# **Help Contents**

## **Getting Started**

Step-by-step instructions to help you register the CD and get started using your information

**Features** What the CD offers

<u>Functions</u> How to access and use features

**Reference** 

Glossary of Popular Mechanics and automotive terms

## **Customer Support**

How to get help from Popular Mechanics when you need it

## **Document Section Jumps (not displayed in help)**

Double-click in red brackets to jump to document sections. <u>Remove from search index before</u> releasing final version.

Page Helps Dialog Helps Definitions

## **Getting Started**

The Automotive Service Information Bureau is designed to provide you with the information you need through all phases of vehicle repair. Follow the steps below to acquaint yourself with the Automotive Service Information Bureau's features and capabilities.

#### **1. CD Registration**

Activating your CD, choosing options and specials.

#### 2. Diagnosis and Repair

Working in the information structure, Technical Service Bulletins, Diagnosis and Repair.

#### **3. General Information**

Reference and checklists to make sure you've covered all the bases.

## **CD** Registration

Registration activates the features and options you choose so you can begin using your CD. The registration process may be completed using your modem or by phoning our Interactive Voice Response (IVR) Registration System.

To register, you will be asked to enter:

- The 12-digit CD serial number located on the CD sleeve sticker
- Whether you would like to register by modem or by phone using the IVR Registration System

## **Modem Registration**

If you choose to register by modem, you will enter:

- Your choice of vehicles
- What options you would like to access on your CD
- Credit card information
- Personal address information

When your selection is complete, your modem will send the information to our Automotive Service Information Bureau server for processing. When the information is approved, you will be given an authorization code(s) to access the information for the vehicle(s) and options selected.

## Interactive Voice Response (IVR) Registration System

If you do not have a modem and you reside in the US or Canada, dial 1-800-344-6614 to register toll free by phone. If you are calling from outside the US or Canada, dial 011-916-683-4908 to register by phone. The automated voice system will lead you through the registration step by step. If you choose to register by phone, you will enter:

- Credit card information
- Telephone number with area code
- Zip code

When you have entered the authorization code into your computer you can access the selected options and features on your CD.

## **Diagnosis and Repair**

Please take a little time to step through the following categories. The more familiar you are with the Automotive Service Information Bureau, the easier it will be to quickly locate and use the information you need to service your car.

#### **Basic Usage**

- 1. Home Screen Features
- 2. Selecting a Vehicle
- 3. Select a System or Component from the Vehicle Hierarchy
- 4. Select an Information Type
- 5. Help Functions

#### **Viewing and Printing**

- 1. Changing Fonts
- 2. Article Views
- 3. Zoom Functions
- 4. Adding and Deleting Annotations
- 5. Print Functions

#### **Database Layout and Navigation**

<u>1. Vehicle Hierarchy</u> 2. Hyperlinks and PowerStep Diagnostics

#### **Technical Service Bulletins (TSBs)**

- 1. Understanding what a TSB is
- 2. Accessing TSBs BEFORE working on the car
- 3. TSB Main Menu

### **Home Screen Features**

The Home screen is the first screen displayed when the Automotive Service Information Bureau starts. From the Home screen, you can jump directly to diagnostic and repair information, general information or preview a vehicle. To return to the Home screen from anywhere in the Automotive Service Information Bureau, click the Home icon on the tool bar.

#### Menu Bar

The menu bar lists all available menu commands. Clicking on any menu item displays a pull-down menu with additional menu options. Pull-down menu items that are followed by an ellipsis (...) indicate additional choices or a dialog box selection.

#### Tool Bar

The tool bar is the strip of icons at the top of the screen. It provides one-click access to the Automotive Service Information Bureau's most-used features.

#### Selecting an Information Category

Any Automotive Service Information Bureau Information Category can be selected from the Home screen by clicking on the category button or title. Information Categories are as follows:

- Preview or Register a Vehicle
- Diagnosis and Repair
- General Information

## **Selecting a Vehicle**

Before working in the Diagnostic and Repair database, you must first select a vehicle because the Automotive Service Information Bureau information is vehicle-specific.

#### To recall a previously-registered vehicle:

- Click the Registered Vehicles icon from the tool bar
- OR -
- Select Data from the menu bar and click Select Registered Vehicles.

Either of these options displays the Select a Registered Vehicle dialog box.

The Registered Vehicle dialog box contains a list of previous vehicle selections. To choose a vehicle:

- Double-click on the vehicle
- OR -
- Click the vehicle and click OK

**Note**: If you choose a vehicle that is not on the currently-loaded disc, the Change Disc dialog box appears prompting you to install the correct CD.

## **Information Types**

After selecting a system or component, you can choose from several Information Types which are displayed as icons.

Automotive Service Information Bureau's vehicle, system and component information is classified according to service Information Type. Information Type sub-categories are also used to help further clarify information. By classifying all information by Information Type, information stays consistent from system to system and model to model.

Click on each of the following categories for additional information:

Service Precautions Application and ID Description and Operation System Diagnosis/Testing and Inspections Adjustments Locations Service and Repair Diagrams Specifications Technical Service Bulletins Field Fixes Tools and Equipment

### **Help Functions**

Online Help provides access to information about the Automotive Service Information Bureau's features, commands and tasks, and may be accessed by several methods.

#### **Help Contents**

Contents displays a list of available help topics. Choose this option to learn more about the Automotive Service Information Bureau or to browse for available features.

#### To choose:

- Click Help from the menu bar
- Click Contents

#### Search For Help On...

Search For Help On... displays the help index dialog box. Choose this option if you know what you want to do, but need additional information.

To choose:

- Click Help from the menu bar
- Click Search For Help On...

#### **Context Sensitive Help**

Context Sensitive Help is available for most Automotive Service Information Bureau windows by clicking the Help icon on the tool bar. Choose this option for information about the current screen display.

#### **Dialog Box Help**

The Help button on any dialog box provides information on how to complete the task required within the box. Choose this option for information about what to do to complete a dialog box request or selection.

## **Changing Fonts**

You can change screen fonts to suit your personal taste by clicking View and selecting Fonts. Note that this selection effects screen fonts only; printer fonts will not be effected.

Selecting a larger screen font allows you to view information in SVGA while reducing the size of icons. Conversely, choosing a smaller font allows you to view more information per text screen when in lower resolutions.

**Note:** If you choose a font that is too large, your table of contents will not display properly and some image titles may truncate.

## **Article Views**

#### **Text and Image**

Text and Image is the default view for all articles that contain both text and image(s). If you are displaying an article in another mode, choosing Text and Image returns you to the default split-screen view with text on the left and image on the right.

As you scroll through text, you may notice image buttons above specific information blocks. To view images that apply to specific topics, click on each image button as it appears in the text.

#### **Text Only**

Choosing Text Only allows you to view the article text in full-screen view without displaying the article image(s). This feature is useful for reading longer articles that contain few images.

In text mode, you can return to Text and Image by clicking on any image button or clicking the Text/Image icon.

#### Image Only

Choosing Image Only allows you to view the image in full-screen view without displaying the article text. This feature is useful for viewing the overall image in greater detail than is possible in split-screen view.

#### Adjusting Text and Image Window Size

If you wish to view a greater (or lesser) text area or image area, you can adjust the window size by moving the article separator bar.

#### To resize:

- Move the mouse pointer over the separator until it changes into an adjust symbol.
- Click and hold the left mouse button while dragging the separator left or right.

Note: Image titles do not wrap like text.

## **Zoom Functions**

#### Fit Image

Choosing Fit Image in Window allows the entire image to display within the image viewing area. This feature is useful for gaining an overall perspective of the image.

#### To view any part of the image in greater detail:

- Click on the image area with the left mouse button.
- Box the area by clicking and dragging the mouse diagonally across the selected image area.
- Click Zoom

#### To return to normal viewing:

- Click Zoom Out
- Click Fit in Window

#### Zoom In

Choosing Zoom In increases the current image size in 50% increments until it reaches Actual Size. This feature is useful for viewing specific image areas in greater detail.

**Note**: You can also Zoom In by clicking on the image area with the left mouse button or boxing the area by clicking and dragging the mouse diagonally across the selected image area.

#### To return to normal viewing:

- Click Zoom Out
- Click Fit in Window

#### Zoom Out

Choosing Zoom Out decreases the current image size in 50% increments until it displays entirely within the image viewing area. This feature is useful for viewing more of the image or for returning to normal view.

## Adding and Deleting Annotations

Annotate allows you to attach your own notes to articles or images. You can place annotations within an article or image by clicking on the area you want to annotate. The annotation will display any time the article or image is viewed again. Annotated articles are indicated by the yellow note symbol.

#### **Suggested Annotations:**

- Reminders
- Field Fixes
- Enhancements to Procedures
- Supporting Information

#### To attach a note to an article:

- Click the annotate button on the tool bar.
- Click on the article or image area you wish to note.
- Type your note in the dialog box window.
- Click OK.

#### To remove a note from an article:

- Click on the yellow note symbol in the article.
- Click delete in the dialog box.

## **Print Functions**

The Print Article dialog box allows you to print the currently-displayed article. To activate the Print dialog box, click the Print icon from the tool bar or select Data from the menu bar and click Print.

## **Print Dialog Box Options**

#### Print the Complete Article (Text and Images)

Select this option if you need a printed copy of the entire article.

#### **Print Article Text Only**

Select this option if you do not need the images and wish to print the article quickly.

#### Print the Image Currently Displayed

Select this option to print only the image you are currently viewing on the screen.

**Note:** If the article does not contain both text and images, Text Only and Image Only options do not apply and are grayed-out in the Print dialog box.

#### To print multiple TSBs or TSB titles:

Display the TSB list and click Print. A dialog box will appear giving you the choice to print Titles Only or Complete Bulletins. Click the appropriate choice and click OK.

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Click OK to print the article as selected in Print options.

#### Cancel

Click Cancel to abort the print command.

## **Vehicle Hierarchy**

Automotive Service Information Bureau's TurboView data structure is a hierarchy that promotes rapid information searches by organizing data into systems, sub-systems and components. The TurboView hierarchy makes an information search consistent, regardless of the selected vehicle. To begin your information look-up, select the specific level of information you need.

The TurboView hierarchy is structured as follows:

### **General Vehicle Information**

Information at the vehicle level pertains to the entire vehicle and includes:

- Vehicle diagrams
- Vehicle specifications
- Comprehensive Technical Service Bulletin summary

#### Systems and Sub-systems

System information refers to the various systems and service categories that make up the entire vehicle. Automotive Service Information Bureau's information is divided into twelve major systems plus additional vehicle level categories as follows:

- Maintenance
- Diagrams
- Engine
- Cooling System
- Exhaust System
- Powertrain Management
- Transmission and Drivetrain
- Brakes and Traction Control
- Starting and Charging
- Steering and Suspension
- Heating and Air Conditioning
- Body Electrical
- Body and Frame
- Air Bags and Seat Belts

#### **Components and Sub-components**

Beneath each system, information is divided into components. Our component list is standardized and based on the SAE J1930 Standard.

After selecting a system or component, click on the Information Type icon. At each level, one or more of the following <u>Information Types</u> are available:

Service Precautions Application and ID Description and Operation System Diagnosis/Testing and Inspections Adjustments Locations Service and Repair Diagrams Specifications Technical Service Bulletins Field Fixes Tools and Equipment

## Hyperlinks and PowerStep Diagnostics

Hyperlinks are "jump-words" that lead to additional or supporting information. PowerStep Diagnostics is a special application of Hyperlinks that leads you through complex diagnostic procedures. If you are viewing an article that refers to a test procedure, diagram or specification, click on the highlighted word or graphic "hot-spot" to bring up the referenced information.

## **Using PowerStep Diagnostics**

Normally, PowerStep Diagnostics begin at the Flow of Diagnosis in the Computers and Control Systems section of Powertrain Management. Follow the chart from the top down. To see a referenced diagnostic routine, diagnostic chart or table, put the mouse pointer on the highlighted area and click the left mouse button. You'll be "power-stepped" to the information you want. When a procedure refers to another chart, click on the reference to power-step to it.

## **Hyperlink History**

Both Hyperlinks and PowerStep Diagnostics employ the Automotive Service Information Bureau's Hyperlink History. With Hyperlink History, a separate window appears across the top of the screen listing each step you've taken and providing a direct path to any previous step with a single mouse button click.

## Understanding what a TSB is

A TSB may be thought of as the combined experience of the best mechanics and engineers in the field. If you were working on a car in the shop and knew nothing about the problem, you would probably ask the "shop expert." That's precisely what a TSB is...the shop expert!

Before spending any unproductive time on a problem or repair, consult the experts... check TSBs.

### **TSB Main Menu**

The main Technical Service Bulletin menu provides you with several TSB title display choices. Each choice prioritizes TSB titles and displays them in a different order. In addition, you can broaden or narrow your TSB search by selecting TSBs at the vehicle, system or component level.

#### **By Category**

Selecting TSBs by category forces all TSBs of a specific type to display at the top of the screen. Note that ALL remaining TSBs are still displayed in a separate section below the category listing.

#### By Symptom

Selecting TSBs by symptom forces all TSBs with particular symptoms or problems to display at the top of the screen. Note that ALL remaining TSBs are still displayed in a separate section below the category listing.

#### All TSBs

Selecting all TSBs allows every TSB for the vehicle, system or component to display.

## Accessing TSBs BEFORE working on the car

Check the TSBs before you exhaust yourself trying to find a problem already documented by the manufacturer.

## **General Information**

General Information contains non-vehicle-specific tips, tricks, traps, and information. A quick exploration of this section may help answer many confusing automotive issues that are not generally covered in repair manuals.

#### **General Information Selections**

Using TurboView Data Organization Service Consultant Vehicle Inspection Forms and Symptom Checklists Technician's Glossary Emissions Quick Reference Guide

## Using TurboView Data Organization

Clicking the TurboView button activates a pop-up menu with Information Type choices and a path to previous selections.

## **Service Consultant**

The Service Consultant contains answers to frequently asked questions about your car (when should I maintain, what should I maintain, what should be checked, and at what interval). It also contains recommendations and descriptions of oil types and viscosities, timing belt replacement intervals, and definition of interference engines.

## **Vehicle Inspection Forms and Symptom Checklists**

Inspection forms are a handy checklist of items to identify when inspecting the car. These are also useful when you decide to take the car to a shop... no sense paying for a subsequent list if you already have one.

## Technician's Glossary

The technician's glossary is a dictionary of automotive terms and components. While generic in nature, it is useful when you have no idea what the component is that is being referenced in a testing and inspection article.

## **Emissions Quick Reference Guide**

The ECS guide was developed for smog shops in states that require periodic emissions testing. It is a complete library of information that allows the shop to identify the vehicles emissions equipment and allowable emissions. This section can be useful in determining the correct equipment required for your car. If you have questions about the cars ability to pass an emissions inspection, this section will answer them for you.

## Features

<u>Work Environment</u> <u>Diagnostic and Repair Information</u> <u>Technical Service Bulletins</u> <u>Hyperlinks and PowerStep Diagnostics</u>

## **Overview of the Work Environment**

The Work Environment is what you see on your screen -- the <u>main topic banner</u>, <u>main topic area</u> and <u>sub-topic</u> area as well as the <u>window title</u>, <u>menu bar</u>, <u>toolbar</u>, and <u>status bar</u>. The work environment also includes elements such as the <u>control menu</u>, dialog boxes and <u>minimize/maximize buttons</u>. Depending on the view you use, different screen elements will be available.

## **Diagnostic and Repair Information**

Diagnostic and Repair Information is the heart of the Automotive Service Information Bureau system. This section contains a collection of OE and aftermarket repair and service information organized into our unique TurboView hierarchy.

To use Diagnostic and Repair Information, follow these steps as they apply to your particular car and repair requirements:

- 1. Check <u>Service Precautions</u> for any information about potential hazards or easily damaged components.
- 2. Make sure you are working on the correct vehicle and have the correct information by checking <u>Application and ID</u>.
- 3. Get a general understanding of how the system works and what its operating parameters are by checking <u>Description and Operation</u>.
- 4. Follow the instructions in <u>System Diagnosis</u> to locate the fault.
- 5. Repair or adjust according to <u>Adjustments</u>.

## **Technical Service Bulletins**

Technical Service Bulletins (TSBs) contain updated part numbers, manual revisions, testing and repair procedures, etc.

It's important to get in the habit of looking at TSBs before spending any unproductive time on the vehicle. TSBs may contain critical information regarding anything from a simple tire change to a complex diagnostic procedure. The answers for many perplexing problems may be overlooked if this important resource is not used.

## Hyperlinks and PowerStep Diagnostics

Hyperlinks are "jump-words" that lead to additional or supporting information. PowerStep Diagnostics is a special application of Hyperlinks that leads you through complex diagnostic procedures. If you are viewing an article that refers to a test procedure, diagram or specification, click on the highlighted word or graphic "hot-spot" to bring up the referenced information.

## **Using PowerStep Diagnostics**

Normally, PowerStep Diagnostics begin at the Flow of Diagnosis in the Computers and Control Systems section of Powertrain Management. Follow the chart from the top down. To see a referenced diagnostic routine, diagnostic chart or table, put the mouse pointer on the highlighted area and click the left mouse button. You'll be "power-stepped" to the information you want. When a procedure refers to another chart, click on the reference to power-step to it.

## **Hyperlink History**

Both Hyperlinks and PowerStep Diagnostics employ the Automotive Service Information Bureau's Hyperlink History. With Hyperlink History, a separate window appears across the top of the screen listing each step you've taken and providing a direct path to any previous step with a single mouse button click.

## Functions

Car Selection Information Look-ups Viewing Information Attaching Notes to Articles and Images Printing Help

## **Car Selection**

Before working in the Diagnostic and Repair database, you must first select a vehicle because the Automotive Service Information Bureau information is vehicle-specific.

#### To recall a previously-registered vehicle:

- Click the Registered Vehicles icon from the tool bar
- OR -
- Select Data from the menu bar and click Select Registered Vehicles

Either of these options displays the Select a Registered Vehicle dialog box.

The Registered Vehicle dialog box contains a list of previous vehicle selections.

#### To choose a vehicle:

- Double-click on the vehicle
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- Click the vehicle and click OK

**Note**: If you choose a vehicle that is not on the currently-loaded disc, the Change Disc dialog box appears prompting you to install the correct CD.

## Information Look-ups

The Automotive Service Information Bureau's TurboView data structure is a hierarchy that promotes rapid information searches by organizing data into systems, sub-systems and components. The TurboView hierarchy makes an information search consistent, regardless of the selected vehicle. To begin your information look-up, select the specific level of information you need.

The TurboView hierarchy is structured as follows:

#### **General Vehicle Information**

Information at the vehicle level pertains to the entire vehicle and includes:

- Vehicle diagrams
- Vehicle specifications
- Comprehensive Technical Service Bulletin summary

#### Systems and Sub-systems

System information refers to the various systems and service categories that make up the entire vehicle. The Automotive Service Information Bureau's information is divided into twelve major systems plus additional vehicle level categories as follows:

- Maintenance
- Diagrams
- Engine
- Cooling System
- Exhaust System
- Powertrain Management
- Transmission and Drivetrain
- Brakes and Traction Control
- Starting and Charging
- Steering and Suspension
- Heating and Air Conditioning
- Body Electrical
- Body and Frame
- Air Bags and Seat Belts

#### **Components and Sub-components**

Beneath each system, information is divided into components. Our component list is standardized and based on the SAE J1930 Standard.

After selecting a system or component, click on the Information Type icon. At each level, one or more of the following <u>Information Types</u> are available:

Service Precautions Application and ID Description and Operation System Diagnosis/Testing and Inspections Adjustments Locations Service and Repair Diagrams Specifications Technical Service Bulletins Field Fixes Tools and Equipment

## **Viewing Information**

#### **Text and Image**

Text and Image is the default view for all articles that contain both text and image(s). If you are displaying an article in another mode, choosing Text and Image returns you to the default split-screen view with text on the left and image on the right.

As you scroll through text, you may notice image buttons above specific information blocks. To view images that apply to specific topics, click on each image button as it appears in the text.

#### **Text Only**

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#### Image Only

Choosing Image Only allows you to view the image in full-screen view without displaying the article text. This feature is useful for viewing the overall image in greater detail than is possible in split-screen view.

#### Adjusting Text and Image Window Size

If you wish to view a greater (or lesser) text area or image area, you can adjust the window size by moving the article separator bar.

#### To resize:

- Move the mouse pointer over the separator until it changes into an adjust symbol.
- Click and hold the left mouse button while dragging the separator left or right.

Note: Image titles do not wrap like text.

## Annotations

Annotate allows you to attach your own notes to articles or images. You can place annotations within an article or image by clicking on the area you want to annotate. The annotation will display any time the article or image is viewed again. Annotated articles are indicated by the yellow note symbol.

### Suggested Annotations:

- Reminders
- Field Fixes
- Enhancements to Procedures
- Supporting Information

### Printing

The Print Article dialog box allows you to print the currently-displayed article. To activate the Print dialog box, click the Print icon from the tool bar or select Data from the menu bar and click Print.

### **Print Dialog Box Options**

### Print the Complete Article (Text and Images)

Select this option if you need a printed copy of the entire article.

### **Print Article Text Only**

Select this option if you do not need the images and wish to print the article quickly.

### Print the Image Currently Displayed

Select this option to print only the image you are currently viewing on the screen.

**Note:** If the article does not contain both text and images, Text Only and Image Only options do not apply and are grayed-out in the Print dialog box.

### Help

Online Help provides access to information about the Automotive Service Information Bureau's features, commands and tasks, and may be accessed by several methods.

### **Help Contents**

Contents displays a list of available help topics. Choose this option to learn more about the Automotive Service Information Bureau or to browse for available features.

#### Search For Help On...

Search For Help On... displays the help index dialog box. Choose this option if you know what you want to do, but need additional information.

#### **Context Sensitive Help**

Context Sensitive Help is available for most Automotive Service Information Bureau windows by clicking the Help icon on the tool bar. Choose this option for information about the current screen display.

#### **Dialog Box Help**

The Help button on any dialog box provides information on how to complete the task required within the box. Choose this option for information about what to do to complete a dialog box request or selection.

# Reference

<u>TurboView Data Organization</u> <u>Definitions</u>

### **TurboView Data Organization**

The Automotive Service Information Bureau's TurboView data structure is a hierarchy that promotes rapid information searches by organizing data into systems, sub-systems and components. The TurboView hierarchy makes an information search consistent, regardless of the selected vehicle.

The TurboView hierarchy is structured as follows:

<u>General Vehicle Information</u> <u>Systems and Sub-systems</u> <u>Components and Sub-components</u>

At each level, one or more of the following Information Types are available:

Service Precautions Application and ID Description and Operation System Diagnosis/Testing and Inspections Adjustments Locations Service and Repair Diagrams Specifications Technical Service Bulletins Field Fixes Tools and Equipment

# **General Vehicle Information**

Information at the vehicle level pertains to the entire vehicle and includes:

- Vehicle diagrams
  Vehicle specifications
  Comprehensive Technical Service Bulletin summary

### Systems and Sub-systems

System information refers to the various systems and service categories that make up the entire vehicle. The Automotive Service Information Bureau's information is divided into twelve major systems plus additional vehicle level categories as follows:

Maintenance Diagrams Engine Cooling System Exhaust System Powertrain Management Transmission and Drivetrain Brakes and Traction Control Starting and Charging Steering and Suspension Heating and Air Conditioning Body Electrical Body and Frame Air Bags and Seat Belts

## Engine

Engine includes systems and components used to generate motive power for the vehicle. This includes the following sub-systems:

- Camshaft and Valve Train
- Cylinder Block Assembly
- Cylinder Head Assembly
  Drive Belts, Mounts, Brackets, and Accessories
  Engine Lubrication
- Intake Manifold
- Timing Components

# **Cooling System**

Cooling System includes systems and components used to control engine temperature.

# Exhaust System

Exhaust System includes systems and components used to evacuate exhaust gases from the engine.

### **Powertrain Management**

Powertrain Management contains information on control systems, fuel, ignition, and emission systems. This includes the following sub-systems:

### **Computers and Control Systems**

Complete information on electronic systems and components used to manage and control engine functions.

### **Emission Control Systems**

Systems and components that reduce vehicle pollutants.

### **Fuel Delivery and Air Induction**

Systems and components used to deliver fuel and air to the engine.

### **Ignition System**

Systems and components used to generate and deliver ignition spark to the combustion chamber.

### **Glow Plug System**

Systems and devices used to pre-heat fuel/air mixture on diesel engines.

### **Transmission Control Systems**

Electronic systems and components used to manage and control transmission functions. (Used only when transmission and engine control functions are interrelated.)

### PROM

Programmable Read Only Memory (GM vehicles only)

### **Transmission and Drivetrain**

Transmission and Drivetrain contains information on the systems and components used to transmit power from the engine to the wheels and tires. This includes the following sub-systems:

- Automatic Transmission/Transaxle
- Manual Transmission/Transaxle
- Clutch (Manual Transmission)
- Differential
- Axle Shaft and Bearings
- Drive Shafts and Universal Joints
- Half Shafts and Constant Velocity Joints

# **Brakes and Traction Control**

Brakes and Traction Control includes systems and components used to slow, stop and hold the vehicle. This includes the following sub-systems:

- Brakes
- Anti-lock Brake SystemTraction Control System

### **Starting and Charging**

Starting and Charging includes systems and components used to generate, store and distribute electrical energy. It also includes systems and components used to crank the engine. This includes the following sub-systems:

- Battery

- Charging SystemStarting SystemPower and Ground Distribution

### **Steering and Suspension**

Steering and Suspension contains information on the systems and components used to control vehicle direction and ride characteristics. This includes the following sub-systems:

### Steering

Systems and components used to transmit directional information from the driver to the wheels and tires.

#### Suspension

Systems and components used to support the body and control the ride characteristics of the vehicle.

### Wheels, Tires and Alignment

Systems and components used to control vehicle tracking and direction.

### Heating and Air Conditioning

Heating and Air Conditioning includes systems and components used to cool, heat and filter vehicle interior air. This includes the following sub-systems:

### **Heating System**

Systems and components used to warm interior air.

### **Air Conditioning**

Systems and components used to cool interior vehicle air.

### **Electronic Climate Control**

Electronic systems used to control heating and air conditioning systems.

# **Body Electrical**

Body Electrical contains information on electrical systems and components contained in the following subsystems:

- Instrument Panel, Gauges and Warning IndicatorsPower and Ground Distribution
- Cruise Control
- Vehicle Lighting
- Wiper and Washer SystemsAccessories and Optional Equipment

### **Body and Frame**

Body and Frame includes information about the vehicle body and appurtenant systems. This includes the following sub-systems and components:

- Bumper
- Convertible Top
- Doors, Hood and Trunk
- Fenders, Trim and Bump Strips
- Frame
- Interior Trim
- Locks
- Mirrors
- Paint
- Roof and Luggage Racks
- Seats and Seat Belts
- Spoilers, Flaps and Air DamsSunroof/Moonroof
- T-Top
- Unibody
- Windows and Glass
- Wiper and Washer Systems

# Air Bags and Seat Belts

Air Bags and Seat Belts includes systems and components designed to help protect and restrain occupants within the vehicle. This includes the following sub-systems:

- Air Bags (Supplemental Restraint Systems)Seats and Seat Belts

## Components

Beneath each system, information is divided into components. Our component list is standardized and based on the SAE J1930 Standard.

To view the complete component list (including path and manufacturer's naming conventions):

- Select General Information from the Home screen
- Click Alphabetical Component Index for TurboView

### **Information Type Categories**

The Automotive Service Information Bureau's vehicle, system and component information is classified according to service Information Type. For system and component level data, information is grouped into major categories. Sub-categories are also used to help clarify information further. Click on each category for additional information.

Service Precautions Application and ID Description and Operation System Diagnosis/Testing and Inspections Adjustments Locations Service and Repair Diagrams Specifications Technical Service Bulletins Field Fixes Tools and Equipment

### **Service Precautions**

Service Precautions includes safety and damage related information. Sub-categories are as follows:

### **Customer Safety Information**

Includes information about conditions, actions or procedures that may cause harm to the customer.

### **Technician Safety Information**

Includes information about conditions, actions or procedures that may cause harm to the technician or those in the immediate vicinity.

### Vehicle Damage Warnings

Includes information about conditions, actions or procedures that may cause unnecessary damage to the vehicle.

### **Application and ID**

Application and ID provides information that helps you determine the correct vehicle or system configuration and application. This allows you to determine if the correct system or component is being used on the vehicle. Appropriate identification aids include:

- VIN description
- vehicle decals
- casting marks
- metal tags
- component color codes
- microprocessor data output
- configuration illustrations

### **Description and Operation**

Description and Operation includes an overall description of the system or component. The description may include purpose, design, construction, operation, etc. Where applicable, the Automotive Service Information Bureau provides a list of related systems and components.

Articles often include information on functional control strategy (i.e., how the system or component should work), interactions between systems and components, block diagrams, and images. Functional control strategy indicates conditions needed to turn systems and components ON or OFF, general timing delay specifications, and other important transition states.

### System Diagnosis/Testing and Inspection

System Diagnosis/Testing and Inspection includes information to diagnose and verify proper system and component operation. All system and sub-system information appears as System Diagnosis. Component information appears as Testing and Inspection. System Diagnosis/Testing and Inspection includes the following sub-categories:

### Flow of Diagnosis

Information presented in diagnostic flow chart form. Flow charts present the correct diagnostic path the technician should follow using the Automotive Service Information Bureau information.

### Procedures

Contains all diagnostic, testing and inspection procedures. Procedures should appear in the order they are performed and be consistent with the Flow of Diagnosis.

### **Oscilloscope Patterns and Waveforms**

Reserved for scope patterns.

# Adjustments

Adjustments includes all adjustments necessary to restore performance or operational efficiency. For example: ignition timing, throttle switch, headlight alignment, wheel alignment, and door adjustments.

# Locations

Locations includes text or images that help you locate various components and systems. This includes the following sub-categories:

- ComponentsConnectors
- Fuse and Fusible Links
- Grounds
- Splices
- Harness

# Service and Repair

Service and Repair includes procedures necessary to remove, replace, install, overhaul, or maintain systems and components.

### Diagrams

Diagrams includes images and diagrams which illustrate system layout and connections. This includes the following sub-categories:

#### **Diagram Information and Instructions**

Includes track numbers, diagram coordinates, legends, schematic symbols, color codes, etc.

#### **Diagnostic Aids**

Diagram-related information that enhances troubleshooting of electrical circuits (i.e., troubleshooting hints, grounds, opens, diagnostic tool use, etc.).

#### **Exploded Views**

Illustrates the relationship of sub-component to component or system.

#### **Connector Views**

Includes connector types and connector numbering system.

#### Electrical

Electrical circuitry and harness routing, power and ground distribution, electrical component schematics, and splices.

#### Mechanical

Images and diagrams of linkages, cables, supporting brackets, etc. Also includes chain and belt routing.

#### Fluid

Shows the paths taken by fluids during various phases of normal operation. Also shows routing (if possible).

### Vacuum and Vapor Hose

Shows the path taken by vacuum and vapor during normal operation. Also shows routing (if possible).

### **Fiber Optic**

Shows the light source, cable routing, splices, and termination points.

### **Specifications**

Specifications contains information, parameters, and related information for the following sub-categories:

### Electrical

Electrical and electronic specifications and limits for voltage, current, frequency, power draw, and other important electrical characteristics.

### Mechanical

Specifications and limits for torque values, grades, sizes, tolerances, mechanical ratios, and any other mechanical numeric values.

### Pressure, Vacuum and Temperature

Specifications and limits for fuel pressure, manifold pressure (vacuum), operating temperatures, etc.

### Capacities

Specifications and limits for fluids, weight, volume, etc.

### **Fluid Types**

Specifications, grades, octane, etc.

### Tune-up

Specifications normally associated with engine emissions, performance and maintenance.

## **Technical Service Bulletins**

Technical Service Bulletins contains the latest OEM factory information. Information includes repair procedures, manual updates, parts updates, recalls, and campaigns.

## **Field Fixes**

Field Fixes includes shop-generated repair procedures for various technical problems. Most field fixes have been tested by our customer base or by our database development staff of ASE-certified technicians.

# **Tools and Equipment**

Tools and Equipment includes information about factory and aftermarket devices required to perform various testing and repair procedures.

# **Customer Support**

Customer Service Representatives -U.S. & Canada call 1-888-968-3494 Outside the U.S. and Canada call 916-684-5200 and ask for Consumer Products Customer Service.

Call Customer Service to:

- Understand a feature
- Correct software difficulties
- Correct hardware difficulties

# Pages

Customer service page	
HIDD CUSTOMER SERVICE	1009
CARWND.DLL Dialogs (non-MFC)	
	1107
	107
HIDD_PREVIOUS_CAR 1108	400
AFW_HIDD_AMS_CAR 1	109
ACE.EXE Pages: ID = 2000 + Page::type()	
	<u>2001</u>
	005 //All TSBs for Selection
	<u>2007</u>
	2009 // should not occur
	<u>2014</u>
HIDD_COLLAPSED_PROM_PAGE	2017
AFW_HIDD_CUSTOMER 2210	
AFW HIDD ESTIMATE PAGE	2450
AFW_HIDD_SHOP_JOBS 2470	
AFW HIDD SETUP 2610	
Component page ID's	
HIDD COMPONENT PAGE	2002 // DNR component page
AFW HIDD EST COMPONENT PAGE	2003 // PandL component page
HIDD MAINT COMPONENT PAGE	2016 // Maintenance component page
TOC page ID's	
HIDD DNR TOC PAGE	2050 // should not occur
AFW_HIDD_WHATS_NEW_TOC_PAGE	2051
HIDD_MAINT_TOC_PAGE	2052 //Maintenance "System"
HIDD TMS TOC PAGE	0050
	2053
HIDD_SERVICE_PRECAUTIONS_TOC_PAGE	2054
HIDD_SERVICE_PRECAUTIONS_TOC_PAGE HIDD_APP_ID_TOC_PAGE	2054 2055
HIDD_SERVICE_PRECAUTIONS_TOC_PAGE HIDD_APP_ID_TOC_PAGE HIDD_DESC_OPERATION_TOC_PAGE	2054 2055 2056
HIDD_SERVICE_PRECAUTIONS_TOC_PAGE HIDD_APP_ID_TOC_PAGE HIDD_DESC_OPERATION_TOC_PAGE HIDD_ADJUSTMENTS_TOC_PAGE	2054 2055 2056 2057
HIDD_SERVICE_PRECAUTIONS_TOC_PAGE HIDD_APP_ID_TOC_PAGE HIDD_DESC_OPERATION_TOC_PAGE HIDD_ADJUSTMENTS_TOC_PAGE HIDD_TESTING_TOC_PAGE	2054 2055 2056 2057 2058
HIDD_SERVICE_PRECAUTIONS_TOC_PAGE HIDD_APP_ID_TOC_PAGE HIDD_DESC_OPERATION_TOC_PAGE HIDD_ADJUSTMENTS_TOC_PAGE	2054 2055 2056 2057
HIDD_SERVICE_PRECAUTIONS_TOC_PAGE HIDD_APP_ID_TOC_PAGE HIDD_DESC_OPERATION_TOC_PAGE HIDD_ADJUSTMENTS_TOC_PAGE HIDD_TESTING_TOC_PAGE	2054 2055 2056 2057 2058
HIDD_SERVICE_PRECAUTIONS_TOC_PAGE HIDD_APP_ID_TOC_PAGE HIDD_DESC_OPERATION_TOC_PAGE HIDD_ADJUSTMENTS_TOC_PAGE HIDD_TESTING_TOC_PAGE HIDD_DIAGRAMS_TOC_PAGE	2054 2055 2056 2057 2058 2059
HIDD_SERVICE_PRECAUTIONS_TOC_PAGE HIDD_APP_ID_TOC_PAGE HIDD_DESC_OPERATION_TOC_PAGE HIDD_ADJUSTMENTS_TOC_PAGE HIDD_TESTING_TOC_PAGE HIDD_DIAGRAMS_TOC_PAGE HIDD_LOCATIONS_TOC_PAGE	2054 2055 2056 2057 2058 2059 2060
HIDD_SERVICE_PRECAUTIONS_TOC_PAGE HIDD_APP_ID_TOC_PAGE HIDD_DESC_OPERATION_TOC_PAGE HIDD_ADJUSTMENTS_TOC_PAGE HIDD_TESTING_TOC_PAGE HIDD_DIAGRAMS_TOC_PAGE HIDD_LOCATIONS_TOC_PAGE HIDD_SPECS_TOC_PAGE	2054 2055 2056 2057 2058 2059 2060 2061
HIDD_SERVICE_PRECAUTIONS_TOC_PAGE HIDD_APP_ID_TOC_PAGE HIDD_DESC_OPERATION_TOC_PAGE HIDD_ADJUSTMENTS_TOC_PAGE HIDD_TESTING_TOC_PAGE HIDD_DIAGRAMS_TOC_PAGE HIDD_LOCATIONS_TOC_PAGE HIDD_SPECS_TOC_PAGE HIDD_SERVICE_REPAIR_TOC_PAGE AFW_HIDD_PARTS_TOC_PAGE	2054 2055 2056 2057 2058 2059 2060 2061 2062
HIDD_SERVICE_PRECAUTIONS_TOC_PAGE HIDD_APP_ID_TOC_PAGE HIDD_DESC_OPERATION_TOC_PAGE HIDD_ADJUSTMENTS_TOC_PAGE HIDD_TESTING_TOC_PAGE HIDD_DIAGRAMS_TOC_PAGE HIDD_LOCATIONS_TOC_PAGE HIDD_SPECS_TOC_PAGE HIDD_SERVICE_REPAIR_TOC_PAGE HIDD_TSB_TOC_PAGE	2054 2055 2056 2057 2058 2059 2060 2061 2061 2062 2063 2064
HIDD_SERVICE_PRECAUTIONS_TOC_PAGE HIDD_APP_ID_TOC_PAGE HIDD_DESC_OPERATION_TOC_PAGE HIDD_ADJUSTMENTS_TOC_PAGE HIDD_TESTING_TOC_PAGE HIDD_DIAGRAMS_TOC_PAGE HIDD_LOCATIONS_TOC_PAGE HIDD_SPECS_TOC_PAGE HIDD_SERVICE_REPAIR_TOC_PAGE AFW_HIDD_PARTS_TOC_PAGE AFW_HIDD_LABOR_TOC_PAGE	2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065
HIDD_SERVICE_PRECAUTIONS_TOC_PAGEHIDD_APP_ID_TOC_PAGEHIDD_DESC_OPERATION_TOC_PAGEHIDD_ADJUSTMENTS_TOC_PAGEHIDD_TESTING_TOC_PAGEHIDD_DIAGRAMS_TOC_PAGEHIDD_LOCATIONS_TOC_PAGEHIDD_SPECS_TOC_PAGEHIDD_SERVICE_REPAIR_TOC_PAGEHIDD_TSB_TOC_PAGEHIDD_TSB_TOC_PAGEHIDD_LABOR_TOC_PAGEHIDD_FIELD_FIXES_TOC_PAGE	2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066
HIDD_SERVICE_PRECAUTIONS_TOC_PAGE HIDD_APP_ID_TOC_PAGE HIDD_DESC_OPERATION_TOC_PAGE HIDD_ADJUSTMENTS_TOC_PAGE HIDD_TESTING_TOC_PAGE HIDD_DIAGRAMS_TOC_PAGE HIDD_LOCATIONS_TOC_PAGE HIDD_SPECS_TOC_PAGE HIDD_SERVICE_REPAIR_TOC_PAGE HIDD_SERVICE_REPAIR_TOC_PAGE HIDD_TSB_TOC_PAGE AFW_HIDD_LABOR_TOC_PAGE HIDD_FIELD_FIXES_TOC_PAGE HIDD_FIELD_FIXES_TOC_PAGE HIDD_TOOLS_TOC_PAGE	2054     2055     2056     2057     2058     2059     2060     2061     2062     2063     2064     2065     2066     2067
HIDD_SERVICE_PRECAUTIONS_TOC_PAGE HIDD_APP_ID_TOC_PAGE HIDD_DESC_OPERATION_TOC_PAGE HIDD_ADJUSTMENTS_TOC_PAGE HIDD_TESTING_TOC_PAGE HIDD_DIAGRAMS_TOC_PAGE HIDD_LOCATIONS_TOC_PAGE HIDD_SPECS_TOC_PAGE HIDD_SERVICE_REPAIR_TOC_PAGE HIDD_SERVICE_REPAIR_TOC_PAGE HIDD_TSB_TOC_PAGE AFW_HIDD_LABOR_TOC_PAGE HIDD_FIELD_FIXES_TOC_PAGE HIDD_FIELD_FIXES_TOC_PAGE HIDD_TOOLS_TOC_PAGE HIDD_MAINTENANCE_TOC_PAGE	2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 <u>2066</u> <u>2066</u> <u>2066</u> <u>2067</u> <u>2068</u> //Maintenance "IT" (in DNR)
HIDD_SERVICE_PRECAUTIONS_TOC_PAGE         HIDD_APP_ID_TOC_PAGE         HIDD_DESC_OPERATION_TOC_PAGE         HIDD_ADJUSTMENTS_TOC_PAGE         HIDD_DIAGRAMS_TOC_PAGE         HIDD_LOCATIONS_TOC_PAGE         HIDD_SPECS_TOC_PAGE         HIDD_SERVICE_REPAIR_TOC_PAGE         HIDD_TSB_TOC_PAGE         HIDD_FIELD_FIXES_TOC_PAGE         HIDD_FIELD_FIXES_TOC_PAGE         HIDD_TOOLS_TOC_PAGE         HIDD_MAINTENANCE_TOC_PAGE         HIDD_MAINTENANCE_TOC_PAGE	2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 //Maintenance "IT" (in DNR) 2069
HIDD_SERVICE_PRECAUTIONS_TOC_PAGE         HIDD_APP_ID_TOC_PAGE         HIDD_DESC_OPERATION_TOC_PAGE         HIDD_ADJUSTMENTS_TOC_PAGE         HIDD_DIAGRAMS_TOC_PAGE         HIDD_LOCATIONS_TOC_PAGE         HIDD_SPECS_TOC_PAGE         HIDD_SERVICE_REPAIR_TOC_PAGE         HIDD_TSB_TOC_PAGE         HIDD_FIELD_FIXES_TOC_PAGE         HIDD_FORS_TOC_PAGE         HIDD_TSB_TOC_PAGE         HIDD_FIELD_FIXES_TOC_PAGE         HIDD_TOOLS_TOC_PAGE         HIDD_MAINTENANCE_TOC_PAGE         HIDD_IMAGES_TOC_PAGE         HIDD_IMAGES_TOC_PAGE	2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2064 2065 2066 2067 2068 //Maintenance "IT" (in DNR) 2069 AGE 2070
HIDD_SERVICE_PRECAUTIONS_TOC_PAGE         HIDD_APP_ID_TOC_PAGE         HIDD_DESC_OPERATION_TOC_PAGE         HIDD_ADJUSTMENTS_TOC_PAGE         HIDD_DIAGRAMS_TOC_PAGE         HIDD_LOCATIONS_TOC_PAGE         HIDD_SPECS_TOC_PAGE         HIDD_SERVICE_REPAIR_TOC_PAGE         HIDD_TSB_TOC_PAGE         HIDD_FIELD_FIXES_TOC_PAGE         HIDD_FIELD_FIXES_TOC_PAGE         HIDD_TOOLS_TOC_PAGE         HIDD_MARTS_TOC_PAGE         HIDD_FIELD_FIXES_TOC_PAGE         HIDD_TOOLS_TOC_PAGE         HIDD_MARTS_TOC_PAGE         HIDD_FIELD_FIXES_TOC_PAGE         HIDD_TOOLS_TOC_PAGE         HIDD_MAGES_TOC_PAGE         HIDD_IMAGES_TOC_PAGE         HIDD_IMAGES_TOC_PAGE         HIDD_TSB_ALL_BULLETINS_TOC_PAGE	2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2066 2067 2068 //Maintenance "IT" (in DNR) 2069 AGE 2070 2071
HIDD_SERVICE_PRECAUTIONS_TOC_PAGE         HIDD_APP_ID_TOC_PAGE         HIDD_DESC_OPERATION_TOC_PAGE         HIDD_ADJUSTMENTS_TOC_PAGE         HIDD_DIAGRAMS_TOC_PAGE         HIDD_LOCATIONS_TOC_PAGE         HIDD_SPECS_TOC_PAGE         HIDD_SERVICE_REPAIR_TOC_PAGE         HIDD_TSB_TOC_PAGE         HIDD_TSB_TOC_PAGE         HIDD_FIELD_FIXES_TOC_PAGE         HIDD_TOOLS_TOC_PAGE         HIDD_MARTS_TOC_PAGE         HIDD_TSB_TOC_PAGE         HIDD_FIELD_FIXES_TOC_PAGE         HIDD_TOOLS_TOC_PAGE         HIDD_MAGES_TOC_PAGE         HIDD_IMAGES_TOC_PAGE         HIDD_SUPPLIER_NEWS_TOC_PAGE	2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2066 2067 2068 //Maintenance "IT" (in DNR) 2069 AGE 2070 2071 2072
HIDD_SERVICE_PRECAUTIONS_TOC_PAGE         HIDD_APP_ID_TOC_PAGE         HIDD_DESC_OPERATION_TOC_PAGE         HIDD_ADJUSTMENTS_TOC_PAGE         HIDD_DIAGRAMS_TOC_PAGE         HIDD_LOCATIONS_TOC_PAGE         HIDD_SPECS_TOC_PAGE         HIDD_SERVICE_REPAIR_TOC_PAGE         HIDD_TSB_TOC_PAGE         HIDD_FIELD_FIXES_TOC_PAGE         HIDD_FIELD_FIXES_TOC_PAGE         HIDD_TOOLS_TOC_PAGE         HIDD_MARTS_TOC_PAGE         HIDD_FIELD_FIXES_TOC_PAGE         HIDD_TOOLS_TOC_PAGE         HIDD_MARTS_TOC_PAGE         HIDD_FIELD_FIXES_TOC_PAGE         HIDD_TOOLS_TOC_PAGE         HIDD_MAGES_TOC_PAGE         HIDD_IMAGES_TOC_PAGE         HIDD_IMAGES_TOC_PAGE         HIDD_TSB_ALL_BULLETINS_TOC_PAGE	2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2066 2067 2068 //Maintenance "IT" (in DNR) 2069 AGE 2070 2071

Article page ID's

HIDD DNR ARTICLE PAGE	2100	// should not occur
AFW HIDD WHATS NEW ARTICLE PAGE		2101
HIDD MAINT ARTICLE PAGE	2102	//Maintenance "System"
HIDD_TMS_ARTICLE_PAGE	2103	
HIDD SERVICE PRECAUTIONS ARTICLE F	PAGE 21	04
HIDD_APP_ID_ARTICLE_PAGE	2105	
HIDD_DESC_OPERATION_ARTICLE_PAGE	210	<u>6</u>
HIDD_ADJUSTMENTS_ARTICLE_PAGE	2107	
HIDD_TESTING_ARTICLE_PAGE	2108	
HIDD_DIAGRAMS_ARTICLE_PAGE	2109	
HIDD_LOCATIONS_ARTICLE_PAGE	2110	
HIDD_SPECS_ARTICLE_PAGE	2111	
HIDD_SERVICE_REPAIR_ARTICLE_PAGE	2112	
AFW_HIDD_PARTS_ARTICLE_PAGE	21	113
HIDD_TSB_ARTICLE_PAGE	2114	
AFW_HIDD_LABOR_ARTICLE_PAGE	2	115
HIDD_FIELD_FIXES_ARTICLE_PAGE	2116	
HIDD_TOOLS_ARTICLE_PAGE	2117	
HIDD_MAINTENANCE_ARTICLE_PAGE	2118	//Maintenance "IT" (in DNR)
HIDD_IMAGES_ARTICLE_PAGE	2119	
AFW_HIDD_AFTERMARKET_PARTS_ARTICL	LE_PAGE	2120
HIDD_TSB_ALL_BULLETINS_ARTICLE_PAGE	<u>E 212'</u>	<u>1</u>
HIDD_SUPPLIER_NEWS_ARTICLE_PAGE	2122	2
HIDD_SUPPLIER_PROMO_ARTICLE_PAGE	21	23
HIDD_SERVICE_INTERVALS_ARTICLE_PAG	<u>E 212</u>	<u>4</u>

# Select a Registered Vehicle

Before working in the Diagnostic and Repair database, you must first select a vehicle because the Popular Mechanics information is vehicle-specific.

The Registered Vehicle dialog box contains a list of previously registered vehicles. To choose a vehicle:

- Double-click on the vehicle
- OR -
- Click the vehicle and click OK

To choose a different engine for a registered car:

• Click the vehicle and click Change Eng...

To view a car that has not yet been registered, select Preview car...

**Note**: If you choose a vehicle that is not on the currently-loaded disc, the Change Disc dialog box appears prompting you to install the correct CD.

### Home

The Home screen is the first screen displayed when Popular Mechanics starts. From the Home screen, you can jump directly to diagnostic and repair information, general information or preview a vehicle. To return to the Home screen from anywhere in Popular Mechanics, click the Home icon on the tool bar.

### Selecting an Information Category

Any Popular Mechanics Category can be selected from the Home screen by clicking on the category button or title. Information Categories are as follows:

- Preview or Register a Vehicle
- Diagnosis and Repair
- General Information

## **All Technical Service Bulletins**

### **Displaying TSBs**

The TSB window displays all Technical Service Bulletin titles for the system level you have selected. To display all available bulletins for the vehicle, click the TSB information icon at the Overall Vehicle Information level. To view only bulletins for a specific system or component, select the level you desire, then click the TSB information icon.

#### Sorting

The TSB list can be sorted by number, date or title. To sort by number, click the number bar above the TSB list. To sort by date or title, click the appropriate bar.

# **Table Window**

The Table window is similar to the Image window. For most tables, you can scroll to hidden areas using the scroll bars to the right and bottom of the table. Some tables contain additional information or footnotes (indicated by an asterisk\*). To view footnotes, move the mouse pointer to the appropriate cell and click the left mouse button.

# **Image Viewing Options**

## Fit Image

Choosing Fit Image in Window allows the entire image to display within the image viewing area. This feature is useful for gaining an overall perspective of the image.

## To view any part of the image in greater detail:

- Click the Zoom In icon on the tool bar.
- Move box to area of image to zoom in and click the left mouse button on the image.

### To return to full view:

- Click the Zoom Out icon on the tool bar.
- Click Fit in Window

### **PROM Window**

The PROM cross reference index provides tables that let you use a PROM identification (ID) code to identify the PROM installed in the Engine Control Module (ECM) on most GM vehicles. From the scan ID, you can identify the part number of the PROM and trace the PROM history to determine if any revised PROMs have been issued to supersede the one in the vehicle. The PROM history for a specific vehicle lists a succession of superseding PROMs ending with the most recent PROM released as a service part for the vehicle.

PROM' that were released as service parts and explained in a Technical Service Bulletin (TSB) are listed with a description of why the PROM was issued. In most cases, the applicable TSB also is referenced.

#### Column 1, SCAN ID:

The scan ID is the internal PROM identification number transmitted on the ECM data stream and displayed by the scanner as PROM ID. The PROM records for each year and engine are listed numerically by this scan ID.

#### Column 2, PROM CODE:

These are the numbers and letters marked on the top of the PROM itself. The numbers are often referred to as the "external PROM ID." The letters are often called the "broadcast code." Together they are the external PROM code.

#### Column 3, PROM P/N:

This is the GM part number for the PROM identified by the codes in columns 1 and 2.

#### Column 4, SUPERSEDING SCAN ID:

Use the superseding scan ID to locate the newer PROM in the table. If the scan ID for the superseding PROM is not known, the PROM broadcast code is listed here.

#### Column 5, SUPERSEDING PROM P/N:

If the PROM is superseded by a newer PROM, that part number is listed in column 5.

#### Column 6, TSB NUMBER

The TSB NUMBER column identifies the original TSB that released this PROM for service. Whenever possible, you should refer to the TSB for additional information before changing a PROM. The bulletin may list other parts that must be installed when the PROM is changed, or it may provide additional troubleshooting information. To find a TSB, simply click on the TSB section under Info Type. After the category page appears, click on the TSB number button found at the bottom of the screen. This will display all the TSBs for that particular vehicle. Screen up or down to find the TSB number that is needed.

### (\*), CONDITION, or SYMPTOM

This line summarizes the reason that the PROM was issued as well as providing the technician a symptom or condition to diagnose with. If the symptom or condition pertaining to your vehicle is found, click on the relating button to view the latest PROM as well as that PROMs history.

# **Diagnosis and Repair/Service Bulletins**

Diagnosis and Repair/Service Bulletins provides access to the Popular Mechanic's <u>TurboView</u> data organization.

### **Article Selection**

- To view Overall Vehicle Information, click on any Information Type icon to view available articles and titles at this level.
- To view System Level Information, click on the appropriate system. Note that the system you selected is now displayed in the topic banner. All Information Type icons now apply to the selected system. Click the appropriate icon to view articles at this level.
- To view sub-system or component-level information, click on the selected item displayed beneath the icon area. Continue clicking at each subsequent level until you reach the information you need. Click the appropriate Information Type icon to view articles at this level.
- To return to the Home screen, click the Home icon on the tool bar.

## Maintenance

Maintenance contains articles essential to helping you maintain your customer's vehicle. Maintenance contains the following types of information:

- Application and ID
- Notes on Severe Service
- Service Intervals
- Maintenance Schedules
- Specifications
- Fluid Capacities
- Service and Repair
- Service Reminder Indicator Reset Procedures

#### **Article Selection**

All categories are displayed on the Maintenance screen as Information Type icons, articles or folders. Use the left mouse button to select the appropriate Maintenance article as follows:

- To select an information type, click on the icon.
- To select an article, click on the article.
- To select an article from a folder, click on the folder to expand choices, then click the article.

#### To back up to a previous selection:

- Click the Back icon from the tool bar
- OR -
- Click the right mouse button and select Back
- OR -
- Press the Escape key

# **Table of Contents**

When more than one article is available for the Information Type you have selected, an article Table of Contents (TOC) is displayed.

### To view the article:

- Click on the article folder to display additional choices. An open folder indicates an expanded list follows.
- Click on any article icon to view the selected article.

**Note:** Sometimes the system will automatically open folders if the expanded list will fit on the screen. This allows you to select directly from an expanded list of choices.

- Click the Back icon on the tool bar
- OR -
- Click the right mouse button and choose from the TurboView Menu
- OR -
- Press the Escape key

# **Maintenance Article Selection**

Maintenance contains articles essential to helping you maintain your customer's vehicle. Maintenance contains the following types of information:

- Application and ID
- Notes on Severe Service
- Service Intervals
- Maintenance Schedules
- Specifications
- Fluid Capacities
- Service and Repair
- Service Reminder Indicator Reset Procedures

### **Article Selection**

- To view overall vehicle maintenance, click on an Information Type icon to view available articles and TOCs at this level.
- To view system level maintenance, click on the appropriate system. Note that the system you selected is now displayed in the topic banner. All Information Type icons now apply to the selected system. Click the appropriate icon to list articles at this level.
- To view sub-system or component level maintenance, click on the selected item displayed beneath the icon area. Continue clicking at each subsequent level until you reach the information you need. Click the appropriate Information Type icon to list articles at this level.
- To return to the Home screen, click the Home icon on the tool bar or click the right mouse button and select Home.

#### To view a maintenance article:

• Click on the article

## To select an article from a folder:

- Click on the folder to expand choices
- Click the article

## **General Information**

General Information articles are designed to provide you with the answers you need to more effectively repair your car.

### **Topics Covered:**

**Alphabetical Component Index for TurboView TurboView Data Organization** Service Consultant Maintenance Tune-up (Fuel, Emission and Ignition Systems) Engine Cooling Exhaust Systems Electrical Brakes Suspension, Drivelines and Steering Air Conditioning Vehicle Inspection Forms and Symptom Checklists Vehicle Repair History Driveability Worksheet Vehicle Inspection Forms Visual Inspection Worksheet Vehicle Service Inspection Comprehensive Vehicle Inspection Symptom Checklists Brake Symptoms Checklist Alignment Symptoms Checklist **Engine Performance Checklist** Vehicle Maintenance Checklist Air Conditioning Symptoms Checklist **Technician's Glossary Emissions Quick Reference Guide Publication Statement** Proper Use of This Guide Abbreviations and Acronyms SAE J1930 Information Liter to Cubic Inch Chart EGR Functional Tests **Visual Inspection Procedures** Emission Control Service Reminder Indicator Reset Procedures Federal and State Air Quality Standards Emission Control System Application Charts Accessing, Interpreting and Clearing Trouble Codes Powertrain Trouble Code Charts

# **Service Precautions**

Service Precautions includes safety and damage related information.

When more than one article is available for the Information Type you have selected, an article Table of Contents (TOC) is displayed.

### To view the article:

- Click on the article folder to display additional choices. An open folder indicates an expanded list follows.
- Click on any article icon to view the selected article.

**Note:** Sometimes the system will automatically open folders if the expanded list will fit on the screen. This allows you to select directly from an expanded list of choices.

- Click the Back icon on the tool bar
- OR -
- Click the right mouse button and choose from the TurboView Menu
- OR -
- Press the Escape key

# **Application and ID Article Selection**

Application and ID provides information that helps you to determine the correct vehicle or system configuration and application. This allows you to determine if the correct system or component is being used on the vehicle.

When more than one article is available for the Information Type you have selected, an article Table of Contents (TOC) is displayed.

### To view the article:

- Click on the article folder to display additional choices. An open folder indicates an expanded list follows.
- Click on any article icon to view the selected article.

**Note:** Sometimes the system will automatically open folders if the expanded list will fit on the screen. This allows you to select directly from an expanded list of choices.

- Click the Back icon on the tool bar
- OR -
- Click the right mouse button and choose from the TurboView Menu
- OR -
- Press the Escape key

# **Description and Operation Article Selection**

Description and Operation includes an overall description of the system or component. The description may include purpose, design, construction, operation, etc. Where applicable, the Automotive Service Information Bureau also provides a list of related systems and components.

When more than one article is available for the Information Type you have selected, an article Table of Contents (TOC) is displayed.

#### To view the article:

- Click on the article folder to display additional choices. An open folder indicates an expanded list follows.
- Click on any article icon to view the selected article.

**Note:** Sometimes the system will automatically open folders if the expanded list will fit on the screen. This allows you to select directly from an expanded list of choices.

- Click the Back icon on the tool bar
- OR -
- Click the right mouse button and choose from the TurboView Menu
- OR -
- Press the Escape key

# Adjustments Article Selection

Adjustments includes all adjustments necessary to restore performance or operational efficiency. For example: ignition timing, throttle switch, headlight alignment, wheel alignment, and door adjustments.

When more than one article is available for the Information Type you have selected, an article Table of Contents (TOC) is displayed.

#### To view the article:

- Click on the article folder to display additional choices. An open folder indicates an expanded list follows.
- Click on any article icon to view the selected article.

**Note:** Sometimes the system will automatically open folders if the expanded list will fit on the screen. This allows you to select directly from an expanded list of choices.

- Click the Back icon on the tool bar
- OR -
- Click the right mouse button and choose from the TurboView Menu
- OR -
- Press the Escape key

# System Diagnosis/Testing and Inspection Article Selection

System Diagnosis/Testing and Inspection includes information to diagnose and verify proper system and component operation. All system and sub-system information appears as System Diagnosis. Component information appears as Testing and Inspection.

When more than one article is available for the Information Type you have selected, an article Table of Contents (TOC) is displayed.

### To view the article:

- Click on the article folder to display additional choices. An open folder indicates an expanded list follows.
- Click on any article icon to view the selected article.

**Note:** Sometimes the system will automatically open folders if the expanded list will fit on the screen. This allows you to select directly from an expanded list of choices.

- Click the Back icon on the tool bar
- OR -
- Click the right mouse button and choose from the TurboView Menu
- OR -
- Press the Escape key

# **Diagrams Article Selection**

Diagrams includes images and diagrams which illustrate system layout and connections.

When more than one article is available for the Information Type you have selected, an article Table of Contents (TOC) is displayed.

### To view the article:

- Click on the article folder to display additional choices. An open folder indicates an expanded list follows.
- Click on any article icon to view the selected article.

**Note:** Sometimes the system will automatically open folders if the expanded list will fit on the screen. This allows you to select directly from an expanded list of choices.

- Click the Back icon on the tool bar
- OR -
- Click the right mouse button and choose from the TurboView Menu
- OR -
- Press the Escape key

# **Locations Article Selection**

Locations includes text or images that help you locate various components and systems.

When more than one article is available for the Information Type you have selected, an article Table of Contents (TOC) is displayed.

### To view the article:

- Click on the article folder to display additional choices. An open folder indicates an expanded list follows.
- Click on any article icon to view the selected article.

**Note:** Sometimes the system will automatically open folders if the expanded list will fit on the screen. This allows you to select directly from an expanded list of choices.

- Click the Back icon on the tool bar
- OR -
- Click the right mouse button and choose from the TurboView Menu
- OR -
- Press the Escape key

# **Specifications Article Selection**

Specifications contains information, parameters and related information for the following sub-categories:

- Electrical
- Mechanical
- Pressure, Vacuum and Temperature
- Capacities
- Fluid Types
- Tune-up

When more than one article is available for the Information Type you have selected, an article Table of Contents (TOC) is displayed.

### To view the article:

- Click on the article folder to display additional choices. An open folder indicates an expanded list follows.
- Click on any article icon to view the selected article.

**Note:** Sometimes the system will automatically open folders if the expanded list will fit on the screen. This allows you to select directly from an expanded list of choices.

- Click the Back icon on the tool bar
- OR -
- Click the right mouse button and choose from the TurboView Menu
- OR -
- Press the Escape key

# Service and Repair Article Selection

Service and Repair includes procedures necessary to remove, replace, install, overhaul, or maintain systems and components.

When more than one article is available for the Information Type you have selected, an article Table of Contents (TOC) is displayed.

#### To view the article:

- Click on the article folder to display additional choices. An open folder indicates an expanded list follows.
- Click on any article icon to view the selected article.

**Note:** Sometimes the system will automatically open folders if the expanded list will fit on the screen. This allows you to select directly from an expanded list of choices.

- Click the Back icon on the tool bar
- OR -
- Click the right mouse button and choose from the TurboView Menu
- OR -
- Press the Escape key

# **Selecting Technical Service Bulletins**

To quickly locate the information you need, Popular Mechanics allows you to display TSB titles for the selected vehicle using several look-up techniques. Most TSB look-ups are performed by:

- Viewing all TSBs for the vehicle
- Viewing all TSBs for the selected system, sub-system or component
- Selecting TSBs by category
- Selecting TSBs by symptom
- Selecting recalls only

Once displayed, TSB titles can be sorted by number, date or title.

### Selecting TSBs by Category:

To place information of special interest at the top of the TSB title list, you may select an information category. Selecting an information category does not filter out other information, it merely moves your selections to the top of the TSB title list. For example, you may be performing a major service on your vehicle and wish to view all Improved Performance TSBs before searching for all emissions related TSBs.

#### To View TSBs by Category for the selected vehicle, system, sub-system, or component:

- Go to the desired system, sub-system or component and click the TSB icon.
- Select from any displayed categories.
- Click on the desired TSB to display the article.

**Note:** Information by Category is level specific. For example, information categories may display for Computers and Control Systems, but not for Powertrain Management.

#### Selecting TSBs by Symptom:

Viewing TSBs by Symptom is helpful when the vehicle displays a distinct malfunction.

#### To view TSBs by Symptom:

- Select the desired system or sub-system.
- Select By Symptom from the TSB list.
- Select the symptom(s) you wish to display.
- Click on the desired TSB to display the article

#### Selecting Recalls only:

Checking for recalls often saves you money. In fact, many emissions test programs now require that certain recalls be completed before the vehicle is certified as compliant.

#### To check for Recalls:

- Go to the desired system, sub-system or component and click the TSB icon.
- Select Recalls.
- Click on the desired TSB to display the article.

# **Field Fixes Article Selection**

Field Fixes includes shop-generated repair procedures for various technical problems. Most field fixes have been tested by our customer base or by our database development staff of ASE-certified technicians.

When more than one article is available for the Information Type you have selected, an article Table of Contents (TOC) is displayed.

### To view the article:

- Click on the article folder to display additional choices. An open folder indicates an expanded list follows.
- Click on any article icon to view the selected article.

**Note:** Sometimes the system will automatically open folders if the expanded list will fit on the screen. This allows you to select directly from an expanded list of choices.

- Click the Back icon on the tool bar
- OR -
- Click the right mouse button and choose from the TurboView Menu
- OR -
- Press the Escape key

# **Tools and Equipment Article Selection**

Tools and Equipment includes information about factory and aftermarket devices required to perform various testing and repair procedures.

When more than one article is available for the Information Type you have selected, an article Table of Contents (TOC) is displayed.

#### To view the article:

- Click on the article folder to display additional choices. An open folder indicates an expanded list follows.
- Click on any article icon to view the selected article.

**Note:** Sometimes the system will automatically open folders if the expanded list will fit on the screen. This allows you to select directly from an expanded list of choices.

- Click the Back icon on the tool bar
- OR -
- Click the right mouse button and choose from the TurboView Menu
- OR -
- Press the Escape key

# Selecting Images From a TOC

### To view the article:

- Click on the article folder to display additional choices. An open folder indicates an expanded list follows.
- Click on any article icon to view the selected article.

**Note:** Sometimes the system will automatically open folders if the expanded list will fit on the screen. This allows you to select directly from an expanded list of choices.

- Click the Back icon on the tool bar
- OR -
- Click the right mouse button and choose from the TurboView Menu
- OR -
- Press the Escape key

# **Selecting All Technical Service Bulletins**

### To view all TSBs for the vehicle:

- At the vehicle information level, click the TSB icon.
- Select Show All Bulletins for Vehicle from the TSB list.
- Sort by number, date or title by clicking on the appropriately-labeled bar.
- To view a specific bulletin, click anywhere on its title.

### Viewing TSBs by system, sub-system or component:

Before working on any vehicle system, the technician should always check all available TSB titles for that system. TSBs may contain valuable troubleshooting and repair information, as well as updated part numbers, procedures and labor operations.

If the TSB icon is selected at the system or sub-system levels, you can display All TSBs for Selected System, By Symptom or By Category. If the TSB icon is selected at the sub-system or component level, all TSB titles pertaining to the component are displayed.

#### To view all TSBs for the selected system, sub-system or component:

- Go to the desired system, sub-system or component and click the TSB icon.
- Select Show All Technical Service Bulletins for....
- Click on the desired TSB to display the article.

#### To view TSBs by symptom or category for the selected system, sub-system or component:

- Go to the desired system, sub-system or component and click the TSB icon.
- Select By Symptom or choose a TSB Category.
- Click on the desired TSB to display the article.

#### Sorting TSB titles:

If searching by category, symptom or recalls still displays a long list of TSBs, you can quickly browse through the title list by selecting the appropriate sort criteria. For example, to view the most recent TSBs first, sort by date order. The most recent TSBs will appear at the top of the list. If you have the TSB number, you can sort by number and then scroll to the correct TSB. When searching for a particular TSB subject, the most useful sort criteria may be the TSB title.

#### To sort TSB titles:

- Click on the appropriate column heading at the top of the TSB list.
- Sort by number and sort by title display in ascending order.
- Sort by date displays in descending order.

# **Service Interval Article Selection**

Service Interval articles contain information essential to maintaining your vehicle.

### To select an article:

- Scroll to the mileage interval your wish to review.
- Click on the article.

- Click the Back icon on the tool bar.
- OR -
- Click the right mouse button and choose from the TurboView Menu.
- OR -
- Press the Escape key.

## **Diagnosis and Repair/Service Bulletins**

Diagnosis and Repair articles contain vehicle system, sub-system and component information for several categories (<u>Information Types</u>):

If both text and image(s) are present, the article window contains two sections (a text area and an image area). However, you can select from three viewing options:

- To view text only, click the text icon on the tool bar.
- To view an image only, click the image icon.
- To return to the text/image split screen display, click the text/image icon.

#### Scrolling

If text extends beyond the length of the screen, a scroll bar appears to the right of the text box. To view hidden text, scroll up or down as needed. If an image extends beyond the image box, scroll bars appear both to the right and below the image box. To view hidden portions of the image, scroll as needed.

#### Adjusting the text/image area

### Maintenance

Maintenance articles contain information essential to helping you maintain your vehicle

If both text and image(s) are present, the article window contains two sections (a text area and an image area). However, you can select from three viewing options:

- To view text only, click the text icon on the tool bar.
- To view an image only, click the image icon.
- To return to the text/image split screen display, click the text/image icon.

#### Scrolling

If text extends beyond the length of the screen, a scroll bar appears to the right of the text box. To view hidden text, scroll up or down as needed. If an image extends beyond the image box, scroll bars appear both to the right and below the image box. To view hidden portions of the image, scroll as needed.

#### Adjusting the text/image area

# **General Information**

General Information articles are designed to provide you with the answers you need to effectively maintain and repair your car.

If both text and image(s) are present, the article window contains two sections (a text area and an image area). However, you can select from three viewing options:

- To view text only, click the text icon on the tool bar.
- To view an image only, click the image icon.
- To return to the text/image split screen display, click the text/image icon.

#### Scrolling

If text extends beyond the length of the screen, a scroll bar appears to the right of the text box. To view hidden text, scroll up or down as needed. If an image extends beyond the image box, scroll bars appear both to the right and below the image box. To view hidden portions of the image, scroll as needed.

#### Adjusting the text/image area

# **Service Precautions**

Service Precautions includes safety and damage related information.

If both text and image(s) are present, the article window contains two sections (a text area and an image area). However, you can select from three viewing options:

- To view text only, click the text icon on the tool bar.
- To view an image only, click the image icon.
- To return to the text/image split screen display, click the text/image icon.

#### Scrolling

If text extends beyond the length of the screen, a scroll bar appears to the right of the text box. To view hidden text, scroll up or down as needed. If an image extends beyond the image box, scroll bars appear both to the right and below the image box. To view hidden portions of the image, scroll as needed.

#### Adjusting the text/image area

# **Application and ID**

Application and ID provides information that helps you to determine the correct vehicle or system configuration and application. This allows you to determine if the correct system or component is being used on the vehicle.

If both text and image(s) are present, the article window contains two sections (a text area and an image area). However, you can select from three viewing options:

- To view text only, click the text icon on the tool bar.
- To view an image only, click the image icon.
- To return to the text/image split screen display, click the text/image icon.

#### Scrolling

If text extends beyond the length of the screen, a scroll bar appears to the right of the text box. To view hidden text, scroll up or down as needed. If an image extends beyond the image box, scroll bars appear both to the right and below the image box. To view hidden portions of the image, scroll as needed.

#### Adjusting the text/image area

# **Description and Operation**

Description and Operation includes an overall description of the system or component. The description may include purpose, design, construction, operation, etc. Where applicable, the Automotive Service Information Bureau also provides a list of related systems and components.

If both text and image(s) are present, the article window contains two sections (a text area and an image area). However, you can select from three viewing options:

- To view text only, click the text icon on the tool bar.
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- To return to the text/image split screen display, click the text/image icon.

#### Scrolling

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#### Adjusting the text/image area

# Adjustments

Adjustments includes all adjustments necessary to restore performance or operational efficiency. For example: ignition timing, throttle switch, headlight alignment, wheel alignment, and door adjustments.

If both text and image(s) are present, the article window contains two sections (a text area and an image area). However, you can select from three viewing options:

- To view text only, click the text icon on the tool bar.
- To view an image only, click the image icon.
- To return to the text/image split screen display, click the text/image icon.

#### Scrolling

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#### Adjusting the text/image area

# System Diagnosis/Testing and Inspection

System Diagnosis/Testing and Inspection includes information to diagnose and verify proper system and component operation.

System and sub-system information appears as System Diagnosis. Component information appears as Testing and Inspection.

If both text and image(s) are present, the article window contains two sections (a text area and an image area). However, you can select from three viewing options:

- To view text only, click the text icon on the tool bar.
- To view an image only, click the image icon.
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#### Scrolling

If text extends beyond the length of the screen, a scroll bar appears to the right of the text box. To view hidden text, scroll up or down as needed. If an image extends beyond the image box, scroll bars appear both to the right and below the image box. To view hidden portions of the image, scroll as needed.

#### Adjusting the text/image area

## Diagrams

Diagrams includes images and diagrams which illustrate system layout and connections.

If both text and image(s) are present, the article window contains two sections (a text area and an image area). However, you can select from three viewing options:

- To view text only, click the text icon on the tool bar.
- To view an image only, click the image icon.
- To return to the text/image split screen display, click the text/image icon.

#### Scrolling

If text extends beyond the length of the screen, a scroll bar appears to the right of the text box. To view hidden text, scroll up or down as needed. If an image extends beyond the image box, scroll bars appear both to the right and below the image box. To view hidden portions of the image, scroll as needed.

#### Adjusting the text/image area

# Locations

Locations includes text or images that help you locate various components and systems.

If both text and image(s) are present, the article window contains two sections (a text area and an image area). However, you can select from three viewing options:

- To view text only, click the text icon on the tool bar.
- To view an image only, click the image icon.
- To return to the text/image split screen display, click the text/image icon.

#### Scrolling

If text extends beyond the length of the screen, a scroll bar appears to the right of the text box. To view hidden text, scroll up or down as needed. If an image extends beyond the image box, scroll bars appear both to the right and below the image box. To view hidden portions of the image, scroll as needed.

#### Adjusting the text/image area

# **Specifications**

Specifications contains information, parameters and related information for the following sub-categories:

- Electrical
- Mechanical
- <u>Pressure, Vacuum and Temperature</u>
- <u>Capacities</u>
- Fluid Types
- Tune-up

If both text and image(s) are present, the article window contains two sections (a text area and an image area). However, you can select from three viewing options:

- To view text only, click the text icon on the tool bar.
- To view an image only, click the image icon.
- To return to the text/image split screen display, click the text/image icon.

#### Scrolling

If text extends beyond the length of the screen, a scroll bar appears to the right of the text box. To view hidden text, scroll up or down as needed. If an image extends beyond the image box, scroll bars appear both to the right and below the image box. To view hidden portions of the image, scroll as needed.

#### Adjusting the text/image area

### Service and Repair

Service and Repair includes procedures necessary to remove, replace, install, overhaul, or maintain systems, and components.

If both text and image(s) are present, the article window contains two sections (a text area and an image area). However, you can select from three viewing options:

- To view text only, click the text icon on the tool bar.
- To view an image only, click the image icon.
- To return to the text/image split screen display, click the text/image icon.

#### Scrolling

If text extends beyond the length of the screen, a scroll bar appears to the right of the text box. To view hidden text, scroll up or down as needed. If an image extends beyond the image box, scroll bars appear both to the right and below the image box. To view hidden portions of the image, scroll as needed.

#### Adjusting the text/image area

# **Technical Service Bulletins**

Technical Service Bulletins contain the most up-to-date information on parts, procedures and fixes.

If both text and image(s) are present, the article window contains two sections (a text area and an image area). However, you can select from three viewing options:

- To view text only, click the text icon on the tool bar.
- To view an image only, click the image icon.
- To return to the text/image split screen display, click the text/image icon.

#### Scrolling

If text extends beyond the length of the screen, a scroll bar appears to the right of the text box. To view hidden text, scroll up or down as needed. If an image extends beyond the image box, scroll bars appear both to the right and below the image box. To view hidden portions of the image, scroll as needed.

#### Adjusting the text/image area

# **Field Fixes**

Field Fixes includes shop-generated repair procedures for various technical problems. Most field fixes have been tested by our customer base or by our database development staff of ASE-certified technicians.

If both text and image(s) are present, the article window contains two sections (a text area and an image area). However, you can select from three viewing options:

- To view text only, click the text icon on the tool bar.
- To view an image only, click the image icon.
- To return to the text/image split screen display, click the text/image icon.

#### Scrolling

If text extends beyond the length of the screen, a scroll bar appears to the right of the text box. To view hidden text, scroll up or down as needed. If an image extends beyond the image box, scroll bars appear both to the right and below the image box. To view hidden portions of the image, scroll as needed.

#### Adjusting the text/image area

# **Tools and Equipment**

Tools and Equipment includes information about factory and aftermarket devices required to perform various testing and repair procedures.

If both text and image(s) are present, the article window contains two sections (a text area and an image area). However, you can select from three viewing options:

- To view text only, click the text icon on the tool bar.
- To view an image only, click the image icon.
- To return to the text/image split screen display, click the text/image icon.

#### Scrolling

If text extends beyond the length of the screen, a scroll bar appears to the right of the text box. To view hidden text, scroll up or down as needed. If an image extends beyond the image box, scroll bars appear both to the right and below the image box. To view hidden portions of the image, scroll as needed.

#### Adjusting the text/image area

### Maintenance

Maintenance articles contain information essential to helping you maintain your vehicle.

If both text and image(s) are present, the article window contains two sections (a text area and an image area). However, you can select from three viewing options:

- To view text only, click the text icon on the tool bar.
- To view an image only, click the image icon.
- To return to the text/image split screen display, click the text/image icon.

#### Scrolling

If text extends beyond the length of the screen, a scroll bar appears to the right of the text box. To view hidden text, scroll up or down as needed. If an image extends beyond the image box, scroll bars appear both to the right and below the image box. To view hidden portions of the image, scroll as needed.

#### Adjusting the text/image area

### Images

An Image Window is displayed if no text is available for an article or if you have selected Image Only from the menu or tool bar.

#### Multiple Images

If more than one image is available for the topic, a series of image buttons is displayed. Click on each image button to view the image.

#### **Image Viewing Options**

#### Fit to Page

Clicking the Fit to Page icon adjusts the image size to fit into the currently-selected image window.

#### Zoom In

Clicking the Zoom In icon enlarges the display size of the image by 50%.

#### Zoom Out

Clicking the Zoom Out icon reduces the display size of the image by 50%.

# **Technical Service Bulletins**

Technical Service Bulletins contain the most up-to-date information on parts, procedures and fixes.

If both text and image(s) are present, the article window contains two sections (a text area and an image area). However, you can select from three viewing options:

- To view text only, click the text icon on the tool bar.
- To view an image only, click the image icon.
- To return to the text/image split screen display, click the text/image icon.

#### Scrolling

If text extends beyond the length of the screen, a scroll bar appears to the right of the text box. To view hidden text, scroll up or down as needed. If an image extends beyond the image box, scroll bars appear both to the right and below the image box. To view hidden portions of the image, scroll as needed.

#### Adjusting the text/image area

### **Service Intervals**

Service Interval articles contain information essential to maintaining your vehicle. Items which are preceded by a "**W**" indicate procedures that must be performed to maintain the manufacturer's warranty.

If both text and image(s) are present, the article window contains two sections (a text area and an image area). However, you can select from three viewing options:

- To view text only, click the text icon on the tool bar.
- To view an image only, click the image icon.
- To return to the text/image split screen display, click the text/image icon.

#### Scrolling

If text extends beyond the length of the screen, a scroll bar appears to the right of the text box. To view hidden text, scroll up or down as needed. If an image extends beyond the image box, scroll bars appear both to the right and below the image box. To view hidden portions of the image, scroll as needed.

#### Adjusting the text/image area

# Dialogs

ACE.EXE Dialogs: ID = 0x20000 + IDD\_dialog HIDD FONTDLG 131173 HIDD\_FIND\_DATA\_DIALOG 131177 HIDD PRINT ARTICLE 131184 HIDD HYPERLINK HISTORY 131185 HIDD COVERAGE 131187 AFW HIDD THERMAL SETUP 131194 AFW HIDD INFORMATION ACCESS SETUP 131201 HIDD REGISTERED CARS AND OPTIONS 131208 HIDD ANNOTATE DIALOG 131217 HIDD ANNOTATION CHANGED 131218 AFW HIDD CUSTOM ITEM LINE DIALOG 131242 AFW HIDD CUSTOM ITEM LIST DIALOG 131243 HIDD\_CD\_REGISTRATION 131272 HIDD SERIAL NUMBER 131273 HIDD REGISTRATION OPTIONS 131274 HIDD\_SELECT\_YMME 131275 HIDD VEHICLE REGISTRATION 131276 HIDD\_VEHICLE\_REGIST\_FINAL\_PAGE 131277 HIDD\_VEHICLE\_REGIST\_IVR 131278 HIDD TRANSMIT SUMMARY 131280 HIDD AUTHORIZATION CODE 131282 HIDD\_VEHICLE\_REGIST\_IVR\_PRINT\_131283 HIDD MODEM CONNECT 131284 HIDD\_PERSONAL\_INFORMATION 131285 HIDD\_RETRIEVE\_OPTIONS\_SPECIALS 131286 HIDD RETRIEVE PRICES 131287 HIDD FIRST MODEM SCREEN 131288 //price information HIDD DATA MODULE 131289 HIDD SELECT ADDITIONAL VEHICLE 131290 HIDD\_ORDER\_SUMMARY/CREDIT CARD INFO 131291 HIDD PREVIEW REG A VEHICLE 131294 HIDD PLACE ANNOTATION 131306 HIDD DATA DIRECTORIES 131315 HIDD DRIVE LIST DIALOG 131822 HIDD\_SEARCH\_DIALOG 131824 HIDD\_ADD\_DEVICE\_DIALOG 131825 HIDD NEW PATH 131830 HIDD CONNECT CONFIRM 131833 HIDD DUPLICATE CONNECTION 131834 AFW HIDD ESTIMATE LOAD 133272 AFW\_HIDD\_CUSTOMER 133282 AFW HIDD RATES PP 133322 AFW HIDD HEADER 133342 AFW HIDD FOOTER 133352 AFW HIDD ESTIMATE NAME 133382 AFW HIDD ESTIMATE CAR 133392 AFW HIDD RATE COMPARE 133402 AFW HIDD RATE BASE 133422 AFW HIDD ESTIMATE PRINT 133442 AFW HIDD ESTIMATE LOAD CAR 133462 AFW HIDD APO PRICE 133482

AFW HIDD ESTIMATE SELECT CAR 133502 AFW\_HIDD\_CUSTOM\_ĪTEM\_LIST 133582 AFW\_HIDD\_WORKSHEET\_DEFAULTS 133642 AFW HIDD DISPLAY SETTINGS 133702 AFW\_HIDD\_FORMAT 133712 AFW\_HIDD\_CHANGE\_QUANTITY 133722 AFW\_HIDD\_ADD\_ESTIMATE\_ITEM 133742 AFW\_HIDD\_PERCENT\_CHARGE\_INFO 133752 HIDD\_CURRENT\_ORDER\_SUMMARY 136207 AFW\_HIDD\_INFORMATION\_ACCESS 163677

# **Change Disc**

If you have not yet inserted a CD, please insert the disc containing information for any vehicle supported by Popular Mechanics.

If there is a CD in the drive, you have inserted a CD which does not contain information for the car you have selected. Please re-check your CD drive to make sure that the correct disc is installed.

### **Printing Articles**

The Print Article dialog box allows you to print the currently-displayed article. To activate the Print dialog box, click the Print icon from the tool bar or select Data from the menu bar and click Print.

#### Print

#### Print the complete article (text and images)

Select this option if you need a printed copy of the entire article.

#### Print article text only

Select this option if you do not need the images and wish to print the article quickly.

#### Print the image currently displayed

Select this option to print only the image you are currently viewing on the screen.

**Note:** If the article does not contain both text and images, Text Only and Image Only options do not apply and are grayed-out in the Print dialog box.

#### To print multiple TSBs or TSB titles

Display the TSB list and click Print. A dialog box will appear giving you the choice to print titles only or complete bulletins. Click the appropriate choice and click OK.

#### οκ

Click OK to print the article as selected in Print options.

#### Cancel

Click Cancel to abort the print command.

### **Hyperlink History**

The Hyperlink History window lists each step you've taken and provides a direct path to any previous step with a single click of the mouse. This feature is useful if you have been browsing for additional information and wish to return to the main topic.

#### To display Hyperlink History:

- Click View from the menu bar
- Click Hyperlink History

#### **Dialog Box Options:**

#### **Return To**

Click on any displayed title to return to that topic.

#### Show this window after I select a Hyperlink

Click this box to automatically display the Hyperlink History window each time a new jump is made.

#### Close

Click Close to remove the Hyperlink History box from the screen. If the "Show this window..." box is checked, Hyperlink History will return each time a new jump is made. If the box is not checked, select View from the menu bar and click Hyperlink History to redisplay.

#### **Clear History**

Clears all Hyperlink jump records from the Return To window

# Data Coverage

Data Coverage displays information statistics for the currently-loaded CD. By reviewing Data Coverage you can determine if the information you are looking for exists on the CD.

Click on **Select Additional Cars...** to register additional cars from this disc. The charge will be shown when you select the data modules.

Click:

- Next > to continue
- OR -
- < Back to go back a step
- OR -
- Cancel to end the registration process.

Note: If you have selected an additional car but wish to remove it. Click on Remove Selected Car.

Dial the IVR (Interactive Voice Response) Registration System phone number on a touch tone phone. Residents of the U.S. and Canada must call 1-800-344-6614 to register toll free. If you live outside the U.S. or Canada you must call, 916-683-4908.

Follow the directions provided. Enter the corresponding information on your phone key pad. Enter the Authorization Code given in the spaces provided.

Click:

- Next > to continue
- OR -
- < Back to go back a step
- OR -
- Cancel to end the registration process.

#### Note:

If you click "Cancel" after receiving your Authorization Code, you may return to this screen again to enter the Authorization Code(s). This does not cancel your order.

# **Registered Cars and Options**

This dialog displays a list of Unlocked Vehicles (vehicles that have been registered).

- Ok to close the dialog box OR -
- **Print** to obtain a printed copy of the summary

# Annotate

Annotate allows you to attach your own notes to articles or images. You can place annotations within an article or image by clicking on the area you want to annotate. The annotation will display any time the article or image is viewed again. Annotated articles are indicated by the yellow note symbol.

#### Suggested Annotations:

- Reminders
- Field Fixes
- Enhancements to Procedures
- Supporting Information

#### To attach a note to an article:

- Click the annotate icon on the tool bar.
- Click on the article or image area you wish to note.
- Type your note in the dialog box window.
- Click OK.

#### To remove a note from an article:

- Click on the yellow note symbol in the article.
- Click delete in the dialog box.

# Annotation Changed

You have edited the existing annotation. If you wish to keep the new version of this note, select OK. If you do not wish to change this note, select Cancel.

# **Place Annotation**

To place an annotation anywhere within the article, position the cursor and click the left mouse button.

**Note**: You may only place annotations on the "live" image area, not the white space at the bottom of the image. All annotations to the text area appear to the left of the closest sentence indicated.

### **Device Setup**

Device Setup allows Popular Mechanics to work with networks and multiple CD changers. If your system has a single CD drive and is not on a network, Popular Mechanics will automatically locate your drive during software installation.

#### Auto-Connect

Auto-Connect searches all CD drives for the Popular Mechanics databases and automatically adds them to the data path list.

#### Connect

Connect allows you to manually enter the drive and data path to your Popular Mechanics database.

#### Modify

Modify allows you to change the drive and data path to your Popular Mechanics database.

#### Disconnect

Disconnect allows you to remove any drives or data paths that are no longer in use.

#### Scan Data Discs

To reinitialize the cache. This is typically used for systems with CD changers.

#### οκ

Confirms selections and closes the Device Setup dialog box

#### Cancel

Abandons changes and closes the Device Setup dialog box

# Auto Connect

Auto-Connect searches all CD drives for the Automotive Service Information Bureau databases and automatically adds them to the data path list.

- Single CD Drive Install any Automotive Service Information Bureau CD into the drive.
- Click Auto-Connect to activate the Auto Configuration dialog box.
- Click OK to automatically add the drive to the active drive list.Click Cancel to abandon the drive search and close the dialog box.

# Connect

Connect allows you to manually enter the drive and data path to your Automotive Service Information Bureau database.

### **Dialog Box Options**

#### **Available Devices**

Click on the available drive you wish to select.

#### Data Path

Type in the data path to the Automotive Service Information Bureau database on the drive you selected.

#### οκ

Confirms drive and path selections and closes the Connect a Device dialog box.

#### Cancel

Abandons changes and closes the Connect a Device dialog box.

# Modify

Modify allows you to change the data path to your Popular Mechanics database.

#### To modify a drive connection

- Click on the drive connection you wish to modify from the drive list.Click Modify to activate the Select New Path dialog box.
- Type in the new path to the Automotive Service Information Bureau database.
- Click OK to confirm changes.
- Click Cancel to abandon changes.

# **Connect Confirm**

This screen normally does not occur. If you are experiencing technical problems please call Customer Service.

# **Duplicate Connection**

This screen normally does not occur. If you are experiencing technical problems please call Customer Service.

# **CD** Registration

The Welcome Screen explains the Popular Mechanics product registration and options. If you choose to continue with the registration, you will be asked to enter:

- The 12-digit CD serial number located on the white sticker on your discs
- Whether you would like to register by modem or by phone using the IVR Registration System

### **Modem Registration**

If you choose to register by modem, you will enter:

- Your choice of vehicles
- · What options you would like to access on your CD
- Credit card information
- Personal address information

When your selection is complete, your modem will send the information to our Popular Mechanic's server for processing. When the information is approved, you will be given an authorization code(s) to access the information for the vehicle(s) and options selected.

### Interactive Voice Response (IVR) Registration System

If you do not have a modem, residents of the U.S. and Canada must call 1-800-344-6614 to register toll free by phone. If you live outside the U.S. or Canada you must call, 916-683-4908.

The automated voice system will lead you through the registration step by step. If you choose to register by phone, you will enter:

- Credit card information
- Telephone number with area code
- Zip code

When you have entered the authorization code into your computer you can access the selected options and features on your CD.

- Next > to continue
- OR -
- Cancel to end the registration process.

# Preview or Register a Vehicle

#### Preview a Vehicle:

Allows you to examine the type of data available for a specific car.

#### **Register a Vehicle:**

Allows you to purchase the data module so you can view and print actual data.

- **Preview** to examine the type of data available
- OR -
- Register to purchase the data module
- OR -
- Cancel to end the registration process.

# Serial Number

Enter the Serial Number that is located on the white sticker on your discs.

- Next > to continue
- OR -
- < Back to go back a step
- OR -
- Cancel to end the registration process.

# **Registration Options**

If you have a modem, you can register using the computer. If you do not have a modem, residents of the U.S. and Canada must call 1-800-344-6614. If you live outside the U.S. or Canada you must call, 916-683-4908.

The Interactive Voice Response (IVR) Registration System will talk you through the registration process.

Choose how you would like to register by clicking on the option.

- Next > to continue
- OR -
- < Back to go back a step
- OR -
- Cancel to end the registration process.

# Select Year, Make and Model

Select the year, make and model of the car you wish to access on your Popular Mechanic's CD.

Click:

- Next > to continue
- OR -
- < Back to go back a step
- OR -
- **Cancel** to end the registration process.

**Note:** If you were previewing a vehicle prior to starting the registration process, you will not be given the option to Select Car to Register.

Click on **Select Additional Cars...** to register additional cars from this disc. The charge will be shown when you select the data modules.

Click:

- Next > to continue
- OR -
- < Back to go back a step
- OR -
- Cancel to end the registration process.

Note: If you have selected an additional car but wish to remove it. Click on Remove Selected Car.

Dial the IVR (Interactive Voice Response) Registration System phone number on a touch tone phone. Residents of the U.S. and Canada must call 1-800-344-6614 to register toll free. If you live outside the U.S. or Canada you must call, 916-683-4908.

Follow the directions provided. Enter the corresponding information on your phone key pad. Enter the Authorization Code given in the spaces provided.

Click:

- Next > to continue
- OR -
- < Back to go back a step
- OR -
- Cancel to end the registration process.

#### Note:

If you click "Cancel" after receiving your Authorization Code, you may return to this screen again to enter the Authorization Code(s). This does not cancel your order.

- 1. The IVR (Interactive Voice Response) Registration System will talk you through the registration system.
- 2. Additional Information you will be asked to enter:
- Credit Card Information if ordering additional options,
- Zip Code,
- Telephone Number,
- 3. Have a pen and paper available for writing down the authorization code(s) you will receive.

- Next > to continue
- OR -
- < Back to go back a step
- OR -
- Cancel to end the registration process.

## Modem Connect

The system is attempting to detect your modem and will download information when your modem is connected.

If a connection cannot be made, you will have the option of re-trying to connect or canceling. If you choose to cancel you can still register using the Interactive Voice Response (IVR) Registration System.

- Next > to continue
- OR -
- < Back to go back a step
- OR -
- Cancel to end the registration process.

## **Personal Information**

You will be required to enter various personal information before proceeding.

- Next > to continue
- OR -
- < Back to go back a step
- OR -
- Cancel to end the registration process.

### **Retrieve Options and Specials**

If you have a modem, make sure it is connected properly. If calling from outside the United States, you may be required to use a different phone number. Refer to your printed instruction sheets for additional information.

- Next > to continue
- OR -
- < Back to go back a step</p>
- OR -
- Cancel to end the registration process.

#### **Retrieve Prices**

The system is attempting to retrieve prices via your modem, and will download information when your modem is connected.

If a connection cannot be made, you will have the option of re-trying to connect or canceling. If you choose to cancel you can still register using the Interactive Voice Response (IVR) Registration System.

#### **Price and Data Module Information**

Your option prices and data module information have been downloaded. You can now select available options.

- Click Next > to begin your order.
  Click Cancel to end the registration process.

### Select Data Module(s)

Select from the available data modules. The price for each is listed to the left of the choice. If you have selected an additional car, and decide not to continue with the additional car, click on **Skip This Car**.

- Next > to continue
- OR -
- < Back to go back a step</p>
- OR -
- Cancel to end the registration process.

### **Select Additional Vehicle**

By clicking **Select Additional Cars...**, you can add another vehicle to your order. This will take you back to the Select a Car screen.

If you decide not to continue with the additional car, click on **Remove Selected Car**.

- Next > to continue
- OR -
- < Back to go back a step</p>
- OR -
- Cancel to end the registration process.

#### **Order Summary**

This screen lists the costs incurred for the options you ordered.

You will be required to enter all credit card information after you receive your free introductory item. For your free introductory item, only your personal information is needed. If you have received a credit from Popular Mechanic's, it will be used prior to your credit card being billed. Click **Print Summary** to receive a print out of your order totals.

- **Next >** to continue
- OR -
- < Back to go back a step
- OR -
- Cancel to end the registration process.

#### Summary

The summary screen displays your current order summary by listing the vehicle(s) you have selected and the option(s) requested for each. In addition the summary supplies you with the Authorization Code(s) for the vehicle(s) and option(s) you ordered. You may print your order by clicking **Print Summary**. (If you decide not to print, you will be asked if you want to print again after you click **Next >**.)

Click:

• Next > to continue

# **Congratulations!**

Click **Finish** to conclude the registration process and begin using your information. Be sure you've recorded the authorization code.

## Vehicle Registration

To print the order information prior to calling into the IVR system, click on **Print Order Information**.

- Next > to continue
- OR -
- < Back to go back a step
- OR -
- **Cancel** to end the registration process.

#### Definitions

Capacities Control Menu Box Electrical Fluid Types Main Topic Area Main Topic Banner Mechanical Menu Bar Minimize and Maximize Buttons Pressure, Vacuum and Temperature Status Bar Sub-Topic Area Tool Bar Tune-up Window Title

#### **Control Menu Box**

Control menu commands include restore, move, size, minimize, and maximize to control window characteristics. Choosing Close ends your Automotive Service Information Bureau session. Choosing Switch To... enables the Windows Task Manager. Double-clicking on the control menu box closes the application.

### Window Title

The window title displays the name of the application. This feature is useful if you have more than one application window on your desktop at a time.

#### **Minimize and Maximize Buttons**

The minimize and maximize buttons re-size the active window. Clicking on the minimize button reduces the application window to an icon. Clicking on the maximize button increases the window area to full-screen. After clicking maximize, the button changes to a restore button.

### Menu Bar

The menu bar lists all available menu commands. Clicking on any menu item displays a pull-down menu with additional menu options. Pull-down menu items that are followed by an ellipsis (...) indicate additional choices or a dialog box selection.

### Tool Bar

The tool bar is the strip of icons at the top of the screen. It provides one-click access to the Automotive Service Information Bureau's most-used features.

# Main Topic Banner

The main topic banner displays the subject of the main topic area.

## Main Topic Area

The main topic area displays the information type you have chosen. The contents of the main topic area vary with the information category you choose.

# Sub-topic Area

The sub-topic area of the Diagnosis and Repair screen contains a list of systems, sub-systems and components of the subject in the main topic banner.

#### **Status Bar**

The status bar is at the bottom of the main window. The left side of the status bar displays the Automotive Service Information Bureau system status. The right side of the status bar displays the year, make, model, and engine of the vehicle you have chosen.

### Electrical

Electrical and electronic specifications and limits for voltage, current, frequency, power draw, and other important electrical characteristics.

### Mechanical

Specifications and limits for torque values, grades, sizes, tolerances, mechanical ratios, and any other mechanical numeric values.

# Pressure, Vacuum and Temperature

Specifications and limits for fuel pressure, manifold pressure (vacuum), operating temperatures, etc.

# Capacities

Specifications and limits for fluids, weight, volume, etc.

# Fluid Types

Specifications, grades, octane, etc.

# Tune-up

Specifications normally associated with engine emissions, performance and maintenance.