

## 2008 MINI Cooper

2007 ACCESSORIES AND BODY, CAB Parts & Accessories - Repair Instructions - Cooper

### 2007 ACCESSORIES AND BODY, CAB

#### Parts & Accessories - Repair Instructions - Cooper

## 00 GENERAL

### 72 SAFETY PRECAUTIONS AND GENERAL INFORMATION

#### SAFETY PRECAUTIONS AND GENERAL INFORMATION

|                                              |     |                                                                                                                 |
|----------------------------------------------|-----|-----------------------------------------------------------------------------------------------------------------|
| Safety instructions                          | --> | <u>SAFETY REGULATIONS</u> for handling airbag modules, airbag components and pyrotechnical seat belt tensioners |
|                                              | --> | <u>NOTES ON SCRAPPING</u> vehicles with gas generators                                                          |
|                                              | --> | <u>DEACTIVATION/ACTIVATION PYROTECHNICAL COMPONENTS</u>                                                         |
| Handling electrical and electronic equipment | --> | <u>UNLOCKING/LOCKING AIRBAG PLUG CONNECTIONS</u>                                                                |
|                                              | --> | <u>REPAIRING AIRBAG LEADS</u>                                                                                   |
|                                              | --> | <u>HANDLING OPTICAL FIBRES</u>                                                                                  |
| Check                                        | --> | <u>CHECK SEAT BELT</u>                                                                                          |
|                                              | --> | <u>CHECKLIST FOR SEAT BELT</u>                                                                                  |
| Airbag system                                | --> | Functional description and checking, refer to DIS                                                               |
|                                              | --> | <u>DEACTIVATING AIRBAGS</u>                                                                                     |
|                                              | --> | <u>PROCEDURE AFTER AIRBAG TRIGGERING</u>                                                                        |

### 72 00 ... SAFETY REGULATIONS FOR HANDLING COMPONENTS WITH GAS GENERATORS

It is essential to comply with the regulations as specified in the law relating to the use of explosives when working on airbag units and seat belt tensioners.

Airbags, seat belt tensioners etc. are pyrotechnical objects. Pyrotechnical objects are assigned to different danger classes on the basis of the quantity of propellant that they contain. The assignment can be ascertained from the identification marking on the product:

**IMPORTANT: Failure to comply with the warning notices and repair instructions for gas generator components can cause accidental deployment and result in injury and vehicle damage!**

This applies in particular to the following components:

- Airbag modules (driver's/front passenger airbags, side airbags)
- Buckle/belt tensioner
- Head airbag (ITS, AHPS)
- Active knee protection
- Active head restraint

- Safety battery terminal (SBK)

## 1. Regulations

The regulations quoted in the following refer to the Federal Republic of Germany.

In all other countries, the relevant legislation and regulations must be observed in each case. Country-specific legal regulations that go beyond this information or court decisions based thereon must be followed in each case or given precedence over these regulations.

The following components used by BMW:

- Pyrotechnical restraint systems are subject to danger class PT1
- Gas generators are pyrotechnical objects belonging to danger class T1.

Handling, transporting and storing non-fired gas generators are subject to the "Explosive Materials Act" (law relating to the use of explosives dated 13/09/1976).

The relevant trade supervisory authority must be notified at least 2 weeks before pyrotechnical objects are handled for the first time. Here the relevant authority must be notified in writing of the person responsible (e.g. dealership owner, holder of general power of attorney or if necessary workshop supervisor). A certificate of qualification, i.e. specific training, is not required for the person responsible.

## 2. Disassembly and assembly

- Inspection, testing and installation work may only be carried out by expert trained personnel in BMW Service.
- Work on components of the airbag system should only ever be carried out with the battery disconnected, the negative terminal post covered and the plug connection of the cable leading to the gas generator disconnected. If only the battery is disconnected, the following prescribed waiting period must be observed without fail:
  - 30 minutes for vehicles up to 9/93;
  - 1 minute for vehicles from 9/93
- In the event of breaks in work, a component with a gas generator that has been removed must be secured against access by other persons.
- Individual components must never be repaired. Instead, always replace them.
- Do not treat airbag system components with cleaning agents or grease.
- Components of the airbag system must not be exposed to temperatures in excess of 75°C.
- Airbag system components, including electronic diagnostic components, which have been dropped from heights in excess of 0.5 m must not be reinstalled in the vehicles.
- Before installing, subject airbag system components (including electronic diagnostic components) to a visual inspection for damage and replace if necessary.
- Airbag system components may only be electrically tested while they are installed and only with the BMW diagnostic system / DIS.
- **Danger of injury:** The airbag module may only be set down with the airbag itself facing upwards.

Otherwise the generator will be thrown upwards if it is fired.

- Do not point the firing pellet of a gas generator at other persons.
- Components with gas generators must not be fired while they are removed. They must be disposed of by special disposal companies or returned to BMW in the packaging of the new components.
- When carrying out straightening and welding work with an electric welder:
  - Disconnect battery
  - Cover negative terminal (post)
- Avoid all contact with the skin when removing a fired airbag module - wear gloves. Wash with water after contact with the skin.

### **3. Transport**

- Components with gas generators must be sent off in the packaging of the new components.

### **4. Storage**

- Observe the regulations of the relevant trade supervisory authority and the applicable national regulations.

## **11 SEAT BELTS**

### **72 11 ... CHECKING AUTOMATIC SAFETY BELT**

General considerations when checking seat belts:

The seat belts must be checked after an accident.

For the check, you should start by trying to get information on which seats in the car involved in the accident were occupied. If this is not possible, check all the seat belts in the car and replace them if necessary.

In the event of deformations on the car, you must subject the components of the restraint system affected in this area such as e.g.

- Seat belt
- Seatbelt height adjustment
- Belt buckle tensioner
- Triggering sensors
- etc.

to a function check and a visual inspection.

**If you are in any doubt as to the unimpaired functional capability of restraint system components, these components must be replaced in the interests of safety!**

If a seat belt has to be replaced following an accident (e.g. in the event of a frontal and/or side impact with permanently deformed impact dampers/deformation elements or cross-members), the complete seat belt must be replaced! The complete seat belt comprises:

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- Top belt
- Lower strap
- Seat belt buckle (buckle tensioner)
- Seatbelt height adjustment
- Retaining screws of all components

The following must also be checked and if necessary replaced:

- Seatbelt mountings on the car body
- Seatbelt mountings on the seat
- seat runners.
- Seat structure (frame, etc.)

#### **Alignment tests on the seat and the seat runners are not permitted!**

The following explanations and the **CHECKLIST** for the automatic safety belt can provide help.

An unusable seat belt or a seat belt worn in a serious accident should be destroyed immediately after removal to guarantee that it cannot be used again.

Checking automatic reel and seatbelt strap:

The automatic reel has two independent activation systems for seat-belt locking.

The first activation system locks the automatic reel when driving quickly around curves, driving in tight curves, on extreme inclinations (vehicle rolls over) and during sharp braking or impact.

To check, the seat backrest must be placed in the upright position and both hands held in a supporting position close to the steering wheel. The brakes are then applied fully while driving on a dry surface and at a road speed equal to twice that of walking speed.

The seat belt must lock.

The second activation system provides additional safety and is controlled by inertia mass.

If the reel locks when the strap is pulled out suddenly, this system is also OK.

Automatic reel does not require servicing and must not be opened.

Precondition for complete, problem-free retraction of straps:

- the straps must not be twisted!
- the straps must not be damaged!

When placed to one side, the straps of the front seats must retract fully.

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With the straps in the rear seat bench, a small remaining loop is acceptable due to increased friction between the strap and the rear seat bench cover if:

- this remaining loop is fully retracted when the strap is reguided.

Belt straps should only be cleaned with a luke-warm soap solution or a commercial laundry detergent.

Belt straps must never be cleaned chemically or dyed.

The automatic reel and strap must be replaced in the event of:

1. creases
2. unravelling
3. pinches
4. cracks and tears
5. traces of melting
6. traces of wear on casing of seat belt tongue or on reversing clip.

Checking lower strap (belt buckle tensioner):

To fasten a seat belt, the tongue should insert easily and with a loud click in the lock.

When the "Red button" is pressed, the tongue must be ejected from the lock under spring pressure.

If the lock cover is missing or damaged, the lower strap must be replaced.

Replace the triggered belt buckle tensioner including the complete seat belt with seatbelt height adjustment and retaining screws and check the

- Seatbelt mountings on the car body
- Seatbelt mountings on the seat
- seat runners.
- Seat structure.

Criteria for a triggered mechanical belt buckle tensioner:

- very low position of seatbelt buckle (comparisons with new part).

Criteria for a triggered pyrotechnical belt buckle tensioner:

- very low position of seatbelt buckle (comparisons with new part).
- Airbag warning lamp permanently lit: read out airbag system fault memory.

The belt buckle tensioners can be triggered under certain circumstances even when the seat is not occupied. If it is definite that the belt system was not used (seat was not occupied), there is no need to replace the

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- upper strap
- attachment parts (belt height adjustment, screws)
- seatbelt mountings on the car body
- Seatbelt mountings on the seat
- seat runners.

after a check.

## 72 11 ... INSPECTION LIST FOR AUTOMATIC SEAT BELT

### AUTOMATIC SEAT BELT LIST

|                                                                                                                                                                                                                                               |     |                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Was the automatic seat belt with lower strap replaced after an accident, e.g. frontal and/or oblique impact in which the impact absorbers/deformation elements were permanently deformed?                                                     | No  | Replace complete automatic seat belt<br>The following must also be checked and replaced, if necessary:<br>seatbelt mountings on the car body<br>seatbelt mountings on the seat<br>seat runners. |
| Yes                                                                                                                                                                                                                                           |     |                                                                                                                                                                                                 |
| Does seat belt lock when pulled out suddenly?                                                                                                                                                                                                 | No  | Replace automatic seat belt (upper strap).                                                                                                                                                      |
| Yes                                                                                                                                                                                                                                           |     |                                                                                                                                                                                                 |
| Can the strap be pulled out without jamming?                                                                                                                                                                                                  | No  | Automatic reel is loose - tighten reel.<br>If fault persists:<br>Return spring broken - replace automatic seat belt (upper strap).                                                              |
| Yes                                                                                                                                                                                                                                           |     |                                                                                                                                                                                                 |
| Does the strap on the front seat belts retract automatically?<br>Does the strap on the rear seat belts retract automatically, a small remaining loop is acceptable<br>if this remaining loop is fully retracted when the strap is readjusted. | No  | Automatic reel is loose - tighten reel.<br>Excessive friction in belt guides - replace automatic seat belt (upper strap).<br>Return spring broken - replace automatic seat belt (upper strap).  |
| Yes                                                                                                                                                                                                                                           |     |                                                                                                                                                                                                 |
| Does automatic reel make a squeaking noise when belt is fastened or unfastened?                                                                                                                                                               | Yes | Excessive friction in belt guides - replace automatic seat belt (upper strap).<br>Reel is loose - tighten reel.<br>Return spring broken - replace automatic seat belt (upper strap).            |
| No                                                                                                                                                                                                                                            |     |                                                                                                                                                                                                 |
| Is the plastic casing on the latch free from damage in the area of the belt opening?                                                                                                                                                          | No  | Replace complete automatic seat belt                                                                                                                                                            |
| Yes                                                                                                                                                                                                                                           |     |                                                                                                                                                                                                 |
| Is the fully extended strap free from pinches,<br>burn marks,<br>tears and cuts,                                                                                                                                                              | No  | Replace complete automatic seat belt                                                                                                                                                            |

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|                                                                                                                           |    |                                                                                                                                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| folding and unravelling?                                                                                                  |    |                                                                                                                                                                                                                           |
| Yes                                                                                                                       |    |                                                                                                                                                                                                                           |
| When the seat belt is fitted, is the latch ejected with spring pressure from the buckle when the "Red button" is pressed? | No | Replace complete automatic seat belt                                                                                                                                                                                      |
| Yes                                                                                                                       |    |                                                                                                                                                                                                                           |
| Does fastened seat belt lock when stopping vehicle quickly on a dry road at a road speed twice as fast as walking speed?  | No | Replace complete automatic seat belt                                                                                                                                                                                      |
| Yes                                                                                                                       |    |                                                                                                                                                                                                                           |
| Is fully pulled-out belt free of serious dirt and other marks?                                                            | No | If dirt and marks cannot be removed with commercially available mild-action detergent, the automatic seat belt (upper strap) must be replaced.                                                                            |
| Yes                                                                                                                       |    |                                                                                                                                                                                                                           |
| In the case of seat-integrated seat belts, is front tongue of reclining mechanism or seat rail free of deformation?       | No | Replace both damaged parts and complete automatic-reel seat belt. The following must also be checked and replaced, if necessary:<br>seatbelt mountings on the car body<br>seatbelt mountings on the seat<br>seat runners. |
| Yes                                                                                                                       |    |                                                                                                                                                                                                                           |
| The automatic seat belt is O.K.!                                                                                          |    |                                                                                                                                                                                                                           |

## 72 11 022 REMOVING AND INSTALLING/REPLACING FRONT LEFT OR RIGHT SEAT BELT

*Necessary preliminary tasks:*

- Remove **REAR SIDE TRIM PANEL**

Release screw (1).

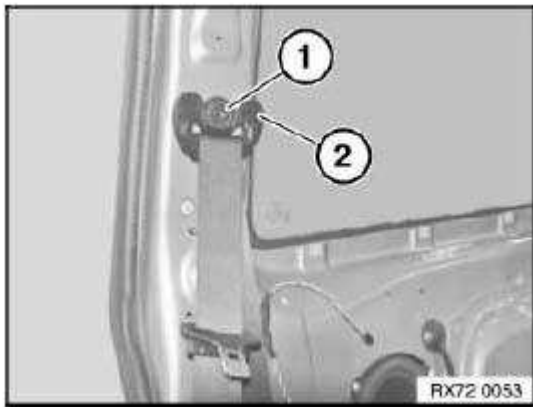
Remove reversing clip (2).

*Installation:*

Tightening torque: 72 11 03AZ . See **SEAT BELTS** for specs.

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**Fig. 1: Identifying Screw And Reversing Clip**  
Courtesy of BMW OF NORTH AMERICA, INC.

Release screw (1).

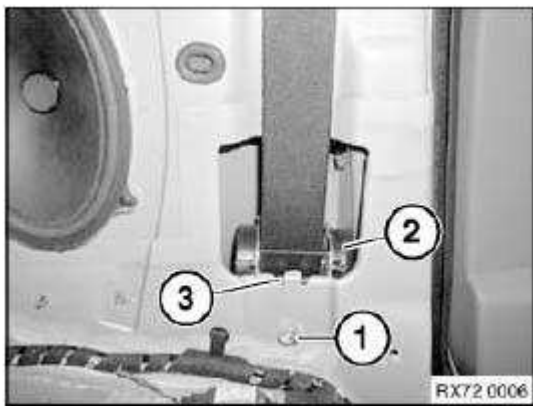
Tightening torque: 72 11 02AZ . See **SEAT BELTS** for specs.

Remove inertia reel mechanism (2).

*Installation:*

Inertia reel mechanism (2) is coded against incorrect installation (3).

Replace screw (1) and insert with Loctite.



**Fig. 2: Identifying Screw And Inertia Reel Mechanism**  
Courtesy of BMW OF NORTH AMERICA, INC.

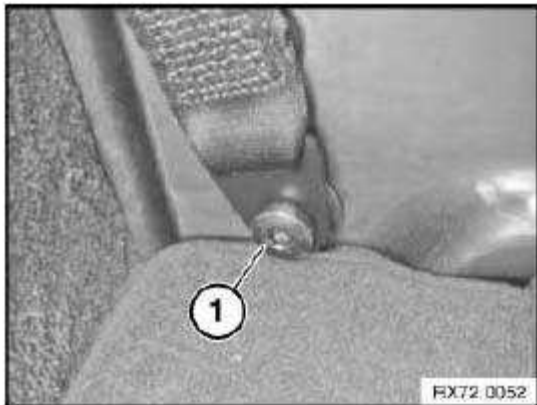
Release screw (1).

Tightening torque: 72 11 04AZ . See **SEAT BELTS** for specs.

*Installation:*

Replace screw and insert with Loctite.

Feed out anchor fitting from trim panel for door pillar (top)



**Fig. 3: Identifying Screw**

Courtesy of BMW OF NORTH AMERICA, INC.

## **72 11 041 REMOVING AND INSTALLING/REPLACING FRONT LEFT OR RIGHT LOWER BELT FITTING (SEAT BELT TENSIONER)**

**WARNING:** Read and comply with SAFETY REGULATIONS for handling airbag modules and pyrotechnical belt tensioners.

**Improper handling can lead to triggering of the pyrotechnical seat belt tensioner or side airbag, resulting in injuries.**

Switch off ignition!

*Necessary preliminary tasks:*

- Remove LEFT OR RIGHT FRONT SEAT .

Unfasten plug connection (3) and disconnect.

Lever retainer (4) out of seat mechanism.

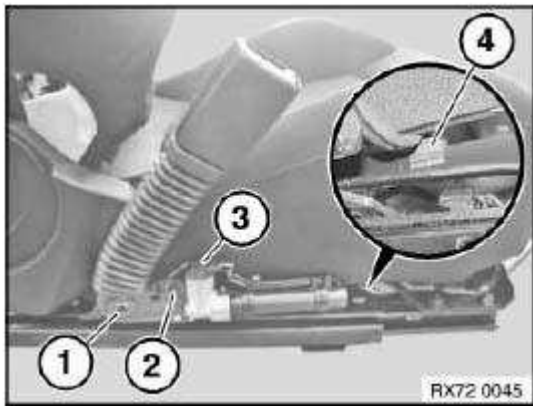
Release screw (1).

Tightening torque: 72 11 09AZ . See SEAT BELTS for specs.

*Installation:*

Belt tensioner is coded against incorrect installation (2).

Replace screw (1) and insert with Loctite.



**Fig. 4: Identifying Plug Connection And Retainer**  
Courtesy of BMW OF NORTH AMERICA, INC.

Partially lever seat cover welt out of seat mechanism.

Unfasten plug connection (1) and disconnect.

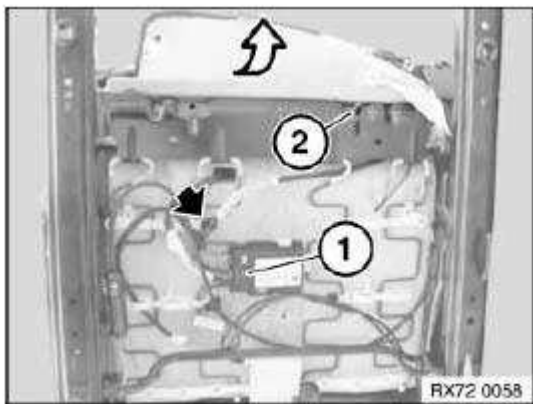
Cut clip with cable tie.

*Installation:*

Replace faulty clip.

Unclip cable holder (2).

Feed wiring harness of belt tensioner out of seat mechanism.



**Fig. 5: Identifying Plug Connection And Cable Holder**  
Courtesy of BMW OF NORTH AMERICA, INC.

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*Necessary preliminary tasks:*

- Remove **REAR SEAT**
- Remove **C-PILLAR TRIM**
- Remove left or right wheel arch trim. See **REMOVING AND INSTALLING/REPLACING LEFT LUGGAGE COMPARTMENT WHEEL ARCH TRIM** and **REMOVING AND INSTALLING/REPLACING RIGHT LUGGAGE COMPARTMENT WHEEL ARCH TRIM** .

Release screw.

Tightening torque: 72 11 07AZ . See **SEAT BELTS** for specs.

*Installation:*

Replace screw and insert with Loctite.

Feed out anchor fitting through C-pillar trim.



**Fig. 6: Identifying Screw**

Courtesy of BMW OF NORTH AMERICA, INC.

Release screw (1).

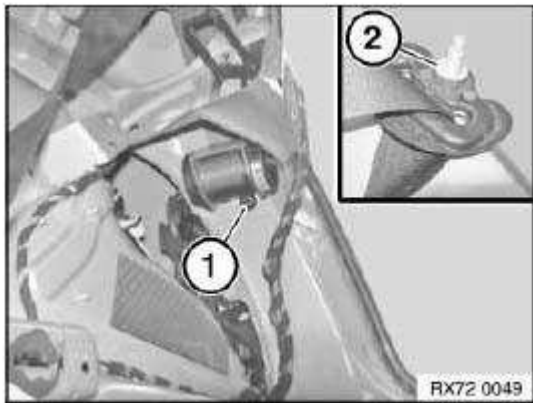
Tightening torque: 72 11 05AZ . See **SEAT BELTS** for specs.

*Installation:*

Replace screw (1) and insert with locking washer (2) and Loctite.

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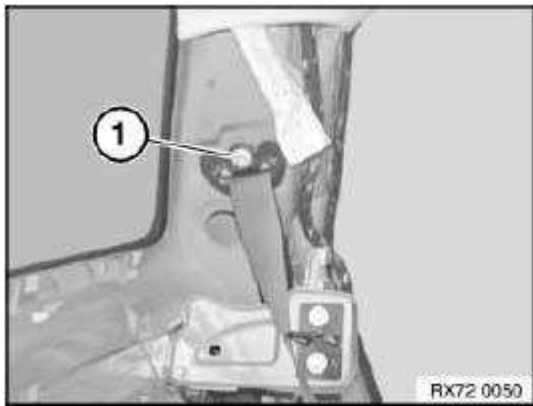
**Fig. 7: Identifying Screw With Locking Washer**  
Courtesy of BMW OF NORTH AMERICA, INC.

Release screw (1) and remove belt deflection fitting.

Tightening torque: 72 11 06AZ . See **SEAT BELTS** for specs.

*Installation:*

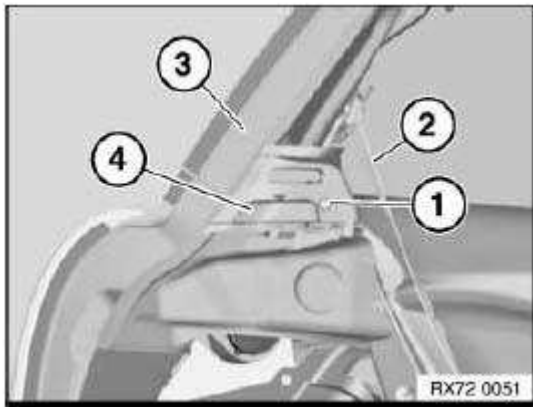
Replace screws and insert with Loctite.



**Fig. 8: Identifying Screw And Belt Deflection Fitting**  
Courtesy of BMW OF NORTH AMERICA, INC.

Release screw (1).

Feed out belt (2) between body (3) and side trim panel (4).



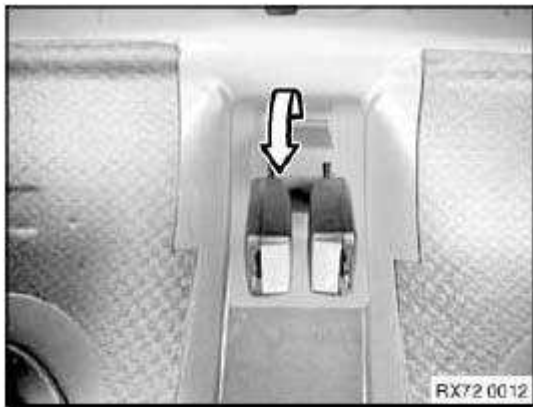
**Fig. 9: Identifying Screw And Side Trim Panel**  
Courtesy of BMW OF NORTH AMERICA, INC.

## 72 11 097 REMOVING AND INSTALLING/REPLACING REAR CENTRE LOWER BELT FITTING

*Necessary preliminary tasks:*

- Remove **REAR SEAT**

Lift off cover.



**Fig. 10: Lifting Off Cover**  
Courtesy of BMW OF NORTH AMERICA, INC.

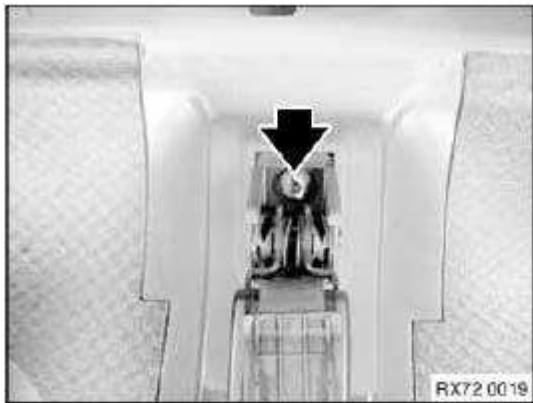
Release screw.

*Installation:*

Replace screw.

Tightening torque: 72 11 08AZ . See **SEAT BELTS** for specs.

Remove lower belt fitting.



**Fig. 11: Locating Screw**

Courtesy of BMW OF NORTH AMERICA, INC.

## **12 AIRBAG GENERATOR-AIRBAG**

### **61 00 ... REPAIRING AIRBAG CABLES**

**IMPORTANT:** Only repair those cables which show visible signs of damage. In the event of visible damage, make sure there is only one cable repair in effect after the repair work. If no visible damage can be identified, the entire cable must be replaced. When carrying out repairs to the airbag wiring harness, you must use the spare parts offered in the Electronic Parts Catalogue (EPC).

#### **Safety regulations:**

Safety regulations for **HANDLING COMPONENTS OF AIRBAG SYSTEM.**

#### **INSTRUCTIONS FOR DISCONNECTING AND CONNECTING BATTERY .**

#### **Procedure for cable repair**

#### **In event of non-visible damage to wiring harness:**

Disconnect plug connection on airbag module or on adapter plug. It is absolutely vital to disconnect the contacts in succession as there is a risk of them being mixed up! Cut through one cable after the other at an appropriate position, do not under any circumstances cut through both cables at the same time. Insulate cables remaining in wiring harness with insulating tape. Now disconnect plug connection on airbag control unit. Unpin contacts. Cut through one cable after the other at an appropriate position and insulate with insulating tape, do not under any circumstances cut through both cables at the same time. Pin contacts of repair cable for airbag control unit in control unit plug, assignment of repair cables is relevant. Lay repair cable in car parallel to existing airbag lead. Now pin in contacts for airbag control unit or contacts of adapter plug, assignment of repair cables is relevant. Cut off excess length of repair cable in proximity (visible area) of airbag module or of adapter plug. Twist open cables. With the connectors and shrink-fit hoses in the Electronic Parts Catalogue (EPC), reconnect the cables with the same cable colours. Twist cables again, open length (twist) must not exceed 40 mm. Secure interface (shrink-fit hoses) with insulating tape to prevent cables from twisting open.

Instructions for cutting off, insulating, crimping cables, installing and removing contacts:

**CUTTING OFF AND INSULATING CABLES .**

**REPAIRING A PLUG CONNECTION USING CONNECTORS .**

**INSTALLING AND REMOVING CONTACTS .**

**In event of visible damage:**

Expose cable at damaged areas. Cut through one cable after the other at an appropriate position and insulate cables no longer required in wiring harness with insulating tape, do not under any circumstances cut through both cables at the same time. Now, depending on the scope of work, unpin contacts either on airbag control unit/airbag module or on adapter plug. Cut off unpinned cables. Insulate cables remaining in wiring harness with insulating tape. Now pin in contacts of repair cable, assignment of repair cables is relevant. Lay repair lead in car parallel to existing airbag lead up to cutting point. Cut off excess length of repair lead. Twist open cables. Connect cables with connectors and shrink-fit hoses in Electronic Parts Catalogue (EPC), assignment of repair cables is relevant. Twist cables again, open length (twist) must not exceed 40 mm. Secure interface (shrink-fit hoses) with insulating tape to prevent cables from twisting open.

Instructions for cutting off, insulating, crimping cables, installing and removing contacts:

**CUTTING OFF AND INSULATING CABLES .**

**REPAIRING A PLUG CONNECTION USING CONNECTORS .**

**INSTALLING AND REMOVING CONTACTS .**

**61 31 068 REMOVING AND INSTALLING/REPLACING SWITCH FOR PASSENGER AIRBAG DEACTIVATION**

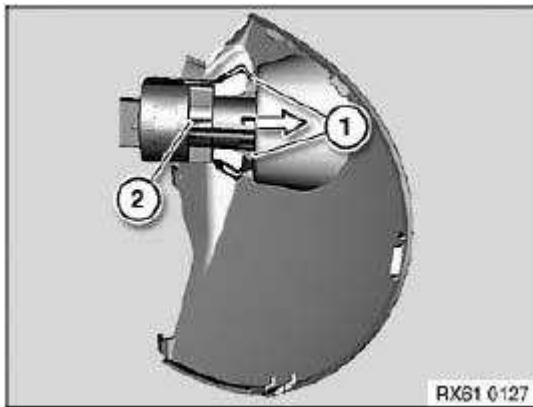
*Necessary preliminary tasks:*

- Disconnect battery negative lead
- Remove **SIDE COVER FROM COVER FOR AIR OUTLET VENT ON RIGHT**

Unlock catches (1) and remove switch for front passenger airbag deactivation (2) in direction of arrow out of cover for air outlet vent.

*Installation:*

Make sure switch for front passenger airbag deactivation (2) is correctly seated on cover for air outlet vent.



**Fig. 12: Identifying Catch And Passenger Airbag Deactivation**  
Courtesy of BMW OF NORTH AMERICA, INC.

## **72 12 ... DEACTIVATING FRONT PASSENGER AIRBAGS WITH KEY-OPERATED SWITCH**

**WARNING:** The responsibility for deactivation/activation rests with the customer.

**Depending on the occupation of the front passenger seat, the front passenger and side airbags must be (de-) activated in accordance with the Owner's Handbook.**

The passenger airbag can only be deactivated in accordance with the following instructions if the vehicle is equipped with a suitable key-operated switch!

The key-operated switch can be retrofitted if it is missing and has been ordered as an optional extra.

Key-operated switch:

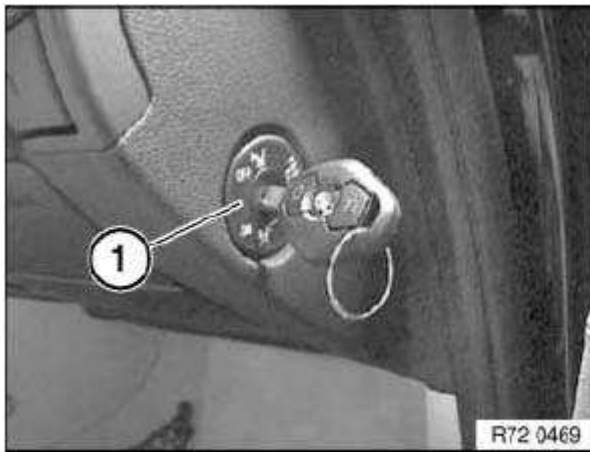
- Optional extra SA 5DA for MINI
- Optional extra SA 470 for BMW

The following airbags are deactivated simultaneously with the key-operated switch (1):

- Passenger airbag
- Side airbag (passenger side)
- If necessary, knee airbag in US models (passenger side)

The airbags can only be deactivated/reactivated while the vehicle is stationary and with the door open.

**IMPORTANT:** The head airbag remains active.



**Fig. 13: Identifying Key-Operated Switch**  
Courtesy of BMW OF NORTH AMERICA, INC.

### **Deactivation**

1. Turn key-operated switch with ignition key to "OFF" position.

Deactivatable airbags on passenger side out of operation.

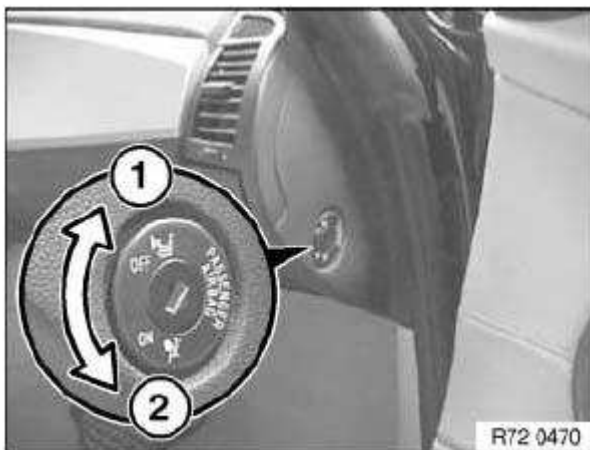
Head airbag on passenger side remains active.

All airbags on driver side remain active.

### **Activation**

2. Turn key-operated switch with ignition key to "ON" position.

All the airbags in the vehicle are activated and are triggered in appropriate situations.



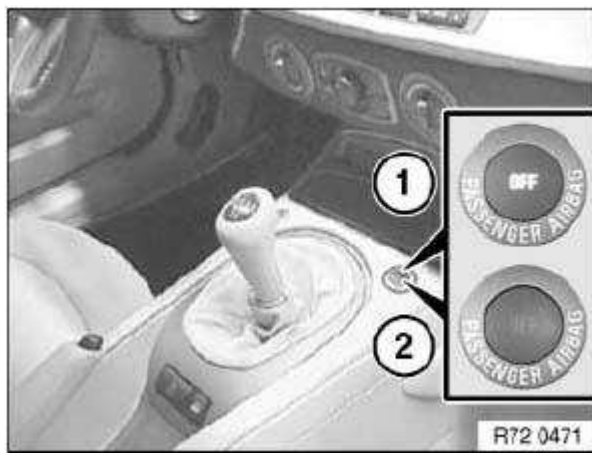
**Fig. 14: Identifying Ignition Key Position**

Courtesy of BMW OF NORTH AMERICA, INC.

### Warning lamp

When the ignition key is turned in the ignition lock, the function of the airbag system is checked and the warning lamp in the center console lights up for several seconds.

1. The warning lamp is permanently lit when the passenger airbags are deactivated
2. The warning lamp goes out after a few seconds when the passenger airbags are activated



**Fig. 15: Identifying Warning Lamp**

Courtesy of BMW OF NORTH AMERICA, INC.

### 72 12 ... NOTES ON SCRAPPING VEHICLES WITH GAS GENERATORS (AIRBAG SYSTEM)

The gas generator is a pyrotechnical component and is for the most part permanently mounted on the following components:

- Airbag module
  - Driver's/passenger airbag
  - Side airbag
  - Head airbag (e.g. AHPS2)
  - Knee airbag
- Belt tensioner
- Belt buckle tensioner
- Safety battery terminal
- Active head restraint

In accordance with accident prevention regulations and specific national regulations, gas generators must be rendered unusable before they are scrapped. This is necessary because pyrotechnical objects can cause injury if improperly activated (e.g. scrapping with flame cutters).

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With vehicles which are scheduled for scrapping, it is always essential prior to draining and further stripping work to ensure that all the gas generators **in the vehicle** are fired. The fired gas generators can then be scrapped together with the vehicle.

**Gas generators that have not fired constitute a hazard (also to the environment)!**

### **Firing failure:**

If correct firing is not possible, the relevant components must be removed and disposed of by special waste disposal companies!

Comply with **SAFETY REGULATIONS** for handling airbag system components.

If a firing operation has failed:

- Disconnect the firing device from the battery and
- Only approach the vehicle after a few minutes have elapsed

**The components of an airbag system must always be disposed of. Such components must not be sold on as used parts.**

### **Firing:**

Firing of the gas generators may only be carried out by expert personnel and under the supervision of a responsible person. Other standard accident prevention regulations (safety goggles, ear defenders etc.) must also be observed.

The gas generators must be fired from the outside in this vehicle which has been earmarked for scrapping. In this process

- the doors must be closed
- the rear lid must be open
- the side windows must be open and
- the sunroof must be open

To fire the gas generators, use the firing device with the appropriate cables (follow instructions).

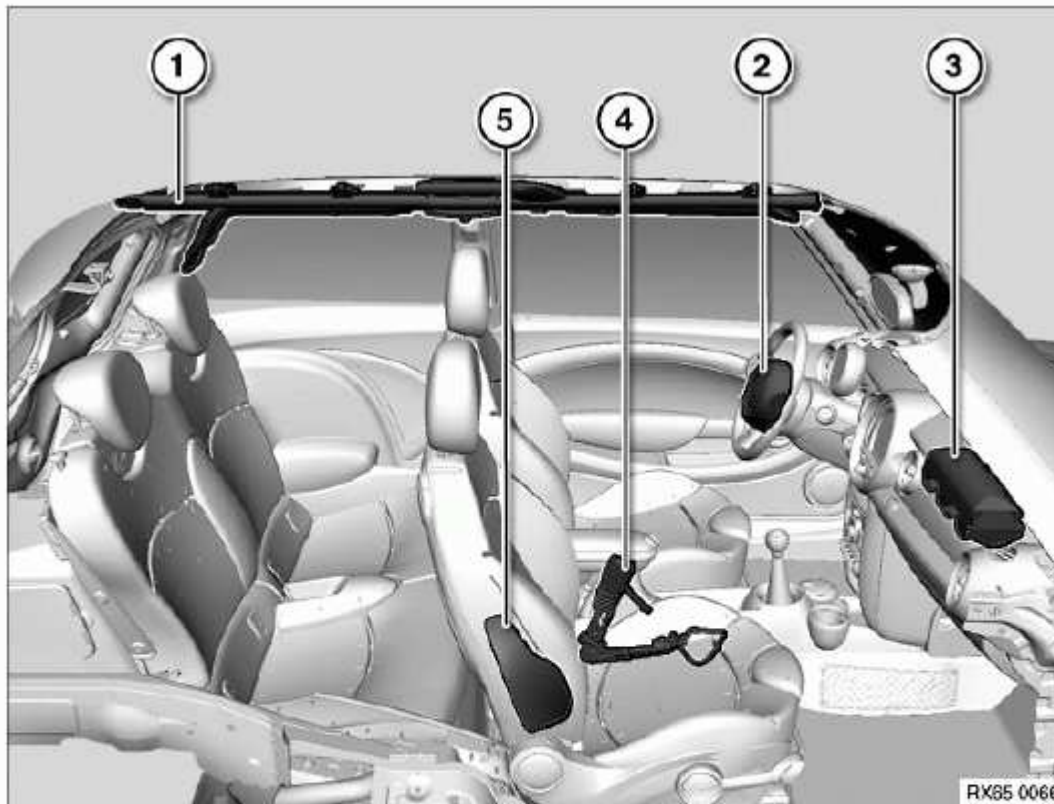
**WARNING:** Once gas generators have been fired, observe a ventilation period of 10 minutes with the doors opened. Only then is it permitted to continue work inside the vehicle.

**Wear protective goggles and protective gloves when handling a fired gas generator!**

**The burning of solid fuel will heat up the airbag unit - danger of burning hands!**

**Wash skin with water after contact with fired gas generators!**

## 72 12 ... OVERVIEW OF AIRBAG MODULES, AIRBAG CONTROL UNIT, BELT TENSIONERS



- |   |                                         |   |                                      |
|---|-----------------------------------------|---|--------------------------------------|
| 1 | Head airbag, left/right (*)             | 4 | Belt tensioner, front left/right (*) |
| 2 | Airbag unit, driver side (*)            | 5 | Side airbag, left / right (*)        |
| 3 | Airbag module, front passenger side (*) |   |                                      |

(\*) Components contain pyrotechnical devices

**Fig. 16: Overview Of Airbag Modules, Airbag Control Unit, Belt Tensioners**  
Courtesy of BMW OF NORTH AMERICA, INC.

### SAFETY PRECAUTIONS AND GENERAL INFORMATION

#### OVERVIEW OF SENSORS FOR AIRBAG SYSTEM

## 72 12 ... PROCEDURE AFTER AIRBAG TRIGGERING AS RESULT OF AN ACCIDENT

Check and/or replace following components after airbag triggering:

### Satellites (control unit + sensor)

- Components
  - Satellite, A-/B-pillar, left/right
  - Satellite, front door
  - Satellite, rear seat
  - Satellite, driver's/front passenger seat
  - Satellite, vehicle center
- Procedure
  - Read out fault memory
  - Disconnect battery and observe waiting period
  - Rectify faults
  - Reconnect battery and observe waiting period
  - Clear fault memory
  - Turn off ignition and wait at least 2 minutes (no consumers may be switched on during this period such as e.g. inside lights, radio, etc.)
  - Switch ignition on.
  - Clear fault memory and if necessary rectify faults

### Cables and plugs

- Components and procedure
  - Check cables and plugs for damage, replace if necessary.

### Belt system

- Components
  - Automatic safety belt tensioner
  - Belt buckle tensioner
  - Seatbelt height adjustment
- Procedure
  - Check components, replace if necessary

### Seats

- Components
  - Seat
  - Airbag module
  - Active head restraint
- Procedure

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- Check seats (function check of seat mechanism), replace if necessary
- Check seat screw/bolt connections
- Replace gas generator of active head restraint system

If the severity of the impact has not caused any other damage to the seat, only the triggered gas generator needs to be replaced.

External feature: The triggered head restraint is folded forwards and engaged.

The repair work can be carried out in the car with the rear panel removed. The entire system can be pushed back into its original position and the new gas generator installed.

The gas generator can be replaced up to 5 times.

- Replace airbag module and seat cover with padding

#### Driver's airbag

- Components
  - Airbag module
  - Steering wheel
  - Steering column (if damaged)
- Procedure
  - Check components, replace if necessary
  - Replace steering wheel

#### Passenger airbag

- Components
  - Airbag module
  - Instrument panel trim
  - Supporting tube (if damaged)
- Procedure
  - Check components, replace if necessary

#### Side airbag, front/rear

- Components
  - Airbag module
  - Door trim panel
  - Door in white
  - Seat

- Procedure
  - Check components, replace if necessary

#### Head airbag (AHPS)

- Components
  - Airbag module
  - Trim, A-pillar
  - Roofliner
  - Trim, B-pillar (if damaged)
  - Trim, C-pillar (if damaged)
  - Bodyshell
- Procedure
  - Check components, replace if necessary

#### Knee airbag

- Components
  - Panel (driver's side)
  - Lower section of glovebox
  - Active knee protector (driver's and passenger sides)
- Procedure
  - Check components, replace if necessary

#### Passive knee protector

- Components
  - Panel (driver's side)
  - Glovebox incl. knee protector (passenger side)
- Procedure
  - Check components for damage, replace if necessary
  - Check fastening elements

#### **72 12 ... UNLOCKING/LOCKING AIRBAG PLUG CONNECTIONS**

**WARNING:** READ AND COMPLY WITH safety regulations for handling airbag modules and pyrotechnical belt tensioners.

**IMPORTANT:** An airbag plug connection must be replaced if it is damaged.

Following versions of plug connections on airbag module/gas generator are possible:

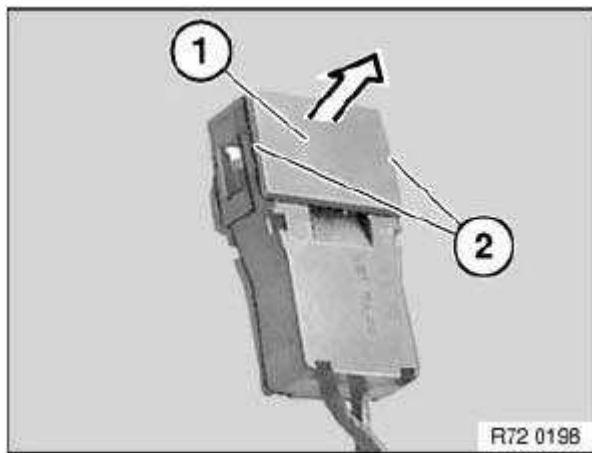
- Airbag plug connection on gas generator/airbag module is offset by 90°
- Airbag plug connection on gas generator/airbag module is straight (3 versions)

**Airbag plug connection on gas generator/airbag module offset by 90°:**

There are two ways of unlocking this airbag plug connection on the gas generator/airbag module:

Method 1:

Simultaneously pull cover (1) upwards at lugs on left and right (2).



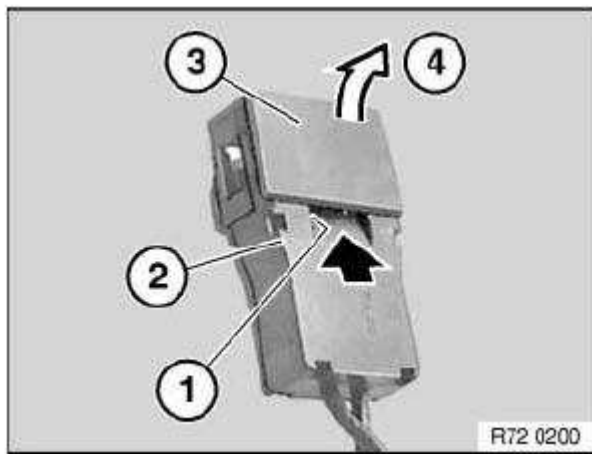
**Fig. 17: Pulling Cover**

**Courtesy of BMW OF NORTH AMERICA, INC.**

Method 2:

Insert a narrow screwdriver into recess (1) in housing (2).

Carefully prise cover (3) off (4).

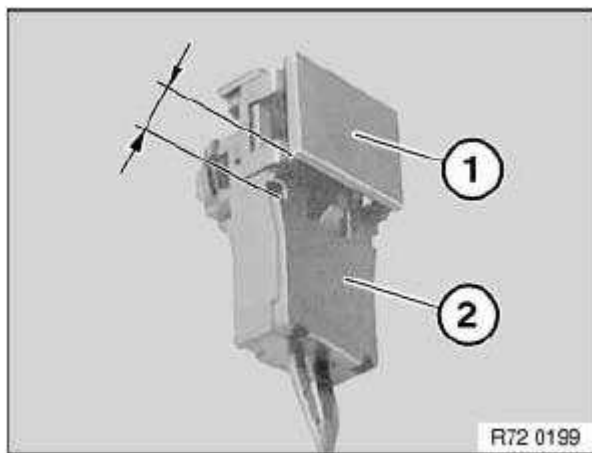


**Fig. 18: Opening Cover**

Courtesy of BMW OF NORTH AMERICA, INC.

Cover (1) is not positioned higher than housing (2).

The airbag plug connection is unlocked and can now be detached from the gas generator/airbag module.



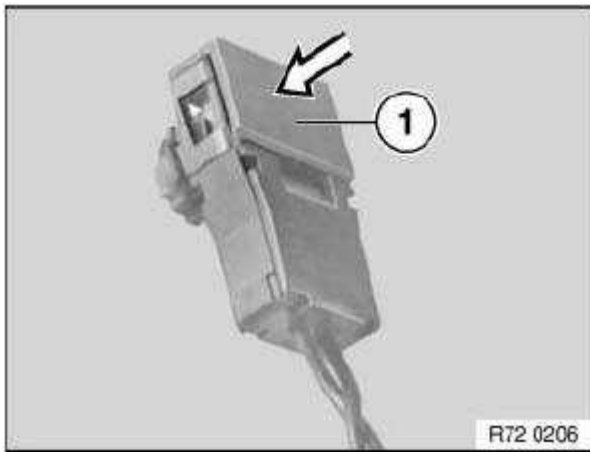
**Fig. 19: Identifying Cover And Housing**

Courtesy of BMW OF NORTH AMERICA, INC.

*Installation:*

After attaching airbag plug connection to gas generator/airbag module, press cover (1) downwards until it rests flat on housing.

Check that it catches properly.



**Fig. 20: Pressing Cover**

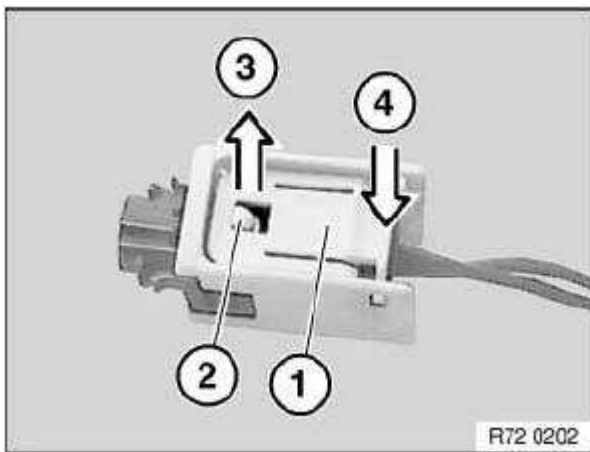
Courtesy of BMW OF NORTH AMERICA, INC.

**Airbag plug connection on gas generator/airbag module is straight (2 versions)**

Version 1:

Press locking/unlocking plate (1) at edge (4).

Locking/unlocking plate (1) snaps upwards at opposite edge (3) and releases detent lug (2).



**Fig. 21: Pressing Locking/Unlocking Plate**

Courtesy of BMW OF NORTH AMERICA, INC.

The airbag plug connection is unlocked and can now be detached from the gas generator/airbag module.

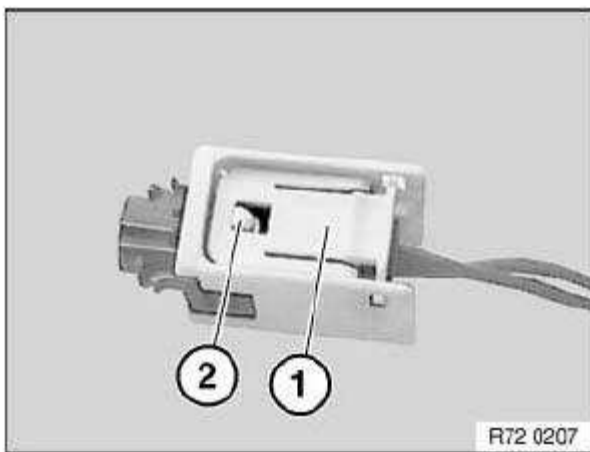


**Fig. 22: Identifying Airbag Plug Connection**  
Courtesy of BMW OF NORTH AMERICA, INC.

*Installation:*

After attaching airbag plug connection to gas generator/airbag module, check whether detent lug (2) is visible in opening of locking/unlocking plate (1).

Only if the detent lug (2) is visible will the airbag plug connection gas generator/airbag module be correctly engaged.



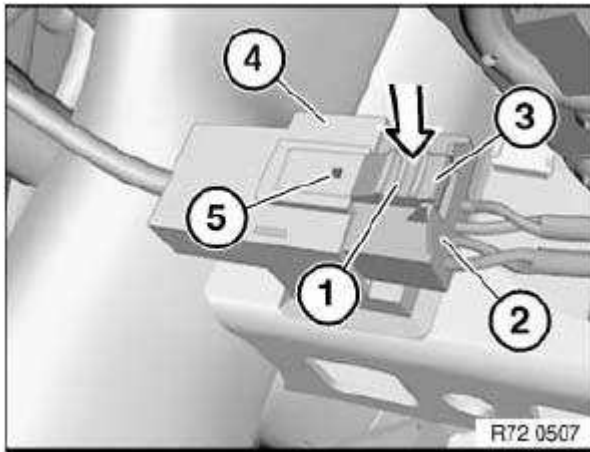
**Fig. 23: Identifying Locking/Unlocking Plate And Detent Lug**  
Courtesy of BMW OF NORTH AMERICA, INC.

Version 2:

Press locking/unlocking plate (1) on edge (3) and pull plug (2) out of plug housing (4).

*Installation:*

Only if the detent lug is visible in opening (5) will the gas generator/airbag module plug connection be correctly engaged.



**Fig. 24: Pressing Locking/Unlocking Plate**  
Courtesy of BMW OF NORTH AMERICA, INC.

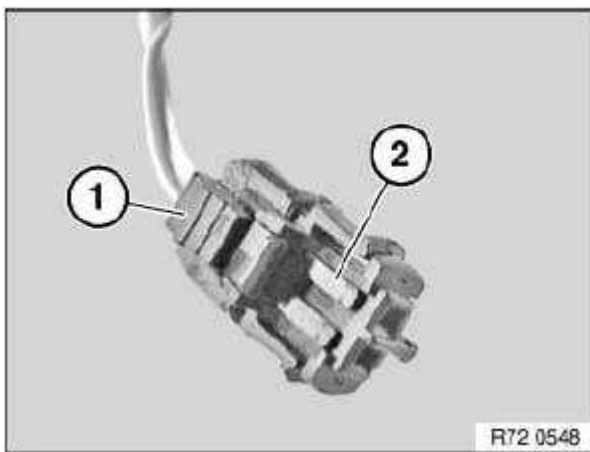
Version 3:

Press lock button (1) and pull out plug (2) up to initial engagement position.

Detach plug (2) from firing pellet.

*Installation:*

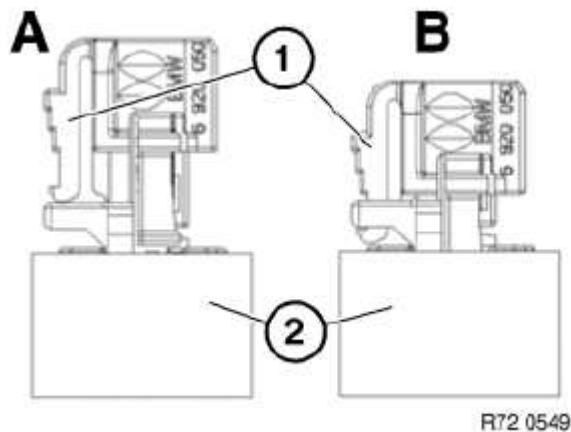
Insert plug connection in initial engagement position in gas generator/airbag module and engage in final engagement position.



**Fig. 25: Identifying Plug And Lock Button**  
Courtesy of BMW OF NORTH AMERICA, INC.

Illustration of version 3 with gas generator:

- A. Initial engagement position
- B. Final engagement position
- 1. Lock button
- 2. Gas generator



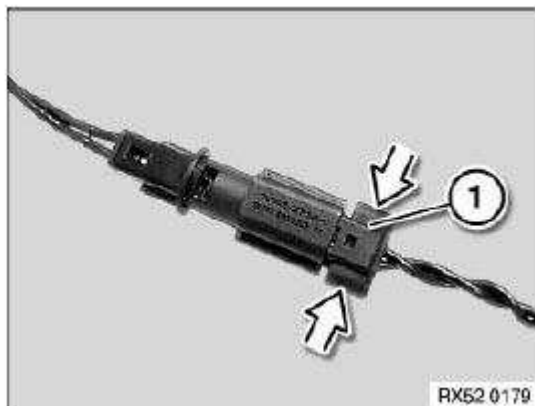
**Fig. 26: Identifying Lock Button And Gas Generator**  
Courtesy of BMW OF NORTH AMERICA, INC.

Version 4 - Crash-active head restraint:

Press locking clip at edge and disconnect plug (1).

*Installation:*

Check for correct engagement.



**Fig. 27: Locating Plug**  
Courtesy of BMW OF NORTH AMERICA, INC.

## **72 12 000 REMOVING AND INSTALLING/REPLACING AIRBAG MODULE ON PASSENGER SIDE**

**WARNING:** Read and comply with **SAFETY REGULATIONS** for handling airbag modules and pyrotechnical belt tensioners.

**Incorrect handling can activate airbag and cause injury.**

*Necessary preliminary tasks:*

- Remove **INSTRUMENT PANEL UPPER SECTION TRIM**

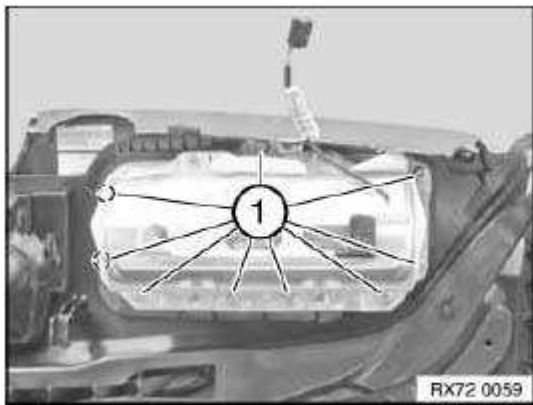
Unscrew nuts (1).

*Installation:*

Replace nuts.

Tightening torque: 72 12 01AZ . See **AIRBAG GAS GENERATOR, UNIT FOR PASSENGER SIDE** for specs.

Remove airbag module from instrument panel.



**Fig. 28: Identifying Nuts**

Courtesy of BMW OF NORTH AMERICA, INC.

## **72 12 050 REMOVING AND INSTALLING/REPLACING SIDE AIRBAG IN FRONT SEAT**

**WARNING:** Read and comply with **SAFETY REGULATIONS** for handling airbag modules and pyrotechnical belt tensioners.

**Incorrect handling may trigger the pyrotechnical seatbelt tensioner or side airbag and thereby cause injuries.**

Switch off ignition!

*Necessary preliminary tasks:*

- Remove **FRONT SEAT**
- If necessary, remove **REAR PANEL**
- Partially remove **BACKREST COVER**

Cut open cable tie (1).

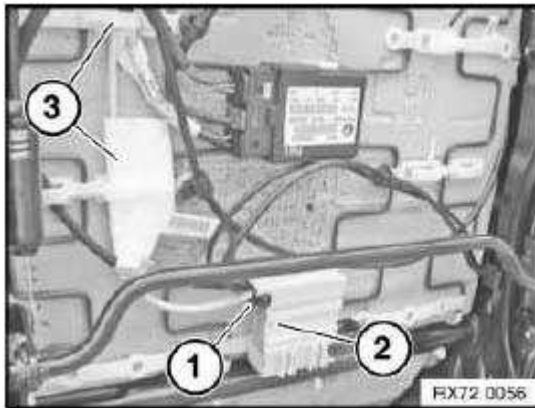
Unlock plug (2) and pull out of plug housing.

*Installation:*

Replace defective cable tie.

Plugs are coded against incorrect installation.

Feed wiring harness out of holders (3).



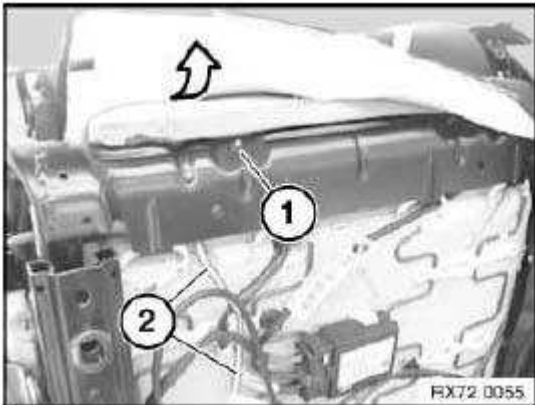
**Fig. 29: Identifying Cable Tie And Plug**  
Courtesy of BMW OF NORTH AMERICA, INC.

**WARNING:** Feed wiring harness carefully through seat and backrest frames owing to sharpness of edges.

Disengage seat cover welt from seat frame.

Unclip cable holder (1).

Feed wiring harness (2) out of seat and backrest frames.



**Fig. 30: Identifying Cable Holder And Wiring Harness**  
Courtesy of BMW OF NORTH AMERICA, INC.

Disengage welt on airbag side from backrest frame.

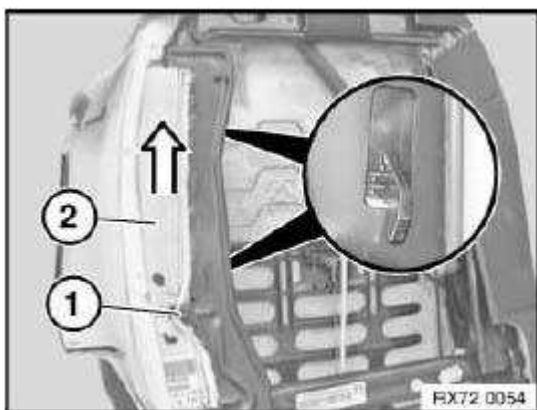
Release screw (1).

Tightening torque: 72 12 06AZ . See **AIRBAG GAS GENERATOR, UNIT FOR PASSENGER SIDE** for specs.

Disengage airbag module in cover pocket (2) from backrest frame.

*Installation:*

Cover pocket (2) must not be trapped between suspension hooks and backrest frame.



**Fig. 31: Identifying Cover Pocket And Screw**  
Courtesy of BMW OF NORTH AMERICA, INC.

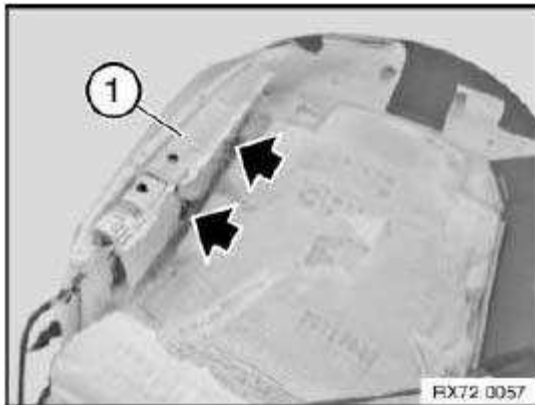
**NOTE:** Shown removed here for purposes of clarity.

Pull airbag module downwards out of cover pockets (1).

*Installation:*

Slide airbag module with suspension hooks up to opening in cover pocket.

Cover pocket (1) must not be damaged.



**Fig. 32: Identifying Cover Pocket**

Courtesy of BMW OF NORTH AMERICA, INC.

**72 12 060 REMOVING AND INSTALLING/REPLACING LEFT OR RIGHT HEAD AIRBAG**

**WARNING:** Read and comply with SAFETY REGULATIONS for handling airbag modules and pyrotechnical belt tensioners.

**Improper handling can lead to triggering of the pyrotechnical seat belt tensioner or side airbag, resulting in injuries.**

Switch off ignition!

*Necessary preliminary tasks:*

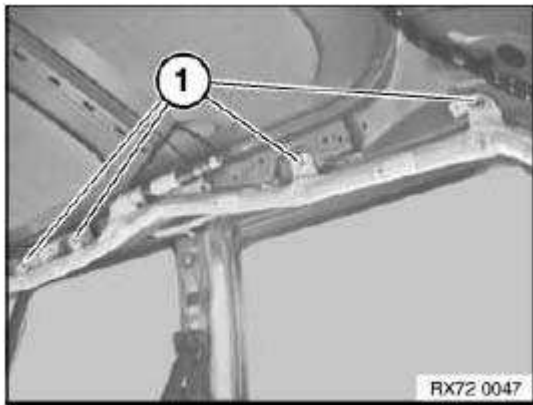
- Remove **ROOFLINER**
- Disconnect negative battery cable

Release screws (1) for folding pack holder.

Tightening torque: 72 12 05AZ . See **AIRBAG GAS GENERATOR, UNIT FOR PASSENGER SIDE** for specs.

*Installation:*

Replace Torx screws and insert with Loctite.



**Fig. 33: Identifying Screws**

Courtesy of BMW OF NORTH AMERICA, INC.

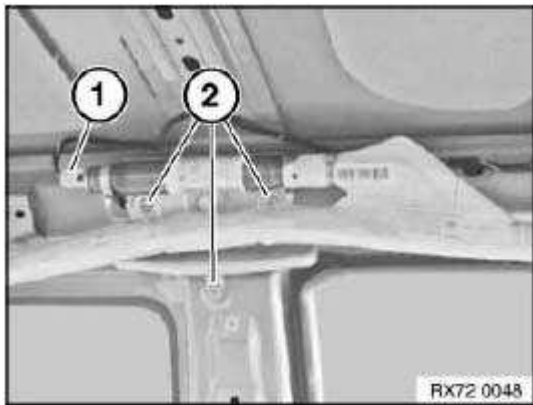
Unlock **PLUG CONNECTION** (1) and disconnect.

Release screws (2) and remove holder with gas generator.

*Installation:*

Replace Torx screws and insert with Loctite.

Gas generator is coded against incorrect installation.



**Fig. 34: Identifying Plug Connection And Screws**

Courtesy of BMW OF NORTH AMERICA, INC.

**IMPORTANT:** Make sure that folding pack cannot be installed twisted.

**Folding pack must not be damaged.**

**Holders of folding pack must not be damaged.**

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### *Installation:*

Secure hole (1) of folding pack with clip from **C-PILLAR TRIM** to body.



**Fig. 35: Identifying Hole**

Courtesy of BMW OF NORTH AMERICA, INC.