SYSTEM DESCRIPTION

1. POWER MIRROR CONTROL SYSTEM DESCRIPTION
   This system has these functions: automatic glare-resistant electrochromic (EC) mirror, electrical remote control type mirror, memory function, foot light function, and rear window defogger-linked mirror defogger.
2. FUNCTION OF MAIN COMPONENT

Components	Function
Vertical mirror motor	Receives signal from outer mirror control ECU and adjusts remote control mirror in the vertical direction.
Horizontal mirror motor	Receives signal from outer mirror control ECU and adjusts remote control mirror in the horizontal direction.
Mirror defogger	Receives signal from defogger relay and starts mirror defogger.
EC mirror cell	Varies reflection rate of mirror through function of EC elements.
Mirror control switch	After selecting "R" or "L" switch, control switches change angle of mirror. Mirror signals are sent to outer mirror control ECU through body ECU.
Mirror master switch	Consists of "R" and "L" switch. One must be chosen before mirror control switches can be operated.
Mirror position sensor	Detects remote control mirror position. This data is detected by outer mirror control ECU.
Set switch (set switch) Memory switch	When set switch and memory switches are pressed simultaneously, SET, 1 or 2 switch is input position Memory switch input to outer mirror control ECU and remote control mirror position is recorded. Then, when memory switch is pressed, 1 or 2 switch is input to outer mirror control ECU and remote control mirror position changes according to memory.

3. SYSTEM OPERATION

The remote control mirror has following features:

Function	Outline
Ignition switch-linked automatic electrical retractable mirror	This function automatically retracts remote control mirrors when ignition switch is turned from ON to LOCK. This feature improves convenience of vehicle by eliminating need to manually operate mirror retract switch after stopping vehicle.
Manual electrical retractable mirror	This function retracts remote control mirrors when mirror retract switch is pressed.
Electrical remote control type mirror	When mirror control switch is operated, this function moves mirror surface vertically or laterally to enable driver to attain optimal mirror angle. Setting mirror master switch to "R" position operates right mirror, and to "L" position operates left mirror.
Rear window defogger-linked mirror defogger	This function automatically turns on mirror defogger when rear window defogger switch is turned on. switch is turned on. After 15 minutes have elapsed from time this function has been activated, rear window defogger turns off automatically, and mirror defogger also turns off.
Wiper-linked mirror defogger	To improve rear visibility in the rain, this system automatically turns on mirror defogger when wiper switch is turned on.
Automatic glare-resistant EC mirror	This function helps to reduce glare/reflection in inner mirror during nighttime driving for safe driving conditions. Glare/reflection from vehicle headlights behind driver could blind driver and cause dangerous driving conditions.
Memory function	This function stores adjusted mirror position in driver and front passenger outer mirror control ECU.

HOW TO PROCEED WITH TROUBLESHOOTING

HINT:

- Use these procedures to troubleshoot the power door lock control system.
- The intelligent tester should be used in steps 4 and 5.

1	**VEHICLE BROUGHT TO WORKSHOP**

NEXT

2	**CUSTOMER PROBLEM ANALYSIS CHECK**

HINT:

- In troubleshooting, confirm that the problem symptoms have been accurately identified. Preconceptions should be discarded in order to make an accurate judgment. To clearly understand what the problem symptoms are, it is extremely important to ask the customer about the problem and the conditions at the time the malfunction occurred.
- Gather as much information as possible for reference. Past problems that seem unrelated may also help in some cases.
- The following 5 items are important points in the problem analysis:

What	Vehicle model, system name
When	Date, time, occurrence frequency
Where	Road conditions
Under what conditions?	Running conditions, driving conditions, weather conditions
How did it happen?	Problem symptoms

NEXT

3	**INSPECT BATTERY VOLTAGE**

Standard Voltage:
11 to 14 V
If the voltage is below 11 V, recharge or replace the battery before proceeding.

NEXT

4	**INSPECT COMMUNICATION FUNCTION OF MULTIPLEX COMMUNICATION SYSTEM (BEAN)**

(a) Use the intelligent tester to check if the Multiplex Communication System (MPX) is functioning normally (See page MP-14).

Result

Result	Proceed to
MPX DTC is not output	A
MPX DTC is output	B

B → Go to MULTIPLEX COMMUNICATION SYSTEM

A

5 PROBLEM SYMPTOMS TABLE

Result

Result	Proceed to
Fault is not listed on problem symptoms table	A
Fault is listed on problem symptoms table	B

B → After repair, go to step 8

A

6 OVERALL ANALYSIS AND TROUBLESHOOTING

(a) Terminals of ECU
(See page MI-9)
(b) DATA LIST/ACTIVE TEST
(See page MI-13)

NEXT

7 REPAIR OR REPLACE

NEXT

8 CONFIRMATION TEST

NEXT

END