

**CIRCUIT OPERATION**

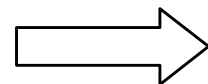
When the Ignition Switch (X134) is in position I or II, the Right Seat Power Relay (K131) is energized, applying ground to the Left Seat Power Relay (K113).

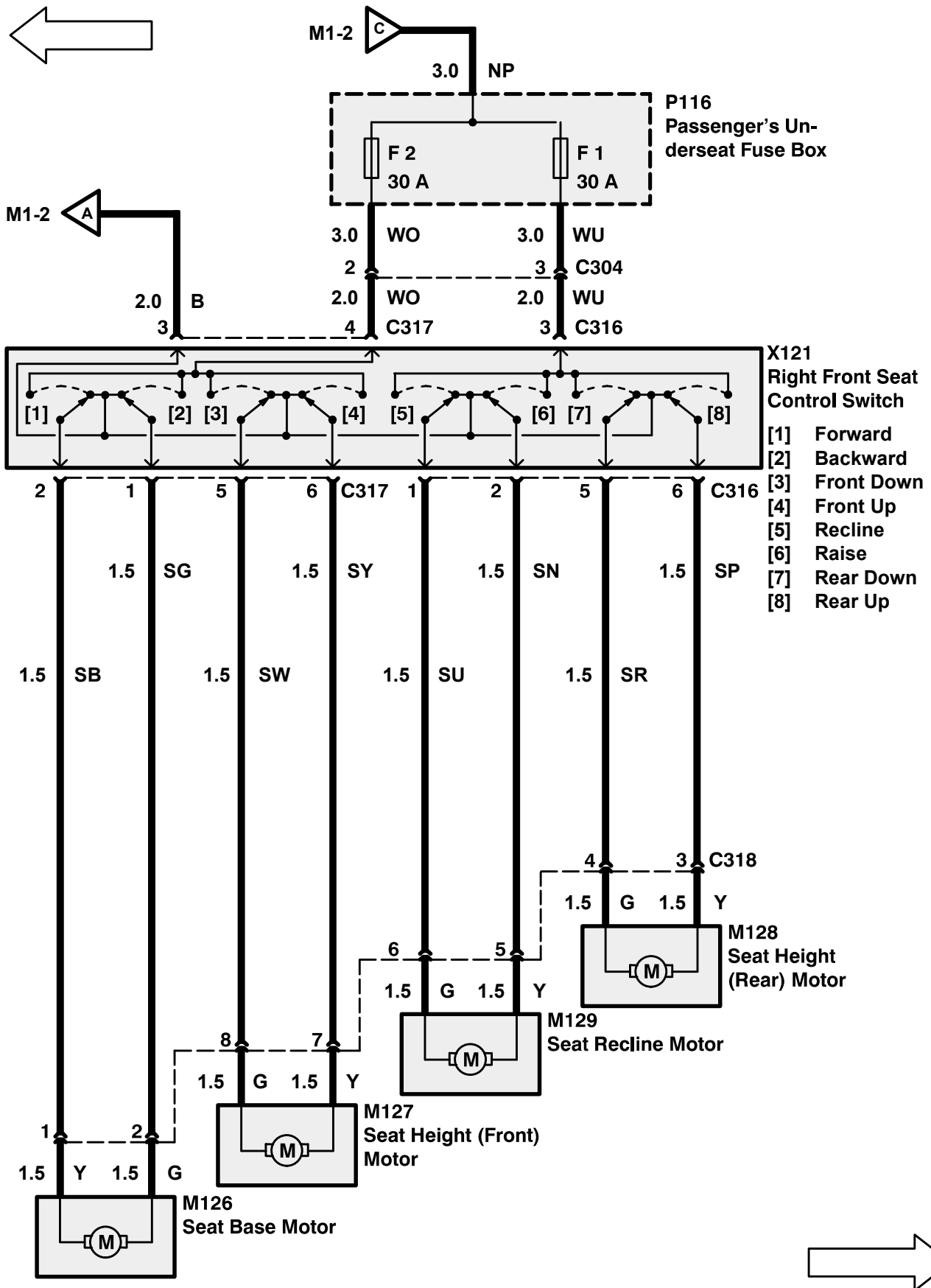
The Left Seat Power Relay (K113) energizes, applying battery voltage to the Left Front Seat Control Switch (X152).

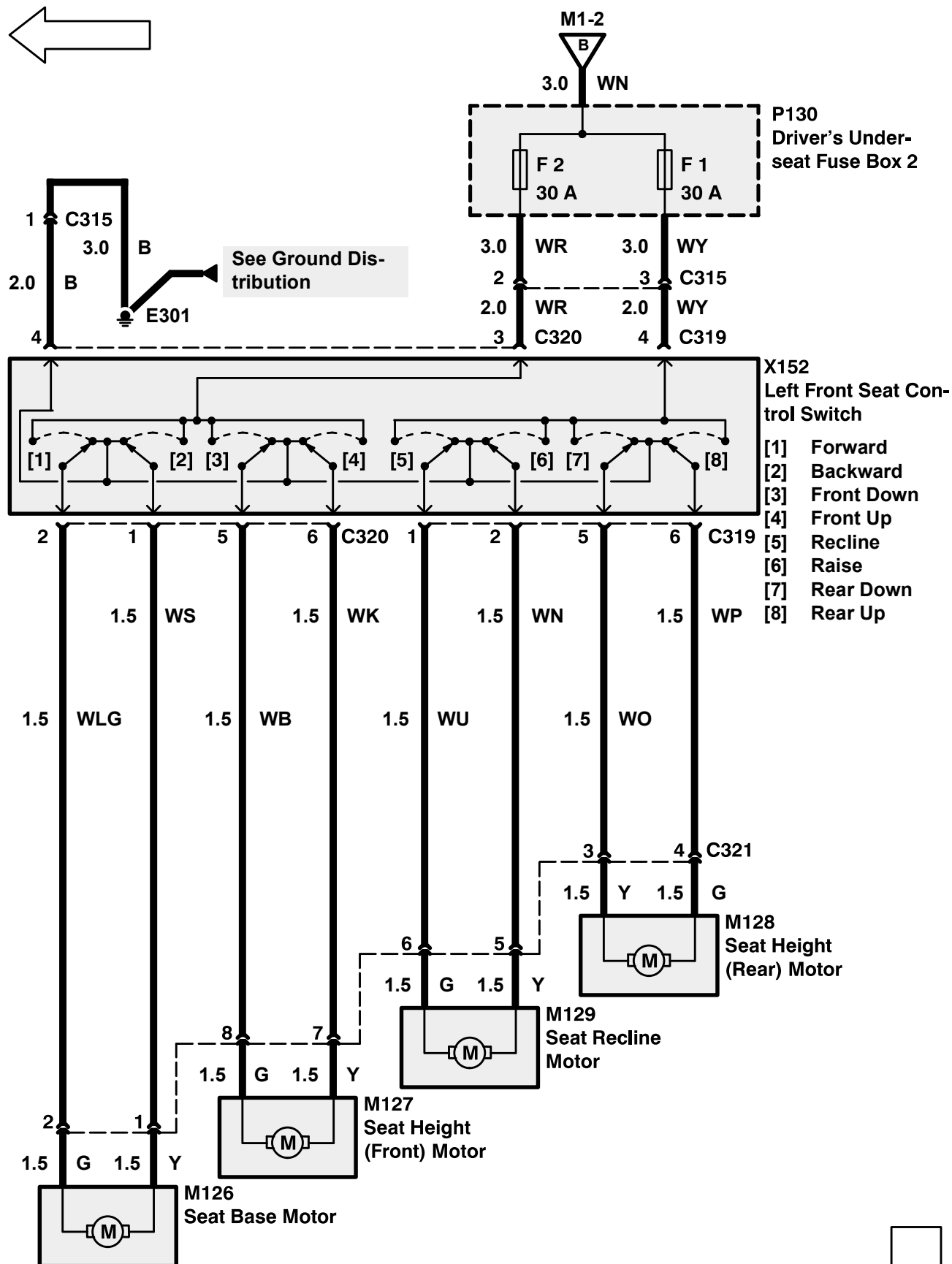
The Left Front Seat Control Switch (X152) controls 4 seat control motors via 8 switches. When each switch is moved to operate its corresponding motor, one seat switch applies ground while the other applies battery voltage to the respective seat motor. The motor turns to adjust the seat in the requested direction.

**Passenger Seat**

Battery voltage is applied to the Right Front Seat Control Switch (X121) at all times. When the Ignition Switch (X134) is in position I or II, the Right Seat Power Relay (K131) is energized, applying ground to the Right Front Seat Control Switch (X121). The Right Front Seat Control Switch (X121) controls 4 seat control motors via 8 switches. When each switch is moved to operate its corresponding motor, one seat switch applies ground while the other applies battery voltage to the respective seat motor. The motor turns to adjust the seat in the requested direction.





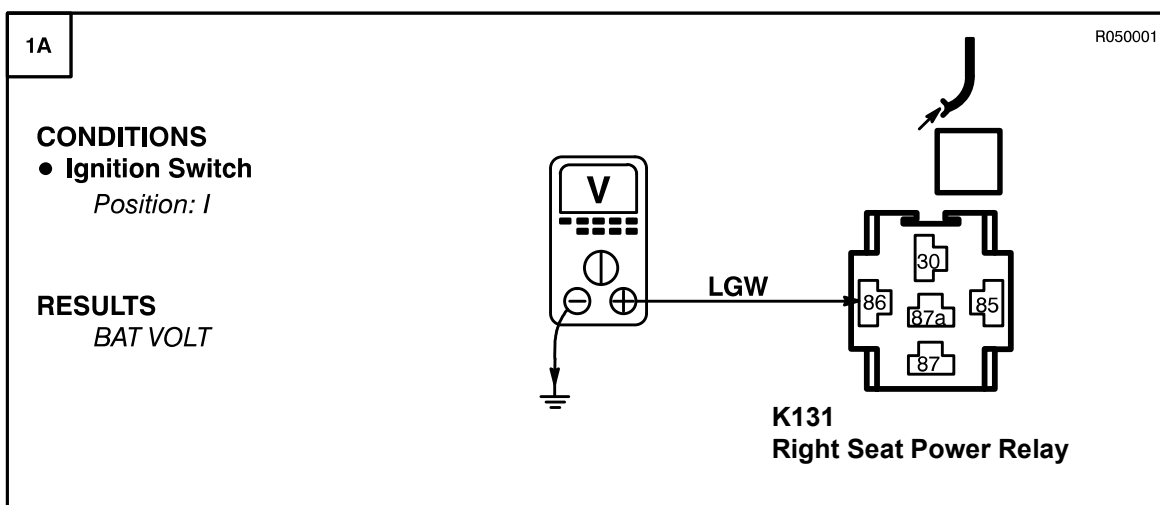


**TROUBLESHOOTING HINTS**

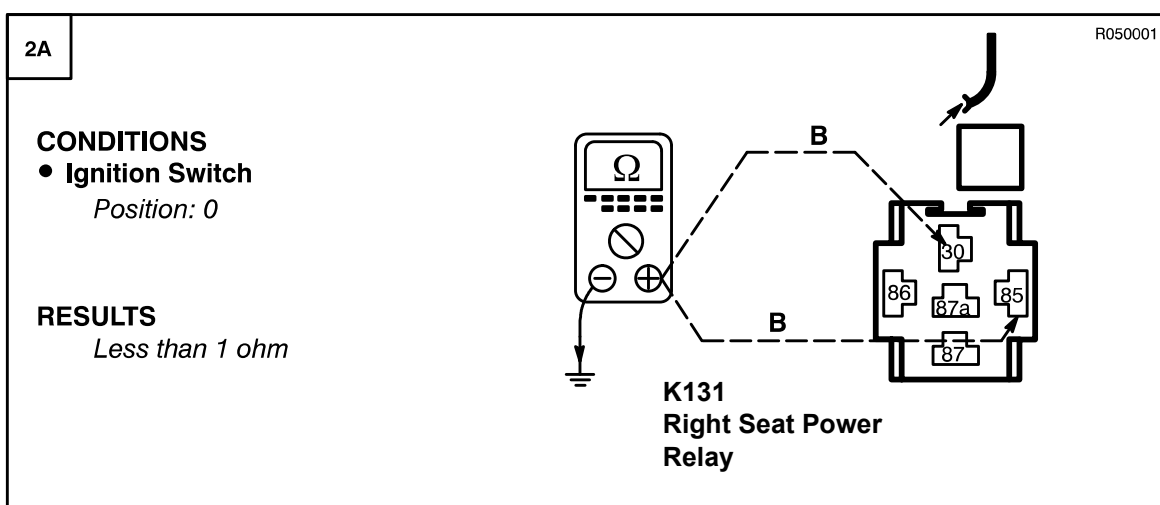
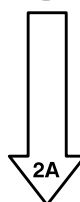
9. If the Right Front seat does not operate, check Maxi Fuse<sup>®</sup> MF3 of the Engine Compartment Fusebox (P125), Fuses F1 and F2 of Passenger's Underseat Fusebox (P116) and Fuse F6 of Fascia Fusebox (P126).
10. If the Left Front seat does not operate, check Maxi Fuse<sup>®</sup> MF3 of the Engine Compartment Fuse Box (P125) and Fuses F1, F2 of the Driver's Underseat Fuse Box (P130).
11. If both seats do not operate with the Left Front door closed, check Right Seat Power Relay (K131), B and BP wire.

**SYSTEM DIAGNOSIS**

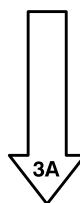
1. If the Right Front seat does not move in any direction, do Test A.
2. If some, but not all, of the Right Front power seat functions operate, do Test B.
3. If the Right Front seat is not moving forward or backward, do Test C.
4. If the rear of the Right Front seat does not move up or down, do Test D.
5. If the Right Front seatback does not move forward or recline, do Test E.
6. If the front of the Right Front seat does not move up or down, do Test F.
7. If the Left Front seat does not move in any direction, do Test G.
8. If some, but not all, of the Left Front seat functions operate, do Test H.
9. If the Left Front seat is not moving forward or backward, do Test I.
10. If the rear of the Left Front seat does not move up or down, do Test J.
11. If the Left Front seatback does not move forward or recline, do Test K.
12. If the front of the Left Front seat does not move up or down, do Test L.

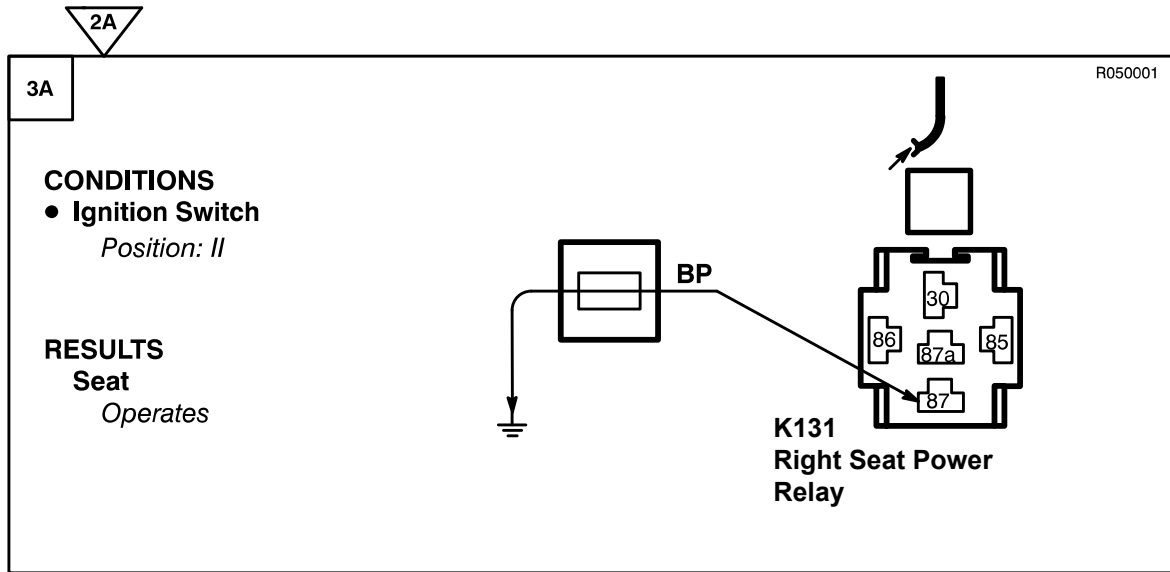
**Test A****PROBLEM CAUSE**

- LGW Wire
- F6 Fuse

**PROBLEM CAUSE**

- B Wire
- Ground Connections





PROBLEM CAUSE

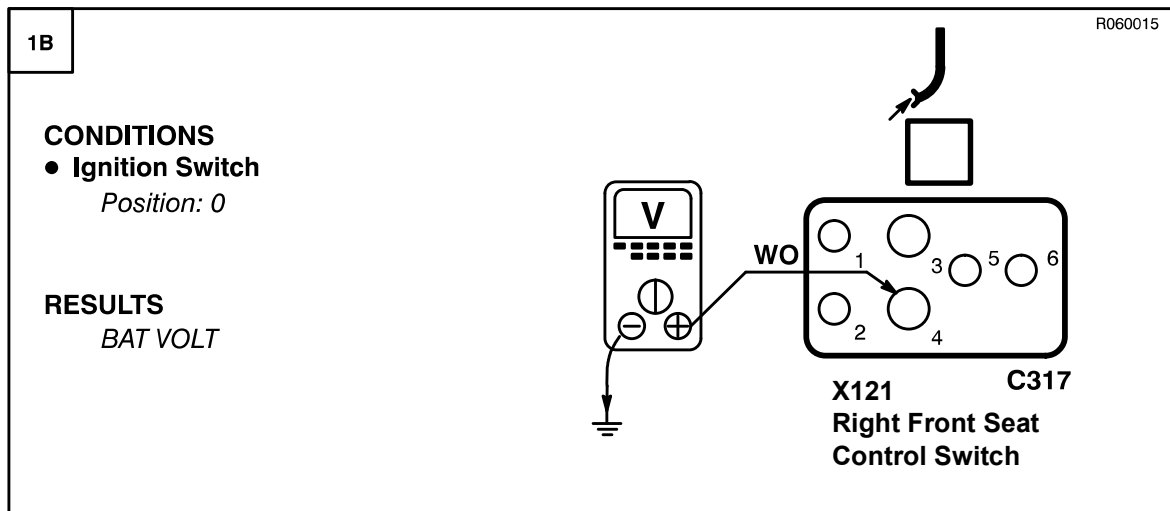
- BP Wire
- B Wire



PROBLEM CAUSE

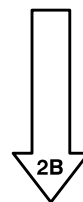
- Right Seat Power  
Relay

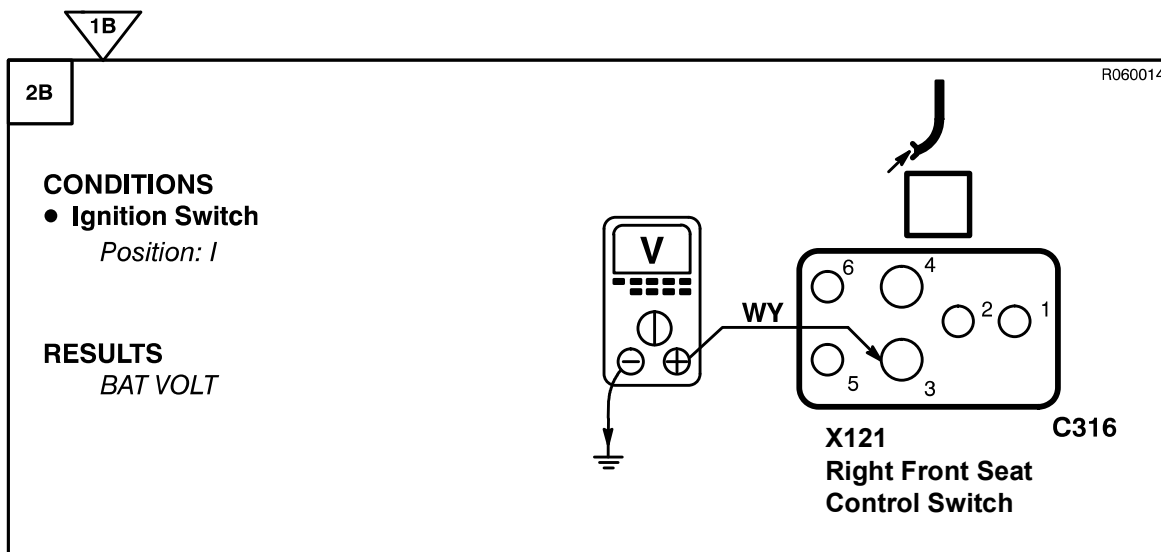
Test B



PROBLEM CAUSE

- F2 Fuse
- WO Wire

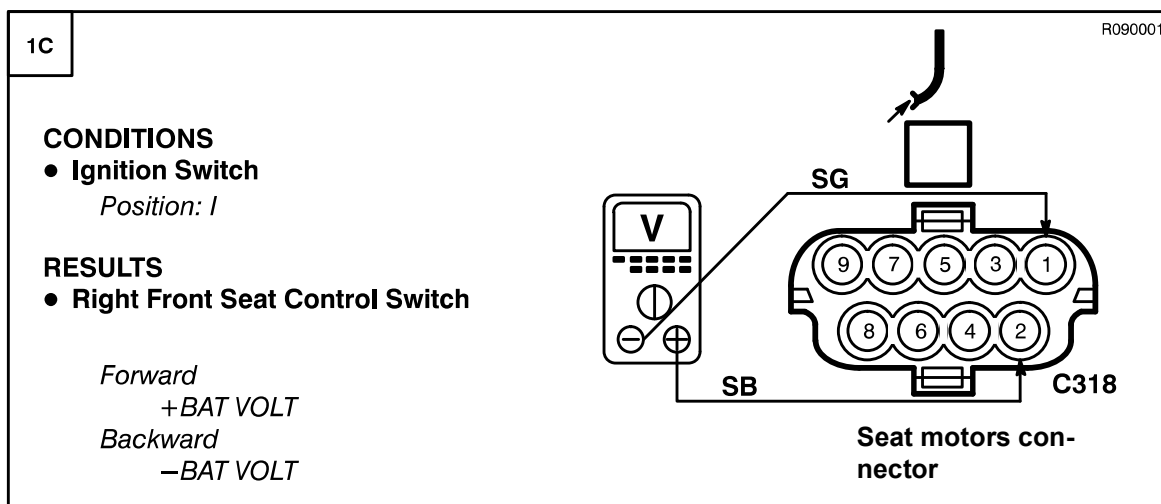


**PROBLEM CAUSE**

- F1 Fuse
- WU Wire

**PROBLEM CAUSE**

- Right Front Seat Control Switch

**Test C****PROBLEM CAUSE**

- SG Wire
- SB Wire
- Right Front Seat Control Switch

**PROBLEM CAUSE**

- Seat Base Motor



**Test D**

**1D**

**CONDITIONS**

- Ignition Switch  
*Position: I*

**RESULTS**

- Right Front Seat Control Switch

*Rear up*  
-BAT VOLT  
*Rear down*  
+BAT VOLT

SR

SP

C318

Seat motors connector

R090001

**PROBLEM CAUSE**

- SR Wire
- SP Wire
- Right Front Seat Control Switch

**PROBLEM CAUSE**

- Seat Height (Rear) Motor

**Test E**

**1E**

**CONDITIONS**

- Ignition Switch  
*Position: I*

**RESULTS**

- Right Front Seat Control Switch

*Recline*  
+BAT VOLT  
*Raise*  
-BAT VOLT

SN

SU

C318

Seat motors connector

R090001

**PROBLEM CAUSE**

- SN Wire
- SU Wire
- Right Front Seat Control Switch

**PROBLEM CAUSE**

- Seat Recline Motor

**Test F**

1F

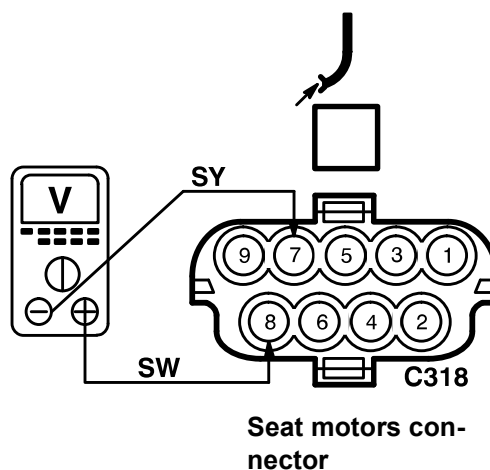
R090001

**CONDITIONS**

- Ignition Switch

*Position: I***RESULTS**

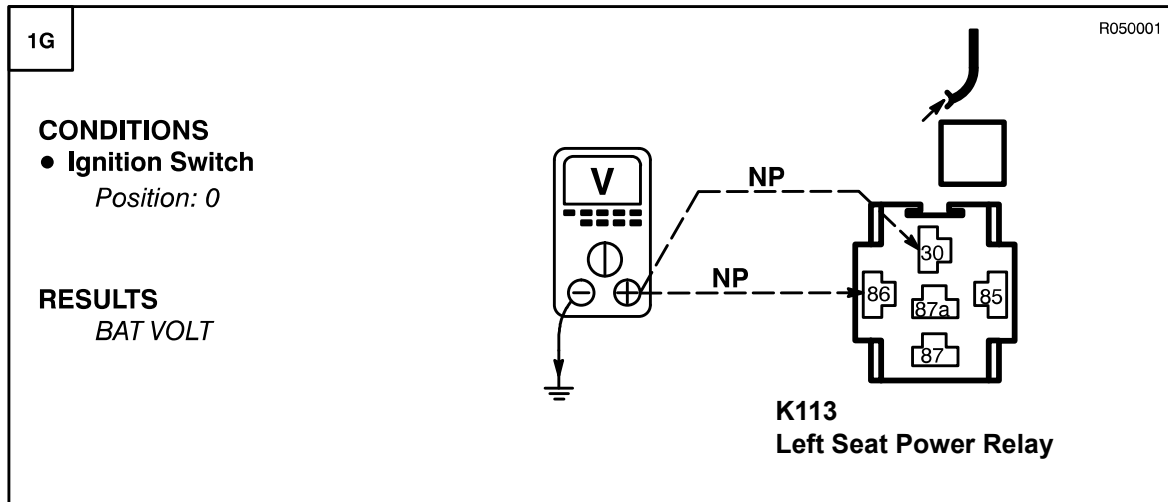
- Right Front Seat Control Switch

*Front down**+BAT VOLT**Front up**-BAT VOLT*Seat motors con-  
nector**PROBLEM CAUSE**

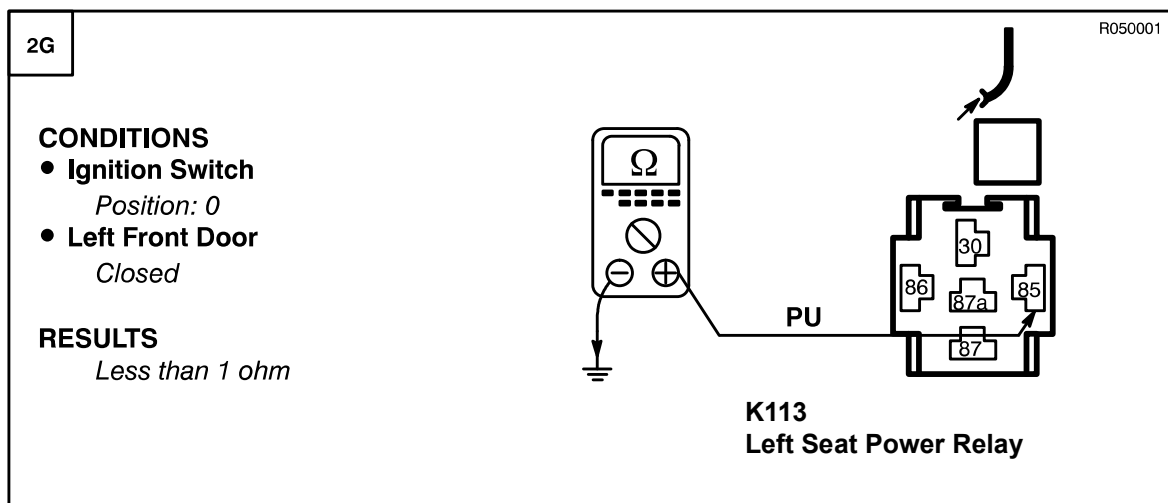
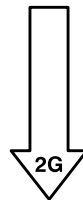
- SY Wire
- SW Wire
- Right Front Seat Control Switch

**PROBLEM CAUSE**

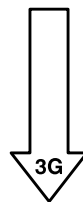
- Seat Height (Front) Motor

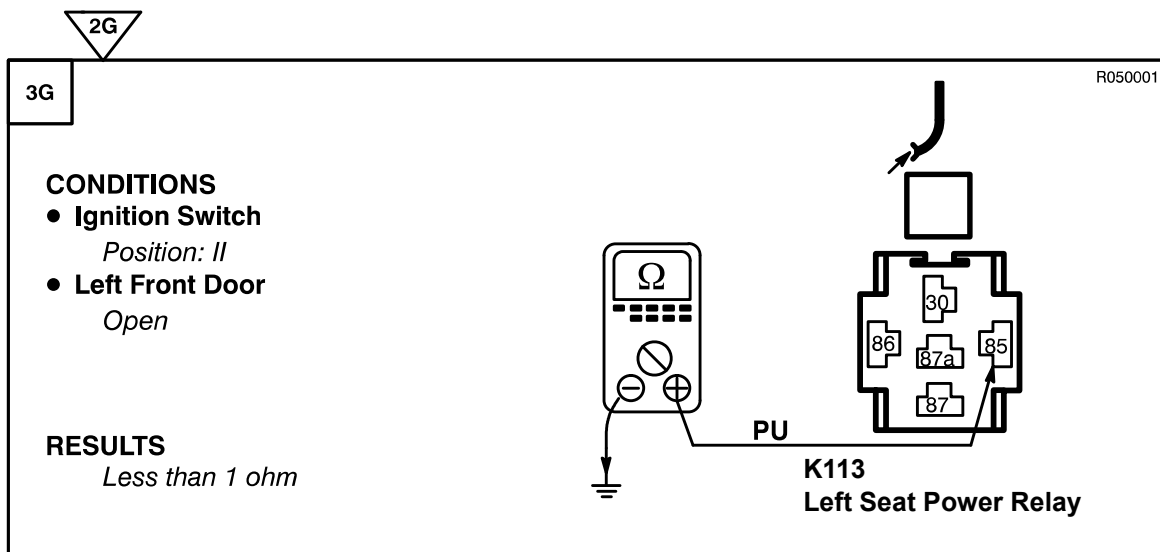
**Test G**

**PROBLEM CAUSE**  
- NP Wire



**PROBLEM CAUSE**  
- PU Wire  
- PG Wire  
- Left Seat Power Relay Diode  
- Left Front Door Switch

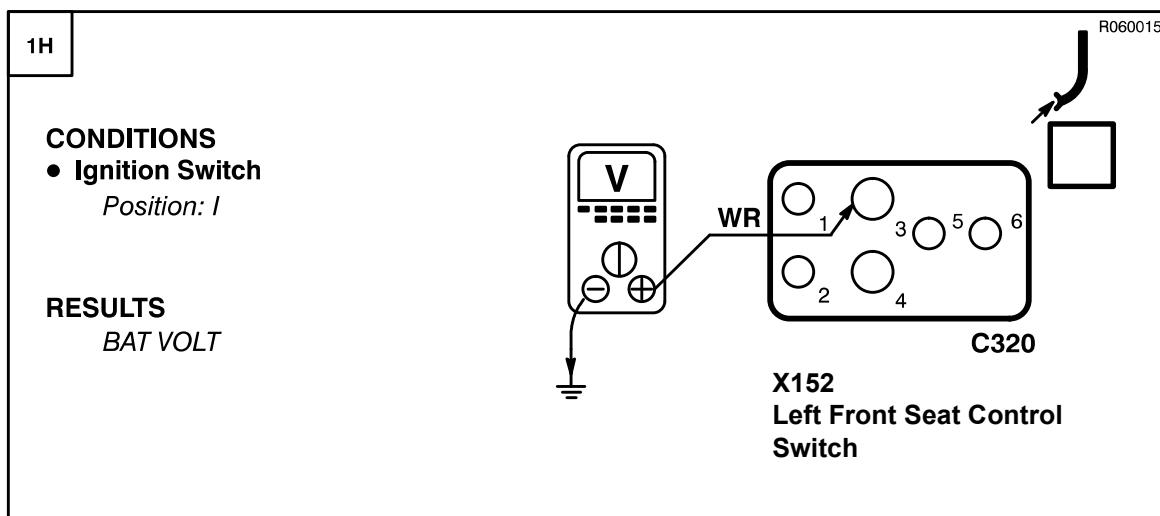


**PROBLEM CAUSE**

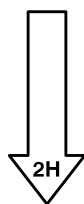
- BP Wire
- PU Wire
- Right Seat Power Relay Diode

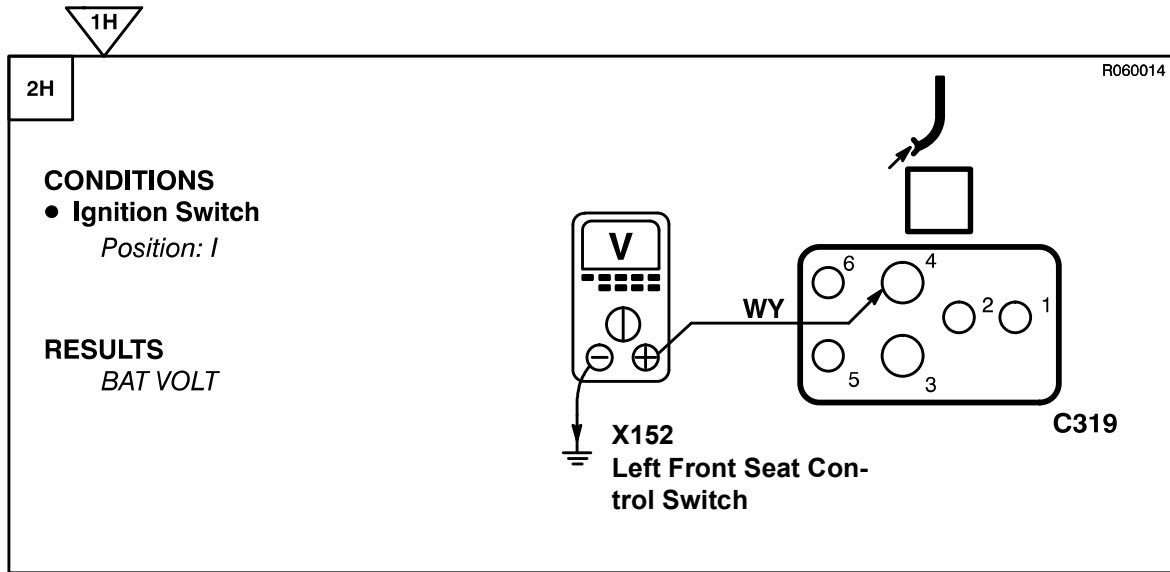
**PROBLEM CAUSE**

- Left Seat Power Relay

**Test H****PROBLEM CAUSE**

- F2 Fuse
- WR Wire

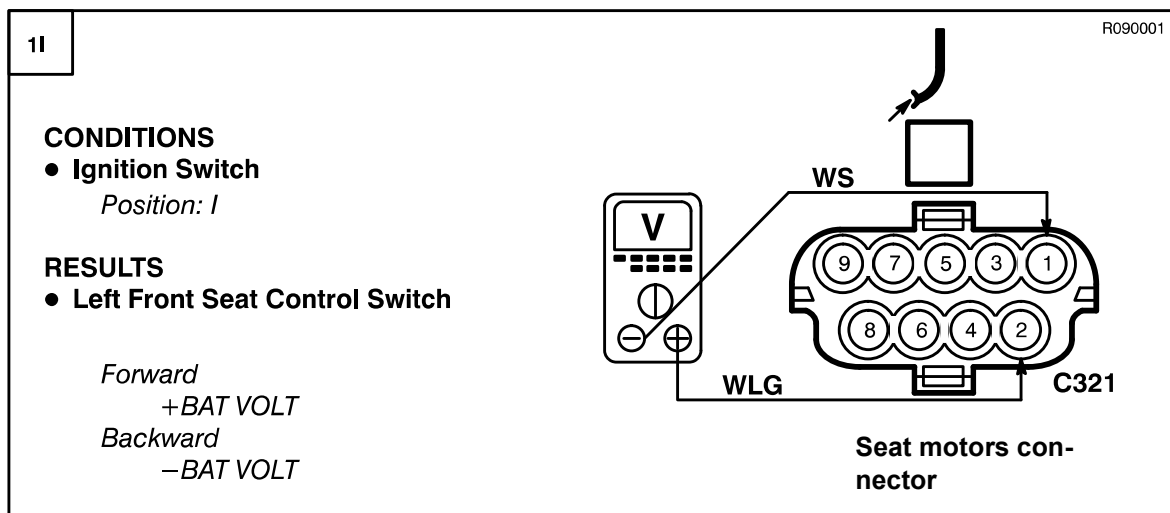


**PROBLEM CAUSE**

- F1 Fuse
- WY Wire

**PROBLEM CAUSE**

- Left Front Seat Control Switch

**Test I****PROBLEM CAUSE**

- WLG Wire
- WS Wire
- Left Front Seat Control Switch

**PROBLEM CAUSE**

- Seat Base Motor

**Test J**

**1J**

**CONDITIONS**

- Ignition Switch  
*Position: I*

**RESULTS**

- Left Front Seat Control Switch

*Rear up*  
-BAT VOLT

*Rear down*  
+BAT VOLT

WO

WP

C321

Seat motors connector

R090001

**PROBLEM CAUSE**

- WP Wire
- WO Wire
- Left Front Seat Control Switch

**PROBLEM CAUSE**

- Seat Height (Rear) Motor

**Test K**

**1K**

**CONDITIONS**

- Ignition Switch  
*Position: I*

**RESULTS**

- Left Front Seat Control Switch

*Recline*  
+BAT VOLT

*Raise*  
-BAT VOLT

WN

WU

C321

Seat motors connector

R090001

**PROBLEM CAUSE**

- WU Wire
- WN Wire
- Left Front Seat Control Switch

**PROBLEM CAUSE**

- Seat Recline Motor

## Test L

1L

R090001

**CONDITIONS**

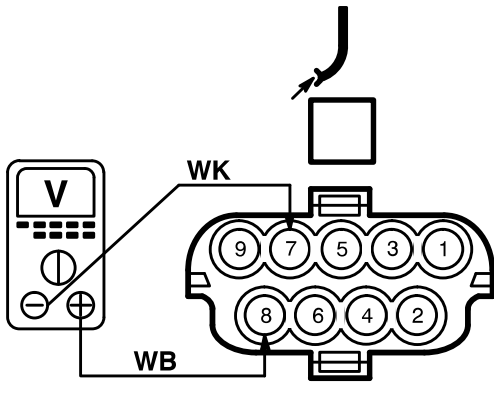
- Ignition Switch  
*Position: I*

**RESULTS**

- Left Front Seat Control Switch

*Front down*  
+BAT VOLT

*Front up*  
-BAT VOLT



Seat motors connector



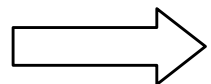
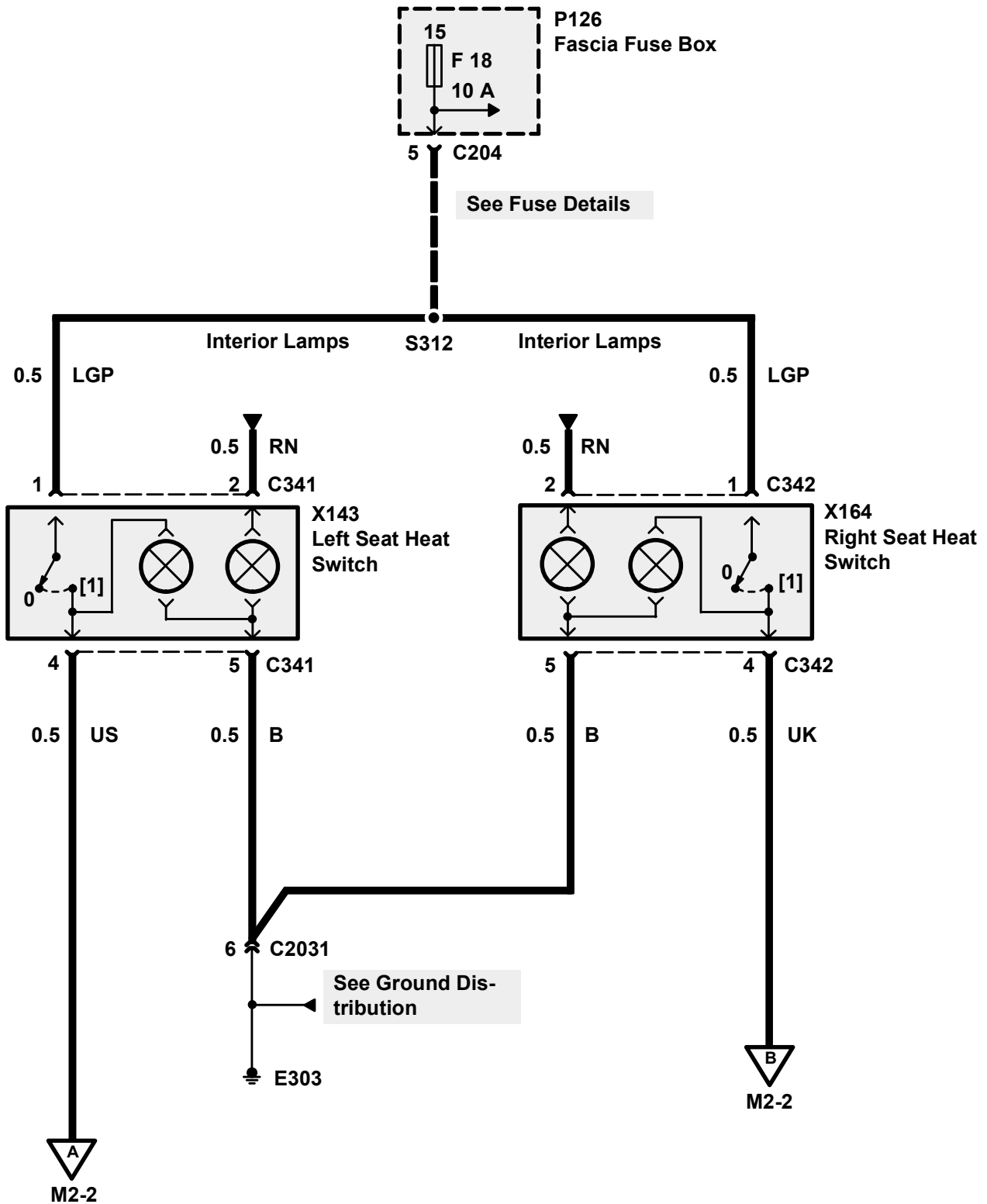
## PROBLEM CAUSE

- WB Wire
- WK Wire
- Left Front Seat Control Switch

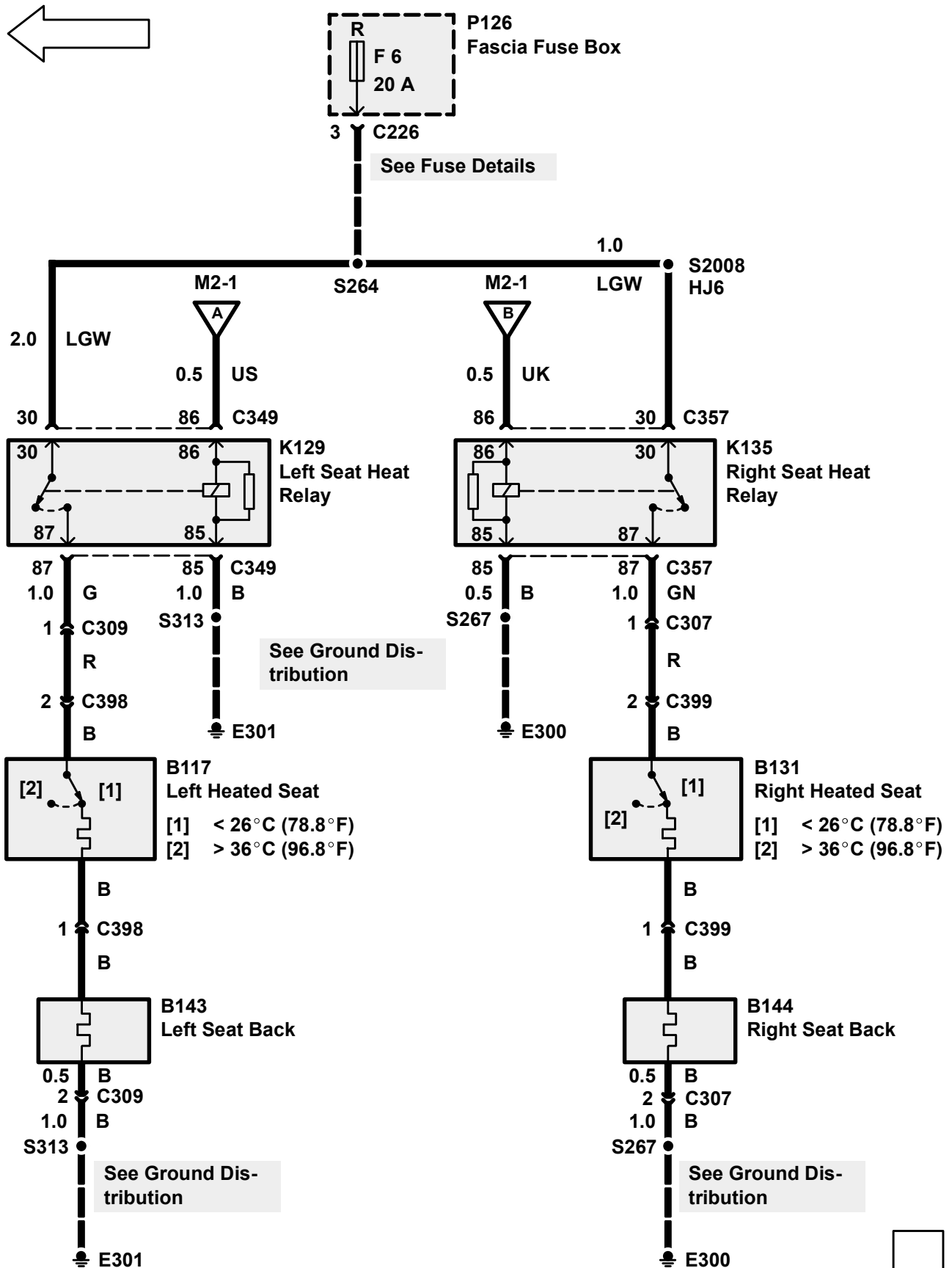


## PROBLEM CAUSE

- Seat Height (Front) Motor







**CIRCUIT OPERATION**

When the Ignition Switch (X134) is in Position II, voltage is supplied to the power mirrors circuit by fuse F15.

**Left/Right Movement**

When a selected mirror is moved to the left by the Mirror Adjustment Switch (X146) the internal contacts move to the "Left/Right Select" and "Move Left or Up" position. The internal solenoid of the selected mirror actuators (M115, M123) is grounded at E201 through the PW, WP, BK and BN wires, the switch contacts, and the B wire. The solenoid is de-energized because the other side of the coil is also grounded at E200 or E201 through the B wire. The de-energized solenoid engages the motor in the actuator with the Left/Right Gearbox. Voltage is applied to the selected mirror actuator's motor at terminal 4 through the SW and PR wires. The selected mirror actuator's motor is grounded at E201 through the PU, BU and BP wires, the switch contacts, and the B wire. The mirror now moves left.

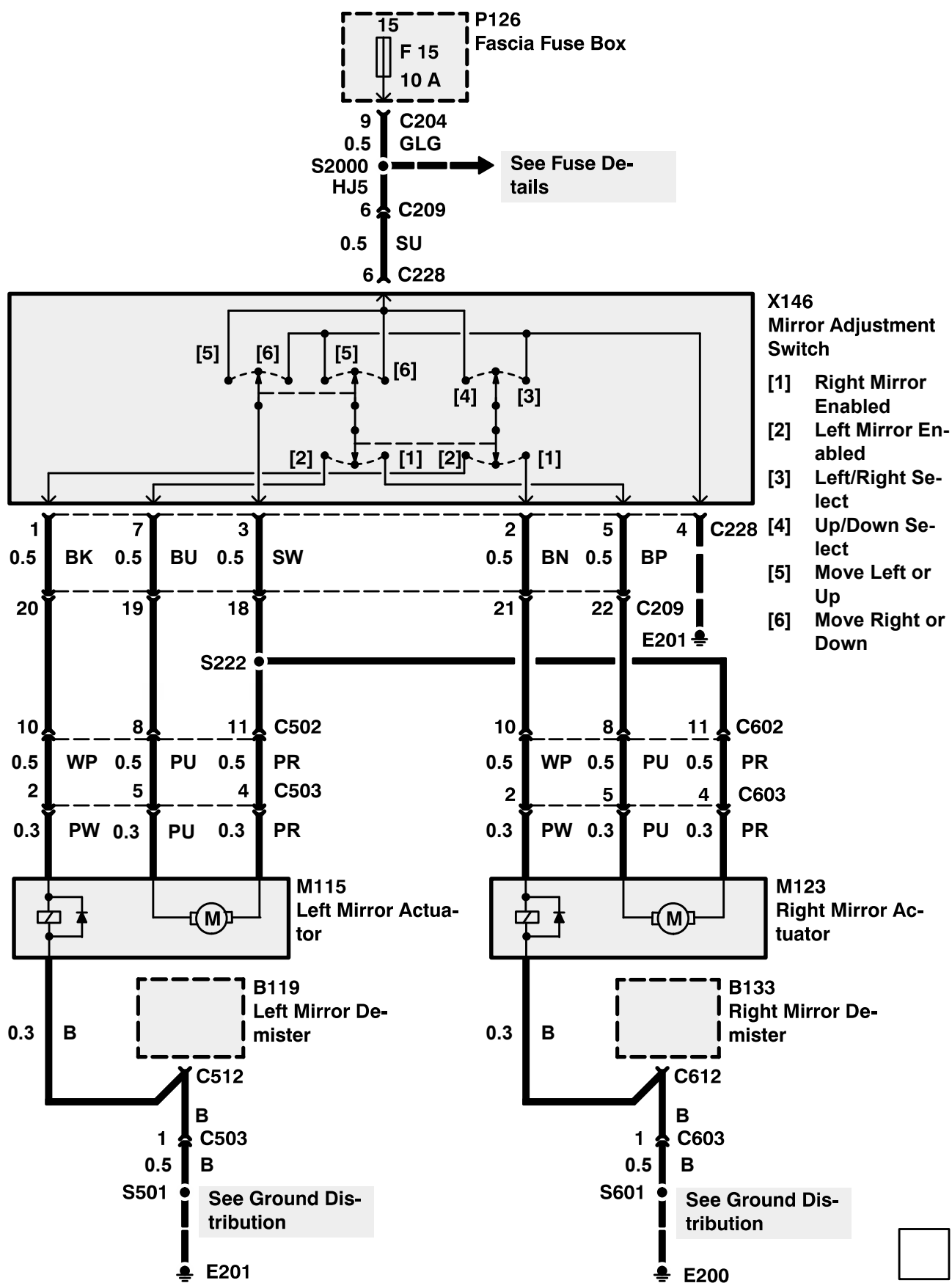
When a selected mirror is moved to the right by the Mirror Adjustment Switch (X146) the internal contacts remain in the "Left/Right Select" position but move to the "Move Right or Down" position. The internal solenoid of the selected mirror actuator (M112, M113) remains de-energized. Voltage is now applied to the selected mirror actuator's motor at terminal 5 through the PU, BU and PB wires. The selected mirror actuator's motor is now grounded at E201 through the PR and SW wires, the switch contacts, and the B wire. Since the polarity of the voltage to the motor has been reversed, the mirror now moves right.

**UP/Down Movement**

When a selected mirror is moved up by the Mirror Adjustment Switch (X146) the internal contacts move to the "Up/Down Select" and "Move Left or Up" position. Voltage is applied to the internal solenoid of the selected mirror actuator through the BN, BK, WP, and PW wires. The solenoid energizes because the other side of the coil is grounded at E200 or E201 through the B wire. The energized solenoid engages the motor in the actuator with the Up/Down Gearbox. Voltage is

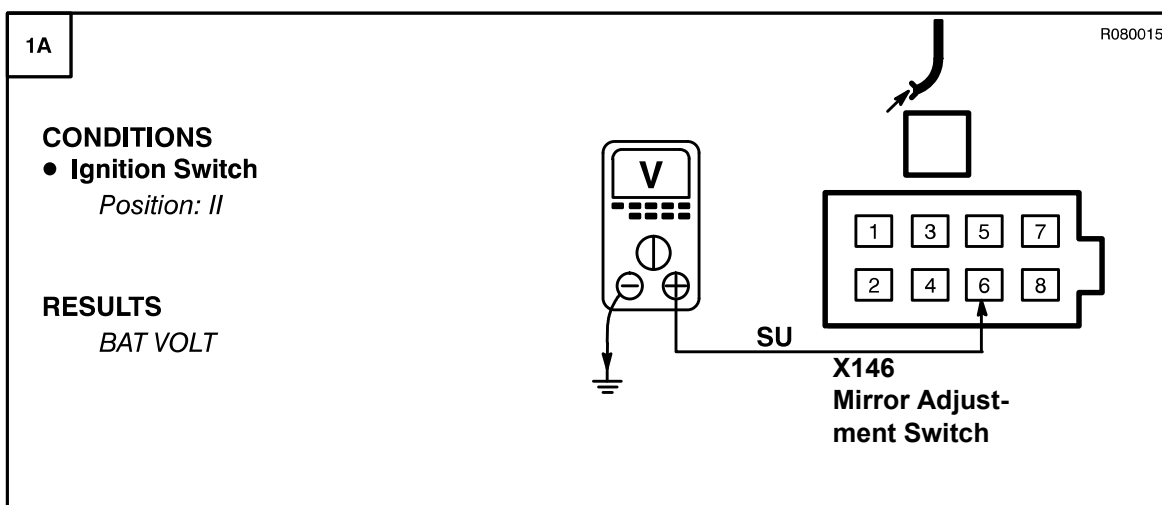
applied to the selected mirror actuator's motor at terminal 4 through the SW and PR wires. The selected mirror actuator's motor is grounded at E201 through the BU, PU and BP wires, the switch contacts, and the B wire. The mirror now moves up.

When a selected mirror is moved down by the Mirror Adjustment Switch (X146) the internal contacts remain in the "Up/Down Select" position but move to the "Move Right or Down" position. The internal solenoid remains energized. Voltage is now applied to the selected mirror actuator's motor at terminal 5 through the BU, PU and BP wires. The selected mirror actuator's motor is now grounded at E201 through the PR and SW wires, the switch contacts, and the B wire. Since the polarity of the voltage to the motor has been reversed, the mirror now moves down.

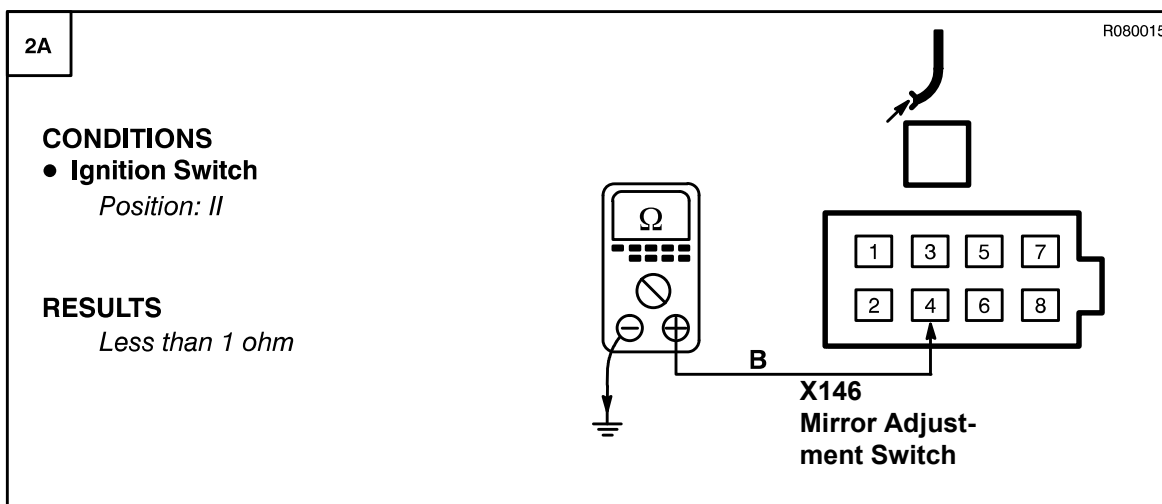
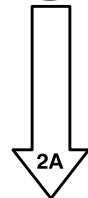


**SYSTEM DIAGNOSIS**

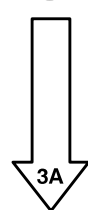
1. If the mirrors do not operate at all, do Test A.
2. If only one mirror does not operate, do Test B, the Mirror Actuator (M115, M123) test.

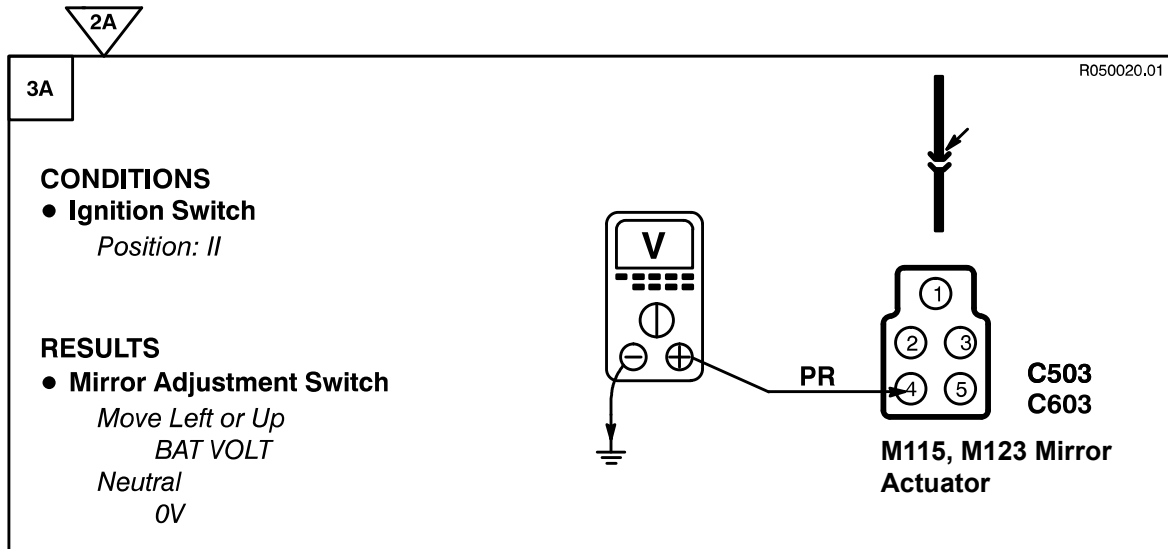
**Test A****PROBLEM CAUSE**

- F15 Wire
- GLG Wire
- SU Wire

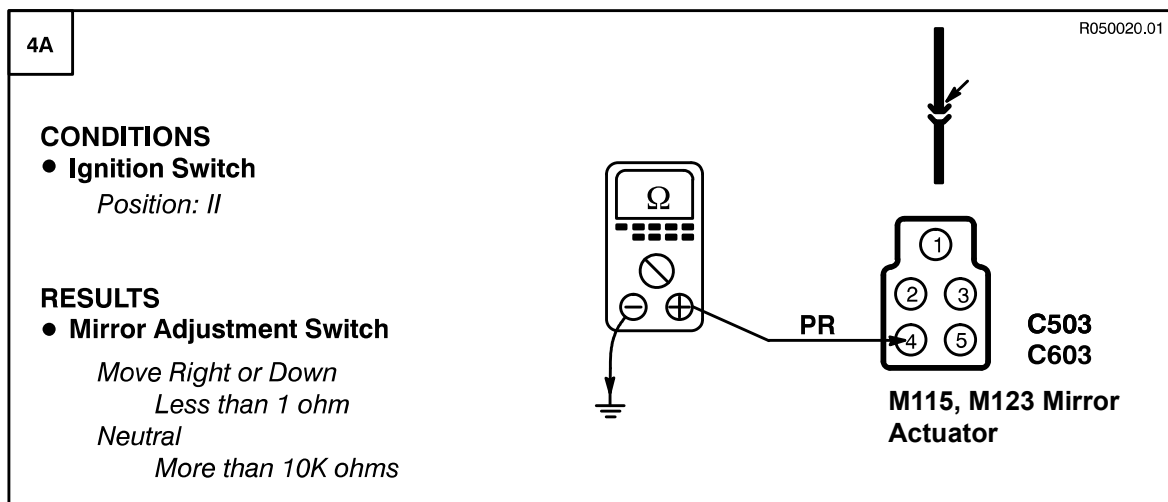
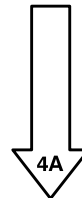
**PROBLEM CAUSE**

- B Wire
- Ground Con-  
nections

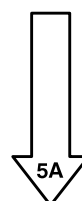


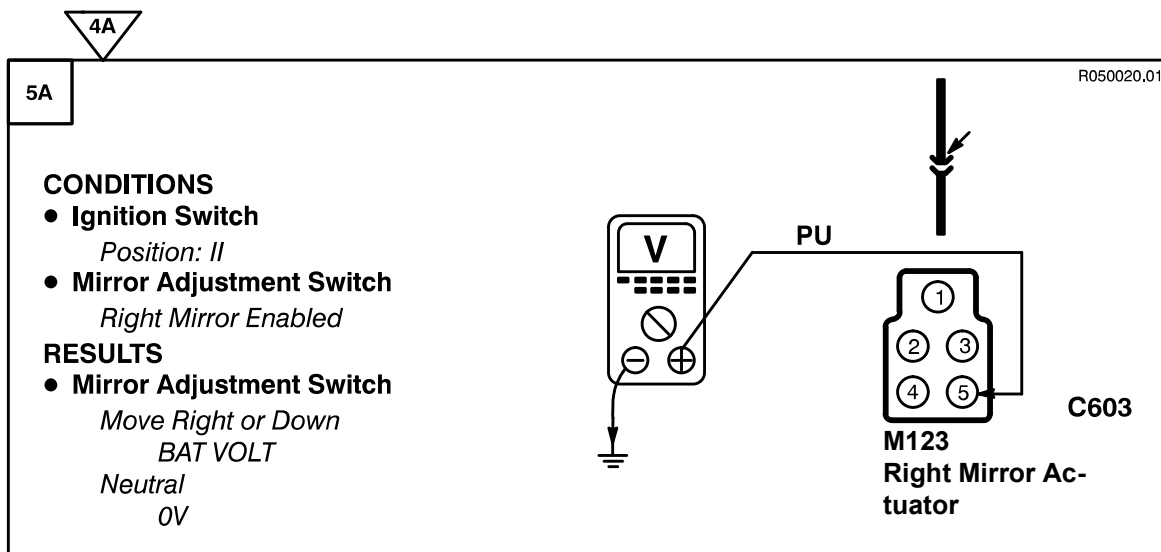
**PROBLEM CAUSE**

- SW Wire
- PR Wire
- Mirror Adjust-ment Switch

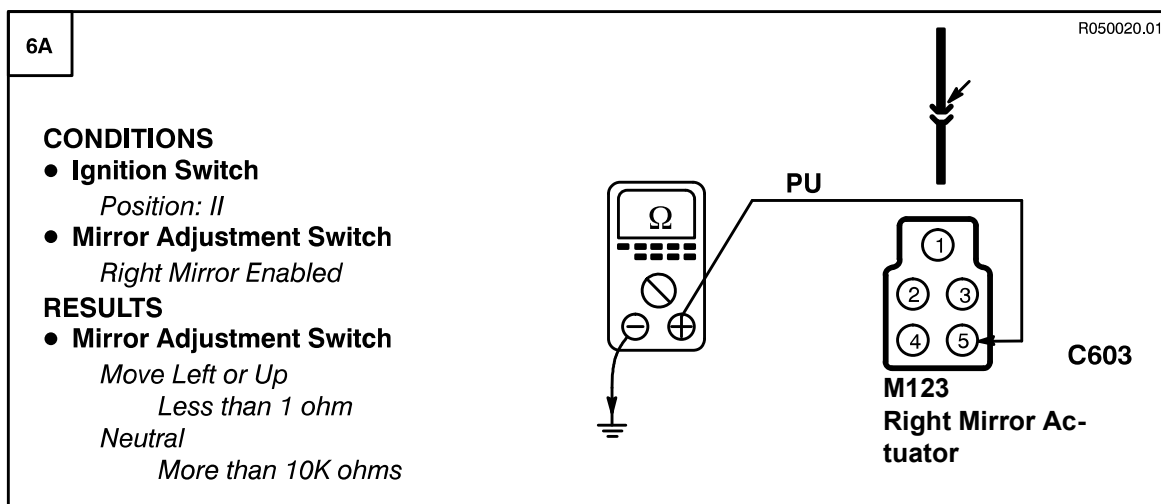
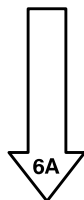
**PROBLEM CAUSE**

- Mirror Adjust-ment Switch

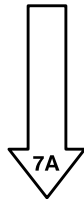


**PROBLEM CAUSE**

- BU Wire
- PU Wire
- Mirror Adjust-  
ment Switch

**PROBLEM CAUSE**

- Mirror Adjust-  
ment Switch



6A

7A

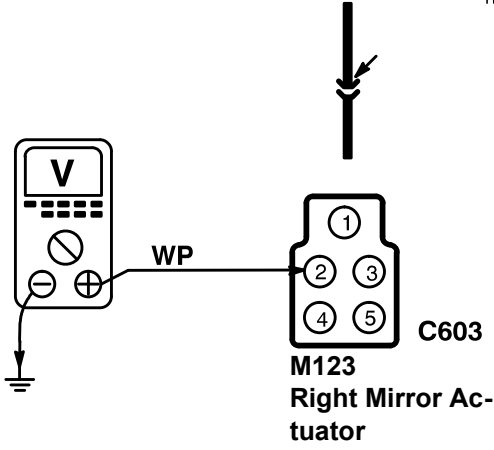
R050020.01

**CONDITIONS**

- Ignition Switch  
*Position: II*
- Mirror Adjustment Switch  
*Right Mirror Enabled*

**RESULTS**

- Mirror Adjustment Switch  
*Move Up or Down*  
*BAT VOLT*  
*Neutral*  
*0V*


**PROBLEM CAUSE**

- BN Wire
- WP Wire
- Mirror Adjustment Switch



8A

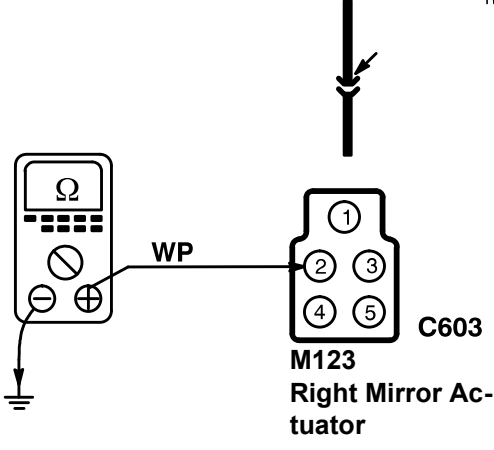
R050020.01

**CONDITIONS**

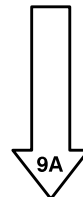
- Ignition Switch  
*Position: II*
- Mirror Adjustment Switch  
*Right Mirror Enabled*

**RESULTS**

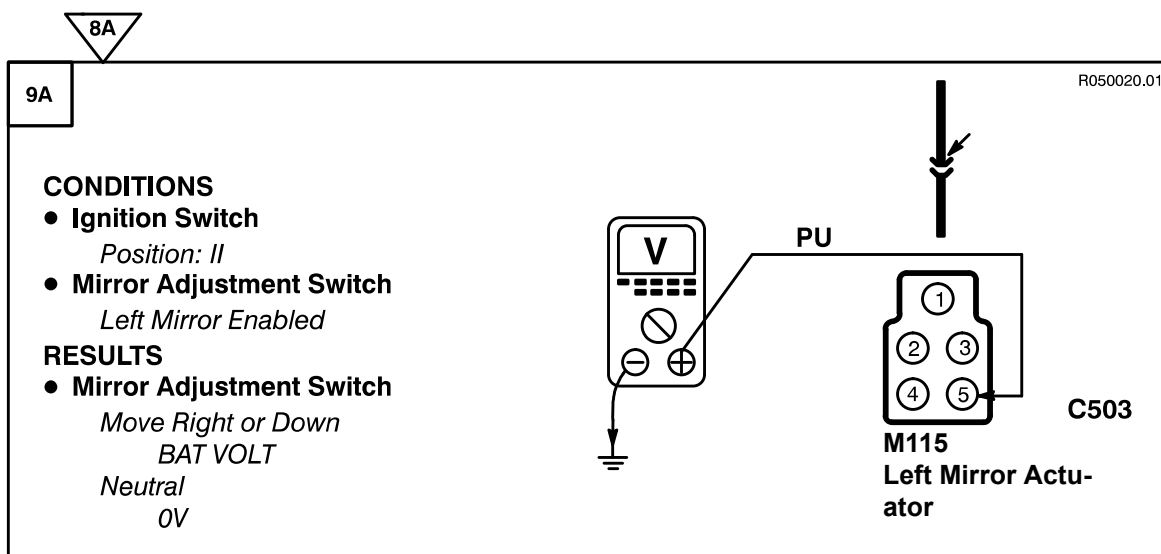
- Mirror Adjustment Switch  
*Move Left or Right*  
*Less than 1 ohm*  
*Neutral*  
*More than 10K ohms*


**PROBLEM CAUSE**

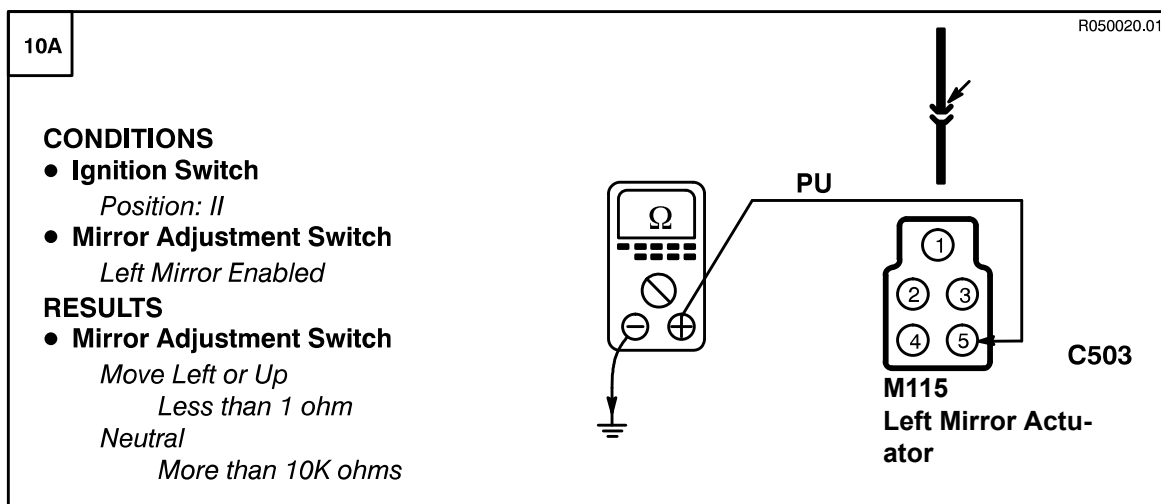
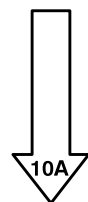
- Mirror Adjustment Switch



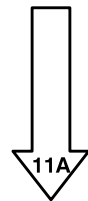


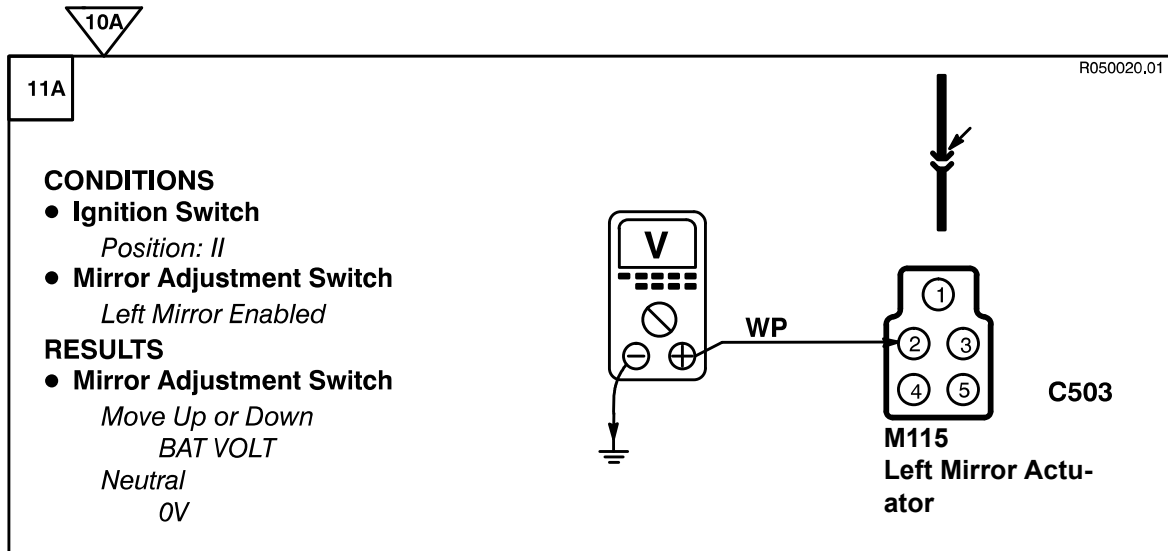
**PROBLEM CAUSE**

- BU Wire
- PU Wire
- Mirror Adjustment Switch

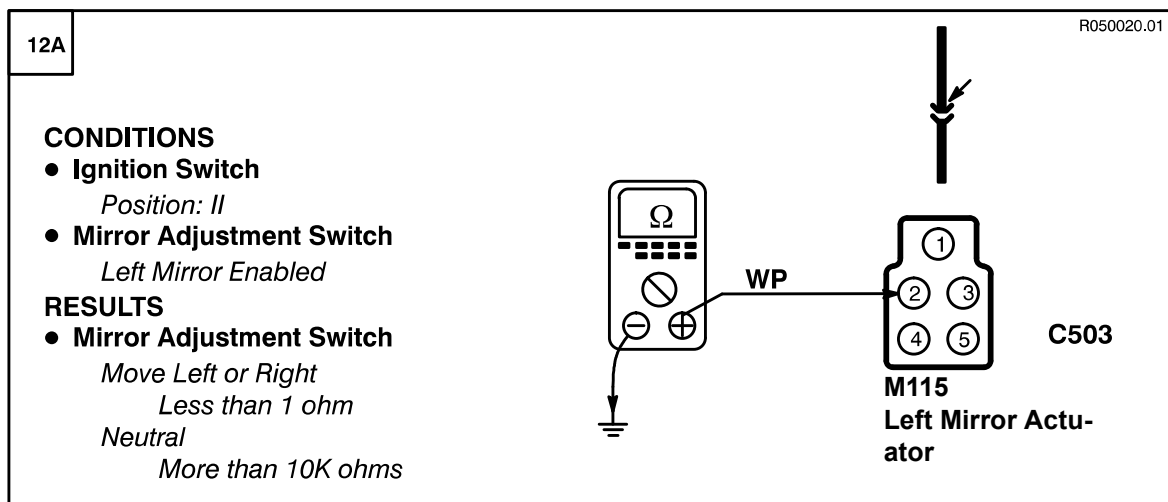
**PROBLEM CAUSE**

- Mirror Adjustment Switch



**PROBLEM CAUSE**

- BK Wire
- WP Wire
- Mirror Adjustment Switch

**PROBLEM CAUSE**

- Mirror Adjustment Switch

**PROBLEM CAUSE**

- M115, M123 Mirror Actuator

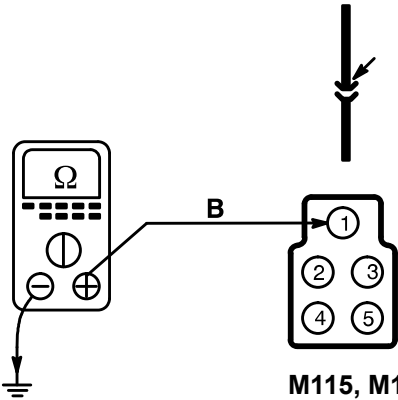
**Test B**

**1B**

**CONDITIONS**

- Ignition Switch  
*Position: 0*

**RESULTS**  
*Less than 1 ohm*



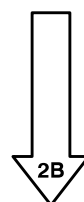
**C503  
C603**

**M115, M123 Mirror Actuator**

R050020.01

**PROBLEM CAUSE**

- B Wire
- Ground Connections



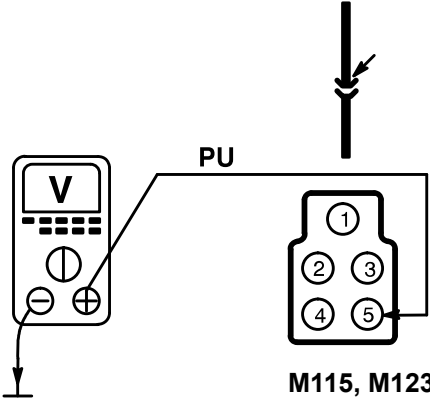
**2B**

**CONDITIONS**

- Ignition Switch  
*Position: II*
- Mirror Adjustment Switch  
*Select suspect mirror*

**RESULTS**

- Mirror Adjustment Switch  
*Move Right or Down  
BAT VOLT  
Move Left or Up  
0V*



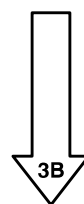
**C503  
C603**

**M115, M123 Mirror Actuator**

R050020.01

**PROBLEM CAUSE**

- BU Wire
- PU Wire
- Mirror Adjustment Switch



2B

3B

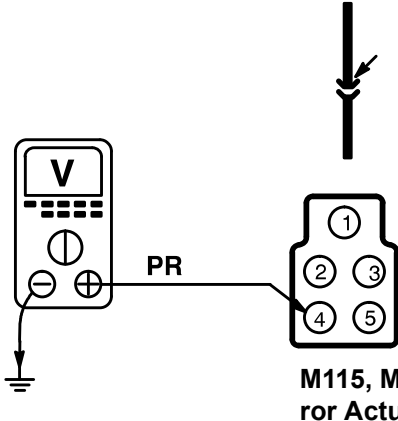
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**CONDITIONS**

- Ignition Switch  
*Position: II*
- Mirror Adjustment Switch  
*Select suspect mirror*

**RESULTS**

- Mirror Adjustment Switch  
*Move Left or Up*  
BAT VOLT  
*Move Right or Down*  
0V



PR

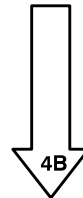
C503  
C603

M115, M123 Mirror Actuator



## PROBLEM CAUSE

- SW Wire
- PR Wire
- Mirror Adjustment Switch



4B

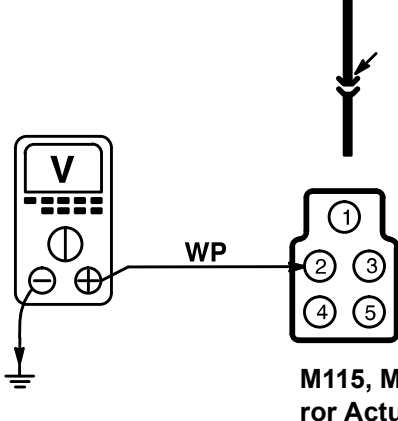
R050020.01

**CONDITIONS**

- Ignition Switch  
*Position: II*
- Mirror Adjustment Switch  
*Select suspect mirror*

**RESULTS**

- Mirror Adjustment Switch  
*Move Up or Down*  
BAT VOLT  
*Move Left or Right*  
0V



WP

C503  
C603

M115, M123 Mirror Actuator



## PROBLEM CAUSE

- BK Wire
- WP, BN Wire
- Mirror Adjustment Switch



## PROBLEM CAUSE

- M115, M123 Mirror Actuator

**CIRCUIT OPERATION****Power and Ground**

Fuse F4 applies battery voltage to retain the memory circuit of the Memory Seat ECU (Z146) at all times. Voltage to operate the seat motors (M126, M127, M128, M129) and the mirror actuators (M115, M123) is supplied to the Memory Seat ECU from fuses F2 and F3. The Maxi Fuse MF3 supplies voltage to fuses F2 and F3 whenever the Left Seat Power Relay (K113) is energized. The relay is energized when the driver's door is open, causing the Left Front Door Switch (X150) to ground the relay's coil, or when the ignition is in position II, causing the Right Seat Power Relay (K131) to ground the Left Seat Power Relay. The Memory Seat ECU is grounded at ground E300 through the B wires.

**Inhibit Inputs**

The Memory Seat ECU (Z146) will not permit movement to the memorized position when the ignition is in position II unless the handbrake is applied and vehicle speed is below 6 kmh. Vehicles equipped with an automatic transmission must also be in PARK or NEUTRAL for operation to occur.

The ECU monitors the Handbrake Switch (X191) position at terminal C302/24. When the handbrake is in position 1, the brake is applied and ground is applied to the ECU terminal C302/24.

Vehicle speed is monitored by the ECU at terminal C302/7 through the vehicle speed output signal supplied by the Instrument Cluster (Z142).

The ECU monitors gear position through the Park/Neutral Position Switch (X167). The switch grounds the ECU at terminal C302/11 when the transmission is in PARK or NEUTRAL.

**Seat Motors**

4 reversible motors control seat position, with each motor controlling 1 plane of movement. The Memory Seat ECU (Z146) applies both voltage and ground to the motors based on the position of the Driver Seat Control Switch (X121) or the execution of a memory position.

**Memory Mirror Actuators (M115, M123)**

Each Memory Mirror Actuator contains 2 motors which controls 1 plane of movement. The Memory Seat ECU (Z146) applies both voltage and ground to the motors based on the position of the Mirror Adjustment Switch (X146) or the execution of a memory position.

### Setting Memory

When the round, green memory set button is depressed, terminal C324/1 of the Memory Seat ECU (Z146) is grounded through the switch contacts. This signals the ECU to record the seat position as reported through the seat position sensors (X194, X195, X196, X197) and the mirror positions through the potentiometers of the Memory Mirror Actuators (M115, M123).

When memory seat position switch 1 or 2 is depressed, ECU terminals C324/3 or C324/2 are grounded through the switch. This signals the ECU to record the current position as position '1' or '2'. Subsequent depressions of memory seat position switch 1 or 2 will cause the ECU to move the seat and mirrors to the position retained in memory. The memory can be cleared by setting a new position or by removing Fuse F4 of the Driver's Underseat Fuse Box (P108).

### SELF TEST MODE

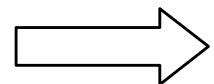
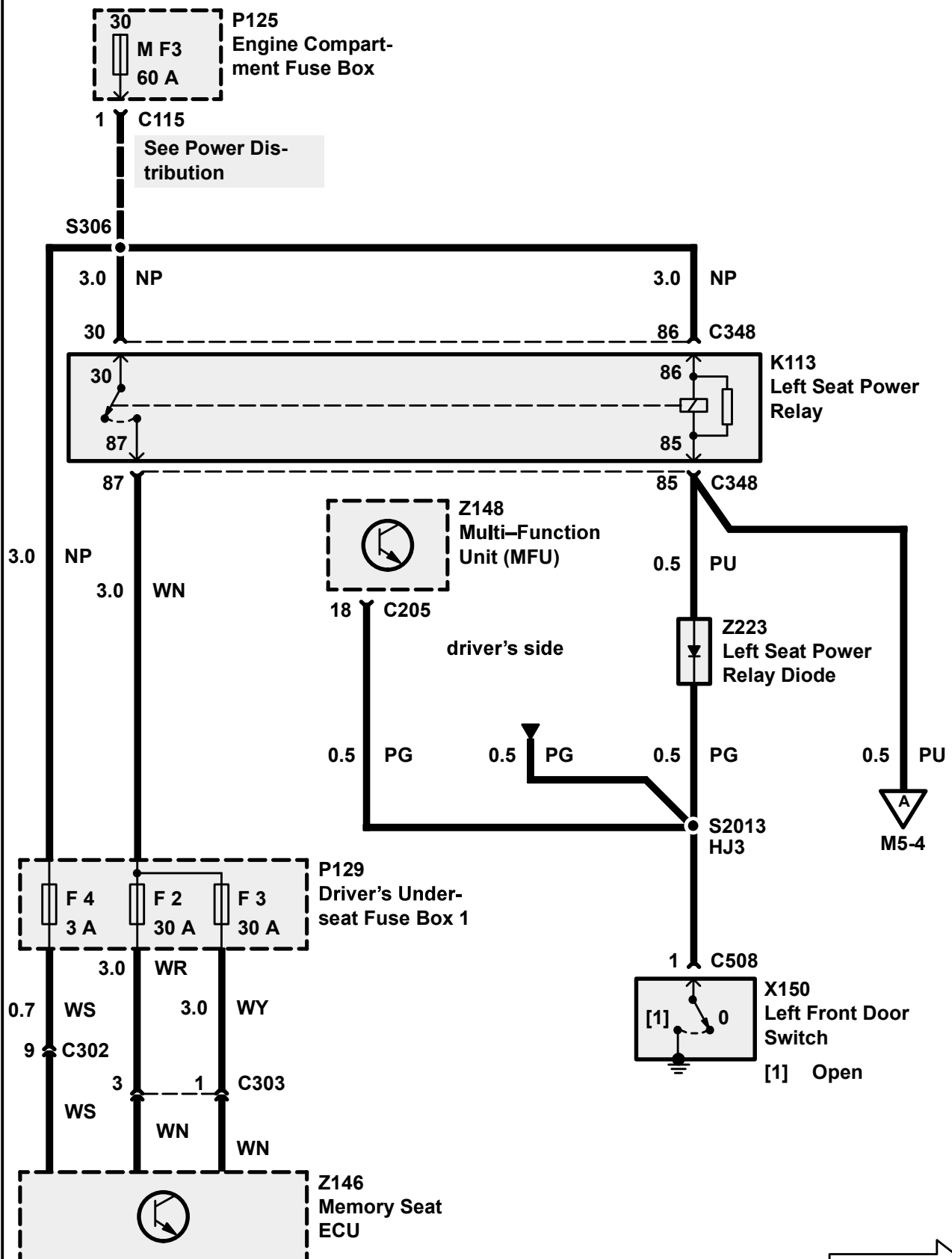
The Self Test Mode is a test routine the Memory Seat ECU (Z146) performs when initialized. When the ECU is commanded into the Self Test Mode, it operates the seats and the mirrors in all planes of travel. Perform the self test before attempting any diagnosis of the memory seat and mirror system. The cause of a system fault can be narrowed down through observation of the seats and mirrors during the Self Test Mode. Before starting the Self Test Mode, be sure to clear away everything from the pathway of the seats.

To initialize the Self Test Mode, do the following:

1. Park vehicle and open driver's door.
2. Press round, green memory button 5 times.
3. Press seat position buttons 1 and 2 in the following sequence:  
2-1-1-2

Seat and mirrors will now move. The test is completed when the seat and mirrors stop in the mid-travel position.

If a motor did not operate at all during the test sequence, that motor or its wiring is faulty. If a motor moves in a plane and then suddenly stops, a loss of the feedback position is indicated. Proceed to the System Diagnosis for further testing.



**X121**  
Right Front Seat  
Control Switch

3 C317

2.0 B

1 C304

3.0 BP

**M5-3**

0.5 PU

**Z222**Right Seat Power  
Relay Diode

0.5 BP

S319

3.0 BP

87

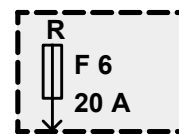


30

3.0 B

S320

E300

**P126**  
Fascia Fuse Box

3 C226

See Fuse Details

S264

1.0 LGW

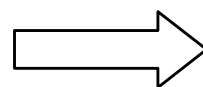
S2008  
HJ6

0.5 LGW

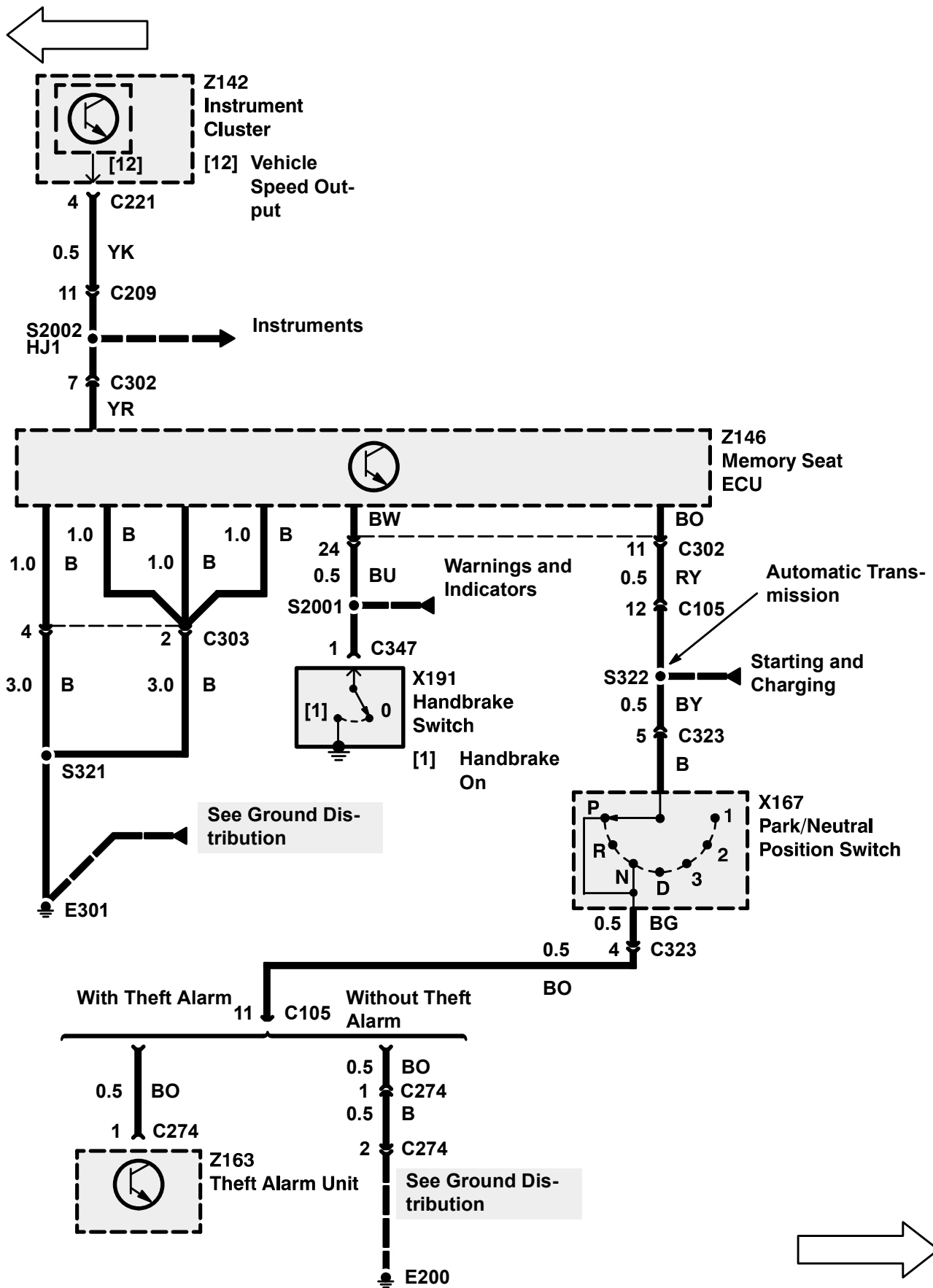
86 C358

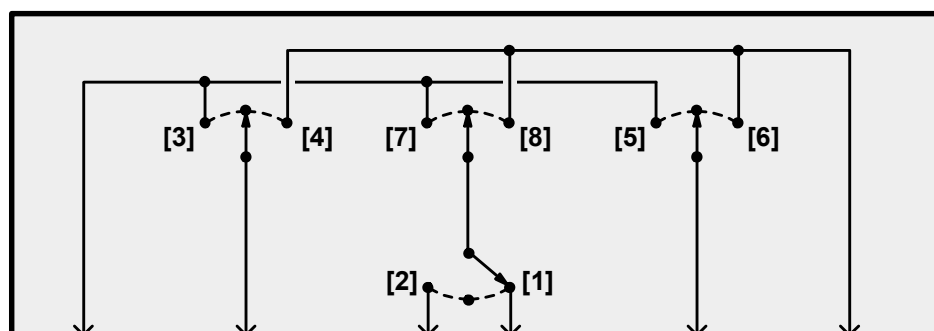
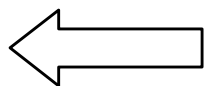
85 C358

3.0 B

See Ground Dis-  
tribution

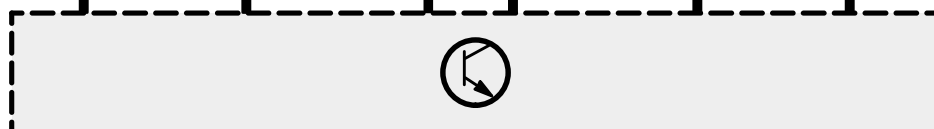
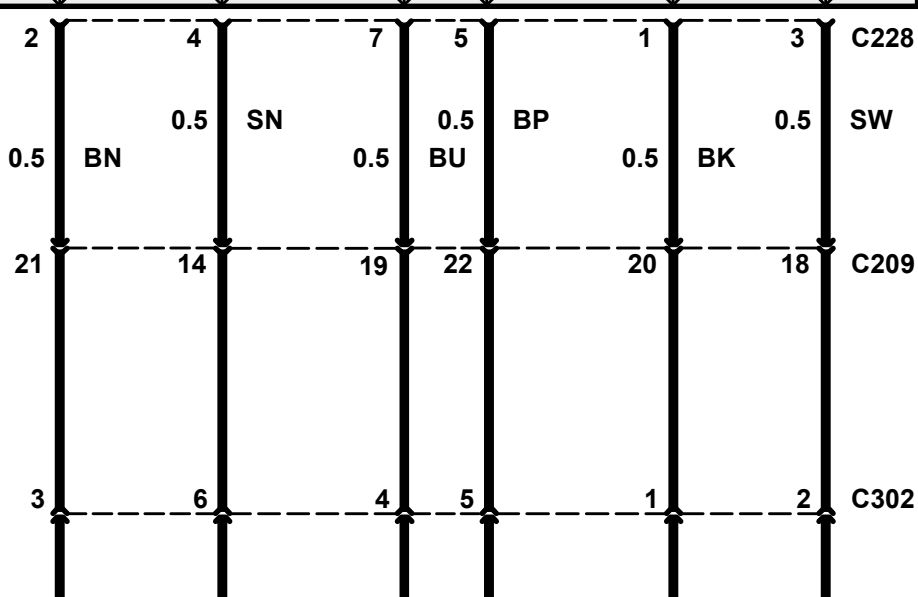




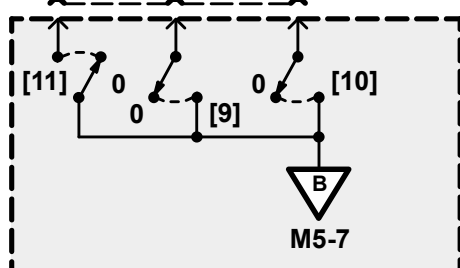
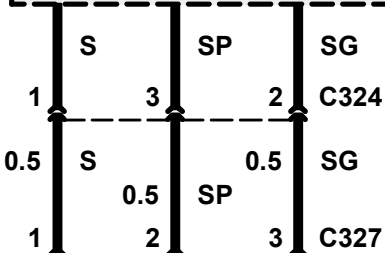


**X146a**  
Mirror Adjust-  
ment Switch

- [1] Right Mirror Enabled
- [2] Left Mirror Enabled
- [3] Move Right
- [4] Move Left
- [5] Move Up
- [6] Move Down
- [7] Move Up or Right
- [8] Move Down or Left

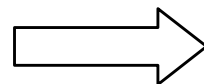


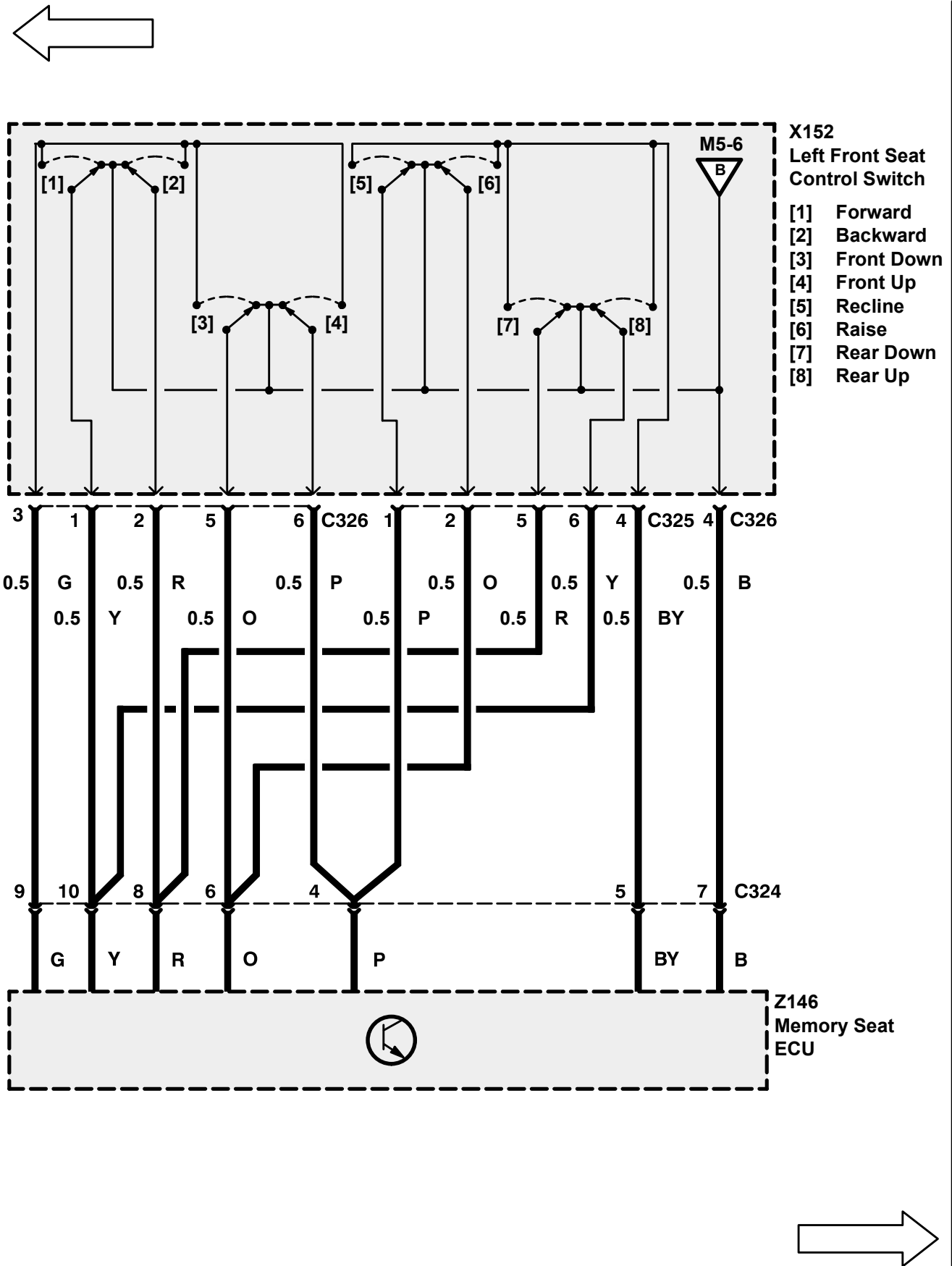
**Z146**  
Memory Seat  
ECU

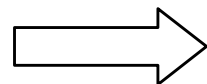
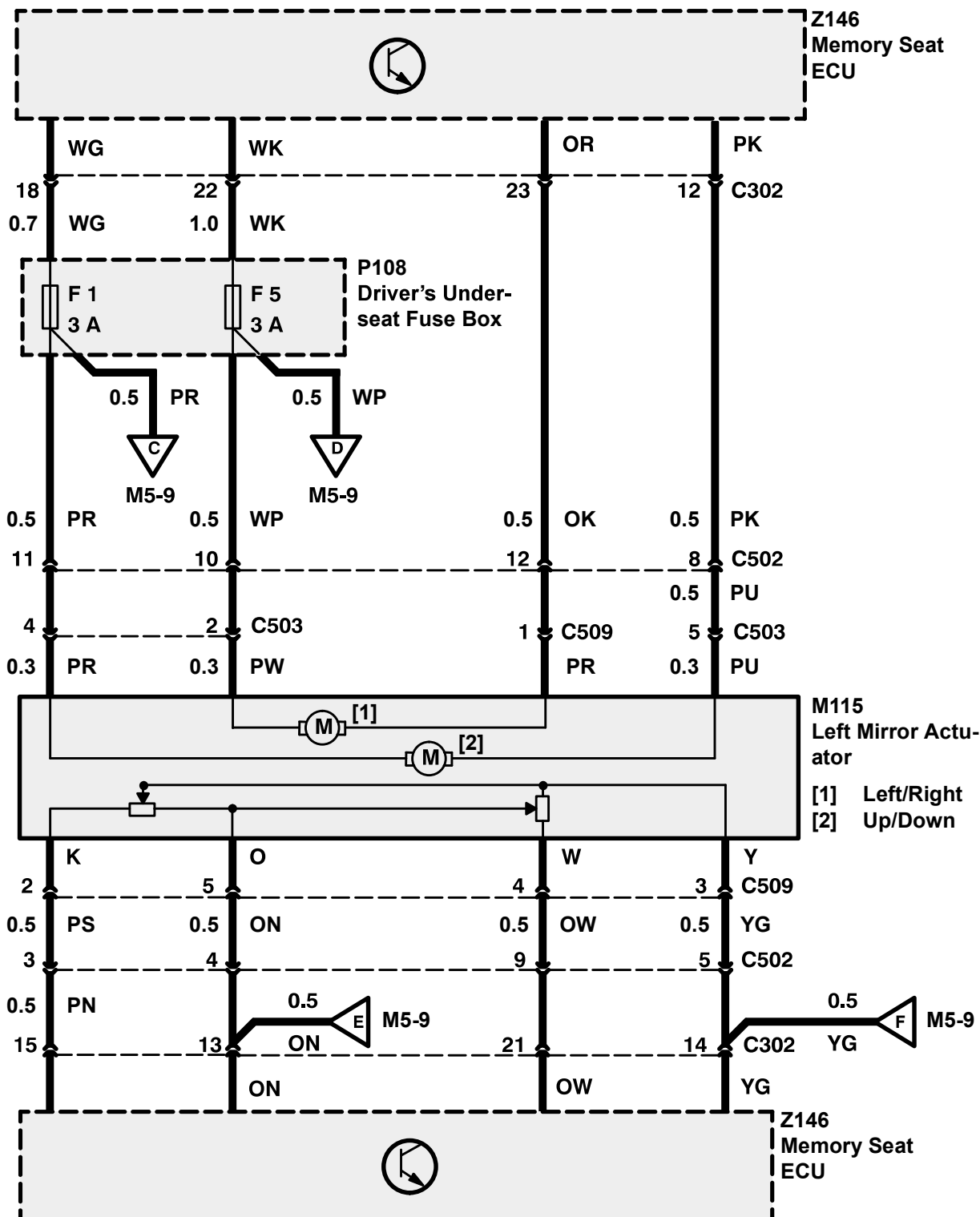
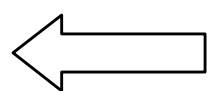


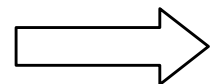
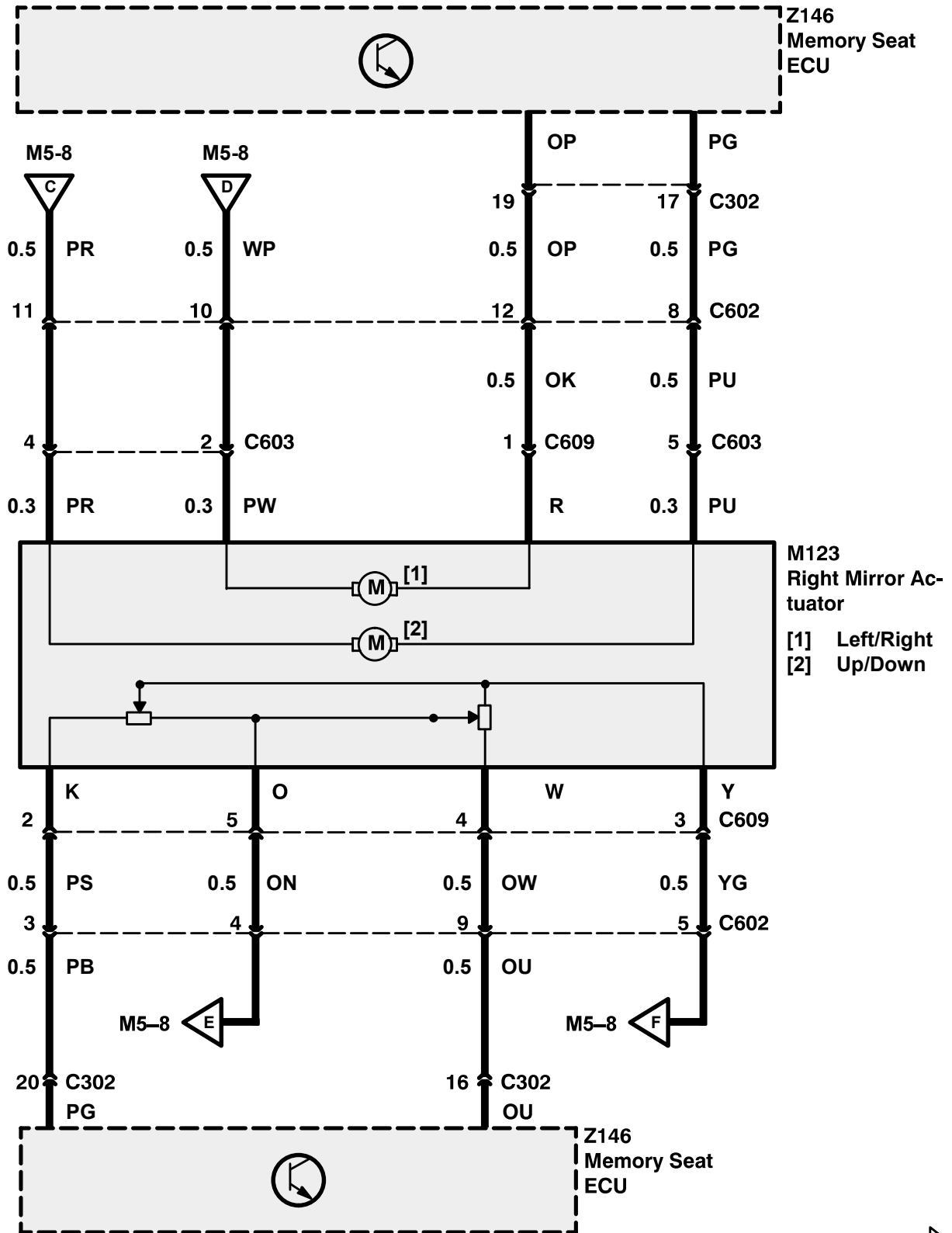
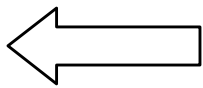
**X152**  
Left Front Seat  
Control Switch

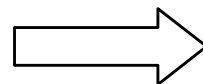
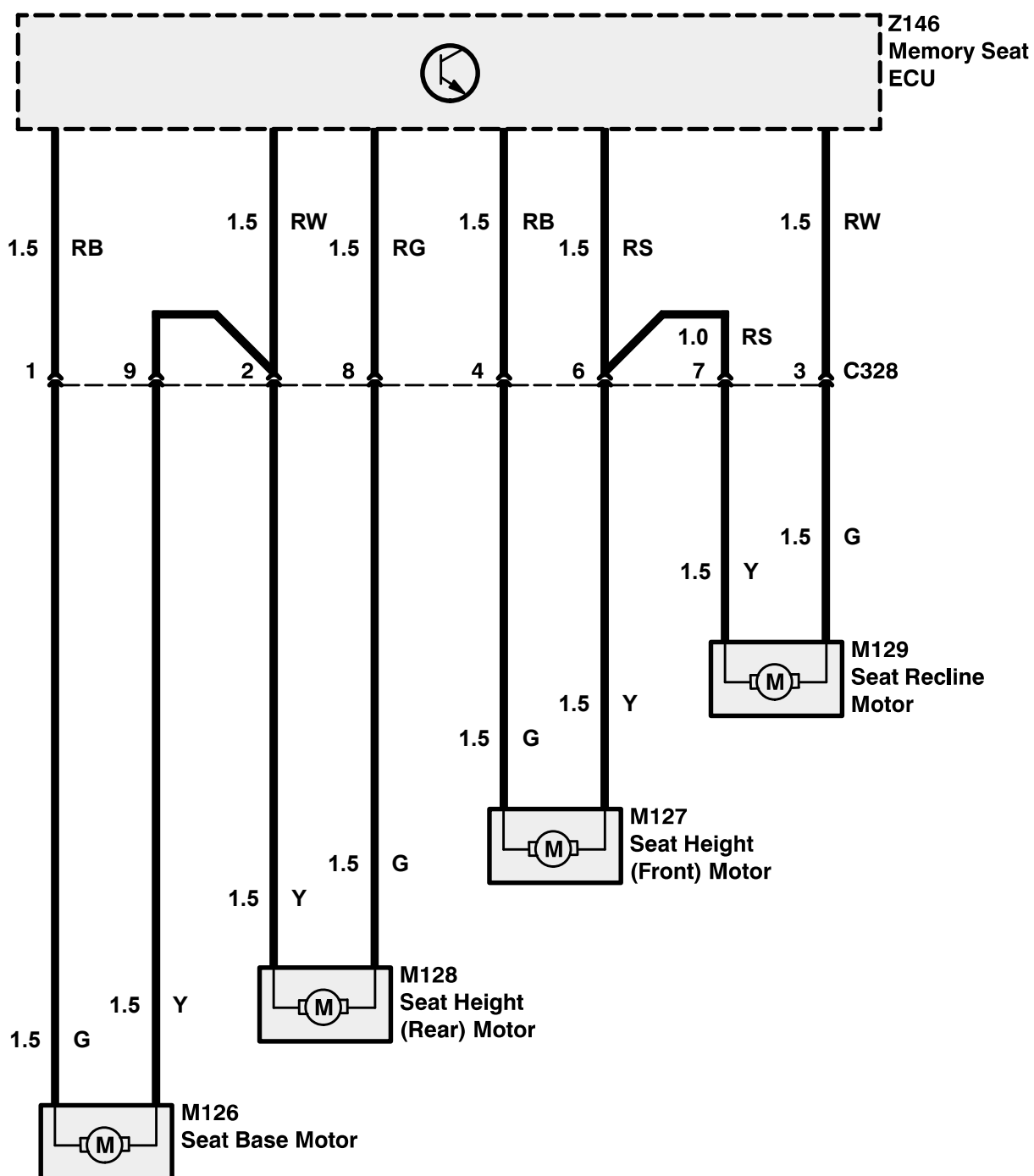
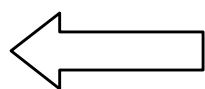
- [9] Memory 1
- [10] Memory 2
- [11] Memory Store

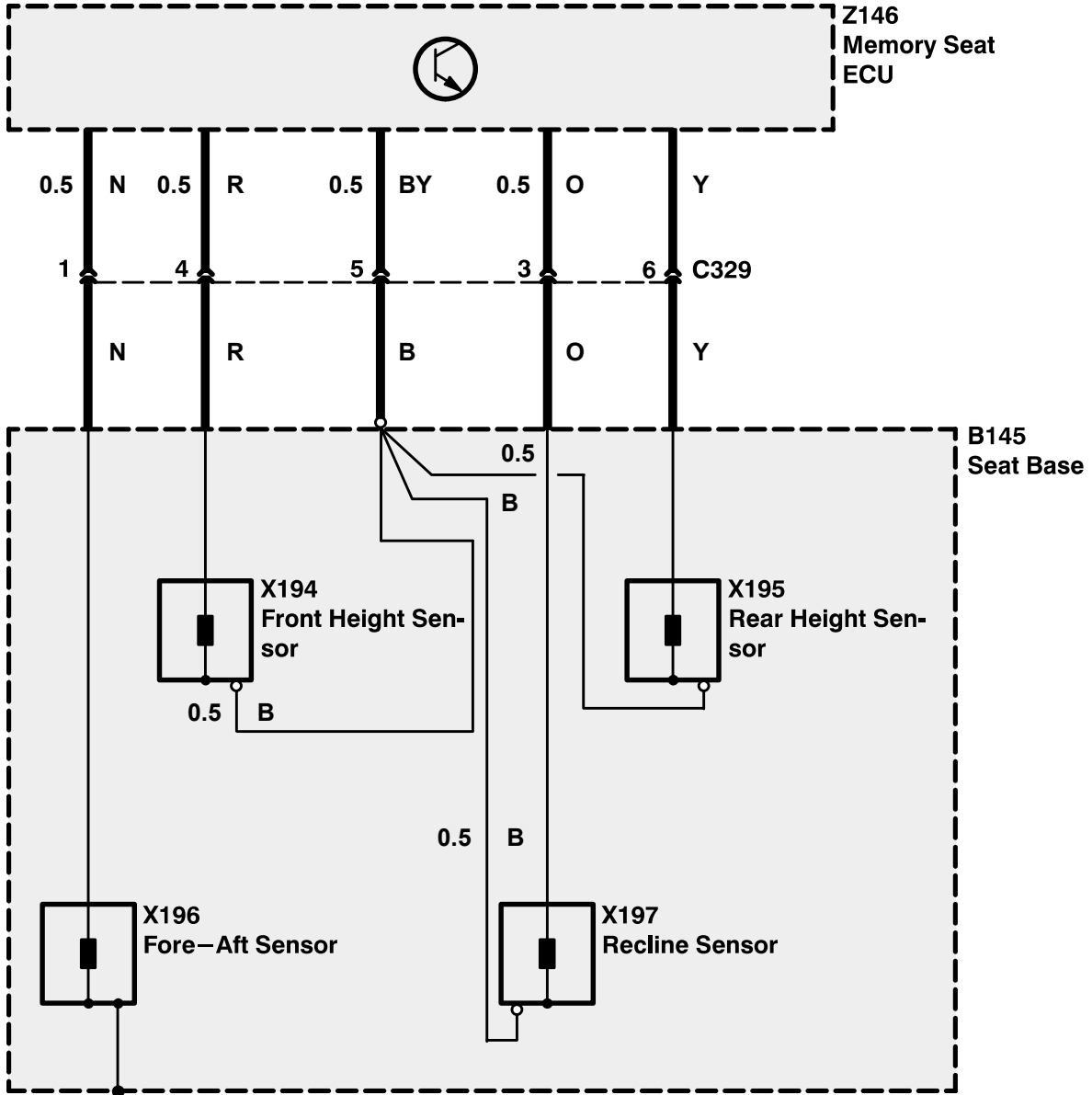
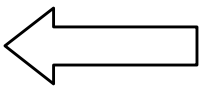










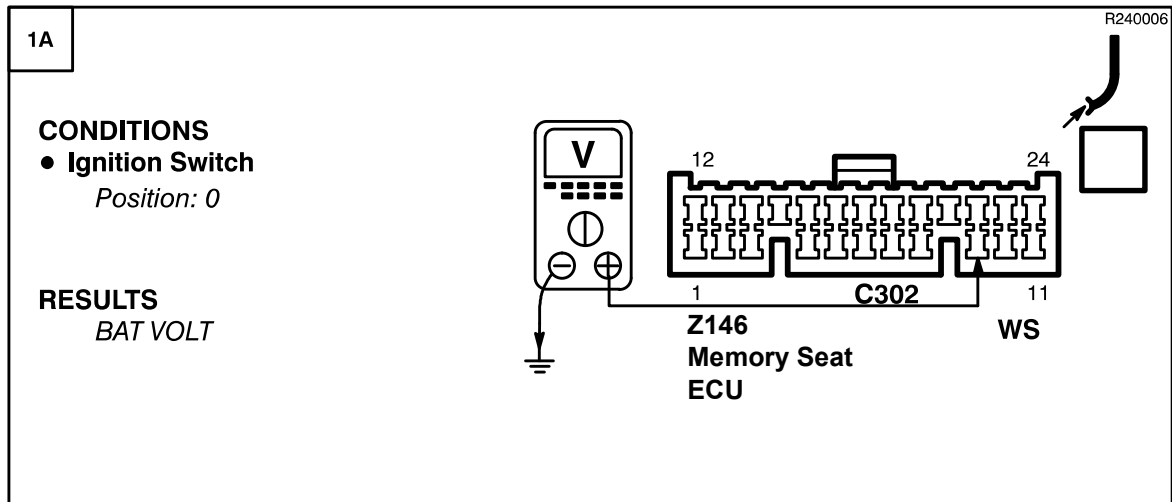


**SYSTEM DIAGNOSIS**

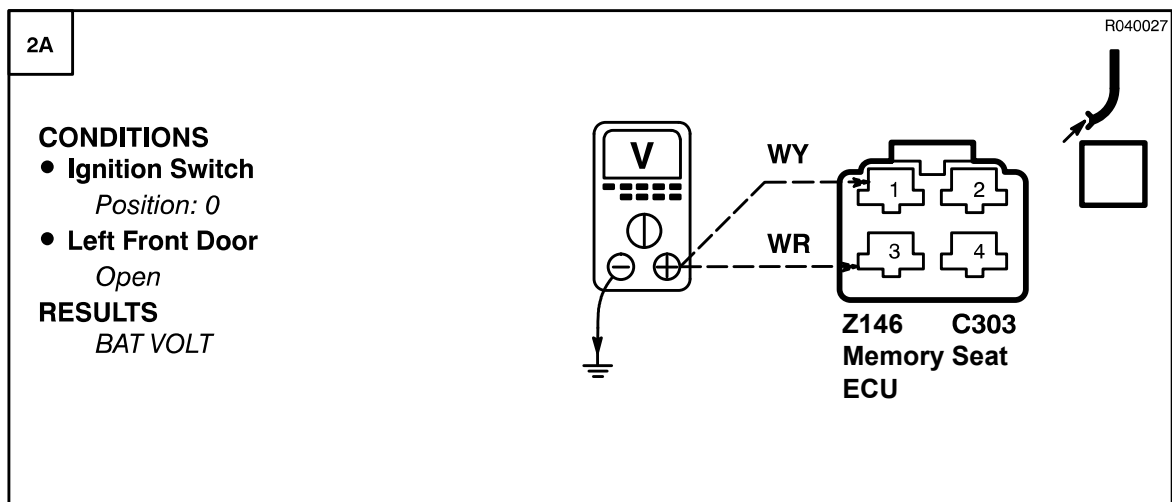
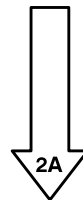
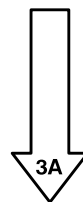
NOTE: Perform the Self Test before performing any diagnosis on the memory seats and mirrors.

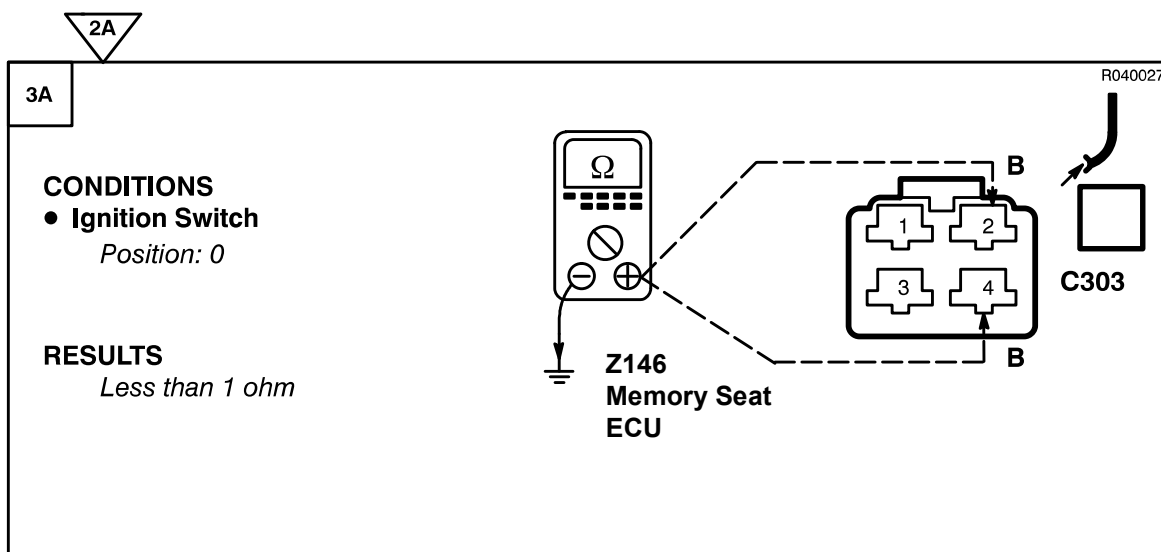
1. If the system will not perform the Self Test, do Test E, Left Front Seat Control Switch (X121) test.
2. If manual and memory seat functions are totally inoperative, check Maxi-Fuse® MF3 of the Engine Compartment Fuse Box (P125), and Fuses F2 and F3 of the Driver's Underseat Fuse Box (P108). Do Test A if the fuses are OK.
3. If the system does not retain memory seat or mirror positions, do Test A, Memory Seat ECU (Z146) power test.
4. If the memory seat system does not operate when the ignition is in position II and the handbrake is applied, do Test B (manual transmission) or Test C (automatic transmission).
5. If memory seat and mirror functions do not operate but the seat does operate in some modes manually, do Test E, Left Front Seat Control Switch (X121) test.
6. If all seat motors operate during the Self Test but do not operate when the Left Front Seat Control Switch (X121) is used, do Test F.
7. If all mirror motors operate during the Self Test but do not operate when the Mirror Adjustment Switch (X146) is used, do Test G.
8. If a seat motor moves during the Self Test and then stops, replace the defective seat sensor (X194, X195, X196, X197).
9. If a seat motor (M126, M127, M128, M129) does not move at all during the Self Test, do Test J.
10. If a mirror motor does not move at all during the Self Test, do Test K (Left Memory Mirror Actuator, M115) or Test L (Right Memory Mirror Actuator, M123).
11. If a mirror motor moves during the Self Test and then stops, do Test H (Left Memory Mirror Actuator, M115) or Test I (Right Memory Mirror Actuator, M123).



**Test A****PROBLEM CAUSE**

- WS Wire
- F4 Fuse
- MF3 Maxi-Fuse

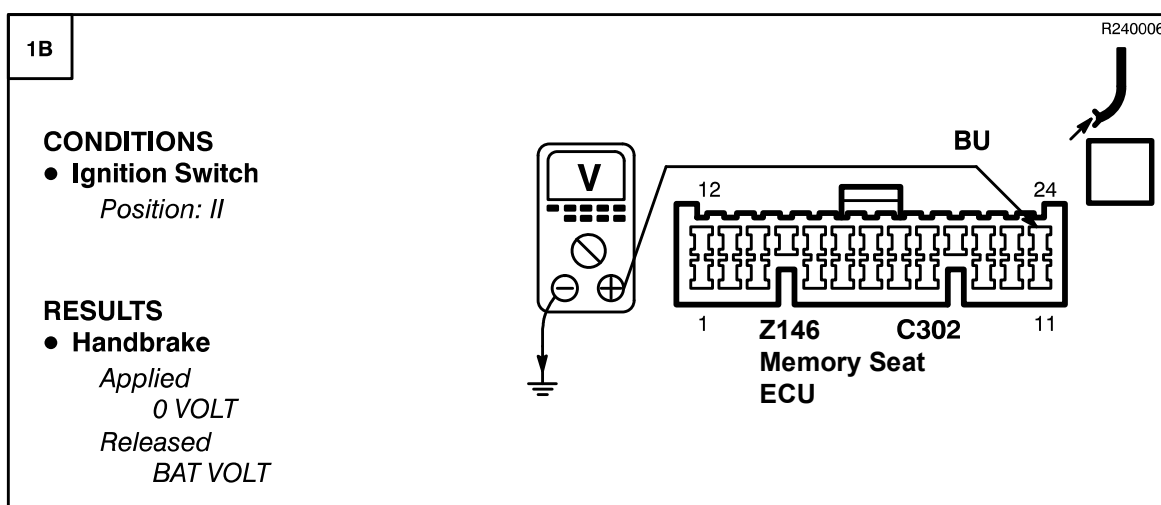
**GO TO TEST D**



**PROBLEM CAUSE**  
- B Wire



**PROBLEM CAUSE**  
- Memory Seat  
ECU

**Test B**

**PROBLEM CAUSE**  
- BU Wire  
- Handbrake  
Switch



**PROBLEM CAUSE**  
- Memory Seat  
ECU

**Test C**

**1C**

**CONDITIONS**

- Ignition Switch  
*Position: II*

**RESULTS**

- Handbrake  
*Applied*  
0 VOLT  
*Released*  
BAT VOLT

**Z146**  
**Memory Seat**  
**ECU**

**C302**

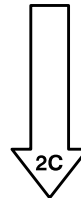
**12** **24** **1** **11**

**BU**

**R240006**

**PROBLEM CAUSE**

- BU Wire
- Handbrake Switch



**2C**

**CONDITIONS**

- Ignition Switch  
*Position: 0*
- Gear Selector  
*P/N*

**RESULTS**

*Less than 1 ohm*

**Z146**  
**Memory Seat**  
**ECU**

**C302**

**12** **24** **1** **11**

**RY**

**R240006**

**PROBLEM CAUSE**

- RY Wire
- BO, BY Wire
- Park/Neutral Position Switch
- Theft Alarm Unit

**PROBLEM CAUSE**

- Memory Seat ECU

**Test D**

**1D**

**CONDITIONS**

- Ignition Switch  
*Position: 0*

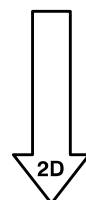
**RESULTS**  
*BAT VOLT*

**K113**  
**Left Seat Power**  
**Relay**

R050001

**PROBLEM CAUSE**

- NP Wire
- MF3 Maxi-Fuse



**2D**

**CONDITIONS**

- Ignition Switch  
*Position: 0*

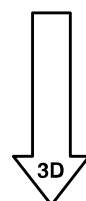
**RESULTS**  
*BAT VOLT*

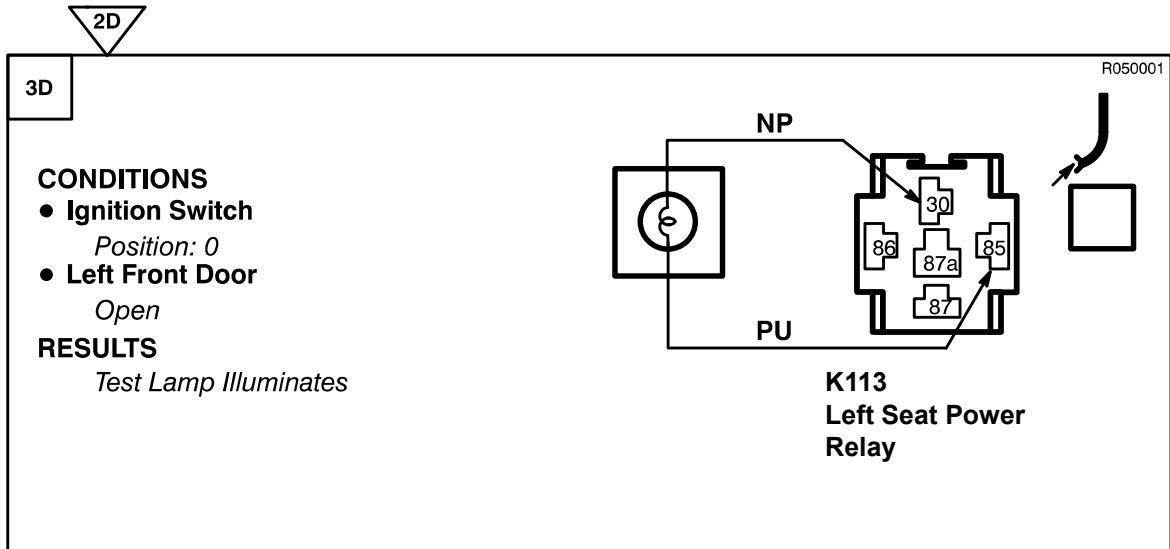
**K113**  
**Left Seat Power**  
**Relay**

R050001

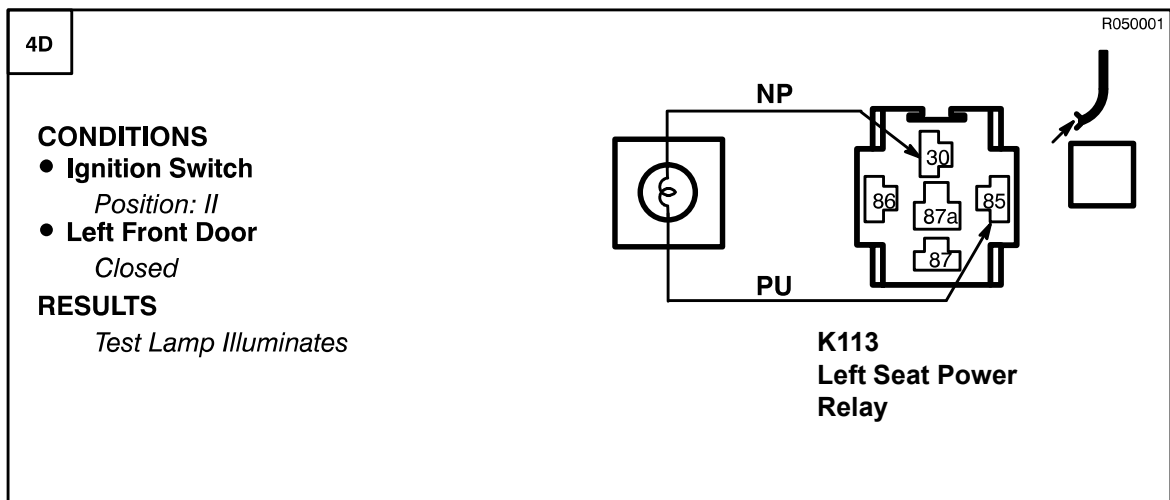
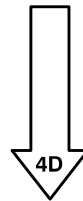
**PROBLEM CAUSE**

- NP Wire
- MF3 Maxi-Fuse

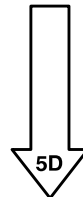


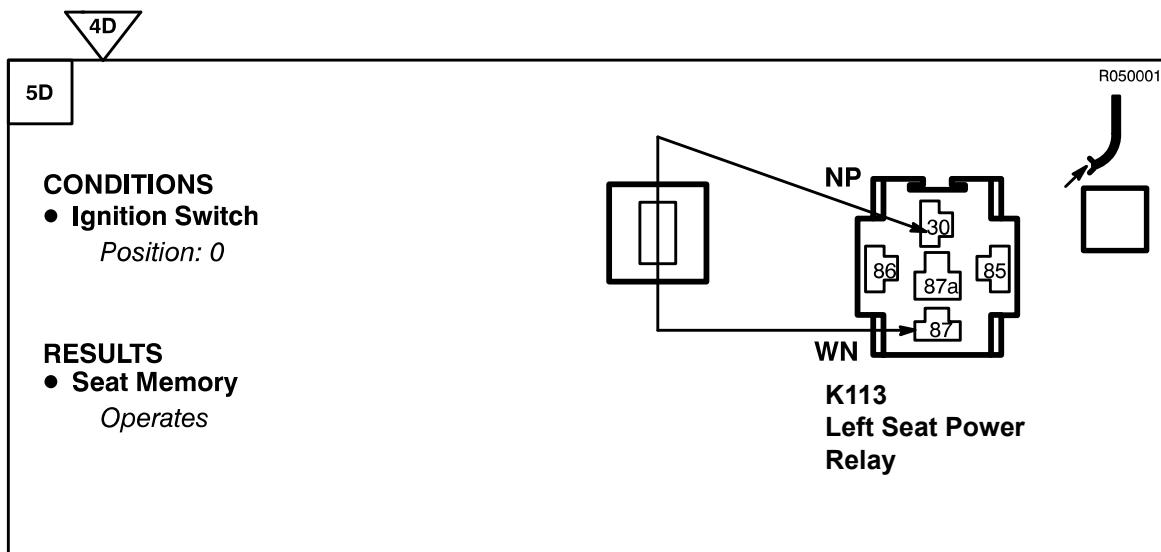
**PROBLEM CAUSE**

- PU Wire
- PG Wire
- Left Seat Power  
Relay Diode
- Left Front Door Switch

**PROBLEM CAUSE**

- PU Wire
- Right Seat Power Relay  
Diode
- BP Wire
- F6 Fuse
- Right Seat Power Relay

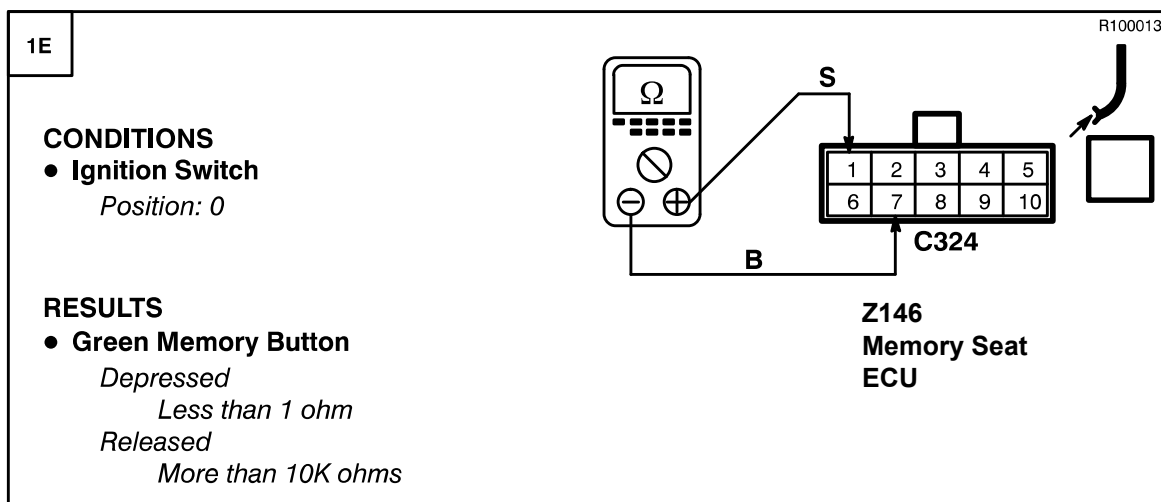


**PROBLEM CAUSE**

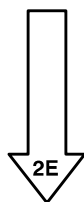
- F2 Fuse
- F3 Fuse
- WN Wire

**PROBLEM CAUSE**

- Left Seat Power  
Relay

**Test E****PROBLEM CAUSE**

- S Wire
- B Wire
- Left Front Seat  
Control Switch



**1E**

**2E**

**CONDITIONS**

- Ignition Switch  
*Position: II*

**RESULTS**

- Position 1 button  
*Depressed*  
*Less than 1 ohm*  
*Released*  
*More than 10K ohms*

SP

B

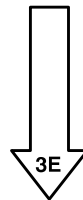
C324

Z146  
Memory Seat ECU

R100013

**PROBLEM CAUSE**

- SP Wire
- Left Front Seat Control Switch



**3E**

**CONDITIONS**

- Ignition Switch  
*Position: 0*

**RESULTS**

- Position 2 button  
*Depressed*  
*Less than 1 ohm*  
*Released*  
*More than 10K ohms*

SG

B

C324

Z146  
Memory Seat ECU

R100013

**PROBLEM CAUSE**

- SG Wire
- Left Front Seat Control Switch

**PROBLEM CAUSE**

- Memory Seat ECU

**Test F**

**1F**

**CONDITIONS**

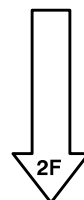
- Ignition Switch  
*Position: 0*

**RESULTS**  
*More than 10K ohms*

**Z146  
Memory Seat  
ECU**

**PROBLEM CAUSE**

- BY Wire
- G Wire
- Left Front Seat Control Switch



**2F**

**CONDITIONS**

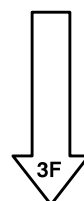
- Ignition Switch  
*Position: 0*

**RESULTS**  
*More than 10K ohms*

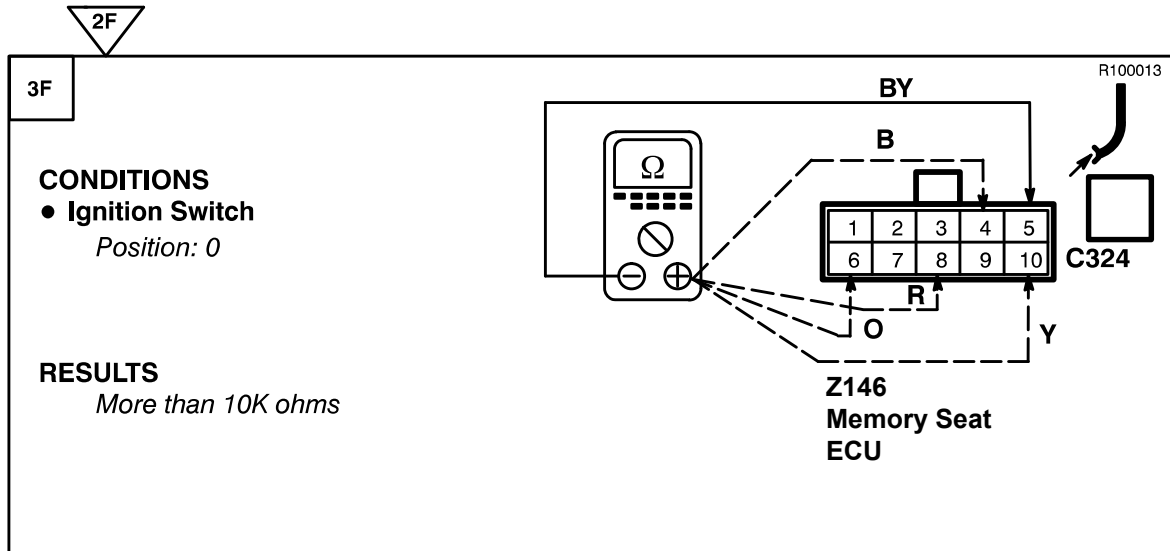
**Z146  
Memory Seat  
ECU**

**PROBLEM CAUSE**

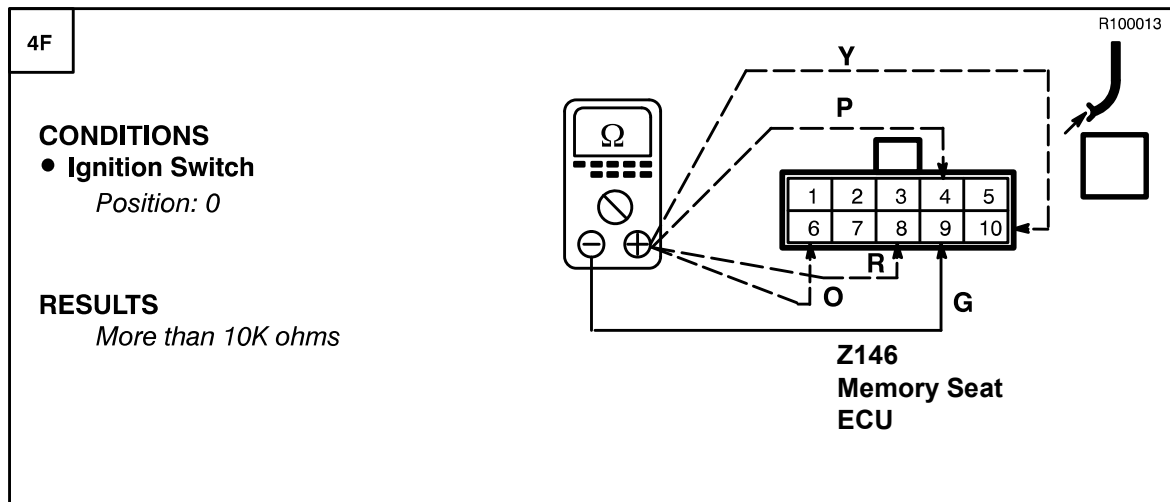
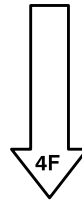
- Left Front Seat Control Switch



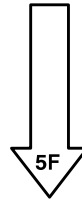


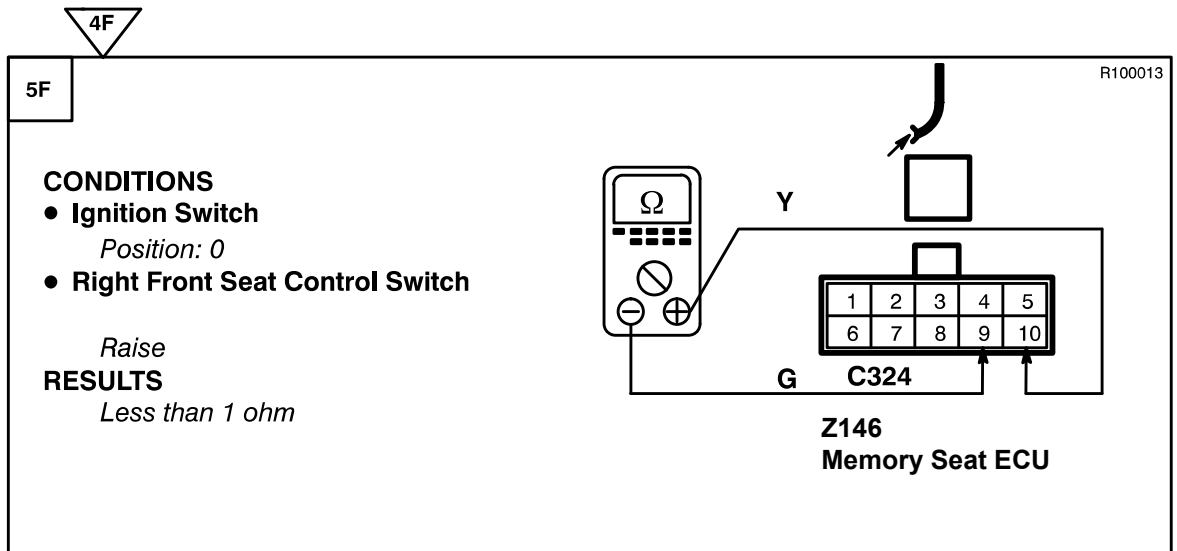
**PROBLEM CAUSE**

- R Wire
- P Wire
- Y Wire
- O Wire
- Left Front Seat Control Switch

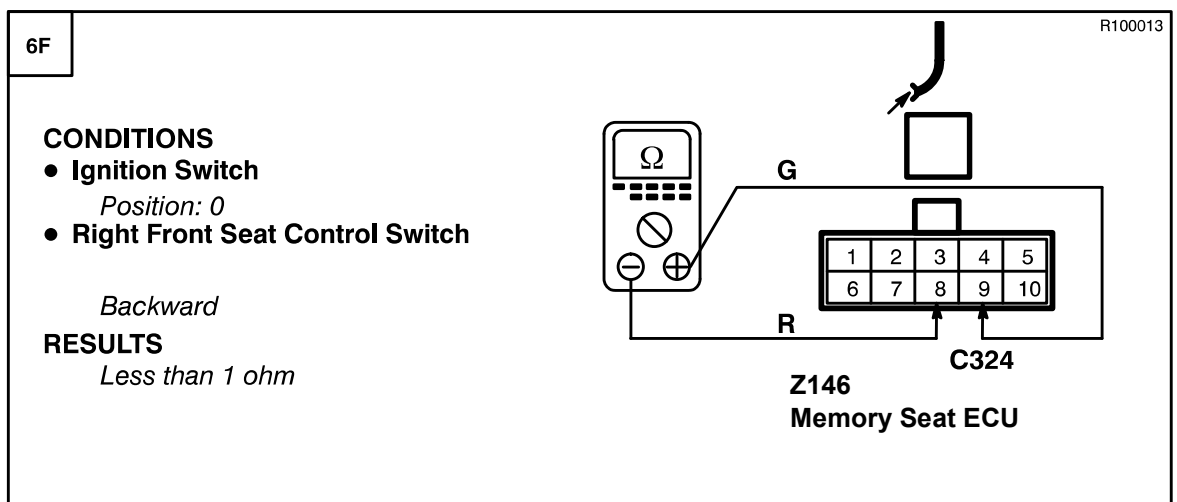
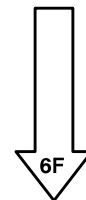
**PROBLEM CAUSE**

- Y Wire
- R Wire
- O Wire
- P Wire
- Left Front Seat Control Switch

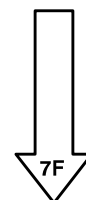


**PROBLEM CAUSE**

- G Wire
- Y Wire
- Left Front Seat Control Switch

**PROBLEM CAUSE**

- R Wire
- Left Front Seat Control Switch



6F

7F

**CONDITIONS**

- Ignition Switch  
*Position: 0*
- Right Front Seat Control Switch

*Front down*

**RESULTS**  
*Less than 1 ohm*

R100013

G

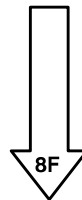
O

C324

Z146  
Memory Seat ECU

**PROBLEM CAUSE**

- O Wire
- Left Front Seat Control Switch



8F

**CONDITIONS**

- Ignition Switch  
*Position: 0*
- Right Front Seat Control Switch

*Front up*

**RESULTS**  
*Less than 1 ohm*

R100013

P

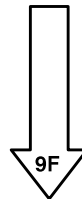
G

C324

Z146  
Memory Seat ECU

**PROBLEM CAUSE**

- P Wire
- Left Front Seat Control Switch



8F

9F

**CONDITIONS**

- Ignition Switch  
*Position: 0*
- Right Front Seat Control Switch

*Recline*

**RESULTS**  
*Less than 1 ohm*

R100013

P

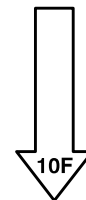
BY

C324

Z146  
Memory Seat ECU

**PROBLEM CAUSE**

- BY Wire
- P Wire
- Left Front Seat Control Switch



10F

**CONDITIONS**

- Ignition Switch  
*Position: 0*
- Right Front Seat Control Switch

*Raise*

**RESULTS**  
*Less than 1 ohm*

R100013

BY

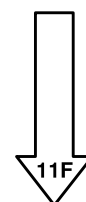
O

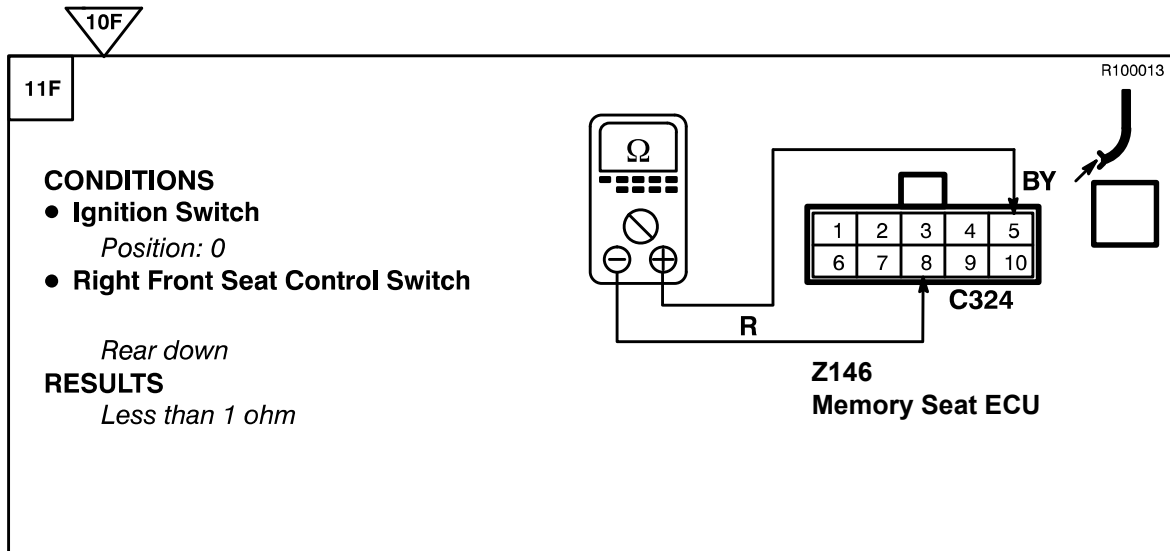
C324

Z146  
Memory Seat ECU

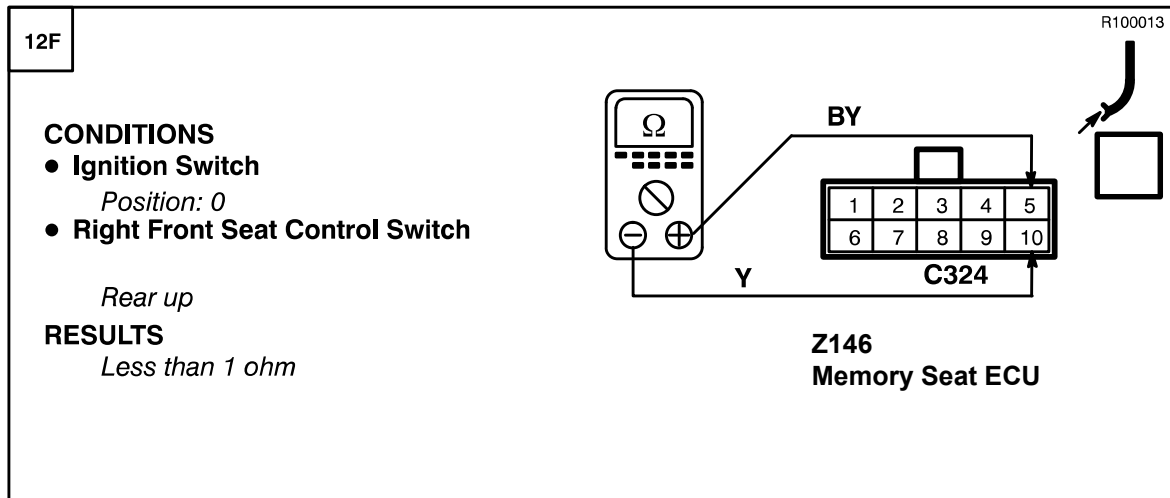
**PROBLEM CAUSE**

- O Wire
- Left Front Seat Control Switch



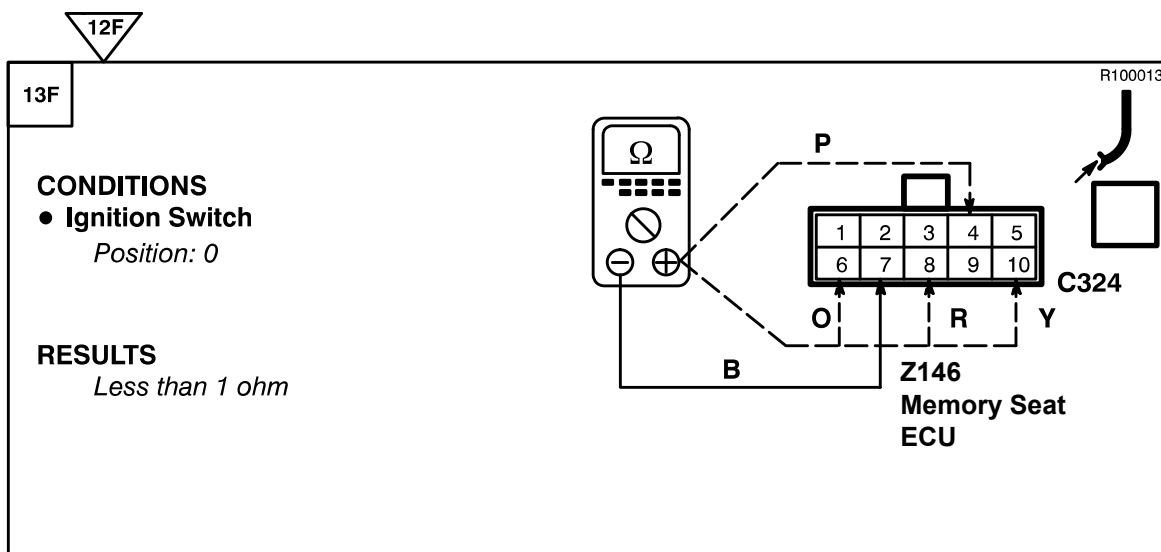
**PROBLEM CAUSE**

- R Wire
- Right Front Seat Control Switch

**PROBLEM CAUSE**

- Y Wire
- Right Front Seat Control Switch





**PROBLEM CAUSE**  
- Left Front Seat  
Control Switch



**PROBLEM CAUSE**  
- Memory Seat  
ECU

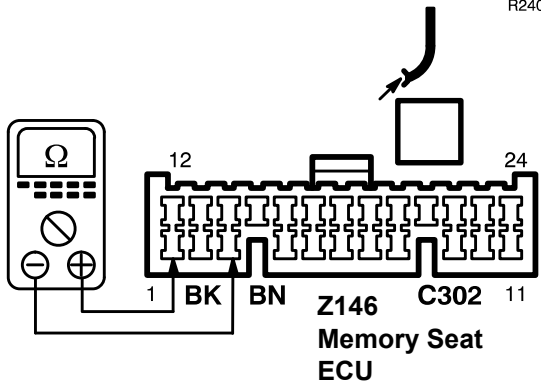
**Test G**

**1G**

**CONDITIONS**

- Ignition Switch  
*Position: 0*
- Mirror Adjustment Switch  
*Up*

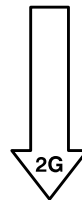
**RESULTS**  
*Less than 1 ohm*



R240006

**PROBLEM CAUSE**

- BK Wire
- BN Wire
- Mirror Adjustment Switch

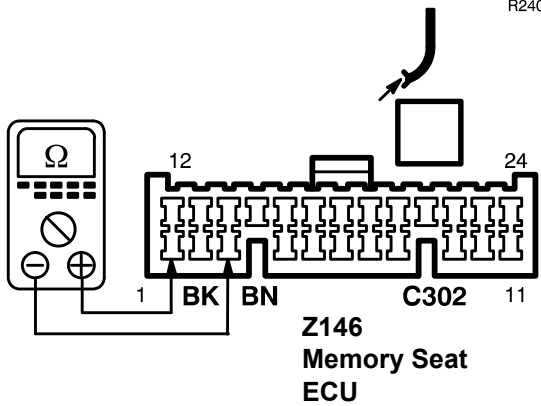


**2G**

**CONDITIONS**

- Ignition Switch  
*Position: 0*
- Mirror Adjustment Switch  
*Down*

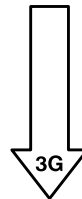
**RESULTS**  
*More than 10K ohms*

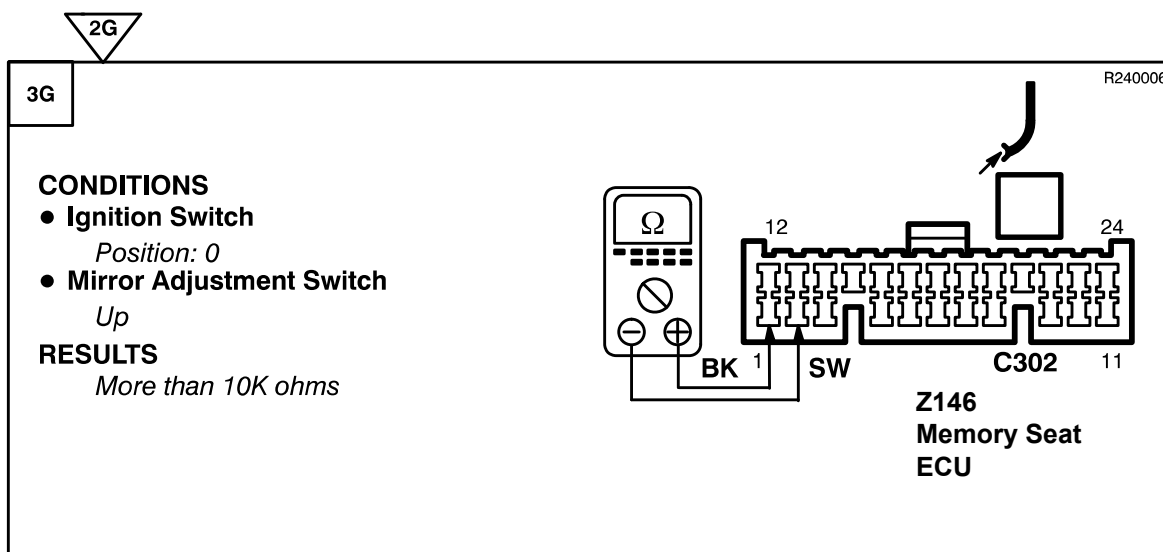


R240006

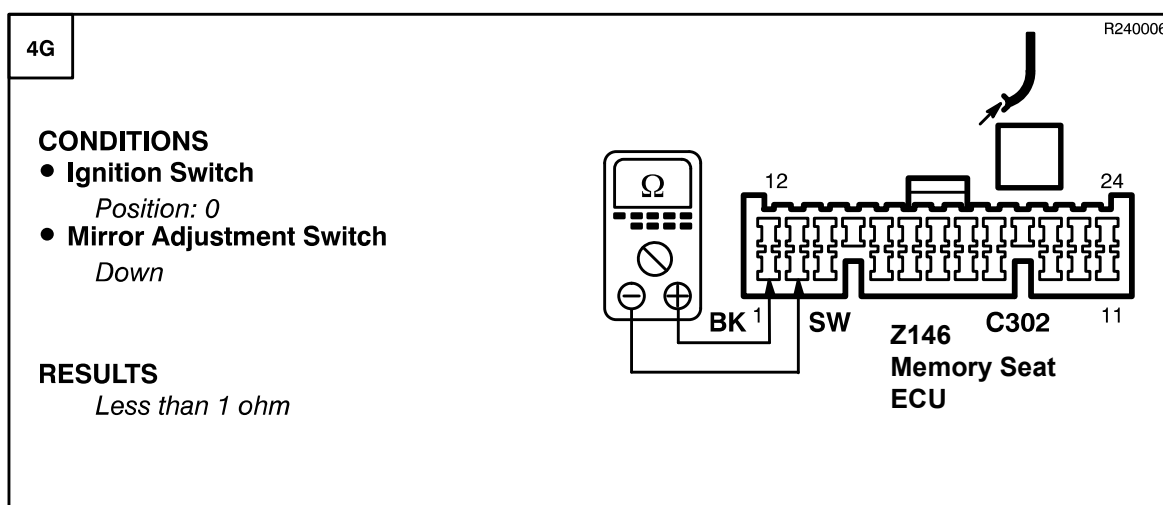
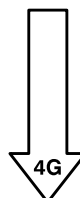
**PROBLEM CAUSE**

- Mirror Adjustment Switch



**PROBLEM CAUSE**

- SW Wire
- Mirror Adjustment Switch

**PROBLEM CAUSE**

- Mirror Adjustment Switch





4G

5G

**CONDITIONS**

- Ignition Switch  
*Position: 0*
- Mirror Adjustment Switch  
*Right*

**RESULTS**  
*Less than 1 ohm*

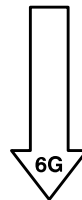
R240006

Z146  
Memory Seat ECU



**PROBLEM CAUSE**

- SN, B Wire
- Mirror Adjust-ment Switch



6G

**CONDITIONS**

- Ignition Switch  
*Position: 0*
- Mirror Adjustment Switch  
*Left*

**RESULTS**  
*More than 10K ohms*

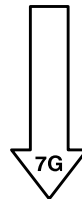
R240006

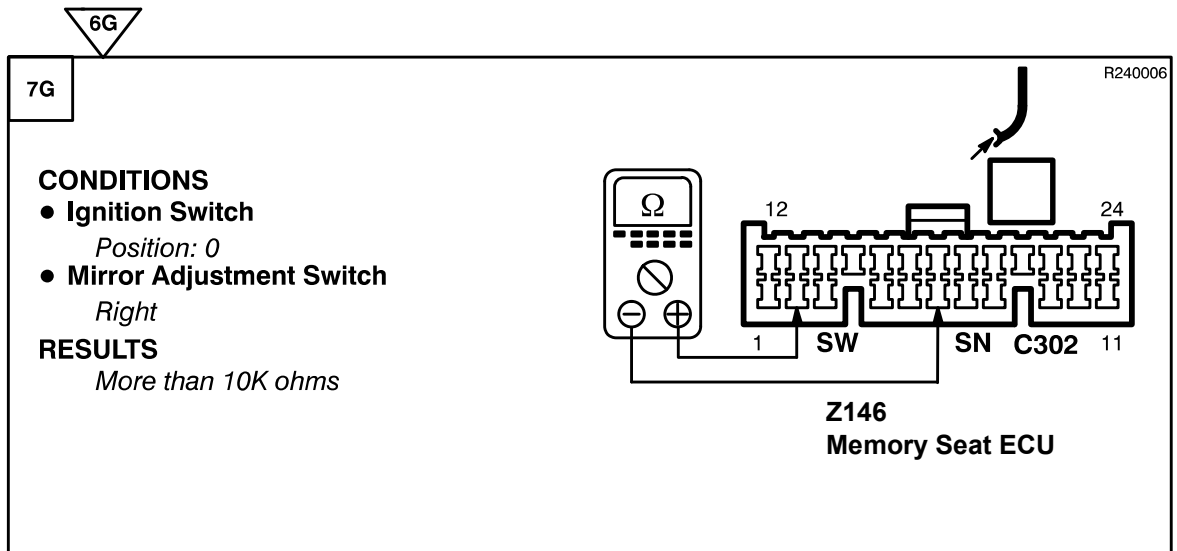
Z146  
Memory Seat ECU



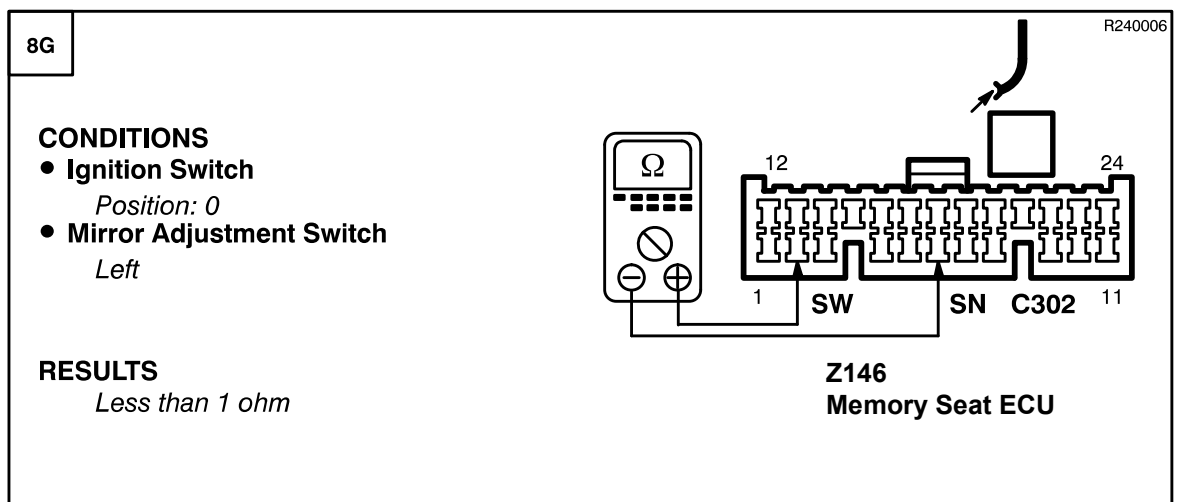
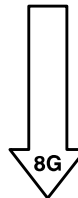
**PROBLEM CAUSE**

- Mirror Adjust-ment Switch

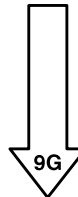


**PROBLEM CAUSE**

- Mirror Adjustment Switch

**PROBLEM CAUSE**

- Mirror Adjustment Switch



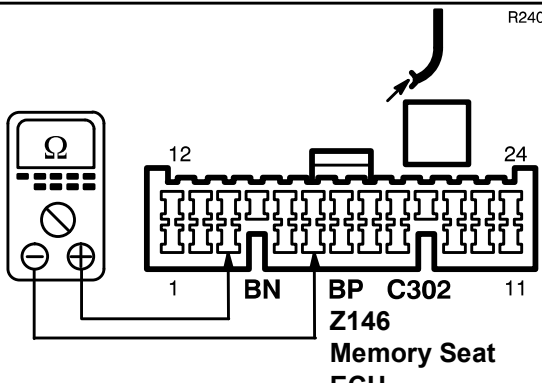
8G

9G

**CONDITIONS**

- Ignition Switch  
*Position: 0*
- Mirror Adjustment Switch  
*Right Mirror Enabled  
Move Right or Down*

**RESULTS**  
*Less than 1 ohm*

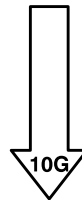


R240006

Memory Seat ECU

**PROBLEM CAUSE**

- BP Wire
- Mirror Adjust-ment Switch

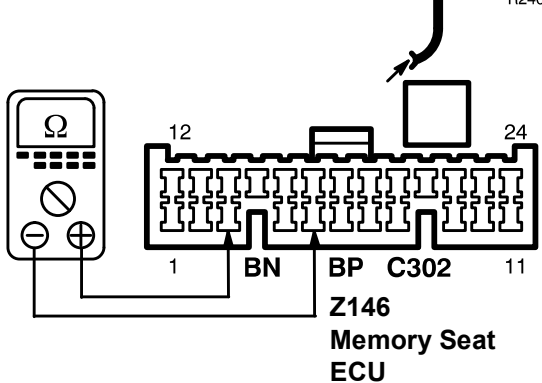


10G

**CONDITIONS**

- Ignition Switch  
*Position: 0*
- Mirror Adjustment Switch  
*Right Mirror Enabled  
Move Left or Up*

**RESULTS**  
*More than 10K ohms*

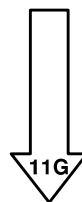


R240006

Memory Seat ECU

**PROBLEM CAUSE**

- Mirror Adjust-ment Switch



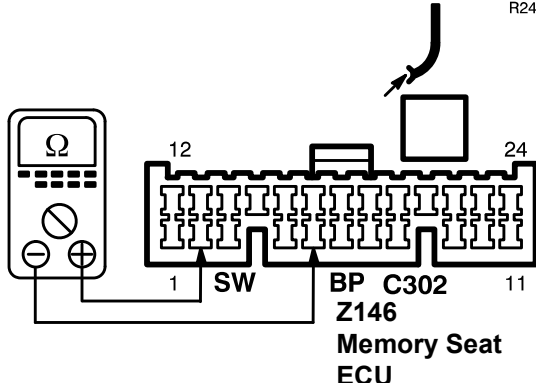
R240006

**11G**

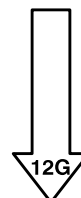
**CONDITIONS**

- **Ignition Switch**  
*Position: 0*
- **Mirror Adjustment Switch**  
*Right Mirror Enabled  
Move Right or Down*

**RESULTS**  
*More than 10K ohms*


**PROBLEM CAUSE**

- Mirror Adjust-ment Switch



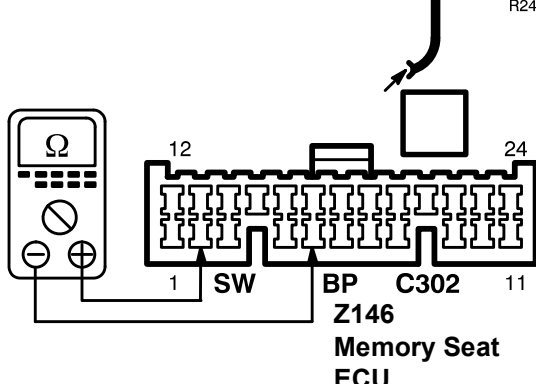
R240006

**12G**

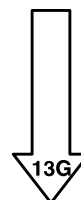
**CONDITIONS**

- **Ignition Switch**  
*Position: 0*
- **Mirror Adjustment Switch**  
*Right Mirror Enabled  
Move Left or Up*

**RESULTS**  
*Less than 1 ohm*


**PROBLEM CAUSE**

- Mirror Adjust-ment Switch



12G

13G

**CONDITIONS**

- Ignition Switch  
*Position: 0*
- Mirror Adjustment Switch  
*Left Mirror Enabled  
Move Right or Down*

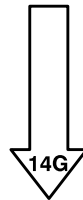
**RESULTS**  
*Less than 1 ohm*

R240006

Z146  
Memory Seat  
ECU

**PROBLEM CAUSE**

- BU Wire
- Mirror Adjust-ment Switch



14G

**CONDITIONS**

- Ignition Switch  
*Position: 0*
- Mirror Adjustment Switch  
*Left Mirror Enabled  
Move Left or Up*

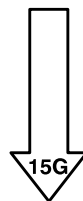
**RESULTS**  
*More than 10K ohms*

R240006

Z146  
Memory Seat  
ECU

**PROBLEM CAUSE**

- Mirror Adjust-ment Switch



R240006

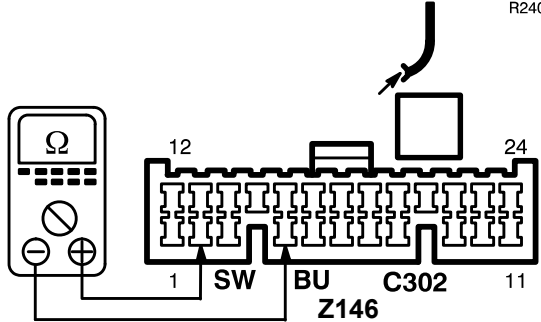
**14G**

**15G**

**CONDITIONS**

- **Ignition Switch**  
*Position: 0*
- **Mirror Adjustment Switch**  
*Left Mirror Enabled  
Move Right or Down*

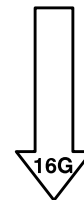
**RESULTS**  
*More than 10K ohms*



12 24 1 11  
SW BU C302  
Z146  
Memory Seat  
ECU

**PROBLEM CAUSE**

- Mirror Adjust-  
ment Switch



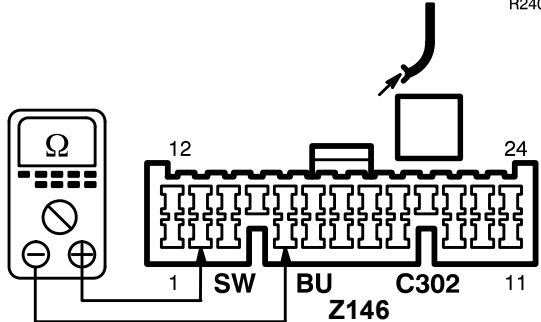
R240006

**16G**

**CONDITIONS**

- **Ignition Switch**  
*Position: 0*
- **Mirror Adjustment Switch**  
*Left Mirror Enabled  
Move Left or Up*

**RESULTS**  
*Less than 1 ohm*



12 24 1 11  
SW BU C302  
Z146  
Memory Seat  
ECU

**PROBLEM CAUSE**

- Mirror Adjust-  
ment Switch



- Memory Seat ECU

**Test H**

**1H**

**CONDITIONS**  
 • Ignition Switch  
*Position: 0*

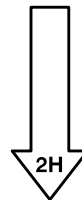
**RESULTS**  
*More than 1000 ohms*

PS  
YG  
ON  
12  
1  
C302  
OW  
11  
24  
Z146  
Memory Seat  
ECU

R240006

**PROBLEM CAUSE**

- YG Wire
- OW Wire
- PS Wire
- ON Wire
- Left Mirror Actuator



**2H**

**CONDITIONS**  
 • Ignition Switch  
*Position: 0*

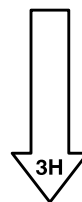
**RESULTS**  
*Less than 50K ohms*

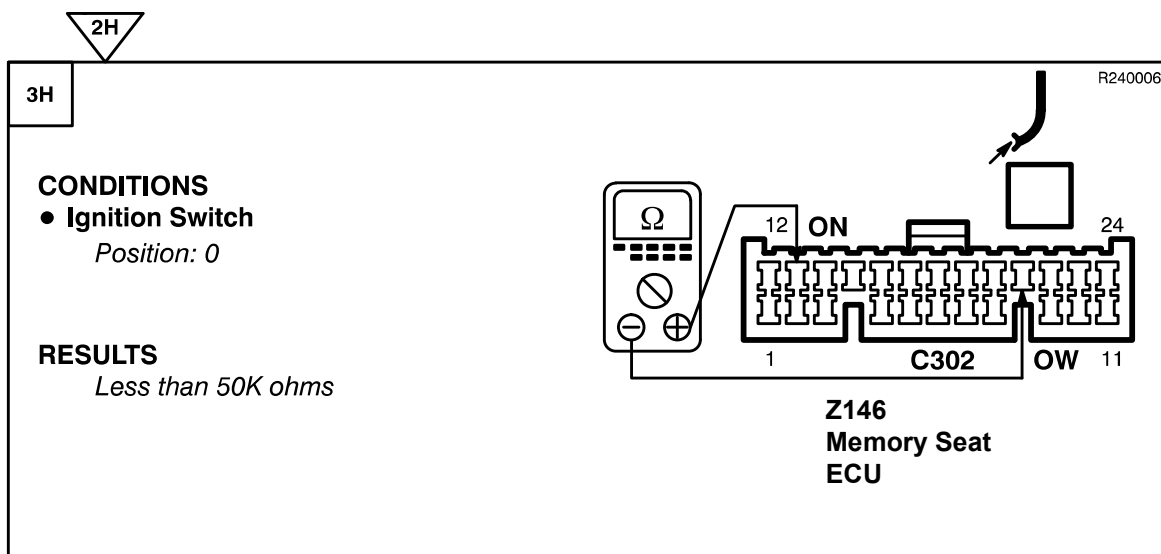
12  
YG  
1  
PN  
C302  
11  
24  
Z146  
Memory Seat  
ECU

R240006

**PROBLEM CAUSE**

- Left Mirror Actuator

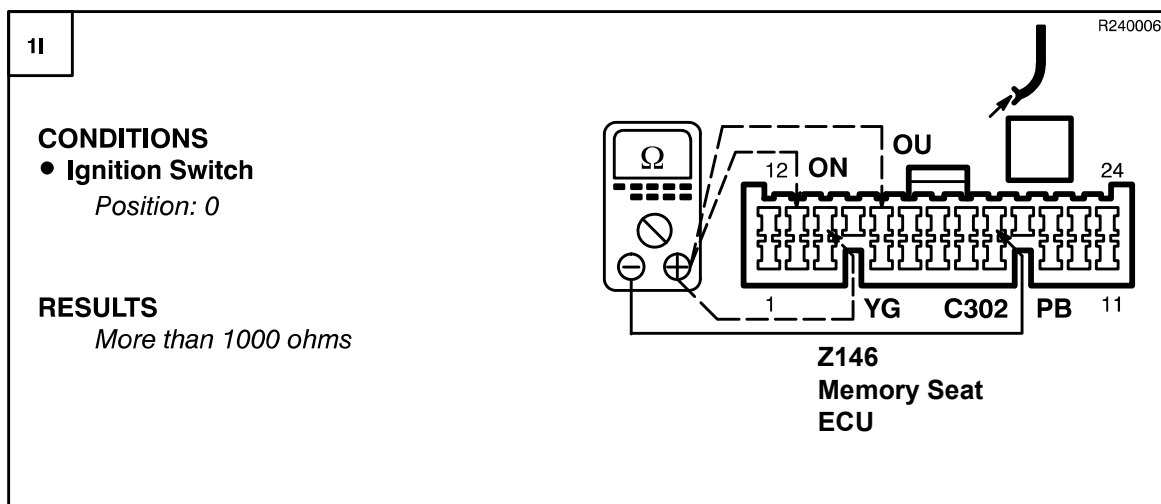




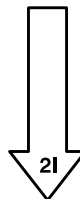
**PROBLEM CAUSE**  
- Left Mirror Actuator



**PROBLEM CAUSE**  
- Memory Seat  
ECU

**Test I**

**PROBLEM CAUSE**  
- OU, OW Wire  
- ON Wire  
- YG Wire  
- PB, PS Wire  
- Right Mirror Actuator





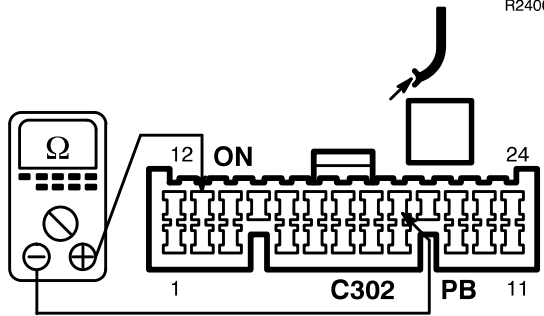
1I

2I

**CONDITIONS**

- Ignition Switch  
Position: 0

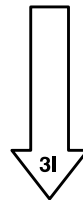
**RESULTS**  
Less than 50K ohms



Z146  
Memory Seat  
ECU



**PROBLEM CAUSE**  
- Right Mirror Ac-  
tuator

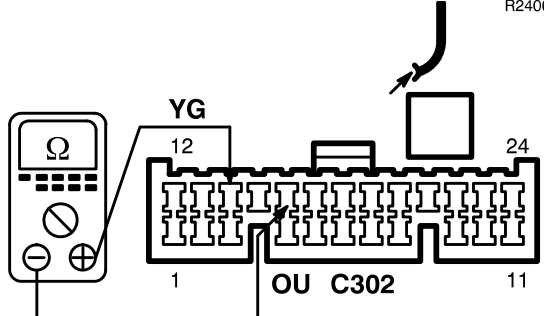


3I

**CONDITIONS**

- Ignition Switch  
Position: 0

**RESULTS**  
Less than 50K ohms



Z146  
Memory Seat  
ECU



**PROBLEM CAUSE**  
- Right Mirror Ac-  
tuator



**PROBLEM CAUSE**  
- Memory Seat  
ECU

**Test J**

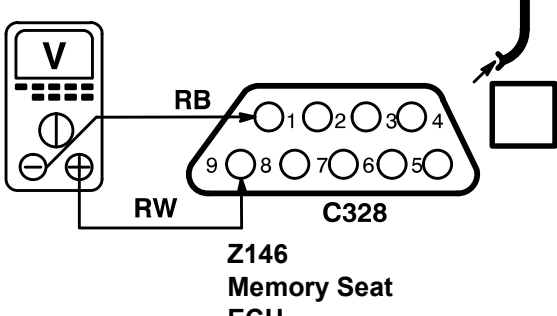
**1J**

**CONDITIONS**

- Ignition Switch  
*Position: I*
- Left Front Door  
*Open*

**RESULTS**

- Left Front Seat Control Switch  
*Forward*  
+BAT VOLT  
*Backward*  
-BAT VOLT



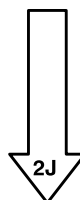
**Z146  
Memory Seat  
ECU**

**C328**

**R090003**



**PROBLEM CAUSE**  
- Memory Seat  
ECU



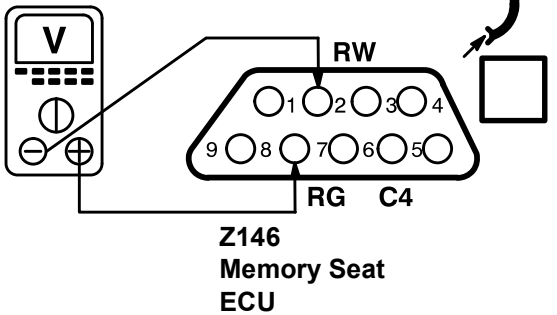
**2J**

**CONDITIONS**

- Ignition Switch  
*Position: I*
- Left Front Door  
*Open*

**RESULTS**

- Left Front Seat Control Switch  
*Rear up*  
-BAT VOLT  
*Rear down*  
+BAT VOLT



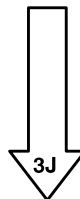
**Z146  
Memory Seat  
ECU**

**C4**

**R090003**



**PROBLEM CAUSE**  
- Memory Seat  
ECU



2J

3J

**CONDITIONS**

- Ignition Switch  
*Position: I*
- Left Front Door  
*Open*

**RESULTS**

- Left Front Seat Control Switch  
*Recline*  
+BAT VOLT  
*Raise*  
-BAT VOLT

RW

RS

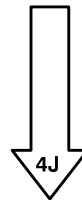
C328

Z146  
Memory Seat  
ECU

R090003



**PROBLEM CAUSE**  
- Memory Seat  
ECU



4J

**CONDITIONS**

- Ignition Switch  
*Position: I*
- Left Front Door  
*Open*

**RESULTS**

- Left Front Seat Control Switch  
*Front up*  
+BAT VOLT  
*Front down*  
-BAT VOLT

RB

RS

C4

Z146  
Memory Seat  
ECU

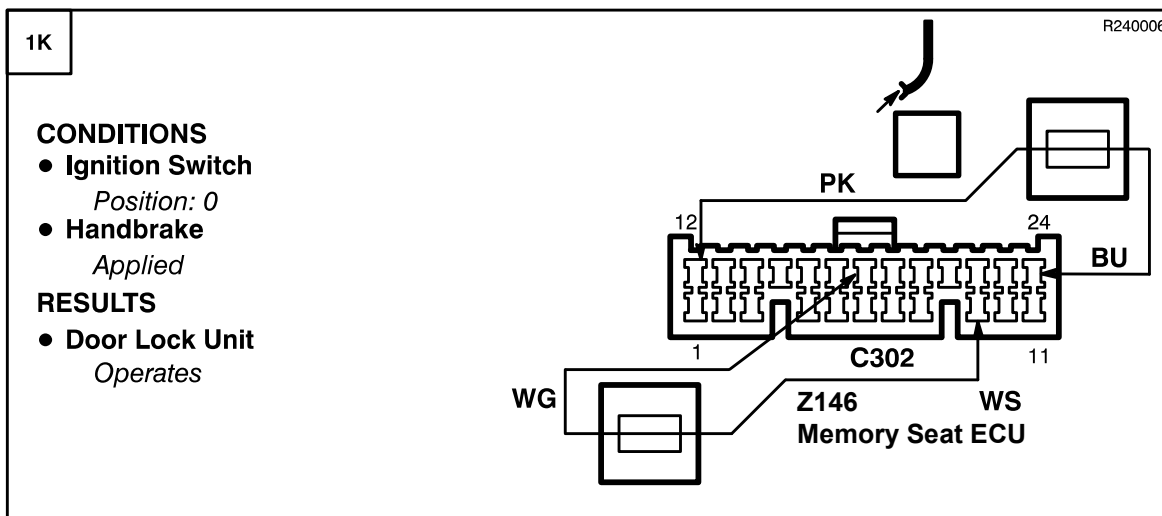
R090003



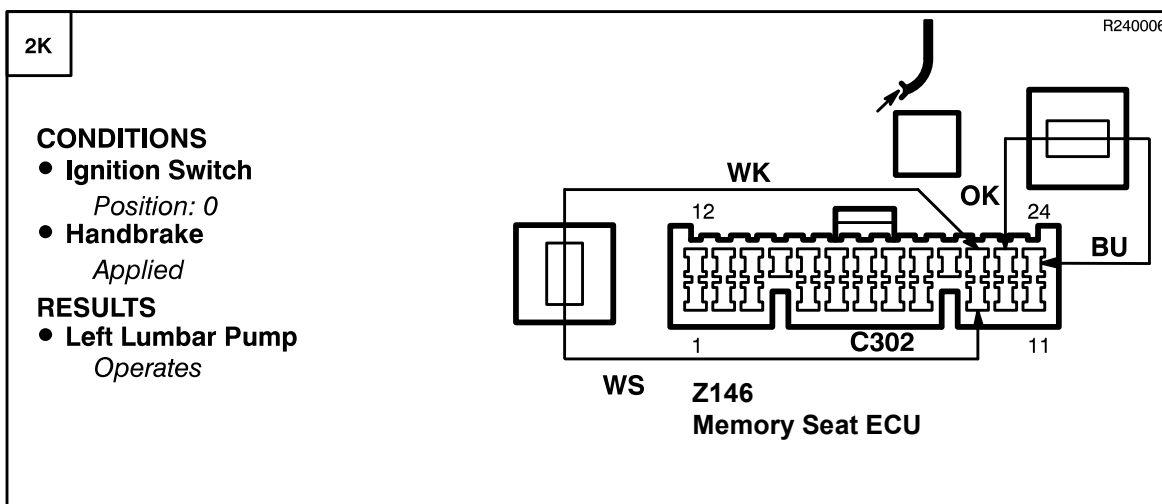
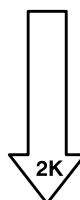
**PROBLEM CAUSE**  
- Memory Seat  
ECU



**PROBLEM CAUSE**  
- Seat Motors

**Test K****PROBLEM CAUSE**

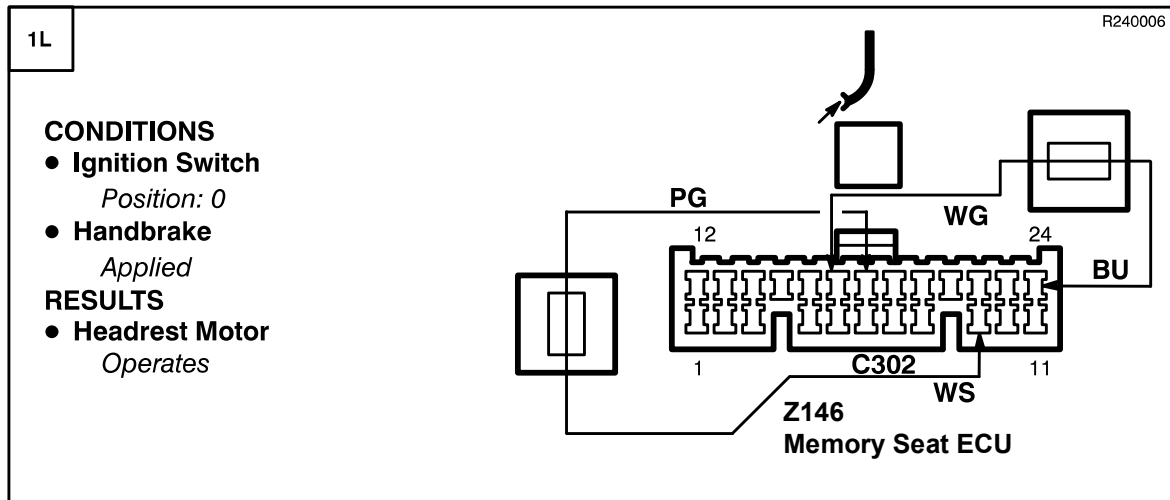
- WG, PR Wire
- PK, PU Wire
- Left Mirror Actuator

**PROBLEM CAUSE**

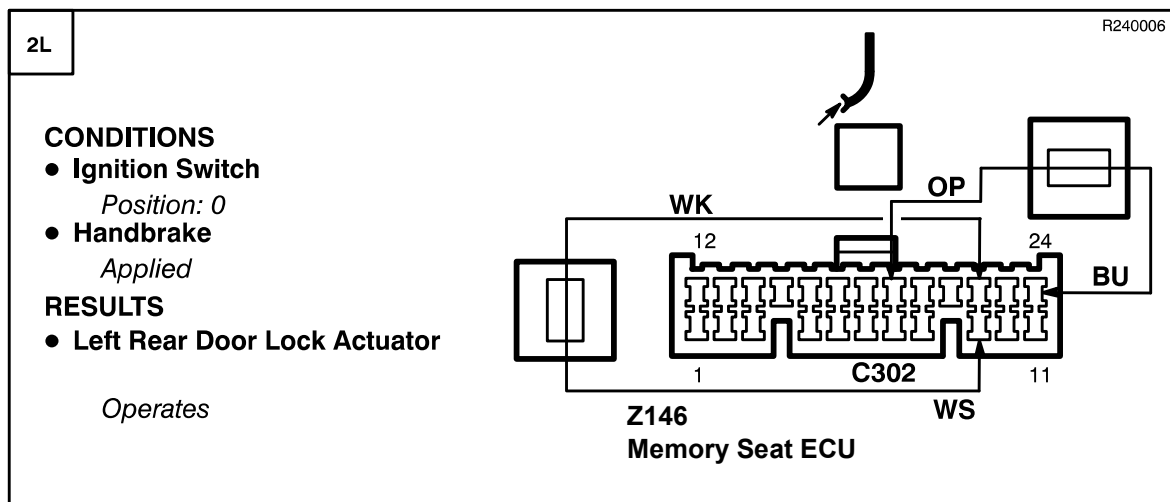
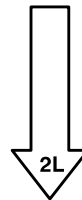
- WK, WP Wire
- OK Wire
- Left Mirror Actuator

**PROBLEM CAUSE**

- Memory Seat ECU

**Test L****PROBLEM CAUSE**

- PU, PG Wire
- PR Wire
- Right Mirror Actuator

**PROBLEM CAUSE**

- OP, OK Wire
- WP Wire
- Right Mirror Actuator

**PROBLEM CAUSE**

- Memory Seat ECU