1980 MITCHELL® ENGINE PERFORMANCE SERVICE & REPAIR

DOMESTIC CARS

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INTRODUCTION

This is the 1980 Supplement to Mitchell's Domestic Car Engine Performance Manual. In it you will find complete service information for Tune-Up, Computerized Engine Controls, Fuel Systems, Exhaust Emission Systems, and Distributors & Ignition Systems. This combination provides the most comprehensive and detailed information available on these systems.

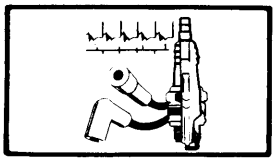
Finding the Information

To find information for the vehicle on which you are working, simply turn to the contents page located at the beginning of the appropriate section. Here you will find alphabetical listings of models grouped according to subject. Just determine the proper page number, and turn to the corresponding article, or use the handy General Index that follows this Introduction.

Description

TUNE-UP SPECIFICATIONS

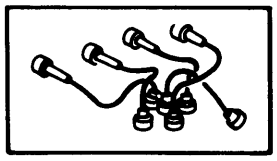
Section T



In this section you will find all Tune-Up Specifications listed in chart form. This is for fast reference when you need Ignition or Fuel System Specifications.

TUNE-UP

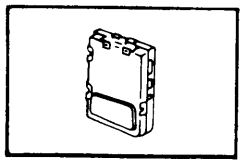
Section 1



The TUNE-Up section is divided by engine size. Included in this section are Engine Identification, Tune-Up Procedures, Belt Adjustments, Filter and Cleaner Service Intervals and Refill Capacities.

COMPUTERIZED ENGINE CONTROLS

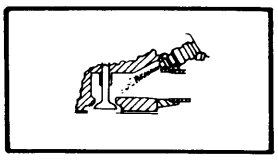
Section 1a



The COMPUTERIZED ENGINE CONTROLS section provides detailed coverage of all Computerized Engine Control Systems. Included are Trouble Shooting Charts, Diagnostic Codes and complete Wiring Diagrams for all control systems. In-depth Description and Operation information clarifies the inner workings of these complex systems.

FUEL SYSTEMS

Section 2



The FUEL SYSTEMS section covers such vital points as Carburetors, Fuel Injection, Turbocharger, Fuel Pumps and Trouble Shooting. Complete Specification Tables and exploded views of carburetors are included. Step-by-step procedures, supported by concise and detailed illustrations, make any fuel system repair easier and faster.

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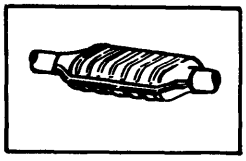
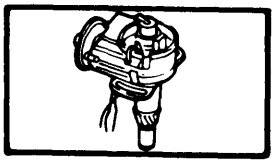


The beginning of this section includes emission control system applications. Each model and engine application requires a different combination of systems to meet Clean Air Standards. This section explains major Emission Systems and their components, Testing, Trouble Shooting and Adjustment procedures.

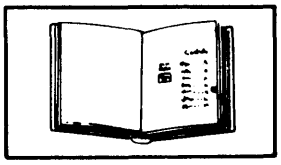
DISTRIBUTORS & IGNITION SYSTEMS

Section 4



In the DISTRIBUTORS & IGNITION SYSTEMS section, you will find complete Testing & Diagnosis procedures. Exploded Views and complete Specifications help make repairs easier and more accurate.

GENERAL INDEX



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Section G

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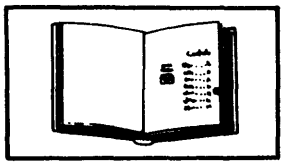

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NOTE: ALSO SEE GENERAL INDEX

Maintenance Reminder Lights

1980 RESET PROCEDURES DOMESTIC CARS

AMERICAN MOTORS

Every 30,000 miles, an emission maintenance reminder light appears on instrument panel indicating Emission service and replacement of oxygen sensor is required. Reset light activating switch as follows:

In engine compartment, locate switch between upper and lower speedometer cables next to firewall. Slide rubber boot up and, with small screw driver, turn reset screw clockwise 1/4 turn until detent resets in switch.

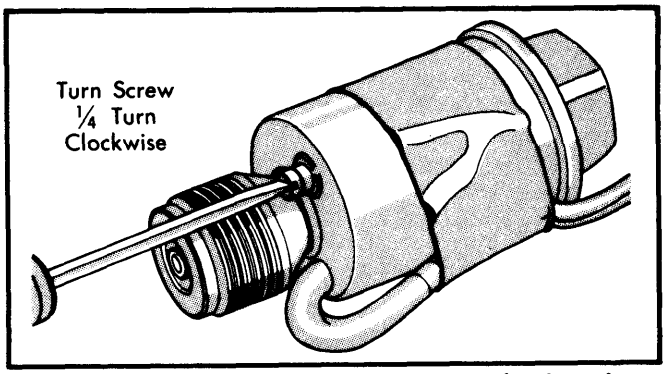

Fig. 1 Resetting Maintenance Reminder Switch American Motors & Chrysler Corp.

CHRYSLER CORP.

A mileage counter activates emission reminder light at 30,000 miles. Two types are used. If equipped with mechanical type, follow procedures for American Motors. The electronic type uses a 9-volt battery which supplies power to the electronic counter to prevent memory loss when the vehicle battery is disconnected. Reset electronic type as follows:

NOTE – *Vehicle battery MUST be connected during resetting procedure to prevent power loss to memory.*

Locate green plastic case behind instrument panel in lower left cluster area, slide case from bracket and open cover. Remove 9-volt battery and insert a small rod or screwdriver into hole in switch, closing contacts. Replace battery with new 9-volt alkaline type, close case, and slide switch back onto bracket.

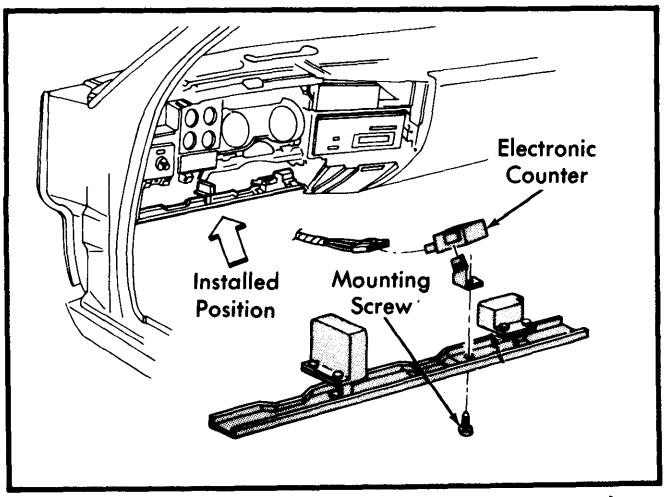

Fig. 2 Resetting Maintenance Reminder Switch Chrysler Electronic Type

FORD MOTOR CO.

NOTE – *Ford Motor Co. does not use a maintenance reminder for 1980.*

GENERAL MOTORS

Every 30,000 miles (15,000 miles for Cadillac), a maintenance reminder "flag" appears in speedometer face, indicating replacement of oxygen sensor is necessary.

Cadillac – Remove lower steering column cover. Sensor reset cable is located to the left of the speedometer cluster. Pull cable lightly (maximum 2 lbs. force). Reinstall lower steering column cover.

All Except Cadillac – Remove instrument panel trim plate. Remove instrument cluster lens. Using pointed tool, apply light downward pressure on notches of flag until it is reset. An alignment mark will appear in left center of odometer window when flag is fully reset.

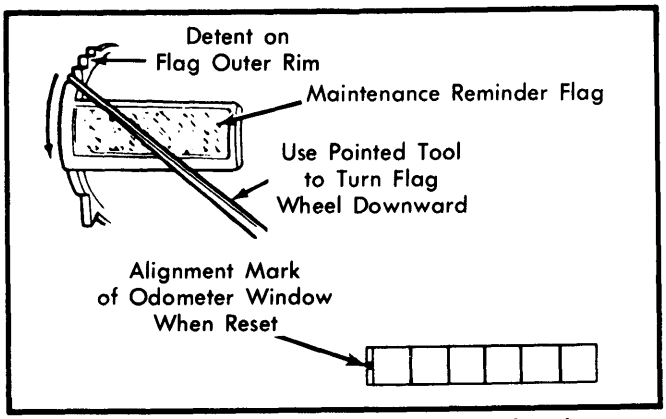

Fig 3 Resetting Maintenance Reminder Flag General Motors Except Cadillac

VIN Code Explanation

ALL MANUFACTURERS

1G1AZ37AXE5 100001

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰

① – Indicates Nation of Origin.
② – Indicates Manufacturer.
③ – Indicates Make and Type.
④ – Indicates Restraint System (Engine Type for AMC)
⑤ – Indicates Carline/Series. (Transmisson/Transaxle/Transfer Case for AMC)
⑥⑦ – Indicates Body Types
⑧ – Indicates Engine Type and Make (Restraint System for AMC).
⑨ – Indicates Check Digit.
⑩ – Indicates Model Year.
⑪ – Indicates Assembly Plant.
⑫⑬⑭⑮⑯⑰ – Indicates Plant Sequential Number.

AMERICAN MOTORS VIN ENGINE CODES

Code Digit	Engine
B	151" 2-Bbl. 4-Cyl.
C	258" 2-Bbl. 6-Cyl.

CHRYSLER CORP. VIN ENGINE CODES

Code Digit	Engine
A	1700cc 2-Bbl. 4-Cyl.
C	225" 1-Bbl. 6-Cyl.
D	225" 2-Bbl. 4-Cyl.
G	318" 2-Bbl. V8
H	318" 4-Bbl. V8
J	360" 4-Bbl. V8
K	360" 2-Bbl. V8
L	360" 4-Bbl. V8

FORD MOTOR CO. VIN ENGINE CODES

Code Digit	Engine
A	140" 2-Bbl. 4-Cyl.
B	200" 1-Bbl. 6-Cyl.
C	250" 1-Bbl. 6-Cyl.
D	255" 2-Bbl. 6-Cyl.
F	302" 2-Bbl. V8
F	302" EFI V8
G	351" 2-Bbl. V8

GENERAL MOTORS VIN ENGINE CODES

Code Digit	Engine
0	1600cc 2-Bbl. 4-Cyl.
9	1600cc 2-Bbl. 4-Cyl.
V	151" 2-Bbl. 4-Cyl.
5	151" 2-Bbl. 4-Cyl.
7	173" 2-Bbl. V6
K	229" 2-Bbl. V6
3	229" Turbo 4-Bbl. V6
A	231" 2-Bbl. V6
4	252" 4-Bbl. V6
F	260" 2-Bbl. V8
S	265" 2-Bbl. V8
J	267" 2-Bbl. V8
T	301" 4-Bbl. V8
W	301" 4-Bbl. V8
H	305" 4-Bbl. V8
Y	307" 4-Bbl. V8
L	350" 4-Bbl. V8
R	350" 4-Bbl. V8
X	350" 4-Bbl. V8
6	350" 4-Bbl. V8
8	350" 4-Bbl. V8
N	350" Diesel V8
6	368" 4-Bbl. V8
9	368" DEFI V8

Tool Applications

ALL MANUFACTURERS

DESCRIPTION

Tool applications used in this manual are noted in the text of all articles where applicable. These tools are usually specific tools that must be used to perform a specific function in Removal, Installation, Overhaul or Testing of a component.

For example; "Using Spline Adapter (J-28513) and Holding Wrench (J-28514), tighten pinion nut until end play is taken up." Although other tools could possibly be substituted, the tool references are those that are recommended by the vehicle manufacturer. These tools should be used whenever possible. Normally, in cases where a non-specific tool is called for, no tool number will be given.

For example; "Place bearing insert in rod and install guides on rod bolts. Compress piston rings using ring compressor." Since about any ring compressor that works and does not damage the components can be used, normally no specific tool number will be called out.

The following descriptions show an example of the reference in text, the maker of the tools recommended by the manufacturer and the tool maker's address. Further information on tools and local suppliers of the tools can be obtained from the tool maker. It is also possible, for example, that a Kent-Moore tool may be cross-referenced to another tool maker. In this case it is imperative that the tools be exactly the same in design, or the specific function of the tool may not be able to be performed.

AMERICAN MOTORS

American Motors Eagle tool applications called out in this manual will appear as follows: "Use Bearing Remover (J-21473-1) and Extension (J-21054-1) to drive out bearing." The "J" in front of the first set of numbers means that it is a Kent-Moore tool. The second set of numbers is the basic tool part number. Part numbers with no additional characters after the basic part number means that the tool listed is a complete tool. The last number means that it is either part of a set (-2,-3 etc.), or a revised tool number (-02,-03, or -B,-C etc,).

AMC TOOL MANUFACTURER

Kent-Moore Tool Division
29784 Little Mack
Roseville, Mich., 48066-2298
Telephone (313) 774-9500
Telex 23-5377

American Motors/Renault tool applications called out in this manual will appear as follows: "Install Spring Retainer (Sus.594-02). Adjust rocker arms using Adjuster (Mot.567)." The two or three letter code at the front of the number stands for the mechanical application, such as Mot. = Motor and Sus. = Suspension. The three digit number after the letters is the tool part number abbreviation. Renault tool numbers are actually listed as 00 00 047 600. The 476 is used for the tool abbreviation as shown in this manual. Any numbers after the three digit part number mean that there is more than one part to the tool.

RENAULT TOOL MANUFACTURER

Facom Tools Inc.
2177-0 Flintstone Dr.
Tucker, (Atlanta) Ga. 30084

CHRYSLER CORP.

Chrysler Corp. tool applications called out in this manual will appear as follows: "Assemble Pinion Locating Spacer (SP-6030) over body of main tool (SP-5385). Install Shaft Locating Sleeve (L-4507), Washer (C-4656) and Compression Nut (SP-533)."

The prefixes "C," "L" and "SP" mean that the tools are manufactured by Miller Special Tools. The number after the letter prefix is the basic tool part number. Any letters or numbers after the basic part number designate either a revised tool number or that the tool is part of a set.

CHRYSLER CORP.
TOOL MANUFACTURER

Miller Special Tools
Division of Utica Tool Co., Inc.
32615 Park Lane
Garden City, Mich. 48135
Telephone (313) 522-6717

FORD MOTOR CO.

Ford Motor Co. tool applications called out in this manual will appear as follows: "Remove pinion bearing with Slide Hammer (T50T-100A with Attachment T58L-101-A). Remove bearing with Puller (T81P-3504-S, T58L-101-A and T81P-3504-T)."

Ford Motor Co. tools are manufactured by Owatonna Tools. The prefix used with Ford tool numbers means that the tools are essential tools. The number after the prefix is the basic tool part number. Any letters or numbers after the basic part number designate either a revised tool number or that the tool is part of a set.

FORD MOTOR CO.
TOOL MANUFACTURER

Owatonna Tool Co. Inc.
Owatonna, Minn. 55060
Telephone (507) 455-2626
Telex 29-0876

GENERAL MOTORS

General Motors tool applications called out in this manual will appear as follows; "Install Pivot Pin Remover (J-21854-1) and remove pins. Using Pin Punch (J-22635), drive out lever pin."

The "J" in front of the first set of numbers means that it is a Kent-Moore tool. The second set of numbers is the basic tool part number. Part numbers with no additional characters after the basic part number means that the tool listed is a complete tool. The last number means that it is either part of a set (-2,-3 etc.), or a revised tool number (-02,-03, or -B,-C etc.).

GENERAL MOTORS
TOOL MANUFACTURER

Kent-Moore Tool Division
29784 Little Mack
Roseville, Mich., 48066-2298
Telephone (313) 774-9500
Telex 23-5377