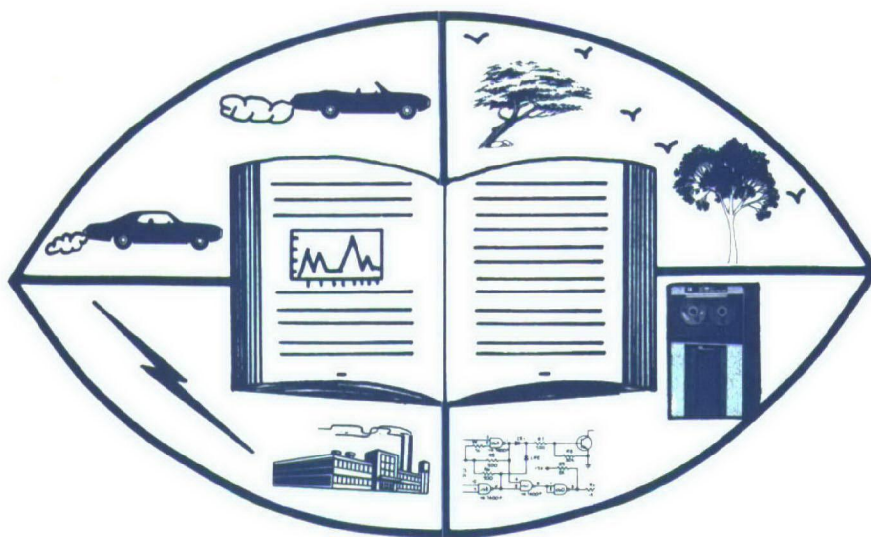


TEMPERATURE COMPARISON: ON-ROAD
VERSUS DYNAMOMETER COOLING



OLSON LABORATORIES, INC.

 An Envirodyne Company

FINAL REPORT

TEMPERATURE COMPARISON: ON-ROAD
VERSUS DYNAMOMETER COOLING

PREPARED FOR:
THE ENVIRONMENTAL PROTECTION AGENCY
CONTRACT NO. 68-03-2412
TASK 2

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FOREWORD

Of critical importance to the reliable measuring of automobile exhaust emissions, such as sulfates, is the extent to which test conditions match actual road conditions. One aspect of this is the degree to which vehicle temperatures produced during dynamometer testing agree with temperatures produced on the road under the same driving conditions. Earlier work sometimes showed poor repeatability of sulfate tests which was attributed to inadequate cooling. This work was intended to better define the vehicle cooling which would be adequate during sulfate emissions tests.

In order to best approximate on-road vehicle temperatures, one can vary dynamometer cooling in a number of ways.

- o By use of a fan with flow proportional to vehicle speed.
- o By use of fixed-flow fans of various sizes.
- o By using fans placed in different locations about the vehicle.

Logically, the proportional-speed fan offers better cooling characteristics than the fixed-speed fan. However, its cost is many times that of a fixed-speed fan, so if it could be shown that a certain configuration of fixed-speed fans provides an adequate approximation to on-road vehicle temperatures, substantial cost savings would result.

The objective of this study, therefore, was to measure and compare vehicle temperatures under both road and dynamometer test conditions, using a variety of fixed-speed fan configurations and sizes for cooling during dynamometer testing. In this way, the degree to which the various fan configurations approximate on-road temperatures could be ascertained. In addition to temperature measurements, gaseous and sulfate emissions were measured during dynamometer testing in order to better characterize the test conditions.

The purpose of this report, is to transmit temperature and emission data summaries to the EPA Task Officer. Raw data has been previously transmitted.

ABSTRACT

Eight vehicle temperatures were measured for two full-sized passenger vehicles on a track and on a dynamometer with five different fixed-speed fan configurations. Velocity proportional cooling was not investigated. Hydrocarbon, CO, CO₂, NO_x and sulfate emissions were measured during dynamometer testing and correlated with temperature measurements. The test sequence under both track and dynamometer conditions consisted of the FTP, three S-7s, an HFET and four steady-state tests.

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A P P E N D I C E S

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Section 1

INTRODUCTION AND SUMMARY

This task was designed to measure vehicle temperatures under road and dynamometer conditions. Five different fixed-speed fan configurations were used to cool the two test vehicles while on the dynamometer; comparison of temperatures recorded under road and dynamometer conditions provided a basis for judging how well fixed-speed fans approximate road conditions. The mass of emitted CO, CO₂, hydrocarbons, NO_x, and sulfate under the various fan configurations was measured to determine the relation between these emissions and differing vehicle cooling conditions.

Temperature results show that: 1) vehicle configuration is important in determining optimal cooling, and 2) use of both front and side fans provides better approximation of track conditions than front cooling alone for the two vehicles tested. However, none of the fan combinations tested were correct for both vehicles. One vehicle was consistently over cooled; the other was consistently undercooled by all of the fan configurations tested.

Section 2

DESCRIPTION OF EQUIPMENT

2.1 VEHICLES AND VEHICLE MODIFICATION

Two full-size passenger vehicles were obtained in the Los Angeles area. Their specifications are given in Table 2-1.

Table 2-1. TEST VEHICLE SPECIFICATIONS

	PONTIAC	CHRYSLER
Year	1976	1975
Model	Bonneville	New Yorker
VIN	2R49W6X132963	CS41TSC111675
Engine Displacement	7.46 l. (455 in. ³)	7.21 l. (440 in. ³)
Loaded Test Weight	2490 kg (5470 lb)	2480 kg (5460 lb)
Catalyst Type	Pelleted	Monolith
Air Pump	Yes	Yes

Dual accelerator and brake controls were installed in each vehicle so that speed could be controlled by a driver seated on the right side of the vehicle. Thus, during track operation, one driver could steer the vehicle while a second driver could watch a driver's aid and control the vehicle speed. A signal generated by a fifth wheel attached to the rear of the vehicle provided a record of vehicle speed on the driver's aid.

2.2 DRIVER'S AIDS

A Varian driver's aid was installed in each vehicle. Prerecorded charts were used during track operation. During dynamometer operation, these aids were removed and a computer-controlled Hewlett-Packard Model 17504A driver's aid was installed just outside the vehicle.

2.3 TEMPERATURE RECORDING INSTRUMENTATION

Eight thermocouples were installed in each vehicle. Their locations are described in Table 2-2. The signals of the seven Type J thermocouples were recorded on an Esterline-Angus Model 1124E 24-Channel recorder; the output of the Type K thermocouple (used to measure catalyst temperature) was recorded on the 50 mV range of a Honeywell Model 194 recorder. During track operation, power was provided to the recorders by a Novus Model 2560-12 inverter powered by two 227 amp. hr. 12 volt batteries.

2.4 TEST FACILITIES

A 3.2 km (2.0 mile) oval track at Dynamic Sciences, Inc., in Phoenix, Arizona, was used for road tests. Coast-downs were performed on it and on a little-used stretch of freeway in Orange County, California.

Dynamometer tests were run at the test facility of Olson Laboratories in Anaheim, California. This facility consists of a Clayton Model ECE-50-0 dynamometer, sulfate dilution tunnel, particulate collection system, a 350 CFM CVS system, and gaseous emissions analysis system; these systems have been described previously (e.g.; Section 4.1 of Olson's proposal in response to RFP CI-77-0054, March, 1977), and comply in all respects with the Task Order Contract.

Table 2-2. THERMOCOUPLE IDENTIFICATION

THERMOCOUPLE	LOCATION	RECORDER CHANNELS USED ¹
TC1	Fuel Tank Vapor: In the vapor space inside upper part of fuel tank	3,11,19
TC2	Outside Fuel Tank: 3-5 cm. in front of fuel tank	2,10,18
TC3	Carburetor: Immersed in fuel in carburetor float chamber	5,13,21
TC4	Radiator: In inlet (top) radiator hose about 5 cm. from the radiator	6,14,22
TC5	Oil Pan: In the oil pan about 5 cm. from oil pan plug	7,15,23
TC6	Air Cleaner: In the air cleaner suspended about 5 cm. above the automatic choke flap valve	4,12,20
TC7	Vehicle Front: About 3 cm. in front of the vehicle grill	1,9,17
TC8	Catalyst Bed: Pontiac - 3 cm above refill plug Chrysler - centered about 2/5 of the way back from the catalyst inlet port	

¹Angus Model 1124E-Channel Multipoint Recorder.

Three cooling fans were used: two Hartzell Model N24-DUW 9150 m³/min. or 5,300 feet³/min. nominal flow rate - designated SMALL FAN), and one Dayton Model 7C402 (708 m³/min. or 25,00 feet³/min. - designated LARGE FAN).

Sulfate analyses were performed on an Altex Model 300 Liquid Chromatograph.

Section 3

PROCEDURE

3.1 EQUIPMENT CHECKOUT AND CALIBRATION

3.1.1 Vehicles

After thermocouple installation, but prior to track operation, both test vehicles were tuned to manufacturer specifications. Timing, idle RPM, and raw hydrocarbon and CO emissions of each vehicle were measured prior to track operation, between track and dynamometer operation, and after dynamometer operation.

3.1.2 Thermocouples

Thermocouple calibration was performed by comparing thermocouple output with a laboratory grade thermometer.

3.1.3 Fans

Fan flows were measured by taking area-weighted averages of air velocities measured with a Dwyer Model 27 air speed indicator.

3.1.4 Fifth Wheels

Fifth wheels were calibrated by comparison with the dynamometer speed meter and by operation on a synchronous motor.

3.1.5 Dynamometer

Indicated horsepower (IHP) was calibrated by applying a known torque to the transducer (dead weight calibration). Correction of IHP to actual horsepower was made by timing 89-72 kph (55-45 mph) coastdowns.

3.1.6 Particulate Sample Flow Measurements

The rotameters and dry gas meters were calibrated by measuring flow through the system with a laminar flow element (LFE, Merriam Model 50MW20) for a set time over a range of rotameter settings. The dry gas meter readings are uncorrected for temperature, since measurements were made close to the LFE standard temperature of 21.1⁰C (70⁰F).

3.1.7 Driver's Aids

The portable Varian driver's aid recorders were adjusted as part of the fifth wheel calibration procedure (paragraph 3.1.4). The dynamometer system driver's aid was set prior to each run by comparison with the dynamometer speedometer at zero and 80 kph (50 mph).

3.1.8 Gaseous Emissions Analysis Systems

A propane shot was run prior to each dynamometer run. Span gas calibration curves, NO_x converter efficiency check, etc., were run as needed.

3.2 FUEL PREPARATION

Prior to testing, the Indolene Clear test fuel was analyzed for API gravity, Reid vapor pressure, sulfur and

lead, and a distillation curve was taken. The fuel was subsequently spiked with thiophene to bring the sulfur level to 300 ± 10 ppm, and reanalyzed for sulfur.

3.3 TEST PROCEDURE

Each test run was performed twice with each vehicle on the test track. Coastdowns were then performed on each vehicle both on the test track and on the Laguna Freeway in Orange County, California. With the vehicle on the dynamometer, the IHP was varied until each vehicle's dynamometer coastdown time matched its freeway coastdown time. The IHP value which thus matched these times was used in all subsequent dynamometer testing.

Dynamometer testing consisted of a pair of runs performed with each of five different fan configurations as indicated in Table 3-1.

Table 3-1. DYNAMOMETER FAN CONFIGURATION SEQUENCE

A1 A2	Small Front
D1 D2	Small Front; Small Side
E1 E2	Small Front; Large Side
F1 F2	Large Front
G1 G2	Large Front; Small Side
H1 H2	Small Front

Key: Large refers to the $708 \text{ m}^3/\text{min}$ fan.
Small refers to a $150 \text{ m}^3/\text{min}$ fan.
Front refers to a position 20-30 cm in front of the grill.
Side refers to a position at the side of the vehicle
opposite the tail pipe and in front of the rear wheel.

Each run consisted of the 20 test cycles listed in Table 3-2.

Table 3-2. TEST SEQUENCE

TEST NUMBER	TEST	TEST TIME (MINUTES)	MEASUREMENTS ^a	HOOD/FAN CONDITION ^b
1	Preconditioning: LA-4	22.9	T	0
2	Overnight Soak	720-1440	T	C
3	FTP: Cold Transient	8.4	T,G,S	0
4	FTP: Cold Stabilized	14.5	T,G,S	0
5	FTP: Hot Transient	8.4	T,G,S	0
6	Hour Soak	75-90	T	C
7	Preconditioning: First 505 Seconds of LA-4	8.4	T	0
8	First One-Minute Idle	0.75-1.25	T	0
9	First S-7	23.5	T,G,S	0
10	5 Minute Soak	5.0	T	C
11	HFET	12.8	T,G,S	0
12	Second One-Minute Idle	0.75-1.25	T	0
13	Second S-7	23.5	T,G,S	0
14	Third One-Minute Idle	0.75-1.25	T	0
15	Third S-7	23.5	T,G,S	0
16	45 Minute Soak	45.0	T	C
17	10 Minute Idle	10.0	T,G,S	0
18	20 MPH Steady State	30.0	T,G,S	0
19	40 MPH Steady State	30.0	T,G,S	0
20	60 MPH Steady State	30.0	T,G,S	0

^aT indicates temperature measurements taken.
G indicates HC, CO, CO₂, and NO_x measurements made
S indicates sulfate measurements made (one filter sample was collected during the entire FTP).

^b0 = hood open, fan(s) on
C = hood closed, fan(s) off

3.4 SULFATE ANALYSIS

Sulfate was determined according to the EPA manual BCA procedure. Daily calibration was performed by weighing a quantity of ammonium sulfate and measuring the percent recovery, and by running a set of standard solutions. Ammonium sulfate recovery was always within 5 percent of its weight.

3.5 DATA REDUCTION

3.5.1 Temperature Measurements

A program was written for the Hewlett Packard 9821 desk top computer (with the 9864A Digitizer) which computed maximum, minimum, and average test temperatures directly from the recorder traces. These data are reported in tabular form in Appendices A and B. The tabular data were then converted to punch cards for submittal to the EPA Project Officer as part of this report.

3.5.2 Gaseous Emissions

Test parameters and chart deflections of gaseous emissions were recorded on keypunch forms. Mass emissions were calculated as gram/mile on the HP 9821 and are given in Appendices C and D. These final data were converted to punch card form for submittal to the EPA Project Officer. The accuracy of the data conforms to specifications given in the Federal Register; the extra digits displayed appear only because it simplified copying the data.

3.5.3 Sulfate Emissions

A program was written for the HP 9821 which calculated sulfate emissions in mg/mile from sulfate concentration, particulate collection system flow rate, CVS volume, and test distance. One filter sample was collected during the entire FTP. The sample pumps were turned off during the 10-minute hot soak period. These emissions data are reported in Appendices C and D and were submitted in punch card form.

Section 4

RESULTS AND CONCLUSIONS

Maximum, minimum and average temperatures were computed as described in Section 3.5.1 and are displayed in Appendices A and B for the Pontiac and Chrysler, respectively.

The most striking result of this study is the consistent overcooling of the Chrysler and undercooling of the Pontiac while under identical test conditions. These very striking differences in the results for the two vehicles suggest that other factors, in addition to fan size and position, are important in determining optimal cooling; and that a single combination of fixed fans may not provide the best fixed fan cooling configuration for all vehicles. Should a closer approximation to track cooling during dynamometer testing be required, then it is likely that air velocity proportional to vehicle speed will be required.

Appendix A

PONTIAC TEMPERATURES

VEHICLE: PONTIAC

TEST 1

TRACK RUN

PRECONDITIONING		1	2
RUN NUMBER		50	52
TC1	MAX	88.5	94.2
FUEL TANK	MIN	78.9	84.2
VAPOR	AV	84.1	88.5
TC2	MAX	103.7	104.6
OUTSIDE	MIN	82.9	79.6
FUEL TANK	AV	95.2	94.7
TC3	MAX	95.4	96.9
CARBURETOR	MIN	80.0	83.7
	AV	85.3	90.1
TC4	MAX	206.8	204.9
RADIATOR	MIN	190.5	189.5
	AV	198.8	196.3
TC5	MAX	228.6	227.6
CIL PAN	MIN	195.0	200.5
	AV	220.2	219.8
TC6	MAX	93.4	100.4
AIR	MIN	79.3	81.1
CLEANER	AV	84.9	91.4
TC7	MAX	80.2	93.8
VEHICLE	MIN	65.4	65.5
FRONT	AV	70.4	73.7
TC8	MAX	795.	0.
CATALYST	MIN	433.	0.
	AV	729.	0.

A-1

NOTE: Zeros indicate no data.

VEHICLE: PONTIAC

TEST 1

FAN CONFIGURATION

PRECONDITIONING

		A		D		E		F		G		H	
		SMALL FRONT		SMALL FRONT SMALL SIDE		SMALL FRONT LARGE SIDE		LARGE FRONT		LARGE FRONT SMALL SIDE		SMALL FRONT	
		1	2	1	2	1	2	1	2	1	2	1	2
RUN NUMBER		2	4	6	8	10	12	14	16	18	20	22	24
TC1	MAX	95.8	118.7	91.2	116.0	84.0	87.5	113.1	123.3	117.7	102.3	91.4	130.8
FUEL TANK	MIN	31.8	105.0	78.3	109.4	73.0	75.1	102.5	112.7	102.7	94.3	80.2	123.5
VAPOR	AV	88.8	108.9	84.3	112.8	79.1	81.7	107.3	115.8	108.4	98.2	85.9	127.8
TC2	MAX	122.2	139.6	113.6	121.0	94.3	98.6	120.7	117.3	98.4	92.4	124.8	152.5
OUTSIDE	MIN	34.2	94.3	74.6	96.4	74.1	75.1	96.9	106.1	86.2	84.4	102.2	119.2
FUEL TANK	AV	108.3	125.7	97.9	107.0	86.7	88.4	112.8	111.9	91.6	88.4	114.2	143.1
TC3	MAX	120.2	144.6	118.2	130.9	116.7	111.8	157.9	122.8	161.9	145.6	121.1	148.6
CARBURETOR	MIN	97.1	105.8	78.7	112.2	73.7	74.4	115.8	111.6	110.6	105.9	106.8	122.7
	AV	110.4	118.8	104.3	124.4	102.1	99.0	121.5	115.7	116.9	111.4	116.7	128.6
TC4	MAX	205.6	205.3	203.5	212.6	202.9	196.4	207.0	205.9	203.2	201.2	208.9	206.3
RADIATOR	MIN	158.0	149.2	81.2	185.5	72.6	77.1	185.3	181.0	173.9	167.2	185.0	180.3
	AV	194.4	194.1	185.9	201.0	185.8	176.1	198.0	195.6	194.1	190.9	200.5	198.1
TC5	MAX	227.2	229.6	222.7	243.3	220.7	216.2	237.1	231.1	228.2	220.1	234.6	243.0
OIL PAN	MIN	156.9	172.9	85.7	226.3	81.2	80.1	222.2	218.0	203.5	185.9	208.1	225.0
	AV	208.8	216.2	188.4	234.7	185.8	182.1	228.3	224.5	221.2	212.6	226.0	232.5
TC6	MAX	129.0	130.4	137.7	136.6	133.5	133.1	127.7	133.6	134.0	136.4	130.8	138.8
AIR	MIN	94.9	102.6	81.2	124.9	75.1	77.6	118.0	114.9	112.3	104.3	116.6	117.7
CLEANER	AV	120.1	122.7	119.1	131.5	118.7	113.0	123.4	120.2	118.8	117.4	125.7	125.4
TC7	MAX	71.0	73.0	74.6	74.3	78.8	79.3	78.1	72.8	73.6	76.1	83.7	76.5
VEHICLE	MIN	64.9	69.0	70.0	68.0	69.6	67.6	72.0	66.7	66.4	64.9	70.0	70.9
FRONT	AV	68.1	70.3	71.4	71.0	74.5	71.8	75.3	69.5	70.2	70.1	74.5	73.3
TC8	MAX	842	846.	740.	875.	884.	1088.	833.	856.	802.	807.	889.	848.
CATALYST	MIN	400.	320.	72.	746.	284.	74.	650.	661.	506.	442.	693.	682.
	AV	736.	723.	583.	802.	754.	856.	754.	774.	726.	728.	815.	776.

VEHICLE: PONTIAC

TEST 2

TRACK RUN

OVERNIGHT SOAK		1	2
RUN NUMBER		50	52
TC1	MAX	0.0	0.0
FUEL TANK	MIN	0.0	0.0
VAPOR	AV	0.0	0.0
TC2	MAX	0.0	0.0
OUTSIDE	MIN	0.0	0.0
FUEL TANK	AV	0.0	0.0
TC3	MAX	0.0	0.0
CARBURETOR	MIN	0.0	0.0
	AV	0.0	0.0
TC4	MAX	0.0	0.0
RADIATOR	MIN	0.0	0.0
	AV	0.0	0.0
TC5	MAX	182.0	0.0
OIL PAN	MIN	63.4	0.0
	AV	91.4	88.2
TC6	MAX	0.0	0.0
AIR	MIN	0.0	0.0
CLEANER	AV	0.0	0.0
TC7	MAX	80.6	0.0
VEHICLE	MIN	59.8	0.0
FRONT	AV	70.0	68.7
TC8	MAX	0.	0.
CATALYST	MIN	0.	0.
	AV	0.	0.

A-3

NOTE: Zeros indicate no data.

VEHICLE: PONTIAC

TEST 2

FAN CONFIGURATION

OVERNIGHT SOAK

A D E F G H
SMALL FRONT SMALL FRONT SMALL FRONT LARGE FRONT LARGE FRONT SMALL FRONT
SMALL SIDE LARGE SIDE

1 2 1 2 1 2 1 2 1 2 1 2

RUN NUMBER 2 4 6 8 10 12 14 16 18 20 22 24

TC1 MAX 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
FUEL TANK MIN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
VAPOR AV 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

TC2 MAX 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
OUTSIDE MIN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
FUEL TANK AV 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

TC3 MAX 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
CARBURETOR MIN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
AV 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

TC4 MAX 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
RADIATOR MIN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
AV 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

TC5 MAX 0.0 206.0 213.1 215.1 214.1 187.5 194.5 217.1 183.5 178.0 136.5 213.1
OIL PAN MIN 0.0 79.1 72.1 70.3 73.4 77.2 73.0 69.9 69.5 68.5 72.5 70.8
AV 0.0 98.2 91.0 89.6 91.2 95.5 88.5 93.0 93.6 82.8 86.2 87.9

TC6 MAX 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
AIR MIN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
CLEANER AV 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

TC7 MAX 0.0 35.7 78.0 80.0 80.0 78.0 79.0 79.0 82.0 80.0 80.0 79.0
VEHICLE MIN 0.0 71.7 77.0 73.0 68.0 76.0 75.0 77.0 75.0 71.0 70.0 70.0
FRONT AV 0.0 76.4 77.0 77.0 75.0 77.0 77.0 78.0 78.0 76.0 75.0 73.0

TC8 MAX 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
CATALYST MIN 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
AV 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.

NOTE: Zeros indicate no data.

A-4

VEHICLE: PONTIAC

TEST 3

TRACK RUN

FTP COLD 505

1

2

RUN NUMBER

50

52

TC1 MAX
FUEL TANK MIN
VAPOR AV

71.5
66.5
68.4

72.0
65.5
69.1

TC2 MAX
OUTSIDE MIN
FUEL TANK AV

83.2
69.2
76.0

86.7
70.0
78.6

TC3 MAX
CARBURETOR MIN
AV

74.1
67.2
70.2

72.5
61.9
68.1

TC4 MAX
RADIATOR MIN
AV

188.2
70.2
144.1

186.0
68.5
150.7

TC5 MAX
OIL PAN MIN
AV

181.0
71.5
131.6

183.5
74.6
136.9

TC6 MAX
AIR MIN
CLEANER AV

76.4
67.2
70.8

72.0
62.9
68.7

TC7 MAX
VEHICLE MIN
FRONT AV

70.0
66.6
68.2

73.5
66.8
69.2

TC8 MAX
CATALYST MIN
AV

831.
76.
638.

833.
76.
621.

A-5

$$FC = 11.08 - 0.06 \bar{a}_{1:n} = 11.63$$

$\begin{matrix} 6.4 & 3 \\ 16.6 & 4.5 \end{matrix}$

$$FC = 9.54 + 0.031 \bar{a}_{1:n} = 11.63$$

$\begin{matrix} 4 & 4 & 3.2 \\ 12.1 & 11 \end{matrix}$

VEHICLE: PONTIAC

TEST 3

FAN CONFIGURATION

FTP COLD 505

		A		D		E		F		G		H	
		SMALL FRONT		SMALL FRONT SMALL SIDE		SMALL FRONT LARGE SIDE		LARGE FRONT		LARGE FRONT SMALL SIDE		SMALL FRONT	
		1	2	1	2	1	2	1	2	1	2	1	2
RUN NUMBER		2	4	6	8	10	12	14	16	18	20	22	24
TC1	MAX	82.2	84.4	80.2	82.9	83.3	80.3	82.8	84.3	75.6	82.0	79.1	83.2
FUEL TANK	MIN	77.4	76.4	73.4	75.1	76.3	72.8	74.1	75.4	74.0	74.7	74.1	75.2
VAPOR	AV	79.1	79.5	76.5	78.5	79.1	76.4	77.7	78.4	74.8	77.5	76.8	76.8
TC2	MAX	106.0	110.6	97.9	95.9	92.4	93.0	100.4	98.9	78.1	90.5	104.5	108.6
OUTSIDE	MIN	73.4	76.6	76.1	76.0	78.3	78.9	74.0	73.0	76.1	76.7	74.1	78.5
FUEL TANK	AV	84.8	89.0	85.5	83.8	85.5	86.0	87.2	86.2	77.9	83.4	88.4	90.2
TC3	MAX	99.4	102.3	99.9	100.0	104.0	105.0	140.5	100.1	110.6	100.9	102.9	102.0
CARBURETOR	MIN	75.2	76.0	74.4	74.4	74.0	76.1	72.1	75.0	105.5	76.6	75.2	74.8
	AV	83.7	84.7	84.6	84.3	87.2	88.6	107.8	85.1	108.6	87.1	85.3	85.3
TC4	MAX	191.5	194.9	197.0	195.1	198.0	199.0	190.0	193.7	170.9	192.0	192.0	189.5
RADIATOR	MIN	78.6	76.7	75.0	75.6	77.0	75.1	73.1	73.9	169.4	76.6	73.0	77.5
	AV	138.3	132.4	141.9	140.2	154.0	156.6	137.8	138.2	170.2	148.5	139.1	140.3
TC5	MAX	178.5	183.5	186.0	186.5	189.4	191.0	178.4	178.5	187.0	181.5	182.5	177.5
OIL PAN	MIN	79.0	78.2	76.1	76.3	79.3	81.6	75.6	75.6	172.4	76.4	72.5	77.8
	AV	119.7	119.3	126.9	124.4	137.1	136.9	122.7	122.2	177.2	129.6	122.5	123.2
TC6	MAX	134.3	129.1	133.1	126.2	132.3	140.0	141.4	138.4	102.5	140.2	141.1	144.3
AIR	MIN	78.0	76.2	74.0	72.5	78.3	82.7	72.5	73.5	100.4	76.9	79.6	79.1
CLEANER	AV	100.8	99.8	102.9	100.9	107.8	111.4	108.2	109.8	101.7	110.0	110.0	110.4
TC7	MAX	74.8	78.9	76.2	77.2	78.3	85.9	75.2	77.5	73.5	81.7	78.9	83.7
VEHICLE	MIN	69.5	73.6	71.0	70.0	73.9	80.4	70.0	72.0	72.5	73.6	72.5	76.0
FRONT	AV	72.2	75.8	74.2	75.0	76.7	82.2	72.1	75.2	72.8	76.5	75.8	77.7
TC8	MAX	904.	881.	865.	867.	871.	886.	869.	848.	831.	843.	867.	856.
CATALYST	MIN	76.	76.	72.	85.	67.	78.	74.	70.	78.	67.	72.	72.
	AV	633.	587.	589.	587.	615.	642.	640.	600.	599.	596.	594.	574.

VEHICLE: PONTIAC

TEST 4

TRACK RUN

FTP 867

1

2

RUN NUMBER

50

52

TC1 MAX

76.1

77.0

FUEL TANK MIN

68.0

68.0

VAPOR AV

72.3

72.7

TC2 MAX

93.8

97.9

OUTSIDE MIN

79.6

83.7

FUEL TANK AV

87.5

89.7

TC3 MAX

82.2

76.7

CARBURETOR MIN

70.0

66.7

AV

75.2

72.6

TC4 MAX

203.0

196.0

RADIATOR MIN

185.5

183.5

AV

194.4

190.7

TC5 MAX

217.1

215.2

CIL PAN MIN

180.5

181.5

AV

204.1

202.1

TC6 MAX

81.7

84.4

AIR MIN

69.6

64.4

CLEANER AV

74.7

73.6

TC7 MAX

73.5

78.6

VEHICLE MIN

65.9

65.7

FRONT AV

68.2

69.6

TC8 MAX

824.

829.

CATALYST MIN

733.

737.

AV

785.

790.

A-7

VEHICLE: PCNTIAC

TEST 4

FAN CONFIGURATION

FTP 867

A D E F G H
SMALL FRONT SMALL FRONT SMALL FRONT LARGE FRONT LARGE FRONT SMALL FRONT
SMALL SIDE LARGE SIDE SMALL SIDE

1 2 1 2 1 2 1 2 1 2 1 2 1 2

RUN NUMBER

2 4 6 8 10 12 14 16 18 20 22 24

TC1 MAX 93.3 94.8 88.3 87.7 86.9 86.1 97.6 90.3 78.1 87.3 90.8 92.3
FUEL TANK MIN 79.6 81.7 78.6 79.6 78.6 77.8 80.6 78.7 74.6 77.4 79.1 79.5
VAPOR AV 86.2 88.6 83.5 83.7 82.8 82.2 85.7 84.1 77.0 82.6 84.8 86.2

TC2 MAX 131.4 132.9 105.4 98.5 93.8 99.7 105.1 102.9 82.7 92.9 129.4 127.5
OUTSIDE MIN 104.5 111.6 93.0 90.5 87.2 90.0 98.9 94.3 79.6 86.2 105.5 111.1
FUEL TANK AV 123.4 126.2 98.0 95.0 90.5 94.0 102.5 99.6 81.9 89.4 121.7 122.1

TC3 MAX 120.1 122.2 118.4 118.2 118.2 121.8 110.2 109.2 105.5 112.6 118.1 118.8
CARBURETOR MIN 100.9 97.9 100.4 100.3 103.5 105.0 97.9 97.4 102.0 97.9 99.9 100.9
AV 112.0 113.5 111.5 112.0 112.7 116.1 105.2 104.5 104.8 106.2 111.3 112.2

TC4 MAX 201.6 205.8 205.4 204.0 203.4 208.4 196.9 195.5 191.5 196.6 201.3 201.6
RADIATOR MIN 191.8 188.0 192.0 193.3 191.6 195.9 186.1 184.7 188.0 186.5 191.5 189.9
AV 197.3 198.9 199.2 198.9 198.5 201.8 191.9 191.1 190.1 192.1 197.1 195.3

TC5 MAX 223.6 223.5 222.3 222.1 220.6 224.2 212.4 212.2 210.6 213.6 220.0 218.3
OIL PAN MIN 182.0 180.5 185.5 185.5 189.0 190.5 176.0 175.5 187.5 178.5 180.0 178.5
AV 208.3 208.8 209.1 210.2 211.0 213.5 200.5 198.5 201.2 202.1 205.4 203.9

TC6 MAX 128.0 131.2 131.3 131.6 129.4 133.9 123.7 122.8 121.2 123.8 128.0 125.7
AIR MIN 116.6 116.1 119.7 118.9 118.7 123.7 112.9 112.1 118.7 108.0 119.2 117.5
CLEANER AV 123.0 126.4 126.1 127.3 124.9 129.7 117.3 116.6 120.7 116.5 122.7 122.0

TC7 MAX 74.7 79.2 78.1 79.6 80.1 87.6 78.3 76.1 73.5 76.6 77.6 80.1
VEHICLE MIN 68.3 75.0 73.9 75.9 71.5 83.0 70.5 68.3 71.0 71.4 74.0 74.6
FRONT AV 72.4 76.6 75.8 77.2 75.4 85.6 73.1 70.9 72.1 73.0 76.1 76.6

TC8 MAX 871. 879. 865. 867. 871. 884. 867. 846. 827. 841. 863. 858.
CATALYST MIN 776. 765. 759. 763. 744. 769. 720. 725. 708. 720. 759. 757.
AV 829. 811. 801. 811. 803. 823. 790. 780. 766. 780. 810. 806.

A-3

VEHICLE: PGNTIAC

TEST 5

TRACK RUN

FTP HCT 505

1

2

RUN NUMBER

50

52

TC1 MAX
FUEL TANK MIN
VAPOR AV78.6
74.6
76.781.2
75.6
78.9TC2 MAX
OUTSIDE MIN
FUEL TANK AV94.9
79.6
89.596.1
87.8
91.4TC3 MAX
CARBURETOR MIN
AV83.7
77.1,
79.482.4
77.9
79.5

A-9

TC4 MAX
RADIATOR MIN
AV200.5
186.5
193.6199.2
184.5
193.0TC5 MAX
OIL PAN MIN
AV222.6
204.0
214.9222.2
203.5
215.3TC6 MAX
AIR MIN
CLEANER AV83.2
77.1
79.383.9
78.1
81.7TC7 MAX
VEHICLE MIN
FRCNT AV73.5
66.4
70.178.2
67.1
70.9TC8 MAX
CATALYST MIN
AV805.
528.
711.808.
563.
738.

VEHICLE: PONTIAC

TEST 5

FAN CONFIGURATION

FTP HCT 505

		A		D		E		F		G		H	
		SMALL	FRONT	SMALL	FRONT	SMALL	FRONT	LARGE	FRONT	LARGE	FRONT	SMALL	FRONT
				SMALL	SIDE	LARGE	SIDE			SMALL	SIDE		
		1	2	1	2	1	2	1	2	1	2	1	2
RUN NUMBER		2	4	6	8	10	12	14	16	18	20	22	24
TC1	MAX	96.5	98.8	90.3	89.7	87.6	87.7	93.5	91.8	88.2	90.8	93.8	93.8
FUEL TANK	MIN	89.8	89.8	83.9	82.6	80.6	83.2	76.1	85.4	80.2	83.3	88.5	86.8
VAPOR	AV	92.7	94.5	87.2	85.6	83.3	84.8	89.2	88.6	84.4	87.3	90.9	91.0
TC2	MAX	129.9	130.2	105.8	106.0	91.3	95.4	111.1	106.1	91.2	94.7	122.8	124.3
OUTSIDE	MIN	97.4	90.3	85.7	90.2	77.7	85.2	91.3	92.3	81.7	87.2	93.3	90.3
FUEL TANK	AV	116.6	116.5	96.7	98.0	85.8	89.9	102.4	100.2	87.5	92.3	112.8	112.3
TC3	MAX	141.0	141.8	139.4	141.0	137.0	141.5	128.3	125.9	120.2	127.8	140.0	141.0
CARBURETOR	MIN	112.8	114.8	111.5	112.2	105.5	110.6	106.7	105.3	102.7	106.8	112.9	113.1
	AV	121.3	124.5	121.4	121.9	113.6	120.3	114.1	113.3	109.7	114.1	121.9	122.3
TC4	MAX	209.0	211.6	209.6	207.7	205.8	208.5	202.0	201.1	201.0	203.9	131.9	205.5
RADIATOR	MIN	183.9	185.0	183.8	187.2	162.1	187.5	179.4	179.2	175.5	178.5	115.9	185.0
	AV	197.5	199.1	197.6	199.0	189.0	199.1	192.2	191.1	190.4	192.9	124.1	195.2
TC5	MAX	231.1	233.6	233.6	232.0	226.1	234.1	223.1	222.6	221.1	225.6	233.1	228.1
OIL PAN	MIN	205.5	201.1	195.0	197.0	178.5	210.6	188.5	184.5	193.5	188.0	198.5	196.5
	AV	218.5	218.9	217.5	219.1	205.4	222.6	209.7	207.8	208.3	210.0	217.8	214.3
TC6	MAX	131.9	133.9	133.9	136.5	128.3	130.9	132.7	132.7	135.2	131.5	132.4	132.9
AIR	MIN	121.0	121.7	120.3	123.2	110.4	116.7	115.6	114.7	115.1	112.6	116.9	117.2
CLEANER	AV	125.3	127.3	126.5	128.6	119.2	124.9	123.3	122.6	121.9	122.1	124.4	123.9
TC7	MAX	72.5	80.1	77.7	75.3	75.5	78.6	80.7	75.3	75.1	81.7	79.1	77.6
VEHICLE	MIN	70.0	73.6	71.3	72.5	70.7	72.5	69.5	69.5	68.5	72.5	74.1	74.0
FRONT	AV	71.2	76.2	74.1	77.1	72.7	76.1	74.3	72.1	71.6	76.4	76.7	75.9
TC8	MAX	873.	869.	846.	866.	837.	856.	827.	824.	816.	829.	852.	846.
CATALYST	MIN	552.	535.	520.	528.	369.	530.	504.	484.	493.	486.	533.	517.
	AV	768.	724.	685.	602.	654.	727.	705.	687.	685.	690.	718.	710.

A-10

VEHICLE: PONTIAC

TEST 6

TRACK RUN

HOUR	SEAK	1	2
RUN NUMBER		50	52
TC1	MAX	0.0	0.0
FUEL TANK	MIN	0.0	0.0
VAPOR	AV	79.3	79.8
TC2	MAX	0.0	0.0
OUTSIDE	MIN	0.0	0.0
FUEL TANK	AV	82.8	81.8
TC3	MAX	0.0	0.0
CARBURETOR	MIN	0.0	0.0
	AV	83.7	79.4
TC4	MAX	0.0	0.0
RADIATOR	MIN	0.0	0.0
	AV	182.8	182.6
TC5	MAX	0.0	0.0
OIL PAN	MIN	0.0	0.0
	AV	163.8	162.6
TC6	MAX	0.0	0.0
AIR	MIN	0.0	0.0
CLEANER	AV	81.3	81.6
TC7	MAX	0.0	0.0
VEHICLE	MIN	0.0	0.0
FRCNT	AV	77.5	77.1
TC8	MAX	795.	757.
CATALYST	MIN	181.	161.
	AV	362.	352.

NOTE: Zeros indicate data not computed.

VEHICLE: PONTIAC

TEST 6

FAN CONFIGURATION

HCUR SOAK

A D E F G H
SMALL FRONT SMALL FRONT SMALL FRONT LARGE FRONT LARGE FRONT SMALL FRONT
SMALL SIDE LARGE SIDE

1 2 1 2 1 2 1 2 1 2 1 2

RUN NUMBER

2 4 6 8 10 12 14 16 18 20 22 24

TC1	MAX	0.0	0.0	0.0	0.0	0.0	0.0	92.8	0.0	0.0	0.0	93.3	0.0
FUEL TANK	MIN	0.0	0.0	0.0	0.0	0.0	0.0	73.3	0.0	0.0	0.0	80.2	0.0
VAPOR	AV	93.8	95.9	86.6	88.3	82.3	84.8	85.7	91.1	84.1	85.2	91.1	91.5
TC2	MAX	0.0	0.0	0.0	0.0	0.0	0.0	95.9	0.0	0.0	0.0	97.4	0.0
OUTSIDE	MIN	0.0	0.0	0.0	0.0	0.0	0.0	82.2	0.0	0.0	0.0	79.6	0.0
FUEL TANK	AV	87.9	95.2	83.1	87.7	79.4	82.4	88.6	87.2	83.1	80.8	85.3	86.2
TC3	MAX	0.0	0.0	0.0	0.0	0.0	0.0	161.3	0.0	0.0	0.0	171.4	0.0
CARBURETOR	MIN	0.0	0.0	0.0	0.0	0.0	0.0	116.7	0.0	0.0	0.0	127.8	0.0
	AV	162.3	163.7	162.0	162.6	155.2	151.0	151.9	150.9	152.0	152.0	163.3	160.7
TC4	MAX	0.0	0.0	0.0	0.0	0.0	0.0	198.0	0.0	0.0	0.0	202.0	0.0
RADIATOR	MIN	0.0	0.0	0.0	0.0	0.0	0.0	150.7	0.0	0.0	0.0	155.0	0.0
	AV	176.5	181.3	163.4	178.8	174.0	164.1	174.1	173.3	172.3	170.6	179.2	176.0
TC5	MAX	0.0	0.0	0.0	0.0	0.0	0.0	216.6	0.0	0.0	0.0	227.6	0.0
CIL PAN	MIN	0.0	0.0	0.0	0.0	0.0	0.0	141.5	0.0	0.0	0.0	146.1	0.0
	AV	171.8	178.3	167.5	176.6	168.1	172.3	171.1	169.7	167.0	164.8	176.7	174.3
TC6	MAX	0.0	0.0	0.0	0.0	0.0	0.0	146.9	0.0	0.0	0.0	157.9	0.0
AIR	MIN	0.0	0.0	0.0	0.0	0.0	0.0	115.7	0.0	0.0	0.0	124.3	0.0
CLEANER	AV	149.2	148.9	151.1	149.1	144.6	124.5	139.0	138.3	140.2	139.1	149.6	146.9
TC7	MAX	0.0	0.0	0.0	0.0	0.0	0.0	84.2	0.0	0.0	0.0	84.2	0.0
VEHICLE	MIN	0.0	0.0	0.0	0.0	0.0	0.0	78.8	0.0	0.0	0.0	79.1	0.0
FRONT	AV	75.2	85.8	77.2	75.5	77.8	75.9	82.4	79.9	81.8	75.3	81.7	75.6
TC8	MAX	843.	854.	852.	866.	833.	848.	824.	822.	810.	829.	848.	841.
CATALYST	MIN	284.	235.	192.	221.	241.	215.	241.	230.	238.	183.	219.	223.
	AV	456.	419.	381.	409.	401.	396.	406.	396.	398.	358.	394.	394.

NOTE: Zeros indicate data not computed.

VEHICLE: PONTIAC

TEST 7

TRACK RUN

PRECCND 505

1

2

RUN NUMBER

50

52

TC1
FUEL TANK
VAPORMAX
MIN
AV83.1
75.8
79.182.2
76.8
79.5TC2
OUTSIDE
FUEL TANKMAX
MIN
AV95.7
71.9
82.894.9
79.1
86.9TC3
CARBURETORMAX
MIN
AV87.9
78.5
82.583.5
74.6
79.6TC4
RADIATORMAX
MIN
AV197.1
152.7
179.9198.1
157.9
180.1TC5
CIL PANMAX
MIN
AV209.1
130.2
176.6207.1
132.4
179.0TC6
AIR
CLEANERMAX
MIN
AV85.1
77.5
80.984.0
73.7
80.0TC7
VEHICLE
FRONTMAX
MIN
AV74.7
69.2
72.178.4
69.9
72.6TC8
CATALYSTMAX
MIN
AV795.
175.
542.818.
177.
552.

A-13

VEHICLE: PONTIAC

TEST 7

FAN CONFIGURATION

PRECNO 505

A D E F G H
SMALL FRONT SMALL FRONT SMALL FRONT LARGE FRONT LARGE FRONT SMALL FRONT
SMALL SIDE LARGE SIDE

1 2 1 2 1 2 1 2 1 2 1 2

RUN NUMBER 2 4 6 8 10 12 14 16 18 20 22 24

TC1 MAX 94.9 97.1 90.1 90.2 87.0 86.2 94.2 92.6 88.2 88.8 91.3 90.5
FUEL TANK MIN 88.0 90.8 82.9 85.0 81.1 81.0 86.9 86.4 80.9 81.7 86.2 85.8
VAPOR AV 90.8 93.8 86.0 87.8 83.5 83.9 90.6 89.4 84.0 85.9 88.1 88.7

TC2 MAX 120.2 121.7 98.4 100.9 89.4 89.2 108.3 102.0 90.0 92.8 116.7 112.1
OUTSIDE MIN 82.2 83.5 80.1 82.8 80.3 78.2 87.7 85.2 82.2 80.1 84.7 83.7
FUEL TANK AV 98.5 102.9 88.5 90.7 84.7 83.4 99.5 94.7 85.5 88.0 100.6 97.6

TC3 MAX 158.9 159.9 156.9 155.7 157.4 143.1 154.7 151.7 150.2 150.7 157.9 156.4
CARBURETOR MIN 106.3 109.6 107.2 107.0 107.5 103.2 106.9 105.2 101.9 98.3 109.6 108.9
AV 121.7 123.9 118.8 119.0 119.2 113.0 119.1 117.2 113.2 114.0 120.9 120.3

TC4 MAX 204.9 207.4 207.0 205.4 203.9 201.0 201.9 200.0 197.9 200.0 204.5 201.5
RADIATOR MIN 146.6 148.6 149.6 164.2 161.7 137.0 154.2 147.6 145.6 149.6 162.0 163.3
AV 184.7 187.9 185.5 188.9 186.0 183.2 184.3 181.7 179.8 182.9 187.6 183.5

TC5 MAX 215.6 220.1 214.1 218.4 216.6 213.1 210.6 209.6 208.5 207.2 216.5 213.1
OIL PAN MIN 138.5 141.1 134.9 148.1 139.5 138.0 143.1 135.4 136.0 129.4 146.1 144.1
AV 184.2 190.7 185.6 192.7 187.4 182.3 183.6 181.5 180.1 180.0 191.0 187.6

TC6 MAX 148.1 130.4 129.1 127.5 136.5 135.8 135.9 136.7 132.9 134.7 137.5 139.5
AIR MIN 111.2 116.3 113.0 116.6 115.9 103.3 109.7 105.8 105.2 109.3 108.7 109.3
CLEANER AV 121.8 123.4 120.9 122.2 121.9 121.0 123.1 121.7 117.8 120.9 123.3 122.6

TC7 MAX 74.4 79.3 78.9 81.1 80.2 77.2 83.9 76.3 73.7 79.0 79.5 74.1
VEHICLE MIN 70.5 73.5 72.9 75.6 71.0 70.5 76.1 69.0 68.9 73.5 73.6 69.9
FRONT AV 72.8 76.3 75.5 77.7 74.8 74.0 80.1 73.1 71.2 76.0 76.4 72.6

TC8 MAX 846. 843. 820. 837. 835. 829. 805. 801. 799. 812. 822. 822.
CATALYST MIN 197. 235. 197. 228. 246. 226. 239. 230. 230. 186. 217. 221.
AV 596. 626. 542. 596. 606. 606. 572. 590. 600. 591. 585. 570.

VEHICLE: PONTIAC

TEST 8

TRACK RUN

FIRST MIN IDLE		1	2
RUN NUMBER		50	52
TC1	MAX	80.6	83.1
FUEL TANK	MIN	79.1	80.2
VAPOR	AV	79.9	81.9
TC2	MAX	94.3	97.1
OUTSIDE	MIN	86.7	91.3
FUEL TANK	AV	89.7	94.6
TC3	MAX	80.6	82.7
CARBURETOR	MIN	78.1	80.2
	AV	79.4	81.5
TC4	MAX	198.5	198.7
RADIATOR	MIN	194.5	193.8
	AV	196.9	196.1
TC5	MAX	208.0	210.0
GIL PAN	MIN	206.5	207.0
	AV	207.8	208.4
TC6	MAX	80.1	83.0
AIR	MIN	75.6	79.3
CLEANER	AV	77.8	81.1
TC7	MAX	74.0	72.3
VEHICLE	MIN	72.0	68.3
FRCNT	AV	73.0	70.7
TC8	MAX	797.	818.
CATALYST	MIN	780.	809.
	AV	792.	814.

A-15

VEHICLE: PONTIAC

TEST 8

FAN CONFIGURATION

FIRST MIN IDLE		A		D		E		F		G		H	
		SMALL	FRONT	SMALL	FRONT	SMALL	FRONT	LARGE	FRONT	LARGE	FRONT	SMALL	FRONT
		SMALL	SMALL	SIDE	LARGE	SMALL	LARGE	SMALL	SMALL	SMALL	SMALL	SMALL	SMALL
		1	2	1	2	1	2	1	2	1	2	1	2
RUN NUMBER		2	4	6	8	10	12	14	16	18	20	22	24
TC1	MAX	93.8	98.0	87.9	90.3	87.2	85.5	93.4	93.1	86.9	83.3	91.8	93.1
FUEL TANK	MIN	90.8	93.2	84.5	87.3	83.7	82.7	89.8	88.2	83.7	86.0	89.3	88.2
VAPOR	AV	92.3	95.9	86.2	88.4	85.7	84.6	91.5	90.8	85.2	87.5	90.8	90.8
TC2	MAX	123.3	124.8	98.8	100.4	91.3	90.3	111.0	104.3	91.0	93.3	118.2	115.9
OUTSIDE	MIN	119.2	120.8	91.7	93.7	85.7	84.6	107.0	101.0	87.2	90.9	116.2	112.1
FUEL TANK	AV	121.2	122.8	95.9	96.1	88.5	87.4	108.9	102.7	89.3	91.8	116.8	114.9
TC3	MAX	116.2	119.3	115.1	116.1	113.1	112.6	112.7	110.0	107.1	111.3	117.2	115.8
CARBURETOR	MIN	113.1	115.1	109.8	112.1	110.6	108.0	110.1	107.5	104.0	109.4	115.7	111.6
	AV	114.6	118.0	111.5	114.8	111.8	110.9	111.8	108.7	105.4	110.3	116.5	113.8
TC4	MAX	207.0	206.4	205.6	205.4	205.0	201.2	201.0	198.7	196.8	201.4	204.0	202.0
RADIATOR	MIN	200.5	200.1	198.5	201.6	199.0	195.5	198.5	195.0	193.0	196.0	199.0	198.0
	AV	204.0	202.9	201.8	206.6	202.9	199.2	200.0	197.1	194.9	199.4	201.9	200.1
TC5	MAX	217.6	221.1	216.0	220.9	217.1	216.1	213.9	212.6	208.0	208.8	217.1	215.4
OIL PAN	MIN	214.1	218.7	212.5	218.1	215.1	211.0	210.5	206.4	204.2	204.9	214.6	213.0
	AV	215.3	220.0	214.6	219.7	216.4	214.5	212.1	209.3	206.0	207.3	215.6	214.3
TC6	MAX	129.4	132.8	127.8	130.5	126.8	122.8	124.8	120.3	121.1	122.5	126.8	123.7
AIR	MIN	125.3	126.8	120.7	126.3	122.8	120.4	119.8	117.6	117.2	118.7	123.3	119.2
CLEANER	AV	127.4	129.3	126.0	128.9	125.2	121.7	121.9	119.1	119.4	120.9	125.2	121.2
TC7	MAX	74.6	77.2	77.6	79.9	73.5	75.0	78.1	71.6	71.9	73.7	77.1	73.5
VEHICLE	MIN	73.5	73.5	72.0	76.5	70.0	72.6	74.1	68.4	69.4	71.5	75.1	69.9
FRONT	AV	74.0	75.8	74.5	78.0	71.4	74.4	77.0	70.4	70.6	73.4	76.3	71.1
TC8	MAX	845.	837.	803.	839.	829.	826.	806.	801.	786.	812.	822.	822.
CATALYST	MIN	811.	808.	781.	809.	796.	813.	780.	762.	764.	765.	791.	791.
	AV	829.	823.	798.	827.	816.	822.	793.	784.	773.	788.	807.	812.

VEHICLE: PONTIAC

TEST 9

TRACK RUN

FIRST S-7		1	2
RUN NUMBER		50	52
TC1	MAX	88.2	91.1
FUEL TANK	MIN	79.4	80.6
VAPOR	AV	83.9	85.8
TC2	MAX	104.6	106.7
OUTSIDE	MIN	84.8	88.1
FUEL TANK	AV	94.7	96.4
TC3	MAX	95.7	91.8
CARBURETOR	MIN	81.2	74.5
	AV	87.3	85.3
TC4	MAX	203.0	202.6
RADIATOR	MIN	193.5	194.1
	AV	198.3	197.8
TC5	MAX	234.6	235.9
GIL PAN	MIN	207.7	208.5
	AV	225.1	225.9
TC6	MAX	91.5	89.6
AIR	MIN	78.8	72.5
CLEANER	AV	84.3	84.3
TC7	MAX	77.4	85.7
VEHICLE	MIN	69.7	68.5
FRONT	AV	72.3	71.6
TC8	MAX	924.	957.
CATALYST	MIN	754.	780.
	AV	834.	874.

A-17

VEHICLE: PONTIAC

TEST 9

FAN CONFIGURATION

FIRST S-7

A D E F G H
SMALL FRONT SMALL FRONT SMALL FRONT LARGE FRONT LARGE FRONT SMALL FRONT
SMALL SIDE LARGE SIDE

1 2 1 2 1 2 1 2 1 2 1 2

RUN NUMBER

2 4 6 8 10 12 14 16 18 20 22 24

TC1	MAX	109.1	109.4	99.7	100.5	92.4	93.3	107.0	102.9	96.6	99.1	103.5	105.4
FUEL TANK	MIN	91.8	94.9	85.4	87.6	82.7	84.3	90.4	88.3	83.7	85.2	90.2	92.0
VAPOR	AV	99.5	101.6	92.0	93.3	87.7	88.4	97.8	95.9	90.8	91.7	97.8	98.7
TC2	MAX	142.5	140.0	124.2	119.8	103.1	104.7	121.9	118.2	99.2	106.3	139.0	135.4
OUTSIDE	MIN	115.7	120.2	91.3	93.3	85.2	86.1	102.4	99.3	87.2	88.7	116.7	115.6
FUEL TANK	AV	130.9	131.9	111.2	109.1	94.8	94.8	113.3	108.7	92.6	96.6	128.7	127.7
TC3	MAX	126.3	127.2	125.5	125.4	122.4	122.2	119.6	119.2	115.2	121.7	127.2	124.8
CARBURETOR	MIN	111.2	116.7	111.7	112.1	109.8	108.0	107.2	104.7	102.4	105.6	112.9	112.7
	AV	119.2	121.6	118.3	118.9	116.6	115.4	114.4	111.6	108.9	113.0	119.6	119.6
TC4	MAX	213.4	211.8	212.9	212.4	213.0	213.4	209.6	207.7	207.6	210.6	212.6	212.6
RADIATOR	MIN	190.0	193.3	193.0	195.1	194.7	190.5	185.8	189.0	188.8	191.4	194.0	195.0
	AV	202.2	203.3	203.5	204.5	203.4	202.6	201.1	200.2	199.9	201.2	202.5	202.7
TC5	MAX	253.7	251.2	250.2	252.8	250.8	250.0	245.0	244.1	243.4	246.2	250.2	252.2
OIL PAN	MIN	215.6	219.1	214.0	218.1	215.2	213.5	207.4	207.5	206.0	207.0	215.5	211.4
	AV	236.5	237.3	235.7	238.4	235.7	235.4	229.0	226.3	226.2	227.9	235.1	234.4
TC6	MAX	137.0	138.2	139.1	141.6	139.0	135.2	133.7	132.6	129.6	132.8	135.4	134.4
AIR	MIN	122.8	123.7	120.7	126.1	121.9	120.6	114.1	112.9	109.6	116.4	122.0	118.7
CLEANER	AV	129.3	130.6	130.8	133.2	130.2	127.7	125.5	121.9	120.4	124.7	129.0	127.5
TC7	MAX	78.1	78.6	79.6	81.1	77.6	80.1	78.6	72.5	79.3	78.8	79.9	77.1
VEHICLE	MIN	69.0	72.5	70.0	76.6	70.6	71.1	71.5	67.1	68.5	65.4	75.0	70.3
FRONT	AV	73.5	75.7	75.4	78.9	73.4	74.5	74.9	69.5	71.2	74.7	77.0	73.5
TC8	MAX	996.	998.	974.	989.	976.	974.	953.	949.	941.	964.	998.	983.
CATALYST	MIN	757.	776.	761.	763.	759.	776.	688.	740.	746.	742.	773.	778.
	AV	889.	893.	882.	889.	883.	885.	846.	850.	849.	860.	889.	887.

VEHICLE: PONTIAC

TEST 10

TRACK RUN

5 MIN SCAK		1	2
RUN NUMBER		50	52
TC1	MAX	90.4	91.7
FUEL TANK	MIN	85.2	86.8
VAPOR	AV	88.2	89.7
TC2	MAX	96.9	91.8
OUTSIDE	MIN	89.7	85.7
FUEL TANK	AV	92.3	89.0
TC3	MAX	93.6	91.8
CARBURETOR	MIN	86.7	84.2
	AV	92.0	89.2
TC4	MAX	217.5	219.4
RADIATOR	MIN	194.9	195.5
	AV	204.9	212.1
TC5	MAX	233.7	231.7
OIL PAN	MIN	220.5	220.0
	AV	228.0	225.7
TC6	MAX	92.8	93.3
AIR	MIN	85.2	86.8
CLEANER	AV	89.4	90.3
TC7	MAX	90.9	101.5
VEHICLE	MIN	72.5	90.8
FRONT	AV	86.6	97.4
TC8	MAX	920.	879.
CATALYST	MIN	701.	705.
	AV	789.	778.

A-19

VEHICLE: PCNTIAC

TEST 10

FAN CONFIGURATION

5 MIN SOAK

A		D		E		F		G		H	
SMALL	FRONT	SMALL	FRONT	SMALL	FRONT	LARGE	FRONT	LARGE	FRONT	SMALL	FRONT
		SMALL	SIDE								

1	2	1	2	1	2	1	2	1	2	1	2
---	---	---	---	---	---	---	---	---	---	---	---

RUN NUMBER

2	4	6	8	10	12	14	16	18	20	22	24
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TC1	MAX	109.3	111.0	101.1	100.2	91.5	92.8	107.2	103.2	98.7	99.5	104.7	106.4
FUEL TANK	MIN	103.2	104.7	95.8	93.3	87.7	88.8	102.9	94.9	92.8	90.8	101.6	99.4
VAPOR	AV	106.2	107.2	98.1	96.7	90.0	90.5	104.7	101.2	95.1	95.7	103.2	103.0

TC2	MAX	139.0	139.6	105.5	106.0	93.4	89.6	114.7	112.7	95.0	96.9	136.0	134.0
OUTSIDE	MIN	99.9	101.3	90.0	94.7	86.7	85.5	95.0	93.2	87.7	92.2	92.9	101.2
FUEL TANK	AV	114.4	115.2	94.5	98.3	89.9	87.8	100.8	100.6	91.3	93.7	107.0	112.2

TC3	MAX	140.5	141.0	142.5	142.5	139.5	138.4	137.4	132.4	131.3	136.9	139.6	140.4
CARBURETOR	MIN	124.3	125.3	121.8	122.8	119.2	118.2	120.2	114.1	114.1	115.6	123.1	122.3
	AV	133.3	133.3	133.7	133.1	131.3	130.4	129.0	124.1	123.3	128.2	132.2	131.6

TC4	MAX	201.5	203.0	201.8	205.0	203.0	201.1	199.1	203.1	203.5	202.0	201.1	203.1
RADIATOR	MIN	193.4	193.0	192.8	193.8	192.3	193.4	193.4	192.6	191.4	192.0	194.2	191.8
	AV	197.1	197.8	196.8	198.7	197.1	197.9	195.9	197.8	195.2	196.5	198.0	197.5

TC5	MAX	250.2	249.8	245.8	250.2	246.6	246.4	242.8	242.2	240.4	240.6	249.1	247.9
CIL PAN	MIN	238.6	239.6	237.6	240.4	236.6	235.3	229.4	228.1	228.5	231.0	238.1	236.5
	AV	245.3	245.0	242.6	245.3	242.6	241.3	236.9	236.2	235.7	236.0	243.9	242.7

TC6	MAX	137.5	140.0	141.9	143.0	138.0	136.3	127.5	127.2	127.3	131.5	140.1	137.9
AIR	MIN	127.7	130.7	132.1	131.8	129.0	124.2	117.0	114.2	115.3	117.7	128.6	127.1
CLEANER	AV	132.0	134.2	136.4	136.1	133.5	129.9	122.5	120.9	120.7	124.2	133.2	132.5

TC7	MAX	75.1	80.6	78.1	83.1	73.0	76.4	77.7	71.8	75.4	79.6	87.9	78.0
VEHICLE	MIN	73.3	74.7	74.0	77.2	70.8	70.8	72.5	65.0	68.0	71.3	77.0	71.0
FRONT	AV	74.1	76.9	76.1	80.3	71.6	73.9	75.3	68.9	71.5	75.4	82.4	75.0

TC8	MAX	964.	949.	932.	960.	936.	932.	945.	932.	901.	930.	964.	951.
CATALYST	MIN	752.	795.	742.	767.	744.	733.	729.	710.	699.	723.	778.	769.
	AV	837.	862.	824.	848.	827.	819.	821.	804.	785.	806.	858.	848.

A-20

VEHICLE: PONTIAC

TEST 11

TRACK RUN

HFET		1	2
RUN NUMBER		50	52
TC1	MAX	91.8	94.9
FUEL TANK	MIN	87.0	87.7
VAPOR	AV	89.6	91.0
TC2	MAX	99.9	99.9
OUTSIDE	MIN	93.8	93.3
FUEL TANK	AV	96.3	96.9
TC3	MAX	102.0	96.8
CARBURETOR	MIN	86.5	88.7
	AV	93.1	92.0
TC4	MAX	217.2	204.5
RADIATOR	MIN	188.4	188.0
	AV	197.2	196.4
TC5	MAX	237.6	236.7
OIL PAN	MIN	216.6	217.6
	AV	230.2	230.1
TC6	MAX	96.9	95.9
AIR	MIN	88.8	89.3
CLEANER	AV	93.1	92.8
TC7	MAX	87.9	97.9
VEHICLE	MIN	69.1	69.3
FRONT	AV	72.7	72.0
TC8	MAX	970.	984.
CATALYST	MIN	693.	690.
	AV	661.	889.

A-21

VEHICLE: PONTIAC

TEST 11

FAN CONFIGURATION

HFET

A		D		E		F		G		H	
SMALL FRONT		SMALL FRONT SMALL SIDE		SMALL FRONT LARGE SIDE		LARGE FRONT		LARGE FRONT SMALL SIDE		SMALL FRONT	
1	2	1	2	1	2	1	2	1	2	1	2

RUN NUMBER		2	4	6	8	10	12	14	16	18	20	22	24
TC1 FUEL TANK VAPOR	MAX	113.3	114.1	104.4	103.0	95.4	95.8	109.6	106.1	101.9	101.7	110.0	108.0
	MIN	104.6	106.3	96.4	95.4	89.8	86.7	103.1	96.4	95.2	94.1	102.5	100.9
	AV	109.1	109.7	100.2	99.9	92.9	91.7	105.7	102.3	97.7	98.4	105.9	104.5
TC2 OUTSIDE FUEL TANK	MAX	144.1	143.6	127.2	119.5	106.0	105.8	123.7	119.7	100.2	113.0	141.5	138.8
	MIN	119.7	96.9	91.8	95.4	87.7	84.7	99.4	94.8	91.9	90.3	109.6	110.1
	AV	131.9	132.5	117.2	113.6	99.5	98.8	115.5	111.4	96.4	102.5	132.4	130.3
TC3 CARBURETOR	MAX	142.5	144.1	141.0	143.6	143.1	138.5	135.9	134.9	135.5	133.9	141.5	139.5
	MIN	119.6	120.0	118.7	116.3	113.9	111.7	113.0	111.8	109.5	110.8	119.1	117.2
	AV	124.8	127.5	123.2	122.1	120.7	118.7	119.3	118.6	115.5	117.3	123.7	122.5
TC4 RADIATOR	MAX	211.0	214.6	211.4	213.1	210.9	208.3	211.2	208.7	208.1	209.4	211.7	207.4
	MIN	188.5	195.9	189.9	196.5	194.9	195.8	181.5	188.3	191.1	189.6	193.8	192.0
	AV	202.4	203.2	203.4	202.8	203.1	201.5	202.0	200.0	200.4	201.0	201.1	200.3
TC5 OIL PAN	MAX	251.2	252.7	253.3	253.7	253.7	252.0	248.7	245.6	245.3	248.1	251.6	250.5
	MIN	227.2	235.0	230.0	234.6	234.5	232.3	221.9	222.0	227.8	225.1	233.8	226.0
	AV	242.5	245.0	243.8	245.0	245.2	242.9	236.1	234.5	237.2	237.8	244.0	241.5
TC6 AIR CLEANER	MAX	138.0	143.4	138.5	139.9	139.0	136.5	137.9	132.7	132.8	134.4	137.5	135.7
	MIN	125.3	129.1	131.3	130.6	128.3	121.0	112.6	115.6	116.9	119.7	115.3	122.8
	AV	131.6	136.0	135.0	135.8	135.3	130.7	129.1	123.6	125.0	128.1	132.0	128.9
TC7 VEHICLE FRONT	MAX	77.6	79.6	79.2	81.3	76.6	77.1	77.3	72.9	74.3	76.9	80.5	74.5
	MIN	69.8	74.1	72.5	74.5	70.0	71.5	73.3	65.4	68.5	69.0	75.1	67.5
	AV	74.9	76.5	76.2	78.2	74.0	73.9	75.3	69.5	72.1	73.0	77.0	71.8
TC8 CATALYST	MAX	1000.	987.	973.	994.	978.	980.	955.	953.	947.	965.	993.	983.
	MIN	624.	748.	720.	761.	722.	712.	611.	671.	695.	712.	765.	757.
	AV	884.	895.	883.	905.	903.	887.	847.	865.	863.	835.	908.	903.

VEHICLE: PONTIAC

TEST 12

TRACK RUN

SECOND MIN IDLE		1	2
RUN NUMBER		50	52
TC1	MAX	90.3	94.5
FUEL TANK	MIN	86.7	93.3
VAPOR	AV	89.6	93.9
TC2	MAX	96.4	104.2
OUTSIDE	MIN	92.8	102.4
FUEL TANK	AV	95.1	103.3
TC3	MAX	93.8	101.0
CARBURETOR	MIN	91.3	95.2
	AV	92.6	97.8
TC4	MAX	201.5	200.7
RADIATOR	MIN	200.0	196.9
	AV	201.0	198.4
TC5	MAX	236.1	229.1
OIL PAN	MIN	232.6	226.7
	AV	234.0	228.3
TC6	MAX	92.3	96.1
AIR	MIN	91.3	93.8
CLEANER	AV	91.9	95.0
TC7	MAX	78.6	75.5
VEHICLE	MIN	74.6	70.0
FRONT	AV	75.6	72.8
TC8	MAX	939.	947.
CATALYST	MIN	896.	892.
	AV	925.	915.

A-23

VEHICLE: PONTIAC

TEST 12

FAN CONFIGURATION

SECOND MIN IDLE		A		D		E		F		G		H	
		SMALL	FRONT	SMALL	FRONT	SMALL	FRONT	LARGE	FRONT	LARGE	FRONT	SMALL	FRONT
		SMALL	FRONT	SMALL	FRONT	SMALL	FRONT	LARGE	FRONT	LARGE	FRONT	SMALL	FRONT
		1	2	1	2	1	2	1	2	1	2	1	2
RUN NUMBER		2	4	6	8	10	12	14	16	18	20	22	24
TC1	MAX	112.9	113.1	102.7	103.0	95.9	94.9	110.6	107.0	100.0	104.5	110.4	107.4
FUEL TANK	MIN	109.6	110.1	98.8	100.4	91.3	91.3	102.5	101.4	97.5	99.9	106.5	105.0
VAPOR	AV	111.7	111.4	100.7	101.7	93.7	92.7	107.8	105.0	99.0	103.2	108.6	106.4
TC2	MAX	147.1	146.1	115.1	113.1	94.3	95.4	122.3	121.2	97.9	102.5	143.3	140.6
OUTSIDE	MIN	144.1	144.1	101.4	103.0	90.3	91.3	118.2	117.2	94.9	98.5	140.1	135.9
FUEL TANK	AV	145.8	145.2	106.4	106.3	92.8	93.0	119.9	119.7	96.2	100.9	141.2	138.9
TC3	MAX	129.4	129.4	125.3	125.3	127.3	123.8	124.3	120.2	118.8	122.3	129.0	125.3
CARBURETOR	MIN	125.7	124.8	121.6	122.8	120.2	120.2	122.8	116.7	115.1	119.7	125.3	118.6
	AV	126.9	126.8	123.5	123.9	123.4	122.3	123.5	118.9	117.6	121.2	127.5	123.0
TC4	MAX	207.5	210.1	206.0	206.0	206.0	206.5	204.0	205.5	201.4	203.5	207.0	207.0
RADIATOR	MIN	203.7	202.5	200.6	202.0	200.5	196.5	198.5	203.5	198.5	200.0	201.0	202.4
	AV	205.1	206.2	202.5	204.5	203.1	202.2	202.0	204.4	200.3	201.8	203.8	204.1
TC5	MAX	250.1	253.2	252.7	252.7	249.1	249.2	243.6	246.1	243.4	242.6	250.1	248.4
CIL PAN	MIN	247.4	246.6	243.9	247.2	243.1	244.1	239.6	243.6	241.4	241.1	240.4	246.4
	AV	248.3	249.7	246.9	249.4	246.1	247.0	242.2	245.4	242.3	242.0	248.6	247.3
TC6	MAX	135.4	140.0	137.5	138.0	134.9	130.9	129.4	130.9	128.5	129.9	132.9	134.4
AIR	MIN	132.1	132.9	131.9	134.4	130.9	129.4	125.8	120.8	125.2	125.3	129.0	126.8
CLEANER	AV	133.8	135.8	133.6	136.5	132.9	130.3	127.8	129.4	127.0	128.0	130.1	130.7
TC7	MAX	76.6	79.1	76.1	78.1	74.6	75.6	78.1	73.0	71.7	73.5	79.5	73.7
VEHICLE	MIN	75.5	74.6	73.3	77.1	72.0	72.5	73.0	69.5	70.5	70.0	77.0	70.0
FRONT	AV	75.9	76.2	74.4	77.6	73.2	73.8	74.7	71.2	71.3	71.8	77.7	72.6
TC8	MAX	957.	970.	974.	983.	945.	981.	941.	936.	932.	943.	979.	978.
CATALYST	MIN	908.	909.	903.	934.	898.	936.	865.	879.	883.	882.	920.	923.
	AV	933.	937.	941.	960.	918.	960.	904.	915.	910.	915.	948.	952.

VEHICLE: PONTIAC

TEST 13

TRACK RUN

SECOND S-7

1

2

RUN NUMBER

50

52

TC1 MAX
FUEL TANK MIN
VAPOR AV

96.3
90.3
93.7

99.9
92.5
95.3

TC2 MAX
OUTSIDE MIN
FUEL TANK AV

108.4
93.3
99.1

106.2
85.9
98.2

TC3 MAX
CARBURETOR MIN
AV

104.5
92.7
97.7

100.5
91.8
96.0

TC4 MAX
RADIATOR MIN
AV

204.7
194.5
198.9

204.7
193.3
198.8

TC5 MAX
OIL PAN MIN
AV

236.0
227.1
231.6

236.3
225.8
231.0

TC6 MAX
AIR MIN
CLEANER AV

99.9
91.7
95.9

101.4
91.1
96.5

TC7 MAX
VEHICLE MIN
FRONT AV

76.9
69.0
72.8

77.5
69.6
72.2

TC8 MAX
CATALYST MIN
AV

928.
784.
852.

966.
759.
859.

A-25

VEHICLE: PONTIAC

TEST 13

FAN CONFIGURATION

SECOND S-7

		A		D		E		F		G		H	
		SMALL	FRONT	SMALL	FRONT	SMALL	FRONT	LARGE	FRONT	LARGE	FRONT	SMALL	FRONT
				SMALL	SIDE	LARGE	SIDE			SMALL	SIDE		
		1	2	1	2	1	2	1	2	1	2	1	2
RUN NUMBER		2	4	6	8	10	12	14	16	18	20	22	24
TC1 FUEL TANK VAPOR	MAX	126.3	124.3	108.5	106.5	98.5	98.4	116.2	114.1	103.9	106.1	119.6	121.7
	MIN	115.9	114.1	100.8	98.6	90.8	90.8	104.7	103.3	96.4	97.5	106.1	105.0
	AV	120.2	119.3	104.7	102.6	94.4	94.7	109.8	107.8	99.7	102.1	114.6	114.7
TC2 OUTSIDE FUEL TANK	MAX	153.8	150.2	128.8	121.3	103.6	106.3	124.2	122.5	98.8	111.7	148.7	152.9
	MIN	139.9	136.0	98.4	98.0	89.8	89.8	111.9	109.2	92.3	93.3	136.5	137.7
	AV	147.6	144.2	116.4	113.3	96.9	98.2	118.7	115.0	95.7	101.3	143.7	144.4
TC3 CARBURETOR	MAX	134.4	130.9	130.8	130.9	126.4	125.9	123.8	124.6	120.7	124.3	128.8	130.5
	MIN	119.8	120.7	118.5	117.1	114.6	112.2	112.6	112.6	105.7	112.6	117.8	119.3
	AV	128.0	125.6	123.9	122.8	120.0	119.5	119.0	117.7	114.3	117.7	124.8	124.6
TC4 RADIATOR	MAX	215.1	213.9	213.7	213.5	212.2	212.3	210.1	210.4	209.3	211.4	210.5	214.3
	MIN	193.0	190.5	193.8	192.0	191.5	194.0	193.3	192.1	190.5	190.7	193.0	195.8
	AV	204.0	203.6	203.7	204.2	203.6	203.0	202.4	202.1	200.3	202.3	202.0	202.7
TC5 OIL PAN	MAX	252.0	251.2	251.6	251.7	251.7	251.0	246.1	245.6	244.8	248.2	251.1	249.8
	MIN	231.4	225.7	232.8	234.3	234.6	234.7	227.4	228.3	226.1	226.9	232.9	232.6
	AV	242.6	239.9	241.8	243.1	243.0	242.3	237.1	236.6	235.4	237.2	241.9	242.3
TC6 AIR CLEANER	MAX	139.0	138.0	138.0	135.1	138.6	136.2	134.5	132.6	132.0	134.0	137.3	136.3
	MIN	126.8	124.8	124.5	128.0	125.8	122.4	118.7	116.2	116.1	114.6	121.4	122.3
	AV	132.6	131.3	133.0	134.6	132.4	129.2	126.3	124.0	122.8	125.1	129.0	128.5
TC7 VEHICLE FRONT	MAX	81.1	79.1	79.8	80.8	75.7	78.2	79.1	75.5	76.5	75.1	79.6	77.0
	MIN	73.6	71.5	73.8	75.1	70.0	72.1	70.5	66.4	69.0	69.0	72.5	70.0
	AV	77.7	75.4	76.1	78.2	72.7	74.5	74.5	71.0	71.5	72.5	76.3	72.7
TC8 CATALYST	MAX	996.	981.	958.	981.	983.	972.	958.	938.	937.	945.	989.	985.
	MIN	759.	639.	759.	790.	815.	818.	784.	784.	773.	779.	818.	808.
	AV	884.	859.	871.	888.	896.	895.	870.	867.	859.	867.	899.	900.

VEHICLE: PONTIAC

TEST 14

TRACK RUN

THIRD MIN IDLE		1	2
RUN NUMBER		50	52
TC1	MAX	96.4	99.4
FUEL TANK	MIN	93.8	95.4
VAPOR	AV	95.0	97.7
TC2	MAX	95.4	101.4
OUTSIDE	MIN	93.3	97.9
FUEL TANK	AV	94.0	99.5
TC3	MAX	100.9	101.4
CARBURETOR	MIN	96.9	94.9
	AV	97.8	96.9
TC4	MAX	204.0	203.5
RADIATOR	MIN	201.0	198.0
	AV	202.3	200.6
TC5	MAX	235.6	230.1
OIL PAN	MIN	231.6	226.1
	AV	233.3	228.0
TC6	MAX	93.8	93.4
AIR	MIN	90.8	93.8
CLEANER	AV	91.7	96.5
TC7	MAX	75.6	74.0
VEHICLE	MIN	71.5	72.0
FRCNT	AV	72.8	72.8
TC8	MAX	932.	968.
CATALYST	MIN	882.	920.
	AV	906.	938.

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VEHICLE: PONTIAC

TEST 14

FAN CONFIGURATION

THIRD MIN IDLE

A		D		E		F		G		H	
SMALL	FRONT	SMALL	FRONT	SMALL	FRONT	LARGE	FRONT	LARGE	FRONT	SMALL	FRONT
		SMALL	SIDE								

1	2	1	2	1	2	1	2	1	2	1	2
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RUN NUMBER

2	4	6	8	10	12	14	16	18	20	22	24
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TC1	MAX	123.7	123.4	109.6	106.5	96.9	96.7	97.9	114.1	104.4	106.5	118.5	118.7
FUEL TANK	MIN	122.2	117.7	105.9	104.5	93.8	93.4	93.9	108.3	99.9	103.5	115.1	112.5
VAPOR	AV	122.8	121.0	107.5	105.5	95.5	95.3	96.8	110.4	102.2	104.8	117.6	117.0

TC2	MAX	150.7	147.3	110.6	109.1	94.9	97.9	118.6	121.4	97.4	100.9	146.0	143.8
OUTSIDE	MIN	148.0	142.0	101.4	105.0	90.3	92.1	115.7	119.4	95.1	97.9	140.9	140.0
FUEL TANK	AV	149.4	144.6	106.3	107.1	93.5	94.4	117.0	120.2	96.1	99.4	144.6	141.7

TC3	MAX	133.0	129.7	127.3	128.3	125.8	122.8	124.2	121.3	120.7	122.8	128.3	126.6
CARBURETOR	MIN	128.8	126.6	123.8	123.3	121.2	118.7	123.5	119.2	116.7	118.7	123.2	121.8
	AV	130.5	128.0	125.7	126.1	124.0	120.7	123.9	120.0	119.2	121.3	126.2	125.3

TC4	MAX	202.5	202.0	201.6	203.5	202.0	202.7	199.2	207.3	203.6	201.0	201.2	201.2
RADIATOR	MIN	199.1	198.3	199.0	199.0	199.0	196.5	195.0	200.5	200.0	197.0	197.7	197.7
	AV	200.6	199.5	200.7	201.0	200.4	199.5	198.2	205.0	202.6	198.7	199.6	199.1

TC5	MAX	250.7	248.6	247.3	249.2	247.7	250.2	241.4	246.0	244.3	243.1	247.6	248.1
OIL PAN	MIN	245.2	245.0	244.6	244.6	244.6	243.5	237.6	240.7	238.6	240.6	245.2	245.0
	AV	247.7	246.8	246.4	247.8	246.1	246.6	240.6	244.2	241.9	241.8	246.4	246.9

TC6	MAX	137.5	134.6	136.3	137.5	135.4	131.4	129.1	130.4	129.0	129.4	132.9	134.0
AIR	MIN	133.0	131.8	132.6	134.9	130.9	128.2	126.3	124.3	125.7	125.8	128.2	128.7
CLEANER	AV	135.6	133.4	134.5	136.3	133.0	129.6	127.9	127.7	127.3	128.1	129.7	130.6

TC7	MAX	78.4	75.5	75.8	77.1	74.6	75.1	74.6	72.5	73.4	73.0	76.5	73.1
VEHICLE	MIN	77.1	73.0	73.5	76.1	70.0	72.8	72.0	70.3	69.0	70.5	73.5	66.5
FRONT	AV	78.0	74.7	74.8	76.4	73.0	73.7	73.6	71.0	72.1	72.2	75.0	70.6

TC8	MAX	968.	947.	970.	934.	924.	934.	924.	924.	917.	911.	960.	949.
CATALYST	MIN	894.	898.	837.	892.	875.	894.	854.	858.	865.	856.	898.	905.
	AV	930.	922.	911.	911.	897.	919.	889.	899.	889.	881.	930.	925.

VEHICLE: PONTIAC

TEST 15

TRACK RUN

THIRD S-7

1

2

RUN NUMBER

50

52

TC1 MAX
FUEL TANK MIN
VAPOR AV

101.3
93.3
97.3

100.4
91.6
97.5

TC2 MAX
OUTSIDE MIN
FUEL TANK AV

107.8
90.7
99.5

108.0
93.8
99.9

TC3 MAX
CARBURETOR MIN
AV

107.1
92.8
100.4

104.1
93.3
97.8

TC4 MAX
RADIATOR MIN
AV

211.5
193.6
202.2

202.7
192.5
198.6

TC5 MAX
CIL PAN MIN
AV

238.0
230.5
234.6

235.1
224.7
230.1

TC6 MAX
AIR MIN
CLEANER AV

100.9
90.2
97.5

99.4
90.8
95.9

TC7 MAX
VEHICLE MIN
FRONT AV

79.8
68.5
73.5

87.2
67.6
72.7

TC8 MAX
CATALYST MIN
AV

949.
807.
881.

945.
767.
858.

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VEHICLE: PONTIAC

TEST 15

FAN CONFIGURATION

THIRD S-7

		A		D		E		F		G		H	
		SMALL FRONT		SMALL FRONT SMALL SIDE		SMALL FRONT LARGE SIDE		LARGE FRONT		LARGE FRONT SMALL SIDE		SMALL FRONT	
		1	2	1	2	1	2	1	2	1	2	1	2
RUN NUMBER		2	4	6	8	10	12	14	16	18	20	22	24
TC1 FUEL TANK VAPOR	MAX	132.9	130.5	113.2	110.9	103.0	98.7	120.2	116.6	106.5	108.1	127.6	127.6
	MIN	124.3	122.8	103.9	102.5	93.3	93.8	112.7	108.6	98.9	101.5	116.7	116.0
	AV	128.1	126.5	108.6	105.7	97.0	96.2	116.2	112.1	102.3	104.8	123.3	122.4
TC2 OUTSIDE FUEL TANK	MAX	155.2	154.5	128.3	121.1	103.0	105.7	125.3	123.7	100.2	111.7	158.4	154.9
	MIN	142.0	142.2	96.9	101.4	92.3	90.3	114.9	109.9	92.8	95.9	141.7	139.7
	AV	149.1	148.1	116.3	114.4	97.3	97.1	120.2	117.2	96.5	101.9	148.5	146.8
TC3 CARBURETOR	MAX	133.9	133.9	131.9	128.8	128.9	125.3	123.8	122.3	120.9	124.8	132.4	130.4
	MIN	123.8	123.1	117.7	117.2	114.1	113.9	118.3	113.9	110.1	112.0	123.0	121.5
	AV	129.6	127.7	124.0	122.8	120.5	119.5	121.0	118.3	115.3	118.1	127.9	126.2
TC4 RADIATOR	MAX	213.6	213.5	213.4	212.6	213.3	211.8	209.9	210.4	210.0	210.6	212.1	210.2
	MIN	192.5	187.5	189.5	194.0	194.1	193.5	191.5	190.9	189.2	191.0	194.8	194.7
	AV	203.8	202.8	202.9	203.4	204.0	202.9	202.9	201.6	201.2	202.4	202.9	202.3
TC5 OIL PAN	MAX	252.5	250.8	250.8	251.8	250.9	251.3	247.9	245.1	246.0	246.2	251.3	251.0
	MIN	230.6	230.8	230.4	235.9	234.7	234.4	231.4	227.5	226.6	228.6	235.5	234.2
	AV	241.8	241.3	241.2	243.4	243.0	241.8	237.4	235.3	235.3	236.9	242.9	242.2
TC6 AIR CLEANER	MAX	139.0	137.0	139.0	138.5	137.7	135.7	133.4	134.5	131.8	131.9	136.5	136.0
	MIN	126.3	126.5	125.7	125.7	123.8	122.8	121.8	114.8	113.6	117.2	121.1	122.8
	AV	133.3	131.7	132.6	134.0	131.6	129.4	127.1	123.7	123.4	125.3	130.3	128.7
TC7 VEHICLE FRONT	MAX	77.4	76.0	77.7	76.6	75.9	75.8	76.2	73.9	75.7	75.1	79.8	75.4
	MIN	73.7	71.0	70.5	73.8	66.9	72.5	71.8	66.9	69.0	70.0	73.5	68.0
	AV	75.5	75.1	75.0	76.4	72.3	74.4	74.0	70.9	72.5	72.6	77.1	72.0
TC8 CATALYST	MAX	981.	969.	962.	987.	977.	968.	958.	937.	941.	949.	983.	973.
	MIN	716.	704.	748.	821.	802.	813.	797.	774.	767.	789.	810.	808.
	AV	866.	854.	862.	902.	888.	891.	871.	857.	852.	867.	894.	892.

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VEHICLE: PONTIAC

TEST 16

TRACK RUN

45 MIN SOAK		1	2
RUN NUMBER		50	52
TC1	MAX	0.0	0.0
FUEL TANK	MIN	0.0	0.0
VAPOR	AV	95.1	96.3
TC2	MAX	0.0	0.0
OUTSIDE	MIN	0.0	0.0
FUEL TANK	AV	82.1	89.7
TC3	MAX	0.0	0.0
CARBURETOR	MIN	0.0	0.0
	AV	98.8	97.7
TC4	MAX	0.0	0.0
RADIATOR	MIN	0.0	0.0
	AV	205.6	203.2
TC5	MAX	0.0	0.0
OIL PAN	MIN	0.0	0.0
	AV	192.2	188.7
TC6	MAX	0.0	0.0
AIR	MIN	0.0	0.0
CLEANER	AV	95.6	98.0
TC7	MAX	0.0	0.0
VEHICLE	MIN	0.0	0.0
FRONT	AV	86.0	80.8
TC8	MAX	936.	926.
CATALYST	MIN	333.	320.
	AV	522.	502.

10-1

NOTE: Zeros indicate data not computed.

VEHICLE: PONTIAC

TEST 16

FAN CONFIGURATION

45 MIN SOAK

		A		D		E		F		G		H	
		SMALL	FRONT	SMALL	FRONT	SMALL	FRONT	LARGE	FRONT	LARGE	FRONT	SMALL	FRONT
				SMALL	SIDE	LARGE	SIDE			SMALL	SIDE		
		1	2	1	2	1	2	1	2	1	2	1	2
RUN NUMBER		2	4	6	8	10	12	14	16	18	20	22	24
TC1	MAX	0.0	0.0	0.0	0.0	0.0	0.0	119.6	0.0	0.0	0.0	0.0	0.0
FUEL TANK	MIN	0.0	0.0	0.0	0.0	0.0	0.0	106.5	0.0	0.0	0.0	0.0	0.0
VAPOR	AV	125.9	125.2	105.3	106.2	95.4	97.6	112.4	110.4	102.4	103.7	120.9	119.9
TC2	MAX	0.0	0.0	0.0	0.0	0.0	0.0	100.5	0.0	0.0	0.0	0.0	0.0
OUTSIDE	MIN	0.0	0.0	0.0	0.0	0.0	0.0	87.2	0.0	0.0	0.0	0.0	0.0
FUEL TANK	AV	98.7	96.5	84.9	90.4	84.1	88.2	92.3	89.7	86.9	89.4	94.5	94.0
TC3	MAX	0.0	0.0	0.0	0.0	0.0	0.0	165.9	0.0	0.0	0.0	0.0	0.0
CARBURETOR	MIN	0.0	0.0	0.0	0.0	0.0	0.0	124.9	0.0	0.0	0.0	0.0	0.0
	AV	172.5	169.3	170.1	169.2	167.9	165.4	153.1	158.2	159.7	160.9	170.0	167.4
TC4	MAX	0.0	0.0	0.0	0.0	0.0	0.0	200.4	0.0	0.0	0.0	0.0	0.0
RADIATOR	MIN	0.0	0.0	0.0	0.0	0.0	0.0	169.6	0.0	0.0	0.0	0.0	0.0
	AV	192.7	191.0	191.6	192.1	192.5	190.6	186.7	187.5	188.5	201.8	192.3	188.6
TC5	MAX	0.0	0.0	0.0	0.0	0.0	0.0	238.3	0.0	0.0	0.0	0.0	0.0
OIL PAN	MIN	0.0	0.0	0.0	0.0	0.0	0.0	190.0	0.0	0.0	0.0	0.0	0.0
	AV	205.0	205.1	205.7	203.9	202.1	206.0	200.3	196.4	196.5	201.6	206.7	200.5
TC6	MAX	0.0	0.0	0.0	0.0	0.0	0.0	153.3	0.0	0.0	0.0	0.0	0.0
AIR	MIN	0.0	0.0	0.0	0.0	0.0	0.0	118.7	0.0	0.0	0.0	0.0	0.0
CLEANER	AV	159.4	156.0	158.9	157.3	157.7	153.7	142.8	146.8	146.0	146.4	157.0	154.2
TC7	MAX	0.0	0.0	0.0	0.0	0.0	0.0	82.5	0.0	0.0	0.0	0.0	0.0
VEHICLE	MIN	0.0	0.0	0.0	0.0	0.0	0.0	73.0	0.0	0.0	0.0	0.0	0.0
FRONT	AV	81.0	76.3	76.6	78.8	75.3	83.2	75.8	72.2	77.6	82.4	84.1	74.0
TC8	MAX	968.	936.	966.	960.	936.	951.	917.	913.	907.	913.	955.	951.
CATALYST	MIN	315.	331.	337.	338.	335.	360.	342.	318.	315.	347.	340.	335.
	AV	515.	520.	528.	541.	525.	536.	509.	500.	497.	515.	536.	532.

NOTE: Zeros indicate data not computed.

VEHICLE: PCNTIAC

TEST 17

TRACK RUN

10 MIN IDLE		1	2
RUN NUMBER		50	52
TC1	MAX	94.9	95.8
FUEL TANK	MIN	77.1	92.8
VAPOR	AV	91.4	94.4
TC2	MAX	83.2	91.1
OUTSIDE	MIN	76.1	82.7
FUEL TANK	AV	79.4	88.1
TC3	MAX	96.4	96.8
CARBURETOR	MIN	91.3	93.3
	AV	93.3	95.1
TC4	MAX	201.0	186.0
RADIATOR	MIN	162.4	168.9
	AV	190.4	181.3
TC5	MAX	206.0	205.5
CIL PAN	MIN	160.4	163.4
	AV	194.0	197.2
TC6	MAX	96.5	96.8
AIR	MIN	90.0	91.5
CLEANER	AV	92.4	94.5
TC7	MAX	94.9	83.3
VEHICLE	MIN	75.6	69.5
FRONT	AV	87.0	74.3
TC8	MAX	449.	526.
CATALYST	MIN	333.	322.
	AV	384.	442.

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VEHICLE: PONTIAC

TEST 17

FAN CONFIGURATION

10 MIN IDLE

		A		D		E		F		G		H	
		SMALL	FRONT	SMALL	FRONT	SMALL	FRONT	LARGE	FRONT	LARGE	FRONT	SMALL	FRONT
				SMALL	SIDE	LARGE	SIDE			SMALL	SIDE		

	1	2	1	2	1	2	1	2	1	2	1	2
--	---	---	---	---	---	---	---	---	---	---	---	---

RUN NUMBER	2	4	6	8	10	12	14	16	18	20	22	24
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TC1	MAX	122.5	122.5	102.3	107.4	97.1	97.9	112.2	109.5	102.9	104.4	119.7	120.3
FUEL TANK	MIN	115.6	117.7	96.4	99.7	90.2	93.0	104.3	102.1	96.0	99.0	113.1	113.1
VAPOR	AV	119.1	120.0	99.4	103.4	93.5	95.1	107.5	105.3	99.0	102.1	116.6	115.8

TC2	MAX	114.1	117.2	85.5	91.3	81.7	86.4	99.8	95.1	86.4	95.0	117.7	110.6
OUTSIDE	MIN	92.3	99.9	79.3	84.5	78.1	82.3	95.9	87.7	83.8	87.2	98.4	91.8
FUEL TANK	AV	109.6	111.3	82.8	87.6	79.4	84.4	98.0	92.4	85.8	92.6	112.3	105.7

TC3	MAX	164.8	167.9	167.5	177.0	169.4	172.4	170.4	171.9	163.9	175.5	173.5	178.5
CARBURETOR	MIN	119.2	116.7	115.6	117.2	111.1	117.9	113.2	108.6	106.0	114.2	118.2	117.7
	AV	135.1	135.1	133.5	136.8	132.1	134.3	129.9	130.0	122.7	132.0	138.1	136.5

TC4	MAX	184.4	179.5	179.0	180.8	179.4	181.0	176.8	174.3	175.6	183.0	182.0	179.5
RADIATOR	MIN	174.8	171.6	170.9	173.0	168.9	171.7	170.0	167.3	167.4	172.4	172.4	170.6
	AV	177.2	174.6	174.2	176.5	173.1	175.3	172.8	170.9	171.3	175.2	176.3	174.2

TC5	MAX	203.5	199.5	199.5	203.2	198.4	201.2	193.4	191.5	192.2	195.0	202.5	199.5
OIL PAN	MIN	196.9	188.0	192.1	180.4	179.5	189.5	177.0	162.9	184.5	175.0	184.5	169.8
	AV	199.8	195.9	196.3	199.9	194.9	195.1	190.3	187.1	189.4	191.9	199.2	195.1

TC6	MAX	145.1	142.0	139.5	151.7	143.1	145.6	139.0	150.7	131.9	140.0	151.2	155.2
AIR	MIN	117.7	116.2	117.0	117.7	113.1	117.0	111.4	107.6	107.7	109.9	114.6	115.1
CLEANER	AV	124.3	120.6	121.0	124.5	118.9	129.4	125.0	122.8	115.7	124.7	127.9	129.3

TC7	MAX	74.6	74.0	80.1	74.6	72.2	80.9	84.8	72.5	73.8	83.5	77.8	73.0
VEHICLE	MIN	71.4	70.0	69.5	70.5	68.9	75.0	74.2	68.7	69.0	76.0	73.5	68.6
FRONT	AV	73.2	71.7	72.9	72.7	70.5	77.2	80.8	70.8	71.1	80.9	75.4	70.4

TC8	MAX	500.	491.	442.	504.	475.	504.	458.	467.	469.	467.	504.	504.
CATALYST	MIN	306.	340.	333.	340.	338.	384.	335.	320.	320.	335.	335.	338.
	AV	408.	422.	384.	428.	407.	444.	402.	393.	396.	402.	426.	429.

VEHICLE: PONTIAC

TEST 18

TRACK RUN

20 MPH S. S.		1	2
RUN NUMBER		50	52
TC1	MAX	0.0	0.0
FUEL TANK	MIN	0.0	0.0
VAPOR	AV	92.8	95.3
TC2	MAX	0.0	0.0
OUTSIDE	MIN	0.0	0.0
FUEL TANK	AV	93.9	94.4
TC3	MAX	0.0	0.0
CARBURETOR	MIN	0.0	0.0
	AV	97.6	97.1
TC4	MAX	0.0	0.0
RADIATOR	MIN	0.0	0.0
	AV	202.4	185.4
TC5	MAX	0.0	0.0
OIL PAN	MIN	0.0	0.0
	AV	212.8	205.2
TC6	MAX	0.0	0.0
AIR	MIN	0.0	0.0
CLEANER	AV	94.2	95.5
TC7	MAX	0.0	0.0
VEHICLE	MIN	0.0	0.0
FRONT	AV	73.0	70.2
TC8	MAX	635.	585.
CATALYST	MIN	464.	526.
	AV	597.	568.

NOTE: Zeros indicate data not computed.

VEHICLE: PONTIAC

TEST 18

FAN CONFIGURATION

20 MPH S. S.

		A		D		E		F		G		H	
		SMALL	FRONT	SMALL	FRONT	SMALL	FRONT	LARGE	FRONT	LARGE	FRONT	SMALL	FRONT
				SMALL	SIDE	LARGE	SIDE			SMALL	SIDE		
		1	2	1	2	1	2	1	2	1	2	1	2
RUN NUMBER		2	4	6	8	10	12	14	16	18	20	22	24
TC1	MAX	0.0	0.0	0.0	0.0	0.0	0.0	107.5	0.0	0.0	0.0	0.0	0.0
FUEL TANK	MIN	0.0	0.0	0.0	0.0	0.0	0.0	102.0	0.0	0.0	0.0	0.0	0.0
VAPOR	AV	117.0	117.3	97.8	100.2	91.0	93.3	104.1	103.4	94.8	100.5	115.8	113.5
TC2	MAX	0.0	0.0	0.0	0.0	0.0	0.0	99.9	0.0	0.0	0.0	0.0	0.0
OUTSIDE	MIN	0.0	0.0	0.0	0.0	0.0	0.0	96.9	0.0	0.0	0.0	0.0	0.0
FUEL TANK	AV	120.3	118.9	92.4	91.3	82.3	85.5	98.6	97.7	85.9	90.0	124.3	115.1
TC3	MAX	0.0	0.0	0.0	0.0	0.0	0.0	109.6	0.0	0.0	0.0	0.0	0.0
CARBURETOR	MIN	0.0	0.0	0.0	0.0	0.0	0.0	107.5	0.0	0.0	0.0	0.0	0.0
	AV	117.2	117.0	113.4	113.8	111.9	114.4	108.6	108.1	105.8	112.2	119.1	116.4
TC4	MAX	0.0	0.0	0.0	0.0	0.0	0.0	184.7	0.0	0.0	0.0	0.0	0.0
RADIATOR	MIN	0.0	0.0	0.0	0.0	0.0	0.0	181.0	0.0	0.0	0.0	0.0	0.0
	AV	188.1	187.2	188.1	186.6	186.8	188.1	182.8	182.1	182.1	185.7	185.0	185.1
TC5	MAX	0.0	0.0	0.0	0.0	0.0	0.0	204.3	0.0	0.0	0.0	0.0	0.0
OIL PAN	MIN	0.0	0.0	0.0	0.0	0.0	0.0	194.0	0.0	0.0	0.0	0.0	0.0
	AV	207.9	207.2	205.8	207.9	204.9	209.3	199.3	196.3	196.6	200.0	205.7	203.7
TC6	MAX	0.0	0.0	0.0	0.0	0.0	0.0	128.3	0.0	0.0	0.0	0.0	0.0
AIR	MIN	0.0	0.0	0.0	0.0	0.0	0.0	124.2	0.0	0.0	0.0	0.0	0.0
CLEANER	AV	120.4	120.0	120.3	120.2	116.5	120.8	123.3	124.8	124.4	118.4	121.4	123.8
TC7	MAX	0.0	0.0	0.0	0.0	0.0	0.0	75.6	0.0	0.0	0.0	0.0	0.0
VEHICLE	MIN	0.0	0.0	0.0	0.0	0.0	0.0	70.5	0.0	0.0	0.0	0.0	0.0
FRONT	AV	72.6	71.1	72.1	72.6	71.5	75.4	72.0	71.4	69.4	70.9	75.0	69.7
TC8	MAX	589.	605.	580.	595.	583.	594.	590.	567.	558.	557.	589.	591.
CATALYST	MIN	550.	522.	440.	557.	526.	558.	533.	482.	519.	497.	524.	533.
	AV	581.	596.	573.	584.	574.	584.	570.	551.	549.	546.	576.	583.

NOTE: Zeros indicate data not computed.

VEHICLE: PONTIAC

TEST 19

TRACK RUN

40 MPH S. S.		1	2
RUN NUMBER		50	52
TC1	MAX	0.0	0.0
FUEL TANK	MIN	0.0	0.0
VAPOR	AV	97.7	93.0
TC2	MAX	0.0	0.0
OUTSIDE	MIN	0.0	0.0
FUEL TANK	AV	100.4	91.6
TC3	MAX	0.0	0.0
CARBURETOR	MIN	0.0	0.0
	AV	98.1	93.2
TC4	MAX	0.0	0.0
RADIATOR	MIN	0.0	0.0
	AV	212.1	198.9
TC5	MAX	0.0	0.0
OIL PAN	MIN	0.0	0.0
	AV	224.3	217.8
TC6	MAX	0.0	0.0
AIR	MIN	0.0	0.0
CLEANER	AV	97.1	91.1
TC7	MAX	0.0	0.0
VEHICLE	MIN	0.0	0.0
FRONT	AV	72.7	68.1
TC8	MAX	887.	841.
CATALYST	MIN	639.	673.
	AV	844.	813.

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NOTE: Zeros indicate data not computed.

VEHICLE: PONTIAC

TEST 19

FAN CONFIGURATION

40 MPH S. S.

A		D		E		F		G		H	
SMALL	FRONT	SMALL	FRONT	SMALL	FRONT	LARGE	FRONT	LARGE	FRONT	SMALL	FRONT
		SMALL	SIDE	LARGE	SIDE			SMALL	SIDE		

1	2	1	2	1	2	1	2	1	2	1	2
---	---	---	---	---	---	---	---	---	---	---	---

RUN NUMBER		2	4	6	8	10	12	14	16	18	20	22	24
TC1 FUEL TANK VAPOR	MAX	0.0	0.0	0.0	0.0	0.0	0.0	111.6	0.0	0.0	0.0	0.0	0.0
	MIN	0.0	0.0	0.0	0.0	0.0	0.0	101.4	0.0	0.0	0.0	0.0	0.0
	AV	121.7	120.4	102.3	101.6	92.8	95.7	106.3	107.8	96.7	101.3	119.3	115.6
TC2 OUTSIDE FUEL TANK	MAX	0.0	0.0	0.0	0.0	0.0	0.0	118.2	0.0	0.0	0.0	0.0	0.0
	MIN	0.0	0.0	0.0	0.0	0.0	0.0	104.0	0.0	0.0	0.0	0.0	0.0
	AV	135.7	130.4	110.1	105.6	90.5	96.0	111.2	114.2	89.9	93.5	130.5	127.7
TC3 CARBURETOR	MAX	0.0	0.0	0.0	0.0	0.0	0.0	117.2	0.0	0.0	0.0	0.0	0.0
	MIN	0.0	0.0	0.0	0.0	0.0	0.0	108.0	0.0	0.0	0.0	0.0	0.0
	AV	123.5	122.0	117.8	116.0	114.0	116.2	112.4	113.1	107.1	113.1	123.2	121.1
TC4 RADIATOR	MAX	0.0	0.0	0.0	0.0	0.0	0.0	202.5	0.0	0.0	0.0	0.0	0.0
	MIN	0.0	0.0	0.0	0.0	0.0	0.0	192.5	0.0	0.0	0.0	0.0	0.0
	AV	204.6	201.5	202.6	203.3	202.9	203.5	197.7	200.5	196.4	201.5	202.4	200.6
TC5 OIL PAN	MAX	0.0	0.0	0.0	0.0	0.0	0.0	235.1	0.0	0.0	0.0	0.0	0.0
	MIN	0.0	0.0	0.0	0.0	0.0	0.0	215.6	0.0	0.0	0.0	0.0	0.0
	AV	233.6	232.7	232.8	233.0	232.4	235.2	225.0	228.7	223.0	228.4	231.6	230.5
TC6 AIR CLEANER	MAX	0.0	0.0	0.0	0.0	0.0	0.0	121.2	0.0	0.0	0.0	0.0	0.0
	MIN	0.0	0.0	0.0	0.0	0.0	0.0	115.1	0.0	0.0	0.0	0.0	0.0
	AV	128.9	128.0	129.9	130.0	128.2	128.3	118.4	116.6	115.7	118.1	125.9	122.3
TC7 VEHICLE FRONT	MAX	0.0	0.0	0.0	0.0	0.0	0.0	71.5	0.0	0.0	0.0	0.0	0.0
	MIN	0.0	0.0	0.0	0.0	0.0	0.0	69.0	0.0	0.0	0.0	0.0	0.0
	AV	72.9	69.2	71.7	71.4	70.5	76.0	70.3	70.1	69.2	72.0	75.5	68.7
TC8 CATALYST	MAX	839.	867.	847.	865.	850.	859.	831.	830.	822.	806.	827.	839.
	MIN	786.	637.	652.	699.	650.	693.	613.	752.	673.	663.	641.	648.
	AV	829.	840.	823.	844.	830.	836.	808.	817.	803.	784.	806.	815.

NOTE: Zeros indicate data not computed.

VEHICLE: PONTIAC

TEST 20

TRACK RUN

60 MPH S. S.		1	2
RUN NUMBER		50	52
TC1	MAX	0.0	0.0
FUEL TANK	MIN	0.0	0.0
VAPOR	AV	98.5	92.1
TC2	MAX	0.0	0.0
GUTSIDE	MIN	0.0	0.0
FUEL TANK	AV	95.2	90.1
TC3	MAX	0.0	0.0
CARBURETOR	MIN	0.0	0.0
	AV	97.9	92.2
TC4	MAX	0.0	0.0
RADIATOR	MIN	0.0	0.0
	AV	201.7	198.8
TC5	MAX	0.0	0.0
OIL PAN	MIN	0.0	0.0
	AV	240.2	237.2
TC6	MAX	0.0	0.0
AIR	MIN	0.0	0.0
CLEANER	AV	97.7	90.9
TC7	MAX	0.0	0.0
VEHICLE	MIN	0.0	0.0
FRONT	AV	71.8	66.2
TC8	MAX	1123.	1076.
CATALYST	MIN	886.	953.
	AV	1056.	1061.

NOTE: Zeros indicate data not computed.

VEHICLE: PONTIAC

TEST 20

FAN CONFIGURATION

60 MPH S. S.

A D E F G H
SMALL FRONT SMALL FRONT SMALL FRONT LARGE FRONT LARGE FRONT SMALL FRONT
SMALL SIDE LARGE SIDE

1 2 1 2 1 2 1 2 1 2 1 2

RUN NUMBER 2 4 6 8 10 12 14 16 18 20 22 24

TC1 MAX 0.0 0.0 0.0 0.0 0.0 0.0 122.0 0.0 0.0 0.0 0.0 0.0
FUEL TANK MIN 0.0 0.0 0.0 0.0 0.0 0.0 113.1 0.0 0.0 0.0 0.0 0.0
VAPOR AV 129.9 126.6 109.1 107.4 98.5 101.1 116.4 117.8 105.6 108.6 125.7 122.4

TC2 MAX 0.0 0.0 0.0 0.0 0.0 0.0 124.9 0.0 0.0 0.0 0.0 0.0
OUTSIDE MIN 0.0 0.0 0.0 0.0 0.0 0.0 117.7 0.0 0.0 0.0 0.0 0.0
FUEL TANK AV 140.9 139.0 124.6 117.8 106.5 111.1 121.3 123.5 99.7 109.0 134.2 133.5

TC3 MAX 0.0 0.0 0.0 0.0 0.0 0.0 124.4 0.0 0.0 0.0 0.0 0.0
CARBURETOR MIN 0.0 0.0 0.0 0.0 0.0 0.0 117.7 0.0 0.0 0.0 0.0 0.0
AV 129.4 125.7 121.9 119.5 117.3 117.4 120.7 122.5 114.7 118.2 126.5 125.9

TC4 MAX 0.0 0.0 0.0 0.0 0.0 0.0 206.0 0.0 0.0 0.0 0.0 0.0
RADIATOR MIN 0.0 0.0 0.0 0.0 0.0 0.0 204.5 0.0 0.0 0.0 0.0 0.0
AV 204.3 204.1 203.2 203.1 204.1 203.7 205.3 204.6 204.9 203.6 201.7 204.9

TC5 MAX 0.0 0.0 0.0 0.0 0.0 0.0 254.2 0.0 0.0 0.0 0.0 0.0
OIL PAN MIN 0.0 0.0 0.0 0.0 0.0 0.0 245.1 0.0 0.0 0.0 0.0 0.0
AV 250.7 256.3 255.4 256.7 256.6 256.5 250.3 251.9 250.3 251.5 254.8 253.3

TC6 MAX 0.0 0.0 0.0 0.0 0.0 0.0 134.4 0.0 0.0 0.0 0.0 0.0
AIR MIN 0.0 0.0 0.0 0.0 0.0 0.0 131.9 0.0 0.0 0.0 0.0 0.0
CLEANER AV 134.1 132.3 134.6 135.0 135.1 133.7 133.4 133.2 128.0 132.3 134.1 135.8

TC7 MAX 0.0 0.0 0.0 0.0 0.0 0.0 72.0 0.0 0.0 0.0 0.0 0.0
VEHICLE MIN 0.0 0.0 0.0 0.0 0.0 0.0 67.5 0.0 0.0 0.0 0.0 0.0
FRONT AV 72.1 69.0 73.2 71.8 72.1 76.0 69.6 70.9 68.9 72.0 73.7 69.3

TC8 MAX 1053. 1064. 1055. 1070. 1051. 1063. 1015. 1014. 1008. 1014. 1047. 1049.
CATALYST MIN 841. 867. 920. 928. 920. 1002. 894. 951. 928. 932. 879. 867.
AV 1033. 1049. 1040. 1053. 1038. 1052. 1001. 1006. 998. 1005. 1027. 1025.

NOTE: Zeros indicate data not computed.

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Appendix B

CHRYSLER TEMPERATURES

VEHICLE: CHRYSLER

TEST 1

TRACK RUN

PRECONDITIONING		1	2
RUN NUMBER		54	56
TC1	MAX	90.0	105.0
FUEL TANK	MIN	76.6	90.0
VAPOR	AV	82.5	94.2
TC2	MAX	117.1	147.0
OUTSIDE	MIN	77.9	97.0
FUEL TANK	AV	97.6	111.2
TC3	MAX	109.1	140.0
CARBURETOR	MIN	74.2	109.0
	AV	95.2	115.2
TC4	MAX	208.6	235.0
RADIATOR	MIN	114.1	197.0
	AV	196.5	200.9
TC5	MAX	212.4	217.0
CIL PAN	MIN	102.4	192.0
	AV	185.1	213.7
TC6	MAX	125.3	158.0
AIR	MIN	78.4	115.0
CLEANER	AV	111.4	126.7
TC7	MAX	77.1	125.0
VEHICLE	MIN	68.8	60.0
FRONT	AV	73.0	65.7
TC8	MAX	1314.	1246.
CATALYST	MIN	611.	653.
	AV	1076.	1039.

VEHICLE: CHRYSLER

TEST 1

FAN CONFIGURATION

PRECONDITIONING		A		D		E		F		G		H	
		SMALL FRONT		SMALL FRONT SMALL SIDE		SMALL FRONT LARGE SIDE		LARGE FRONT		LARGE FRONT SMALL SIDE		SMALL FRONT	
		1	2	1	2	1	2	1	2	1	2	1	2
RUN NUMBER		26	28	30	32	34	36	42	44	38	40	46	48
TC1	MAX	132.2	144.6	127.9	113.0	102.9	111.4	102.5	105.9	94.3	91.8	132.9	159.4
FUEL TANK	MIN	101.9	128.3	118.4	98.1	93.2	89.2	97.8	95.0	81.7	75.3	104.0	146.5
VAPOR	AV	120.1	134.6	122.2	106.1	95.8	97.6	100.5	100.7	89.4	84.3	118.5	151.4
TC2	MAX	174.4	142.3	129.7	124.5	98.5	105.8	107.0	108.0	94.4	93.2	170.8	196.5
CUTSIDE	MIN	128.3	122.8	112.6	91.8	89.2	89.7	97.3	86.8	84.7	74.8	100.9	144.1
FUEL TANK	AV	160.7	128.6	123.6	114.0	95.0	95.1	103.5	101.7	91.7	87.7	147.9	181.6
TC3	MAX	108.0	141.5	137.0	113.6	147.1	107.5	107.0	114.1	98.9	93.5	111.4	131.4
CARBURETOR	MIN	98.9	126.8	119.4	102.6	102.4	100.6	97.8	94.0	81.2	77.6	102.6	113.6
	AV	103.6	130.7	124.2	109.3	107.3	105.1	99.5	100.0	93.0	87.4	106.7	120.4
TC4	MAX	203.6	205.3	207.0	202.2	203.9	215.6	199.8	200.4	199.3	200.0	203.2	203.4
RADIATOR	MIN	138.9	192.7	174.5	170.5	161.4	187.9	177.5	162.0	188.3	89.0	163.9	168.0
	AV	197.2	199.1	198.2	195.4	195.7	198.8	194.5	192.3	194.7	182.4	195.1	195.1
TC5	MAX	220.1	228.7	225.0	216.1	216.4	220.1	218.1	207.8	205.8	203.0	218.1	221.2
CIL PAN	MIN	196.5	216.6	197.5	170.0	176.5	199.9	201.7	159.9	148.1	85.7	197.0	207.9
	AV	215.0	222.7	218.9	203.4	208.7	214.1	209.2	199.5	193.1	177.2	211.9	215.0
TC6	MAX	111.7	152.2	130.9	112.6	123.8	112.3	106.1	104.9	109.6	102.8	110.9	117.2
AIR	MIN	101.1	128.9	114.0	93.4	96.1	102.8	98.3	83.3	84.7	76.7	94.5	99.5
CLEANER	AV	107.3	136.3	124.6	106.7	105.6	109.1	101.6	99.8	104.9	94.6	103.2	104.5
TC7	MAX	80.1	97.8	90.1	82.1	78.7	81.7	75.6	79.1	81.3	81.2	84.7	80.1
VEHICLE	MIN	73.5	86.7	80.7	75.6	72.0	74.4	68.9	70.4	73.6	71.2	65.4	71.5
FRONT	AV	77.3	91.6	85.3	78.0	74.4	77.9	73.1	74.9	78.0	76.4	77.8	76.7
TC8	MAX	1254.	1319.	1196.	1110.	1102.	1225.	1203.	1110.	1172.	1100.	1168.	1307.
CATALYST	MIN	945.	776.	786.	487.	526.	866.	854.	617.	820.	367.	780.	919.
	AV	1052.	1074.	989.	943.	938.	1018.	990.	936.	963.	906.	977.	1162.

VEHICLE: CHRYSLER

TEST 2

TRACK RUN

OVERNIGHT SOAK

1

2

RUN NUMBER

54

56

TC1 MAX
FUEL TANK MIN
VAPOR AV

0.0
0.0
0.0

0.0
0.0
0.0

TC2 MAX
OUTSIDE MIN
FUEL TANK AV

0.0
0.0
0.0

0.0
0.0
0.0

TC3 MAX
CARBURETOR MIN
AV

0.0
0.0
0.0

0.0
0.0
0.0

TC4 MAX
RADIATOR MIN
AV

0.0
0.0
0.0

0.0
0.0
0.0

TC5 MAX
OIL PAN MIN
AV

0.0
0.0
0.0

183.0
63.1
81.7

TC6 MAX
AIR MIN
CLEANER AV

0.0
0.0
0.0

0.0
0.0
0.0

TC7 MAX
VEHICLE MIN
FRONT AV

0.0
0.0
0.0

0.0
0.0
0.0

TC8 MAX
CATALYST MIN
AV

0.
0.
0.

0.
0.
0.

NOTE: Zeros indicate no data.

VEHICLE: CHRYSLER

TEST 2

FAN CONFIGURATION

OVERNIGHT SOAK

A D E F G H
 SMALL FRONT SMALL FRONT SMALL FRONT LARGE FRONT LARGE FRONT SMALL FRONT
 SMALL SIDE LARGE SIDE

1 2 1 2 1 2 1 2 1 2 1 2

RUN NUMBER 26 28 30 32 34 36 42 44 38 40 46 48

TC1 MAX 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 FUEL TANK MIN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 VAPOR AV 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

TC2 MAX 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 OUTSIDE MIN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 FUEL TANK AV 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

TC3 MAX 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 CARBURETOR MIN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 AV 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

TC4 MAX 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 RADIATOR MIN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 AV 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

TC5 MAX 193.5 201.5 165.9 142.0 200.5 192.0 172.4 187.5 167.4 179.5 192.5 195.0
 OIL PAN MIN 76.1 74.0 69.5 73.8 75.3 78.1 76.4 75.2 77.9 75.1 80.1 76.6
 AV 92.5 87.8 86.6 82.3 91.5 88.6 91.1 85.5 87.7 87.8 94.4 93.2

TC6 MAX 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 AIR MIN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 CLEANER AV 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

TC7 MAX 79.0 79.0 78.0 79.0 79.0 79.0 80.0 80.0 80.0 80.0 81.0 81.0
 VEHICLE MIN 69.0 71.0 69.0 69.0 72.0 74.0 76.0 73.0 72.0 75.0 74.0 74.0
 FRONT AV 74.0 75.0 75.0 75.0 75.0 76.0 77.0 77.0 76.0 78.0 78.0 78.0

TC8 MAX 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
 CATALYST MIN 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
 AV 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.

NOTE: Zeros indicate no data.

B-4

VEHICLE: CHRYSLER

TEST 3

TRACK RUN

FTP COLD 505

1

2

RUN NUMBER

54

56

TC1 MAX
FUEL TANK MIN
VAPOR AV

77.1
69.7
72.6

85.0
80.0
77.1

TC2 MAX
OUTSIDE MIN
FUEL TANK AV

97.0
72.0
82.7

104.0
75.0
39.8

TC3 MAX
CARBURETOR MIN
AV

89.8
70.4
77.5

95.0
75.0
34.1

B-5

TC4 MAX
RADIATOR MIN
AV

204.1
73.5
157.1

205.0
94.0
165.1

TC5 MAX
OIL PAN MIN
AV

178.5
72.5
125.4

187.0
75.0
146.8

TC6 MAX
AIR MIN
CLEANER AV

108.6
78.1
95.7

114.0
80.0
101.6

TC7 MAX
VEHICLE MIN
FRONT AV

75.5
69.6
72.3

85.0
75.0
75.3

TC8 MAX
CATALYST MIN
AV

1341.
70.
1028.

1290.
72.
1051.

VEHICLE: CHRYSLER

TEST 3

FAN CONFIGURATION

FTP COLD 505

B-9-6

		A		D		E		F		G		H	
		SMALL	FRONT	SMALL	FRONT	SMALL	FRONT	LARGE	FRONT	LARGE	FRONT	SMALL	FRONT
				SMALL	SIDE	LARGE	SIDE			SMALL	SIDE		
		1	2	1	2	1	2	1	2	1	2	1	2
RUN NUMBER		26	28	30	32	34	36	42	44	38	40	46	48
TC1	MAX	91.3	87.2	84.7	87.2	82.5	83.7	85.4	84.5	83.7	83.7	89.8	86.7
FUEL TANK	MIN	78.6	79.0	69.0	75.7	74.3	76.6	75.1	73.2	76.9	69.7	78.9	74.8
VAPOR	AV	83.6	81.5	75.3	79.6	77.7	79.3	78.6	77.1	79.3	75.6	82.5	78.6
TC2	MAX	129.4	94.7	106.5	102.4	91.4	90.3	93.3	93.8	85.3	89.0	125.2	121.7
OUTSIDE	MIN	80.8	78.6	73.6	77.6	75.2	78.6	74.2	75.2	76.4	69.1	79.1	71.3
FUEL TANK	AV	100.7	86.7	90.4	89.0	83.5	83.6	93.8	85.2	80.7	79.1	97.7	92.9
TC3	MAX	90.6	91.3	85.7	86.2	87.2	86.2	85.3	84.1	84.2	81.8	89.7	86.7
CARBURETOR	MIN	79.4	78.0	70.5	74.2	75.6	74.6	76.2	72.7	76.4	70.8	78.2	71.2
	AV	83.0	81.7	76.4	77.9	78.7	79.4	80.8	76.3	79.1	75.2	82.3	76.7
TC4	MAX	196.9	195.7	198.0	197.3	197.7	197.0	198.8	195.5	196.2	196.6	198.3	197.0
RADIATOR	MIN	80.9	79.6	72.5	78.1	75.7	76.6	79.9	76.3	79.1	73.3	73.5	77.4
	AV	144.5	133.6	136.8	139.7	141.5	134.6	139.9	137.1	141.3	137.3	145.5	142.3
TC5	MAX	176.0	173.9	171.9	172.9	172.4	169.4	167.9	168.4	169.4	165.4	175.5	175.9
OIL PAN	MIN	82.2	79.6	73.5	80.1	75.6	79.6	78.1	75.3	79.6	72.9	81.7	75.9
	AV	129.3	123.4	119.8	123.1	124.8	119.4	124.0	118.6	122.7	117.4	126.7	126.5
TC6	MAX	102.4	107.5	96.4	98.9	95.9	95.9	93.3	94.8	91.3	93.3	98.4	91.3
AIR	MIN	80.7	79.6	72.6	76.1	70.0	78.1	82.5	74.3	82.1	75.1	75.1	74.5
CLEANER	AV	88.9	88.9	84.8	84.6	81.8	87.1	86.2	83.0	86.5	86.2	83.4	81.0
TC7	MAX	31.9	24.3	76.1	79.1	75.9	78.1	79.8	79.8	78.1	82.2	80.7	76.5
VEHICLE	MIN	76.6	77.3	66.9	72.0	67.5	72.5	72.7	71.6	72.1	67.6	73.9	65.4
FRONT	AV	79.0	79.9	71.6	74.5	73.8	74.9	75.8	75.9	74.9	74.7	78.8	71.7
TC8	MAX	1138.	1174.	1219.	1134.	1134.	1097.	1119.	1087.	1102.	1112.	1116.	1113.
CATALYST	MIN	72.	72.	70.	72.	67.	74.	76.	80.	91.	78.	76.	104.
	AV	941.	930.	948.	873.	873.	829.	865.	839.	898.	842.	853.	921.

VEHICLE: CHRYSLER

TEST 4

TRACK RUN

FTP 867

1

2

RUN NUMBER

54

56

TC1 MAX
FUEL TANK MIN
VAPOR AV

85.7
75.1
78.9

89.0
80.0
83.7

TC2 MAX
OUTSIDE MIN
FUEL TANK AV

115.6
91.3
102.3

123.0
100.0
108.3

TC3 MAX
CARBURETOR MIN
AV

108.0
86.7
99.4

114.0
95.0
106.0

TC4 MAX
RADIATOR MIN
AV

206.8
196.8
202.3

212.0
202.0
205.8

TC5 MAX
OIL PAN MIN
AV

211.3
175.0
200.2

217.0
188.0
207.5

TC6 MAX
AIR MIN
CLEANER AV

122.3
107.0
116.0

127.0
115.0
121.5

TC7 MAX
VEHICLE MIN
FRONT AV

85.2
70.1
72.7

86.0
75.0
77.2

TC8 MAX
CATALYST MIN
AV

1125.
971.
1031.

1183.
1026.
1087.

B-7

VEHICLE: CHRYSLER

TEST 4

FAN CONFIGURATION

FTP 867

A		D		E		F		G		H	
SMALL	FRONT	SMALL	FRONT	SMALL	FRONT	LARGE	FRONT	LARGE	FRONT	SMALL	FRONT
		SMALL	SIDE					SMALL	SIDE		

1	2	1	2	1	2	1	2	1	2	1	2
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RUN NUMBER

26	28	30	32	34	36	42	44	38	40	46	48
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TC1	MAX	119.7	95.8	97.6	95.4	87.5	87.9	96.7	95.4	88.3	90.6	116.2	115.5
FUEL TANK	MIN	88.8	82.8	84.2	84.7	80.1	81.0	83.3	83.2	83.2	83.2	87.2	85.2
VAPOR	AV	107.6	89.5	92.9	91.6	84.1	84.4	91.2	90.1	85.6	87.6	103.7	103.0

TC2	MAX	154.1	106.2	117.4	107.0	92.3	93.5	102.0	100.9	88.3	94.0	163.2	144.4
OUTSIDE	MIN	128.6	93.8	106.2	92.3	85.5	82.7	94.6	93.3	84.8	87.5	124.3	120.2
FUEL TANK	AV	144.8	99.9	111.7	99.2	88.7	89.4	98.5	97.2	86.8	90.3	148.3	137.8

B-B

TC3	MAX	107.0	105.5	99.8	100.8	99.0	98.8	95.8	94.9	90.8	95.3	103.3	98.7
CARBURETOR	MIN	86.7	87.8	85.2	85.2	85.2	86.2	83.7	82.2	83.7	84.2	86.2	83.2
	AV	99.0	98.9	94.3	95.9	94.0	93.8	91.0	90.1	87.6	90.9	97.3	92.4

TC4	MAX	201.5	202.0	199.5	200.0	200.1	197.2	198.5	197.5	197.5	200.0	202.5	197.0
RADIATOR	MIN	190.0	188.5	187.7	189.5	190.4	188.2	188.0	188.0	188.3	189.6	190.0	187.6
	AV	195.7	196.7	194.5	195.2	195.2	193.5	193.8	193.2	192.8	193.9	194.9	192.6

TC5	MAX	211.0	210.9	205.7	207.6	206.9	205.6	201.2	201.0	199.5	200.2	208.7	206.0
OIL PAN	MIN	176.0	172.9	173.4	170.9	172.9	169.9	168.4	155.4	167.4	165.5	172.9	170.9
	AV	198.5	197.2	194.6	195.5	195.0	193.7	190.4	190.0	189.2	189.7	196.0	193.5

TC6	MAX	111.2	120.5	104.9	108.3	105.5	104.3	103.3	102.5	97.9	105.9	107.3	97.2
AIR	MIN	97.4	105.0	95.5	96.9	94.7	95.0	94.3	93.3	89.8	96.9	94.8	87.4
CLEANER	AV	105.5	113.1	100.1	103.3	99.9	100.2	99.6	98.9	94.1	101.6	102.3	92.4

TC7	MAX	83.7	85.2	76.3	80.1	77.7	77.5	79.0	78.6	76.1	82.2	82.6	75.0
VEHICLE	MIN	75.7	80.1	70.1	74.6	73.4	73.9	73.3	73.0	70.8	74.5	76.5	68.0
FRONT	AV	78.4	82.7	72.9	76.4	75.1	75.6	76.4	77.2	73.6	79.1	79.6	72.8

TC8	MAX	1132.	1166.	1114.	1110.	1078.	1089.	1046.	1029.	989.	1040.	1057.	1044.
CATALYST	MIN	933.	939.	929.	959.	956.	927.	918.	908.	923.	921.	951.	952.
	AV	984.	995.	966.	993.	991.	951.	956.	938.	951.	954.	980.	978.

VEHICLE: CHRYSLER

TEST 5

TRACK RUN

FTP HCT 505

1

2

RUN NUMBER

54

56

TC1	MAX	96.9
FUEL TANK	MIN	84.9
VAPOR	AV	89.0

100.0
90.0
92.4

TC2	MAX	108.6
OUTSIDE	MIN	97.6
FUEL TANK	AV	101.7

121.0
102.0
107.8

TC3	MAX	132.9
CARBURETOR	MIN	106.1
	AV	115.4

135.0
114.0
121.7

TC4	MAX	229.6
RADIATOR	MIN	199.9
	AV	204.2

225.0
202.0
209.4

TC5	MAX	215.1
OIL PAN	MIN	178.0
	AV	207.9

224.0
185.0
213.9

TC6	MAX	150.1
AIR	MIN	113.8
CLEANER	AV	126.7

157.0
125.0
137.1

TC7	MAX	82.7
VEHICLE	MIN	70.6
FRONT	AV	73.4

140.0
78.0
84.7

TC8	MAX	1271.
CATALYST	MIN	765.
	AV	1058.

1292.
810.
1108.

B-9

VEHICLE: CHRYSLER

TEST 5

FAN CONFIGURATION

FTP HCT 505

A D E F G H
SMALL FRONT SMALL FRONT SMALL FRONT LARGE FRONT LARGE FRONT SMALL FRONT
SMALL SIDE LARGE SIDE SMALL SIDE

1 2 1 2 1 2 1 2 1 2 1 2

FAN NUMBER		26	28	30	32	34	36	42	44	38	40	46	48
TC1 FUEL TANK VAPOR	MAX	122.8	94.6	97.4	96.5	89.9	89.6	96.5	90.9	89.2	94.4	119.1	115.1
	MIN	113.8	89.0	86.2	90.6	82.6	86.2	91.9	91.6	83.5	89.5	111.6	105.4
	AV	117.2	91.3	90.3	92.2	86.0	83.2	94.3	94.3	85.2	91.6	114.6	109.1
TC2 OUTSIDE FUEL TANK	MAX	149.1	104.0	111.2	105.1	99.6	97.4	104.1	102.3	90.2	94.9	153.3	146.5
	MIN	121.7	88.3	85.2	87.4	83.1	86.7	91.8	91.8	80.9	85.2	114.6	109.6
	AV	132.7	96.1	99.1	95.3	90.8	91.0	97.8	96.6	86.1	90.9	133.8	126.8
TC3 CARBURETOR	MAX	124.3	127.0	116.5	114.7	117.2	114.6	112.0	109.1	108.6	109.2	119.6	113.3
	MIN	105.4	104.1	98.0	100.4	98.6	98.9	95.7	95.3	91.0	94.8	104.5	98.3
	AV	112.4	112.0	105.0	105.7	104.9	104.0	101.5	99.4	98.5	99.6	110.0	104.0
TC4 RADIATOR	MAX	202.9	203.5	227.1	204.0	202.2	201.0	219.1	200.8	221.6	202.4	202.4	199.9
	MIN	189.5	188.1	179.0	182.5	187.0	184.5	177.9	183.0	180.8	183.6	185.5	182.0
	AV	197.3	197.5	195.1	195.8	196.3	195.3	194.2	193.8	192.7	195.2	196.1	194.0
TC5 OIL PAN	MAX	216.5	215.9	214.0	214.8	215.1	212.6	206.3	206.9	204.9	208.0	214.4	212.5
	MIN	170.5	182.5	168.4	173.4	186.5	174.5	164.4	170.4	169.4	165.9	175.4	168.4
	AV	207.0	205.3	200.9	201.7	203.6	202.2	195.6	197.1	191.8	197.6	202.9	200.3
TC6 AIR CLEANER	MAX	136.0	138.5	134.4	128.5	130.4	124.8	123.8	119.7	121.7	118.7	130.3	121.7
	MIN	106.3	112.5	99.3	102.6	102.2	102.5	100.9	97.6	89.3	97.9	103.7	94.2
	AV	112.6	119.3	107.1	110.6	108.0	107.9	105.7	102.3	99.3	105.4	110.9	100.3
TC7 VEHICLE FRONT	MAX	81.0	87.7	75.4	78.7	78.0	80.6	82.3	77.6	76.0	80.0	82.2	76.0
	MIN	74.1	78.7	69.0	70.5	72.8	72.0	71.5	69.5	68.7	72.8	76.0	65.9
	AV	78.3	82.8	71.9	75.7	75.5	76.9	76.9	75.5	73.5	73.1	79.6	73.5
TC8 CATALYST	MAX	1109.	1113.	1118.	1154.	1140.	1130.	1120.	1106.	1101.	1122.	1124.	1117.
	MIN	718.	693.	712.	620.	718.	718.	697.	684.	581.	707.	735.	748.
	AV	927.	928.	932.	925.	958.	932.	939.	911.	900.	922.	944.	955.

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VEHICLE: CHRYSLER

TEST 6

TRACK RUN

HOOR	SCAK	1	2
RUN	NUMBER	54	56
TC1	MAX	100.0	105.0
FUEL TANK	MIN	85.2	81.0
VAPOR	AV	93.8	100.7
TC2	MAX	121.5	125.0
OUTSIDE	MIN	82.7	87.0
FUEL TANK	AV	93.3	95.1
TC3	MAX	178.0	182.0
CARBURETOR	MIN	109.0	115.0
	AV	161.1	167.7
TC4	MAX	235.9	237.0
RADIATOR	MIN	174.0	189.0
	AV	210.2	213.4
TC5	MAX	216.6	222.0
OIL PAN	MIN	121.3	126.0
	AV	150.7	152.6
TC6	MAX	174.8	180.0
AIR	MIN	120.0	132.0
CLEANER	AV	162.5	170.4
TC7	MAX	145.4	138.0
VEHICLE	MIN	73.0	78.0
FRONT	AV	94.4	96.9
TC8	MAX	1110.	1204.
CATALYST	MIN	183.	208.
	AV	481.	486.

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VEHICLE: CHRYSLER

TEST 6

FAN CONFIGURATION

HOUR SOAK

A D E F G H
SMALL FRONT SMALL FRONT SMALL FRONT LARGE FRONT LARGE FRONT SMALL FRONT
SMALL SIDE LARGE SIDE

1 2 1 2 1 2 1 2 1 2 1 2

RUN NUMBER 26 28 30 32 34 36 42 44 38 40 46 48

TC1 MAX 0.0 0.0 0.0 99.4 90.0 95.9 102.0 98.6 92.5 102.5 121.5 117.2
FUEL TANK MIN 0.0 0.0 0.0 82.7 79.0 84.0 85.7 84.2 80.7 83.1 96.1 91.5
VAPOR AV 109.8 89.4 86.0 91.7 84.9 89.9 94.8 92.3 86.8 93.4 109.2 103.8

TC2 MAX 0.0 0.0 0.0 102.5 94.0 103.8 110.0 103.5 91.6 112.7 152.3 144.1
OUTSIDE MIN 0.0 0.0 0.0 79.2 76.6 79.1 79.6 77.8 70.1 78.0 84.3 83.3
FUEL TANK AV 108.5 86.8 82.1 87.2 81.0 87.9 89.5 85.6 81.7 89.1 107.7 97.2

TC3 MAX 0.0 0.0 0.0 159.4 160.4 158.4 156.7 162.5 151.3 163.2 168.5 162.2
CARBURETOR MIN 0.0 0.0 0.0 102.5 98.5 101.9 96.4 96.9 87.7 97.4 104.2 98.9
AV 147.5 157.7 150.8 143.3 144.3 143.5 138.5 144.4 136.4 145.6 150.5 144.1

TC4 MAX 0.0 0.0 0.0 228.9 226.2 226.9 215.6 220.6 217.4 223.2 226.5 222.0
RADIATOR MIN 0.0 0.0 0.0 154.2 162.5 158.9 152.7 159.0 137.4 167.1 168.3 167.0
AV 199.9 200.6 198.8 191.3 196.8 197.7 192.6 197.3 187.5 198.5 201.1 198.7

TC5 MAX 0.0 0.0 0.0 217.1 210.1 212.5 204.5 203.0 205.3 205.5 214.1 210.6
OIL PAN MIN 0.0 0.0 0.0 115.6 112.7 121.6 115.0 112.8 107.9 116.1 120.5 118.7
AV 151.3 139.6 142.9 149.1 143.2 149.9 142.6 141.8 137.5 145.8 151.3 146.4

TC6 MAX 0.0 0.0 0.0 150.7 152.4 151.2 147.5 151.7 145.3 150.9 156.5 151.1
AIR MIN 0.0 0.0 0.0 108.6 104.1 103.0 102.6 99.5 94.4 103.9 107.6 99.4
CLEANER AV 144.7 148.0 143.3 142.7 142.8 141.9 136.9 138.2 133.8 140.3 144.8 138.5

TC7 MAX 0.0 0.0 0.0 111.3 105.4 100.7 92.8 108.6 94.4 111.8 123.8 114.6
VEHICLE MIN 0.0 0.0 0.0 73.5 73.5 71.0 72.6 70.0 70.4 71.5 74.7 71.6
FRONT AV 93.9 99.2 93.2 92.6 91.2 90.0 84.0 93.9 85.4 97.4 105.3 105.2

TC8 MAX 1044. 1095. 1082. 1104. 1095. 1053. 1032. 1025. 1061. 1106. 1070. 1057.
CATALYST MIN 166. 161. 181. 175. 190. 208. 206. 172. 155. 135. 206. 210.
AV 471. 460. 473. 500. 494. 496. 493. 467. 437. 496. 496. 512.

NOTE: Zeros indicate data not computed.

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VEHICLE: CHRYSLER

TEST 7

TRACK RUN

PRECED 505

1

2

RUN NUMBER

54

56

TC1 MAX 92.8
FUEL TANK MIN 85.6
VAPOR AV 88.2

99.0
91.0
94.1

TC2 MAX 105.9
OUTSIDE MIN 86.8
FUEL TANK AV 94.9

112.0
92.0
101.9

TC3 MAX 172.0
CARBURETOR MIN 104.6
AV 120.2

180.0
115.0
132.2

TC4 MAX 207.0
RADIATOR MIN 173.5
AV 199.0

211.0
187.0
204.1

TC5 MAX 208.5
OIL PAN MIN 123.8
AV 188.0

214.0
125.0
189.1

TC6 MAX 166.9
AIR MIN 108.2
CLEANER AV 120.8

176.0
125.0
134.9

TC7 MAX 96.4
VEHICLE MIN 72.3
FRONT AV 75.9

95.0
78.0
82.4

TC8 MAX 1226.
CATALYST MIN 136.
AV 921.

1263.
210.
1023.

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VEHICLE: CHRYSLER

TEST 7

FAN CONFIGURATION

PRECAD 505

A D E F G H
SMALL FRONT SMALL FRONT SMALL FRONT LARGE FRONT LARGE FRONT SMALL FRONT
SMALL SIDE LARGE SIDE

1 2 1 2 1 2 1 2 1 2 1 2

RUN NUMBER 26 28 30 32 34 36 42 44 38 40 46 48

TC1 MAX 98.4 90.3 89.1 90.8 87.7 86.2 92.6 90.7 88.7 89.6 105.0 102.4
FUEL TANK MIN 92.3 84.7 78.9 84.0 80.7 82.2 84.4 82.2 80.2 81.3 96.9 90.0
VAPOR AV 94.7 87.5 83.5 86.7 83.5 84.5 87.8 85.8 84.1 85.2 100.1 94.5

TC2 MAX 102.4 97.4 106.5 101.4 94.8 88.8 97.6 97.3 92.8 90.6 130.9 127.2
OUTSIDE MIN 84.2 83.2 77.7 81.7 78.6 78.6 79.4 79.6 78.7 78.4 89.3 85.4
FUEL TANK AV 91.7 90.4 92.0 90.2 85.9 84.2 89.2 89.2 86.5 85.5 107.2 102.9

TC3 MAX 141.5 163.4 160.4 153.7 151.7 150.2 144.6 144.6 133.4 157.9 161.9 158.9
CARBURETOR MIN 130.4 104.5 98.1 97.5 96.9 95.9 93.2 92.1 89.5 94.7 100.7 100.5
AV 109.4 116.7 110.6 108.8 108.7 105.3 104.7 102.7 97.9 108.0 115.1 111.7

TC4 MAX 202.0 203.5 200.0 200.2 200.9 199.0 198.0 198.8 199.0 198.6 200.9 199.1
RADIATOR MIN 141.3 163.4 164.7 157.5 160.9 154.2 147.7 151.7 132.5 159.1 160.4 164.4
AV 186.8 192.5 190.9 190.7 190.8 188.7 184.6 186.6 184.1 188.0 190.3 189.8

TC5 MAX 203.5 205.0 204.4 203.0 201.5 201.0 196.0 196.9 193.9 197.1 203.0 201.5
OIL PAN MIN 112.1 117.2 114.6 119.2 117.2 126.3 115.6 114.6 109.1 116.2 126.3 119.7
AV 177.8 181.8 180.4 180.3 178.3 181.6 172.3 176.5 171.6 175.3 180.2 178.0

TC6 MAX 120.1 142.5 133.9 129.9 132.4 119.7 120.7 112.6 104.5 134.4 139.5 133.9
AIR MIN 90.0 100.9 90.7 88.5 88.8 85.7 83.4 83.8 83.3 89.6 95.2 87.2
CLEANER AV 105.2 115.6 100.3 101.2 100.3 96.4 96.0 93.6 92.4 99.0 102.3 97.4

TC7 MAX 97.8 89.8 76.1 80.0 80.6 75.6 79.2 77.1 78.3 79.9 81.1 79.6
VEHICLE MIN 81.2 81.7 68.9 71.5 74.9 72.0 71.4 69.5 71.3 69.5 74.4 70.0
FRONT AV 85.1 86.5 72.1 75.4 77.4 73.7 76.4 74.8 75.6 76.8 78.2 77.0

TC8 MAX 1108. 1125. 1093. 1131. 1108. 1089. 1074. 1074. 1091. 1093. 1093. 1102.
CATALYST MIN 163. 159. 183. 190. 138. 210. 203. 172. 152. 190. 203. 203.
AV 836. 872. 825. 869. 834. 828. 825. 804. 815. 864. 810. 834.

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VEHICLE: CHRYSLER

TEST 8

TRACK RUN

FIRST MIN IDLE		1	2
RUN NUMBER		54	56
TC1	MAX	90.3	95.3
FUEL TANK	MIN	86.6	92.9
VAPOR	AV	88.5	94.1
TC2	MAX	105.0	117.2
OUTSIDE	MIN	102.3	106.5
FUEL TANK	AV	103.5	109.9
TC3	MAX	112.1	120.3
CARBURETOR	MIN	108.0	118.0
	AV	109.8	119.1
TC4	MAX	207.7	216.0
RADIATOR	MIN	205.5	205.1
	AV	206.7	210.7
TC5	MAX	208.3	215.6
OIL PAN	MIN	205.6	210.8
	AV	207.2	213.4
TC6	MAX	138.0	140.6
AIR	MIN	127.8	137.0
CLEANER	AV	132.4	139.1
TC7	MAX	79.0	85.8
VEHICLE	MIN	77.6	81.1
FRONT	AV	78.3	84.0
TC8	MAX	1219.	1110.
CATALYST	MIN	1046.	970.
	AV	1140.	1031.

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VEHICLE: CHRYSLER

TEST 8

FAN CONFIGURATION

FIRST MIN IDLE		A		D		E		F		G		H	
		SMALL FRONT		SMALL FRONT SMALL SIDE		SMALL FRONT LARGE SIDE		LARGE FRONT		LARGE FRONT SMALL SIDE		SMALL FRONT	
		1	2	1	2	1	2	1	2	1	2	1	2
RUN NUMBER		26	28	30	32	34	36	42	44	38	40	46	48
TC1 FUEL TANK VAPOR	MAX	96.2	91.8	92.3	92.3	85.9	85.5	94.8	93.0	90.3	93.3	104.9	103.5
	MIN	91.3	87.7	86.7	88.8	83.7	83.7	89.7	89.7	86.4	89.3	103.0	100.2
	AV	94.1	89.8	90.0	90.3	84.6	84.7	92.5	91.3	88.0	90.7	104.2	101.8
TC2 OUTSIDE FUEL TANK	MAX	100.2	99.4	107.0	99.4	89.8	86.7	99.8	97.9	90.3	93.3	133.5	138.4
	MIN	95.4	93.8	100.4	92.3	87.7	84.3	97.3	94.6	86.0	89.8	128.8	126.8
	AV	96.7	96.3	104.6	95.2	88.7	85.3	98.4	96.1	87.4	90.5	131.6	132.7
TC3 CARBURETOR	MAX	105.0	110.1	100.9	102.5	99.9	97.9	97.7	97.9	93.4	98.9	103.8	105.5
	MIN	102.0	105.5	98.9	99.1	98.1	96.2	95.7	93.2	91.0	94.6	102.2	102.6
	AV	104.0	108.0	100.0	100.4	98.3	96.8	97.0	95.5	91.9	96.0	103.0	103.4
TC4 RADIATOR	MAX	200.6	201.5	202.5	199.7	200.0	197.5	197.5	199.3	195.2	199.5	200.5	200.2
	MIN	197.4	196.5	196.5	194.0	195.7	193.7	194.0	192.7	187.9	193.1	195.6	194.5
	AV	199.0	199.8	198.3	197.6	197.0	195.9	195.8	195.7	192.6	196.6	198.0	197.1
TC5 OIL PAN	MAX	205.0	205.5	204.0	204.4	204.0	202.9	197.1	198.9	196.7	199.7	205.0	203.6
	MIN	199.8	201.5	200.0	198.6	201.5	200.0	193.0	192.4	192.4	194.1	198.7	200.4
	AV	201.8	203.4	200.9	201.7	202.9	201.9	195.2	196.5	194.2	197.7	202.1	201.4
TC6 AIR CLEANER	MAX	120.8	126.3	109.6	112.4	105.5	106.5	103.0	101.5	100.0	104.2	105.0	102.7
	MIN	116.5	122.3	104.0	105.5	102.1	102.3	98.3	97.9	95.7	98.4	102.1	100.9
	AV	113.1	124.9	106.2	110.2	103.3	103.9	100.7	99.5	97.8	101.5	103.1	102.2
TC7 VEHICLE FRONT	MAX	36.7	91.3	74.0	77.1	78.0	76.0	77.3	72.8	77.7	78.4	80.8	80.7
	MIN	83.7	85.7	71.0	73.5	74.0	74.1	73.1	70.2	72.7	74.0	74.3	76.1
	AV	84.9	87.9	72.7	75.5	76.3	74.8	75.2	71.4	75.2	77.0	76.3	78.8
TC8 CATALYST	MAX	1055.	1057.	950.	1074.	1038.	1021.	1027.	1038.	1085.	1034.	1059.	1091.
	MIN	915.	926.	896.	970.	961.	930.	936.	936.	949.	923.	943.	959.
	AV	988.	979.	909.	1006.	994.	966.	962.	967.	1007.	949.	986.	1005.

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VEHICLE: CHRYSLER

TEST 9

TRACK RUN

FIRST S-7

1

2

RUN NUMBER

54

56

TC1 MAX
FUEL TANK MIN
VAPOR AV

97.9
87.2
92.6

105.0
94.0
99.0

TC2 MAX
OUTSIDE MIN
FUEL TANK AV

124.3
100.7
107.2

130.0
110.0
112.2

TC3 MAX
CARBURETOR MIN
AV

116.9
106.7
111.3

122.0
115.0
118.2

TC4 MAX
RADIATOR MIN
AV

207.5
200.2
204.0

210.0
204.0
207.1

TC5 MAX
OIL PAN MIN
AV

229.7
205.0
218.9

232.0
210.0
223.3

TC6 MAX
AIR MIN
CLEANER AV

137.0
119.9
126.9

142.0
128.0
133.6

TC7 MAX
VEHICLE MIN
FRONT AV

77.6
70.1
73.6

85.0
79.0
80.4

TC8 MAX
CATALYST MIN
AV

1383.
1000.
1179.

1365.
943.
1192.

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VEHICLE: CHRYSLER

TEST 9

FAN CONFIGURATION

FIRST 5-7

A		D		E		F		G		H	
SMALL FRONT		SMALL FRONT SMALL SIDE		SMALL FRONT LARGE SIDE		LARGE FRONT		LARGE FRONT SMALL SIDE		SMALL FRONT	
1	2	1	2	1	2	1	2	1	2	1	2

RUN NUMBER

26	28	30	32	34	36	42	44	38	40	46	48
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TC1 FUEL TANK VAPOR	MAX	111.5	106.0	106.5	111.6	99.9	97.6	105.5	100.8	98.9	96.9	132.9	129.9
	MIN	94.5	89.8	88.8	90.0	84.2	84.7	92.0	89.3	86.2	88.5	100.0	102.0
	AV	102.5	98.3	99.1	100.8	90.5	90.8	98.3	90.9	93.5	93.7	119.3	119.2

TC2 OUTSIDE FUEL TANK	MAX	117.5	118.6	129.3	125.2	110.5	107.5	115.1	109.6	101.9	93.9	168.9	176.4
	MIN	99.0	97.9	100.9	93.3	86.6	85.7	95.5	95.4	86.6	83.8	131.3	132.1
	AV	108.9	109.0	117.7	112.1	98.8	96.7	105.4	102.8	96.3	94.5	149.4	152.3

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TC3 CARBURETOR	MAX	119.2	121.2	107.6	113.1	107.8	107.8	104.3	100.9	100.9	99.5	112.6	114.7
	MIN	106.6	108.0	98.7	100.6	97.9	98.4	92.8	92.6	91.5	93.9	100.0	102.0
	AV	113.0	114.4	103.2	107.2	102.9	103.4	98.5	97.0	96.7	97.1	106.8	109.1

TC4 RADIATOR	MAX	210.6	209.5	203.8	205.5	204.6	205.1	205.5	203.5	203.0	202.7	204.0	205.1
	MIN	193.0	194.0	191.6	192.5	191.3	191.0	189.3	187.6	189.2	189.1	188.9	191.2
	AV	202.0	202.0	198.6	199.9	198.3	198.9	197.0	196.7	196.9	197.7	197.3	198.4

TC5 OIL PAN	MAX	236.2	238.1	231.8	235.1	232.3	232.7	226.1	225.0	222.5	224.3	227.6	230.1
	MIN	203.0	205.0	200.0	202.9	200.0	201.0	192.1	191.7	192.2	194.5	198.3	201.2
	AV	221.6	223.7	217.5	220.6	216.0	213.2	210.3	210.2	210.6	211.0	215.4	217.0

TC6 AIR CLEANER	MAX	142.5	141.0	113.3	125.8	114.8	118.8	117.1	109.9	110.5	112.3	112.1	113.0
	MIN	117.3	122.3	102.4	106.2	101.1	103.0	98.2	96.8	95.1	99.6	99.0	101.8
	AV	129.0	131.5	108.2	115.9	109.0	111.8	107.0	103.5	104.2	106.5	106.1	108.1

TC7 VEHICLE FRONT	MAX	94.6	96.4	77.5	94.0	80.4	79.0	79.7	78.4	81.2	80.5	81.1	84.1
	MIN	84.2	86.2	71.3	75.1	73.0	73.4	69.6	68.1	68.4	73.0	71.5	74.1
	AV	89.4	91.5	73.5	79.4	77.0	76.4	76.3	75.3	77.2	77.4	77.4	80.0

TC8 CATALYST	MAX	1204.	1303.	1203.	1252.	1236.	1211.	1259.	1221.	1217.	1222.	1252.	1239.
	MIN	850.	867.	901.	931.	928.	874.	886.	875.	892.	847.	889.	907.
	AV	1168.	1151.	1074.	1057.	1096.	1077.	1070.	1053.	1067.	1079.	1081.	1085.

VEHICLE: CHRYSLER

TEST 10

TRACK RUN

5 MIN SOAK

1

2

RUN NUMBER

54

56

TC1 MAX
FUEL TANK MIN
VAPOR AV

104.0
95.5
93.7

107.0
102.0
104.0

TC2 MAX
OUTSIDE MIN
FUEL TANK AV

127.8
107.5
120.0

140.0
110.0
128.5

TC3 MAX
CARBURETOR MIN
AV

126.8
108.6
117.9

125.0
115.0
119.5

TC4 MAX
RADIATOR MIN
AV

238.5
205.0
229.7

242.0
209.0
228.5

TC5 MAX
OIL PAN MIN
AV

222.1
196.7
208.6

230.0
207.0
220.0

TC6 MAX
AIR MIN
CLEANER AV

133.9
120.4
126.2

135.0
129.0
131.5

TC7 MAX
VEHICLE MIN
FRONT AV

80.6
75.6
78.0

86.0
80.0
83.5

TC8 MAX
CATALYST MIN
AV

1310.
1053.
1162.

1316.
1080.
1189.

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VEHICLE: CHRYSLER

TEST 10

FAN CONFIGURATION

5 MIN SCAK

A		D		E		F		G		H	
SMALL FRONT		SMALL FRONT SMALL SIDE		SMALL FRONT LARGE SIDE		LARGE FRONT		LARGE FRONT SMALL SIDE		SMALL FRONT	
1	2	1	2	1	2	1	2	1	2	1	2

PUN NUMBER

26	28	30	32	34	36	42	44	38	40	46	48
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TC1	MAX	109.8	108.6	109.1	109.8	98.2	97.5	108.9	105.1	101.4	98.4	133.6	130.2
FUEL TANK	MIN	106.4	103.0	104.6	103.9	93.5	93.1	101.5	99.4	95.9	93.8	129.9	124.3
VAPOR	AV	105.0	105.1	106.8	107.2	96.0	95.3	106.0	102.7	99.1	96.3	131.3	127.3

TC2	MAX	117.2	116.7	122.3	113.1	99.9	107.1	120.0	111.0	116.7	98.9	166.6	172.7
OUTSIDE	MIN	103.3	101.4	107.9	95.2	90.4	92.7	106.5	102.0	97.4	90.3	155.7	167.4
FUEL TANK	AV	108.3	106.8	112.3	102.8	94.2	100.6	114.7	106.1	106.7	94.5	163.6	170.4

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TC3	MAX	129.4	132.4	112.6	119.7	116.2	115.2	109.9	107.1	108.0	109.6	116.5	117.9
CARBURETOR	MIN	118.3	119.2	105.6	110.6	105.9	106.4	101.5	99.4	99.9	98.4	108.3	110.8
	AV	123.6	125.0	108.5	115.1	110.8	110.9	106.2	103.2	104.1	104.1	111.8	113.4

TC4	MAX	236.0	239.1	232.6	233.6	234.7	240.2	236.6	238.1	223.1	236.1	233.6	223.5
RADIATOR	MIN	204.1	203.5	198.4	201.0	202.4	200.0	187.0	198.5	189.0	199.0	199.5	198.0
	AV	219.8	220.6	209.2	216.8	215.1	214.2	211.1	209.1	207.5	212.8	212.3	207.2

TC5	MAX	235.6	232.1	231.6	230.6	230.6	228.2	222.6	220.6	219.6	220.1	226.1	228.1
OIL PAN	MIN	202.9	206.0	203.9	205.0	203.6	203.5	195.4	189.0	194.0	193.5	201.0	206.2
	AV	216.3	219.1	215.3	217.1	216.0	215.5	205.3	202.5	205.2	204.2	212.1	215.2

TC6	MAX	149.6	153.7	131.8	142.0	133.0	133.2	123.7	121.5	125.3	122.8	131.9	129.3
AIR	MIN	136.4	137.0	114.4	123.8	113.5	117.7	109.2	104.3	106.0	106.0	108.4	110.1
CLEANER	AV	142.2	144.6	121.4	132.9	123.1	124.6	115.9	112.4	116.3	114.9	118.5	118.1

TC7	MAX	105.1	114.1	109.3	84.4	108.7	84.7	81.5	79.9	93.3	76.6	88.4	85.4
VEHICLE	MIN	87.2	88.3	71.6	78.6	74.5	71.5	71.0	70.5	73.0	71.5	73.0	70.5
FRONT	AV	99.4	101.4	92.4	81.7	94.9	78.8	76.6	76.8	86.3	75.2	80.8	80.4

TC8	MAX	1232.	1224.	1078.	1117.	1125.	1093.	1104.	1074.	1076.	1110.	1095.	1089.
CATALYST	MIN	1038.	1059.	939.	997.	1008.	966.	987.	962.	951.	937.	989.	970.
	AV	1125.	1135.	985.	1063.	1070.	1027.	1039.	1022.	1007.	1047.	1040.	1020.

VEHICLE: CHRYSLER

TEST 11

TRACK RUN

PFET		1	2
RUN NUMBER		54	56
TC1	MAX	104.7	111.0
FUEL TANK	MIN	98.4	104.0
VAPOR	AV	101.5	106.4
TC2	MAX	129.4	135.4
CUTSIDE	MIN	101.5	107.3
FUEL TANK	AV	105.4	110.8
TC3	MAX	129.4	131.9
CARBURETOR	MIN	109.5	113.7
	AV	114.5	118.6
TC4	MAX	207.4	210.0
RADIATOR	MIN	197.2	202.0
	AV	203.2	206.4
TC5	MAX	230.7	232.2
OIL PAN	MIN	199.5	211.1
	AV	223.7	226.8
TC6	MAX	148.7	150.6
AIR	MIN	118.7	124.3
CLEANER	AV	124.6	130.1
TC7	MAX	81.2	83.2
VEHICLE	MIN	72.0	78.7
FRONT	AV	74.6	80.1
TC8	MAX	1392.	1355.
CATALYST	MIN	966.	953.
	AV	1193.	1178.

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VEHICLE: CHRYSLER

TEST 11

FAN CONFIGURATION

HFET		A		D		E		F		G		H	
		SMALL FRONT		SMALL FRONT SMALL SIDE		SMALL FRONT LARGE SIDE		LARGE FRONT		LARGE FRONT SMALL SIDE		SMALL FRONT	
		1	2	1	2	1	2	1	2	1	2	1	2
RUN NUMBER		26	28	30	32	34	36	42	44	38	40	46	48
TC1 FUEL TANK VAPOR	MAX	112.4	109.6	109.9	111.2	102.0	100.1	110.1	107.4	102.5	100.1	134.7	133.8
	MIN	105.3	101.7	105.6	98.4	92.3	92.3	101.9	97.6	96.4	93.9	129.4	127.8
	AV	108.7	106.1	107.3	104.6	97.2	96.3	104.1	101.6	98.8	96.5	132.3	130.3
TC2 OUTSIDE FUEL TANK	MAX	118.1	120.8	131.2	130.5	112.6	108.0	116.7	109.6	102.0	101.4	159.5	161.4
	MIN	105.0	102.0	109.1	89.8	91.3	90.6	102.1	100.4	96.3	92.8	147.0	143.9
	AV	111.9	112.3	122.5	118.1	104.7	101.2	108.6	105.0	99.0	97.0	152.0	149.6
B-22 TC3 CARBURETOR	MAX	132.9	134.5	119.3	124.3	119.3	117.6	111.8	110.1	113.1	109.1	123.2	123.8
	MIN	115.9	118.1	105.2	106.5	105.4	105.1	100.6	98.2	99.4	97.6	110.8	113.3
	AV	120.6	121.9	109.4	111.8	109.8	103.8	103.9	101.8	102.1	101.0	115.4	116.9
TC4 RADIATOR	MAX	209.0	206.5	204.7	204.1	205.5	204.3	203.5	203.0	201.6	203.1	202.8	203.0
	MIN	195.4	194.5	193.2	192.5	192.6	190.4	187.5	190.9	192.4	187.0	193.5	193.9
	AV	201.8	201.4	200.1	199.1	199.6	199.1	198.6	198.5	198.0	199.0	198.2	198.9
TC5 OIL PAN	MAX	240.0	239.1	233.6	235.7	230.6	234.1	227.9	227.6	225.5	227.1	231.7	230.6
	MIN	221.1	223.6	215.1	208.0	215.1	211.6	205.0	209.0	209.5	205.1	211.0	216.5
	AV	232.2	232.0	226.2	226.5	227.1	225.9	218.5	218.8	218.9	218.9	223.3	224.0
TC6 AIR CLEANER	MAX	150.2	153.2	130.9	140.0	132.4	131.9	117.7	117.2	120.7	117.2	132.2	123.8
	MIN	128.6	131.0	107.3	111.1	103.2	111.0	106.6	103.4	103.2	105.2	106.0	106.8
	AV	134.8	137.2	112.3	117.7	115.0	117.3	111.6	108.2	108.5	110.5	112.3	111.5
TC7 VEHICLE FRONT	MAX	93.6	101.1	77.1	82.2	80.6	80.4	79.9	79.2	76.4	79.3	81.3	81.2
	MIN	86.6	88.9	69.5	73.0	73.8	73.8	69.9	71.2	70.9	70.0	72.6	75.1
	AV	90.5	93.6	73.4	78.1	76.9	77.2	75.6	76.0	74.2	76.6	77.7	78.9
TC8 CATALYST	MAX	1262.	1258.	1146.	1174.	1109.	1158.	1142.	1121.	1146.	1151.	1167.	1166.
	MIN	936.	943.	866.	865.	899.	875.	869.	848.	898.	877.	909.	934.
	AV	1129.	1147.	1039.	1053.	1063.	1054.	1041.	1017.	1030.	1039.	1052.	1057.

VEHICLE: CHRYSLER

TEST 12

TRACK RUN

SECOND MIN IDLE		1	2
RUN NUMBER		54	56
TC1	MAX	100.9	105.0
FUEL TANK	MIN	99.9	104.0
VAPOR	AV	100.3	104.5
TC2	MAX	134.4	128.3
OUTSIDE	MIN	107.5	119.2
FUEL TANK	AV	122.3	123.6
TC3	MAX	113.1	118.7
CARBURETOR	MIN	109.1	115.1
	AV	112.0	117.1
TC4	MAX	207.1	207.5
RADIATOR	MIN	205.7	205.0
	AV	206.6	205.8
TC5	MAX	226.7	229.1
OIL PAN	MIN	222.5	225.1
	AV	224.2	227.0
TC6	MAX	132.8	139.0
AIR	MIN	123.3	129.4
CLEANER	AV	127.2	135.5
TC7	MAX	78.1	83.7
VEHICLE	MIN	75.1	81.7
FRONT	AV	76.6	82.7
TC8	MAX	1106.	1153.
CATALYST	MIN	1030.	1019.
	AV	1052.	1076.

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VEHICLE: CHRYSLER

TEST 12

FAN CONFIGURATION

SECOND MIN IDLE

A D E F G H
SMALL FRONT SMALL FRONT SMALL FRONT LARGE FRONT LARGE FRONT SMALL FRONT
SMALL SIDE LARGE SIDE SMALL SIDE

1 2 1 2 1 2 1 2 1 2 1 2 1 2

RUN NUMBER

26 28 30 32 34 36 42 44 38 40 46 48

TC1 MAX 113.1 110.8 108.6 111.6 102.0 99.4 105.4 103.3 99.0 93.9 134.5 139.9
FUEL TANK MIN 109.8 106.5 108.0 108.6 98.9 95.5 104.4 101.0 98.1 94.3 131.6 129.4
VAPOR AV 111.7 108.7 108.4 110.0 101.0 97.0 104.7 102.2 98.6 97.2 132.9 135.3

TC2 MAX 117.7 113.7 124.3 121.2 103.5 103.0 115.6 110.0 101.2 96.4 167.5 188.9
OUTSIDE MIN 116.2 111.1 116.2 104.5 97.9 94.3 113.4 105.5 97.9 94.3 162.9 139.4
FUEL TANK AV 116.9 112.7 119.7 114.6 101.4 98.2 114.0 107.5 100.0 95.4 165.7 158.9

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TC3 MAX 122.3 123.8 108.6 113.1 110.1 109.6 105.0 103.0 105.3 103.0 116.6 121.8
CARBURETOR MIN 121.1 121.5 107.0 112.1 108.0 108.9 103.5 100.5 101.4 100.9 113.3 113.6
AV 121.5 122.8 108.1 112.6 109.0 109.2 104.5 101.5 104.0 102.2 114.4 117.2

TC4 MAX 206.2 206.6 204.0 203.5 206.0 202.8 204.0 198.6 201.1 201.0 202.0 204.0
RADIATOR MIN 203.9 202.3 199.5 200.0 199.0 198.5 193.3 193.3 195.3 196.5 199.8 191.3
AV 204.9 204.3 201.3 202.4 202.3 201.3 200.3 195.7 197.7 193.5 200.9 197.6

TC5 MAX 236.4 236.6 233.6 234.1 234.6 231.4 226.6 222.2 222.6 226.6 230.2 231.3
OIL PAN MIN 233.6 233.9 228.1 230.1 228.6 227.1 220.6 217.9 220.0 222.6 227.8 218.5
AV 235.4 234.8 230.2 232.0 231.4 230.0 224.4 219.9 221.3 223.7 229.2 223.4

TC6 MAX 144.1 150.2 118.2 129.8 121.2 121.4 115.2 108.8 113.2 115.1 114.7 115.2
AIR MIN 137.5 142.5 111.1 120.2 116.2 118.2 111.1 103.9 109.3 110.6 112.3 104.9
CLEANER AV 141.2 144.3 113.5 124.3 118.4 119.4 113.4 106.9 110.8 112.1 113.3 109.5

TC7 MAX 91.3 94.8 71.5 79.1 79.6 79.7 78.3 77.1 76.2 76.6 78.6 83.6
VEHICLE MIN 90.3 91.7 70.5 76.6 76.6 76.1 73.5 69.1 72.8 71.5 73.3 71.3
FRONT AV 90.7 92.6 71.0 78.1 78.2 76.2 76.5 71.3 74.3 74.2 75.1 78.7

TC8 MAX 1200. 1224. 1112. 1136. 1138. 1123. 1097. 1083. 1101. 1100. 1105. 1129.
CATALYST MIN 1017. 1089. 1051. 1074. 1074. 1003. 1025. 1015. 1050. 1027. 1043. 1054.
AV 1123. 1158. 1084. 1109. 1112. 1077. 1061. 1051. 1079. 1063. 1077. 1001.

VEHICLE: CHRYSLER

TEST 13

TRACK RUN

SECOND S-7

1

2

PUN NUMBER

54

56

TC1 MAX
FUEL TANK MIN
VAPOR AV

106.6
100.3
103.6

111.1
105.3
108.3

TC2 MAX
OUTSIDE MIN
FUEL TANK AV

127.9
103.8
110.4

134.4
108.0
115.3

TC3 MAX
CARBURETOR MIN
AV

121.8
110.9
115.8

125.4
113.1
119.9

TC4 MAX
RADIATOR MIN
AV

207.9
198.9
202.9

208.8
200.5
206.2

TC5 MAX
OIL PAN MIN
AV

227.7
219.1
222.2

230.8
222.5
226.8

TC6 MAX
AIR MIN
CLEANER AV

147.1
120.6
128.7

143.6
122.3
132.4

TC7 MAX
VEHICLE MIN
FRONT AV

76.6
70.1
73.2

83.7
78.8
80.5

TC8 MAX
CATALYST MIN
AV

1366.
998.
1187.

1394.
969.
1186.

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VEHICLE: CHRYSLER

TEST 13

FAN CONFIGURATION

SECOND S-7

A		D		E		F		G		H	
SMALL FRONT		SMALL FRONT SMALL SIDE		SMALL FRONT LARGE SIDE		LARGE FRONT		LARGE FRONT SMALL SIDE		SMALL FRONT	
1	2	1	2	1	2	1	2	1	2	1	2

RUN NUMBER

26	28	30	32	34	36	42	44	38	40	46	48
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TC1 FUEL TANK VAPOR	MAX	118.2	114.0	112.6	115.7	104.2	100.4	107.0	106.0	102.1	98.9	143.8	134.4
	MIN	109.3	106.5	107.5	106.4	94.2	94.3	102.6	97.9	96.1	92.4	132.9	131.9
	AV	113.9	110.1	109.6	110.3	98.5	97.1	104.6	100.9	98.8	95.6	139.2	133.4

TC2 OUTSIDE FUEL TANK	MAX	125.1	121.1	132.4	130.9	115.1	109.1	114.1	109.1	104.4	100.4	182.3	179.0
	MIN	114.7	110.6	116.7	97.9	95.0	94.8	107.9	101.4	97.0	90.8	161.7	166.4
	AV	118.0	114.7	125.1	121.0	103.5	100.7	111.1	105.2	100.0	95.9	169.9	171.2

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TC3 CARBURETOR	MAX	126.3	126.3	112.1	115.1	112.7	113.0	105.5	104.0	104.9	103.5	121.4	117.2
	MIN	118.5	119.7	107.5	109.3	105.3	107.3	101.6	97.8	99.9	96.8	113.6	114.1
	AV	121.6	122.9	109.6	112.3	108.8	109.5	103.6	100.1	102.4	99.5	116.7	115.8

TC4 RADIATOR	MAX	211.8	207.3	206.2	204.6	205.1	206.0	205.0	203.0	205.0	202.8	203.6	202.0
	MIN	195.1	197.5	194.0	194.4	192.6	194.8	191.5	188.8	191.0	189.0	194.0	196.5
	AV	201.2	202.2	199.8	199.2	199.4	199.2	197.8	197.2	197.5	197.1	198.6	199.1

TC5 OIL PAN	MAX	239.5	237.9	232.1	233.0	234.6	232.1	224.5	224.6	225.6	225.7	231.1	229.6
	MIN	221.1	223.3	218.2	219.5	216.7	218.4	210.9	207.5	209.2	207.5	216.2	224.6
	AV	230.1	230.4	225.1	226.8	225.3	224.5	217.5	215.4	216.3	216.4	223.0	226.3

TC6 AIR CLEANER	MAX	146.6	148.1	121.7	127.8	120.4	124.2	116.1	111.1	113.6	115.2	117.2	112.1
	MIN	131.3	137.0	106.9	112.3	107.0	114.1	107.1	101.3	104.2	103.9	105.6	109.1
	AV	135.9	141.8	111.5	117.6	113.3	117.7	111.0	105.4	107.8	108.4	110.7	110.3

TC7 VEHICLE FRONT	MAX	95.6	99.4	77.3	80.4	80.2	85.2	73.4	78.6	81.1	79.0	82.3	75.6
	MIN	87.3	92.3	71.2	74.0	74.7	75.6	71.0	70.4	72.1	63.0	72.0	74.0
	AV	91.5	95.0	73.9	77.1	77.2	81.0	76.0	74.9	77.5	75.5	78.5	74.6

TC8 CATALYST	MAX	1318.	1349.	1178.	1224.	1225.	1201.	1222.	1157.	1169.	1173.	1177.	1200.
	MIN	903.	979.	947.	955.	956.	948.	934.	879.	927.	915.	954.	962.
	AV	1157.	1185.	1077.	1102.	1100.	1089.	1075.	1034.	1058.	1051.	1083.	1087.

VEHICLE: CHRYSLER

TEST 14

TRACK RUN

THIRD MIN IDLE		1	2
RUN NUMBER		54	56
TC1	MAX	106.3	112.0
FUEL TANK	MIN	104.5	109.3
VAPOR	AV	105.4	110.8
TC2	MAX	114.6	150.0
OUTSIDE	MIN	104.9	134.9
FUEL TANK	AV	108.4	146.5
TC3	MAX	117.4	119.2
CARBURETOR	MIN	114.1	115.7
	AV	116.0	117.8
TC4	MAX	208.6	207.1
RADIATOR	MIN	206.5	204.2
	AV	207.9	205.6
TC5	MAX	223.9	227.8
LIL PAN	MIN	222.5	226.5
	AV	223.4	227.1
TC6	MAX	146.0	140.5
AIR	MIN	134.4	133.9
CLEANER	AV	141.0	136.6
TC7	MAX	79.5	83.1
VEHICLE	MIN	75.6	80.4
FRONT	AV	77.4	81.7
TC8	MAX	1267.	1176.
CATALYST	MIN	1076.	1042.
	AV	1142.	1146.

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VEHICLE: CHRYSLER

TEST 14

FAN CONFIGURATION

THIRD MIN IDLE

A		D		E		F		G		H	
SMALL	FRONT	SMALL	FRONT	SMALL	FRONT	LARGE	FRONT	LARGE	FRONT	SMALL	FRONT
		SMALL	SIDE	LARGE	SIDE			SMALL	SIDE		

1	2	1	2	1	2	1	2	1	2	1	2
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RUN NUMBER		26	28	30	32	34	36	42	44	38	40	46	48
TC1	MAX	117.4	113.4	112.1	115.4	103.0	100.4	106.5	103.6	101.7	98.9	142.5	131.4
FUEL TANK	MIN	114.2	110.0	110.6	114.3	99.4	97.4	104.9	101.4	98.9	95.7	139.0	128.8
VAPOR	AV	115.8	112.3	111.3	114.7	101.3	98.9	105.4	102.2	101.0	97.8	141.8	129.7
TC2	MAX	122.6	116.4	121.2	121.4	104.5	97.9	114.1	110.5	101.2	94.4	182.5	177.0
OUTSIDE	MIN	120.2	114.6	112.6	119.2	99.4	95.4	111.6	109.0	98.3	92.7	174.0	155.2
FUEL TANK	AV	121.5	115.6	117.0	120.5	101.8	96.5	113.5	109.9	99.9	93.6	179.8	170.2
TC3	MAX	126.3	127.3	112.1	114.9	112.6	114.1	108.3	102.4	103.8	103.0	117.7	116.2
CARBURETOR	MIN	122.8	123.7	109.6	112.7	111.1	111.6	105.9	100.6	102.5	100.5	114.1	114.1
	AV	124.9	125.3	110.8	114.0	111.6	113.3	107.5	101.4	103.1	101.4	116.5	115.1
TC4	MAX	207.5	208.1	202.5	204.6	204.5	202.0	200.1	202.1	203.5	200.1	201.0	203.5
RADIATOR	MIN	202.8	204.5	198.0	200.3	199.5	195.5	195.5	195.9	197.3	196.5	198.5	199.0
	AV	204.5	205.7	200.1	202.0	201.4	198.1	198.1	198.7	199.3	197.8	199.8	200.5
TC5	MAX	236.1	235.6	230.6	231.6	233.1	227.1	224.1	224.2	224.6	221.0	229.1	231.1
CIL PAN	MIN	230.6	230.7	225.6	230.1	226.1	224.6	219.8	217.0	219.4	218.7	224.6	228.6
	AV	233.8	233.2	228.0	230.6	229.5	226.1	221.5	220.7	221.5	219.7	226.8	229.7
TC6	MAX	151.6	152.6	120.7	127.7	122.3	124.8	111.8	110.1	113.2	112.1	117.2	113.6
AIR	MIN	145.3	143.0	115.7	121.7	118.7	120.2	110.0	104.5	110.3	109.8	114.6	112.1
CLEANER	AV	147.4	148.4	117.7	124.7	119.8	123.2	111.1	108.7	111.8	110.9	115.6	112.8
TC7	MAX	91.6	95.0	75.1	78.6	76.6	81.2	77.0	75.9	77.1	75.9	79.1	77.1
VEHICLE	MIN	89.3	90.3	72.0	76.6	74.0	79.6	70.5	68.5	73.8	70.0	74.6	74.6
FRONT	AV	90.5	93.6	73.4	77.4	76.1	80.3	74.7	72.8	75.7	72.8	76.8	75.5
TC8	MAX	1243.	1241.	1108.	1140.	1123.	1108.	1083.	1078.	1072.	1085.	1110.	1114.
CATALYST	MIN	1073.	1074.	1025.	1036.	1042.	989.	987.	1021.	1027.	1012.	1022.	1027.
	AV	1184.	1156.	1071.	1099.	1090.	1056.	1033.	1053.	1048.	1046.	1075.	1085.

VEHICLE: CHRYSLER

TEST 15

TRACK RUN

THIRD S-7

1

2

RUN NUMBER

54

56

TC1 MAX 110.1
FUEL TANK MIN 104.0
VAPOR AV 106.9

115.5
109.4
112.4

TC2 MAX 126.3
OUTSIDE MIN 104.0
FUEL TANK AV 108.6

140.5
110.2
116.5

TC3 MAX 123.3
CARBURETOR MIN 111.4
AV 116.8

125.9
112.2
120.3

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TC4 MAX 209.9
RADIATOR MIN 199.7
AV 203.3

210.6
202.1
206.0

TC5 MAX 227.9
CIL PAN MIN 216.5
AV 222.3

231.0
222.2
226.6

TC6 MAX 150.2
AIR MIN 119.3
CLEANER AV 129.0

146.4
121.4
133.2

TC7 MAX 81.2
VEHICLE MIN 70.9
FRONT AV 73.4

91.3
78.2
80.9

TC8 MAX 1406.
CATALYST MIN 1001.
AV 1188.

1360.
951.
1167.

VEHICLE: CHRYSLER

TEST 15

FAN CONFIGURATION

THIRD S-7

A D E F G H
SMALL FRONT SMALL FRONT SMALL FRONT LARGE FRONT LARGE FRONT SMALL FRONT
SMALL SIDE LARGE SIDE SMALL SIDE

1 2 1 2 1 2 1 2 1 2 1 2

RUN NUMBER

26 28 30 32 34 36 42 44 38 40 46 48

TC1 MAX 122.3 139.3 114.6 118.6 104.9 101.4 108.6 106.0 103.4 99.0 148.3 140.9
FUEL TANK MIN 115.2 111.8 108.2 112.0 96.6 95.9 103.4 99.7 96.4 92.5 139.6 132.4
VAPOR AV 118.2 127.1 111.9 114.4 99.7 98.4 105.5 102.4 100.1 96.0 144.1 136.2

TC2 MAX 128.3 174.3 134.4 133.7 113.0 109.1 114.2 111.1 105.4 99.9 187.2 184.0
OUTSIDE MIN 117.9 115.7 111.1 110.7 97.1 95.9 108.6 104.3 96.9 90.8 164.9 142.5
FUEL TANK AV 121.7 157.0 126.6 126.8 103.9 101.8 110.9 107.1 100.5 95.3 173.0 150.6

TC3 MAX 127.8 129.1 115.1 118.0 111.9 114.7 108.0 106.5 105.9 103.0 125.8 124.8
CARBURETOR MIN 121.9 116.2 107.4 110.5 106.6 107.0 103.1 98.4 100.5 96.8 114.5 114.6
AV 124.7 121.5 110.5 114.1 109.0 111.2 104.6 101.4 103.2 99.7 119.5 119.4

TC4 MAX 207.0 206.2 205.0 205.1 204.0 205.5 202.3 205.4 204.5 202.0 206.8 203.5
RADIATOR MIN 195.4 195.5 191.4 193.2 193.5 194.4 187.5 191.3 190.5 189.7 191.5 192.6
AV 201.1 200.2 198.8 199.3 199.0 199.3 197.1 197.5 197.8 196.8 198.3 198.1

TC5 MAX 236.6 235.3 232.6 233.2 233.1 232.1 225.0 223.8 225.0 225.6 230.3 230.1
OIL PAN MIN 223.1 222.7 217.5 219.7 218.2 218.5 208.4 208.2 209.3 207.1 215.3 217.1
AV 229.7 223.9 224.3 226.5 224.5 224.7 216.0 215.6 216.5 215.5 221.9 222.7

TC6 MAX 148.6 153.2 120.2 124.3 119.2 124.3 115.5 108.9 113.1 113.6 117.2 113.1
AIR MIN 131.9 115.1 105.6 112.9 108.4 115.0 106.1 102.0 104.3 101.2 105.9 104.6
CLEANER AV 137.9 123.1 111.3 117.5 113.1 118.4 110.3 104.9 108.2 107.6 110.1 108.8

TC7 MAX 99.4 94.0 78.6 80.6 81.7 81.6 78.5 77.3 82.2 78.1 81.9 81.2
VEHICLE MIN 89.3 79.3 70.5 74.2 74.0 75.6 72.0 69.5 74.3 68.6 70.3 74.8
FRONT AV 92.8 84.1 73.5 76.7 77.2 79.2 75.9 75.1 78.4 74.7 77.9 78.5

TC8 MAX 1346. 1345. 1188. 1235. 1222. 1260. 1218. 1194. 1221. 1171. 1231. 1219.
CATALYST MIN 926. 949. 945. 956. 953. 926. 915. 917. 916. 915. 964. 949.
AV 1130. 1195. 1088. 1112. 1097. 1094. 1062. 1049. 1059. 1056. 1097. 1094.

B-30

VEHICLE: CHRYSLER

TEST 16

TRACK RUN

45 MIN SCAK

1

2

RUN NUMBER

54

56

TC1	MAX	112.1
FUEL TANK	MIN	98.6
VAPOR	AV	105.2

113.6
106.4
109.5

TC2	MAX	126.3
OUTSIDE	MIN	86.3
FUEL TANK	AV	101.2

111.7
91.5
101.1

TC3	MAX	164.4
CARBURETOR	MIN	113.6
	AV	158.7

162.2
114.7
159.6

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TC4	MAX	242.5
RADIATOR	MIN	207.5
	AV	229.5

243.6
207.2
231.0

TC5	MAX	219.6
OIL PAN	MIN	143.1
	AV	172.3

221.8
142.3
172.2

TC6	MAX	178.5
AIR	MIN	124.1
CLEANER	AV	163.1

175.0
123.8
161.6

TC7	MAX	123.6
VEHICLE	MIN	76.0
FRONT	AV	89.1

145.7
89.8
128.3

TC8	MAX	1202.
CATALYST	MIN	373.
	AV	658.

1164.
392.
692.

VEHICLE: CHRYSLER

TEST 16

FAN CONFIGURATION

45 MIN SOAK

		A		D		E		F		G		H	
		SMALL	FRONT	SMALL	FRONT	SMALL	FRONT	LARGE	FRONT	LARGE	FRONT	SMALL	FRONT
				SMALL	SIDE	LARGE	SIDE			SMALL	SIDE		
		1	2	1	2	1	2	1	2	1	2	1	2
RUN NUMBER		26	28	30	32	34	36	42	44	38	40	46	48
TC1 FUEL TANK VAPOR	MAX	0.0	0.0	0.0	119.2	105.8	107.5	121.8	114.2	115.5	107.3	149.1	0.0
	MIN	0.0	0.0	0.0	104.1	92.7	97.0	101.4	101.0	94.3	95.2	127.9	0.0
	AV	113.5	126.5	113.1	111.8	98.9	102.9	114.5	106.9	109.0	100.6	140.0	137.7
TC2 OUTSIDE FUEL TANK	MAX	0.0	0.0	0.0	126.3	102.0	116.1	129.3	113.3	132.4	119.2	181.7	0.0
	MIN	0.0	0.0	0.0	90.8	83.9	78.7	89.2	83.8	83.8	81.2	109.2	0.0
	AV	102.2	109.5	103.2	100.2	90.4	100.7	106.9	95.5	112.4	92.3	137.8	135.3
TC3 CARBURETOR	MAX	0.0	0.0	0.0	157.6	164.9	164.0	163.0	160.4	144.2	151.2	169.5	0.0
	MIN	0.0	0.0	0.0	112.1	106.6	110.6	116.9	99.5	102.0	99.7	115.6	0.0
	AV	158.3	148.9	141.4	140.3	145.2	144.1	145.5	134.9	131.7	131.3	147.2	146.6
TC4 RADIATOR	MAX	0.0	0.0	0.0	231.5	236.5	237.0	229.9	230.2	225.0	224.8	236.6	0.0
	MIN	0.0	0.0	0.0	195.7	159.2	199.0	181.9	173.0	173.4	197.0	198.6	0.0
	AV	226.9	224.3	218.1	217.5	219.6	221.2	215.6	217.2	206.8	213.9	220.5	80.1
TC5 OIL PAN	MAX	0.0	0.0	0.0	232.1	229.1	227.6	196.5	218.7	220.1	212.7	229.1	0.0
	MIN	0.0	0.0	0.0	143.6	139.5	154.2	136.7	135.6	134.1	134.9	141.1	0.0
	AV	170.1	177.5	174.7	175.8	171.7	179.8	160.9	162.8	165.9	163.4	171.6	177.8
TC6 AIR CLEANER	MAX	0.0	0.0	0.0	147.9	161.0	159.9	154.8	153.3	131.0	147.8	161.6	0.0
	MIN	0.0	0.0	0.0	120.0	114.2	123.3	120.4	102.7	92.7	104.8	112.0	0.0
	AV	163.4	157.2	146.5	142.3	151.2	153.2	145.2	137.1	118.1	138.2	148.3	159.7
TC7 VEHICLE FRONT	MAX	0.0	0.0	0.0	82.8	116.9	126.6	111.6	109.2	88.4	105.0	97.9	0.0
	MIN	0.0	0.0	0.0	75.0	73.6	81.7	72.8	66.4	70.5	73.6	73.0	0.0
	AV	108.8	110.3	103.7	79.0	97.0	112.7	98.6	98.6	77.1	91.0	83.9	143.2
TC8 CATALYST	MAX	1254.	1239.	1115.	1127.	1132.	1100.	1089.	1080.	1068.	1097.	1119.	1106.
	MIN	380.	440.	404.	400.	384.	389.	391.	373.	402.	382.	418.	447.
	AV	679.	753.	706.	711.	706.	674.	688.	673.	673.	683.	745.	727.

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NOTE: Zeros indicate data not computed.

VEHICLE: CHRYSLER

TEST 17

TRACK RUN

10 MIN IDLE		1	2
RUN NUMBER		54	56
TC1	MAX	103.5	107.0
FUEL TANK	MIN	97.9	103.1
VAPOR	AV	101.0	104.1
TC2	MAX	113.8	97.4
OUTSIDE	MIN	88.2	90.2
FUEL TANK	AV	101.1	93.4
TC3	MAX	166.9	179.5
CARBURETOR	MIN	128.9	134.2
	AV	147.1	145.5
TC4	MAX	214.6	206.5
RADIATOR	MIN	190.9	190.5
	AV	198.7	202.4
TC5	MAX	203.7	208.5
OIL PAN	MIN	143.0	143.6
	AV	192.3	193.3
TC6	MAX	179.4	170.0
AIR	MIN	129.9	140.8
CLEANER	AV	141.3	145.9
TC7	MAX	78.1	121.7
VEHICLE	MIN	73.5	80.5
FRONT	AV	75.0	89.8
TC8	MAX	703.	710.
CATALYST	MIN	367.	371.
	AV	585.	586.

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VEHICLE: CHRYSLER

TEST 17

FAN CONFIGURATION

10 MIN IDLE

		A		D		E		F		G		H	
		SMALL FRONT		SMALL FRONT SMALL SIDE		SMALL FRONT LARGE SIDE		LARGE FRONT		LARGE FRONT SMALL SIDE		SMALL FRONT	
		1	2	1	2	1	2	1	2	1	2	1	2

RUN NUMBER

		26	28	30	32	34	36	42	44	38	40	46	48
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TC1 FUEL TANK VAPOR	MAX	106.5	115.2	107.0	106.6	94.6	98.9	101.1	102.0	97.4	99.0	130.8	128.8
	MIN	100.9	107.6	97.4	98.9	89.1	92.4	94.5	90.8	89.8	86.1	120.8	119.2
	AV	104.6	111.1	100.9	102.6	92.3	95.2	97.2	95.2	92.4	90.4	125.2	123.8

TC2 OUTSIDE FUEL TANK	MAX	105.0	106.4	92.8	95.3	88.4	88.5	92.8	69.2	90.3	86.8	126.3	128.3
	MIN	91.3	96.4	88.3	91.3	83.1	84.2	86.2	83.7	83.7	82.0	112.5	109.0
	AV	98.3	102.5	90.7	93.4	85.1	86.2	89.2	86.3	87.9	83.6	118.3	119.3

TC3 CARBURETOR	MAX	169.9	163.4	154.2	154.7	154.2	161.4	155.3	154.7	123.8	146.7	165.9	162.9
	MIN	119.7	112.0	107.0	106.0	104.5	108.3	99.3	97.9	95.4	96.6	110.0	107.6
	AV	137.1	130.2	124.2	124.7	120.9	127.4	119.1	119.4	104.3	115.9	130.2	127.5

TC4 RADIATOR	MAX	196.5	199.0	196.0	195.5	195.9	196.0	193.5	196.0	193.8	197.5	198.8	196.0
	MIN	170.4	184.5	180.0	172.0	160.9	175.5	171.8	170.4	187.9	175.0	168.4	172.4
	AV	192.1	193.7	191.8	190.5	187.8	191.1	187.8	188.6	190.8	189.2	189.1	190.8

TC5 OIL PAN	MAX	197.0	197.5	196.0	195.0	191.2	193.7	186.5	187.3	185.9	188.0	193.6	197.0
	MIN	168.9	158.9	173.5	147.1	161.9	150.9	143.1	144.1	174.9	139.0	146.6	166.9
	AV	169.6	192.6	189.1	186.7	184.3	188.8	178.3	181.3	181.5	180.7	187.1	190.6

TC6 AIR CLEANER	MAX	150.2	144.1	136.5	139.0	125.3	147.6	136.0	139.5	95.2	146.1	151.7	140.5
	MIN	115.1	101.4	97.4	97.8	95.9	97.9	90.4	87.7	90.8	88.5	93.4	93.3
	AV	121.8	109.8	105.0	105.6	100.0	107.5	90.9	96.6	93.1	97.5	105.0	103.0

TC7 VEHICLE FRONT	MAX	91.3	83.7	77.1	77.0	79.7	80.5	79.5	74.0	80.0	77.6	78.7	79.9
	MIN	86.7	76.7	71.5	71.3	73.5	75.2	71.1	68.0	72.0	69.6	70.5	71.4
	AV	88.9	79.2	74.4	73.4	76.8	77.5	70.0	72.6	77.2	74.6	76.2	77.2

TC8 CATALYST	MAX	596.	611.	615.	660.	656.	619.	632.	622.	645.	622.	635.	652.
	MIN	306.	361.	319.	342.	315.	373.	273.	310.	338.	322.	328.	347.
	AV	474.	500.	485.	528.	513.	501.	482.	475.	527.	485.	510.	523.

VEHICLE: CHRYSLER

TEST 18

TPACK RUN

20 MPH S. S.

1

2

PLN NUMBER

54

56

TC1	MAX	104.0
FUEL TANK	MIN	99.0
VAPOR	AV	101.5

111.1
103.7
107.6

TC2	MAX	105.0
OUTSIDE	MIN	96.8
FUEL TANK	AV	101.9

116.3
103.5
110.5

TC3	MAX	129.8
CARBURETOR	MIN	110.1
	AV	115.2

133.4
117.7
121.9

TC4	MAX	202.9
RADIATOR	MIN	197.6
	AV	199.8

211.7
198.7
203.5

TC5	MAX	210.5
OIL PAN	MIN	203.5
	AV	207.6

215.8
206.5
211.6

TC6	MAX	132.4
AIR	MIN	118.2
CLEANER	AV	121.9

140.5
125.6
130.5

TC7	MAX	75.5
VEHICLE	MIN	69.5
FRONT	AV	72.3

84.0
78.8
80.9

TC8	MAX	858.
CATALYST	MIN	710.
	AV	773.

879.
731.
771.

VEHICLE: CHRYSLER

TEST 12

FAN CONFIGURATION

20 MPH S. S.

A D E F G H
SMALL FRONT SMALL FRONT SMALL FRONT LARGE FRONT LARGE FRONT SMALL FRONT
SMALL SIDE LARGE SIDE

1 2 1 2 1 2 1 2 1 2 1 2

RUN NUMBER 26 28 30 32 34 36 42 44 38 40 46 48

TC1 MAX 0.0 0.0 104.5 105.2 96.1 95.9 100.6 95.5 96.4 92.7 137.0 0.0
FUEL TANK MIN 0.0 0.0 98.6 96.5 87.3 89.7 94.7 89.5 87.9 85.3 120.7 0.0
VAPOR AV 109.9 115.3 101.5 100.6 92.1 91.9 97.5 92.5 92.2 89.7 129.6 123.5

TC2 MAX 0.0 0.0 110.6 107.4 95.1 93.3 99.4 94.3 94.3 91.2 137.0 0.0
OUTSIDE MIN 0.0 0.0 101.8 93.3 87.2 85.7 92.8 88.1 86.3 82.8 118.5 0.0
FUEL TANK AV 106.5 126.0 105.5 102.3 91.3 90.0 96.8 91.4 89.9 83.1 129.7 118.0

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TC3 MAX 0.0 0.0 105.5 106.3 105.9 106.5 100.3 97.0 96.9 96.5 109.3 0.0
CARBURETOR MIN 0.0 0.0 102.6 95.6 100.9 101.6 95.2 89.5 90.8 90.6 104.2 0.0
AV 114.5 107.8 104.0 102.9 103.4 103.4 97.5 92.8 94.0 93.2 106.6 107.7

TC4 MAX 0.0 0.0 196.8 196.4 201.2 197.0 196.7 196.8 195.5 196.4 196.5 0.0
RADIATOR MIN 0.0 0.0 192.5 190.0 190.0 191.3 189.4 189.5 190.0 189.0 189.5 0.0
AV 196.4 195.3 194.9 193.6 195.5 194.6 193.1 193.0 192.8 193.3 193.0 194.3

TC5 MAX 0.0 0.0 206.5 209.5 210.2 203.6 202.4 202.3 200.4 201.0 209.1 0.0
OIL PAN MIN 0.0 0.0 196.5 191.5 190.4 192.5 183.5 186.7 187.5 185.3 191.0 0.0
AV 207.6 204.2 202.0 203.4 204.8 203.7 197.5 197.8 196.1 196.1 204.5 204.8

TC6 MAX 0.0 0.0 102.0 104.0 106.3 106.9 102.3 96.1 97.9 100.3 100.4 0.0
AIR MIN 0.0 0.0 96.3 96.4 97.8 97.2 95.9 90.3 91.3 89.0 92.7 0.0
CLEANER AV 116.9 102.1 99.4 100.7 101.8 102.6 99.4 93.3 95.2 95.5 97.6 97.2

TC7 MAX 0.0 0.0 77.6 79.1 83.9 83.1 84.3 78.6 81.2 79.7 79.0 0.0
VEHICLE MIN 0.0 0.0 74.1 72.5 74.9 70.9 69.9 67.4 71.8 66.9 69.5 0.0
FRONT AV 89.8 79.4 75.8 75.4 79.3 80.0 77.1 73.3 76.2 74.4 75.9 79.7

TC8 MAX 801. 805. 757. 827. 803. 757. 799. 751. 769. 808. 801. 843.
CATALYST MIN 714. 723. 720. 701. 699. 695. 688. 682. 707. 682. 697. 742.
AV 756. 779. 742. 783. 766. 741. 759. 730. 742. 755. 777. 797.

NOTE: Zeros indicate data not computed.

VEHICLE: CHRYSLER

TEST 19

TRACK RUN

40 MPH S. S.

1

2

RUN NUMBER

54

56

TC1 MAX 103.0
FUEL TANK MIN 95.4
VAPOR AV 99.3

110.6
102.9
105.7

TC2 MAX 104.5
OUTSIDE MIN 93.4
FUEL TANK AV 98.3

111.6
102.5
105.1

TC3 MAX 113.6
CARBURETOR MIN 102.0
AV 106.8

121.8
111.1
114.4

TC4 MAX 203.7
RADIATOR MIN 196.0
AV 199.9

207.2
199.1
202.7

TC5 MAX 218.1
OIL PAN MIN 206.5
AV 213.5

221.6
210.6
218.4

TC6 MAX 120.7
AIR MIN 109.6
CLEANER AV 115.0

136.5
120.8
124.9

TC7 MAX 72.9
VEHICLE MIN 68.4
FRONT AV 70.8

84.2
76.6
79.2

TC8 MAX 1059.
CATALYST MIN 746.
AV 833.

1110.
784.
881.

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VEHICLE: CHRYSLER

TEST 19

FAN CONFIGURATION

40 MPH S. S.

A D E F G H
SMALL FRONT SMALL FRONT SMALL FRONT LARGE FRONT LARGE FRONT SMALL FRONT
SMALL SIDE LARGE SIDE

1 2 1 2 1 2 1 2 1 2 1 2

RUN NUMBER		26	28	30	32	34	36	42	44	38	40	46	48
TC1 FUEL TANK VAPOR	MAX	0.0	0.0	108.2	109.6	101.4	100.9	102.2	97.6	96.8	95.3	141.5	0.0
	MIN	0.0	0.0	106.1	100.4	94.9	90.2	97.9	91.2	90.7	88.8	132.9	0.0
	AV	116.9	121.7	107.0	106.5	96.1	96.0	100.1	94.4	94.0	93.3	136.7	130.1
TC2 OUTSIDE FUEL TANK	MAX	0.0	0.0	117.2	121.2	102.6	103.0	105.1	99.8	96.0	95.0	153.5	0.0
	MIN	0.0	0.0	115.0	111.6	93.3	94.7	101.3	91.8	88.8	89.7	136.0	0.0
	AV	118.6	129.8	115.9	118.0	100.1	99.3	103.1	96.0	93.2	92.1	144.7	131.5
TC3 CARBURETOR	MAX	0.0	0.0	108.0	109.2	109.1	110.1	101.4	97.3	96.4	95.9	115.5	0.0
	MIN	0.0	0.0	106.5	102.5	103.5	101.9	96.4	90.6	92.8	91.8	107.0	0.0
	AV	118.3	113.3	107.2	105.8	106.0	106.9	98.8	94.0	95.2	94.6	110.9	115.0
TC4 RADIATOR	MAX	0.0	0.0	199.2	199.9	199.0	200.9	197.7	198.6	199.0	200.0	199.3	0.0
	MIN	0.0	0.0	194.4	194.5	191.7	196.2	189.5	192.1	192.5	193.0	190.7	0.0
	AV	200.2	198.2	196.5	197.2	195.0	198.4	193.2	194.9	195.8	196.1	194.3	196.4
TC5 OIL PAN	MAX	0.0	0.0	221.6	225.1	224.6	224.2	211.0	211.7	215.2	214.6	218.5	0.0
	MIN	0.0	0.0	216.1	211.1	218.1	209.0	204.0	197.9	205.0	199.5	208.0	0.0
	AV	225.2	222.3	219.6	221.1	221.0	220.1	207.8	207.0	211.9	209.4	213.8	218.1
TC6 AIR CLEANER	MAX	0.0	0.0	107.5	109.0	112.1	115.6	108.3	99.0	102.6	102.8	104.7	0.0
	MIN	0.0	0.0	104.5	102.5	104.8	107.9	100.4	94.0	96.5	96.3	97.8	0.0
	AV	127.0	114.3	105.8	105.8	108.3	112.2	103.7	96.2	98.9	99.9	101.3	102.8
TC7 VEHICLE FRONT	MAX	0.0	0.0	78.1	77.5	82.2	87.1	77.8	75.7	79.6	75.8	79.6	0.0
	MIN	0.0	0.0	73.0	73.0	75.5	79.1	68.8	66.4	68.5	68.1	68.8	0.0
	AV	92.0	81.8	76.2	75.1	78.5	82.3	74.8	72.3	74.8	73.0	75.9	79.1
TC8 CATALYST	MAX	1034.	1029.	947.	953.	943.	945.	1043.	896.	886.	915.	968.	949.
	MIN	931.	897.	880.	914.	901.	878.	862.	826.	837.	855.	879.	868.
	AV	942.	914.	892.	919.	911.	887.	898.	834.	852.	864.	894.	895.

NOTE: Zeros indicate data not computed.

VEHICLE: CHRYSLER

TEST 20

TRACK RUN

60 MPH S. S.

1

2

RUN NUMBER

54

56

TC1 MAX
FUEL TANK MIN
VAPOR AV

98.8
94.3
96.4

108.4
101.8
105.5

TC2 MAX
OUTSIDE MIN
FUEL TANK AV

100.5
92.6
96.3

124.0
101.4
105.5

TC3 MAX
CARBURETOR MIN
AV

105.7
100.1
102.6

116.4
109.3
113.4

TC4 MAX
RADIATOR MIN
AV

207.0
194.8
203.1

209.9
198.5
205.2

TC5 MAX
OIL PAN MIN
AV

235.6
210.7
227.9

241.1
215.0
233.7

TC6 MAX
AIR MIN
CLEANER AV

115.1
107.9
111.5

130.6
119.2
122.7

TC7 MAX
VEHICLE MIN
FRONT AV

73.1
65.8
68.8

75.6
73.0
75.9

TC8 MAX
CATALYST MIN
AV

1310.
1080.
1159.

1429.
1130.
1299.

B-39

VEHICLE: CHRYSLER

TEST 20

FAN CONFIGURATION

60 MPH S. S.

A D E F G H
SMALL FRONT SMALL FRONT SMALL FRONT LARGE FRONT LARGE FRONT SMALL FRONT
SMALL SIDE LARGE SIDE SMALL SIDE

1 2 1 2 1 2 1 2 1 2 1 2

FAN NUMBER 26 28 30 32 34 36 42 44 38 40 46 48

TC1 MAX 0.0 0.0 123.8 125.6 110.6 112.1 113.8 108.3 105.3 104.5 152.7 0.0
FUEL TANK MIN 0.0 0.0 112.5 108.5 99.5 97.9 98.9 94.4 95.9 95.1 137.9 0.0
VAPOR AV 133.7 124.7 116.4 119.3 106.4 105.8 108.4 103.1 101.0 100.6 144.1 136.0

TC2 MAX 0.0 0.0 147.6 139.2 120.8 120.2 117.4 111.7 105.1 106.3 181.7 0.0
OUTSIDE MIN 0.0 0.0 135.9 122.8 110.1 107.0 103.0 98.9 97.5 97.6 152.6 0.0
FUEL TANK AV 162.7 132.1 141.4 134.3 116.2 116.1 113.0 107.0 101.3 101.2 170.8 151.3

B-40

TC3 MAX 0.0 0.0 123.8 124.8 120.8 120.1 112.8 107.2 107.1 103.6 134.9 0.0
CARBURETOR MIN 0.0 0.0 114.1 108.5 107.1 108.5 98.3 94.9 99.2 95.7 121.6 0.0
AV 130.9 131.3 119.3 118.4 115.8 116.3 107.4 102.7 103.8 103.6 128.6 126.4

TC4 MAX 0.0 0.0 204.5 205.2 205.3 205.1 202.3 202.5 202.9 204.9 204.4 0.0
RADIATOR MIN 0.0 0.0 197.4 199.3 200.0 199.5 197.2 197.9 197.2 197.7 197.7 0.0
AV 202.9 203.5 202.3 202.1 202.6 202.2 199.9 200.3 200.2 201.2 201.0 201.1

TC5 MAX 0.0 0.0 243.6 246.7 245.1 242.4 235.3 234.8 235.8 236.3 243.2 0.0
OIL PAN MIN 0.0 0.0 234.7 226.1 224.6 225.1 215.2 217.7 219.8 220.6 226.5 0.0
AV 242.7 240.8 239.4 240.6 239.8 238.5 230.1 230.0 232.0 232.5 238.3 235.2

TC6 MAX 0.0 0.0 123.8 127.1 125.8 131.5 120.8 113.6 115.2 117.3 121.8 0.0
AIR MIN 0.0 0.0 115.1 110.5 114.1 118.7 107.2 102.1 106.8 108.6 112.2 0.0
CLEANER AV 140.1 135.1 120.7 121.4 122.3 127.3 116.6 109.6 111.7 113.9 116.7 115.0

TC7 MAX 0.0 0.0 79.6 78.5 81.5 89.4 73.5 76.2 79.6 79.9 73.7 0.0
VEHICLE MIN 0.0 0.0 74.6 70.7 76.1 80.0 70.6 66.4 70.7 63.0 70.4 0.0
FRONT AV 96.3 90.2 76.7 74.9 78.3 83.7 75.1 72.0 76.1 75.2 76.2 80.2

TC8 MAX 1383. 1265. 1157. 1172. 1236. 1152. 1172. 1108. 1129. 1029. 1260. 1191.
CATALYST MIN 1269. 1170. 1142. 1136. 1147. 1106. 1103. 1044. 1087. 1115. 1152. 1106.
AV 1316. 1192. 1149. 1161. 1164. 1139. 1116. 1097. 1107. 1124. 1205. 1149.

NOTE: Zeros indicate data not computed.

Appendix C
PONTIAC EMISSIONS

$$FE \quad \frac{2421}{0.866 \text{ HC} + 0.429 \text{ CO} + 0.273 \text{ CO}_2}$$

27.15

GASEOUS EMISSIONS IN GM/MILE AND SULFATE EMISSIONS IN MG/MILE FOR THE INDICATED FAN CONFIGURATIONS

PONTIAC	A ₁	A ₂	D ₁	D ₂	E ₁	E ₂	F ₁	F ₂	G ₁	G ₂	H ₁	H ₂
FTP HC	0.61 0.76	10.02 0.89	9.95 1.05	10.19 1.02	9.77 1.02	9.43 3.35	9.59 5.71	9.93 0.94	10.25 1.43	9.90 1.40	10.14 1.06	10.46 1.38
CT CO	10.87	13.28	14.70	13.10	15.67	9.26	17.43	13.89	14.71	17.67	16.40	9.96
505 CO ₂	902.8	861.3	864.4	846.8	879.9	915.0	879.1	868.5	837.9	863.2	845.7	827.6
NO _x	2.15	2.55	2.22	2.42	2.11	2.39	2.76	2.31	2.36	2.25	2.60	2.62
FTP HC	10.30 0.19	10.64 0.19	11.03 0.30	11.04 0.17	10.78 0.17	10.92 0.13	10.89 0.19	10.77 0.20	10.75 0.28	10.72 0.33	11.00 0.24	11.19 0.21
CS CO	2.79	2.63	5.40	2.70	2.43	0.86	2.47	2.81	3.76	4.92	3.85	3.03
867 CO ₂	855.8	828.6	794.6	798.2	818.2	810.2	810.2	818.7	818.4	818.7	799.5	787.2
NO _x	1.52	1.86	1.66	1.93	1.66	1.88	1.75	1.70	1.71	1.62	1.99	1.99
FTP HC	11.90 0.32	12.19 0.29	12.49 0.36	12.67 0.47	11.87 0.82	12.68 0.53	12.46 0.38	12.47 0.29	12.61 0.28	12.31 0.25	12.93 0.33	12.96 0.37
HT CO	2.40	1.76	2.81	1.92	4.08	3.23	1.69	2.57	2.77	2.34	2.66	2.57
505 CO ₂	740.4	723.7	704.7	695.5	737.9	692.5	707.8	706.1	697.8	715.9	680.8	679.1
NO _x	2.11	2.55	2.22	2.56	2.22	2.48	2.45	2.31	2.36	2.40	2.53	2.73
FTP HC	10.53 .342	.361	.472	.426	.523	.900	1.378	.380	.514	.529	.435	.494
WT CO	4.345	4.585	6.608	4.628	5.604	3.238	5.336	5.025	5.743	6.84	6.110	4.329
CO ₂	834.1	806.9	784.6	780.3	809.0	799.7	796.6	798.4	789.5	799.9	776.7	766.0
NO _x	1.811	2.190	1.933	2.201	1.905	2.153	2.149	1.989	2.024	1.963	2.262	2.324
SO ₄ [*]	.377	.08	.04	.172	.171	.320	.264	.463	.213	.388	.29	.73
FAN CONFIG.	Small Front		Small Front Small Side		Small Front Large Side		Large Front		Large Front Small Side		Small Front	

Small Fan: 150 m³/Min. (5,300 CFM)
Large Fan: 708 m³/Min. (25,000 CFM)

*A single filter was used for all 3 bags.

GASEOUS EMISSIONS IN GM/MILE AND SULFATE EMISSIONS IN MG/MILE FOR THE INDICATED FAN CONFIGURATIONS (Continued)

PONTIAC	A ₁	A ₂	D ₁	D ₂	E ₁	E ₂	F ₁	F ₂	G ₁	G ₂	H ₁	H ₂
S-1 HC	.07	.06	.10	.06	.07	.07	.06	.11	.12	.12	.06	.06
CO	.87	.28	.84	.14	.28	.53	.31	1.23	1.41	.89	.31	.20
CO ₂	595.93	583.32	572.97	567.39	578.22	576.97	562.89	561.18	568.13	571.00	561.61	550.09
NO ₂ ^C	2.13	2.21	2.19	2.51	2.00	2.14	2.17	1.98	2.04	2.07	2.30	2.23
SO ₄ ^x	.539	.104	.201	.265	.284	.214	.351	.180	.203	.227	.593	.630
HWY ECO	17.10	17.57	17.89	17.84	16.93	17.42	17.65	17.47	17.86	17.40	17.87	18.42
HC	.05	.04	.06	.04	.05	.07	.04	.05	.05	.05	.04	.04
CO	.27	.05	.12	.00	.44	.23	0.00	.06	.12	.03	.00	.02
CO ₂	517.87	504.60	495.32	497.05	523.03	508.46	502.27	507.49	496.12	509.37	496.06	481.32
NO ₂ ^C	2.11	2.29	2.20	2.50	1.98	2.19	2.20	2.03	2.03	2.09	2.20	2.15
SO ₄ ^x	.353	.773	.392	.700	.690	.507	1.088	.597	.567	.598	.769	2.297
S-2 HC	.08	.06	.07	.06	.07	.06	.06	.07	.07	.07	.06	.06
CO	.64	.21	.36	.04	.16	.02	.05	.43	.72	.19	.14	.22
CO ₂	597.85	561.36	562.18	551.38	576.10	556.58	557.84	568.52	560.99	567.11	560.14	539.86
NO ₂ ^C	2.07	2.26	2.12	2.39	1.84	2.13	2.14	1.95	1.97	2.06	2.18	2.17
SO ₄ ^x	.213	.378	.191	.338	1.166	.390	1.214	.296	.314	.240	.904	1.015
S-3 HC	.10	.09	.08	.06	.06	.06	.06	.07	.11	.07	.09	.08
CO	.69	.62	.45	.20	.39	.09	.19	.49	1.69	.21	.62	.44
CO ₂	580.72	562.63	559.34	559.84	569.99	556.75	554.83	566.67	551.01	567.17	566.64	546.05
NO ₂ ^C	1.98	2.26	2.11	2.32	1.84	2.13	2.11	2.05	1.92	2.04	2.30	2.20
SO ₄ ^x	.093	.330	.215	.529	.701	.476	1.202	.347	.288	.307	.482	.792
FAN CONFIG.	Small Front		Small Front Small Side		Small Front Large Side		Large Front		Large Front Small Side		Small Front	

Small Fan: 150 m³/Min. (5,300 CFM)
 Large Fan: 708 m³/Min. (25,000 CFM)

GASEOUS EMISSIONS IN GM/MILE AND SULFATE EMISSIONS IN MG/MILE FOR THE INDICATED FAN CONFIGURATIONS* (Continued)
(IDLE EMISSIONS ARE IN GM/MINUTE OR, FOR SULFATE, MG/MINUTE)

PONTIAC	A ₁	A ₂	D ₁	D ₂	E ₁	E ₂	F ₁	F ₂	G ₁	G ₂	H ₁	H ₂
IDLE HC	.310	.635	.663	.596	.973	.491	.726	.581	.521	.563	.550	.569
CO	.397	.710	1.138	1.340	1.334	.656	.620	.843	.713	1.085	1.147	1.299
CO ₂	117.110	114.804	116.543	111.806	110.009	115.908	114.800	117.485	117.333	113.721	112.393	115.389
NO ₂	.049	.047	.034	.034	.033	.749	.049	.047	.049	.049	.048	.046
SO ₄ ^x	.038	.029	.143	.191	.149	.100	.001	.106	.022	.104	.033	.286
20-1 HC	.21	.18	.36	.34	.60	.50	.62	.63	.71	.51	.27	.45
CO	.13	.10	.71	.58	1.49	1.62	1.74	2.13	2.99	1.48	.36	1.12
CO ₂	467.84	457.91	456.74	456.05	466.91	455.12	455.33	457.38	454.23	525.50	443.01	444.59
NO ₂	.53	.60	.58	.60	.67	.65	.62	.53	.48	.94	.61	.50
SO ₄ ^x	.356	.085	.389	.111	.525	.649	.352	.071	.328	.353	.488	.952
20-2 HC	.20	.18	.27	.28	.47	.46	.52	.59	.74	.56	.22	.39
CO	.13	.07	.45	.55	1.18	1.41	1.74	2.18	3.40	1.80	.24	.88
CO ₂	459.40	442.43	446.53	437.07	454.33	441.36	441.57	446.44	443.82	441.89	439.70	431.15
NO ₂	.53	.55	.53	.50	.62	.66	.57	.48	.42	.55	.53	.46
SO ₄ ^x	.022	.088	.081	.505	.363	.440	.002	.070	.389	2.598	.109	.849
20-3 HC	.20	.20	.28	.31	.46	.50	.56	.63	.91	.61	.24	.42
CO	.13	.16	.57	.58	1.09	1.56	2.01	2.69	4.64	2.13	.27	1.09
CO ₂	449.79	451.79	446.54	446.34	454.61	446.06	436.96	456.27	443.65	441.75	429.35	430.03
NO ₂	.53	.55	.48	.55	.58	.61	.53	.48	.41	.55	.57	.45
SO ₄ ^x	.590	.089	.391	.578	.365	.002	.355	.457	.421	.603	.606	.783
FAN CONFIG.	Small Front		Small Front Small Side		Small Front Large Side		Large Front		Large Front Small Side		Small Front	

Small Fan: 150 m³/Min. (5,300 CFM)
Large Fan: 708 m³/Min. (25,000 CFM)

*Each steady-state condition consisted of 10 minutes of sampling.

GASEOUS EMISSIONS IN GM/MILE AND SULFATE EMISSIONS IN MG/MILE FOR THE INDICATED FAN CONFIGURATIONS* (Continued)

PONTIAC	A ₁	A ₂	D ₁	D ₂	E ₁	E ₂	F ₁	F ₂	G ₁	G ₂	H ₁	H ₂
40-1 HC	.06	.17	.17	.18	.17	.22	.28	.23	.32	.11	.06	.05
CO	.01	.00	.00	.00	.00	0.00	.00	.36	.00	.61	.35	.01
CO ₂	453.87	450.35	442.04	442.19	457.60	442.66	441.59	444.24	444.20	440.25	424.36	416.64
NO ₂ C	1.13	1.19	1.23	1.32	1.13	1.31	1.20	1.15	1.09	1.10	1.08	1.08
SO ₄ ^x	.242	.423	.493	.715	1.066	.663	.839	.207	.778	.239	.057	.429
40-2 HC	.04	.11	.12	.13	.12	.15	.22	.21	.28	.04	.05	.05
CO	.01	.00	.00	.00	.00	0.00	.00	0.00	0.00	.00	.01	.00
CO ₂	440.17	435.31	439.57	432.29	441.68	435.80	425.16	430.12	435.12	423.16	411.00	411.53
NO ₂ C	1.09	1.21	1.23	1.29	1.16	1.36	1.15	1.19	1.05	1.05	1.17	1.05
SO ₄ ^x	.365	.645	1.198	1.078	1.531	.971	1.544	.435	1.243	.229	.268	.864
40-3 HC	.04	0.11	.12	.12	.11	.16	.19	.21	.30	.05	.05	.05
CO	.01	.00	.00	.00	.00	0.00	.00	0.00	0.00	.00	.00	.00
CO ₂	436.54	437.30	437.35	432.82	438.21	433.52	422.87	432.64	460.62	423.75	402.13	407.52
NO ₂ C	1.14	1.21	1.23	1.30	1.18	1.41	1.15	1.19	1.12	1.02	1.22	1.06
SO ₄ ^x	.362	1.165	1.068	1.479	1.995	1.122	1.155	.799	1.737	.581	.357	1.170
FAN CONFIG.	Small Front		Small Front Small Side		Small Front Large Side		Large Front		Large Front Small Side		Small Front	

Small Fan: 150 m³/Min. (5,300 CFM)
 Large Fan: 708 m³/Min. (25,000 CFM)

*Each steady-state condition consisted of 10 minutes of sampling.

GASEOUS EMISSIONS IN GM/MILE AND SULFATE EMISSIONS IN MG/MILE FOR THE INDICATED FAN CONFIGURATIONS*(Continued)

PONTIAC	A ₁	A ₂	D ₁	D ₂	E ₁	E ₂	F ₁	F ₂	G ₁	G ₂	H ₁	H ₂
60-1 HC	.03	.03	.02	.02	.02	.02	.03	.02	.03	.04	.03	.02
CO	.34	.39	.00	.01	.00	.05	.00	0.00	0.00	.32	.00	.00
CO ₂	430.08	506.65	509.41	507.33	517.49	517.74	490.49	430.06	482.88	508.48	484.37	479.72
NO ₂	1.75	2.47	2.41	2.58	2.22	2.82	2.41	2.57	2.36	2.58	2.55	2.47
SO ₄ ^x	2.647	4.844	5.546	11.748	12.561	7.715	13.422	22.626	14.571	4.300	14.468	20.622
60-2 HC	.02	.03	.02	.02	.02	0.02	.02	.02	.03	.03	.03	.02
CO	.00	.00	.00	.00	.00	0.00	.00	0.00	0.00	.02	.00	.00
CO ₂	513.36	500.44	509.45	502.35	512.61	508.49	463.97	491.12	484.12	500.04	479.36	476.51
NO ₂	2.53	2.57	2.46	2.65	2.27	2.83	2.40	2.55	2.35	2.62	2.56	2.45
SO ₄ ^x	1.948	3.250	6.003	9.813	15.211	11.320	17.970	15.062	20.032	9.207	19.929	28.225
60-3 HC	0.02	.02	.02	.02	.02	.02	.03	.02	.03	.03	.03	.02
CO	0.00	.00	.00	.00	.00	0.00	.00	.00	0.00	.00	.00	.00
CO ₂	509.81	502.33	508.30	498.50	507.88	505.76	461.77	493.17	480.35	498.12	478.25	474.82
NO ₂	2.59	2.65	2.45	2.68	2.27	2.82	2.42	2.53	2.33	2.63	2.57	2.47
SO ₄ ^x	3.425	4.252	6.597	10.528	18.510	15.146	21.339	20.040	28.752	14.231	25.470	31.699
FAN CONFIG.	Small Front		Small Front Small Side		Small Front Large Side		Large Front		Large Front Small Side		Small Front	

Small Fan: 150 m³/Min. (5,300 CFM)

Large Fan: 708 m³/Min. (25,000 CFM)

*Each steady-state condition consisted of 10 minutes of sampling.

Appendix D
CHRYSLER EMISSIONS

GASEOUS EMISSIONS IN GM/MILE AND SULFATE EMISSIONS IN MG/MILE FOR THE INDICATED FAN CONFIGURATIONS

CHRYSLER		A ₁	A ₂	D ₁	D ₂	E ₁	E ₂	F ₁	F ₂	G ₁	G ₂	H ₁	H ₂
FTP	HC	1.04	2.34	1.06	1.32	1.11	1.82	1.42	1.97	1.49	1.50	0.86	1.35
CT	CO	14.18	35.74	14.64	27.04	25.83	28.14	31.21	48.82	20.41	46.12	28.24	22.05
505	CO ₂	884.4	867.1	902.0	863.2	874.7	847.1	876.3	830.6	879.1	860.7	844.9	849.6
	NO _x	3.89	3.18	3.34	3.60	3.30	3.91	3.28	3.77	3.43	3.38	3.95	3.64
FTP	HC	0.10	0.09	0.10	0.10	0.10	0.08	0.12	0.10	0.10	0.10	0.06	0.05
CS	CO	0.37	0.59	0.15	0.23	0.49	0.19	0.88	0.23	0.34	0.30	0.22	0.09
867	CO ₂	944.0	949.1	923.3	938.4	951.2	917.7	968.3	928.1	942.7	962.9	947.3	945.3
	NO _x	2.97	2.72	2.69	2.92	2.68	3.16	2.69	3.11	2.74	2.83	3.05	2.84
FTP	HC	0.20	0.26	0.27	0.22	0.37	0.27	0.20	0.52	0.24	0.33	0.23	0.21
HT	CO	2.60	3.17	3.31	3.69	4.88	3.27	3.60	2.46	2.50	3.59	2.51	3.97
505	CO ₂	741.5	738.2	726.7	742.6	751.3	730.6	768.0	741.8	767.1	765.7	737.6	740.1
	NO _x	4.43	4.38	3.81	3.64	3.47	4.09	3.52	4.25	3.79	3.99	4.05	3.64
FTP	HC	.320	.602	.345	.385	.383	.491	.408	.601	.425	.452	.273	.363
WT	CO	3.819	8.529	3.998	6.691	6.906	6.78	7.868	10.842	5.062	10.632	6.614	5.672
	CO ₂	876.6	874.7	865.3	869.5	880.9	852.1	894.8	857.3	881.8	888.2	869.1	869.6
	NO _x	3.56	3.271	3.132	3.258	3.025	3.565	3.041	3.556	3.165	3.261	3.511	3.226
	SO ₄ *	2.31	4.65	4.88	6.49	8.89	34.3	4.04	12.4	8.45	11.60	28.9	9.72
FAN CONFIG.		Small Front		Small Front Small Side		Small Front Large Side		Large Front		Large Front Small Side		Small Front	

Small Fan: 150 m³/Min. (5,300 CFM)

Large Fan: 708 m³/Min. (25,000 CFM)

*A single filter was used for all 3 bags.

GASEOUS EMISSIONS IN GM/MILE AND SULFATE EMISSIONS IN MG/MILE FOR THE INDICATED FAN CONFIGURATIONS (Continued)

CHRYSLER	A ₁	A ₂	D ₁	D ₂	E ₁	E ₂	F ₁	F ₂	G ₁	G ₂	H ₁	H ₂
1ST S-7												
HC	.05	.06	.04	.04	.04	.04	.05	.03	.04	.05	.04	.03
CO	1.57	3.74	.78	.66	.95	.61	1.51	.89	.50	.71	.81	.60
CO ₂	632.24	640.52	622.25	615.55	637.67	616.05	652.20	635.90	630.18	644.64	620.77	617.57
NO _x	2.98	2.73	3.68	3.58	3.51	3.76	3.23	3.38	3.25	3.26	3.63	3.57
SO ₄	3.605	3.041	19.512	17.536	16.526	28.1	29.74	42.61	27.19	25.51	90.899	32.417
HWY ECON												
HC	.05	.04	.04	.04	.05	.05	.04	.03	.09	.04	.03	.03
CO	.80	.96	.17	.34	.42	.35	.33	.07	.55	.13	.12	.17
CO ₂	538.66	543.35	519.70	529.35	540.64	511.53	537.02	517.45	509.30	539.29	518.18	509.50
NO _x	3.78	3.50	4.34	4.43	4.25	4.60	4.01	3.99	3.86	4.21	4.55	4.19
SO ₄	4.265	6.090	34.555	18.988	25.323	36.819	42.56	39.09	38.65	22.25	62.988	46.331
2ND S-7												
HC	.05	.05	.03	.04	.04	.05	.04	.04	.04	.04	.04	.00
CO	3.09	4.53	.27	.53	.76	.55	.89	.29	.34	.39	.21	.24
CO ₂	631.30	636.09	615.03	597.09	628.38	611.13	635.08	617.46	618.87	606.31	607.45	599.36
NO _x	2.88	2.44	3.50	3.47	3.44	3.92	3.30	3.62	3.39	3.46	3.85	3.61
SO ₄	3.002	3.674	44.769	31.047	39.111	43.0	39.98	61.86	49.81	24.62	76.385	58.886
3RD S-7												
HC	.06	.06	.04	.04	.06	.05	.05	.04	.04	.05	.04	.00
CO	4.35	3.81	.47	.56	.76	.53	.65	.20	.28	.27	.30	.19
CO ₂	629.66	621.62	618.62	610.74	617.04	605.22	633.58	625.87	606.45	634.50	609.39	607.68
NO _x	2.36	2.14	3.43	3.41	3.41	4.06	3.40	3.54	3.33	3.57	3.32	3.58
SO ₄	2.815	7.236	45.763	40.306	38.277	41.701	38.71	59.01	46.11	30.37	61.524	59.126
FAN CONFIG.	Small Front		Small Front Small Side		Small Front Large Side		Large Front		Large Front Small Side		Small Front	

Small Fan: 150 m³/min. (5,300 CFM)

Large Fan: 708 m³/Min. (25,000 CFM)

GASEOUS EMISSIONS IN GM/MILE AND SULFATE EMISSIONS IN MG/MILE FOR THE INDICATED FAN CONFIGURATIONS* (Continued)
(IDLE EMISSIONS ARE IN GM/MINUTE OR, FOR SULFATE, MG/MINUTE)

CHRYSLER	A ₁	A ₂	D ₁	D ₂	E ₁	E ₂	F ₁	F ₂	G ₁	G ₂	H ₁	H ₂
IDLE HC	.510	.202	.306	.182	.290	.369	.236	.262	.123	.252	.163	.148
CO	1.097	.435	1.072	.494	1.406	1.059	1.351	1.409	.552	1.322	.990	.524
CO ₂	118.438	119.791	119.008	118.396	121.833	118.618	124.774	125.063	119.651	124.178	124.778	123.345
NO _x	.043	.043	.044	.045	.046	.046	.046	.046	.046	.049	.045	.045
SO ₄	.234	.278	1.097	1.737	1.788	1.995	1.85	4.35	1.80	.88	7.316	5.467
20-1 HC	0.18	0.15	.11	.10	.15	.09	0.11	.09	.12	0.11	0.08	.09
CO	.09	0.12	.12	.12	.24	.12	0.21	0.16	.24	0.16	0.07	.06
CO ₂	557.11	583.23	572.78	597.43	584.30	566.22	629.14	626.3	559.57	639.82	615.68	579.78
NO _x	1.13	0.86	.86	.92	1.06	.95	0.78	0.76	.74	.80	0.79	0.75
SO ₄	1.220	.781	4.439	1.723	2.595	5.783	9.78	14.19	3.07	4.19	18.460	14.002
20-2 HC	0.14	0.14	0.14	0.14	0.14	0.12	.09	.10	0.12	.08	.08	.08
CO	.09	.09	.12	.09	.21	.15	0.18	.19	0.24	1.11	.07	.09
CO ₂	556.24	572.78	550.90	554.45	575.27	538.40	604.23	604.12	551.43	629.31	574.41	583.46
NO _x	.98	.86	.85	.91	1.00	.95	0.70	0.72	.62	.75	0.76	0.62
SO ₄	1.025	.666	2.091	2.546	2.960	2.948	2.82	7.91	1.98	1.54	11.295	10.076
20-3 HC	0.14	0.12	.12	.11	.12	.15	.09	0.13	.12	0.12	.08	.09
CO	.03	.09	.15	.12	.21	.15	0.41	0.19	.27	0.16	.10	.15
CO ₂	571.15	569.23	546.21	573.58	575.77	539.10	609.91	580.00	550.29	568.78	574.39	568.90
NO _x	.94	.81	.78	.82	.78	.88	0.76	0.72	.59	.70	0.71	0.62
SO ₄	.859	.976	2.919	2.737	2.855	3.314	4.67	7.80	1.88	3.45	12.414	11.731
FAN CONFIG.	Small Front		Small Front Small Side		Small Front Large Side		Large Front		Large Front Small Side		Small Front	

Small Fan: 150 m³/Min. (5,300 CFM)
Large Fan: 708 m³/Min. (25,000 CFM)

*Each steady-state condition consisted of 10 minutes of sampling.

GASEOUS EMISSIONS IN GM/MILE AND SULFATE EMISSIONS IN MG/MILE FOR THE INDICATED FAN CONFIGURATIONS* (Continued)

CHRYSLER	A ₁	A ₂	D ₁	D ₂	E ₁	E ₂	F ₁	F ₂	G ₁	G ₂	H ₁	H ₂
40-1 HC	.04	.03	.03	.04	.04	.04	.03	.05	.04	.04	.03	.02
CO	.08	.03	.03	.03	.03	.05	.02	.04	.05	.05	.02	.03
CO ₂	436.01	438.11	427.97	439.50	433.42	422.56	467.44	437.17	424.52	450.53	439.81	422.45
NO _x	2.78	2.62	2.86	2.81	2.74	3.04	2.13	2.67	2.47	2.73	2.36	2.59
SO ₄ ^x	2.656	7.806	10.283	18.644	7.533	10.708	14.71	14.95	12.65	5.03	57.605	41.620
40-2 HC	.04	.04	.03	.04	.04	.04	.03	.04	.04	.04	.03	.00
CO	.08	.05	.03	.03	.03	.05	.04	.04	.05	.04	.04	.03
CO ₂	439.73	426.42	421.53	437.37	431.03	416.44	425.41	435.29	419.19	443.66	426.04	423.50
NO _x	2.78	2.59	2.69	2.70	2.62	3.09	2.19	2.51	2.41	2.59	2.33	2.53
SO ₄ ^x	8.112	11.493	24.560	28.638	15.044	19.621	12.61	18.22	18.42	12.06	54.306	54.823
40-3 HC	.04	.04	.04	.04	.04	.04	.03	.04	.04	.04	.03	.00
CO	.09	.03	.04	.03	.03	.05	.03	.04	.05	.04	.02	.03
CO ₂	438.07	417.49	420.99	437.07	431.47	414.58	422.62	429.91	417.23	444.67	413.12	418.69
NO _x	2.69	2.88	2.69	2.65	2.55	3.02	2.12	2.49	2.41	2.52	2.32	2.48
SO ₄ ^x	13.751	9.616	23.930	38.518	21.312	20.614	27.93	22.60	22.63	9.66	55.187	63.090
FAN CONFIG.	Small Front		Small Front Small Side		Small Front Large Side		Large Front		Large Front Small Side		Small Front	

Small Fan: 150 m³/Min. (5,300 CFM)

Large Fan: 708 m³/Min. (25,000 CFM)

*Each steady-state condition consisted of 10 minutes of sampling.

GASEOUS EMISSIONS IN GM/MILE AND SULFATE EMISSIONS IN MG/MILE FOR THE INDICATED FAN CONFIGURATIONS* (Continued)

CHRYSLER	A ₁	A ₂	D ₁	D ₂	E ₁	E ₂	F ₁	F ₂	G ₁	G ₂	H ₁	H ₂
60-1 HC	.02	.02	.02	.02	.02	.02	.02	.03	.02	.02	.02	.00
CO	.08	.03	.04	.04	.04	.05	.03	.05	.04	.04	.04	.02
CO ₂	534.16	513.08	499.33	501.86	522.76	499.06	502.94	500.58	489.78	516.01	486.54	490.33
NO ₂ C	4.48	6.16	5.88	5.52	5.85	6.32	4.95	5.21	4.97	5.37	4.91	5.52
SO ₄ ^x	24.884	51.028	69.020	105.167	71.105	100.439	81.90	136.96	104.8	60.77	75.715	79.040
60-2 HC	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.01	.00
CO	.09	.05	.04	.03	.04	.04	.03	.05	.04	.05	.08	.03
CO ₂	539.67	513.46	497.79	500.48	518.48	491.84	501.70	497.98	490.08	514.74	508.52	484.56
NO ₂ C	3.75	5.80	5.88	5.49	5.82	6.32	4.96	5.05	4.97	5.25	4.35	5.23
SO ₄ ^x	24.587	56.198	67.453	61.031	69.218	73.846	93.31	106.32	74.92	67.79	66.889	86.526
60-3 HC	.03	.02	.02	.02	.02	.02	.02	.01	.02	.02	.00	.00
CO	.10	.07	.04	.04	.04	.04	.04	.04	.05	.04	.10	.05
CO ₂	550.71	511.76	494.30	497.24	515.67	493.35	502.48	499.96	490.98	511.79	514.15	477.56
NO ₂ C	3.21	5.18	5.75	5.38	5.78	6.22	4.98	5.11	5.29	5.23	3.69	4.79
SO ₄ ^x	33.758	52.164	68.479	73.314	76.303	81.323	90.34	95.57	79.86	42.52	86.310	57.101
FAN CONFIG.	Small Front		Small Front Small Side		Small Front Large Side		Large Front		Large Front Small Side		Small Front	

Small Fan: 150 m³/Min. (5,300 CFM)
Large Fan: 708 m³/Min. (25,000 CFM)

*Each steady-state condition consisted of 10 minutes of sampling.