POWER MIRRORS

CONTENTS

GENERAL INFORMATION

Electrically operated power mirrors are available on all car lines. The mirrors are controlled by a single switch assembly located either on the driver's door trim panel or on the center console.

There are three types of switches currently used, each uses a L (left) R (right) for mirror selection (Fig. 1). Type I, which uses a rocker for mirror selection and four buttons for mirror movement direction. Type II, uses a toggle switch which is rotated clockwise for the Right mirror or counterclockwise for the Left mirror selection, and moved UP, DOWN, LEFT or RIGHT for mirror movement direction. Type III, uses a paddle knob which is moved Left or Right for mirror selection and four buttons for mirror movement direction.

The motors which operate the mirrors are part of the mirror assembly and cannot be replaced separately.

All vehicles are equipped with an Ignition-Off Draw Connector which is used when the vehicles are originally shipped from the factory. This connector, which is located near the battery, helps to prevent

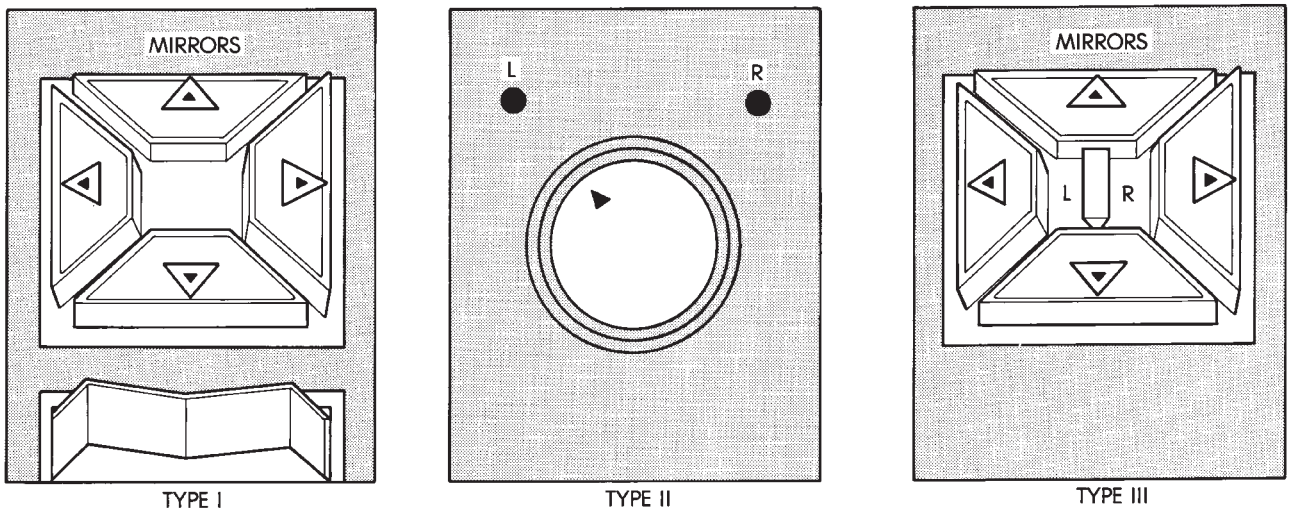


Fig. 1 Power Mirror Switches

battery discharge during storage. For specific connector type and location, refer Group 8W, Wiring Diagrams.

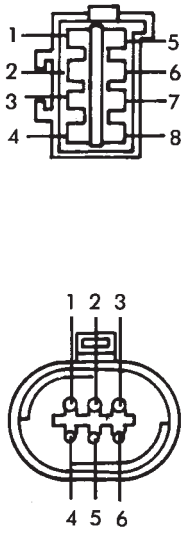
This connector is included in the power mirror circuitry except, for AC and AY body and should be checked if the mirrors are inoperative.

MIRROR MOTOR TEST PROCEDURE

(1) Remove power mirror switch from mounting position.

(2) Disconnect switch wiring harness at connector. In the case of memory mirrors, (green 8-way mirror connector and memory switch in drivers door panel), the switch wiring disconnects from the cowl top harness rather than the mirror harness.

(3) Using two jumper wires, one connected to a 12 volt source, and the other connected to a good body ground. Refer to the Mirror Test (Fig. 2 through 5) for appropriate switch style, and for pin numbers.



MIRROR TEST			
SWITCH CONNECTOR			
		MIRROR REACTION	
12 Volts	Ground	Right	Left
PIN 2	PIN 3	UP	
PIN 6	PIN 3		UP
PIN 3	PIN 2	DOWN	
PIN 3	PIN 6		DOWN
PIN 7	PIN 1	RIGHT	
PIN 7	PIN 5		RIGHT
PIN 1	PIN 7	LEFT	
PIN 5	PIN 7		LEFT
DOOR CONNECTOR			
12 Volts	Ground	MIRROR REACTION	
PIN 4	PIN 6	UP	
PIN 6	PIN 4	DOWN	
PIN 5	PIN 3	RIGHT	
PIN 3	PIN 5	LEFT	
PIN 1	PIN 2	HEATER	

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Fig. 2 MIRROR TEST — AP Body

(4) If results shown in the Fig. 2 through 5 are not obtained, check for broken or shorted circuit, or replace mirror assembly as necessary.

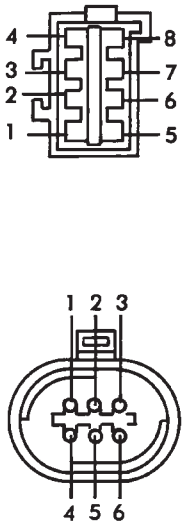
MIRROR SWITCH TEST PROCEDURE

(1) Remove power mirror switch from mounting position.

(2) Disconnect wiring harness at switch connector.

(3) Using an ohmmeter, test for continuity between the terminals of the switch as shown in the Mirror Switch Continuity for appropriate switch style (Fig. 6 through 8).

(4) If results shown in the Fig. 5, 6 and 7 are not obtained, replace the switch.



MIRROR TEST			
SWITCH CONNECTOR			
		MIRROR REACTION	
12 Volts	Ground	Right	Left
PIN 6	PIN 7	UP	
PIN 2	PIN 3		UP
PIN 7	PIN 6	DOWN	
PIN 3	PIN 2		DOWN
PIN 7	PIN 5	RIGHT	
PIN 3	PIN 1		RIGHT
PIN 5	PIN 7	LEFT	
PIN 1	PIN 3		LEFT
DOOR CONNECTOR			
12 Volts	Ground	MIRROR REACTION	
PIN 4	PIN 6	UP	
PIN 6	PIN 4	DOWN	
PIN 5	PIN 3	RIGHT	
PIN 3	PIN 5	LEFT	
PIN 1	PIN 2	HEATER	

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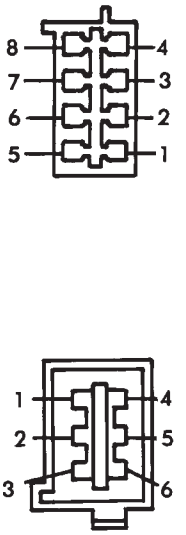
Fig. 3 MIRROR TEST — AA Body



MIRROR TEST			
SWITCH CONNECTOR			
		MIRROR REACTION	
12 Volts	Ground	Right	Left
PIN 6	PIN 7	UP	
PIN 2	PIN 3		UP
PIN 7	PIN 6	DOWN	
PIN 3	PIN 2		DOWN
PIN 7	PIN 5	RIGHT	
PIN 3	PIN 1		RIGHT
PIN 5	PIN 7	LEFT	
PIN 1	PIN 3		LEFT
DOOR CONNECTOR			
12 Volts	Ground	MIRROR REACTION	
PIN 4	PIN 6	UP	
PIN 6	PIN 4	DOWN	
PIN 6	PIN 5	RIGHT	
PIN 5	PIN 6	LEFT	
PIN 1	PIN 3	HEATER	

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Fig. 4 MIRROR TEST — AC and AY Bodies

HEATED MIRROR

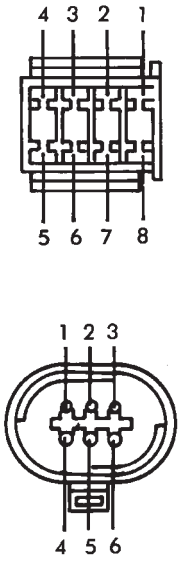
Heated mirrors are available on all car lines except AP Body, with Power Mirrors and Rear Window Defogger only. The heated mirror is controlled by the rear window defogger switch. Only time that the heated mirror is on is when the rear window defogger is on.

TEST PROCEDURES

(1) The mirror should be warm to the touch.

(a) If not check fuses.

(b) Test voltage at rear window defogger switch.



MIRROR TEST			
SWITCH CONNECTOR			
		MIRROR REACTION	
12 Volts	Ground	Right	Left
PIN 6	PIN 5	UP	
PIN 4	PIN 5		UP
PIN 5	PIN 6	DOWN	
PIN 5	PIN 4		DOWN
PIN 5	PIN 7	RIGHT	
PIN 5	PIN 8		RIGHT
PIN 7	PIN 5	LEFT	
PIN 8	PIN 5		LEFT
DOOR CONNECTOR			
12 Volts	Ground	MIRROR REACTION	
PIN 1	PIN 5	UP	
PIN 5	PIN 1	DOWN	
PIN 4	PIN 6	RIGHT	
PIN 6	PIN 4	LEFT	
PIN 2	PIN 3	HEATER	

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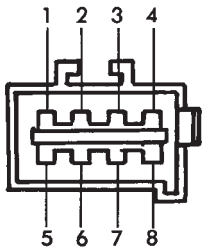
Fig. 5 MIRROR TEST — AG and AJ Bodies



MIRROR SWITCH CONTINUITY TYPE I	
Mirror Selector Knob in "L" Position	
MOVE LEVER	CONTINUITY BETWEEN
▲	PINS 2 AND 8 PINS 3 AND 4
▶	PINS 3 AND 8 PINS 1 AND 4
▼	PINS 3 AND 8 PINS 2 AND 4
◀	PINS 1 AND 8 PINS 3 AND 4
Mirror Selector Knob in "R" Position	
MOVE LEVER	CONTINUITY BETWEEN
▲	PINS 6 AND 8 PINS 7 AND 4
▶	PINS 7 AND 8 PINS 5 AND 4
▼	PINS 7 AND 8 PINS 6 AND 4
◀	PINS 5 AND 8 PINS 7 AND 4

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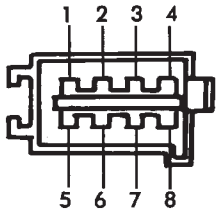
Fig. 6 Type I Mirror Switch Test

- If no voltage repair wire.
- Apply voltage to one wire and ground the other, refer to Fig. 2 through 5 for pin numbers. Mirror should become warm to the touch.
- If not remove mirror glass and test the wires for continuity. If no continuity repair wires.
- If wires are OK, replace mirror glass.
- To test defogger switch refer to Group 8N, Rear Window Defogger, Control Switch/Timer Relay Module Test.



MIRROR SWITCH CONTINUITY TYPE II	
Mirror Selector Knob in "L" Position	
MOVE LEVER	CONTINUITY BETWEEN
▲	PINS 2 AND 8 PINS 3 AND 4
▶	PINS 3 AND 8 PINS 1 AND 4
▼	PINS 3 AND 8 PINS 2 AND 4
◀	PINS 1 AND 8 PINS 3 AND 4
Mirror Selector Knob in "R" Position	
MOVE LEVER	CONTINUITY BETWEEN
▲	PINS 6 AND 8 PINS 7 AND 4
▶	PINS 7 AND 8 PINS 5 AND 4
▼	PINS 7 AND 8 PINS 6 AND 4
◀	PINS 5 AND 4 PINS 7 AND 8

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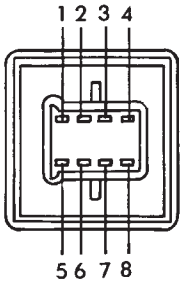
Fig. 7 Type II Mirror Switch Test



MIRROR SWITCH CONTINUITY TYPE III	
Mirror Switch Knob in "L" Position	
MOVE LEVER	CONTINUITY BETWEEN
▲	PINS 6 AND 8 PINS 5 TO 1 AND 4
▶	PINS 6 AND 1 PINS 5 AND 4
▼	PINS 6 AND 1 PINS 5 AND 8
◀	PINS 6 AND 4 PINS 5 TO 1 AND 8
Mirror Selector Knob in "R" Positon	
MOVE LEVER	CONTINUITY BETWEEN
▲	PINS 6 AND 7 PINS 5 TO 1 AND 3
▶	PINS 6 AND 1 PINS 5 AND 3
▼	PINS 5 AND 7 PINS 6 AND 1
◀	PINS 6 AND 3 PINS 5 TO 1 AND 7

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Fig. 8 Type III Mirror Switch Test

MIRROR SWITCH REPLACEMENT — AA BODY

(1) Remove door trim panel.
(2) Remove set screw from pillar trim bezel.
(3) Remove pillar trim bezel retaining screws.
(4) Disconnect switch wiring (Fig. 9).
(5) Remove switch from switch bezel.
(6) For installation, reverse above procedure.

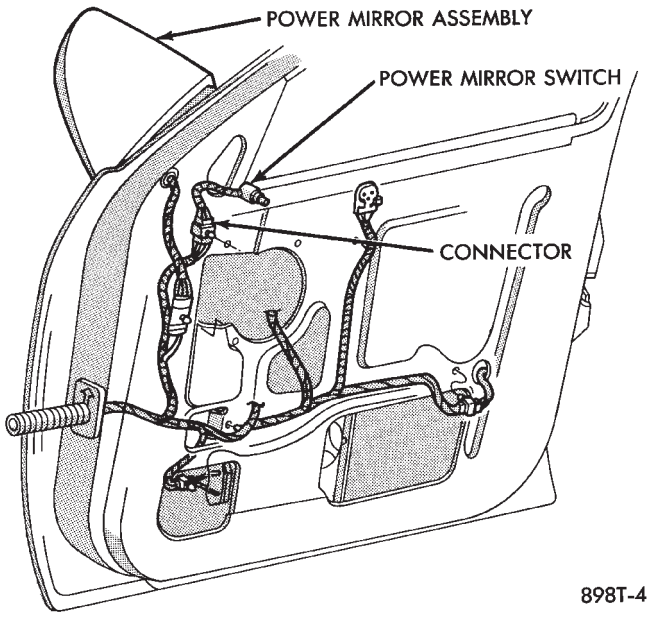

Fig. 9 Power Mirror Switch — AA Body

MIRROR SWITCH REPLACEMENT — AG AND AJ BODIES

(1) Carefully pry switch from switch bezel (Fig. 10).

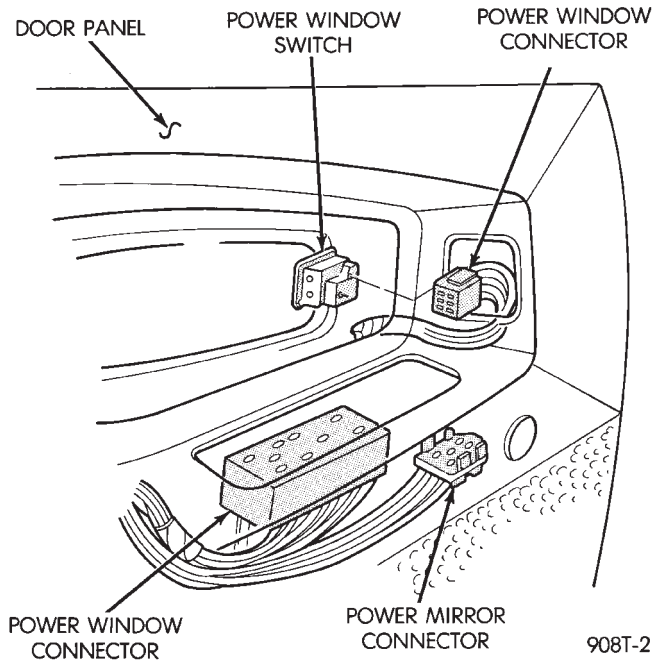

Fig. 10 Power Mirror Switch — AG, and AJ Bodies

(2) Remove switch wiring connector.

(3) For installation, reverse above procedure.

MIRROR SWITCH REPLACEMENT — AP BODY

(1) Remove power mirror switch bezel from mounting position (Fig. 11).

(2) Turn bezel over and remove two switch retaining screws.

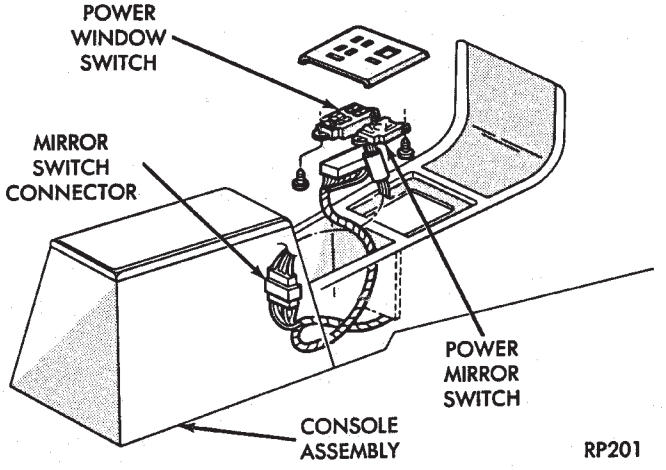

Fig. 11 Power Mirror Switch — AP Body

(3) Disconnect wiring at switch connector.

(4) Remove switch from vehicle.

(5) For installation, reverse above procedure.

MIRROR SWITCH REPLACEMENT — AC AND AY BODIES

(1) Remove door trim panel.

(2) Remove three pillar trim bezel retaining screws and pull bezel from door.

(3) Loosen remote control switch retaining screw and pull switch from bezel.

(4) Disconnect switch wiring at connector near bottom of door and pull switch and harness from door (Fig. 12).

(5) For installation, reverse above procedure.

MIRROR ASSEMBLY REPLACEMENT — AA BODY

(1) Remove door trim panel.

(2) Remove switch set screw from door pillar trim.

(3) Remove two pillar trim bezel screws and remove bezel (Fig. 13).

(4) Disconnect mirror wiring connector.

(5) Remove three mirror retaining nuts and pull mirror and harness from door.

(6) For installation, reverse above procedure. Test operation of mirror before installing door trim panel.

MIRROR ASSEMBLY REPLACEMENT — AG BODY

(1) Remove door trim panel.

(2) Disconnect mirror wiring at connector (Figs. 14 and 15).

(3) Remove plugs used to conceal mirror mounting nuts.

(4) Remove mirror mounting nuts and release mirror from door.

(5) For installation, reverse above procedure. Test mirror for proper operation before installing door trim panel.

MIRROR ASSEMBLY REPLACEMENT — AJ BODY

(1) Remove door trim panel.

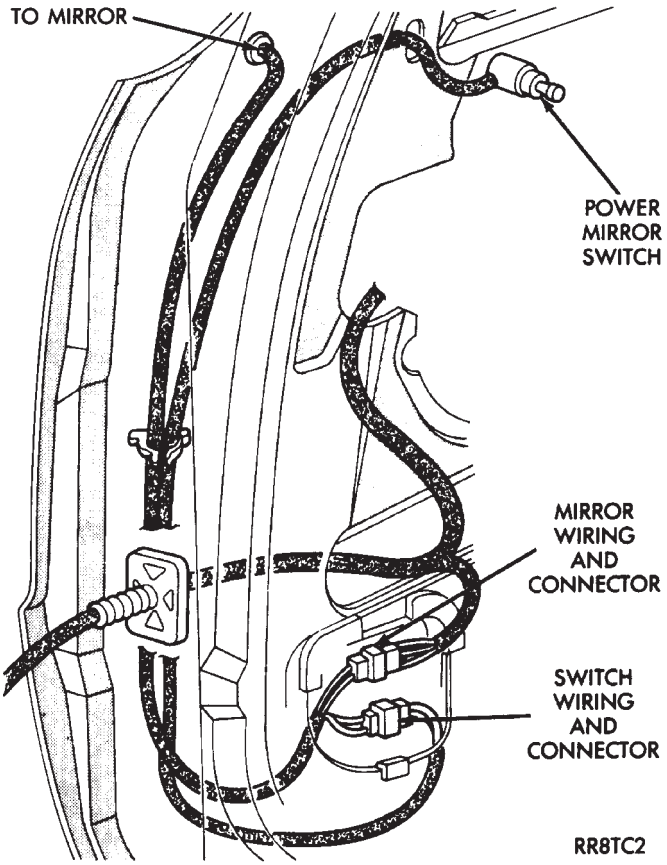

Fig. 12 Power Mirror Switch and Wiring — AC and AY Bodies

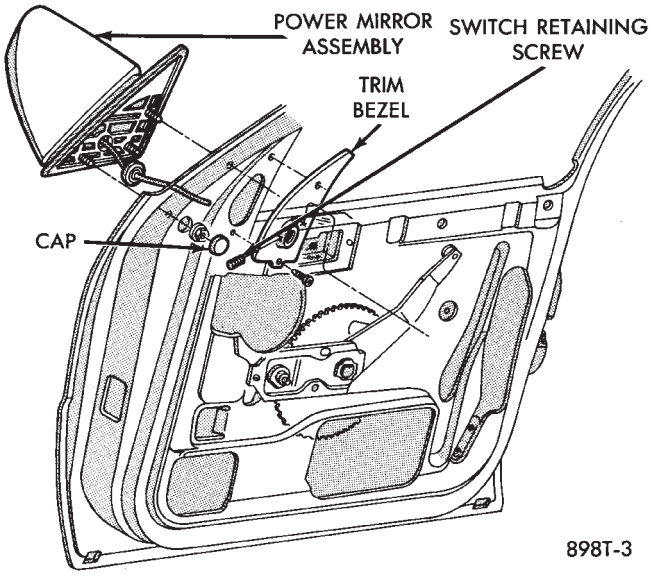

Fig. 13 Power Mirror Assembly — AA Body

(2) Remove door speaker and disconnect mirror wiring connectors (Fig. 16).

(3) Remove plugs used to conceal mirror mounting nuts.

(4) Remove mirror mounting nuts and release mirror from door.

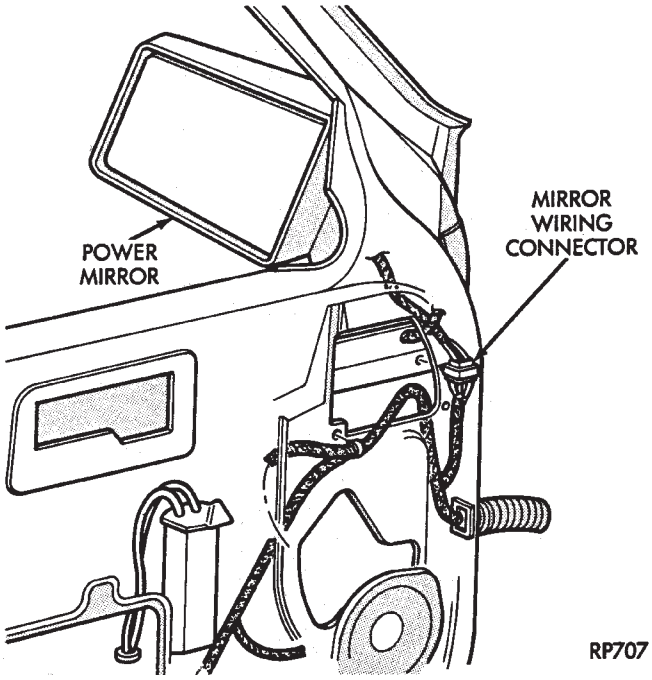

Fig. 14 Power Mirror Wiring — AG Body

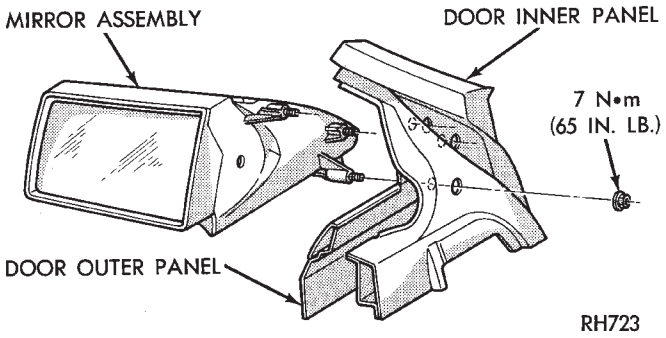

Fig. 15 Power Mirror Assembly—AG Body

(5) For installation, reverse above procedure. Test mirror for proper operation before installing door trim panel.

MIRROR ASSEMBLY REPLACEMENT — AP BODY

(1) Remove door trim panel.

(2) Disconnect wiring at connector (Figs. 17 and 18).

(3) Remove door bezel and small plug to gain access to mirror retaining nuts.

(4) Remove three mirror retaining nuts and remove mirror from vehicle.

(5) For installation, reverse above procedure. Test mirror for proper operation before installing door trim panel.

MIRROR ASSEMBLY REPLACEMENT — AC AND AY BODIES

(1) Remove door trim panel.

(2) Remove three pillar trim bezel retaining screws and pull bezel from door.

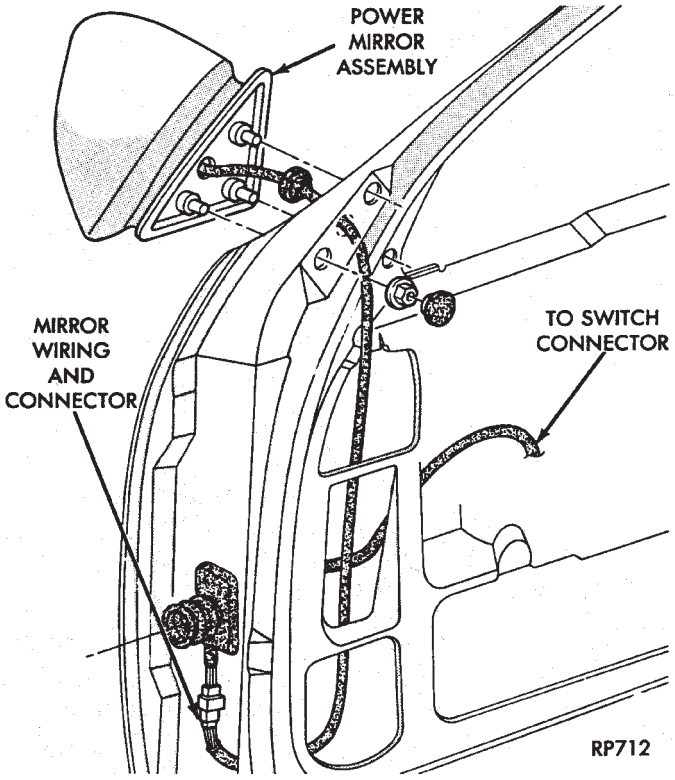

Fig. 16 Power Mirror Assembly—AJ Body

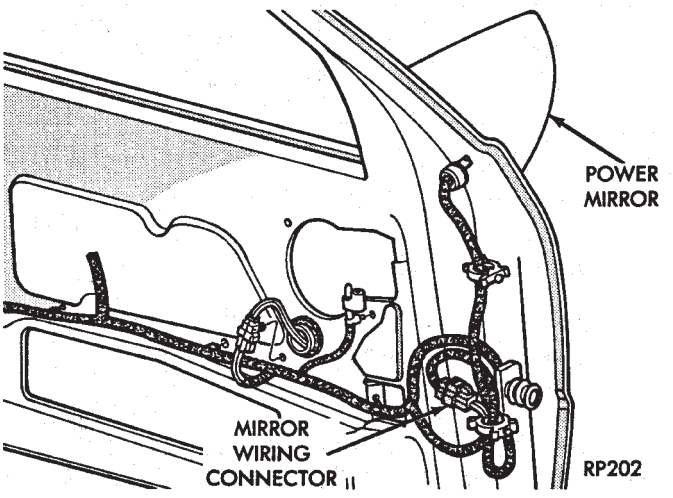

Fig. 17 Power Mirror Wiring—AP Body

(3) Disconnect mirror wiring connector near bottom of door (Fig. 19).

(4) Remove two mirror retaining nuts and screw one, and pull mirror and harness from door.

(5) For installation, reverse above procedure. Test mirror for proper operation before installing door trim panel.

INSIDE MIRROR/READING LAMPS REPLACEMENT

(1) Release locking tab on front side of mirror stay by pushing down. While holding tab down, pull mirror rearward to remove (Fig. 20).

(2) Remove visor center attaching clips.

(3) Remove header end caps.

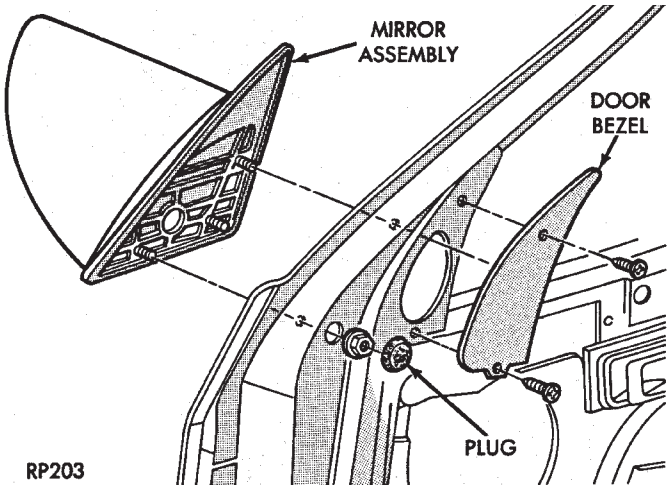

Fig. 18 Power Mirror Assembly — AP Body

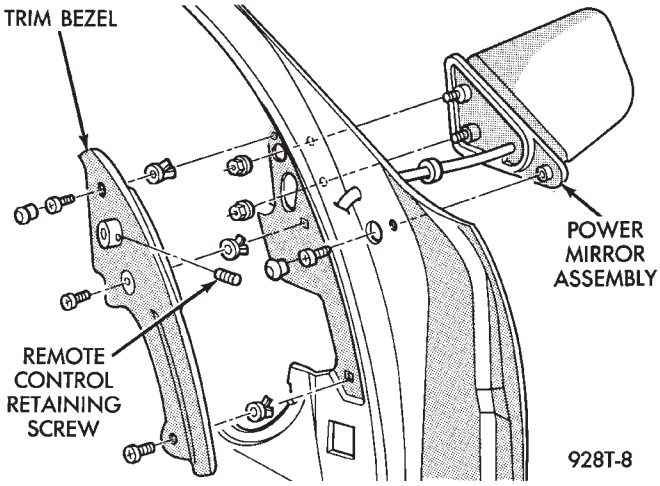

Fig. 19 Power Mirror Assembly — AC and AY Body

(4) Remove header trim.

(5) Disconnect wiring connector.

(6) For installation, reverse above procedure. Ensure the mirror is fully locked into place.

INSIDE MIRROR/READING LAMPS BULB/LENS REPLACEMENT

(1) Place a small thin blade tool in the notch at the outside end of the lens housing and pry off the lens housing.

(2) Remove lamp socket from lens housing. Remove bulb socket and replace if necessary.

(3) Remove lens by applying pressure on locking tabs to remove lens.

(4) Replacing lens, set into place apply pressure until it is locked into position.

(5) For installation, reverse above procedure.

AUTOMATIC DAY/NIGHT INSIDE MIRROR

Operational test:

- Turn ignition switch to the ON position with the vehicle in park (Fig. 21).
- Place mirror switch in the high position.

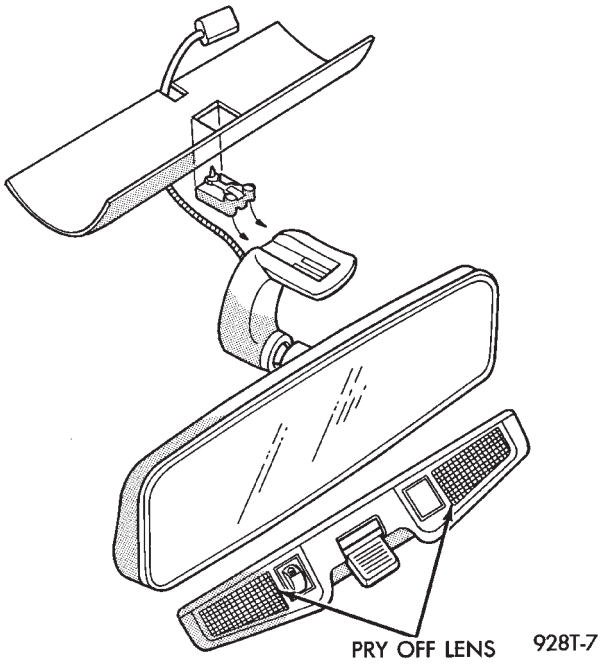

Fig. 20 Header Mirror/Reading Lamps

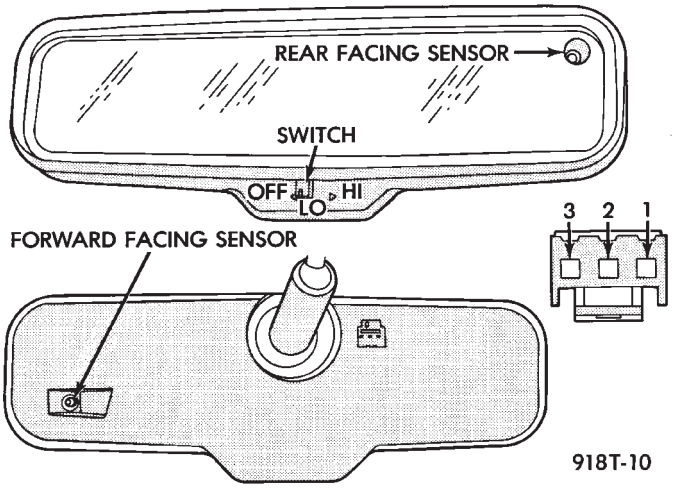

Fig. 21 Automatic Day / Night Mirror

- Cover the forward facing sensor with dark cloth to keep out any ambient light.
- Shine a light into the rear facing sensor, watch to see if the mirror darkens.

With the mirror darkened, place the vehicle in reverse, the mirror should return to its normal condition.

If the above conditions are met the mirror is operating properly.

- If not test voltage.

Test three way connector harness. Refer to Fig. 21.

(1) Pin 1 Ignition Switch in run position, should have battery voltage.

(2) Pin 2 Should have continuity to Ground.

(3) Pin 3 When the transmission is in reverse, should have battery voltage.

(4) If test is OK replace Mirror.

(5) If not refer, to Wiring Diagrams manual to test the circuits.

AUTOMATIC DAY/NIGHT INSIDE MIRROR WITH ULTRALIGHT HEADLAMP CONTROL

CAUTION: When JUMP STARTING the vehicle, before cranking engine turn ignition ON and turn OFF the Automatic Headlamp Control.

The mirror automatically reduces the amount to headlamp glare from rear approaching traffic and provides automatic headlamp control (Fig. 22).

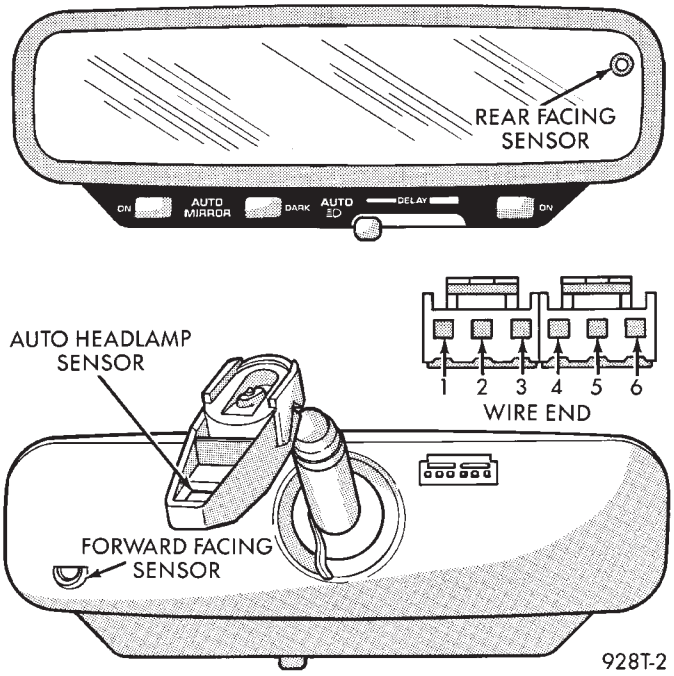

Fig. 22 Automatic Day / Night Mirror with Ultralight Headlamp Control

SELF DIAGNOSTIC MODE—OPERATIONAL TEST:

(1) Place shift selector in park (P) or Neutral (N) position. With ignition OFF, press and hold AUTO MIRROR and AUTO LAMP (headlamp) buttons, turn ignition switch ON. When LED indicators start flashing, release buttons.

(a) The button LED indicators should flash for above five seconds.

- AUTO MIRROR
- DARK
- AUTO LAMP

(b) If they continue to flash much longer than five seconds, the mirror assembly is defective.

(2) The headlamps and parking lamps should turn ON for above five seconds.

- AUTO MIRROR LED
- DARK LED
- AUTO LAMP LED
- The LED indicators blink for about 5 seconds.

• If the three indicators continue to blink considerably longer than 5 seconds, then the mirror assembly is defective.

(3) The mirror should change to dim state.

(a) Place shift selector in reverse (R), with ignition switch ON:

• AUTO MIRROR LED indicator ON
• DARK LED indicator flashing
• Lasting about 15 seconds

(b) The mirror should slowly change to bright state.

(c) If the ignition is not turned OFF within the 15 second time period, the mirror will reset to its previous setting.

The previous conditions are OK, the mirror is operating properly.

If not OK, continue with voltage tests below.

VOLTAGE TEST

To test for voltage insert voltmeter probe into wire end of connector to contact terminal.

Pin 1 ignition voltage

(a) Ignition switch OFF, zero volts.

(b) Ignition switch ON, battery voltage.

Pin 2 battery voltage

(a) Battery voltage at all times.

(b) No voltage, check 15 amp. fuse.

Pin 3 Ground

(a) Continuity to ground.

(b) No voltage

Pin 4 Reverse over-ride

(a) Ignition OFF, zero voltage

(b) Ignition ON shift selector in Reverse (R), battery voltage.

(c) Ignition ON shift selector in any position other than Reverse (R), zero voltage.

Pin 5 Headlamp relay

(a) Battery voltage at all times from headlamp relay.

(b) No battery voltage, test headlamp relay.

Pin 6 Park lamp relay

(a) Ignition switch ON, battery voltage feed from park lamp relay.

(b) Ignition switch OFF, zero voltage.

(c) Ignition ON, No battery voltage test park lamp relay.

If Voltage Test are OK, replace mirror assembly.

If not OK, refer to Wiring Diagrams manual.