

*** ENGINE SYSTEMS UNIFORM INSPECTION GUIDELINES ***

Article Text

1991 Volkswagen Vanagon
For Volkswagen Technical Site
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Saturday, March 18, 2000 08:46PM

ARTICLE BEGINNING

GENERAL INFORMATION

Engine Maintenance & Performance
Uniform Inspection Guidelines

All Makes & Models

Last Updated: December, 1994

MAP UNIFORM INSPECTION GENERAL GUIDELINES

OVERVIEW OF MOTORIST ASSURANCE PROGRAM

The Motorist Assurance Program (MAP) is the consumer outreach effort of the Automotive Maintenance and Repair Association, Inc. (AMRA). Participation in the Motorist Assurance Program is drawn from retailers, suppliers, independent repair facilities, vehicle manufacturers and industry associations.

The Motorist Assurance Program was established as an industry-wide effort to address concerns raised by regulators, the media and consumers questioning our ethics and methods of doing business. The automotive repair industry had been bombarded by months of negative stories in the media and scrutiny from state and federal regulators who focused on how the need for repairs is determined. MAP was formed as an industry response to this issue.

Our mission is to strengthen the relationship between the consumer and the auto repair industry. We produce materials that give motorists the information and encouragement to take responsibility for their vehicles - through proper, manufacturer-recommended, maintenance. We encourage participating service and repair shops (including franchisees and dealers) to adopt a Pledge to their Customers and the Motorist Assurance Program developed Standards of Service. All participating service providers have agreed to subscribe to this Pledge and to adhere to the promulgated Standards of Service which demonstrates to their customers that they are serious about customer satisfaction.

These Standards of Service require that an inspection of the vehicle's (problem) system be made according to industry guidelines. After learning that neither the car manufacturers nor any other source had complete guidelines, leading industry organizations, along with other industry participants banded together to address this challenging task. During the past two and a half years, they successfully developed industry inspection guidelines for the following systems: Exhaust, Brakes, ABS, Steering and Suspension, Engine Maintenance and Performance, HVAC, and Electrical systems. Guidelines for Drive Train and Transmission are currently being promulgated. Revisions to the inspection guidelines for Exhaust, Brakes/ABS and Steering and Suspension Systems, which were issued two years ago, are now being published for implementation beginning spring 1997. Participating shops utilize these Uniform Inspection Guidelines as part of the inspection process and for communicating their findings

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to their customers.

The Motorist Assurance Program continues to work cooperatively and proactively with government agencies and consumer groups toward solutions that both benefit the customer and are mutually acceptable to both regulators and industry. We maintain the belief that industry must retain control over how we conduct our business, and we must be viewed as part of the solution and not part of the problem. Meetings with state and other government officials concerned with auto repair and/or consumer protection are conducted. Feedback from these representatives are brought back to members, and the program adjusted as needed.

To assure auto repair customers recourse if they were not satisfied with a repair transaction, the Motorist Assurance Program offers arbitration through MAP/BBB-CARE in cooperation with the Council of Better Business Bureaus and individual participating Bureaus. MAP "piloted" in Indianapolis and Pittsburgh during spring, 1996 - and publicized "roll-outs" in New Jersey, Detroit (MI), Chicago (IL) and Richmond (VA) were conducted. To put some "teeth" in the program, and accreditation requirement for shops was initiated. The requirements are stringent and a self-policing method has been incorporated which includes the "mystery shopping" of outlets. In addition, a committee of service providers had been working diligently developing standards for newspaper, television and Internet advertising.

We welcome you to join us as we continue our outreach ... with your support, both the automotive repair industry and your customers will reap the benefits. Please visit MAP at our Internet site: www.hunter.com/map.htm or contact us at:

808 17th Street, NW Suite 200

Washington, D.C. 20006

Ph. (202) 466-7050 Fax (202) 223-9569

OVERVIEW OF SERVICE REQUIREMENTS & SUGGESTIONS

It is MAP policy that all exhaust, brake, ABS, steering and suspension, wheel alignment, tires and wheels, driveline, engine performance and maintenance and heating, ventilation and air conditioning services be offered and performed under the guidelines and procedures specified in these sections.

Before any service is performed on a vehicle, an inspection of the appropriate system must be performed. The results of this inspection must be explained to the customer and documented on an inspection form. The condition of the vehicle and its components will indicate what services/part replacements may be required or suggested. In addition, suggestions may be made to satisfy the needs expressed by the customer.

This section lists the various parts and conditions that indicate required or suggested service or part replacement. Although this list is extensive, it is not inclusive. In addition to this list, a technician may make a suggestion. This suggestion must be based on substantial and informed experience or the vehicle manufacturer's

[illegible]

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Condition	3	Procedure
AA		
Contaminated	3	Require replacement of oil and filter.
	3	See NOTE: (1) below.
AA		
High level	3	Determine source of incorrect level and
AAAAAAAAAAAAAAAAAAAAAAAAAAAAA		suggest correction.
Low level	3	
AA		
Maintenance intervals	3	Suggest replacement to comply with vehicles
	3	OEM recommended service intervals.
AA		
NOTE: (1) Determine source of contamination, i.e., engine coolant,		
		fuel, metal particles, when changing oil.
AA		

ENGINE OIL FILTER/CANISTER

Condition	3	Procedure
AA		
Contaminated	3	Require replacement of oil and filter.
	3	See NOTE: (1) below.
AA		
Damaged	3	Suggest replacement. Further inspection
	3	required. See NOTE: (2) below.
AA		
Leaking	3	Require repair or replacement.
AA		
Maintenance intervals	3	Suggest replacement to comply with vehicles
	3	OEM recommended service intervals.
AA		
NOTE: (1) Determine cause of contamination, i.e., engine coolant,		
		fuel, metal particles, when changing oil.
		(2) Determine cause, i.e., broken motor mount.
AA		

ENGINE GASKETS/SEALS

Condition	3	Procedure
AA		
Leaking	3	Tighten or suggest replacement as necessary.
AA		

ENGINE OIL DRAIN PLUG/GASKET

Condition	3	Procedure
AA		
Leaking	3	Require repair or replacement.
AA		
Damaged threads	3	Require repair or replacement.
AA		
NOTE: Some OEMs require replacement of drain plug gasket. Inspect		

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Missing/by-passed ³ Further inspection required.

Air flow restriction ³ Suggest repair.

Missing, damaged, deteriorated ⚡ Require repair or replacement of
mounting hardware and bushings ⚡ hardware and/or bushings.

ENGINE COOLING SYSTEM

RADIATOR & RADIATOR CAP

Condition - Radiator					
Procedure					

Leaking ³ Require repair or replacement.

AA

Damaged fins, tubes or fittings ^a Suggest repair or replacement.

Internal restrictions ³ Require repair or replacement.

[illegible]

Missing, damaged, deteriorated ^a Require repair or replacement of
mounting hardware and bushings ^a hardware and/or bushings.

Leaking internal trans cooler ³ Require repair or replacement.

Corroded ³ Suggest repair or replacement.

Condition - Radiator Cap 3 Procedure

Missing ³ Require replacement.

Fails to maintain proper pressure ³ Require replacement.

Damaged/bent or corroded ³ Suggest replacement.

Missing gaskets/seals ³ Require replacement.

Coolant recovery check valve inoperative³ Require replacement.

```
Improper application                                     3 Require replacement.
```

THERMOSTAT/HOUSING

<div style="text-align:center;">AA</div>					
Condition			3		Procedure

Improper installation ³ Require repair or replacement.

Missing/damaged/corroded thermostat ³ Require replacement of

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3 thermostat

Improper application 3 Require replacement.

Inoperative 3 Require replacement.

Damaged/corroded housing 3 Suggest replacement of housing.

COOLANT HOSES/TUBES (RADIATOR, BY-PASS, HEATER, RECOVERY TANK)

Condition 3 Procedure

Leaking 3 Require repair or replacement.

Brittle, hard, cracked, corroded, 3 Suggest repair or replacement.

spongy, soft, oil soaked, 3

collapsed, swollen, non-automotive 3

Improper routing 3 Suggest repair or replacement.

Restricted 3 Suggest repair or replacement.

Missing/damaged protective sleeves 3 Suggest replacement of sleeves.

Maintenance intervals 3 Suggest replacement to comply

with vehicle's OEM recommended

service intervals.

CLAMPS

Condition 3 Procedure

Missing/damaged 3 Require replacement.

Loose 3 Require repair or replacement.

Corroded 3 Suggest replacement.

NOTE: Be sure to inspect hoses for deterioration.

COOLANT RECOVERY TANK/CAP

Condition 3 Procedure

Missing 3 Require replacement.

Leaking 3 Require repair or replacement.

Damaged 3 Suggest repair or replacement.

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AA

Missing, damaged mounting hardware ³ Suggest repair or replacement of
³ hardware.

AA

COOLANT

AA

Condition ³ Procedure

AA

Contaminated ³ Require replacement. Further inspection
³ required. See NOTE: (1).

AA

Low level ³ Require filling to proper level. See
³ NOTE: (2).

AA

Improper mixture/type ³ Require correction or replacement.

AA

Improper acidity (pH) ³ Suggest correction or replacement.

AA

Maintenance intervals ³ Suggest replacement. See NOTE: (3).

AA

NOTE: (1) Determine source of contamination and suggest correction
prior to coolant replacement.

(2) Determine source of incorrect level and suggest repair.

(3) The system should be drained and/or flushed and refilled
with correct coolant according to OEM Recommended Service
Interval and procedure.

AA

WATER PUMP

AA

Condition ³ Procedure

AA

Leaking, damaged ³ Require replacement.

AA

Noisy ³ Suggest replacement.

AA

Inoperative ³ Require replacement.

AA

Broken, missing fasteners ³ Require replacement of fasteners.

AA

SHROUD/BAFFLES/DEFLECTORS

AA

Condition ³ Procedure

AA

Missing/damaged ³ Require replacement.

AA

Missing/damaged mounting hardware ³ Require replacement of hardware.

AA

RADIATOR FAN BLADE & FAN CLUTCH

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Condition - Fan Motor Resistor	3	Procedure
Leaking	3	Require repair or replacement.
Contaminated/corroded	3	Suggest repair or replacement.
Intermittent/inoperative	3	Require replacement.
Damaged	3	Suggest replacement.

ACCESSORY BELTS

Condition	3	Procedure
Missing	3	Require replacement.
Improper tension	3	Require adjustment or repair.
Improper alignment	3	Further inspection required. See note.
Damaged	3	Require replacement.
Noisy	3	Suggest replacement.

NOTE: Check alignment of pulleys and proper belt installation.

ACCESSORY PULLEYS & TENSIONERS

Condition - Pulleys	3	Procedure
Damaged	3	Require replacement.
Improper alignment	3	Require repair.
Missing, damaged mounting hardware	3	Require repair or replacement of hardware.

Condition - Tensioners	3	Procedure
Missing	3	Require replacement
Noisy	3	Suggest replacement.
Damaged	3	Suggest replacement.
Improper adjustment	3	Require adjustment or repair.

GASKETS

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Condition	3	Procedure
Leaking	3	Tighten or suggest replacement as necessary.

HEATER CORE

Condition	3	Procedure
Leaking	3	Require repair or replacement.
Damaged fins, tubes, fittings	3	Suggest repair or replacement.
Internal restrictions	3	Suggest repair or replacement.
Missing/by-passed	3	Suggest repair or replacement.
Air flow restriction	3	Suggest repair or replacement.
Missing, damaged deteriorated mounting hardware/bushing	3	Suggest repair or replacement of hardware/bushing
Corroded	3	Suggest repair or replacement.

HEATER CONTROL VALVE

Condition	3	Procedure
Missing/by-passed	3	Suggest repair or replacement.
Leaking	3	Require replacement.
Inoperative	3	Suggest replacement.
Damaged valve/bracket	3	Suggest repair or replacement of valve/bracket

ENGINE COOLING PASSAGES

Condition	3	Procedure
External/internal leak	3	Require repair or replacement.
Restricted cooling passage	3	Require repair.

CASTING CORE/EXPANSION PLUGS

Condition	3	Procedure
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Condition - Control³

Solenoid

³

Procedure

AA

Inoperative ³ Require repair or replacement. Further inspection

³ required. See NOTE: below.

AA

Leaking ³ Require repair or replacement.

AA

NOTE: Inoperative includes intermittent operation or out of OEM

specification.

AA

IDLE AIR CONTROL (IAC)

AA

Condition

³

Procedure

AA

Missing ³ Require replacement.

AA

Inoperative ³ Require repair or replacement. Further inspection

³ required. See NOTE: below.

AA

Damaged ³ Suggest replacement.

AA

Missing/damaged ³ Require repair or replacement of hardware.

mounting hardware ³

AA

NOTE: Inoperative includes intermittent operation or out of OEM

specifications. Some components may be serviceable; check for

accepted cleaning procedure.

AA

CHARGE AIR COOLER "INTERCOOLER" (CAC)

AA

Condition

³

Procedure

AA

Missing ³ Require replacement.

AA

Leaking ³ Require repair or replacement

AA

Damaged ³ Suggest repair or replacement.

AA

Missing/damaged mounting hardware ³ Require repair or replacement of

³ hardware.

AA

INTAKE AIR TEMP SENSOR (IAT)

AA

Condition

³

Procedure

AA

Missing ³ Require replacement.

AA

Inoperative ³ Require repair or replacement. Further inspection

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Restricted ³ Require repair or replacement. See NOTE: below.

NOTE: Refer to accepted service procedure.

CARBURETOR/CHOKE (SEE NOTE:)

AA		
Condition	3	Procedure

Improper operation ³ Require repair or replacement.

Missing, damaged, binding mounting ³ Require repair or replacement.

[illegible]

NOTE: Proper operation of a carburetor includes the ability to control fuel mixtures during all phases of driving operation to comply with all federal and local emission standards.

Adjustments are to be considered repairs.

THROTTLE BODY

AA		
Condition	3	Procedure

Leaking ³ Require repair or replacement.

Restricted/contaminated ³ Require repair. See NOTE: below.

AA
Damaged ³ Require repair or replacement.

NOTE: Some components may be serviceable; check for accepted

```
cleaning procedure.
```

VACUUM HOSES/TUBES

Condition		3	Procedure	

Missing ³ Require replacement.

[illegible]

Leaking/restricted ³ Require repair or replacement.
 ~~~~~~

### EARLY FUEL EVAPORATION (EFE)

| Condition |  | 3 | Procedure |  |
|-----------|--|---|-----------|--|
|-----------|--|---|-----------|--|

Refer to Early Fuel Evaporation Heater/Grid.

[illegible]

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POWERTRAIN CONTROL MODULE (PCM)

|                                                                                  |                                  |
|----------------------------------------------------------------------------------|----------------------------------|
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |                                  |
| Condition                                                                        | 3 Procedure                      |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |                                  |
| Inoperative                                                                      | 3 Require repair or replacement. |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |                                  |
| Damaged                                                                          | 3 Suggest repair or replacement. |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |                                  |

**SENSORS/ACTUATORS DEFINITIONS**

NOTE: The conditions and procedures apply to, but are not limited to the following list of components (SAE J1930 Terminology).

SENSORS/ACTUATORS DEFINITIONS

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

|                                                       |                           |
|-------------------------------------------------------|---------------------------|
| Sensor                                                | Abbreviation              |
| 02 Sensor .....                                       | 02S                       |
| Intake Air Temperature Sensor .....                   | IAT                       |
| Manifold Absolute Pressure Sensor .....               | MAP                       |
| Engine Coolant Temperature Sensor .....               | ECT                       |
| Barometric Pressure Sensor .....                      | BARO                      |
| Crankshaft Position Sensor .....                      | CKP                       |
| Throttle Positon Sensor .....                         | TPS                       |
| Camshaft Position Sensor .....                        | CMP                       |
| Park Neutral Position .....                           | PNP                       |
| Clutch Pedal Position Switch .....                    | CPP                       |
| Wide Open Throttle Switch .....                       | WOT Switch                |
| Exhaust Gas Recirculation Valve Position Sensor ..... | EGR Valve Position Sensor |
| Mass Air Flow Sensor .....                            | MAF                       |
| Volume Air Flow Sensor .....                          | VAF                       |
| Power Steering Pressure Sensor .....                  | PSP                       |
| Vehicle Speed Sensor .....                            | VSS                       |
| Fan Control Sensor .....                              | FS                        |
| Knock Sensor .....                                    | KS                        |
| Air Conditioning Cycling Switch .....                 | AC                        |
| Exhaust Gas Recirculating Temperature Sensor .....    | EGRT                      |
| Transmission Range Switch .....                       | TR Switch                 |

|                                          |              |
|------------------------------------------|--------------|
| Actuators                                | Abbreviation |
| Idle Speed Control Actuator .....        | ISC          |
| Idle Air Control .....                   | IAC          |
| Exhaust Gas Recirculation Solenoid ..... | EGR Solenoid |
| Vacuum Regulator Solenoid .....          | ...          |
| Mix Control Solenoid .....               | MC Solenoid  |
| Torque Converter Clutch .....            | TCC          |
| Fuel Injector .....                      | ...          |

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|                                           |       |              |
|-------------------------------------------|-------|--------------|
| Evaporative Emission Canister Purge Valve | ..... | EVAP         |
| Secondary Air Injection By-Pass           | ..... | Air By-Pass  |
| Secondary Air Injection Diverter          | ..... | Air Diverter |
| Waste Gate Control Solenoid               | ..... | ...          |

[illegible]

| Condition | 3 | Procedure |
|-----------|---|-----------|
|-----------|---|-----------|

[illegible]

Missing <sup>3</sup> Require replacement.

[illegible]

Inoperative                    <sup>3</sup> Require repair or replacement. Further inspection

<sup>3</sup> required. See NOTE: below.

[illegible]

Damaged <sup>3</sup> Suggest replacement.

[illegible]

Missing/damaged      <sup>3</sup> Require repair or replacement of hardware.

mounting hardware 3

[illegible]

NOTE: Inoperative includes intermittent operation or out of OEM specifications. Contaminated components may be serviceable; check for accepted cleaning procedure.

[illegible]

## POSITIVE CRANKCASE VENTILATION SYSTEM (PCV)

## POSITIVE CRANKCASE VENTILATION VALVE (PCV VALVE)

[illegible]

| Condition | 3 | Procedure |
|-----------|---|-----------|
|-----------|---|-----------|

[illegible]

Missing <sup>3</sup> Require replacement.

[illegible]

Damaged <sup>3</sup> Suggest repair or replacement.

[illegible]

Restricted <sup>3</sup> Suggest replacement.

[illegible]

Maintenance intervals <sup>3</sup> Suggest replacement to comply with vehicle's

<sup>3</sup> OEM recommended service intervals.[illegible]

## PCV BREATHING ELEMENT

[illegible]

| Condition | 3 | Procedure |
|-----------|---|-----------|
|-----------|---|-----------|

[illegible]

Missing <sup>3</sup> Require replacement.

[illegible]

Damaged <sup>3</sup> Suggest repair or replacement.

[illegible]

Restricted <sup>3</sup> Suggest replacement.

[illegible]

Maintenance intervals <sup>3</sup> Suggest replacement to comply with vehicle's

<sup>3</sup> OEM recommended service intervals.

[illegible]

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**TUBES, HOSES, CLAMPS & GROMMETS**

|                                                                                  |   |                                |
|----------------------------------------------------------------------------------|---|--------------------------------|
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |   |                                |
| Condition                                                                        | 3 | Procedure                      |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |   |                                |
| Missing                                                                          | 3 | Require replacement.           |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |   |                                |
| Damaged                                                                          | 3 | Require repair or replacement. |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |   |                                |
| Leaking                                                                          | 3 | Require repair or replacement. |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |   |                                |
| Restricted                                                                       | 3 | Require repair or replacement. |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |   |                                |

**ORIFICE**

|                                                                                  |   |                                              |
|----------------------------------------------------------------------------------|---|----------------------------------------------|
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |   |                                              |
| Condition                                                                        | 3 | Procedure                                    |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |   |                                              |
| Missing                                                                          | 3 | Require replacement.                         |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |   |                                              |
| Restricted                                                                       | 3 | Require repair or replacement.               |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |   |                                              |
| Maintenance intervals                                                            | 3 | Suggest replacement to comply with vehicle's |
|                                                                                  | 3 | OEM recommended service intervals.           |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |   |                                              |

**OIL SEPARATOR/FILTER**

|                                                                                  |   |                                              |
|----------------------------------------------------------------------------------|---|----------------------------------------------|
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |   |                                              |
| Condition                                                                        | 3 | Procedure                                    |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |   |                                              |
| Missing                                                                          | 3 | Require replacement.                         |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |   |                                              |
| Restricted                                                                       | 3 | Require repair or replacement.               |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |   |                                              |
| Damaged                                                                          | 3 | Suggest repair or replacement.               |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |   |                                              |
| Maintenance intervals                                                            | 3 | Suggest replacement to comply with vehicle's |
|                                                                                  | 3 | OEM recommended service intervals.           |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |   |                                              |

**IGNITION SYSTEM**

**BATTERY**

|                                                                                  |   |           |
|----------------------------------------------------------------------------------|---|-----------|
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |   |           |
| Condition                                                                        | 3 | Procedure |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |   |           |
| Refer to Starting/Charging System information.                                   |   |           |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |   |           |

**BATTERY CABLES/WIRES/CONNECTORS (SEE NOTE:)**

|                                                                                  |   |           |
|----------------------------------------------------------------------------------|---|-----------|
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |   |           |
| Condition                                                                        | 3 | Procedure |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |   |           |

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[illegible]

## BATTERY TRAY/HOLD DOWN HARDWARE

| Condition        | Ⓐ | Procedure                                            |
|------------------|---|------------------------------------------------------|
| Missing          | Ⓐ | Require replacement.                                 |
| Damaged/corroded | Ⓐ | Suggest repair or replacement. See NOTE:<br>Ⓐ below. |

NOTE: If battery tray/hold down hardware no longer performs intended purpose, require repair or replacement.

## FUSIBLE LINK

| Condition |   | Procedure                      |
|-----------|---|--------------------------------|
| Damaged   | 3 | Suggest repair or replacement. |
| Open      | 3 | Require replacement.           |

## IGNITION SWITCH

| Condition               | Procedure              |
|-------------------------|------------------------|
| Damaged                 | ³ Suggest replacement. |
| Inoperable/intermittent | ³ Require replacement. |

## PARK NEUTRAL SWITCH (PNP)

| Condition                            | Procedure            |
|--------------------------------------|----------------------|
| Inoperable/intermittent <sup>3</sup> | Require replacement. |







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specifications.

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

IGNITION HARNESS (PRIMARY)

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

| Condition | 3 | Procedure |
|-----------|---|-----------|
|-----------|---|-----------|

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

|         |   |                                |
|---------|---|--------------------------------|
| Damaged | 3 | Suggest repair or replacement. |
|---------|---|--------------------------------|

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

|            |   |                 |
|------------|---|-----------------|
| Mis-routed | 3 | Suggest repair. |
|------------|---|-----------------|

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

|                   |   |                      |
|-------------------|---|----------------------|
| Open fusible link | 3 | Require replacement. |
|-------------------|---|----------------------|

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

|              |   |                                |
|--------------|---|--------------------------------|
| Shorted/open | 3 | Require repair or replacement. |
|--------------|---|--------------------------------|

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

|                            |   |                                |
|----------------------------|---|--------------------------------|
| Connector terminal problem | 3 | Require repair or replacement. |
|----------------------------|---|--------------------------------|

(bent, broken, corroded or loose) 3

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

|                      |   |                                |
|----------------------|---|--------------------------------|
| Excessive resistance | 3 | Require repair or replacement. |
|----------------------|---|--------------------------------|

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

|             |   |                 |
|-------------|---|-----------------|
| Poor ground | 3 | Require repair. |
|-------------|---|-----------------|

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

DISTRIBUTOR

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

| Condition | 3 | Procedure |
|-----------|---|-----------|
|-----------|---|-----------|

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

|                           |   |                                        |
|---------------------------|---|----------------------------------------|
| Bent shaft, worn bushings | 3 | Further inspection required. See NOTE: |
|---------------------------|---|----------------------------------------|

and/or cam lobe 3 below.

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

|         |   |                                |
|---------|---|--------------------------------|
| Damaged | 3 | Suggest repair or replacement. |
|---------|---|--------------------------------|

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

|                           |   |                                            |
|---------------------------|---|--------------------------------------------|
| Missing, damaged mounting | 3 | Require repair or replacement of hardware. |
|---------------------------|---|--------------------------------------------|

hardware 3

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

|           |   |                              |
|-----------|---|------------------------------|
| Worn gear | 3 | Suggest replacement of gear. |
|-----------|---|------------------------------|

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

|             |   |                              |
|-------------|---|------------------------------|
| Broken gear | 3 | Require replacement of gear. |
|-------------|---|------------------------------|

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

|            |   |                                        |
|------------|---|----------------------------------------|
| Oil soaked | 3 | Further inspection required. See NOTE: |
|------------|---|----------------------------------------|

3 below.

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

NOTE: Refer to OEM recommended service procedures.

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

DISTRIBUTOR CAP

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

| Condition | 3 | Procedure |
|-----------|---|-----------|
|-----------|---|-----------|

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

|         |   |                      |
|---------|---|----------------------|
| Damaged | 3 | Suggest replacement. |
|---------|---|----------------------|

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

|                           |   |                      |
|---------------------------|---|----------------------|
| Corroded/eroded terminals | 3 | Suggest replacement. |
|---------------------------|---|----------------------|



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SPARK PLUGS (SEE NOTE: (1))

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

| Condition | 3 | Procedure |
|-----------|---|-----------|
|-----------|---|-----------|

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

|         |   |                      |
|---------|---|----------------------|
| Damaged | 3 | Require replacement. |
|---------|---|----------------------|

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

|         |   |                      |
|---------|---|----------------------|
| Shorted | 3 | Require replacement. |
|---------|---|----------------------|

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

|        |   |                                               |
|--------|---|-----------------------------------------------|
| Fouled | 3 | Require repair or replacement. See NOTE: (2). |
|--------|---|-----------------------------------------------|

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

|                      |   |                                     |
|----------------------|---|-------------------------------------|
| Maintenance interval | 3 | Suggest replacement. See NOTE: (3). |
|----------------------|---|-------------------------------------|

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

|                  |   |                      |
|------------------|---|----------------------|
| Eroded electrode | 3 | Suggest replacement. |
|------------------|---|----------------------|

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

|               |   |                                |
|---------------|---|--------------------------------|
| Incorrect gap | 3 | Require repair or replacement. |
|---------------|---|--------------------------------|

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

NOTE: (1) It is not required to replace spark plugs in sets.

However, you may suggest replacement of the other plugs for preventive maintenance.

(2) Determine cause of fouling and suggest repair.

(3) Suggest replacement to comply with vehicle's OEM recommended service intervals.

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

DISTRIBUTOR ADVANCE/RETARD (MECHANICAL/VACUUM)

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

| Condition | 3 | Procedure |
|-----------|---|-----------|
|-----------|---|-----------|

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

|         |   |                                |
|---------|---|--------------------------------|
| Damaged | 3 | Suggest repair or replacement. |
|---------|---|--------------------------------|

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

|             |   |                                |
|-------------|---|--------------------------------|
| Inoperative | 3 | Require repair or replacement. |
|-------------|---|--------------------------------|

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

|                      |   |                                |
|----------------------|---|--------------------------------|
| Out of specification | 3 | Require repair or replacement. |
|----------------------|---|--------------------------------|

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

ELECTRONIC SPARK CONTROL MODULE

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

| Condition | 3 | Procedure |
|-----------|---|-----------|
|-----------|---|-----------|

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

|         |   |                      |
|---------|---|----------------------|
| Damaged | 3 | Suggest replacement. |
|---------|---|----------------------|

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

|             |   |                                                                              |
|-------------|---|------------------------------------------------------------------------------|
| Inoperative | 3 | Require repair or replacement. Further inspection required. See NOTE: below. |
|-------------|---|------------------------------------------------------------------------------|

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

NOTE: Inoperative includes intermittent operation, out of OEM specifications.

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

GAS CAP

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

| Condition | 3 | Procedure |
|-----------|---|-----------|
|-----------|---|-----------|

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## FUEL FILLER NECK/HOSES/CLAMPS/RESTRICTOR

| Condition                          |   |                                            | Procedure |
|------------------------------------|---|--------------------------------------------|-----------|
| Missing                            | 3 | Require replacement.                       |           |
| Leaking                            | 3 | Require repair or replacement.             |           |
| Damaged                            | 3 | Suggest repair or replacement.             |           |
| Missing, damaged mounting hardware | 3 | Require repair or replacement of hardware. |           |

## FUEL TANK/CELL

| Condition                          | 3 | Procedure                                                     |
|------------------------------------|---|---------------------------------------------------------------|
| Leaking                            | 3 | Require repair or replacement.                                |
| Loose baffles                      | 3 | Require repair or replacement.                                |
| Damaged                            | 3 | Suggest repair or replacement.                                |
| Missing, damaged mounting hardware | 3 | Require repair or replacement of hardware.                    |
| Contaminated                       | 3 | Suggest repair. Further inspection required. See NOTE: below. |

NOTE: Some components may be serviceable; check for accepted cleaning procedure.

## FUEL LEVEL SENDER

| Condition   | Procedure                        |
|-------------|----------------------------------|
| Inoperative | 3 Suggest repair or replacement. |
| Leaking     | 3 Require repair or replacement. |
| Damaged     | 3 Suggest repair or replacement. |

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FUEL PUMP (IN TANK/EXTERNAL - ELECTRICAL OR MECHANICAL)

|                                                                          |                                              |
|--------------------------------------------------------------------------|----------------------------------------------|
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |                                              |
| Condition                                                                | 3 Procedure                                  |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |                                              |
| Inoperative                                                              | 3 Require repair or replacement.             |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |                                              |
| Noisy                                                                    | 3 Suggest replacement.                       |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |                                              |
| Leaking                                                                  | 3 Require repair or replacement.             |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |                                              |
| Damaged                                                                  | 3 Suggest repair or replacement.             |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |                                              |
| Missing, damaged mounting hardware                                       | 3 Requires repair or replacement of hardware |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |                                              |

ELECTRIC FUEL PUMP CONTROL CIRCUIT

|                                                                          |             |
|--------------------------------------------------------------------------|-------------|
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |             |
| Condition                                                                | 3 Procedure |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |             |
| See Electrical Uniform Inspection Guidelines.                            |             |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |             |

LIQUID VAPOR SEPARATOR

|                                                                          |                                  |
|--------------------------------------------------------------------------|----------------------------------|
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |                                  |
| Condition                                                                | 3 Procedure                      |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |                                  |
| Missing                                                                  | 3 Require replacement.           |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |                                  |
| Leaking                                                                  | 3 Require replacement.           |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |                                  |
| Damaged                                                                  | 3 Suggest repair or replacement. |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |                                  |
| Inoperative                                                              | 3 Require repair or replacement  |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |                                  |

ROLL-OVER VALVE

|                                                                          |                                  |
|--------------------------------------------------------------------------|----------------------------------|
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |                                  |
| Condition                                                                | 3 Procedure                      |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |                                  |
| Missing                                                                  | 3 Require replacement.           |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |                                  |
| Damaged                                                                  | 3 Suggest repair or replacement. |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |                                  |
| Inoperative                                                              | 3 Require replacement.           |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |                                  |
| Leaking                                                                  | 3 Require replacement.           |
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |                                  |

INERTIA FUEL SHUT OFF SWITCH

|                                                                          |  |
|--------------------------------------------------------------------------|--|
| AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA |  |
|--------------------------------------------------------------------------|--|

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| Condition   | 3 | Procedure                      |
|-------------|---|--------------------------------|
| Inoperative | 3 | Require repair or replacement. |
| Missing     | 3 | Require replacement.           |
| Damaged     | 3 | Suggest replacement.           |

## FUEL LINES/CLAMPS/O-RINGS/CONNECTORS (SEE NOTE)

| Condition          | 3 | Procedure                      |
|--------------------|---|--------------------------------|
| Missing            | 3 | Require replacement.           |
| Leaking            | 3 | Require repair or replacement. |
| Restricted         | 3 | Require repair or replacement. |
| Routed incorrectly | 3 | Suggest repair.                |
| Damaged            | 3 | Suggest repair or replacement. |

NOTE: When replacing fuel lines/hoses, replace with products that meet(s) or exceed(s) OEM design specifications.

## FUEL FILTER & IN-TANK FUEL STRAINER

| Condition - External Filter <sup>3</sup> |                                                                                                   | Procedure |
|------------------------------------------|---------------------------------------------------------------------------------------------------|-----------|
| Missing                                  | <sup>3</sup> Require replacement.                                                                 |           |
| Restricted/contaminated                  | <sup>3</sup> Require replacement.                                                                 |           |
| Leaking                                  | <sup>3</sup> Require repair or replacement.                                                       |           |
| Damaged                                  | <sup>3</sup> Suggest replacement.                                                                 |           |
| Maintenance interval                     | <sup>3</sup> Suggest replacement to comply with OEM<br><sup>3</sup> recommended service interval. |           |

|                                    |   |                                              |
|------------------------------------|---|----------------------------------------------|
| Missing, damaged mounting hardware | 3 | Suggest repair. Further inspection required. |
|------------------------------------|---|----------------------------------------------|

| Condition - In-Tank | Procedure                      |
|---------------------|--------------------------------|
| Missing             | Require replacement.           |
| Damaged             | Require replacement.           |
| Restricted          | Require repair or replacement. |



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Damaged 3 Suggest replacement.

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Restricted/contaminated 3 Suggest repair. Further inspection required.

3 See NOTE: below.

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

NOTE: Some components may be serviceable; check for accepted  
cleaning procedure.

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FUEL/COLD START INJECTORS (SEE NOTE: (1))

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Condition 3 Procedure

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Inoperative 3 Require repair or replacement. Further  
inspection required. See NOTE: (2) below.

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Damaged 3 Suggest repair or replacement.

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Missing, damaged mounting 3 Require repair or replacement of hardware.  
hardware 3

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Leaking 3 Require repair or replacement.

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

NOTE: (1) It is not required to replace injectors in sets. However,  
you may suggest replacement of all injectors for preventive  
maintenance.

(2) Inoperative included intermittent operations out of OEM  
specifications. Some components may be serviceable; check  
for accepted cleaning procedure.

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

THROTTLE BODY

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Condition 3 Procedure

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Leaking 3 Require repair or replacement.

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Restricted/contaminated 3 Require repair. See NOTE: below.

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Damaged 3 Require repair or replacement.

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

NOTE: Some components may be serviceable; check for accepted  
cleaning procedure.

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

CARBURETOR/CHOKE

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Condition 3 Procedure

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Improper air/fuel control 3 Require repair or replacement.

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Missing, damaged hardware 3 Require repair or replacement of



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⌘ hardware.

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Leaking ⌘ Require repair or replacement.

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Contaminated ⌘ Require repair or replacement. Further

⌘ inspection required. See NOTE: below.

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Improper mechanical operation ⌘ Require repair or replacement.

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

NOTE: Some components may be serviceable; check for accepted  
cleaning procedure.

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

EARLY FUEL EVAPORATION VALVE (HEAT RISER ASSEMBLY)

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Condition ⌘ Procedure

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Inoperative, binding ⌘ Require repair or replacement.

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Leaking exhaust ⌘ Require repair or replacement.

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Noisy ⌘ Suggest repair or replacement.

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

EARLY FUEL EVAPORATION, HEATER/GRID (EFE)

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Condition ⌘ Procedure

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Inoperative ⌘ Require repair or replacement.

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Restricted ⌘ Require repair or replacement.

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Damaged ⌘ Suggest repair or replacement.

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

EXHAUST GAS RECIRCULATION SYSTEM (EGR)

EGR VALVE

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Condition ⌘ Procedure

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Missing ⌘ Require replacement.

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Inoperative ⌘ Require repair or replacement.

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Leaking ⌘ Require repair or replacement.

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Restricted passage ⌘ Require repair or replacement.

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Damaged ⌘ Suggest repair or replacement.

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Maintenance interval ⌘ Suggest repair or replacement to comply with





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## CONTROL SOLENOID

| Condition   | Procedure            |
|-------------|----------------------|
| Missing     | Require replacement. |
| Damaged     | Suggest replacement. |
| Inoperative | Require replacement. |

## EVAPORATIVE SYSTEMS

## EVAPORATIVE EMISSION CANISTER (EVAP)

| Condition   | Procedure                      |
|-------------|--------------------------------|
| Damaged     | Suggest replacement.           |
| Missing     | Require replacement.           |
| Leaking     | Require replacement.           |
| Saturated   | Require replacement.           |
| Inoperative | Require repair or replacement. |

## EVAPORATIVE EMISSION CANISTER FILTER (EVAP FILTER)

| Condition            | Procedure                                                                      |
|----------------------|--------------------------------------------------------------------------------|
| Missing              | Require replacement.                                                           |
| Restricted           | Suggest replacement.                                                           |
| Maintenance interval | Suggest repair or replacement to comply with OEM recommended service interval. |

## HOSES / CLAMPS / TUBES

[illegible]

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| Condition  | 3 | Procedure                      |
|------------|---|--------------------------------|
| Missing    | 3 | Require replacement.           |
| Damaged    | 3 | Suggest replacement.           |
| Leaking    | 3 | Require repair or replacement. |
| Restricted | 3 | Require repair or replacement. |

EVAPORATIVE EMISSION CANISTER PURGE VALVE (ELECTRICAL/VACUUM)

| Condition   | 3 | Procedure            |
|-------------|---|----------------------|
| Missing     | 3 | Require replacement. |
| Damaged     | 3 | Suggest replacement. |
| Inoperative | 3 | Require replacement. |
| Leaking     | 3 | Require replacement. |

GAS CAP

| Condition | 3 | Procedure            |
|-----------|---|----------------------|
| Missing   | 3 | Require replacement. |
| Leaking   | 3 | Require replacement. |
| Damaged   | 3 | Suggest replacement. |

LIQUID/VAPOR SEPARATOR

| Condition   | 3 | Procedure                      |
|-------------|---|--------------------------------|
| Missing     | 3 | Require replacement.           |
| Leaking     | 3 | Require replacement.           |
| Damaged     | 3 | Suggest repair or replacement. |
| Inoperative | 3 | Require repair or replacement. |

ROLL OVER VALVE

| Condition | 3 | Procedure |
|-----------|---|-----------|
|-----------|---|-----------|

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## TRANSMISSION & CLUTCH RELATED INSPECTION INFORMATION

## AUTOMATIC TRANSMISSION FILTER

| Condition             | Procedure                                                             |
|-----------------------|-----------------------------------------------------------------------|
| Contaminated          | Require replacement of fluid and filter.                              |
| Maintenance intervals | Suggest replacement to comply with OEM recommended service intervals. |

## TRANSMISSION FLUID

```

#####
Condition          3                      Procedure
#####
See * TRANSMISSION UNIFORM INSPECTION GUIDELINES *. (1)
#####
(1) - TRANSMISSION UNIFORM INSPECTION GUIDELINES article is not
      available at this time.
#####

```

## CLUTCH FLUID

```

#####
Condition          3          Procedure
#####
See * TRANSMISSION UNIFORM INSPECTION GUIDELINES *. (1)
#####
(1) - TRANSMISSION UNIFORM INSPECTION GUIDELINES article is not
      available at this time.
#####

```

**END OF ARTICLE**