

SUPPLEMENTAL RESTRAINT SYSTEM

31

GENERAL INFORMATION	31-3	B0001-12	31-17
Description	31-3	B0001-1A	31-17
Operation	31-4	B0001-1B	31-17
Specifications	31-5	B0001-1C	31-17
Tools	31-5	B0010-11	31-21
Circuit Diagram	31-6	B0010-12	31-21
		B0010-1A	31-21
DIAGNOSIS & TESTING	31-7	B0010-1B	31-21
SRS Control Module Assembly		B0010-1C	31-21
Terminal List	31-7	B1231-12	31-26
DTC Confirmation Procedure	31-7	B1231-1C	31-26
Diagnostic Trouble Code (DTC) Chart	31-10	B1232-12	31-26
B1200-11	31-12	B1232-1C	31-26
B1200-12	31-12	B1232-12	31-31
B1200-4A	31-12	B1232-1C	31-31
B1200-64	31-12	B1250-16	31-36
B1200-86	31-12	B1250-17	31-36
B1200-96	31-12	B1251-49	31-41
B1200-1C	31-12	B1240-96	31-41
B1201-11	31-12	U0073-88	31-41
B1201-12	31-12	U0121-87	31-41
B1201-4A	31-12	U0129-86	31-41
B1201-64	31-12	U0140-87	31-41
B1201-86	31-12	U0155-87	31-41
B1201-1C	31-12	U1300-55	31-41
B1201-96	31-12	U1400-87	31-41
B1204-11	31-12		
B1204-12	31-12	ON-VEHICLE SERVICE	31-45
B1204-1C	31-12	Driver Airbag Assembly	31-45
B1204-4A	31-12	On-vehicle Inspection	31-45
B1204-64	31-12	Installation	31-47
B1204-86	31-12	Disposal	31-47
B1204-96	31-13	Spiral Cable	31-48
B1205-11	31-13	Removal	31-48
B1205-12	31-13	Inspection	31-49
B1205-1C	31-13	Installation	31-49
B1205-4A	31-13	Front Passenger Airbag Assembly	31-50
B1205-64	31-13	On-vehicle Inspection	31-50
B1205-86	31-13	Removal	31-50
B1205-96	31-13	Installation	31-51
B0001-11	31-17	Disposal	31-52

دیجیتال خودرو

شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

اولین سامانه دیجیتال تعمیرکاران خودرو در ایران



021 62 99 92 92

www.digitalkhodro.com

GENERAL INFORMATION

Description

This vehicle adopts the passenger restraint system, which includes active and supplemental types. Active restraint system requires passengers to take some actions, such as fastening seat belt; while supplemental restraint system requires no actions from passengers.

Active restraint system:

- Driver seat belt and front passenger seat belt
- Rear seat belt

Supplemental restraint system:

- Airbag system
- Driver seat belt pretensioner and front passenger seat belt pretensioner

Airbag system consists of following components:

- Driver airbag

Driver airbag is installed in the steering wheel, which will inflate to protect driver in event of a severe collision.

- Front passenger airbag assembly

Front passenger airbag is installed in right upper of instrument panel, which will inflate to protect front passenger in event of a severe collision. (if equipped)

- Driver side airbag (if equipped)

Driver airbag is installed in steering wheel, which will inflate to protect driver in event of a severe collision.

- Curtain shield airbag (if equipped)

Curtain shield airbag is installed in both sides of roof, which will inflate to protect passengers in event of a severe collision.

- Side collision sensor (if equipped)

Side collision sensor is installed in lower part of B-pillar on body, which will detect the strength of side collision and send this signal to SRS control module assembly in event of a severe side collision.

- SRS control module assembly

SRS control module assembly has a built-in collision sensor, which is installed on the body floor of auxiliary fascia console assembly. It controls the inflation of airbag so as to protect driver and other passengers in event of a severe collision.

- Spiral cable

It is used to connect driver airbag while ensuring that steering wheel has enough steering angle.

- Airbag malfunction indicator

After ignition switch is turned to ON, if malfunction indicator goes off after coming on for approximately 6 seconds, it means that supplemental restraint system operates normally. If malfunction indicator does not come on, remains on or flashes, it means that supplemental restraint system has a problem and it is necessary to perform tests and repairs.

- Wire harness

Generally, it is yellow and used to connect each element of supplemental restraint system. Connector has a safety mechanism.

Airbag system function:

- Airbag must work together with seat belt, and it cannot be substitute for seat belt. Driver and passengers should always fasten their seat belts when driving, and adjust the belts to a proper position according to their size.
- Minor collision will not activate the airbag system. Airbags will quickly inflate to protect driver and front passenger only when severe frontal collision occurs.

Seat belt pretensioner consists of following components:

31 - SUPPLEMENTAL RESTRAINT SYSTEM

- Driver seat belt pretensioner

Driver seat belt pretensioner is located on driver seat belt retractor, which will retract driver seat belt to protect driver in event of a severe collision.

- Front passenger seat belt pretensioner

Front passenger seat belt pretensioner is located on front passenger seat belt retractor, which will retract front passenger seat belt to protect front passenger in event of a severe collision.

Seat belt pretensioner function

- At the moment of collision, pretensioner retracts seat belt before passenger moves forward, and restrains passenger firmly onto seat immediately, then locks seat belt to prevent passenger from leaning forward, thus protecting passenger.

31

Front passenger seat belt pretensioner

- Front passenger seat belt pretensioner is located on front passenger seat belt retractor, which will retract front passenger seat belt to protect front passenger in event of a severe collision.

Seat belt pretensioner function:

- At the moment of collision, pretensioner retracts seat belt before passenger moves forward, and restrains passenger firmly onto seat immediately, then locks seat belt to prevent passenger from leaning forward, thus protecting passenger.
- Seat belt pretensioner works with airbag system. Once a frontal collision impact higher than specified value is detected, seat belt with pretensioner will work together with airbag system to protect passenger.

Operation

Supplemental restraint system can improve the safety of passengers only when used cooperatively with seat belts. passengers must fasten their seat belts in order to gain full protection from supplemental restraint system.

Supplemental restraint system circuit is continuously monitored and controlled by SRS control module assembly. Airbag indicator on instrument cluster illuminates for approximately 6 seconds for a test each time ignition switch is turned ON. Airbag indicator goes off after the test is completed. If indicator comes on at any time other than test time, it indicates that there is a problem in supplemental restraint system circuit.

Whether airbag deploys or not depends on the angle and severity of an impact. When vehicle is subjected to a severe collision, microprocessor in supplemental restraint system sends signals to corresponding inflation unit of airbags to deploy the airbags quickly, thus protecting passengers.

HINT:

- Before removing airbag system components, disconnect negative battery cable and wait for at least 90 seconds. Before servicing steering system, remove driver airbag and spiral cable for safekeeping.
- If vehicle has been involved in a minor collision but airbags do not deploy, always inspect airbag components.
- If airbags may be touched during servicing, remove airbags as necessary for safekeeping before servicing.
- Never use airbag components in another vehicle. New airbag components should be used during replacement.
- If an airbag component is dropped or if there are any cracks, dents or other defects in the case, bracket or connector, replace it with a new one.
- Information labels are attached to periphery of airbag components. Always follow the cautions and instructions on labels.

⚠ WARNING

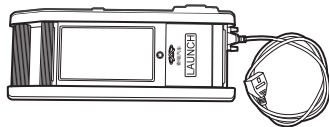
- Never expose airbag components directly to hot air or open flames.
- Never attempt to disassemble or repair airbag components.
- Removed airbag should be kept properly. Never put other objects on it. Otherwise, it may cause personal injury if triggered accidentally.
- As a disposable component, airbag must be replaced after deployment and avoid being reused.
- Always dispose of vehicle together with airbags, otherwise, they may be triggered accidentally which could cause personal injury.

31

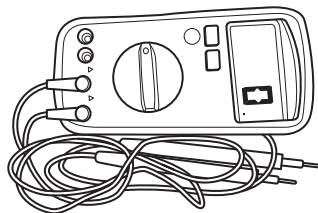
Specifications**Torque Specifications**

Description	Torque (N·m)
Coupling Bolt Between Front Passenger Airbag Assembly and Instrument Panel Crossmember Assembly	10 ± 2
Coupling Bolt Between Curtain Shield Airbag Assembly and Body	10 ± 1.5
Coupling Bolt Between Side Collision Sensor and Body	10 ± 2
Coupling Bolt Between SRS Control Module Assembly and Body	10 ± 1.5

Tools**Special Tool**

X-431 3G Diagnostic Tester	 RCH0000001
----------------------------	--

General Tool

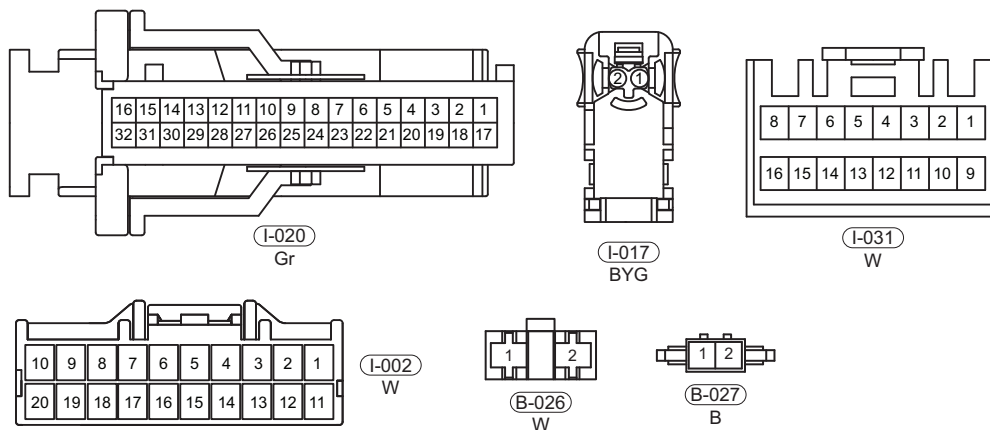
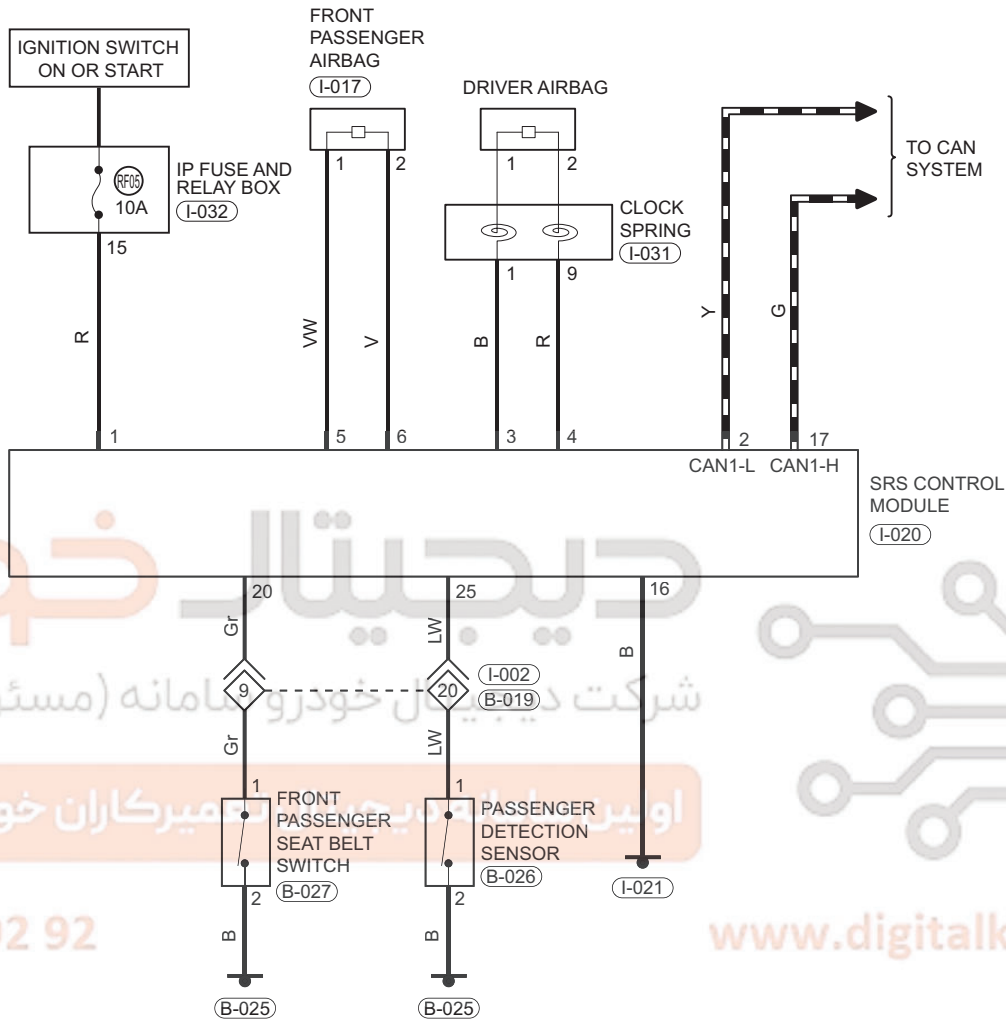
Digital Multimeter	 RCH0000002
--------------------	--

31 - SUPPLEMENTAL RESTRAINT SYSTEM

Circuit Diagram

Supplemental Restraint System

31



EA13T310010

DIAGNOSIS & TESTING

SRS Control Module Assembly Terminal List

Terminal No.	Description	Terminal No.	Description
1	IG Power Supply	17	CAN1-H
2	AN1-L	18	-
3	Driver Airbag	19	-
4	Driver Airbag	20	Front Passenger Seat Belt Switch
5	Front Passenger Airbag	21	-
6	Front Passenger Airbag	22	-
7	-	23	-
8	-	24	-
9	-	25	Passenger Detection Sensor
10	-	26	-
11	-	27	-
12	-	28	-
13	-	29	-
14	-	30	-
15	-	31	-
16	Ground	32	-

31

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 supplemental restraint 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 no DTC is detected, malfunction indicated by DTC is intermittent.

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 interrupt in related circuit.
- If possible, try to duplicate the conditions under which DTC was set.
- Look for the data that has changed or the DTC to be reset during wiggle test.
- Look for broken, bent, protruded or corroded terminals.
- Inspect airbag components and mounting areas for damage, foreign matter, etc. that will cause incorrect signals.

31 - SUPPLEMENTAL RESTRAINT SYSTEM

- Check and clean all wire harness connectors and grounding parts related to the current DTC.
- If multiple trouble codes were set, refer to the circuit diagrams to look for any common ground circuit or power supply circuit applied to the DTC.
- Refer to any Technical Bulletin that may apply to the malfunction.

Ground Inspection

Groundings are very important to entire circuit system, which are normal or not can seriously affect the entire circuit system. Ground points are often exposed to moisture, dirt and other corrosive environments. Corrosion (rust) can increase resistance which will change the way in which a circuit works.

Electrical control circuits are very sensitive to proper grounding. A loose or corroded ground can affect electrical control circuit. Operations to check the ground points are as follows:

31

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

Diagnosis Procedure**HINT:**

Use following procedures to troubleshoot Supplemental Restraint System (SRS).

1	Vehicle is 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 SRS warning light
---	-------------------------

NEXT

4	Check for DTCs (current DTC and history DTC)
---	--

DTC occurs

For current DTC, go to step 5

NO DTC

For history DTC, go to step 6

31 - SUPPLEMENTAL RESTRAINT SYSTEM

5 Diagnostic Trouble Code (DTC) Chart

NEXT

6 Circuit inspection

HINT:

- An activation prevention mechanism is built in airbag system connector. When connector is disconnected, this mechanism cuts off circuit by bringing short spring plate into contact with terminals, thus insulating the circuit from external power sources to prevent accidental airbag activation.
- To release activation prevention mechanism, insert a piece of paper with the same thickness as male terminal between terminals and short spring plate to disconnect the connection.

31

⚠ WARNING

- DO NOT release the activation prevention mechanism, unless specially directed by troubleshooting procedure.
- During circuit troubleshooting for airbag system, make sure to cut off battery power source, and wait for at least 90 seconds to discharge the system condenser.
- When performing circuit diagnosis and test, always refer to the circuit diagram for specific circuit and component information.

NEXT

7 Repair

NEXT

8 Clear DTCs (current and history DTCs)

NEXT

9 Check for DTCs (current and history DTCs)

DTC is output

Go to step 5

No DTC is output

Go to next step

10 Confirmation test

NEXT

31 - SUPPLEMENTAL RESTRAINT SYSTEM

11	End
----	-----

Diagnostic Trouble Code (DTC) Chart

DTC	DTC Definition
B1251-49	Electronic Control Unit (ECU), Internal Electronic Failure
B1200-11	Driver Side Impact Sensor Circuit Short to Ground
B1200-12	Driver Side Impact Sensor Circuit Short to Battery
B1200-4A	Driver Side Impact Sensor Incorrect Component Installed
B1200-64	Driver Side Impact Sensor Signal Plausibility Failure
B1200-86	Driver Side Impact Sensor Signal Invalid
B1200-96	Driver Side Impact Sensor Component Internal Failures
B1200-1C	Driver Side Impact Sensor Circuit Voltage Out of Range
B1201-11	Passenger Side Impact Sensor Circuit Short to Ground
B1201-12	Passenger Side Impact Sensor Circuit Short to Battery
B1201-4A	Passenger Side Impact Sensor Incorrect Component Installed
B1201-64	Passenger Side Impact Sensor Signal Plausibility Failure
B1201-86	Passenger Side Impact Sensor Signal Invalid
B1201-1C	Passenger Side Impact Sensor Circuit Voltage Out of Range
B1201-96	Passenger Side Impact Sensor Component Internal Failures
B1204-11	UFS (Up Front Sensor) Left Circuit Short to Ground
B1204-12	UFS (Up Front Sensor) Left Circuit Short to Battery
B1204-1C	UFS (Up Front Sensor) Left Circuit Voltage Out of Range
B1204-4A	UFS (Up Front Sensor) Left Incorrect Component Installed
B1204-64	UFS (Up Front Sensor) Left Signal Plausibility Failure
B1204-86	UFS (Up Front Sensor) Left Signal Invalid
B1204-96	UFS (Up Front Sensor) Left Component Internal Failures
B1205-11	UFS (Up Front Sensor) Right Circuit Short to Ground
B1205-12	UFS (Up Front Sensor) Right Circuit Short to Battery
B1205-1C	UFS (Up Front Sensor) Right Circuit Voltage Out of Range
B1205-4A	UFS (Up Front Sensor) Right Incorrect Component Installed
B1205-64	UFS (Up Front Sensor) Right Signal Plausibility Failure
B1205-86	UFS (Up Front Sensor) Right Signal Invalid
B1205-96	UFS (Up Front Sensor) Right Component Internal Failures
B0001-11	Front Airbag Passenger Loop Circuit Short to Ground
B0001-12	Front Airbag Driver Loop Circuit Short to Battery
B0001-1A	Front Airbag Driver Loop Circuit Resistance Below Threshold

31 - SUPPLEMENTAL RESTRAINT SYSTEM

31

DTC	DTC Definition
B0001-1B	Front Airbag Driver Loop Circuit Resistance Above Threshold
B0001-1C	Front Airbag Driver Loop Circuit Voltage Out of Range
B0010-11	Front Airbag Passenger Loop Circuit Short to Ground
B0010-12	Front Airbag Passenger Loop Circuit Short to Battery
B0010-1A	Front Airbag Passenger Loop Circuit Resistance Below Threshold
B0010-1B	Front Airbag Passenger Loop Circuit Resistance Above Threshold
B0010-1C	Front Airbag Passenger Loop Circuit Voltage Out of Range
B0070-11	Belt Pretensioner Front Driver Loop Circuit Short to Battery
B0070-12	Belt Pretensioner Front Driver Loop Circuit Short to Battery
B0070-1A	Belt Pretensioner Front Driver Loop Circuit Resistance Below Threshold
B0070-1B	Belt Pretensioner Front Driver Loop Circuit Resistance Above Threshold
B0070-1C	Belt Pretensioner Front Driver Loop Circuit Voltage Out of Range
B0072-11	Belt Pretensioner Front Passenger Loop Circuit Short to Ground
B0072-12	Belt Pretensioner Front Passenger Loop Circuit Short to Battery
B0072-1A	Belt Pretensioner Front Passenger Loop Circuit Resistance Below Threshold
B0072-1B	Belt Pretensioner Front Passenger Loop Circuit Resistance Above Threshold
B0072-1C	Belt Pretensioner Front Passenger Loop Circuit Voltage Out of Range
B1231-12	Buckle Switch Front Passenger (BLFP) Circuit Short to Battery
B1231-1C	Buckle Switch Front Passenger (BLFP) Circuit Voltage Out of Range
B1232-12	PDM (Passenger Detection Mat) Switch Circuit Short to Battery
B1232-1C	PDM (Passenger Detection Mat) Switch Circuit Voltage Out of Range
B1250-16	Battery Voltage Circuit Voltage Below Threshold
B1250-17	Battery Voltage Circuit Voltage Above Threshold
B1211-00	BT Deployment
B1210-00	Front Deployment
B125A-00	Crash Counter Reached Max
B1240-96	ICM Airbag Lamp Failed
U0073-88	CAN Bus Off
U0121-87	Lost Communication with BSM
U0129-86	Vehicle Speed Status from BSM
U0140-87	Lost Communication with BCM
U0155-87	Lost Communication with ICM
U1300-55	Software Configuration Error
U1400-87	Lost Communication of ABM

31 - SUPPLEMENTAL RESTRAINT SYSTEM

31

DTC	B1200-11	Driver Side Impact Sensor Circuit Short to Ground
DTC	B1200-12	Driver Side Impact Sensor Circuit Short to Battery
DTC	B1200-4A	Driver Side Impact Sensor Incorrect Component Installed
DTC	B1200-64	Driver Side Impact Sensor Signal Plausibility Failure
DTC	B1200-86	Driver Side Impact Sensor Signal Invalid
DTC	B1200-96	Driver Side Impact Sensor Component Internal Failures
DTC	B1200-1C	Driver Side Impact Sensor Circuit Voltage Out of Range
DTC	B1201-11	Passenger Side Impact Sensor Circuit Short to Ground
DTC	B1201-12	Passenger Side Impact Sensor Circuit Short to Battery
DTC	B1201-4A	Passenger Side Impact Sensor Incorrect Component Installed
DTC	B1201-64	Passenger Side Impact Sensor Signal Plausibility Failure
DTC	B1201-86	Passenger Side Impact Sensor Signal Invalid
DTC	B1201-1C	Passenger Side Impact Sensor Circuit Voltage Out of Range
DTC	B1201-96	Passenger Side Impact Sensor Component Internal Failures
DTC	B1204-11	UFS (Up Front Sensor) Left Circuit Short to Ground
DTC	B1204-12	UFS (Up Front Sensor) Left Circuit Short to Battery
DTC	B1204-1C	UFS (Up Front Sensor) Left Circuit Voltage Out of Range
DTC	B1204-4A	UFS (Up Front Sensor) Left Incorrect Component Installed
DTC	B1204-64	UFS (Up Front Sensor) Left Signal Plausibility Failure
DTC	B1204-86	UFS (Up Front Sensor) Left Signal Invalid

31 - SUPPLEMENTAL RESTRAINT SYSTEM

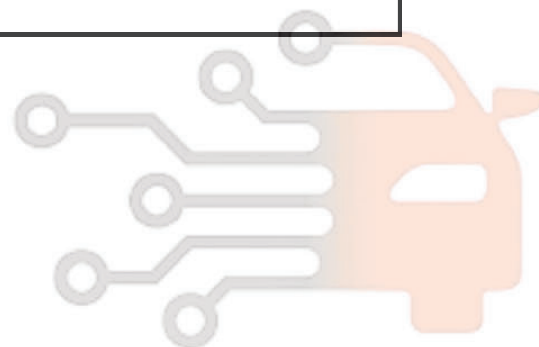
DTC	B1204-96	UFS (Up Front Sensor) Left Component Internal Failures
DTC	B1205-11	UFS (Up Front Sensor) Right Circuit Short to Ground
DTC	B1205-12	UFS (Up Front Sensor) Right Circuit Short to Battery
DTC	B1205-1C	UFS (Up Front Sensor) Right Circuit Voltage Out of Range
DTC	B1205-4A	UFS (Up Front Sensor) Right Incorrect Component Installed
DTC	B1205-64	UFS (Up Front Sensor) Right Signal Plausibility Failure
DTC	B1205-86	UFS (Up Front Sensor) Right Signal Invalid
DTC	B1205-96	UFS (Up Front Sensor) Right Component Internal Failures

31

دیجیتال خودرو

شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

اولین سامانه دیجیتال تعمیرکاران خودرو در ایران



021 62 99 92 92

www.digitalkhodro.com

31 - SUPPLEMENTAL RESTRAINT SYSTEM

31

DTC	DTC Definition	DTC Detection Condition	Possible Cause
B1200-11	Driver Side Impact Sensor Circuit Short to Ground	Airbag module integrated acceleration sensor is damaged	- Airbag module damage - Integrated acceleration sensor circuit short or open
B1200-12	Driver Side Impact Sensor Circuit Short to Battery		
B1200-4A	Driver Side Impact Sensor Incorrect Component Installed		
B1200-64	Driver Side Impact Sensor Signal Plausibility Failure		
B1200-86	Driver Side Impact Sensor Signal Invalid		
B1200-96	Driver Side Impact Sensor Component Internal Failures		
B1200-1C	Driver Side Impact Sensor Circuit Voltage Out of Range		
B1201-11	Passenger Side Impact Sensor Circuit Short to Ground		
B1201-12	Passenger Side Impact Sensor Circuit Short to Battery		
B1201-4A	Passenger Side Impact Sensor Incorrect Component Installed		
B1201-64	Passenger Side Impact Sensor Signal Plausibility Failure		
B1201-86	Passenger Side Impact Sensor Signal Invalid		
B1201-1C	Passenger Side Impact Sensor Circuit Voltage Out of Range		
B1201-96	Passenger Side Impact Sensor Component Internal Failures		
B1204-11	UFS (Up Front Sensor) Left Circuit Short to Ground		

31 - SUPPLEMENTAL RESTRAINT SYSTEM

31

DTC	DTC Definition	DTC Detection Condition	Possible Cause
B1204-12	UFS (Up Front Sensor) Left Circuit Short to Battery	Airbag module integrated acceleration sensor is damaged	- Airbag module damage - Integrated acceleration sensor circuit short or open
B1204-1C	UFS (Up Front Sensor) Left Circuit Voltage Out of Range		
B1204-4A	UFS (Up Front Sensor) Left Incorrect Component Installed		
B1204-64	UFS (Up Front Sensor) Left Signal Plausibility Failure		
B1204-86	UFS (Up Front Sensor) Left Signal Invalid		
B1204-96	UFS (Up Front Sensor) Left Component Internal Failures		
B1205-11	UFS (Up Front Sensor) Right Circuit Short to Ground		
B1205-12	UFS (Up Front Sensor) Right Circuit Short to Battery		
B1205-1C	UFS (Up Front Sensor) Right Circuit Voltage Out of Range		
B1205-4A	UFS (Up Front Sensor) Right Incorrect Component Installed		
B1205-64	UFS (Up Front Sensor) Right Signal Plausibility Failure		
B1205-86	UFS (Up Front Sensor) Right Signal Invalid		
B1205-96	UFS (Up Front Sensor) Right Component Internal Failures		

31 - SUPPLEMENTAL RESTRAINT SYSTEM

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.
- Using diagnostic tester, select Read Datastream.
- If datastream is not detected, malfunction indicated by datastream is current. Go to diagnosis procedure - Step 1.
- If datastream is detected, malfunction indicated by datastream is intermittent.

If above trouble codes still occur by performing above steps, it confirms that internal airbag module malfunctions occur. At this time, it is necessary to replace airbag module.

31

 CAUTION

Because acceleration sensor for A13T is integrated into airbag module, so connector inspection is not involved in such DTC.

دیجیتال خودرو

شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

اولین سامانه دیجیتال تعمیرکاران خودرو در ایران



021 62 99 92 92

www.digitalkhodro.com

DTC	B0001-11	Front Airbag Passenger Loop Circuit Short to Ground
DTC	B0001-12	Front Airbag Driver Loop Circuit Short to Battery
DTC	B0001-1A	Front Airbag Driver Loop Circuit Resistance Below Threshold
DTC	B0001-1B	Front Airbag Driver Loop Circuit Resistance Above Threshold
DTC	B0001-1C	Front Airbag Driver Loop Circuit Voltage Out of Range

دیجیتال خودرو

شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

اولین سامانه دیجیتال تعمیرکاران خودرو در ایران

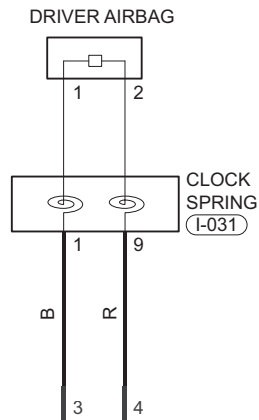


021 62 99 92 92

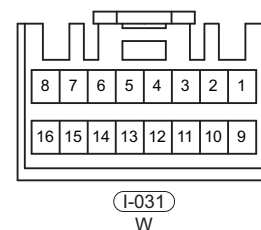
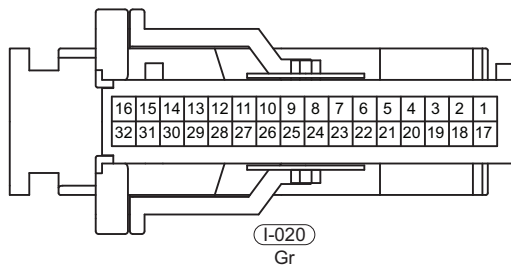
www.digitalkhodro.com

31 - SUPPLEMENTAL RESTRAINT SYSTEM

31



SRS CONTROL
MODULE
(I-020)



EA13T310020

31 - SUPPLEMENTAL RESTRAINT SYSTEM

DTC	DTC Definition	DTC Detection Condition	Possible Cause
B0001-11	Front Airbag Passenger Loop Circuit Short to Ground	Ignition switch ON Engine running	• Driver side airbag • Wire harness and connector • SRS control module assembly
B0001-12	Front Airbag Driver Loop Circuit Short to Battery		
B0001-1A	Front Airbag Driver Loop Circuit Resistance Below Threshold		
B0001-1C	Front Airbag Driver Loop Circuit Voltage Out of Range		
B0001-1B	Front Airbag Driver Loop Circuit Resistance Above Threshold		

31

 CAUTION

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

1

Check driver side airbag

- Turn ignition switch to LOCK, disconnect negative battery cable and wait for at least 90 seconds.
- Disconnect driver side airbag connector, and install new main airbag to coil spring connector I-031.
- Reconnect negative battery cable and wait for a few seconds.
- Turn ignition switch ON and wait for at least 90 seconds.
- Use X-431 3G diagnostic tester to clear DTCs.
- Turn ignition switch to LOCK.
- Turn ignition switch ON and wait for at least 90 seconds.
- Use X-431 3G diagnostic tester to check if there is still DTC output.

 WARNING

Never measure driver side airbag directly, otherwise it may cause serious personal injury due to accidental deployment of airbag.

OK

Replace driver side airbag

31 - SUPPLEMENTAL RESTRAINT SYSTEM

NG

2 Check wire harness and connector

Use circuit diagram as a guide to perform the following procedures:

- Turn ignition switch to LOCK, disconnect negative battery cable and wait for at least 90 seconds.
- Disconnect main airbag and coil spring connector I-031 and SRS control module assembly connector I-020.
- 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 instrument panel wire harness and connector

OK

3 Check driver side airbag control circuit

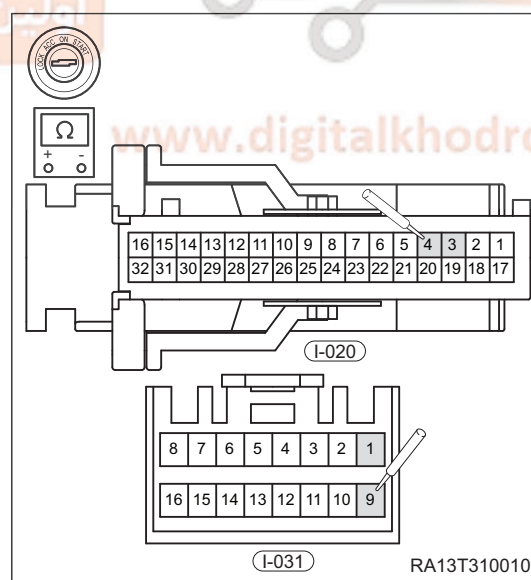
- Turn ignition switch to LOCK, disconnect negative battery cable and wait for at least 90 seconds.
- Disconnect the SRS control module assembly connector I-020.
- Disconnect connector I-031 between coil spring and main airbag.
- Connect negative battery cable and wait for a few seconds.
- Turn ignition switch to ON.
- Using a digital multimeter, check for continuity between SRS control module assembly connector I-020 and coil spring to check for a short circuit in system circuit according to table below.
- a. Check for continuity between main airbag and coil spring.

Check for Open

Multimeter Connection	Specified Condition
I-020 (4) - I-031 (9)	Continuity
I-020 (3) - I-031 (1)	Continuity

NG

Replace coil spring



OK

Replace main airbag assembly

DTC	B0010-11	Front Airbag Passenger Loop Circuit Short to Ground
DTC	B0010-12	Front Airbag Passenger Loop Circuit Short to Battery
DTC	B0010-1A	Front Airbag Passenger Loop Circuit Resistance Below Threshold
DTC	B0010-1B	Front Airbag Passenger Loop Circuit Resistance Above Threshold
DTC	B0010-1C	Belt Pretensioner Front Driver Loop Circuit Short to Battery

دیجیتال خودرو

شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

اولین سامانه دیجیتال تعمیرکاران خودرو در ایران



021 62 99 92 92

www.digitalkhodro.com

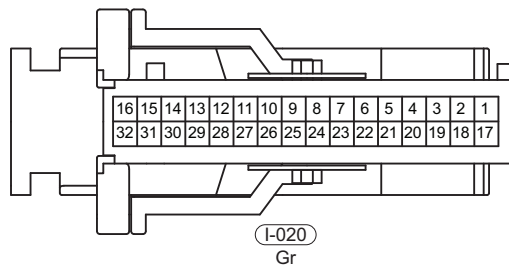
31 - SUPPLEMENTAL RESTRAINT SYSTEM

31

FRONT
PASSENGER
AIRBAG
(I-017)



SRS CONTROL
MODULE
(I-020)



(I-020)
Gr



(I-017)
BYG

EA13T310030

31 - SUPPLEMENTAL RESTRAINT SYSTEM

DTC	DTC Definition	DTC Detection Condition	Possible Cause
B0010-11	Front Airbag Passenger Loop Circuit Short to Ground	Ignition switch ON Engine running	• Front passenger airbag assembly • Wire harness and connector • SRS control module assembly
B0010-12	Front Airbag Passenger Loop Circuit Short to Battery		
B0010-1A	Front Airbag Passenger Loop Circuit Resistance Below Threshold		
B0010-1C	Belt Pretensioner Front Driver Loop Circuit Short to Battery		
B0010-1B	Front Airbag Passenger Loop Circuit Resistance Above Threshold		

31

 CAUTION

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

1

Check front passenger airbag assembly

- Turn ignition switch to LOCK, disconnect negative battery cable and wait for at least 90 seconds.
- Disconnect front passenger airbag connector, and connect new front passenger airbag (I-017) to connector I-020.
- Reconnect negative battery cable and wait for a few seconds.
- Turn ignition switch ON and wait for at least 90 seconds.
- Use X-431 3G diagnostic tester to clear DTCs.
- Turn ignition switch to LOCK.
- Turn ignition switch ON and wait for at least 90 seconds.
- Use X-431 3G diagnostic tester to check if there is still DTC output.

NO

Replace front passenger airbag

YES

2

Check wire harness and connector

Use circuit diagram as a guide to perform the following procedures:

- Turn ignition switch to LOCK, disconnect negative battery cable and wait for at least 90 seconds.
- Disconnect front passenger airbag connector I-017 and SRS control module assembly connector I-020.

31 - SUPPLEMENTAL RESTRAINT SYSTEM

- 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 instrument panel wire harness and connector

OK

31

3

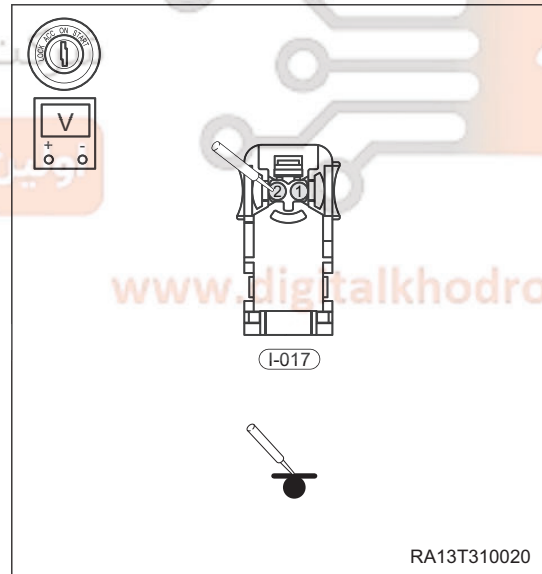
Check front passenger airbag control circuit

- Turn ignition switch to LOCK, disconnect negative battery cable and wait for at least 90 seconds.
- Disconnect the SRS control module assembly connector I-020.
- Disconnect the front passenger airbag connector I-017.
- Connect negative battery cable and wait for a few seconds.
- Turn ignition switch to ON.
- Using a digital multimeter, measure voltage between front passenger airbag connector I-022 and body ground to check for a short circuit to power supply according to table below.

Standard Voltage

Multimeter Connection	Condition	Specified Condition
I-017(2) - Body ground	Ignition switch ON	Below 1 V
I-017(1) - Body ground	Ignition switch ON	Below 1 V

- Turn ignition switch to LOCK, disconnect negative battery cable and wait for at least 90 seconds.
- Using a digital multimeter, check for continuity between front passenger airbag connector I-017 and body ground to check for a short circuit to ground according to table below.



31 - SUPPLEMENTAL RESTRAINT SYSTEM

Standard Condition

Multimeter Connection	Condition	Specified Condition
I-017(2) - I-017(1)	Always	Continuity
I-017(1) - Body ground	Always	No continuity
I-017(2) - Body ground	Always	No continuity

- i. Release activation prevention mechanism built into SRS control module assembly connector I-020.
- j. Using a digital multimeter, check for continuity between terminal of front passenger airbag connector I-017 and SRS control module assembly connector I-020 according to table below.

Standard Condition

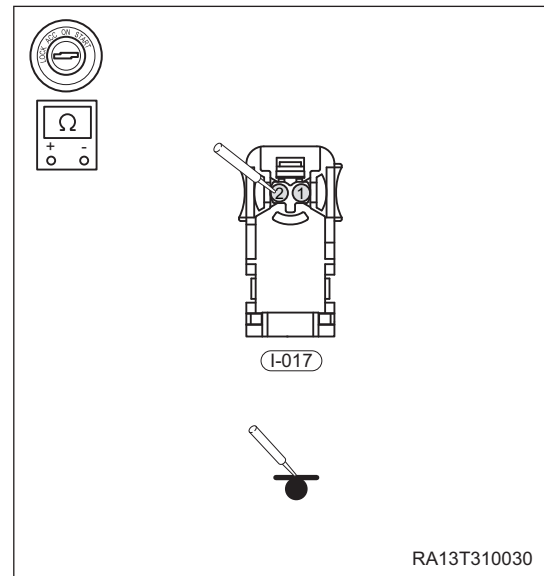
Multimeter Connection	Condition	Specified Condition
I-017(1) - I-020(5)	Always	Continuity
I-017(2) - I-020(6)	Always	Continuity

OK

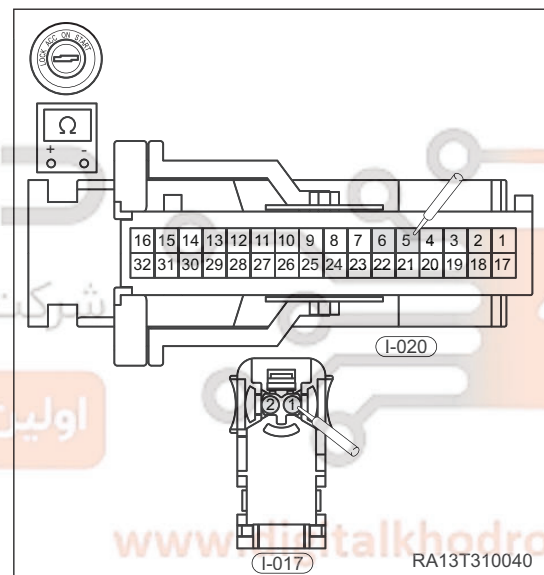
Replace SRS control module assembly

NG

Replace instrument panel wire harness and connector



31



31 - SUPPLEMENTAL RESTRAINT SYSTEM

DTC	B1231-12	Buckle Switch Front Passenger (BLFP) Circuit Short to Battery
DTC	B1231-1C	Buckle Switch Front Passenger (BLFP) Circuit Voltage Outof Range
DTC	B1232-12	PDM (Passenger Detection Mat) Switch Circuit Short to Battery
DTC	B1232-1C	PDM (Passenger Detection Mat) Switch Circuit Voltage Outof Range

31

دیجیتال خودرو

شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

اولین سامانه دیجیتال تعمیرکاران خودرو در ایران

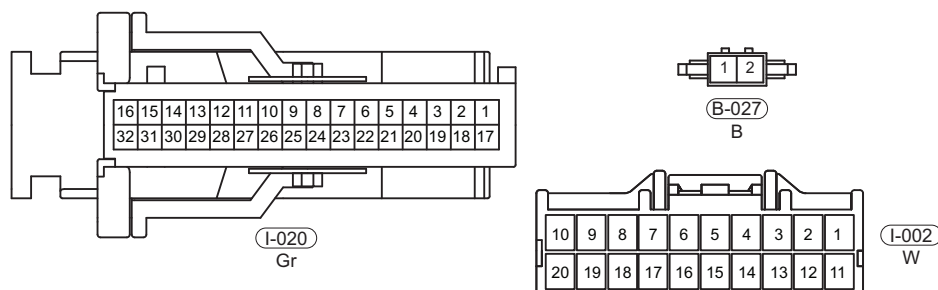
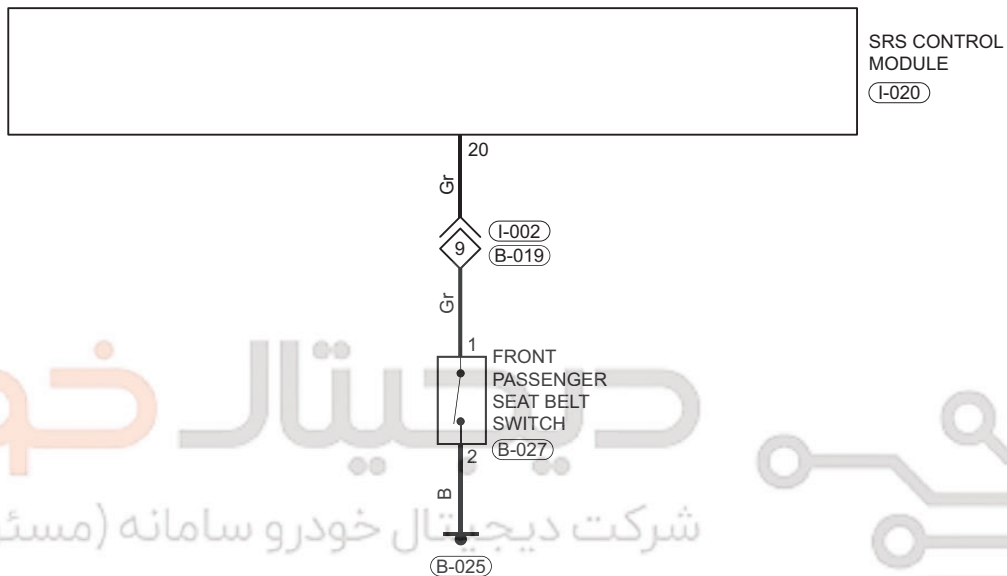


021 62 99 92 92

www.digitalkhodro.com

31 - SUPPLEMENTAL RESTRAINT SYSTEM

31



EA13T310040

31 - SUPPLEMENTAL RESTRAINT SYSTEM

Self-diagnosis Detection Logic

DTC	DTC Definition	DTC Detection Condition	Possible Cause
B1231-12	Buckle Switch Front Passenger (BLFP) Circuit Short to Battery	Front passenger seat belt buckle short to power supply	• Front passenger seat belt switch • Wire harness and connector • SRS control module assembly
B1231-1C	Buckle Switch Front Passenger (BLFP) Circuit Voltage Out of Range		
B1232-12	PDM (Passenger Detection Mat) Switch Circuit Short to Battery		
B1232-1C	PDM (Passenger Detection Mat) Switch Circuit Voltage Out of Range		

HINT:

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

1 Check front passenger seat belt switch

- Turn ignition switch to LOCK, disconnect negative battery cable and wait for at least 90 seconds.
- Disconnect front passenger seat belt switch connector, and connect new front passenger seat belt switch to connector B-027.
- Reconnect negative battery cable and wait for a few seconds.
- Turn ignition switch ON and wait for at least 90 seconds.
- Use X-431 3G diagnostic tester to check if there is still DTC output.

NO

Replace front passenger seat belt switch

YES

2 Check wire harness and connector

Use circuit diagram as a guide to perform the following procedures:

- Turn ignition switch to LOCK, disconnect negative battery cable and wait for at least 90 seconds.
- Disconnect front passenger seat belt switch connector B-027 and SRS control module assembly connector I-020.
- 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 airbag wire harness and connector

OK

3**Check front passenger seat belt switch control circuit**

- Turn ignition switch to LOCK, disconnect negative battery cable and wait for at least 90 seconds.
- Disconnect the SRS control module assembly connector I-020.
- Disconnect the front passenger seat belt switch connector B-027.
- Connect negative battery cable and wait for a few seconds.
- Turn ignition switch to ON.
- Using a digital multimeter, measure voltage between front passenger seat belt switch connector B-027 and body ground to check for a short circuit to power supply according to table below.

Standard Voltage

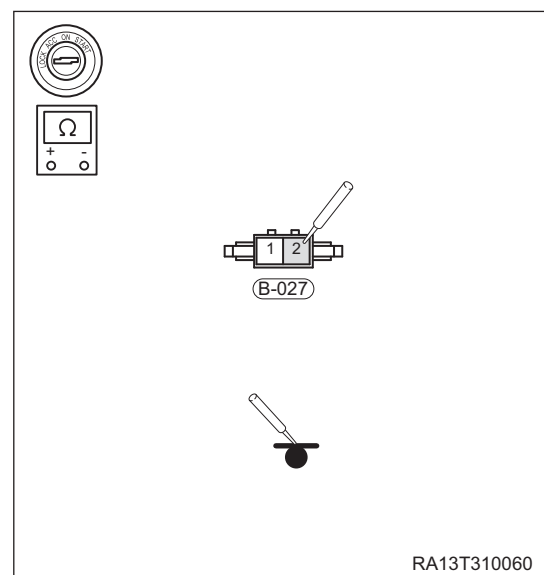
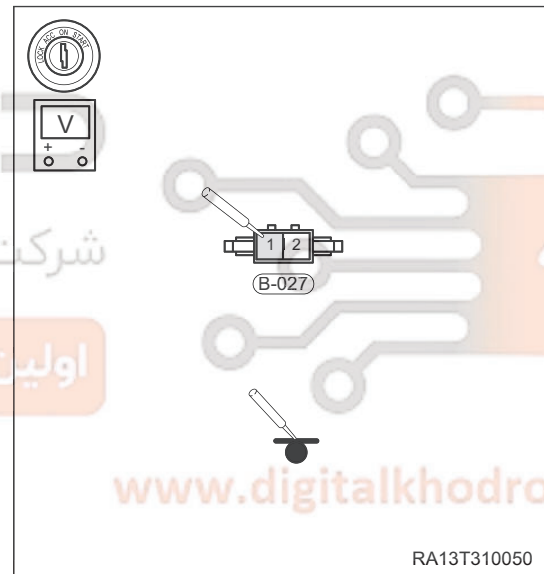
Multimeter Connection	Condition	Specified Condition
B-027 (1) - Body ground	Ignition switch ON	Below 1 V

- Turn ignition switch to LOCK, disconnect negative battery cable and wait for at least 90 seconds.
- Using a digital multimeter, check for continuity between front passenger seat belt switch connector B-027 and body ground to check for a short circuit to ground according to table below.

Standard Condition

Multimeter Connection	Condition	Specified Condition
B-027 (2) - Body ground	Always	No continuity

- Using a digital multimeter, check for continuity between terminals of connectors B-026 and I-020 according to table below.



31 - SUPPLEMENTAL RESTRAINT SYSTEM

Standard Condition

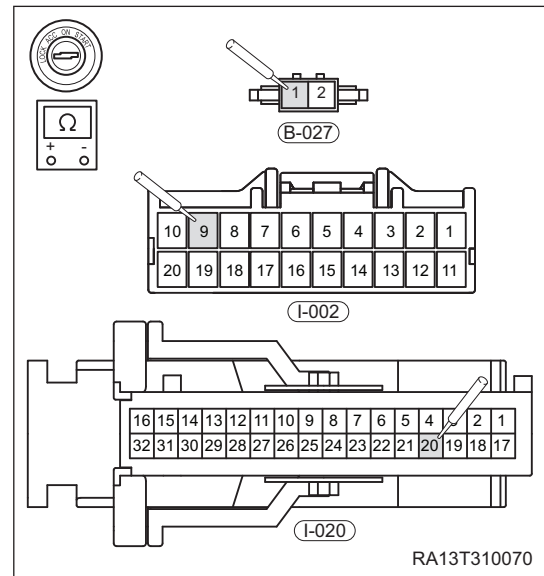
Multimeter Connection	Condition	Specified Condition
B-027 (1) – I-002 (9)	Always	Continuity
I-020 (20) – I-002 (9)	Always	Continuity

OK

Replace SRS control module assembly

NG

Repair or replace airbag wire harness and connector



دیجیتال خودرو

شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

اولین سامانه دیجیتال تعمیرکاران خودرو در ایران



021 62 99 92 92

www.digitalkhodro.com

DTC	B1232-12	PDM (Passenger Detection Mat) Switch Circuit Short to Battery
DTC	B1232-1C	PDM (Passenger Detection Mat) Switch Circuit Voltage Outof Range

دیجیتال خودرو

شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

اولین سامانه دیجیتال تعمیرکاران خودرو در ایران

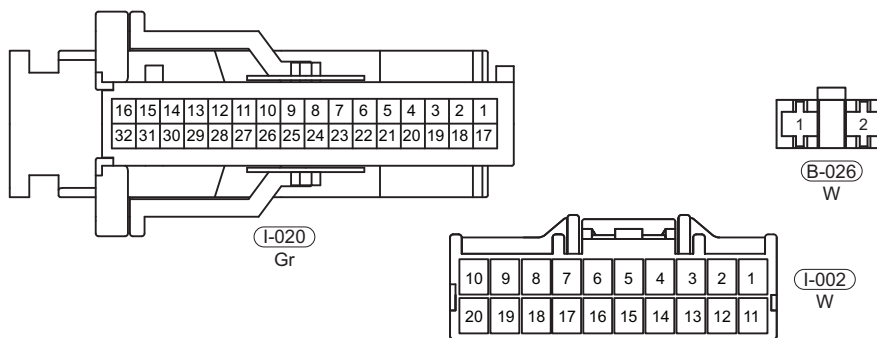
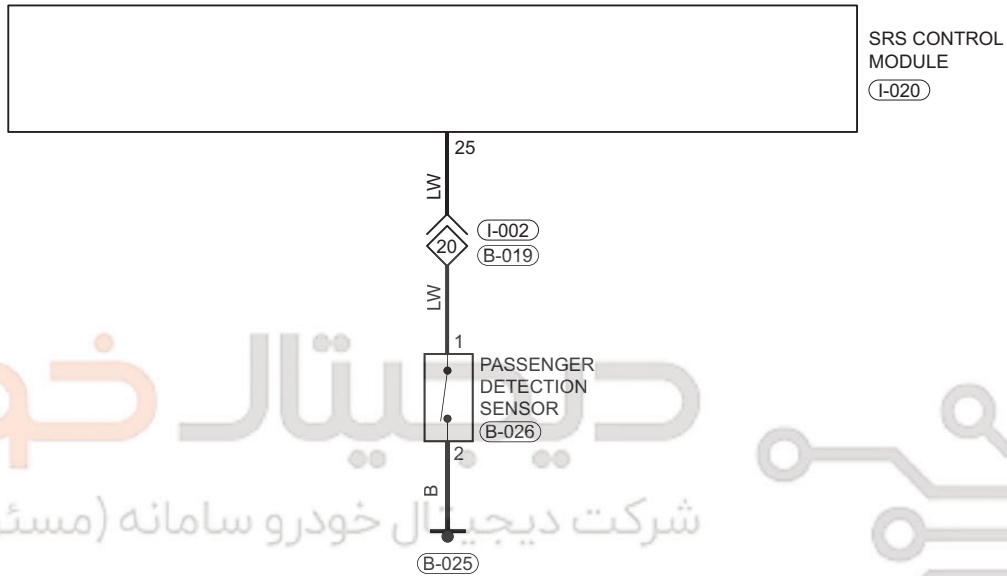


021 62 99 92 92

www.digitalkhodro.com

31 - SUPPLEMENTAL RESTRAINT SYSTEM

31



EA13T310050

Self-diagnosis Detection Logic

DTC	DTC Definition	DTC Detection Condition	Possible Cause
B1232-12	PDM (Passenger Detection Mat) Switch Circuit Short to Battery	Front passenger seat sensor short to power supply	- Front passenger seat belt reminder sensor - Wire harness or connector - SRS control module assembly
B1232-1C	PDM (Passenger Detection Mat) Switch Circuit Voltage Out of Range		

31

HINT:

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

1 Check front passenger seat belt reminder sensor

- Turn ignition switch to LOCK, disconnect negative battery cable and wait for at least 90 seconds.
- Disconnect front passenger seat belt reminder sensor connector, and connect new front passenger seat belt reminder sensor to connector I-002.
- Reconnect negative battery cable and wait for a few seconds.
- Turn ignition switch ON and wait for at least 90 seconds.
- Use X-431 3G diagnostic tester to clear DTCs.
- Turn ignition switch to LOCK.
- Turn ignition switch ON and wait for at least 90 seconds.
- Use X-431 3G diagnostic tester to check if there is still DTC output.

NO

Replace front passenger seat belt reminder sensor

YES

2 Check wire harness and connector

Use circuit diagram as a guide to perform the following procedures:

- Turn ignition switch to LOCK, disconnect negative battery cable and wait for at least 90 seconds.
- Disconnect front passenger seat belt reminder sensor connector B-026 and SRS control module assembly connector I-020.
- 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 airbag wire harness and connector

OK

31 - SUPPLEMENTAL RESTRAINT SYSTEM

3

Check front passenger seat belt remindersensor control circuit

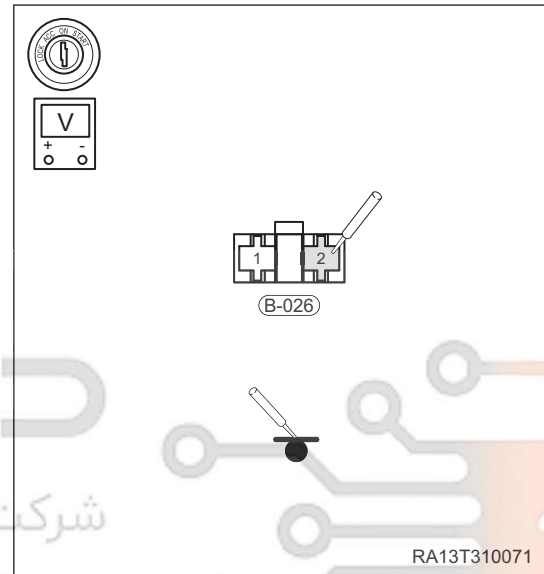
- Turn ignition switch to LOCK, disconnect negative battery cable and wait for at least 90 seconds.
- Disconnect the SRS control module assembly connector I-020.
- Disconnect the front passenger seat belt reminder sensor connector B-026.
- Connect negative battery cable and wait for a few seconds.
- Turn ignition switch to ON.
- Using a digital multimeter, measure voltage between front passenger seat belt reminder sensor connector B-026 and body ground to check for a short circuit to power supply according to table below.

31

Standard Voltage

Multimeter Connection	Condition	Specified Condition
B-026 (2) - Body ground	Ignition switch ON	Below 1 V

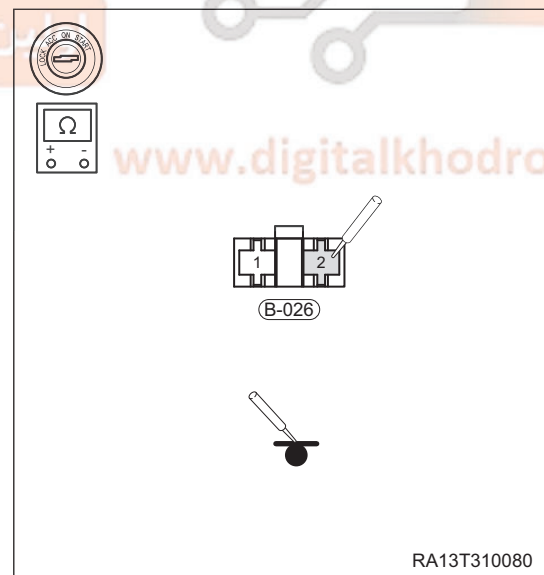
- Turn ignition switch to LOCK, disconnect negative battery cable and wait for at least 90 seconds.
- Using a digital multimeter, check for continuity between front passenger seat belt reminder sensor connector B-026 and body ground to check for a short circuit to ground according to table below.



Standard Voltage

Multimeter Connection	Condition	Specified Condition
B-026 (2) - Body ground	Always	No continuity

- Using a digital multimeter, check for continuity between terminals of connectors B-026 and I-020 according to table below.



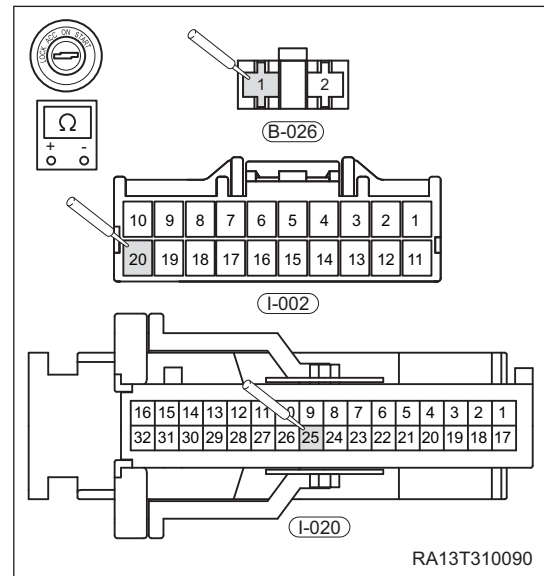
31 - SUPPLEMENTAL RESTRAINT SYSTEM

Standard Voltage

Multimeter Connection	Condition	Specified Condition
I-020 (25) - I-002 (20)	Always	Continuity
B-026 (1) - I-002 (20)	Always	Continuity

OK

Replace SRS control module assembly



NG

31

دیجیتال خودرو

شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

اولین سامانه دیجیتال تعمیرکاران خودرو در ایران



021 62 99 92 92

www.digitalkhodro.com

31 - SUPPLEMENTAL RESTRAINT SYSTEM

DTC	B1250-16	Battery Voltage Circuit Voltage Below Threshold
DTC	B1250-17	Battery Voltage Circuit Voltage Above Threshold

دیجیتال خودرو

شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

اولین سامانه دیجیتال تعمیرکاران خودرو در ایران

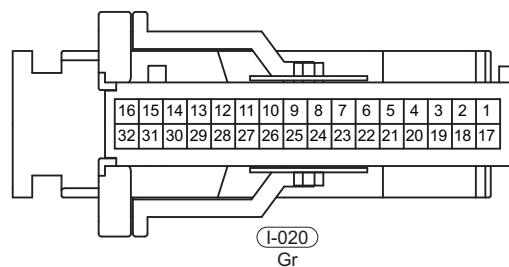
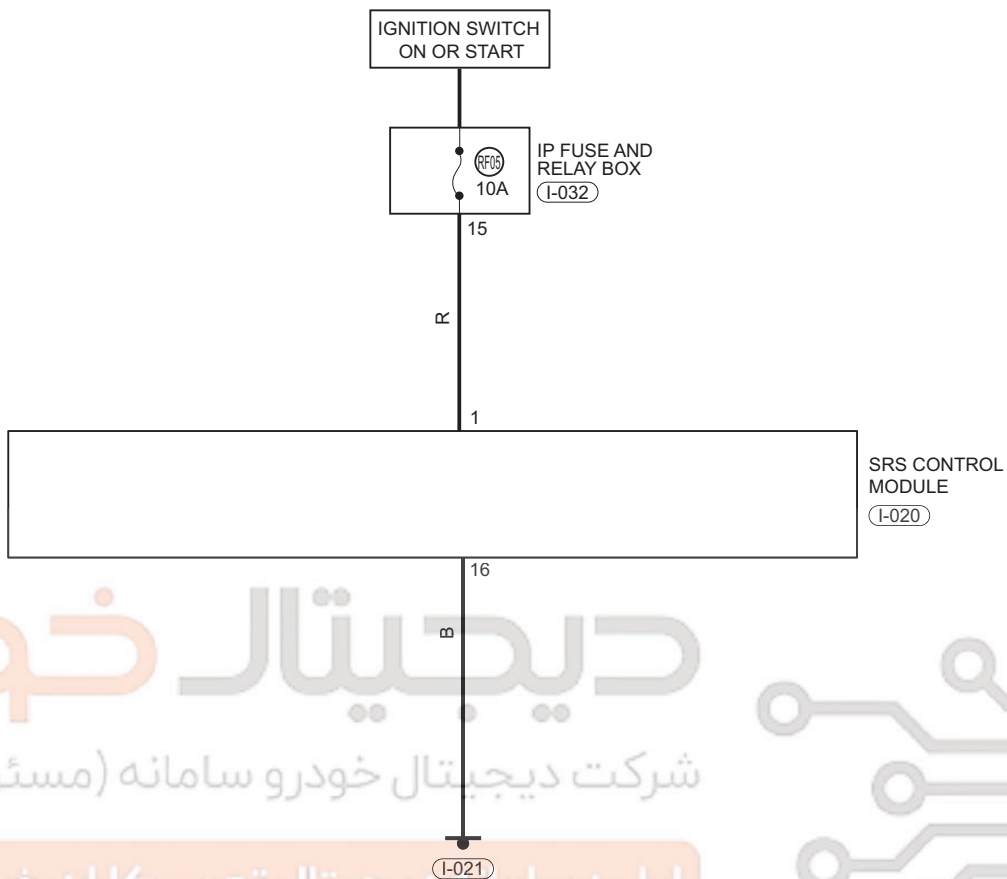


021 62 99 92 92

www.digitalkhodro.com

31 - SUPPLEMENTAL RESTRAINT SYSTEM

31



EA13T310060

31 - SUPPLEMENTAL RESTRAINT SYSTEM

DTC	DTC Definition	DTC Detection Condition	Possible Cause
B1250-16	Battery Voltage Circuit Voltage Below Threshold	Module supply voltage low	- Battery - Charging system
B1250-17	Battery Voltage Circuit Voltage Above Threshold	Module supply voltage high	- Wire harness and connector - SRS control module assembly

HINT:**31**

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

1 Check battery voltage

- a. Measure battery voltage with a digital multimeter.
Standard voltage: 11 to 14 V

NG**Check charging system (See page 16-6).****OK****2 Check wire harness and connector (SRS control module assembly – instrument panel fuse and relay box)**

Use circuit diagram as a guide to perform the following procedures:

- Turn ignition switch to LOCK, disconnect negative battery cable and wait for at least 90 seconds.
- Disconnect the SRS control module assembly connector I-020.
- Disconnect the instrument panel fuse and relay box wire harness connector I-032.
- 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 instrument panel wire harness and connector****OK****3 Check wire harness and connector (SRS control module assembly - battery)**

- a. Turn ignition switch to LOCK, disconnect negative battery cable and wait for at least 90 seconds.
b. Disconnect the SRS control module assembly connector I-020.
c. Connect negative battery cable and wait for a few seconds.
d. Turn ignition switch to ON.
e. Using a digital multimeter, measure power supply voltage of SRS control module assembly connector I-020 to check if power supply circuit is normal according to table below.

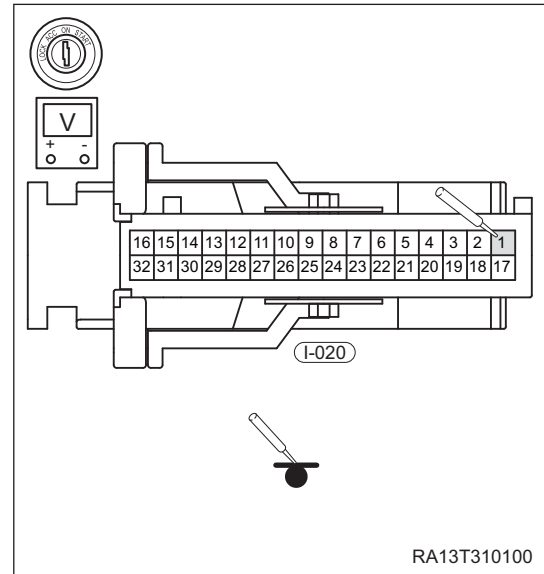
31 - SUPPLEMENTAL RESTRAINT SYSTEM

Standard Voltage

Multimeter Connection	Condition	Specified Condition
I-020 (1) - Body ground	Ignition switch ON	11 to 14 V

NG

Repair or replace instrument panel wire harness and connector



OK

31

4

Check wire harness and connector (SRS control module assembly - body ground)

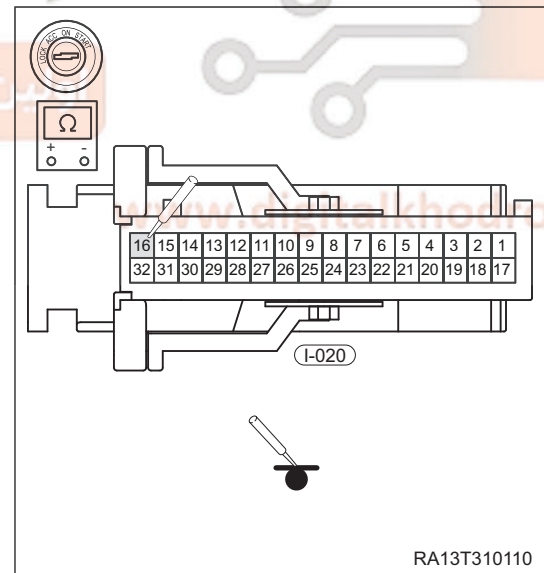
- Turn ignition switch to LOCK, disconnect negative battery cable and wait for at least 90 seconds.
- Disconnect the SRS control module assembly connector I-020.
- Using a digital multimeter, check ground circuit of SRS control module assembly connector I-020 to check if system ground circuit is normal according to table below.

Standard Condition

Multimeter Connection	Condition	Specified Condition
I-020 (16) - Body ground	Always	Continuity

NG

Repair or replace airbag wire harness and connector



OK

31 - SUPPLEMENTAL RESTRAINT SYSTEM

5**Reconfirm DTCs**

- a. Reconnect SRS control module assembly connector I-020 securely.
- b. Reconnect instrument panel fuse and relay box wire harness connector I-032 securely.
- c. Connect the negative battery cable.
- d. Turn ignition switch to ON.
- e. Use X-431 3G diagnostic tester (the latest software) to record and clear DTCs stored in supplemental restraint system.
- f. Turn ignition switch to LOCK and wait for a few seconds.
- g. Turn ignition switch to ON.
- h. Using X-431 3G diagnostic tester, read DTCs stored in supplemental restraint system again.
- i. Check if the same DTCs are still output.

NO**System operates normally****YES****Replace SRS control module assembly**

دیجیتال خودرو

شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

اولین سامانه دیجیتال تعمیرکاران خودرو در ایران



021 62 99 92 92

www.digitalkhodro.com

31 - SUPPLEMENTAL RESTRAINT SYSTEM

DTC	B1251-49	Electronic Control Unit (ECU), Internal Electronic Failure
DTC	B1240-96	ICM Airbag Lamp Failed
DTC	U0073-88	CAN Bus Off
DTC	U0121-87	Lost Communication with BSM
DTC	U0129-86	Vehicle Speed Status from BSM
DTC	U0140-87	Lost Communication with BCM
DTC	U0155-87	Lost Communication with ICM
DTC	U1300-55	Software Configuration Error
DTC	U1400-87	Lost Communication of ABM

31

دیجیتال خودرو

شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

اولین سامانه دیجیتال تعمیرکاران خودرو در ایران

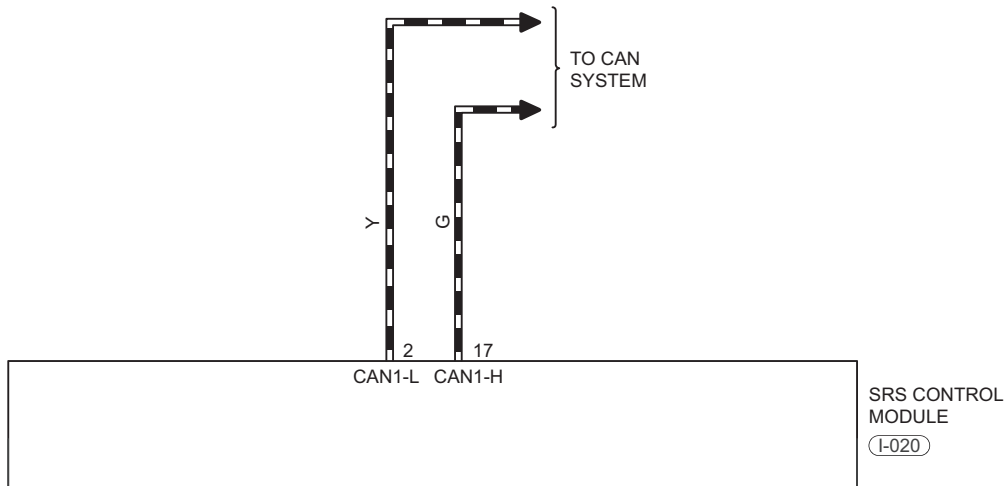


021 62 99 92 92

www.digitalkhodro.com

31 - SUPPLEMENTAL RESTRAINT SYSTEM

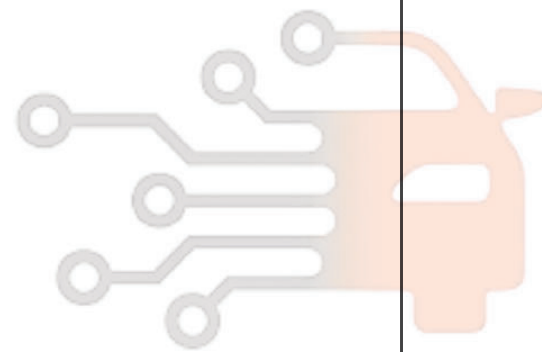
31



دیجیتال خودرو

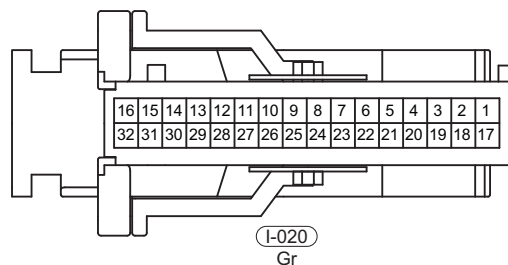
شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

اولین سامانه دیجیتال تعمیرکاران خودرو در ایران



021 62 99 92 92

www.digitalkhodro.com



EA13T310080

31 - SUPPLEMENTAL RESTRAINT SYSTEM

31

DTC	DTC Definition	DTC Detection Condition	Possible Cause
B1251-49	Electronic Control Unit (ECU), Internal Electronic Failure	ON	- Engine control module - ABS/ESP control module - Body control module - Wire harness and connector - SRS control module - Instrument Cluster
U0129-86	Vehicle Speed Status from BSM		
U0140-87	Lost Communication with BCM		
B1240-96	ICM Airbag Lamp Failed		
U0155-87	Lost Communication with ICM		
U1300-55	Lost Communication of ABM		
U1400-87	Lost Communication of ABM		
U0073-88	CAN Bus Off		
U0121-87	Lost Communication with BSM		

1 Check wire harness and connector

Use circuit diagram as a guide to perform the following procedures:

- Turn ignition switch to LOCK, disconnect negative battery cable and wait for at least 90 seconds.
- Disconnect the SRS control module assembly connector I-020.
- Using a digital multimeter, measure resistance between pins 2 and 17 of SRS control module assembly connector I-020. Standard resistance is 60 Ω .

Standard Resistance

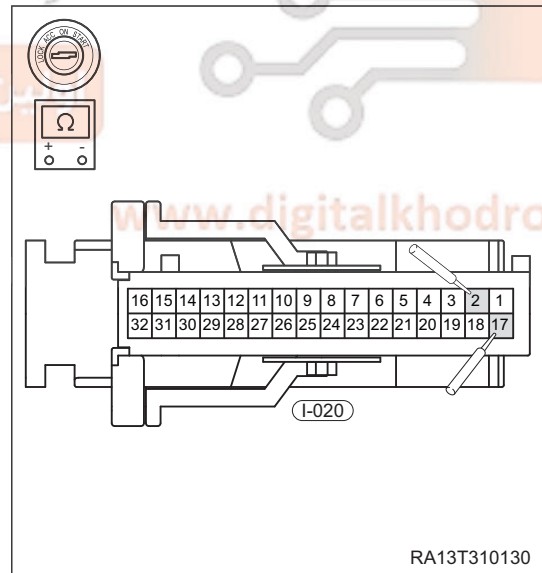
Multimeter Connection	Condition	Specified Condition
I-020 (2) - I-020 (17)	Ignition switch ON	60 Ω

OK

Replace SRS control module assembly

NG

Check other CAN network control circuits



31 - SUPPLEMENTAL RESTRAINT SYSTEM

2**Reconfirm DTCs**

- a. Turn ignition switch to LOCK.
- b. Disconnect the negative battery cable and wait for at least 90 seconds.
- c. Connect the negative battery cable.
- d. Turn ignition switch to ON.
- e. Use X-431 3G diagnostic tester (the latest software) to record and clear DTCs stored in supplemental restraint system.
- f. Turn ignition switch to LOCK and wait for a few seconds.
- g. Turn ignition switch to ON, and then select Read Code.

OK**Malfunction has been repaired and system operates normally****31**

دیجیتال خودرو

شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

اولین سامانه دیجیتال تعمیرکاران خودرو در ایران



021 62 99 92 92

www.digitalkhodro.com

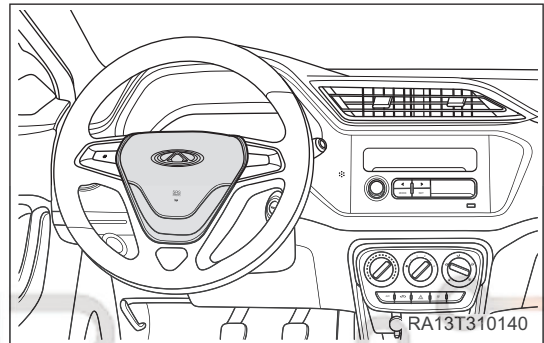
ON-VEHICLE SERVICE

Driver Airbag Assembly

On-vehicle Inspection

1. Check the driver airbag assembly (vehicle hasn't been involved in a collision with airbags not deployed).
 - a. Perform diagnosis system inspection.
 - b. Perform visual inspection with the driver airbag assembly installed on vehicle:
 - Check for cuts, cracks or discoloration on outer surface and grooved portion of driver airbag assembly.
 - If any defect above is found, replace driver airbag assembly with a new one.

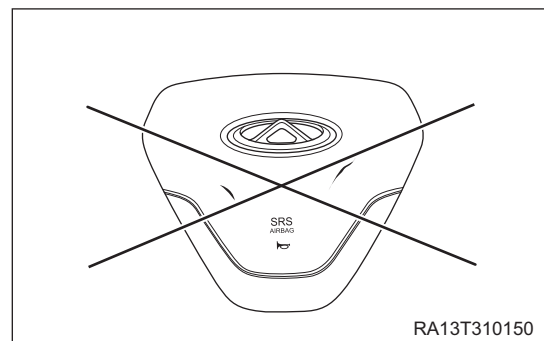
31



2. Check the driver airbag assembly (vehicle had been involved in a collision with airbag not deployed).
 - a. Perform diagnosis system inspection.
 - b. Perform visual inspection with driver airbag assembly removed from vehicle:
 - Check for cuts, cracks or discoloration on outer surface and grooved portion of driver airbag assembly.
 - Check wire harnesses for cuts and cracks, and if connectors are chipped.
 - Check steering wheel for deformation.

CAUTION

Be sure to follow correct procedures to remove and install driver airbag assembly.

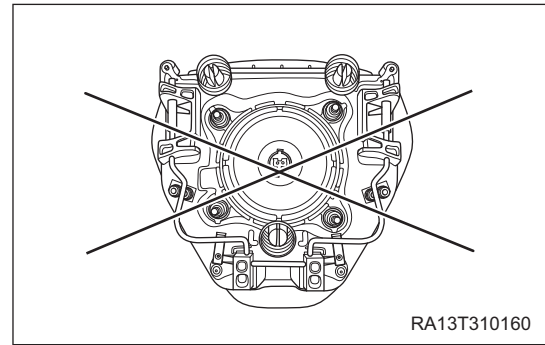


HINT:

- If driver airbag assembly contact plate is deformed, never repair it. Always replace driver airbag assembly with a new one.

31 - SUPPLEMENTAL RESTRAINT SYSTEM

- There should not be any contact between driver airbag assembly and steering wheel, and keep an uniform clearance all around, when installing new driver airbag assembly onto steering wheel.



31



ENVIRONMENTAL PROTECTION

- Handle airbag and airbag control module assembly carefully, and never tap or strike them fiercely.
- Removal, inspection and installation of airbag system must meet relevant requirements and specifications, and never perform operation casually.
- Removed airbag should be kept properly with face up. Store the airbag in a place with enough spare space to prevent accidental airbag deployment.

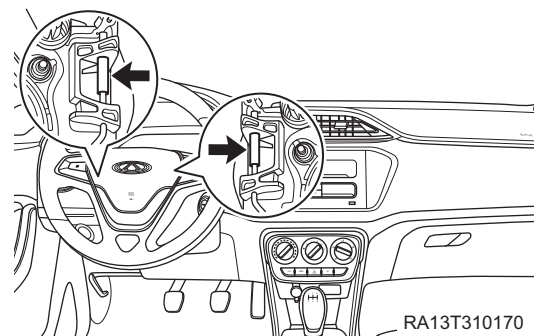
- Turn off all electrical equipment and the ignition switch.
- Disconnect the negative battery cable.



WARNING

Wait at least 90 seconds after disconnecting the negative battery cable to disable supplementary restraint system.

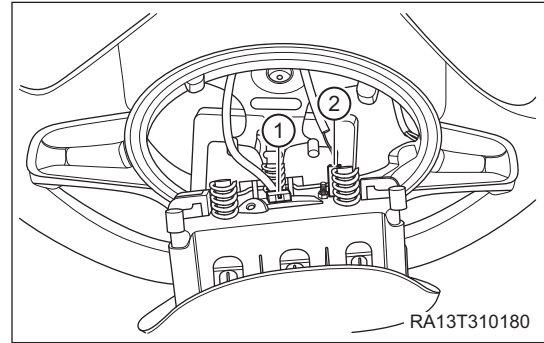
- Remove the driver airbag assembly.
 - Position the front wheels straight ahead.
 - Using a flat tip screwdriver wrapped with protective tape, push driver airbag assembly snap springs (arrow) from service hole on both sides of steering wheel.



- Disengage driver airbag assembly from steering wheel, and support driver airbag assembly stably by hands.
- Disconnect driver airbag assembly wire harness connector (1) and horn wire harness connector (2).

31 - SUPPLEMENTAL RESTRAINT SYSTEM

- e. Remove the driver airbag assembly.



CAUTION

- DO NOT damage the airbag wire harness when handling airbag wire harness connector.

31

WARNING

DO NOT pull the airbag wire harness when removing driver airbag assembly.

- f. Remove the driver airbag assembly.

Installation

- Installation is in the reverse order of removal.

CAUTION

- Be sure to install snap springs in place during installation.
- Check that horn operates normally after installation.
- Check SRS warning light after installation, and make sure that supplemental restraint system operates normally.

Disposal

Always dispose of airbag together with vehicle which is equipped with supplemental restraint system. Otherwise, the airbag will be in chemical and physical hazard. Failure to handle it properly will cause personal injury. Do not dispose of airbag by oneself, and always contact the professional service department to perform disposal.

31 - SUPPLEMENTAL RESTRAINT SYSTEM

Spiral Cable

Removal

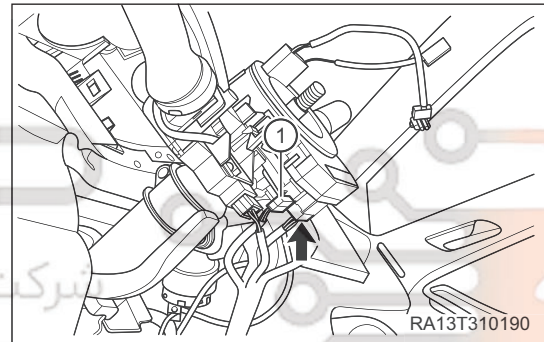
1. Turn off all electrical equipment and the ignition switch.
2. Disconnect the negative battery cable.

⚠ WARNING

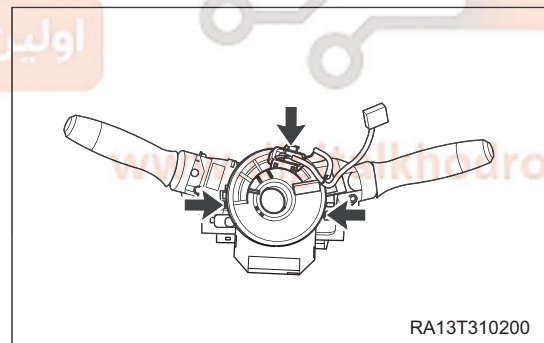
- Wait at least 90 seconds after disconnecting the negative battery cable to disable supplementary restraint system.

31

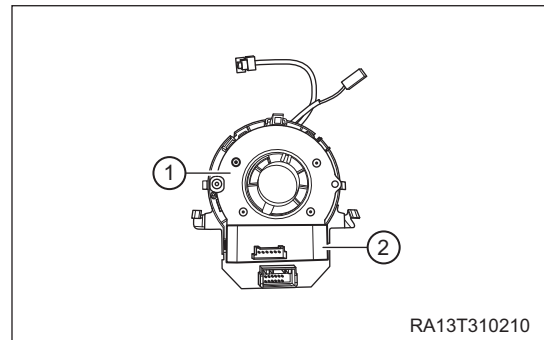
3. Position the front wheels straight ahead.
4. Remove the steering wheel assembly (See page 28-8).
5. Remove the combination switch cover assembly (See page 28-11).
6. Remove the spiral cable.
 - a. Disconnect spiral cable wire harness connector (arrow) and angle sensor connector (1) (if equipped).



- b. Detach fixing claws (arrow) between spiral cable and combination switch assembly.



- c. Detach angle sensor fixing claws and separate angle sensor (1) and spiral cable (2).

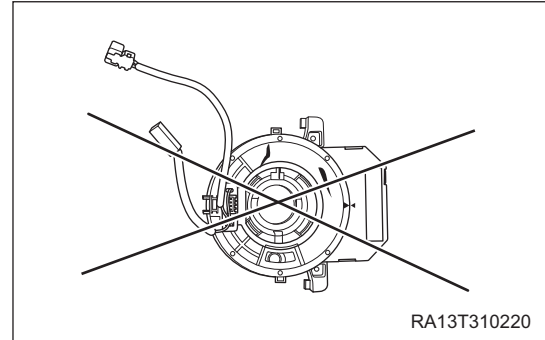


Inspection

1. Check the spiral cable.
 - a. Check that there are no scratches or cracks on connectors, and/or no cracks, dents or chipping on the cable.
 - b. If there are scratches, cracks, dents or cuts on connectors or spiral cable, replace the spiral cable with a new one.

HINT:

When installing charcoal canister breather pipe, be careful to align the white mark (1) on charcoal canister breather pipe with the side seam (2) of activated charcoal canister assembly.



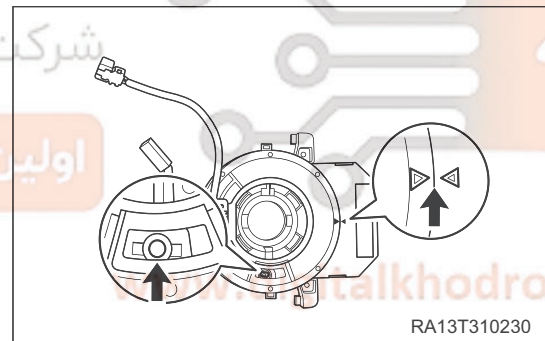
31

Installation

Installation is in the reverse order of removal.

HINT:

- Always install spiral cable correctly according to matchmarks on spiral cable and steering column (fully turn spiral cable to one direction slowly, then turn it to the other direction until yellow ball appears in transparent neutral window and aligns with arrow mark), otherwise spiral cable may be damaged.



CAUTION

- Always install spiral cable correctly according to specified operating instructions.
- DO NOT rotate the spiral cable over specified turns to prevent it from breaking.
- Be sure to install fixing claws in place when installing spiral cable.
- Check that horn operates normally after installation.
- Check SRS warning light after installation, and make sure that supplemental restraint system operates normally.

31 - SUPPLEMENTAL RESTRAINT SYSTEM

Front Passenger Airbag Assembly

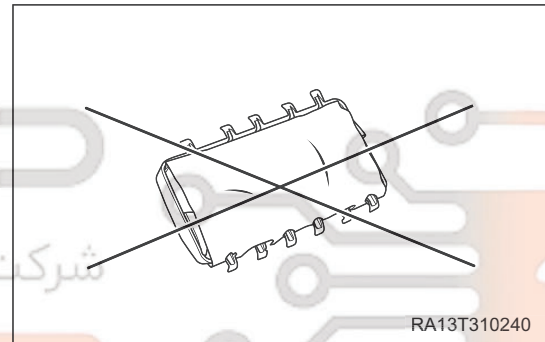
On-vehicle Inspection

1. Check the front passenger airbag assembly (vehicle has been involved in a collision with airbag not deployed).
 - a. Perform diagnosis system inspection.
 - b. Perform visual inspection with front passenger airbag assembly removed from vehicle:
 - Check for cuts, cracks or wear on front passenger airbag assembly.
 - Check for cracks or other damage on connector.
 - Check instrument panel or instrument panel crossmember assembly for deformation or damage. If any defect above is found, replace the front passenger airbag assembly with a new one.

31

WARNING

- Be sure to follow correct procedures to remove and install front passenger airbag assembly.



Removal

CAUTION

- Handle airbag and airbag control module assembly carefully, and never tap or strike them fiercely.
- Removal, inspection and installation of airbag system must meet relevant requirements and specifications, and never perform operation casually.
- Removed airbag should be kept properly with face up. Store the airbag in a place with enough spare space to prevent accidental airbag deployment.

1. Turn off all electrical equipment and the ignition switch.
2. Disconnect the negative battery cable.

WARNING

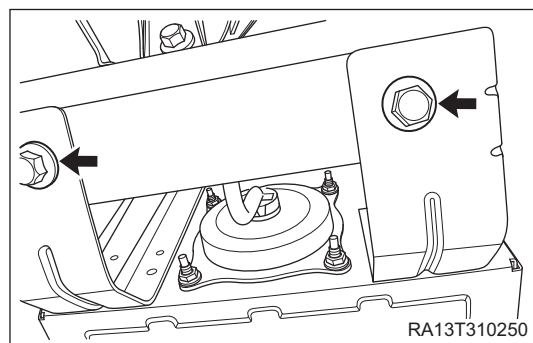
- Wait at least 90 seconds after disconnecting the negative battery cable to disable supplementary restraint system.

3. Remove the glove box assembly (See page 46-12).

31 - SUPPLEMENTAL RESTRAINT SYSTEM

4. Remove the front passenger airbag assembly.

- a. Remove 2 coupling bolts (arrow) between front passenger airbag assembly and instrument panel crossmember assembly. (Tightening torque: 10 ± 2 N·m)

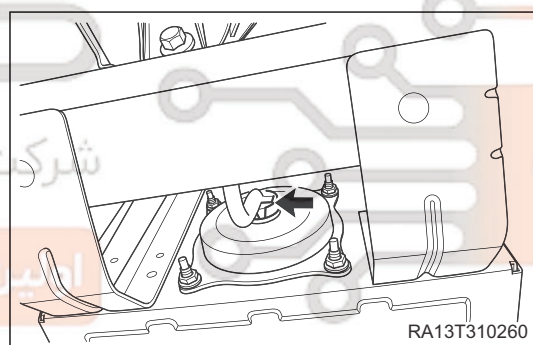


31

- b. Disconnect the front passenger airbag assembly wire harness connector (arrow).

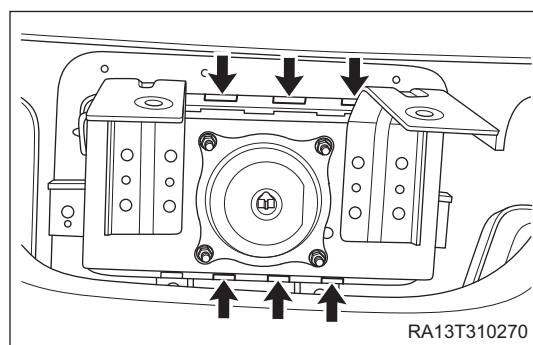
⚠ WARNING

- DO NOT damage airbag assembly wire harness when handling airbag assembly wire harness connector.



- c. Remove the instrument panel assembly (See page 46-11).

- d. Using a flat tip screwdriver wrapped with protective tape, slightly pry fixing claws (arrow) around front passenger airbag assembly mounting bracket to separate it from instrument panel assembly.



- e. Remove the front passenger airbag assembly.

Installation

Installation is in the reverse order of removal.

31 - SUPPLEMENTAL RESTRAINT SYSTEM

 CAUTION

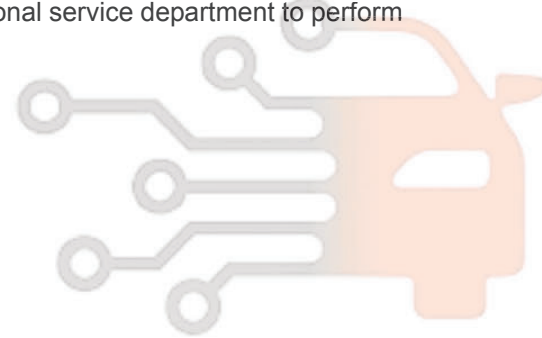
- Before installing tightening bolts, always make sure that airbag wire harness is not hold down or stuck. Adjust if necessary and install it in place.
- Make sure to tighten fixing bolts to specified torques during installation.
- When installing front passenger airbag assembly, first slide the hook on one side into locating hole in airbag box, and then press in hook on the other side firmly, making sure that hooks on both sides enter the corresponding locating holes correctly.
- Always keep vehicle power off during installation. It is forbidden to install the front passenger airbag assembly with vehicle power on.
- During installation of instrument panel assembly, if installation cannot proceed due to contact of front passenger airbag assembly bracket and instrument panel crossmember assembly, hold the airbag slightly at opening of glove box assembly to install it in place.
- Check SRS warning light after installation, and make sure that supplemental restraint system operates normally.

Disposal

Always dispose of airbag assembly together with vehicle that is equipped with supplemental restraint system. Otherwise, the airbag will be in chemical and physical hazard. Failure to handle it properly will cause personal injury. Do not dispose of airbag by oneself, and always contact the professional service department to perform disposal.

دیجیتال خودرو
شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

اولین سامانه دیجیتال تعمیرکاران خودرو در ایران



021 62 99 92 92

www.digitalkhodro.com