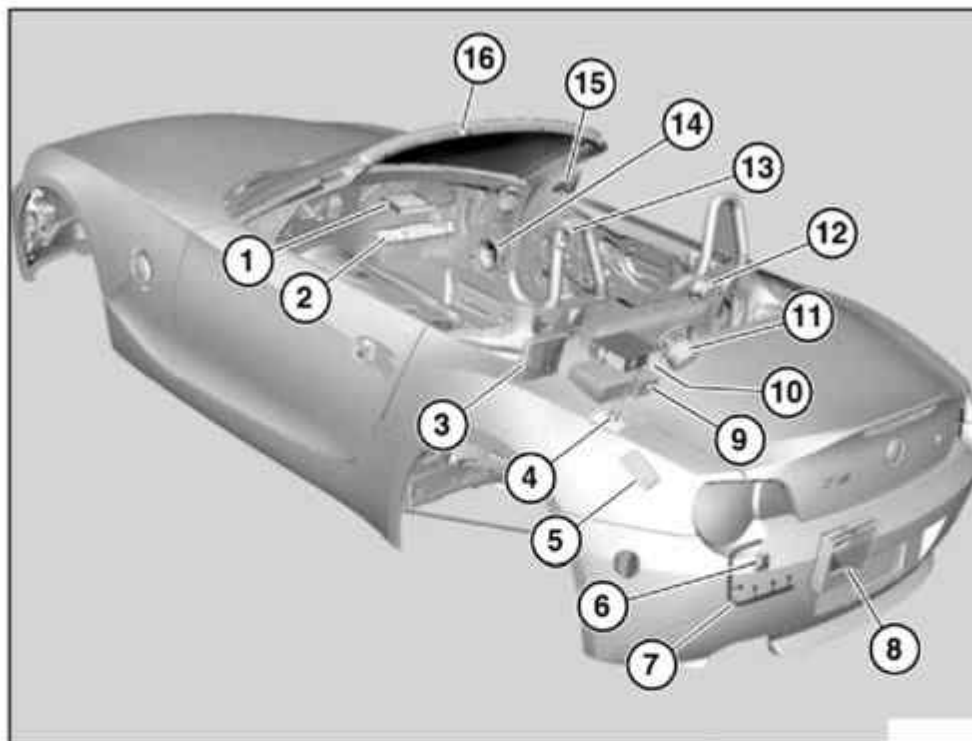


2003-05 ACCESSORIES & EQUIPMENT

Audio, Navigation & Anti-Theft Systems - Repair Instructions - Z4

MONO RADIO

65 00.. OVERVIEW OF RADIO AND SPECIAL EQUIPMENT



- | | | | |
|---|-----------------------------------|----|---|
| 1 | Central information display | 9 | CD changer |
| 2 | Radio receiver | 10 | Navigation computer |
| 3 | Video module for on-board monitor | 11 | Rear speaker (woofer, in side trim panel) |
| 4 | Rubber antenna | 12 | Mid-range speaker, side trim |
| 5 | Antenna amplifier, diversity | 13 | Mid-range speaker, door trim |
| 6 | Antenna amplifier FM | 14 | Bass speaker, A-pillar |
| 7 | Bumper antenna | 15 | Treble speaker |
| 8 | Amplifier | 16 | Antenna (GPS) |

G03298604

Fig. 1: Overview Of Radio And Special Equipment
 Courtesy of BMW OF NORTH AMERICA, INC.

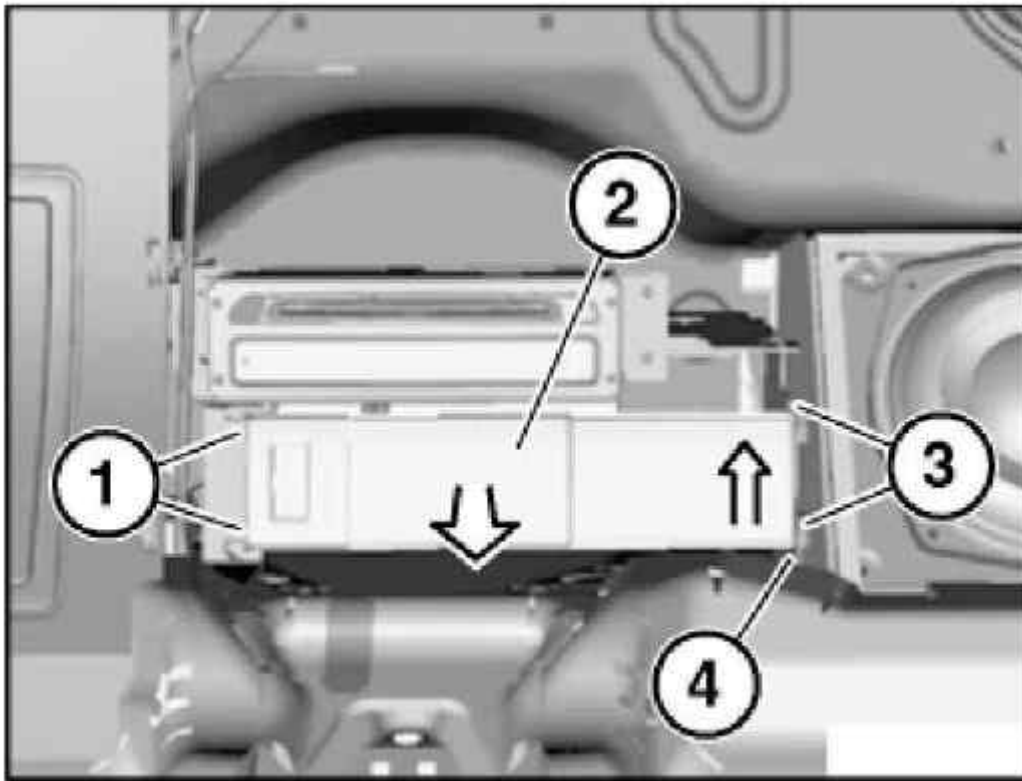
65 11 070 REMOVING AND INSTALLING/REPLACING CD CHANGER

Necessary preliminary tasks:

- Remove rear storage compartment. Refer to **51 16 240 REMOVING AND INSTALLING REAR STORAGE COMPARTMENT**.

NOTE: For purposes of clarity, the rear left side trim is shown removed.

Release screws (1).



G03298695

Fig. 2: Removing CD Changer
Courtesy of BMW OF NORTH AMERICA, INC.

Lift CD changer (2) out of mountings (3) and remove in direction of arrow from CD changer holder (4).

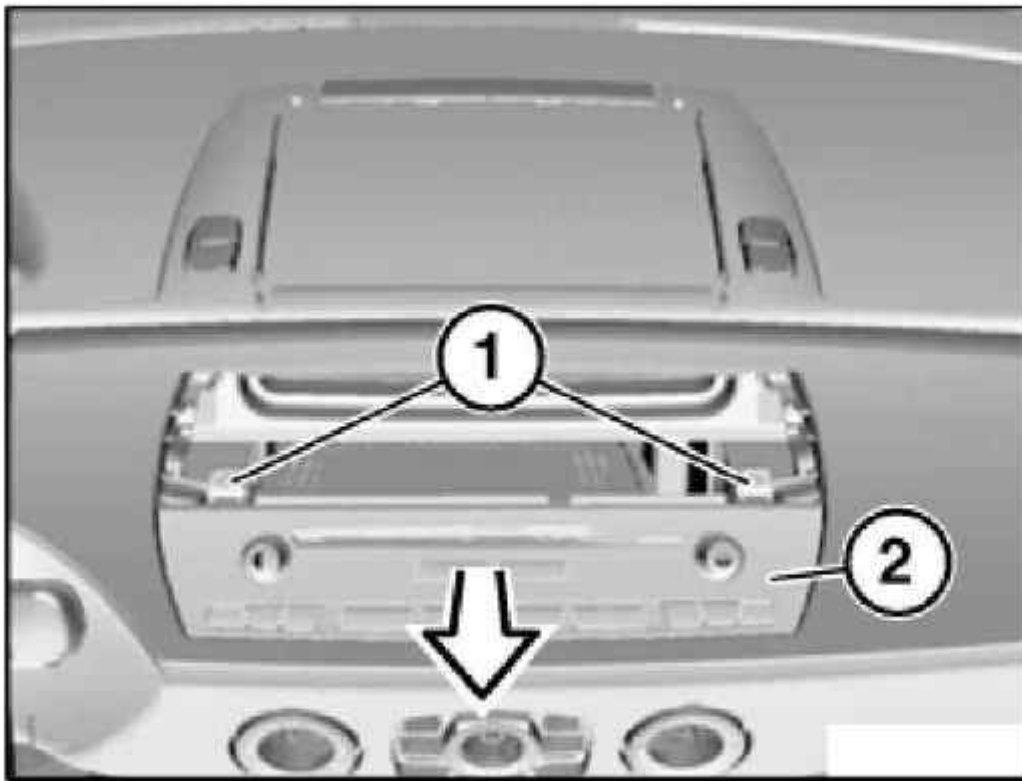
Unlock plug connections behind and disconnect.

Remove CD changer (2).

Necessary preliminary tasks:

- Remove center fresh air grill, refer to **64 22 161 REMOVING AND INSTALLING/REPLACING CENTER FRESH-AIR GRILL**

Release screws (1).



G03298696

Fig. 3: Removing Radio Receiver

Courtesy of BMW OF NORTH AMERICA, INC.

Pull out radio receiver (2) in direction of arrow, unlock and disconnect associated plug connections.

Remove radio receiver (2).

Replacement:

Carry out coding/programming.

Observe following IDC specifications:

- Programming
- Coding
- If necessary, car & key memory
- CD "CIP"



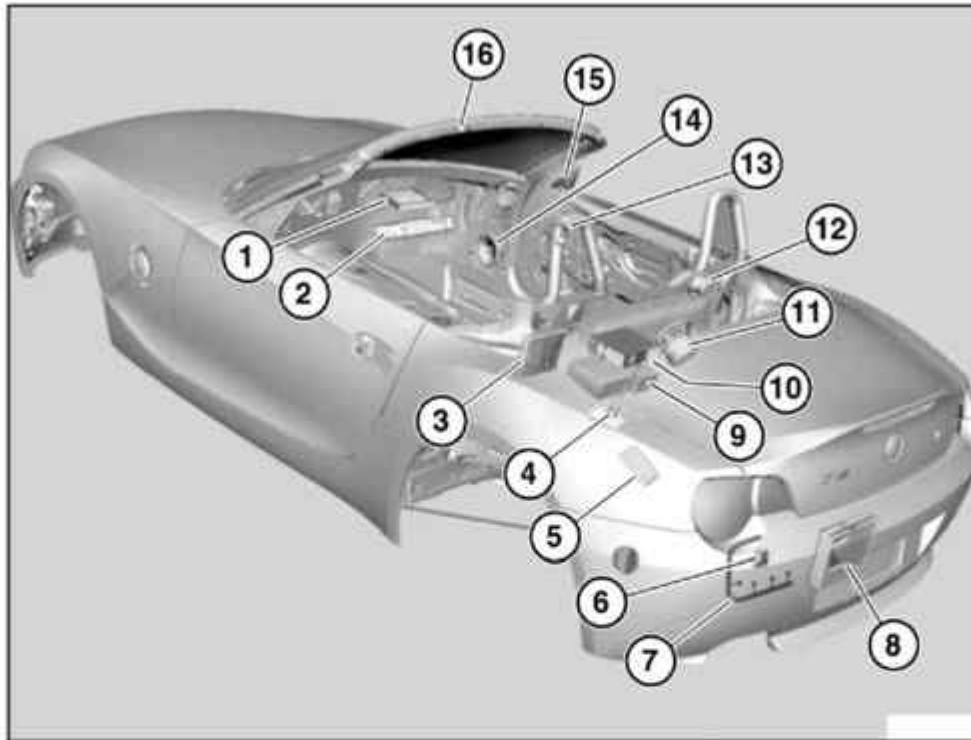
G03298697

Fig. 4: Identifying DIS

Courtesy of BMW OF NORTH AMERICA, INC.

STEREO RADIO AMPLIFIER

65 00.. OVERVIEW OF RADIO AND SPECIAL EQUIPMENT



- | | | | |
|---|-----------------------------------|----|---|
| 1 | Central information display | 9 | CD changer |
| 2 | Radio receiver | 10 | Navigation computer |
| 3 | Video module for on-board monitor | 11 | Rear speaker (woofer, in side trim panel) |
| 4 | Rubber antenna | 12 | Mid-range speaker, side trim |
| 5 | Antenna amplifier, diversity | 13 | Mid-range speaker, door trim |
| 6 | Antenna amplifier FM | 14 | Bass speaker, A-pillar |
| 7 | Bumper antenna | 15 | Treble speaker |
| 8 | Amplifier | 16 | Antenna (GPS) |

G03298608

Fig. 5: Overview Of Radio And Special Equipment
Courtesy of BMW OF NORTH AMERICA, INC.

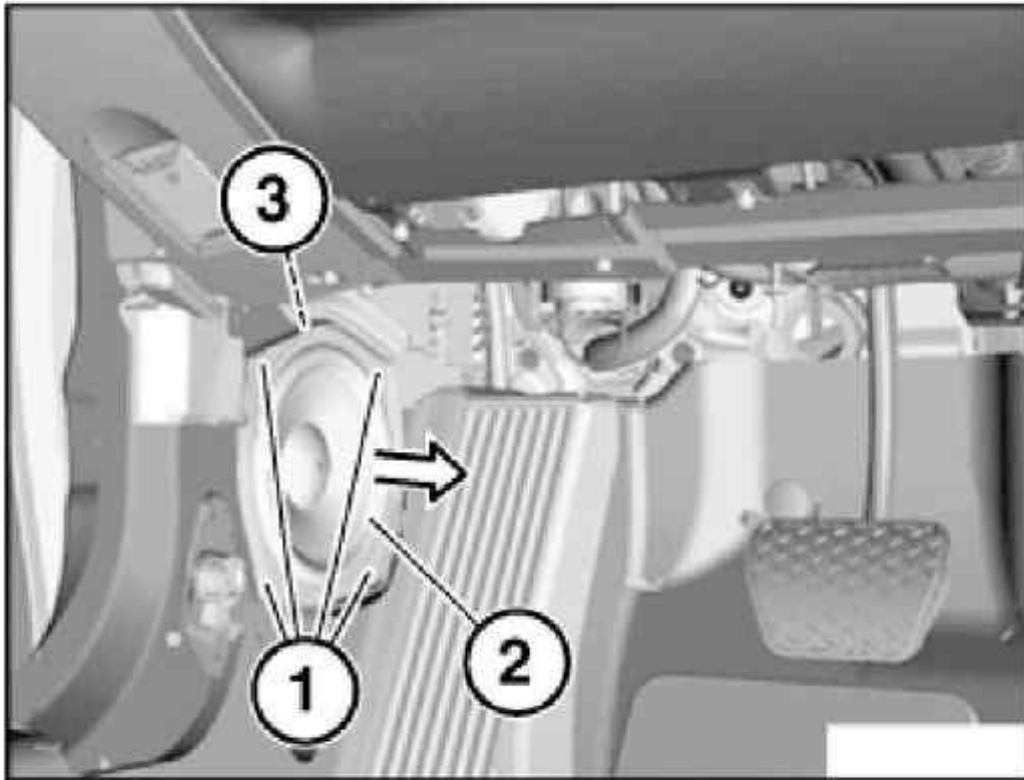
65 12 000 REMOVING AND INSTALLING/REPLACING SPEAKER (IN SIDE TRIM)

Necessary preliminary tasks:

- Remove footwell side trim panel on A-pillar, refer to **51 43 070 REMOVING AND INSTALLING/REPLACING SIDE TRIM PANEL, FOOTWELL, ON A-PILLAR, LEFT** or **51 43 075 REMOVING AND INSTALLING/REPLACING SIDE TRIM PANEL, FOOTWELL, ON A-PILLAR, RIGHT**

Release screws (1) and remove speaker (2) in direction of arrow.

Disconnect upper plug connection (3) and remove speaker (2).



G03298699

Fig. 6: Removing Speaker

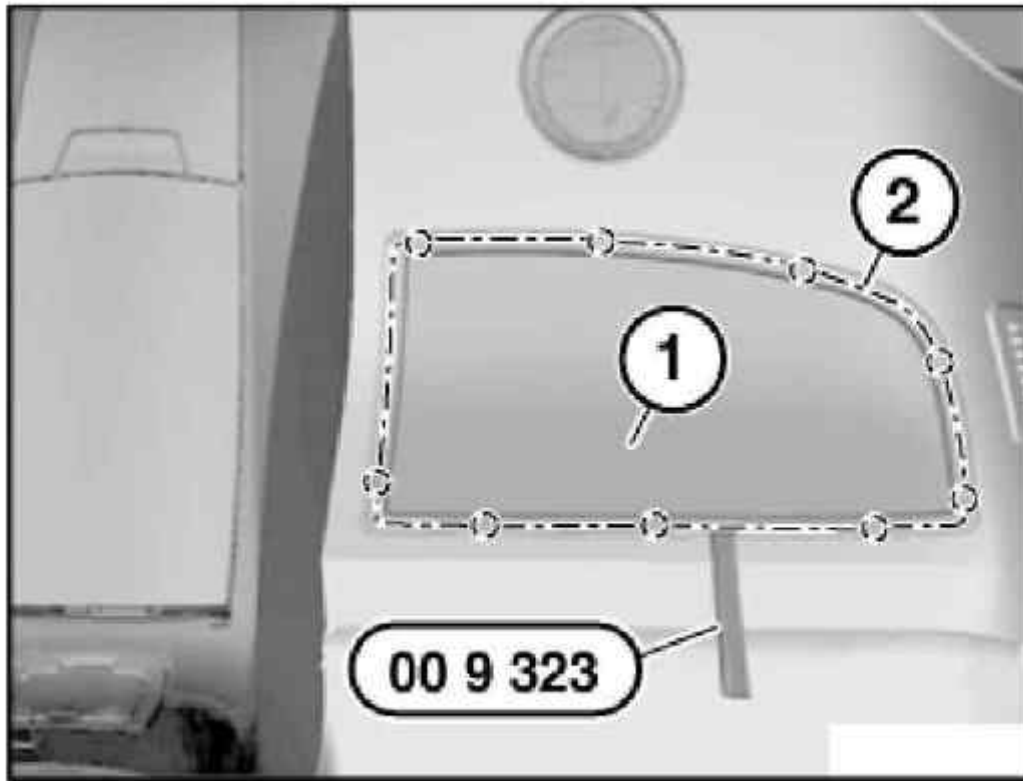
Courtesy of BMW OF NORTH AMERICA, INC.

65 12 020 REMOVING AND INSTALLING/REPLACING SPEAKER (WOOFER IN SIDE TRIM PANEL)

Special tools required:

- 00 9 323

Lever out rear speaker trim (1) with special tool 00 9 323 in area (2).

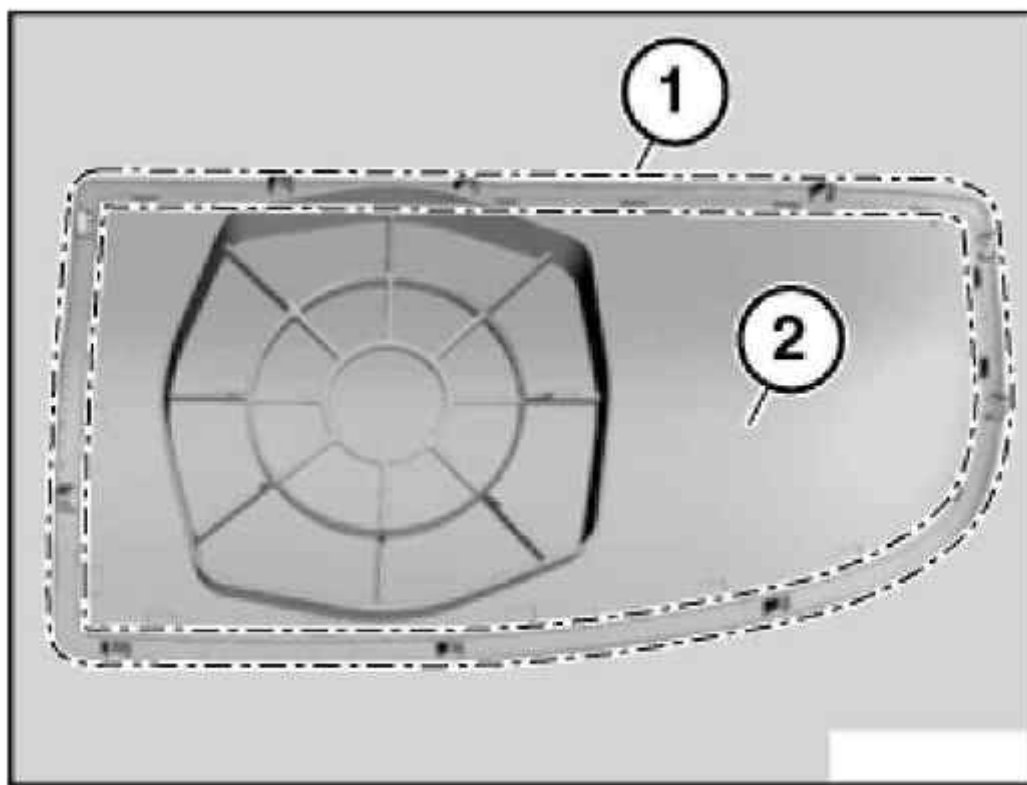


G03298700

Fig. 7: Removing Out Rear Speaker Trim
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Catches in area (1) must not be damaged.

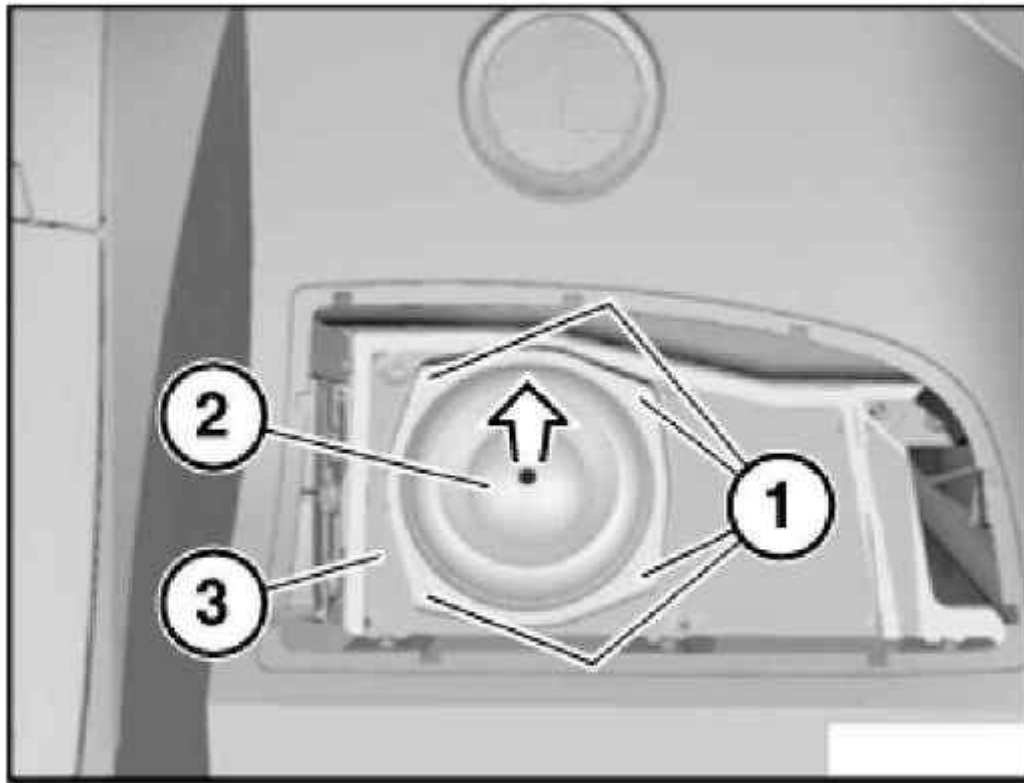


G03298701

Fig. 8: Identifying Catches And Rear Speaker Trim
Courtesy of BMW OF NORTH AMERICA, INC.

Make sure rear speaker trim (2) is correctly seated.

Release screws (1).



G03298702

Fig. 9: Removing Rear Speaker

Courtesy of BMW OF NORTH AMERICA, INC.

Remove rear speaker (2) in direction of arrow slightly from plate (3).

Unlock plug connection behind and disconnect.

Remove rear speaker (2).

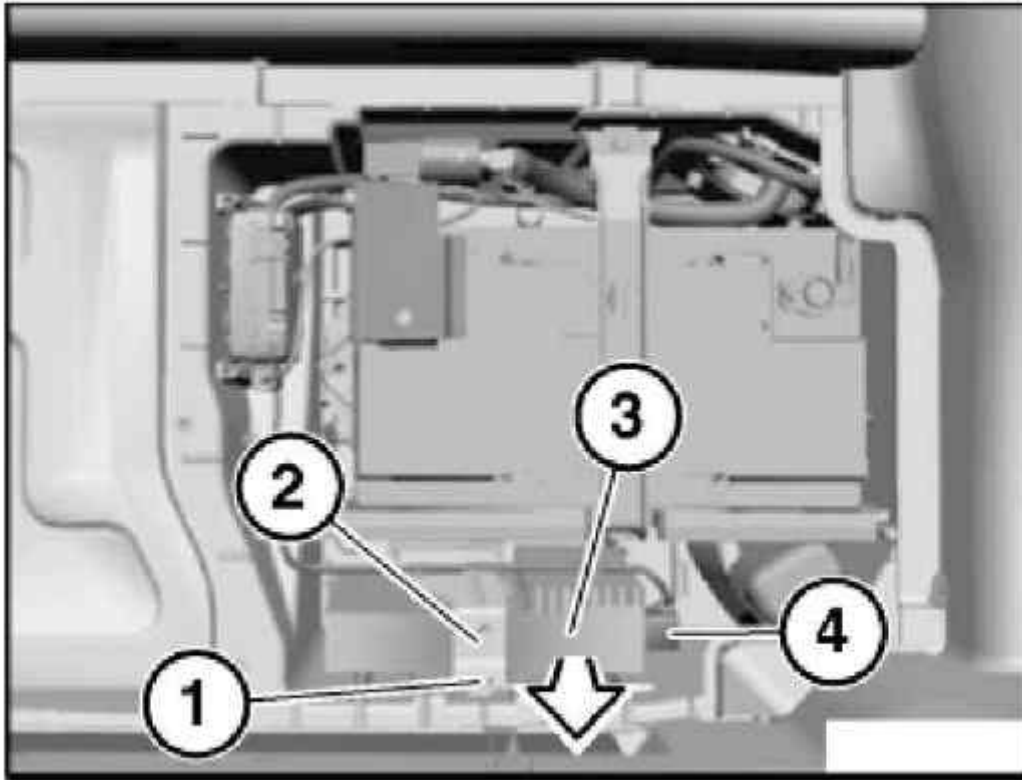
65 12 070 REMOVING AND INSTALLING/REPLACING AMPLIFIER (HI-FI SYSTEM)

Necessary preliminary tasks:

- Take out trunk floor trim panel. Refer to **51 47 101 REMOVING AND INSTALLING/REPLACING LUGGAGE COMPARTMENT FLOOR TRIM(S)** .
- Disconnect and cover battery negative lead. Refer to **12 00... INSTRUCTIONS FOR DISCONNECTING AND CONNECTING BATTERY** .

NOTE: If necessary, remove tool bag.

Unscrew bolt (1).



G03298703

Fig. 10: Removing Amplifier

Courtesy of BMW OF NORTH AMERICA, INC.

Take off holder (2).

Raise amplifier (3) a little.

Unfasten plug connection (4) and disconnect.

Remove amplifier (3) in direction of arrow.

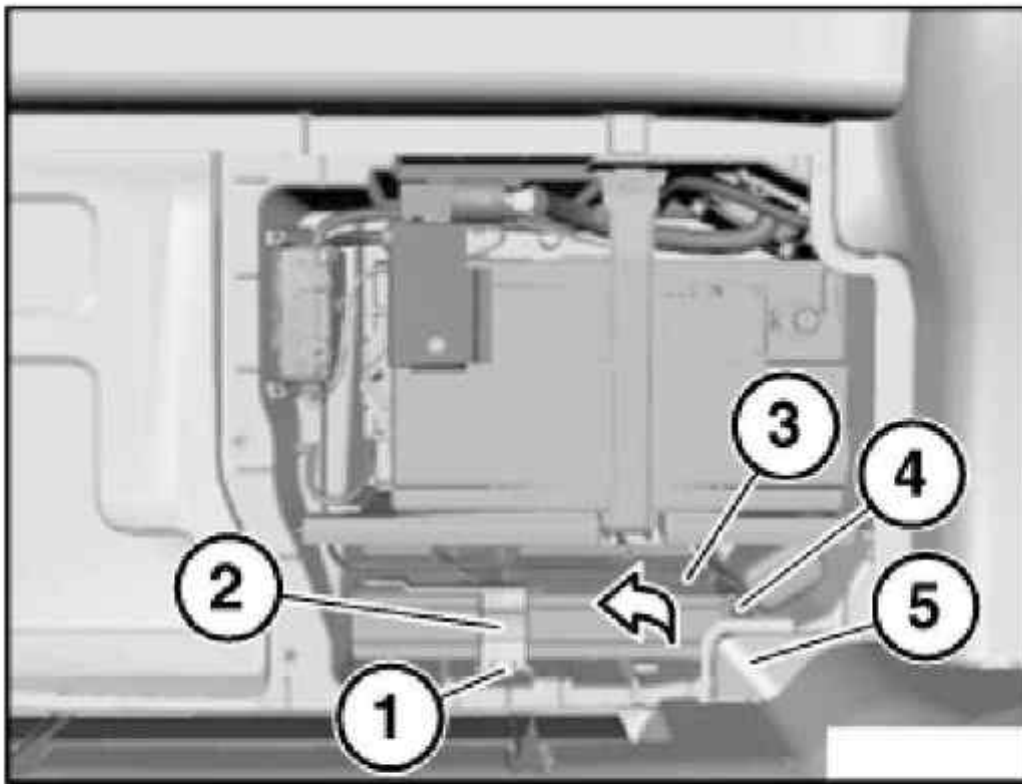
65 12 072 REMOVING AND INSTALLING (REPLACING) AMPLIFIER (TOP HI-FI SYSTEM)

Necessary preliminary tasks:

- Take out trunk floor trim panel. Refer to **51 47 101 REMOVING AND INSTALLING/REPLACING LUGGAGE COMPARTMENT FLOOR TRIM(S)** .
- Disconnect and cover battery negative lead. Refer to **12 00 ... INSTRUCTIONS FOR DISCONNECTING AND CONNECTING BATTERY** .

NOTE: **If necessary, remove tool bag.**

Unscrew bolt (1).



G03298704

Fig. 11: Removing Amplifier

Courtesy of BMW OF NORTH AMERICA, INC.

Take off holder (2).

Raise right amplifier (3) a little.

Unfasten plug connection (4) and disconnect.

Guide amplifier (3) in direction of arrow past loading sill cover (5) and remove.

Replacement:

Carry out coding/programming.

Observe following IDC specifications:

- Programming
- Coding
- If necessary, car & key memory
- CD "CIP"



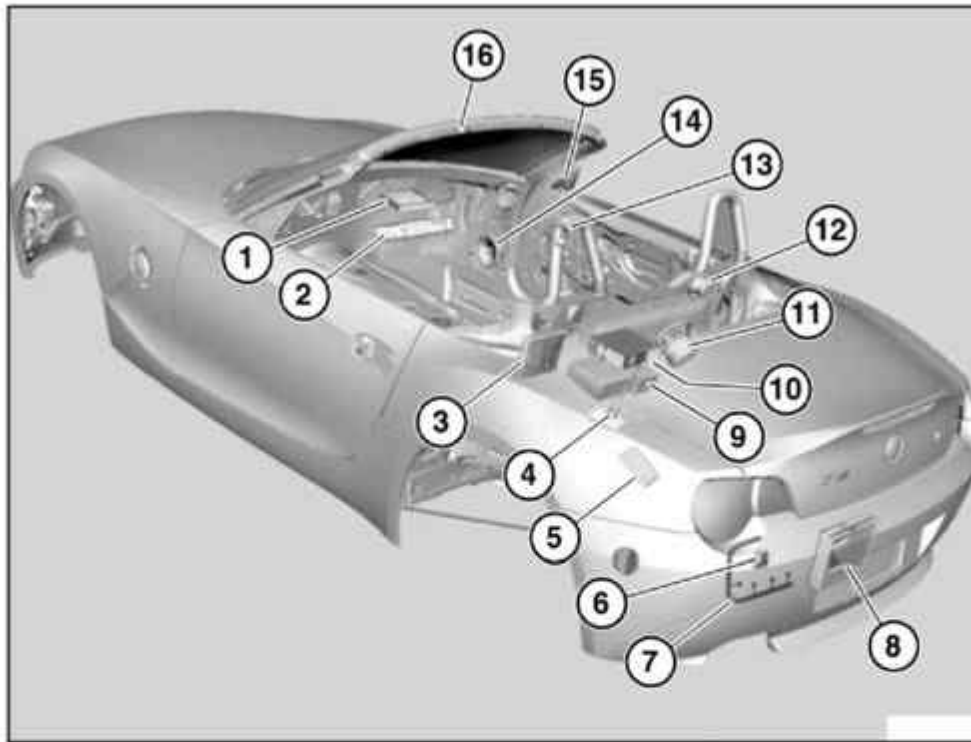
G03298705

Fig. 12: Identifying DIS

Courtesy of BMW OF NORTH AMERICA, INC.

SPEAKER AND COVER

65 00.. OVERVIEW OF RADIO AND SPECIAL EQUIPMENT



- | | | | |
|---|-----------------------------------|----|---|
| 1 | Central information display | 9 | CD changer |
| 2 | Radio receiver | 10 | Navigation computer |
| 3 | Video module for on-board monitor | 11 | Rear speaker (woofer, in side trim panel) |
| 4 | Rubber antenna | 12 | Mid-range speaker, side trim |
| 5 | Antenna amplifier, diversity | 13 | Mid-range speaker, door trim |
| 6 | Antenna amplifier FM | 14 | Bass speaker, A-pillar |
| 7 | Bumper antenna | 15 | Treble speaker |
| 8 | Amplifier | 16 | Antenna (GPS) |

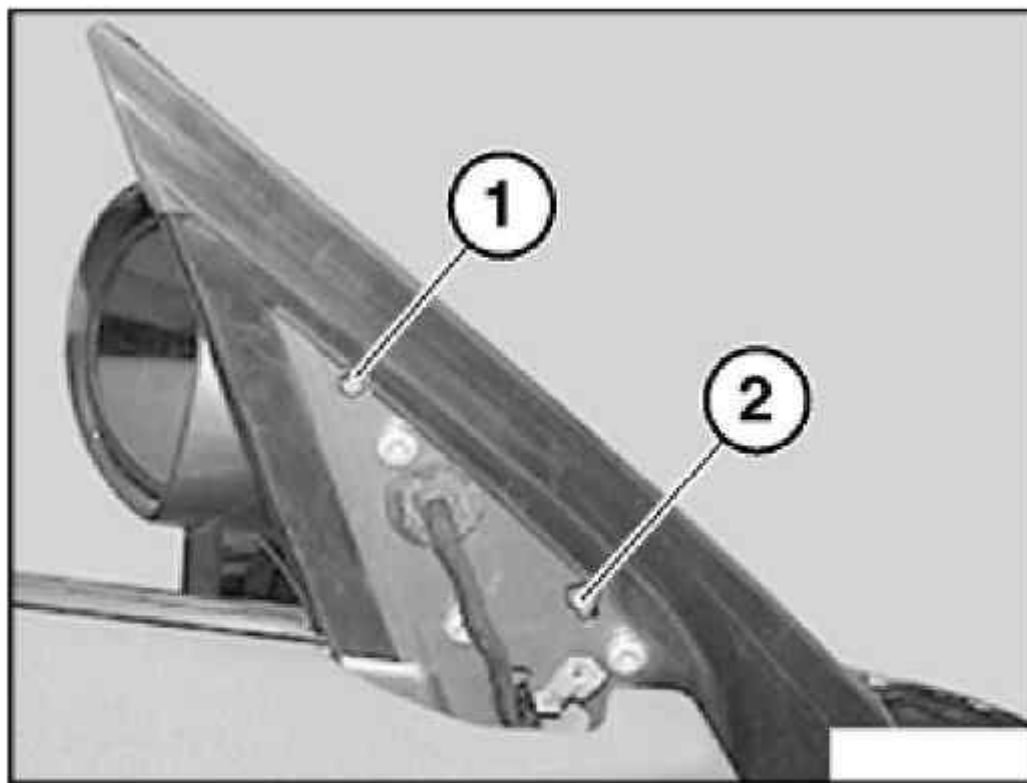
G03298706

Fig. 13: Overview Of Radio And Special Equipment

Courtesy of BMW OF NORTH AMERICA, INC.

65 13 050 REMOVING AND INSTALLING/REPLACING SPEAKER (TREBLE SPEAKER IN MIRROR TRIANGLE TRIM)

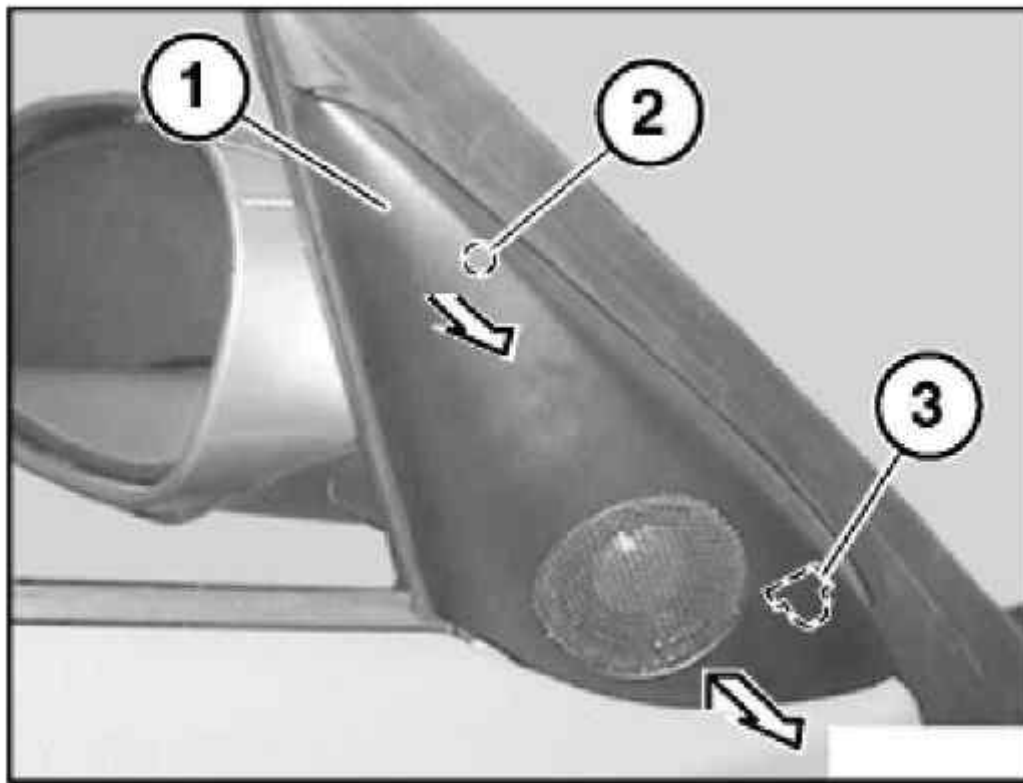
NOTE: Mirror triangle trim is clipped into place at top (1) and secured at bottom via a vertical guide (2).



G03298707

Fig. 14: View Of Mirror Triangle Trim
Courtesy of BMW OF NORTH AMERICA, INC.

Unclip mirror triangle trim (1) at top out of catch (2) and feed out at bottom in direction of arrow from mounting (3).



G03298708

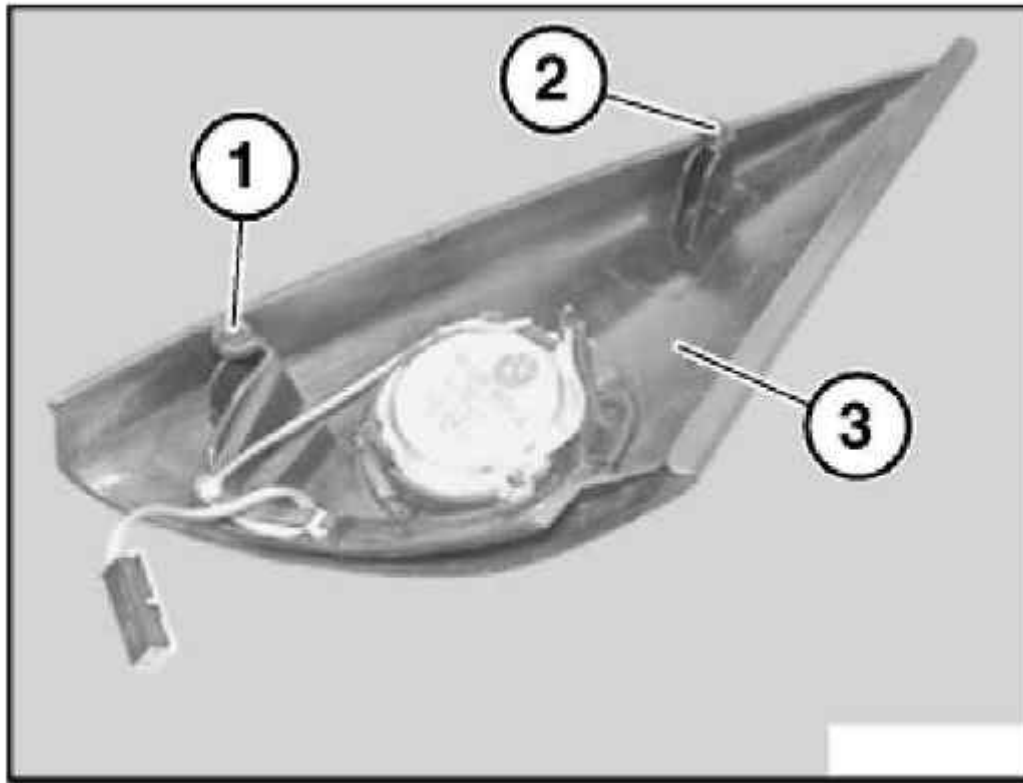
Fig. 15: Removing Mirror Triangle Trim
Courtesy of BMW OF NORTH AMERICA, INC.

Unlock plug connection underneath and disconnect.

Remove mirror triangle trim (1).

Installation:

Guide (1) and clip (2) of mirror triangle trim (3) must not be damaged.



G03298709

Fig. 16: Locating Guide And Clip Of Mirror Triangle Trim
Courtesy of BMW OF NORTH AMERICA, INC.

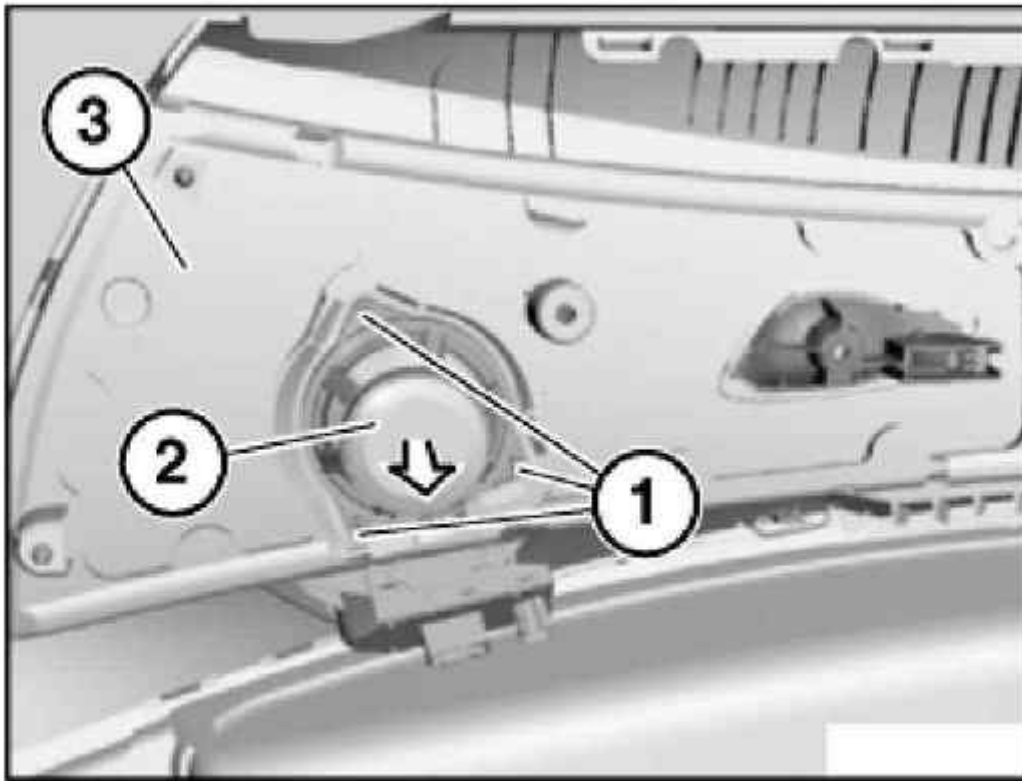
65 13 070 REMOVING AND INSTALLING/REPLACING SPEAKER (MID-RANGE SPEAKER IN DOOR TRIM PANEL)

Necessary preliminary tasks:

- Remove front door trim panel. Refer to **51 41 000 REMOVING AND INSTALLING LEFT OR RIGHT FRONT DOOR TRIM PANEL** .

NOTE: **Secure speaker against falling out.**

Release nuts (1) and remove speaker (2) in direction of arrow from door trim (3).



G03298710

Fig. 17: Removing Speaker

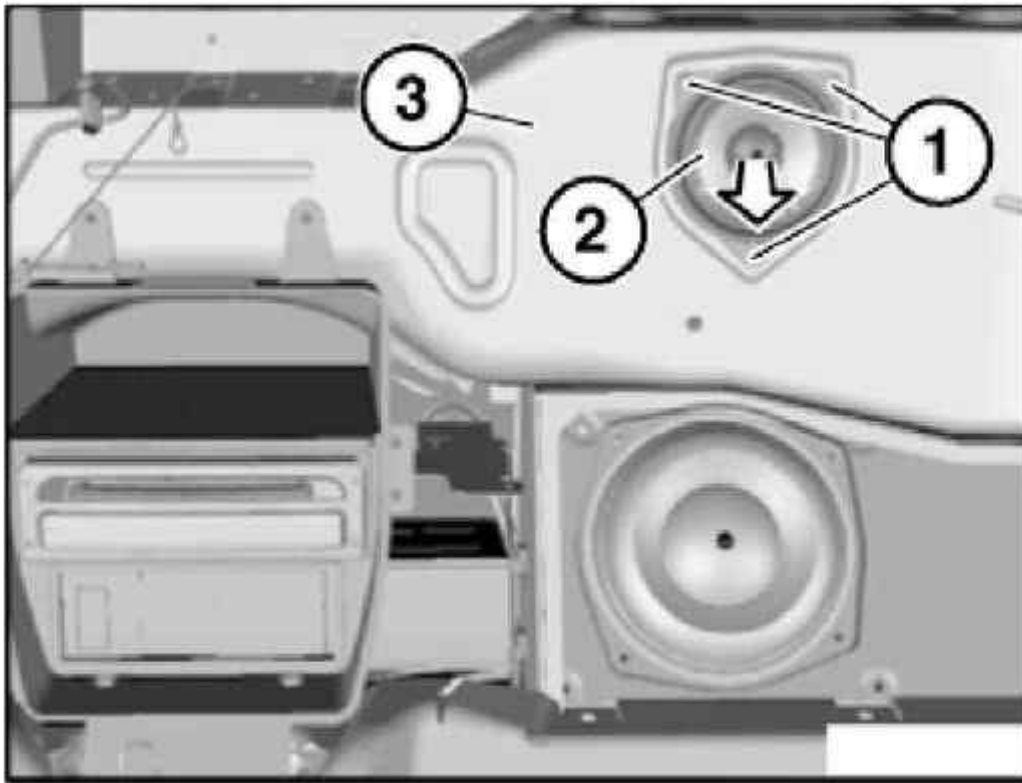
Courtesy of BMW OF NORTH AMERICA, INC.

65 13 080 REMOVING AND INSTALLING/REPLACING SPEAKER (MID-RANGE SPEAKER IN REAR DOOR TRIM)

Necessary preliminary tasks:

- Remove upper section of side trim at rear. Refer to **51 43 010 REMOVING AND INSTALLING/REPLACING REAR LEFT OR RIGHT UPPER SIDE TRIM SECTION** .

Release screws (1).



G03298711

Fig. 18: Removing Rear Speaker

Courtesy of BMW OF NORTH AMERICA, INC.

Remove rear speaker (2) in direction of arrow from mounting plate (3).

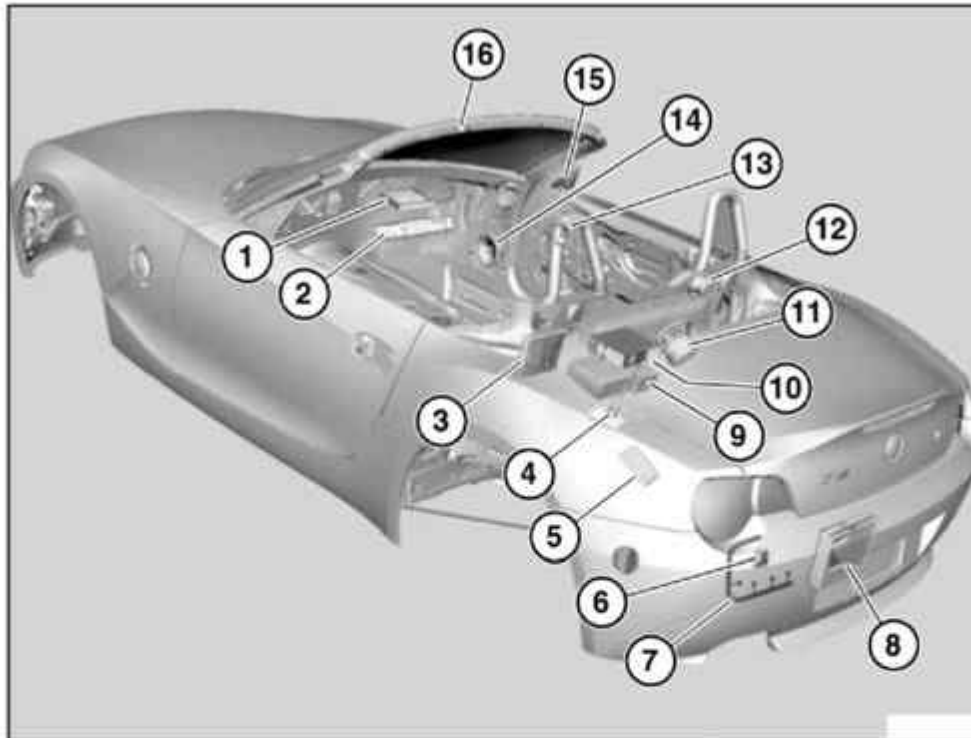
Unlock plug connection behind and disconnect.

Remove speaker (2).

AERIAL-ANTENNA**65 00.. OVERVIEW OF RADIO AND SPECIAL EQUIPMENT**

2005 BMW Z4

2003-05 ACCESSORIES & EQUIPMENT Audio, Navigation & Anti-Theft Systems - Repair Instructions - Z4



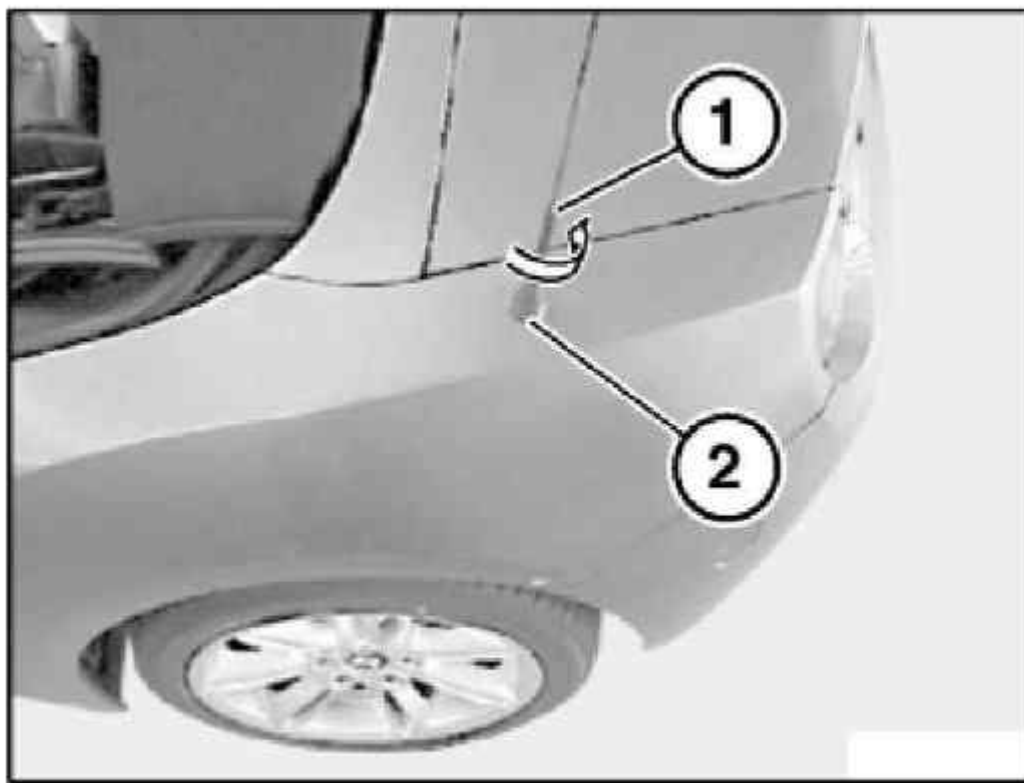
- | | | | |
|---|-----------------------------------|----|---|
| 1 | Central information display | 9 | CD changer |
| 2 | Radio receiver | 10 | Navigation computer |
| 3 | Video module for on-board monitor | 11 | Rear speaker (woofer, in side trim panel) |
| 4 | Rubber antenna | 12 | Mid-range speaker, side trim |
| 5 | Antenna amplifier, diversity | 13 | Mid-range speaker, door trim |
| 6 | Antenna amplifier FM | 14 | Bass speaker, A-pillar |
| 7 | Bumper antenna | 15 | Treble speaker |
| 8 | Amplifier | 16 | Antenna (GPS) |

G03298719

Fig. 19: Overview Of Radio And Special Equipment
Courtesy of BMW OF NORTH AMERICA, INC.

65 20 050 REMOVING AND INSTALLING/REPLACING ANTENNA ROD

Release antenna rod (1) in direction of arrow and remove from antenna base (2).



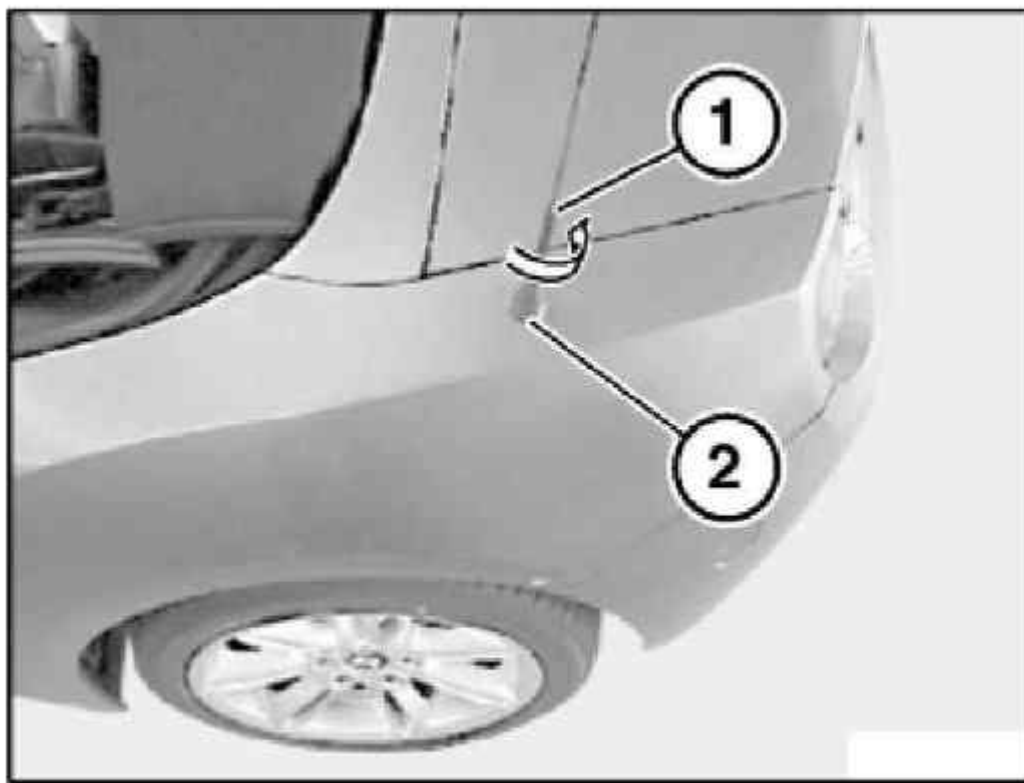
G03298720

Fig. 20: Releasing Antenna Rod

Courtesy of BMW OF NORTH AMERICA, INC.

65 20 055 REMOVING AND INSTALLING/REPLACING ANTENNA BASE

Release antenna rod (1) in direction of arrow and remove from antenna base (2).



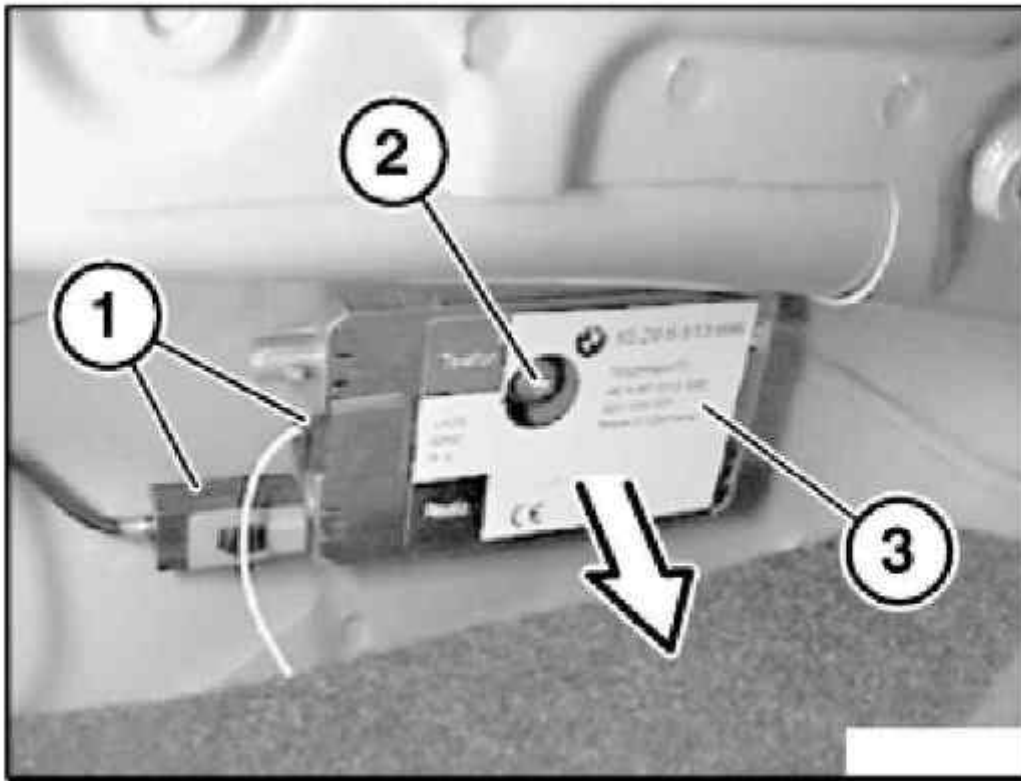
G03298721

Fig. 21: Removing Antenna Rod

Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: **Open trunk lid.**

Unlock plug connections (1) and disconnect.



G03298722

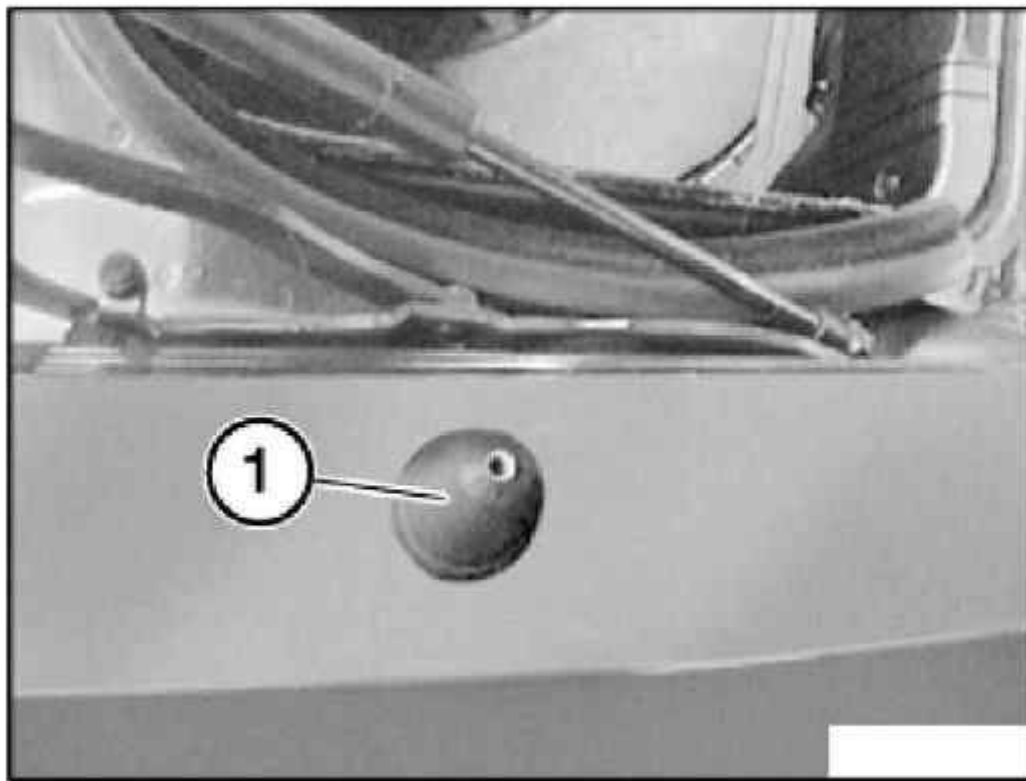
Fig. 22: Removing Antenna Amplifier
Courtesy of BMW OF NORTH AMERICA, INC.

Release screw (2) and remove antenna amplifier (3) downwards.

Installation:

Tightening torque 65 20 1AZ. Refer to **AUDIO, NAVIGATION AND ANTI-THEFT - TIGHTENING TORQUES** .

Remove antenna base (1) towards top.



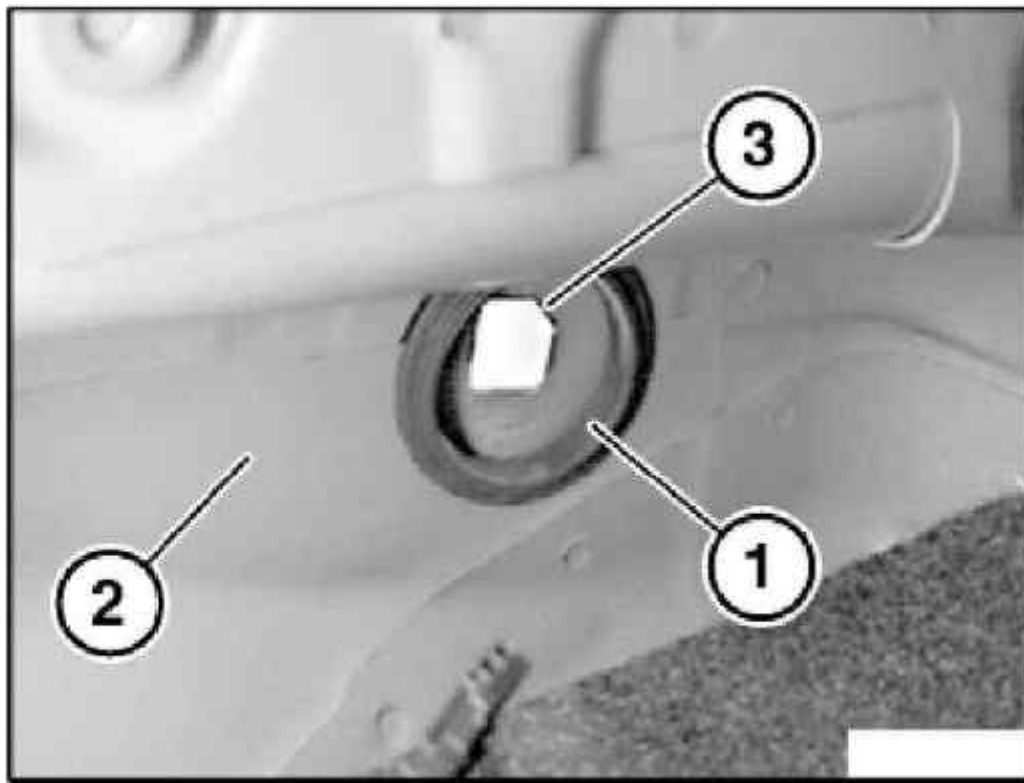
G03298723

Fig. 23: Removing Antenna Base

Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Make sure rubber grommet (1) is correctly seated on all-round flange of side section (2).



G03298724

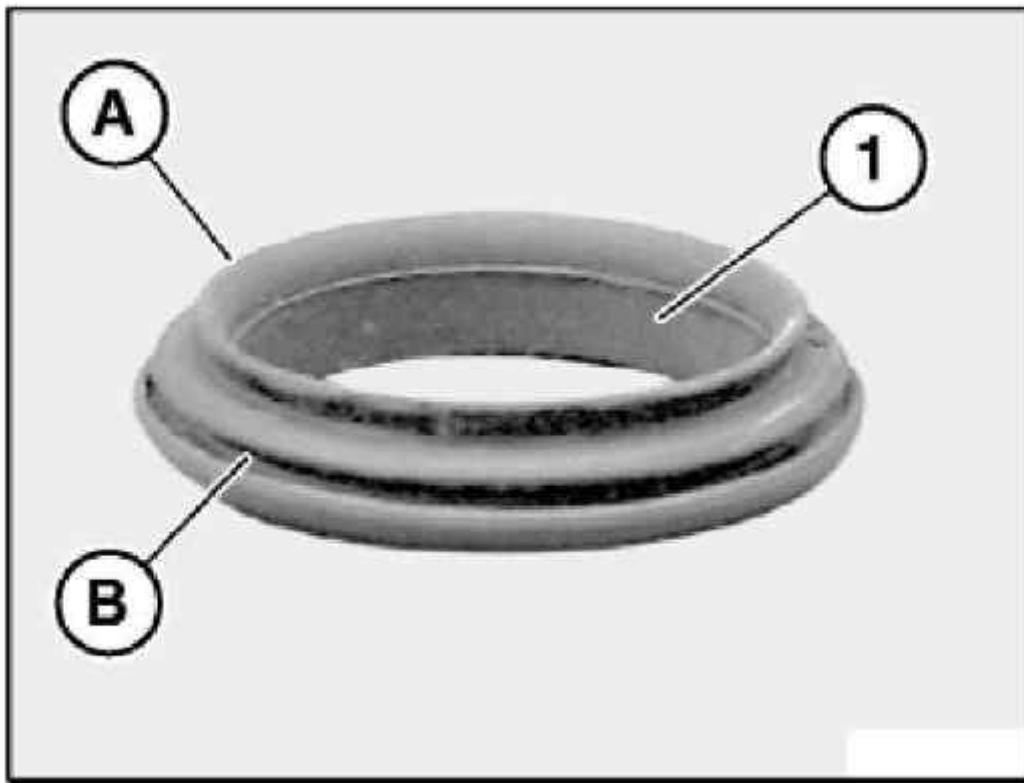
Fig. 24: Installing Rubber Grommet
Courtesy of BMW OF NORTH AMERICA, INC.

If necessary, replace rubber grommet.

Antenna base is secured by chamfer (3) against incorrect installation.

Observe installation position of rubber grommet (1):

- A: Sealing lip, top
- B: Mounting for rabbet of side section



G03298725

Fig. 25: Identifying Position Of Rubber Grommet
Courtesy of BMW OF NORTH AMERICA, INC.

65 20 105 REMOVING AND INSTALLING/REPLACING ANTENNA AMPLIFIER (ROD-TYPE ANTENNA)

This operation is described under:

"Remove antenna base." Refer to **65 20 055 REMOVING AND INSTALLING/REPLACING ANTENNA BASE** .

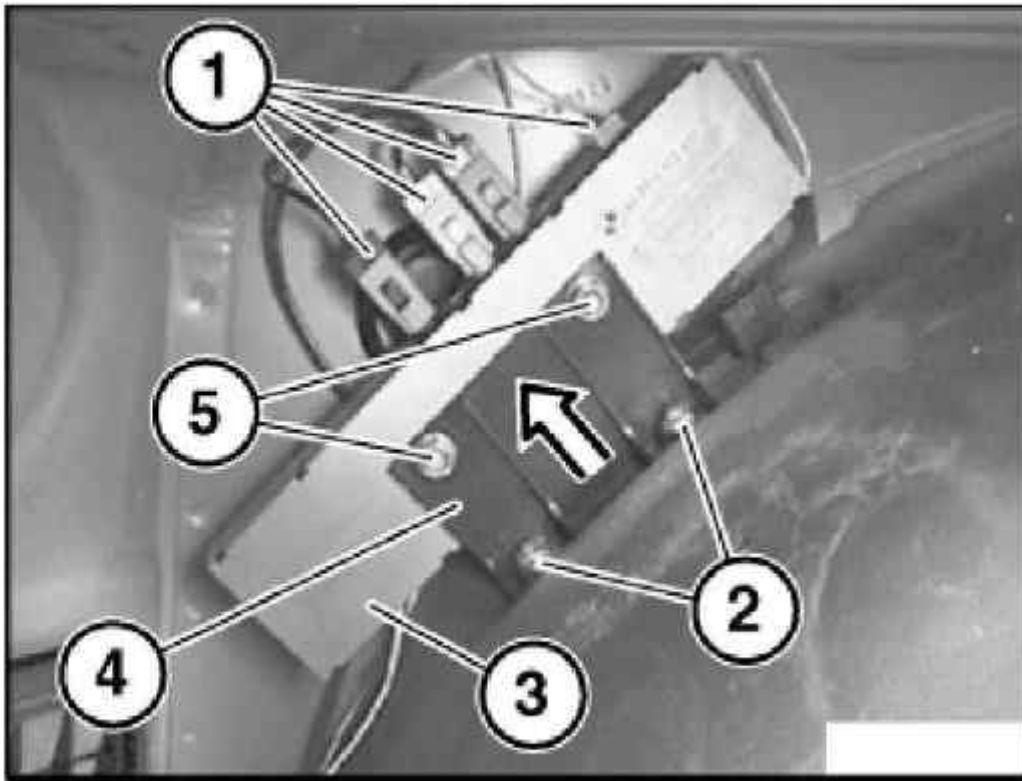
65 20 110 REMOVING AND INSTALLING/REPLACING ANTENNA AMPLIFIER (DIVERSITY)

Necessary preliminary tasks:

- Remove luggage compartment wheel arch trim on left. Refer to **51 47 151 REMOVING AND INSTALLING/REPLACING LEFT LUGGAGE COMPARTMENT WHEEL ARCH TRIM** .

Unlock plug connections (1) and disconnect.

Release screws (2) and remove antenna amplifier (3) with holder (4) in direction of arrow.



G03298726

Fig. 26: Removing Antenna Amplifier With Holder
Courtesy of BMW OF NORTH AMERICA, INC.

Replacement:

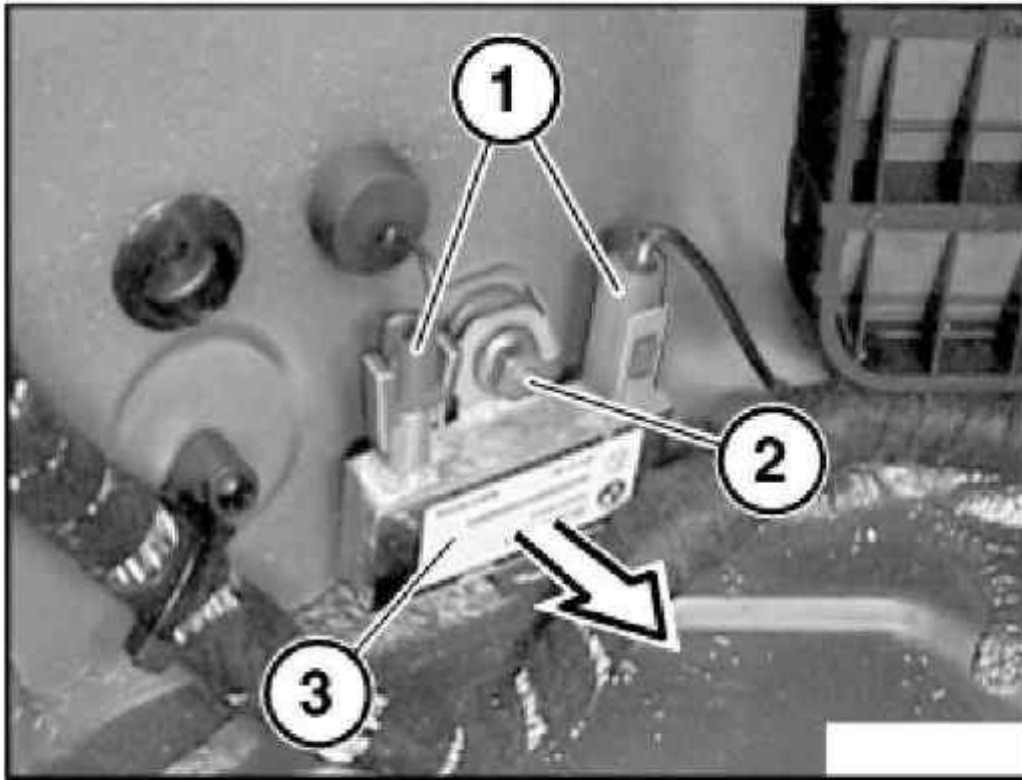
Release screws (5) and remove antenna amplifier (3) from holder (4).

65 20 115 REMOVING AND INSTALLING/REPLACING ANTENNA AMPLIFIER (FM)

Necessary preliminary tasks:

- Partially remove left luggage compartment wheel arch trim. Refer to **51 47 151 REMOVING AND INSTALLING/REPLACING LEFT LUGGAGE COMPARTMENT WHEEL ARCH TRIM**.

Unlock plug connections (1) and disconnect.



G03298727

Fig. 27: Removing Antenna Amplifier
Courtesy of BMW OF NORTH AMERICA, INC.

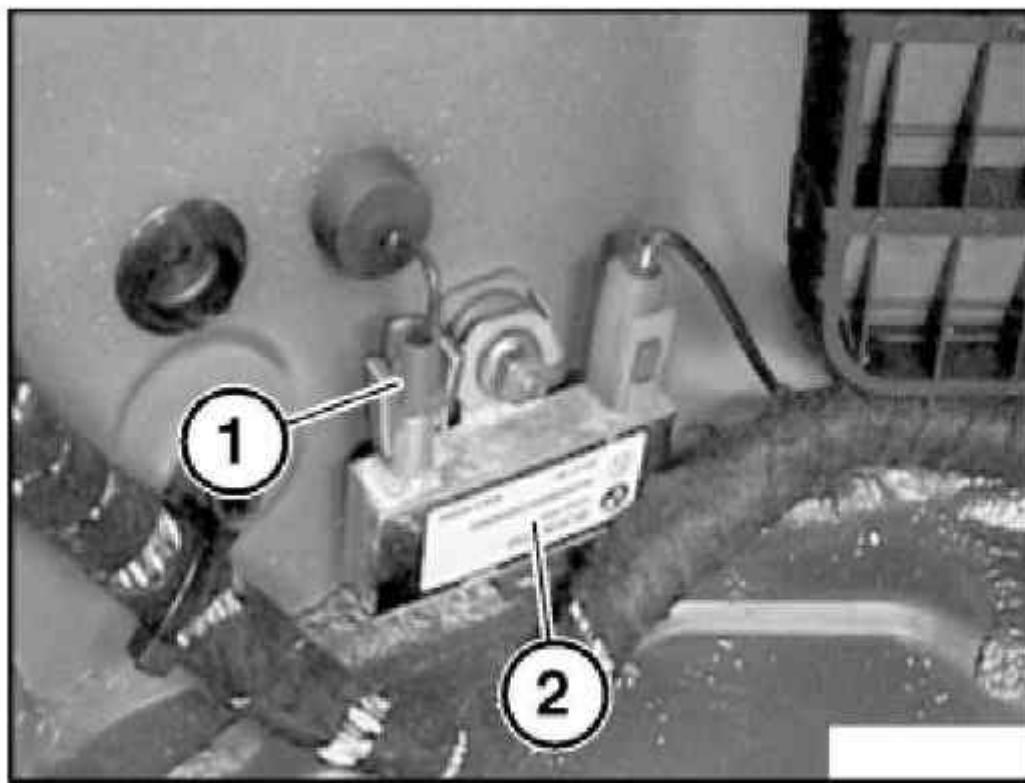
Release nut (2) and remove antenna amplifier (3) in direction of arrow.

65 20 300 REMOVING AND INSTALLING/REPLACING BUMPER ANTENNA

Necessary preliminary tasks:

- Remove rear bumper trim. Refer to 51 12 156 Removing and installing rear bumper trim .
- Partially remove luggage compartment wheel arch trim on left. Refer to **51 47 151 REMOVING AND INSTALLING/REPLACING LEFT LUGGAGE COMPARTMENT WHEEL ARCH TRIM** .

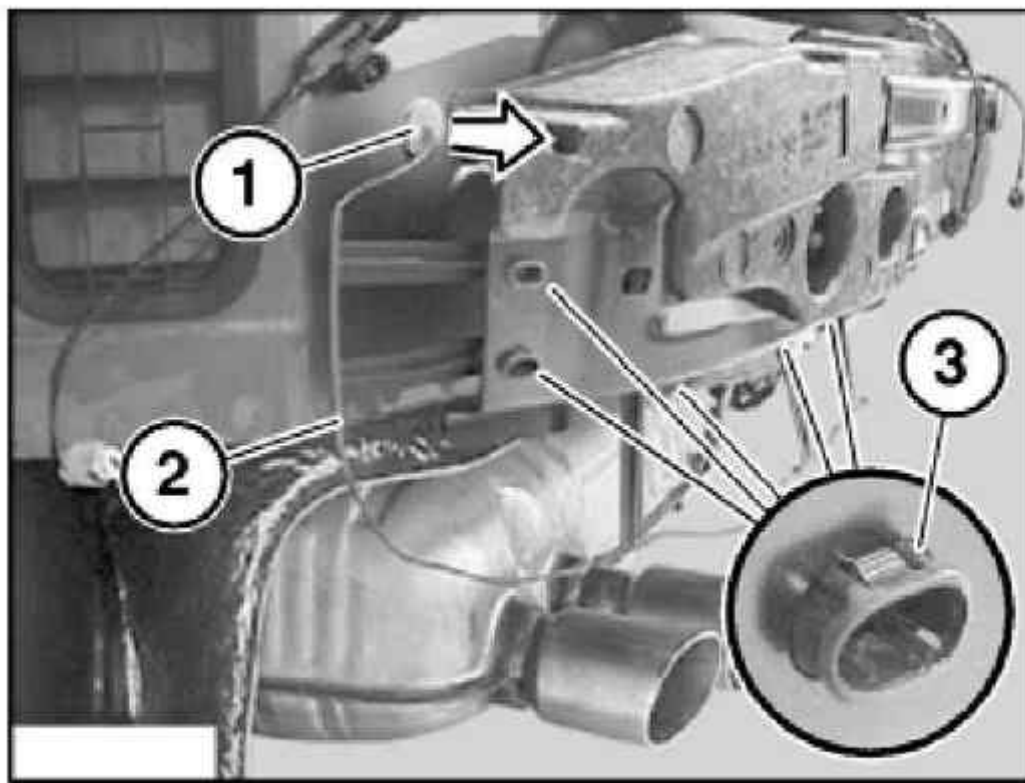
Unlock plug connection (1) on antenna amplifier (2) and disconnect.



G03298728

Fig. 28: Unlocking Plug Connection On Antenna Amplifier
Courtesy of BMW OF NORTH AMERICA, INC.

Pull out rubber plug (1) with antenna lead in direction of arrow.



G03298729

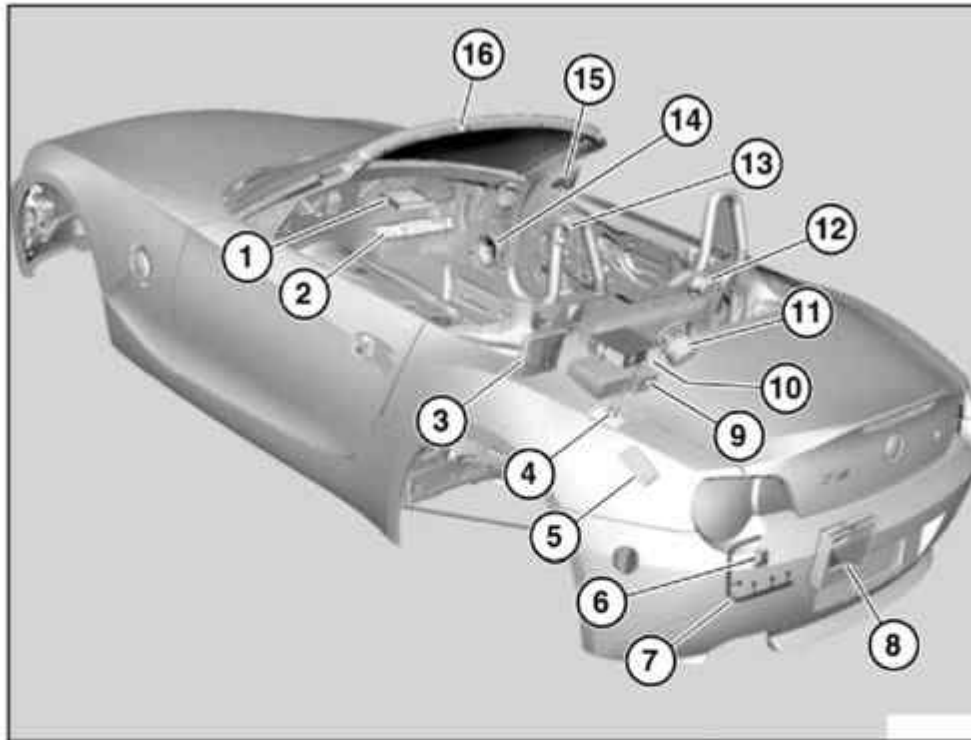
Fig. 29: Removing Bumper Antenna

Courtesy of BMW OF NORTH AMERICA, INC.

Unclip bumper antenna (2) at points (3) and remove.

VIDEO AND TV EQUIPMENT

65 00.. OVERVIEW OF RADIO AND SPECIAL EQUIPMENT



- | | | | |
|---|-----------------------------------|----|---|
| 1 | Central information display | 9 | CD changer |
| 2 | Radio receiver | 10 | Navigation computer |
| 3 | Video module for on-board monitor | 11 | Rear speaker (woofer, in side trim panel) |
| 4 | Rubber antenna | 12 | Mid-range speaker, side trim |
| 5 | Antenna amplifier, diversity | 13 | Mid-range speaker, door trim |
| 6 | Antenna amplifier FM | 14 | Bass speaker, A-pillar |
| 7 | Bumper antenna | 15 | Treble speaker |
| 8 | Amplifier | 16 | Antenna (GPS) |

G03298730

Fig. 30: Overview Of Radio And Special Equipment
Courtesy of BMW OF NORTH AMERICA, INC.

65 50 010 REMOVING AND INSTALLING/REPLACING VIDEO MODULE FOR ON-BOARD MONITOR

Necessary preliminary tasks:

- Disconnect battery negative lead, refer to **12 00... INSTRUCTIONS FOR DISCONNECTING AND CONNECTING BATTERY**.
- Remove panel for luggage compartment partition, refer to **51 47 140 REMOVING AND INSTALLING/REPLACING PANEL FOR LUGGAGE COMPARTMENT PARTITION**

Mark antenna plugs (3) and disconnect.

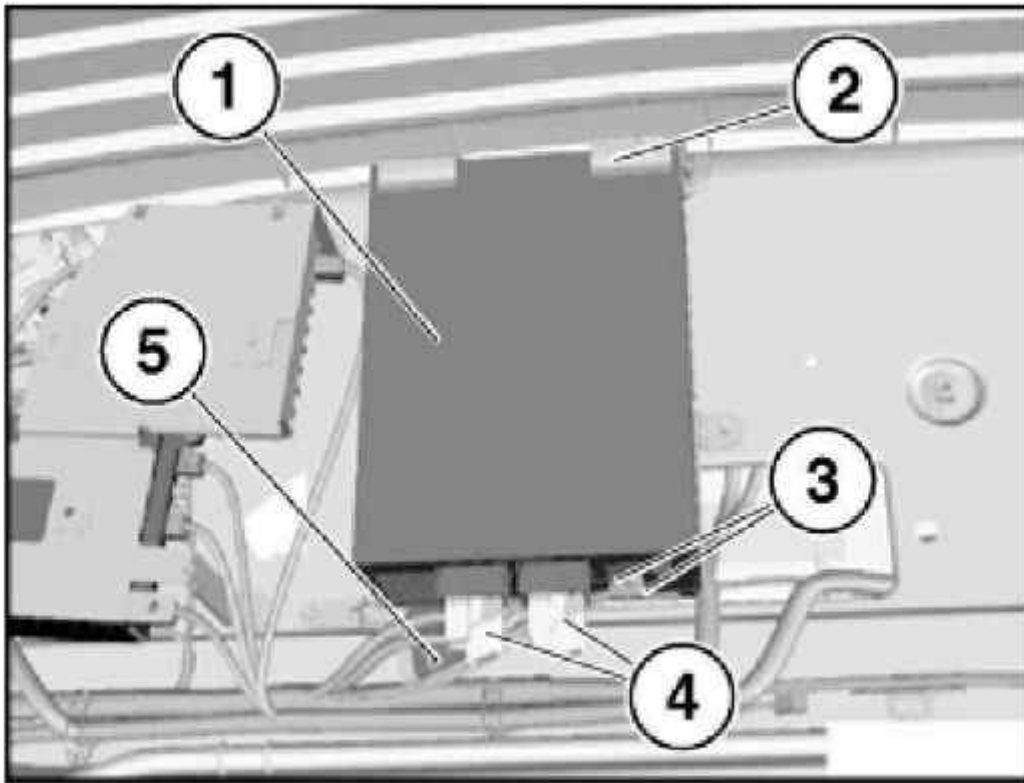
**G03298731**

Fig. 31: Removing Video Module For On-Board Monitor
Courtesy of BMW OF NORTH AMERICA, INC.

Unlock plug connections (4) and disconnect.

Release nut (5).

Remove video module for on-board monitor (1) from holder (2).

Replacement:

Carry out coding/programming.

Observe following IDC specifications:

- Programming
- Coding

- If necessary, car & key memory
- CD "CIP"



G03298732

Fig. 32: Identifying DIS

Courtesy of BMW OF NORTH AMERICA, INC.

65 50 055 REMOVING AND INSTALLING/REPLACING CENTRAL INFORMATION DISPLAY

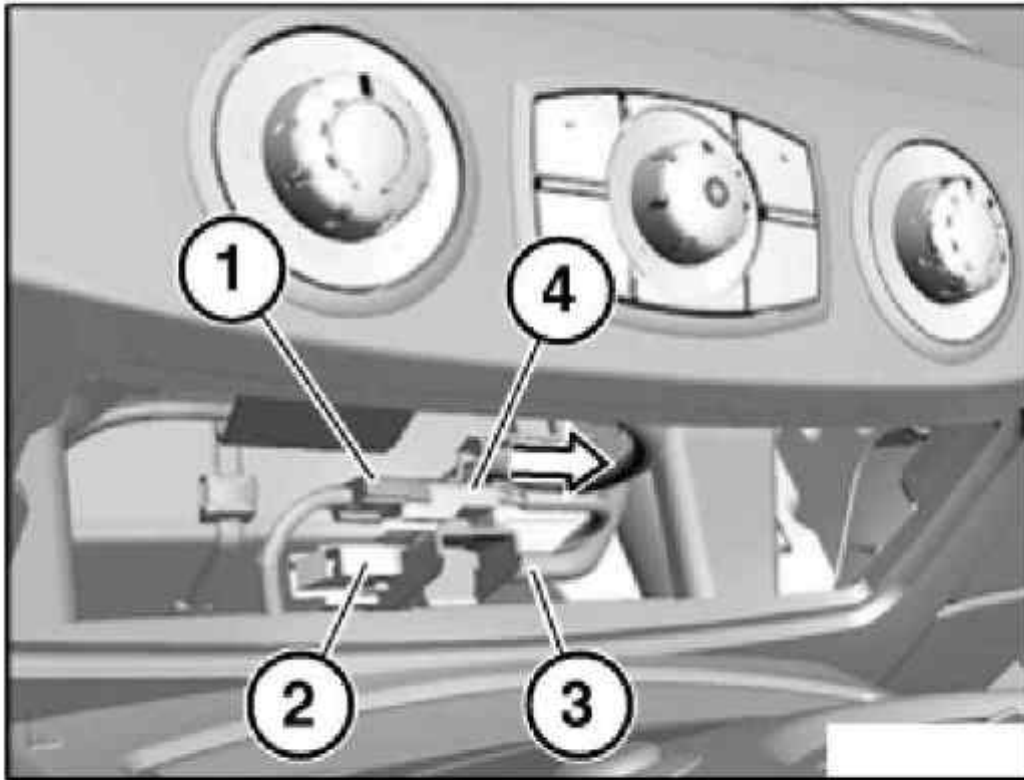
Special tools required:

- 00 9 323

Necessary preliminary tasks:

- Remove center fresh air grill, refer to **64 22 161 REMOVING AND INSTALLING/REPLACING CENTER FRESH AIR GRILL**
- Remove cover, refer to **51 16... REMOVING AND INSTALLING/REPLACING COVER**

Unlock plug connections (1) and (2) and disconnect.



G03298733

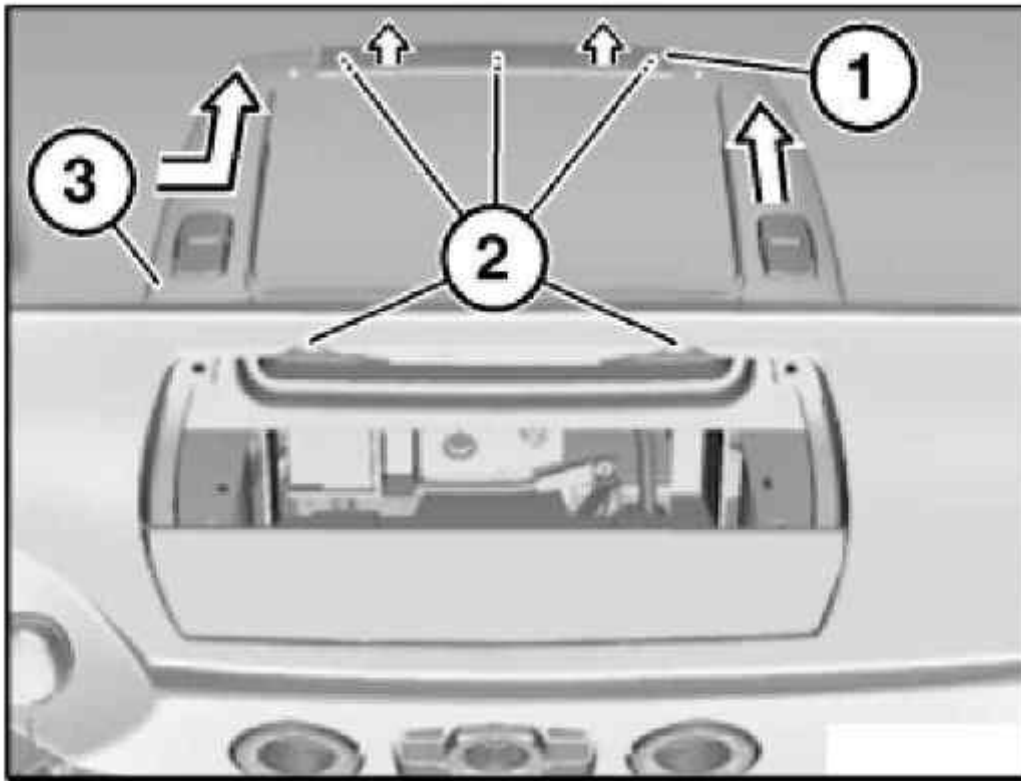
Fig. 33: Unlocking Plug

Courtesy of BMW OF NORTH AMERICA, INC.

Unlock plug (4) and detach in direction of arrow from plug (3).

Turn plug (3) counterclockwise and unclip from mounting underneath.

Lever out cover (1) with special tool 00 9 323 and remove.



G03298734

Fig. 34: Removing Central Information Display
Courtesy of BMW OF NORTH AMERICA, INC.

Loosen screws (2).

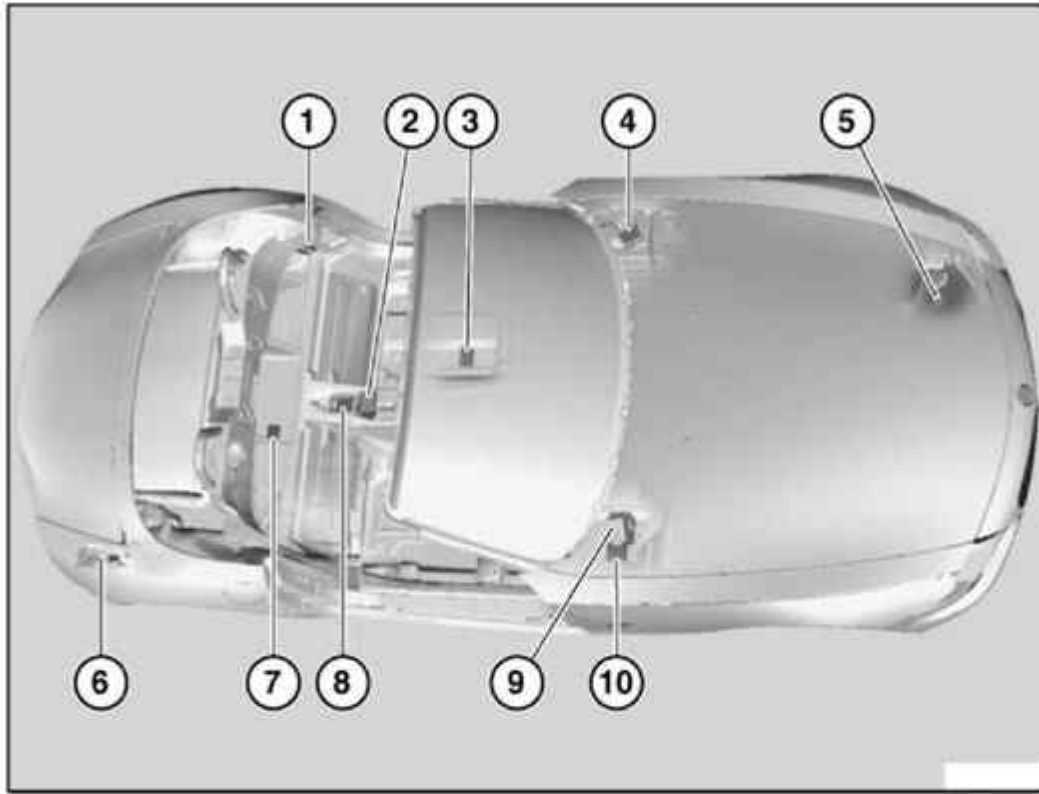
Raise Central Information Display (3) on right, feed out in direction of arrow and remove.

Installation:

Ensure correct cable routing for Central Information Display (3).

ANTI-THEFT ALARM SYSTEM

61 35.. OVERVIEW OF CONTROL UNITS, MODULES



- | | |
|---|---|
| 1 <u>Convertible top module</u> | 6 <u>Control unit (PDC)</u> |
| 2 <u>Module for interior sensor</u> | 7 <u>Pitch/tilt sensor</u> |
| 3 <u>Rain/light sensor</u> | 8 <u>Airbag control unit</u> |
| 4 <u>Control unit of electronic immobilizer</u> | 9 <u>Module for folding door mirror</u> |
| 5 <u>Outside temperature sensor</u> | 10 <u>General module</u> |

G03298735

Fig. 35: Overview Of Control Units, Modules
 Courtesy of BMW OF NORTH AMERICA, INC.

65 75 551 REMOVING AND INSTALLING/REPLACING TILT SENSOR

Necessary preliminary tasks:

Cars without CD changer and navigation system only:

- Remove rear storage box, Refer to **51 16 240 REMOVING AND INSTALLING REAR STORAGE COMPARTMENT**

Cars with CD changer and/or navigation system only:

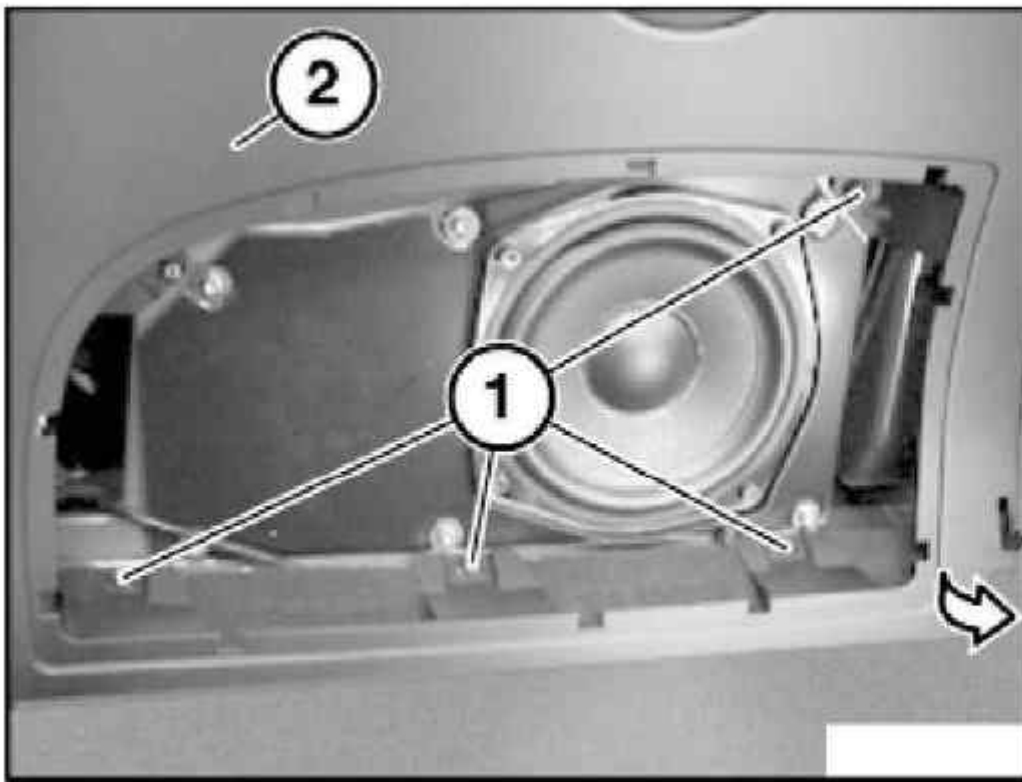
- Remove panel for rear storage box, refer to **51 16 235 REMOVING AND INSTALLING PANEL FOR**

REAR STORAGE BOX

- Remove right rear speaker trim, refer to **65 12 020 REMOVING AND INSTALLING/REPLACING SPEAKER (WOOFER IN SIDE TRIM PANEL)**

Cars with CD changer and/or navigation system only:

Release screws (1) and pull back panel (2) in lower section a little.



G03298736

Fig. 36: Pulling Back Panel In Lower Section
Courtesy of BMW OF NORTH AMERICA, INC.

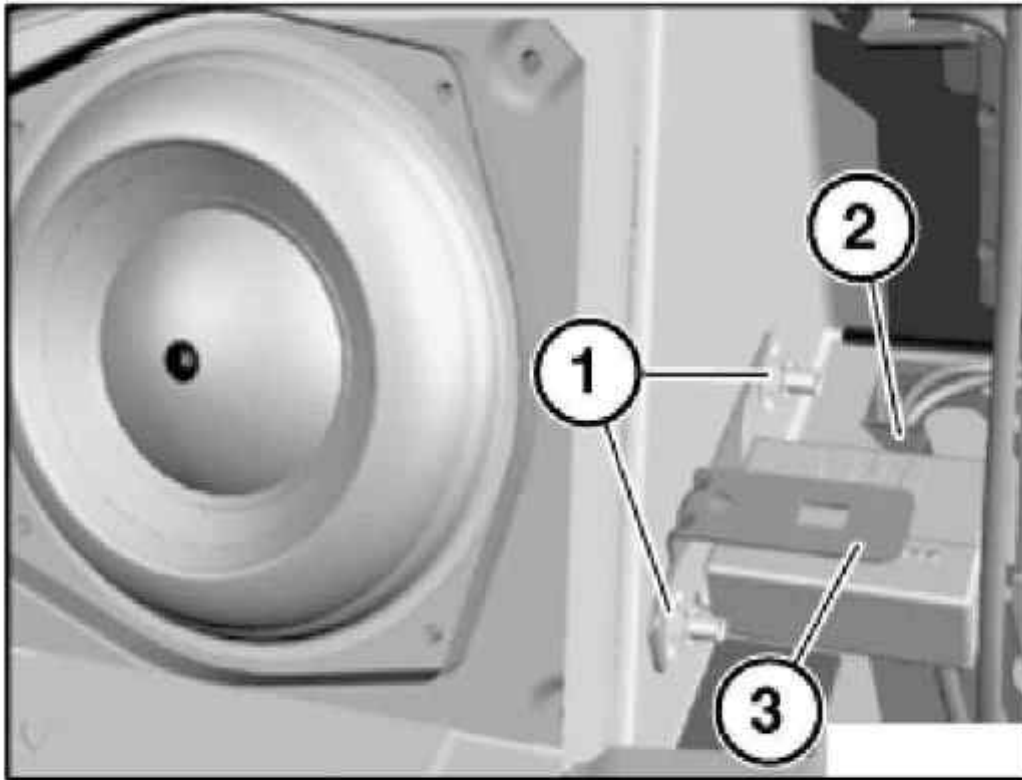
All models:

Unscrew nuts (1).

Feed out tilt alarm sensor (3) with holder.

Disconnect plug connection (2).

If necessary, detach holder from tilt alarm sensor.



G03298737

Fig. 37: Removing Tilt Alarm Sensor With Holder
Courtesy of BMW OF NORTH AMERICA, INC.

65 75 572 REMOVING AND INSTALLING/REPLACING MODULE FOR PASSENGER COMPARTMENT PROTECTION

Necessary preliminary tasks:

- Remove rear storage box, refer to **51 16 240 REMOVING AND INSTALLING REAR STORAGE COMPARTMENT**

Loosen screws (2).

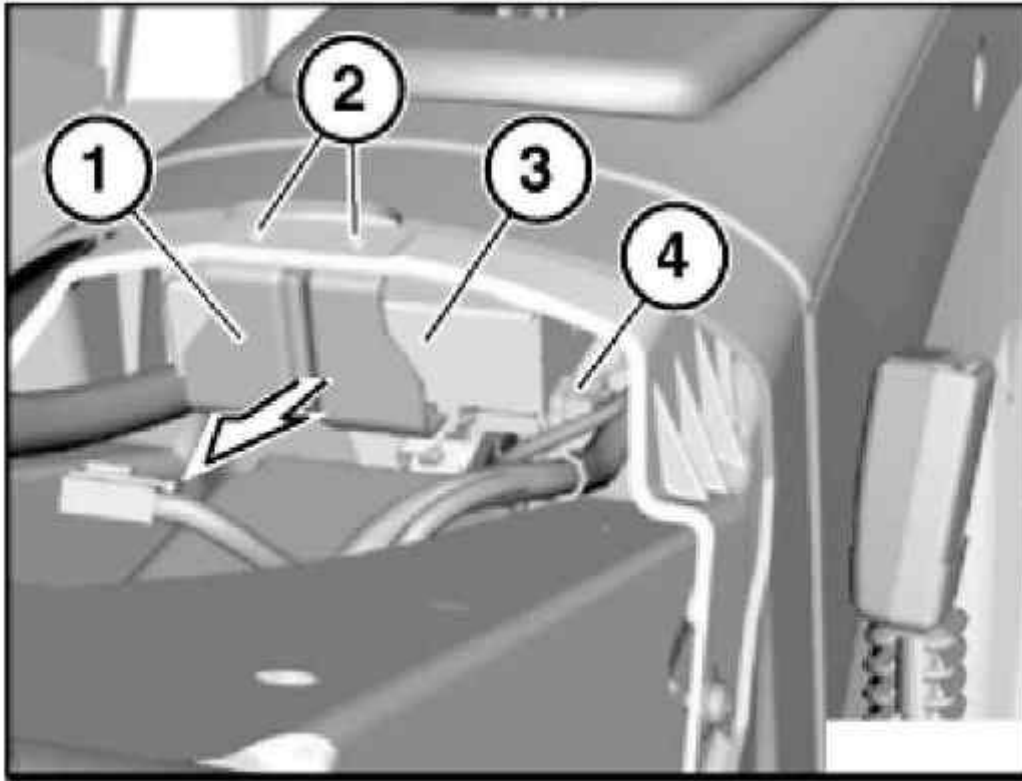
**G03298738**

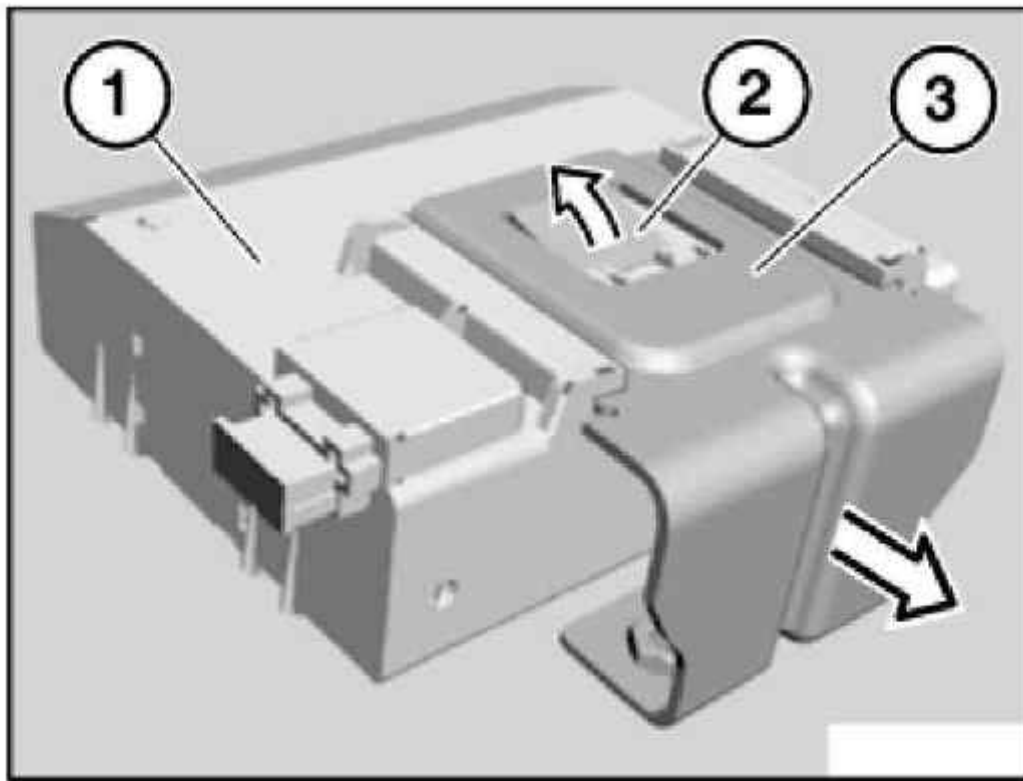
Fig. 38: Removing Module For Interior Sensor
Courtesy of BMW OF NORTH AMERICA, INC.

Feed out module for interior sensor (3) complete with holder (1) in direction of arrow.

Unlock plug connection (4) and disconnect, remove module for interior sensor (3) complete with holder (1).

Replacement:

Release lock (2) and remove holder (3) of module for interior sensor (1) in direction of arrow.

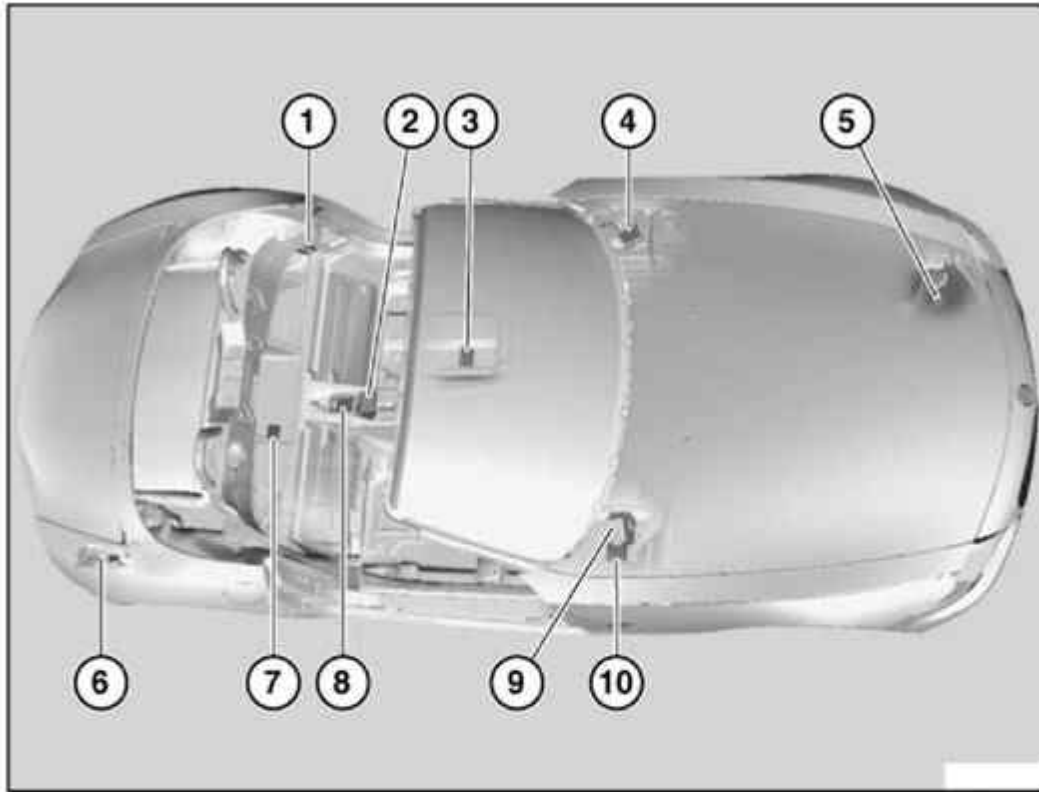


G03298739

Fig. 39: Removing Holder Of Module For Interior Sensor
Courtesy of BMW OF NORTH AMERICA, INC.

AIRBAG TRIGGERING UNIT

61 35.. OVERVIEW OF CONTROL UNITS, MODULES



- | | |
|---|---|
| 1 <u>Convertible top module</u> | 6 <u>Control unit (PDC)</u> |
| 2 <u>Module for interior sensor</u> | 7 <u>Pitch/tilt sensor</u> |
| 3 <u>Rain/light sensor</u> | 8 <u>Airbag control unit</u> |
| 4 <u>Control unit of electronic immobilizer</u> | 9 <u>Module for folding door mirror</u> |
| 5 <u>Outside temperature sensor</u> | 10 <u>General module</u> |

G03298740

Fig. 40: Overview Of Control Units, Modules
Courtesy of BMW OF NORTH AMERICA, INC.

65 77 016 REMOVING AND INSTALLING/REPLACING AIRBAG CONTROL UNIT

WARNING: Note AIRBAG safety instructions! Refer to AIR BAG SAFETY PRECAUTIONS .
Incorrect handling can activate AIRBAG and cause injury

NOTE: Follow instructions for handling optical fibers. Refer to 61 00... NOTES ON HANDLING OPTICAL FIBERS .

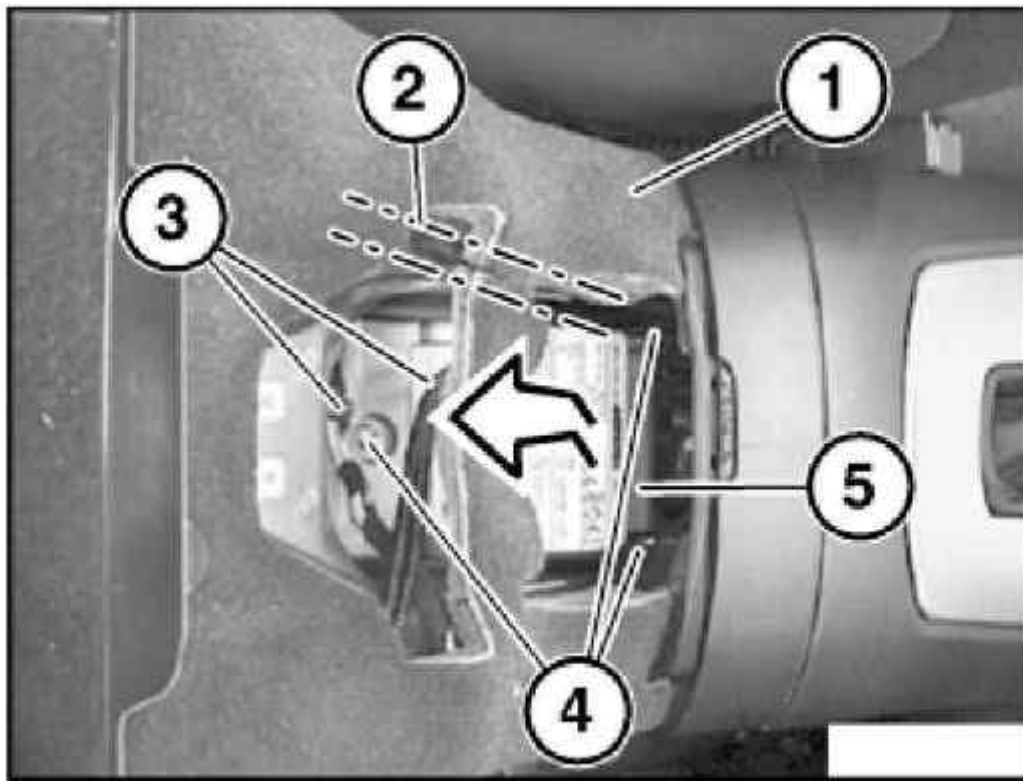
Necessary preliminary tasks:

- Disconnect battery negative lead and cover. Refer to **12 00 ... INSTRUCTIONS FOR**

DISCONNECTING AND CONNECTING BATTERY .

- Remove rear storage compartment. Refer to **51 16 240 REMOVING AND INSTALLING REAR STORAGE COMPARTMENT .**

Cut through carpet (1) in area (2) and fold to one side.



G03298741

Fig. 41: Removing AIRBAG Control Unit
Courtesy of BMW OF NORTH AMERICA, INC.

Unlock plug connections (3) and disconnect.

Unscrew nuts (4).

Installation:

Tightening torque 65 77 1AZ. Refer to **AUDIO, NAVIGATION AND ANTI-THEFT - TIGHTENING TORQUES .**

Feed out AIRBAG control unit (5) in direction of arrow and remove.

Replacement:

Carry out coding/programming.

Observe following IDC specifications:

- Programming
- Coding
- If necessary, car & key memory
- CD "CIP"



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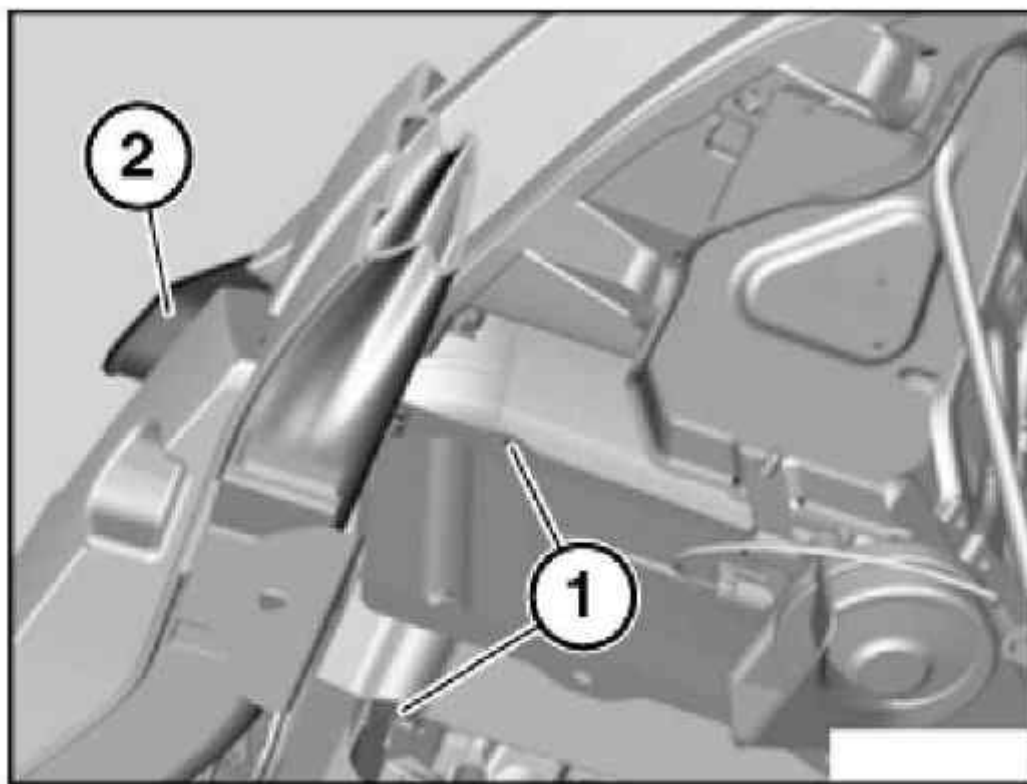
Fig. 42: Identifying DIS

Courtesy of BMW OF NORTH AMERICA, INC.

Necessary preliminary tasks:

- Remove radiator cover, refer to **REMOVING RADIATOR COVER**
- Remove front bumper trim, refer to 51 11 156 Removing And Installing Front Bumper Trim

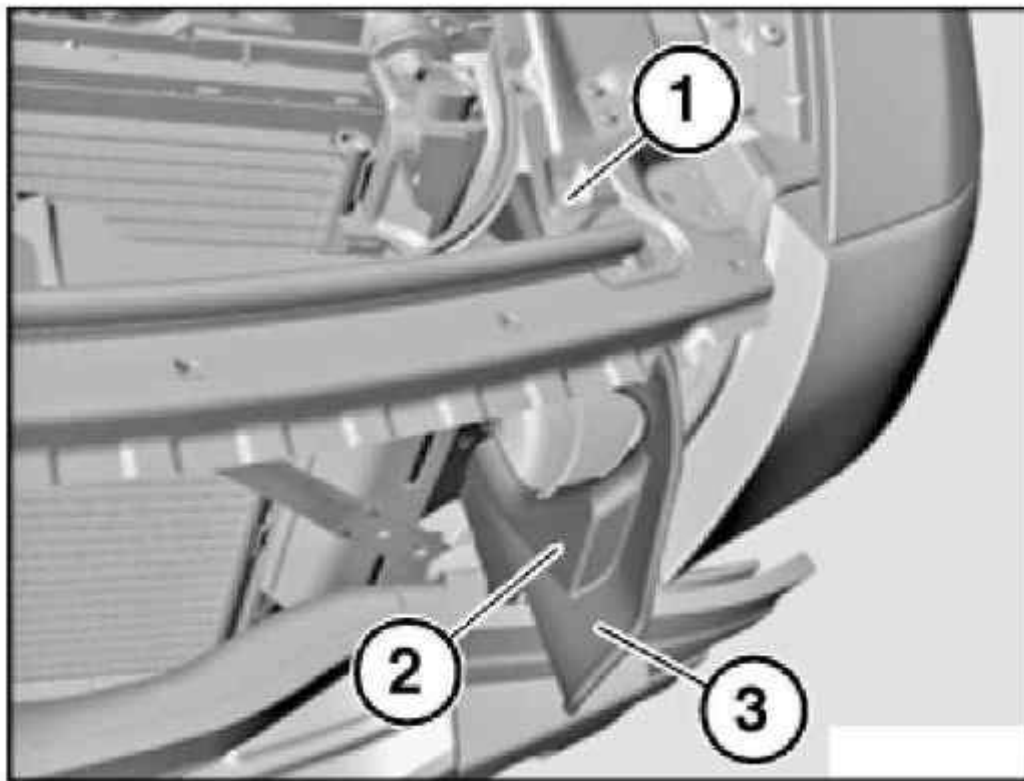
Release screws (1) on deflector (2).



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Fig. 43: Releasing Screws On Deflector
Courtesy of BMW OF NORTH AMERICA, INC.

Release screw (1).



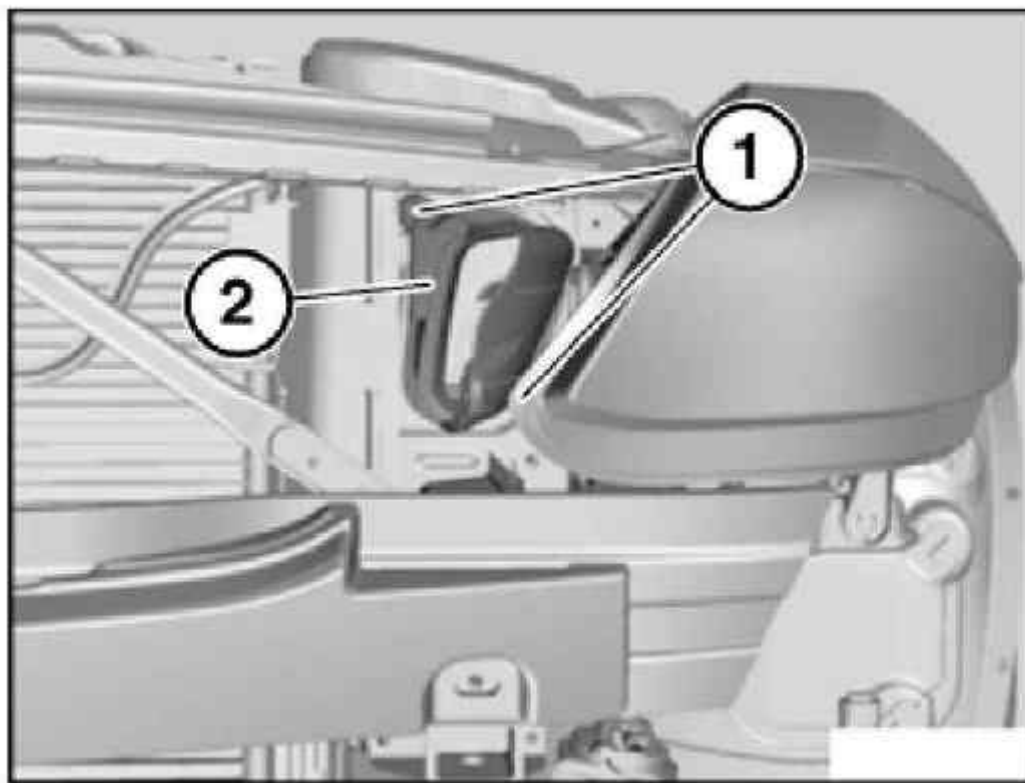
G03298744

Fig. 44: Releasing Expansion Rivet
Courtesy of BMW OF NORTH AMERICA, INC.

Release expansion rivet (2).

Lay deflector (3) inwards to one side.

Release expander rivets (1) and remove intake duct (2) towards front.

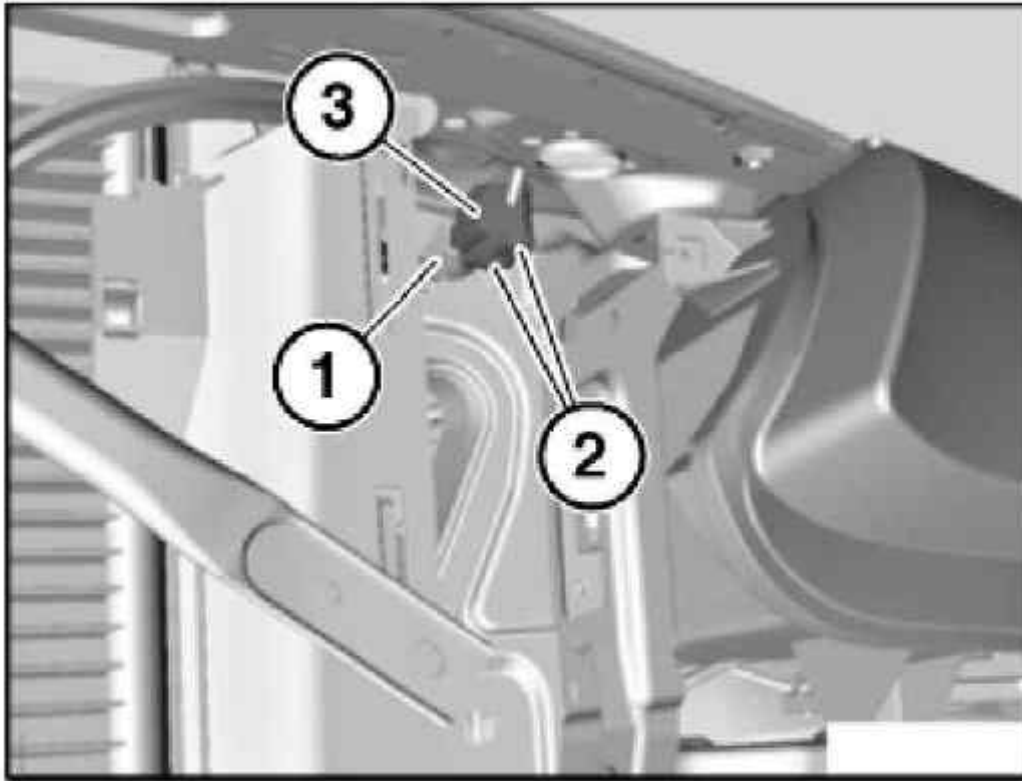


G03298745

Fig. 45: Removing Intake Duct

Courtesy of BMW OF NORTH AMERICA, INC.

Release screws (2), tightening torque 65 77 3AZ. Refer to **AUDIO, NAVIGATION AND ANTI-THEFT - TIGHTENING TORQUES**.



G03298746

Fig. 46: Removing Front Left Sensor

Courtesy of BMW OF NORTH AMERICA, INC.

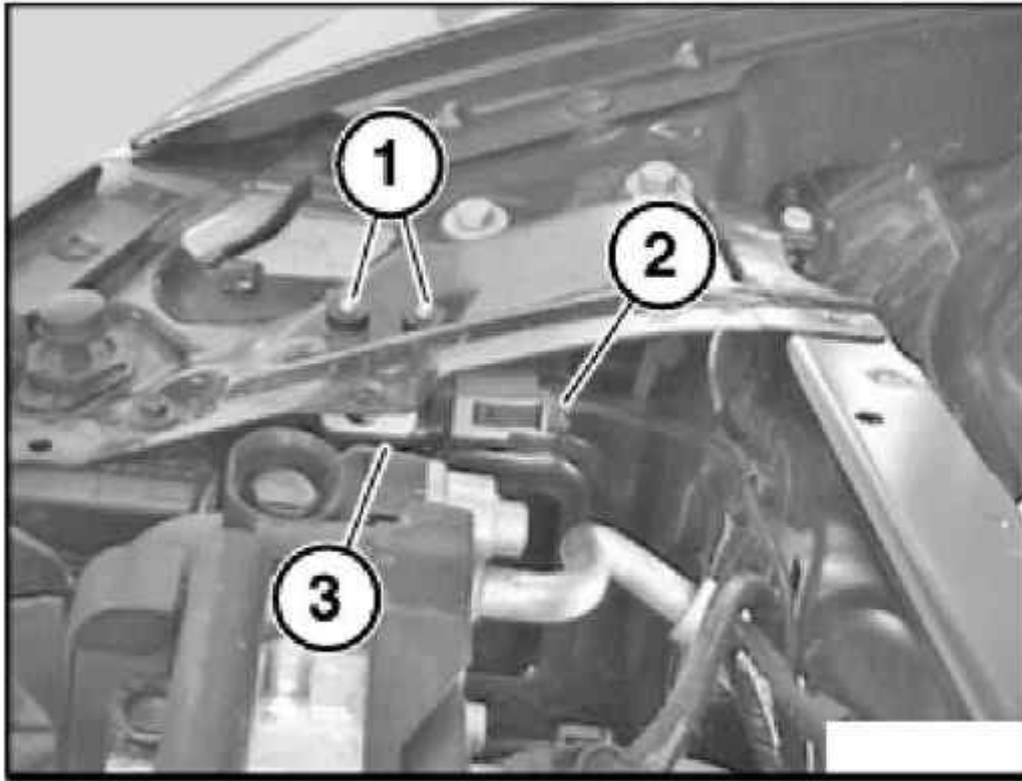
Unlock and disconnect plug connection (1) and remove front left sensor (3).

65 77 534 REMOVING AND INSTALLING/REPLACING FRONT RIGHT SENSOR

Necessary preliminary tasks:

- Remove fluid reservoir for windscreen washer system, refer to **61 71 061 REPLACING FLUID RESERVOIR FOR WINDSHIELD WASHER SYSTEM**
- Remove radiator cover, refer to **REMOVING RADIATOR COVER**

Release screws (1), tightening torque 65 77 3AZ. Refer to **AUDIO, NAVIGATION AND ANTI-THEFT - TIGHTENING TORQUES**.



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Fig. 47: Removing Front Right Sensor
Courtesy of BMW OF NORTH AMERICA, INC.

Unlock and disconnect plug connection (2) and remove front right sensor (3).

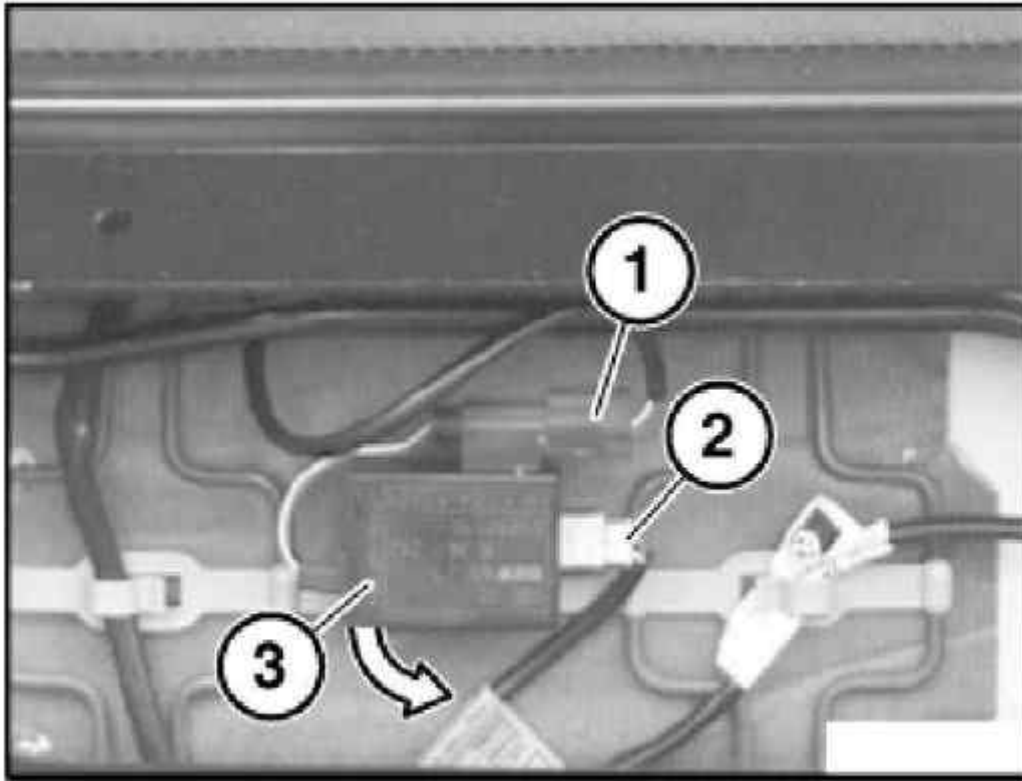
65 77 560 REMOVING AND INSTALLING/REPLACING CONTROL ELECTRONICS FOR PASSENGER SEAT OCCUPANCY DETECTOR

Necessary preliminary tasks:

- Move seat into most upward position.
- Unlock and remove first aid kit under passenger seat.

NOTE: **Seat removed for purposes of clarity.**

Turn control electronics for passenger seat occupancy detector (3) approx. 45° in direction of arrow and unclip from seat frame.



G03298748

Fig. 48: Removing Control Electronics For Passenger Seat Occupancy Detector
Courtesy of BMW OF NORTH AMERICA, INC.

Unlock and disconnect plug connections (1) and (2), remove control electronics for passenger seat occupancy detector (3).

65 77 610 REPLACING SENSOR MAT FOR PASSENGER SEAT OCCUPANCY DETECTOR

WARNING: US/CND front passenger seat (with OC3 mat) only:

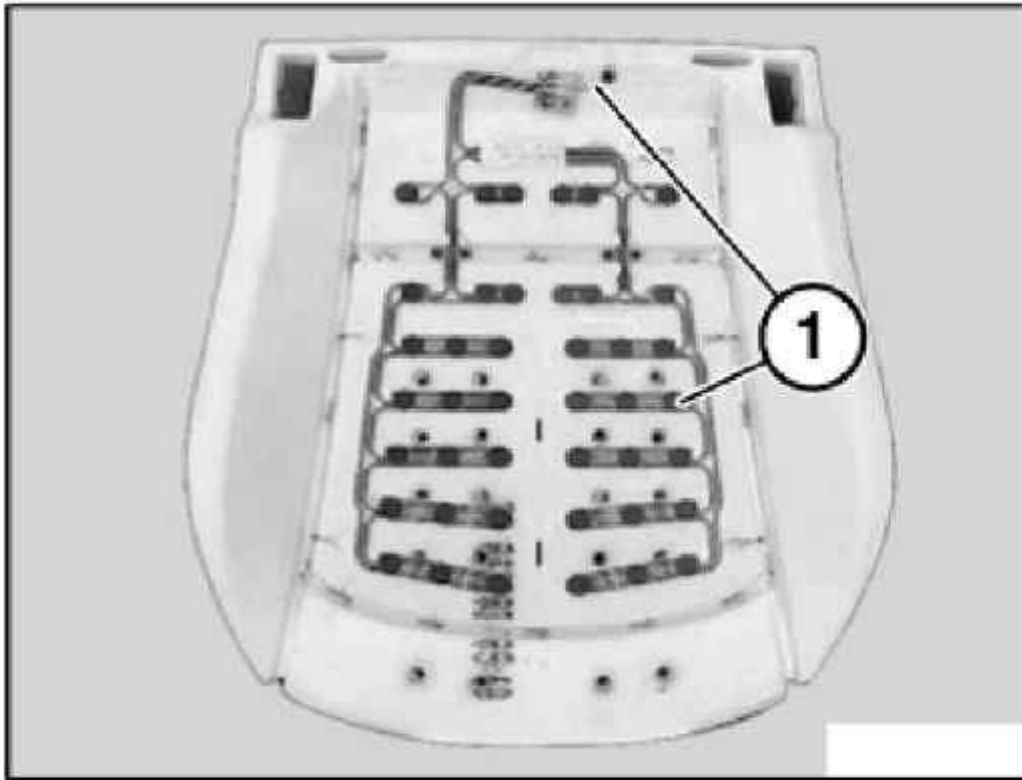
Seat cover must not be separated from padding.

All parts must be replaced completely and released with the diagnosis system in event of defective fan, seat cover, seat heating, OC3 mat or padding.

Necessary preliminary tasks:

- Remove seat cover for passenger seat, refer to **52 13 400 REPLACING COVER FOR LEFT OR RIGHT FRONT SEAT**

Remove sensor mat (1) from passenger seat padding.



G03298749

Fig. 49: Removing Sensor Mat

Courtesy of BMW OF NORTH AMERICA, INC.

IMPORTANT: To avoid malfunctions, make sure sensor mat (1) is cleanly laid:

- Lay plug-in connection in designated recess.
- Lay sensor mat (1) straight and without kinks (large bending radii).
- If necessary, secure sensor mat (1) with adhesive tape provided.

65 77 720 REMOVING AND INSTALLING (REPLACING) LEFT B-PILLAR SENSOR

WARNING: Note AIRBAG safety instructions! Refer to **AIR BAG SAFETY PRECAUTIONS**.

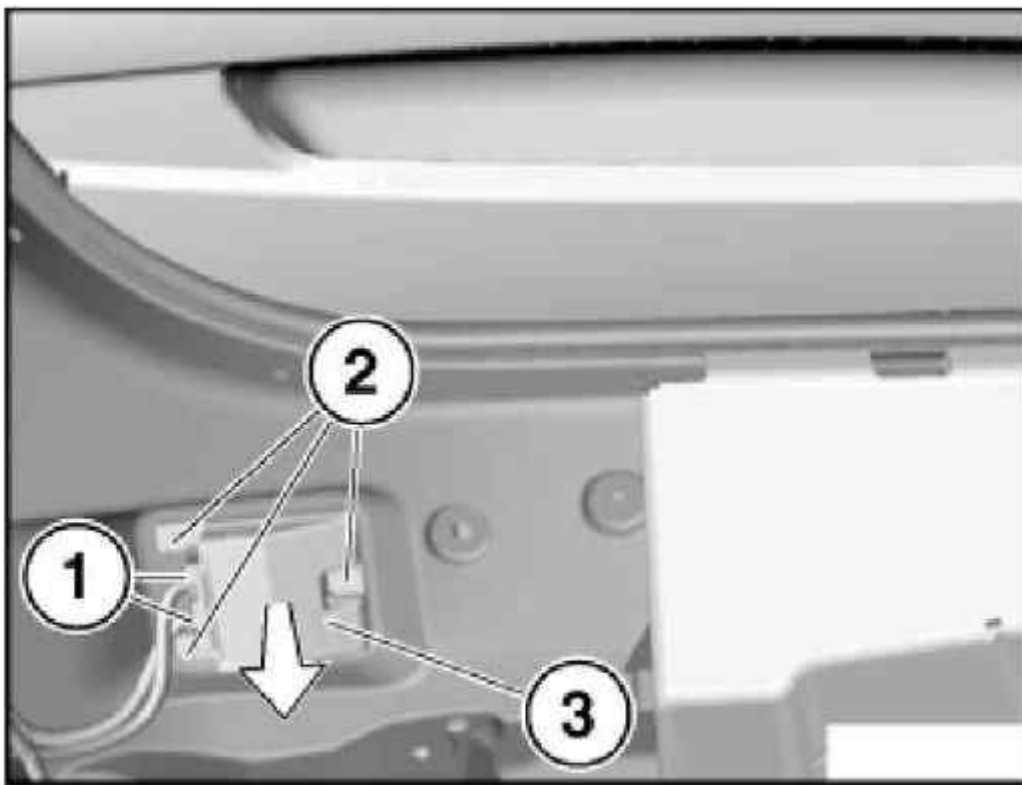
Incorrect handling can activate AIRBAG and cause injury.

NOTE: Follow instructions for handling optical fibers. Refer to 61 00... NOTES ON HANDLING OPTICAL FIBERS .

Necessary preliminary tasks:

- Disconnect battery negative lead and cover. Refer to 12 00 ... INSTRUCTIONS FOR DISCONNECTING AND CONNECTING BATTERY .
- Remove front left entrance cover strip. Refer to 51 47 000 REMOVING AND INSTALLING/REPLACING FRONT (INSIDE) LEFT OR RIGHT ENTRANCE COVER STRIP .
- Remove rear left lower side trim section. Refer to 51 43 015 Removing and installing/replacing rear left or right lower side trim section .

Unlock plug connections (1) and disconnect.



G03298750

Fig. 50: Removing B-Pillar Sensor
Courtesy of BMW OF NORTH AMERICA, INC.

Release screws (2) and remove B-pillar sensor (3) in direction of arrow.

Installation:

Tightening torque 65 77 5AZ. Refer to **AUDIO, NAVIGATION AND ANTI-THEFT - TIGHTENING TORQUES** .

Replacement:

Carry out coding/programming.

Observe following IDC specifications:

- Programming
- Coding
- Car & Key Memory
- CD "CIP"



G03298751

Fig. 51: Identifying DIS

Courtesy of BMW OF NORTH AMERICA, INC.

65 77 740 REMOVING AND INSTALLING (REPLACING) LEFT FRONT DOOR SENSOR

WARNING: Note AIRBAG safety instructions! Refer to **AIR BAG SAFETY PRECAUTIONS** .

Incorrect handling can activate AIRBAG and cause injury.

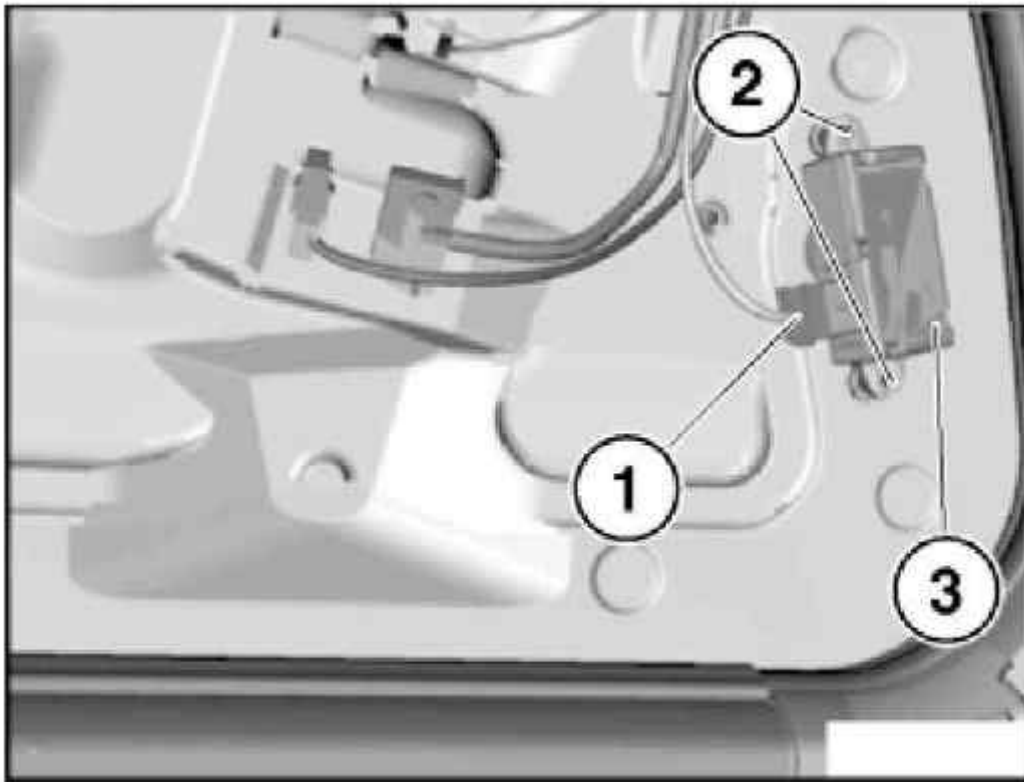
NOTE: Follow instructions for handling optical fibers. Refer to **61 00... NOTES ON HANDLING OPTICAL FIBERS** .

Necessary preliminary tasks:

- Disconnect battery negative lead and cover. Refer to **12 00 ... INSTRUCTIONS FOR DISCONNECTING AND CONNECTING BATTERY** .
- Remove front left door trim. Refer to **51 41 000 REMOVING AND INSTALLING LEFT OR RIGHT**

FRONT DOOR TRIM PANEL .

Unfasten plug connection (1) and disconnect.



G03298752

Fig. 52: Removing Front Door Sensor
Courtesy of BMW OF NORTH AMERICA, INC.

Release screws (2) and remove front door sensor (3).

Installation:

Tightening torque 65 77 7AZ. Refer to **AUDIO, NAVIGATION AND ANTI-THEFT - TIGHTENING TORQUES .**

Installation:

Make sure front door sensor seal (1) is correctly seated. Pins (2) must be exactly seated in mountings (3).

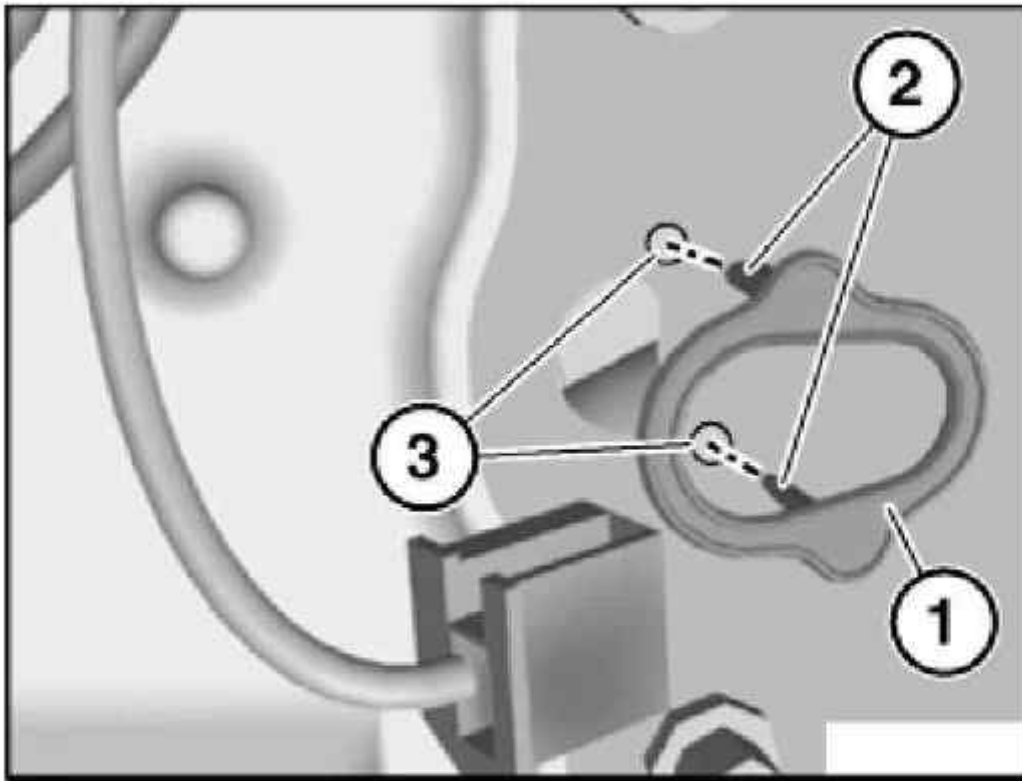
**G03298753**

Fig. 53: Identifying Front Door Sensor Seal
Courtesy of BMW OF NORTH AMERICA, INC.

If necessary, replace front door sensor seal (1).

Replacement:

Carry out coding/programming.

Observe following IDC specifications:

- Programming
- Coding
- If necessary, car & key memory
- CD "CIP"

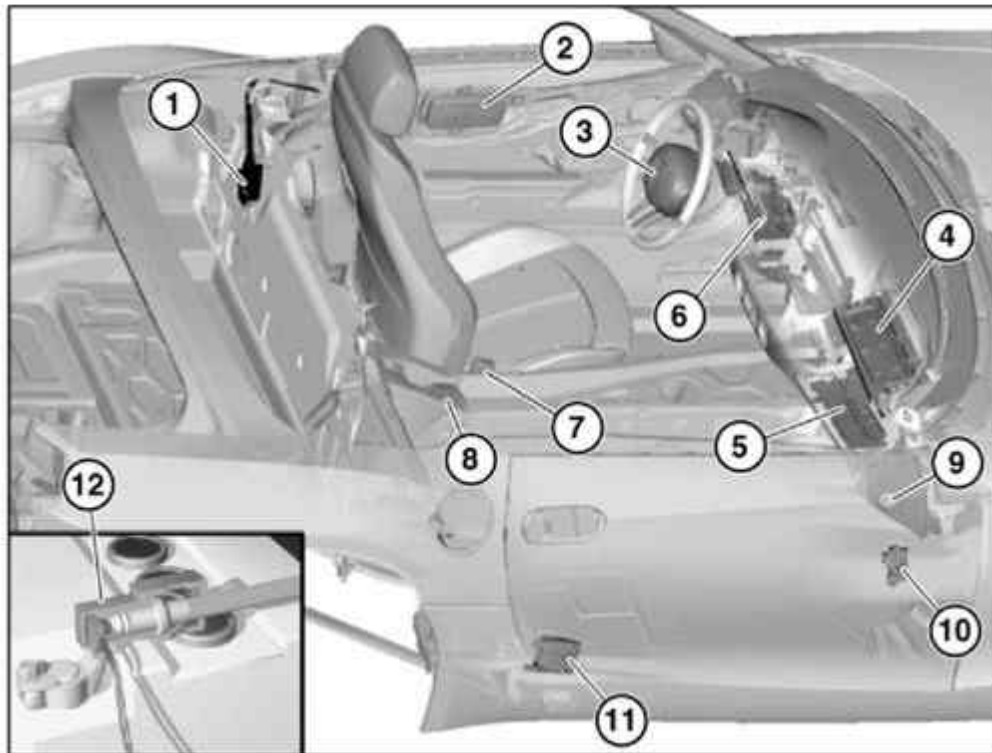


G03298754

Fig. 54: Identifying DIS

Courtesy of BMW OF NORTH AMERICA, INC.

72 12... OVERVIEW OF AIRBAG MODULES, SEAT BELTS AND AIRBAG TRIGGERING UNITS



- | | | | |
|---|-------------------------------|----|--|
| 1 | Seat belt, front left/right | 7 | Seat belt tensioner, left/right |
| 2 | Side airbag, front left/right | 8 | Airbag control unit |
| 3 | Driver's airbag | 9 | Switch for passenger airbag deactivation |
| 4 | Passenger airbag | 10 | Sensor, front door, left/right |
| 5 | Knee protection for passenger | 11 | Sensor, B-pillar, left/right |
| 6 | Knee protection for driver | 12 | Safety battery terminal |

G03298755

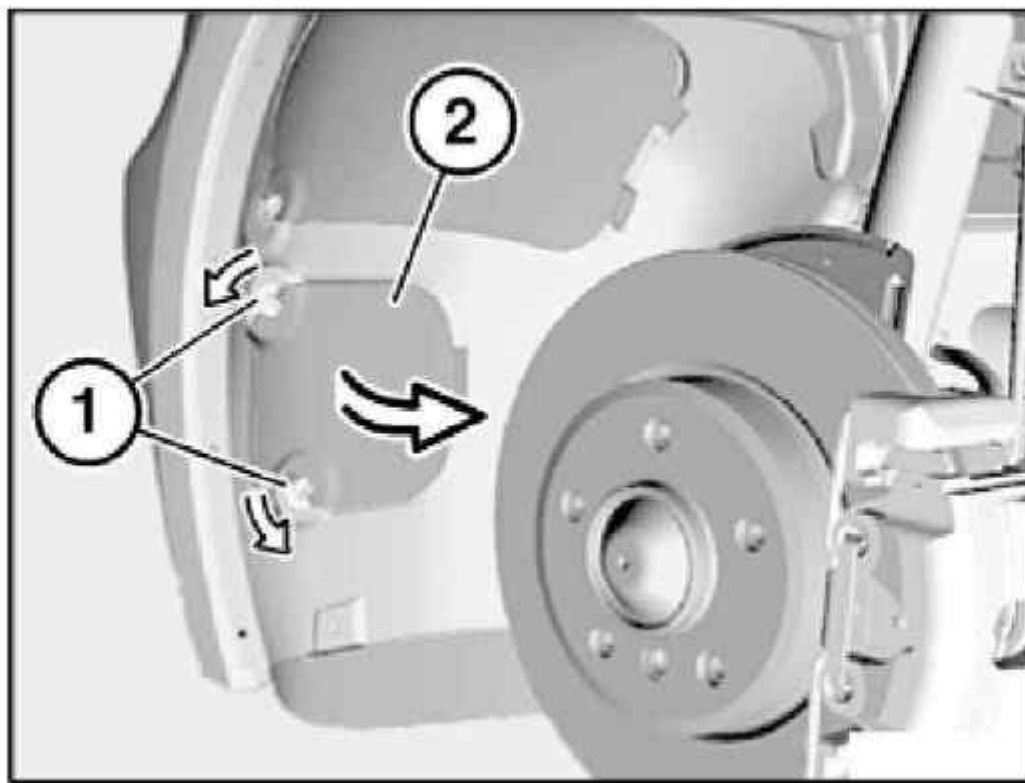
Fig. 55: Overview Of AIRBAG Modules, Seat Belts And AIRBAG Triggering Units
 Courtesy of BMW OF NORTH AMERICA, INC.

ON-BOARD COMPUTER

65 81 060 REMOVING AND INSTALLING/REPLACING EXTERNAL TEMPERATURE SENSOR

NOTE: Front wheel removed for purposes of clarity.

Unlock fasteners (1) by turning counterclockwise through 180° and fold up cover (2) in direction of arrow.

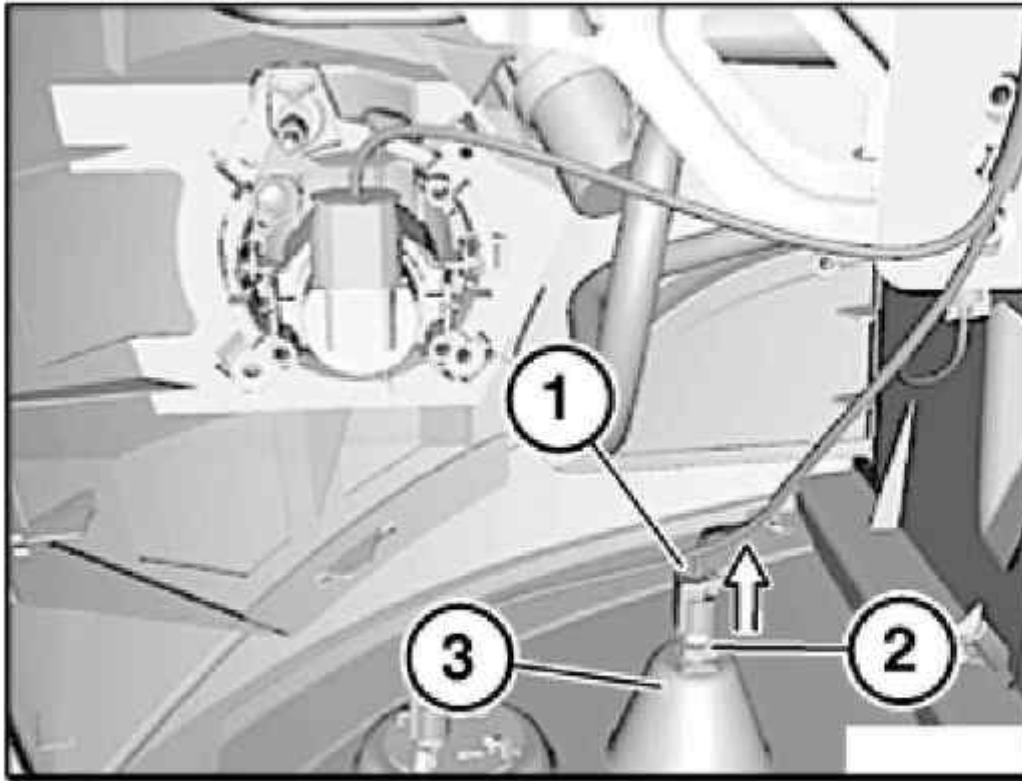


G03298756

Fig. 56: Unlocking Fasteners

Courtesy of BMW OF NORTH AMERICA, INC.

Unlock plug connection (1) and disconnect.



G03298757

Fig. 57: Removing Outside Temperature Sensor
Courtesy of BMW OF NORTH AMERICA, INC.

Unclip outside temperature sensor (2) in direction of arrow from cover (3).

Installation:

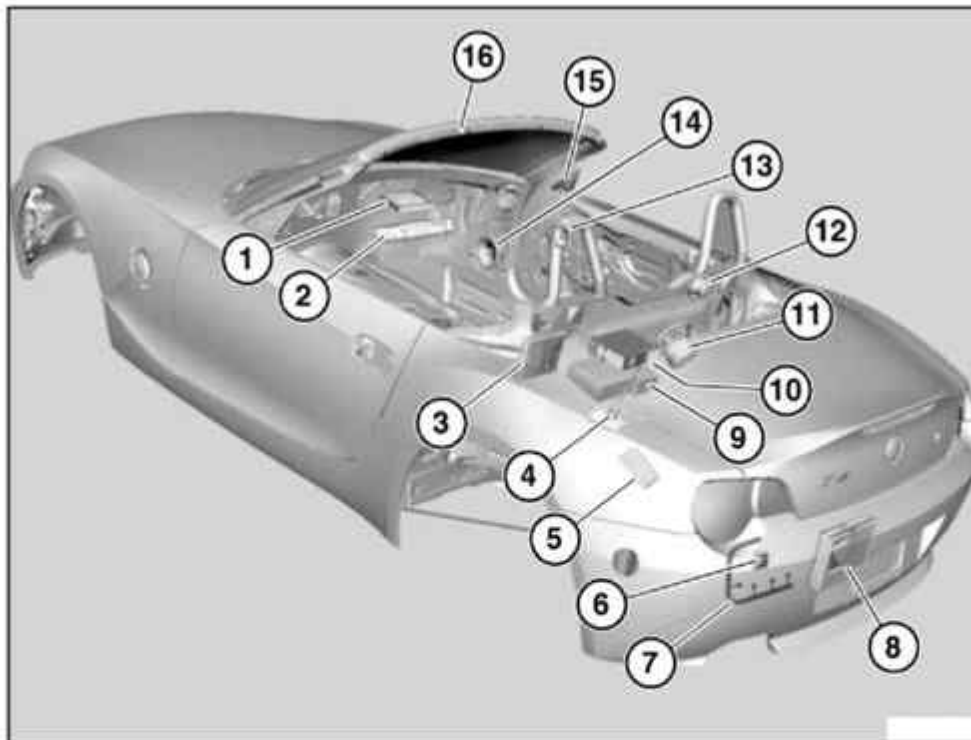
Make sure outside temperature sensor (2) is engaged in cover (3).

NAVIGATION SYSTEM

65 00.. OVERVIEW OF RADIO AND SPECIAL EQUIPMENT

2005 BMW Z4

2003-05 ACCESSORIES & EQUIPMENT Audio, Navigation & Anti-Theft Systems - Repair Instructions - Z4



- | | | | |
|---|-----------------------------------|----|---|
| 1 | Central information display | 9 | CD changer |
| 2 | Radio receiver | 10 | Navigation computer |
| 3 | Video module for on-board monitor | 11 | Rear speaker (woofer, in side trim panel) |
| 4 | Rubber antenna | 12 | Mid-range speaker, side trim |
| 5 | Antenna amplifier, diversity | 13 | Mid-range speaker, door trim |
| 6 | Antenna amplifier FM | 14 | Bass speaker, A-pillar |
| 7 | Bumper antenna | 15 | Treble speaker |
| 8 | Amplifier | 16 | Antenna (GPS) |

G03298758

Fig. 58: Identifying Overview Of Radio And Special Equipment (Navigation System)
Courtesy of BMW OF NORTH AMERICA, INC.

65 90... NOTES ON HANDLING NAVIGATION COMPUTERS

All model series:

CAUTION: Risk of damage!

The navigation computer must not be disconnected from the power supply while the LED on the computer remains lit (the LED goes out after approx. 1 minute).

NOTE: To ensure full operation of all the communications components, it is necessary in new cars to insert a Road Map CD in the navigation computer.

This is absolutely essential as certain functions are disabled for distribution channels.

These functions will only be available again after a Road Map CD has been inserted. The mode preset at the factory is automatically reset when this CD is inserted.

Software installation:

The navigation software must be loaded with terminal 15 activated and the navigation system ready for operation.

Make sure there is a stable power supply. If necessary, connect a battery charger to the vehicle.

The charging operation must not be interrupted (terminal 15 remains activated).

When replacing navigation computer:

From E65/66:

- Carry out coding of navigation computer with aid of Diagnosis and Information System via "CIP".

To E65/66:

- Carry out coding of navigation computer with aid of Diagnosis and Information System in path "1 Recoding".

E46 (with radio navigation) only:

When replacing navigation computer:

- Connect Diagnosis and Information System to vehicle.
- Switch on ignition.
- Select Coding/Programming.
- Select path "3 Coding ZCS".
- Select vehicle.
- Select path "4 Retrofitting".
- Select menu item "3 Instrument cluster".
- Select menu item "2 Language".
- Select the desired languages following the user prompting.
- Start coding of the instrument cluster.
- After the prompt from the Diagnosis and Information System "Now follow the instructions on the on-board monitor", insert the operating software CD.
- The following note appears from DIS CD 25 software (and higher):

"With radio navigation insert the operating software CD in the computer and wait until it is ejected. Then

follow the instructions on the display. This procedure takes several minutes".

NOTE: **The ignition must not be turned off and then on again during this procedure.**
 The software is loaded when the operating software CD is ejected.

- Carry out coding of navigation computer with aid of Diagnosis and Information System in path "1 Recoding".

If the software is updated at a later stage, the last step is omitted if the navigation computer is already configured for a navigation system (radio navigation or navigation system).

65 90 511 REMOVING AND INSTALLING (REPLACING) NAVIGATION COMPUTER WITH CD DRIVE

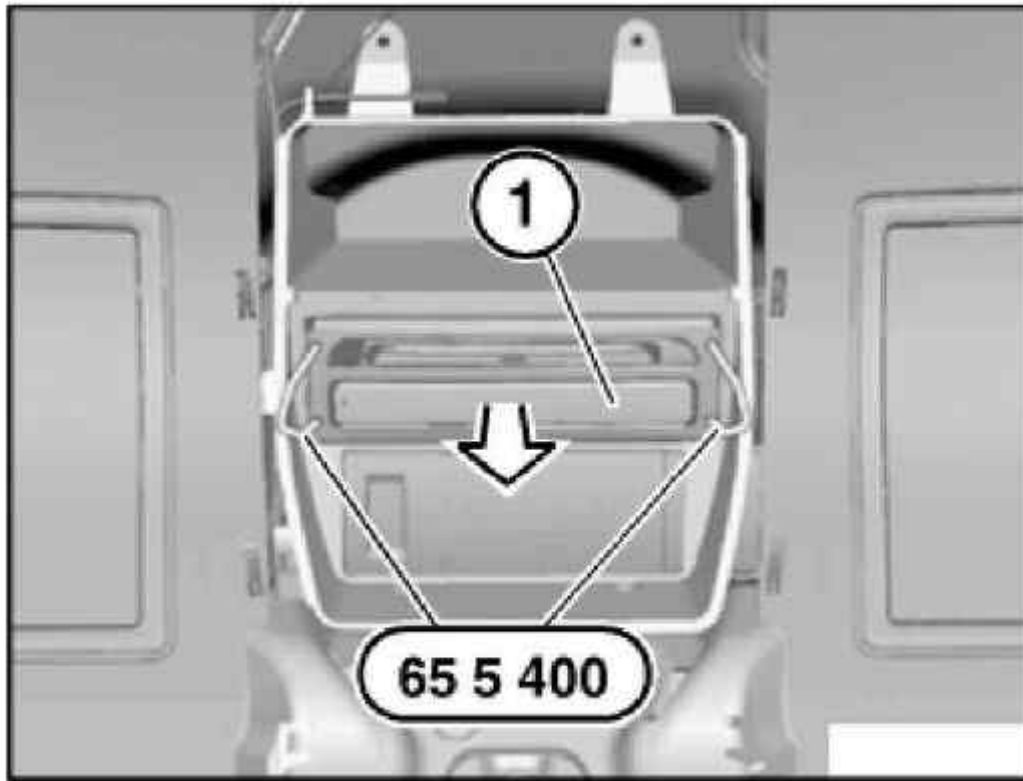
Special tools required:

- 65 5 400

Necessary preliminary tasks:

- Remove panel for rear storage box. Refer to **51 16 235 REMOVING AND INSTALLING PANEL FOR REAR STORAGE BOX** .

Unlock navigation computer (1) with special tool 65 5 400 and pull out.



G03298759

Fig. 59: Removing Navigation Computer
Courtesy of BMW OF NORTH AMERICA, INC.

Unlock plug connections behind and disconnect.

Remove navigation computer (1).

Replacement:

Carry out coding/programming.

Observe following IDC specifications:

- Programming
- Coding
- If necessary, car & key memory
- CD "CIP"



G03298760

Fig. 60: Identifying DIS

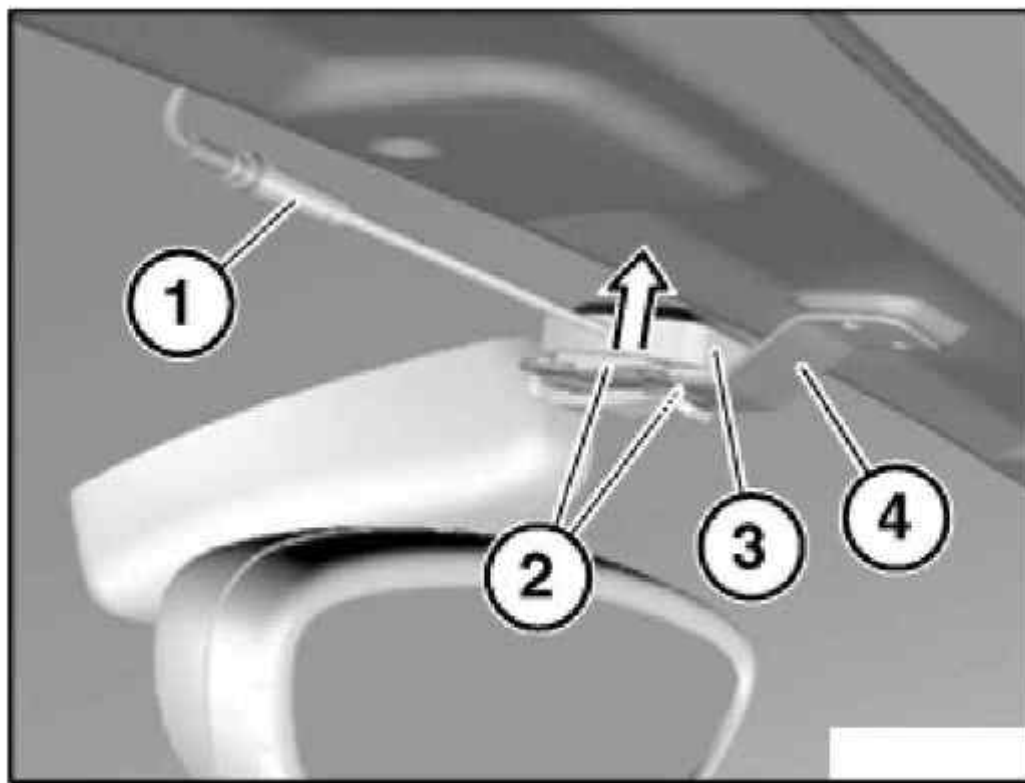
Courtesy of BMW OF NORTH AMERICA, INC.

65 90 540 REMOVING AND INSTALLING/REPLACING ANTENNA OF GLOBAL POSITIONING SYSTEM (GPS)

Necessary preliminary tasks:

- Remove trim for front roofliner. Refer to **51 44 150 REPLACING TRIM FOR FRONT ROOFLINER**.

Release knurled nut and disconnect antenna plug (1).



G03298761

Fig. 61: Disconnecting Antenna Plug

Courtesy of BMW OF NORTH AMERICA, INC.

Unlock both catches (2) in direction of arrow, slide antenna of Global Positioning System (3) forwards from holder (4) and remove.