

*** ENGINE SYSTEMS UNIFORM INSPECTION GUIDELINES ***

Article Text

1993 Volkswagen Passat

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Wednesday, March 22, 2000 09:50PM

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 ³ Require repair or replacement of
mounting hardware and bushings ³ hardware and/or bushings.

ENGINE COOLING SYSTEM

RADIATOR & RADIATOR CAP

Condition - Radiator ³ Procedure

Leaking ³ Require repair or replacement.

D Damaged fins, tubes or fittings ³ Suggest repair or replacement.

Internal restrictions ³ Require repair or replacement.

Air flow restriction ³ Suggest repair.

Missing, damaged, deteriorated 3 Require repair or replacement of

mounting hardware and bushings ³ hardware and/or bushings.
 ~~~~~

Leaking internal trans cooler     3 Require repair or replacement.

[illegible]

Condition - Radiator Cap**3**Procedure

[illegible]

Fails to maintain proper pressure <sup>3</sup> Require replacement.  
 ~~~~~

[illegible]

Missing gaskets/seals ³ Require replacement.

Coolant recovery check valve inoperative ³ Require replacement.

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

THERMOSTAT/HOUSING

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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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

VOLUME AIR FLOW (VAF)

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
specification.

AA

MASS AIR FLOW (MAF)

AA

Condition ³ Procedure

AA

Missing ³ Require replacement.

AA

Inoperative ³ Require repair or replacement. 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
specification.

AA

AIR PLENUM/INTAKE MANIFOLD

AA

Condition ³ Procedure

AA

Leaking ³ Require repair or replacement.

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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.

D Damaged ³ Require repair or replacement.

NOTE: Some components may be serviceable; check for accepted

[illegible]

VACUUM HOSES/TUBES

Condition		3	Procedure	

Missing ^a 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)

AA	
Condition	3 Procedure
AA	
Inoperative	3 Require repair or replacement.
AA	
Damaged	3 Suggest repair or replacement.
AA	

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

AA

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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TUBES, HOSES, CLAMPS & GROMMETS

AA		
Condition	3	Procedure
AA		
Missing	3	Require replacement.
AA		
Damaged	3	Require repair or replacement.
AA		
Leaking	3	Require repair or replacement.
AA		
Restricted	3	Require repair or replacement.
AA		

ORIFICE

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

OIL SEPARATOR/FILTER

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

IGNITION SYSTEM

BATTERY

AA		
Condition	3	Procedure
AA		
Refer to Starting/Charging System information.		
AA		

BATTERY CABLES/WIRES/CONNECTORS (SEE NOTE:)

AA		
Condition	3	Procedure
AA		

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[illegible]

BATTERY TRAY/HOLD DOWN HARDWARE

Condition ³ Procedure					
Missing ³ Require replacement.					
Damaged/corroded ³ Suggest repair or replacement. See NOTE:					
³ 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 ³	Require replacement.

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specifications.

AA

IGNITION HARNESS (PRIMARY)

AA

Condition ³ Procedure

AA

Damaged ³ Suggest repair or replacement.

AA

Mis-routed ³ Suggest repair.

AA

Open fusible link ³ Require replacement.

AA

Shorted/open ³ Require repair or replacement.

AA

Connector terminal problem ³ Require repair or replacement.

(bent, broken, corroded or loose) ³

AA

Excessive resistance ³ Require repair or replacement.

AA

Poor ground ³ Require repair.

AA

DISTRIBUTOR

AA

Condition ³ Procedure

AA

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

and/or cam lobe ³ below.

AA

Damaged ³ Suggest repair or replacement.

AA

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

hardware ³

AA

Worn gear ³ Suggest replacement of gear.

AA

Broken gear ³ Require replacement of gear.

AA

Oil soaked ³ Further inspection required. See NOTE:

³ below.

AA

NOTE: Refer to OEM recommended service procedures.

AA

DISTRIBUTOR CAP

AA

Condition ³ Procedure

AA

Damaged ³ Suggest replacement.

AA

Corroded/eroded terminals ³ Suggest replacement.

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AAAAAA
Burned/carbon tracked/arcing ³ Require replacement.
AAAAAA
Missing carbon button ³ Require replacement.
AAAAAA
AAAAAA
Loose ³ Suggest repair or replacement.
AAAAAA

DISTRIBUTOR ROTOR

AAAAAA
Condition ³ Procedure
AAAAAA
Damaged ³ Suggest replacement.
AAAAAA
Corroded/eroded ³ Require replacement.
AAAAAA
Loose ³ Suggest repair or replacement.
AAAAAA
Missing, damaged hold down ³ Require repair or replacement of fastener
fastener ³
AAAAAA
Burned/carbon tracked ³ Require replacement.
AAAAAA

IGNITION WIRES/BOOTS/TERMINAL (SECONDARY - SEE NOTE: (1))

AAAAAA
Condition ³ Procedure
AAAAAA
Damaged ³ Suggest repair or replacement.
AAAAAA
Oil soaked ³ Suggest replacement.
AAAAAA
Open/shorted ³ Require repair or replacement.
AAAAAA
Mis-routed ³ Suggest repair. See NOTE: (2).
AAAAAA
Missing/damaged mounting ³ Suggest repair or replacement of hardware.
³ See NOTE: (2).
AAAAAA
Loose terminal ³ Suggest repair or replacement.
AAAAAA
Corroded ³ Suggest repair or replacement.
AAAAAA
High/Low resistance ³ Require repair or replacement.
AAAAAA

NOTE: (1) It is not required to replace ignition wires in sets.

However, you may suggest replacement of the entire secondary wire set for preventive maintenance.

(2) Proper routing, hardware, heat shields, etc. are intended to prevent premature failure of secondary ignition components.

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SPARK PLUGS (SEE NOTE: (1))

AA

Condition	3	Procedure
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AA

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

AA

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

AA

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

AA

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

AA

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

AA

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

AA

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.

AA

DISTRIBUTOR ADVANCE/RETARD (MECHANICAL/VACUUM)

AA

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

AA

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

AA

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

AA

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

AA

ELECTRONIC SPARK CONTROL MODULE

AA

Condition	3	Procedure
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AA

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

AA

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

AA

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

AA

GAS CAP

AA

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)

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

ELECTRIC FUEL PUMP CONTROL CIRCUIT

AA	
Condition	3 Procedure
AA	
See Electrical Uniform Inspection Guidelines.	
AA	

LIQUID VAPOR SEPARATOR

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

ROLL-OVER VALVE

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

INERTIA FUEL SHUT OFF SWITCH

AA	
--	--

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

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

AA		
Condition	3	Procedure
AA		
Missing	3	Require replacement.
AA		
Leaking	3	Require repair or replacement.
AA		
Restricted	3	Require repair or replacement.
AA		
Routed incorrectly	3	Suggest repair.
AA		
Damaged	3	Suggest repair or replacement.
AA		
NOTE: When replacing fuel lines/hoses, replace with products that		
meet(s) or exceed(s) OEM design specifications.		
AA		

FUEL FILTER & IN-TANK FUEL STRAINER

AA		
Condition - External Filter	3	Procedure
AA		
Missing	3	Require replacement.
AA		
Restricted/contaminated	3	Require replacement.
AA		
Leaking	3	Require repair or replacement.
AA		
Damaged	3	Suggest replacement.
AA		
Maintenance interval	3	Suggest replacement to comply with OEM
recommended service interval.		
AA		
Missing, damaged mounting hardware	3	Suggest repair. Further inspection
required.		
AA		
Condition - In-Tank	3	Procedure
AA		
Missing	3	Require replacement.
AA		
Damaged	3	Require replacement.
AA		
Restricted	3	Require repair or replacement.

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Damaged 3 Suggest replacement.

AA

Restricted/contaminated 3 Suggest repair. Further inspection required.

3 See NOTE: below.

AA

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

AA

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

AA

Condition 3 Procedure

AA

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

AA

Damaged 3 Suggest repair or replacement.

AA

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

AA

Leaking 3 Require repair or replacement.

AA

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.

AA

THROTTLE BODY

AA

Condition 3 Procedure

AA

Leaking 3 Require repair or replacement.

AA

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

AA

Damaged 3 Require repair or replacement.

AA

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

AA

CARBURETOR/CHOKE

AA

Condition 3 Procedure

AA

Improper air/fuel control 3 Require repair or replacement.

AA

Missing, damaged hardware 3 Require repair or replacement of

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⌘ hardware.

AA

Leaking ⌘ Require repair or replacement.

AA

Contaminated ⌘ Require repair or replacement. Further

⌘ inspection required. See NOTE: below.

AA

Improper mechanical operation ⌘ Require repair or replacement.

AA

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

AA

EARLY FUEL EVAPORATION VALVE (HEAT RISER ASSEMBLY)

AA

Condition ⌘ Procedure

AA

Inoperative, binding ⌘ Require repair or replacement.

AA

Leaking exhaust ⌘ Require repair or replacement.

AA

Noisy ⌘ Suggest repair or replacement.

AA

EARLY FUEL EVAPORATION, HEATER/GRID (EFE)

AA

Condition ⌘ Procedure

AA

Inoperative ⌘ Require repair or replacement.

AA

Restricted ⌘ Require repair or replacement.

AA

Damaged ⌘ Suggest repair or replacement.

AA

EXHAUST GAS RECIRCULATION SYSTEM (EGR)

EGR VALVE

AA

Condition ⌘ Procedure

AA

Missing ⌘ Require replacement.

AA

Inoperative ⌘ Require repair or replacement.

AA

Leaking ⌘ Require repair or replacement.

AA

Restricted passage ⌘ Require repair or replacement.

AA

Damaged ⌘ Suggest repair or replacement.

AA

Maintenance interval ⌘ Suggest repair or replacement to comply with

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[illegible]

CONTROL SOLENOID

Condition	3	Procedure
Missing	3	Require replacement.
Damaged	3	Suggest replacement.
Inoperative	3	Require replacement.

EVAPORATIVE SYSTEMS

EVAPORATIVE EMISSION CANISTER (EVAP)

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

EVAPORATIVE EMISSION CANISTER FILTER (EVAP FILTER)

Condition		Procedure
Missing	3	Require replacement.
Restricted	3	Suggest replacement.
Maintenance interval	3	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.
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END OF ARTICLE