
Air

 **EPA Supplemental Guidance for
I/M Programs:
Hot Line Services**



**SUPPLEMENTAL GUIDANCE FOR
I/M PROGRAMS:
HOT LINE SERVICES**

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Emission Planning and Strategies Division
Office of Mobile Sources
Office of Air and Radiation
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PREFACE

This document is intended as a resource for state and local Inspection and Maintenance (I/M) planners and administrators. It provides guidance regarding the hot line service requirement outlined in 40 CFR 51.369(a)(2) of the I/M program regulation.

The provision for a hot line service is required in both basic and enhanced I/M areas. It is required in basic I/M areas by 1994 (January 1, 1994 for decentralized programs or July 1, 1994 for centralized programs.) It is required by January 1, 1995 in enhanced I/M programs. The program agency is required to provide a hot line that will: 1) assist repair technicians with specific repair problems, 2) answer technical questions that arise in the repair process, and 3) answer questions related to the legal requirements of state and federal law with regard to emission control device tampering, engine switching, or similar issues.

A draft of this hot line guidance, dated January 3, 1994, was circulated to various state and industry organizations including hot line services. Comments from EPA reviewers, state agencies, industry organizations, and the hot line services were incorporated as appropriate in this version. The regulatory requirements are discussed, followed by minimum hot line capabilities that meet the three requirements of the rule. This is followed by various options for implementation by a state program agency. Also presented are enhancements, some of which states are considering, in addition to the minimum requirements to further assist the repair technician. This is followed by guidelines state agencies can consider for selection or development of a hot line service. Also provided are some possible hot line enhancements. A bibliography of available commercial hot line services is also provided.

Although this guidance document has not been released in time for states to prepare their final SIPs, it will be useful in developing those programs required by regulation to support the "M" side of I/M; in this case, a hot line service in support of a basic or enhanced I/M program. Subsequently, the information in this document will be incorporated into a revision of the draft March 24, 1993 OMS document titled, "Supplemental Guidance for I/M Programs: Vehicle Repair, Technician Training and Certification, and Repair Shop Tracking." Also included will be a revised version of the "Performance Monitoring Guidance," a draft of which was released by this office in December 1993. Comments on this document are welcome and should be directed to:

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1.0 REGULATORY REQUIREMENTS

Section 51.369(a)(2) of the Inspection/Maintenance Program Requirements published November 5, 1992 in the Federal Register states:

"The (oversight) agency shall provide a hot line service to assist repair technicians with specific repair problems, answer technical questions that arise in the repair process, and answer questions related to the legal requirements of state and federal law with regard to emission control device tampering, engine switching, or similar issues".

In essence, this regulatory language contains three distinct service areas that a program agency is required to provide through a hot line. These three areas are:

- (1) provide specific repair advice,
- (2) provide technical information during the repair process, and
- (3) respond to legal and agency policy questions on specific vehicle conditions/repair strategy needed for compliance.

The provision for a hot line service is required in both basic and enhanced I/M areas. This includes the areas of the country that choose to opt into either the basic or enhanced I/M programs if they seek the corresponding level of emission reduction credit.

Further, §51.369(d) requires that the SIP (State Implementation Plan) "... include a description of the technical assistance plan to be implemented," The "technical assistance" language refers to the requirements of §51.369(a), which includes the hot line service requirements.

2.0 MINIMUM HOT LINE CAPABILITIES THAT MEET REGULATORY REQUIREMENTS

The state program agency must provide a hot line service that provides a basic level of technical service in order to assist the technician (or anyone seeking technical advice, e.g., do-it-yourselfers) during the repair process and also answers the legal and policy questions as they relate to specific vehicle conditions and repairs. The state may choose to contract for some of these services if certain conditions, as discussed in Section 3.0, are met.

With regard to providing repair advice and technical information during the repair process, the staff on this hot line must have an understanding of the I/M test procedures used in that state, and an understanding of the basic vehicle systems and components, as well as a working knowledge of how the two relate to each other in order to answer generic repair questions. It is

not necessary that such a service offer repair advice on an in-depth vehicle-specific level which is available from many commercial hot line services (e.g., "What is the voltage on pin 9 of model xx?" as opposed to a generic question, "How could a purge failure affect IM240 emissions?"). Therefore, the staff of any technical hot line service offered under §51.369(a)(2) must at least have a general understanding of emission repair diagnostic procedures.

With regard to responding to legal and agency policy questions, the hot line staff that is chosen must be familiar with state and federal specific I/M rules, regulations, and policies in regard to all aspects of the I/M program (tampering, engine switching policy, catalyst replacement policy, consumer protection policy, location of I/M test stations, I/M cutpoints for different model years, waivers, reinspection, etc.).

For minimum access requirements, it is preferable, but not required, that the technical hot line established under 51.369(a)(2) be separate from the public awareness information number which could be established by a state under 51.368(a). However, technicians (or others) in need of advice during the repair process should not be made to wait while general program information is disseminated. If a state chooses to operate only one hot line, it must ensure that the hot line has enough capacity or special routing features so technicians will not have to wait for repair information.

If the repair questions are more vehicle-specific than generic, hot line personnel must be able to refer the technician to additional sources of information that could further assist the technician in the repair process. At a minimum, hot line personnel should be prepared to provide the technicians with general information summarizing methods to access available commercial hot line services that support the specific area of the question, as well as their general capabilities and costs. The section titled, "*Guidelines for Selecting Commercial Hot Lines*" discussed later in this document (Section 5.0) may provide a starting point for the states in preparing this information.

A state may also wish to propose alternatives to this basic referral requirement, such as referring technicians to a specific repair manual. However, the burden would be on the state to show how such alternatives would work in practice (e.g., would the hot line operator have specific knowledge of appropriate repair manuals; where would the technician obtain the manual if the technician did not have it, etc.).

3.0 OPTIONS FOR HOT LINE MANAGEMENT

There is considerable flexibility with regard to how the rule is administered.

Conceptually, paraphrased areas (1) and (2), which address the issues of providing specific repair advice and technical information during the repair process, probably have the most flexibility. Some of the options available to the states include the following.

- 1) The state could operate the entire repair information function itself.
- 2) The state could have a contractor handle all the repair information hot line functions including detailed repair questions.
- 3) The state could provide a repair hot line that provides a basic level of technical service, and refers detailed repair questions to commercial repair services. With this approach, the referral could be: (1) to a specific hot line service under contract, (2) to one of several hot line services under contract, (3) to one or many hot line services that meet state requirements (but not under contract), or (4) any service that the state has identified that can provide support for the specific repair questions asked by the technicians (i.e., essentially a free market with minimal oversight to assure that the minimum referral requirements in Section 2.0 are met).
- 4) The state could turn over the operation and management of a basic repair hot line to the state I/M contractor, and the contractor would subsequently refer the more detailed questions to commercial hot line services, or
- 5) The state could work in partnership with an I/M contractor in establishing and operating a hot line service (i.e., a combination of options 3 and 4 above).

Other options in administering the functional requirements of the repair hot line may exist.

Paraphrased area (3) of the rule encompasses a variety of services. The most straightforward service requirement is the dissemination of the legal requirements and policies of the I/M program. A more complicated service requirement is responding to questions from the service industry that may involve interpreting both Federal and State legal and policy guidelines for individual situations. Interpretation of legal and policy guidelines may be considered "an inherently governmental function" in many states. As an aside, Federal regulations prohibit the Federal government from performing an inherently governmental function under contract.

EPA feels that a state could contract out area (3) if the following conditions are met:

- 1) the state can legally do so (i.e., this activity would not be considered an inherent governmental function under state law),
- 2) the state is comfortable with the contractor making these decisions, and
- 3) the hot line staff that is chosen should be familiar with state and federal specific I/M rules, regulations, and policies in regard to all aspects of the I/M program, as discussed in Section 2.0.

Assuming that the above criteria are met, and a state could contract out a legal/policy hot line, EPA still recommends that the state program agency itself establish a hot line to answer the questions related to the legal requirements and interpretation of state and federal laws and the state I/M program itself. This is because there can be unique repair situations that do not conveniently fit within frequently encountered legal and policy guidelines. For this reason, many states currently offer hot line services to address such unusual circumstances. In addition, one of the purposes of this section of the I/M rule was to encourage the states to work more closely with the repair industry. If the state contracts out all of the interface with the repair industry, including the legal assistance, this interface element with the repair industry envisioned by the regulations will be lost.

Another reason supporting the recommendation that the state operate the legal hot line is because of the volume and variety of state and local laws that a given hot line service may handle. Because there currently are a limited number of commercial hot line services, it is reasonable to assume that any given hot line service contracted by a state will in reality also be supporting many different states. Unless a contractor assigns specific personnel for each state, there could be difficulties experienced by a contractor in becoming familiar with the many state and local laws and regulations, as well as the federal laws and regulations. This could be particularly problematic if the contractor personnel are also providing detailed repair advice. If the hot line service contractor is capable of establishing a hot line service with a dedicated legal interpreter for each particular state, then the possibility of the contractor successfully handling the legal questions will be much greater. If a state chooses to contract out this area, the state will ultimately have to deal with situations that could arise if the information provided by the hot line service is in error.

In summary, the state must provide a mechanism to ensure that a hot line service will exist that addresses the three areas listed in Section 1. We would expect that most states would physically operate a hot line that handles the basic functional requirements (including legal issues), and employ one of the referral options discussed previously. The states are free, however, to propose other methods for administering the required

hot line service, as long as sufficient information is provided to allow a reasonable expectation that the alternate method would result in a system that would meet the requirements of §51.369(a)(2). Finally, §51.369(d) requires that the SIP include a "... description of the technical assistance program to be implemented" A description of the method(s) that will be used to administer the hot line and the functions/capabilities that will be offered by the service are considered to be part of the description of the technical assistance program required by §51.369(d).

4.0 REPAIR SUPPORT ENHANCEMENTS

In addition to the approaches that have been discussed above, the state may opt to enhance its program using other approaches beyond the minimum program that is required. Listed below are several ideas, some of which states are presently proposing, as enhancements to technician assistance. This may not be an exhaustive list, but should still be useful. Individual states may wish to develop other enhancements to meet their specific needs.

- 1) The state (or its contractor) may wish to negotiate pricing and access arrangements with one or more national repair hot line services which a registered technician could call for free, or at nominal charge, or at cost.

- 2) The state may wish to identify minimum qualifications for referral services to be included on the state referral list. For example, repair subjects covered, access requirements, hours of operation, etc.

- 3) The state (or its contractor) could set up a diagnostic center, establish electronic (phone or other) communication capabilities with in-field BAR90 analyzers or other diagnostic equipment, and could provide the capability for technicians to take cars to the center if the over-the-phone approach is unsuccessful.

- 4) The state (or its contractor) could set up an electronic library from which the technician could down-load information or otherwise access.

- 5) The state (or its contractor) could establish a library of failure information on vehicles in the local fleet that was electronically accessible.

5.0 GUIDELINES FOR SELECTING COMMERCIAL HOT LINES

Listed below are guidelines state agencies could consider for selection or development of a hot line service. This list may not encompass all the criteria necessary to consider in choosing a hot line; however, the list should be broad enough to provide useful guidance. Even so, individual states may have specific needs not mentioned here, and of course, those would need to be considered when using the following guidance. In preparing these guidelines, EPA reviewed the guidelines from several sources, including the Coalition for Safer, Cleaner Vehicles' (CSCV), Education/Training Advisory Board. Some of those guidelines were incorporated where appropriate.

Even though these guidelines are directed more toward the commercial services, many of the criteria specified in these guidelines would still be applicable to a state-run program. When reviewing these guidelines it is important to remember that the IM240 data are not yet available. A hot line should have the capability to use and incorporate these data when they do become available.

5.1 Guidelines for Enhanced I/M Areas

1) A hot line service should provide the auto repair facilities with comprehensive technical information. Personnel providing repair information should have in-depth knowledge of the vehicle in question.

The hot line should be capable of providing assistance in: a) diagnosis and repair of malfunctions in computer controlled, closed loop vehicles (e.g., 1981 and later) as well as earlier vehicles (e.g., those with oxidation catalysts or non-catalyst) to which the I/M program applies, b) the application of emission control theory and diagnostic data to the diagnosis and repair on the transient emission test and the evaporative system functional checks, and c) the use of diagnostic information on systematic or repeated failures observed in the transient emission test and the evaporative system functional checks.

2) The hot line capacity should be sized to minimize access time during periods of high demand.

3) The hot line should provide a mechanism to ensure that the necessary preliminary systems checks have been completed prior to making the initial repair call. This will minimize the hot line service from being flooded with inquiries relating to basic service questions. This may take the form of a standard checklist to be provided by the hot line service or initial questioning by the hot line technician to determine if these checks have been made. The existence and

necessity of conducting such preliminary checks should be widely distributed to the repair industry.

4) The information should be provided in a timely manner after receipt of a call. In general, the information should be provided almost immediately (e.g., within an hour).

5) The hot line should be convenient and cost effective (local, 800, or 900 number) with minimum operating hours that cover the hours of normal repair shop activity in the I/M area.

6) The service should have a complete collection of factory service manuals, wiring diagrams, factory service bulletins; PROM update information, and a demonstrated ability to acquire and to incorporate the most recent information available. This collection should generally be for all model years covered by the I/M program.

Several efforts are underway which would provide independent service facilities/hot lines with greater access to OEMs service information. EPA's September 24, 1991 proposed rule on onboard diagnostics requires manufacturers to make emission-related repair and service information (including recall information) available to all independent technicians and services. Portions of this proposal are expected to be finalized in 1994. Also, beginning in 1998, the proposed rules would require this information to be provided in a standardized electronic format currently being developed by the Society of Automotive Engineers (SAE) under SAE J2008: Recommended Organization of Vehicle Service Information. A draft version of this document was released in July of 1993.

7) The hot line should have available current access to various service information in electronic form. The service should be upgradeable to SAE J2008 format when available.

8) The service should remain current with the local I/M fleet as the model year mix changes with time.

9) The hot line service should create a database with the repair knowledge (not IM240 data) gained through the assistance provided by the service. This database will give historical perspective on a particular vehicle and/or vehicle type. The database should be accessible such that it could be easily downloaded to local or county air pollution program databases.

10) Bilingual services are appropriate in areas with large non-English speaking populations.

11) The hot line should have facsimile (fax) capabilities.

5.2 Guidelines For Basic I/M Areas

The guidelines state agencies can consider for selection or development of a hot line service listed in Section 5.1 will generally also pertain to the basic I/M areas. Again, this list may not encompass all the criteria necessary to consider in choosing or developing a hot line. Individual states may have specific needs not mentioned here. It is also possible that states with long-running basic I/M programs already have a state operated hot line in place that meets and/or exceeds these guidelines.

5.3 Enhanced Capabilities

There are several other enhanced capabilities states may look for when selecting or developing a hot line service. These additional capabilities require more equipment and expertise on the part of the hot line service. It should be noted that, in order to be in compliance with Section 51.366 of the I/M rule, states are required to collect the repair data.

- 1) The capability for modem to modem transfer of data from specific types of diagnostic equipment (e.g., BAR 90, scan tools, etc.) to the commercial hot line. This includes the ability to provide direct computer access to symptom/emission failure specific repair information.

- 2) If possible, the state may want to provide a mechanism for the hot line service to: 1) accept from the program agency I/M repair data for all the repair facilities, 2) analyze the data, and 3) incorporate the data into its database. The hot line service would then have a much larger database to draw from when providing assistance to repair technicians.

APPENDIX 1

BIBLIOGRAPHY OF COMMERCIAL HOT LINE SERVICES

The following bibliography is provided for reference only. EPA does not endorse any particular service. Currently, at least six companies operate commercial hot line services. If EPA becomes aware of any additional sources, they will be added to future updates of the guidance document. It is expected that the state and local agencies will determine which, if any, of these hot lines can meet the needs of an I/M program in their state. The information below was provided by the companies operating hot line services, and EPA makes no claims on the accuracy of the data and provides no specific endorsement of these services.

- 1) ASPIRE
U.S. Hwy 1
Morrisville, PA 19067
Contact: J. R. King 800-435-1050

The hot line operated by ASPIRE was established in 1980, with subscribers from state and industry. The ASPIRE hot line logs about 20,000 to 25,000 minutes of call time per month. Service charges for actual time used and the price charged depends on the user. Calls are primarily related to driveability, performance, and emissions. There is a separate hot line to support trainers.

- 2) Technet/Automotive Data Systems (ADS)
15593 Graham
Huntington Beach, CA 92649
Information source: Leith Tecklenberg 714-891-7818
Contact no.: 714-892-8330, ask for Curt Moore or
714-891-7818

The company runs four hot lines, the Shell Auto Care Hot line, a hot line for Hurst Motor Repair Manuals, a test program with Snap-on Tools, and Teleguide for Computer Aided Service Corporation. Technet/ADS services approximately 7000 cars per month with 90 to 95% of the calls related to driveability/engine control. Over the past 10 years they have averaged 1000 to 1500 calls per day. During their 13 years of operation, the company has compiled a vehicle repair database, tracking repair patterns with over 300,000 cars.

- 3) Mitchell
9889 Willow Creek Road
P.O. Box 26260
San Diego, CA 92126
Contact: Bob Gradijan 800-854-7030, extension 6411 or
Eddie Santangelo, extension 6504

Mitchell has a call volume of 100-200 calls/week, with 75% of calls driveability related and the rest electrical. Most of the

customers are technicians and shop owners. Charges are assessed on a per problem basis.

- 4) Autoline Telediagnosis
2714 Patton Rd.
Roseville, MN 55113
Contact no.: Rob Schuyt 800-288-6220

Autoline has been in existence for over five years. The company handles about 10,000 calls per month and has 4200 factory manuals and all factory bulletins. The company also has Expertec, a CD ROM service from General Motors with PROM updates. The company has an extensive database with 500,000 fixes logged into the system. Customers include independent shops, service stations, fleets, and car dealers. Autoline runs hot lines for NAPA, Parts Plus, Mighty Auto Parts, ASA, NTDRA, Amoco, Exxon, Chevron, BP, and Marathon. The company can also receive live data over the phone from a modem on test equipment. Hours of operation are 7:00 a.m. to 7:00 p.m. CST, Monday through Friday. A quarterly newsletter giving technical information is also published and a sample copy can be obtained from the contact listed above. Charges for this hot line service are by the minute, with no monthly fees and no sign-up fees.

- 5) GE Capital Fleet Services
Three Capital Drive
Eden Prairie, MN 55244
Information source: Mike Peterzen 612-828-2103
Contact no.: 612-828-2799

GE Capital Fleet Services' past experience does not have service center subscribers; its clients are owners of fleet vehicles being serviced at shops not owned by the fleets. The company provides guidance to mechanics, and also issues purchase orders to repair or rental facilities, so drivers do not incur out of pocket expenses.

At present, GE Capital Fleet Services is completing the development of an Enhanced Inspection/Maintenance Technical Hot Line. Their proposed system includes online access to emission results by VIN, the ability to access a database of historical data, the ability to view State parameters regarding emission tests, and the ability to create statistical reports from the database of calls.

- 6) Technician ONLINE
8949 Bluewater Hwy
Saranac, MI 48881
Contact: Terry L. Callaghan 616-642-9271

The Technician ONLINE hot line is, at present, a computer accessed hot line that has been in operation since August, 1992. It is a 24 hour service that enables the technician to access technical bulletins and service information compiled directly from field experiences. Files have recently been added to access IM240 emission traces, automotive Original Equipment Manufacturers (OEM) emission/safety product recalls, and OEM recall notices in the SAE J2008 format. A monthly newsletter, Driveability Technician, giving technical information directly from the repair technicians is also published. A sample copy can be obtained from the contact listed above. After the initial set-up and training is completed by Technician ONLINE (with a one time charge), the cost for their hot line service is on a per month basis. There is an additional charge if the Technician ONLINE graphical software is desired by the user. Technician ONLINE will also establish, for independent states, an Automotive Information Resource Center. This center would be based in the specific state and would be set up by Technician ONLINE to the state's specifications and needs.

APPENDIX 2

OTHER PRODUCT INFORMATION HOT LINE SERVICES

There are many other companies that sponsor technical hot lines relating to companies' own parts. Many of these other hot lines are designed to answer specific questions on products of particular companies; thus, they vary in usefulness and scope. If you are a customer of these products, the hot lines are usually free, but may be limited to directions on how to install a particular product. Since the hot lines specified in §51.369(a)(2) are diagnostic in nature, these other hot lines will not be discussed here.