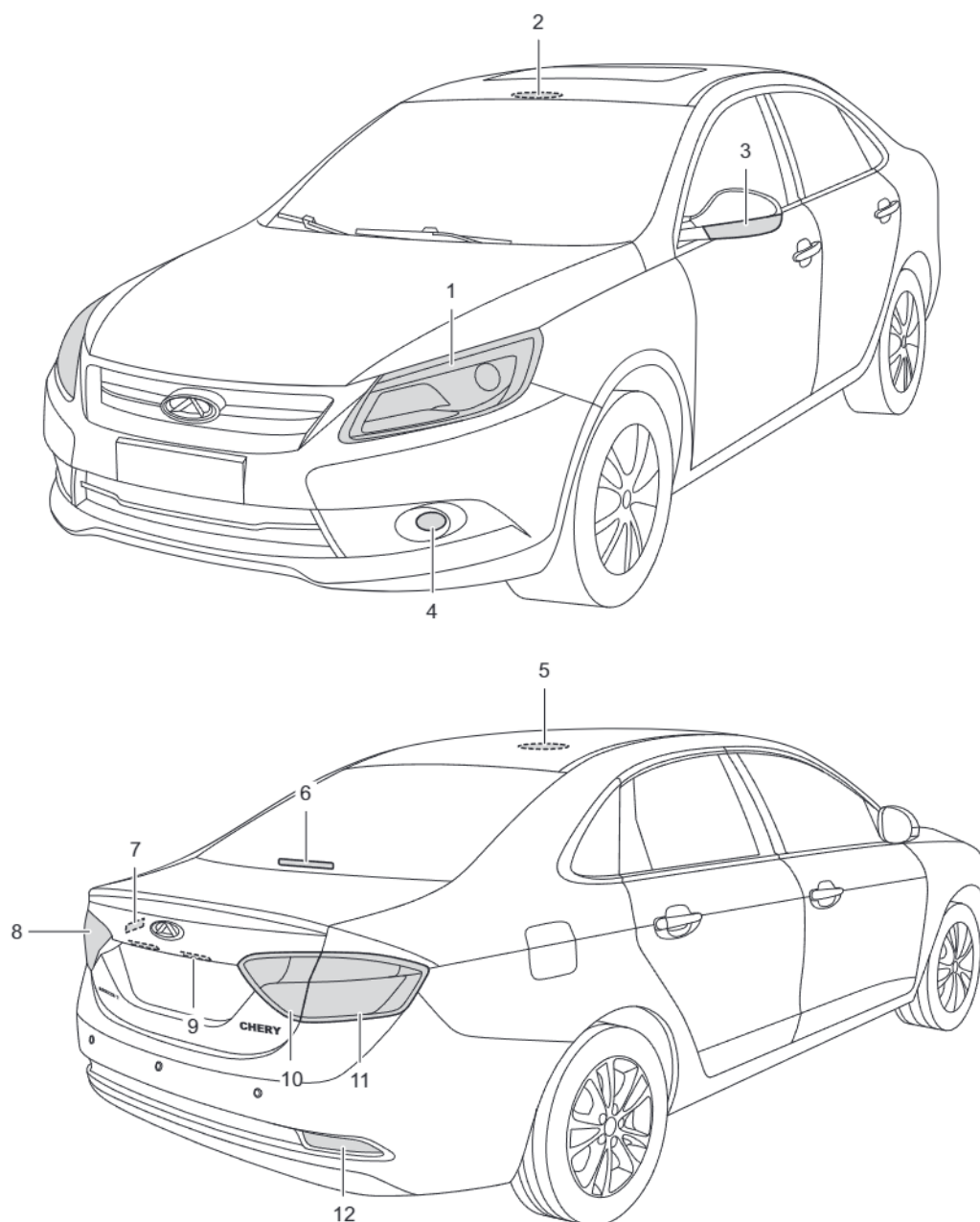


LIGHTING SYSTEM

GENERAL INFORMATION	36-3	Installation	36-94
Light Position Diagram	36-3	Warning Light Switch	36-95
System Assembly Diagram	36-5	Removal	36-95
Description	36-6	Inspection	36-96
Specifications	36-7	Installation	36-96
Tools	36-8	Back-up Light Switch Assembly	36-97
Circuit Diagram	36-9	Removal	36-97
		Inspection	36-97
		Installation	36-98
DIAGNOSIS & TESTING	36-23	Front Dome Light Assembly	36-99
Problem Symptoms Table	36-23	Removal	36-99
DTC Confirmation Procedure	36-26	Inspection	36-100
Intermittent DTC Troubleshooting	36-26	Installation	36-100
Ground Inspection	36-26	Rear Dome Light Assembly	36-101
System Diagnostic	36-27	Removal	36-101
Diagnosis Procedure	36-29	Inspection	36-102
Diagnostic Trouble Code (DTC) Chart	36-30	Installation	36-102
B1001-18	36-31	Headlight Assembly	36-103
B1001-19	36-31	Removal	36-103
B1002-18	36-38	Installation	36-103
B1002-19	36-38	Adjustment	36-104
B1003-18	36-45	Front Fog Light Assembly	36-106
B1003-19	36-45	Removal	36-106
B1004-18	36-52	Installation	36-106
B1004-19	36-52	Rear Combination Light Assembly (Fixed Part)	36-107
B1005-12	36-59	Removal	36-107
B1005-13	36-59	Installation	36-107
B1006-12	36-59	Rear Combination Light Assembly (Movable Part)	36-108
B1006-13	36-59	Removal	36-108
B1007-12	36-68	Installation	36-108
B1007-13	36-68	Retro-reflector	36-109
B1008-12	36-75	Removal	36-109
B1008-13	36-75	Installation	36-109
B100A-16	36-80	High Mounted Stop Light Assembly	36-110
B100A-17	36-80	Removal	36-110
B100B-16	36-86	Installation	36-110
B100B-17	36-86	License Plate Light Assembly	36-111
		Removal	36-111
		Installation	36-111
ON-VEHICLE SERVICE	36-90	Luggage Compartment Light Assembly	36-112
Combination Light Switch Assembly	36-90	Removal	36-112
Removal	36-90	Installation	36-112
Inspection	36-91		
Installation	36-92		
Adjustment Switch Assembly	36-93		
Removal	36-93		
Inspection	36-93		

GENERAL INFORMATION

Light Position Diagram



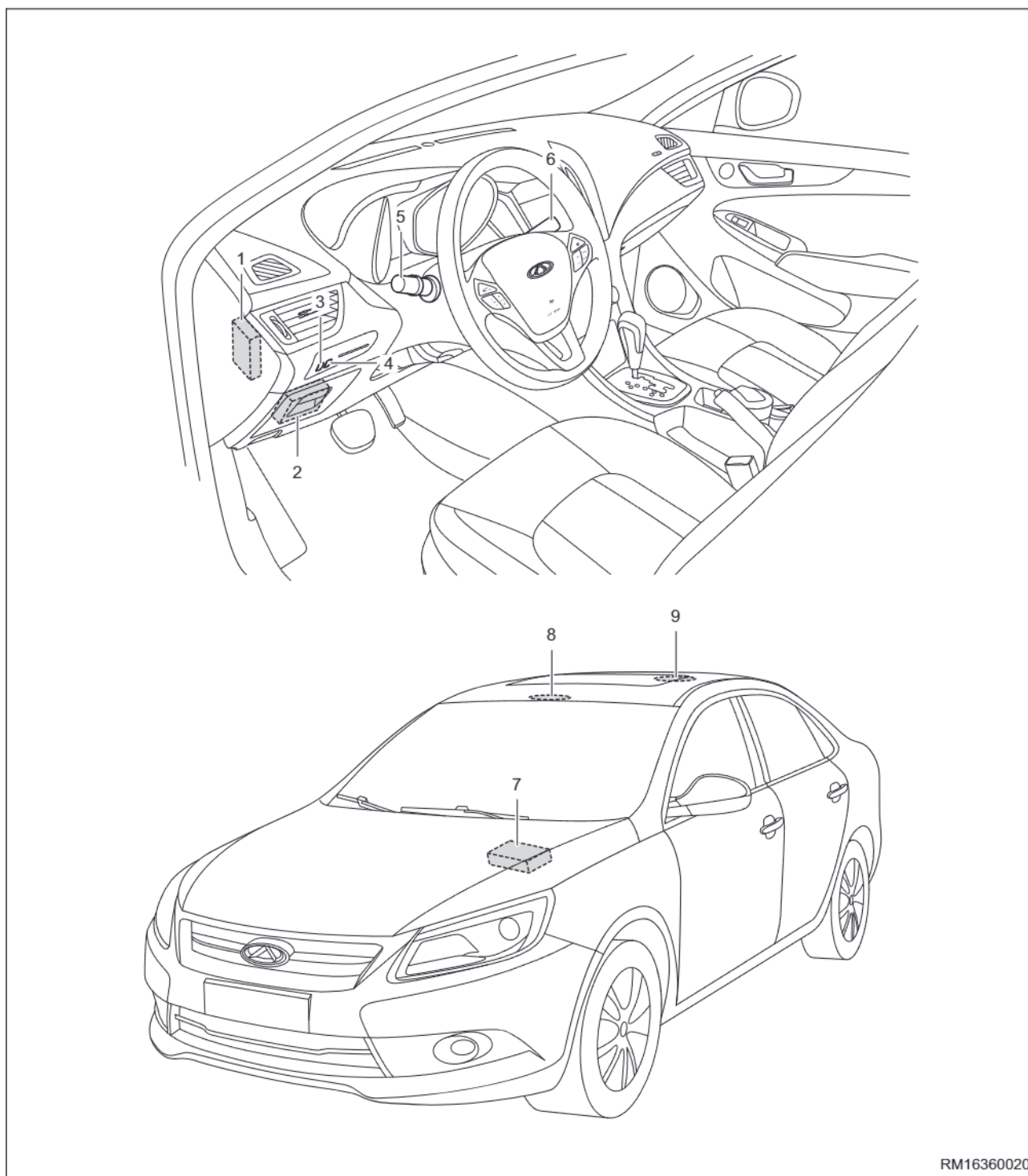
36

RM16360010



1 - Headlight Assembly (Including Low Beam Light, High Beam Light, Front Position Light, Turn Signal Light)	2 - Interior Front Dome Light
3 - Side Turn Signal Light	4 - Front Fog Light
5 - Interior Rear Dome Light	6 - High Mounted Stop Light
7 - Luggage Compartment Light	8 - Rear Fog Light
9 - License Plate Light	10 - Rear Combination Light Assembly (Movable Part) (Position Light, Back-up Light)
11 - Rear Combination Light Assembly (Fixed Part) (Rear Turn Signal Light, Brake Light, Position Light)	12 - Rear Retro-reflector

System Assembly Diagram



36

RM16360020

1 - Body Control Module (BCM)	2 - Instrument Panel Fuse Box
3 - Backlight Adjustment Switch	4 - Headlight Leveling Switch
5 - Combination Light Switch	6 - Wiper Switch
7 - Engine Compartment Fuse and Relay Box	8 - Interior Front Dome Light Switch
9 - Interior Rear Dome Light Switch	

Description

Lighting system on this model consists of vehicle lighting device and light signal device, which are used for normal operation of vehicle to ensure safety when driving at night or in fog.

Lighting system consists of headlight assembly (including low beam light, high beam light, front position light and turn signal light), front fog light, side turn signal light, front dome light, rear combination light assembly (including turn signal light, rear position light/brake light and back-up light), rear fog light, retro-reflector, license plate light, high mounted stop light, rear dome light and luggage compartment light. Headlight assembly and rear combination light assembly use semi-closed structure for easy inspection and repair.

Specifications

Bulb Specifications

Bulb Name	Nominal Light Source (Model/Type)
Headlight (High Beam/Low Beam)	H7
Front Position Light	W5W
Front Turn Signal Light	PY21W
Brake Light	LED
Front Fog Light	H7
Rear Fog Light	W21W
License Plate Light	C5W
High Mounted Stop Light	LED
Rear Position Light	LED
Rear Turn Signal Light	WY21W
Back-up Light	W21W
Side Turn Signal Light	LED
Front Dome Light	W5W
Rear Dome Light	W5W
Luggage Compartment Light	C5W

36

Torque Specifications

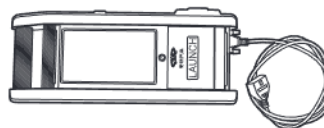
Description	Torque (N·m)
Headlight Assembly Fixing Bolt	4.5 ± 0.5
Front Fog Light Assembly Fixing Screw	1.5 ± 0.5
Rear Combination Light Assembly (Fixed Part) Fixing Nut	4.0 ± 0.5
Rear Combination Light Assembly (Movable Part) Fixing Nut	4.0 ± 0.5
Front Dome Light Assembly Fixing Screw	2.5 ± 0.5
High Mounted Stop Light Fixing Nut	2.5 ± 0.5
Bumper Left Mounting Bracket Fixing Bolt	4.5 ± 1
License Plate Light Cover Fixing Screw	1.2 ± 0.2
Back-up Light Switch Assembly	20 ± 2



Tools

Special Tool

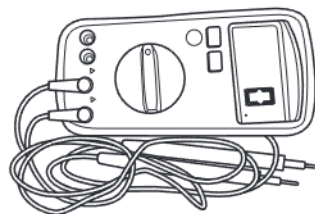
X-431 3G Diagnostic Tester



RCH0000001

General Tool

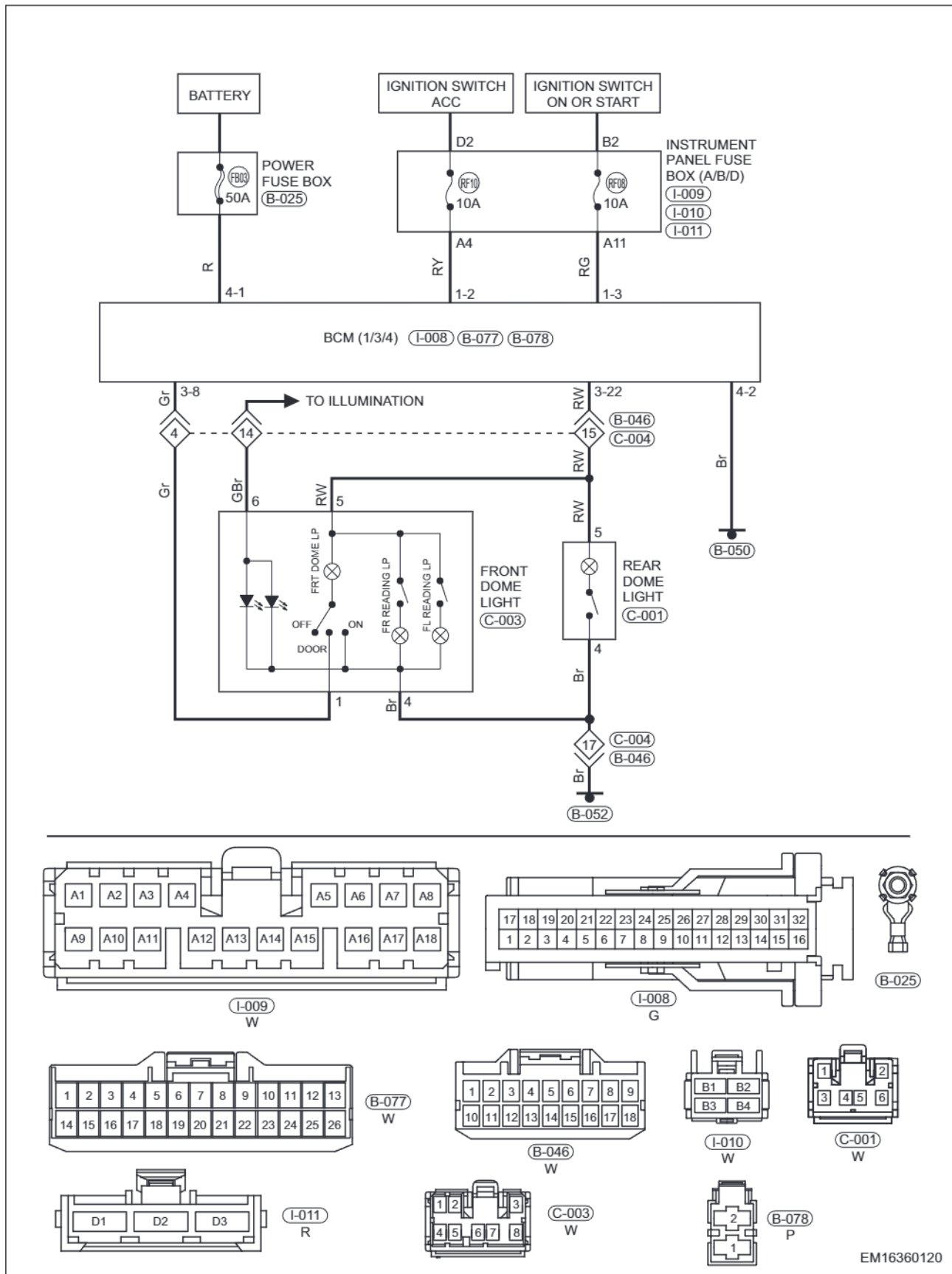
Digital Multimeter



RCH0000002

Circuit Diagram

Dome Light

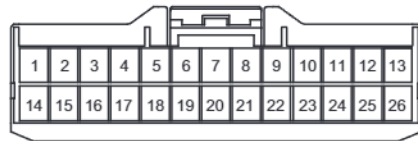
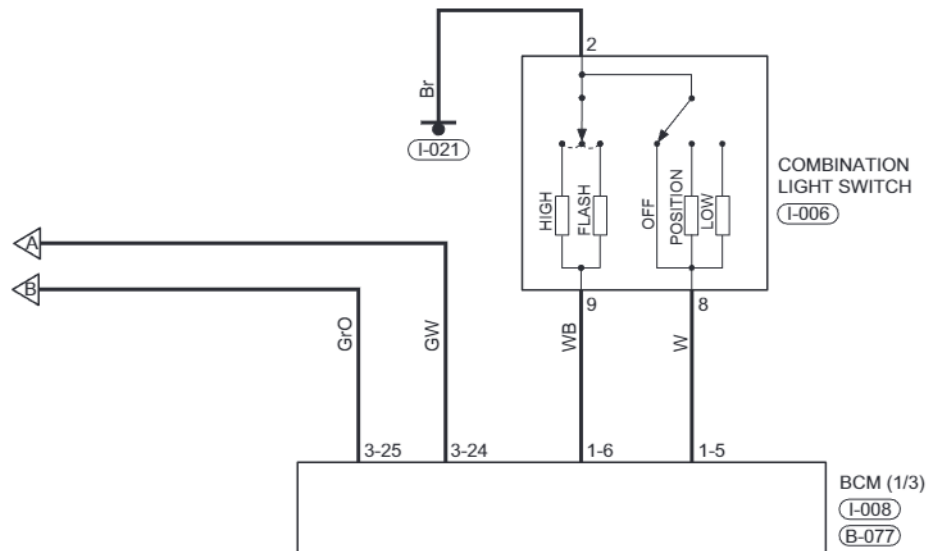
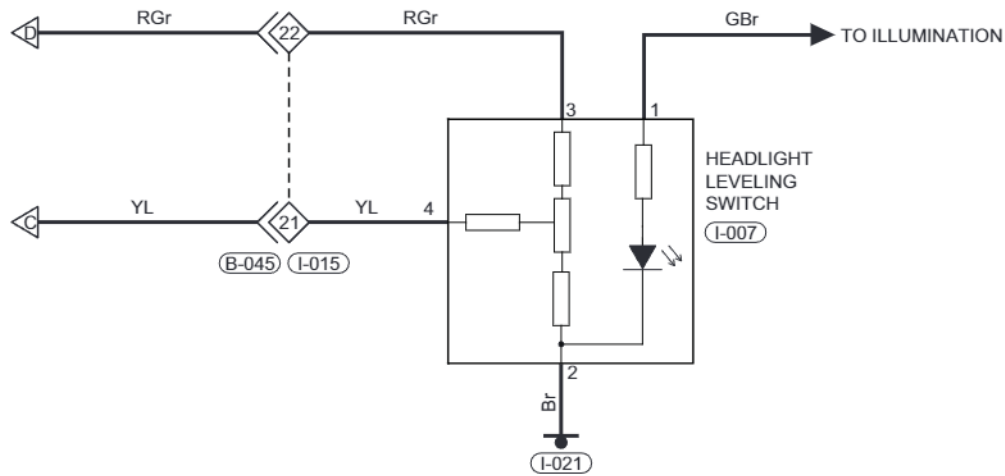


36-10

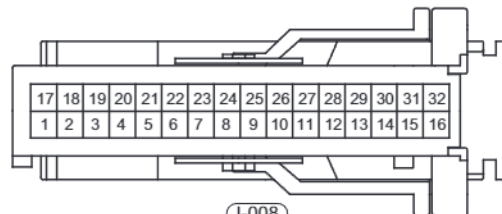


EM16360010

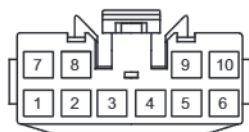
High/Low Beam Light (Page 2 of 2)



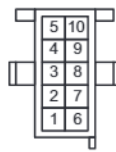
(B-077)
W



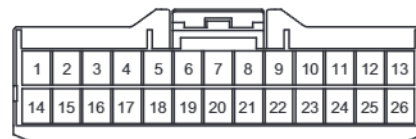
(I-008)
G



(I-007)
W



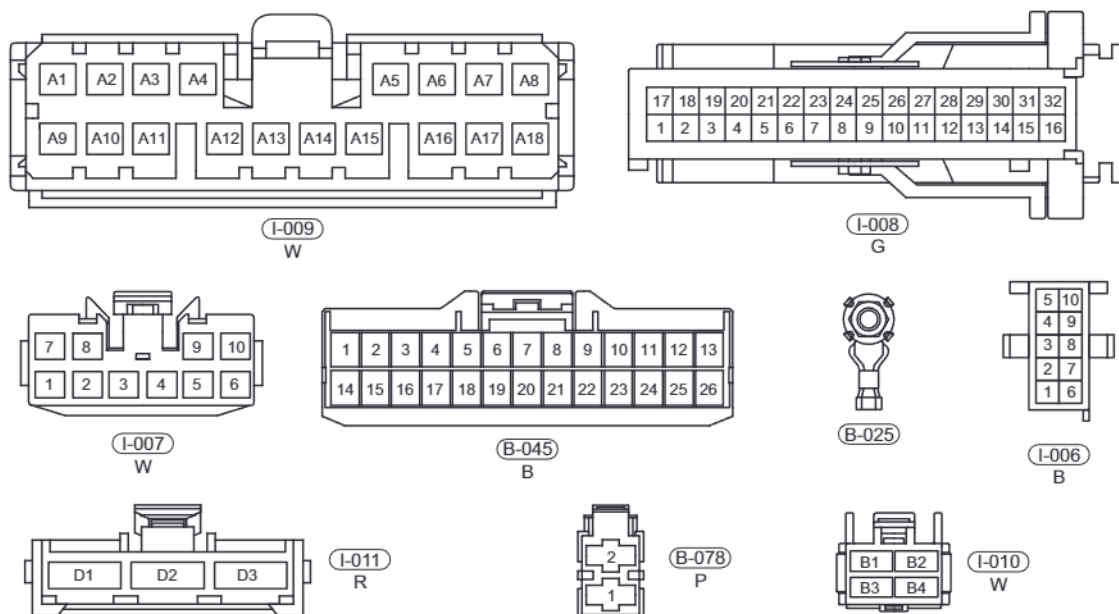
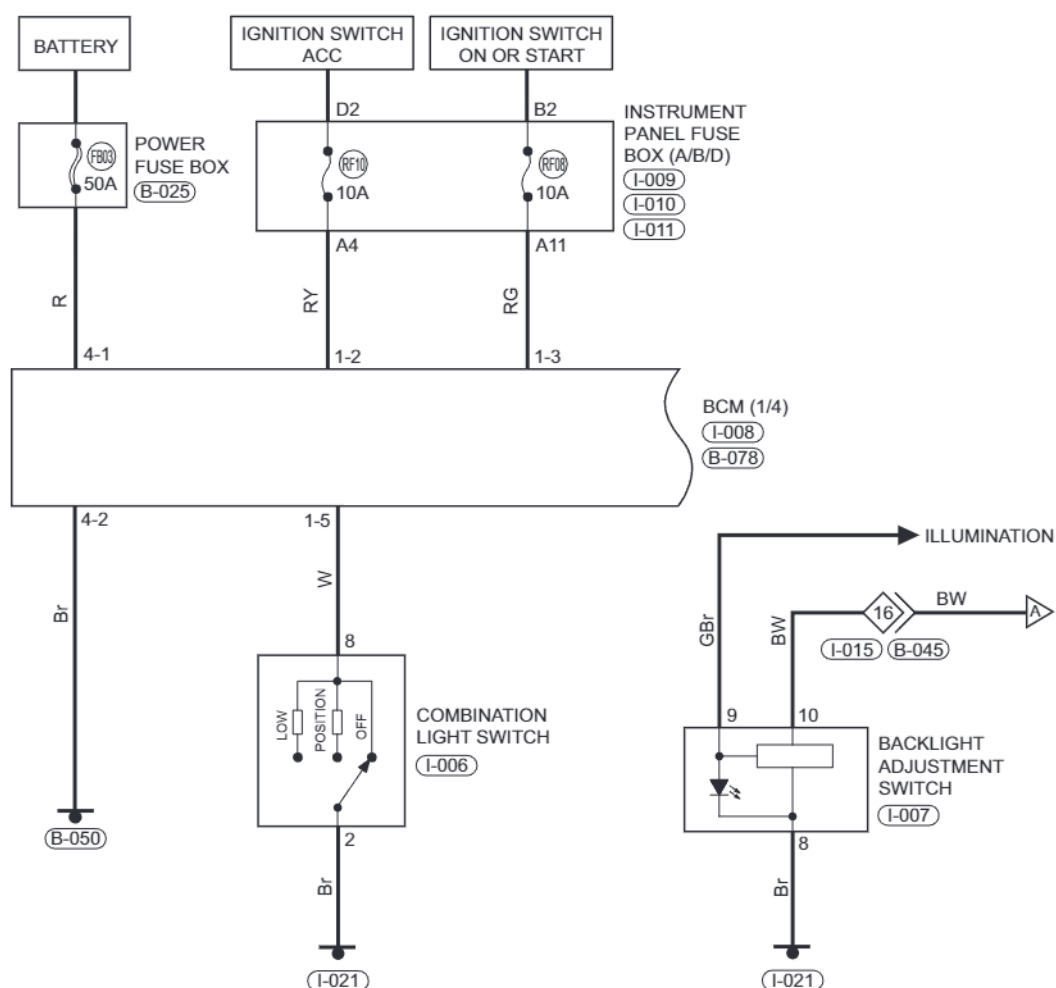
(I-006)
B



(B-045)
B

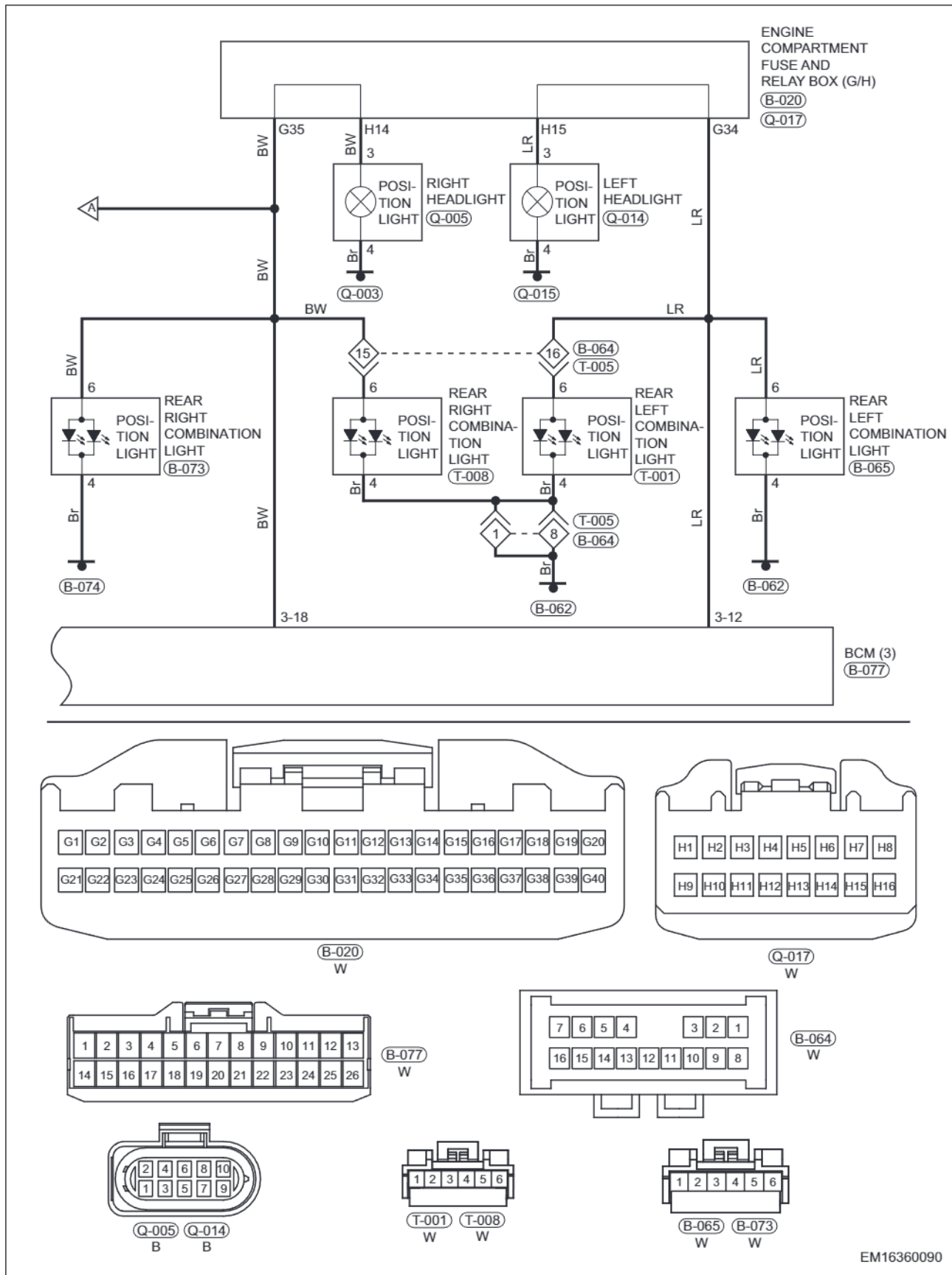
EM16360020

Position Light (Page 1 of 2)



EM16360080

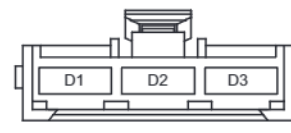
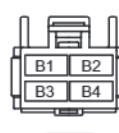
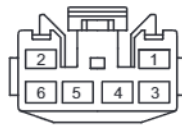
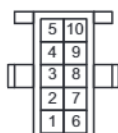
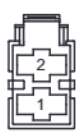
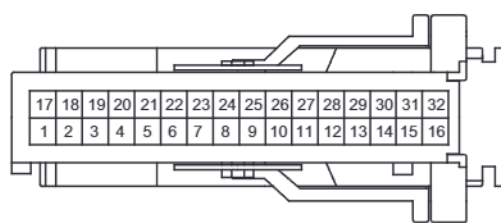
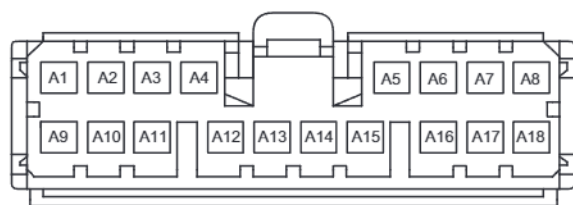
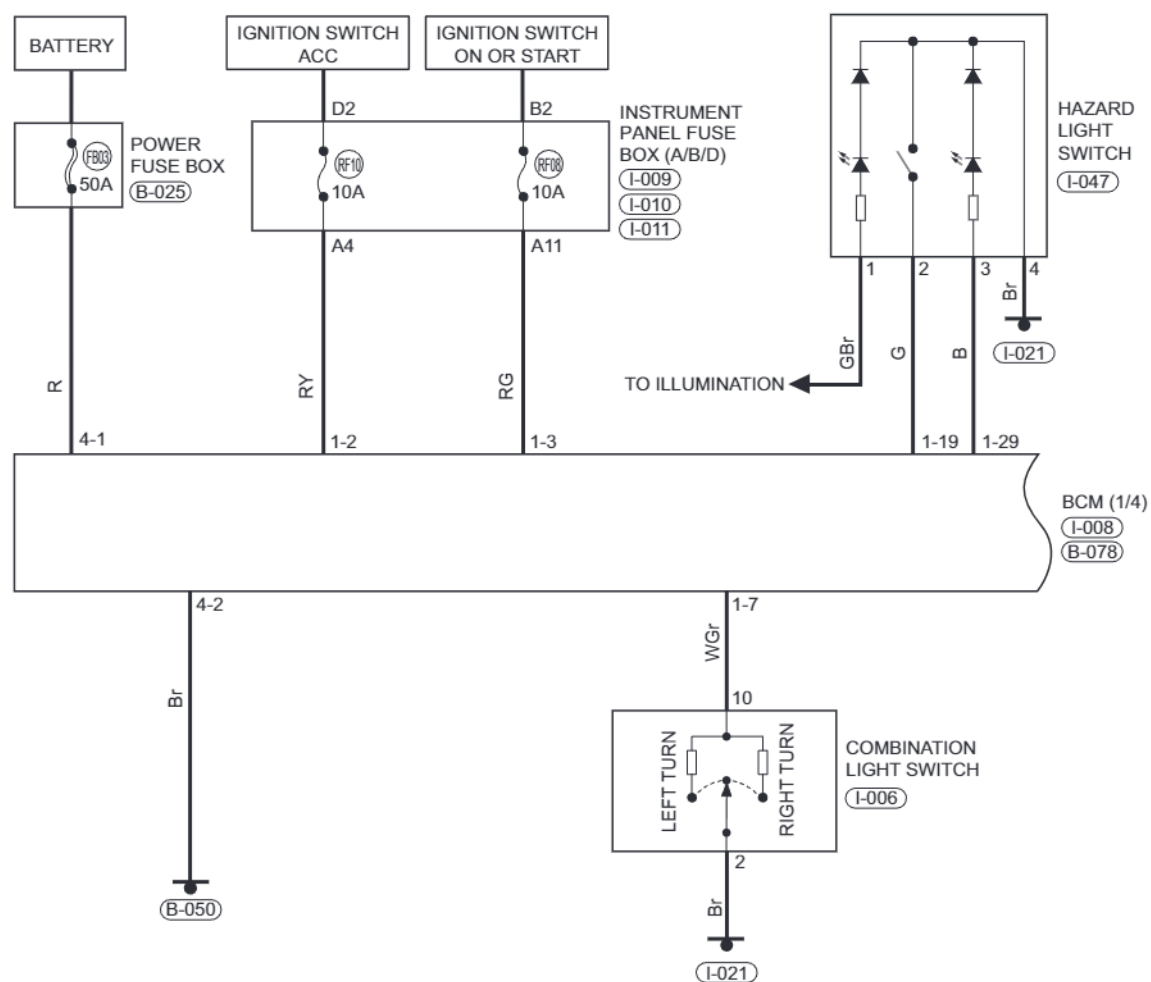
Position Light (Page 2 of 2)



36

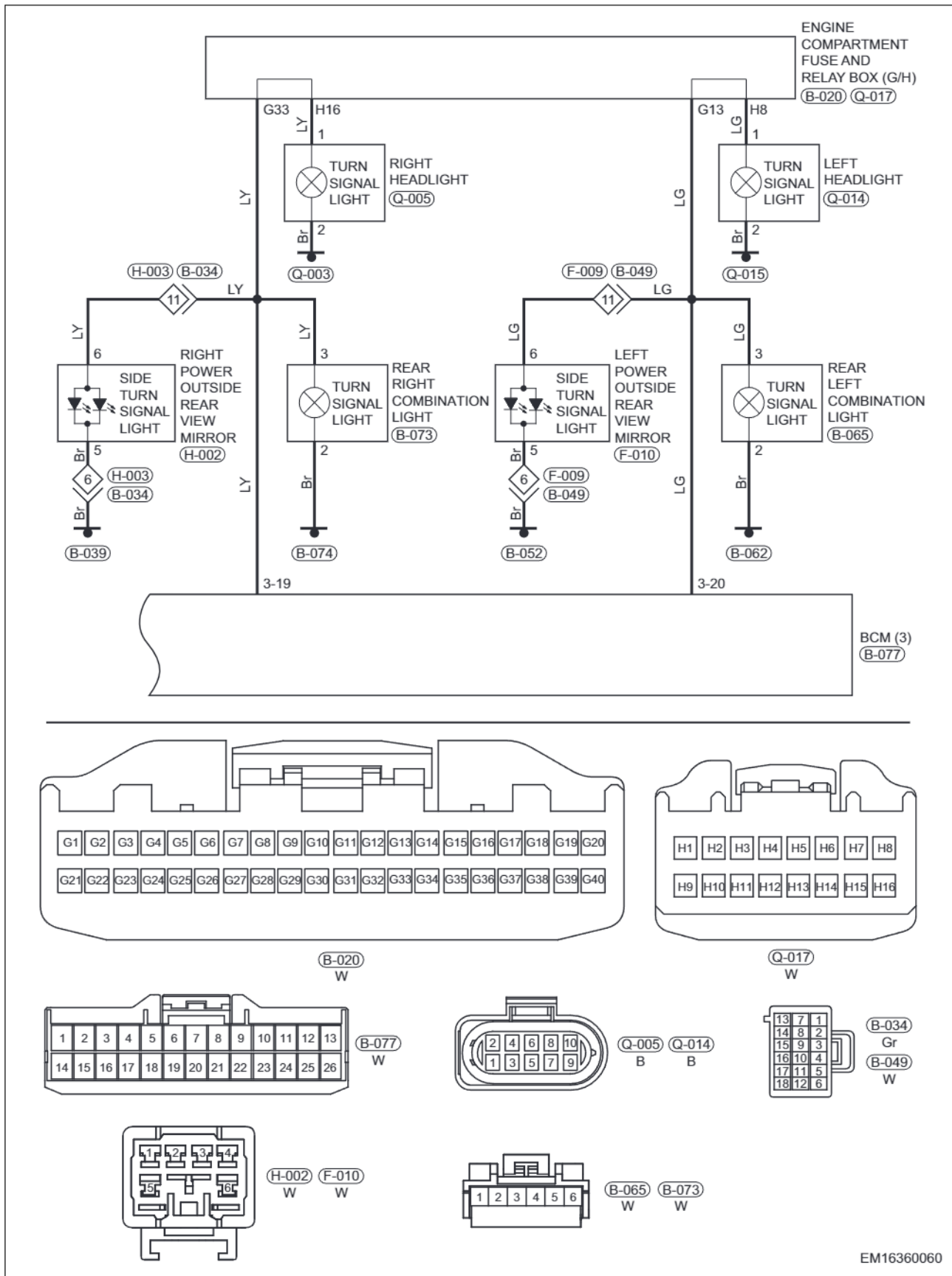


Hazard Warning Light



EM16360050

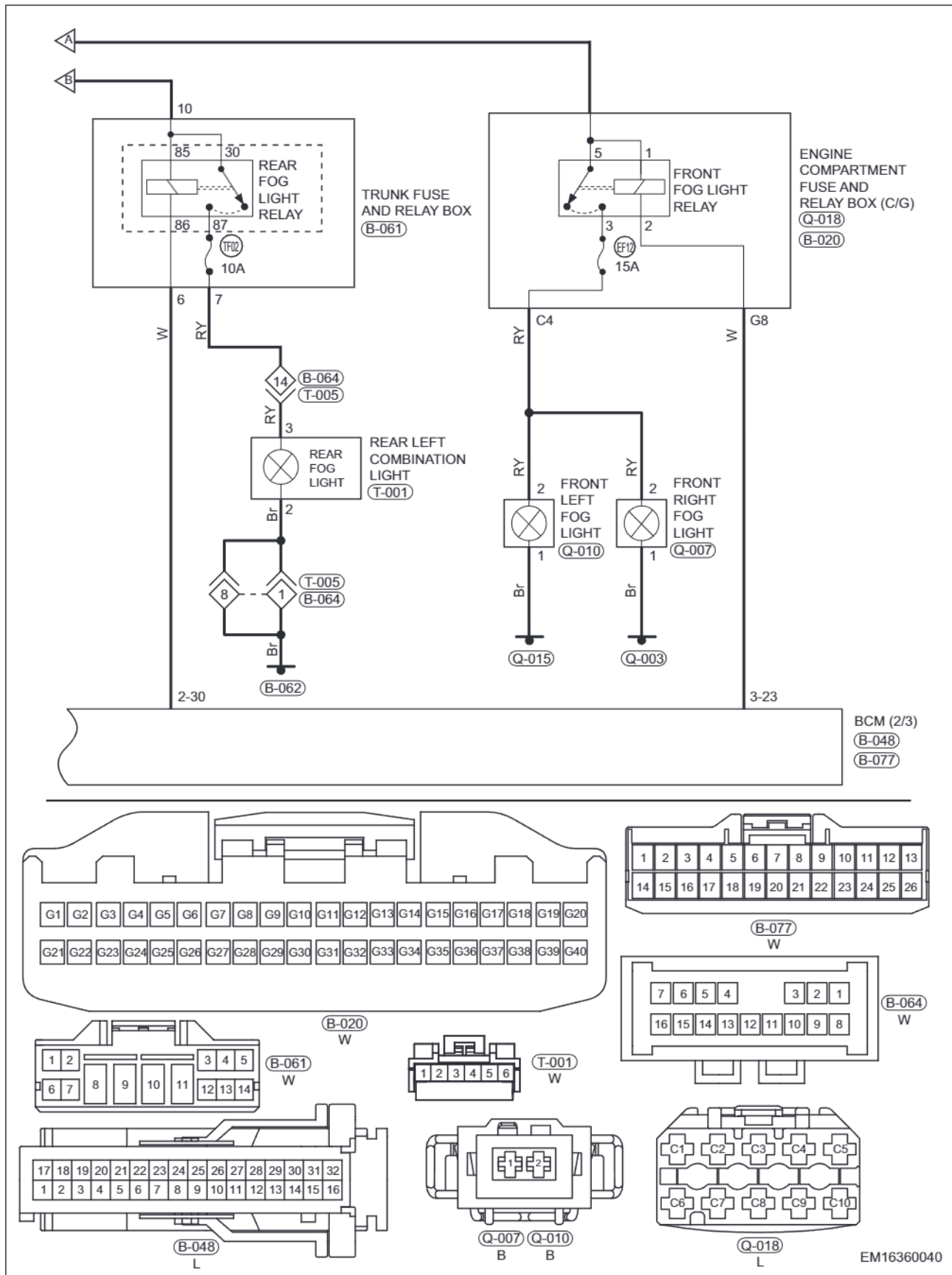
Turn Signal Light



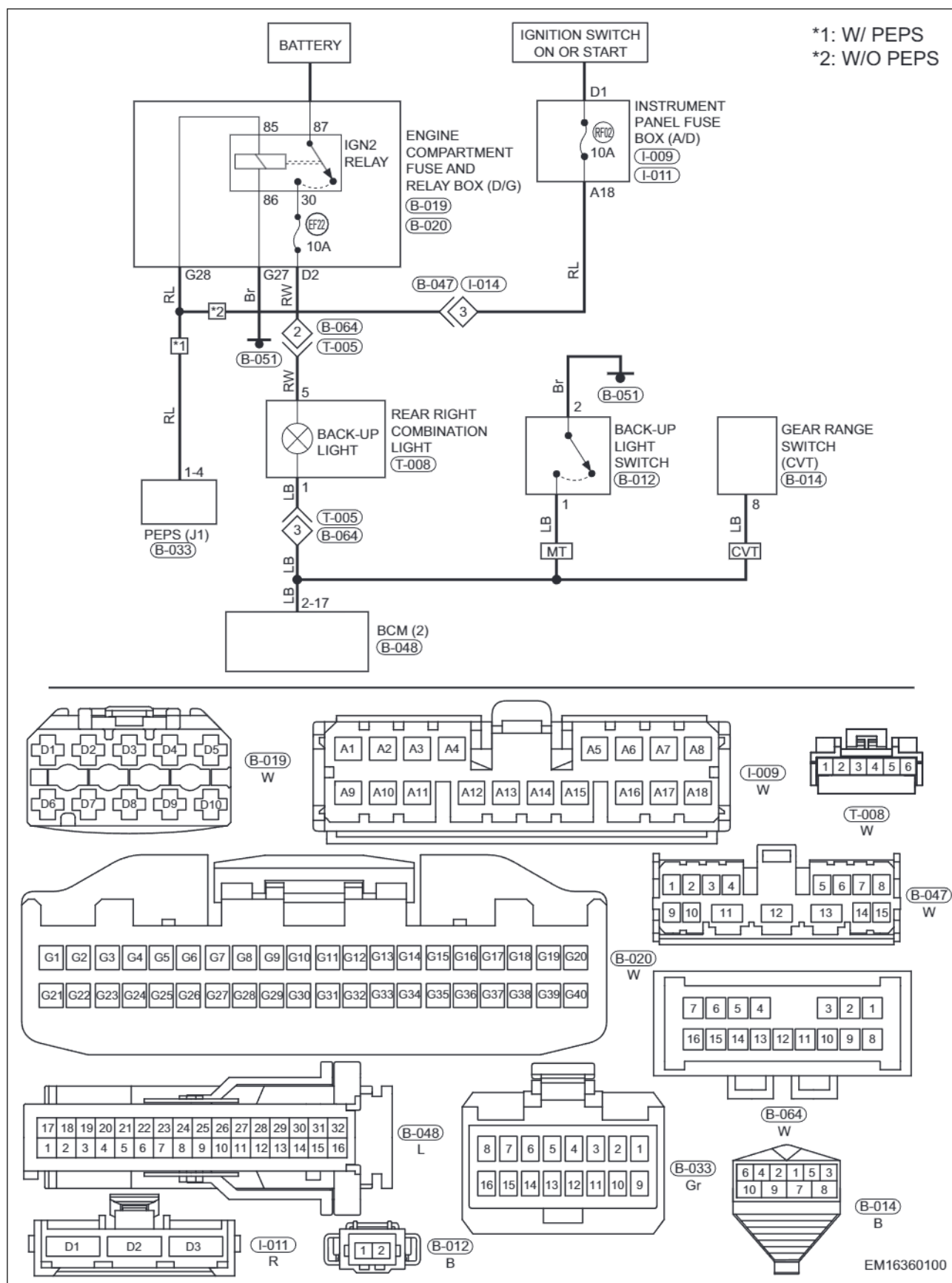
36



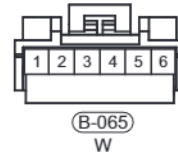
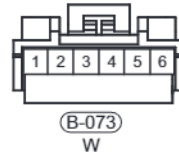
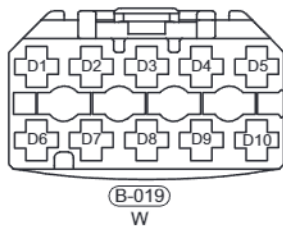
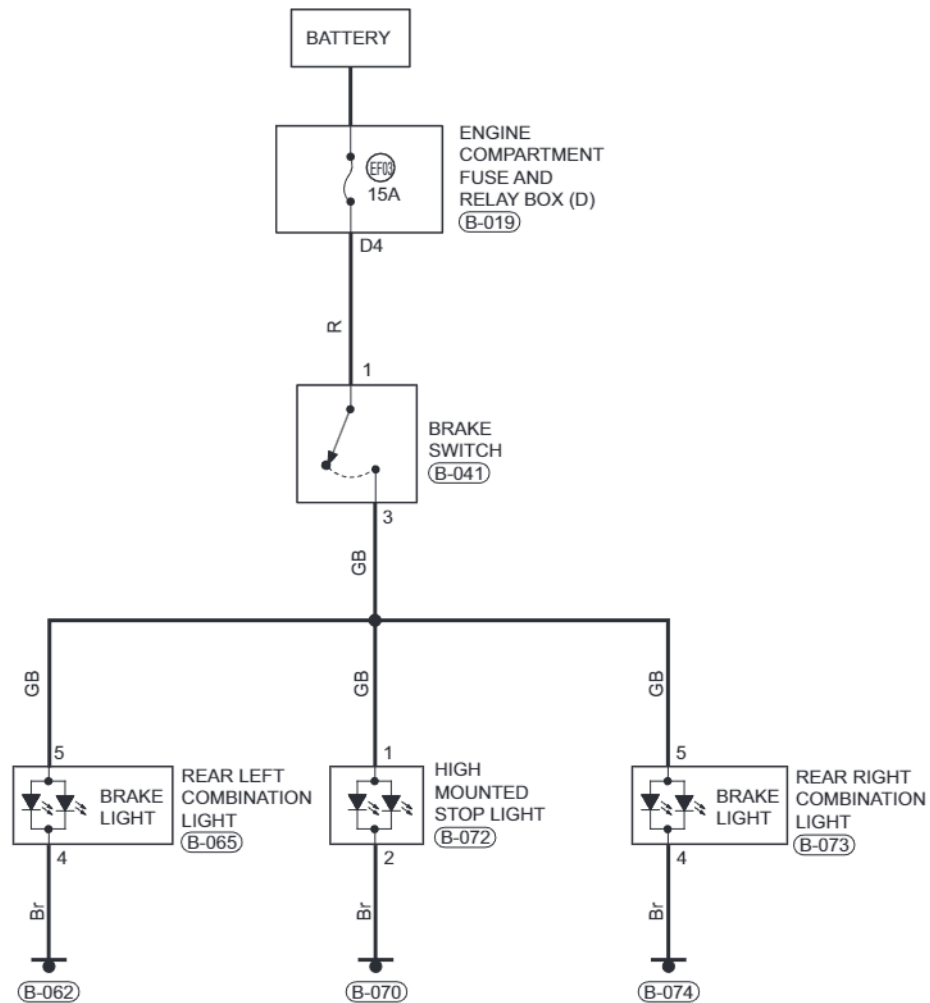
Fog Light (Page 2 of 2)



Back-up Light

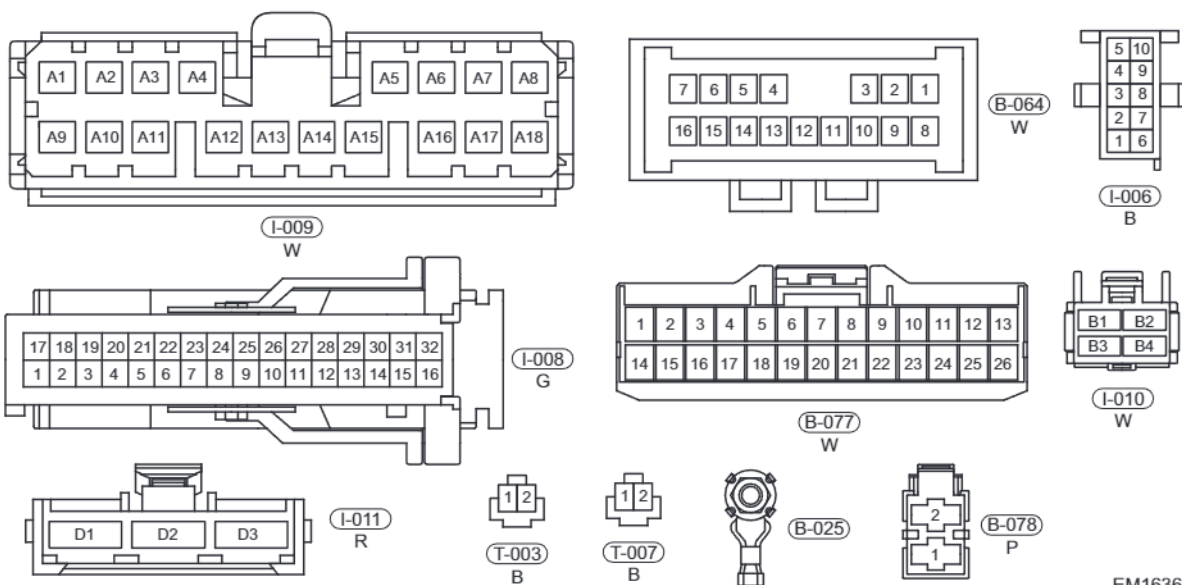
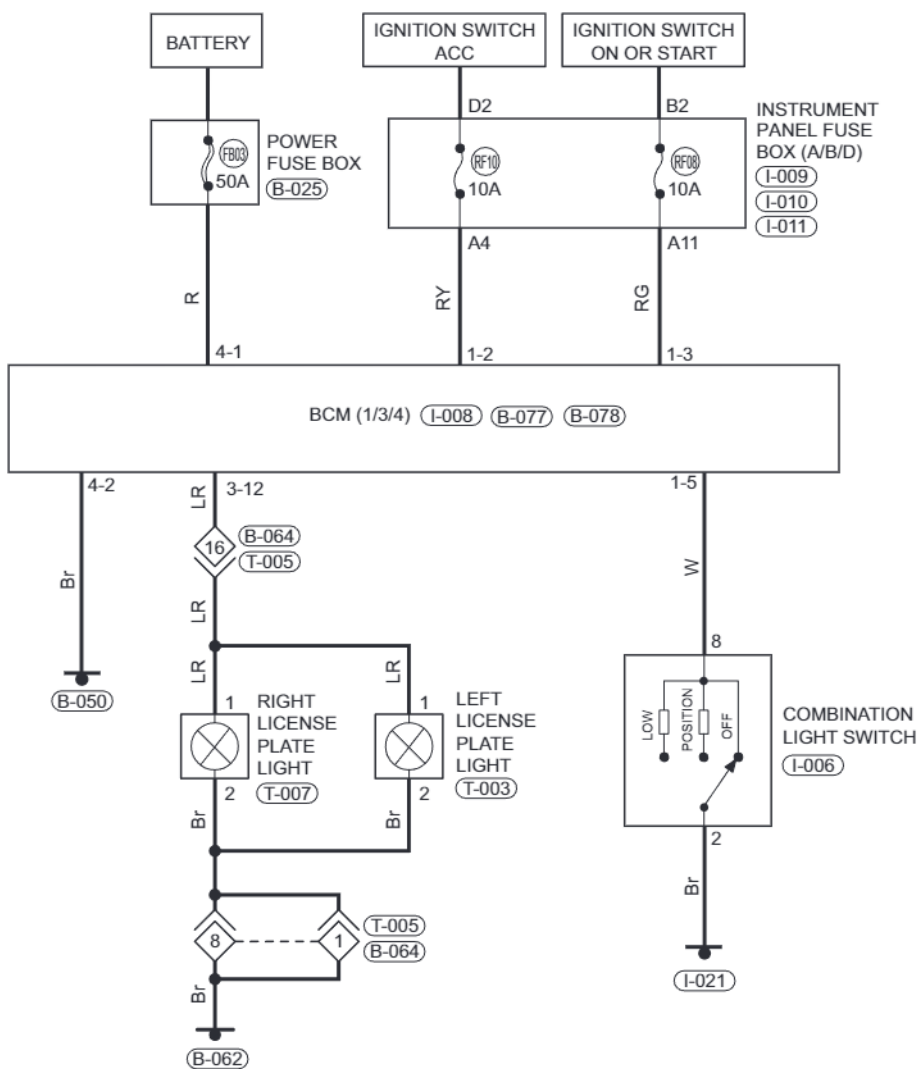


Brake Light



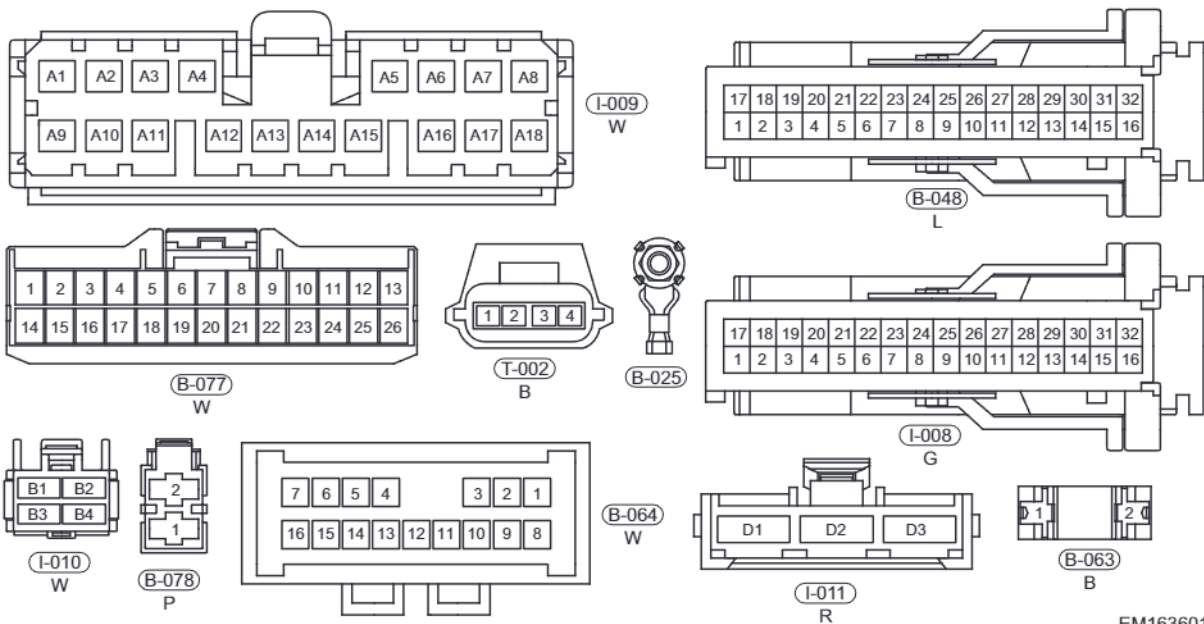
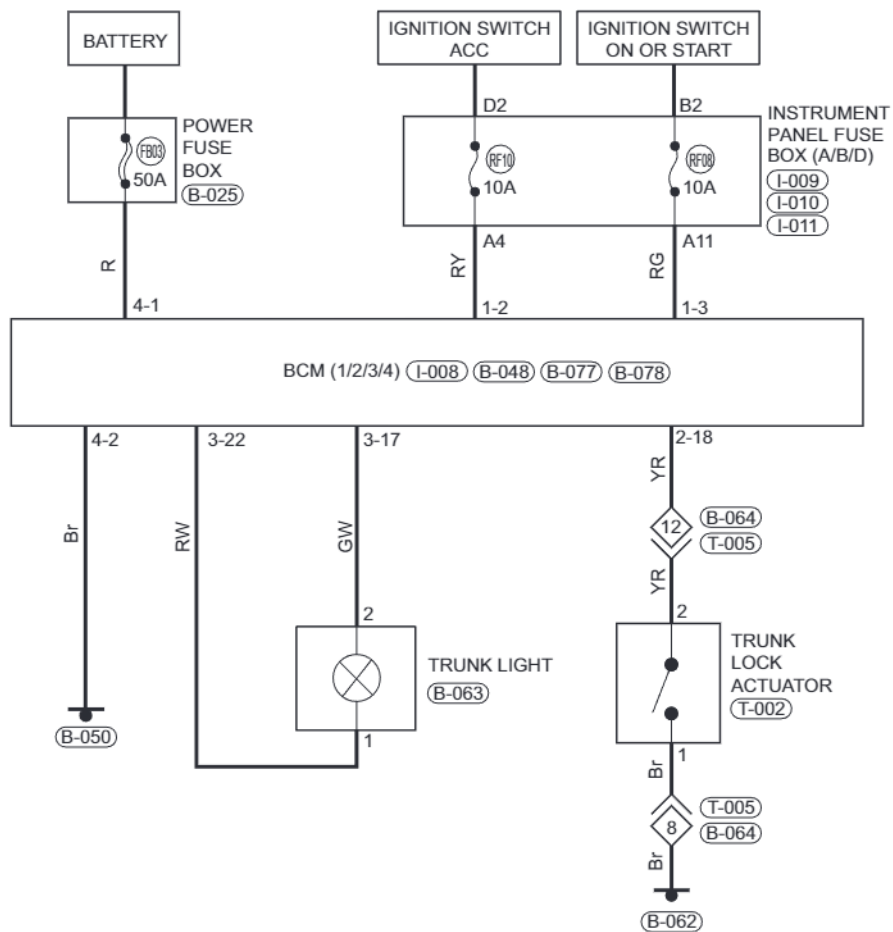
EM16360070

License Plate Light



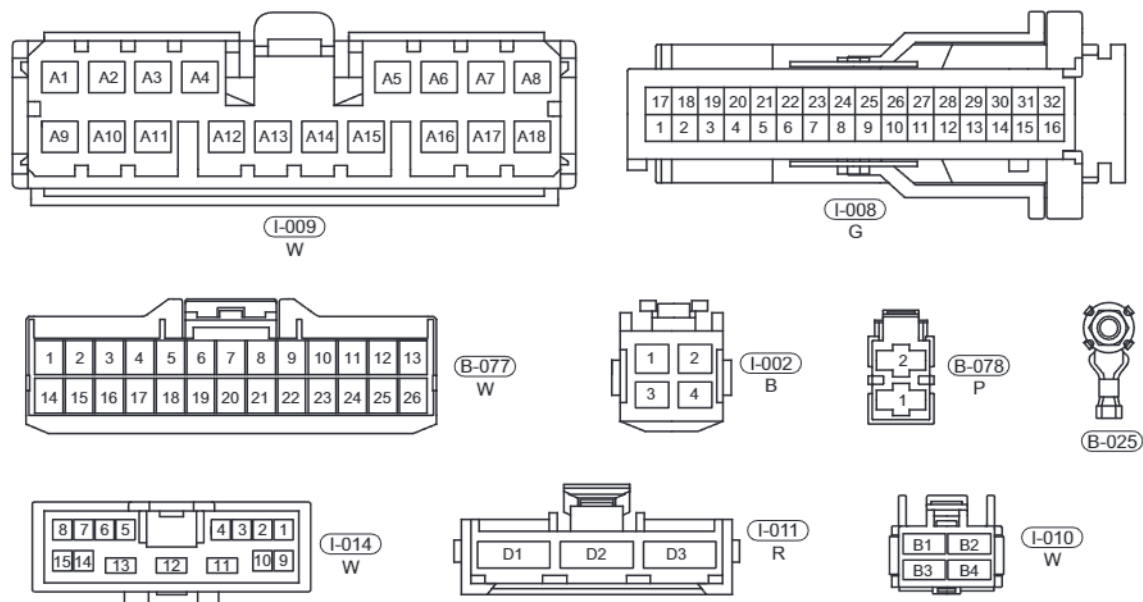
EM16360110

Luggage Compartment Light



EM16360130

36



36-22

DIAGNOSIS & TESTING

Problem Symptoms Table

HINT:

Use symptoms table below to help determine cause of problem. Check each suspected area in sequence. Repair or adjust faulty components, or replace as necessary.

Position Light, Low Beam Light, High Beam Light

Symptom	Suspected Area	See page
Low beam does not come on (one side)	Fuse	53-37
	Low beam bulb	-
	Wire harness or connector	-
Low beam does not come on (both sides)	Fuse	53-37
	Low beam bulb	-
	Combination light switch assembly	36-90
	Low beam relay	53-37
	Wire harness or connector	-
	Body Control Module (BCM)	-
High beam does not come on (one side)	Fuse	53-37
	High beam bulb	-
	Wire harness or connector	-
High beam does not come on (both sides)	Fuse	53-37
	High beam bulb	-
	Combination light switch assembly	36-90
	High beam relay	53-37
	Wire harness or connector	-
	Body Control Module (BCM)	-
Position light does not come on (both sides)	Position light bulb (all)	-
	Wire harness or connector	-
	Combination light switch assembly	36-90
	Body Control Module (BCM)	-
Position light does not come on (one side)	Position light bulb	-
	Wire harness or connector	-

Front Fog Light

Symptom	Suspected Area	See page
Front fog light does not come on (both sides)	Fuse	53-37
	Front fog light relay	53-37
	Front fog light bulb	-
	Combination light switch assembly	36-90
	Wire harness or connector	-
	Body Control Module (BCM)	-
Front fog light does not come on (one side)	Front fog light bulb	-
	Wire harness or connector	-

Rear Fog Light

Symptom	Suspected Area	See page
Rear fog light does not come on	Fuse	53-40
	Rear fog light relay	53-37
	Rear fog light bulb	-
	Combination light switch assembly	36-90
	Wire harness or connector	-
	Body Control Module (BCM)	-

Turn Signal Light and Hazard Warning Light

Symptom	Suspected Area	See page
Hazard warning light and turn signal light do not come on	Bulb	-
	Wire harness or connector	
	Hazard warning light switch	36-95
	Combination light switch assembly	36-90
	Body Control Module (BCM)	-
Hazard warning light does not come on (turn signal light is normal)	Hazard warning light switch	36-95
	Wire harness or connector	-
Turn signal light does not come on (hazard warning light is normal)	Combination light switch assembly	36-90
	Wire harness or connector	-

License Plate Light

Symptom	Suspected Area	See page
License plate light does not come on	License plate light bulb	-
	Combination light switch assembly	36-90
	Wire harness or connector	-
	Body Control Module (BCM)	-

Luggage Compartment Light

Symptom	Suspected Area	See page
Luggage compartment light does not come on	Luggage compartment light bulb	-
	Wire harness or connector	-
	Body Control Module (BCM)	-

Brake Light

Symptom	Suspected Area	See page
Brake light does not come on (all)	Fuse	53-37
	Brake bulb	-
	Brake light switch	26-22
	Wire harness or connector	-
Only one brake light does not come on	Brake light bulb	-
	Wire harness or connector	-

36**Front Dome Light**

Symptom	Suspected Area	See page
Front dome light does not come on	Front dome light bulb	-
	Wire harness or connector	-
	Front dome light assembly	36-99
	Body Control Module (BCM)	-

Rear Dome Light

Symptom	Suspected Area	See page
Rear dome light does not come on	Rear dome light bulb	-
	Wire harness or connector	-
	Rear dome light assembly	36-101
	Body Control Module (BCM)	-

Back-up Light

Symptom	Suspected Area	See page
Back-up light does not come on (all)	Fuse	53-37
	IGN2 relay	53-37
	Back-up light bulb	-
	Back-up light switch (MT model)	36-97
	Gear range switch (CVT model)	18-108
	Wire harness or connector	-

DTC Confirmation Procedure

Confirm that battery voltage is over 12 V before performing following procedures.

- Turn ignition switch to LOCK.
- Connect X-431 3G diagnostic tester (the latest software) to Data Link Connector (DLC).
- Turn ignition switch to ON.
- Use X-431 3G diagnostic tester to record and clear DTCs stored in lighting system.
- Turn ignition switch to LOCK and wait for a few seconds.
- Turn ignition switch to ON and then select Read Code.
- If DTC is detected, malfunction indicated by DTC is current. Go to diagnosis procedure - Step 1.
- If DTC is not detected, malfunction indicated by DTC is intermittent.

Intermittent DTC Troubleshooting

If malfunction is intermittent, perform the followings:

- Check if connectors are loose.
- Check if wire harnesses are worn, pierced, pinched or partially broken.
- Monitor X-431 3G diagnostic tester (the latest software) data that is related to this circuit.
- Wiggle related wire harnesses and connectors and observe if signal is interrupted in related circuit during testing.
- If possible, try to duplicate the conditions under which DTC was set.
- Look for data that has changed or the DTC to be reset during wiggle test.
- Look for broken, bent, protruded or corroded terminals.
- Inspect the mounting areas of combination light switch assembly and each light assembly and so on for damage, foreign matter, etc. that will cause incorrect signals.
- If multiple trouble codes were set, refer to the circuit diagrams to look for any common ground circuit or power supply circuit applied to DTC.
- Refer to any Technical Bulletin that may apply to the malfunction.

Ground Inspection

Ground inspection is very important to the proper operation of electrics and circuits. Ground connections are often exposed to moisture, dirt and corrosive elements. Corrosion (rust) can increase resistance which will change the way in which a circuit works.

Electronically controlled circuits are very sensitive to proper grounding. A loose or corroded ground can affect the electronically controlled circuit. The operations to check the ground points are as follows:

1. Remove the ground nut or bolt.
2. Check all contact surfaces for tarnish, dirt, rust, etc.
3. Clean as necessary to ensure that contacting is in a good condition.
4. Reinstall the ground nut or bolt securely.

5. Check if add-on accessories interfere with ground circuit.
6. If several wire harnesses are crimped into one ground eyelet terminal, check if they are installed correctly. Make sure all wire harnesses are clean, securely fastened and providing a good ground path.

System Diagnostic

1. Description
 - a. Lighting system data and Diagnostic Trouble Codes (DTCs) can be read from Data Link Connector (DLC) of vehicle. When system seems to be malfunctioning, use X-431 3G diagnostic tester to check for a malfunction and perform repairs.
2. Check battery voltage

Standard voltage:

11 to 14 V

If voltage is below 11 V, recharge or replace the battery before proceeding to next step.

DTC Check/Clear

1. Check DTCs
 - a. Connect X-431 3G diagnostic tester to Data Link Connector (DLC).
 - b. Turn ignition switch to ON, and turn X-431 3G diagnostic tester on.
 - c. Select following menu items to read the current malfunctions: M16/BCM/Read fault code/Read present fault code.
 - d. Read DTCs by following indications on tester screen.
2. Clear DTCs
 - a. Connect X-431 3G diagnostic tester to Data Link Connector (DLC).
 - b. Turn ignition switch to ON, and turn X-431 3G diagnostic tester on.
 - c. Select following menu items: M16/BCM/Erase fault code.
 - d. Clear DTCs by following the directions on tester screen.

Data List/Active Test

1. Read the Data List.

HINT:

Using X-431 3G diagnostic tester to read Data List allows values or states of switches, sensors, actuators and other items to be read without removing any parts. This non-intrusive inspection can be very useful because intermittent problems or signals may be discovered before parts or wiring is disturbed. Reading the Data List information early in troubleshooting is one way to save diagnostic time.

CAUTION

- In the table below, values listed under "Normal Condition" are reference values. Do not depend solely on these reference values, when deciding whether a part is faulty or not.

- a. Connect X-431 3G diagnostic tester to Data Link Connector (DLC).
- b. Turn ignition switch to ON, and turn X-431 3G diagnostic tester on.
- c. Select following menu items: M16/BCM/Read data stream/Input status (Light).
- d. Read the Data List according to display on tester.

Tester Display	Measurement Item/Range	Normal Condition
Left Turn Signal Light	Left turn signal/On or Off	Left turn signal On: Active Left turn signal Off: Inactive

Tester Display	Measurement Item/Range	Normal Condition
Right Turn Signal Light	Right turn signal/On or Off	Right turn signal On: Active Right turn signal Off: Inactive
Front Fog Light	Front fog light signal/On or Off	Front fog light signal On: Active Front fog light signal Off: Inactive
Rear Fog Light	Rear fog light signal/On or Off	Rear fog light signal On: Active Rear fog light signal Off: Inactive
Position Light	Position light signal/On or Off	Position light signal On: Active Position light signal Off: Inactive
Low Beam	Low beam light signal/On or Off	Low beam light signal On: Active Low beam light signal Off: Inactive
High Beam	High beam light signal/On or Off	High beam light signal On: Active High beam light signal Off: Inactive
Hazard	Hazard light signal/On or Off	Hazard light signal On: Active Hazard light signal Off: Inactive
Reversing Light	Reversing light signal/On or Off	Reversing light signal On: Active Reversing light signal Off: Inactive
Passing Light	Passing light signal/On or Off	Passing light signal On: Active Passing light signal Off: Inactive

2. Perform the Active Test.

HINT:

Using X-431 3G diagnostic tester to perform Active Tests allows items to be tested without removing any parts. This non-intrusive functional inspection can be very useful because intermittent problems may be discovered before parts or wiring is disturbed. Perform the Active Test early in troubleshooting is one way to save diagnostic time. Data List information can be displayed when performing Active Test.

- Connect X-431 3G diagnostic tester to Data Link Connector (DLC).
- Turn ignition switch to ON, and turn X-431 3G diagnostic tester on.
- Select following menu items: M16/BCM/Action Test.
- Perform Active Test according to the tester display.

Test Part	Control Range
Left Turn Signal Light	Active/Inactive
Right Turn Signal Light	Active/Inactive
Position Light	Active/Inactive
Low Beam	Active/Inactive
High Beam	Active/Inactive
Front Fog Light	Active/Inactive
Rear Fog Light	Active/Inactive
Dome Lamp	Active/Inactive
Security Indicator	Active/Inactive

Diagnosis Procedure

HINT:

Perform troubleshooting according to the procedures below.

1 Vehicle brought to workshop

NEXT

2 Check battery voltage

Standard voltage: 11 to 14 V

If voltage is below 11 V, recharge or replace the battery before proceeding to next step.

NEXT

3 Check for DTCs (current DTC and history DTC)

36

DTC
occurs

For current DTC, go to step 4

No
DTC

For history DTC, go to step 5

4 Diagnostic Trouble Code (DTC) chart

NEXT

5 Circuit inspection

NEXT

6 Repair or replace

NEXT

7 Clear DTCs (current DTC and history DTC)

NEXT

8 Check for DTCs (current DTC and history DTC)



DTC
occurs

Go to step 4

NO DTC
output

Go to next step

9

Conduct test and confirm malfunction has been repaired

NEXT

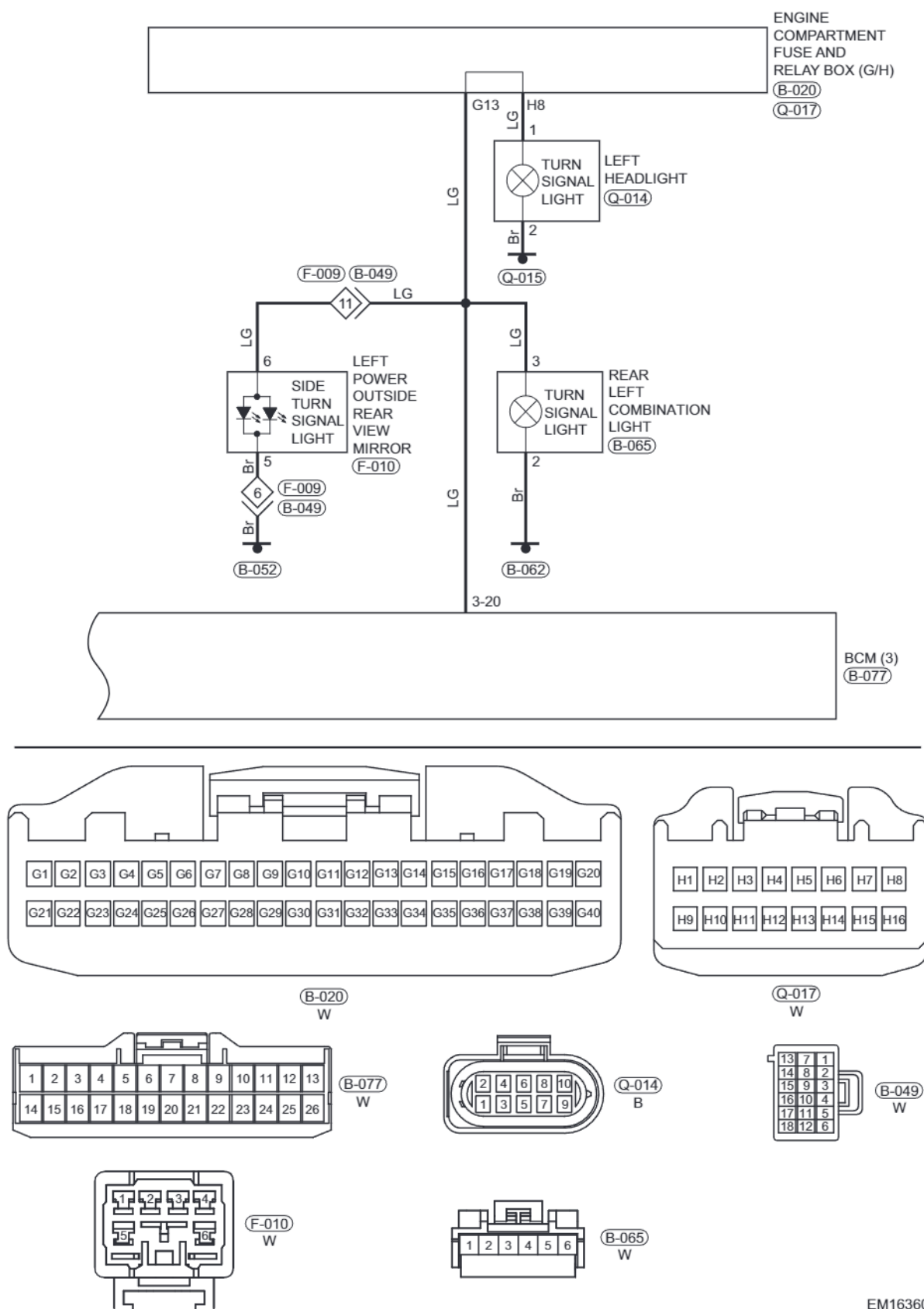
10

End

Diagnostic Trouble Code (DTC) Chart

DTC Code	DTC Definition
B1001-18	Left Turn Lights Control Circuit Current Below Threshold
B1001-19	Left Turn Lights Control Circuit Current Above Threshold
B1002-18	Right Turn Lights Control Circuit Current Below Threshold
B1002-19	Right Turn Lights Control Circuit Current Above Threshold
B1003-18	Left Park Control Circuit Current Below Threshold
B1003-19	Left Park Control Circuit Current Above Threshold
B1004-18	Right Park Control Circuit Current Below Threshold
B1004-19	Right Park Control Circuit Current Above Threshold
B1005-12	Low Beam Control Circuit Short to Battery
B1005-13	Low Beam Control Circuit Open
B1006-12	High Beam Control Circuit Short to Battery
B1006-13	High Beam Control Circuit Open
B1007-12	Front Fog Control Circuit Short to Battery
B1007-13	Front Fog Control Circuit Open
B1008-12	Rear Fog Control Circuit Short to Battery
B1008-13	Rear Fog Control Circuit Open
B100A-16	Dome Lights Control Circuit Voltage Below Threshold
B100A-17	Dome Lights Control Circuit Voltage Over Threshold
B100B-16	Truck Lamp Control Circuit Voltage Below Threshold
B100B-17	Truck Lamp Control Circuit Voltage Over Threshold

DTC	B1001-18	Left Turn Lights Control Circuit Current Below Threshold
DTC	B1001-19	Left Turn Lights Control Circuit Current Above Threshold



DTC	DTC Definition	DTC Detection Condition	Possible Cause
B1001-18	Left Turn Lights Control Circuit Current Below Threshold	Ignition switch ON	- Wire harness or connector - BCM
B1001-19	Left Turn Lights Control Circuit Current Above Threshold		

CAUTION

- When performing electrical equipment diagnosis and test, always refer to the circuit diagram for related circuit and component information.

DTC Confirmation Procedure

Confirm that battery voltage is normal before performing following procedures.

- Turn ignition switch to LOCK.
- Connect X-431 3G diagnostic tester (the latest software) to Data Link Connector (DLC).
- Turn ignition switch to ON.
- Use X-431 3G diagnostic tester to record and clear DTCs stored in BCM.
- Turn ignition switch to LOCK and wait for a few seconds.
- Use X-431 3G diagnostic tester to select Read Trouble Code.
- If DTC is detected, malfunction indicated by DTC is current. Go to diagnosis procedure - Step 1.
- If no DTC is detected, malfunction indicated by DTC is intermittent ([See page 36-26](#)).

Diagnosis Procedure

1 Check left turn signal light bulb

- Turn off all electrical equipment and the ignition switch.
- Disconnect the negative battery cable.
- Remove the left turn signal light bulb, and check if left turn signal light bulb filament is blown.

NG

Replace left turn signal light bulb

OK

2 Check connector and wire harness

- Check the groundings B-052, B-062 and Q-015 of left turn signal light ([See page 53-28](#)).
- Disconnect the BCM connector B-077, engine compartment fuse and relay box connectors B-020 and Q-017.
- Disconnect the left headlight connector Q-014, left power outside rear view mirror connector F-010, rear left combination light connector B-065.
- Disconnect the connectors F-009/B-049 between front left door wire harness and body wire harness.
- Check if wire harnesses are worn, pierced, pinched or partially broken.
- Look for broken, bent, protruded or corroded terminals.



g. Check if related connector terminal contact pins are in good condition.

NG

Repair or replace related connector or wire harness

OK

3 Check supply voltage of left turn signal light

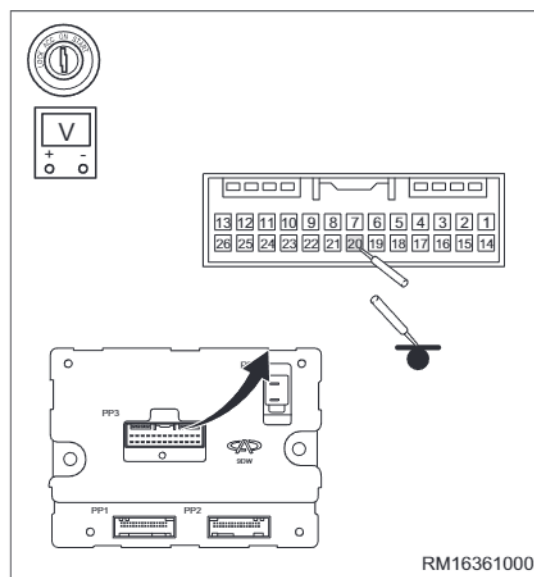
- Connect the negative battery cable.
- Turn ignition switch to ON, and turn combination light switch to ON position of left turn signal light.
- Check the voltage between BCM (3) terminal 20 (connect with connector B-077) and body ground.

Tester Connection	Condition	Specified Condition
Terminal 20 - Body ground	Ignition switch ON	Changes between 0 - 12 V

36

NG

Go to step 6



OK

4 Check left turn signal light control circuit

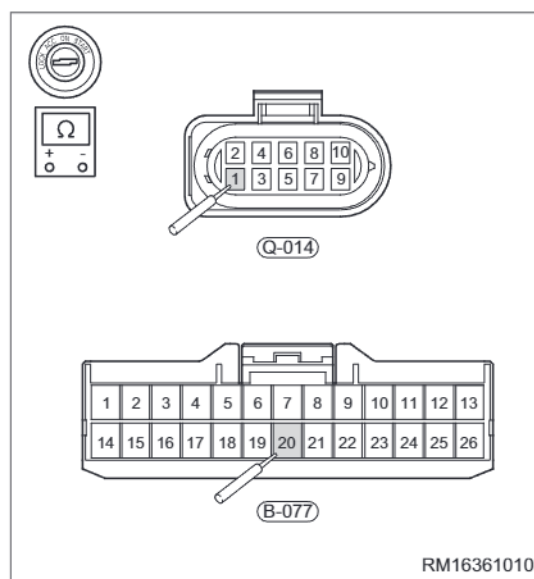
- Disconnect the negative battery cable.
- Check the wire harness between BCM connector B-077 and left headlight connector Q-014.

Check for Open

Tester Connection	Condition	Specified Condition
B-077 (20) - Q-014 (1)	Always	Continuity

Check for Short

Tester Connection	Condition	Specified Condition
B-077 (20) or Q-014 (1) - Body ground	Always	No continuity
B-077 (20) or Q-014 (1) - Battery positive	Always	No continuity



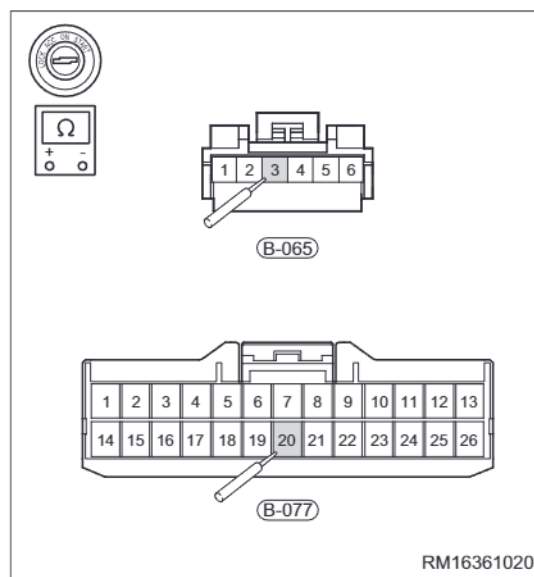
- c. Check the wire harness between BCM connector B-077 and rear left combination light connector B-065.

Check for Open

Tester Connection	Condition	Specified Condition
B-077 (20) - B-065 (3)	Always	Continuity

Check for Short

Tester Connection	Condition	Specified Condition
B-077 (20) or B-065 (3) - Body ground	Always	No continuity
B-077 (20) or B-065 (3) - Battery positive	Always	No continuity



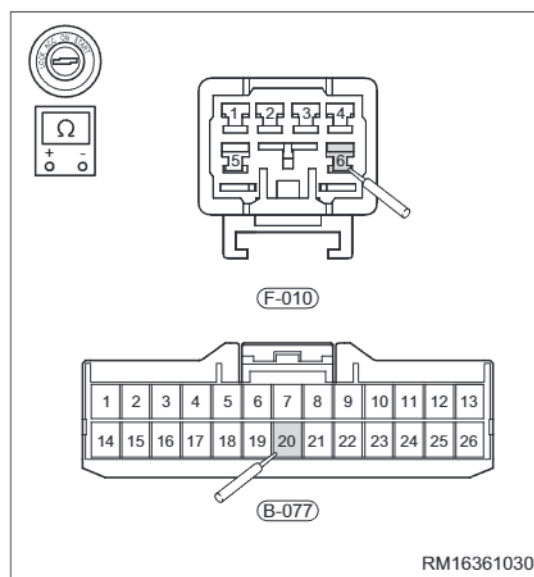
- d. Check the wire harness between BCM connector B-077 and left power outside rear view mirror connector F-010.

Check for Open

Tester Connection	Condition	Specified Condition
B-077 (20) - F-010 (6)	Always	Continuity

Check for Short

Tester Connection	Condition	Specified Condition
B-077 (20) or F-010 (6) - Body ground	Always	No continuity
B-077 (20) or F-010 (6) - Battery positive	Always	No continuity



NG

Replace or repair related connector or wire harness

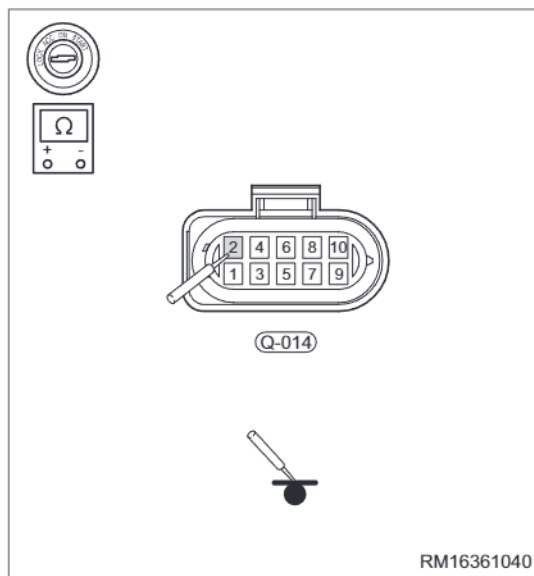
OK

5 Check left turn signal light ground wire

- a. Check the wire harness between left headlight connector Q-014 and body ground.

Check for Open

Tester Connection	Condition	Specified Condition
Q-014 (2) - Body ground	Always	Continuity

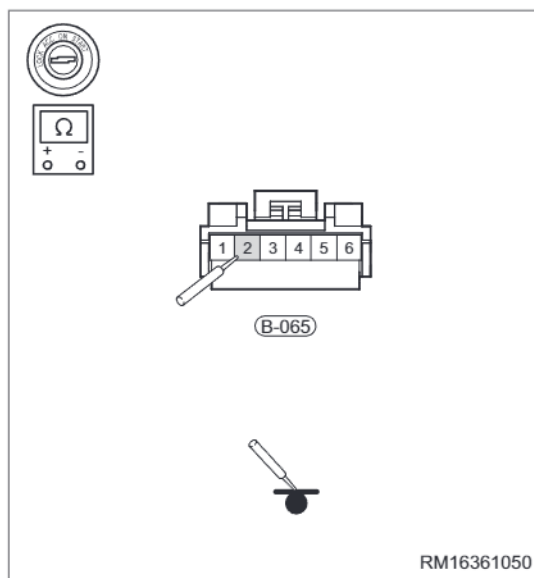


36

- b. Check the wire harness between rear left combination light connector B-065 and body ground.

Check for Open

Tester Connection	Condition	Specified Condition
B-065 (2) - Body ground	Always	Continuity



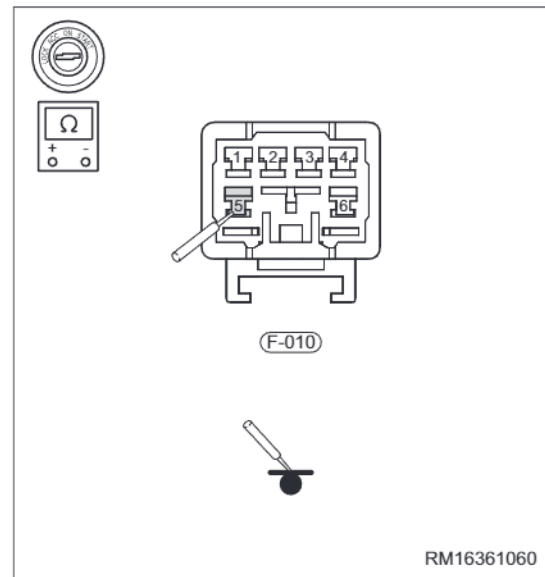
- c. Check the wire harness between left power outside rear view mirror connector F-010 and body ground.

Check for Open

Tester Connection	Condition	Specified Condition
F-010 (5) - Body ground	Always	Continuity

NG

Replace or repair related connector or wire harness



OK

6

Replace BCM

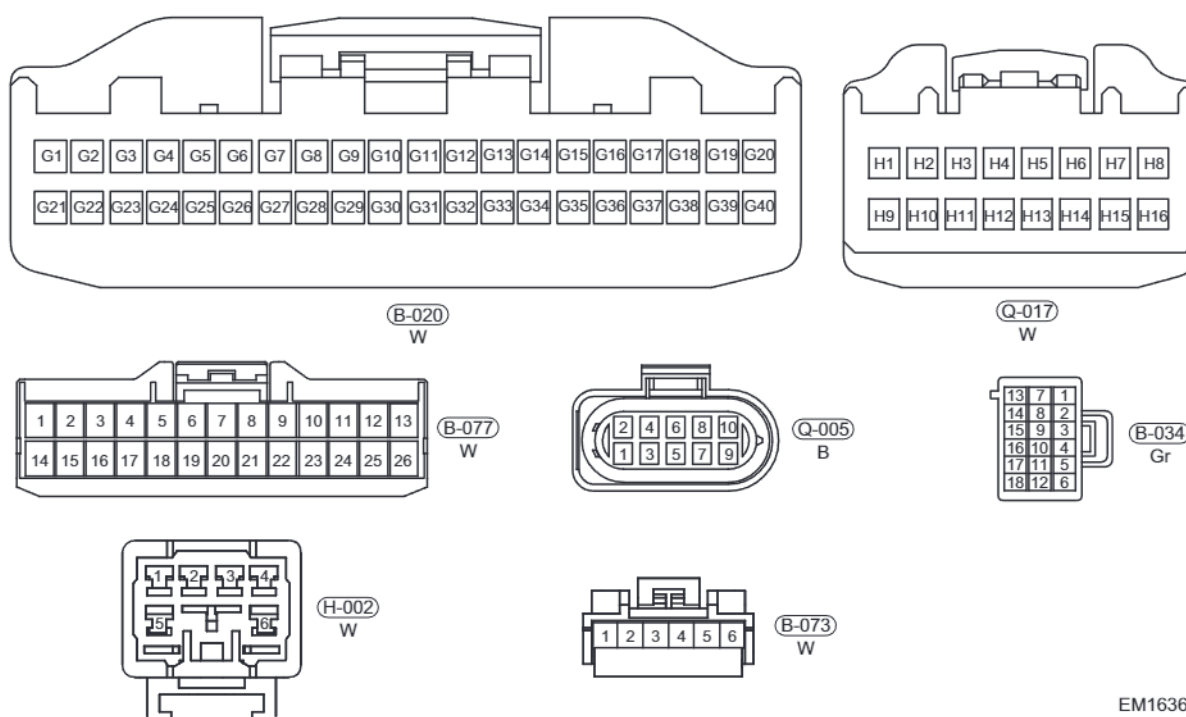
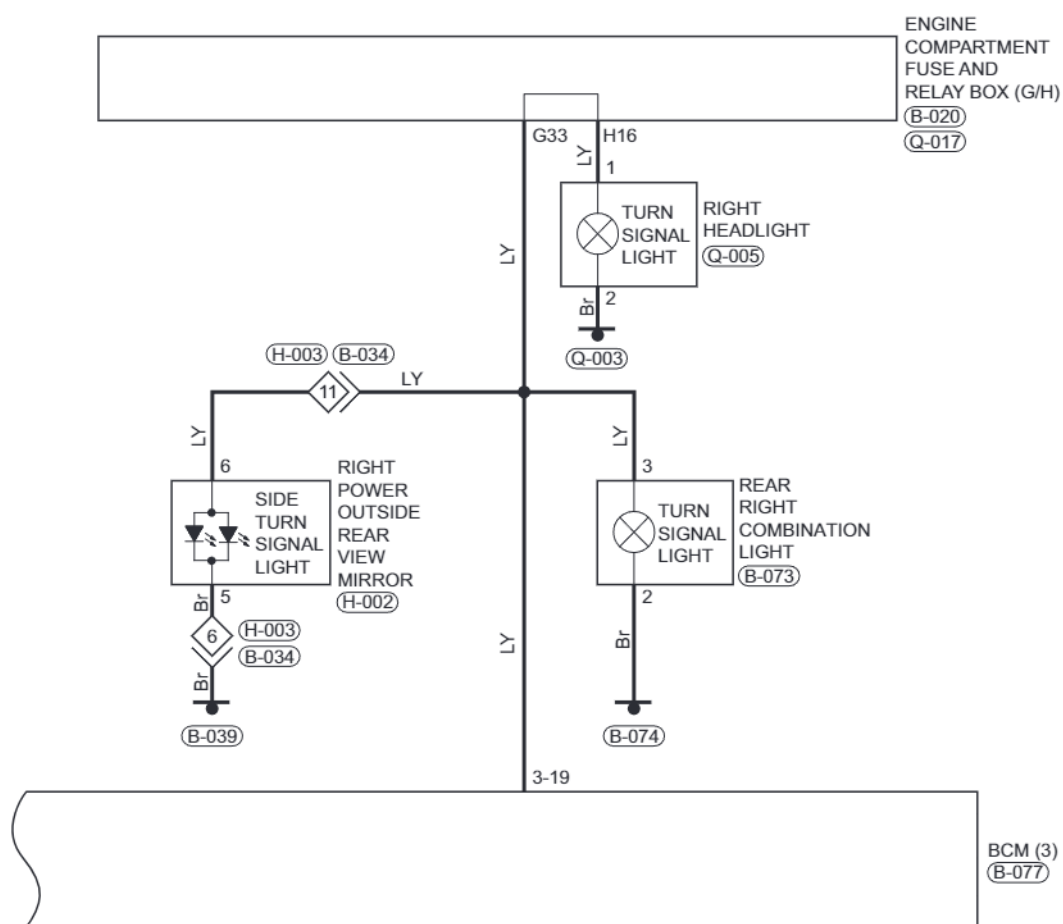
- Replace BCM.
- Connect related wire harness connectors.
- Connect the negative battery cable.
- Turn ignition switch to ON.
- Connect X-431 3G diagnostic tester to Data Link Connector, and check if DTC is detected.

OK

System operates normally

36

DTC	B1002-18	Right Turn Lights Control Circuit Current Below Threshold
DTC	B1002-19	Right Turn Lights Control Circuit Current Above Threshold



DTC	DTC Definition	DTC Detection Condition	Possible Causes
B1002-18	Right Turn Lights Control Circuit Current Below Threshold	Ignition switch ON	- Wire harness or connector - BCM
B1002-19	Right Turn Lights Control Circuit Current Above Threshold		

CAUTION

- When performing electrical equipment diagnosis and test, always refer to the circuit diagram for related circuit and component information.

DTC Confirmation Procedure

Confirm that battery voltage is normal before performing the following procedures.

- 36 • Turn ignition switch to LOCK.
- Connect X-431 3G diagnostic tester (the latest software) to Data Link Connector (DLC).
- Turn ignition switch to ON.
- Use X-431 3G diagnostic tester to record and clear DTCs stored in BCM.
- Turn ignition switch to LOCK and wait for a few seconds.
- Use X-431 3G diagnostic tester to select Read Trouble Code.
- If DTC is detected, malfunction indicated by DTC is current. Go to diagnosis procedure - Step 1.
- If no DTC is detected, malfunction indicated by DTC is intermittent ([See page 36-26](#)).

Diagnosis Procedure**1 Check right turn signal light bulb**

- a. Turn off all electrical equipment and the ignition switch.
- b. Disconnect the negative battery cable.
- c. Remove the right turn signal light bulb, and check if right turn signal light bulb filament is blown.

NG**Replace right turn signal light bulb****OK****2 Check connector and wire harness**

- a. Check the groundings B-039, B-074 and Q-003 of right turn signal light ([See page 53-28](#)).
- b. Disconnect the BCM connector B-077, engine compartment fuse and relay box connectors B-020 and Q-017.
- c. Disconnect the right headlight connector Q-005, right power outside rear view mirror connector H-002, rear right combination light connector B-073.
- d. Disconnect the connector H-003/B-034 between front right door wire harness and body wire harness.
- e. Check if wire harnesses are worn, pierced, pinched or partially broken.
- f. Look for broken, bent, protruded or corroded terminals.

g. Check if related connector terminal contact pins are in good condition.

NG

Repair or replace related connector or wire harness

YES

3 Check supply voltage of right turn signal light

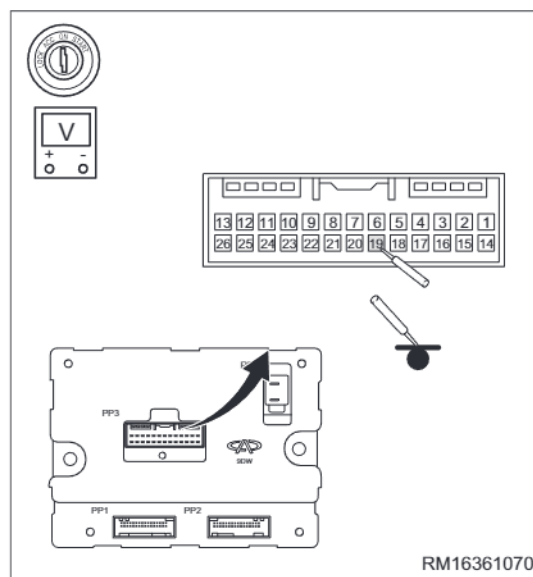
- Connect the negative battery cable.
- Turn ignition switch to ON, and turn combination light switch to ON position of right turn signal light.
- Check the voltage between BCM (3) terminal 19 (connect with connector B-077) and body ground.

Standard Condition

Tester Connection	Condition	Specified Condition
Terminal 19 - Body ground	Ignition switch ON	Changes between 0 - 12 V

NG

Go to step 6



RM16361070

OK

4 Check right turn signal light control circuit

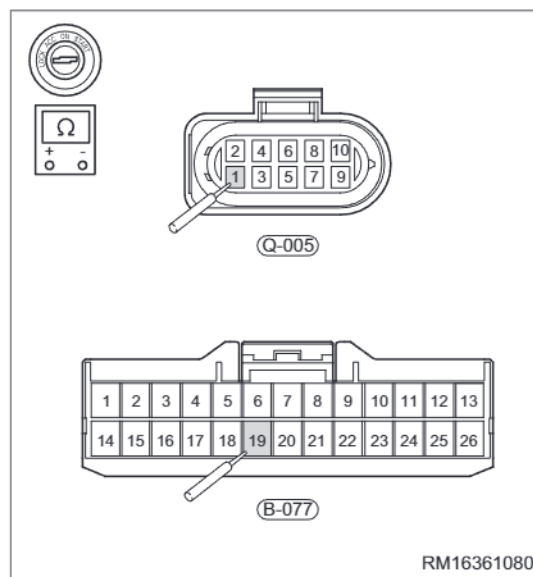
- Disconnect the negative battery cable.
- Check the wire harness between BCM connector B-077 and right headlight connector Q-005.

Check for Open

Tester Connection	Condition	Specified Condition
B-077 (19) - Q-005 (1)	Always	Continuity

Check for Short

Tester Connection	Condition	Specified Condition
B-077 (19) or Q-005 (1) - Body ground	Always	No continuity
B-077 (19) or Q-005 (1) - Battery positive	Always	No continuity



RM16361080

36

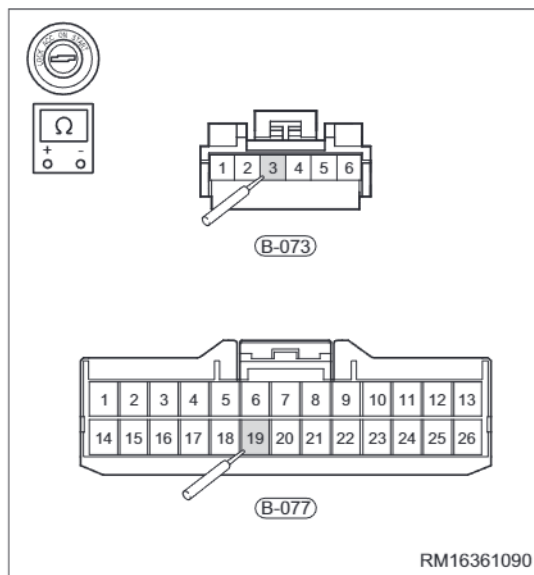
- c. Check the wire harness between BCM connector B-077 and rear right combination light connector B-073.

Check for Open

Tester Connection	Condition	Specified Condition
B-077 (19) - B-073 (3)	Always	Continuity

Check for Short

Tester Connection	Condition	Specified Condition
B-077 (19) or B-073 (3) - Body ground	Always	No continuity
B-077 (19) or B-073 (3) - Battery positive	Always	No continuity



36

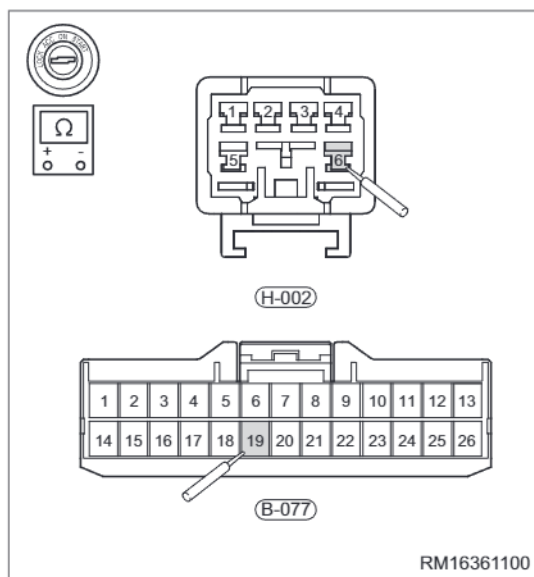
- d. Check the wire harness between BCM connector B-077 and right power outside rear view mirror connector H-002.

Check for Open

Tester Connection	Condition	Specified Condition
B-077 (19) - H-002 (6)	Always	Continuity

Check for Short

Tester Connection	Condition	Specified Condition
B-077 (19) or H-002 (6) - Body ground	Always	No continuity
B-077 (19) or H-002 (6) - Battery positive	Always	No continuity



NG

Replace or repair related connector or wire harness

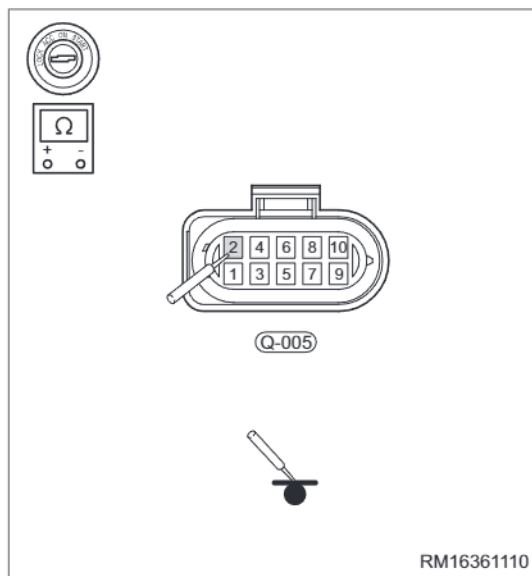
OK

5 Check right turn signal light ground wire

- a. Check the wire harness between right headlight connector Q-005 and body ground.

Check for Open

Tester Connection	Condition	Specified Condition
Q-005 (2) - Body ground	Always	Continuity

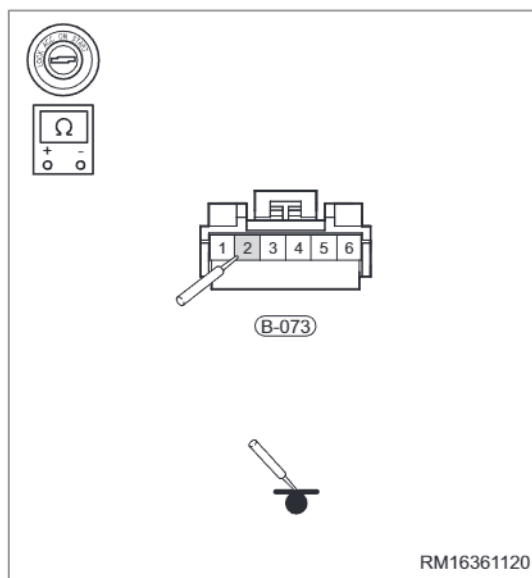


36

- b. Check the wire harness between rear right combination light connector B-073 and body ground.

Check for Open

Tester Connection	Condition	Specified Condition
B-073 (2) - Body ground	Always	Continuity



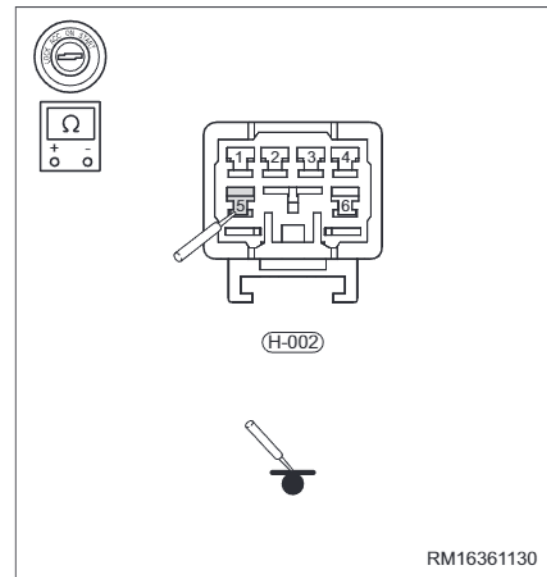
- c. Check the wire harness between right power outside rear view mirror connector H-002 and body ground.

Check for Open

Tester Connection	Condition	Specified Condition
H-002 (5) - Body ground	Always	Continuity

NG

Replace or repair related connector or wire harness



OK

36

6

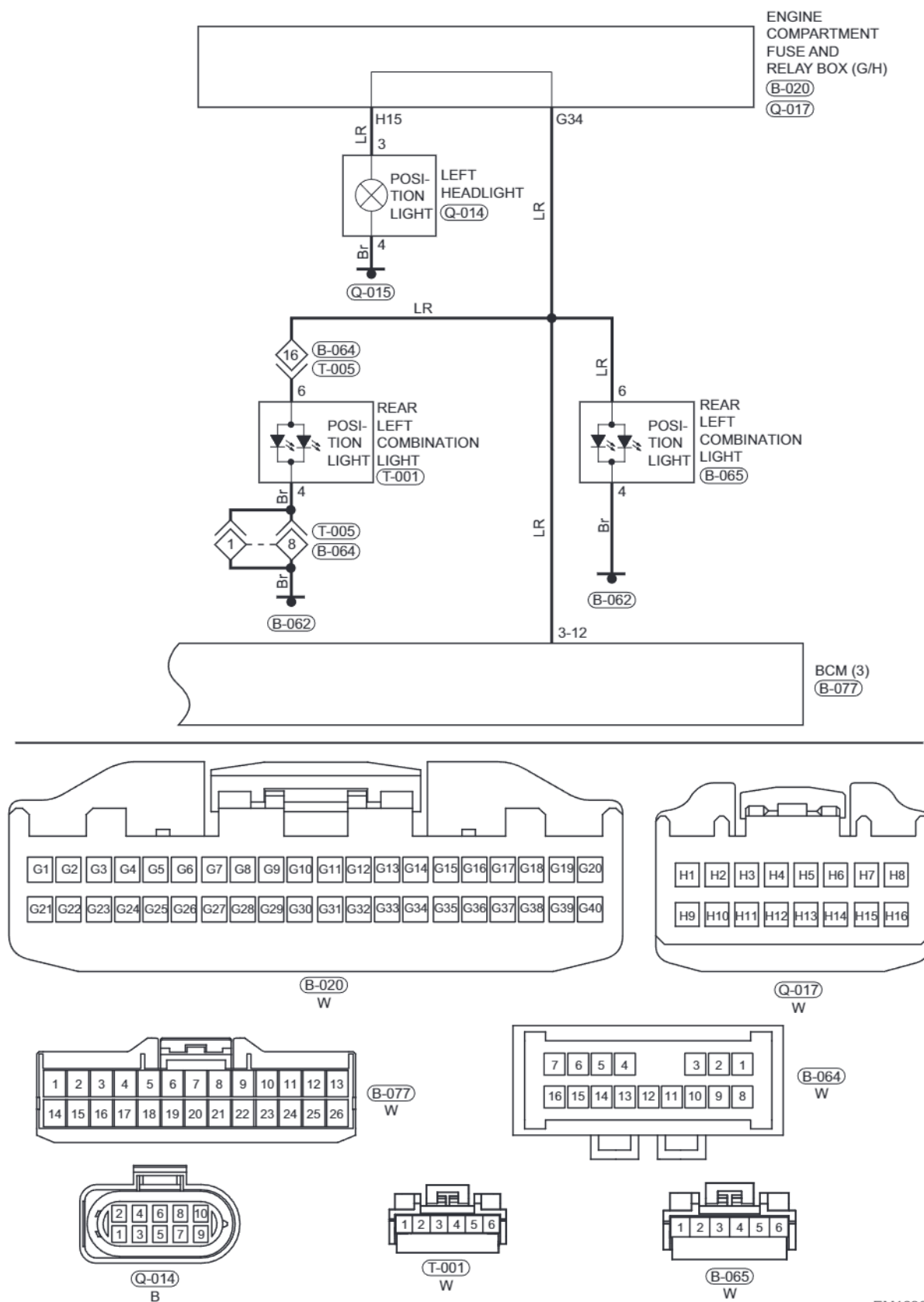
Replace BCM

- Replace BCM.
- Connect related wire harness connectors.
- Connect the negative battery cable.
- Turn ignition switch to ON.
- Connect X-431 3G diagnostic tester to Data Link Connector, and check if DTC is detected.

OK

System operates normally

DTC	B1003-18	Left Park Control Circuit Current Below Threshold
DTC	B1003-19	Left Park Control Circuit Current Above Threshold



DTC	DTC Definition	DTC Detection Condition	Possible Cause
B1003-18	Left Park Control Circuit Current Below Threshold	Ignition switch ON	- Wire harness or connector - BCM
B1003-19	Left Park Control Circuit Current Above Threshold		

CAUTION

- When performing electrical equipment diagnosis and test, always refer to the circuit diagram for related circuit and component information.

DTC Confirmation Procedure

Confirm that battery voltage is normal before performing the following procedures.

- Turn ignition switch to LOCK.
- Connect X-431 3G diagnostic tester (the latest software) to Data Link Connector (DLC).
- Turn ignition switch to ON.
- Use X-431 3G diagnostic tester to record and clear DTCs stored in BCM.
- Turn ignition switch to LOCK and wait for a few seconds.
- Use X-431 3G diagnostic tester to select Read Trouble Code.
- If DTC is detected, malfunction indicated by DTC is current. Go to diagnosis procedure - Step 1.
- If no DTC is detected, malfunction indicated by DTC is intermittent ([See page 36-26](#)).

Diagnosis Procedure

1 Check left position light

- Turn ignition switch to ON.
- Rotate the knob of headlight combination light switch to ON position of position light, and check if left position light comes on.
- Remove the front left position light bulb, and check if front left position light bulb filament is blown.

NG

Replace rear left combination light or front left position light bulb

OK

2 Check connector and wire harness

- Turn ignition switch to LOCK and disconnect the negative battery cable.
- Check the groundings B-062 and Q-015 of left position light ([See page 53-28](#)).
- Disconnect the BCM connector B-077, engine compartment fuse and relay box connectors B-020 and Q-017.
- Disconnect the left headlight connector Q-014, rear left combination light connectors T-001 and B-065.

- e. Disconnect the connectors T-005/B-064 between luggage compartment wire harness and body wire harness.
- f. Check if wire harnesses are worn, pierced, pinched or partially broken.
- g. Look for broken, bent, protruded or corroded terminals.
- h. Check if related connector terminal contact pins are in good condition.

NG

Repair or replace related connector or wire harness

OK

3

Check supply voltage of left position light

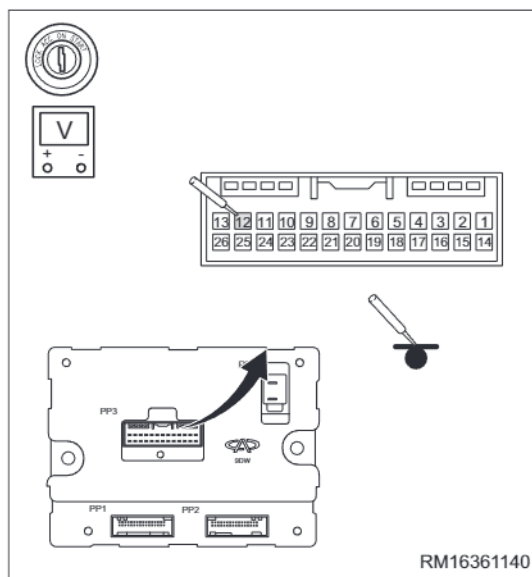
- a. Connect the negative battery cable and Turn ignition switch to ON.
- b. Rotate the knob of combination light switch to ON position of position light.
- c. Check the voltage between BCM (3) terminal 12 (connect with connector B-077) and body ground.

36

Tester Connection	Condition	Specified Condition
Terminal 12 - Body ground	Ignition switch ON	12 V

NG

Go to step 6



OK

4 Check left position light control circuit

- Turn ignition switch to LOCK and disconnect the negative battery cable.
- Check the wire harness between BCM connector B-077 and rear left combination light (fixed part) connector B-065.

Check for Open

Tester Connection	Condition	Specified Condition
B-077 (12) - B-065 (6)	Always	Continuity

Check for Short

Tester Connection	Condition	Specified Condition
B-077 (12) or B-065 (6) - Body ground	Always	No continuity
B-077 (12) or B-065 (6) - Battery positive	Always	No continuity

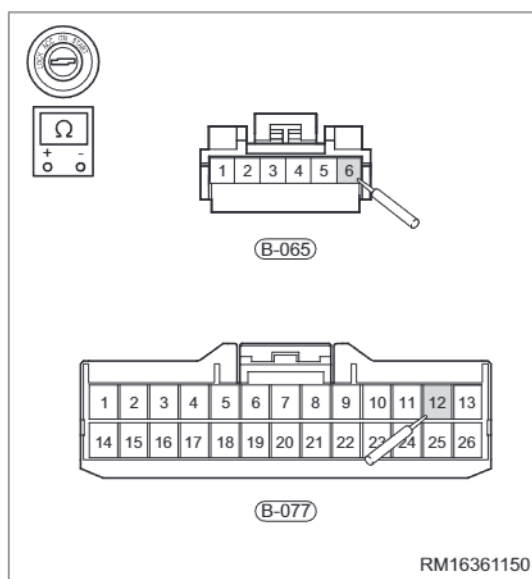
- Check the wire harness between BCM connector B-077 and rear left combination light (movable part) connector T-001.

Check for Open

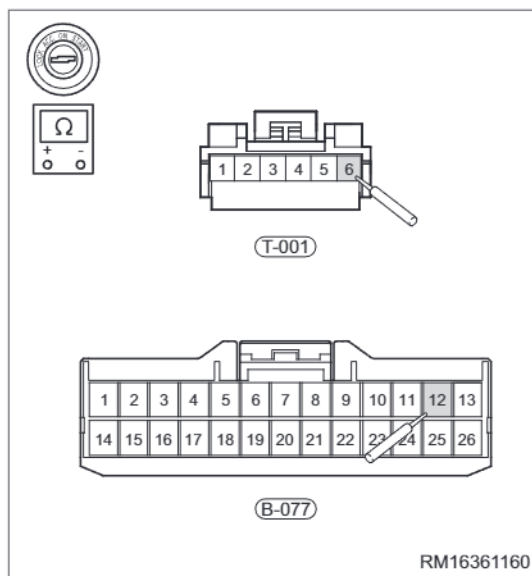
Tester Connection	Condition	Specified Condition
B-077 (12) - T-001 (6)	Always	Continuity

Check for Short

Tester Connection	Condition	Specified Condition
B-077 (12) or T-001 (6) - Body ground	Always	No continuity
B-077 (12) or T-001 (6) - Battery positive	Always	No continuity



36



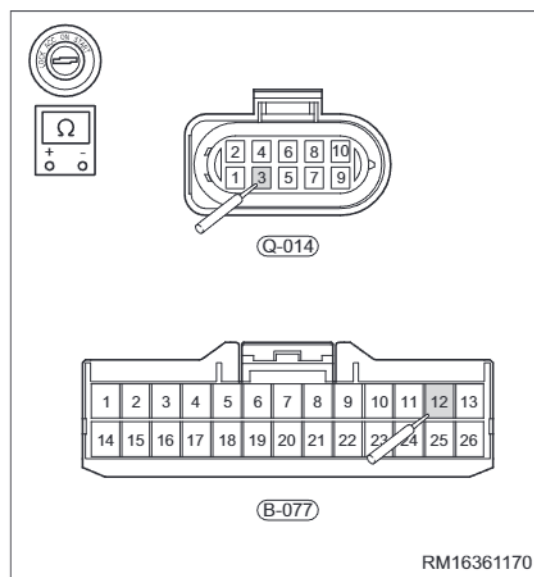
- d. Check the wire harness between BCM connector B-077 and left headlight connector Q-014.

Check for Open

Tester Connection	Condition	Specified Condition
B-077 (12) - Q-014 (3)	Always	Continuity

Check for Short

Tester Connection	Condition	Specified Condition
B-077 (12) or Q-014 (3) - Body ground	Always	No continuity
B-077 (12) or Q-014 (3) - Battery positive	Always	No continuity



36

NG

Replace or repair related connector or wire harness

OK

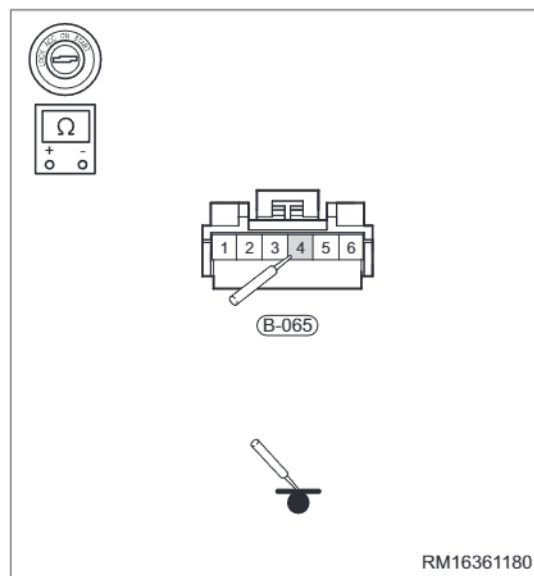
5

Check left position light ground wire

- a. Check the wire harness between rear left combination light (fixed part) connector B-065 and body ground.

Check for Open

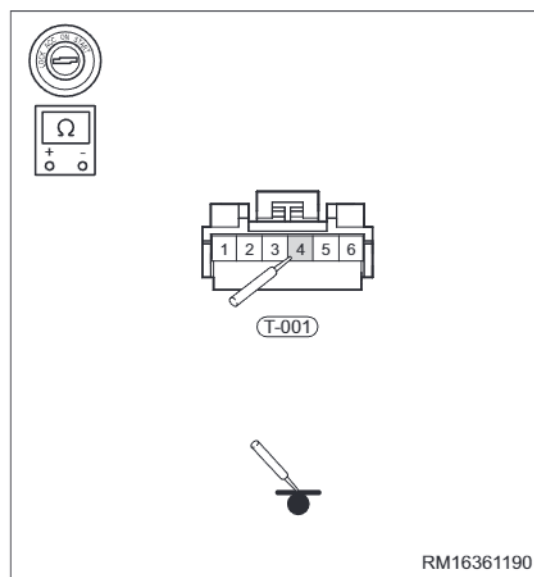
Tester Connection	Condition	Specified Condition
B-065 (4) - Body ground	Always	Continuity



- b. Check the wire harness between rear left combination light (movable part) connector T-001 and body ground.

Check for Open

Tester Connection	Condition	Specified Condition
T-001 (4) - Body ground	Always	Continuity



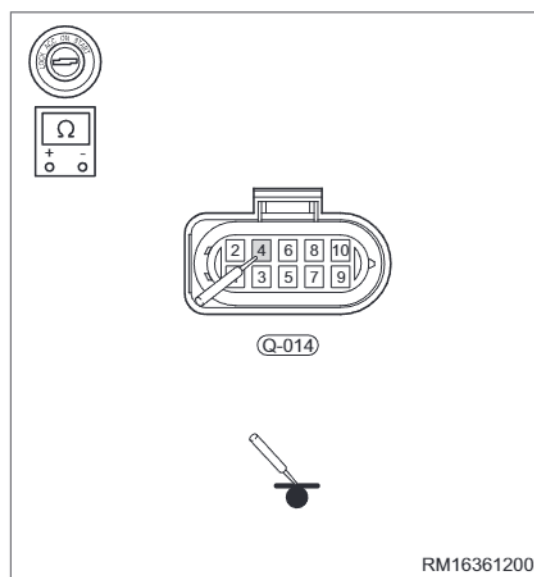
- c. Check the wire harness between left headlight connector Q-014 and body ground.

Check for Open

Tester Connection	Condition	Specified Condition
Q-014 (4) - Body ground	Always	Continuity

NG

Replace or repair related connector or wire harness



OK

6

Replace BCM

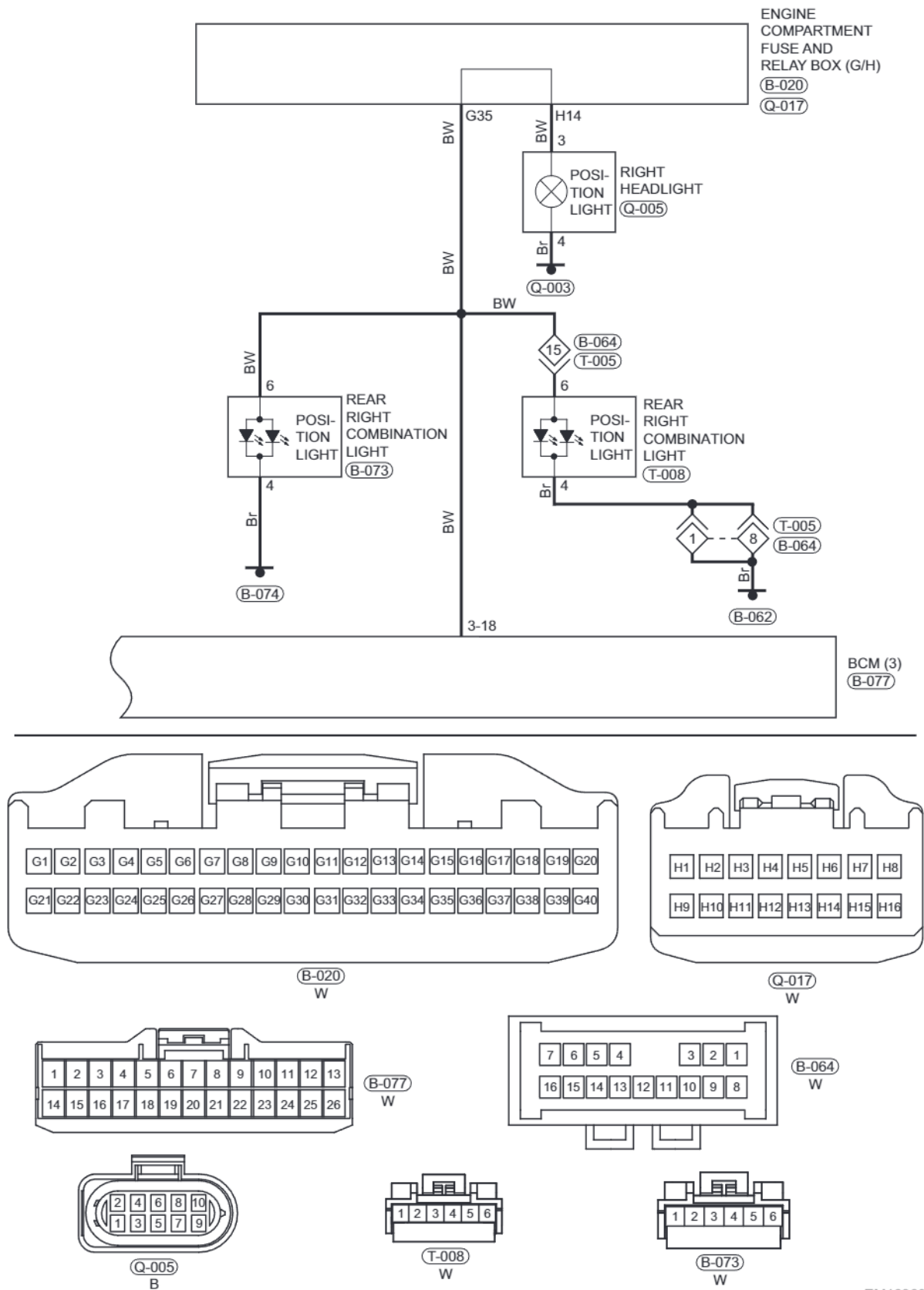
- Replace BCM.
- Connect related wire harness connectors.
- Connect the negative battery cable.
- Turn ignition switch to ON.
- Connect X-431 3G diagnostic tester to Data Link Connector, and check if DTC is detected.

OK

System operates normally



DTC	B1004-18	Right Park Control Circuit Current Below Threshold
DTC	B1004-19	Right Park Control Circuit Current Above Threshold



EM16360180

DTC	DTC Definition	DTC Detection Condition	Possible Cause
B1004-18	Right Park Control Circuit Current Below Threshold	Ignition switch ON	- Wire harness or connector - BCM
B1004-19	Right Park Control Circuit Current Above Threshold		

CAUTION

- When performing electrical equipment diagnosis and test, always refer to the circuit diagram for related circuit and component information.

DTC Confirmation Procedure

Confirm that battery voltage is normal before performing the following procedures.

- 36 Turn ignition switch to LOCK.
- Connect X-431 3G diagnostic tester (the latest software) to Data Link Connector (DLC).
- Turn ignition switch to ON.
- Use X-431 3G diagnostic tester to record and clear DTCs stored in BCM.
- Turn ignition switch to LOCK and wait for a few seconds.
- Use X-431 3G diagnostic tester to select Read Trouble Code.
- If DTC is detected, malfunction indicated by DTC is current. Go to diagnosis procedure - Step 1.
- If no DTC is detected, malfunction indicated by DTC is intermittent ([See page 36-26](#)).

Diagnosis Procedure**1 Check right position light**

- a. Turn ignition switch to ON.
- b. Rotate the knob of combination light switch to ON position of position light, and check if right position light comes on.
- c. Remove the front right position light bulb, and check if front right position light bulb filament is blown.

NG

Replace rear right combination light or front right position light bulb

OK**2 Check connector and wire harness**

- a. Turn ignition switch to LOCK and disconnect the negative battery cable.
- b. Check the groundings B-062, B-074 and Q-003 of right position light ([See page 53-28](#)).
- c. Disconnect the BCM connector B-077, engine compartment fuse and relay box connectors B-020 and Q-017.
- d. Disconnect the right headlight connector Q-005, rear right combination light connectors T-008 and B-073.

- e. Disconnect the connectors T-005/B-064 between luggage compartment wire harness and body wire harness.
- f. Check if wire harnesses are worn, pierced, pinched or partially broken.
- g. Look for broken, bent, protruded or corroded terminals.
- h. Check if related connector terminal contact pins are in good condition.

NG

Repair or replace related connector or wire harness

OK

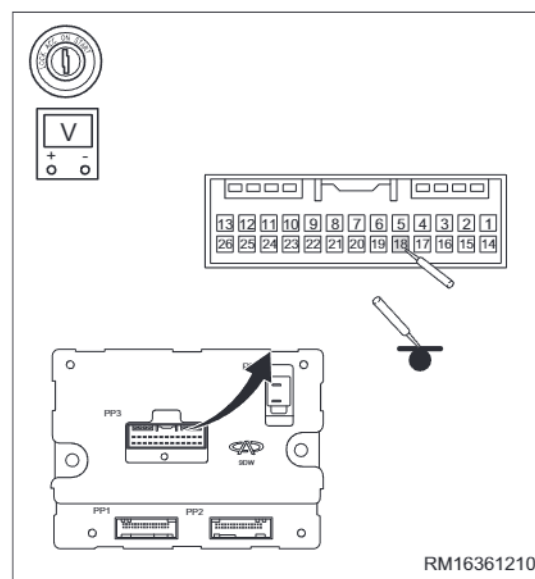
3 Check supply voltage of right position light

- a. Connect the negative battery cable and Turn ignition switch to ON.
- b. Rotate the knob of combination light switch to ON position of position light.
- c. Check the voltage between BCM (3) terminal 18 (connect with connector B-077) and body ground.

Tester Connection	Condition	Specified Condition
Terminal 18 - Body ground	Ignition switch ON	12 V

NG

Go to step 6



OK

36

4 Check right position light control circuit

- Turn ignition switch to LOCK and disconnect the negative battery cable.
- Check the wire harness between BCM connector B-077 and rear right combination light (fixed part) connector B-093.

Check for Open

Tester Connection	Condition	Specified Condition
B-077 (18) - B-073 (6)	Always	Continuity

Check for Short

Tester Connection	Condition	Specified Condition
B-077 (18) or B-073 (6) - Body ground	Always	No continuity
B-077 (18) or B-073 (6) - Battery positive	Always	No continuity

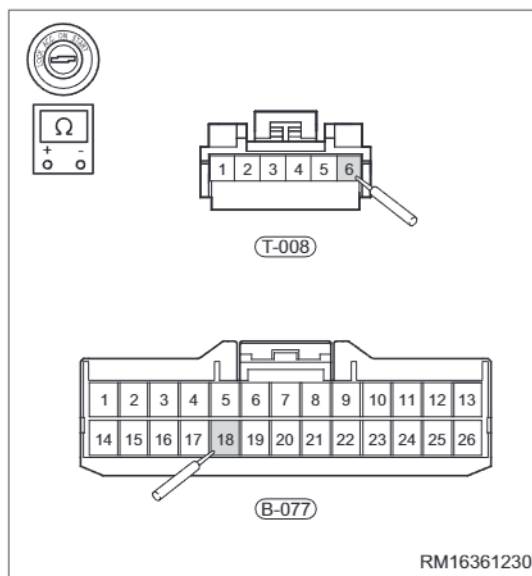
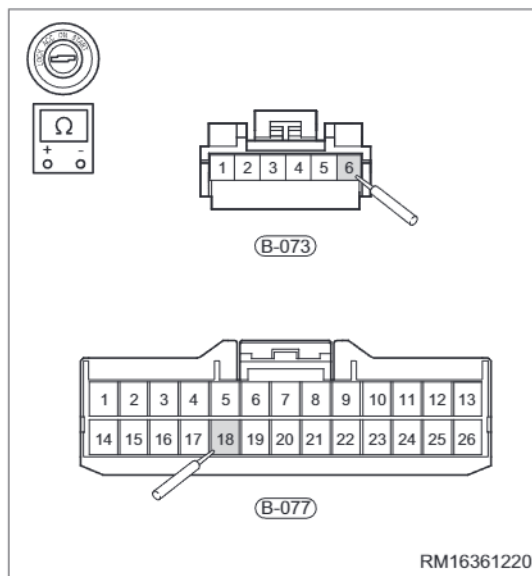
- Check the wire harness between BCM connector B-077 and rear right combination light (movable part) connector T-008.

Check for Open

Tester Connection	Condition	Specified Condition
B-077 (18) - T-008 (6)	Always	Continuity

Check for Short

Tester Connection	Condition	Specified Condition
B-077 (18) or T-008 (6) - Body ground	Always	No continuity
B-077 (18) or T-008 (6) - Battery positive	Always	No continuity



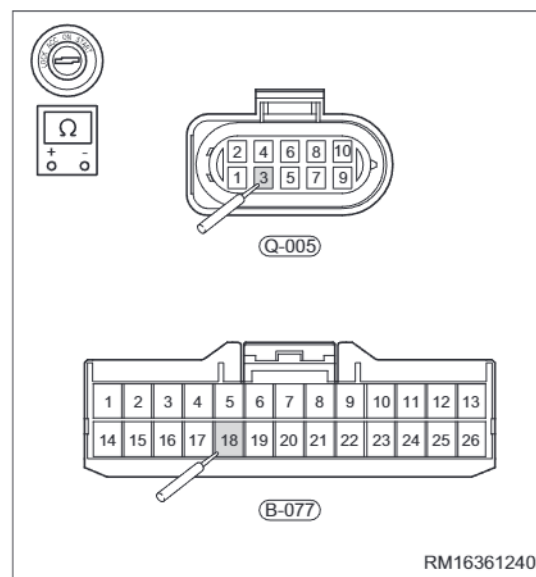
- d. Check the wire harness between BCM connector B-077 and front right combination light connector Q-005.

Check for Open

Tester Connection	Condition	Specified Condition
B-077 (18) - Q-005 (3)	Always	Continuity

Check for Short

Tester Connection	Condition	Specified Condition
B-077 (18) or Q-005 (3) - Body ground	Always	No continuity
B-077 (18) or Q-005 (3) - Battery positive	Always	No continuity



NG

Replace or repair related connector or wire harness

36

OK

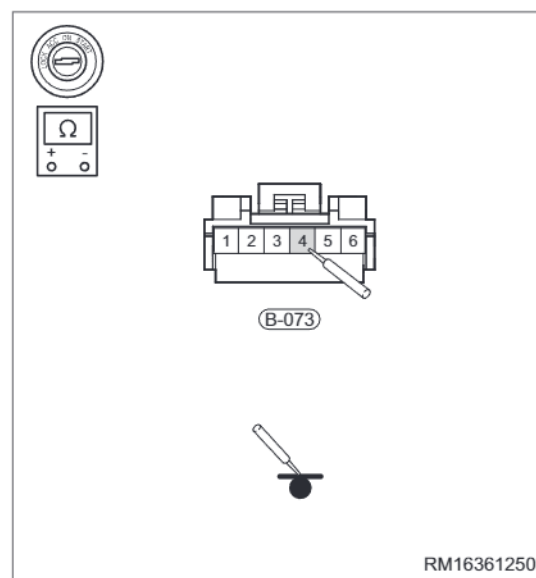
5

Check right position light ground wire

- a. Check the wire harness between rear right combination light (fixed part) connector B-073 and body ground.

Check for Open

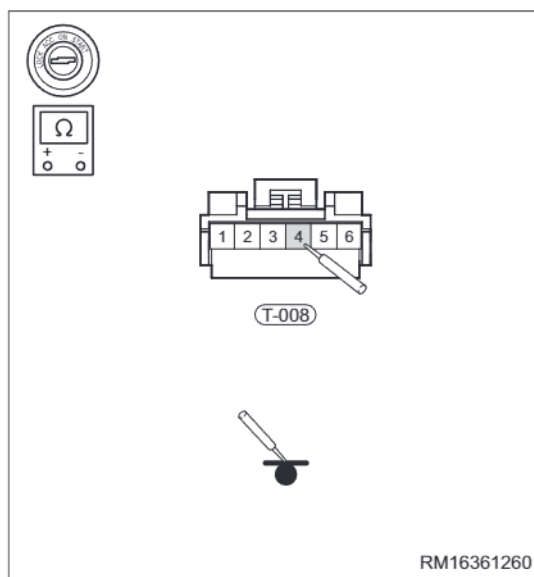
Tester Connection	Condition	Specified Condition
B-073 (4) - Body ground	Always	Continuity



- b. Check the wire harness between rear right combination light (movable part) connector T-008 and body ground.

Check for Open

Tester Connection	Condition	Specified Condition
T-008 (4) - Body ground	Always	Continuity



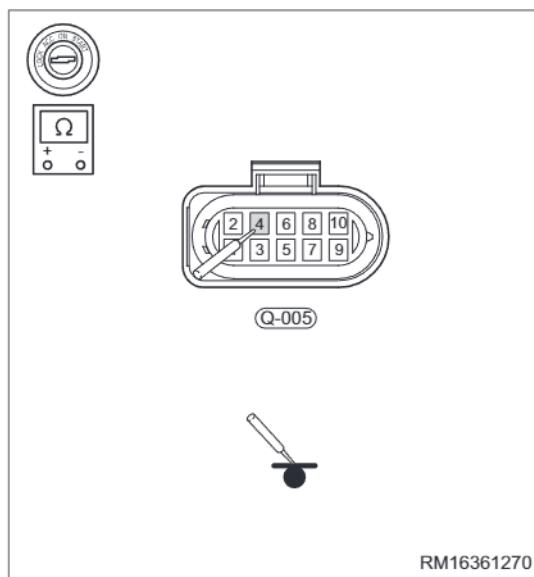
- c. Check the wire harness between right headlight connector Q-005 and body ground.

Check for Open

Tester Connection	Condition	Specified Condition
Q-005 (4) - Body ground	Always	Continuity

NG

Replace or repair related connector or wire harness



OK

6

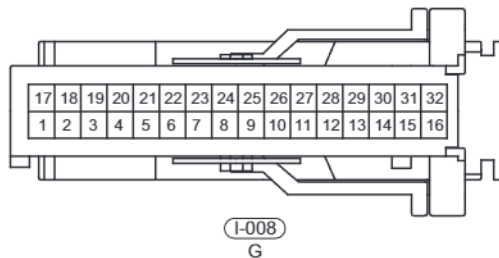
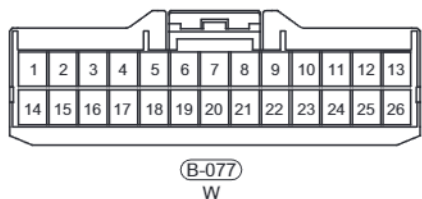
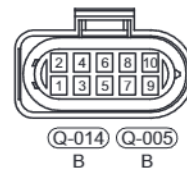
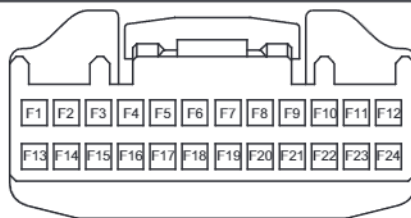
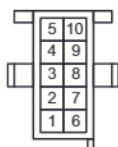
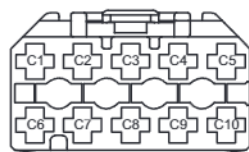
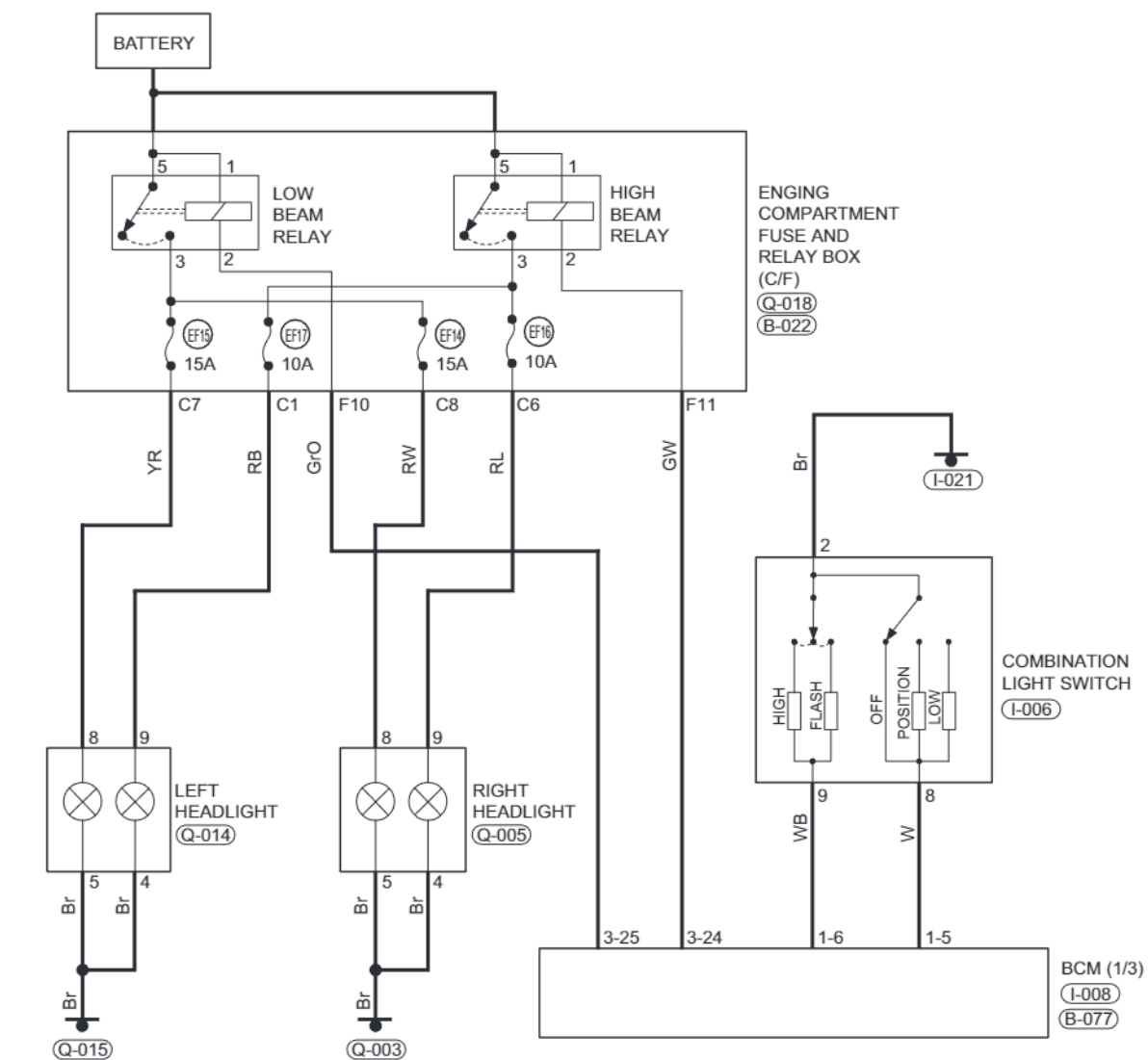
Replace BCM

- Replace BCM.
- Connect related wire harness connectors.
- Connect the negative battery cable.
- Turn ignition switch to ON.
- Connect X-431 3G diagnostic tester to Data Link Connector, and check if DTC is detected.

OK

System operates normally

DTC	B1005-12	Low Beam Control Circuit Short to Battery
DTC	B1005-13	Low Beam Control Circuit Open
DTC	B1006-12	High Beam Control Circuit Short to Battery
DTC	B1006-13	High Beam Control Circuit Open



EM16360190

DTC	DTC Definition	DTC Detection Condition	Possible Cause
B1005-12	Low Beam Control Circuit Short to Battery	Engine switch ON	• Low beam light relay • High beam light relay • Fuse • Wire harness or connector • BCM
B1005-13	Low Beam Control Circuit Open		
B1006-12	High Beam Control Circuit Short to Battery		
B1006-13	High Beam Control Circuit Open		

CAUTION

- When performing electrical equipment diagnosis and test, always refer to the circuit diagram for related circuit and component information.

36

DTC Confirmation Procedure

Confirm that battery voltage is normal before performing the following procedures.

- Turn ignition switch to LOCK.
- Connect X-431 3G diagnostic tester (the latest software) to Data Link Connector (DLC).
- Turn ignition switch to ON.
- Use X-431 3G diagnostic tester to record and clear DTCs stored in BCM.
- Turn ignition switch to LOCK and wait for a few seconds.
- Use X-431 3G diagnostic tester to select Read Trouble Code.
- If DTC is detected, malfunction indicated by DTC is current. Go to diagnosis procedure - Step 1.
- If no DTC is detected, malfunction indicated by DTC is intermittent ([See page 36-26](#)).

Diagnosis Procedure

1 Check low beam light bulb and high beam light bulb

- Turn off all electrical equipment and the ignition switch.
- Disconnect the negative battery cable.
- Remove the left low beam light bulb and high beam light bulb, and check if bulb filaments are blown.
- Remove the right low beam light bulb and high beam light bulb, and check if bulb filaments are blown.

NG

Replace low beam light bulb and high beam light bulb

OK

2 Check fuse and relay

- Remove fuses EF15 (15A), EF17 (10A), EF14 (15A) and EF16 (10A) from engine compartment fuse and relay box.
- Remove the low beam light relay and high beam light relay from engine compartment fuse and relay box.



- c. Check fuses and relays for blown and damage.

NG**Repair or replace damaged fuses and relays****OK****3****Check grounding points, connector and wire harness**

- a. Check BCM grounding point B-050 ([See page 53-28](#)).
- b. Disconnect the BCM connector B-077, engine compartment fuse and relay box connectors B-022 and Q-018.
- c. Disconnect the right headlight connector Q-005, and left headlight connector Q-014.
- d. Check if wire harnesses are worn, pierced, pinched or partially broken.
- e. Look for broken, bent, protruded or corroded terminals.
- f. Check if related connector terminal contact pins are in good condition.

NG**Repair or replace related connector or wire harness****OK****36**

4 Check low beam light and high beam light control circuits

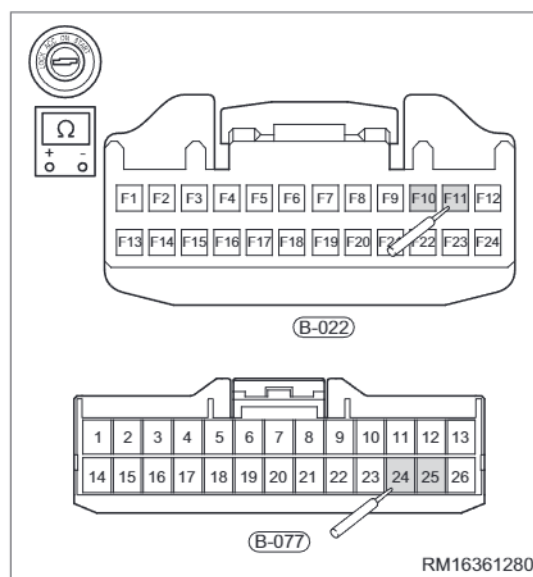
- a. Check the wire harness between BCM connector B-077 and engine compartment fuse and relay box connector B-022.

Check for Open

Tester Connection	Condition	Specified Condition
B-077(24) - B-022 (F11)	Always	Continuity
B-077 (25) - B-022 (F10)	Always	Continuity

Check for Short

Tester Connection	Condition	Specified Condition
B-077 (24) or B-022 (F11) - Body ground	Always	No continuity
B-077 (25) or B-022 (F10) - Body ground	Always	No continuity
B-077 (24) or B-022 (F11) - Battery positive	Always	No continuity
B-077 (25) or B-022 (F10) - Battery positive	Always	No continuity



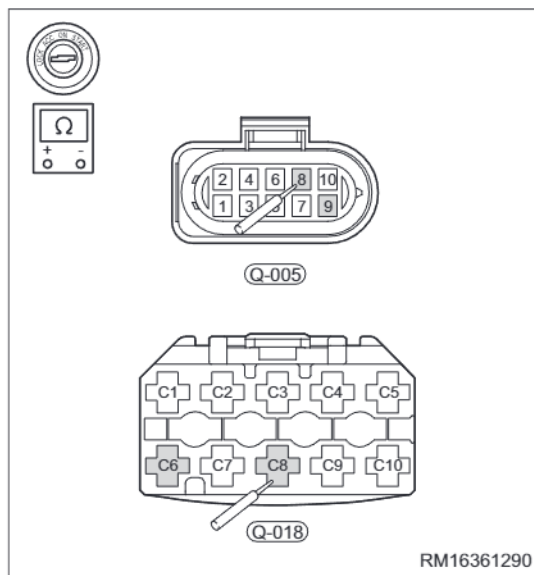
- b. Check the wire harness between right headlight connector Q-005 and engine compartment fuse and relay box connector Q-018.

Check for Open

Tester Connection	Condition	Specified Condition
Q-005 (8) - Q-018 (C8)	Always	Continuity
Q-005 (9) - Q-018 (C6)	Always	Continuity

Check for Short

Tester Connection	Condition	Specified Condition
Q-005 (8) or Q-018 (C8) - Body ground	Always	No continuity
Q-005 (9) or Q-018 (C6) - Body ground	Always	No continuity
Q-005 (8) or Q-018 (C8) - Battery positive	Always	No continuity
Q-005 (9) or Q-018 (C6) - Battery positive	Always	No continuity



- c. Check the wire harness between left headlight connector Q-014 and engine compartment fuse and relay box connector Q-018.

Check for Open

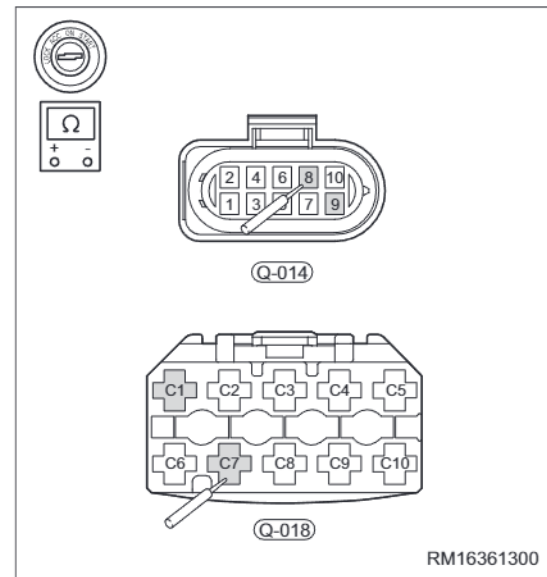
Tester Connection	Condition	Specified Condition
Q-014 (8) - Q-018 (C7)	Always	Continuity
Q-014 (9) - Q-018 (C1)	Always	Continuity

Check for Short

Tester Connection	Condition	Specified Condition
Q-014 (8) or Q-018 (C7) - Body ground	Always	No continuity
Q-014 (9) or Q-018 (C1) - Body ground	Always	No continuity
Q-014 (8) or Q-018 (C7) - Battery positive	Always	No continuity
Q-014 (9) or Q-018 (C1) - Battery positive	Always	No continuity

NG

Repair or replace related connector or wire harness



36

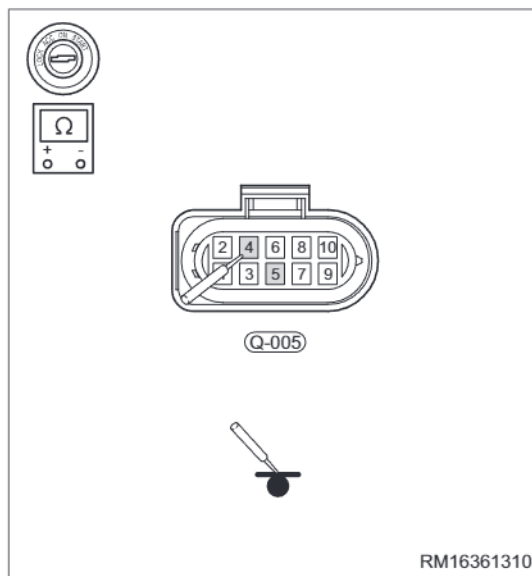
OK

5 Check low beam light and high beam light ground circuits

- a. Check the wire harness between right headlight connector Q-005 and body ground.

Check for Open

Tester Connection	Condition	Specified Condition
Q-005 (5) - Body ground	Always	Continuity
Q-005 (4) - Body ground	Always	Continuity

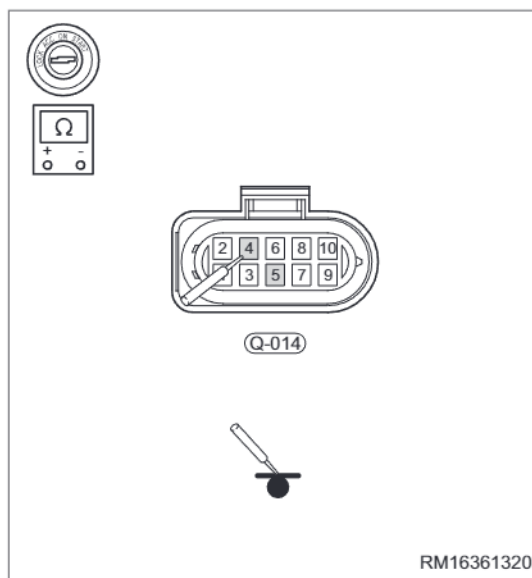


36

- b. Check the wire harness between left headlight connector Q-014 and body ground.

Check for Open

Tester Connection	Condition	Specified Condition
Q-014 (5) - Body ground	Always	Continuity
Q-014 (4) - Body ground	Always	Continuity



NG

Repair or replace low beam light and high beam light ground circuits

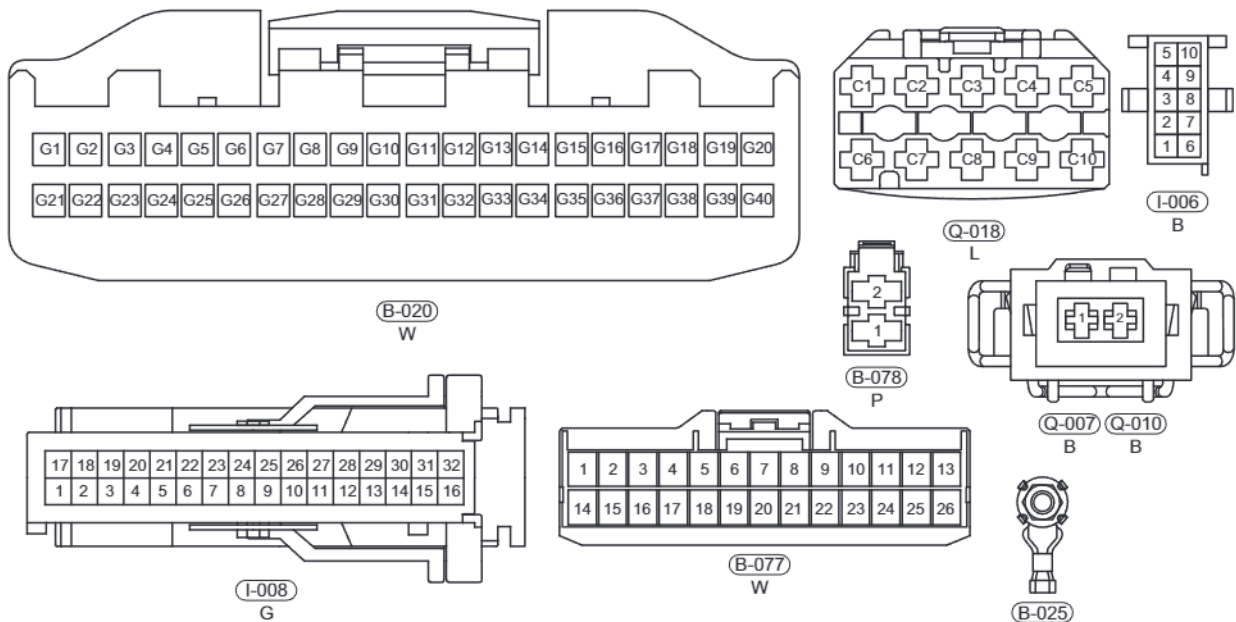
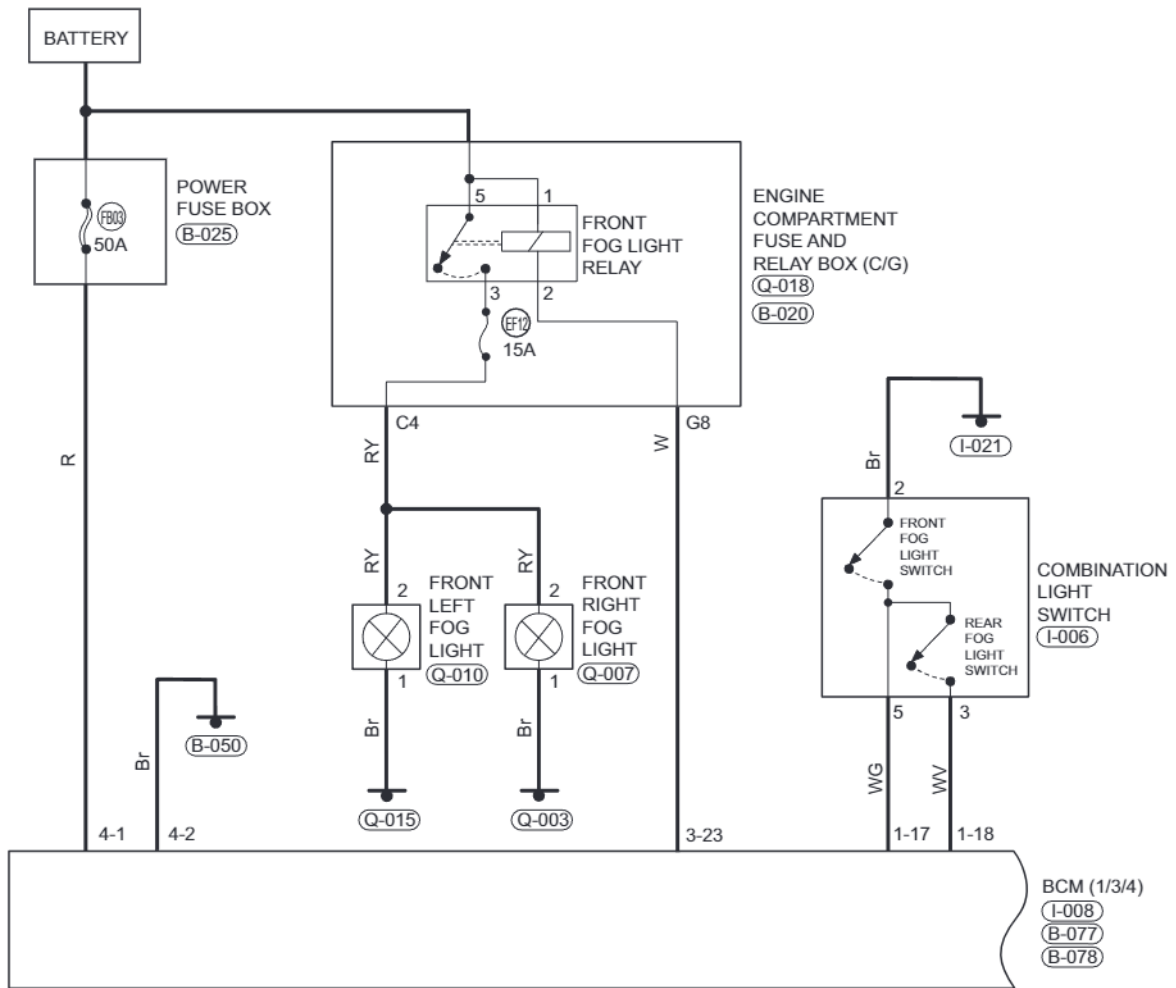
OK

6**Reconfirm DTCs**

- a. Connect related wire harness connectors.
- b. Connect the negative battery cable.
- c. Turn ignition switch to ON.
- d. Connect X-431 3G diagnostic tester to Data Link Connector, and check if DTC is detected.

NG**Repair or replace BCM****OK****System operates normally**

DTC	B1007-12	Front Fog Control Circuit Short to Battery
DTC	B1007-13	Front Fog Control Circuit Open



EM16360200

DTC	DTC Definition	DTC Detection Condition	Possible Cause
B1007-12	Front Fog Control Circuit Short to Battery	Ignition switch ON	• Fuse • Front fog light relay • Wire harness or connector • BCM
B1007-13	Front Fog Control Circuit Open		

CAUTION

- When performing electrical equipment diagnosis and test, always refer to the circuit diagram for related circuit and component information.

DTC Confirmation Procedure

Confirm that battery voltage is normal before performing the following procedures.

- Turn ignition switch to LOCK.
- Connect X-431 3G diagnostic tester (the latest software) to Data Link Connector (DLC).
- Turn ignition switch to ON.
- Use X-431 3G diagnostic tester to record and clear DTCs stored in BCM.
- Turn ignition switch to LOCK and wait for a few seconds.
- Use X-431 3G diagnostic tester to select Read Trouble Code.
- If DTC is detected, malfunction indicated by DTC is current. Go to diagnosis procedure - Step 1.
- If no DTC is detected, malfunction indicated by DTC is intermittent ([See page 36-26](#)).

Diagnosis Procedure

1 Check front fog light bulb

- Turn off all electrical equipment and the ignition switch.
- Disconnect the negative battery cable.
- Remove the front fog light bulb, and check if bulb filament is blown.

NG

Replace damaged front fog light bulb

OK

2 Check fuse and relay

- Remove the fuse EF12 (15A) from engine compartment fuse and relay box.
- Remove the front fog light relay from engine compartment fuse and relay box.
- Check fuses and relays for blown and damage.

NG

Repair or replace damaged fuses and relays

OK

3 Check grounding points, connector and wire harness

- Check BCM grounding point B-050 (See page 53-28).
- Disconnect the BCM connector B-077, engine compartment fuse and relay box connectors B-020 and Q-018.
- Disconnect the front right fog light connector Q-007, front left fog light connector Q-010.
- Check if wire harnesses are worn, pierced, pinched or partially broken.
- Look for broken, bent, protruded or corroded terminals.
- Check if related connector terminal contact pins are in good condition.

NG

Repair or replace related connector or wire harness

OK

4 Check front fog light control circuit

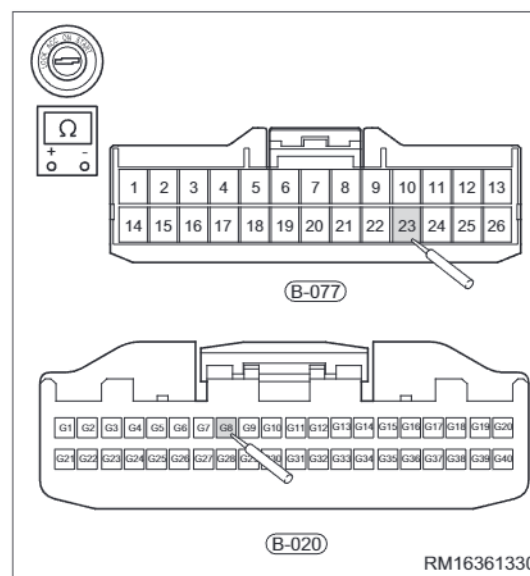
- Check the wire harness between BCM connector B-077 and engine compartment fuse and relay box connector B-020.

Check for Open

Tester Connection	Condition	Specified Condition
B-077 (23) - B-020 (G8)	Always	Continuity

Check for Short

Tester Connection	Condition	Specified Condition
B-077 (23) or B-020 (G8) - Body ground	Always	No continuity
B-077 (23) or B-020 (G8) - Battery negative	Always	No continuity



36

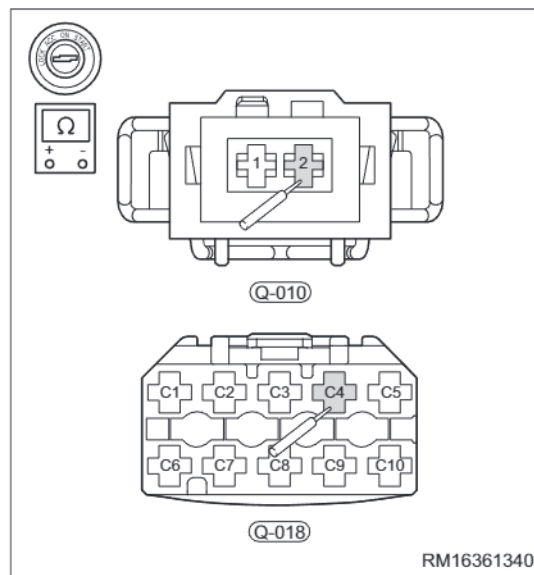
- b. Check the wire harness between engine compartment fuse and relay box connector Q-018 and front left fog light connector Q-010.

Check for Open

Tester Connection	Condition	Specified Condition
Q-018 (C4) - Q-010 (2)	Always	Continuity

Check for Short

Tester Connection	Condition	Specified Condition
Q-018 (C4) or Q-010 (2) - Body ground	Always	No continuity
Q-018 (C4) or Q-010 (2) - Battery negative	Always	No continuity



36

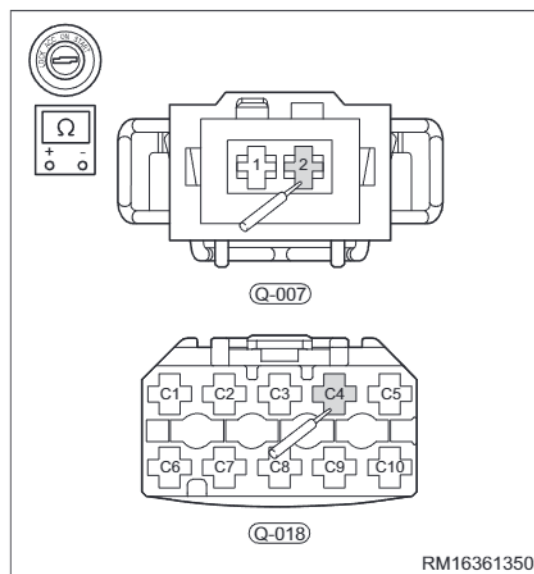
- c. Check the wire harness between engine compartment fuse and relay box connector Q-018 and front right fog light connector Q-007.

Check for Open

Tester Connection	Condition	Specified Condition
Q-018 (C4) - Q-007 (2)	Always	Continuity

Check for Short

Tester Connection	Condition	Specified Condition
Q-018 (C4) or Q-007 (2) - Body ground	Always	No continuity
Q-018 (C4) or Q-007 (2) - Battery negative	Always	No continuity



NG

Repair or replace related connector or wire harness

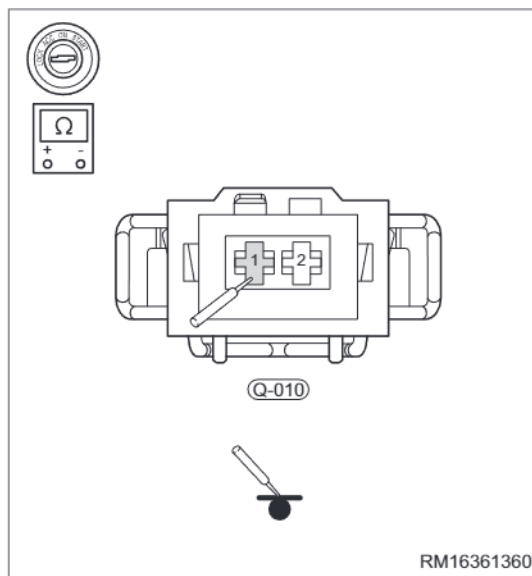
OK

5 Check front fog light ground circuit

- a. Check the wire harness between front left fog light connector Q-010 and body ground.

Check for Open

Tester Connection	Condition	Specified Condition
Q-010 (1) - Body ground	Always	Continuity

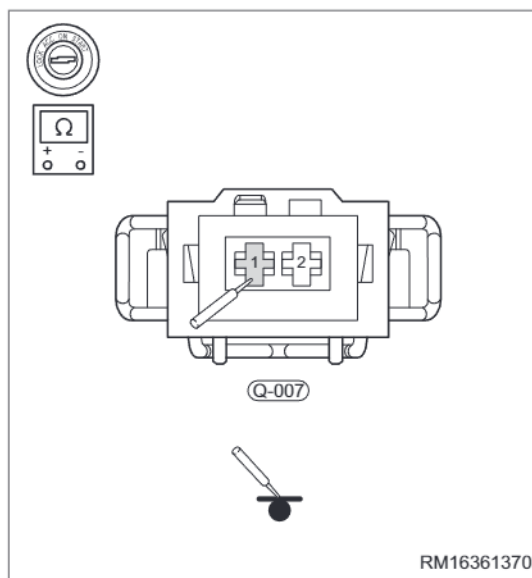


36

- b. Check the wire harness between front right fog light connector Q-007 and body ground.

Check for Open

Tester Connection	Condition	Specified Condition
Q-007 (1) - Body ground	Always	Continuity



NG

Repair or replace front fog light ground wire

OK

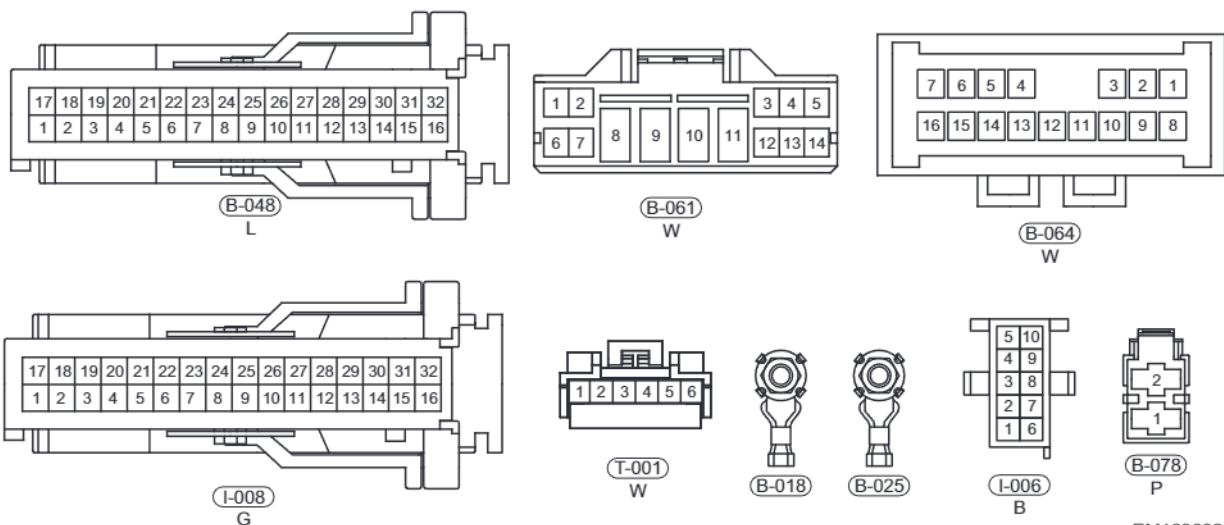
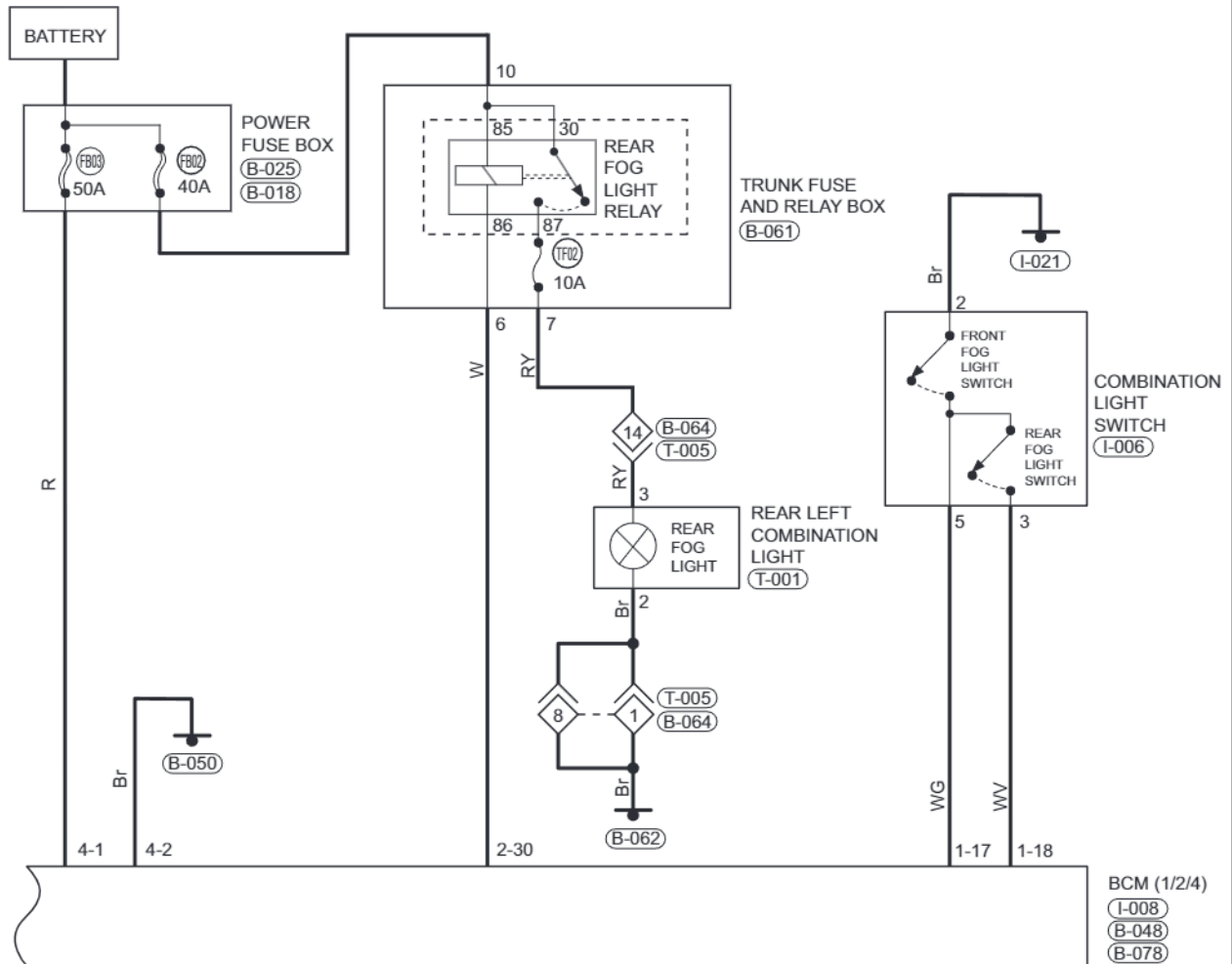
6**Reconfirm DTCs**

- a. Connect related wire harness connectors.
- b. Connect the negative battery cable.
- c. Turn ignition switch to ON.
- d. Connect X-431 3G diagnostic tester to Data Link Connector, and check if DTC is detected.

NG**Repair or replace BCM****OK****System operates normally**

DTC	B1008-12	Rear Fog Control Circuit Short to Battery
-----	----------	---

DTC	B1008-13	Rear Fog Control Circuit Open
-----	----------	-------------------------------



EM16360210

DTC	DTC Definition	DTC Detection Condition	Possible Causes
B1008-12	Rear Fog Control Circuit Short to Battery	Ignition switch ON	- Fuse - Rear fog light relay - Wire harness or connector - BCM
B1008-13	Rear Fog Control Circuit Open		

CAUTION

- When performing electrical equipment diagnosis and test, always refer to the circuit diagram for related circuit and component information.

DTC Confirmation Procedure

Confirm that battery voltage is normal before performing the following procedures.

- Turn ignition switch to LOCK.
- Connect X-431 3G diagnostic tester (the latest software) to Data Link Connector (DLC).
- Turn ignition switch to ON.
- Use X-431 3G diagnostic tester to record and clear DTCs stored in BCM.
- Turn ignition switch to LOCK and wait for a few seconds.
- Use X-431 3G diagnostic tester to select Read Trouble Code.
- If DTC is detected, malfunction indicated by DTC is current. Go to diagnosis procedure - Step 1.
- If no DTC is detected, malfunction indicated by DTC is intermittent ([See page 36-26](#)).

Diagnosis Procedure**1 Check front fog light bulb**

- Turn off all electrical equipment and the ignition switch.
- Disconnect the negative battery cable.
- Remove the rear fog light bulb, and check if bulb filament is blown.

NG**Replace damaged rear fog light bulb****OK****2 Check fuse and relay**

- Remove the fuse FB02 (40 A) from power supply fuse box.
- Remove the fuse TF02 (10 A) from luggage compartment fuse and relay box.
- Remove the rear fog light relay from luggage compartment fuse and relay box.
- Check the fuses and relays for blown and damage.

NG**Repair or replace damaged fuses and relays****OK**

3 Check grounding points, connector and wire harness

- Check BCM grounding point B-050 (See page 53-28).
- Disconnect the BCM connector B-048, luggage compartment fuse and relay box connector B-061.
- Disconnect the rear fog connector T-001.
- Check if wire harnesses are worn, pierced, pinched or partially broken.
- Look for broken, bent, protruded or corroded terminals.
- Check if related connector terminal contact pins are in good condition.

NG

Repair or replace related connector or wire harness

OK

4 Check rear fog light control circuit

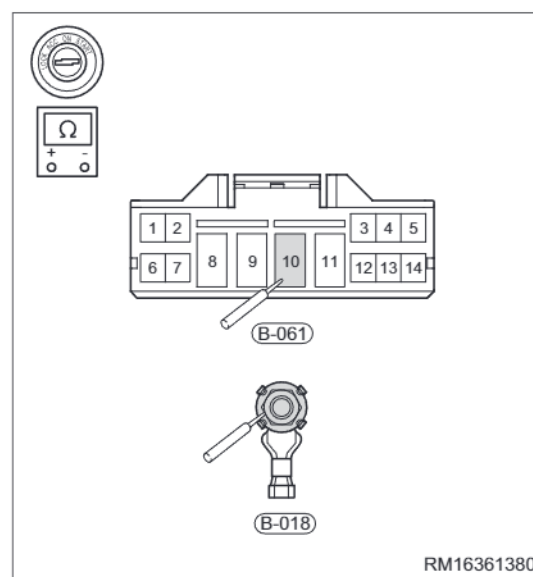
- Check the wire harness between power supply fuse box connector B-018 and luggage compartment fuse and relay box connector B-061.

Check for Open

Tester Connection	Condition	Specified Condition
B-018 - B-061(10)	Always	Continuity

Check for Short

Tester Connection	Condition	Specified Condition
B-018 or B-061 (10) - Body ground	Always	No continuity
B-018 or B-061 (10) - Battery negative	Always	No continuity



36

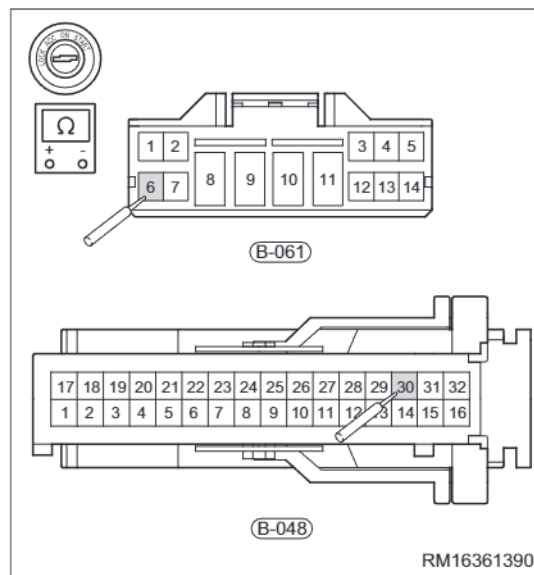
- b. Check the wire harness between luggage compartment fuse and relay box connector B-061 and BCM connector B-048.

Check for Open

Tester Connection	Condition	Specified Condition
B-061 (6) - B-048 (30)	Always	Continuity

Check for Short

Tester Connection	Condition	Specified Condition
B-061 (6) or B-048 (30) - Body ground	Always	No continuity
B-061 (6) or B-048 (30) - Battery negative	Always	No continuity



36

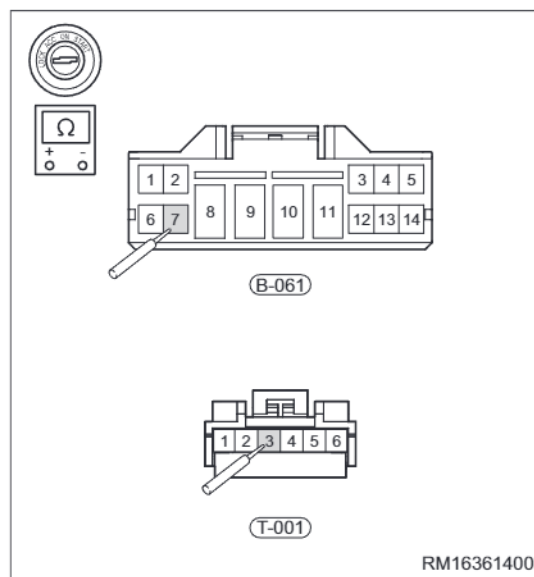
- c. Check the wire harness between luggage compartment fuse and relay box connector B-061 and rear fog light connector T-001.

Check for Open

Tester Connection	Condition	Specified Condition
B-061 (7) - T-001 (3)	Always	Continuity

Check for Short

Tester Connection	Condition	Specified Condition
B-061 (7) or T-001 (3) - Body ground	Always	No continuity
B-061 (7) or T-001 (3) - Battery negative	Always	No continuity



NG

Repair or replace related connector or wire harness

OK

5 Check rear fog light ground circuit

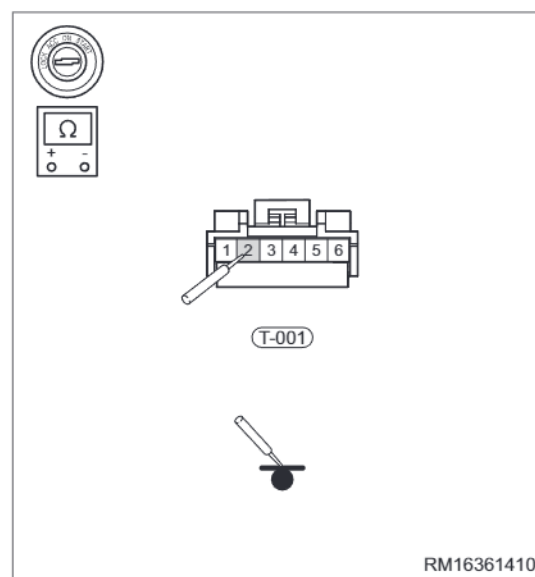
- a. Check the wire harness between rear fog light connector T-001 and body ground.

Check for Open

Tester Connection	Condition	Specified Condition
T-001 (2) - Body ground	Always	Continuity

NG

Repair or replace front fog light ground wire



OK

36

6 Reconfirm DTCs

- Connect related wire harness connectors.
- Connect the negative battery cable.
- Turn ignition switch to ON.
- Connect X-431 3G diagnostic tester to Data Link Connector, and check if DTC is detected.

NG

Repair or replace BCM

OK

System operates normally

DTC	DTC Definition	DTC Detection Condition	Possible Causes
B100A-16	Dome Lights Control Circuit Voltage Below Threshold	Ignition switch ON	• Wire harness or connector • Front dome light assembly • Rear dome light assembly • BCM
B100A-17	Dome Lights Control Circuit Voltage Over Threshold		

CAUTION

- When performing electrical equipment diagnosis and test, always refer to the circuit diagram for related circuit and component information.

DTC Confirmation Procedure

Confirm that battery voltage is normal before performing the following procedures.

- Turn ignition switch to LOCK.
- Connect X-431 3G diagnostic tester (the latest software) to Data Link Connector (DLC).
- Turn ignition switch to ON.
- Use X-431 3G diagnostic tester to record and clear DTCs stored in BCM.
- Turn ignition switch to LOCK and wait for a few seconds.
- Use X-431 3G diagnostic tester to select Read Trouble Code.
- If DTC is detected, malfunction indicated by DTC is current. Go to diagnosis procedure - Step 1.
- If no DTC is detected, malfunction indicated by DTC is intermittent ([See page 36-26](#)).

Diagnosis Procedure

1 Check dome light bulb

- Turn off all electrical equipment and the ignition switch.
- Disconnect the negative battery cable.
- Remove the front dome light bulb and rear dome light bulb, and check if bulb filaments are blown.

NG

Replace damaged dome light bulbs

OK

2 Check grounding points, connector and wire harness

- Check BCM grounding point B-050 ([See page 53-28](#)).
- Disconnect the BCM connector B-077.
- Disconnect the front dome light connector C-003 and rear dome light connector C-001.
- Check if wire harnesses are worn, pierced, pinched or partially broken.
- Look for broken, bent, protruded or corroded terminals.
- Check if related connector terminal contact pins are in good condition.

NG

Repair or replace related connector or wire harness

OK

3 Check supply voltage of dome light

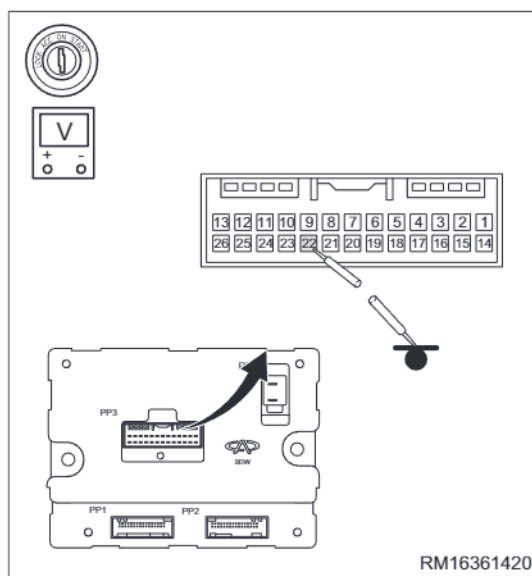
- Connect the negative battery cable.
- Check the voltage between BCM (3) terminal 22 (connect with connector B-077) and body ground.

Tester Connection	Condition	Specified Condition
Terminal 22 - Body ground	Ignition switch ON	11 - 14 V

NG

Go to step 7

36



OK

4 Check dome light control circuit

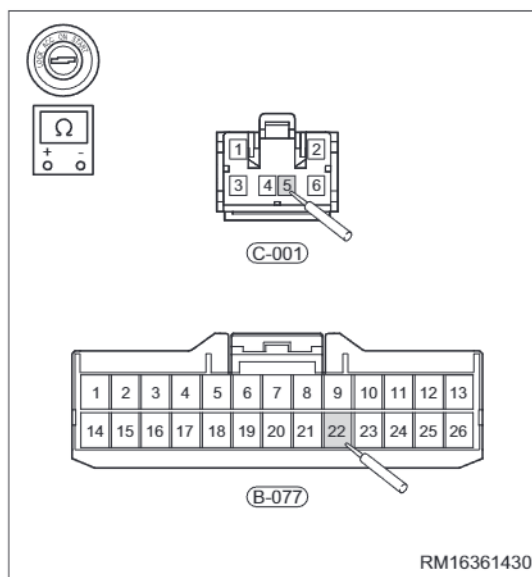
- Disconnect the negative battery cable.
- Check the wire harness between BCM connector B-077 and rear dome light connector C-001.

Check for Open

Tester Connection	Condition	Specified Condition
B-077 (22) - C-001 (5)	Always	Continuity

Check for Short

Tester Connection	Condition	Specified Condition
B-077 (22) or C-001 (5) - Body ground	Always	No continuity
B-077 (22) or C-001 (5) - Battery positive	Always	No continuity



- c. Check the wire harness between BCM connector B-077 and front dome light connector C-003.

Check for Open

Tester Connection	Condition	Specified Condition
B-077 (22) - C-003 (5)	Always	Continuity

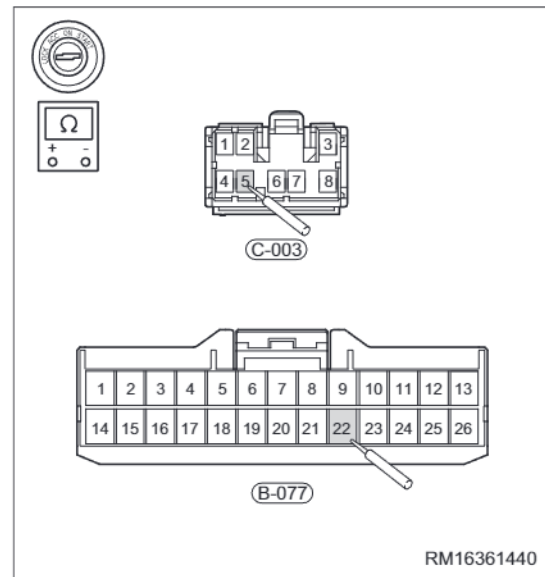
Check for Short

Tester Connection	Condition	Specified Condition
B-077 (22) or C-003 (5) - Body ground	Always	No continuity
B-077 (22) or C-003 (5) - Battery positive	Always	No continuity

NG

Replace or repair related connector or wire harness

OK



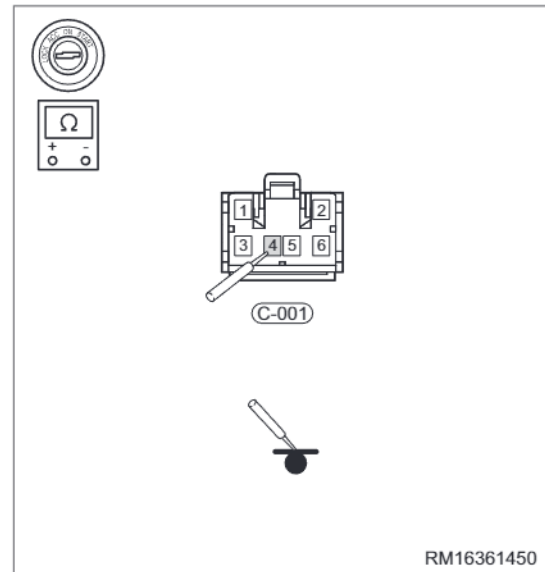
5

Check dome light ground wire

- a. Check the wire harness between rear dome light connector C-001 and body ground.

Check for Open

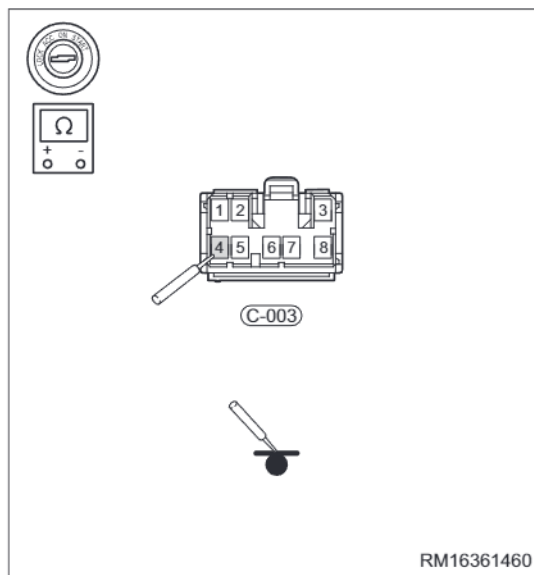
Tester Connection	Condition	Specified Condition
C-001 (4) - Body ground	Always	Continuity



- b. Check the wire harness between front dome light connector C-003 and body ground.

Check for Open

Tester Connection	Condition	Specified Condition
C-003 (4) - Body ground	Always	Continuity



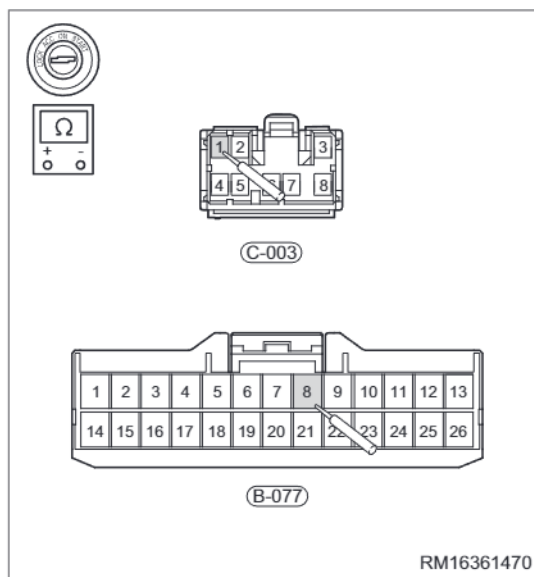
- c. Check the wire harness between front dome light connector C-003 and BCM connector B-077.

Check for Open

Tester Connection	Condition	Specified Condition
C-003 (1) - B-077 (8)	Always	Continuity

Check for Short

Tester Connection	Condition	Specified Condition
C-003 (1) or B-077 (8) - Body ground	Always	No continuity
C-003 (1) or B-077 (8) - Battery positive	Always	No continuity



NG

Replace or repair related connector or wire harness

OK

6

Check front dome light assembly and rear dome light assembly

- Remove the front dome light assembly (See page 36-99).
- Remove the rear dome light assembly (See page 36-101).
- Check the front dome light assembly (See page 36-99).
- Check the rear dome light assembly (See page 36-101).

NG

Replace or repair front dome light assembly and rear dome light assembly

OK

7 Replace BCM

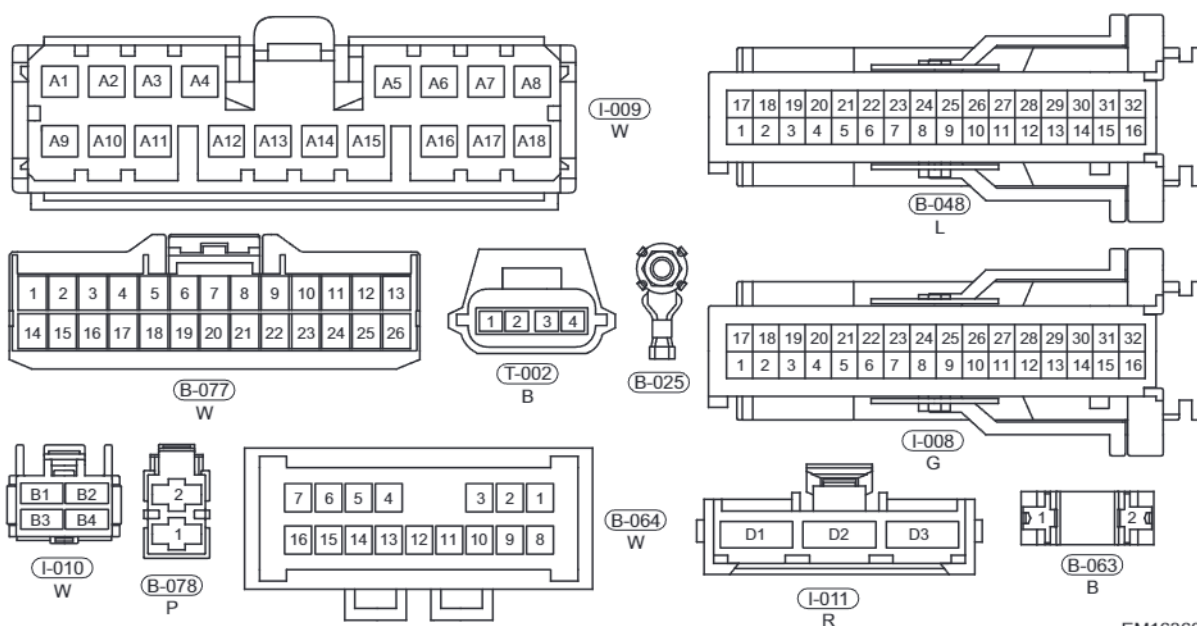
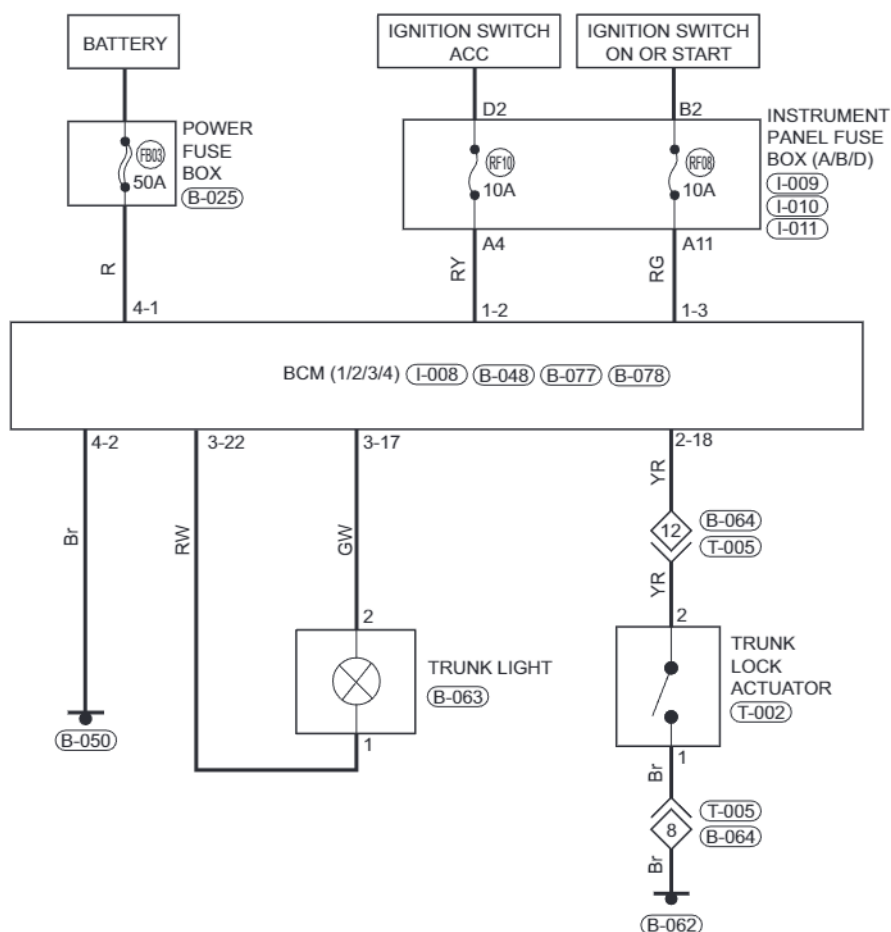
- a. Replace BCM.
- b. Connect related wire harness connectors.
- c. Connect the negative battery cable.
- d. Turn ignition switch to ON.
- e. Connect X-431 3G diagnostic tester to Data Link Connector, and check if DTC is detected.

OK

System operates normally

DTC	B100B-16	Truck Lamp Control Circuit Voltage Below Threshold
-----	----------	--

DTC	B100B-17	Truck Lamp Control Circuit Voltage Over Threshold
-----	----------	---



EM16360130

DTC	DTC Definition	DTC Detection Condition	Possible Causes
B100B-16	Truck Lamp Control Circuit Voltage Below Threshold	Ignition switch ON	- Wire harness or connector - BCM
B100B-17	Truck Lamp Control Circuit Voltage Over Threshold		

CAUTION

- When performing electrical equipment diagnosis and test, always refer to the circuit diagram for related circuit and component information.

DTC Confirmation Procedure

Confirm that battery voltage is normal before performing the following procedures.

- Turn ignition switch to LOCK.
- Connect X-431 3G diagnostic tester (the latest software) to Data Link Connector (DLC).
- Turn ignition switch to ON.
- Use X-431 3G diagnostic tester to record and clear DTCs stored in BCM.
- Turn ignition switch to LOCK and wait for a few seconds.
- Use X-431 3G diagnostic tester to select Read Trouble Code.
- If DTC is detected, malfunction indicated by DTC is current. Go to diagnosis procedure - Step 1.
- If no DTC is detected, malfunction indicated by DTC is intermittent ([See page 36-26](#)).

Diagnosis Procedure

1 Check luggage compartment light bulb

- Turn off all electrical equipment and the ignition switch.
- Disconnect the negative battery cable.
- Remove the luggage compartment light bulb, and check if bulb filament is blown.

NG

Replace luggage compartment light bulb

OK

2 Check grounding points, connector and wire harness

- Check BCM grounding point B-050 ([See page 53-28](#)).
- Disconnect the BCM connector B-077.
- Disconnect the luggage compartment light connector B-063.
- Check if wire harnesses are worn, pierced, pinched or partially broken.
- Look for broken, bent, protruded or corroded terminals.
- Check if related connector terminal contact pins are in good condition.

NG

Repair or replace related connector or wire harness

OK

3 Check supply voltage of luggage compartment light

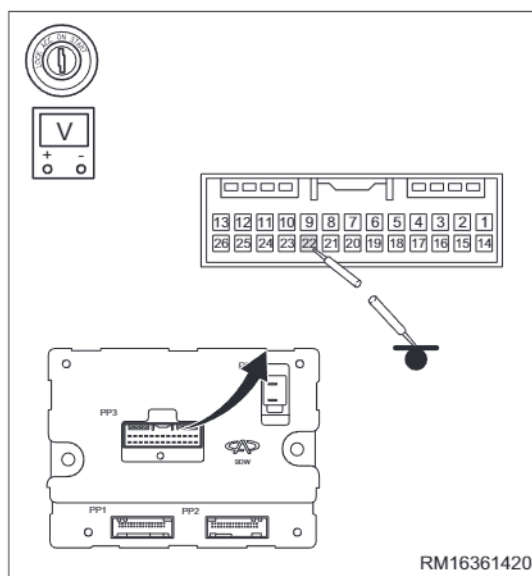
- Connect the negative battery cable.
- Check the voltage between BCM (3) terminal 22 (connect with connector B-077) and body ground.

Tester Connection	Condition	Specified Condition
Terminal 22 - Body ground	Always	11 - 14 V

NG

Go to step 6

36



OK

4 Check luggage compartment light control circuit

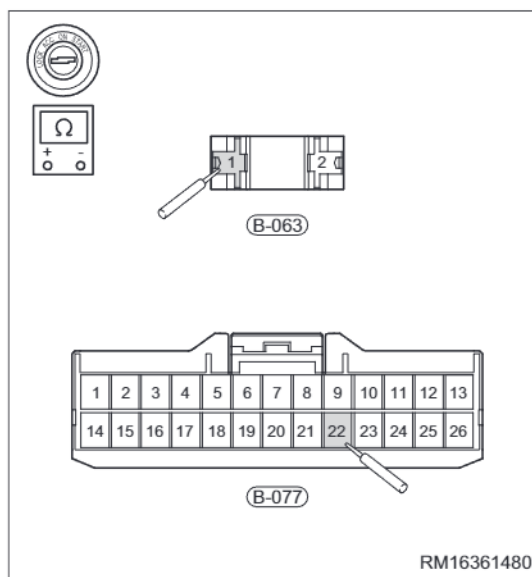
- Disconnect the negative battery cable.
- Check the wire harness between BCM connector B-077 and luggage compartment light connector B-063.

Check for Open

Tester Connection	Condition	Specified Condition
B-077 (22) - B-063 (1)	Always	Continuity

Check for Short

Tester Connection	Condition	Specified Condition
B-077 (22) or B-063 (1) - Body ground	Always	No continuity
B-077 (22) or B-063 (1) - Battery positive	Always	No continuity



NG

Replace or repair related connector or wire harness

OK

5 Check luggage compartment light ground wire

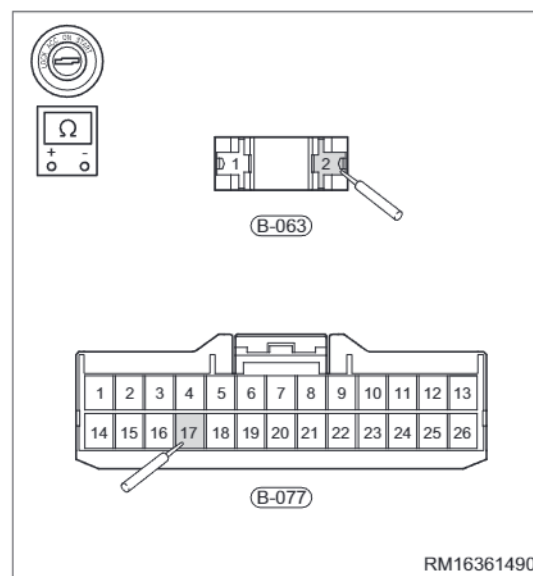
- a. Check the wire harness between luggage compartment light connector B-063 and BCM connector B-077.

Check for Open

Tester Connection	Condition	Specified Condition
B-063 (2) - B-077 (17)	Always	Continuity

Check for Short

Tester Connection	Condition	Specified Condition
B-063 (2) or B-077 (17) - Body ground	Always	No continuity
B-063 (2) or B-077 (17) - Battery positive	Always	No continuity



NG

Replace or repair related connector or wire harness

OK

6 Replace BCM

- Replace BCM.
- Connect related wire harness connectors.
- Connect the negative battery cable.
- Turn ignition switch to ON.
- Connect X-431 3G diagnostic tester to Data Link Connector, and check if DTC is detected.

OK

System operates normally

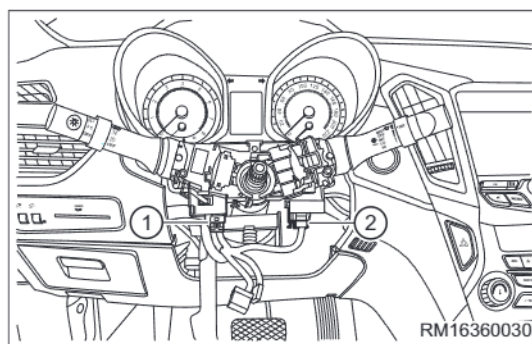
36

ON-VEHICLE SERVICE

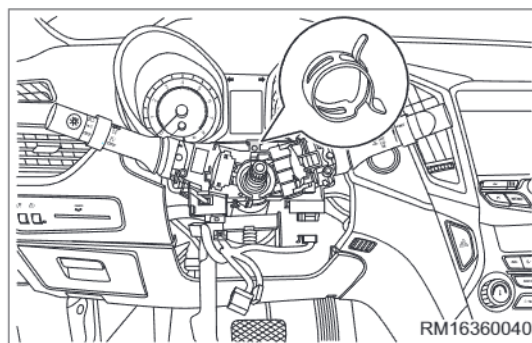
Combination Light Switch Assembly

Removal

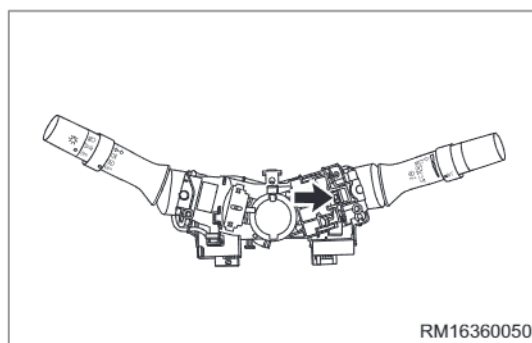
1. Turn off all electrical equipment and the ignition switch.
2. Disconnect the negative battery cable.
3. Remove the driver airbag ([See page 32-84](#)).
4. Remove the steering wheel ([See page 28-25](#)).
5. Remove the combination switch cover ([See page 28-28](#)).
6. Remove the spiral cable ([See page 32-87](#)).
7. Remove the combination switch assembly.
 - a. Disconnect the combination light switch connector (1) and wiper switch connector (2).



- b. Loosen the combination switch clamp, pull combination switch outward, disconnect the connection between combination switch and steering column and remove the combination switch.



- c. Press the claw (arrow) on wiper switch, and separate wiper switch and combination light switch assembly.



Inspection

1. Check combination light switch.

- a. Using the ohm band of digital multimeter, measure the resistance between terminals as shown in the table.
Combination Light Switch Assembly (Position Light/
Low Beam Light/High Beam Light Switch)

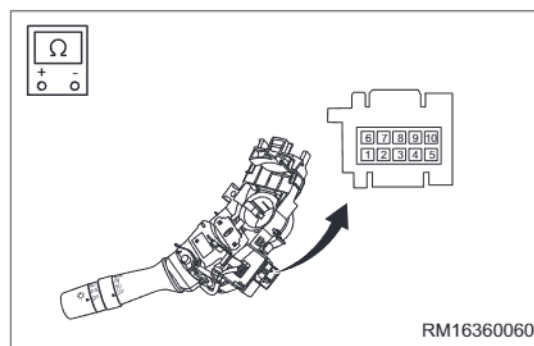
Tester Connection	Switch Condition	Specified Condition
Terminal 8 - Terminal 2	Switch OFF	No continuity
Terminal 8 - Terminal 2	Switch in position light	220 Ω
Terminal 8 - Terminal 2	Switch in low beam	150 Ω
Terminal 9 - Terminal 2	Switch in high beam	150 Ω
Terminal 9 - Terminal 2	Switch in passing light	330 Ω

If result is not as specified, replace combination light switch assembly.

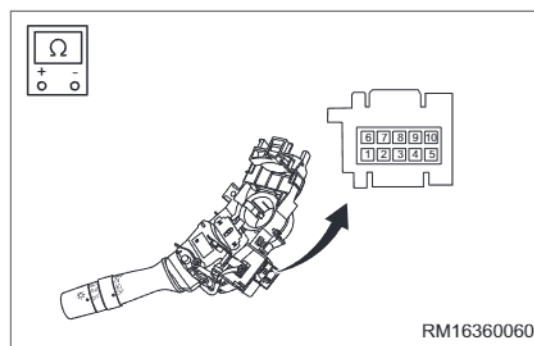
- b. Using the ohm band of digital multimeter, check for continuity between terminals as shown in the table.
Combination Light Switch Assembly (Front Fog Light/
Rear Fog Light Switch)

Tester Connection	Switch Condition	Specified Condition
Terminal 5 - Terminal 2	Switch in front fog light	Continuity
Terminal 3 - Terminal 2	Switch in rear fog light	Continuity
Terminal 5 - Terminal 2	Switch OFF	No continuity
Terminal 3 - Terminal 2		

If result is not as specified, replace combination light switch assembly.



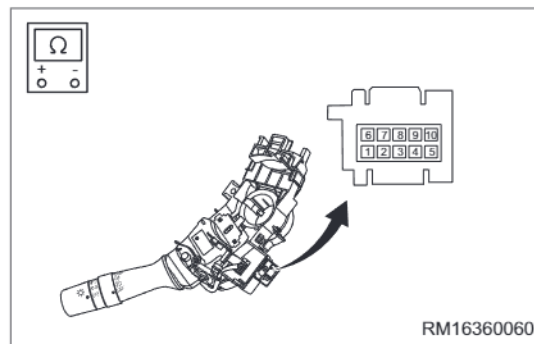
36



- c. Using the ohm band of digital multimeter, measure the resistance between terminals as shown in the table.
Combination Light Switch Assembly (Turn Signal Light Switch)

Tester Connection	Switch Condition	Specified Condition
Terminal 10 - Terminal 2	Switch in left turn position	150 Ω
Terminal 10 - Terminal 2	Switch in right turn position	330 Ω

If result is not as specified, replace combination light switch assembly.



Installation

Installation is in the reverse order of removal.

CAUTION

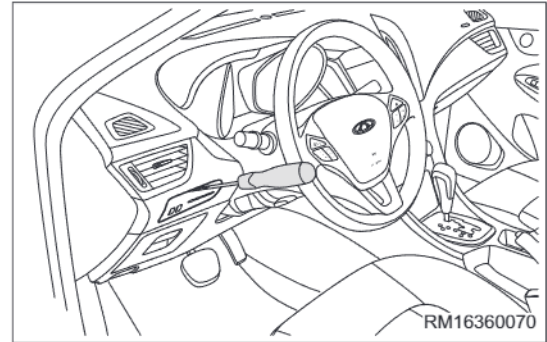
36

- Always install spiral cable correctly according to specified operating instructions.
- Check that horn operates properly after installation.
- Check SRS warning light after installation, and make sure that supplementary restraint system operates normally.

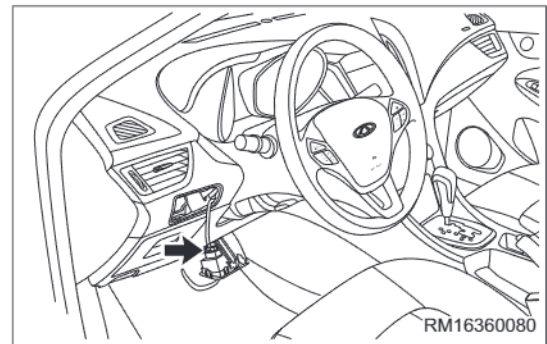
Adjustment Switch Assembly

Removal

1. Turn off all electrical equipment and the ignition switch.
2. Disconnect the negative battery cable.
3. Remove the adjustment switch assembly.
 - a. Using a screwdriver wrapped with protective tape, pry both ends of adjustment switch carefully to remove it.



- b. Disconnect the adjustment switch wire harness connector (arrow), and remove adjustment switch assembly.



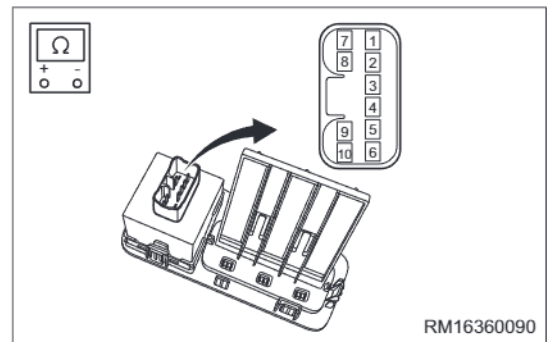
36

Inspection

1. Check the headlight leveling switch.
 - a. Check the resistance of headlight leveling switch.

Tester Connection	Condition	Specified Condition
Terminal 2 - Terminal 4	Turn headlight leveling switch (level 0 to level 3)	Resistance value increases gradually
Terminal 3 - Terminal 4		Resistance value decreases gradually
Terminal 2 - Terminal 3		Resistance value does not change

If result is not as specified, replace the adjustment switch assembly.



- b. Check the headlight leveling switch backlight illumination.

Battery Connection	Condition	Specified Condition
Battery positive (+) - Terminal 1 Battery negative (-) - Terminal 2	Always	Backlight comes on

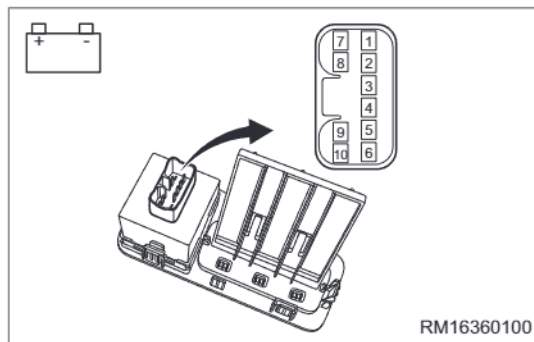
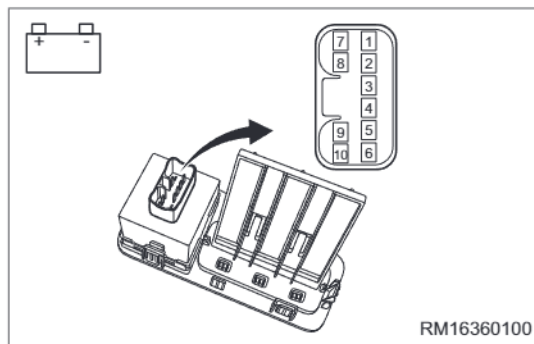
If result is not as specified, replace the leveling switch assembly.

2. Check backlight adjustment switch.

- a. Check the backlight adjustment switch illumination.

Battery Connection	Condition	Specified Condition
Battery positive (+) - Terminal 9 Battery negative (-) - Terminal 8	Always	Backlight comes on
Battery positive (+) - Terminal 10 Battery negative (-) - Terminal 8	Turn backlight adjustment switch	Backlight brightness shades

If result is not as specified, replace the adjustment switch assembly.



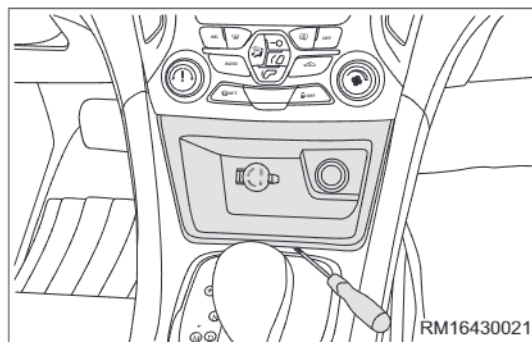
Installation

Installation is in the reverse order of removal.

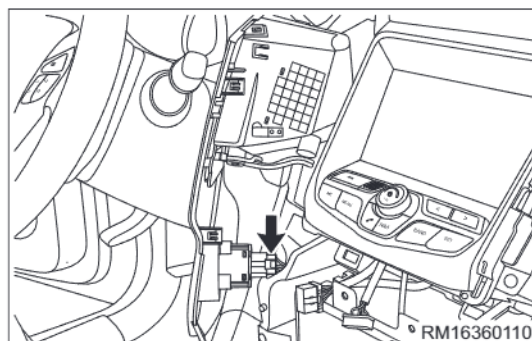
Warning Light Switch

Removal

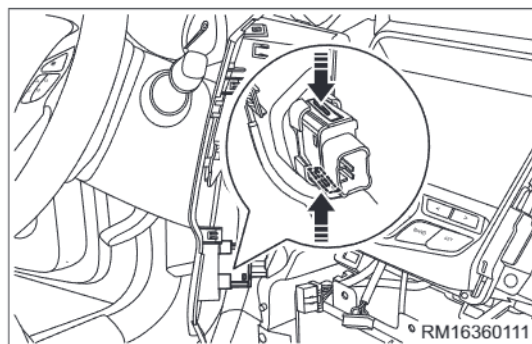
1. Turn off all electrical equipment and the ignition switch.
2. Disconnect the negative battery cable.
3. Remove the lower center storage box assembly.
 - a. Using a screwdriver wrapped with protective tape, pry the clips on lower center storage box assembly and remove the lower center storage box assembly.



4. Remove the center control panel integration assembly (See page 31-79).
5. Remove the center left outlet panel assembly (See page 40-34).
6. Remove the warning light switch.
 - a. Disconnect the warning light switch connector (arrow).



- b. Press the claws (arrow) on both ends of warning light switch by hand, and push outward forcefully to remove it.



Inspection

1. Check warning light switch.

- a. Using the ohm band of digital multimeter, check for continuity between terminals of warning light switch as shown in the table.

Tester Connection	Switch Condition	Specified Condition
Terminal 2 - Terminal 4	Switch pushed	Continuity
Terminal 2 - Terminal 4	Switch released	No continuity

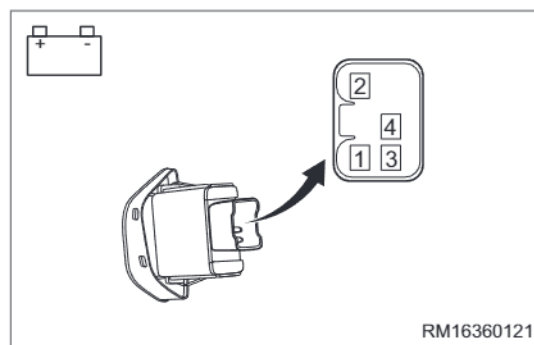
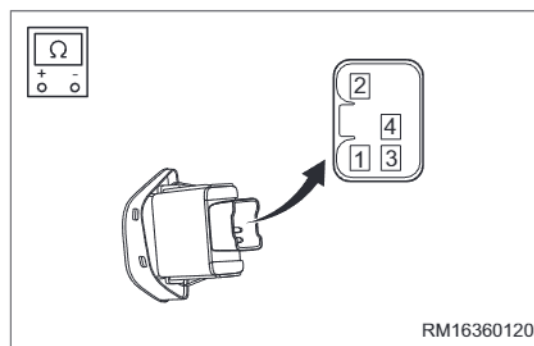
If result is not as specified, replace the warning light switch.

2. Check warning light switch illumination.

- a. Check warning light switch illumination as shown in the table.

Battery Connection	Condition	Specified Condition
Battery positive (+) - Terminal 1 Battery negative (-) - Terminal 4	Always	Warning light switch illumination comes on
Battery positive (+) - Terminal 3 Battery negative (-) - Terminal 4	Always	Warning light switch illumination comes on

If result is not as specified, replace the warning light switch.



Installation

Installation is in the reverse order of removal.

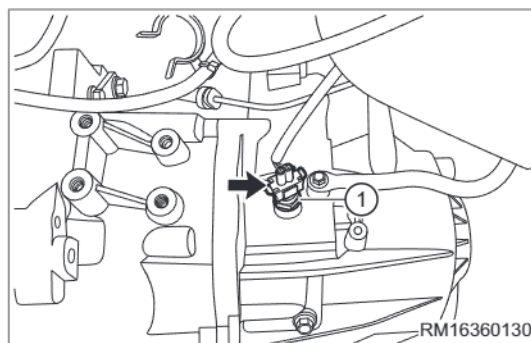
Back-up Light Switch Assembly

Removal

WARNING

- Be sure to wear necessary safety equipment to prevent accidents, when removing back-up light switch.
- Check if safety lock of lift is locked, when performing vehicle lift repair and inspection.

1. Turn off all electrical equipment and the ignition switch.
2. Disconnect the negative battery cable.
3. Raise the vehicle with a lift.
4. Remove the engine lower protector body assembly (See page 49-22).
5. Remove the back-up light switch assembly.
 - a. Disconnect the back-up light switch assembly wire harness connector (arrow).
 - b. Loosen the fixing nut, and remove back-up light switch assembly (1).
(Tightening torque: 20 ± 2 N·m)



36

HINT:

Transmission oil may flow out when removing back-up light switch assembly. Use a container to collect the oil.

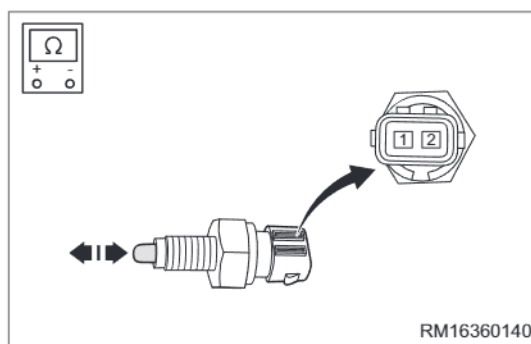
ENVIRONMENTAL PROTECTION

- Drained transmission oil should be collected with a recovering tool.

Inspection

1. Check back-up light switch assembly.
 - a. Using ohm band of digital multimeter, check for continuity between terminals of back-up light switch assembly as shown in the table.

Tester Connection	Switch Position	Specified Condition
Terminal 1 - Terminal 2	Switch pushed	Continuity
Terminal 1 - Terminal 2	Switch released	No continuity



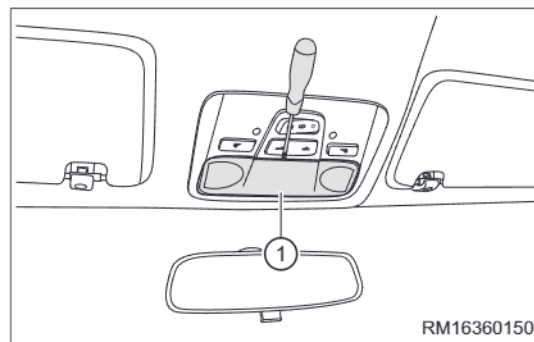
Installation

1. Apply thread locker to threads of back-up light switch assembly, and clean transmission oil on the area between transmission and back-up light switch assembly, before installing the back-up light switch assembly. Then install the back-up light switch assembly securely.
(Tightening torque: 20 ± 2 N·m)
2. Check if transmission oil level is in the proper position after installation.
 - a. It is necessary to fill transmission oil to the specified position, if it is not in the proper position (fill oil until it flows out of retaining plug).
3. Other installation procedures are in the reverse order of removal.

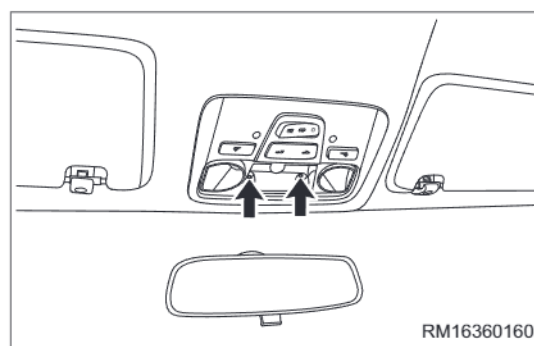
Front Dome Light Assembly

Removal

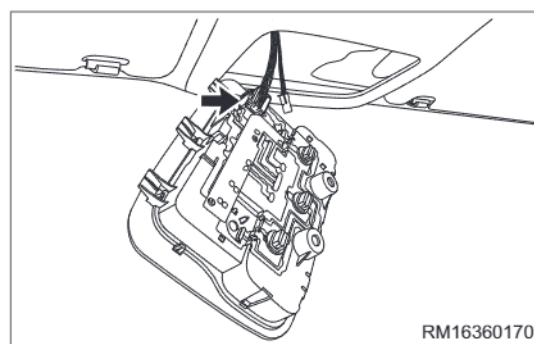
1. Turn off all electrical equipment and the ignition switch.
2. Disconnect the negative battery cable.
3. Remove the front dome light assembly.
 - a. Using a flat tip screwdriver wrapped with protective tape, remove the front dome light assembly cover (1).



- b. Remove 2 fixing screws (arrow) from front dome light assembly.
(Tightening torque: $2.5 \pm 0.5 \text{ N}\cdot\text{m}$)



- c. Disconnect the front dome light assembly wire harness connector (arrow), and remove front dome light assembly.



Inspection

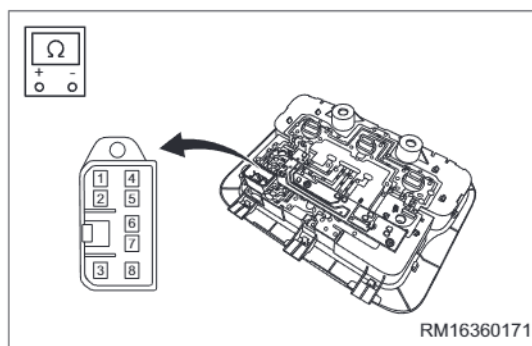
1. Check the front dome light assembly.
 - a. Measure the front dome light assembly as shown in the table.

Battery Connection	Condition	Specified Condition
Battery positive (+) - Terminal 5 Battery negative (-) - Terminal 1	Dome light switch in DOOR position	Dome light comes on
Battery positive (+) - Terminal 5 Battery negative (-) - Terminal 4	Dome light switch ON	Dome light comes on
Battery positive (+) - Terminal 5 Battery negative (-) - Terminal 4	Right map light switch ON	Right map light comes on
Battery positive (+) - Terminal 5 Battery negative (-) - Terminal 4	Left map light switch ON	Left map light comes on

If result is not as specified, replace front dome light assembly.

Installation

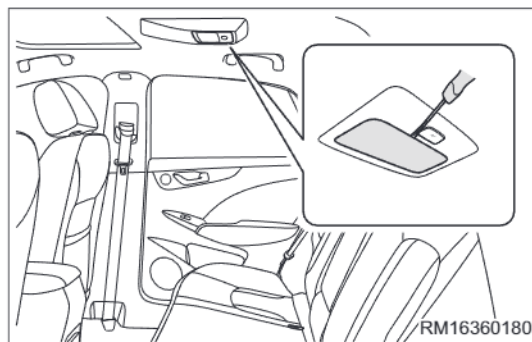
Installation is in the reverse order of removal.



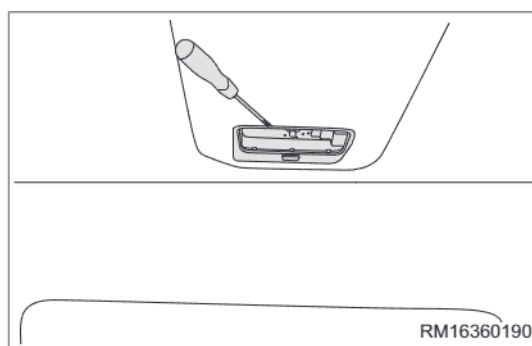
Rear Dome Light Assembly

Removal

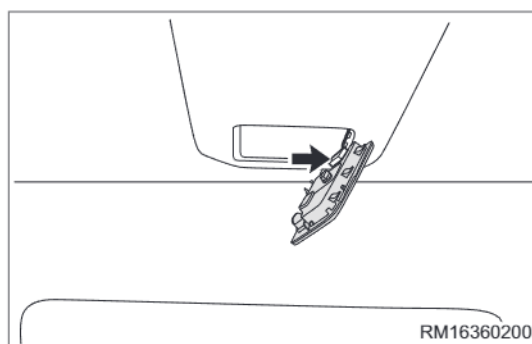
1. Turn off all electrical equipment and the ignition switch.
2. Disconnect the negative battery cable.
3. Remove the rear dome light assembly.
 - a. Using a flat tip screwdriver wrapped with protective tape, remove the rear dome light assembly cover.



- b. Using a flat tip screwdriver wrapped with protective tape, pry the rear dome light assembly to separate it from roof.



- c. Disconnect the rear dome light assembly wire harness connector (arrow), and remove rear dome light assembly.

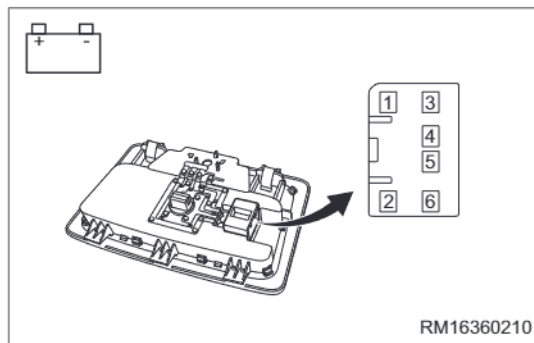


Inspection

1. Check the rear dome light assembly.
 - a. Measure the rear dome light assembly as shown in the table.

Terminal Connection	Switch Position	Specified Condition
Battery positive (+) - Terminal 5 Battery negative (-) - Terminal 4	Rear dome light switch ON	Rear dome light comes on

If result is not as specified, replace rear dome light assembly.



Installation

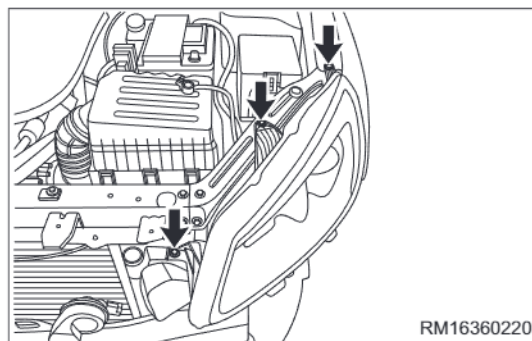
Installation is in the reverse order of removal.

Headlight Assembly

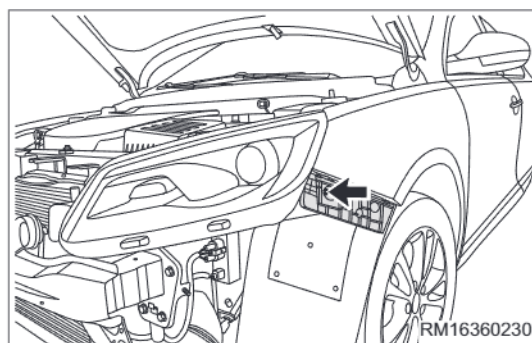
Removal

HINT:

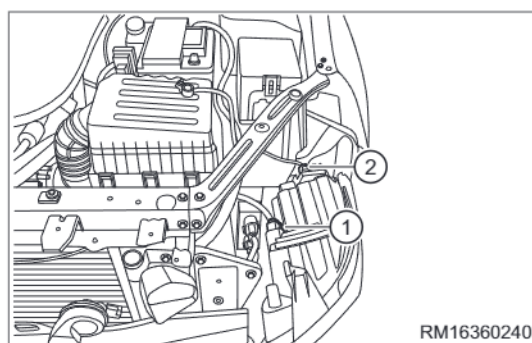
- Use same procedures for right and left sides.
 - Removal procedures listed below are for left side.
1. Turn off all electrical equipment and the ignition switch.
 2. Disconnect the negative battery cable.
 3. Remove the front bumper (See page 49-8).
 4. Remove the headlight assembly.
 - a. Remove 2 fixing bolts and a fixing clip (arrow) from headlight assembly.
(Tightening torque: $4.5 \pm 0.5 \text{ N}\cdot\text{m}$)



- b. Remove the fixing bolt (arrow) from front bumper left mounting bracket.
(Tightening torque: $4.5 \pm 1 \text{ N}\cdot\text{m}$)



- c. Disconnect the connection between headlight assembly wire harness connector (1) and headlight leveling adjustment motor connector (2), and remove headlight assembly.



Installation

Installation is in the reverse order of removal.

CAUTION

- When installing headlight assembly, make sure headlight assembly is well fitted with hood, front wing and front bumper. Adjust as necessary.

Adjustment

1. Preparations:

- Tire inflation pressure comes up to standard.
 - Vehicle is unloaded (besides spare tire and tool kit, it is generally specified to include the weight of driver).
 - Park vehicle on a level ground or a workplace.
 - Keep lens surface of headlight free from dirt.
 - Check if power supply operates normally and bulbs are installed correctly.
- Headlight beam can be adjusted up and down, left and right by using headlight leveling switch or adjustment area at the rear of headlight. Always perform adjustment according to the international standard.

No.	Item	Standard
1	Up and down offset of left/right low beam	570 - 630 mm
2	Left and right offset of left low beam	Left offset no more than 170 mm, right offset no more than 350 mm
3	Left and right offset of right low beam	Left offset no more than 170 mm, right offset no more than 350 mm
4	High beam light intensity	> 30000 cd

2. Headlight leveling can be adjusted according to the number of passengers and loading condition.

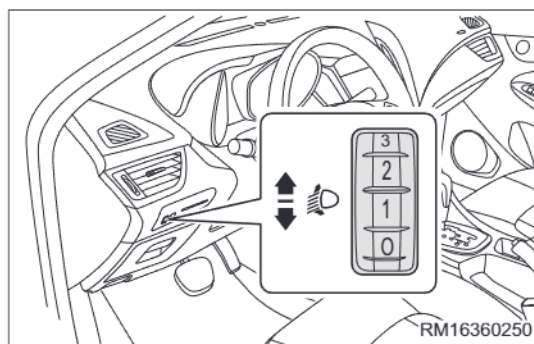
There are 4 adjustment bands to select on headlight leveling knob: 0, 1, 2 and 3.

Turn up: Raise headlight beam.

Turn down: Lower headlight beam.

Adjust the light according to the table below.

Passenger and Luggage Loading Condition		Knob Position
Occupant	Luggage Loading	
Driver	None	0
Driver + Front Passenger	None	0
Full Occupied	None	1
Full Occupied	Full Luggage Loading	2
Driver	Full Luggage Loading	3



CAUTION

- Whether headlight leveling is correct or not will directly affects driving safety. Be sure to adjust the beam with special tool according to related specification.

3. Manual headlight leveling: the headlight leveling can be changed by adjusting the following areas manually as shown in the illustration.

Adjustment method for left headlight

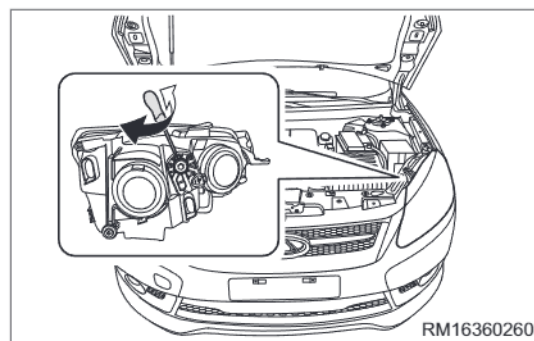
HINT:

Left headlight adjustment has the symmetric distribution with right side. Left headlight adjustment method is taken as an example. Use the same method to adjust the right headlight.

a. High/low beams up/down adjustment

When rotating screwdriver clockwise, the beam moves downward;

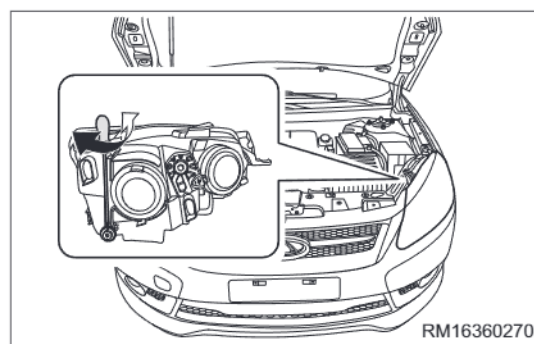
When rotating screwdriver counterclockwise, the beam moves upward.



b. High/low beams left/right adjustment

When rotating screwdriver clockwise, the beam moves to right;

When rotating screwdriver counterclockwise, the beam moves to left.

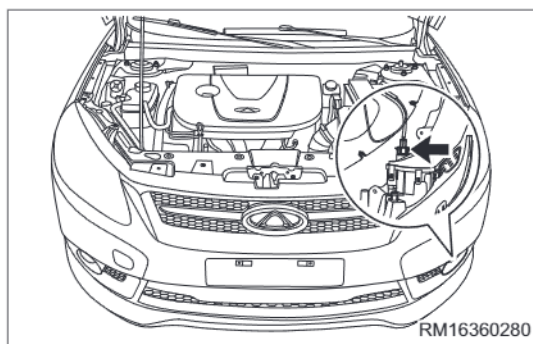


Front Fog Light Assembly

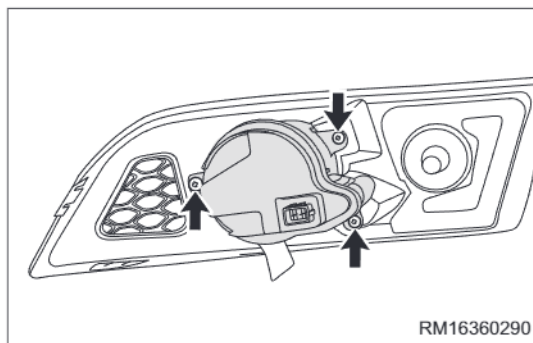
Removal

HINT:

- Use same procedures for front right and front left sides.
 - Procedures listed below are for front left side.
1. Turn off all electrical equipment and the ignition switch.
 2. Disconnect the negative battery cable.
 3. Raise the vehicle with a lift.
 4. Turn the wheels.
 5. Remove the front wheel house protector (See page 49-17).
 6. Remove the front fog light assembly.
 - a. Disconnect the front fog light assembly wire harness connector (arrow).



- b. Remove 3 fixing screws (arrow) from front fog light assembly.
(Tightening torque: 1.5 ± 0.5 N·m)



- c. Remove the front fog light assembly from back of front bumper mounting hole.

Installation

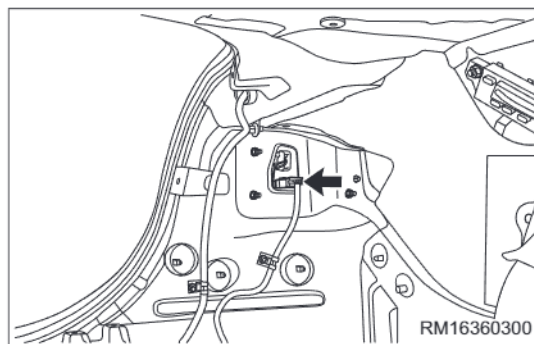
Installation is in the reverse order of removal.

Rear Combination Light Assembly (Fixed Part)

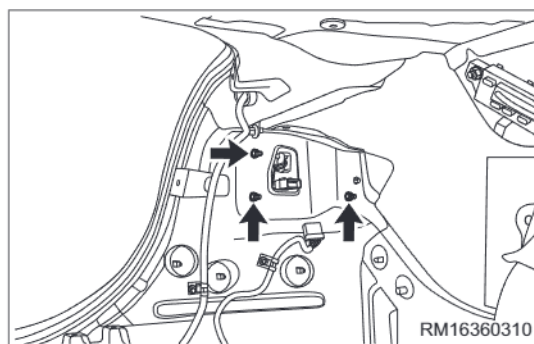
Removal

HINT:

- Use same procedures for rear right and rear left sides.
 - Procedures listed below are for rear left side.
1. Turn off all electrical equipment and the ignition switch.
 2. Disconnect the negative battery cable.
 3. Remove the rear combination light assembly (fixed part).
 - a. Open the luggage compartment door, and remove the luggage compartment left wheel house assembly.
 - b. Disconnect the rear combination light assembly (fixed part) wire harness connector (arrow).



- c. Remove 3 fixing nuts (arrow) from rear combination light assembly (fixed part).
(Tightening torque: $4.0 \pm 0.5 \text{ N}\cdot\text{m}$)



- d. Remove the rear combination light assembly (fixed part).

Installation

Installation is in the reverse order of removal.

CAUTION

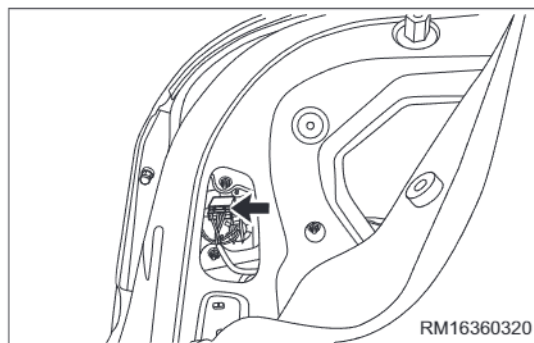
- When installing rear combination light assembly, make sure rear combination light assembly is well fitted with luggage compartment door and rear bumper. Adjust as necessary.

Rear Combination Light Assembly (Movable Part)

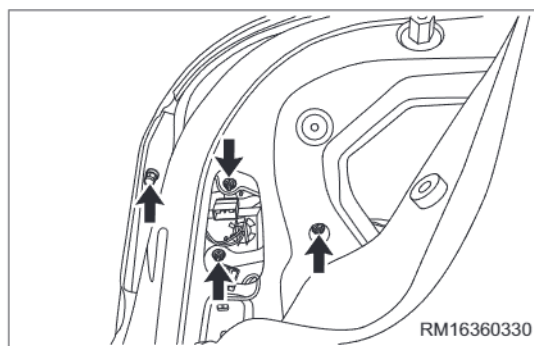
Removal

HINT:

- Use same procedures for rear right and rear left sides.
 - Removal procedures listed below are for rear left side.
1. Turn off all electrical equipment and the ignition switch.
 2. Disconnect the negative battery cable.
 3. Remove the rear combination light assembly (movable part).
 - a. Open the luggage compartment door, and remove the luggage compartment door trim assembly.
 - b. Disconnect the rear combination light assembly (movable part) wire harness connector (arrow).



- c. Remove 4 fixing nuts (arrow) from rear combination light assembly (movable part), and remove rear combination light assembly (movable part). (Tightening torque: $4.0 \pm 0.5 \text{ N}\cdot\text{m}$)



Installation

Installation is in the reverse order of removal.

CAUTION

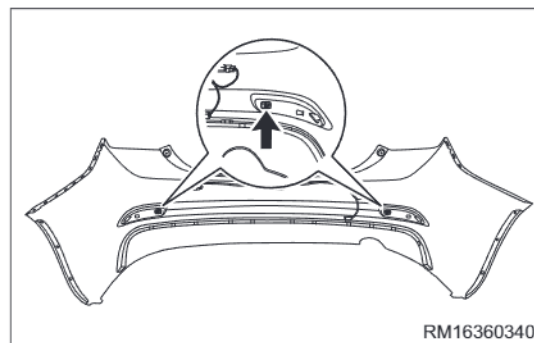
- When installing rear combination light assembly, make sure rear combination light assembly is well fitted with luggage compartment door and rear bumper. Adjust as necessary.

Retro-reflector

Removal

HINT:

- Use same procedures for rear right and rear left sides.
 - Procedures listed below are for rear left side.
1. Turn off all electrical equipment and the ignition switch.
 2. Disconnect the negative battery cable.
 3. Remove the rear bumper assembly (See page 49-23).
 4. Remove the retro-reflector assembly.
 - a. Pinch the elastic clip from rear bumper to pop the clip up from rear bumper mounting hole.



36

- b. Remove the retro-reflector assembly.

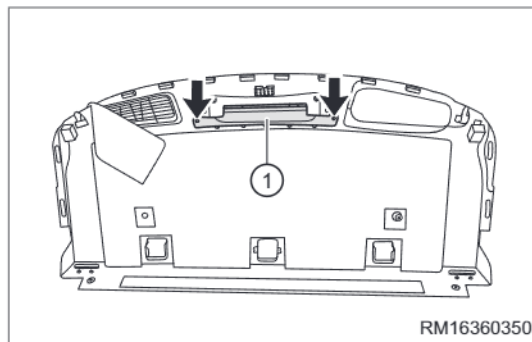
Installation

Installation is in the reverse order of removal.

High Mounted Stop Light Assembly

Removal

1. Turn off all electrical equipment and the ignition switch.
2. Disconnect the negative battery cable.
3. Remove the tonneau cover assembly ([See page 50-37](#)).
4. Remove the high mounted stop light assembly.
 - a. Remove 2 fixing screws (arrow) from high mounted stop light assembly.
(Tightening torque: 2.5 ± 0.5 N·m)

**36**

- b. Remove the high mounted stop light assembly from tonneau cover assembly.

Installation

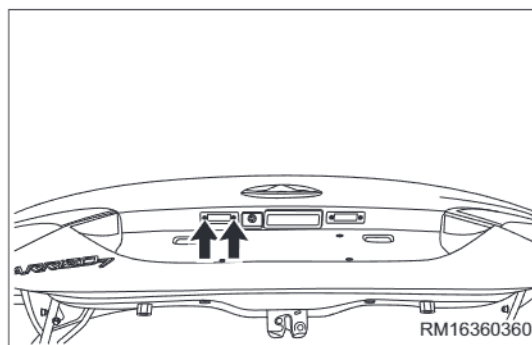
Installation is in the reverse order of removal.

License Plate Light Assembly

Removal

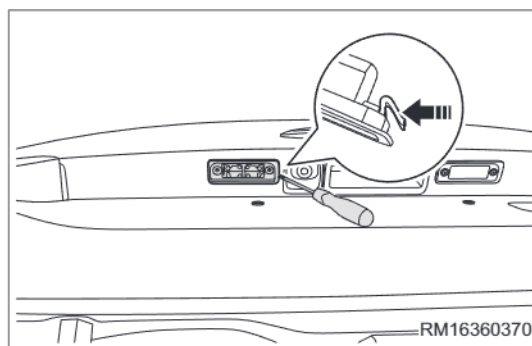
HINT:

- Use same procedures for right and left sides.
 - Procedures listed below are for left side.
1. Turn off all electrical equipment and the ignition switch.
 2. Disconnect the negative battery cable.
 3. Remove the license plate light assembly.
 - a. Remove 2 fixing screws from license plate light cover, and remove the license plate light cover together with bulb.
(Tightening torque: $1.2 \pm 0.2 \text{ N}\cdot\text{m}$)

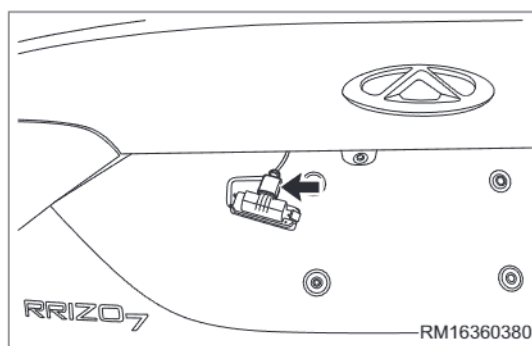


36

- b. Remove the luggage compartment door trim assembly.
 - c. Push the elastic clamp of license plate light socket from the metal plate hole, and detach the license plate light socket.



- d. Disconnect the license plate light wire harness connector, and remove the license plate light socket.



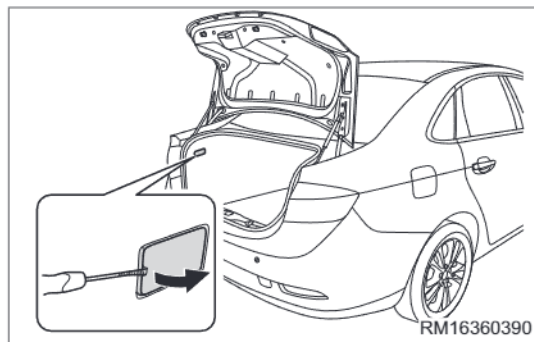
Installation

Installation is in the reverse order of removal.

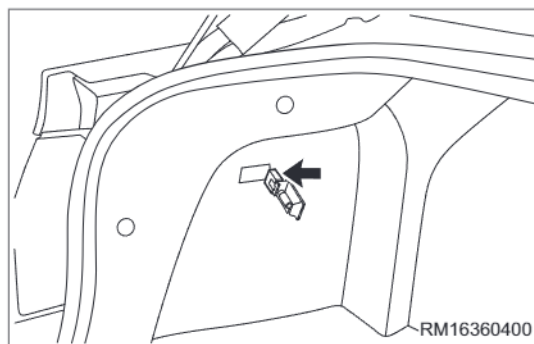
Luggage Compartment Light Assembly

Removal

1. Turn off all electrical equipment and the ignition switch.
2. Remove the luggage compartment light assembly.
 - a. Open the luggage compartment door.
 - b. Disconnect the negative battery cable.
 - c. Using a screwdriver wrapped with protective tape, pry up the luggage compartment light cover in direction of arrow as shown in illustration.

**36**

- d. Disconnect the luggage compartment light assembly wire harness connector (arrow).



- e. Remove the luggage compartment light assembly.

Installation

Installation is in the reverse order of removal.

