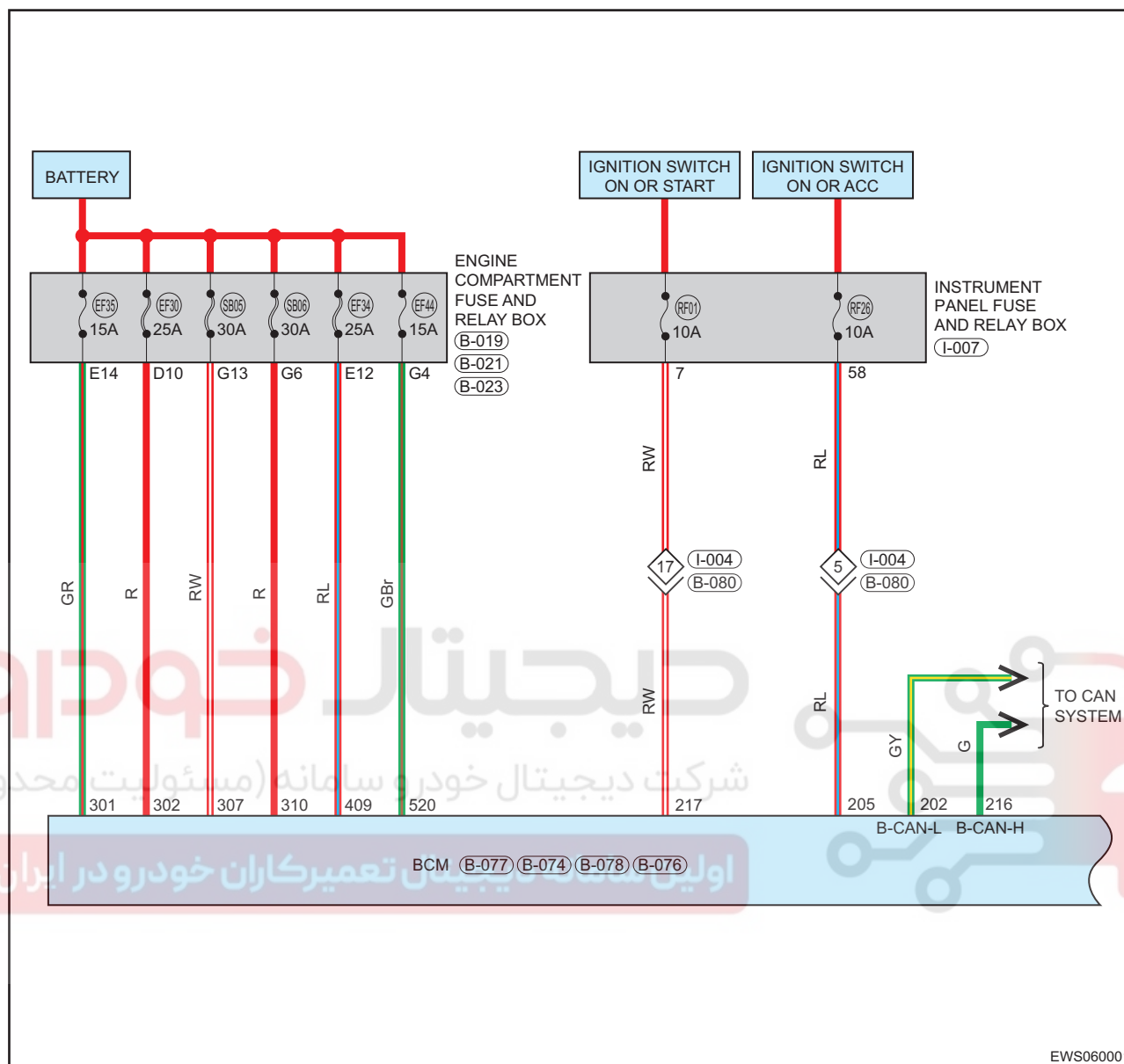


Circuit Diagram



Description

DTC	DTC Definition	DTC Detection Condition	Possible Cause
B1021-17	Anti-pinch Module Power Supply	ENGINE START STOP switch OFF, engine does not run	• Circuit Voltage Below Threshold • Circuit Voltage Above Threshold • Component internal fault
B1021-16	Anti-pinch Module Power Supply		
B102D-96	Anti-pinch Module Controller		

Caution:

When performing circuit diagnosis and test, always refer to the circuit diagram for specific circuit and component information.

Procedure**1 Check battery voltage**

- Connect negative battery cable, and turn ENGINE START STOP switch to ON to make engine run normally.
- Using voltage band of multimeter, check the power of battery.

OK

Multimeter Connection	Condition	Specified Condition
Battery (+) - Battery (-)	ENGINE START STOP switch ON	$\geq 12V$

Result

Proceed to
OK
NG

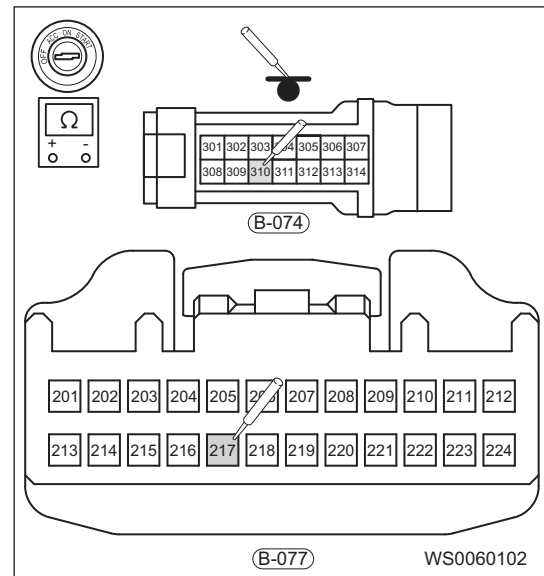
NG**Check battery charging system****OK****2 Check wire harness and connector**

- Disconnect negative battery cable, and turn ENGINE START STOP switch to OFF.
- Disconnect the BCM wire harness connectors B-024 and B-077.

- (c) Using ohm band of multimeter, check for continuity between B-074 (310) and ground, B-077 (217) and ground.

OK

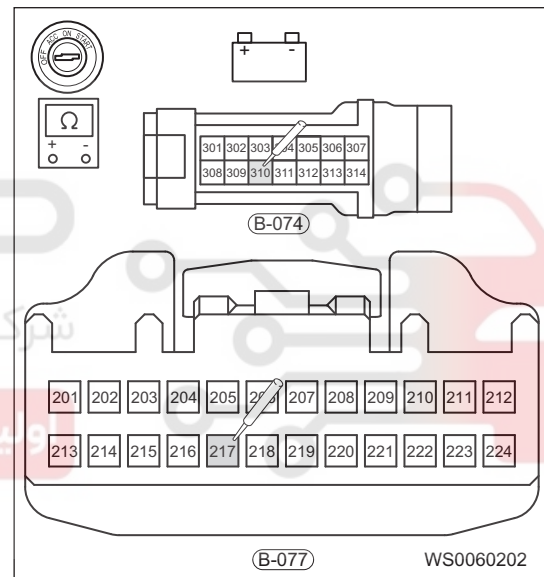
Multimeter Connection	Condition	Specified Condition
B-074 (310) - Ground	ENGINE START STOP switch OFF	∞
B-077 (217) - Ground	ENGINE START STOP switch OFF	∞



- (d) Using ohm band of multimeter, check for continuity between B-074 (310) and battery (+), B-077 (217) and battery (+).

OK

Multimeter Connection	Condition	Specified Condition
B-074 (310) - Battery (+)	ENGINE START STOP switch OFF	∞
B-077 (217) - Battery (+)	ENGINE START STOP switch OFF	∞



40

Result

Proceed to
OK
NG

OK

Replace jam protection module assembly

NG

Replace wire harness and connector

DTC	B100C-13	Front Left Window Up Control Circuit
DTC	B100C-71	Front Right Window Up Control Circuit
DTC	B100D-13	Front Right Window Down Control Circuit
DTC	C006B-00	Stability System Active Too Long
DTC	B100D-71	Front Left Window Down Control Circuit
DTC	B1022-71	FL Window Button
DTC	B1029-71	FL Window Relay
DTC	B102E-86	FL Window Motor Position Signal

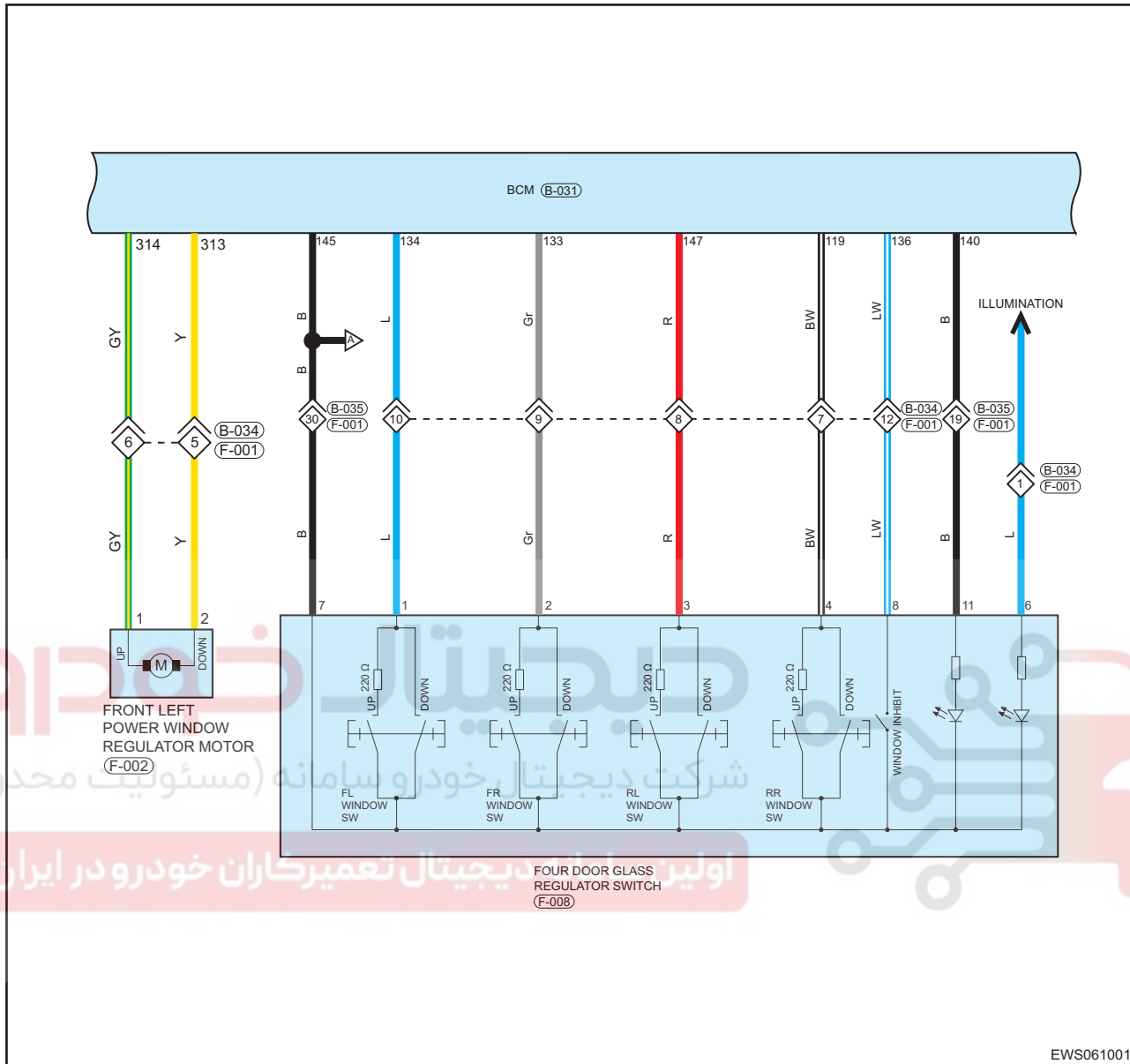
دیجیتال خودرو

شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

اولین سامانه دیجیتال تعمیرکاران خودرو در ایران



Circuit Diagram



Description

DTC	DTC Definition	DTC Detection Condition	Possible Cause
B100C-13	Front Left Window Up Control Circuit	ENGINE START STOP switch OFF, engine does not run	- Ground - Line connector - Glass regulator switch - Glass regulator motor - BCM module - Jam protection learning is not performed
B100C-71	Front Left Window Up Control Circuit		
B100D-13	Front Left Window Down Control Circuit		
B100D-71	Front Left Window Down Control Circuit		
B1022-71	FL Window Button		
B1029-71	FL Window Relay		
B102E-86	FL Window Motor Position Signal		

Caution:

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

Procedure**1 Check the ground points.**

- (a) Disconnect negative battery cable, and turn ENGINE START STOP switch to OFF.
- (b) Check BCM ground point.

Result

Proceed to
OK
NG

NG

Repair or replace ground wire harness or ground point.

OK

2 Use diagnostic tester, perform active test for window system**Result**

Proceed to
OK
NG

NG

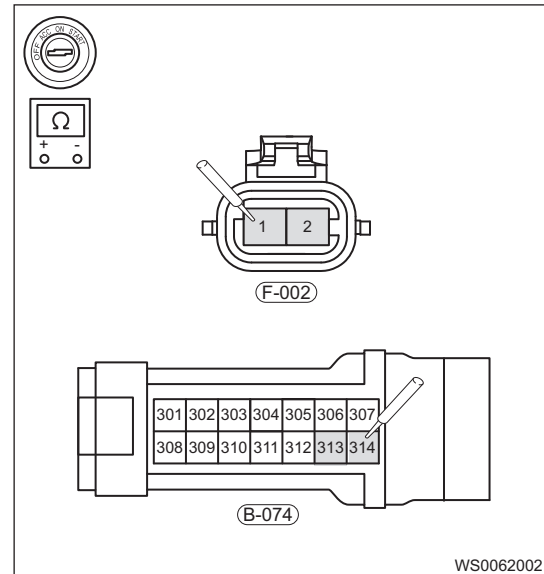
3 Check executive circuit of front left window system.

- (a) Disconnect negative battery cable, and turn ENGINE START STOP switch to OFF.
- (b) Disconnect the front left door glass regulator motor wire harness connector F-002, BCM connector B-074.

- (c) Using ohm band of multimeter, check for continuity between F-002 (1) - B-074 (314) and F-002 (2) - B-074 (313) separately.

OK

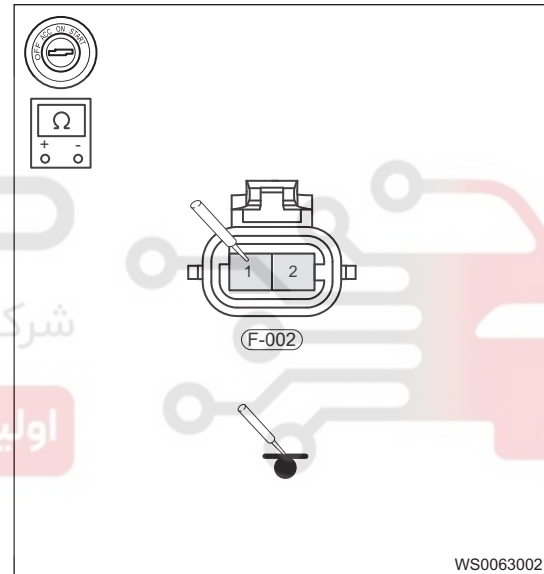
Multimeter Connection	Condition	Specified Condition
F-002 (1) - B-074 (314)	ENGINE START STOP switch OFF	$\leq 1 \Omega$
F-002 (2) - B-074 (313)	ENGINE START STOP switch OFF	$\leq 1 \Omega$



- (d) Using ohm band of multimeter, check for continuity between F-002 (1) and ground, F-002 (2) and ground separately.

OK

Multimeter Connection	Condition	Specified Condition
F-002 (1) - Ground	ENGINE START STOP switch OFF	∞
F-002 (2) - Ground	ENGINE START STOP switch OFF	∞



- (e) Using ohm band of multimeter, check for continuity between F-002 (1) and battery (+), F-002 (2) and battery (+) separately.

OK

Multimeter Connection	Condition	Specified Condition
F-002 (1) - Battery (+)	ENGINE START STOP switch OFF	∞
F-002 (2) - Battery (+)	ENGINE START STOP switch OFF	∞

Result

Proceed to
OK
NG

NG

Replace wire harness and connector

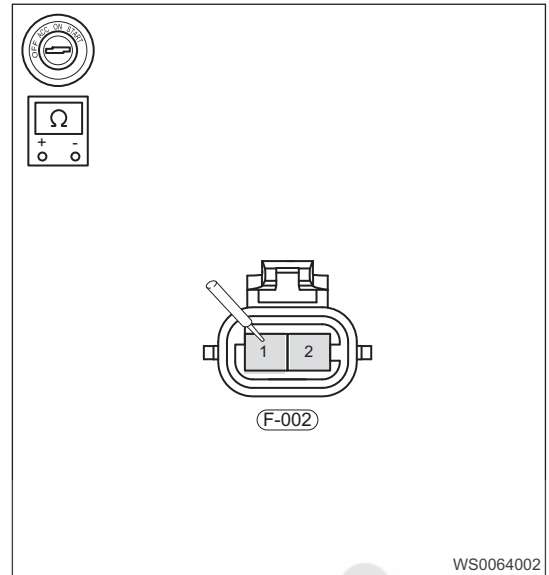
OK

4 Check front left window regulator motor.

- Disconnect negative battery cable, and turn ENGINE START STOP switch to OFF.
- Disconnect the front left window regulator motor connector F-002.
- Using ohm band of multimeter, check resistance between F-002(1) and F-002 (2).

OK

Multimeter Connection	Condition	Specified Condition
F-002 (1) - F-002 (2)	ENGINE START STOP switch OFF	1 Ω



- Apply 12 V voltage to both terminals of front left window regulator motor connector F-002, observe if operation of window regulator is faulty.

Result

Proceed to
OK
NG

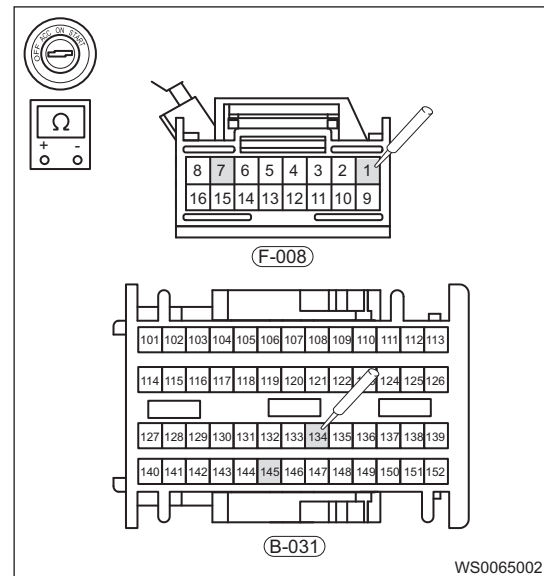
OK**Replace the BCM****NG****Replace front left window regulator motor****5 Check front left door glass control circuit.**

- Turn ENGINE START STOP switch to OFF, disconnect the negative battery cable.
- Disconnect the front left door glass regulator switch connector F-008 and BCM connector B-031.

- (c) Using ohm band of multimeter, check for continuity between F-008 (1) - B-031 (134) and F-008 (7) - B-031 (145).

OK

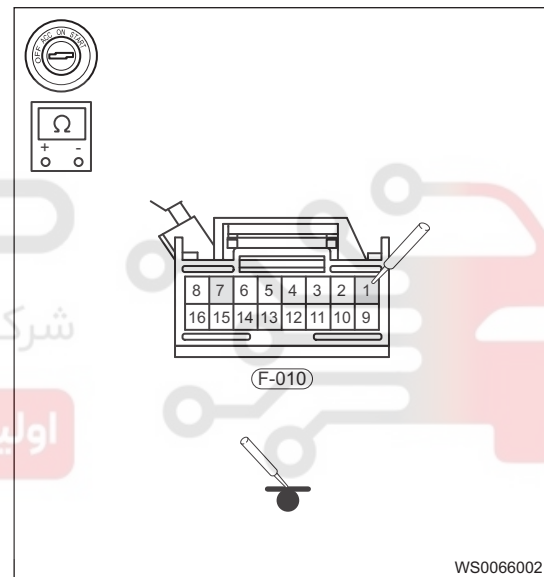
Multimeter Connection	Condition	Specified Condition
F-008 (1) - B-031 (134)	ENGINE START STOP switch OFF	$\leq 1 \Omega$
F-008 (7) - B-031 (145)	ENGINE START STOP switch OFF	$\leq 1 \Omega$



- (d) Using ohm band of multimeter, check for continuity between F-008 (1) and ground, F-008 (7) and ground.

OK

Multimeter Connection	Condition	Specified Condition
F-008 (1) - Ground	ENGINE START STOP switch OFF	∞
F-008 (7) - Ground	ENGINE START STOP switch OFF	∞



- (e) Using ohm band of multimeter, check for continuity between F-008 (1) and battery (+), F-008 (7) and battery (+).

OK

Multimeter Connection	Condition	Specified Condition
F-008 (1) - Battery (+)	ENGINE START STOP switch OFF	∞
F-008 (7) - Battery (+)	ENGINE START STOP switch OFF	∞

Result

Proceed to
OK
NG

NG

Replace wire harness and connector

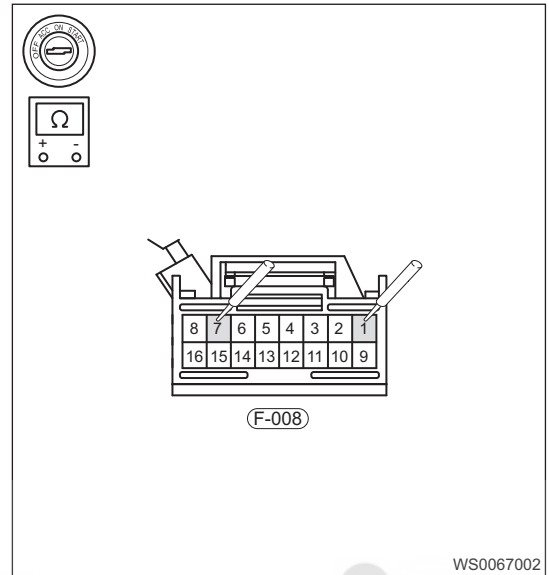
OK

6 Check front left door power glass regulator switch

- Turn ENGINE START STOP switch to OFF, disconnect the negative battery cable.
- Remove front left door power glass regulator switch F-008.
- Use ohm band of multimeter to detect the resistance between F-008 (1) and F-008 (7).

OK

Multimeter Connection	Condition	Specified Condition
F-008 (1) - F-008 (7)	Not pushed	∞
	Pushed	325.36 Ω - 343.64 Ω
	Fully pushed	$\leq 5 \Omega$
	Pulled	2940 Ω - 3060 Ω
	Fully pulled up	980 Ω - 1020 Ω



- Check glass regulator switch for stuck, damage.

Result

Proceed to
OK
NG

NG

Replace front left door glass regulator switch

OK**7 Reconfirm DTCs**

- Connect all connectors.
- Connect the negative battery cable.
- Turn ENGINE START STOP switch to OFF.
- Use diagnostic tester (the latest software) to read the DTCs stored in body control system again.

Result

Proceed to
OK
NG

OK

System operates normally

NG

Replace Body Control Module (BCM)

DTC	B100E-13	Front Right Window Up Control Circuit
DTC	B100E-71	Front Right Window Up Control Circuit
DTC	B100F-13	Front Right Window Down Control Circuit
DTC	B100F-71	Front Right Window Down Control Circuit
DTC	B1023-71	FR Window Button
DTC	B1026-71	Passenger FR Window Button
DTC	B102A-71	FR Window Relay
DTC	B102F-86	FR Window Motor Position Signal

دیجیتال خودرو

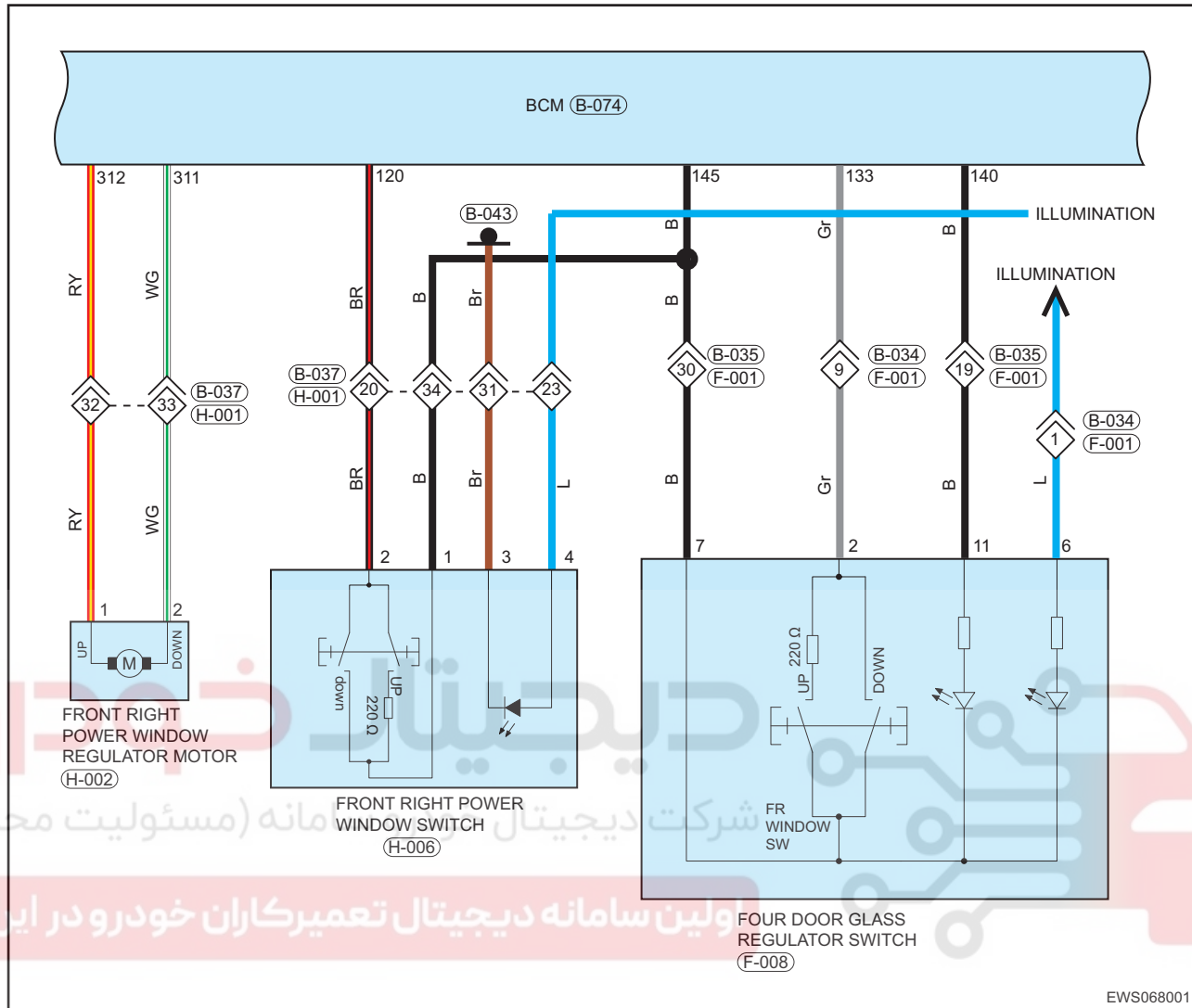
40

شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

اولین سامانه دیجیتال تعمیرکاران خودرو در ایران



Circuit Diagram



40

Description

DTC	DTC Definition	DTC Detection Condition	Possible Cause
B100E-13	Front Right Window Up Control Circuit	ENGINE START STOP switch OFF, engine does not run	- Ground - Line connector - Glass regulator switch - Glass regulator motor - BCM module - Jam protection learning is not performed
B100E-71	Front Right Window Up Control Circuit		
B100F-13	Front Right Window Down Control Circuit		
B100F-71	Front Right Window Down Control Circuit		
B1023-71	FR Window Button		
B1026-71	Passenger FR Window Button		
B102A-71	FR Window Relay		
B102F-86	FR Window Motor Position Signal		

Procedure

1 Check the ground points.

- (a) Disconnect negative battery cable, and turn ENGINE START STOP switch to OFF.
 (b) Check BCM ground point.

Result

Proceed to
OK
NG

NG

Repair or replace ground wire harness or ground point.

OK

2 Use diagnostic tester, perform active test for window system**Result**

Proceed to
OK
NG

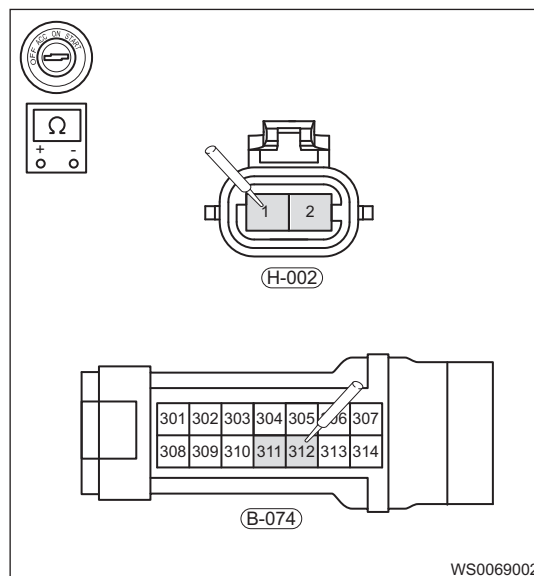
NG

3 Check executive circuit of front right window system.

- (a) Disconnect negative battery cable, and turn ENGINE START STOP switch to OFF.
 (b) Disconnect the front right door glass regulator motor wire harness connector H-002, BCM connector B-074.
 (c) Using ohm band of multimeter, check for continuity between H-002 (1) - B-074 (312) and H-002 (2) - B-074 (311) separately.

OK

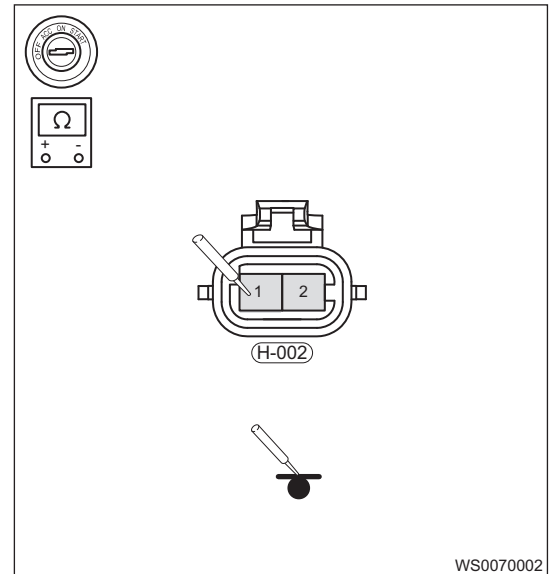
Multimeter Connection	Condition	Specified Condition
H-002 (1) - B-074 (312)	ENGINE START STOP switch OFF	$\leq 1 \Omega$
H-002 (2) - B-074 (311)	ENGINE START STOP switch OFF	$\leq 1 \Omega$



- (d) Using ohm band of multimeter, check for continuity between H-002 (1) and ground, H-002 (2) and ground separately.

OK

Multimeter Connection	Condition	Specified Condition
H-002 (1) - Ground	ENGINE START STOP switch OFF	∞
H-002 (2) - Ground	ENGINE START STOP switch OFF	∞



- (e) Using ohm band of multimeter, check for continuity between H-002(1) and battery (+), H-002 (2) and battery (+) separately.

OK

Multimeter Connection	Condition	Specified Condition
H-002 (1) - Battery (+)	ENGINE START STOP switch OFF	∞
H-002 (2) - Battery (+)	ENGINE START STOP switch OFF	∞

Result

Proceed to
OK
NG

NG

Replace wire harness and connector

OK

4

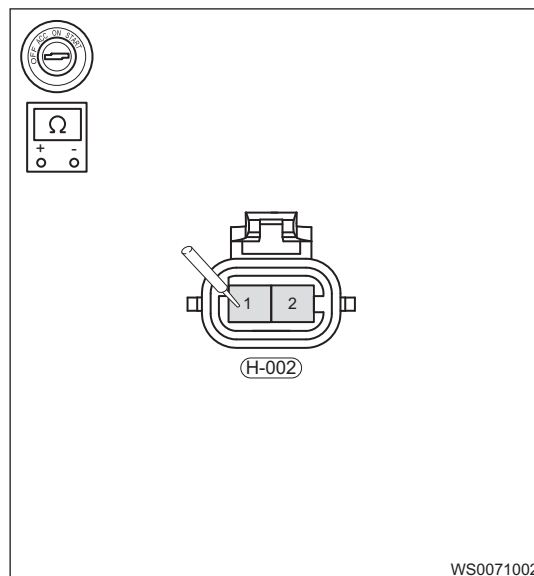
Check front right window regulator motor.

- (a) Disconnect negative battery cable, and turn ENGINE START STOP switch to OFF.
(b) Disconnect the front right window regulator motor connector H-002.

- (c) Using ohm band of multimeter, check resistance between H-002 (1) and H-002 (2).

OK

Multimeter Connection	Condition	Specified Condition
H-002 (1) - H-002 (2)	ENGINE START STOP switch OFF	1 Ω



- (d) Apply 12 V voltage to both terminals of front right window regulator motor connector H-002, observe if operation of window regulator is faulty.

Result

Proceed to
OK
NG

OK

Replace the BCM

NG

Replace front left window regulator motor

40

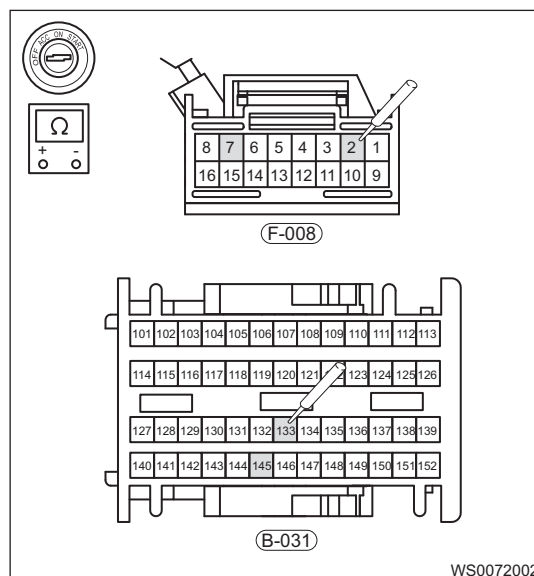
5

Check front right glass regulator control circuit

- (a) Turn ENGINE START STOP switch to OFF, disconnect the negative battery cable.
 (b) Disconnect the front left door glass regulator switch connector F-008 and BCM connector B-031.
 (c) Using ohm band of multimeter, check for continuity between F-008(2) - B-031 (133) and F-008(7) - B-031 (145).

OK

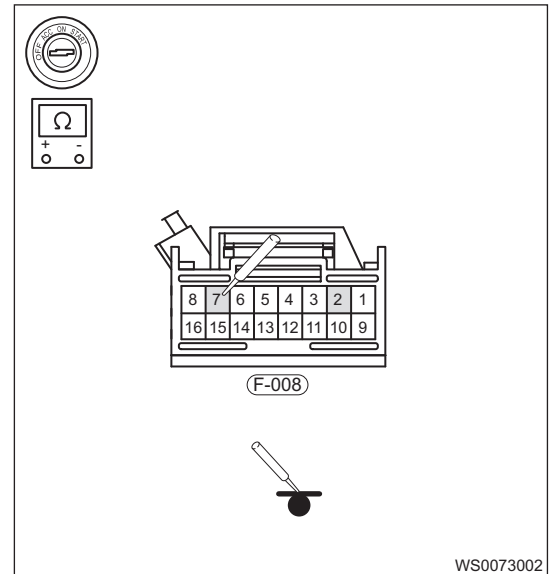
Multimeter Connection	Condition	Specified Condition
F-008 (2) - B-031 (133)	ENGINE START STOP switch OFF	$\leq 1 \Omega$
F-008 (7) - B-031 (145)	ENGINE START STOP switch OFF	$\leq 1 \Omega$



- (d) Using ohm band of multimeter, check for continuity between F-008(2) and ground, F-008(7) and ground.

OK

Multimeter Connection	Condition	Specified Condition
F-008 (2) - Ground	ENGINE START STOP switch OFF	∞
F-008 (7) - Ground	ENGINE START STOP switch OFF	∞



- (e) Using ohm band of multimeter, check for continuity between F-008 (2) and battery (+), F-008 (7) and battery (+).

OK

Multimeter Connection	Condition	Specified Condition
F-008 (2) - Battery (+)	ENGINE START STOP switch OFF	∞
F-008 (7) - Battery (+)	ENGINE START STOP switch OFF	∞

Result

Proceed to
OK
NG

NG

Replace wire harness and connector

OK

6

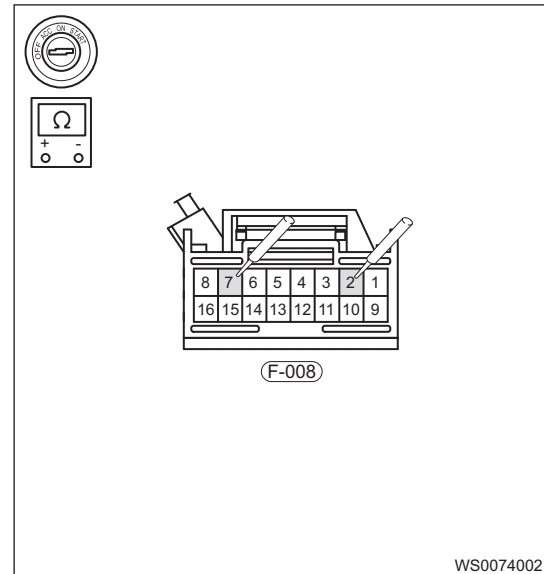
Check front left glass regulator switch assembly (which controls front right glass regulator)

- (a) Turn ENGINE START STOP switch to OFF, disconnect the negative battery cable.
(b) Remove front left door power glass regulator switch F-008.

- (c) Use ohm band of multimeter to detect the resistance between F-008 (2) and F-008 (7).

OK

Multimeter Connection	Condition	Specified Condition
F-008 (2) - F-008 (7)	Not pushed	∞
	Pushed	325.36 Ω - 343.64 Ω
	Fully pushed	$\leq 5 \Omega$
	Pulled	2940 Ω - 3060 Ω
	Fully pulled up	980 Ω - 1020 Ω



- (d) Check glass regulator switch for stuck, damage.

Result

Proceed to
OK
NG

NG

Replace front left door glass regulator switch assembly

OK

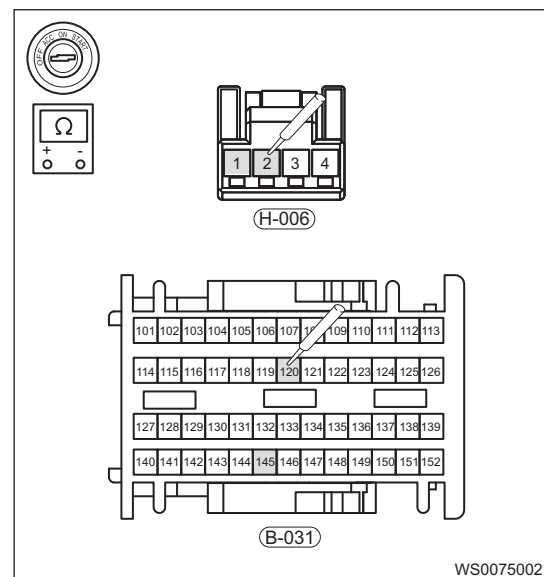
40

7 Check front right door glass control circuit

- (a) Turn ENGINE START STOP switch to OFF, disconnect the negative battery cable.
 (b) Disconnect the front right door glass regulator switch H-006 and BCM connector B-031.
 (c) Using ohm band of multimeter, check for continuity between H-006 (2) - B-031 (120) and H-006 (1) - B-031 (145).

OK

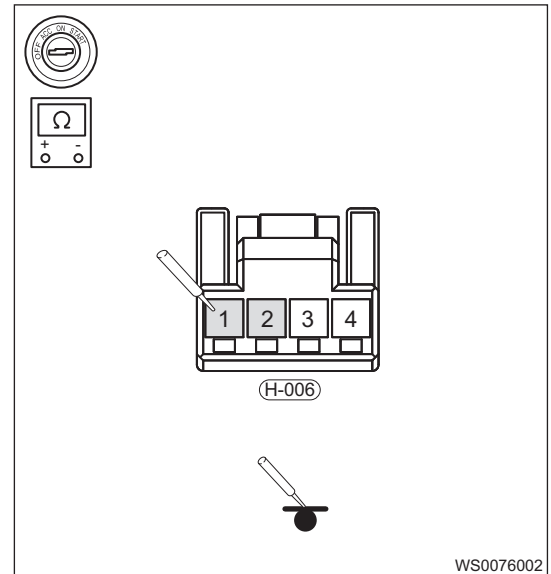
Multimeter Connection	Condition	Specified Condition
H-006 (2) - B-031 (120)	ENGINE START STOP switch OFF	$\leq 1 \Omega$
H-006 (1) - B-031 (145)	ENGINE START STOP switch OFF	$\leq 1 \Omega$



- (d) Using ohm band of multimeter, check for continuity between H-006 (2) and ground, H-006 (1) and ground.

OK

Multimeter Connection	Condition	Specified Condition
H-006 (2) - Ground	ENGINE START STOP switch OFF	∞
H-006 (1) - Ground	ENGINE START STOP switch OFF	∞



- (e) Using ohm band of multimeter, check for continuity between H-006 (2) and battery (+), H-006 (1) and battery (+).

OK

Multimeter Connection	Condition	Specified Condition
H-006 (2) - Battery (+)	ENGINE START STOP switch OFF	∞
H-006 (1) - Battery (+)	ENGINE START STOP switch OFF	∞

Result

Proceed to
OK
NG

NG

Replace wire harness and connector

OK

8

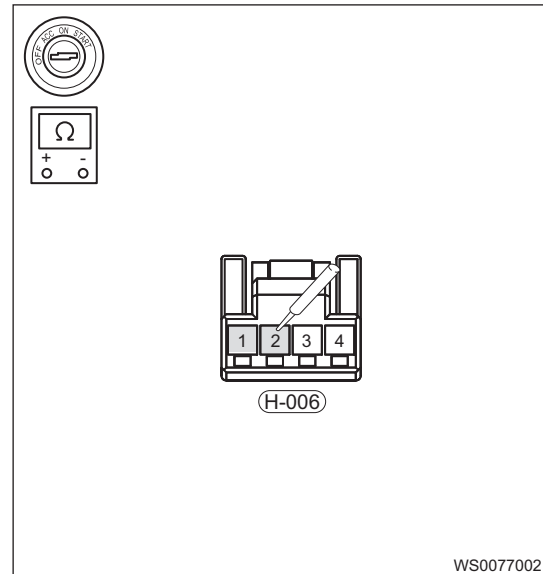
Check front right door power glass regulator switch

- (a) Turn ENGINE START STOP switch to OFF, disconnect the negative battery cable.
(b) Remove front right door power glass regulator switch H-006.

- (c) Use ohm band of multimeter to detect the resistance between H-006 (1) and H-006 (2).

OK

Multimeter Connection	Condition	Specified Condition
H-006 (1) - H-006 (2)	Not pushed	∞
	Pushed	325.36 Ω - 343.64 Ω
	Fully pushed	$\leq 5 \Omega$
	Pulled	2940 Ω - 3060 Ω
	Fully pulled up	980 Ω - 1020 Ω



- (d) Check glass regulator switch for stuck, damage.

Result

Proceed to
OK
NG

NG

Replace front right door glass regulator switch

OK

40

9

Reconfirm DTCs

- Connect all connectors.
- Connect the negative battery cable.
- Turn ENGINE START STOP switch to OFF.
- Use diagnostic tester (the latest software) to read the DTCs stored in body control system again.

Result

Proceed to
OK
NG

OK

System is normal

NG

Replace Body Control Module (BCM)

DTC	B1010-13	Rear Left Window Up Control Circuit
DTC	B1010-71	Rear Left Window Up Control Circuit
DTC	B1011-13	Rear Left Window Down Control Circuit
DTC	B1011-71	Rear Left Window Down Control Circuit
DTC	B102B-71	RL Window Relay
DTC	B1030-86	RL Window Motor Position Signal

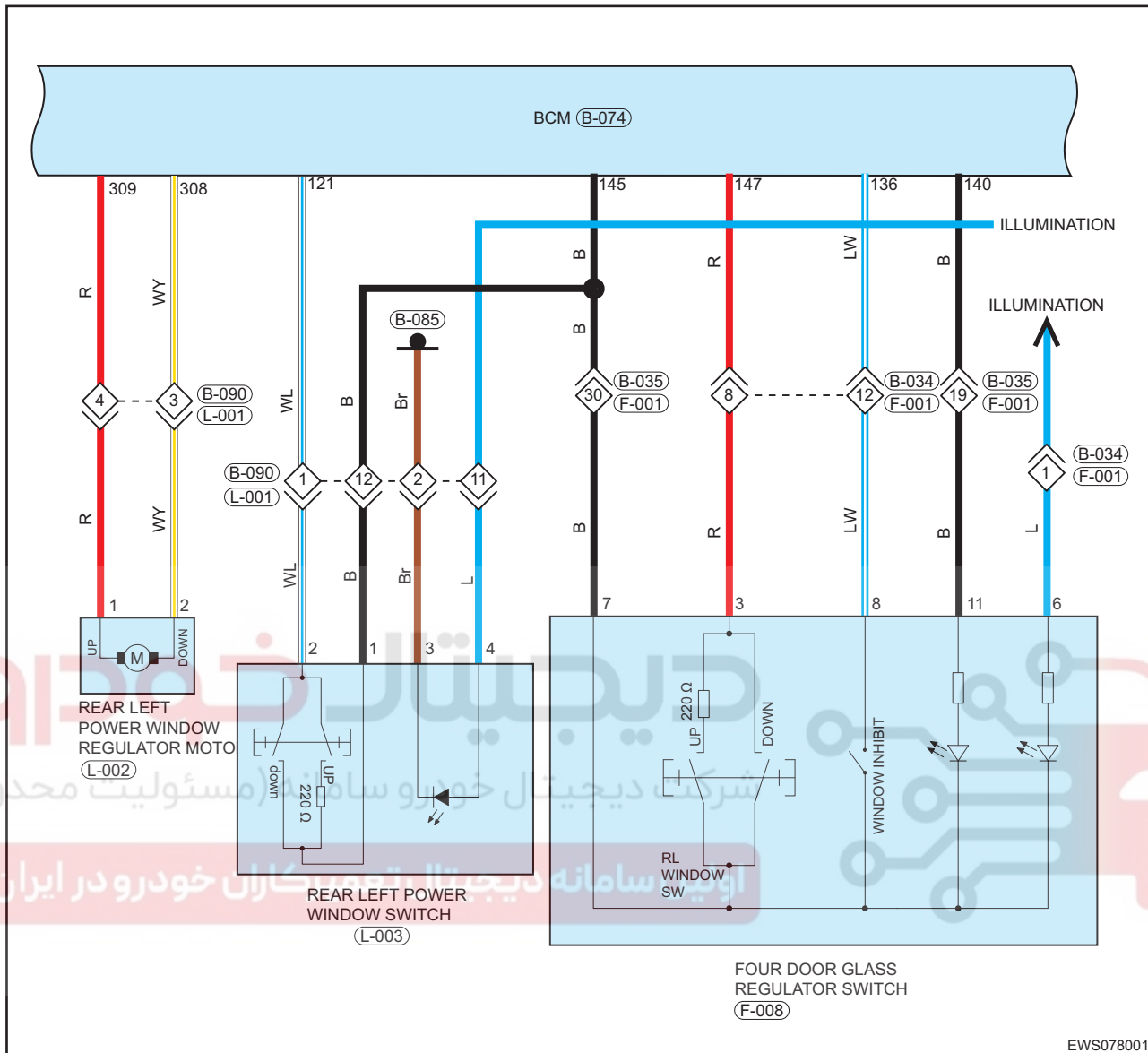
دیجیتال خودرو

شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

اولین سامانه دیجیتال تعمیرکاران خودرو در ایران



Circuit Diagram



Description

DTC	DTC Definition	DTC Detection Condition	Possible Cause
B1010-13	Rear Left Window Up Control Circuit	ENGINE START STOP switch OFF, engine does not run	- Ground - Line connector - Glass regulator switch - Glass regulator motor - BCM module - Jam protection learning is not performed
B1010-71	Rear Left Window Up Control Circuit		
B1011-13	Rear Left Window Down Control Circuit		
B1011-71	Rear Left Window Down Control Circuit		
B102B-71	RL Window Relay		
B1030-86	RL Window Motor Position Signal		

Procedure

1 Check the ground points.

- (a) Disconnect negative battery cable, and turn ENGINE START STOP switch to OFF.
 (b) Check BCM ground point.

Result

Proceed to
OK
NG

NG

Repair or replace ground wire harness or ground point.

OK**2 Use diagnostic tester, perform active test for window system****Result**

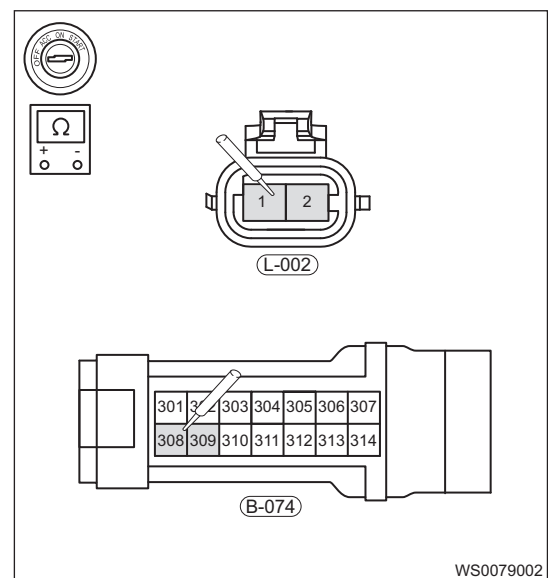
Proceed to
OK
NG

NG**40****3 Check executive circuit of rear left window system.**

- (a) Disconnect negative battery cable, and turn ENGINE START STOP switch to OFF.
 (b) Disconnect the rear left door glass regulator motor connector L-002, BCM connector B-074.
 (c) Using ohm band of multimeter, check for continuity between L-002 (1) - B-074 (308) and L-002 (2) - B-024 (309) separately.

OK

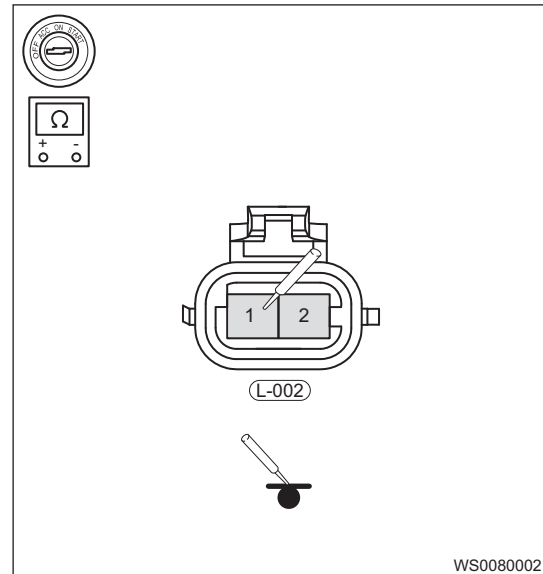
Multimeter Connection	Condition	Specified Condition
L-002 (2) - B-074 (308)	ENGINE START STOP switch OFF	$\leq 1 \Omega$
L-002 (1) - B-074 (309)	ENGINE START STOP switch OFF	$\leq 1 \Omega$



- (d) Using ohm band of multimeter, check for continuity between L-002 (1) and ground, L-002 (2) and ground separately.

OK

Multimeter Connection	Condition	Specified Condition
L-002 (1) - Ground	ENGINE START STOP switch OFF	∞
L-002 (2) - Ground	ENGINE START STOP switch OFF	∞



- (e) Using ohm band of multimeter, check for continuity between L-002 (1) and battery (+), L-002 (2) and battery (+) separately.

OK

Multimeter Connection	Condition	Specified Condition
L-002 (1) - Battery (+)	ENGINE START STOP switch OFF	∞
L-002 (2) - Battery (+)	ENGINE START STOP switch OFF	∞

Result

40

Proceed to
OK
NG

NG

Replace wire harness and connector

OK

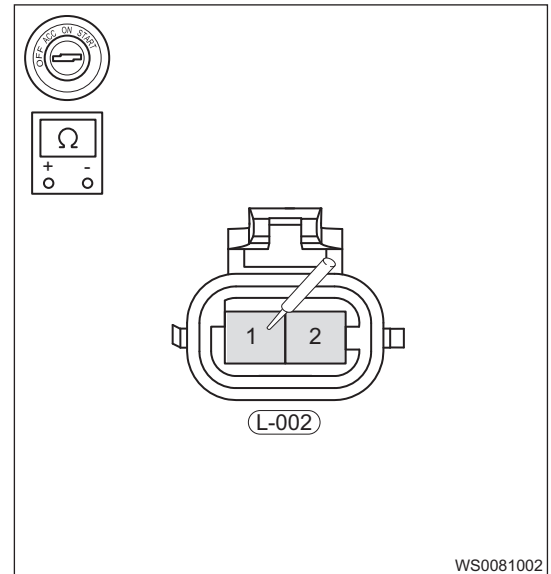
4 Check rear left window regulator motor

- (a) Disconnect negative battery cable, and turn ENGINE START STOP switch to OFF.
(b) Disconnect the rear left window regulator motor connector L-002.

- (c) Using ohm band of multimeter, check resistance between L-002 (1) and L-002 (2).

OK

Multimeter Connection	Condition	Specified Condition
L-002 (1) - L-002 (2)	ENGINE START STOP switch OFF	1 Ω



- (d) Apply 12 V voltage to both terminals of rear left window regulator motor connector L-002, observe if operation of window regulator is faulty.

Result

Proceed to
OK
NG

OK

Replace BCM

NG

Replace rear left window regulator motor.

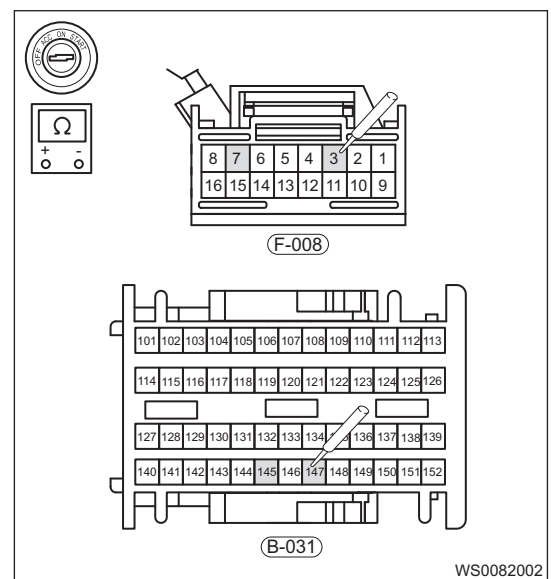
40

5 Check rear left glass regulator control circuit

- (a) Turn ENGINE START STOP switch to OFF, disconnect the negative battery cable.
 (b) Disconnect the front left door glass regulator switch connector F-008 and BCM connector B-031.
 (c) Using ohm band of multimeter, check for continuity between F-008 (3) - B-031 (147) and F-008 (7) - B-031 (145).

OK

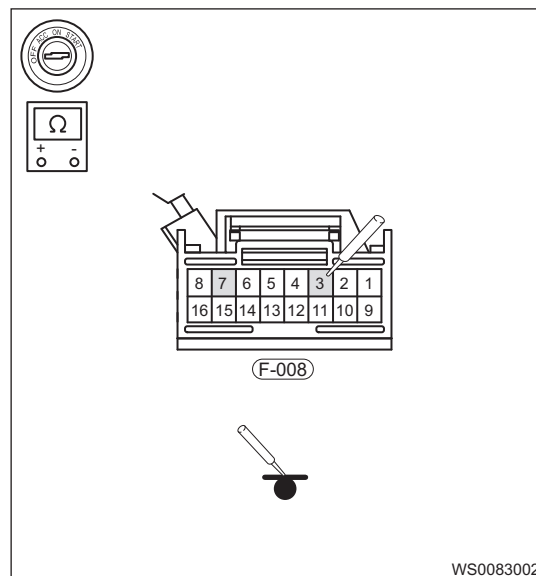
Multimeter Connection	Condition	Specified Condition
F-008 (3) - B-031 (147)	ENGINE START STOP switch OFF	$\leq 1 \Omega$
F-008 (7) - B-031 (145)	ENGINE START STOP switch OFF	$\leq 1 \Omega$



- (d) Using ohm band of multimeter, check for continuity between F-008 (4) and ground, F-008 (11) and ground.

OK

Multimeter Connection	Condition	Specified Condition
F-008 (3) - Ground	ENGINE START STOP switch OFF	∞
F-008 (7) - Ground	ENGINE START STOP switch OFF	∞



- (e) Using ohm band of multimeter, check for continuity between F-008 (3) and battery (+), F-008 (7) and battery (+).

OK

Multimeter Connection	Condition	Specified Condition
F-008 (3) - Battery (+)	ENGINE START STOP switch OFF	∞
F-008 (7) - Battery (+)	ENGINE START STOP switch OFF	∞

Result

Proceed to

OK

NG

NG

Replace wire harness and connector

OK

6

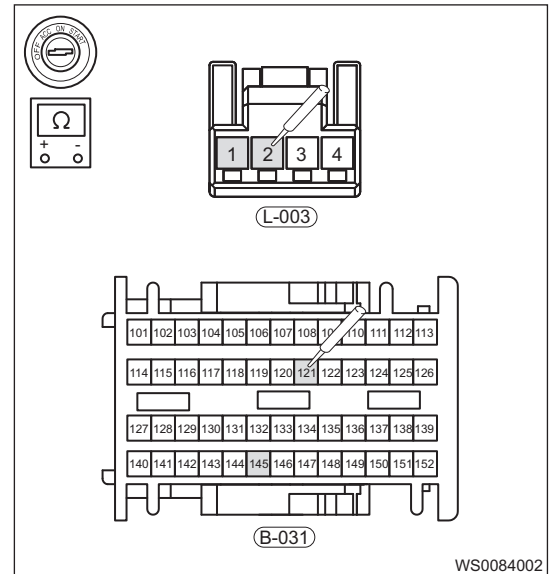
Check rear left door glass control circuit

- (a) Turn ENGINE START STOP switch to OFF, disconnect the negative battery cable.
 (b) Disconnect the rear left door glass regulator switch connector L-003 and BCM connector B-031.

- (c) Using ohm band of multimeter, check for continuity between L-003 (2) and B-031 (121), and L-003 (1) and B-031 (145).

OK

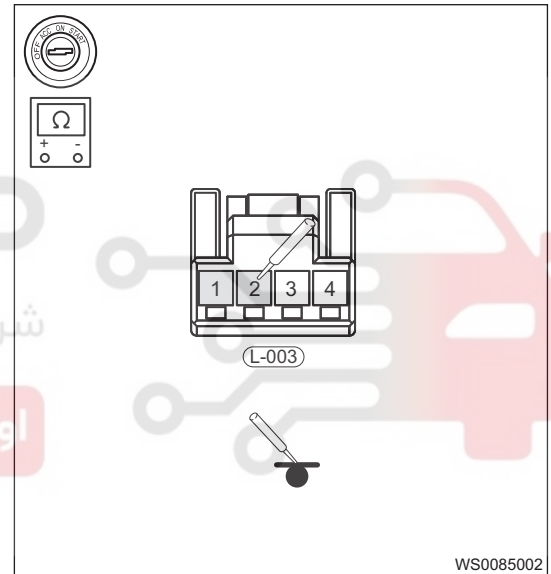
Multimeter Connection	Condition	Specified Condition
L-003 (2) - B-031 (121)	ENGINE START STOP switch OFF	$\leq 1 \Omega$
L-003 (1) - B-031 (145)	ENGINE START STOP switch OFF	$\leq 1 \Omega$



- (d) Using ohm band of multimeter, check for continuity between L-003 (2) and ground, L-003 (1) and ground.

Result

Multimeter Connection	Condition	Specified Condition
L-003 (2) - Ground	ENGINE START STOP switch OFF	∞
L-003 (1) - Ground	ENGINE START STOP switch OFF	∞



- (e) Using ohm band of multimeter, check for continuity between L-003 (2) and battery (+), L-003 (1) and battery (+).

Result

Multimeter Connection	Condition	Specified Condition
L-003 (2) - Battery (+)	ENGINE START STOP switch OFF	∞
L-003 (1) - Battery (+)	ENGINE START STOP switch OFF	∞

Result

Proceed to
OK
NG

NG

Replace wire harness and connector

OK

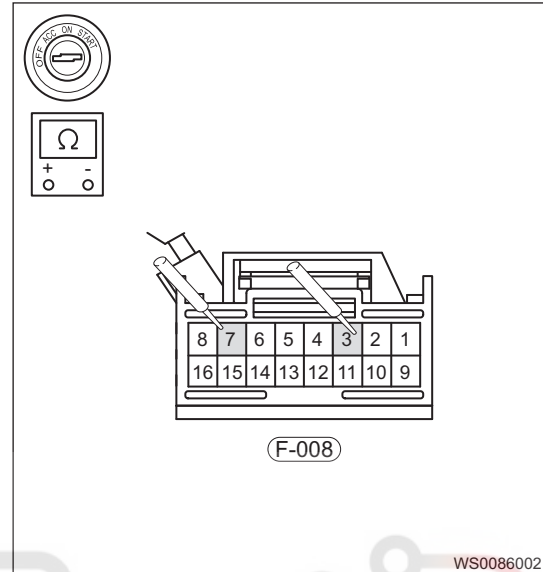
7

Check front left door glass regulator switch assembly (which controls rear left glass regulator)

- Turn ENGINE START STOP switch to OFF, disconnect the negative battery cable.
- Remove front left door power glass regulator switch L-008.
- Use ohm band of multimeter to detect the resistance between F-010 (3) and F-010 (7).

OK

Multimeter Connection	Condition	Specified Condition
F-008 (3) - F-008 (7)	Not pushed	∞
	Pushed	325.36 Ω - 343.64 Ω
	Fully pushed	$\leq 5 \Omega$
	Pulled	2940 Ω - 3060 Ω
	Fully pulled up	980 Ω - 1020 Ω



- Check glass regulator switch for stuck, damage.

Result

40

Proceed to
OK
NG

NG

Replace front left door glass regulator switch assembly

OK

8

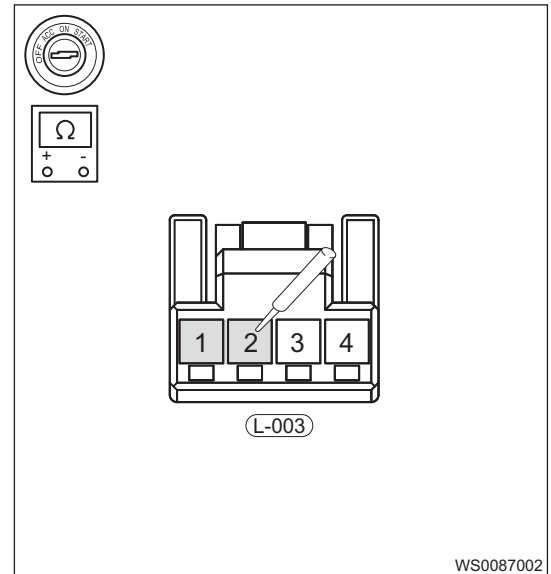
Check front right door power glass regulator switch

- Turn ENGINE START STOP switch to OFF, disconnect the negative battery cable.
- Remove rear left door power glass regulator switch L-003.

- (c) Use ohm band of multimeter to detect the resistance between L-003 (1) - L-003 (2).

OK

Multimeter Connection	Condition	Specified Condition
L-003 (1) - L-003 (2)	Not pushed	∞
	Pushed	325.36 Ω - 343.64 Ω
	Fully pushed	$\leq 5 \Omega$
	Pulled	2940 Ω - 3060 Ω
	Fully pulled up	980 Ω - 1020 Ω



- (d) Check glass regulator switch for stuck, damage.

Result

Proceed to
OK
NG

NG

Replace rear left door glass regulator switch

OK

40

9

Reconfirm DTCs

- (a) Connect all connectors.
 (b) Connect the negative battery cable.
 (c) Turn ENGINE START STOP switch to OFF.
 (d) Use diagnostic tester (the latest software) to read the DTCs stored in body control system again.

Result

Proceed to
OK
NG

OK

System is normal

NG

Replace Body Control Module (BCM)

DTC	B1012-13	Rear Right Window Up Control Circuit
DTC	B1012-71	Rear Right Window Up Control Circuit
DTC	B1013-13	Rear Right Window Down Control Circuit
DTC	B1013-71	Rear Right Window Down Control Circuit
DTC	B1025-71	RR Window Button
DTC	B1028-71	Passenger RR Window Button Short
DTC	B102C-71	RR Window Relay
DTC	B1031-86	RR Window Motor Position Signal

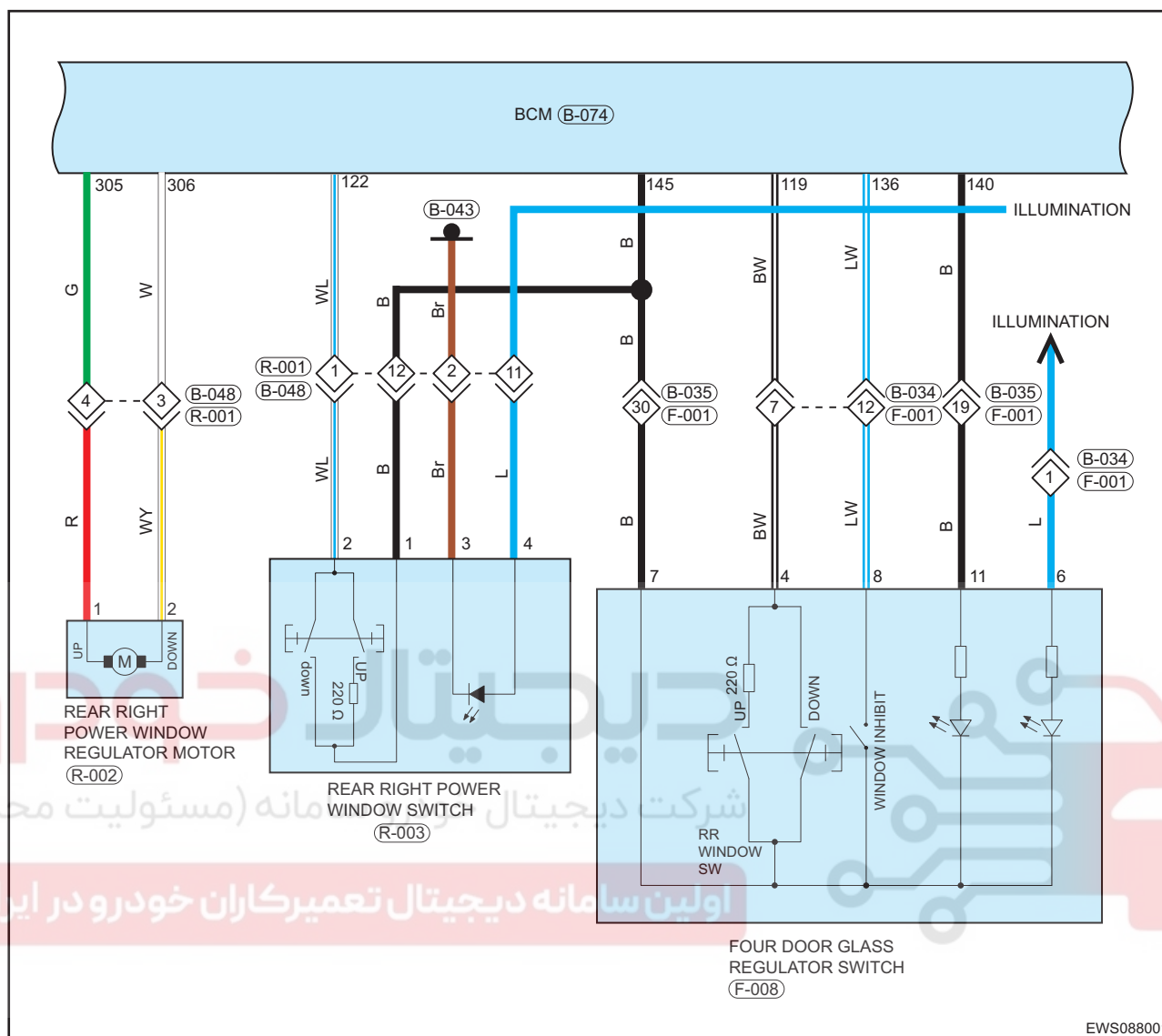
دیجیتال خودرو

40 شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

اولین سامانه دیجیتال تعمیرکاران خودرو در ایران



Circuit Diagram



Description

DTC	DTC Definition	DTC Detection Condition	Possible Cause
B1012-13	Rear Right Window Up Control Circuit	ENGINE START STOP switch OFF, engine does not run	• Ground • Line connector • Glass regulator switch • Glass regulator motor • BCM module • Jam protection learning is not performed
B1012-71	Rear Right Window Up Control Circuit		
B1013-13	Rear Right Window Down Control Circuit		
B1013-71	Rear Right Window Down Control Circuit		
B1025-71	RR Window Button		
B1028-71	Passenger RR Window Button Short		
B102C-71	RR Window Relay		
B1031-86	RR Window Motor Position Signal		

1 Check the ground points.

- (a) Disconnect negative battery cable, and turn ENGINE START STOP switch to OFF.
 (b) Check BCM ground point.

Result

Proceed to
OK
NG

NG

Repair or replace ground wire harness or ground point.

OK**2 Use diagnostic tester, perform active test for window system****Result**

Proceed to
OK
NG

NG

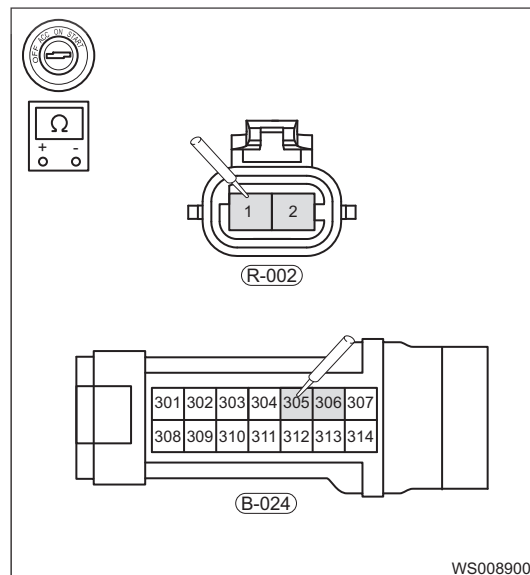
40

3 Check executive circuit of rear right window system.

- (a) Disconnect negative battery cable, and turn ENGINE START STOP switch to OFF.
 (b) Disconnect the rear right door glass regulator motor connector R-002, BCM connector B-074.
 (c) Using ohm band of multimeter, check for continuity between R-002 (1) - B-074 (305) and R-002 (2) - B-074 (306) separately.

OK

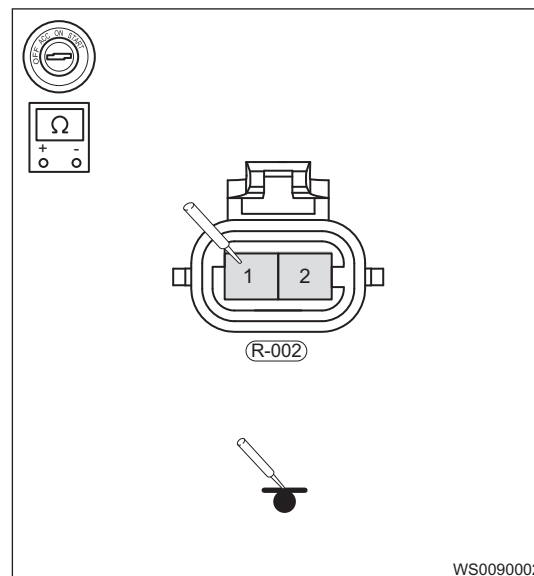
Multimeter Connection	Condition	Specified Condition
R-002 (1) - B-074 (305)	ENGINE START STOP switch OFF	$\leq 1 \Omega$
R-002 (2) - B-074 (306)	ENGINE START STOP switch OFF	$\leq 1 \Omega$



- (d) Using ohm band of multimeter, check for continuity between R-002 (1) and ground, R-002 (2) and ground separately.

OK

Multimeter Connection	Condition	Specified Condition
R-002 (1) - Ground	ENGINE START STOP switch OFF	∞
R-002 (2) - Ground	ENGINE START STOP switch OFF	∞



- (e) Using ohm band of multimeter, check for continuity between R-002 (1) and battery (+), R-002 (2) and battery (+) separately.

OK

Multimeter Connection	Condition	Specified Condition
R-002 (1) - Battery (+)	ENGINE START STOP switch OFF	∞
R-002 (2) - Battery (+)	ENGINE START STOP switch OFF	∞

Result

Proceed to
OK
NG

NG

Replace wire harness and connector

OK

4

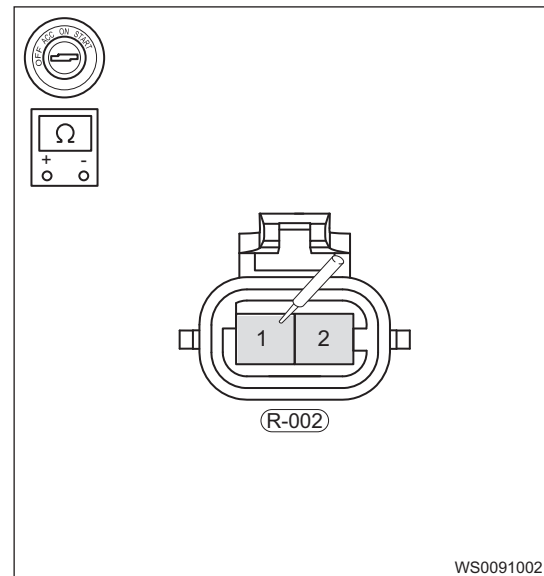
Check rear right window regulator motor.

- (a) Disconnect negative battery cable, and turn ENGINE START STOP switch to OFF.
(b) Disconnect the rear right window regulator motor connector R-004.

- (c) Using ohm band of multimeter, check resistance between R-002 (1) and R-002 (2).

OK

Multimeter Connection	Condition	Specified Condition
R-002 (1) - R-002 (2)	ENGINE START STOP switch OFF	1 Ω



- (d) Apply 12 V voltage to both terminals of rear right window regulator motor connector R-002, observe if operation of window regulator is faulty.

Result

Proceed to
OK
NG

OK

Replace the BCM

NG

Replace the rear right window regulator motor

40

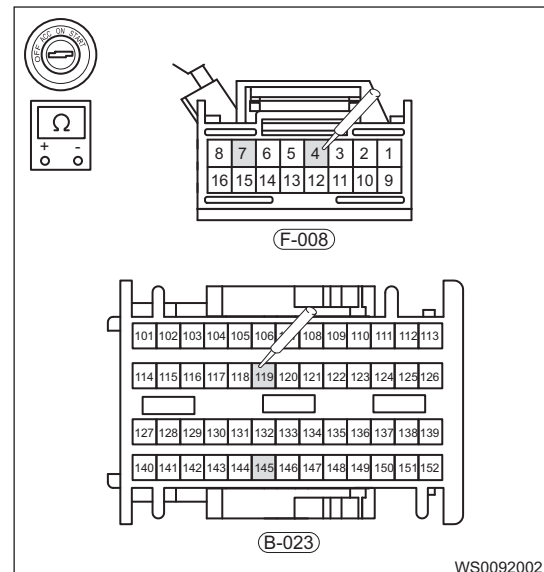
5

Check rear right glass regulator control circuit

- (a) Turn ENGINE START STOP switch to OFF, disconnect the negative battery cable.
 (b) Disconnect the front left door glass regulator switch connector F-008 and BCM connector B-031.
 (c) Using ohm band of multimeter, check for continuity between F-008 (4) - B-031 (119) and F-008 (7) - B-031 (145).

OK

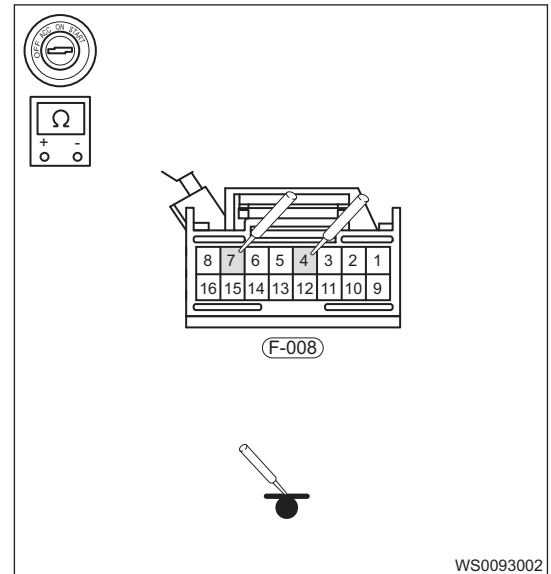
Multimeter Connection	Condition	Specified Condition
F-008 (4) - B-031 (119)	ENGINE START STOP switch OFF	$\leq 1 \Omega$
F-008 (7) - B-031 (145)	ENGINE START STOP switch OFF	$\leq 1 \Omega$



- (d) Using ohm band of multimeter, check for continuity between F-008 (4) and ground, F-008 (7) and ground.

OK

Multimeter Connection	Condition	Specified Condition
F-008 (4) - Ground	ENGINE START STOP switch OFF	∞
F-008 (7) - Ground	ENGINE START STOP switch OFF	∞



- (e) Using ohm band of multimeter, check for continuity between F-008 (4) and battery (+), F-008 (7) and battery (+).

OK

Multimeter Connection	Condition	Specified Condition
F-008 (4) - Battery (+)	ENGINE START STOP switch OFF	∞
F-008 (7) - Battery (+)	ENGINE START STOP switch OFF	∞

Result

Proceed to
OK
NG

NG

Replace wire harness and connector

OK

6

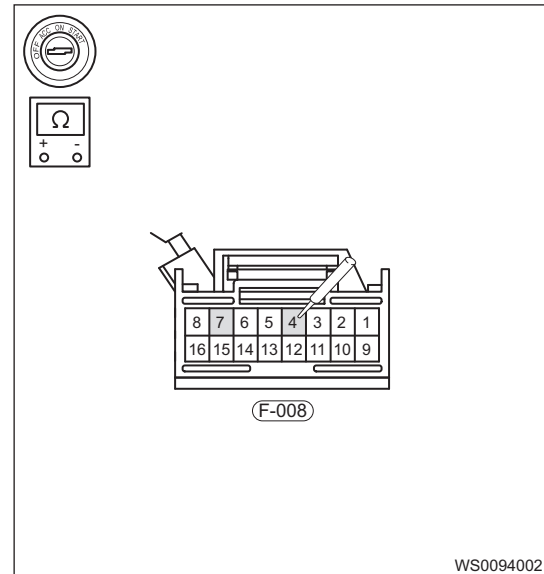
Check front left door glass regulator switch assembly (which controls rear right glass regulator)

- (a) Turn ENGINE START STOP switch to OFF, disconnect the negative battery cable.
(b) Remove front left door power glass regulator switch F-008.

- (c) Use ohm band of multimeter to detect the resistance between F-008 (4) and F-008 (7).

OK

Multimeter Connection	Condition	Specified Condition
F-008 (4) - F-008 (7)	Not pushed	∞
	Pushed	325.36 Ω - 343.64 Ω
	Fully pushed	$\leq 5 \Omega$
	Pulled	2940 Ω - 3060 Ω
	Fully pulled up	980 Ω - 1020 Ω



- (d) Check glass regulator switch for stuck, damage.

Result

Proceed to
OK
NG

NG

Replace front left door glass regulator switch assembly

OK

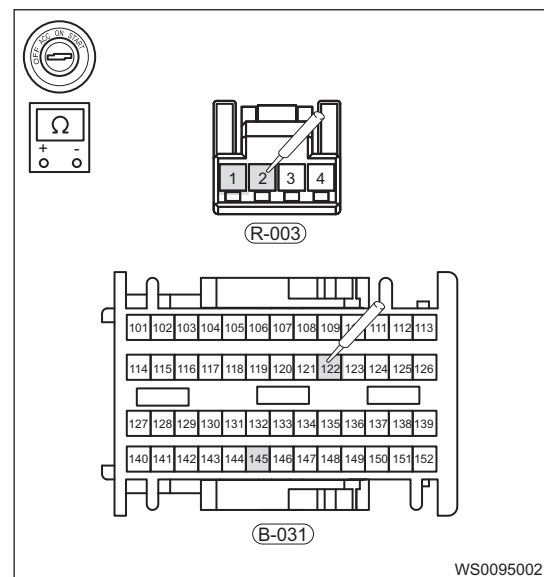
40

7 Check rear right door glass control circuit

- (a) Turn ENGINE START STOP switch to OFF, disconnect the negative battery cable.
 (b) Disconnect the rear right door glass regulator switch connector R-003 and BCM connector B-031.
 (c) Using ohm band of multimeter, check for continuity between R-003 (2) and B-031 (122), and R-002 (1) and B-031 (145).

OK

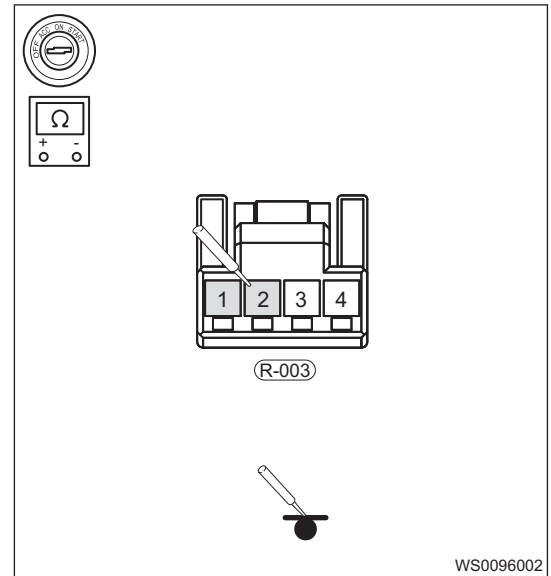
Multimeter Connection	Condition	Specified Condition
R-003 (2) - B-031 (122)	ENGINE START STOP switch OFF	$\leq 1 \Omega$
R-003 (1) - B-031 (145)	ENGINE START STOP switch OFF	$\leq 1 \Omega$



- (d) Using ohm band of multimeter, check for continuity between R-003 (2) and ground, R-003 (1) and ground.

OK

Multimeter Connection	Condition	Specified Condition
R-003 (2) - Ground	ENGINE START STOP switch OFF	∞
R-003 (1) - Ground	ENGINE START STOP switch OFF	∞



- (e) Using ohm band of multimeter, check for continuity between R-003 (2) and battery (+), R-003 (1) and battery (+).

OK

Multimeter Connection	Condition	Specified Condition
R-003 (2) - Battery (+)	ENGINE START STOP switch OFF	∞
R-003 (1) - Battery (+)	ENGINE START STOP switch OFF	∞

Result

Proceed to
OK
NG

NG

Replace wire harness and connector

OK

8

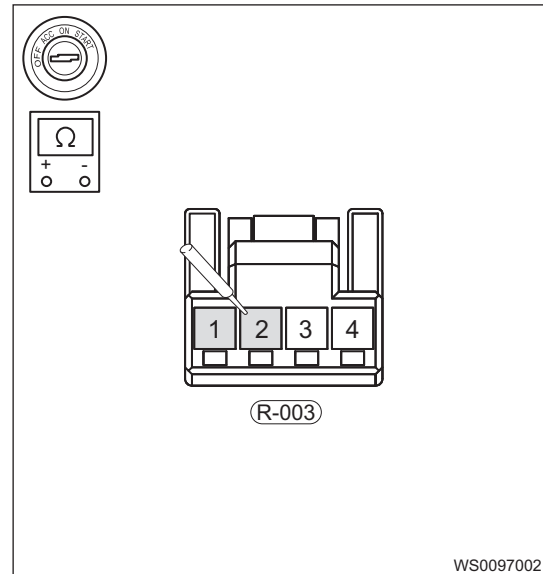
Check rear right door power glass regulator switch

- (a) Turn ENGINE START STOP switch to OFF, disconnect the negative battery cable.
(b) Remove rear right door power glass regulator switch R-003.

- (c) Use ohm band of multimeter to detect the resistance between R-003 (1) and R-003 (2).

OK

Multimeter Connection	Condition	Specified Condition
R-003 (1) - R-003 (2)	Not pushed	∞
	Pushed	325.36 Ω - 343.64 Ω
	Fully pushed	$\leq 5 \Omega$
	Pulled	2940 Ω - 3060 Ω
	Fully pulled up	980 Ω - 1020 Ω



- (d) Check glass regulator switch for stuck, damage.

Result

Proceed to
OK
NG

NG

Replace rear right door glass regulator switch

OK

40

9

Reconfirm DTCs

- (a) Connect all connectors.
 (b) Connect the negative battery cable.
 (c) Turn ENGINE START STOP switch to OFF.
 (d) Use diagnostic tester (the latest software) to read the DTCs stored in body control system again.

Result

Proceed to
OK
NG

OK

System is normal

NG

Replace Body Control Module (BCM)