

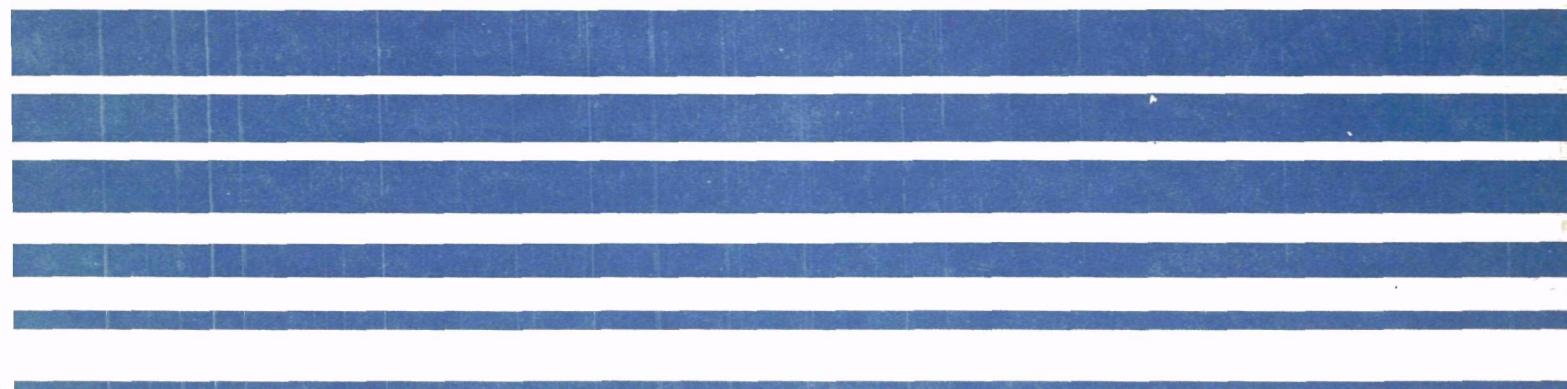
United States  
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Agency

Motor Vehicle Emission Lab  
2565 Plymouth Rd.  
Ann Arbor, Michigan 48105

EPA-460/3-80-021  
October 1980

Air

# **Testing Support for an Evaluation of a Houston I/M Program**



**Testing Support  
for the Evaluation of  
Physical and Functional  
Inspection/Maintenance**

**Contract No. 68-03-2935**

**September 25, 1980**

**prepared for:**

**Environmental Protection Agency  
2565 Plymouth Road  
Ann Arbor, Michigan 48105**

**submitted by:**

**Automotive Testing Laboratories, Inc.  
651 Chambers Road, Suite 200  
Aurora, Colorado 80011  
(303) 343-8939**

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TESTING SUPPORT FOR AN EVALUATION  
OF A HOUSTON I/M PROGRAM

by

Automotive Testing Laboratories, Inc.  
Aurora, Colorado 80011

Contract No. 68-03-2935

EPA Project Officer: Thomas C. Bejma

September 1980

Prepared For:  
Environmental Protection Agency  
Office of Air, Noise and Radiation  
Office of Mobile Source Air Pollution Control  
Emission Control Technology Division  
Test and Evaluation Branch  
Ann Arbor, Michigan 48105

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## ABSTRACT

The standard mass emission (Federal Test Procedure) was performed for determination of the effects of inspection and maintenance on a sample of passenger cars operating in the Houston area. This sample was also used for obtaining abbreviated emission test (short cycle test), fuel economy, and emission component system maladjustment and disablement and other data.

Four-hundred eighty vehicles were inspected under the program: one-hundred from the 1980 model year, one-hundred 1979 vehicles, one-hundred 1978 vehicles, sixty 1977 vehicles, sixty 1976 vehicles and sixty from the 1975 model year. Both domestic and imported auto makes were examined.

All vehicles which failed an initial inspection, a total of 206 vehicles, were subject to a baseline and set of replicate test sequences comprised of the FTP, the 50 Cruise Test, the Highway Fuel Economy Test, the Loaded Two Mode Test and the Four Speed Idle Test. A prescribed maintenance step preceded each of the replicate sequences. Failed vehicles were further subject to an emission control system maladjustment/disablement and status inspection, driveability evaluations and owner-interviews to obtain vehicle maintenance and usage data.

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## 1. INTRODUCTION

The United States Environmental Protection Agency (EPA), under authority of the Clean Air Act, develops, implements and administers a program to assess, quantify and reduce pollution of the nation's resources. Authority for parts of this program is delegated to the agency's Inspection/Maintenance (I/M) Staff. The I/M Staff's responsibility is to administer, advise and support inspection/maintenance programs as well as certain studies which pertain to the institution of such programs.

One such study, which is the subject of this report, was conducted in the Houston area (population 2,885,000 with a comparably large vehicle population) examining model-year 1975 through 1980 vehicles. The 1975 Federal Test Procedure was used to assess the effect maintenance actions produced on vehicle emissions. Direct tailpipe emission data by abbreviated test procedures was also analyzed, since abbreviated tests are used in state and local vehicle emission inspection/maintenance programs. Also included are investigations of the individual and combined effects of emission control system malfunction, disablement and maladjustment on vehicle emissions and fuel economy.

To execute this study, the EPA contracted with Automotive Testing Laboratories, Inc. (ATL).

## 2. TECHNICAL DISCUSSION

### 2.1 PROGRAM OBJECTIVE

The object of the program was to develop test data, to furnish the Environmental Protection Agency (EPA) and the Texas Air Control Board with the capacity to answer questions and resolve issues specific to a potential I/M program using inspection tests other than tailpipe emissions. The data were obtained from privately owned in-use light duty vehicles recruited in the Houston, Texas area.

### 2.2 PROGRAM DESIGN

Four-hundred eighty (480) vehicles were inspected as part of the program. Model years 1975-1980 were examined. A total of 206 vehicles, by virtue of failing an inspection, which consisted of a catalyst inspection, a fuel inlet restrictor inspection, an idle test and a propane recovery test, were found to qualify for testing and maintenance.

Lists which prescribed the composition of the sample were provided by the EPA. Substitutions were allowed within certain limits. Procedures by which the test vehicles were obtained were in keeping with an EPA approved procurement strategy. Although some of the vehicles were from rental fleets, most were privately owned. Incentives were offered to promote owner participation.

Those vehicles which qualified for testing and maintenance were subjected, in their as-received condition, to those parts of the 1975 Federal Test Procedure (FTP) which deal with cold and hot start exhaust emission tests. In addition, tested vehicles were subject to the Highway Fuel Economy Test (HFET) as well as three short cycle tests, which were the 50 MPH Cruise, the Four Speed Idle and the Loaded Two Mode Tests.

Failed vehicles were eligible for up to six maintenance steps. Subsequent to each step a replicate test sequence consisting of the FTP, HFET and the three short cycles was performed. The number of sequences and maintenance steps performed was dictated by the category or categories of the inspection which the vehicle failed.

Other actions performed for each failed vehicle included: an emission control system maladjustment/disablement inspection, a tire inspection, a vehicle driveability evaluation and an interview of the vehicle owner to secure historical information on the vehicle's maintenance and use.

Other study-related activities pertained to test equipment calibration and data review, reduction and reporting. Details concerning these and the activities cited above are presented in the remainder of this section.

### 2.3 TEST VEHICLE PROCUREMENT

#### 2.3.1 Sample Criteria

Criteria for the procurement and selection of test vehicles were provided by the EPA. Criteria for the sample were given on a list describing 480 vehicles from the 1975-1980 model years. Quantities required were designated in the descending order of model year, make, model size (subcompact, compact, intermediate, etc), engine size, carburetor type (fuel injected, 1 barrel, 2 barrel, etc.) and transmission type (automatic, manual 3 speed, manual 4 speed, etc.). Quantities required by model year were weighted for the most part toward the later model years. Vehicles from the later model years are equipped with the latest in emission control technology and are also those on which the least amount of in-use data are available.

Substitution allowances were provided to take into account localized vehicle distributions as well as other factors which generally contribute to procurement difficulties. These allowances are reflected in the following minimum procurement requirements:

100% exact vehicle match to listed make and model year.

90% exact vehicle match to listed make, model year and engine size.

70% exact vehicle match to all listed parameters.

Other criteria for the emission factors sample consisted of limitations on procurement sources. The use of fleet and rental vehicles was limited to no more than ten per

cent for each model year. The use of vehicles from civic, fraternal and other organizations was limited to no more than fifty per cent. The use of vehicle groups from organizations with an automotive orientation such as sports car clubs, however, was prohibited.

#### 2.3.2 Procurement Plan

The plan for procuring test vehicles primarily consists of the use of vehicle registration lists and direct mail solicitations.

Several postal zip-code areas were selected in the Houston metropolitan area on the basis of their proximity to the laboratory. Vehicle owners residing within these areas were selected from commercially available computerized vehicle-registration files by the random process of nth name selection whereby each 1, 2, 3, 4 or nth name appearing in the file is selected. The value of n is determined by the total number of vehicles in the file in relation to the number of vehicles needed. Selected vehicle owners were mailed a letter and a post-paid information reply card. The letter explained the program's purpose and nature and invited participation. The reply card was provided to enable the owner to supply vehicle information not otherwise available.

Experience provided the basis for determining the number of mailings required. Affirmative responses vary, but they were generally between five and ten per cent of the total number mailed. Approximately thirty mailings were sent for each vehicle required.

Mail solicitations produced approximately ninety per cent of the vehicles procured. Approximately five per cent of the test cars were obtained through color-coded vehicle reply cards which the Texas State Emission Testing Center inspectors handed out to participants who voluntarily had their vehicles inspected at the Center. The remainder were obtained as a result of appeals directed through the news media and from car lots, rental car agencies and referrals from other participants.

#### 2.3.3 Incentives

An incentive package prescribed by the EPA was offered and provided for each

vehicle tested. The package consisted of:

A \$75 U. S. Savings Bond

A late-model loan vehicle to serve as a substitute for the test vehicle

Fuel for the loan vehicle

A full tank of fuel for the test vehicle upon return to its owner

#### 2.3.4 Test Vehicle General Handling

Vehicle owners were contacted from telephone numbers given on the reply cards. Vehicle information was confirmed and any missing information was obtained during this contact. Test schedules were also established at this time. Privately owned vehicles were delivered to the laboratory. Laboratory personnel picked up and returned vehicles which were procured from rental car agencies and car lots.

The prospective test vehicle was examined upon arrival at the laboratory to confirm compliance with the sample specification and to assure suitability for testing. A relative few were rejected by reason of incorrect owner-supplied engine, carburetor and/or other equipment-identifying information. Relatively few other vehicles were rejected at this or some subsequent point due to exhaust system leakage, transmission problems, brake problems or related factors. Acceptance activities included an incoming vehicle status inspection which was used to limit laboratory liability. Test and loan vehicle exchange agreements were completed upon acceptance of the test vehicle and an EPA-furnished questionnaire was administered to the owner. The questionnaire is designed to gain usage, maintenance and other information concerning the vehicle. The vehicle was subsequently moved to a staging area where remaining pre-test operations were completed.

The vehicle was returned to the staging area for depreparation procedures and refueling after testing was completed. It was then moved to a parking area where it remained until picked up by the owner.

## 2.4 FACILITY AND EQUIPMENT

### 2.4.1 Test Location and Facility

A temporary laboratory facility located at 8564 Katy Freeway, Suite 132, in Houston was used for the study. The elevation above sea level is sixty feet. The facility contained 7,200 square feet of laboratory and office space. Cooling was furnished by two permanently installed twelve and one-half ton air refrigeration units supplemented by a portable three and one-half ton air refrigeration unit.

### 2.4.2 Chassis Dynamometer

The chassis dynamometer used in the study was a Clayton Model ECE-50. The ECE-50 has two continuous rolls, seventy-eight inches in length and 8 5/8 inches in diameter. Axial spacing of the rolls is 17 1/4 inches. The tachometer generator was installed on the rear roll.

The dynamometer was equipped with a speed meter which was linear with speed and accurate to within  $\pm 2.0$  km/hr ( $\pm 1.2$  mph) over the 0 to 95 km/hr (0-59 mph) range. It was also equipped with a power meter which was accurate to  $\pm 0.187$  kw ( $\pm 0.25$  hp). The dynamometer was further equipped with a direct-drive inertia assembly which provided 250 pound inertia increments from 1750 to 5500 pounds.

The dynamometer was lubricated and maintained in accordance with Clayton's requirements.

### 2.4.3 Constant Volume Sampler

The constant volume sampler (CVS) used was the AESI Model 1000. The Model 1000 is a positive displacement pump (PDP) type equipped with a gas-to-water heat exchanger and six sample bags. All plumbing in the sampling and calibration systems was of stainless steel or teflon construction. Leak-tight convoluted stainless steel tubing was used to connect the CVS and the vehicle tailpipe. Several lengths were provided to keep the exhaust run as short as practical. Accuflex brand silicone-rubber adapters were used to connect the tubing to the tailpipe.

The sampler was modified from the conventional design to facilitate automated sampling system evacuation/leak check.

#### **2.4.4 Analytical Instruments**

Listed below are instrument models, and ranges, which were part of the analytical system used for FTP and HFET (diluted) sample analyses:

Two Beckman Model 400 FID's providing full scale C ranges of:  
0-50 ppm, 0-100 ppm, 0-300 ppm, 0-1,000 ppm and 0-3,000 ppm

One TECO Model 10 CL NO<sub>x</sub> analyzer with full scale ranges of:  
0-100 ppm, 0-250 ppm, 0-1,000 ppm and 0-2,500 ppm

One Bendix Model 8501 NDIR CO analyzer providing full scale ranges of:  
0-100 ppm, 0-500 ppm, 0-.3%, 0-3% and 0-5%

One Beckman Model 315B NDIR CO<sub>2</sub> analyzer with full scale ranges of:  
0-2.5%, 0-4% and 0-8%

Undiluted emission analysis (Four Speed Idle, Loaded Two Mode and the 50 Cruise) was performed using the following analyzers and ranges:

One Chrysler Model III C NDIR CO analyzer with full scale ranges of:  
0-300 ppm C<sub>6</sub> and 0-2,000 ppm C<sub>6</sub>  
0-0.5% CO and 0-10% CO

One TECO Model 10 CL NO<sub>x</sub> analyzer with full scale ranges of:  
0-100 ppm, 0-250 ppm, 0-1,000 ppm, 0-2,500 ppm and 0-10,000 ppm

The diluted and undiluted exhaust analyzers were respectively situated within rack-type console cabinets. Sampling, analytical and calibration system plumbing was of stainless steel or teflon construction.

#### **2.4.5 Data Acquisition**

The following equipment was used for the acquisition of test data:

Wet and dry bulb temperatures of air supplied to the vehicle under test and temperature of the CVS exhaust gas/dilution air mixing point were recorded on a Soltec Model DB, three-channel, ink stylus, strip chart recorder, with a chart width of approximately eleven inches.

Barometric pressure was recorded on a Taylor Model 6450 recording barometer.

Soak area temperature was recorded on a Rustrak Model 2133, single channel, pressure stylus, strip chart recorder, with a chart width of approximately two inches and a range from 10°C to 37.5°C (50°F to 100°F).

The driver's aid was an Esterline Angus two-channel, off-set heat stylus, strip chart recorder, with a chart width of approximately eleven inches. The leading pen records the dynamometer speed command signal; the lagging pen records the feedback signal.

Exhaust emission analyzers were connected to Texas Instruments (TI) Model Servo-riter II, two-channel, ink stylus, strip chart recorders, with a chart width of approximately eleven inches and 100 division full scale chart paper. Diluted CO and CO<sub>2</sub> were connected to one of these recorders. Diluted HC and NO<sub>x</sub> were connected to a second. Undiluted CO, HC and NO<sub>x</sub> were connected to a three-channel version of the TI Servo-riter II.

CVS pump revolutions were displayed on an electronic digital meter.

A Data General Model Nova II computer was used to generate driving schedule traces and as a cross check to ensure accuracy of the analyzer ranges. The computer also provides printouts of distance traveled by the test vehicle and integrates analyzer and test cell temperature traces.

#### 2.4.6 Laboratory Standard Calibration Gases

A set of secondary calibration gas standards was used at the site to calibrate the analytical instruments. All secondary calibration standards were identified from a set of primary standards which, in turn, were identified by the EPA's laboratory in Ann Arbor.

Primary and secondary calibration gases are bi-blends (CO, CO<sub>2</sub> and NO<sub>x</sub> plus zero-grade N<sub>2</sub> as the diluent, HC as propane plus zero-grade air as the diluent).

FID fuel gases were a mixture of 40% H<sub>2</sub> and 60% N<sub>2</sub>. Zero gas impurities were maintained below 1 ppm C, 1 ppm CO, 400 ppm CO<sub>2</sub> and 0.1 ppm NO. NO<sub>x</sub> calibration gases contained less than 2% NO<sub>2</sub>.

#### 2.4.7 Miscellaneous Equipment

As-received vehicle tank fuel was analyzed for lead content. The analysis was performed using a Science Essentials fuel lead test kit (Mobil Method 1125-74).

A Hartzell Model N24DW propeller-type fan, nominally air flow rated at 5300 cubic feet per minute, was used in connection with dynamometer testing to supply vehicle frontal and underhood cooling air.

Wheel chocks and a ratcheting-type winch were used to secure vehicles on the dynamometer and prevent them from rocking on the rolls. A rubber belt dressing was

applied to drive tires immediately before cold start testing began to reduce slippage between the drive tires and dynamometer rolls.

The usual complement of ignition scopes, timing lights, tachometers, hand tools and other engine diagnostic and tune-up equipment was used to perform the emission-related inspections, adjustments and repairs. Special diagnostic and repair equipment was provided and used as needed.

## 2.5 EQUIPMENT CALIBRATION AND VERIFICATION

Program test equipment calibration and verification requirements were met through application of the following procedures.

### 2.5.1 Chassis Dynamometer

Dynamometer calibration was performed initially and confirmed each two weeks thereafter.

Initial calibration included setting the speed meter to true zero with the dynamometer at rest followed by establishment of the upscale span point (46.3 mph). A fixed-rate strobe light was used to establish the upscale span point. The power meter was zeroed with no weight applied to the torque area. A known weight was subsequently applied and the power meter was adjusted accordingly. Dead weight calibration was followed by dynamic calibration using the coastdown technique to establish the relationship between indicated and actual horsepower.

Bi-weekly calibration confirmations included the speed point checks and the coast-downs. Coastdown calibrations were maintained within  $\pm 0.746$  kw ( $\pm 1$  hp) for each inertia weight.

Calibration of the driver's aid was checked in relation to the speed meter indication before and after each test. Pre-test driver's aid speed checks were maintained within  $\pm 0.6$  km/hr ( $\pm 1$  mph) of the indication on the dynamometer speed meter.

### 2.5.2 Constant Volume Sampler

The constant volume sampler was subjected to an initial checkout and flow calibration. A Meriam Model 50-MC2-6F laminar flow element (LFE), which has an air flow rating of 1,000 cfm, was used as the flow standard. LFE calibration is traceable to the National Bureau of Standards. A minimum of ten points, five on each side of the normal set point, was measured on the CVS pump's single range. Auxiliary devices used to calibrate include: a mercury barometer for measuring absolute ambient pressure, a close tolerance mercury thermometer for measuring blower inlet temperature, a U-tube water manometer for measuring pressure drop across the blower and blower inlet pressure and a close tolerance inclined water manometer for measuring pressure drop across the LFE. Calibration was such that no data point deviated more than 0.5% from the least squares best-fit line through the points measured and that no data point deviated more than 0.25% from the least squares best-fit line through all points.

CVS calibration was confirmed daily thereafter by propane injection and recovery. The injected amount was such as to have produced a concentration falling in the upper one-third of the 0-300 ppm FID range. Recovery within  $\pm$  2% of the injected amount was acceptable. A recovery outside the acceptable range required corrective action and two successive recoveries within range before testing was resumed.

### 2.5.3 Analytical Instruments

Emission analyzers were set-up in accordance with procedures specified by the manufacturers and subjected to initial calibration. Flame Ionization Detector (FID) and Nitric Oxide ( $\text{NO}_x$ ) analyzers were calibrated at three points spread somewhat evenly across each range. Carbon Monoxide (CO) and Carbon Dioxide ( $\text{CO}_2$ ) analyzers were calibrated at seven points spread somewhat evenly across each range. Initial calibration curves were maintained such that the actual calibration point was within  $\pm$  5% of the curve value and the difference between the actual point and the curve was within  $\pm$  1 % of the full scale value.

Calibration curves for the analyzers were subjected to a complete check on a weekly basis. Each curve point was maintained within  $\pm$  1 division (100 divisions, full scale) of the point established in the original calibration.

Analyzers were zeroed with zero gas and spanned on the range in use at eighty per cent to 100 per cent of full scale.

Efficiency of the NO<sub>x</sub> analyzer converter was checked daily and maintained between ninety per cent and 100 per cent.

CVS sample bags were purged with nitrogen, evacuated and leak-checked prior to each test. Other procedural precautions included zero and span point sets immediately before exhaust sample analysis and zero and span point verification immediately following sample analysis. Verified zero and span points were maintained within  $\pm$  1 division of the set points. Noise levels of recorded analyzer outputs were maintained within  $\pm$  0.5 divisions.

Analyzers used for tailpipe emission measurements were zeroed with zero gas and spanned with known span gases immediately before each test. These analyzers were otherwise operated in accordance with the manufacturer's specifications.

## 2.6 TEST PROCEDURES

Tests were performed in the following sequence:

Federal Test Procedure

50 Cruise Test

Highway Fuel Economy Test

Four Speed Idle Test

Loaded Two Mode Test

### 2.6.1 Inspection Procedure

Each vehicle accepted into the study was subjected to an I/M Lane Test performed at the Texas State Emission Testing Center, located at 4303 San Felipe in Houston. This

inspection was designated I/M Lane Test #2, which differed from I/M Lane Test #1 only in that a #1 designation indicated that the inspected vehicles were procured by the State Center with no assistance from ATL.

Inspectors at the State Center performed functional and visual checks of the car to assess the vehicle condition in four categories:

Damage to the fuel inlet restrictor

Presence or absence of the catalyst

HC and CO readings from an idle test

Propane gain from a propane enrichment procedure

The following standards\* were used to evaluate the idle and propane gain tests:

<u>Model Year</u>	<u>HC (ppm)</u>	<u>CO (%)</u>	<u>Propane Gain</u>
1975-1977	400	3.5	10
1978-1979	300	3.0	10
1980	200	2.0	10

Vehicles which were passed by the Center inspectors in all four categories were returned immediately to their owners. Cars which were not originally equipped with inlet restrictors and catalysts were pronounced passed in those two categories.

Vehicles which were failed by the inspectors in one or more of the four categories were returned to the laboratory and retained for testing and maintenance.

A number of vehicles were procured from vehicle owners who voluntarily took their cars to the State Center. This inspection was designated I/M Lane Test #1. After the inspection, vehicle owners were presented with a reply card which they were asked to fill out and return to ATL. The Center inspectors distributed blue cards to the owners of passing vehicles and yellow cards to those of failing vehicles. It was not necessary, therefore, for ATL to take the vehicles procured from the color-coded cards to the State Center after the vehicle arrived at the laboratory. Twenty-two vehicles were recruited into the program using this method.

\*The HC and CO standards are the maximum allowable; the propane gain standard is the minimum allowable.

The State Center inspection was repeated for each failed vehicle after all testing and maintenance had been completed, prior to the vehicle being returned to the owner. In addition, failed vehicles were re-inspected at the State Center after each test sequence as often as vehicle availability (i.e., the car was not in soak) coincided with the State Center operating hours.

When the study began, the Texas State Emission Testing Center performed vehicle inspections Monday through Friday from 8:30 AM to 4:30 PM. At approximately the midpoint of the study, the Center changed their inspection hours to better accommodate the general public. The new hours were 8:30 AM to 4:30 PM Tuesday, Wednesday and Friday, 8:30 AM to 7:30 PM on Thursday and 8:30 AM to 1:30 PM on Saturday.

On August 30, 1980, the State Center discontinued operations, and ATL automotive technicians assumed the function of performing inspections.

#### 2.6.2 Vehicle Preparation

Subsequent to acceptance and inspection, the failed vehicles were drained of as-received fuel and refilled to forty per cent of tank capacity. A sample of fuel drained from each vehicle was retained for lead analysis. Those vehicles requiring unleaded fuel were refueled with Indolene Clear. All others were supplied with Indolene 30.

All vehicles were operated for a period of ten minutes on a predetermined public road route subsequent to refueling. The purposes of such operation are threefold: to purge non-test fuel from the fuel system, to bring the vehicle to normal operating temperature and to assess vehicle operating characteristics. Moderate to severe operating difficulties, in particular, are noted for later reference in the cold start tests.

After test preparation procedures were completed, the vehicle was driven to an indoor, temperature controlled area and shut down to begin the temperature stabilization (soak) period prescribed by the Federal Test Procedure.

#### 2.6.3 Equipment Preparation

The laboratory operated at the rate of three shifts per day. Approximately

twenty-one hours of the operating day were devoted to testing. The remaining three hours were used for calibrations and daily equipment checks. The facility operated at the rate of six days per week. The seventh day was also used for calibrations and for scheduled and unscheduled maintenance of the laboratory and its equipment; consequently, equipment was rarely in a shutdown mode. When it had been shut down for an extended period of time, however, certain reactivation procedures were followed.

Equipment which had been idle or in a stand-by condition was fully activated to begin warm-up. Such equipment included the water heater and mass pump of the CVS and each of the analytical instruments. If not subjected to extended operation in the two hour period preceding a test the dynamometer was also warmed-up by means of fifteen minutes of vehicle operation on the dynamometer at 48.3 km/hr (30 mph).

With all equipment at normal operating temperature, sensitivity of the constant volume sampler's automatic leak detection system was checked and adjusted as necessary. A leak-check of the undiluted tailpipe analytical system was also performed. Efficiency of the NO<sub>x</sub> analyzer thermal converter was checked, strip chart recorders and other elements of the data acquisition system were aligned with analyzer outputs and the propane recovery test was performed. Calibration of the dynamometer speed meter and driver's aid recorder was also checked for accuracy and adjusted as needed.

Other minor laboratory maintenance and pre-test requirements were attended to during the daily three hour non-test period as needed.

#### 2.6.4 Federal Exhaust Emission Test Procedure

The Federal Exhaust Emission Test was performed in accordance with those parts of 40 Federal Register 126 which deal with cold and hot start tests.

This test, commonly referred to as the Federal Test Procedure (FTP) is a test which utilizes a constant volume sampler (CVS) and which produces mass emission test results. It is preceded by a minimum vehicle soak period of twelve hours during which

the vehicle remains unstated and with all accessories off in ambient temperatures between 20° C and 30° C (68° F and 86° F). Maximum soak time for this program was limited to thirty-six hours.

At the end of the soak period the vehicle was placed on the dynamometer in preparation for the cold start portion of the test. A cooling fan which directs air to the vehicle only during exhaust sampling periods was situated with its center at the middle of the vehicle grille and twelve inches away. The engine compartment was fully opened and a collector tube which directs all exhaust to the CVS was attached to the vehicle tailpipe.

The FTP consists of three sampled portions. Background air and CVS diluted exhaust samples were collected for each portion. The cold transient portion is nominally 505 seconds long and covers a distance of 5.78 km (3.59 miles) at an average speed of 41.19 km/hr (25.6 mph). The cold stabilized portion is nominally 869 seconds in duration covering 6.21 km (3.86 miles) at an average speed of 25.74 km/hr (16.0 mph). The hot transient portion is a hot start repetition of the cold transient portion.

Cold transient CVS sampling commenced with engagement of the engine starter. The cold transient portion of the FTP driving schedule commenced with the starting of the engine. The time between starter engagement and the point at which the engine began to run of its own accord added to the sampling interval. Also, any stall encountered during this or the two subsequent FTP portions added to the sampling interval of the portion in which it occurred. The driving schedule was stopped in place when a stall occurred and was restarted from that same place after the engine was restarted. Cold transient sampling terminated at the 505 second point of the driving schedule.

Cold stabilized sampling commenced at the 505 second point of the driving schedule and terminated when the engine stopped running after the ignition was turned off at the 1372 second point, the end of the driving schedule. Any after-run of the engine added to the sampling period of this test portion.

A soak period of ten minutes followed the end of the cold stabilized portion. During this period the engine and cooling fan were off, the engine compartment was closed and the CVS exhaust collection tube was disconnected from the tailpipe. At 10 + 1 minutes into the soak period, the engine compartment was re-opened, the collector tube was reconnected and the engine starter was engaged once more to begin the hot transient portion. The fan was turned on upon engagement of the starter and sampling also commenced. Hot transient sampling continued to the 505 second point of the schedule at which time the test was concluded.

#### 2.6.5 50 (mph) Cruise Test Procedure

In this case the 50 Cruise Test was conducted during the three minute period of 80.5 km/hr (50 mph) preconditioning which preceded the Highway Fuel Economy Test.

Undiluted HC, CO and NO<sub>x</sub> emission measurements were taken in connection with this test. Equilibrium of vehicle speed, engine speed and analyzer traces were obtained before the reported test readings were bracketed and integrated.

The 50 Cruise Test was inherently preceded by a sustained period of vehicle operation (eg, the 1,372 second FTP driving schedule) by reason of its connection with preconditioning for the Highway Fuel Economy Test.

#### 2.6.6 Highway Fuel Economy Test Procedure

The Highway Fuel Economy Test (HFET) was started within the fifteen minute period following conclusion of the FTP. Unsampled vehicle operation over the 1,372 second FTP driving schedule preceded this test if more than thirty-five minutes elapsed between the conclusion of the FTP and the beginning of the HFET.

The test was immediately preceded by the three minute period of operation at 80.5 km/hr (50 mph) during which the 50 Cruise Test was performed. Within one minute following the end of this period the vehicle was brought to idle and the HFET driving schedule was begun. CVS sampling commenced upon commencement of the schedule and continued to the end of the 765 second, 16.4 km (10.2 miles) HFET driving schedule.

Fuel economy was calculated from emission results by means of the Federal Register-contained carbon balance equation. Power settings, inertia weights, emission sampling procedures, cooling air temperatures and cooling fan placement and operation were identical to those of the Federal Test Procedure.

#### 2.6.7 Loaded Two Mode Test

The Loaded Two Mode Test employs volumetric exhaust emission sampling at one mode with the vehicle operating at 48.3 km/hr (30 mph) and 6.714 kw (9 hp) and at one with the engine idling with the transmission in neutral. Maximum duration of each mode was three minutes. Speed and HC, CO and NO<sub>x</sub> equilibrium was maintained for thirty seconds before the reported readings were bracketed and integrated.

This test was preceded by a 6 + 1 minute idle period with the underhood cooling fan on and the engine compartment open. At the end of this period the vehicle was operated, and emission readings were taken, at the cruise mode, then at the idle mode. Dynamometer inertia setting for the cruise mode was 1750 pounds.

#### 2.6.8 Four Speed Idle Test

Also employing volumetric sampling, the Four Speed Idle is a test having four modes when automatic transmissions are involved and three when they are not. It was preceded by a 6 + 1 minute idle period with the cooling fan on and the engine compartment open. Subsequent to this period the vehicle was operated in the order of: idle in neutral, idle at 2,500 engine rpm, idle in neutral and in the case of an automatic transmission-equipped vehicle, idle in drive with the brakes applied. The maximum period for each mode was three minutes. Speed and HC, CO and NO<sub>x</sub> equilibrium was maintained for thirty seconds before the reported readings were bracketed and integrated.

#### 2.6.9 Vehicle Inspection Procedure

The procedure used to determine incoming condition of the test vehicles consisted of the measurement of basic engine parameters and visual and functional inspections of emission control systems, subsystems and parts. Parameters measured included those of

idle speed, ignition timing and dwell and idle HC and CO emissions. Whether the idle mixture was rich or lean for the given vehicle was also determined by enriching the mixture with propane. Visual inspections were performed to determine: the presence or absence of the air pump, catalytic converter, idle adjustment limiters, modulators, delay valves and the like; the routing of wires, vacuum lines and the like; and any modifications which would affect emission control system operation including those to the fuel filler neck which enable the use of leaded fuel. Functional checks were performed to determine operational status of: the ignition, distributor and its advance-retard mechanisms; the carburetor and its vacuum and electrical control devices; the induction system and its sensors, switches, modulators, etc; the exhaust gas recirculation (EGR) system and associated vacuum and pressure devices, temperature sensing devices and so on.

#### 2.6.10 Maintenance Procedures

The study design provided for nine separate maintenance steps (subsequently reduced to seven after two of the steps were dropped). Any one vehicle could qualify for as many as six maintenance steps (subsequently reduced to five), the number and type dictated by the category of failures recorded at the Texas State Emission Testing Center inspection and by the condition and performance of the car as determined from the emission component checks and subsequent dyno testing. Figures 1 and 2 illustrate the progress of a test vehicle which failed its inspection and which maintenance actions were performed for the vehicle. In order to avoid confusion between Test Sequences #1 and #2 and I/M Lane Tests #1 and #2, the test sequences were numbered #11 through #20.

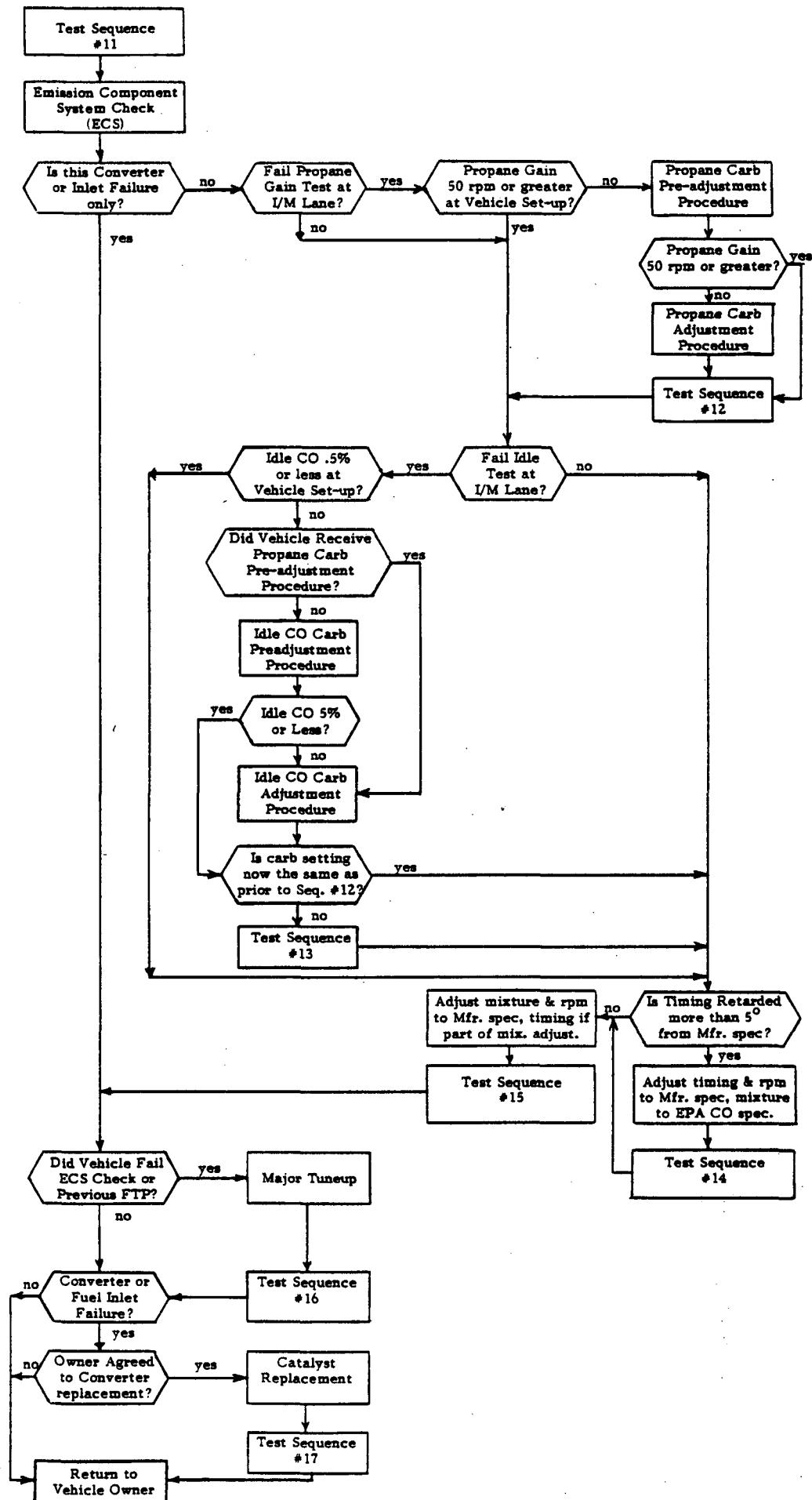


Figure 1, Maintenance Actions for Failed Vehicles  
Not Equipped with Sealed Carburetors

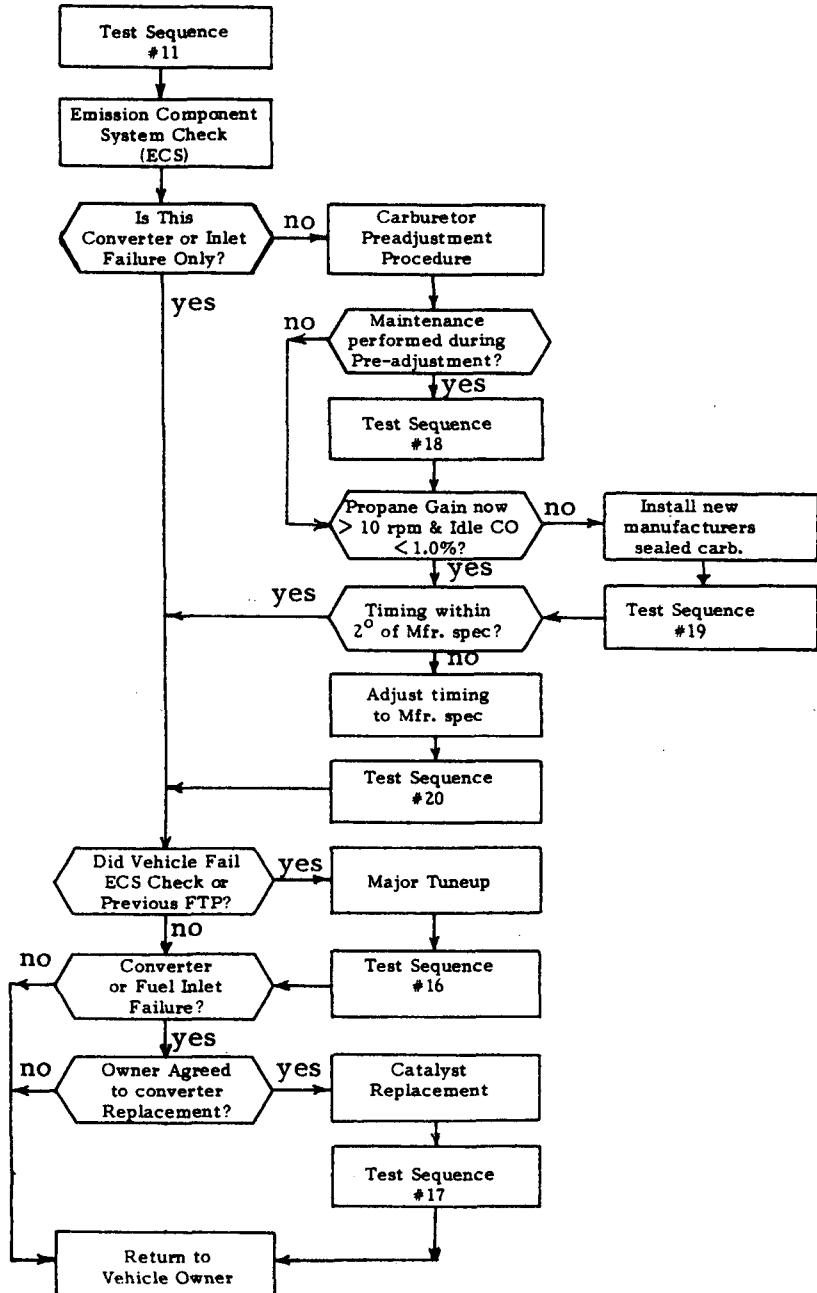


Figure 2, Maintenance Actions for Failed Vehicles  
Equipped with Sealed Carburetors

A summary of each maintenance step of the study follows.

Sequence #11. Vehicles undergoing this sequence were in as-received condition. No maintenance had been performed.

Sequence #12. Vehicles without sealed carburetors which had failed the propane gain portion of the I/M Lane Test were subjected to the Carburetor Pre-adjustment Procedure. The pre-adjustment procedure stipulated that vacuum connections be checked and corrected, if needed; choke, heated air intake and PCV system were checked, and corrected as needed; the air cleaner was checked and cleaned or changed, as needed; and the crankcase oil was checked and changed, if necessary. If, after the pre-adjustment procedure, the Universal Propane Standard of forty to sixty rpm gain had not been achieved, the Propane Carburetor Adjustment Procedure was performed. The adjustment procedure stipulated a number of steps during which the idle mixture and speed were adjusted until a forty-to-sixty gain was achieved.

Sequence #13. Vehicles without sealed carburetors which had failed CO and/or HC on the idle portion of the I/M Lane Test were subjected to the Carburetor Pre-adjustment Procedure unless the vehicle was given the pre-adjustment procedure during Sequence #12 (the pre-adjustment procedure for Sequences #12 and #13 were identical). If the pre-adjustment procedure failed to cause the vehicle to meet the Universal CO Standard of .4 to .6 per cent, the Idle CO Carburetor Adjustment Procedure was performed. The CO adjustment procedure stipulated a number of steps during which the idle mixture and speed were adjusted until a reading of .4 to .6 per cent was achieved. If, at set-up (prior to any adjustment or maintenance actions being performed), the idle CO reading was at .5 per cent or less (i.e., the vehicle failed HC only), Sequence #13 was not performed.

Sequence #14. Vehicles without sealed carburetors on which the timing was retarded more than five degrees from manufacturers specifications were given a timing adjustment. Sequence #14 was subsequently dropped.

Sequence #15. Vehicles without sealed carburetor which failed the idle or propane tests, or both, were adjusted to manufacturers specification. The adjustments were idle speed and idle mixture, and timing if it was specified as part of the mixture adjustment.

Sequence #16. All failed vehicles were eligible for this sequence, for which a vehicle qualified if it failed either an item on the as-received emission component check or failed standards on the FTP run immediately prior to the Sequence #16. Cars undergoing a Sequence #16 had all maladjustments, disablements and failed emission components repaired or replaced and were given a manufacturer's specified normal tuneup. Standards for the FTP were:

<u>Model Year</u>	<u>HC</u>	<u>CO</u>
1975-1979	1.80	18.0
1980	0.49	8.4

Sequence #17. All vehicles which failed either the inlet or the catalyst inspection and whose owners consented to having the catalyst replaced were eligible.

The old catalyst was removed and replaced with a new one purchased from a manufacturer distributor.

Sequence #18. Vehicles having sealed carburetors and which failed the idle and/or propane gain portion(s) of the I/M Lane Test were subjected to the Sealed Carburetor Pre-adjustment Procedure. This procedure stipulates two aspects, one for vehicles which failed the propane gain portion of the I/M Lane test and one for those which failed the idle portion. Vehicles which failed both were subjected to the two aspects concurrently. The procedure consisted of checking and correcting the following until the desired readings (forty to sixty rpm propane gain and/or .4 to .6 per cent CO) were attained: vacuum lines, dirty air filter, choke, heated air intake system and PCV system including crankcase oil.

Sequence #19. Vehicles having sealed carburetors which, after Sequence #18, still had readings of greater than 1.0 per cent CO and/or propane gain of less than ten rpm were submitted to Sequence #19. The as-received sealed carburetor was removed and replaced with a new sealed carburetor purchased from a manufacturer distributor.

An extension of Sequence #19 occurred after all other testing on the vehicle was completed. The new sealed carburetor was removed and the as-received sealed carburetor was broken open at the seals and replaced on the car by an ATL automotive technician. The technician attempted to adjust the as-received carburetor to forty to sixty rpm propane gain and .4 to .6 per cent CO readings. The rpm propane gain and per cent CO readings which actually were achieved were recorded and dated. The automotive technician lastly replaced the newly purchased carburetor on the vehicle prior to its return to the vehicle owner.

Sequence #20. Vehicles having sealed carburetors on which timing was not within two degrees of manufacturers specification were given a timing adjustment. This sequence was subsequently dropped.

#### 2.6.11 Daily Test Schedule Procedure

Overall program scheduling was dictated by personnel, equipment and facility availability and the time constraint of the contract. These factors also dictated the daily testing rates.

Tests were performed on a three shift per day, six day per week basis. Work shifts for the most part began at 7:00 AM, 3:00 PM and 11:00 PM. Tests were not generally scheduled between the hours of 4:00 PM and 7:00 PM. Daily equipment quality assurance checks were performed during this period. Some weekly and bi-weekly equipment calibrations and checks were also performed during this period, as well as during unscheduled breaks in the testing schedule. Most weekly and bi-weekly calibration

activities were performed on the one day of the week when tests were not scheduled.

Vehicle acceptance activities generally took place between the morning hours of 7:00 - 9:00 and the evening hours of 5:00 - 7:00 as a convenience to participants.

Vehicle throughput averaged nine tests per day. Each car was given a baseline test sequence, with the vehicle in the as-received condition. After each maintenance step the vehicle was subjected to a replicate test sequence to evaluate the effects of the maintenance action.

## 2.7 DATA HANDLING

### 2.7.1 Data Collection

Many parameters directly associated with the emission tests were recorded on strip charts. Included were: temperature of the soak area, wet and dry bulb temperatures of air supplied to the vehicle under test, temperature of the CVS dilution air/exhaust gas mixing point and the output of each emission analyzer. Barometric pressure was recorded on a seven day circular chart. Recorders monitoring emission analyzer outputs were allowed to run continuously during calibration and emission analysis. An on-line mini-computer was used to integrate analyzer readings during diluted and undiluted emission analysis and as a cross check to verify analyzer deflections and ranges in use. Other test data were manually collected and recorded.

### 2.7.2 Data Processing

After an on-site review, raw data in the form of individual test packets were shipped from the testing site to ATL's data processing center in Denver for final review and disposition. Processing of the raw data was performed manually and by computer. A large scale time-sharing system was used to perform the computerized part of processing operations. Manual processing consisted of combining data from the raw data sheets with magnetic tape-contained data from the on-line computer into a single tape. Once combined, these data were transferred to the time-share system where they were

subjected to additional manual and computerized review and edit operations. Corrections to the computer contained data files were made as necessary. The corrected data were subsequently computer reduced, output and reported on a monthly basis.

### 2.7.3 Quality Control

Quality of the test data was assured through reviews and edits which were conducted at several stages in the collection and subsequent handling processes.

The first of two reviews was conducted at the testing site. Following completion of each test sequence all data were collected and assembled into a single test packet. Materials in the test packet included: data sheets used to identify the vehicle, vehicle exchange agreements, the completed vehicle-owner questionnaire, raw data sheets associated with each test in the sequence, analyzer strip chart recordings and on-line computer magnetic tape printouts, cooling air temperature and humidity recordings for each test in the sequence and data sheets used to document vehicle preparation procedures and inspection results. Upon assembly, each of these materials was reviewed for completeness and accuracy. This review was started as soon after test sequence completion as practicable in an effort to have it completed before the vehicle started into another testing sequence or was returned to its owner. The practice of early review was employed for two reasons: to keep the necessity for vehicle recall and retest to a minimum and to facilitate immediate feedback to test personnel of errors and omissions as they emerged. Following this part of the quality assurance program the test packets were shipped to Denver.

Soak area temperature traces, raw data sheets and strip chart recordings used to document periodic calibrations and checks of the test equipment and other materials common to tests on a group of vehicles were subjected to a similar review, packaged and sent to Denver.

Upon arrival in Denver, each packet was reviewed a second time for completeness

and accuracy. Following this review data from the raw data sheets were manually combined with magnetic tape contained data from the on-line computer and a single magnetic tape was produced. Data from this tape was subsequently placed into the time-share computer. Printed lists generated by the computer were proofread against the original data. Corrections were made to the computer stored data, as necessary.

A computerized edit program was applied to the stored data after the more obvious errors had been corrected and data files were complete. This edit program examines each data entry for keying errors and for logical and tolerance deviations from established criteria. Errors determined in connection with this process were resolved by one or more of a number of means including communication with on-site testing personnel, more detailed reviews of test documentation and, as necessary, by recall and reinspection or retesting of the vehicle in question.

A "dump" sheet containing the reduced data was subsequently produced. Each entry on the dump sheet was checked for reasonableness and accuracy. Reasonableness was established on the basis of one data point relative to another, a single data point relative to a composite of data points and both single and composite data points relative to the weight, engine size, model-year, maintenance state and other pertinent characteristics of the vehicle.

Errors found in the course of on-site reviews were usually associated with inconsistencies between materials in the test packet (eg, information on the vehicle-owner questionnaire conflicted with that of the after-test vehicle inspection) and errors in transposing data from strip charts to raw data sheets (eg, analyzer ranges and deflections). Problems dealt with in subsequent stages of review were most frequently associated with insufficient verbal information backing up numerical emission component failure and vehicle maintenance action codes and inconsistencies in responses within the vehicle-owner questionnaire.

#### 2.7.4 Calculation of Results

Results for the mass emission tests (i.e., those employing the CVS) are calculated by means of the formulae of 40 Federal Register 126. Although actual distances traveled by the test vehicle were measured in connection with the tests, these distances were not used in the calculations. Distance constants of the 40 Federal Register 126 exhaust emission test (FTP) driving schedule and distance constants of other of the mass emission tests are respectively used, instead. The equations of 40 Federal Register 126 applied to the FTP and to the Highway Fuel Economy Test.

The carbon balance equations of 42 Federal Register 176 which take mass HC, CO and CO<sub>2</sub> emissions into account were used to calculate fuel economy data for the above tests. The distance constants associated with each test were respectively used for fuel economy calculations as well.

Volumetric test results are reported as measured. Volumetric results applied to the 50 Cruise Test, the Loaded Two Mode Test, and the Four Speed Idle Test.

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
9010	79	BUIC	350	930M4U/9B4-3						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 456 CO: 2.79 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	1.79	20.8	560.1	2.92	14.8
SEQ#11	50 MPH CRUISE	34.2	0.01	787.5		
SEQ#11	HIGHWAY FUEL ECON.	0.24	1.9	415.3	2.80	21.2
SEQ#11	4 SPD IDLE (NEUT)	495.1	2.07		42.5	
SEQ#11	4 SPD IDLE (2500)	47.4	0.01		231.9	
SEQ#11	4 SPD IDLE (NEUT)	459.3	1.14		30.0	
SEQ#11	4 SPD IDLE (DRIV)	344.0	2.35		57.5	
SEQ#11	FED 2 MODE (30)	63.8	0.02		1267.5	
SEQ#11	FED 2 MODE (NEUT)	549.0	0.65		35.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR FILTER, FUEL FILTER, OIL FILTER, PCV VALVE, ADJUSTED TIMING AND SPEED.

SEQ#16	FEDERAL TEST PROC.	1.39	12.8	577.5	2.01	14.7
SEQ#16	50 MPH CRUISE	14.4	0.00	555.0		
SEQ#16	HIGHWAY FUEL ECON.	0.17	1.0	429.5	2.26	20.6
SEQ#16	4 SPD IDLE (NEUT)	374.9	0.92		42.1	
SEQ#16	4 SPD IDLE (2500)	20.7	0.01		177.8	
SEQ#16	4 SPD IDLE (NEUT)	276.9	0.79		31.6	
SEQ#16	4 SPD IDLE (DRIV)	255.7	1.72		68.1	
SEQ#16	FED 2 MODE (30)	43.1	0.02		691.5	
SEQ#16	FED 2 MODE (NEUT)	286.7	0.04		11.5	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 278 CO: 1.39 GAIN: 60

COMMENT : CHANGED OIL ON PROPANE PROCEDURE TO A 50 RPM GAIN, USING CO PROCEDURE COULDN'T GET IT BELOW .5%. PULLED OUT PCV VALVE, CO WENT DOWN TO .21%.

SEQ#18	FEDERAL TEST PROC.	1.48	12.4	573.0	2.91	14.9
SEQ#18	50 MPH CRUISE	24.3	0.01	640.9		
SEQ#18	HIGHWAY FUEL ECON.	0.15	0.7	419.2	2.76	21.1
SEQ#18	4 SPD IDLE (NEUT)	461.6	0.45		27.5	
SEQ#18	4 SPD IDLE (2500)	27.3	0.01		199.6	
SEQ#18	4 SPD IDLE (NEUT)	352.8	0.28		17.7	
SEQ#18	4 SPD IDLE (DRIV)	265.1	0.97		58.2	
SEQ#18	FED 2 MODE (30)	38.5	0.02		946.9	
SEQ#18	FED 2 MODE (NEUT)	205.4	0.04		12.3	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
9010	79	BUIC	350	930M4U/9B4-3	(CON'T)					

COMMENT : ADJUSTED TIMING TO SPEC.

SEQ#20	FEDERAL TEST PROC.	1.47	12.2	579.6	2.21	14.7
SEQ#20	50 MPH CRUISE	25.6	0.01	538.8		
SEQ#20	HIGHWAY FUEL ECON.	0.14	0.6	427.9	2.15	20.7
SEQ#20	4 SPD IDLE (NEUT)	430.4	0.81		35.9	
SEQ#20	4 SPD IDLE (2500)	25.0	0.01		176.0	
SEQ#20	4 SPD IDLE (NEUT)	302.2	0.80		30.7	
SEQ#20	4 SPD IDLE (DRIV)	262.8	1.49		59.4	
SEQ#20	FED 2 MODE (30)	34.8	0.02		808.7	
SEQ#20	FED 2 MODE (NEUT)	454.9	0.14		19.1	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 421 CO: 3.55 GAIN: 20

9014 79 BUIC 403 930M4U/9B4-3

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 287 CO: 2.08 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	1.82	15.5	610.5	1.95	13.9
SEQ#11	50 MPH CRUISE	14.1	0.00	589.4		
SEQ#11	HIGHWAY FUEL ECON.	0.19	1.3	470.7	2.47	18.7
SEQ#11	4 SPD IDLE (NEUT)	200.1	0.36		13.5	
SEQ#11	4 SPD IDLE (2500)	6.9	0.01		149.1	
SEQ#11	4 SPD IDLE (NEUT)	118.1	0.25		14.4	
SEQ#11	4 SPD IDLE (DRIV)	173.7	0.67		31.7	
SEQ#11	FED 2 MODE (30)	27.3	0.01		437.7	
SEQ#11	FED 2 MODE (NEUT)	29.9	0.01		54.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : CARBURETOR INSTALLED

SEQ#19	FEDERAL TEST PROC.	0.68	3.5	647.1	2.11	13.6
SEQ#19	50 MPH CRUISE	2.3	0.01	558.0		
SEQ#19	HIGHWAY FUEL ECON.	0.10	0.5	480.9	2.38	18.4
SEQ#19	4 SPD IDLE (NEUT)	0.0	0.00		57.8	
SEQ#19	4 SPD IDLE (2500)	0.0	0.01		146.7	
SEQ#19	4 SPD IDLE (NEUT)	0.0	0.00		59.1	
SEQ#19	4 SPD IDLE (DRIV)	0.0	0.00		85.9	
SEQ#19	FED 2 MODE (30)	3.6	0.00		385.2	
SEQ#19	FED 2 MODE (NEUT)	8.9	0.00		54.4	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 178 CO: 0.23 GAIN: 90

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	CH <sub>4</sub>	
9014	79	BUIC	403	930M4U/9B4-3	(CON'T)					

COMMENT : TIMING RESET TO +20 AT 1100 RPM, PER EMISSION DECAL.

SEQ#20	FEDERAL TEST PROC.	0.88	8.0	648.6	1.57	13.4
SEQ#20	50 MPH CRUISE	3.3	0.01		441.8	
SEQ#20	HIGHWAY FUEL ECON.	0.10	1.0	477.3	1.92	18.5
SEQ#20	4 SPD IDLE (NEUT)	0.0	0.01		63.5	
SEQ#20	4 SPD IDLE (2500)	0.0	0.01		133.7	
SEQ#20	4 SPD IDLE (NEUT)	0.0	0.00		61.0	
SEQ#20	4 SPD IDLE (DRIV)	0.0	0.00		79.8	
SEQ#20	FED 2 MODE (30)	0.3	0.01		333.6	
SEQ#20	FED 2 MODE (NEUT)	1.3	0.01		53.3	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 46 CO: 0.04 GAIN: 110

9019 79 CHEV 098 910W2 / 9B5-1

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 168 CO: 3.78 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	1.98	24.8	300.7	1.27	25.7
SEQ#11	50 MPH CRUISE	25.0	0.02		1104.7	
SEQ#11	HIGHWAY FUEL ECON.	0.14	1.8	240.3	1.93	36.4
SEQ#11	4 SPD IDLE (NEUT)	195.0	3.43		27.2	
SEQ#11	4 SPD IDLE (2500)	150.7	3.65		133.1	
SEQ#11	4 SPD IDLE (NEUT)	186.0	3.04		37.8	
SEQ#11	FED 2 MODE (30)	37.8	0.02		1114.7	
SEQ#11	FED 2 MODE (NEUT)	141.7	3.33		54.2	

NO FOLLOW UP LANE TEST DONE

COMMENT : REPLACED SPARK PLUGS, OIL AND OIL FILTER, PCV VALVE,  
AIR FILTER ELEMENT, GAS FILTER. SET TO SPEC. EPA  
COULD NOT SUPPLY A CARBURETOR FOR SEQUENCE 19.

SEQ#16	FEDERAL TEST PROC.	1.61	19.5	305.2	1.15	26.0
SEQ#16	50 MPH CRUISE	22.3	0.01		1282.5	
SEQ#16	HIGHWAY FUEL ECON.	0.12	1.3	240.6	2.02	36.5
SEQ#16	4 SPD IDLE (NEUT)	180.0	2.13		52.7	
SEQ#16	4 SPD IDLE (2500)	111.5	2.32		211.1	
SEQ#16	4 SPD IDLE (NEUT)	186.0	2.38		49.5	
SEQ#16	FED 2 MODE (30)	37.1	0.01		1149.8	
SEQ#16	FED 2 MODE (NEUT)	189.4	2.70		72.9	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 168 CO: 3.53 GAIN: 0

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
9019	79	CHEV	098	910W2 / 9B5-1	(CON'T)					

COMMENT : ALL PRE-ADJUSTMENTS DONE FOR BOTH PROPANE GAIN  
AND CO, WITH NEGATIVE RESULTS.

SEQ#18	FEDERAL TEST PROC.	1.68	21.1	313.3	1.26	25.2
SEQ#18	50 MPH CRUISE	16.4	0.01	1260.0		
SEQ#18	HIGHWAY FUEL ECON.	0.13	1.7	249.3	2.20	35.2
SEQ#18	4 SPD IDLE (NEUT)	171.7	2.82		37.6	
SEQ#18	4 SPD IDLE (2500)	115.8	2.64		190.4	
SEQ#18	4 SPD IDLE (NEUT)	176.7	3.01		43.7	
SEQ#18	FED 2 MODE (30)	37.1	0.01	1209.9		
SEQ#18	FED 2 MODE (NEUT)	174.7	3.12		63.2	

NO FOLLOW UP LANE TEST DONE

9020 79 CHEV 098 910W2 / 9B5-1

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 46 CO: 0.47 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	0.80	14.2	349.9	1.45	23.7
SEQ#11	50 MPH CRUISE	3.9	0.01	391.2		
SEQ#11	HIGHWAY FUEL ECON.	0.05	0.8	299.6	1.30	29.5
SEQ#11	4 SPD IDLE (NEUT)	4.6	0.00		77.9	
SEQ#11	4 SPD IDLE (2500)	51.3	1.79		89.8	
SEQ#11	4 SPD IDLE (NEUT)	6.9	0.00		89.7	
SEQ#11	4 SPD IDLE (DRIV)	4.9	0.00	133.7		
SEQ#11	FED 2 MODE (30)	5.3	0.00	673.3		
SEQ#11	FED 2 MODE (NEUT)	3.0	0.00		85.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : CARBURETOR INSTALLED.

SEQ#19	FEDERAL TEST PROC.	0.53	13.6	339.0	1.29	24.5
SEQ#19	50 MPH CRUISE	0.0	0.00	245.7		
SEQ#19	HIGHWAY FUEL ECON.	0.03	0.3	290.5	1.08	30.5
SEQ#19	4 SPD IDLE (NEUT)	3.3	0.00		56.8	
SEQ#19	4 SPD IDLE (2500)	19.0	0.44		96.2	
SEQ#19	4 SPD IDLE (NEUT)	3.6	0.00	121.9	54.4	
SEQ#19	4 SPD IDLE (DRIV)	4.3	0.00	446.8		
SEQ#19	FED 2 MODE (30)	6.6	0.00		58.4	
SEQ#19	FED 2 MODE (NEUT)	3.3	0.00			

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 72 CO: 0.91 GAIN: 50

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NOx <sub>c</sub>	CH <sub>4</sub>	
9021	79	CHEV	098	910W2 / 9B5-1						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 233 CO: 3.97 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	2.14	36.9	397.4	1.66	19.2
SEQ#11 50 MPH CRUISE	1.0	0.01	431.7		
SEQ#11 HIGHWAY FUEL ECON.	0.22	4.6	305.7	1.66	28.3
SEQ#11 4 SPD IDLE (NEUT)	96.9	2.77		132.6	
SEQ#11 4 SPD IDLE (2500)	84.7	2.64		155.0	
SEQ#11 4 SPD IDLE (NEUT)	94.9	2.64		151.6	
SEQ#11 4 SPD IDLE (DRIV)	183.0	2.34		807.7	
SEQ#11 FED 2 MODE (30)	20.0	0.09		440.8	
SEQ#11 FED 2 MODE (NEUT)	82.0	2.12		177.5	

NO FOLLOW UP LANE TEST DONE

COMMENT : CHANGED OIL AND REPLACED AIR FILTER ELEMENT.IDLE  
NEUTRAL 1800 RPM.

SEQ#18 FEDERAL TEST PROC.	1.14	20.4	406.4	1.73	20.1
SEQ#18 50 MPH CRUISE	2.0	0.01	611.6		
SEQ#18 HIGHWAY FUEL ECON.	0.12	2.6	310.4	1.78	28.2
SEQ#18 4 SPD IDLE (NEUT)	75.1	1.85		200.6	
SEQ#18 4 SPD IDLE (2500)	64.2	1.68		253.7	
SEQ#18 4 SPD IDLE (NEUT)	65.2	1.49		217.0	
SEQ#18 4 SPD IDLE (DRIV)	168.3	1.32		1427.8	
SEQ#18 FED 2 MODE (30)	5.9	0.01		971.9	
SEQ#18 FED 2 MODE (NEUT)	1.3	0.33		58.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : INSTALLED CARBURETOR.

SEQ#19 FEDERAL TEST PROC.	0.53	8.4	391.7	1.36	21.8
SEQ#19 50 MPH CRUISE	0.0	0.01	382.1		
SEQ#19 HIGHWAY FUEL ECON.	0.04	0.4	313.5	1.32	28.2
SEQ#19 4 SPD IDLE (NEUT)	0.0	0.02		82.0	
SEQ#19 4 SPD IDLE (2500)	17.4	0.26		219.4	
SEQ#19 4 SPD IDLE (NEUT)	1.0	0.02		91.6	
SEQ#19 4 SPD IDLE (DRIV)	4.6	0.01		361.9	
SEQ#19 FED 2 MODE (30)	10.8	0.01		555.0	
SEQ#19 FED 2 MODE (NEUT)	1.6	0.03		108.8	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 4 CO: 0.07 GAIN: 100

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
9027	79	CHEV	250	910F1H / 9B1-1						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 549 CO: 2.82 GAIN: 20

SEQ#11	FEDERAL TEST PROC.	3.15	46.8	445.6	2.42	16.8
SEQ#11	50 MPH CRUISE	15.8	0.02	1420.3		
SEQ#11	HIGHWAY FUEL ECON.	0.30	2.7	336.0	3.93	26.0
SEQ#11	4 SPD IDLE (NEUT)	326.4	3.39		26.9	
SEQ#11	4 SPD IDLE (2500)	14.1	0.01		284.1	
SEQ#11	4 SPD IDLE (NEUT)	307.2	3.48		29.0	
SEQ#11	FED 2 MODE (30)	94.3	0.28		725.8	
SEQ#11	FED 2 MODE (NEUT)	282.0	3.59		29.6	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE NEUTRAL 800 RPM. CO .4%, HC 900 PPM.

SEQ#13	FEDERAL TEST PROC.	1.60	16.6	471.6	2.82	17.7
SEQ#13	50 MPH CRUISE	6.9	0.01	1247.5		
SEQ#13	HIGHWAY FUEL ECON.	0.07	0.7	327.4	3.77	27.0
SEQ#13	4 SPD IDLE (NEUT)	172.0	0.27		16.5	
SEQ#13	4 SPD IDLE (2500)	6.2	0.01		292.2	
SEQ#13	4 SPD IDLE (NEUT)	109.8	0.15		8.9	
SEQ#13	FED 2 MODE (30)	8.5	0.01		798.6	
SEQ#13	FED 2 MODE (NEUT)	359.5	0.15		8.2	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE SPEED AND MIXTURE.

SEQ#15	FEDERAL TEST PROC.	0.89	7.5	489.7	2.86	17.6
SEQ#15	50 MPH CRUISE	1.0	0.01	1027.0		
SEQ#15	HIGHWAY FUEL ECON.	0.05	0.6	332.3	3.45	26.6
SEQ#15	4 SPD IDLE (NEUT)	3.3	0.01		48.5	
SEQ#15	4 SPD IDLE (2500)	1.0	0.01		228.1	
SEQ#15	4 SPD IDLE (NEUT)	10.5	0.01		54.8	
SEQ#15	FED 2 MODE (30)	1.3	0.01		618.7	
SEQ#15	FED 2 MODE (NEUT)	25.6	0.01		67.7	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
9027	79	CHEV	250	910F1H / 9B1-1	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR, FUEL, OIL AND CRANKCASE BREATHER FILTERS, PCV VALVE, ADJUSTED IDLE MIXTURE AND SPEED.

SEQ#16 FEDERAL TEST PROC.	0.85	7.6	510.9	3.02	16.9
SEQ#16 50 MPH CRUISE	2.6	0.01			
SEQ#16 HIGHWAY FUEL ECON.	0.04	0.2	329.3	3.14	26.9
SEQ#16 4 SPD IDLE (NEUT)	5.3	0.01			
SEQ#16 4 SPD IDLE (2500)	1.0	0.01			
SEQ#16 4 SPD IDLE (NEUT)	8.5	0.01			
SEQ#16 FED 2 MODE (30)	16.7	0.02			
SEQ#16 FED 2 MODE (NEUT)	76.4	0.01			

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 13 CO: 0.02 GAIN: 40

9051 79 CHRY 360 FD3602CA/9E6/1

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 198 CO: 2.55 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	1.33	28.3	650.4	1.61	12.7
SEQ#11 50 MPH CRUISE	6.9	0.01			
SEQ#11 HIGHWAY FUEL ECON.	0.19	2.2	410.5	3.22	21.4
SEQ#11 4 SPD IDLE (NEUT)	7.5	0.11			
SEQ#11 4 SPD IDLE (2500)	0.0	0.00			
SEQ#11 4 SPD IDLE (NEUT)	1.3	0.04			
SEQ#11 4 SPD IDLE (DRIV)	2.3	0.01			
SEQ#11 FED 2 MODE (30)	13.5	0.01			
SEQ#11 FED 2 MODE (NEUT)	11.5	0.04			

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE NEUTRAL 750 RPMs, PROPANE GAIN 50 RPMs.

SEQ#12 FEDERAL TEST PROC.	0.99	14.8	672.3	1.72	12.7
SEQ#12 50 MPH CRUISE	3.6	0.01			
SEQ#12 HIGHWAY FUEL ECON.	0.14	1.9	401.1	2.92	21.9
SEQ#12 4 SPD IDLE (NEUT)	6.6	0.02			
SEQ#12 4 SPD IDLE (2500)	0.0	0.01			
SEQ#12 4 SPD IDLE (NEUT)	0.7	0.01			
SEQ#12 4 SPD IDLE (DRIV)	1.6	0.01			
SEQ#12 FED 2 MODE (30)	6.2	0.01			
SEQ#12 FED 2 MODE (NEUT)	5.9	0.01			

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	CH <sub>4</sub>	
9051	79	CHRY	360	FD3602CA/9E6/1	(CON'T)					

COMMENT : ADJUSTED IDLE NEUTRAL 750 RPMs, PROPANE GAIN 140  
RPMs, CO .03%, HC 25 PPM.

SEQ#15	FEDERAL TEST PROC.	0.72	8.7	665.1	2.25	13.0
SEQ#15	50 MPH CRUISE	2.0	0.01		586.3	
SEQ#15	HIGHWAY FUEL ECON.	0.09	0.9	408.0	3.25	21.7
SEQ#15	4 SPD IDLE (NEUT)	5.9	0.01		52.5	
SEQ#15	4 SPD IDLE (2500)	0.0	0.01		172.7	
SEQ#15	4 SPD IDLE (NEUT)	0.3	0.01		55.5	
SEQ#15	4 SPD IDLE (DRIV)	1.6	0.01		78.5	
SEQ#15	FED 2 MODE (30)	6.6	0.01		421.6	
SEQ#15	FED 2 MODE (NEUT)	4.6	0.01		49.4	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 12 CO: 0.02 GAIN: 120

9052 79 CHRY 360 FD3602CA/9E6/1

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 129 CO: 0.96 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	0.80	12.7	576.8	1.63	14.8
SEQ#11	50 MPH CRUISE	3.3	0.01		375.1	
SEQ#11	HIGHWAY FUEL ECON.	0.13	1.1	366.9	2.06	24.0
SEQ#11	4 SPD IDLE (NEUT)	23.0	0.15		10.9	
SEQ#11	4 SPD IDLE (2500)	0.0	0.01		131.6	
SEQ#11	4 SPD IDLE (NEUT)	26.9	0.25		13.0	
SEQ#11	4 SPD IDLE (DRIV)	1.3	0.01		22.3	
SEQ#11	FED 2 MODE (30)	11.8	0.01		291.1	
SEQ#11	FED 2 MODE (NEUT)	32.5	0.13		22.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE SPEED 730 NEUTRAL, PROPANE GAIN 70 RPM.  
THIS WAS MINIMUM PROPANE GAIN OBTAINABLE AT THIS  
SPEED. FURTHER ENRICHMENT RESULTED IN NO IDLE  
RPM INCREASE. FURTHER LEANING OF MIXTURE  
RESULTED IN IDLE SPEED DROP AND GREATER PROPANE  
RPM GAIN.

SEQ#12	FEDERAL TEST PROC.	0.48	6.1	608.0	1.71	14.3
SEQ#12	50 MPH CRUISE	0.0	0.00		263.9	
SEQ#12	HIGHWAY FUEL ECON.	0.07	0.4	359.1	1.73	24.7
SEQ#12	4 SPD IDLE (NEUT)	26.9	0.01		38.1	
SEQ#12	4 SPD IDLE (2500)	0.0	0.00		103.1	
SEQ#12	4 SPD IDLE (NEUT)	6.2	0.00		41.9	
SEQ#12	4 SPD IDLE (DRIV)	3.9	0.00		58.6	
SEQ#12	FED 2 MODE (30)	2.3	0.01		227.5	
SEQ#12	FED 2 MODE (NEUT)	24.6	0.01		39.9	

NO FOLLOW UP LANE TEST DONE

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
9052	79	CHRY	360	FD3602CA/9E6/1	(CON'T)					

COMMENT : IDLE MIXTURE AND SPEED SET TO SPEC. PROPANE ENRICHMENT WITH EGR, ESC, PCV AND EVAP PURGE LINES DISCONNECTED. EGR AND ESC LINES PLUGGED. CARB SWITCH GROUNDED. ENRICHED RPM 890 IDLE 750.

SEQ#15	FEDERAL TEST PROC.	0.48	7.0	625.3	1.77	13.9
SEQ#15	50 MPH CRUISE	6.9	0.01		303.3	
SEQ#15	HIGHWAY FUEL ECON.	0.06	0.3	368.2	1.84	24.1
SEQ#15	4 SPD IDLE (NEUT)	17.4	0.01		47.1	
SEQ#15	4 SPD IDLE (2500)	0.0	0.01		106.0	
SEQ#15	4 SPD IDLE (NEUT)	2.6	0.01		50.1	
SEQ#15	4 SPD IDLE (DRIV)	0.0	0.01		67.7	
SEQ#15	FED 2 MODE (30)	0.0	0.01		245.7	
SEQ#15	FED 2 MODE (NEUT)	15.8	0.01		45.7	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR, FUEL, OIL FILTERS, PCV VALVE AND ENGINE OIL. REPLACED AIR INJECTION VALVE. ADJUSTED TIMING, IDLE MIXTURE AND SPEED PER EPA PROCEDURES.

SEQ#16	FEDERAL TEST PROC.	0.75	7.3	646.2	1.87	13.4
SEQ#16	50 MPH CRUISE	0.0	0.00		285.1	
SEQ#16	HIGHWAY FUEL ECON.	0.06	0.2	376.0	1.88	23.6
SEQ#16	4 SPD IDLE (NEUT)	15.8	0.00		48.6	
SEQ#16	4 SPD IDLE (2500)	0.0	0.00		109.3	
SEQ#16	4 SPD IDLE (NEUT)	0.0	0.00		52.6	
SEQ#16	4 SPD IDLE (DRIV)	0.0	0.00		76.4	
SEQ#16	FED 2 MODE (30)	0.0	0.00		292.2	
SEQ#16	FED 2 MODE (NEUT)	17.4	0.01		43.0	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 13 CO: 0.02 GAIN: 70

9062 79 FORD 140 2.3TF1X92 / BE

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 332 CO: 8.22 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	0.52	3.9	550.1	1.40	15.9
SEQ#11	50 MPH CRUISE	7.5	0.00		190.6	
SEQ#11	HIGHWAY FUEL ECON.	0.05	0.1	338.3	1.64	26.2
SEQ#11	4 SPD IDLE (NEUT)	7.2	0.00		12.6	
SEQ#11	4 SPD IDLE (2500)	6.9	0.00		30.1	
SEQ#11	4 SPD IDLE (NEUT)	7.2	0.00		11.5	
SEQ#11	FED 2 MODE (30)	8.2	0.00		136.7	
SEQ#11	FED 2 MODE (NEUT)	7.5	0.00		12.9	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	CH <sub>4</sub>	
9062	79	FORD	140	2.3TF1X92 / BE	(CON'T)					

COMMENT : IDLE RPM 900 NEUTRAL, PROPANE GAIN 50 RPM.

SEQ#12	FEDERAL TEST PROC.	0.73	4.2	544.7	1.50	16.0
SEQ#12	50 MPH CRUISE	16.1	0.01		354.8	
SEQ#12	HIGHWAY FUEL ECON.	0.06	0.3	357.2	1.60	24.8
SEQ#12	4 SPD IDLE (NEUT)	14.1	0.00		29.1	
SEQ#12	4 SPD IDLE (2500)	7.5	0.00		57.4	
SEQ#12	4 SPD IDLE (NEUT)	6.6	0.00		28.5	
SEQ#12	FED 2 MODE (30)	28.9	0.01		241.7	
SEQ#12	FED 2 MODE (NEUT)	15.8	0.00		39.3	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE NEUTRAL 900 RPM, CO .1%, HC 70 PPM.

SEQ#15	FEDERAL TEST PROC.	0.52	3.2	542.8	1.27	16.2
SEQ#15	50 MPH CRUISE	11.5	0.00		150.8	
SEQ#15	HIGHWAY FUEL ECON.	0.05	0.3	341.7	1.56	25.9
SEQ#15	4 SPD IDLE (NEUT)	28.3	0.00		17.8	
SEQ#15	4 SPD IDLE (2500)	15.8	0.00		33.6	
SEQ#15	4 SPD IDLE (NEUT)	20.4	0.00		19.8	
SEQ#15	FED 2 MODE (30)	16.7	0.01		133.9	
SEQ#15	FED 2 MODE (NEUT)	10.5	0.00		20.5	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 12 CO: 0.02 GAIN: 100

9066 79 FORD 171 2.8B1X92 / DA

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 13 CO: 0.02 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	1.38	6.1	482.0	2.23	17.9
SEQ#11	50 MPH CRUISE	16.4	0.00		317.4	
SEQ#11	HIGHWAY FUEL ECON.	0.15	0.1	373.0	1.73	23.8
SEQ#11	4 SPD IDLE (NEUT)	428.1	2.13		51.4	
SEQ#11	4 SPD IDLE (2500)	30.6	0.00		266.9	
SEQ#11	4 SPD IDLE (NEUT)	35.8	0.00		40.9	
SEQ#11	4 SPD IDLE (DRIV)	232.5	2.62		60.3	
SEQ#11	FED 2 MODE (30)	74.7	0.01		830.0	
SEQ#11	FED 2 MODE (NEUT)	30.2	0.01		44.1	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
9066	79	FORD	171	2.8B1X92 / DA	(CON'T)					

COMMENT : IDLE RPM 620, PROPANE GAIN 50 RPM.

SEQ#12	FEDERAL TEST PROC.	0.84	5.4	482.1	2.38	18.0
SEQ#12	50 MPH CRUISE	21.3	0.01	352.8		
SEQ#12	HIGHWAY FUEL ECON.	0.16	0.1	377.2	1.90	23.5
SEQ#12	4 SPD IDLE (NEUT)	355.0	2.13		51.4	
SEQ#12	4 SPD IDLE (2500)	33.2	0.01		267.9	
SEQ#12	4 SPD IDLE (NEUT)	41.1	0.01		41.3	
SEQ#12	4 SPD IDLE (DRIV)	238.6	3.13		56.4	
SEQ#12	FED 2 MODE (30)	65.8	0.01		728.9	
SEQ#12	FED 2 MODE (NEUT)	26.9	0.01		47.4	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE SPEED AND MIXTURE.

SEQ#15	FEDERAL TEST PROC.	0.75	6.8	478.9	2.31	18.0
SEQ#15	50 MPH CRUISE	20.0	0.00	286.1		
SEQ#15	HIGHWAY FUEL ECON.	0.15	0.1	374.6	1.82	23.7
SEQ#15	4 SPD IDLE (NEUT)	37.5	0.01		90.6	
SEQ#15	4 SPD IDLE (2500)	10.8	0.01		220.1	
SEQ#15	4 SPD IDLE (NEUT)	119.8	0.00		75.9	
SEQ#15	4 SPD IDLE (DRIV)	30.6	0.02		146.2	
SEQ#15	FED 2 MODE (30)	42.1	0.01		779.4	
SEQ#15	FED 2 MODE (NEUT)	82.0	0.01		76.4	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 38 CO: 0.02 GAIN: 100

9072 79 FORD 302 5.0C2X124/LA

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 60 CO: 0.02 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	0.74	9.1	629.3	2.14	13.7
SEQ#11	50 MPH CRUISE	25.6	0.00	612.6		
SEQ#11	HIGHWAY FUEL ECON.	0.21	0.4	446.9	3.35	19.8
SEQ#11	4 SPD IDLE (NEUT)	273.9	2.56		68.9	
SEQ#11	4 SPD IDLE (2500)	190.7	0.00		149.8	
SEQ#11	4 SPD IDLE (NEUT)	7.9	0.00		142.4	
SEQ#11	4 SPD IDLE (DRIV)	9.5	0.00		335.6	
SEQ#11	FED 2 MODE (30)	82.7	0.00		401.3	
SEQ#11	FED 2 MODE (NEUT)	17.7	0.00		93.3	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 7 CO: 0.00 GAIN: 0

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
9072	79	FORD	302	5.0C2X124/LA	(CON'T)					

COMMENT : IDLE NEUTRAL 850 RPM, WITH PROPANE 900 RPM.

SEQ#12 FEDERAL TEST PROC.	0.64	6.0	576.9	2.24	15.1
SEQ#12 50 MPH CRUISE	30.9	0.00		641.9	
SEQ#12 HIGHWAY FUEL ECON.	0.20	0.2	427.9	3.00	20.7
SEQ#12 4 SPD IDLE (NEUT)	31.5	0.08		57.4	
SEQ#12 4 SPD IDLE (2500)	134.7	0.00		148.0	
SEQ#12 4 SPD IDLE (NEUT)	5.6	0.00		108.5	
SEQ#12 4 SPD IDLE (DRIV)	13.1	0.00		252.7	
SEQ#12 FED 2 MODE (30)	73.4	0.00		371.0	
SEQ#12 FED 2 MODE (NEUT)	29.6	0.00		69.6	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 7 CO: 0.00 GAIN: 50

COMMENT : ADJUSTED TIMING, IDLE SPEED & MIXTURE TO SPEC.

SEQ#15 FEDERAL TEST PROC.	0.91	6.5	600.6	2.90	14.5
SEQ#15 50 MPH CRUISE	30.9	0.00		661.1	
SEQ#15 HIGHWAY FUEL ECON.	0.23	0.3	444.1	3.55	19.9
SEQ#15 4 SPD IDLE (NEUT)	91.3	0.00		124.2	
SEQ#15 4 SPD IDLE (2500)	189.7	0.00		171.1	
SEQ#15 4 SPD IDLE (NEUT)	10.5	0.00		168.8	
SEQ#15 4 SPD IDLE (DRIV)	8.5	0.00		363.9	
SEQ#15 FED 2 MODE (30)	93.3	0.00		448.9	
SEQ#15 FED 2 MODE (NEUT)	83.7	0.00		105.4	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 10 CO: 0.00 GAIN: 100

9074 79 FORD 140 2.3A1X92 / BA

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 230 CO: 5.20 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	1.17	30.9	413.2	1.19	19.1
SEQ#11 50 MPH CRUISE	3.0	0.00		479.2	
SEQ#11 HIGHWAY FUEL ECON.	0.14	2.3	328.8	2.24	26.7
SEQ#11 4 SPD IDLE (NEUT)	208.8	5.60		48.5	
SEQ#11 4 SPD IDLE (2500)	45.4	0.00		106.2	
SEQ#11 4 SPD IDLE (NEUT)	202.7	6.08		47.8	
SEQ#11 4 SPD IDLE (DRIV)	243.9	6.32		48.1	
SEQ#11 FED 2 MODE (30)	35.2	0.01		466.0	
SEQ#11 FED 2 MODE (NEUT)	233.9	6.33		46.2	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 202 CO: 6.17 GAIN: 0

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NOx <sub>c</sub>	CH <sub>4</sub>	
9074	79	FORD	140	2.3A1X92 / BA	(CON'T)					

COMMENT : IDLE NEUTRAL 1020 RPM, WITH PROPANE 1070 RPM.

SEQ#12 FEDERAL TEST PROC.	0.44	16.0	432.4	1.21	19.3
SEQ#12 50 MPH CRUISE	13.8	0.00		581.3	
SEQ#12 HIGHWAY FUEL ECON.	0.06	1.3	334.9	2.35	26.3
SEQ#12 4 SPD IDLE (NEUT)	156.7	0.59		31.7	
SEQ#12 4 SPD IDLE (2500)	227.2	0.00		102.4	
SEQ#12 4 SPD IDLE (NEUT)	163.3	1.08		52.3	
SEQ#12 4 SPD IDLE (DRIV)	30.2	0.00		224.4	
SEQ#12 FED 2 MODE (30)	33.8	0.00		396.3	
SEQ#12 FED 2 MODE (NEUT)	106.2	1.56		59.3	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 162 CO: 1.10 GAIN: 40

COMMENT : IDLE CO .5%, IDLE NEUTRAL 970 RPM.

SEQ#13 FEDERAL TEST PROC.	0.44	16.5	456.0	1.14	18.4
SEQ#13 50 MPH CRUISE	0.0	0.00		767.3	
SEQ#13 HIGHWAY FUEL ECON.	0.06	1.7	345.8	2.57	25.5
SEQ#13 4 SPD IDLE (NEUT)	27.6	0.00		77.1	
SEQ#13 4 SPD IDLE (2500)	24.0	0.00		104.9	
SEQ#13 4 SPD IDLE (NEUT)	0.0	0.00		71.6	
SEQ#13 4 SPD IDLE (DRIV)	0.0	0.01		75.2	
SEQ#13 FED 2 MODE (30)	9.5	0.00		470.1	
SEQ#13 FED 2 MODE (NEUT)	0.0	0.02		54.6	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 0 CO: 0.00 GAIN: 100

COMMENT : ADJUSTED IDLE SPEED & MIXTURE TO SPEC.

SEQ#15 FEDERAL TEST PROC.	0.45	13.1	445.4	1.21	19.0
SEQ#15 50 MPH CRUISE	0.0	0.00		630.8	
SEQ#15 HIGHWAY FUEL ECON.	0.06	1.4	338.7	2.41	26.0
SEQ#15 4 SPD IDLE (NEUT)	9.5	0.00		74.0	
SEQ#15 4 SPD IDLE (2500)	83.3	0.01		101.1	
SEQ#15 4 SPD IDLE (NEUT)	0.0	0.02		68.0	
SEQ#15 4 SPD IDLE (DRIV)	13.5	0.01		221.4	
SEQ#15 FED 2 MODE (30)	15.8	0.00		505.5	
SEQ#15 FED 2 MODE (NEUT)	3.0	0.00		83.2	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 0 CO: 0.02 GAIN: 140

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS				FUEL ECON
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	
9091	79	MERC	351	5.8MD2X124/TND					

**PRELIMINARY LANE TEST:**

CAT: P FUEL: P  
HC: 12 CO: 0.02 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	0.68	14.3	759.9	0.94	11.3
SEQ#11 50 MPH CRUISE	10.2	0.01	301.3		
SEQ#11 HIGHWAY FUEL ECON.	0.13	0.7	496.3	1.09	17.8
SEQ#11 4 SPD IDLE (NEUT)	165.3	3.83		58.5	
SEQ#11 4 SPD IDLE (2500)	34.5	0.01		89.8	
SEQ#11 4 SPD IDLE (NEUT)	5.6	0.00		57.3	
SEQ#11 4 SPD IDLE (DRIV)	190.0	4.13		72.4	
SEQ#11 FED 2 MODE (30)	30.2	0.01		280.0	
SEQ#11 FED 2 MODE (NEUT)	7.9	0.01		49.7	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 600 RPM, IDLE NEUTRAL 780 RPM,  
PROPANE GAIN 50 RPM. USED UNIVERSAL METHOD.

SEQ#12 FEDERAL TEST PROC.	0.72	11.1	721.3	0.99	12.0
SEQ#12 50 MPH CRUISE	6.2	0.01	245.7		
SEQ#12 HIGHWAY FUEL ECON.	0.12	0.2	488.9	1.10	18.1
SEQ#12 4 SPD IDLE (NEUT)	51.3	0.00		72.4	
SEQ#12 4 SPD IDLE (2500)	45.0	0.00		89.1	
SEQ#12 4 SPD IDLE (NEUT)	9.2	0.00		68.7	
SEQ#12 4 SPD IDLE (DRIV)	8.2	0.00		162.4	
SEQ#12 FED 2 MODE (30)	21.0	0.00		275.0	
SEQ#12 FED 2 MODE (NEUT)	29.6	0.00		60.9	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE DRIVE 600 RPM, IDLE CO .25%.

SEQ#15 FEDERAL TEST PROC.	0.80	14.0	733.4	0.98	11.7
SEQ#15 50 MPH CRUISE	6.9	0.01	256.8		
SEQ#15 HIGHWAY FUEL ECON.	0.12	0.3	503.8	1.07	17.6
SEQ#15 4 SPD IDLE (NEUT)	56.9	0.00		74.7	
SEQ#15 4 SPD IDLE (2500)	54.9	0.00		92.2	
SEQ#15 4 SPD IDLE (NEUT)	6.9	0.00		66.3	
SEQ#15 4 SPD IDLE (DRIV)	8.5	0.00		149.6	
SEQ#15 FED 2 MODE (30)	23.0	0.01		277.0	
SEQ#15 FED 2 MODE (NEUT)	39.8	0.00		58.7	

FOLLOW UP LANE TEST:  
CAT: P FUEL: P  
HC: 9 CO: 0.02 GAIN: 120

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
9105	79	PLYM	086	4G1M-F / E-79-1						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 189 CO: 4.24 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	2.07	17.6	252.9	1.84	30.9
SEQ#11	50 MPH CRUISE	98.2	0.29	1147.3		
SEQ#11	HIGHWAY FUEL ECON.	0.71	5.2	206.0	2.78	41.0
SEQ#11	4 SPD IDLE (NEUT)	197.7	2.30		70.9	
SEQ#11	4 SPD IDLE (2500)	262.8	4.95		77.9	
SEQ#11	4 SPD IDLE (NEUT)	222.8	2.84		69.6	
SEQ#11	FED 2 MODE (30)	112.5	0.26		858.3	
SEQ#11	FED 2 MODE (NEUT)	232.9	3.39		73.2	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE SPEED NEUTRAL 700 RPMs, PROPANE  
GAIN 60 RPMs.

SEQ#12	FEDERAL TEST PROC.	1.91	12.2	246.8	1.79	32.6
SEQ#12	50 MPH CRUISE	80.0	0.17	1092.1		
SEQ#12	HIGHWAY FUEL ECON.	0.58	2.9	201.7	2.39	42.6
SEQ#12	4 SPD IDLE (NEUT)	113.1	0.06		70.2	
SEQ#12	4 SPD IDLE (2500)	278.1	5.24		76.7	
SEQ#12	4 SPD IDLE (NEUT)	153.7	0.39		60.0	
SEQ#12	FED 2 MODE (30)	97.2	0.20		916.8	
SEQ#12	FED 2 MODE (NEUT)	141.7	0.14		64.6	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE NEUTRAL 700 RPMs, CO .3%, HC 120  
PPM.

SEQ#13	FEDERAL TEST PROC.	1.81	11.9	254.2	1.70	31.9
SEQ#13	50 MPH CRUISE	122.1	0.26	1122.2		
SEQ#13	HIGHWAY FUEL ECON.	0.61	5.0	201.0	2.41	42.1
SEQ#13	4 SPD IDLE (NEUT)	133.7	0.08		78.6	
SEQ#13	4 SPD IDLE (2500)	326.4	6.13		68.9	
SEQ#13	4 SPD IDLE (NEUT)	165.3	0.12		70.8	
SEQ#13	FED 2 MODE (30)	134.1	0.85		1042.1	
SEQ#13	FED 2 MODE (NEUT)	154.3	0.10		67.9	

NO FOLLOW UP LANE TEST DONE

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
9105	79	PLYM	086	4G1M-F / E-79-1	(CON'T)					

COMMENT : ADJUSTED IDLE SPEED AND MIXTURE.

SEQ#15 FEDERAL TEST PROC.	1.76	11.5	261.8	1.60	31.1
SEQ#15 50 MPH CRUISE	76.4	0.26		849.2	
SEQ#15 HIGHWAY FUEL ECON.	0.62	4.8	190.5	2.08	44.4
SEQ#15 4 SPD IDLE (NEUT)	128.7	0.05		62.5	
SEQ#15 4 SPD IDLE (2500)	251.9	4.40		75.7	
SEQ#15 4 SPD IDLE (NEUT)	147.0	0.05		68.6	
SEQ#15 FED 2 MODE (30)	107.8	0.30		712.7	
SEQ#15 FED 2 MODE (NEUT)	165.0	0.05		75.5	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 245 CO: 0.09 GAIN: 160COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, POINTS,  
CONDENSER, FUEL FILTER, OIL FILTER, CRANKCASE AND  
AIR FILTER. RESET TIMING, DWELL AND IDLE SPEED.

SEQ#16 FEDERAL TEST PROC.	1.73	9.9	272.3	1.91	30.3
SEQ#16 50 MPH CRUISE	63.5	0.17		1227.4	
SEQ#16 HIGHWAY FUEL ECON.	0.60	3.6	219.6	2.96	39.1
SEQ#16 4 SPD IDLE (NEUT)	113.1	0.05		57.1	
SEQ#16 4 SPD IDLE (2500)	188.4	1.98		83.1	
SEQ#16 4 SPD IDLE (NEUT)	137.4	0.04		69.4	
SEQ#16 FED 2 MODE (30)	80.7	0.11		966.9	
SEQ#16 FED 2 MODE (NEUT)	132.1	0.04		88.4	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 236 CO: 0.10 GAIN: 100

9108 79 PLYM 225 FD2252CA/9E3/2

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 12 CO: 4.22 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	1.35	18.5	475.2	2.02	17.5
SEQ#11 50 MPH CRUISE	10.5	0.01		705.6	
SEQ#11 HIGHWAY FUEL ECON.	0.21	1.5	349.2	2.17	25.2
SEQ#11 4 SPD IDLE (NEUT)	117.5	1.60		57.6	
SEQ#11 4 SPD IDLE (2500)	12.8	0.01		294.2	
SEQ#11 4 SPD IDLE (NEUT)	123.4	1.85		54.1	
SEQ#11 4 SPD IDLE (DRIV)	118.8	0.08		54.9	
SEQ#11 FED 2 MODE (30)	24.0	0.02		3224.5	
SEQ#11 FED 2 MODE (NEUT)	133.4	1.90		83.1	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE				FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	
9108	79	PLYM	225	FD2252CA/9E3/2	(CON'T)				

COMMENT : ADJUSTED IDLE NEUTRAL 750 RPM, PROPANE GAIN 60  
RPM. USED UNIVERSAL METHOD.

SEQ#12 FEDERAL TEST PROC.	0.75	11.1	484.4	2.09	17.6
SEQ#12 50 MPH CRUISE	5.3	0.01	786.5		
SEQ#12 HIGHWAY FUEL ECON.	0.09	1.4	356.3	2.15	24.7
SEQ#12 4 SPD IDLE (NEUT)	7.2	0.01		62.7	
SEQ#12 4 SPD IDLE (2500)	7.9	0.01		225.5	
SEQ#12 4 SPD IDLE (NEUT)	4.6	0.01		65.4	
SEQ#12 4 SPD IDLE (DRIV)	8.2	0.00		177.3	
SEQ#12 FED 2 MODE (30)	21.0	0.02		3037.2	
SEQ#12 FED 2 MODE (NEUT)	7.5	0.00		69.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE NEUTRAL 750 RPM, CO .4%, HC 80 PPM.  
USED UNIVERSAL METHOD.

SEQ#13 FEDERAL TEST PROC.	0.82	9.3	493.2	2.04	17.4
SEQ#13 50 MPH CRUISE	6.6	0.01	615.7		
SEQ#13 HIGHWAY FUEL ECON.	0.07	0.6	360.1	2.09	24.6
SEQ#13 4 SPD IDLE (NEUT)	13.8	0.01		53.6	
SEQ#13 4 SPD IDLE (2500)	13.5	0.01		186.5	
SEQ#13 4 SPD IDLE (NEUT)	5.6	0.01		60.9	
SEQ#13 4 SPD IDLE (DRIV)	35.2	0.01		220.1	
SEQ#13 FED 2 MODE (30)	17.1	0.02		2672.3	
SEQ#13 FED 2 MODE (NEUT)	10.8	0.01		75.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE NEUTRAL 750 RPM, PROPANE GAIN 890  
RPM, CO .1%, HC 75 PPM.

SEQ#15 FEDERAL TEST PROC.	0.81	8.5	539.4	1.84	16.0
SEQ#15 50 MPH CRUISE	2.0	0.01	695.5		
SEQ#15 HIGHWAY FUEL ECON.	0.07	1.0	354.4	2.14	24.9
SEQ#15 4 SPD IDLE (NEUT)	27.3	0.01		40.8	
SEQ#15 4 SPD IDLE (2500)	12.1	0.01		202.9	
SEQ#15 4 SPD IDLE (NEUT)	19.4	0.01		37.7	
SEQ#15 4 SPD IDLE (DRIV)	6.2	0.01		72.2	
SEQ#15 FED 2 MODE (30)	18.4	0.01		2632.9	
SEQ#15 FED 2 MODE (NEUT)	28.9	0.01		76.2	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
9108	79	PLYM	225	FD2252CA/9E3/2	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, PCV VALVE, OIL AND OIL FILTER, FUEL FILTER, CHECK VALVE IN ASPIRATOR SYSTEM, SET TO SPEC.

SEQ#	TEST	HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	FUEL ECON MPG
16	FEDERAL TEST PROC.	0.93	8.4	500.4	1.89		17.2
16	50 MPH CRUISE	8.9	0.01		648.0		
16	HIGHWAY FUEL ECON.	0.07	1.0	357.8	1.98		24.7
16	4 SPD IDLE (NEUT)	24.6	0.01			35.1	
16	4 SPD IDLE (2500)	11.2	0.01			232.5	
16	4 SPD IDLE (NEUT)	21.7	0.00			36.8	
16	4 SPD IDLE (DRIV)	9.5	0.01			53.3	
16	FED 2 MODE (30)	14.8	0.01			2459.8	
16	FED 2 MODE (NEUT)	29.9	0.01			65.2	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 13 CO: 0.02 GAIN: 140

9126 79 TOYO 134 20R(V) / EV-R

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 21 CO: 0.73 GAIN: 0

SEQ#	TEST	HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	FUEL ECON MPG
11	FEDERAL TEST PROC.	0.46	12.9	462.4	3.98		18.3
11	50 MPH CRUISE	10.8	0.41		1352.7		
11	HIGHWAY FUEL ECON.	0.15	6.3	287.5	4.52		29.8
11	4 SPD IDLE (NEUT)	26.9	0.69			18.5	
11	4 SPD IDLE (2500)	4.3	0.22			60.8	
11	4 SPD IDLE (NEUT)	17.7	0.64			22.8	
11	FED 2 MODE (30)	3.6	0.38			855.2	
11	FED 2 MODE (NEUT)	10.5	0.64			29.4	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE NEUTRAL 850 RPM, PROPANE GAIN 50 RPM. USED UNIVERSAL METHOD.

SEQ#	TEST	HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	FUEL ECON MPG
12	FEDERAL TEST PROC.	0.27	7.8	487.7	2.49		17.7
12	50 MPH CRUISE	0.0	0.17		610.6		
12	HIGHWAY FUEL ECON.	0.03	2.9	318.3	2.94		27.5
12	4 SPD IDLE (NEUT)	20.7	0.35			24.3	
12	4 SPD IDLE (2500)	0.3	0.19			68.5	
12	4 SPD IDLE (NEUT)	14.4	0.38			27.5	
12	FED 2 MODE (30)	3.0	0.24			591.4	
12	FED 2 MODE (NEUT)	13.8	0.37			30.6	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 29 CO: 0.25 GAIN: 30

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
9126	79	TOYO	134	20R(V) / EV-R	(CON'T)					

COMMENT : ADJUSTED IDLE NEUTRAL 800 RPM, CO .15%, HC 35 PPM.

SEQ#15 FEDERAL TEST PROC.	0.55	8.0	497.1	2.65	17.4
SEQ#15 50 MPH CRUISE	0.7	0.19		799.1	
SEQ#15 HIGHWAY FUEL ECON.	0.07	2.7	327.9	2.97	26.7
SEQ#15 4 SPD IDLE (NEUT)	32.2	0.11		28.4	
SEQ#15 4 SPD IDLE (2500)	1.0	0.17		70.9	
SEQ#15 4 SPD IDLE (NEUT)	16.7	0.13		36.7	
SEQ#15 FED 2 MODE (30)	1.0	0.20		523.7	
SEQ#15 FED 2 MODE (NEUT)	14.4	0.15		43.1	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 59 CO: 0.07 GAIN: 40

9131 79 DATS 085 A14OF/EVPCARB2

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 41 CO: 0.84 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	1.58	10.6	335.6	2.95	24.8
SEQ#11 50 MPH CRUISE	96.9	0.11		1530.5	
SEQ#11 HIGHWAY FUEL ECON.	1.06	2.5	249.7	4.52	34.6
SEQ#11 4 SPD IDLE (NEUT)	60.2	0.43		18.7	
SEQ#11 4 SPD IDLE (2500)	26.0	0.24		96.2	
SEQ#11 4 SPD IDLE (NEUT)	101.9	0.68		28.4	
SEQ#11 FED 2 MODE (30)	87.3	0.09		1014.5	
SEQ#11 FED 2 MODE (NEUT)	72.4	0.62		36.4	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE SPEED 700 RPM, PROPANE GAIN 50 RPM.

SEQ#12 FEDERAL TEST PROC.	2.30	7.3	319.7	2.89	26.2
SEQ#12 50 MPH CRUISE	85.7	0.12		1668.3	
SEQ#12 HIGHWAY FUEL ECON.	1.11	2.2	251.7	4.55	34.3
SEQ#12 4 SPD IDLE (NEUT)	151.4	0.10		14.2	
SEQ#12 4 SPD IDLE (2500)	28.3	0.21		120.3	
SEQ#12 4 SPD IDLE (NEUT)	159.0	0.10		20.1	
SEQ#12 FED 2 MODE (30)	81.7	0.09		964.4	
SEQ#12 FED 2 MODE (NEUT)	126.7	0.10		32.7	

NO FOLLOW UP LANE TEST DONE

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
9131	79	DATS	085	A140F/EVPCARB2	(CON'T)					

COMMENT : ADJUSTED IDLE SPEED AND MIXTURE TO SPEC.

SEQ#15 FEDERAL TEST PROC.	1.86	8.2	321.5	2.86	26.1
SEQ#15 50 MPH CRUISE	80.7	0.11	1643.2		
SEQ#15 HIGHWAY FUEL ECON.	1.03	2.5	248.5	4.61	34.7
SEQ#15 4 SPD IDLE (NEUT)	105.5	0.21		25.4	
SEQ#15 4 SPD IDLE (2500)	25.0	0.29		121.1	
SEQ#15 4 SPD IDLE (NEUT)	94.6	0.21		29.9	
SEQ#15 FED 2 MODE (30)	84.7	0.10		1089.6	
SEQ#15 FED 2 MODE (NEUT)	101.9	0.18		44.4	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED AIR, FUEL, OIL AND CRANKCASE BREather FILTERS, SPARK PLUGS, PCV VALVE, CRANKCASE OIL. ADJUSTED TIMING, IDLE SPEED AND MIXTURE.

SEQ#16 FEDERAL TEST PROC.	1.46	8.3	361.1	1.47	23.4
SEQ#16 50 MPH CRUISE	8.9	0.15	413.5		
SEQ#16 HIGHWAY FUEL ECON.	0.40	3.1	276.4	1.67	31.4
SEQ#16 4 SPD IDLE (NEUT)	94.9	0.27		23.9	
SEQ#16 4 SPD IDLE (2500)	14.1	0.16		84.7	
SEQ#16 4 SPD IDLE (NEUT)	82.0	0.18		31.1	
SEQ#16 FED 2 MODE (30)	18.4	0.14		332.6	
SEQ#16 FED 2 MODE (NEUT)	75.7	0.15		42.0	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 113 CO: 0.31 GAIN: 25

9140 79 VOLK 089 37F / 37

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 270 CO: 4.60 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	2.60	49.0	349.3	1.42	20.4
SEQ#11 50 MPH CRUISE	198.7	2.84	1002.0		
SEQ#11 HIGHWAY FUEL ECON.	1.60	33.3	212.9	1.29	32.8
SEQ#11 4 SPD IDLE (NEUT)	217.8	9.70		38.1	
SEQ#11 4 SPD IDLE (2500)	318.7	8.72		71.9	
SEQ#11 4 SPD IDLE (NEUT)	117.1	5.83		66.4	
SEQ#11 FED 2 MODE (30)	258.9	4.85		350.8	
SEQ#11 FED 2 MODE (NEUT)	113.5	5.75		67.1	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 119 CO: 5.84 GAIN: 0

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE				FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	
9140	79	VOLK	089	37F / 37	(CON'T)				

COMMENT : PROPANE GAIN 50 RPM.

SEQ#12 FEDERAL TEST PROC.	1.82	19.5	373.8	1.69	21.6
SEQ#12 50 MPH CRUISE	138.7	0.63	1119.7		
SEQ#12 HIGHWAY FUEL ECON.	1.13	8.9	237.6	2.23	34.8
SEQ#12 4 SPD IDLE (NEUT)	88.0	1.39		71.1	
SEQ#12 4 SPD IDLE (2500)	55.3	1.15		167.8	
SEQ#12 4 SPD IDLE (NEUT)	63.8	1.15		73.6	
SEQ#12 FED 2 MODE (30)	169.7	1.32		986.9	
SEQ#12 FED 2 MODE (NEUT)	72.1	1.37		76.4	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 63 CO: 1.16 GAIN: 80

COMMENT : IDLE CO .5%, IDLE NEUTRAL 925 RPM.

SEQ#13 FEDERAL TEST PROC.	1.77	15.4	376.2	1.99	21.9
SEQ#13 50 MPH CRUISE	162.7	1.55	1515.5		
SEQ#13 HIGHWAY FUEL ECON.	1.39	19.9	225.0	1.89	34.1
SEQ#13 4 SPD IDLE (NEUT)	58.9	0.25		77.3	
SEQ#13 4 SPD IDLE (2500)	87.0	4.17		103.6	
SEQ#13 4 SPD IDLE (NEUT)	47.0	0.28		78.1	
SEQ#13 FED 2 MODE (30)	166.0	1.38		1009.5	
SEQ#13 FED 2 MODE (NEUT)	44.4	0.31		79.7	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 46 CO: 0.27 GAIN: 230

COMMENT : ADJUSTED IDLE SPEED &amp; MIXTURE TO SPEC.

SEQ#15 FEDERAL TEST PROC.	1.50	10.9	387.4	2.04	21.7
SEQ#15 50 MPH CRUISE	143.0	1.51	648.0		
SEQ#15 HIGHWAY FUEL ECON.	1.30	16.1	229.1	1.87	34.3
SEQ#15 4 SPD IDLE (NEUT)	42.4	0.75		93.0	
SEQ#15 4 SPD IDLE (2500)	98.9	4.92		100.6	
SEQ#15 4 SPD IDLE (NEUT)	30.2	0.22		89.0	
SEQ#15 FED 2 MODE (30)	204.7	2.68		751.1	
SEQ#15 FED 2 MODE (NEUT)	40.1	0.22		87.6	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 30 CO: 0.22 GAIN: 80

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	GRAMS / MILE CO <sub>2</sub>	NO <sub>Xc</sub>	CH <sub>4</sub>	
9143	79	MAZD	070	9REP / 9SRE						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 18 CO: 0.05 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	0.71	6.8	581.4	1.64	14.9
SEQ#11	50 MPH CRUISE	0.0	0.02	555.0		
SEQ#11	HIGHWAY FUEL ECON.	0.26	1.0	351.9	1.93	25.1
SEQ#11	4 SPD IDLE (NEUT)	0.0	0.03		28.2	
SEQ#11	4 SPD IDLE (2500)	0.0	0.02		64.0	
SEQ#11	4 SPD IDLE (NEUT)	0.0	0.05		28.0	
SEQ#11	FED 2 MODE (30)	0.0	0.02		362.9	
SEQ#11	FED 2 MODE (NEUT)	0.0	0.19		33.5	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE NEUTRAL 750 RPM, PROPANE GAIN 50 RPM.

SEQ#12	FEDERAL TEST PROC.	5.15	14.6	511.0	1.72	16.1
SEQ#12	50 MPH CRUISE	2.6	0.16	340.7		
SEQ#12	HIGHWAY FUEL ECON.	0.72	1.6	354.8	1.76	24.7
SEQ#12	4 SPD IDLE (NEUT)	616.7	0.39		14.6	
SEQ#12	4 SPD IDLE (2500)	439.3	0.30		40.1	
SEQ#12	4 SPD IDLE (NEUT)	470.5	0.41		17.0	
SEQ#12	FED 2 MODE (30)	20.0	0.40		240.1	
SEQ#12	FED 2 MODE (NEUT)	537.7	0.35		19.7	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE NEUTRAL 700 RPM, HC 0 PPM, CO .005%.

SEQ#15	FEDERAL TEST PROC.	2.34	17.8	543.6	1.45	15.3
SEQ#15	50 MPH CRUISE	6.2	0.47	358.9		
SEQ#15	HIGHWAY FUEL ECON.	2.09	16.0	336.9	1.39	24.1
SEQ#15	4 SPD IDLE (NEUT)	0.3	0.07		28.0	
SEQ#15	4 SPD IDLE (2500)	3.0	0.16		71.5	
SEQ#15	4 SPD IDLE (NEUT)	0.0	0.17		29.2	
SEQ#15	FED 2 MODE (30)	0.0	0.10		265.9	
SEQ#15	FED 2 MODE (NEUT)	0.0	0.38		33.7	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS ----- GRAMS / MILE -----					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
9143	79	MAZD	070	9REP / 9SRE	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR FILTER AND OIL FILTER.

SEQ#16	FEDERAL TEST PROC.	0.84	5.7	560.7	1.64	15.5
SEQ#16	50 MPH CRUISE	0.0	0.02		518.6	
SEQ#16	HIGHWAY FUEL ECON.	0.19	0.7	346.6	1.95	25.5
SEQ#16	4 SPD IDLE (NEUT)	0.7	0.01		27.8	
SEQ#16	4 SPD IDLE (2500)	0.7	0.02		57.8	
SEQ#16	4 SPD IDLE (NEUT)	0.0	0.00		28.0	
SEQ#16	FED 2 MODE (30)	0.0	0.01		325.5	
SEQ#16	FED 2 MODE (NEUT)	0.0	0.01		29.2	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 36 CO: 0.07 GAIN: 0

9144 79 MAZD 086 9UCP / 9SCA

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 41 CO: 0.05 GAIN: 5

SEQ#11	FEDERAL TEST PROC.	0.86	11.6	310.9	1.82	26.7
SEQ#11	50 MPH CRUISE	53.9	0.06		841.7	
SEQ#11	HIGHWAY FUEL ECON.	0.28	1.9	256.7	2.16	34.1
SEQ#11	4 SPD IDLE (NEUT)	175.0	0.13		9.4	
SEQ#11	4 SPD IDLE (2500)	218.1	0.36		41.1	
SEQ#11	4 SPD IDLE (NEUT)	205.7	0.26		9.5	
SEQ#11	4 SPD IDLE (DRIV)	44.1	0.02		36.9	
SEQ#11	FED 2 MODE (30)	73.8	0.05		926.0	
SEQ#11	FED 2 MODE (NEUT)	195.4	0.22		6.4	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE DRIVE 600 RPM, IDLE NEUTRAL 760 RPM, PROPANE ENRICHED IDLE 810 RPM.

SEQ#12	FEDERAL TEST PROC.	0.54	6.6	303.4	2.42	28.1
SEQ#12	50 MPH CRUISE	45.4	0.02		1412.8	
SEQ#12	HIGHWAY FUEL ECON.	0.17	0.5	253.2	3.06	34.9
SEQ#12	4 SPD IDLE (NEUT)	52.3	0.00		55.8	
SEQ#12	4 SPD IDLE (2500)	41.1	0.01		219.9	
SEQ#12	4 SPD IDLE (NEUT)	29.9	0.00		65.6	
SEQ#12	4 SPD IDLE (DRIV)	34.8	0.00		183.2	
SEQ#12	FED 2 MODE (30)	61.9	0.03		1204.9	
SEQ#12	FED 2 MODE (NEUT)	39.4	0.00		86.5	

NO FOLLOW UP LANE TEST DONE

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
9144	79	MAZD	086	9UCP / 9SCA	(CON'T)					

COMMENT : ADJUSTED IDLE MIXTURE AND SPEED TO SPEC.

SEQ#15 FEDERAL TEST PROC.	0.57	8.6	300.2	2.43	28.1
SEQ#15 50 MPH CRUISE	48.7	0.03	1237.4		
SEQ#15 HIGHWAY FUEL ECON.	0.18	0.5	259.7	3.14	34.0
SEQ#15 4 SPD IDLE (NEUT)	32.5	0.00		43.6	
SEQ#15 4 SPD IDLE (2500)	35.5	0.01		190.4	
SEQ#15 4 SPD IDLE (NEUT)	26.9	0.00		46.8	
SEQ#15 4 SPD IDLE (DRIV)	28.3	0.00		121.6	
SEQ#15 FED 2 MODE (30)	63.2	0.04		1059.6	
SEQ#15 FED 2 MODE (NEUT)	35.5	0.00		60.7	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED AIR, FUEL AND OIL FILTER,  
SPARK PLUGS, ENGINE OIL, PCV VALVE. ADJUSTED  
TIMING AND IDLE SPEED AND MIXTURE TO SPEC.

SEQ#16 FEDERAL TEST PROC.	0.50	7.9	286.8	1.91	29.5
SEQ#16 50 MPH CRUISE	35.8	0.03	905.8		
SEQ#16 HIGHWAY FUEL ECON.	0.16	0.5	239.3	2.48	36.9
SEQ#16 4 SPD IDLE (NEUT)	22.7	0.00		50.8	
SEQ#16 4 SPD IDLE (2500)	28.9	0.01		135.2	
SEQ#16 4 SPD IDLE (NEUT)	13.5	0.00		54.9	
SEQ#16 4 SPD IDLE (DRIV)	19.4	0.00		129.6	
SEQ#16 FED 2 MODE (30)	49.3	0.03		841.1	
SEQ#16 FED 2 MODE (NEUT)	28.9	0.00		65.2	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 23 CO: 0.02 GAIN: 10

9146 79 FIAT 122 132-A / EV-2A

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 55 CO: 1.50 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	0.79	20.9	393.6	2.99	20.7
SEQ#11 50 MPH CRUISE	40.4	0.05	1756.0		
SEQ#11 HIGHWAY FUEL ECON.	0.17	4.1	266.6	3.29	32.4
SEQ#11 4 SPD IDLE (NEUT)	63.5	3.10		86.7	
SEQ#11 4 SPD IDLE (2500)	34.8	1.46		127.8	
SEQ#11 4 SPD IDLE (NEUT)	62.2	2.89		52.6	
SEQ#11 FED 2 MODE (30)	28.9	0.05		1385.2	
SEQ#11 FED 2 MODE (NEUT)	62.2	3.35		49.7	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 63 CO: 2.89 GAIN: 0

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	CH <sub>4</sub>	
9146	79	FIAT	122	132-A / EV-2A	(CON'T)					

COMMENT : IDLE NEUTRAL WITH PROPANE 850 RPM, WITHOUT PROPANE 900 RPM.

SEQ#12 FEDERAL TEST PROC.	0.64	6.8	396.3	3.16	21.7
SEQ#12 50 MPH CRUISE	35.8	0.04	1871.2		
SEQ#12 HIGHWAY FUEL ECON.	0.16	2.4	274.1	3.21	31.9
SEQ#12 4 SPD IDLE (NEUT)	8.2	0.00		65.0	
SEQ#12 4 SPD IDLE (2500)	3.3	0.01		178.3	
SEQ#12 4 SPD IDLE (NEUT)	9.5	0.00		57.9	
SEQ#12 FED 2 MODE (30)	24.0	0.07		1452.9	
SEQ#12 FED 2 MODE (NEUT)	4.3	0.01		99.0	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 10 CO: 0.00 GAIN: 130

COMMENT : ADJUSTED IDLE MIXTURE & TIMING TO SPEC.

SEQ#15 FEDERAL TEST PROC.	0.70	9.1	405.2	2.76	21.0
SEQ#15 50 MPH CRUISE	15.8	0.05	1678.3		
SEQ#15 HIGHWAY FUEL ECON.	0.25	7.7	275.1	2.77	30.8
SEQ#15 4 SPD IDLE (NEUT)	2.6	0.01		53.1	
SEQ#15 4 SPD IDLE (2500)	0.0	0.02		157.8	
SEQ#15 4 SPD IDLE (NEUT)	0.0	0.01		56.6	
SEQ#15 FED 2 MODE (30)	16.4	0.04		1442.8	
SEQ#15 FED 2 MODE (NEUT)	3.6	0.03		90.3	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 0 CO: 0.01 GAIN: 30

8151 78 AMC 232 I-1 / E-1

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 40 CO: 0.01 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	0.51	6.0	517.5	1.68	16.8
SEQ#11 50 MPH CRUISE	28.9	0.00		252.7	
SEQ#11 HIGHWAY FUEL ECON.	0.13	0.5	386.6	1.66	22.9
SEQ#11 4 SPD IDLE (NEUT)	9.5	0.01		42.2	
SEQ#11 4 SPD IDLE (2500)	27.9	0.00		93.1	
SEQ#11 4 SPD IDLE (NEUT)	3.6	0.00		43.8	
SEQ#11 4 SPD IDLE (DRIV)	14.1	0.00		55.5	
SEQ#11 FED 2 MODE (30)	27.6	0.00		246.7	
SEQ#11 FED 2 MODE (NEUT)	5.3	0.00		41.8	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 3 CO: 0.00 GAIN: 0

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8151	78	AMC	232	I-1 / E-1 (CON'T)						

COMMENT : NO MAINTENANCE PERFORMED DURING PRE-ADJUSTMENT. 50 RPM PROPANE GAIN ACHEIVED AT STEP 6 OF PROPANE CARBURETOR ADJUSTMENT PROCEDURE A-1. IDLE RPM 660 NEUTRAL, WITH PROPANE 710 NEUTRAL.

SEQ#12	FEDERAL TEST PROC.	0.64	5.1	502.4	2.09	17.3
SEQ#12	50 MPH CRUISE	27.9	0.00		267.9	
SEQ#12	HIGHWAY FUEL ECON.	0.15	0.3	377.1	1.51	23.5
SEQ#12	4 SPD IDLE (NEUT)	12.5	0.00		43.0	
SEQ#12	4 SPD IDLE (2500)	34.2	0.00		101.8	
SEQ#12	4 SPD IDLE (NEUT)	6.6	0.00		47.0	
SEQ#12	4 SPD IDLE (DRIV)	16.4	0.00		83.1	
SEQ#12	FED 2 MODE (30)	42.7	0.00		307.3	
SEQ#12	FED 2 MODE (NEUT)	15.1	0.00		48.4	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 7 CO: 0.00 GAIN: 70

COMMENT : ADJUSTED IDLE SPEED & MIXTURE TO SPEC.

SEQ#15	FEDERAL TEST PROC.	0.56	5.6	488.1	1.58	17.8
SEQ#15	50 MPH CRUISE	20.4	0.00		260.8	
SEQ#15	HIGHWAY FUEL ECON.	0.14	0.4	384.4	1.37	23.0
SEQ#15	4 SPD IDLE (NEUT)	7.5	0.00		49.6	
SEQ#15	4 SPD IDLE (2500)	24.6	0.00		102.1	
SEQ#15	4 SPD IDLE (NEUT)	1.3	0.00		51.0	
SEQ#15	4 SPD IDLE (DRIV)	10.8	0.00		98.3	
SEQ#15	FED 2 MODE (30)	42.1	0.00		316.4	
SEQ#15	FED 2 MODE (NEUT)	13.1	0.00		51.4	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 0 CO: 0.00 GAIN: 30

8152 78 BUIC 231 840B2BCB 8BCV

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 316 CO: 3.10 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	1.46	25.9	453.9	1.88	17.8
SEQ#11	50 MPH CRUISE	28.3	0.02		936.8	
SEQ#11	HIGHWAY FUEL ECON.	0.13	1.5	360.0	2.66	24.5
SEQ#11	4 SPD IDLE (NEUT)	209.4	1.86		60.5	
SEQ#11	4 SPD IDLE (2500)	30.2	0.07		195.1	
SEQ#11	4 SPD IDLE (NEUT)	221.5	2.12		44.4	
SEQ#11	4 SPD IDLE (DRIV)	242.6	2.37		222.4	
SEQ#11	FED 2 MODE (30)	58.2	0.12		679.3	
SEQ#11	FED 2 MODE (NEUT)	225.8	2.04		50.5	

NO FOLLOW UP LANE TEST DONE

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8152	78	BUIC	231	840B2BCB 8BCV	(CON'T)					

COMMENT : IDLE RPM WITHOUT PROPANE 820 RPM, WITH PROPANE  
870 RPM.

SEQ#12	FEDERAL TEST PROC.	1.16	15.8	453.4	1.84	18.4
SEQ#12	50 MPH CRUISE	14.4	0.01		840.1	
SEQ#12	HIGHWAY FUEL ECON.	0.11	1.1	353.6	2.55	25.0
SEQ#12	4 SPD IDLE (NEUT)	122.4	0.41		45.8	
SEQ#12	4 SPD IDLE (2500)	15.8	0.01		193.2	
SEQ#12	4 SPD IDLE (NEUT)	145.0	0.59		37.2	
SEQ#12	4 SPD IDLE (DRIV)	192.7	0.66		251.7	
SEQ#12	FED 2 MODE (30)	34.5	0.02		613.6	
SEQ#12	FED 2 MODE (NEUT)	182.4	0.69		58.6	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE MIXTURE & TIMING TO SPEC.

SEQ#15	FEDERAL TEST PROC.	0.49	6.0	471.5	1.74	18.4
SEQ#15	50 MPH CRUISE	4.9	0.00		672.3	
SEQ#15	HIGHWAY FUEL ECON.	0.04	0.3	357.4	2.19	24.8
SEQ#15	4 SPD IDLE (NEUT)	6.9	0.00		63.1	
SEQ#15	4 SPD IDLE (2500)	0.3	0.00		205.5	
SEQ#15	4 SPD IDLE (NEUT)	10.8	0.00		66.8	
SEQ#15	4 SPD IDLE (DRIV)	0.0	0.00		178.3	
SEQ#15	FED 2 MODE (30)	10.5	0.00		475.1	
SEQ#15	FED 2 MODE (NEUT)	53.9	0.00		64.9	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 14 CO: 0.03 GAIN: 145

8156 78 BUIC 350 350-4661

PRELIMINARY LANE TEST:

CAT: P FUEL: F  
HC: 1300 CO: 1.80 GAIN: 30

SEQ#11	FEDERAL TEST PROC.	5.24	33.9	587.5	4.53	13.5
SEQ#11	50 MPH CRUISE	90.9	0.38		1072.1	
SEQ#11	HIGHWAY FUEL ECON.	1.83	9.2	412.7	5.06	20.5
SEQ#11	4 SPD IDLE (NEUT)	1308.4	0.61		52.1	
SEQ#11	4 SPD IDLE (2500)	104.5	0.39		379.1	
SEQ#11	4 SPD IDLE (NEUT)	1099.6	0.85		50.8	
SEQ#11	4 SPD IDLE (DRIV)	561.7	2.08		91.3	
SEQ#11	FED 2 MODE (30)	262.8	0.50		994.5	
SEQ#11	FED 2 MODE (NEUT)	1434.0	0.57		59.6	

FOLLOW UP LANE TEST:

CAT: P FUEL: F  
HC: 1112 CO: 0.86 GAIN: 40

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8156	78	BUIC	350	350-4661 (CON'T)						

COMMENT : IDLE CO .55%, HC 1600 PPM, IDLE NEUTRAL 730 RPM.

SEQ#13	FEDERAL TEST PROC.	5.61	25.1	596.0	4.87	13.6
SEQ#13	50 MPH CRUISE	99.2	0.37		1262.5	
SEQ#13	HIGHWAY FUEL ECON.	1.99	8.8	431.4	5.29	19.7
SEQ#13	4 SPD IDLE (NEUT)	1530.8	0.24		59.0	
SEQ#13	4 SPD IDLE (2500)	195.4	0.46		347.8	
SEQ#13	4 SPD IDLE (NEUT)	1535.9	0.28		61.7	
SEQ#13	4 SPD IDLE (DRIV)	894.3	0.48		130.3	
SEQ#13	FED 2 MODE (30)	280.3	0.58		967.5	
SEQ#13	FED 2 MODE (NEUT)	1857.4	0.22		71.0	

FOLLOW UP LANE TEST:

CAT: P FUEL: F  
HC: 1536 CO: 0.28 GAIN: 70

COMMENT : ADJUSTED IDLE SPEED & MIXTURE TO SPEC.

SEQ#15	FEDERAL TEST PROC.	6.49	21.9	577.8	3.98	14.0
SEQ#15	50 MPH CRUISE	102.5	0.30		1129.7	
SEQ#15	HIGHWAY FUEL ECON.	1.88	6.9	410.7	4.16	20.8
SEQ#15	4 SPD IDLE (NEUT)	1959.2	0.10		78.4	
SEQ#15	4 SPD IDLE (2500)	253.4	0.44		323.5	
SEQ#15	4 SPD IDLE (NEUT)	1961.9	0.10		75.1	
SEQ#15	4 SPD IDLE (DRIV)	1061.0	0.09		257.8	
SEQ#15	FED 2 MODE (30)	303.7	0.49		964.4	
SEQ#15	FED 2 MODE (NEUT)	2381.0	0.11		75.4	

FOLLOW UP LANE TEST:

CAT: P FUEL: F  
HC: 1957 CO: 0.10 GAIN: 110

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, FUEL, AIR,  
CANISTER & OIL FILTERS, PCV VALVE & FILTER ENGINE  
OIL, DISTRUBUROR CAP, ROTOR & COIL. ADJUSTED IDLE  
SPEED & MIXTURE TO SPEC.

SEQ#16	FEDERAL TEST PROC.	6.18	13.8	549.6	3.98	15.0
SEQ#16	50 MPH CRUISE	122.1	0.31		1147.3	
SEQ#16	HIGHWAY FUEL ECON.	1.77	5.5	426.3	4.57	20.1
SEQ#16	4 SPD IDLE (NEUT)	1515.4	0.05		77.1	
SEQ#16	4 SPD IDLE (2500)	248.6	0.34		330.6	
SEQ#16	4 SPD IDLE (NEUT)	1833.5	0.06		95.0	
SEQ#16	4 SPD IDLE (DRIV)	1080.3	0.04		268.9	
SEQ#16	FED 2 MODE (30)	335.9	0.29		981.9	
SEQ#16	FED 2 MODE (NEUT)	1935.0	0.10		72.6	

FOLLOW UP LANE TEST:

CAT: P FUEL: F  
HC: 1823 CO: 0.06 GAIN: 120

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NOx <sub>c</sub>	CH <sub>4</sub>	
8156	78	BUIC	350	350-4661	(CON'T)					

COMMENT : REPLACED CATALYST.

SEQ#17	FEDERAL TEST PROC.	1.04	9.4	587.1	2.55	14.7
SEQ#17	50 MPH CRUISE	11.5	0.01	916.8		
SEQ#17	HIGHWAY FUEL ECON.	0.18	1.0	433.8	3.61	20.4
SEQ#17	4 SPD IDLE (NEUT)	22.3	0.00		83.8	
SEQ#17	4 SPD IDLE (2500)	7.2	0.00		303.3	
SEQ#17	4 SPD IDLE (NEUT)	28.9	0.00		98.5	
SEQ#17	4 SPD IDLE (DRIV)	17.4	0.00		324.5	
SEQ#17	FED 2 MODE (30)	16.7	0.01		824.9	
SEQ#17	FED 2 MODE (NEUT)	120.8	0.00		83.9	

FOLLOW UP LANE TEST:

CAT: P FUEL: F  
HC: 30 CO: 0.00 GAIN: 80

8157 78 BUIC 350 830M4UBFO 8BFV

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 283 CO: 3.80 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	2.12	30.1	635.9	2.48	12.9
SEQ#11	50 MPH CRUISE	31.2	0.01	498.4		
SEQ#11	HIGHWAY FUEL ECON.	0.30	1.7	450.0	2.93	19.6
SEQ#11	4 SPD IDLE (NEUT)	280.9	1.40		51.8	
SEQ#11	4 SPD IDLE (2500)	46.7	0.02		151.9	
SEQ#11	4 SPD IDLE (NEUT)	286.3	1.69		52.5	
SEQ#11	4 SPD IDLE (DRIV)	210.8	1.55		101.8	
SEQ#11	FED 2 MODE (30)	52.0	0.02		359.9	
SEQ#11	FED 2 MODE (NEUT)	284.3	1.40		50.5	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 550 RPMs, IDLE NEUTRAL 660 RPMs, PROPANE GAIN 50 RPMs, USED UNIVERSAL METHOD.

SEQ#12	FEDERAL TEST PROC.	1.07	6.9	640.8	2.65	13.6
SEQ#12	50 MPH CRUISE	11.5	0.00	523.7		
SEQ#12	HIGHWAY FUEL ECON.	0.17	0.2	452.4	3.10	19.6
SEQ#12	4 SPD IDLE (NEUT)	18.4	0.01		51.9	
SEQ#12	4 SPD IDLE (2500)	19.7	0.01		148.5	
SEQ#12	4 SPD IDLE (NEUT)	30.6	0.00		63.0	
SEQ#12	4 SPD IDLE (DRIV)	5.3	0.01		112.6	
SEQ#12	FED 2 MODE (30)	19.7	0.01		371.0	
SEQ#12	FED 2 MODE (NEUT)	57.6	0.01		65.0	

NO FOLLOW UP LANE TEST DONE

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8157	78	BUIC	350	830M4UBFO 8BFV	(CON'T)					

COMMENT : ADJUSTED IDLE DRIVE 550 RPM, CO .05%, HC 65 PPM,  
IDLE NEUTRAL 650 RPM, CO .05%, HC 150 PPM, USED  
UNIVERSAL METHOD.

SEQ#13	FEDERAL TEST PROC.	0.87	5.9	613.4	2.43	14.2
SEQ#13	50 MPH CRUISE	33.2	0.00	408.4		
SEQ#13	HIGHWAY FUEL ECON.	0.14	0.4	430.9	2.56	20.5
SEQ#13	4 SPD IDLE (NEUT)	21.0	0.00		51.2	
SEQ#13	4 SPD IDLE (2500)	24.0	0.00		147.0	
SEQ#13	4 SPD IDLE (NEUT)	27.9	0.01		52.8	
SEQ#13	4 SPD IDLE (DRIV)	3.3	0.01		93.9	
SEQ#13	FED 2 MODE (30)	20.7	0.01		328.6	
SEQ#13	FED 2 MODE (NEUT)	62.5	0.01		53.5	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 224 CO: 0.02 GAIN: 130

COMMENT : IDLE MIXTURE AND SPEED ADJUSTED TO SPEC. IDLE  
ENRICHMENT 635 RPM, ENRICHED 550 RPM CURB IDLE IN  
DRIVE.

SEQ#15	FEDERAL TEST PROC.	0.90	10.0	620.5	2.43	13.9
SEQ#15	50 MPH CRUISE	7.2	0.01	420.5		
SEQ#15	HIGHWAY FUEL ECON.	0.12	0.1	446.4	2.79	19.9
SEQ#15	4 SPD IDLE (NEUT)	15.4	0.01		50.0	
SEQ#15	4 SPD IDLE (2500)	13.5	0.01		143.4	
SEQ#15	4 SPD IDLE (NEUT)	44.4	0.00		47.8	
SEQ#15	4 SPD IDLE (DRIV)	8.2	0.00		85.6	
SEQ#15	FED 2 MODE (30)	15.4	0.02		284.1	
SEQ#15	FED 2 MODE (NEUT)	74.1	0.01		45.0	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 50 CO: 0.01 GAIN: 180

8158 78 CADIA 350 860JOV / 8BA

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 33 CO: 0.02 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	1.11	6.1	592.3	5.21	14.7
SEQ#11	50 MPH CRUISE	34.5	0.01	1242.4		
SEQ#11	HIGHWAY FUEL ECON.	0.33	0.1	409.6	6.40	21.6
SEQ#11	4 SPD IDLE (NEUT)	39.8	0.01		28.4	
SEQ#11	4 SPD IDLE (2500)	19.7	0.01		199.2	
SEQ#11	4 SPD IDLE (NEUT)	41.1	0.01		32.3	
SEQ#11	4 SPD IDLE (DRIV)	56.3	0.01		34.9	
SEQ#11	FED 2 MODE (30)	47.7	0.01		842.1	
SEQ#11	FED 2 MODE (NEUT)	75.1	0.01		36.8	

NO FOLLOW UP LANE TEST DONE

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS				FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	
8158	78	CADI	350	860JOV / 8BA	(CON'T)				

COMMENT : ADJUSTED IDLE DRIVE 600 RPM, PROPANE GAIN 50  
RPM. USED UNIVERSAL METHOD.

SEQ#12	FEDERAL TEST PROC.	0.88	5.6	595.4	5.25	14.6
SEQ#12	50 MPH CRUISE	36.5	0.01	1204.9		
SEQ#12	HIGHWAY FUEL ECON.	0.31	0.1	407.2	6.44	21.7
SEQ#12	4 SPD IDLE (NEUT)	95.2	0.01		44.3	
SEQ#12	4 SPD IDLE (2500)	21.7	0.01		203.7	
SEQ#12	4 SPD IDLE (NEUT)	104.2	0.00		47.8	
SEQ#12	4 SPD IDLE (DRIV)	35.2	0.01		71.9	
SEQ#12	FED 2 MODE (30)	45.0	0.01		969.4	
SEQ#12	FED 2 MODE (NEUT)	154.3	0.01		56.2	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 600 RPM, CO .5%, HC 150 PPM.

SEQ#15	FEDERAL TEST PROC.	0.88	5.8	612.8	5.43	14.2
SEQ#15	50 MPH CRUISE	34.2	0.01	1280.0		
SEQ#15	HIGHWAY FUEL ECON.	0.30	0.1	424.1	6.70	20.9
SEQ#15	4 SPD IDLE (NEUT)	100.2	0.01		43.2	
SEQ#15	4 SPD IDLE (2500)	23.3	0.01		197.0	
SEQ#15	4 SPD IDLE (NEUT)	120.4	0.01		51.8	
SEQ#15	4 SPD IDLE (DRIV)	35.2	0.01		73.4	
SEQ#15	FED 2 MODE (30)	42.4	0.01		807.7	
SEQ#15	FED 2 MODE (NEUT)	169.3	0.01		58.4	

FOLLOW UP LANE TEST:

CAT: P      FUEL: P  
HC: 55    CO: 0.02    GAIN: 30

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR FILTER, OIL FILTER, ENGINE OIL, PCV VALVE, CRANKCASE BREATHER FILTER, EGR VALVE, CARBON CANISTER FILTER. EGR PASSAGE BLOCKED IN THE INTERNAL ENGINE PASSAGE.

SEQ#16	FEDERAL TEST PROC.	0.78	5.5	586.5	5.16	14.8
SEQ#16	50 MPH CRUISE	38.8	0.01	1192.3		
SEQ#16	HIGHWAY FUEL ECON.	0.31	0.2	398.1	5.82	22.2
SEQ#16	4 SPD IDLE (NEUT)	123.8	0.00		31.8	
SEQ#16	4 SPD IDLE (2500)	29.6	0.01		176.2	
SEQ#16	4 SPD IDLE (NEUT)	131.4	0.00		48.2	
SEQ#16	4 SPD IDLE (DRIV)	34.8	0.00		71.6	
SEQ#16	FED 2 MODE (30)	51.0	0.01		807.7	
SEQ#16	FED 2 MODE (NEUT)	228.2	0.01		48.4	

FOLLOW UP LANE TEST:

CAT: P      FUEL: P  
HC: 38    CO: 0.02    GAIN: 15

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS				FUEL ECON	FUEL MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C		
8160	78	CHEV	098	810W1 / 8ABV						

PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 82 CO: 2.41 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	1.10	18.3	316.3	1.31	25.5
SEQ#11	50 MPH CRUISE	9.2	0.01		884.2	
SEQ#11	HIGHWAY FUEL ECON.	0.09	0.9	239.3	1.60	36.8
SEQ#11	4 SPD IDLE (NEUT)	88.0	1.35		77.3	
SEQ#11	4 SPD IDLE (2500)	8.9	0.01		252.7	
SEQ#11	4 SPD IDLE (NEUT)	80.4	1.35		86.9	
SEQ#11	FED 2 MODE (30)	19.4	0.01		573.2	
SEQ#11	FED 2 MODE (NEUT)	54.9	0.61		93.9	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE 800 RPM, PROPANE GAIN 60 RPM.

SEQ#12	FEDERAL TEST PROC.	1.19	16.7	318.3	1.42	25.5
SEQ#12	50 MPH CRUISE	10.5	0.00		532.8	
SEQ#12	HIGHWAY FUEL ECON.	0.09	1.1	237.3	1.61	37.1
SEQ#12	4 SPD IDLE (NEUT)	55.9	0.48		58.0	
SEQ#12	4 SPD IDLE (2500)	4.9	0.00		189.1	
SEQ#12	4 SPD IDLE (NEUT)	38.1	0.32		56.1	
SEQ#12	FED 2 MODE (30)	11.8	0.00		424.6	
SEQ#12	FED 2 MODE (NEUT)	28.6	0.22		46.2	

FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 7 CO: 0.03 GAIN: 30

COMMENT : USED PROPANE METHOD SPEC 900 RPMS. ADJUSTED IDLE SPEED NEUTRAL TO 800 RPMs, PROPANE GAIN 100 RPMS.

SEQ#15	FEDERAL TEST PROC.	1.09	16.4	323.6	1.27	25.2
SEQ#15	50 MPH CRUISE	0.0	0.01		1503.0	
SEQ#15	HIGHWAY FUEL ECON.	0.05	0.6	238.5	1.54	37.0
SEQ#15	4 SPD IDLE (NEUT)	1.6	0.01		76.9	
SEQ#15	4 SPD IDLE (2500)	0.0	0.01		241.2	
SEQ#15	4 SPD IDLE (NEUT)	1.6	0.01		74.6	
SEQ#15	FED 2 MODE (30)	11.5	0.01		540.8	
SEQ#15	FED 2 MODE (NEUT)	10.2	0.01		76.4	

FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 50 CO: 0.19 GAIN: 0

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8165	78	CHEV	196	840B2BCB	8BCV					

**PRELIMINARY LANE TEST:**

CAT: P FUEL: P

HC: 184 CO: 4.07 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	2.30	22.6	510.9	2.67	16.0
SEQ#11 50 MPH CRUISE	14.4	0.07		1082.1	
SEQ#11 HIGHWAY FUEL ECON.	0.24	2.2	352.4	3.15	24.9
SEQ#11 4 SPD IDLE (NEUT)	355.0	2.22		42.7	
SEQ#11 4 SPD IDLE (2500)	14.4	0.08		194.5	
SEQ#11 4 SPD IDLE (NEUT)	202.7	3.92		44.3	
SEQ#11 FED 2 MODE (30)	22.7	0.21		761.2	
SEQ#11 FED 2 MODE (NEUT)	209.4	4.21		48.9	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE SPEED 800 RPMs, PROPANE GAIN 50 RPMs.

SEQ#12 FEDERAL TEST PROC.	2.44	17.1	521.3	2.78	16.0
SEQ#12 50 MPH CRUISE	21.0	0.02		989.7	
SEQ#12 HIGHWAY FUEL ECON.	0.21	1.4	349.2	3.28	25.2
SEQ#12 4 SPD IDLE (NEUT)	12.5	0.01		44.0	
SEQ#12 4 SPD IDLE (2500)	3.0	0.01		208.8	
SEQ#12 4 SPD IDLE (NEUT)	255.7	1.09		32.2	
SEQ#12 FED 2 MODE (30)	11.5	0.02		679.3	
SEQ#12 FED 2 MODE (NEUT)	197.7	1.25		37.2	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE NEUTRAL 800 RPMs, CO .4%, HC 800 PPM. USED UNIVERSAL METHOD.

SEQ#13 FEDERAL TEST PROC.	1.20	6.7	555.4	3.05	15.6
SEQ#13 50 MPH CRUISE	0.0	0.01		966.9	
SEQ#13 HIGHWAY FUEL ECON.	0.08	0.4	358.2	3.70	24.7
SEQ#13 4 SPD IDLE (NEUT)	10.2	0.00		80.8	
SEQ#13 4 SPD IDLE (2500)	0.0	0.00		192.2	
SEQ#13 4 SPD IDLE (NEUT)	11.5	0.00		80.7	
SEQ#13 FED 2 MODE (30)	0.0	0.00		581.3	
SEQ#13 FED 2 MODE (NEUT)	16.1	0.00		75.3	

NO FOLLOW UP LANE TEST DONE

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8165	78	CHEV	196	840B2BCB 8BCV	(CON'T)					

COMMENT : ADJUSTED IDLE NEUTRAL 800 RPMs, PROPANE GAIN 180  
RPMs, CO .04%, HC 100 PPM.

SEQ#15 FEDERAL TEST PROC.	1.12	5.9	564.0	3.19	15.4
SEQ#15 50 MPH CRUISE	0.0	0.02		964.4	
SEQ#15 HIGHWAY FUEL ECON.	0.08	0.5	351.7	3.35	25.2
SEQ#15 4 SPD IDLE (NEUT)	16.7	0.00		84.0	
SEQ#15 4 SPD IDLE (2500)	0.0	0.00		201.4	
SEQ#15 4 SPD IDLE (NEUT)	22.0	0.00		75.3	
SEQ#15 FED 2 MODE (30)	0.0	0.01		600.5	
SEQ#15 FED 2 MODE (NEUT)	29.6	0.01		75.5	

NO FOLLOW UP LANE TEST DONE

COMMENT : REPLACED OIL AND OIL FILTER, SPARK PLUGS, FUEL  
FILTER, PCV VALVE AND FILTER. REPLACED AIR  
FILTER ELEMENT. SET TO MANUFACTURER SPEC.

SEQ#16 FEDERAL TEST PROC.	1.74	6.1	615.7	1.55	14.1
SEQ#16 50 MPH CRUISE	6.6	0.01		270.9	
SEQ#16 HIGHWAY FUEL ECON.	0.08	0.6	385.9	1.40	22.9
SEQ#16 4 SPD IDLE (NEUT)	20.7	0.00		88.4	
SEQ#16 4 SPD IDLE (2500)	25.0	0.00		88.1	
SEQ#16 4 SPD IDLE (NEUT)	19.7	0.00		77.5	
SEQ#16 FED 2 MODE (30)	7.2	0.01		172.7	
SEQ#16 FED 2 MODE (NEUT)	32.9	0.00		72.0	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 17 CO: 0.02 GAIN: 190

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8170	78	CHEV	305	810Y2BCCH	8BCV					

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 302 CO: 2.79 GAIN: 40

SEQ#11	FEDERAL TEST PROC.	2.37	41.3	540.2	1.42	14.5
SEQ#11	50 MPH CRUISE	26.3	0.78		118.3	
SEQ#11	HIGHWAY FUEL ECON.	0.90	29.7	379.4	0.88	20.7
SEQ#11	4 SPD IDLE (NEUT)	242.9	0.87		22.4	
SEQ#11	4 SPD IDLE (2500)	80.7	1.96		88.1	
SEQ#11	4 SPD IDLE (NEUT)	229.9	1.65		37.0	
SEQ#11	4 SPD IDLE (DRIV)	194.4	1.79		80.8	
SEQ#11	FED 2 MODE (30)	117.8	1.84		160.3	
SEQ#11	FED 2 MODE (NEUT)	267.1	1.79		40.3	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE RPM 500 IN DRIVE, CO .2%.

SEQ#13	FEDERAL TEST PROC.	0.74	18.9	541.7	1.10	15.5
SEQ#13	50 MPH CRUISE	10.8	0.09		78.0	
SEQ#13	HIGHWAY FUEL ECON.	0.55	25.3	385.9	0.78	20.8
SEQ#13	4 SPD IDLE (NEUT)	3.6	0.00		52.1	
SEQ#13	4 SPD IDLE (2500)	32.9	0.94		50.0	
SEQ#13	4 SPD IDLE (NEUT)	1.0	0.00		66.2	
SEQ#13	4 SPD IDLE (DRIV)	3.0	0.00		129.0	
SEQ#13	FED 2 MODE (30)	7.9	0.01		144.7	
SEQ#13	FED 2 MODE (NEUT)	15.4	0.01		61.9	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE MIXTURE TO SPEC. IDLE RPM 480 IN DRIVE. IDLE CO .01%.

SEQ#15	FEDERAL TEST PROC.	0.90	21.2	544.3	1.07	15.3
SEQ#15	50 MPH CRUISE	3.3	0.14		61.6	
SEQ#15	HIGHWAY FUEL ECON.	0.55	26.1	391.5	0.81	20.4
SEQ#15	4 SPD IDLE (NEUT)	6.2	0.00		39.4	
SEQ#15	4 SPD IDLE (2500)	4.3	0.04		51.0	
SEQ#15	4 SPD IDLE (NEUT)	0.0	0.00		59.2	
SEQ#15	4 SPD IDLE (DRIV)	0.0	0.00		118.3	
SEQ#15	FED 2 MODE (30)	12.5	0.00		157.8	
SEQ#15	FED 2 MODE (NEUT)	11.5	0.00		50.9	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE				FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	
8170	78	CHEV	305	810Y2BCCH 8BCV	(CON'T)				

COMMENT : RESET CHOKE VACUUM BREAK, REPLACED PCV LINE,  
INSTALLED AIR CLEANER COVER CORRECTLY. NEW SPARK  
PLUGS, AIR, FUEL, OIL AND CRANKCASE FILTERS, AND  
ENGINE OIL. ADJUSTED IDLE SPEED AND MIXTURE.

SEQ#16	FEDERAL TEST PROC.	0.97	10.6	556.8	1.66	15.4
SEQ#16	50 MPH CRUISE	8.9	0.00	246.7		
SEQ#16	HIGHWAY FUEL ECON.	0.08	0.4	383.4	1.30	23.1
SEQ#16	4 SPD IDLE (NEUT)	0.0	0.00		52.8	
SEQ#16	4 SPD IDLE (2500)	8.5	0.01		111.6	
SEQ#16	4 SPD IDLE (NEUT)	0.0	0.00		61.1	
SEQ#16	4 SPD IDLE (DRIV)	0.0	0.00		122.4	
SEQ#16	FED 2 MODE (30)	18.4	0.00		161.1	
SEQ#16	FED 2 MODE (NEUT)	17.7	0.00		60.0	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 20 CO: 0.00 GAIN: 90

8171 78 CHEV 305 810Y2BCCH 8BCV

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 136 CO: 4.60 GAIN: 5

SEQ#11	FEDERAL TEST PROC.	1.11	32.5	609.6	1.15	13.4
SEQ#11	50 MPH CRUISE	3.9	0.01	236.3		
SEQ#11	HIGHWAY FUEL ECON.	0.45	15.6	430.0	0.78	19.5
SEQ#11	4 SPD IDLE (NEUT)	153.0	4.17		40.2	
SEQ#11	4 SPD IDLE (2500)	4.9	0.03		88.0	
SEQ#11	4 SPD IDLE (NEUT)	139.7	4.85		48.2	
SEQ#11	4 SPD IDLE (DRIV)	176.7	4.25		53.7	
SEQ#11	FED 2 MODE (30)	13.5	0.04		154.2	
SEQ#11	FED 2 MODE (NEUT)	120.4	3.48		34.6	

NO FOLLOW UP LANE TEST DONE

COMMENT : REPLACED VACUUM ADVANCE UNIT. PROPANE GAIN 50 RPM.

SEQ#12	FEDERAL TEST PROC.	1.59	12.9	519.9	2.69	16.3
SEQ#12	50 MPH CRUISE	12.5	0.00	380.1		
SEQ#12	HIGHWAY FUEL ECON.	0.16	2.1	387.1	1.83	22.7
SEQ#12	4 SPD IDLE (NEUT)	8.9	0.00		61.1	
SEQ#12	4 SPD IDLE (2500)	15.8	0.00		120.6	
SEQ#12	4 SPD IDLE (NEUT)	8.9	0.01		44.6	
SEQ#12	4 SPD IDLE (DRIV)	6.9	0.05		11.6	
SEQ#12	FED 2 MODE (30)	28.9	0.00		226.3	
SEQ#12	FED 2 MODE (NEUT)	45.0	0.01		27.0	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8171	78	CHEV	305	810Y2BCCH 8BCV	(CON'T)					

COMMENT : ADJUSTED IDLE CO TO SPEC.

SEQ#13	FEDERAL TEST PROC.	1.91	20.7	527.0	2.58	15.7
SEQ#13	50 MPH CRUISE	17.1	0.01	426.6		
SEQ#13	HIGHWAY FUEL ECON.	0.20	2.3	372.2	2.08	23.6
SEQ#13	4 SPD IDLE (NEUT)	335.9	1.24		28.8	
SEQ#13	4 SPD IDLE (2500)	20.0	0.00		126.0	
SEQ#13	4 SPD IDLE (NEUT)	286.0	1.96		28.9	
SEQ#13	4 SPD IDLE (DRIV)	278.1	1.96		71.7	
SEQ#13	FED 2 MODE (30)	47.7	0.00		267.9	
SEQ#13	FED 2 MODE (NEUT)	346.6	1.69		33.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE SPEED & MIXTURE TO SPEC.

SEQ#15	FEDERAL TEST PROC.	1.02	10.4	543.4	2.59	15.8
SEQ#15	50 MPH CRUISE	11.8	0.00	394.3		
SEQ#15	HIGHWAY FUEL ECON.	0.14	2.2	386.7	1.93	22.7
SEQ#15	4 SPD IDLE (NEUT)	8.5	0.00		71.1	
SEQ#15	4 SPD IDLE (2500)	9.2	0.01		129.0	
SEQ#15	4 SPD IDLE (NEUT)	4.3	0.01		62.8	
SEQ#15	4 SPD IDLE (DRIV)	0.0	0.00		142.6	
SEQ#15	FED 2 MODE (30)	22.3	0.00		211.3	
SEQ#15	FED 2 MODE (NEUT)	40.4	0.00		71.5	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED OIL & OIL FILTER, GAS FILTER, CANISTER FILTER, AIR FILTER, SPARK PLUGS, PCV VALVE & FILTER ADJUSTED IDLE SPEED TO SPEC. ADJUSTED PRIMARY VACUUM BREAK TO SPEC.

SEQ#16	FEDERAL TEST PROC.	0.76	8.7	615.3	3.25	14.1
SEQ#16	50 MPH CRUISE	8.2	0.00	556.0		
SEQ#16	HIGHWAY FUEL ECON.	0.22	5.8	423.1	2.50	20.5
SEQ#16	4 SPD IDLE (NEUT)	10.8	0.00		146.0	
SEQ#16	4 SPD IDLE (2500)	12.5	0.00		134.2	
SEQ#16	4 SPD IDLE (NEUT)	19.4	0.00		62.9	
SEQ#16	4 SPD IDLE (DRIV)	9.8	0.00		77.6	
SEQ#16	FED 2 MODE (30)	35.2	0.00		182.4	
SEQ#16	FED 2 MODE (NEUT)	80.0	0.00		56.4	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 20 CO: 0.00 GAIN: 100

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8172	78	CHEV	305	810Y2BCCH	8BCV					

## PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 265 CO: 4.46 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	2.83	60.1	520.8	4.17	14.2
SEQ#11	50 MPH CRUISE	9.5	0.01	1440.3		
SEQ#11	HIGHWAY FUEL ECON.	0.29	4.3	382.4	5.17	22.8
SEQ#11	4 SPD IDLE (NEUT)	246.0	3.01		45.7	
SEQ#11	4 SPD IDLE (2500)	23.0	0.01		419.5	
SEQ#11	4 SPD IDLE (NEUT)	231.5	3.07		47.7	
SEQ#11	4 SPD IDLE (DRI)	224.5	3.15		77.9	
SEQ#11	FED 2 MODE (30)	113.8	0.40		1027.0	
SEQ#11	FED 2 MODE (NEUT)	253.0	3.16		47.7	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 280 CO: 4.48 GAIN: 0

COMMENT : IDLE RPM DRIVE 500, PROPANE GAIN 65 RPM'S IN DRIVE,  
IDLE RPM 600 NEUTRAL, PROPANE GAIN 155 RPM'S IN  
NEUTRAL.

SEQ#12	FEDERAL TEST PROC.	1.07	16.2	541.7	5.10	15.6
SEQ#12	50 MPH CRUISE	10.2	0.01	1635.7		
SEQ#12	HIGHWAY FUEL ECON.	0.11	0.6	412.3	5.91	21.5
SEQ#12	4 SPD IDLE (NEUT)	33.2	0.01		54.4	
SEQ#12	4 SPD IDLE (2500)	7.2	0.01		501.4	
SEQ#12	4 SPD IDLE (NEUT)	62.5	0.01		48.0	
SEQ#12	4 SPD IDLE (DRI)	25.6	0.01		82.4	
SEQ#12	FED 2 MODE (30)	14.1	0.01		916.9	
SEQ#12	FED 2 MODE (NEUT)	89.3	0.01		81.6	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 35 CO: 0.02 GAIN: 180

COMMENT : ADJUSTED IDLE DRIVE 500 RPM'S, IDLE NEUTRAL 600  
RPM'S, CO NEUTRAL .21%, HC 420 PPM. USED UNIVERSAL  
METHOD.

SEQ#13	FEDERAL TEST PROC.	1.78	27.0	537.7	4.26	15.2
SEQ#13	50 MPH CRUISE	9.8	0.01	1442.8		
SEQ#13	HIGHWAY FUEL ECON.	0.14	1.9	396.2	5.35	22.2
SEQ#13	4 SPD IDLE (NEUT)	16.1	0.01		74.9	
SEQ#13	4 SPD IDLE (2500)	1.3	0.01		427.6	
SEQ#13	4 SPD IDLE (NEUT)	69.5	0.44		41.8	
SEQ#13	4 SPD IDLE (DRI)	8.2	0.01		128.3	
SEQ#13	FED 2 MODE (30)	16.1	0.01		947.2	
SEQ#13	FED 2 MODE (NEUT)	27.9	0.01		77.8	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8172	78	CHEV	305	810Y2BCCH 8BCV	(CON'T)					

COMMENT : IDLE SPEED AND MIXTURE SET TO SPEC. ENRICHED IDLE  
520-540 RPM IN DRIVE, IDLE SPEED 500 RPM IN DRIVE.

SEQ#15 FEDERAL TEST PROC.	1.39	19.2	538.2	4.68	15.5
SEQ#15 50 MPH CRUISE	5.9	0.01	1640.7		
SEQ#15 HIGHWAY FUEL ECON.	0.14	1.6	401.2	5.55	22.0
SEQ#15 4 SPD IDLE (NEUT)	250.3	0.55		27.7	
SEQ#15 4 SPD IDLE (2500)	7.2	0.01		501.4	
SEQ#15 4 SPD IDLE (NEUT)	25.0	0.00		74.1	
SEQ#15 4 SPD IDLE (DRIV)	6.6	0.00		156.7	
SEQ#15 FED 2 MODE (30)	15.4	0.02		976.9	
SEQ#15 FED 2 MODE (NEUT)	41.7	0.00		76.7	

NO FOLLOW UP LANE TEST DONE

COMMENT : CLEARED VACUUM LINE AND RECONNECTED. REPLACED SPARK PLUGS, AIR, FUEL, OIL AND CRANKCASE BREATHER FILTERS, AND ENGINE OIL. RESET CHOKE THERMOSTAT TO SPEC.

SEQ#16 FEDERAL TEST PROC.	0.75	8.1	547.8	2.27	15.8
SEQ#16 50 MPH CRUISE	8.5	0.00	446.8		
SEQ#16 HIGHWAY FUEL ECON.	0.14	1.3	401.5	2.12	22.0
SEQ#16 4 SPD IDLE (NEUT)	11.5	0.00		69.2	
SEQ#16 4 SPD IDLE (2500)	3.6	0.01		176.8	
SEQ#16 4 SPD IDLE (NEUT)	4.6	0.01		78.8	
SEQ#16 4 SPD IDLE (DRIV)	0.0	0.01		148.0	
SEQ#16 FED 2 MODE (30)	51.6	0.62		400.3	
SEQ#16 FED 2 MODE (NEUT)	37.5	0.01		71.0	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 22 CO: 0.01 GAIN: 50

8175 78 CHEV 350 810L4BFCH 8BFV

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 260 CO: 3.70 GAIN: 10

SEQ#11 FEDERAL TEST PROC.	1.60	21.8	602.4	3.10	13.8
SEQ#11 50 MPH CRUISE	82.3	0.00	495.4		
SEQ#11 HIGHWAY FUEL ECON.	0.14	1.1	425.3	2.81	20.8
SEQ#11 4 SPD IDLE (NEUT)	212.4	1.28		60.5	
SEQ#11 4 SPD IDLE (2500)	48.0	0.00		134.4	
SEQ#11 4 SPD IDLE (NEUT)	233.5	2.42		62.2	
SEQ#11 4 SPD IDLE (DRIV)	250.0	2.77		149.8	
SEQ#11 FED 2 MODE (30)	40.1	0.00		215.2	
SEQ#11 FED 2 MODE (NEUT)	253.7	2.27		59.6	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8175	78	CHEV	350	810L4BFCH 8BFV	(CON'T)					

COMMENT : ADJUSTED IDLE DRIVE 480 RPMS, IDLE NEUTRAL 560 RPMS. IDLE CO .5%, HC 600 PPM.

SEQ#13	FEDERAL TEST PROC.	0.68	2.2	609.5	2.96	14.4
SEQ#13	50 MPH CRUISE	13.5	0.00	459.0		
SEQ#13	HIGHWAY FUEL ECON.	0.07	0.0	425.5	2.78	20.8
SEQ#13	4 SPD IDLE (NEUT)	6.9	0.00		52.5	
SEQ#13	4 SPD IDLE (2500)	13.5	0.01		142.6	
SEQ#13	4 SPD IDLE (NEUT)	8.9	0.00		62.5	
SEQ#13	4 SPD IDLE (DRIV)	1.6	0.00		125.4	
SEQ#13	FED 2 MODE (30)	21.3	0.00		194.1	
SEQ#13	FED 2 MODE (NEUT)	28.6	0.00		55.6	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 500 RPMS. CO .05%, HC 100 PPM. PROPANE GAIN 70 RPMS.

SEQ#15	FEDERAL TEST PROC.	0.81	3.7	597.6	2.64	14.6
SEQ#15	50 MPH CRUISE	9.8	0.00	525.7		
SEQ#15	HIGHWAY FUEL ECON.	0.07	0.0	420.8	2.57	21.1
SEQ#15	4 SPD IDLE (NEUT)	6.9	0.00		28.2	
SEQ#15	4 SPD IDLE (2500)	10.5	0.00		148.3	
SEQ#15	4 SPD IDLE (NEUT)	14.8	0.00		34.4	
SEQ#15	4 SPD IDLE (DRIV)	6.2	0.00		45.7	
SEQ#15	FED 2 MODE (30)	11.8	0.01		213.4	
SEQ#15	FED 2 MODE (NEUT)	41.1	0.00		34.8	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 20 CO: 0.00 GAIN: 194

COMMENT : REPLACED SPARK PLUGS, AIR, FUEL, OIL, CRANKCASE BREATHER FILTERS, PCV VALVE AND ENGINE OIL. RESET TIMING AND IDLE SPEED.

SEQ#16	FEDERAL TEST PROC.	0.69	3.0	614.1	2.42	14.3
SEQ#16	50 MPH CRUISE	0.0	0.00		344.7	
SEQ#16	HIGHWAY FUEL ECON.	0.07	0.0	427.5	2.36	20.8
SEQ#16	4 SPD IDLE (NEUT)	4.9	0.00		29.4	
SEQ#16	4 SPD IDLE (2500)	8.2	0.00		103.6	
SEQ#16	4 SPD IDLE (NEUT)	7.5	0.00		35.5	
SEQ#16	4 SPD IDLE (DRIV)	0.0	0.00		48.8	
SEQ#16	FED 2 MODE (30)	6.6	0.00		148.3	
SEQ#16	FED 2 MODE (NEUT)	33.8	0.00		32.3	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 22 CO: 0.01 GAIN: 300

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NOx <sub>c</sub>	CH <sub>4</sub>	
8176	78	CHRY	318	FD-318-2-CAE-7						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 228 CO: 3.75 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	2.62	34.9	516.1	2.40	15.3
SEQ#11	50 MPH CRUISE	18.7	0.02	879.5		
SEQ#11	HIGHWAY FUEL ECON.	0.68	8.0	369.4	2.29	23.1
SEQ#11	4 SPD IDLE (NEUT)	169.7	0.88		48.8	
SEQ#11	4 SPD IDLE (2500)	6.9	0.07		209.1	
SEQ#11	4 SPD IDLE (NEUT)	150.4	1.11		53.2	
SEQ#11	4 SPD IDLE (DRIV)	214.8	0.96		96.2	
SEQ#11	FED 2 MODE (30)	79.0	0.03		833.0	
SEQ#11	FED 2 MODE (NEUT)	153.0	1.17		54.4	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE NEUTRAL 750 RPMs, PROPANE GAIN 50 RPMs. USED UNIVERSAL METHOD.

SEQ#12	FEDERAL TEST PROC.	1.23	12.5	544.2	2.63	15.6
SEQ#12	50 MPH CRUISE	10.5	0.01	771.3		
SEQ#12	HIGHWAY FUEL ECON.	0.14	0.9	361.6	2.41	24.4
SEQ#12	4 SPD IDLE (NEUT)	21.7	0.01		55.0	
SEQ#12	4 SPD IDLE (2500)	1.0	0.02		147.8	
SEQ#12	4 SPD IDLE (NEUT)	0.0	0.00		70.9	
SEQ#12	4 SPD IDLE (DRIV)	17.7	0.01		188.6	
SEQ#12	FED 2 MODE (30)	30.2	0.01		885.6	
SEQ#12	FED 2 MODE (NEUT)	12.1	0.00		57.9	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 30 CO: 0.03 GAIN: 50

COMMENT : IDLE SPEED 750 RPMs IN NEUTRAL, IDLE CO .05%.

SEQ#13	FEDERAL TEST PROC.	1.35	14.8	548.5	2.75	15.4
SEQ#13	50 MPH CRUISE	0.0	0.02	772.3		
SEQ#13	HIGHWAY FUEL ECON.	0.21	2.1	370.6	2.31	23.7
SEQ#13	4 SPD IDLE (NEUT)	12.8	0.01		52.7	
SEQ#13	4 SPD IDLE (2500)	0.0	0.01		197.0	
SEQ#13	4 SPD IDLE (NEUT)	0.0	0.01		67.3	
SEQ#13	4 SPD IDLE (DRIV)	14.1	0.01		185.5	
SEQ#13	FED 2 MODE (30)	26.0	0.02		868.4	
SEQ#13	FED 2 MODE (NEUT)	5.3	0.01		62.1	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8176	78	CHRY	318	FD-318-2-CAE-7	(CON'T)					

COMMENT : IDLE SPEED NEUTRAL 750 RPMs, IDLE CO .035, IDLE  
HC 60 PPM.

SEQ#15	FEDERAL TEST PROC.	1.06	11.4	558.4	2.74	15.3
SEQ#15	50 MPH CRUISE	0.0	0.02		611.6	
SEQ#15	HIGHWAY FUEL ECON.	0.21	2.1	368.7	2.33	23.8
SEQ#15	4 SPD IDLE (NEUT)	26.0	0.00		50.7	
SEQ#15	4 SPD IDLE (2500)	0.0	0.04		110.1	
SEQ#15	4 SPD IDLE (NEUT)	0.0	0.00		57.7	
SEQ#15	4 SPD IDLE (DRIV)	12.1	0.00		155.7	
SEQ#15	FED 2 MODE (30)	20.7	0.01		792.6	
SEQ#15	FED 2 MODE (NEUT)	16.4	0.00		51.6	

NO FOLLOW UP LANE TEST DONE

COMMENT : REPLACED SPARK PLUGS, PCV VALVE FILTER, OIL AND  
OIL FILTER, PURGED CANISTER AND FUEL FILTERS, AIR  
CLEANER ELEMENT, SET TO MANUFACTURER SPECS.

SEQ#16	FEDERAL TEST PROC.	0.88	8.3	558.4	2.75	15.5
SEQ#16	50 MPH CRUISE	17.4	0.33		657.1	
SEQ#16	HIGHWAY FUEL ECON.	0.17	1.2	364.3	3.50	24.2
SEQ#16	4 SPD IDLE (NEUT)	19.7	0.00		49.2	
SEQ#16	4 SPD IDLE (2500)	0.0	0.01		195.2	
SEQ#16	4 SPD IDLE (NEUT)	0.7	0.00		59.0	
SEQ#16	4 SPD IDLE (DRIV)	21.7	0.00		166.8	
SEQ#16	FED 2 MODE (30)	25.3	0.00		697.5	
SEQ#16	FED 2 MODE (NEUT)	11.2	0.00		51.5	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 21 CO: 0.02 GAIN: 90

8178 78 DODG 105 CF-105-2-BPE-5

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 25 CO: 0.02 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	0.93	4.2	381.5	1.53	22.7
SEQ#11	50 MPH CRUISE	13.5	0.00		496.4	
SEQ#11	HIGHWAY FUEL ECON.	0.12	1.0	255.9	2.23	34.4
SEQ#11	4 SPD IDLE (NEUT)	16.4	0.00		38.1	
SEQ#11	4 SPD IDLE (2500)	1.3	0.00		61.3	
SEQ#11	4 SPD IDLE (NEUT)	2.0	0.00		38.7	
SEQ#11	FED 2 MODE (30)	0.0	0.03		154.7	
SEQ#11	FED 2 MODE (NEUT)	1.6	0.00		36.6	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 3 CO: 0.00 GAIN: 0

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8178	78	DODG	105	CF-105-2-BPE-5	(CON'T)					

COMMENT : IDLE RPM 900 NEUTRAL, WITH PROPANE 950 RPM.

SEQ#12 FEDERAL TEST PROC.	0.88	4.3	385.4	1.96	22.5
SEQ#12 50 MPH CRUISE	49.0	0.00		529.7	
SEQ#12 HIGHWAY FUEL ECON.	0.17	0.3	240.3	2.88	36.8
SEQ#12 4 SPD IDLE (NEUT)	100.5	0.00		36.3	
SEQ#12 4 SPD IDLE (2500)	33.8	0.00		58.5	
SEQ#12 4 SPD IDLE (NEUT)	35.5	0.00		39.7	
SEQ#12 FED 2 MODE (30)	32.9	0.01		454.9	
SEQ#12 FED 2 MODE (NEUT)	33.8	0.00		46.5	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 11 CO: 0.00 GAIN: 60

COMMENT : ADJUSTED IDLE SPEED & MIXTURE TO SPEC.

SEQ#15 FEDERAL TEST PROC.	0.63	4.1	383.5	1.51	22.6
SEQ#15 50 MPH CRUISE	33.8	0.00		454.9	
SEQ#15 HIGHWAY FUEL ECON.	0.16	1.1	242.7	2.30	36.2
SEQ#15 4 SPD IDLE (NEUT)	147.0	0.00		41.5	
SEQ#15 4 SPD IDLE (2500)	37.8	0.01		57.5	
SEQ#15 4 SPD IDLE (NEUT)	68.1	0.00		41.0	
SEQ#15 FED 2 MODE (30)	64.2	0.01		461.0	
SEQ#15 FED 2 MODE (NEUT)	38.8	0.00		52.9	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 69 CO: 0.00 GAIN: 200

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR, FUEL, OIL & CARBON CANISTER FILTER, ENGINE OIL & PCV VALVE. ADJUSTED PRIMARY VACUUM BREAK, IDLE SPEED & MIXUTER TO SPEC.

SEQ#16 FEDERAL TEST PROC.	1.01	3.7	426.3	2.41	20.4
SEQ#16 50 MPH CRUISE	32.2	0.00		606.2	
SEQ#16 HIGHWAY FUEL ECON.	0.18	0.5	234.4	2.69	37.7
SEQ#16 4 SPD IDLE (NEUT)	133.4	0.00		40.2	
SEQ#16 4 SPD IDLE (2500)	35.5	0.00		81.1	
SEQ#16 4 SPD IDLE (NEUT)	88.6	0.00		38.5	
SEQ#16 FED 2 MODE (30)	54.6	0.00		611.2	
SEQ#16 FED 2 MODE (NEUT)	35.8	0.00		50.1	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 89 CO: 0.00 GAIN: 130

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8179	78	DODG	225	FD-225-2-CAE-1						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 148 CO: 4.02 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	2.61	36.9	443.5	2.91	17.4
SEQ#11 50 MPH CRUISE	47.7	0.02	789.5		
SEQ#11 HIGHWAY FUEL ECON.	0.69	4.6	329.2	2.01	26.2
SEQ#11 4 SPD IDLE (NEUT)	134.4	3.51		82.3	
SEQ#11 4 SPD IDLE (2500)	41.7	0.02		416.5	
SEQ#11 4 SPD IDLE (NEUT)	127.7	3.25		89.2	
SEQ#11 4 SPD IDLE (DRIV)	200.7	3.26		167.5	
SEQ#11 FED 2 MODE (30)	83.3	0.04		2534.3	
SEQ#11 FED 2 MODE (NEUT)	129.1	3.42		108.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE RPM 750 NEUTRAL, PROPANE GAIN 50 RPM.

SEQ#12 FEDERAL TEST PROC.	1.61	15.5	459.6	2.94	18.1
SEQ#12 50 MPH CRUISE	43.4	0.01	809.8		
SEQ#12 HIGHWAY FUEL ECON.	0.45	2.3	351.6	2.33	24.9
SEQ#12 4 SPD IDLE (NEUT)	25.3	0.00		85.4	
SEQ#12 4 SPD IDLE (2500)	30.2	0.01		320.5	
SEQ#12 4 SPD IDLE (NEUT)	17.7	0.00		85.3	
SEQ#12 4 SPD IDLE (DRIV)	45.4	0.00		183.2	
SEQ#12 FED 2 MODE (30)	68.1	0.02		2258.1	
SEQ#12 FED 2 MODE (NEUT)	22.7	0.00		86.8	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE NEUTRAL 750 RPM, CO .1%.

SEQ#15 FEDERAL TEST PROC.	1.60	14.2	466.5	3.06	18.0
SEQ#15 50 MPH CRUISE	34.2	0.01	763.3		
SEQ#15 HIGHWAY FUEL ECON.	0.29	1.0	333.7	2.20	26.4
SEQ#15 4 SPD IDLE (NEUT)	19.4	0.00		79.7	
SEQ#15 4 SPD IDLE (2500)	23.3	0.00		300.2	
SEQ#15 4 SPD IDLE (NEUT)	10.5	0.00		85.8	
SEQ#15 4 SPD IDLE (DRIV)	37.5	0.00		219.3	
SEQ#15 FED 2 MODE (30)	58.2	0.01		2593.4	
SEQ#15 FED 2 MODE (NEUT)	17.4	0.00		94.9	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8179	78	DODG	225	FD-225-2-CAE-1	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED AIR, FUEL, OIL AND CHARCOAL CANISTER FILTERS, SPARK PLUGS, PCV VALVE, ENGINE OIL. ADJUSTED TIMING AND IDLE SPEED AND MIXTURE.

SEQ#16	FEDERAL TEST PROC.	4.15	9.8	486.2	3.53	17.2
SEQ#16	50 MPH CRUISE	225.7	0.01	791.6		
SEQ#16	HIGHWAY FUEL ECON.	0.99	0.8	349.9	2.46	25.1
SEQ#16	4 SPD IDLE (NEUT)	852.9	0.00		94.9	
SEQ#16	4 SPD IDLE (2500)	199.7	0.00		248.7	
SEQ#16	4 SPD IDLE (NEUT)	594.1	0.00		100.8	
SEQ#16	4 SPD IDLE (DRIV)	546.7	0.00		315.4	
SEQ#16	FED 2 MODE (30)	728.4	0.02		2297.0	
SEQ#16	FED 2 MODE (NEUT)	472.7	0.00		124.4	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 496 CO: 0.03 GAIN: 140

8182 78 FORD 140 F2.3A1X95 / BB

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 13 CO: 0.02 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	0.84	5.2	421.8	2.39	20.5
SEQ#11	50 MPH CRUISE	43.7	0.01	1262.5		
SEQ#11	HIGHWAY FUEL ECON.	0.22	0.6	275.5	3.89	32.0
SEQ#11	4 SPD IDLE (NEUT)	29.2	0.00		36.5	
SEQ#11	4 SPD IDLE (2500)	10.8	0.00		116.7	
SEQ#11	4 SPD IDLE (NEUT)	18.7	0.00		45.7	
SEQ#11	FED 2 MODE (30)	39.4	0.01		819.1	
SEQ#11	FED 2 MODE (NEUT)	19.7	0.00		48.5	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 18 CO: 0.03 GAIN: 0

COMMENT : ADJUSTED IDLE NEUTRAL 850 RPMs, PROPANE GAIN 50 RPMs. USED UNIVERSAL METHOD.

SEQ#12	FEDERAL TEST PROC.	1.00	5.6	402.0	2.49	21.4
SEQ#12	50 MPH CRUISE	49.0	0.00	1172.3		
SEQ#12	HIGHWAY FUEL ECON.	0.22	0.5	274.2	3.74	32.2
SEQ#12	4 SPD IDLE (NEUT)	107.5	0.00		31.3	
SEQ#12	4 SPD IDLE (2500)	4.6	0.00		162.4	
SEQ#12	4 SPD IDLE (NEUT)	62.9	0.00		34.5	
SEQ#12	FED 2 MODE (30)	58.9	0.01		851.2	
SEQ#12	FED 2 MODE (NEUT)	46.0	0.00		39.7	

NO FOLLOW UP LANE TEST DONE

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8182	78	FORD	140	F2.3A1X95 / BB	(CON'T)					

COMMENT : ADJUSTED IDLE NEUTRAL 850 RPMs, IDLE CO .04%, HC 70 PPM.

SEQ#15 FEDERAL TEST PROC.	0.95	5.7	420.9	2.29	20.5
SEQ#15 50 MPH CRUISE	39.8	0.01	1244.9		
SEQ#15 HIGHWAY FUEL ECON.	0.22	0.6	288.8	4.01	30.6
SEQ#15 4 SPD IDLE (NEUT)	26.3	0.00		35.3	
SEQ#15 4 SPD IDLE (2500)	10.5	0.00		111.1	
SEQ#15 4 SPD IDLE (NEUT)	18.1	0.00		37.7	
SEQ#15 FED 2 MODE (30)	46.0	0.01		807.7	
SEQ#15 FED 2 MODE (NEUT)	19.0	0.00		39.3	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 14 CO: 0.02 GAIN: 0

8186 78 FORD 302 F302C2X132LA

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 56 CO: 0.02 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	3.54	69.7	636.3	1.02	11.7
SEQ#11 50 MPH CRUISE	54.6	0.00	486.3		
SEQ#11 HIGHWAY FUEL ECON.	0.48	2.6	433.6	1.88	20.2
SEQ#11 4 SPD IDLE (NEUT)	178.0	3.41		68.3	
SEQ#11 4 SPD IDLE (2500)	96.6	0.01		1476.1	
SEQ#11 4 SPD IDLE (NEUT)	180.0	3.51		67.3	
SEQ#11 4 SPD IDLE (DRIV)	337.4	3.91		1089.5	
SEQ#11 FED 2 MODE (30)	108.8	0.01		1069.0	
SEQ#11 FED 2 MODE (NEUT)	202.4	4.12		65.5	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE TO 600 RPMs, PROPANE GAIN OF 40 RPMs IN DRIVE.

SEQ#12 FEDERAL TEST PROC.	2.05	19.2	672.0	1.53	12.5
SEQ#12 50 MPH CRUISE	43.7	0.00	495.4		
SEQ#12 HIGHWAY FUEL ECON.	0.45	0.1	436.6	2.46	20.3
SEQ#12 4 SPD IDLE (NEUT)	73.8	0.00		103.9	
SEQ#12 4 SPD IDLE (2500)	86.6	0.00		127.0	
SEQ#12 4 SPD IDLE (NEUT)	150.4	0.00		112.9	
SEQ#12 4 SPD IDLE (DRIV)	58.6	0.00		234.5	
SEQ#12 FED 2 MODE (30)	75.1	0.00		361.9	
SEQ#12 FED 2 MODE (NEUT)	226.5	0.00		96.5	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 174 CO: 0.01 GAIN: 130

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8186	78	FORD	302 F302C2X132LA	(CON'T)						

COMMENT : IDLE DRIVE 600 RPMs, CO .02%, HC 100 PPM, PROPANE GAIN DRIVE 50 RPMs.

SEQ#15	FEDERAL TEST PROC.	1.38	20.0	688.2	1.39	12.3
SEQ#15	50 MPH CRUISE	38.5	0.00	461.0		
SEQ#15	HIGHWAY FUEL ECON.	0.41	0.3	460.3	2.48	19.2
SEQ#15	4 SPD IDLE (NEUT)	80.0	0.01		96.2	
SEQ#15	4 SPD IDLE (2500)	96.9	0.00		114.7	
SEQ#15	4 SPD IDLE (NEUT)	137.0	0.00		95.9	
SEQ#15	4 SPD IDLE (DRIV)	53.3	0.00		206.0	
SEQ#15	FED 2 MODE (30)	72.4	0.00		336.6	
SEQ#15	FED 2 MODE (NEUT)	261.1	0.00		96.5	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 77 CO: 0.02 GAIN: 220

COMMENT : MAJOR TUNE-UP. REPLACED FUEL, AIR, OIL AND BREATHER FILTERS, IDLE SPEED AND MIXTURE ADJUSTED.

SEQ#16	FEDERAL TEST PROC.	2.07	28.6	660.7	1.42	12.5
SEQ#16	50 MPH CRUISE	46.0	0.00	510.5		
SEQ#16	HIGHWAY FUEL ECON.	0.41	0.3	437.5	2.43	20.2
SEQ#16	4 SPD IDLE (NEUT)	72.4	0.01		112.6	
SEQ#16	4 SPD IDLE (2500)	80.0	0.01		124.9	
SEQ#16	4 SPD IDLE (NEUT)	141.7	0.01		124.7	
SEQ#16	4 SPD IDLE (DRIV)	49.3	0.01		256.8	
SEQ#16	FED 2 MODE (30)	73.8	0.00		342.7	
SEQ#16	FED 2 MODE (NEUT)	234.6	0.01		109.0	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 38 CO: 0.00 GAIN: 210

8187 78 FORD 302 F302C2X132LA

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 48 CO: 0.02 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	2.14	33.0	717.5	0.74	11.4
SEQ#11	50 MPH CRUISE	29.6	0.01	56.8		
SEQ#11	HIGHWAY FUEL ECON.	0.28	2.7	474.7	0.58	18.5
SEQ#11	4 SPD IDLE (NEUT)	619.0	8.82		19.9	
SEQ#11	4 SPD IDLE (2500)	927.3	0.04		40.7	
SEQ#11	4 SPD IDLE (NEUT)	669.0	9.28		15.8	
SEQ#11	4 SPD IDLE (DRIV)	890.0	10.41		10.2	
SEQ#11	FED 2 MODE (30)	65.5	0.01		40.2	
SEQ#11	FED 2 MODE (NEUT)	643.9	9.55		11.6	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON	MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>		
8187	78	FORD	302	F302C2X132LA	(CON'T)						

COMMENT : ADJUSTED IDLE DRIVE 600 RPMS, IDLE NEUTRAL 780 RPMS, PROPANE GAIN 50 RPMS.

SEQ#12	FEDERAL TEST PROC.	1.46	18.4	660.3	0.89	12.8
SEQ#12	50 MPH CRUISE	20.7	0.01	59.0		
SEQ#12	HIGHWAY FUEL ECON.	0.31	1.7	461.7	0.69	! 19.1
SEQ#12	4 SPD IDLE (NEUT)	13.8	0.02		59.7	
SEQ#12	4 SPD IDLE (2500)	65.8	0.02		39.1	
SEQ#12	4 SPD IDLE (NEUT)	7.2	0.00		57.9	
SEQ#12	4 SPD IDLE (DRIV)	201.4	0.80		43.8	
SEQ#12	FED 2 MODE (30)	18.4	0.01		41.9	
SEQ#12	FED 2 MODE (NEUT)	28.6	0.01		55.2	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 24 CO: 0.01 GAIN: 81

COMMENT : ADJUSTED IDLE DRIVE 600 RPMS, IDLE NEUTRAL 760 RPMS, IDLE CO .45%, HC 100 PPM. USED UNIVERSAL METHOD.

SEQ#13	FEDERAL TEST PROC.	1.58	17.8	682.0	0.86	12.4
SEQ#13	50 MPH CRUISE	37.5	0.01	61.3		
SEQ#13	HIGHWAY FUEL ECON.	0.31	1.5	471.0	0.66	18.7
SEQ#13	4 SPD IDLE (NEUT)	167.7	0.50		32.7	
SEQ#13	4 SPD IDLE (2500)	85.3	0.01		46.6	
SEQ#13	4 SPD IDLE (NEUT)	8.9	0.00		58.5	
SEQ#13	4 SPD IDLE (DRIV)	251.7	1.19		59.1	
SEQ#13	FED 2 MODE (30)	44.4	0.00		42.0	
SEQ#13	FED 2 MODE (NEUT)	22.3	0.00		52.9	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 18 CO: 0.01 GAIN: 0

COMMENT : ADJUSTED IDLE DRIVE 600 RPMS, IDLE NEUTRAL 780 RPMS, IDLE CO .05%, HC 85 PPM, PROPANE GAIN 80 RPMS.

SEQ#15	FEDERAL TEST PROC.	1.39	15.1	684.4	0.97	12.5
SEQ#15	50 MPH CRUISE	35.8	0.00	67.4		
SEQ#15	HIGHWAY FUEL ECON.	0.34	0.8	467.8	0.68	18.9
SEQ#15	4 SPD IDLE (NEUT)	53.6	0.17		62.5	
SEQ#15	4 SPD IDLE (2500)	99.2	0.01		53.1	
SEQ#15	4 SPD IDLE (NEUT)	12.8	0.00		73.3	
SEQ#15	4 SPD IDLE (DRIV)	157.3	0.78		72.0	
SEQ#15	FED 2 MODE (30)	58.9	0.00		47.9	
SEQ#15	FED 2 MODE (NEUT)	44.4	0.00		70.4	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 10 CO: 0.01 GAIN: 130

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8187	78	FORD	302	F302C2X132LA	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR, FUEL AND CRANKCASE BREATHER FILTERS, REPLACED PCV VALVE AND ADJUSTED IDLE SPEED AND TIMING.

SEQ#16	FEDERAL TEST PROC.	1.85	10.9	649.6	1.30	13.2
SEQ#16	50 MPH CRUISE	46.4	0.00		83.3	
SEQ#16	HIGHWAY FUEL ECON.	0.46	0.8	460.9	0.94	19.1
SEQ#16	4 SPD IDLE (NEUT)	24.3	0.01		92.6	
SEQ#16	4 SPD IDLE (2500)	96.2	0.02		43.4	
SEQ#16	4 SPD IDLE (NEUT)	8.9	0.00		86.5	
SEQ#16	4 SPD IDLE (DRIV)	8.5	0.01		170.3	
SEQ#16	FED 2 MODE (30)	107.5	0.00		71.7	
SEQ#16	FED 2 MODE (NEUT)	76.7	0.01		88.3	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 34 CO: 0.02 GAIN: 170

8189 78 FORD 302 F302C2X132LA

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 16 CO: 0.02 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	0.87	19.0	749.5	3.73	11.3
SEQ#11	50 MPH CRUISE	12.5	0.01		1285.0	
SEQ#11	HIGHWAY FUEL ECON.	0.25	0.6	521.8	5.19	17.0
SEQ#11	4 SPD IDLE (NEUT)	417.0	7.88		39.1	
SEQ#11	4 SPD IDLE (2500)	26.3	0.02		425.6	
SEQ#11	4 SPD IDLE (NEUT)	29.9	0.01		47.1	
SEQ#11	4 SPD IDLE (DRIV)	359.5	9.39		26.8	
SEQ#11	FED 2 MODE (30)	104.5	0.01		481.2	
SEQ#11	FED 2 MODE (NEUT)	42.4	0.01		45.9	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE RPM 600 IN DRIVE, PROPANE GAIN 50 RPM.

SEQ#12	FEDERAL TEST PROC.	1.29	5.3	696.7	4.82	12.5
SEQ#12	50 MPH CRUISE	16.7	0.00		1513.0	
SEQ#12	HIGHWAY FUEL ECON.	0.38	0.4	463.3	5.26	19.1
SEQ#12	4 SPD IDLE (NEUT)	73.1	0.00		88.5	
SEQ#12	4 SPD IDLE (2500)	9.5	0.00		476.1	
SEQ#12	4 SPD IDLE (NEUT)	75.7	0.00		74.9	
SEQ#12	4 SPD IDLE (DRIV)	50.0	0.00		198.3	
SEQ#12	FED 2 MODE (30)	51.3	0.01		916.9	
SEQ#12	FED 2 MODE (NEUT)	71.4	0.00		71.8	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8189	78	FORD	302	F302C2X132LA	(CON'T)					

COMMENT : ADJUSTED IDLE DRIVE 600 RPM, CO .04%, HC 80 PPM,  
PROPANE GAIN 120 RPM.

SEQ#15	FEDERAL TEST PROC.	1.11	4.7	659.2	5.02	13.2
SEQ#15	50 MPH CRUISE	37.8	0.01	1645.7		
SEQ#15	HIGHWAY FUEL ECON.	0.31	0.2	495.0	6.24	17.9
SEQ#15	4 SPD IDLE (NEUT)	110.5	0.01		76.3	
SEQ#15	4 SPD IDLE (2500)	13.1	0.00		484.2	
SEQ#15	4 SPD IDLE (NEUT)	133.7	0.00		62.3	
SEQ#15	4 SPD IDLE (DRIV)	55.6	0.00		140.3	
SEQ#15	FED 2 MODE (30)	55.9	0.01		986.9	
SEQ#15	FED 2 MODE (NEUT)	177.3	0.00		62.3	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 138 CO: 0.01 GAIN: 270

COMMENT : REPLACED SPARK PLUGS, AIR FILTER, FUEL FILTER,  
OIL FILTER, PCV VALVE AND FILTER. REPAIRED EGR  
NIPPLE.

SEQ#16	FEDERAL TEST PROC.	1.17	7.3	669.5	1.43	13.0
SEQ#16	50 MPH CRUISE	22.0	0.00	161.9		
SEQ#16	HIGHWAY FUEL ECON.	0.37	0.8	463.7	1.34	19.0
SEQ#16	4 SPD IDLE (NEUT)	64.2	0.00		47.1	
SEQ#16	4 SPD IDLE (2500)	30.2	0.00		50.2	
SEQ#16	4 SPD IDLE (NEUT)	59.9	0.00		38.2	
SEQ#16	4 SPD IDLE (DRIV)	33.2	0.00		96.2	
SEQ#16	FED 2 MODE (30)	33.5	0.00		86.1	
SEQ#16	FED 2 MODE (NEUT)	91.3	0.00		37.6	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 162 CO: 0.02 GAIN: 310

8190 78 FORD 351 B351MB2X160LC

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 25 CO: 0.02 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	0.47	4.3	768.2	2.27	11.4
SEQ#11	50 MPH CRUISE	7.9	0.01	394.3		
SEQ#11	HIGHWAY FUEL ECON.	0.15	0.2	437.5	2.35	20.3
SEQ#11	4 SPD IDLE (NEUT)	426.9	3.76		75.5	
SEQ#11	4 SPD IDLE (2500)	225.1	0.01		177.3	
SEQ#11	4 SPD IDLE (NEUT)	28.6	0.01		149.3	
SEQ#11	4 SPD IDLE (DRIV)	120.4	3.24		140.6	
SEQ#11	FED 2 MODE (30)	46.7	0.01		409.4	
SEQ#11	FED 2 MODE (NEUT)	90.0	0.01		107.0	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8190	78	FORD	351	B351MB2X160LC	(CON'T)					

COMMENT : PROPANE PRE-ADJUSTMENT HAD NO EFFECT, 50 RPM GAIN  
WAS ACHIEVED AT STEP 9 OF PROPANE ADJUSTMENT  
PROCEDURE A-2.

SEQ#12	FEDERAL TEST PROC.	0.45	2.6	709.8	3.09	12.4
SEQ#12	50 MPH CRUISE	11.2	0.00	372.0		
SEQ#12	HIGHWAY FUEL ECON.	0.20	0.0	445.1	2.28	19.9
SEQ#12	4 SPD IDLE (NEUT)	46.0	0.01		196.8	
SEQ#12	4 SPD IDLE (2500)	127.4	0.00		163.4	
SEQ#12	4 SPD IDLE (NEUT)	47.7	0.00		219.1	
SEQ#12	4 SPD IDLE (DRIV)	3.0	0.01		856.3	
SEQ#12	FED 2 MODE (30)	35.8	0.00		295.2	
SEQ#12	FED 2 MODE (NEUT)	127.4	0.00		166.0	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 48 CO: 0.02 GAIN: 140

COMMENT : ADJUSTED IDLE MIXTURE TO SPEC.

SEQ#15	FEDERAL TEST PROC.	0.49	2.2	677.0	2.91	13.0
SEQ#15	50 MPH CRUISE	12.1	0.00	352.8		
SEQ#15	HIGHWAY FUEL ECON.	0.18	0.1	421.8	2.30	21.0
SEQ#15	4 SPD IDLE (NEUT)	56.9	0.01		126.5	
SEQ#15	4 SPD IDLE (2500)	106.8	0.00		142.9	
SEQ#15	4 SPD IDLE (NEUT)	49.3	0.00		134.4	
SEQ#15	4 SPD IDLE (DRIV)	4.9	0.00		475.1	
SEQ#15	FED 2 MODE (30)	48.3	0.00		285.1	
SEQ#15	FED 2 MODE (NEUT)	117.5	0.00		99.3	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 32 CO: 0.02 GAIN: 135

8191 78 FORD 351 B351MB2X160LC

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 522 CO: 0.02 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	0.83	21.3	749.3	1.08	11.3
SEQ#11	50 MPH CRUISE	18.4	0.01	227.3		
SEQ#11	HIGHWAY FUEL ECON.	0.15	2.4	473.9	1.36	18.6
SEQ#11	4 SPD IDLE (NEUT)	236.2	2.44		48.5	
SEQ#11	4 SPD IDLE (2500)	66.8	0.01		100.8	
SEQ#11	4 SPD IDLE (NEUT)	8.9	0.00		51.1	
SEQ#11	4 SPD IDLE (DRIV)	240.6	4.17		54.2	
SEQ#11	FED 2 MODE (30)	50.3	0.00		175.0	
SEQ#11	FED 2 MODE (NEUT)	16.7	0.00		45.7	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE				FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	
8191	78	FORD	351	B351MB2X160LC	(CON'T)				

COMMENT : ADJUSTED IDLE SPEED DRIVE 600 RPM, IDLE NEUTRAL  
765 RPM, PROPANE GAIN IN NEUTRAL 55 RPM.

SEQ#12	FEDERAL TEST PROC.	0.51	10.5	692.2	1.25	12.5
SEQ#12	50 MPH CRUISE	30.9	0.00		181.6	
SEQ#12	HIGHWAY FUEL ECON.	0.18	1.3	430.8	1.05	20.5
SEQ#12	4 SPD IDLE (NEUT)	27.3	0.01		67.9	
SEQ#12	4 SPD IDLE (2500)	47.4	0.01		99.0	
SEQ#12	4 SPD IDLE (NEUT)	10.8	0.00		63.6	
SEQ#12	4 SPD IDLE (DRIV)	2.6	0.01		106.0	
SEQ#12	FED 2 MODE (30)	53.6	0.00		178.0	
SEQ#12	FED 2 MODE (NEUT)	34.8	0.00		60.1	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 26 CO: 0.02 GAIN: 80

COMMENT : IDLE CO .2%, IDLE DRIVE 600 RPM.

SEQ#13	FEDERAL TEST PROC.	0.71	17.3	699.0	1.14	12.2
SEQ#13	50 MPH CRUISE	20.4	0.00		178.8	
SEQ#13	HIGHWAY FUEL ECON.	0.19	2.3	438.4	1.09	20.1
SEQ#13	4 SPD IDLE (NEUT)	24.6	0.00		64.6	
SEQ#13	4 SPD IDLE (2500)	53.3	0.00		93.4	
SEQ#13	4 SPD IDLE (NEUT)	14.1	0.00		59.2	
SEQ#13	4 SPD IDLE (DRIV)	4.3	0.07		60.3	
SEQ#13	FED 2 MODE (30)	57.6	0.01		163.2	
SEQ#13	FED 2 MODE (NEUT)	36.8	0.01		52.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE SPEED AND MIXTURE TO SPEC.

SEQ#15	FEDERAL TEST PROC.	0.60	15.3	706.8	1.14	12.1
SEQ#15	50 MPH CRUISE	8.5	0.00		176.0	
SEQ#15	HIGHWAY FUEL ECON.	0.18	1.9	449.7	1.05	19.6
SEQ#15	4 SPD IDLE (NEUT)	24.3	0.00		66.4	
SEQ#15	4 SPD IDLE (2500)	40.4	0.00		93.8	
SEQ#15	4 SPD IDLE (NEUT)	11.2	0.00		63.8	
SEQ#15	4 SPD IDLE (DRIV)	24.3	0.17		30.5	
SEQ#15	FED 2 MODE (30)	47.4	0.00		177.8	
SEQ#15	FED 2 MODE (NEUT)	34.5	0.00		52.0	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 16 CO: 0.01 GAIN: 85

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8192	78	FORD	400	B351MB2X16OLC						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 37 CO: 0.00 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	1.21	4.8	725.4	1.40	12.0
SEQ#11	50 MPH CRUISE	82.0	0.01	225.2		
SEQ#11	HIGHWAY FUEL ECON.	0.38	0.0	482.7	1.29	18.3
SEQ#11	4 SPD IDLE (NEUT)	573.7	2.35		48.3	
SEQ#11	4 SPD IDLE (2500)	221.5	0.01		119.3	
SEQ#11	4 SPD IDLE (NEUT)	30.2	0.01		66.9	
SEQ#11	4 SPD IDLE (DRIV)	121.4	2.35		62.6	
SEQ#11	FED 2 MODE (30)	217.5	0.01		242.6	
SEQ#11	FED 2 MODE (NEUT)	95.6	0.01		51.6	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE TO 575 RPM, IDLE NEUTRAL TO 710 RPM, PROPANE GAIN 50 RPM. USED UNIVERSAL METHOD.

SEQ#12	FEDERAL TEST PROC.	1.38	5.1	705.2	1.55	12.4
SEQ#12	50 MPH CRUISE	72.1	0.01	215.8		
SEQ#12	HIGHWAY FUEL ECON.	0.45	0.2	474.6	1.30	18.6
SEQ#12	4 SPD IDLE (NEUT)	54.6	0.01		76.5	
SEQ#12	4 SPD IDLE (2500)	196.7	0.01		117.5	
SEQ#12	4 SPD IDLE (NEUT)	28.3	0.00		74.1	
SEQ#12	4 SPD IDLE (DRIV)	13.8	0.00		160.1	
SEQ#12	FED 2 MODE (30)	129.1	0.01		223.4	
SEQ#12	FED 2 MODE (NEUT)	100.5	0.00		65.3	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 50 CO: 0.06 GAIN: 75

COMMENT : IDLE MIXTURE AND SPEED ADJUSTED TO MANUFACTURERS SPEC., PROPANE GAIN 20 RPM IN DRIVE.

SEQ#15	FEDERAL TEST PROC.	1.38	5.5	715.2	1.44	12.2
SEQ#15	50 MPH CRUISE	41.4	0.01	195.0		
SEQ#15	HIGHWAY FUEL ECON.	0.42	0.6	487.7	1.25	18.1
SEQ#15	4 SPD IDLE (NEUT)	56.6	0.01		71.4	
SEQ#15	4 SPD IDLE (2500)	243.3	0.01		116.7	
SEQ#15	4 SPD IDLE (NEUT)	31.9	0.00		74.2	
SEQ#15	4 SPD IDLE (DRIV)	24.6	0.01		189.6	
SEQ#15	FED 2 MODE (30)	112.5	0.00		206.8	
SEQ#15	FED 2 MODE (NEUT)	132.4	0.00		60.4	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8192	78	FORD	400	B351MB2X160LC	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR, FUEL, OIL AND CRANKCASE BREATHER FILTERS, PCV VALVE AND ENGINE OIL. ADJUSTED IDLE SPEED AND TIMING.

SEQ#16	FEDERAL TEST PROC.	1.87	5.3	710.5	1.82	12.2
SEQ#16	50 MPH CRUISE	42.7	0.00		181.6	
SEQ#16	HIGHWAY FUEL ECON.	0.33	0.2	478.3	1.37	18.5
SEQ#16	4 SPD IDLE (NEUT)	65.5	0.00		84.3	
SEQ#16	4 SPD IDLE (2500)	169.7	0.01		99.3	
SEQ#16	4 SPD IDLE (NEUT)	51.6	0.00		86.7	
SEQ#16	4 SPD IDLE (DRIV)	30.6	0.01		225.5	
SEQ#16	FED 2 MODE (30)	89.3	0.00		202.9	
SEQ#16	FED 2 MODE (NEUT)	123.8	0.00		74.5	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 110 CO: 0.02 GAIN: 100

8193 78 LINC 460 F460A2X160TOA

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 560 CO: 6.40 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	0.63	4.3	772.7	2.08	11.4
SEQ#11	50 MPH CRUISE	1.3	0.00		240.9	
SEQ#11	HIGHWAY FUEL ECON.	0.08	0.4	520.3	2.08	17.0
SEQ#11	4 SPD IDLE (NEUT)	335.9	3.16		39.7	
SEQ#11	4 SPD IDLE (2500)	27.3	0.00		114.7	
SEQ#11	4 SPD IDLE (NEUT)	15.4	0.00		50.1	
SEQ#11	4 SPD IDLE (DRIV)	120.8	1.90		46.8	
SEQ#11	FED 2 MODE (30)	21.7	0.00		188.6	
SEQ#11	FED 2 MODE (NEUT)	96.6	0.00		40.5	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 16 CO: 0.00 GAIN: 0

COMMENT : IDLE NEUTRAL 720 RPM, WITH PROPANE 770 RPM.

SEQ#12	FEDERAL TEST PROC.	0.73	3.5	766.7	2.25	11.5
SEQ#12	50 MPH CRUISE	2.3	0.00		284.1	
SEQ#12	HIGHWAY FUEL ECON.	0.11	0.1	520.9	2.31	17.0
SEQ#12	4 SPD IDLE (NEUT)	151.0	0.00		65.9	
SEQ#12	4 SPD IDLE (2500)	1.0	0.00		124.7	
SEQ#12	4 SPD IDLE (NEUT)	16.7	0.00		63.2	
SEQ#12	4 SPD IDLE (DRIV)	7.2	0.00		107.5	
SEQ#12	FED 2 MODE (30)	13.1	0.00		191.1	
SEQ#12	FED 2 MODE (NEUT)	165.7	0.00		48.8	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 16 CO: 0.00 GAIN: 100

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8193	78	LINC	460	F460A2X160TOA	(CON'T)					

COMMENT : ADJUSTED IDLE MIXTURE TO .5%, IDLE SPEED 580 RPM.

SEQ#13 FEDERAL TEST PROC.	2.17	40.9	788.5	1.26	10.3
SEQ#13 50 MPH CRUISE	2.6	0.00		195.7	
SEQ#13 HIGHWAY FUEL ECON.	0.08	1.0	532.7	1.67	16.6
SEQ#13 4 SPD IDLE (NEUT)	590.9	9.26		14.4	
SEQ#13 4 SPD IDLE (2500)	13.5	0.01		96.6	
SEQ#13 4 SPD IDLE (NEUT)	183.7	5.78		20.0	
SEQ#13 4 SPD IDLE (DRIV)	548.4	10.21		13.1	
SEQ#13 FED 2 MODE (30)	39.4	0.01		115.7	
SEQ#13 FED 2 MODE (NEUT)	577.4	9.39		14.6	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 185 CO: 5.84 GAIN: 0

COMMENT : ADJUSTED TIMING, IDLE SPEED TO SPEC.

SEQ#15 FEDERAL TEST PROC.	0.79	2.4	768.6	2.35	11.5
SEQ#15 50 MPH CRUISE	12.8	0.00		372.0	
SEQ#15 HIGHWAY FUEL ECON.	0.15	0.0	513.5	2.64	17.3
SEQ#15 4 SPD IDLE (NEUT)	153.7	0.00		60.2	
SEQ#15 4 SPD IDLE (2500)	45.0	0.00		128.3	
SEQ#15 4 SPD IDLE (NEUT)	95.2	0.00		62.9	
SEQ#15 4 SPD IDLE (DRIV)	78.7	0.00		107.0	
SEQ#15 FED 2 MODE (30)	22.3	0.00		237.6	
SEQ#15 FED 2 MODE (NEUT)	376.9	0.00		47.5	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 96 CO: 0.00 GAIN: 70

8197 78 MERC 351 F351WC2X132LB

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 129 CO: 3.80 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	2.44	53.8	632.6	7.46	12.2
SEQ#11 50 MPH CRUISE	17.7	0.01		2337.1	
SEQ#11 HIGHWAY FUEL ECON.	0.19	3.1	421.7	8.50	20.8
SEQ#11 4 SPD IDLE (NEUT)	120.1	2.35		74.9	
SEQ#11 4 SPD IDLE (2500)	12.5	0.01		567.1	
SEQ#11 4 SPD IDLE (NEUT)	112.1	2.61		84.2	
SEQ#11 4 SPD IDLE (DRIV)	172.3	2.50		190.1	
SEQ#11 FED 2 MODE (30)	26.6	0.00		1826.1	
SEQ#11 FED 2 MODE (NEUT)	129.1	2.92		90.6	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8197	78	MERC	351	F351WC2X132LB	(CON'T)					

COMMENT : IDLE SPEED 800 RPM NEUTRAL, 600 RPM DRIVE, PROPANE  
GAIN 50 RPM IN NEUTRAL.

SEQ#12 FEDERAL TEST PROC.	1.87	32.1	612.6	7.63	13.3
SEQ#12 50 MPH CRUISE	18.7	0.00	2299.5		
SEQ#12 HIGHWAY FUEL ECON.	0.17	1.5	416.2	8.37	21.2
SEQ#12 4 SPD IDLE (NEUT)	81.4	0.44		51.7	
SEQ#12 4 SPD IDLE (2500)	4.6	0.00		576.2	
SEQ#12 4 SPD IDLE (NEUT)	43.1	0.68		67.3	
SEQ#12 4 SPD IDLE (DRIV)	121.4	0.71		160.1	
SEQ#12 FED 2 MODE (30)	16.7	0.01		1821.1	
SEQ#12 FED 2 MODE (NEUT)	94.3	0.82		81.4	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE SPEED 600 RPM DRIVE, IDLE CO .3%.

SEQ#13 FEDERAL TEST PROC.	1.35	18.8	647.1	7.63	13.0
SEQ#13 50 MPH CRUISE	16.1	0.01	2199.0		
SEQ#13 HIGHWAY FUEL ECON.	0.15	1.1	418.0	8.41	21.1
SEQ#13 4 SPD IDLE (NEUT)	26.9	0.01		90.6	
SEQ#13 4 SPD IDLE (2500)	10.5	0.00		478.2	
SEQ#13 4 SPD IDLE (NEUT)	9.8	0.03		64.2	
SEQ#13 4 SPD IDLE (DRIV)	6.6	0.01		169.1	
SEQ#13 FED 2 MODE (30)	22.7	0.01		1720.9	
SEQ#13 FED 2 MODE (NEUT)	13.5	0.04		77.3	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE TO 600 RPM, CO .4%, HC 60 PPM,  
IDLE NEUTRAL TO 730 RPM, CO .05%, HC 500 PPM,  
PROPANE GAIN IN NEUTRAL 120 RPM.

SEQ#15 FEDERAL TEST PROC.	0.77	5.5	659.3	7.73	13.2
SEQ#15 50 MPH CRUISE	10.2	0.01	1942.6		
SEQ#15 HIGHWAY FUEL ECON.	0.08	0.0	416.5	7.75	21.3
SEQ#15 4 SPD IDLE (NEUT)	17.7	0.00		82.8	
SEQ#15 4 SPD IDLE (2500)	1.3	0.00		549.9	
SEQ#15 4 SPD IDLE (NEUT)	13.8	0.00		99.5	
SEQ#15 4 SPD IDLE (DRIV)	3.9	0.00		213.7	
SEQ#15 FED 2 MODE (30)	15.1	0.00		1653.2	
SEQ#15 FED 2 MODE (NEUT)	38.8	0.00		107.5	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 20 CO: 0.01 GAIN: 150

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR MAKE CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE				FUEL ECON MPG
			HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	
8197	78 MERC 351 F351WC2X132LB	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR, FUEL,  
CRANKCASE BREATHER FILTERS, PCV VALVE, ADJUSTED  
IDLE SPEED AND MIXTURE. REMOVED NON-FACTORY  
INSTALLED DELAY VALVE FROM EGR LINE.

SEQ#16	FEDERAL TEST PROC.	2.46	35.1	807.8	0.91	10.2
SEQ#16	50 MPH CRUISE	35.8	0.32		33.1	
SEQ#16	HIGHWAY FUEL ECON.	0.67	18.3	580.8	0.49	14.5
SEQ#16	4 SPD IDLE (NEUT)	62.2	0.00		58.9	
SEQ#16	4 SPD IDLE (2500)	16.4	0.03		31.9	
SEQ#16	4 SPD IDLE (NEUT)	1.3	0.00		69.1	
SEQ#16	4 SPD IDLE (DRIV)	1.6	0.00		174.7	
SEQ#16	FED 2 MODE (30)	59.6	0.01		41.6	
SEQ#16	FED 2 MODE (NEUT)	6.9	0.01		55.6	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 77 CO: 0.22 GAIN: 80

8199 78 OLDS 231 840B2BCB 8BCV

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 320 CO: 6.00 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	2.18	55.0	475.5	1.84	15.6
SEQ#11	50 MPH CRUISE	9.5	0.07		622.7	
SEQ#11	HIGHWAY FUEL ECON.	0.27	5.0	370.1	1.86	23.4
SEQ#11	4 SPD IDLE (NEUT)	298.8	5.30		26.1	
SEQ#11	4 SPD IDLE (2500)	31.2	0.37		112.6	
SEQ#11	4 SPD IDLE (NEUT)	244.3	4.75		36.2	
SEQ#11	4 SPD IDLE (DRIV)	234.9	5.09		51.3	
SEQ#11	FED 2 MODE (30)	59.6	0.24		546.9	
SEQ#11	FED 2 MODE (NEUT)	308.3	5.28		38.3	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 246 CO: 4.78 GAIN: 0

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8199	78	OLDS	231	840B2BCB	8BCV	(CON'T)				

COMMENT : NO MAINTENANCE PERFORMED DURING PRE-ADJUSTMENT.  
 50 RPM GAIN ACHEIVED DURING STEP 7 OF PROPANE  
 CARBURETOR ADJUSTMENT A-2. IDLE NEUTRAL 830 RPM,  
 WITH PROPANE 880 RPM.

SEQ#12 FEDERAL TEST PROC.	1.54	25.0	507.9	1.70	16.1
SEQ#12 50 MPH CRUISE	13.8	0.03	666.2		
SEQ#12 HIGHWAY FUEL ECON.	0.16	2.4	384.3	1.74	22.8
SEQ#12 4 SPD IDLE (NEUT)	218.8	0.90		42.3	
SEQ#12 4 SPD IDLE (2500)	20.0	0.10		137.3	
SEQ#12 4 SPD IDLE (NEUT)	192.0	0.75		31.5	
SEQ#12 4 SPD IDLE (DRIV)	156.7	0.85		107.7	
SEQ#12 FED 2 MODE (30)	27.9	0.03		478.2	
SEQ#12 FED 2 MODE (NEUT)	246.3	0.83		41.6	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
 HC: 192 CO: 0.75 GAIN: 60

COMMENT : ADJUSTED IDLE MIXTURE & SPEED TO SPEC. ADJUSTED  
 TIMING TO SPEC.

SEQ#15 FEDERAL TEST PROC.	0.85	15.9	518.2	1.64	16.3
SEQ#15 50 MPH CRUISE	17.1	0.04	777.4		
SEQ#15 HIGHWAY FUEL ECON.	0.10	1.4	388.6	1.92	22.7
SEQ#15 4 SPD IDLE (NEUT)	77.7	0.00		66.2	
SEQ#15 4 SPD IDLE (2500)	11.2	0.18		121.3	
SEQ#15 4 SPD IDLE (NEUT)	105.8	0.00		72.1	
SEQ#15 4 SPD IDLE (DRIV)	22.3	0.00		158.0	
SEQ#15 FED 2 MODE (30)	23.6	0.08		461.0	
SEQ#15 FED 2 MODE (NEUT)	188.0	0.00		64.7	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
 HC: 106 CO: 0.00 GAIN: 210

8200 78 OLDS 305 810Y2BCCH 8BCV

PRELIMINARY LANE TEST:  
 CAT: P FUEL: P  
 HC: 1659 CO: 7.79 GAIN: 20

SEQ#11 FEDERAL TEST PROC.	4.36	56.4	493.9	1.56	14.9
SEQ#11 50 MPH CRUISE	18.1	0.01	298.2		
SEQ#11 HIGHWAY FUEL ECON.	1.27	17.1	410.9	1.25	20.1
SEQ#11 4 SPD IDLE (NEUT)	1149.1	6.40		5.6	
SEQ#11 4 SPD IDLE (2500)	31.9	0.02		75.3	
SEQ#11 4 SPD IDLE (NEUT)	1004.7	6.93		7.4	
SEQ#11 4 SPD IDLE (DRIV)	957.7	8.00		5.8	
SEQ#11 FED 2 MODE (30)	147.4	0.42		225.8	
SEQ#11 FED 2 MODE (NEUT)	1000.0	6.25		11.5	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8200	78	OLDS	305	810Y2BCCH 8BCV	(CON'T)					

COMMENT : IDLE NEUTRAL 600 RPM, CO .5%, ACHEIVED AT STEP 5C  
OF IDLE CO CARB ADJUSTMENT PROCEDURE A-2.

SEQ#13	FEDERAL TEST PROC.	1.01	10.8	547.5	1.71	15.6
SEQ#13	50 MPH CRUISE	19.0	0.01		205.2	
SEQ#13	HIGHWAY FUEL ECON.	0.58	10.5	405.6	1.21	20.9
SEQ#13	4 SPD IDLE (NEUT)	23.6	0.00		32.2	
SEQ#13	4 SPD IDLE (2500)	68.8	1.00		47.1	
SEQ#13	4 SPD IDLE (NEUT)	29.9	0.00		32.7	
SEQ#13	4 SPD IDLE (DRIV)	18.1	0.00		61.1	
SEQ#13	FED 2 MODE (30)	25.0	0.00		126.2	
SEQ#13	FED 2 MODE (NEUT)	60.2	0.00		29.7	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE MIXTURE AND SPEED TO SPEC. USING  
PROPANE ENRICHMENT PROCEDURES, ENRICHED RPM 530  
IN DRIVE, IDLE RPM 500 IN DRIVE.

SEQ#15	FEDERAL TEST PROC.	1.10	13.7	558.0	1.72	15.2
SEQ#15	50 MPH CRUISE	12.8	0.01		215.2	
SEQ#15	HIGHWAY FUEL ECON.	0.67	12.1	419.6	1.38	20.1
SEQ#15	4 SPD IDLE (NEUT)	23.3	0.00		25.6	
SEQ#15	4 SPD IDLE (2500)	16.7	0.01		67.4	
SEQ#15	4 SPD IDLE (NEUT)	19.0	0.00		30.7	
SEQ#15	4 SPD IDLE (DRIV)	11.5	0.00		54.4	
SEQ#15	FED 2 MODE (30)	18.1	0.00		127.8	
SEQ#15	FED 2 MODE (NEUT)	50.6	0.00		30.9	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED AIR, FUEL, OIL, AND  
CRANKCASE BREather FILTERS, SPARK PLUGS, PCV  
VALVE AND ENGINE OIL. ADJUSTED IDLE SPEED AND  
MIXTURE.

SEQ#16	FEDERAL TEST PROC.	0.97	6.8	546.4	2.18	15.8
SEQ#16	50 MPH CRUISE	13.1	0.01		234.5	
SEQ#16	HIGHWAY FUEL ECON.	0.39	6.1	423.1	1.54	20.5
SEQ#16	4 SPD IDLE (NEUT)	22.0	0.00		27.8	
SEQ#16	4 SPD IDLE (2500)	16.4	0.04		50.2	
SEQ#16	4 SPD IDLE (NEUT)	20.4	0.00		30.4	
SEQ#16	4 SPD IDLE (DRIV)	10.2	0.00		49.9	
SEQ#16	FED 2 MODE (30)	18.1	0.00		133.1	
SEQ#16	FED 2 MODE (NEUT)	75.7	0.00		28.1	

FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 50 CO: 0.03 GAIN: 140

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8202	78	OLDS	305	810L4BFCH	8BFV					

## PRELIMINARY LANE TEST:

CAT: P FUEL: F

HC: 430 CO: 3.70 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	4.64	65.5	443.2	1.58	15.8
SEQ#11	50 MPH CRUISE	122.1	0.49	389.2		
SEQ#11	HIGHWAY FUEL ECON.	1.94	23.7	338.8	1.53	23.2
SEQ#11	4 SPD IDLE (NEUT)	672.2	3.60		19.9	
SEQ#11	4 SPD IDLE (2500)	97.6	1.16		161.4	
SEQ#11	4 SPD IDLE (NEUT)	791.6	4.68		23.5	
SEQ#11	4 SPD IDLE (DRIV)	711.0	5.43		25.0	
SEQ#11	FED 2 MODE (30)	242.3	1.53		795.6	
SEQ#11	FED 2 MODE (NEUT)	701.9	4.17		29.9	

## FOLLOW UP LANE TEST:

CAT: P FUEL: F

HC: 803 CO: 4.64 GAIN: 0

## COMMENT : PROPANE GAIN 50 RPM.

SEQ#12	FEDERAL TEST PROC.	2.55	40.7	476.1	1.55	16.2
SEQ#12	50 MPH CRUISE	52.3	0.07	369.0		
SEQ#12	HIGHWAY FUEL ECON.	1.13	12.8	352.8	1.58	23.6
SEQ#12	4 SPD IDLE (NEUT)	22.3	0.00		64.9	
SEQ#12	4 SPD IDLE (2500)	87.3	1.48		138.8	
SEQ#12	4 SPD IDLE (NEUT)	41.4	0.00		60.5	
SEQ#12	4 SPD IDLE (DRIV)	14.4	0.00		103.6	
SEQ#12	FED 2 MODE (30)	163.3	0.47		939.3	
SEQ#12	FED 2 MODE (NEUT)	107.5	0.00		57.5	

## FOLLOW UP LANE TEST:

CAT: P FUEL: F

HC: 43 CO: 0.00 GAIN: 80

## COMMENT : ADJUSTED IDLE SPEED &amp; MIXTURE.

SEQ#13	FEDERAL TEST PROC.	2.68	40.7	482.4	1.55	16.0
SEQ#13	50 MPH CRUISE	116.8	0.41	366.0		
SEQ#13	HIGHWAY FUEL ECON.	1.02	11.0	367.0	1.68	22.9
SEQ#13	4 SPD IDLE (NEUT)	21.3	0.00		51.1	
SEQ#13	4 SPD IDLE (2500)	76.1	1.40		171.4	
SEQ#13	4 SPD IDLE (NEUT)	39.8	0.00		52.3	
SEQ#13	4 SPD IDLE (DRIV)	12.8	0.00		89.8	
SEQ#13	FED 2 MODE (30)	172.0	0.90		861.7	
SEQ#13	FED 2 MODE (NEUT)	68.8	0.00		50.9	

## FOLLOW UP LANE TEST:

CAT: P FUEL: F

HC: 39 CO: 0.00 GAIN: 110

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NOx <sub>c</sub>	CH <sub>4</sub>	
8202	78	OLDS	305	810L4BFCH 8BFV	(CON'T)					

COMMENT : ADJUSTED IDLE SPEED & MIXTURE TO SPEC.

SEQ#15 FEDERAL TEST PROC.	3.14	42.1	473.7	1.64	16.1
SEQ#15 50 MPH CRUISE	106.2	0.37		473.1	
SEQ#15 HIGHWAY FUEL ECON.	1.20	13.2	341.7	1.86	24.2
SEQ#15 4 SPD IDLE (NEUT)	19.7	0.00		61.0	
SEQ#15 4 SPD IDLE (2500)	84.7	1.75		130.6	
SEQ#15 4 SPD IDLE (NEUT)	38.1	0.01		42.4	
SEQ#15 4 SPD IDLE (DRIV)	5.3	0.01		53.9	
SEQ#15 FED 2 MODE (30)	159.0	0.68		831.6	
SEQ#15 FED 2 MODE (NEUT)	75.7	0.00		58.1	

FOLLOW UP LANE TEST:

CAT: P FUEL: F  
HC: 29 CO: 0.01 GAIN: 50

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR, FUEL,  
OIL, CARBON CANISTER & CRANKCASE BREATHER FILTERS,  
ENGINE OIL, PCV VALVE. ADJUSTED IDLE SPEED &  
MIXTURE & FAST IDLE TO SPEC.

SEQ#16 FEDERAL TEST PROC.	1.89	33.9	493.2	1.62	16.1
SEQ#16 50 MPH CRUISE	22.7	0.01		568.1	
SEQ#16 HIGHWAY FUEL ECON.	0.39	5.4	397.3	2.38	21.8
SEQ#16 4 SPD IDLE (NEUT)	22.3	0.00		85.5	
SEQ#16 4 SPD IDLE (2500)	63.8	1.04		145.5	
SEQ#16 4 SPD IDLE (NEUT)	66.5	0.00		86.2	
SEQ#16 4 SPD IDLE (DRIV)	38.1	0.00		203.2	
SEQ#16 FED 2 MODE (30)	102.9	0.22		498.4	
SEQ#16 FED 2 MODE (NEUT)	115.5	0.00		76.1	

FOLLOW UP LANE TEST:

CAT: P FUEL: F  
HC: 66 CO: 0.00 GAIN: 120

COMMENT : REPLACED CATALYST.

SEQ#17 FEDERAL TEST PROC.	0.83	22.3	516.8	1.15	16.0
SEQ#17 50 MPH CRUISE	0.3	0.00		354.8	
SEQ#17 HIGHWAY FUEL ECON.	0.06	4.4	383.4	1.19	22.7
SEQ#17 4 SPD IDLE (NEUT)	0.0	0.00		93.4	
SEQ#17 4 SPD IDLE (2500)	0.0	0.00		83.6	
SEQ#17 4 SPD IDLE (NEUT)	0.0	0.00		124.4	
SEQ#17 4 SPD IDLE (DRIV)	0.0	0.00		421.6	
SEQ#17 FED 2 MODE (30)	0.0	0.02		648.8	
SEQ#17 FED 2 MODE (NEUT)	7.5	0.00		113.6	

FOLLOW UP LANE TEST:

CAT: P FUEL: F  
HC: 0 CO: 0.00 GAIN: 110

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8205	78	PLYM	225	FD-225-2-CAE-1						
<b>PRELIMINARY LANE TEST:</b>										
CAT: P FUEL: P										
HC: 470 CO: 8.20 GAIN: 0										
SEQ#11	FEDERAL TEST PROC.				4.46	54.2	485.4	4.59		15.2
SEQ#11	50 MPH CRUISE				55.3	0.01			2711.8	
SEQ#11	HIGHWAY FUEL ECON.				0.65	5.2	380.7	5.53		22.7
SEQ#11	4 SPD IDLE (NEUT)				713.3	6.55			62.0	
SEQ#11	4 SPD IDLE (2500)				165.3	1.14			849.2	
SEQ#11	4 SPD IDLE (NEUT)				649.5	6.74			61.0	
SEQ#11	4 SPD IDLE (DRIV)				708.7	6.79			70.0	
SEQ#11	FED 2 MODE (30)				266.5	0.62			2711.8	
SEQ#11	FED 2 MODE (NEUT)				859.1	6.50			69.0	
<b>FOLLOW UP LANE TEST:</b>										
CAT: P FUEL: P										
HC: 643 CO: 6.67 GAIN: 0										
<b>COMMENT : PROPANE GAIN 50 RPM.</b>										
SEQ#12	FEDERAL TEST PROC.				2.62	15.3	484.4	4.80		17.2
SEQ#12	50 MPH CRUISE				33.2	0.01		2613.1		
SEQ#12	HIGHWAY FUEL ECON.				0.34	1.5	377.4	6.87		23.3
SEQ#12	4 SPD IDLE (NEUT)				564.0	0.07			80.5	
SEQ#12	4 SPD IDLE (2500)				73.8	0.07			704.6	
SEQ#12	4 SPD IDLE (NEUT)				624.6	0.08			74.8	
SEQ#12	4 SPD IDLE (DRIV)				736.2	0.09			146.0	
SEQ#12	FED 2 MODE (30)				89.3	0.04			2642.7	
SEQ#12	FED 2 MODE (NEUT)				570.7	0.06			92.9	
<b>FOLLOW UP LANE TEST:</b>										
CAT: P FUEL: P										
HC: 620 CO: 0.08 GAIN: 40										
<b>COMMENT : ADJUSTED IDLE CO TO .5%.</b>										
SEQ#13	FEDERAL TEST PROC.				3.25	24.8	477.9	5.00		16.8
SEQ#13	50 MPH CRUISE				26.9	0.01		2721.6		
SEQ#13	HIGHWAY FUEL ECON.				0.38	2.0	380.0	6.64		23.1
SEQ#13	4 SPD IDLE (NEUT)				819.5	0.95			60.0	
SEQ#13	4 SPD IDLE (2500)				77.4	0.29			690.5	
SEQ#13	4 SPD IDLE (NEUT)				884.9	1.93			61.6	
SEQ#13	4 SPD IDLE (DRIV)				981.9	1.70			79.0	
SEQ#13	FED 2 MODE (30)				226.8	0.17			2751.2	
SEQ#13	FED 2 MODE (NEUT)				1024.9	1.23			69.5	
<b>FOLLOW UP LANE TEST:</b>										
CAT: P FUEL: P										
HC: 897 CO: 1.92 GAIN: 20										

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS ----- GRAMS / MILE -----					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8205	78	PLYM	225	FD-225-2-CAE-1	(CON'T)					

COMMENT : ADJUSTED TIMING, IDLE SPEED &amp; MIXTURE TO SPEC.

SEQ#15	FEDERAL TEST PROC.	1.32	10.2	502.5	5.76	17.0
SEQ#15	50 MPH CRUISE	13.8	0.01	3254.1		
SEQ#15	HIGHWAY FUEL ECON.	0.18	1.0	406.0	8.34	21.7
SEQ#15	4 SPD IDLE (NEUT)	50.6	0.00		101.3	
SEQ#15	4 SPD IDLE (2500)	22.0	0.04		714.7	
SEQ#15	4 SPD IDLE (NEUT)	74.4	0.00		97.7	
SEQ#15	4 SPD IDLE (DRIV)	56.3	0.00		240.6	
SEQ#15	FED 2 MODE (30)	93.6	0.05		3017.5	
SEQ#15	FED 2 MODE (NEUT)	127.4	0.00		114.2	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 76 CO: 0.00 GAIN: 130COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR, FUEL,  
CARBON CANISTER & OIL FILTERS, ENGINE OIL, PCV  
VALVE, IGNITION COIL, UNPLUGGED EGR LINE.  
ADJUSTED IDLE SPEED & MIXTURE TO SPEC.

SEQ#16	FEDERAL TEST PROC.	1.29	9.3	534.0	2.43	16.1
SEQ#16	50 MPH CRUISE	17.4	0.00	591.4		
SEQ#16	HIGHWAY FUEL ECON.	0.16	0.6	399.7	2.28	22.1
SEQ#16	4 SPD IDLE (NEUT)	42.1	0.00		109.5	
SEQ#16	4 SPD IDLE (2500)	35.5	0.00		231.1	
SEQ#16	4 SPD IDLE (NEUT)	25.0	0.00		107.5	
SEQ#16	4 SPD IDLE (DRIV)	22.0	0.00		310.4	
SEQ#16	FED 2 MODE (30)	43.1	0.01		1513.0	
SEQ#16	FED 2 MODE (NEUT)	68.5	0.00		113.6	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 26 CO: 0.00 GAIN: 180

8206 78 PLYM 318 FD-318-2-CAE-7

PRELIMINARY LANE TEST:

CAT: P FUEL: F  
HC: 427 CO: 0.10 GAIN: 150

SEQ#11	FEDERAL TEST PROC.	2.94	16.1	630.7	2.41	13.3
SEQ#11	50 MPH CRUISE	18.7	0.13	337.6		
SEQ#11	HIGHWAY FUEL ECON.	1.51	3.9	421.2	2.79	20.5
SEQ#11	4 SPD IDLE (NEUT)	551.2	0.12		55.4	
SEQ#11	4 SPD IDLE (2500)	17.4	0.11		123.1	
SEQ#11	4 SPD IDLE (NEUT)	414.8	0.07		58.1	
SEQ#11	4 SPD IDLE (DRIV)	217.8	0.06		114.4	
SEQ#11	FED 2 MODE (30)	86.3	0.08		765.3	
SEQ#11	FED 2 MODE (NEUT)	483.9	0.10		54.7	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8206	78	PLYM	318	FD-318-2-CAE-7	(CON'T)					

COMMENT : ADJUSTED IDLE MIXTURE TO SPEC.

SEQ#15	FEDERAL TEST PROC.	2.53	13.0	639.2	3.93	13.3
SEQ#15	50 MPH CRUISE	11.8	0.05		372.0	
SEQ#15	HIGHWAY FUEL ECON.	1.48	2.5	415.7	5.68	20.9
SEQ#15	4 SPD IDLE (NEUT)	171.0	0.05		25.0	
SEQ#15	4 SPD IDLE (2500)	8.9	0.04		91.1	
SEQ#15	4 SPD IDLE (NEUT)	68.5	0.03		30.1	
SEQ#15	4 SPD IDLE (DRIV)	73.4	0.03		67.5	
SEQ#15	FED 2 MODE (30)	39.8	0.04		329.6	
SEQ#15	FED 2 MODE (NEUT)	85.7	0.04		30.9	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP, REPLACED CARBURETOR, SPARK PLUGS,  
ENGINE OIL AND FILTER, FUEL FILTER, PCV VALVE,  
CARBON CANISTER FILTER, AIR FILTER, ADJUSTED IDLE  
SPEED AND MIXTURE, ADJUSTED TIMING TO SPEC.

SEQ#16	FEDERAL TEST PROC.	3.00	26.4	618.1	2.15	13.3
SEQ#16	50 MPH CRUISE	43.4	0.36		299.2	
SEQ#16	HIGHWAY FUEL ECON.	1.95	11.6	413.9	2.57	20.2
SEQ#16	4 SPD IDLE (NEUT)	205.7	0.11		58.1	
SEQ#16	4 SPD IDLE (2500)	9.5	0.19		106.7	
SEQ#16	4 SPD IDLE (NEUT)	100.2	0.07		70.6	
SEQ#16	4 SPD IDLE (DRIV)	151.7	0.05		227.8	
SEQ#16	FED 2 MODE (30)	120.1	0.35		884.6	
SEQ#16	FED 2 MODE (NEUT)	156.7	0.11		68.4	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 140 CO: 0.14 GAIN: 110

COMMENT : REPLACED CATALYST.

SEQ#17	FEDERAL TEST PROC.	1.16	18.3	606.9	0.92	13.9
SEQ#17	50 MPH CRUISE	3.6	0.03		182.1	
SEQ#17	HIGHWAY FUEL ECON.	0.40	5.3	413.8	1.13	21.0
SEQ#17	4 SPD IDLE (NEUT)	37.8	0.01		58.0	
SEQ#17	4 SPD IDLE (2500)	0.0	0.07		70.0	
SEQ#17	4 SPD IDLE (NEUT)	23.3	0.01		73.2	
SEQ#17	4 SPD IDLE (DRIV)	40.1	0.01		232.2	
SEQ#17	FED 2 MODE (30)	36.2	0.10		611.6	
SEQ#17	FED 2 MODE (NEUT)	56.3	0.01		65.4	

FOLLOW UP LANE TEST:

CAT: P FUEL: F  
HC: 25 CO: 0.06 GAIN: 60

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8208	78	PONT	231	840B2BCB 8BCV						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 362 CO: 4.62 GAIN: 15

SEQ#11	FEDERAL TEST PROC.	2.28	34.3	439.6	1.55	17.7
SEQ#11	50 MPH CRUISE	14.4	0.01	715.7		
SEQ#11	HIGHWAY FUEL ECON.	0.23	2.2	331.1	2.23	26.5
SEQ#11	4 SPD IDLE (NEUT)	394.8	4.17		41.4	
SEQ#11	4 SPD IDLE (2500)	28.3	0.02		175.7	
SEQ#11	4 SPD IDLE (NEUT)	333.0	3.80		47.3	
SEQ#11	4 SPD IDLE (DRIV)	335.2	4.05		138.8	
SEQ#11	FED 2 MODE (30)	36.2	0.01		370.0	
SEQ#11	FED 2 MODE (NEUT)	374.9	4.33		53.7	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 600 RPM, CO .5%, HC 350 PPM.

SEQ#13	FEDERAL TEST PROC.	0.71	6.9	456.0	1.91	18.9
SEQ#13	50 MPH CRUISE	10.8	0.01	803.7		
SEQ#13	HIGHWAY FUEL ECON.	0.08	0.6	343.0	2.76	25.8
SEQ#13	4 SPD IDLE (NEUT)	10.5	0.00		73.7	
SEQ#13	4 SPD IDLE (2500)	4.6	0.00		190.9	
SEQ#13	4 SPD IDLE (NEUT)	13.5	0.00		81.0	
SEQ#13	4 SPD IDLE (DRIV)	5.3	0.01		398.3	
SEQ#13	FED 2 MODE (30)	16.1	0.00		346.7	
SEQ#13	FED 2 MODE (NEUT)	32.9	0.00		83.8	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 600 RPM, CO .11%, HC 200 PPM,  
PROPANE GAIN 150 RPM.

SEQ#15	FEDERAL TEST PROC.	0.85	9.3	466.3	1.82	18.4
SEQ#15	50 MPH CRUISE	8.2	0.01	894.7		
SEQ#15	HIGHWAY FUEL ECON.	0.10	0.7	340.9	2.54	25.9
SEQ#15	4 SPD IDLE (NEUT)	62.5	0.17		27.2	
SEQ#15	4 SPD IDLE (2500)	6.2	0.02		185.0	
SEQ#15	4 SPD IDLE (NEUT)	12.1	0.01		93.8	
SEQ#15	4 SPD IDLE (DRIV)	3.6	0.02		477.2	
SEQ#15	FED 2 MODE (30)	17.4	0.01		444.8	
SEQ#15	FED 2 MODE (NEUT)	20.0	0.01		102.4	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 84 CO: 0.37 GAIN: 60

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE				FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	
8208	78	PONT	231	840B2BCB 8BCV	(CON'T)				

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, FUEL, OIL, PCV, PURGE CANISTER FILTERS. AIR FILTER ELEMENT, ENGINE OIL, PCV VALVE, SET TIMING TO SPEC.

SEQ#16 FEDERAL TEST PROC.	1.19	14.1	457.4	1.73	18.4
SEQ#16 50 MPH CRUISE	11.5	0.01	830.0		
SEQ#16 HIGHWAY FUEL ECON.	0.14	1.4	346.1	2.25	25.4
SEQ#16 4 SPD IDLE (NEUT)	101.2	0.21		29.8	
SEQ#16 4 SPD IDLE (2500)	8.5	0.02		163.9	
SEQ#16 4 SPD IDLE (NEUT)	14.8	0.00		82.2	
SEQ#16 4 SPD IDLE (DRIV)	2.6	0.01		308.3	
SEQ#16 FED 2 MODE (30)	15.1	0.01		388.2	
SEQ#16 FED 2 MODE (NEUT)	10.8	0.01		35.3	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 155 CO: 1.29 GAIN: 60

8209 78 PONT 231 840B2BCB 8BCV

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 536 CO: 5.30 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	3.24	34.3	416.9	5.05	18.4
SEQ#11 50 MPH CRUISE	2.3	0.02	3056.9		
SEQ#11 HIGHWAY FUEL ECON.	0.36	1.8	350.4	7.66	25.0
SEQ#11 4 SPD IDLE (NEUT)	499.6	5.27		45.3	
SEQ#11 4 SPD IDLE (2500)	22.7	0.07		441.8	
SEQ#11 4 SPD IDLE (NEUT)	463.8	4.85		42.1	
SEQ#11 4 SPD IDLE (DRIV)	383.8	5.62		54.4	
SEQ#11 FED 2 MODE (30)	96.6	0.22		2277.9	
SEQ#11 FED 2 MODE (NEUT)	542.2	4.95		49.4	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE SPEED NEUTRAL 860, DRIVE 600, PROPANE GAIN 60RPM.

SEQ#12 FEDERAL TEST PROC.	1.03	10.9	469.2	5.30	18.1
SEQ#12 50 MPH CRUISE	3.3	0.01	2672.3		
SEQ#12 HIGHWAY FUEL ECON.	0.15	0.4	357.4	8.02	24.8
SEQ#12 4 SPD IDLE (NEUT)	0.7	0.01		90.9	
SEQ#12 4 SPD IDLE (2500)	0.0	0.01		463.0	
SEQ#12 4 SPD IDLE (NEUT)	0.0	0.01		98.3	
SEQ#12 4 SPD IDLE (DRIV)	0.0	0.01		410.4	
SEQ#12 FED 2 MODE (30)	15.1	0.02		2121.7	
SEQ#12 FED 2 MODE (NEUT)	15.8	0.01		105.7	

NO FOLLOW UP LANE TEST DONE

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON	MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>		
8209	78	PONT	231	840B2BCB	8BCV	(CON'T)					

COMMENT : IDLE SPEED NEUTRAL 850, DRIVE 600, IDLE CO .45%.

SEQ#13 FEDERAL TEST PROC.	1.04	10.0	472.9	5.39	18.0
SEQ#13 50 MPH CRUISE	12.5	0.01		2751.2	
SEQ#13 HIGHWAY FUEL ECON.	0.14	0.3	354.0	8.18	25.0
SEQ#13 4 SPD IDLE (NEUT)	14.1	0.00		93.4	
SEQ#13 4 SPD IDLE (2500)	0.0	0.01		444.8	
SEQ#13 4 SPD IDLE (NEUT)	18.7	0.00		92.9	
SEQ#13 4 SPD IDLE (DRIV)	6.2	0.00		337.6	
SEQ#13 FED 2 MODE (30)	21.3	0.02		1916.3	
SEQ#13 FED 2 MODE (NEUT)	55.6	0.00		100.3	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE DRIVE 600RPMS, CO .05%, HC 90PPM, PROPANE GAIN,  
DRIVE 30RPM,NEUTRAL 120RPM.

SEQ#15 FEDERAL TEST PROC.	1.08	8.4	471.3	6.22	18.2
SEQ#15 50 MPH CRUISE	11.8	0.02		2504.7	
SEQ#15 HIGHWAY FUEL ECON.	0.14	0.3	364.7	8.81	24.3
SEQ#15 4 SPD IDLE (NEUT)	13.1	0.01		101.8	
SEQ#15 4 SPD IDLE (2500)	0.0	0.01		459.0	
SEQ#15 4 SPD IDLE (NEUT)	13.5	0.01		95.9	
SEQ#15 4 SPD IDLE (DRIV)	2.6	0.01		339.7	
SEQ#15 FED 2 MODE (30)	17.7	0.02		1718.4	
SEQ#15 FED 2 MODE (NEUT)	59.9	0.00		114.2	

NO FOLLOW UP LANE TEST DONE

COMMENT : REPLACED SPARK PLUGS, PCV, FUEL AND OIL FILTERS,OIL,  
AIR CLEANER ELEMENT,REMOVED STEEL BALL FROM EGR  
LINE.SET TO MANUFACTOR SPEC.

SEQ#16 FEDERAL TEST PROC.	1.64	10.9	511.2	1.46	16.6
SEQ#16 50 MPH CRUISE	15.8	0.00		666.2	
SEQ#16 HIGHWAY FUEL ECON.	0.13	0.3	370.6	2.13	23.9
SEQ#16 4 SPD IDLE (NEUT)	12.1	0.01		83.6	
SEQ#16 4 SPD IDLE (2500)	16.4	0.03		170.3	
SEQ#16 4 SPD IDLE (NEUT)	12.8	0.01		84.0	
SEQ#16 4 SPD IDLE (DRIV)	11.5	0.01		373.0	
SEQ#16 FED 2 MODE (30)	25.0	0.01		562.1	
SEQ#16 FED 2 MODE (NEUT)	36.2	0.00		91.0	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 2322 CO: 12.44 GAIN: 0

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NOx <sub>c</sub>	CH <sub>4</sub>	
8216	78	TOYO	134	20R(F) / EV-R						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 8 CO: 0.52 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	0.51	16.3	459.5	1.85	18.2
SEQ#11	50 MPH CRUISE	26.9	0.17	358.9		
SEQ#11	HIGHWAY FUEL ECON.	0.17	4.0	370.6	1.93	23.5
SEQ#11	4 SPD IDLE (NEUT)	28.6	0.59		16.9	
SEQ#11	4 SPD IDLE (2500)	8.9	0.21		51.5	
SEQ#11	4 SPD IDLE (NEUT)	19.7	0.55		17.7	
SEQ#11	4 SPD IDLE (DRIV)	51.3	1.32		26.8	
SEQ#11	FED 2 MODE (30)	16.7	0.33		297.2	
SEQ#11	FED 2 MODE (NEUT)	19.4	0.57		20.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE SPEED 850 RPMs, PROPANE GAIN 50 RPMs.

SEQ#12	FEDERAL TEST PROC.	0.63	13.3	450.3	1.95	18.8
SEQ#12	50 MPH CRUISE	5.6	0.11	262.8		
SEQ#12	HIGHWAY FUEL ECON.	0.15	3.8	367.6	1.91	23.7
SEQ#12	4 SPD IDLE (NEUT)	38.8	0.05		22.5	
SEQ#12	4 SPD IDLE (2500)	16.7	0.15		39.9	
SEQ#12	4 SPD IDLE (NEUT)	37.5	0.06		23.6	
SEQ#12	4 SPD IDLE (DRIV)	64.5	0.05		110.3	
SEQ#12	FED 2 MODE (30)	19.7	0.26		227.6	
SEQ#12	FED 2 MODE (NEUT)	27.9	0.06		26.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE SPEED 850 RPMs IN NEUTRAL, IDLE MIXTURE  
ADJUSTED PER EMISSION STICKER, 920 TO 850 RPMs  
LEAN DROP.

SEQ#15	FEDERAL TEST PROC.	0.67	14.4	443.9	1.88	18.9
SEQ#15	50 MPH CRUISE	4.6	0.14	285.1		
SEQ#15	HIGHWAY FUEL ECON.	0.15	4.1	351.0	1.79	24.8
SEQ#15	4 SPD IDLE (NEUT)	20.4	0.08		23.4	
SEQ#15	4 SPD IDLE (2500)	6.6	0.14		40.5	
SEQ#15	4 SPD IDLE (NEUT)	18.4	0.10		23.5	
SEQ#15	4 SPD IDLE (DRIV)	44.1	0.15		104.4	
SEQ#15	FED 2 MODE (30)	12.8	0.28		220.9	
SEQ#15	FED 2 MODE (NEUT)	15.1	0.11		22.2	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 29 CO: 0.19 GAIN: 0

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON	MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>		
8216	78	TOYO	134	20R(F) / EV-R (CON'T)							

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR, FUEL AND OIL FILTERS. CHANGED CRANKCASE OIL. ADJUSTED IDLE SPEED AND MIXTURE, IGNITION AND TIMING.

SEQ#16 FEDERAL TEST PROC.	0.60	14.1	456.8	1.83	18.5
SEQ#16 50 MPH CRUISE	5.6	0.08		150.1	
SEQ#16 HIGHWAY FUEL ECON.	0.13	4.0	367.4	1.70	23.7
SEQ#16 4 SPD IDLE (NEUT)	14.8	0.05		20.5	
SEQ#16 4 SPD IDLE (2500)	6.6	0.07		16.9	
SEQ#16 4 SPD IDLE (NEUT)	14.4	0.06		19.8	
SEQ#16 4 SPD IDLE (DRIV)	29.6	0.08		72.8	
SEQ#16 FED 2 MODE (30)	9.5	0.16		125.4	
SEQ#16 FED 2 MODE (NEUT)	13.1	0.06		21.7	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 0 CO: 0.23 GAIN: 0

8217 78 DATS 085 A140F/EVPCARB2

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 34 CO: 1.18 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	1.29	11.0	322.5	3.35	25.8
SEQ#11 50 MPH CRUISE	74.7	0.04		1092.1	
SEQ#11 HIGHWAY FUEL ECON.	0.91	2.1	224.6	5.04	38.5
SEQ#11 4 SPD IDLE (NEUT)	27.3	0.30		27.3	
SEQ#11 4 SPD IDLE (2500)	14.1	0.17		68.4	
SEQ#11 4 SPD IDLE (NEUT)	25.6	0.32		22.9	
SEQ#11 FED 2 MODE (30)	56.3	0.04		474.1	
SEQ#11 FED 2 MODE (NEUT)	28.3	0.36		26.2	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE SPEED, NEUTRAL 700 RPM, PROPANE GAIN 50 RPM.

SEQ#12 FEDERAL TEST PROC.	1.48	6.2	307.1	3.25	27.6
SEQ#12 50 MPH CRUISE	56.3	0.03		929.0	
SEQ#12 HIGHWAY FUEL ECON.	0.88	1.4	225.3	4.92	38.5
SEQ#12 4 SPD IDLE (NEUT)	90.6	0.05		19.0	
SEQ#12 4 SPD IDLE (2500)	21.0	0.08		89.0	
SEQ#12 4 SPD IDLE (NEUT)	82.7	0.05		19.2	
SEQ#12 FED 2 MODE (30)	46.0	0.04		409.4	
SEQ#12 FED 2 MODE (NEUT)	80.4	0.05		23.8	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 103 CO: 0.09 GAIN: 0

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8217	78	DATS	085	A140F/EVPCARB2	(CON'T)					

COMMENT : IDLE RPM 700 NEUTRAL, LEAN DROP 740 TO 700 RPM IN NEUTRAL.

SEQ#15 FEDERAL TEST PROC.	1.48	9.0	311.6	3.31	26.9
SEQ#15 50 MPH CRUISE	102.5	0.07	1633.2		
SEQ#15 HIGHWAY FUEL ECON.	0.88	1.8	236.0	5.11	36.7
SEQ#15 4 SPD IDLE (NEUT)	105.8	0.24		36.1	
SEQ#15 4 SPD IDLE (2500)	28.6	0.18		155.0	
SEQ#15 4 SPD IDLE (NEUT)	106.5	0.24		37.3	
SEQ#15 FED 2 MODE (30)	90.0	0.08		687.4	
SEQ#15 FED 2 MODE (NEUT)	99.9	0.23		41.5	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, OIL AND OIL FILTER, FUEL AND AIR FILTER, PCV VALVE AND FILTER. SET TO SPEC.

SEQ#16 FEDERAL TEST PROC.	1.35	6.5	311.6	3.06	27.2
SEQ#16 50 MPH CRUISE	90.9	0.06	1518.0		
SEQ#16 HIGHWAY FUEL ECON.	0.80	1.2	229.6	4.61	37.9
SEQ#16 4 SPD IDLE (NEUT)	151.0	0.26		39.7	
SEQ#16 4 SPD IDLE (2500)	26.6	0.13		127.5	
SEQ#16 4 SPD IDLE (NEUT)	158.3	0.20		44.1	
SEQ#16 FED 2 MODE (30)	72.4	0.07		591.4	
SEQ#16 FED 2 MODE (NEUT)	134.7	0.23		40.7	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 170 CO: 1.09 GAIN: 0

8219 78 DATS 146 L240/280F

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 481 CO: 2.71 GAIN: 23

SEQ#11 FEDERAL TEST PROC.	8.44	84.6	362.0	1.14	17.0
SEQ#11 50 MPH CRUISE	134.4	2.73	674.3		
SEQ#11 HIGHWAY FUEL ECON.	3.19	57.0	279.8	1.61	23.4
SEQ#11 4 SPD IDLE (NEUT)	206.4	2.13		50.1	
SEQ#11 4 SPD IDLE (2500)	75.1	2.49		134.2	
SEQ#11 4 SPD IDLE (NEUT)	217.1	2.27		51.1	
SEQ#11 FED 2 MODE (30)	130.7	2.94		167.8	
SEQ#11 FED 2 MODE (NEUT)	229.9	2.16		49.6	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE				FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	
8219	78	DATS	146	L240/280F	(CON'T)				

COMMENT : IDLE NEUTRAL 700 RPM, IDLE CO .2%.

SEQ#13 FEDERAL TEST PROC.	6.55	60.6	399.0	1.39	17.2
SEQ#13 50 MPH CRUISE	142.4	1.89	859.2		
SEQ#13 HIGHWAY FUEL ECON.	2.77	45.7	285.1	1.68	24.3
SEQ#13 4 SPD IDLE (NEUT)	119.4	0.27		67.1	
SEQ#13 4 SPD IDLE (2500)	57.6	1.82		172.4	
SEQ#13 4 SPD IDLE (NEUT)	121.1	0.29		70.4	
SEQ#13 FED 2 MODE (30)	116.1	2.22		278.0	
SEQ#13 FED 2 MODE (NEUT)	144.7	0.32		67.9	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE SPEED & MIXTURE TO SPEC.

SEQ#15 FEDERAL TEST PROC.	6.39	50.9	403.7	1.49	17.6
SEQ#15 50 MPH CRUISE	144.0	1.63		1054.6	
SEQ#15 HIGHWAY FUEL ECON.	2.89	39.1	311.2	2.17	23.2
SEQ#15 4 SPD IDLE (NEUT)	271.7	0.14		65.7	
SEQ#15 4 SPD IDLE (2500)	81.5	0.81		195.2	
SEQ#15 4 SPD IDLE (NEUT)	168.4	0.13		64.6	
SEQ#15 FED 2 MODE (30)	134.7	1.64		327.5	
SEQ#15 FED 2 MODE (NEUT)	175.3	0.15		63.6	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED OIL & OIL FILTER, SPARK PLUGS, AIR FILTER, PCV FILTER, ADJUSTED IDLE NEUTRAL TO 700 RPM, CO .155.

SEQ#16 FEDERAL TEST PROC.	6.42	53.7	405.8	1.47	17.4
SEQ#16 50 MPH CRUISE	137.4	1.95		951.9	
SEQ#16 HIGHWAY FUEL ECON.	2.77	41.4	306.3	2.36	23.3
SEQ#16 4 SPD IDLE (NEUT)	151.4	0.12		60.5	
SEQ#16 4 SPD IDLE (2500)	45.0	1.22		194.7	
SEQ#16 4 SPD IDLE (NEUT)	128.1	0.11		61.8	
SEQ#16 FED 2 MODE (30)	119.8	2.30		262.8	
SEQ#16 FED 2 MODE (NEUT)	151.0	0.12		61.1	

FOLLOW UP LANE TEST:  
CAT: P FUEL: P  
HC: 256 CO: 0.37 GAIN: 74

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8222	78	VOLK	089	37F / 37						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 109 CO: 1.42 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	3.56	10.3	341.1	2.77	24.1
SEQ#11 50 MPH CRUISE	131.7	0.31	854.2		
SEQ#11 HIGHWAY FUEL ECON.	2.78	10.1	233.9	3.32	34.3
SEQ#11 4 SPD IDLE (NEUT)	69.8	1.32		39.1	
SEQ#11 4 SPD IDLE (2500)	112.1	3.23		51.1	
SEQ#11 4 SPD IDLE (NEUT)	77.7	0.85		39.3	
SEQ#11 FED 2 MODE (30)	198.1	1.44		607.6	
SEQ#11 FED 2 MODE (NEUT)	97.9	0.48		42.3	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE RPM 925, PROPANE GAIN 75 RPM.

SEQ#12 FEDERAL TEST PROC.	2.60	10.0	352.3	2.73	23.6
SEQ#12 50 MPH CRUISE	102.9	0.38	848.2		
SEQ#12 HIGHWAY FUEL ECON.	2.42	12.1	222.3	2.97	35.6
SEQ#12 4 SPD IDLE (NEUT)	35.5	1.33		51.8	
SEQ#12 4 SPD IDLE (2500)	80.4	1.26		60.3	
SEQ#12 4 SPD IDLE (NEUT)	44.1	0.98		52.0	
SEQ#12 FED 2 MODE (30)	139.7	0.28		956.9	
SEQ#12 FED 2 MODE (NEUT)	42.1	0.47		66.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE MIXTURE TO SPEC, IDLE SPEED 925 RPM,  
IDLE CO .05%, HC 40 PPM.

SEQ#15 FEDERAL TEST PROC.	3.09	18.3	359.3	2.69	22.3
SEQ#15 50 MPH CRUISE	16.7	0.03		56.8	
SEQ#15 HIGHWAY FUEL ECON.	2.66	14.1	226.3	2.88	34.5
SEQ#15 4 SPD IDLE (NEUT)	11.2	0.00		0.8	
SEQ#15 4 SPD IDLE (2500)	13.5	0.06		8.3	
SEQ#15 4 SPD IDLE (NEUT)	8.9	0.00		0.9	
SEQ#15 FED 2 MODE (30)	22.3	0.03		98.5	
SEQ#15 FED 2 MODE (NEUT)	13.5	0.01		0.6	

NO FOLLOW UP LANE TEST DONE

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS ----- GRAMS / MILE -----					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8222	78	VOLK	089	37F / 37	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, OIL AND OIL FILTER, AIR FILTER, POINTS, ROTOR AND DISTRIBUTOR CAP. SET TO SPEC.

SEQ#16	FEDERAL TEST PROC.	2.47	17.5	360.4	1.73	22.4
SEQ#16	50 MPH CRUISE	228.5	0.91	1219.9		
SEQ#16	HIGHWAY FUEL ECON.	2.81	18.0	230.6	2.24	33.1
SEQ#16	4 SPD IDLE (NEUT)	87.3	6.30		86.2	
SEQ#16	4 SPD IDLE (2500)	165.3	5.81		97.5	
SEQ#16	4 SPD IDLE (NEUT)	88.3	4.98		90.9	
SEQ#16	FED 2 MODE (30)	301.2	2.25		892.7	
SEQ#16	FED 2 MODE (NEUT)	85.3	2.43		115.4	

FOLLOW UP LANE TEST:

CAT: P      FUEL: P  
HC: 62      CO: 1.90      GAIN: 0

8223 78 VOLK 097 37F / 37

PRELIMINARY LANE TEST:  
CAT: P      FUEL: P  
HC: 171      CO: 7.10      GAIN: 0

SEQ#11	FEDERAL TEST PROC.	2.63	50.3	326.5	1.67	21.4
SEQ#11	50 MPH CRUISE	140.0	0.91	649.0		
SEQ#11	HIGHWAY FUEL ECON.	1.80	14.9	275.5	2.54	29.1
SEQ#11	4 SPD IDLE (NEUT)	208.8	6.95		40.1	
SEQ#11	4 SPD IDLE (2500)	122.4	3.42		91.3	
SEQ#11	4 SPD IDLE (NEUT)	207.7	6.66		44.0	
SEQ#11	4 SPD IDLE (DRIV)	303.9	7.13		41.4	
SEQ#11	FED 2 MODE (30)	206.7	2.11		591.4	
SEQ#11	FED 2 MODE (NEUT)	174.3	5.81		52.4	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE NEUTRAL 930 RPM, PROPANE ENRICHED 980 RPM.

SEQ#12	FEDERAL TEST PROC.	1.66	9.6	391.1	1.99	21.6
SEQ#12	50 MPH CRUISE	74.4	0.14	372.0		
SEQ#12	HIGHWAY FUEL ECON.	1.42	3.4	309.1	3.44	27.8
SEQ#12	4 SPD IDLE (NEUT)	148.7	0.60		68.6	
SEQ#12	4 SPD IDLE (2500)	36.8	0.19		127.5	
SEQ#12	4 SPD IDLE (NEUT)	163.0	0.53		73.2	
SEQ#12	4 SPD IDLE (DRIV)	148.0	0.64		107.2	
SEQ#12	FED 2 MODE (30)	102.2	0.18		571.2	
SEQ#12	FED 2 MODE (NEUT)	129.4	0.49		77.9	

NO FOLLOW UP LANE TEST DONE

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8223	78	VOLK	097	37F / 37	(CON'T)					

COMMENT : ADJUSTED IDLE NEUTRAL 925 RPM, CO .6%.

SEQ#13	FEDERAL TEST PROC.	1.60	6.8	398.6	2.01	21.4
SEQ#13	50 MPH CRUISE	77.1	0.15	423.6		
SEQ#13	HIGHWAY FUEL ECON.	1.30	3.1	310.8	3.45	27.8
SEQ#13	4 SPD IDLE (NEUT)	96.9	0.40		84.2	
SEQ#13	4 SPD IDLE (2500)	34.2	0.16		138.0	
SEQ#13	4 SPD IDLE (NEUT)	86.3	0.40		83.4	
SEQ#13	4 SPD IDLE (DRIV)	127.1	0.43		127.8	
SEQ#13	FED 2 MODE (30)	110.5	0.42		626.2	
SEQ#13	FED 2 MODE (NEUT)	107.2	0.35		83.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE NEUTRAL 925 RPM, CO .35%, HC 60 PPM,  
PROPANE GAIN 175 RPM.

SEQ#15	FEDERAL TEST PROC.	1.76	6.8	392.8	2.01	21.7
SEQ#15	50 MPH CRUISE	97.6	0.20	548.9		
SEQ#15	HIGHWAY FUEL ECON.	1.42	3.2	313.2	3.65	27.5
SEQ#15	4 SPD IDLE (NEUT)	82.3	0.27		107.0	
SEQ#15	4 SPD IDLE (2500)	47.4	0.16		155.2	
SEQ#15	4 SPD IDLE (NEUT)	143.7	0.32		102.4	
SEQ#15	4 SPD IDLE (DRIV)	118.1	0.30		164.4	
SEQ#15	FED 2 MODE (30)	129.7	0.51		670.2	
SEQ#15	FED 2 MODE (NEUT)	84.3	0.28		109.8	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, OIL AND OIL  
FILTER, POINTS, ROTOR, DISTRIBUTOR CAP, FUEL  
FILTER, AIR FILTER, ADJUSTED TIMING TO SPEC.  
REPLACED HOT AND FRESH AIR DUCTS.

SEQ#16	FEDERAL TEST PROC.	1.44	5.2	378.4	2.39	22.7
SEQ#16	50 MPH CRUISE	89.3	0.15	677.3		
SEQ#16	HIGHWAY FUEL ECON.	1.39	3.0	309.0	4.37	27.9
SEQ#16	4 SPD IDLE (NEUT)	116.1	0.32		87.3	
SEQ#16	4 SPD IDLE (2500)	50.6	0.17		165.7	
SEQ#16	4 SPD IDLE (NEUT)	185.0	0.30		93.9	
SEQ#16	4 SPD IDLE (DRIV)	130.7	0.34		160.3	
SEQ#16	FED 2 MODE (30)	121.8	0.12		858.3	
SEQ#16	FED 2 MODE (NEUT)	126.7	0.31		100.3	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 124 CO: 1.33 GAIN: 100

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NOx <sub>c</sub>	CH <sub>4</sub>	
8224	78	SUBA	097	BU / GU						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 219 CO: 6.64 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	1.71	24.6	294.7	3.23	26.2
SEQ#11	50 MPH CRUISE	69.5	0.22	2494.8		
SEQ#11	HIGHWAY FUEL ECON.	0.71	5.9	215.0	4.50	39.2
SEQ#11	4 SPD IDLE (NEUT)	109.5	4.62		54.5	
SEQ#11	4 SPD IDLE (2500)	8.2	0.34		110.6	
SEQ#11	4 SPD IDLE (NEUT)	93.3	4.55		50.8	
SEQ#11	FED 2 MODE (30)	73.8	0.16	2356.8		
SEQ#11	FED 2 MODE (NEUT)	91.6	4.57	79.3		

NO FOLLOW UP LANE TEST DONE

COMMENT : NO MAINTENANCE PERFORMED DURING PRE-ADJUSTMENT.50 RPM PROPANE GAIN ACHEIVED AT STEP 7 OF PROPANE ADJUSTMENT M-1.IDLE RPM WITHOUT PROPANE 850,WITH PROPANE 900 RPM.

SEQ#12	FEDERAL TEST PROC.	1.25	10.1	292.2	3.26	28.4
SEQ#12	50 MPH CRUISE	54.6	0.22	2221.9		
SEQ#12	HIGHWAY FUEL ECON.	0.57	4.1	214.1	4.39	39.9
SEQ#12	4 SPD IDLE (NEUT)	81.4	0.29		89.3	
SEQ#12	4 SPD IDLE (2500)	5.9	0.14		146.0	
SEQ#12	4 SPD IDLE (NEUT)	61.5	0.32		71.5	
SEQ#12	FED 2 MODE (30)	19.7	0.27	1653.2		
SEQ#12	FED 2 MODE (NEUT)	38.8	0.35	112.1		

## FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 87 CO: 0.85 GAIN: 9

COMMENT : CO .3% ON HOOK-UP..5% IDLE CO ACHEIVED AT STEP 3 OF IDLE CO CARBURETOR ADJUSTMENT PROCEDURE M-1.IDLE NEUTRAL 870 RPM.

SEQ#13	FEDERAL TEST PROC.	1.55	9.8	294.0	3.44	28.2
SEQ#13	50 MPH CRUISE	51.6	0.23	1891.2		
SEQ#13	HIGHWAY FUEL ECON.	0.52	3.9	203.9	4.54	41.9
SEQ#13	4 SPD IDLE (NEUT)	47.0	0.56		92.1	
SEQ#13	4 SPD IDLE (2500)	3.9	0.16		148.5	
SEQ#13	4 SPD IDLE (NEUT)	27.9	0.40		76.2	
SEQ#13	FED 2 MODE (30)	78.4	0.15	1776.0		
SEQ#13	FED 2 MODE (NEUT)	37.5	0.41	95.2		

## FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 80 CO: 0.40 GAIN: 30

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8224	78	SUBA	097	BU / GU (CON'T)						

COMMENT : ADJUSTED TIMING & IDLE SPEED & MIXTURE TO SPEC.

SEQ#15 FEDERAL TEST PROC.	1.45	18.9	293.3	2.83	27.1
SEQ#15 50 MPH CRUISE	53.0	0.23		1758.5	
SEQ#15 HIGHWAY FUEL ECON.	0.51	4.6	210.5	4.11	40.5
SEQ#15 4 SPD IDLE (NEUT)	60.2	2.79		90.6	
SEQ#15 4 SPD IDLE (2500)	0.7	0.18		149.1	
SEQ#15 4 SPD IDLE (NEUT)	45.7	2.74		69.8	
SEQ#15 FED 2 MODE (30)	50.0	0.19		1766.0	
SEQ#15 FED 2 MODE (NEUT)	45.4	2.70		134.7	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 46 CO: 1.50 GAIN: 0

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR FILTER,  
FUEL FILTER, IGNITION POINTS. ADJUSTED TIMING, IDLE  
SPEED & MIXTURE TO SPEC.

SEQ#16 FEDERAL TEST PROC.	1.22	12.0	293.6	3.11	28.1
SEQ#16 50 MPH CRUISE	37.8	0.24		1695.8	
SEQ#16 HIGHWAY FUEL ECON.	0.43	3.9	208.0	4.55	41.2
SEQ#16 4 SPD IDLE (NEUT)	51.3	1.55		70.5	
SEQ#16 4 SPD IDLE (2500)	0.0	0.16		136.2	
SEQ#16 4 SPD IDLE (NEUT)	17.4	1.24		62.9	
SEQ#16 FED 2 MODE (30)	13.5	0.25		1425.3	
SEQ#16 FED 2 MODE (NEUT)	22.3	1.12		68.3	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 16 CO: 1.23 GAIN: 0

7226 77 AMC 258 I-2

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 15 CO: 0.50 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	2.10	55.7	580.1	2.39	13.2
SEQ#11 50 MPH CRUISE	86.6	0.10		686.4	
SEQ#11 HIGHWAY FUEL ECON.	0.10	3.0	443.1	2.97	19.8
SEQ#11 4 SPD IDLE (NEUT)	27.3	0.42		31.0	
SEQ#11 4 SPD IDLE (2500)	13.5	0.15		155.2	
SEQ#11 4 SPD IDLE (NEUT)	8.5	0.36		34.1	
SEQ#11 4 SPD IDLE (DRIV)	28.3	1.58		49.2	
SEQ#11 FED 2 MODE (30)	15.1	0.58		452.9	
SEQ#11 FED 2 MODE (NEUT)	2.3	0.41		31.4	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 10 CO: 0.37 GAIN: 0

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
7226	77	AMC	258	I-2 (CON'T)						

COMMENT : IDLE NEUTRAL 710 RPM, WITH PROPANE 760 RPM.

SEQ#12 FEDERAL TEST PROC.	4.74	51.1	596.5	3.14	12.8
SEQ#12 50 MPH CRUISE	36.2	0.12		1503.0	
SEQ#12 HIGHWAY FUEL ECON.	0.63	4.1	439.3	4.57	19.8
SEQ#12 4 SPD IDLE (NEUT)	259.4	0.11		13.9	
SEQ#12 4 SPD IDLE (2500)	21.3	0.08		159.6	
SEQ#12 4 SPD IDLE (NEUT)	242.9	0.12		17.7	
SEQ#12 4 SPD IDLE (DRIV)	1320.9	0.10		9.6	
SEQ#12 FED 2 MODE (30)	80.0	0.18		565.1	
SEQ#12 FED 2 MODE (NEUT)	67.8	0.08		35.1	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 242 CO: 0.12 GAIN: 80

COMMENT : ADJUSTED IDLE SPEED & MIXTURE TO SPEC.

SEQ#15 FEDERAL TEST PROC.	2.20	14.8	563.9	2.56	14.9
SEQ#15 50 MPH CRUISE	57.6	0.10		1302.6	
SEQ#15 HIGHWAY FUEL ECON.	0.51	3.0	406.0	4.48	21.5
SEQ#15 4 SPD IDLE (NEUT)	43.1	0.23		33.7	
SEQ#15 4 SPD IDLE (2500)	8.9	0.08		154.7	
SEQ#15 4 SPD IDLE (NEUT)	38.1	0.29		38.7	
SEQ#15 4 SPD IDLE (DRIV)	57.9	0.24		61.3	
SEQ#15 FED 2 MODE (30)	14.8	0.11		475.1	
SEQ#15 FED 2 MODE (NEUT)	31.2	0.27		33.8	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 39 CO: 0.29 GAIN: 70

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR, FUEL,  
CARBON CANISTER, OIL & CRANKCASE BREATHER FILTERS,  
PCV VALVE, ENGINE OIL, EGR VALVE, THERMAL  
SENSOR. ADJUSTED CHOKE, REPAIRED LINKAGE, ADJUSTED  
IDLE SPEED & MIXTURE.

SEQ#16 FEDERAL TEST PROC.	1.63	20.5	572.0	1.46	14.6
SEQ#16 50 MPH CRUISE	16.1	0.21		436.7	
SEQ#16 HIGHWAY FUEL ECON.	0.21	6.4	417.5	1.75	20.7
SEQ#16 4 SPD IDLE (NEUT)	24.0	0.68		33.1	
SEQ#16 4 SPD IDLE (2500)	0.3	0.13		72.3	
SEQ#16 4 SPD IDLE (NEUT)	16.1	0.80		37.8	
SEQ#16 4 SPD IDLE (DRIV)	63.2	1.46		50.8	
SEQ#16 FED 2 MODE (30)	9.5	0.37		414.5	
SEQ#16 FED 2 MODE (NEUT)	15.8	0.82		33.6	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 16 CO: 0.80 GAIN: 100

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON
					HC	CO	CO <sub>2</sub>	NOx <sub>c</sub>	CH <sub>4</sub>	
7227	77	BUIC	231	740E2						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 85 CO: 4.16 GAIN: 20

SEQ#11	FEDERAL TEST PROC.	1.59	48.1	536.1	1.55	14.4
SEQ#11	50 MPH CRUISE	10.2	0.00	338.7		
SEQ#11	HIGHWAY FUEL ECON.	0.38	11.8	360.0	1.20	23.4
SEQ#11	4 SPD IDLE (NEUT)	69.5	2.74		61.2	
SEQ#11	4 SPD IDLE (2500)	40.4	0.01		107.7	
SEQ#11	4 SPD IDLE (NEUT)	72.1	3.38		69.5	
SEQ#11	4 SPD IDLE (DRIV)	124.4	3.42		102.6	
SEQ#11	FED 2 MODE (30)	22.3	0.01		195.2	
SEQ#11	FED 2 MODE (NEUT)	72.4	3.32		67.3	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE SPEED 600 RPM DRIVE, IDLE CO .3%.

SEQ#13	FEDERAL TEST PROC.	1.23	29.8	562.3	1.71	14.5
SEQ#13	50 MPH CRUISE	0.0	0.01	311.4		
SEQ#13	HIGHWAY FUEL ECON.	0.32	9.2	366.3	1.21	23.2
SEQ#13	4 SPD IDLE (NEUT)	37.8	0.73		60.7	
SEQ#13	4 SPD IDLE (2500)	33.8	0.01		96.5	
SEQ#13	4 SPD IDLE (NEUT)	39.1	0.98		66.2	
SEQ#13	4 SPD IDLE (DRIV)	83.7	1.24		137.5	
SEQ#13	FED 2 MODE (30)	14.1	0.12		132.1	
SEQ#13	FED 2 MODE (NEUT)	38.5	1.21		65.7	

NO FOLLOW UP LANE TEST DONE

COMMENT : LEAN DROP OF 40 RPM IN DRIVE, IDLE SPEED 600 DRIVE, IDLE CO .85%, IDLE HC 120 PPM. TIMING IS RECOMMENDED BEFORE ADJUSTING MIXTURE AND WAS RESET.

SEQ#15	FEDERAL TEST PROC.	1.44	19.8	600.0	1.71	14.0
SEQ#15	50 MPH CRUISE	0.0	0.00	270.9		
SEQ#15	HIGHWAY FUEL ECON.	0.16	3.6	368.2	1.37	23.7
SEQ#15	4 SPD IDLE (NEUT)	0.0	0.02		37.0	
SEQ#15	4 SPD IDLE (2500)	38.5	0.00		88.8	
SEQ#15	4 SPD IDLE (NEUT)	0.0	0.25		26.1	
SEQ#15	4 SPD IDLE (DRIV)	48.0	0.65		117.5	
SEQ#15	FED 2 MODE (30)	0.3	0.01		159.1	
SEQ#15	FED 2 MODE (NEUT)	20.0	0.82		59.5	

FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 17 CO: 0.06 GAIN: 70

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
7227	77	BUIC	231	740E2	(CON'T)					

COMMENT : REPLACED SPARK PLUGS, AIR, FUEL AND OIL FILTER,  
ENGINE OIL AND PCV VALVE AND FILTER. SET TO  
MANUFACTURERS SPEC.

SEQ#16	FEDERAL TEST PROC.	1.10	25.1	580.5	1.70	14.2
SEQ#16	50 MPH CRUISE	5.9	0.00		326.5	
SEQ#16	HIGHWAY FUEL ECON.	0.12	2.3	383.9	1.60	22.9
SEQ#16	4 SPD IDLE (NEUT)	3.3	0.01		70.4	
SEQ#16	4 SPD IDLE (2500)	45.4	0.01		107.0	
SEQ#16	4 SPD IDLE (NEUT)	3.0	0.02		51.9	
SEQ#16	4 SPD IDLE (DRIV)	47.0	0.40		136.0	
SEQ#16	FED 2 MODE (30)	6.6	0.01		172.7	
SEQ#16	FED 2 MODE (NEUT)	2.3	0.03		51.0	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 21 CO: 0.02 GAIN: 90

7229 77 BUIC 350 730M4AU

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 12 CO: 0.01 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	0.44	3.8	713.2	1.63	12.3
SEQ#11	50 MPH CRUISE	9.5	0.00		273.0	
SEQ#11	HIGHWAY FUEL ECON.	0.08	0.1	463.2	1.35	19.1
SEQ#11	4 SPD IDLE (NEUT)	5.6	0.01		37.1	
SEQ#11	4 SPD IDLE (2500)	0.0	0.01		96.4	
SEQ#11	4 SPD IDLE (NEUT)	3.3	0.01		37.5	
SEQ#11	4 SPD IDLE (DRIV)	4.6	0.01		43.0	
SEQ#11	FED 2 MODE (30)	8.2	0.00		282.0	
SEQ#11	FED 2 MODE (NEUT)	6.2	0.00		37.2	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 12 CO: 0.01 GAIN: 0

COMMENT : ADJUSTED IDLE DRIVE 550 RPMs, IDLE NEUTRAL 660 RPMs, PROPANE GAIN 50 RPMs.

SEQ#12	FEDERAL TEST PROC.	0.44	3.2	685.7	1.74	12.8
SEQ#12	50 MPH CRUISE	4.6	0.00		297.2	
SEQ#12	HIGHWAY FUEL ECON.	0.08	0.1	476.5	1.41	18.6
SEQ#12	4 SPD IDLE (NEUT)	4.9	0.01		36.8	
SEQ#12	4 SPD IDLE (2500)	0.0	0.00		104.2	
SEQ#12	4 SPD IDLE (NEUT)	0.7	0.00		40.7	
SEQ#12	4 SPD IDLE (DRIV)	2.3	0.00		64.4	
SEQ#12	FED 2 MODE (30)	23.6	0.01		333.6	
SEQ#12	FED 2 MODE (NEUT)	8.2	0.01		39.5	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	CH <sub>4</sub>	
7229	77	BUIC	350	730M4AU	(CON'T)					

COMMENT : CARBURETOR ADJUSTED, 640-600 LEAN DROP IN DRIVE,  
RESET IDLE SPEED TO ES SPEC. TIMING NOT ADJUSTED.

SEQ#15 FEDERAL TEST PROC.	0.41	3.4	679.6	1.65	12.9
SEQ#15 50 MPH CRUISE	6.9	0.01	284.1		
SEQ#15 HIGHWAY FUEL ECON.	0.08	0.3	461.3	1.26	19.2
SEQ#15 4 SPD IDLE (NEUT)	2.6	0.00		38.6	
SEQ#15 4 SPD IDLE (2500)	0.0	0.00		97.3	
SEQ#15 4 SPD IDLE (NEUT)	0.0	0.00		40.0	
SEQ#15 4 SPD IDLE (DRIV)	0.0	0.00		60.4	
SEQ#15 FED 2 MODE (30)	19.7	0.00		319.5	
SEQ#15 FED 2 MODE (NEUT)	7.5	0.00		42.8	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 43 CO: 0.03 GAIN: 70

7230 77 BUIC 350 730M4U

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 785 CO: 4.01 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	2.51	26.5	531.2	1.97	15.3
SEQ#11 50 MPH CRUISE	73.4	0.01	789.1		
SEQ#11 HIGHWAY FUEL ECON.	0.28	1.7	409.7	2.69	21.5
SEQ#11 4 SPD IDLE (NEUT)	691.8	0.92		35.1	
SEQ#11 4 SPD IDLE (2500)	155.0	0.01		271.9	
SEQ#11 4 SPD IDLE (NEUT)	589.6	2.12		37.3	
SEQ#11 4 SPD IDLE (DRIV)	330.8	3.14		47.0	
SEQ#11 FED 2 MODE (30)	79.7	0.00		530.7	
SEQ#11 FED 2 MODE (NEUT)	934.3	1.28		25.9	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE DRIVE 500 RPM, IDLE NEUTRAL 700 RPM, PROPANE  
GAIN IN NEUTRAL 50 RPM. USED UNIVERSAL METHOD.

SEQ#12 FEDERAL TEST PROC.	1.42	13.6	561.3	2.06	15.1
SEQ#12 50 MPH CRUISE	8.2	0.00	747.1		
SEQ#12 HIGHWAY FUEL ECON.	0.14	0.7	405.3	2.71	21.8
SEQ#12 4 SPD IDLE (NEUT)	17.1	0.00		62.4	
SEQ#12 4 SPD IDLE (2500)	78.0	0.00		287.1	
SEQ#12 4 SPD IDLE (NEUT)	10.8	0.00		64.9	
SEQ#12 4 SPD IDLE (DRIV)	0.0	0.00		103.4	
SEQ#12 FED 2 MODE (30)	19.7	0.00		584.3	
SEQ#12 FED 2 MODE (NEUT)	33.5	0.00		72.8	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 169 CO: 0.02 GAIN: 90

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NOx <sub>c</sub>	CH <sub>4</sub>	
7230	77	BUIC	350	730M4U	(CON'T)					

COMMENT : ADJUSTED IDLE DRIVE TO 550 RPM, IDLE NEUTRAL TO 680 RPM, CO .3%, HC 740 PPM. USED UNIVERSAL METHOD.

SEQ#13	FEDERAL TEST PROC.	1.95	20.7	552.0	1.93	15.0
SEQ#13	50 MPH CRUISE	26.0	0.01	685.4		
SEQ#13	HIGHWAY FUEL ECON.	0.22	1.3	409.7	2.65	21.5
SEQ#13	4 SPD IDLE (NEUT)	28.3	0.01		36.2	
SEQ#13	4 SPD IDLE (2500)	78.7	0.01		239.6	
SEQ#13	4 SPD IDLE (NEUT)	492.8	0.25		35.2	
SEQ#13	4 SPD IDLE (DRIV)	308.8	0.89		59.6	
SEQ#13	FED 2 MODE (30)	43.7	0.00		453.9	
SEQ#13	FED 2 MODE (NEUT)	765.1	0.09		18.2	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE SPEED AND MIXTURE TO SPEC. IDLE DRIVE 550 RPM, PROPANE GAIN 70 RPM.

SEQ#15	FEDERAL TEST PROC.	0.57	4.3	572.5	2.01	15.3
SEQ#15	50 MPH CRUISE	17.4	0.00	695.5		
SEQ#15	HIGHWAY FUEL ECON.	0.09	0.4	422.7	2.75	21.0
SEQ#15	4 SPD IDLE (NEUT)	13.5	0.00		26.5	
SEQ#15	4 SPD IDLE (2500)	68.5	0.00		249.7	
SEQ#15	4 SPD IDLE (NEUT)	20.0	0.00		31.0	
SEQ#15	4 SPD IDLE (DRIV)	13.8	0.00		41.8	
SEQ#15	FED 2 MODE (30)	22.7	0.01		534.8	
SEQ#15	FED 2 MODE (NEUT)	53.6	0.00		34.6	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 26 CO: 0.01 GAIN: 260

7231 77 CADI 425 760V4U

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 302 CO: 3.71 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	2.63	54.6	684.6	1.60	11.4
SEQ#11	50 MPH CRUISE	34.8	0.01	294.2		
SEQ#11	HIGHWAY FUEL ECON.	0.38	5.9	481.1	1.47	18.1
SEQ#11	4 SPD IDLE (NEUT)	417.0	2.56		63.5	
SEQ#11	4 SPD IDLE (2500)	24.6	0.01		109.0	
SEQ#11	4 SPD IDLE (NEUT)	330.8	2.56		76.7	
SEQ#11	4 SPD IDLE (DRIV)	207.1	2.91		201.4	
SEQ#11	FED 2 MODE (30)	162.7	2.51		132.4	
SEQ#11	FED 2 MODE (NEUT)	388.2	2.55		65.3	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON	MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>		
7231	77	CADI	425	760V4U	(CON'T)						

COMMENT : ADJUSTED IDLE DRIVE TO 600 RPM, IDLE NEUTRAL TO 735 RPM, PROPANE GAIN IN NEUTRAL 50 RPM. DRIVE SPRING TENSION TOO WEAK.

SEQ#12 FEDERAL TEST PROC.	2.30	39.5	662.8	1.48	12.1
SEQ#12 50 MPH CRUISE	35.8	0.01	284.1		
SEQ#12 HIGHWAY FUEL ECON.	0.29	3.7	460.4	1.35	19.0
SEQ#12 4 SPD IDLE (NEUT)	669.0	0.56		52.1	
SEQ#12 4 SPD IDLE (2500)	18.1	0.01		116.2	
SEQ#12 4 SPD IDLE (NEUT)	450.4	1.52		64.9	
SEQ#12 4 SPD IDLE (DRIV)	209.8	2.00		164.2	
SEQ#12 FED 2 MODE (30)	157.0	2.46		123.4	
SEQ#12 FED 2 MODE (NEUT)	612.2	1.06		51.2	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 456 CO: 2.53 GAIN: 0

COMMENT : IDLE DRIVE 580 RPM, IDLE CO .4%.

SEQ#13 FEDERAL TEST PROC.	2.53	41.0	670.7	1.44	11.9
SEQ#13 50 MPH CRUISE	25.6	0.01	265.9		
SEQ#13 HIGHWAY FUEL ECON.	0.36	5.2	472.8	1.39	18.4
SEQ#13 4 SPD IDLE (NEUT)	714.6	0.61		47.5	
SEQ#13 4 SPD IDLE (2500)	29.6	0.01		109.0	
SEQ#13 4 SPD IDLE (NEUT)	479.4	1.49		65.8	
SEQ#13 4 SPD IDLE (DRIV)	208.1	2.04		179.6	
SEQ#13 FED 2 MODE (30)	120.8	1.28		137.0	
SEQ#13 FED 2 MODE (NEUT)	765.1	0.62		46.8	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE SPEED AND MIXTURE.

SEQ#15 FEDERAL TEST PROC.	0.73	11.0	717.4	1.69	12.0
SEQ#15 50 MPH CRUISE	5.3	0.00	262.8		
SEQ#15 HIGHWAY FUEL ECON.	0.10	1.5	470.0	1.40	18.8
SEQ#15 4 SPD IDLE (NEUT)	3.6	0.01		133.4	
SEQ#15 4 SPD IDLE (2500)	0.7	0.01		112.6	
SEQ#15 4 SPD IDLE (NEUT)	19.4	0.01		155.2	
SEQ#15 4 SPD IDLE (DRIV)	0.0	0.01		344.7	
SEQ#15 FED 2 MODE (30)	5.3	0.01		143.7	
SEQ#15 FED 2 MODE (NEUT)	61.9	0.01		122.4	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 16 CO: 0.00 GAIN: 190

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NOx <sub>c</sub>	CH <sub>4</sub>	
7232	77	CHEV	098	710W1						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 291 CO: 9.29 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	2.37	28.5	301.4	2.05	25.1
SEQ#11	50 MPH CRUISE	29.2	0.01	569.2		
SEQ#11	HIGHWAY FUEL ECON.	0.37	2.1	232.5	2.57	37.5
SEQ#11	4 SPD IDLE (NEUT)	288.4	5.36		4.4	
SEQ#11	4 SPD IDLE (2500)	35.5	0.43		100.1	
SEQ#11	4 SPD IDLE (NEUT)	238.6	5.28		7.4	
SEQ#11	FED 2 MODE (30)	40.8	0.01		392.2	
SEQ#11	FED 2 MODE (NEUT)	250.7	5.30		14.5	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE NEUTRAL 800 RPMs, PROPANE GAIN 180 RPMs. USED UNIVERSAL METHOD.

SEQ#12	FEDERAL TEST PROC.	0.86	5.5	330.9	1.89	25.9
SEQ#12	50 MPH CRUISE	12.8	0.01	670.2		
SEQ#12	HIGHWAY FUEL ECON.	0.12	0.4	230.9	2.40	38.3
SEQ#12	4 SPD IDLE (NEUT)	67.1	0.00		24.3	
SEQ#12	4 SPD IDLE (2500)	25.6	0.00		110.1	
SEQ#12	4 SPD IDLE (NEUT)	67.8	0.00		24.2	
SEQ#12	FED 2 MODE (30)	15.1	0.01		435.7	
SEQ#12	FED 2 MODE (NEUT)	92.6	0.00		27.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE SPEED 800 RPMs NEUTRAL, IDLE CO .02-2.5%, DEFECTIVE SPARK PLUG WIRES CAUSE CO AND HC READINGS TO FLUCTUATE. ADJUSTMENTS WERE MADE WHICH RESULTED IN AN OVERALL LOWERING OF THE AVERAGE CO VOLUME.

SEQ#13	FEDERAL TEST PROC.	1.16	12.6	307.7	2.19	26.8
SEQ#13	50 MPH CRUISE	34.5	0.04	599.5		
SEQ#13	HIGHWAY FUEL ECON.	0.45	3.5	224.2	2.17	38.4
SEQ#13	4 SPD IDLE (NEUT)	45.7	0.04		21.3	
SEQ#13	4 SPD IDLE (2500)	12.1	0.00		185.5	
SEQ#13	4 SPD IDLE (NEUT)	17.4	0.07		11.1	
SEQ#13	FED 2 MODE (30)	33.2	0.02		507.5	
SEQ#13	FED 2 MODE (NEUT)	27.6	0.10		12.5	

NO FOLLOW UP LANE TEST DONE

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
7232	77	CHEV	098	710W1	(CON'T)					

COMMENT : ADJUSTED IDLE MIXTURE TO SPEC. SPARK PLUG WIRES  
ARE STILL ARCING.

SEQ#15 FEDERAL TEST PROC.	0.92	12.3	326.1	2.29	25.5
SEQ#15 50 MPH CRUISE	50.0	0.07	1540.5		
SEQ#15 HIGHWAY FUEL ECON.	0.41	3.7	235.5	2.36	36.6
SEQ#15 4 SPD IDLE (NEUT)	50.0	0.00		97.5	
SEQ#15 4 SPD IDLE (2500)	17.1	0.00		358.9	
SEQ#15 4 SPD IDLE (NEUT)	49.7	0.00		101.3	
SEQ#15 FED 2 MODE (30)	53.6	0.03		1104.7	
SEQ#15 FED 2 MODE (NEUT)	30.9	0.00		102.9	

FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 11 CO: 0.02 GAIN: 0

COMMENT : MAJOR TUNE-UP, REPLACED SPARK PLUGS, IGNITION WIRES,  
OIL AND OIL FILTER, FUEL AND CANISTER FILTER. SET  
TO SPEC.

SEQ#16 FEDERAL TEST PROC.	0.93	11.1	321.1	2.37	26.0
SEQ#16 50 MPH CRUISE	53.3	0.05	1405.3		
SEQ#16 HIGHWAY FUEL ECON.	0.35	1.9	236.7	2.43	36.9
SEQ#16 4 SPD IDLE (NEUT)	11.5	0.05		38.5	
SEQ#16 4 SPD IDLE (2500)	8.2	0.01		348.8	
SEQ#16 4 SPD IDLE (NEUT)	10.5	0.01		81.1	
SEQ#16 FED 2 MODE (30)	58.9	0.03		1039.5	
SEQ#16 FED 2 MODE (NEUT)	18.1	0.20		18.3	

FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 9 CO: 0.04 GAIN: 100

7233 77 CHEV 140 710C2

PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 517 CO: 1.13 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	1.37	7.3	439.7	2.42	19.5
SEQ#11 50 MPH CRUISE	16.4	0.06	759.2		
SEQ#11 HIGHWAY FUEL ECON.	0.26	1.1	333.8	1.93	26.4
SEQ#11 4 SPD IDLE (NEUT)	27.3	0.05		59.8	
SEQ#11 4 SPD IDLE (2500)	37.8	0.18		91.5	
SEQ#11 4 SPD IDLE (NEUT)	50.3	0.02		80.0	
SEQ#11 4 SPD IDLE (DRIV)	89.0	0.04		176.8	
SEQ#11 FED 2 MODE (30)	72.4	0.06		403.4	
SEQ#11 FED 2 MODE (NEUT)	78.7	0.04		85.7	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NOx <sub>c</sub>	CH <sub>4</sub>	
7233	77	CHEV	140	710C2 (CON'T)						

COMMENT : ADJUSTED IDLE DRIVE 650 RPM, PROPANE GAIN 80 RPM.

SEQ#12 FEDERAL TEST PROC.	1.22	6.7	420.9	2.25	20.4
SEQ#12 50 MPH CRUISE	27.3	0.06	863.3		
SEQ#12 HIGHWAY FUEL ECON.	0.36	2.0	326.3	2.35	26.9
SEQ#12 4 SPD IDLE (NEUT)	28.3	0.20		55.6	
SEQ#12 4 SPD IDLE (2500)	27.3	0.54		71.1	
SEQ#12 4 SPD IDLE (NEUT)	31.9	0.03		70.1	
SEQ#12 4 SPD IDLE (DRIV)	119.8	0.29		95.9	
SEQ#12 FED 2 MODE (30)	115.8	0.24		421.6	
SEQ#12 FED 2 MODE (NEUT)	45.0	0.06		71.6	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 650 RPM, CO .15%, HC 200 PPM.

SEQ#15 FEDERAL TEST PROC.	1.26	6.4	475.2	2.63	18.1
SEQ#15 50 MPH CRUISE	23.6	0.05	779.4		
SEQ#15 HIGHWAY FUEL ECON.	0.18	1.2	371.7	2.20	23.7
SEQ#15 4 SPD IDLE (NEUT)	40.1	0.02		74.0	
SEQ#15 4 SPD IDLE (2500)	48.3	0.50		66.6	
SEQ#15 4 SPD IDLE (NEUT)	67.1	0.01		88.5	
SEQ#15 4 SPD IDLE (DRIV)	83.0	0.01		171.1	
SEQ#15 FED 2 MODE (30)	63.5	0.05		394.3	
SEQ#15 FED 2 MODE (NEUT)	118.4	0.02		81.8	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, PCV VALVE,  
AIR CLEANER, OIL & OIL FILTER, PURGE CANISTER  
FILTER, ADJUSTED IDLE SPEED & MIXTURE, TIMING,  
PRIMARY VACUUM BREAK TO SPEC.

SEQ#16 FEDERAL TEST PROC.	1.20	6.6	435.8	2.55	19.7
SEQ#16 50 MPH CRUISE	27.9	0.05	731.9		
SEQ#16 HIGHWAY FUEL ECON.	0.21	1.3	344.8	2.35	25.5
SEQ#16 4 SPD IDLE (NEUT)	107.5	0.02		67.7	
SEQ#16 4 SPD IDLE (2500)	106.5	0.11		77.2	
SEQ#16 4 SPD IDLE (NEUT)	120.8	0.01		75.8	
SEQ#16 4 SPD IDLE (DRIV)	83.0	0.01		151.1	
SEQ#16 FED 2 MODE (30)	58.2	0.05		329.6	
SEQ#16 FED 2 MODE (NEUT)	120.1	0.03		76.7	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 137 CO: 0.04 GAIN: 101

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
7238	77	CHEV	350	710J4						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 430 CO: 6.82 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	3.34	67.2	569.8	2.20	12.9
SEQ#11	50 MPH CRUISE	16.4	0.01	264.9		
SEQ#11	HIGHWAY FUEL ECON.	0.39	4.3	432.4	2.59	20.2
SEQ#11	4 SPD IDLE (NEUT)	337.4	4.36		16.7	
SEQ#11	4 SPD IDLE (2500)	33.5	0.02		84.2	
SEQ#11	4 SPD IDLE (NEUT)	341.8	4.32		19.6	
SEQ#11	4 SPD IDLE (DRIV)	262.8	4.95		25.8	
SEQ#11	FED 2 MODE (30)	33.2	0.01		137.0	
SEQ#11	FED 2 MODE (NEUT)	286.9	3.72		26.5	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 500 RPM, NEUTRAL 680 RPM,  
PROPANE GAIN 50 RPM. USED UNIVERSAL PROPANE  
METHOD.

SEQ#12	FEDERAL TEST PROC.	0.98	7.5	604.1	2.38	14.3
SEQ#12	50 MPH CRUISE	15.8	0.00	165.0		
SEQ#12	HIGHWAY FUEL ECON.	0.30	3.3	431.7	2.09	20.3
SEQ#12	4 SPD IDLE (NEUT)	78.0	0.48		13.8	
SEQ#12	4 SPD IDLE (2500)	38.8	0.44		32.5	
SEQ#12	4 SPD IDLE (NEUT)	90.3	0.84		14.5	
SEQ#12	4 SPD IDLE (DRIV)	89.0	0.81		37.2	
SEQ#12	FED 2 MODE (30)	18.4	0.00		102.4	
SEQ#12	FED 2 MODE (NEUT)	69.8	0.20		10.4	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE SPEED AND MIXTURE TO SPEC.

SEQ#15	FEDERAL TEST PROC.	0.76	7.5	612.0	1.84	14.2
SEQ#15	50 MPH CRUISE	15.4	0.01	332.6		
SEQ#15	HIGHWAY FUEL ECON.	0.05	0.1	448.9	2.01	19.8
SEQ#15	4 SPD IDLE (NEUT)	304.4	0.33		28.2	
SEQ#15	4 SPD IDLE (2500)	12.8	0.01		139.3	
SEQ#15	4 SPD IDLE (NEUT)	19.4	0.01		53.1	
SEQ#15	4 SPD IDLE (DRIV)	29.6	0.18		24.9	
SEQ#15	FED 2 MODE (30)	4.9	0.01		193.1	
SEQ#15	FED 2 MODE (NEUT)	30.9	0.01		51.7	

NO FOLLOW UP LANE TEST DONE

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
7238	77	CHEV	350	710J4	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, OIL AND OIL FILTER, PCV VALVE AND FILTER, FUEL FILTER, SET TO SPEC.

SEQ#16	FEDERAL TEST PROC.	0.78	8.2	631.3	1.79	13.7
SEQ#16	50 MPH CRUISE	7.2	0.01	378.1		
SEQ#16	HIGHWAY FUEL ECON.	0.09	0.5	455.7	2.06	19.4
SEQ#16	4 SPD IDLE (NEUT)	348.4	1.26		33.8	
SEQ#16	4 SPD IDLE (2500)	6.6	0.01		143.4	
SEQ#16	4 SPD IDLE (NEUT)	144.4	0.53		22.1	
SEQ#16	4 SPD IDLE (DRIV)	114.5	0.63		57.1	
SEQ#16	FED 2 MODE (30)	4.6	0.01		164.8	
SEQ#16	FED 2 MODE (NEUT)	32.5	0.01		57.6	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 9 CO: 0.02 GAIN: 30

7240 77 CHEV 350 710J4

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 303 CO: 7.51 GAIN: 10

SEQ#11	FEDERAL TEST PROC.	2.22	55.2	619.1	1.93	12.4
SEQ#11	50 MPH CRUISE	15.4	0.00	357.9		
SEQ#11	HIGHWAY FUEL ECON.	0.25	3.3	452.3	2.02	19.4
SEQ#11	4 SPD IDLE (NEUT)	291.1	5.57		31.6	
SEQ#11	4 SPD IDLE (2500)	26.9	0.02		158.3	
SEQ#11	4 SPD IDLE (NEUT)	261.8	5.75		39.6	
SEQ#11	4 SPD IDLE (DRIV)	257.7	6.23		51.2	
SEQ#11	FED 2 MODE (30)	31.5	0.00		220.4	
SEQ#11	FED 2 MODE (NEUT)	273.5	5.91		40.2	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 500 RPM, IDLE IN NEUTRAL 580 RPM, IDLE CO NEUTRAL 45%, HC 900 PPM. RIGHT IDLE SCREW SCREWED ALL THE WAY IN. USED UNIVERSAL METHOD.

SEQ#13	FEDERAL TEST PROC.	0.70	10.7	633.8	1.72	13.6
SEQ#13	50 MPH CRUISE	0.0	0.00	326.5		
SEQ#13	HIGHWAY FUEL ECON.	0.04	0.1	443.0	1.84	20.0
SEQ#13	4 SPD IDLE (NEUT)	12.8	0.00		42.9	
SEQ#13	4 SPD IDLE (2500)	0.0	0.00		139.0	
SEQ#13	4 SPD IDLE (NEUT)	26.3	0.00		42.8	
SEQ#13	4 SPD IDLE (DRIV)	13.1	0.00		67.7	
SEQ#13	FED 2 MODE (30)	1.3	0.00		181.4	
SEQ#13	FED 2 MODE (NEUT)	48.0	0.00		42.8	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
7240	77	CHEV	350	710J4	(CON'T)					

COMMENT : ADJUSTED IDLE SPEED AND MIXTURE, LEAN DROP FROM 550 RPM TO 500 RPM IN DRIVE. IDLE SPEED 500 RPM IN DRIVE, IDLE CO .02%.

SEQ#15	FEDERAL TEST PROC.	0.52	6.3	639.6	1.86	13.6
SEQ#15	50 MPH CRUISE	0.3	0.00		283.1	
SEQ#15	HIGHWAY FUEL ECON.	0.04	0.1	440.5	1.81	20.1
SEQ#15	4 SPD IDLE (NEUT)	15.8	0.01		39.5	
SEQ#15	4 SPD IDLE (2500)	0.0	0.01		135.2	
SEQ#15	4 SPD IDLE (NEUT)	9.5	0.00		45.3	
SEQ#15	4 SPD IDLE (DRIV)	1.3	0.00		63.6	
SEQ#15	FED 2 MODE (30)	1.0	0.01		176.2	
SEQ#15	FED 2 MODE (NEUT)	36.5	0.01		44.6	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 41 CO: 0.04 GAIN: 130

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR, FUEL, OIL, AND CRANKCASE BREATHER FILTERS, PCV VALVE AND ENGINE OIL, RESET TIMING AND IDLE SPEED.

SEQ#16	FEDERAL TEST PROC.	0.80	9.4	658.8	1.93	13.1
SEQ#16	50 MPH CRUISE	0.0	0.01		306.3	
SEQ#16	HIGHWAY FUEL ECON.	0.06	0.6	469.5	2.01	18.9
SEQ#16	4 SPD IDLE (NEUT)	20.4	0.00		35.1	
SEQ#16	4 SPD IDLE (2500)	0.0	0.00		126.7	
SEQ#16	4 SPD IDLE (NEUT)	9.5	0.00		39.0	
SEQ#16	4 SPD IDLE (DRIV)	2.6	0.00		58.8	
SEQ#16	FED 2 MODE (30)	0.0	0.00		180.9	
SEQ#16	FED 2 MODE (NEUT)	41.1	0.00		36.4	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 26 CO: 0.08 GAIN: 110

7242 77 CHEV 350 710J4

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 289 CO: 5.03 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	2.37	40.1	566.4	2.00	13.9
SEQ#11	50 MPH CRUISE	27.6	0.00		423.6	
SEQ#11	HIGHWAY FUEL ECON.	0.21	1.9	414.6	2.35	21.2
SEQ#11	4 SPD IDLE (NEUT)	326.4	4.12		45.3	
SEQ#11	4 SPD IDLE (2500)	57.2	0.01		142.4	
SEQ#11	4 SPD IDLE (NEUT)	297.8	4.28		50.4	
SEQ#11	4 SPD IDLE (DRIV)	273.7	4.36		73.7	
SEQ#11	FED 2 MODE (30)	47.0	0.00		179.8	
SEQ#11	FED 2 MODE (NEUT)	379.3	5.87		46.4	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 312 CO: 4.90 GAIN: 0

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE				FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NOx <sub>c</sub>	
7242	77	CHEV	350	710J4	(CON'T)				

COMMENT : ADJUSTED IDLE DRIVE TO 560 RPM, IDLE NEUTRAL TO 700 RPM, PROPANE GAIN IN NEUTRAL 50 RPM. IDLE SPEED DRIVE WOULD NOT COME DOWN TO SPEC, THROTTLE PLATES CLOSED AT 560 RPM. USED UNIVERSAL METHOD.

SEQ#12 FEDERAL TEST PROC.	1.01	7.9	591.8	2.17	14.6
SEQ#12 50 MPH CRUISE	0.0	0.00		354.8	
SEQ#12 HIGHWAY FUEL ECON.	0.04	0.1	434.2	2.50	20.4
SEQ#12 4 SPD IDLE (NEUT)	2.0	0.00		56.9	
SEQ#12 4 SPD IDLE (2500)	0.0	0.00		135.5	
SEQ#12 4 SPD IDLE (NEUT)	0.3	0.00		64.6	
SEQ#12 4 SPD IDLE (DRIV)	0.0	0.00		146.0	
SEQ#12 FED 2 MODE (30)	3.6	0.00		179.1	
SEQ#12 FED 2 MODE (NEUT)	3.9	0.00		49.6	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE TO 500 RPM, IDLE NEUTRAL TO 570 RPM, IDLE CO NEUTRAL .38%, HC 800 PPM. USED UNIVERSAL METHOD.

SEQ#13 FEDERAL TEST PROC.	0.72	5.8	581.3	2.12	15.0
SEQ#13 50 MPH CRUISE	0.0	0.01		361.9	
SEQ#13 HIGHWAY FUEL ECON.	0.04	0.1	417.4	2.34	21.3
SEQ#13 4 SPD IDLE (NEUT)	0.0	0.00		36.9	
SEQ#13 4 SPD IDLE (2500)	0.0	0.00		133.4	
SEQ#13 4 SPD IDLE (NEUT)	1.0	0.00		45.4	
SEQ#13 4 SPD IDLE (DRIV)	0.0	0.00		62.4	
SEQ#13 FED 2 MODE (30)	2.6	0.01		231.7	
SEQ#13 FED 2 MODE (NEUT)	19.4	0.01		55.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED TO SPEC., IDLE DRIVE 500 RPM, IDLE CO .08%, HC 160 PPM.

SEQ#15 FEDERAL TEST PROC.	0.62	3.7	598.1	2.38	14.6
SEQ#15 50 MPH CRUISE	3.6	0.00		420.5	
SEQ#15 HIGHWAY FUEL ECON.	0.04	0.0	446.4	2.80	19.9
SEQ#15 4 SPD IDLE (NEUT)	3.3	0.01		28.6	
SEQ#15 4 SPD IDLE (2500)	0.0	0.01		147.8	
SEQ#15 4 SPD IDLE (NEUT)	8.2	0.01		33.5	
SEQ#15 4 SPD IDLE (DRIV)	0.0	0.00		46.4	
SEQ#15 FED 2 MODE (30)	6.6	0.01		209.3	
SEQ#15 FED 2 MODE (NEUT)	25.6	0.01		43.0	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 22 CO: 0.01 GAIN: 250

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
7242	77	CHEV	350	710J4	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR, FUEL AND BREATHER FILTERS, ENGINE OIL AND PCV VALVE. ADJUSTED IDLE SPEED AND TIMING.

SEQ#16	FEDERAL TEST PROC.	0.93	2.5	608.4	2.14	14.4
SEQ#16	50 MPH CRUISE	0.0	0.01	420.5		
SEQ#16	HIGHWAY FUEL ECON.	0.05	0.0	446.7	2.62	19.9
SEQ#16	4 SPD IDLE (NEUT)	0.0	0.00		29.8	
SEQ#16	4 SPD IDLE (2500)	0.0	0.00		133.1	
SEQ#16	4 SPD IDLE (NEUT)	0.0	0.00		43.7	
SEQ#16	4 SPD IDLE (DRIV)	0.0	0.00		73.8	
SEQ#16	FED 2 MODE (30)	2.0	0.01		227.3	
SEQ#16	FED 2 MODE (NEUT)	20.0	0.00		54.1	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 16 CO: 0.02 GAIN: 140

7244 77 DODG 225 FD-225-2-C

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 264 CO: 0.04 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	3.36	40.6	506.0	3.32	15.3
SEQ#11	50 MPH CRUISE	114.5	0.16		593.4	
SEQ#11	HIGHWAY FUEL ECON.	1.65	16.1	401.1	2.10	20.6
SEQ#11	4 SPD IDLE (NEUT)	156.3	1.56		66.1	
SEQ#11	4 SPD IDLE (2500)	71.4	0.06		288.1	
SEQ#11	4 SPD IDLE (NEUT)	153.3	1.79		65.8	
SEQ#11	4 SPD IDLE (DRIV)	236.6	1.95		114.7	
SEQ#11	FED 2 MODE (30)	122.8	0.02		2603.3	
SEQ#11	FED 2 MODE (NEUT)	170.3	2.27		71.5	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE NEUTRAL 750 RPM, PROPANE GAIN 40 RPM. USED UNIVERSAL PROPANE METHOD. REROUTED NOX OSAC VALVE AND REPLACED AIR CLEANER.

SEQ#12	FEDERAL TEST PROC.	2.38	24.8	553.5	2.49	14.8
SEQ#12	50 MPH CRUISE	88.6	0.10		668.2	
SEQ#12	HIGHWAY FUEL ECON.	1.38	14.4	419.6	1.88	19.9
SEQ#12	4 SPD IDLE (NEUT)	36.5	0.01		95.7	
SEQ#12	4 SPD IDLE (2500)	41.1	0.03		324.5	
SEQ#12	4 SPD IDLE (NEUT)	40.4	0.01		99.3	
SEQ#12	4 SPD IDLE (DRIV)	90.6	0.01		299.2	
SEQ#12	FED 2 MODE (30)	94.6	0.02		2692.0	
SEQ#12	FED 2 MODE (NEUT)	46.0	0.01		110.8	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 112 CO: 0.05 GAIN: 70

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
7244	77	DODG	225	FD-225-2-C	(CON'T)					

COMMENT : ADJUSTED IDLE NEUTRAL 750 RPM, PROPANE ENRICHMENT 900 RPM.

SEQ#15	FEDERAL TEST PROC.	2.09	21.3	562.9	2.56	14.7
SEQ#15	50 MPH CRUISE	90.3	0.09	672.3		
SEQ#15	HIGHWAY FUEL ECON.	1.29	11.1	426.3	1.99	19.8
SEQ#15	4 SPD IDLE (NEUT)	91.9	0.01		69.8	
SEQ#15	4 SPD IDLE (2500)	30.2	0.03		295.2	
SEQ#15	4 SPD IDLE (NEUT)	207.1	0.01		69.3	
SEQ#15	4 SPD IDLE (DRIV)	72.4	0.01		206.5	
SEQ#15	FED 2 MODE (30)	83.0	0.02		2465.2	
SEQ#15	FED 2 MODE (NEUT)	152.7	0.00		86.7	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED PCV VALVE, FUEL FILTER, OIL AND OIL FILTER, SPARK PLUGS, CHECK VALVE TO ASPIRATOR SYSTEM. ADJUSTED TO SPEC.

SEQ#16	FEDERAL TEST PROC.	2.60	23.4	539.9	2.48	15.2
SEQ#16	50 MPH CRUISE	103.9	0.27	594.4		
SEQ#16	HIGHWAY FUEL ECON.	1.42	17.9	403.6	1.73	20.3
SEQ#16	4 SPD IDLE (NEUT)	564.0	0.01		80.0	
SEQ#16	4 SPD IDLE (2500)	50.0	0.03		317.4	
SEQ#16	4 SPD IDLE (NEUT)	638.2	0.01		75.0	
SEQ#16	4 SPD IDLE (DRIV)	195.0	0.01		261.8	
SEQ#16	FED 2 MODE (30)	104.9	0.02		2711.8	
SEQ#16	FED 2 MODE (NEUT)	577.4	0.01		96.2	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 228 CO: 0.03 GAIN: 280

7246 77 FORD 140 F2.3B1CV5

PRELIMINARY LANE TEST:

CAT: 4 FUEL: 4  
HC: 0 CO: 0.00 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	1.42	7.1	368.7	2.71	23.1
SEQ#11	50 MPH CRUISE	33.5	0.00	1355.2		
SEQ#11	HIGHWAY FUEL ECON.	0.27	0.5	262.6	5.43	33.6
SEQ#11	4 SPD IDLE (NEUT)	83.0	0.00		54.7	
SEQ#11	4 SPD IDLE (2500)	7.2	0.00		156.7	
SEQ#11	4 SPD IDLE (NEUT)	164.7	0.00		33.7	
SEQ#11	FED 2 MODE (30)	51.0	0.01		939.3	
SEQ#11	FED 2 MODE (NEUT)	177.7	0.00		52.2	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 165 CO: 0.00 GAIN: 0

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
7246	77	FORD	140	F2.3B1CV5	(CON'T)					

COMMENT : IDLE RPM 850, WITH PROPANE 900 RPM.

SEQ#12 FEDERAL TEST PROC.	1.54	6.3	352.9	2.93	24.1
SEQ#12 50 MPH CRUISE	151.0	0.00		1290.0	
SEQ#12 HIGHWAY FUEL ECON.	0.29	0.3	272.7	5.73	32.4
SEQ#12 4 SPD IDLE (NEUT)	368.2	0.00		66.7	
SEQ#12 4 SPD IDLE (2500)	33.8	0.00		166.0	
SEQ#12 4 SPD IDLE (NEUT)	495.1	0.00		59.3	
SEQ#12 FED 2 MODE (30)	97.9	0.11		1072.1	
SEQ#12 FED 2 MODE (NEUT)	361.7	0.00		85.4	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 486 CO: 0.00 GAIN: 60

COMMENT : ADJUSTED IDLE SPEED & MIXTURE TO SPEC.

SEQ#15 FEDERAL TEST PROC.	1.74	7.0	369.7	3.10	23.0
SEQ#15 50 MPH CRUISE	42.4	0.00		1673.3	
SEQ#15 HIGHWAY FUEL ECON.	0.29	0.3	273.4	6.44	32.3
SEQ#15 4 SPD IDLE (NEUT)	131.1	0.00		43.5	
SEQ#15 4 SPD IDLE (2500)	7.9	0.00		146.0	
SEQ#15 4 SPD IDLE (NEUT)	180.3	0.00		38.0	
SEQ#15 FED 2 MODE (30)	58.9	0.00		1257.5	
SEQ#15 FED 2 MODE (NEUT)	147.4	0.00		44.1	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 182 CO: 0.00 GAIN: 20

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, PCV VALVE,  
ENGINE OIL & FILTER, AIR FUEL & CRANKCASE BREATHER  
FILTERS. ADJUSTED IDLE SPEED & MIXTURE TO SPEC.,  
ADJUSTED CHOKE.

SEQ#16 FEDERAL TEST PROC.	1.44	6.9	373.8	3.10	22.8
SEQ#16 50 MPH CRUISE	43.4	0.00		1730.9	
SEQ#16 HIGHWAY FUEL ECON.	0.28	0.4	277.3	5.94	31.8
SEQ#16 4 SPD IDLE (NEUT)	202.7	0.00		48.3	
SEQ#16 4 SPD IDLE (2500)	9.8	0.00		151.1	
SEQ#16 4 SPD IDLE (NEUT)	239.6	0.00		42.1	
SEQ#16 FED 2 MODE (30)	62.5	0.00		1252.5	
SEQ#16 FED 2 MODE (NEUT)	218.5	0.00		56.1	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 239 CO: 0.00 GAIN: 20

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
7247	77	FORD	140	F2.3B1CV5						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 50 CO: 0.10 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	0.70	5.3	480.2	4.48	18.1
SEQ#11	50 MPH CRUISE	25.0	0.01	1788.5		
SEQ#11	HIGHWAY FUEL ECON.	0.24	0.2	382.2	7.57	23.2
SEQ#11	4 SPD IDLE (NEUT)	21.0	0.01		41.0	
SEQ#11	4 SPD IDLE (2500)	8.5	0.01		210.3	
SEQ#11	4 SPD IDLE (NEUT)	22.3	0.01		41.2	
SEQ#11	4 SPD IDLE (DRIV)	23.3	0.01		44.8	
SEQ#11	FED 2 MODE (30)	44.4	0.02		1908.7	
SEQ#11	FED 2 MODE (NEUT)	37.1	0.01		52.2	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 23 CO: 0.01 GAIN: 0

COMMENT : PROPANE GAIN 50 RPM.

SEQ#12	FEDERAL TEST PROC.	0.67	4.0	461.4	4.77	18.9
SEQ#12	50 MPH CRUISE	39.4	0.01	1851.1		
SEQ#12	HIGHWAY FUEL ECON.	0.24	0.2	363.9	7.40	24.3
SEQ#12	4 SPD IDLE (NEUT)	36.8	0.00		64.4	
SEQ#12	4 SPD IDLE (2500)	23.6	0.01		209.9	
SEQ#12	4 SPD IDLE (NEUT)	27.6	0.00		58.1	
SEQ#12	4 SPD IDLE (DRIV)	39.1	0.00		98.8	
SEQ#12	FED 2 MODE (30)	70.1	0.02		1928.8	
SEQ#12	FED 2 MODE (NEUT)	26.0	0.00		67.9	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 26 CO: 0.00 GAIN: 60

COMMENT : ADJUSTED TIMING, IDLE SPEED &amp; MIXTURE TO SPEC.

SEQ#15	FEDERAL TEST PROC.	0.57	3.8	461.5	4.26	18.9
SEQ#15	50 MPH CRUISE	26.6	0.01	1723.4		
SEQ#15	HIGHWAY FUEL ECON.	0.19	0.2	371.0	6.82	23.9
SEQ#15	4 SPD IDLE (NEUT)	24.0	0.00		51.3	
SEQ#15	4 SPD IDLE (2500)	16.1	0.01		179.3	
SEQ#15	4 SPD IDLE (NEUT)	16.1	0.00		49.3	
SEQ#15	4 SPD IDLE (DRIV)	30.9	0.00		72.4	
SEQ#15	FED 2 MODE (30)	55.6	0.02		1688.3	
SEQ#15	FED 2 MODE (NEUT)	23.6	0.00		58.6	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 16 CO: 0.00 GAIN: 20

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
7247	77	FORD	140	F2.3B1CV5	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR, FUEL,  
OIL & CRANKCASE BREATHER FILTERS, PCV VALVE,  
ENGINE OIL ADJUSTED FAST IDLE, IDLE SPEED &  
MIXTURE TO SPEC.

SEQ#16	FEDERAL TEST PROC.	0.54	3.2	516.3	4.94	17.0
SEQ#16	50 MPH CRUISE	28.3	0.01	2139.8		
SEQ#16	HIGHWAY FUEL ECON.	0.21	0.3	409.2	8.06	21.6
SEQ#16	4 SPD IDLE (NEUT)	30.9	0.00		54.9	
SEQ#16	4 SPD IDLE (2500)	21.0	0.01		220.4	
SEQ#16	4 SPD IDLE (NEUT)	23.6	0.00		56.4	
SEQ#16	4 SPD IDLE (DRIV)	43.7	0.00		103.9	
SEQ#16	FED 2 MODE (30)	67.1	0.01		2111.7	
SEQ#16	FED 2 MODE (NEUT)	23.6	0.00		65.7	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 23 CO: 0.00 GAIN: 40

7248 77 FORD 302 F302A1CV5

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 20 CO: 0.05 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	1.05	6.2	723.3	5.24	12.1
SEQ#11	50 MPH CRUISE	15.1	0.01	1367.7		
SEQ#11	HIGHWAY FUEL ECON.	0.23	0.2	503.4	6.03	17.6
SEQ#11	4 SPD IDLE (NEUT)	33.8	0.31		48.3	
SEQ#11	4 SPD IDLE (2500)	12.5	0.00		375.1	
SEQ#11	4 SPD IDLE (NEUT)	41.7	0.00		76.4	
SEQ#11	4 SPD IDLE (DRIV)	26.9	0.00		148.8	
SEQ#11	FED 2 MODE (30)	44.1	0.00		1197.4	
SEQ#11	FED 2 MODE (NEUT)	62.5	0.00		85.9	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 650 RPMS, IDLE NEUTRAL 840  
RPMs, 70 RPMs PROPANE GAIN.

SEQ#12	FEDERAL TEST PROC.	0.95	6.4	710.7	5.05	12.3
SEQ#12	50 MPH CRUISE	12.8	0.01	680.4		
SEQ#12	HIGHWAY FUEL ECON.	0.25	0.3	500.3	5.78	17.7
SEQ#12	4 SPD IDLE (NEUT)	21.0	0.12		34.0	
SEQ#12	4 SPD IDLE (2500)	9.5	0.00		227.8	
SEQ#12	4 SPD IDLE (NEUT)	41.4	0.01		42.1	
SEQ#12	4 SPD IDLE (DRIV)	21.3	0.00		86.3	
SEQ#12	FED 2 MODE (30)	22.0	0.00		623.7	
SEQ#12	FED 2 MODE (NEUT)	23.6	0.00		44.4	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
7248	77	FORD	302	F302A1CV5	(CON'T)					

COMMENT : IDLE SPEED AND MIXTURE SET TO SPEC.

SEQ#15 FEDERAL TEST PROC.	1.20	7.1	709.8	5.30	12.2
SEQ#15 50 MPH CRUISE	13.8	0.00	833.0		
SEQ#15 HIGHWAY FUEL ECON.	0.24	0.3	494.4	5.83	17.9
SEQ#15 4 SPD IDLE (NEUT)	44.4	0.00		54.8	
SEQ#15 4 SPD IDLE (2500)	8.9	0.00		215.5	
SEQ#15 4 SPD IDLE (NEUT)	44.4	0.00		44.9	
SEQ#15 4 SPD IDLE (DRIV)	22.0	0.00		100.6	
SEQ#15 FED 2 MODE (30)	33.2	0.00		766.3	
SEQ#15 FED 2 MODE (NEUT)	59.2	0.00		49.6	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 46 CO: 0.01 GAIN: 310

7249 77 FORD 302 F302D1CV5

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 395 CO: 4.03 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	4.54	72.2	513.0	1.27	13.8
SEQ#11 50 MPH CRUISE	177.0	0.71	278.0		
SEQ#11 HIGHWAY FUEL ECON.	1.42	17.7	396.2	1.00	20.7
SEQ#11 4 SPD IDLE (NEUT)	379.3	2.77		70.7	
SEQ#11 4 SPD IDLE (2500)	121.4	0.79		106.7	
SEQ#11 4 SPD IDLE (NEUT)	359.5	3.13		74.2	
SEQ#11 4 SPD IDLE (DRIV)	377.1	3.42		189.8	
SEQ#11 FED 2 MODE (30)	249.7	0.72		213.7	
SEQ#11 FED 2 MODE (NEUT)	374.9	3.13		70.9	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE TO 650 RPM, IDLE NEUTRAL TO 950 RPM, PROPANE GAIN IN NEUTRAL 50 RPM.

SEQ#12 FEDERAL TEST PROC.	2.05	33.1	575.4	1.02	14.0
SEQ#12 50 MPH CRUISE	76.7	0.56	176.5		
SEQ#12 HIGHWAY FUEL ECON.	0.84	13.1	415.8	0.79	20.2
SEQ#12 4 SPD IDLE (NEUT)	32.5	0.00		141.4	
SEQ#12 4 SPD IDLE (2500)	8.9	0.33		22.3	
SEQ#12 4 SPD IDLE (NEUT)	7.9	0.00		159.3	
SEQ#12 4 SPD IDLE (DRIV)	0.0	0.00		456.9	
SEQ#12 FED 2 MODE (30)	58.2	0.24		49.2	
SEQ#12 FED 2 MODE (NEUT)	20.7	0.02		128.3	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 31 CO: 0.04 GAIN: 150

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
7249	77	FORD	302	F302D1CV5	(CON'T)					

COMMENT : ADJUSTED IDLE DRIVE TO 650 RPM, IDLE NEUTRAL TO 930 RPM, IDLE CO IN NEUTRAL .45%, HC 85 PPM.

SEQ#13	FEDERAL TEST PROC.	3.96	55.8	546.7	1.30	13.7
SEQ#13	50 MPH CRUISE	78.0	0.58		247.7	
SEQ#13	HIGHWAY FUEL ECON.	0.84	13.1	419.8	1.00	20.0
SEQ#13	4 SPD IDLE (NEUT)	150.4	0.49		53.0	
SEQ#13	4 SPD IDLE (2500)	11.5	0.24		30.5	
SEQ#13	4 SPD IDLE (NEUT)	220.1	1.31		78.7	
SEQ#13	4 SPD IDLE (DRIV)	302.5	1.83		271.9	
SEQ#13	FED 2 MODE (30)	174.0	0.54		173.9	
SEQ#13	FED 2 MODE (NEUT)	232.2	1.33		68.7	

NO FOLLOW UP LANE TEST DONE

COMMENT : TIMING SET TO +2. IDLE SPEED IN DRIVE 650 RPM,  
CO .05%.

SEQ#14	FEDERAL TEST PROC.	1.56	20.1	574.7	2.24	14.5
SEQ#14	50 MPH CRUISE	37.8	0.30		314.4	
SEQ#14	HIGHWAY FUEL ECON.	0.42	6.1	416.3	1.46	20.8
SEQ#14	4 SPD IDLE (NEUT)	4.9	0.00		7.0	
SEQ#14	4 SPD IDLE (2500)	5.9	0.00		3.0	
SEQ#14	4 SPD IDLE (NEUT)	7.2	0.00		10.0	
SEQ#14	4 SPD IDLE (DRIV)	6.6	0.00		9.8	
SEQ#14	FED 2 MODE (30)	4.9	0.00		5.0	
SEQ#14	FED 2 MODE (NEUT)	5.6	0.00		5.3	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE SPEED AND MIXTURE SET TO SPEC. IDLE  
ENRICHMENT 80-120 RPM GAIN.

SEQ#15	FEDERAL TEST PROC.	1.62	22.9	582.1	2.46	14.2
SEQ#15	50 MPH CRUISE	61.2	0.32		303.3	
SEQ#15	HIGHWAY FUEL ECON.	0.55	8.1	423.6	1.51	20.3
SEQ#15	4 SPD IDLE (NEUT)	79.4	0.01		142.4	
SEQ#15	4 SPD IDLE (2500)	18.4	0.10		87.5	
SEQ#15	4 SPD IDLE (NEUT)	64.2	0.01		189.6	
SEQ#15	4 SPD IDLE (DRIV)	27.3	0.01		359.9	
SEQ#15	FED 2 MODE (30)	29.9	0.01		383.1	
SEQ#15	FED 2 MODE (NEUT)	95.6	0.01		163.7	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 68 CO: 0.07 GAIN: 380

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
7249	77	FORD	302	F302D1CV5	(CON'T)					

COMMENT : REPLACED SPARK PLUGS, AIR, FUEL, OIL AND CRANKCASE FILTERS, PCV VALVE AND ENGINE OIL. TIMING AND IDLE SPEED RESET.

SEQ#16	FEDERAL TEST PROC.	1.40	14.9	564.1	2.39	15.0
SEQ#16	50 MPH CRUISE	18.4	0.03	478.2		
SEQ#16	HIGHWAY FUEL ECON.	0.29	3.4	425.8	2.06	20.5
SEQ#16	4 SPD IDLE (NEUT)	105.5	0.01		78.2	
SEQ#16	4 SPD IDLE (2500)	23.3	0.01		138.3	
SEQ#16	4 SPD IDLE (NEUT)	83.3	0.01		118.5	
SEQ#16	4 SPD IDLE (DRIV)	43.4	0.01		235.5	
SEQ#16	FED 2 MODE (30)	38.5	0.01		413.5	
SEQ#16	FED 2 MODE (NEUT)	147.0	0.01		116.7	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 42 CO: 0.03 GAIN: 480

7250 77 FORD 351 F351MB2CV1

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 169 CO: 6.28 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	3.34	78.7	840.2	3.19	9.1
SEQ#11	50 MPH CRUISE	7.9	0.01	647.0		
SEQ#11	HIGHWAY FUEL ECON.	0.42	3.7	579.8	3.93	15.1
SEQ#11	4 SPD IDLE (NEUT)	567.0	11.42		15.1	
SEQ#11	4 SPD IDLE (2500)	13.8	0.01		158.5	
SEQ#11	4 SPD IDLE (NEUT)	52.0	2.67		33.3	
SEQ#11	4 SPD IDLE (DRIV)	463.8	0.02		10.9	
SEQ#11	FED 2 MODE (30)	34.8	0.01		214.0	
SEQ#11	FED 2 MODE (NEUT)	60.9	2.95		31.6	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE DRIVE 650 RPM, PROPANE GAIN 50 RPM.

SEQ#12	FEDERAL TEST PROC.	3.66	25.5	859.5	4.13	9.7
SEQ#12	50 MPH CRUISE	10.5	0.06	834.0		
SEQ#12	HIGHWAY FUEL ECON.	0.73	3.8	586.0	4.59	14.9
SEQ#12	4 SPD IDLE (NEUT)	92.3	0.15		81.2	
SEQ#12	4 SPD IDLE (2500)	0.0	0.01		174.7	
SEQ#12	4 SPD IDLE (NEUT)	81.4	0.01		59.7	
SEQ#12	4 SPD IDLE (DRIV)	274.9	0.01		149.6	
SEQ#12	FED 2 MODE (30)	531.0	0.09		422.6	
SEQ#12	FED 2 MODE (NEUT)	237.2	0.02		49.9	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
7250	77	FORD	351	F351MB2CV1	(CON'T)					

COMMENT : ADJUSTED IDLE SPEED AND MIXTURE TO SPEC. IDLE RPM 650 DRIVE, IDLE CO .45%.

SEQ#15 FEDERAL TEST PROC.	4.56	23.6	829.3	3.65	10.1
SEQ#15 50 MPH CRUISE	54.3	0.15	796.6		
SEQ#15 HIGHWAY FUEL ECON.	0.86	3.4	566.5	4.23	
SEQ#15 4 SPD IDLE (NEUT)	142.0	0.06		84.2	
SEQ#15 4 SPD IDLE (2500)	0.0	0.01		182.4	
SEQ#15 4 SPD IDLE (NEUT)	27.6	0.00		64.6	
SEQ#15 4 SPD IDLE (DRIV)	341.8	0.01		151.9	
SEQ#15 FED 2 MODE (30)	414.8	0.07		439.8	
SEQ#15 FED 2 MODE (NEUT)	141.4	0.02		58.6	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR, FUEL, OIL AND CRANKCASE BREATHER FILTERS. REPLACED ENGINE OIL, VACUUM TEE FITTINGS, COLD AIR DUCT. ADJUSTED IDLE MIXTURE, SPEED AND TIMING.

SEQ#16 FEDERAL TEST PROC.	2.11	29.5	776.1	6.54	10.7
SEQ#16 50 MPH CRUISE	23.0	0.01	1720.9		
SEQ#16 HIGHWAY FUEL ECON.	0.28	0.4	499.6	8.20	
SEQ#16 4 SPD IDLE (NEUT)	229.9	0.30		110.8	
SEQ#16 4 SPD IDLE (2500)	4.6	0.01		323.5	
SEQ#16 4 SPD IDLE (NEUT)	83.3	0.01		132.6	
SEQ#16 4 SPD IDLE (DRIV)	95.6	0.01		465.0	
SEQ#16 FED 2 MODE (30)	57.2	0.01		859.3	
SEQ#16 FED 2 MODE (NEUT)	74.1	0.01		125.4	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 60 CO: 0.02 GAIN: 60

7251 77 FORD 351 F351WC2CV4

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 422 CO: 6.38 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	4.09	74.9	588.5	5.78	12.3
SEQ#11 50 MPH CRUISE	26.9	0.00	1345.1		
SEQ#11 HIGHWAY FUEL ECON.	0.30	3.7	456.0	6.89	
SEQ#11 4 SPD IDLE (NEUT)	341.8	3.90		54.8	
SEQ#11 4 SPD IDLE (2500)	32.5	0.01		360.9	
SEQ#11 4 SPD IDLE (NEUT)	341.8	4.15		55.9	
SEQ#11 4 SPD IDLE (DRIV)	320.4	6.07		64.1	
SEQ#11 FED 2 MODE (30)	74.1	0.01		1154.8	
SEQ#11 FED 2 MODE (NEUT)	386.0	4.69		52.4	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NOx <sub>c</sub>	CH <sub>4</sub>	
7251	77	FORD	351	F351WC2CV4	(CON'T)					

COMMENT : ADJUSTED IDLE DRIVE 600 RPMS, IDLE NEUTRAL 990  
RPMs, PROPANE GAIN 130 RPMs.

SEQ#12	FEDERAL TEST PROC.	1.42	7.9	649.1	5.96	13.3
SEQ#12	50 MPH CRUISE	10.8	0.00	1487.9		
SEQ#12	HIGHWAY FUEL ECON.	0.10	0.1	453.7	6.31	19.5
SEQ#12	4 SPD IDLE (NEUT)	53.9	0.00		82.1	
SEQ#12	4 SPD IDLE (2500)	0.0	0.00		318.4	
SEQ#12	4 SPD IDLE (NEUT)	54.6	0.00		97.5	
SEQ#12	4 SPD IDLE (DRIV)	12.5	0.00		222.4	
SEQ#12	FED 2 MODE (30)	27.3	0.00		854.2	
SEQ#12	FED 2 MODE (NEUT)	204.4	0.00		87.5	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED TIMING TO +4, CO .05%, HC 170 PPM, 625  
RPMs DRIVE.

SEQ#14	FEDERAL TEST PROC.	1.07	5.2	642.9	9.97	13.6
SEQ#14	50 MPH CRUISE	21.3	0.01	1327.6		
SEQ#14	HIGHWAY FUEL ECON.	0.15	0.1	461.4	11.08	19.2
SEQ#14	4 SPD IDLE (NEUT)	22.3	0.01		88.8	
SEQ#14	4 SPD IDLE (2500)	3.6	0.00		273.0	
SEQ#14	4 SPD IDLE (NEUT)	65.2	0.00		98.3	
SEQ#14	4 SPD IDLE (DRIV)	13.8	0.00		174.2	
SEQ#14	FED 2 MODE (30)	22.3	0.01		818.9	
SEQ#14	FED 2 MODE (NEUT)	165.3	0.00		100.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 625 RPMS, CO .04%, HC 100 PPM,  
PROPANE GAIN 120 RPMs.

SEQ#15	FEDERAL TEST PROC.	1.09	5.7	634.6	9.96	13.7
SEQ#15	50 MPH CRUISE	26.6	0.00	1405.3		
SEQ#15	HIGHWAY FUEL ECON.	0.15	0.1	447.0	10.31	19.8
SEQ#15	4 SPD IDLE (NEUT)	43.7	0.00		114.7	
SEQ#15	4 SPD IDLE (2500)	3.3	0.00		314.4	
SEQ#15	4 SPD IDLE (NEUT)	48.7	0.00		115.4	
SEQ#15	4 SPD IDLE (DRIV)	9.8	0.00		264.9	
SEQ#15	FED 2 MODE (30)	27.3	0.00		944.4	
SEQ#15	FED 2 MODE (NEUT)	113.8	0.00		129.6	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
7251	77	FORD	351	F351WC2CV4	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR, FUEL, OIL, CRANKCASE BREATHER FILTERS, ENGINE OIL, PCV VALVE. ADJUSTED TIMING AND IDLE SPEED. ECS CONNECTIONS: RECONNECTED HOT AND COLD AIR DUCTS.

SEQ#16	FEDERAL TEST PROC.	0.94	4.8	637.9	9.46	13.7
SEQ#16	50 MPH CRUISE	19.0	0.01	1490.4		
SEQ#16	HIGHWAY FUEL ECON.	0.15	0.1	452.6	10.93	19.6
SEQ#16	4 SPD IDLE (NEUT)	35.2	0.01		92.4	
SEQ#16	4 SPD IDLE (2500)	6.2	0.01		261.8	
SEQ#16	4 SPD IDLE (NEUT)	40.8	0.01		93.9	
SEQ#16	4 SPD IDLE (DRIV)	9.2	0.01		309.3	
SEQ#16	FED 2 MODE (30)	20.0	0.00		1089.6	
SEQ#16	FED 2 MODE (NEUT)	85.0	0.00		101.3	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 95 CO: 0.02 GAIN: 195

7252 77 FORD 400 F351MB2CV1

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 502 CO: 5.51 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	4.72	92.4	650.8	7.44	10.9
SEQ#11	50 MPH CRUISE	55.3	0.01	2632.9		
SEQ#11	HIGHWAY FUEL ECON.	0.63	6.3	502.9	9.57	17.2
SEQ#11	4 SPD IDLE (NEUT)	630.3	4.31		54.2	
SEQ#11	4 SPD IDLE (2500)	90.0	0.01		546.9	
SEQ#11	4 SPD IDLE (NEUT)	637.1	5.06		56.1	
SEQ#11	4 SPD IDLE (DRIV)	357.2	5.91		93.1	
SEQ#11	FED 2 MODE (30)	143.4	0.25		1252.5	
SEQ#11	FED 2 MODE (NEUT)	515.2	4.75		54.4	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE TO 600 RPM, IDLE NEUTRAL TO 770 RPM, PROPANE GAIN IN NEUTRAL 70 RPM. USED UNIVERSAL METHOD.

SEQ#12	FEDERAL TEST PROC.	0.95	6.2	751.1	1.97	11.6
SEQ#12	50 MPH CRUISE	8.5	0.00	289.1		
SEQ#12	HIGHWAY FUEL ECON.	0.19	0.1	526.6	1.93	16.8
SEQ#12	4 SPD IDLE (NEUT)	126.1	0.00		111.9	
SEQ#12	4 SPD IDLE (2500)	62.5	0.00		113.9	
SEQ#12	4 SPD IDLE (NEUT)	61.5	0.00		139.6	
SEQ#12	4 SPD IDLE (DRIV)	21.3	0.01		270.9	
SEQ#12	FED 2 MODE (30)	34.2	0.00		213.4	
SEQ#12	FED 2 MODE (NEUT)	208.4	0.00		111.1	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 4 CO: 0.01 GAIN: 160

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
7252	77	FORD	400	F351MB2CV1	(CON'T)					

COMMENT : ADJUSTED IDLE CO .1%, HC 340 PPM, IDLE NEUTRAL 780 RPM, IDLE DRIVE 600 RPM. USED UNIVERSAL METHOD.

SEQ#13	FEDERAL TEST PROC.	2.50	32.8	695.5	7.00	11.8
SEQ#13	50 MPH CRUISE	15.1	0.01	1916.3		
SEQ#13	HIGHWAY FUEL ECON.	0.32	2.3	470.8	7.33	18.7
SEQ#13	4 SPD IDLE (NEUT)	102.5	0.01		79.2	
SEQ#13	4 SPD IDLE (2500)	0.7	0.01		473.1	
SEQ#13	4 SPD IDLE (NEUT)	168.3	0.21		56.9	
SEQ#13	4 SPD IDLE (DRIV)	142.0	0.55		126.7	
SEQ#13	FED 2 MODE (30)	20.0	0.04		831.6	
SEQ#13	FED 2 MODE (NEUT)	190.7	0.04		70.7	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE MIXTURE AND SPEED ADJUSTED TO SPEC.

SEQ#15	FEDERAL TEST PROC.	2.15	25.2	712.4	7.14	11.7
SEQ#15	50 MPH CRUISE	23.6	0.01	2081.6		
SEQ#15	HIGHWAY FUEL ECON.	0.23	1.9	509.1	8.33	17.3
SEQ#15	4 SPD IDLE (NEUT)	123.1	0.01		98.5	
SEQ#15	4 SPD IDLE (2500)	0.3	0.01		441.8	
SEQ#15	4 SPD IDLE (NEUT)	95.9	0.01		112.4	
SEQ#15	4 SPD IDLE (DRIV)	31.9	0.01		225.8	
SEQ#15	FED 2 MODE (30)	23.3	0.01		994.5	
SEQ#15	FED 2 MODE (NEUT)	226.5	0.01		109.8	

NO FOLLOW UP LANE TEST DONE

COMMENT : REPLACED SPARK PLUGS, AIR, FUEL, AND OIL FILTERS, ENGINE OIL, PCV VALVE AND FILTER. SET TO SPEC.

SEQ#16	FEDERAL TEST PROC.	1.67	22.3	691.5	6.79	12.1
SEQ#16	50 MPH CRUISE	9.5	0.02	2221.9		
SEQ#16	HIGHWAY FUEL ECON.	0.19	1.6	493.3	8.25	17.9
SEQ#16	4 SPD IDLE (NEUT)	128.4	0.01		107.0	
SEQ#16	4 SPD IDLE (2500)	0.0	0.01		422.6	
SEQ#16	4 SPD IDLE (NEUT)	135.7	0.01		117.8	
SEQ#16	4 SPD IDLE (DRIV)	41.1	0.01		247.7	
SEQ#16	FED 2 MODE (30)	20.4	0.01		1079.6	
SEQ#16	FED 2 MODE (NEUT)	295.6	0.01		107.7	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 155 CO: 0.02 GAIN: 130

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
				HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
7254	77	MERC	351 F351MB2CV1						

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 14 CO: 0.02 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	0.89	8.6	771.5	1.08	11.3
SEQ#11	50 MPH CRUISE	13.1	0.01	236.6		
SEQ#11	HIGHWAY FUEL ECON.	0.19	0.4	508.0	1.46	17.4
SEQ#11	4 SPD IDLE (NEUT)	297.8	4.20		48.0	
SEQ#11	4 SPD IDLE (2500)	37.8	0.00		96.2	
SEQ#11	4 SPD IDLE (NEUT)	9.5	0.00		48.9	
SEQ#11	4 SPD IDLE (DRIV)	193.4	3.65		38.6	
SEQ#11	FED 2 MODE (30)	46.7	0.01		182.7	
SEQ#11	FED 2 MODE (NEUT)	23.3	0.01		40.7	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 650 RPM, PROPANE GAIN 50  
RPM. USED UNIVERSAL PROPANE METHOD.

SEQ#12	FEDERAL TEST PROC.	1.33	6.6	727.0	1.36	12.0
SEQ#12	50 MPH CRUISE	6.6	0.01	200.6		
SEQ#12	HIGHWAY FUEL ECON.	0.28	0.4	484.0	1.59	18.3
SEQ#12	4 SPD IDLE (NEUT)	664.4	1.79		61.8	
SEQ#12	4 SPD IDLE (2500)	60.9	0.01		89.6	
SEQ#12	4 SPD IDLE (NEUT)	87.6	0.01		78.6	
SEQ#12	4 SPD IDLE (DRIV)	36.8	0.01		180.3	
SEQ#12	FED 2 MODE (30)	33.2	0.01		171.9	
SEQ#12	FED 2 MODE (NEUT)	96.2	0.01		59.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 650 RPM.

SEQ#15	FEDERAL TEST PROC.	1.30	9.5	750.6	1.26	11.5
SEQ#15	50 MPH CRUISE	7.5	0.01	208.3		
SEQ#15	HIGHWAY FUEL ECON.	0.19	0.3	500.9	1.41	17.7
SEQ#15	4 SPD IDLE (NEUT)	61.5	0.02		70.9	
SEQ#15	4 SPD IDLE (2500)	30.9	0.01		87.9	
SEQ#15	4 SPD IDLE (NEUT)	51.0	0.00		69.8	
SEQ#15	4 SPD IDLE (DRIV)	28.6	0.01		147.0	
SEQ#15	FED 2 MODE (30)	27.3	0.01		144.9	
SEQ#15	FED 2 MODE (NEUT)	64.8	0.00		49.1	

NO FOLLOW UP LANE TEST DONE

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS ----- GRAMS / MILE -----					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
7254	77	MERC	351	F351MB2CV1	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, FUEL FILTER,  
PCV VALVE AND FILTER, OIL AND OIL FILTER, AIR  
FILTER ELEMENT. ADJUSTED CHOKE NOTCHES TO SPEC.

SEQ#16 FEDERAL TEST PROC.	0.79	5.4	708.0	1.18	12.3
SEQ#16 50 MPH CRUISE	11.2	0.01		197.1	
SEQ#16 HIGHWAY FUEL ECON.	0.21	0.3	486.6	1.40	18.2
SEQ#16 4 SPD IDLE (NEUT)	429.1	1.90		62.0	
SEQ#16 4 SPD IDLE (2500)	56.3	0.01		80.8	
SEQ#16 4 SPD IDLE (NEUT)	95.6	0.00		75.0	
SEQ#16 4 SPD IDLE (DRIV)	36.5	0.00		160.3	
SEQ#16 FED 2 MODE (30)	30.6	0.01		137.3	
SEQ#16 FED 2 MODE (NEUT)	109.2	0.00		56.9	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 43 CO: 0.02 GAIN: 430

7255 77 OLDS 231 740E2

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 176 CO: 4.87 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	1.63	40.6	493.2	2.02	15.8
SEQ#11 50 MPH CRUISE	9.5	0.00		250.7	
SEQ#11 HIGHWAY FUEL ECON.	0.19	2.7	358.9	2.03	24.4
SEQ#11 4 SPD IDLE (NEUT)	101.5	2.99		34.7	
SEQ#11 4 SPD IDLE (2500)	44.7	0.04		97.0	
SEQ#11 4 SPD IDLE (NEUT)	102.9	3.42		34.8	
SEQ#11 4 SPD IDLE (DRIV)	130.4	3.12		53.6	
SEQ#11 FED 2 MODE (30)	38.1	0.11		303.3	
SEQ#11 FED 2 MODE (NEUT)	114.8	3.51		36.3	

'NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE SPEED 790 RPM NEUTRAL, 600 RPM DRIVE,  
PROPANE GAIN 50 RPM NEUTRAL.

SEQ#12 FEDERAL TEST PROC.	1.27	18.3	492.5	2.23	16.9
SEQ#12 50 MPH CRUISE	7.5	0.00		230.5	
SEQ#12 HIGHWAY FUEL ECON.	0.09	1.1	340.6	2.12	25.9
SEQ#12 4 SPD IDLE (NEUT)	75.4	0.38		27.2	
SEQ#12 4 SPD IDLE (2500)	30.2	0.00		75.7	
SEQ#12 4 SPD IDLE (NEUT)	67.5	0.84		32.1	
SEQ#12 4 SPD IDLE (DRIV)	71.1	0.60		123.1	
SEQ#12 FED 2 MODE (30)	18.1	0.01		305.3	
SEQ#12 FED 2 MODE (NEUT)	93.9	0.77		33.1	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
7255	77	OLDS	231	740E2	(CON'T)					

COMMENT : ADJUSTED IDLE DRIVE 600 RPMS, IDLE NEUTRAL 760 RPMS, CO .25%, HC 330 PPM. USED UNIVERSAL CO METHOD.

SEQ#13	FEDERAL TEST PROC.	0.96	13.7	504.8	2.15	16.8
SEQ#13	50 MPH CRUISE	30.9	0.00		69.8	
SEQ#13	HIGHWAY FUEL ECON.	0.08	0.7	351.1	2.11	25.2
SEQ#13	4 SPD IDLE (NEUT)	27.9	0.00		6.6	
SEQ#13	4 SPD IDLE (2500)	33.5	0.00		24.1	
SEQ#13	4 SPD IDLE (NEUT)	40.1	0.09		6.6	
SEQ#13	4 SPD IDLE (DRIV)	27.3	0.04		16.6	
SEQ#13	FED 2 MODE (30)	20.7	0.00		93.0	
SEQ#13	FED 2 MODE (NEUT)	37.1	0.07		7.4	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE SPEED AND MIXTURE TO SPEC.

SEQ#15	FEDERAL TEST PROC.	0.77	10.8	498.3	2.39	17.1
SEQ#15	50 MPH CRUISE	10.2	0.00		397.3	
SEQ#15	HIGHWAY FUEL ECON.	0.06	0.6	353.2	2.41	25.1
SEQ#15	4 SPD IDLE (NEUT)	22.3	0.00		81.1	
SEQ#15	4 SPD IDLE (2500)	47.0	0.00		147.8	
SEQ#15	4 SPD IDLE (NEUT)	19.4	0.00		97.2	
SEQ#15	4 SPD IDLE (DRIV)	0.3	0.00		283.1	
SEQ#15	FED 2 MODE (30)	11.8	0.01		498.4	
SEQ#15	FED 2 MODE (NEUT)	43.4	0.00		98.3	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, OIL AND OIL FILTER, PCV VALVE AND FILTER, CANISTER FILTER, FUEL FILTER. SET TO SPEC.

SEQ#16	FEDERAL TEST PROC.	0.72	11.2	512.6	2.50	16.7
SEQ#16	50 MPH CRUISE	10.8	0.01		416.5	
SEQ#16	HIGHWAY FUEL ECON.	0.05	0.3	357.7	2.42	24.8
SEQ#16	4 SPD IDLE (NEUT)	28.6	0.01		99.3	
SEQ#16	4 SPD IDLE (2500)	50.3	0.01		159.3	
SEQ#16	4 SPD IDLE (NEUT)	17.1	0.01		101.6	
SEQ#16	4 SPD IDLE (DRIV)	3.6	0.01		360.9	
SEQ#16	FED 2 MODE (30)	15.8	0.01		628.8	
SEQ#16	FED 2 MODE (NEUT)	31.2	0.01		104.9	

FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 159 CO: 0.02 GAIN: 120

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
7257	77	OLDS	350	730M4U						

**PRELIMINARY LANE TEST:**

CAT: P FUEL: P

HC: 1101 CO: 6.30 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	3.90	37.4	625.4	2.44	12.7
SEQ#11 50 MPH CRUISE	26.6	0.00		306.3	
SEQ#11 HIGHWAY FUEL ECON.	0.30	3.2	427.9	2.59	20.5
SEQ#11 4 SPD IDLE (NEUT)	492.8	1.87		14.8	
SEQ#11 4 SPD IDLE (2500)	46.7	0.01		98.5	
SEQ#11 4 SPD IDLE (NEUT)	495.1	2.02		13.1	
SEQ#11 4 SPD IDLE (DRIV)	501.8	2.27		41.8	
SEQ#11 FED 2 MODE (30)	36.2	0.00		269.9	
SEQ#11 FED 2 MODE (NEUT)	546.7	1.96		13.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 550 RPMs, IDLE NEUTRAL 680 RPMs, PROPANE GAIN 60 RPMs. USED UNIVERSAL METHOD.

SEQ#12 FEDERAL TEST PROC.	0.83	2.9	621.1	2.45	14.1
SEQ#12 50 MPH CRUISE	19.7	0.00		624.8	
SEQ#12 HIGHWAY FUEL ECON.	0.08	0.3	426.8	2.48	20.8
SEQ#12 4 SPD IDLE (NEUT)	10.8	0.00		106.5	
SEQ#12 4 SPD IDLE (2500)	35.2	0.00		200.1	
SEQ#12 4 SPD IDLE (NEUT)	15.1	0.00		141.6	
SEQ#12 4 SPD IDLE (DRIV)	12.1	0.00		509.5	
SEQ#12 FED 2 MODE (30)	49.7	0.00		400.3	
SEQ#12 FED 2 MODE (NEUT)	60.9	0.00		92.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE NEUTRAL 640 RPMs, IDLE CO .02%, IDLE HC 30 PPM.

SEQ#15 FEDERAL TEST PROC.	1.03	3.1	645.0	2.58	13.6
SEQ#15 50 MPH CRUISE	22.7	0.01		655.1	
SEQ#15 HIGHWAY FUEL ECON.	0.09	0.5	425.1	2.56	20.8
SEQ#15 4 SPD IDLE (NEUT)	9.8	0.01		103.4	
SEQ#15 4 SPD IDLE (2500)	47.7	0.01		194.5	
SEQ#15 4 SPD IDLE (NEUT)	18.4	0.00		120.3	
SEQ#15 4 SPD IDLE (DRIV)	13.1	0.00		418.5	
SEQ#15 FED 2 MODE (30)	62.2	0.01		538.8	
SEQ#15 FED 2 MODE (NEUT)	81.4	0.00		118.0	

**FOLLOW UP LANE TEST:**

CAT: P FUEL: P

HC: 15 CO: 0.02 GAIN: 140

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
7263	77	PONT	231	740E2						

PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 143 CO: 5.60 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	1.67	58.9	514.0	5.74	14.5
SEQ#11 50 MPH CRUISE	13.8	0.12		2356.8	
SEQ#11 HIGHWAY FUEL ECON.	0.25	7.4	359.4	5.99	23.9
SEQ#11 4 SPD IDLE (NEUT)	111.8	4.97		61.3	
SEQ#11 4 SPD IDLE (2500)	130.4	0.13		537.8	
SEQ#11 4 SPD IDLE (NEUT)	126.1	5.19		67.8	
SEQ#11 4 SPD IDLE (DRIV)	152.7	5.09		101.3	
SEQ#11 FED 2 MODE (30)	62.2	0.29		2089.1	
SEQ#11 FED 2 MODE (NEUT)	122.8	5.22		74.4	

NO FOLLOW UP LANE TEST DONE

COMMENT : PROPANE PRE-ADJUSTMENT, 0 GAIN, 50 RPM GAIN WAS  
ACHIEVED AT STEP 8C OF PROPANE ADJUSTMENT  
PROCEDURE A-2. IDLE NEUTRAL 850 RPM, PROPANE  
ENRICHED NEUTRAL 900 RPM.

SEQ#12 FEDERAL TEST PROC.	2.10	27.2	498.9	5.88	16.2
SEQ#12 50 MPH CRUISE	12.8	0.35		1475.4	
SEQ#12 HIGHWAY FUEL ECON.	0.33	6.2	358.5	5.62	24.0
SEQ#12 4 SPD IDLE (NEUT)	455.4	0.19		87.5	
SEQ#12 4 SPD IDLE (2500)	26.6	0.02		534.8	
SEQ#12 4 SPD IDLE (NEUT)	951.0	0.26		39.3	
SEQ#12 4 SPD IDLE (DRIV)	633.7	0.50		279.0	
SEQ#12 FED 2 MODE (30)	10.5	0.14		1199.9	
SEQ#12 FED 2 MODE (NEUT)	1172.7	0.18		30.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED TIMING AND IDLE SPEED TO SPEC, CO .3%,  
IDLE DRIVE 600 RPM, TIMING +12. NOTE: EXTREMELY  
ROUGH IDLE IS EXPERIENCED AT THESE SETTINGS.

SEQ#14 FEDERAL TEST PROC.	3.32	25.7	534.0	8.44	15.2
SEQ#14 50 MPH CRUISE	6.2	0.33		2001.8	
SEQ#14 HIGHWAY FUEL ECON.	0.39	4.5	390.9	8.54	22.2
SEQ#14 4 SPD IDLE (NEUT)	649.5	0.28		209.3	
SEQ#14 4 SPD IDLE (2500)	97.9	0.04		901.8	
SEQ#14 4 SPD IDLE (NEUT)	791.6	0.32		140.3	
SEQ#14 4 SPD IDLE (DRIV)	704.2	0.91		781.5	
SEQ#14 FED 2 MODE (30)	8.2	0.10		2248.3	
SEQ#14 FED 2 MODE (NEUT)	1579.6	0.22		73.4	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	CH <sub>4</sub>	
7263	77	PONT	231	740E2	(CON'T)					

COMMENT : ADJUSTED IDLE MIXTURE TO SPEC.

SEQ#15 FEDERAL TEST PROC.	2.07	15.2	531.1	8.08	15.8
SEQ#15 50 MPH CRUISE	8.9	0.85		1856.1	
SEQ#15 HIGHWAY FUEL ECON.	0.30	2.6	387.4	8.27	22.6
SEQ#15 4 SPD IDLE (NEUT)	31.9	0.02		300.2	
SEQ#15 4 SPD IDLE (2500)	54.6	0.03		801.6	
SEQ#15 4 SPD IDLE (NEUT)	148.0	0.15		165.2	
SEQ#15 4 SPD IDLE (DRIV)	182.7	0.22		641.9	
SEQ#15 FED 2 MODE (30)	3.3	0.03		2948.4	
SEQ#15 FED 2 MODE (NEUT)	308.0	0.10		95.9	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED AIR FILTER, PCV VALVE,  
EGR VALVE, FUEL FILTER, SPARK PLUGS, OIL AND OIL  
FILTER.

SEQ#16 FEDERAL TEST PROC.	1.43	23.1	509.1	4.24	16.1
SEQ#16 50 MPH CRUISE	3.7	0.04		421.6	
SEQ#16 HIGHWAY FUEL ECON.	0.20	2.0	345.1	2.49	25.4
SEQ#16 4 SPD IDLE (NEUT)	109.8	0.10		126.0	
SEQ#16 4 SPD IDLE (2500)	187.7	0.01		299.2	
SEQ#16 4 SPD IDLE (NEUT)	248.3	0.19		98.0	
SEQ#16 4 SPD IDLE (DRIV)	153.3	2.62		912.9	
SEQ#16 FED 2 MODE (30)	8.9	0.01		884.6	
SEQ#16 FED 2 MODE (NEUT)	363.9	0.09		54.4	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 301 CO: 0.10 GAIN: 102

7268 77 DATS 146 L240F

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 450 CO: 0.30 GAIN: 30

SEQ#11 FEDERAL TEST PROC.	2.27	12.1	513.6	2.18	16.4
SEQ#11 50 MPH CRUISE	61.5	0.19		1172.3	
SEQ#11 HIGHWAY FUEL ECON.	1.08	4.2	349.4	3.82	24.7
SEQ#11 4 SPD IDLE (NEUT)	1296.0	0.21		31.2	
SEQ#11 4 SPD IDLE (2500)	97.2	0.16		121.6	
SEQ#11 4 SPD IDLE (NEUT)	927.3	0.24		30.4	
SEQ#11 FED 2 MODE (30)	53.0	0.18		280.0	
SEQ#11 FED 2 MODE (NEUT)	409.5	0.24		33.8	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 920 CO: 0.24 GAIN: 60

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
7268	77	DATS	146	L240F	(CON'T)					

COMMENT : ADJUSTED IDLE SPEED & MIXTURE TO SPEC.

SEQ#15	FEDERAL TEST PROC.	2.01	9.5	522.2	2.20	16.3
SEQ#15	50 MPH CRUISE	68.5	0.19		1425.3	
SEQ#15	HIGHWAY FUEL ECON.	1.11	4.0	344.7	4.40	25.0
SEQ#15	4 SPD IDLE (NEUT)	656.3	0.19		29.1	
SEQ#15	4 SPD IDLE (2500)	89.6	0.18		105.7	
SEQ#15	4 SPD IDLE (NEUT)	477.4	0.18		30.4	
SEQ#15	FED 2 MODE (30)	41.1	0.18		295.2	
SEQ#15	FED 2 MODE (NEUT)	338.0	0.19		32.0	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 4860 CO: 0.18 GAIN: 166

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR & FUEL FILTERS, OIL & OIL FILTER. ADJUSTED IDLE SPEED & MIXTURE TO SPEC.

SEQ#16	FEDERAL TEST PROC.	1.79	9.4	495.2	2.68	17.2
SEQ#16	50 MPH CRUISE	59.2	0.18		1285.0	
SEQ#16	HIGHWAY FUEL ECON.	1.06	4.1	351.5	4.54	24.6
SEQ#16	4 SPD IDLE (NEUT)	729.3	0.19		29.5	
SEQ#16	4 SPD IDLE (2500)	61.5	0.19		95.4	
SEQ#16	4 SPD IDLE (NEUT)	383.4	0.19		30.9	
SEQ#16	FED 2 MODE (30)	20.7	0.19		268.9	
SEQ#16	FED 2 MODE (NEUT)	240.9	0.19		32.8	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 377 CO: 0.19 GAIN: 180

7269 77 HOND 076 77EB

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 41 CO: 1.19 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	1.04	12.8	323.0	2.38	25.6
SEQ#11	50 MPH CRUISE	23.6	0.42		986.9	
SEQ#11	HIGHWAY FUEL ECON.	0.35	7.1	252.0	3.24	33.6
SEQ#11	4 SPD IDLE (NEUT)	56.3	0.82		24.6	
SEQ#11	4 SPD IDLE (2500)	23.6	0.80		22.8	
SEQ#11	4 SPD IDLE (NEUT)	54.3	0.81		25.4	
SEQ#11	FED 2 MODE (30)	68.5	1.10		1089.6	
SEQ#11	FED 2 MODE (NEUT)	47.7	0.82		33.0	

NO FOLLOW UP LANE TEST DONE

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
7269	77	HOND	076	77EB	(CON'T)					

COMMENT : ADJUSTED IDLE NEUTRAL 750 RPM, PROPANE GAIN 50  
RPM. USED UNIVERSAL PROPANE METHOD.

SEQ#12	FEDERAL TEST PROC.	1.62	11.5	336.8	2.48	24.6
SEQ#12	50 MPH CRUISE	20.7	0.43	944.4		
SEQ#12	HIGHWAY FUEL ECON.	0.49	6.5	240.5	3.30	35.2
SEQ#12	4 SPD IDLE (NEUT)	61.5	0.14		32.3	
SEQ#12	4 SPD IDLE (2500)	22.0	0.73		23.4	
SEQ#12	4 SPD IDLE (NEUT)	68.5	0.13		32.5	
SEQ#12	FED 2 MODE (30)	66.5	0.67	1202.4		
SEQ#12	FED 2 MODE (NEUT)	60.5	0.17		41.6	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE NEUTRAL 750 RPM, CO .25%, HC 80 PPM.

SEQ#15	FEDERAL TEST PROC.	1.85	11.5	308.7	2.02	26.7
SEQ#15	50 MPH CRUISE	20.7	0.41	949.4		
SEQ#15	HIGHWAY FUEL ECON.	0.50	6.3	234.7	2.66	36.1
SEQ#15	4 SPD IDLE (NEUT)	64.2	0.08		30.6	
SEQ#15	4 SPD IDLE (2500)	24.6	0.63		27.3	
SEQ#15	4 SPD IDLE (NEUT)	63.2	0.08		29.4	
SEQ#15	FED 2 MODE (30)	23.6	0.58	590.4		
SEQ#15	FED 2 MODE (NEUT)	60.5	0.09		36.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, OIL AND OIL FILTER, FUEL FILTER, ADJUSTED TIMING TO MANUFACTURER SPEC, REPLACED AIR FILTER ELEMENT.

SEQ#16	FEDERAL TEST PROC.	2.02	10.6	326.9	1.74	25.4
SEQ#16	50 MPH CRUISE	11.8	0.40	602.5		
SEQ#16	HIGHWAY FUEL ECON.	0.45	5.8	251.9	2.27	33.8
SEQ#16	4 SPD IDLE (NEUT)	127.4	0.09		35.2	
SEQ#16	4 SPD IDLE (2500)	15.8	0.56		29.2	
SEQ#16	4 SPD IDLE (NEUT)	108.5	0.08		34.8	
SEQ#16	FED 2 MODE (30)	54.3	0.82	796.6		
SEQ#16	FED 2 MODE (NEUT)	80.0	0.10		42.1	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 53 CO: 0.16 GAIN: 95

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
7270	77	HOND	098	77ED-2						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 66 CO: 0.25 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	1.16	8.8	312.6	2.45	26.9
SEQ#11	50 MPH CRUISE	17.7	0.25	2790.7		
SEQ#11	HIGHWAY FUEL ECON.	0.13	2.2	240.6	3.62	36.3
SEQ#11	4 SPD IDLE (NEUT)	82.0	0.18		97.5	
SEQ#11	4 SPD IDLE (2500)	10.2	0.16		182.9	
SEQ#11	4 SPD IDLE (NEUT)	42.7	0.23		91.8	
SEQ#11	FED 2 MODE (30)	62.9	0.18		3688.0	
SEQ#11	FED 2 MODE (NEUT)	66.8	0.22		109.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE NEUTRAL 800 RPM, PROPANE GAIN 60 RPM. USED UNIVERSAL PROPANE METHOD.

SEQ#12	FEDERAL TEST PROC.	1.18	8.7	312.7	2.50	26.9
SEQ#12	50 MPH CRUISE	3.9	0.22	2189.3		
SEQ#12	HIGHWAY FUEL ECON.	0.17	2.4	231.0	3.55	37.7
SEQ#12	4 SPD IDLE (NEUT)	109.5	0.16		86.2	
SEQ#12	4 SPD IDLE (2500)	7.5	0.15		184.0	
SEQ#12	4 SPD IDLE (NEUT)	42.7	0.20		73.4	
SEQ#12	FED 2 MODE (30)	69.5	0.17		3549.9	
SEQ#12	FED 2 MODE (NEUT)	65.8	0.18		99.5	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE NEUTRAL 800 RPM, CO .17%, HC 145 PPM.

SEQ#15	FEDERAL TEST PROC.	1.25	9.2	302.6	2.51	27.6
SEQ#15	50 MPH CRUISE	3.3	0.22	2026.5		
SEQ#15	HIGHWAY FUEL ECON.	0.17	2.4	238.7	3.54	36.5
SEQ#15	4 SPD IDLE (NEUT)	105.2	0.16		70.9	
SEQ#15	4 SPD IDLE (2500)	0.0	0.10		190.1	
SEQ#15	4 SPD IDLE (NEUT)	41.1	0.21		76.7	
SEQ#15	FED 2 MODE (30)	62.2	0.18		3165.4	
SEQ#15	FED 2 MODE (NEUT)	70.8	0.17		92.5	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
7270	77	HOND	098	77ED-2 (CON'T)						

COMMENT : MAJOR TUNE-UP. PARTS INCLUDED SPARK PLUGS, AIR AND FUEL FILTERS, POINTS AND CONDENSER, ENGINE OIL. TIMING MIXTURE, IDLE SPEED AND DWELL ANGLE WERE ADJUSTED.

SEQ#16 FEDERAL TEST PROC.	1.14	9.2	316.4	2.42	26.5
SEQ#16 50 MPH CRUISE	0.7	0.21		1906.2	
SEQ#16 HIGHWAY FUEL ECON.	0.15	2.3	241.6	3.34	36.1
SEQ#16 4 SPD IDLE (NEUT)	104.2	0.15		76.2	
SEQ#16 4 SPD IDLE (2500)	7.5	0.18		171.9	
SEQ#16 4 SPD IDLE (NEUT)	74.1	0.18		60.3	
SEQ#16 FED 2 MODE (30)	55.6	0.19		2978.0	
SEQ#16 FED 2 MODE (NEUT)	62.2	0.18		79.6	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 317 CO: 0.27 GAIN: 70

7272 77 TOYO 134 20R(F)

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 445 CO: 1.20 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	3.47	84.8	365.9	2.17	17.4
SEQ#11 50 MPH CRUISE	180.7	3.23		1485.4	
SEQ#11 HIGHWAY FUEL ECON.	1.40	40.4	249.0	3.05	28.0
SEQ#11 4 SPD IDLE (NEUT)	723.8	0.90		81.1	
SEQ#11 4 SPD IDLE (2500)	1402.1	4.61		392.2	
SEQ#11 4 SPD IDLE (NEUT)	580.5	1.28		77.3	
SEQ#11 FED 2 MODE (30)	249.0	3.76		1087.1	
SEQ#11 FED 2 MODE (NEUT)	495.1	1.45		76.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE TO 800 RPM, PROPANE GAIN 200 RPM AND CLEANED AIR FILTER ELEMENT. ENGINE IDLED ROUGH.

SEQ#12 FEDERAL TEST PROC.	3.51	84.0	365.5	2.12	17.4
SEQ#12 50 MPH CRUISE	179.0	4.11		1007.0	
SEQ#12 HIGHWAY FUEL ECON.	1.45	44.0	229.7	2.37	29.2
SEQ#12 4 SPD IDLE (NEUT)	368.3	1.25		84.8	
SEQ#12 4 SPD IDLE (2500)	1628.5	4.36		369.0	
SEQ#12 4 SPD IDLE (NEUT)	399.3	1.58		80.8	
SEQ#12 FED 2 MODE (30)	234.9	4.31		806.6	
SEQ#12 FED 2 MODE (NEUT)	282.5	1.64		79.6	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
7272	77	TOYO	134	20R(F)	(CON'T)					

COMMENT : ADJUSTED IDLE MIXTURE TO .5% CO.

SEQ#13 FEDERAL TEST PROC.	3.48	82.1	359.1	2.07	17.8
SEQ#13 50 MPH CRUISE	155.0	3.92	1104.7		
SEQ#13 HIGHWAY FUEL ECON.	1.43	43.2	231.3	2.44	29.2
SEQ#13 4 SPD IDLE (NEUT)	445.9	0.87		91.2	
SEQ#13 4 SPD IDLE (2500)	1811.1	4.46		398.3	
SEQ#13 4 SPD IDLE (NEUT)	501.8	1.09		86.9	
SEQ#13 FED 2 MODE (30)	229.2	4.27		861.7	
SEQ#13 FED 2 MODE (NEUT)	499.6	0.66		103.4	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE MIXTURE AND SPEED ADJUSTED TO MANUFACTURERS SPEC. IDLE SPEED 800 RPM, IDLE CO .9%.

SEQ#15 FEDERAL TEST PROC.	3.64	86.8	366.9	2.09	17.2
SEQ#15 50 MPH CRUISE	184.4	3.89	1122.2		
SEQ#15 HIGHWAY FUEL ECON.	1.51	42.1	233.0	2.44	29.2
SEQ#15 4 SPD IDLE (NEUT)	700.9	0.62		86.9	
SEQ#15 4 SPD IDLE (2500)	1635.9	4.03		431.7	
SEQ#15 4 SPD IDLE (NEUT)	744.4	0.95		82.6	
SEQ#15 FED 2 MODE (30)	282.5	4.25		901.8	
SEQ#15 FED 2 MODE (NEUT)	508.5	1.15		80.6	

NO FOLLOW UP LANE TEST DONE

COMMENT : REPLACED SPARK PLUGS, AIR, FUEL AND OIL FILTERS, ROTOR AND POINTS, AND PCV VALVE. SET TO MANUFACTURERS SPEC.

SEQ#16 FEDERAL TEST PROC.	2.86	82.0	364.0	1.26	17.7
SEQ#16 50 MPH CRUISE	156.7	4.00	677.3		
SEQ#16 HIGHWAY FUEL ECON.	1.30	42.6	225.7	1.62	29.9
SEQ#16 4 SPD IDLE (NEUT)	185.4	1.88		63.6	
SEQ#16 4 SPD IDLE (2500)	137.0	4.82		163.4	
SEQ#16 4 SPD IDLE (NEUT)	197.0	2.01		60.8	
SEQ#16 FED 2 MODE (30)	165.3	3.83		589.4	
SEQ#16 FED 2 MODE (NEUT)	174.7	1.15		65.0	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 168 CO: 1.88 GAIN: 40

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NOx <sub>c</sub>	CH <sub>4</sub>	
7273	77	TOYO	134	20R(F)						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 20 CO: 0.59 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	0.55	17.1	456.2	1.39	18.3
SEQ#11	50 MPH CRUISE	0.3	0.16		230.9	
SEQ#11	HIGHWAY FUEL ECON.	0.18	5.0	349.4	1.98	24.8
SEQ#11	4 SPD IDLE (NEUT)	11.8	0.42		10.0	
SEQ#11	4 SPD IDLE (2500)	0.7	0.12		27.7	
SEQ#11	4 SPD IDLE (NEUT)	10.2	0.40		11.9	
SEQ#11	4 SPD IDLE (DRIV)	32.2	0.98		18.8	
SEQ#11	FED 2 MODE (30)	2.0	0.17		137.0	
SEQ#11	FED 2 MODE (NEUT)	10.8	0.41		12.4	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE SPEED 850 RPM NEUTRAL, PROPANE GAIN 50 RPM.

SEQ#12	FEDERAL TEST PROC.	0.67	13.7	465.8	1.52	18.1
SEQ#12	50 MPH CRUISE	3.3	0.14		219.1	
SEQ#12	HIGHWAY FUEL ECON.	0.23	5.2	352.7	2.13	24.5
SEQ#12	4 SPD IDLE (NEUT)	28.3	0.13		19.9	
SEQ#12	4 SPD IDLE (2500)	8.9	0.13		22.9	
SEQ#12	4 SPD IDLE (NEUT)	28.9	0.14		20.3	
SEQ#12	4 SPD IDLE (DRIV)	45.4	0.23		91.7	
SEQ#12	FED 2 MODE (30)	8.5	0.17		124.4	
SEQ#12	FED 2 MODE (NEUT)	21.0	0.15		20.9	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE SPEED AND MIXTURE TO SPEC.

SEQ#15	FEDERAL TEST PROC.	0.86	14.7	460.1	1.40	18.3
SEQ#15	50 MPH CRUISE	10.8	0.14		204.2	
SEQ#15	HIGHWAY FUEL ECON.	0.32	4.9	351.3	1.91	24.7
SEQ#15	4 SPD IDLE (NEUT)	34.5	0.08		24.4	
SEQ#15	4 SPD IDLE (2500)	6.6	0.12		23.7	
SEQ#15	4 SPD IDLE (NEUT)	50.0	0.08		27.3	
SEQ#15	4 SPD IDLE (DRIV)	44.4	0.12		104.7	
SEQ#15	FED 2 MODE (30)	6.6	0.19		117.5	
SEQ#15	FED 2 MODE (NEUT)	51.3	0.09		27.6	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
7273	77	TOYO	134	20R(F)	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, POINTS, AIR, FUEL AND OIL FILTERS, CRANKCASE OIL. TIMING AND IDLE SPEED WERE SET TO SPEC. DWELL WAS ALSO ADJUSTED.

SEQ#16 FEDERAL TEST PROC.	0.82	13.0	452.5	1.43	18.7
SEQ#16 50 MPH CRUISE	3.9	0.24	412.5		
SEQ#16 HIGHWAY FUEL ECON.	0.31	4.9	346.1	2.11	25.0
SEQ#16 4 SPD IDLE (NEUT)	37.8	0.20		38.7	
SEQ#16 4 SPD IDLE (2500)	9.8	0.21		45.2	
SEQ#16 4 SPD IDLE (NEUT)	47.4	0.18		41.9	
SEQ#16 4 SPD IDLE (DRIV)	72.1	0.34		159.6	
SEQ#16 FED 2 MODE (30)	4.6	0.35		202.9	
SEQ#16 FED 2 MODE (NEUT)	41.4	0.19		46.1	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 36 CO: 0.14 GAIN: 80

7275 77 VOLK 097 FAMILY 37

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 171 CO: 6.16 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	2.24	27.6	346.0	3.78	22.4
SEQ#11 50 MPH CRUISE	96.2	0.67	2176.8		
SEQ#11 HIGHWAY FUEL ECON.	1.25	10.8	243.0	4.15	33.6
SEQ#11 4 SPD IDLE (NEUT)	170.0	5.22		67.2	
SEQ#11 4 SPD IDLE (2500)	117.1	1.41		361.9	
SEQ#11 4 SPD IDLE (NEUT)	172.3	4.84		67.9	
SEQ#11 FED 2 MODE (30)	115.5	0.58		1961.4	
SEQ#11 FED 2 MODE (NEUT)	158.3	4.72		74.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE DRIVE 925 RPM, PROPANE ENRICHED RPM 980.

SEQ#12 FEDERAL TEST PROC.	1.60	14.5	398.9	4.17	20.8
SEQ#12 50 MPH CRUISE	81.4	0.44	2149.2		
SEQ#12 HIGHWAY FUEL ECON.	1.04	7.8	259.7	4.25	32.2
SEQ#12 4 SPD IDLE (NEUT)	80.7	2.52		100.1	
SEQ#12 4 SPD IDLE (2500)	36.5	0.54		224.2	
SEQ#12 4 SPD IDLE (NEUT)	67.5	1.54		108.8	
SEQ#12 FED 2 MODE (30)	90.9	1.21		2141.7	
SEQ#12 FED 2 MODE (NEUT)	64.2	2.22		115.4	

NO FOLLOW UP LANE TEST DONE

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
7275	77	VOLK	097	FAMILY 37	(CON'T)					

COMMENT : ADJUSTED IDLE CO TO .4% AT 925 RPM.

SEQ#13 FEDERAL TEST PROC.	1.15	6.4	403.3	4.08	21.3
SEQ#13 50 MPH CRUISE	71.4	0.42		2084.1	
SEQ#13 HIGHWAY FUEL ECON.	0.95	4.0	273.3	5.02	31.4
SEQ#13 4 SPD IDLE (NEUT)	31.2	0.36		120.6	
SEQ#13 4 SPD IDLE (2500)	22.7	0.16		220.4	
SEQ#13 4 SPD IDLE (NEUT)	27.3	0.35		120.8	
SEQ#13 FED 2 MODE (30)	71.8	0.16		1928.8	
SEQ#13 FED 2 MODE (NEUT)	30.6	0.29		124.4	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE MIXTURE AND SPEED TO SPEC.

SEQ#15 FEDERAL TEST PROC.	1.29	9.0	397.8	4.12	21.3
SEQ#15 50 MPH CRUISE	83.7	0.46		2259.4	
SEQ#15 HIGHWAY FUEL ECON.	1.02	5.9	267.4	4.51	31.7
SEQ#15 4 SPD IDLE (NEUT)	67.1	1.96		105.4	
SEQ#15 4 SPD IDLE (2500)	22.0	0.30		204.2	
SEQ#15 4 SPD IDLE (NEUT)	51.6	1.06		107.5	
SEQ#15 FED 2 MODE (30)	86.0	0.21		2051.5	
SEQ#15 FED 2 MODE (NEUT)	46.4	0.91		115.7	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 56 CO: 1.65 GAIN: 95

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, FUEL FILTER,  
OIL AND OIL FILTER, AIR FILTER, DISTRIBUTOR CAP,  
POINTS, ROTOR, SET TO SPEC, REPAIRED EGR VALVE.

SEQ#16 FEDERAL TEST PROC.	1.33	8.7	409.1	4.80	20.8
SEQ#16 50 MPH CRUISE	90.3	0.53		2534.3	
SEQ#16 HIGHWAY FUEL ECON.	1.00	6.2	264.2	5.17	32.0
SEQ#16 4 SPD IDLE (NEUT)	61.2	1.20		177.3	
SEQ#16 4 SPD IDLE (2500)	41.4	0.79		198.1	
SEQ#16 4 SPD IDLE (NEUT)	53.6	0.86		158.3	
SEQ#16 FED 2 MODE (30)	99.6	0.27		2287.7	
SEQ#16 FED 2 MODE (NEUT)	54.9	0.91		128.5	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 47 CO: 1.13 GAIN: 120

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS				FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	
0279	80	CHEV	173	01C2EY/0B6-1					

**PRELIMINARY LANE TEST:**

CAT: P FUEL: P

HC: 10 CO: 0.05 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	0.32	3.6	467.8	1.38	18.7
SEQ#11 50 MPH CRUISE	3.9	0.00		317.4	
SEQ#11 HIGHWAY FUEL ECON.	0.05	0.0	322.6	1.21	27.5
SEQ#11 4 SPD IDLE (NEUT)	1.6	0.00		32.0	
SEQ#11 4 SPD IDLE (2500)	194.4	6.43		36.9	
SEQ#11 4 SPD IDLE (NEUT)	2.3	0.01		64.7	
SEQ#11 4 SPD IDLE (DRIV)	0.7	0.00		89.6	
SEQ#11 FED 2 MODE (30)	0.0	0.00		188.0	
SEQ#11 FED 2 MODE (NEUT)	0.0	0.00		69.9	

**FOLLOW UP LANE TEST:**

CAT: P FUEL: P

HC: 12 CO: 0.01 GAIN: 20

**COMMENT :** PROPANE GAIN 30 RPM. CHECKED HOSE ROUTINGS, AIR FILTER, CHOKE, HEATED INTAKE SYS, PCV FLOW AND ENGINE OIL FOR GAS, NO ADJ MADE.

SEQ#18 FEDERAL TEST PROC.	0.35	4.5	488.9	1.51	17.9
SEQ#18 50 MPH CRUISE	10.2	0.00		302.3	
SEQ#18 HIGHWAY FUEL ECON.	0.06	0.3	331.2	1.28	26.7
SEQ#18 4 SPD IDLE (NEUT)	3.6	0.00		40.4	
SEQ#18 4 SPD IDLE (2500)	188.4	6.50		38.4	
SEQ#18 4 SPD IDLE (NEUT)	3.3	0.01		71.0	
SEQ#18 4 SPD IDLE (DRIV)	2.3	0.01		106.7	
SEQ#18 FED 2 MODE (30)	0.0	0.00		95.3	
SEQ#18 FED 2 MODE (NEUT)	0.0	0.00		69.8	

**FOLLOW UP LANE TEST:**

CAT: P FUEL: P

HC: 12 CO: 0.01 GAIN: 30

0301 80 FORD 255 4.2/5.0BJF

**PRELIMINARY LANE TEST:**

CAT: P FUEL: P

HC: 0 CO: 0.01 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	0.31	3.6	608.0	0.85	14.4
SEQ#11 50 MPH CRUISE	2.0	0.00		140.8	
SEQ#11 HIGHWAY FUEL ECON.	0.04	0.0	433.3	0.84	20.5
SEQ#11 4 SPD IDLE (NEUT)	222.5	5.25		17.0	
SEQ#11 4 SPD IDLE (2500)	9.8	0.01		73.7	
SEQ#11 4 SPD IDLE (NEUT)	0.0	0.00		48.9	
SEQ#11 4 SPD IDLE (DRIV)	0.0	0.00		61.9	
SEQ#11 FED 2 MODE (30)	6.2	0.00		106.0	
SEQ#11 FED 2 MODE (NEUT)	0.0	0.00		42.0	

**FOLLOW UP LANE TEST:**

CAT: P FUEL: P

HC: 0 CO: 0.00 GAIN: 0

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON	FUEL MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>		
0301	80	FORD	255	4.2/5.0BJF	(CON'T)						

COMMENT : IDLE NEUTRAL 620 RPM, WITH PROPANE 670 RPM.

SEQ#12	FEDERAL TEST PROC.	0.31	2.0	602.3	0.92	14.6
SEQ#12	50 MPH CRUISE	14.8	0.00		130.3	
SEQ#12	HIGHWAY FUEL ECON.	0.04	0.1	440.4	0.86	20.1
SEQ#12	4 SPD IDLE (NEUT)	8.2	0.00		52.9	
SEQ#12	4 SPD IDLE (2500)	3.9	0.00		57.8	
SEQ#12	4 SPD IDLE (NEUT)	0.0	0.00		58.5	
SEQ#12	4 SPD IDLE (DRIV)	0.0	0.00		103.4	
SEQ#12	FED 2 MODE (30)	11.8	0.00		75.3	
SEQ#12	FED 2 MODE (NEUT)	1.6	0.00		44.6	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 0 CO: 0.00 GAIN: 40

COMMENT : ADJUSTED IDLE MIXTURE TO SPEC.

SEQ#15	FEDERAL TEST PROC.	0.42	1.6	604.2	0.99	14.6
SEQ#15	50 MPH CRUISE	2.3	0.00		123.7	
SEQ#15	HIGHWAY FUEL ECON.	0.04	0.0	436.2	0.87	20.3
SEQ#15	4 SPD IDLE (NEUT)	4.9	0.00		54.4	
SEQ#15	4 SPD IDLE (2500)	0.7	0.00		57.3	
SEQ#15	4 SPD IDLE (NEUT)	0.0	0.00		61.7	
SEQ#15	4 SPD IDLE (DRIV)	1.0	0.00		112.4	
SEQ#15	FED 2 MODE (30)	12.8	0.00		81.6	
SEQ#15	FED 2 MODE (NEUT)	4.3	0.00		48.4	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 0 CO: 0.00 GAIN: 70

0302 80 FORD 255 4.2/5.0BJF

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 5 CO: 0.01 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	0.54	8.3	550.8	0.65	15.7
SEQ#11	50 MPH CRUISE	29.2	0.00		362.9	
SEQ#11	HIGHWAY FUEL ECON.	0.17	0.2	357.5	1.67	24.8
SEQ#11	4 SPD IDLE (NEUT)	543.9	5.76		38.6	
SEQ#11	4 SPD IDLE (2500)	74.4	0.01		99.5	
SEQ#11	4 SPD IDLE (NEUT)	18.1	0.00		45.8	
SEQ#11	4 SPD IDLE (DRIV)	13.5	0.00		48.2	
SEQ#11	FED 2 MODE (30)	41.1	0.00		225.5	
SEQ#11	FED 2 MODE (NEUT)	10.2	0.00		37.7	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 16 CO: 0.00 GAIN: 0

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	CH <sub>4</sub>	
0302	80	FORD	255	4.2/5.0BJF	(CON'T)					

COMMENT : PROPANE GAIN 50 RPM

SEQ#12	FEDERAL TEST PROC.	0.56	4.5	524.8	0.94	16.6
SEQ#12	50 MPH CRUISE	31.9	0.00	328.6		
SEQ#12	HIGHWAY FUEL ECON.	0.15	0.0	365.2	1.71	24.3
SEQ#12	4 SPD IDLE (NEUT)	420.4	0.97		22.4	
SEQ#12	4 SPD IDLE (2500)	49.7	0.00		88.3	
SEQ#12	4 SPD IDLE (NEUT)	6.9	0.00		54.4	
SEQ#12	4 SPD IDLE (DRIV)	10.5	0.00		81.3	
SEQ#12	FED 2 MODE (30)	32.9	0.00		198.6	
SEQ#12	FED 2 MODE (NEUT)	14.4	0.00		38.0	

FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 7 CO: 0.00 GAIN: 50

COMMENT : ADJUSTED IDLE SPEED &amp; MIXTURE TO SPEC.

SEQ#15	FEDERAL TEST PROC.	0.67	6.3	502.0	1.34	17.3
SEQ#15	50 MPH CRUISE	23.0	0.00	464.0		
SEQ#15	HIGHWAY FUEL ECON.	0.14	0.1	354.5	2.31	25.0
SEQ#15	4 SPD IDLE (NEUT)	235.2	0.36		11.4	
SEQ#15	4 SPD IDLE (2500)	44.4	0.00		118.0	
SEQ#15	4 SPD IDLE (NEUT)	7.2	0.00		82.8	
SEQ#15	4 SPD IDLE (DRIV)	8.9	0.00		94.9	
SEQ#15	FED 2 MODE (30)	34.5	0.00		326.5	
SEQ#15	FED 2 MODE (NEUT)	25.6	0.00		62.5	

FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 7 CO: 0.00 GAIN: 60

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR, FUEL, PCV &amp; OIL FILTERS, ENGINE OIL &amp; PCV VALVE ADJUSTED IDLE SPEED &amp; MIXTURE TO SPEC.

SEQ#16	FEDERAL TEST PROC.	0.68	7.2	492.8	1.25	17.5
SEQ#16	50 MPH CRUISE	181.0	0.00	451.9		
SEQ#16	HIGHWAY FUEL ECON.	0.14	0.2	357.1	2.15	24.8
SEQ#16	4 SPD IDLE (NEUT)	95.9	0.00		86.2	
SEQ#16	4 SPD IDLE (2500)	87.3	0.00		112.6	
SEQ#16	4 SPD IDLE (NEUT)	59.9	0.00		109.5	
SEQ#16	4 SPD IDLE (DRIV)	55.6	0.00		160.3	
SEQ#16	FED 2 MODE (30)	58.6	0.00		298.2	
SEQ#16	FED 2 MODE (NEUT)	62.2	0.00		71.1	

FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 59 CO: 0.00 GAIN: 120

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON	FUEL MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	CH <sub>4</sub>		
0303	80	FORD	140	2.3AC							

## PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 50 CO: 0.02 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	0.30	3.4	416.0	1.08	21.0
SEQ#11	50 MPH CRUISE	7.5	0.00	444.8		
SEQ#11	HIGHWAY FUEL ECON.	0.04	0.2	271.7	1.83	32.6
SEQ#11	4 SPD IDLE (NEUT)	503.9	8.66		20.6	
SEQ#11	4 SPD IDLE (2500)	31.9	0.01		64.6	
SEQ#11	4 SPD IDLE (NEUT)	13.1	0.00		35.2	
SEQ#11	FED 2 MODE (30)	28.9	0.00		268.9	
SEQ#11	FED 2 MODE (NEUT)	9.5	0.00		33.4	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 130 CO: 0.00 GAIN: 0

COMMENT : PROPANE GAIN 50 RPM.

SEQ#12	FEDERAL TEST PROC.	0.37	3.5	414.9	1.15	21.1
SEQ#12	50 MPH CRUISE	8.2	0.00	460.0		
SEQ#12	HIGHWAY FUEL ECON.	0.05	0.3	277.0	2.15	32.0
SEQ#12	4 SPD IDLE (NEUT)	475.2	0.86		25.0	
SEQ#12	4 SPD IDLE (2500)	18.1	0.00		59.0	
SEQ#12	4 SPD IDLE (NEUT)	4.3	0.00		49.4	
SEQ#12	FED 2 MODE (30)	17.7	0.00		277.0	
SEQ#12	FED 2 MODE (NEUT)	13.1	0.00		36.9	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 3 CO: 0.00 GAIN: 70

COMMENT : ADJUSTED IDLE SPEED &amp; MIXTURE TO SPEC.

SEQ#15	FEDERAL TEST PROC.	0.56	4.3	401.0	1.24	21.7
SEQ#15	50 MPH CRUISE	12.8	0.00	456.9		
SEQ#15	HIGHWAY FUEL ECON.	0.06	0.4	271.8	2.06	32.6
SEQ#15	4 SPD IDLE (NEUT)	12.5	0.00		65.3	
SEQ#15	4 SPD IDLE (2500)	6.9	0.00		60.9	
SEQ#15	4 SPD IDLE (NEUT)	8.5	0.00		66.9	
SEQ#15	FED 2 MODE (30)	11.8	0.00		274.0	
SEQ#15	FED 2 MODE (NEUT)	20.4	0.00		60.9	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 10 CO: 0.00 GAIN: 50

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
0303	80	FORD	140	2.3AC (CON'T)						

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR, FUEL & OIL FILTERS, PCV VALVE, ENGINE OIL. ADJUSTED IDLE SPEED & MIXTURE TO SPEC.

SEQ#16 FEDERAL TEST PROC.	0.59	4.6	414.1	1.51	21.0
SEQ#16 50 MPH CRUISE	16.1	0.00		599.5	
SEQ#16 HIGHWAY FUEL ECON.	0.06	0.2	258.4	2.00	34.3
SEQ#16 4 SPD IDLE (NEUT)	2.0	0.00		61.0	
SEQ#16 4 SPD IDLE (2500)	5.6	0.00		61.1	
SEQ#16 4 SPD IDLE (NEUT)	2.0	0.00		65.2	
SEQ#16 FED 2 MODE (30)	11.8	0.00		259.8	
SEQ#16 FED 2 MODE (NEUT)	5.9	0.00		58.7	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 3 CO: 0.00 GAIN: 70

0304 80 FORD 200 3.3GA

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 384 CO: 2.92 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	0.78	15.1	458.1	1.01	18.3
SEQ#11 50 MPH CRUISE	13.1	0.00		85.2	
SEQ#11 HIGHWAY FUEL ECON.	0.25	7.7	370.8	0.63	23.1
SEQ#11 4 SPD IDLE (NEUT)	96.9	0.33		18.6	
SEQ#11 4 SPD IDLE (2500)	13.8	0.04		25.1	
SEQ#11 4 SPD IDLE (NEUT)	96.9	0.37		28.5	
SEQ#11 4 SPD IDLE (DRIV)	200.7	1.02		68.1	
SEQ#11 FED 2 MODE (30)	9.5	0.00		97.5	
SEQ#11 FED 2 MODE (NEUT)	100.2	0.33		20.4	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 550 RPM, PROPANE GAIN 50 RPM.

SEQ#12 FEDERAL TEST PROC.	0.43	6.3	465.3	1.51	18.6
SEQ#12 50 MPH CRUISE	0.0	0.00		98.0	
SEQ#12 HIGHWAY FUEL ECON.	0.20	7.1	368.1	0.76	23.4
SEQ#12 4 SPD IDLE (NEUT)	10.5	0.00		33.0	
SEQ#12 4 SPD IDLE (2500)	10.2	0.01		33.2	
SEQ#12 4 SPD IDLE (NEUT)	1.3	0.00		48.7	
SEQ#12 4 SPD IDLE (DRIV)	2.0	0.00		157.0	
SEQ#12 FED 2 MODE (30)	10.5	0.00		87.8	
SEQ#12 FED 2 MODE (NEUT)	3.3	0.00		53.1	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
0304	80	FORD	200	3.3GA	(CON'T)					

COMMENT : ADJUSTED IDLE DRIVE 550 RPM, CO .03%, HC 55 PPM.

SEQ#15 FEDERAL TEST PROC.	0.32	5.8	454.6	1.44	19.1
SEQ#15 50 MPH CRUISE	3.9	0.00	92.3		
SEQ#15 HIGHWAY FUEL ECON.	0.17	5.9	357.9	0.61	24.1
SEQ#15 4 SPD IDLE (NEUT)	6.6	0.00	43.4		
SEQ#15 4 SPD IDLE (2500)	7.9	0.08	34.6		
SEQ#15 4 SPD IDLE (NEUT)	0.0	0.00	50.7		
SEQ#15 4 SPD IDLE (DRIV)	0.7	0.00	162.9		
SEQ#15 FED 2 MODE (30)	9.5	0.00	78.9		
SEQ#15 FED 2 MODE (NEUT)	3.0	0.00	46.7		

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 22 CO: 0.09 GAIN: 80

0305 80 MERC 200 3.3GA

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 678 CO: 8.62 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	1.70	40.4	437.5	0.71	17.5
SEQ#11 50 MPH CRUISE	3.9	0.01	227.3		
SEQ#11 HIGHWAY FUEL ECON.	0.15	5.3	376.0	0.60	23.1
SEQ#11 4 SPD IDLE (NEUT)	701.9	5.16		24.4	
SEQ#11 4 SPD IDLE (2500)	53.0	0.01		80.7	
SEQ#11 4 SPD IDLE (NEUT)	503.9	6.62		20.7	
SEQ#11 4 SPD IDLE (DRIV)	572.9	8.34		24.1	
SEQ#11 FED 2 MODE (30)	39.4	0.00		215.0	
SEQ#11 FED 2 MODE (NEUT)	679.1	6.60		20.8	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE RPM WITHOUT PROPANE 730, WITH PROPANE 780  
RPM. PROPANE GAIN 50 RPM.

SEQ#12 FEDERAL TEST PROC.	0.36	10.6	456.8	0.94	18.7
SEQ#12 50 MPH CRUISE	4.9	0.00	202.2		
SEQ#12 HIGHWAY FUEL ECON.	0.04	3.2	385.0	0.66	22.7
SEQ#12 4 SPD IDLE (NEUT)	6.2	0.00		62.7	
SEQ#12 4 SPD IDLE (2500)	8.9	0.00		58.7	
SEQ#12 4 SPD IDLE (NEUT)	0.0	0.00		74.0	
SEQ#12 4 SPD IDLE (DRIV)	0.0	0.00		243.6	
SEQ#12 FED 2 MODE (30)	0.0	0.00		166.8	
SEQ#12 FED 2 MODE (NEUT)	0.0	0.00		68.4	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
0305	80	MERC	200	3.3GA	(CON'T)					

COMMENT : ADJUSTED IDLE MIXTURE TO SPEC, TIMING TO SPEC.

SEQ#15 FEDERAL TEST PROC.	2.36	90.7	461.9	1.54	14.5
SEQ#15 50 MPH CRUISE	150.4	4.36		73.9	
SEQ#15 HIGHWAY FUEL ECON.	2.25	103.3	299.7	0.25	18.9
SEQ#15 4 SPD IDLE (NEUT)	5.6	0.00		201.1	
SEQ#15 4 SPD IDLE (2500)	239.9	4.58		47.2	
SEQ#15 4 SPD IDLE (NEUT)	2.0	0.00		245.7	
SEQ#15 4 SPD IDLE (DRIV)	0.0	0.00		1262.5	
SEQ#15 FED 2 MODE (30)	146.0	4.68		67.2	
SEQ#15 FED 2 MODE (NEUT)	3.6	0.01		260.8	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 12 CO: 0.03 GAIN: 175

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, FUEL FILTER,  
AIR FILTER, PCV VALVE & FILTER, OIL & OIL  
FILTER. REPLACED CHOKE FUSE.

SEQ#16 FEDERAL TEST PROC.	0.23	8.6	426.6	0.99	20.1
SEQ#16 50 MPH CRUISE	0.7	0.00		234.2	
SEQ#16 HIGHWAY FUEL ECON.	0.03	2.3	353.2	0.73	24.9
SEQ#16 4 SPD IDLE (NEUT)	0.0	0.00		38.0	
SEQ#16 4 SPD IDLE (2500)	0.0	0.00		89.0	
SEQ#16 4 SPD IDLE (NEUT)	0.0	0.00		55.5	
SEQ#16 4 SPD IDLE (DRIV)	0.0	0.00		111.6	
SEQ#16 FED 2 MODE (30)	3.0	0.00		186.8	
SEQ#16 FED 2 MODE (NEUT)	0.3	0.00		47.0	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 7 CO: 0.02 GAIN: 61

0307 80 MERC 200 3.3GA

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 8 CO: 0.02 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	0.54	5.7	468.5	1.68	18.5
SEQ#11 50 MPH CRUISE	11.8	0.00		300.2	
SEQ#11 HIGHWAY FUEL ECON.	0.11	0.2	314.8	2.08	28.1
SEQ#11 4 SPD IDLE (NEUT)	284.0	1.87		64.4	
SEQ#11 4 SPD IDLE (2500)	24.0	0.01		92.0	
SEQ#11 4 SPD IDLE (NEUT)	12.1	0.00		39.2	
SEQ#11 FED 2 MODE (30)	21.7	0.00		432.7	
SEQ#11 FED 2 MODE (NEUT)	9.2	0.00		42.8	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	CH <sub>4</sub>	
0307	80	MERC	200	3.3GA (CON'T)						

COMMENT : NO MAINTENANCE PERFORMED DURING PRE-ADJUSTMENT,  
PROPANE GAIN 50 RPM.

SEQ#12 FEDERAL TEST PROC.	0.55	3.9	433.5	2.05	20.1
SEQ#12 50 MPH CRUISE	8.2	0.00	339.7		
SEQ#12 HIGHWAY FUEL ECON.	0.09	0.1	294.9	1.99	30.1
SEQ#12 4 SPD IDLE (NEUT)	13.1	0.00		72.8	
SEQ#12 4 SPD IDLE (2500)	2.3	0.00		99.5	
SEQ#12 4 SPD IDLE (NEUT)	0.3	0.00		29.4	
SEQ#12 FED 2 MODE (30)	20.7	0.00		513.6	
SEQ#12 FED 2 MODE (NEUT)	8.9	0.00		41.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE SPEED & MIXTURE TO SPEC.

SEQ#15 FEDERAL TEST PROC.	0.46	3.3	448.9	2.24	19.5
SEQ#15 50 MPH CRUISE	8.2	0.00	287.1		
SEQ#15 HIGHWAY FUEL ECON.	0.10	0.2	316.6	2.30	28.0
SEQ#15 4 SPD IDLE (NEUT)	15.8	0.00		81.2	
SEQ#15 4 SPD IDLE (2500)	6.2	0.00		95.1	
SEQ#15 4 SPD IDLE (NEUT)	2.6	0.00		37.2	
SEQ#15 FED 2 MODE (30)	19.4	0.00		468.1	
SEQ#15 FED 2 MODE (NEUT)	12.5	0.00		54.6	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 0 CO: 0.00 GAIN: 80

0308 80 FORD 302 4.2/5.0BU-S

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 7 CO: 0.02 GAIN: 3

SEQ#11 FEDERAL TEST PROC.	0.67	6.1	663.7	1.21	13.1
SEQ#11 50 MPH CRUISE	7.5	0.00	235.5		
SEQ#11 HIGHWAY FUEL ECON.	0.11	0.2	543.8	1.99	16.3
SEQ#11 4 SPD IDLE (NEUT)	264.4	6.59		45.1	
SEQ#11 4 SPD IDLE (2500)	7.2	0.01		60.2	
SEQ#11 4 SPD IDLE (NEUT)	0.0	0.00		43.8	
SEQ#11 4 SPD IDLE (DRIV)	2.6	0.00		52.0	
SEQ#11 FED 2 MODE (30)	59.9	0.00		128.0	
SEQ#11 FED 2 MODE (NEUT)	5.9	0.00		34.9	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 8 CO: 0.02 GAIN: 0

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
0308	80	FORD	302	4.2/5.0BU-S	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR FILTER,  
OIL & OIL FILTER, PCV VALVE & FILTER.

SEQ#16 FEDERAL TEST PROC.	0.36	2.3	592.5	1.17	14.9
SEQ#16 50 MPH CRUISE	8.9	0.00		119.3	
SEQ#16 HIGHWAY FUEL ECON.	0.04	0.0	383.2	0.81	23.2
SEQ#16 4 SPD IDLE (NEUT)	213.8	2.62		55.5	
SEQ#16 4 SPD IDLE (2500)	7.5	0.00		51.4	
SEQ#16 4 SPD IDLE (NEUT)	0.0	0.00		46.7	
SEQ#16 4 SPD IDLE (DRIV)	3.3	0.00		60.6	
SEQ#16 FED 2 MODE (30)	18.1	0.00		169.1	
SEQ#16 FED 2 MODE (NEUT)	0.0	0.00		32.5	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 8 CO: 0.01 GAIN: 0

COMMENT : INSTALLED NEW CARBURETOR WITH NEW GASKETS AND  
CHECKED IDLE SPPEDS.

SEQ#19 FEDERAL TEST PROC.	0.65	3.1	608.1	1.34	14.4
SEQ#19 50 MPH CRUISE	12.8	0.00		108.8	
SEQ#19 HIGHWAY FUEL ECON.	0.05	0.0	426.7	0.96	20.8
SEQ#19 4 SPD IDLE (NEUT)	192.0	2.27		55.0	
SEQ#19 4 SPD IDLE (2500)	28.9	0.01		48.6	
SEQ#19 4 SPD IDLE (NEUT)	3.9	0.00		40.5	
SEQ#19 4 SPD IDLE (DRIV)	10.8	0.00		59.0	
SEQ#19 FED 2 MODE (30)	23.6	0.00		139.8	
SEQ#19 FED 2 MODE (NEUT)	0.3	0.00		29.7	

NO FOLLOW UP LANE TEST DONE

0310 80 DODG 105 OFA1052BBP/0E-1/4

PRELIMINARY LANE TEST:  
CAT: P FUEL: P  
HC: 0 CO: 0.02 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	0.19	2.2	367.2	1.39	23.9
SEQ#11 50 MPH CRUISE	16.4	0.00		648.0	
SEQ#11 HIGHWAY FUEL ECON.	0.01	0.2	304.0	2.58	29.2
SEQ#11 4 SPD IDLE (NEUT)	16.4	0.00		32.8	
SEQ#11 4 SPD IDLE (2500)	1.0	0.00		44.9	
SEQ#11 4 SPD IDLE (NEUT)	0.7	0.00		36.7	
SEQ#11 4 SPD IDLE (DRIV)	3.3	0.00		43.5	
SEQ#11 FED 2 MODE (30)	3.3	0.00		340.7	
SEQ#11 FED 2 MODE (NEUT)	0.0	0.00		38.8	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
0310	80	DODG	105	OFA1052BBP/OE-1/4	(CON'T)					

COMMENT : ADJUSTED IDLE MIXTURE AND SPEED TO MANUFACTURERS SPECS. LIMITER CAPS ACCIDENTALLY BROKEN OFF DURING ADJUSTMENT, REMOVAL WAS NOT REQUIRED TO ACHEIVE 100 RPM PROPANE GAIN.

SEQ#15 FEDERAL TEST PROC.	0.19	2.0	393.6	1.53	22.3
SEQ#15 50 MPH CRUISE	16.7	0.00		580.3	
SEQ#15 HIGHWAY FUEL ECON.	0.01	0.1	309.2	2.29	28.7
SEQ#15 4 SPD IDLE (NEUT)	11.2	0.00		35.9	
SEQ#15 4 SPD IDLE (2500)	0.0	0.00		50.2	
SEQ#15 4 SPD IDLE (NEUT)	0.0	0.00		43.9	
SEQ#15 4 SPD IDLE (DRIV)	0.0	0.00		52.2	
SEQ#15 FED 2 MODE (30)	0.0	0.00		176.0	
SEQ#15 FED 2 MODE (NEUT)	0.0	0.00		44.4	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 11 CO: 0.01 GAIN: 150

0314 80 PLYM 225 OFA-225-1-BXP

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 40 CO: 0.05 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	0.47	3.0	530.7	5.04	16.5
SEQ#11 50 MPH CRUISE	3.9	0.00		1382.7	
SEQ#11 HIGHWAY FUEL ECON.	0.09	0.3	428.2	5.60	20.7
SEQ#11 4 SPD IDLE (NEUT)	9.5	0.00		31.8	
SEQ#11 4 SPD IDLE (2500)	2.6	0.00		193.2	
SEQ#11 4 SPD IDLE (NEUT)	5.9	0.00		28.8	
SEQ#11 4 SPD IDLE (DRIV)	3.6	0.00		33.3	
SEQ#11 FED 2 MODE (30)	20.0	0.00		1477.9	
SEQ#11 FED 2 MODE (NEUT)	10.8	0.00		31.6	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 7 CO: 0.00 GAIN: 0

COMMENT : PROPANE GAIN 50 RPM.

SEQ#12 FEDERAL TEST PROC.	0.70	6.0	552.4	6.06	15.7
SEQ#12 50 MPH CRUISE	6.2	0.00		1377.7	
SEQ#12 HIGHWAY FUEL ECON.	0.08	0.2	422.5	5.45	21.0
SEQ#12 4 SPD IDLE (NEUT)	29.9	0.00		27.7	
SEQ#12 4 SPD IDLE (2500)	3.6	0.00		317.4	
SEQ#12 4 SPD IDLE (NEUT)	31.5	0.00		33.5	
SEQ#12 4 SPD IDLE (DRIV)	15.1	0.00		82.2	
SEQ#12 FED 2 MODE (30)	20.0	0.00		1951.3	
SEQ#12 FED 2 MODE (NEUT)	47.4	0.00		51.3	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 33 CO: 0.00 GAIN: 80

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	CH <sub>4</sub>	
0314	80	PLYM	225	OFA-225-1-BXP	(CON'T)					

COMMENT : ADJUSTED IDLE SPEED &amp; MIXTURE TO SPEC.

SEQ#15 FEDERAL TEST PROC.	0.40	4.2	538.3	6.21	16.2
SEQ#15 50 MPH CRUISE	9.8	0.00	1570.6		
SEQ#15 HIGHWAY FUEL ECON.	0.09	0.2	420.8	6.01	21.1
SEQ#15 4 SPD IDLE (NEUT)	81.0	0.00		48.7	
SEQ#15 4 SPD IDLE (2500)	2.6	0.00	300.2		
SEQ#15 4 SPD IDLE (NEUT)	47.4	0.00		41.9	
SEQ#15 4 SPD IDLE (DRIV)	23.0	0.00		88.0	
SEQ#15 FED 2 MODE (30)	26.6	0.00	1868.7		
SEQ#15 FED 2 MODE (NEUT)	83.7	0.00		60.1	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 46 CO: 0.00 GAIN: 140COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR, FUEL,  
CARBON CANISTER & OIL FILTER, PCV VALVE, ENGINE  
OIL, CARBURETOR, VACUUM AMPLIFIER, UNPLUGGED EGR  
LINE.

SEQ#16 FEDERAL TEST PROC.	0.41	4.2	526.2	1.39	16.6
SEQ#16 50 MPH CRUISE	6.9	0.00	222.9		
SEQ#16 HIGHWAY FUEL ECON.	0.06	0.3	407.4	1.38	21.7
SEQ#16 4 SPD IDLE (NEUT)	15.8	0.00		16.7	
SEQ#16 4 SPD IDLE (2500)	7.5	0.00	39.3		
SEQ#16 4 SPD IDLE (NEUT)	4.3	0.00		18.5	
SEQ#16 4 SPD IDLE (DRIV)	2.6	0.00		47.7	
SEQ#16 FED 2 MODE (30)	17.7	0.00	677.3		
SEQ#16 FED 2 MODE (NEUT)	4.9	0.00		25.7	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 30 CO: 0.00 GAIN: 70

0315 80 AMC 258 CP8R-1/E4

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 240 CO: 3.30 GAIN: -40

SEQ#11 FEDERAL TEST PROC.	0.94	33.6	554.7	1.00	14.5
SEQ#11 50 MPH CRUISE	5.3	0.00	379.1		
SEQ#11 HIGHWAY FUEL ECON.	0.11	0.0	359.3	1.51	24.7
SEQ#11 4 SPD IDLE (NEUT)	4.3	0.00		36.4	
SEQ#11 4 SPD IDLE (2500)	0.0	0.00		113.1	
SEQ#11 4 SPD IDLE (NEUT)	7.2	0.00		51.3	
SEQ#11 4 SPD IDLE (DRIV)	0.0	0.32		29.2	
SEQ#11 FED 2 MODE (30)	10.2	0.03	361.9		
SEQ#11 FED 2 MODE (NEUT)	17.4	0.00		66.8	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 7 CO: 0.00 GAIN: 0

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
0315	80	AMC	258	CP8R-1/E4 (CON'T)						

COMMENT : PROPANE GAIN 50 RPM.

SEQ#12 FEDERAL TEST PROC.	0.77	23.5	520.4	1.09	15.9
SEQ#12 50 MPH CRUISE	4.3	0.00	449.9		
SEQ#12 HIGHWAY FUEL ECON.	0.07	0.1	350.5	1.50	25.3
SEQ#12 4 SPD IDLE (NEUT)	23.6	0.00		22.8	
SEQ#12 4 SPD IDLE (2500)	1.6	0.00		126.7	
SEQ#12 4 SPD IDLE (NEUT)	1.6	0.00		16.7	
SEQ#12 4 SPD IDLE (DRIV)	23.6	0.00		65.5	
SEQ#12 FED 2 MODE (30)	9.8	0.01		504.5	
SEQ#12 FED 2 MODE (NEUT)	0.0	0.00		17.7	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 3 CO: 0.00 GAIN: 90

COMMENT : IDLE CO .5%, IDLE NEUTRAL 710 RPM.

SEQ#13 FEDERAL TEST PROC.	1.08	34.5	561.3	1.12	14.3
SEQ#13 50 MPH CRUISE	1.3	0.01	376.1		
SEQ#13 HIGHWAY FUEL ECON.	0.15	0.2	353.9	1.68	25.0
SEQ#13 4 SPD IDLE (NEUT)	0.3	0.20		27.6	
SEQ#13 4 SPD IDLE (2500)	0.0	0.00		55.2	
SEQ#13 4 SPD IDLE (NEUT)	22.3	0.80		34.0	
SEQ#13 4 SPD IDLE (DRIV)	55.6	3.28		22.1	
SEQ#13 FED 2 MODE (30)	29.2	0.05		356.9	
SEQ#13 FED 2 MODE (NEUT)	11.2	0.27		55.0	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 23 CO: 0.80 GAIN: 0

COMMENT : ADJUSTED IDLE SPEED &amp; MIXTURE TO SPEC.

SEQ#15 FEDERAL TEST PROC.	0.96	28.5	527.8	1.14	15.4
SEQ#15 50 MPH CRUISE	2.6	0.00	476.1		
SEQ#15 HIGHWAY FUEL ECON.	0.05	0.2	344.2	1.27	25.7
SEQ#15 4 SPD IDLE (NEUT)	25.6	0.00		23.6	
SEQ#15 4 SPD IDLE (2500)	0.0	0.00		127.8	
SEQ#15 4 SPD IDLE (NEUT)	1.3	0.00		19.2	
SEQ#15 4 SPD IDLE (DRIV)	27.3	0.00		65.4	
SEQ#15 FED 2 MODE (30)	8.5	0.02		609.6	
SEQ#15 FED 2 MODE (NEUT)	0.0	0.00		20.3	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 0 CO: 0.00 GAIN: 70

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
0315	80	AMC	258	CP8R-1/E4	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR, FUEL,  
CRANKCASE BREATHER & OIL FILTERS, PCV VALVE.  
ADJUSTED IDLE SPEED & MIXTURE TO SPEC.

SEQ#16	FEDERAL TEST PROC.	0.81	22.2	532.9	1.12	15.6
SEQ#16	50 MPH CRUISE	0.0	0.00		351.8	
SEQ#16	HIGHWAY FUEL ECON.	0.05	0.1	347.2	1.00	25.5
SEQ#16	4 SPD IDLE (NEUT)	15.8	0.00		16.7	
SEQ#16	4 SPD IDLE (2500)	0.0	0.00		110.1	
SEQ#16	4 SPD IDLE (NEUT)	0.0	0.00		13.1	
SEQ#16	4 SPD IDLE (DRIV)	18.1	0.00		68.5	
SEQ#16	FED 2 MODE (30)	9.8	0.02		568.1	
SEQ#16	FED 2 MODE (NEUT)	0.0	0.00		37.8	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 0 CO: 0.00 GAIN: 70

0319 80 TOYO 108 3T-(F) / EV-TF

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 8 CO: 0.05 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	0.31	4.6	391.0	1.22	22.2
SEQ#11	50 MPH CRUISE	5.3	0.00		608.6	
SEQ#11	HIGHWAY FUEL ECON.	0.07	0.4	253.1	1.29	34.9
SEQ#11	4 SPD IDLE (NEUT)	0.0	0.00		55.4	
SEQ#11	4 SPD IDLE (2500)	1.0	0.00		83.6	
SEQ#11	4 SPD IDLE (NEUT)	0.0	0.00		58.4	
SEQ#11	FED 2 MODE (30)	7.9	0.00		458.0	
SEQ#11	FED 2 MODE (NEUT)	0.0	0.00		60.4	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE SPEED 850 RPM, PROPANE GAIN 50 RPM.

SEQ#12	FEDERAL TEST PROC.	0.28	4.3	393.3	1.26	22.1
SEQ#12	50 MPH CRUISE	6.6	0.01		588.4	
SEQ#12	HIGHWAY FUEL ECON.	0.05	0.5	258.0	1.33	34.3
SEQ#12	4 SPD IDLE (NEUT)	0.0	0.00		59.8	
SEQ#12	4 SPD IDLE (2500)	0.7	0.01		61.8	
SEQ#12	4 SPD IDLE (NEUT)	0.0	0.00		66.5	
SEQ#12	FED 2 MODE (30)	4.3	0.00		368.0	
SEQ#12	FED 2 MODE (NEUT)	0.0	0.00		69.9	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
0319	80	TOYO	108	3T-(F) / EV-TF	(CON'T)					

COMMENT : IDLE SPEED 850 RPM. ADJUSTED IDLE MIXTURE TO SPEC.

SEQ#15	FEDERAL TEST PROC.	0.28	4.4	401.6	1.39	21.7
SEQ#15	50 MPH CRUISE	5.9	0.01		595.4	
SEQ#15	HIGHWAY FUEL ECON.	0.05	0.3	267.7	1.47	33.1
SEQ#15	4 SPD IDLE (NEUT)	3.3	0.01		51.9	
SEQ#15	4 SPD IDLE (2500)	6.6	0.01		86.0	
SEQ#15	4 SPD IDLE (NEUT)	0.0	0.00		56.5	
SEQ#15	FED 2 MODE (30)	14.4	0.01		503.4	
SEQ#15	FED 2 MODE (NEUT)	0.0	0.00		63.0	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 7 CO: 0.02 GAIN: 30

0327 80 BUIC 301 02S4V/0B4-2

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 651 CO: 6.03 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	1.36	25.4	541.3	1.96	15.2
SEQ#11	50 MPH CRUISE	11.8	0.01		560.1	
SEQ#11	HIGHWAY FUEL ECON.	0.16	1.8	372.3	2.57	23.6
SEQ#11	4 SPD IDLE (NEUT)	329.4	4.27		38.6	
SEQ#11	4 SPD IDLE (2500)	20.7	0.01		188.8	
SEQ#11	4 SPD IDLE (NEUT)	299.4	4.15		30.4	
SEQ#11	4 SPD IDLE (DRIV)	271.7	3.89		92.1	
SEQ#11	FED 2 MODE (30)	45.0	0.01		248.7	
SEQ#11	FED 2 MODE (NEUT)	308.3	3.46		28.8	

NO FOLLOW UP LANE TEST DONE

COMMENT : CORRECTED MISROUTED VACUUM LINE TO EFE VALVE. NO  
ADJUSTMENTS MADE.

SEQ#18	FEDERAL TEST PROC.	1.53	27.8	539.2	1.86	15.1
SEQ#18	50 MPH CRUISE	7.5	0.01		444.8	
SEQ#18	HIGHWAY FUEL ECON.	0.16	1.9	361.5	2.33	24.3
SEQ#18	4 SPD IDLE (NEUT)	359.6	4.47		34.2	
SEQ#18	4 SPD IDLE (2500)	17.4	0.02		184.5	
SEQ#18	4 SPD IDLE (NEUT)	327.3	4.31		39.2	
SEQ#18	4 SPD IDLE (DRIV)	312.0	4.29		81.6	
SEQ#18	FED 2 MODE (30)	31.2	0.01		211.9	
SEQ#18	FED 2 MODE (NEUT)	327.3	4.03		31.0	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
0327	80	BUIC	301	02S4V/0B4-2	(CON'T)					

COMMENT : INSTALLED NEW CARBURETOR.

SEQ#19	FEDERAL TEST PROC.	0.27	2.2	510.2	1.95	17.3
SEQ#19	50 MPH CRUISE	8.9	0.00	493.3		
SEQ#19	HIGHWAY FUEL ECON.	0.03	0.1	354.5	2.28	25.0
SEQ#19	4 SPD IDLE (NEUT)	0.0	0.00		157.5	
SEQ#19	4 SPD IDLE (2500)	3.3	0.00		170.9	
SEQ#19	4 SPD IDLE (NEUT)	0.0	0.00		190.4	
SEQ#19	4 SPD IDLE (DRIV)	0.0	0.00		407.4	
SEQ#19	FED 2 MODE (30)	5.9	0.00		282.0	
SEQ#19	FED 2 MODE (NEUT)	5.3	0.00		154.7	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 5 CO: 0.02 GAIN: 185

0334 80 CHEV 231 04E2A/0B3-4

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 13 CO: 0.02 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	0.38	2.7	616.8	2.68	14.3
SEQ#11	50 MPH CRUISE	12.8	0.01	589.4		
SEQ#11	HIGHWAY FUEL ECON.	0.01	0.0	365.3	2.58	24.3
SEQ#11	4 SPD IDLE (NEUT)	4.3	0.00		45.7	
SEQ#11	4 SPD IDLE (2500)	0.7	0.00		131.6	
SEQ#11	4 SPD IDLE (NEUT)	3.6	0.00		45.6	
SEQ#11	FED 2 MODE (30)	7.9	0.00		371.0	
SEQ#11	FED 2 MODE (NEUT)	3.9	0.00		44.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : INSTALLED CARBURETOR.

SEQ#19	FEDERAL TEST PROC.	0.39	4.1	581.9	2.46	15.1
SEQ#19	50 MPH CRUISE	3.6	0.00	505.5		
SEQ#19	HIGHWAY FUEL ECON.	0.02	0.2	340.6	2.18	26.0
SEQ#19	4 SPD IDLE (NEUT)	4.9	0.00		37.4	
SEQ#19	4 SPD IDLE (2500)	0.3	0.00		126.5	
SEQ#19	4 SPD IDLE (NEUT)	4.6	0.00		39.8	
SEQ#19	FED 2 MODE (30)	6.9	0.00		304.3	
SEQ#19	FED 2 MODE (NEUT)	6.2	0.00		39.6	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 8 CO: 0.02 GAIN: 0

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
0338	80	CHEV	173	01C2EY/0B6-1						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 17 CO: 0.04 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	0.42	2.8	497.3	1.60	17.6
SEQ#11	50 MPH CRUISE	13.1	0.01	487.3		
SEQ#11	HIGHWAY FUEL ECON.	0.08	0.2	347.4	1.89	25.5
SEQ#11	4 SPD IDLE (NEUT)	6.6	0.00		54.7	
SEQ#11	4 SPD IDLE (2500)	245.6	8.05		39.8	
SEQ#11	4 SPD IDLE (NEUT)	7.2	0.01		64.0	
SEQ#11	4 SPD IDLE (DRIV)	5.3	0.01		79.5	
SEQ#11	FED 2 MODE (30)	1.6	0.01		113.4	
SEQ#11	FED 2 MODE (NEUT)	0.0	0.00		60.5	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 19 CO: 0.00 GAIN: 18

0339 80 CHEV 173 01C2EY/0B6-1

## PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 9 CO: 0.02 GAIN: 5

SEQ#11	FEDERAL TEST PROC.	0.40	4.1	483.7	1.75	18.1
SEQ#11	50 MPH CRUISE	5.9	0.00	479.2		
SEQ#11	HIGHWAY FUEL ECON.	0.06	0.0	311.0	1.71	28.5
SEQ#11	4 SPD IDLE (NEUT)	5.3	0.00		82.4	
SEQ#11	4 SPD IDLE (2500)	56.3	2.48		87.2	
SEQ#11	4 SPD IDLE (NEUT)	4.6	0.01		85.7	
SEQ#11	4 SPD IDLE (DRIV)	3.9	0.00		163.2	
SEQ#11	FED 2 MODE (30)	4.6	0.42		98.0	
SEQ#11	FED 2 MODE (NEUT)	0.0	0.00		82.2	

NO FOLLOW UP LANE TEST DONE

COMMENT : REPLACED AIR FILTER.

SEQ#18	FEDERAL TEST PROC.	0.28	10.3	506.6	1.41	16.9
SEQ#18	50 MPH CRUISE	4.3	0.00	379.1		
SEQ#18	HIGHWAY FUEL ECON.	0.06	4.2	340.9	1.15	25.5
SEQ#18	4 SPD IDLE (NEUT)	10.2	0.74		32.4	
SEQ#18	4 SPD IDLE (2500)	286.7	10.08		13.5	
SEQ#18	4 SPD IDLE (NEUT)	21.3	1.10		26.1	
SEQ#18	4 SPD IDLE (DRIV)	1.0	0.01		61.4	
SEQ#18	FED 2 MODE (30)	7.9	1.37		52.9	
SEQ#18	FED 2 MODE (NEUT)	9.2	1.37		23.7	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
0339	80	CHEV	173	01C2EY/0B6-1	(CON'T)					

COMMENT : INSTALLED NEW CARBURETOR.

SEQ#19	FEDERAL TEST PROC.	0.29	3.2	469.1	1.77	18.7
SEQ#19	50 MPH CRUISE	11.8	0.01	469.1		
SEQ#19	HIGHWAY FUEL ECON.	0.06	0.2	317.4	1.81	27.9
SEQ#19	4 SPD IDLE (NEUT)	6.6	0.00		45.2	
SEQ#19	4 SPD IDLE (2500)	133.7	5.22		41.8	
SEQ#19	4 SPD IDLE (NEUT)	4.9	0.01		50.9	
SEQ#19	4 SPD IDLE (DRIV)	4.9	0.01		77.6	
SEQ#19	FED 2 MODE (30)	3.9	0.01		281.0	
SEQ#19	FED 2 MODE (NEUT)	3.0	0.01		50.3	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 13 CO: 0.02 GAIN: 0

0349 80 FORD 098 1.6ABF

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 75 CO: 0.02 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	0.18	5.3	353.1	0.92	24.5
SEQ#11	50 MPH CRUISE	8.2	0.00	441.8		
SEQ#11	HIGHWAY FUEL ECON.	0.03	0.4	245.5	1.21	36.1
SEQ#11	4 SPD IDLE (NEUT)	1214.4	5.87		12.6	
SEQ#11	4 SPD IDLE (2500)	64.8	0.03		59.8	
SEQ#11	4 SPD IDLE (NEUT)	39.1	0.01		74.5	
SEQ#11	FED 2 MODE (30)	15.1	0.02		188.8	
SEQ#11	FED 2 MODE (NEUT)	0.0	0.00		62.0	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 390 CO: 0.01 GAIN: 0

COMMENT : PROPANE GAIN 50 RPM.

SEQ#12	FEDERAL TEST PROC.	0.21	4.7	334.9	0.86	25.9
SEQ#12	50 MPH CRUISE	12.8	0.00	390.2		
SEQ#12	HIGHWAY FUEL ECON.	0.06	0.1	244.7	1.33	36.2
SEQ#12	4 SPD IDLE (NEUT)	863.8	0.61		28.8	
SEQ#12	4 SPD IDLE (2500)	17.1	0.00		65.4	
SEQ#12	4 SPD IDLE (NEUT)	19.0	0.00		179.3	
SEQ#12	FED 2 MODE (30)	7.9	0.01		217.5	
SEQ#12	FED 2 MODE (NEUT)	13.5	0.00		188.0	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 20 CO: 0.00 GAIN: 70

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS ----- GRAMS / MILE -----					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
0349	80	FORD	098	1.6ABF (CON'T)						

COMMENT : ADJUSTED IDLE SPEED &amp; MIXTURE TO SPEC.

SEQ#15 FEDERAL TEST PROC.	0.25	5.6	334.3	0.83	25.8
SEQ#15 50 MPH CRUISE	6.2	0.00		327.5	
SEQ#15 HIGHWAY FUEL ECON.	0.05	0.2	242.1	1.20	36.6
SEQ#15 4 SPD IDLE (NEUT)	819.5	0.42		39.8	
SEQ#15 4 SPD IDLE (2500)	29.6	0.00		65.1	
SEQ#15 4 SPD IDLE (NEUT)	18.7	0.00		163.9	
SEQ#15 FED 2 MODE (30)	5.3	0.01		149.6	
SEQ#15 FED 2 MODE (NEUT)	0.0	0.00		154.7	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 20 CO: 0.00 GAIN: 60

0351 80 FORD 140 2.3AC

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 18 CO: 0.02 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	0.39	6.4	421.7	1.14	20.5
SEQ#11 50 MPH CRUISE	9.5	0.00		464.0	
SEQ#11 HIGHWAY FUEL ECON.	0.08	0.3	259.9	1.86	34.0
SEQ#11 4 SPD IDLE (NEUT)	688.2	8.19		16.7	
SEQ#11 4 SPD IDLE (2500)	23.0	0.00		72.4	
SEQ#11 4 SPD IDLE (NEUT)	27.6	0.00		33.9	
SEQ#11 FED 2 MODE (30)	22.0	0.00		260.8	
SEQ#11 FED 2 MODE (NEUT)	22.3	0.00		32.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE NEUTRAL 850 RPM, PROPANE ENRICHED SPEED 910 RPM.

SEQ#12 FEDERAL TEST PROC.	0.63	8.3	411.6	0.93	20.8
SEQ#12 50 MPH CRUISE	10.8	0.00		404.4	
SEQ#12 HIGHWAY FUEL ECON.	0.09	0.4	259.9	1.68	34.0
SEQ#12 4 SPD IDLE (NEUT)	620.1	0.74		41.0	
SEQ#12 4 SPD IDLE (2500)	29.9	0.00		55.9	
SEQ#12 4 SPD IDLE (NEUT)	28.6	0.00		30.4	
SEQ#12 FED 2 MODE (30)	24.0	0.00		229.9	
SEQ#12 FED 2 MODE (NEUT)	32.5	0.00		25.3	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 9 CO: 0.01 GAIN: 68

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
0351	80	FORD	140	2.3AC	(CON'T)					

COMMENT : ADJUSTED IDLE NEUTRAL 850 RPM, PROPANE GAIN 10  
RPM.

SEQ#15	FEDERAL TEST PROC.	0.59	7.6	407.5	0.94	21.1
SEQ#15	50 MPH CRUISE	14.1	0.00	429.6		
SEQ#15	HIGHWAY FUEL ECON.	0.08	0.3	264.1	1.83	33.5
SEQ#15	4 SPD IDLE (NEUT)	257.0	4.58		42.0	
SEQ#15	4 SPD IDLE (2500)	31.9	0.00		59.7	
SEQ#15	4 SPD IDLE (NEUT)	14.4	0.00		38.6	
SEQ#15	FED 2 MODE (30)	26.9	0.00		222.4	
SEQ#15	FED 2 MODE (NEUT)	10.5	0.00		33.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, PCV VALVE,  
FUEL FILTER, AIR FILTER, OIL AND OIL FILTER. SET  
TO SPEC.

SEQ#16	FEDERAL TEST PROC.	0.46	6.9	413.0	1.10	20.9
SEQ#16	50 MPH CRUISE	15.1	0.00	451.9		
SEQ#16	HIGHWAY FUEL ECON.	0.07	0.6	268.1	1.91	33.0
SEQ#16	4 SPD IDLE (NEUT)	442.2	1.38		46.5	
SEQ#16	4 SPD IDLE (2500)	19.0	0.00		58.9	
SEQ#16	4 SPD IDLE (NEUT)	12.5	0.00		34.4	
SEQ#16	FED 2 MODE (30)	24.6	0.00		276.0	
SEQ#16	FED 2 MODE (NEUT)	14.4	0.00		33.1	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 9 CO: 0.02 GAIN: 0

0354 80 MERC 140 2.3AC

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 8 CO: 0.02 GAIN: 7

SEQ#11	FEDERAL TEST PROC.	0.22	1.4	519.2	1.82	17.0
SEQ#11	50 MPH CRUISE	19.7	0.00	564.1		
SEQ#11	HIGHWAY FUEL ECON.	0.04	0.2	356.8	3.58	24.8
SEQ#11	4 SPD IDLE (NEUT)	477.4	7.24		31.9	
SEQ#11	4 SPD IDLE (2500)	43.7	0.01		62.8	
SEQ#11	4 SPD IDLE (NEUT)	13.5	0.00		39.3	
SEQ#11	FED 2 MODE (30)	11.2	0.00		187.0	
SEQ#11	FED 2 MODE (NEUT)	7.5	0.00		35.1	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
0354	80	MERC	140	2.3AC	(CON'T)					

COMMENT : NO MAINTENANCE PERFORMED DURING PREADJUSTMENT.50  
RPM PROPANE GAIN ACHEIVED AT PROPANE CARB.  
ADJUSTMENT M-1.IDLE RPM 850,WITH PROPANE 900.

SEQ#12	FEDERAL TEST PROC.	0.42	3.4	450.2	1.60	19.4
SEQ#12	50 MPH CRUISE	4.9	0.00		469.1	
SEQ#12	HIGHWAY FUEL ECON.	0.05	0.1	330.5	2.99	26.8
SEQ#12	4 SPD IDLE (NEUT)	426.9	1.64		33.2	
SEQ#12	4 SPD IDLE (2500)	29.9	0.00		59.5	
SEQ#12	4 SPD IDLE (NEUT)	7.2	0.00		42.2	
SEQ#12	FED 2 MODE (30)	10.8	0.00		189.3	
SEQ#12	FED 2 MODE (NEUT)	5.3	0.00		38.4	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 7 CO: 0.00 GAIN: 70

COMMENT : ADJUSTED IDLE MIXTURE TO 30 RPM PROPANE GAIN AT  
850 RPM IN NEUTRAL.

SEQ#15	FEDERAL TEST PROC.	0.41	3.2	460.4	1.61	19.0
SEQ#15	50 MPH CRUISE	3.6	0.00		448.9	
SEQ#15	HIGHWAY FUEL ECON.	0.05	0.0	326.8	3.03	27.1
SEQ#15	4 SPD IDLE (NEUT)	277.9	3.55		50.1	
SEQ#15	4 SPD IDLE (2500)	29.2	0.01		62.4	
SEQ#15	4 SPD IDLE (NEUT)	4.9	0.00		46.0	
SEQ#15	FED 2 MODE (30)	11.8	0.00		172.4	
SEQ#15	FED 2 MODE (NEUT)	0.7	0.00		41.6	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 7 CO: 0.00 GAIN: 50

0356 80 FORD 302 4.2/5.0BJF

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 4 CO: 0.02 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	0.50	3.3	630.3	1.90	13.9
SEQ#11	50 MPH CRUISE	8.5	0.00		204.5	
SEQ#11	HIGHWAY FUEL ECON.	0.05	0.1	365.4	1.33	24.3
SEQ#11	4 SPD IDLE (NEUT)	313.7	3.04		36.3	
SEQ#11	4 SPD IDLE (2500)	3.6	0.00		86.2	
SEQ#11	4 SPD IDLE (NEUT)	0.0	0.00		61.4	
SEQ#11	4 SPD IDLE (DRIV)	0.0	0.00		61.9	
SEQ#11	FED 2 MODE (30)	14.1	0.01		127.5	
SEQ#11	FED 2 MODE (NEUT)	0.0	0.00		36.3	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 0 CO: 0.00 GAIN: 0

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	GRAMS / MILE CO <sub>2</sub>	NO <sub>x</sub> C	CH <sub>4</sub>	
0356	80	FORD	302	4.2/5.0BJF	(CON'T)					

COMMENT : NO MAINTENANCE PERFORMED DURING PRE-ADJUSTMENT.  
 50 RPM GAIN WAS ACHEIVED AT STEP 7 OF PROPANE  
 CARBURETOR ADJUSTMENT A-2. IDLE NEUTRAL 600 RPM,  
 WITH PROPANE 650 RPM.

SEQ#12	FEDERAL TEST PROC.	0.31	3.3	570.2	1.17	15.4
SEQ#12	50 MPH CRUISE	7.9	0.00		175.7	
SEQ#12	HIGHWAY FUEL ECON.	0.04	0.1	357.1	1.20	24.8
SEQ#12	4 SPD IDLE (NEUT)	15.1	0.16		10.0	
SEQ#12	4 SPD IDLE (2500)	13.5	0.00		68.0	
SEQ#12	4 SPD IDLE (NEUT)	0.0	0.00		63.5	
SEQ#12	4 SPD IDLE (DRIV)	0.0	0.00		91.3	
SEQ#12	FED 2 MODE (30)	8.5	0.00		92.0	
SEQ#12	FED 2 MODE (NEUT)	0.3	0.00		38.5	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
 HC: 0 CO: 0.00 GAIN: 40

COMMENT : ADJUSTED IDLE MIXTURE TO SPEC.

SEQ#15	FEDERAL TEST PROC.	0.29	1.4	560.5	1.47	15.7
SEQ#15	50 MPH CRUISE	0.0	0.00		213.7	
SEQ#15	HIGHWAY FUEL ECON.	0.04	0.0	311.5	1.11	28.5
SEQ#15	4 SPD IDLE (NEUT)	5.6	0.00		53.0	
SEQ#15	4 SPD IDLE (2500)	19.4	0.00		77.4	
SEQ#15	4 SPD IDLE (NEUT)	0.0	0.00		62.0	
SEQ#15	4 SPD IDLE (DRIV)	0.0	0.00		93.1	
SEQ#15	FED 2 MODE (30)	9.5	0.00		198.6	
SEQ#15	FED 2 MODE (NEUT)	10.5	0.00		45.2	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
 HC: 0 CO: 0.00 GAIN: 130

0357 80 FORD 200 3.3GA/A

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
 HC: 678 CO: 6.99 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	1.97	43.6	440.0	1.08	17.2
SEQ#11	50 MPH CRUISE	4.3	0.00		140.6	
SEQ#11	HIGHWAY FUEL ECON.	0.20	3.6	376.7	0.84	23.2
SEQ#11	4 SPD IDLE (NEUT)	522.0	4.77		24.3	
SEQ#11	4 SPD IDLE (2500)	32.2	0.01		49.7	
SEQ#11	4 SPD IDLE (NEUT)	370.5	4.67		17.6	
SEQ#11	4 SPD IDLE (DRIV)	341.8	4.85		42.2	
SEQ#11	FED 2 MODE (30)	14.4	0.00		205.0	
SEQ#11	FED 2 MODE (NEUT)	479.4	4.67		25.1	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
 HC: 689 CO: 7.31 GAIN: 0

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
0357	80	FORD	200	3.3GA/A (CON'T)						

COMMENT : IDLE NEUTRAL 750 RPM, PROPANE GAIN 50 RPM.  
ACHIEVED AT STEP 6 OF PROPANE CARB ADJUSTMENT  
PROCEDURE A-1.

SEQ#12 FEDERAL TEST PROC.	0.38	3.8	481.4	2.18	18.2
SEQ#12 50 MPH CRUISE	0.0	0.00		164.2	
SEQ#12 HIGHWAY FUEL ECON.	0.05	1.0	393.6	1.23	22.5
SEQ#12 4 SPD IDLE (NEUT)	5.6	0.00		73.8	
SEQ#12 4 SPD IDLE (2500)	11.8	0.00		54.5	
SEQ#12 4 SPD IDLE (NEUT)	0.0	0.00		91.1	
SEQ#12 4 SPD IDLE (DRIV)	0.7	0.00		469.1	
SEQ#12 FED 2 MODE (30)	9.8	0.00		148.0	
SEQ#12 FED 2 MODE (NEUT)	2.3	0.00		82.2	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE DRIVE 550 RPM, IDLE NEUTRAL 710 RPM, CO .02%,  
IDLE HC 30 PPM.

SEQ#15 FEDERAL TEST PROC.	0.37	5.1	438.8	1.98	19.8
SEQ#15 50 MPH CRUISE	5.9	0.00		142.9	
SEQ#15 HIGHWAY FUEL ECON.	0.07	2.0	350.8	0.80	25.1
SEQ#15 4 SPD IDLE (NEUT)	5.9	0.00		72.3	
SEQ#15 4 SPD IDLE (2500)	5.9	0.00		48.7	
SEQ#15 4 SPD IDLE (NEUT)	0.0	0.00		92.3	
SEQ#15 4 SPD IDLE (DRIV)	0.0	0.00		524.7	
SEQ#15 FED 2 MODE (30)	6.6	0.00		130.6	
SEQ#15 FED 2 MODE (NEUT)	1.6	0.00		79.3	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 5 CO: 0.03 GAIN: 410

0358 80 FORD 302 4.2/5.0BHS

PRELIMINARY LANE TEST:  
CAT: P FUEL: P  
HC: 238 CO: 3.80 GAIN: 10

SEQ#11 FEDERAL TEST PROC.	1.16	45.1	588.6	0.83	13.4
SEQ#11 50 MPH CRUISE	5.3	0.00		512.5	
SEQ#11 HIGHWAY FUEL ECON.	0.12	1.1	362.2	1.77	24.4
SEQ#11 4 SPD IDLE (NEUT)	228.9	1.97		48.6	
SEQ#11 4 SPD IDLE (2500)	12.1	0.00		113.1	
SEQ#11 4 SPD IDLE (NEUT)	240.6	2.10		35.3	
SEQ#11 4 SPD IDLE (DRIV)	199.1	1.15		60.3	
SEQ#11 FED 2 MODE (30)	11.8	0.00		269.9	
SEQ#11 FED 2 MODE (NEUT)	215.1	1.99		25.8	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
0358	80	FORD	302	4.2/5.0BHS	(CON'T)					

COMMENT : IDLE NEUTRAL 590 RPM, CO .5%.

SEQ#13 FEDERAL TEST PROC.	0.59	3.9	546.8	2.17	16.0
SEQ#13 50 MPH CRUISE	2.0	0.00		567.1	
SEQ#13 HIGHWAY FUEL ECON.	0.06	0.1	352.1	2.27	25.2
SEQ#13 4 SPD IDLE (NEUT)	0.0	0.00		34.7	
SEQ#13 4 SPD IDLE (2500)	0.0	0.00		126.2	
SEQ#13 4 SPD IDLE (NEUT)	0.0	0.00		31.3	
SEQ#13 4 SPD IDLE (DRIV)	0.0	0.00		123.4	
SEQ#13 FED 2 MODE (30)	3.6	0.00		314.4	
SEQ#13 FED 2 MODE (NEUT)	0.3	0.00		40.7	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE DRIVE 500 RPM. ADJUSTED IDLE MIXTURE TO SPEC.

SEQ#15 FEDERAL TEST PROC.	0.47	5.3	555.3	1.93	15.7
SEQ#15 50 MPH CRUISE	5.3	0.00		278.0	
SEQ#15 HIGHWAY FUEL ECON.	0.13	1.1	365.3	1.48	24.2
SEQ#15 4 SPD IDLE (NEUT)	255.4	2.21		24.1	
SEQ#15 4 SPD IDLE (2500)	8.5	0.00		66.6	
SEQ#15 4 SPD IDLE (NEUT)	236.9	2.26		13.4	
SEQ#15 4 SPD IDLE (DRIV)	221.8	1.74		43.2	
SEQ#15 FED 2 MODE (30)	7.5	0.00		161.9	
SEQ#15 FED 2 MODE (NEUT)	225.5	2.27		10.7	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 303 CO: 2.30 GAIN: 0

0359 80 MERC 250 4.1FA

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 11 CO: 0.10 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	0.50	16.1	529.9	1.53	15.9
SEQ#11 50 MPH CRUISE	19.7	0.00		189.1	
SEQ#11 HIGHWAY FUEL ECON.	0.03	0.1	430.9	1.47	20.6
SEQ#11 4 SPD IDLE (NEUT)	256.0	5.37		59.7	
SEQ#11 4 SPD IDLE (2500)	23.3	0.00		82.7	
SEQ#11 4 SPD IDLE (NEUT)	229.5	5.91		58.5	
SEQ#11 4 SPD IDLE (DRIV)	303.2	6.10		69.5	
SEQ#11 FED 2 MODE (30)	19.4	0.00		112.6	
SEQ#11 FED 2 MODE (NEUT)	258.4	5.67		57.2	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
0359	80	MERC	250	4.1FA	(CON'T)					

COMMENT : NO MAINTENANCE PERFORMED DURING PROPANE PREADJUSTMENTS. 50 RPM GAIN ACHEIVED DURING STEP 6, PROPANE ADJUSTMENTS. 600 RPM WITHOUT PROPANE. 650 RPM WITH PROPANE.

SEQ#12 FEDERAL TEST PROC.	0.17	1.0	516.9	1.74	17.1
SEQ#12 50 MPH CRUISE	0.0	0.00		165.5	
SEQ#12 HIGHWAY FUEL ECON.	0.02	0.0	422.4	1.44	21.0
SEQ#12 4 SPD IDLE (NEUT)	0.0	0.00		52.8	
SEQ#12 4 SPD IDLE (2500)	15.4	0.00		58.1	
SEQ#12 4 SPD IDLE (NEUT)	0.0	0.00		56.8	
SEQ#12 4 SPD IDLE (DRIV)	0.0	0.00		104.9	
SEQ#12 FED 2 MODE (30)	8.2	0.00		64.0	
SEQ#12 FED 2 MODE (NEUT)	0.0	0.00		41.6	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 0 CO: 0.00 GAIN: 60

COMMENT : ADJUSTED IDLE MIXTURE TO 35 RPM PROPANE GAIN IN DRIVE.

SEQ#15 FEDERAL TEST PROC.	0.15	0.7	519.7	1.84	17.0
SEQ#15 50 MPH CRUISE	0.0	0.00		146.2	
SEQ#15 HIGHWAY FUEL ECON.	0.02	0.0	418.1	1.45	21.2
SEQ#15 4 SPD IDLE (NEUT)	0.0	0.00		47.7	
SEQ#15 4 SPD IDLE (2500)	26.6	0.00		56.9	
SEQ#15 4 SPD IDLE (NEUT)	0.0	0.00		58.2	
SEQ#15 4 SPD IDLE (DRIV)	0.0	0.00		89.3	
SEQ#15 FED 2 MODE (30)	4.3	0.00		71.0	
SEQ#15 FED 2 MODE (NEUT)	0.0	0.00		43.2	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 0 CO: 0.00 GAIN: 130

0372 80 MAZD 086 OUCP/OSCAF

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 4 CO: 0.02 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	0.33	5.7	370.3	1.04	23.3
SEQ#11 50 MPH CRUISE	8.2	0.00		254.8	
SEQ#11 HIGHWAY FUEL ECON.	0.07	0.2	256.0	1.61	34.6
SEQ#11 4 SPD IDLE (NEUT)	7.5	0.00		33.4	
SEQ#11 4 SPD IDLE (2500)	2.6	0.02		39.4	
SEQ#11 4 SPD IDLE (NEUT)	0.3	0.00		34.1	
SEQ#11 FED 2 MODE (30)	11.5	0.01		201.6	
SEQ#11 FED 2 MODE (NEUT)	6.6	0.00		34.9	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
0372	80	MAZD	086	OUCP/OSCAF	(CON'T)					

COMMENT : IDLE NEUTRAL 700 RPM, PROPANE GAIN 50 RPM.  
ACHIEVED AT STEP 6C OF PROPANE CARB PROCEDURE M-1.

SEQ#12 FEDERAL TEST PROC.	0.28	3.5	354.1	1.01	24.6
SEQ#12 50 MPH CRUISE	8.9	0.00		246.7	
SEQ#12 HIGHWAY FUEL ECON.	0.07	0.2	261.0	1.51	33.9
SEQ#12 4 SPD IDLE (NEUT)	6.6	0.00		36.1	
SEQ#12 4 SPD IDLE (2500)	9.2	0.00		45.9	
SEQ#12 4 SPD IDLE (NEUT)	4.6	0.00		34.2	
SEQ#12 FED 2 MODE (30)	15.1	0.00		154.4	
SEQ#12 FED 2 MODE (NEUT)	5.3	0.00		37.2	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE SPEED AND MIXTURE TO SPEC.

SEQ#15 FEDERAL TEST PROC.	0.29	3.7	365.5	1.16	23.8
SEQ#15 50 MPH CRUISE	6.9	0.00		259.8	
SEQ#15 HIGHWAY FUEL ECON.	0.07	0.3	267.1	1.77	33.1
SEQ#15 4 SPD IDLE (NEUT)	7.9	0.00		32.1	
SEQ#15 4 SPD IDLE (2500)	5.3	0.00		42.0	
SEQ#15 4 SPD IDLE (NEUT)	1.3	0.00		32.9	
SEQ#15 FED 2 MODE (30)	13.8	0.01		154.2	
SEQ#15 FED 2 MODE (NEUT)	3.0	0.00		35.7	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 16 CO: 0.01 GAIN: 100

8378 78 DODG 360 FB-360-4-CE-3

PRELIMINARY LANE TEST:

CAT: P FUEL: F  
HC: 144 CO: 0.73 GAIN: 130

SEQ#11 FEDERAL TEST PROC.	1.58	7.2	758.8	3.05	11.5
SEQ#11 50 MPH CRUISE	14.1	0.14		430.7	
SEQ#11 HIGHWAY FUEL ECON.	0.65	3.6	483.2	3.07	18.1
SEQ#11 4 SPD IDLE (NEUT)	38.8	0.53		54.4	
SEQ#11 4 SPD IDLE (2500)	79.4	0.09		165.2	
SEQ#11 4 SPD IDLE (NEUT)	61.2	0.60		50.2	
SEQ#11 4 SPD IDLE (DRIV)	76.1	0.58		62.2	
SEQ#11 FED 2 MODE (30)	4.9	0.10		96.7	
SEQ#11 FED 2 MODE (NEUT)	45.7	0.36		49.2	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8378	78	DODG	360	FB-360-4-CE-3	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR FILTER,  
OIL AND OIL FILTER, FUEL FILTER, PCV VALVE.  
ADJUSTED TO MANUFACTURER SPEC.

SEQ#16	FEDERAL TEST PROC.	2.04	7.3	713.3	1.71	12.1
SEQ#16	50 MPH CRUISE	8.9	0.06	170.9		
SEQ#16	HIGHWAY FUEL ECON.	0.78	3.7	497.9	3.22	17.5
SEQ#16	4 SPD IDLE (NEUT)	206.7	0.13		25.6	
SEQ#16	4 SPD IDLE (2500)	9.5	0.05		67.9	
SEQ#16	4 SPD IDLE (NEUT)	939.2	0.14		35.2	
SEQ#16	4 SPD IDLE (DRIV)	267.4	0.10		50.3	
SEQ#16	FED 2 MODE (30)	10.8	0.10		133.4	
SEQ#16	FED 2 MODE (NEUT)	715.6	0.15		30.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : INSTALLED NEW CATALYST.

SEQ#17	FEDERAL TEST PROC.	0.37	1.4	813.7	1.58	10.9
SEQ#17	50 MPH CRUISE	0.0	0.01	160.6		
SEQ#17	HIGHWAY FUEL ECON.	0.05	0.2	518.2	2.83	17.1
SEQ#17	4 SPD IDLE (NEUT)	121.8	0.01		56.7	
SEQ#17	4 SPD IDLE (2500)	3.9	0.01		71.6	
SEQ#17	4 SPD IDLE (NEUT)	71.4	0.01		52.1	
SEQ#17	4 SPD IDLE (DRIV)	38.5	0.01		85.3	
SEQ#17	FED 2 MODE (30)	0.0	0.00		120.8	
SEQ#17	FED 2 MODE (NEUT)	86.6	0.01		51.6	

FOLLOW UP LANE TEST:

CAT: P FUEL: F  
HC: 25 CO: 0.02 GAIN: 270

8379 78 PLYM 225 FD-225-2-CAE-1

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 306 CO: 6.85 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	2.70	49.5	452.1	1.93	16.5
SEQ#11	50 MPH CRUISE	9.8	0.02	984.4		
SEQ#11	HIGHWAY FUEL ECON.	0.53	7.4	352.8	1.26	24.2
SEQ#11	4 SPD IDLE (NEUT)	237.6	4.95		60.4	
SEQ#11	4 SPD IDLE (2500)	87.0	0.56		461.0	
SEQ#11	4 SPD IDLE (NEUT)	249.0	4.58		61.6	
SEQ#11	4 SPD IDLE (DRIV)	318.7	4.88		86.0	
SEQ#11	FED 2 MODE (30)	184.4	0.68		2603.3	
SEQ#11	FED 2 MODE (NEUT)	252.0	4.61		75.5	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	CH <sub>4</sub>	
8379	78	PLYM	225	FD-225-2-CAE-1	(CON'T)					

COMMENT : ADJUSTED IDLE NEUTRAL 750 RPM, PROPANE GAIN 60  
RPM. USED UNIVERSAL PROPANE METHOD.

SEQ#12	FEDERAL TEST PROC.	1.07	16.5	475.5	1.85	17.6
SEQ#12	50 MPH CRUISE	6.9	0.01	1182.3		
SEQ#12	HIGHWAY FUEL ECON.	0.13	1.3	335.7	1.78	26.2
SEQ#12	4 SPD IDLE (NEUT)	14.1	0.10		33.9	
SEQ#12	4 SPD IDLE (2500)	9.5	0.03		377.1	
SEQ#12	4 SPD IDLE (NEUT)	7.9	0.04		55.9	
SEQ#12	4 SPD IDLE (DRIV)	8.9	0.02		191.9	
SEQ#12	FED 2 MODE (30)	20.0	0.05		2938.6	
SEQ#12	FED 2 MODE (NEUT)	11.5	0.02		101.6	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE CO .5%, HC 100 PPM. IDLE NEUTRAL 750 RPM.

SEQ#13	FEDERAL TEST PROC.	1.51	20.0	480.6	2.13	17.2
SEQ#13	50 MPH CRUISE	8.9	0.00	944.2		
SEQ#13	HIGHWAY FUEL ECON.	0.17	1.4	359.4	2.10	24.5
SEQ#13	4 SPD IDLE (NEUT)	48.0	0.17		28.3	
SEQ#13	4 SPD IDLE (2500)	6.6	0.01		424.6	
SEQ#13	4 SPD IDLE (NEUT)	104.9	0.76		49.9	
SEQ#13	4 SPD IDLE (DRIV)	193.0	0.70		95.9	
SEQ#13	FED 2 MODE (30)	75.1	0.10		2859.7	
SEQ#13	FED 2 MODE (NEUT)	111.5	0.65		65.2	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE NEUTRAL 750 RPM, PROPANE GAIN 900  
RPM.

SEQ#15	FEDERAL TEST PROC.	5.44	14.4	561.2	2.72	14.8
SEQ#15	50 MPH CRUISE	143.0	0.02	1079.6		
SEQ#15	HIGHWAY FUEL ECON.	1.40	2.4	421.7	2.70	20.6
SEQ#15	4 SPD IDLE (NEUT)	72.8	0.00		80.1	
SEQ#15	4 SPD IDLE (2500)	171.7	0.00		431.7	
SEQ#15	4 SPD IDLE (NEUT)	63.2	0.00		78.1	
SEQ#15	4 SPD IDLE (DRIV)	66.2	0.00		200.9	
SEQ#15	FED 2 MODE (30)	290.0	0.02		2415.9	
SEQ#15	FED 2 MODE (NEUT)	89.6	0.00		94.7	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR MAKE CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE				FUEL ECON MPG
			HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	
8379	78 PLYM 225 FD-225-2-CAE-1	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, FUEL FILTER,  
PCV VALVE, PURGE CANISTER FILTER, OIL AND OIL  
FILTER, AIR FILTER, SET TO SPEC.

SEQ#16	FEDERAL TEST PROC.	0.56	4.4	502.9	2.25	17.3
SEQ#16	50 MPH CRUISE	4.3	0.01		562.1	
SEQ#16	HIGHWAY FUEL ECON.	0.07	0.4	358.3	1.88	24.7
SEQ#16	4 SPD IDLE (NEUT)	71.4	0.00		25.2	
SEQ#16	4 SPD IDLE (2500)	9.2	0.01		212.2	
SEQ#16	4 SPD IDLE (NEUT)	50.3	0.00		29.7	
SEQ#16	4 SPD IDLE (DRIV)	33.8	0.01		51.0	
SEQ#16	FED 2 MODE (30)	11.5	0.01		1756.0	
SEQ#16	FED 2 MODE (NEUT)	64.8	0.00		47.9	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 30 CO: 0.02 GAIN: 519

8382 78 FORD 200 F200B1X95 / AB

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 109 CO: 2.03 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	1.45	20.1	480.8	2.02	17.2
SEQ#11	50 MPH CRUISE	22.3	0.01		157.3	
SEQ#11	HIGHWAY FUEL ECON.	0.49	7.7	365.2	1.31	23.4
SEQ#11	4 SPD IDLE (NEUT)	72.4	0.83		30.1	
SEQ#11	4 SPD IDLE (2500)	8.2	0.01		235.0	
SEQ#11	4 SPD IDLE (NEUT)	66.2	1.34		29.3	
SEQ#11	4 SPD IDLE (DRIV)	39.8	0.06		38.4	
SEQ#11	FED 2 MODE (30)	46.7	0.00		180.3	
SEQ#11	FED 2 MODE (NEUT)	69.8	1.58		31.7	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE NEUTRAL 830 RPM, PROPANE GAIN 50 RPM.

SEQ#12	FEDERAL TEST PROC.	1.18	6.4	467.1	2.27	18.5
SEQ#12	50 MPH CRUISE	24.3	0.01		192.4	
SEQ#12	HIGHWAY FUEL ECON.	0.43	5.1	377.5	1.50	22.9
SEQ#12	4 SPD IDLE (NEUT)	164.0	0.00		19.4	
SEQ#12	4 SPD IDLE (2500)	41.7	0.00		107.2	
SEQ#12	4 SPD IDLE (NEUT)	76.7	0.00		22.7	
SEQ#12	4 SPD IDLE (DRIV)	63.2	0.00		43.9	
SEQ#12	FED 2 MODE (30)	54.3	0.00		198.8	
SEQ#12	FED 2 MODE (NEUT)	91.3	0.00		23.8	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8382	78	FORD	200	F200B1X95 / AB	(CON'T)					

COMMENT : ADJUSTED IDLE DRIVE 650 RPM, CO .02%, HC 65 PPM.

SEQ#15	FEDERAL TEST PROC.	1.17	7.8	481.3	2.48	17.8
SEQ#15	50 MPH CRUISE	24.0	0.01		243.6	
SEQ#15	HIGHWAY FUEL ECON.	0.49	7.0	387.2	1.70	22.2
SEQ#15	4 SPD IDLE (NEUT)	141.7	0.00		29.2	
SEQ#15	4 SPD IDLE (2500)	119.4	0.00		62.3	
SEQ#15	4 SPD IDLE (NEUT)	42.7	0.00		29.4	
SEQ#15	4 SPD IDLE (DRIV)	114.5	0.00		58.6	
SEQ#15	FED 2 MODE (30)	51.6	0.00		224.2	
SEQ#15	FED 2 MODE (NEUT)	68.5	0.00		26.7	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 64 CO: 0.02 GAIN: 250

8383 78 FORD 200 F200B1X95 / AB

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 244 CO: 5.65 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	1.61	29.2	468.6	2.18	17.1
SEQ#11	50 MPH CRUISE	18.1	0.00		172.1	
SEQ#11	HIGHWAY FUEL ECON.	0.25	2.1	392.2	1.57	22.4
SEQ#11	4 SPD IDLE (NEUT)	144.7	2.01		34.3	
SEQ#11	4 SPD IDLE (2500)	11.5	0.01		363.9	
SEQ#11	4 SPD IDLE (NEUT)	150.4	2.95		33.7	
SEQ#11	4 SPD IDLE (DRIV)	207.1	3.35		38.2	
SEQ#11	FED 2 MODE (30)	98.9	0.00		102.4	
SEQ#11	FED 2 MODE (NEUT)	162.7	3.15		30.5	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE SPEED 850 NEUTRAL, PROPANE GAIN 50 RPM.

SEQ#12	FEDERAL TEST PROC.	0.92	7.0	503.6	2.24	17.2
SEQ#12	50 MPH CRUISE	13.5	0.00		211.1	
SEQ#12	HIGHWAY FUEL ECON.	0.19	0.8	391.2	1.69	22.6
SEQ#12	4 SPD IDLE (NEUT)	13.5	0.00		43.3	
SEQ#12	4 SPD IDLE (2500)	36.8	0.00		48.6	
SEQ#12	4 SPD IDLE (NEUT)	3.0	0.00		50.7	
SEQ#12	4 SPD IDLE (DRIV)	4.3	0.00		149.8	
SEQ#12	FED 2 MODE (30)	52.0	0.00		131.3	
SEQ#12	FED 2 MODE (NEUT)	6.2	0.00		49.1	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NOx <sub>c</sub>	CH <sub>4</sub>	
8383	78	FORD	200	F200B1X95 / AB	(CON'T)					

COMMENT : ADJUSTED IDLE DRIVE 650 RPM, CO .05%, HC 70 PPM.

SEQ#15 FEDERAL TEST PROC.	0.87	5.3	506.4	2.03	17.2
SEQ#15 50 MPH CRUISE	14.1	0.01		195.0	
SEQ#15 HIGHWAY FUEL ECON.	0.19	1.2	407.1	1.57	21.7
SEQ#15 4 SPD IDLE (NEUT)	16.7	0.00		47.7	
SEQ#15 4 SPD IDLE (2500)	47.4	0.01		46.0	
SEQ#15 4 SPD IDLE (NEUT)	5.9	0.00		57.5	
SEQ#15 4 SPD IDLE (DRIV)	5.9	0.00		167.5	
SEQ#15 FED 2 MODE (30)	52.0	0.00		107.2	
SEQ#15 FED 2 MODE (NEUT)	9.5	0.00		53.7	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 26 CO: 0.04 GAIN: 80

8384 78 FORD 351 F351WC2X132LB

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 446 CO: 10.11 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	10.12	131.7	539.7	1.71	11.4
SEQ#11 50 MPH CRUISE	29.6	0.01		350.8	
SEQ#11 HIGHWAY FUEL ECON.	1.18	11.0	409.1	1.50	20.6
SEQ#11 4 SPD IDLE (NEUT)	585.0	10.41		14.4	
SEQ#11 4 SPD IDLE (2500)	22.3	0.03		105.7	
SEQ#11 4 SPD IDLE (NEUT)	553.5	10.78		7.9	
SEQ#11 4 SPD IDLE (DRIV)	619.0	11.48		8.8	
SEQ#11 FED 2 MODE (30)	229.2	0.39		229.5	
SEQ#11 FED 2 MODE (NEUT)	716.9	11.05		12.6	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 600 RPM, PROPANE GAIN 50 RPM.

SEQ#12 FEDERAL TEST PROC.	1.52	11.0	649.9	2.20	13.2
SEQ#12 50 MPH CRUISE	30.9	0.01		417.5	
SEQ#12 HIGHWAY FUEL ECON.	0.24	0.7	436.3	1.61	20.3
SEQ#12 4 SPD IDLE (NEUT)	10.8	0.01		82.5	
SEQ#12 4 SPD IDLE (2500)	32.2	0.03		124.9	
SEQ#12 4 SPD IDLE (NEUT)	0.0	0.02		101.1	
SEQ#12 4 SPD IDLE (DRIV)	0.0	0.01		247.7	
SEQ#12 FED 2 MODE (30)	49.3	0.01		286.1	
SEQ#12 FED 2 MODE (NEUT)	16.4	0.00		91.8	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NOx <sub>c</sub>	CH <sub>4</sub>	
8384	78	FORD	351	F351WC2X132LB	(CON'T)					

COMMENT : IDLE DRIVE 600 RPM, CO .01%, HC 50 PPM.

SEQ#15 FEDERAL TEST PROC.	0.92	8.3	667.9	2.40	13.0
SEQ#15 50 MPH CRUISE	22.0	0.01	296.2		
SEQ#15 HIGHWAY FUEL ECON.	0.24	0.8	450.7	1.78	19.6
SEQ#15 4 SPD IDLE (NEUT)	10.5	0.00		59.5	
SEQ#15 4 SPD IDLE (2500)	5.3	0.02		78.4	
SEQ#15 4 SPD IDLE (NEUT)	0.0	0.01		61.5	
SEQ#15 4 SPD IDLE (DRIV)	0.0	0.00		168.3	
SEQ#15 FED 2 MODE (30)	32.9	0.00		179.1	
SEQ#15 FED 2 MODE (NEUT)	13.5	0.01		59.4	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, OIL AND OIL FILTER, PCV VALVE AND FILTER, FUEL FILTER, AIR FILTER ELEMENT. ADJUSTED TO SPEC.

SEQ#16 FEDERAL TEST PROC.	1.08	7.4	653.2	2.33	13.3
SEQ#16 50 MPH CRUISE	26.9	0.01	282.0		
SEQ#16 HIGHWAY FUEL ECON.	0.25	0.4	436.0	1.90	20.3
SEQ#16 4 SPD IDLE (NEUT)	15.4	0.00		60.8	
SEQ#16 4 SPD IDLE (2500)	10.8	0.02		77.4	
SEQ#16 4 SPD IDLE (NEUT)	0.3	0.01		63.0	
SEQ#16 4 SPD IDLE (DRIV)	1.3	0.01		158.5	
SEQ#16 FED 2 MODE (30)	40.4	0.00		168.8	
SEQ#16 FED 2 MODE (NEUT)	13.5	0.00		58.9	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 54 CO: 0.03 GAIN: 310

8387 78 CAD1 425 860V4UEBFC8BFV

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 331 CO: 4.36 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	2.69	53.3	632.1	2.18	12.3
SEQ#11 50 MPH CRUISE	8.2	0.01	620.7		
SEQ#11 HIGHWAY FUEL ECON.	0.29	3.7	453.3	2.49	19.3
SEQ#11 4 SPD IDLE (NEUT)	414.8	3.10		51.2	
SEQ#11 4 SPD IDLE (2500)	0.3	0.01		232.2	
SEQ#11 4 SPD IDLE (NEUT)	379.3	4.50		57.7	
SEQ#11 4 SPD IDLE (DRIV)	311.3	4.24		162.1	
SEQ#11 FED 2 MODE (30)	154.7	1.29		338.7	
SEQ#11 FED 2 MODE (NEUT)	390.4	3.92		53.2	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8387	78	CADI	425	860V4UEBFC8BFV	(CON'T)					

COMMENT : IDLE DRIVE 600 RPM, PROPANE GAIN 50 RPM.

SEQ#12	FEDERAL TEST PROC.	1.22	15.0	649.5	2.14	13.1
SEQ#12	50 MPH CRUISE	7.9	0.00	631.8		
SEQ#12	HIGHWAY FUEL ECON.	0.10	0.7	458.7	2.50	19.3
SEQ#12	4 SPD IDLE (NEUT)	3.6	0.00		65.4	
SEQ#12	4 SPD IDLE (2500)	0.0	0.01		204.0	
SEQ#12	4 SPD IDLE (NEUT)	49.7	0.14		25.4	
SEQ#12	4 SPD IDLE (DRIV)	29.6	0.35		60.4	
SEQ#12	FED 2 MODE (30)	13.8	0.01		382.1	
SEQ#12	FED 2 MODE (NEUT)	77.7	0.07		12.3	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 600 RPM, CO .4%, HC 800 PPM.

SEQ#13	FEDERAL TEST PROC.	0.54	4.9	649.1	2.38	13.5
SEQ#13	50 MPH CRUISE	3.6	0.00	648.0		
SEQ#13	HIGHWAY FUEL ECON.	0.06	0.1	460.7	2.58	19.3
SEQ#13	4 SPD IDLE (NEUT)	3.0	0.00		77.8	
SEQ#13	4 SPD IDLE (2500)	0.0	0.01		207.3	
SEQ#13	4 SPD IDLE (NEUT)	14.8	0.00		81.0	
SEQ#13	4 SPD IDLE (DRIV)	2.0	0.00		189.6	
SEQ#13	FED 2 MODE (30)	5.9	0.01		405.4	
SEQ#13	FED 2 MODE (NEUT)	39.8	0.00		75.3	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 600 RPM, CO .1%, HC 85 PPM,  
PROPANE GAIN 630 RPM.

SEQ#15	FEDERAL TEST PROC.	0.68	7.2	661.2	2.36	13.2
SEQ#15	50 MPH CRUISE	3.6	0.00	663.8		
SEQ#15	HIGHWAY FUEL ECON.	0.06	0.1	477.1	2.85	18.6
SEQ#15	4 SPD IDLE (NEUT)	6.2	0.00		77.1	
SEQ#15	4 SPD IDLE (2500)	0.0	0.01		211.9	
SEQ#15	4 SPD IDLE (NEUT)	15.1	0.01		79.1	
SEQ#15	4 SPD IDLE (DRIV)	2.3	0.01		205.2	
SEQ#15	FED 2 MODE (30)	16.1	0.02		425.6	
SEQ#15	FED 2 MODE (NEUT)	38.8	0.00		76.9	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 25 CO: 0.03 GAIN: 100

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8388	78	CHEV	305	810Y2BCCH	8BCV					

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 497 CO: 7.84 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	4.93	90.7	451.8	2.00	14.5
SEQ#11	50 MPH CRUISE	24.3	0.06	844.2		
SEQ#11	HIGHWAY FUEL ECON.	0.64	9.0	383.3	2.60	22.2
SEQ#11	4 SPD IDLE (NEUT)	492.8	6.78		13.8	
SEQ#11	4 SPD IDLE (2500)	62.9	0.02		301.3	
SEQ#11	4 SPD IDLE (NEUT)	454.9	7.47		22.1	
SEQ#11	4 SPD IDLE (DRIV)	522.0	8.13		17.2	
SEQ#11	FED 2 MODE (30)	213.1	1.51		657.1	
SEQ#11	FED 2 MODE (NEUT)	441.5	6.88		38.3	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 500 RPM, PROPANE GAIN 50 RPM.

SEQ#12	FEDERAL TEST PROC.	1.34	15.4	512.4	2.38	16.4
SEQ#12	50 MPH CRUISE	17.4	0.01	1139.7		
SEQ#12	HIGHWAY FUEL ECON.	0.20	2.0	374.5	3.10	23.5
SEQ#12	4 SPD IDLE (NEUT)	12.8	0.01		74.2	
SEQ#12	4 SPD IDLE (2500)	53.6	0.01		311.4	
SEQ#12	4 SPD IDLE (NEUT)	6.2	0.01		89.5	
SEQ#12	4 SPD IDLE (DRIV)	3.3	0.01		275.0	
SEQ#12	FED 2 MODE (30)	23.6	0.01		669.2	
SEQ#12	FED 2 MODE (NEUT)	22.0	0.01		92.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 500 RPM, CO .4%.

SEQ#13	FEDERAL TEST PROC.	2.21	20.7	491.0	2.36	16.7
SEQ#13	50 MPH CRUISE	14.1	0.01	1082.1		
SEQ#13	HIGHWAY FUEL ECON.	0.24	2.4	377.9	3.05	23.2
SEQ#13	4 SPD IDLE (NEUT)	3.0	0.01		77.5	
SEQ#13	4 SPD IDLE (2500)	54.3	0.01		317.4	
SEQ#13	4 SPD IDLE (NEUT)	70.8	0.23		40.9	
SEQ#13	4 SPD IDLE (DRIV)	265.0	0.48		117.5	
SEQ#13	FED 2 MODE (30)	27.3	0.01		843.1	
SEQ#13	FED 2 MODE (NEUT)	9.5	0.01		67.2	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8388	78	CHEV	305	810Y2BCCH 8BCV	(CON'T)					

COMMENT : IDLE DRIVE 500 RPM.

SEQ#15 FEDERAL TEST PROC.	1.61	14.1	503.0	2.46	16.7
SEQ#15 50 MPH CRUISE	14.1	0.01	1044.6		
SEQ#15 HIGHWAY FUEL ECON.	0.18	1.8	385.6	3.32	22.8
SEQ#15 4 SPD IDLE (NEUT)	9.2	0.01		78.2	
SEQ#15 4 SPD IDLE (2500)	47.7	0.02		305.3	
SEQ#15 4 SPD IDLE (NEUT)	8.5	0.01		94.9	
SEQ#15 4 SPD IDLE (DRIV)	4.3	0.01		234.5	
SEQ#15 FED 2 MODE (30)	18.1	0.01		776.4	
SEQ#15 FED 2 MODE (NEUT)	12.5	0.01		84.9	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, OIL AND OIL FILTER, PCV VALVE AND FILTER, FUEL AND PURGE CANISTER FILTERS, VALVE COVER GASKETS. ADJUSTED VALVES AND SET TO SPEC.

SEQ#16 FEDERAL TEST PROC.	1.83	17.2	497.5	2.15	16.7
SEQ#16 50 MPH CRUISE	17.7	0.01	885.6		
SEQ#16 HIGHWAY FUEL ECON.	0.17	1.7	388.5	2.86	22.7
SEQ#16 4 SPD IDLE (NEUT)	13.1	0.00		71.2	
SEQ#16 4 SPD IDLE (2500)	13.5	0.01		262.8	
SEQ#16 4 SPD IDLE (NEUT)	7.5	0.00		80.8	
SEQ#16 4 SPD IDLE (DRIV)	3.3	0.00		220.4	
SEQ#16 FED 2 MODE (30)	25.3	0.01		656.1	
SEQ#16 FED 2 MODE (NEUT)	16.7	0.00		74.7	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 262 CO: 0.89 GAIN: 30

8392 78 OLDS 260 830H2U8DP08BDV

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 318 CO: 3.79 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	1.31	17.5	477.6	1.89	17.4
SEQ#11 50 MPH CRUISE	16.1	0.00	606.6		
SEQ#11 HIGHWAY FUEL ECON.	0.19	1.4	367.9	2.45	23.9
SEQ#11 4 SPD IDLE (NEUT)	199.1	1.55		30.2	
SEQ#11 4 SPD IDLE (2500)	28.9	0.01		113.9	
SEQ#11 4 SPD IDLE (NEUT)	180.7	1.57		29.8	
SEQ#11 4 SPD IDLE (DRIV)	156.3	1.73		53.8	
SEQ#11 FED 2 MODE (30)	27.9	0.02		434.7	
SEQ#11 FED 2 MODE (NEUT)	198.1	1.75		40.1	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8392	78	OLDS	260	830H2U8DP08BDV	(CON'T)					

COMMENT : ADJUSTED IDLE DRIVE 500 RPM, PROPANE GAIN 50 RPM.

SEQ#12 FEDERAL TEST PROC.	0.90	6.8	506.1	2.09	17.1
SEQ#12 50 MPH CRUISE	15.4	0.00	620.7		
SEQ#12 HIGHWAY FUEL ECON.	0.10	0.3	379.1	2.63	23.4
SEQ#12 4 SPD IDLE (NEUT)	5.9	0.00		43.2	
SEQ#12 4 SPD IDLE (2500)	9.5	0.00		118.3	
SEQ#12 4 SPD IDLE (NEUT)	5.3	0.00		41.3	
SEQ#12 4 SPD IDLE (DRIV)	1.0	0.00		90.8	
SEQ#12 FED 2 MODE (30)	14.1	0.01		392.2	
SEQ#12 FED 2 MODE (NEUT)	19.7	0.01		34.4	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 500 RPM, CO .15%, HC 280 PPM,  
PROPANE GAIN 40 RPM.

SEQ#15 FEDERAL TEST PROC.	0.54	3.2	492.6	2.04	17.8
SEQ#15 50 MPH CRUISE	11.5	0.00	654.1		
SEQ#15 HIGHWAY FUEL ECON.	0.09	0.4	367.1	2.61	24.1
SEQ#15 4 SPD IDLE (NEUT)	6.2	0.00		30.6	
SEQ#15 4 SPD IDLE (2500)	8.5	0.00		111.1	
SEQ#15 4 SPD IDLE (NEUT)	5.3	0.00		34.7	
SEQ#15 4 SPD IDLE (DRIV)	2.6	0.00		56.5	
SEQ#15 FED 2 MODE (30)	12.8	0.01		428.6	
SEQ#15 FED 2 MODE (NEUT)	12.8	0.00		34.7	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 137 CO: 0.09 GAIN: 105

8393 78 OLDS 260 830H2U8DP08BDV

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 237 CO: 2.94 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	2.63	53.7	457.5	1.13	16.1
SEQ#11 50 MPH CRUISE	52.3	0.16	410.4		
SEQ#11 HIGHWAY FUEL ECON.	0.71	16.9	361.8	1.70	22.7
SEQ#11 4 SPD IDLE (NEUT)	158.3	1.53		35.8	
SEQ#11 4 SPD IDLE (2500)	23.0	0.01		142.9	
SEQ#11 4 SPD IDLE (NEUT)	163.3	1.66		34.5	
SEQ#11 4 SPD IDLE (DRIV)	170.7	1.96		56.2	
SEQ#11 FED 2 MODE (30)	30.9	0.02		216.3	
SEQ#11 FED 2 MODE (NEUT)	170.7	2.15		26.4	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8393	78	OLDS	260	830H2U8DPO8BDV	(CON'T)					

COMMENT : ADJUSTED IDLE DRIVE 500 RPM, PROPANE GAIN 50 RPM.  
USED UNIVERSAL CO METHOD.

SEQ#12	FEDERAL TEST PROC.	1.32	34.4	482.2	1.10	16.4
SEQ#12	50 MPH CRUISE	44.4	0.19		328.6	
SEQ#12	HIGHWAY FUEL ECON.	0.69	20.0	366.5	1.65	22.2
SEQ#12	4 SPD IDLE (NEUT)	14.8	0.00		41.6	
SEQ#12	4 SPD IDLE (2500)	17.4	0.01		146.5	
SEQ#12	4 SPD IDLE (NEUT)	11.2	0.00		43.1	
SEQ#12	4 SPD IDLE (DRIV)	7.2	0.00		98.3	
SEQ#12	FED 2 MODE (30)	16.7	0.02		221.4	
SEQ#12	FED 2 MODE (NEUT)	21.3	0.00		38.2	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE SPEED AND MIXTURE TO SPEC, PROPANE ENRICHED SPEED 560-580 IN DRIVE, IDLE SPEED 500 DRIVE. TIMING WAS RESET FROM 25 TO 21 AS RECOMMENDED BY MANUFACTURER.

SEQ#15	FEDERAL TEST PROC.	1.43	46.9	517.3	0.61	14.9
SEQ#15	50 MPH CRUISE	51.6	0.50		144.4	
SEQ#15	HIGHWAY FUEL ECON.	1.29	44.5	394.7	0.69	18.9
SEQ#15	4 SPD IDLE (NEUT)	4.6	0.00		25.4	
SEQ#15	4 SPD IDLE (2500)	0.0	0.01		57.9	
SEQ#15	4 SPD IDLE (NEUT)	5.3	0.00		31.1	
SEQ#15	4 SPD IDLE (DRIV)	0.0	0.00		42.1	
SEQ#15	FED 2 MODE (30)	54.9	0.60		70.5	
SEQ#15	FED 2 MODE (NEUT)	12.1	0.00		24.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR, FUEL, OIL AND CRANKCASE BREATHER FILTERS., CHARCOAL CANISTER FILTER, PCV VALVE. ADJUSTED IDLE SPEED AND MIXTURE.

SEQ#16	FEDERAL TEST PROC.	1.41	51.0	503.8	0.50	15.1
SEQ#16	50 MPH CRUISE	43.1	0.39		122.6	
SEQ#16	HIGHWAY FUEL ECON.	1.09	37.4	374.8	0.59	20.3
SEQ#16	4 SPD IDLE (NEUT)	11.2	0.00		18.6	
SEQ#16	4 SPD IDLE (2500)	3.9	0.00		84.6	
SEQ#16	4 SPD IDLE (NEUT)	7.9	0.00		21.3	
SEQ#16	4 SPD IDLE (DRIV)	0.7	0.00		27.3	
SEQ#16	FED 2 MODE (30)	36.5	0.28		48.9	
SEQ#16	FED 2 MODE (NEUT)	17.4	0.00		20.3	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 36 CO: 0.07 GAIN: 205

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8398	78	PONT	301	820S4BFPB	8BFV					

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 481 CO: 5.23 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	2.26	37.9	526.1	2.43	15.0
SEQ#11	50 MPH CRUISE	17.7	0.01	796.6		
SEQ#11	HIGHWAY FUEL ECON.	0.32	2.7	394.8	3.43	22.2
SEQ#11	4 SPD IDLE (NEUT)	268.8	3.81		50.2	
SEQ#11	4 SPD IDLE (2500)	66.8	0.33		178.8	
SEQ#11	4 SPD IDLE (NEUT)	287.7	3.59		53.3	
SEQ#11	4 SPD IDLE (DRIV)	280.9	4.16		80.5	
SEQ#11	FED 2 MODE (30)	96.9	0.05		514.6	
SEQ#11	FED 2 MODE (NEUT)	273.9	3.46		59.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 550 RPM, PROPANE GAIN 40 RPM.  
USED UNIVERSAL PROPANE METHOD.

SEQ#12	FEDERAL TEST PROC.	1.58	11.3	521.2	2.62	16.3
SEQ#12	50 MPH CRUISE	20.4	0.00	818.9		
SEQ#12	HIGHWAY FUEL ECON.	0.16	0.6	400.5	3.55	22.1
SEQ#12	4 SPD IDLE (NEUT)	372.7	0.29		27.0	
SEQ#12	4 SPD IDLE (2500)	16.4	0.02		178.6	
SEQ#12	4 SPD IDLE (NEUT)	260.6	0.17		22.3	
SEQ#12	4 SPD IDLE (DRIV)	160.0	0.35		75.1	
SEQ#12	FED 2 MODE (30)	25.3	0.01		474.1	
SEQ#12	FED 2 MODE (NEUT)	51.3	0.01		64.9	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 550 RPM, PROPANE GAIN 590 RPM.

SEQ#15	FEDERAL TEST PROC.	0.96	8.5	551.3	2.56	15.6
SEQ#15	50 MPH CRUISE	16.1	0.01	697.5		
SEQ#15	HIGHWAY FUEL ECON.	0.13	0.5	384.2	3.40	23.0
SEQ#15	4 SPD IDLE (NEUT)	10.2	0.01		71.3	
SEQ#15	4 SPD IDLE (2500)	5.9	0.02		175.0	
SEQ#15	4 SPD IDLE (NEUT)	16.7	0.01		75.6	
SEQ#15	4 SPD IDLE (DRIV)	3.0	0.01		134.2	
SEQ#15	FED 2 MODE (30)	22.3	0.01		447.8	
SEQ#15	FED 2 MODE (NEUT)	57.9	0.01		67.7	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
8398	78	PONT	301	820S4BFPB	8BFV	(CON'T)				

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR AND FUEL FILTER, PCV VALVE AND BREATHER FILTERS, OIL AND OIL FILTER CARBON CANISTER FILTER, ADJUSTED TIMING, IDLE DRIVE AND IDLE MIXTURE.

SEQ#16 FEDERAL TEST PROC.	1.53	13.5	541.5	2.50	15.6
SEQ#16 50 MPH CRUISE	23.3	0.01	781.4		
SEQ#16 HIGHWAY FUEL ECON.	0.26	2.4	391.2	3.54	22.4
SEQ#16 4 SPD IDLE (NEUT)	27.3	0.00		69.4	
SEQ#16 4 SPD IDLE (2500)	8.5	0.01		191.4	
SEQ#16 4 SPD IDLE (NEUT)	32.9	0.00		82.9	
SEQ#16 4 SPD IDLE (DRIV)	10.2	0.00		141.9	
SEQ#16 FED 2 MODE (30)	77.4	0.23		280.0	
SEQ#16 FED 2 MODE (NEUT)	95.2	0.01		68.5	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 51 CO: 0.00 GAIN: 30

7402 77 DODG 360 FD-360-2-C

## PRELIMINARY LANE TEST:

CAT: F FUEL: P  
HC: 172 CO: 3.29 GAIN: 13

SEQ#11 FEDERAL TEST PROC.	7.37	52.7	570.1	4.63	13.1
SEQ#11 50 MPH CRUISE	79.0	0.13	1803.5		
SEQ#11 HIGHWAY FUEL ECON.	2.35	9.6	412.0	6.79	20.4
SEQ#11 4 SPD IDLE (NEUT)	1600.3	2.25		49.9	
SEQ#11 4 SPD IDLE (2500)	1401.2	0.19		327.5	
SEQ#11 4 SPD IDLE (NEUT)	1340.9	2.14		53.7	
SEQ#11 4 SPD IDLE (DRIV)	1469.5	1.70		69.3	
SEQ#11 FED 2 MODE (30)	1143.4	0.17		1057.1	
SEQ#11 FED 2 MODE (NEUT)	1211.9	2.42		53.4	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, FUEL, AIR, OIL FILTERS, EGR VALVE, VACUUM DELAY SOLENOID, HEATER HOSE, PCV VALVE. ADJUSTED TIMING & IDLE SPEED TO SPEC. REPLACED IGNITION VALVE, UNPLUGGED ASPIRATOR HOSE, ADJUSTED IDLE MIXTURE.

SEQ#16 FEDERAL TEST PROC.	2.19	24.8	633.9	3.62	13.1
SEQ#16 50 MPH CRUISE	8.2	0.14	913.9		
SEQ#16 HIGHWAY FUEL ECON.	1.33	6.2	421.7	9.15	20.4
SEQ#16 4 SPD IDLE (NEUT)	255.4	0.21		42.1	
SEQ#16 4 SPD IDLE (2500)	8.9	0.09		203.2	
SEQ#16 4 SPD IDLE (NEUT)	150.0	0.16		42.5	
SEQ#16 4 SPD IDLE (DRIV)	74.7	0.17		64.2	
SEQ#16 FED 2 MODE (30)	17.1	0.10		341.7	
SEQ#16 FED 2 MODE (NEUT)	236.6	0.21		41.1	

## FOLLOW UP LANE TEST:

CAT: F FUEL: P  
HC: 1490 CO: 0.16 GAIN: 140

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> <sub>c</sub>	CH <sub>4</sub>	
7404	77	MERC	302	F302D1CV5						

PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 348 CO: 2.33 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	5.33	73.0	521.6	2.22	13.6
SEQ#11 50 MPH CRUISE	195.4	1.26		906.8	
SEQ#11 HIGHWAY FUEL ECON.	2.22	30.4	395.7	3.06	19.7
SEQ#11 4 SPD IDLE (NEUT)	348.4	2.04		72.2	
SEQ#11 4 SPD IDLE (2500)	234.6	1.48		169.6	
SEQ#11 4 SPD IDLE (NEUT)	368.3	2.41		75.3	
SEQ#11 4 SPD IDLE (DRIV)	381.6	3.03		153.9	
SEQ#11 FED 2 MODE (30)	252.3	0.98		470.1	
SEQ#11 FED 2 MODE (NEUT)	344.0	2.37		71.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE SPEED 980 RPMS NEUTRAL, PROPANE GAIN 65 RPMs.

SEQ#12 FEDERAL TEST PROC.	3.61	50.4	540.0	2.06	14.1
SEQ#12 50 MPH CRUISE	108.5	0.70		437.7	
SEQ#12 HIGHWAY FUEL ECON.	2.01	30.7	389.5	2.96	20.0
SEQ#12 4 SPD IDLE (NEUT)	59.6	0.01		64.1	
SEQ#12 4 SPD IDLE (2500)	112.8	0.40		94.4	
SEQ#12 4 SPD IDLE (NEUT)	31.5	0.01		71.5	
SEQ#12 4 SPD IDLE (DRIV)	26.0	0.01		190.1	
SEQ#12 FED 2 MODE (30)	53.3	0.08		240.9	
SEQ#12 FED 2 MODE (NEUT)	48.7	0.01		68.2	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE MIXTURE AND SPEED WERE WITHIN EMISSION DECAL CRITERIA FOR PROPANE ENRICHMENT RPM/RESET READINGS SO NO ADJUSTMENTS WERE NECESSARY.

SEQ#15 FEDERAL TEST PROC.	2.89	38.1	548.5	2.33	14.4
SEQ#15 50 MPH CRUISE	87.6	0.60		536.8	
SEQ#15 HIGHWAY FUEL ECON.	1.71	24.9	384.6	2.87	20.7
SEQ#15 4 SPD IDLE (NEUT)	58.2	0.00		71.9	
SEQ#15 4 SPD IDLE (2500)	92.6	0.37		104.7	
SEQ#15 4 SPD IDLE (NEUT)	20.4	0.00		82.2	
SEQ#15 4 SPD IDLE (DRIV)	18.1	0.00		291.1	
SEQ#15 FED 2 MODE (30)	33.5	0.05		246.7	
SEQ#15 FED 2 MODE (NEUT)	37.1	0.00		73.3	

FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 83 CO: 0.06 GAIN: 150

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE				FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	
7404	77	MERC	302 F302D1CV5	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED FUEL, OIL AND CRANKCASE BREATHER FILTERS, SPARK PLUGS, PCV VALVE AND ENGINE OIL. ADDITIONAL PARTS INCLUDED PCV FRESH AIR HOSE AND FITTING BETWEEN HOSE AND BREATHER ELEMENT.

SEQ#16 FEDERAL TEST PROC.	2.93	41.8	550.1	2.23	14.2
SEQ#16 50 MPH CRUISE	97.6	0.67	702.6		
SEQ#16 HIGHWAY FUEL ECON.	1.74	25.8	393.3	3.15	
SEQ#16 4 SPD IDLE (NEUT)	69.1	0.00		104.4	
SEQ#16 4 SPD IDLE (2500)	138.0	0.45		113.9	
SEQ#16 4 SPD IDLE (NEUT)	26.9	0.00		109.3	
SEQ#16 4 SPD IDLE (DRIV)	13.5	0.00		417.5	
SEQ#16 FED 2 MODE (30)	62.2	0.09		312.4	
SEQ#16 FED 2 MODE (NEUT)	50.0	0.00		96.5	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 117 CO: 0.04 GAIN: 120

7405 77 MERC 460 F460B2CV4

PRELIMINARY LANE TEST:  
CAT: P FUEL: P  
HC: 1065 CO: 0.06 GAIN: 160

SEQ#11 FEDERAL TEST PROC.	6.26	23.7	902.2	1.38	9.3
SEQ#11 50 MPH CRUISE	8.9	0.12		246.7	
SEQ#11 HIGHWAY FUEL ECON.	0.68	5.4	600.1	1.81	
SEQ#11 4 SPD IDLE (NEUT)	1360.8	0.05		54.8	
SEQ#11 4 SPD IDLE (2500)	190.0	0.07		105.7	
SEQ#11 4 SPD IDLE (NEUT)	955.4	0.05		48.1	
SEQ#11 4 SPD IDLE (DRIV)	705.5	0.07		77.3	
SEQ#11 FED 2 MODE (30)	273.7	0.09		182.9	
SEQ#11 FED 2 MODE (NEUT)	1194.5	0.06		49.7	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 650 RPMs, CO .5%, HC 500 PPM,  
IDLE NEUTRAL 770 RPMs, CO .15%, HC 800 PPM. PROPANE  
GAIN 110 RPMs.

SEQ#15 FEDERAL TEST PROC.	5.40	24.2	991.5	1.27	8.5
SEQ#15 50 MPH CRUISE	4.9	0.07		134.4	
SEQ#15 HIGHWAY FUEL ECON.	0.40	5.8	685.0	0.98	
SEQ#15 4 SPD IDLE (NEUT)	1271.3	0.05		59.4	
SEQ#15 4 SPD IDLE (2500)	66.8	0.06		70.8	
SEQ#15 4 SPD IDLE (NEUT)	735.3	0.06		34.2	
SEQ#15 4 SPD IDLE (DRIV)	519.7	0.08		126.7	
SEQ#15 FED 2 MODE (30)	121.1	0.16		88.2	
SEQ#15 FED 2 MODE (NEUT)	1058.9	0.06		53.0	

NO FOLLOW UP LANE TEST DONE

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
7405	77	MERC	460	F460B2CV4	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED AIR, FUEL, OIL, AND CRANKCASE BREather FILTER, SPARK PLUGS, PCV VALVE, AND ENGINE OIL. IDLE SPEED AND TIMING WERE CHECKED.

SEQ#16	FEDERAL TEST PROC.	6.68	19.5	991.1	1.33	8.5
SEQ#16	50 MPH CRUISE	6.2	0.06		158.8	
SEQ#16	HIGHWAY FUEL ECON.	0.98	4.7	587.7	1.79	14.8
SEQ#16	4 SPD IDLE (NEUT)	1566.5	0.05		69.6	
SEQ#16	4 SPD IDLE (2500)	304.4	0.09		102.9	
SEQ#16	4 SPD IDLE (NEUT)	1096.8	0.06		54.6	
SEQ#16	4 SPD IDLE (DRIV)	675.8	0.06		156.5	
SEQ#16	FED 2 MODE (30)	317.6	0.11		221.4	
SEQ#16	FED 2 MODE (NEUT)	1213.6	0.06		57.4	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 1104 CO: 0.06 GAIN: 200

7406 77 BUIC 350 730M4U

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 464 CO: 5.28 GAIN: 10

SEQ#11	FEDERAL TEST PROC.	3.34	43.1	553.8	1.43	14.0
SEQ#11	50 MPH CRUISE	29.2	0.00		403.4	
SEQ#11	HIGHWAY FUEL ECON.	0.35	2.4	417.1	1.72	21.0
SEQ#11	4 SPD IDLE (NEUT)	573.7	3.50		29.3	
SEQ#11	4 SPD IDLE (2500)	30.9	0.00		175.2	
SEQ#11	4 SPD IDLE (NEUT)	490.6	2.96		35.1	
SEQ#11	4 SPD IDLE (DRIV)	370.5	4.78		37.7	
SEQ#11	FED 2 MODE (30)	38.1	0.00		377.1	
SEQ#11	FED 2 MODE (NEUT)	497.3	3.28		33.5	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE TO 550 RPM, IDLE NEUTRAL TO 680 RPM, CO .4%, HC 850 PPM. USED UNIVERSAL METHOD.

SEQ#13	FEDERAL TEST PROC.	2.21	19.6	575.8	1.48	14.5
SEQ#13	50 MPH CRUISE	5.9	0.00		367.0	
SEQ#13	HIGHWAY FUEL ECON.	0.16	0.6	403.1	1.53	21.9
SEQ#13	4 SPD IDLE (NEUT)	2.3	0.00		39.9	
SEQ#13	4 SPD IDLE (2500)	0.3	0.00		159.8	
SEQ#13	4 SPD IDLE (NEUT)	175.7	0.09		20.1	
SEQ#13	4 SPD IDLE (DRIV)	214.4	0.29		35.1	
SEQ#13	FED 2 MODE (30)	9.5	0.00		326.5	
SEQ#13	FED 2 MODE (NEUT)	348.4	0.09		11.9	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	CH <sub>4</sub>	
7406	77	BUIC	350	730M4U	(CON'T)					

COMMENT : ADJUSTED IDLE DRIVE TO 550 RPM, CO .05%, HC 130 PPM, IDLE NEUTRAL TO 680 RPM, CO .06%, HC 250 PPM, PROPANE GAIN 120 RPM.

SEQ#15 FEDERAL TEST PROC.	1.19	13.0	595.5	1.62	14.3
SEQ#15 50 MPH CRUISE	4.9	0.01		248.7	
SEQ#15 HIGHWAY FUEL ECON.	0.07	0.2	424.1	1.83	20.9
SEQ#15 4 SPD IDLE (NEUT)	7.9	0.01		26.3	
SEQ#15 4 SPD IDLE (2500)	6.2	0.01		103.1	
SEQ#15 4 SPD IDLE (NEUT)	16.1	0.01		28.4	
SEQ#15 4 SPD IDLE (DRIV)	7.2	0.01		45.9	
SEQ#15 FED 2 MODE (30)	5.3	0.01		203.7	
SEQ#15 FED 2 MODE (NEUT)	27.9	0.00		29.1	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 20 CO: 0.01 GAIN: 120

7407 77 CAD1 425 760V4U

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 528 CO: 6.19 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	3.64	62.2	604.3	2.97	12.4
SEQ#11 50 MPH CRUISE	30.9	0.09		435.7	
SEQ#11 HIGHWAY FUEL ECON.	0.76	8.1	451.0	2.54	19.0
SEQ#11 4 SPD IDLE (NEUT)	667.7	5.30		25.9	
SEQ#11 4 SPD IDLE (2500)	46.7	0.14		143.2	
SEQ#11 4 SPD IDLE (NEUT)	602.1	5.73		38.2	
SEQ#11 4 SPD IDLE (DRIV)	402.9	5.84		83.1	
SEQ#11 FED 2 MODE (30)	155.0	1.57		1214.9	
SEQ#11 FED 2 MODE (NEUT)	679.1	5.00		44.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : CONNECTED PCV FILTER, PROPANE GAIN 50 RPM, IDLE NEUTRAL WITHOUT PROPANE 750 RPM, WITH PROPANE 800 RPM.

SEQ#12 FEDERAL TEST PROC.	2.04	20.6	639.3	2.94	13.1
SEQ#12 50 MPH CRUISE	18.4	0.00		603.5	
SEQ#12 HIGHWAY FUEL ECON.	0.38	2.9	453.4	2.57	19.3
SEQ#12 4 SPD IDLE (NEUT)	475.2	0.54		48.5	
SEQ#12 4 SPD IDLE (2500)	15.1	0.04		132.4	
SEQ#12 4 SPD IDLE (NEUT)	346.6	1.24		59.9	
SEQ#12 4 SPD IDLE (DRIV)	229.3	1.72		218.6	
SEQ#12 FED 2 MODE (30)	142.4	1.27		1405.3	
SEQ#12 FED 2 MODE (NEUT)	437.9	0.20		53.0	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
7407	77	CADI	425	760V4U	(CON'T)					

COMMENT : CO .5%, IDLE RPM 780 NEUTRAL HC 430 PPM.

SEQ#13	FEDERAL TEST PROC.	2.97	26.4	657.4	3.18	12.5
SEQ#13	50 MPH CRUISE	21.7	0.01		593.4	
SEQ#13	HIGHWAY FUEL ECON.	0.35	3.3	462.4	2.87	18.9
SEQ#13	4 SPD IDLE (NEUT)	499.5	1.38		38.0	
SEQ#13	4 SPD IDLE (2500)	75.4	0.88		120.8	
SEQ#13	4 SPD IDLE (NEUT)	338.0	1.36		51.1	
SEQ#13	4 SPD IDLE (DRIIV)	232.2	1.63		173.7	
SEQ#13	FED 2 MODE (30)	140.0	1.19		1267.5	
SEQ#13	FED 2 MODE (NEUT)	535.0	0.65		56.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 600 RPM, CO .3%, HC 800 PPM,  
PROPANE GAIN 130 RPM.

SEQ#15	FEDERAL TEST PROC.	0.88	5.5	683.7	3.10	12.8
SEQ#15	50 MPH CRUISE	16.1	0.01		536.8	
SEQ#15	HIGHWAY FUEL ECON.	0.14	0.6	464.0	2.59	19.1
SEQ#15	4 SPD IDLE (NEUT)	34.5	0.01		96.7	
SEQ#15	4 SPD IDLE (2500)	8.2	0.01		131.9	
SEQ#15	4 SPD IDLE (NEUT)	70.8	0.01		105.4	
SEQ#15	4 SPD IDLE (DRIIV)	11.2	0.01		265.9	
SEQ#15	FED 2 MODE (30)	102.5	0.76		1337.6	
SEQ#15	FED 2 MODE (NEUT)	196.7	0.01		109.3	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR FILTER,  
FUEL FILTER, PCV VALVE, CRANKCASE BREATHER FILTER,  
ENGINE OIL & FILTER. ADJUSTED TIMING, CHOKE,  
IDLE MIXTURE & SPEED TO SPEC.

SEQ#16	FEDERAL TEST PROC.	0.61	5.6	675.6	2.65	12.9
SEQ#16	50 MPH CRUISE	21.7	0.01		371.0	
SEQ#16	HIGHWAY FUEL ECON.	0.09	0.5	449.1	1.97	19.7
SEQ#16	4 SPD IDLE (NEUT)	43.4	0.00		67.9	
SEQ#16	4 SPD IDLE (2500)	5.6	0.01		114.7	
SEQ#16	4 SPD IDLE (NEUT)	30.6	0.01		75.7	
SEQ#16	4 SPD IDLE (DRIIV)	9.5	0.01		200.4	
SEQ#16	FED 2 MODE (30)	18.7	0.02		1239.9	
SEQ#16	FED 2 MODE (NEUT)	131.4	0.00		84.2	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 51 CO: 0.03 GAIN: 144

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	CH <sub>4</sub>	
7408	77	CHEV	305	710Y2						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 603 CO: 8.09 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	3.54	67.8	586.0	1.85	12.6
SEQ#11	50 MPH CRUISE	27.9	0.01		338.7	
SEQ#11	HIGHWAY FUEL ECON.	0.52	8.0	430.2	1.81	20.0
SEQ#11	4 SPD IDLE (NEUT)	417.0	5.73		25.6	
SEQ#11	4 SPD IDLE (2500)	43.7	0.02		147.8	
SEQ#11	4 SPD IDLE (NEUT)	341.8	5.48		37.1	
SEQ#11	4 SPD IDLE (DRIV)	392.6	6.28		39.3	
SEQ#11	FED 2 MODE (30)	71.4	0.00		188.3	
SEQ#11	FED 2 MODE (NEUT)	392.6	5.73		34.5	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 500 RPMS, IDLE NEUTRAL 590 RPMS, PROPANE GAIN 50 RPMS. USED UNIVERSAL METHOD.

SEQ#12	FEDERAL TEST PROC.	1.33	11.4	822.3	2.74	10.5
SEQ#12	50 MPH CRUISE	31.9	0.46		360.9	
SEQ#12	HIGHWAY FUEL ECON.	0.53	9.2	586.0	3.14	14.7
SEQ#12	4 SPD IDLE (NEUT)	26.3	0.00		38.2	
SEQ#12	4 SPD IDLE (2500)	15.1	0.00		155.0	
SEQ#12	4 SPD IDLE (NEUT)	49.7	0.00		41.3	
SEQ#12	4 SPD IDLE (DRIV)	35.8	0.00		74.9	
SEQ#12	FED 2 MODE (30)	15.4	0.04		394.3	
SEQ#12	FED 2 MODE (NEUT)	52.6	0.00		42.6	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE MIXTURE AND SPEED ADJUSTED TO MANUFACTURERS SPECS. LEAN DROP FROM 550 TO 500 RPMS IN DRIVE.

SEQ#15	FEDERAL TEST PROC.	1.43	9.7	710.0	2.22	12.2
SEQ#15	50 MPH CRUISE	44.4	0.00		198.1	
SEQ#15	HIGHWAY FUEL ECON.	0.28	1.8	421.7	1.73	20.9
SEQ#15	4 SPD IDLE (NEUT)	67.8	0.00		23.3	
SEQ#15	4 SPD IDLE (2500)	31.5	0.00		87.8	
SEQ#15	4 SPD IDLE (NEUT)	70.4	0.00		26.8	
SEQ#15	4 SPD IDLE (DRIV)	47.7	0.00		59.1	
SEQ#15	FED 2 MODE (30)	48.0	0.00		117.2	
SEQ#15	FED 2 MODE (NEUT)	98.6	0.00		24.7	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
7408	77	CHEV	305	710Y2	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR, FUEL, OIL, CRANKCASE BREATHER FILTERS, PCV VALVE, ENGINE OIL. ADJUSTED IDLE SPEED AND TIMING.

SEQ#16 FEDERAL TEST PROC.	1.18	7.1	666.5	2.12	13.0
SEQ#16 50 MPH CRUISE	16.4	0.00		226.0	
SEQ#16 HIGHWAY FUEL ECON.	0.24	1.1	424.3	1.86	20.8
SEQ#16 4 SPD IDLE (NEUT)	51.0	0.00		25.6	
SEQ#16 4 SPD IDLE (2500)	1.5	0.01		94.2	
SEQ#16 4 SPD IDLE (NEUT)	60.9	0.00		25.1	
SEQ#16 4 SPD IDLE (DRIV)	29.6	0.00		44.4	
SEQ#16 FED 2 MODE (30)	26.0	0.01		125.2	
SEQ#16 FED 2 MODE (NEUT)	69.1	0.00		29.9	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 72 CO: 0.02 GAIN: 120

7410 77 OLDS 350 730M4U

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 453 CO: 3.76 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	2.31	41.1	685.6	1.76	11.7
SEQ#11 50 MPH CRUISE	8.2	0.01		249.7	
SEQ#11 HIGHWAY FUEL ECON.	0.33	5.6	501.6	1.57	17.4
SEQ#11 4 SPD IDLE (NEUT)	428.1	3.28		31.2	
SEQ#11 4 SPD IDLE (2500)	133.7	0.01		177.5	
SEQ#11 4 SPD IDLE (NEUT)	528.7	3.70		35.0	
SEQ#11 4 SPD IDLE (DRIV)	337.4	4.37		59.6	
SEQ#11 FED 2 MODE (30)	38.8	0.01		166.2	
SEQ#11 FED 2 MODE (NEUT)	479.4	3.37		38.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 600 RPM, PROPANE GAIN 60 RPM.  
USED UNIVERSAL PROPANE METHOD.

SEQ#12 FEDERAL TEST PROC.	1.37	26.7	715.3	2.06	11.7
SEQ#12 50 MPH CRUISE	15.4	0.00		358.9	
SEQ#12 HIGHWAY FUEL ECON.	0.16	4.6	543.4	1.90	16.1
SEQ#12 4 SPD IDLE (NEUT)	14.1	0.00		44.3	
SEQ#12 4 SPD IDLE (2500)	30.6	0.00		148.5	
SEQ#12 4 SPD IDLE (NEUT)	10.2	0.00		44.6	
SEQ#12 4 SPD IDLE (DRIV)	2.6	0.00		189.3	
SEQ#12 FED 2 MODE (30)	27.3	0.00		216.0	
SEQ#12 FED 2 MODE (NEUT)	28.3	0.00		43.1	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
7410	77	OLDS	350	730M4U	(CON'T)					

COMMENT : IDLE MIXTURE AND SPEED SET TO MANUFACTURERS SPEC.

SEQ#15 FEDERAL TEST PROC.	1.27	20.6	732.4	2.13	11.5
SEQ#15 50 MPH CRUISE	17.1	0.01	299.2		
SEQ#15 HIGHWAY FUEL ECON.	0.13	4.1	567.4	1.85	15.5
SEQ#15 4 SPD IDLE (NEUT)	19.7	0.01		52.2	
SEQ#15 4 SPD IDLE (2500)	34.2	0.00		133.9	
SEQ#15 4 SPD IDLE (NEUT)	18.4	0.00		45.6	
SEQ#15 4 SPD IDLE (DRIV)	5.9	0.00		218.6	
SEQ#15 FED 2 MODE (30)	38.1	0.00		149.6	
SEQ#15 FED 2 MODE (NEUT)	47.4	0.00		50.8	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, PCV VALVE  
AND FILTER, PURGE CANISTER FILTER, OIL AND OIL  
FILTER, FUEL FILTER. SET FAST IDLE TO  
MANUFACTURER SPEC. REPLACED FRESH AIR TUBE.

SEQ#16 FEDERAL TEST PROC.	1.25	17.0	739.8	2.07	11.5
SEQ#16 50 MPH CRUISE	14.8	0.00	278.0		
SEQ#16 HIGHWAY FUEL ECON.	0.13	2.4	557.0	1.94	15.8
SEQ#16 4 SPD IDLE (NEUT)	21.3	0.00		43.5	
SEQ#16 4 SPD IDLE (2500)	46.4	0.00		139.6	
SEQ#16 4 SPD IDLE (NEUT)	19.0	0.00		40.9	
SEQ#16 4 SPD IDLE (DRIV)	5.3	0.00		167.8	
SEQ#16 FED 2 MODE (30)	41.1	0.00		133.7	
SEQ#16 FED 2 MODE (NEUT)	41.4	0.00		30.0	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 39 CO: 0.02 GAIN: 330

6412 76 AMC 258 I

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 178 CO: 6.00 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	2.11	34.1	489.0	6.25	16.2
SEQ#11 50 MPH CRUISE	19.0	0.09	1390.2		
SEQ#11 HIGHWAY FUEL ECON.	0.61	5.9	399.2	7.97	21.6
SEQ#11 4 SPD IDLE (NEUT)	97.2	2.43		49.8	
SEQ#11 4 SPD IDLE (2500)	21.3	0.30		322.5	
SEQ#11 4 SPD IDLE (NEUT)	95.6	2.64		50.4	
SEQ#11 4 SPD IDLE (DRIV)	127.1	2.56		64.8	
SEQ#11 FED 2 MODE (30)	59.2	0.21		1297.6	
SEQ#11 FED 2 MODE (NEUT)	98.9	3.13		55.5	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 150 CO: 4.42 GAIN: 0

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR MAKE CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE				FUEL ECON MPG
			HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	
6412	76 AMC 258 I	(CON'T)					

COMMENT : IDLE SPEED 650 RPM NEUTRAL, PROPANE GAIN 50 RPM.  
ACHEIVED AT STEP 6 OF PROPANE CARB ADJ PROCEDURE  
A-1, CORRECTED VACUUM LINES.

SEQ#12 FEDERAL TEST PROC.	1.86	18.6	508.5	3.18	16.3
SEQ#12 50 MPH CRUISE	8.5	0.09		578.3	
SEQ#12 HIGHWAY FUEL ECON.	0.57	4.6	424.3	3.82	20.5
SEQ#12 4 SPD IDLE (NEUT)	32.2	0.06		53.3	
SEQ#12 4 SPD IDLE (2500)	11.8	0.23		184.5	
SEQ#12 4 SPD IDLE (NEUT)	65.5	0.06		49.7	
SEQ#12 4 SPD IDLE (DRIV)	63.8	0.05		69.5	
SEQ#12 FED 2 MODE (30)	52.6	0.16		618.7	
SEQ#12 FED 2 MODE (NEUT)	42.7	0.07		66.3	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 550 RPM, CO .14%, HC 125 PPM.

SEQ#15 FEDERAL TECOC.	1.88	16.1	522.6	3.18	16.0
SEQ#15 50 MPH CRUISE	6.9	0.08		564.1	
SEQ#15 HIGHWAY FUEL ECON.	0.62	5.3	422.2	3.94	20.5
SEQ#15 4 SPD IDLE (NEUT)	39.8	0.07		53.6	
SEQ#15 4 SPD IDLE (2500)	22.0	0.69		168.0	
SEQ#15 4 SPD IDLE (NEUT)	139.0	0.07		25.1	
SEQ#15 4 SPD IDLE (DRIV)	96.2	0.05		33.0	
SEQ#15 FED 2 MODE (30)	66.8	0.46		563.1	
SEQ#15 FED 2 MODE (NEUT)	41.7	0.06		53.9	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, PCV VALVE,  
OIL AND OIL FILTER, FUEL FILTER.

SEQ#16 FEDERAL TEST PROC.	1.95	12.7	511.9	2.42	16.5
SEQ#16 50 MPH CRUISE	12.1	0.11		685.4	
SEQ#16 HIGHWAY FUEL ECON.	0.52	3.8	416.4	2.91	20.9
SEQ#16 4 SPD IDLE (NEUT)	43.4	0.10		34.9	
SEQ#16 4 SPD IDLE (2500)	52.0	0.17		260.8	
SEQ#16 4 SPD IDLE (NEUT)	88.0	0.09		67.9	
SEQ#16 4 SPD IDLE (DRIV)	159.3	0.07		56.1	
SEQ#16 FED 2 MODE (30)	66.2	0.19		756.2	
SEQ#16 FED 2 MODE (NEUT)	170.0	0.10		45.5	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 194 CO: 0.12 GAIN: 200

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6413	76	PLYM	225	FD-225-1-5SS						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 709 CO: 9.99 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	4.84	64.4	514.7	6.37	14.1
SEQ#11	50 MPH CRUISE	86.0	0.29	2514.5		
SEQ#11	HIGHWAY FUEL ECON.	1.53	15.3	412.5	7.27	20.1
SEQ#11	4 SPD IDLE (NEUT)	633.7	7.58		44.4	
SEQ#11	4 SPD IDLE (2500)	106.8	0.10		800.7	
SEQ#11	4 SPD IDLE (NEUT)	615.6	7.98		45.0	
SEQ#11	4 SPD IDLE (DRIV)	777.7	7.90		49.5	
SEQ#11	FED 2 MODE (30)	227.8	0.18		2465.2	
SEQ#11	FED 2 MODE (NEUT)	663.1	7.33		48.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : PROPANE GAIN 50 RPM.

SEQ#12	FEDERAL TEST PROC.	2.88	21.7	515.7	6.31	15.9
SEQ#12	50 MPH CRUISE	81.4	0.22	2372.2		
SEQ#12	HIGHWAY FUEL ECON.	1.05	9.4	426.4	7.35	20.0
SEQ#12	4 SPD IDLE (NEUT)	488.4	0.03		128.8	
SEQ#12	4 SPD IDLE (2500)	58.2	0.09		748.1	
SEQ#12	4 SPD IDLE (NEUT)	197.0	0.00		129.0	
SEQ#12	4 SPD IDLE (DRIV)	298.5	0.01		469.1	
SEQ#12	FED 2 MODE (30)	150.0	0.32		1983.9	
SEQ#12	FED 2 MODE (NEUT)	153.0	0.00		146.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE SPEED &amp; MIXTURE TO SPEC.

SEQ#15	FEDERAL TEST PROC.	2.79	27.6	551.0	6.90	14.7
SEQ#15	50 MPH CRUISE	80.7	0.17	2544.1		
SEQ#15	HIGHWAY FUEL ECON.	0.85	8.2	409.8	7.05	20.9
SEQ#15	4 SPD IDLE (NEUT)	314.7	0.03		254.8	
SEQ#15	4 SPD IDLE (2500)	105.2	0.44		791.6	
SEQ#15	4 SPD IDLE (NEUT)	201.1	0.00		293.2	
SEQ#15	4 SPD IDLE (DRIV)	348.8	0.01		807.7	
SEQ#15	FED 2 MODE (30)	207.1	0.30		2189.3	
SEQ#15	FED 2 MODE (NEUT)	248.6	0.01		261.8	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6413	76	PLYM	225	FD-225-1-5SS	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR FILTER, PCV VALVE, CRANKCASE BREATHER FILTER, ENGINE OIL & OIL FILTER. ADJUSTED IDLE SPEED & MIXTURE. EGR VALVE HAS LOW FLOW DUE TO RESTRICTION IN EXHAUST PASSAGE.

SEQ#16	FEDERAL TEST PROC.	1.80	11.7	485.5	5.87	17.4
SEQ#16	50 MPH CRUISE	77.1	0.05	2563.8		
SEQ#16	HIGHWAY FUEL ECON.	0.60	4.3	409.6	6.86	21.2
SEQ#16	4 SPD IDLE (NEUT)	210.1	0.01		135.5	
SEQ#16	4 SPD IDLE (2500)	52.3	0.05		708.7	
SEQ#16	4 SPD IDLE (NEUT)	166.7	0.00		143.2	
SEQ#16	4 SPD IDLE (DRIV)	226.5	0.01		544.9	
SEQ#16	FED 2 MODE (30)	127.7	0.07		2034.0	
SEQ#16	FED 2 MODE (NEUT)	89.6	0.00		133.9	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 291 CO: 0.24 GAIN: 41

6414 76 PLYM 225 FD-225-1-5SS

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 183 CO: 4.38 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	1.94	32.3	462.1	5.58	17.1
SEQ#11	50 MPH CRUISE	19.7	0.02	722.8		
SEQ#11	HIGHWAY FUEL ECON.	0.68	12.7	390.8	4.54	21.5
SEQ#11	4 SPD IDLE (NEUT)	113.5	1.66		46.0	
SEQ#11	4 SPD IDLE (2500)	21.0	0.03		477.2	
SEQ#11	4 SPD IDLE (NEUT)	102.2	1.30		53.1	
SEQ#11	4 SPD IDLE (DRIV)	119.8	1.63		126.0	
SEQ#11	FED 2 MODE (30)	35.8	0.04		1568.1	
SEQ#11	FED 2 MODE (NEUT)	100.2	1.42		58.3	

NO FOLLOW UP LANE TEST DONE

COMMENT : CORRECTED THERMOSTATIC AIR CLEANER DURING PRE-ADJUSTMENT. 50 RPM PROPANE GAIN ACHIEVED AT STEP 7 OF PROPANE ADJUSTMENT PROCEDURE A-1. IDLE RPM WITHOUT PROPANE 750, WITH PROPANE 800 RPM.

SEQ#12	FEDERAL TEST PROC.	1.10	18.9	476.8	4.96	17.4
SEQ#12	50 MPH CRUISE	27.9	0.07	1270.0		
SEQ#12	HIGHWAY FUEL ECON.	0.56	10.7	358.1	3.77	23.6
SEQ#12	4 SPD IDLE (NEUT)	31.2	0.01		120.1	
SEQ#12	4 SPD IDLE (2500)	7.9	0.02		859.3	
SEQ#12	4 SPD IDLE (NEUT)	13.5	0.00		129.8	
SEQ#12	4 SPD IDLE (DRIV)	46.4	0.01		505.5	
SEQ#12	FED 2 MODE (30)	42.7	0.04		2928.7	
SEQ#12	FED 2 MODE (NEUT)	17.7	0.01		134.7	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6414	76	PLYM	225	FD-225-1-5SS	(CON'T)					

COMMENT : ADJUSTED IDLE NEUTRAL 770 RPM, CO .6%, HC 80 PPM, USED UNIVERSAL CO METHOD.

SEQ#13	FEDERAL TEST PROC.	1.27	18.1	464.4	4.90	17.9
SEQ#13	50 MPH CRUISE	26.9	0.05	1392.7		
SEQ#13	HIGHWAY FUEL ECON.	0.57	10.9	359.3	3.76	23.5
SEQ#13	4 SPD IDLE (NEUT)	74.1	0.54		120.6	
SEQ#13	4 SPD IDLE (2500)	15.1	0.02		871.4	
SEQ#13	4 SPD IDLE (NEUT)	32.2	0.01		133.1	
SEQ#13	4 SPD IDLE (DRIV)	72.4	0.02		555.0	
SEQ#13	FED 2 MODE (30)	53.3	0.05		3086.5	
SEQ#13	FED 2 MODE (NEUT)	38.8	0.03		147.3	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE NEUTRAL 750 RPM, CO .25%, HC 75 PPM.

SEQ#15	FEDERAL TEST PROC.	1.14	13.0	485.4	5.48	17.4
SEQ#15	50 MPH CRUISE	33.2	0.05	1237.4		
SEQ#15	HIGHWAY FUEL ECON.	0.57	11.1	377.2	4.21	22.4
SEQ#15	4 SPD IDLE (NEUT)	28.3	0.01		113.6	
SEQ#15	4 SPD IDLE (2500)	10.2	0.01		779.4	
SEQ#15	4 SPD IDLE (NEUT)	11.2	0.01		122.9	
SEQ#15	4 SPD IDLE (DRIV)	37.5	0.01		514.6	
SEQ#15	FED 2 MODE (30)	33.5	0.03		3155.5	
SEQ#15	FED 2 MODE (NEUT)	8.9	0.00		154.7	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR FILTER ELEMENT, FUEL FILTER, PCV VALVE, OIL & OIL FILTER, PURGE CANISTER FILTER. ADJUSTED PRIMARY VACUUM BREAK TO SPEC.

SEQ#16	FEDERAL TEST PROC.	0.92	13.5	477.1	5.54	17.7
SEQ#16	50 MPH CRUISE	21.3	0.03	1395.2		
SEQ#16	HIGHWAY FUEL ECON.	0.39	6.2	365.4	4.38	23.6
SEQ#16	4 SPD IDLE (NEUT)	16.7	0.01		125.2	
SEQ#16	4 SPD IDLE (2500)	3.9	0.01		709.7	
SEQ#16	4 SPD IDLE (NEUT)	16.1	0.01		122.9	
SEQ#16	4 SPD IDLE (DRIV)	42.7	0.02		557.0	
SEQ#16	FED 2 MODE (30)	39.1	0.04		3135.8	
SEQ#16	FED 2 MODE (NEUT)	10.8	0.01		125.4	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 89 CO: 0.40 GAIN: 101

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6415	76	PLYM	225	FD-225-1-5SS						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 294 CO: 4.32 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	3.31	30.6	514.7	3.17	15.5
SEQ#11	50 MPH CRUISE	53.3	0.02	720.8		
SEQ#11	HIGHWAY FUEL ECON.	0.63	2.5	431.5	3.31	20.3
SEQ#11	4 SPD IDLE (NEUT)	266.5	3.50		72.5	
SEQ#11	4 SPD IDLE (2500)	57.6	0.02		204.0	
SEQ#11	4 SPD IDLE (NEUT)	265.1	3.42		72.7	
SEQ#11	4 SPD IDLE (DRIV)	340.2	3.73		116.0	
SEQ#11	FED 2 MODE (30)	87.6	0.02		727.9	
SEQ#11	FED 2 MODE (NEUT)	262.1	3.81		75.3	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE NEUTRAL 750 RPM, PROPANE GAIN 50  
RPM.

SEQ#12	FEDERAL TEST PROC.	2.37	12.4	539.8	3.57	15.7
SEQ#12	50 MPH CRUISE	56.6	0.02	840.1		
SEQ#12	HIGHWAY FUEL ECON.	0.50	1.2	449.0	3.60	19.6
SEQ#12	4 SPD IDLE (NEUT)	98.6	0.03		85.1	
SEQ#12	4 SPD IDLE (2500)	48.0	0.02		181.6	
SEQ#12	4 SPD IDLE (NEUT)	77.7	0.00		87.4	
SEQ#12	4 SPD IDLE (DRIV)	163.7	0.01		271.9	
SEQ#12	FED 2 MODE (30)	77.4	0.02		751.5	
SEQ#12	FED 2 MODE (NEUT)	99.9	0.03		86.9	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE NEUTRAL 750 RPM, CO .5%, HC 270 PPM.

SEQ#13	FEDERAL TEST PROC.	2.27	9.3	519.7	3.42	16.4
SEQ#13	50 MPH CRUISE	43.7	0.01	874.2		
SEQ#13	HIGHWAY FUEL ECON.	0.46	1.0	437.0	3.62	20.2
SEQ#13	4 SPD IDLE (NEUT)	117.5	0.05		82.2	
SEQ#13	4 SPD IDLE (2500)	54.3	0.02		182.0	
SEQ#13	4 SPD IDLE (NEUT)	93.9	0.00		85.7	
SEQ#13	4 SPD IDLE (DRIV)	173.0	0.01		233.5	
SEQ#13	FED 2 MODE (30)	84.3	0.03		662.2	
SEQ#13	FED 2 MODE (NEUT)	152.0	0.03		86.7	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6415	76	PLYM	225	FD-225-1-5SS (CON'T)						

COMMENT : ADJUSTED IDLE SPEED &amp; MIXTURE TO SPEC.

SEQ#15 FEDERAL TEST PROC.	1.60	7.0	519.6	3.54	16.6
SEQ#15 50 MPH CRUISE	50.6	0.01	857.3		
SEQ#15 HIGHWAY FUEL ECON.	0.43	0.9	439.3	3.59	20.1
SEQ#15 4 SPD IDLE (NEUT)	190.7	0.01		78.1	
SEQ#15 4 SPD IDLE (2500)	82.0	0.02		169.8	
SEQ#15 4 SPD IDLE (NEUT)	107.5	0.00		85.7	
SEQ#15 4 SPD IDLE (DRIV)	154.0	0.00		229.3	
SEQ#15 FED 2 MODE (30)	75.7	0.01		763.3	
SEQ#15 FED 2 MODE (NEUT)	111.5	0.01		97.5	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED FUEL FILTER, PCV VALVE,  
CARBON CANISTER FILTER, ENGINE OIL & FILTER,  
SPARK PLUGS & AIR FILTER. ADJUSTED IDLE SPEED &  
MIXTURE TO SPEC.

SEQ#16 FEDERAL TEST PROC.	2.33	9.7	524.1	3.66	16.2
SEQ#16 50 MPH CRUISE	41.1	0.02	881.5		
SEQ#16 HIGHWAY FUEL ECON.	0.50	1.9	446.0	3.62	19.7
SEQ#16 4 SPD IDLE (NEUT)	163.7	0.06		78.0	
SEQ#16 4 SPD IDLE (2500)	70.1	0.01		188.3	
SEQ#16 4 SPD IDLE (NEUT)	114.1	0.00		82.5	
SEQ#16 4 SPD IDLE (DRIV)	196.4	0.00		209.6	
SEQ#16 FED 2 MODE (30)	78.7	0.00		864.3	
SEQ#16 FED 2 MODE (NEUT)	142.0	0.01		82.1	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 192 CO: 0.35 GAIN: 45

6416 76 DODG 318 FD-318-2-5SS

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 303 CO: 3.91 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	3.32	61.5	547.2	5.43	13.6
SEQ#11 50 MPH CRUISE	29.2	0.02	1042.1		
SEQ#11 HIGHWAY FUEL ECON.	0.59	3.6	452.9	6.76	19.3
SEQ#11 4 SPD IDLE (NEUT)	240.3	2.72		29.9	
SEQ#11 4 SPD IDLE (2500)	30.2	0.05		205.7	
SEQ#11 4 SPD IDLE (NEUT)	255.0	2.86		31.9	
SEQ#11 4 SPD IDLE (DRIV)	202.4	3.12		38.4	
SEQ#11 FED 2 MODE (30)	93.3	0.69		657.1	
SEQ#11 FED 2 MODE (NEUT)	225.8	2.92		30.6	

NO FOLLOW UP LANE TEST DONE

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6416	76	DODG	318	FD-318-2-5SS	(CON'T)					

COMMENT : PROPANE GAIN 50 RPM ACHIEVED AT STEP 7C, NO MAINTENANCE PERFORMED.

SEQ#12	FEDERAL TEST PROC.	2.47	28.0	585.7	6.02	13.9
SEQ#12	50 MPH CRUISE	25.6	0.02	2149.2		
SEQ#12	HIGHWAY FUEL ECON.	0.51	2.4	464.5	7.30	18.9
SEQ#12	4 SPD IDLE (NEUT)	169.3	0.05		61.0	
SEQ#12	4 SPD IDLE (2500)	9.2	0.02		350.8	
SEQ#12	4 SPD IDLE (NEUT)	114.5	0.05		61.5	
SEQ#12	4 SPD IDLE (DRIV)	89.3	0.05		99.0	
SEQ#12	FED 2 MODE (30)	101.2	0.34		1615.7	
SEQ#12	FED 2 MODE (NEUT)	181.7	0.30		69.3	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE NEUTRAL 750 RPM, CO .5%, HC 350 PPM. USED UNIVERSAL CO METHOD.

SEQ#13	FEDERAL TEST PROC.	2.48	33.9	587.2	6.05	13.7
SEQ#13	50 MPH CRUISE	33.8	0.05	2066.6		
SEQ#13	HIGHWAY FUEL ECON.	0.50	2.7	453.4	7.12	19.3
SEQ#13	4 SPD IDLE (NEUT)	154.7	0.08		62.7	
SEQ#13	4 SPD IDLE (2500)	12.1	0.02		345.7	
SEQ#13	4 SPD IDLE (NEUT)	102.9	0.06		61.6	
SEQ#13	4 SPD IDLE (DRIV)	76.7	0.04		99.0	
SEQ#13	FED 2 MODE (30)	108.2	0.56		1442.8	
SEQ#13	FED 2 MODE (NEUT)	181.0	0.33		67.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE NEUTRAL 750 RPM, CO .4%.

SEQ#15	FEDERAL TEST PROC.	2.29	27.3	595.0	5.96	13.8
SEQ#15	50 MPH CRUISE	28.6	0.02	2204.3		
SEQ#15	HIGHWAY FUEL ECON.	0.43	2.2	457.1	6.94	19.2
SEQ#15	4 SPD IDLE (NEUT)	212.8	0.04		68.6	
SEQ#15	4 SPD IDLE (2500)	8.9	0.02		323.5	
SEQ#15	4 SPD IDLE (NEUT)	72.4	0.02		77.4	
SEQ#15	4 SPD IDLE (DRIV)	49.0	0.02		118.5	
SEQ#15	FED 2 MODE (30)	78.7	0.22		1655.8	
SEQ#15	FED 2 MODE (NEUT)	144.7	0.05		76.0	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR MAKE CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE				FUEL ECON MPG
			HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	
6416	76 DODG 318	FD-318-2-5SS (CON'T)					

COMMENT : MAJOR TUNE--UP. REPLACED SPARK PLUGS, AIR FILTER, OIL FILTER, PCV VALVE, CANISTER & FUEL FILTERS, HOT AIR INLET TUBE. ADJUSTED IDLE SPEED & MIXTURE TO SPEC.

SEQ#16 FEDERAL TEST PROC.	1.16	6.0	601.1	6.74	14.4
SEQ#16 50 MPH CRUISE	31.9	0.04		2209.3	
SEQ#16 HIGHWAY FUEL ECON.	0.34	1.0	460.8	7.46	19.2
SEQ#16 4 SPD IDLE (NEUT)	442.2	0.00		83.2	
SEQ#16 4 SPD IDLE (2500)	22.3	0.01		336.6	
SEQ#16 4 SPD IDLE (NEUT)	242.3	0.00		84.8	
SEQ#16 4 SPD IDLE (DRIV)	102.9	0.00		160.3	
SEQ#16 FED 2 MODE (30)	48.7	0.01		1345.1	
SEQ#16 FED 2 MODE (NEUT)	304.5	0.01		83.7	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 253 CO: 0.00 GAIN: 269

6417 76 CHRY 360 FD-360-2-5S

## PRELIMINARY LANE TEST:

CAT: P FUEL: F  
HC: 117 CO: 1.52 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	3.15	35.5	707.3	4.90	11.5
SEQ#11 50 MPH CRUISE	55.3	0.12		1753.4	
SEQ#11 HIGHWAY FUEL ECON.	1.77	13.3	451.0	7.94	18.6
SEQ#11 4 SPD IDLE (NEUT)	41.7	0.78		55.2	
SEQ#11 4 SPD IDLE (2500)	123.4	0.13		379.1	
SEQ#11 4 SPD IDLE (NEUT)	50.0	0.71		51.3	
SEQ#11 4 SPD IDLE (DRIV)	70.1	0.49		61.0	
SEQ#11 FED 2 MODE (30)	77.7	0.09		762.2	
SEQ#11 FED 2 MODE (NEUT)	46.0	0.60		49.9	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE NEUTRAL 700 RPM, CO .32%, HC 150 PPM.

SEQ#15 FEDERAL TEST PROC.	3.35	26.3	702.7	3.37	11.8
SEQ#15 50 MPH CRUISE	71.4	0.22		2317.3	
SEQ#15 HIGHWAY FUEL ECON.	1.81	17.0	451.9	5.89	18.3
SEQ#15 4 SPD IDLE (NEUT)	62.9	0.53		61.7	
SEQ#15 4 SPD IDLE (2500)	202.4	0.18		537.8	
SEQ#15 4 SPD IDLE (NEUT)	65.5	0.45		64.1	
SEQ#15 4 SPD IDLE (DRIV)	84.0	0.27		84.0	
SEQ#15 FED 2 MODE (30)	95.9	0.12		969.4	
SEQ#15 FED 2 MODE (NEUT)	77.1	0.43		64.9	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	CH <sub>4</sub>	
6417	76	CHRY	360	FD-360-2-5S	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR, OIL AND CHARCOAL CANISTER FILTERS, PCV VALVE AND ENGINE OIL. ADJUSTED TIMING, IDLE SPEED AND MIXTURE. REPLACED HOT AND COLD AIR DUCTS, RECONNECTED EGR LINE.

SEQ#16 FEDERAL TEST PROC.	3.89	21.5	710.5	3.40	11.7
SEQ#16 50 MPH CRUISE	61.5	0.18		902.8	
SEQ#16 HIGHWAY FUEL ECON.	1.84	13.2	458.7	6.33	18.3
SEQ#16 4 SPD IDLE (NEUT)	165.3	0.26		55.2	
SEQ#16 4 SPD IDLE (2500)	669.0	0.20		552.0	
SEQ#16 4 SPD IDLE (NEUT)	167.7	0.20		58.7	
SEQ#16 4 SPD IDLE (DRIV)	93.6	0.13		69.6	
SEQ#16 FED 2 MODE (30)	101.9	0.13		842.1	
SEQ#16 FED 2 MODE (NEUT)	328.6	0.17		50.7	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 110 CO: 0.83 GAIN: 190

COMMENT : REPLACED CATALYTIC CONVERTER.

SEQ#17 FEDERAL TEST PROC.	1.35	15.8	718.8	2.24	11.9
SEQ#17 50 MPH CRUISE	18.1	0.02		1966.4	
SEQ#17 HIGHWAY FUEL ECON.	0.59	8.3	446.1	4.24	19.3
SEQ#17 4 SPD IDLE (NEUT)	13.8	0.04		57.3	
SEQ#17 4 SPD IDLE (2500)	300.0	0.02		445.8	
SEQ#17 4 SPD IDLE (NEUT)	24.3	0.03		60.0	
SEQ#17 4 SPD IDLE (DRIV)	20.0	0.01		72.3	
SEQ#17 FED 2 MODE (30)	38.1	0.02		781.4	
SEQ#17 FED 2 MODE (NEUT)	39.8	0.03		59.5	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 32 CO: 0.05 GAIN: 100

6418 76 CHRY 400 FE-400-4-EM

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 170 CO: 6.12 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	4.73	86.2	700.0	2.65	10.4
SEQ#11 50 MPH CRUISE	3.3	0.07		390.2	
SEQ#11 HIGHWAY FUEL ECON.	0.81	8.8	521.9	4.91	16.5
SEQ#11 4 SPD IDLE (NEUT)	214.4	6.50		44.3	
SEQ#11 4 SPD IDLE (2500)	10.2	0.03		146.2	
SEQ#11 4 SPD IDLE (NEUT)	192.4	6.50		45.4	
SEQ#11 4 SPD IDLE (DRIV)	273.9	7.04		42.6	
SEQ#11 FED 2 MODE (30)	15.1	0.12		188.3	
SEQ#11 FED 2 MODE (NEUT)	210.4	6.83		43.0	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	CH <sub>4</sub>	
6418	76	CHRY	400	FE-400-4-EM	(CON'T)					

COMMENT : PROPANE GAIN 50 RPM, IDLE RPM WITHOUT PROPANE 690,  
WITH PROPANE 770 RPM.

SEQ#12	FEDERAL TEST PROC.	1.95	31.4	805.7	2.34	10.3
SEQ#12	50 MPH CRUISE	0.0	0.06		343.7	
SEQ#12	HIGHWAY FUEL ECON.	0.47	5.1	508.8	4.91	17.1
SEQ#12	4 SPD IDLE (NEUT)	74.1	1.34		53.9	
SEQ#12	4 SPD IDLE (2500)	3.0	0.03		143.7	
SEQ#12	4 SPD IDLE (NEUT)	64.2	1.26		56.2	
SEQ#12	4 SPD IDLE (DRIV)	121.1	1.67		73.8	
SEQ#12	FED 2 MODE (30)	7.9	0.10		152.1	
SEQ#12	FED 2 MODE (NEUT)	62.9	1.26		55.6	

NO FOLLOW UP LANE TEST DONE

COMMENT : CO 1.7% ON HOOK-UP.

SEQ#13	FEDERAL TEST PROC.	2.32	23.6	809.8	3.12	10.4
SEQ#13	50 MPH CRUISE	6.9	0.05		341.7	
SEQ#13	HIGHWAY FUEL ECON.	0.52	4.8	553.1	5.64	15.8
SEQ#13	4 SPD IDLE (NEUT)	96.2	0.59		53.2	
SEQ#13	4 SPD IDLE (2500)	1.0	0.02		150.6	
SEQ#13	4 SPD IDLE (NEUT)	90.3	0.58		54.1	
SEQ#13	4 SPD IDLE (DRIV)	109.8	0.66		74.3	
SEQ#13	FED 2 MODE (30)	9.8	0.09		172.9	
SEQ#13	FED 2 MODE (NEUT)	84.3	0.58		53.3	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE SPEED & MIXTURE TO SPEC.

SEQ#15	FEDERAL TEST PROC.	1.86	20.3	847.0	2.93	10.0
SEQ#15	50 MPH CRUISE	9.2	0.07		373.0	
SEQ#15	HIGHWAY FUEL ECON.	0.47	4.8	548.5	5.48	15.9
SEQ#15	4 SPD IDLE (NEUT)	48.7	0.23		63.6	
SEQ#15	4 SPD IDLE (2500)	2.0	0.02		164.4	
SEQ#15	4 SPD IDLE (NEUT)	42.4	0.19		67.2	
SEQ#15	4 SPD IDLE (DRIV)	74.4	0.18		100.8	
SEQ#15	FED 2 MODE (30)	11.5	0.09		192.4	
SEQ#15	FED 2 MODE (NEUT)	41.4	0.21		65.9	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6418	76	CHRY	400	FE-400-4-EM	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR FILTER, FUEL FILTER, PCV VALVE, CARBON CANISTER FILTER, ENGINE OIL & FILTER, HEATED AIR TUBE. ADJUSTED PRIMARY VACUUM BREAK, IDLE SPEED & MIXTURE TO SPEC.

SEQ#16	FEDERAL TEST PROC.	1.59	14.7	818.5	2.34	10.5
SEQ#16	50 MPH CRUISE	2.0	0.05		383.1	
SEQ#16	HIGHWAY FUEL ECON.	0.51	3.8	522.2	5.89	16.8
SEQ#16	4 SPD IDLE (NEUT)	38.1	0.14		53.3	
SEQ#16	4 SPD IDLE (2500)	0.0	0.02		177.5	
SEQ#16	4 SPD IDLE (NEUT)	21.7	0.13		55.3	
SEQ#16	4 SPD IDLE (DRIV)	39.1	0.14		85.3	
SEQ#16	FED 2 MODE (30)	8.5	0.10		193.2	
SEQ#16	FED 2 MODE (NEUT)	27.3	0.14		50.2	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 41 CO: 0.12 GAIN: 250

6420 76 CHRY 400 FD-400-2-5S

## PRELIMINARY LANE TEST:

CAT: F FUEL: P  
HC: 98 CO: 4.69 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	2.16	60.4	790.2	3.13	10.0
SEQ#11	50 MPH CRUISE	11.2	0.17		595.4	
SEQ#11	HIGHWAY FUEL ECON.	0.58	15.5	575.2	3.61	14.8
SEQ#11	4 SPD IDLE (NEUT)	115.8	4.33		55.2	
SEQ#11	4 SPD IDLE (2500)	8.5	0.15		201.4	
SEQ#11	4 SPD IDLE (NEUT)	96.2	3.77		58.2	
SEQ#11	4 SPD IDLE (DRIV)	123.8	3.56		67.3	
SEQ#11	FED 2 MODE (30)	8.2	0.07		319.5	
SEQ#11	FED 2 MODE (NEUT)	93.6	3.71		58.3	

NO FOLLOW UP LANE TEST DONE

COMMENT : CORRECTED VACUUM HOSE ROUTINGS, REPLACED VACUUM ADVANCE DIAPHRAGM. PROPANE GAIN 50 RPM.

SEQ#12	FEDERAL TEST PROC.	1.84	24.3	783.0	2.75	10.7
SEQ#12	50 MPH CRUISE	20.4	0.18		1327.6	
SEQ#12	HIGHWAY FUEL ECON.	0.89	10.3	533.0	4.58	16.1
SEQ#12	4 SPD IDLE (NEUT)	99.6	0.58		47.6	
SEQ#12	4 SPD IDLE (2500)	75.1	0.18		294.2	
SEQ#12	4 SPD IDLE (NEUT)	107.5	0.45		49.7	
SEQ#12	4 SPD IDLE (DRIV)	140.4	0.46		63.6	
SEQ#12	FED 2 MODE (30)	43.1	0.17		697.5	
SEQ#12	FED 2 MODE (NEUT)	110.2	1.59		47.8	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>Xc</sub>	CH <sub>4</sub>	
6420	76	CHRY	400	FD-400-2-5S	(CON'T)					

COMMENT : ADJUSTED IDLE SPEED &amp; MIXTURE TO SPEC.

SEQ#15 FEDERAL TEST PROC.	1.91	23.0	786.7	2.63	10.7
SEQ#15 50 MPH CRUISE	7.2	0.14	1159.8		
SEQ#15 HIGHWAY FUEL ECON.	0.72	7.2	512.2	4.36	16.9
SEQ#15 4 SPD IDLE (NEUT)	91.9	0.16		42.8	
SEQ#15 4 SPD IDLE (2500)	135.4	0.09		273.0	
SEQ#15 4 SPD IDLE (NEUT)	166.3	0.13		39.8	
SEQ#15 4 SPD IDLE (DRIV)	111.5	0.13		55.2	
SEQ#15 FED 2 MODE (30)	27.3	0.12		638.9	
SEQ#15 FED 2 MODE (NEUT)	117.5	0.15		34.6	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR FILTER, PCV VALVE, CARBON CANISTER FILTER, ENGINE OIL &amp; FILTER. ADJUSTED FAST IDLE SPEED &amp; MIXTURE TO SPEC.

SEQ#16 FEDERAL TEST PROC.	1.65	16.1	798.1	2.92	10.7
SEQ#16 50 MPH CRUISE	31.5	0.14	1167.3		
SEQ#16 HIGHWAY FUEL ECON.	0.52	5.5	441.4	4.14	19.6
SEQ#16 4 SPD IDLE (NEUT)	187.7	0.13		38.1	
SEQ#16 4 SPD IDLE (2500)	25.6	0.06		271.9	
SEQ#16 4 SPD IDLE (NEUT)	208.8	0.12		39.4	
SEQ#16 4 SPD IDLE (DRIV)	71.4	0.13		55.5	
SEQ#16 FED 2 MODE (30)	26.9	0.11		600.5	
SEQ#16 FED 2 MODE (NEUT)	181.0	0.14		36.8	

NO FOLLOW UP LANE TEST DONE

COMMENT : INSTALLED CATALYST.

SEQ#17 FEDERAL TEST PROC.	0.50	11.6	819.0	2.42	10.6
SEQ#17 50 MPH CRUISE	31.9	0.00	1262.5		
SEQ#17 HIGHWAY FUEL ECON.	0.05	1.7	553.1	3.80	16.0
SEQ#17 4 SPD IDLE (NEUT)	14.1	0.00		59.7	
SEQ#17 4 SPD IDLE (2500)	3.6	0.00		323.5	
SEQ#17 4 SPD IDLE (NEUT)	7.5	0.00		53.9	
SEQ#17 4 SPD IDLE (DRIV)	0.0	0.00		67.7	
SEQ#17 FED 2 MODE (30)	0.0	0.00		571.2	
SEQ#17 FED 2 MODE (NEUT)	0.0	0.00		51.7	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 1 CO: 0.03 GAIN: 134

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6421	76	FORD	140	2.3(1CEF)						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 99 CO: 0.14 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	2.40	33.1	384.9	1.57	20.0
SEQ#11	50 MPH CRUISE	49.3	0.67	951.9		
SEQ#11	HIGHWAY FUEL ECON.	0.54	10.6	285.1	2.65	29.3
SEQ#11	4 SPD IDLE (NEUT)	142.0	0.80		50.2	
SEQ#11	4 SPD IDLE (2500)	26.9	0.42		106.0	
SEQ#11	4 SPD IDLE (NEUT)	125.8	0.29		28.1	
SEQ#11	FED 2 MODE (30)	78.0	0.82		661.3	
SEQ#11	FED 2 MODE (NEUT)	124.8	0.33		48.9	

NO FOLLOW UP LANE TEST DONE

COMMENT : PCV LINE OBSTRUCTED BUT REMOVED AT STEP 9B OF  
PROPANE ADJUSTMENT PROCEDURE. PROPANE GAIN OF 50  
RPM WAS ACHIEVED AT STEP 6C OF PROPANE ADJUSTMENT  
PROCEDURE.

SEQ#12	FEDERAL TEST PROC.	1.86	19.1	377.5	2.74	21.5
SEQ#12	50 MPH CRUISE	53.3	0.32	1227.4		
SEQ#12	HIGHWAY FUEL ECON.	0.62	5.2	284.3	4.08	30.1
SEQ#12	4 SPD IDLE (NEUT)	149.4	0.07		46.3	
SEQ#12	4 SPD IDLE (2500)	20.4	0.23		140.1	
SEQ#12	4 SPD IDLE (NEUT)	102.2	0.04		62.9	
SEQ#12	FED 2 MODE (30)	76.4	0.50		882.5	
SEQ#12	FED 2 MODE (NEUT)	76.4	0.04		59.7	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE NEUTRAL 850 RPM, PROPANE GAIN 40  
RPM.

SEQ#15	FEDERAL TEST PROC.	1.61	20.8	387.2	2.54	20.9
SEQ#15	50 MPH CRUISE	46.0	0.32	1162.3		
SEQ#15	HIGHWAY FUEL ECON.	0.50	5.8	287.8	3.97	29.7
SEQ#15	4 SPD IDLE (NEUT)	66.8	0.09		56.5	
SEQ#15	4 SPD IDLE (2500)	12.5	0.18		146.7	
SEQ#15	4 SPD IDLE (NEUT)	33.8	0.06		41.6	
SEQ#15	FED 2 MODE (30)	63.5	0.46		909.3	
SEQ#15	FED 2 MODE (NEUT)	32.5	0.06		53.9	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 72 CO: 0.18 GAIN: 10

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
				HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6421	76	FORD	140 2.3(1CEF)	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, PCV VALVE AND FILTER, OIL AND OIL FILTER, AIR FILTER, FUEL FILTER, ADJUSTED PRIMARY VACUUM BREAK TO SPEC.

SEQ#16 FEDERAL TEST PROC.	1.86	21.0	382.6	2.44	21.1
SEQ#16 50 MPH CRUISE	50.0	0.32		1152.3	
SEQ#16 HIGHWAY FUEL ECON.	0.51	5.5	288.7	4.04	29.7
SEQ#16 4 SPD IDLE (NEUT)	47.4	0.11		31.8	
SEQ#16 4 SPD IDLE (2500)	12.1	0.17		121.6	
SEQ#16 4 SPD IDLE (NEUT)	49.7	0.08		35.7	
SEQ#16 FED 2 MODE (30)	66.8	0.51		851.7	
SEQ#16 FED 2 MODE (NEUT)	53.3	0.06		45.9	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 40 CO: 0.10 GAIN: 20

6422 76 FORD 140 2.3(1CEF)

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 17 CO: 0.04 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	1.36	11.3	488.2	3.99	17.4
SEQ#11 50 MPH CRUISE	46.0	0.15		1673.3	
SEQ#11 HIGHWAY FUEL ECON.	0.66	3.3	366.8	6.59	23.7
SEQ#11 4 SPD IDLE (NEUT)	23.6	0.03		39.9	
SEQ#11 4 SPD IDLE (2500)	26.6	0.14		129.6	
SEQ#11 4 SPD IDLE (NEUT)	21.0	0.03		40.4	
SEQ#11 4 SPD IDLE (DRIV)	53.9	0.05		43.8	
SEQ#11 FED 2 MODE (30)	109.2	0.21		1402.8	
SEQ#11 FED 2 MODE (NEUT)	26.6	0.04		51.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 750 RPM, PROPANE GAIN 50 RPM, USED UNIVERSAL PROPANE METHOD.

SEQ#12 FEDERAL TEST PROC.	1.33	10.6	479.4	4.34	17.7
SEQ#12 50 MPH CRUISE	55.9	0.15		1535.5	
SEQ#12 HIGHWAY FUEL ECON.	0.64	3.4	367.2	6.86	23.7
SEQ#12 4 SPD IDLE (NEUT)	34.5	0.01		48.8	
SEQ#12 4 SPD IDLE (2500)	25.0	0.15		143.2	
SEQ#12 4 SPD IDLE (NEUT)	24.6	0.01		50.0	
SEQ#12 4 SPD IDLE (DRIV)	49.0	0.01		98.8	
SEQ#12 FED 2 MODE (30)	105.2	0.28		1087.1	
SEQ#12 FED 2 MODE (NEUT)	28.6	0.02		55.7	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6422	76	FORD	140	2.3(1CEF)	(CON'T)					

COMMENT : ADJUSTED IDLE DRIVE 750 RPM, PROPANE GAIN 10 RPM.

SEQ#15 FEDERAL TEST PROC.	1.37	9.0	465.9	4.57	18.3
SEQ#15 50 MPH CRUISE	55.6	0.08	1773.5		
SEQ#15 HIGHWAY FUEL ECON.	0.66	2.4	366.3	7.26	23.8
SEQ#15 4 SPD IDLE (NEUT)	38.5	0.01		49.5	
SEQ#15 4 SPD IDLE (2500)	27.3	0.14		162.1	
SEQ#15 4 SPD IDLE (NEUT)	28.9	0.01		47.7	
SEQ#15 4 SPD IDLE (DRIV)	51.3	0.01		92.4	
SEQ#15 FED 2 MODE (30)	102.2	0.22		1237.4	
SEQ#15 FED 2 MODE (NEUT)	35.5	0.02		53.8	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, PCV VALVE AND FILTER, FUEL FILTER, OIL & OIL FILTER, AIR FILTER ELEMENT, SET TO SPEC.

SEQ#16 FEDERAL TEST PROC.	1.46	11.0	495.5	4.64	17.2
SEQ#16 50 MPH CRUISE	53.9	0.09	1690.8		
SEQ#16 HIGHWAY FUEL ECON.	0.69	3.2	368.9	7.43	23.6
SEQ#16 4 SPD IDLE (NEUT)	40.8	0.01		50.0	
SEQ#16 4 SPD IDLE (2500)	27.3	0.13		197.8	
SEQ#16 4 SPD IDLE (NEUT)	30.6	0.01		53.8	
SEQ#16 4 SPD IDLE (DRIV)	59.9	0.01		128.3	
SEQ#16 FED 2 MODE (30)	99.9	0.20		1357.7	
SEQ#16 FED 2 MODE (NEUT)	30.2	0.02		55.6	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 23 CO: 0.02 GAIN: 118

6426 76 FORD 302 302"A"(1CEF)

PRELIMINARY LANE TEST:  
CAT: P FUEL: P  
HC: 309 CO: 3.74 GAIN: 10

SEQ#11 FEDERAL TEST PROC.	4.88	106.4	480.1	1.33	13.4
SEQ#11 50 MPH CRUISE	226.2	5.46	201.6		
SEQ#11 HIGHWAY FUEL ECON.	3.38	121.1	359.2	0.66	15.8
SEQ#11 4 SPD IDLE (NEUT)	330.8	1.72		72.3	
SEQ#11 4 SPD IDLE (2500)	160.0	3.14		154.7	
SEQ#11 4 SPD IDLE (NEUT)	352.8	2.49		79.9	
SEQ#11 4 SPD IDLE (DRIV)	374.9	3.14		158.3	
SEQ#11 FED 2 MODE (30)	218.5	1.90		570.2	
SEQ#11 FED 2 MODE (NEUT)	359.5	2.37		68.3	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	CH <sub>4</sub>	
6426	76	FORD	302	302"A"(1CEF)	(CON'T)					

COMMENT : IDLE DRIVE 650 RPM, IDLE CO .25%.

SEQ#13	FEDERAL TEST PROC.	3.32	67.6	542.1	2.09	13.5
SEQ#13	50 MPH CRUISE	214.4	5.30		207.8	
SEQ#13	HIGHWAY FUEL ECON.	3.01	110.0	345.7	0.71	16.8
SEQ#13	4 SPD IDLE (NEUT)	443.7	0.02		180.1	
SEQ#13	4 SPD IDLE (2500)	142.0	1.93		155.0	
SEQ#13	4 SPD IDLE (NEUT)	339.6	0.01		217.3	
SEQ#13	4 SPD IDLE (DRIV)	146.0	0.01		758.2	
SEQ#13	FED 2 MODE (30)	171.7	0.94		684.4	
SEQ#13	FED 2 MODE (NEUT)	381.6	0.02		191.6	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE SPEED AND MIXTURE.

SEQ#15	FEDERAL TEST PROC.	3.36	70.5	539.2	2.06	13.4
SEQ#15	50 MPH CRUISE	216.1	5.42		242.6	
SEQ#15	HIGHWAY FUEL ECON.	3.19	113.9	366.4	0.74	16.0
SEQ#15	4 SPD IDLE (NEUT)	753.6	0.02		131.9	
SEQ#15	4 SPD IDLE (2500)	173.7	1.66		168.8	
SEQ#15	4 SPD IDLE (NEUT)	576.0	0.01		165.0	
SEQ#15	4 SPD IDLE (DRIV)	181.7	0.01		452.9	
SEQ#15	FED 2 MODE (30)	177.7	0.86		661.1	
SEQ#15	FED 2 MODE (NEUT)	479.4	0.02		156.5	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR, FUEL,  
CRANKCASE BREATHER FILTERS, ENGINE OIL, PCV VALVE,  
AIR PUMP AND BELT. COLD AIR DUCT RECONNECTED.

SEQ#16	FEDERAL TEST PROC.	2.09	17.2	590.4	2.85	14.2
SEQ#16	50 MPH CRUISE	57.6	0.19		619.7	
SEQ#16	HIGHWAY FUEL ECON.	1.01	20.1	489.5	1.82	16.9
SEQ#16	4 SPD IDLE (NEUT)	723.8	0.02		95.9	
SEQ#16	4 SPD IDLE (2500)	37.1	0.04		246.0	
SEQ#16	4 SPD IDLE (NEUT)	609.9	0.02		85.2	
SEQ#16	4 SPD IDLE (DRIV)	271.6	0.01		254.8	
SEQ#16	FED 2 MODE (30)	91.9	0.03		846.1	
SEQ#16	FED 2 MODE (NEUT)	434.8	0.02		132.9	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
r0: 2.21 GAIN: 40

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	CH <sub>4</sub>	
6427	76	FORD	302	302"A"(1CEF)						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 29 CO: 0.09 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	2.04	17.3	687.7	1.65	12.3
SEQ#11	50 MPH CRUISE	54.6	0.04		521.6	
SEQ#11	HIGHWAY FUEL ECON.	0.68	1.7	466.3	2.03	18.8
SEQ#11	4 SPD IDLE (NEUT)	156.0	3.48		68.9	
SEQ#11	4 SPD IDLE (2500)	28.3	0.03		149.6	
SEQ#11	4 SPD IDLE (NEUT)	14.4	0.02		57.8	
SEQ#11	4 SPD IDLE (DRIV)	157.7	2.07		73.8	
SEQ#11	FED 2 MODE (30)	68.5	0.02		280.0	
SEQ#11	FED 2 MODE (NEUT)	19.4	0.03		57.8	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 650 RPM, IDLE NEUTRAL 760 RPM,  
PROPANE GAIN 50 RPM.

SEQ#12	FEDERAL TEST PROC.	1.84	8.4	671.5	2.06	12.9
SEQ#12	50 MPH CRUISE	58.2	0.04		619.7	
SEQ#12	HIGHWAY FUEL ECON.	0.79	1.4	459.6	2.27	19.1
SEQ#12	4 SPD IDLE (NEUT)	157.0	0.20		79.9	
SEQ#12	4 SPD IDLE (2500)	42.1	0.03		174.2	
SEQ#12	4 SPD IDLE (NEUT)	87.3	0.01		72.4	
SEQ#12	4 SPD IDLE (DRIV)	70.1	0.01		130.3	
SEQ#12	FED 2 MODE (30)	75.7	0.02		428.6	
SEQ#12	FED 2 MODE (NEUT)	89.3	0.01		70.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 650 RPM, CO .25%, HC 170 PPM,  
PROPANE GAIN 90 RPM.

SEQ#15	FEDERAL TEST PROC.	2.07	7.9	672.4	2.08	12.8
SEQ#15	50 MPH CRUISE	58.6	0.04		559.0	
SEQ#15	HIGHWAY FUEL ECON.	0.78	1.5	466.6	2.19	18.8
SEQ#15	4 SPD IDLE (NEUT)	501.8	0.01		75.4	
SEQ#15	4 SPD IDLE (2500)	59.9	0.03		169.1	
SEQ#15	4 SPD IDLE (NEUT)	341.8	0.01		68.0	
SEQ#15	4 SPD IDLE (DRIV)	190.0	0.01		124.4	
SEQ#15	FED 2 MODE (30)	82.7	0.02		389.2	
SEQ#15	FED 2 MODE (NEUT)	284.7	0.01		65.4	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
				HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6427	76	FORD	302 302"A"(1CEF)	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, OIL AND OIL FILTER, PCV VALVE AND FILTER, AIR AND FUEL FILTER. SET TO SPEC.

SEQ#16	FEDERAL TEST PROC.	2.31	7.5	660.6	2.25	13.1
SEQ#16	50 MPH CRUISE	58.9	0.03	596.4		
SEQ#16	HIGHWAY FUEL ECON.	0.86	1.3	455.5	2.47	19.3
SEQ#16	4 SPD IDLE (NEUT)	639.4	0.01		66.5	
SEQ#16	4 SPD IDLE (2500)	93.3	0.02		148.3	
SEQ#16	4 SPD IDLE (NEUT)	437.0	0.01		58.6	
SEQ#16	4 SPD IDLE (DRIV)	247.5	0.00		98.8	
SEQ#16	FED 2 MODE (30)	82.3	0.01		341.7	
SEQ#16	FED 2 MODE (NEUT)	441.5	0.01		51.4	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 211 CO: 0.02 GAIN: 230

6428 76 FORD 351 351W"B"(1CET)

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 21 CO: 0.42 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	1.76	29.4	655.2	6.40	12.6
SEQ#11	50 MPH CRUISE	48.3	0.42	2141.7		
SEQ#11	HIGHWAY FUEL ECON.	0.84	17.1	495.6	7.70	16.9
SEQ#11	4 SPD IDLE (NEUT)	247.6	2.29		50.8	
SEQ#11	4 SPD IDLE (2500)	90.9	0.10		593.4	
SEQ#11	4 SPD IDLE (NEUT)	38.8	0.18		53.8	
SEQ#11	4 SPD IDLE (DRIV)	125.4	1.05		69.6	
SEQ#11	FED 2 MODE (30)	52.3	0.09		956.9	
SEQ#11	FED 2 MODE (NEUT)	35.5	0.28		44.9	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 650 RPM, PROPANE GAIN 60 RPM.

SEQ#12	FEDERAL TEST PROC.	1.54	18.7	705.8	6.57	12.0
SEQ#12	50 MPH CRUISE	43.7	0.49	2046.5		
SEQ#12	HIGHWAY FUEL ECON.	0.79	19.8	519.4	7.70	16.0
SEQ#12	4 SPD IDLE (NEUT)	330.8	0.13		82.1	
SEQ#12	4 SPD IDLE (2500)	62.5	0.13		594.4	
SEQ#12	4 SPD IDLE (NEUT)	70.4	0.07		63.4	
SEQ#12	4 SPD IDLE (DRIV)	75.7	0.09		210.4	
SEQ#12	FED 2 MODE (30)	49.7	0.16		949.4	
SEQ#12	FED 2 MODE (NEUT)	88.0	0.09		59.8	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6428	76	FORD	351	351W"B"(1CET)	(CON'T)					

COMMENT : ADJUSTED IDLE DRIVE 650 RPM, CO .1%, HC 110 PPM,  
PROPANE GAIN 90 RPM.

SEQ#15	FEDERAL TEST PROC.	1.60	21.0	695.9	6.44	12.1
SEQ#15	50 MPH CRUISE	44.7	0.46	2091.6		
SEQ#15	HIGHWAY FUEL ECON.	0.81	19.7	510.7	7.29	16.3
SEQ#15	4 SPD IDLE (NEUT)	397.1	0.11		73.4	
SEQ#15	4 SPD IDLE (2500)	66.8	0.12		498.4	
SEQ#15	4 SPD IDLE (NEUT)	122.1	0.06		56.5	
SEQ#15	4 SPD IDLE (DRIV)	87.6	0.05		201.9	
SEQ#15	FED 2 MODE (30)	46.4	0.13		951.9	
SEQ#15	FED 2 MODE (NEUT)	156.3	0.06		56.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, PCV VALVE  
AND FILTER, FUEL FILTER, OIL AND OIL FILTER, EGR  
BACK PRESSURE TRANSDUCER. SET TO SPEC.

SEQ#16	FEDERAL TEST PROC.	1.49	10.0	716.1	3.55	12.1
SEQ#16	50 MPH CRUISE	40.1	0.14	893.7		
SEQ#16	HIGHWAY FUEL ECON.	0.81	6.8	510.6	4.40	16.9
SEQ#16	4 SPD IDLE (NEUT)	247.6	0.09		77.4	
SEQ#16	4 SPD IDLE (2500)	204.1	0.08		167.0	
SEQ#16	4 SPD IDLE (NEUT)	102.2	0.05		56.5	
SEQ#16	4 SPD IDLE (DRIV)	63.5	0.04		189.8	
SEQ#16	FED 2 MODE (30)	39.8	0.04		379.1	
SEQ#16	FED 2 MODE (NEUT)	57.6	0.05		51.4	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 74 CO: 0.07 GAIN: 130

6429 76 FORD 351 351W"B"(1CET)

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 21 CO: 0.29 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	2.41	26.7	726.5	3.42	11.4
SEQ#11	50 MPH CRUISE	74.7	0.09	1029.5		
SEQ#11	HIGHWAY FUEL ECON.	1.20	4.0	505.2	4.78	17.2
SEQ#11	4 SPD IDLE (NEUT)	133.4	2.22		65.5	
SEQ#11	4 SPD IDLE (2500)	22.7	0.08		171.4	
SEQ#11	4 SPD IDLE (NEUT)	15.8	0.22		49.8	
SEQ#11	4 SPD IDLE (DRIV)	181.3	2.45		81.8	
SEQ#11	FED 2 MODE (30)	60.2	0.08		486.3	
SEQ#11	FED 2 MODE (NEUT)	20.7	0.26		48.5	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6429	76	FORD	351	351W"B"(1CET)	(CONT'D)					

COMMENT : ADJUSTED IDLE DRIVE 650 RPM, IDLE NEUTRAL 850 RPM,  
PROPANE GAIN 50 RPM. USED UNIVERSAL METHOD.

SEQ#12	FEDERAL TEST PROC.	1.96	10.5	703.8	3.57	12.2
SEQ#12	50 MPH CRUISE	60.2	0.08	1019.5		
SEQ#12	HIGHWAY FUEL ECON.	1.10	2.9	483.5	4.54	18.1
SEQ#12	4 SPD IDLE (NEUT)	72.8	0.13		87.3	
SEQ#12	4 SPD IDLE (2500)	26.0	0.09		177.9	
SEQ#12	4 SPD IDLE (NEUT)	44.1	0.07		69.2	
SEQ#12	4 SPD IDLE (DRIV)	62.9	0.08		210.4	
SEQ#12	FED 2 MODE (30)	85.0	0.06		383.3	
SEQ#12	FED 2 MODE (NEUT)	52.6	0.07		68.4	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 650 RPM, CO .25%, HC 100 PPM,  
PROPANE GAIN 70 RPM.

SEQ#15	FEDERAL TEST PROC.	1.79	11.8	710.8	3.60	12.1
SEQ#15	50 MPH CRUISE	60.5	0.08	1044.6		
SEQ#15	HIGHWAY FUEL ECON.	1.05	3.1	485.1	4.42	18.0
SEQ#15	4 SPD IDLE (NEUT)	89.3	0.14		87.5	
SEQ#15	4 SPD IDLE (2500)	19.7	0.08		174.7	
SEQ#15	4 SPD IDLE (NEUT)	57.6	0.06		65.7	
SEQ#15	4 SPD IDLE (DRIV)	74.4	0.11		208.8	
SEQ#15	FED 2 MODE (30)	38.8	0.05		445.8	
SEQ#15	FED 2 MODE (NEUT)	34.2	0.07		64.3	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED AIR, FUEL, OIL AND  
CRANKCASE BREATHER FILTERS, SPARK PLUGS, PCV  
VALVE, ENGINE OIL.

SEQ#16	FEDERAL TEST PROC.	2.24	14.4	697.3	3.41	12.2
SEQ#16	50 MPH CRUISE	27.9	0.03	347.8		
SEQ#16	HIGHWAY FUEL ECON.	1.03	2.9	484.5	4.49	18.0
SEQ#16	4 SPD IDLE (NEUT)	49.0	0.04		30.2	
SEQ#16	4 SPD IDLE (2500)	11.8	0.02		63.3	
SEQ#16	4 SPD IDLE (NEUT)	16.7	0.02		25.5	
SEQ#16	4 SPD IDLE (DRIV)	26.6	0.02		80.3	
SEQ#16	FED 2 MODE (30)	17.1	0.02		138.0	
SEQ#16	FED 2 MODE (NEUT)	26.0	0.02		22.7	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 24 CO: 0.11 GAIN: 100

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	CH <sub>4</sub>	
6431	76	FORD	400	351M/400(2CET)						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 127 CO: 0.03 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	1.66	10.6	773.0	2.02	11.2
SEQ#11	50 MPH CRUISE	25.3	0.02		327.5	
SEQ#11	HIGHWAY FUEL ECON.	0.53	0.9	537.5	2.17	16.4
SEQ#11	4 SPD IDLE (NEUT)	555.7	2.46		63.7	
SEQ#11	4 SPD IDLE (2500)	179.0	0.04		122.9	
SEQ#11	4 SPD IDLE (NEUT)	134.1	0.01		141.4	
SEQ#11	4 SPD IDLE (DRIV)	145.4	2.51		133.7	
SEQ#11	FED 2 MODE (30)	56.3	0.02		268.9	
SEQ#11	FED 2 MODE (NEUT)	243.6	0.03		87.8	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 650 RPM, PROPANE GAIN 60 RPM.  
USED UNIVERSAL CO METHOD.

SEQ#12	FEDERAL TEST PROC.	1.90	10.9	738.9	2.26	11.6
SEQ#12	50 MPH CRUISE	24.0	0.02		306.3	
SEQ#12	HIGHWAY FUEL ECON.	0.60	1.3	538.5	2.09	16.4
SEQ#12	4 SPD IDLE (NEUT)	639.4	0.05		91.3	
SEQ#12	4 SPD IDLE (2500)	138.0	0.02		128.0	
SEQ#12	4 SPD IDLE (NEUT)	206.2	0.01		127.2	
SEQ#12	4 SPD IDLE (DRIV)	59.2	0.00		306.3	
SEQ#12	FED 2 MODE (30)	65.8	0.01		271.9	
SEQ#12	FED 2 MODE (NEUT)	441.5	0.01		106.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 650 RPM, PROPANE GAIN 55 RPM.

SEQ#15	FEDERAL TEST PROC.	1.44	8.5	712.7	2.44	12.1
SEQ#15	50 MPH CRUISE	26.9	0.01		329.6	
SEQ#15	HIGHWAY FUEL ECON.	0.57	1.4	536.6	2.60	16.4
SEQ#15	4 SPD IDLE (NEUT)	639.4	0.02		86.9	
SEQ#15	4 SPD IDLE (2500)	214.4	0.02		121.1	
SEQ#15	4 SPD IDLE (NEUT)	282.5	0.01		117.0	
SEQ#15	4 SPD IDLE (DRIV)	69.1	0.00		231.5	
SEQ#15	FED 2 MODE (30)	94.9	0.01		241.6	
SEQ#15	FED 2 MODE (NEUT)	313.2	0.01		88.0	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6431	76	FORD	400	351M/400(2CET)	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR, FUEL, OIL AND CRANKCASE BREATHER FILTERS, PCV VALVE.

SEQ#16	FEDERAL TEST PROC.	1.60	9.3	722.5	2.06	12.0
SEQ#16	50 MPH CRUISE	20.7	0.02	290.1		
SEQ#16	HIGHWAY FUEL ECON.	0.54	0.8	530.2	2.07	16.6
SEQ#16	4 SPD IDLE (NEUT)	590.9	0.01		97.5	
SEQ#16	4 SPD IDLE (2500)	130.4	0.02		110.1	
SEQ#16	4 SPD IDLE (NEUT)	171.7	0.01		113.9	
SEQ#16	4 SPD IDLE (DRIV)	71.1	0.00		317.4	
SEQ#16	FED 2 MODE (30)	42.7	0.01		244.6	
SEQ#16	FED 2 MODE (NEUT)	211.1	0.00		82.9	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 137 CO: 0.02 GAIN: 170

6432 76 FORD 400 351M/400(2CET)

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 86 CO: 0.03 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	0.92	5.2	753.2	1.99	11.6
SEQ#11	50 MPH CRUISE	11.5	0.01	294.2		
SEQ#11	HIGHWAY FUEL ECON.	0.32	1.0	517.8	2.16	17.1
SEQ#11	4 SPD IDLE (NEUT)	466.4	4.36		43.2	
SEQ#11	4 SPD IDLE (2500)	141.0	0.03		126.2	
SEQ#11	4 SPD IDLE (NEUT)	413.8	4.67		41.6	
SEQ#11	4 SPD IDLE (DRIV)	265.3	5.62		54.9	
SEQ#11	FED 2 MODE (30)	34.5	0.01		335.6	
SEQ#11	FED 2 MODE (NEUT)	82.7	0.01		62.3	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 650 RPM, PROPANE GAIN 60 RPM.  
USED UNIVERSAL PROPANE METHOD.

SEQ#12	FEDERAL TEST PROC.	0.98	4.0	730.4	2.55	12.0
SEQ#12	50 MPH CRUISE	4.3	0.01	281.0		
SEQ#12	HIGHWAY FUEL ECON.	0.36	0.6	528.1	2.24	16.7
SEQ#12	4 SPD IDLE (NEUT)	348.8	0.01		122.1	
SEQ#12	4 SPD IDLE (2500)	145.0	0.02		117.5	
SEQ#12	4 SPD IDLE (NEUT)	188.7	0.01		143.7	
SEQ#12	4 SPD IDLE (DRIV)	71.8	0.00		312.4	
SEQ#12	FED 2 MODE (30)	41.1	0.01		239.6	
SEQ#12	FED 2 MODE (NEUT)	312.2	0.01		122.6	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 94 CO: 0.02 GAIN: 120

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6432	76	FORD	400	351M/400(2CET)	(CON'T)					

COMMENT : ADJUSTED IDLE SPEED AND MIXTURE TO SPEC.

SEQ#15 FEDERAL TEST PROC.	0.98	1.8	714.2	2.53	12.3
SEQ#15 50 MPH CRUISE	7.5	0.01		260.8	
SEQ#15 HIGHWAY FUEL ECON.	0.44	0.6	512.5	2.07	17.2
SEQ#15 4 SPD IDLE (NEUT)	387.7	0.01		116.5	
SEQ#15 4 SPD IDLE (2500)	137.4	0.02		111.6	
SEQ#15 4 SPD IDLE (NEUT)	217.8	0.01		110.8	
SEQ#15 4 SPD IDLE (DRIV)	51.6	0.00		296.2	
SEQ#15 FED 2 MODE (30)	60.5	0.01		279.0	
SEQ#15 FED 2 MODE (NEUT)	238.6	0.01		84.9	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 107 CO: 0.03 GAIN: 123

6433 76 FORD 460 460"A"(2CMT)

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 358 CO: 6.20 GAIN: 10

SEQ#11 FEDERAL TEST PROC.	3.82	111.8	691.2	3.46	10.1
SEQ#11 50 MPH CRUISE	62.5	1.90		1154.8	
SEQ#11 HIGHWAY FUEL ECON.	1.92	69.5	500.1	3.73	14.4
SEQ#11 4 SPD IDLE (NEUT)	235.6	5.27		36.2	
SEQ#11 4 SPD IDLE (2500)	76.1	1.69		259.8	
SEQ#11 4 SPD IDLE (NEUT)	240.3	5.04		40.8	
SEQ#11 4 SPD IDLE (DRIV)	255.0	6.35		42.0	
SEQ#11 FED 2 MODE (30)	105.5	2.19		515.6	
SEQ#11 FED 2 MODE (NEUT)	295.1	6.27		35.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : CONNECTED VACUUM LINE ROUTINGS.

SEQ#13 FEDERAL TEST PROC.	0.86	8.2	839.5	3.01	10.4
SEQ#13 50 MPH CRUISE	3.0	0.04		856.7	
SEQ#13 HIGHWAY FUEL ECON.	0.17	1.7	619.4	3.26	14.3
SEQ#13 4 SPD IDLE (NEUT)	965.3	0.03		47.7	
SEQ#13 4 SPD IDLE (2500)	16.7	0.05		236.3	
SEQ#13 4 SPD IDLE (NEUT)	433.5	0.06		38.1	
SEQ#13 4 SPD IDLE (DRIV)	115.8	0.02		83.0	
SEQ#13 FED 2 MODE (30)	46.7	0.08		418.5	
SEQ#13 FED 2 MODE (NEUT)	672.2	0.03		49.4	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 82 CO: 0.02 GAIN: 180

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6433	76	FORD	460	460"A"(2CMT)	(CON'T)					

COMMENT : ADJUSTED TIMING TO MANUFACTURER SPEC, CO .04%, HC 200 PPM, IDLE DRIVE 650 RPM.

SEQ#14	FEDERAL TEST PROC.	1.02	11.5	848.7	2.99	10.2
SEQ#14	50 MPH CRUISE	5.9	0.03	753.1		
SEQ#14	HIGHWAY FUEL ECON.	0.15	3.7	639.6	3.43	13.7
SEQ#14	4 SPD IDLE (NEUT)	1187.4	0.05		56.3	
SEQ#14	4 SPD IDLE (2500)	146.4	0.04		246.7	
SEQ#14	4 SPD IDLE (NEUT)	701.9	0.04		52.1	
SEQ#14	4 SPD IDLE (DRIV)	252.3	0.04		123.7	
SEQ#14	FED 2 MODE (30)	82.0	0.24		475.1	
SEQ#14	FED 2 MODE (NEUT)	768.5	0.03		54.7	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 175 CO: 0.04 GAIN: 180

COMMENT : ADJUSTED IDLE DRIVE 650 RPM, PROPANE GAIN 690 RPM.

SEQ#15	FEDERAL TEST PROC.	1.05	8.6	821.0	3.29	10.6
SEQ#15	50 MPH CRUISE	1.0	0.03	896.8		
SEQ#15	HIGHWAY FUEL ECON.	0.16	3.0	626.3	4.05	14.1
SEQ#15	4 SPD IDLE (NEUT)	1602.9	0.07		30.5	
SEQ#15	4 SPD IDLE (2500)	100.9	0.08		289.1	
SEQ#15	4 SPD IDLE (NEUT)	400.8	0.07		57.1	
SEQ#15	4 SPD IDLE (DRIV)	132.7	0.03		134.2	
SEQ#15	FED 2 MODE (30)	44.1	0.04		666.2	
SEQ#15	FED 2 MODE (NEUT)	1111.7	0.03		55.8	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, PCV VALVE, OIL AND OIL FILTER, FUEL FILTER, EGR BACKPRESSURE TRANSDUCER. ADJUSTED PRIMARY VACUUM BREAK AND CHOKE NOTCHES TO SPEC. REPLACED HEATED AIR INLET TUBE.

SEQ#16	FEDERAL TEST PROC.	3.38	3.2	772.7	2.28	11.3
SEQ#16	50 MPH CRUISE	12.5	0.04	386.2		
SEQ#16	HIGHWAY FUEL ECON.	0.59	1.5	576.1	2.46	15.3
SEQ#16	4 SPD IDLE (NEUT)	2035.0	0.06		16.4	
SEQ#16	4 SPD IDLE (2500)	159.7	0.06		115.4	
SEQ#16	4 SPD IDLE (NEUT)	899.0	0.08		12.2	
SEQ#16	4 SPD IDLE (DRIV)	532.8	0.06		35.7	
SEQ#16	FED 2 MODE (30)	75.1	0.02		284.1	
SEQ#16	FED 2 MODE (NEUT)	1738.4	0.06		11.4	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 168 CO: 0.02 GAIN: 270

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6434	76	BUIC	231	40E2Z						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 280 CO: 10.39 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	5.77	144.6	448.9	3.19	12.8
SEQ#11	50 MPH CRUISE	148.7	2.93	1650.7		
SEQ#11	HIGHWAY FUEL ECON.	1.38	35.0	354.9	4.51	21.4
SEQ#11	4 SPD IDLE (NEUT)	330.8	10.41		22.5	
SEQ#11	4 SPD IDLE (2500)	232.3	5.50		218.1	
SEQ#11	4 SPD IDLE (NEUT)	339.6	10.49		26.9	
SEQ#11	4 SPD IDLE (DRIV)	333.0	10.65		32.8	
SEQ#11	FED 2 MODE (30)	310.0	5.76		804.1	
SEQ#11	FED 2 MODE (NEUT)	346.2	10.65		33.7	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 600 RPM, PROPANE GAIN 50 RPM.  
USED UNIVERSAL METHOD. CLEARED OBSTRUCTION IN  
EGR VALVE.

SEQ#12	FEDERAL TEST PROC.	2.79	47.2	561.8	2.06	13.8
SEQ#12	50 MPH CRUISE	27.3	0.26	413.5		
SEQ#12	HIGHWAY FUEL ECON.	0.39	11.0	392.6	2.92	21.6
SEQ#12	4 SPD IDLE (NEUT)	65.8	0.80		71.2	
SEQ#12	4 SPD IDLE (2500)	95.9	1.78		98.3	
SEQ#12	4 SPD IDLE (NEUT)	78.7	1.17		74.6	
SEQ#12	4 SPD IDLE (DRIV)	40.4	0.02		225.4	
SEQ#12	FED 2 MODE (30)	195.4	2.01		233.2	
SEQ#12	FED 2 MODE (NEUT)	89.6	1.65		84.9	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 600 RPM, CO .19%, HC 100 PPM.  
USED UNIVERSAL METHOD.

SEQ#13	FEDERAL TEST PROC.	1.75	34.5	569.9	1.96	14.1
SEQ#13	50 MPH CRUISE	22.7	0.58	317.4		
SEQ#13	HIGHWAY FUEL ECON.	0.21	8.6	382.1	2.52	22.4
SEQ#13	4 SPD IDLE (NEUT)	13.8	0.44		45.5	
SEQ#13	4 SPD IDLE (2500)	75.4	2.10		85.5	
SEQ#13	4 SPD IDLE (NEUT)	9.8	0.27		27.7	
SEQ#13	4 SPD IDLE (DRIV)	11.2	0.09		197.1	
SEQ#13	FED 2 MODE (30)	183.7	2.07		199.3	
SEQ#13	FED 2 MODE (NEUT)	21.0	0.47		56.0	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 20 CO: 0.15 GAIN: 130

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	CH <sub>4</sub>	
6434	76	BUIC	231	4OE2Z	(CON'T)					

COMMENT : ADJUSTED IDLE DRIVE 600 RPM, CO .1%, HC 80 PPM,  
PROPANE GAIN 140 RPM. ADJUSTED TIMING TO SPEC.

SEQ#14	FEDERAL TEST PROC.	1.82	23.0	517.1	2.61	15.9
SEQ#14	50 MPH CRUISE	19.4	0.19	451.9		
SEQ#14	HIGHWAY FUEL ECON.	0.17	5.4	373.2	3.40	23.2
SEQ#14	4 SPD IDLE (NEUT)	59.2	0.01		70.9	
SEQ#14	4 SPD IDLE (2500)	78.0	1.20		81.6	
SEQ#14	4 SPD IDLE (NEUT)	39.8	0.01		77.7	
SEQ#14	4 SPD IDLE (DRIV)	115.1	0.01		495.4	
SEQ#14	FED 2 MODE (30)	174.3	1.33		259.8	
SEQ#14	FED 2 MODE (NEUT)	67.1	0.01		72.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 600 RPMs, CO .03%, HC 60 PPM.

SEQ#15	FEDERAL TEST PROC.	1.33	19.3	508.6	2.51	16.3
SEQ#15	50 MPH CRUISE	14.1	0.18	581.1		
SEQ#15	HIGHWAY FUEL ECON.	0.19	6.4	380.2	3.47	22.7
SEQ#15	4 SPD IDLE (NEUT)	43.7	0.01		75.4	
SEQ#15	4 SPD IDLE (2500)	48.3	0.94		71.0	
SEQ#15	4 SPD IDLE (NEUT)	28.9	0.01		80.6	
SEQ#15	4 SPD IDLE (DRIV)	9.8	0.01		343.7	
SEQ#15	FED 2 MODE (30)	114.5	1.00		267.9	
SEQ#15	FED 2 MODE (NEUT)	54.6	0.01		77.2	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR, FUEL,  
OIL AND CRANKCASE BREATHER FILTERS, CHARCOAL  
CANISTER FILTER, ENGINE OIL AND PCV VALVE.

SEQ#16	FEDERAL TEST PROC.	1.72	27.4	520.1	1.87	15.6
SEQ#16	50 MPH CRUISE	12.8	0.36	319.5		
SEQ#16	HIGHWAY FUEL ECON.	0.17	8.4	378.2	2.18	22.6
SEQ#16	4 SPD IDLE (NEUT)	52.0	0.01		63.2	
SEQ#16	4 SPD IDLE (2500)	51.0	1.46		66.9	
SEQ#16	4 SPD IDLE (NEUT)	41.1	0.01		63.3	
SEQ#16	4 SPD IDLE (DRIV)	17.4	0.01		211.4	
SEQ#16	FED 2 MODE (30)	128.1	1.47		191.4	
SEQ#16	FED 2 MODE (NEUT)	71.1	0.01		63.3	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 84 CO: 0.05 GAIN: 200

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	CH <sub>4</sub>	
6435	76	BUIC	231	40E2Z						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 148 CO: 3.94 GAIN: 20

SEQ#11	FEDERAL TEST PROC.	2.30	39.2	519.4	2.97	15.1
SEQ#11	50 MPH CRUISE	21.3	0.02	838.1		
SEQ#11	HIGHWAY FUEL ECON.	0.35	3.5	374.4	3.72	23.3
SEQ#11	4 SPD IDLE (NEUT)	103.9	1.31		61.7	
SEQ#11	4 SPD IDLE (2500)	17.7	0.04		128.8	
SEQ#11	4 SPD IDLE (NEUT)	122.8	1.92		61.5	
SEQ#11	4 SPD IDLE (DRIV)	193.7	1.83		112.6	
SEQ#11	FED 2 MODE (30)	57.9	0.03		349.8	
SEQ#11	FED 2 MODE (NEUT)	137.4	2.41		57.5	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 600 RPM, IDLE NEUTRAL 730 RPM,  
CO .45%, HC 65 PPM. USED UNIVERSAL METHOD.

SEQ#13	FEDERAL TEST PROC.	0.98	11.4	551.6	3.23	15.5
SEQ#13	50 MPH CRUISE	16.4	0.02	842.1		
SEQ#13	HIGHWAY FUEL ECON.	0.17	0.7	376.1	3.60	23.5
SEQ#13	4 SPD IDLE (NEUT)	8.5	0.01		68.1	
SEQ#13	4 SPD IDLE (2500)	12.1	0.02		135.7	
SEQ#13	4 SPD IDLE (NEUT)	8.5	0.01		75.4	
SEQ#13	4 SPD IDLE (DRIV)	19.4	0.01		208.8	
SEQ#13	FED 2 MODE (30)	42.1	0.05		463.0	
SEQ#13	FED 2 MODE (NEUT)	10.2	0.03		78.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED TIMING TO SPEC, IDLE CO .3%, HC 80 PPM.

SEQ#14	FEDERAL TEST PROC.	1.10	10.8	538.6	3.68	15.9
SEQ#14	50 MPH CRUISE	24.3	0.02	1039.5		
SEQ#14	HIGHWAY FUEL ECON.	0.20	0.9	367.1	4.48	24.0
SEQ#14	4 SPD IDLE (NEUT)	13.1	0.02		67.6	
SEQ#14	4 SPD IDLE (2500)	10.2	0.03		143.7	
SEQ#14	4 SPD IDLE (NEUT)	9.2	0.02		77.1	
SEQ#14	4 SPD IDLE (DRIV)	27.3	0.02		246.7	
SEQ#14	FED 2 MODE (30)	56.9	0.04		473.1	
SEQ#14	FED 2 MODE (NEUT)	16.7	0.04		76.4	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	CH <sub>4</sub>	
6435	76	BUIC	231	40E2Z	(CON'T)					

COMMENT : ADJUSTED IDLE DRIVE 600 RPM, CO .11%, HC 135 PPM,  
PROPANE GAIN 100 RPM.

SEQ#15 FEDERAL TEST PROC.	1.15	12.2	525.1	3.37	16.2
SEQ#15 50 MPH CRUISE	20.4	0.02	1049.6		
SEQ#15 HIGHWAY FUEL ECON.	0.22	0.7	369.8	4.26	23.9
SEQ#15 4 SPD IDLE (NEUT)	26.6	0.02		53.6	
SEQ#15 4 SPD IDLE (2500)	17.1	0.05		146.5	
SEQ#15 4 SPD IDLE (NEUT)	12.5	0.01		59.0	
SEQ#15 4 SPD IDLE (DRIV)	23.6	0.01		147.0	
SEQ#15 FED 2 MODE (30)	56.9	0.03		455.9	
SEQ#15 FED 2 MODE (NEUT)	30.9	0.03		62.5	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED AIR, FUEL, OIL AND  
CRANKCASE BREATHER FILTERS, PCV VALVE, CHARCOAL  
CANISTER FILTER AND SPARK PLUGS.

SEQ#16 FEDERAL TEST PROC.	1.19	10.4	527.6	3.54	16.2
SEQ#16 50 MPH CRUISE	19.4	0.02	951.9		
SEQ#16 HIGHWAY FUEL ECON.	0.20	0.5	375.9	4.56	23.5
SEQ#16 4 SPD IDLE (NEUT)	26.0	0.01		50.9	
SEQ#16 4 SPD IDLE (2500)	8.9	0.02		145.7	
SEQ#16 4 SPD IDLE (NEUT)	8.5	0.01		57.9	
SEQ#16 4 SPD IDLE (DRIV)	23.3	0.01		152.1	
SEQ#16 FED 2 MODE (30)	50.6	0.03		61.0	
SEQ#16 FED 2 MODE (NEUT)	23.3	0.02		58.4	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 21 CO: 0.03 GAIN: 180

6436 76 BUIC 350 40J2

PRELIMINARY LANE TEST:  
CAT: P FUEL: P  
HC: 796 CO: 0.12 GAIN: 72

SEQ#11 FEDERAL TEST PROC.	11.20	7.5	689.6	2.72	12.0
SEQ#11 50 MPH CRUISE	711.0	0.04	631.8		
SEQ#11 HIGHWAY FUEL ECON.	4.56	2.2	516.3	3.60	16.6
SEQ#11 4 SPD IDLE (NEUT)	134.4	0.01		36.6	
SEQ#11 4 SPD IDLE (2500)	422.6	0.03		168.3	
SEQ#11 4 SPD IDLE (NEUT)	201.1	0.01		42.3	
SEQ#11 4 SPD IDLE (DRIV)	161.0	0.01		50.6	
SEQ#11 FED 2 MODE (30)	685.9	0.03		301.3	
SEQ#11 FED 2 MODE (NEUT)	348.8	0.01		40.1	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS				FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	
6436	76	BUIC	350	40J2 (CON'T)					

COMMENT : REPLACED VACUUM ADVANCE DIAPHRAGM, EFE THERMAL VACUUM SWITCH DURING PRE-ADJUSTMENT. ADJUSTED IDLE CO TO .4%. 1600 PPM HYDROCARBON CAUSED BY A DEFECTIVE SPARK PLUG MISFIRING.

SEQ#13	FEDERAL TEST PROC.	19.96	15.5	700.4	5.32	11.3
SEQ#13	50 MPH CRUISE	972.4	0.04		2003.9	
SEQ#13	HIGHWAY FUEL ECON.	8.13	5.7	536.2	7.50	15.5
SEQ#13	4 SPD IDLE (NEUT)	1935.0	0.35		42.3	
SEQ#13	4 SPD IDLE (2500)	708.7	0.03		249.7	
SEQ#13	4 SPD IDLE (NEUT)	1738.4	0.13		48.3	
SEQ#13	4 SPD IDLE (DRIV)	1980.8	0.21		68.3	
SEQ#13	FED 2 MODE (30)	798.6	0.03		677.3	
SEQ#13	FED 2 MODE (NEUT)	1600.3	0.06		48.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE MIXTURE SCREWS BENT. ADJUSTED IDLE RPM TO SPEC.

SEQ#15	FEDERAL TEST PROC.	12.13	5.9	677.9	4.35	12.2
SEQ#15	50 MPH CRUISE	979.5	0.08		1625.7	
SEQ#15	HIGHWAY FUEL ECON.	7.45	5.4	488.6	5.63	17.0
SEQ#15	4 SPD IDLE (NEUT)	437.9	0.02		49.1	
SEQ#15	4 SPD IDLE (2500)	791.6	0.10		183.4	
SEQ#15	4 SPD IDLE (NEUT)	359.6	0.01		53.5	
SEQ#15	4 SPD IDLE (DRIV)	459.8	0.02		95.7	
SEQ#15	FED 2 MODE (30)	845.1	0.03		782.5	
SEQ#15	FED 2 MODE (NEUT)	588.6	0.00		64.7	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED CARBURETOR, EGR VALVE, SPARK PLUGS, AIR FILTER, FUEL FILTER, PCV VALVE, CRANKCASE BREATHER FILTER, ENGINE OIL & FILTER, CARBON CANISTER FILTER. ADJUSTED TIMING, IDLE SPEED, & MIXTURE TO SPEC.

SEQ#16	FEDERAL TEST PROC.	1.78	7.1	656.9	1.96	13.2
SEQ#16	50 MPH CRUISE	33.8	0.01		507.5	
SEQ#16	HIGHWAY FUEL ECON.	0.37	1.0	454.5	2.88	19.4
SEQ#16	4 SPD IDLE (NEUT)	287.7	0.00		49.9	
SEQ#16	4 SPD IDLE (2500)	24.3	0.01		144.2	
SEQ#16	4 SPD IDLE (NEUT)	113.8	0.00		54.0	
SEQ#16	4 SPD IDLE (DRIV)	58.2	0.00		84.5	
SEQ#16	FED 2 MODE (30)	71.4	0.00		216.5	
SEQ#16	FED 2 MODE (NEUT)	257.7	0.00		37.5	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 132 CO: 0.03 GAIN: 191

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE				FUEL ECON	FUEL MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c		
6439	76	CADI	500	60V4						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 470 CO: 1.08 GAIN: 20

SEQ#11	FEDERAL TEST PROC.	5.86	144.4	689.3	1.65	9.5
SEQ#11	50 MPH CRUISE	102.9	3.39		192.4	
SEQ#11	HIGHWAY FUEL ECON.	3.41	149.0	505.2	1.35	11.8
SEQ#11	4 SPD IDLE (NEUT)	335.2	0.56		34.5	
SEQ#11	4 SPD IDLE (2500)	105.5	3.70		66.2	
SEQ#11	4 SPD IDLE (NEUT)	300.0	0.59		36.1	
SEQ#11	4 SPD IDLE (DRIV)	194.7	0.56		83.0	
SEQ#11	FED 2 MODE (30)	137.7	3.56		125.7	
SEQ#11	FED 2 MODE (NEUT)	319.8	0.33		37.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE SPEED 710 RPM, IDLE CO .4%, ACHIEVED AT STEP  
5A OF IDLE CO CARBURETOR ADJUSTMENT PROCEDURE A-2.

SEQ#13	FEDERAL TEST PROC.	5.35	140.2	706.2	1.66	9.4
SEQ#13	50 MPH CRUISE	81.4	3.18		173.4	
SEQ#13	HIGHWAY FUEL ECON.	3.00	130.7	484.8	1.31	12.7
SEQ#13	4 SPD IDLE (NEUT)	260.7	0.06		60.6	
SEQ#13	4 SPD IDLE (2500)	85.0	3.36		67.8	
SEQ#13	4 SPD IDLE (NEUT)	229.2	0.07		62.4	
SEQ#13	4 SPD IDLE (DRIV)	60.2	0.04		151.4	
SEQ#13	FED 2 MODE (30)	116.8	3.10		142.9	
SEQ#13	FED 2 MODE (NEUT)	328.9	0.06		56.5	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE SPEED 600 RPM DRIVE, IDLE CO .15%, HC 170  
PPM.

SEQ#15	FEDERAL TEST PROC.	3.67	99.1	636.5	1.53	11.0
SEQ#15	50 MPH CRUISE	79.0	2.55		191.6	
SEQ#15	HIGHWAY FUEL ECON.	2.75	116.5	452.5	1.21	13.8
SEQ#15	4 SPD IDLE (NEUT)	811.2	0.12		51.1	
SEQ#15	4 SPD IDLE (2500)	80.7	2.74		80.9	
SEQ#15	4 SPD IDLE (NEUT)	238.8	0.06		57.0	
SEQ#15	4 SPD IDLE (DRIV)	70.1	0.03		107.5	
SEQ#15	FED 2 MODE (30)	111.2	2.51		178.3	
SEQ#15	FED 2 MODE (NEUT)	297.8	0.07		51.1	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6439	76	CADI	500	60V4	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUG, PCV VALVE AND FILTER, OIL AND OIL FILTER, PURGE CANISTER FILTER, AIR FILTER, FUEL FILTER. SET TO MANUFACTURER SPEC.

SEQ#16	FEDERAL TEST PROC.	5.61	66.1	730.4	2.45	10.4
SEQ#16	50 MPH CRUISE	97.9	2.72		411.4	
SEQ#16	HIGHWAY FUEL ECON.	2.56	79.3	481.7	1.54	14.4
SEQ#16	4 SPD IDLE (NEUT)	1204.0	0.07		30.4	
SEQ#16	4 SPD IDLE (2500)	111.5	3.06		134.9	
SEQ#16	4 SPD IDLE (NEUT)	946.0	0.08		36.5	
SEQ#16	4 SPD IDLE (DRIV)	535.5	0.05		72.6	
SEQ#16	FED 2 MODE (30)	123.8	0.95		529.7	
SEQ#16	FED 2 MODE (NEUT)	1264.1	0.08		26.4	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 805 CO: 0.13 GAIN: 50

6441 76 CHEV 085 10WI

## PRELIMINARY LANE TEST:

CAT: P FUEL: F  
HC: 310 CO: 7.45 GAIN: 16

SEQ#11	FEDERAL TEST PROC.	3.23	34.4	291.8	2.84	24.9
SEQ#11	50 MPH CRUISE	83.0	0.14		1598.1	
SEQ#11	HIGHWAY FUEL ECON.	0.90	3.5	236.4	3.57	36.3
SEQ#11	4 SPD IDLE (NEUT)	372.5	9.36		34.4	
SEQ#11	4 SPD IDLE (2500)	102.2	1.30		145.5	
SEQ#11	4 SPD IDLE (NEUT)	320.8	7.53		40.3	
SEQ#11	FED 2 MODE (30)	146.0	0.11		2251.9	
SEQ#11	FED 2 MODE (NEUT)	394.2	8.26		38.9	

NO FOLLOW UP LANE TEST DONE

COMMENT : NO MAINTENANCE PERFORMED DURING PRE-ADJUSTMENT. IDLE CO OF .5% WAS ACHIEVED AT STEP 3C OF CO ADJUSTMENT PROCEDURE M-1. IDLE NEUTRAL 770 RPM, CO .45%, HC 300 PPM.

SEQ#13	FEDERAL TEST PROC.	2.31	15.4	298.2	2.94	26.9
SEQ#13	50 MPH CRUISE	80.0	0.13		1575.6	
SEQ#13	HIGHWAY FUEL ECON.	0.91	2.9	225.9	3.66	38.0
SEQ#13	4 SPD IDLE (NEUT)	194.7	0.24		42.9	
SEQ#13	4 SPD IDLE (2500)	42.7	0.13		159.3	
SEQ#13	4 SPD IDLE (NEUT)	178.7	0.17		42.8	
SEQ#13	FED 2 MODE (30)	109.2	0.09		1918.8	
SEQ#13	FED 2 MODE (NEUT)	185.7	0.27		52.4	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	CH <sub>4</sub>	
6441	76	CHEV	085	10WI	(CON'T)					

COMMENT : ADJUSTED IDLE NEUTRAL 800 RPM, CO .2%, HC 400 PPM.

SEQ#15 FEDERAL TEST PROC.	2.48	14.5	320.8	3.26	25.2
SEQ#15 50 MPH CRUISE	98.9	0.18	2339.6		
SEQ#15 HIGHWAY FUEL ECON.	0.90	2.8	250.0	4.00	34.5
SEQ#15 4 SPD IDLE (NEUT)	230.5	0.15		70.9	
SEQ#15 4 SPD IDLE (2500)	49.3	0.17		205.2	
SEQ#15 4 SPD IDLE (NEUT)	327.3	0.17		74.8	
SEQ#15 FED 2 MODE (30)	133.7	0.13		2701.9	
SEQ#15 FED 2 MODE (NEUT)	323.0	0.17		83.4	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, FUEL FILTER,  
PCV VALVE, ENGINE OIL & FILTER, CARBON CANISTER  
FILTER. ADJUSTED IDLE MIXTURE & SPEED TO SPEC.

SEQ#16 FEDERAL TEST PROC.	2.69	14.6	327.4	3.31	24.7
SEQ#16 50 MPH CRUISE	95.2	0.14	2121.7		
SEQ#16 HIGHWAY FUEL ECON.	0.92	2.9	253.6	4.23	34.0
SEQ#16 4 SPD IDLE (NEUT)	218.8	0.34		65.0	
SEQ#16 4 SPD IDLE (2500)	69.8	0.17		212.3	
SEQ#16 4 SPD IDLE (NEUT)	231.2	0.23		66.4	
SEQ#16 FED 2 MODE (30)	131.4	0.12		2682.2	
SEQ#16 FED 2 MODE (NEUT)	190.0	0.44		77.4	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 14 CO: 0.00 GAIN: 23

COMMENT : REPLACED CATALYTIC CONVERTER.

SEQ#17 FEDERAL TEST PROC.	0.58	11.8	335.0	2.69	25.0
SEQ#17 50 MPH CRUISE	24.6	0.01	2094.1		
SEQ#17 HIGHWAY FUEL ECON.	0.01	0.5	263.9	4.40	33.5
SEQ#17 4 SPD IDLE (NEUT)	10.8	0.04		8.5	
SEQ#17 4 SPD IDLE (2500)	4.3	0.00		222.4	
SEQ#17 4 SPD IDLE (NEUT)	5.6	0.00		18.1	
SEQ#17 FED 2 MODE (30)	18.4	0.01		2402.2	
SEQ#17 FED 2 MODE (NEUT)	5.3	0.00		56.7	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 14 CO: 0.00 GAIN: 23

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6443	76	CHEV	305	10G2						

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 402 CO: 4.25 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	2.75	45.7	518.5	2.89	14.8
SEQ#11	50 MPH CRUISE	30.9	0.05	821.9		
SEQ#11	HIGHWAY FUEL ECON.	0.32	3.4	424.4	4.01	20.6
SEQ#11	4 SPD IDLE (NEUT)	394.2	3.51		35.5	
SEQ#11	4 SPD IDLE (2500)	31.5	0.03		182.4	
SEQ#11	4 SPD IDLE (NEUT)	379.0	3.99		34.3	
SEQ#11	4 SPD IDLE (DRIV)	308.0	4.51		48.6	
SEQ#11	FED 2 MODE (30)	60.5	0.12		273.0	
SEQ#11	FED 2 MODE (NEUT)	429.1	3.89		32.9	

NO FOLLOW UP LANE TEST DONE

COMMENT : RECONNECTED VAPOR CANISTER PURGE LINE AND CLEARED  
PCV LINE.

SEQ#12	FEDERAL TEST PROC.	1.72	16.7	552.9	2.92	15.2
SEQ#12	50 MPH CRUISE	16.1	0.01	224.4		
SEQ#12	HIGHWAY FUEL ECON.	0.16	1.0	429.6	3.94	20.6
SEQ#12	4 SPD IDLE (NEUT)	20.4	0.01		15.5	
SEQ#12	4 SPD IDLE (2500)	19.0	0.00		43.9	
SEQ#12	4 SPD IDLE (NEUT)	42.4	0.07		8.4	
SEQ#12	4 SPD IDLE (DRIV)	46.0	0.11		22.2	
SEQ#12	FED 2 MODE (30)	21.0	0.00		75.7	
SEQ#12	FED 2 MODE (NEUT)	50.6	0.06		10.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE RPM TO SPEC.

SEQ#15	FEDERAL TEST PROC.	0.85	5.5	560.4	2.92	15.5
SEQ#15	50 MPH CRUISE	14.8	0.01	706.6		
SEQ#15	HIGHWAY FUEL ECON.	0.10	0.3	423.3	3.81	20.9
SEQ#15	4 SPD IDLE (NEUT)	23.6	0.00		57.8	
SEQ#15	4 SPD IDLE (2500)	20.4	0.01		185.7	
SEQ#15	4 SPD IDLE (NEUT)	23.6	0.01		66.9	
SEQ#15	4 SPD IDLE (DRIV)	11.8	0.01		138.3	
SEQ#15	FED 2 MODE (30)	43.4	0.01		352.8	
SEQ#15	FED 2 MODE (NEUT)	53.9	0.01		55.3	

NO FOLLOW UP LANE TEST DONE

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	CH <sub>4</sub>	
6443	76	CHEV	305	10G2	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, CANISTER FILTER, OIL AND OIL FILTER, PCV FILTER AND VALVE, AIR FILTER, GAS FILTER, SET TO SPEC. ADJUSTED PRIMARY VACUUM BREAK TO .140.

SEQ#16 FEDERAL TEST PROC.	0.75	5.0	568.4	3.08	15.3
SEQ#16 50 MPH CRUISE	12.8	0.01	741.0		
SEQ#16 HIGHWAY FUEL ECON.	0.09	0.4	423.5	3.73	20.9
SEQ#16 4 SPD IDLE (NEUT)	36.8	0.00		53.8	
SEQ#16 4 SPD IDLE (2500)	18.1	0.00		181.6	
SEQ#16 4 SPD IDLE (NEUT)	32.2	0.00		59.5	
SEQ#16 4 SPD IDLE (DRIV)	15.1	0.00		157.0	
SEQ#16 FED 2 MODE (30)	48.7	0.01		345.7	
SEQ#16 FED 2 MODE (NEUT)	64.8	0.00		56.3	

FOLLOW UP LANE TEST:  
CAT: P FUEL: P  
HC: 27 CO: 0.02 GAIN: 182

6445 76 CHEV 305 10G2

PRELIMINARY LANE TEST:  
CAT: P FUEL: P  
HC: 430 CO: 7.22 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	2.63	62.9	503.4	2.70	14.5
SEQ#11 50 MPH CRUISE	5.6	0.00	386.2		
SEQ#11 HIGHWAY FUEL ECON.	0.25	4.8	445.1	4.37	19.6
SEQ#11 4 SPD IDLE (NEUT)	141.0	2.28		29.8	
SEQ#11 4 SPD IDLE (2500)	11.5	0.01		81.1	
SEQ#11 4 SPD IDLE (NEUT)	177.7	2.63		22.4	
SEQ#11 4 SPD IDLE (DRIV)	154.7	3.12		27.0	
SEQ#11 FED 2 MODE (30)	57.9	0.50		428.6	
SEQ#11 FED 2 MODE (NEUT)	199.7	2.51		21.6	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 600 RPM, PROPANE GAIN 60 RPM,  
USED UNIVERSAL PROPANE METHOD.

SEQ#12 FEDERAL TEST PROC.	0.94	6.7	569.1	3.16	15.2
SEQ#12 50 MPH CRUISE	4.9	0.00	520.6		
SEQ#12 HIGHWAY FUEL ECON.	0.10	0.4	444.0	4.49	19.9
SEQ#12 4 SPD IDLE (NEUT)	16.7	0.01		51.6	
SEQ#12 4 SPD IDLE (2500)	11.2	0.01		133.7	
SEQ#12 4 SPD IDLE (NEUT)	17.1	0.02		13.6	
SEQ#12 4 SPD IDLE (DRIV)	62.5	0.14		62.2	
SEQ#12 FED 2 MODE (30)	17.4	0.01		273.0	
SEQ#12 FED 2 MODE (NEUT)	24.3	0.00		53.0	

NO FOLLOW UP LANE TEST DONE

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	CH <sub>4</sub>	
6445	76	CHEV	305	10G2	(CON'T)					

COMMENT : ADJUSTED IDLE DRIVE 600 RPM, CO .15%, HC 260 PPM.  
ADJUSTED TO MANUFACTURER SPEC.

SEQ#15	FEDERAL TEST PROC.	0.64	2.2	568.5	3.44	15.5
SEQ#15	50 MPH CRUISE	8.9	0.00		471.1	
SEQ#15	HIGHWAY FUEL ECON.	0.08	0.1	448.8	4.42	19.8
SEQ#15 4	SPD IDLE (NEUT)	17.7	0.00		53.1	
SEQ#15 4	SPD IDLE (2500)	9.5	0.00		139.3	
SEQ#15 4	SPD IDLE (NEUT)	15.8	0.00		58.4	
SEQ#15 4	SPD IDLE (DRIV)	6.6	0.00		150.6	
SEQ#15	FED 2 MODE (30)	12.5	0.01		244.6	
SEQ#15	FED 2 MODE (NEUT)	46.0	0.00		51.5	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR, FUEL,  
OIL, CRANKCASE BREather, CHARCOAL CANISTER  
FILTERS, PCV VALVE, HOT AND COLD AIR DUCTS AND  
ENGINE OIL. ADJUSTED IDLE MIXTURE AND SPEED,  
IGNITION, TIMING.

SEQ#16	FEDERAL TEST PROC.	0.48	1.8	649.0	2.03	13.6
SEQ#16	50 MPH CRUISE	3.0	0.00		275.0	
SEQ#16	HIGHWAY FUEL ECON.	0.04	0.1	504.4	2.49	17.6
SEQ#16 4	SPD IDLE (NEUT)	22.7	0.00		27.5	
SEQ#16 4	SPD IDLE (2500)	2.3	0.00		97.7	
SEQ#16 4	SPD IDLE (NEUT)	20.0	0.00		28.0	
SEQ#16 4	SPD IDLE (DRIV)	9.2	0.00		49.8	
SEQ#16	FED 2 MODE (30)	5.9	0.00		128.3	
SEQ#16	FED 2 MODE (NEUT)	54.9	0.00		20.7	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 18 CO: 0.02 GAIN: 290

6446 76 CHEV 350 10K4J

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 1210 CO: 10.29 GAIN: 4

SEQ#11	FEDERAL TEST PROC.	3.59	71.4	582.5	3.78	12.6
SEQ#11	50 MPH CRUISE	32.9	0.31		921.8	
SEQ#11	HIGHWAY FUEL ECON.	0.77	10.8	450.9	3.85	18.9
SEQ#11 4	SPD IDLE (NEUT)	326.9	5.56		29.0	
SEQ#11 4	SPD IDLE (2500)	68.8	1.45		205.5	
SEQ#11 4	SPD IDLE (NEUT)	325.1	5.76		35.2	
SEQ#11 4	SPD IDLE (DRIV)	338.0	6.13		44.3	
SEQ#11	FED 2 MODE (30)	114.1	0.65		648.0	
SEQ#11	FED 2 MODE (NEUT)	315.4	5.64		42.8	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6446	76	CHEV	350	10K4J	(CON'T)					

COMMENT : UNPLUGGED EGR LINE DURING PROPANE PRE-ADJUSTMENT. IDLE RPM 600 DRIVE, PROPANE GAIN 50 RPM.

SEQ#12 FEDERAL TEST PROC.	2.27	29.7	559.1	3.20	14.5
SEQ#12 50 MPH CRUISE	50.6	0.33	1017.0		
SEQ#12 HIGHWAY FUEL ECON.	0.47	6.1	452.1	4.30	19.2
SEQ#12 4 SPD IDLE (NEUT)	197.7	1.24		32.1	
SEQ#12 4 SPD IDLE (2500)	53.0	0.92		214.0	
SEQ#12 4 SPD IDLE (NEUT)	188.0	1.24		37.4	
SEQ#12 4 SPD IDLE (DRIV)	225.8	1.50		55.7	
SEQ#12 FED 2 MODE (30)	119.4	1.17		499.4	
SEQ#12 FED 2 MODE (NEUT)	177.7	1.29		41.6	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE MIXTURE .5%, IDLE RPM 770 NEUTRAL, HC 270 PPM.

SEQ#13 FEDERAL TEST PROC.	2.06	24.2	579.6	3.23	14.2
SEQ#13 50 MPH CRUISE	23.0	0.19	681.3		
SEQ#13 HIGHWAY FUEL ECON.	0.43	6.7	426.1	3.97	20.3
SEQ#13 4 SPD IDLE (NEUT)	204.4	1.05		35.3	
SEQ#13 4 SPD IDLE (2500)	55.3	1.12		226.4	
SEQ#13 4 SPD IDLE (NEUT)	172.0	0.80		38.7	
SEQ#13 4 SPD IDLE (DRIV)	213.4	0.97		53.2	
SEQ#13 FED 2 MODE (30)	112.5	0.55		529.7	
SEQ#13 FED 2 MODE (NEUT)	191.7	0.85		41.8	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 600 RPM, CO .2%, HC 170 PPM, PROPANE GAIN 70 RPM.

SEQ#15 FEDERAL TEST PROC.	1.94	22.8	581.2	3.20	14.2
SEQ#15 50 MPH CRUISE	40.4	0.27	871.7		
SEQ#15 HIGHWAY FUEL ECON.	0.26	3.9	460.4	3.98	19.0
SEQ#15 4 SPD IDLE (NEUT)	161.3	0.47		32.8	
SEQ#15 4 SPD IDLE (2500)	50.0	1.07		227.3	
SEQ#15 4 SPD IDLE (NEUT)	144.0	0.35		32.1	
SEQ#15 4 SPD IDLE (DRIV)	187.7	0.58		63.8	
SEQ#15 FED 2 MODE (30)	100.5	0.49		578.3	
SEQ#15 FED 2 MODE (NEUT)	193.4	0.36		36.8	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6446	76	CHEV	350	10K4J	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, PCV VALVE, OIL AND OIL FILTER, AIR FILTER, PURGE CANISTER FILTER.

SEQ#16	FEDERAL TEST PROC.	0.70	7.5	584.7	3.43	14.8
SEQ#16	50 MPH CRUISE	10.5	0.01		1372.7	
SEQ#16	HIGHWAY FUEL ECON.	0.07	0.4	434.9	5.13	20.4
SEQ#16	4 SPD IDLE (NEUT)	21.7	0.00		53.3	
SEQ#16	4 SPD IDLE (2500)	0.0	0.01		305.3	
SEQ#16	4 SPD IDLE (NEUT)	7.2	0.00		55.0	
SEQ#16	4 SPD IDLE (DRIV)	5.3	0.00		102.6	
SEQ#16	FED 2 MODE (30)	11.8	0.01		613.6	
SEQ#16	FED 2 MODE (NEUT)	21.0	0.00		57.6	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 13 CO: 0.03 GAIN: 195

6447 76 CHEV 305 10G2

## PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 273 CO: 4.31 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	3.32	63.0	544.1	2.47	13.6
SEQ#11	50 MPH CRUISE	13.5	0.01		961.9	
SEQ#11	HIGHWAY FUEL ECON.	0.26	3.5	434.0	3.68	20.2
SEQ#11	4 SPD IDLE (NEUT)	424.7	5.07		43.5	
SEQ#11	4 SPD IDLE (2500)	27.9	0.04		153.4	
SEQ#11	4 SPD IDLE (NEUT)	260.4	2.59		61.2	
SEQ#11	4 SPD IDLE (DRIV)	278.9	3.55		113.4	
SEQ#11	FED 2 MODE (30)	29.6	0.01		481.2	
SEQ#11	FED 2 MODE (NEUT)	346.6	3.43		57.9	

NO FOLLOW UP LANE TEST DONE

COMMENT : PROPANE PRE-ADJUSTMENT PROCEDURE HAD NO EFFECT.

SEQ#12	FEDERAL TEST PROC.	1.88	27.5	563.6	2.85	14.5
SEQ#12	50 MPH CRUISE	13.5	0.01		1179.8	
SEQ#12	HIGHWAY FUEL ECON.	0.26	6.8	438.9	3.70	19.7
SEQ#12	4 SPD IDLE (NEUT)	14.4	0.01		66.9	
SEQ#12	4 SPD IDLE (2500)	0.0	0.00		160.3	
SEQ#12	4 SPD IDLE (NEUT)	79.7	0.09		31.5	
SEQ#12	4 SPD IDLE (DRIV)	142.7	0.29		114.7	
SEQ#12	FED 2 MODE (30)	18.1	0.00		414.5	
SEQ#12	FED 2 MODE (NEUT)	29.9	0.01		67.2	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6447	76	CHEV	305	10G2	(CON'T)					

COMMENT : ADJUSTED TIMING AS PRELIMINARY ADJUSTMENT TO MANUFACTURER SPEC, IDLE DRIVE 600 RPM, CO .15%, HC 250 PPM.

SEQ#15 FEDERAL TEST PROC.	1.04	18.3	581.2	4.19	14.5
SEQ#15 50 MPH CRUISE	16.4	0.01		1578.1	
SEQ#15 HIGHWAY FUEL ECON.	0.12	1.2	460.3	5.44	19.2
SEQ#15 4 SPD IDLE (NEUT)	31.2	0.00		68.4	
SEQ#15 4 SPD IDLE (2500)	9.8	0.00		186.8	
SEQ#15 4 SPD IDLE (NEUT)	42.4	0.00		75.8	
SEQ#15 4 SPD IDLE (DRIV)	17.7	0.00		237.6	
SEQ#15 FED 2 MODE (30)	25.3	0.00		535.8	
SEQ#15 FED 2 MODE (NEUT)	58.6	0.00		82.6	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, PCV VALVE AND FILTER, AIR FFILTER, OIL AND OIL FFILTER, PURGE CANISTER FFILTER, ADJUSTED CHOKE NOTCHES TO SPEC, CLEANED EGR VALVE. RECONNECTED FRESH AIR DUCT.

SEQ#16 FEDERAL TEST PROC.	1.12	5.6	590.8	4.08	14.7
SEQ#16 50 MPH CRUISE	11.8	0.01		1147.3	
SEQ#16 HIGHWAY FUEL ECON.	0.12	0.8	434.8	4.69	20.3
SEQ#16 4 SPD IDLE (NEUT)	15.8	0.01		109.8	
SEQ#16 4 SPD IDLE (2500)	3.0	0.00		176.2	
SEQ#16 4 SPD IDLE (NEUT)	15.4	0.00		122.1	
SEQ#16 4 SPD IDLE (DRIV)	9.5	0.01		562.1	
SEQ#16 FED 2 MODE (30)	25.0	0.01		520.6	
SEQ#16 FED 2 MODE (NEUT)	27.9	0.00		107.7	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 56 CO: 0.11 GAIN: 100

6448 76 CHEV 305 10G2

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 544 CO: 7.44 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	3.34	79.5	539.7	2.86	13.1
SEQ#11 50 MPH CRUISE	21.0	0.02		772.3	
SEQ#11 HIGHWAY FUEL ECON.	0.54	9.2	431.1	3.23	19.8
SEQ#11 4 SPD IDLE (NEUT)	508.3	5.37		22.4	
SEQ#11 4 SPD IDLE (2500)	71.4	0.02		129.3	
SEQ#11 4 SPD IDLE (NEUT)	437.9	5.28		37.0	
SEQ#11 4 SPD IDLE (DRIV)	318.7	6.50		37.9	
SEQ#11 FED 2 MODE (30)	124.1	1.10		615.7	
SEQ#11 FED 2 MODE (NEUT)	535.0	5.81		38.7	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON. MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	CH <sub>4</sub>	
6448	76	CHEV	305	10G2	(CON'T)					

COMMENT : IDLE NEUTRAL WITHOUT PROPANE 820 RPM, WITH  
PROPANE 870 RPM.

SEQ#12 FEDERAL TEST PROC.	1.59	16.6	586.9	3.21	14.4
SEQ#12 50 MPH CRUISE	12.5	0.01	812.8		
SEQ#12 HIGHWAY FUEL ECON.	0.20	2.5	421.1	3.54	20.9
SEQ#12 4 SPD IDLE (NEUT)	32.9	0.00		63.0	
SEQ#12 4 SPD IDLE (2500)	83.3	0.00		150.6	
SEQ#12 4 SPD IDLE (NEUT)	48.0	0.01		36.7	
SEQ#12 4 SPD IDLE (DRIV)	171.7	0.25		102.4	
SEQ#12 FED 2 MODE (30)	30.2	0.00		406.4	
SEQ#12 FED 2 MODE (NEUT)	102.2	0.01		39.8	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE NEUTRAL 830 RPM, .5% CO, 350 PPM HC.

SEQ#13 FEDERAL TEST PROC.	0.95	11.4	590.2	3.31	14.5
SEQ#13 50 MPH CRUISE	13.8	0.01	871.4		
SEQ#13 HIGHWAY FUEL ECON.	0.14	1.6	441.9	3.83	20.0
SEQ#13 4 SPD IDLE (NEUT)	35.5	0.01		89.2	
SEQ#13 4 SPD IDLE (2500)	80.4	0.00		154.4	
SEQ#13 4 SPD IDLE (NEUT)	37.1	0.01		91.9	
SEQ#13 4 SPD IDLE (DRIV)	16.4	0.01		271.9	
SEQ#13 FED 2 MODE (30)	28.3	0.01		429.6	
SEQ#13 FED 2 MODE (NEUT)	47.7	0.01		91.8	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE MIXTURE AND SPEED TO SPEC.

SEQ#15 FEDERAL TEST PROC.	0.75	8.6	589.7	3.43	14.7
SEQ#15 50 MPH CRUISE	15.1	0.00	838.1		
SEQ#15 HIGHWAY FUEL ECON.	0.19	3.0	427.5	3.58	20.5
SEQ#15 4 SPD IDLE (NEUT)	67.5	0.00		70.1	
SEQ#15 4 SPD IDLE (2500)	82.3	0.00		152.1	
SEQ#15 4 SPD IDLE (NEUT)	59.9	0.00		80.2	
SEQ#15 4 SPD IDLE (DRIV)	17.7	0.00		236.6	
SEQ#15 FED 2 MODE (30)	31.5	0.00		379.1	
SEQ#15 FED 2 MODE (NEUT)	66.5	0.00		74.5	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6448	76	CHEV	305	10G2	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, FUEL FILTER,  
OIL FILTER, PCV VALVE, CRANKCASE BREATHER FILTER,  
CARBON CANISTER FILTER, ENGINE OIL AND FILTER.  
ADJUSTED TO SPEC.

SEQ#16	FEDERAL TEST PROC.	1.53	18.3	598.9	3.33	14.0
SEQ#16	50 MPH CRUISE	16.1	0.01	894.3		
SEQ#16	HIGHWAY FUEL ECON.	0.27	5.0	434.4	3.77	20.0
SEQ#16	4 SPD IDLE (NEUT)	57.2	0.00		66.1	
SEQ#16	4 SPD IDLE (2500)	77.1	0.00		135.2	
SEQ#16	4 SPD IDLE (NEUT)	32.9	0.00		64.9	
SEQ#16	4 SPD IDLE (DRIV)	21.0	0.00		177.8	
SEQ#16	FED 2 MODE (30)	38.1	0.01		315.4	
SEQ#16	FED 2 MODE (NEUT)	59.9	0.00		71.3	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 40 CO: 0.02 GAIN: 100

6449 76 CHEV 350 10J2

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 278 CO: 5.18 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	2.96	70.4	587.2	4.83	12.6
SEQ#11	50 MPH CRUISE	17.1	0.03	1525.5		
SEQ#11	HIGHWAY FUEL ECON.	0.48	7.7	458.5	6.36	18.8
SEQ#11	4 SPD IDLE (NEUT)	217.1	4.07		27.3	
SEQ#11	4 SPD IDLE (2500)	26.0	0.18		282.0	
SEQ#11	4 SPD IDLE (NEUT)	203.4	3.48		44.9	
SEQ#11	4 SPD IDLE (DRIV)	231.9	3.87		56.8	
SEQ#11	FED 2 MODE (30)	99.6	1.00		692.5	
SEQ#11	FED 2 MODE (NEUT)	232.5	3.82		46.7	

NO FOLLOW UP LANE TEST DONE

## COMMENT : CORRECTED VACUUM LINE ROUTINGS.

SEQ#12	FEDERAL TEST PROC.	2.75	47.4	604.0	2.22	12.9
SEQ#12	50 MPH CRUISE	14.8	0.02	715.7		
SEQ#12	HIGHWAY FUEL ECON.	0.27	3.1	462.1	3.63	19.0
SEQ#12	4 SPD IDLE (NEUT)	117.5	0.27		42.7	
SEQ#12	4 SPD IDLE (2500)	10.2	0.02		149.6	
SEQ#12	4 SPD IDLE (NEUT)	54.3	0.05		33.0	
SEQ#12	4 SPD IDLE (DRIV)	97.6	0.12		76.6	
SEQ#12	FED 2 MODE (30)	28.9	0.02		173.2	
SEQ#12	FED 2 MODE (NEUT)	76.7	0.05		33.5	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6449	76	CHEV	350	10J2	(CON'T)					

COMMENT : ADJUSTED IDLE DRIVE 600 RPM, CO .5%, HC 180 PPM. USED UNIVERSAL CO METHOD.

SEQ#13	FEDERAL TEST PROC.	1.77	28.4	656.8	2.69	12.6
SEQ#13	50 MPH CRUISE	21.7	0.03	699.6		
SEQ#13	HIGHWAY FUEL ECON.	0.26	3.6	497.5	3.95	17.6
SEQ#13	4 SPD IDLE (NEUT)	50.3	0.00		54.9	
SEQ#13	4 SPD IDLE (2500)	12.5	0.01		142.1	
SEQ#13	4 SPD IDLE (NEUT)	37.8	0.03		39.8	
SEQ#13	4 SPD IDLE (DRIV)	86.3	0.10		75.0	
SEQ#13	FED 2 MODE (30)	23.0	0.01		176.8	
SEQ#13	FED 2 MODE (NEUT)	94.3	0.07		30.2	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 600 RPM, CO 1.9%, HC 260 PPM. SET TO SPEC.

SEQ#15	FEDERAL TEST PROC.	1.82	31.4	651.4	2.79	12.6
SEQ#15	50 MPH CRUISE	19.4	0.03	649.0		
SEQ#15	HIGHWAY FUEL ECON.	0.21	3.1	493.1	4.03	17.8
SEQ#15	4 SPD IDLE (NEUT)	100.9	0.21		45.2	
SEQ#15	4 SPD IDLE (2500)	15.4	0.01		139.3	
SEQ#15	4 SPD IDLE (NEUT)	32.9	0.02		42.4	
SEQ#15	4 SPD IDLE (DRIV)	55.3	0.06		63.9	
SEQ#15	FED 2 MODE (30)	26.3	0.02		200.4	
SEQ#15	FED 2 MODE (NEUT)	89.0	0.17		32.3	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR FILTER, FUEL FILTER, PCV VALVE, CRANKCASE BREATHER FILTER, ENGINE OIL AND FILTER, CARBON CANISTER FILTER, EFE THERMAL VACUUM SWITCH, ADJUSTED CHOKE, IDLE SPEED & MIXTURE.

SEQ#16	FEDERAL TEST PROC.	0.96	15.2	636.0	2.42	13.4
SEQ#16	50 MPH CRUISE	11.2	0.01	504.5		
SEQ#16	HIGHWAY FUEL ECON.	0.14	0.8	484.8	3.34	18.2
SEQ#16	4 SPD IDLE (NEUT)	154.7	1.78		44.7	
SEQ#16	4 SPD IDLE (2500)	31.5	0.01		143.4	
SEQ#16	4 SPD IDLE (NEUT)	70.4	0.00		43.7	
SEQ#16	4 SPD IDLE (DRIV)	27.3	0.00		76.3	
SEQ#16	FED 2 MODE (30)	21.7	0.01		190.9	
SEQ#16	FED 2 MODE (NEUT)	80.0	0.00		42.7	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 43 CO: 0.02 GAIN: 163

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6450	76	CHEV	350	10J2						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 195 CO: 5.25 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	3.97	134.5	605.6	2.07	10.7
SEQ#11 50 MPH CRUISE	18.1	0.19	572.2		
SEQ#11 HIGHWAY FUEL ECON.	0.63	18.0	477.4	3.49	17.5
SEQ#11 4 SPD IDLE (NEUT)	208.8	4.24		70.4	
SEQ#11 4 SPD IDLE (2500)	89.6	2.71		115.4	
SEQ#11 4 SPD IDLE (NEUT)	203.4	4.23		74.1	
SEQ#11 4 SPD IDLE (DRIV)	248.3	5.16		136.7	
SEQ#11 FED 2 MODE (30)	145.7	3.36		117.8	
SEQ#11 FED 2 MODE (NEUT)	206.1	4.21		75.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : 50 RPM PROPANE GAIN ACHEIVED AT STEP 9 OF PROPANE  
ADJUSTMENT PROCEDURE A-2.

SEQ#12 FEDERAL TEST PROC.	2.73	69.5	623.4	2.17	12.0
SEQ#12 50 MPH CRUISE	17.1	0.13	473.1		
SEQ#12 HIGHWAY FUEL ECON.	0.39	10.1	455.9	3.15	18.8
SEQ#12 4 SPD IDLE (NEUT)	47.4	0.42		46.0	
SEQ#12 4 SPD IDLE (2500)	46.4	1.55		119.3	
SEQ#12 4 SPD IDLE (NEUT)	55.6	0.70		53.7	
SEQ#12 4 SPD IDLE (DRIV)	139.4	1.13		142.6	
SEQ#12 FED 2 MODE (30)	104.9	2.00		128.3	
SEQ#12 FED 2 MODE (NEUT)	76.7	0.85		59.5	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE CO OF .5% ACHEIVED AT STEP 5C OF CO  
ADJUSTMENT PROCEDURE A-2.

SEQ#13 FEDERAL TEST PROC.	2.41	55.4	642.1	2.11	12.0
SEQ#13 50 MPH CRUISE	11.8	0.05	553.0		
SEQ#13 HIGHWAY FUEL ECON.	0.34	9.3	463.8	3.16	18.5
SEQ#13 4 SPD IDLE (NEUT)	9.2	0.00		65.8	
SEQ#13 4 SPD IDLE (2500)	36.5	1.46		111.6	
SEQ#13 4 SPD IDLE (NEUT)	7.5	0.01		70.6	
SEQ#13 4 SPD IDLE (DRIV)	77.1	0.29		92.6	
SEQ#13 FED 2 MODE (30)	100.5	1.84		122.1	
SEQ#13 FED 2 MODE (NEUT)	20.7	0.01		61.6	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON. MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6450	76	CHEV	350	10J2	(CON'T)					

COMMENT : ADJUSTED IDLE MIXTURE AND IDLE SPEED TO  
MANUFACTURERS SPEC. 50 RPM LEAN DROP IN D. IDLE RPM  
600 D.

SEQ#15	FEDERAL TEST PROC.	1.50	34.0	663.8	2.20	12.3
SEQ#15	50 MPH CRUISE	7.5	0.01	681.4		
SEQ#15	HIGHWAY FUEL ECON.	0.32	9.8	470.2	3.02	18.2
SEQ#15	4 SPD IDLE (NEUT)	25.0	0.00		49.9	
SEQ#15	4 SPD IDLE (2500)	24.3	1.05		107.7	
SEQ#15	4 SPD IDLE (NEUT)	5.6	0.00		66.2	
SEQ#15	4 SPD IDLE (DRIV)	5.9	0.00		169.6	
SEQ#15	FED 2 MODE (30)	85.0	1.17		131.6	
SEQ#15	FED 2 MODE (NEUT)	30.6	0.01		53.8	

NO FOLLOW UP LANE TEST DONE

COMMENT : REPLACED SPARK PLUGS, AIR, FUEL, CRANKCASE BREATHER,  
OIL, & CARBON CANISTER FILTERS, PCV VALVE, AND  
ENGINE OIL. TIGHTENED CARB. THROTTLE BODY SCREWS, &  
& FUEL LINE CONNECTION. ADJUSTED CHOKE, IDLE MIXTURE  
& RPM TO MANUF. SPECS.

SEQ#16	FEDERAL TEST PROC.	1.02	21.1	654.2	2.05	12.9
SEQ#16	50 MPH CRUISE	3.6	0.00	701.6		
SEQ#16	HIGHWAY FUEL ECON.	0.14	3.9	468.4	3.15	18.7
SEQ#16	4 SPD IDLE (NEUT)	28.9	0.00		56.8	
SEQ#16	4 SPD IDLE (2500)	22.0	1.03		129.6	
SEQ#16	4 SPD IDLE (NEUT)	24.6	0.00		73.7	
SEQ#16	4 SPD IDLE (DRIV)	8.5	0.00		212.4	
SEQ#16	FED 2 MODE (30)	62.5	0.90		166.0	
SEQ#16	FED 2 MODE (NEUT)	44.4	0.00		55.0	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 43 CO: 0.70 GAIN: 175

6452 76 CHEV 400 10K4J

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 147 CO: 3.00 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	1.60	34.7	698.7	5.51	11.7
SEQ#11	50 MPH CRUISE	3.3	0.01	1122.2		
SEQ#11	HIGHWAY FUEL ECON.	0.18	1.3	543.6	6.18	16.3
SEQ#11	4 SPD IDLE (NEUT)	131.4	1.45		45.2	
SEQ#11	4 SPD IDLE (2500)	3.3	0.01		204.2	
SEQ#11	4 SPD IDLE (NEUT)	116.8	1.59		47.3	
SEQ#11	4 SPD IDLE (DRIV)	142.4	1.40		79.3	
SEQ#11	FED 2 MODE (30)	8.2	0.01		739.0	
SEQ#11	FED 2 MODE (NEUT)	155.3	1.88		50.2	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6452	76	CHEV	400	10K4J	(CON'T)					

COMMENT : IDLE RPM WITHOUT PROPANE 730 RPM, WITH PROPANE  
790 RPM.

SEQ#12 FEDERAL TEST PROC.	1.10	21.1	708.9	5.95	11.9
SEQ#12 50 MPH CRUISE	0.0	0.01		1305.1	
SEQ#12 HIGHWAY FUEL ECON.	0.09	0.5	552.1	6.92	16.0
SEQ#12 4 SPD IDLE (NEUT)	25.3	0.01		55.6	
SEQ#12 4 SPD IDLE (2500)	0.0	0.01		211.4	
SEQ#12 4 SPD IDLE (NEUT)	14.1	0.01		60.2	
SEQ#12 4 SPD IDLE (DRIV)	21.3	0.01		114.4	
SEQ#12 FED 2 MODE (30)	12.8	0.01		876.5	
SEQ#12 FED 2 MODE (NEUT)	105.2	0.18		53.4	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED TIMING, CURB IDLE RPM TO SPEC. ADJUSTED  
IDLE MIXTURE.

SEQ#15 FEDERAL TEST PROC.	0.85	19.2	699.1	8.35	12.1
SEQ#15 50 MPH CRUISE	10.5	0.00		1720.9	
SEQ#15 HIGHWAY FUEL ECON.	0.07	0.5	547.9	9.36	16.2
SEQ#15 4 SPD IDLE (NEUT)	67.5	0.01		43.9	
SEQ#15 4 SPD IDLE (2500)	1.0	0.01		228.3	
SEQ#15 4 SPD IDLE (NEUT)	27.6	0.00		51.3	
SEQ#15 4 SPD IDLE (DRIV)	37.1	0.00		121.6	
SEQ#15 FED 2 MODE (30)	12.5	0.01		1042.1	
SEQ#15 FED 2 MODE (NEUT)	51.6	0.00		61.3	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR FILTER,  
FUEL FILTER, PCV VALVE, CRANKCASE BREATHER FILTER,  
ENGINE OIL AND FILTER, EGR VALVE, FRESH AIR  
INTAKE TUBE, OIL FILTER CAPS, ADJUSTED CHOKE IDLE  
SPEED & MIXTURE.

SEQ#16 FEDERAL TEST PROC.	0.60	4.3	712.5	4.30	12.3
SEQ#16 50 MPH CRUISE	3.6	0.00		801.6	
SEQ#16 HIGHWAY FUEL ECON.	0.08	0.3	546.1	5.46	16.2
SEQ#16 4 SPD IDLE (NEUT)	82.0	0.00		33.2	
SEQ#16 4 SPD IDLE (2500)	5.9	0.00		143.2	
SEQ#16 4 SPD IDLE (NEUT)	59.9	0.00		34.1	
SEQ#16 4 SPD IDLE (DRIV)	37.1	0.00		63.4	
SEQ#16 FED 2 MODE (30)	17.1	0.00		343.7	
SEQ#16 FED 2 MODE (NEUT)	90.3	0.00		35.3	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 35 CO: 0.01 GAIN: 218

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	CH <sub>4</sub>	
6453	76	OLDS	260	30H2J						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 539 CO: 8.91 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	2.29	46.5	564.1	2.68	13.8
SEQ#11	50 MPH CRUISE	13.8	0.01	1004.5		
SEQ#11	HIGHWAY FUEL ECON.	0.39	3.9	441.0	3.54	19.8
SEQ#11	4 SPD IDLE (NEUT)	459.3	5.75		34.4	
SEQ#11	4 SPD IDLE (2500)	48.7	0.02		234.5	
SEQ#11	4 SPD IDLE (NEUT)	454.9	6.04		40.5	
SEQ#11	4 SPD IDLE (DRIV)	346.2	6.85		53.7	
SEQ#11	FED 2 MODE (30)	36.8	0.01		726.9	
SEQ#11	FED 2 MODE (NEUT)	414.8	5.79		50.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE DRIVE 550 RPM, PROPANE GAIN 50 RPM NEUTRAL.

SEQ#12	FEDERAL TEST PROC.	1.49	18.1	590.2	2.74	14.2
SEQ#12	50 MPH CRUISE	13.5	0.01	934.3		
SEQ#12	HIGHWAY FUEL ECON.	0.26	2.6	444.9	3.53	19.7
SEQ#12	4 SPD IDLE (NEUT)	6.6	0.01		56.0	
SEQ#12	4 SPD IDLE (2500)	20.7	0.01		284.1	
SEQ#12	4 SPD IDLE (NEUT)	68.5	0.03		12.5	
SEQ#12	4 SPD IDLE (DRIV)	160.3	0.20		77.0	
SEQ#12	FED 2 MODE (30)	27.6	0.01		906.8	
SEQ#12	FED 2 MODE (NEUT)	241.3	0.19		41.3	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE DRIVE 550 RPM, IDLE CO .35%.

SEQ#13	FEDERAL TEST PROC.	1.15	14.8	565.2	2.70	15.0
SEQ#13	50 MPH CRUISE	16.7	0.01	916.8		
SEQ#13	HIGHWAY FUEL ECON.	0.20	2.4	438.7	3.78	20.0
SEQ#13	4 SPD IDLE (NEUT)	3.3	0.00		86.4	
SEQ#13	4 SPD IDLE (2500)	11.5	0.00		296.2	
SEQ#13	4 SPD IDLE (NEUT)	6.9	0.00		78.3	
SEQ#13	4 SPD IDLE (DRIV)	0.7	0.00		267.9	
SEQ#13	FED 2 MODE (30)	26.3	0.01		894.3	
SEQ#13	FED 2 MODE (NEUT)	28.6	0.01		87.5	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6453	76	OLDS	260	30H2J	(CON'T)					

COMMENT : IDLE SPEED AND MIXTURE SET TO SPEC.

SEQ#15 FEDERAL TEST PROC.	0.77	9.9	582.7	2.71	14.8
SEQ#15 50 MPH CRUISE	12.1	0.01		894.3	
SEQ#15 HIGHWAY FUEL ECON.	0.18	2.1	453.2	3.73	19.4
SEQ#15 4 SPD IDLE (NEUT)	28.6	0.01		94.7	
SEQ#15 4 SPD IDLE (2500)	22.3	0.01		259.8	
SEQ#15 4 SPD IDLE (NEUT)	57.9	0.01		71.8	
SEQ#15 4 SPD IDLE (DRIV)	12.8	0.01		201.1	
SEQ#15 FED 2 MODE (30)	19.0	0.01		799.6	
SEQ#15 FED 2 MODE (NEUT)	83.0	0.01		78.9	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 37 CO: 0.02 GAIN: 100

6454 76 OLDS 350 30J4

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 147 CO: 4.60 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	1.53	37.0	669.0	3.79	12.1
SEQ#11 50 MPH CRUISE	6.6	0.01		741.0	
SEQ#11 HIGHWAY FUEL ECON.	0.16	1.7	509.8	3.78	17.3
SEQ#11 4 SPD IDLE (NEUT)	189.4	3.87		33.6	
SEQ#11 4 SPD IDLE (2500)	2.3	0.01		212.7	
SEQ#11 4 SPD IDLE (NEUT)	157.3	3.75		42.0	
SEQ#11 4 SPD IDLE (DRIV)	175.7	3.91		46.7	
SEQ#11 FED 2 MODE (30)	8.5	0.01		519.6	
SEQ#11 FED 2 MODE (NEUT)	168.3	4.00		47.2	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 600 RPM, 60 RPM PROPANE GAIN.

SEQ#12 FEDERAL TEST PROC.	1.57	7.6	634.8	2.42	13.6
SEQ#12 50 MPH CRUISE	8.9	0.01		495.4	
SEQ#12 HIGHWAY FUEL ECON.	0.16	0.3	462.6	2.47	19.1
SEQ#12 4 SPD IDLE (NEUT)	119.1	0.00		14.8	
SEQ#12 4 SPD IDLE (2500)	31.5	0.01		157.5	
SEQ#12 4 SPD IDLE (NEUT)	158.7	0.00		12.1	
SEQ#12 4 SPD IDLE (DRIV)	132.7	0.00		33.9	
SEQ#12 FED 2 MODE (30)	50.6	0.00		193.4	
SEQ#12 FED 2 MODE (NEUT)	308.6	0.00		10.3	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6454	76	OLDS	350	30J4 (CON'T)						

COMMENT : ADJUSTED IDLE DRIVE 550 RPM, CO .4%, HC 900 PPM.  
USED UNIVERSAL CO METHOD.

SEQ#13 FEDERAL TEST PROC.	2.13	22.4	665.5	1.70	12.5
SEQ#13 50 MPH CRUISE	22.7	0.01	316.4		
SEQ#13 HIGHWAY FUEL ECON.	0.22	1.0	513.7	2.04	17.2
SEQ#13 4 SPD IDLE (NEUT)	773.1	0.37		34.2	
SEQ#13 4 SPD IDLE (2500)	38.5	0.00		135.2	
SEQ#13 4 SPD IDLE (NEUT)	383.4	1.17		37.6	
SEQ#13 4 SPD IDLE (DRIV)	278.1	1.25		49.3	
SEQ#13 FED 2 MODE (30)	42.7	0.00		140.3	
SEQ#13 FED 2 MODE (NEUT)	426.9	2.32		35.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE MIXTURE & SPEED TO SPEC.

SEQ#15 FEDERAL TEST PROC.	0.78	7.6	664.4	1.67	13.1
SEQ#15 50 MPH CRUISE	7.2	0.01	297.2		
SEQ#15 HIGHWAY FUEL ECON.	0.11	0.8	502.9	1.83	17.6
SEQ#15 4 SPD IDLE (NEUT)	50.6	0.00		46.0	
SEQ#15 4 SPD IDLE (2500)	15.1	0.01		135.7	
SEQ#15 4 SPD IDLE (NEUT)	48.0	0.00		52.4	
SEQ#15 4 SPD IDLE (DRIV)	35.8	0.00		74.9	
SEQ#15 FED 2 MODE (30)	33.2	0.01		132.4	
SEQ#15 FED 2 MODE (NEUT)	109.8	0.00		50.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, PCV VALVE,  
FUEL FILTER, AIR FILTER ELEMENT, OIL & OIL FILTER,  
CANISTER FILTER.

SEQ#16 FEDERAL TEST PROC.	0.74	6.9	686.1	1.72	12.7
SEQ#16 50 MPH CRUISE	5.9	0.00	275.0		
SEQ#16 HIGHWAY FUEL ECON.	0.12	1.0	535.6	2.55	16.5
SEQ#16 4 SPD IDLE (NEUT)	82.0	0.00		43.4	
SEQ#16 4 SPD IDLE (2500)	9.5	0.00		133.4	
SEQ#16 4 SPD IDLE (NEUT)	74.1	0.00		56.0	
SEQ#16 4 SPD IDLE (DRIV)	31.5	0.00		103.6	
SEQ#16 FED 2 MODE (30)	28.9	0.00		130.3	
SEQ#16 FED 2 MODE (NEUT)	127.4	0.00		51.9	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 210 CO: 0.25 GAIN: 92

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6457	76	OLDS	455	30S4						

**PRELIMINARY LANE TEST:**

CAT: F FUEL: F  
HC: 302 CO: 7.28 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	4.04	81.9	620.6	7.15	11.6
SEQ#11 50 MPH CRUISE	61.5	0.43	2692.0		
SEQ#11 HIGHWAY FUEL ECON.	1.86	23.2	454.5	8.47	17.9
SEQ#11 4 SPD IDLE (NEUT)	292.4	5.70		43.7	
SEQ#11 4 SPD IDLE (2500)	2375.4	0.25		2036.5	
SEQ#11 4 SPD IDLE (NEUT)	497.3	6.04		57.4	
SEQ#11 4 SPD IDLE (DRIV)	359.5	6.47		53.6	
SEQ#11 FED 2 MODE (30)	144.0	1.30		1144.7	
SEQ#11 FED 2 MODE (NEUT)	261.8	6.22		48.4	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 650 RPM, PROPANE GAIN 50 RPM.

SEQ#12 FEDERAL TEST PROC.	3.14	33.1	661.5	7.75	12.3
SEQ#12 50 MPH CRUISE	53.9	0.58	2721.6		
SEQ#12 HIGHWAY FUEL ECON.	1.60	22.0	474.4	9.09	17.3
SEQ#12 4 SPD IDLE (NEUT)	1137.2	0.29		53.8	
SEQ#12 4 SPD IDLE (2500)	48.7	0.44		396.3	
SEQ#12 4 SPD IDLE (NEUT)	843.6	0.33		64.7	
SEQ#12 4 SPD IDLE (DRIV)	248.0	0.19		148.8	
SEQ#12 FED 2 MODE (30)	100.5	0.82		1222.4	
SEQ#12 FED 2 MODE (NEUT)	850.5	0.36		62.2	

**FOLLOW UP LANE TEST:**

CAT: F FUEL: F  
HC: 867 CO: 0.62 GAIN: 110

COMMENT : ADJUSTED IDLE DRIVE 650 RPM, CO .5%, HC 700 PPM.  
USED UNIVERSAL CO METHOD.

SEQ#13 FEDERAL TEST PROC.	3.00	22.9	687.5	8.46	12.1
SEQ#13 50 MPH CRUISE	48.3	0.32	2820.2		
SEQ#13 HIGHWAY FUEL ECON.	1.43	12.6	493.6	10.70	17.1
SEQ#13 4 SPD IDLE (NEUT)	1103.9	0.26		33.1	
SEQ#13 4 SPD IDLE (2500)	58.9	0.36		374.0	
SEQ#13 4 SPD IDLE (NEUT)	746.7	0.29		50.4	
SEQ#13 4 SPD IDLE (DRIV)	186.0	0.13		153.9	
SEQ#13 FED 2 MODE (30)	82.7	0.14		1477.9	
SEQ#13 FED 2 MODE (NEUT)	628.1	0.45		63.2	

NO FOLLOW UP LANE TEST DONE

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	CH <sub>4</sub>	
6457	76	OLDS	455	30S4	(CON'T)					

COMMENT : ADJUSTED IDLE DRIVE 650 RPM, CO .2%, HC 470 PPM,  
PROPANE GAIN 80 RPM.

SEQ#15 FEDERAL TEST PROC.	3.18	28.1	672.0	8.14	12.2
SEQ#15 50 MPH CRUISE	51.3	0.30		2899.1	
SEQ#15 HIGHWAY FUEL ECON.	7.67	19.7	480.3	9.55	16.6
SEQ#15 4 SPD IDLE (NEUT)	21.3	0.18		67.7	
SEQ#15 4 SPD IDLE (2500)	136.1	0.29		404.4	
SEQ#15 4 SPD IDLE (NEUT)	712.4	0.26		52.1	
SEQ#15 4 SPD IDLE (DRIV)	226.5	0.13		133.4	
SEQ#15 FED 2 MODE (30)	88.0	0.12		1460.4	
SEQ#15 FED 2 MODE (NEUT)	519.7	1.19		67.2	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED AIR, OIL AND FUEL  
FILTERS, SPARK PLUGS, PCV VALVE, ENGINE OIL.  
RESET TIMING AND IDLE MIXTURE. CHOKE SECONDARY  
VACUUM BREAK ADJUSTED, REPLACED COLD AIR DUCT.

SEQ#16 FEDERAL TEST PROC.	2.68	12.6	680.3	8.75	12.5
SEQ#16 50 MPH CRUISE	44.4	0.22		2672.3	
SEQ#16 HIGHWAY FUEL ECON.	1.33	7.8	467.1	9.66	18.4
SEQ#16 4 SPD IDLE (NEUT)	990.6	0.25		20.6	
SEQ#16 4 SPD IDLE (2500)	46.4	0.18		367.0	
SEQ#16 4 SPD IDLE (NEUT)	501.8	0.30		67.2	
SEQ#16 4 SPD IDLE (DRIV)	178.0	0.12		183.4	
SEQ#16 FED 2 MODE (30)	82.7	0.45		1202.4	
SEQ#16 FED 2 MODE (NEUT)	705.5	0.28		31.5	

NO FOLLOW UP LANE TEST DONE

COMMENT : REPLACED CATALYTIC CONVERTER.

SEQ#17 FEDERAL TEST PROC.	0.69	3.3	701.5	7.12	12.5
SEQ#17 50 MPH CRUISE	17.7	0.02		2770.9	
SEQ#17 HIGHWAY FUEL ECON.	0.22	0.9	491.1	8.22	18.0
SEQ#17 4 SPD IDLE (NEUT)	377.1	0.01		26.5	
SEQ#17 4 SPD IDLE (2500)	10.2	0.02		387.2	
SEQ#17 4 SPD IDLE (NEUT)	421.5	0.01		37.5	
SEQ#17 4 SPD IDLE (DRIV)	119.8	0.01		104.2	
SEQ#17 FED 2 MODE (30)	34.8	0.02		1465.4	
SEQ#17 FED 2 MODE (NEUT)	249.7	0.03		80.9	

FOLLOW UP LANE TEST:  
CAT: P FUEL: P  
HC: 186 CO: 0.03 GAIN: 150

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6461	76	PONT	400	2004						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 205 CO: 3.41 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	2.33	26.1	645.3	2.37	12.8
SEQ#11	50 MPH CRUISE	9.5	0.03		534.8	
SEQ#11	HIGHWAY FUEL ECON.	0.39	1.5	495.3	3.36	17.8
SEQ#11	4 SPD IDLE (NEUT)	344.5	1.66		38.3	
SEQ#11	4 SPD IDLE (2500)	16.1	0.03		185.2	
SEQ#11	4 SPD IDLE (NEUT)	269.6	1.70		44.9	
SEQ#11	4 SPD IDLE (DRIV)	198.4	1.98		55.0	
SEQ#11	FED 2 MODE (30)	21.0	0.01		373.0	
SEQ#11	FED 2 MODE (NEUT)	383.4	0.77		48.7	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 271 CO: 3.07 GAIN: 9

## COMMENT : ADJUSTED IDLE DRIVE 575 RPM, PROPANE GAIN 50 RPM.

SEQ#12	FEDERAL TEST PROC.	2.72	24.2	679.6	2.75	12.2
SEQ#12	50 MPH CRUISE	6.2	0.03		635.9	
SEQ#12	HIGHWAY FUEL ECON.	0.40	1.5	506.1	3.86	17.4
SEQ#12	4 SPD IDLE (NEUT)	368.2	1.37		32.5	
SEQ#12	4 SPD IDLE (2500)	11.2	0.03		186.3	
SEQ#12	4 SPD IDLE (NEUT)	290.9	1.61		39.3	
SEQ#12	4 SPD IDLE (DRIV)	193.0	1.66		46.9	
SEQ#12	FED 2 MODE (30)	18.7	0.02		382.1	
SEQ#12	FED 2 MODE (NEUT)	453.2	0.09		32.3	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED TIMING TO SPEC. IDLE CO .5%, HC 200 PPM,  
IDLE DRIVE 575 RPM.

SEQ#14	FEDERAL TEST PROC.	2.68	29.3	633.9	3.39	12.9
SEQ#14	50 MPH CRUISE	9.5	0.03		944.4	
SEQ#14	HIGHWAY FUEL ECON.	0.59	2.0	490.5	4.73	17.9
SEQ#14	4 SPD IDLE (NEUT)	555.0	2.66		26.0	
SEQ#14	4 SPD IDLE (2500)	14.8	0.05		210.9	
SEQ#14	4 SPD IDLE (NEUT)	517.2	2.13		34.0	
SEQ#14	4 SPD IDLE (DRIV)	301.5	3.28		36.5	
SEQ#14	FED 2 MODE (30)	29.2	0.02		404.4	
SEQ#14	FED 2 MODE (NEUT)	894.3	0.46		41.8	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6461	76	PONT	400	2004	(CON'T)					

COMMENT : ADJUSTED IDLE DRIVE 575 RPM, CO .2%, HC 800 PPM.

SEQ#15	FEDERAL TEST PROC.	2.89	24.0	666.0	3.20	12.5
SFQ#15	50 MPH CRUISE	7.5	0.03	715.7		
SEQ#15	HIGHWAY FUEL ECON.	0.46	0.7	477.2	4.50	18.5
SEQ#15	4 SPD IDLE (NEUT)	882.6	0.02		46.0	
SEQ#15	4 SPD IDLE (2500)	17.4	0.02		195.0	
SEQ#15	4 SPD IDLE (NEUT)	658.6	0.02		49.6	
SEQ#15	4 SPD IDLE (DRIV)	470.8	0.01		84.7	
SEQ#15	FED 2 MODE (30)	25.6	0.02		437.7	
SEQ#15	FED 2 MODE (NEUT)	724.8	0.02		50.7	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED DISTRIBUTOR CAP, ROTOR, POLE PEICE & PLATE ASSEMBLY, IGNITION MODUEL & COIL, SPARK PLUGS, FUEL FILTER, PCV VALVE, CARNKCASE BREATHER FILTER, AIR FILTER, CARBON CANISTER FILTER. ADJUSTED CHOKE, IDLE MIXTURE & SPEED.

SEQ#16	FEDERAL TEST PROC.	2.10	18.6	610.8	2.78	13.7
SEQ#16	50 MPH CRUISE	10.8	0.03	800.7		
SEQ#16	HIGHWAY FUEL ECON.	0.43	1.6	462.2	4.32	19.0
SEQ#16	4 SPD IDLE (NEUT)	854.4	0.47		38.1	
SEQ#16	4 SPD IDLE (2500)	18.4	0.03		216.3	
SEQ#16	4 SPD IDLE (NEUT)	733.9	0.30		41.1	
SEQ#16	4 SPD IDLE (DRIV)	394.2	1.20		57.5	
SEQ#16	FED 2 MODE (30)	31.5	0.02		620.7	
SEQ#16	FED 2 MODE (NEUT)	828.8	0.15		38.8	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 677 CO: 1.20 GAIN: 11

6462 76 PONT 400 2004

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 573 CO: 7.20 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	4.01	52.0	632.1	2.18	12.2
SEQ#11	50 MPH CRUISE	15.8	0.11		286.1	
SEQ#11	HIGHWAY FUEL ECON.	0.84	9.0	500.6	2.12	17.2
SEQ#11	4 SPD IDLE (NEUT)	640.5	5.33		12.8	
SEQ#11	4 SPD IDLE (2500)	32.9	0.46		117.8	
SEQ#11	4 SPD IDLE (NEUT)	564.0	8.96		16.6	
SEQ#11	4 SPD IDLE (DRIV)	431.3	9.12		16.9	
SEQ#11	FED 2 MODE (30)	98.6	0.41		430.7	
SEQ#11	FED 2 MODE (NEUT)	530.5	4.91		20.9	

NO FOLLOW UP LANE TEST DONE

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6462	76	PONT	400	2004 (CON'T)						

COMMENT : IDLE NEUTRAL 720 RPM, PROPANE ENRICHED IDLE SPEED 780 RPM.

SEQ#12 FEDERAL TEST PROC.	1.61	11.1	710.2	2.56	12.1
SEQ#12 50 MPH CRUISE	10.2	0.00	470.1		
SEQ#12 HIGHWAY FUEL ECON.	0.36	2.7	526.8	2.45	16.7
SEQ#12 4 SPD IDLE (NEUT)	376.9	0.54		33.2	
SEQ#12 4 SPD IDLE (2500)	17.4	0.01		131.3	
SEQ#12 4 SPD IDLE (NEUT)	239.9	0.12		41.8	
SEQ#12 4 SPD IDLE (DRIV)	30.6	0.00		70.1	
SEQ#12 FED 2 MODE (30)	35.8	0.09		334.6	
SEQ#12 FED 2 MODE (NEUT)	301.5	0.06		33.8	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE CO TO .45%, HC 200 PPM, IDLE SPEED 690 RPM.

SEQ#13 FEDERAL TEST PROC.	2.58	32.0	671.5	2.45	12.2
SEQ#13 50 MPH CRUISE	13.1	0.04	375.1		
SEQ#13 HIGHWAY FUEL ECON.	0.71	7.6	507.2	2.30	17.0
SEQ#13 4 SPD IDLE (NEUT)	389.9	1.72		23.8	
SEQ#13 4 SPD IDLE (2500)	28.9	0.19		112.6	
SEQ#13 4 SPD IDLE (NEUT)	325.1	2.17		31.1	
SEQ#13 4 SPD IDLE (DRIV)	249.7	1.96		36.4	
SEQ#13 FED 2 MODE (30)	56.9	0.14		358.9	
SEQ#13 FED 2 MODE (NEUT)	389.9	1.69		32.6	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE MIXTURE TO SPEC.

SEQ#15 FEDERAL TEST PROC.	2.53	28.2	677.4	2.37	12.2
SEQ#15 50 MPH CRUISE	8.2	0.02	406.4		
SEQ#15 HIGHWAY FUEL ECON.	0.54	5.4	512.1	2.21	17.0
SEQ#15 4 SPD IDLE (NEUT)	413.8	1.38		27.1	
SEQ#15 4 SPD IDLE (2500)	14.1	0.24		128.3	
SEQ#15 4 SPD IDLE (NEUT)	295.1	1.77		34.3	
SEQ#15 4 SPD IDLE (DRIV)	217.8	1.70		41.8	
SEQ#15 FED 2 MODE (30)	66.5	0.20		447.8	
SEQ#15 FED 2 MODE (NEUT)	488.4	0.36		36.4	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6462	76	PONT	400	2004	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR, FUEL, CRANKCASE, OIL FILTER AND OIL. ADJUSTED TIMING, IDLE MIXTURE, IDLE SPEED, SECONDARY VACUUM BREAK AND FAST IDLE.

SEQ#16	FEDERAL TEST PROC.	1.78	16.1	633.0	2.74	13.4
SEQ#16	50 MPH CRUISE	4.3	0.01		513.6	
SEQ#16	HIGHWAY FUEL ECON.	0.26	1.2	505.2	2.76	17.5
SEQ#16	4 SPD IDLE (NEUT)	420.4	0.15		34.2	
SEQ#16	4 SPD IDLE (2500)	9.2	0.04		112.9	
SEQ#16	4 SPD IDLE (NEUT)	346.6	0.99		40.9	
SEQ#16	4 SPD IDLE (DRIV)	221.1	0.63		59.9	
SEQ#16	FED 2 MODE (30)	25.3	0.01		583.3	
SEQ#16	FED 2 MODE (NEUT)	506.1	0.19		38.2	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 444 CO: 0.04 GAIN: 67

6463 76 HOND 076 76EB

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 27 CO: 0.95 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	1.10	23.5	319.4	1.60	24.7
SEQ#11	50 MPH CRUISE	29.6	0.84		989.4	
SEQ#11	HIGHWAY FUEL ECON.	0.42	13.5	242.6	2.70	33.5
SEQ#11	4 SPD IDLE (NEUT)	8.9	0.38		45.2	
SEQ#11	4 SPD IDLE (2500)	16.1	0.79		43.9	
SEQ#11	4 SPD IDLE (NEUT)	6.9	0.50		40.3	
SEQ#11	FED 2 MODE (30)	42.1	1.30		434.7	
SEQ#11	FED 2 MODE (NEUT)	12.1	0.47		44.4	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE NEUTRAL 800 RPM, PROPANE GAIN 160 RPM.

SEQ#12	FEDERAL TEST PROC.	2.60	22.2	288.1	1.73	26.8
SEQ#12	50 MPH CRUISE	41.1	0.92		856.7	
SEQ#12	HIGHWAY FUEL ECON.	0.58	12.1	236.8	2.74	34.5
SEQ#12	4 SPD IDLE (NEUT)	515.0	0.09		33.9	
SEQ#12	4 SPD IDLE (2500)	50.3	0.77		41.9	
SEQ#12	4 SPD IDLE (NEUT)	451.0	0.10		40.3	
SEQ#12	FED 2 MODE (30)	54.6	1.35		490.3	
SEQ#12	FED 2 MODE (NEUT)	437.9	0.10		41.3	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 83 CO: 0.11 GAIN: 210

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6463	76	HOND	076	76EB (CON'T)						

COMMENT : ADJUSTED IDLE NEUTRAL 800 RPM.

SEQ#15 FEDERAL TEST PROC.	2.12	27.6	286.5	1.47	26.4
SEQ#15 50 MPH CRUISE	28.9	0.87	763.3		
SEQ#15 HIGHWAY FUEL ECON.	0.48	11.9	219.9	2.22	37.0
SEQ#15 4 SPD IDLE (NEUT)	94.6	0.38		40.7	
SEQ#15 4 SPD IDLE (2500)	31.2	1.21		33.4	
SEQ#15 4 SPD IDLE (NEUT)	80.0	0.61		41.7	
SEQ#15 FED 2 MODE (30)	44.1	1.23		489.3	
SEQ#15 FED 2 MODE (NEUT)	94.9	0.32		48.5	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED IGNITION POINTS,  
DISTRIBUTOR CAP, ROTOR, AIR FILTER, FUEL FILTER,  
ENGINE OIL AND FILTER. ADJUSTED DWELL, TIMING,  
IDLE SPEED AND MIXTURE.

SEQ#16 FEDERAL TEST PROC.	2.58	27.9	271.4	1.83	27.4
SEQ#16 50 MPH CRUISE	31.2	0.77	936.8		
SEQ#16 HIGHWAY FUEL ECON.	0.59	12.5	226.0	2.83	35.9
SEQ#16 4 SPD IDLE (NEUT)	572.9	0.18		54.4	
SEQ#16 4 SPD IDLE (2500)	46.4	1.18		34.5	
SEQ#16 4 SPD IDLE (NEUT)	387.7	0.18		41.8	
SEQ#16 FED 2 MODE (30)	54.3	1.18		611.6	
SEQ#16 FED 2 MODE (NEUT)	437.9	0.14		46.8	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 131 CO: 1.10 GAIN: 51

6464 76 DATS 085 N-081

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 157 CO: 1.10 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	1.84	10.4	318.0	4.94	26.1
SEQ#11 50 MPH CRUISE	100.9	0.12	2504.7		
SEQ#11 HIGHWAY FUEL ECON.	0.98	2.3	245.3	6.32	35.2
SEQ#11 4 SPD IDLE (NEUT)	77.4	0.37		21.7	
SEQ#11 4 SPD IDLE (2500)	36.5	0.11		169.8	
SEQ#11 4 SPD IDLE (NEUT)	77.4	0.38		23.5	
SEQ#11 FED 2 MODE (30)	95.2	0.08		1986.4	
SEQ#11 FED 2 MODE (NEUT)	63.8	0.39		35.8	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS				FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	
6464	76	DATS	085	N-081	(CON'T)				

COMMENT : ADJUSTED IDLE NEUTRAL 700 RPM, PROPANE GAIN 40  
RPM.

SEQ#12 FEDERAL TEST PROC.	1.86	7.9	322.5	5.45	26.0
SEQ#12 50 MPH CRUISE	90.6	0.12		2751.2	
SEQ#12 HIGHWAY FUEL ECON.	0.99	2.1	244.2	6.63	35.4
SEQ#12 4 SPD IDLE (NEUT)	202.7	0.09		30.4	
SEQ#12 4 SPD IDLE (2500)	42.4	0.11		189.3	
SEQ#12 4 SPD IDLE (NEUT)	270.2	0.10		34.2	
SEQ#12 FED 2 MODE (30)	115.5	0.09		2297.6	
SEQ#12 FED 2 MODE (NEUT)	150.7	0.10		53.8	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE NEUTRAL 700 RPM, CO 2%, HC 100 PPM.

SEQ#15 FEDERAL TEST PROC.	1.58	10.3	325.1	5.27	25.6
SEQ#15 50 MPH CRUISE	98.9	0.16		2770.9	
SEQ#15 HIGHWAY FUEL ECON.	0.95	2.6	239.3	6.35	36.0
SEQ#15 4 SPD IDLE (NEUT)	42.7	1.14		23.8	
SEQ#15 4 SPD IDLE (2500)	41.1	0.21		171.9	
SEQ#15 4 SPD IDLE (NEUT)	50.6	1.17		25.3	
SEQ#15 FED 2 MODE (30)	119.8	0.11		2366.6	
SEQ#15 FED 2 MODE (NEUT)	39.1	1.03		41.6	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR FILTER,  
PCV FILTER, OIL AND OIL FILTER.

SEQ#16 FEDERAL TEST PROC.	1.66	7.3	316.0	5.09	26.7
SEQ#16 50 MPH CRUISE	88.3	0.16		2221.9	
SEQ#16 HIGHWAY FUEL ECON.	0.97	2.8	237.4	6.24	36.2
SEQ#16 4 SPD IDLE (NEUT)	71.8	0.10		29.2	
SEQ#16 4 SPD IDLE (2500)	29.2	0.18		143.7	
SEQ#16 4 SPD IDLE (NEUT)	69.1	0.10		30.8	
SEQ#16 FED 2 MODE (30)	98.2	0.10		1893.7	
SEQ#16 FED 2 MODE (NEUT)	59.9	0.10		50.6	

FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 88 CO: 0.16 GAIN: 0

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6465	76	DATS	168	N-112						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 612 CO: 0.99 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	2.04	30.1	513.5	3.13	15.6
SEQ#11	50 MPH CRUISE	56.9	0.19		1660.8	
SEQ#11	HIGHWAY FUEL ECON.	0.65	9.0	336.0	4.09	25.2
SEQ#11	4 SPD IDLE (NEUT)	103.2	0.87		58.0	
SEQ#11	4 SPD IDLE (2500)	14.8	0.06		213.7	
SEQ#11	4 SPD IDLE (NEUT)	121.4	0.96		49.0	
SEQ#11	FED 2 MODE (30)	73.1	0.46		757.2	
SEQ#11	FED 2 MODE (NEUT)	440.1	0.69		42.1	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 286 CO: 1.03 GAIN: 15

COMMENT : CONNECTED EGR LINE IN PRE-ADJUSTMENT. PROPANE GAIN  
OF 50 RPM ACHEIVED AT STEP 7 OF PROPANE  
ADJUSTMENT PROCEUDRE M-1. IDLE RPM 800 NEUTRAL,  
WITHOUT PROPANE 850 NEUTRAL.

SEQ#12	FEDERAL TEST PROC.	1.74	24.1	504.8	1.95	16.2
SEQ#12	50 MPH CRUISE	43.7	0.12		785.5	
SEQ#12	HIGHWAY FUEL ECON.	0.42	4.8	348.2	2.54	24.9
SEQ#12	4 SPD IDLE (NEUT)	510.6	0.02		54.8	
SEQ#12	4 SPD IDLE (2500)	35.2	0.04		162.4	
SEQ#12	4 SPD IDLE (NEUT)	173.3	0.02		58.9	
SEQ#12	FED 2 MODE (30)	46.7	0.21		351.8	
SEQ#12	FED 2 MODE (NEUT)	60.5	0.02		55.7	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE MIXTURE SETTING THE SAME FOR THIS SEQUENCE  
AS #12. MANUFACTURERS SPECIFIED CO IS LESS THAN  
1.0%.

SEQ#15	FEDERAL TEST PROC.	1.50	20.7	533.8	2.24	15.5
SEQ#15	50 MPH CRUISE	27.3	0.11		896.8	
SEQ#15	HIGHWAY FUEL ECON.	0.43	4.5	356.9	2.65	24.3
SEQ#15	4 SPD IDLE (NEUT)	679.1	0.03		58.2	
SEQ#15	4 SPD IDLE (2500)	537.2	0.06		176.8	
SEQ#15	4 SPD IDLE (NEUT)	448.8	0.02		60.8	
SEQ#15	FED 2 MODE (30)	48.3	0.20		361.9	
SEQ#15	FED 2 MODE (NEUT)	230.9	0.02		60.9	

NO FOLLOW UP LANE TEST DONE

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	CH <sub>4</sub>	
6465	76	DATS	168	N-112	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR FILTER,  
FUEL FILTER, CARBON CANISTER FILTER, ENGINE OIL &  
FILTER. ADJUSTED IDLE RPM TO SPEC.

SEQ#16 FEDERAL TEST PROC.	1.62	25.0	502.1	1.86	16.2
SEQ#16 50 MPH CRUISE	29.6	0.12	666.2		
SEQ#16 HIGHWAY FUEL ECON.	0.45	5.6	341.5	2.37	25.2
SEQ#16 4 SPD IDLE (NEUT)	552.8	0.03		58.6	
SEQ#16 4 SPD IDLE (2500)	267.1	0.03		167.5	
SEQ#16 4 SPD IDLE (NEUT)	88.3	0.07		52.8	
SEQ#16 FED 2 MODE (30)	46.4	0.36		313.4	
SEQ#16 FED 2 MODE (NEUT)	81.7	0.59		48.2	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 478 CO: 0.06 GAIN: 22

6467 76 TOYO 097 2T-C

PRELIMINARY LANE TEST:  
CAT: P FUEL: P  
HC: 108 CO: 2.34 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	1.11	17.4	416.4	2.62	19.8
SEQ#11 50 MPH CRUISE	35.5	0.41	1325.1		
SEQ#11 HIGHWAY FUEL ECON.	0.58	6.6	268.1	3.74	31.7
SEQ#11 4 SPD IDLE (NEUT)	9.5	0.41		33.1	
SEQ#11 4 SPD IDLE (2500)	3.9	0.38		53.1	
SEQ#11 4 SPD IDLE (NEUT)	6.6	0.39		34.1	
SEQ#11 FED 2 MODE (30)	61.2	0.53		1054.6	
SEQ#11 FED 2 MODE (NEUT)	6.2	0.40		38.5	

NO FOLLOW UP LANE TEST DONE

COMMENT : NO PROPANE GAIN DURING PRE-ADJUSTMENT.  
ADJUSTMENT OF THROTTLE OPENER VALVE WAS NEEDED TO  
OBTAIN SPECIFIED IDLE SPEED IN STEP 2B OF THE  
PROPANE ADJUSTMENT PROCEDURE. 50 RPM GAIN WAS  
ACHEIVED AT STEP 6C.

SEQ#12 FEDERAL TEST PROC.	1.14	15.5	390.0	2.39	21.2
SEQ#12 50 MPH CRUISE	33.2	0.44	1172.3		
SEQ#12 HIGHWAY FUEL ECON.	0.52	6.6	256.0	3.57	33.1
SEQ#12 4 SPD IDLE (NEUT)	76.1	0.25		31.9	
SEQ#12 4 SPD IDLE (2500)	5.9	0.38		49.2	
SEQ#12 4 SPD IDLE (NEUT)	58.6	0.24		36.2	
SEQ#12 FED 2 MODE (30)	69.8	0.63		892.7	
SEQ#12 FED 2 MODE (NEUT)	57.6	0.29		41.6	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6467	76	TOYO	097	2T-C (CON'T)						

COMMENT : ADJUSTED IDLE MIXTURE TO SPEC.

SEQ#15 FEDERAL TEST PROC.	1.08	15.5	394.5	2.54	21.0
SEQ#15 50 MPH CRUISE	37.5	0.35	1357.7		
SEQ#15 HIGHWAY FUEL ECON.	0.55	6.3	271.9	3.82	31.3
SEQ#15 4 SPD IDLE (NEUT)	87.6	0.14		32.4	
SEQ#15 4 SPD IDLE (2500)	9.5	0.29		59.0	
SEQ#15 4 SPD IDLE (NEUT)	70.1	0.14		35.7	
SEQ#15 FED 2 MODE (30)	65.2	0.44		1029.5	
SEQ#15 FED 2 MODE (NEUT)	57.6	0.16		42.6	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 49 CO: 0.16 GAIN: 60

6468 76 TOYO 133 20R(80-1)

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 303 CO: 4.98 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	3.42	84.8	311.8	1.96	19.5
SEQ#11 50 MPH CRUISE	158.3	4.51	1144.7		
SEQ#11 HIGHWAY FUEL ECON.	1.88	57.4	251.4	2.65	25.5
SEQ#11 4 SPD IDLE (NEUT)	481.8	1.57		79.3	
SEQ#11 4 SPD IDLE (2500)	137.4	3.03		263.9	
SEQ#11 4 SPD IDLE (NEUT)	477.4	1.60		79.1	
SEQ#11 4 SPD IDLE (DRIV)	261.1	0.63		379.1	
SEQ#11 FED 2 MODE (30)	208.4	3.73		1044.6	
SEQ#11 FED 2 MODE (NEUT)	318.7	3.80		69.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : CORRECTED MISROUTED VACUUM LINES.

SEQ#12 FEDERAL TEST PROC.	0.69	20.2	417.3	2.21	19.7
SEQ#12 50 MPH CRUISE	1.6	0.32	1084.6		
SEQ#12 HIGHWAY FUEL ECON.	0.03	3.4	334.1	3.00	26.1
SEQ#12 4 SPD IDLE (NEUT)	213.1	0.19		41.0	
SEQ#12 4 SPD IDLE (2500)	7.2	0.15		79.9	
SEQ#12 4 SPD IDLE (NEUT)	206.4	0.12		45.0	
SEQ#12 4 SPD IDLE (DRIV)	252.6	0.08		79.3	
SEQ#12 FED 2 MODE (30)	6.6	0.47		543.9	
SEQ#12 FED 2 MODE (NEUT)	132.4	0.11		47.7	

NO FOLLOW UP LANE TEST DONE

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6468	76	TOYO	133	20R(80-1)	(CON'T)					

COMMENT : ADJUSTED IDLE CO .5%, IDLE RPM 870 NEUTRAL.

SEQ#13	FEDERAL TEST PROC.	0.65	20.6	436.3	2.39	18.9
SEQ#13	50 MPH CRUISE	2.0	0.16	954.4		
SEQ#13	HIGHWAY FUEL ECON.	0.03	3.3	360.3	3.67	24.3
SEQ#13	4 SPD IDLE (NEUT)	47.7	0.13		36.0	
SEQ#13	4 SPD IDLE (2500)	1.6	0.13		62.8	
SEQ#13	4 SPD IDLE (NEUT)	135.1	0.10		39.8	
SEQ#13	4 SPD IDLE (DRIV)	479.6	0.08		32.1	
SEQ#13	FED 2 MODE (30)	32.5	1.33		926.8	
SEQ#13	FED 2 MODE (NEUT)	41.1	0.14		48.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE SPEED AND MIXTURE.

SEQ#15	FEDERAL TEST PROC.	0.65	23.3	427.1	2.30	19.1
SEQ#15	50 MPH CRUISE	0.0	0.24	1024.5		
SEQ#15	HIGHWAY FUEL ECON.	0.02	3.3	347.1	3.48	25.2
SEQ#15	4 SPD IDLE (NEUT)	78.7	0.13		31.5	
SEQ#15	4 SPD IDLE (2500)	3.9	0.16		68.0	
SEQ#15	4 SPD IDLE (NEUT)	124.1	0.17		34.3	
SEQ#15	4 SPD IDLE (DRIV)	55.3	0.14		75.1	
SEQ#15	FED 2 MODE (30)	3.0	0.38		534.8	
SEQ#15	FED 2 MODE (NEUT)	32.2	0.30		35.7	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, PCV VALVE,  
AIR FILTER, FUEL FILTER, IGNITION POINTS,  
DISTRIBUTOR CAP, ROTOR, ENGINE OIL AND FILTER.  
ADJUSTED TIMING IDLE RPM, IDLE MIXTURE.

SEQ#16	FEDERAL TEST PROC.	0.64	21.3	441.5	1.72	18.6
SEQ#16	50 MPH CRUISE	0.7	0.23	912.9		
SEQ#16	HIGHWAY FUEL ECON.	0.09	3.1	324.9	3.39	26.9
SEQ#16	4 SPD IDLE (NEUT)	62.9	0.20		33.9	
SEQ#16	4 SPD IDLE (2500)	3.0	0.12		64.5	
SEQ#16	4 SPD IDLE (NEUT)	63.2	0.13		35.6	
SEQ#16	4 SPD IDLE (DRIV)	53.6	0.13		81.9	
SEQ#16	FED 2 MODE (30)	1.6	0.28		342.7	
SEQ#16	FED 2 MODE (NEUT)	67.1	0.11		37.9	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 48 CO: 0.91 GAIN: 36

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6470	76	VOLK	097	32F						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 39 CO: 1.87 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	1.36	23.6	398.7	2.48	20.2
SEQ#11	50 MPH CRUISE	34.5	0.69	964.4		
SEQ#11	HIGHWAY FUEL ECON.	0.46	11.9	285.3	2.75	29.1
SEQ#11	4 SPD IDLE (NEUT)	20.7	0.91		41.3	
SEQ#11	4 SPD IDLE (2500)	30.9	0.24		82.1	
SEQ#11	4 SPD IDLE (NEUT)	25.0	1.00		41.8	
SEQ#11	FED 2 MODE (30)	51.0	0.48	868.4		
SEQ#11	FED 2 MODE (NEUT)	28.9	1.24	43.8		

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE NEUTRAL 925 RPM. PROPANE GAIN 50  
RPM. USED UNIVERSAL PROPANE METHOD.

SEQ#12	FEDERAL TEST PROC.	1.74	21.5	350.8	4.06	22.8
SEQ#12	50 MPH CRUISE	89.0	1.24	1412.8		
SEQ#12	HIGHWAY FUEL ECON.	1.20	17.9	257.4	4.73	30.7
SEQ#12	4 SPD IDLE (NEUT)	26.0	0.32		52.2	
SEQ#12	4 SPD IDLE (2500)	28.3	0.19		129.0	
SEQ#12	4 SPD IDLE (NEUT)	47.7	0.49		46.5	
SEQ#12	FED 2 MODE (30)	115.8	0.54	1510.5		
SEQ#12	FED 2 MODE (NEUT)	34.2	0.43	50.6		

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE NEUTRAL 925 RPM, CO .8%, HC 45 PPM.

SEQ#15	FEDERAL TEST PROC.	2.06	43.5	346.4	4.24	21.1
SEQ#15	50 MPH CRUISE	88.0	0.95	1357.7		
SEQ#15	HIGHWAY FUEL ECON.	1.20	17.7	255.9	4.80	30.9
SEQ#15	4 SPD IDLE (NEUT)	45.7	0.18		104.2	
SEQ#15	4 SPD IDLE (2500)	42.7	0.19		121.9	
SEQ#15	4 SPD IDLE (NEUT)	46.0	0.18		93.1	
SEQ#15	FED 2 MODE (30)	112.5	0.65	1515.5		
SEQ#15	FED 2 MODE (NEUT)	40.1	0.17	106.5		

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
6470	76	VOLK	097	32F (CON'T)						

COMMENT : REPLACED SPARK PLUGS, AIR FILTER ELEMENT, OIL & OIL FILTER, FUEL FILTER. SET TO MANUFACTURERS SPECS. REPLACED ANTI-BACKFIRE VACUUM HOSE.

SEQ#16 FEDERAL TEST PROC.	1.94	29.5	347.2	3.66	22.2
SEQ#16 50 MPH CRUISE	90.9	1.42		1347.6	
SEQ#16 HIGHWAY FUEL ECON.	1.11	23.3	242.7	4.06	31.4
SEQ#16 4 SPD IDLE (NEUT)	166.0	0.22		146.0	
SEQ#16 4 SPD IDLE (2500)	84.7	0.20		138.0	
SEQ#16 4 SPD IDLE (NEUT)	150.0	0.22		136.7	
SEQ#16 FED 2 MODE (30)	102.2	0.91		1400.2	
SEQ#16 FED 2 MODE (NEUT)	141.4	0.20		147.5	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 157 CO: 0.22 GAIN: 59

5471 75 AMC 232 I

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 124 CO: 5.36 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	2.94	104.1	645.8	1.55	10.8
SEQ#11 50 MPH CRUISE	17.4	0.16		351.8	
SEQ#11 HIGHWAY FUEL ECON.	0.99	30.6	499.2	1.21	16.1
SEQ#11 4 SPD IDLE (NEUT)	109.8	4.62		65.9	
SEQ#11 4 SPD IDLE (2500)	6.6	1.01		128.5	
SEQ#11 4 SPD IDLE (NEUT)	119.1	5.54		65.8	
SEQ#11 4 SPD IDLE (DRIV)	158.0	5.16		73.3	
SEQ#11 FED 2 MODE (30)	2.0	0.12		616.7	
SEQ#11 FED 2 MODE (NEUT)	111.2	5.81		69.2	

NO FOLLOW UP LANE TEST DONE

COMMENT : THE AIR CLEANER ASSEMBLY WAS REPLACED TO CORRECT THE HEATED AIR INTAKE SYSTEM - NO CHANGE.  
PROPANE GAIN 50 RPM.

SEQ#12 FEDERAL TEST PROC.	2.57	70.7	637.2	1.78	11.7
SEQ#12 50 MPH CRUISE	124.8	0.04		393.3	
SEQ#12 HIGHWAY FUEL ECON.	0.64	15.6	554.7	1.73	15.3
SEQ#12 4 SPD IDLE (NEUT)	136.7	1.55		113.4	
SEQ#12 4 SPD IDLE (2500)	63.2	2.40		107.0	
SEQ#12 4 SPD IDLE (NEUT)	96.2	1.30		120.1	
SEQ#12 4 SPD IDLE (DRIV)	125.8	0.89		192.2	
SEQ#12 FED 2 MODE (30)	20.4	0.12		662.2	
SEQ#12 FED 2 MODE (NEUT)	62.2	1.10		117.2	

NO FOLLOW UP LANE TEST DONE

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	CH <sub>4</sub>	
5471	75	AMC	232 I	(CON'T)						

COMMENT : ADJUSTED IDLE CO .5%, HC 170 PPM, IDLE NEUTRAL  
600 RPM.

SEQ#13	FEDERAL TEST PROC.	1.66	31.0	580.7	2.34	14.0
SEQ#13	50 MPH CRUISE	33.8	0.66		613.6	
SEQ#13	HIGHWAY FUEL ECON.	0.77	17.2	447.0	2.38	18.6
SEQ#13	4 SPD IDLE (NEUT)	56.6	0.15		88.3	
SEQ#13	4 SPD IDLE (2500)	10.2	0.77		236.6	
SEQ#13	4 SPD IDLE (NEUT)	64.8	0.33		95.2	
SEQ#13	4 SPD IDLE (DRIV)	107.8	0.20		148.8	
SEQ#13	FED 2 MODE (30)	12.1	0.15		623.7	
SEQ#13	FED 2 MODE (NEUT)	59.6	0.69		94.9	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE SPEED, MIXTURE & TIMING TO SPEC.

SEQ#15	FEDERAL TEST PROC.	1.90	21.6	521.7	3.23	15.8
SEQ#15	50 MPH CRUISE	26.9	0.58		984.4	
SEQ#15	HIGHWAY FUEL ECON.	1.00	13.2	420.2	3.29	20.0
SEQ#15	4 SPD IDLE (NEUT)	58.2	0.13		79.9	
SEQ#15	4 SPD IDLE (2500)	36.5	2.16		241.4	
SEQ#15	4 SPD IDLE (NEUT)	66.8	0.14		83.1	
SEQ#15	4 SPD IDLE (DRIV)	118.1	0.10		143.9	
SEQ#15	FED 2 MODE (30)	69.8	1.25		678.3	
SEQ#15	FED 2 MODE (NEUT)	77.1	0.30		83.9	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED PLUGS, AIR FILTER, FUEL FILTER, PCV VALVE, CARBON CANISTER FILTER, CRANKCASE BREATHER FILTER, ENGINE OIL AND FILTER. ADJUSTED IDLE SPEED AND MIXTURE TO SPEC.

SEQ#16	FEDERAL TEST PROC.	3.44	99.3	511.0	1.61	13.1
SEQ#16	50 MPH CRUISE	73.8	3.75		453.9	
SEQ#16	HIGHWAY FUEL ECON.	1.45	32.5	407.5	1.37	19.2
SEQ#16	4 SPD IDLE (NEUT)	37.5	0.58		123.4	
SEQ#16	4 SPD IDLE (2500)	38.5	2.70		219.3	
SEQ#16	4 SPD IDLE (NEUT)	38.8	0.52		122.6	
SEQ#16	4 SPD IDLE (DRIV)	91.6	0.35		252.7	
SEQ#16	FED 2 MODE (30)	89.6	2.74		434.7	
SEQ#16	FED 2 MODE (NEUT)	41.1	1.13		126.5	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 97 CO: 3.15 GAIN: 22

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE				FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	
5472	75	AMC	258	I					

## PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 211 CO: 7.42 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	3.17	77.4	528.0	6.89	13.5
SEQ#11	50 MPH CRUISE	53.9	0.68	1074.6		
SEQ#11	HIGHWAY FUEL ECON.	1.49	29.7	376.5	6.75	20.7
SEQ#11	4 SPD IDLE (NEUT)	108.8	3.05		29.9	
SEQ#11	4 SPD IDLE (2500)	49.0	1.19		177.3	
SEQ#11	4 SPD IDLE (NEUT)	106.8	2.87		30.6	
SEQ#11	4 SPD IDLE (DRIV)	120.1	3.25		36.7	
SEQ#11	FED 2 MODE (30)	67.5	0.91		548.9	
SEQ#11	FED 2 MODE (NEUT)	96.9	2.67		29.9	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 550 RPMS, IDLE NEUTRAL 660 RPMS, PROPANE GAIN 65 RPMS. USED UNIVERSAL METHOD.

SEQ#12	FEDERAL TEST PROC.	3.01	46.4	517.0	2.47	14.8
SEQ#12	50 MPH CRUISE	59.9	0.91	394.3		
SEQ#12	HIGHWAY FUEL ECON.	1.57	30.9	365.4	2.61	21.2
SEQ#12	4 SPD IDLE (NEUT)	67.5	0.27		56.6	
SEQ#12	4 SPD IDLE (2500)	58.9	1.86		65.4	
SEQ#12	4 SPD IDLE (NEUT)	120.1	0.23		56.5	
SEQ#12	4 SPD IDLE (DRIV)	91.3	0.22		113.1	
SEQ#12	FED 2 MODE (30)	90.6	1.53		103.6	
SEQ#12	FED 2 MODE (NEUT)	100.9	0.47		51.3	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE SPEED 550 RPMS DRIVE, CO .4%. EXHAUST TEMP SO HIGH THAT IT MELTED THE TIP OF THE SAMPLE HOSE. TIMING 20 DEGREES ADVANCED.

SEQ#13	FEDERAL TEST PROC.	3.56	66.6	497.0	2.44	14.5
SEQ#13	50 MPH CRUISE	75.4	0.87	658.1		
SEQ#13	HIGHWAY FUEL ECON.	1.46	23.3	369.4	2.88	21.6
SEQ#13	4 SPD IDLE (NEUT)	243.9	5.68		55.4	
SEQ#13	4 SPD IDLE (2500)	85.3	2.55		115.7	
SEQ#13	4 SPD IDLE (NEUT)	291.7	6.32		53.6	
SEQ#13	4 SPD IDLE (DRIV)	271.2	6.93		64.6	
SEQ#13	FED 2 MODE (30)	121.1	1.71		236.5	
SEQ#13	FED 2 MODE (NEUT)	280.9	6.43		53.2	

NO FOLLOW UP LANE TEST DONE

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE				FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	
5472	75	AMC	258	I	(CON'T)				

COMMENT : ADJUSTED IDLE DRIVE 550 RPMs, CO .11%, HC 30 PPM,  
IDLE NEUTRAL 620 RPMs, CO .13%, HC 20 PPM, PROPANE  
GAIN 140 RPMs. ADJUSTED TIMING TO SPEC.

SEQ#15 FEDERAL TEST PROC.	2.33	38.9	700.5	1.70	11.5
SEQ#15 50 MPH CRUISE	20.4	0.37		410.4	
SEQ#15 HIGHWAY FUEL ECON.	1.08	18.5	465.7	1.57	17.8
SEQ#15 4 SPD IDLE (NEUT)	16.1	0.11		101.6	
SEQ#15 4 SPD IDLE (2500)	18.7	2.29		105.2	
SEQ#15 4 SPD IDLE (NEUT)	12.5	0.10		97.7	
SEQ#15 4 SPD IDLE (DRIV)	27.6	0.10		173.2	
SEQ#15 FED 2 MODE (30)	33.8	0.79		212.9	
SEQ#15 FED 2 MODE (NEUT)	13.5	0.09		87.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : REPLACED PCV VALVE AND FILTER, OIL AND OIL FILTER,  
FUEL FILTER, SPARK PLUGS. SET TO SPEC.

SEQ#16 FEDERAL TEST PROC.	2.19	38.9	645.8	1.44	12.4
SEQ#16 50 MPH CRUISE	16.1	0.34		310.4	
SEQ#16 HIGHWAY FUEL ECON.	0.98	18.7	458.0	1.40	18.1
SEQ#16 4 SPD IDLE (NEUT)	38.8	0.28		90.9	
SEQ#16 4 SPD IDLE (2500)	20.4	1.43		100.6	
SEQ#16 4 SPD IDLE (NEUT)	40.1	0.20		100.3	
SEQ#16 4 SPD IDLE (DRIV)	82.3	0.29		165.7	
SEQ#16 FED 2 MODE (30)	35.2	0.54		180.9	
SEQ#16 FED 2 MODE (NEUT)	36.5	0.22		93.1	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 103 CO: 0.51 GAIN: 30

5473 75 DODG 225 F-RG-CII

PRELIMINARY LANE TEST:  
CAT: P FUEL: P  
HC: 210 CO: 7.98 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	2.42	25.9	452.4	4.76	17.7
SEQ#11 50 MPH CRUISE	19.4	0.01		2189.3	
SEQ#11 HIGHWAY FUEL ECON.	0.25	1.9	367.3	8.55	23.9
SEQ#11 4 SPD IDLE (NEUT)	208.1	5.00		69.3	
SEQ#11 4 SPD IDLE (2500)	21.3	0.02		454.9	
SEQ#11 4 SPD IDLE (NEUT)	192.0	4.78		62.3	
SEQ#11 4 SPD IDLE (DRIV)	216.5	4.92		75.3	
SEQ#11 FED 2 MODE (30)	53.0	0.01		793.6	
SEQ#11 FED 2 MODE (NEUT)	235.6	4.85		49.9	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 192 CO: 4.78 GAIN: 0

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	CH <sub>4</sub>	
5473	75	DODG	225	F-RG-CII (CON'T)						

COMMENT : NO MAINTENANCE PERFORMED DURING PRE-ADJUSTMENT.  
50 RPM PROPANE GAIN ACHEIVED AT STEP 6 OF PROPANE  
CARBURETOR ADJUSTMENT PROCEDURE A-1.

SEQ#12 FEDERAL TEST PROC.	0.88	6.1	458.0	6.11	18.9
SEQ#12 50 MPH CRUISE	22.7	0.01	2268.0		
SEQ#12 HIGHWAY FUEL ECON.	0.07	0.5	378.9	9.50	23.4
SEQ#12 4 SPD IDLE (NEUT)	24.6	0.01		181.4	
SEQ#12 4 SPD IDLE (2500)	3.9	0.00		708.7	
SEQ#12 4 SPD IDLE (NEUT)	9.5	0.00		143.9	
SEQ#12 4 SPD IDLE (DRIV)	21.7	0.01		227.3	
SEQ#12 FED 2 MODE (30)	37.1	0.01		1678.3	
SEQ#12 FED 2 MODE (NEUT)	15.4	0.00		140.8	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 100 CO: 0.00 GAIN: 50

COMMENT : ADJUSTED IDLE CO TO .5% AT STEP 3 OF IDLE CO  
CARBURETOR ADJUSTMENT A-1. IDLE NEUTRAL 750 RPM.

SEQ#13 FEDERAL TEST PROC.	0.95	9.9	461.2	7.11	18.5
SEQ#13 50 MPH CRUISE	19.0	0.00	2554.0		
SEQ#13 HIGHWAY FUEL ECON.	0.11	0.7	377.2	9.51	23.4
SEQ#13 4 SPD IDLE (NEUT)	44.4	0.21		133.7	
SEQ#13 4 SPD IDLE (2500)	2.0	0.00		661.1	
SEQ#13 4 SPD IDLE (NEUT)	7.9	0.00		143.4	
SEQ#13 4 SPD IDLE (DRIV)	51.3	0.04		166.8	
SEQ#13 FED 2 MODE (30)	30.2	0.00		1856.1	
SEQ#13 FED 2 MODE (NEUT)	10.5	0.00		166.8	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 7 CO: 0.00 GAIN: 50

COMMENT : ADJUSTED IDLE NEUTRAL TO 750 RPM, ADJUSTED CO TO  
.3%.

SEQ#15 FEDERAL TEST PROC.	1.09	10.1	487.2	7.58	17.5
SEQ#15 50 MPH CRUISE	11.8	0.00	2761.1		
SEQ#15 HIGHWAY FUEL ECON.	0.11	0.6	368.3	10.66	24.0
SEQ#15 4 SPD IDLE (NEUT)	15.4	0.01		168.5	
SEQ#15 4 SPD IDLE (2500)	3.0	0.01		744.0	
SEQ#15 4 SPD IDLE (NEUT)	7.2	0.00		149.1	
SEQ#15 4 SPD IDLE (DRIV)	25.0	0.01		260.8	
SEQ#15 FED 2 MODE (30)	31.5	0.01		1768.5	
SEQ#15 FED 2 MODE (NEUT)	9.8	0.00		151.9	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 7 CO: 0.00 GAIN: 80

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5473	75	DODG	225	F-RG-CII	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, FUEL, AIR, CANISTER AND OIL FILTER, PCV VALVE AND OIL. REPLACED CARBURETOR AND ADJUSTED IDLE SPEED AND MIXTURE TO SPEC.

SEQ#16	FEDERAL TEST PROC.	0.95	10.8	493.7	3.35	17.3
SEQ#16	50 MPH CRUISE	134.1	0.00		1014.5	
SEQ#16	HIGHWAY FUEL ECON.	0.09	0.8	372.1	3.79	23.8
SEQ#16	4 SPD IDLE (NEUT)	45.0	0.00		102.1	
SEQ#16	4 SPD IDLE (2500)	28.6	0.00		253.7	
SEQ#16	4 SPD IDLE (NEUT)	15.8	0.00		101.1	
SEQ#16	4 SPD IDLE (DRIV)	29.2	0.00		175.7	
SEQ#16	FED 2 MODE (30)	40.4	0.00		1002.0	
SEQ#16	FED 2 MODE (NEUT)	11.5	0.00		100.3	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 16 CO: 0.00 GAIN: 60

## 5475 75 DODG 225 F-RG-CII

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 134 CO: 5.55 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	3.09	68.9	496.5	2.57	14.4
SEQ#11	50 MPH CRUISE	23.0	0.10		717.8	
SEQ#11	HIGHWAY FUEL ECON.	1.12	18.5	394.0	2.85	20.8
SEQ#11	4 SPD IDLE (NEUT)	119.8	4.44		74.3	
SEQ#11	4 SPD IDLE (2500)	90.6	2.03		220.9	
SEQ#11	4 SPD IDLE (NEUT)	122.8	4.16		77.7	
SEQ#11	4 SPD IDLE (DRIV)	170.3	4.00		100.1	
SEQ#11	FED 2 MODE (30)	161.0	1.46		1032.0	
SEQ#11	FED 2 MODE (NEUT)	114.1	4.03		82.6	

NO FOLLOW UP LANE TEST DONE

COMMENT : CORRECTED PCV LINE, ADJUSTED IDLE MIXTURE, 50 RPM PROPANE GAIN.

SEQ#12	FEDERAL TEST PROC.	2.54	36.8	530.6	2.80	14.9
SEQ#12	50 MPH CRUISE	94.3	0.53		847.2	
SEQ#12	HIGHWAY FUEL ECON.	1.35	21.3	394.2	2.67	20.5
SEQ#12	4 SPD IDLE (NEUT)	40.4	0.11		113.9	
SEQ#12	4 SPD IDLE (2500)	41.7	0.32		213.7	
SEQ#12	4 SPD IDLE (NEUT)	11.5	0.01		132.9	
SEQ#12	4 SPD IDLE (DRIV)	22.7	0.01		232.4	
SEQ#12	FED 2 MODE (30)	55.9	0.06		1017.0	
SEQ#12	FED 2 MODE (NEUT)	15.1	0.01		138.5	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE				FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	
5475	75	DODG	225	F-RG-CII (CON'T)					

COMMENT : ADJUSTED IDLE NEUTRAL 770 RPM, CO .5%, HC 60 PPM.  
USED UNIVERSAL CO METHOD.

SEQ#13	FEDERAL TEST PROC.	2.32	35.8	504.8	2.45	15.6
SEQ#13	50 MPH CRUISE	81.0	0.40	734.9		
SEQ#13	HIGHWAY FUEL ECON.	1.15	17.8	377.2	2.37	21.7
SEQ#13	4 SPD IDLE (NEUT)	29.2	0.05		112.4	
SEQ#13	4 SPD IDLE (2500)	15.1	0.10		190.4	
SEQ#13	4 SPD IDLE (NEUT)	7.2	0.01		124.2	
SEQ#13	4 SPD IDLE (DRIV)	17.4	0.02		178.8	
SEQ#13	FED 2 MODE (30)	49.3	0.13		867.4	
SEQ#13	FED 2 MODE (NEUT)	9.2	0.01		124.9	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED CO TO .3%, IDLE NEUTRAL 750 RPM.

SEQ#15	FEDERAL TEST PROC.	1.88	29.2	547.5	2.59	14.8
SEQ#15	50 MPH CRUISE	88.0	0.63	834.1		
SEQ#15	HIGHWAY FUEL ECON.	1.22	20.2	392.1	2.58	20.8
SEQ#15	4 SPD IDLE (NEUT)	18.4	0.00		129.0	
SEQ#15	4 SPD IDLE (2500)	27.6	0.27		185.2	
SEQ#15	4 SPD IDLE (NEUT)	3.6	0.00		127.5	
SEQ#15	4 SPD IDLE (DRIV)	16.7	0.00		231.4	
SEQ#15	FED 2 MODE (30)	83.0	0.16		899.3	
SEQ#15	FED 2 MODE (NEUT)	12.5	0.00		129.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED AIR FILTER, FUEL FILTER,  
PCV VALVE, CRANKCASE BREather FILTER, CARBON  
CANISTER FILTER, DISTRIBUTOR CAP, AIR FILTER,  
SPARK PLUGS, OIL AND OIL FILTER. ADJUSTED IDLE  
SPEED & MIXTURE TO SPEC, ALSO FAST IDLE SPEED.

SEQ#16	FEDERAL TEST PROC.	1.72	34.8	585.9	1.83	13.7
SEQ#16	50 MPH CRUISE	66.5	1.10	406.4		
SEQ#16	HIGHWAY FUEL ECON.	1.28	30.3	438.5	1.48	18.1
SEQ#16	4 SPD IDLE (NEUT)	46.4	0.06		119.5	
SEQ#16	4 SPD IDLE (2500)	7.5	0.32		109.0	
SEQ#16	4 SPD IDLE (NEUT)	2.3	0.00		129.3	
SEQ#16	4 SPD IDLE (DRIV)	17.4	0.01		157.3	
SEQ#16	FED 2 MODE (30)	41.7	0.32		362.9	
SEQ#16	FED 2 MODE (NEUT)	9.5	0.00		131.9	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 78 CO: 0.36 GAIN: 67

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS				FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	
5476	75	DODG	318	F-LA2P-C					

## PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 280 CO: 7.00 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	6.38	152.8	518.9	2.09	11.4
SEQ#11	50 MPH CRUISE	110.8	2.21	688.4		
SEQ#11	HIGHWAY FUEL ECON.	3.21	99.9	372.4	2.63	16.4
SEQ#11	4 SPD IDLE (NEUT)	160.0	3.91		28.8	
SEQ#11	4 SPD IDLE (2500)	46.0	0.86		242.4	
SEQ#11	4 SPD IDLE (NEUT)	162.0	4.11		31.0	
SEQ#11	4 SPD IDLE (DRIV)	200.1	4.01		34.5	
SEQ#11	FED 2 MODE (30)	103.9	0.64		1224.9	
SEQ#11	FED 2 MODE (NEUT)	176.7	4.33		34.7	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE NEUTRAL 750 RPM, PROPANE GAIN 60 RPM,  
USED UNIVERSAL PROPANE METHOD.

SEQ#12	FEDERAL TEST PROC.	1.42	13.3	604.6	4.49	14.1
SEQ#12	50 MPH CRUISE	21.3	0.01	2494.8		
SEQ#12	HIGHWAY FUEL ECON.	0.20	1.1	436.6	7.61	20.2
SEQ#12	4 SPD IDLE (NEUT)	11.8	0.00		78.3	
SEQ#12	4 SPD IDLE (2500)	3.0	0.01		439.8	
SEQ#12	4 SPD IDLE (NEUT)	8.5	0.00		88.5	
SEQ#12	4 SPD IDLE (DRIV)	19.0	0.00		134.2	
SEQ#12	FED 2 MODE (30)	41.1	0.01		2211.8	
SEQ#12	FED 2 MODE (NEUT)	13.5	0.00		100.6	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE NEUTRAL 720 RPM, CO .5%, HC 120  
PPM. USED UNIVERSAL CO METHOD.

SEQ#13	FEDERAL TEST PROC.	1.69	13.0	611.8	4.49	13.9
SEQ#13	50 MPH CRUISE	22.3	0.00	2554.0		
SEQ#13	HIGHWAY FUEL ECON.	0.15	0.8	408.4	6.84	21.6
SEQ#13	4 SPD IDLE (NEUT)	17.4	0.01		67.7	
SEQ#13	4 SPD IDLE (2500)	6.9	0.01		488.3	
SEQ#13	4 SPD IDLE (NEUT)	16.4	0.01		79.0	
SEQ#13	4 SPD IDLE (DRIV)	31.5	0.00		117.5	
SEQ#13	FED 2 MODE (30)	51.3	0.01		2297.0	
SEQ#13	FED 2 MODE (NEUT)	22.0	0.01		93.1	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE				FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	
5476	75	DODG	318	F-LA2P-C	(CON'T)				

COMMENT : ADJUSTED IDLE SPEED & MIXTURE TO SPEC.

SEQ#15 FEDERAL TEST PROC.	1.46	13.7	603.5	4.57	14.1
SEQ#15 50 MPH CRUISE	19.4	0.01	2249.4		
SEQ#15 HIGHWAY FUEL ECON.	0.16	1.1	428.0	7.68	20.6
SEQ#15 4 SPD IDLE (NEUT)	13.5	0.01		70.6	
SEQ#15 4 SPD IDLE (2500)	7.2	0.01		420.5	
SEQ#15 4 SPD IDLE (NEUT)	12.1	0.01		79.1	
SEQ#15 4 SPD IDLE (DRIV)	21.3	0.01		115.2	
SEQ#15 FED 2 MODE (30)	36.8	0.01		2006.4	
SEQ#15 FED 2 MODE (NEUT)	13.1	0.01		94.2	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED OIL & OIL FILTER, AIR,  
CANISTER & FUEL FILTER, SPRAK PLUGS, PCV  
VALVE. ADJUSTED TIMING, IDLE SPEED & MIXTURE TO SPEC.

SEQ#16 FEDERAL TEST PROC.	1.26	11.9	640.0	3.72	13.4
SEQ#16 50 MPH CRUISE	25.6	0.00	1838.6		
SEQ#16 HIGHWAY FUEL ECON.	0.11	0.7	429.2	5.99	20.6
SEQ#16 4 SPD IDLE (NEUT)	10.2	0.00		71.1	
SEQ#16 4 SPD IDLE (2500)	0.0	0.00		353.8	
SEQ#16 4 SPD IDLE (NEUT)	1.0	0.00		79.6	
SEQ#16 4 SPD IDLE (DRIV)	8.2	0.00		117.0	
SEQ#16 FED 2 MODE (30)	26.9	0.00		1490.4	
SEQ#16 FED 2 MODE (NEUT)	3.9	0.00		102.1	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 54 CO: 0.02 GAIN: 124

5477 75 PLYM 318 F-LA2-AP

PRELIMINARY LANE TEST:  
CAT: P FUEL: P  
HC: 913 CO: 1.51 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	22.23	31.7	610.8	4.83	12.1
SEQ#11 50 MPH CRUISE	1214.4	0.10	1933.8		
SEQ#11 HIGHWAY FUEL ECON.	15.50	4.0	441.3	8.90	17.9
SEQ#11 4 SPD IDLE (NEUT)	1140.9	0.93		37.3	
SEQ#11 4 SPD IDLE (2500)	993.8	0.11		414.5	
SEQ#11 4 SPD IDLE (NEUT)	1027.3	1.07		31.4	
SEQ#11 4 SPD IDLE (DRIV)	1263.7	2.13		33.4	
SEQ#11 FED 2 MODE (30)	1273.6	0.07		1267.5	
SEQ#11 FED 2 MODE (NEUT)	1089.9	1.06		39.1	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5477	75	PLYM	318	F-LA2-AP	(CON'T)					

COMMENT : NO MAINTENANCE PERFORMED DURING PRE-ADJUSTMENT. PROPANE GAIN 60 RPM. IDL RPM WITHOUT PROPANE 890 RPM, WITH PROPANE 950 RPM.

SEQ#	TEST	HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	FUEL ECON MPG
12	FEDERAL TEST PROC.	25.98	18.6	634.9	5.44		11.9
12	50 MPH CRUISE	1160.4	0.08		1750.9		
12	HIGHWAY FUEL ECON.	16.59	3.8	450.3	7.96		17.4
12	4 SPD IDLE (NEUT)	1126.3	0.13		71.6		
12	4 SPD IDLE (2500)	1039.3	0.10		439.8		
12	4 SPD IDLE (NEUT)	1170.2	0.21		83.6		
12	4 SPD IDLE (DRIV)	1286.1	0.26		167.0		
12	FED 2 MODE (30)	1243.9	0.07		1057.1		
12	FED 2 MODE (NEUT)	1158.0	0.23		96.5		

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE CO .2% ON HOOK-UP.

SEQ#	TEST	HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	FUEL ECON MPG
13	FEDERAL TEST PROC.	22.16	19.4	615.2	4.54		12.4
13	50 MPH CRUISE	1204.5	0.09		1663.3		
13	HIGHWAY FUEL ECON.	15.22	3.7	442.0	7.62		17.9
13	4 SPD IDLE (NEUT)	1070.6	0.33		48.1		
13	4 SPD IDLE (2500)	996.2	0.10		290.1		
13	4 SPD IDLE (NEUT)	1080.3	0.36		51.1		
13	4 SPD IDLE (DRIV)	1693.8	0.72		135.5		
13	FED 2 MODE (30)	1246.4	0.07		1079.6		
13	FED 2 MODE (NEUT)	1099.6	0.35		57.8		

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED TIMING -2, IDLE RPM 900 IN NEUTRAL, CO TO .5% .MANUFACTURERES SPEC.

SEQ#	TEST	HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	FUEL ECON MPG
15	FEDERAL TEST PROC.	29.43	17.7	674.7	3.84		11.2
15	50 MPH CRUISE	868.5	0.10		771.3		
15	HIGHWAY FUEL ECON.	16.07	4.8	468.6	5.16		16.8
15	4 SPD IDLE (NEUT)	1008.2	0.12		55.0		
15	4 SPD IDLE (2500)	970.0	0.10		199.1		
15	4 SPD IDLE (NEUT)	1022.5	0.13		57.9		
15	4 SPD IDLE (DRIV)	1209.4	0.15		104.9		
15	FED 2 MODE (30)	1097.2	0.07		530.7		
15	FED 2 MODE (NEUT)	1005.8	0.13		59.2		

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	CH <sub>4</sub>	
5477	75	PLYM	318	F-LA2-AP	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, CANISTER FILTER, FUEL FILTER, OIL AND OIL FILTER, AIR FILTER, TEMPERATURE SENSOR, PCV VALVE, SPARK PLUG WIRE #4. ADJUSTED CURB IDLE TO SPEC. ADJUSTED TIMING TO SPEC

SEQ#16	FEDERAL TEST PROC.	1.70	10.4	741.0	2.83	11.6
SEQ#16	50 MPH CRUISE	52.3	0.10	788.5		
SEQ#16	HIGHWAY FUEL ECON.	1.15	3.5	458.1	4.24	
SEQ#16	4 SPD IDLE (NEUT)	20.0	0.08		72.3	
SEQ#16	4 SPD IDLE (2500)	32.9	0.11		152.4	
SEQ#16	4 SPD IDLE (NEUT)	13.8	0.08		65.5	
SEQ#16	4 SPD IDLE (DRIV)	26.0	0.10		101.1	
SEQ#16	FED 2 MODE (30)	65.2	0.08		427.6	
SEQ#16	FED 2 MODE (NEUT)	9.2	0.08		64.2	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 16 CO: 0.08 GAIN: 271

5478 75 DODG 360 F-LA2L-C

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 247 CO: 6.91 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	5.23	100.0	611.9	3.46	11.3
SEQ#11	50 MPH CRUISE	13.5	0.05	2206.8		
SEQ#11	HIGHWAY FUEL ECON.	0.71	14.8	477.9	6.96	
SEQ#11	4 SPD IDLE (NEUT)	221.8	5.89		48.0	
SEQ#11	4 SPD IDLE (2500)	14.4	0.01		530.7	
SEQ#11	4 SPD IDLE (NEUT)	206.1	6.10		49.4	
SEQ#11	4 SPD IDLE (DRIV)	239.9	5.67		50.6	
SEQ#11	FED 2 MODE (30)	32.5	0.02		1224.9	
SEQ#11	FED 2 MODE (NEUT)	186.0	5.28		63.4	

## NO FOLLOW UP LANE TEST DONE

COMMENT : NO MAINTENANCE PERFORMED DURING PRE-ADJUSTMENT 50 RPM PROPANE GAIN ACHEIVED AT STEP 7 OF PROPANE CARBURETOR ADJUSTMENT PROCEDURE A-2. IDLE RPM WITHOUT PROPANE 750, WITH PROPANE 800 RPM.

SEQ#12	FEDERAL TEST PROC.	2.90	55.6	683.8	4.02	11.4
SEQ#12	50 MPH CRUISE	10.8	0.11	2086.6		
SEQ#12	HIGHWAY FUEL ECON.	0.64	16.1	481.4	7.48	
SEQ#12	4 SPD IDLE (NEUT)	76.1	1.36		63.4	
SEQ#12	4 SPD IDLE (2500)	9.5	0.01		491.3	
SEQ#12	4 SPD IDLE (NEUT)	59.6	1.21		67.5	
SEQ#12	4 SPD IDLE (DRIV)	97.9	0.98		94.8	
SEQ#12	FED 2 MODE (30)	41.1	0.00		1189.8	
SEQ#12	FED 2 MODE (NEUT)	49.7	0.81		74.9	

## NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5478	75	DODG	360	F-LA2L-C	(CON'T)					

COMMENT : ADJUSTED IDLE CO TO .5%, HC 70 PPM, IDLE RPM 740 RPM.

SEQ#13	FEDERAL TEST PROC.	2.30	41.4	696.8	4.35	11.5
SEQ#13	50 MPH CRUISE	13.8	0.18	1978.9		
SEQ#13	HIGHWAY FUEL ECON.	0.54	13.9	496.6	7.52	17.1
SEQ#13	4 SPD IDLE (NEUT)	55.9	0.80		71.7	
SEQ#13	4 SPD IDLE (2500)	1.6	0.04		543.9	
SEQ#13	4 SPD IDLE (NEUT)	43.4	0.72		75.7	
SEQ#13	4 SPD IDLE (DRIV)	26.9	0.03		79.8	
SEQ#13	FED 2 MODE (30)	28.3	0.00		1325.1	
SEQ#13	FED 2 MODE (NEUT)	33.8	0.24		77.4	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE SPEED AND MIXTURE TO SPEC.

SEQ#15	FEDERAL TEST PROC.	2.30	41.9	668.2	5.21	12.0
SEQ#15	50 MPH CRUISE	8.2	0.23	1968.9		
SEQ#15	HIGHWAY FUEL ECON.	0.41	11.4	471.9	7.40	18.1
SEQ#15	4 SPD IDLE (NEUT)	3.6	0.00		72.6	
SEQ#15	4 SPD IDLE (2500)	0.0	0.00		463.0	
SEQ#15	4 SPD IDLE (NEUT)	0.0	0.00		82.5	
SEQ#15	4 SPD IDLE (DRIV)	1.3	0.00		122.4	
SEQ#15	FED 2 MODE (30)	16.7	0.00		949.4	
SEQ#15	FED 2 MODE (NEUT)	9.8	0.00		87.2	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 0 CO: 0.00 GAIN: 110

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR, FUEL, OIL, CRANCASE BREATHER & CARBON CANISTER FILTERS, PCV VALVE, ENGINE OIL, TIMING DELAY SOLENOID. ADJUSTED IDLE SPEED & MIXTURE TO SPEC.

SEQ#16	FEDERAL TEST PROC.	2.55	55.1	688.7	4.66	11.3
SEQ#16	50 MPH CRUISE	20.0	0.02	2169.3		
SEQ#16	HIGHWAY FUEL ECON.	0.33	9.2	494.2	6.68	17.4
SEQ#16	4 SPD IDLE (NEUT)	33.8	0.00		64.2	
SEQ#16	4 SPD IDLE (2500)	19.4	0.00		340.7	
SEQ#16	4 SPD IDLE (NEUT)	8.2	0.00		63.7	
SEQ#16	4 SPD IDLE (DRIV)	28.3	0.00		99.0	
SEQ#16	FED 2 MODE (30)	26.9	0.00		1002.0	
SEQ#16	FED 2 MODE (NEUT)	13.5	0.00		69.4	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 100 CO: 0.00 GAIN: 140

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5479	75	PLYM	400	F-B2-C						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 134 CO: 4.36 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	4.58	38.5	829.1	2.71	9.8
SEQ#11	50 MPH CRUISE	14.4	0.01	644.0		
SEQ#11	HIGHWAY FUEL ECON.	0.14	4.1	575.4	2.54	15.2
SEQ#11	4 SPD IDLE (NEUT)	82.7	2.87		68.0	
SEQ#11	4 SPD IDLE (2500)	13.1	0.01		224.7	
SEQ#11	4 SPD IDLE (NEUT)	67.5	2.57		69.4	
SEQ#11	4 SPD IDLE (DRIV)	115.8	2.30		98.8	
SEQ#11	FED 2 MODE (30)	14.4	0.01		380.1	
SEQ#11	FED 2 MODE (NEUT)	68.8	2.15		69.4	

NO FOLLOW UP LANE TEST DONE

COMMENT : REPLACED AIR FILTER ELEMENT AND VACUUM DIAPHRAGM.  
0 RPM PROPANE GAIN IN PREADJUSTMENT. 50 RPM  
PROPANE GAIN IN CARB. ADJUSTMENT PROCEDURE.

SEQ#12	FEDERAL TEST PROC.	1.69	27.6	858.9	2.74	9.8
SEQ#12	50 MPH CRUISE	0.3	0.01	722.8		
SEQ#12	HIGHWAY FUEL ECON.	0.18	6.1	609.7	2.63	14.3
SEQ#12	4 SPD IDLE (NEUT)	39.4	0.00		65.6	
SEQ#12	4 SPD IDLE (2500)	0.0	0.00		262.8	
SEQ#12	4 SPD IDLE (NEUT)	2.0	0.00		66.8	
SEQ#12	4 SPD IDLE (DRIV)	11.8	0.00		73.7	
SEQ#12	FED 2 MODE (30)	0.0	0.00		284.1	
SEQ#12	FED 2 MODE (NEUT)	15.1	0.00		54.7	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE RPM & IDLE CO AT STEP 5 OF CO  
ADJUSTMENTS. CURB IDLE 750 N & CO TO .4%.

SEQ#13	FEDERAL TEST PROC.	1.12	14.1	798.4	2.99	10.8
SEQ#13	50 MPH CRUISE	0.0	0.00		832.0	
SEQ#13	HIGHWAY FUEL ECON.	0.20	5.8	530.3	2.14	16.4
SEQ#13	4 SPD IDLE (NEUT)	106.5	0.00		47.5	
SEQ#13	4 SPD IDLE (2500)	0.0	0.00		223.2	
SEQ#13	4 SPD IDLE (NEUT)	4.9	0.00		54.4	
SEQ#13	4 SPD IDLE (DRIV)	11.5	0.00		68.3	
SEQ#13	FED 2 MODE (30)	0.0	0.00		325.5	
SEQ#13	FED 2 MODE (NEUT)	51.6	0.00		52.0	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	GRAMS / MILE CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5479	75	PLYM	400	F-B2-C	(CON'T)					

COMMENT : ADJUSTED IDLE MIXTURE TO MANUFACTURERS SPEC AT  
750 RPM.

SEQ#15 FEDERAL TEST PROC.	1.14	11.5	806.2	2.99	10.7
SEQ#15 50 MPH CRUISE	0.0	0.00	818.9		
SEQ#15 HIGHWAY FUEL ECON.	0.12	3.1	535.4	2.37	16.4
SEQ#15 4 SPD IDLE (NEUT)	118.4	0.00		51.9	
SEQ#15 4 SPD IDLE (2500)	0.0	0.00		216.8	
SEQ#15 4 SPD IDLE (NEUT)	12.1	0.00		56.4	
SEQ#15 4 SPD IDLE (DRIV)	18.7	0.00		74.4	
SEQ#15 FED 2 MODE (30)	0.0	0.00		273.0	
SEQ#15 FED 2 MODE (NEUT)	136.7	0.00		50.9	

NO FOLLOW UP LANE TEST DONE

COMMENT : REPLACED: SPARK PLUGS, ENGINE OIL, PCV VALVE, HOT AIR INLET TUBE, AIR OIL FUEL CRANKCASE BREATHER & CARBON CANISTER FILTERS. ADJUSTED TIMING, IDLE MIXTURE AND IDLE SPEED.

SEQ#16 FEDERAL TEST PROC.	1.10	12.6	848.2	3.28	10.2
SEQ#16 50 MPH CRUISE	3.3	0.01	1092.1		
SEQ#16 HIGHWAY FUEL ECON.	0.08	0.9	535.6	5.18	16.5
SEQ#16 4 SPD IDLE (NEUT)	42.1	0.00		49.4	
SEQ#16 4 SPD IDLE (2500)	0.0	0.01		261.8	
SEQ#16 4 SPD IDLE (NEUT)	11.2	0.00		47.6	
SEQ#16 4 SPD IDLE (DRIV)	23.6	0.00		52.1	
SEQ#16 FED 2 MODE (30)	7.5	0.01		330.6	
SEQ#16 FED 2 MODE (NEUT)	61.2	0.00		44.7	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 25 CO: 0.03 GAIN: 142

5480 75 CHRY 400 F-B4-C

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 102 CO: 4.25 GAIN: 5

SEQ#11 FEDERAL TEST PROC.	10.08	177.0	711.1	1.61	8.7
SEQ#11 50 MPH CRUISE	123.1	3.42	631.8		
SEQ#11 HIGHWAY FUEL ECON.	2.53	63.2	449.4	2.28	15.9
SEQ#11 4 SPD IDLE (NEUT)	87.6	4.51		69.3	
SEQ#11 4 SPD IDLE (2500)	54.3	3.05		199.6	
SEQ#11 4 SPD IDLE (NEUT)	114.5	6.27		63.8	
SEQ#11 4 SPD IDLE (DRIV)	154.0	6.83		64.4	
SEQ#11 FED 2 MODE (30)	197.0	3.38		269.9	
SEQ#11 FED 2 MODE (NEUT)	112.5	5.62		63.5	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>X</sub> C	CH <sub>4</sub>	
5480	75	CHRY	400 F-B4-C	(CON'T)						

COMMENT : REPLACED VACUUM BREAK DIAPHRAGM IN PRE-ADJUSTMENT. 50 RPM PROPANE GAIN ACHIEVED AT STEP 8 OF PROPANE CARBURETOR ADJUSTMENT PROCEDURE A-2. IDLE RPM 750, WITH PROPANE 800 RPM.

SEQ#12	FEDERAL TEST PROC.	4.15	85.9	705.5	1.65	10.4
SEQ#12	50 MPH CRUISE	113.1	2.13	657.1		
SEQ#12	HIGHWAY FUEL ECON.	2.32	49.2	465.4	2.44	16.1
SEQ#12	4 SPD IDLE (NEUT)	80.0	0.74		57.9	
SEQ#12	4 SPD IDLE (2500)	55.3	3.18		190.4	
SEQ#12	4 SPD IDLE (NEUT)	77.7	1.52		60.8	
SEQ#12	4 SPD IDLE (DRIV)	97.2	1.53		74.4	
SEQ#12	FED 2 MODE (30)	186.4	3.14		295.2	
SEQ#12	FED 2 MODE (NEUT)	82.0	0.48		59.7	

FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 79 CO: 1.52 GAIN: 60

COMMENT : ADJUSTED IDLE CO TO .5% AT STEP 5 OF IDLE CO CARBURETOR ADJUSTMENT PROCEDURE A-2. IDLE RPM 730, CO .5%.

SEQ#13	FEDERAL TEST PROC.	4.11	89.0	725.7	1.76	10.1
SEQ#13	50 MPH CRUISE	116.1	1.96	769.3		
SEQ#13	HIGHWAY FUEL ECON.	2.18	43.2	471.4	2.78	16.3
SEQ#13	4 SPD IDLE (NEUT)	41.1	0.22		54.4	
SEQ#13	4 SPD IDLE (2500)	50.3	2.72		193.9	
SEQ#13	4 SPD IDLE (NEUT)	48.3	0.36		59.4	
SEQ#13	4 SPD IDLE (DRIV)	65.2	0.49		74.1	
SEQ#13	FED 2 MODE (30)	172.7	2.50		402.4	
SEQ#13	FED 2 MODE (NEUT)	57.2	0.21		58.3	

FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 49 CO: 0.35 GAIN: 100

COMMENT : ADJUSTED IDLE MIXTURE TO .3%.

SEQ#15	FEDERAL TEST PROC.	4.56	88.9	772.0	2.00	9.6
SEQ#15	50 MPH CRUISE	193.4	2.13	788.5		
SEQ#15	HIGHWAY FUEL ECON.	2.33	48.6	468.9	2.78	16.1
SEQ#15	4 SPD IDLE (NEUT)	57.2	0.29		68.5	
SEQ#15	4 SPD IDLE (2500)	73.4	3.22		186.8	
SEQ#15	4 SPD IDLE (NEUT)	33.5	0.40		66.5	
SEQ#15	4 SPD IDLE (DRIV)	37.1	0.13		86.8	
SEQ#15	FED 2 MODE (30)	178.0	2.36		380.1	
SEQ#15	FED 2 MODE (NEUT)	34.8	0.10		64.1	

FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 33 CO: 0.39 GAIN: 130

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5480	75	CHRY	400	F-B4-C	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, PCV VALVE, AIR FILTER, FUEL FILTER, OIL & OIL FILTER, CANISTER FILTER, PCV FILTER. ADJUSTED IDLE NEUTRAL TO 750 RPM, CO TO .3%.

SEQ#	TEST	HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	FUEL ECON MPG
16	FEDERAL TEST PROC.	3.90	69.6	738.1	2.03		10.3
16	50 MPH CRUISE	123.4	2.00		844.1		
16	HIGHWAY FUEL ECON.	2.20	42.0	457.6	3.08		16.7
16	4 SPD IDLE (NEUT)	33.5	0.26		61.3		
16	4 SPD IDLE (2500)	312.2	1.88		254.8		
16	4 SPD IDLE (NEUT)	46.0	0.16		58.3		
16	4 SPD IDLE (DRIV)	60.9	0.25		76.4		
16	FED 2 MODE (30)	198.7	2.76		459.0		
16	FED 2 MODE (NEUT)	63.8	0.06		60.4		

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 46 CO: 0.17 GAIN: 80

5482 75 FORD 140 2.3" A" EGR AIR

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 93 CO: 3.97 GAIN: 0

SEQ#	TEST	HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	FUEL ECON MPG
11	FEDERAL TEST PROC.	3.20	55.4	458.1	1.71		16.0
11	50 MPH CRUISE	7.9	0.18		376.1		
11	HIGHWAY FUEL ECON.	0.56	7.7	370.6	1.87		23.1
11	4 SPD IDLE (NEUT)	93.3	3.51		41.4		
11	4 SPD IDLE (2500)	35.5	2.05		82.1		
11	4 SPD IDLE (NEUT)	88.6	3.26		42.4		
11	4 SPD IDLE (DRIV)	120.4	3.26		55.3		
11	FED 2 MODE (30)	29.2	0.23		698.6		
11	FED 2 MODE (NEUT)	82.3	3.12		43.4		

NO FOLLOW UP LANE TEST DONE

COMMENT : 50 RPM GAIN OBTAINED AT STEP 6C OF PROPANE ADJUSTMENT PROCEDURE A-1. IDLE RPM 880 NEUTRAL, WITH PROPANE 930 RPM. TIGHTENING OF CARBURETOR BASEPLATE BOLTS WAS NECESSARY TO OBTAIN CORRECT ADJUSTMENT.

SEQ#	TEST	HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	FUEL ECON MPG
12	FEDERAL TEST PROC.	2.85	45.0	453.3	1.69		16.7
12	50 MPH CRUISE	33.5	0.24		451.9		
12	HIGHWAY FUEL ECON.	0.67	7.9	357.9	2.15		23.8
12	4 SPD IDLE (NEUT)	122.1	1.70		46.4		
12	4 SPD IDLE (2500)	54.9	2.66		86.5		
12	4 SPD IDLE (NEUT)	186.0	0.72		46.7		
12	4 SPD IDLE (DRIV)	160.3	1.10		56.9		
12	FED 2 MODE (30)	47.4	0.54		679.3		
12	FED 2 MODE (NEUT)	157.0	1.62		46.1		

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE				FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	
5482	75	FORD	140	2.3"A"EGRAIR	(CON'T)				

COMMENT : IDLE MIXTURE FLUCTUATES FROM .4% TO .7%, IDLE SPEED FLUCTUATES FROM 860 TO 900 RPM. CO OF .5% WAS ACHIEVED AT STEP 4C OF IDLE CO ADJUSTMENT PROCEDURE, A-1.

SEQ#13	FEDERAL TEST PROC.	2.29	44.1	449.1	1.67	16.9
SEQ#13	50 MPH CRUISE	18.1	0.24		465.0	
SEQ#13	HIGHWAY FUEL ECON.	0.62	8.0	349.4	2.01	24.4
SEQ#13	4 SPD IDLE (NEUT)	221.8	0.91		52.1	
SEQ#13	4 SPD IDLE (2500)	56.6	2.34		100.6	
SEQ#13	4 SPD IDLE (NEUT)	199.8	0.88		52.2	
SEQ#13	4 SPD IDLE (DRIV)	168.4	0.96		70.6	
SEQ#13	FED 2 MODE (30)	40.8	0.31		844.1	
SEQ#13	FED 2 MODE (NEUT)	128.4	1.47		50.7	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE MIXTURE TO SPEC.

SEQ#15	FEDERAL TEST PROC.	2.30	40.7	451.4	1.58	17.0
SEQ#15	50 MPH CRUISE	17.4	0.20		455.9	
SEQ#15	HIGHWAY FUEL ECON.	0.51	7.1	360.6	1.97	23.8
SEQ#15	4 SPD IDLE (NEUT)	227.2	1.39		45.8	
SEQ#15	4 SPD IDLE (2500)	52.6	2.25		85.3	
SEQ#15	4 SPD IDLE (NEUT)	466.4	0.86		44.0	
SEQ#15	4 SPD IDLE (DRIV)	165.3	0.72		64.5	
SEQ#15	FED 2 MODE (30)	37.8	0.28		711.7	
SEQ#15	FED 2 MODE (NEUT)	288.7	1.17		48.9	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR, FUEL, AND OIL FILTERS, CRANKCASE BREATHER FILTERS, PCV VALVE, ENGINE OIL, SPARK PLUG WIRES. ADJUSTED FAST IDLE RPM, AND IDLE SPEED AND MIXTURE.

SEQ#16	FEDERAL TEST PROC.	2.26	41.8	434.8	1.85	17.5
SEQ#16	50 MPH CRUISE	36.5	0.40		535.8	
SEQ#16	HIGHWAY FUEL ECON.	0.71	9.8	350.1	2.55	24.1
SEQ#16	4 SPD IDLE (NEUT)	273.8	1.05		51.9	
SEQ#16	4 SPD IDLE (2500)	60.2	2.20		96.2	
SEQ#16	4 SPD IDLE (NEUT)	424.7	0.50		51.7	
SEQ#16	4 SPD IDLE (DRIV)	176.8	0.64		74.8	
SEQ#16	FED 2 MODE (30)	66.8	0.91		640.9	
SEQ#16	FED 2 MODE (NEUT)	229.3	1.03		50.1	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 142 CO: 0.71 GAIN: 28

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS				FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	
5484	75	FORD	250	250 1CEF					

## PRELIMINARY LANE TEST:

CAT: P FUEL: F  
HC: 51 CO: 0.02 GAIN: 50

SEQ#11	FEDERAL TEST PROC.	1.96	4.0	640.6	4.05	13.6
SEQ#11	50 MPH CRUISE	24.0	0.02	493.4	463.0	
SEQ#11	HIGHWAY FUEL ECON.	0.43	1.3		2.74	17.9
SEQ#11	4 SPD IDLE (NEUT)	113.1	0.01		69.5	
SEQ#11	4 SPD IDLE (2500)	27.3	0.01		227.5	
SEQ#11	4 SPD IDLE (NEUT)	109.5	0.01		56.8	
SEQ#11	4 SPD IDLE (DRIV)	219.8	0.02		241.6	
SEQ#11	FED 2 MODE (30)	101.5	0.01		917.9	
SEQ#11	FED 2 MODE (NEUT)	87.0	0.01		71.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, OIL AND OIL FILTER, PCV VALVE AND FILTER, FUEL FILTER, COOLANT TEMPERATURE SWITCH TO EGR. SET TO MANUFACTURER SPEC.

SEQ#16	FEDERAL TEST PROC.	2.40	5.2	622.3	4.20	13.9
SEQ#16	50 MPH CRUISE	45.7	0.03	457.2	742.0	
SEQ#16	HIGHWAY FUEL ECON.	0.59	1.1		4.83	19.3
SEQ#16	4 SPD IDLE (NEUT)	241.3	0.01		74.9	
SEQ#16	4 SPD IDLE (2500)	40.4	0.01		243.6	
SEQ#16	4 SPD IDLE (NEUT)	607.7	0.02		62.9	
SEQ#16	4 SPD IDLE (DRIV)	216.8	0.00		330.6	
SEQ#16	FED 2 MODE (30)	108.5	0.01		664.2	
SEQ#16	FED 2 MODE (NEUT)	630.3	0.02		56.3	

## FOLLOW UP LANE TEST:

CAT: P FUEL: F  
HC: 92 CO: 0.02 GAIN: 150

5485 75 FORD 250 250 1CEF

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 246 CO: 6.30 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	1.53	36.6	562.8	5.90	14.2
SEQ#11	50 MPH CRUISE	4.9	0.01	457.6	1224.9	
SEQ#11	HIGHWAY FUEL ECON.	0.23	2.2		5.72	19.2
SEQ#11	4 SPD IDLE (NEUT)	255.4	5.57		64.8	
SEQ#11	4 SPD IDLE (2500)	12.5	0.02		374.0	
SEQ#11	4 SPD IDLE (NEUT)	277.2	6.13		61.8	
SEQ#11	4 SPD IDLE (DRIV)	252.3	6.13		104.2	
SEQ#11	FED 2 MODE (30)	28.8	0.01		1227.4	
SEQ#11	FED 2 MODE (NEUT)	274.5	5.13		66.8	

NO FOLLOW UP LANE TEST DONE

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5485	75	FORD	250	250 1CEF	(CON'T)					

COMMENT : ADJUSTED IDLE DRIVE 600 RPM, PROPANE GAIN 50 RPM.

SEQ#12 FEDERAL TEST PROC.	0.86	7.3	583.1	4.96	14.9
SEQ#12 50 MPH CRUISE	5.9	0.01	673.3		
SEQ#12 HIGHWAY FUEL ECON.	0.17	0.9	465.6	4.24	19.0
SEQ#12 4 SPD IDLE (NEUT)	42.1	0.02		71.7	
SEQ#12 4 SPD IDLE (2500)	82.3	0.01		136.0	
SEQ#12 4 SPD IDLE (NEUT)	20.0	0.01		83.1	
SEQ#12 4 SPD IDLE (DRIV)	12.8	0.09		104.4	
SEQ#12 FED 2 MODE (30)	22.3	0.01		467.0	
SEQ#12 FED 2 MODE (NEUT)	52.6	0.01		89.9	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 600 RPM, PROPANE GAIN 60 RPM.

SEQ#15 FEDERAL TEST PROC.	0.63	2.9	572.9	4.73	15.3
SEQ#15 50 MPH CRUISE	5.9	0.01	572.2		
SEQ#15 HIGHWAY FUEL ECON.	0.26	0.4	457.8	3.79	19.3
SEQ#15 4 SPD IDLE (NEUT)	289.1	0.01		108.0	
SEQ#15 4 SPD IDLE (2500)	104.9	0.02		112.2	
SEQ#15 4 SPD IDLE (NEUT)	43.4	0.01		106.5	
SEQ#15 4 SPD IDLE (DRIV)	8.2	0.01		328.6	
SEQ#15 FED 2 MODE (30)	29.6	0.01		403.4	
SEQ#15 FED 2 MODE (NEUT)	116.8	0.01		142.6	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, OIL, PCV,  
FUEL FILTERS, PCV VALVE, ENGINE OIL. ADJUSTED  
TIMING TO SPEC.

SEQ#16 FEDERAL TEST PROC.	0.55	5.1	648.2	2.73	13.5
SEQ#16 50 MPH CRUISE	0.0	0.01	400.3		
SEQ#16 HIGHWAY FUEL ECON.	0.07	0.5	537.0	2.45	16.5
SEQ#16 4 SPD IDLE (NEUT)	86.0	0.00		62.8	
SEQ#16 4 SPD IDLE (2500)	15.8	0.01		90.9	
SEQ#16 4 SPD IDLE (NEUT)	26.0	0.00		72.7	
SEQ#16 4 SPD IDLE (DRIV)	5.6	0.00		150.8	
SEQ#16 FED 2 MODE (30)	3.3	0.01		225.4	
SEQ#16 FED 2 MODE (NEUT)	46.4	0.00		71.8	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 50 CO: 0.02 GAIN: 190

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE				FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	
5487	75	FORD	351	351W "A"					

## PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 103 CO: 5.19 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	3.39	69.3	723.9	3.09	10.5
SEQ#11	50 MPH CRUISE	20.7	0.30	840.1		
SEQ#11	HIGHWAY FUEL ECON.	1.04	13.2	514.8	5.07	16.5
SEQ#11	4 SPD IDLE (NEUT)	63.5	2.49		60.1	
SEQ#11	4 SPD IDLE (2500)	6.6	0.20		243.7	
SEQ#11	4 SPD IDLE (NEUT)	114.8	4.51		63.8	
SEQ#11	4 SPD IDLE (DRIV)	127.1	5.27		85.9	
SEQ#11	FED 2 MODE (30)	8.5	0.13		333.6	
SEQ#11	FED 2 MODE (NEUT)	65.2	2.91		59.2	

NO FOLLOW UP LANE TEST DONE

COMMENT : NO MAINTENANCE PERFORMED DURING PRE-ADJUSTMENT. ADJUSTED IDLE MIXTURE TO 50 RPM PROPANE GAIN AT STEP 7C OF PROPANE ADJUSTMENT PROCEDURE A-2.

SEQ#12	FEDERAL TEST PROC.	1.95	38.4	799.2	3.13	10.3
SEQ#12	50 MPH CRUISE	24.6	0.45	746.5		
SEQ#12	HIGHWAY FUEL ECON.	0.82	16.1	565.6	3.99	15.0
SEQ#12	4 SPD IDLE (NEUT)	55.9	1.44		82.6	
SEQ#12	4 SPD IDLE (2500)	7.9	0.38		190.4	
SEQ#12	4 SPD IDLE (NEUT)	39.1	1.08		88.3	
SEQ#12	4 SPD IDLE (DRIV)	82.3	1.55		124.2	
SEQ#12	FED 2 MODE (30)	14.1	0.24		360.9	
SEQ#12	FED 2 MODE (NEUT)	44.1	0.86		86.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE CO AT .3% ON HOOK UP AND OBTAINED .5% CO IN IDLE CO CARBURETOR ADJUSTMENT STEP 5.

SEQ#13	FEDERAL TEST PROC.	1.87	29.4	793.9	3.03	10.5
SEQ#13	50 MPH CRUISE	31.2	0.38	624.8		
SEQ#13	HIGHWAY FUEL ECON.	0.72	10.9	572.5	3.86	15.0
SEQ#13	4 SPD IDLE (NEUT)	40.4	0.79		87.2	
SEQ#13	4 SPD IDLE (2500)	9.5	0.28		205.0	
SEQ#13	4 SPD IDLE (NEUT)	44.7	0.49		90.9	
SEQ#13	4 SPD IDLE (DRIV)	64.2	0.84		143.7	
SEQ#13	FED 2 MODE (30)	13.5	0.17		359.9	
SEQ#13	FED 2 MODE (NEUT)	31.2	0.42		89.9	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5487	75	FORD	351	351W "A"	(CON'T)					

COMMENT : ADJUSTED IDLE DRIVE 650 PROPANE GAIN 60 RPM.

SEQ#15 FEDERAL TEST PROC.	1.45	23.5	814.6	3.28	10.4
SEQ#15 50 MPH CRUISE	15.1	0.35		695.5	
SEQ#15 HIGHWAY FUEL ECON.	0.70	12.9	584.0	4.88	14.6
SEQ#15 4 SPD IDLE (NEUT)	11.8	0.21		115.7	
SEQ#15 4 SPD IDLE (2500)	2.3	0.15		212.7	
SEQ#15 4 SPD IDLE (NEUT)	5.9	0.18		107.7	
SEQ#15 4 SPD IDLE (DRIV)	26.6	0.20		234.0	
SEQ#15 FED 2 MODE (30)	5.9	0.12		371.0	
SEQ#15 FED 2 MODE (NEUT)	6.9	0.20		112.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : REPLACED OIL FILTER, SPARK PLUGS, PCV FILTER, OIL & FILTER, PCV VALVE, EGR VALVE, FUEL FILTER, EGR TEMP SENSOR VALVE, HOT & FRESH AIR TUBING, RESET CHOKE SPRING TO SPEC, ADJUSTED CURB IDLE TO 650 DR., TIMING AT 4 AND FAST IDLE SET TO 1400 N.

SEQ#16 FEDERAL TEST PROC.	1.99	19.8	726.5	2.12	11.6
SEQ#16 50 MPH CRUISE	13.1	0.20		273.0	
SEQ#16 HIGHWAY FUEL ECON.	0.73	5.8	550.5	2.03	15.8
SEQ#16 4 SPD IDLE (NEUT)	55.9	0.32		77.0	
SEQ#16 4 SPD IDLE (2500)	10.8	0.12		160.1	
SEQ#16 4 SPD IDLE (NEUT)	24.6	0.30		81.3	
SEQ#16 4 SPD IDLE (DRIV)	82.0	0.37		150.3	
SEQ#16 FED 2 MODE (30)	11.2	0.10		313.4	
SEQ#16 FED 2 MODE (NEUT)	52.6	0.30		78.5	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 56 CO: 0.61 GAIN: 68

5488 75 FORD 351 351W 1CET

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 215 CO: 5.84 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	2.73	49.5	634.2	5.41	12.3
SEQ#11 50 MPH CRUISE	35.2	0.17		1993.9	
SEQ#11 HIGHWAY FUEL ECON.	0.88	9.0	493.5	7.54	17.4
SEQ#11 4 SPD IDLE (NEUT)	131.1	2.27		59.5	
SEQ#11 4 SPD IDLE (2500)	7.2	0.12		327.5	
SEQ#11 4 SPD IDLE (NEUT)	136.7	3.14		59.6	
SEQ#11 4 SPD IDLE (DRIV)	223.2	3.20		80.3	
SEQ#11 FED 2 MODE (30)	49.0	0.41		535.8	
SEQ#11 FED 2 MODE (NEUT)	139.7	3.00		60.1	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5488	75	FORD	351	351W 1CET	(CON'T)					

COMMENT : IDLE DRIVE 650 RPM, PROPANE GAIN 50 RPM.

SEQ#12 FEDERAL TEST PROC.	1.96	17.3	690.4	5.89	12.3
SEQ#12 50 MPH CRUISE	31.5	0.13	2151.7		
SEQ#12 HIGHWAY FUEL ECON.	0.73	4.7	494.9	8.21	17.6
SEQ#12 4 SPD IDLE (NEUT)	203.4	0.12		72.4	
SEQ#12 4 SPD IDLE (2500)	7.2	0.08		308.3	
SEQ#12 4 SPD IDLE (NEUT)	127.7	0.20		78.0	
SEQ#12 4 SPD IDLE (DRIV)	90.3	0.21		177.3	
SEQ#12 FED 2 MODE (30)	28.9	0.15		538.8	
SEQ#12 FED 2 MODE (NEUT)	148.7	0.20		71.6	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE DRIVE 650 RPM, CO .4%.

SEQ#13 FEDERAL TEST PROC.	2.07	14.5	708.1	5.24	12.0
SEQ#13 50 MPH CRUISE	23.6	0.14	1695.8		
SEQ#13 HIGHWAY FUEL ECON.	0.66	4.7	495.5	7.12	17.6
SEQ#13 4 SPD IDLE (NEUT)	293.5	0.09		62.6	
SEQ#13 4 SPD IDLE (2500)	13.1	0.09		283.1	
SEQ#13 4 SPD IDLE (NEUT)	179.0	0.16		71.2	
SEQ#13 4 SPD IDLE (DRIV)	88.0	0.14		138.3	
SEQ#13 FED 2 MODE (30)	23.3	0.13		463.0	
SEQ#13 FED 2 MODE (NEUT)	258.1	0.14		65.5	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE SPEED AND MIXTURE TO SPEC.

SEQ#15 FEDERAL TEST PROC.	1.75	15.6	699.8	5.23	12.2
SEQ#15 50 MPH CRUISE	26.9	0.13	1836.1		
SEQ#15 HIGHWAY FUEL ECON.	0.70	5.0	499.9	7.38	17.4
SEQ#15 4 SPD IDLE (NEUT)	169.0	0.15		68.4	
SEQ#15 4 SPD IDLE (2500)	3.9	0.13		299.2	
SEQ#15 4 SPD IDLE (NEUT)	119.1	0.18		71.8	
SEQ#15 4 SPD IDLE (DRIV)	77.4	0.15		144.7	
SEQ#15 FED 2 MODE (30)	25.3	0.13		456.9	
SEQ#15 FED 2 MODE (NEUT)	177.7	0.16		67.5	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE				FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	
5488	75	FORD	351	351W 1CET	(CON'T)				

COMMENT : MAJOR TUNE-UP. REPLACED AIR, FUEL, OIL AND CRANKCASE BREATHER FILTERS, SPARK PLUGS, PCV VALVE, ENGINE OIL, EGR COOLANT TEMP SWITCH, HOT AND COLD AIR DUCTS. NO ADJUSTMENTS WERE NECESSARY.

SEQ#16 FEDERAL TEST PROC.	1.63/	8.8	711.3	2.52	12.2
SEQ#16 50 MPH CRUISE	18.1	0.09	450.9		
SEQ#16 HIGHWAY FUEL ECON.	0.61	3.3	500.7	2.97	17.5
SEQ#16 4 SPD IDLE (NEUT)	410.4	0.10		62.0	
SEQ#16 4 SPD IDLE (2500)	72.1	0.11		122.9	
SEQ#16 4 SPD IDLE (NEUT)	270.5	0.10		68.0	
SEQ#16 4 SPD IDLE (DRIV)	92.3	0.06		147.8	
SEQ#16 FED 2 MODE (30)	26.0	0.09		429.6	
SEQ#16 FED 2 MODE (NEUT)	368.3	0.08		54.6	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 166 CO: 0.09 GAIN: 40

5489 75 FORD 400 351M/4001CET

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 121 CO: 3.25 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	2.19	42.8	818.2	1.29	9.9
SEQ#11 50 MPH CRUISE	7.2	0.07		121.6	
SEQ#11 HIGHWAY FUEL ECON.	0.37	6.6	654.6	1.24	13.3
SEQ#11 4 SPD IDLE (NEUT)	69.8	1.04		38.2	
SEQ#11 4 SPD IDLE (2500)	3.0	0.07		68.0	
SEQ#11 4 SPD IDLE (NEUT)	71.8	0.97		41.1	
SEQ#11 4 SPD IDLE (DRIV)	75.4	0.87		51.7	
SEQ#11 FED 2 MODE (30)	9.8	0.05		134.9	
SEQ#11 FED 2 MODE (NEUT)	79.4	0.91		36.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE DRIVE 650 RPM, PROPANE GAIN 15 RPM.

SEQ#15 FEDERAL TEST PROC.	2.23	25.3	866.9	1.52	9.7
SEQ#15 50 MPH CRUISE	6.9	0.04		116.2	
SEQ#15 HIGHWAY FUEL ECON.	0.28	3.7	655.2	1.55	13.4
SEQ#15 4 SPD IDLE (NEUT)	450.4	0.22		36.8	
SEQ#15 4 SPD IDLE (2500)	24.6	0.04		63.3	
SEQ#15 4 SPD IDLE (NEUT)	302.2	0.24		39.0	
SEQ#15 4 SPD IDLE (DRIV)	82.3	0.17		57.4	
SEQ#15 FED 2 MODE (30)	22.7	0.04		128.3	
SEQ#15 FED 2 MODE (NEUT)	405.9	0.26		33.8	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 350 CO: 1.37 GAIN: 140

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE				FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	
5489	75	FORD	400	351M/4001CET	(CON'T)				

COMMENT : MAJOR TUNE-UP. REPLACED AIR, FUEL, OIL AND CRANKCASE BREather FILTERS, SPARK PLUGS, PCV VALVE, HOT AIR Duct, ENGINE OIL, SEVERAL VACUUM LINES.

SEQ#16	FEDERAL TEST PROC.	1.92	18.2	874.5	1.62	9.8
SEQ#16	50 MPH CRUISE	4.6	0.04		125.2	
SEQ#16	HIGHWAY FUEL ECON.	0.23	2.9	646.7	1.42	
SEQ#16	4 SPD IDLE (NEUT)	295.6	0.24		38.6	
SEQ#16	4 SPD IDLE (2500)	38.5	0.05		59.1	
SEQ#16	4 SPD IDLE (NEUT)	180.3	0.24		45.0	
SEQ#16	4 SPD IDLE (DRIV)	73.4	0.17		67.2	
SEQ#16	FED 2 MODE (30)	13.1	0.04		96.7	
SEQ#16	FED 2 MODE (NEUT)	379.3	0.29		36.1	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 174 CO: 1.19 GAIN: 175

5491 75 FORD 351 351M/4001CET

## PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 500 CO: 0.67 GAIN: 20

SEQ#11	FEDERAL TEST PROC.	4.63	115.6	915.4	1.80	8.0
SEQ#11	50 MPH CRUISE	0.0	0.33		357.9	
SEQ#11	HIGHWAY FUEL ECON.	1.22	44.3	742.4	2.17	
SEQ#11	4 SPD IDLE (NEUT)	339.6	0.44		46.4	
SEQ#11	4 SPD IDLE (2500)	8.9	0.05		154.2	
SEQ#11	4 SPD IDLE (NEUT)	260.6	0.16		50.6	
SEQ#11	4 SPD IDLE (DRIV)	200.4	0.08		56.4	
SEQ#11	FED 2 MODE (30)	11.2	0.32		270.9	
SEQ#11	FED 2 MODE (NEUT)	341.8	0.22		46.2	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE NEUTRAL 500 RPM, CO .3%

SEQ#13	FEDERAL TEST PROC.	3.62	90.9	951.1	1.75	8.0
SEQ#13	50 MPH CRUISE	11.2	0.77		345.7	
SEQ#13	HIGHWAY FUEL ECON.	1.38	59.9	725.6	1.90	
SEQ#13	4 SPD IDLE (NEUT)	535.5	0.39		45.1	
SEQ#13	4 SPD IDLE (2500)	11.5	0.03		165.2	
SEQ#13	4 SPD IDLE (NEUT)	370.5	0.40		51.5	
SEQ#13	4 SPD IDLE (DRIV)	275.9	0.33		60.9	
SEQ#13	FED 2 MODE (30)	20.0	0.34		263.9	
SEQ#13	FED 2 MODE (NEUT)	466.0	0.29		42.6	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE				FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	
5491	75	FORD	351	351M/4001CET	(CON'T)				

COMMENT : IDLE DRIVE ADJUSTED 650 RPM, TIMING SET TO +8, CO IS BELOW .5%.

SEQ#14 FEDERAL TEST PROC.	25.25	42.7	877.0	2.35	8.7
SEQ#14 50 MPH CRUISE	1748.3	0.14	439.8		
SEQ#14 HIGHWAY FUEL ECON.	18.66	20.5	645.1	2.66	12.1
SEQ#14 4 SPD IDLE (NEUT)	1566.5	0.11		46.2	
SEQ#14 4 SPD IDLE (2500)	1334.1	0.11		145.2	
SEQ#14 4 SPD IDLE (NEUT)	1424.1	0.13		50.9	
SEQ#14 4 SPD IDLE (DRIV)	1588.8	0.08		102.9	
SEQ#14 FED 2 MODE (30)	1372.9	0.11		266.9	
SEQ#14 FED 2 MODE (NEUT)	1338.9	0.14		49.5	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 650 RPM, CO .1%, HC 100 PPM, PROPANE GAIN 160 RPM.

SEQ#15 FEDERAL TEST PROC.	1.84	39.8	932.0	2.15	8.9
SEQ#15 50 MPH CRUISE	0.0	0.07		357.9	
SEQ#15 HIGHWAY FUEL ECON.	0.42	9.1	644.9	2.18	13.4
SEQ#15 4 SPD IDLE (NEUT)	9.5	0.10		90.0	
SEQ#15 4 SPD IDLE (2500)	0.0	0.08		142.6	
SEQ#15 4 SPD IDLE (NEUT)	8.9	0.09		88.8	
SEQ#15 4 SPD IDLE (DRIV)	92.6	0.06		202.2	
SEQ#15 FED 2 MODE (30)	15.1	0.12		379.1	
SEQ#15 FED 2 MODE (NEUT)	28.6	0.08		81.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED PCV VALVE AND FILTER, AIR FILTER, SPARK PLUGS, FRESH AND WARM AIR DUCT, ENGINE OIL AND FILTER, VACUUM ADVANCE UNIT, CORRECTED CHOKE HEAT WIRE, HEAT CONTROL VALVE, TRANSMISSION LINKAGE DELAY VALVE, SET TO SPEC.

SEQ#16 FEDERAL TEST PROC.	2.25	16.6	819.3	3.81	10.4
SEQ#16 50 MPH CRUISE	24.3	0.13		633.9	
SEQ#16 HIGHWAY FUEL ECON.	1.14	6.1	506.1	4.32	17.1
SEQ#16 4 SPD IDLE (NEUT)	64.8	0.09		70.9	
SEQ#16 4 SPD IDLE (2500)	10.5	0.16		195.7	
SEQ#16 4 SPD IDLE (NEUT)	59.9	0.08		70.0	
SEQ#16 4 SPD IDLE (DRIV)	70.1	0.06		200.4	
SEQ#16 FED 2 MODE (30)	27.3	0.07		380.1	
SEQ#16 FED 2 MODE (NEUT)	75.7	0.09		73.6	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 84 CO: 0.08 GAIN: 150

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5493	75	FORD	460	460(1CMT)						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 31 CO: 1.45 GAIN: 4

SEQ#11	FEDERAL TEST PROC.	1.98	68.4	912.2	1.92	8.7
SEQ#11	50 MPH CRUISE	4.6	0.20		301.3	
SEQ#11	HIGHWAY FUEL ECON.	0.20	7.8	683.5	2.72	12.7
SEQ#11	4 SPD IDLE (NEUT)	53.3	2.01		69.3	
SEQ#11	4 SPD IDLE (2500)	0.3	0.06		140.6	
SEQ#11	4 SPD IDLE (NEUT)	72.4	4.29		56.8	
SEQ#11	4 SPD IDLE (DRIV)	146.0	4.88		78.0	
SEQ#11	FED 2 MODE (30)	41.4	1.22		236.6	
SEQ#11	FED 2 MODE (NEUT)	196.0	10.49		36.9	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 650 RPM, PROPANE GAIN 55 RPM.  
USED UNIVERSAL PROPANE METHOD.

SEQ#12	FEDERAL TEST PROC.	2.32	65.0	925.3	1.77	8.6
SEQ#12	50 MPH CRUISE	3.0	0.15		288.1	
SEQ#12	HIGHWAY FUEL ECON.	0.41	8.5	659.8	2.21	13.2
SEQ#12	4 SPD IDLE (NEUT)	35.5	0.78		50.5	
SEQ#12	4 SPD IDLE (2500)	0.0	0.06		128.5	
SEQ#12	4 SPD IDLE (NEUT)	163.0	7.49		42.6	
SEQ#12	4 SPD IDLE (DRIV)	99.9	0.94		93.4	
SEQ#12	FED 2 MODE (30)	14.4	0.29		316.4	
SEQ#12	FED 2 MODE (NEUT)	46.4	0.12		59.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE SPEED AND MIXTURE TO SPEC.

SEQ#15	FEDERAL TEST PROC.	1.96	63.6	947.2	2.05	8.4
SEQ#15	50 MPH CRUISE	4.3	0.16		379.1	
SEQ#15	HIGHWAY FUEL ECON.	0.31	10.2	706.1	2.87	12.3
SEQ#15	4 SPD IDLE (NEUT)	738.5	9.72		25.9	
SEQ#15	4 SPD IDLE (2500)	33.2	0.08		150.6	
SEQ#15	4 SPD IDLE (NEUT)	35.2	0.33		55.5	
SEQ#15	4 SPD IDLE (DRIV)	65.5	0.29		94.2	
SEQ#15	FED 2 MODE (30)	8.5	0.09		175.7	
SEQ#15	FED 2 MODE (NEUT)	25.6	0.13		69.5	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 28 CO: 0.70 GAIN: 0

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5493	75	FORD	460	460(1CMT)	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, PCV VALVE AND FILTER, AIR FILTER, OIL AND OIL FILTER, ADJUSTED IDLE SPEED AND MIXTURE TO SPEC.

SEQ#16	FEDERAL TEST PROC.	1.87	13.0	923.5	2.51	9.3
SEQ#16	50 MPH CRUISE	7.9	0.09	741.5		
SEQ#16	HIGHWAY FUEL ECON.	0.52	3.6	649.3	2.75	13.5
SEQ#16	4 SPD IDLE (NEUT)	727.1	0.13	47.0		
SEQ#16	4 SPD IDLE (2500)	37.8	0.06	114.9		
SEQ#16	4 SPD IDLE (NEUT)	535.0	0.08	49.1		
SEQ#16	4 SPD IDLE (DRIV)	134.1	0.08	91.6		
SEQ#16	FED 2 MODE (30)	21.7	0.07	102.9		
SEQ#16	FED 2 MODE (NEUT)	519.4	0.11	45.2		

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 785 CO: 0.08 GAIN: 140

5495 75 BUIC 350 40J23-A

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 1066 CO: 2.39 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	12.60	33.9	721.2	2.21	10.9
SEQ#11	50 MPH CRUISE	109.8	0.01	625.8		
SEQ#11	HIGHWAY FUEL ECON.	1.22	1.9	481.8	3.36	18.2
SEQ#11	4 SPD IDLE (NEUT)	887.7	0.39	37.8		
SEQ#11	4 SPD IDLE (2500)	127.1	0.00	165.7		
SEQ#11	4 SPD IDLE (NEUT)	887.7	0.59	41.5		
SEQ#11	4 SPD IDLE (DRIV)	890.0	0.62	48.2		
SEQ#11	FED 2 MODE (30)	117.1	0.01	287.1		
SEQ#11	FED 2 MODE (NEUT)	836.6	0.26	41.8		

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 600 RPMS, IDLE NEUTRAL 730 RPMS, PROPANE GAIN 50 RPMS. EFE LINE DISCONNECTED AND EGR VALVE HAS A LEAK RESULTING IN ROUGH IDLE.

SEQ#12	FEDERAL TEST PROC.	8.59	27.3	700.9	2.09	11.5
SEQ#12	50 MPH CRUISE	83.3	0.01	733.9		
SEQ#12	HIGHWAY FUEL ECON.	1.07	1.1	483.6	3.37	18.2
SEQ#12	4 SPD IDLE (NEUT)	650.8	0.13	33.9		
SEQ#12	4 SPD IDLE (2500)	116.8	0.01	165.2		
SEQ#12	4 SPD IDLE (NEUT)	621.2	0.22	38.8		
SEQ#12	4 SPD IDLE (DRIV)	582.8	0.15	51.7		
SEQ#12	FED 2 MODE (30)	96.6	0.00	308.3		
SEQ#12	FED 2 MODE (NEUT)	238.8	0.02	30.2		

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5495	75	BUIC	350	40J23-A	(CON'T)					

COMMENT : IDLE SPEED 600 DRIVE, IDLE CO .15%, HC 250 PPM.

SEQ#15 FEDERAL TEST PROC.	6.75	22.6	697.1	2.23	11.8
SEQ#15 50 MPH CRUISE	64.8	0.01	462.0		
SEQ#15 HIGHWAY FUEL ECON.	1.09	1.4	418.1	2.91	20.9
SEQ#15 4 SPD IDLE (NEUT)	19.7	0.00		22.4	
SEQ#15 4 SPD IDLE (2500)	65.2	0.00		106.7	
SEQ#15 4 SPD IDLE (NEUT)	16.1	0.00		24.5	
SEQ#15 4 SPD IDLE (DRIV)	19.7	0.00		48.0	
SEQ#15 FED 2 MODE (30)	73.1	0.00		167.0	
SEQ#15 FED 2 MODE (NEUT)	35.2	0.00		23.7	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP, REPLACED AIR, FUEL, OIL AND CRANKCASE BREATHER FILTERS, SPARK PLUGS, PCV VALVE AND ENGINE OIL. REPLACED FAILED COMPONENTS, CARBURETOR AND VACUUM BREAKS.

SEQ#16 FEDERAL TEST PROC.	1.77	9.8	672.1	1.71	12.8
SEQ#16 50 MPH CRUISE	4.9	0.00	380.1		
SEQ#16 HIGHWAY FUEL ECON.	0.11	0.7	424.1	2.61	20.9
SEQ#16 4 SPD IDLE (NEUT)	23.6	0.01		28.6	
SEQ#16 4 SPD IDLE (2500)	3.0	0.00		112.6	
SEQ#16 4 SPD IDLE (NEUT)	45.4	0.00		32.0	
SEQ#16 4 SPD IDLE (DRIV)	30.2	0.00		48.4	
SEQ#16 FED 2 MODE (30)	23.6	0.01		205.2	
SEQ#16 FED 2 MODE (NEUT)	103.5	0.00		29.6	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 68 CO: 0.03 GAIN: 70

5496 75 BUIC 350 40J43

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 587 CO: 7.75 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	4.16	64.2	774.9	2.15	10.0
SEQ#11 50 MPH CRUISE	13.8	0.10	240.6		
SEQ#11 HIGHWAY FUEL ECON.	0.57	10.6	624.5	2.76	13.8
SEQ#11 4 SPD IDLE (NEUT)	283.6	3.41		21.5	
SEQ#11 4 SPD IDLE (2500)	23.6	0.18		83.3	
SEQ#11 4 SPD IDLE (NEUT)	264.4	3.91		24.3	
SEQ#11 4 SPD IDLE (DRIV)	220.1	3.12		28.8	
SEQ#11 FED 2 MODE (30)	24.3	0.10		132.6	
SEQ#11 FED 2 MODE (NEUT)	261.4	3.65		25.0	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
				HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5496	75	BUIC 350	40J43	(CON'T)					

COMMENT : CORRECTED VACUUM LINE DURING PRE-ADJUSTMENT. IDLE NEUTRAL WITHOUT PROPANE 730 RPM, WITH PROPANE 780 RPM, 50 RPM GAIN AT STEP 8C. VACUUM ADVANCE DIAPHRAGM WAS NOT REPLACED BECAUSE IT WOULD HAVE NO EFFECT ON IDLE MIXTURE OR SEC VAV BREAK.

SEQ#12	FEDERAL TEST PROC.	3.28	41.5	812.6	2.30	10.0
SEQ#12	50 MPH CRUISE	12.8	0.31	393.3		
SEQ#12	HIGHWAY FUEL ECON.	0.50	13.5	636.3	2.77	13.5
SEQ#12	4 SPD IDLE (NEUT)	495.1	1.70		30.9	
SEQ#12	4 SPD IDLE (2500)	35.2	0.24		116.7	
SEQ#12	4 SPD IDLE (NEUT)	444.4	1.21		32.9	
SEQ#12	4 SPD IDLE (DRIV)	523.9	0.41		37.2	
SEQ#12	FED 2 MODE (30)	42.7	0.19		189.3	
SEQ#12	FED 2 MODE (NEUT)	595.4	1.26		30.8	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 600 RPM, CO .6%, HC 1200 PPM.

SEQ#13	FEDERAL TEST PROC.	3.23	34.0	846.6	2.16	9.8
SEQ#13	50 MPH CRUISE	9.2	0.47	352.8		
SEQ#13	HIGHWAY FUEL ECON.	0.36	17.8	603.1	2.14	14.0
SEQ#13	4 SPD IDLE (NEUT)	274.5	0.62		35.8	
SEQ#13	4 SPD IDLE (2500)	18.4	0.47		111.3	
SEQ#13	4 SPD IDLE (NEUT)	325.1	0.30		31.3	
SEQ#13	4 SPD IDLE (DRIV)	376.9	0.13		35.1	
SEQ#13	FED 2 MODE (30)	35.8	0.20		197.0	
SEQ#13	FED 2 MODE (NEUT)	481.8	0.29		28.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 600 RPM, CO .3%, HC 700 PPM.

SEQ#15	FEDERAL TEST PROC.	3.36	51.3	808.5	1.97	9.9
SEQ#15	50 MPH CRUISE	11.5	0.50	489.3		
SEQ#15	HIGHWAY FUEL ECON.	0.68	30.5	574.2	2.86	14.2
SEQ#15	4 SPD IDLE (NEUT)	169.3	3.00		43.9	
SEQ#15	4 SPD IDLE (2500)	17.4	1.02		103.4	
SEQ#15	4 SPD IDLE (NEUT)	510.6	0.97		45.2	
SEQ#15	4 SPD IDLE (DRIV)	242.0	2.09		60.1	
SEQ#15	FED 2 MODE (30)	43.4	1.30		148.0	
SEQ#15	FED 2 MODE (NEUT)	654.1	0.47		39.9	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5496	75	BUIC	350	40J43	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED VACUUM DIAPHRAGM, VACUUM ADVANE UNIT, SPARK PLUGS, FUEL, PCV, CANISTER, AIR FILTERS, OIL & OIL FILTER, PCV VALVE. ADJUSTED SEC VAC BREAK, IDLE SPEED & MIXUTE TO SPEC.

SEQ#16 FEDERAL TEST PROC.	3.41	27.9	783.8	2.46	10.6
SEQ#16 50 MPH CRUISE	46.0	0.60		601.5	
SEQ#16 HIGHWAY FUEL ECON.	0.79	22.8	533.8	3.31	15.5
SEQ#16 4 SPD IDLE (NEUT)	272.9	0.22		36.0	
SEQ#16 4 SPD IDLE (2500)	39.4	0.29		154.4	
SEQ#16 4 SPD IDLE (NEUT)	331.6	0.18		33.1	
SEQ#16 4 SPD IDLE (DRIV)	227.8	0.12		39.3	
SEQ#16 FED 2 MODE (30)	73.1	0.17		283.1	
SEQ#16 FED 2 MODE (NEUT)	392.1	0.18		29.6	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 291 CO: 1.27 GAIN: 179

5497 75 BUIC 455 40S43

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 203 CO: 3.48 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	2.94	33.6	858.6	1.72	9.6
SEQ#11 50 MPH CRUISE	15.8	0.01		350.8	
SEQ#11 HIGHWAY FUEL ECON.	0.38	3.5	579.3	2.28	15.1
SEQ#11 4 SPD IDLE (NEUT)	90.0	1.34		46.4	
SEQ#11 4 SPD IDLE (2500)	105.8	0.01		118.5	
SEQ#11 4 SPD IDLE (NEUT)	93.9	1.46		44.4	
SEQ#11 4 SPD IDLE (DRIV)	83.3	1.00		83.8	
SEQ#11 FED 2 MODE (30)	35.8	0.02		135.2	
SEQ#11 FED 2 MODE (NEUT)	97.6	0.86		42.4	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE MIXTURE AND SPEED ADJUSTED TO SPEC. IDLE DRIVE 600 RPM, CO .05%.

SEQ#15 FEDERAL TEST PROC.	2.31	17.9	886.0	1.81	9.6
SEQ#15 50 MPH CRUISE	4.9	0.01		370.0	
SEQ#15 HIGHWAY FUEL ECON.	0.22	1.3	591.3	2.51	14.9
SEQ#15 4 SPD IDLE (NEUT)	49.7	0.21		46.0	
SEQ#15 4 SPD IDLE (2500)	50.6	0.01		118.3	
SEQ#15 4 SPD IDLE (NEUT)	33.2	0.18		38.0	
SEQ#15 4 SPD IDLE (DRIV)	37.5	0.18		84.9	
SEQ#15 FED 2 MODE (30)	35.2	0.02		118.5	
SEQ#15 FED 2 MODE (NEUT)	12.5	0.01		42.7	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5497	75	BUIC	455	40S43	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, OIL AND OIL FILTER, PCV VALVE AND FILTER, FUEL AND PURGE CANISTER FILTERS. REPLACED FRESH AIR TUBE.

SEQ#16 FEDERAL TEST PROC.	2.13	15.7	908.3	1.76	9.4
SEQ#16 50 MPH CRUISE	1.6	0.01	343.7		
SEQ#16 HIGHWAY FUEL ECON.	0.18	0.9	598.1	2.57	14.8
SEQ#16 4 SPD IDLE (NEUT)	122.4	0.24		39.1	
SEQ#16 4 SPD IDLE (2500)	114.5	0.01		119.0	
SEQ#16 4 SPD IDLE (NEUT)	17.7	0.02		33.5	
SEQ#16 4 SPD IDLE (DRIV)	26.9	0.18		62.4	
SEQ#16 FED 2 MODE (30)	55.9	0.01		123.9	
SEQ#16 FED 2 MODE (NEUT)	8.2	0.01		46.4	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 156 CO: 1.37 GAIN: 90

5499 75 CAD1 500 60V43

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 471 CO: 0.18 GAIN: 100

SEQ#11 FEDERAL TEST PROC.	5.11	171.9	655.6	1.96	9.4
SEQ#11 50 MPH CRUISE	157.7	7.29	250.7		
SEQ#11 HIGHWAY FUEL ECON.	4.07	215.5	399.2	0.83	11.8
SEQ#11 4 SPD IDLE (NEUT)	418.2	0.09		98.3	
SEQ#11 4 SPD IDLE (2500)	245.6	9.06		70.7	
SEQ#11 4 SPD IDLE (NEUT)	383.4	0.15		107.2	
SEQ#11 4 SPD IDLE (DRIV)	79.4	0.09		426.6	
SEQ#11 FED 2 MODE (30)	184.7	5.16		354.8	
SEQ#11 FED 2 MODE (NEUT)	433.5	0.13		111.6	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 600 RPM, CO .09%, HC 290 PPM.

SEQ#15 FEDERAL TEST PROC.	4.62	168.0	618.8	1.75	9.9
SEQ#15 50 MPH CRUISE	168.7	7.35	202.2		
SEQ#15 HIGHWAY FUEL ECON.	3.78	201.3	394.7	0.80	12.3
SEQ#15 4 SPD IDLE (NEUT)	448.8	0.03		106.5	
SEQ#15 4 SPD IDLE (2500)	194.0	7.77		78.2	
SEQ#15 4 SPD IDLE (NEUT)	517.2	0.05		141.9	
SEQ#15 4 SPD IDLE (DRIV)	166.0	0.02		340.7	
SEQ#15 FED 2 MODE (30)	175.3	4.43		430.7	
SEQ#15 FED 2 MODE (NEUT)	667.7	0.05		115.2	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5499	75	CADI	500	60V43	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR FILTER, FUEL FILTER, PCV VALVE, CRANKCASE BREATHER FILTER AND ATTACHING RUBBER GROMMETS, ENGINE OIL AND FILTER, CARBON CANISTER FILTER, PCV LINE. ADJUSTED HOUSING.

SEQ#16	FEDERAL TEST PROC.	4.17	136.9	670.6	2.37	9.9
SEQ#16	50 MPH CRUISE	142.0	5.81		304.3	
SEQ#16	HIGHWAY FUEL ECON.	3.45	178.2	439.7	1.22	12.1
SEQ#16	4 SPD IDLE (NEUT)	335.9	0.02		129.8	
SEQ#16	4 SPD IDLE (2500)	158.7	6.59		89.8	
SEQ#16	4 SPD IDLE (NEUT)	497.3	0.02		138.3	
SEQ#16	4 SPD IDLE (DRIV)	121.1	0.00		388.2	
SEQ#16	FED 2 MODE (30)	146.0	2.69		681.4	
SEQ#16	FED 2 MODE (NEUT)	717.9	0.04		126.5	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 594 CO: 0.11 GAIN: 150

5826 75 CHEV 140 10C21

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 226 CO: 5.61 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	4.03	50.5	335.2	3.46	20.8
SEQ#11	50 MPH CRUISE	71.1	0.39		2347.1	
SEQ#11	HIGHWAY FUEL ECON.	1.24	14.4	269.6	4.99	30.0
SEQ#11	4 SPD IDLE (NEUT)	249.0	5.95		56.6	
SEQ#11	4 SPD IDLE (2500)	115.5	2.51		204.0	
SEQ#11	4 SPD IDLE (NEUT)	233.9	5.78		57.2	
SEQ#11	FED 2 MODE (30)	156.3	0.68		1948.8	
SEQ#11	FED 2 MODE (NEUT)	245.6	6.04		66.7	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 236 CO: 5.84 GAIN: 0

COMMENT : CONNECTED EGR LINE DURING PRE-ADJUSTMENT. 50 RPM PROPANE GAIN ACHEIVED AT STEP 7 OF PROPANE CARBURETOR ADJUSTMENT M-1.

SEQ#12	FEDERAL TEST PROC.	2.75	24.9	357.8	1.66	21.9
SEQ#12	50 MPH CRUISE	51.6	0.10		852.2	
SEQ#12	HIGHWAY FUEL ECON.	0.71	7.6	267.5	2.21	31.5
SEQ#12	4 SPD IDLE (NEUT)	137.4	0.57		51.7	
SEQ#12	4 SPD IDLE (2500)	79.4	1.52		222.7	
SEQ#12	4 SPD IDLE (NEUT)	70.8	0.07		49.7	
SEQ#12	FED 2 MODE (30)	90.0	0.18		1708.4	
SEQ#12	FED 2 MODE (NEUT)	91.6	0.02		74.8	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 72 CO: 0.07 GAIN: 50

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5826	75	CHEV	140	10C21	(CON'T)					

COMMENT : ADJUSTED IDLE SPEED &amp; MIXTURE.

SEQ#13 FEDERAL TEST PROC.	2.87	29.5	368.3	2.11	20.9
SEQ#13 50 MPH CRUISE	41.1	0.08		901.7	
SEQ#13 HIGHWAY FUEL ECON.	0.63	5.6	272.6	2.36	31.3
SEQ#13 4 SPD IDLE (NEUT)	131.7	0.37		51.0	
SEQ#13 4 SPD IDLE (2500)	69.5	1.42		242.4	
SEQ#13 4 SPD IDLE (NEUT)	112.8	0.33		53.4	
SEQ#13 FED 2 MODE (30)	105.8	0.26		1821.1	
SEQ#13 FED 2 MODE (NEUT)	117.8	0.22		58.6	

FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 112 CO: 0.35 GAIN: 200

COMMENT : ADJUSTED IDLE SPEED &amp; MIXTURE TO SPEC.

SEQ#15 FEDERAL TEST PROC.	2.53	24.9	370.6	1.78	21.2
SEQ#15 50 MPH CRUISE	46.7	0.06		836.6	
SEQ#15 HIGHWAY FUEL ECON.	0.54	4.8	271.3	2.44	31.6
SEQ#15 4 SPD IDLE (NEUT)	40.8	0.00		63.2	
SEQ#15 4 SPD IDLE (2500)	42.4	0.83		192.9	
SEQ#15 4 SPD IDLE (NEUT)	53.6	0.00		61.6	
SEQ#15 FED 2 MODE (30)	81.7	0.11		1848.6	
SEQ#15 FED 2 MODE (NEUT)	88.0	0.01		88.3	

FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 16 CO: 0.00 GAIN: 170

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR, FUEL,  
CARBON CANISTER, & OIL FILTERS, ENGINE OIL, PCV  
VALVE. ADJUSTED FAST IDLE, IDLE RPM, AND MIXTURE TO  
SPEC.

SEQ#16 FEDERAL TEST PROC.	2.19	23.2	374.1	1.75	21.3
SEQ#16 50 MPH CRUISE	38.1	0.04		834.1	
SEQ#16 HIGHWAY FUEL ECON.	0.45	4.0	272.9	2.30	31.6
SEQ#16 4 SPD IDLE (NEUT)	85.7	0.00		64.4	
SEQ#16 4 SPD IDLE (2500)	32.9	0.66		179.6	
SEQ#16 4 SPD IDLE (NEUT)	65.5	0.01		61.8	
SEQ#16 FED 2 MODE (30)	84.7	0.11		1961.4	
SEQ#16 FED 2 MODE (NEUT)	163.7	0.01		66.4	

FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 66 CO: 0.01 GAIN: 120

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5828	75	CHEV	250	10F13						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 332 CO: 7.03 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	2.39	56.1	471.7	3.03	15.6
SEQ#11 50 MPH CRUISE	13.8	0.01		1014.5	
SEQ#11 HIGHWAY FUEL ECON.	0.26	3.0	381.5	3.82	22.9
SEQ#11 4 SPD IDLE (NEUT)	392.6	7.45		24.8	
SEQ#11 4 SPD IDLE (2500)	13.5	0.02		295.2	
SEQ#11 4 SPD IDLE (NEUT)	374.9	7.56		33.8	
SEQ#11 4 SPD IDLE (DRIV)	414.8	8.66		34.3	
SEQ#11 FED 2 MODE (30)	30.9	0.01		1057.1	
SEQ#11 FED 2 MODE (NEUT)	381.6	7.11		50.3	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE NEUTRAL 800 RPM, PROPANE GAIN 50 RPM.

SEQ#12 FEDERAL TEST PROC.	0.72	9.0	539.2	1.61	16.0
SEQ#12 50 MPH CRUISE	0.7	0.01		343.7	
SEQ#12 HIGHWAY FUEL ECON.	0.09	0.5	408.6	1.62	21.7
SEQ#12 4 SPD IDLE (NEUT)	7.5	0.01		65.2	
SEQ#12 4 SPD IDLE (2500)	2.3	0.01		124.7	
SEQ#12 4 SPD IDLE (NEUT)	7.9	0.01		72.1	
SEQ#12 4 SPD IDLE (DRIV)	6.2	0.01		171.6	
SEQ#12 FED 2 MODE (30)	18.4	0.01		765.3	
SEQ#12 FED 2 MODE (NEUT)	21.7	0.01		85.4	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE DRIVE 550 RPM, MIXTURE SETTING: LEAN DROP FROM 650 TO 600 RPM IN DRIVE, RESET SPEED TO 550 RPM. TIMING WAS NOT ADJUSTED.

SEQ#15 FEDERAL TEST PROC.	0.62	9.0	541.4	1.61	15.9
SEQ#15 50 MPH CRUISE	7.2	0.01		256.8	
SEQ#15 HIGHWAY FUEL ECON.	0.07	0.2	409.8	1.48	21.6
SEQ#15 4 SPD IDLE (NEUT)	19.7	0.01		58.7	
SEQ#15 4 SPD IDLE (2500)	9.8	0.01		116.2	
SEQ#15 4 SPD IDLE (NEUT)	22.7	0.01		60.0	
SEQ#15 4 SPD IDLE (DRIV)	13.5	0.01		148.8	
SEQ#15 FED 2 MODE (30)	20.0	0.01		646.0	
SEQ#15 FED 2 MODE (NEUT)	46.7	0.01		69.3	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5828	75	CHEV	250	10F13	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR, FUEL,  
OIL, CRANKCASE BREATHER FILTERS, CHARCOAL  
CANISTER FILTER, PCV VALVE AND ENGINE OIL.  
ADJUSTED TIMING, IDLE SPEED AND MIXTURE.

SEQ#16 FEDERAL TEST PROC.	0.76	11.5	523.1	1.70	16.3
SEQ#16 50 MPH CRUISE	9.5	0.01	329.6		
SEQ#16 HIGHWAY FUEL ECON.	0.10	0.5	396.9	1.95	22.3
SEQ#16 4 SPD IDLE (NEUT)	36.8	0.00		53.7	
SEQ#16 4 SPD IDLE (2500)	9.5	0.00		124.2	
SEQ#16 4 SPD IDLE (NEUT)	31.2	0.00		59.9	
SEQ#16 4 SPD IDLE (DRIV)	15.4	0.00		161.4	
SEQ#16 FED 2 MODE (30)	21.7	0.01		621.7	
SEQ#16 FED 2 MODE (NEUT)	67.5	0.00		65.7	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 34 CO: 0.02 GAIN: 190

5829 75 CHEV 350 10J23

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 321 CO: 6.24 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	3.92	73.1	536.4	3.80	13.4
SEQ#11 50 MPH CRUISE	21.3	0.02	946.9		
SEQ#11 HIGHWAY FUEL ECON.	0.74	8.7	420.6	4.95	20.3
SEQ#11 4 SPD IDLE (NEUT)	802.0	5.81		25.3	
SEQ#11 4 SPD IDLE (2500)	100.9	0.57		207.5	
SEQ#11 4 SPD IDLE (NEUT)	589.6	5.57		36.7	
SEQ#11 4 SPD IDLE (DRIV)	372.7	6.23		54.4	
SEQ#11 FED 2 MODE (30)	146.0	2.23		213.4	
SEQ#11 FED 2 MODE (NEUT)	639.4	5.28		30.7	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE SPEED 770 RPM IN NEUTRAL. PROPANE GAIN 50  
RPM. ACHEIVED AT STEP 6 OF PROPANE CARB  
ADJUSTMENT PROCEDURE A-2.

SEQ#12 FEDERAL TEST PROC.	2.93	24.0	574.3	4.26	14.3
SEQ#12 50 MPH CRUISE	12.8	0.01	649.0		
SEQ#12 HIGHWAY FUEL ECON.	0.47	2.8	460.6	5.61	19.0
SEQ#12 4 SPD IDLE (NEUT)	359.5	0.08		30.5	
SEQ#12 4 SPD IDLE (2500)	32.2	0.05		137.0	
SEQ#12 4 SPD IDLE (NEUT)	304.4	0.12		33.0	
SEQ#12 4 SPD IDLE (DRIV)	147.7	0.39		77.3	
SEQ#12 FED 2 MODE (30)	64.2	0.27		240.6	
SEQ#12 FED 2 MODE (NEUT)	222.1	0.02		21.7	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5829	75	CHEV	350	10J23	(CON'T)					

COMMENT : ADJUSTED IDLE DRIVE 600 RPM, CO .4%, HC 860 PPM.  
USED UNIVERSAL CO METHOD.

SEQ#13	FEDERAL TEST PROC.	1.57	8.0	579.5	4.34	14.9
SEQ#13	50 MPH CRUISE	15.4	0.01	653.1		
SEQ#13	HIGHWAY FUEL ECON.	0.33	1.4	460.9	5.65	
SEQ#13	4 SPD IDLE (NEUT)	142.7	0.01		45.7	
SEQ#13	4 SPD IDLE (2500)	36.2	0.01		161.6	
SEQ#13	4 SPD IDLE (NEUT)	207.1	0.01		47.3	
SEQ#13	4 SPD IDLE (DRIV)	41.4	0.00		107.5	
SEQ#13	FED 2 MODE (30)	28.9	0.02		265.9	
SEQ#13	FED 2 MODE (NEUT)	285.7	0.01		42.5	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED TIMING TO MANUFACTURER SPEC. IDLE RPM  
DRIVE 600. CO .1%, HC 130 PPM. PROPANE GAIN 100  
RPM.

SEQ#15	FEDERAL TEST PROC.	0.71	3.1	656.3	2.42	13.4
SEQ#15	50 MPH CRUISE	7.2	0.01	349.8		
SEQ#15	HIGHWAY FUEL ECON.	0.18	0.7	478.3	3.10	
SEQ#15	4 SPD IDLE (NEUT)	89.0	0.00		42.8	
SEQ#15	4 SPD IDLE (2500)	4.9	0.01		118.0	
SEQ#15	4 SPD IDLE (NEUT)	48.0	0.00		47.2	
SEQ#15	4 SPD IDLE (DRIV)	16.7	0.00		113.1	
SEQ#15	FED 2 MODE (30)	13.5	0.01		154.4	
SEQ#15	FED 2 MODE (NEUT)	72.1	0.00		37.2	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 56 CO: 0.02 GAIN: 240

COMMENT : MAJOR TUNE-UP. PARTS INCLUDED AIR, FUEL, OIL,  
CRANKCASE BREather, CHARCOAL CANISTER FILTERS,  
SPARK PLUGS, PCV VALVE, ENGINE OIL. ADJUSTED  
IDLE SPEED.

SEQ#16	FEDERAL TEST PROC.	0.91	4.5	632.6	2.41	13.8
SEQ#16	50 MPH CRUISE	3.3	0.00	259.8		
SEQ#16	HIGHWAY FUEL ECON.	0.17	0.5	470.9	2.84	
SEQ#16	4 SPD IDLE (NEUT)	177.0	0.00		23.2	
SEQ#16	4 SPD IDLE (2500)	7.5	0.01		98.0	
SEQ#16	4 SPD IDLE (NEUT)	103.5	0.00		25.1	
SEQ#16	4 SPD IDLE (DRIV)	25.0	0.00		52.2	
SEQ#16	FED 2 MODE (30)	9.2	0.00		117.5	
SEQ#16	FED 2 MODE (NEUT)	244.6	0.00		18.4	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 149 CO: 0.02 GAIN: 200

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5831	75	CHEV	350	10J23						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 500 CO: 9.08 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	6.37	164.6	516.5	1.35	11.2
SEQ#11 50 MPH CRUISE	125.4	2.12		460.0	
SEQ#11 HIGHWAY FUEL ECON.	2.71	69.4	411.9	1.55	16.8
SEQ#11 4 SPD IDLE (NEUT)	401.5	7.27		28.1	
SEQ#11 4 SPD IDLE (2500)	84.7	2.39		106.5	
SEQ#11 4 SPD IDLE (NEUT)	386.0	7.15		36.4	
SEQ#11 4 SPD IDLE (DRIV)	408.1	8.00		41.8	
SEQ#11 FED 2 MODE (30)	203.4	4.00		98.0	
SEQ#11 FED 2 MODE (NEUT)	352.8	6.69		43.7	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE DRIVE 600 RPM, PROPANE GAIN 50 RPM.

SEQ#12 FEDERAL TEST PROC.	3.64	59.9	553.5	1.74	13.5
SEQ#12 50 MPH CRUISE	94.6	1.21		661.1	
SEQ#12 HIGHWAY FUEL ECON.	2.11	47.3	448.4	2.12	16.8
SEQ#12 4 SPD IDLE (NEUT)	41.7	0.01		76.6	
SEQ#12 4 SPD IDLE (2500)	43.1	1.12		138.8	
SEQ#12 4 SPD IDLE (NEUT)	49.3	0.02		74.7	
SEQ#12 4 SPD IDLE (DRIV)	176.0	0.20		178.0	
SEQ#12 FED 2 MODE (30)	130.4	1.41		197.0	
SEQ#12 FED 2 MODE (NEUT)	49.0	0.01		92.6	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE RPM 750 NEUTRAL, CO .4%.

SEQ#13 FEDERAL TEST PROC.	3.26	58.7	591.1	1.84	12.8
SEQ#13 50 MPH CRUISE	58.2	0.74		373.0	
SEQ#13 HIGHWAY FUEL ECON.	1.77	41.3	426.8	1.89	17.8
SEQ#13 4 SPD IDLE (NEUT)	17.7	0.01		82.4	
SEQ#13 4 SPD IDLE (2500)	18.4	0.48		91.1	
SEQ#13 4 SPD IDLE (NEUT)	21.7	0.00		78.6	
SEQ#13 4 SPD IDLE (DRIV)	13.8	0.00		128.5	
SEQ#13 FED 2 MODE (30)	72.4	0.79		120.8	
SEQ#13 FED 2 MODE (NEUT)	28.6	0.01		64.3	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5831	75	CHEV	350	10J23	(CON'T)					

COMMENT : ADJUSTED IDLE MIXTURE AND SPEED TO SPEC.

SEQ#15 FEDERAL TEST PROC.	2.52	52.0	611.7	1.87	12.7
SEQ#15 50 MPH CRUISE	65.5	1.25	331.6		
SEQ#15 HIGHWAY FUEL ECON.	1.81	44.9	448.4	2.11	16.9
SEQ#15 4 SPD IDLE (NEUT)	29.6	0.01		133.1	
SEQ#15 4 SPD IDLE (2500)	20.0	0.39		96.6	
SEQ#15 4 SPD IDLE (NEUT)	24.6	0.01		93.8	
SEQ#15 4 SPD IDLE (DRIV)	15.4	0.01		136.7	
SEQ#15 FED 2 MODE (30)	37.8	0.13		99.8	
SEQ#15 FED 2 MODE (NEUT)	67.5	0.00		85.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, OIL AND OIL FILTER, PCV VALVE AND FILTER, AIR FILTER ELEMENT.

SEQ#16 FEDERAL TEST PROC.	1.74	28.2	605.3	1.93	13.5
SEQ#16 50 MPH CRUISE	38.5	0.39	312.4		
SEQ#16 HIGHWAY FUEL ECON.	1.40	33.2	448.3	2.28	17.6
SEQ#16 4 SPD IDLE (NEUT)	44.7	0.01		100.6	
SEQ#16 4 SPD IDLE (2500)	10.5	0.06		79.0	
SEQ#16 4 SPD IDLE (NEUT)	44.4	0.01		71.8	
SEQ#16 4 SPD IDLE (DRIV)	18.1	0.01		100.6	
SEQ#16 FED 2 MODE (30)	23.6	0.03		163.7	
SEQ#16 FED 2 MODE (NEUT)	99.2	0.01		55.9	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 76 CO: 0.05 GAIN: 290

5832 75 CHEV 350 10J23

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 156 CO: 4.99 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	2.74	74.8	682.0	2.99	11.0
SEQ#11 50 MPH CRUISE	8.9	0.00	1014.5		
SEQ#11 HIGHWAY FUEL ECON.	0.30	8.1	495.8	4.29	17.4
SEQ#11 4 SPD IDLE (NEUT)	160.0	4.67		41.0	
SEQ#11 4 SPD IDLE (2500)	50.3	1.63		141.6	
SEQ#11 4 SPD IDLE (NEUT)	134.7	4.00		54.2	
SEQ#11 4 SPD IDLE (DRIV)	185.4	4.20		82.9	
SEQ#11 FED 2 MODE (30)	86.6	1.40		310.4	
SEQ#11 FED 2 MODE (NEUT)	109.8	3.09		65.2	

NO FOLLOW UP LANE TEST DONE

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5832	75	CHEV	350	10J23	(CON'T)					

COMMENT : ADJUSTED IDLE DRIVE TO 500 RPM, IDLE NEUTRAL TO 755 RPM, PROPANE GAIN 65 RPM.

SEQ#12 FEDERAL TEST PROC.	1.90	38.2	669.0	2.67	12.1
SEQ#12 50 MPH CRUISE	9.5	0.00	924.3		
SEQ#12 HIGHWAY FUEL ECON.	0.17	3.1	490.6	4.16	17.9
SEQ#12 4 SPD IDLE (NEUT)	17.7	0.02		37.7	
SEQ#12 4 SPD IDLE (2500)	2.3	0.01		168.0	
SEQ#12 4 SPD IDLE (NEUT)	16.4	0.16		13.1	
SEQ#12 4 SPD IDLE (DRIV)	100.2	0.56		67.5	
SEQ#12 FED 2 MODE (30)	16.1	0.03		254.8	
SEQ#12 FED 2 MODE (NEUT)	23.6	0.10		34.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE TO 590 RPM, IDLE CO .4%, ACHIEVED AT STEP 5B OF CO ADJUSTMENT PROCEDURE A-2.

SEQ#13 FEDERAL TEST PROC.	1.49	28.0	660.6	2.47	12.5
SEQ#13 50 MPH CRUISE	4.3	0.00	538.8		
SEQ#13 HIGHWAY FUEL ECON.	0.11	1.8	486.8	3.93	18.1
SEQ#13 4 SPD IDLE (NEUT)	13.1	0.01		34.7	
SEQ#13 4 SPD IDLE (2500)	3.9	0.01		107.5	
SEQ#13 4 SPD IDLE (NEUT)	12.8	0.01		36.7	
SEQ#13 4 SPD IDLE (DRIV)	5.6	0.01		55.0	
SEQ#13 FED 2 MODE (30)	10.5	0.01		168.3	
SEQ#13 FED 2 MODE (NEUT)	16.1	0.01		34.7	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE TO 600 RPM, CO .04%, HC 90 PPM, IDLE NEUTRAL TO 740 RPM, CO .05%, HC 320 PPM, PROPANE GAIN 200 RPM.

SEQ#15 FEDERAL TEST PROC.	0.92	16.1	693.6	2.82	12.3
SEQ#15 50 MPH CRUISE	8.5	0.00	471.1		
SEQ#15 HIGHWAY FUEL ECON.	0.06	0.2	485.7	4.15	18.3
SEQ#15 4 SPD IDLE (NEUT)	25.3	0.00		32.2	
SEQ#15 4 SPD IDLE (2500)	3.6	0.00		102.6	
SEQ#15 4 SPD IDLE (NEUT)	37.8	0.00		31.7	
SEQ#15 4 SPD IDLE (DRIV)	8.2	0.00		62.1	
SEQ#15 FED 2 MODE (30)	9.2	0.00		158.5	
SEQ#15 FED 2 MODE (NEUT)	75.1	0.00		29.6	

NO FOLLOW UP LANE TEST DONE

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5832	75	CHEV	350	10J23	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR, FUEL, OIL AND CRANKCASE BREATHER FILTER, PCV VALVE AND ENGINE OIL. ADJUSTED IDLE SPEED, TIMING AND CARBURETOR CHOKE THERMOSTAT COVER.

SEQ#16 FEDERAL TEST PROC.	0.57	5.4	698.8	2.92	12.5
SEQ#16 50 MPH CRUISE	7.5	0.00	546.9		
SEQ#16 HIGHWAY FUEL ECON.	0.07	0.4	490.7	4.78	18.1
SEQ#16 4 SPD IDLE (NEUT)	22.3	0.00		42.6	
SEQ#16 4 SPD IDLE (2500)	1.6	0.00		101.8	
SEQ#16 4 SPD IDLE (NEUT)	12.8	0.00		41.4	
SEQ#16 4 SPD IDLE (DRIV)	3.0	0.00		101.6	
SEQ#16 FED 2 MODE (30)	6.6	0.00		181.9	
SEQ#16 FED 2 MODE (NEUT)	36.8	0.00		34.2	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 25 CO: 0.02 GAIN: 230

5833 75 CHEV 350 10J23

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 336 CO: 6.30 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	5.42	112.1	552.4	3.43	11.9
SEQ#11 50 MPH CRUISE	87.3	1.43	1362.7		
SEQ#11 HIGHWAY FUEL ECON.	2.06	44.2	440.8	4.12	17.2
SEQ#11 4 SPD IDLE (NEUT)	684.9	6.76		17.1	
SEQ#11 4 SPD IDLE (2500)	95.6	2.20		201.4	
SEQ#11 4 SPD IDLE (NEUT)	383.8	6.74		24.7	
SEQ#11 4 SPD IDLE (DRIV)	412.6	7.49		28.1	
SEQ#11 FED 2 MODE (30)	167.3	2.78		398.3	
SEQ#11 FED 2 MODE (NEUT)	337.4	6.04		34.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE SPEED 600 RPM DRIVE, PROPANE GAIN 50 RPM.

SEQ#12 FEDERAL TEST PROC.	2.97	41.5	606.9	3.18	13.0
SEQ#12 50 MPH CRUISE	79.4	1.06	1380.2		
SEQ#12 HIGHWAY FUEL ECON.	1.86	35.7	453.2	3.97	17.2
SEQ#12 4 SPD IDLE (NEUT)	275.2	2.47		22.4	
SEQ#12 4 SPD IDLE (2500)	36.2	0.86		227.0	
SEQ#12 4 SPD IDLE (NEUT)	231.2	4.09		29.4	
SEQ#12 4 SPD IDLE (DRIV)	283.0	4.13		41.5	
SEQ#12 FED 2 MODE (30)	84.7	0.27		678.3	
SEQ#12 FED 2 MODE (NEUT)	231.2	1.87		51.1	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5833	75	CHEV	350	10J23 (CON'T)						

COMMENT : IDLE SPEED 600 RPM DRIVE, CO .3%.

SEQ#13 FEDERAL TEST PROC.	2.12	31.1	627.8	3.35	13.0
SEQ#13 50 MPH CRUISE	66.2	0.61	1422.8		
SEQ#13 HIGHWAY FUEL ECON.	1.56	30.5	448.5	4.06	17.7
SEQ#13 4 SPD IDLE (NEUT)	144.4	0.37		46.3	
SEQ#13 4 SPD IDLE (2500)	33.5	0.91		280.0	
SEQ#13 4 SPD IDLE (NEUT)	214.4	0.59		51.9	
SEQ#13 4 SPD IDLE (DRIV)	92.6	0.70		65.3	
SEQ#13 FED 2 MODE (30)	23.6	0.11		638.9	
SEQ#13 FED 2 MODE (NEUT)	242.6	0.01		71.8	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE DRIVE 600 RPM. MIXTURE SETTING: LEAN DROP  
650 TO 600 RPM DRIVE.

SEQ#15 FEDERAL TEST PROC.	2.04	29.0	608.0	3.07	13.4
SEQ#15 50 MPH CRUISE	62.9	0.68	1295.0		
SEQ#15 HIGHWAY FUEL ECON.	1.42	30.3	442.6	3.98	17.9
SEQ#15 4 SPD IDLE (NEUT)	64.5	0.01		55.0	
SEQ#15 4 SPD IDLE (2500)	16.1	0.67		234.5	
SEQ#15 4 SPD IDLE (NEUT)	164.0	0.02		63.4	
SEQ#15 4 SPD IDLE (DRIV)	47.7	0.01		116.7	
SEQ#15 FED 2 MODE (30)	15.1	0.03		656.1	
SEQ#15 FED 2 MODE (NEUT)	333.0	0.01		64.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR, OIL  
AND CRANKCASE BREATHER FILTERS, PCV VALVE AND  
CARBURETOR. ADJUSTED IDLE SPEED AND MIXTURE.

SEQ#16 FEDERAL TEST PROC.	4.97	53.7	633.0	1.73	12.1
SEQ#16 50 MPH CRUISE	15.8	0.09	389.2		
SEQ#16 HIGHWAY FUEL ECON.	0.65	13.1	476.0	2.61	17.8
SEQ#16 4 SPD IDLE (NEUT)	54.6	1.60		47.5	
SEQ#16 4 SPD IDLE (2500)	33.8	1.37		126.7	
SEQ#16 4 SPD IDLE (NEUT)	38.1	0.65		54.8	
SEQ#16 4 SPD IDLE (DRIV)	102.2	2.23		80.4	
SEQ#16 FED 2 MODE (30)	104.9	1.75		181.0	
SEQ#16 FED 2 MODE (NEUT)	56.3	1.67		59.6	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 96 CO: 2.54 GAIN: 40

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5834	75	CHEV	454	10R43M						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 35 CO: 1.65 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	1.90	59.5	872.6	1.07	9.1
SEQ#11	50 MPH CRUISE	8.5	0.17		150.1	
SEQ#11	HIGHWAY FUEL ECON.	0.10	6.5	664.9	1.04	13.1
SEQ#11	4 SPD IDLE (NEUT)	172.3	5.76		16.7	
SEQ#11	4 SPD IDLE (2500)	0.0	0.09		89.4	
SEQ#11	4 SPD IDLE (NEUT)	47.0	4.11		21.6	
SEQ#11	4 SPD IDLE (DRIV)	294.8	6.74		16.6	
SEQ#11	FED 2 MODE (30)	19.7	0.76		59.9	
SEQ#11	FED 2 MODE (NEUT)	20.4	2.30		30.6	

NO FOLLOW UP LANE TEST DONE

COMMENT : 50 RPM GAIN ACHEIVED AT STEP 8 OF PROPANE CARBURETOR ADJUSTMENT A-2. IDLE RPM 720, WITH PROPANE 770 RPM.

SEQ#12	FEDERAL TEST PROC.	1.80	30.1	867.1	1.18	9.6
SEQ#12	50 MPH CRUISE	0.0	0.12		174.4	
SEQ#12	HIGHWAY FUEL ECON.	0.09	3.3	659.7	1.37	13.3
SEQ#12	4 SPD IDLE (NEUT)	102.2	0.80		39.0	
SEQ#12	4 SPD IDLE (2500)	0.0	0.05		97.6	
SEQ#12	4 SPD IDLE (NEUT)	44.7	0.55		36.3	
SEQ#12	4 SPD IDLE (DRIV)	91.9	1.50		41.2	
SEQ#12	FED 2 MODE (30)	14.4	0.25		80.3	
SEQ#12	FED 2 MODE (NEUT)	212.4	0.69		30.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE SPEED & MIXTURE TO SPEC.

SEQ#15	FEDERAL TEST PROC.	1.97	35.2	849.6	1.22	9.7
SEQ#15	50 MPH CRUISE	0.0	0.14		170.9	
SEQ#15	HIGHWAY FUEL ECON.	0.07	3.6	661.2	1.31	13.3
SEQ#15	4 SPD IDLE (NEUT)	26.9	1.38		35.6	
SEQ#15	4 SPD IDLE (2500)	0.0	0.08		87.2	
SEQ#15	4 SPD IDLE (NEUT)	1.6	0.55		37.5	
SEQ#15	4 SPD IDLE (DRIV)	53.9	1.85		40.1	
SEQ#15	FED 2 MODE (30)	12.5	0.49		74.3	
SEQ#15	FED 2 MODE (NEUT)	36.2	0.75		34.9	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 3 CO: 0.55 GAIN: 70

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

AUTOMOTIVE TESTING LABORATORIES, INC.  
TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5834	75	CHEV	454	10R43M	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED VACUUM ADVANCE UNIT,  
SPARK PLUGS, OIL & OIL FILTER, AIR FILTER,  
CANISTER FILTER, PCV VALVE & FILTER, EFE VACUUM  
SOLENOID & SECONDARY VACUUM BREAK. ADJUSTED  
CHOKE & IDLE SPEED TO SPEC.

SEQ#16 FEDERAL TEST PROC.	9.20	37.4	693.9	1.57	11.4
SEQ#16 50 MPH CRUISE	21.7	0.38		190.9	
SEQ#16 HIGHWAY FUEL ECON.	0.98	10.5	521.8	1.94	16.4
SEQ#16 4 SPD IDLE (NEUT)	2029.6	0.58		16.8	
SEQ#16 4 SPD IDLE (2500)	59.6	0.13		98.1	
SEQ#16 4 SPD IDLE (NEUT)	1577.0	0.48		19.6	
SEQ#16 4 SPD IDLE (DRIV)	958.1	0.49		25.1	
SEQ#16 FED 2 MODE (30)	150.4	0.33		72.3	
SEQ#16 FED 2 MODE (NEUT)	2341.6	0.21		11.9	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 1587 CO: 0.47 GAIN: 200

5836 . 75 CHEV 400 10K43A

PRELIMINARY LANE TEST:  
CAT: P FUEL: P  
HC: 30 CO: 0.02 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	1.11	19.3	793.7	2.88	10.7
SEQ#11 50 MPH CRUISE	10.8	0.01		403.4	
SEQ#11 HIGHWAY FUEL ECON.	0.27	0.4	573.4	3.54	15.4
SEQ#11 4 SPD IDLE (NEUT)	6.9	0.00		22.9	
SEQ#11 4 SPD IDLE (2500)	7.5	0.01		72.5	
SEQ#11 4 SPD IDLE (NEUT)	16.7	0.00		23.0	
SEQ#11 4 SPD IDLE (DRIV)	8.9	0.01		27.2	
SEQ#11 FED 2 MODE (30)	13.5	0.00		224.4	
SEQ#11 FED 2 MODE (NEUT)	26.9	0.00		24.5	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE DRIVE 600 RPM, NEUTRAL 760 RPM, PROPANE GAIN  
50 RPM. RECONNECTED EGR LINE.

SEQ#12 FEDERAL TEST PROC.	1.54	20.2	717.2	2.84	11.8
SEQ#12 50 MPH CRUISE	14.4	0.01		466.0	
SEQ#12 HIGHWAY FUEL ECON.	0.27	0.3	553.6	3.61	16.0
SEQ#12 4 SPD IDLE (NEUT)	20.7	0.00		25.1	
SEQ#12 4 SPD IDLE (2500)	15.8	0.01		80.4	
SEQ#12 4 SPD IDLE (NEUT)	14.4	0.00		27.2	
SEQ#12 4 SPD IDLE (DRIV)	19.0	0.00		61.4	
SEQ#12 FED 2 MODE (30)	15.8	0.00		360.9	
SEQ#12 FED 2 MODE (NEUT)	19.0	0.00		30.9	

NO FOLLOW UP LANE TEST DONE

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON
					HC	CO	CO <sub>2</sub>	NOx <sub>c</sub>	CH <sub>4</sub>	
5836	75	CHEV	400	10K43A	(CON'T)					

COMMENT : IDLE DRIVE 600 RPM, CO .15%, HC 130 PPM, IDLE  
NEUTRAL 730 RPM, CO .15%, HC 165 PPM, PROPANE  
GAIN 100 RPM.

SEQ#15 FEDERAL TEST PROC.	1.61	22.9	707.5	2.69	11.9
SEQ#15 50 MPH CRUISE	12.5	0.00		116.2	
SEQ#15 HIGHWAY FUEL ECON.	0.28	0.4	554.1	3.43	16.0
SEQ#15 4 SPD IDLE (NEUT)	15.4	0.00		4.1	
SEQ#15 4 SPD IDLE (2500)	13.8	0.00		20.5	
SEQ#15 4 SPD IDLE (NEUT)	13.8	0.00		4.6	
SEQ#15 4 SPD IDLE (DRIV)	13.5	0.00		9.5	
SEQ#15 FED 2 MODE (30)	11.5	0.00		72.0	
SEQ#15 FED 2 MODE (NEUT)	11.2	0.00		5.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, OIL, AIR,  
CANISTER AND PCV FILTERS, PCV VALVE, ENGINE OIL,  
SET TO SPEC.

SEQ#16 FEDERAL TEST PROC.	1.03	12.0	710.2	3.00	12.1
SEQ#16 50 MPH CRUISE	13.5	0.02		767.3	
SEQ#16 HIGHWAY FUEL ECON.	0.25	0.3	542.4	3.75	16.3
SEQ#16 4 SPD IDLE (NEUT)	98.2	0.01		20.7	
SEQ#16 4 SPD IDLE (2500)	6.9	0.01		169.1	
SEQ#16 4 SPD IDLE (NEUT)	81.0	0.00		29.5	
SEQ#16 4 SPD IDLE (DRIV)	28.3	0.00		60.8	
SEQ#16 FED 2 MODE (30)	13.8	0.01		502.4	
SEQ#16 FED 2 MODE (NEUT)	130.7	0.01		37.3	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 33 CO: 0.01 GAIN: 220

5837 75 CHEV 400 10K43A

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 25 CO: 0.03 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	0.96	8.6	731.6	4.15	11.9
SEQ#11 50 MPH CRUISE	15.4	0.04		981.9	
SEQ#11 HIGHWAY FUEL ECON.	0.35	1.1	542.5	4.83	16.3
SEQ#11 4 SPD IDLE (NEUT)	1.6	0.01		37.7	
SEQ#11 4 SPD IDLE (2500)	3.0	0.05		90.2	
SEQ#11 4 SPD IDLE (NEUT)	16.1	0.00		36.8	
SEQ#11 4 SPD IDLE (DRIV)	3.0	0.01		40.2	
SEQ#11 FED 2 MODE (30)	2.6	0.03		209.9	
SEQ#11 FED 2 MODE (NEUT)	13.8	0.00		34.8	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5837	75	CHEV	400	10K43A	(CON'T)					

COMMENT : ADJUSTED IDLE DRIVE 600 RPM, PROPANE GAIN 40 RPM.  
USED UNIVERSAL PROPANE METHOD

SEQ#12 FEDERAL TEST PROC.	0.85	9.5	726.3	2.79	11.9
SEQ#12 50 MPH CRUISE	16.1	0.02	638.9		
SEQ#12 HIGHWAY FUEL ECON.	0.20	0.5	531.0	3.87	16.7
SEQ#12 4 SPD IDLE (NEUT)	17.4	0.00		40.2	
SEQ#12 4 SPD IDLE (2500)	13.5	0.06		100.6	
SEQ#12 4 SPD IDLE (NEUT)	12.1	0.00		42.9	
SEQ#12 4 SPD IDLE (DRIV)	23.3	0.00		90.6	
SEQ#12 FED 2 MODE (30)	11.8	0.01		295.2	
SEQ#12 FED 2 MODE (NEUT)	19.0	0.00		46.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 600 RPM, CO .14%, HC 100 PPM,  
PROPANE GAIN 820 RPM.

SEQ#15 FEDERAL TEST PROC.	0.76	7.2	755.5	3.17	11.5
SEQ#15 50 MPH CRUISE	14.8	0.02	696.4		
SEQ#15 HIGHWAY FUEL ECON.	0.18	0.3	561.9	4.35	15.8
SEQ#15 4 SPD IDLE (NEUT)	28.9	0.00		38.7	
SEQ#15 4 SPD IDLE (2500)	20.0	0.05		99.5	
SEQ#15 4 SPD IDLE (NEUT)	20.4	0.00		42.0	
SEQ#15 4 SPD IDLE (DRIV)	22.0	0.00		101.6	
SEQ#15 FED 2 MODE (30)	33.8	0.02		292.2	
SEQ#15 FED 2 MODE (NEUT)	23.6	0.00		43.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, PCV VALVE &  
FILTER, PURGE CANISTER FILTER, FUEL FILTER, OIL  
AND OIL FILTER. SET TO SPEC.

SEQ#16 FEDERAL TEST PROC.	0.78	7.0	734.1	3.10	11.9
SEQ#16 50 MPH CRUISE	18.7	0.02	749.1		
SEQ#16 HIGHWAY FUEL ECON.	0.19	0.4	546.2	4.36	16.2
SEQ#16 4 SPD IDLE (NEUT)	16.4	0.00		42.6	
SEQ#16 4 SPD IDLE (2500)	3.0	0.01		129.3	
SEQ#16 4 SPD IDLE (NEUT)	13.1	0.00		50.2	
SEQ#16 4 SPD IDLE (DRIV)	22.3	0.00		149.6	
SEQ#16 FED 2 MODE (30)	20.4	0.02		280.0	
SEQ#16 FED 2 MODE (NEUT)	24.0	0.00		45.5	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 19 CO: 0.02 GAIN: 158

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NOx <sub>c</sub>	CH <sub>4</sub>	
5838	75	OLDS	260	30H23E						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 556 CO: 5.64 GAIN: 10

SEQ#11	FEDERAL TEST PROC.	2.62	31.3	512.8	5.46	15.6
SEQ#11	50 MPH CRUISE	26.9	0.02	2179.3		
SEQ#11	HIGHWAY FUEL ECON.	0.52	2.0	448.5	7.70	19.6
SEQ#11	4 SPD IDLE (NEUT)	962.4	2.65		45.6	
SEQ#11	4 SPD IDLE (2500)	37.8	0.03		460.0	
SEQ#11	4 SPD IDLE (NEUT)	811.2	4.47		40.1	
SEQ#11	4 SPD IDLE (DRIV)	441.5	4.81		72.8	
SEQ#11	FED 2 MODE (30)	94.6	0.27		1683.3	
SEQ#11	FED 2 MODE (NEUT)	834.3	4.28		48.5	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 550 RPM, CO .4%, HC 1100 PPM.

SEQ#13	FEDERAL TEST PROC.	1.34	11.8	610.9	6.92	14.0
SEQ#13	50 MPH CRUISE	23.3	0.01	2339.6		
SEQ#13	HIGHWAY FUEL ECON.	0.33	1.7	508.0	9.11	17.3
SEQ#13	4 SPD IDLE (NEUT)	145.0	0.00		187.0	
SEQ#13	4 SPD IDLE (2500)	17.7	0.02		748.1	
SEQ#13	4 SPD IDLE (NEUT)	137.4	0.00		90.0	
SEQ#13	4 SPD IDLE (DRIV)	122.8	0.00		269.9	
SEQ#13	FED 2 MODE (30)	67.1	0.12		1608.2	
SEQ#13	FED 2 MODE (NEUT)	195.7	0.01		97.5	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 600 RPM, CO .14%, HC 1000 PPM.

SEQ#15	FEDERAL TEST PROC.	1.33	7.4	588.5	6.33	14.7
SEQ#15	50 MPH CRUISE	18.7	0.01	2120.1		
SEQ#15	HIGHWAY FUEL ECON.	0.30	1.1	466.9	8.36	18.9
SEQ#15	4 SPD IDLE (NEUT)	113.5	0.00		104.9	
SEQ#15	4 SPD IDLE (2500)	10.2	0.01		474.1	
SEQ#15	4 SPD IDLE (NEUT)	165.3	0.00		105.4	
SEQ#15	4 SPD IDLE (DRIV)	131.4	0.00		368.0	
SEQ#15	FED 2 MODE (30)	44.4	0.05		1550.5	
SEQ#15	FED 2 MODE (NEUT)	234.6	0.01		113.4	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 113 CO: 0.05 GAIN: 100

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NOx <sub>c</sub>	CH <sub>4</sub>	
5839	75	OLDS	260	30H23E						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 1115 CO: 3.78 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	2.62	30.0	789.5	4.12	10.5
SEQ#11	50 MPH CRUISE	16.7	0.00	502.4		
SEQ#11	HIGHWAY FUEL ECON.	0.38	5.0	563.3	4.34	15.5
SEQ#11	4 SPD IDLE (NEUT)	1099.6	3.67		27.1	
SEQ#11	4 SPD IDLE (2500)	76.7	0.01		299.2	
SEQ#11	4 SPD IDLE (NEUT)	906.1	2.91		37.1	
SEQ#11	4 SPD IDLE (DRIV)	357.4	5.18		42.2	
SEQ#11	FED 2 MODE (30)	64.8	0.01		475.1	
SEQ#11	FED 2 MODE (NEUT)	1092.4	3.81		37.9	

NO FOLLOW UP LANE TEST DONE

COMMENT : CORRECTED VACUUM HOSE ROUTINGS AND REPAIRED CHECK VALVE. PROPANE GAIN 50 RPM.

SEQ#12	FEDERAL TEST PROC.	2.07	8.8	589.1	3.16	14.6
SEQ#12	50 MPH CRUISE	32.9	0.00	734.9		
SEQ#12	HIGHWAY FUEL ECON.	0.23	0.5	467.4	4.03	18.9
SEQ#12	4 SPD IDLE (NEUT)	108.2	0.00		80.5	
SEQ#12	4 SPD IDLE (2500)	129.7	0.00		296.2	
SEQ#12	4 SPD IDLE (NEUT)	231.9	0.00		100.6	
SEQ#12	4 SPD IDLE (DRIV)	241.9	0.00		360.9	
SEQ#12	FED 2 MODE (30)	166.7	0.01		589.4	
SEQ#12	FED 2 MODE (NEUT)	342.3	0.00		95.2	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE SPEED & MIXTURE TO SPEC. IDLE NEUTRAL 720 RPM, CO .5%, HC 1120 PPM.

SEQ#13	FEDERAL TEST PROC.	1.76	10.2	611.4	3.41	14.0
SEQ#13	50 MPH CRUISE	26.0	0.00	749.0		
SEQ#13	HIGHWAY FUEL ECON.	0.22	0.3	449.2	3.91	19.7
SEQ#13	4 SPD IDLE (NEUT)	34.2	0.00		84.6	
SEQ#13	4 SPD IDLE (2500)	82.3	0.00		325.5	
SEQ#13	4 SPD IDLE (NEUT)	123.8	0.00		90.3	
SEQ#13	4 SPD IDLE (DRIV)	137.4	0.00		421.6	
SEQ#13	FED 2 MODE (30)	125.1	0.01		613.6	
SEQ#13	FED 2 MODE (NEUT)	318.7	0.00		106.7	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5839	75	OLDS	260	30H23E	(CON'T)					

COMMENT : ADJUSTED IDLE SPEED &amp; MIXTURE TO SPEC.

SEQ#15 FEDERAL TEST PROC.	2.14	11.2	609.1	3.23	14.0
SEQ#15 50 MPH CRUISE	45.7	0.02		691.5	
SEQ#15 HIGHWAY FUEL ECON.	0.23	0.4	466.8	4.24	
SEQ#15 4 SPD IDLE (NEUT)	90.9	0.02		37.0	
SEQ#15 4 SPD IDLE (2500)	140.0	0.02		312.4	
SEQ#15 4 SPD IDLE (NEUT)	185.4	0.02		36.0	
SEQ#15 4 SPD IDLE (DRIV)	199.1	0.02		84.9	
SEQ#15 FED 2 MODE (30)	143.4	0.01		590.4	
SEQ#15 FED 2 MODE (NEUT)	340.2	0.01		39.8	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR FILTER,  
FUEL FILTER, PCV VALVE, CRANKCASE BREATHER FILTER,  
ENGINE OIL & FILTER, CARBON CANISTER FILTER,  
ADJUSTED CHOKE, IDLE SPEED & MIXTURE TO SPEC.

SEQ#16 FEDERAL TEST PROC.	1.22	13.0	549.3	3.87	15.5
SEQ#16 50 MPH CRUISE	34.5	0.01		1209.9	
SEQ#16 HIGHWAY FUEL ECON.	0.20	0.6	454.7	5.33	
SEQ#16 4 SPD IDLE (NEUT)	39.4	0.00		69.3	
SEQ#16 4 SPD IDLE (2500)	101.5	0.00		421.6	
SEQ#16 4 SPD IDLE (NEUT)	69.1	0.00		70.1	
SEQ#16 4 SPD IDLE (DRIV)	22.7	0.00		194.7	
SEQ#16 FED 2 MODE (30)	153.0	0.01		1017.0	
SEQ#16 FED 2 MODE (NEUT)	208.1	0.00		82.9	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 185 CO: 0.03 GAIN: 177

5842 75 OLDS 455 30S43

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 350 CO: 3.83 GAIN: 10

SEQ#11 FEDERAL TEST PROC.	2.60	42.4	669.1	2.07	11.9
SEQ#11 50 MPH CRUISE	15.1	0.02		507.5	
SEQ#11 HIGHWAY FUEL ECON.	0.50	5.2	490.4	3.27	
SEQ#11 4 SPD IDLE (NEUT)	361.7	3.42		37.7	
SEQ#11 4 SPD IDLE (2500)	78.0	1.44		119.8	
SEQ#11 4 SPD IDLE (NEUT)	295.6	3.31		42.7	
SEQ#11 4 SPD IDLE (DRIV)	265.0	3.77		48.3	
SEQ#11 FED 2 MODE (30)	68.5	0.05		267.9	
SEQ#11 FED 2 MODE (NEUT)	281.6	3.18		42.5	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5842	75	OLDS	455	30S43	(CON'T)					

COMMENT : ADJUSTED IDLE DRIVE 550 RPM, CO .28%, HC 570 PPM.  
USED UNIVERSAL CO METHOD.

SEQ#13 FEDERAL TEST PROC.	1.40	11.6	679.5	2.03	12.6
SEQ#13 50 MPH CRUISE	10.5	0.02		421.6	
SEQ#13 HIGHWAY FUEL ECON.	0.35	3.1	477.9	3.01	18.3
SEQ#13 4 SPD IDLE (NEUT)	116.5	0.01		44.1	
SEQ#13 4 SPD IDLE (2500)	6.9	0.06		159.6	
SEQ#13 4 SPD IDLE (NEUT)	92.3	0.01		51.0	
SEQ#13 4 SPD IDLE (DRIV)	53.9	0.01		66.6	
SEQ#13 FED 2 MODE (30)	36.5	0.01		236.6	
SEQ#13 FED 2 MODE (NEUT)	133.4	0.01		45.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 550 RPM, CO .1%, HC 290 PPM.  
ADJUSTED TIMING PRELIMINARY TO MIXTURE.

SEQ#15 FEDERAL TEST PROC.	1.42	15.7	696.8	1.50	12.2
SEQ#15 50 MPH CRUISE	4.3	0.02		356.9	
SEQ#15 HIGHWAY FUEL ECON.	0.27	3.8	494.4	2.40	17.7
SEQ#15 4 SPD IDLE (NEUT)	148.4	0.01		34.4	
SEQ#15 4 SPD IDLE (2500)	3.3	0.04		140.3	
SEQ#15 4 SPD IDLE (NEUT)	172.0	0.01		40.2	
SEQ#15 4 SPD IDLE (DRIV)	118.8	0.01		44.6	
SEQ#15 FED 2 MODE (30)	30.2	0.01		170.3	
SEQ#15 FED 2 MODE (NEUT)	184.7	0.01		34.8	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, PCV VALVE  
AND FILTER, OIL AND OIL FILTER, FUEL FILTER,  
PURGE CANISTER, AIR FILTER ELEMENT AND HOT AIR  
TUBE.

SEQ#16 FEDERAL TEST PROC.	1.66	14.8	672.6	1.42	12.7
SEQ#16 50 MPH CRUISE	9.5	0.03		341.7	
SEQ#16 HIGHWAY FUEL ECON.	0.48	6.7	465.6	2.37	18.6
SEQ#16 4 SPD IDLE (NEUT)	198.7	0.01		31.1	
SEQ#16 4 SPD IDLE (2500)	10.2	0.05		136.7	
SEQ#16 4 SPD IDLE (NEUT)	155.7	0.01		35.7	
SEQ#16 4 SPD IDLE (DRIV)	100.9	0.01		41.9	
SEQ#16 FED 2 MODE (30)	33.5	0.01		196.8	
SEQ#16 FED 2 MODE (NEUT)	214.1	0.00		33.5	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 197 CO: 0.00 GAIN: 60

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5843	75	PONT	350	40J23-A						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 215 CO: 7.97 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	3.37	100.0	573.9	4.21	12.0
SEQ#11	50 MPH CRUISE	10.2	0.02	1440.3		
SEQ#11	HIGHWAY FUEL ECON.	0.54	10.0	445.6	5.02	19.2
SEQ#11	4 SPD IDLE (NEUT)	237.9	8.00		45.2	
SEQ#11	4 SPD IDLE (2500)	53.0	0.83		244.6	
SEQ#11	4 SPD IDLE (NEUT)	215.1	7.84		53.1	
SEQ#11	4 SPD IDLE (DRIV)	243.6	7.77		66.8	
SEQ#11	FED 2 MODE (30)	130.4	1.79		829.0	
SEQ#11	FED 2 MODE (NEUT)	215.8	7.49		53.3	

NO FOLLOW UP LANE TEST DONE

COMMENT : PRE ADJUSTMENT PROCEDURE, REPLACED EGR, EFE, TAC CTO SWITCH, O GAIN, REPLACED AIR FILTER ELEMENT. ADJUSTED IDLE DRIVE 600 RPM, PROPANE GAIN 50 RPM. USED UNIVERSAL PROPANE METHOD.

SEQ#12	FEDERAL TEST PROC.	1.86	30.9	635.3	2.29	12.9
SEQ#12	50 MPH CRUISE	2.6	0.01	495.4		
SEQ#12	HIGHWAY FUEL ECON.	0.22	3.0	447.0	2.37	19.6
SEQ#12	4 SPD IDLE (NEUT)	18.4	0.01		57.2	
SEQ#12	4 SPD IDLE (2500)	5.6	0.32		88.3	
SEQ#12	4 SPD IDLE (NEUT)	26.9	0.01		64.6	
SEQ#12	4 SPD IDLE (DRIV)	7.9	0.00		143.4	
SEQ#12	FED 2 MODE (30)	25.3	0.05		211.4	
SEQ#12	FED 2 MODE (NEUT)	47.4	0.01		60.7	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE CO OF .2% WAS ACHEIVED AT STEP 5C OF UNIVERSAL IDLE CO ADJUSTMENT PROCEDURE A-2.

SEQ#13	FEDERAL TEST PROC.	2.20	40.1	609.7	2.14	13.1
SEQ#13	50 MPH CRUISE	7.9	0.00	454.9		
SEQ#13	HIGHWAY FUEL ECON.	0.30	4.5	449.7	2.35	19.4
SEQ#13	4 SPD IDLE (NEUT)	137.4	0.97		50.2	
SEQ#13	4 SPD IDLE (2500)	34.8	0.75		108.0	
SEQ#13	4 SPD IDLE (NEUT)	127.7	0.84		54.2	
SEQ#13	4 SPD IDLE (DRIV)	88.6	0.22		81.8	
SEQ#13	FED 2 MODE (30)	76.4	0.28		222.7	
SEQ#13	FED 2 MODE (NEUT)	98.9	0.52		50.0	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5843	75	PONT	350	40J23-A	(CON'T)					

COMMENT : ADJUSTED IDLE MIXTURE AND SPEED TO SPEC.

SEQ#15 FEDERAL TEST PROC.	1.83	30.1	622.5	2.18	13.1
SEQ#15 50 MPH CRUISE	7.2	0.01	464.0		
SEQ#15 HIGHWAY FUEL ECON.	0.37	7.5	433.6	2.19	19.9
SEQ#15 4 SPD IDLE (NEUT)	71.4	0.58		60.9	
SEQ#15 4 SPD IDLE (2500)	26.3	0.91		109.3	
SEQ#15 4 SPD IDLE (NEUT)	74.4	1.31		66.5	
SEQ#15 4 SPD IDLE (DRIV)	91.3	0.35		149.3	
SEQ#15 FED 2 MODE (30)	77.1	0.31		225.4	
SEQ#15 FED 2 MODE (NEUT)	90.6	0.92		60.9	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, FUEL FILTER,  
OIL AND OIL FILTER, PURGE CANISTER FILTER, PCV  
VALVE AND FILTER, SET TO SPEC.

SEQ#16 FEDERAL TEST PROC.	1.89	33.0	646.9	2.36	12.6
SEQ#16 50 MPH CRUISE	3.9	0.01	470.1		
SEQ#16 HIGHWAY FUEL ECON.	0.22	4.7	440.3	2.41	19.8
SEQ#16 4 SPD IDLE (NEUT)	70.1	1.27		62.4	
SEQ#16 4 SPD IDLE (2500)	28.9	0.62		114.9	
SEQ#16 4 SPD IDLE (NEUT)	63.5	1.17		68.9	
SEQ#16 4 SPD IDLE (DRIV)	113.8	1.03		192.2	
SEQ#16 FED 2 MODE (30)	73.4	0.19		224.7	
SEQ#16 FED 2 MODE (NEUT)	73.4	1.04		63.8	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 96 CO: 1.76 GAIN: 80

5845 75 PONT 400 20K43

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 122 CO: 4.08 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	1.46	30.4	845.6	1.40	9.9
SEQ#11 50 MPH CRUISE	0.0	0.01	244.6		
SEQ#11 HIGHWAY FUEL ECON.	0.10	2.0	576.9	1.13	15.3
SEQ#11 4 SPD IDLE (NEUT)	129.1	3.96		44.1	
SEQ#11 4 SPD IDLE (2500)	8.2	0.02		107.7	
SEQ#11 4 SPD IDLE (NEUT)	106.5	3.99		53.2	
SEQ#11 4 SPD IDLE (DRIV)	120.8	3.08		64.1	
SEQ#11 FED 2 MODE (30)	7.9	0.01		136.5	
SEQ#11 FED 2 MODE (NEUT)	102.5	3.28		54.9	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5845	75	PONT	400	20K43	(CON'T)					

COMMENT : ADJUSTED IDLE DRIVE 650 RPM, PROPANE GAIN 50  
RPM. USED UNIVERSAL PROPANE METHOD.

SEQ#12 FEDERAL TEST PROC.	2.02	22.4	666.7	2.07	12.5
SEQ#12 50 MPH CRUISE	27.9	0.01	460.0		
SEQ#12 HIGHWAY FUEL ECON.	0.28	1.4	479.8	2.13	18.4
SEQ#12 4 SPD IDLE (NEUT)	274.2	0.54		49.8	
SEQ#12 4 SPD IDLE (2500)	92.9	0.03		126.5	
SEQ#12 4 SPD IDLE (NEUT)	293.5	1.24		50.9	
SEQ#12 4 SPD IDLE (DRIV.)	183.4	0.57		86.5	
SEQ#12 FED 2 MODE (30)	48.7	0.00		411.4	
SEQ#12 FED 2 MODE (NEUT)	363.9	0.48		54.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 650 RPM, CO .4%. USED UNIVERSAL  
CO METHOD.

SEQ#13 FEDERAL TEST PROC.	1.23	11.7	690.9	2.04	12.4
SEQ#13 50 MPH CRUISE	20.7	0.01	411.4		
SEQ#13 HIGHWAY FUEL ECON.	0.19	0.6	485.7	2.17	18.2
SEQ#13 4 SPD IDLE (NEUT)	61.9	0.01		56.3	
SEQ#13 4 SPD IDLE (2500)	71.8	0.01		130.3	
SEQ#13 4 SPD IDLE (NEUT)	91.9	0.05		42.7	
SEQ#13 4 SPD IDLE (DRIV.)	20.4	0.01		99.5	
SEQ#13 FED 2 MODE (30)	38.8	0.01		397.3	
SEQ#13 FED 2 MODE (NEUT)	88.0	0.01		64.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE SPEED ONLY.

SEQ#15 FEDERAL TEST PROC.	1.27	11.1	700.4	2.07	12.3
SEQ#15 50 MPH CRUISE	14.1	0.01	387.2		
SEQ#15 HIGHWAY FUEL ECON.	0.17	0.9	485.9	2.11	18.2
SEQ#15 4 SPD IDLE (NEUT)	94.6	0.01		59.6	
SEQ#15 4 SPD IDLE (2500)	73.1	0.05		122.4	
SEQ#15 4 SPD IDLE (NEUT)	69.1	0.01		65.6	
SEQ#15 4 SPD IDLE (DRIV.)	31.2	0.01		105.2	
SEQ#15 FED 2 MODE (30)	35.2	0.01		387.2	
SEQ#15 FED 2 MODE (NEUT)	144.7	0.01		66.8	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5845	75	PONT	400	20K43	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED AIR FILTER, FUEL FILTER, PCV VALVE, CRANKCASE FILTER, OIL AND OIL FILTER, CARBON CANISTER FILTER, HOT AIR INLET TUBE, SPARK PLUGS, ADJUSTED TIMING, IDLE SPEED AND MIXTURE TO SPEC. ADJUSTED CHOKE TO SPEC.

SEQ#16 FEDERAL TEST PROC.	1.38	8.2	670.5	2.52	12.9
SEQ#16 50 MPH CRUISE	13.5	0.01	507.5		
SEQ#16 HIGHWAY FUEL ECON.	0.14	0.3	468.3	2.78	18.9
SEQ#16 4 SPD IDLE (NEUT)	88.3	0.00		30.9	
SEQ#16 4 SPD IDLE (2500)	87.6	0.01		138.0	
SEQ#16 4 SPD IDLE (NEUT)	104.9	0.00		22.0	
SEQ#16 4 SPD IDLE (DRIV)	69.8	0.00		59.8	
SEQ#16 FED 2 MODE (30)	25.0	0.00		412.5	
SEQ#16 FED 2 MODE (NEUT)	245.3	0.00		12.2	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 134 CO: 0.02 GAIN: 491

5846 75 PONT 400 20K43

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 939 CO: 1.30 GAIN: 20

SEQ#11 FEDERAL TEST PROC.	7.44	131.7	676.8	3.25	9.8
SEQ#11 50 MPH CRUISE	132.1	2.59	673.3		
SEQ#11 HIGHWAY FUEL ECON.	3.06	64.6	496.4	4.16	14.6
SEQ#11 4 SPD IDLE (NEUT)	1001.0	0.94		24.1	
SEQ#11 4 SPD IDLE (2500)	90.6	2.65		118.0	
SEQ#11 4 SPD IDLE (NEUT)	1221.7	1.64		22.1	
SEQ#11 4 SPD IDLE (DRIV)	512.8	3.94		24.6	
SEQ#11 FED 2 MODE (30)	238.6	3.44		215.3	
SEQ#11 FED 2 MODE (NEUT)	1386.1	1.70		24.0	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE DRIVE 650 RPM, CO .15%, PRE ADJUSTMENT, INSTALLED NEW VACUUM LINE TO EGR. USED UNIVERSAL CO METHOD.

SEQ#13 FEDERAL TEST PROC.	5.40	86.3	733.6	1.07	10.0
SEQ#13 50 MPH CRUISE	114.5	3.50	172.4		
SEQ#13 HIGHWAY FUEL ECON.	2.43	57.2	512.2	1.33	14.6
SEQ#13 4 SPD IDLE (NEUT)	29.6	0.04		180.3	
SEQ#13 4 SPD IDLE (2500)	80.0	2.26		72.3	
SEQ#13 4 SPD IDLE (NEUT)	225.5	0.02		109.8	
SEQ#13 4 SPD IDLE (DRIV)	59.6	0.01		159.3	
SEQ#13 FED 2 MODE (30)	194.7	2.79		136.0	
SEQ#13 FED 2 MODE (NEUT)	838.1	0.02		73.1	

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5846	75	PONT	400	20K43	(CON'T)					

COMMENT : ADJUSTED IDLE DRIVE 650 RPM, CO .5%, HC 600 PPM,  
PROPANE GAIN 120 RPM.

SEQ#15 FEDERAL TEST PROC.	4.69	79.6	734.9	1.07	10.1
SEQ#15 50 MPH CRUISE	98.6	2.42		147.0	
SEQ#15 HIGHWAY FUEL ECON.	2.31	59.4	493.1	1.24	14.9
SEQ#15 4 SPD IDLE (NEUT)	111.8	0.00		65.5	
SEQ#15 4 SPD IDLE (2500)	54.6	1.65		63.2	
SEQ#15 4 SPD IDLE (NEUT)	203.1	0.01		65.4	
SEQ#15 4 SPD IDLE (DRIV)	37.5	0.00		98.3	
SEQ#15 FED 2 MODE (30)	166.3	2.26		228.3	
SEQ#15 FED 2 MODE (NEUT)	615.6	0.01		53.4	

NO FOLLOW UP LANE TEST DONE

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, PCV VALVE  
AND FILTER, PURGE CANISTER FILTER, FUEL FILTER,  
OIL AND OIL FILTER, AIR FILTER, ADJUSTED TIMING,  
SET TO SPEC.

SEQ#16 FEDERAL TEST PROC.	4.07	63.8	747.2	1.15	10.3
SEQ#16 50 MPH CRUISE	107.2	1.57		227.8	
SEQ#16 HIGHWAY FUEL ECON.	1.99	50.7	511.2	1.34	14.9
SEQ#16 4 SPD IDLE (NEUT)	108.8	0.01		65.7	
SEQ#16 4 SPD IDLE (2500)	49.3	1.91		85.1	
SEQ#16 4 SPD IDLE (NEUT)	278.1	0.01		73.1	
SEQ#16 4 SPD IDLE (DRIV)	58.9	0.01		124.4	
SEQ#16 FED 2 MODE (30)	193.7	2.51		280.0	
SEQ#16 FED 2 MODE (NEUT)	845.1	0.01		67.8	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 558 CO: 0.06 GAIN: 171

5847 75 FIAT 107 132

PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 320 CO: 6.60 GAIN: 0

SEQ#11 FEDERAL TEST PROC.	5.79	92.1	328.5	1.66	18.1
SEQ#11 50 MPH CRUISE	130.1	2.85		976.9	
SEQ#11 HIGHWAY FUEL ECON.	2.26	45.7	237.6	2.28	28.0
SEQ#11 4 SPD IDLE (NEUT)	269.2	7.45		41.9	
SEQ#11 4 SPD IDLE (2500)	195.0	6.13		99.8	
SEQ#11 4 SPD IDLE (NEUT)	267.1	7.20		46.4	
SEQ#11 FED 2 MODE (30)	150.4	3.14		624.8	
SEQ#11 FED 2 MODE (NEUT)	261.1	8.15		40.9	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 266 CO: 7.20 GAIN: 0

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5847	75	FIAT	107	132	(CON'T)					

COMMENT : IDLE RPM 850, WITH PROPANE 900 RPM.

SEQ#12 FEDERAL TEST PROC.	4.31	62.8	360.3	2.08	18.8
SEQ#12 50 MPH CRUISE	116.8	1.96		1247.5	
SEQ#12 HIGHWAY FUEL ECON.	1.93	28.9	258.3	2.92	28.7
SEQ#12 4 SPD IDLE (NEUT)	127.4	0.33		74.5	
SEQ#12 4 SPD IDLE (2500)	134.7	3.66		132.6	
SEQ#12 4 SPD IDLE (NEUT)	93.3	0.35		81.6	
SEQ#12 FED 2 MODE (30)	109.5	1.80		896.8	
SEQ#12 FED 2 MODE (NEUT)	98.9	0.50		84.1	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 92 CO: 0.34 GAIN: 70

COMMENT : ADJUSTED IDLE SPEED &amp; MIXTURE TO SPEC.

SEQ#13 FEDERAL TEST PROC.	4.26	69.1	368.7	2.09	18.1
SEQ#13 50 MPH CRUISE	114.1	1.93		1172.3	
SEQ#13 HIGHWAY FUEL ECON.	1.85	30.8	253.1	2.75	28.9
SEQ#13 4 SPD IDLE (NEUT)	118.8	0.90		77.6	
SEQ#13 4 SPD IDLE (2500)	155.3	4.58		106.7	
SEQ#13 4 SPD IDLE (NEUT)	177.0	4.75		65.8	
SEQ#13 FED 2 MODE (30)	122.4	2.19		727.9	
SEQ#13 FED 2 MODE (NEUT)	141.4	4.79		72.4	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 175 CO: 4.78 GAIN: 80

COMMENT : ADJUSTED IDLE SPEED &amp; MIXTURE TO SPEC.

SEQ#15 FEDERAL TEST PROC.	4.08	61.8	360.6	2.10	18.9
SEQ#15 50 MPH CRUISE	108.8	1.68		1257.5	
SEQ#15 HIGHWAY FUEL ECON.	1.83	28.7	255.3	2.86	29.0
SEQ#15 4 SPD IDLE (NEUT)	127.7	0.28		83.3	
SEQ#15 4 SPD IDLE (2500)	140.7	4.28		119.5	
SEQ#15 4 SPD IDLE (NEUT)	108.2	0.26		82.4	
SEQ#15 FED 2 MODE (30)	109.8	2.13		764.3	
SEQ#15 FED 2 MODE (NEUT)	86.6	0.59		86.6	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 109 CO: 0.26 GAIN: 80

[NOTE: FOR 4 SPD IDLE &amp; FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5847	75	FIAT	107	132	(CON'T)					

COMMENT : MAJOR TUNE-UP. REPLACED SPARK PLUGS, AIR & FUEL FILTERS, DISTRIBUTOR POINTS, CONDENSERS. ADJUSTED TIMING & DWELL TO SPEC. INSTALLED AIR PUMP & BELTS & HOSES, THERMAL SWITCHES, SEALING RINGS FOR EGR.

SEQ#	TEST	HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	FUEL ECON MPG
16	FEDERAL TEST PROC.	3.46	60.5	368.3	2.23		18.7
16	50 MPH CRUISE	86.3	1.53		1480.4		
16	HIGHWAY FUEL ECON.	1.32	23.0	284.0	3.44		27.4
16	4 SPD IDLE (NEUT)	63.8	0.43		85.2		
16	4 SPD IDLE (2500)	64.5	2.83		116.5		
16	4 SPD IDLE (NEUT)	57.9	0.47		88.2		
16	FED 2 MODE (30)	75.1	1.73		1034.5		
16	FED 2 MODE (NEUT)	57.9	0.47		89.3		

## FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 59 CO: 0.47 GAIN: 100

5850 75 DATS 085 N-081

## PRELIMINARY LANE TEST:

CAT: P FUEL: P  
HC: 418 CO: 7.70 GAIN: 0

SEQ#	TEST	HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	FUEL ECON MPG
11	FEDERAL TEST PROC.	2.97	19.4	303.0	4.78		25.9
11	50 MPH CRUISE	77.7	0.17		1833.6		
11	HIGHWAY FUEL ECON.	1.16	5.6	223.9	5.51		37.5
11	4 SPD IDLE (NEUT)	184.7	3.24		25.4		
11	4 SPD IDLE (2500)	30.2	0.68		94.7		
11	4 SPD IDLE (NEUT)	181.0	3.35		25.8		
11	FED 2 MODE (30)	79.7	0.08		1457.9		
11	FED 2 MODE (NEUT)	176.0	3.37		31.2		

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE NEUTRAL 700 RPM, PROPANE GAIN 50 RPM, USED UNIVERSAL PROPANE METHOD.

SEQ#	TEST	HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	FUEL ECON MPG
12	FEDERAL TEST PROC.	2.79	12.6	297.1	4.76		27.2
12	50 MPH CRUISE	79.0	0.20		2086.6		
12	HIGHWAY FUEL ECON.	1.29	5.1	244.5	6.51		34.6
12	4 SPD IDLE (NEUT)	235.2	0.44		26.6		
12	4 SPD IDLE (2500)	38.1	0.28		132.4		
12	4 SPD IDLE (NEUT)	161.7	0.47		28.7		
12	FED 2 MODE (30)	145.7	0.08		1588.1		
12	FED 2 MODE (NEUT)	136.7	0.68		36.3		

NO FOLLOW UP LANE TEST DONE

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> C	CH <sub>4</sub>	
5850	75	DATS	085	N-081	(CON'T)					

COMMENT : ADJUSTED IDLE NEUTRAL 700 RPM, IDLE CO .3%, HC 400 PPM. USED UNIVERSAL PROPANE METHOD.

SEQ#13 FEDERAL TEST PROC.	2.71	8.8	299.9	5.06	27.5
SEQ#13 50 MPH CRUISE	83.7	0.22		1968.9	
SEQ#13 HIGHWAY FUEL ECON.	1.17	5.6	232.3	6.09	36.3
SEQ#13 4 SPD IDLE (NEUT)	596.3	0.11		19.0	
SEQ#13 4 SPD IDLE (2500)	50.3	0.22		141.4	
SEQ#13 4 SPD IDLE (NEUT)	445.9	0.11		22.4	
SEQ#13 FED 2 MODE (30)	100.5	0.08		1783.5	
SEQ#13 FED 2 MODE (NEUT)	291.3	0.10		30.1	

NO FOLLOW UP LANE TEST DONE

COMMENT : ADJUSTED IDLE MIXTURE AND SPEED TO SPEC. LEAN DROP OF 815 TO 750 IN NEUTRAL. HC 320 PPM, CO .15%.

SEQ#15 FEDERAL TEST PROC.	2.70	10.5	307.9	4.81	26.7
SEQ#15 50 MPH CRUISE	84.7	0.18		2076.6	
SEQ#15 HIGHWAY FUEL ECON.	1.18	5.6	246.3	6.64	34.3
SEQ#15 4 SPD IDLE (NEUT)	271.6	0.14		30.0	
SEQ#15 4 SPD IDLE (2500)	33.2	0.28		133.1	
SEQ#15 4 SPD IDLE (NEUT)	165.0	0.15		32.8	
SEQ#15 FED 2 MODE (30)	86.0	0.08		1708.4	
SEQ#15 FED 2 MODE (NEUT)	123.1	0.16		40.4	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 225 CO: 0.44 GAIN: 95

COMMENT : MAJOR TUNE-UP. REPLACED AIR, FUEL, OIL AND CRANKCASE BREather FILTERS, SPARK PLUGS, POINTS, CONDENSER, DISTRIBUTOR CAP, ROTOR, PCV VALVE, ENGINE OIL. ADJUSTED TIMING, DWELL, IDLE MIXTURE AND SPEED.

SEQ#16 FEDERAL TEST PROC.	2.73	8.9	311.6	4.69	26.6
SEQ#16 50 MPH CRUISE	67.8	0.11		1725.9	
SEQ#16 HIGHWAY FUEL ECON.	1.08	3.1	230.8	5.78	37.1
SEQ#16 4 SPD IDLE (NEUT)	166.3	0.12		28.6	
SEQ#16 4 SPD IDLE (2500)	35.2	0.16		117.2	
SEQ#16 4 SPD IDLE (NEUT)	163.0	0.13		28.9	
SEQ#16 FED 2 MODE (30)	88.6	0.08		1442.8	
SEQ#16 FED 2 MODE (NEUT)	152.3	0.13		37.2	

FOLLOW UP LANE TEST:

CAT: P FUEL: P  
HC: 196 CO: 0.71 GAIN: 70

## AUTOMOTIVE TESTING LABORATORIES, INC.

## TEXAS PILOT I/M STUDY

LISTING OF TEST RESULTS  
HOUSTON #2

VEH. NO.	YR	MAKE	CID	ENGINE FAMILY	EMISSION RESULTS GRAMS / MILE					FUEL ECON MPG
					HC	CO	CO <sub>2</sub>	NO <sub>x</sub> c	CH <sub>4</sub>	
5852	75	TOYO	096	2T-C						

## PRELIMINARY LANE TEST:

CAT: P FUEL: P

HC: 447 CO: 1.93 GAIN: 0

SEQ#11	FEDERAL TEST PROC.	2.04	19.3	366.6	2.65	22.0
SEQ#11	50 MPH CRUISE	41.7	0.36	1239.9		
SEQ#11	HIGHWAY FUEL ECON.	0.67	7.8	262.0	4.64	32.1
SEQ#11	4 SPD IDLE (NEUT)	9.8	0.25		26.2	
SEQ#11	4 SPD IDLE (2500)	3.0	0.15		41.2	
SEQ#11	4 SPD IDLE (NEUT)	432.6	0.80		21.9	
SEQ#11	FED 2 MODE (30)	66.5	0.56		734.9	
SEQ#11	FED 2 MODE (NEUT)	419.2	0.86		25.2	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE SPEED 850 IN NEUTRAL, PROPANE GAIN 50 RPM.  
 ACHEIVED AT STEP 6C OF PROPANE CARB ADJUSTMENT  
 PROCEDURE M-1. AIR FILTER WAS REPLACED DURING  
 PRE-ADJUSTMENT BUT DID NOT RESULT IN ANY PROPANE  
 GAIN.

SEQ#12	FEDERAL TEST PROC.	1.75	17.0	373.6	3.05	21.9
SEQ#12	50 MPH CRUISE	34.8	0.30	1272.5		
SEQ#12	HIGHWAY FUEL ECON.	0.65	7.2	263.1	4.98	32.1
SEQ#12	4 SPD IDLE (NEUT)	348.4	0.12		18.5	
SEQ#12	4 SPD IDLE (2500)	16.4	0.20		37.4	
SEQ#12	4 SPD IDLE (NEUT)	352.8	0.13		21.3	
SEQ#12	FED 2 MODE (30)	55.6	0.47		856.7	
SEQ#12	FED 2 MODE (NEUT)	228.2	0.13		26.9	

NO FOLLOW UP LANE TEST DONE

COMMENT : IDLE MIXTURE SET TO EMISSIONS DECAL SPEC: 920 TO  
 850 LEAN DROP IN NEUTRAL.

SEQ#15	FEDERAL TEST PROC.	1.65	16.4	391.6	3.23	21.0
SEQ#15	50 MPH CRUISE	41.7	0.29	1392.7		
SEQ#15	HIGHWAY FUEL ECON.	0.73	6.4	277.0	5.56	30.7
SEQ#15	4 SPD IDLE (NEUT)	335.2	0.12		18.8	
SEQ#15	4 SPD IDLE (2500)	29.2	0.23		35.4	
SEQ#15	4 SPD IDLE (NEUT)	221.4	0.11		23.1	
SEQ#15	FED 2 MODE (30)	62.5	0.34		951.9	
SEQ#15	FED 2 MODE (NEUT)	171.0	0.13		38.0	

## FOLLOW UP LANE TEST:

CAT: P FUEL: P

HC: 328 CO: 0.21 GAIN: 80

[NOTE: FOR 4 SPD IDLE & FED 2 MODE TESTS: CO IS %; HC IS PPM/H; NO IS PPM]