* ELECTRICAL SYSTEM UNIFORM INSPECTION GUIDELINES *

1995 Volvo 850

GENERAL INFORMATION Electrical System Motorist Assurance Program Standards For Automotive Repair

All Makes and Models

INTRODUCTION TO MOTORIST ASSURANCE PROGRAM (MAP)

CONTENTS

HORNS AND SIRENS

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)

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

IGNITION SWITCHES

INTRODUCTION TO MOTORIST ASSURANCE PROGRAM (MAP)

OVERVIEW OF MOTORIST ASSURANCE PROGRAM

WIRING HARNESSES AND CONNECTORS

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 Connector (Weatherpack	. A	Require repair or replacement.
•	. A	Require repair or replacement.

Connector melted	A	(1) Require repair or replacement.
Connector missing Inoperative Linkage bent, affecting	C A	Require replacement. (2) Require replacement.
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	
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 Linkage noisy Missing Terminal broken	C 2 C A	Require replacement. Suggest repair or replacement. Require replacement. Require replacement.
Terminal burned, affecting performance	А	
Terminal burned, not affecting performance	1	
Terminal corroded, affecting performance Terminal corroded, not	А	Require repair or replacement.
affecting performance Terminal loose, affecting	1	Suggest repair or replacement.
performance Terminal loose, not	В	Require repair or replacement.
affecting performance Missing	1 C 2	 Suggest repair or replacement. Require replacement. Suggest repair or replacement.
Out of adjustment	В	Require repair or replacement.
(1) - Determine cause and or replacement of part.(2) - Inoperative includes specification.		ermittent operation or out of OEM

ACTUATOR MOTORS (VACUUM)

ACTUATOR MOTOR (VACUUM) INSPECTION

Condition		Code			Proced	ure
		А	 Requir	e repair	or replacement of hardware	
Attaching missing	hardware	С	 	Require	replacement	of

hardware.

Attaching hardware not functioning	А	Require repair or replacement of hardware.
Connector broken Connector (Weatherpack	A	
type) leaking	A A	Require repair or replacement (1) Require repair or replacement.
Connector missing Inoperative Leaking (vacuum) Linkage bent,	C A A	
affecting performance	А	Require repair or replacement of linkage.
Linkage bent, not affecting performance	2	Suggest repair or replacement of linkage.
Linkage binding, affecting performance	А	Require repair or replacement of linkage.
Linkage binding, not affecting performance	1	Suggest repair or replacement of linkage.
Linkage broken	A	
_	A	Require repair or replacement of linkage.
Linkage loose, not affecting performance	1	Suggest repair or replacement of linkage.
Linkage missing Linkage noisy Missing Noisy Out of adjustment	C 2 C 2 A	Require replacement. Suggest repair or replacement. Require replacement. Suggest repair or replacement. Require repair or replacement.
(1) - Determine cause and c replacement of part.(2) - Inoperative includes OEM specification.		ect prior to repair or ermittent operation or out of

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 Attaching hardware	В	Require replacement.
broken	A	Require repair or replacement of hardware.
Attaching hardware missing	С	Require replacement of hardware.
Attaching hardware non-functioning	А	Require repair or replacement of hardware.
Connector broken Connector (Weatherpack	A	Require repair or replacement.
type) leaking Connector melted	A A	<pre> Require repair or replacement (1) Require repair or</pre>
Connector missing Diode inoperative	C A	Require replacement(2) Require repair or replacement.
Housing broken, affecting performance	A	Require repair or replacement.
affecting performance	• •	No service suggested or required.
Housing cracked, affecting performance Housing cracked, not	А	Require repair or replacement.
affecting performance Inoperative	1 A	Suggest repair or replacement (2) Require repair or
Noisy Pulley incorrect Terminal broken	2 B A	replacement Suggest repair or replacement Require replacement Require repair or replacement.
Terminal burned, affecting performance	А	(1) Require repair or replacement.
Terminal burned, not	2	Suggest repair or replacement.
Terminal corroded,		
affecting performance Terminal corroded, not		Require repair or replacement.
affecting performance Terminal loose, affecting		Suggest repair or replacement.
performance Terminal loose, not		Require repair or replacement.
affecting performance Terminal resistance (voltage drop) out of	1	Suggest repair or replacement.
specification		Require repair or replacement.
Threads damaged Threads stripped (threads	A	
missing) Voltage drop out of	A	Require replacement.
	A	Require repair or replacement.
(1) - Determine cause and c	orr	ect prior to repair or

- (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
	. A	Require repair or replacement of hardware.
Attaching hardware missing	. C	Require replacement of hardware.
Attaching hardware not functioning	. A	
Broken Bent Binding Connector broken Connector melted	. 2 . 2 . A	Require replacement. Suggest repair or replacement. Suggest repair or replacement. Require repair or replacement. (1) Require repair or replacement.
Connector missing Inoperative Insulation damaged,		Require replacement (2) Require replacement.
conductors exposed Insulation damaged,	. A	Require repair or replacement.
conductors not exposed Missing	. C . A . 2 . 2	Suggest replacement. Require replacement. Require or replacement. Suggest repair or replacement. Suggest repair or replacement. Require repair or replacement.
performance		(1) Require repair or replacement.
Terminal burned, not affecting performance . Terminal corroded,	. 2	
affecting performance . Terminal corroded, not		Require repair or replacement.
affecting performance . Terminal loose, affecting performance		 Suggest repair or replacement. Require repair or replacement.
Terminal loose, not		Suggest repair or replacement.
(1) - Determine cause and replacement of part(2) - Inoperative include specification.		ect prior to repair or ermittent operation or out of

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 ${\tt CCA.}$

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 P	rocedure
Battery frozen	• •	nspection required.
Case leaking Casing swollen	A Require repl A (2) Further in	acement.
Circuit open internally Electrolyte		
contamination	, , , , , , , , , , , , , , , , , , , ,	nspection required.
Electrolyte discoloration	A (2) Further ir	nspection required.
Fails to accept and hold charge	A (3) Require repl B (4) Further in	
Out of performance specification for	_	equired.
battery	B (5) Require repl	.acement.
application Post (top or side) burned	B (5) Require repl	acement.
affecting performance .	A (6) Require r	repair or acement.
Post (top or side) burned not affecting	-1	
performance	2 (6) Suggest repl	repair or acement.
Post (top or side) corroded, affecting		
performance Post (top or side) corroded, not affecting	A Require	e repair.
performance	2 Suggest	repair.

Post (top or side) loose Post (top or side) melted,	A	Require replacement.
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	В	(7) Further inspection required.
State of charge low	А	(7) Further inspection required.
Top dirty	2	Suggest cleaning battery.
		(8) Require cleaning battery. Further inspection required.
Vent cap loose	Α	Require repair or replacement of vent cap.
Vent cap missing	С	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	С	ode		Procedure
Application incorrect Attaching hardware		В		Require repair or replacement.
		A	• • •	Require repair or replacement of hardware.
Attaching hardware				

missing	С	Require replacement of hardware.
Attaching hardware not functioning	А	Require repair or replacement of hardware.
Connector broken Connector melted	A A	Require repair or replacement (1) Require repair or replacement.
Connector missing Insulation damaged,	С	Require replacement.
conductors exposed	A	(2) Require repair or replacement.
Insulation damaged,		
conductors not exposed .	1	
Open	Α	Require repair or replacement.
(conduit) melted	2	(1) Suggest repair or
		replacement.
Protective shield		
(conduit) missing Resistance (voltage drop)	2	Suggest repair or replacement.
out of specification	Α	Require repair or replacement.
Routed incorrectly	В	Require repair.
Secured incorrectly	В	Require repair.
Shorted	A	Require repair or replacement.
Terminal broken	Α	Require repair or replacement.
Terminal burned, affecting		1 1
performance	Α	(1) Require repair or
		replacement.
Terminal burned, not		
affecting performance	2	Suggest repair or replacement.
Terminal corroded,		
affecting performance	А	Require repair or replacement.
Terminal corroded, not		
affecting performance	2	Suggest repair or replacement.
Terminal loose, affecting	Б	Description of the second of t
performance	В	Require repair or replacement.
Terminal loose, not	1	Suggest repair or replacement.
affecting performance Voltage drop out of	1	Suggest repair or replacement.
specification	A	Require repair or replacement.
(1)		
(1) - Determine cause and c	orr	ect prior to repair or
replacement of part.	ron	lacement (aftermarket) terminal
end does not require		
	- GP	all of repracement.

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.
performance Bent, not affecting	. A	Require repair	or replacement.

performance	• •	No service suggested or required.
Broken, affecting performance Broken, not affecting	А	Require repair or replacement.
performance	• •	No service suggested or required.
Corroded, affecting		
performance	А	Require repair or replacement.
performance	2	Suggest repair or replacement.
•	A	Require repair or replacement.
performance	1 C A	Suggest repair or replacement Require replacement Require repair or replacement.
Threads stripped (threads missing)		Require replacement. Require repair.

BATTERY WIRES

See BATTERY CABLES, WIRES AND CONNECTORS.

BELTS

BELT INSPECTION

Condition	Code	Procedure
Alignment incorrect	. В	(1) Further inspection required.
Cracked	. 1 . C	Suggest replacement. Suggest replacement. Require replacement.
Tension out of		Require replacement Require adjustment or
Worn beyond adjustment		replacement.
range		Require replacement.
		Require replacement.
(1) - Determine cause of(2) - Determine cause of		rect alignment and require repair. 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	e repair o	r replacement
Bulb seized in socket Burned, affecting	A		Require	repair or	of hardware. replacement.
performance	A	• •		(1) Requ	ire repair or replacement.
Burned, not affecting performance	2			(1) Sugg	est repair or replacement.
Broken	Α		Require	repair or	replacement.
Connector broken	Α		Require	repair or	replacement.
Connector missing	С			. Require	replacement.
Connector (Weatherpack	-		ъ.		3
type) leaking	A				replacement.
Connector melted	A	• •		(I) Requ	<pre>ire repair or replacement.</pre>
Corroded, affecting					repracement.
performance	А		Require	repair or	replacement.
performance	2		Suggest	repair or	replacement.
Leaking	Α				replacement.
Melted	Α				replacement.
Shorted	Α				replacement.
Terminal broken	Α				replacement.
Terminal burned, affecting					
performance	A	• •		(2) Requ	ire repair or replacement.
Terminal burned, not					
affecting performance Terminal corroded,	2	• •	Suggest	repair or	replacement.
affecting performance	А		Require	repair or	replacement.
Terminal corroded, not affecting performance	2		Suggest	repair or	replacement.
Terminal loose, affecting	-	• •	baggebe	repair or	repracement.
performance	В		Require	repair or	replacement.
Terminal loose, not	1		C		
affecting performance	Τ	• •	Suggest	repair or	replacement.
(1) - Determine cause and c replacement of socket		ect	prior to	repair or	
(2) - Determine cause and c		ect	prior to	replaceme	nt of part.

BULBS, SEALED BEAMS AND LEDS

NOTE: Does not include soldered-in components.

BULB, SEALED BEAM AND LED INSPECTION

Condition	Code	Procedure
		Require repair or replacement (1) Require replacement.
2	. A	Require repair or replacement of hardware.
Attaching hardware missing	. C	Require replacement of hardware.
Attaching hardware not		

	A	Require repair or replacement of hardware	t :
Base burned, affecting performance	A	(2) Require repair of replacement	
Base burned, not affecting performance	2	(2) Suggest repair of	or
Base corroded, affecting	_	replacement	
performance		Require repair or replacement	
affecting performance Base leaking	2 A	Suggest repair or replacement Require repair or replacement	
performance	В	Require repair or replacement	
performance	1 A	Suggest repair or replacement (2) Require replacement	
Bracket bent, affecting			
performance Bracket bent, not	A	Require repair or replacement	
affecting performance Bracket broken, affecting	••	No service suggested o	
performance	А	Require replacement	•
affecting performance		No service suggested o	
Bracket corroded, affecting performance Bracket corroded, not	A	Require repair or replacement	
affecting performance	2	Suggest repair or replacement	
Bracket cracked, affecting performance	А	Require repair or replacement	
Bracket cracked, not affecting performance	1	Suggest repair or replacement	
Bracket loose, affecting performance	А	Require repair or replacement	
Bracket loose, not affecting performance	1	Suggest repair or replacement	
Bracket missing	С	Require replacement	•
Burned out	A A	Require replacement Require repair or replacement	
Connector (Weatherpack			
type) leaking Connector melted	A A	Require repair or replacement (2) Require repair of	
connector merced	А	(2) Require repair of replacement	
Connector missing Corroded, affecting	С	Require replacement	
performance	A	Require repair or replacement	•
performance	2	Suggest repair or replacement	
Cracked	Α	Require replacement	
Intermittent	A	Require replacement	
Lamp base melted	Α	(2) Require replacement	
Leaking	Α	Require repair or replacement	
Missing	С	Require replacement	
Seized in socket	Α	Require repair or replacement	
Terminal broken	А	Require repair or replacement	•
Terminal burned, affecting performance	А	(2) Require repair of	r
Torminal hurned not		replacement	

affecting performance	2	• • •		(2)	Sugg	est repair or replacement.
Terminal corroded,						-
affecting performance	Α		Require	repai	r or	replacement.
Terminal corroded, not						
affecting performance	2		Suggest	repai	r or	replacement.
Terminal loose, affecting						
performance	В		Require	repai	r or	replacement.
Terminal loose, not						
affecting performance						
Threads damaged	Α		Require	repai	r or	replacement.
Threads stripped (threads						
missing)	Α	• • •		. Req	uire	replacement.
		_				
(1) - Application incorrect color.	inc	clude	es wrong	bulb	coat.	ing or
(2) - Determine cause and co	orre	ect 1	orior to	repai	r or	
replacement of part.		-	-	-		

CD PLAYERS

of part.

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	
Loose Missing Sticking Terminal broken Terminal burned, affectir performance	. 2 . A . A	Require repair or replacement Suggest replacement Require repair or replacement Require repair or replacement.
Terminal burned, not affecting performance . Terminal corroded,	. 2	Suggest repair or replacement.
•	. A	Require repair or replacement.
	. 2	Suggest repair or replacement.
performance	,	Require repair or replacement.
·	. 1	Suggest repair or replacement.
specification.		ermittent operation or out of OEM
(2) - Determine cause and	d corre	ect prior to repair or replacement

CIRCUIT BREAKERS

See FUSES, FUSIBLE LINKS AND CIRCUIT BREAKERS.

CLUTCH SWITCHES

See SWITCHES.

CONNECTORS

See WIRING HARNESSES AND CONNECTORS.

CONTROL MODULES

CONTROL MODULE INSPECTION

Condition	Code	Procedure
Application incorrect	. В	Require replacement.
Attaching hardware missing	. С	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 Connector melted		Require repair or replacement (2) Require repair or replacement.
Connector missing Contaminated		Require repair(3) Require repair or replacement.
Inoperative	. В	
Leaking Missing Terminal broken Terminal burned, affectin	. C	Require repair or replacement. Require repair or replacement. Require repair or replacement.
performance	. A	(2) Require repair or replacement.
Terminal burned, not affecting performance . Terminal corroded,	. 2	Suggest repair or replacement.
affecting performance . Terminal corroded, not	. A	Require repair or replacement.
affecting performance . Terminal loose, affecting		Suggest repair or replacement.
performance		Require repair or replacement.
affecting performance . Threads damaged	. A	 Suggest repair or replacement. Require repair or replacement.
Threads stripped (threads missing)		Require replacement.

Wire lead	conductors						
exposed		 В		Require	repair	or	replacement.
Wire lead	corroded	 Α		Require	repair	or	replacement.
Wire lead	open	 Α		Require	repair	or	replacement.
Wire lead	shorted .	 А	• •	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 Require repair or replacement.
performance Bracket bent, not	. A	Require repair or replacement No service suggested or
Bracket broken, affecting		required.
Bracket broken, not		Require replacement No service suggested or
Bracket corroded,		required.
Bracket corroded, not		Require repair or replacement.
affecting performance .	. ∠	Suggest repair or replacement.

	А	Require repair or replacement.
Bracket cracked, not affecting performance Bracket loose, affecting	1	Suggest repair or replacement.
performance	A	Require repair or replacement.
affecting performance Bracket missing Broken Cracked Disconnected	1 C A A	Suggest repair or replacement Require replacement Require replacement Require replacement Require repair or replacement Require repair or replacement.
Kinked	A A	Require repair or replacement (1) Require repair or replacement.
Missing Noisy Out of adjustment	C 2 B	Require replacement Suggest repair or replacement (2) Require repair or replacement.
Routed incorrectly Seized	2 A	· · · · · · · · · · · · · · · · · · ·

- (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
	. А	Require repair or replacement of hardware.
	. C	Require replacement of hardware.
Attaching hardware not functioning	. A	Require repair or replacement of hardware.
Inoperative Leaking	. A	Require repair or replacement (1) Require replacement Suggest replacement (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 Melted Missing Oil-soaked (spongy) Restricted Surface cracks (dry-	. A . C . 1	Require Require Suggest	replacement. replacement. replacement.
rotted)	. 1	Suggest	replacement.

CRUISE CONTROL VEHICLE SPEED SENSORS

CRUISE CONTROL VEHICLE SPEED SENSOR INSPECTION

Condition	Code	Procedure
	. В	(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
Broken		
specifications	. В . В	 (2) Require replacement. Require rerouting according to vehicle manufacturer's specifications.
Loose	. В	(3) Require adjustment to vehicle manufacturer's specifications.
Missing		Require replacement(2) Require repair or replacement.
Surface contaminated	. 2	Suggest cleaning; identify and
Tip bent Tip broken Tip missing Wire lead burned Wire lead conductors exposed	. B . B . A	correct source
Wire lead corroded Wire lead open Wire lead shorted	. A	Require replacement. Require replacement. Require replacement.
(1) If a concer is not	a d 411 a 4	- abla funthan inapartion is

 ^{(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
Binding, affecting performance	. A	of hardware Require repair or replacement.
Binding, not affecting performance	. 2 . A	Suggest repair or replacement Require repair or replacement.
performance	. A	(1) Require repair or replacement.
Burned, not affecting performance	. 2	(1) Suggest repair or replacement.
Cracked, affecting performance Cracked, not affecting	. A	Require repair or replacement.
performance		Suggest repair or replacement (2) Require repair or replacement.
Melted, affecting performance	. A	
Melted, not affecting performance	. 2	(1) Suggest repair or replacement.
Missing Terminal broken Terminal burned, affectin	. A	Require replacement Require repair or replacement.
performance		(1) Require repair or replacement.
Terminal burned, not affecting performance . Terminal corroded,	. 2	Suggest repair or replacement.
	. A	Require repair or replacement.

affecting performance Terminal loose, affecting	2	• •	Suggest	repair	or	replacement.
performance	В	• •	Require	repair	or	replacement.
affecting performance	1	• •	Suggest	repair	or	replacement.
(1) - Determine cause and c replacement of part.	orre	ect p	prior to	repair	or	
(2) - Inoperative includes specification.	inte	ermit	ttent ope	eration	or	out of OEM

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 Binding, not affecting	
performance	
Burned, affecting performance	. A (1) Require repair or replacement.
Burned, not affecting performance	2 (1) Suggest repair or replacement.
Cracked, affecting performance Cracked, not affecting	. A Require repair or replacement.
performance	
Melted, affecting performance	-
Melted, not affecting performance	. 2 (1) Suggest repair or
Missing Terminal broken	. A Require repair or replacement.
Terminal burned, affectin performance	
Terminal burned, not affecting performance . Terminal corroded,	. 2 Suggest repair or replacement.
affecting performance . Terminal corroded, not	. A Require repair or replacement.
affecting performance . Terminal loose, affecting performance	

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 Broken, not affecting	. A	Require replacement.
•		No service suggested or required.
Burned, affecting performance	. A	
Burned, not affecting performance	. 2	
Connector broken Connector (Weatherpack	. A	Require repair or replacement.
type) leaking Connector melted		1 1
Connector missing Cover missing Cracked, affecting		Require replacement Require replacement of cover.
	. A	Require repair or replacement.
	. 1	Suggest repair or replacement.
•	. A	(1) Require replacement.

Melted, not affecting performance Terminal broken						
Terminal burned, affecting performance	A			(1) R	equ	ire repair or replacement.
Terminal burned, not affecting performance	2		Suggest	repair	or	replacement.
Terminal corroded, affecting performance			2 2	1		-
Terminal corroded, not			-	1		-
affecting performance Terminal loose, affecting	2	• •	Suggest	repair	or	replacement.
performance Terminal loose, not	В	• •	Require	repair	or	replacement.
affecting performance	1		Suggest	repair	or	replacement.
(1) - Determine cause and creplacement of part.	orre	ect	prior to	repair	or	

FUSES, FUSIBLE LINKS AND CIRCUIT BREAKERS

FUSE, FUSIBLE LINK AND CIRCUIT BREAKER INSPECTION

Condition	Code	Procedure
Application incorrect Blown		1 1
performance	. A	Require repair or replacement.
performance	. 2	Suggest repair or replacement.
performance	. A	Require repair or replacement.
performance		
Insulation damaged, conductors exposed	. A	Require repair or replacement.
Insulation damaged, conductors not exposed Missing	. C . B . B	Suggest replacement. Require replacement. Require repair. Require repair. Require repair.
Terminal burned, affectin performance		(1) Require repair or replacement.
Terminal burned, not affecting performance . Terminal corroded,	. 2	Suggest repair or replacement.
affecting performance . Terminal corroded, not	. A	Require repair or replacement.
•	. 2	Suggest repair or replacement.
performance Terminal loose, not		Require repair or replacement.
•	. 1	Suggest repair or replacement.
(1) - Determine cause and		ect prior to repair or

- replacement of part.

 (2) Inoperative includes intermittent operation.

FUSIBLE LINKS

or out of range.

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	. С	Require replacement of hardware.
Attaching hardware not functioning	. A	Require repair or replacement of hardware.
Connector broken Connector (Weatherpack		Require repair or replacement.
type) leaking Connector melted	. A	Require repair or replacement (1) Require repair or replacement.
Connector missing	. A	Require replacement. Require replacement.
Lens broken		(2) Require repair or replacement.
Lens cloudy		(2) Suggest repair or replacement.
Lens missing		(2) Require repair or replacement.
Malfunctioning		(3) Require repair or replacement.
Mechanical head noisy Terminal broken Terminal burned, affecting	. A	 Suggest repair or replacement. Require repair or replacement.
performance		(1) Require repair or replacement.
Terminal burned, not affecting performance. Terminal corroded,	. 2	Suggest repair or replacement.
	. A	Require repair or replacement.
	. 2	Suggest repair or replacement.
performance	. B	
		Suggest repair or replacement.
(1) - Determine cause and replacement of part		-
(2) - If lens is availabl replacement of lens	only	•
		termittent operation, failure , out of OEM specification,

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 Corroded, not affecting	. A	Require repair or replacement.
	. 2	Suggest repair or replacement.
exposing conductors Loose	. A	
Open		Require repair or replacement.Require repair or replacement.
<pre>(voltage drop) is out of specification Voltage drop out of</pre>	. В	Require repair or replacement.
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.
	. A	Require repair or replacement of hardware.
	. A . A . C	Require repair or replacement.

					adjusters.
Seized	Α	 Require	repair	or	replacement.
Threads damaged	Α	 Require	repair	or	replacement.
Threads stripped (threads					
missing)	Α	 	. Requi	ire	replacement.

HEATING ELEMENTS (DEFROSTERS, DEFOGGERS, ELECTRIC HEATERS AND $_{\tt SEATS})$

HEATING ELEMENT (DEFROSTER, DEFOGGER, ELECTRIC HEATER AND SEAT) INSPECTION $% \left(1\right) =\left(1\right) \left(1\right)$

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	
Connector broken Connector (Weatherpack	. A	
type) leaking Connector melted	. A	Require repair or replacement. (1) Require repair or replacement.
Connector missing Inoperative		
Terminal broken Terminal burned, affecting		Require repair or replacement.
performance		(1) Require repair or replacement.
Terminal burned, not affecting performance . Terminal corroded,	. 2	Suggest repair or replacement.
· · · · · · · · · · · · · · · · · · ·	. A	Require repair or replacement.
	. 2	Suggest repair or replacement.
performance		Require repair or replacement.
affecting performance . Wire lead burned Wire lead conductors	. 1	 Suggest repair or replacement. Require repair or replacement.
exposed	. A	1 1 1
(1) - Determine cause and replacement of part	corre	

HORNS AND SIRENS

HORN AND SIREN INSPECTION

Condition Code Procedure

Attaching hardware broken	A	Require repair or replacement of hardware.
Attaching hardware missing	С	Require replacement of hardware.
Attaching hardware not functioning	А	Require repair or replacement of hardware.
Connector broken Connector melted	A A	Require repair or replacement (1) Require repair or replacement.
Connector missing Inoperative	C A	Require replacement
Missing Out of adjustment Sound quality poor	C B A	Require replacement. Require adjustment. Require repair or replacement. Further inspection required.
Terminal broken Terminal burned, affecting performance	A A	Require repair or replacement.
Terminal burned, not affecting performance	2	replacement Suggest repair or replacement.
Terminal corroded, affecting performance		
Terminal corroded, not affecting performance Terminal loose, affecting	2	Suggest repair or replacement.
performance Terminal loose, not	В	Require repair or replacement.
affecting performance Wire lead burned Wire lead conductors	1 A	 Suggest repair or replacement. Require repair or replacement.
exposed	B A A	Require repair or replacement.Require repair or replacement.Require repair or replacement.
(1) - Determine cause and or replacement of part.(2) - Inoperative includes		-

IGNITION SWITCHES

See SWITCHES.

INDICATOR LIGHTS

INDICATOR LIGHT INSPECTION

Condition	Code			Procedure
Does not come on during bulb check Fails to function properl		 (1)	Further	inspection required.
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	
Connector broken Connector (Weatherpack	. A	
type) leaking Connector melted		Require repair or replacement (1) Require repair or replacement.
Connector missing Malfunctioning		
Terminal broken Terminal burned, affectin		Require repair or replacement.
performance	. A	(1) Require repair or replacement.
Terminal burned, not affecting performance . Terminal corroded,	. 2	Suggest repair or replacement.
affecting performance . Terminal corroded, not	. A	Require repair or replacement.
affecting performance . Terminal loose, affecting		Suggest repair or replacement.
performance	. В	Require repair or replacement.
affecting performance . Wire lead burned		22 1 1
Wire lead conductors		
exposed		<u> </u>
Wire lead open Wire lead shorted		 Require repair or replacement. Require repair or replacement.
(1) - Determine cause and replacement of part		ect prior to repair or
(2) - Malfunctioning incl	udes :	inoperative, intermittent 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
Application incorrect	. В . А	Require repair 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 Broken, not affecting	. A	Require replacement.
		No service suggested or required.
Cracked Discolored Leaking Melted, affecting	. A	Require replacement Require replacement.
,	. A	Require replacement.
performance		

MICROPHONES

See SPEAKERS AND MICROPHONES.

MIRRORS (ELECTROCHROMATIC AND HEATED)

MIRROR (ELECTROCHROMATIC AND HEATED) INSPECTION

Condition	Code	Procedure
Attaching hardware broken	. А	Require repair or replacement of hardware.
Attaching hardware missing	. С	Require replacement of hardware.
Attaching hardware not functioning	. А	Require repair or replacement of hardware.
Broken	. A	Require repair or replacement.Require repair or replacement.
Connector missing	. A . A . C . A	Require replacement (2) Require replacement.
performance	,	(1) Require repair or

						replacement.
Terminal burned, not affecting performance	2		Suggest	repair	or	replacement.
Terminal corroded, affecting performance	А		Require	repair	or	replacement.
Terminal corroded, not affecting performance	2		Silaaest	renair	or	renlacement
Terminal loose, affecting				_		_
performance Terminal loose, not	В	• •	Require	repair	or	replacement.
affecting performance				-		-
Wire lead burned Wire lead conductors	А	• •	Require	repair	or	replacement.
exposed			- .	-		replacement.
Wire lead open Wire lead shorted			_	_		replacement. replacement.
wife fead shoreda		• •	require	reparr	01	repracement.
(1) - Determine cause and of replacement of part.	orr	ect	prior to	repair	or	
(2) - Inoperative includes	int	ermi	ttent ope	eration	•	

MOTORS

MOTOR INSPECTION

Condition	Code	Procedure
Amperage draw out of specification	. A	Require repair or replacement.
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.Require repair or replacement.Require repair or replacement.
affecting performance . Bracket holes elongated, not affecting	. A	Require repair or replacement.
performance		No service suggested or required.
Bracket missing Connector broken Connector (Weatherpack		Require replacement Require repair or replacement.
type) leaking Connector melted		Require repair or replacement (1) Require repair or
Connector missing		replacement Require replacement.
Drive mechanism damaged,		(2) Require repair or
Drive mechanism damaged, not affecting		replacement.
	. 2	(2) Suggest repair or replacement.
Fails to disengage	. A	Require repair or replacement.

Housing broken, affecting performance Housing broken, not affecting performance	2	Suggest repair or replacement No service suggested or
Housing cracked, affecting	• •	required.
performance	A	Require repair or replacement.
affecting performance Inoperative	1 A	
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	_
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	_
Linkage missing Linkage noisy Missing Noisy Out of adjustment	C 2 C 2 B	Require replacement. Suggest repair or replacement. Require replacement. Suggest repair or replacement. (4) Further inspection required.
Resistance out of specification Terminal broken Terminal burned, affecting	A A	Require repair or replacement.
performance	A	(1) Require repair or replacement.
	2	Suggest repair or replacement.
Terminal corroded, affecting performance	A	Require repair or replacement.
Terminal corroded, not affecting performance Terminal loose, affecting	2	Suggest repair or replacement.
performance Terminal loose, not	В	Require repair or replacement.
affecting performance Wire lead burned Wire lead conductors	1 A	 Suggest repair or replacement. Require repair or replacement.
exposed	B A	Require repair or replacement.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	
Attaching hardware not functioning	. A	Require repair or replacement of hardware.
Connector broken Connector (Weatherpack	. A	Require repair or replacement.
type) leaking Connector melted		Require repair or replacement (1) Require repair or replacement.
Connector missing Drive cable broken Drive cable noisy Inoperative	. A	Require replacement. Require replacement. Suggest repair or replacement. (2) Further inspection required.
Leaking Lens broken		Require replacement
Lens cloudy	. 2	
Lens missing	. C	(3) Require repair or replacement.
Noisy	. A	Suggest repair or replacement Require repair or replacement.
performance		(1) Require repair or replacement.
Terminal burned, not affecting performance .	. 2	Suggest repair or replacement.
J 1	. A	Require repair or replacement.
Terminal corroded, not affecting performance. Terminal loose, affecting	. 2	Suggest repair or replacement.
performance Terminal loose, not		Require repair or replacement.
	. 1	Suggest repair or replacement.
(1) - Dotormino gaugo and	laorr	act prior to repair or

^{(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 Application incorrect Attaching hardware		Require repair or replacement Require replacement.
2	. 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		Require replacement.
belt life		Require replacement.

RECEIVERS, AMPLIFIERS, EQUALIZERS AND SUB-WOOFER VOLUME CONTROLS

Condition	Code	Procedure
Attaching hardware broken	. А	Require repair or replacement of hardware.
Attaching hardware missing	. С	Require replacement of hardware.
Attaching hardware not functioning	. А	Require repair or replacement of hardware.
		Require repair or replacement (1) Require repair or replacement.
Connector missing		Require replacement.
Missing Sound quality poor	. C . A	Require replacement
Terminal broken Terminal burned, affecting		Require repair or replacement.
		(1) Require repair or replacement.
Terminal burned, not affecting performance	. 2	Suggest repair or replacement.

Terminal corroded, affecting performance Terminal corroded, not	А		Require	repair	or	replacement.
affecting performance Terminal loose, affecting	2	• •	Suggest	repair	or	replacement.
performance	В	• •	Require	repair	or	replacement.
affecting performance	1		Suggest	repair	or	replacement.
Wire lead burned Wire lead conductors	A	• •	Require	repair	or	replacement.
exposed	В		Require	repair	or	replacement.
Wire lead open	Α		Require	repair	or	replacement.
Wire lead shorted			_	-		replacement.
(1) - Determine cause and c replacement of part.	orre	ect]	prior to	repair	or	
(2) - Malfunctioning includes inoperative, intermittent operation, or failure to perform all functions.						
(3) - Make sure poor sound quality is not caused by						
ignition/charging sys interference.	_				-	ctrical

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 Broken, not affecting	. A	Require replacement.
		No service suggested or required.
Burned, affecting performance	. A	(1) Require repair or replacement.
Burned, not affecting performance	. 2	
Connector broken Connector (Weatherpack	. A	Require repair or replacement.
type) leaking Connector melted	. A	Require repair or replacement. (1) Require repair or replacement.
Connector missing Cover missing Cracked, affecting		Require replacement. Require replacement of cover.
performance	. A	Require repair or replacement.
performance Melted, affecting	. 1	Suggest repair or replacement.
	. A	(1) Require replacement.

performance Terminal broken Terminal burned, affecting						replacement. replacement.
performance	A			(1) Re	equ	ire repair or replacement.
Terminal burned, not						
affecting performance	2		Suggest	repair	or	replacement.
Terminal corroded,						
affecting performance	Α		Require	repair	or	replacement.
Terminal corroded, not						
affecting performance	2		Suggest	repair	or	replacement.
Terminal loose, affecting				_		_
performance	В		Require	repair	or	replacement.
Terminal loose, not			-	-		-
affecting performance	1		Suggest	repair	or	replacement.
(1) - Determine cause and c replacement of part.	orre	ect	prior to	repair	or	

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 Housing cracked Inoperative Missing Terminal broken Terminal burned, affecting	. 2 . A . C . A	Require replacement. Suggest replacement. (1) Require replacement. Require replacement. Require replacement.
performance	_	(2) Require repair or replacement.
Terminal burned, not affecting performance . Terminal corroded,	. 2	Suggest repair or replacement.
affecting performance . Terminal corroded, not	. A	Require repair or replacement.
affecting performance .	. 2	Suggest repair or replacement.
Terminal loose, affecting performance		Require repair or replacement.
Terminal loose, not affecting performance .	. 1	Suggest repair or replacement.
(1) - Inoperative includes specification.	s inte	ermittent operation or out of OEM
(2) - Determine cause and replacement of part		ect prior to repair or

SEALED BEAMS

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 thread damaged		Require repair or replacement of hardware.
Attaching hardware thread stripped (threads		
missing)	A	Require repair or replacement of hardware.
Connector broken Connector melted		<pre> Require repair or replacement(1) Require repair or</pre>
Connector missing Inoperative		<u> </u>
Missing Resistance out of	C	Require replacement.
specification Terminal broken Terminal burned, affecting	A	Require repair or replacement.Require repair or replacement.
performance		(1) Require repair or replacement.
Terminal burned, not affecting performance Terminal corroded,	2	Suggest repair or replacement.
	A	Require repair or replacement.
	2	Suggest repair or replacement.
performance Terminal loose, not		Require repair or replacement.
affecting performance Threads damaged Threads stripped (threads	A	 Suggest repair or replacement. Require repair or replacement.
missing)		Require replacement.
exposed	A A	Require repair or replacement.Require repair or replacement.Require repair or replacement.Require repair or replacement.
(1) - Determine cause and replacement of part (2) - Inoperative include specification.	- -	ect prior to repair or ermittent operation or out of OEM

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 Attaching hardware	. A	Require replacement.
	. 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 Connector (Weatherpack	. A	Require repair or replacement.
type) leaking Connector melted		<pre> Require repair or replacement (1) Require repair or</pre>
Connector missing Inoperative		
Membrane torn Missing Polarity reversed Sound quality poor	. C	inspection required. Require replacement. Require replacement. Require repair. (3) Require repair or replacement. Further
Terminal broken Terminal burned, affectin		inspection required Require repair or replacement.
performance		(1) Require repair or replacement.
Terminal burned, not affecting performance . Terminal corroded,	. 2	Suggest repair or replacement.
	. A	Require repair or replacement.
	. 2	Suggest repair or replacement.
performance Terminal loose, not	. В	Require repair or replacement.
	. 1	Suggest repair or replacement.
(1) - Determine cause and replacement of part		ect prior to repair or
		ermittent operation or out of

- (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

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		Require repair or replacement Require repair or replacement.
Bracket bent, affecting performance Bracket bent, not	. A	Require repair or replacement.
		No service suggested or required.
Bracket broken, affecting performance Bracket broken, not		Require replacement.
affecting performance .		No service suggested or required.
Bracket corroded, affecting performance . Bracket corroded, not	. A	Require repair or replacement.
affecting performance . Bracket cracked, affectin	g	Suggest repair or replacement.
performance Bracket cracked, not affecting performance .		 Require repair or replacement. Suggest repair or replacement.
Bracket loose, affecting performance		Require repair or replacement.
Bracket loose, not affecting performance . Bracket missing	. C	Suggest repair or replacement Require replacement Require replacement.
Broken	. A	 Require repair or replacement. Require repair or replacement.
Kinked		Require repair or replacement. (1) Require repair or replacement.
Missing	. 2	Require replacement. Suggest repair or replacement. Suggest repair. Require repair or replacement.
(1) - Determine cause and replacement of part		ect prior to repair or

SPEEDOMETER CABLES

See SPEEDOMETER AND TACHOMETER LINKAGES AND CABLES.

SPEEDOMETERS

See GAUGES.

STARTERS

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

STARTER INSPECTION

Condition	Code	Procedure
Amperage draw does not meet OEM specifications Attaching hardware	. В	Require repair or replacement.
broken	. A	Require repair or replacement of hardware.
Attaching hardware missing	. C	Require replacement of hardware.
Attaching hardware not functioning	. A	
Bracket bent, affecting performance Bracket bent, not		Require repair or replacement.
affecting performance .		No service suggested or required.
Bracket broken, affecting performance Bracket broken, not		Require replacement.
affecting performance .		No service suggested or required.
Bracket corroded, affecting performance . Bracket corroded, not	. A	Require repair or replacement.
affecting performance . Bracket cracked, affectin		Suggest repair or replacement.
performance Bracket cracked, not		-
affecting performance . Bracket holes elongated,		
<pre>affecting performance . Bracket holes elongated, not affecting</pre>	. A	Require repair or replacement.
performance)		No service suggested or required.
Bracket loose, affecting performance Bracket loose, not		Require repair or replacement.
affecting performance . Bracket missing		
Drive gear damaged,		
Drive gear damaged, not affecting performance .	. 2	(2) Suggest repair or
Fails to disengage		replacement Require repair or replacement.
Housing broken, affecting performance Housing broken, not		Require repair or replacement.

affecting performance	• •	No service suggested or required.		
Housing cracked, affecting	-	•		
performance Housing cracked, not	Α	Require repair or replacement.		
affecting performance Inoperative	2 A	(3) Require repair or		
Noisy	2	replacement Suggest repair or replacement.		
Shimmed incorrectly	В	Require repair.		
Starter shaft bushing missing	С	(4) Require replacement.		
worn, affecting performance	A	Require replacement.		
worn, not affecting performance	1	Suggest replacement.		
Terminal broken	Α			
Terminal burned, affecting performance	A	(5) Require repair or replacement.		
Terminal burned, not	2	Suggest repair or replacement.		
Terminal corroded,	۷	Suggest repair of repracement.		
affecting performance Terminal corroded, not	А	Require repair or replacement.		
affecting performance Terminal loose, affecting	2	Suggest repair or replacement.		
performance	В	Require repair or replacement.		
Terminal loose, not affecting performance	1	Suggest repair or replacement.		
(1) Turnerah lalankan kali	la			
	qui	red to determine cause. Require		
<pre>inspection of ring gear. (3) - Inoperative includes intermittent operation.</pre>				
(4) - Bushing may be in bel	l h	ousing.		
(5) - Determine cause and c	orr	ect 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	Rec	quire repair	or replacement of hardware.
Attaching hardware missing	. C		Require	
Attaching hardware not functioning	. A	Rec	quire repair	or replacement of hardware.
Binding, affecting				

performance	A	Require repair or replacement.
performance	2	Suggest repair or replacement.
Broken	A	Require repair or replacement.
Burned, affecting		Require repair of repracement.
performance	Α	(1) Require repair or
r		replacement.
Burned, not affecting		1
performance	2	(1) Suggest repair or
r		replacement.
Cracked, affecting		ī
performance	Α	Require repair or replacement.
Cracked, not affecting		
performance	1	Suggest repair or replacement.
Leaking	Α	
Malfunctioning	Α	(2) Require repair or
J.		replacement.
Melted, affecting		-
performance	Α	(1) Require repair or
-		replacement.
Melted, not affecting		-
performance	2	(1) Suggest repair or
-		replacement.
Missing	С	Require replacement.
Out of adjustment	В	Require repair or replacement.
Terminal broken	Α	Require repair or replacement.
Terminal burned, affecting		
performance	Α	(1) Require repair or
		replacement.
Terminal burned, not		
affecting performance	2	Suggest repair or replacement.
Terminal corroded,		
affecting performance	Α	Require repair or replacement.
Terminal corroded, not		
affecting performance	2	Suggest repair or replacement.
Terminal loose, affecting		
performance	В	Require repair or replacement.
Terminal loose, not		
affecting performance	1	
Won't return	Α	
Worn	1	Suggest replacement.
(1) - Determine cause and co	orre	ect prior to repair or
replacement of part.		
		termittent operation, or failure
to perform all function	ons.	•

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

broken	A	Require repair or replacement of hardware.			
Attaching hardware missing	С	Require replacement of hardware.			
Attaching hardware not functioning	A	Require repair or replacement of hardware.			
Connector broken Connector melted	A A	Require repair or replacement (1) Require repair or			
Connector missing Malfunctioning	C A	replacement			
Missing	C A A	Require replacement Require repair or replacement (3) Require repair or replacement.			
Speed incorrect Terminal broken Terminal burned, affecting	A A	Require repair or replacement Require repair or replacement.			
performance	A	(1) Require repair or replacement.			
Terminal burned, not affecting performance Terminal corroded,	2	Suggest repair or replacement.			
affecting performance Terminal corroded, not	A	Require repair or replacement.			
affecting performance Terminal loose, affecting	2	Suggest repair or replacement.			
performance Terminal loose, not	В	Require repair or replacement.			
affecting performance Wire lead burned Wire lead conductors	1 A	 Suggest repair or replacement. Require repair or replacement.			
exposed	B A A	Require repair or replacement.Require repair or replacement.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.					

TENSIONER INSPECTION

TENSIONERS

Condition	Code	Procedure
Alignment incorrect Attaching hardware	. В	Require repair or replacement.
	. 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	В	Require adjustment or repair.
Cracked	2	Suggest replacement.
Missing	С	Require replacement.
Noisy	2	Suggest replacement.
Pulley damaged, affecting		
belt life	Α	Require replacement.
Seized	Α	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.
performance	. A	(1) Require repair or replacement.
Burned, not affecting performance	. 2	
Cracked, affecting performance Cracked, not affecting	. A	Require repair or replacement.
performance		Suggest repair or replacement (2) Require repair or replacement.
Melted, affecting performance	. A	
Melted, not affecting performance	. 2	
Missing Terminal broken Terminal burned, affectin	. A	Require replacement Require repair or replacement.
performance		(1) Require repair or replacement.
Terminal burned, not affecting performance .	. 2	Suggest repair or replacement.
Terminal corroded, affecting performance . Terminal corroded, not	. A	Require repair or replacement.
	. 2	Suggest repair or replacement.
performance Terminal loose, not		Require repair or replacement.
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	
		Require repair or replacement Require replacement.
(1) - Inoperative include specification.	s inte	ermittent operation or out of OEM

TRANSCEIVERS

TRANSCEIVER 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 Connector melted		<pre> Require repair or replacement (1) Require repair or</pre>
Connector missing Malfunctioning		
Terminal broken Terminal burned, affectin		Require repair or replacement.
_	. A	(1) Require repair or replacement.
Terminal burned, not affecting performance . Terminal corroded,	. 2	Suggest repair or replacement.
affecting performance . Terminal corroded, not	. A	Require repair or replacement.
affecting performance . Terminal loose, affecting		Suggest repair or replacement.

performance Terminal loose, not	В	• •	Require	repair	or	replacement.
affecting performance	1		Suggest	repair	or	replacement.
Wire lead burned Wire lead conductors	А	• •	Require	repair	or	replacement.
exposed	В		Require	repair	or	replacement.
Wire lead open	Α		Require	repair	or	replacement.
Wire lead shorted	A		Require	repair	or	replacement.
(1) - Determine cause and c replacement of part.	orre	ect	prior to	repair	or	
(2) - Malfunctioning includ	es :	inop	erative,	interm	itte	ent
operation, or failure						
(3) - Make sure poor sound	qua:	lity	is not d	caused b	οу	
ignition/charging sys interference.	tem	or	other for	rms of e	ele	ctrical

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 Connector (Weatherpack	. A	Require repair or replacement.
type) leaking Connector melted		Require repair or replacement (1) Require repair or replacement.
Connector missing Drive mechanism damaged,	. C	=
affecting performance .	. A	(2) Require repair or replacement.
Drive mechanism damaged, not affecting		-
performance	. 2	(2) Suggest repair or replacement.
Inoperative	. A	
Leaking (vacuum/fluid/air) Linkage bent, affecting	. A	Require replacement.
performance	. A	Require repair or replacement of linkage.
Linkage bent, not affecting performance .		No service suggested or required.
Linkage binding, affecting performance		Require repair or replacement of linkage.
Linkage binding, not affecting performance .	. 2	Suggest repair or replacement
Linkage broken	. A	of linkage 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 Require replacement.
Linkage noisy Out of adjustment	2	Suggest repair or replacement.
Terminal broken Terminal burned, affecting	A	Require repair or replacement.
performance	A	(1) Require repair or replacement.
Terminal burned, not affecting performance Terminal corroded,	2	Suggest repair or replacement.
affecting performance Terminal corroded, not	A	Require repair or replacement.
affecting performance Terminal loose, affecting	2	Suggest repair or replacement.
	В	Require repair or replacement.
·	1	Suggest repair or replacement.
(1) - Determine cause and c replacement of part.	orre	ect prior to repair or
(2) - Further inspection re		
(3) - Inoperative includes specification.	inte	ermittent operation or out of
		djustment procedures. Repair cification.

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	А	Require repair or replacement of hardware.
Attaching hardware missing	С	Require replacement of hardware.
Attaching hardware not functioning	А	Require repair or replacement of hardware.
Connector broken Connector (Weatherpack	A	Require repair or replacement.
type) leaking Connector melted	A A	1 1
Connector missing Inoperative Terminal broken Terminal burned, affecting	C A A	
	A	(1) Require repair or replacement.
Terminal burned, not affecting performance Terminal corroded,	2	Suggest repair or replacement.
•	Α	Require repair or replacement.
affecting performance Terminal loose, affecting	2	Suggest repair or replacement.
performance	В	Require repair or replacement.
Terminal loose, not affecting performance	1	Suggest repair or replacement.
(1) - Determine cause and creplacement of part.	orr	ect prior to repair or
(2) - NOTE: Inoperative incout of OEM specificat		es intermittent operation or \cdot

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.
	. A	Require repair or replacement Require repair or replacement.
performance	_	(2) Require repair or replacement.
Terminal burned, not affecting performance . Terminal corroded,	. 2	Suggest repair or replacement.
	. A	Require repair or replacement.

Terminal corroded, not						
affecting performance	2		Suggest	repair	or	replacement.
Terminal loose, affecting			2.2	-		-
performance	В		Require	repair	or	replacement.
Terminal loose, not						
affecting performance	1		Suggest	repair	or	replacement.
Wire lead conductors						
exposed	В		Require	repair	or	replacement.
Wire lead corroded	А					replacement.
Wire lead open						replacement.
Wire lead shorted	Α		Require	repair	or	replacement.
(1) - Inoperative includes	int	ermit	ttent ope	eration	or	out of OEM
specification.						
(2) - Determine cause and (corr	ect 1	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 Connector melted		Require repair or replacement. (1) Require repair or replacement.
Connector missing Inoperative		Require replacement(2) Require repair or replacement.
Leaking externally Leaking internally Noisy Resistance out of	. A	Require repair or replacement.Require repair or replacement.Suggest repair or replacement.
specification Terminal broken Terminal burned, affecting	. A	Require repair or replacement.
performance Terminal burned, not	. A	(1) Require repair or replacement.
	. 2	Suggest repair or replacement.
affecting performance . Terminal corroded, not	. A	Require repair or replacement.
affecting performance . Terminal loose, affecting	. 2	Suggest repair or replacement.
performance Terminal loose, not	. В	Require repair or replacement.
affecting performance . Threads damaged Threads stripped (threads	. A	 Suggest repair or replacement. Require repair or replacement.
missing)		Require replacement.
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 Bent Loose Missing Noisy Size incorrect Tension insufficient Torn Worn, affecting performance	. A 2 . C . 2 . 2 . B . A	Require replacement. Require repair or replacement. Suggest repair or replacement. Require replacement. Suggest repair or replacement. Suggest repair or replacement. Require repair or replacement. Require replacement. Require replacement.
Worn, not affecting		Suggest replacement.

WIPER BLADES

See WIPER ARMS AND BLADES.

WIPER HOSES AND NOZZLES

WIPER HOSE AND NOZZLE INSPECTION

Condition	Code	Procedure
Attaching hardwar broken		Require repair or replacement of hardware.
Attaching hardwar missing		Require replacement of hardware.
Attaching hardwar functioning		Require repair or replacement of hardware.
Blocked	A	Require repair or replacement.

Leaking	Α	Require repair or replacement.
Missing	С	Require replacement.
		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.		
Worn, not affecting	. A . A . 2 . C . 2 . B	Require replacement. Require repair or replacement. Require repair or replacement. Suggest repair or replacement. Require replacement. Require replacement. Require replacement. Require repair or replacement. Suggest repair or replacement. Suggest repair or 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.
Leaking	. A	Require replacement Require repair or replacement Require replacement.

WIRING HARNESSES AND CONNECTORS

WIRING HARNESS AND CONNECTOR INSPECTION

Condition	Code	Procedure		
Application incorrect Attaching hardware	. В	Require repair or replacement.		
broken	. A	Require repair or replacement of hardware.		
Attaching hardware missing	. C	Require replacement of		
Attaching hardware not functioning	. A	hardware Require repair or replacement		
Connector broken		of hardware Require repair or replacement.		
Connector (Weatherpack type) leaking	. A	Require repair or replacement.		
Connector melted				
Connector missing Insulation damaged, conductors exposed		 Require replacement. Require repair or replacement.		
Insulation damaged, conductors not exposed		Suggest replacement.		
Open		Require repair or replacement.		
(conduit) melted	. 2	(1) Suggest repair or replacement.		
Protective shield (conduit) missing		Suggest repair or replacement.		
Resistance (voltage drop) out of specification		Require repair or replacement.		
Routed incorrectly		Require repair.		
Secured incorrectly		Require repair.		
Shorted	. A	Require repair or replacement.Require repair or replacement.		
Terminal burned, affectin performance		(1) Require repair or replacement.		
Terminal burned, not		10,1400010		
affecting performance . Terminal corroded,	. 2	Suggest repair or replacement.		
affecting performance . Terminal corroded, not	. A	Require repair or replacement.		
Terminal loose, affecting	. 2			
performance	. B	Require repair or replacement.		
affecting performance . Voltage drop out of	. 1	Suggest repair or replacement.		
specification	. A	Require repair or replacement.		
 Determine cause and correct prior to repair or replacement of part. 				