

*** ELECTRICAL SYSTEM UNIFORM INSPECTION GUIDELINES ***

1998 Toyota Supra

GENERAL INFORMATION

Electrical System Motorist Assurance Program
Standards For Automotive Repair

All Makes and Models

INTRODUCTION TO MOTORIST ASSURANCE PROGRAM (MAP)

CONTENTS

OVERVIEW OF MOTORIST ASSURANCE PROGRAM
OVERVIEW OF SERVICE REQUIREMENTS & SUGGESTIONS
ACTUATOR MOTORS (SOLENOIDS) (ELECTRIC)
ACTUATOR MOTORS (VACUUM)
AIR BAGS
ALTERNATORS AND GENERATORS
AMPLIFIERS
ANTENNAS
BATTERIES
BATTERY CABLES
BATTERY CABLES
BATTERY HOLD DOWN HARDWARE
BATTERY TRAYS AND HOLD DOWN HARDWARE
BATTERY WIRES
BELTS
BULB SOCKETS
BULBS, SEALED BEAMS AND LEDS
CD PLAYERS
CIGARETTE LIGHTER ASSEMBLIES
CIRCUIT BREAKERS
CLUTCH SWITCHES
CONNECTORS
CONTROL MODULES
CRUISE CONTROL BRAKE SWITCHES
CRUISE CONTROL CABLES
CRUISE CONTROL CLUTCH SWITCHES
CRUISE CONTROL LINKAGES AND CABLES
CRUISE CONTROL RESERVOIRS
CRUISE CONTROL TUBES
CRUISE CONTROL VACUUM DUMP RELEASE VALVES
CRUISE CONTROL VACUUM HOSES, TUBES AND RESERVOIRS
CRUISE CONTROL VEHICLE SPEED SENSORS
DEFOGGERS
DEFROSTERS
DELAYS
DIMMERS
ELECTRIC HEATERS
EQUALIZERS
FUSE BLOCKS
FUSE BOXES AND BLOCKS
FUSES, FUSIBLE LINKS AND CIRCUIT BREAKERS
FUSIBLE LINKS
GAUGES
GENERATORS
GROUND CABLES AND STRAPS
GROUND STRAPS
HEADLIGHT ADJUSTERS
HEATING ELEMENTS (DEFROSTERS, DEFOGGERS, ELECTRIC HEATERS AND SEATS)
HORNS AND SIRENS

IGNITION SWITCHES
INDICATOR LIGHTS
KEYLESS ENTRY KEYPADS AND TRANSMITTERS
KEYLESS ENTRY TRANSMITTERS
LEDS
LENSES
MICROPHONES
MIRRORS (ELECTROCHROMATIC AND HEATED)
MOTORS
NEUTRAL SAFETY SWITCHES
ODOMETERS
ODOMETERS, SPEEDOMETERS AND TACHOMETERS (CABLE-DRIVEN)
PULLEYS
RECEIVERS, AMPLIFIERS, EQUALIZERS AND SUB-WOOFER VOLUME CONTROLS
RELAY BOXES
RELAYS
SEALED BEAMS
SEAT HEATERS
SECURITY ALARM SENSORS
SIRENS
SOLENOIDS
SPEAKERS AND MICROPHONES
SPEEDOMETER AND TACHOMETER LINKAGES AND CABLES
SPEEDOMETER CABLES
SPEEDOMETERS
STARTERS
SUB-WOOFER VOLUME CONTROLS
SWITCHES
TACHOMETER CABLES
TACHOMETERS
TAPE PLAYERS AND CD PLAYERS
TENSIONERS
TIMERS
TIRE PRESSURE SENSORS
TRANSCEIVERS
TRANSDUCERS
VACUUM ACCUMULATORS (RESERVOIRS)
VACUUM RESERVOIRS
VOLTAGE REGULATORS
WASHER FLUID LEVEL SENDERS
WASHER PUMPS
WIPER ARMS AND BLADES
WIPER BLADES
WIPER HOSES AND NOZZLES
WIPER LINKAGES
WIPER NOZZLES
WIPER PUMP RESERVOIRS
WIRING HARNESSES AND CONNECTORS

INTRODUCTION TO MOTORIST ASSURANCE PROGRAM (MAP)

OVERVIEW OF MOTORIST ASSURANCE PROGRAM

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, and Electrical Systems. Further, revisions to all of these inspection communication standards are continually re-published.

In addition to these, standards for Drive Train and Transmissions have recently been promulgated. 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 MAP/BBB-CARE 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:

1444 I Street, NW Suite 700
Washington, DC 20005
Phone (202) 712-9042 Fax (202) 216-9646
January 1999

MAP UNIFORM INSPECTION GENERAL GUIDELINES

OVERVIEW OF SERVICE REQUIREMENTS & 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.

ELECTRICAL SYSTEMS

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 MOTOR (SOLENOIDS) (ELECTRIC) INSPECTION

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	.....	(1) Require repair or replacement.
Connector missing	C	.....	Require replacement.
Inoperative	A	.....	(2) Require 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.
Terminal broken	A	..	Require repair or replacement.
Terminal burned, affecting performance	A	.....	(1) Require repair or replacement.
Terminal burned, not affecting performance ..	1	.....	(1) Suggest repair or replacement.
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.

(1) - Determine cause and correct prior to repair or replacement of part.
(2) - Inoperative includes intermittent operation or out of OEM specification.

ACTUATOR MOTORS (VACUUM)

ACTUATOR MOTOR (VACUUM) INSPECTION

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	.....	(1) Require repair or replacement.	
Connector missing	C	.....	Require replacement.	
Inoperative	A	.....	(2) Require replacement.	
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.	
(1) - Determine cause and correct prior to repair or replacement of part.				
(2) - Inoperative includes intermittent operation or out of OEM specification.				

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.

ALTERNATOR AND GENERATOR INSPECTION

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	.....	(1) Require repair or replacement.
Connector missing	C	.....	Require replacement.
Diode inoperative	A	.....	(2) Require repair or replacement.
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	.....	(2) Require repair or replacement.
Noisy	2	..	Suggest repair or replacement.
Pulley incorrect	B	.....	Require replacement.
Terminal broken	A	..	Require repair or replacement.
Terminal burned, affecting performance	A	.....	(1) Require repair or replacement.
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.

(1) - Determine cause and correct prior to repair or replacement of part.

(2) - Inoperative includes intermittent operation or out of OEM specification.

AMPLIFIERS

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

ANTENNAS

ANTENNA INSPECTION

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	..... (1) Require repair or replacement.
Connector missing	C	..... Require replacement.
Inoperative	A	..... (2) Require replacement.
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	..... (1) Require repair or replacement.
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.

(1) - Determine cause and correct prior to repair or
replacement of part.

(2) - Inoperative includes intermittent operation or out of
specification.

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.

BATTERY INSPECTION

Condition	Code	Procedure
Battery frozen .....	..	(1) Further inspection required.
Case leaking	A	Require replacement.
Casing swollen	A	(2) Further inspection required.
Circuit open internally .	A	Require replacement.
Electrolyte contamination	A	(2) Further inspection required.
Electrolyte discoloration	A	(2) Further inspection required.
Fails to accept and hold charge	A	(3) Require replacement.
Fluid level low	B	(4) Further inspection required.
Out of performance specification for battery	B	(5) Require replacement.
Out of specification for application	B	(5) Require replacement.
Post (top or side) burned, affecting performance ..	A	(6) Require repair or replacement.
Post (top or side) burned, not affecting performance	2	(6) Suggest repair or replacement.
Post (top or side) corroded, affecting performance	A	Require repair.
Post (top or side) corroded, not affecting performance	2	Suggest repair.

Post (top or side) loose	A	Require replacement.
Post (top or side) melted, affecting performance ..	A	(6) Require repair or replacement.
Post (top or side) melted, not affecting performance	2	(6) Suggest repair or replacement.
Specific gravity low	B	(7) Further inspection required.
State of charge low	A	(7) Further inspection required.
Top dirty	2	Suggest cleaning battery.
Top wet	A ...	(8) Require cleaning battery. Further inspection required.
Vent cap loose	A ...	Require repair or replacement of vent cap.
Vent cap missing	C	Require replacement of vent cap.

- (1) - DO NOT attempt to charge a frozen battery. Allow battery to warm thoroughly and then performance-test. If battery fails performance test, require replacement.
- (2) - No service suggested or required unless the battery fails performance test, in which case, require replacement.
- (3) - 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.
- (4) - 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.
- (5) - The battery may meet battery manufacturer's specifications but test below the minimum specification defined by the vehicle's OEM for that vehicle.
- (6) - Determine cause and correct prior to repair or replacement of part.
- (7) - Recharge and test to manufacturer's specifications. If battery fails performance test, require replacement.
- (8) - Check fluid level and adjust to manufacturer's specification. Suggest checking charging system for proper operation.

BATTERY CABLES

See BATTERY CABLES, WIRES AND CONNECTORS.

BATTERY CABLES, WIRES AND CONNECTORS

BATTERY CABLE, WIRE AND CONNECTOR INSPECTION

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	.....	(1) Require repair or replacement.
Connector missing	C	.....	Require replacement.
Insulation damaged, conductors exposed	A	.....	(2) Require repair or replacement.
Insulation damaged, conductors not exposed ..	1	.....	Suggest replacement.
Open	A	..	Require repair or replacement.
Protective shield (conduit) melted	2	.....	(1) Suggest repair or replacement.
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	.....	(1) Require repair or replacement.
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.
(1) - Determine cause and correct prior to repair or replacement of part.			
(2) - Exposed conductor at replacement (aftermarket) terminal end does not require repair or replacement.			

BATTERY HOLD DOWN HARDWARE

See BATTERY TRAYS AND HOLD DOWN HARDWARE.

BATTERY TRAYS AND HOLD DOWN HARDWARE

BATTERY TRAY AND HOLD DOWN HARDWARE INSPECTION

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

BELT INSPECTION

Condition	Code	Procedure
Alignment incorrect	B	..... (1) Further inspection required.
Cracked	1	..... Suggest replacement.
Frayed	1	..... Suggest replacement.
Missing	C	..... Require replacement.
Noisy	2	..... (2) Further inspection required.
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.

(1) - Determine cause of incorrect alignment and require repair.

(2) - Determine cause of noise and suggest repair.

BULB SOCKETS

BULB SOCKET INSPECTION

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	.....	(1) Require repair or replacement.	
Burned, not affecting performance	2	.....	(1) Suggest repair or replacement.	
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	.....	(1) Require repair or replacement.	
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	.....	(2) Require replacement.	
Shorted	A	..	Require repair or replacement.	
Terminal broken	A	..	Require repair or replacement.	
Terminal burned, affecting performance	A	.....	(2) Require repair or replacement.	
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.	
(1) - Determine cause and correct prior to repair or replacement of socket.				
(2) - Determine cause and correct prior to replacement of part.				

BULBS, SEALED BEAMS AND LEDS

NOTE: Does not include soldered-in components.

BULB, SEALED BEAM AND LED INSPECTION

Condition	Code	Procedure
Adjustment out of specification	B	.. Require repair or replacement.
Application incorrect ...	B	..... (1) 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.
Base burned, affecting performance	A	.....	(2) Require repair or replacement.
Base burned, not affecting performance	2	.....	(2) Suggest repair or replacement.
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	.....	(2) Require 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.
Burned out	A	.....	Require replacement.
Connector broken	A	..	Require repair or replacement.
Connector (Weatherpack type) leaking	A	..	Require repair or replacement.
Connector melted	A	.....	(2) Require repair or replacement.
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	.....	(2) Require replacement.
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	.....	(2) Require repair or replacement.
Terminal burned, not			

affecting performance ..	2	.....	(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.
(1) - Application incorrect includes wrong bulb coating or color.			
(2) - Determine cause and correct prior to repair or replacement of part.			

CD PLAYERS

See TAPE PLAYERS AND CD PLAYERS.

CIGARETTE LIGHTER ASSEMBLIES

CIGARETTE LIGHTER ASSEMBLY INSPECTION

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	..... (1) Require repair or replacement.
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	..... (2) Require repair or replacement.
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.
(1) - Inoperative includes intermittent operation or out of OEM specification.		
(2) - Determine cause and correct prior to repair or replacement of part.		

CIRCUIT BREAKERS

See FUSES, FUSIBLE LINKS AND CIRCUIT BREAKERS.

CLUTCH SWITCHES

See SWITCHES.

CONNECTORS

See WIRING HARNESSES AND CONNECTORS.

CONTROL MODULES

CONTROL MODULE INSPECTION

Condition	Code	Procedure
Application incorrect ...	B	..... Require replacement.
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.
Code set (if applicable)	A	..... (1) Further inspection required.
Connector broken	A	.. Require repair or replacement.
Connector melted	A	..... (2) Require repair or replacement.
Connector missing	A	..... Require repair.
Contaminated	A	..... (3) Require repair or replacement.
Inoperative	B	..... (4) Require repair or replacement. Further inspection required.
Leaking	A	.. Require repair or replacement.
Missing	C	..... Require replacement.
Terminal broken	A	.. Require repair or replacement.
Terminal burned, affecting performance	A	..... (2) Require repair or replacement.
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.

- (1) - Refer to manufacturer's diagnostic trouble code procedure and require repair or replacement of affected component(s).
- (2) - Determine cause and correct prior to repair or replacement of part.
- (3) - Determine source of contamination, such as engine coolant, fuel, metal particles, or water. Require repair or replacement.
- (4) - Inoperative includes intermittent operation or out of OEM specification. Some components may be serviceable; check for accepted cleaning procedure.

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 LINKAGE AND CABLE INSPECTION

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	.....	(1) Require repair or replacement.
Missing	C	.....	Require replacement.
Noisy	2	..	Suggest repair or replacement.
Out of adjustment	B	.....	(2) Require repair or replacement.
Routed incorrectly	2	.....	Suggest repair.
Seized	A	..	Require repair or replacement.

(1) - Determine cause and correct prior to repair or replacement of part.

(2) - Follow OEM recommended adjustment procedures. Require repair or replacement if out of specification.

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 VALVE INSPECTION

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	..... (1) Require replacement.
Leaking	2	..... Suggest replacement.
Out of adjustment	B	..... (2) Further inspection required.

(1) - Inoperative includes intermittent operation or out of OEM specification.

(2) - Follow OEM recommended adjustment procedures. Require repair or replacement if out of specification.

CRUISE CONTROL VACUUM HOSES, TUBES AND RESERVOIRS

CRUISE CONTROL VACUUM HOSE, TUBE AND RESERVOIR INSPECTION

Condition	Code	Procedure
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 SENSOR INSPECTION

Condition	Code	Procedure
Air gap incorrect	B	(1) Require adjustment to vehicle manufacturer's specifications.
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	(2) Require replacement.
Lead routing incorrect ..	B ..	Require rerouting according to vehicle manufacturer's specifications.
Loose	B	(3) Require adjustment to vehicle manufacturer's specifications.
Missing	C	Require replacement.
Output signal incorrect ..	B	(2) Require repair or replacement.
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.

(1) - If a sensor is not adjustable, further inspection is required to identify and correct cause.

(2) - Component failure may be caused by water intrusion into the wiring harness. Always check insulation for damage

- and wiring for excessive resistance.
- (3) - Some integral bearing assemblies with sensors may require replacement.

DEFOGGERS

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

DEFROSTERS

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

DELAYS

DELAY INSPECTION

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	(1) Require repair or replacement.
Burned, not affecting performance	2	(1) Suggest repair or replacement.
Cracked, affecting performance	A ..	Require repair or replacement.
Cracked, not affecting performance	1 ..	Suggest repair or replacement.
Inoperative	A	(2) Require repair or replacement.
Melted, affecting performance	A	(1) Require repair or replacement.
Melted, not affecting performance	2	(1) Suggest repair or replacement.
Missing	C	Require replacement.
Terminal broken	A ..	Require repair or replacement.
Terminal burned, affecting performance	A	(1) Require repair or replacement.
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.

- (1) - Determine cause and correct prior to repair or replacement of part.
(2) - Inoperative includes intermittent operation or out of OEM specification.

DIMMERS

DIMMER INSPECTION

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	(1) Require repair or replacement.
Burned, not affecting performance	2	(1) Suggest repair or replacement.
Cracked, affecting performance	A ..	Require repair or replacement.
Cracked, not affecting performance	1 ..	Suggest repair or replacement.
Inoperative	A	(2) Require repair or replacement.
Melted, affecting performance	A	(1) Require repair or replacement.
Melted, not affecting performance	2	(1) Suggest repair or replacement.
Missing	C	Require replacement.
Terminal broken	A ..	Require repair or replacement.
Terminal burned, affecting performance	A	(1) Require repair or replacement.
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.

- (1) - Determine cause and correct prior to repair or replacement of part.
- (2) - Inoperative includes intermittent operation or out of OEM specification.

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 BOX AND BLOCK INSPECTION

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	(1) Require repair or replacement.
Burned, not affecting performance	2	(1) Suggest repair or replacement.
Connector broken	A ..	Require repair or replacement.
Connector (Weatherpack type) leaking	A ..	Require repair or replacement.
Connector melted	A	(1) Require repair or replacement.
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	(1) Require replacement.

Melted, not affecting performance	2	.....	(1) Suggest replacement.
Terminal broken	A	..	Require repair or replacement.
Terminal burned, affecting performance	A	.....	(1) Require repair or replacement.
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.

(1) - Determine cause and correct prior to repair or replacement of part.

FUSES, FUSIBLE LINKS AND CIRCUIT BREAKERS

FUSE, FUSIBLE LINK AND CIRCUIT BREAKER INSPECTION

Condition	Code	Procedure
Application incorrect ...	B	..... Require replacement.
Blown	A	..... (1) Require replacement.
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	..... (2) Require replacement.
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	..... (1) Require repair or replacement.
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.

(1) - Determine cause and correct prior to repair or replacement of part.

(2) - Inoperative includes intermittent operation.

FUSIBLE LINKS

See FUSES, FUSIBLE LINKS AND CIRCUIT BREAKERS.

GAUGES

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

GAUGE INSPECTION

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	(1) Require repair or replacement.
Connector missing	C	Require replacement.
Leaking	A	Require replacement.
Lens broken	A	(2) Require repair or replacement.
Lens cloudy	2	(2) Suggest repair or replacement.
Lens missing	C	(2) Require repair or replacement.
Malfunctioning	A	(3) Require repair or replacement.
Mechanical head noisy ...	2 ..	Suggest repair or replacement.
Terminal broken	A ..	Require repair or replacement.
Terminal burned, affecting performance	A	(1) Require repair or replacement.
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.

- (1) - Determine cause and correct prior to repair or replacement of part.
 - (2) - If lens is available as a separate part, require replacement of lens only.
 - (3) - Includes inoperative, intermittent operation, failure to perform all functions, out of OEM specification, or out of range.
-

GENERATORS

See ALTERNATORS AND GENERATORS.

GROUND CABLES AND STRAPS

GROUND CABLE AND STRAP INSPECTION

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 ADJUSTER INSPECTION

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 ELEMENT (DEFROSTER, DEFOGGER, ELECTRIC HEATER AND SEAT) INSPECTION

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	..... (1) Require repair or replacement.
Connector missing	C	..... Require replacement.
Inoperative	A	..... (2) Require repair or replacement.
Terminal broken	A	.. Require repair or replacement.
Terminal burned, affecting performance	A	..... (1) Require repair or replacement.
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.

(1) - Determine cause and correct prior to repair or replacement of part.

(2) - Inoperative includes intermittent operation or out of OEM specification.

HORNS AND SIRENS

HORN AND SIREN INSPECTION

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	.....	(1) Require repair or replacement.
Connector missing	C	.....	Require replacement.
Inoperative	A	.....	(2) Require repair or replacement.
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	.....	(1) Require repair or replacement.
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.

(1) - Determine cause and correct prior to repair or
replacement of part.

(2) - Inoperative includes intermittent operation.

IGNITION SWITCHES

See SWITCHES.

INDICATOR LIGHTS

INDICATOR LIGHT INSPECTION

Condition	Code	Procedure
Does not come on during bulb check (1) Further inspection required.
Fails to function properly during test mode (1) Further inspection required.
On constantly (1) Further inspection required.

On intermittently (1) Further inspection
required.

(1) - See service manual for further information.

KEYLESS ENTRY KEYPADS AND TRANSMITTERS

KEYLESS ENTRY KEYPAD AND TRANSMITTER INSPECTION

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	(1) Require repair or replacement.
Connector missing	C	Require replacement.
Malfunctioning	A	(2) Require repair or replacement.
Terminal broken	A ..	Require repair or replacement.
Terminal burned, affecting performance	A	(1) Require repair or replacement.
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.

(1) - Determine cause and correct prior to repair or
replacement of part.

(2) - Malfunctioning includes inoperative, intermittent
operation, or failure to perform all functions.

KEYLESS ENTRY TRANSMITTERS

See KEYLESS ENTRY KEYPADS AND TRANSMITTERS.

LEDS

See BULBS, SEALED BEAMS AND LEDS.

LENSES

LENSE INSPECTION

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)

MIRROR (ELECTROCHROMATIC AND HEATED) INSPECTION

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	(1) Require repair or replacement.
Connector missing	C	Require replacement.
Cracked	A	Require replacement.
Inoperative	A	(2) Require replacement.
Missing	C	Require replacement.
Terminal broken	A ..	Require repair or replacement.
Terminal burned, affecting performance	A	(1) Require repair or

					replacement.
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.	

- (1) - Determine cause and correct prior to repair or replacement of part.
(2) - Inoperative includes intermittent operation.

MOTORS

MOTOR INSPECTION

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	.....	(1) Require repair or replacement.
Connector missing	.....	C	.....	Require replacement.
Drive mechanism damaged, affecting performance	..	A	.....	(2) Require repair or replacement.
Drive mechanism damaged, not affecting performance	.....	2	.....	(2) Suggest repair or replacement.
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	.....	(3) Require repair or 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.
Missing	C	.....	Require replacement.
Noisy	2	..	Suggest repair or replacement.
Out of adjustment	B	.....	(4) Further inspection required.
Resistance out of specification	A	..	Require repair or replacement.
Terminal broken	A	..	Require repair or replacement.
Terminal burned, affecting performance	A	.....	(1) Require repair or replacement.
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.

- (1) - Determine cause and correct prior to repair or replacement of part.
 (2) - Further inspection required to determine cause.
 (3) - Inoperative includes intermittent operation.

- (4) - Follow OEM recommended adjustment procedures. Repair or replace if out of specification.

NEUTRAL SAFETY SWITCHES

See SWITCHES.

ODOMETERS

See GAUGES.

ODOMETERS, SPEEDOMETERS AND TACHOMETERS (CABLE-DRIVEN)

ODOMETER, SPEEDOMETER AND TACHOMETER (CABLE-DRIVEN) INSPECTION

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	(1) Require repair or replacement.
Connector missing	C	Require replacement.
Drive cable broken	A	Require replacement.
Drive cable noisy	2 ..	Suggest repair or replacement.
Inoperative	A	(2) Further inspection required.
Leaking	A	Require replacement.
Lens broken	A	(3) Require repair or replacement.
Lens cloudy	2	(3) Suggest repair or replacement.
Lens missing	C	(3) Require repair or replacement.
Noisy	2 ..	Suggest repair or replacement.
Terminal broken	A ..	Require repair or replacement.
Terminal burned, affecting performance	A	(1) Require repair or replacement.
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.

- (1) - Determine cause and correct prior to repair or replacement of part.

- (2) - If lens is available as a separate part, require

replacement of lens only.

- (3) - Includes inoperative, intermittent operation, failure to perform all functions, out of OEM specification, or out of range.

PULLEYS

PULLEY INSPECTION

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

RECEIVER, AMPLIFIER, EQUALIZER AND SUB-WOOFER VOLUME CONTROL INSPECTION

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	(1) Require repair or replacement.
Connector missing	C	Require replacement.
Malfunctioning	A	(2) Require repair or replacement.
Missing	C	Require replacement.
Sound quality poor	A	(3) Require repair or replacement.
Terminal broken	A ..	Require repair or replacement.
Terminal burned, affecting performance	A	(1) Require repair or replacement.
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.

- (1) - Determine cause and correct prior to repair or replacement of part.
- (2) - Malfunctioning includes inoperative, intermittent operation, or failure to perform all functions.
- (3) - Make sure poor sound quality is not caused by ignition/charging system or other forms of electrical interference.

RELAY BOXES

RELAY BOX INSPECTION

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	... (1) Require repair or replacement.
Burned, not affecting performance	2	... (1) Suggest repair or replacement.
Connector broken	A	.. Require repair or replacement.
Connector (Weatherpack type) leaking	A	.. Require repair or replacement.
Connector melted	A	... (1) Require repair or replacement.
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	... (1) Require replacement.
Melted, not affecting		

performance	2	.....	(1) Suggest replacement.
Terminal broken	A	..	Require repair or replacement.
Terminal burned, affecting performance	A	.....	(1) Require repair or replacement.
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.

(1) - Determine cause and correct prior to repair or replacement of part.

RELAYS

RELAY INSPECTION

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	..... (1) Require replacement.
Missing	C	..... Require replacement.
Terminal broken	A	.. Require repair or replacement.
Terminal burned, affecting performance	A	..... (2) Require repair or replacement.
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.

(1) - Inoperative includes intermittent operation or out of OEM specification.

(2) - Determine cause and correct prior to repair or replacement of part.

SEALED BEAMS

See BULBS, SEALED BEAMS AND LEDS.

SEAT HEATERS

See

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

SECURITY ALARM SENSORS

SECURITY ALARM SENSOR INSPECTION

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	(1) Require repair or replacement.
Connector missing	C	Require replacement.
Inoperative	B	(2) Require repair or replacement. Further inspection required.
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	(1) Require repair or replacement.
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.

(1) - Determine cause and correct prior to repair or replacement of part.

(2) - Inoperative includes intermittent operation or out of OEM specification.

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

SPEAKER AND MICROPHONE INSPECTION

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	(1) Require repair or replacement.
Connector missing	C	Require replacement.
Inoperative	B	(2) Require repair or replacement. Further inspection required.
Membrane torn	A	Require replacement.
Missing	C	Require replacement.
Polarity reversed	A	Require repair.
Sound quality poor	A	(3) Require repair or replacement. Further inspection required.
Terminal broken	A ..	Require repair or replacement.
Terminal burned, affecting performance	A	(1) Require repair or replacement.
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.

(1) - Determine cause and correct prior to repair or replacement of part.

(2) - Inoperative includes intermittent operation or out of OEM specification.

(3) - Make sure poor sound quality is not caused by ignition/charging system or other forms of electrical

interference.

SPEEDOMETER AND TACHOMETER LINKAGES AND CABLES

SPEEDOMETER AND TACHOMETER LINKAGE AND CABLE INSPECTION

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	(1) Require repair or replacement.
Missing	C	Require replacement.
Noisy	2 ..	Suggest repair or replacement.
Routed incorrectly	2	Suggest repair.
Seized	A ..	Require repair or replacement.

(1) - Determine cause and correct prior to repair or
replacement of part.

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.

STARTER INSPECTION

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	(1) Require repair or replacement of hardware.
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 performance) .....	.. ..	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	(2) Require repair or replacement.
Drive gear damaged, not affecting performance ..	2	(2) Suggest repair or replacement.
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	(3) Require repair or replacement.
Noisy	2 ..	Suggest repair or replacement.
Shimmed incorrectly	B	Require repair.
Starter shaft bushing missing	C	(4) Require replacement.
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	(5) Require repair or replacement.
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.

- (1) - Inspect block or bell housing mounting surface.
(2) - Further inspection required to determine cause. Require inspection of ring gear.
(3) - Inoperative includes intermittent operation.
(4) - Bushing may be in bell housing.
(5) - Determine cause and correct prior to repair or replacement of part.

SUB-WOOFER VOLUME CONTROLS

See

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

SWITCHES

SWITCH INSPECTION

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	.....	(1) Require repair or replacement.
Burned, not affecting performance	2	.....	(1) Suggest repair or replacement.
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	.....	(2) Require repair or replacement.
Melted, affecting performance	A	.....	(1) Require repair or replacement.
Melted, not affecting performance	2	.....	(1) Suggest repair or replacement.
Missing	C	.....	Require replacement.
Out of adjustment	B	..	Require repair or replacement.
Terminal broken	A	..	Require repair or replacement.
Terminal burned, affecting performance	A	.....	(1) Require repair or replacement.
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.

- (1) - Determine cause and correct prior to repair or replacement of part.
- (2) - Includes inoperative, intermittent operation, or failure to perform all functions.

TACHOMETER CABLES

See SPEEDOMETER AND TACHOMETER LINKAGES AND CABLES.

TACHOMETERS

See GAUGES.

TAPE PLAYERS AND CD PLAYERS

TAPE PLAYER AND CD PLAYER INSPECTION

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	.....	(1) Require repair or replacement.
Connector missing	C	.....	Require replacement.
Malfunctioning	A	.....	(2) Require repair or replacement.
Missing	C	.....	Require replacement.
Skips	A	..	Require repair or replacement.
Sound quality poor	A	.....	(3) Require repair or replacement.
Speed incorrect	A	..	Require repair or replacement.
Terminal broken	A	..	Require repair or replacement.
Terminal burned, affecting performance	A	.....	(1) Require repair or replacement.
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.

- (1) - Determine cause and correct prior to repair or replacement of part.
- (2) - Malfunctioning includes inoperative, intermittent operation, or failure to perform all functions.
- (3) - Make sure poor sound quality is not caused by ignition/charging system or other forms of electrical interference.

TENSIONERS

TENSIONER INSPECTION

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

TIMER INSPECTION

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	..... (1) Require repair or replacement.
Burned, not affecting performance	2	..... (1) Suggest repair or replacement.
Cracked, affecting performance	A	.. Require repair or replacement.
Cracked, not affecting performance	1	.. Suggest repair or replacement.
Inoperative	A	..... (2) Require repair or replacement.
Melted, affecting performance	A	..... (1) Require repair or replacement.
Melted, not affecting performance	2	..... (1) Suggest repair or replacement.
Missing	C	..... Require replacement.
Terminal broken	A	.. Require repair or replacement.
Terminal burned, affecting performance	A	..... (1) Require repair or replacement.
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.

(1) - Determine cause and correct prior to repair or replacement of part.

(2) - Inoperative includes intermittent operation or out of OEM specification.

TIRE PRESSURE SENSORS

TIRE PRESSURE SENSOR INSPECTION

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	(1) Require repair or replacement.
Loose	A ..	Require repair or replacement.
Missing	C	Require replacement.

(1) - Inoperative includes intermittent operation or out of OEM specification.

TRANSCIEVERS

TRANSCIEVER INSPECTION

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	(1) Require repair or replacement.
Connector missing	C	Require replacement.
Malfunctioning	A	(2) Require repair or replacement.
Missing	C	Require replacement.
Sound quality poor	A	(3) Require repair or replacement.
Terminal broken	A ..	Require repair or replacement.
Terminal burned, affecting performance	A	(1) Require repair or replacement.
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.

- (1) - Determine cause and correct prior to repair or replacement of part.
- (2) - Malfunctioning includes inoperative, intermittent operation, or failure to perform all functions.
- (3) - Make sure poor sound quality is not caused by ignition/charging system or other forms of electrical interference.

TRANSDUCERS

TRANSDUCER INSPECTION

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	..... (1) Require repair or replacement.
Connector missing	C	..... Require replacement.
Drive mechanism damaged, affecting performance ..	A	..... (2) Require repair or replacement.
Drive mechanism damaged, not affecting performance	2	..... (2) Suggest repair or replacement.
Inoperative	A	..... (3) Require repair or replacement.
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	.....	(4) Further inspection required.		
Terminal broken	A	..	Require repair or replacement.		
Terminal burned, affecting performance	A	.....	(1) Require repair or replacement.		
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.		

- (1) - Determine cause and correct prior to repair or replacement of part.
- (2) - Further inspection required to determine cause.
- (3) - Inoperative includes intermittent operation or out of specification.
- (4) - Follow OEM recommended adjustment procedures. Repair or replace if out of specification.

VACUUM ACCUMULATORS (RESERVOIRS)

VACUUM ACCUMULATOR (RESERVOIR) INSPECTION

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 REGULATOR INSPECTION

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	.....	(1) Require repair or replacement.
Connector missing	C	.....	Require replacement.
Inoperative	A	.....	(2) Require replacement.
Terminal broken	A	..	Require repair or replacement.
Terminal burned, affecting performance	A	.....	(1) Require repair or replacement.
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.

(1) - Determine cause and correct prior to repair or replacement of part.

(2) - NOTE: Inoperative includes intermittent operation or out of OEM specification.

WASHER FLUID LEVEL SENDERS

WASHER FLUID LEVEL SENDER INSPECTION

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	..... (1) Require repair or replacement.
Leaking	A	.. Require repair or replacement.
Terminal broken	A	.. Require repair or replacement.
Terminal burned, affecting performance	A	..... (2) Require repair or replacement.
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.

- (1) - Inoperative includes intermittent operation or out of OEM specification.
(2) - Determine cause and correct prior to repair or replacement of part.

WASHER PUMPS

WASHER PUMP INSPECTION

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	..... (1) Require repair or replacement.
Connector missing	C	..... Require replacement.
Inoperative	A	..... (2) Require repair or replacement.
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	..... (1) Require repair or replacement.
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.

- (1) - Determine cause and correct prior to repair or replacement of part.
- (2) - Inoperative includes intermittent operation.

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 ARM AND BLADE INSPECTION

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 HOSE AND NOZZLE INSPECTION

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 LINKAGE INSPECTION

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	..... (1) Require replacement.
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.

(1) - Inoperative includes intermittent operation.

WIPER NOZZLES

See WIPER HOSES AND NOZZLES.

WIPER PUMP RESERVOIRS

WIPER PUMP RESERVOIR INSPECTION

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 HARNESSES AND CONNECTORS

WIRING HARNESS AND CONNECTOR INSPECTION

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	(1) Require repair or replacement.
Connector missing	C	Require replacement.
Insulation damaged, conductors exposed	A ..	Require repair or replacement.
Insulation damaged, conductors not exposed ..	1	Suggest replacement.
Open	A ..	Require repair or replacement.
Protective shield (conduit) melted	2	(1) Suggest repair or replacement.
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	(1) Require repair or replacement.
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.
(1) - Determine cause and correct prior to repair or replacement of part.		