

Uniform Inspection and Communication Standards

ELECTRICAL SYSTEMS

OVERVIEW

The Motorist Assurance Program 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.

Our organization's 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 greater responsibility for their vehicles through proper, manufacturer-recommended, maintenance. We encourage participating service and repair shops (including franchisees and dealers) to adopt (1) a Pledge of Assurance to their Customers and (2) the Motorist Assurance Program Standards of Service. All participating service providers have agreed to subscribe to this Pledge and to adhere to the promulgated Standards of Service demonstrating 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 and the results communicated to the customer according to industry standards. Given that the industry did not have such standards, the Motorist Assurance Program successfully promulgated industry inspection communication standards in 1994-95 for the following systems: Exhaust, Brakes, ABS, Steering and Suspension, Engine Maintenance and Performance, HVAC, Electrical Systems, and Drive Train and Transmissions. Further, revisions to all of these inspection communication standards are continually re-published. Participating shops utilize these Uniform Inspection & Communication Standards as part of the inspection process and for communicating their findings 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 (and their representatives), concerned with auto repair and/or consumer protection, are conducted. Feedback from these sessions is brought back to the association, 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 mediation and arbitration through the Better Business Bureau and other non-profit organizations. MAP conducted pilot programs in twelve states before announcing the program nationally in October 1998. During the pilots, participating repair shops demonstrated their adherence to the Pledge and Standards and agreed to follow the UICS in communicating the results of their inspection to their customers.

To put some "teeth" in the program, an 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.

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.motorist.org or contact us at:

7101 Wisconsin Avenue

Bethesda, MD 20814

Phone (301) 634-4955 - Fax (202) 318-0378

January 2002

Map@motorist.org

OVERVIEW OF SERVICE REQUIREMENTS AND SUGGESTIONS

It is MAP policy that all exhaust, brake, steering, suspension, wheel alignment, drive-line, engine performance and maintenance, and heating, ventilation and air conditioning, and electrical services be offered and performed under the standards 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 requests expressed by the customer.

When a component is suggested or required to be repaired or replaced, the decision to repair or replace must be made in the customer's best interest, and at his or her choice given the options available.

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

Some conditions indicate that service or part replacement is **required** because the part in question is no longer providing the function for which it is intended, does not meet a vehicle manufacturer's design specification or is missing.

Example: An exhaust pipe has corroded severely and has a hole in it through which exhaust gases are leaking. Replacement of the exhaust pipe in this case is **required** due to functional failure.

Example: A brake rotor has been worn to the point where it measures less than the vehicle manufacturer's discard specifications. Replacement of the rotor is **required** because it does not meet design specifications.

Some conditions indicate that a service or part replacement is **suggested** because the part is close to the end of its useful life or addresses a customer's need, convenience or request. If a customer's vehicle has one of these conditions, the procedure may be only to suggest service.

Example: An exhaust pipe is rusted, corroded or weak, but no leaks are present. In this case, the exhaust pipe has not failed. However, there is evidence that the pipe may need replacement in the near future. Replacement of the pipe may be **suggested** for the customer's convenience in avoiding a future problem.

Example: The customer desires improved ride and/or handling, but the vehicle's shocks or struts have not failed. In this case, replacement may be **suggested** to satisfy the customer's wishes. In this case, replacement of the shocks or struts may not be sold as a requirement.

A customer, of course, has the choice of whether or not a shop will service his or her vehicle. He or she may decide not to follow some of your suggestions. When a repair is **required**, a MAP shop must refuse partial service on that system if, in the judgment of the service provider, proceeding with the work could create or continue an unsafe condition. When a procedure states that required or suggested repair or replacement is recommended, the customer must be informed of the generally acceptable repair/replacement options whether or not performed by the shop.

When presenting **suggested** repairs to the customer, you must present the facts, allowing the customer to draw their own conclusions and make an informed decision about how to proceed.

The following reasons may be used for **required** and **suggested** services. These codes are shown in the "Code" column of the MAP Uniform Inspection & Communications Standards that follow:

Reasons to Require Repair or Replacement

- A - Part no longer performs intended purpose
- B - Part does not meet a design specification (regardless of performance)
- C - Part is missing

NOTE: When a repair is required, the shop must refuse partial service to the system in question, if the repair creates or continues an unsafe condition.

Reasons to Suggest Repair or Replacement

- 1 - Part is close to the end of its useful life (just above discard specifications, or weak; failure likely to occur soon, etc.)
- 2 - To address a customer need, convenience, or request (to stiffen ride, enhance performance, eliminate noise, etc.)
- 3 - To comply with maintenance recommended by the vehicle's Original Equipment Manufacturer (OEM)
- 4 - Technician's recommendation based on substantial and informed experience

NOTE: Suggested services are always optional. When presenting suggested repairs to the customer, you must present the facts, allowing the customer to draw their own conclusions and make an informed decision about how to proceed.

SERVICE PROCEDURES REQUIRED AND SUGGESTED FOR PROPER VEHICLE OPERATION

NOTE: When working on electrical systems, if a potentially hazardous condition is observed, require repair or replacement of affected components prior to

performing further work.

ACTUATOR MOTORS (SOLENOIDS) (ELECTRIC)

Actuator Motors (Solenoids) (Electric)

Condition	Code	Procedure
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Connector broken	A	Require repair or replacement.
Connector (Weatherpack type) leaking	A	Require repair or replacement.
Connector melted	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Connector missing	C	Require replacement.
Inoperative	A	Require replacement. See note below.
NOTE: Inoperative includes intermittent operation or out of OEM specification.		
Linkage bent, affecting performance	A	Require repair or replacement of linkage.
Linkage bent, not affecting performance	2	Suggest repair or replacement of linkage.
Linkage binding, affecting performance	A	Require repair or replacement of linkage.
Linkage binding, not affecting performance	1	Suggest repair or replacement of linkage.
Linkage broken	A	Require repair or replacement of linkage.
Linkage loose, affecting performance	A	Require repair or replacement of linkage.
Linkage loose, not affecting performance	1	Suggest repair or replacement of linkage.
Linkage missing	C	Require replacement.
Linkage noisy	2	Suggest repair or replacement.
Missing	C	Require replacement.
Terminal broken	A	Require repair or replacement.
Terminal burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Terminal burned, not affecting performance	1	Suggest repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Terminal corroded, affecting performance	A	Require repair or replacement.

Terminal corroded, not affecting performance	1	Suggest repair or replacement.
Terminal loose, affecting performance	B	Require repair or replacement.
Terminal loose, not affecting performance	1	Suggest repair or replacement.
Missing	C	Require replacement.
Noisy	2	Suggest repair or replacement.
Out of adjustment	B	Require repair or replacement.

ACTUATOR MOTORS (VACUUM)

Actuator Motors (Vacuum)

Condition	Code	Procedure
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Connector broken	A	Require repair or replacement.
Connector (Weatherpack type) leaking	A	Require repair or replacement.
Connector melted	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Connector missing	C	Require replacement.
Inoperative	A	Require replacement. See note below.
NOTE: Inoperative includes intermittent operation or out of OEM specification.		
Leaking (vacuum)	A	Require repair or replacement.
Linkage bent, affecting performance	A	Require repair or replacement of linkage.
Linkage bent, not affecting performance	2	Suggest repair or replacement of linkage.
Linkage binding, affecting performance	A	Require repair or replacement of linkage.
Linkage binding, not affecting performance	1	Suggest repair or replacement of linkage.
Linkage broken	A	Require repair or replacement of linkage.
Linkage loose, affecting performance	A	Require repair or replacement of linkage.
Linkage loose, not affecting performance	1	Suggest repair or replacement of linkage.
Linkage missing	C	Require replacement.
Linkage noisy	2	Suggest repair or replacement.
Missing	C	Require replacement.

Noisy	2	Suggest repair or replacement.
Out of adjustment	A	Require repair or replacement.

AIR BAGS

For all air bag components and conditions, refer to vehicle manufacturer's specifications for diagnosis and parts replacement.

ALTERNATORS AND GENERATORS

NOTE: If components have been added that increase vehicle electrical load requirement (for example, sound systems, air conditioning, alarm systems, etc.), charging system output must meet the increased demand.

Alternators and Generators

Condition	Code	Procedure
Alternator output meets OEM specification but is insufficient for add-on electrical load	2	Suggest upgrade of alternator or removal of excess electrical load.
Alternator's rated output is below OEM specification	B	Require replacement.
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware non-functioning	A	Require repair or replacement of hardware.
Connector broken	A	Require repair or replacement.
Connector (Weatherpack type) leaking	A	Require repair or replacement.
Connector melted	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Connector missing	C	Require replacement.
Diode inoperative	A	Require repair or replacement. See note below.
NOTE: Inoperative includes intermittent operation or out of OEM specification.		
Housing broken, affecting performance	A	Require repair or replacement.
Housing broken, not affecting performance		No service suggested or required.
Housing cracked, affecting performance	A	Require repair or replacement.
Housing cracked, not affecting performance	1	Suggest repair or replacement.
Inoperative	A	Require repair or replacement. See note below.
NOTE: Inoperative includes intermittent operation or out of OEM specification.		

Noisy	2	Suggest repair or replacement.
Pulley incorrect	B	Require replacement.
Terminal broken	A	Require repair or replacement.
Terminal burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Terminal burned, not affecting performance	2	Suggest repair or replacement.
Terminal corroded, affecting performance	A	Require repair or replacement.
Terminal corroded, not affecting performance	2	Suggest repair or replacement.
Terminal loose, affecting performance	B	Require repair or replacement.
Terminal loose, not affecting performance	1	Suggest repair or replacement.
Terminal resistance (voltage drop) out of specification	A	Require repair or replacement.
Threads damaged	A	Require repair or replacement.
Threads stripped (threads missing)	A	Require replacement.
Voltage drop out of specification	A	Require repair or replacement.

AMPLIFIERS

See Receivers, Amplifiers, Equalizers, and Sub-Woofer Volume Controls.

ANTENNAS

Antennas

Condition	Code	Procedure
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Broken	A	Require replacement.
Bent	2	Suggest repair or replacement.
Binding	2	Suggest repair or replacement.
Connector broken	A	Require repair or replacement.
Connector melted	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Connector missing	C	Require replacement.
Inoperative	A	Require replacement. See note below.
NOTE: Inoperative includes intermittent operation or out of specification.		

Insulation damaged, conductors exposed	A	Require repair or replacement.
Insulation damaged, conductors not exposed	1	Suggest replacement.
Missing	C	Require replacement.
Motor runs continuously	A	Require or replacement.
Power antenna noisy	2	Suggest repair or replacement.
Sticking	2	Suggest repair or replacement.
Terminal broken	A	Require repair or replacement.
Terminal burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Terminal burned, not affecting performance	2	Suggest repair or replacement.
Terminal corroded, affecting performance	A	Require repair or replacement.
Terminal corroded, not affecting performance	2	Suggest repair or replacement.
Terminal loose, affecting performance	B	Require repair or replacement.
Terminal loose, not affecting performance	1	Suggest repair or replacement.

BATTERIES

Proper operation of any electrical system or component can be affected by battery condition. The battery(ies) must meet or exceed minimum specification for vehicle as equipped and test to that specific battery's CCA.

Definition of Terms

Battery Performance Testing - Testing that determines whether or not a battery meets both vehicle OEM and battery manufacturer's specifications.

Cold Cranking Amp (CCA) Rating - The number of amperes a new, fully charged battery at 0°F (-17.8°C) can deliver for 30 seconds and maintain at least a voltage of 1.2 volts per cell (7.2 volts for a 12-volt battery).

Cranking Amps (CA) - The number of amperes a new, fully charged battery, typically at 32°F (0° C) can deliver for 30 seconds and maintain at least a voltage of 1.2 volts per cell (7.2 volts for a 12-volt battery).

OEM Cranking Amps - The minimum CCA required by the original vehicle manufacturer for a specific vehicle.

Batteries

Condition	Code	Procedure
Battery frozen		Further inspection required. See note below.

NOTE: Do not attempt to charge a frozen battery. Allow battery to warm thoroughly and then performance-test. If battery fails performance test, require replacement.

Case leaking	A	Require replacement.
Casing swollen	A	Further inspection required. See note below.

NOTE: No service suggested or required unless the battery fails performance test, in which case, require replacement.

Circuit open internally	A	Require replacement.
Electrolyte contamination	A	Further inspection required. See note below.

NOTE: No service suggested or required unless the battery fails performance test, in which case, require replacement.

Electrolyte discoloration	A	Further inspection required. See note below.
---------------------------	---	--

NOTE: No service suggested or required unless the battery fails performance test, in which case, require replacement.

Fails to accept and hold charge	A	Require replacement. See note below.
---------------------------------	---	--------------------------------------

NOTE: This phrase refers to a battery that fails to either accept and/or retain a charge using appropriate times listed in the Battery Charging Guide of the BCI Service Manual, battery charger operating manual, or battery manufacturer's specifications.

Fluid level low	B	Further inspection required. See note below.
-----------------	---	--

NOTE: Determine cause of low fluid level. Refill to proper level(s) with water (distilled water preferred). Recharge battery and performance-test.

If battery does not meet specifications, require replacement.

If battery is sealed type (non-removable filler caps), require replacement.

Out of performance specification for battery	B	Require replacement. See note below.
--	---	--------------------------------------

NOTE: The battery may meet vehicle's OEM specifications for that vehicle but test below the minimum specifications defined by the battery manufacturer.

Out of specification for application	B	Require replacement.
--------------------------------------	---	----------------------

NOTE: The battery may meet battery manufacturer's specifications but test below the minimum specification defined by the vehicle's OEM for that vehicle.

Post (top or side) burned, affecting performance	A	Require repair or replacement. See note below.
--	---	--

NOTE: Determine cause and correct prior to repair or replacement of part.

Post (top or side) burned, not affecting performance	2	Suggest repair or replacement. See note below.
--	---	--

NOTE: Determine cause and correct prior to repair or replacement of part.

Post (top or side) corroded, affecting performance	A	Require repair.
--	---	-----------------

Post (top or side) corroded, not affecting performance	2	Suggest repair.
--	---	-----------------

affecting performance		
Post (top or side) loose	A	Require replacement.
Post (top or side) melted, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Post (top or side) melted, not affecting performance	2	Suggest repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Specific gravity low	B	Further inspection required. See note below.
NOTE: Recharge and test to manufacturer's specifications. If battery fails performance test, require replacement.		
State of charge low	A	Further inspection required. See note below.
NOTE: Recharge and test to manufacturer's specifications. If battery fails performance test, require replacement.		
Top dirty	2	Suggest cleaning battery.
Top wet	A	Require cleaning battery. Further inspection required. See note below.
NOTE: Check fluid level and adjust to manufacturer's specification. Suggest checking charging system for proper operation.		
Vent cap loose	A	Require repair or replacement of vent cap.
Vent cap missing	C	Require replacement of vent cap.

BATTERY CABLES

See Battery Cables, Wires, and Connectors.

BATTERY CABLES, WIRES, AND CONNECTORS

Battery Cables, Wires, and Connectors

Condition	Code	Procedure
Application incorrect	B	Require repair or replacement.
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Connector broken	A	Require repair or replacement.
Connector melted	A	Require repair or replacement. See note below.

NOTE: Determine cause and correct prior to repair or replacement of part.		
Connector missing	C	Require replacement.
Insulation damaged, conductors exposed	A	Require repair or replacement. See note below.
NOTE: Exposed conductor at replacement (aftermarket) terminal end does not require repair or replacement.		
Insulation damaged, conductors not exposed	1	Suggest replacement.
Open	A	Require repair or replacement.
Protective shield (conduit) melted	2	Suggest repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Protective shield (conduit) missing	2	Suggest repair or replacement.
Resistance (voltage drop) out of specification	A	Require repair or replacement.
Routed incorrectly	B	Require repair.
Secured incorrectly	B	Require repair.
Shorted	A	Require repair or replacement.
Terminal broken	A	Require repair or replacement.
Terminal burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Terminal burned, not affecting performance	2	Suggest repair or replacement.
Terminal corroded, affecting performance	A	Require repair or replacement.
Terminal corroded, not affecting performance	2	Suggest repair or replacement.
Terminal loose, affecting performance	B	Require repair or replacement.
Terminal loose, not affecting performance	1	Suggest repair or replacement.
Voltage drop out of specification	A	Require repair or replacement.

BATTERY HOLD DOWN HARDWARE

See Battery Trays and Hold Down Hardware.

BATTERY TRAYS AND HOLD DOWN HARDWARE

Battery Trays and Hold Down Hardware

Condition	Code	Procedure

Battery improperly secured	2	Suggest repair.
Bent, affecting performance	A	Require repair or replacement.
Bent, not affecting performance		No service suggested or required.
Broken, affecting performance	A	Require repair or replacement.
Broken, not affecting performance		No service suggested or required.
Corroded, affecting performance	A	Require repair or replacement.
Corroded, not affecting performance	2	Suggest repair or replacement.
Cracked, affecting performance	A	Require repair or replacement.
Cracked, not affecting performance	1	Suggest repair or replacement.
Missing	C	Require replacement.
Threads damaged	A	Require repair or replacement.
Threads stripped (threads missing)	A	Require replacement.
Water drain clogged	A	Require repair.

BATTERY WIRES

See Battery Cables, Wires, and Connectors.

BELTS

Belts

Condition	Code	Procedure
Alignment incorrect	B	Further inspection required. See note below.
NOTE: Determine cause of incorrect alignment and require repair.		
Cracked	1	Suggest replacement.
Frayed	1	Suggest replacement.
Missing	C	Require replacement.
Noisy	2	Further inspection required. See note below.
NOTE: Determine cause of noise and suggest repair.		
Plies separated	A	Require replacement.
Tension out of specification	B	Require adjustment or replacement.
Worn beyond adjustment range	B	Require replacement.
Worn so it contacts bottom of pulley	A	Require replacement.

BULB SOCKETS

Bulb Sockets

Condition	Code	Procedure
Attaching hardware broken	A	Require repair or replacement of hardware.

Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Bulb seized in socket	A	Require repair or replacement.
Burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of socket.		
Burned, not affecting performance	2	Suggest repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of socket.		
Broken	A	Require repair or replacement.
Connector broken	A	Require repair or replacement.
Connector missing	C	Require replacement.
Connector (Weatherpack type) leaking	A	Require repair or replacement.
Connector melted	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Corroded, affecting performance	A	Require repair or replacement.
Corroded, not affecting performance	2	Suggest repair or replacement.
Leaking	A	Require repair or replacement.
Melted	A	Require replacement. See note below.
NOTE: Determine cause and correct prior to replacement of part.		
Shorted	A	Require repair or replacement.
Terminal broken	A	Require repair or replacement.
Terminal burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Terminal burned, not affecting performance	2	Suggest repair or replacement.
Terminal corroded, affecting performance	A	Require repair or replacement.
Terminal corroded, not affecting performance	2	Suggest repair or replacement.
Terminal loose, affecting performance	B	Require repair or replacement.
Terminal loose, not affecting performance	1	Suggest repair or replacement.

BULBS, SEALED BEAMS, AND LEDS

NOTE: Does not include soldered-in components.

Bulbs, Sealed Beams, and LEDs

Condition	Code	Procedure
Adjustment out of specification	B	Require repair or replacement.
Application incorrect	B	Require replacement. See note below.
NOTE: Application incorrect includes wrong bulb coating or color.		
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Base burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Base burned, not affecting performance	2	Suggest repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Base corroded, affecting performance	A	Require repair or replacement.
Base corroded, not affecting performance	2	Suggest repair or replacement.
Base leaking	A	Require repair or replacement.
Base loose, affecting performance	B	Require repair or replacement.
Base loose, not affecting performance	1	Suggest repair or replacement.
Base melted	A	Require replacement. See note below.
NOTE: Determine cause and correct prior to replacement of part.		
Bracket bent, affecting performance	A	Require repair or replacement.
Bracket bent, not affecting performance		No service suggested or required.
Bracket broken, affecting performance	A	Require replacement.
Bracket broken, not affecting performance		No service suggested or required.
Bracket corroded, affecting performance	A	Require repair or replacement.
Bracket corroded, not affecting performance	2	Suggest repair or replacement.
Bracket cracked, affecting performance	A	Require repair or replacement.
Bracket cracked, not affecting performance	1	Suggest repair or replacement.
Bracket loose, affecting performance	A	Require repair or replacement.
Bracket loose, not affecting performance	1	Suggest repair or replacement.
Bracket missing	C	Require replacement.
Burned out	A	Require replacement.
Connector broken	A	Require repair or replacement.

Connector (Weatherpack type) leaking	A	Require repair or replacement.
Connector melted	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Connector missing	C	Require replacement.
Corroded, affecting performance	A	Require repair or replacement.
Corroded, not affecting performance	2	Suggest repair or replacement.
Cracked	A	Require replacement.
Intermittent	A	Require replacement.
Lamp base melted	A	Require replacement. See note below.
NOTE: Determine cause and correct prior to replacement of part.		
Leaking	A	Require repair or replacement.
Missing	C	Require replacement.
Seized in socket	A	Require repair or replacement.
Terminal broken	A	Require repair or replacement.
Terminal burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Terminal burned, not affecting performance	2	Suggest repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Terminal corroded, affecting performance	A	Require repair or replacement.
Terminal corroded, not affecting performance	2	Suggest repair or replacement.
Terminal loose, affecting performance	B	Require repair or replacement.
Terminal loose, not affecting performance	1	Suggest repair or replacement.
Threads damaged	A	Require repair or replacement.
Threads stripped (threads missing)	A	Require replacement.

CD PLAYERS

See Tape Players and CD Players.

CIGARETTE LIGHTER ASSEMBLIES

Cigarette Lighter Assemblies

Condition	Code	Procedure
Attaching hardware broken	A	Require repair or replacement of hardware.

Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Inoperative	A	Require repair or replacement. See note below.
NOTE: Inoperative includes intermittent operation or out of OEM specification.		
Loose	A	Require repair or replacement.
Missing	2	Suggest replacement.
Sticking	A	Require repair or replacement.
Terminal broken	A	Require repair or replacement.
Terminal burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Terminal burned, not affecting performance	2	Suggest repair or replacement.
Terminal corroded, affecting performance	A	Require repair or replacement.
Terminal corroded, not affecting performance	2	Suggest repair or replacement.
Terminal loose, affecting performance	B	Require repair or replacement.
Terminal loose, not affecting performance	1	Suggest repair or replacement.

CIRCUIT BREAKERS

See Fuses, Fusible Links, and Circuit Breakers.

CLUTCH SWITCHES

See Switches.

CONNECTORS

See Wiring Harnesses and Connectors.

CONTROL MODULES

Control Modules

Condition	Code	Procedure
Application incorrect	B	Require replacement.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware threads	A	Require repair or replacement of hardware.

damaged		
Attaching hardware threads stripped (threads missing)	A	Require repair or replacement of hardware.
Code set (if applicable)	A	Further inspection required. See note below.
NOTE: Refer to manufacturer's diagnostic trouble code procedure and require repair or replacement of affected component(s).		
Connector broken	A	Require repair or replacement.
Connector melted	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Connector missing	A	Require repair.
Contaminated	A	Require repair or replacement. See note below.
NOTE: Determine source of contamination, such as engine coolant, fuel, metal particles, or water. Require repair or replacement.		
Inoperative	B	Require repair or replacement. Further inspection required. See note below.
NOTE: Inoperative includes intermittent operation or out of OEM specification. Some components may be serviceable; check for accepted cleaning procedure.		
Leaking	A	Require repair or replacement.
Missing	C	Require replacement.
Terminal broken	A	Require repair or replacement.
Terminal burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Terminal burned, not affecting performance	2	Suggest repair or replacement.
Terminal corroded, affecting performance	A	Require repair or replacement.
Terminal corroded, not affecting performance	2	Suggest repair or replacement.
Terminal loose, affecting performance	B	Require repair or replacement.
Terminal loose, not affecting performance	1	Suggest repair or replacement.
Threads damaged	A	Require repair or replacement.
Threads stripped (threads missing)	A	Require replacement.
Wire lead conductors exposed	B	Require repair or replacement.
Wire lead corroded	A	Require repair or replacement.
Wire lead open	A	Require repair or replacement.
Wire lead shorted	A	Require repair or replacement.

CRUISE CONTROL BRAKE SWITCHES

See Switches.

CRUISE CONTROL CABLES

See Cruise Control Linkages and Cables.

CRUISE CONTROL CLUTCH SWITCHES

See Switches.

CRUISE CONTROL LINKAGES AND CABLES

Cruise Control Linkages and Cables

Condition	Code	Procedure
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Bent	A	Require repair or replacement.
Binding	A	Require repair or replacement.
Bracket bent, affecting performance	A	Require repair or replacement.
Bracket bent, not affecting performance		No service suggested or required.
Bracket broken, affecting performance	A	Require replacement.
Bracket broken, not affecting performance		No service suggested or required.
Bracket corroded, affecting performance	A	Require repair or replacement.
Bracket corroded, not affecting performance	2	Suggest repair or replacement.
Bracket cracked, affecting performance	A	Require repair or replacement.
Bracket cracked, not affecting performance	1	Suggest repair or replacement.
Bracket loose, affecting performance	A	Require repair or replacement.
Bracket loose, not affecting performance	1	Suggest repair or replacement.
Bracket missing	C	Require replacement.
Broken	A	Require replacement.
Cracked	A	Require repair or replacement.

Disconnected	A	Require repair or replacement.
Kinked	A	Require repair or replacement.
Melted	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Missing	C	Require replacement.
Noisy	2	Suggest repair or replacement.
Out of adjustment	B	Require repair or replacement. See note below.
NOTE: Follow OEM recommended adjustment procedures. Require repair or replacement if out of specification.		
Routed incorrectly	2	Suggest repair.
Seized	A	Require repair or replacement.

CRUISE CONTROL RESERVOIRS

See Cruise Control Vacuum Hoses, Tubes, and Reservoirs.

CRUISE CONTROL TUBES

See Cruise Control Vacuum Hoses, Tubes, and Reservoirs.

CRUISE CONTROL VACUUM DUMP RELEASE VALVES

Cruise Control Vacuum Dump Release Valves

Condition	Code	Procedure
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Broken	A	Require repair or replacement.
Inoperative	A	Require replacement. See note below.
NOTE: Inoperative includes intermittent operation or out of OEM specification.		
Leaking	2	Suggest replacement.
Out of adjustment	B	Further inspection required. See note below.
NOTE: Follow OEM recommended adjustment procedures. Require repair or replacement if out of specification.		

CRUISE CONTROL VACUUM HOSES, TUBES, AND RESERVOIRS

Cruise Control Vacuum Hoses, Tubes, and Reservoirs

Leaking	A	Require repair or replacement.
---------	---	--------------------------------

Melted	A	Require replacement.
Missing	C	Require replacement.
Oil-soaked (spongy)	1	Suggest replacement.
Restricted	A	Require repair or replacement.
Surface cracks (dry-rotted)	1	Suggest replacement.

CRUISE CONTROL VEHICLE SPEED SENSORS

Cruise Control Vehicle Speed Sensors

Condition	Code	Procedure
Air gap incorrect	B	Require adjustment to vehicle manufacturer's specifications. See note below.

NOTE: If a sensor is not adjustable, further inspection is required to identify and correct cause.

Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Broken	A	Require replacement.
Housing cracked	A	Require replacement.
Internal resistance does not meet specifications	B	Require replacement. See note below.

NOTE: Component failure may be caused by water intrusion into the wiring harness. Always check insulation for damage and wiring for excessive resistance.

Lead routing incorrect	B	Require rerouting according to vehicle manufacturer's specifications.
Loose	B	Require adjustment to vehicle manufacturer's specifications. See note below.

NOTE: Some integral bearing assemblies with sensors may require replacement.

Missing	C	Require replacement.
Output signal incorrect	B	Require repair or replacement. See note below.

NOTE: Component failure may be caused by water intrusion into the wiring harness. Always check insulation for damage and wiring for excessive resistance.

Surface contaminated	2	Suggest cleaning; identify and correct source.
Tip bent	B	Require replacement.
Tip broken	B	Require replacement.
Tip missing	B	Require replacement.
Wire lead burned	A	Require replacement.
Wire lead conductors exposed	B	Require replacement.
Wire lead corroded	A	Require replacement.

Wire lead open	A	Require replacement.
Wire lead shorted	A	Require replacement.

DEFOGGERS

See Heating Elements (Defrosters, Defoggers, Electric Heaters, and Seats).

DEFROSTERS

See Heating Elements (Defrosters, Defoggers, Electric Heaters, and Seats).

DELAYS

Delays

Condition	Code	Procedure
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Binding, affecting performance	A	Require repair or replacement.
Binding, not affecting performance	2	Suggest repair or replacement.
Broken	A	Require repair or replacement.
Burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Burned, not affecting performance	2	Suggest repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Cracked, affecting performance	A	Require repair or replacement.
Cracked, not affecting performance	1	Suggest repair or replacement.
Inoperative	A	Require repair or replacement. See note below.
NOTE: Inoperative includes intermittent operation or out of OEM specification.		
Melted, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Melted, not affecting performance	2	Suggest repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Missing	C	Require replacement.

Terminal broken	A	Require repair or replacement.
Terminal burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Terminal burned, not affecting performance	2	Suggest repair or replacement.
Terminal corroded, affecting performance	A	Require repair or replacement.
Terminal corroded, not affecting performance	2	Suggest repair or replacement.
Terminal loose, affecting performance	B	Require repair or replacement.
Terminal loose, not affecting performance	1	Suggest repair or replacement.

DIMMERS

Dimmers

Condition	Code	Procedure
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Binding, affecting performance	A	Require repair or replacement.
Binding, not affecting performance	2	Suggest repair or replacement.
Broken	A	Require repair or replacement.
Burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Burned, not affecting performance	2	Suggest repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Cracked, affecting performance	A	Require repair or replacement.
Cracked, not affecting performance	1	Suggest repair or replacement.
Inoperative	A	Require repair or replacement. See note below.
NOTE: Inoperative includes intermittent operation or out of OEM specification.		
Melted, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Melted, not affecting performance	2	Suggest repair or replacement. See note below.

		below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Missing	C	Require replacement.
Terminal broken	A	Require repair or replacement.
Terminal burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Terminal burned, not affecting performance	2	Suggest repair or replacement.
Terminal corroded, affecting performance	A	Require repair or replacement.
Terminal corroded, not affecting performance	2	Suggest repair or replacement.
Terminal loose, affecting performance	B	Require repair or replacement.
Terminal loose, not affecting performance	1	Suggest repair or replacement.

ELECTRIC HEATERS

See Heating Elements (Defrosters, Defoggers, Electric Heaters, and Seats).

EQUALIZERS

See Receivers, Amplifiers, Equalizers, and Sub-Woofer Volume Controls.

FUSE BLOCKS

See Fuse Boxes and Blocks.

FUSE BOXES AND BLOCKS

Fuse Boxes and Blocks

Condition	Code	Procedure
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Broken, affecting performance	A	Require replacement.
Broken, not affecting performance		No service suggested or required.
Burned, affecting performance	A	Require repair or replacement. See note below.

NOTE: Determine cause and correct prior to repair or replacement of fuse box.		
Burned, not affecting performance	2	Suggest repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of fuse box.		
Connector broken	A	Require repair or replacement.
Connector (Weatherpack type) leaking	A	Require repair or replacement.
Connector melted	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Connector missing	C	Require replacement.
Cover missing	C	Require replacement of cover.
Cracked, affecting performance	A	Require repair or replacement.
Cracked, not affecting performance	1	Suggest repair or replacement.
Melted, affecting performance	A	Require replacement. See note below.
NOTE: Determine cause and correct prior to replacement of part.		
Melted, not affecting performance	2	Suggest replacement. See note below.
NOTE: Determine cause and correct prior to replacement of part.		
Terminal broken	A	Require repair or replacement.
Terminal burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Terminal burned, not affecting performance	2	Suggest repair or replacement.
Terminal corroded, affecting performance	A	Require repair or replacement.
Terminal corroded, not affecting performance	2	Suggest repair or replacement.
Terminal loose, affecting performance	B	Require repair or replacement.
Terminal loose, not affecting performance	1	Suggest repair or replacement.

FUSES, FUSIBLE LINKS, AND CIRCUIT BREAKERS

Fuses, Fusible Links, and Circuit Breakers

Condition	Code	Procedure
Application incorrect	B	Require replacement.
Blown	A	Require replacement.
NOTE: Determine cause and correct prior to replacement of part.		
Corroded, affecting performance	A	Require repair or replacement.
Corroded, not affecting performance	2	Suggest repair or replacement.

Cracked, affecting performance	A	Require repair or replacement.
Cracked, not affecting performance	1	Suggest repair or replacement.
Inoperative	A	Require replacement. See note below.
NOTE: Inoperative includes intermittent operation.		
Insulation damaged, conductors exposed	A	Require repair or replacement.
Insulation damaged, conductors not exposed	1	Suggest replacement.
Missing	C	Require replacement.
Routed incorrectly	B	Require repair.
Secured incorrectly	B	Require repair.
Terminal broken	A	Require repair or replacement.
Terminal burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Terminal burned, not affecting performance	2	Suggest repair or replacement.
Terminal corroded, affecting performance	A	Require repair or replacement.
Terminal corroded, not affecting performance	2	Suggest repair or replacement.
Terminal loose, affecting performance	B	Require repair or replacement.
Terminal loose, not affecting performance	1	Suggest repair or replacement.

FUSIBLE LINKS

See Fuses, Fusible Links, and Circuit Breakers.

GAUGES

NOTE: Includes odometers, speedometers, and tachometers (except cable-driven).

Gauges

Condition	Code	Procedure
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Connector broken	A	Require repair or replacement.
Connector (Weatherpack type) leaking	A	Require repair or replacement.

Connector melted	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Connector missing	C	Require replacement.
Leaking	A	Require replacement.
Lens broken	A	Require repair or replacement. See note below.
NOTE: If lens is available as a separate part, require replacement of lens only.		
Lens cloudy	2	Suggest repair or replacement. See note below.
NOTE: If lens is available as a separate part, suggest replacement of lens only.		
Lens missing	C	Require repair or replacement. See note below.
NOTE: If lens is available as a separate part, require replacement of lens only.		
Malfunctioning	A	Require repair or replacement. See note below.
NOTE: Includes inoperative, intermittent operation, failure to perform all functions, out of OEM specification, or out of range.		
Mechanical head noisy	2	Suggest repair or replacement.
Terminal broken	A	Require repair or replacement.
Terminal burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Terminal burned, not affecting performance	2	Suggest repair or replacement.
Terminal corroded, affecting performance	A	Require repair or replacement.
Terminal corroded, not affecting performance	2	Suggest repair or replacement.
Terminal loose, affecting performance	B	Require repair or replacement.
Terminal loose, not affecting performance	1	Suggest repair or replacement.

GENERATORS

See Alternators and Generators.

GROUND CABLES AND STRAPS

Ground Cables and Straps

Condition	Code	Procedure

Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Corroded, affecting performance	A	Require repair or replacement.
Corroded, not affecting performance	2	Suggest repair or replacement.
Insulation damaged, exposing conductors	2	Suggest replacement.
Loose	A	Require repair.
Missing	C	Require replacement.
Open	A	Require repair or replacement.
Resistance high	A	Require repair or replacement.
Terminal resistance (voltage drop) is out of specification	B	Require repair or replacement.
Voltage drop out of specification	B	Require repair or replacement.

GROUND STRAPS

See Ground Cables and Straps.

HEADLIGHT ADJUSTERS

Headlight Adjusters

Condition	Code	Procedure
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Bent, preventing adjustment	A	Require repair or replacement.
Broken	A	Require repair or replacement.
Indicator broken	A	Require replacement.
Indicator missing	C	Require replacement.
Missing	C	Require replacement of adjusters.
Seized	A	Require repair or replacement.
Threads damaged	A	Require repair or replacement.
Threads stripped (threads missing)	A	Require replacement.

HEATING ELEMENTS (DEFROSTERS, DEFOGGERS, ELECTRIC HEATERS, AND SEATS)

Heating Elements (Defrosters, Defoggers, Electric Heaters, and Seats)

--	--	--

Condition	Code	Procedure
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Connector broken	A	Require repair or replacement.
Connector (Weatherpack type) leaking	A	Require repair or replacement.
Connector melted	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Connector missing	C	Require replacement.
Inoperative	A	Require repair or replacement. See note below.
NOTE: Inoperative includes intermittent operation or out of OEM specification.		
Terminal broken	A	Require repair or replacement.
Terminal burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Terminal burned, not affecting performance	2	Suggest repair or replacement.
Terminal corroded, affecting performance	A	Require repair or replacement.
Terminal corroded, not affecting performance	2	Suggest repair or replacement.
Terminal loose, affecting performance	B	Require repair or replacement.
Terminal loose, not affecting performance	1	Suggest repair or replacement.
Wire lead burned	A	Require repair or replacement.
Wire lead conductors exposed	B	Require repair or replacement.
Wire lead open	A	Require repair or replacement.
Wire lead shorted	A	Require repair or replacement.

HORNS AND SIRENS

Horns and Sirens

Condition	Code	Procedure
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Connector broken	A	Require repair or replacement.

Connector melted	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Connector missing	C	Require replacement.
Inoperative	A	Require repair or replacement. See note below.
NOTE: Inoperative includes intermittent operation.		
Missing	C	Require replacement.
Out of adjustment	B	Require adjustment.
Sound quality poor	A	Require repair or replacement. Further inspection required.
Terminal broken	A	Require repair or replacement.
Terminal burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Terminal burned, not affecting performance	2	Suggest repair or replacement.
Terminal corroded, affecting performance	A	Require repair or replacement.
Terminal corroded, not affecting performance	2	Suggest repair or replacement.
Terminal loose, affecting performance	B	Require repair or replacement.
Terminal loose, not affecting performance	1	Suggest repair or replacement.
Wire lead burned	A	Require repair or replacement.
Wire lead conductors exposed	B	Require repair or replacement.
Wire lead open	A	Require repair or replacement.
Wire lead shorted	A	Require repair or replacement.

IGNITION SWITCHES

See Switches.

INDICATOR LIGHTS

Indicator Lights

Condition	Code	Procedure
Does not come on during bulb check		Further inspection required. See note below.

NOTE: See service manual for further information.

Fails to function properly during test mode		Further inspection required. See note below.
NOTE: See service manual for further information.		
On constantly		Further inspection required. See note below.
NOTE: See service manual for further information.		
On intermittently		Further inspection required. See note below.
NOTE: See service manual for further information.		

KEYLESS ENTRY KEYPADS AND TRANSMITTERS

Keyless Entry Keypads and Transmitters

Condition	Code	Procedure
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Connector broken	A	Require repair or replacement.
Connector (Weatherpack type) leaking	A	Require repair or replacement.
Connector melted	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Connector missing	C	Require replacement.
Malfunctioning	A	Require repair or replacement. See note below.
NOTE: Malfunctioning includes inoperative, intermittent operation, or failure to perform all functions.		
Terminal broken	A	Require repair or replacement.
Terminal burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Terminal burned, not affecting performance	2	Suggest repair or replacement.
Terminal corroded, affecting performance	A	Require repair or replacement.
Terminal corroded, not affecting performance	2	Suggest repair or replacement.
Terminal loose, affecting performance	B	Require repair or replacement.
Terminal loose, not affecting performance	1	Suggest repair or replacement.

performance		
Wire lead burned	A	Require repair or replacement.
Wire lead conductors exposed	B	Require repair or replacement.
Wire lead open	A	Require repair or replacement.
Wire lead shorted	A	Require repair or replacement.

KEYLESS ENTRY TRANSMITTERS

See Keyless Entry Keypads and Transmitters.

LEDS

See Bulbs, Sealed Beams, and LEDs.

LENSES

Lenses

Condition	Code	Procedure
Adjustment out of specification	B	Require repair.
Application incorrect	A	Require replacement.
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Broken, affecting performance	A	Require replacement.
Broken, not affecting performance		No service suggested or required.
Cracked	A	Require replacement.
Discolored	A	Require replacement.
Leaking	A	Require repair or replacement.
Melted, affecting performance	A	Require replacement.
Melted, not affecting performance	2	Suggest replacement.
Missing	C	Require replacement.

MICROPHONES

See Speakers and Microphones.

MIRRORS (ELECTROCHROMATIC AND HEATED)

Mirrors (Electrochromatic and Heated)

Condition	Code	Procedure
Attaching hardware broken	A	Require repair or replacement of

		hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Broken	A	Require repair or replacement.
Connector broken	A	Require repair or replacement.
Connector melted	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Connector missing	C	Require replacement.
Cracked	A	Require replacement.
Inoperative	A	Require replacement. See note below.
NOTE: Inoperative includes intermittent operation.		
Missing	C	Require replacement.
Terminal broken	A	Require repair or replacement.
Terminal burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Terminal burned, not affecting performance	2	Suggest repair or replacement.
Terminal corroded, affecting performance	A	Require repair or replacement.
Terminal corroded, not affecting performance	2	Suggest repair or replacement.
Terminal loose, affecting performance	B	Require repair or replacement.
Terminal loose, not affecting performance	1	Suggest repair or replacement.
Wire lead burned	A	Require repair or replacement.
Wire lead conductors exposed	B	Require repair or replacement.
Wire lead open	A	Require repair or replacement.
Wire lead shorted	A	Require repair or replacement.

MOTORS

Motors

Condition	Code	Procedure
Amperage draw out of specification	A	Require repair or replacement.
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.

Attaching hardware not functioning	A	Require repair or replacement of hardware.
Bracket bent	A	Require repair or replacement.
Bracket broken	A	Require repair or replacement.
Bracket cracked	A	Require repair or replacement.
Bracket holes elongated, affecting performance	A	Require repair or replacement.
Bracket holes elongated, not affecting performance		No service suggested or required.
Bracket missing	C	Require replacement.
Connector broken	A	Require repair or replacement.
Connector (Weatherpack type) leaking	A	Require repair or replacement.
Connector melted	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Connector missing	C	Require replacement.
Drive mechanism damaged, affecting performance	A	Require repair or replacement. See note below.
NOTE: Further inspection required to determine cause.		
Drive mechanism damaged, not affecting performance	2	Suggest repair or replacement. See note below.
NOTE: Further inspection required to determine cause.		
Fails to disengage	A	Require repair or replacement.
Housing broken, affecting performance	2	Suggest repair or replacement.
Housing broken, not affecting performance		No service suggested or required.
Housing cracked, affecting performance	A	Require repair or replacement.
Housing cracked, not affecting performance	1	Suggest repair or replacement.
Inoperative	A	Require repair or replacement. See note below.
NOTE: Inoperative includes intermittent operation.		
Linkage bent, affecting performance	A	Require repair or replacement of linkage.
Linkage bent, not affecting performance		No service suggested or required.
Linkage binding, affecting performance	A	Require repair or replacement of linkage.
Linkage binding, not affecting performance	2	Suggest repair or replacement of linkage.
Linkage broken	A	Require repair or replacement of linkage.
Linkage loose, affecting performance	A	Require repair or replacement of linkage.

Linkage loose, not affecting performance	1	Suggest repair or replacement of linkage.
Linkage missing	C	Require replacement.
Linkage noisy	2	Suggest repair or replacement.
Missing	C	Require replacement.
Noisy	2	Suggest repair or replacement.
Out of adjustment	B	Further inspection required. See note below.
NOTE: Follow OEM recommended adjustment procedures. Repair or replace if out of specification.		
Resistance out of specification	A	Require repair or replacement.
Terminal broken	A	Require repair or replacement.
Terminal burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Terminal burned, not affecting performance	2	Suggest repair or replacement.
Terminal corroded, affecting performance	A	Require repair or replacement.
Terminal corroded, not affecting performance	2	Suggest repair or replacement.
Terminal loose, affecting performance	B	Require repair or replacement.
Terminal loose, not affecting performance	1	Suggest repair or replacement.
Wire lead burned	A	Require repair or replacement.
Wire lead conductors exposed	B	Require repair or replacement.
Wire lead open	A	Require repair or replacement.
Wire lead shorted	A	Require repair or replacement.

NEUTRAL SAFETY SWITCHES

See Switches.

ODOMETERS

See Gauges.

ODOMETERS, SPEEDOMETERS, AND TACHOMETERS (CABLE-DRIVEN)

Odometers, Speedometers, and Tachometers (Cable-driven)

Condition	Code	Procedure
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.

Attaching hardware not functioning	A	Require repair or replacement of hardware.
Connector broken	A	Require repair or replacement.
Connector (Weatherpack type) leaking	A	Require repair or replacement.
Connector melted	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Connector missing	C	Require replacement.
Drive cable broken	A	Require replacement.
Drive cable noisy	2	Suggest repair or replacement.
Inoperative	A	Further inspection required. See note below.
NOTE: Inoperative includes intermittent operation, out of OEM specification, or out of range.		
Leaking	A	Require replacement.
Lens broken	A	Require repair or replacement. See note below.
NOTE: If lens is available as a separate part, require replacement of lens only.		
Lens cloudy	2	Suggest repair or replacement. See note below.
NOTE: If lens is available as a separate part, suggest replacement of lens only.		
Lens missing	C	Require repair or replacement. See note below.
NOTE: If lens is available as a separate part, require replacement of lens only.		
Noisy	2	Suggest repair or replacement.
Terminal broken	A	Require repair or replacement.
Terminal burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Terminal burned, not affecting performance	2	Suggest repair or replacement.
Terminal corroded, affecting performance	A	Require repair or replacement.
Terminal corroded, not affecting performance	2	Suggest repair or replacement.
Terminal loose, affecting performance	B	Require repair or replacement.
Terminal loose, not affecting performance	1	Suggest repair or replacement.

PULLEYS

Pulleys

Condition	Code	Procedure
Alignment incorrect	B	Require repair or replacement.
Application incorrect	B	Require replacement.
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Bent	A	Require replacement.
Cracked	A	Require replacement.
Loose	A	Require repair or replacement.
Missing	C	Require replacement.
Pulley damaged, affecting belt life	A	Require replacement.

RECEIVERS, AMPLIFIERS, EQUALIZERS, AND SUB-WOOFER VOLUME CONTROLS

Receivers, Amplifiers, Equalizers, and Sub-Woofers Volume Controls

Condition	Code	Procedure
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Connector broken	A	Require repair or replacement.
Connector melted	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Connector missing	C	Require replacement.
Malfunctioning	A	Require repair or replacement. See note below.
NOTE: Malfunctioning includes inoperative, intermittent operation, or failure to perform all functions.		
Missing	C	Require replacement.
Sound quality poor	A	Require repair or replacement. See note below.
NOTE: Make sure poor sound quality is not caused by ignition/charging system or other forms of electrical interference.		
Terminal broken	A	Require repair or replacement.
Terminal burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		

Terminal burned, not affecting performance	2	Suggest repair or replacement.
Terminal corroded, affecting performance	A	Require repair or replacement.
Terminal corroded, not affecting performance	2	Suggest repair or replacement.
Terminal loose, affecting performance	B	Require repair or replacement.
Terminal loose, not affecting performance	1	Suggest repair or replacement.
Wire lead burned	A	Require repair or replacement.
Wire lead conductors exposed	B	Require repair or replacement.
Wire lead open	A	Require repair or replacement.
Wire lead shorted	A	Require repair or replacement.

RELAY BOXES

Relay Boxes

Condition	Code	Procedure
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Broken, affecting performance	A	Require replacement.
Broken, not affecting performance		No service suggested or required.
Burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of relay box.		
Burned, not affecting performance	2	Suggest repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of relay box.		
Connector broken	A	Require repair or replacement.
Connector (Weatherpack type) leaking	A	Require repair or replacement.
Connector melted	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Connector missing	C	Require replacement.
Cover missing	C	Require replacement of cover.
Cracked, affecting performance	A	Require repair or replacement.
Cracked, not affecting performance	1	Suggest repair or replacement.
Melted, affecting performance	A	Require replacement. See note below.

NOTE: Determine cause and correct prior to replacement of part.		
Melted, not affecting performance	2	Suggest replacement. See note below.
NOTE: Determine cause and correct prior to replacement of part.		
Terminal broken	A	Require repair or replacement.
Terminal burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Terminal burned, not affecting performance	2	Suggest repair or replacement.
Terminal corroded, affecting performance	A	Require repair or replacement.
Terminal corroded, not affecting performance	2	Suggest repair or replacement.
Terminal loose, affecting performance	B	Require repair or replacement.
Terminal loose, not affecting performance	1	Suggest repair or replacement.

RELAYS

Relays

Condition	Code	Procedure
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Housing broken	A	Require replacement.
Housing cracked	2	Suggest replacement.
Inoperative	A	Require replacement. See note below.
NOTE: Inoperative includes intermittent operation or out of OEM specification.		
Missing	C	Require replacement.
Terminal broken	A	Require repair or replacement.
Terminal burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Terminal burned, not affecting performance	2	Suggest repair or replacement.
Terminal corroded, affecting performance	A	Require repair or replacement.
Terminal corroded, not affecting performance	2	Suggest repair or replacement.

Terminal loose, affecting performance	B	Require repair or replacement.
Terminal loose, not affecting performance	1	Suggest repair or replacement.

SEALED BEAMS

See Bulbs, Sealed Beams, and LEDs.

SEAT HEATERS

See Heating Elements (Defrosters, Defoggers, Electric Heaters, and Seats).

SECURITY ALARM SENSORS

Security Alarm Sensors

Condition	Code	Procedure
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware threads damaged	A	Require repair or replacement of hardware.
Attaching hardware threads stripped (threads missing)	A	Require repair or replacement of hardware.
Connector broken	A	Require repair or replacement.
Connector melted	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Connector missing	C	Require replacement.
Inoperative	B	Require repair or replacement. Further inspection required. See note below.
NOTE: Inoperative includes intermittent operation or out of OEM specification.		
Missing	C	Require replacement.
Resistance out of specification	B	Require repair or replacement.
Terminal broken	A	Require repair or replacement.
Terminal burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Terminal burned, not affecting performance	2	Suggest repair or replacement.
Terminal corroded, affecting performance	A	Require repair or replacement.
Terminal corroded, not affecting performance	2	Suggest repair or replacement.
Terminal loose, affecting	B	Require repair or replacement.

performance		
Terminal loose, not affecting performance	1	Suggest repair or replacement.
Threads damaged	A	Require repair or replacement.
Threads stripped (threads missing)	A	Require replacement.
Wire lead conductors exposed	B	Require repair or replacement.
Wire lead corroded	A	Require repair or replacement.
Wire lead open	A	Require repair or replacement.
Wire lead shorted	A	Require repair or replacement.

SIRENS

See Horns and Sirens.

SOLENOIDS

See Actuator Motors (Solenoids) (Electric).

NOTE: For starter solenoids that are integral to the starter assembly, see Starters.

NOTE: For starter relays, see Relays.

SPEAKERS AND MICROPHONES

Speakers and Microphones

Condition	Code	Procedure
Application incorrect	A	Require replacement.
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Connector broken	A	Require repair or replacement.
Connector (Weatherpack type) leaking	A	Require repair or replacement.
Connector melted	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Connector missing	C	Require replacement.
Inoperative		
NOTE: Inoperative includes intermittent operation or out of OEM specification.		
Membrane torn	A	Require replacement.

Missing	C	Require replacement.
Polarity reversed	A	Require repair.
Sound quality poor	A	Require repair or replacement. Further inspection required. See note below.
NOTE: Make sure poor sound quality is not caused by ignition/charging system or other forms of electrical interference.		
Terminal broken	A	Require repair or replacement.
Terminal burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Terminal burned, not affecting performance	2	Suggest repair or replacement.
Terminal corroded, affecting performance	A	Require repair or replacement.
Terminal corroded, not affecting performance	2	Suggest repair or replacement.
Terminal loose, affecting performance	B	Require repair or replacement.
Terminal loose, not affecting performance	1	Suggest repair or replacement.

SPEEDOMETER AND TACHOMETER LINKAGES AND CABLES

Speedometer and Tachometer Linkages and Cables

Condition	Code	Procedure
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Bent	A	Require repair or replacement.
Binding	A	Require repair or replacement.
Bracket bent, affecting performance	A	Require repair or replacement.
Bracket bent, not affecting performance		No service suggested or required.
Bracket broken, affecting performance	A	Require replacement.
Bracket broken, not affecting performance		No service suggested or required.
Bracket corroded, affecting performance	A	Require repair or replacement.
Bracket corroded, not affecting performance	2	Suggest repair or replacement.

Bracket cracked, affecting performance	A	Require repair or replacement.
Bracket cracked, not affecting performance	1	Suggest repair or replacement.
Bracket loose, affecting performance	A	Require repair or replacement.
Bracket loose, not affecting performance	1	Suggest repair or replacement.
Bracket missing	C	Require replacement.
Broken	A	Require replacement.
Cracked	A	Require repair or replacement.
Disconnected	A	Require repair or replacement.
Kinked	A	Require repair or replacement.
Melted	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Missing	C	Require replacement.
Noisy	2	Suggest repair or replacement.
Routed incorrectly	2	Suggest repair.
Seized	A	Require repair or replacement.

SPEEDOMETER CABLES

See Speedometer and Tachometer Linkages and Cables.

SPEEDOMETERS

See Gauges.

STARTERS

NOTE: To prevent misdiagnosis, care should be taken to eliminate the possibilities of mechanical problems or high resistance in power and/or ground circuits.

Starters

Condition	Code	Procedure
Amperage draw does not meet OEM specifications	B	Require repair or replacement.
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware. See note below.

NOTE: Inspect block or bell housing mounting surface.

Bracket bent, affecting performance	A	Require repair or replacement.
Bracket bent, not affecting performance		No service suggested or required.
Bracket broken, affecting performance	A	Require replacement.
Bracket broken, not affecting performance		No service suggested or required.
Bracket corroded, affecting performance	A	Require repair or replacement.
Bracket corroded, not affecting performance	2	Suggest repair or replacement.
Bracket cracked, affecting performance	A	Require repair or replacement.
Bracket cracked, not affecting performance	1	Suggest repair or replacement.
Bracket holes elongated, affecting performance	A	Require repair or replacement.
Bracket holes elongated, not affecting performances)		No service suggested or required.
Bracket loose, affecting performance	A	Require repair or replacement.
Bracket loose, not affecting performance	1	Suggest repair or replacement.
Bracket missing	C	Require replacement.
Drive gear damaged, affecting performance	A	Require repair or replacement. See note below.

NOTE: Further inspection required to determine cause. Require inspection of ring gear.

Drive gear damaged, not affecting performance	2	Suggest repair or replacement. See note below.
---	---	--

NOTE: Further inspection required to determine cause. Require inspection of ring gear and service as needed.

Fails to disengage	A	Require repair or replacement.
Housing broken, affecting performance	2	Require repair or replacement.
Housing broken, not affecting performance		No service suggested or required.
Housing cracked, affecting performance	A	Require repair or replacement.
Housing cracked, not affecting performance	2	Suggest repair or replacement.
Inoperative	A	Require repair or replacement. See note below.

NOTE: Inoperative includes intermittent operation.

Noisy	2	Suggest repair or replacement.
-------	---	--------------------------------

Shimmed incorrectly	B	Require repair.
Starter shaft bushing missing	C	Require replacement. See note below.
NOTE: Bushing may be in bell housing.		
Starter shaft bushing worn, affecting performance	A	Require replacement.
Starter shaft bushing worn, not affecting performance	1	Suggest replacement.
Terminal broken	A	Require repair or replacement.
Terminal burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Terminal burned, not affecting performance	2	Suggest repair or replacement.
Terminal corroded, affecting performance	A	Require repair or replacement.
Terminal corroded, not affecting performance	2	Suggest repair or replacement.
Terminal loose, affecting performance	B	Require repair or replacement.
Terminal loose, not affecting performance	1	Suggest repair or replacement.

SUB-WOOFER VOLUME CONTROLS

See Receivers, Amplifiers, Equalizers, and Sub-Woofer Volume Controls.

SWITCHES

Switches

Condition	Code	Procedure
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Binding, affecting performance	A	Require repair or replacement.
Binding, not affecting performance	2	Suggest repair or replacement.
Broken	A	Require repair or replacement.
Burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Burned, not affecting performance	2	Suggest repair or replacement. See note

		below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Cracked, affecting performance	A	Require repair or replacement.
Cracked, not affecting performance	1	Suggest repair or replacement.
Leaking	A	Require repair or replacement.
Malfunctioning	A	Require repair or replacement. See note below.
NOTE: Includes inoperative, intermittent operation, or failure to perform all functions.		
Melted, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Melted, not affecting performance	2	Suggest repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Missing	C	Require replacement.
Out of adjustment	B	Require repair or replacement.
Terminal broken	A	Require repair or replacement.
Terminal burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Terminal burned, not affecting performance	2	Suggest repair or replacement.
Terminal corroded, affecting performance	A	Require repair or replacement.
Terminal corroded, not affecting performance	2	Suggest repair or replacement.
Terminal loose, affecting performance	B	Require repair or replacement.
Terminal loose, not affecting performance	1	Suggest repair or replacement.
Won't return	A	Require repair or replacement.
Worn	1	Suggest replacement.

TACHOMETER CABLES

See Speedometer and Tachometer Linkages and Cables.

TACHOMETERS

See Gauges.

TAPE PLAYERS AND CD PLAYERS

Tape Players and CD Players

Condition	Code	Procedure
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Connector broken	A	Require repair or replacement.
Connector melted	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Connector missing	C	Require replacement.
Malfunctioning	A	Require repair or replacement. See note below.
NOTE: Malfunctioning includes inoperative, intermittent operation, or failure to perform all functions.		
Missing	C	Require replacement.
Skips	A	Require repair or replacement.
Sound quality poor	A	Require repair or replacement. See note below.
NOTE: Make sure poor sound quality is not caused by ignition/charging system or other forms of electrical interference.		
Speed incorrect	A	Require repair or replacement.
Terminal broken	A	Require repair or replacement.
Terminal burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Terminal burned, not affecting performance	2	Suggest repair or replacement.
Terminal corroded, affecting performance	A	Require repair or replacement.
Terminal corroded, not affecting performance	2	Suggest repair or replacement.
Terminal loose, affecting performance	B	Require repair or replacement.
Terminal loose, not affecting performance	1	Suggest repair or replacement.
Wire lead burned	A	Require repair or replacement.
Wire lead conductors exposed	B	Require repair or replacement.
Wire lead open	A	Require repair or replacement.
Wire lead shorted	A	Require repair or replacement.

TENSIONERS

Tensioners

Condition	Code	Procedure
Alignment incorrect	B	Require repair or replacement.
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Bearings worn	1	Suggest replacement.
Belt tension incorrect	B	Require adjustment or repair.
Cracked	2	Suggest replacement.
Missing	C	Require replacement.
Noisy	2	Suggest replacement.
Pulley damaged, affecting belt life	A	Require replacement.
Seized	A	Require repair or replacement.

TIMERS

Timers

Condition	Code	Procedure
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Broken	A	Require repair or replacement.
Burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Burned, not affecting performance	2	Suggest repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Cracked, affecting performance	A	Require repair or replacement.
Cracked, not affecting performance	1	Suggest repair or replacement.
Inoperative	A	Require repair or replacement. See note below.
NOTE: Inoperative includes intermittent operation or out of OEM specification.		
Melted, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		

Melted, not affecting performance	2	Suggest repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Missing	C	Require replacement.
Terminal broken	A	Require repair or replacement.
Terminal burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Terminal burned, not affecting performance	2	Suggest repair or replacement.
Terminal corroded, affecting performance	A	Require repair or replacement.
Terminal corroded, not affecting performance	2	Suggest repair or replacement.
Terminal loose, affecting performance	B	Require repair or replacement.
Terminal loose, not affecting performance	1	Suggest repair or replacement.

TIRE PRESSURE SENSORS

Tire Pressure Sensors

Condition	Code	Procedure
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Inoperative	A	Require repair or replacement. See note below.
NOTE: Inoperative includes intermittent operation or out of OEM specification.		
Loose	A	Require repair or replacement.
Missing	C	Require replacement.

TRANSCEIVERS

Transceivers

Condition	Code	Procedure
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.

Connector broken	A	Require repair or replacement.
Connector melted	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Connector missing	C	Require replacement.
Malfunctioning	A	Require repair or replacement. See note below.
NOTE: Malfunctioning includes inoperative, intermittent operation, or failure to perform all functions.		
Missing	C	Require replacement.
Sound quality poor	A	Require repair or replacement. See note below.
NOTE: Make sure poor sound quality is not caused by ignition/charging system or other forms of electrical interference.		
Terminal broken	A	Require repair or replacement.
Terminal burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Terminal burned, not affecting performance	2	Suggest repair or replacement.
Terminal corroded, affecting performance	A	Require repair or replacement.
Terminal corroded, not affecting performance	2	Suggest repair or replacement.
Terminal loose, affecting performance	B	Require repair or replacement.
Terminal loose, not affecting performance	1	Suggest repair or replacement.
Wire lead burned	A	Require repair or replacement.
Wire lead conductors exposed	B	Require repair or replacement.
Wire lead open	A	Require repair or replacement.
Wire lead shorted	A	Require repair or replacement.

TRANSDUCERS

Transducers

Condition	Code	Procedure
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.

Connector broken	A	Require repair or replacement.
Connector (Weatherpack type) leaking	A	Require repair or replacement.
Connector melted	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Connector missing	C	Require replacement.
Drive mechanism damaged, affecting performance	A	Require repair or replacement. See note below.
NOTE: Further inspection required to determine cause.		
Drive mechanism damaged, not affecting performance	2	Suggest repair or replacement. See note below.
NOTE: Further inspection required to determine cause.		
Inoperative	A	Require repair or replacement. See note below.
NOTE: Inoperative includes intermittent operation or out of specification.		
Leaking (vacuum/fluid/air)	A	Require replacement.
Linkage bent, affecting performance	A	Require repair or replacement of linkage.
Linkage bent, not affecting performance		No service suggested or required.
Linkage binding, affecting performance	A	Require repair or replacement of linkage.
Linkage binding, not affecting performance	2	Suggest repair or replacement of linkage.
Linkage broken	A	Require repair or replacement of linkage.
Linkage loose, affecting performance	A	Require repair or replacement of linkage.
Linkage loose, not affecting performance	1	Suggest repair or replacement of linkage.
Linkage missing	C	Require replacement.
Linkage noisy	2	Suggest repair or replacement.
Out of adjustment	B	Further inspection required. See note below.
NOTE: Follow OEM recommended adjustment procedures. Repair or replace if out of specification.		
Terminal broken	A	Require repair or replacement.
Terminal burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Terminal burned, not affecting performance	2	Suggest repair or replacement.
Terminal corroded, affecting performance	A	Require repair or replacement.

Terminal corroded, not affecting performance	2	Suggest repair or replacement.
Terminal loose, affecting performance	B	Require repair or replacement.
Terminal loose, not affecting performance	1	Suggest repair or replacement.

VACUUM ACCUMULATORS (RESERVOIRS)

Vacuum Accumulators (Reservoirs)

Condition	Code	Procedure
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Leaking	A	Require repair or replacement.

VACUUM RESERVOIRS

See Vacuum Accumulators (Reservoirs).

VOLTAGE REGULATORS

Voltage Regulators

Condition	Code	Procedure
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Connector broken	A	Require repair or replacement.
Connector (Weatherpack type) leaking	A	Require repair or replacement.
Connector melted	A	Require repair or replacement. See note below.

NOTE: Determine cause and correct prior to repair or replacement of part.

Connector missing	C	Require replacement.
Inoperative	A	Require replacement. See note below.

NOTE: Inoperative includes intermittent operation or out of OEM specification.

Terminal broken	A	Require repair or replacement.
Terminal burned, affecting performance	A	Require repair or replacement. See note below.

NOTE: Determine cause and correct prior to repair or replacement of part.

Terminal burned, not affecting performance	2	Suggest repair or replacement.
--	---	--------------------------------

Terminal corroded, affecting performance	A	Require repair or replacement.
Terminal corroded, not affecting performance	2	Suggest repair or replacement.
Terminal loose, affecting performance	B	Require repair or replacement.
Terminal loose, not affecting performance	1	Suggest repair or replacement.

WASHER FLUID LEVEL SENDERS

Washer Fluid Level Senders

Condition	Code	Procedure
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Inoperative	A	Require repair or replacement. See note below.
NOTE: Inoperative includes intermittent operation or out of OEM specification.		
Leaking	A	Require repair or replacement.
Terminal broken	A	Require repair or replacement.
Terminal burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Terminal burned, not affecting performance	2	Suggest repair or replacement.
Terminal corroded, affecting performance	A	Require repair or replacement.
Terminal corroded, not affecting performance	2	Suggest repair or replacement.
Terminal loose, affecting performance	B	Require repair or replacement.
Terminal loose, not affecting performance	1	Suggest repair or replacement.
Wire lead conductors exposed	B	Require repair or replacement.
Wire lead corroded	A	Require repair or replacement.
Wire lead open	A	Require repair or replacement.
Wire lead shorted	A	Require repair or replacement.

WASHER PUMPS

Washer Pumps

Condition	Code	Procedure
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Connector broken	A	Require repair or replacement.
Connector melted	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Connector missing	C	Require replacement.
Inoperative	A	Require repair or replacement. See note below.
NOTE: Inoperative includes intermittent operation.		
Leaking externally	A	Require repair or replacement.
Leaking internally	A	Require repair or replacement.
Noisy	2	Suggest repair or replacement.
Resistance out of specification	B	Require repair or replacement.
Terminal broken	A	Require repair or replacement.
Terminal burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Terminal burned, not affecting performance	2	Suggest repair or replacement.
Terminal corroded, affecting performance	A	Require repair or replacement.
Terminal corroded, not affecting performance	2	Suggest repair or replacement.
Terminal loose, affecting performance	B	Require repair or replacement.
Terminal loose, not affecting performance	1	Suggest repair or replacement.
Threads damaged	A	Require repair or replacement.
Threads stripped (threads missing)	A	Require replacement.
Wire lead conductors exposed	B	Require repair or replacement.
Wire lead corroded	A	Require repair or replacement.
Wire lead open	A	Require repair or replacement.
Wire lead shorted	A	Require repair or replacement.

WIPER ARMS AND BLADES

NOTE: Windshield coatings or waxes can cause blades to not function as intended. Clean surface before making final judgment about blade replacement.

Wiper Arms and Blades

Condition	Code	Procedure
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Attaching socket stripped	A	Require replacement.
Bent	A	Require repair or replacement.
Loose	2	Suggest repair or replacement.
Missing	C	Require replacement.
Noisy	2	Suggest repair or replacement.
Size incorrect	2	Suggest replacement.
Tension insufficient	B	Require repair or replacement.
Torn	A	Require replacement.
Worn, affecting performance	A	Require replacement.
Worn, not affecting performance	1	Suggest replacement.

WIPER BLADES

See Wiper Arms and Blades.

WIPER HOSES AND NOZZLES

Wiper Hoses and Nozzles

Condition	Code	Procedure
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Blocked	A	Require repair or replacement.
Leaking	A	Require repair or replacement.
Missing	C	Require replacement.
Oil-soaked (spongy)	1	Suggest replacement.
Spray pattern incorrect	2	Suggest repair or replacement.
Surface cracks (dry-rotted)	1	Suggest replacement.

WIPER LINKAGES

Wiper Linkages

Condition	Code	Procedure

Condition	Code	Procedure
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Attaching stud stripped	A	Require replacement.
Bent	A	Require repair or replacement.
Inoperative	A	Require replacement. See note below.
NOTE: Inoperative includes intermittent operation.		
Loose	2	Suggest repair or replacement.
Missing	C	Require replacement.
Noisy	2	Suggest repair or replacement.
Tension insufficient	B	Require repair or replacement.
Worn, affecting performance	A	Require replacement.
Worn, not affecting performance	1	Suggest replacement.

WIPER NOZZLES

See Wiper Hoses and Nozzles.

WIPER PUMP RESERVOIRS

Wiper Pump Reservoirs

Condition	Code	Procedure
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.
Cap missing	C	Require replacement.
Leaking	A	Require repair or replacement.
Missing	C	Require replacement.

WIRING HARNESSSES AND CONNECTORS

Wiring Harnesses and Connectors

Condition	Code	Procedure
Application incorrect	B	Require repair or replacement.
Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	C	Require replacement of hardware.
Attaching hardware not functioning	A	Require repair or replacement of hardware.

Connector broken	A	Require repair or replacement.
Connector (Weatherpack type) leaking	A	Require repair or replacement.
Connector melted	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Connector missing	C	Require replacement.
Insulation damaged, conductors exposed	A	Require repair or replacement.
Insulation damaged, conductors not exposed	1	Suggest repair or replacement.
Open	A	Require repair or replacement.
Protective shield (conduit) melted	2	Suggest repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Protective shield (conduit) missing	C	Require repair or replacement.
Resistance (voltage drop) out of specification	A	Require repair or replacement.
Routed incorrectly	B	Require repair.
Secured incorrectly	B	Require repair.
Shorted	A	Require repair or replacement.
Terminal broken	A	Require repair or replacement.
Terminal burned, affecting performance	A	Require repair or replacement. See note below.
NOTE: Determine cause and correct prior to repair or replacement of part.		
Terminal burned, not affecting performance	2	Suggest repair or replacement.
Terminal corroded, affecting performance	A	Require repair or replacement.
Terminal corroded, not affecting performance	2	Suggest repair or replacement.
Terminal loose, affecting performance	B	Require repair or replacement.
Terminal loose, not affecting performance	1	Suggest repair or replacement.
Voltage drop out of specification	A	Require repair or replacement.