SUNROOF

54 0 ... REPAIR INSTRUCTIONS FOR BONDED SEALS

1. General Information On Handling Rubber Seal Profiles:
   - If seals reveal partly detached protective film on delivery, they must not be bonded.
   - Store seals at 15Â°C to 25Â°C.
   - If, during the handling, the protective film has come off before bonding, it can still be bonded.
   - Bonding at room and object temperature >20Â°C. Temperatures between 40 and 50 Â°C significantly increase initial adhesion.
   - Seals, which are subjected to temperatures above 80Â°C after gluing, will be very difficult to remove.
2. Damage Pattern And Repair:

   2.1. Partially detached bond (rubber-adhesive tape or adhesive tape-paint):
   - Up to 120 mm for retouching without auxiliary resources.
   - Up to 200 mm repaired with pressing-on tools on straight surfaces.

   a. Cleaning damaged areas:
   - Degrease bonded area with adhesive cleaner and remove other residues.

   NOTE: Use necessary cotton or fluff-free paper towel once only.

   When using solvent:

   Expose repair area to air for at least 2 minutes.

   b. Applying adhesive:
   - With a fine nozzle, apply a wafer-thin bead to adhesive tape.

   NOTE: Use contact adhesive (e.g. Terokal 2444).

   CAUTION: Avoid contact to skin! Do not apply adhesive to visible painted surfaces.

   c. Pressing on rubber seal:
   - Press down seal using contact pressure (forced pressure not necessary) for at least 1 minute.

   CAUTION: Load can only be applied to the bond after a period of 2 minutes. This waiting time is absolutely essential.

   2.2. Larger defects (mechanical damage and larger separations of seal):
   - A complete replacement of the rubber seal is necessary.

   a. Peeling off damaged rubber seal:
   - Pull off rubber seal slowly at an angle of 15 to 25Â°.

   NOTE: Make sure the connection between adhesive tape and seal is retained. If the connection between adhesive tape and seal is detached: Carefully and slowly detach adhesive tape at an

angle of 15 to 25Â° from roof opening or lid. If, in the case of older seals, you are peeling off using a hot air blower: Do not damage paintwork. Do not detach rubber-adhesive tape connection if at all possible.

b. Cleaning bonded area:

- Degrease bonded area with adhesive cleaner and remove other residues.

NOTE: Use necessary cotton- or fluff-free paper towel once only. When using solvent:
Expose repair area to air for at least 2 minutes.

c. Detaching protective film from bonded area:

- Detach protective film from rubber seal in sections.

CAUTION: Once the protective film has been removed, do not under any circumstances touch the exposed bonded area.

d. Applying rubber seal:

- Apply rubber seal on roof opening edge beginning at rear center. Use upper lip as application edge. Press on seal continuously by hand. Carefully unwrap seal at radii without tension and press down (critical area).

NOTE: If positioned incorrectly, the seal can still be pulled off, repositioned and pressed on again.

e. Establishing seal joint:

- Mark contact point at joint by pressing down loose end on seal of already bonded end. Then cut and press down loose end at same height.

NOTE: Small areas of seal can remain stuck to adhesive tape of loose end.

f. Pressing on seal:

- Press on seal using a roller.
- Adhesive tape width up to 5 mm Application pressure approx. 5 N.
- Adhesive tape width up to 10 mm Application pressure approx. 10 N.

Seal On Sliding Sunroof E83 Only:

- Press against seal strongly with a roller. Application pressure approx. 70 N.

Seal On Sliding Sunroof E36 Only:

- Application pressure approx. 30 N.
- Tear off tear-off lip at rear and side in area of narrower flange.

NOTE: Firm thumb pressure has approx. 35 N/cm^2 .

3. Checking Rubber Seal:

- Check the bonded seals for correct positioning and perfect adhesion. The bonding can be checked by pressing back the sealing lip.
- The force required to peel off the seal immediately after gluing must be greater than 10 N/cm.

HARD TOP

54 21 000 FITTING HARD TOP (WITH SETTINGS AT FASTENING, B-PILLAR)

Open convertible top.

Open side windows.

Open cap (1) on cover at top of B-pillar (2).

3 Hard top locating point.

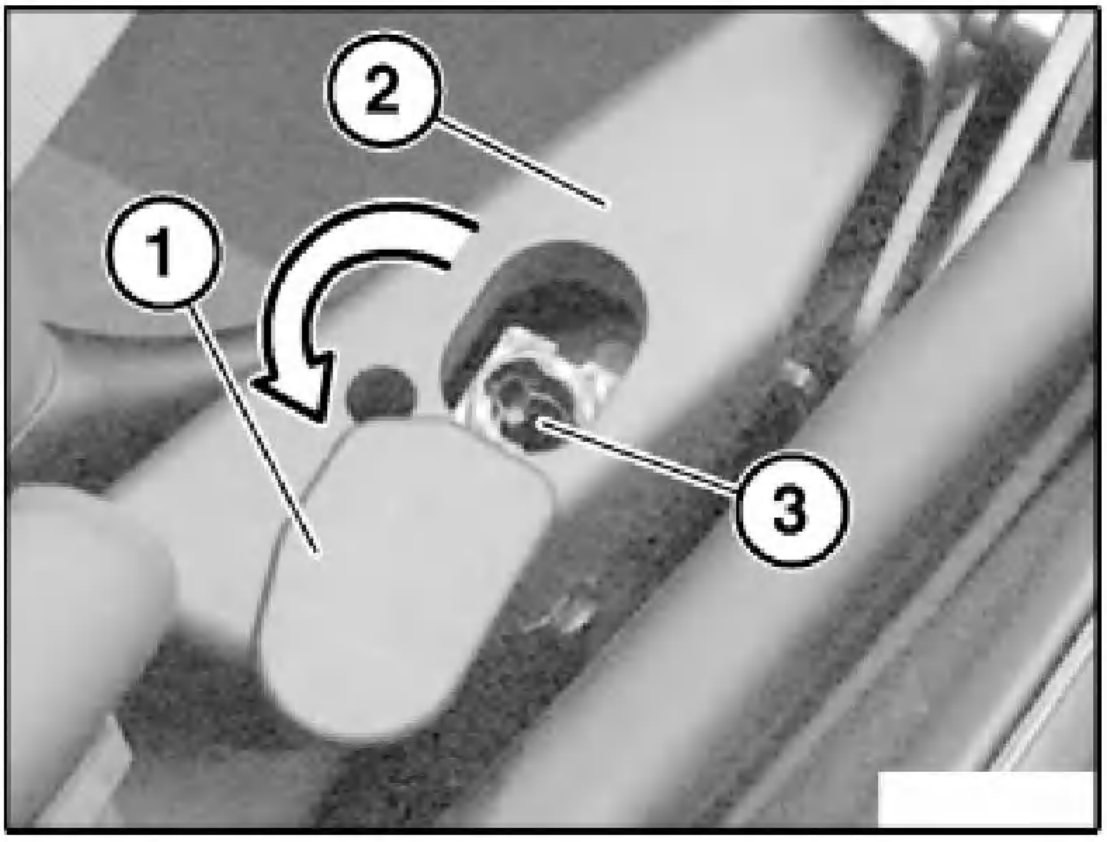


Fig. 1: Opening Cap
Courtesy of BMW OF NORTH AMERICA, INC.

Unscrew bolt (1).

Remove cover at top of B-pillar (2).

Fit hard top and lock.

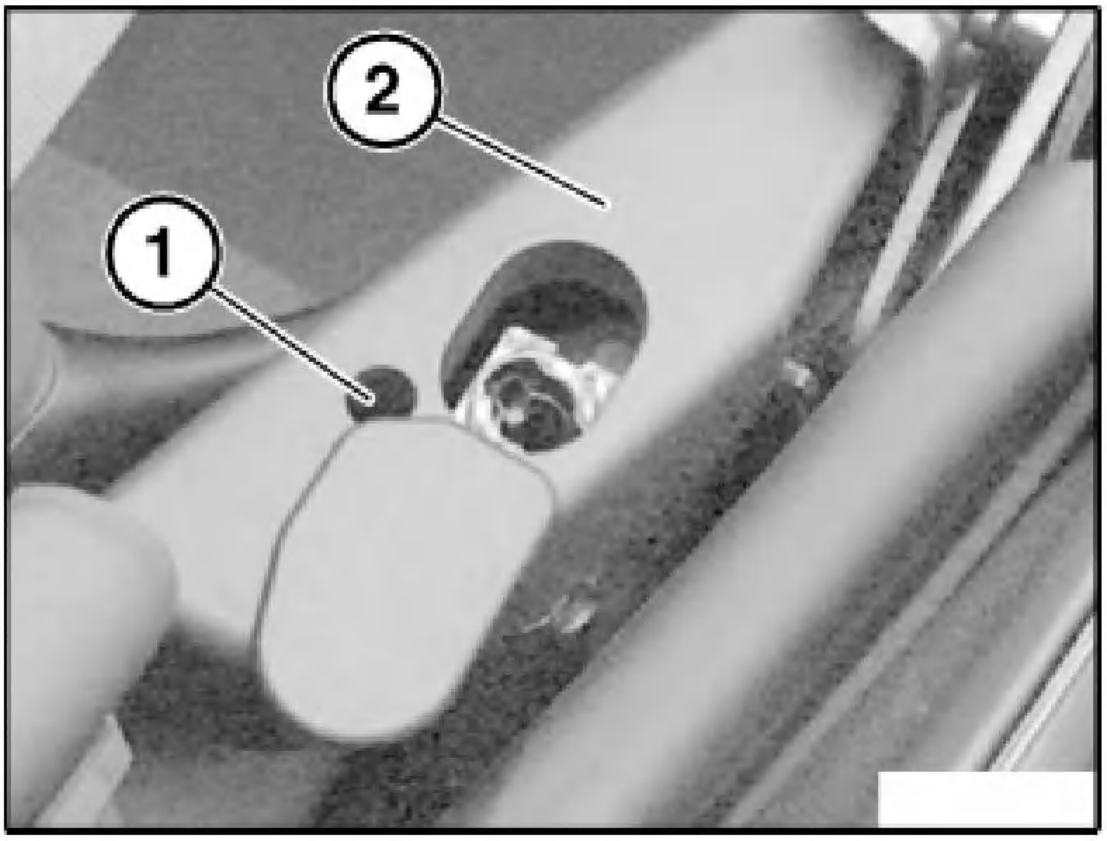


Fig. 2: Removing Bolt
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Release slotted nut (1). Adjust hard top in direction "Y" (transverse to vehicle axis) symmetrically on left and right.

Adjust vertical clearance "Z" between hard top and body (0.2 mm all round) with nut (2).

Release screws (3). Adjust hard top in direction "X" (vehicle longitudinal axis).

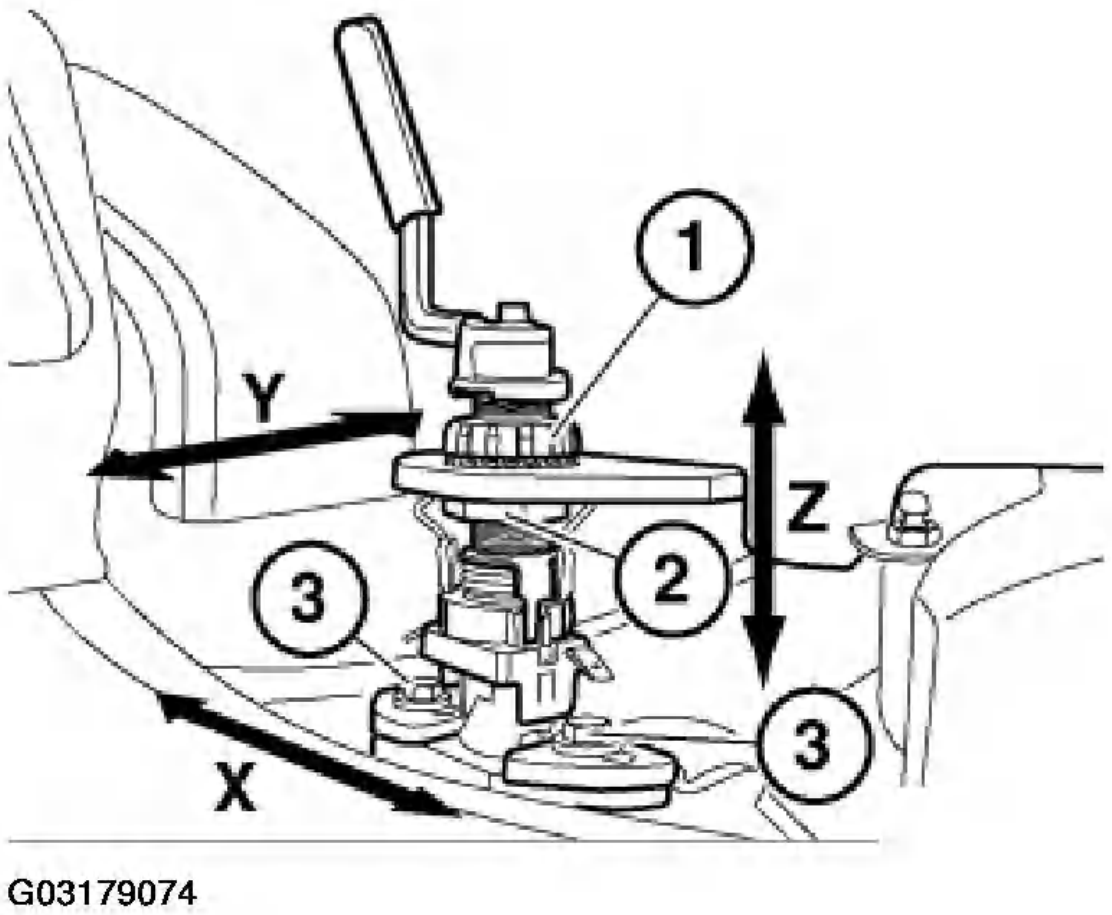


Fig. 3: Releasing Slotted Nut
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

During movement in direction "X", edge of hard top (1) must be flush with edge of side panel at rear (2).

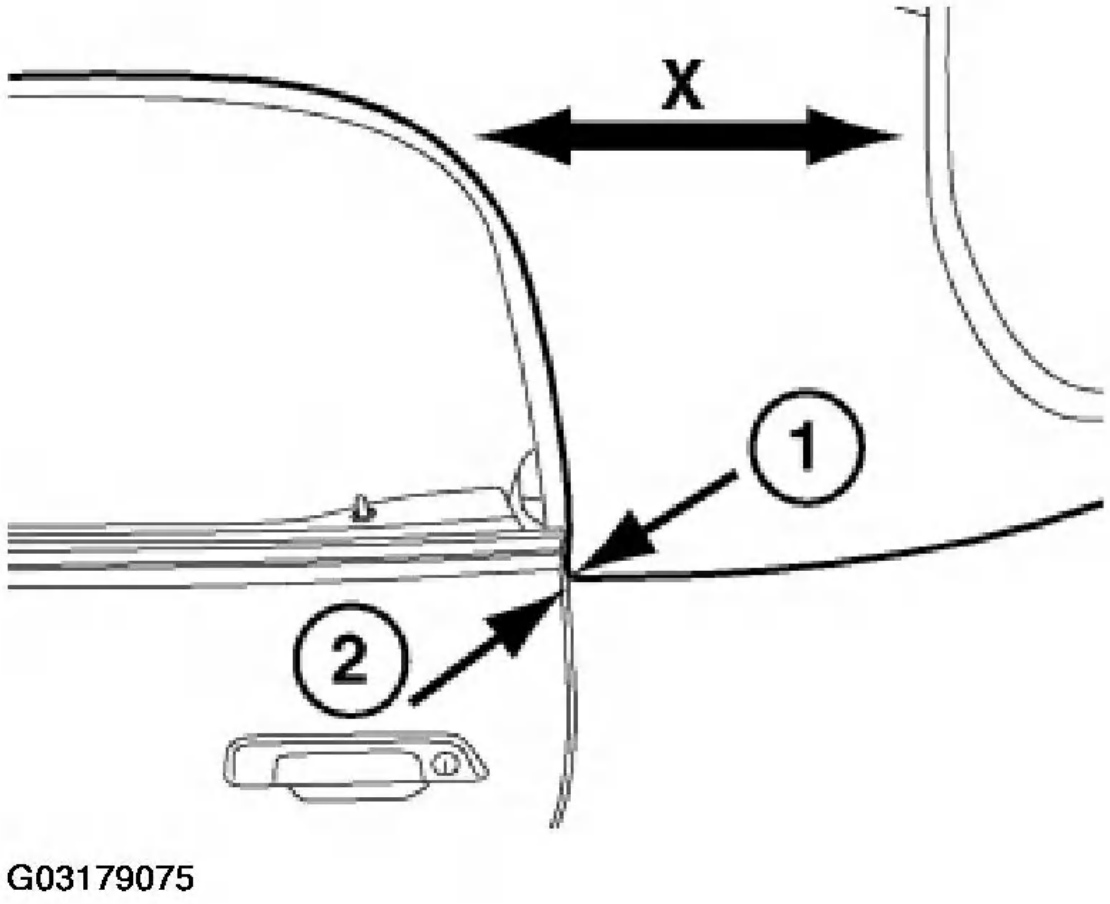


Fig. 4: Locating Edge Of Hard Top And Edge Of Side Panel At Rear
Courtesy of BMW OF NORTH AMERICA, INC.

54 21 001 REMOVING HARD TOP

Release screws (2) on left and right in cowl panel (1).

NOTE: Keep screws (2) in cowl panel (1).

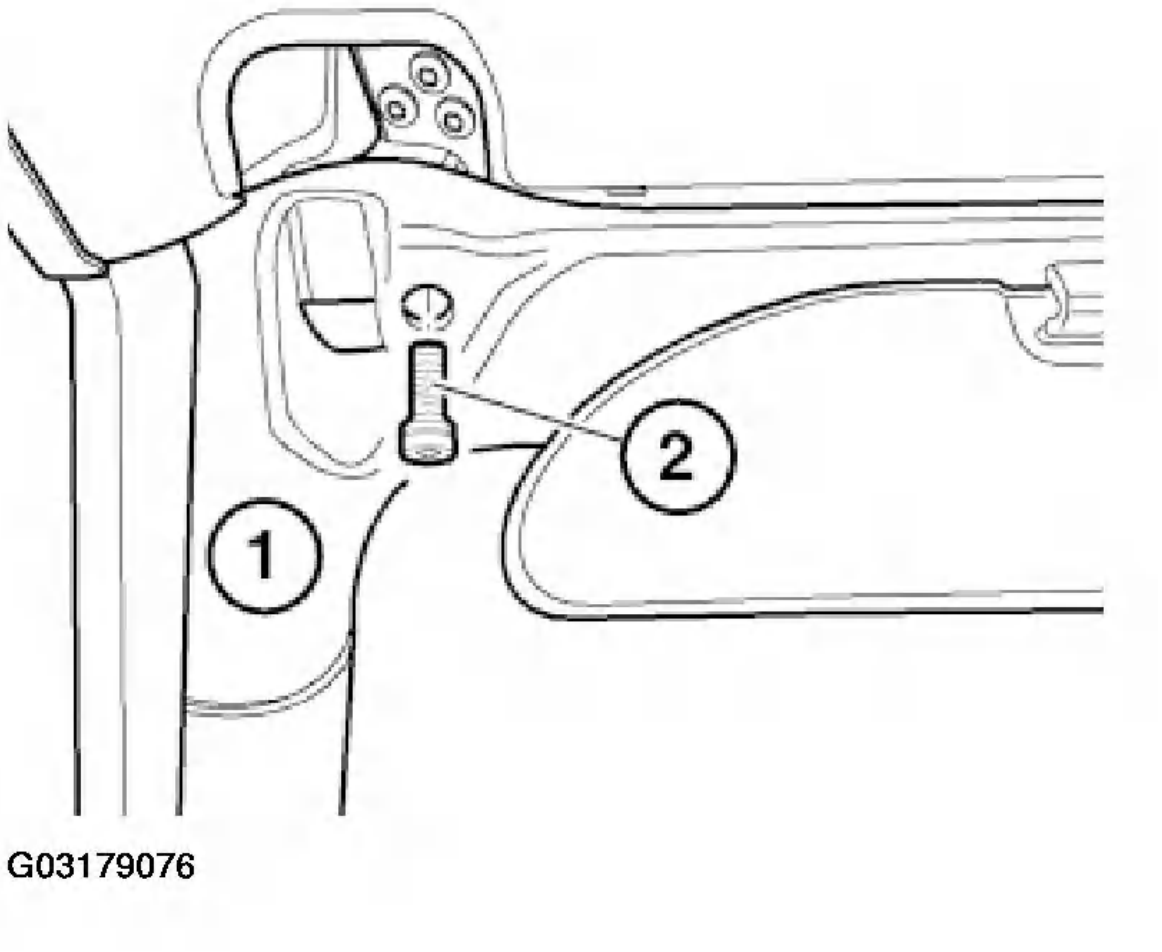


Fig. 5: Removing Screws
Courtesy of BMW OF NORTH AMERICA, INC.

Turn locking lever (1) on left and right forwards.

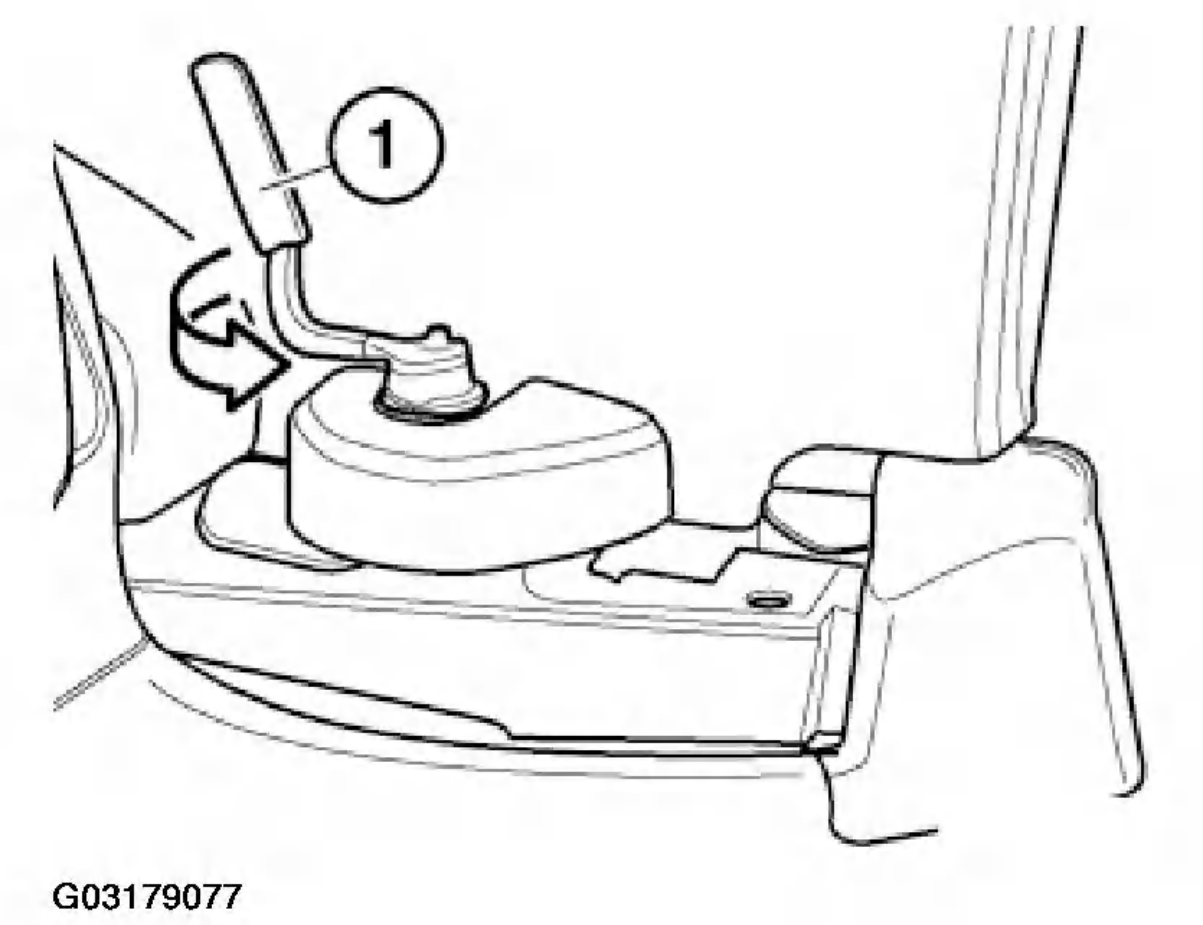


Fig. 6: Turning Locking Lever
Courtesy of BMW OF NORTH AMERICA, INC.

Lift off hard top with a second person.

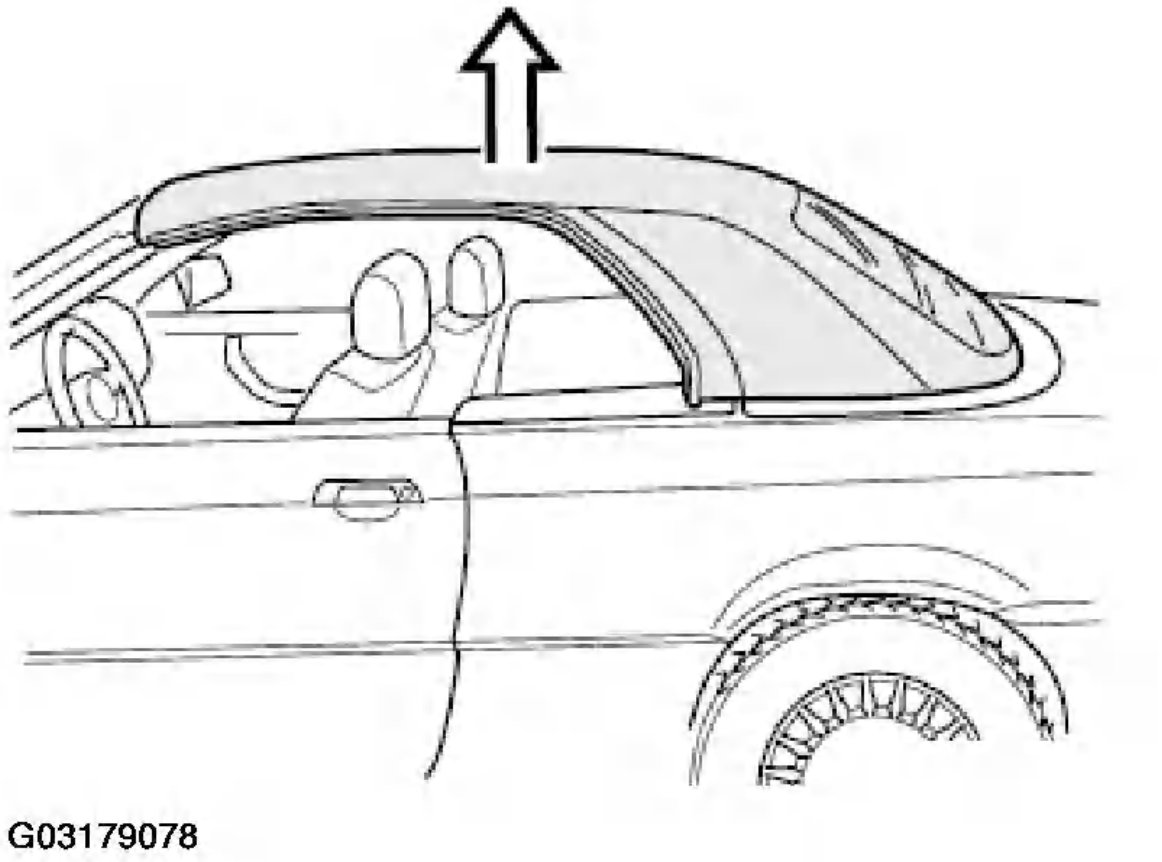


Fig. 7: Lifting Off Hard Top
Courtesy of BMW OF NORTH AMERICA, INC.

Close off hard top locating point (3) with cap (1) on cover at top of B-pillar (2).

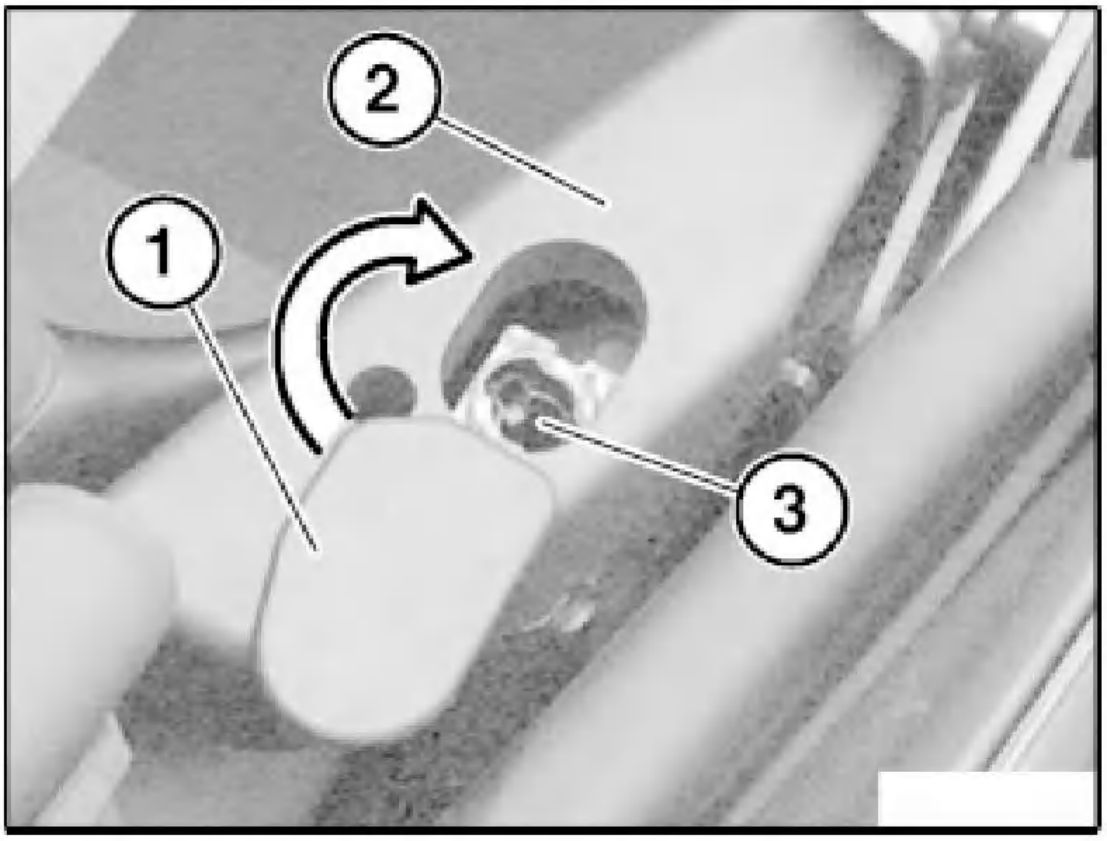


Fig. 8: Closing Off Hard Top Locating Point With Cap
Courtesy of BMW OF NORTH AMERICA, INC.

54 21 005 INSTALLING HARD TOP (REFITTING AS BEFORE WITHOUT ADJUSTING HEIGHT)

Hard top is installed in reverse sequence to its removal, refer to 54 21 001 REMOVING HARD TOP .

54 21 010 REPLACING RUBBER SEAL ON HARD TOP AT FRONT

Remove hard top, refer to 54 21 001 REMOVING HARD TOP .

Detach rubber seal (2) at bonding points (1).

Installation:

Use profile rubber adhesive for bonding.

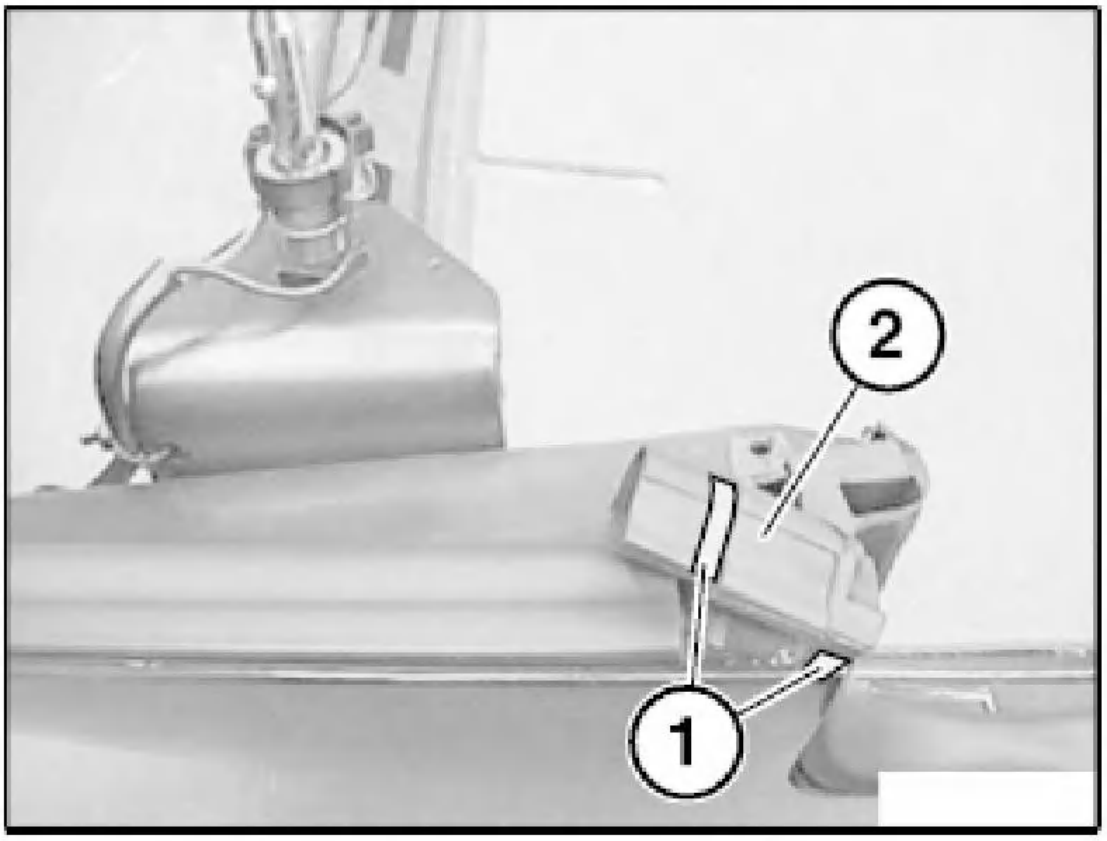


Fig. 9: Removing Rubber Seal
Courtesy of BMW OF NORTH AMERICA, INC.

Carefully twist rubber seal (1) out of guide rail (2).

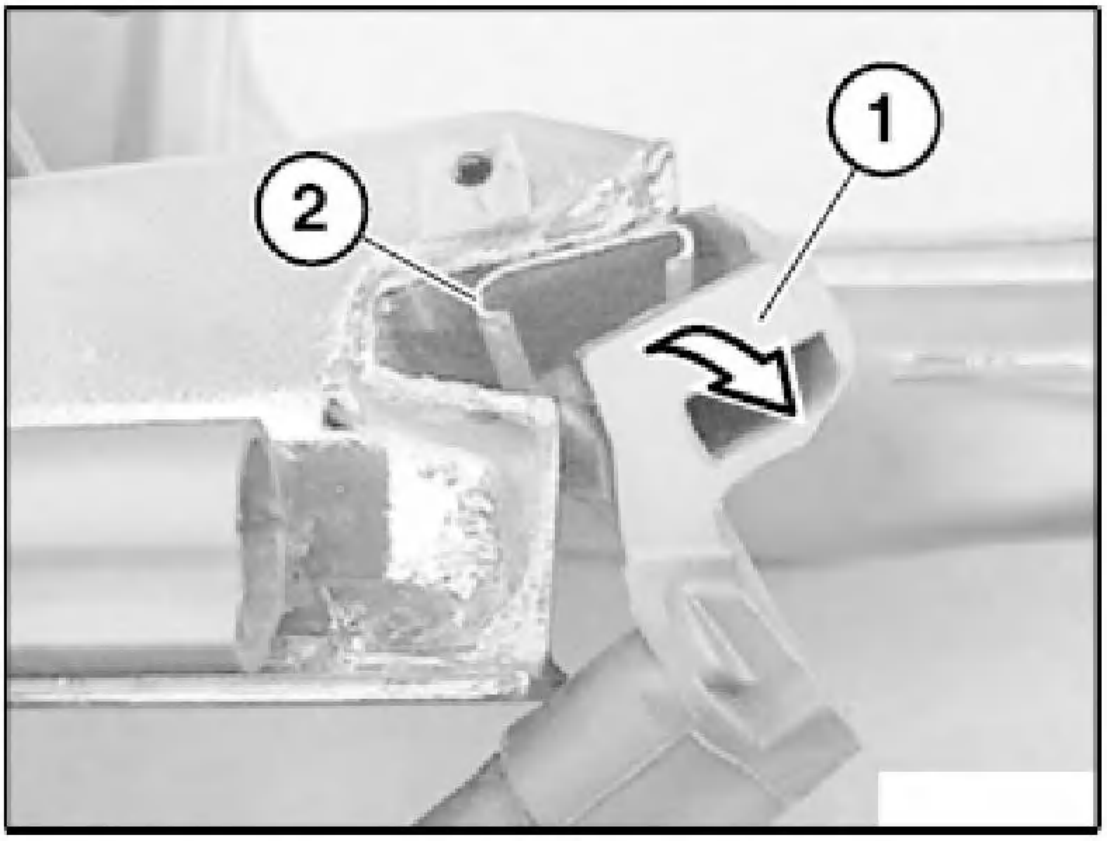


Fig. 10: Removing Rubber Seal
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Holes (1) in rubber seal must line up with journals (2) on guide rail.

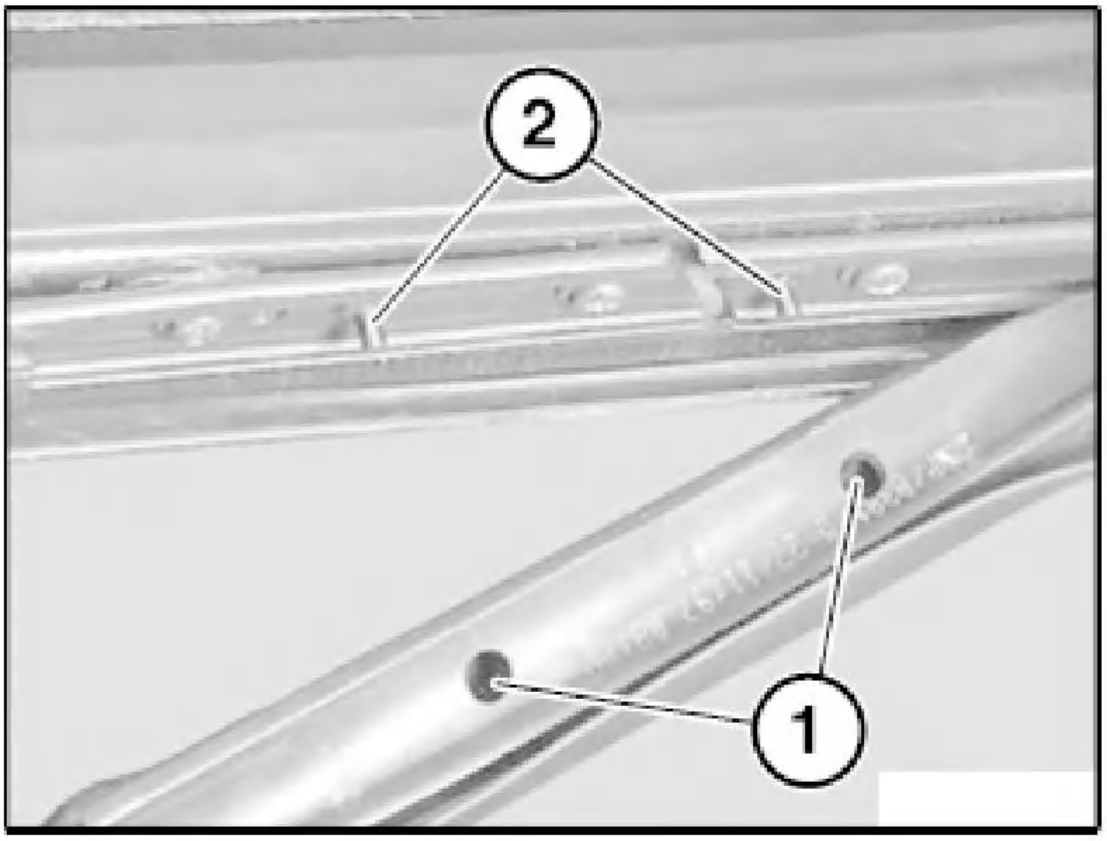


Fig. 11: Locating Holes
Courtesy of BMW OF NORTH AMERICA, INC.

54 21 020 REPLACING RUBBER SEAL ON HARD TOP AT REAR

Remove hard top, refer to 54 21 001 REMOVING HARD TOP .

Carefully detach bonding points (1).

Pull off rubber seal (2) towards rear.

Installation:

Use profile rubber adhesive for bonding.

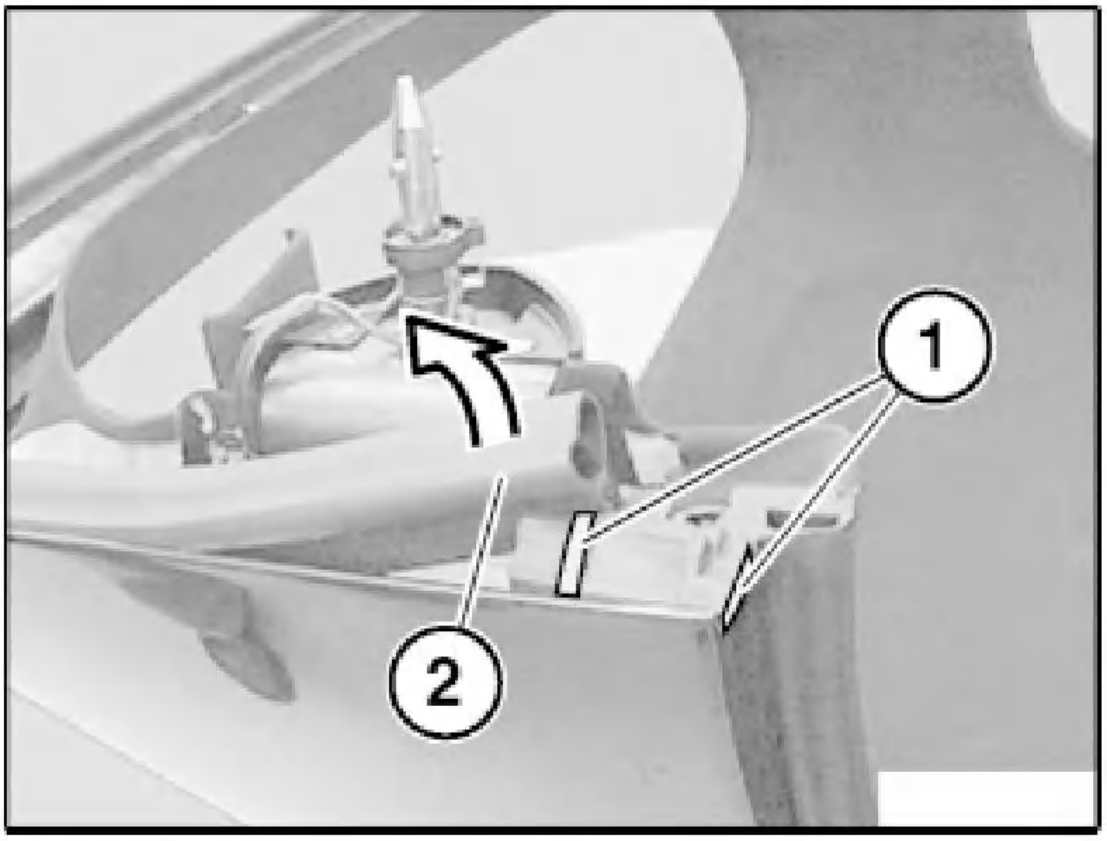


Fig. 12: Detaching Bonding Points
Courtesy of BMW OF NORTH AMERICA, INC.

54 21 060 REMOVING AND INSTALLING/REPLACING MOUNTING PLATE, FRONT LEFT OR RIGHT

Remove hard top, refer to 54 21 001 REMOVING HARD TOP .

Detach cover (1) on mounting plate towards front.

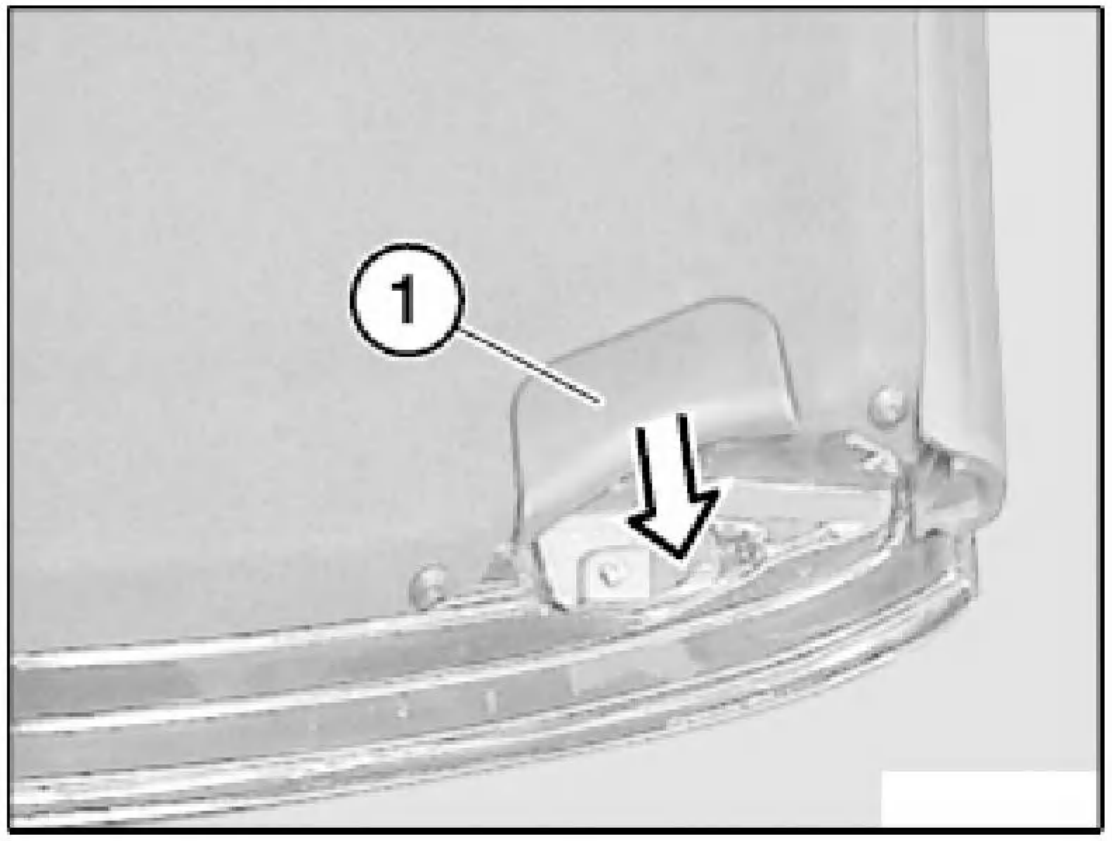


Fig. 13: Detaching Cover
Courtesy of BMW OF NORTH AMERICA, INC.

Release screws (2) and remove mounting plate.

(1) Cowl panel.

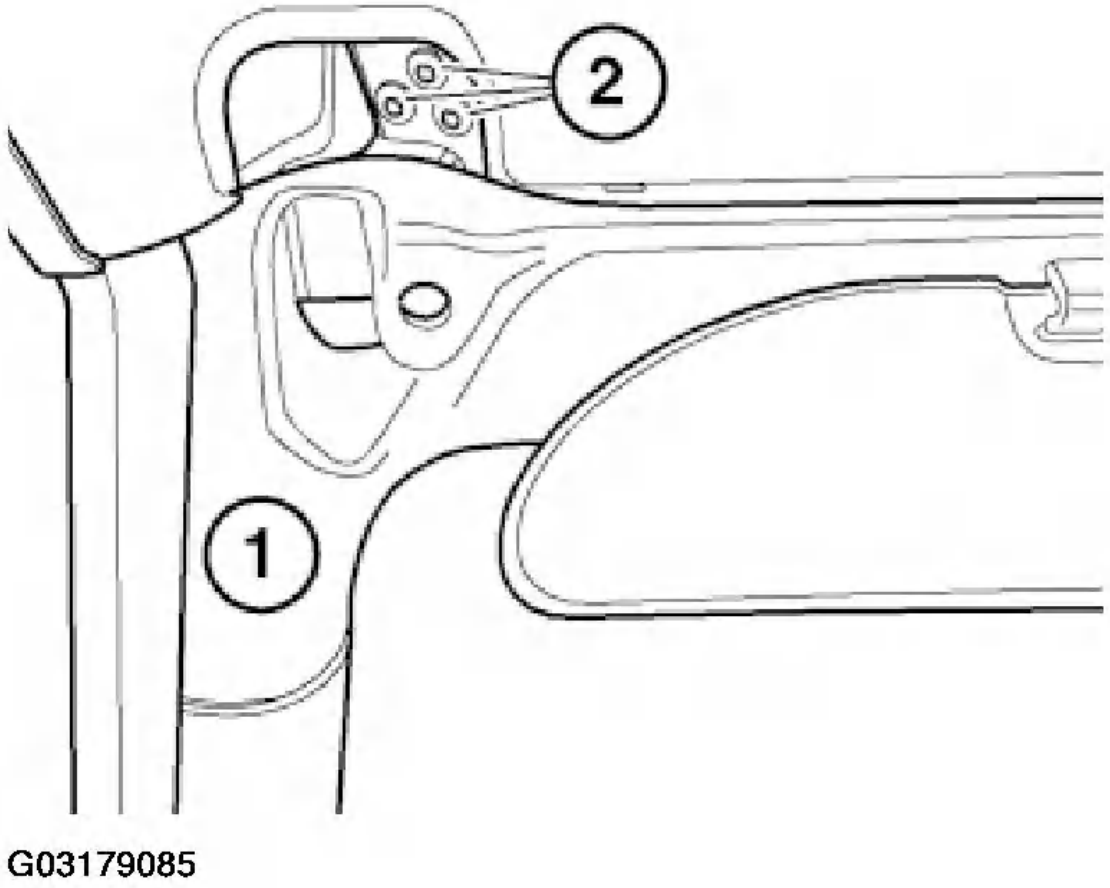


Fig. 14: Releasing Screws
Courtesy of BMW OF NORTH AMERICA, INC.

54 21 070 REPLACING LEFT OR RIGHT GUTTER

Detach gutter (1) from rear towards front/top.

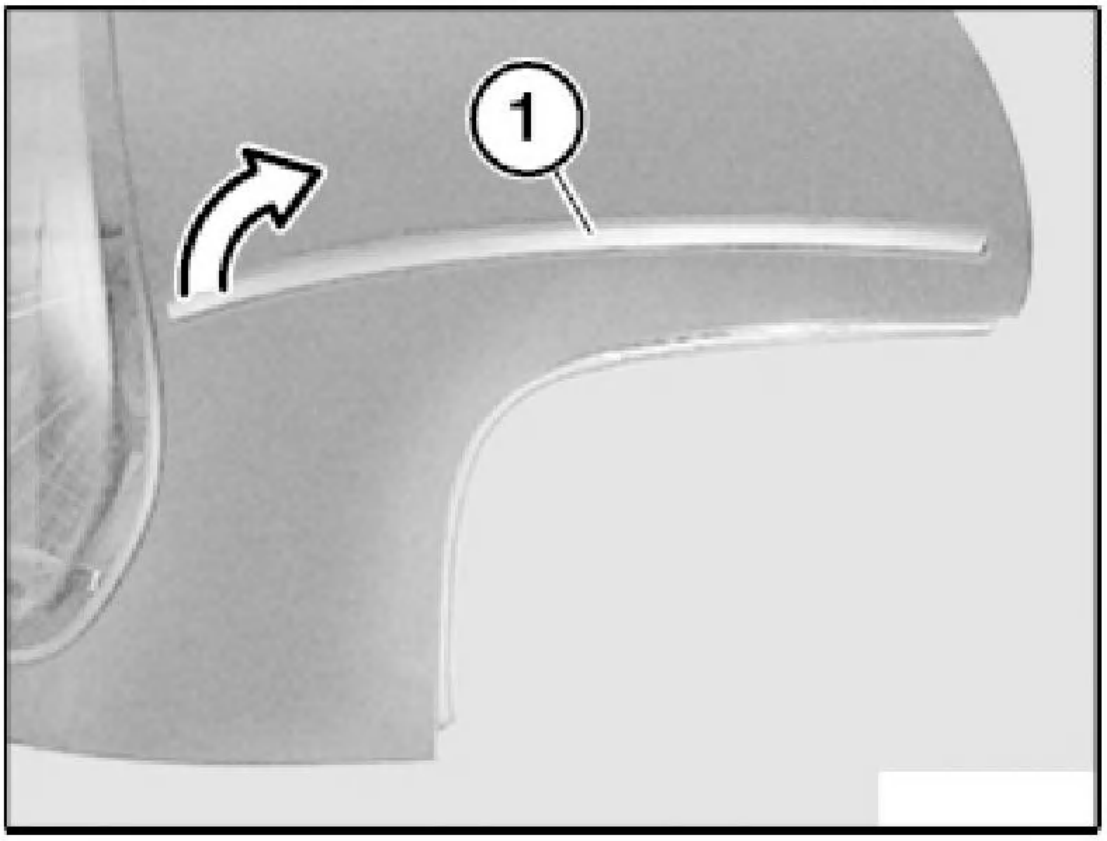


Fig. 15: Detaching Gutter
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Remove residual adhesive and clean adhesive area with spirit.

54 21 090 REMOVING AND INSTALLING/REPLACING PANEL, REAR WINDOW FRAME, BOTTOM

Remove hard top, refer to 54 21 001 REMOVING HARD TOP .

Release expansion rivets (1) and remove panel, rear window frame, bottom (2).

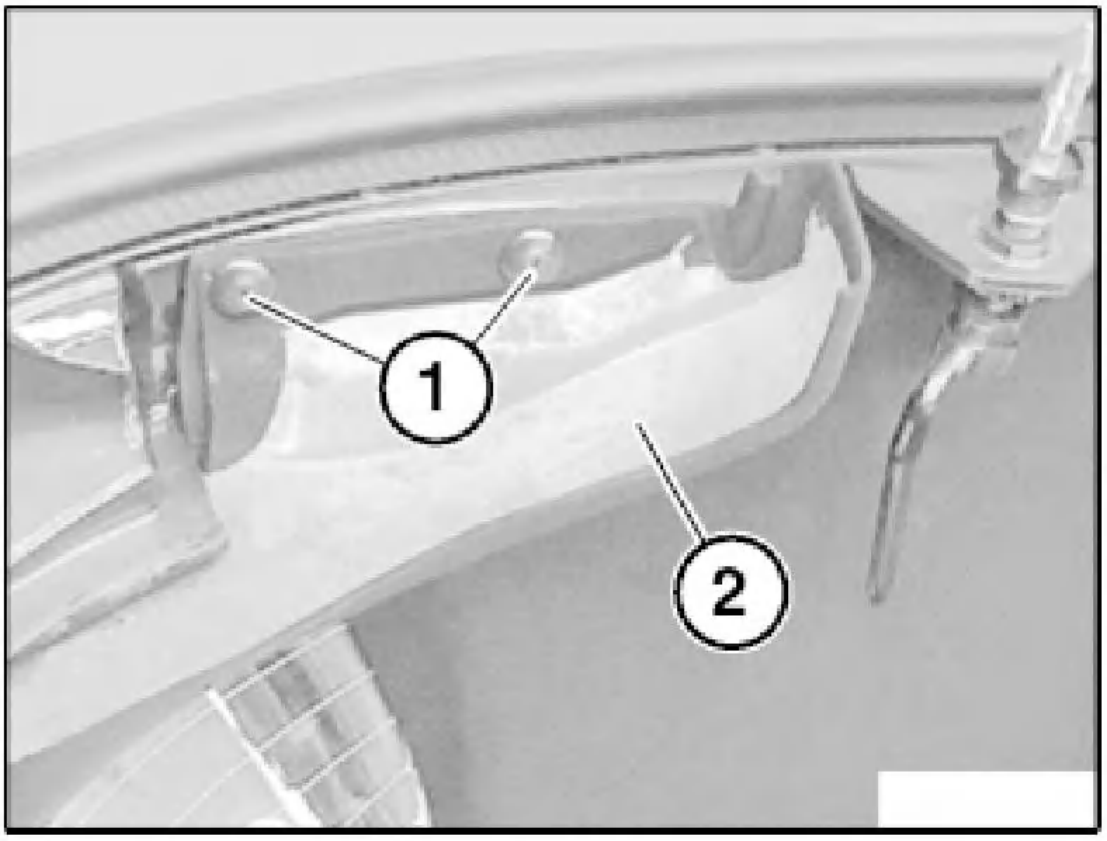


Fig. 16: Removing Expansion Rivets
Courtesy of BMW OF NORTH AMERICA, INC.

54 21 100 REMOVING AND INSTALLING/REPLACING MOLDED ROOF LINING ON HARD TOP

Remove hard top, refer to 54 21 001 REMOVING HARD TOP .

Detach cover (1) on mounting plate towards front.

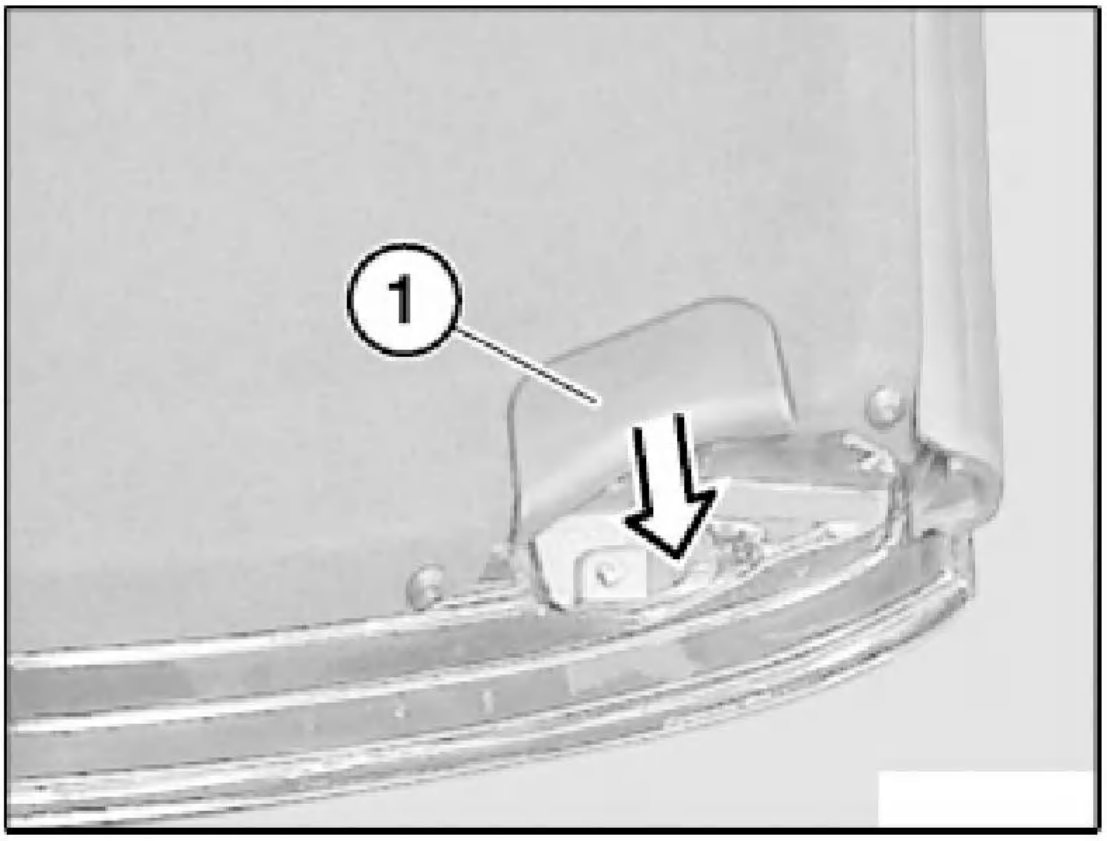


Fig. 17: Detaching Cover On Mounting Plate
Courtesy of BMW OF NORTH AMERICA, INC.

Release expansion rivets (1).

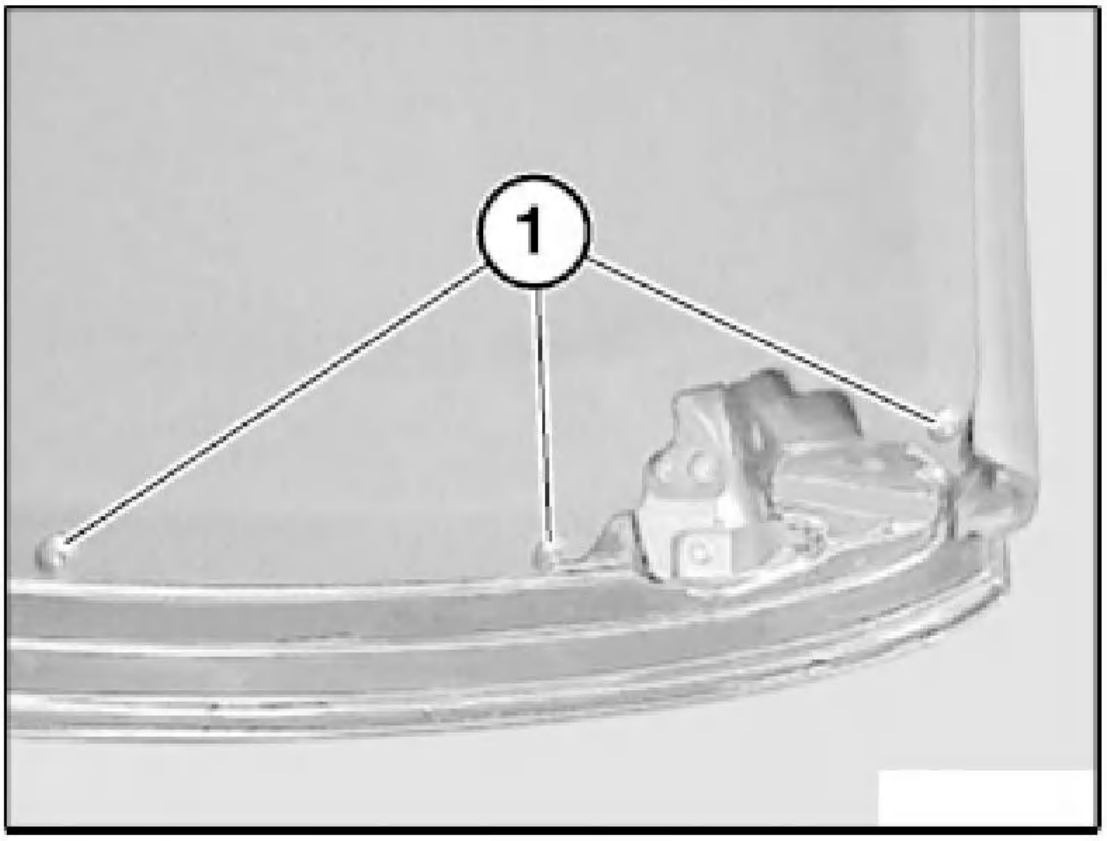


Fig. 18: Releasing Expansion Rivets
Courtesy of BMW OF NORTH AMERICA, INC.

Release expansion rivets (1) on left and right.

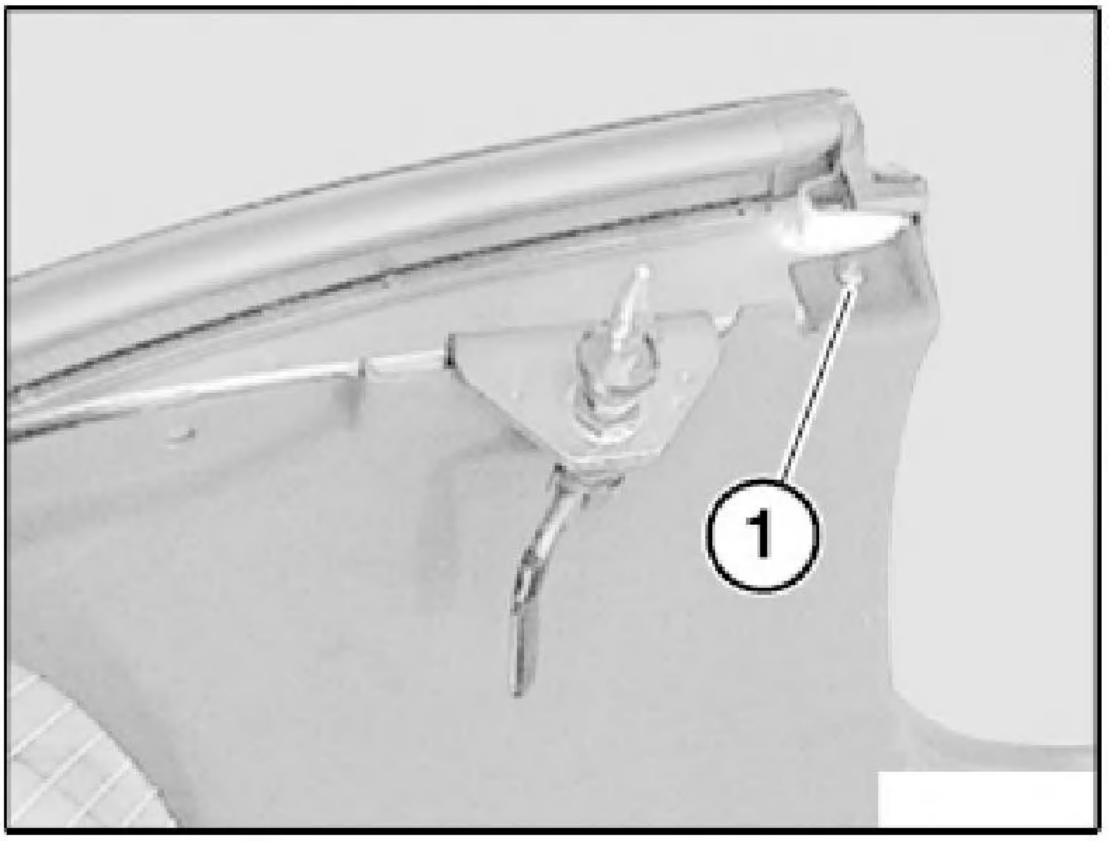


Fig. 19: Releasing Expansion Rivets On Left And Right
Courtesy of BMW OF NORTH AMERICA, INC.

Release screws (1) and remove cover (2).

Remove panel, rear window frame, bottom, refer to 54 21 090 REMOVING AND INSTALLING/REPLACING PANEL, REAR WINDOW FRAME, BOTTOM .

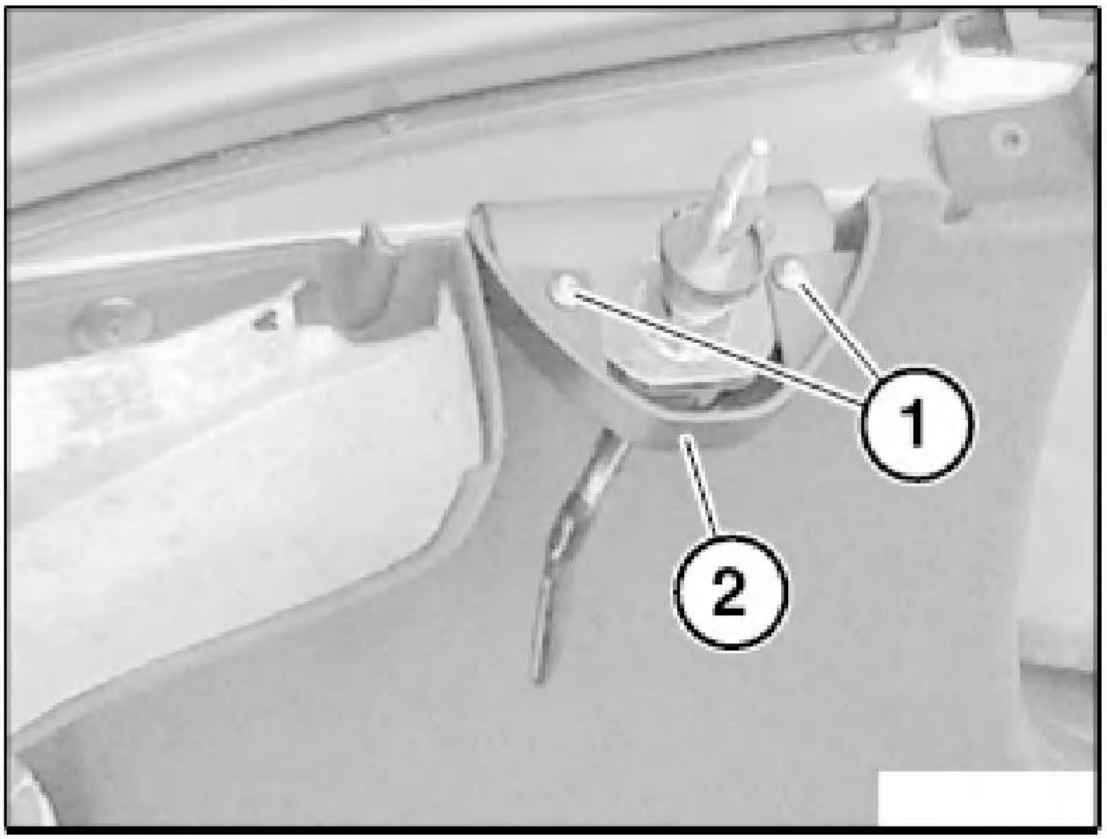


Fig. 20: Releasing Screws
Courtesy of BMW OF NORTH AMERICA, INC.

Pull off molded roof lining (2) from rubber seal at front (1) towards inside.

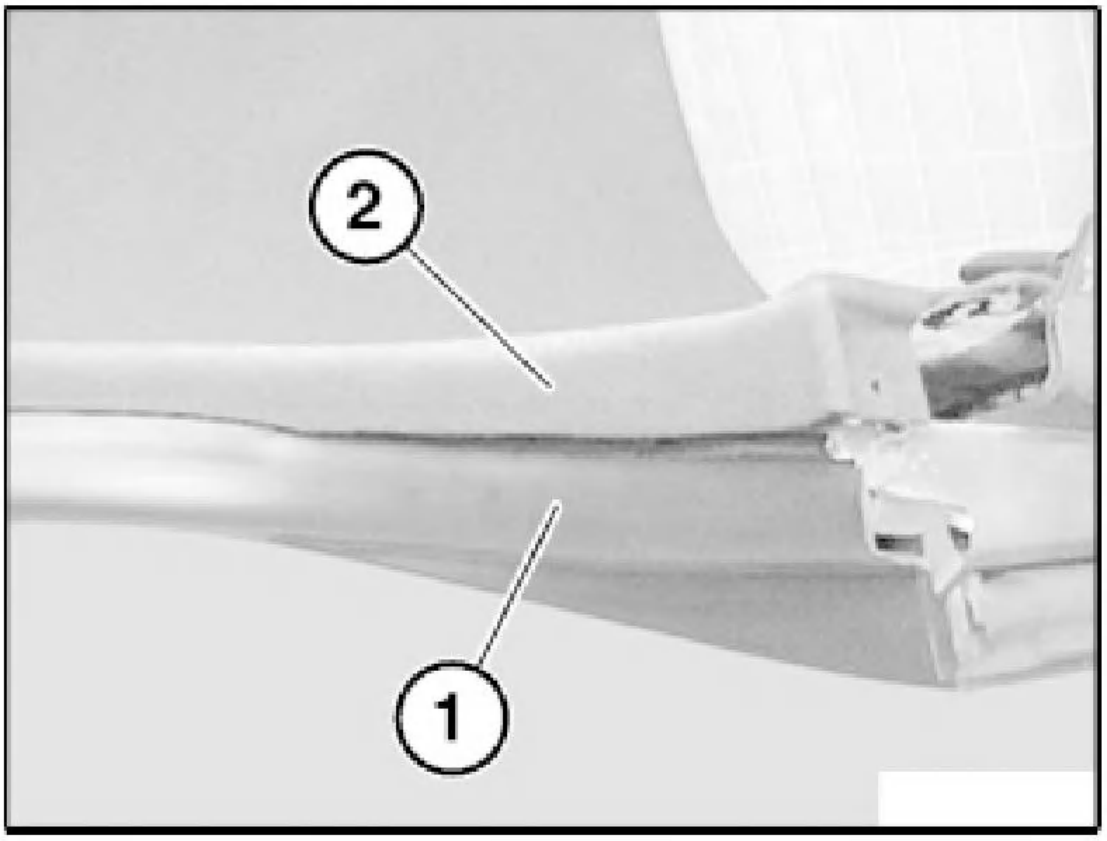


Fig. 21: Pulling Off Molded Roof Lining
Courtesy of BMW OF NORTH AMERICA, INC.

Raise molded roof lining (1) at rear window and slide towards front.

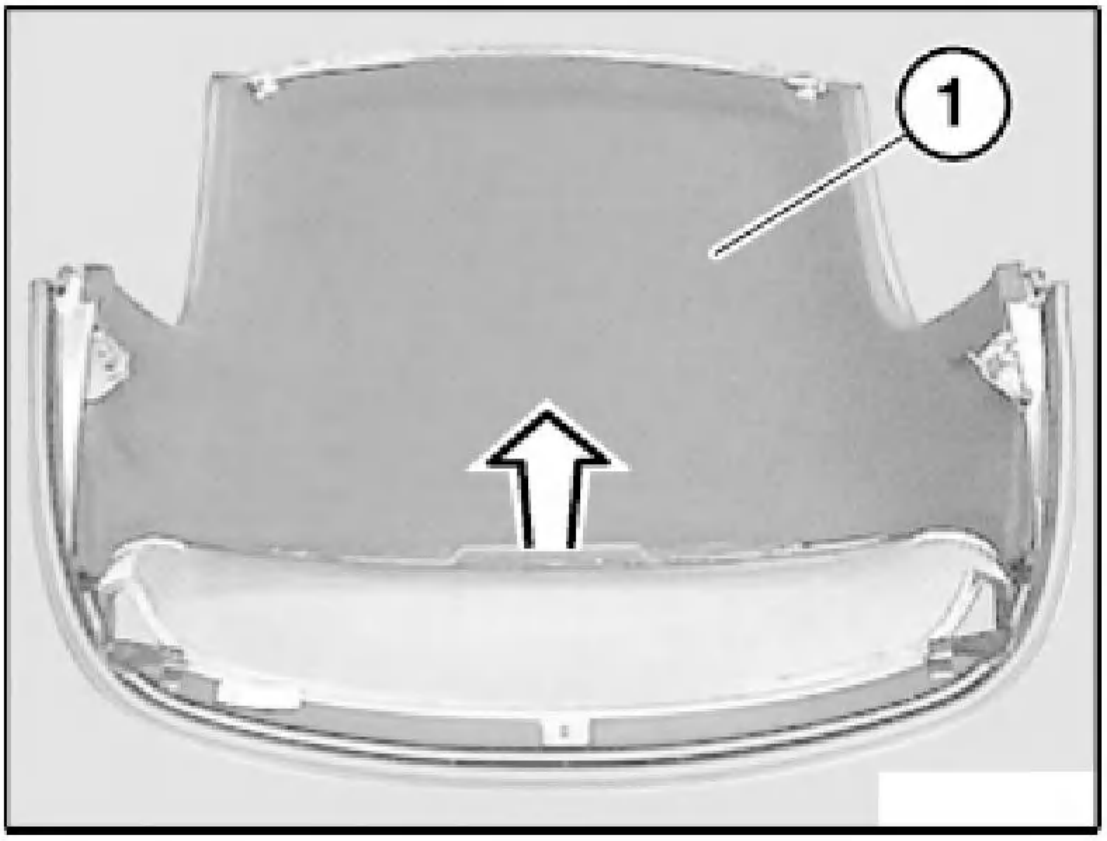


Fig. 22: Raising Molded Roof Lining
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

There must be four Velcro-type strips (1) on the hard top and roof lining (2).

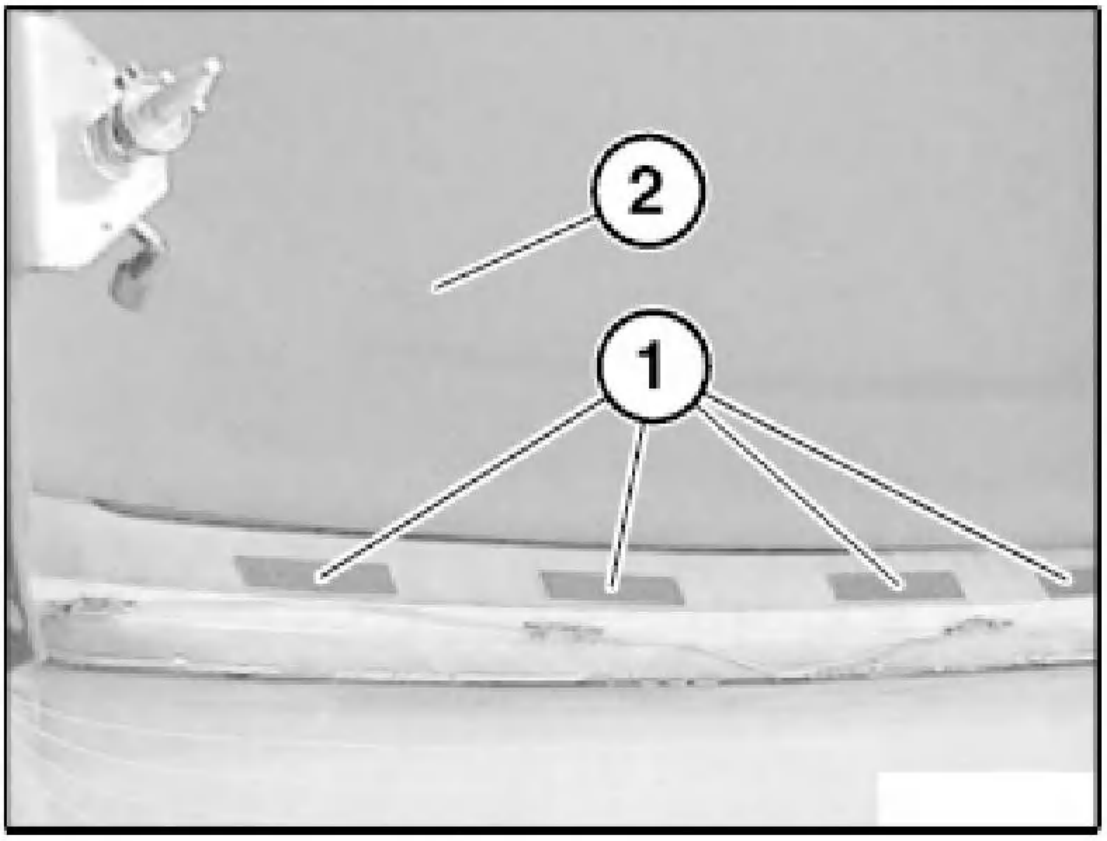


Fig. 23: Identifying Velcro-Type Strips
Courtesy of BMW OF NORTH AMERICA, INC.

54 21 150 REMOVING AND INSTALLING/REPLACING REAR WINDOW FOR HARD TOP

NOTE: For gluing the rear window, cements for cold and hot processing are permitted.

Cold Processing:

Comply with instructions on gluing windows, refer to 51 31 ... INSTRUCTIONS ON GLUING WINDSCREEN .

Warm Processing:

Open aluminum membrane at rear end of cartridge.

Place cartridge in cartridge oven.

Heat glue cartridges to 80Â° C for one hour in oven.

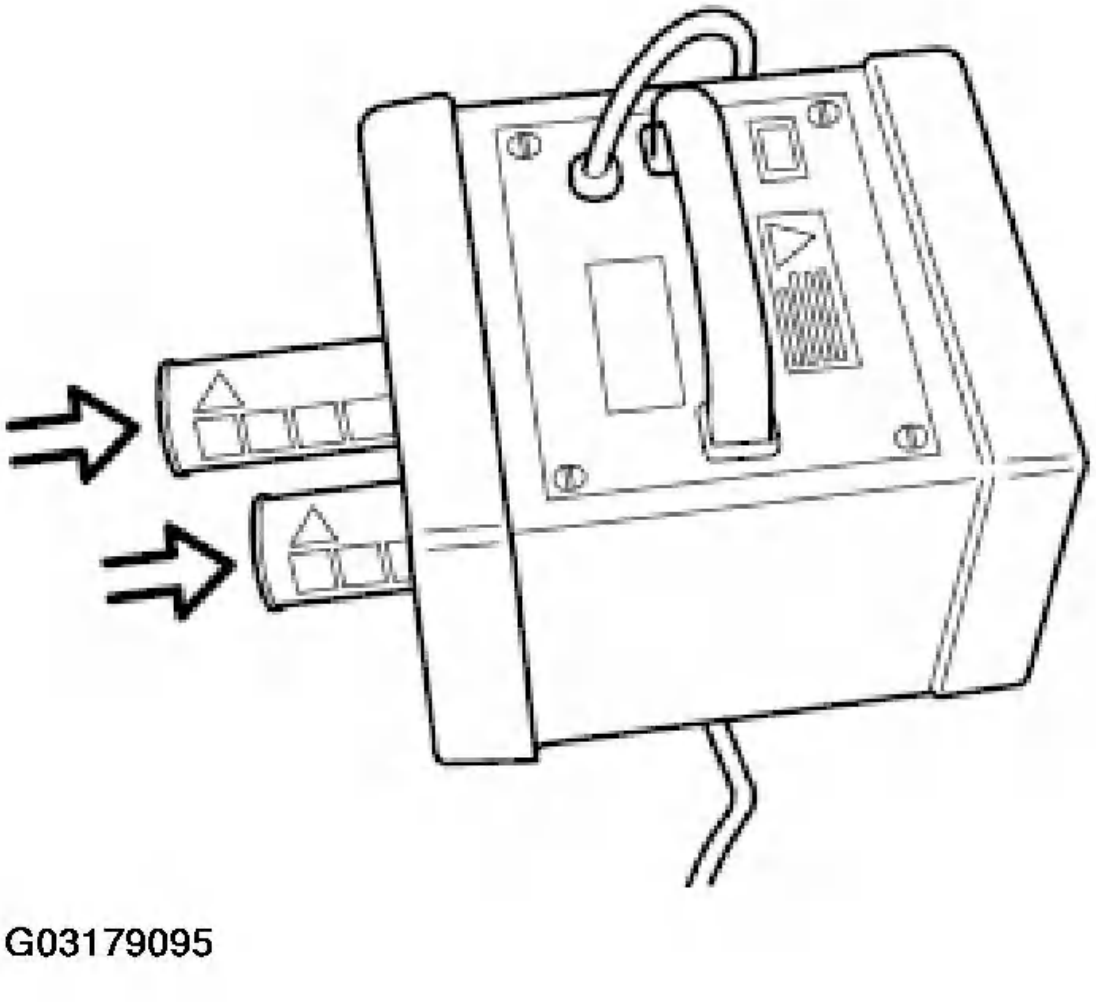


Fig. 24: Placing Cartridge In Cartridge Oven
Courtesy of BMW OF NORTH AMERICA, INC.

Comply with instructions on gluing windows, refer to 51 31 ... INSTRUCTIONS ON GLUING WINDSCREEN .

Remove hard top, refer to 54 21 001 REMOVING HARD TOP .

Remove molded roof lining from hard top, refer to 54 21 100 REMOVING AND INSTALLING/REPLACING MOLDED ROOF LINING ON HARD TOP .

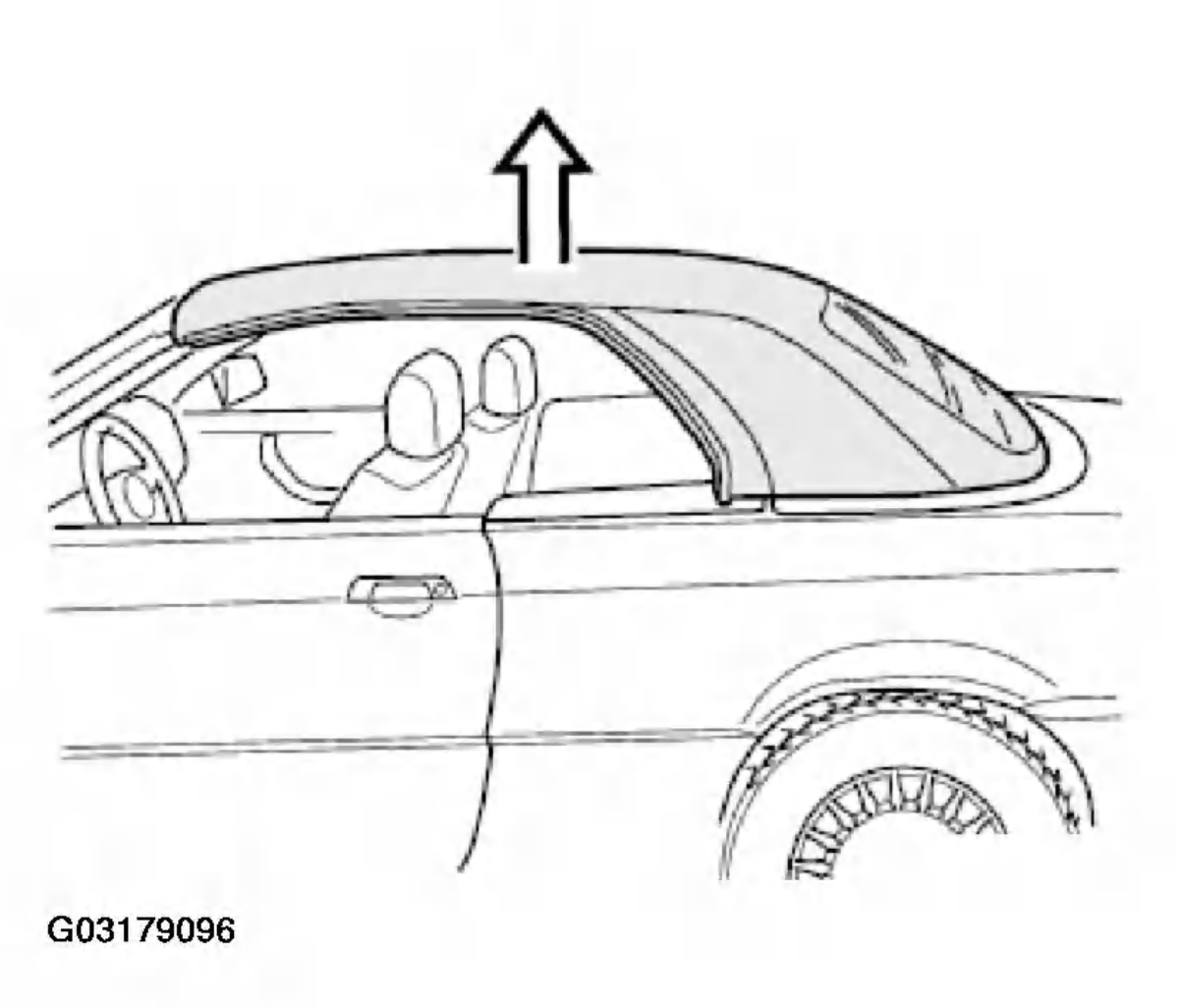


Fig. 25: Removing Hard Top
Courtesy of BMW OF NORTH AMERICA, INC.

Disconnect plug (1) for rear window heater (2) on left and right.

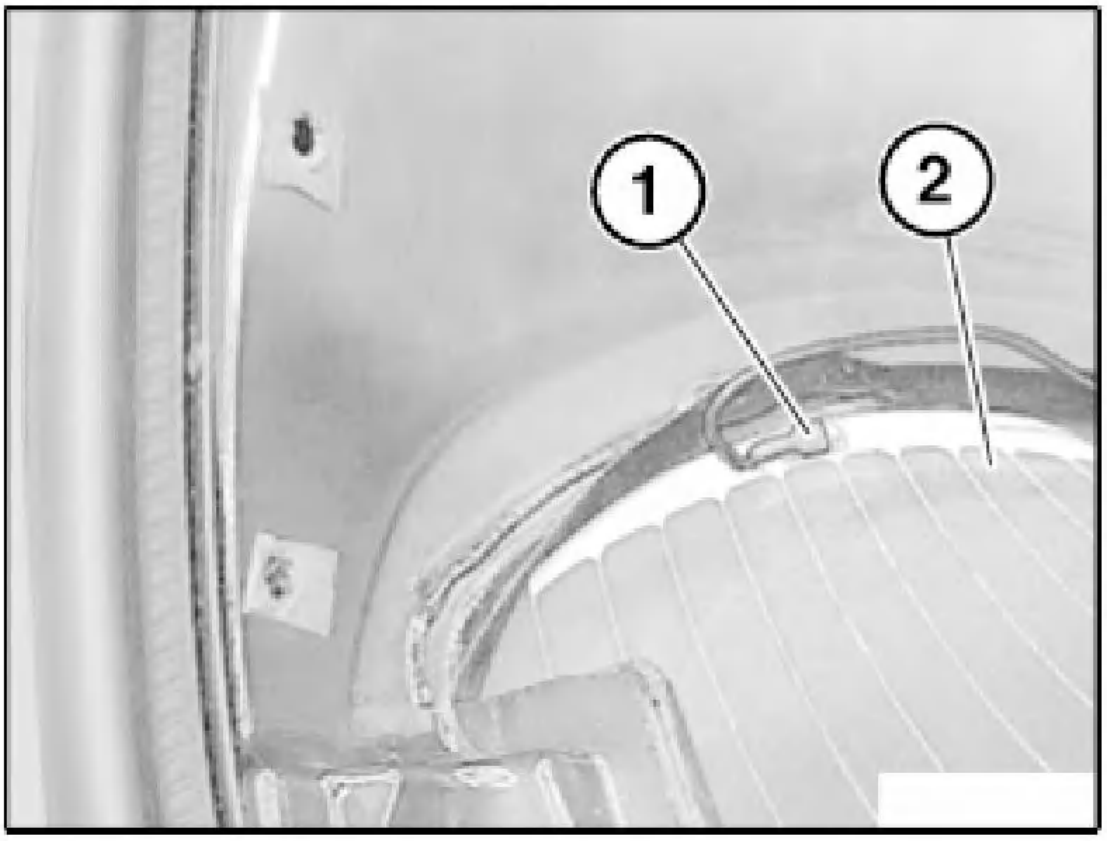


Fig. 26: Disconnecting Plug
Courtesy of BMW OF NORTH AMERICA, INC.

Pull out seal (1) from transition area of gutter (2).

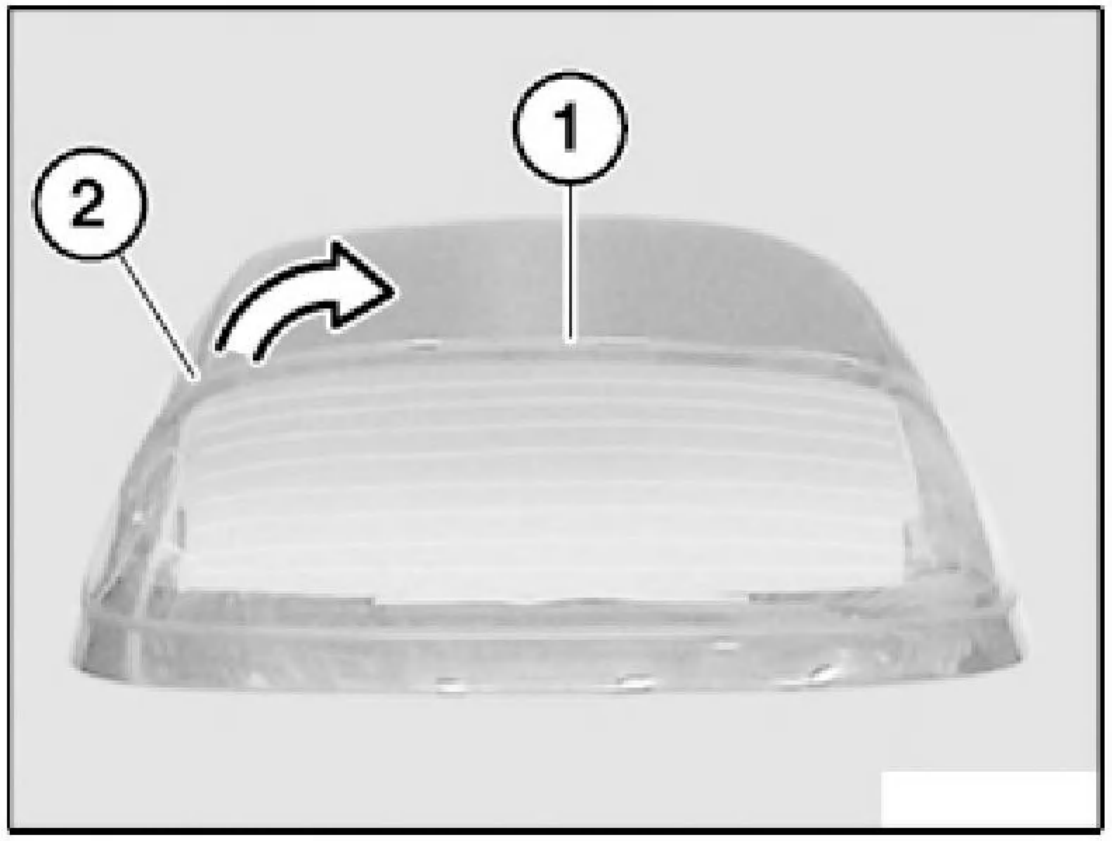


Fig. 27: Pulling Out Seal
Courtesy of BMW OF NORTH AMERICA, INC.

Mask trunk lid corners and hard top with fabric adhesive tape (e.g. Tesa).

1. Rear window.
2. Glue bead.
3. Hard top flange.
4. Fabric adhesive tape.

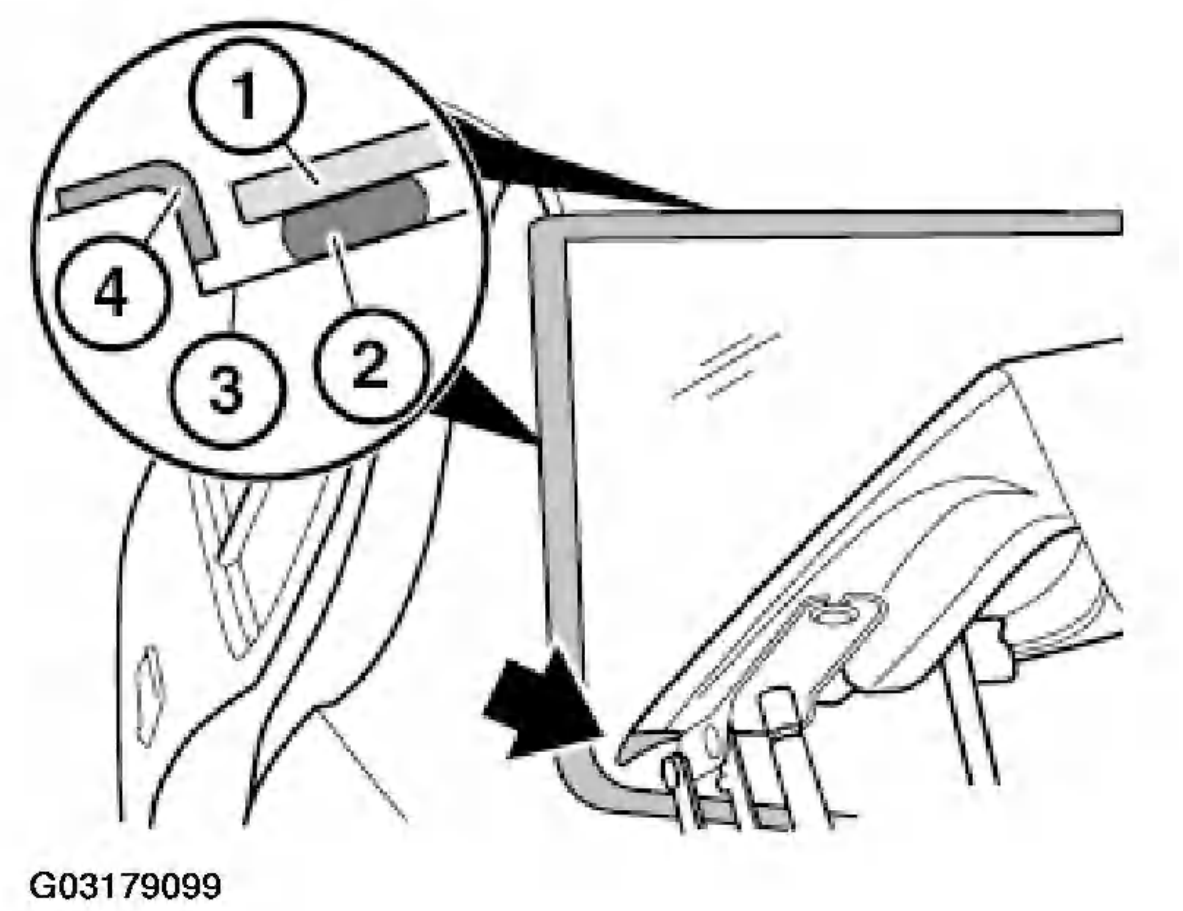


Fig. 28: Masking Trunk Lid Corners And Hard Top With Fabric Adhesive Tape
Courtesy of BMW OF NORTH AMERICA, INC.

Fit knife to the tool.

NOTE: If necessary, resharpen knife with machine running.



Fig. 29: Fitting Knife To Tool
Courtesy of BMW OF NORTH AMERICA, INC.

CAUTION: When reusing the rear window: Do not damage wires for rear window heater.

Carefully insert knife between hard top and rear window.

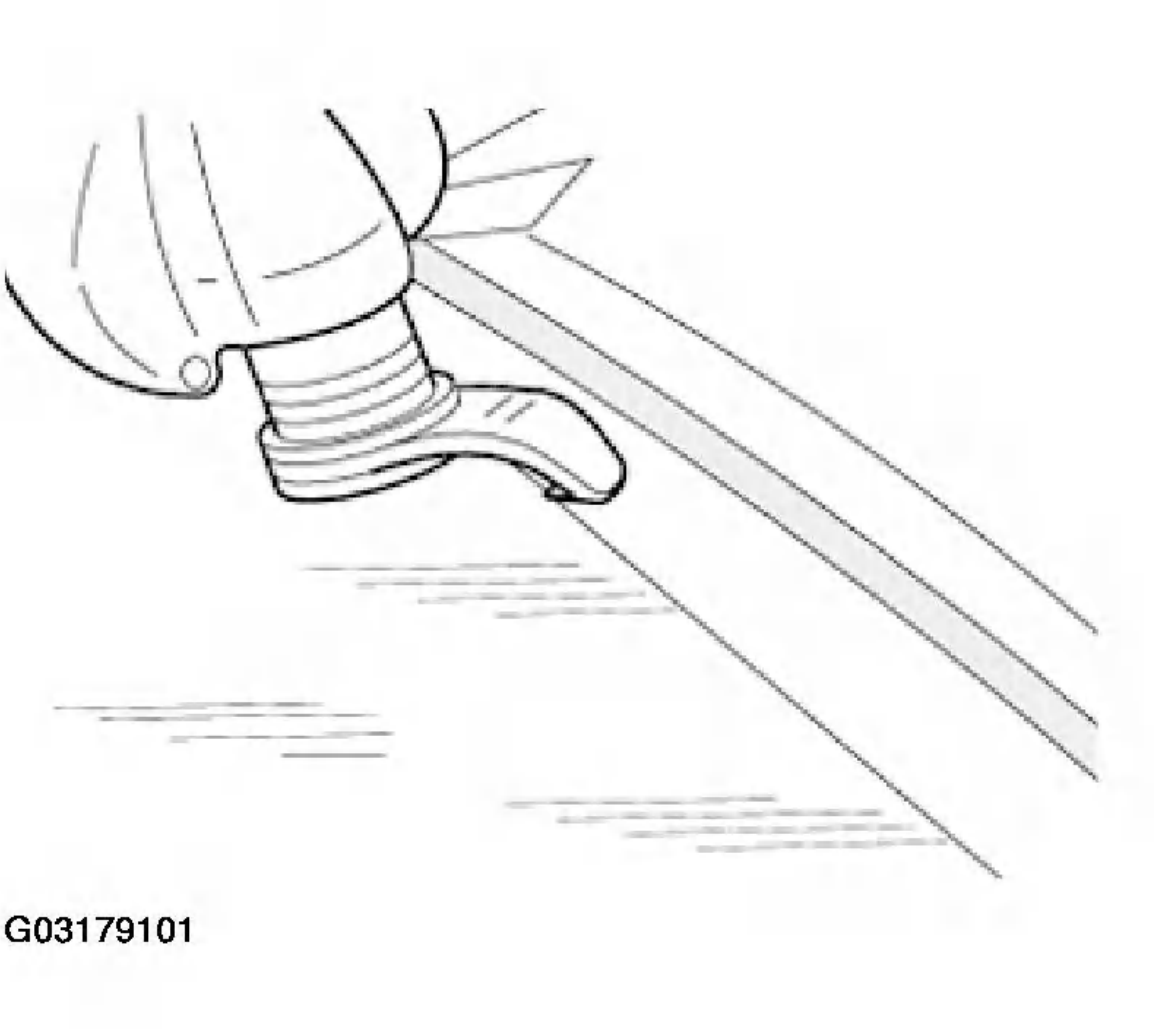


Fig. 30: Inserting Knife Between Hard Top And Rear Window
Courtesy of BMW OF NORTH AMERICA, INC.

Guide web of knife parallel to rear window.

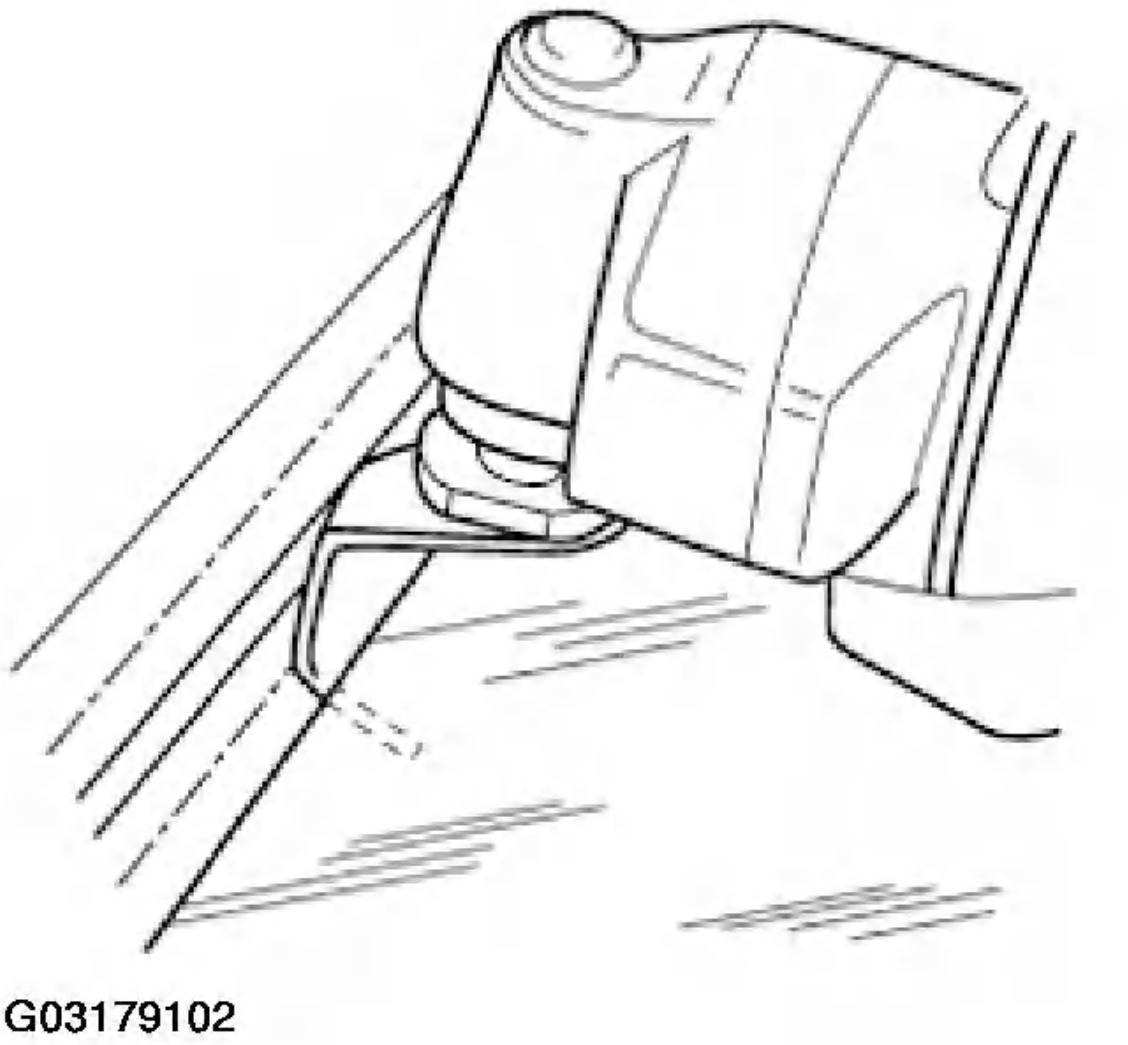


Fig. 31: Guiding Web Of Knife Parallel To Rear Window
Courtesy of BMW OF NORTH AMERICA, INC.

Cut through glue bead all around as close as possible to the rear window glass.

1. Hard top cutout.
2. Glue bead.
3. Knife.
4. Rear window.

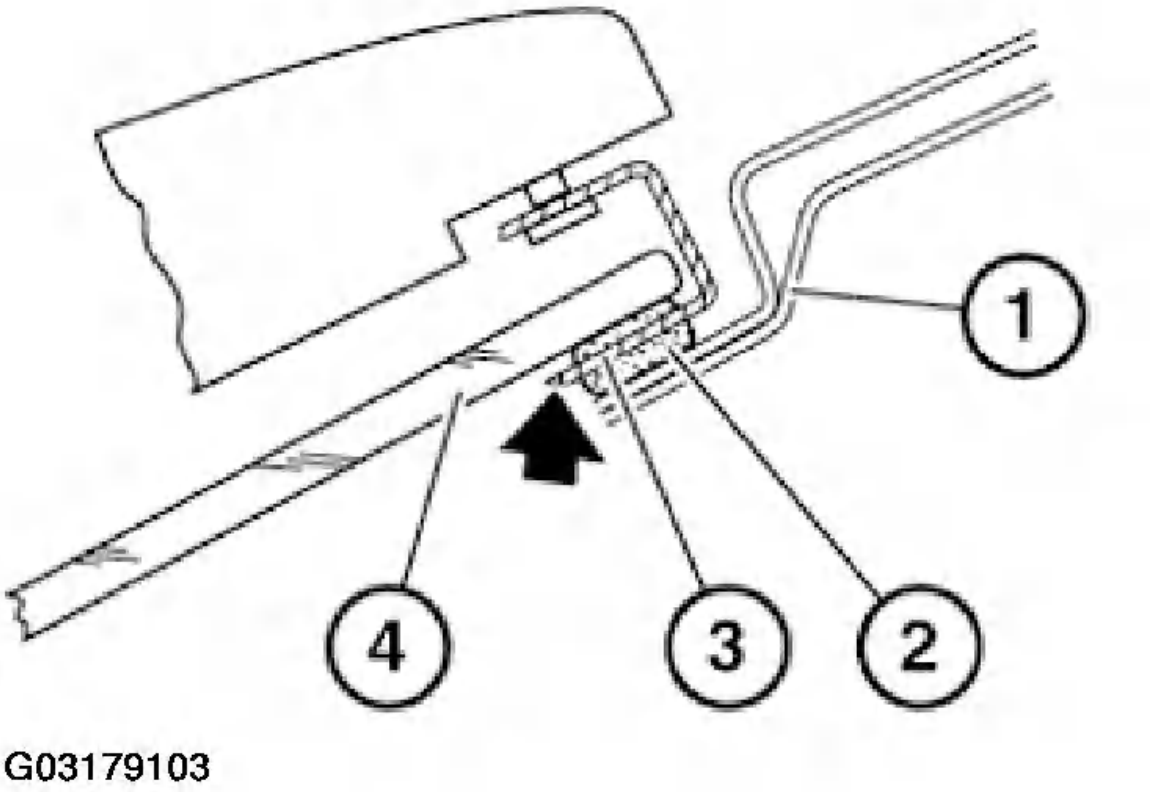


Fig. 32: Cutting Through Glue Bead
Courtesy of BMW OF NORTH AMERICA, INC.

Lift out rear window with special tool 51 3 010.

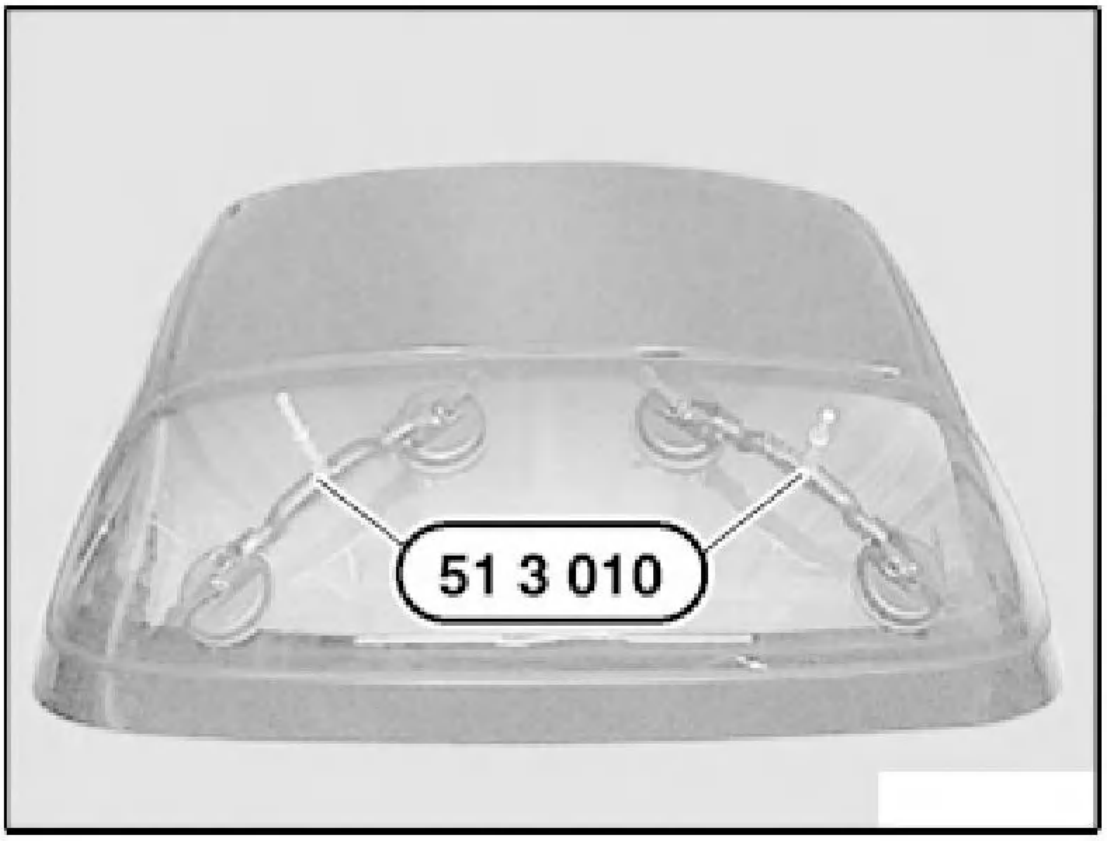


Fig. 33: Installing Special Tool
Courtesy of BMW OF NORTH AMERICA, INC.

Remove residual adhesive in hard top cutout to a thickness of approx. 0.5 mm.

To avoid damage to paintwork in hard top cutout, cut off residual adhesive with universal knife (razor sharp).

Pull off adhesive tapes all round.

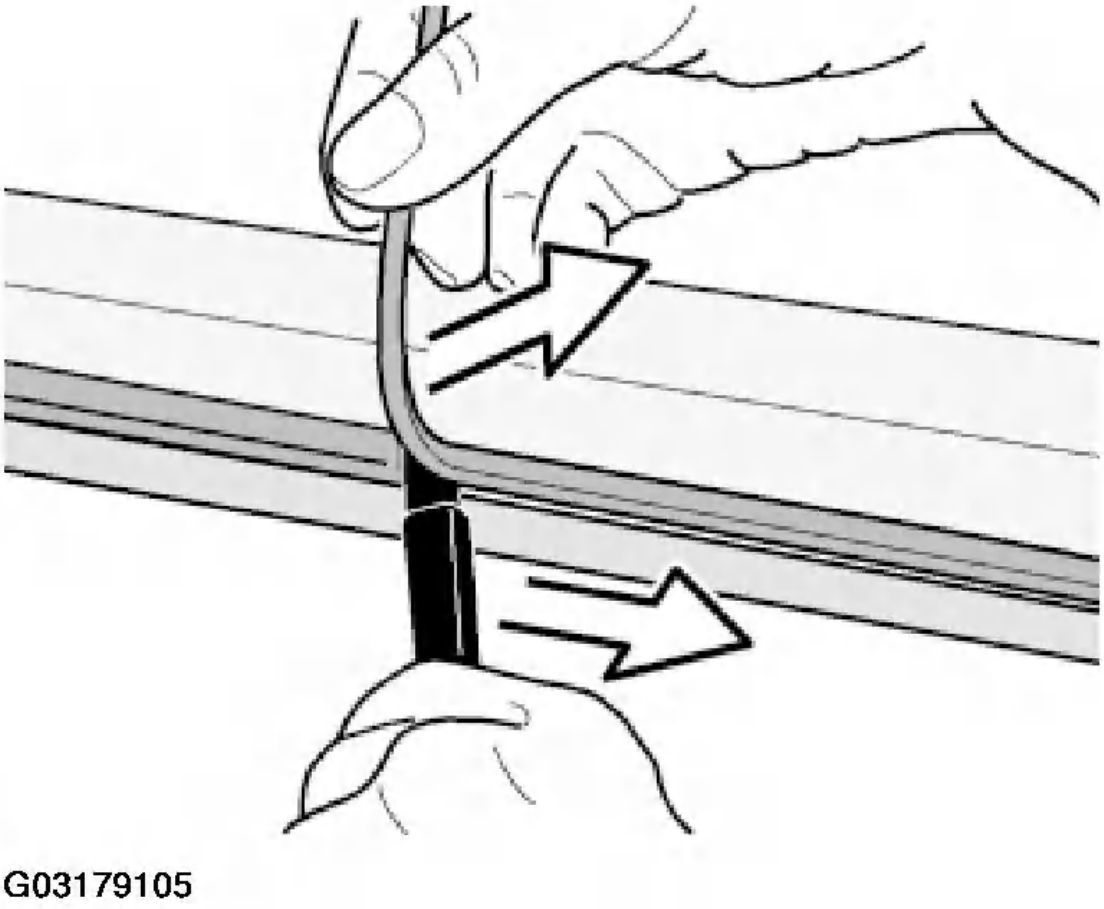


Fig. 34: Removing Residual Adhesive
Courtesy of BMW OF NORTH AMERICA, INC.

CAUTION: To ensure long-term corrosion protection, it is essential to touch up damage to paintwork (scratches and large-surface damage).

Refer to 51 31 ... INSTRUCTIONS ON GLUING WINDSCREEN .

When reusing the rear window:

Scrape away glue residue on rear window to depth of 0.5 mm with scraper.

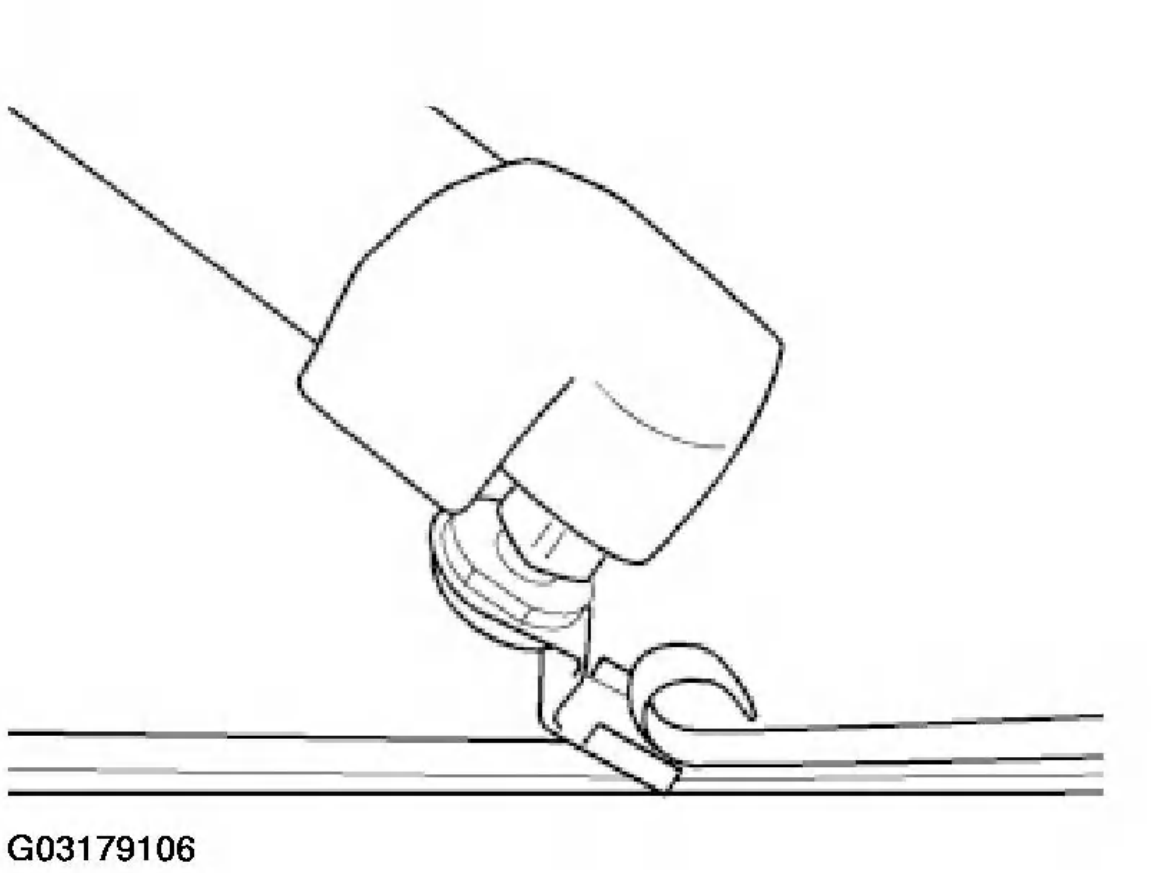


Fig. 35: Scraping Glue Residue On Rear Window
Courtesy of BMW OF NORTH AMERICA, INC.

Mount and press seal on to rear window glass at bottom.

Mount and press seal on to rear window glass at top and sides.

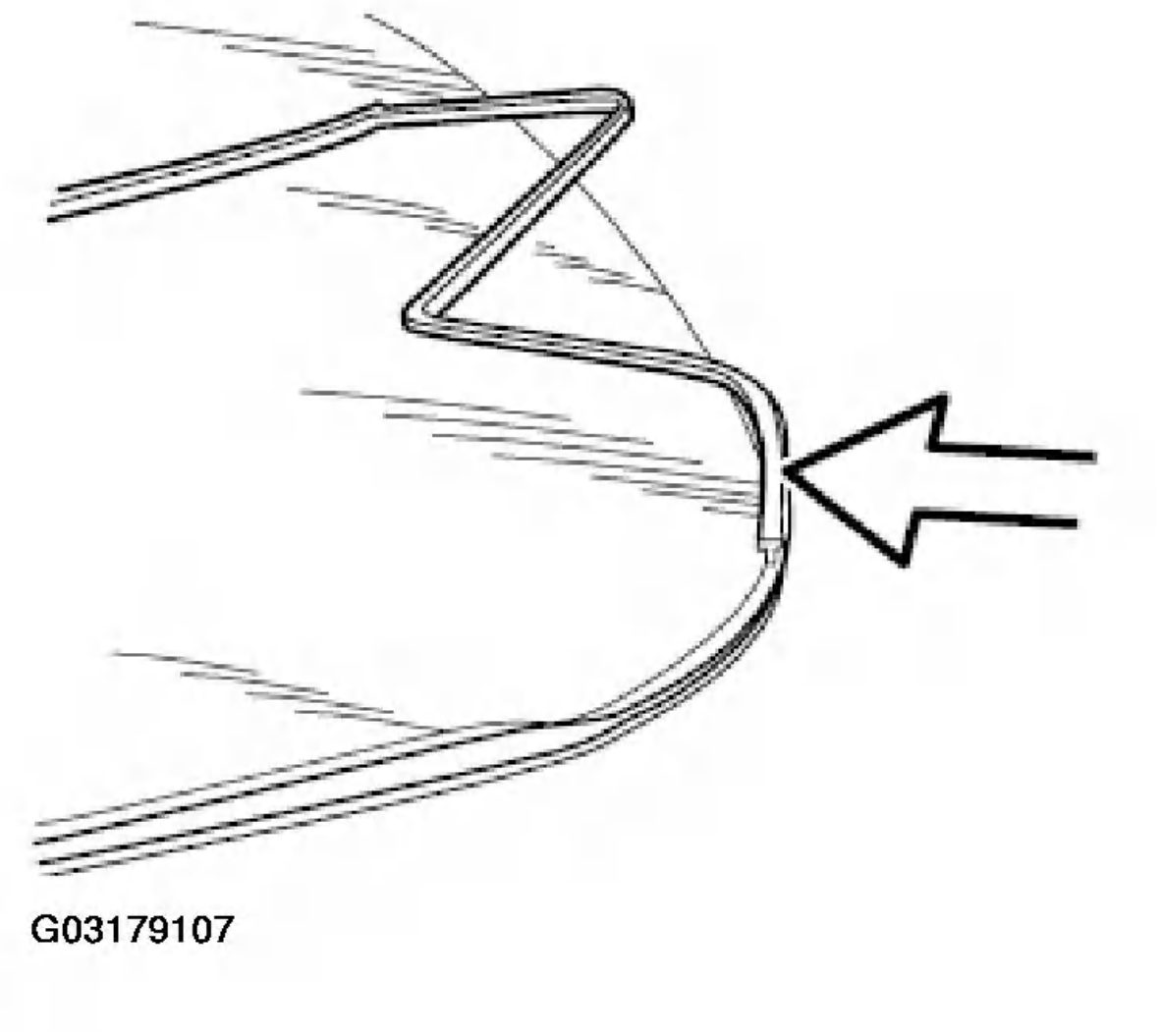


Fig. 36: Pressing Seal On Rear Window Glass
Courtesy of BMW OF NORTH AMERICA, INC.

CAUTION: The basic filler must have hardened!

Treat rear window and hard top in adhesive area with BMW-approved materials, refer to 51 31 ... INSTRUCTIONS ON GLUING WINDSCREEN .

NOTE: Note specified ventilation time.

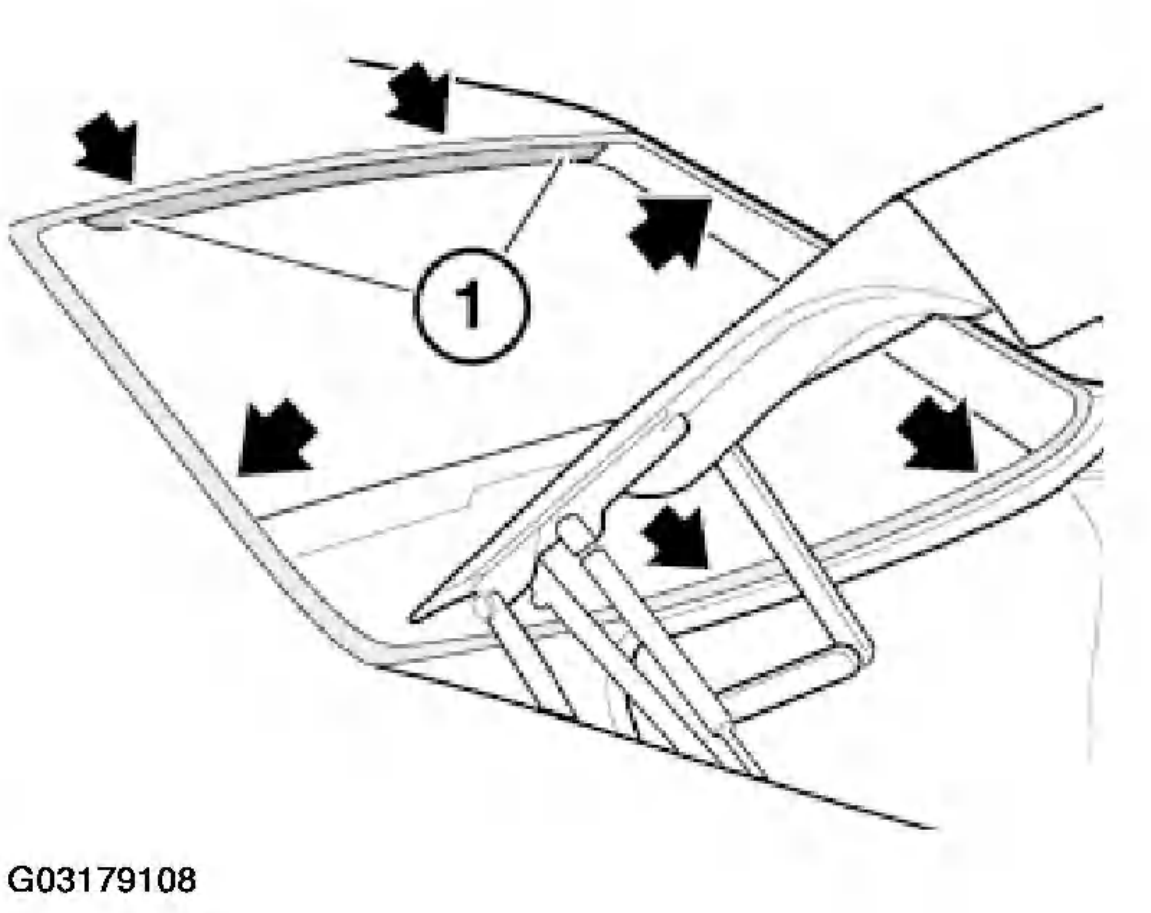


Fig. 37: Treating Rear Window And Hard Top In Adhesive Area
Courtesy of BMW OF NORTH AMERICA, INC.

Cut nozzle to size.

A. = 9 mm.
B. = 6 mm.

NOTE: To apply a uniform glue bead, use cartridge pistol.

Check expiry date of glue!

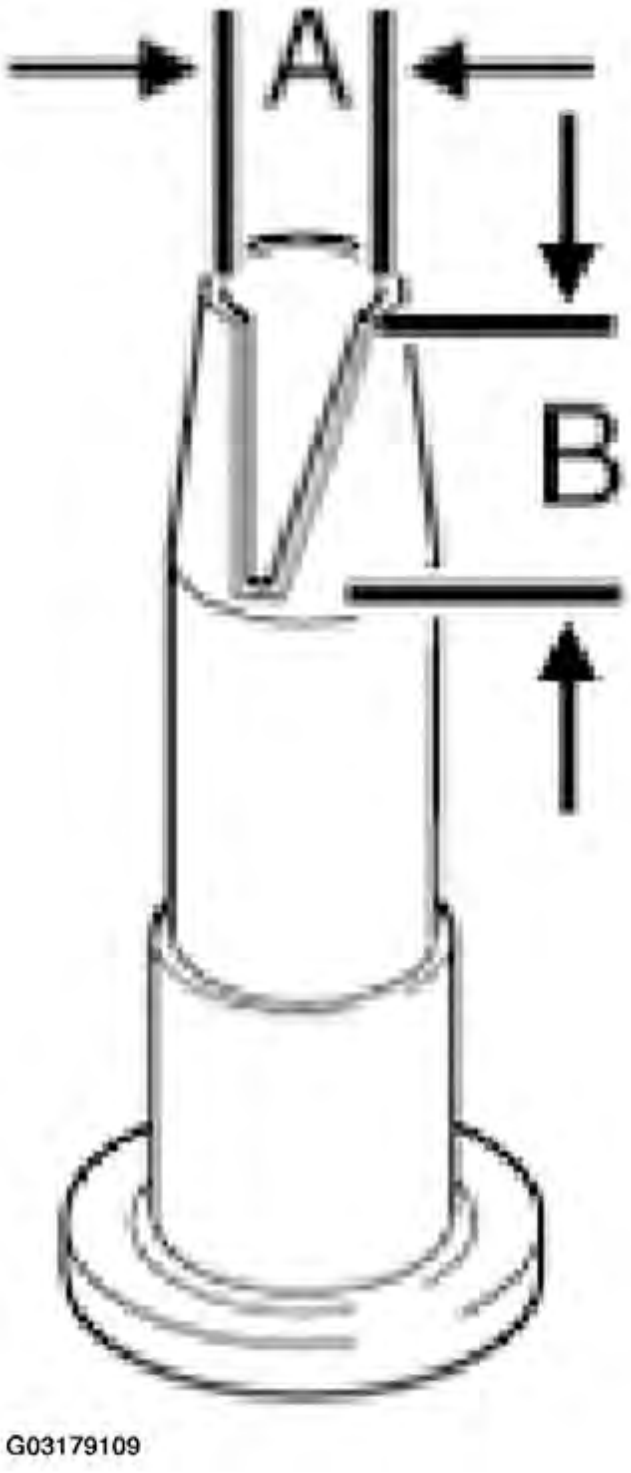


Fig. 38: Measuring Cutting Nozzle Size
Courtesy of BMW OF NORTH AMERICA, INC.

If necessary, apply a test bead before gluing.

Cartridge must be arranged vertically against rear window.

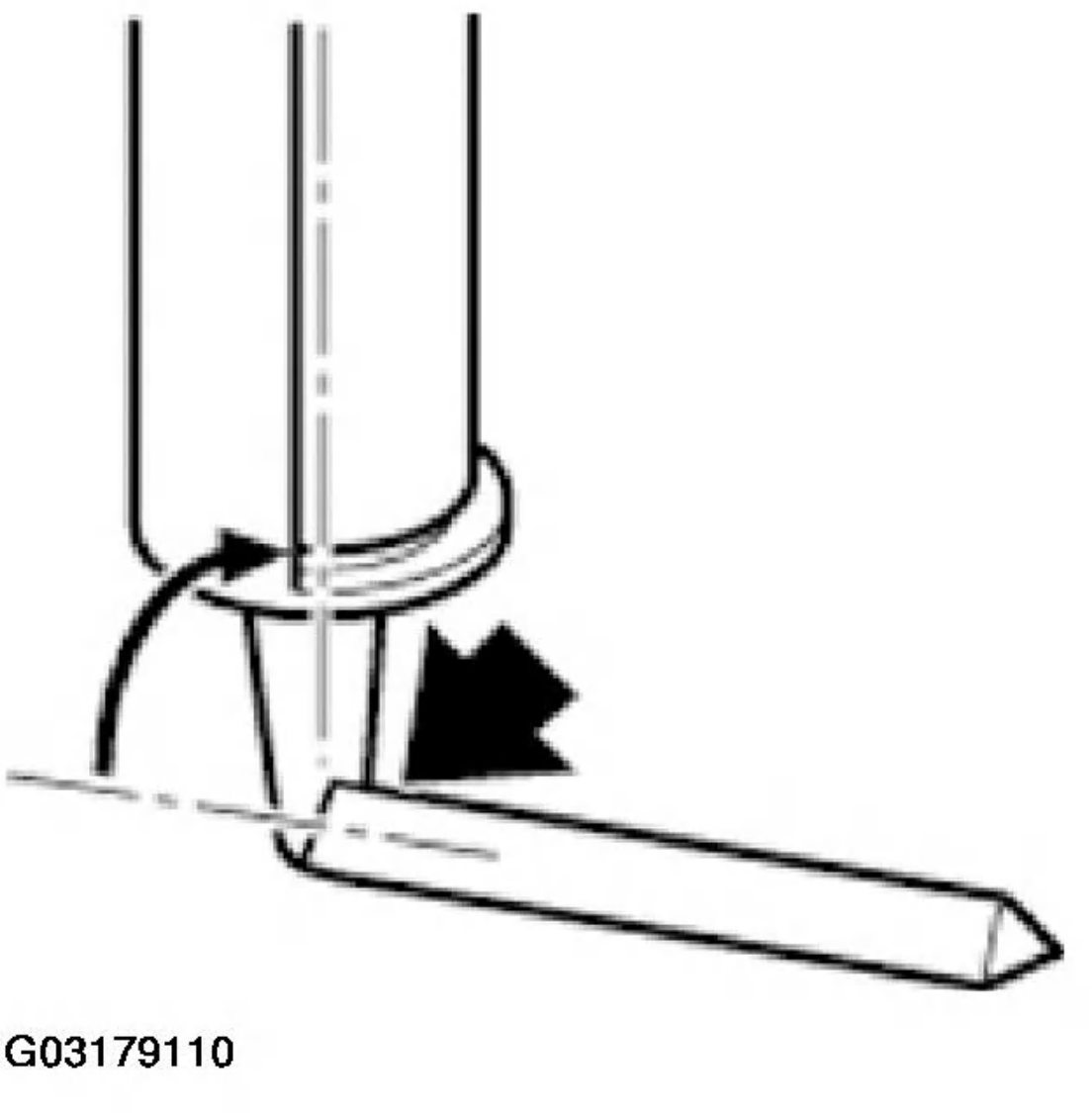


Fig. 39: Applying Test Bead Before Gluing
Courtesy of BMW OF NORTH AMERICA, INC.

CAUTION: There must be no adhesive on the connection contacts of the rear window heater.

Shape of adhesive bead:

A. = 9 mm.
B. = 6 mm.

CAUTION: Apply glue bead quickly and insert window. Skin formation time of glue, maximum 10 minutes.

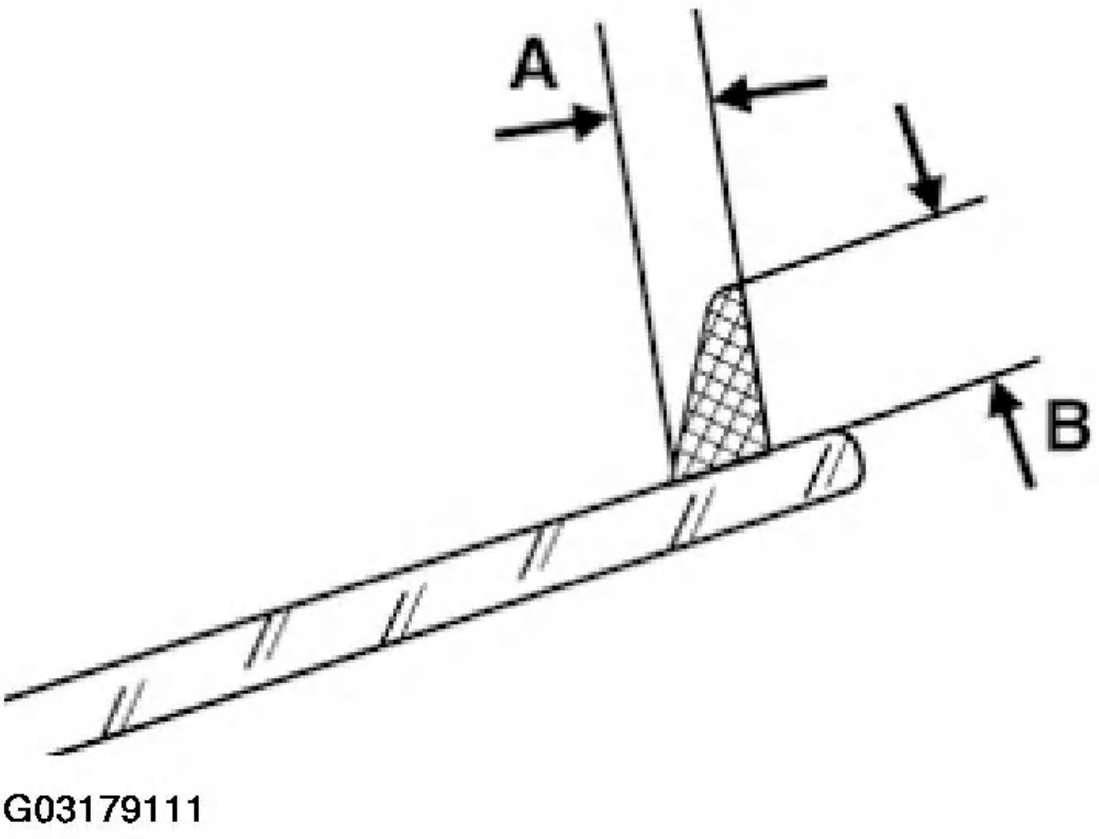


Fig. 40: Measuring Shape Of Adhesive Bead
Courtesy of BMW OF NORTH AMERICA, INC.

Maintain uniform distance (A) between glue bead and seal.

Distance (A) = 3 mm

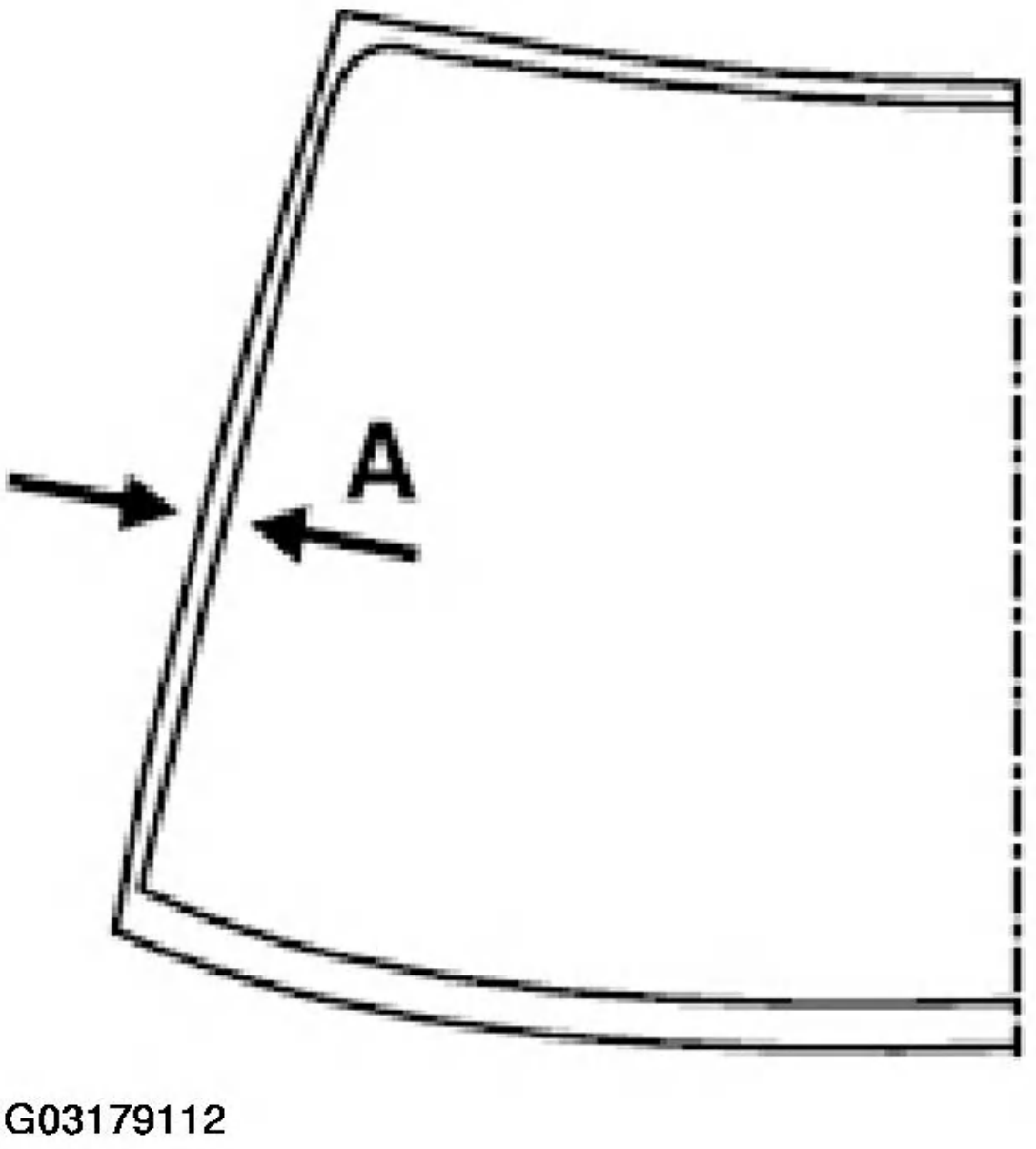


Fig. 41: Measuring Distance Between Glue Bead And Seal
Courtesy of BMW OF NORTH AMERICA, INC.

Install rear window carefully using special tool 51 3 010. Seal must fit uniformly on the sides. Push up rear window glass until seal bears uniformly on the roof flange.

Align rear window to roof flange and evenly at sides. Press-fit rear window and secure in this position with fabric adhesive tape (e.g. Tesa).

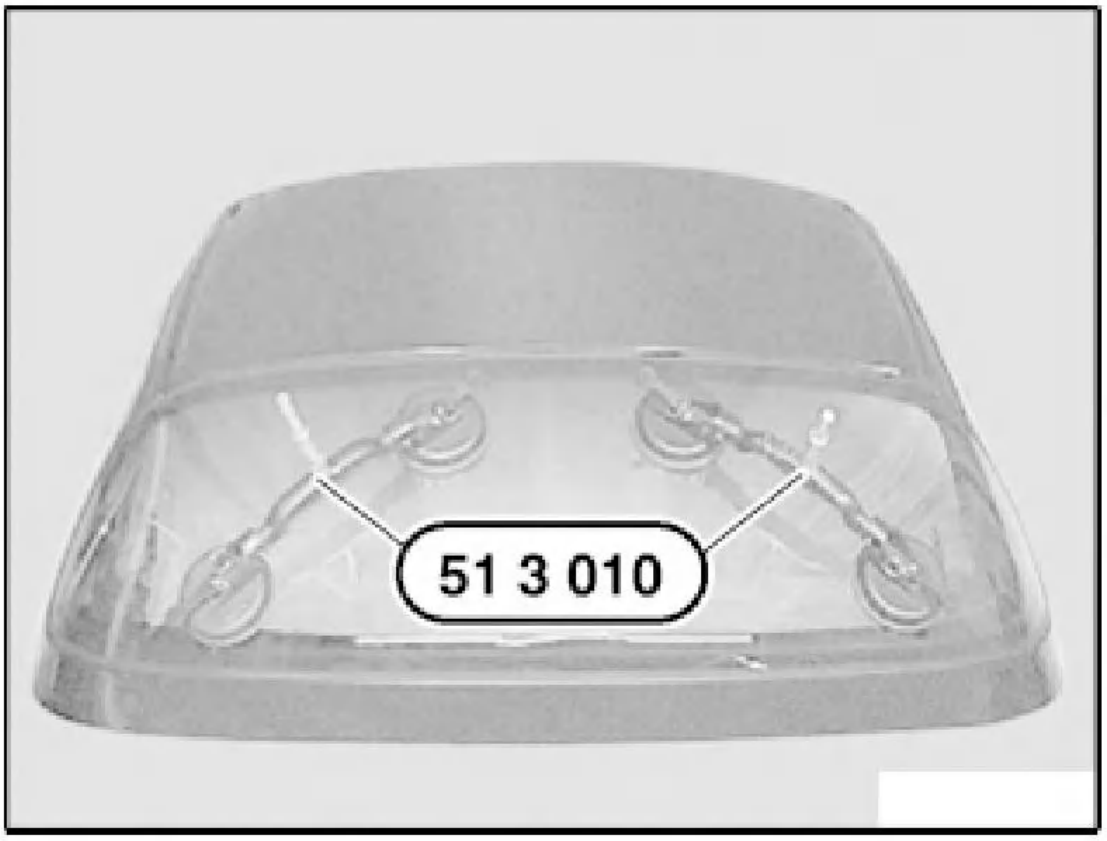


Fig. 42: Installing Special Tool
Courtesy of BMW OF NORTH AMERICA, INC.

CAUTION: Before hardening, remove contamination by residual adhesive with Sika remover 208. Do not press out rear window glass again for this purpose. Hardened glue can only be removed by machine.

Assemble car.

After the hardening time, remove adhesive tapes.

NOTE: Leaks can be found by spraying water on the sealing lips or with an ultrasonic leak detector and then eliminated by using a suitable nozzle.

CONVERTIBLE TOP LINKAGE...

54 31 010 REMOVING AND INSTALLING COMPLETE CONVERTIBLE TOP (Z3 ROADSTER, M ROADSTER)

Cover rear side walls and trunk lid (risk of damage), and use 10 mm-socket

Remove tackstrip:

Open convertible top.

Lift right trim piece (1) out of the main pivot threading toward the rear and pull out upward.

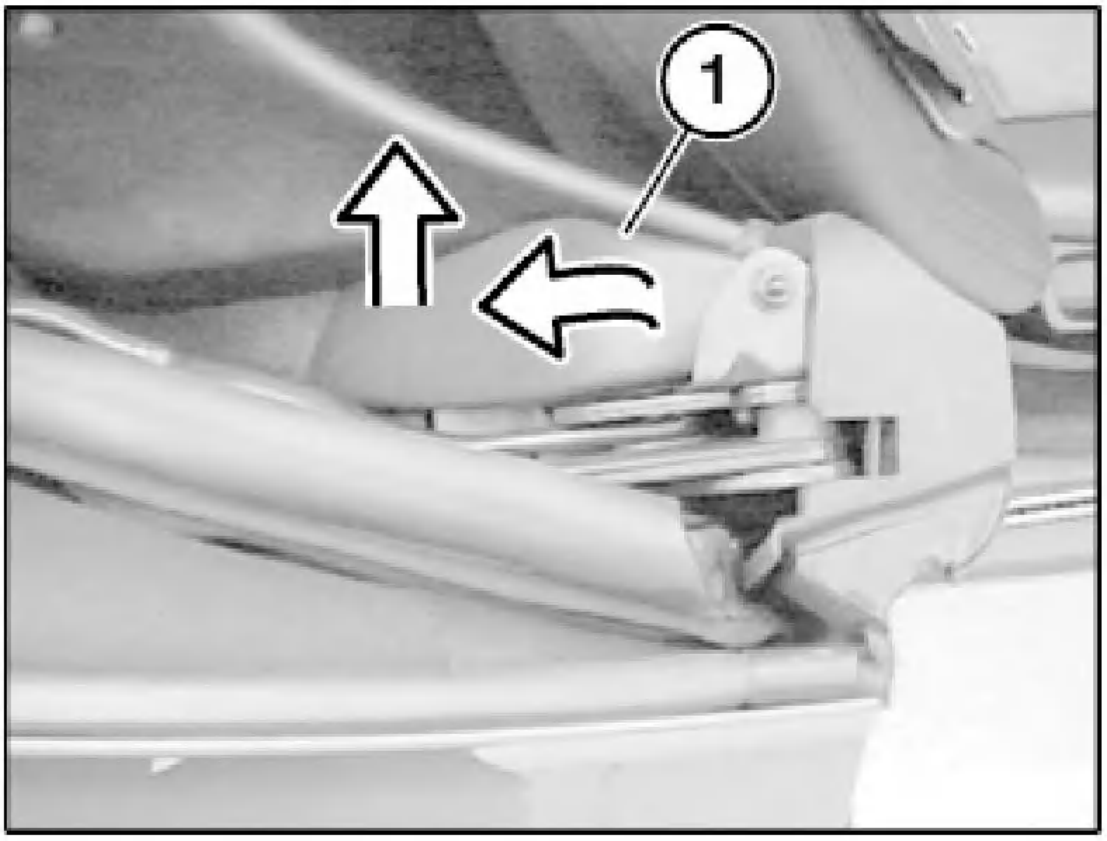


Fig. 43: Lifting Right Trim Piece Out Of Main Pivot Threading
Courtesy of BMW OF NORTH AMERICA, INC.

Lift right trim piece (1) out of the main bearing threading toward the rear and pull out upward.

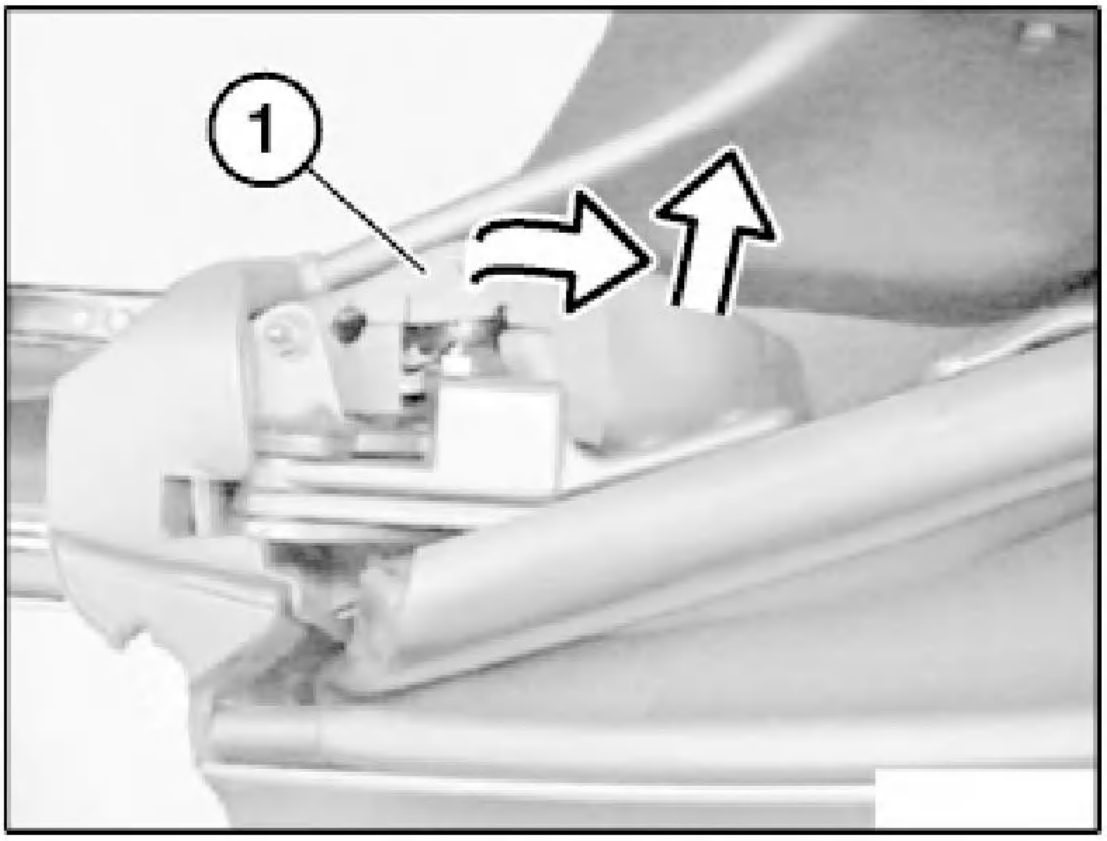


Fig. 44: Lifting Right Trim Piece Out Of Main Bearing Threading
Courtesy of BMW OF NORTH AMERICA, INC.

Close convertible top (do not lock).

Unfasten clips (1) and pull inner trim of convertible top compartment (2) downwards out of groove in tackstrip (3).

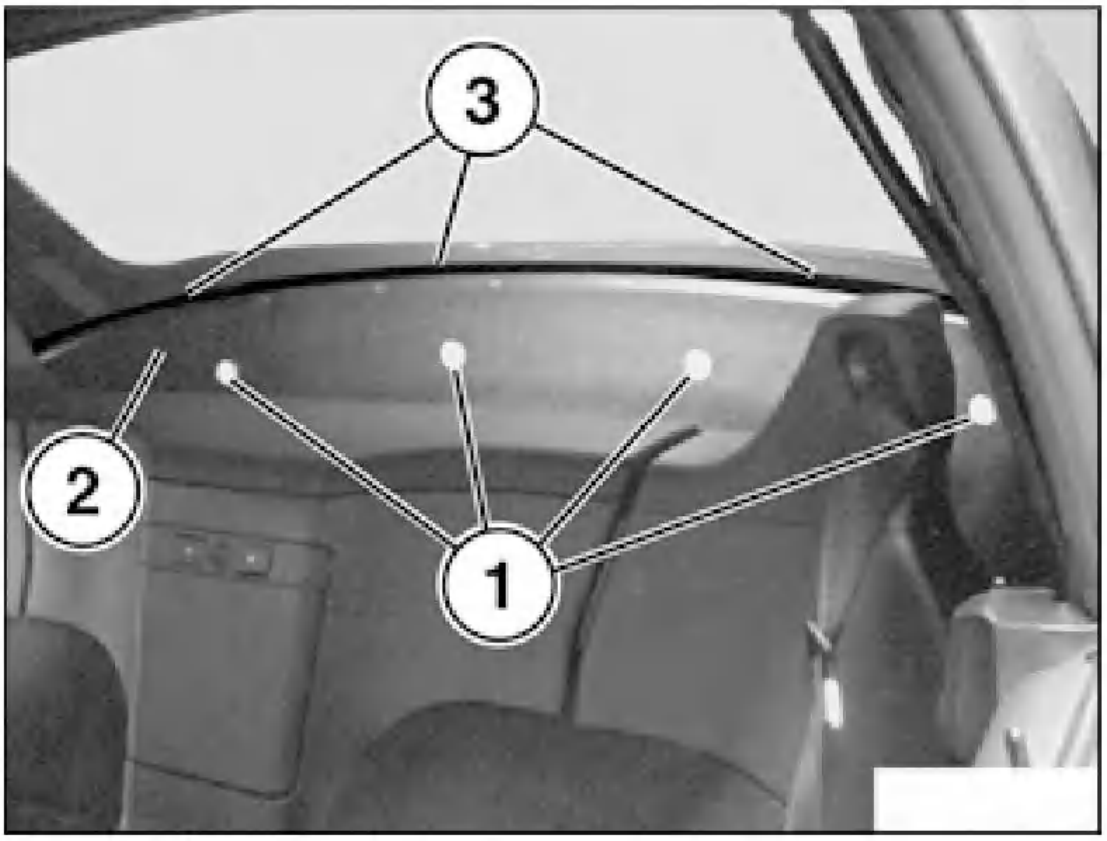


Fig. 45: Unfastening Clips
Courtesy of BMW OF NORTH AMERICA, INC.

Unfasten left/right screws (1) and center (2) of tackstrip (3).

NOTE: Do not unfasten screw (4).

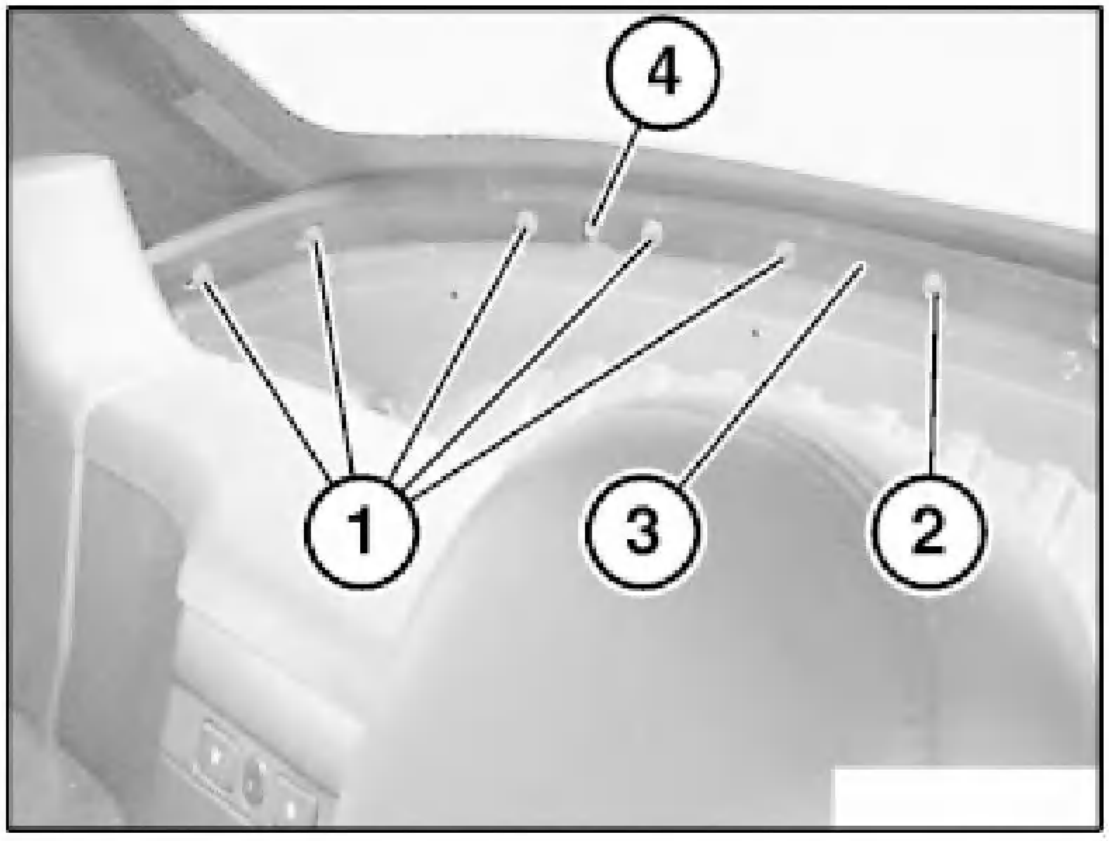


Fig. 46: Unfastening Screws
Courtesy of BMW OF NORTH AMERICA, INC.

Unfasten screws (1) and (2) on left/right of tackstrip (3) in convertible top compartment.

NOTE: Do not unfasten left/right screw (4). If necessary, note number of shims on left/right screw (1) and fit back in same location during installation.

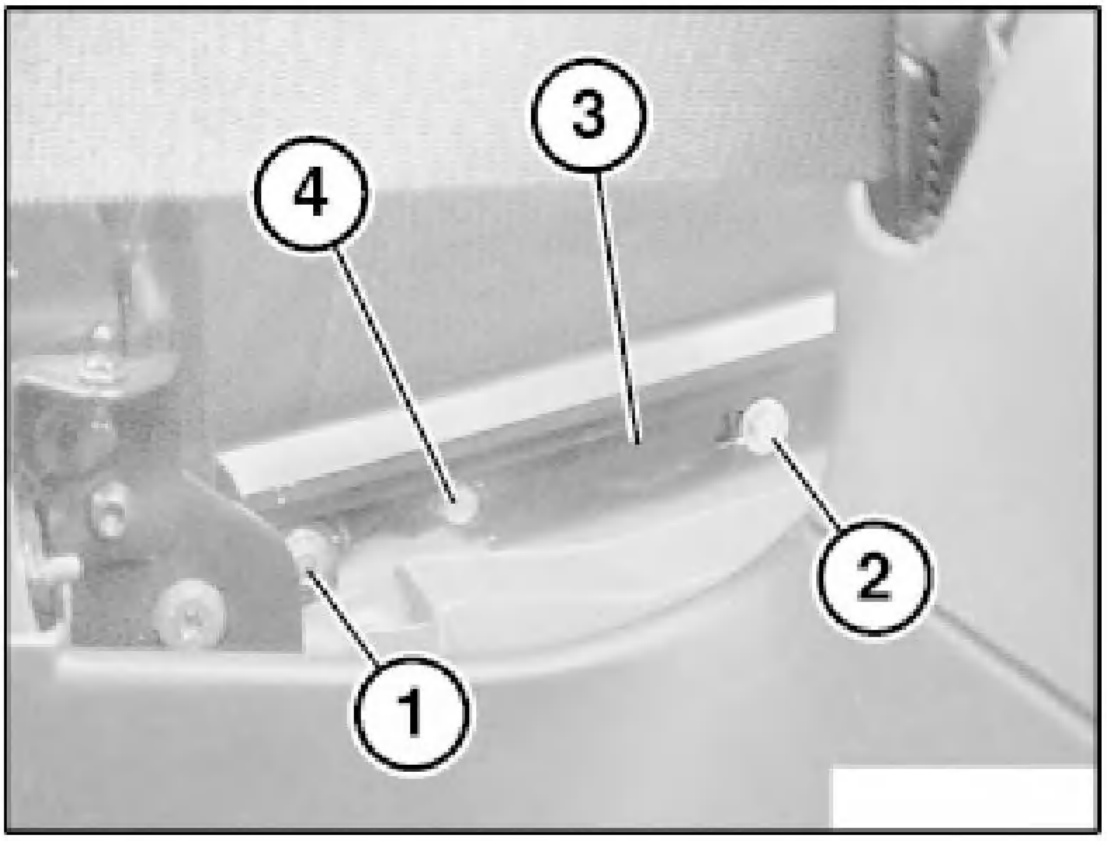


Fig. 47: Unfastening Screws
Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: The operation "Removing tackstrip" ends here. Follow installation instructions, refer to "Installing tackstrip".

Removing Complete Convertible Top:

Pry out gas spring strut inward at top with special tool 00 9 319.

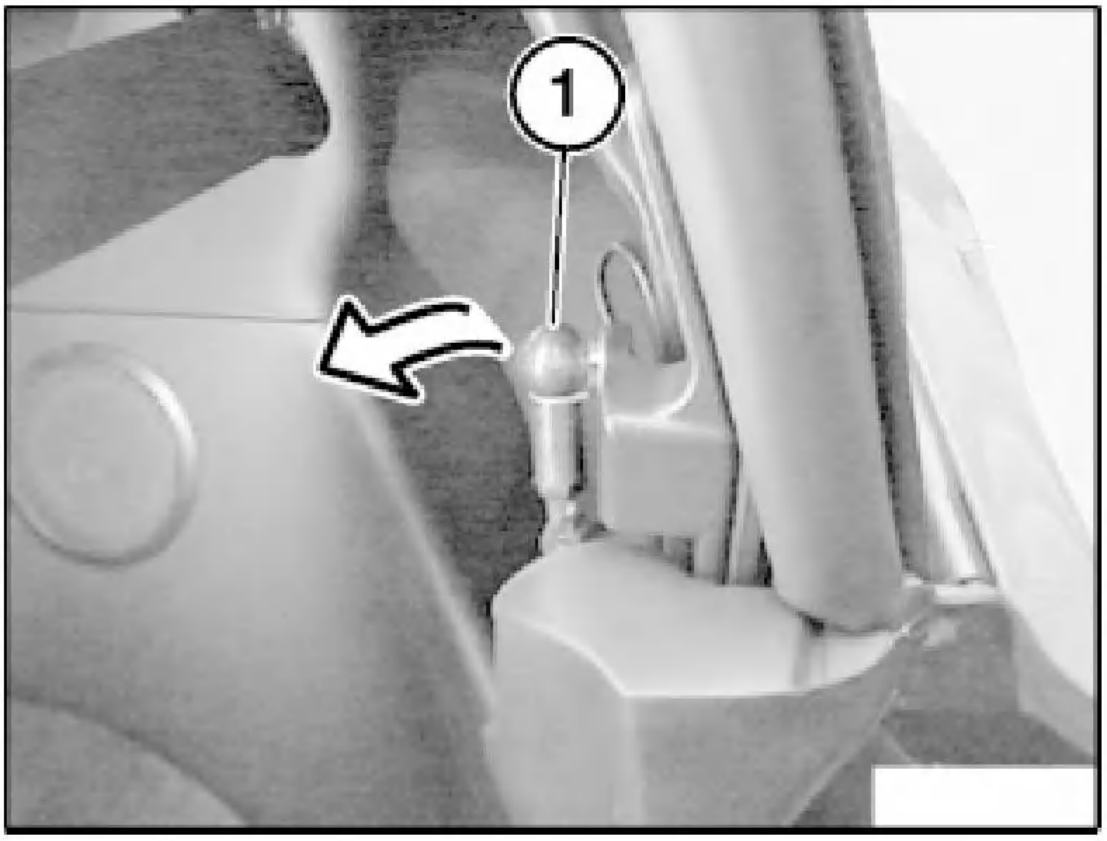


Fig. 48: Prying Out Gas Spring Strut Inward At Top
Courtesy of BMW OF NORTH AMERICA, INC.

Version with electrohydraulic/semi-automatic convertible top operation only:

Release retaining clip (1) and pull off downward.

Pry out hydraulic cylinder (2) inward with special tool 00 9 319.

Fig. 49: Prying Out Hydraulic Cylinder
Courtesy of BMW OF NORTH AMERICA, INC.

Stow convertible top in its compartment.

Version with electrohydraulic/semi-automatic convertible top operation only:

Unlock connector (1) and remove.

Fig. 50: Removing Connector
Courtesy of BMW OF NORTH AMERICA, INC.

Unclip finisher strip (1) until guide (2) leaves the mucket (3) and remove the mucket.

Installation:

Insert mucket (3) in the convertible top compartment seal (4) (leaks).

Fig. 51: Removing Finisher Strip
Courtesy of BMW OF NORTH AMERICA, INC.

Unfasten left/right screw (1) and nut (2).

Remove screw (1) with washer (3) and shim (4).

Fig. 52: Removing Screw
Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: Note down number of shims (4).

Press down convertible top (1) on one side of main bearing with second person lifting opposite side at the same time, thus lifting convertible top out of its compartment.

Fig. 53: Pressing Down Convertible Top
Courtesy of BMW OF NORTH AMERICA, INC.

Installing Complete Convertible Top:

Four shims (2) (each 1 mm) should be fitted to left/right of attachment studs (1).

Fig. 54: Identifying Shims
Courtesy of BMW OF NORTH AMERICA, INC.

Install convertible top.

Install left/right nuts (2) on main pivot bracket, tighten down then loosen slightly again.

Insert screw (1).

Insert shim (4) between main pivot bracket and body and tighten left/right screw (1).

NOTE: For the basic setting, fit seven shims (4).

Tighten left/right nut (2).

Close convertible top (do not lock).

Fig. 55: Locating Nuts
Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: The convertible top is now fitted in its basic setting and this may need correcting after the tackstrip is fitted.

Installing Tackstrip:

Attach a butylene tape with a total thickness of 2 mm between tackstrip (2) and convertible top compartment (apply twice if necessary).

Insert screw (1) in center of tackstrip (2) but do not tighten down.

Fig. 56: Inserting Screw In Center Of Tackstrip
Courtesy of BMW OF NORTH AMERICA, INC.

Insert screws (1) and (2) in the tackstrip (3) (beside B-pillar) on left/right sides but do not tighten down.

NOTE: If necessary, fit a shim on the left/right screw (1).

Fig. 57: Inserting Screws And In Tackstrip
Courtesy of BMW OF NORTH AMERICA, INC.

Tighten down screw (1) in center of tackstrip (2).

Fig. 58: Tightening Screw In Center Of Tackstrip
Courtesy of BMW OF NORTH AMERICA, INC.

Tighten down screws (1) and (2) to left/right of tackstrip (3) (beside B-pillar).

Fig. 59: Tightening Screws
Courtesy of BMW OF NORTH AMERICA, INC.

Screw in all remaining screws (1) on left/right sides and tighten down.

Fig. 60: Installing Screws
Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: The operation for "Installing tackstrip" ends here.

Fine Adjustment Of Convertible Top:

Lock down convertible top.

The convertible top must close flush with front of windshield (up to 2 mm lower than the windshield). For correction, where necessary, adjust the locking hooks. Locking hook operates in two directions, longitudinally and downwards, identical to angle of centering pin.

Fig. 61: Locking Down Convertible Top
Courtesy of BMW OF NORTH AMERICA, INC.

If the convertible top does not fit in longitudinal direction, change the number of shims (4) in longitudinal direction.

If necessary, open convertible top.

Loosen screw (1) and nut (2) on left/right of main bearing and use appropriate shims (4) to correct any deviation.

Fig. 62: Loosening Screw
Courtesy of BMW OF NORTH AMERICA, INC.

Tighten down left/right nuts (2) then loosen slightly again.

Tighten down left/right screw (1).

Tighten left/right nut (2).

54 31 011 REPLACING COMPLETE CONVERTIBLE TOP (MANUAL CONVERTIBLE TOP) (Z3 ROADSTER, M ROADSTER)

Operation Is Described In:

- Remove and install complete convertible top (manual convertible top). Refer to 54 31 010 REMOVING AND INSTALLING COMPLETE CONVERTIBLE TOP (Z3 ROADSTER, M ROADSTER) .

54 31 013 REPLACING REAR WINDOW IN CONVERTIBLE TOP (Z3 ROADSTER, M ROADSTER)

CAUTION: Vehicle must be brought to room temperature of approx. 20Â°C. The rear window and the convertible top must not come into contact with solvents, greases etc. The work should be carried out with a second person.

Lower all side windows.

Unlock convertible top and lift somewhat.

NOTE: Protect rear window frame and side panels from damage.

Fig. 63: Lowering All Side Windows
Courtesy of BMW OF NORTH AMERICA, INC.

Raise profile piping below center with folding leg and pull fabric approx. 100 mm out of profile piping.

Fig. 64: Raising Profile Piping
Courtesy of BMW OF NORTH AMERICA, INC.

1. Rear window.
2. PVC profile piping.
3. Sealing tape.
4. Locking clip.
5. Seam.
6. Cover fabric.
7. Top cloth (rear window tail strip).
8. Zip fastener.
9. Counter-support plate.

Fig. 65: Identifying Components
Courtesy of BMW OF NORTH AMERICA, INC.

Bend over four claws on retaining clips on inside edge of rear window (below center) using screwdriver.

CAUTION: Do not damage zip fastener.

Fig. 66: Bending Over Four Claws On Retaining Clips
Courtesy of BMW OF NORTH AMERICA, INC.

Remove counter-support plate from inside of rear window.

Fig. 67: Removing Counter-Support Plate From Inside Of Rear Window
Courtesy of BMW OF NORTH AMERICA, INC.

Extract retaining clip from outside.

Fig. 68: Extracting Retaining Clip
Courtesy of BMW OF NORTH AMERICA, INC.

Open zip fastener from inside with folding leg.

Fig. 69: Opening Zip Fastener
Courtesy of BMW OF NORTH AMERICA, INC.

Unfasten rear window from outside by applying gentle pressure and press inwards to remove.

NOTE: Completely remove residues of sealing tape from convertible top fabric by hand without using solvents.

Fig. 70: Unfastening Rear Window
Courtesy of BMW OF NORTH AMERICA, INC.

Rear inside window:

Slide zip fastener slide onto underside of rear window on blue zip fastener tape.

CAUTION: When installing new rear window, protect from dirt and damage.

Fig. 71: Sliding Zip Fastener
Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: Assistant holds outside of rear window and ensures that zip fastener slide does not jam.

Insert second half of zip fastener on fabric cover into zip fastener slide so that both leading edges of fabrics (1) are flush with the zip fastener.

First link (2) connects on right or left.

Fig. 72: Inserting Second Half Of Zip Fastener
Courtesy of BMW OF NORTH AMERICA, INC.

Maximum permitted offset: 1 link to right or left.

NOTE: If rear window is slightly wavy, then replace coupling member in other direction.

Fig. 73: Replacing Coupling Member In Other Direction
Courtesy of BMW OF NORTH AMERICA, INC.

Slowly close zip fastener and remove zip fastener slide.

CAUTION: Zip fastener must not start opening at one end.

Fig. 74: Closing Zip Fastener
Courtesy of BMW OF NORTH AMERICA, INC.

Close convertible top but do not lock it down.

NOTE: Check zip fastener (spiral) to ensure that it is closed all around.

Fig. 75: Closing Convertible Top
Courtesy of BMW OF NORTH AMERICA, INC.

Insert retaining clip through zip fastener from outside.

Carefully position opening point for rear window.

Fig. 76: Inserting Retaining Clip
Courtesy of BMW OF NORTH AMERICA, INC.

Fit counter-support plate to inside and bend claw fasteners into place.

Remove protective film from sealing tape.

NOTE: Countermeasures from outside required on the retaining clip.

Fig. 77: Removing Protective Film From Sealing Tape
Courtesy of BMW OF NORTH AMERICA, INC.

Attach 100 mm of sealing tape on retaining clips flush with profile piping and remove protective film.

CAUTION: Place protective card on rear window with fleece face downwards to ensure that this is not damaged when working with the folding leg.

Fig. 78: Removing Protective Film
Courtesy of BMW OF NORTH AMERICA, INC.

Raise profile piping with folding leg, insert leading edge of fabric and rub vigorously with folding leg.

NOTE: Counter support required from inside.

Fig. 79: Raising Profile Piping With Folding Leg
Courtesy of BMW OF NORTH AMERICA, INC.

Raise profile piping (3) with folding leg (4) and insert leading edge of fabric (6).

CAUTION: Risk of damage to rear window.

1. Rear window.
2. Protective card.
3. PVC profile piping.
4. Folding leg.
5. Sealing tape.
6. Cover fabric.
7. Seam.
8. Zip fastener.

Fig. 80: Raising Profile Piping
Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: Folds are not permitted.

Rub leading edge of fabric with folding leg: counter-pressure required from inside.

Remove protective card.

Lock down convertible top.

CAUTION: Sealing tape must harden. For this reason, the fabric top must not be folded for the next 24 hours.

54 31 020 REPLACING CONVERTIBLE COVER (Z3 ROADSTER)

Removing and installing tackstrip operation is described in: Removing and installing complete convertible cover (Z3 roadster), refer to 54 31 010 REMOVING AND INSTALLING COMPLETE CONVERTIBLE TOP (Z3 ROADSTER, M ROADSTER) .

Removal:

Remove convertible cover gaskets (1) and (2) on left/right sides.

Raise convertible cover out of convertible top box.

Fig. 81: Removing Convertible Cover Gaskets
Courtesy of BMW OF NORTH AMERICA, INC.

Press convertible cover (1) to one side on B-pillar (2) or raise up out of convertible top box (3).

Unfasten blind rivet (4) on left/right sides from convertible top cover/lower B-pillar bracket (drill out).

Fig. 82: Pressing Convertible Cover
Courtesy of BMW OF NORTH AMERICA, INC.

Lift window (2) out of convertible cover/B-pillar bracket (3) on left/right sides.

Fig. 83: Lifting Window Out Of Convertible Cover
Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: Before unfastening the screws (1), note position and number of spacer discs (2) (if fitted) because same number has to be fitted at the same location (wind noise, leaks).

Fig. 84: Locating Screws
Courtesy of BMW OF NORTH AMERICA, INC.

Unscrew bolts (1). Unfasten screw (2) and swivel support rails (for the convertible top gasket) on left/right sides upwards.

NOTE: Do not unfasten the screw for the interlock frame (adjustment is changed).

Fig. 85: Locating Bolts
Courtesy of BMW OF NORTH AMERICA, INC.

Unfasten screws (1) on left/right windshield bracket (2) and fold tab (3) upwards.

Fig. 86: Locating Screws
Courtesy of BMW OF NORTH AMERICA, INC.

Unscrew bolts (1). Remove frame rail (2) from windshield bracket.

Fig. 87: Removing Bolts Frame Rail
Courtesy of BMW OF NORTH AMERICA, INC.

Pull convertible top off cement seal (double-sided adhesive tape, e.g. Tesafix 4965) on front windshield bracket.

Raise convertible top out of its box.

Fig. 88: Pulling Convertible Top Off Cement Seal
Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: Before unfastening the screws (1), note the position and number of spacer discs (2) (if fitted) because same number has to be refitted at the same location (wind noise, leaks). Unfasten screws (1) and remove left/right frame rail (3).

Fig. 89: Locating Screws
Courtesy of BMW OF NORTH AMERICA, INC.

Unfasten left/right screws (1) and rivets (2).

Fig. 90: Locating Screws
Courtesy of BMW OF NORTH AMERICA, INC.

Move front of convertible cover (1) to back. Unfasten screw (1) and unfasten clamp cable bracket (2) from top left/right convertible top linkage.

Fig. 91: Moving Front Of Convertible Cover
Courtesy of BMW OF NORTH AMERICA, INC.

Lift off left/right convertible top (1).

Fig. 92: Lifting Off Left/Right Convertible Top
Courtesy of BMW OF NORTH AMERICA, INC.

Unfasten screw (1) and remove clamp cable bracket (2).

Bend clamp cable bracket (2) upwards and pull clamping cable forwards out of convertible cover (3).

Fig. 93: Removing Screws
Courtesy of BMW OF NORTH AMERICA, INC.

Slightly raise front of convertible cover. Unfasten left/right screw (1) and unfasten side retaining strap (2) on center bracket (3).

Fig. 94: Removing Screws
Courtesy of BMW OF NORTH AMERICA, INC.

Remove tensioning rail (1) from the brackets.

Unfasten convertible strap from the brackets.

Fold convertible cover backwards into convertible top box.

Fig. 95: Removing Tensioning Rail
Courtesy of BMW OF NORTH AMERICA, INC.

Unfasten blind rivets (1) on clamping cable mount (2) of left/right rear bracket (3).

Fig. 96: Unfastening Blind Rivets
Courtesy of BMW OF NORTH AMERICA, INC.

Unfasten screw (1) on joint of rear bracket (2).

Remove clamping cable straps (3) on left and right and remove from bracket (2).

Place bracket (2) forwards over the convertible top linkage (risk of damage).

Fig. 97: Removing Screws
Courtesy of BMW OF NORTH AMERICA, INC.

Lift convertible cover (1) with tackstrip (2) on one side and remove from convertible top box.

Fig. 98: Lifting Convertible Cover
Courtesy of BMW OF NORTH AMERICA, INC.

Remove cement residue from the brackets (1) between the clamping straps (2) (clean).

Fig. 99: Removing Cement Residue From Brackets
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Install new convertible cover with tackstrip in the convertible top box (2-man operation).

Slide clamping belt loops on left/right sides over the brackets.

Screw down bracket on left/right joints, installing screws with screw locking varnish.

Rivet left/right clamping belts on brackets (hole pattern in clamping belt is specified).

Place cover over convertible top linkage.

Fit blind rivet with washer to left/right sides of convertible cover/B-pillar bracket.

Fit rivet from outside => convertible cover, bracket, washer.

Fig. 100: Fitting Blind Rivet With Washer
Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: If necessary, replace the damaged gasket under the tackstrip.

Screw down tackstrip in convertible top box (operation is described in):

Removing and installing complete convertible top (Z3 roadster), refer to 54 31 010 REMOVING AND INSTALLING COMPLETE CONVERTIBLE TOP (Z3 ROADSTER, M ROADSTER) .

Install clamping cables with brackets (to screw down, windshield bracket should be vertical).

Attach convertible cover on left/right sides to B-pillar bracket.

Install screw in top left/right on the convertible top/B-pillar bracket.

Stow convertible top in its box.

Install side cover mount on windshield brackets at left/right sides.

Fig. 101: Installing Side Cover Mount On Windshield Brackets
Courtesy of BMW OF NORTH AMERICA, INC.

Remove protective paper from double-sided adhesive tape, move convertible cover over front of windshield bracket and secure (position is specified by hole pattern).

Screw down frame rail on windshield bracket.

Screw down left/right frame rails on convertible top gasket.

Fit left/right frame rails for the convertible top gasket.

CAUTION: The washers are refitted in the same location as noted during disassembly.

Close and lock soft top.

Cement convertible tabs to the brackets.

Clip tensioning rail onto the brackets.

Fit convertible top gaskets to each side.

Fit edge protector on B-pillar/side panel.

NOTE: The dimensions and tolerances for the convertible top linkage and cover are designed in such a way that no tension correction is required. For an initial period after assembly, new convertible tops are always rather "tight". If the vehicle is parked for an extended period (e.g. over night) with the convertible top closed, the convertible top "settles" and the closing forces return to normal.

CAUTION: If the convertible top is too tense, the locking forces rise and the convertible top also adopts the properties of a "drum". The wind forces exerted on the vehicle while in motion and the action of raindrops "beat down" in a drum-like fashion on the top and substantially impair interior acoustics. On the other hand, if the convertible top is not tense enough, "it droops" and, at higher roadspeeds, it starts to make a "banging noise".

54 31 030 REMOVING AND INSTALLING/REPLACING ROOF LINER IN CONVERTIBLE TOP (Z3 ROADSTER)

Open convertible top.

Unfasten screws (1).

Remove securing rail (2) from plastic retainer.

Installation:

Edges of securing rail (2) must be located under convertible top seal (window guide).

Fig. 102: Removing Screws
Courtesy of BMW OF NORTH AMERICA, INC.

Pull convertible top seal (1) out of securing rail.

Fig. 103: Pulling Convertible Top Seal
Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: Before releasing screws (1), make a note of the number of shims (2) (if fitted) since they must be reinstalled in the same positions (wind noises, leaks).

Fig. 104: Locating Screws
Courtesy of BMW OF NORTH AMERICA, INC.

Remove screws (1 and 2). Remove securing rail of convertible top seal.

Installation:

Mark screw positions so that the securing rail can be installed in the same position.

NOTE: Do not release the screw for the closure base plate, otherwise the setting will be altered.

Fig. 105: Removing Screws
Courtesy of BMW OF NORTH AMERICA, INC.

Release screws (1) on plastic retainer (2) and fold out lug (3).

NOTE: Securing rail is disassembled.

Fig. 106: Removing Screws On Plastic Retainer
Courtesy of BMW OF NORTH AMERICA, INC.

Detach cover from adhesive fastening on plastic retainer.

Raise convertible top out of convertible top compartment.

Installation:

Stick on cover with double-sided adhesive tape, e.g. Tesafix 4965, to plastic retainer at front.

Fig. 107: Raising Convertible Top
Courtesy of BMW OF NORTH AMERICA, INC.

Drill out rivets (1) on B-pillar mounting.

Drill out rubber band mounting (2).

NOTE: Drill carefully so as not to damage convertible top cover.

Installation:

Only steel rivets (1) may be used.

Fig. 108: Drilling Out Rivets
Courtesy of BMW OF NORTH AMERICA, INC.

Drill out rivets (1) and (2) from plastic deflector (3) on left/right.

Installation:

Rivet down spring part of mount on front rivet (1) under plastic deflector.

Only steel rivets (1 + 2) may be used.

Fig. 109: Drilling Out Rivets
Courtesy of BMW OF NORTH AMERICA, INC.

Release expansion rivets (1) on rear retainer (convertible top frame).

NOTE: Roof liner must not be damaged.

Fig. 110: Releasing Expansion Rivets
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Replace expansion rivets.

Insert expansion rivet for locating hole (1) first.

Locating hole (1) = round hole in wire bracket = 3rd hole from right

Fig. 111: Locating Holes
Courtesy of BMW OF NORTH AMERICA, INC.

Mark side position of shell crossrail (1).

Drill out any locating rivets if necessary.

Unclip shell crossrail.

Installation:

Align shell crossrail on marking so that roof liner does not have any folds.

Only steel rivets may be used.

Fig. 112: Marking Side Position Of Shell Crossrail
Courtesy of BMW OF NORTH AMERICA, INC.

Mark side position of shell crossrail (1), then unclip.

Installation:

Align shell crossrail on marking so that roof liner does not have any folds.

Fig. 113: Marking Side Position Of Shell Crossrail
Courtesy of BMW OF NORTH AMERICA, INC.

Release screw (1) of spacer on left/right.

NOTE: A mount can also be riveted down instead of a spacer.

Fig. 114: Removing Screws
Courtesy of BMW OF NORTH AMERICA, INC.

Drill out rivets (1) on cowl on left/right.

Release screws (2) on center of cowl.

Fig. 115: Removing Screws
Courtesy of BMW OF NORTH AMERICA, INC.

Pull out roof liner towards rear.

Installation:

Only aluminum rivets (1) may be used.

54 31 055 REMOVING AND INSTALLING / REPLACING GAS SPRING STRUT ON CONVERTIBLE TOP (Z3 ROADSTER, M ROADSTER)

Removing and installing rear left lower section of side trim, refer to 51 43 015 REMOVING AND INSTALLING / REPLACING REAR LEFT OR RIGHT LOWER SECTION OF SIDE TRIM (Z3 ROADSTER, M ROADSTER) .

Pry out gas spring strut at top with special tool 00 9 319.

Fig. 116: Prying Out Gas Spring Strut
Courtesy of BMW OF NORTH AMERICA, INC.

Pry out gas spring strut (1) at bottom with special tool 00 9 319 and remove from the vehicle.

Fig. 117: Installing Special Tool
Courtesy of BMW OF NORTH AMERICA, INC.

MOTOR OPERATED CONVERTIBLE TOP

54 34... NOTES ON EH CONVERTIBLE TOP (Z3 ROADSTER, M ROADSTER)

NOTE: All door windows must be lowered slightly.

Important!

Ensure absolute cleanliness when working on the hydraulic system while opened as even the smallest dirt particles can cause malfunctions in the hydraulic system.

Function Description (Open/Close):

Actuation of convertible top is only possible:

- With vehicle stopped.
- From ignition lock position "R" (radio setting).
- With brake pedal depressed.
- With convertible top unlocked (by hand) and raised over dead center (open).
- With tonneau cover removed (close).
- While control switch in instrument panel is pressed.

Fig. 118: Locating Actuation Of Convertible Top
Courtesy of BMW OF NORTH AMERICA, INC.

Emergency Actuation Of Convertible Top:

Remove luggage compartment trim on left. Refer to 51 47 151 REMOVING AND INSTALLING/REPLACING LEFT TRUNK WHEEL HOUSING TRIM (Z3 ROADSTER, M ROADSTER) .

Older Hydraulic Unit:

Open emergency valve (1) counterclockwise by a half turn (system is depressurized).

Convertible top can now be closed and opened by hand.

Fig. 119: Locating Emergency Valve
Courtesy of BMW OF NORTH AMERICA, INC.

Newer Hydraulic Unit:

Open emergency valve (1) counterclockwise by a half turn (system is depressurized).

Convertible top can now be closed and opened by hand.

Fig. 120: Locating Emergency Valve
Courtesy of BMW OF NORTH AMERICA, INC.

Checking Fluid Level In Hydraulic Unit:

- Remove luggage compartment trim on left. Refer to 51 47 151 REMOVING AND INSTALLING/REPLACING LEFT TRUNK WHEEL HOUSING TRIM (Z3 ROADSTER, M ROADSTER) .
- Open convertible top (motor-driven) once and close again to bleed the system.
- Convertible top must be closed.

Older hydraulic unit:

Fluid level must be in range of marking (1) on hydraulic unit (2).

Fig. 121: Identifying Fluid Level
Courtesy of BMW OF NORTH AMERICA, INC.

Newer Hydraulic Unit:

Fluid level must be in range of marking (1) on hydraulic unit (2).

Fig. 122: Identifying Fluid Level
Courtesy of BMW OF NORTH AMERICA, INC.

Topping Up Fluid In Hydraulic Unit:

- Remove luggage compartment trim on left. Refer to 51 47 151 REMOVING AND INSTALLING/REPLACING LEFT TRUNK WHEEL HOUSING TRIM (Z3 ROADSTER, M ROADSTER) .
- Open convertible top (motor-driven) once and close again to bleed the system.
- Convertible top must be closed.
- Open emergency valve counterclockwise by a half turn (system is depressurized).

Installation:

- Replace oil filler plug and seal.

  Tightening torque: 11 Nm.

- Check fluid level after filling (see work step further above).

Older Hydraulic Unit:

- Undo oil filler plug (2). Replenish as much hydraulic fluid until it lies in area of marking (3)
- Close emergency valve (1).

Fig. 123: Removing Oil Filler Plug
Courtesy of BMW OF NORTH AMERICA, INC.

New Hydraulic Unit:

- Partially remove hydraulic unit. Refer to 54 34 005 REMOVING AND INSTALLING/REPLACING HYDRAULIC UNIT FOR CONVERTIBLE TOP DRIVE UNIT (Z3 ROADSTER, M ROADSTER) .
- Turn hydraulic unit so that oil filler plug (1) points upwards.
- Undo oil filler plug (1).

  Fig. 124: Locating Oil Filler Plug
  Courtesy of BMW OF NORTH AMERICA, INC.

Tightening torque: 11 Nm.

- Replenish hydraulic fluid until it lies in area of marking (2).
- Position hydraulic unit in mounting and check fluid level, install if necessary.
- Close emergency valve (3).

Extended Storage Of Hydraulic Components:

If the hydraulic unit is replaced or remains removed for an extended period, the bores on the hydraulic unit and the hose connections for hydraulic cylinder must be sealed off.

54 34 005 REMOVING AND INSTALLING/REPLACING HYDRAULIC UNIT FOR CONVERTIBLE TOP DRIVE UNIT (Z3 ROADSTER, M ROADSTER)

NOTE: Observe notes on EH convertible top. Refer to 54 34... NOTES ON EH CONVERTIBLE TOP (Z3 ROADSTER, M ROADSTER) .

Necessary Preliminary Tasks:

- Remove luggage compartment trim on left. Refer to 51 47 151 REMOVING AND INSTALLING/REPLACING LEFT TRUNK WHEEL HOUSING TRIM (Z3 ROADSTER, M ROADSTER) .
- Open emergency valve (system is depressurized). Refer to 54 34... NOTES ON EH CONVERTIBLE TOP (Z3 ROADSTER, M ROADSTER) .
- Lay an absorbent protective cover on the trunk floor next to the hydraulic control unit (danger of becoming dirty from oil running out).

NOTE: There are 2 different hydraulic units. The unit illustrated is the newer one. It was introduced at the beginning of 1999. In the event of replacement, this new unit can be installed.

Components:

1. Plug.
2. Nut for cable (tightening torque: 11 Nm.).
3. Cable.
4. Nut for mounting bracket (tightening torque: 11 Nm.).
5. Hydraulic unit with marking for fluid level.
6. Relay with holder.
7. Emergency valve.
8. Oil filler plug (tightening torque: 11 Nm.).

Fig. 125: Identifying Hydraulic Unit Components
Courtesy of BMW OF NORTH AMERICA, INC.

As Both Hydraulic Units Are Very Similar, The Following Text Describes Removal Of The Older Unit:

- Disconnect plug (1).
- Release nut (2) and detach cable (3).
- Release nut (4).
- Unscrew hydraulic unit (5) inwards and set down on protective cover.

Installation:

Tightening torque: 11 Nm.

Fig. 126: Removing Procedure Hydraulic Units
Courtesy of BMW OF NORTH AMERICA, INC.

Press down lock (1) and detach relay holder (2).

Fig. 127: Pressing Down Lock
Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: Have a cloth ready to wipe away escaping oil.

If necessary, press relay holder to one side slightly.

Release banjo bolts (1) and (2) and remove lines.

Fig. 128: Releasing Banjo Bolts
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

- Hose with red hose lettering (3) on hydraulic unit connection "red".
- Hose with blue hose lettering (4) on hydraulic unit connection "blue".
- Tightening torque: 11 Nm.

NOTE: If hydraulic components are to be stored for an extended period, seal off bores on hydraulic unit and hose connections for hydraulic cylinder.

Installation:

Always fit new banjo bolts (1) and seals (2 and 4).

Fig. 129: Fitting New Banjo Bolts And Seals
Courtesy of BMW OF NORTH AMERICA, INC.

Banjo bolts (1) on hydraulic unit have a nozzle.

1. Banjo bolt.
2. Upper seal (thin).
3. Hose connection.
4. Lower seal (thick).

Important!

Check fluid level, top up if necessary. Refer to 54 34... NOTES ON EH CONVERTIBLE TOP (Z3 ROADSTER, M ROADSTER) .

Seal Off Lines And Line Connections:

Plug Connections On Hydraulic Control Unit:

Use the plugs (1) from the "Banjo bolts for hydraulic unit" set and the old seals for this purpose.

Fig. 130: Locating Plug Banjo Bolts
Courtesy of BMW OF NORTH AMERICA, INC.

Plug hose connections for hydraulic cylinder:

Use the plugs (1) and cap nuts (2) from the "Banjo bolts for hydraulic unit" set and the old seals for this purpose.

Fig. 131: Identifying Plug And Cap Banjo Bolts
Courtesy of BMW OF NORTH AMERICA, INC.

ROLLOVER BAR, FIXED

54 61 ... REMOVING AND INSTALLING / REPLACING BRACKET FOR LEFT OR RIGHT ROLLOVER PROTECTION BAR (Z3 ROADSTER, M ROADSTER)

Removing and installing rear left or right lower section of side trim, refer to 51 43 015 REMOVING AND INSTALLING / REPLACING .

Version with Harman-Kardon Hi-Fi system:

Unfasten screws (1) and remove bracket (2).

Fig. 132: Removing Screws Bracket
Courtesy of BMW OF NORTH AMERICA, INC.

Replace screws (3).

Unfasten clip (1).

Fig. 133: Removing Clip
Courtesy of BMW OF NORTH AMERICA, INC.

Unfasten nuts (1).

Tightening torque, 10 Nm.

Unfasten screws (2).

Tightening torque, 22 Nm.

Remove bracket (3) for rollover protection bar.

Fig. 134: Removing Nuts
Courtesy of BMW OF NORTH AMERICA, INC.

54 61 001 REMOVING AND INSTALLING / REPLACING LEFT OR RIGHT ROLLOVER PROTECTION BAR (Z3 ROADSTER, M ROADSTER)

Convertible top open and hardtop not fitted.

Version without "Harman-Kardon" Hi-Fi system:

Unlock cover (1) and open.

Unclip cover (2) with long screwdriver through opening (3) for seat belt.

Unclip cover (4).

Fig. 135: Unclipping Cover
Courtesy of BMW OF NORTH AMERICA, INC.

Version without "Harman-Kardon" Hi-Fi system:

Installation:

The retaining lugs (2) of the cover (1) may not be damaged.

Fig. 136: Installing Retaining Lugs

Courtesy of BMW OF NORTH AMERICA, INC.

Version without "Harman-Kardon" Hi-Fi system:

Loosen screws (1) by 10 mm and pull out roll bar (2) upward.

Installation:

While tightening the screws (1) the roll bar (2) must be pressed down, as otherwise the mounting holes will be damaged.

Tightening torque, 22 Nm.

Fig. 137: Loosening Screws
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

The holes (1) of the roll bar (2) may not be damaged.

Fig. 138: Identifying Holes Of Roll Bar
Courtesy of BMW OF NORTH AMERICA, INC.

Version with "Harman-Kardon" Hi-Fi system:

Removing and installing loudspeaker box, refer to 65 13 300 REMOVING AND INSTALLING/REPLACING COMPLETE SUBWOOFER SPEAKER FOR TOP HI-FI SYSTEM (Z3 ROADSTER, M ROADSTER HARMANN KARDON) .

Unclip cover (1) with long screwdriver through opening for seat belt.

Fig. 139: Removing Cover
Courtesy of BMW OF NORTH AMERICA, INC.

Version with "Harman-Kardon" Hi-Fi system:

Installation:

The retaining lugs (2) of the cover (1) may not be damaged.

Fig. 140: Installing Retaining Lugs
Courtesy of BMW OF NORTH AMERICA, INC.

Version with "Harman-Kardon" Hi-Fi system:

Loosen screws (1) by 10 mm and pull out roll bar (2) upward.

Fig. 141: Loosening Screws
Courtesy of BMW OF NORTH AMERICA, INC.

Version with "Harman-Kardon" Hi-Fi system:

Installation:

The holes (1) of the roll bar (2) may not be damaged.

Fig. 142: Identifying Holes Of Roll Bar
Courtesy of BMW OF NORTH AMERICA, INC.

Version with "Harman-Kardon" Hi-Fi system:

Installation:

While tightening the screws (1), the roll bar (2) must be pressed down, as otherwise the mounting holes will be damaged.

Tightening torque, 22 Nm.

Fig. 143: Installing Screws Roll Bar
Courtesy of BMW OF NORTH AMERICA, INC.

Article GUID: A00202365

GENERAL

51 00 ... SAFETY INSTRUCTIONS FOR WORKING ON CARS WITH AIRBAG SYSTEMS

WARNING: If work is carried out in area of airbag systems, e.g. on:

- Door trim panels.
- Interior trims.
- Instrument panel etc.

the ignition must be turned off in each case.

- The ignition must always be off.
- The ignition key must be removed from the ignition lock.

This eliminates the risk of injury.

FRONT BUMPER

51 11 000 REMOVING AND INSTALLING COMPLETE FRONT BUMPER (Z3 ROADSTER, M ROADSTER)

Unfasten hexagon bolts (1) and Torx screws (2) at left/right.

NOTE: Screw (2) for mounting on impact absorber is Torx T50.

Version without foglights and/or headlight cleaning system: Pull bumper forwards to remove.

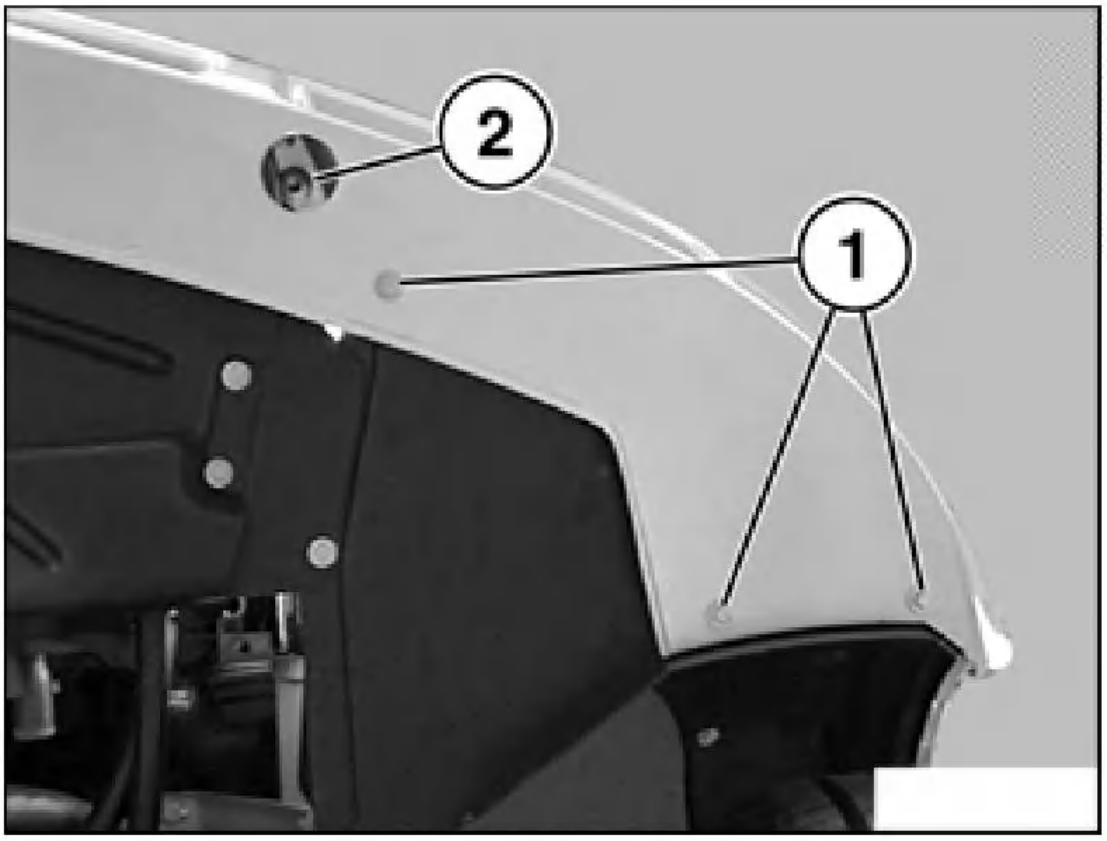


Fig. 1: Locating Hexagon Bolts And Torx Screws
Courtesy of BMW OF NORTH AMERICA, INC.

Version With Foglights:

If necessary, remove left/right plug connection (1) from foglights.

Version With Headlight Cleaning System:

If necessary, unfasten hose clip (2) and seal hose firmly.

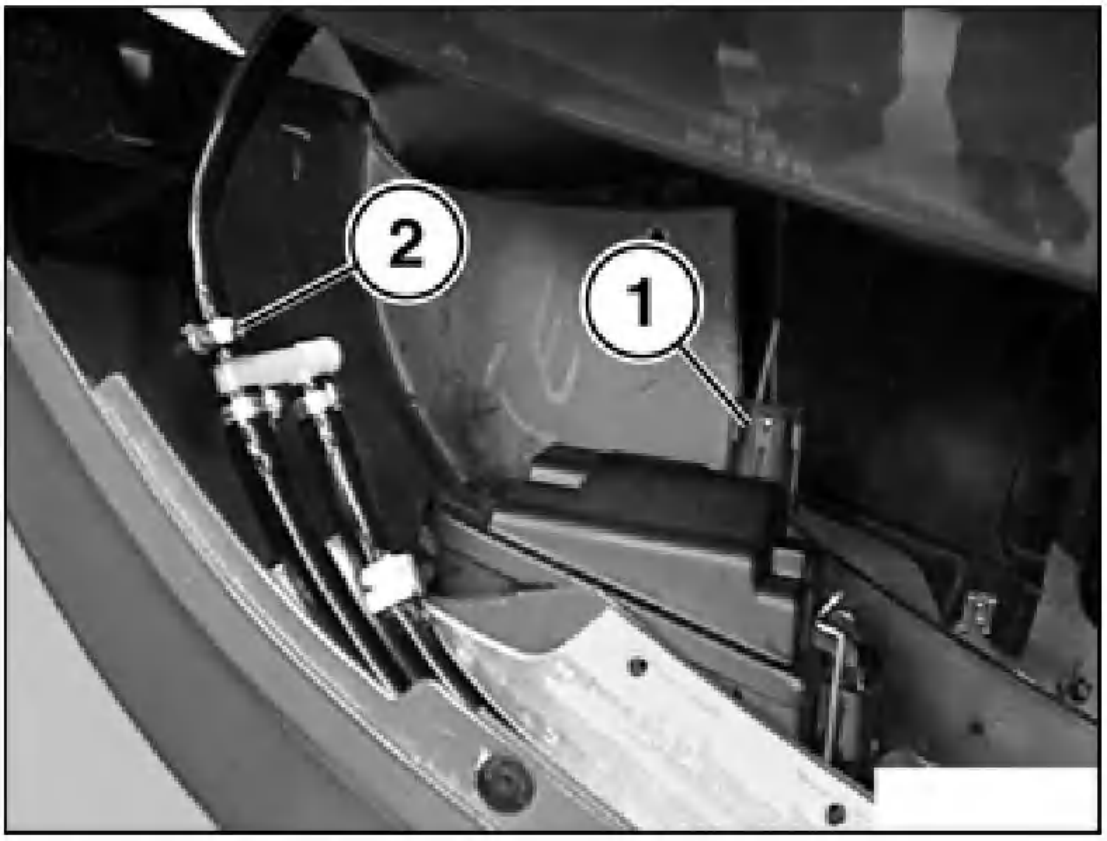


Fig. 2: Identifying Foglights Connection And Hose Clip
Courtesy of BMW OF NORTH AMERICA, INC.

Adjust Bumper:

Ideal setting (dimension):

Transition (A) should be flush on left/right side.

(B) 5 mm (tolerance + 0.5/-1 mm).

(C) Transition from below 5 mm (tolerance + 1/-0.5 mm) upwards to 2.5 mm (tolerance + 0.5/-1 mm).

(D) 5 mm (tolerance + 1/-0.5 mm).

(E) 5 mm (tolerance + 1/-0.5 mm).

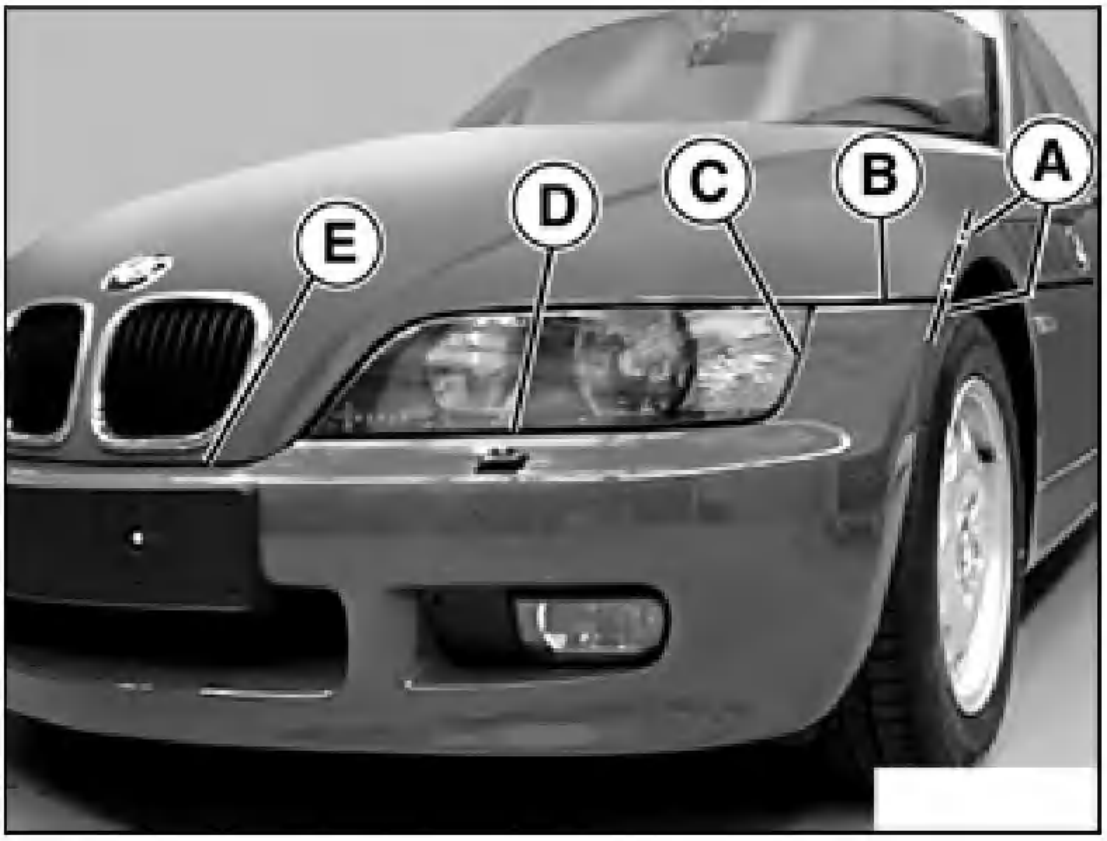


Fig. 3: Adjusting Bumper
Courtesy of BMW OF NORTH AMERICA, INC.

Loosen nut (1) from wheel arch and adjust bracket (2).

NOTE: Adjustment possible with bumper fitted.

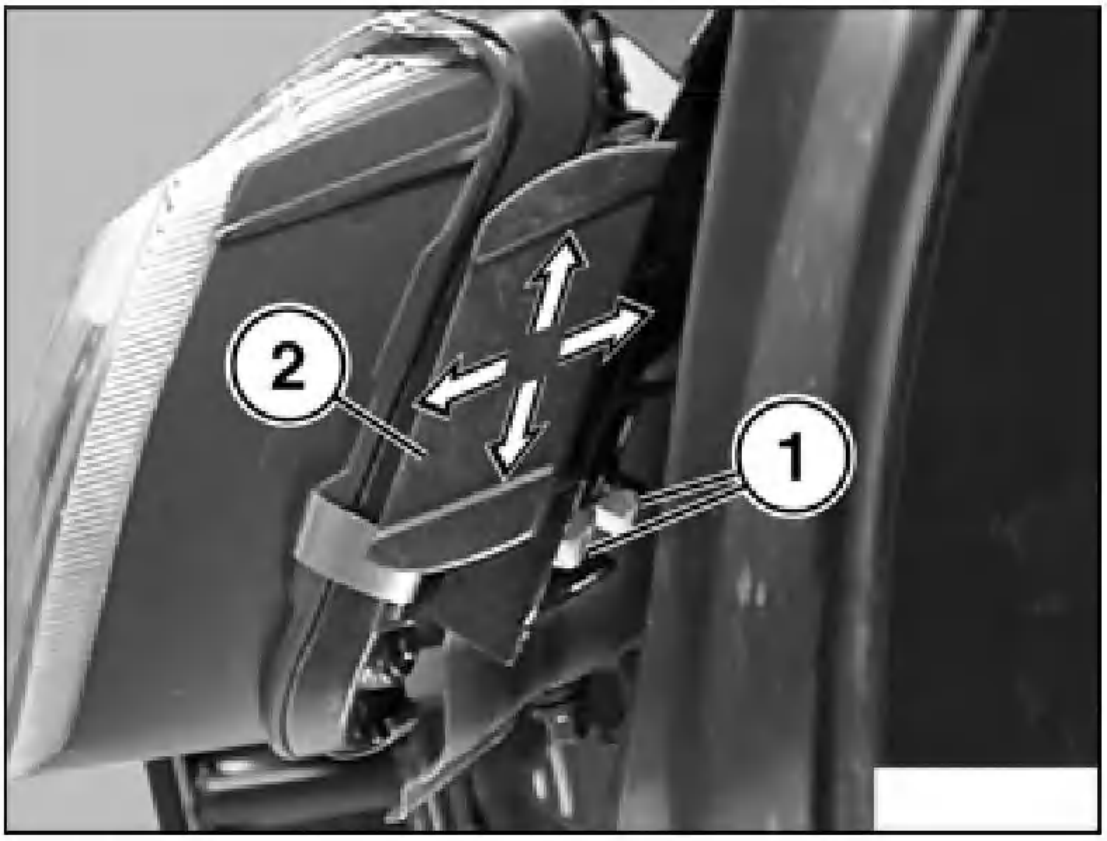


Fig. 4: Adjusting Bracket
Courtesy of BMW OF NORTH AMERICA, INC.

Loosen left/right hexagon bolts (1).

Loosen left/right screw (2).

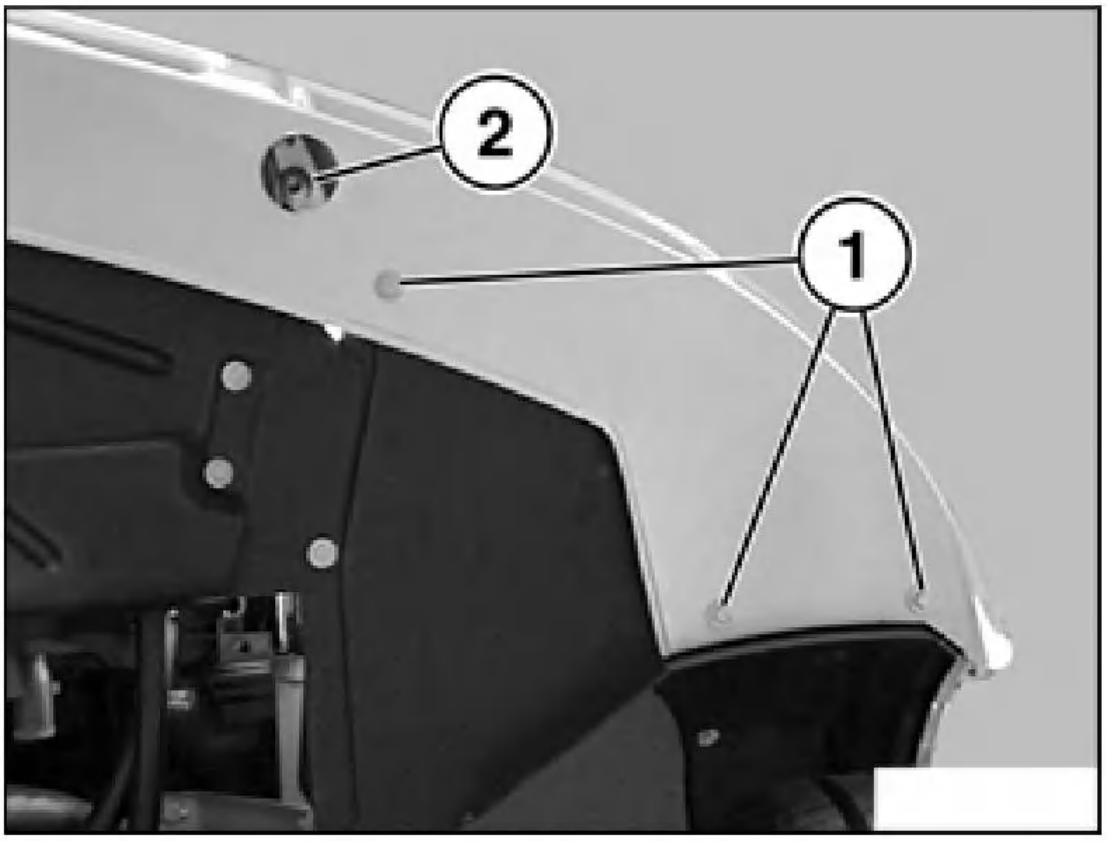


Fig. 5: Removing Left/Right Hexagon Bolts
Courtesy of BMW OF NORTH AMERICA, INC.

Height adjustment with fitted bumper:

Fit special tool 51 1 130 to standard extension (1) with reversible handle (2) and insert through bore (3) in bumper (4) of shock absorber (5).

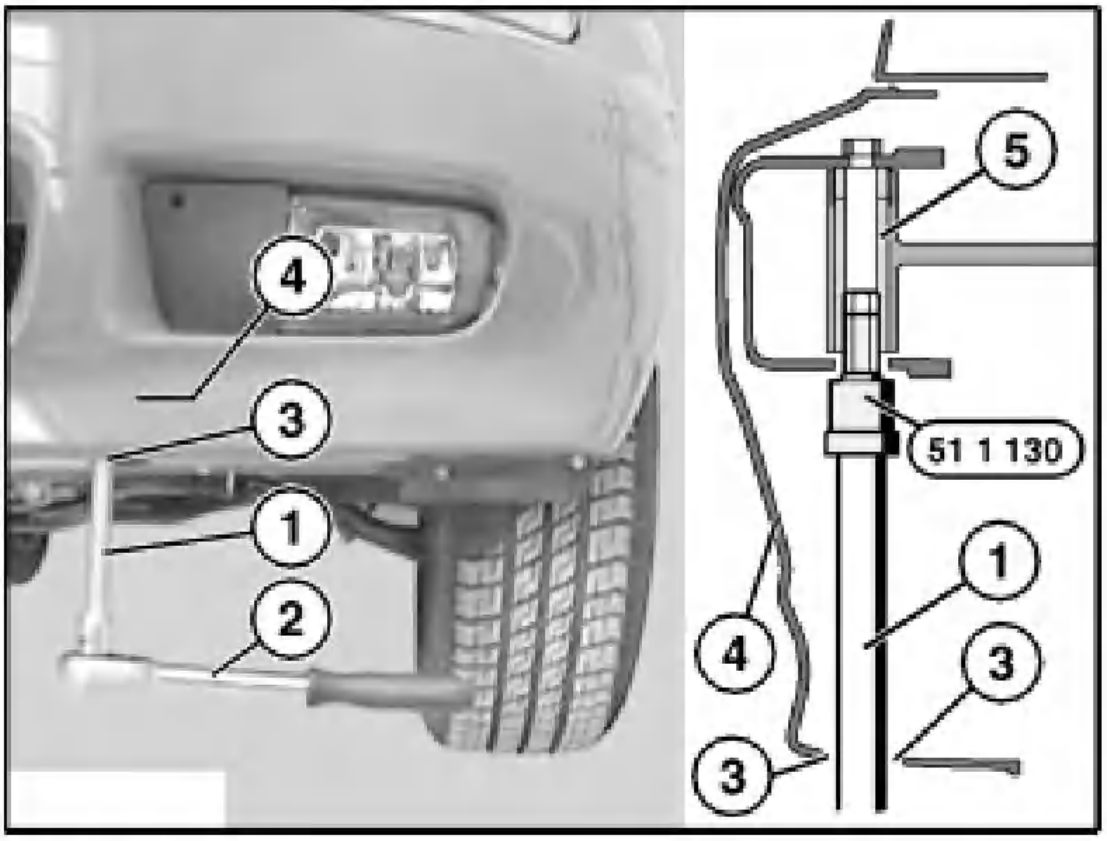


Fig. 6: Adjusting Bumper Height Using Special Tool
Courtesy of BMW OF NORTH AMERICA, INC.

Height of bumper (in front area) is now adjusted by turning socket head cap screw (1) in shock absorber (2).

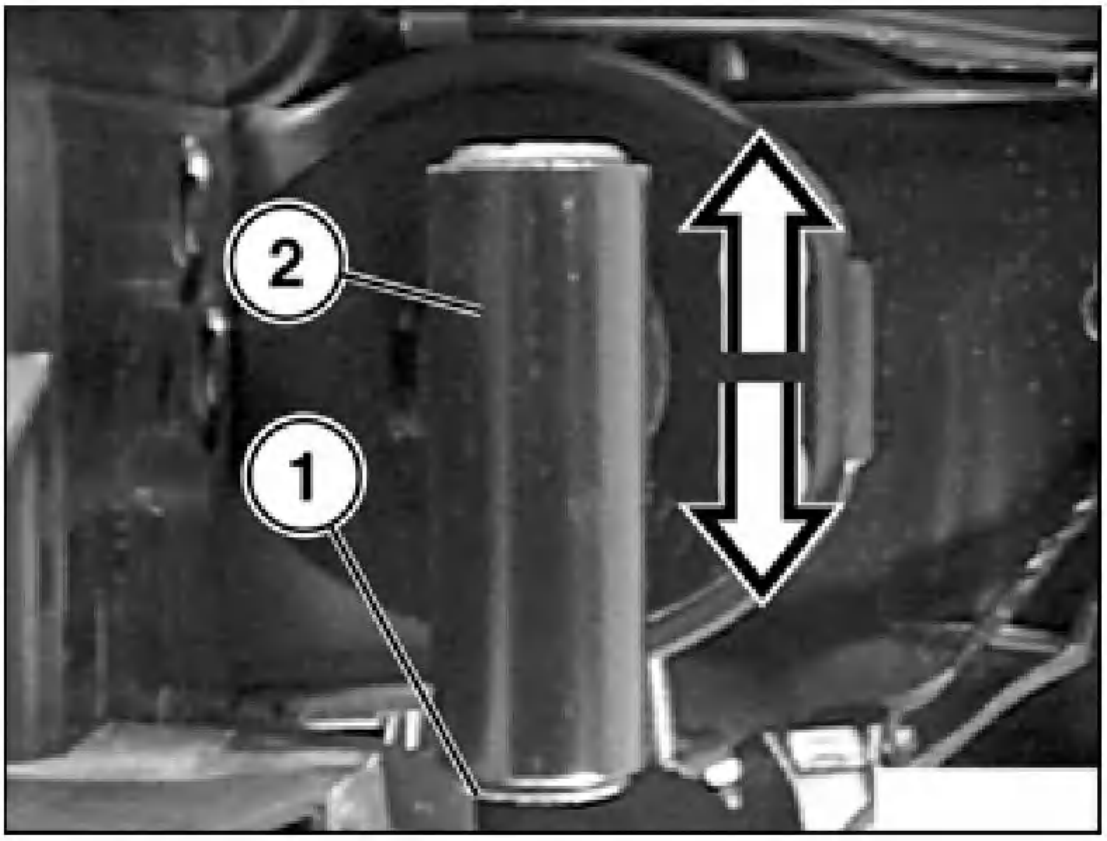


Fig. 7: Turning Socket Head Cap Screw In Shock Absorber
Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: Adjustment only possible when bumper is fitted using special tool 51 1 130.

51 11 001 REPLACING FRONT BUMPER (Z3 ROADSTER, Z3 COUPE)

Unscrew And Remove License Plate:

Remove complete front bumper, refer to 51 11 000 REMOVING AND INSTALLING COMPLETE FRONT BUMPER (Z3 ROADSTER, M ROADSTER) .

Version With Fog Light:

Remove foglight insert, refer to 63 17 000 REMOVING AND INSTALLING/REPLACING LEFT OR RIGHT FOGLIGHT INSERT .

Replace Center Section (Support Member) Of Front Bumper:

Unfasten screws (1) and remove license plate baseplate (2).

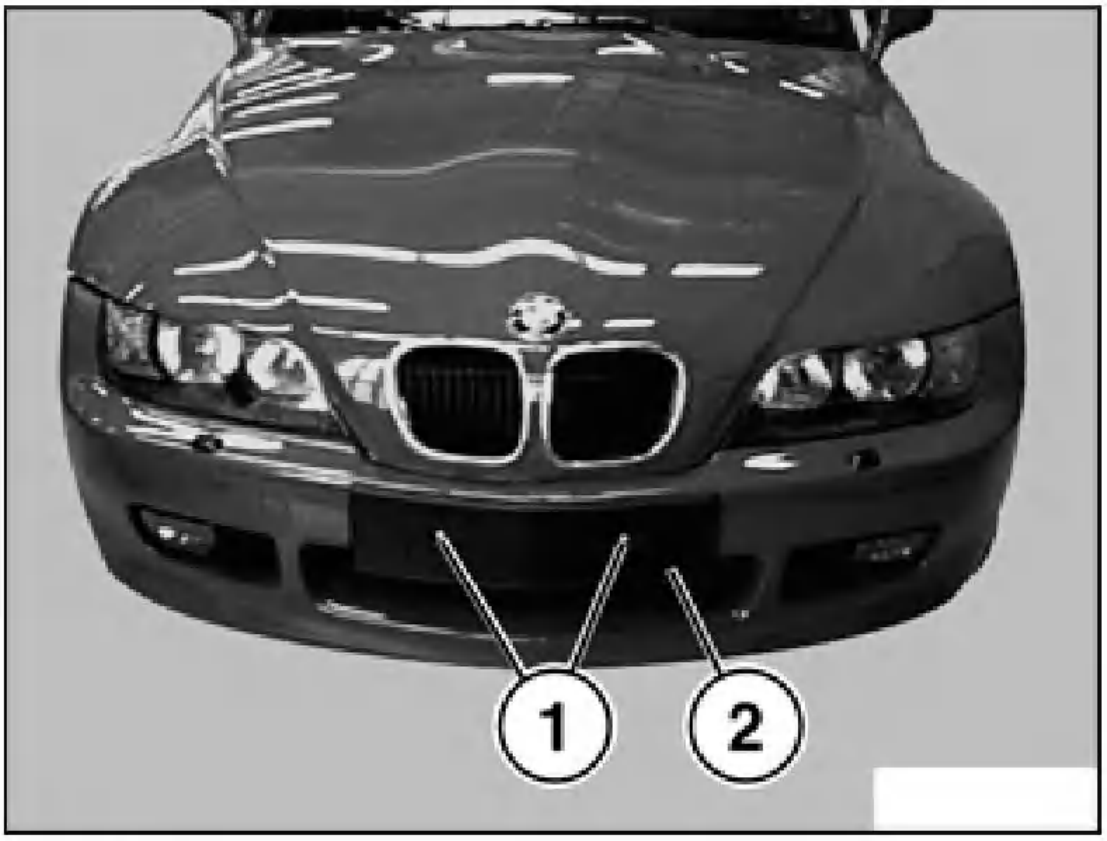


Fig. 8: Removing License Plate Baseplate
Courtesy of BMW OF NORTH AMERICA, INC.

Version With Headlight Cleaning System:

Lift out detent (1) and remove hose connection (2).

Unfasten nut (3).

Remove spray nozzle (4) and left/right clamping ring (5).

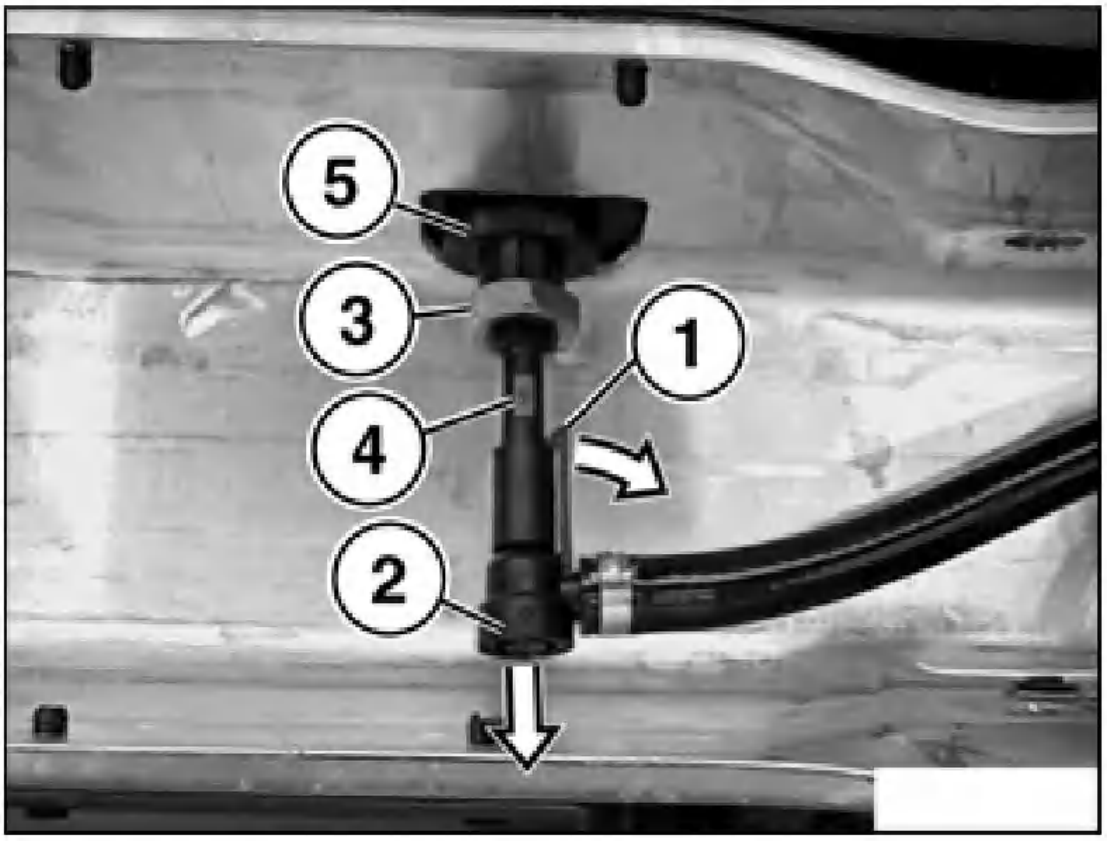


Fig. 9: Removing Spray Nozzle
Courtesy of BMW OF NORTH AMERICA, INC.

Version With Headlight Cleaning System:

Installation:

Lug in spray nozzle (1) must be aligned with recess in clamping ring (2).

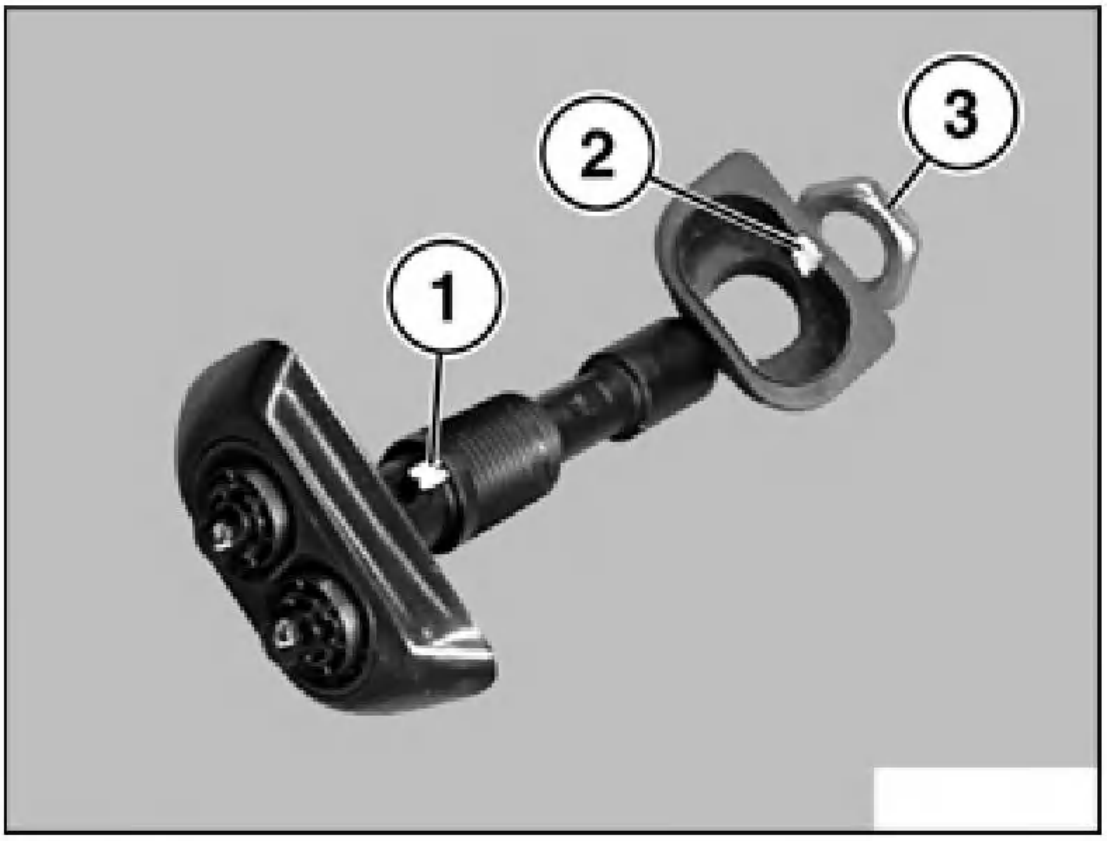


Fig. 10: Identifying Headlight Cleaning System
Courtesy of BMW OF NORTH AMERICA, INC.

Tighten with the nut (3).

Lift out expanding rivets (1) and remove bumper carrier (2).

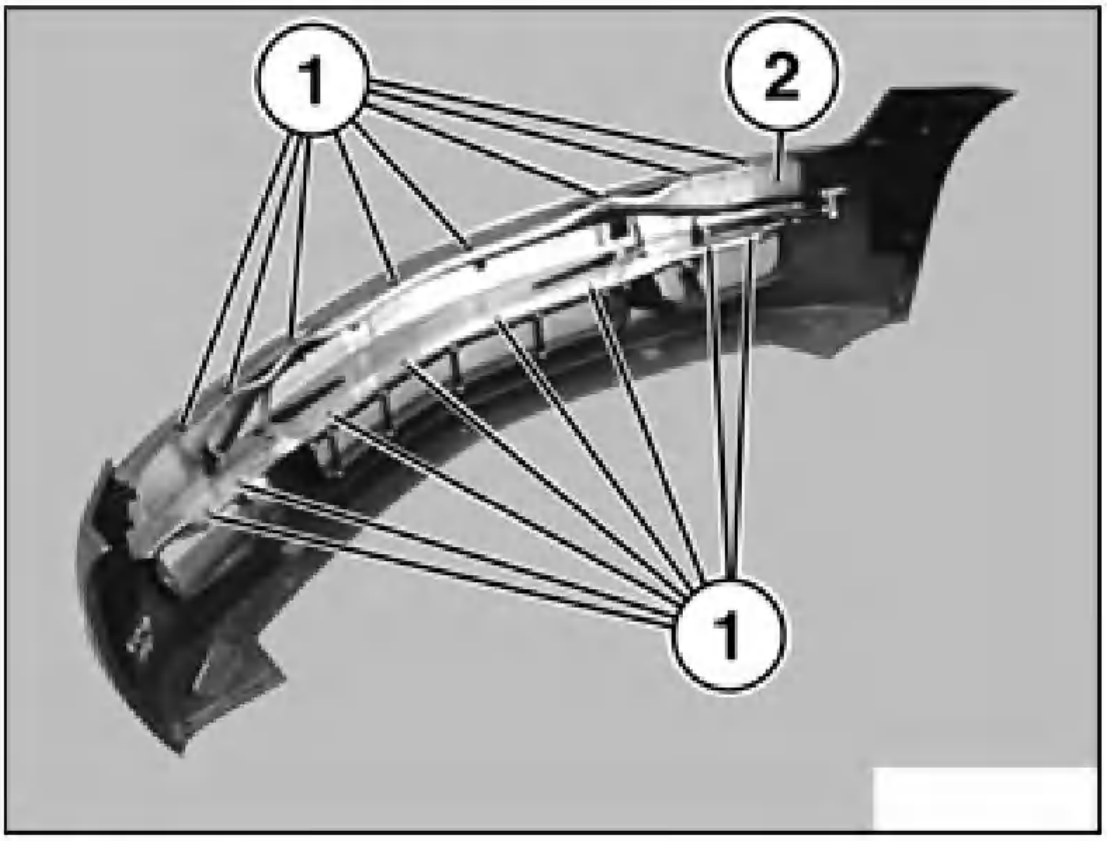


Fig. 11: Removing Bumper Carrier
Courtesy of BMW OF NORTH AMERICA, INC.

Version With Headlight Cleaning System:

If necessary, unfasten expanding rivets (1) and screws (2).

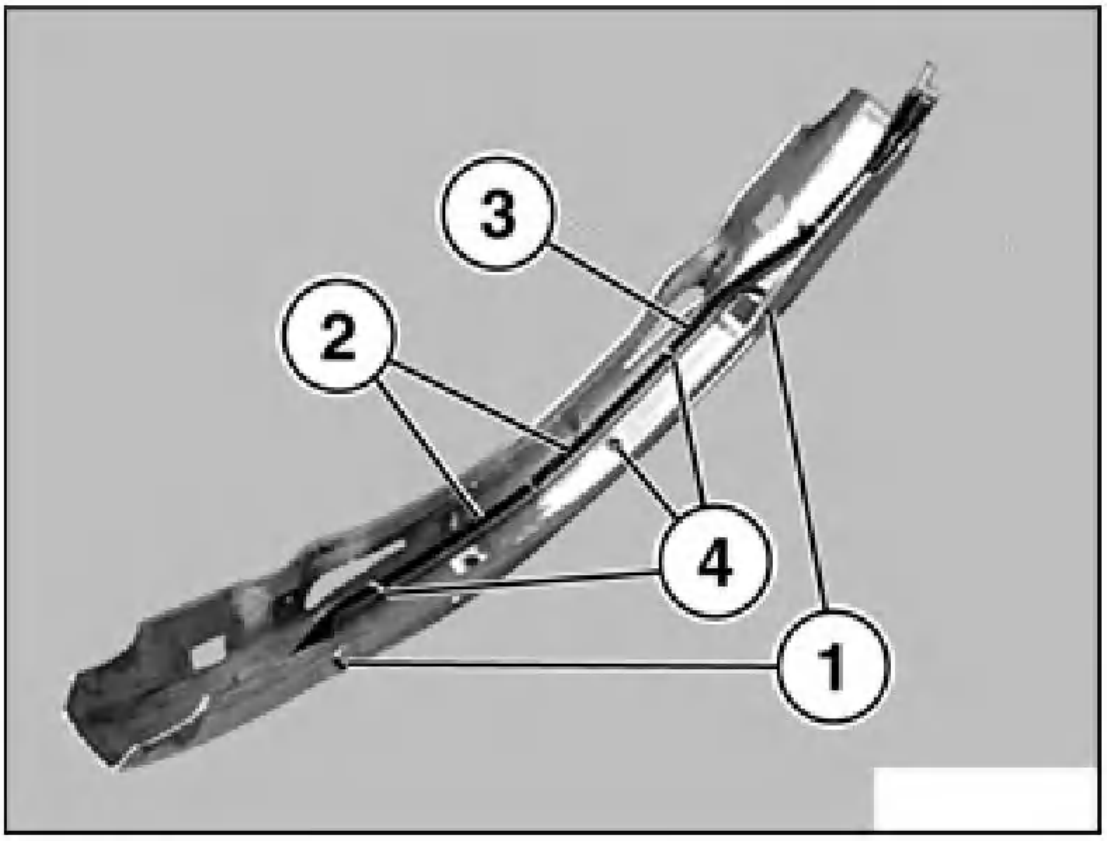


Fig. 12: Checking Headlight Cleaning System
Courtesy of BMW OF NORTH AMERICA, INC.

Remove support member (3) with hoses, replace faulty cable ties (4) if necessary.

NOTE: The operation "Removing center section of front bumper (support beam)" ends here.

Unfasten retaining washers and remove air grill.

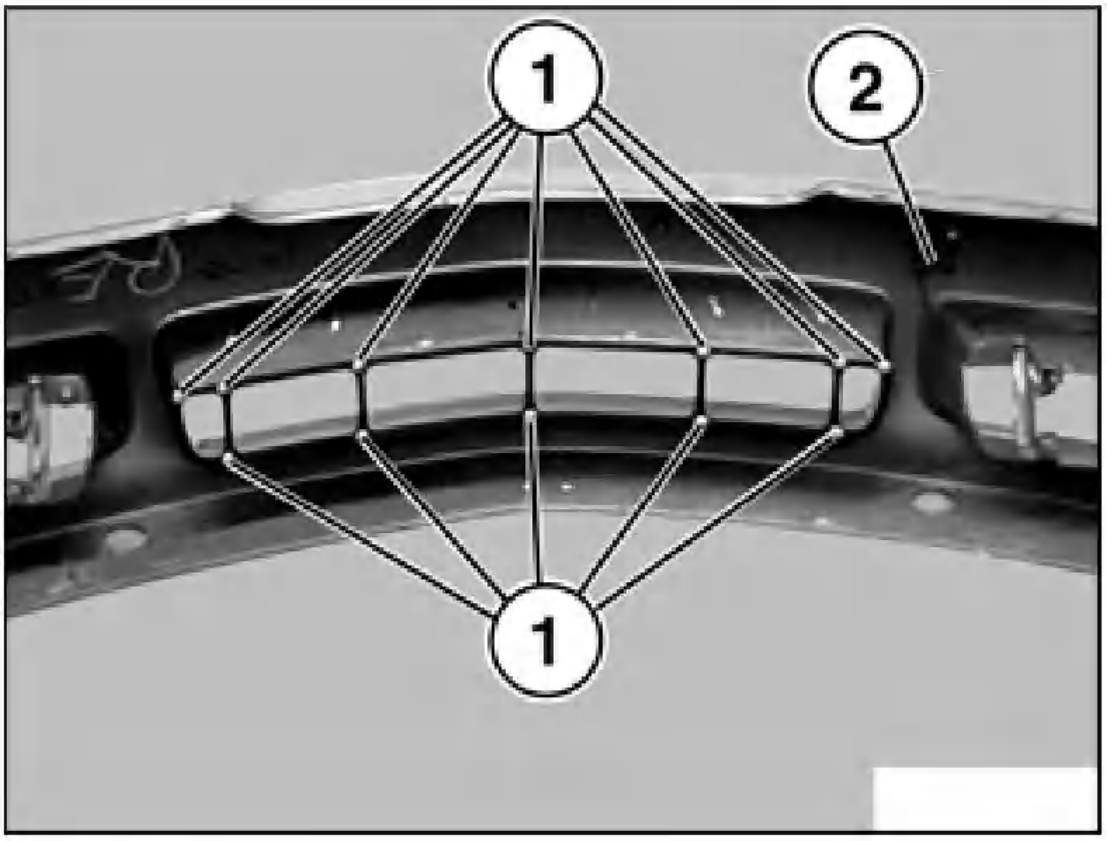


Fig. 13: Removing Air Grill
Courtesy of BMW OF NORTH AMERICA, INC.

Lift cover (2) off towing eye and unfasten catch band.

51 11 011 REPLACING BUMPER CENTER SECTION (CARRIER), FRONT (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE)

Operation Is Described In:

Replacing front bumper, refer to 51 11 001 REPLACING FRONT BUMPER (Z3 ROADSTER, Z3 COUPE) .

51 11 157 REPLACING BUMPER TRIM, FRONT (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE)

Operation Is Identical To:

Replacing front bumper, refer to 51 11 001 REPLACING FRONT BUMPER (Z3 ROADSTER, Z3 COUPE) .

51 11 158 REPLACING BASEPLATE FOR LICENSE PLATE (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE)

Unscrew and remove license plate.

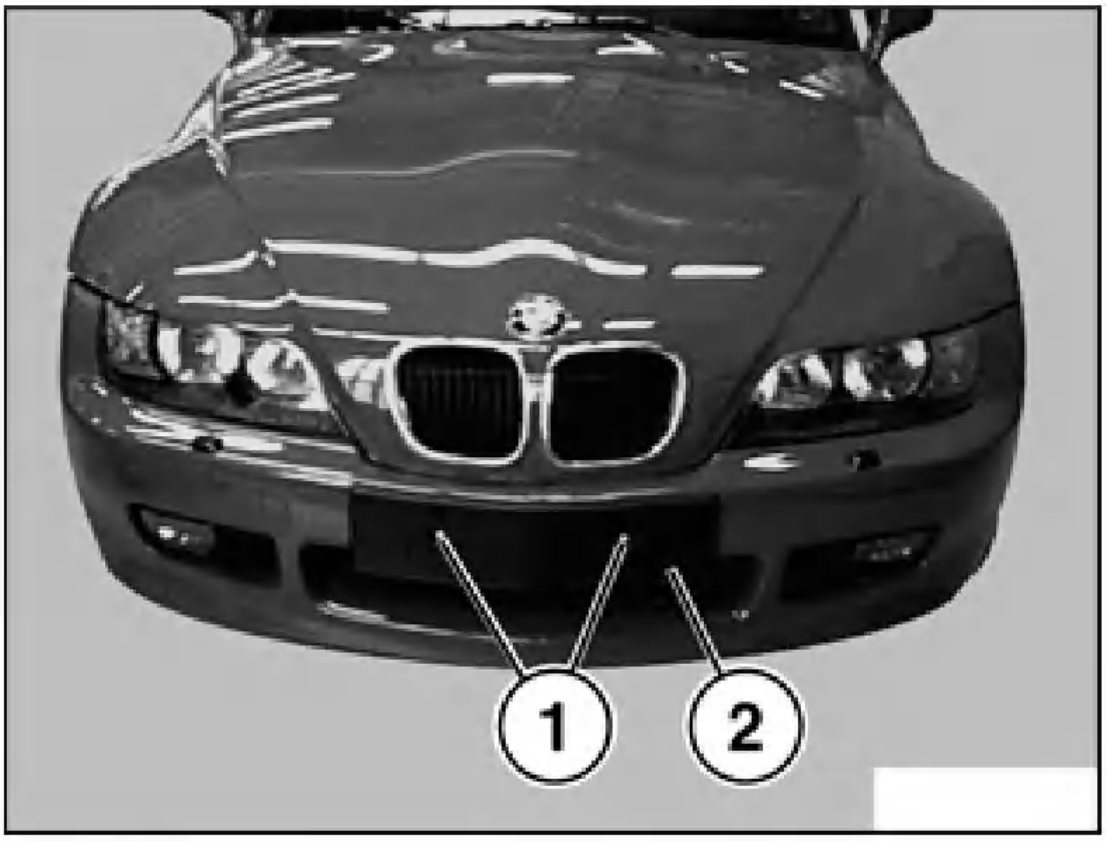


Fig. 14: Removing License Plate
Courtesy of BMW OF NORTH AMERICA, INC.

Lift out expanding wedges (1).

Remove baseplate for licence plate (2) from lower left/right sides.

51 11 701 REPLACING BRACKET FOR BUMPER, FRONT LEFT OR RIGHT (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE)

(Bumper Removed)

(If necessary, remove front bumper, refer to 51 11 000 REMOVING AND INSTALLING COMPLETE FRONT BUMPER (Z3 ROADSTER, M ROADSTER) .)

Installation:

If necessary, mark position of bracket on body.

Unfasten nut (1) from wheel arch and remove bracket (2).

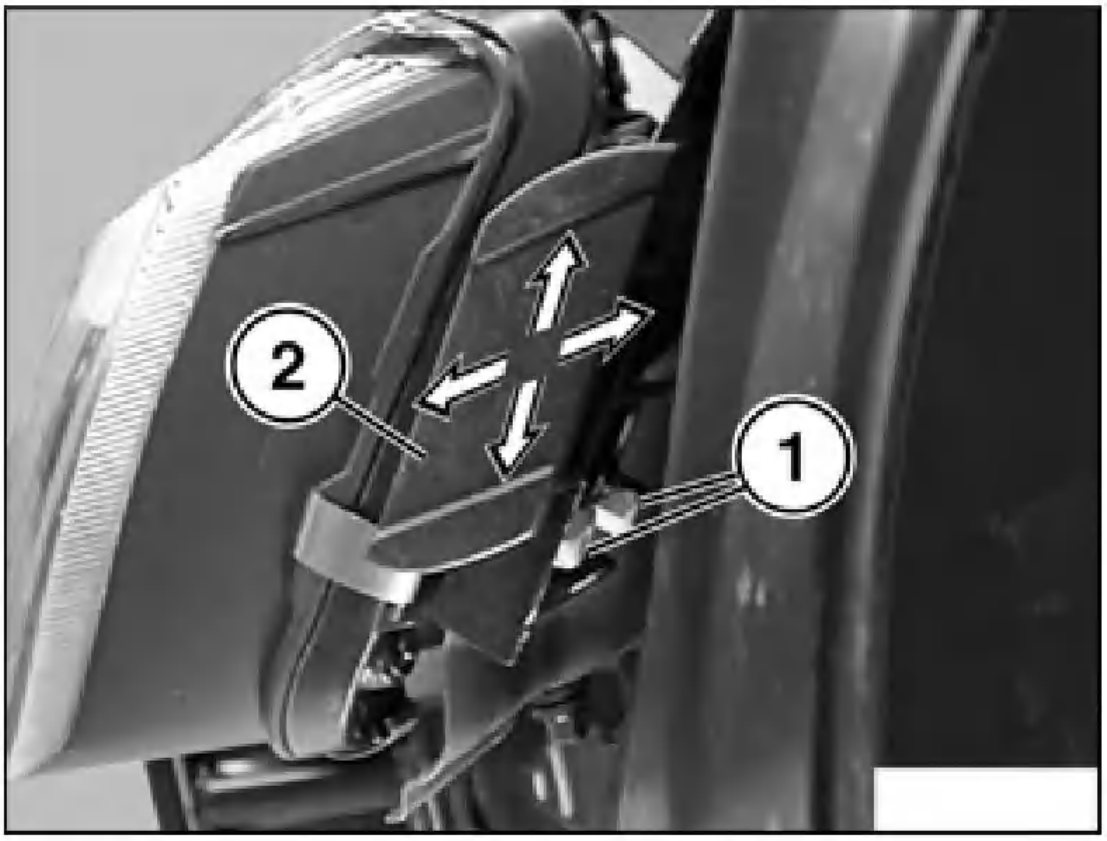


Fig. 15: Adjusting Front Bumper
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Adjust front bumper, refer to 51 11 000 REMOVING AND INSTALLING COMPLETE FRONT BUMPER (Z3 ROADSTER, M ROADSTER) .

51 11 794 REPLACING A SHOCK ABSORBER FOR BUMPER, FRONT (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE)

(Bumper Removed)

(If necessary, remove front bumper, refer to 51 11 000 REMOVING AND INSTALLING COMPLETE FRONT BUMPER (Z3 ROADSTER, M ROADSTER) .)

Unfasten nut (1) and remove shock absorber (2).

Tightening Torque, 51 11 3AZ. Refer to 51 11 FRONT BUMPER .

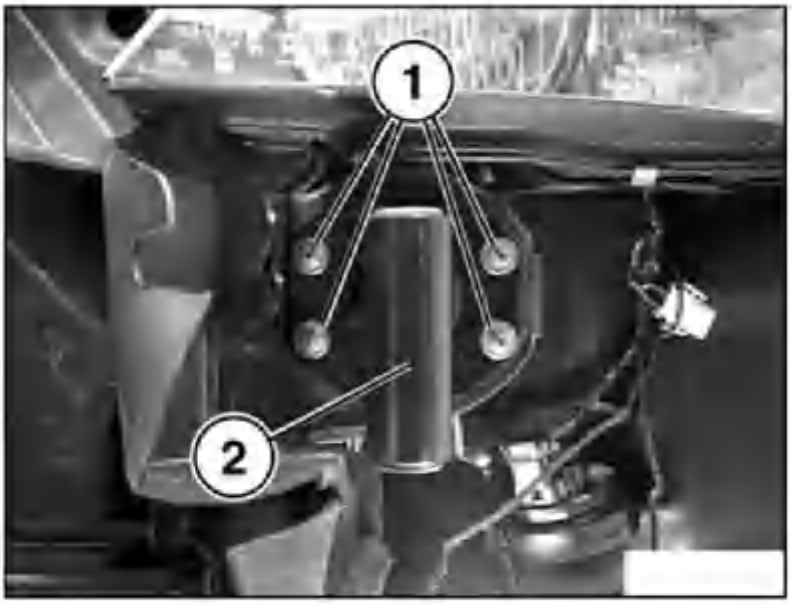


Fig. 16: Removing Shock Absorber
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Height of bumper is determined by turning the socket head cap screw (1) on the shock absorber (2).

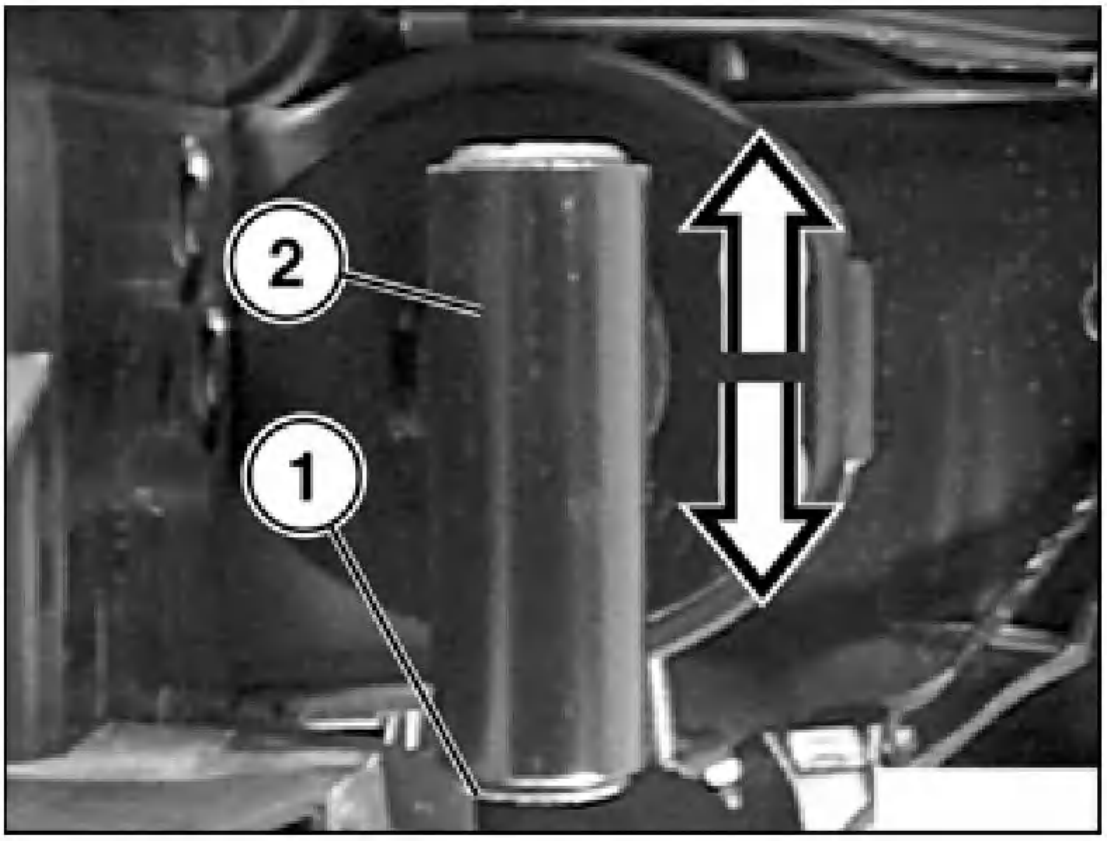


Fig. 17: Identifying Shock Absorber
Courtesy of BMW OF NORTH AMERICA, INC.

Adjust front bumper, refer to 51 11 000 REMOVING AND INSTALLING COMPLETE FRONT BUMPER (Z3 ROADSTER, M ROADSTER) .

REAR BUMPER

51 12 000 REMOVING AND INSTALLING COMPLETE REAR BUMPER (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE)

Remove spare wheel.

Remove and install rear wheel housing cover, left and right, refer to 51 71 041 REMOVING AND INSTALLING/REPLACING WHEEL ARCH COVER, REAR LEFT OR RIGHT (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE) .

Z3 roadster only:

Unclip lamps (1) from license plate lighting on broad rib.

Unfasten connector and remove license plate lighting.

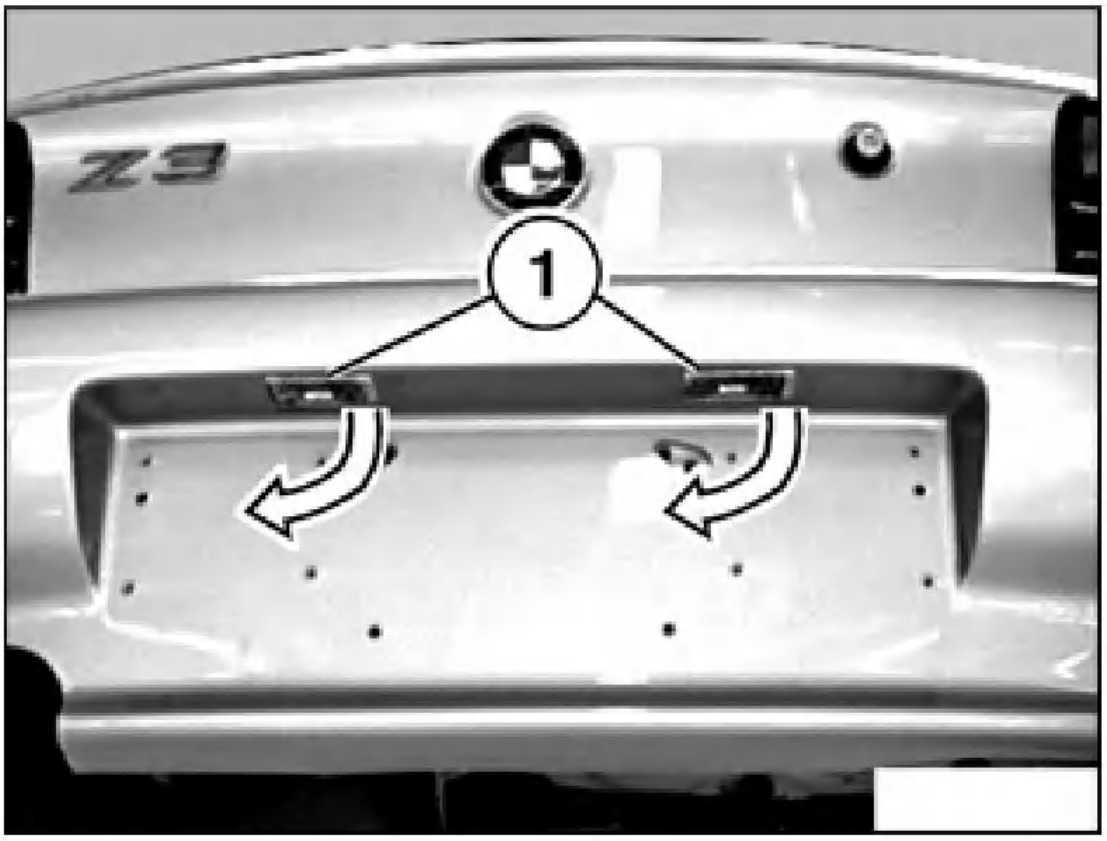


Fig. 18: Identifying License Plate Lighting
Courtesy of BMW OF NORTH AMERICA, INC.

Unscrew bolts (1).

Installation:

Tightening Torque, 51 12 2AZ. Refer to 51 12 REAR BUMPER .

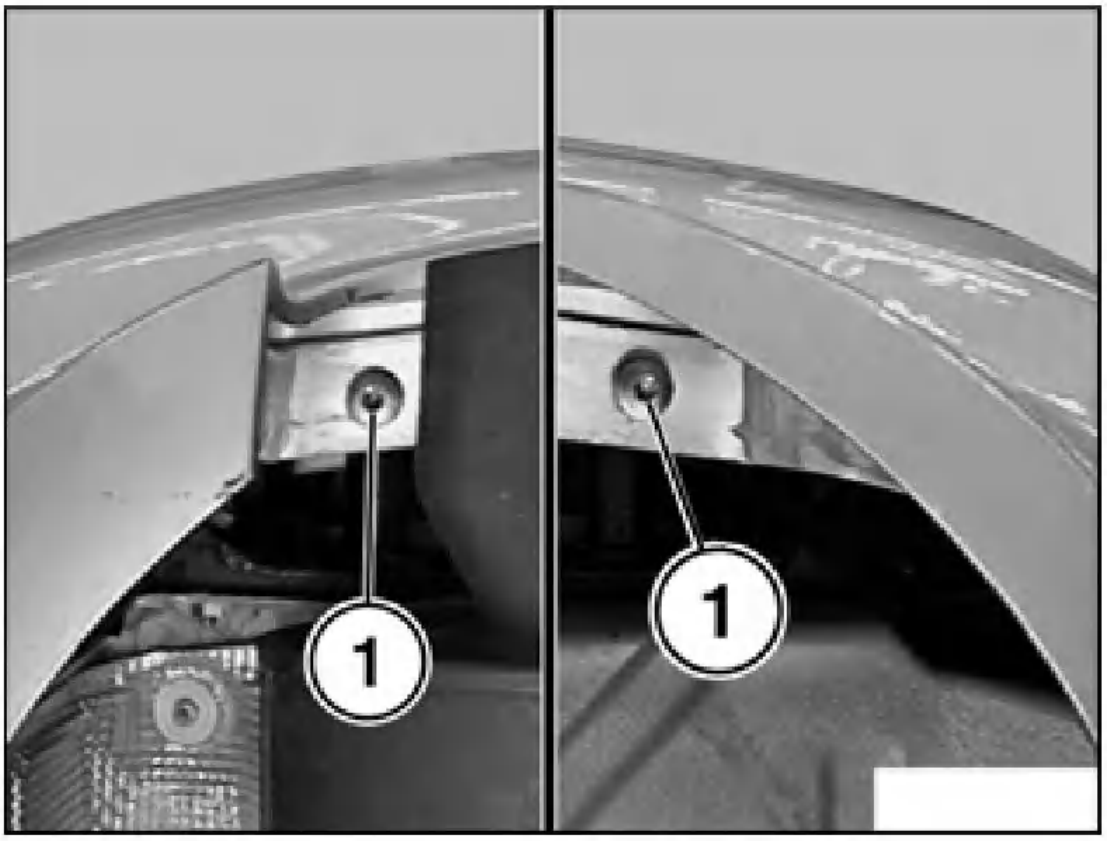


Fig. 19: Tightening Bolts
Courtesy of BMW OF NORTH AMERICA, INC.

Z3 roadster with 4-cylinder engines only:

Unfasten expanding rivet (1) in left/right wheel housing.



Fig. 20: Identifying Left/Right Wheel Housing
Courtesy of BMW OF NORTH AMERICA, INC.

6-cylinder engines only:

Push bumper (1) forward until clips (2) are located in assembly opening.

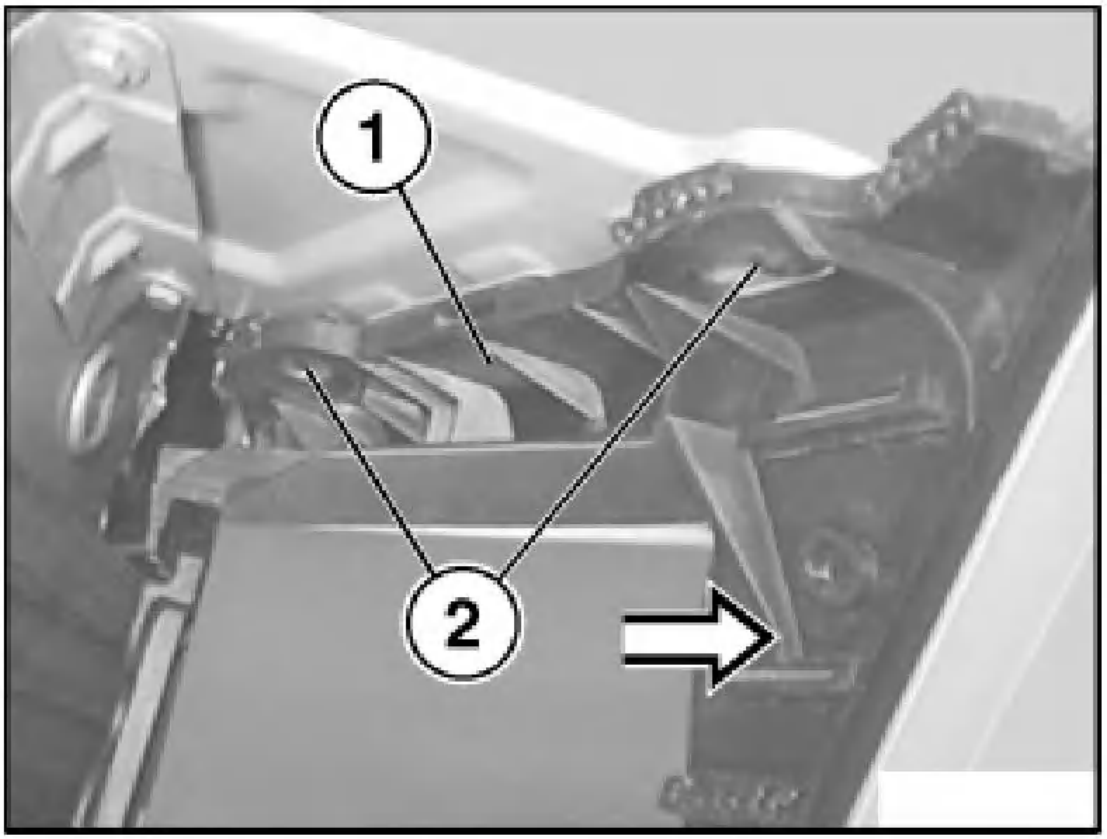


Fig. 21: Aligning Bumper Forward
Courtesy of BMW OF NORTH AMERICA, INC.

6-cylinder engines only:

Press bumper (1) downwards/towards rear until clips (2) are out of assembly opening (3).

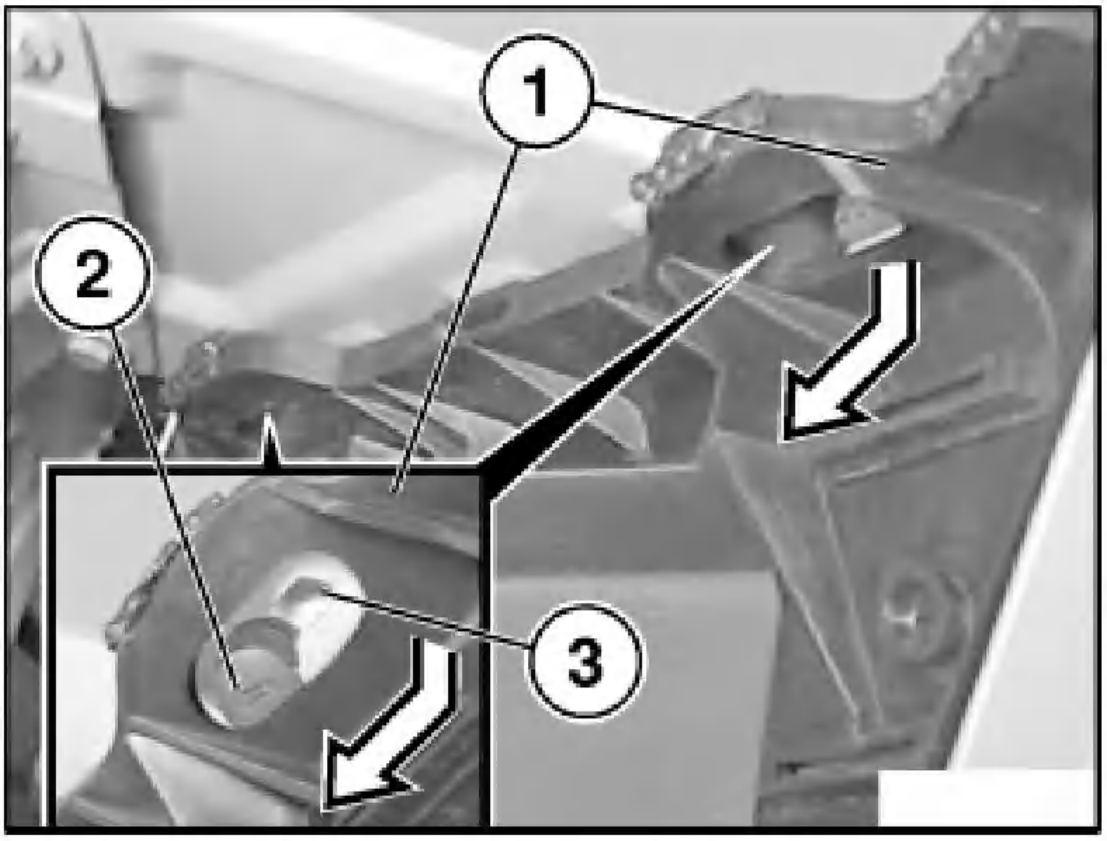


Fig. 22: Pressing Bumper Downwards Until Clips Are Out Of Assembly Opening
Courtesy of BMW OF NORTH AMERICA, INC.

Carefully press bumper (1) from wheel housing over tail lights (2) on left/right (risk of damage to tail light rubber) and remove bumper (1) towards rear.

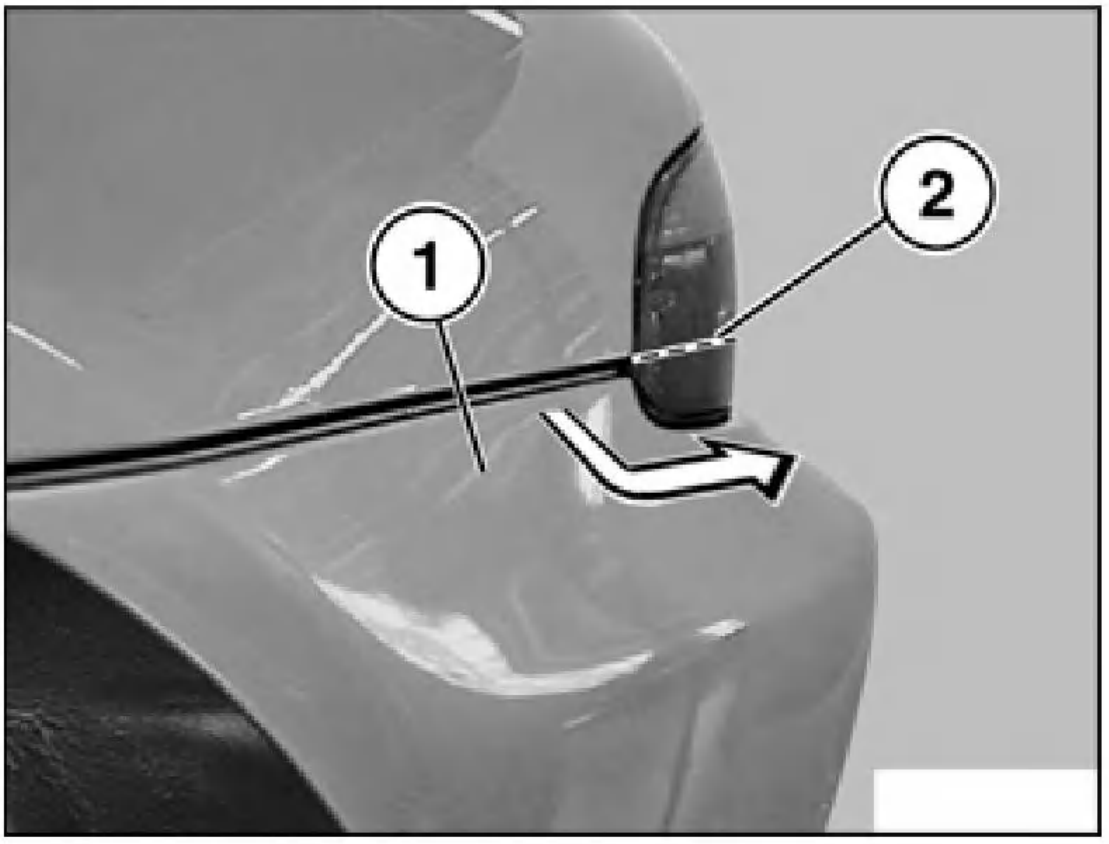


Fig. 23: Removing Bumper
Courtesy of BMW OF NORTH AMERICA, INC.

6-cylinder engines only:

If necessary, replace defective clips (1).

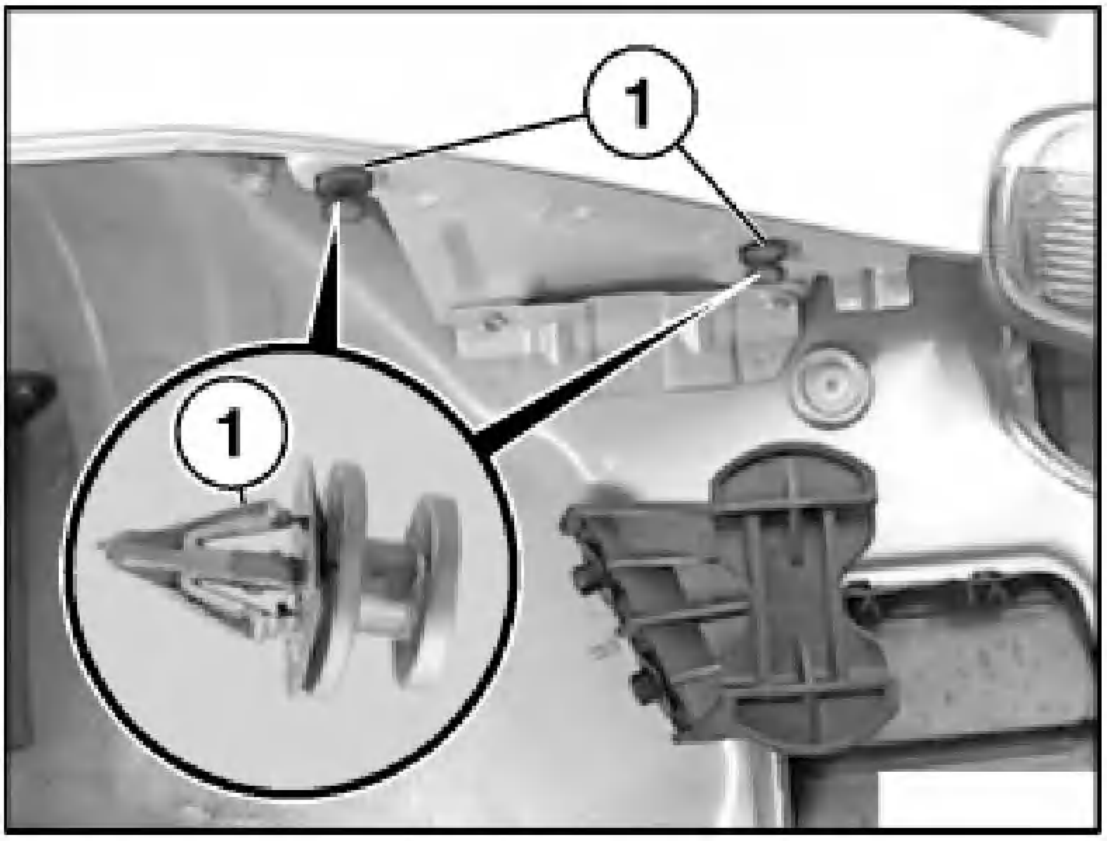


Fig. 24: Replacing Defective Clip
Courtesy of BMW OF NORTH AMERICA, INC.

Adjust Bumper:

Ideal setting (dimension):

Transition (A) should be flush on left/right side.

(B) 5.5 mm (tolerance + 0.5/-1 mm).

(C) 1 mm (tolerance + 1.5/-0 mm).

(D) 5 mm (tolerance + 0.5/-1 mm).

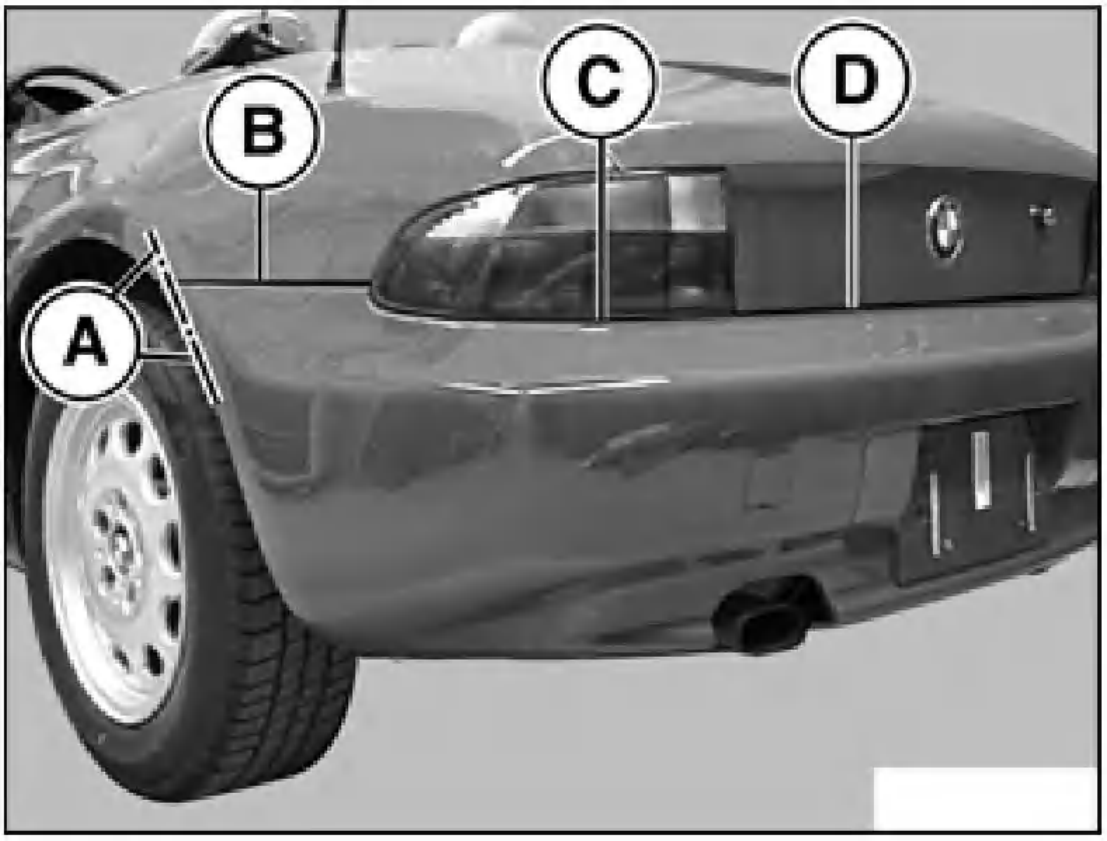


Fig. 25: Identifying Bumper Adjustment Settings
Courtesy of BMW OF NORTH AMERICA, INC.

Loosen nut (1) from wheel housing and adjust bracket (2).

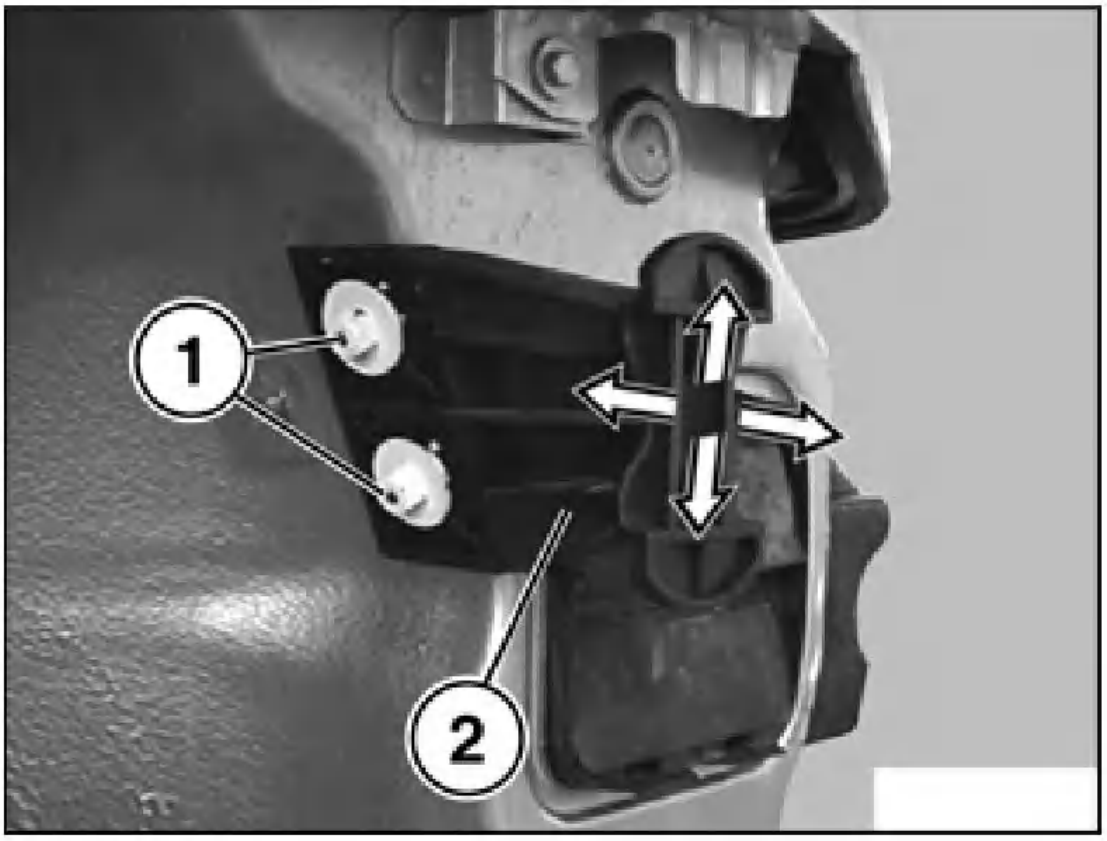


Fig. 26: Adjusting Bracket
Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: Adjustment at shock absorber is also possible with bumper installed if spare wheel is removed.

Unfasten left/right screws (1).

Installation:

Tightening Torque, 51 12 2AZ. Refer to 51 12 REAR BUMPER .

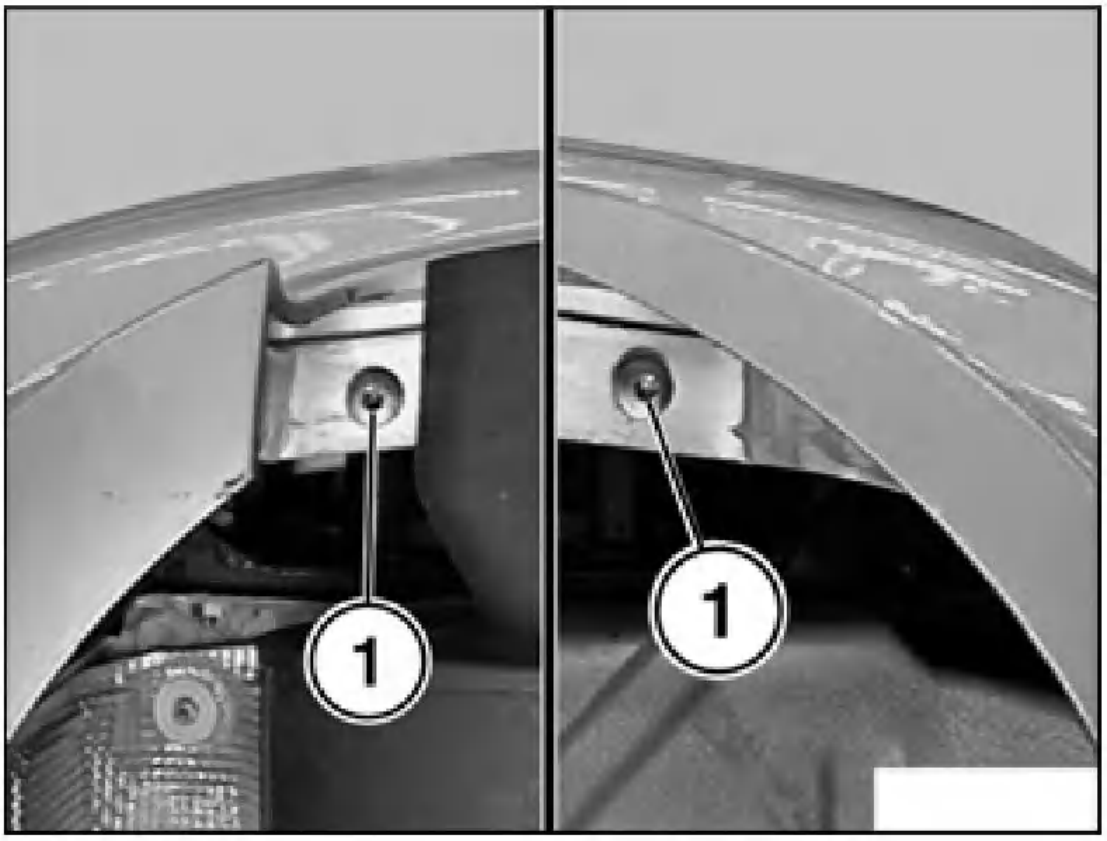


Fig. 27: Adjusting Shock Absorber
Courtesy of BMW OF NORTH AMERICA, INC.

Insert special tool 51 1 130 on standard extension (1) through bore with reversible handle into shock absorber (2).

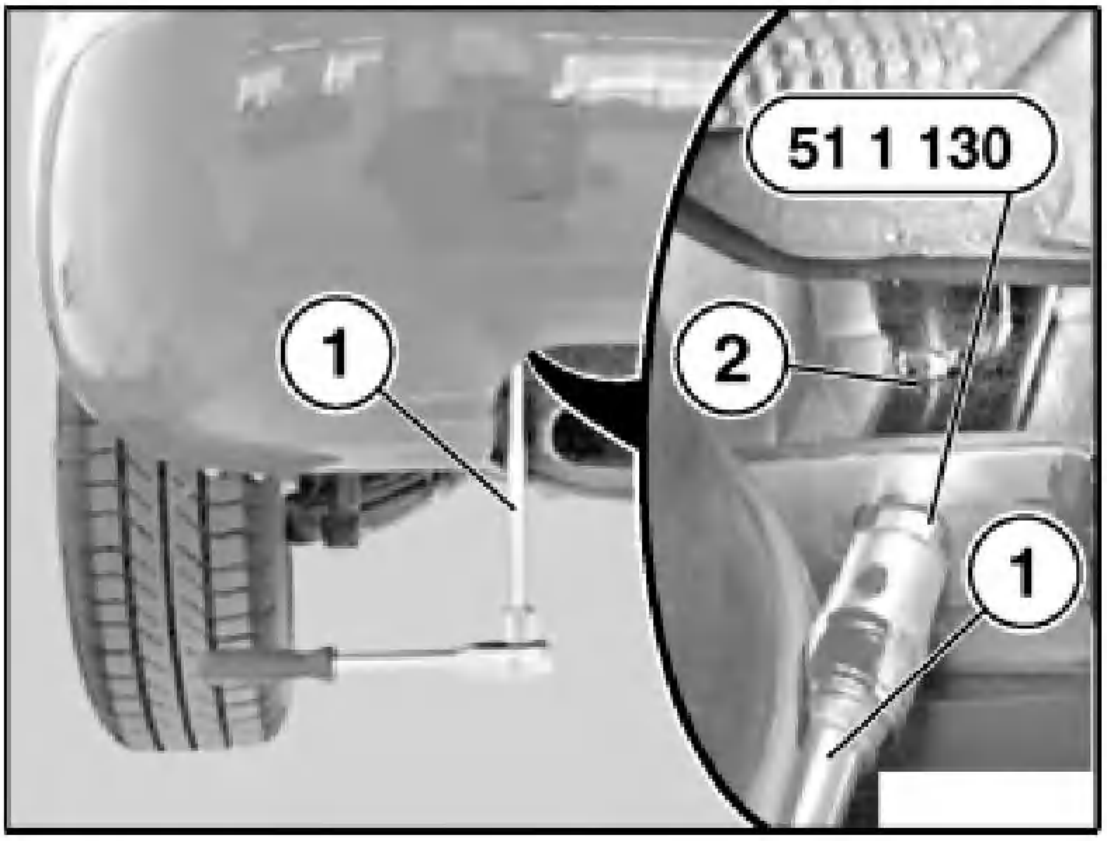


Fig. 28: Installing Special Tool In Shock Absorber
Courtesy of BMW OF NORTH AMERICA, INC.

Height of bumper (in rear area) is now set by twisting socket head cap screw (1) in shock absorber (2).

NOTE: Adjustment only possible when bumper is fitted using special tool 51 1 130.

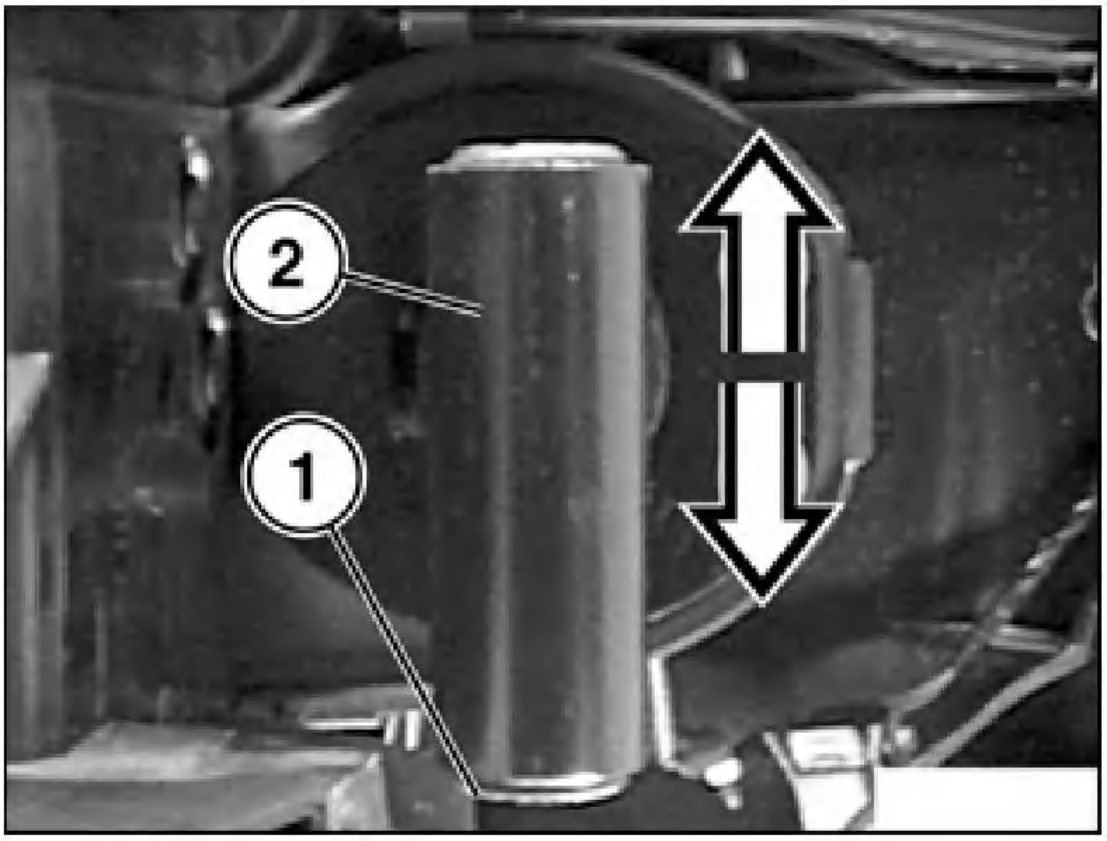


Fig. 29: Adjusting Special Tool
Courtesy of BMW OF NORTH AMERICA, INC.

51 12 001 REPLACING REAR BUMPER (Z3 ROADSTER, M ROADSTER)

Unscrew License Plate (Z3 Roadster Only):

Remove complete rear bumper, refer to 51 12 000 REMOVING AND INSTALLING COMPLETE REAR BUMPER (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE) .

US version also (Z3 roadster only):

Unfasten screws (1) (from below/inside) and (2) and remove baseplate (3) from licence plate.

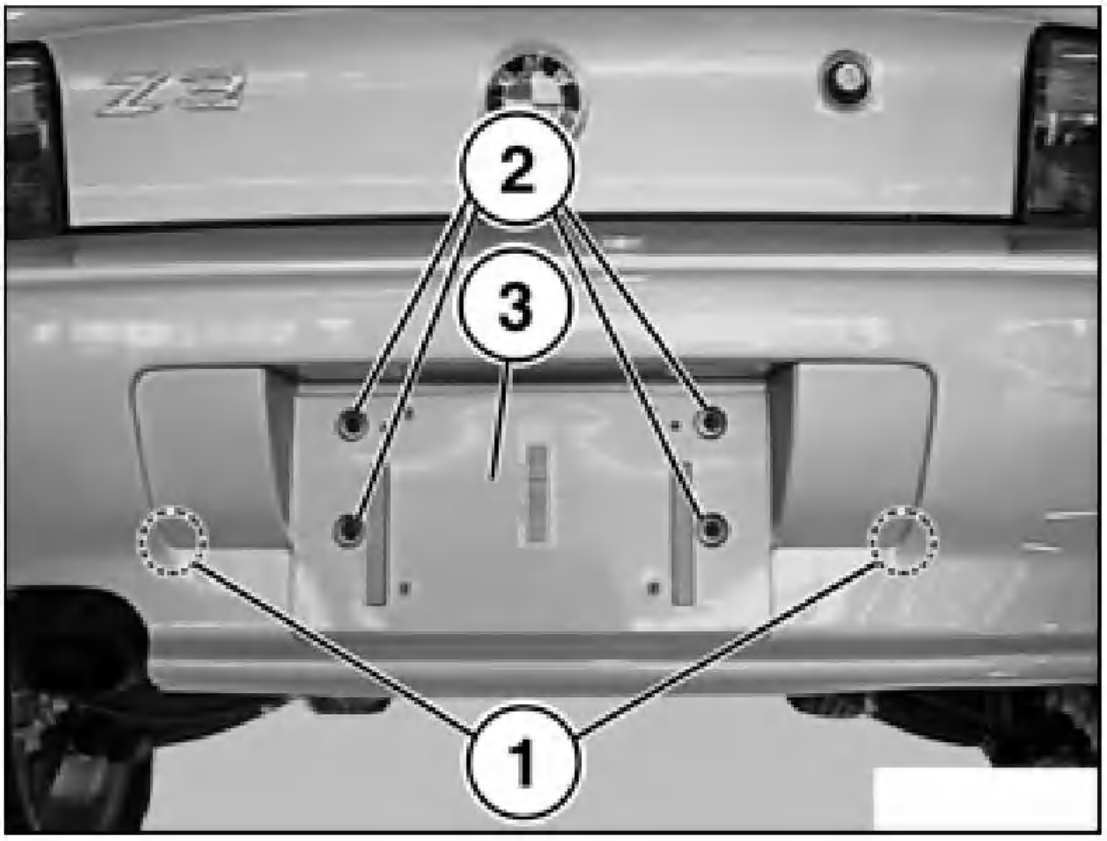


Fig. 30: Removing Baseplate From Licence Plate
Courtesy of BMW OF NORTH AMERICA, INC.

Remove Rear Bumper Center Section (Support Member):

Unfasten expanding rivets (1) and remove center section of bumper (2).

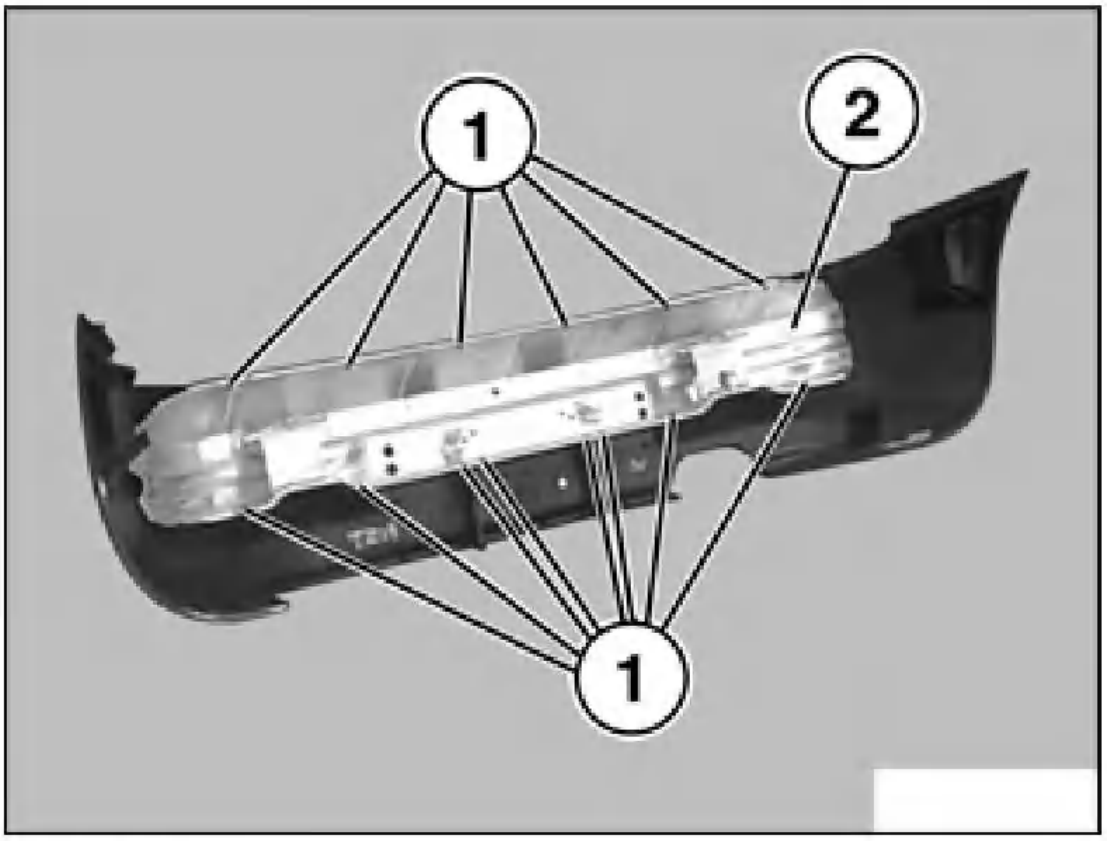


Fig. 31: Removing Center Section Of Bumper
Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: The operations 51 12 011 REPLACING REAR CENTER SECTION OF BUMPER (CARRIER) (Z3 ROADSTER) end here.

Only Replacement Of "Rear Bumper Trim And Bumper":

Unclip finisher strip for towing eye and remove catch band.

51 12 011 REPLACING REAR CENTER SECTION OF BUMPER (CARRIER) (Z3 ROADSTER)

Operation Is Described In:

Replacing rear bumper, refer to 51 12 001 REPLACING REAR BUMPER (Z3 ROADSTER, M ROADSTER) .

51 12 157 REPLACING REAR BUMPER TRIM (Z3 ROADSTER)

Operation Is Described In:

Replacing rear bumper, refer to 51 12 001 REPLACING REAR BUMPER (Z3 ROADSTER, M ROADSTER) .

51 12 158 REMOVING AND INSTALLING/REPLACING BASEPLATE FOR LICENSE PLATE (US) (Z3 ROADSTER, Z3 COUPE)

Remove spare wheel.

Unscrew and remove license plate.

Only US version:

Unfasten screws (1) (from below/inside) and (2), and remove baseplate (3) from licence plate.

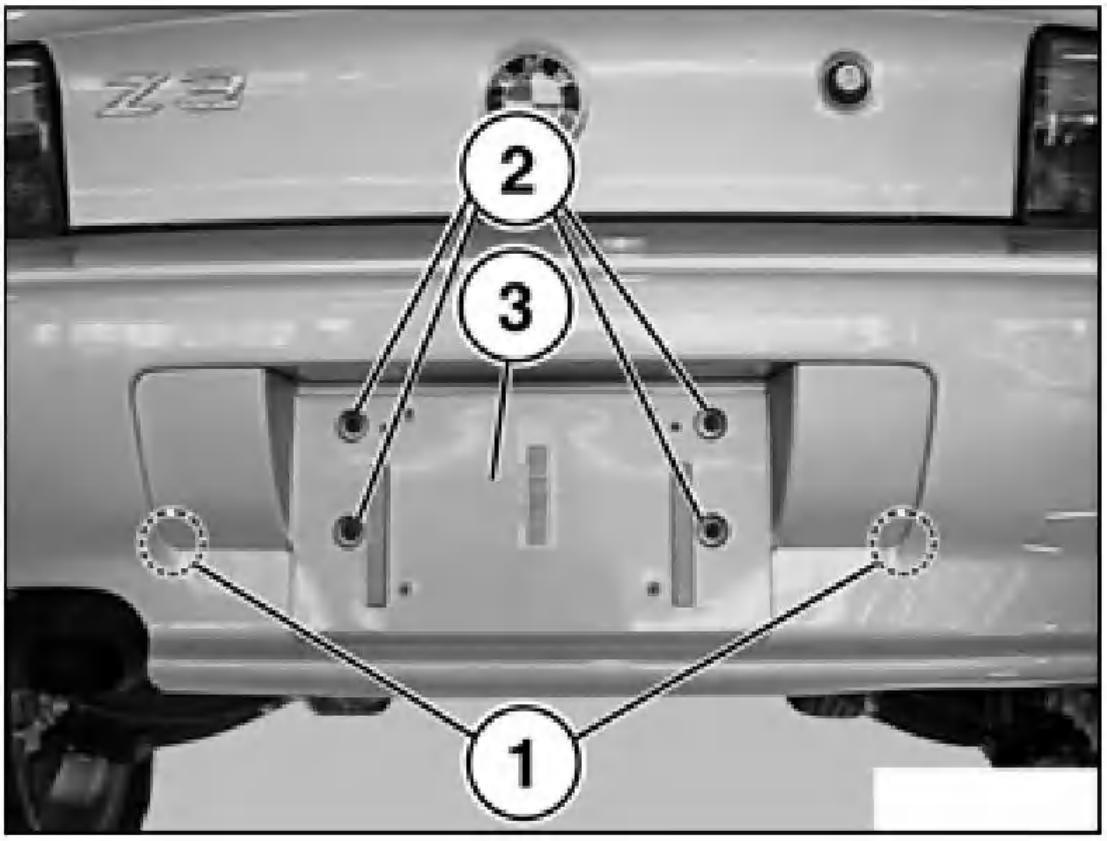


Fig. 32: Removing Baseplate From Licence Plate
Courtesy of BMW OF NORTH AMERICA, INC.

51 12 742 REPLACING A SHOCK ABSORBER FOR BUMPER, REAR (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE)

(Bumper Removed)

(If necessary remove rear bumper, refer to 51 12 000 REMOVING AND INSTALLING COMPLETE REAR BUMPER (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE) .)

Left shock absorber:

Press floor mat (1) to one side and unfasten nut (2).

Tightening Torque, 51 12 3AZ. Refer to 51 12 REAR BUMPER .

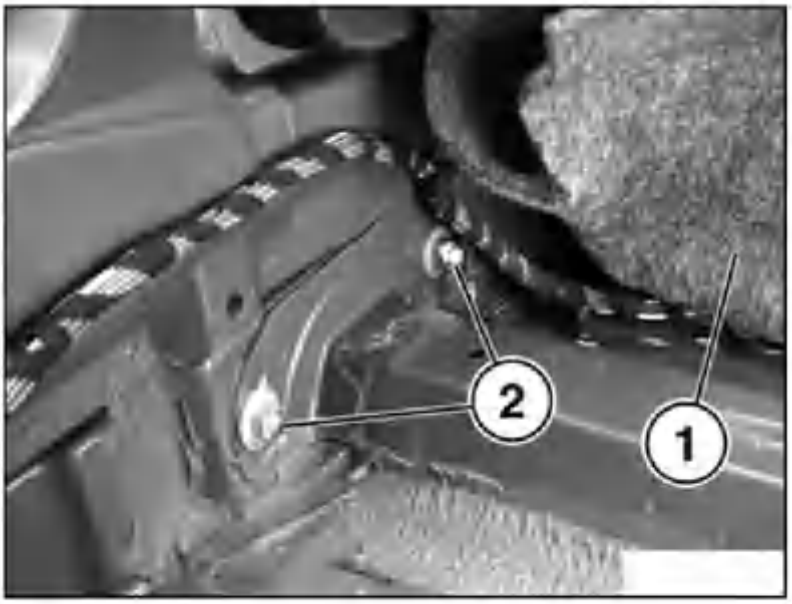


Fig. 33: Identifying Left Shock Absorber Nut
Courtesy of BMW OF NORTH AMERICA, INC.

Unfasten nut (1) and remove shock absorber (2).

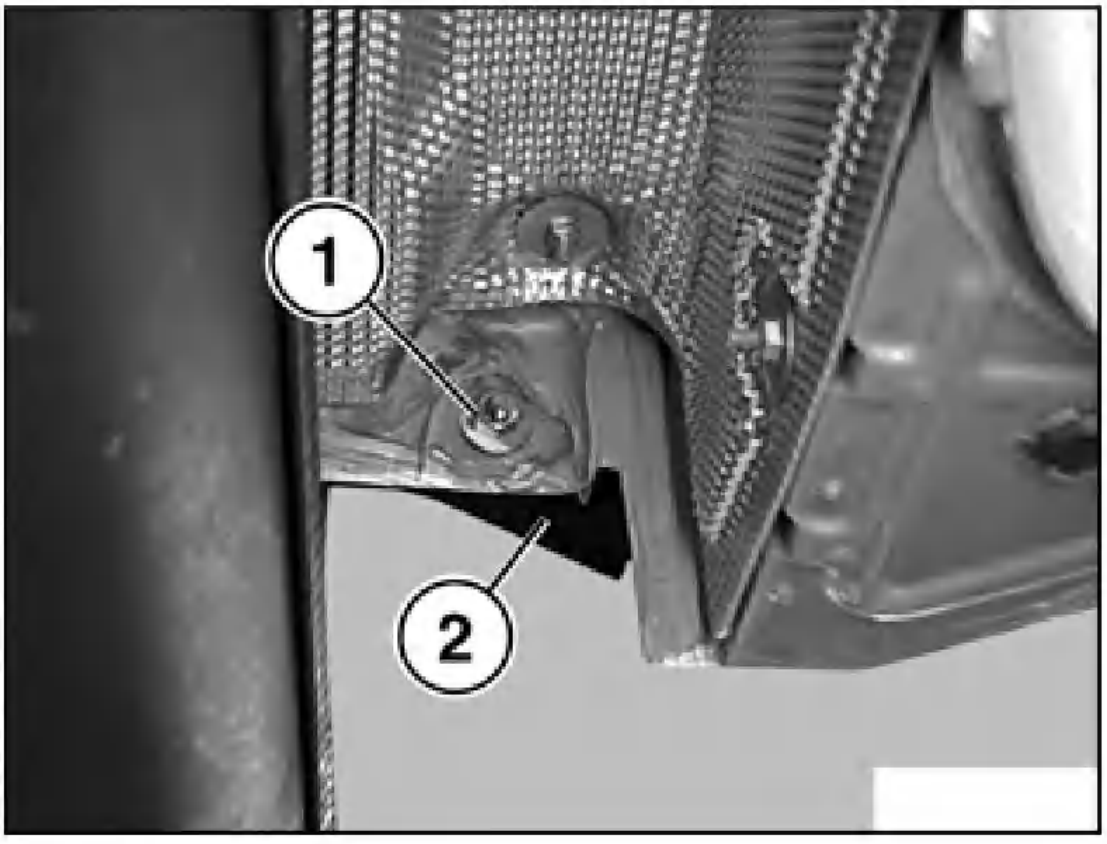


Fig. 34: Removing Shock Absorber Nut
Courtesy of BMW OF NORTH AMERICA, INC.

Tightening Torque, 51 12 3AZ. Refer to 51 12 REAR BUMPER .

Right shock absorber:

Press floor mat (1) to one side, unfasten nut (2) and pull out shock absorber.

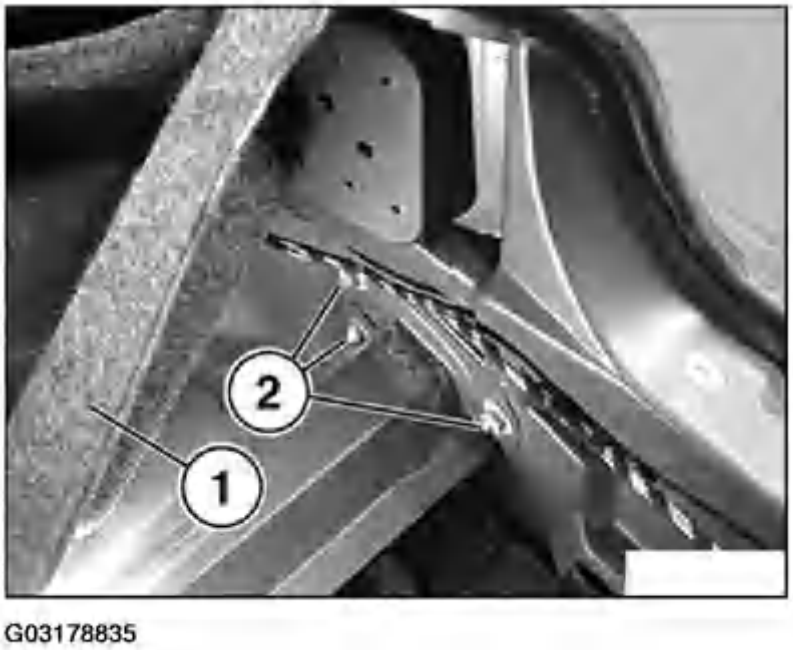


Fig. 35: Identifying Right Shock Absorber Nut
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Tightening Torque, 51 12 3AZ. Refer to 51 12 REAR BUMPER .

Adjust rear bumper, refer to 51 12 000 REMOVING AND INSTALLING COMPLETE REAR BUMPER (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE) .

51 12 801 REPLACING BRACKET FOR BUMPER, REAR LEFT OR RIGHT (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE)

(Bumper removed)

(If necessary, remove rear bumper, refer to 51 12 000 REMOVING AND INSTALLING COMPLETE REAR BUMPER (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE) .)

Unfasten screws (1) and remove bracket (2).

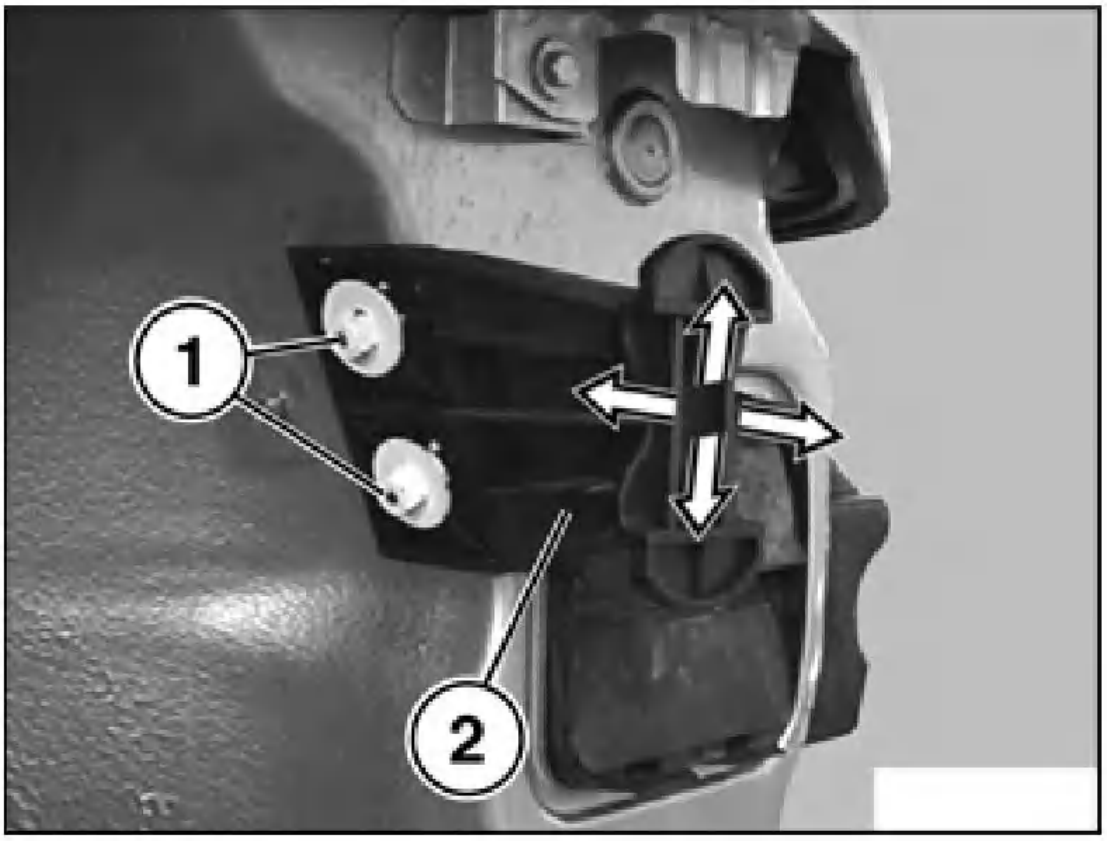


Fig. 36: Removing Bracket
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Tightening Torque, 51 12 5AZ. Refer to 51 12 REAR BUMPER .

Adjust rear bumper, refer to 51 12 000 REMOVING AND INSTALLING COMPLETE REAR BUMPER (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE) .

TRIM, COVERS, HANDLE TRIM

51 13 077 REMOVING AND INSTALLING/REPLACING GRILL FOR AIR INTAKE/HEATER (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE)

Removing both windscreen wiper arms, refer to 61 61 100 REMOVING AND INSTALLING/REPLACING BOTH WINDSHIELD WIPER ARMS .

Remove left/right rubber seal (1) from beside protective grill (2).

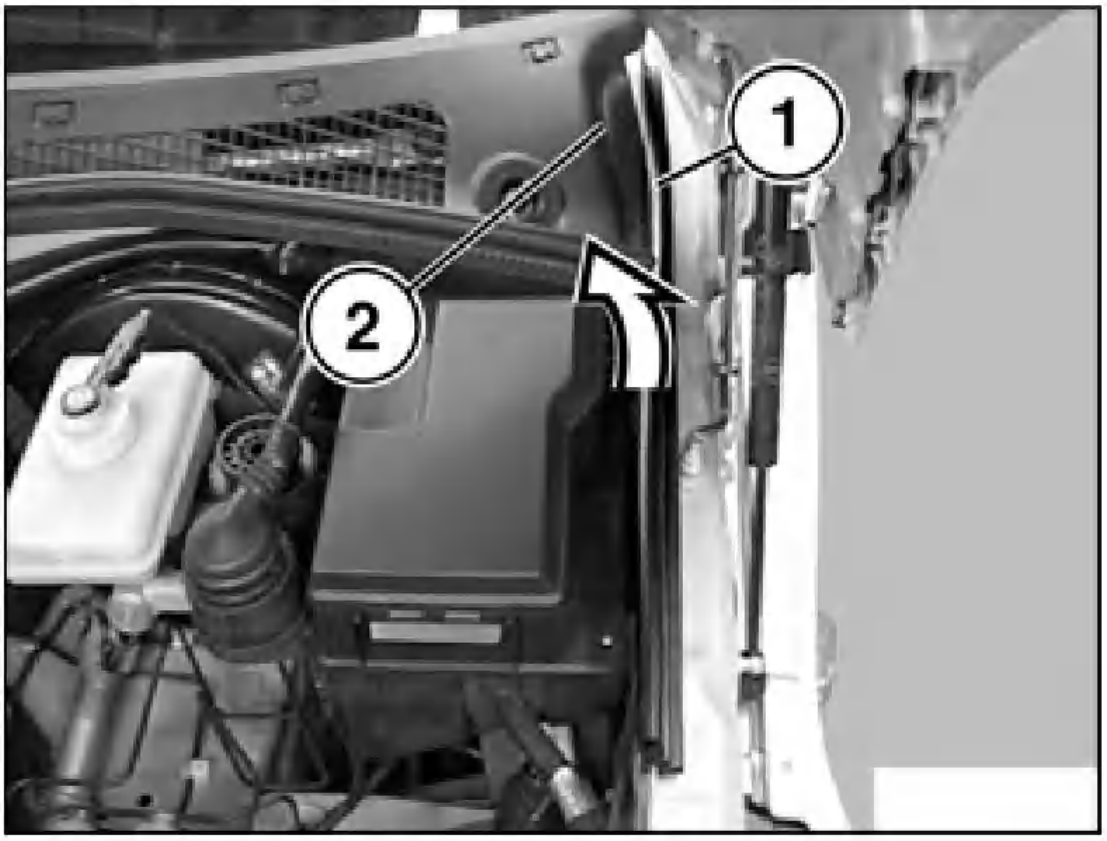


Fig. 37: Removing Windscreen Wiper Arms
Courtesy of BMW OF NORTH AMERICA, INC.

Remove rubber seal from protective grill.

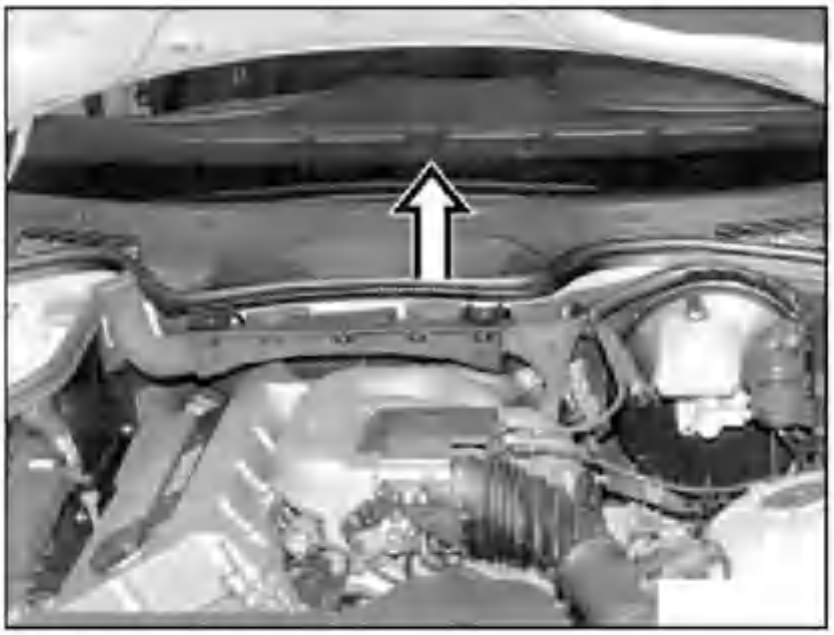


Fig. 38: Removing Rubber Seal From Protective Grill
Courtesy of BMW OF NORTH AMERICA, INC.

Unfasten all expanding rivets and remove protective grill.

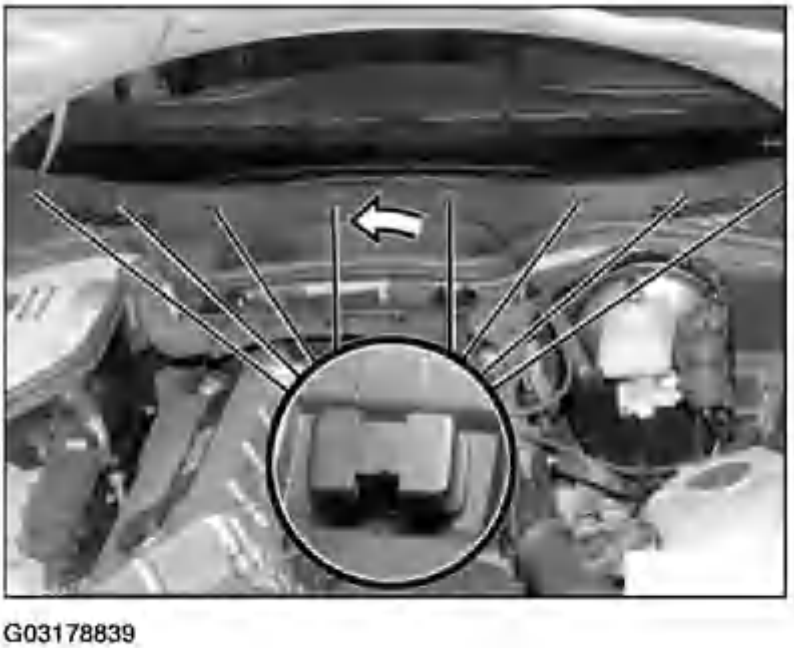


Fig. 39: Removing Protective Grill
Courtesy of BMW OF NORTH AMERICA, INC.

BMW EMBLEMS, MODEL EMBLEMS

51 14 110 REMOVING AND INSTALLING/REPLACING MODEL DESIGNATION (EMBLEM) AT

REAR (Z3 ROADSTER, M ROADSTER)

The model sign is glued and cannot be reused after removal. The model sign must be installed at room temperature.

Coat nylon string or thread with Tenside (e.g. dish detergent), cut through adhesive layer and remove with washing benzene.

At paint baking temperatures exceeding 80Â°C, the model designation must be removed.

Z3 Roadster:

Apply adhesive tape up to upper edge "A" and mark dimensions as per table.

Dimension in mm

A = 88, B = 30, C = 10.

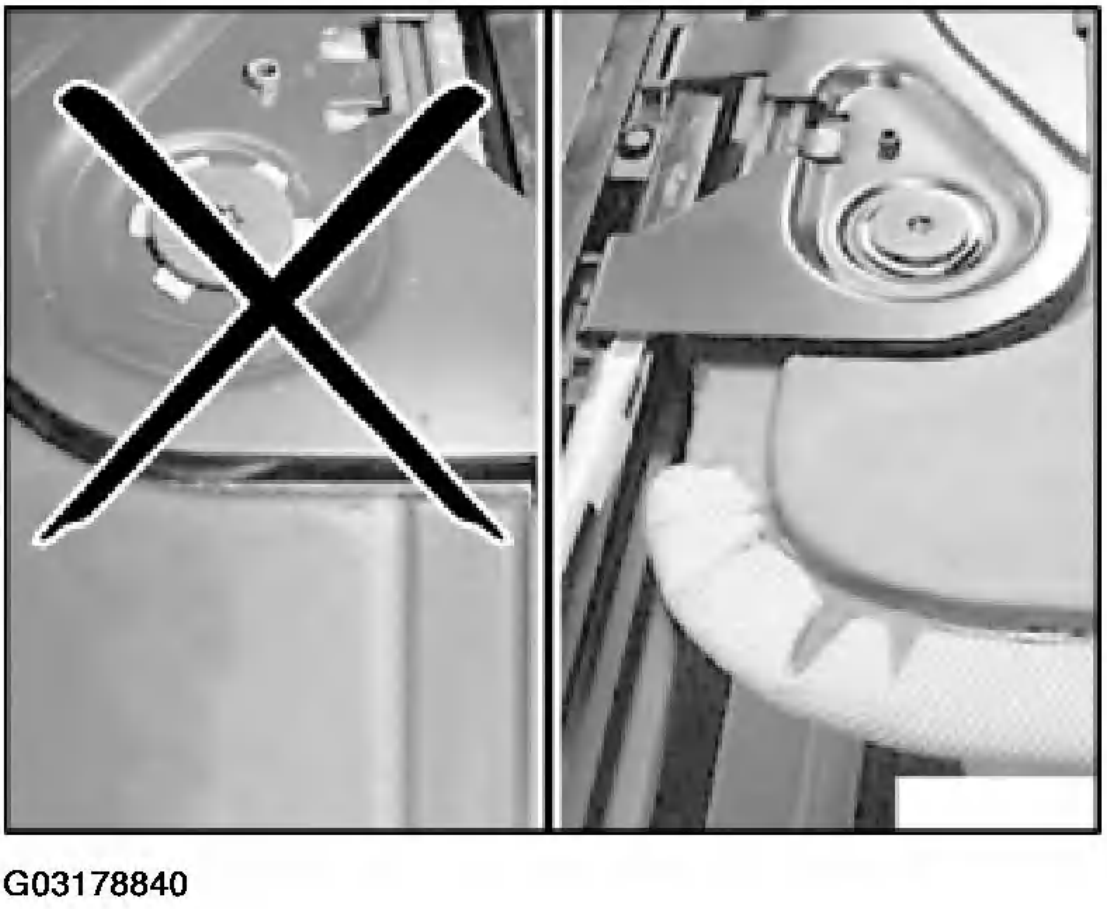


Fig. 40: Identifying Correct Way Of Applying Adhesive Tape
Courtesy of BMW OF NORTH AMERICA, INC.

MIRRORS/COVERS/ASHTRAYS/SHELVES/TRAYS

51 16 ... CEMENTING OF MIRROR BASE

Material Requirements:

Repair set for cementing of mirror base.

Primer XW 775.

1. Preparations:

   1.1. Cement at room temperature and make sure that, in cold weather, the window glass and base are brought to room temperature in the workshop long enough to prevent moisture forming on the surface.

   1.2. Mark location of the mirror mount on the outside of the windshield. Scratch off cement residue on glass and base with a sharp tool.

   1.3. Clean cement area on window and base with clean non-fluffing cloth and alcohol/acetone and allow to dry! Never use paint thinners!

2. Primer Coat:

   Apply colorless, diluted primer to surface of windshield intended for cementing with help of cotton buds (Q-Tips or similar).

   Specified ventilation time at least 10 minutes, maximum 1 hour.

3. Cement Coat:

   3.1. Mixing Cement:

   Trim off sealing tips on containers of cement and hardener using a knife.

   Make sure that both openings are equal in size, as otherwise there would be mistakes in mixing.

   The sealing cap for subsequent plugging of the double injector is located between both pistons of the injector. Break off sealing cap.

   The required amount of cement and hardener is removed by applying light pressure on the pistons.

   The mixing ratio for cement and hardener is 1 : 1 (weight and volume). It is important that the same volumes of cement and hardener are removed (increase size of openings if necessary).

   Both components react chemically with each other. Thorough, intensive and homogenous mixing is a requirement for this reaction and for the quality of cementing.

   Consequently both components must be mixed in such a way that there is a uniform, ream-free color mixture.

   3.2. Application:

   At 20 ... 25 Â°C the mix can be processed after approx. 5 ... 10 minutes (pot time).

   Apply thin (approx. 0.5 mm), uniform coat of cement on base with spatula and press base onto glass in such a way that cement obtains good contact with windshield across the entire surface area.

   NOTE: The temperature for the hardening process should not be lower than +18 Â°C.

   3.3. Fixing Bonded Parts:

   Epoxide resin cement does not have an initial strength property. It is therefore necessary to fix all bonded parts (cement tape or similar). The joining and fixing of bonded parts must be accomplished within the potlife. Check that the arresting button is located correctly on the mirror base to ensure that the mirror, when it is attached, is seated straight.

   (Long side of mirror base hexagon parallel to upper edge of window).

3.4. Hardening Of Cement:

Hardening speed depends on the ambient temperature.

For this reason, the mirror base must be secured with adhesive tape or similar for at least 3 ... 4 hours.

After 12 hours have elapsed, clip mirror into place as soon as possible.

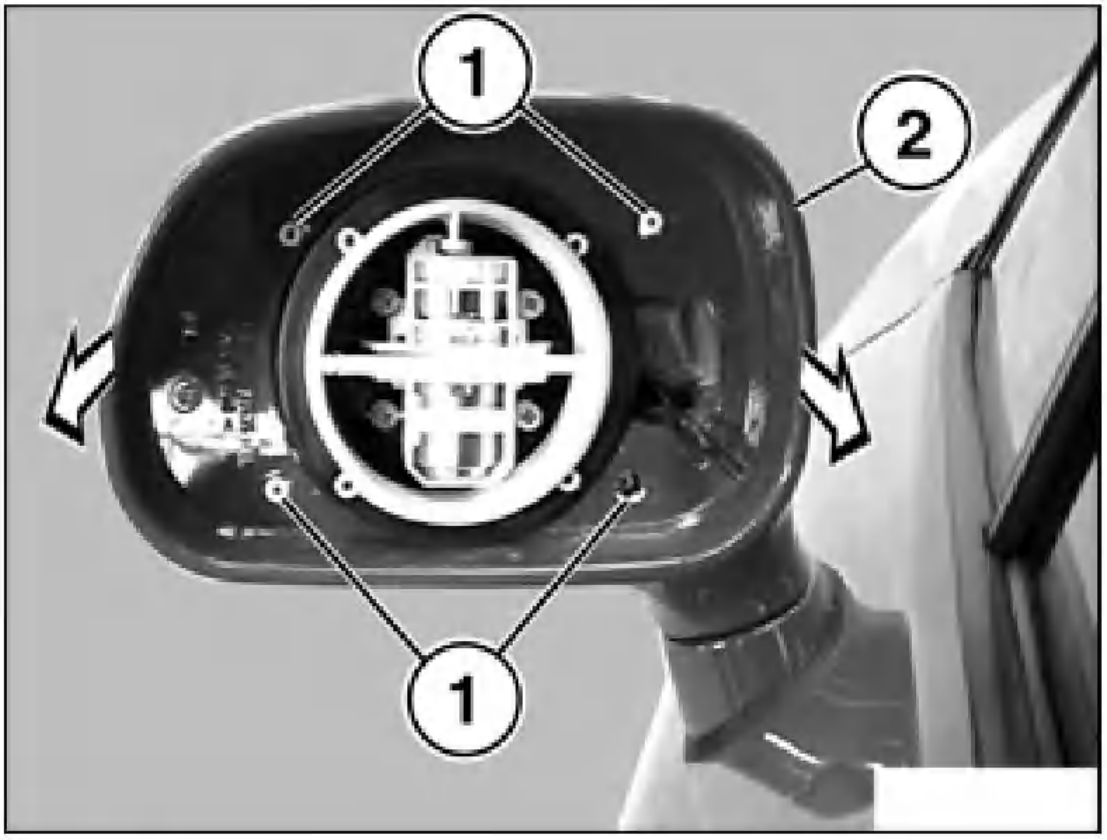
4. Working Hygiene:

CAUTION: Cement is dangerous for health when vapors are inhaled or through contact with the skin. As is the case for all epoxide resins, sensitive persons might be confronted with an allergic reaction through contact with the skin. If the product gets on the skin, wash off with soap and water immediately. If it gets in an eye, rinse the eye thoroughly in water and consult a doctor. Make sure that the room is well ventilated and gloves are worn for the application of cement.

51 16 ... REPLACING HOUSING ON LEFT OR RIGHT OUTSIDE MIRROR (Z3 ROADSTER)

Remove mirror glass, refer to 51 16 026 REPLACING MIRROR GLASS FOR REAR-VIEW MIRROR (ON FRONT DOOR) .

Unfasten screws (1) and pull front section of housing (2) backwards to remove.



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Fig. 41: Removing Front Section Of Housing

Courtesy of BMW OF NORTH AMERICA, INC.

Carefully slide guide (1) forwards (risk of damage) and remove rear section of housing (2).

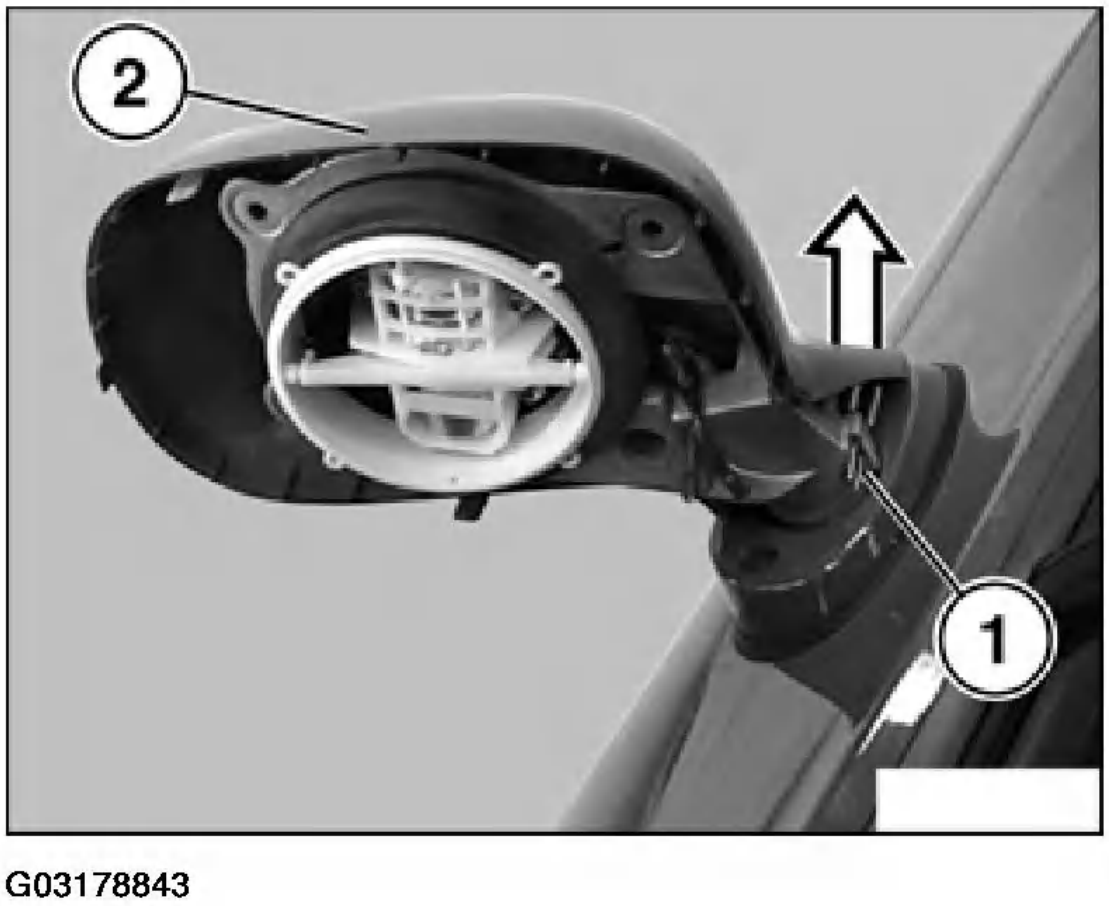


Fig. 42: Removing Rear Section Of Housing
Courtesy of BMW OF NORTH AMERICA, INC.

51 16 000 REMOVING AND INSTALLING/REPLACING REAR-VIEW MIRROR ON LEFT OR RIGHT FRONT DOOR (Z3 ROADSTER)

Removing door trim, refer to 51 41 000 REMOVING AND INSTALLING FRONT LEFT OR RIGHT DOOR TRIM PANEL (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE) .

Partially remove foil from front door (1).

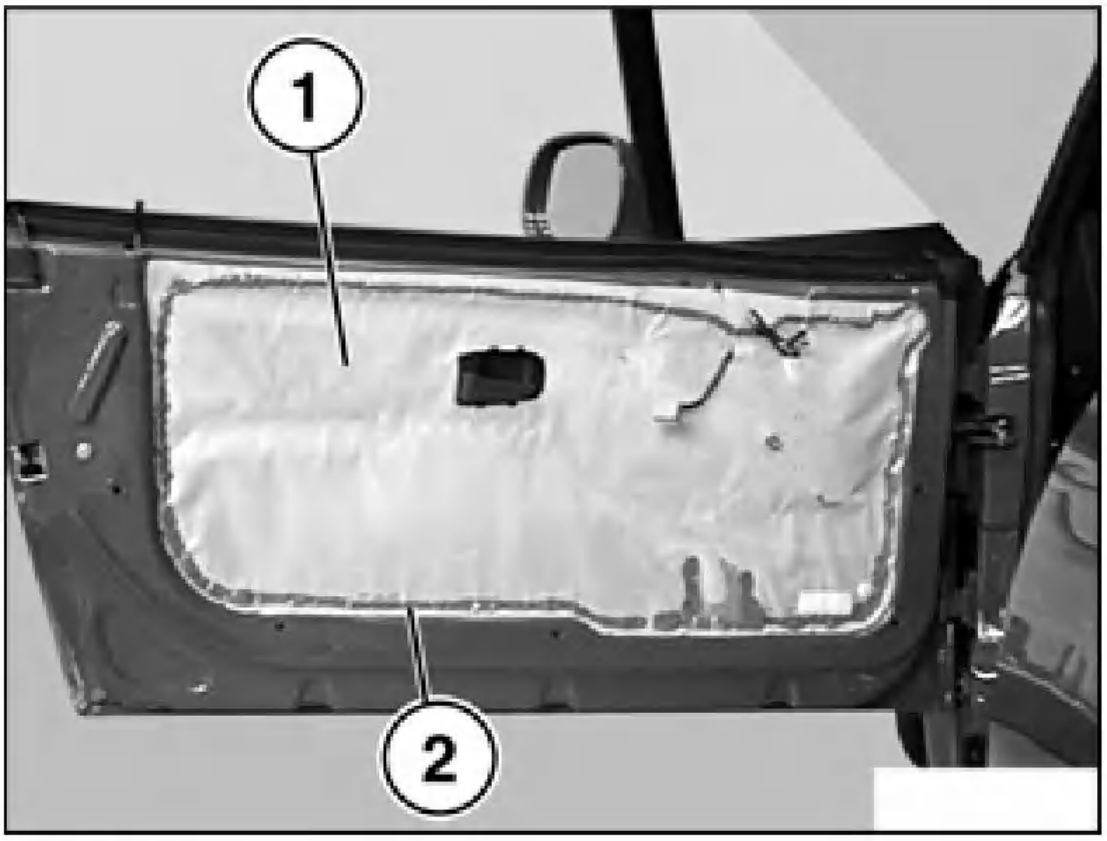


Fig. 43: Removing Foil From Front Door
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

If the cement bead (2) is broken, seal with butylene thread.

Unfasten connector (1), lift out Omega clip (2) and expose cable.

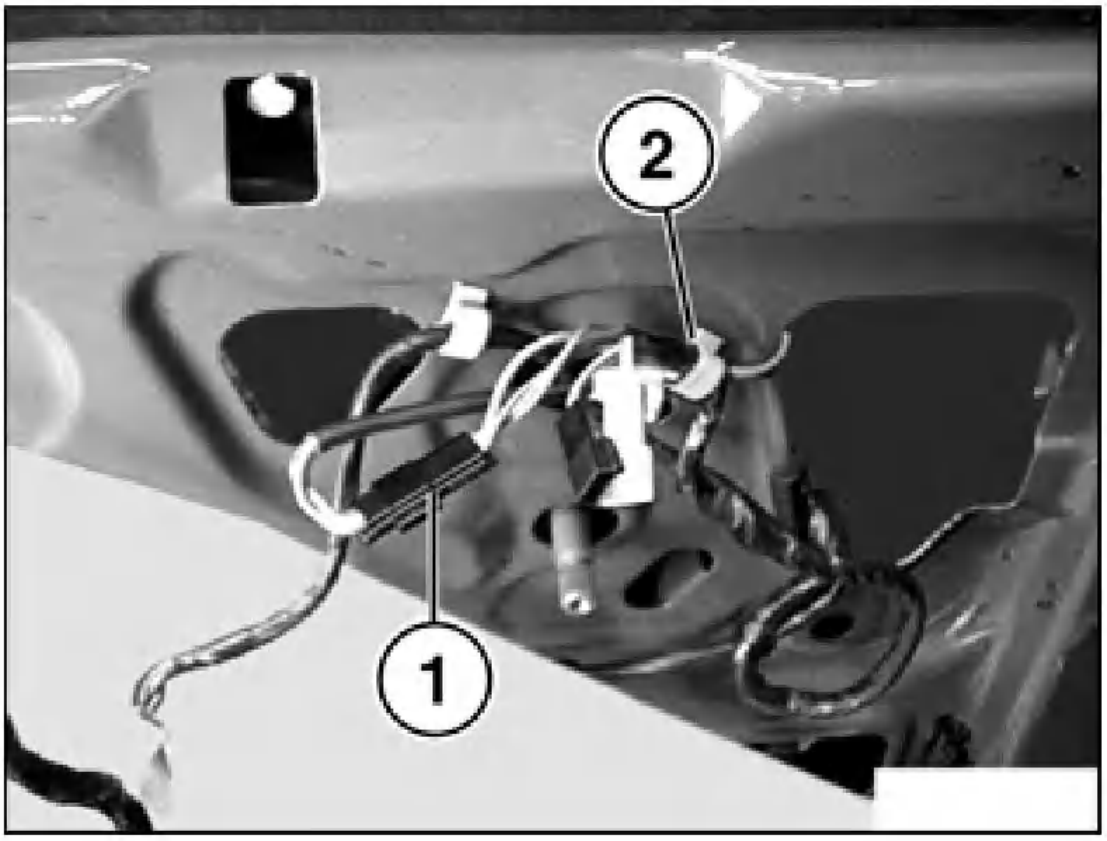


Fig. 44: Identifying Omega Clip And Exposing Cable
Courtesy of BMW OF NORTH AMERICA, INC.

Turn rear-view mirror 90Â° to face forward.

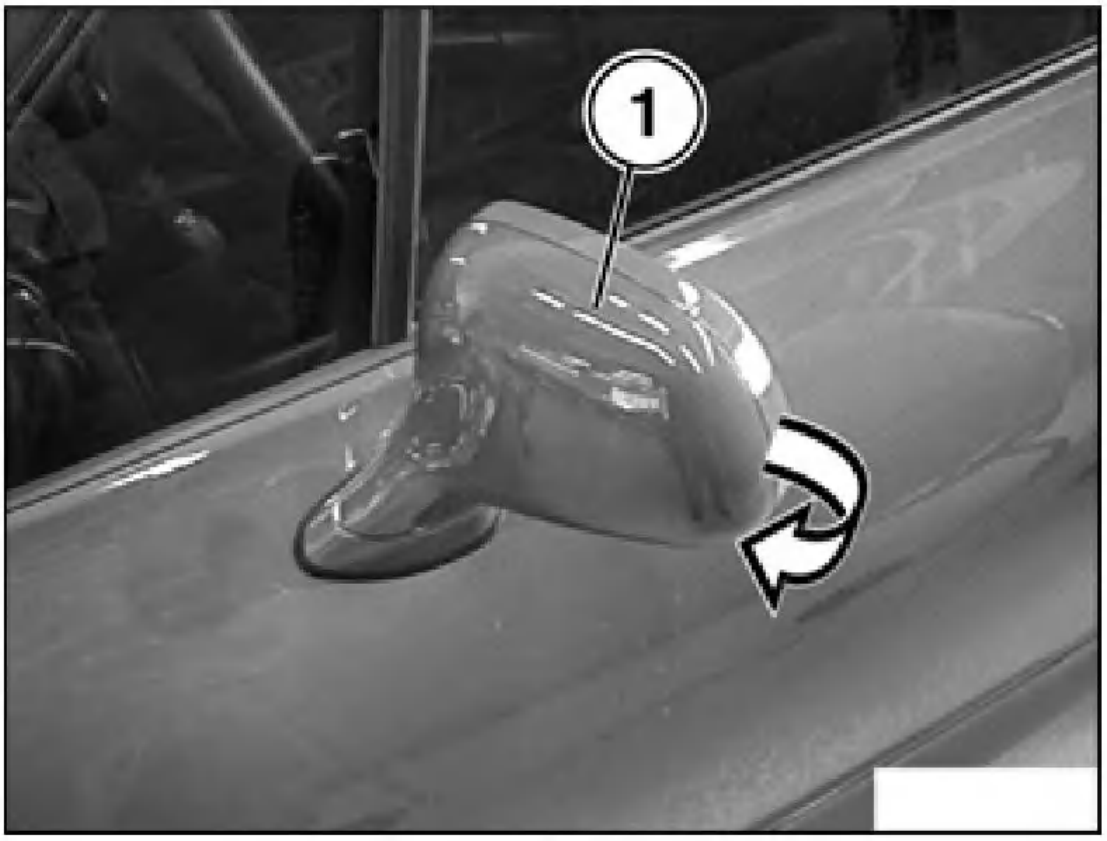


Fig. 45: Turning Rear-View Mirror 90Â° To Face Forward
Courtesy of BMW OF NORTH AMERICA, INC.

Loosen screws (1).

Remove rear-view mirror (2) and pull out cables.

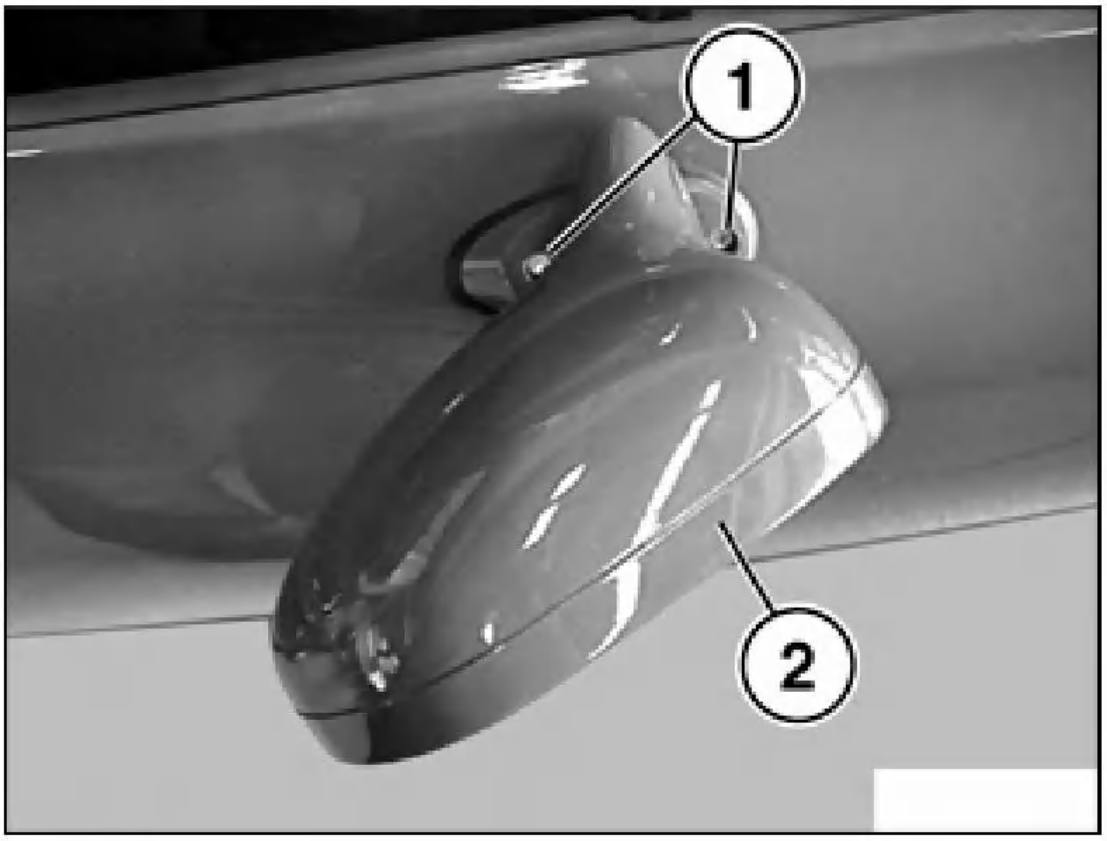


Fig. 46: Removing Rear-View Mirror
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Tightening torque, 51 16 1AZ. Refer to 51 16 MIRRORS, FINISHERS, ASHTRAYS, CONSOLES .

Check function.

Only replace:

Remove seal (1) and pull out cables (2).

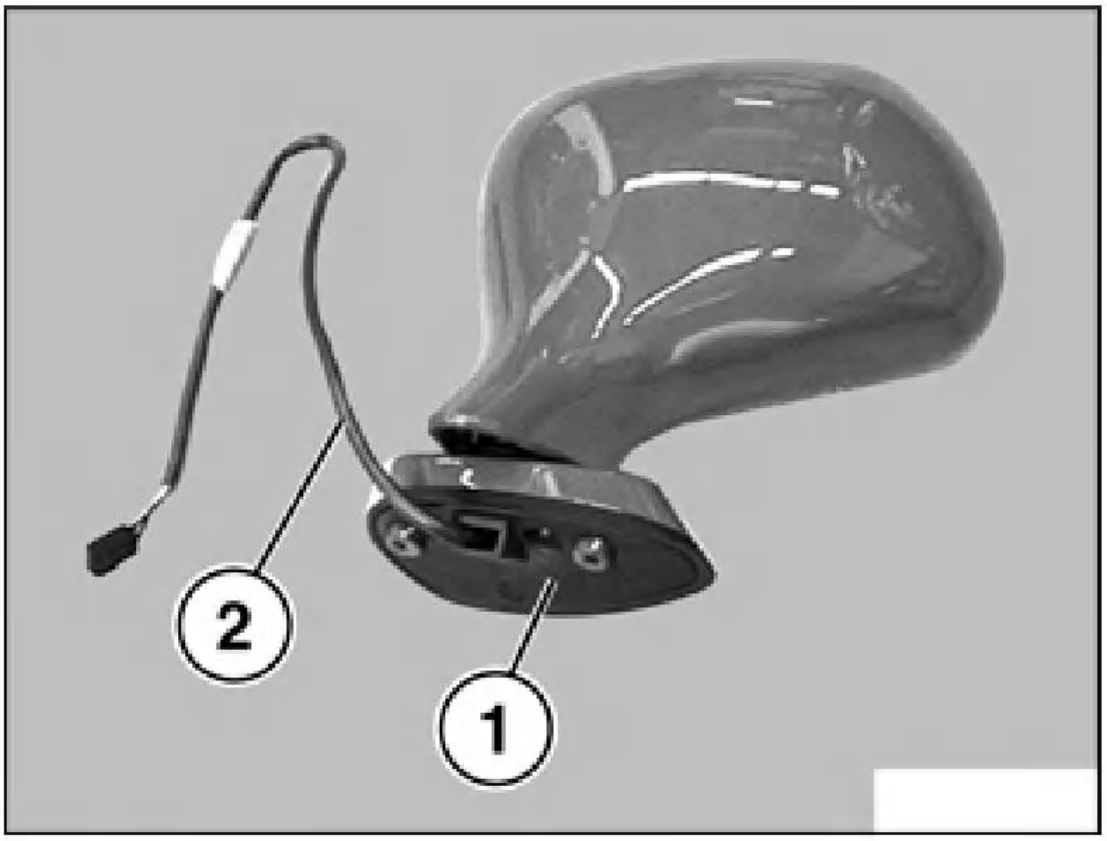


Fig. 47: Removing Seal
Courtesy of BMW OF NORTH AMERICA, INC.

51 16 026 REPLACING MIRROR GLASS FOR REAR-VIEW MIRROR (ON FRONT DOOR)

CAUTION: Make sure car has room temperature to prevent the clips from breaking off.

Tilt mirror glass.

Remove cement between mirror glass and edge of housing (risk of damage).

Unclip mirror glass using a wooden wedge.

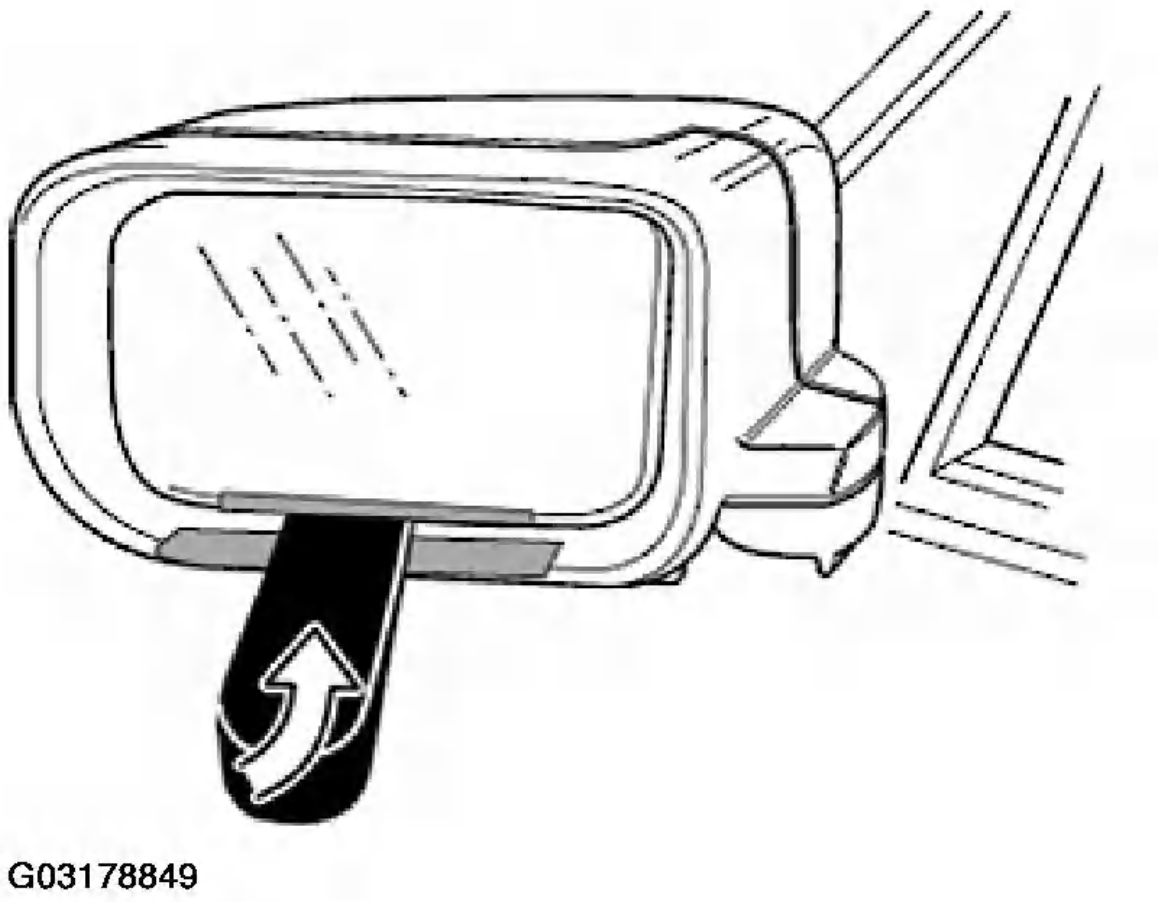


Fig. 48: Unclipping Mirror Glass Using Wooden Wedge
Courtesy of BMW OF NORTH AMERICA, INC.

If applicable, remove connector (mirror glass heating) and remove mirror glass.

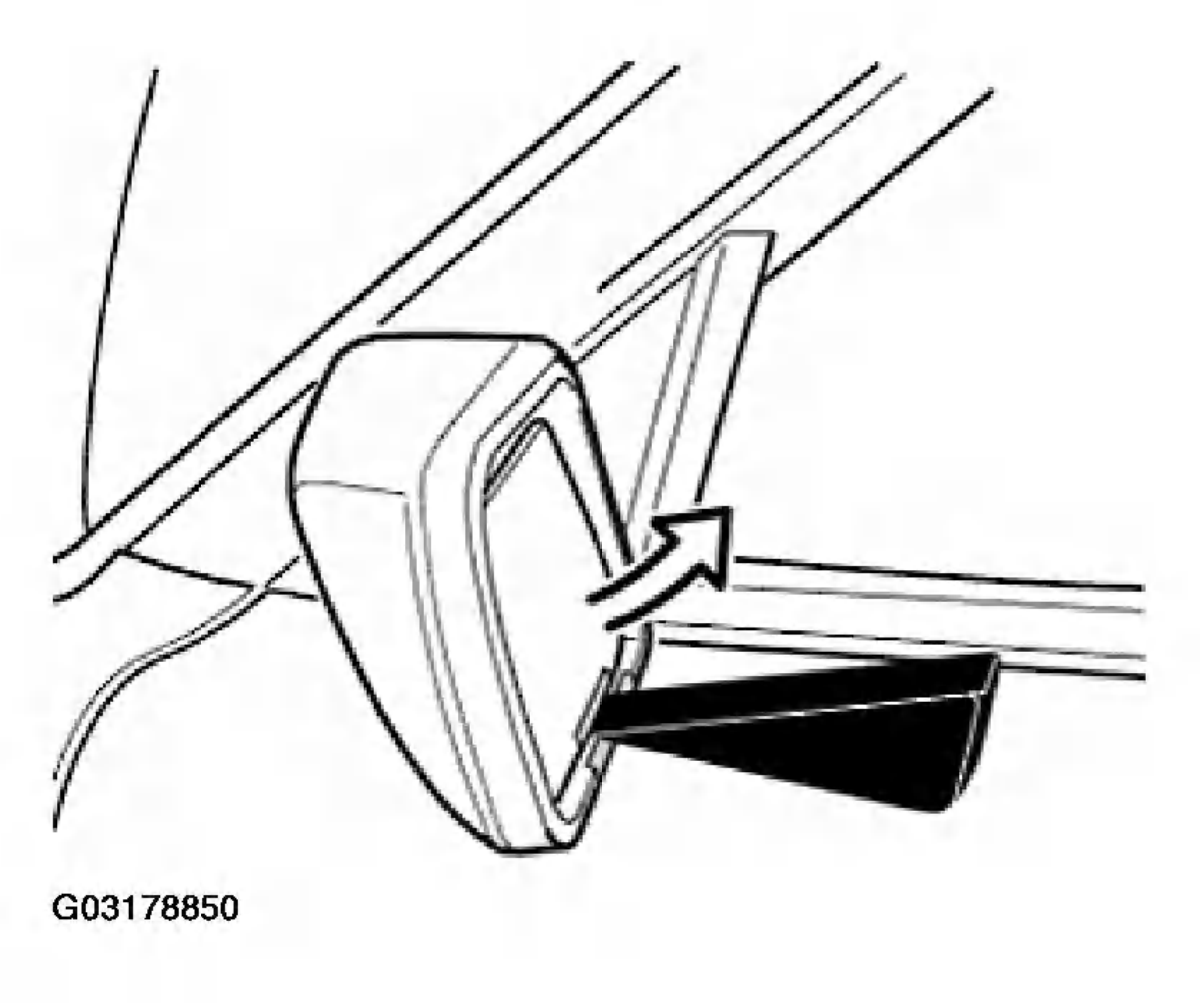


Fig. 49: Removing Mirror Glass
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Install mirror glass that clips are seated on tabs and clip on glass.

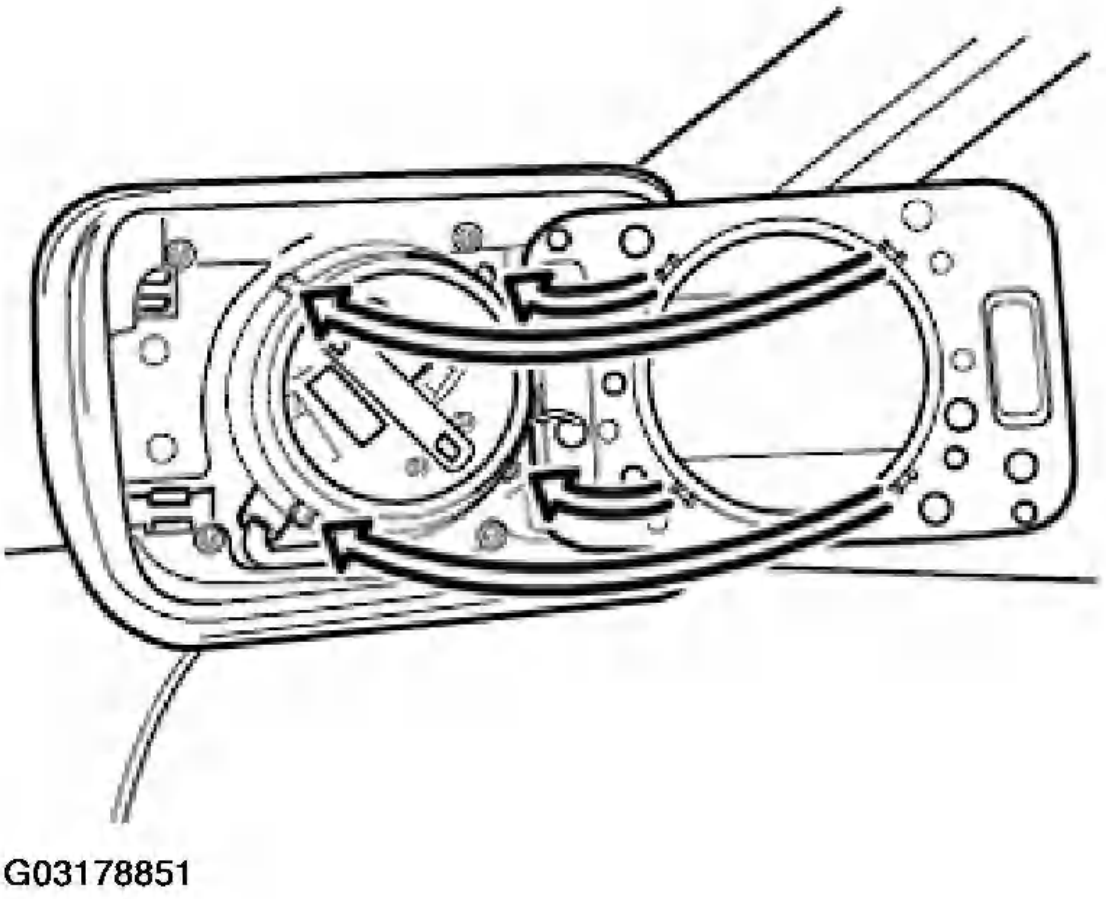


Fig. 50: Identifying Mirror Glass Clips
Courtesy of BMW OF NORTH AMERICA, INC.

Ensure correct engagement.

Check function.

51 16 060 REMOVING AND INSTALLING OR REPLACING INTERIOR REAR-VIEW MIRROR.

NOTE: On version with remote control for central locking: If necessary, disconnect negative lead to battery, refer to 12 00 ... DISCONNECTING AND CONNECTING BATTERY .

Version with automatic dip action (electro-chrome plating technology) for interior mirror and/or infrared remote control:

Remove panel and disconnect plug connection.

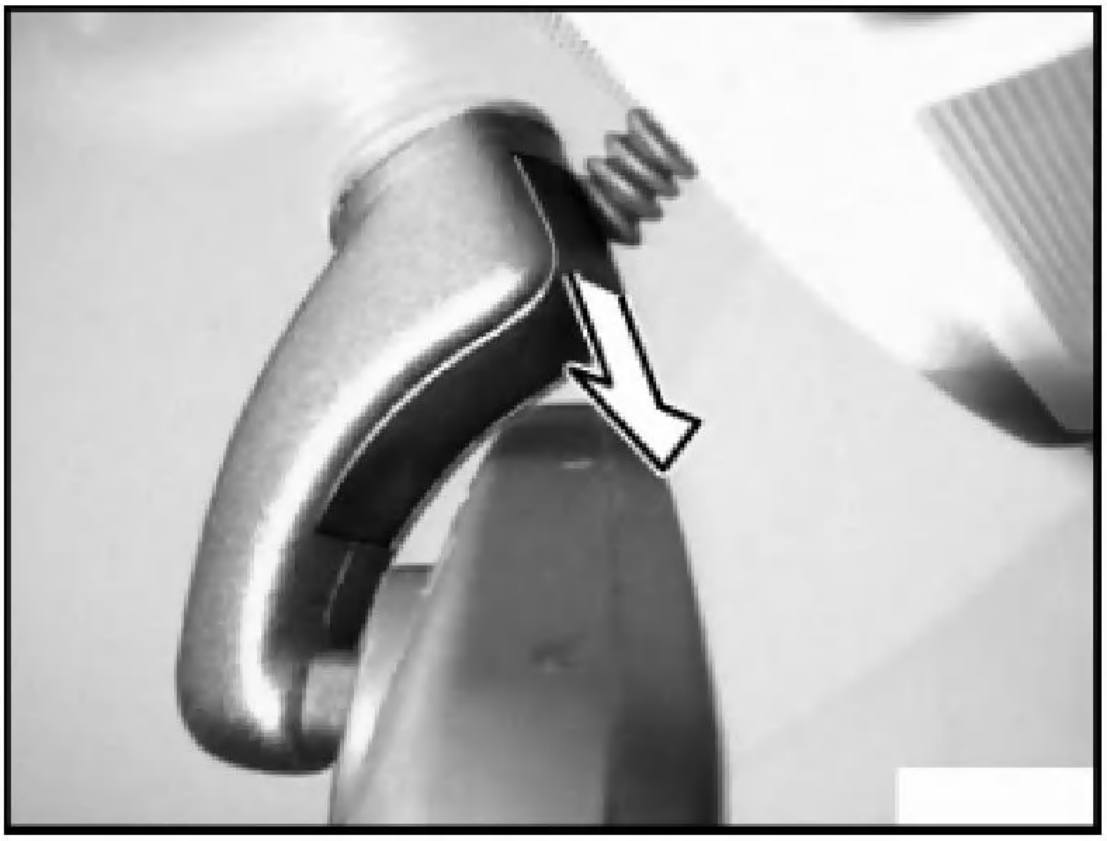


Fig. 51: Removing Panel And Disconnecting Plug Connection
Courtesy of BMW OF NORTH AMERICA, INC.

Snap mirror (1) forwards out of mirror mount and remove.

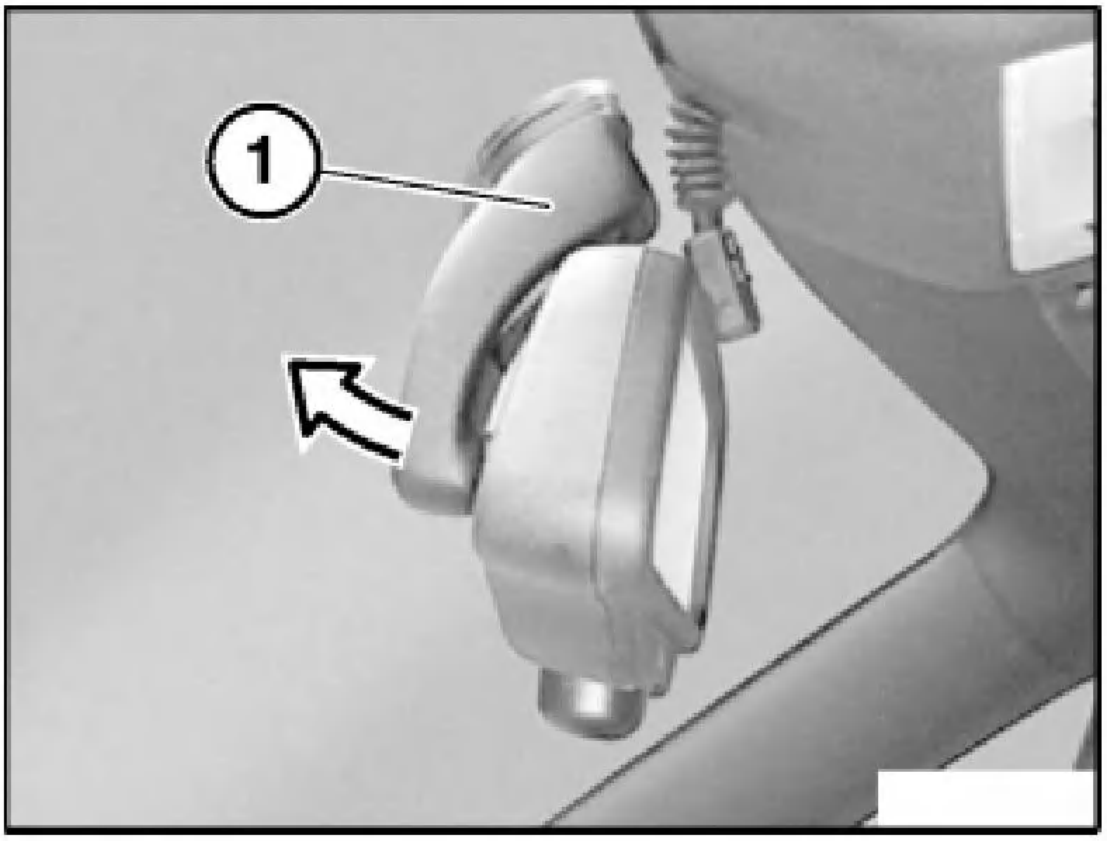


Fig. 52: Removing Mirror From Mirror Mounting
Courtesy of BMW OF NORTH AMERICA, INC.

CAUTION: Do not snap mirror backwards (risk of damage).

Installation:

1. Twist mirror base by approx. 45Â° and fit to mirror mount.

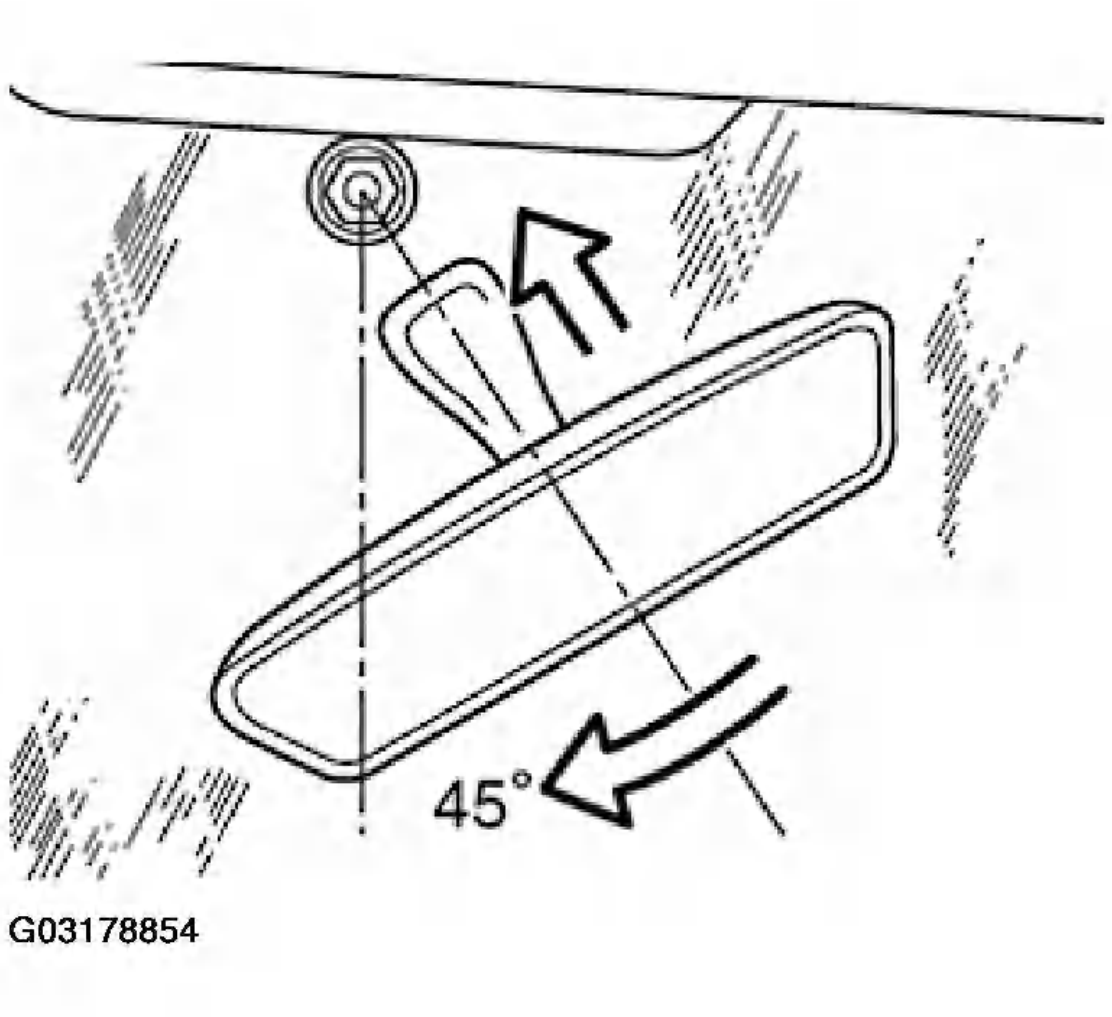


Fig. 53: Installing Mirror Base
Courtesy of BMW OF NORTH AMERICA, INC.

2. Turn mirror foot until it engages on mirror base.

Only replace with version with infrared remote control for central locking:

Installation:

Initialize all transmitters (key).

51 16 063 REMOVING AND INSTALLING / REPLACING INTERIOR REARVIEW MIRROR (WITH REMOTE CONTROL)

Operation Is Identical To:

Removing and installing/replacing interior rearview mirror. Refer to 51 16 060 REMOVING AND INSTALLING OR REPLACING INTERIOR REAR-VIEW MIRROR. .

51 16 104 REMOVING AND INSTALLING/REPLACING LEFT OR RIGHT SON VISOR (Z3 ROADSTER)

Unfasten screws (1) and remove sun visor (2).

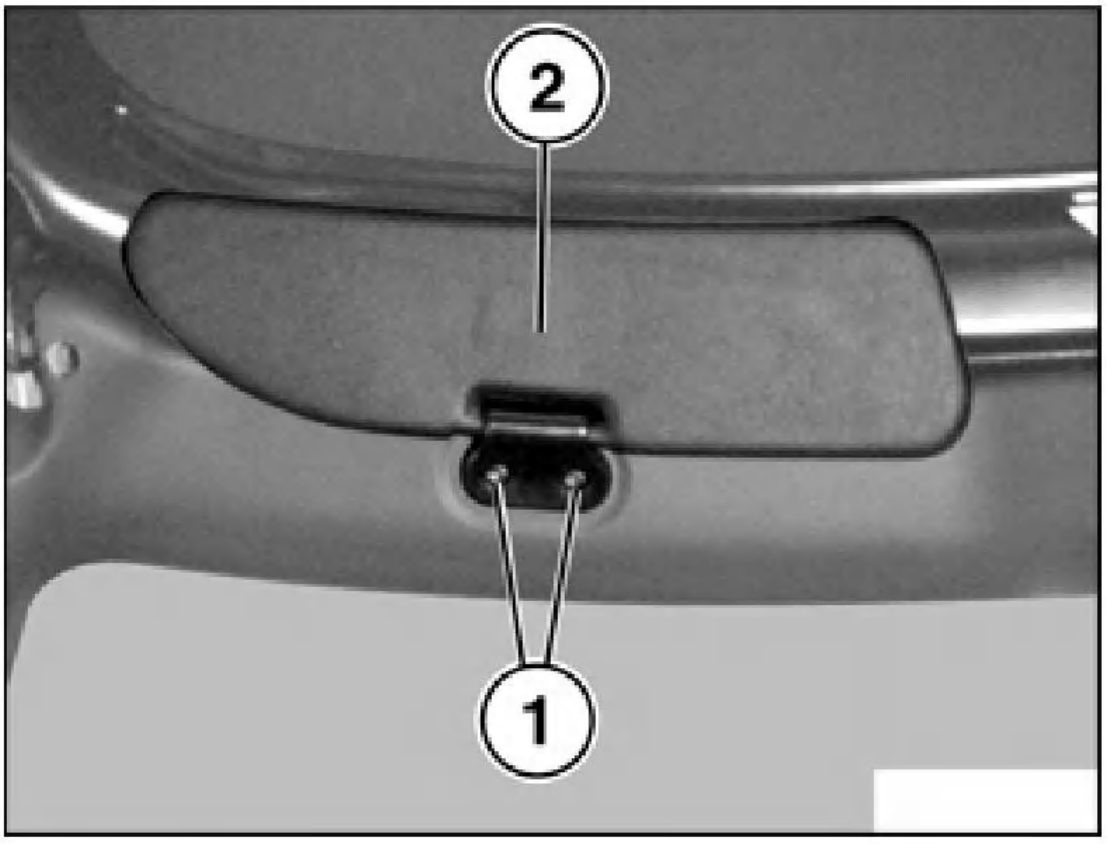


Fig. 54: Removing Sun Visor
Courtesy of BMW OF NORTH AMERICA, INC.

51 16 200 REMOVING AND INSTALLING ODDMENTS TRAY (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE)

Releasing And Removing Oddments Tray:

If necessary, remove radio receiver, refer to 65 11 030 RADIO (BAVARIA C II OR C REVERSE II) , 65 11 030 REMOVING AND INSTALLING OR REPLACING RADIO (BAVARIA CIII OR C REVERS III RDS) or 65 11 030 REMOVING AND INSTALLING/REPLACING RADIO (BUSINESS) .

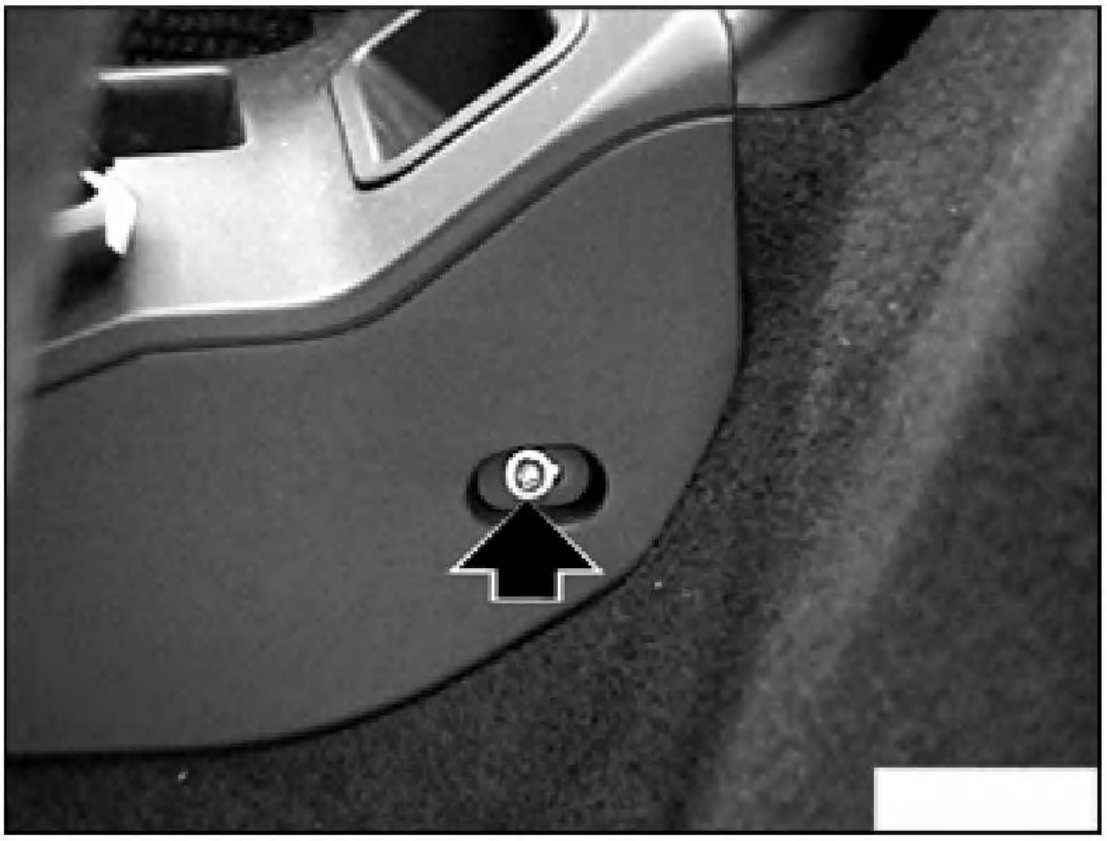
Version with manual transmission:

Remove shift lever knob with cover and sound insulation.

Version with automatic transmission:

Remove handle with cover and sound insulation.

Unfasten screws on left/right side.



G03178856

Fig. 55: Removing Screw
Courtesy of BMW OF NORTH AMERICA, INC.

Lift out rubber gaiter (1).



G03178857

Fig. 56: Removing Rubber Gaiter
Courtesy of BMW OF NORTH AMERICA, INC.

Pull finisher strip (1) approx. 5 mm backwards and remove upwards.

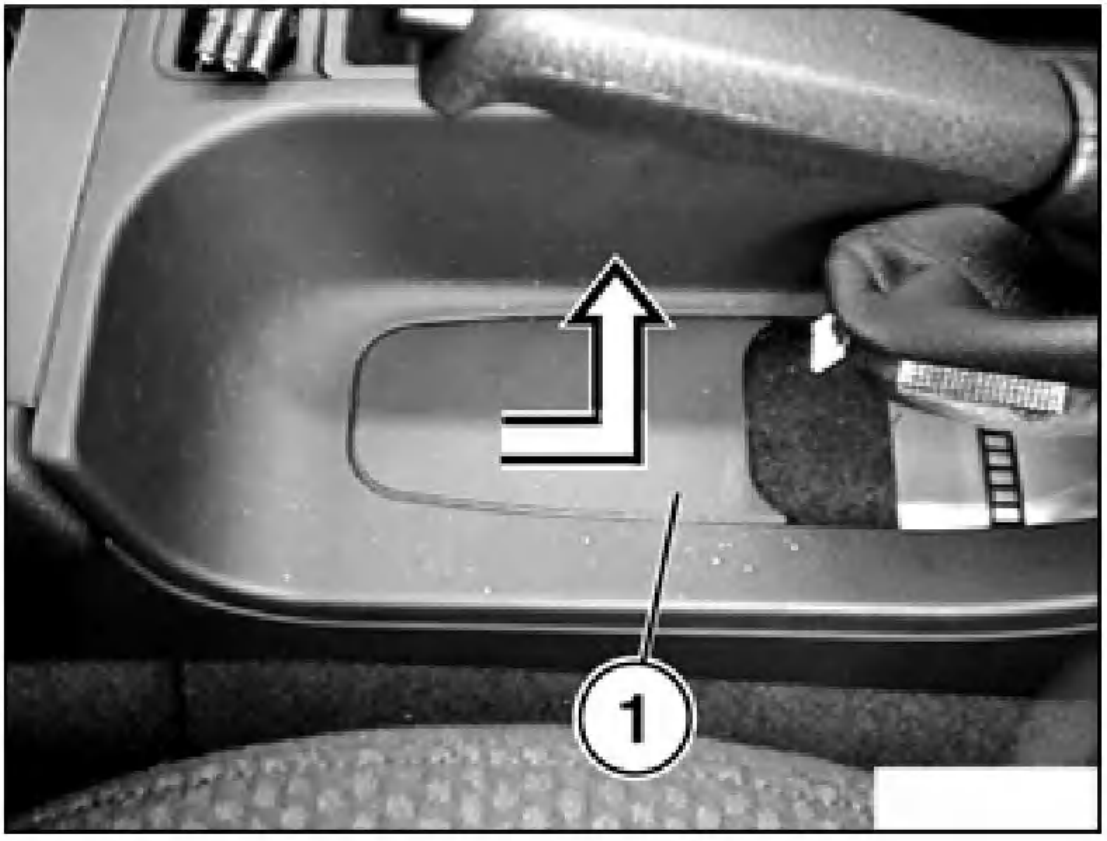


Fig. 57: Removing Finisher Strip
Courtesy of BMW OF NORTH AMERICA, INC.

Lift off finisher strips (1) and unfasten left/right screws.

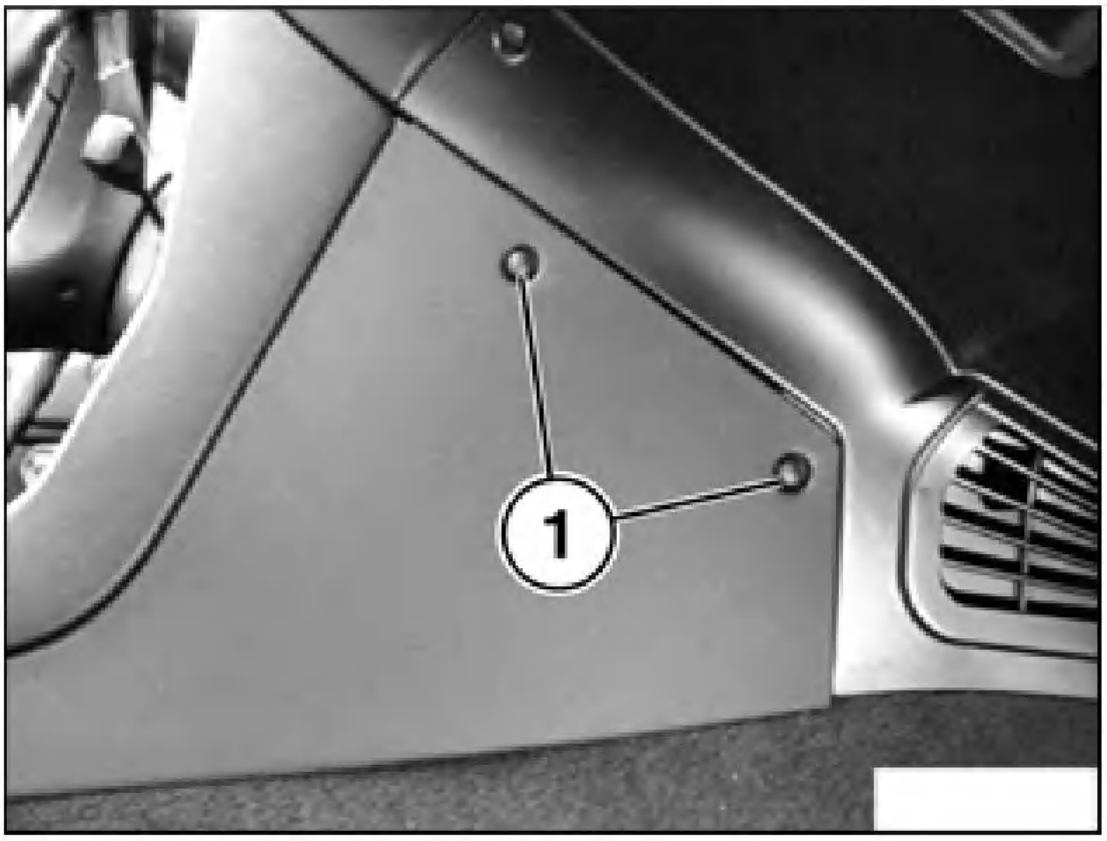


Fig. 58: Removing Finisher Strip And Screws
Courtesy of BMW OF NORTH AMERICA, INC.

Unfasten screws (1).

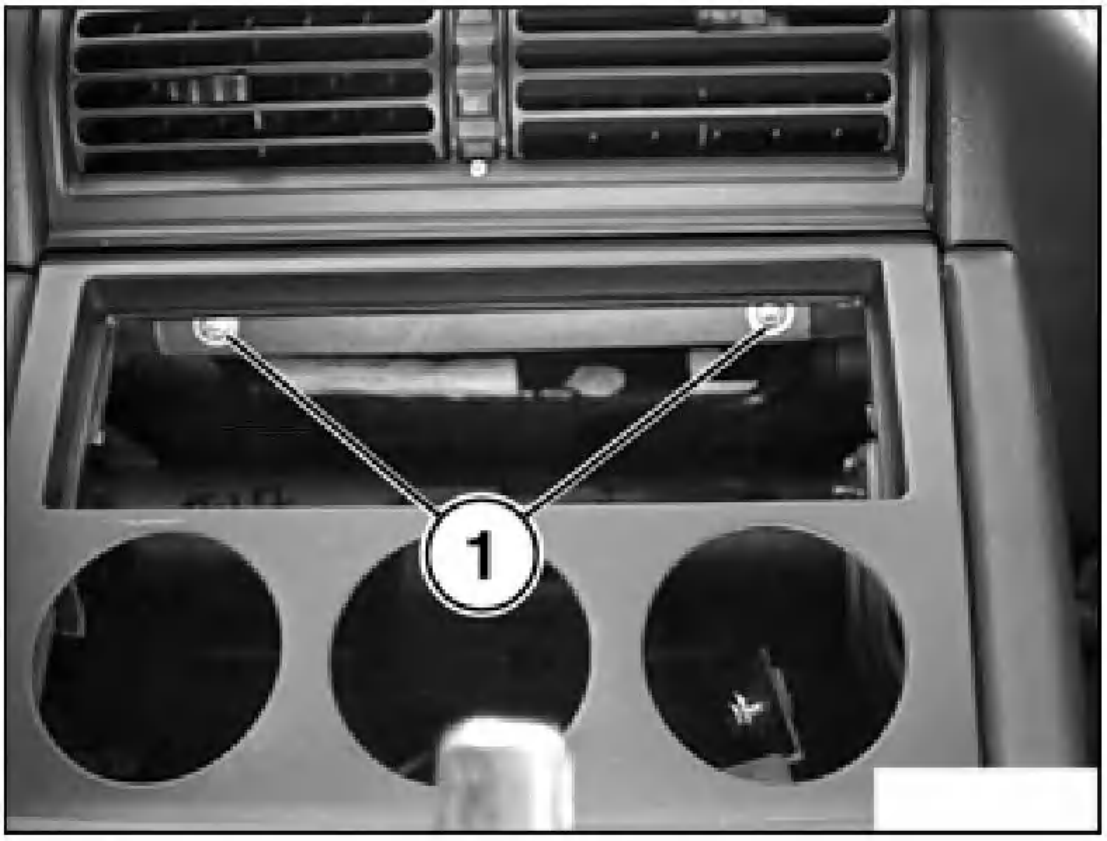


Fig. 59: Removing Screw
Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: The operation "Unfastening oddments tray" ends here.

Removing Oddments Tray:

Remove all switches from oddments tray, refer to 61 31 . . . REPLACING ALL SWITCHES AND INDICATOR LAMPS IN center CONSOLE (Z3 ROADSTER, Z3 COUPE) .

Remove clock, refer to 62 13 050 REMOVING AND INSTALLING/REPLACING CLOCK .

Z3 Roadster From 04/99:

Disconnect plug connection for clock/on-board computer.

Push oddments tray (1) forward at an angle and guide out of parking brake lever (2).



Fig. 60: Aligning Oddments Tray
Courtesy of BMW OF NORTH AMERICA, INC.

Remove oddments tray (1) from vehicle.



Fig. 61: Removing Oddments Tray
Courtesy of BMW OF NORTH AMERICA, INC.

51 16 201 REPLACING ODDMENTS TRAY (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE)

Removing center console, refer to 51 16 200 REMOVING AND INSTALLING ODDMENTS TRAY (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE) .

Unclip tray (1).

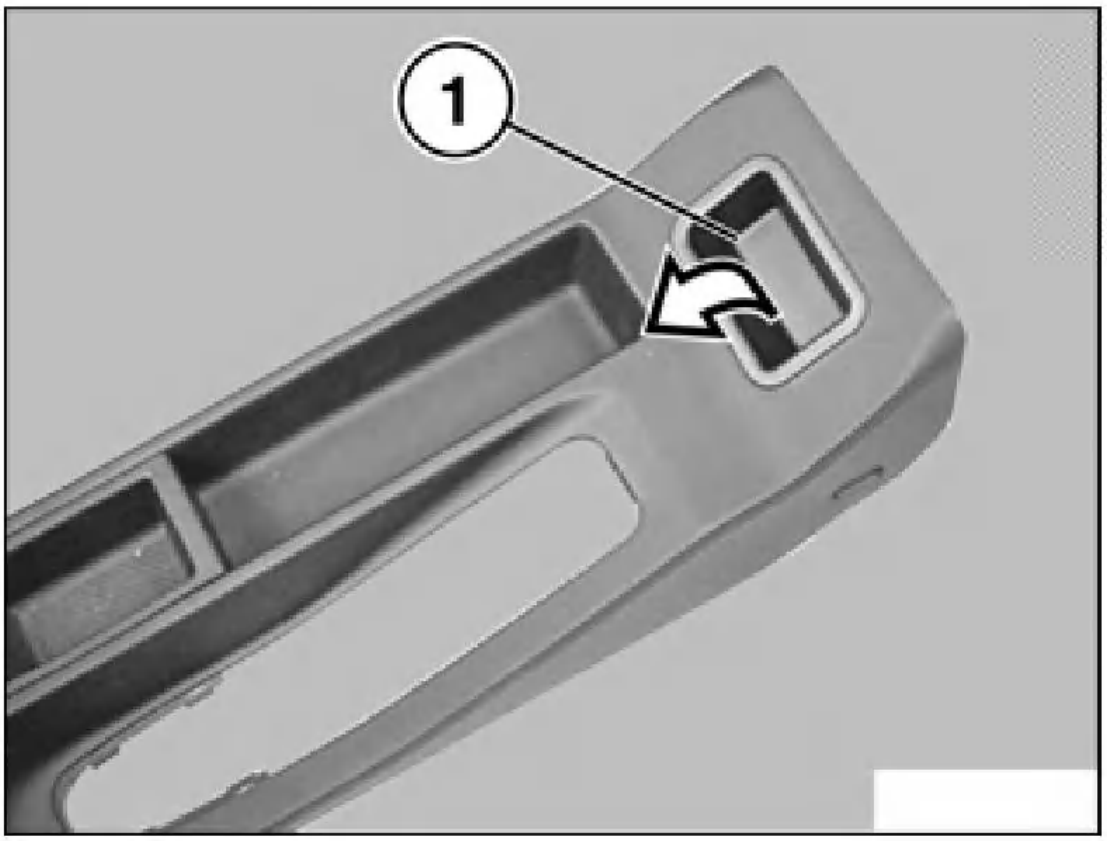


Fig. 62: Removing Center Console
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Clip tray (1) correctly into frame (2).

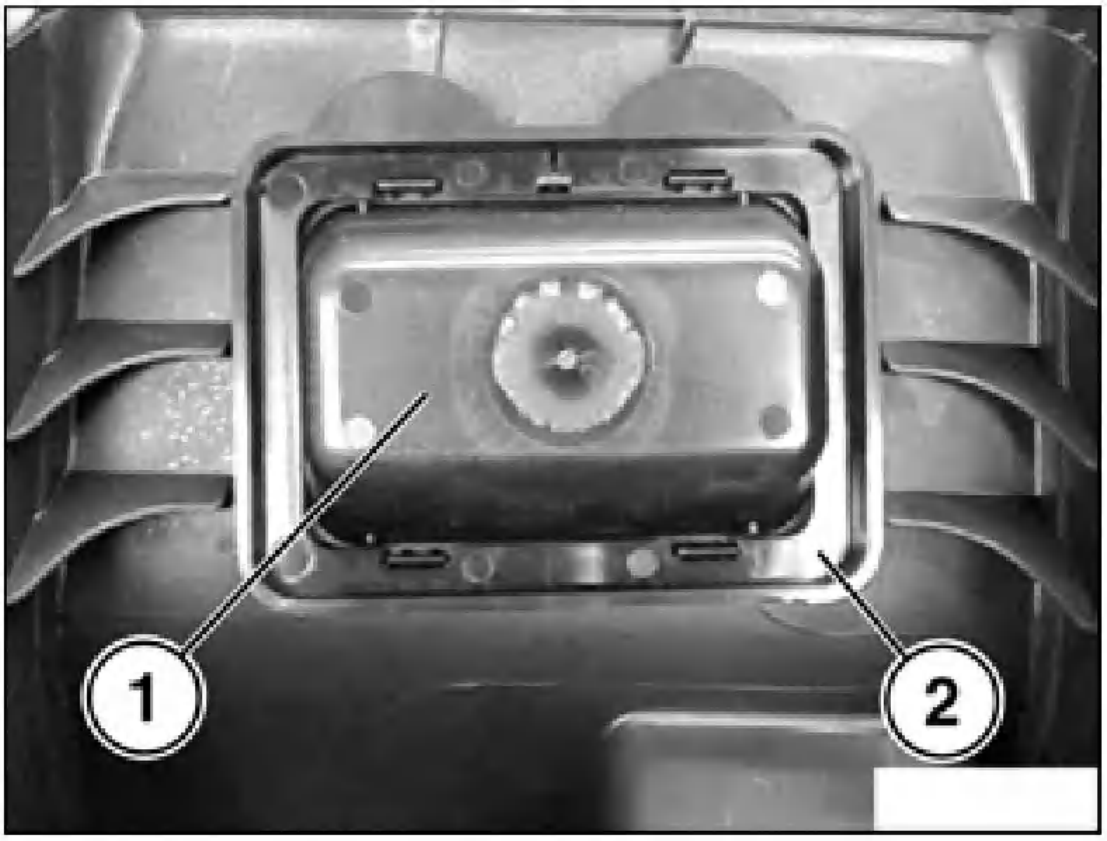


Fig. 63: Installing Frame
Courtesy of BMW OF NORTH AMERICA, INC.

Unclip tray (1).

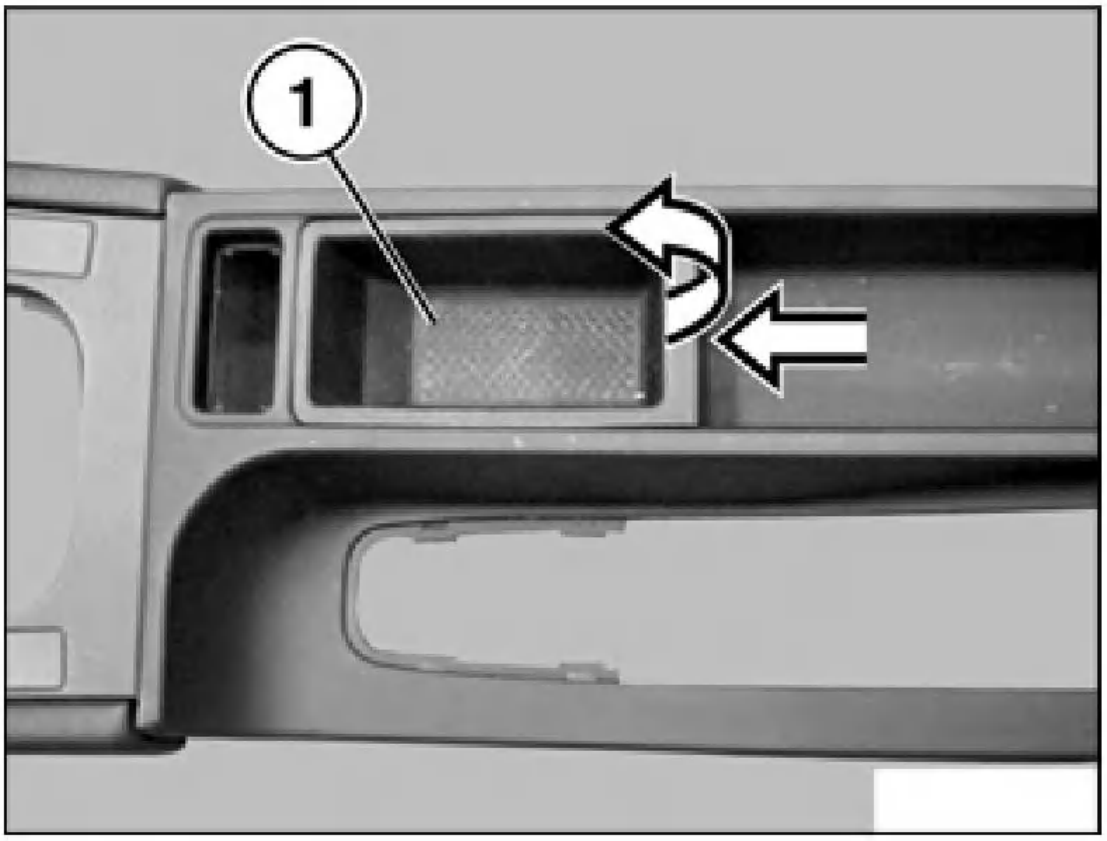


Fig. 64: Removing Tray
Courtesy of BMW OF NORTH AMERICA, INC.

Remove cigar lighter (1).

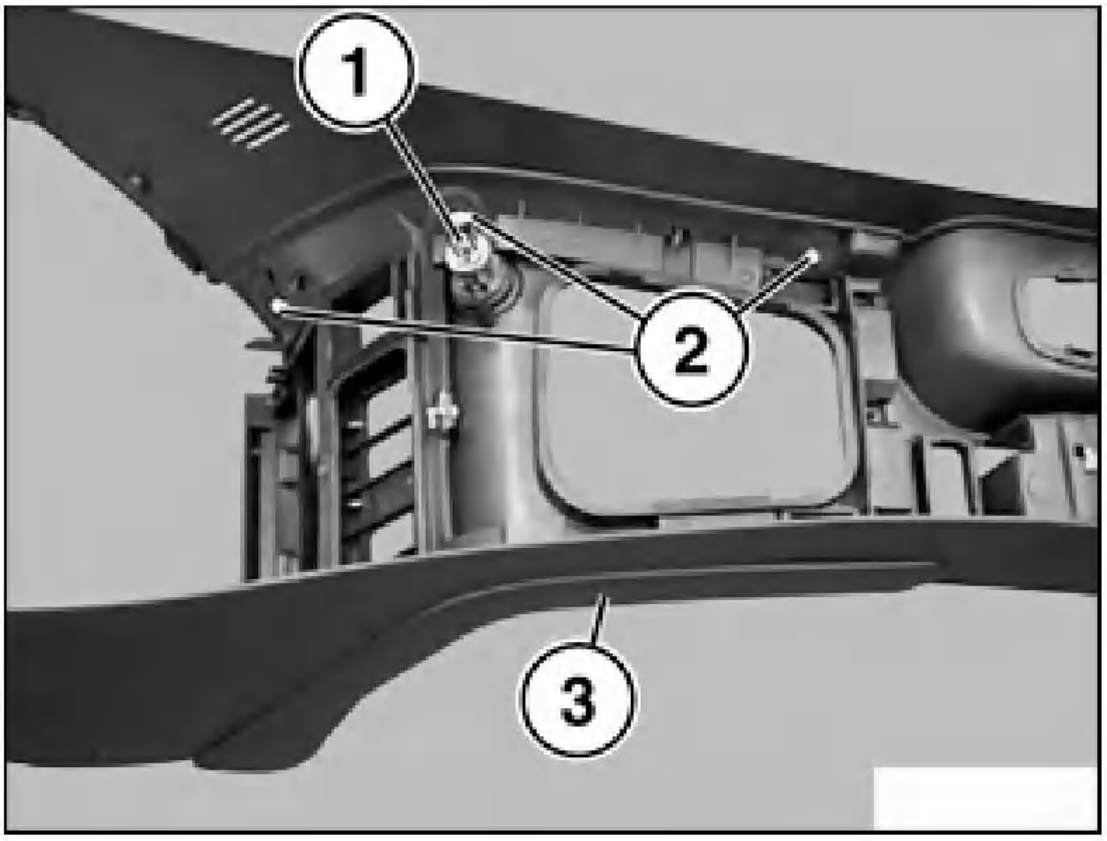


Fig. 65: Removing Cigar Lighter
Courtesy of BMW OF NORTH AMERICA, INC.

Unfasten left/right screws (2) and remove left / right finisher strips (3).

Unfasten screws (1) and remove selector lever finisher strip (2).

Installation:

Insert correctly in supports (3).

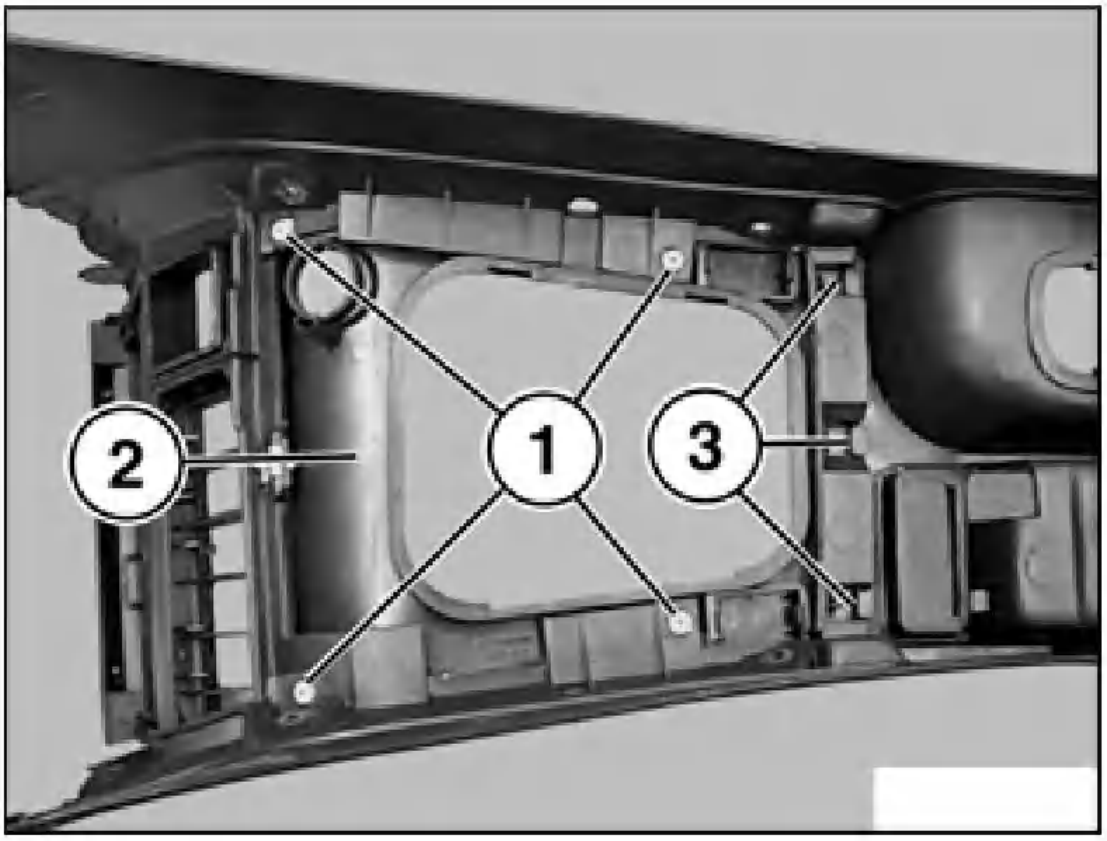


Fig. 66: Removing Selector Lever Finisher Strip
Courtesy of BMW OF NORTH AMERICA, INC.

Unfasten screws (1) and remove radio finisher strip (2).

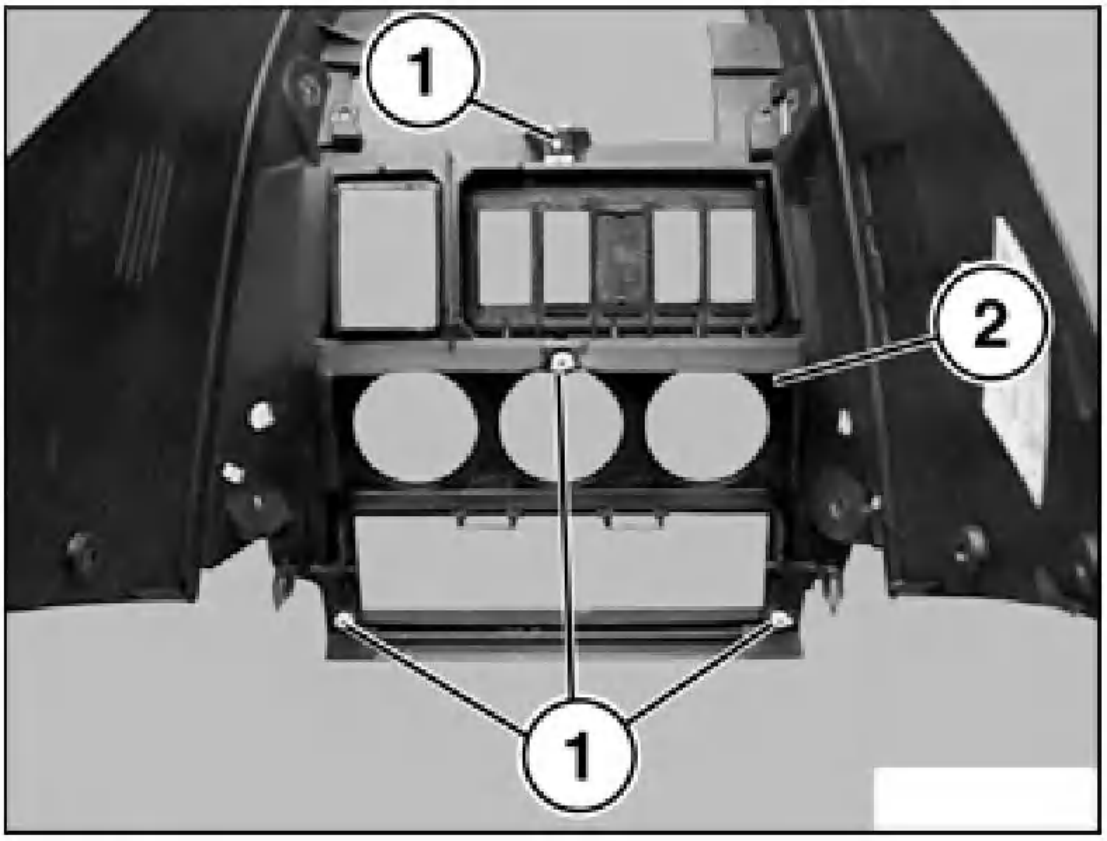


Fig. 67: Removing Radio Finisher Strip
Courtesy of BMW OF NORTH AMERICA, INC.

Remove speed nuts (1).

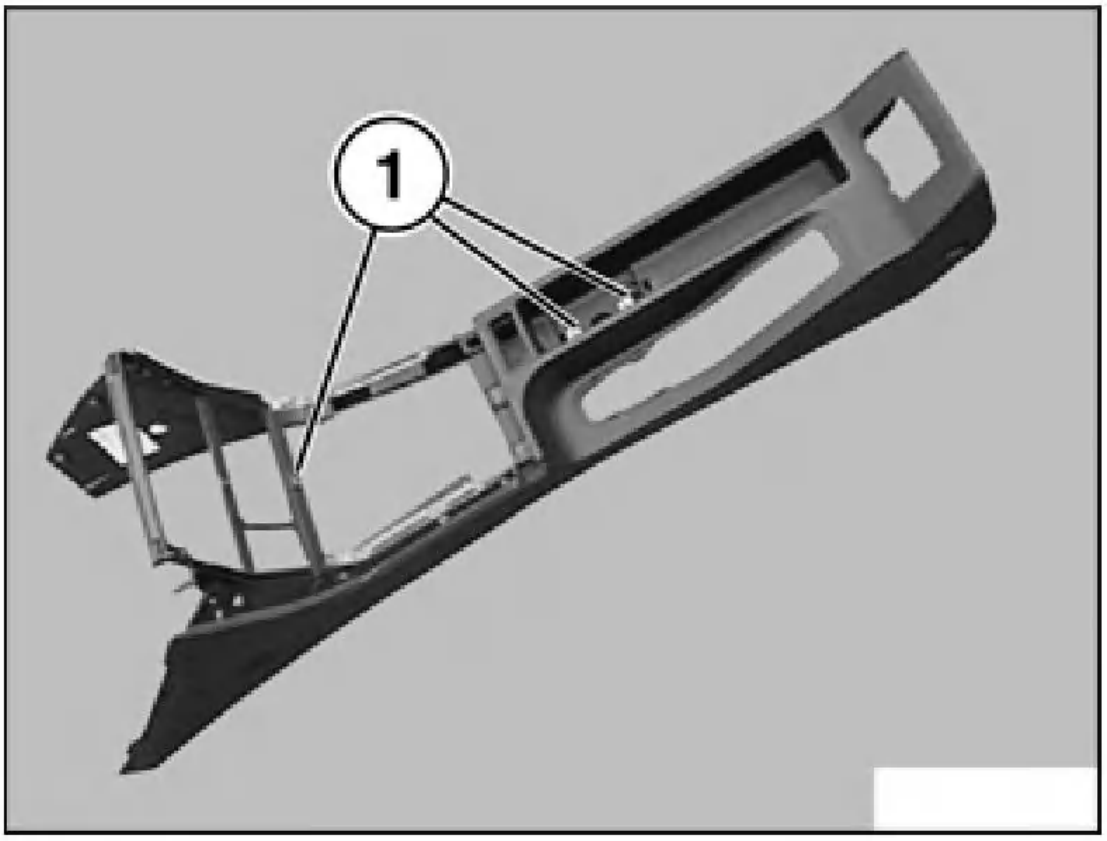


Fig. 68: Removing Speed Nuts
Courtesy of BMW OF NORTH AMERICA, INC.

51 16 240 REMOVING AND INSTALLING REAR ODDMENTS BOX (Z3 ROADSTER, M ROADSTER)

Loosen oddments tray (do not remove), refer to 51 16 200 REMOVING AND INSTALLING ODDMENTS TRAY (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE) .

Press up oddments tray (1) and unfasten screws (2).

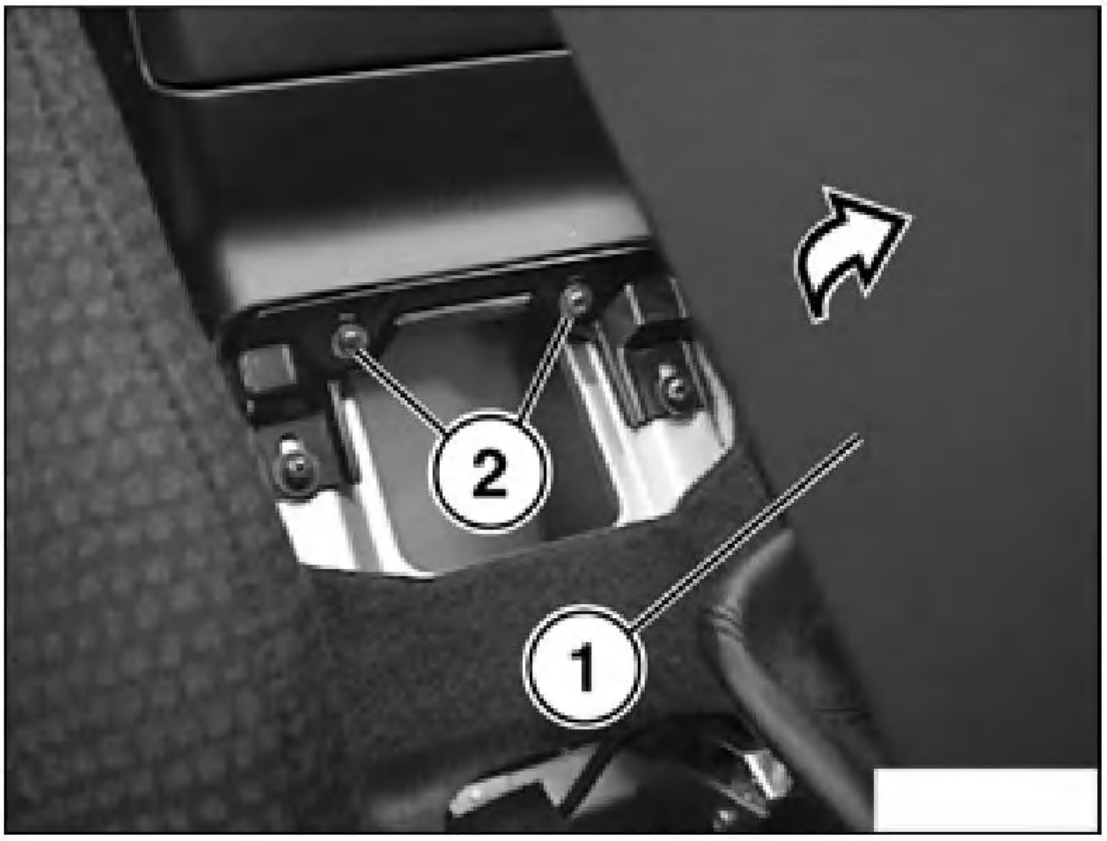


Fig. 69: Removing Oddments Tray
Courtesy of BMW OF NORTH AMERICA, INC.

Version (A):

Without rollover protection bar, without subwoofer, without "Harman-Kardon" Hi-Fi system:

Open cover and unfasten screws (1).

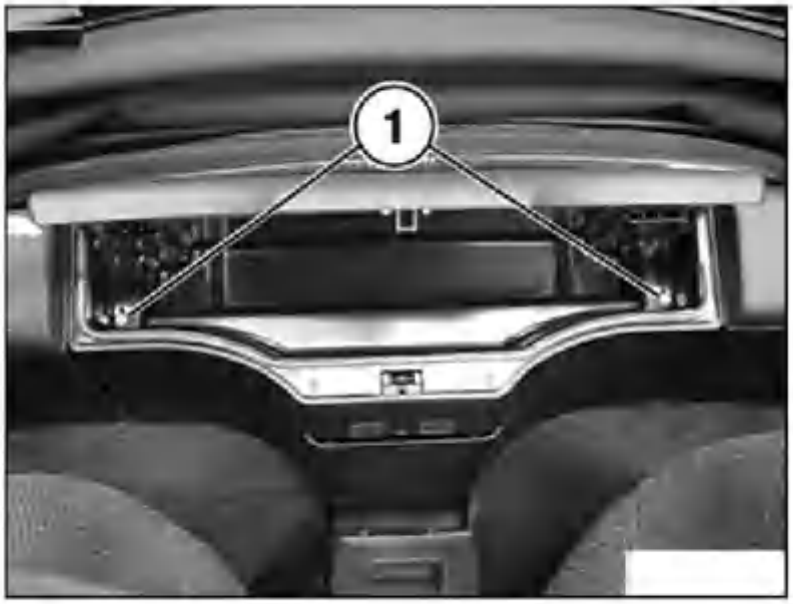


Fig. 70: Opening Cover
Courtesy of BMW OF NORTH AMERICA, INC.

Without rollover protection bar, without subwoofer, without "Harman-Kardon" Hi-Fi system:

Unfasten screws (1) and remove oddments box (2).

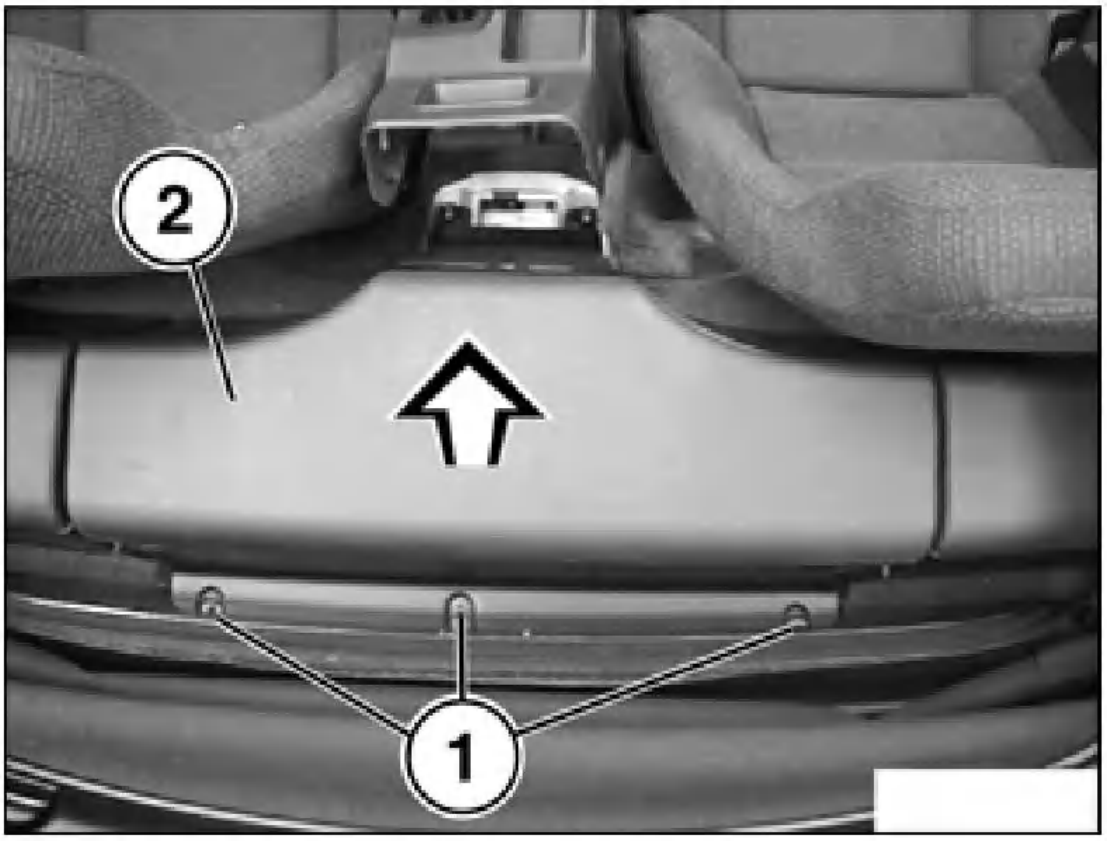


Fig. 71: Removing Oddments Box
Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: The procedures for "removing and installing rear oddments box" version (A) ends here.

Version (B):

With rollover protection bar:

Removing and installing rollover protection bar, refer to 54 61 001 REMOVING AND INSTALLING / REPLACING .

Pull off finisher (1) (lock) upward.

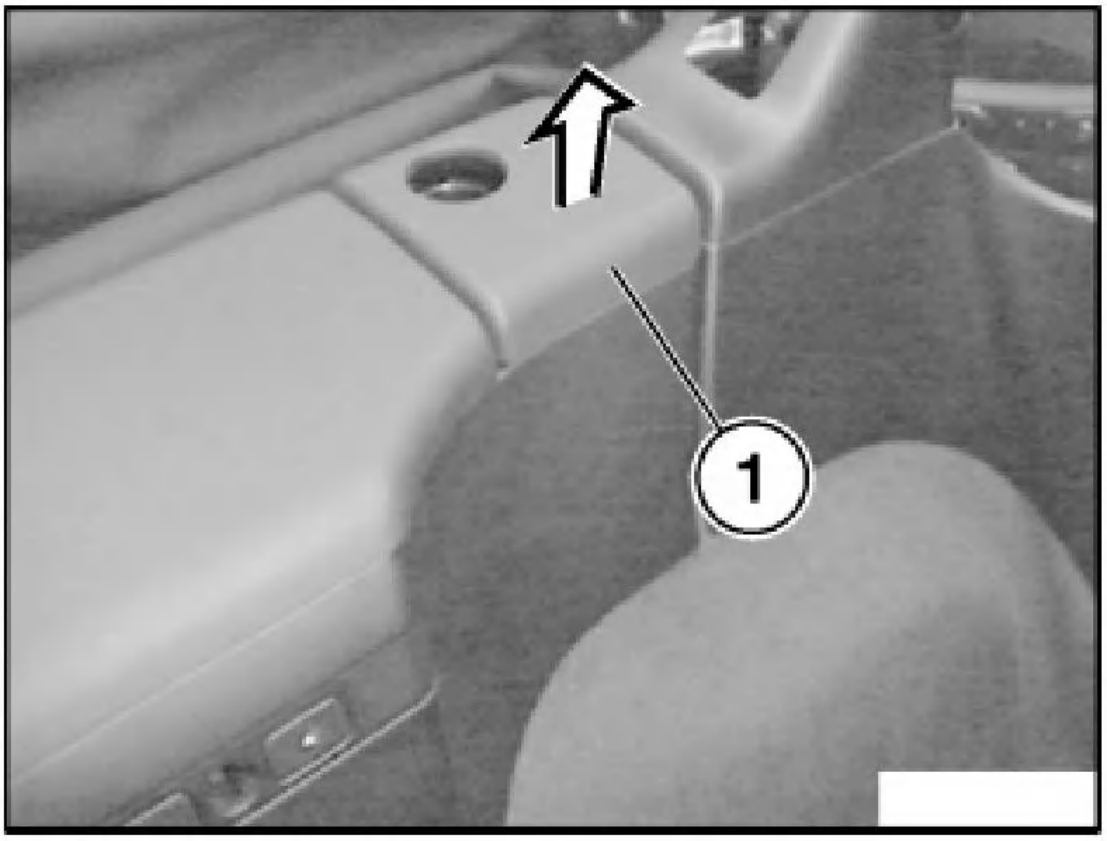


Fig. 72: Removing Finisher
Courtesy of BMW OF NORTH AMERICA, INC.

Version (B):

With rollover protection bar:

Lift out covers (1) and unfasten screws. Unfasten screws (2) and take off oddments box upward.

NOTE: The procedure for removing and installing the "rear oddments box" Version (B) ends here.

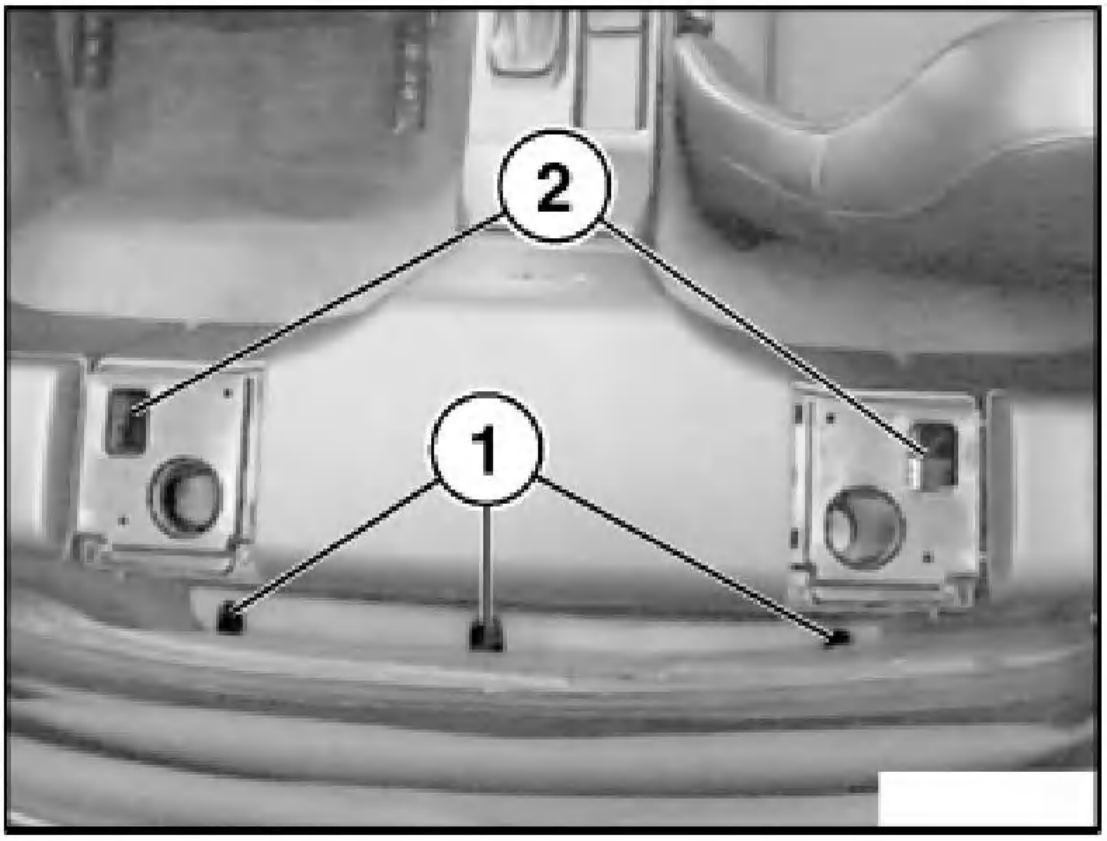


Fig. 73: Removing Covers And Screws
Courtesy of BMW OF NORTH AMERICA, INC.

Version (C):

With rollover protection bar, with "Harman-Kardon" Hi-Fi system:

Removing and installing loudspeaker box, refer to 65 13 300 REMOVING AND INSTALLING/REPLACING COMPLETE SUBWOOFER SPEAKER FOR TOP HI-FI SYSTEM (Z3 ROADSTER, M ROADSTER HARMANN KARDON) .

Unclip cover (1) upward.

Removing and installing left and right rollover protection bar, refer to 54 61 001 REMOVING AND INSTALLING / REPLACING LEFT OR RIGHT ROLLOVER PROTECTION BAR (Z3 ROADSTER, M ROADSTER) .

Lift out detent (1) and pull off finisher strip (2) (lock) upward.

Installation:

Glue on seal (3) if necessary.

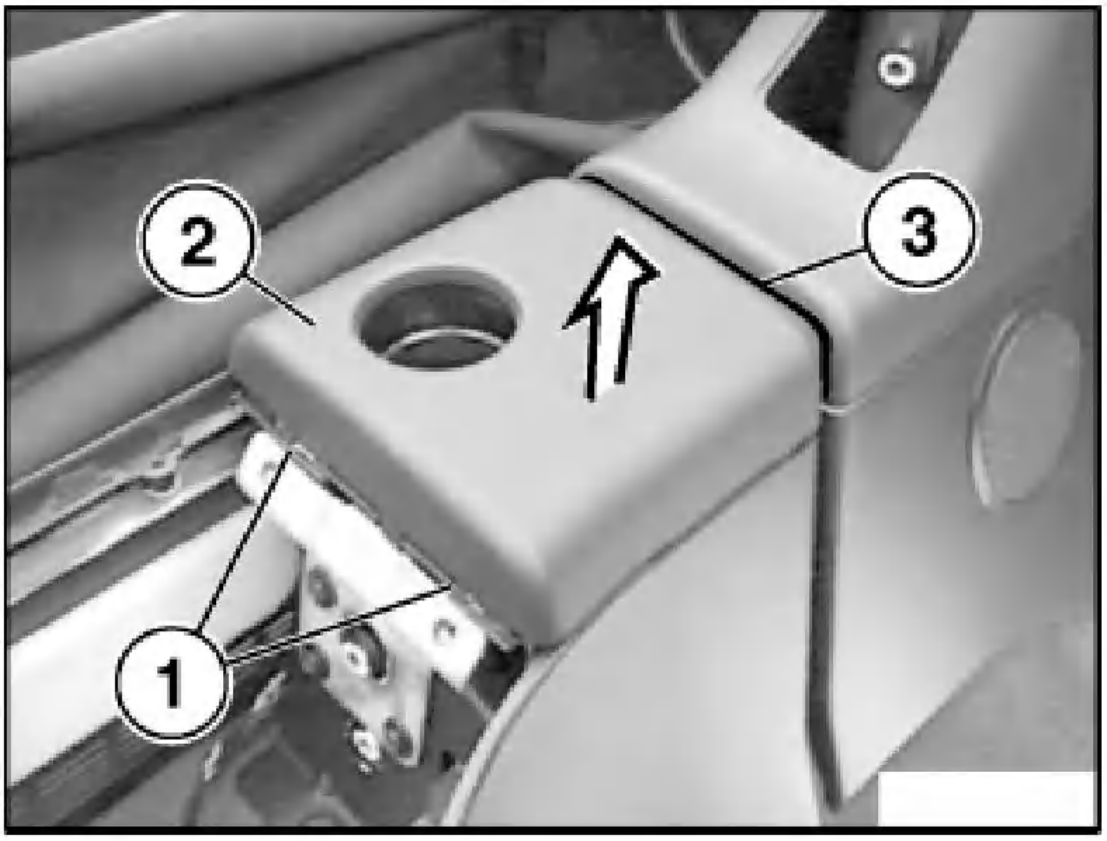


Fig. 74: Identifying Detent And Finisher Strip
Courtesy of BMW OF NORTH AMERICA, INC.

Version (C):

With rollover protection bar, with "Harman-Kardon" Hi-Fi system:

Lift out covers (1) and unfasten screws. Unfasten screws (2) and take off oddments box upward.

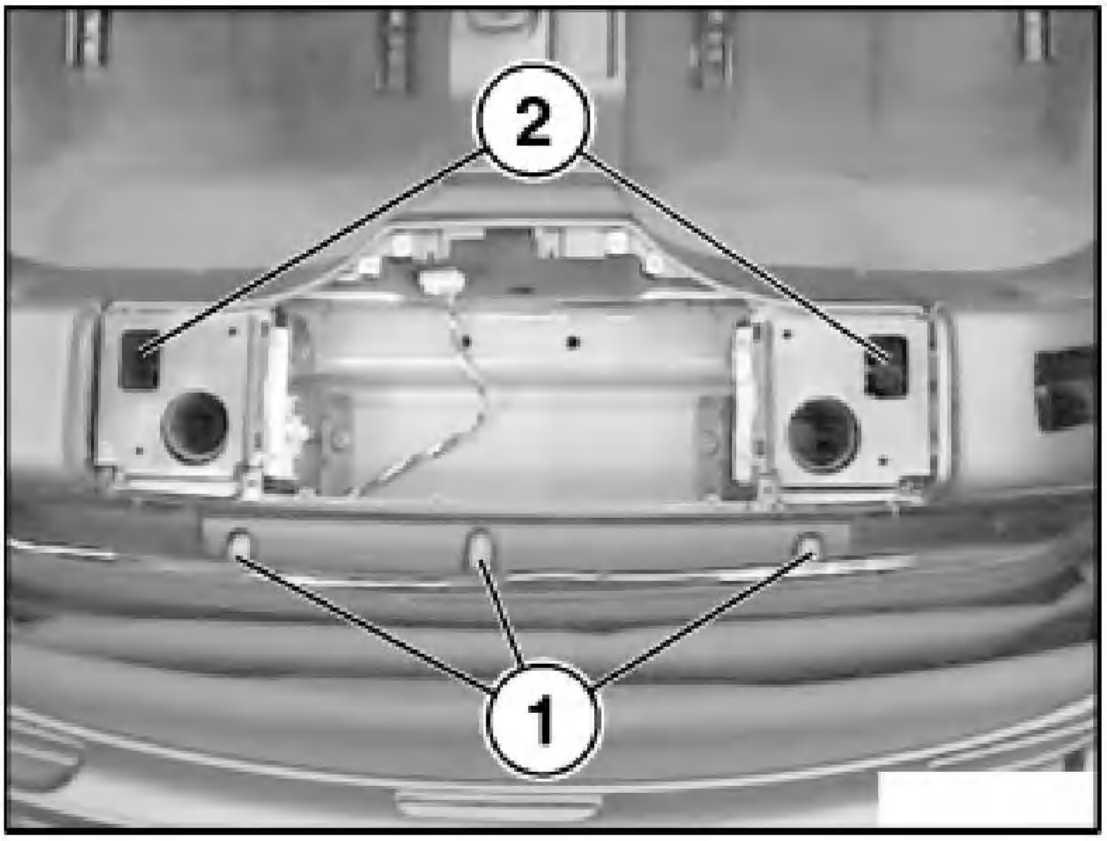


Fig. 75: Removing Oddments Box
Courtesy of BMW OF NORTH AMERICA, INC.

51 16 340 REMOVING AND INSTALLING/REPLACING LOCK FOR GLOVEBOX, RIGHT (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE)

Only US version:

Unfasten screws (1) and remove upper (2) and lower sections of lock.

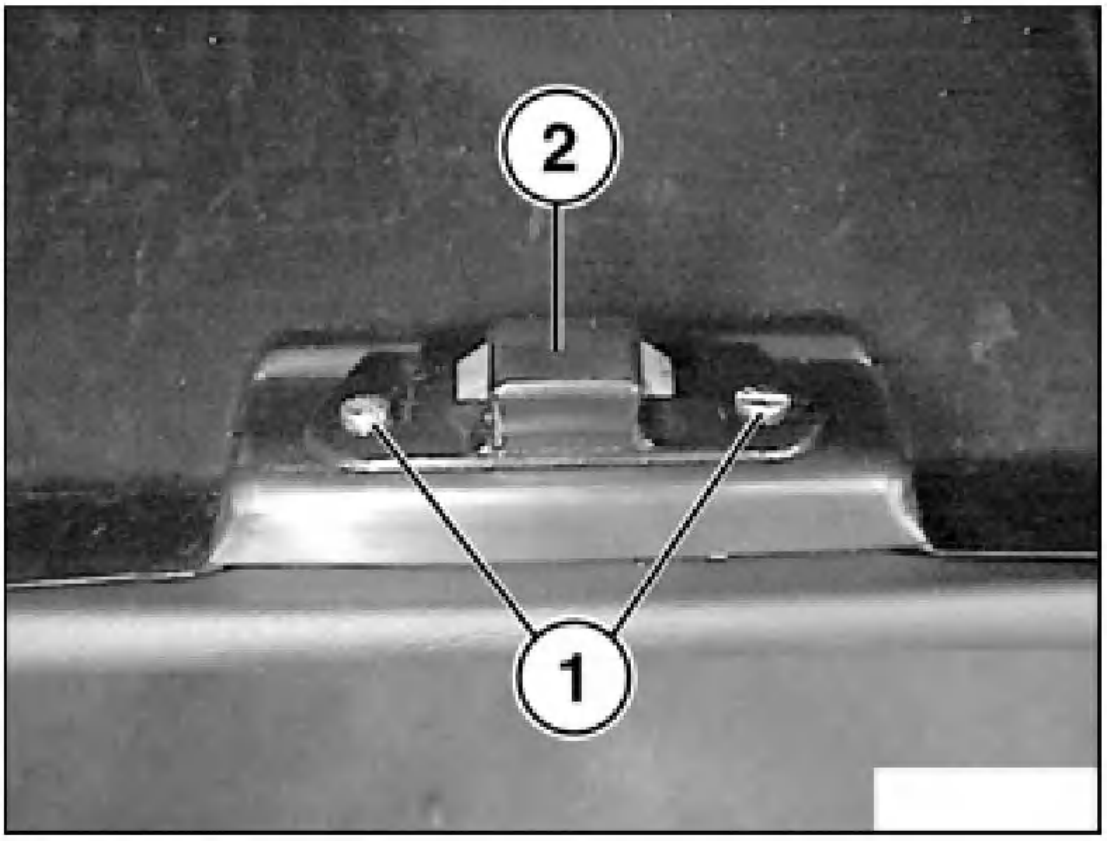


Fig. 76: Removing Upper And Lower Sections Of Lock
Courtesy of BMW OF NORTH AMERICA, INC.

Only replacement (US version):

Insert vehicle key in lock cylinder (2).

Break open locks (1) if necessary and pull out lock cylinder (2) with vehicle key.

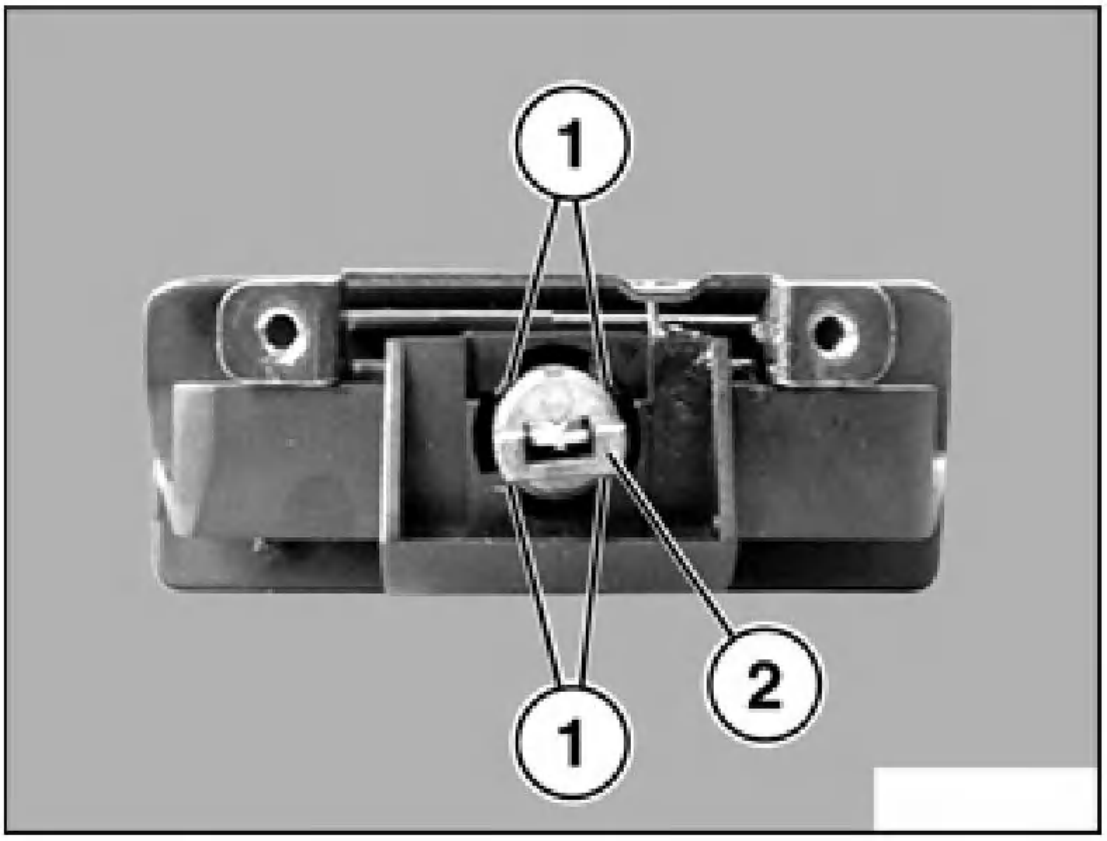


Fig. 77: Installing Vehicle Key In Lock Cylinder
Courtesy of BMW OF NORTH AMERICA, INC.

CAUTION: Do not pull on vehicle key. Do not pull vehicle key out of removed lock cylinder (retainers and springs would drop out of lock cylinder).

Installation:

Perform function check on removed lock.

NOTE: The operation "Removing and installing/replacing glovebox lock" for US version ends here.

Unfasten screws (1) and remove lock (2).

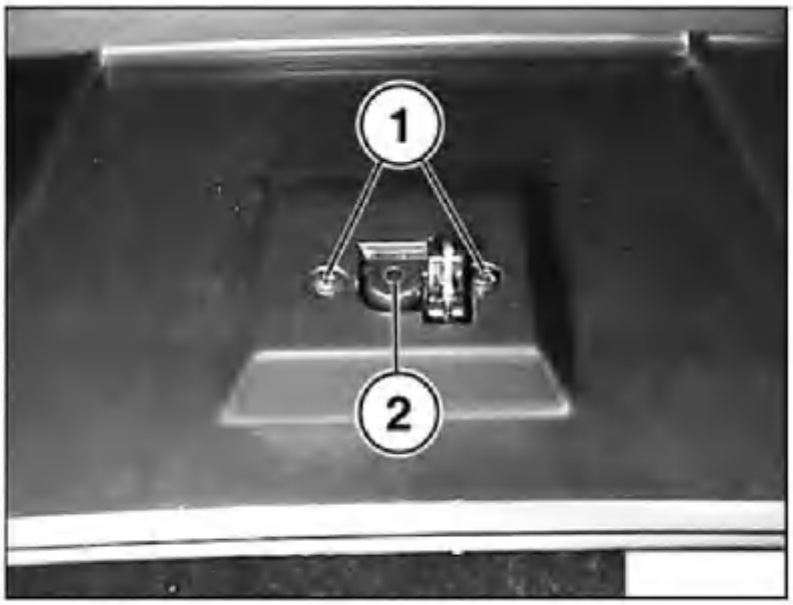


Fig. 78: Removing Lock
Courtesy of BMW OF NORTH AMERICA, INC.

Only replace:

NOTE: The lock cylinder (1) must remain in open position.

Clamp lock in vise. Drive out pin with punch (2) until handle (3) can be pulled upwards and removed.

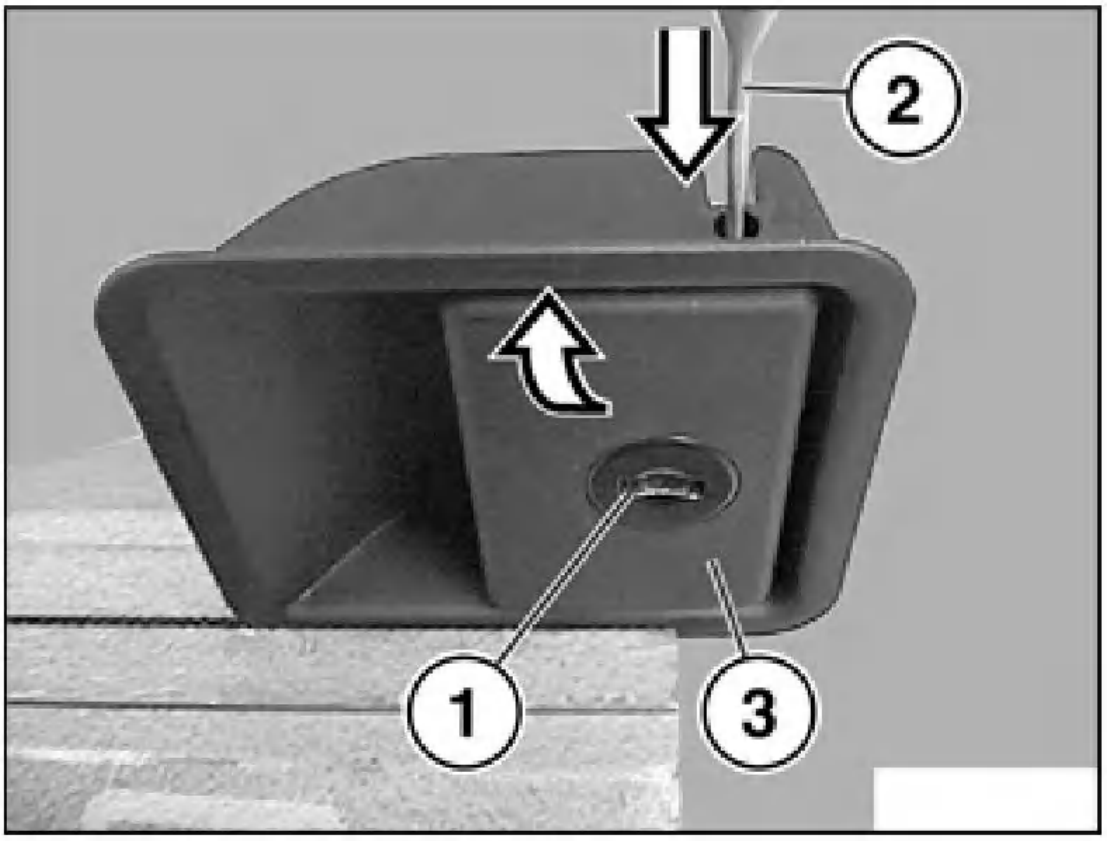


Fig. 79: Driving Out Pin With Punch
Courtesy of BMW OF NORTH AMERICA, INC.

Insert vehicle key in lock cylinder (2).

Break open locks (1) if necessary and pull out lock cylinder (2) with vehicle key.

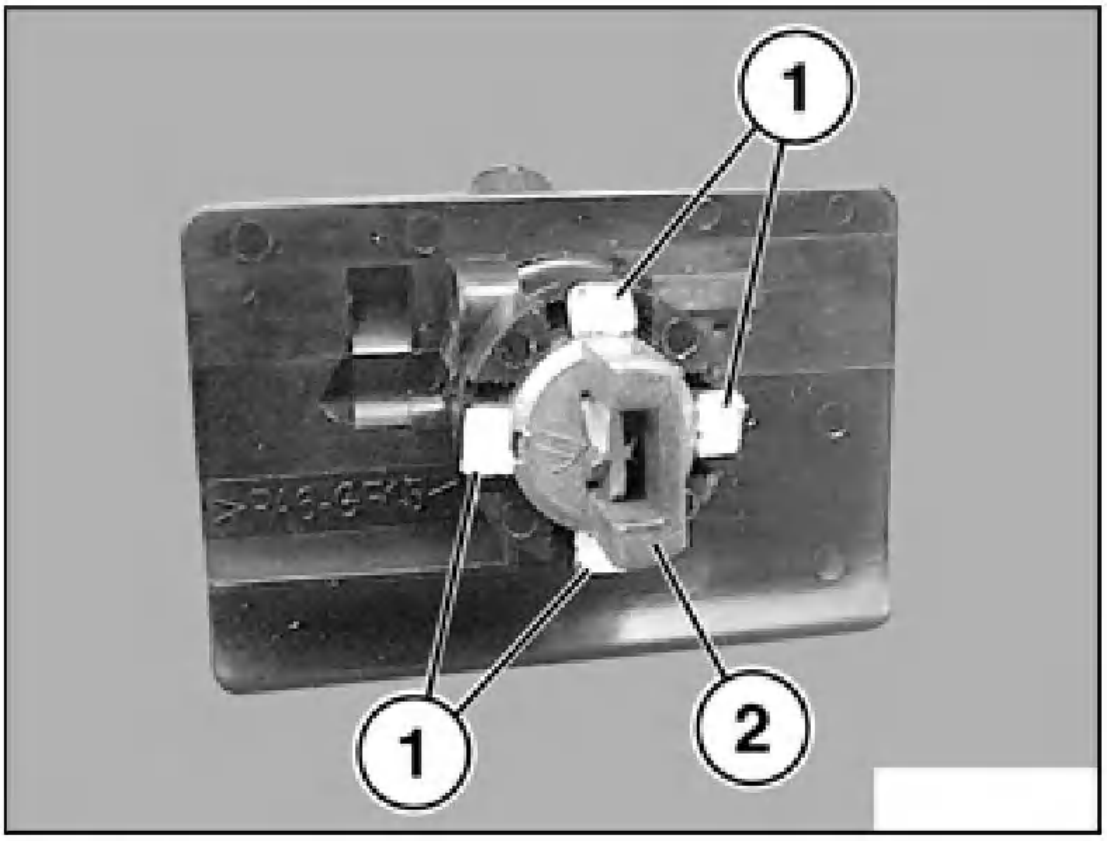


Fig. 80: Identifying Vehicle Key In Lock Cylinder
Courtesy of BMW OF NORTH AMERICA, INC.

CAUTION: Do not pull vehicle key. Do not pull vehicle key out of removed lock cylinder (retainers and springs would drop out of lock cylinder).

Installation:

Insert lock cylinder with aperture (1) in groove (2) of locking disc.

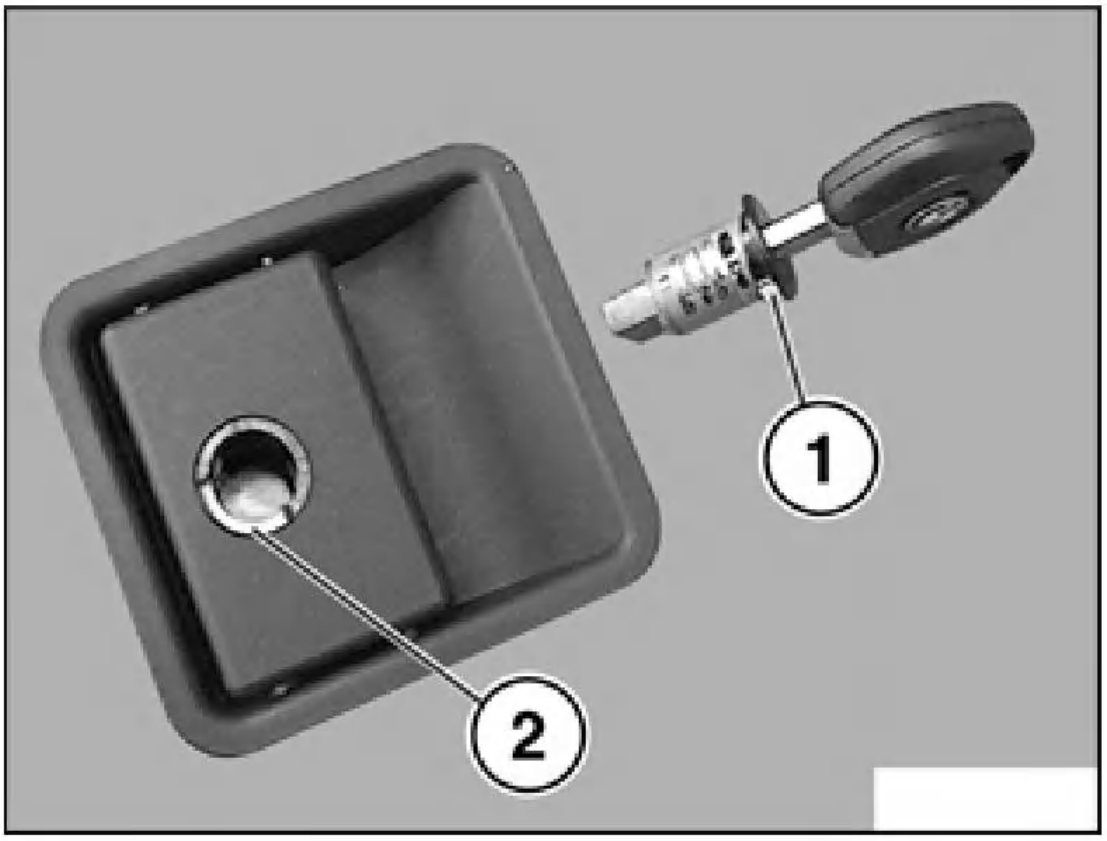


Fig. 81: Installing Lock Cylinder
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Perform function check on removed lock.

51 16 360 REMOVING AND INSTALLING GLOVEBOX, RIGHT (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE)

Release rotary clips (1) at bottom and lever out lower trim panel on left (risk of damage) and center.

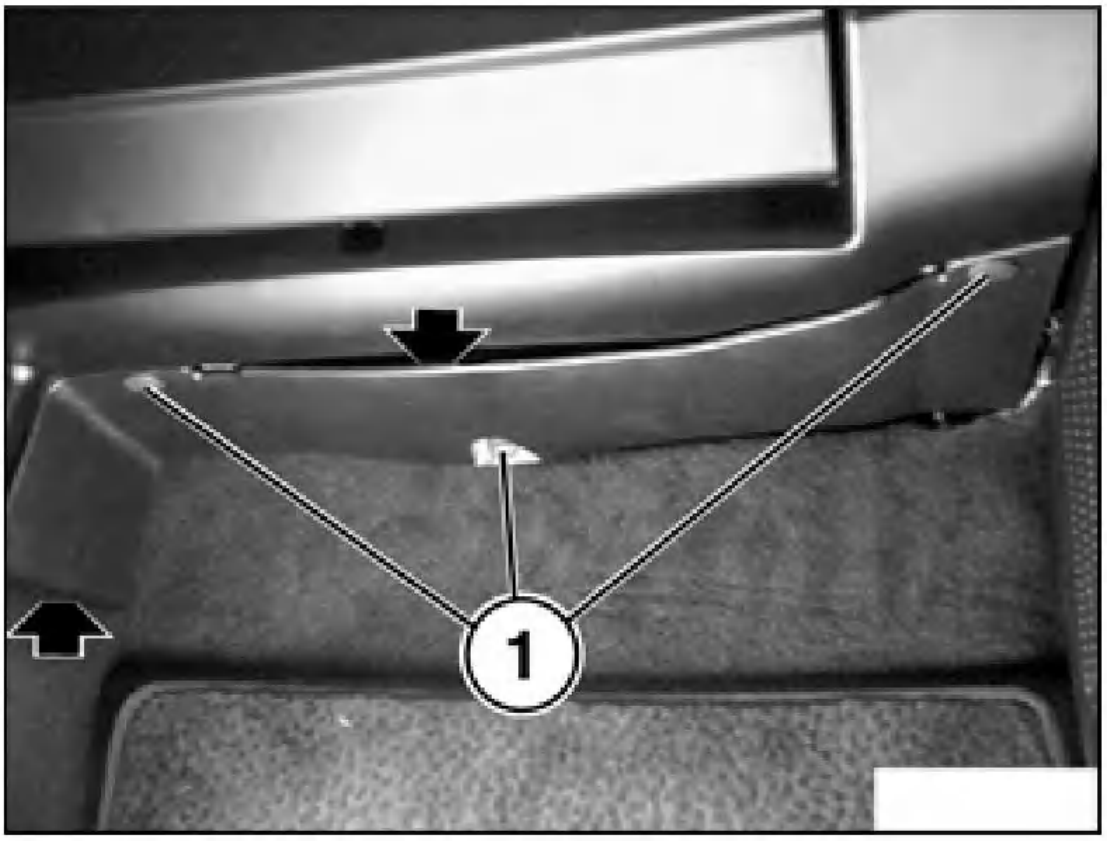


Fig. 82: Identifying Rotary Clips
Courtesy of BMW OF NORTH AMERICA, INC.

Open glove compartment cover.

Lift out finisher strips (1) and unfasten screws.

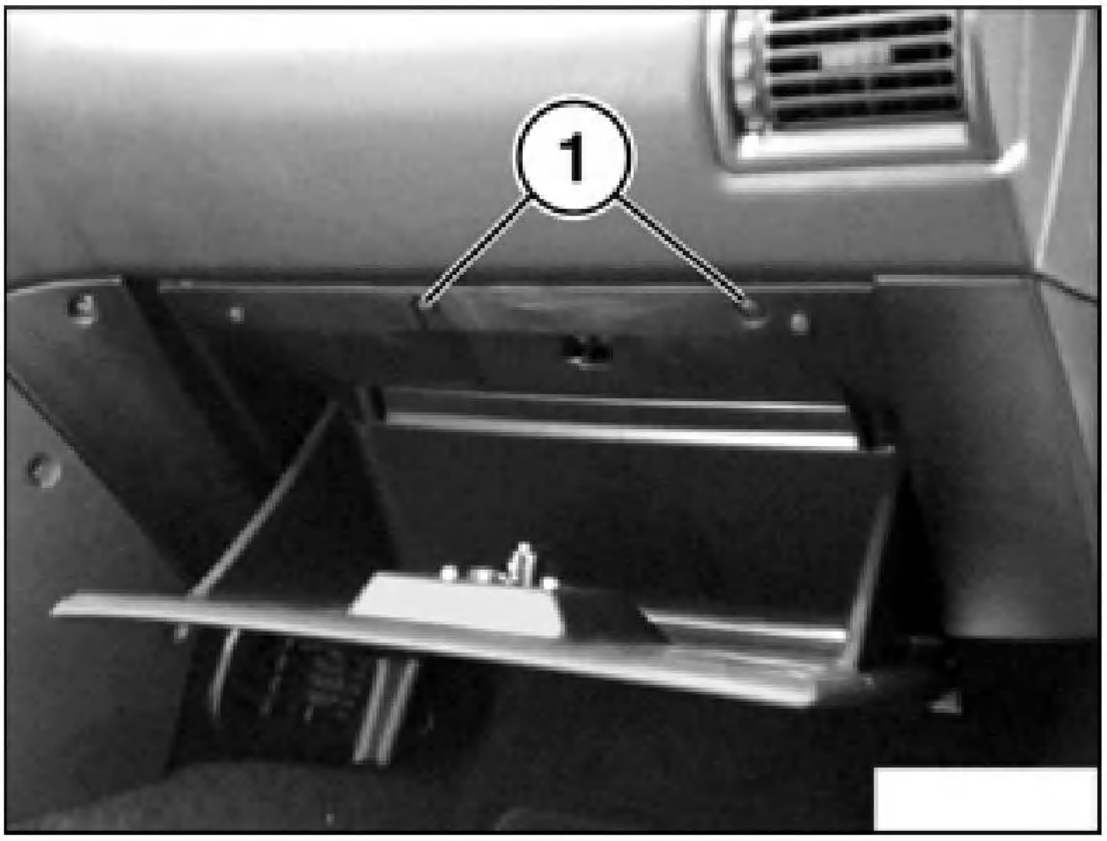


Fig. 83: Removing Finisher Strips
Courtesy of BMW OF NORTH AMERICA, INC.

Close glove compartment cover.

Lift out finisher strips (1) and unfasten screws. Remove glove compartment outward/downward.

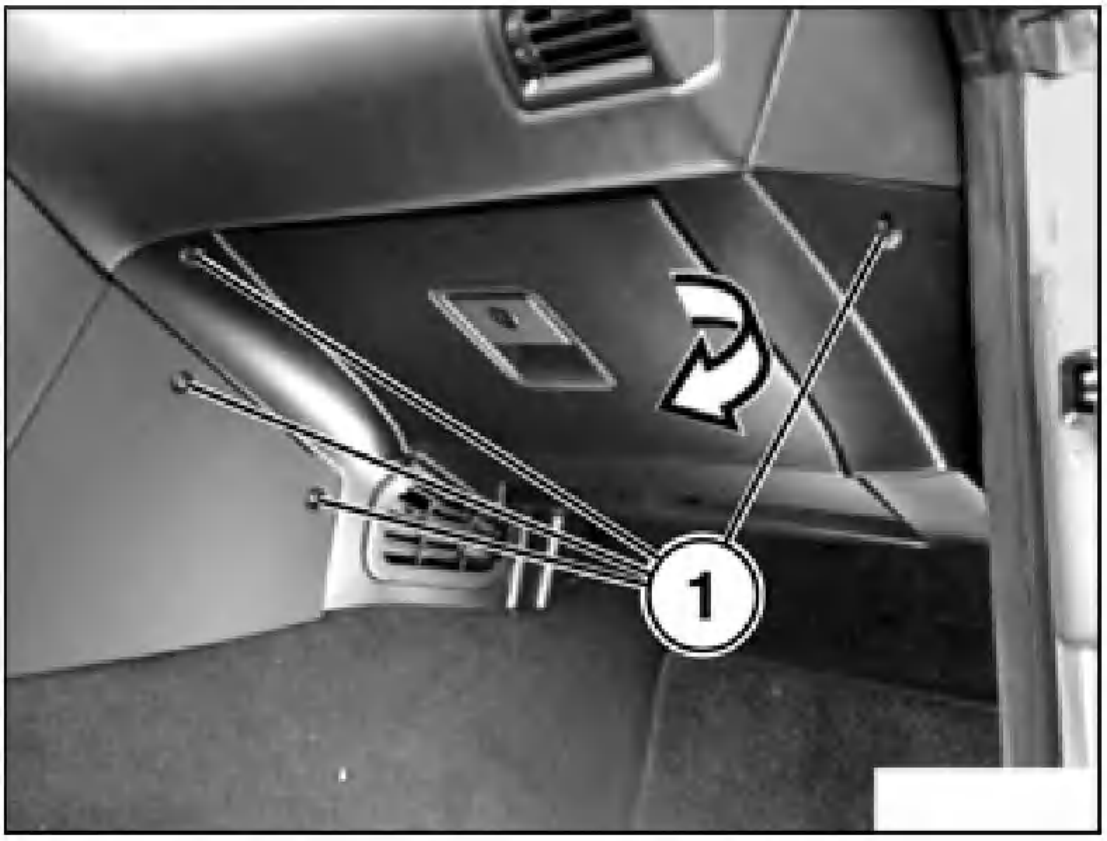


Fig. 84: Removing Glove Compartment Outward/Downward
Courtesy of BMW OF NORTH AMERICA, INC.

51 16 361 REPLACING RIGHT GLOVEBOX

Remove lock for right glovebox. Refer to 51 16 340 REMOVING AND INSTALLING/REPLACING LOCK FOR GLOVEBOX, RIGHT (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE) .

Remove right glovebox. Refer to 51 16 360 REMOVING AND INSTALLING GLOVEBOX, RIGHT (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE) .

LIDS

51 23 265 REMOVING AND INSTALLING/REPLACING LEFT OR RIGHT GAS STRUT FOR ENGINE BONNET/HOOD

WARNING: Risk of injury and damage! For the following tasks, you must take the appropriate measures to support the engine bonnet/hood. As an alternative, you can enlist the help of a second person to hold the bonnet/hood.

Raise bonnet/hood lid.

Removing gas spring strut at top and bottom:

1. Push retainer spring to end of gas spring strut.
2. Remove gas spring strut from ball head.

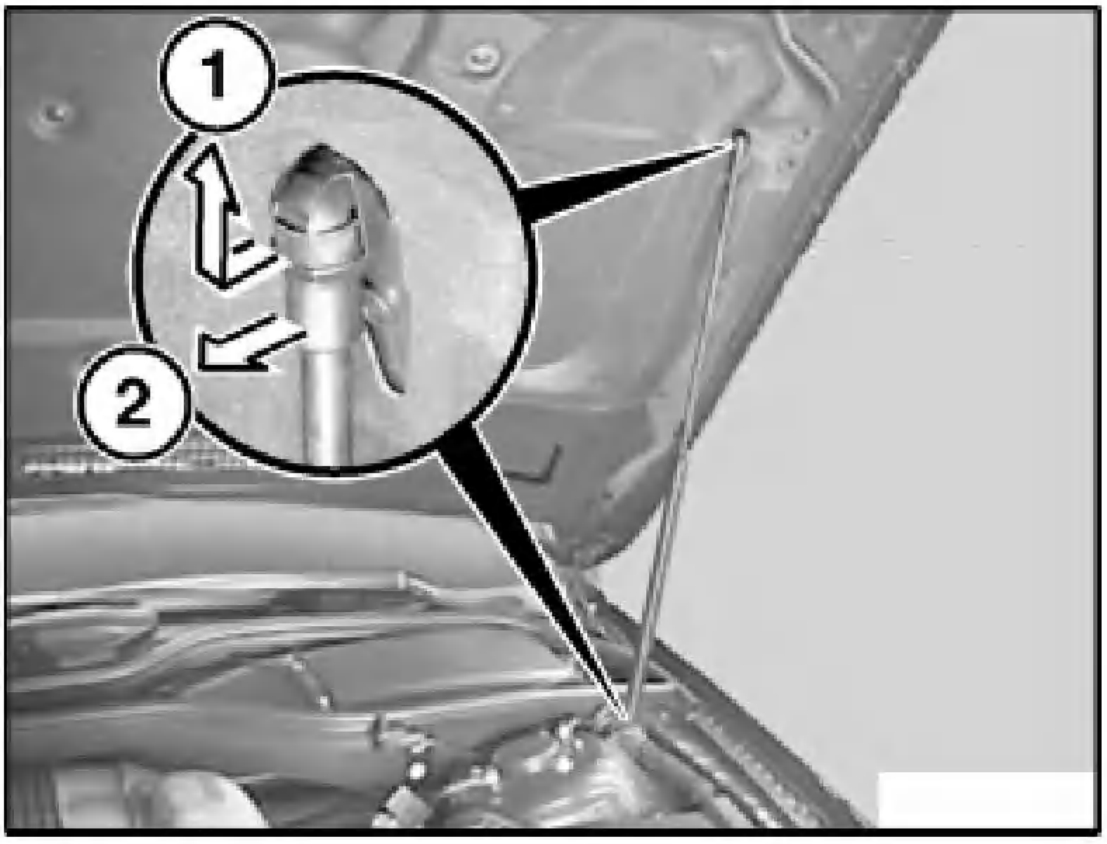


Fig. 85: Removing Gas Spring Strut At Top And Bottom
Courtesy of BMW OF NORTH AMERICA, INC.

FRONT DOOR LOCKS, HANDLES, FITTINGS

51 21 003 REPLACING DOOR DETENT (LOCK STRIKER), FRONT LEFT OR RIGHT (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE)

Remove rear side trim (lower section), refer to 51 43 015 REMOVING AND INSTALLING / REPLACING REAR LEFT OR RIGHT LOWER SECTION OF SIDE TRIM (Z3 ROADSTER, M ROADSTER) .

Lift off cover (1). Unfasten connector (2) and withdraw cable.

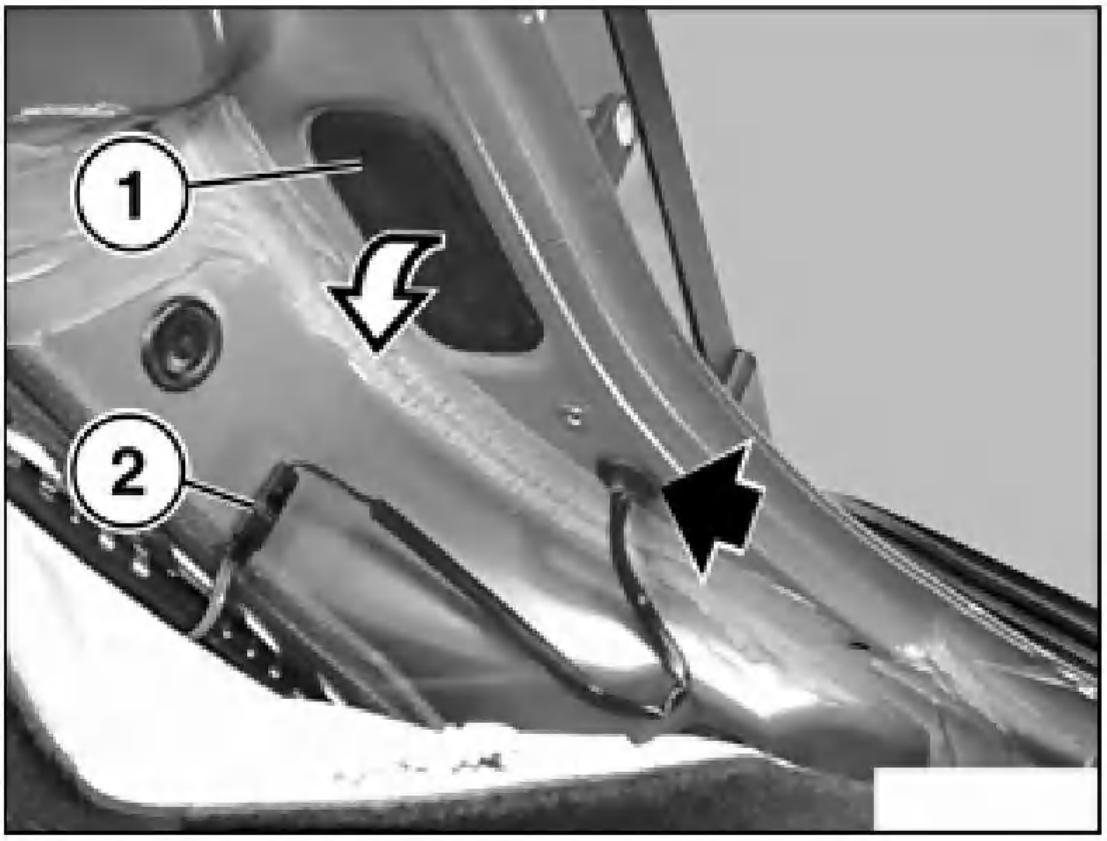


Fig. 86: Removing Cover And Cable
Courtesy of BMW OF NORTH AMERICA, INC.

Unfasten screws (1) then remove threaded plate (2) and striker (3).

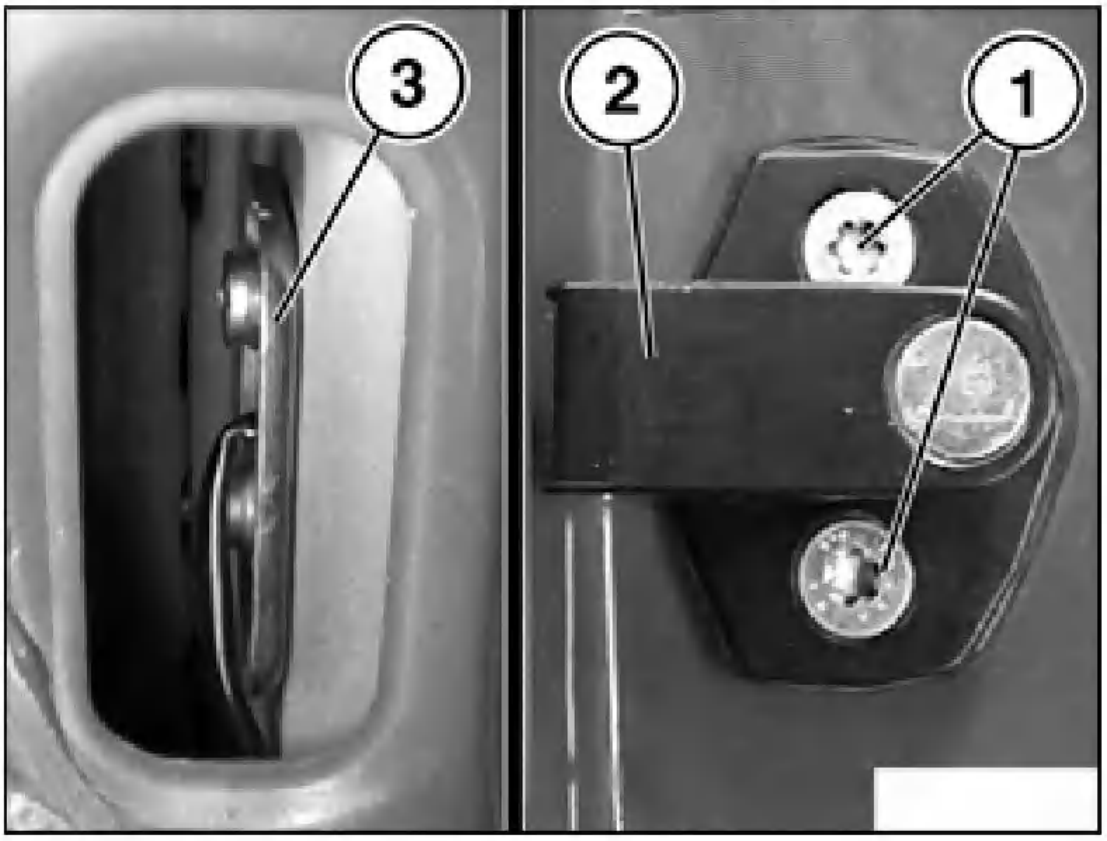


Fig. 87: Removing Threaded Plate And Striker
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Adjust striker.

51 21 090 REMOVING AND INSTALLING/REPLACING DOOR LOCK ON FRONT LEFT OR RIGHT DOOR (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE)

Removing front door window, refer to 51 32 170 REMOVING AND INSTALLING/REPLACING FRONT LEFT OR RIGHT DOOR WINDOWS (Z3 ROADSTER) .

Unscrew bolt. Unhook door opener on linkage and remove.

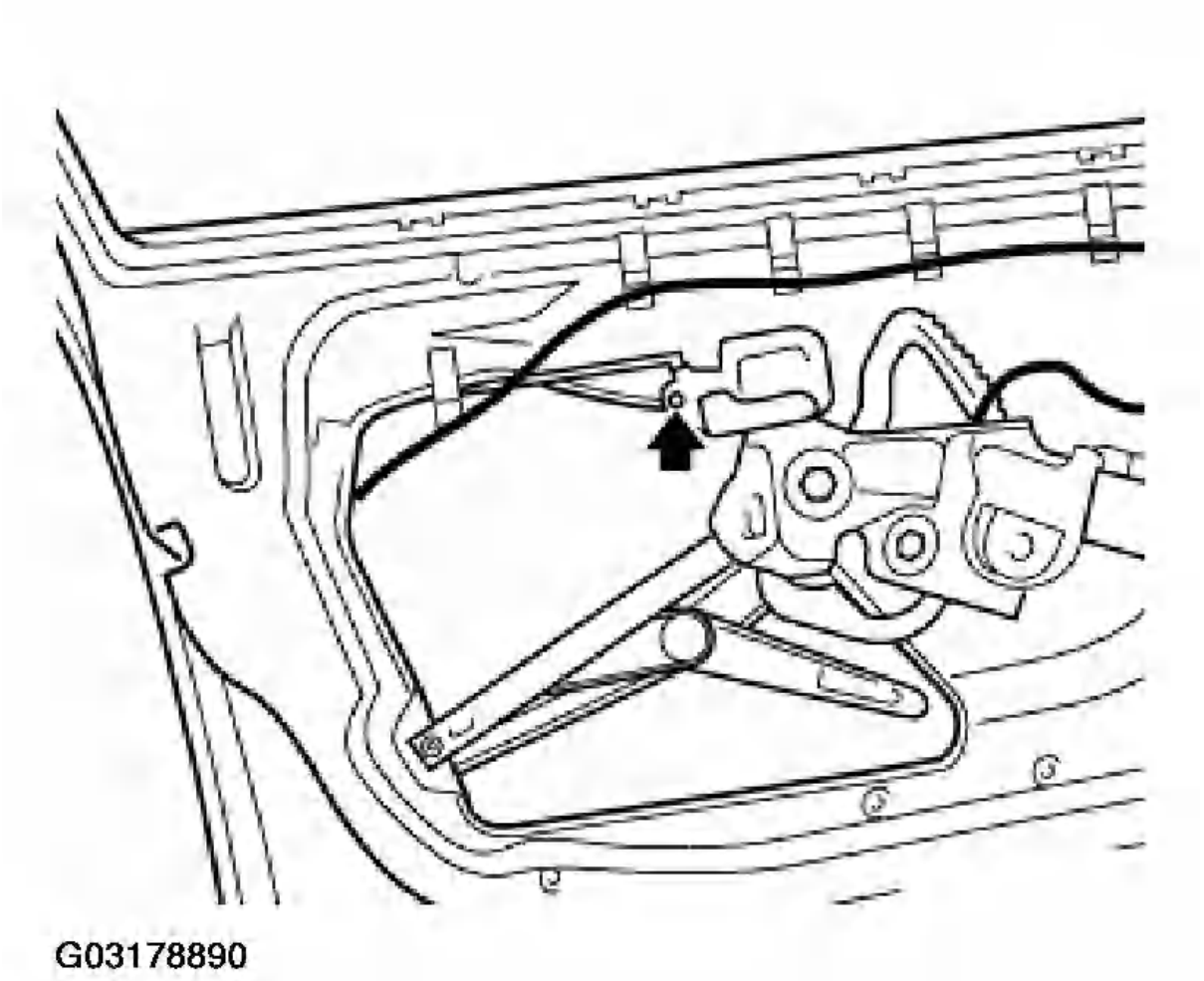


Fig. 88: Removing Door Opener On Linkage
Courtesy of BMW OF NORTH AMERICA, INC.

Unfasten lower screw on window guide rail.

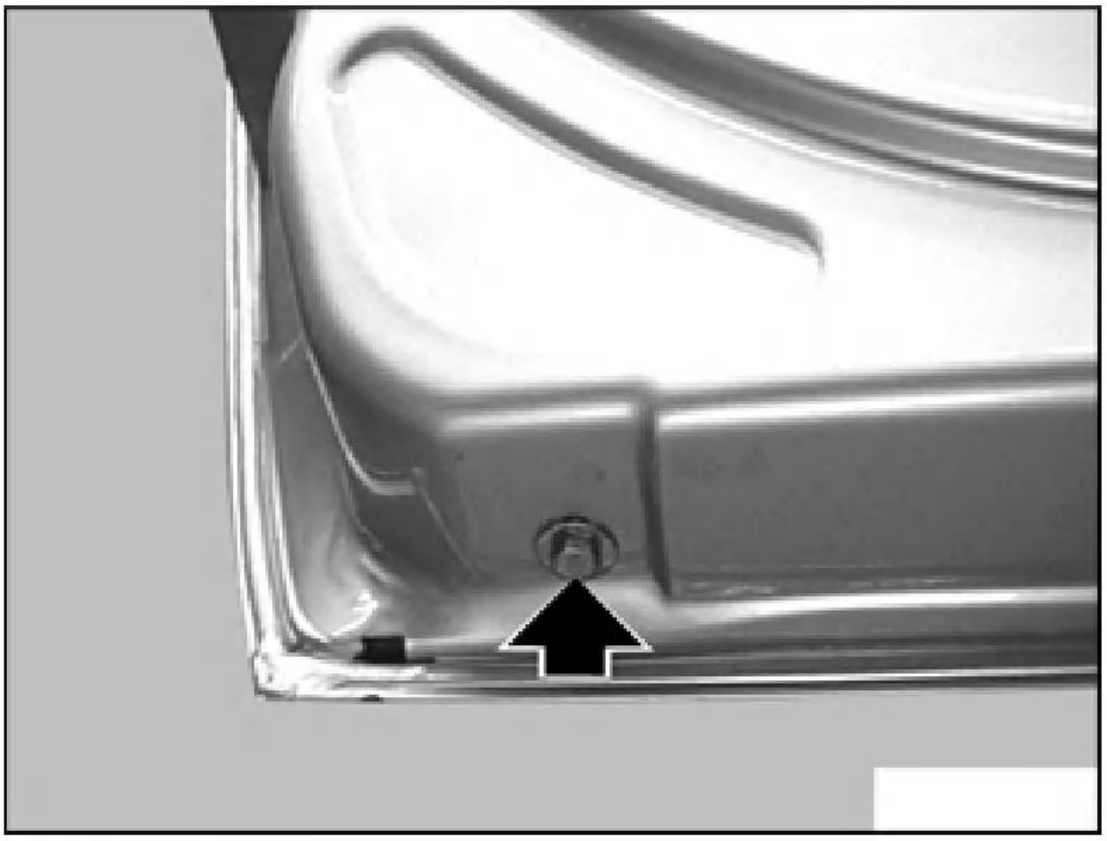


Fig. 89: Removing Lower Screw On Window Guide Rail
Courtesy of BMW OF NORTH AMERICA, INC.

Unscrew bolt (1). Twist window guide rail (2) towards door hinge and remove through aperture in metal panel.

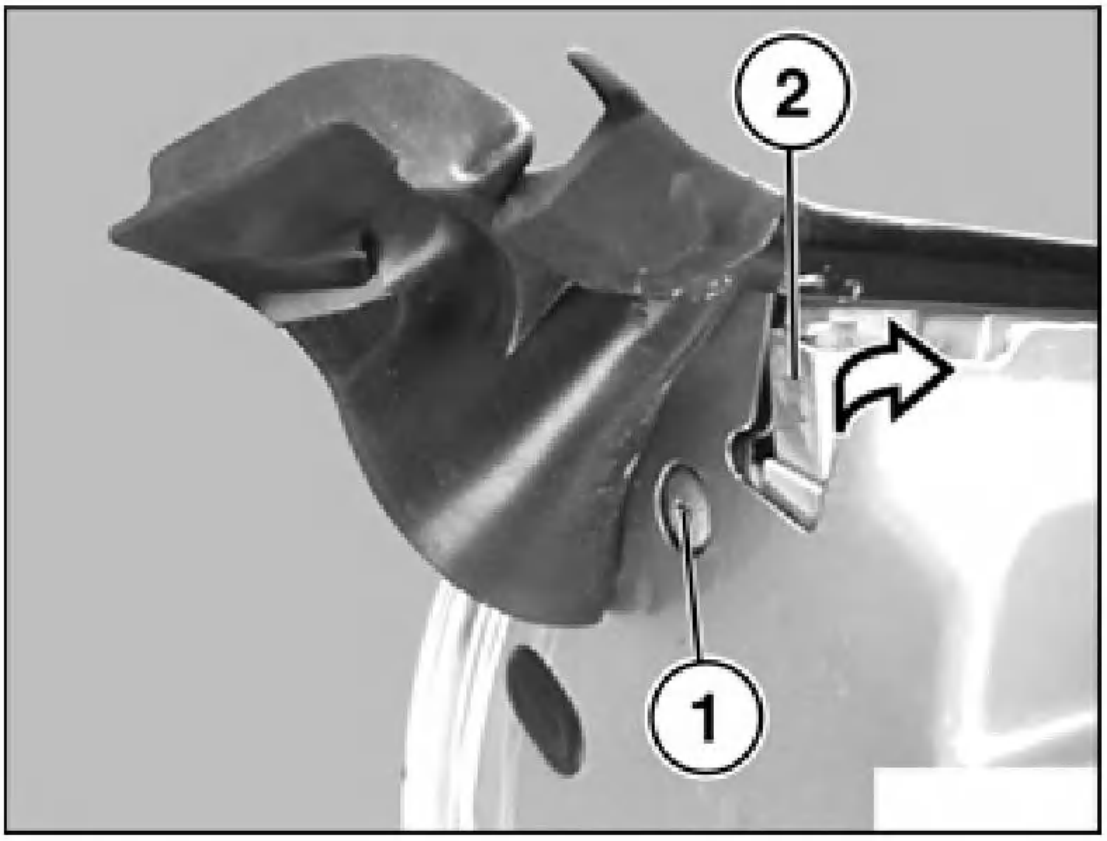


Fig. 90: Removing Window Guide Rail
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Fit muckets (1) and (2) to window guide rail (3).

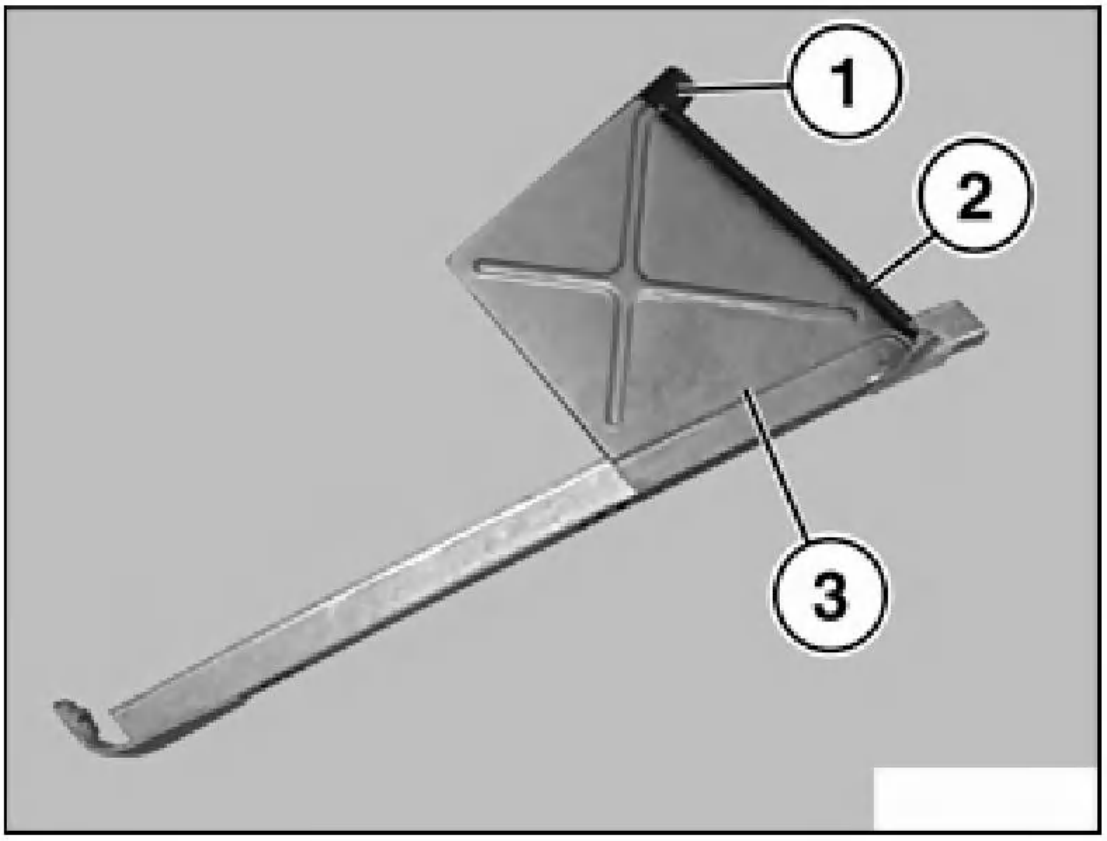


Fig. 91: Installing Window Guide Rail
Courtesy of BMW OF NORTH AMERICA, INC.

Unfasten screws.

Installation:

Install screws with Loctite 270.

Tightening Torque, 51 21 1AZ. Refer to 51 21 FRONT DOOR LOCKS .

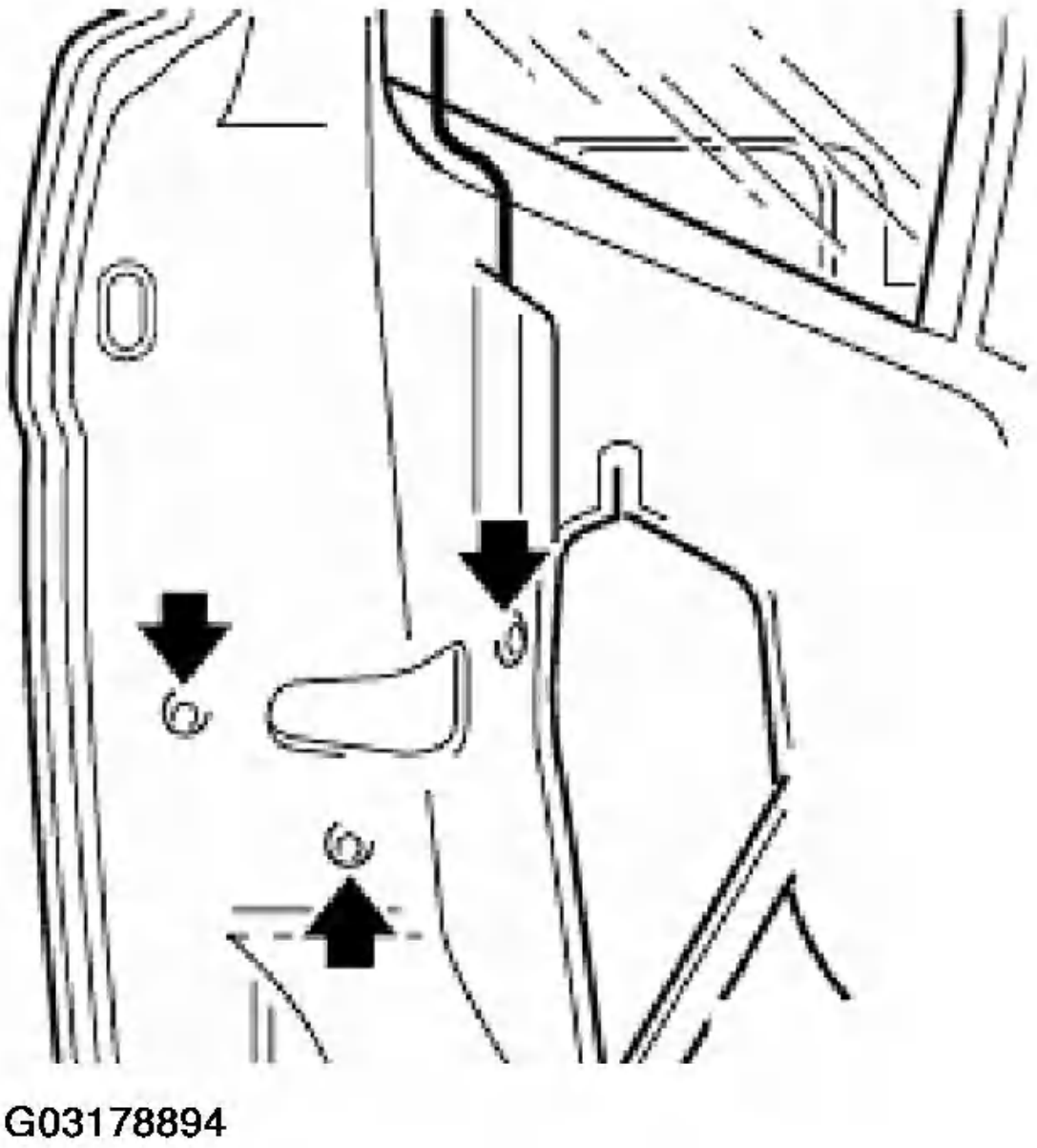


Fig. 92: Installing Screw
Courtesy of BMW OF NORTH AMERICA, INC.

Unclip retainer (1) and lift out linkage (2).

Lift door lock (3) up slightly and disconnect linkage (4) from outside door handle.

Remove door lock downwards.

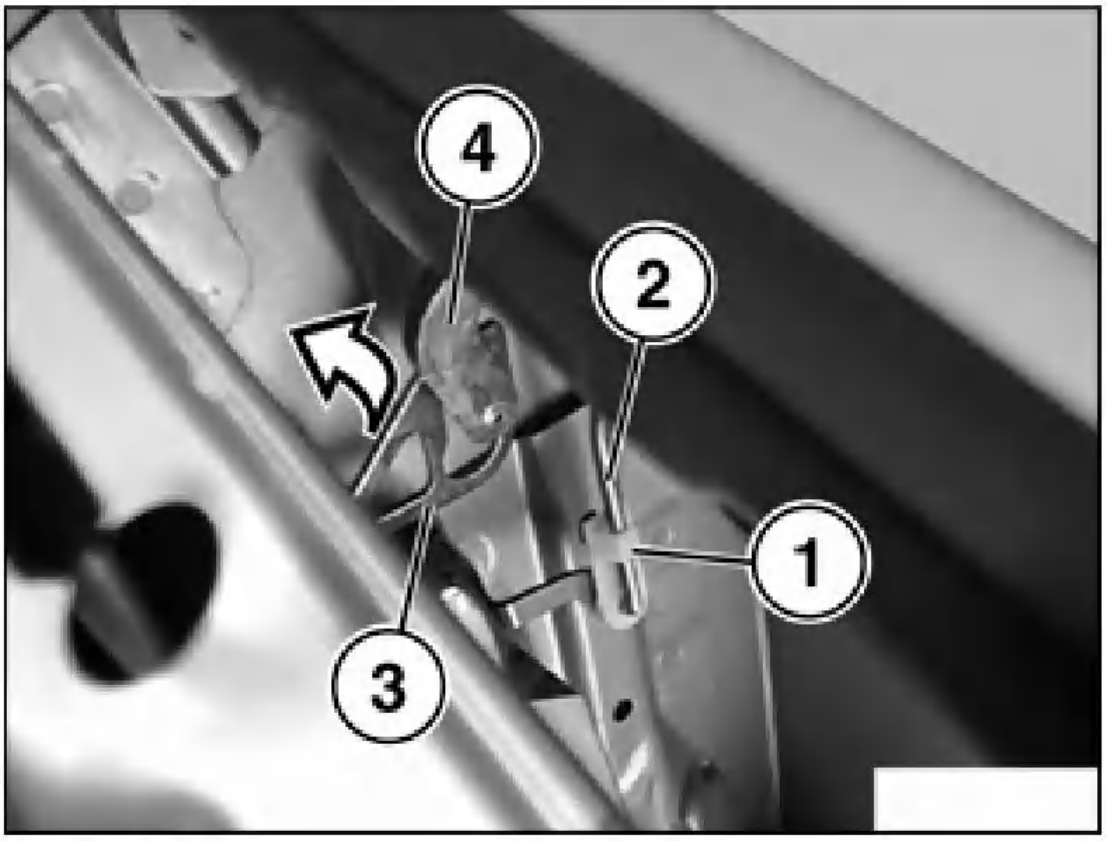


Fig. 93: Removing Door Lock
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Insert frame for catch button through opening in inner door panel. Do not bend linkage.

Lift cable (1) out of brackets (2) on door lock (3).

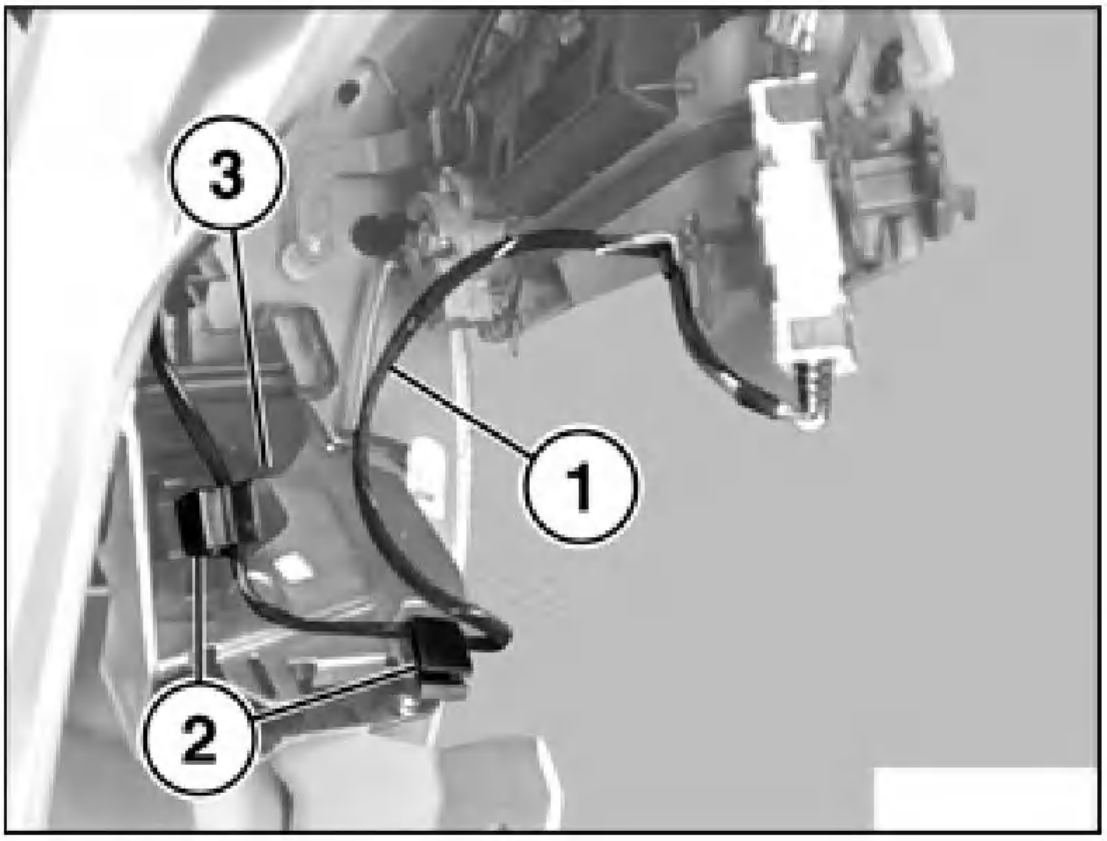


Fig. 94: Removing Brackets On Door Lock
Courtesy of BMW OF NORTH AMERICA, INC.

Unfasten connector (1) and remove door lock (2).

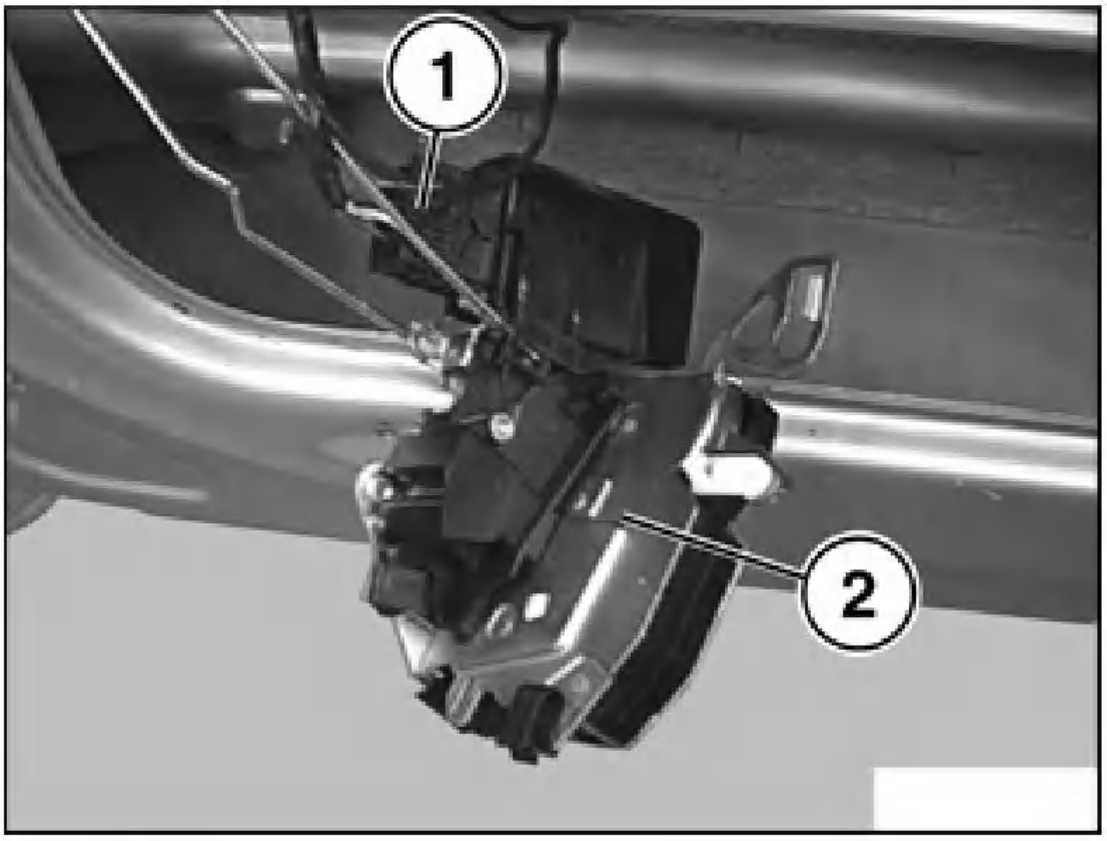


Fig. 95: Removing Connector And Door Lock
Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: The operation "Removing lock from front door" ends here.

Only replacement (central locking drive):

Lift out lock and remove actuator drive (1) from central locking mechanism.

Installation:

Check actuating rod (2), locking rod (3), clip and cable tie (4) for wear and replace if necessary.

Check function.

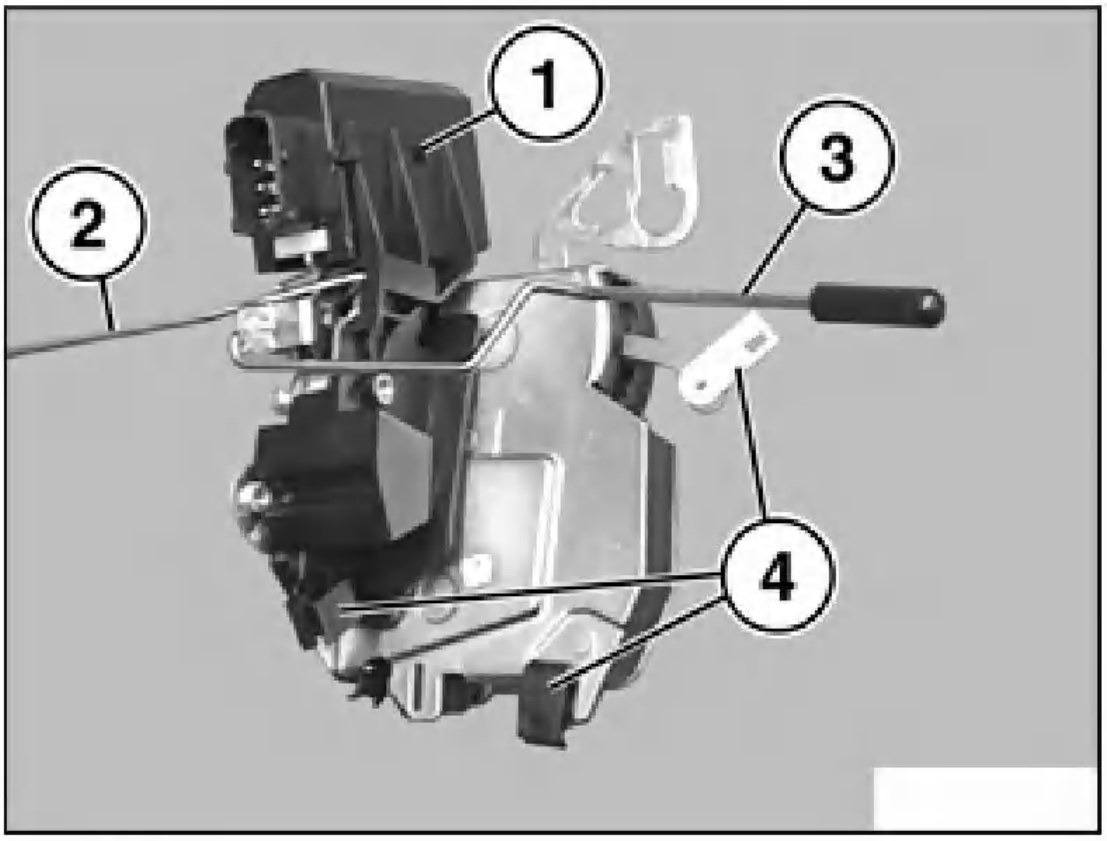


Fig. 96: Removing Actuator Drive From Central Locking Mechanism
Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: The operation "Replacing switch on front door" ends here.

Only replacement (door lock):

Lift out lock and remove actuator drive (1) from central locking mechanism.

Disconnect actuating rod (2) and locking rod (3). Replace clip and cable tie (4).

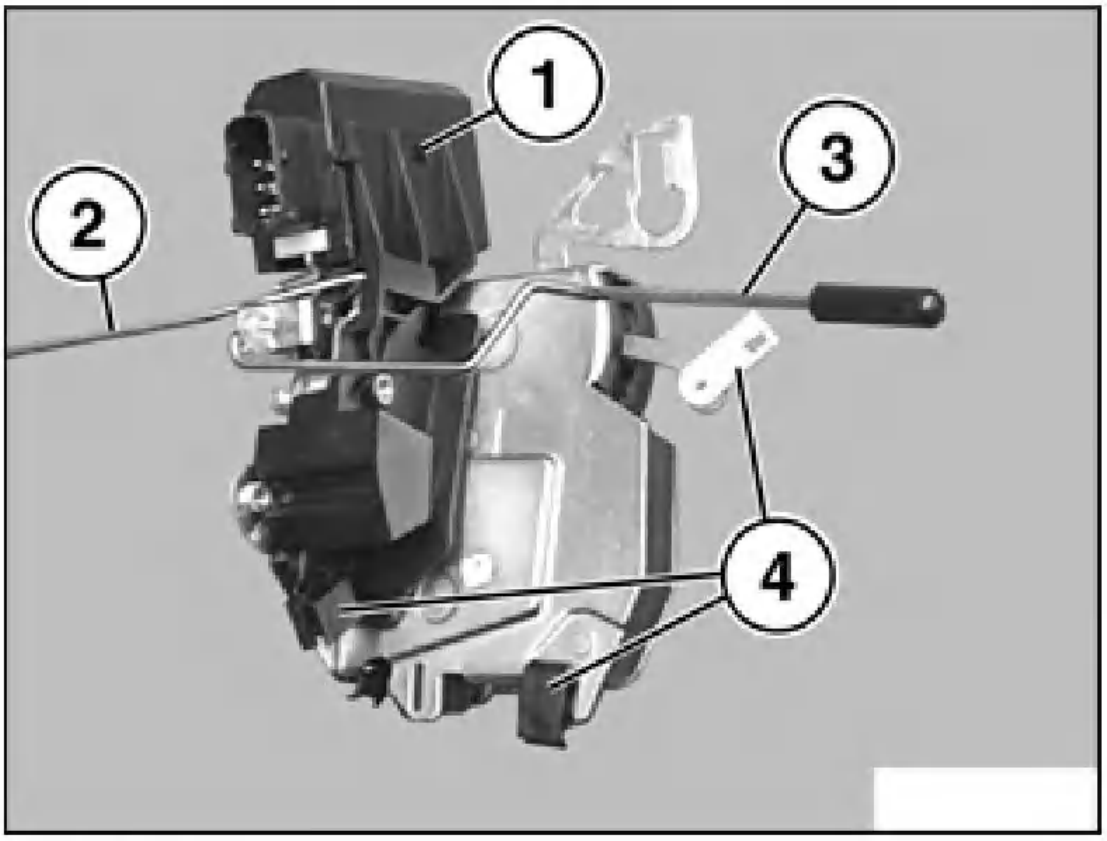


Fig. 97: Removing Actuating Rod And Locking Rod
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Check function.

51 21 140 REMOVING AND INSTALLING/REPLACING COMPLETE LOCK CYLINDER

Operation Is Described In:

Removing and installing/replacing outside handle on left or right front door, refer to 51 21 170 REMOVING AND INSTALLING/REPLACING OUTSIDE HANDLE ON FRONT LEFT OR RIGHT DOOR (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE) .

51 21 170 REMOVING AND INSTALLING/REPLACING OUTSIDE HANDLE ON FRONT LEFT OR RIGHT DOOR (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE)

Remove finisher strip for outside handle on front door, refer to 51 21 194 REMOVING AND INSTALLING/REPLACING FINISHER FROM OUTSIDE HANDLE ON LEFT OR RIGHT FRONT DOOR .

Remove front door trim, refer to 51 41 000 REMOVING AND INSTALLING FRONT LEFT OR RIGHT DOOR TRIM PANEL (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE) .

Turn and remove holder on outside handle.

Cut through connector (1) on central locking mechanism and disconnect cable (2) from retaining tab (3).

Remove retaining plate (4) and lift out pin.

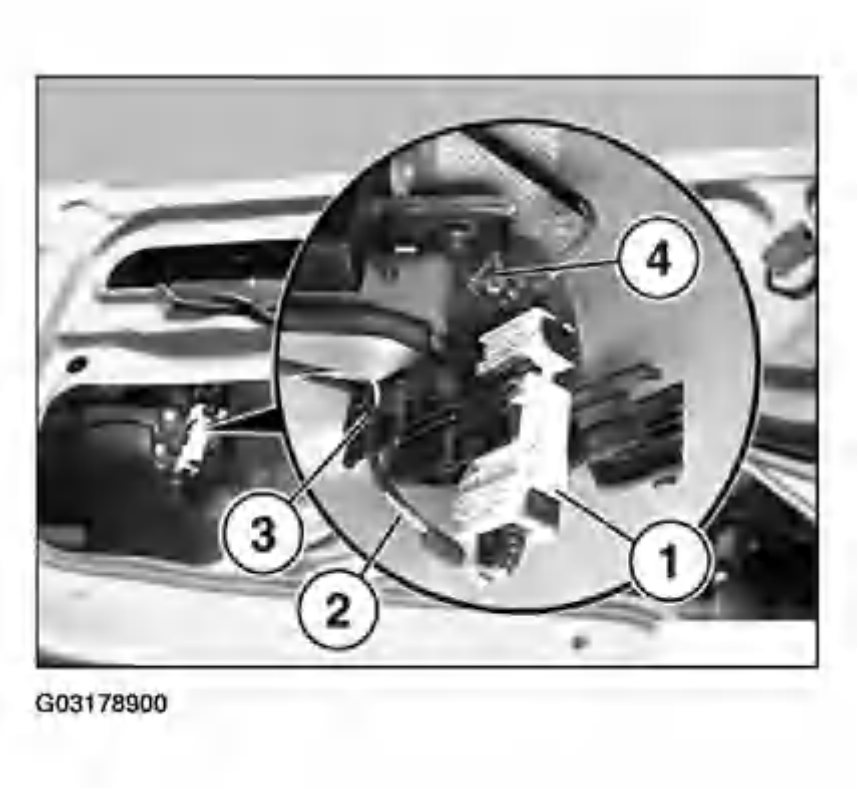


Fig. 98: Removing Retaining Plate And Lift Out Pin
Courtesy of BMW OF NORTH AMERICA, INC.

Unscrew nut using special tool 51 2 070 and take off outside handle.

Installation:

Tightening Torque, 51 21 2AZ. Refer to 51 21 FRONT DOOR LOCKS .

Check function.

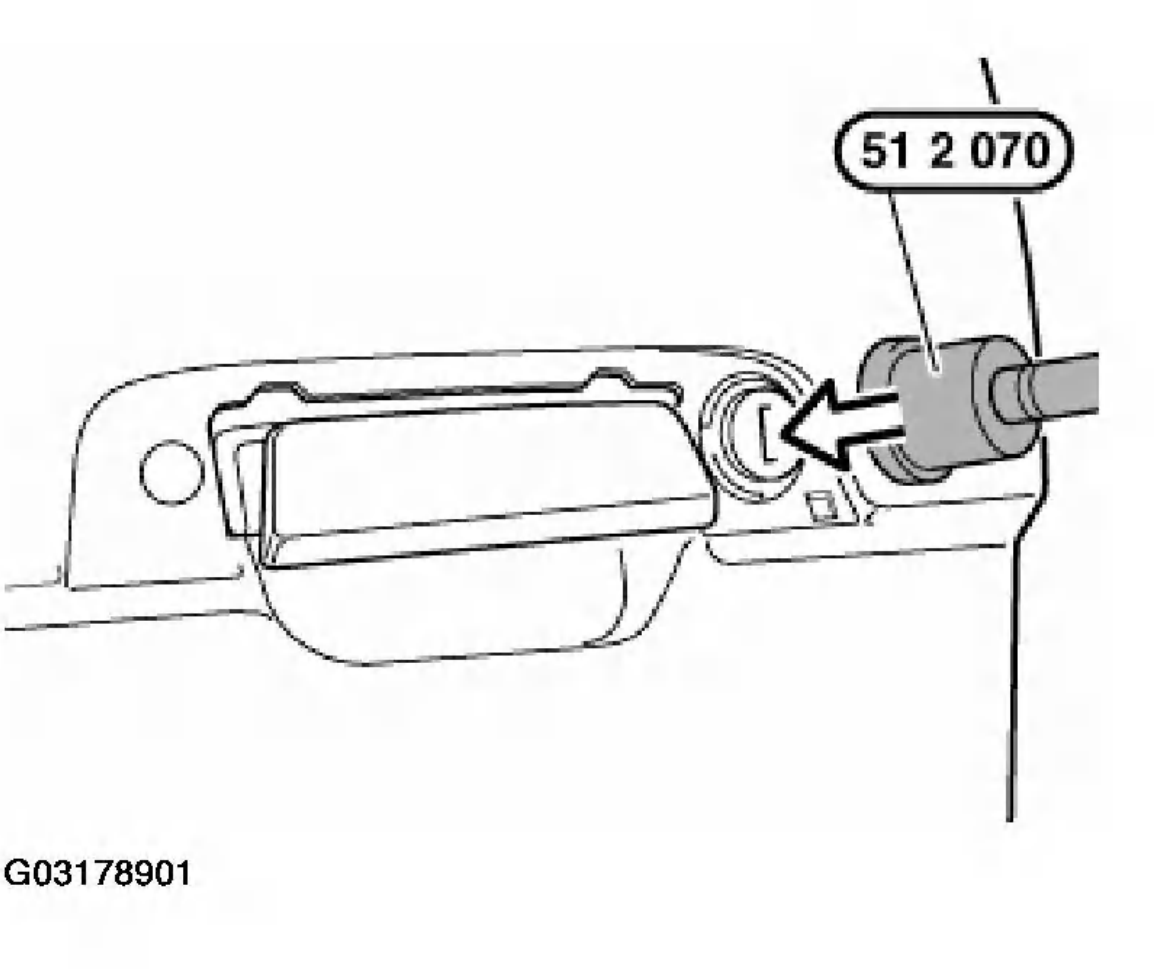


Fig. 99: Removing Outside Handle
Courtesy of BMW OF NORTH AMERICA, INC.

Unclip retainer (1) and lift out linkage (2). Press outside handle (3) slightly down, disconnect from gate on door lock (4) and remove.

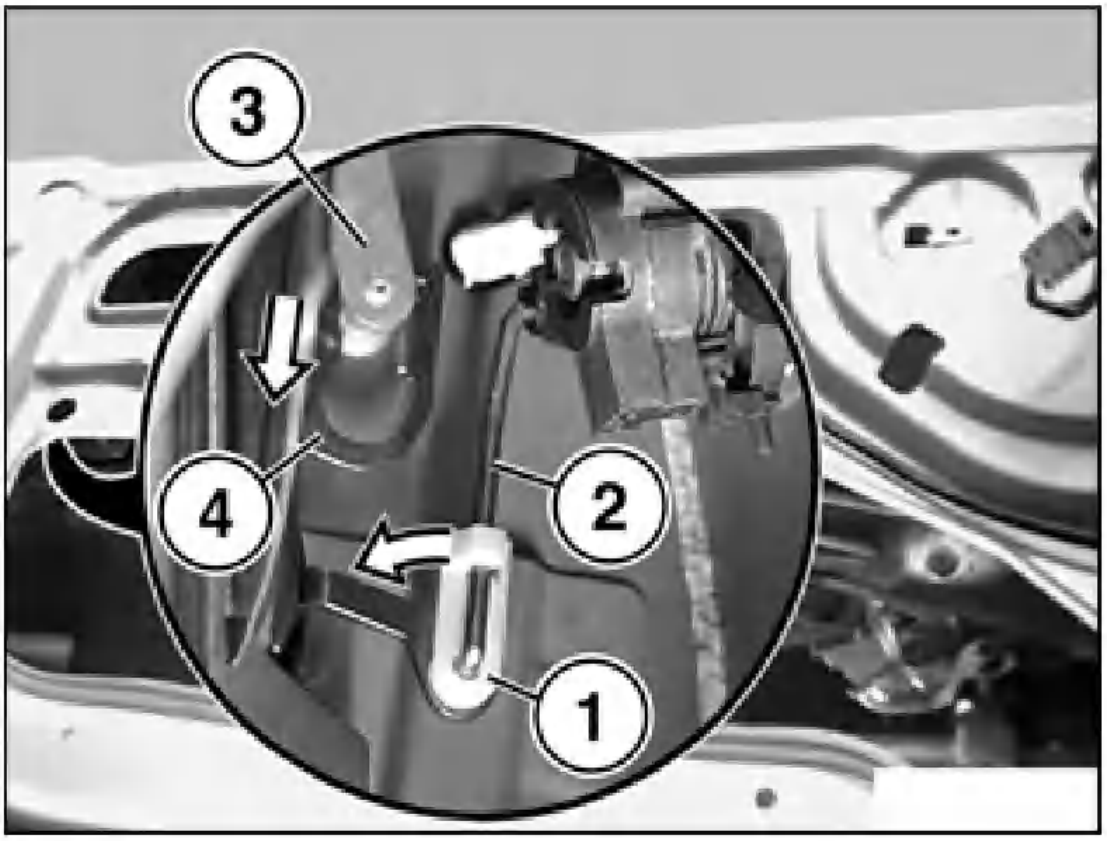


Fig. 100: Removing Retainer And Lift Out Linkage
Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: The operation "Removing outside handle from left or right front door" ends here.

Only For Replacement Of Lock Cylinder:

Insert key (1) in lock cylinder (3).

Drive out pin (2) using much and press out lock cylinder (3) using the vehicle key (1) (do not pull on the key (1)).

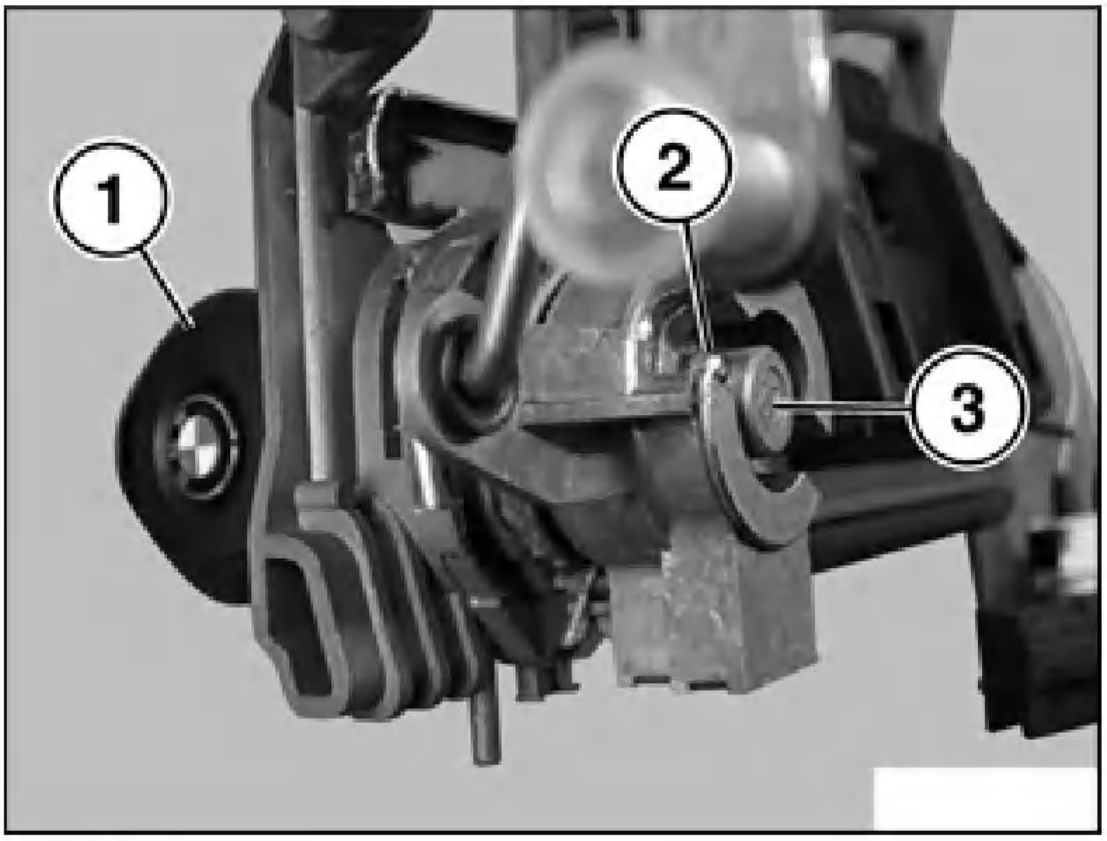


Fig. 101: Removing Outside Handle From Left Or Right Front Door
Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: If the key (1) is removed from the lock cylinder (2) during disassembly, the encoding plates (3) drop out.

Installation:

When installed, the tip (4) is at the top.

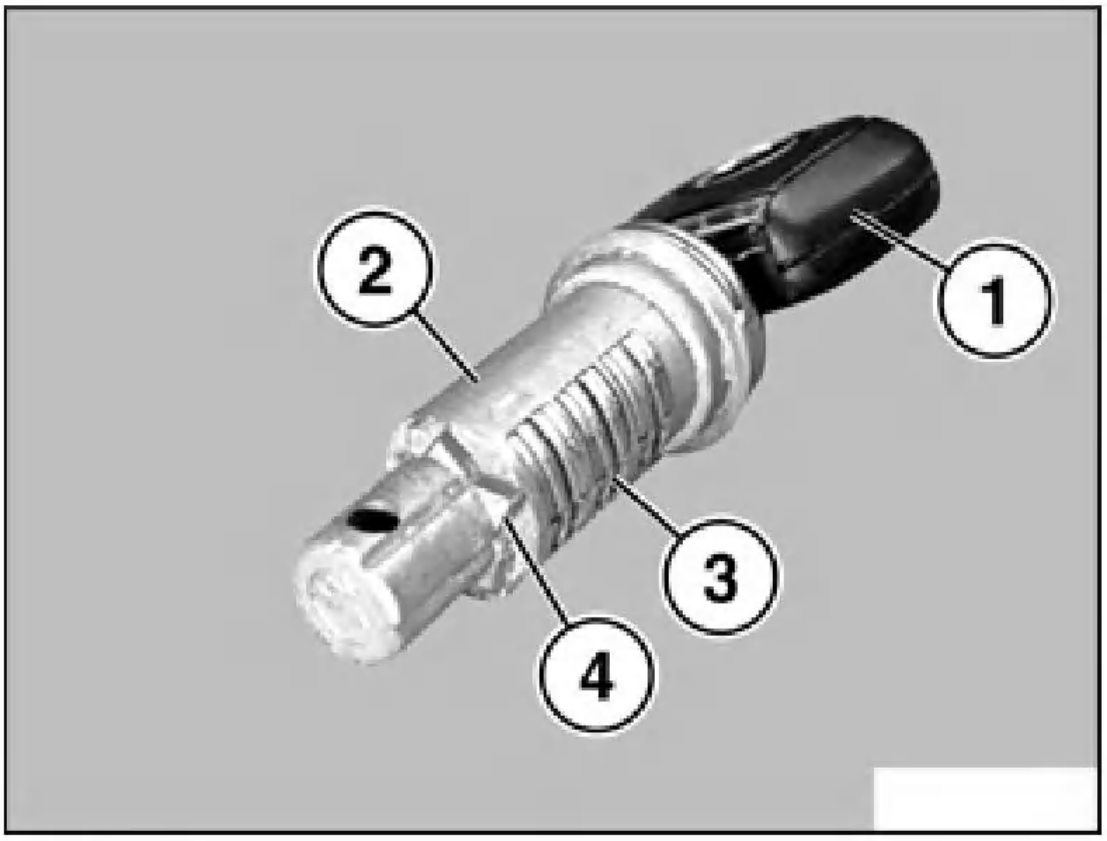


Fig. 102: Identifying Lock Assembly
Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: The operation "Removing and installing/replacing complete lock cylinder on left or right front door" ends here.

Remove clip (1) and lift out micro-switch (2). Remove cable (3) from the guide (4). Twist contactor socket (5) and remove. Remove actuating rod (6).

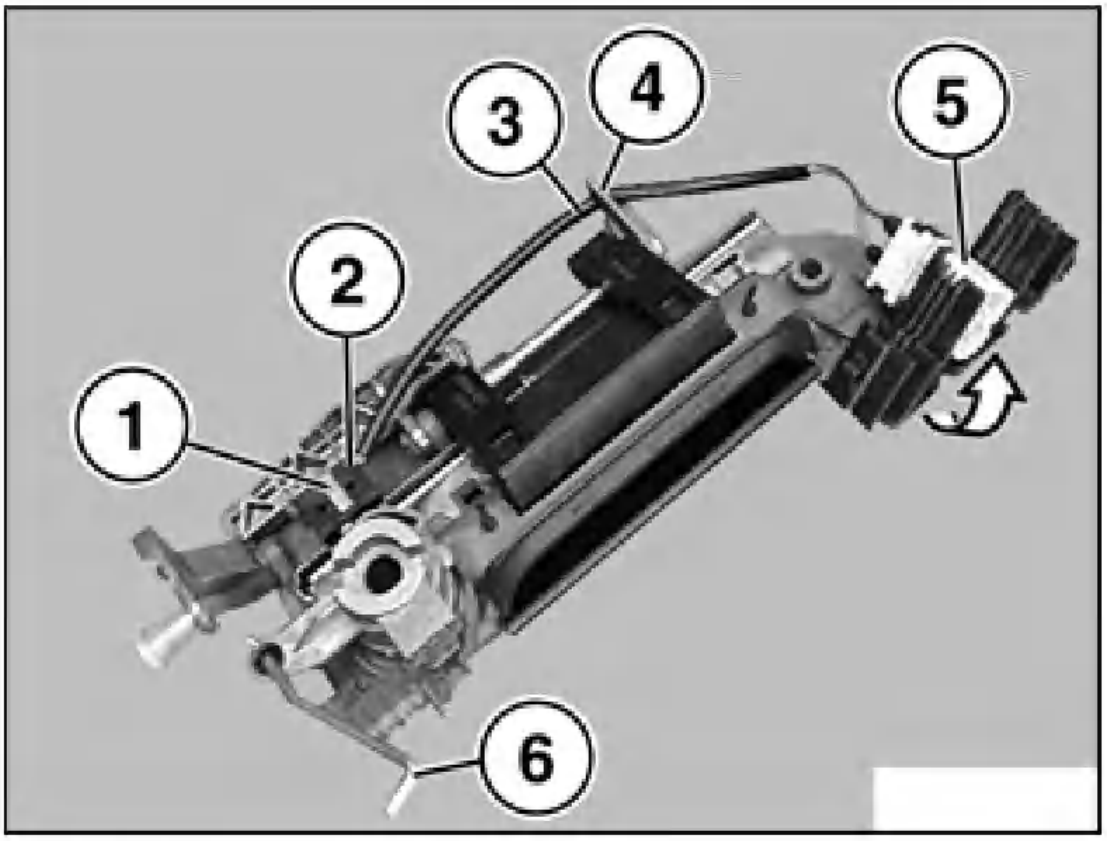


Fig. 103: Removing Actuating Rod
Courtesy of BMW OF NORTH AMERICA, INC.

51 21 194 REMOVING AND INSTALLING/REPLACING FINISHER FROM OUTSIDE HANDLE ON LEFT OR RIGHT FRONT DOOR

Unclip cover.

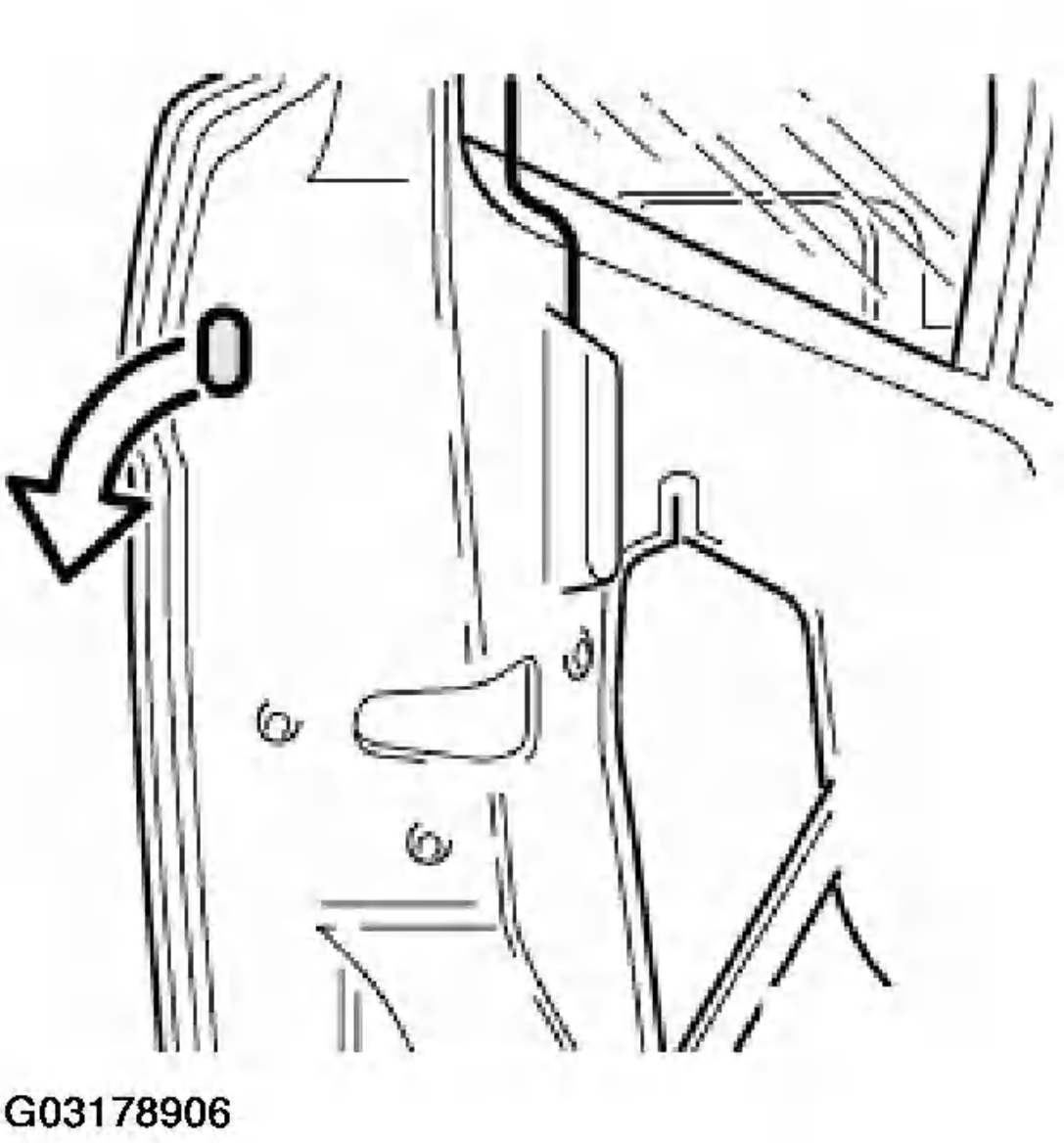


Fig. 104: Removing Cover
Courtesy of BMW OF NORTH AMERICA, INC.

Push slide forwards with special tool 51 3 190 and remove finisher from outside handle.

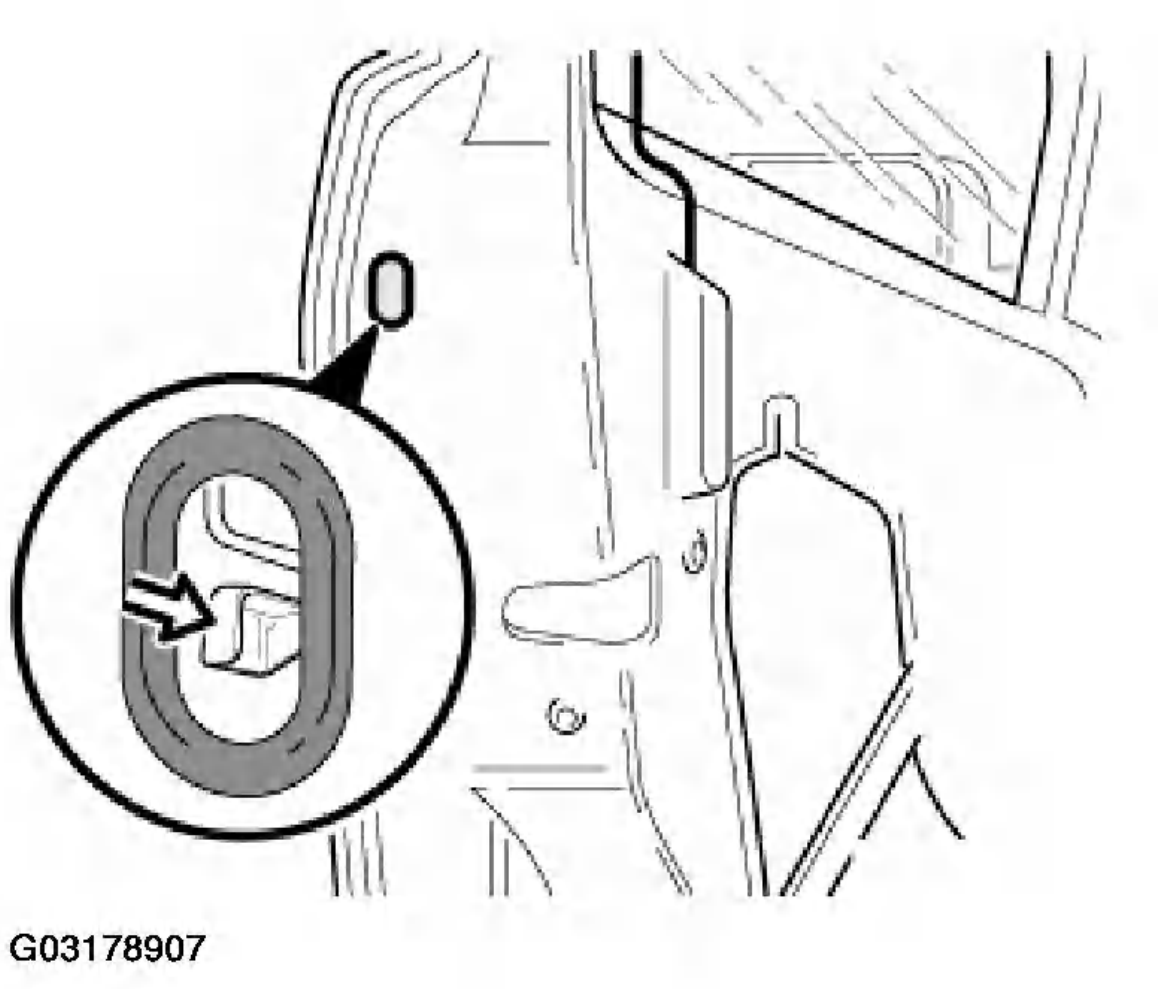


Fig. 105: Removing Finisher From Outside Handle
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Install finisher for outside handle, pull slide backwards with special tool 51 3 190 and ensure it is correctly engaged.

51 21 200 REMOVING AND INSTALLING/REPLACING OUTSIDE HANDLE AND LOCK ACTUATOR ON FRONT LEFT OR RIGHT DOOR (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE)

Operation Is Described In:

Removing and installing/replacing outside handle from front left or right door (Z3 Roadster), refer to 51 21 170 REMOVING AND INSTALLING/REPLACING OUTSIDE HANDLE ON FRONT LEFT OR RIGHT DOOR (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE) .

51 21 225 REMOVING AND INSTALLING/REPLACING INSIDE DOOR HANDLE IN LEFT OR RIGHT FRONT DOOR

Remove door trim panel, refer to 51 41 000 REMOVING AND INSTALLING FRONT LEFT OR RIGHT DOOR TRIM PANEL (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE) .

Unfasten screw, unclip door handle from linkage and remove.

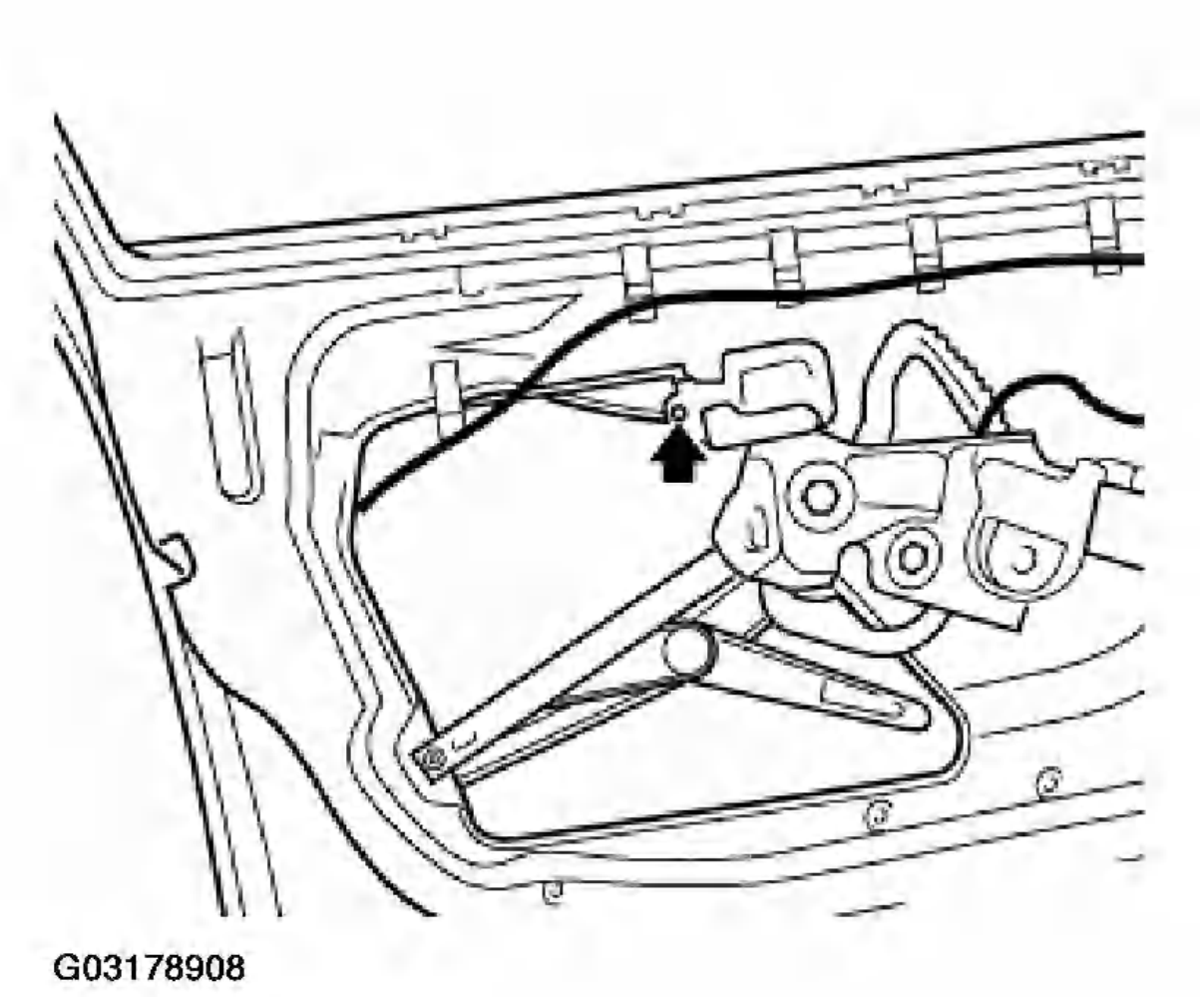


Fig. 106: Removing Door Handle From Linkage
Courtesy of BMW OF NORTH AMERICA, INC.

51 21 280 REMOVING AND INSTALLING OR REPLACING DOOR STOP ON LEFT OR RIGHT FRONT DOOR

Remove door trim panel, refer to 51 41 000 REMOVING AND INSTALLING FRONT LEFT OR RIGHT DOOR TRIM PANEL (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE) .

Pull off inner foil and/or part of front acoustic insulation.

NOTE: To prevent damage to paintwork, mask the area around the rivet with fabric adhesive tape.

Slide rubber grommet to one side and, if necessary, unfasten cable strap.

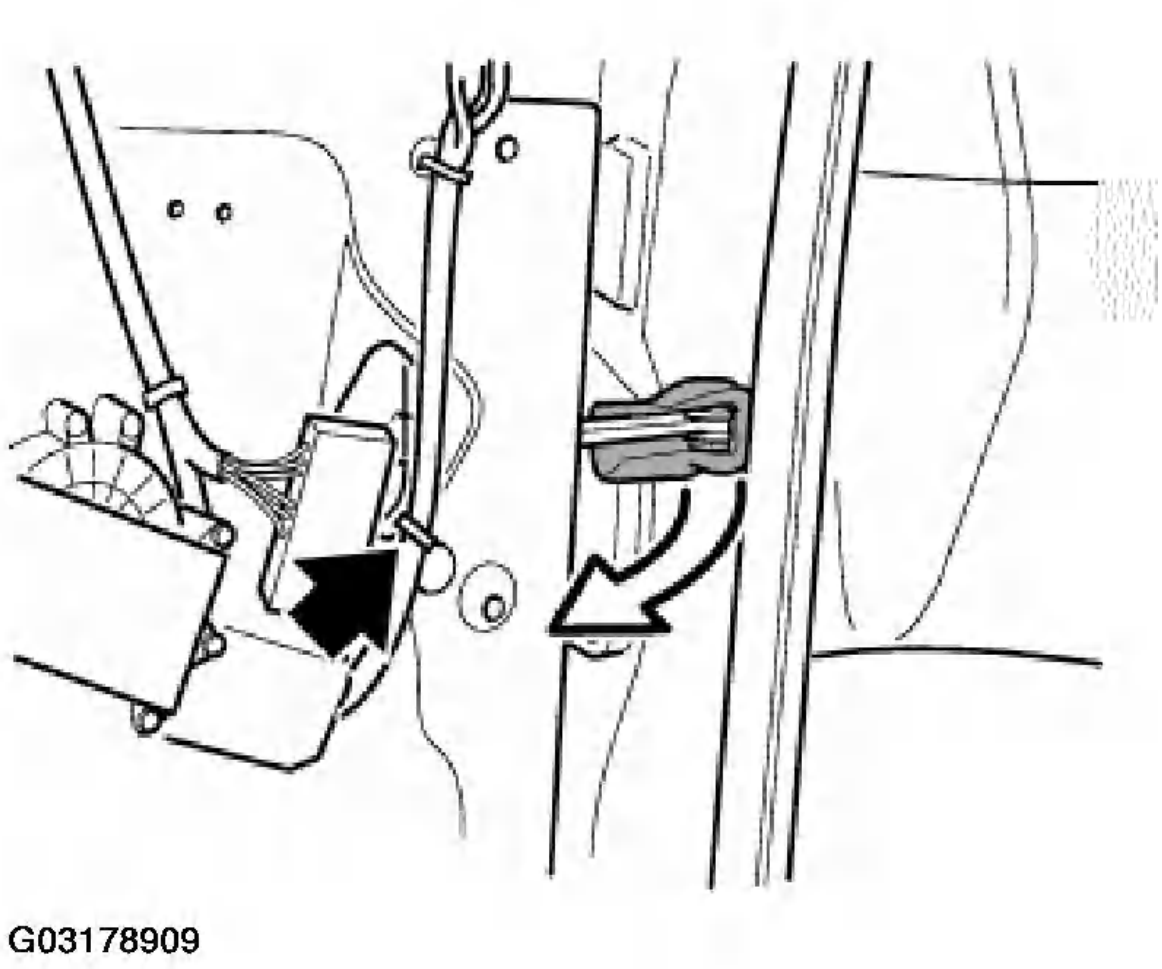


Fig. 107: Removing Cable Strap
Courtesy of BMW OF NORTH AMERICA, INC.

Old Build Status:

Pull lock plate off towards rear.

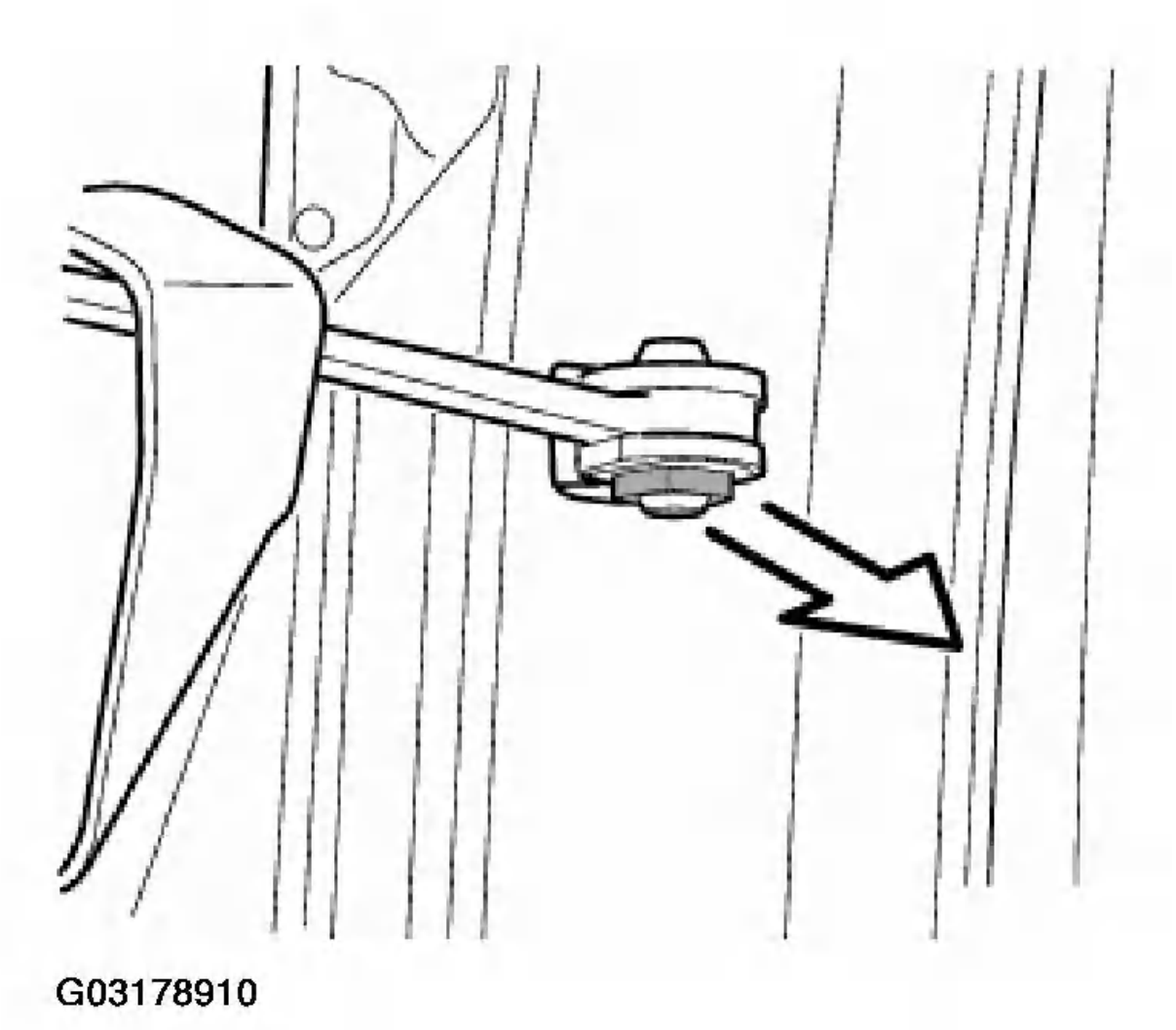


Fig. 108: Removing Lock Plate
Courtesy of BMW OF NORTH AMERICA, INC.

Old Build Status:

Drive rivet out in upwards direction.

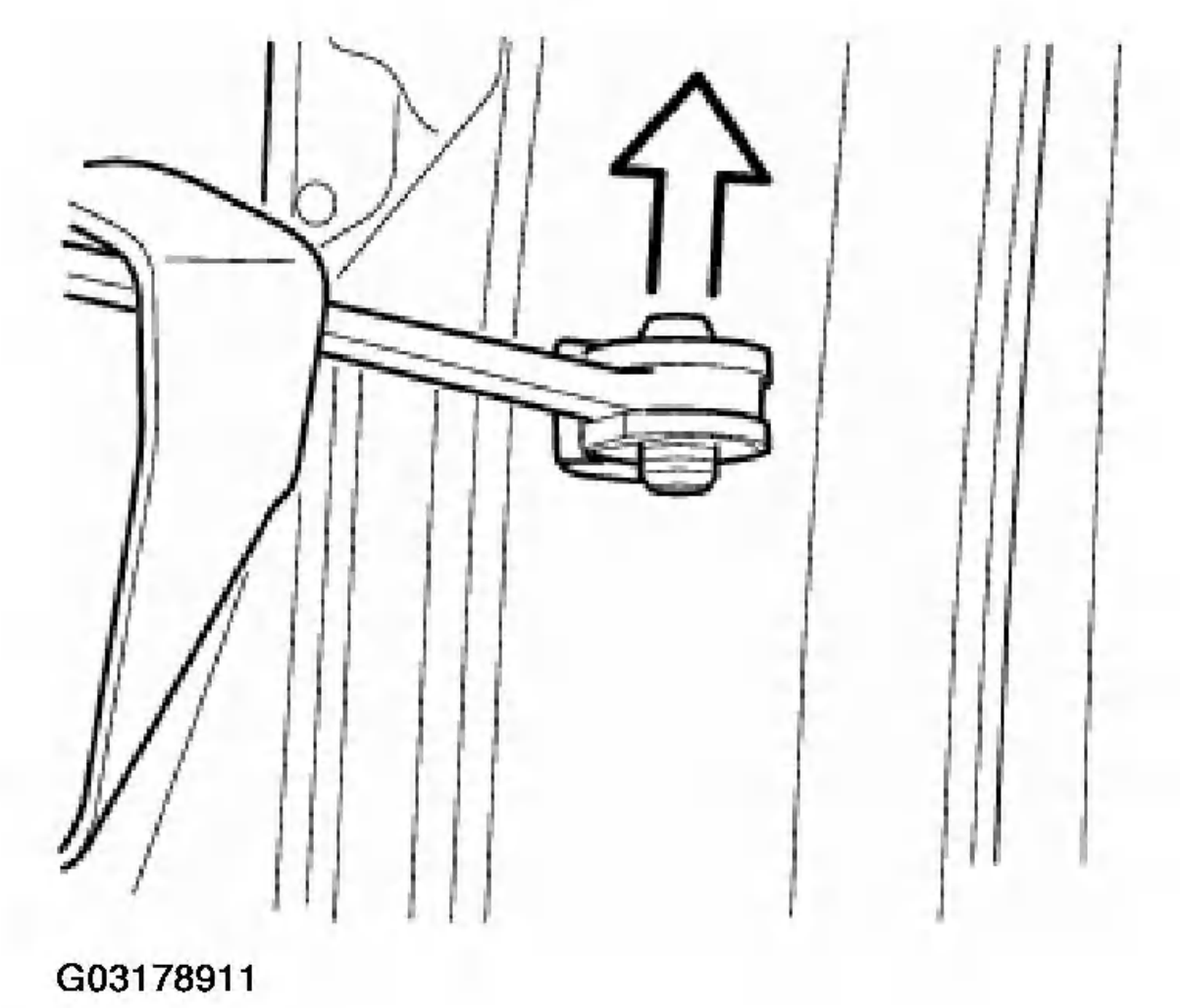


Fig. 109: Driving Rivet Out
Courtesy of BMW OF NORTH AMERICA, INC.

Pull off rubber grommet.

New Build Status:

To brace a socket nut (1) (e.g. size 10 mm), mask with fabric adhesive tape (damage to paintwork) and use hammer (500 grammes).

Drive rivet (2) upwards to remove.

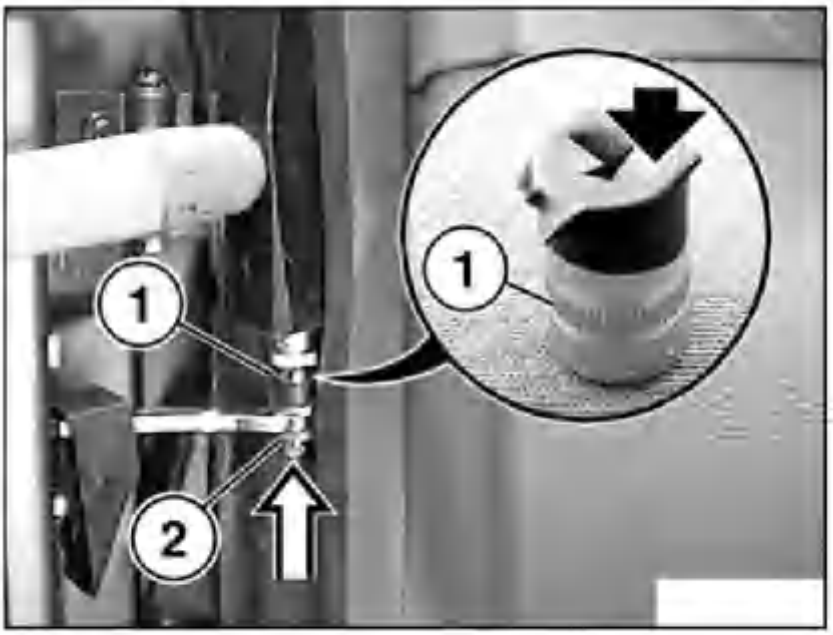


Fig. 110: Identifying Socket Nut
Courtesy of BMW OF NORTH AMERICA, INC.

New Build Status:

Installation:

Insert lug (1) in bore. Fit tab (2) on rivet (3) facing door. Pull off fabric adhesive tape (4).

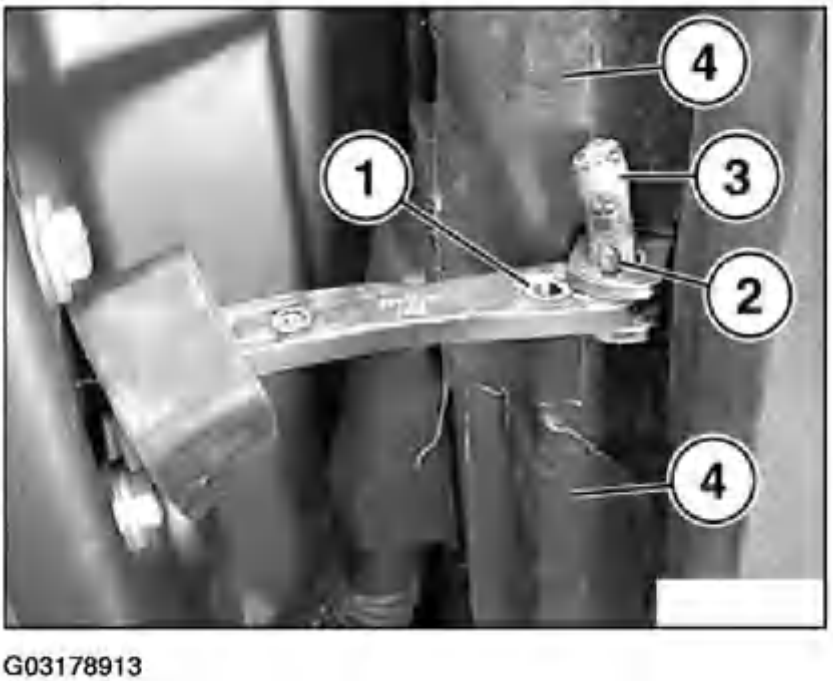


Fig. 111: Identifying Lug In Bore

Courtesy of BMW OF NORTH AMERICA, INC.

Unfasten screws.

Push retarder upwards into door and remove.

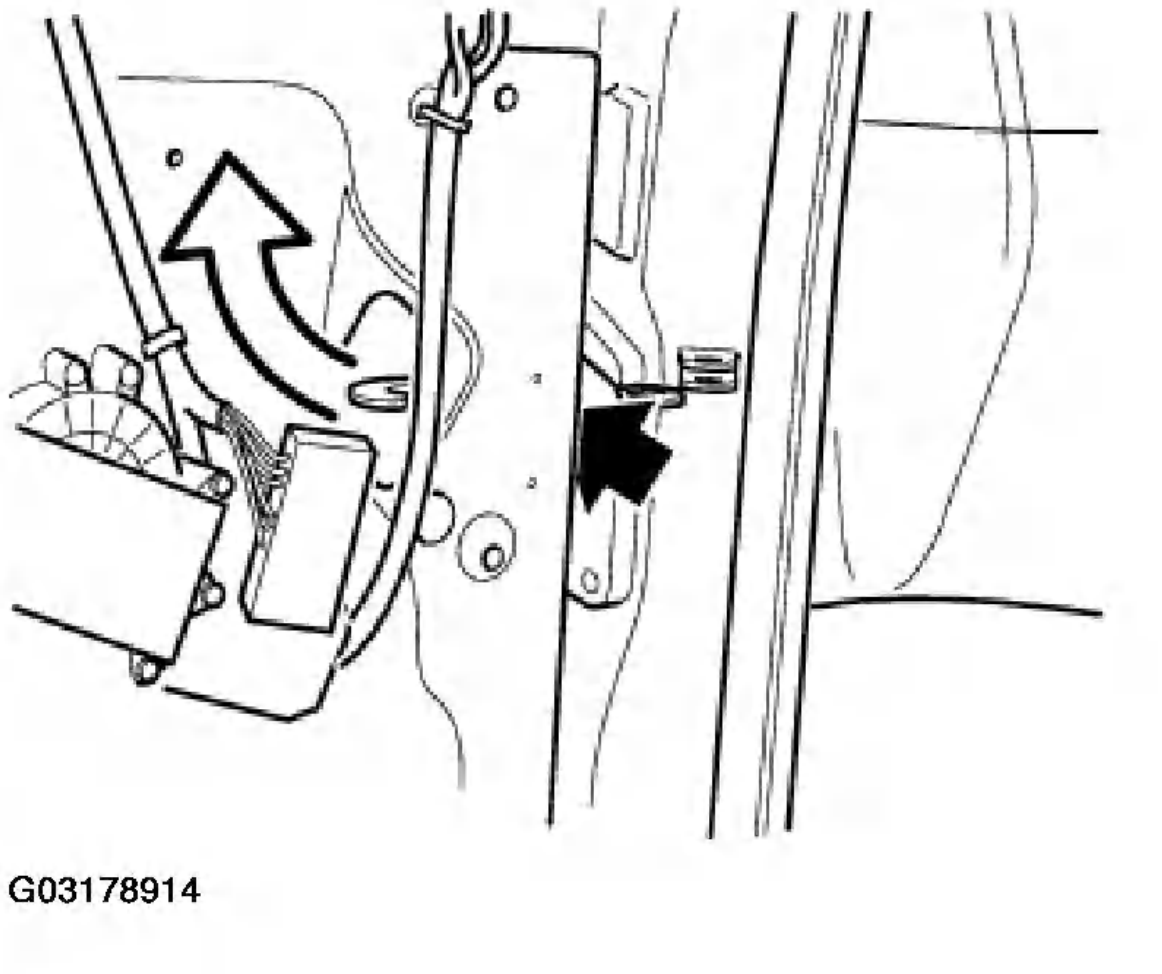


Fig. 112: Removing Retarder
Courtesy of BMW OF NORTH AMERICA, INC.

51 21 300 REMOVING AND INSTALLING OR REPLACING WINDOW RECESS COVER STRIP ON OUTSIDE OF LEFT OR RIGHT FRONT DOOR

Attach adhesive tape (1) below window cavity cover strip (2) (risk of damage).

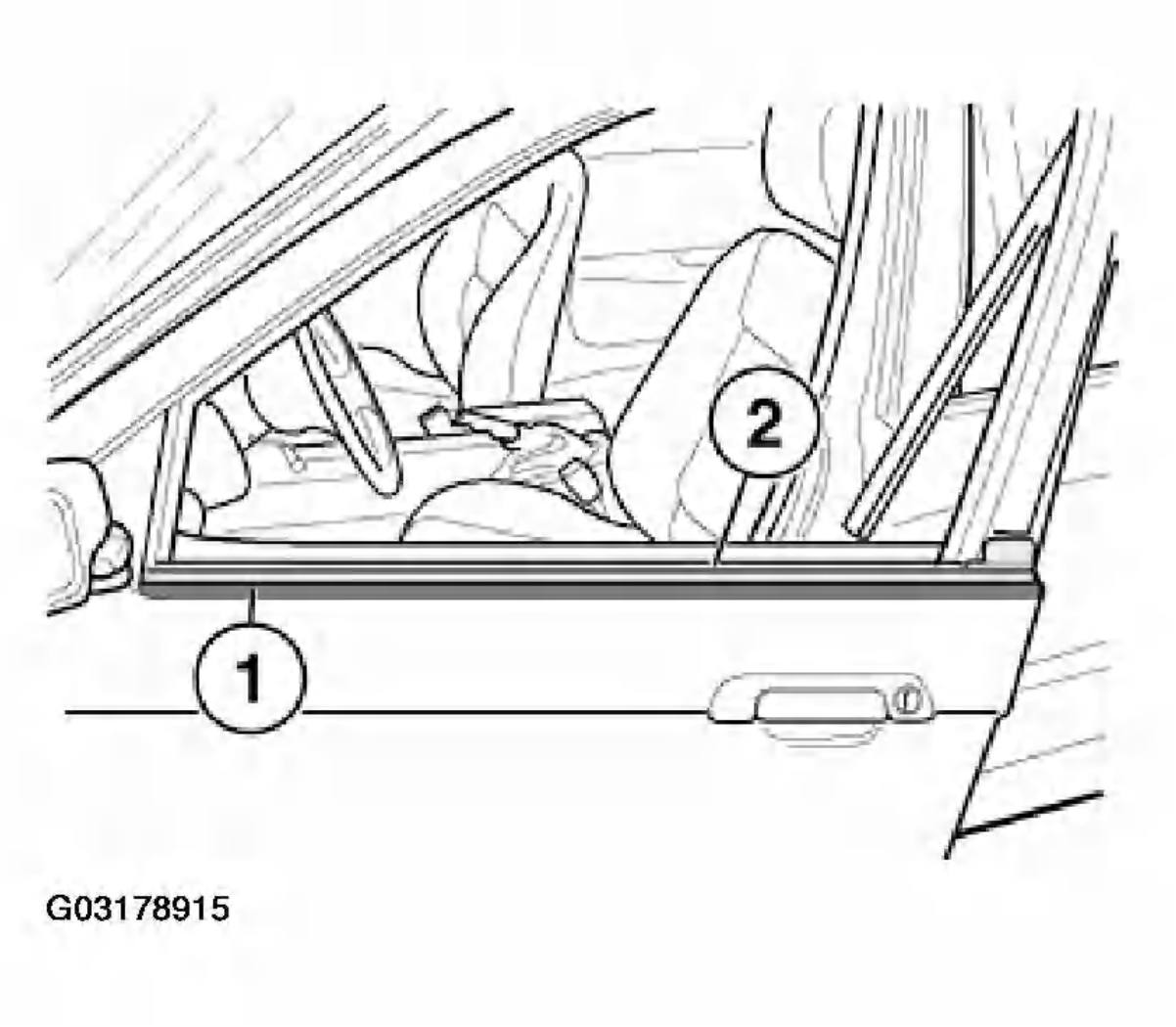


Fig. 113: Identifying Cavity Cover Strip
Courtesy of BMW OF NORTH AMERICA, INC.

Using special tool 00 9 311, starting at back, (1) and moving to front (2), lift out window cavity cover strip.

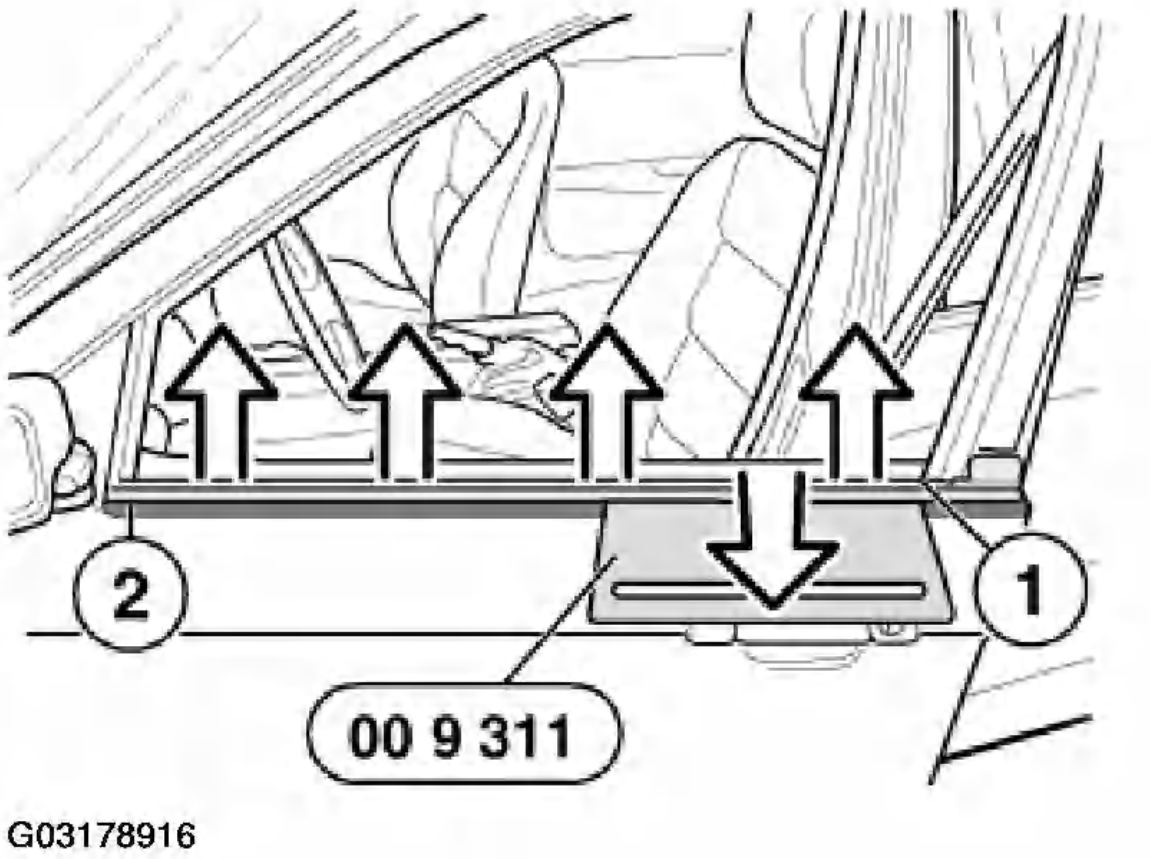


Fig. 114: Removing Window Cavity Cover Strip
Courtesy of BMW OF NORTH AMERICA, INC.

51 21 351 REPLACING WINDOW CAVITY SEAL ON FRONT LEFT OR RIGHT DOOR, INSIDE (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE)

Operation Is Identical To:

Removing and installing door trim panel, refer to 51 41 000 REMOVING AND INSTALLING FRONT LEFT OR RIGHT DOOR TRIM PANEL (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE) .

HOOD LATCH, LOCKS

51 23 265 REMOVING AND INSTALLING/REPLACING LEFT OR RIGHT GAS STRUT FOR ENGINE BONNET/HOOD

Refer to 51 23 265 REMOVING AND INSTALLING/REPLACING LEFT OR RIGHT GAS STRUT FOR ENGINE BONNET/HOOD .

TRUNK LATCH, LOCKS

51 24 004 ADJUSTING TRUNK LID LOCK (Z3 ROADSTER)

Requirement:

Trunk lid and gaskets must be correctly fitted and adjusted.

If necessary, adjust trunk lid to fit.

Completely screw down detent buffer in left/right trunk lid.

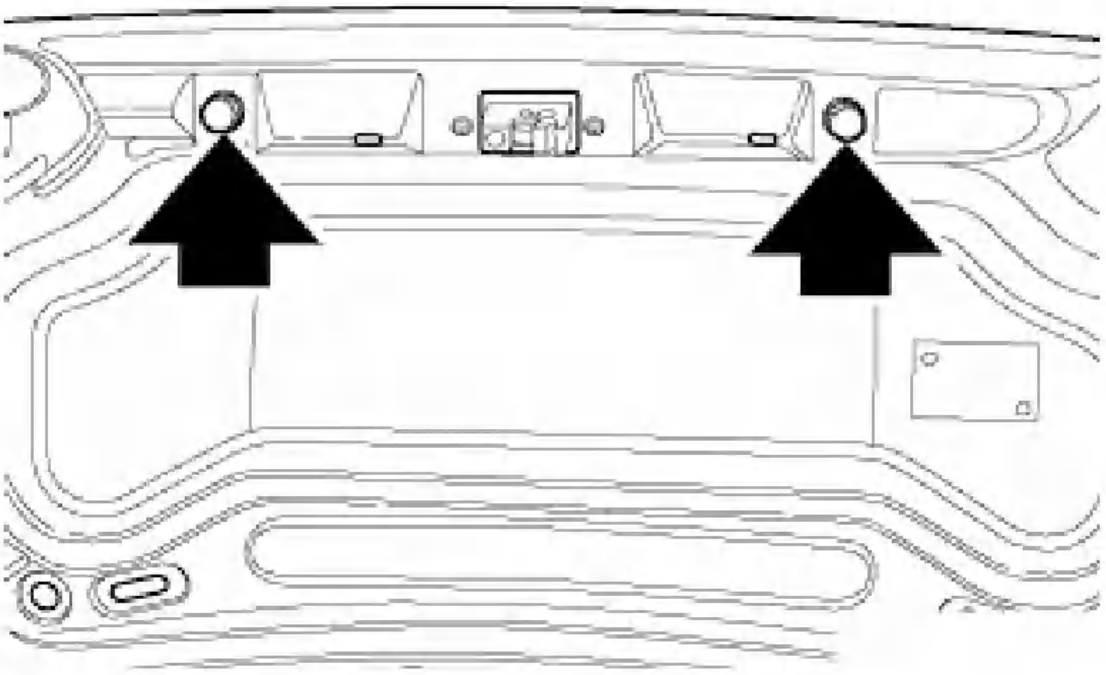


Fig. 115: Identifying Screws For Removing Detent Buffer
Courtesy of BMW OF NORTH AMERICA, INC.

Loosen screws in lower section of trunk lid until it is just still able to move, allowing it to center itself.

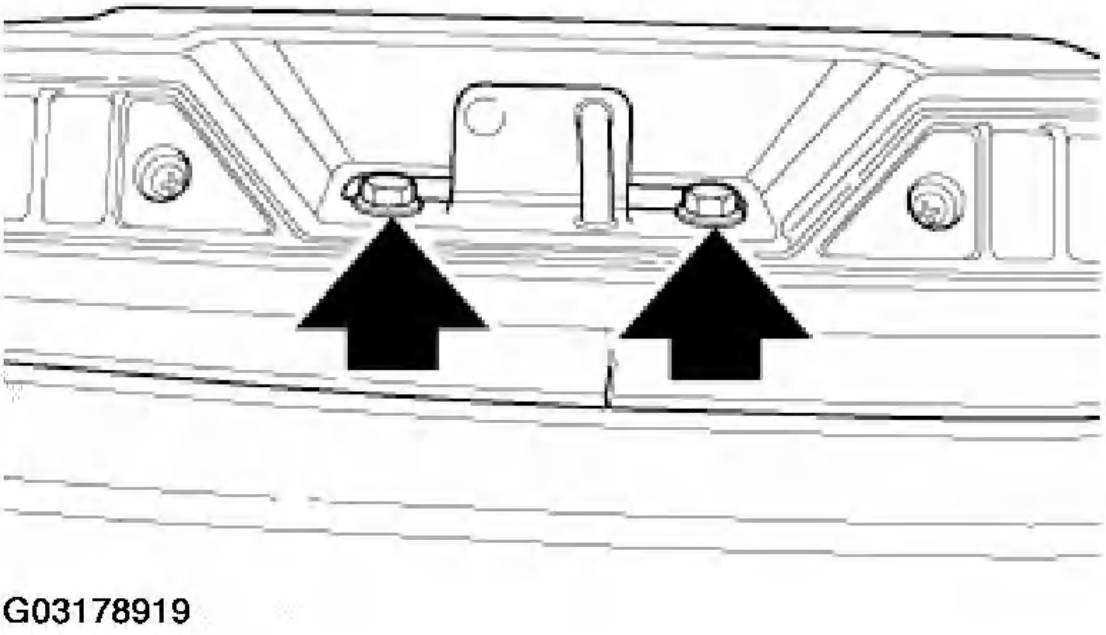


Fig. 116: Loosening Trunk Lid Lock Screws
Courtesy of BMW OF NORTH AMERICA, INC.

The lower section of the trunk lid lock must not scrape against the trunk lid lock.

Adjust lower section of trunk lid lock:

Close trunk lid, holding down the lock button to prevent the trunk lid lock from engaging.

This enables lower section of trunk lid lock to adjust itself correctly.

Open trunk lid.

Tighten screws on lower section of trunk lid lock.

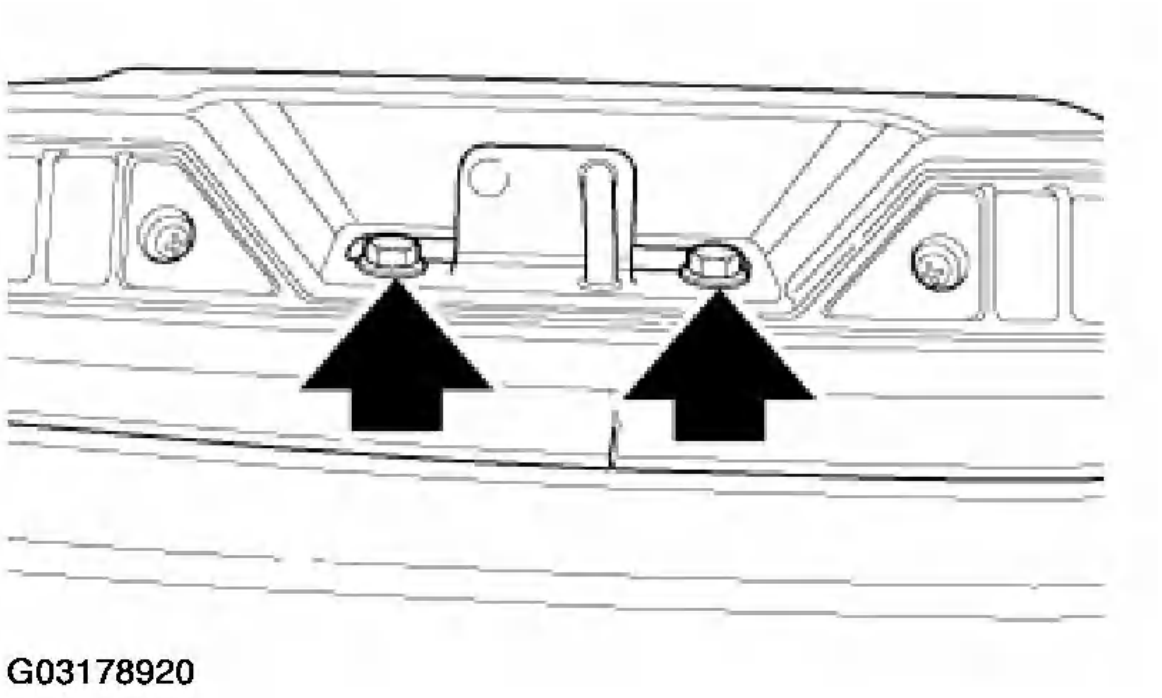


Fig. 117: Tightening Trunk Lid Lock Screws
Courtesy of BMW OF NORTH AMERICA, INC.

Check adjustment of trunk lid and trunk lid lock, repeating adjustment if necessary.

Unscrew detent buffer until closed trunk lid is flush on left/right detent buffers.

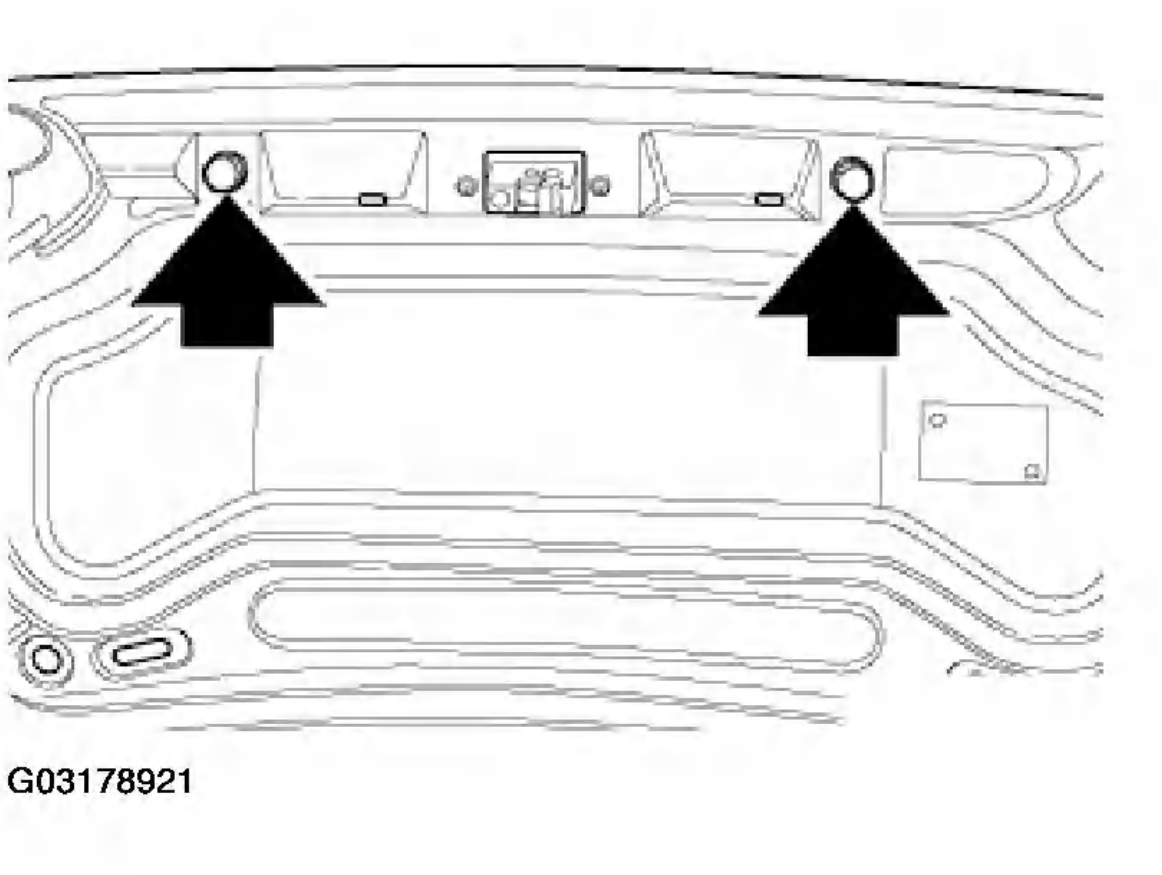


Fig. 118: Identifying Screws For Removing Detent Buffer
Courtesy of BMW OF NORTH AMERICA, INC.

CAUTION: The trunk lid must not be higher than the side panels, otherwise preload would affect height adjustment!

CENTRAL LOCKING SYSTEM

51 26 000 REPLACING SWITCHES (CENTRAL LOCKING DRIVE) FOR DOOR LOCKING ON LEFT OR RIGHT SIDES

Operation Is Described In:

Removing and installing/replacing lock on left or right front door, refer to 51 21 090 REMOVING AND INSTALLING/REPLACING DOOR LOCK ON FRONT LEFT OR RIGHT DOOR (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE) .

FRONT AND REAR WINDOW

51 31 ... INSTRUCTIONS ON GLUING WINDSCREEN

Important!

The Following Topics Were Included Or Amended In March 2005:

Storage temperature of all adhesive products of 5Â°C to 25Â°C must be observed.

Special instructions for hot processing must be observed:

- Temperature of cartridge oven must be checked every morning with DIS or GT1.

- Temperature of cartridge < 80Â°C results in the formation of bubbles/blisters (gluing/cementing not permitted).
- Insufficient heating (< 1 hour) results in the formation of bubbles/blisters (gluing/cementing not permitted).
- Heating time or a cartridge max. 8 hours.
- Mistake in mixing in event of an interruption in application >1 minute (gluing/cementing not permitted).
- A test bead of 50...70 mm must be rejected after an interruption in application.
- Cartridge may only be heated up once; if the lower label is black, this adhesive may only still be used cold without accelerator while adhering to the best before date.

These instructions are not applicable to door window cementing (door "center") on the E38/L7:

Work Steps For Removing And Installing Windscreens:

- Is displayed at the end of this document by clicking on the "framed cross-reference".

General:

The windscreen and rear window (also the rear side windows if necessary) are bonded to the body. This gluing will increase the torsional strength of the vehicle. To obtain perfect bonding, comply with the installation procedure described in the following.

It is possible to tow or drive without windscreen or rear window.

The windscreen must be secured with yellow plastic adhesive tape after being installed. The paint must be completely hardened after painting work.

- Set down window glass and process on BMW-approved X-universal stand.
- In winter, the vehicles must stand in a room with a temperature of at least 15Â°C.

On-The-Job Safety:

When working with adhesive products (adhesive, cleaning agent, bonding agent etc.):

- Wear protective goggles, protective gloves and if necessary an apron.
- Ensure rooms are well ventilated.
- Change work clothing contaminated with adhesive immediately.
- Change work clothing contaminated with solvents and swelling agents immediately (keep spare work clothing on hand).
- Take skin protection measures, provide washing facilities including hot water, use silicone-free skin creams.
- Provide eye bath facilities, change water regularly (once a month).
- Comply with the relevant safety regulations.
- Do not eat, drink or smoke in areas of PUR processing.

Replacement Of Windscreens:

Version with head-up display (HUD):

- Marking for HUD must be present on the windscreen.

Version with front passenger airbag:

- Stick on reminder label. Refer to 00 00... INFORMATION / WARNING LABELS .

Tools For Cutting Through Adhesive Bead:

SPECIAL TOOL SPECIFICATION

Type	Model	Order/Part Number
Special cutter (manufacturer: Fein) with oscillating blade.	Pneumatically operated. Electrically operated.	81 43 9 429 183. 81 43 9 427 786.
BMW blade set.	All required blades.	81 43 9 428 596.
Blade (U-shape).	19.5mm (1). 24 mm. 36 mm. 45 mm.	6 39 03 118 01 3. 6 39 03 076 01 6. 6 39 03 079 01 2. 6 39 03 154 01 0.
Blade (straight with stop roller).	16 to 35 mm (adjustable). 10 mm (fixed) (1). 14 mm (fixed).	6 39 03 143 01 3. 6 39 03 189 01 0. 6 39 03 082 01 6.
"Roll Out 2000".	Wire cutting system (1).	81 62 0 301 76 8.
Scalpel.	For heavy-duty applications (1).	-
Handles for cutting wire.	Self-locking (1).	Special tool 513 270.
(1) Not included in BMW blade set		

Storage Temperature:

Storage temperature of all adhesive products of 5Â°C to 25Â°C must be observed.

Adhesive:

The BMW-approved 1-component polyurethane adhesive must be used for bonding.

- Adhesive cartridge (part number BMW 83 19 0 152 031, MINI 83 19 0 152 032).

Adhesive is applied to window glass with cartridge gun.

When Using Accelerator (Hot Processing):

- Temperature (min. 80 +/- 5Â°C) of cartridge oven must be checked every morning. Connect temperature sensor to DIS or GT1 (in conjunction with MIB - Measurement Interface Box).
- Heat adhesive for at least 1 hour in cartridge oven to 80 +/- 5Â°C.
  - Write date and time on adhesive when inserting into cartridge oven.
  - Insufficient heating (< 1 hour) results in the formation of bubbles/blisters (gluing/cementing not permitted).
  - Temperature < 80 +/- 5 Â°C results in the formation of bubbles/blisters (gluing/cementing not permitted).
- Remove cured adhesive prior to further processing.
- Mistake in mixing in event of an interruption in application >1 minute (gluing/cementing not permitted).
  - A test bead of 50...70 mm must be rejected after an interruption in application.
- Best before dates of accelerator and adhesive must not be more than 3 months apart.
  - Best before date >3 months results in the formation of bubbles/blisters (gluing/cementing not permitted).

Sealed Adhesive:

- May only be stored for a maximum of 8 hours once it has been heated up to 80 +/- 5Â°C.
- The adhesive will be damaged if this time is exceeded (gluing/cementing not permitted).
- Damaged adhesive must not be used and must be disposed of in compliance with national regulations.

- Cartridge may only be heated up once.
    - If the lower label is black, this adhesive may only still be used cold without accelerator while adhering to the Best before date.

Important!

Not all window glass may be bonded with accelerator (hot processing).

If hot processing is not permitted, this is described in the relevant document.

Adhesive Best Before Date:

Repair kit and adhesive cartridges are marked with a date (Best before).

The adhesive cannot be used after this date.

Adhesive Disposal:

Pure hardened adhesive is handled as normal waste.

The adhesive is disposed of in paper bags so that it can react with moisture.

Non-hardened adhesive, cartridges and mixtures of adhesive and solvents and the like must be disposed of as special waste.

Accelerator:

Accelerator is screwed onto the adhesive cartridge and contains a reaction paste which is mixed with the heated adhesive.

Important!

The accelerator may only be paired with the adhesive cartridge of an unopened package (bubbling).

Adhesive and accelerator must be paired while taking into account the Best before dates.

The accelerator may no longer be used if the Best before dates are more than 3 months apart.

Bonding Agent (Activator):

The BMW-approved bonding agents must be used to treat bonding areas:

- "Glass Activator 1" (on glass ceramic material).
- "Paint Activator A" (on sheet metal flange or residual adhesive bead).

Bonding Agent Best Before Date:

Repair kit and bonding agent are marked with a date (Best before).

- The bonding agent may only be used up to this date (if not already opened previously).
- Once it has been opened (locking ring broken), use for 1 week only even if the Best before date has not been reached.

NOTE: Write the date on the bottle when opening the bonding agent for the first time. Close the bottle immediately after extracting the bonding agent (reaction with air).

Removal Of Window Glass:

Important!

As of E63 and E87 it will only be possible to remove the rear window with the "Roll Out 2000". Refer to 51 31 ... REMOVING WINDSCREEN WITH "ROLL OUT 2000" .

Cover side panels, roof antenna and if necessary interior trim with protective covers.

Tape off body with fabric adhesive tape (e.g. Tesa) in areas where the oscillating blade could damage the window glass or the paint.

When using cutting wire, pull cutting wire ends through special tool 51 3 270, bend and tape off with fabric adhesive tape (e.g. Tesa) (risk of injury and damage).

When removing the windscreen:

- Wear protective goggles and gloves.

Cut through adhesive bead of window glass:

- with "Roll Out 2000" (wire cutting system); no paint is damaged here in the case of narrow gaps. Refer to 51 31 ... REMOVING WINDSCREEN WITH "ROLL OUT 2000" .
- with special cutter and oscillating blade.

Prior to each use, regrind the blade with a grinding stone while the machine is running (new blades also).

Avoid damage to paintwork on body cutout.

Guide blade carefully between body and window glass.

Run blade of knife parallel to glass.

Cut through adhesive bead as closely as possible to window glass.

To remove adhesive bead in body cutout (and on window glass if reusing):

- Use a scalpel for heavy-duty applications.
- Cut off residual adhesive to a thickness of approx. 0.5 mm.
- Remove residual bead only briefly before bonding.

Damage To Paintwork In Body Aperture:

To ensure long-term corrosion protection, it is absolutely essential to touch up damage to paintwork!

The "BMW Color System" painting handbook forms the basis of these repair instructions and must be observed without fail.

Touch up damage to paintwork on body cutout with BMW multibase filler.

Grind out scratches in non-visible areas and touch up with BMW multibase filler.

Grind extensive areas of damage down to the bare metal and coat with BMW multibase filler (coating thickness 30 ... 40 ace;m).

Hardening time:

- With infrared, at least 10 minutes.
- Without infrared for at least 60Â°C, at least 30 minutes.
- Without infrared for at least 20Â°C, at least 24 hours.

If a complete build-up of paint is required in the visible area:

- Tape off primed bonding flange before applying top coat.

Important!

Observe hardening time of BMW multibase filler otherwise a perfect bond cannot be guaranteed!

Treatment of glued area in body:

TREATMENT OF GLUED AREA IN BODY

Glue	Treatment
Bonding and sealing compound for car window glass.	a. Clean with spirit (available in pharmacies). b. Observe an air drying time of at least 1 minute (at least 15 minutes when applied to residual bead). c. Apply "Paint Activator A" to paint and residual bead. d. Observe an air drying time of at least 1 minute (at least 10 minutes when applied to residual bead).

Important!

Do not use Sika remover 208 for cleaning in the bonding area.

Preparation For Assembly:

Prepare plastic nozzle(s) for shaping adhesive bead (when not using the standard nozzle), can be cut to size during the air drying time.

Lay a test bead of approx. 50 mm - watch out for formation of bubbles/blisters when hot cementing; if OK, apply immediately to window glass.

- Interruption must be < 5 second (incorrect mixture ratio).

Cartridge must be vertical to window glass.

Black ceramic material impermeable to UV light is located on the peripheral zone of the inside edge of the window to protect the adhesive bead.

Glass ceramic material must not be damaged and must be treated as follows.

Treatment Of Glass Ceramic Surface (Inside Of Window):

TREATMENT OF GLASS CERAMIC SURFACE

Adhesive (With Part Numbers)	Treatment
Hot cementing: • BMW 83 19 0 147 370, MINI 83 19 0 147 372. Cold cementing: • BMW 83 19 0 147 369, MINI 83 19 0 147 371.	a. Clean with spirit (available in pharmacies). b. Observe an air drying time of at least 1 minute. c. Apply a thin coating of "Glass Activator 1". d. Observe an air drying time of at least 10 minutes.

Adhesive cartridge: • BMW 83 19 0 152 031, MINI 83 19 0 152 032.	

Version with inspection window for vehicle identification number in windscreen only (all except US/GB):

- Seal inspection window (bottom left) with Sika primer 206 G+P.

Adhesive Quantities:

Approx. 1 1/4 adhesive cartridges are needed to cement 7 Series windscreens.

In the case of hot cementing (with accelerator), the missing residual bead is applied from a second adhesive cartridge (not contained in the repair kit) but while cold and without accelerator (bubbling).

Minimum hardening period is thus not increased.

Important!

If a second cartridge is required for cementing:

- First apply cold adhesive to cowl panel at bottom (skin formation time).
- Accelerator from repair kit must not be used with the second cartridge (bubbling).

Bubbling results in leakage and insufficient bonding strength (torsional rigidity, passenger airbag).

Effect Of Differing Adhesive Quantities:

ADHESIVE QUANTITIES EFFECT

Too little adhesive:	Too much adhesive:
• Windscreen rests too low in body cutout. • Strains/tensions may occur (windscreen breakage). • Insufficient squeezing of adhesive bead (leaking).	• Windscreen rests too high in body cutout. • Wind noise may occur. • Strains/tensions may occur (windscreen breakage). • Fouling of add-on parts by emerging adhesive. • Adhesive on uninsulated strainer pressure lines of antenna(s) (interference of reception).

Spacer Buffers:

Before sticking on new spacer buffers, remove all remaining traces of old spacer buffers completely.

Position of spacer buffers must be observed exactly.

Incorrectly fitted spacer buffers will result in:

- Windscreen glass breakage.
- Leakage (if the spacer buffer is in the adhesive area).
- Wind noises.

Assembly:

To prevent a pressure increase in the vehicle interior when the doors are closed:

- Open a window.

Important!

After the adhesive bead has been applied, the window glass must be fitted within 5 to 10 minutes (depending on air humidity, temperature and use of accelerator).

After 5 to 10 minutes the adhesive bead forms a skin which can no longer guarantee a perfect bond.

To secure the windscreen, use only the yellow plastic adhesive tape (Part number 83 19 9 410 979).

The glass will slip down if other adhesive tapes are used.

Windscreen slippage will result in leaks and wind noises.

Remove adhesive residue immediately with adhesive remover (Sika remover 208). Do not press out the window glass again.

Hardened adhesive can only be removed by machine.

Check height of windscreen/rear window with special tool 51 0 010 or 51 3 210.

Assemble car.

Hardening:

The adhesive hardens as it reacts with air humidity (with accelerator also due to mixed-in reaction paste) at room temperature.

Minimum hardening time (table) is obtained from 22Â°C and 38 % relative air humidity.

At ambient temperatures above 23Â°C and 50 % relative air humidity (hot countries), the adhesive open time is shortened to approx. 5 minutes (skin formation time).

The adhesive hardening process is interrupted completely at ambient temperatures below 5Â°C. In this event, there will be no increase in the strength of the adhesive bond.

Do not subject the vehicle to load on one side during the minimum hardening time (see table below, Minimum Hardening Time "Without Passenger Airbag"), such as e.g.:

- One wheel on curb.
- Lifting platform.
- Etc.

Maneuvering inside garage/workshop:

- Only permitted on level ground.
- Do not under any circumstance driver over access ramps, e.g. into multi-store car parks.

Remove adhesive tapes after hardening time.

If you fail to adhere to the minimum hardening times (see table below, Minimum Hardening Time "Without Passenger Airbag"):

- Leaks and wind noises will occur when the windscreen is moved.

Glues And Their Minimum Hardening Times:

GLUES AND THEIR MINIMUM HARDENING TIMES

Glue	Minimum Hardening Time "Without Passenger Airbag" (After Which	Minimum Hardening Time "With Passenger Airbag" (Countries Where Seatbelt Use Is

	Vehicle Can Be Moved)	Not Required By Law)
Hot processing with accelerator.	2 hours.	3 hours (1) .
Cold processing.	9 hours.	20 hours (1) .

(1)

Vehicles With Passenger Airbag:
The vehicle can be handed over to the customer after the hardening period (vehicle can be moved, adhesive-dependent) with the following warning:
Once The Windscreen Glass Has Been Bonded, All Occupants Must Travel With Their Seatbelts Attached For "... Hours"!
The time is taken from the "Minimum hardening period" table for countries where seatbelt use is not required by law.

Important!

If the minimum hardening time is not adhered to:

- The front passenger together with the windscreen may fall out of the vehicle in the event of an accident after the front passenger airbag has been triggered.

Locate leaks:

- By spraying water underneath sealing lips.
- With ultrasonic leak detector.

If necessary, seal leakage with appropriate nozzle.

Work Steps For Removing And Installing Windscreens:

Refer to 51 31 000 REMOVING AND INSTALLING WINDSHIELD (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE) .

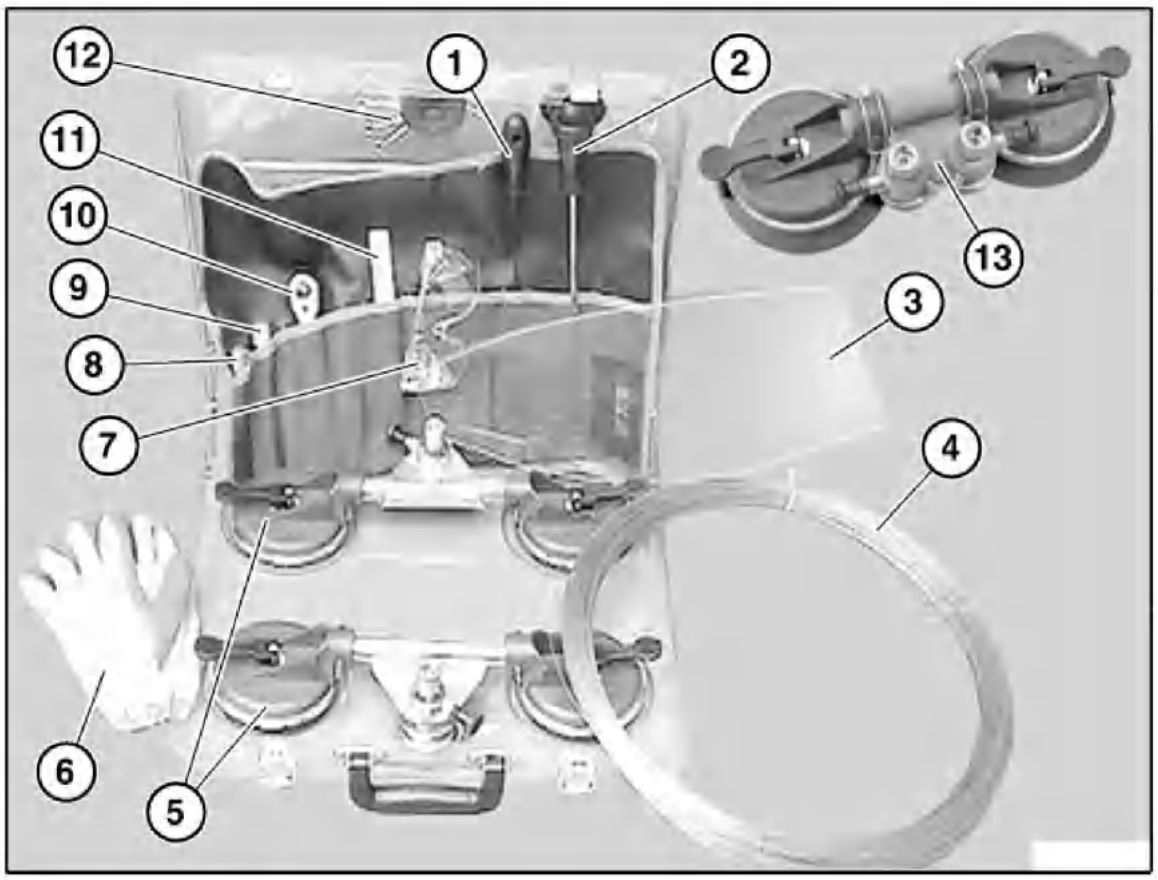
51 31 ... REMOVING WINDSCREEN WITH "ROLL OUT 2000"

NOTE: For Special Tool identification, see SPECIAL TOOLS - Z3

Special Tools Required:

- 51 3 270

Windscreen removal system "Roll Out 2000":



1	Wire starter	8	Extension (short)
2	Parabolic tool	9	Extension (long)
3	Plastic washer	10	Reversible ratchet
4	Wire cutting roller	11	Plastic wedge
5	Windlasses	12	Guide needles
6	Protective gloves	13	Windlass with double coil
7	Protective goggles		

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Fig. 119: Identifying Components Of Windscreen Removal System "Roll Out 2000"
Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: Using the "Roll Out 2000" system minimizes paintwork and ergonomic damage as well as damage that is hazardous to health.

WARNING: Follow safety instructions for working on cars with airbag systems (risk of injury). Refer to 51 00 ... SAFETY INSTRUCTIONS FOR WORKING ON CARS WITH AIRBAG SYSTEMS .

Important!

Take care when handling sharp-edged tools and cutting wire (risk of damage to head airbag).

Important!

Always keep both suckers dry and clean to ensure their optimum adhesion on the windscreen.

Lubricate coil if interlock rattling becomes too loud.

Always wear protective goggles and gloves for your own safety.

Preparatory Work:

- To avoid paintwork damage, tape off working area over large area at outlet of wire starter (2) with fabric adhesive tape (1).
- Cut off required length (A) from cutting wire (A) = Window diagonal x 4.
- Check whether wire can get caught on rivets or retainers; if necessary, insert guide needles in bonding joint and guide cutting wire past.

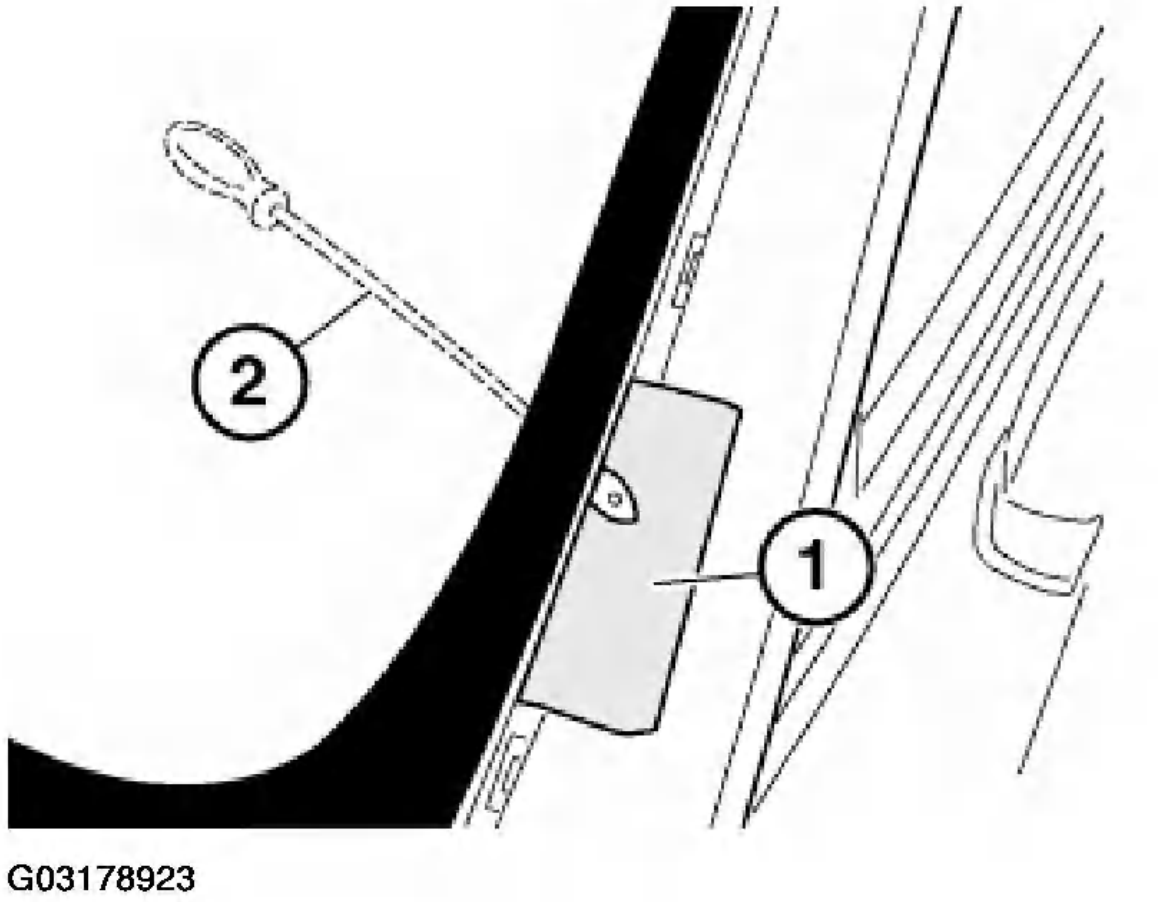


Fig. 120: Identifying Wire Starter
Courtesy of BMW OF NORTH AMERICA, INC.

Pulling Cutting Wire Into Car:

- Push wire starter (2) from inside at a suitable point through adhesive bead.
- Feed wire end (1) into hole of wire starter (2) and bend back.
- Pull in both wires in succession crossways.

NOTE: Crossing the wires cuts through the adhesive bead completely.

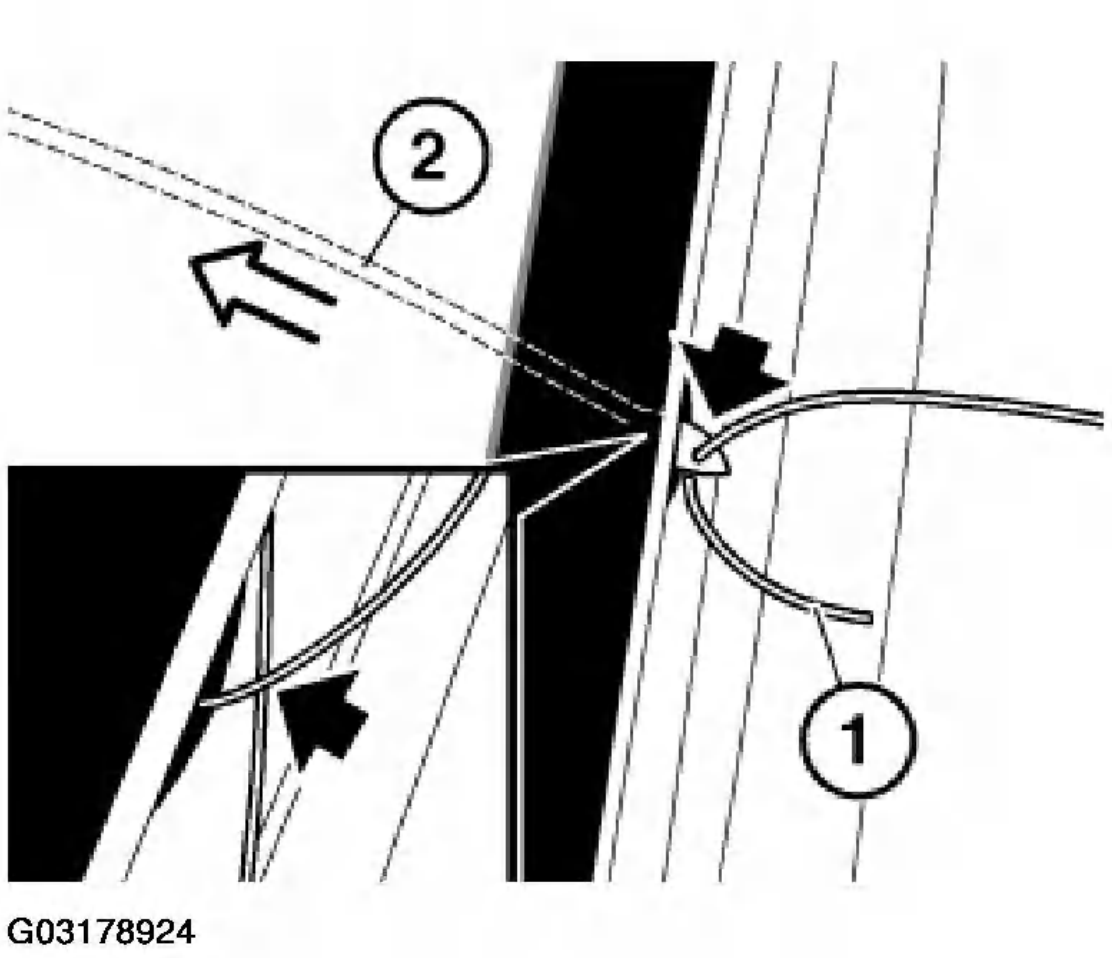


Fig. 121: Pulling Cutting Wire Into Car
Courtesy of BMW OF NORTH AMERICA, INC.

Laying Cutting Wire Around Windscreen:

- Starting from pull-in point, lay wire eyelet created on the outside counterclockwise around the windscreen.
- Pull excess wire into car interior.

Important!

Make sure the cutting wire is located at all four corner points below the windscreen.

Check that the cutting wire is not caught on retainers or body.

Secure window on outside with adhesive tape against slipping.

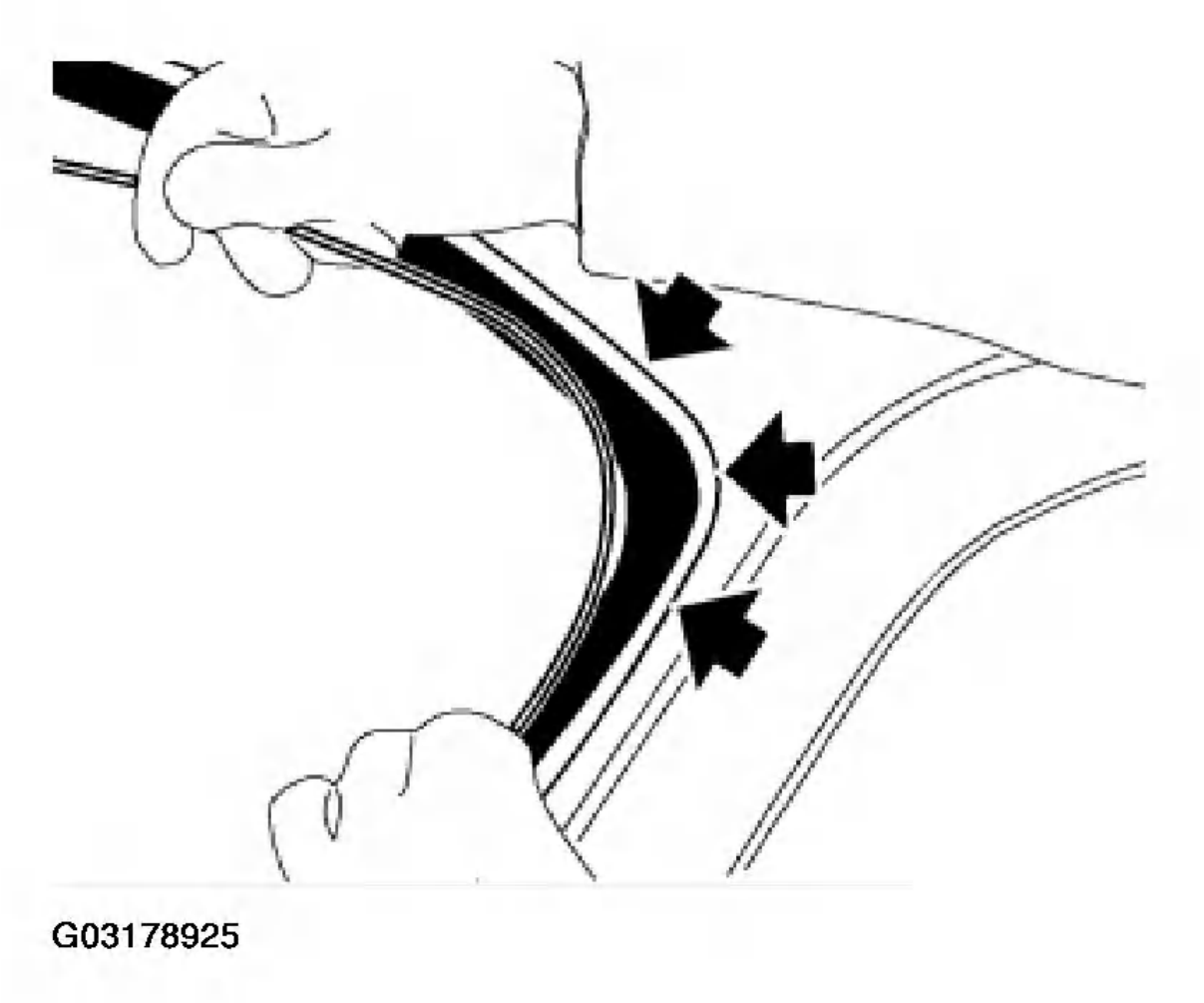


Fig. 122: Laying Cutting Wire Around Windscreen
Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: Windows (1) with fitted seals (3) or sprayed-on surrounds:

- Moisten cutting wire (4) and seals (3) on window (1) with water.
- Insert cutting wire (4) in bend (without kinking) between window (1) and body cutout (2).

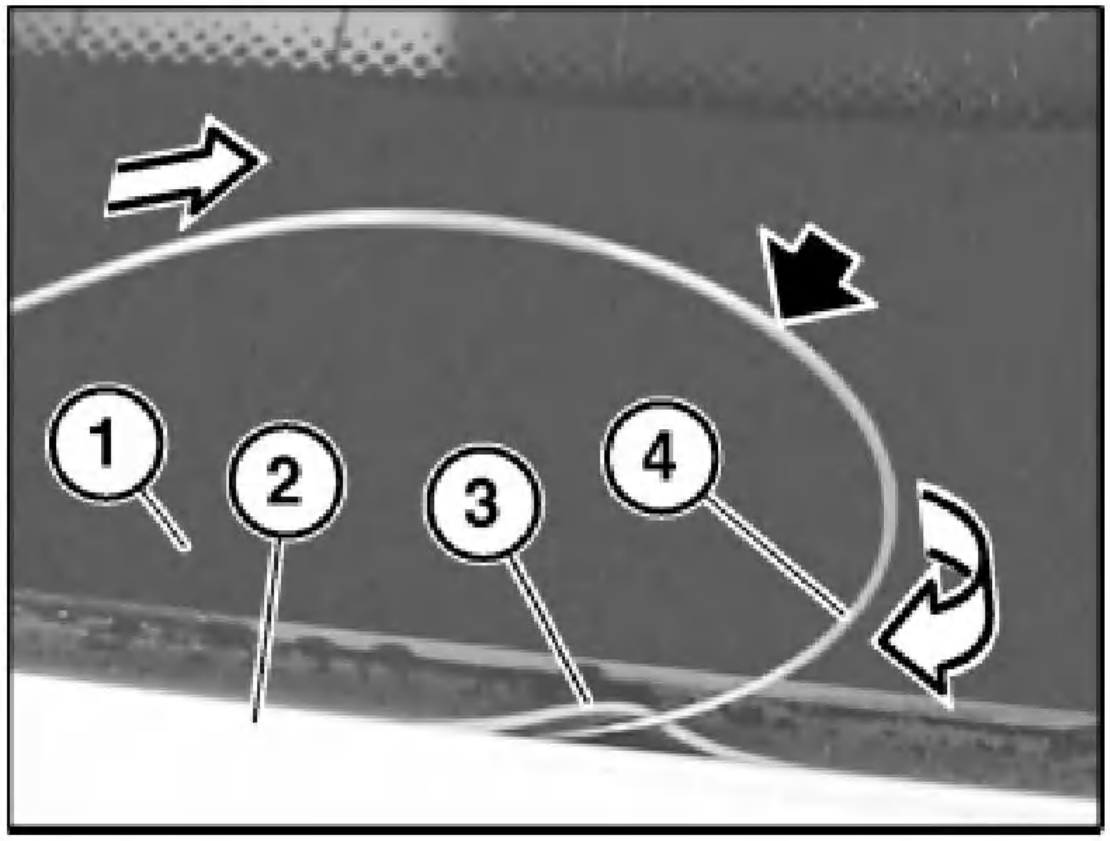


Fig. 123: Identifying Moistened Cutting Wire
Courtesy of BMW OF NORTH AMERICA, INC.

Protecting Car Interior:

- To avoid damage and if necessary dirt, protect A-pillars, roof and instrument panel by means of parabolic tool (1) or plastic washer (2).

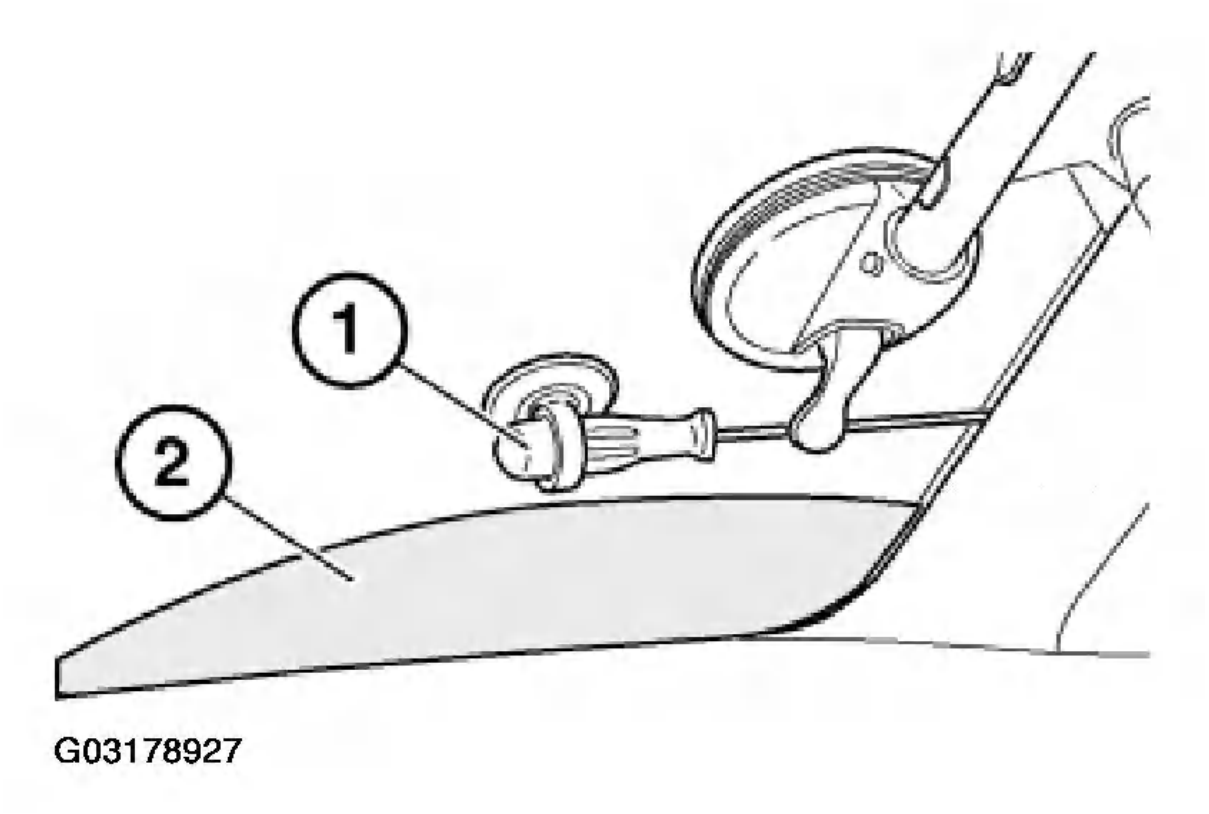


Fig. 124: Identifying Parabolic Tool And Plastic Washer
Courtesy of BMW OF NORTH AMERICA, INC.

- Move parabolic tool (1) during removal so that wire cannot get caught.
- Always guide plastic washer (2) between wire and panel.

Starting Removal:

- Place windlass (1) on windscreen.

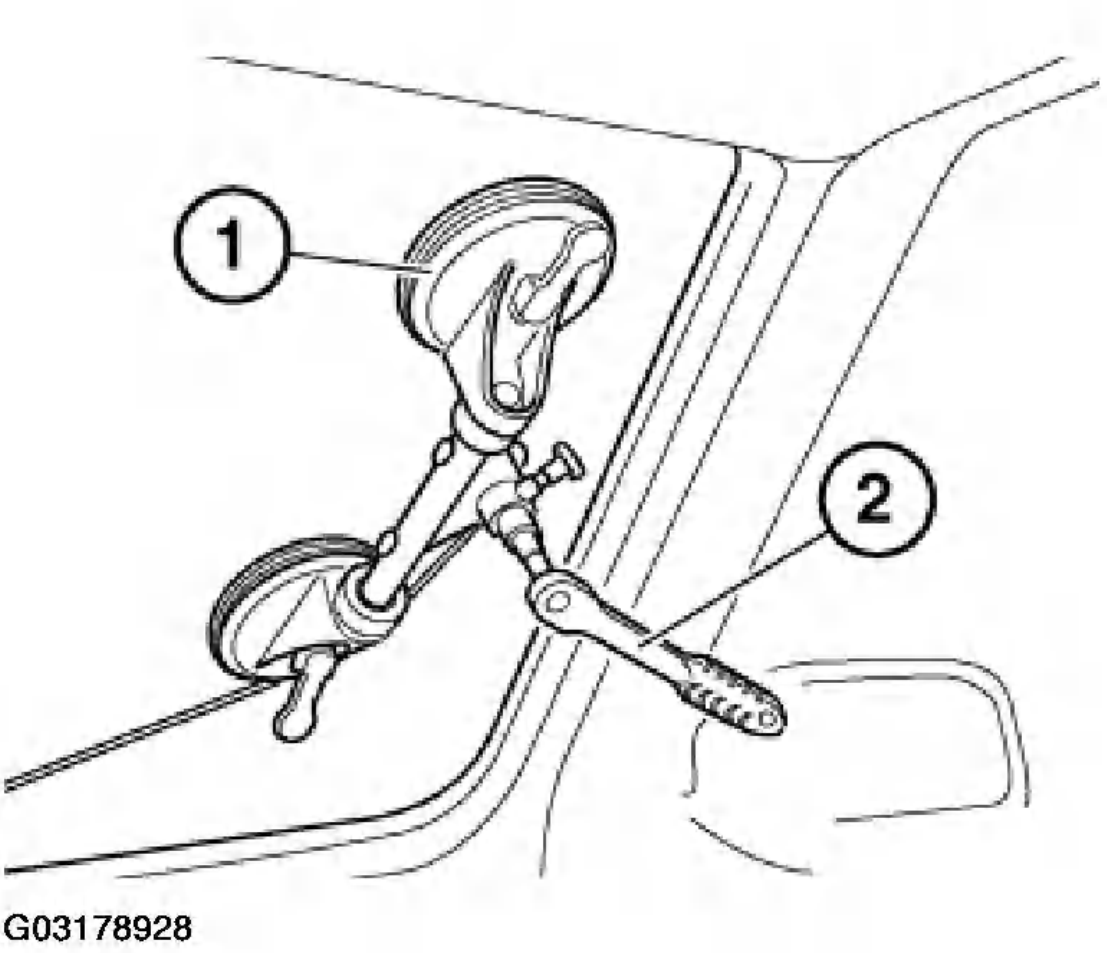


Fig. 125: Placing Windlass On Windscreen
Courtesy of BMW OF NORTH AMERICA, INC.

- Feed wire end into coil of windlass (1).

NOTE: Coil can only be turned in one direction.

- Make sure the wire is always situated in the guide channel of the windlass (1).
- Fit reversible ratchet (2) on coil and tension wire.
- Start by cutting lower adhesive bead.
- Grip second wire end in special tool 51 3 270.

Moving Windlass:

- Before moving windlass, remove reversible ratchet, extension and parabolic tool.
- Release sucker on windlass.
- Pull and hold black locking button (1).
- Turn windlass and move with sucker.

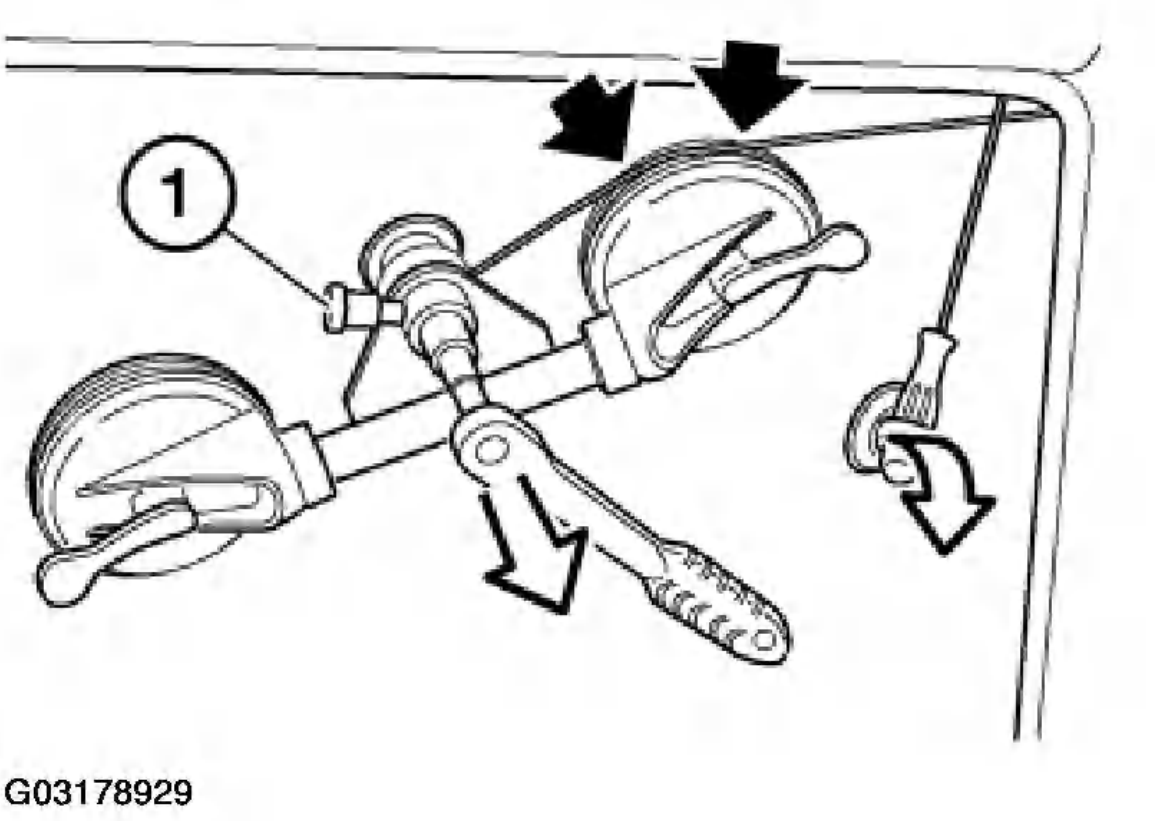


Fig. 126: Moving Windlass
Courtesy of BMW OF NORTH AMERICA, INC.

- Refit reversible ratchet, parabolic tool and if necessary extension.
- When cutting the corner points, make sure the wire is situated in the guide channel of the windlass; this makes the cutting job easier.

Installing Second Windlass:

- Secure second windlass by suction on windscreen.

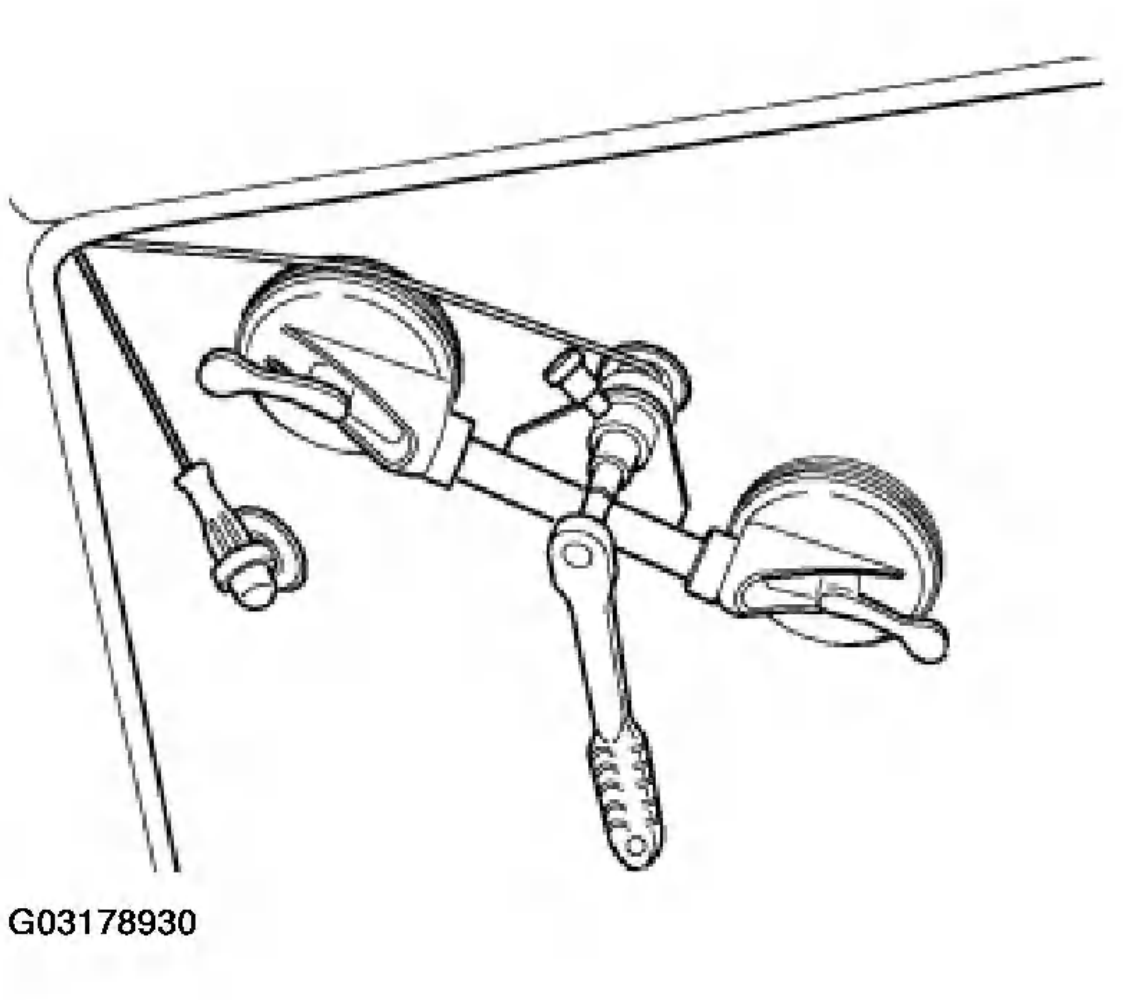


Fig. 127: Installing Second Windlass
Courtesy of BMW OF NORTH AMERICA, INC.

- Feed second wire end into coil.
- Cut left side and top left corner point, as described above.
- Finish removal.
- Remove "Roll Out 2000".

Windlass With Double Coil:

For use with small windows.

- Attach windlass firmly to window so that both coils are turned away from application point of wire.

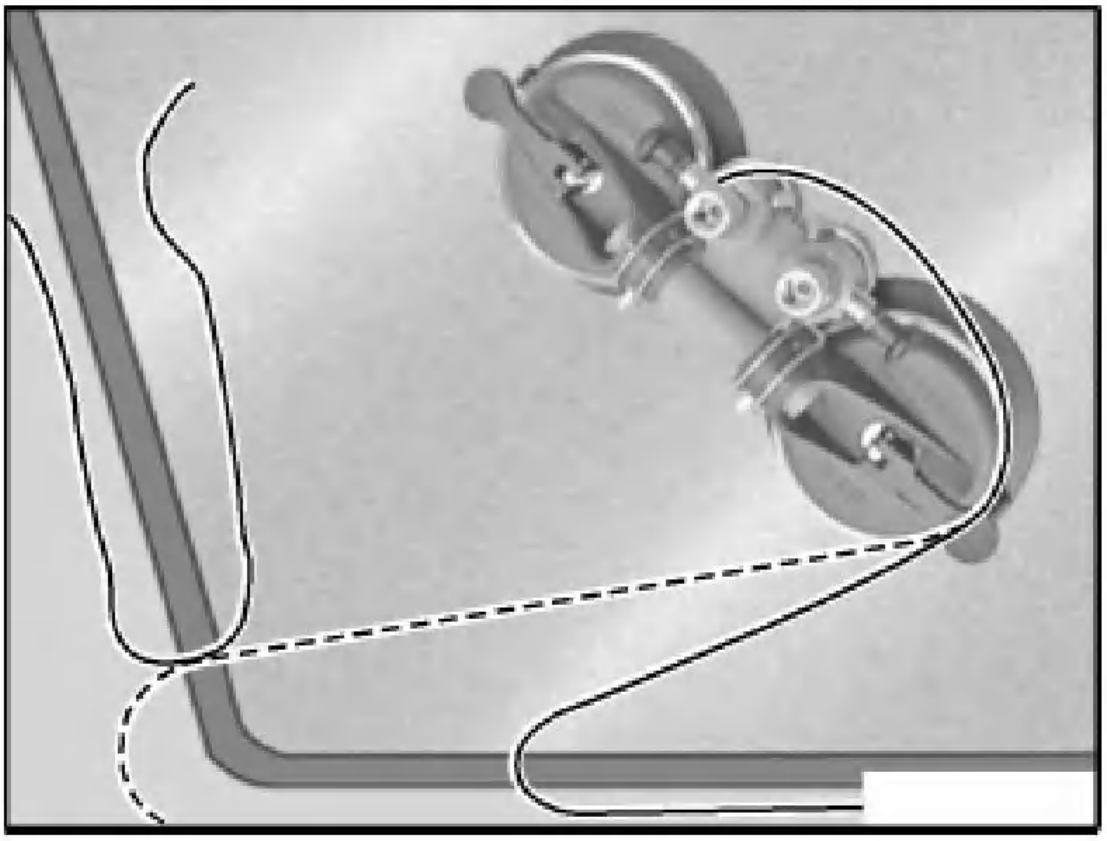


Fig. 128: Identifying Windlass With Double Coil
Courtesy of BMW OF NORTH AMERICA, INC.

- Feed either the upper wire end into the lower coil or the lower wire end into the upper coil.
- Fit reversible ratchet on coil and tension wire.
- Cut through approx. 10 cm of bonding joint.
- Feed other wire end into free coil so that the wires cross.

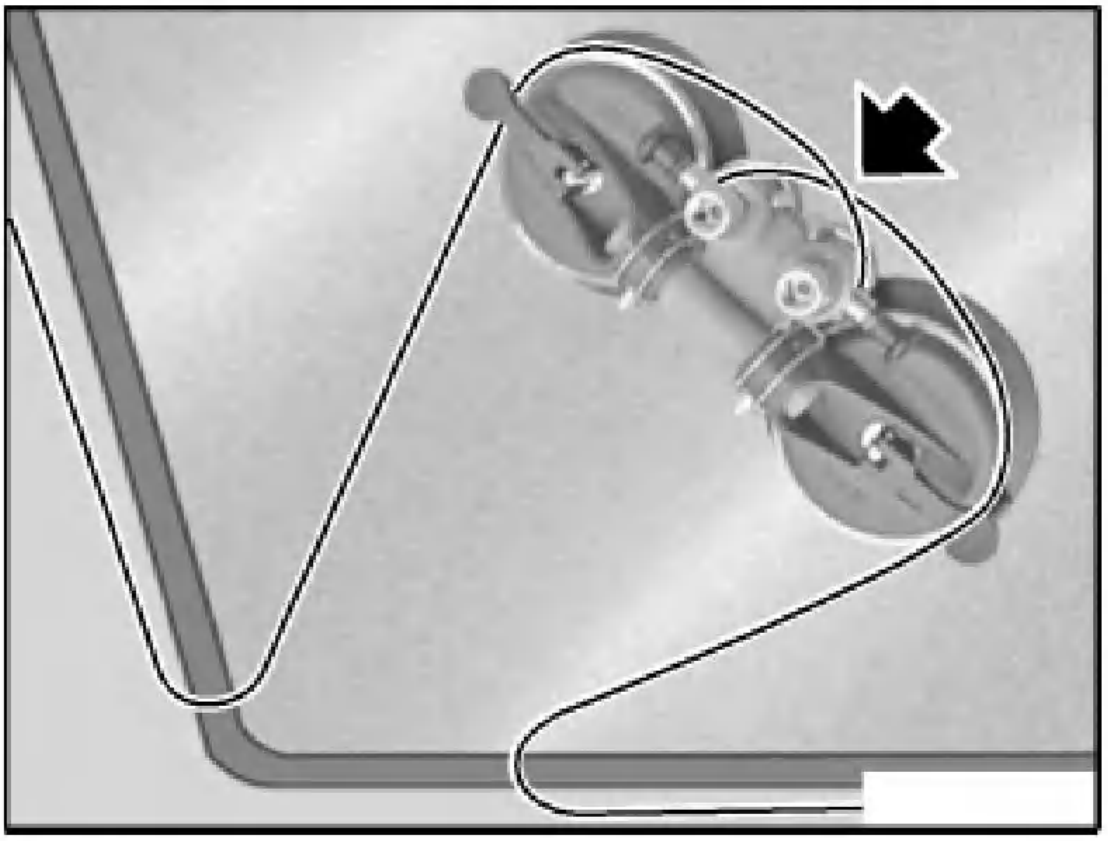


Fig. 129: Identifying Wires Crossing
Courtesy of BMW OF NORTH AMERICA, INC.

- Continue cutting bonding joint by alternately using the coils.
- Both wires meet ahead of both coils when removal is completed.
- Remove "Roll Out 2000".

51 31 000 REMOVING AND INSTALLING WINDSHIELD (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE)

NOTE: To bond windshield: Adhesives for cold and hot working are permitted. Remove interior rearview mirror, refer to 51 16 060 REMOVING AND INSTALLING OR REPLACING INTERIOR REAR-VIEW MIRROR . Remove trim pieces for front roof pillar (A-pillar), refer to 51 43 201 REMOVING AND INSTALLING/REPLACING PANEL FOR ROOF PILLAR, FRONT LEFT OR RIGHT (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE) . Remove grill for air intake/heater, refer to 51 13 077 REMOVING AND INSTALLING/REPLACING GRILL FOR AIR INTAKE/HEATER (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE) .

Cold Processing:

Comply with instructions on gluing windows, refer to 51 31 ... REMOVING WINDSCREEN WITH "ROLL OUT 2000" .

Warm Processing:

Open aluminum membrane at rear end of cartridge.

Place cartridge in cartridge oven.

Heat glue cartridges to 80Â° C for one hour in oven.

Comply with instructions on gluing windows, refer to 51 31 ... REMOVING WINDSCREEN WITH "ROLL OUT 2000" .

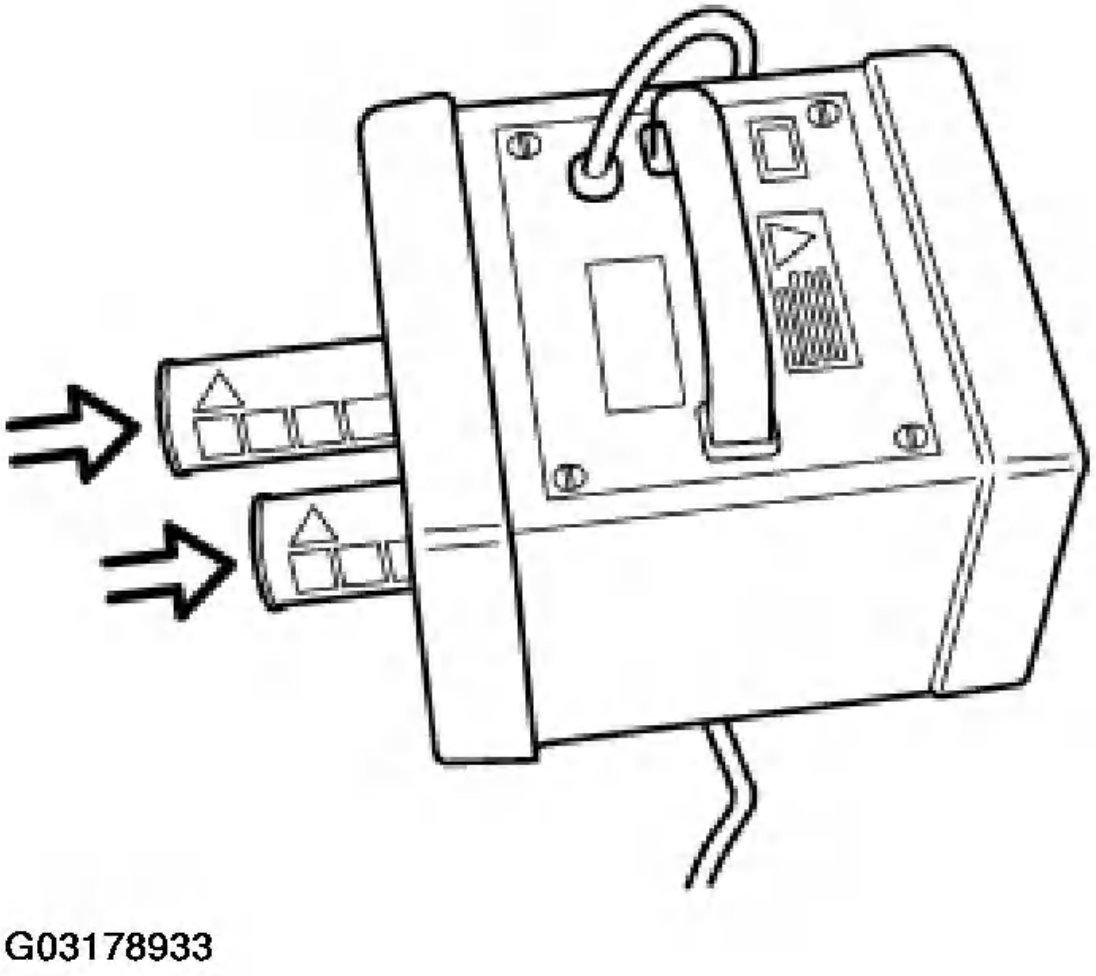


Fig. 130: View Of Cartridge Oven
Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: Cover radiator/engine compartment (top) and front side walls with protective covers.

Pull seal (1) down from left to right.

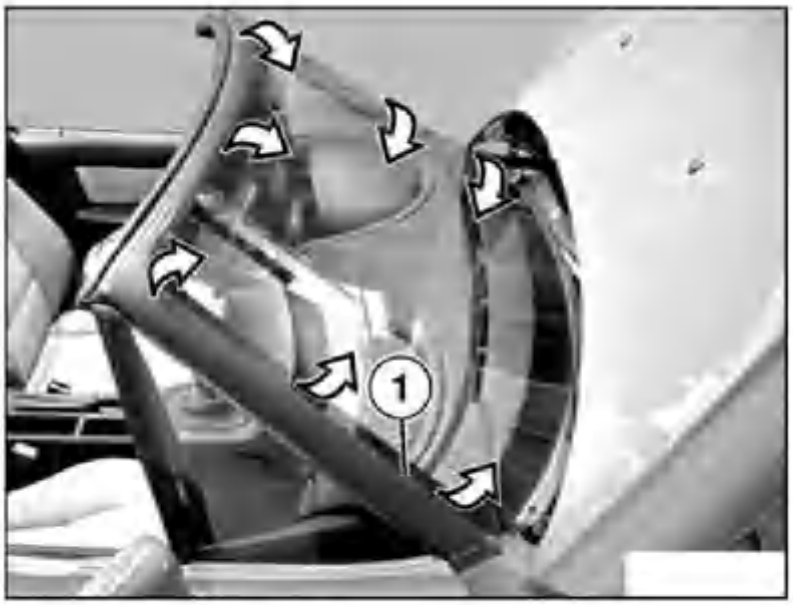


Fig. 131: Removing Seal
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Left/right seals (1) must be pushed over seal (2).

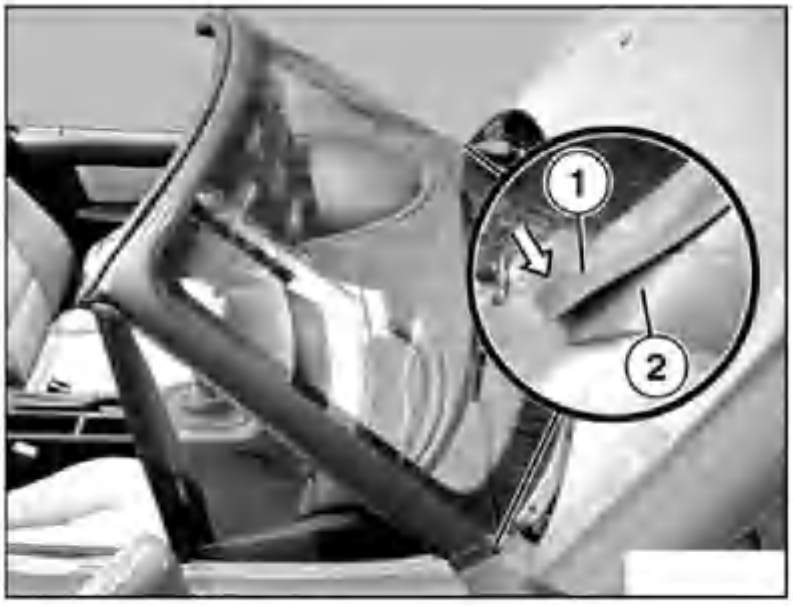


Fig. 132: Installing Seal
Courtesy of BMW OF NORTH AMERICA, INC.

Mask body along roof connection with narrow fabric adhesive tape (e.g. Tesa).

1. Windshield.

2. Glue bead.
3. Body opening.
4. Fabric adhesive tape.

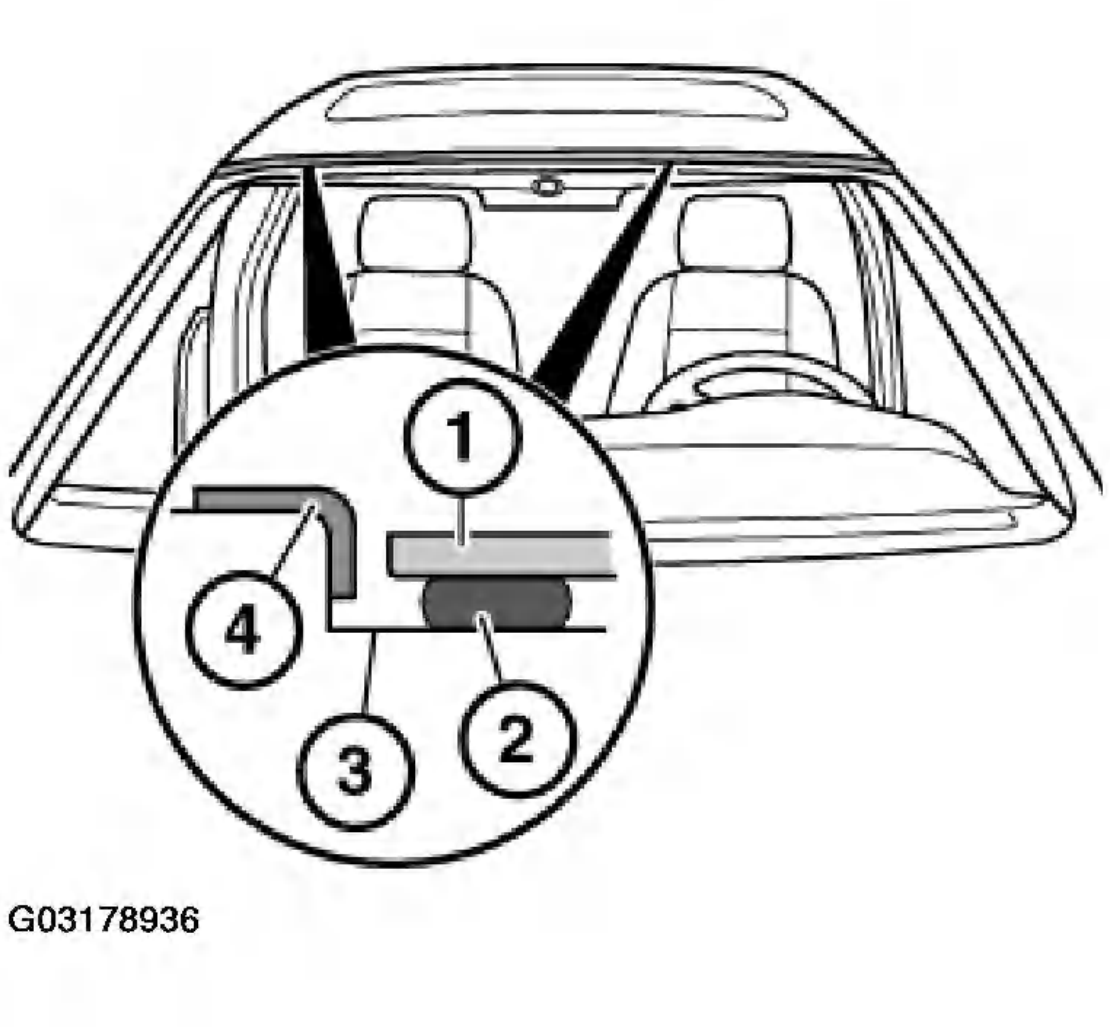


Fig. 133: Identifying Windshield, Glue Bead, Body Opening And Fabric Adhesive Tape
Courtesy of BMW OF NORTH AMERICA, INC.

Cover cowl panel bottom edge with tape.

Attach adhesive to edges on front side panels.

1. Windshield.
2. Glue bead.
3. Body opening.
4. Fabric adhesive tape.

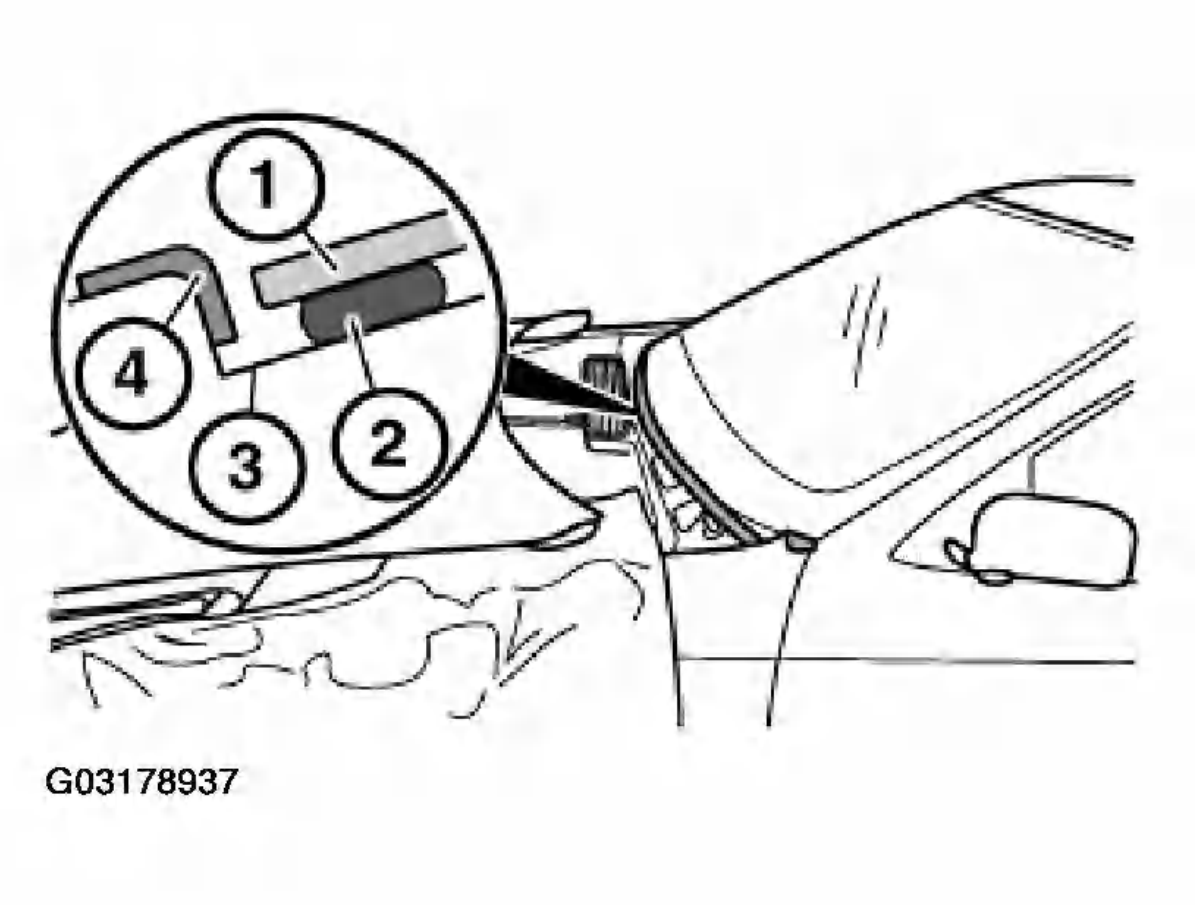


Fig. 134: Locating Windshield, Glue Bead, Body Opening And Fabric Adhesive Tape
Courtesy of BMW OF NORTH AMERICA, INC.

Fit long knife (36 mm blade length) to the tool.

NOTE: Resharpen knife with machine running.

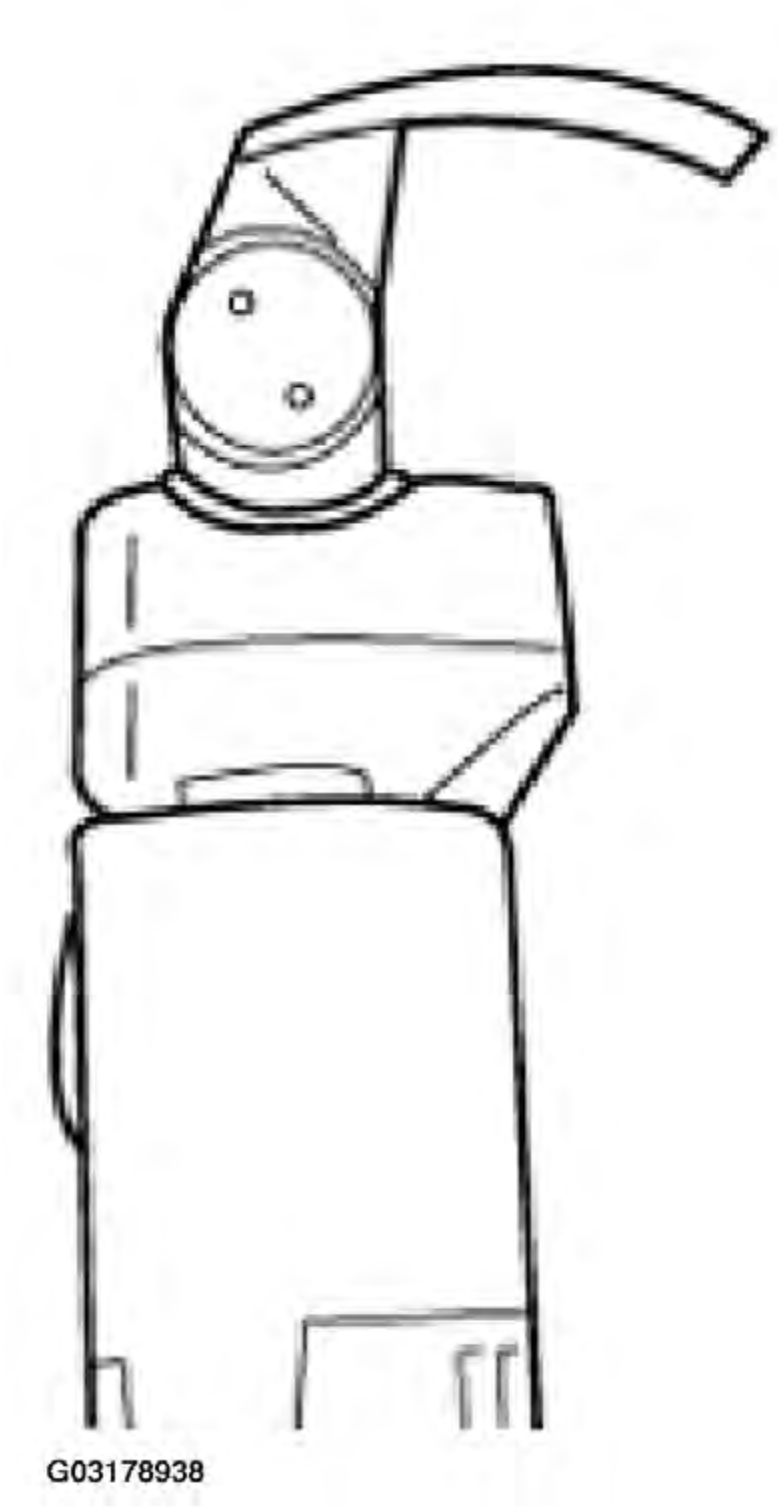


Fig. 135: Fitting Knife To Special Tool
Courtesy of BMW OF NORTH AMERICA, INC.

Carefully insert knife between body and windshield.

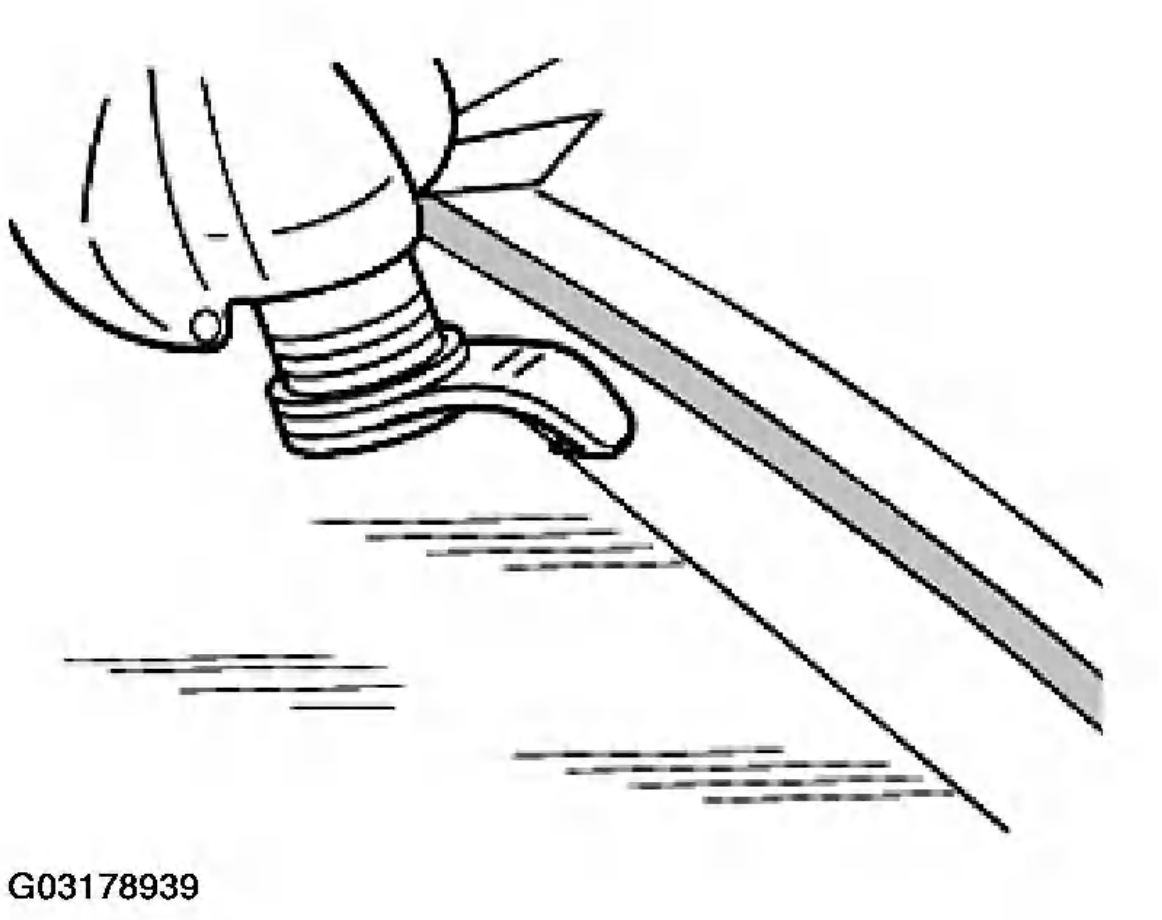


Fig. 136: Inserting Knife Between Body And Windshield
Courtesy of BMW OF NORTH AMERICA, INC.

Guide handle of knife parallel to windshield.

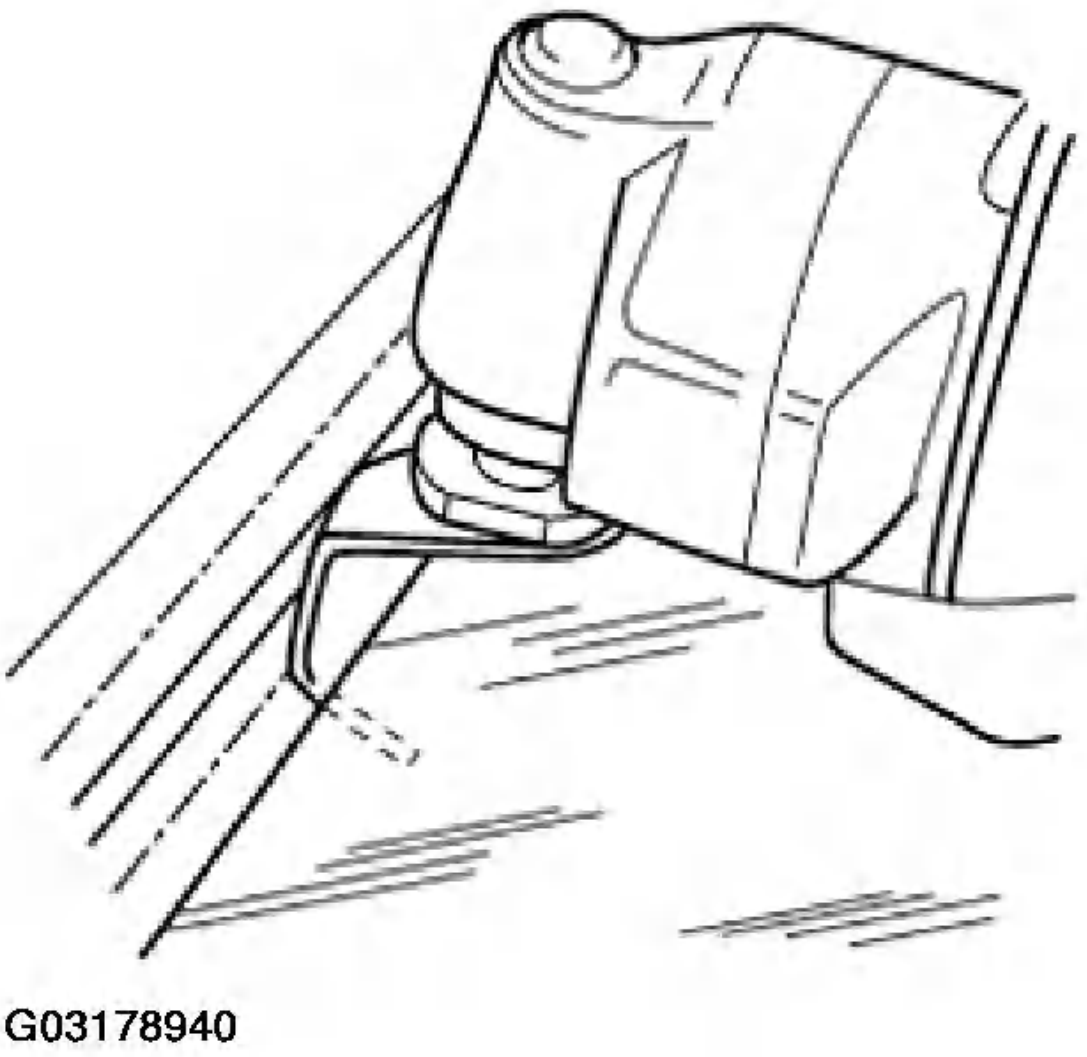


Fig. 137: Guiding Handle Of Knife Parallel To Windshield
Courtesy of BMW OF NORTH AMERICA, INC.

Cut through glue bead all around and as close as possible to windscreen glass.

1. Body opening.
2. Glue bead.
3. Knife.
4. Windshield.

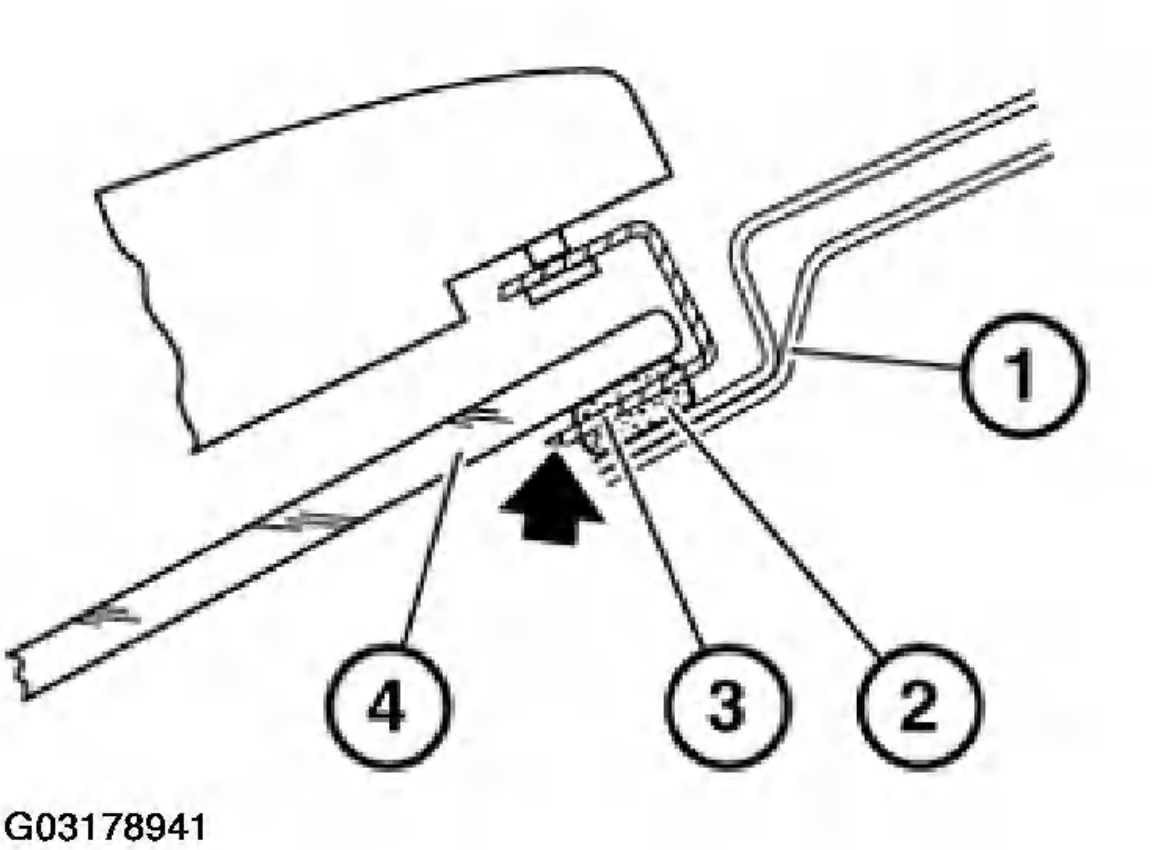


Fig. 138: Locating Windshield, Glue Bead, Body Opening And Fabric Adhesive Tape
Courtesy of BMW OF NORTH AMERICA, INC.

Lift out the windscreen using special tool 51 3 010.

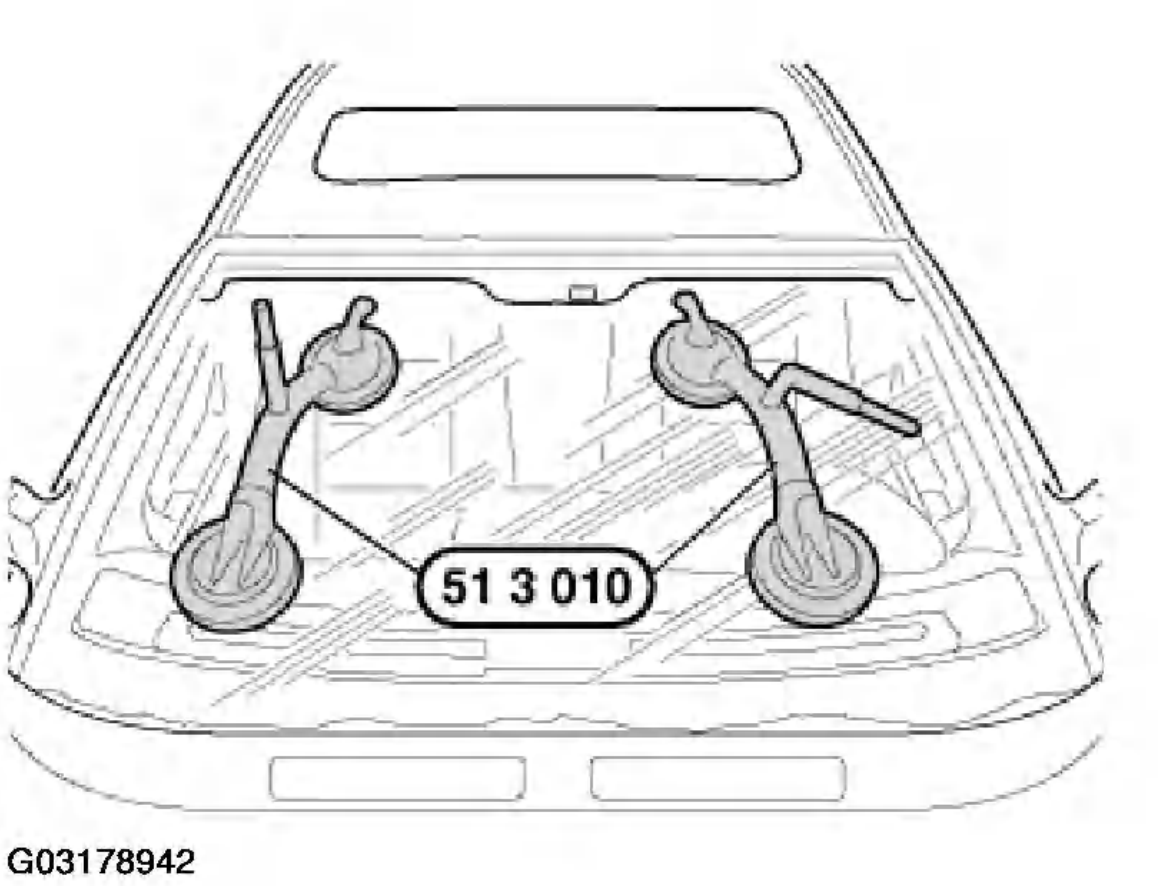


Fig. 139: Removing Windscreen
Courtesy of BMW OF NORTH AMERICA, INC.

Cut off old glue in body opening to a thickness of approx. 0.5 mm.

Cut off old glue carefully with a universal knife (sharp as a razor blade) to avoid damaging the paint finish in body opening.

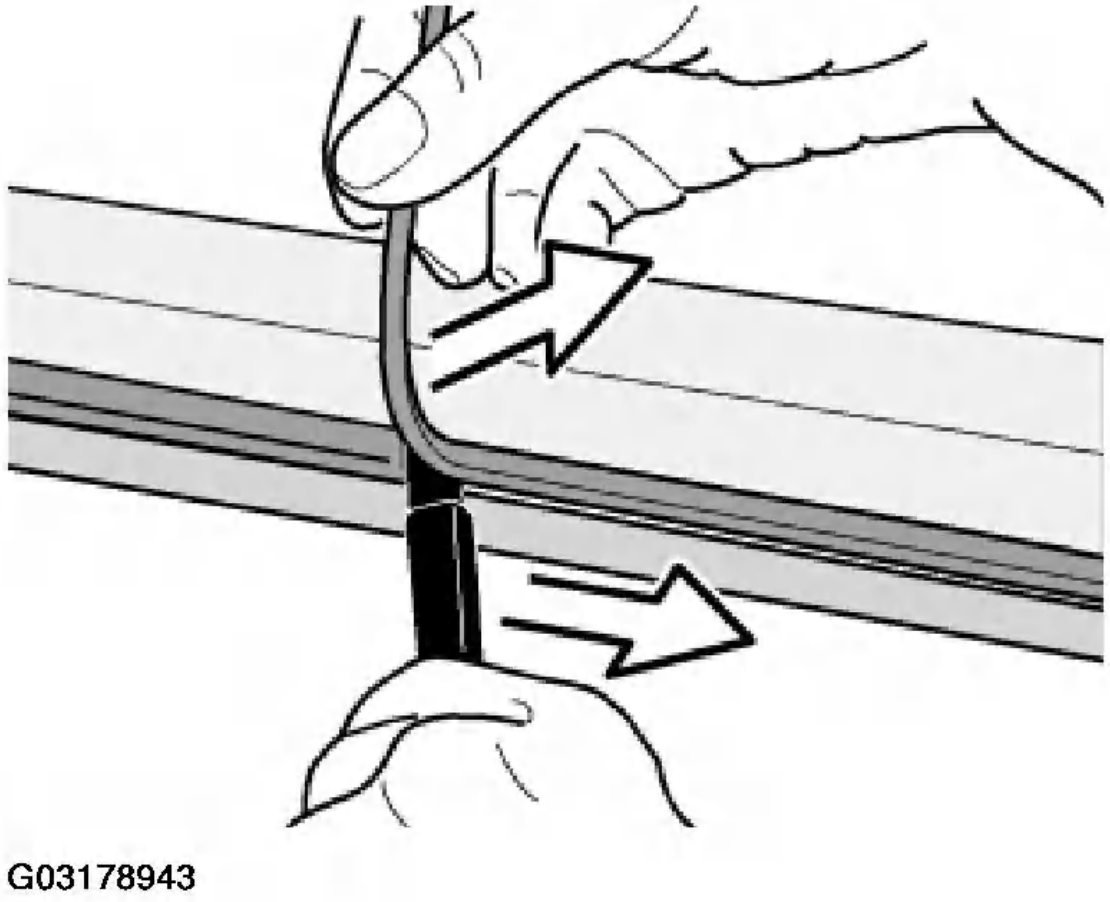


Fig. 140: Removing Old Glue
Courtesy of BMW OF NORTH AMERICA, INC.

Pull off adhesive tapes all round.

CAUTION: To ensure long-term corrosion protection, it is absolutely essential to repair paintwork damage (scratches and large-surface damage), refer to 51 31 ... REMOVING WINDSCREEN WITH "ROLL OUT 2000" .

When reusing the windshield:

Remove glue residue on windshield with a heavy-duty scalpel to approx. 0.5 mm.

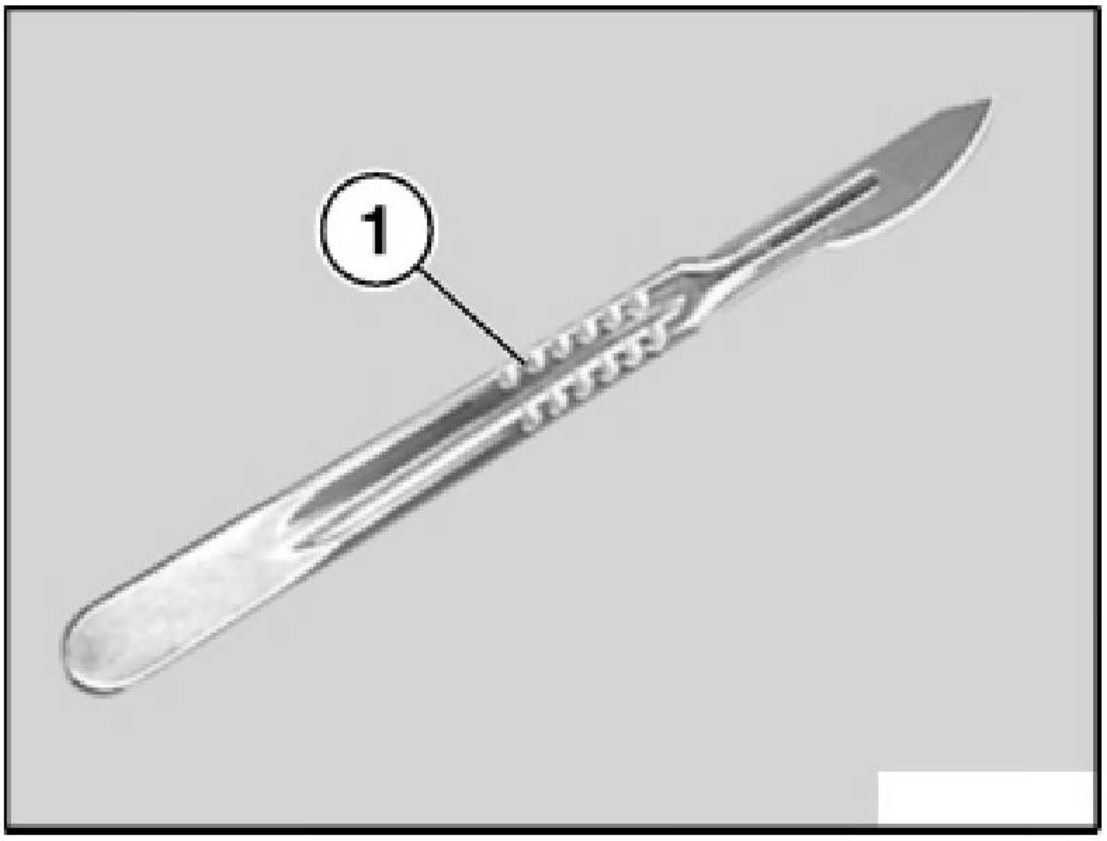


Fig. 141: Identifying Heavy-Duty Scalpel
Courtesy of BMW OF NORTH AMERICA, INC.

Install seal from bottom left to bottom right and press on.

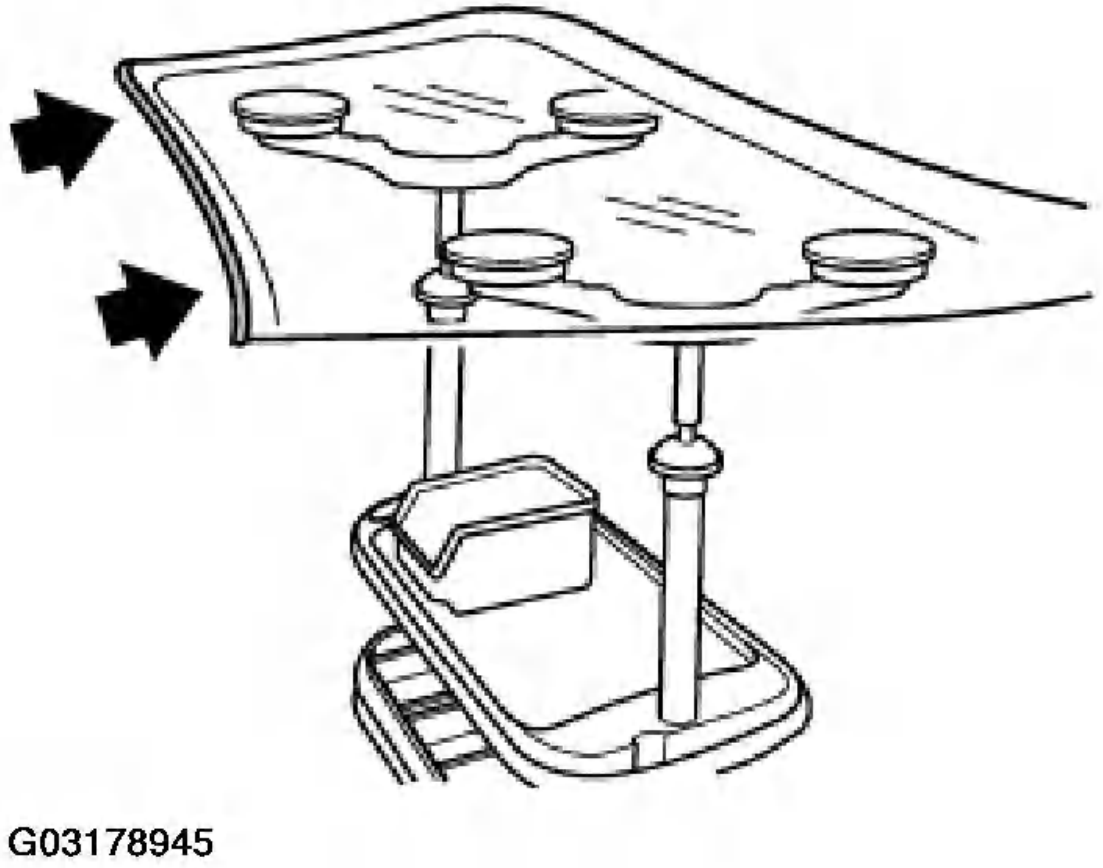


Fig. 142: Installing Seal
Courtesy of BMW OF NORTH AMERICA, INC.

CAUTION: The basic filler must have hardened!

Treat windshield and body around glued area with BMW-approved materials, refer to 51 31 ... REMOVING WINDSCREEN WITH "ROLL OUT 2000" .

NOTE: Note ventilation time!

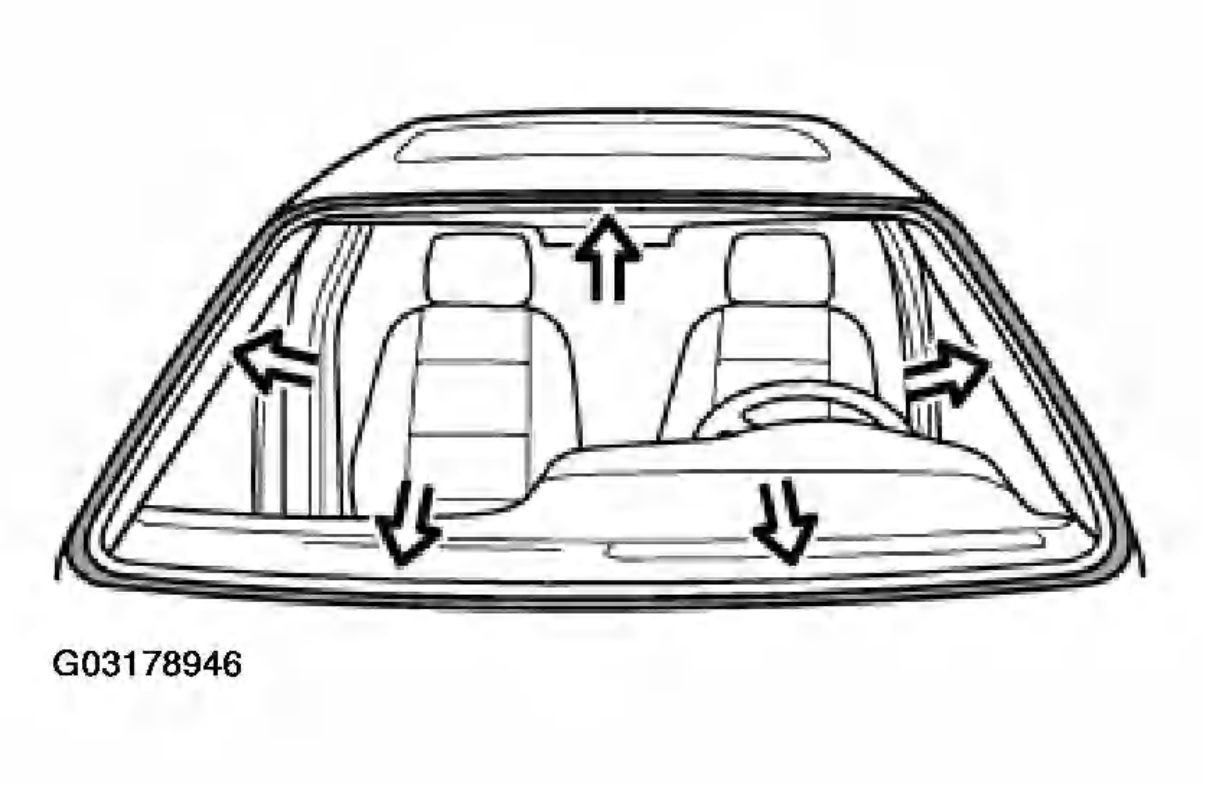


Fig. 143: Installing Windshield
Courtesy of BMW OF NORTH AMERICA, INC.

Stick on 1 spacer buffer (2) in each case in center and at distances (A) and (B) from center of cowl panel.

Dimensions:

A. 500 mm.
B. 500 mm.
C. 18 mm.

1. Windshield.
2. Spacer buffer.
3. Glue bead.
4. Windshield.

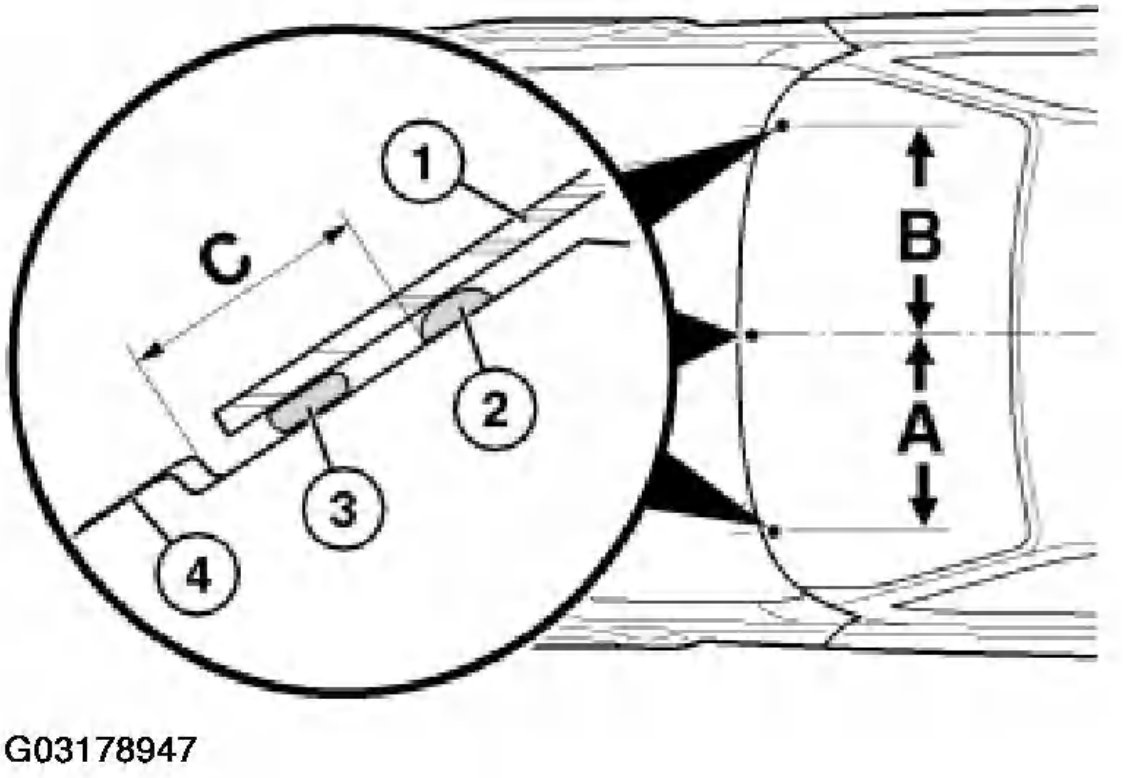


Fig. 144: Identifying Spacer Buffer Locations
Courtesy of BMW OF NORTH AMERICA, INC.

Cut nozzle to size.

Dimensions:

A. 8 $_{-2}$ 2 mm.

B. 11 $_{-2}$ mm.

NOTE: For an even application of adhesive bead: Use a cartridge gun (operated pneumatically or electrically).

Check expiration date of glue!

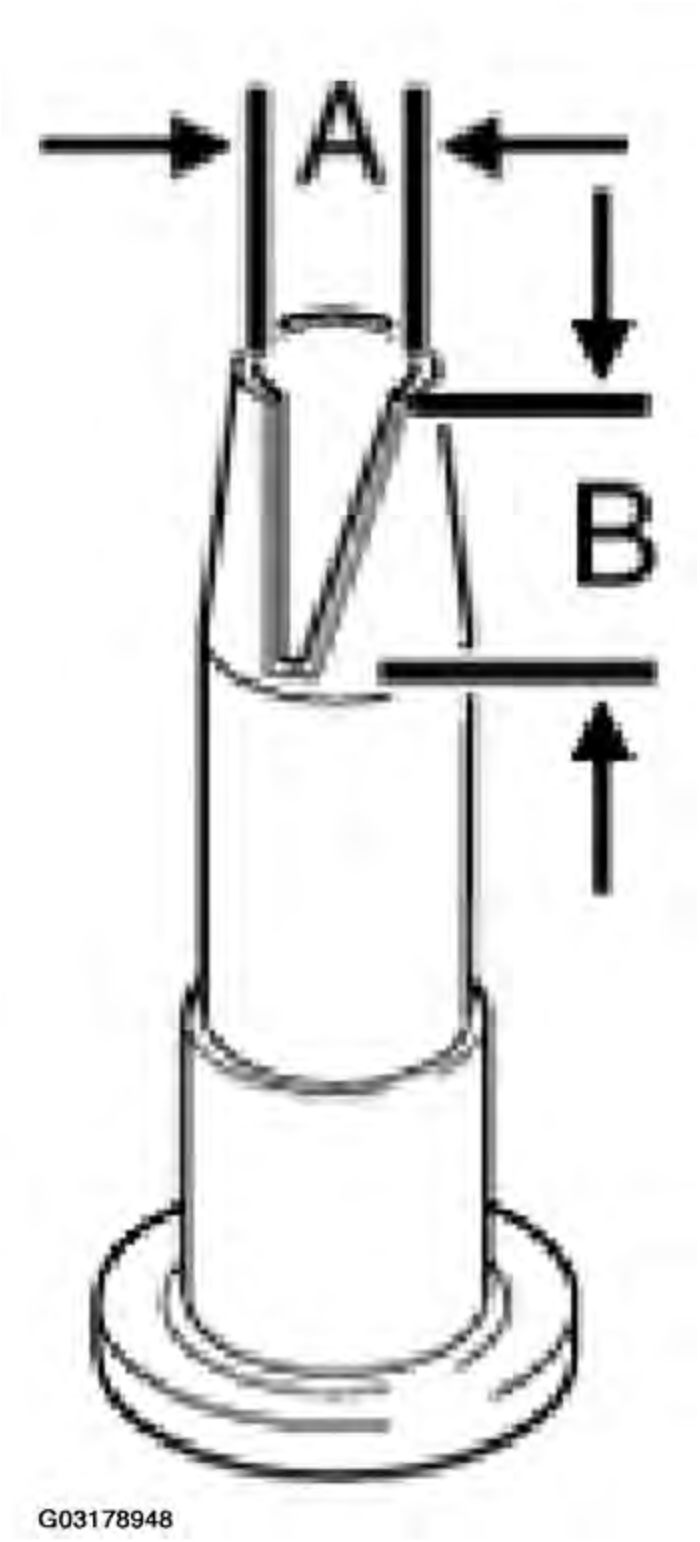


Fig. 145: Identifying Nozzle Dimensions
Courtesy of BMW OF NORTH AMERICA, INC.

If necessary, apply a test bead before gluing.

Cartridge must be held perpendicular to the windscreen glass.

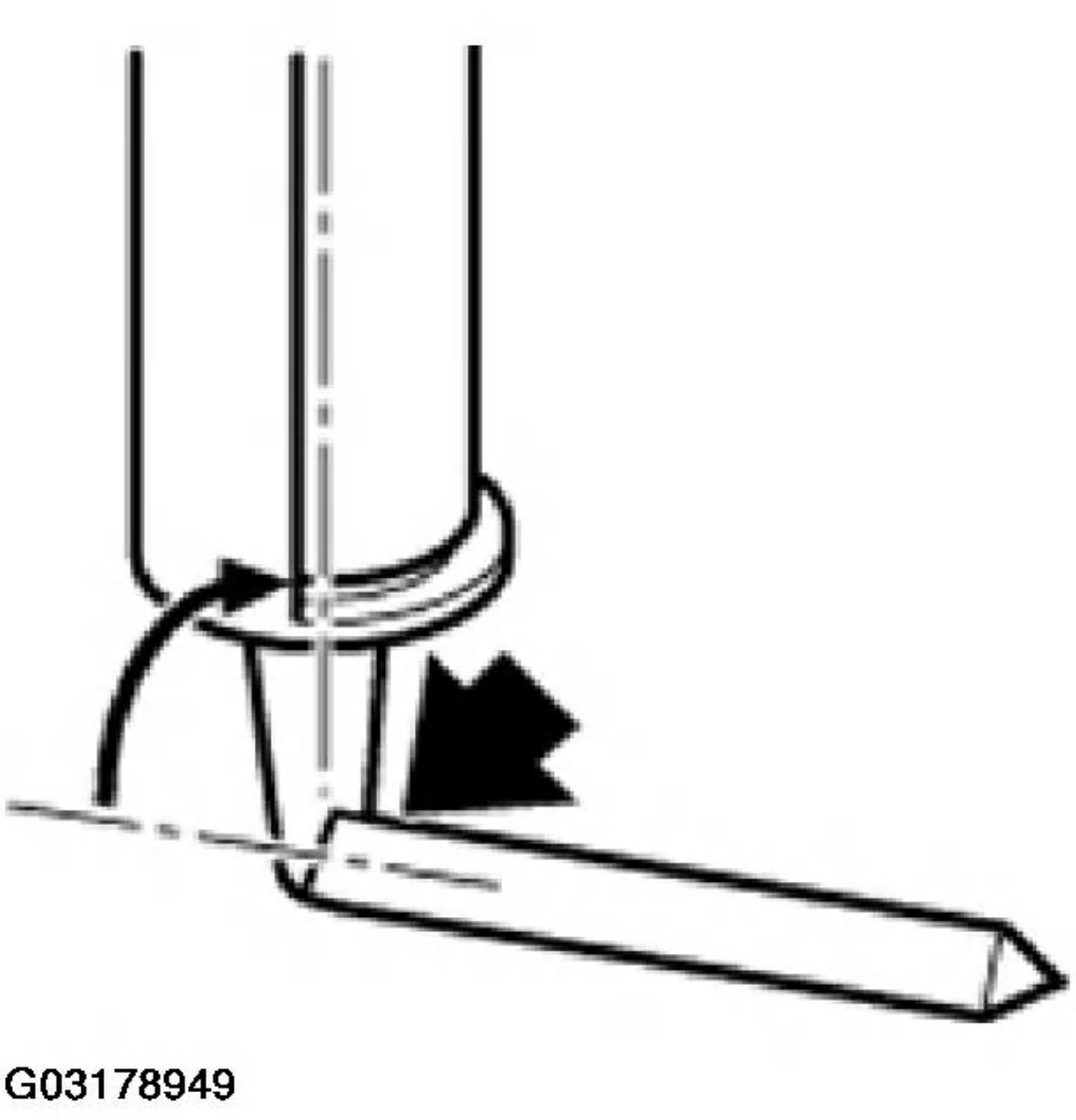


Fig. 146: Testing Glue
Courtesy of BMW OF NORTH AMERICA, INC.

Shape of glue bead:

A. 8 $_{-2}$ mm.

B. 11 $_{-2}$ mm.

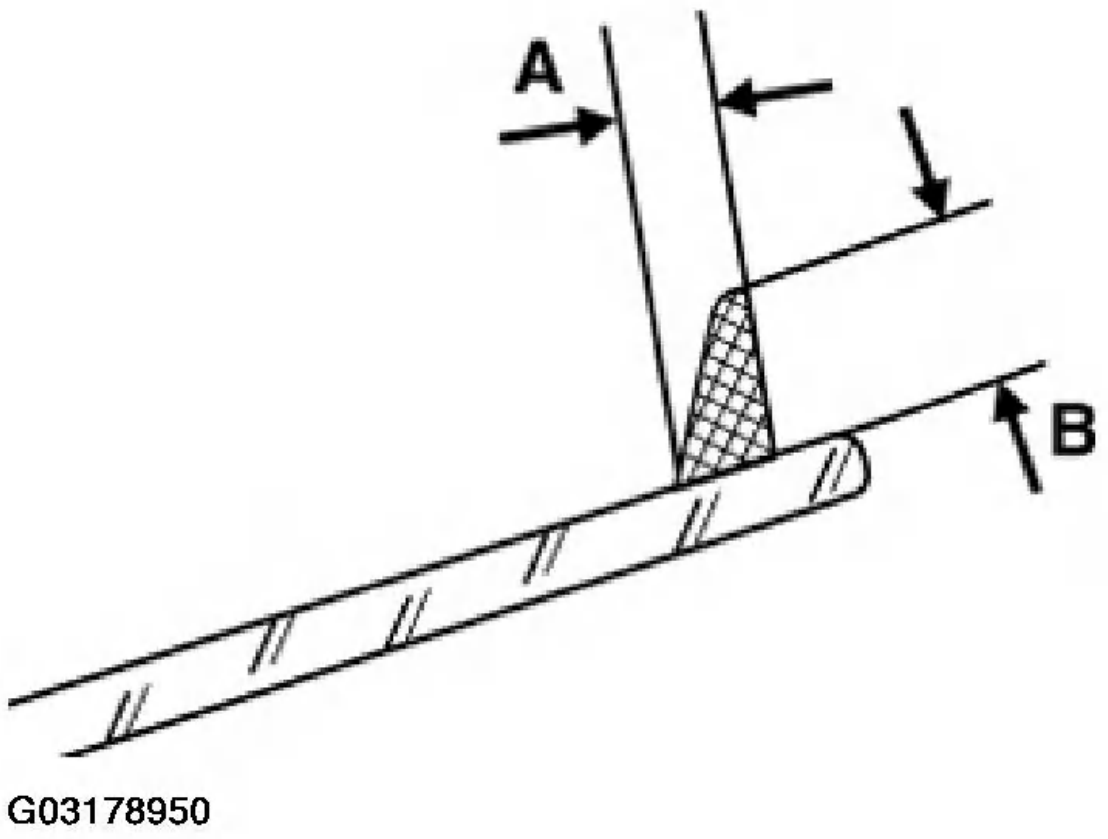


Fig. 147: Identifying Shape Of Glue Bead
Courtesy of BMW OF NORTH AMERICA, INC.

CAUTION: Apply glue bead quickly and insert windscreen glass. Skin formation time of glue, maximum 10 minutes.

GLUE BEAD THICKNESS SPECIFICATION

(A) = 8 mm.	Distance of glue bead to edge of windshield/bottom of windshield.
(B) = 8 mm.	Distance between glue bead and edge of windshield.
(C) = 8 mm.	Distance between glue bead and edge of windshield.

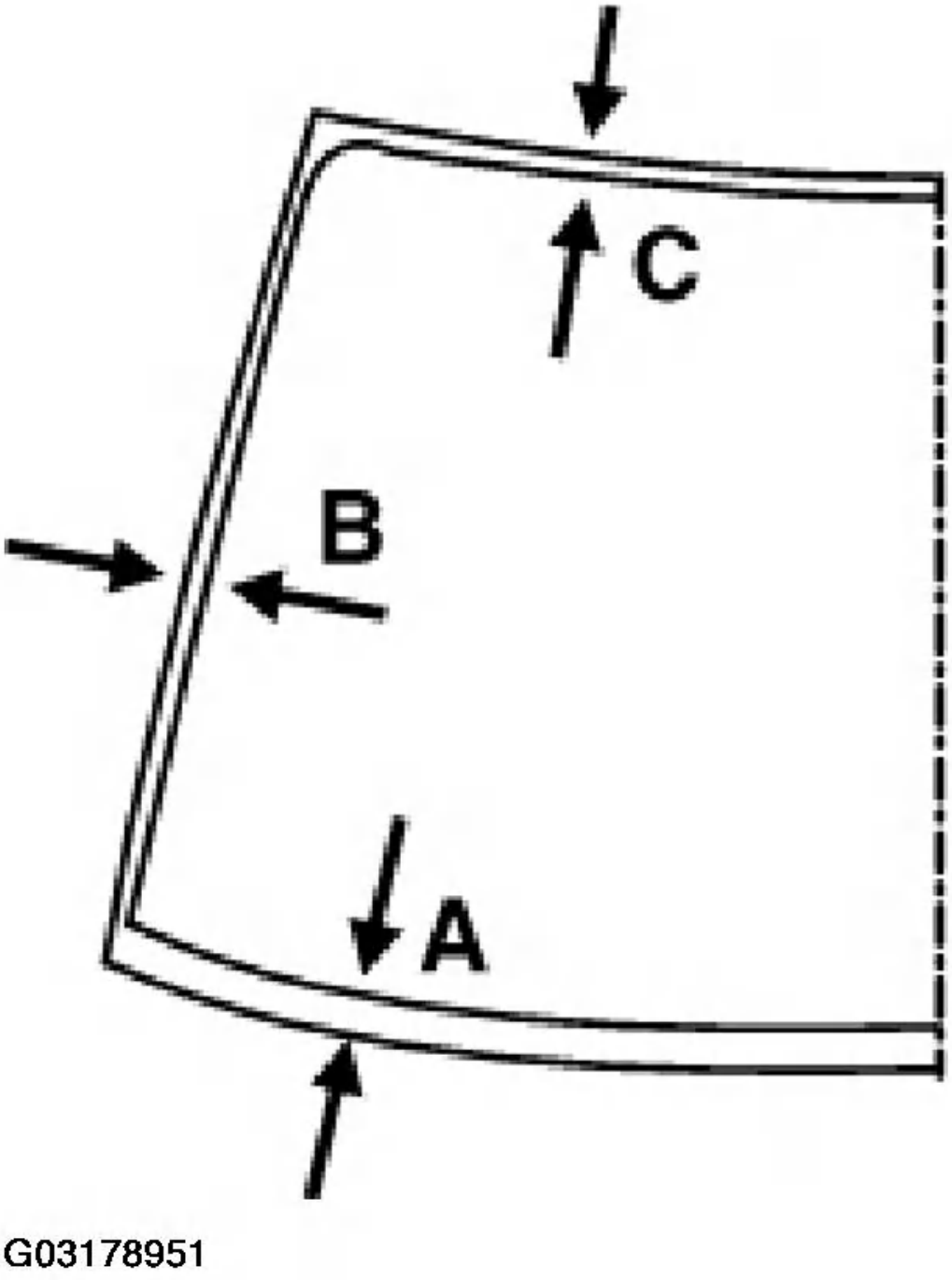


Fig. 148: Glue Bead Thickness Specification
Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: The adhesive area for the plastic adhesive tapes must be free of grease and dust.

Attach two yellow plastic adhesive tapes (1) to roof at distance (A) from outer corners.

Length: 500 mm.

Width: 50 mm.

(A) 250 mm.

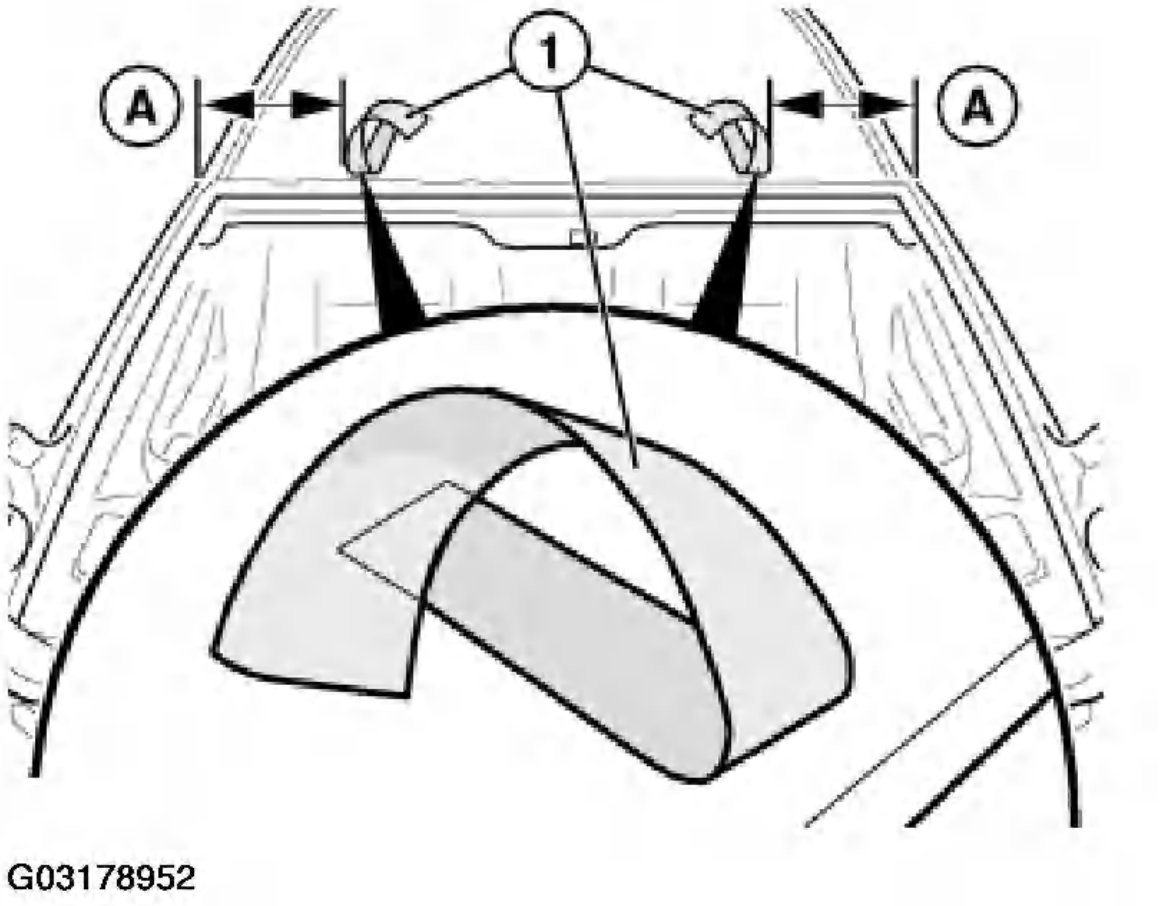


Fig. 149: Identifying Plastic Adhesive Tapes
Courtesy of BMW OF NORTH AMERICA, INC.

Using special tool 51 3 010, first position windshield at top, align sides, then install at bottom and press into place.

Press windshield upwards until seal rests uniformly on roof.

Fix windshield in this location at top with two yellow plastic adhesive tapes.

If necessary, support windshield glass from below with wooden wedge.

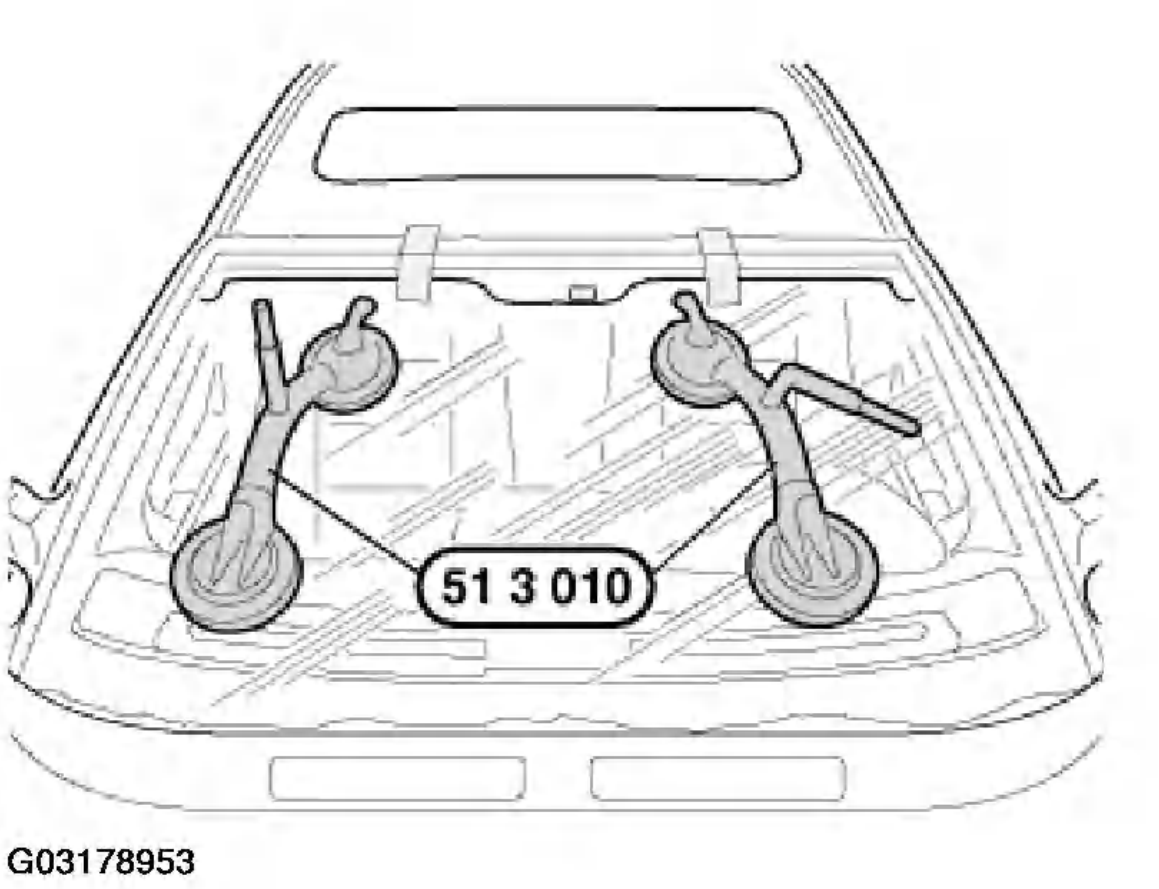


Fig. 150: Installing Windshield Glass
Courtesy of BMW OF NORTH AMERICA, INC.

CAUTION: Remove dirt from residual glue with Sika-Entferner 208 before glue is hard. Do not press out windscreen glass again for this purpose. Hardened glue can only be removed by machine.

Assemble car.

After hardening time, remove support.

NOTE: Any leakages are located by spraying water under the sealing lips or by using an ultrasonic leak detector and sealed with the appropriate nozzle.

51 31 000 REMOVING AND INSTALLING/REPLACING WINDSCREEN

Important!

The "Instructions for window cementing" serve as the basis for these repair instructions and must be followed without fail. Refer to 51 31 ... INSTRUCTIONS ON GLUING WINDSCREEN .

51 31 011 REPLACING WINDSCREEN (COMPLETE WINDSCREEN)

Operation Is Described In:

Removing and installing windscreen, refer to 51 31 000 REMOVING AND INSTALLING WINDSHIELD (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE) .

51 31 015 REPAIRING DAMAGE TO WINDSCREENS CAUSED BY PITTING (STONE CHIPS)

(CLEAR AND TINTED LAMINATED SAFETY GLASS)

Field Of Vision (No Repairs Acceptable):

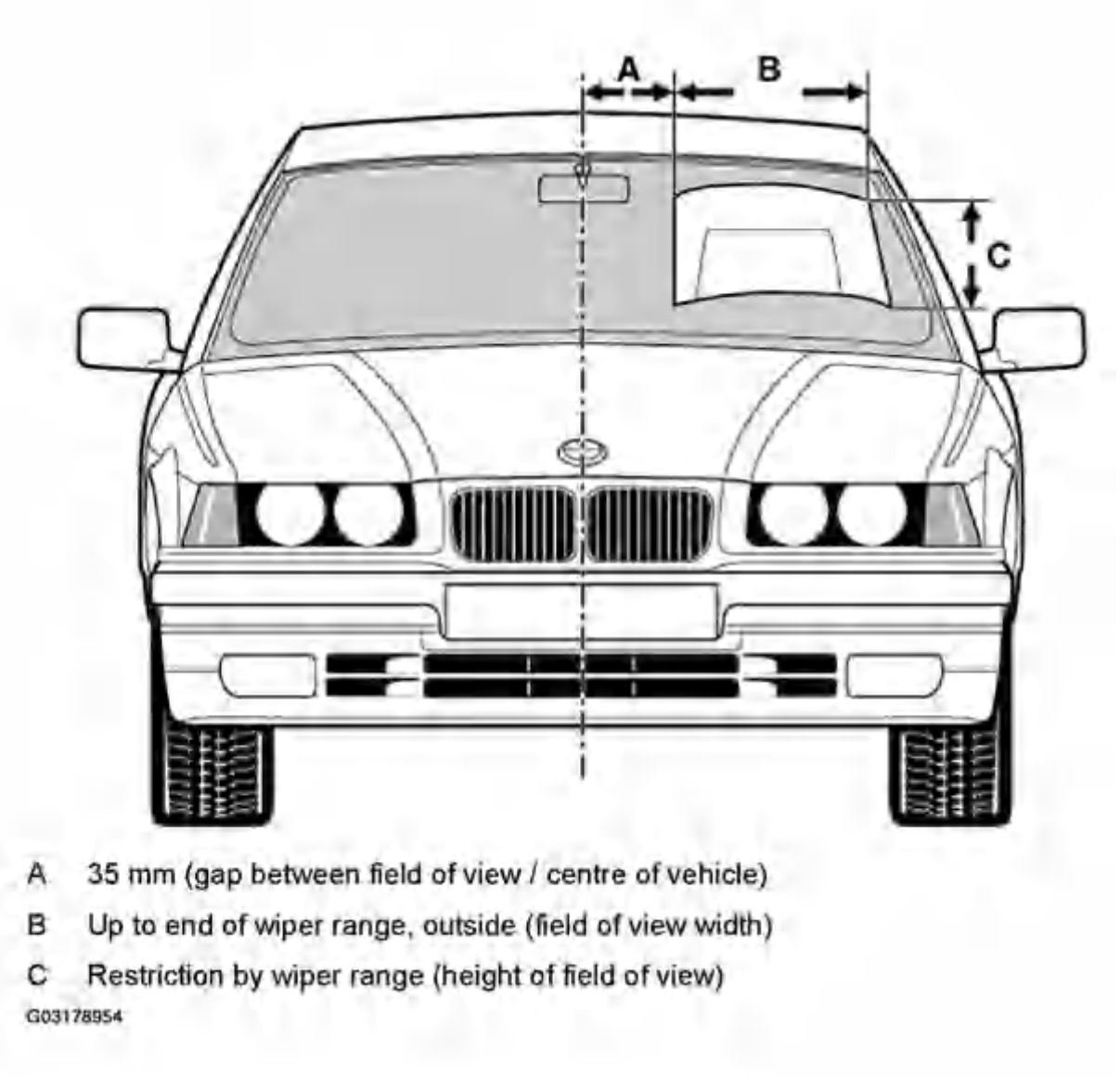


Fig. 151: Identifying Field Of Vision
Courtesy of BMW OF NORTH AMERICA, INC.

Important!

Repairs must only be carried out outside of the field of vision (refer to sketch).

If the stone chip damage is outside the field of vision, refer to 51 31 ... REMOVING WINDSCREEN WITH "ROLL OUT 2000" .

54 21 150 REMOVING AND INSTALLING/REPLACING REAR WINDOW FOR HARD TOP

NOTE: For gluing the rear window, cements for cold and hot processing are permitted.

Cold Processing:

Comply with instructions on gluing windows, refer to 51 31 ... REMOVING WINDSCREEN WITH "ROLL OUT 2000" .

Warm Processing:

Open aluminum membrane at rear end of cartridge. Place cartridge in cartridge oven.

Heat glue cartridges to 80Â°C for one hour in oven.

Comply with instructions on gluing windows, refer to 51 31 ... REMOVING WINDSCREEN WITH "ROLL OUT 2000" .

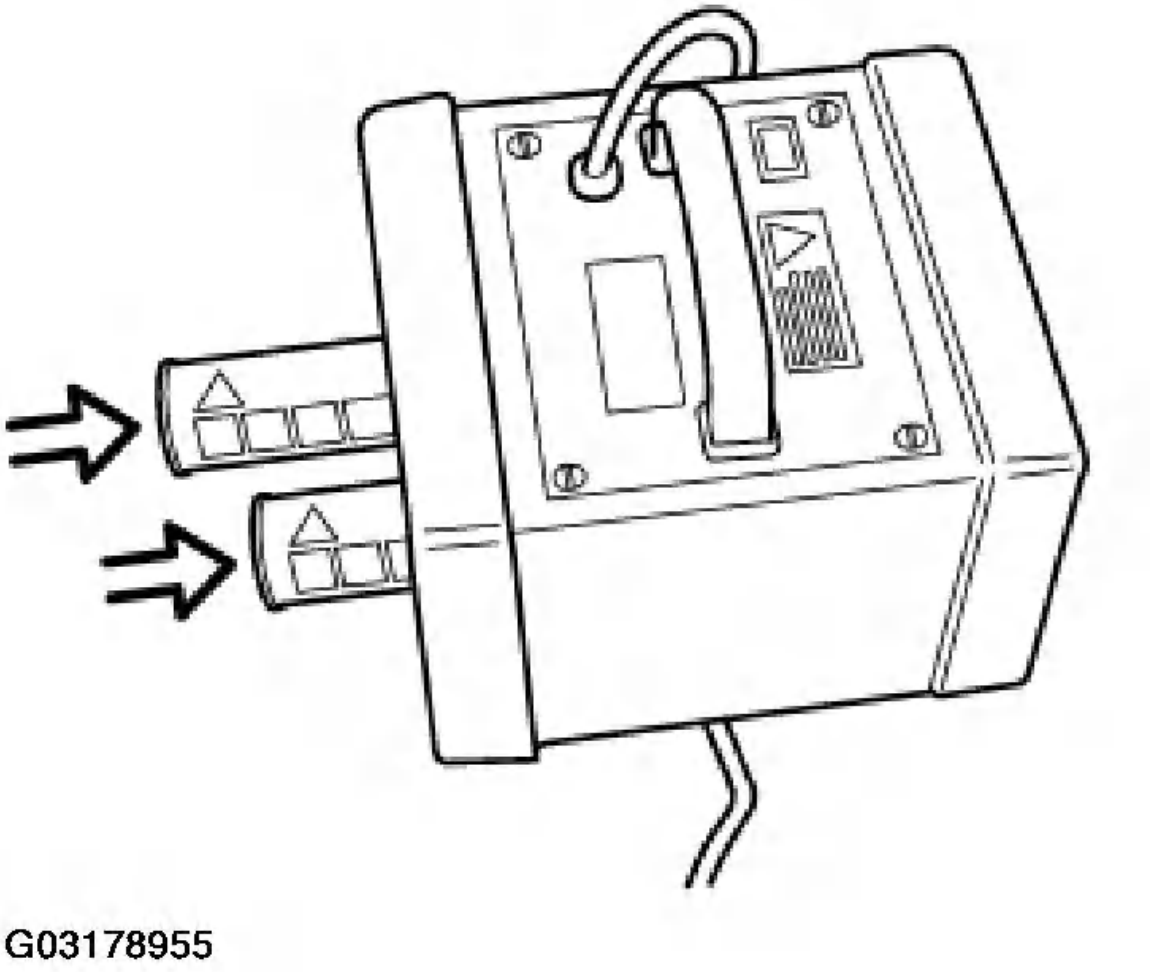


Fig. 152: View Of Cartridge Oven
Courtesy of BMW OF NORTH AMERICA, INC.

Remove hard top, refer to 54 21 001 REMOVING HARD TOP .

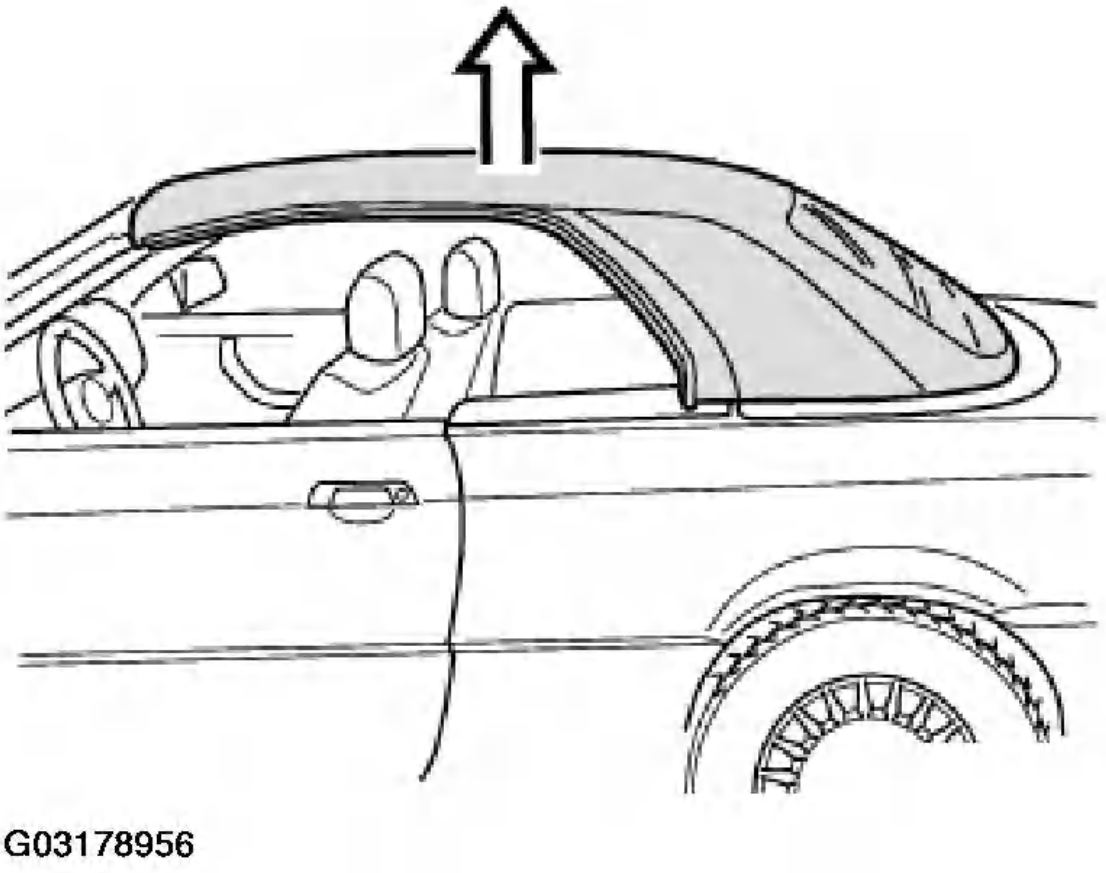


Fig. 153: Removing Hard Top
Courtesy of BMW OF NORTH AMERICA, INC.

Remove molded roof lining from hard top, refer to 54 21 100 REMOVING AND INSTALLING/REPLACING MOLDED ROOF LINING ON HARD TOP .

Disconnect plug (1) for rear window heater (2) on left and right.

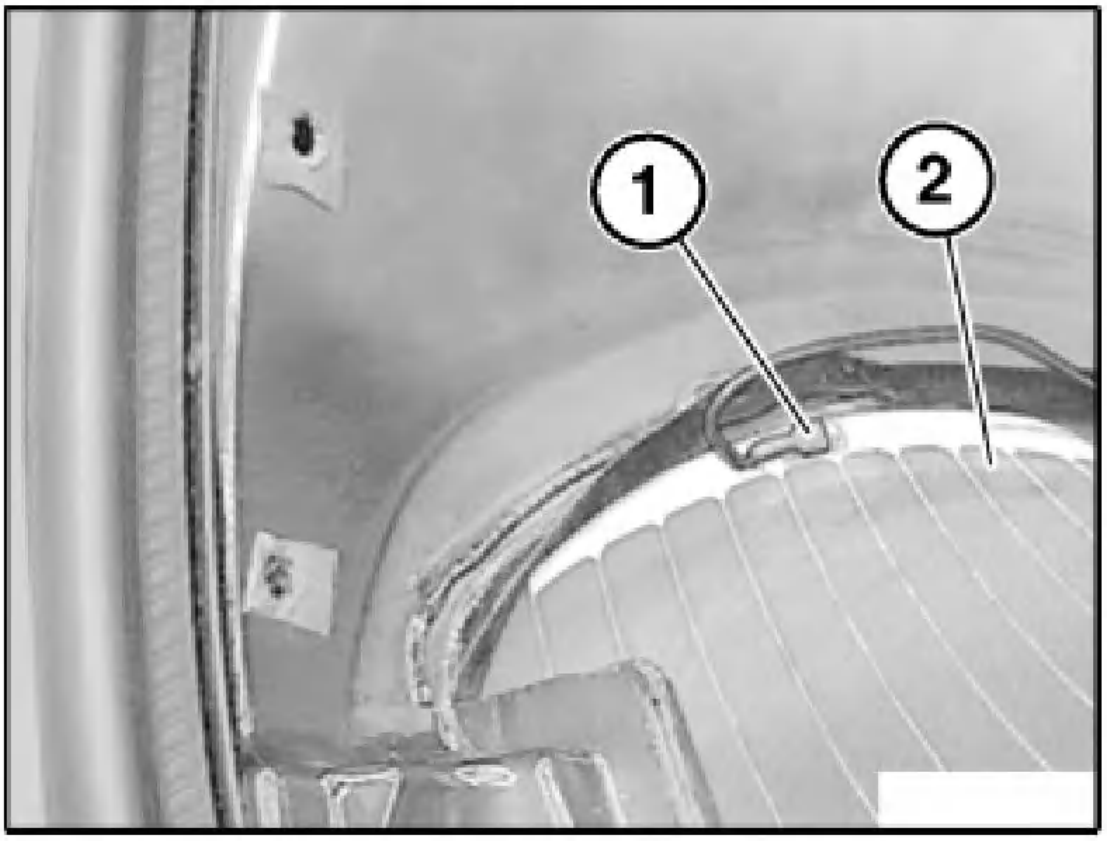


Fig. 154: Disconnecting Plug For Rear Window Heater
Courtesy of BMW OF NORTH AMERICA, INC.

Pull out seal (1) from transition area of gutter (2).

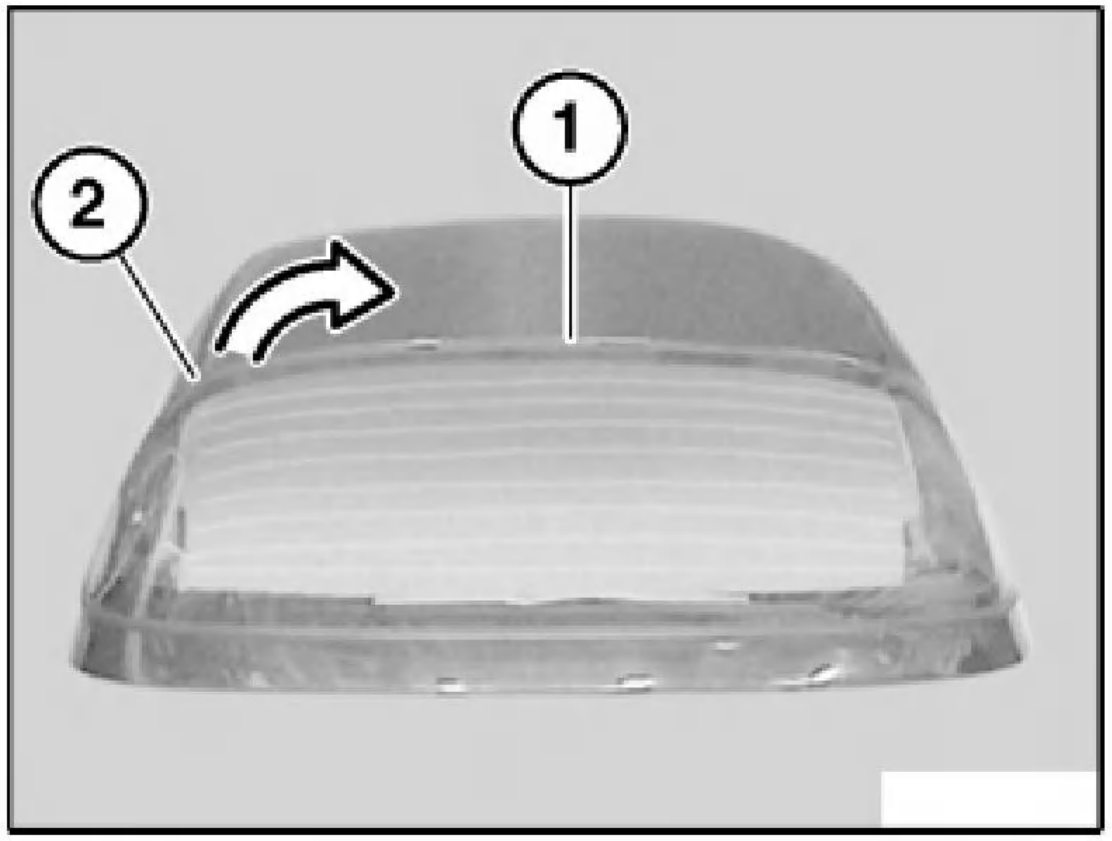


Fig. 155: Removing Seal From Transition Area Of Gutter
Courtesy of BMW OF NORTH AMERICA, INC.

Mask trunk lid corners and hard top with fabric adhesive tape (e.g. Tesa).

1. Rear window.
2. Glue bead.
3. Hard top flange.
4. Fabric adhesive tape.

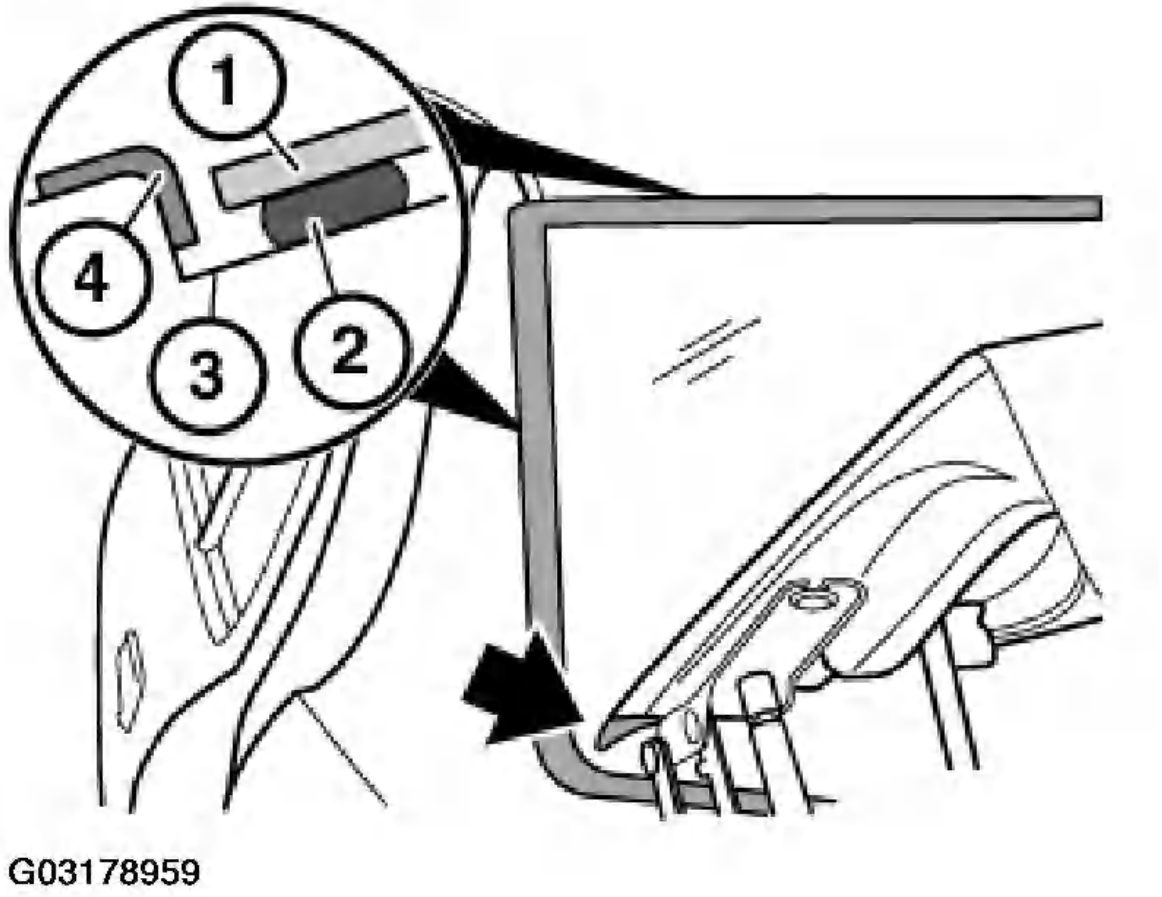


Fig. 156: Identifying Rear Window, Glue Bead, Hard Top Flange And Fabric Adhesive Tape
Courtesy of BMW OF NORTH AMERICA, INC.

Fit knife (24 mm blade length) to the tool.

NOTE: If necessary, resharpen knife with machine running.

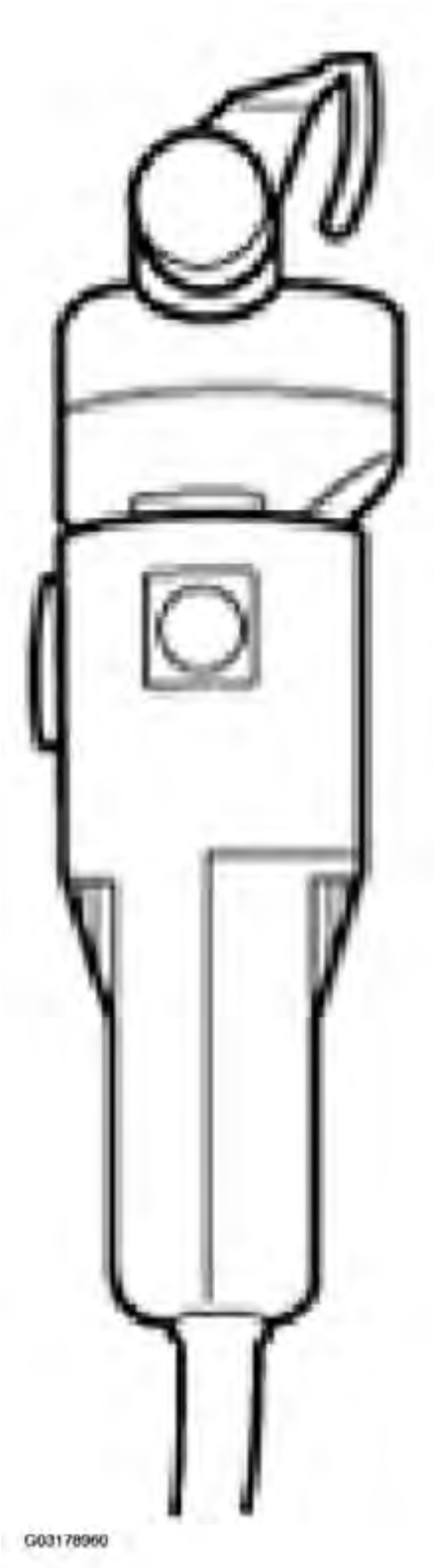


Fig. 157: Fitting Knife To Special Tool
Courtesy of BMW OF NORTH AMERICA, INC.

CAUTION: When reusing the rear window: Do not damage wires for rear window heater.

Carefully insert knife between hard top and rear window.

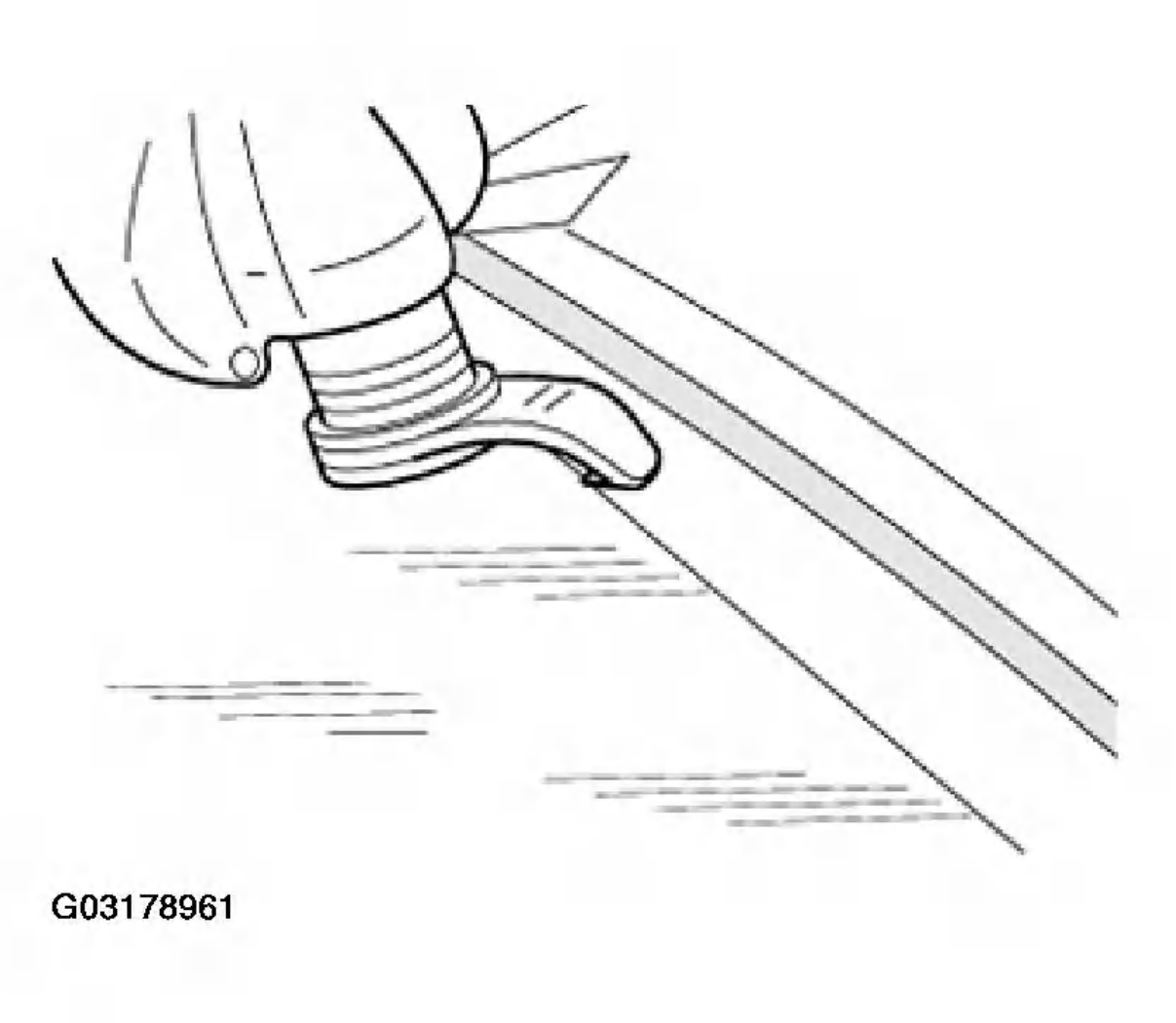


Fig. 158: Inserting Knife Between Hard Top And Rear Window
Courtesy of BMW OF NORTH AMERICA, INC.

Guide web of knife parallel to rear window.

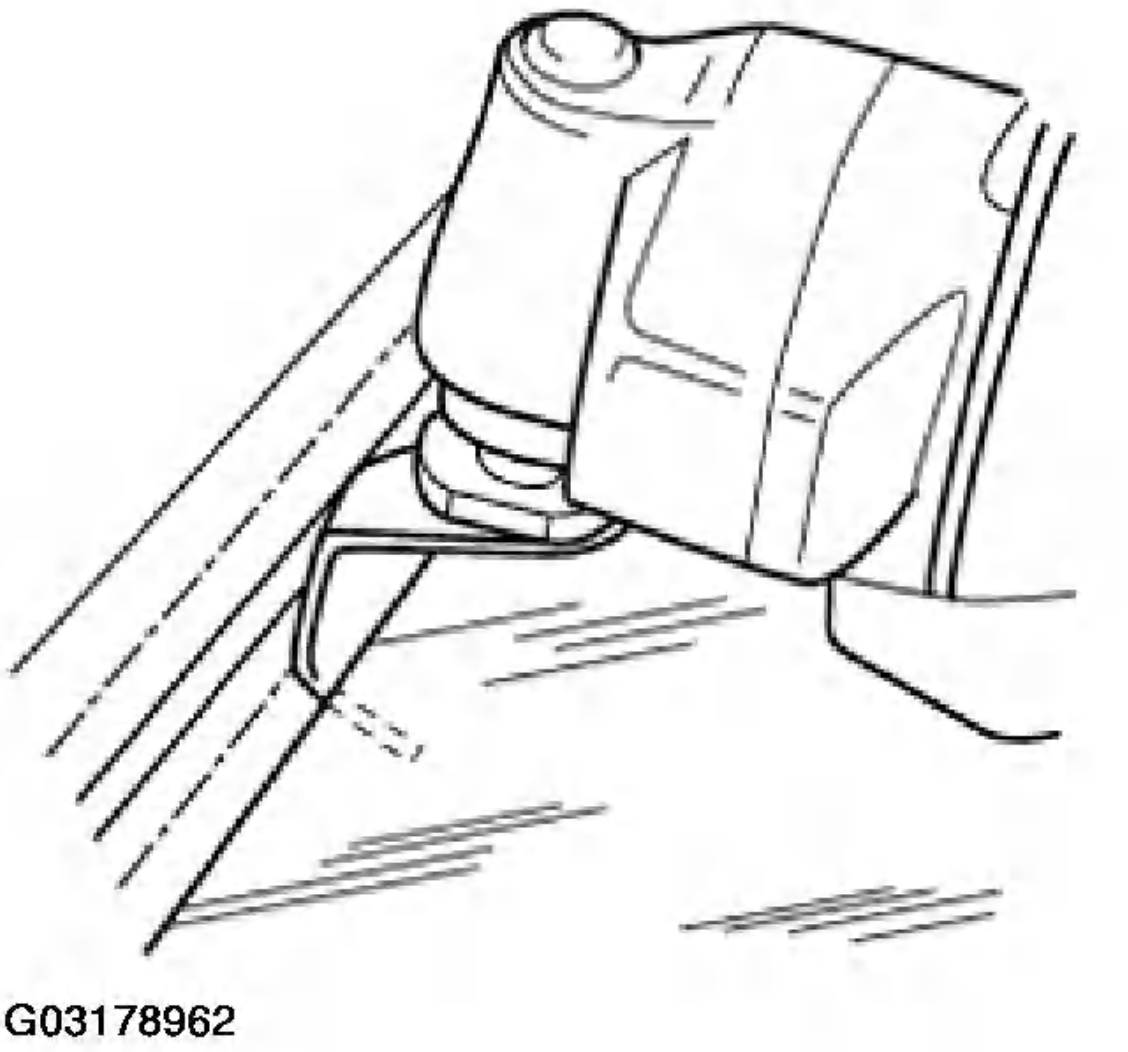


Fig. 159: Guiding Web Of Knife Parallel To Rear Window
Courtesy of BMW OF NORTH AMERICA, INC.

Cut through glue bead all around as close as possible to the rear window glass.

1. Hard top cutout.
2. Glue bead.
3. Knife.
4. Rear window.

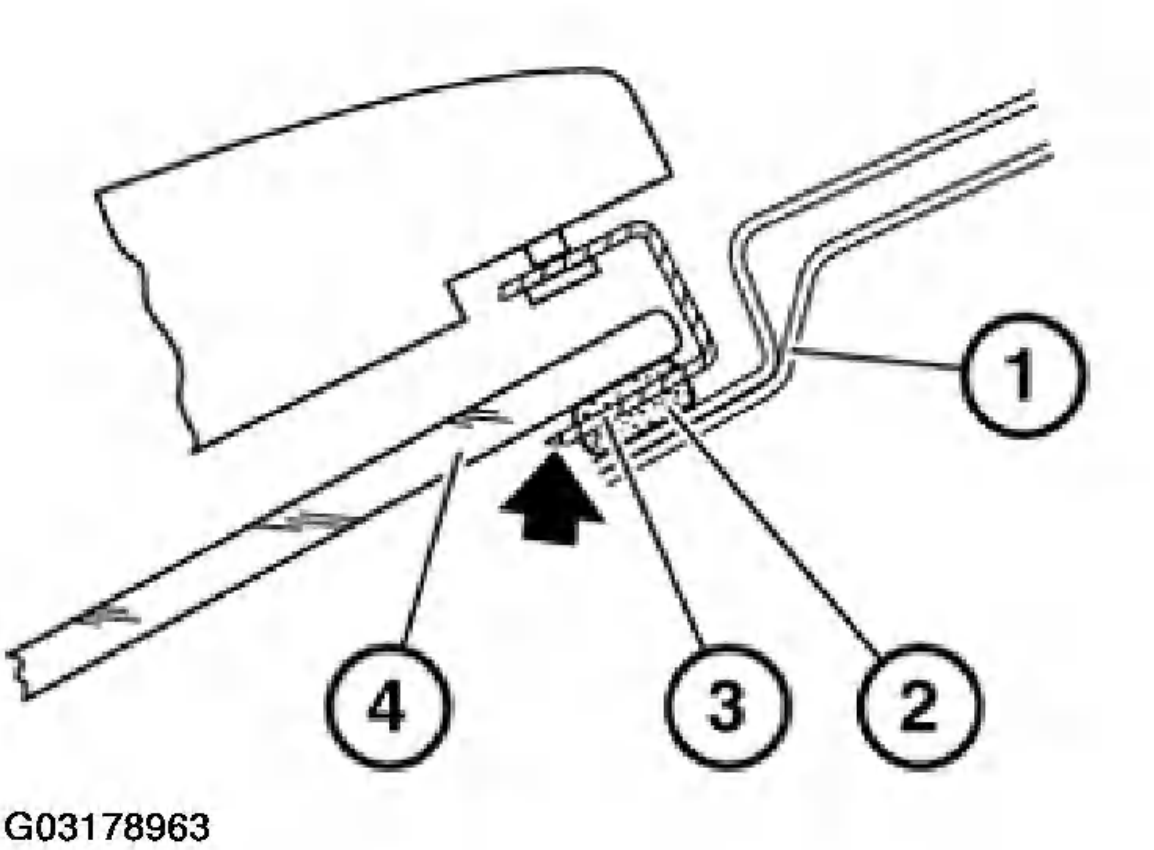


Fig. 160: Identifying Rear Window, Glue Bead, Hard Top Flange And Fabric Adhesive Tape
Courtesy of BMW OF NORTH AMERICA, INC.

Lift out rear window with special tool 51 3 010.

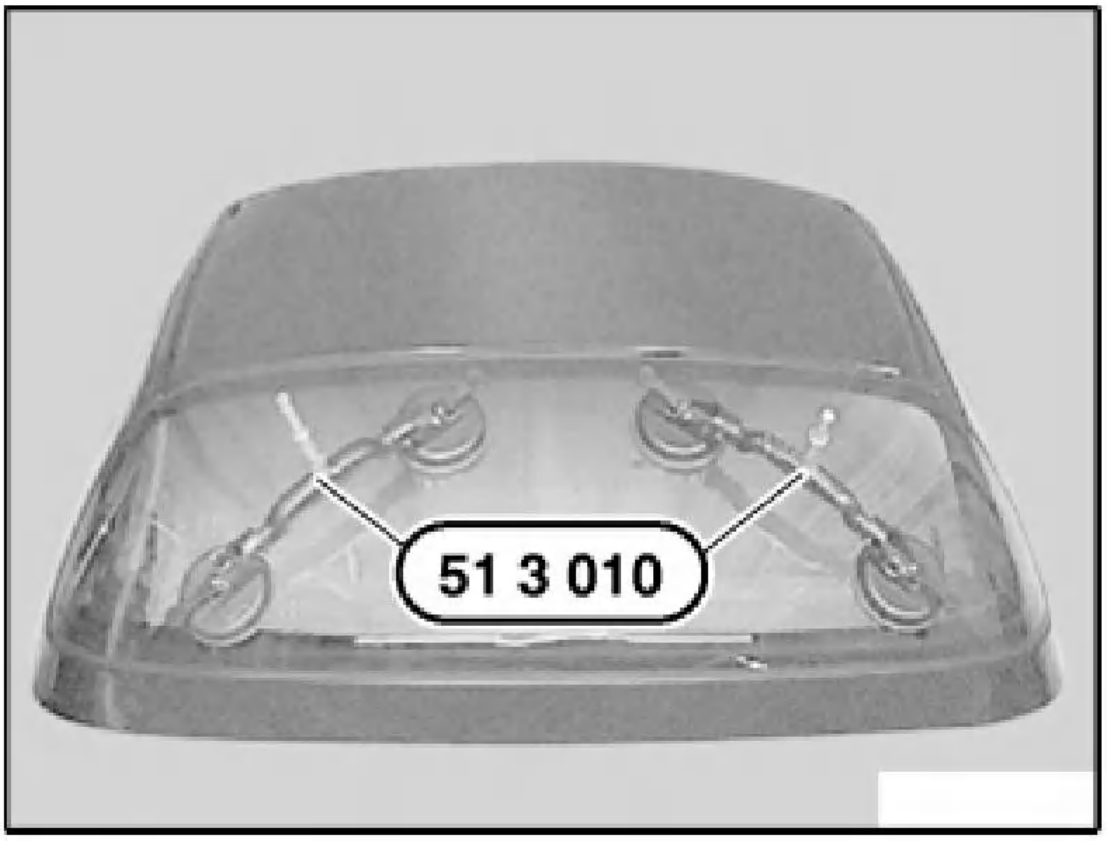


Fig. 161: Removing Rear Window
Courtesy of BMW OF NORTH AMERICA, INC.

Remove residual adhesive in hard top cutout to a thickness of approx. 0.5 mm.

To avoid damage to paintwork in hard top cutout, cut off residual adhesive with universal knife (razor sharp).

Pull off adhesive tapes all round.

CAUTION: To ensure long-term corrosion protection, it is essential to touch up damage to paintwork (scratches and large-surface damage).

Refer to 51 31 ... REMOVING WINDSCREEN WITH "ROLL OUT 2000" .

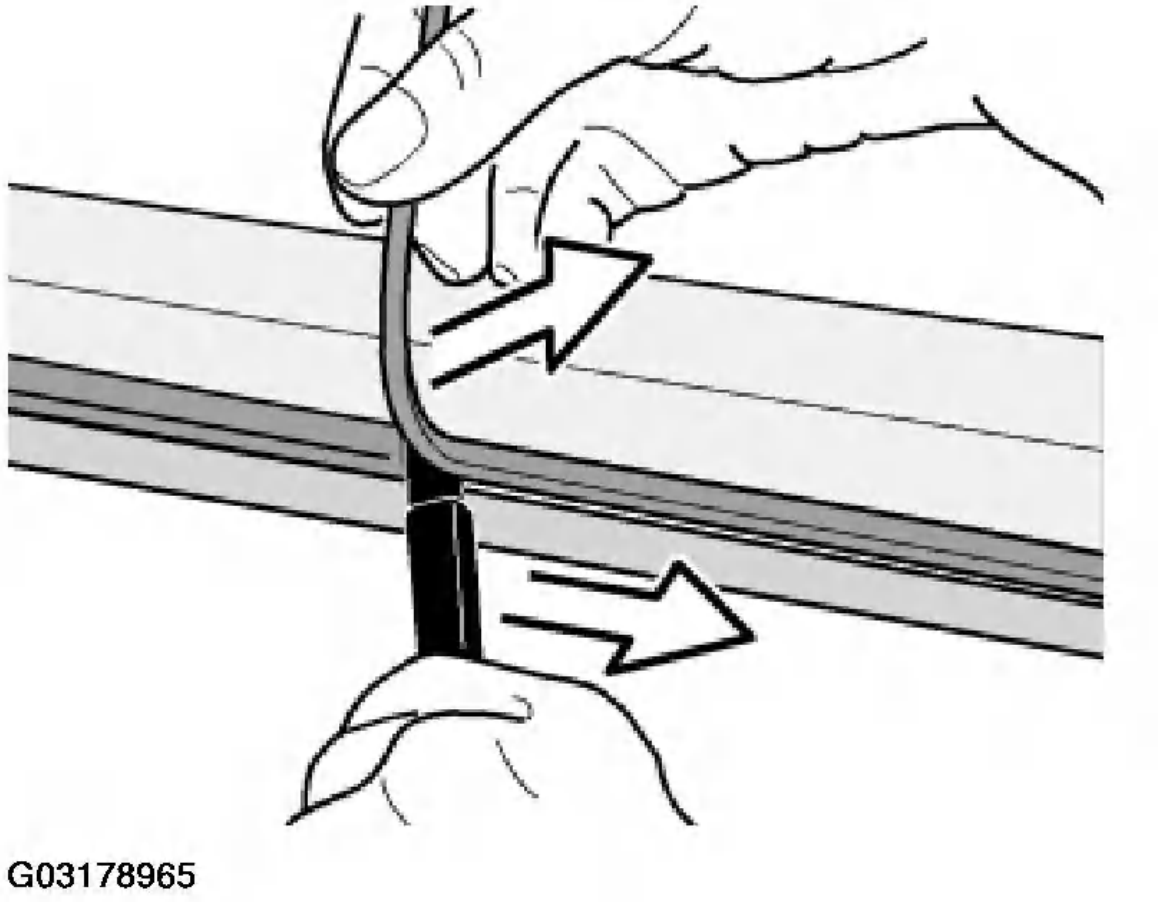


Fig. 162: Removing Residual Adhesive In Hard Top
Courtesy of BMW OF NORTH AMERICA, INC.

When reusing the rear window:

Scrape away glue residue on rear window to depth of 0.5 mm with scraper.

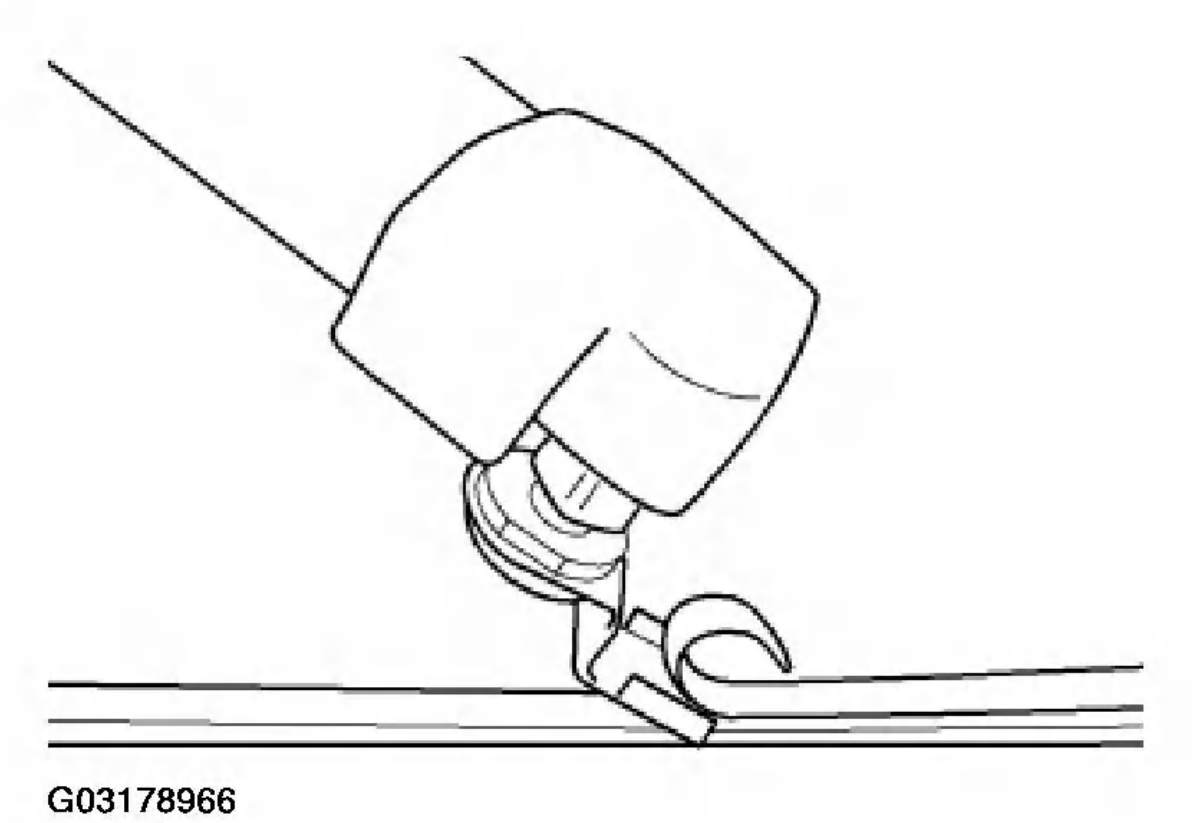


Fig. 163: Scraping Glue Residue On Rear Window
Courtesy of BMW OF NORTH AMERICA, INC.

Mount and press seal on to rear window glass at bottom.

Mount and press seal on to rear window glass at top and sides.

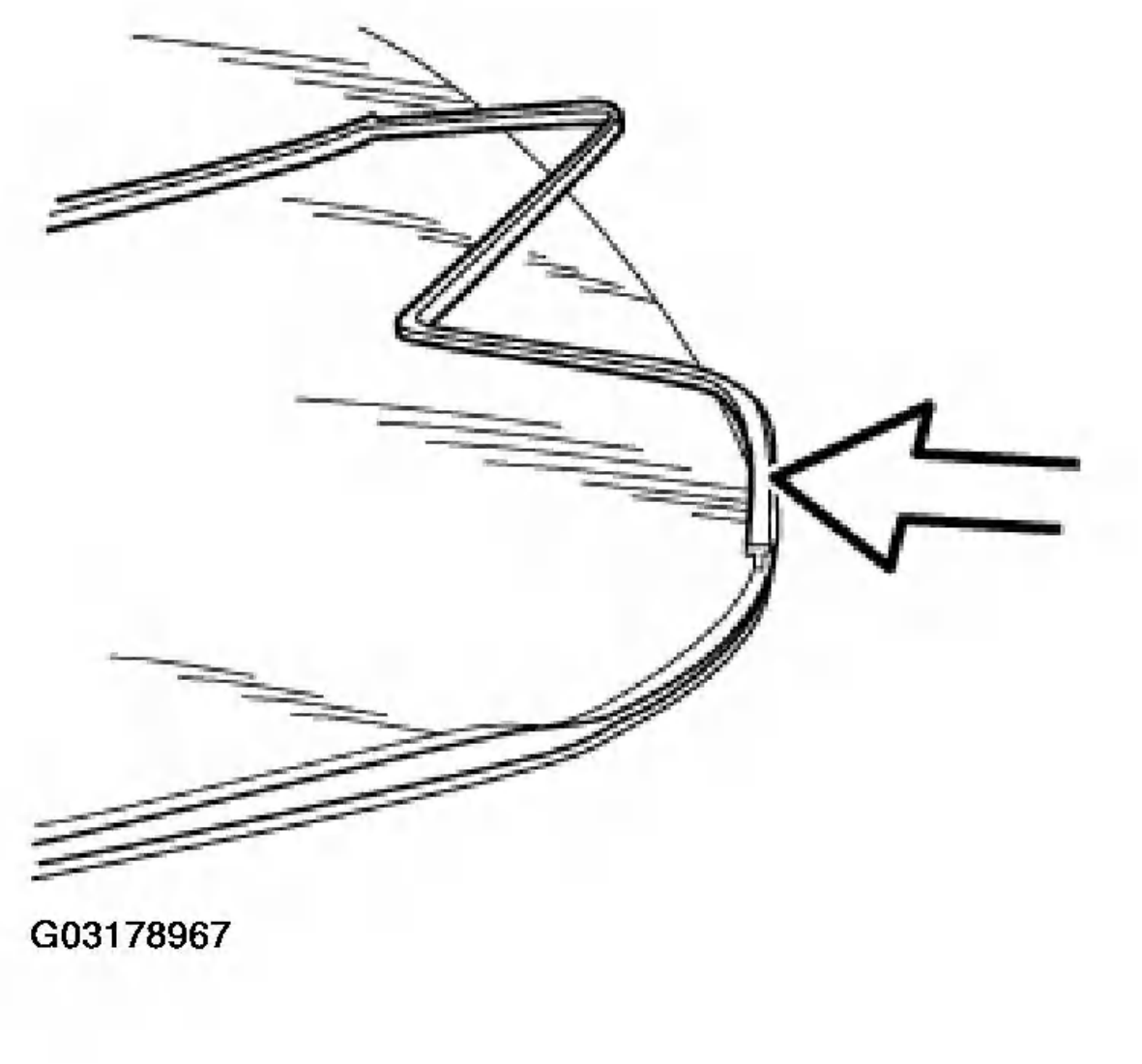


Fig. 164: Pressing Seal On Rear Window Glass At Bottom
Courtesy of BMW OF NORTH AMERICA, INC.

CAUTION: The basic filler must have hardened!

Treat rear window and hard top in adhesive area with BMW-approved materials, refer to 51 31 ... REMOVING WINDSCREEN WITH "ROLL OUT 2000" .

NOTE: Note specified ventilation time.

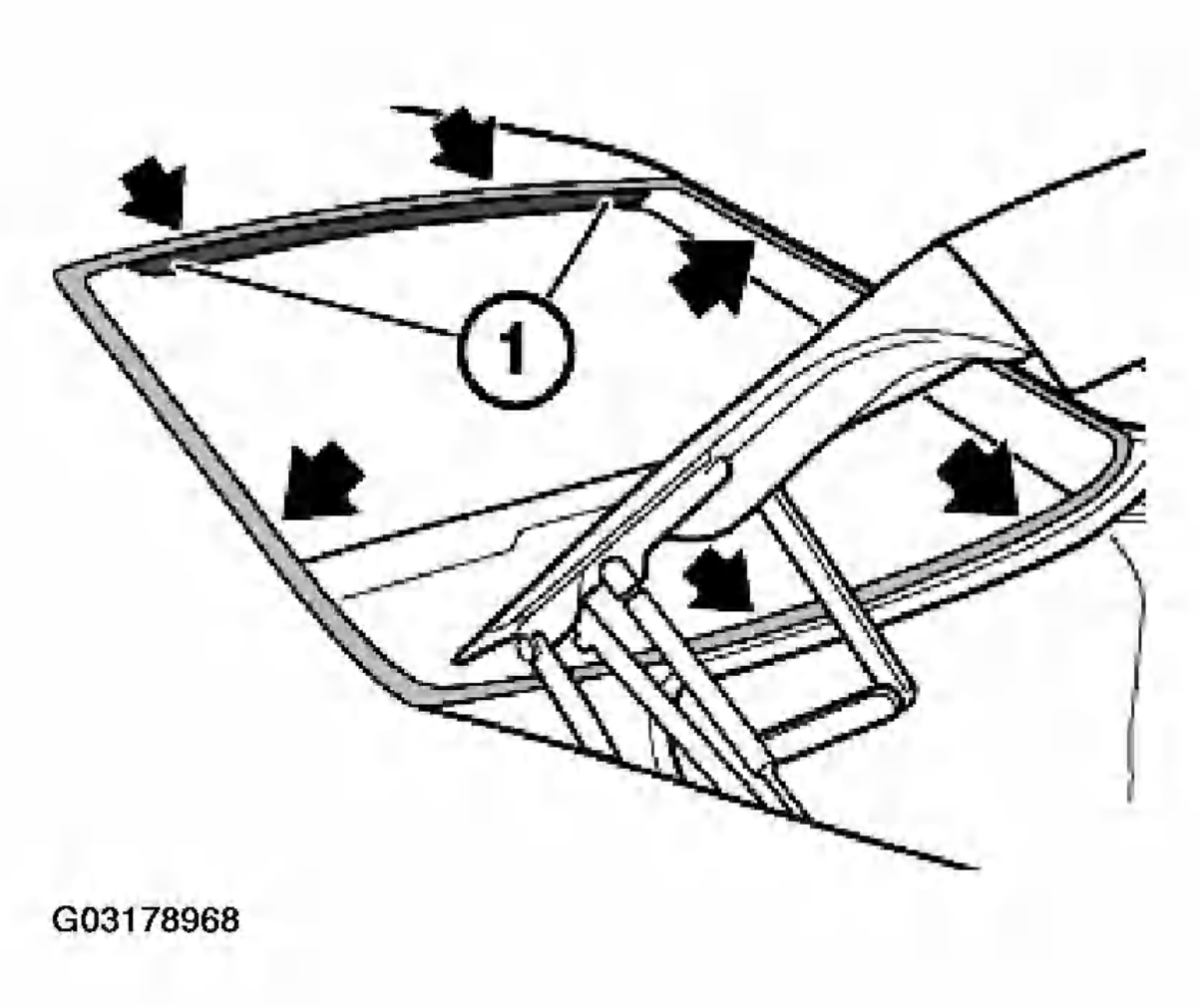


Fig. 165: Installing Rear Window
Courtesy of BMW OF NORTH AMERICA, INC.

Cut nozzle to size.

(A) = 9 mm.

(B) = 6 mm.

NOTE: To apply a uniform glue bead, use cartridge pistol.

Check expiry date of glue!

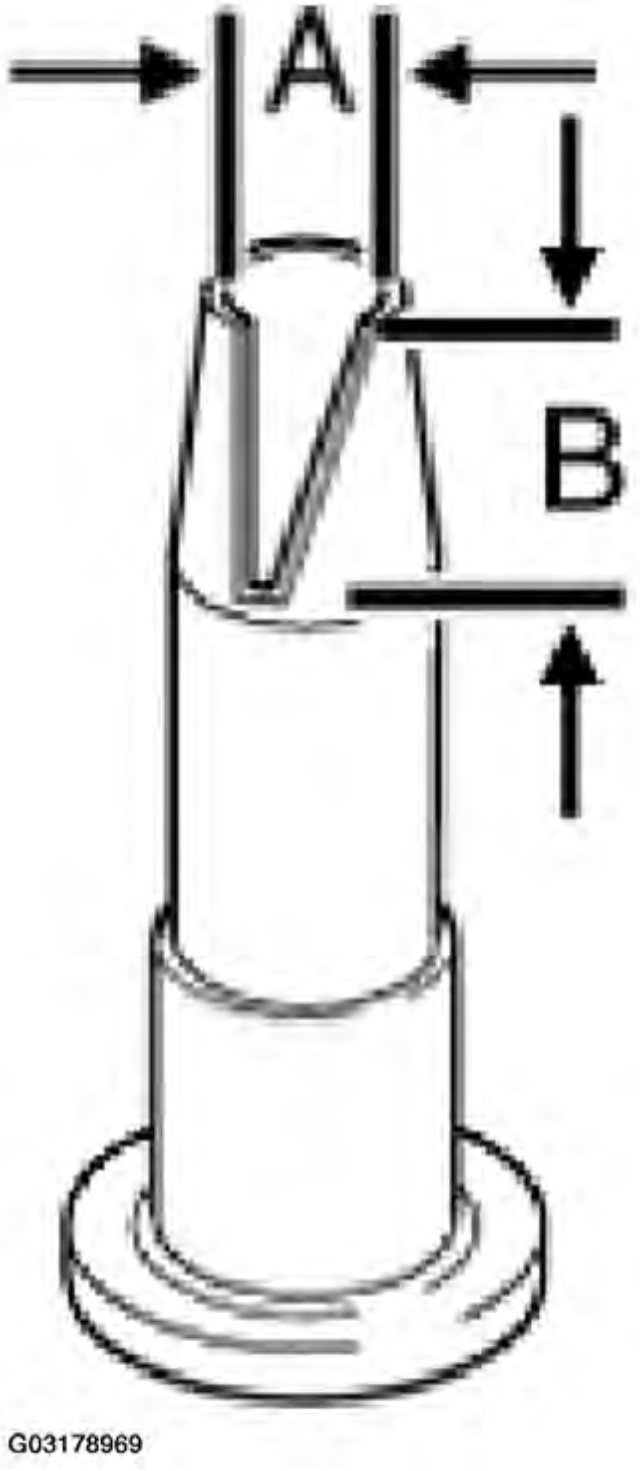


Fig. 166: Identifying Nozzle Size
Courtesy of BMW OF NORTH AMERICA, INC.

If necessary, apply a test bead before gluing.

Cartridge must be arranged vertically against rear window.

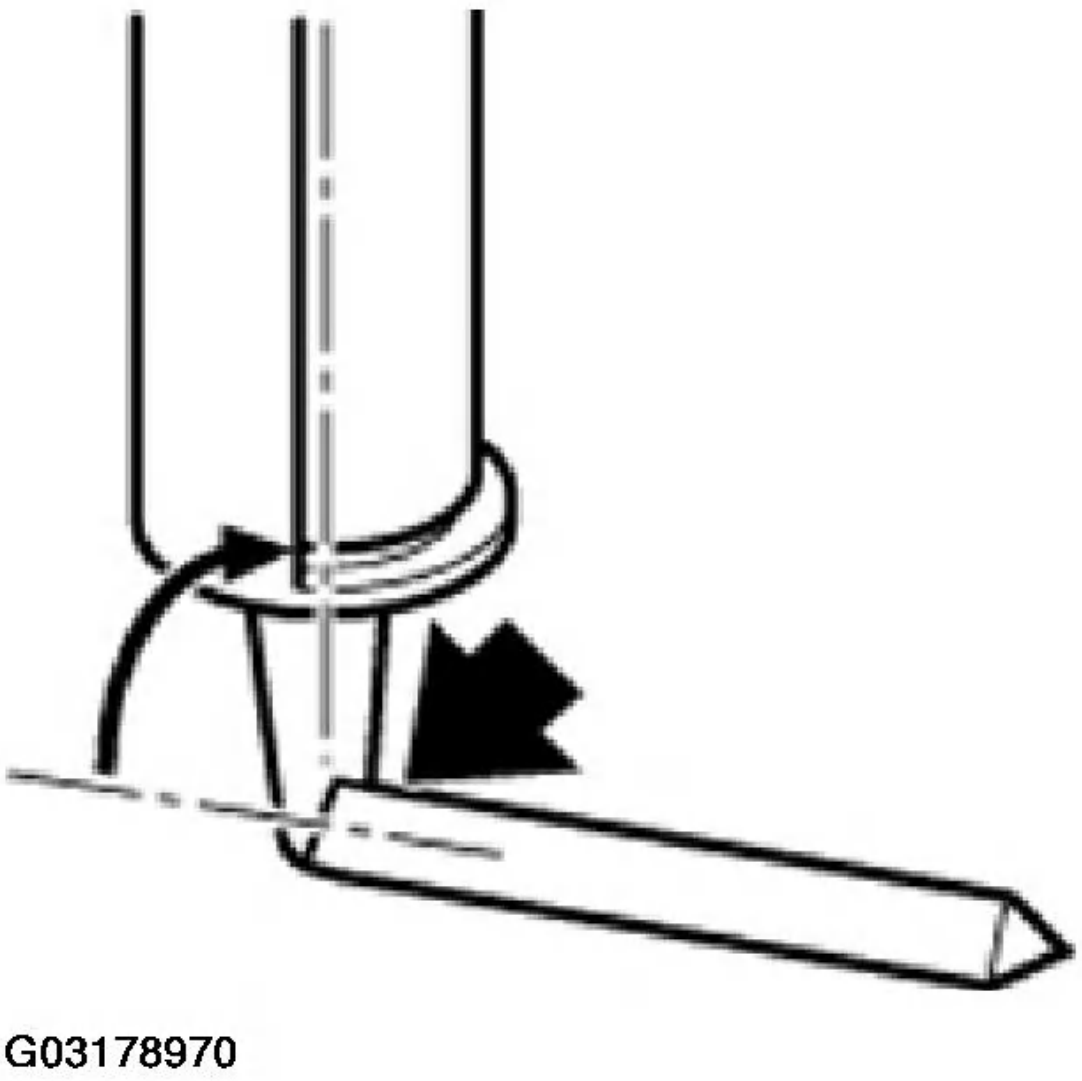


Fig. 167: Testing Before Gluing
Courtesy of BMW OF NORTH AMERICA, INC.

CAUTION: There must be no adhesive on the connection contacts of the rear window heater.

Shape of adhesive bead:

(A) = 9 mm

(B) = 6 mm

CAUTION: Apply glue bead quickly and insert window. Skin formation time of glue, maximum 10 minutes.

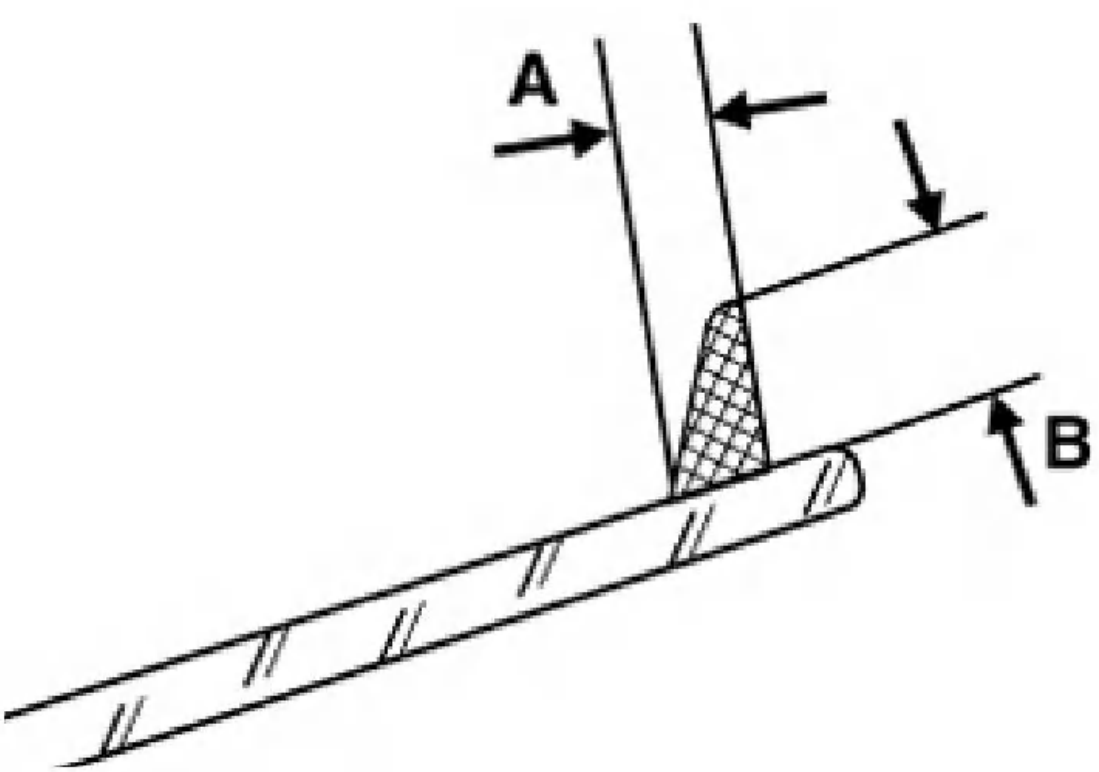


Fig. 168: Identifying Shape Of Adhesive Bead (1 Of 2)
Courtesy of BMW OF NORTH AMERICA, INC.

Maintain uniform distance (A) between glue bead and seal.

Distance (A) = 3 mm.

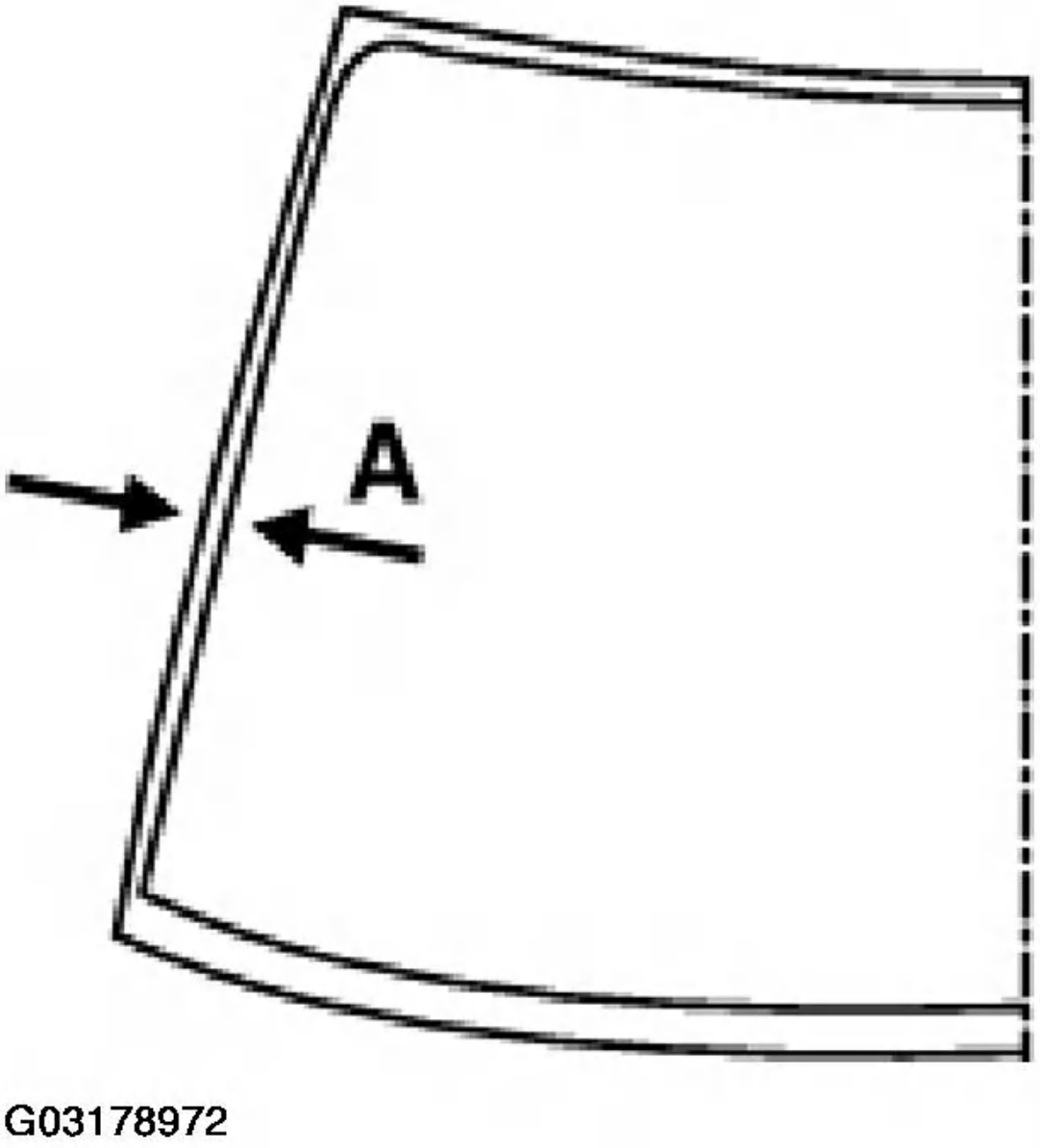


Fig. 169: Identifying Uniform Distance Of Glue
Courtesy of BMW OF NORTH AMERICA, INC.

Install rear window carefully using special tool 51 3 010. Seal must fit uniformly on the sides. Push up rear window glass until seal bears uniformly on the roof flange.

Align rear window to roof flange and evenly at sides. Press-fit rear window and secure in this position with fabric adhesive tape (e.g. Tesa).

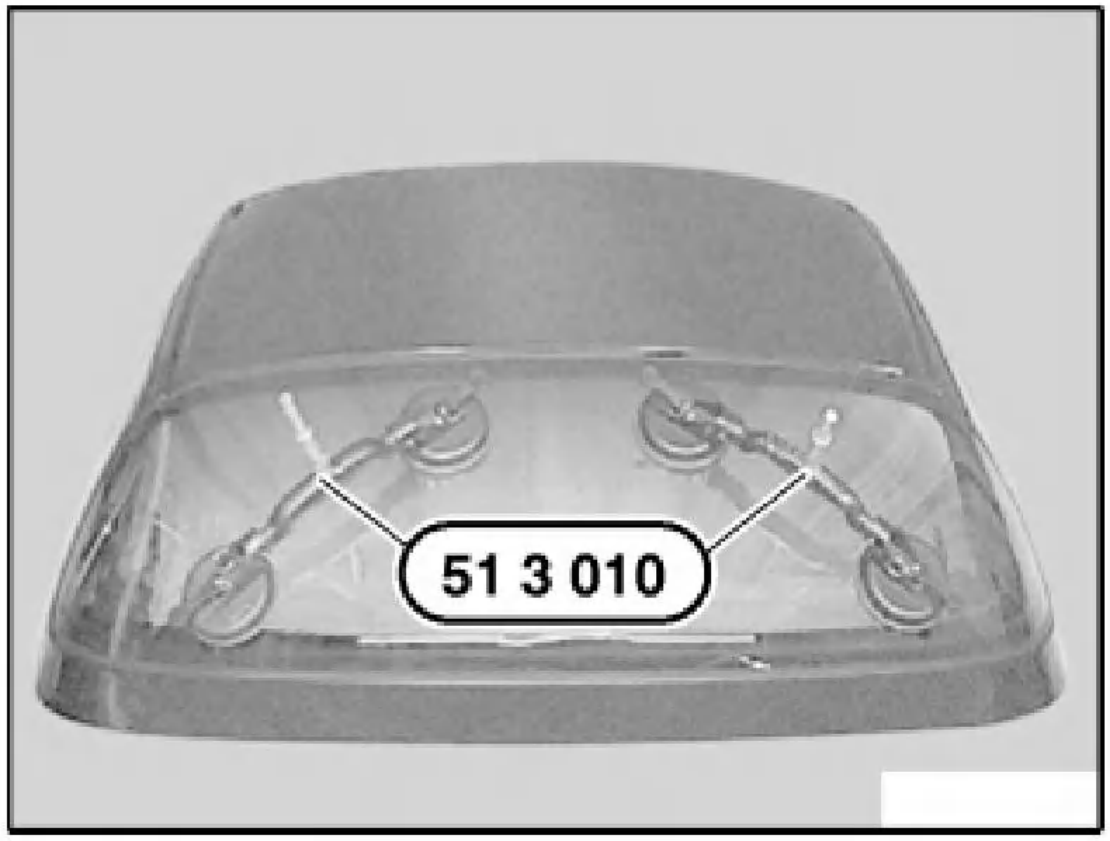


Fig. 170: Installing Rear Window
Courtesy of BMW OF NORTH AMERICA, INC.

CAUTION: Before hardening, remove contamination by residual adhesive with Sika remover 208. Do not press out rear window glass again for this purpose. Hardened glue can only be removed by machine.

Assemble car.

After the hardening time, remove adhesive tapes.

NOTE: Leaks can be found by spraying water on the sealing lips or with an ultrasonic leak detector and then eliminated by using a suitable nozzle.

FRONT MANUALLY OPERATED WINDOWS

51 32 020 REMOVING AND INSTALLING/REPLACING CRANK UNIT IN LEFT OR RIGHT FRONT DOOR (Z3 ROADSTER)

Remove front door window, refer to 51 32 170 REMOVING AND INSTALLING/REPLACING FRONT LEFT OR RIGHT DOOR WINDOWS (Z3 ROADSTER) .

Unscrew bolts (1).



Fig. 171: Identifying Bolts
Courtesy of BMW OF NORTH AMERICA, INC.

Unfasten screws (1) and carefully turn crank unit (2) to remove from front door.

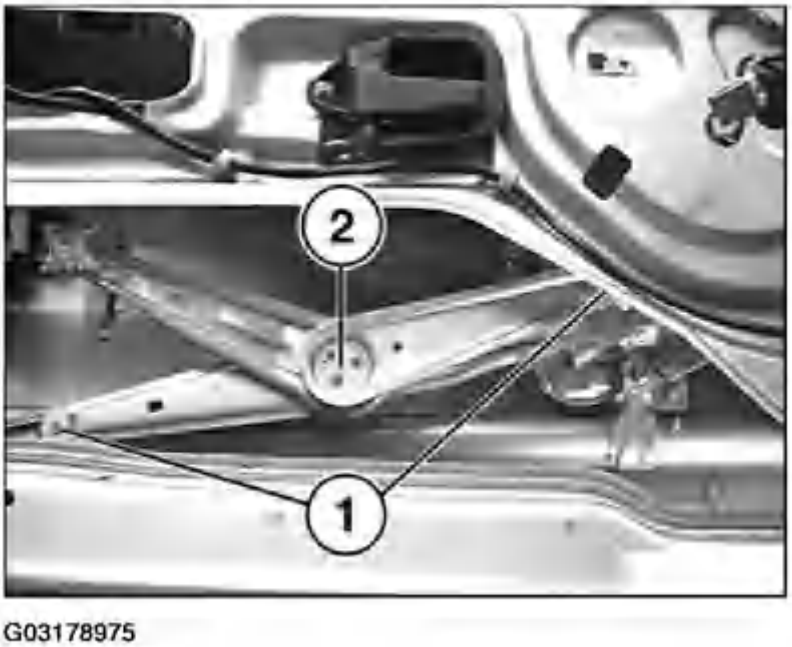


Fig. 172: Removing Crank Unit From Front Door
Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: If tolerances are unfavorable, untighten screws (1) and remove support (2).

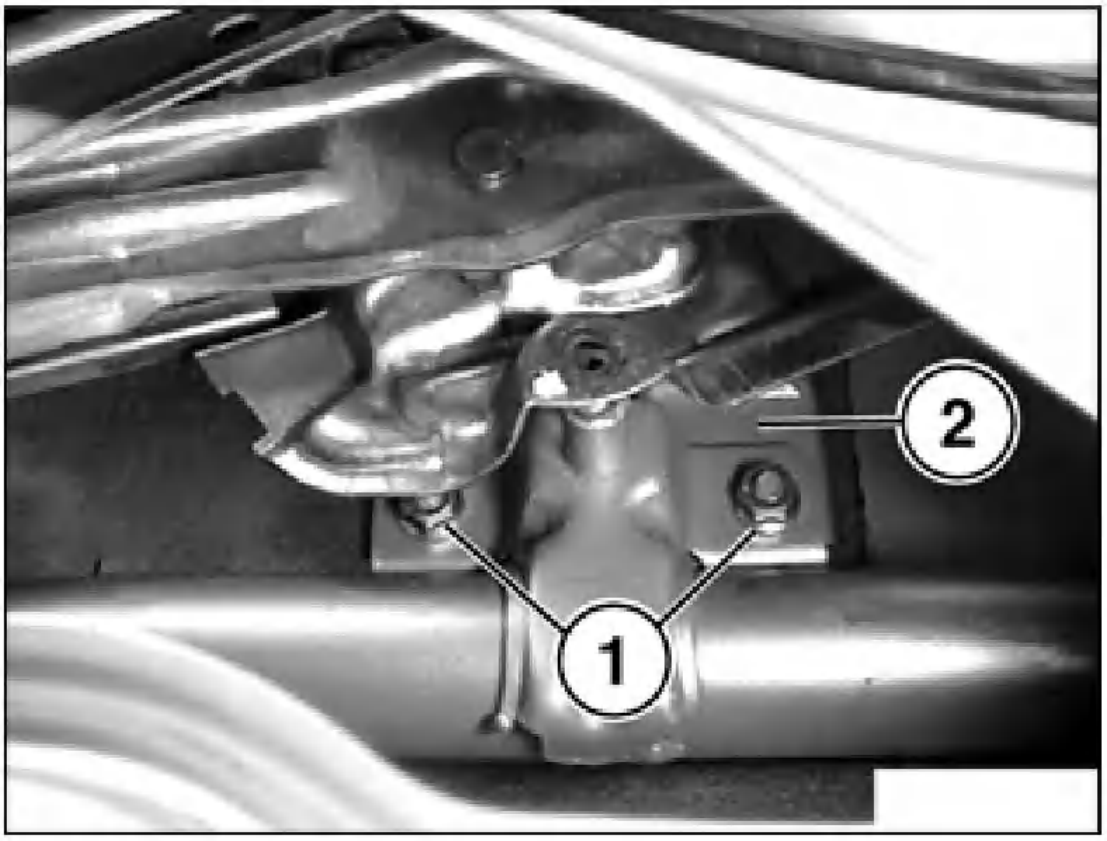


Fig. 173: Removing Support
Courtesy of BMW OF NORTH AMERICA, INC.

51 32 140 REMOVING AND INSTALLING OR REPLACING FRONT LEFT OR RIGHT DOOR WINDOW (FIXED) (Z3 ROADSTER)

Remove door trim panel, refer to 51 41 000 REMOVING AND INSTALLING FRONT LEFT OR RIGHT DOOR TRIM PANEL (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE) .

Partially remove inner foil.

Installation:

If necessary, replace defective inner foil.

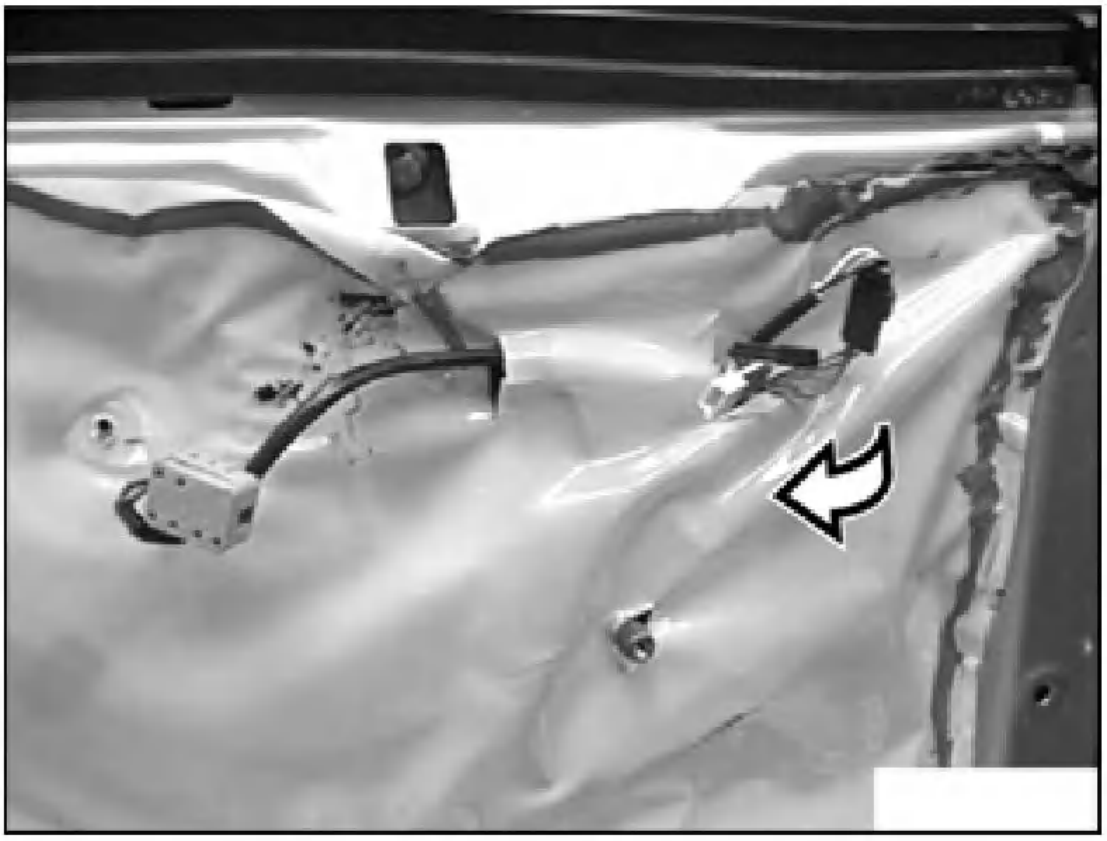


Fig. 174: Removing Defective Inner Foil
Courtesy of BMW OF NORTH AMERICA, INC.

Unfasten screw.

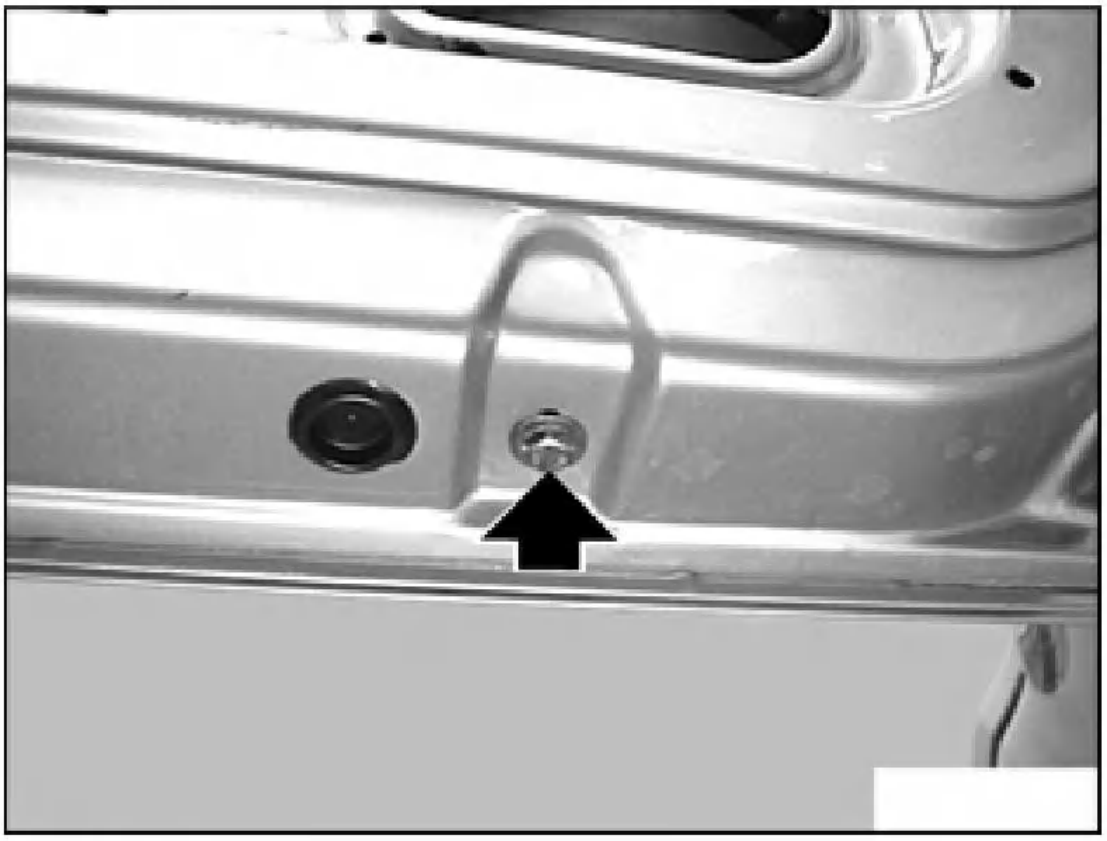


Fig. 175: Removing Screw
Courtesy of BMW OF NORTH AMERICA, INC.

Unfasten screws (1 ... 2) and carefully lift door window (3) up to remove.

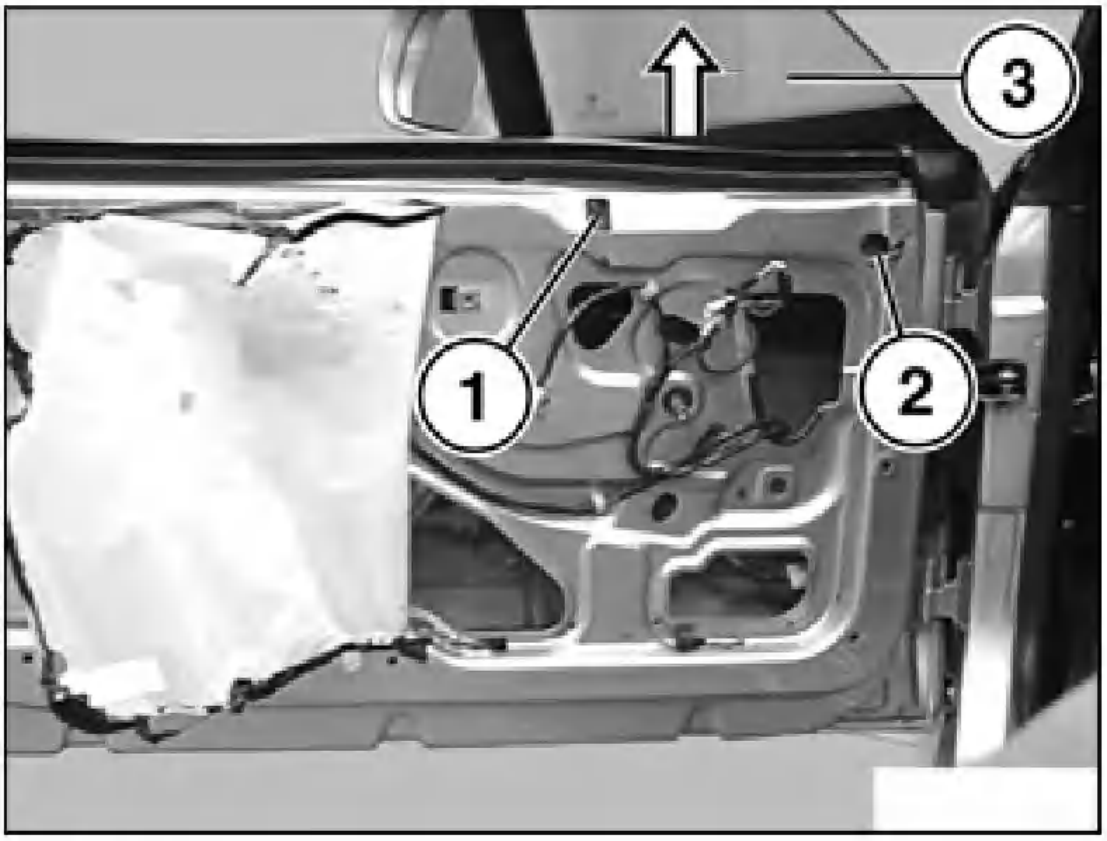


Fig. 176: Adjusting Door Window
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Screw (1) is longer than the remaining screw.

Adjusting door window, refer to 51 32 154 ADJUSTING FRONT LEFT OR RIGHT DOOR WINDOW (Z3 ROADSTER) .

Only replace:

If necessary, remove guide rubber (1).

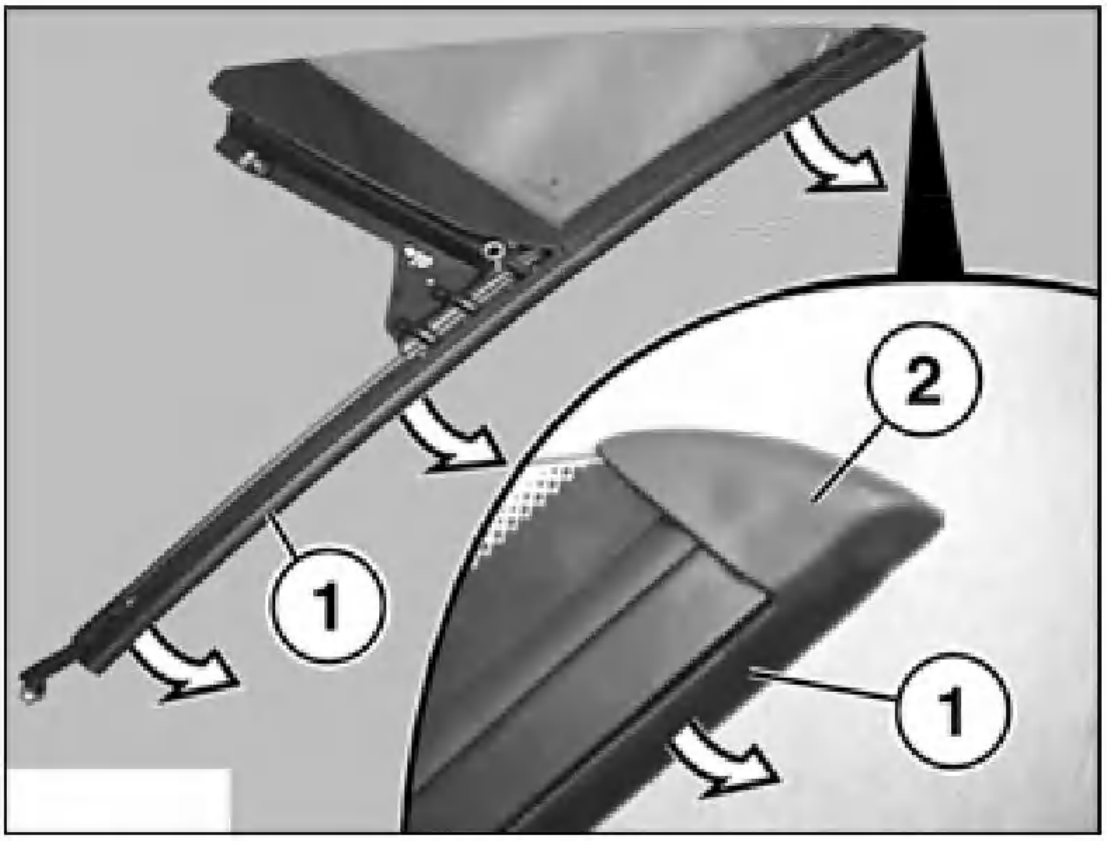


Fig. 177: Removing Guide Rubber
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Guide rubber (1) is cemented in area (2).

51 32 154 ADJUSTING FRONT LEFT OR RIGHT DOOR WINDOW (Z3 ROADSTER)

Remove door trim panel, refer to 51 41 000 REMOVING AND INSTALLING FRONT LEFT OR RIGHT DOOR TRIM PANEL (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE) .

Ideal adjustment:

The door window (1) gasket (2) must locate evenly all round (wind noise, water ingress).

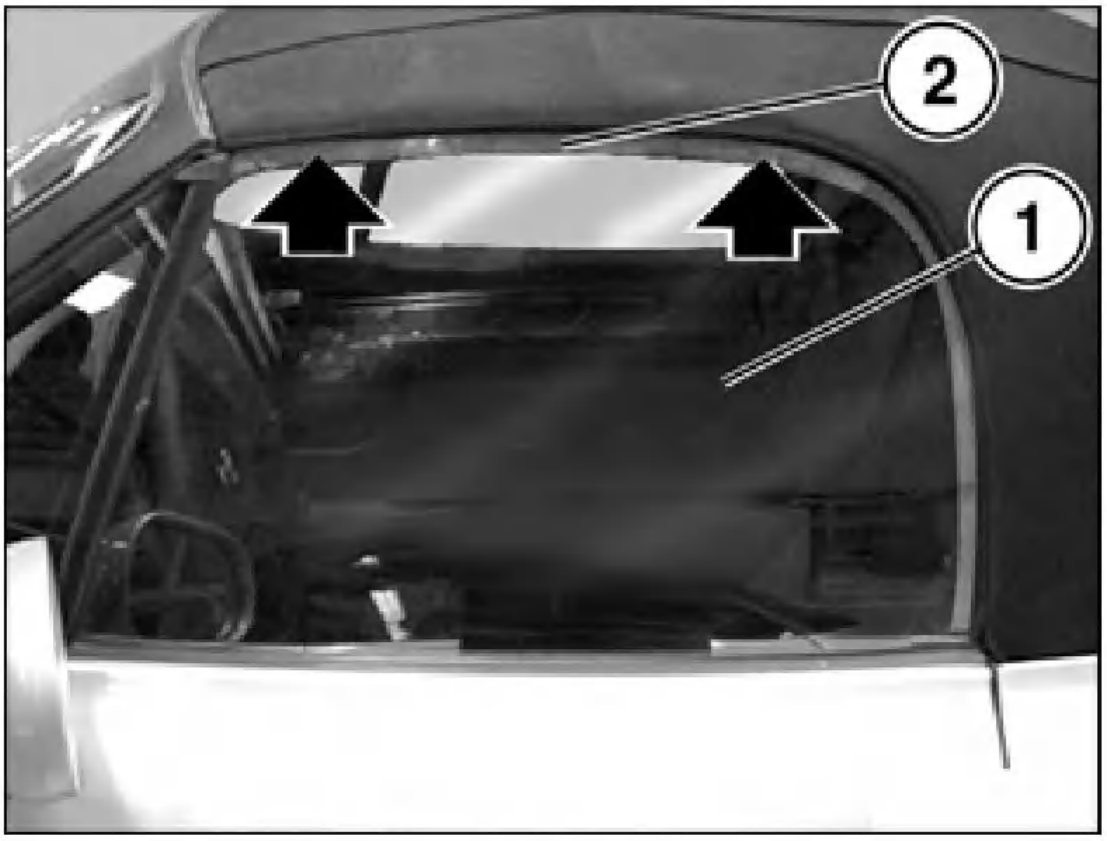


Fig. 178: Identifying Door Window Gasket
Courtesy of BMW OF NORTH AMERICA, INC.

Ideal adjustment:

Door window (1) locates flush against A-pillar (2).

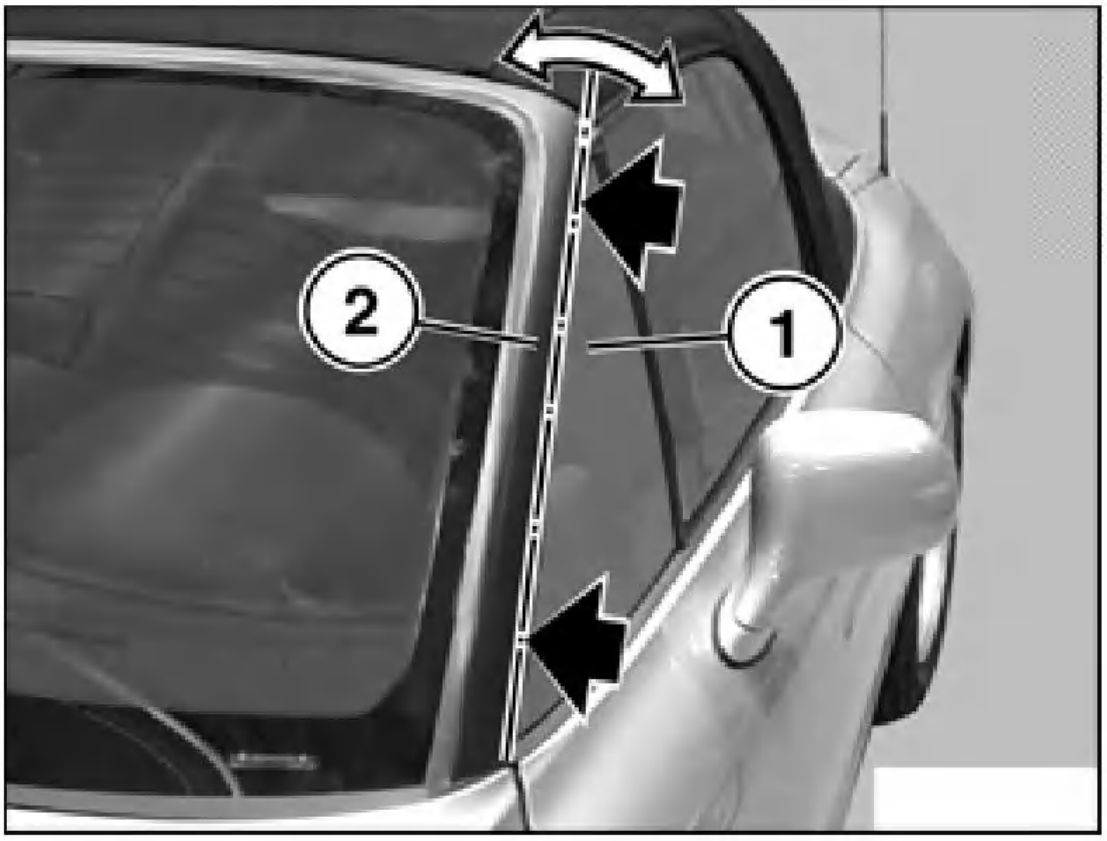


Fig. 179: Identifying Door Window And A-Pillar
Courtesy of BMW OF NORTH AMERICA, INC.

Pull off cover.

Installation:

Replace cover.

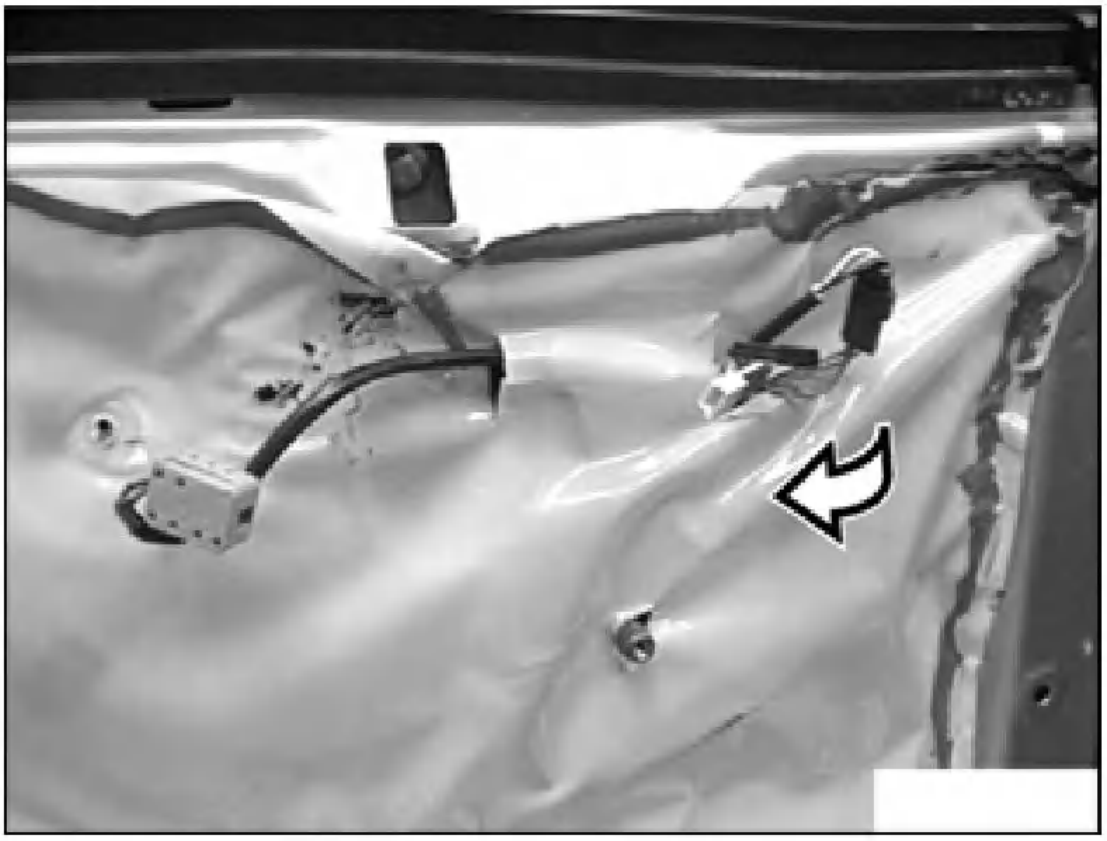


Fig. 180: Replacing Cover
Courtesy of BMW OF NORTH AMERICA, INC.

Parallelism:

Adjust door window so that it is parallel to the window frame by adjusting the guide rails.

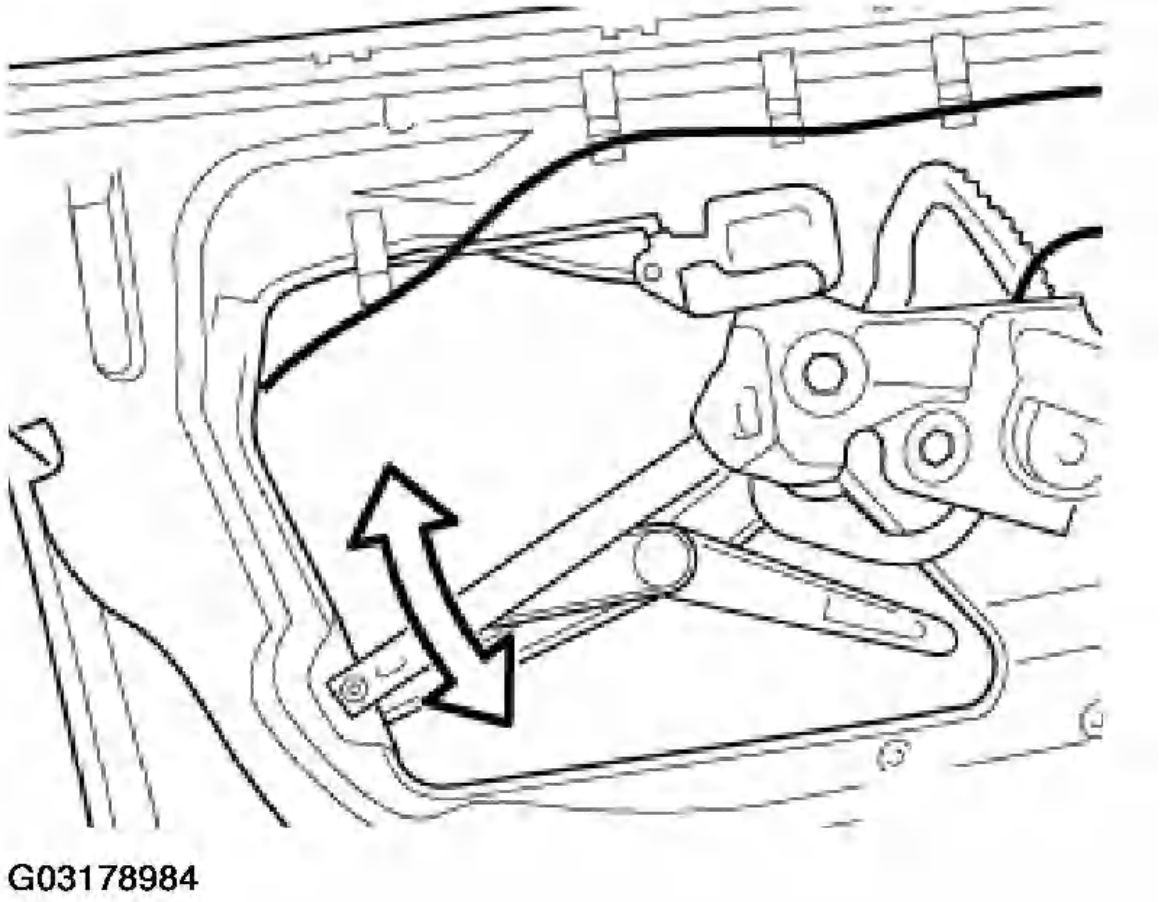


Fig. 181: Adjusting Guide Rails
Courtesy of BMW OF NORTH AMERICA, INC.

Preload on door window (fixed):

Adjust window guide rail until door window (1) locates flush against the A-pillar (2).

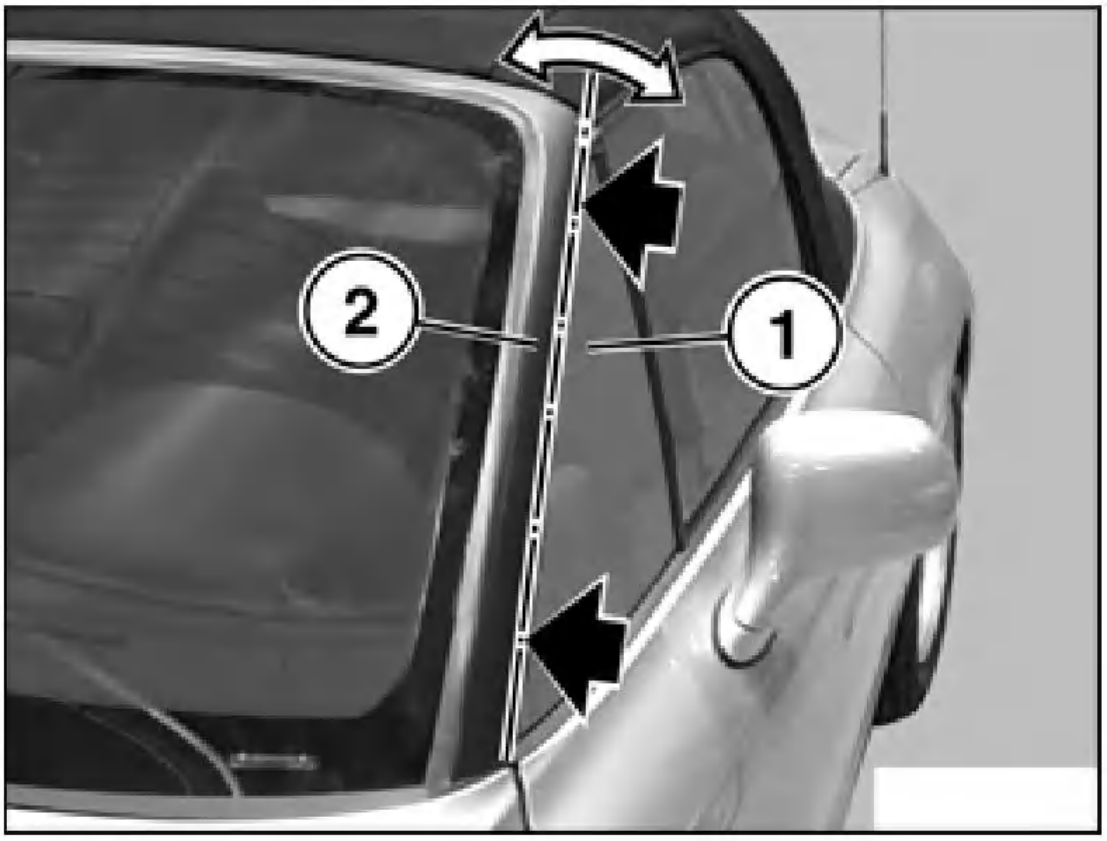


Fig. 182: Identifying Door Window And A-Pillar
Courtesy of BMW OF NORTH AMERICA, INC.

Loosen screw (1) and adjust window guide rail (front).

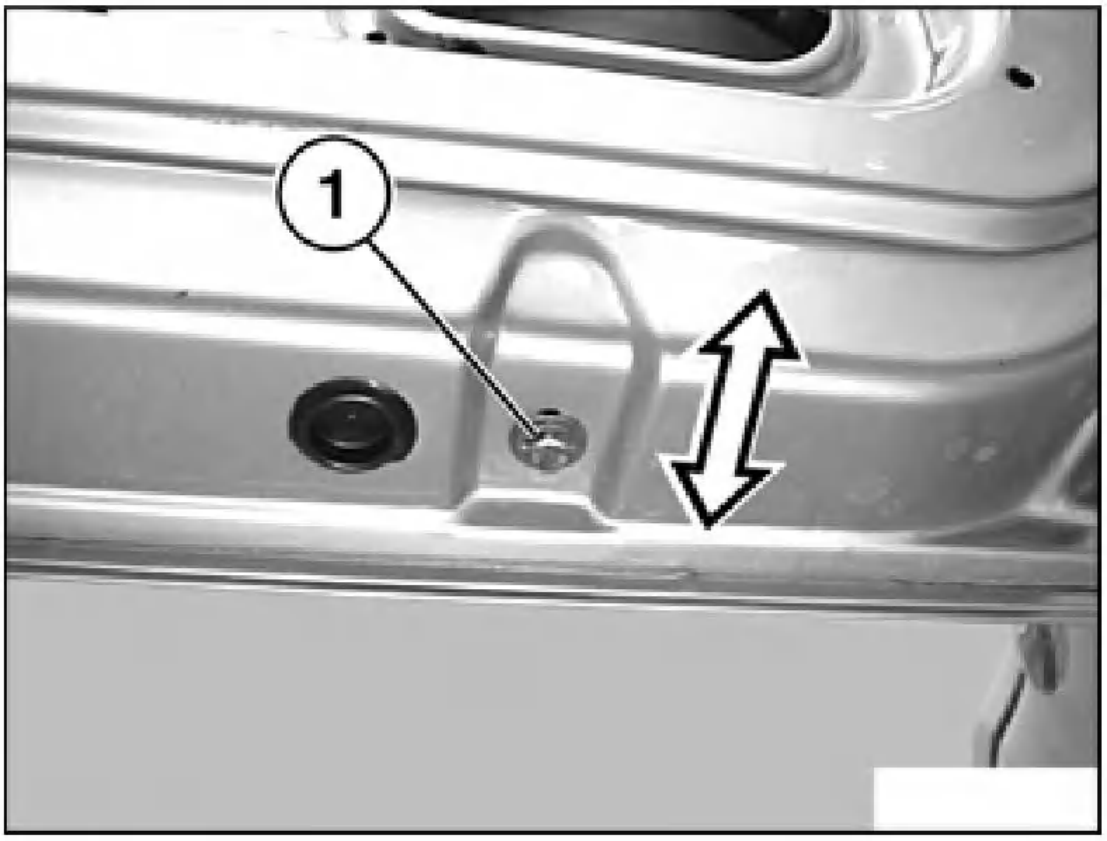


Fig. 183: Loosening Window Guide Rail Screw (Front)
Courtesy of BMW OF NORTH AMERICA, INC.

Preload on door window:

Loosen screw (1) and adjust window guide rail (rear).

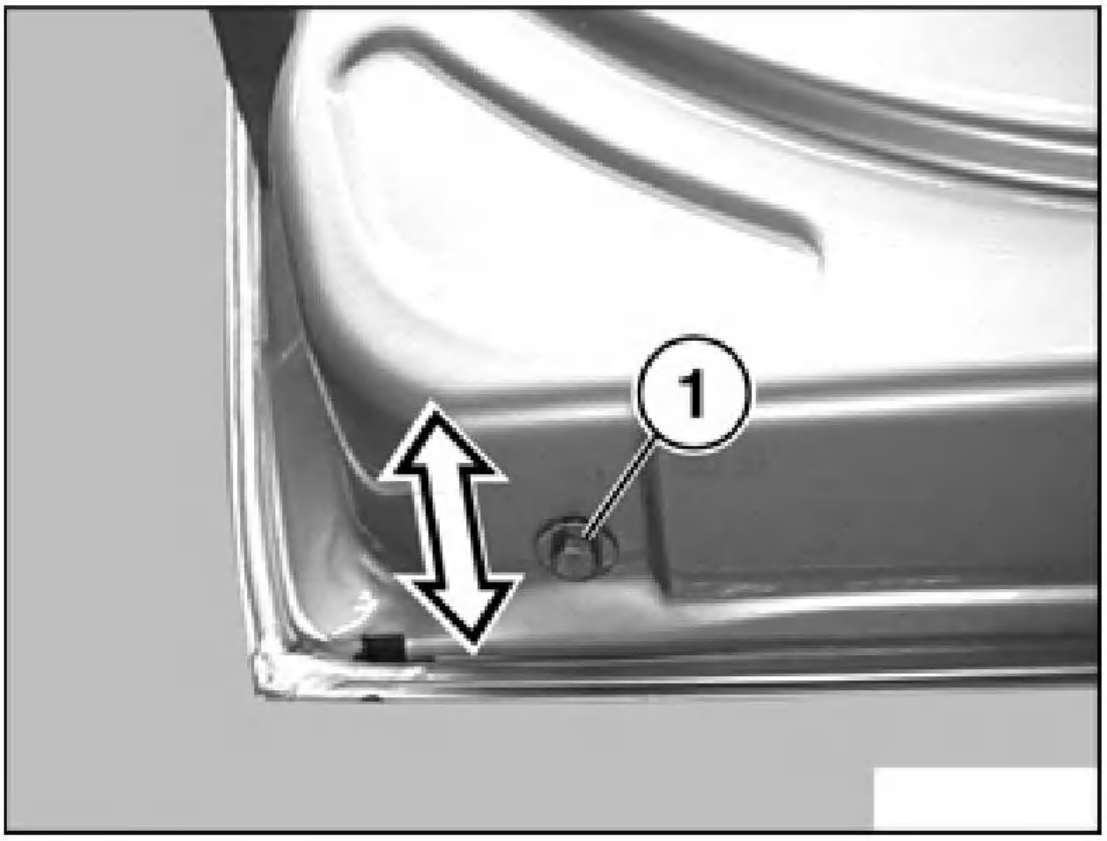


Fig. 184: Loosening Window Guide Rail Screw (Rear)
Courtesy of BMW OF NORTH AMERICA, INC.

Ideal adjustment:

Adjust height of door window (1) until transition from fixed door window (3) to rubber window seal (2) forms a smooth line.

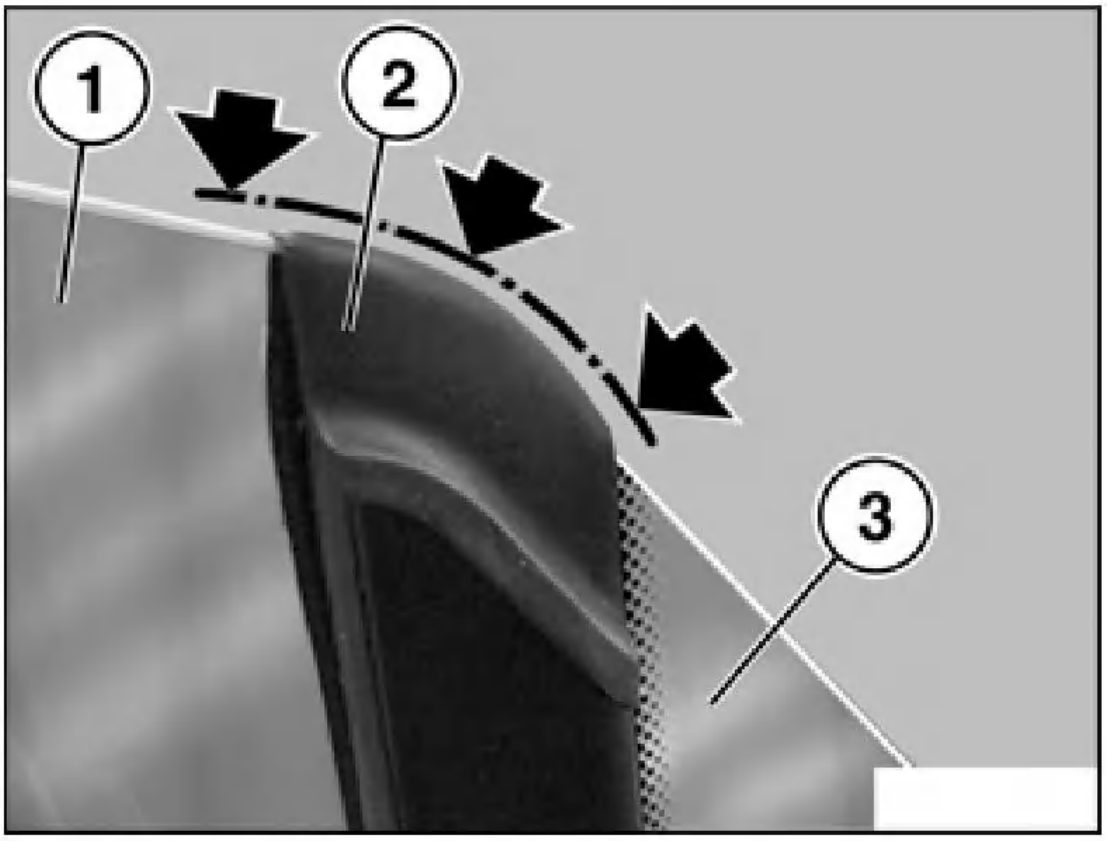


Fig. 185: Adjusting Door Window Height
Courtesy of BMW OF NORTH AMERICA, INC.

Height of door window is adjusted by turning the screw (1) on the window regulator (2).

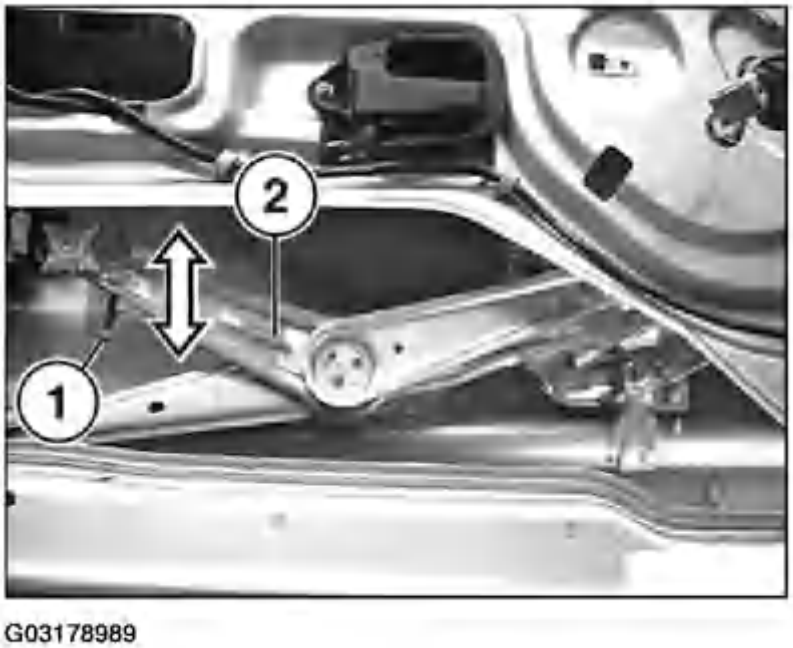


Fig. 186: Identifying Window Regulator
Courtesy of BMW OF NORTH AMERICA, INC.

51 32 155 ADJUSTING LIMIT STOP FOR FRONT LEFT OR RIGHT DOOR WINDOW (Z3 ROADSTER),

Operation Is Described In:

Adjusting front left or right door window (Z3 roadster) refer to 51 32 154 ADJUSTING FRONT LEFT OR RIGHT DOOR WINDOW (Z3 ROADSTER) .

51 32 170 REMOVING AND INSTALLING/REPLACING FRONT LEFT OR RIGHT DOOR WINDOWS (Z3 ROADSTER)

Removing front door window (fixed), refer to 51 32 140 REMOVING AND INSTALLING OR REPLACING FRONT LEFT OR RIGHT DOOR WINDOW (FIXED) (Z3 ROADSTER) .

Fit window crank (1) and close door window (2) down to dimension (A).

Distance (A) = approx. 100 ... 200 mm.

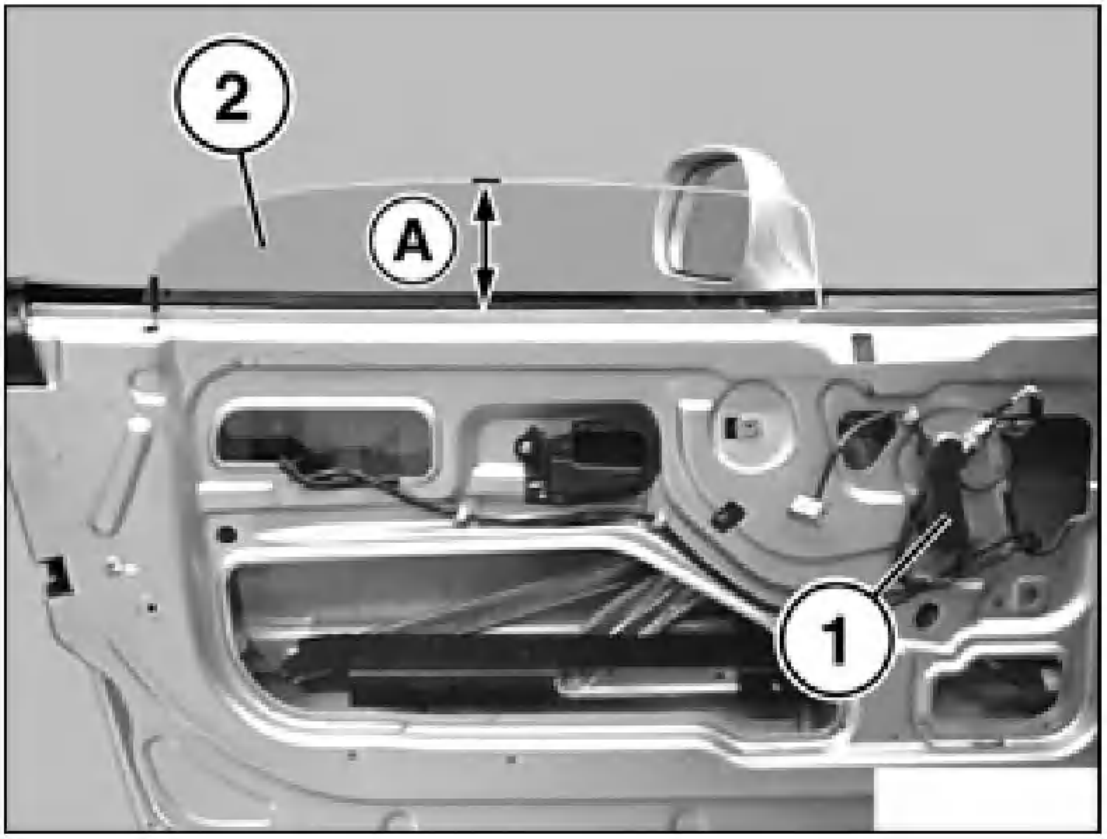


Fig. 187: Adjusting Door Window Height
Courtesy of BMW OF NORTH AMERICA, INC.

Slide door window (1) forwards out of window regulator support (2).

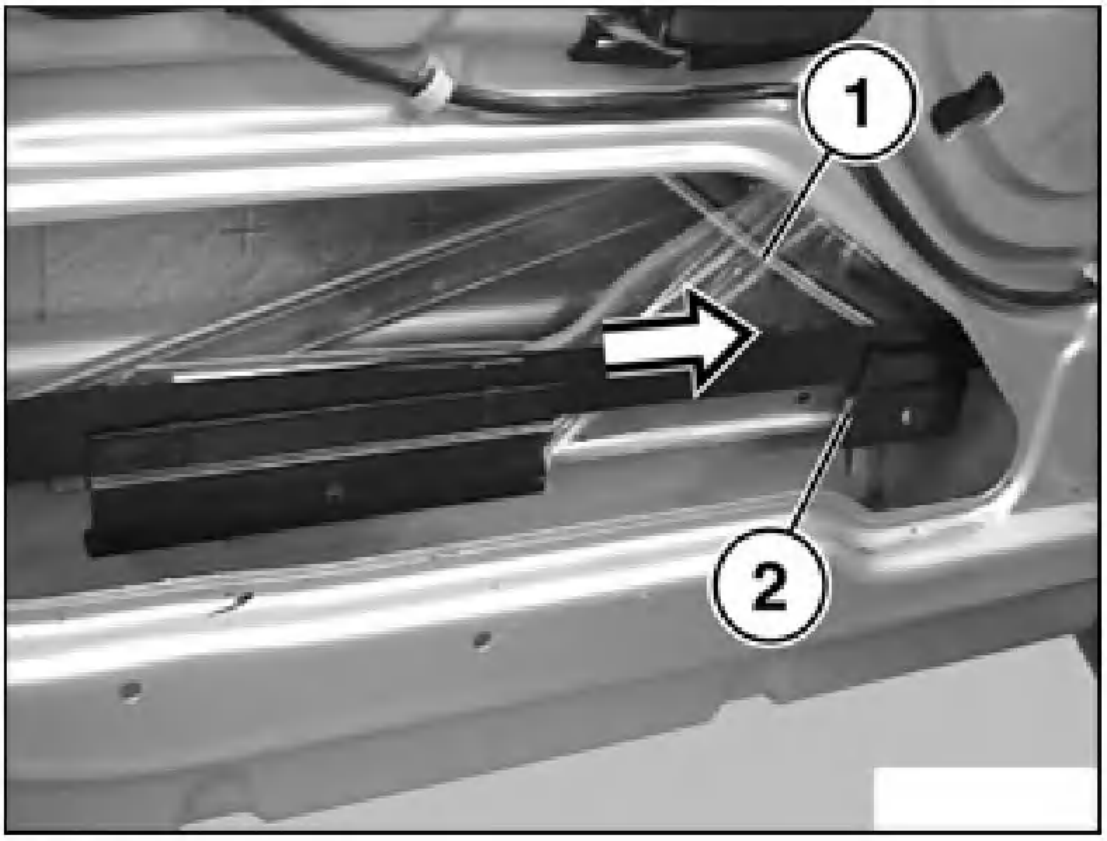


Fig. 188: Identifying Window Regulator Support
Courtesy of BMW OF NORTH AMERICA, INC.

Carefully push door window (1) upwards and slide bracket (2) out of window regulator support (3).

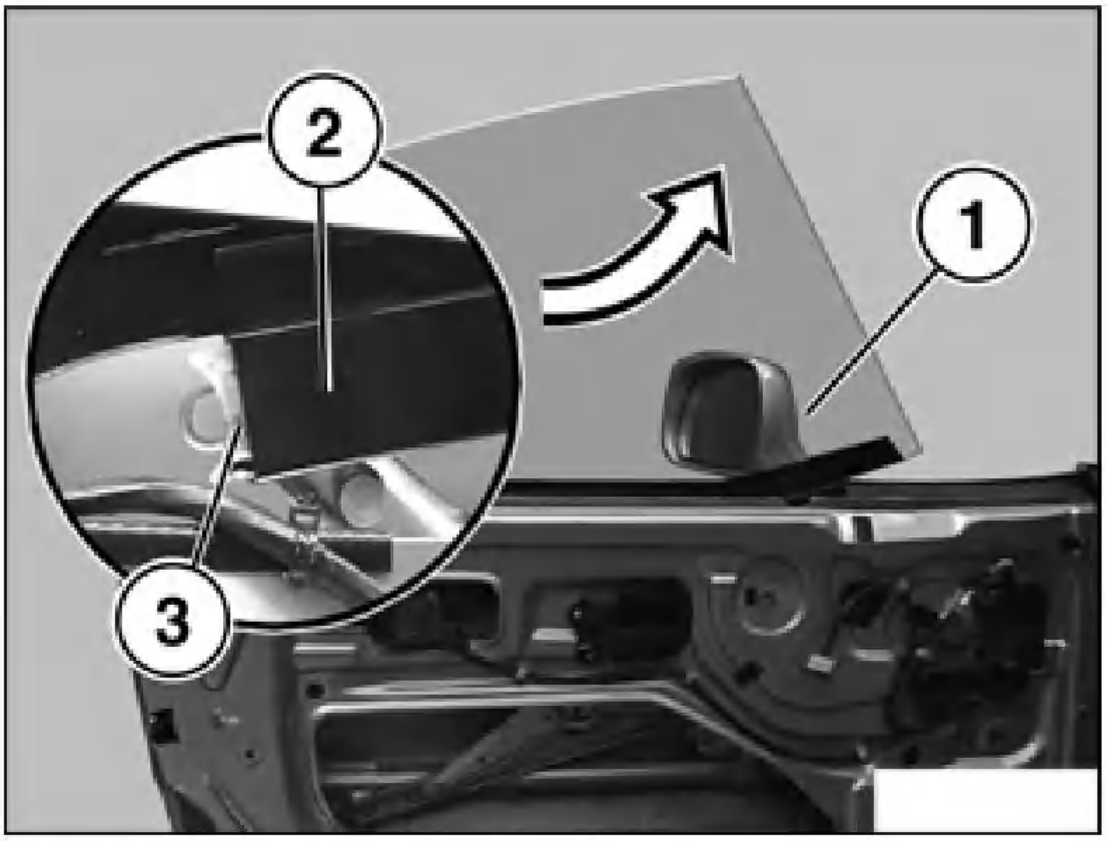


Fig. 189: Identifying Window Bracket
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Height of door window is adjusted by turning screw (1).

Adjust door window, refer to 51 32 154 ADJUSTING FRONT LEFT OR RIGHT DOOR WINDOW (Z3 ROADSTER) .

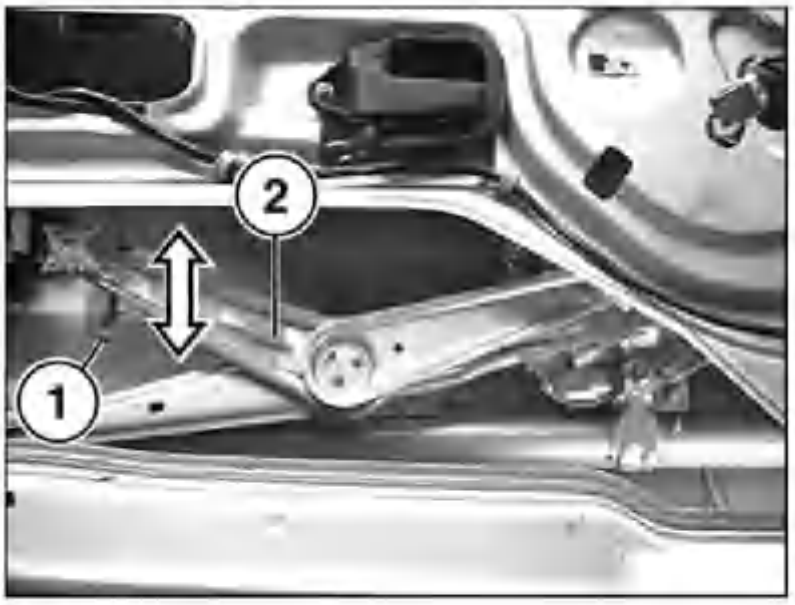


Fig. 190: Adjusting Door Window
Courtesy of BMW OF NORTH AMERICA, INC.

51 32 211 REPLACING RUBBER GUIDE FROM FRONT LEFT OR RIGHT DOOR WINDOW (Z3 ROADSTER)

Removing and installing/replacing left or right front door window (Fixed) (Z3 Roadster), refer to 51 32 140 REMOVING AND INSTALLING OR REPLACING FRONT LEFT OR RIGHT DOOR WINDOW (FIXED) (Z3 ROADSTER) .

Remove rubber guide (1).

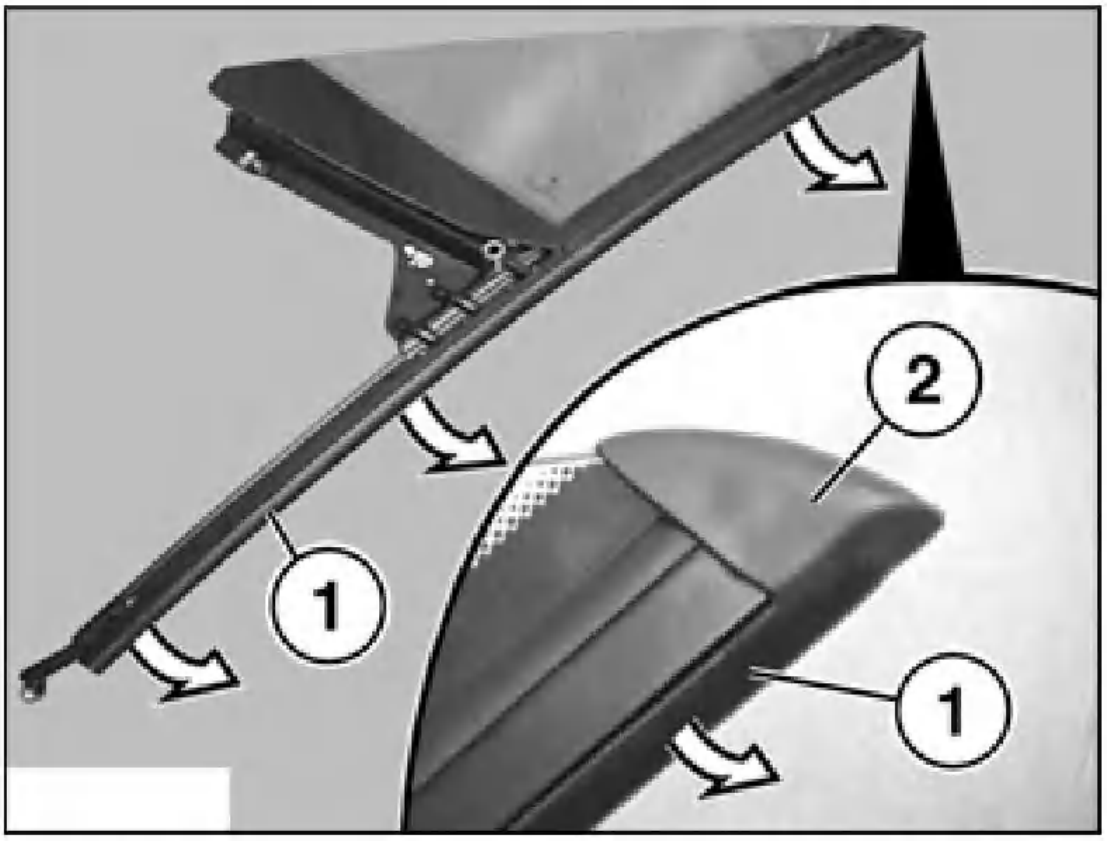


Fig. 191: Removing Rubber Guide
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Rubber guide is cemented in area (2).

FRONT ELECTRICALLY OPERATED WINDOWS

12 00 ... DISCONNECTING AND CONNECTING BATTERY

Safety instructions for handling vehicle battery. Refer to 61 00 ... SAFETY INSTRUCTIONS FOR HANDLING VEHICLE BATTERY .

Disconnect Battery:

If the battery is not disconnected when working on components, cable connections etc., faults can occur in the fault memories of the relevant control units.

CAUTION: Disconnecting the vehicle battery will cancel the fault memories of control units. For this reason, before disconnecting the battery, always interrogate the fault memories and print out the faults on the printer attached to the BMW Service-Tester. Investigate stored faults. Once the Stored settings of the on-board computer and clock will also be lost. On door closing systems with infrared operation, all keys must be receded. Battery has been disconnected, the radio can only be restarted with the radio code; for this reason, ask the

customer for his/her radio code card beforehand. Note stored stations and restore them after connecting the battery. Stored settings of the on-board computer and clock will also be lost. On door closing systems with infrared operation, all keys must be receded.

REAR ELECTRICALLY OPERATED WINDOWS

12 00 ... DISCONNECTING AND CONNECTING BATTERY

Refer to 12 00 ... DISCONNECTING AND CONNECTING BATTERY .

FRONT DOOR TRIM PANEL WITH ARM REST

51 41 000 REMOVING AND INSTALLING FRONT LEFT OR RIGHT DOOR TRIM PANEL (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE)

WARNING: Model with side airbag: Follow safety instructions for working on cars with airbag systems, refer to 51 00 ... SAFETY INSTRUCTIONS FOR WORKING ON CARS WITH AIRBAG SYSTEMS

Lift out cover plate.

Release screw and remove window crank.

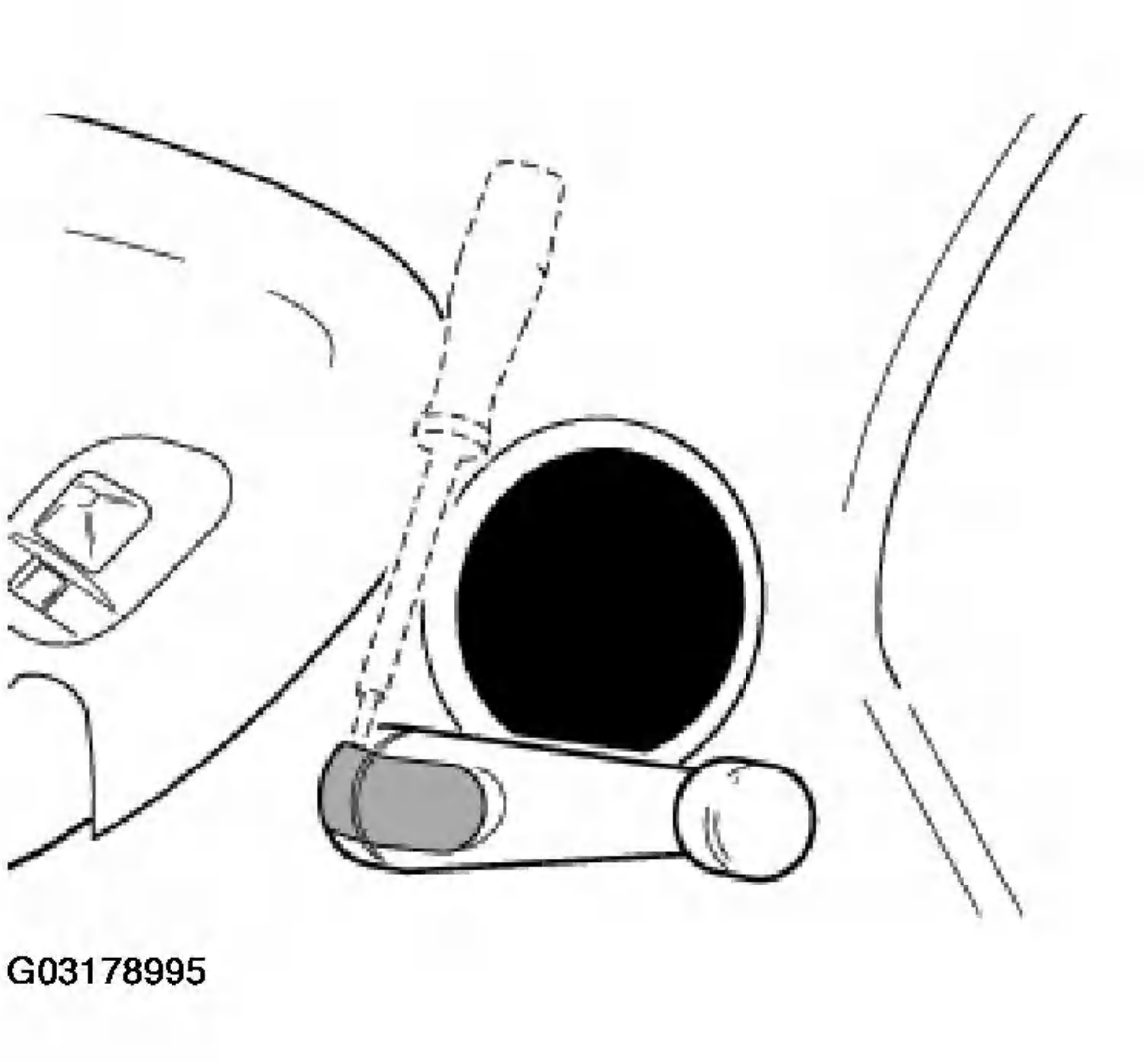


Fig. 192: Removing Window Crank
Courtesy of BMW OF NORTH AMERICA, INC.

Remove outside mirror adjusting button.

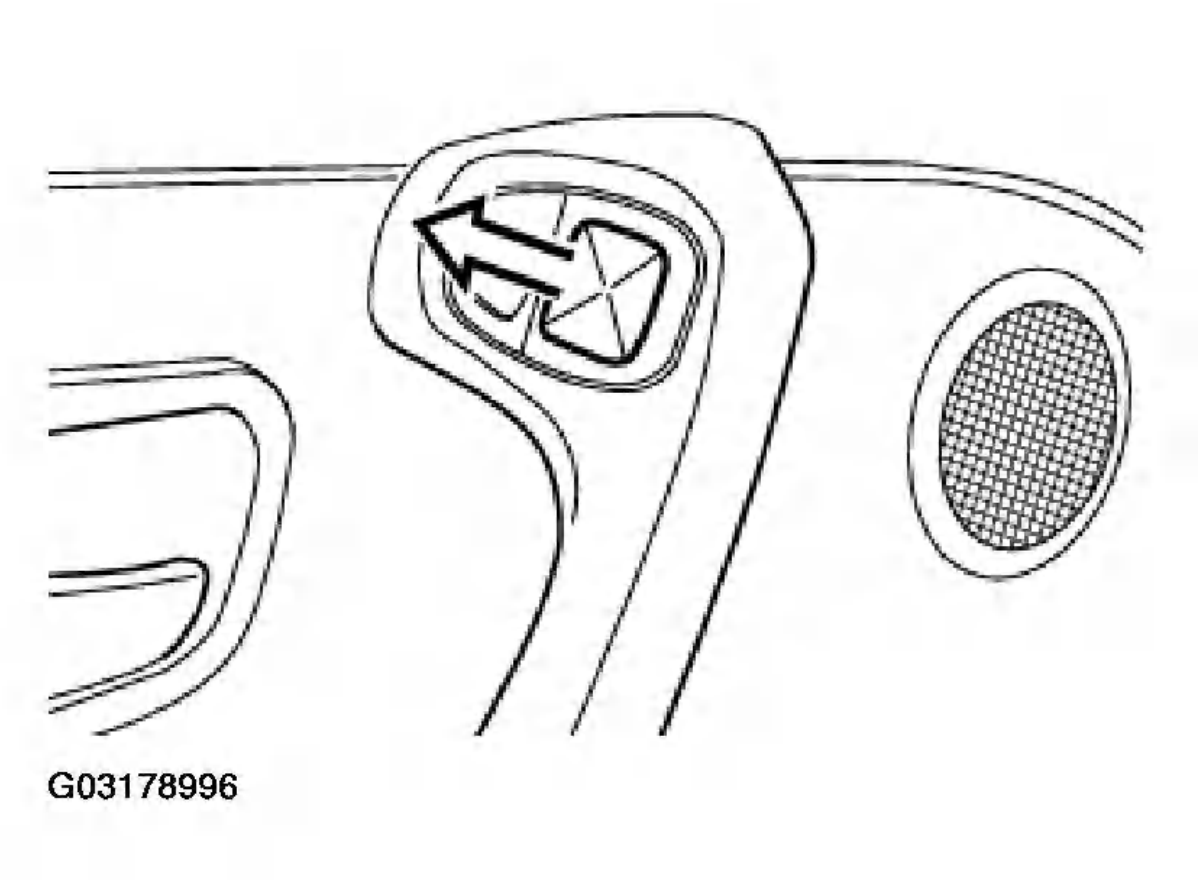


Fig. 193: Removing Outside Mirror Adjusting Button
Courtesy of BMW OF NORTH AMERICA, INC.

Remove mirror switch with special tool 61 1 300 and pull apart plug connection.

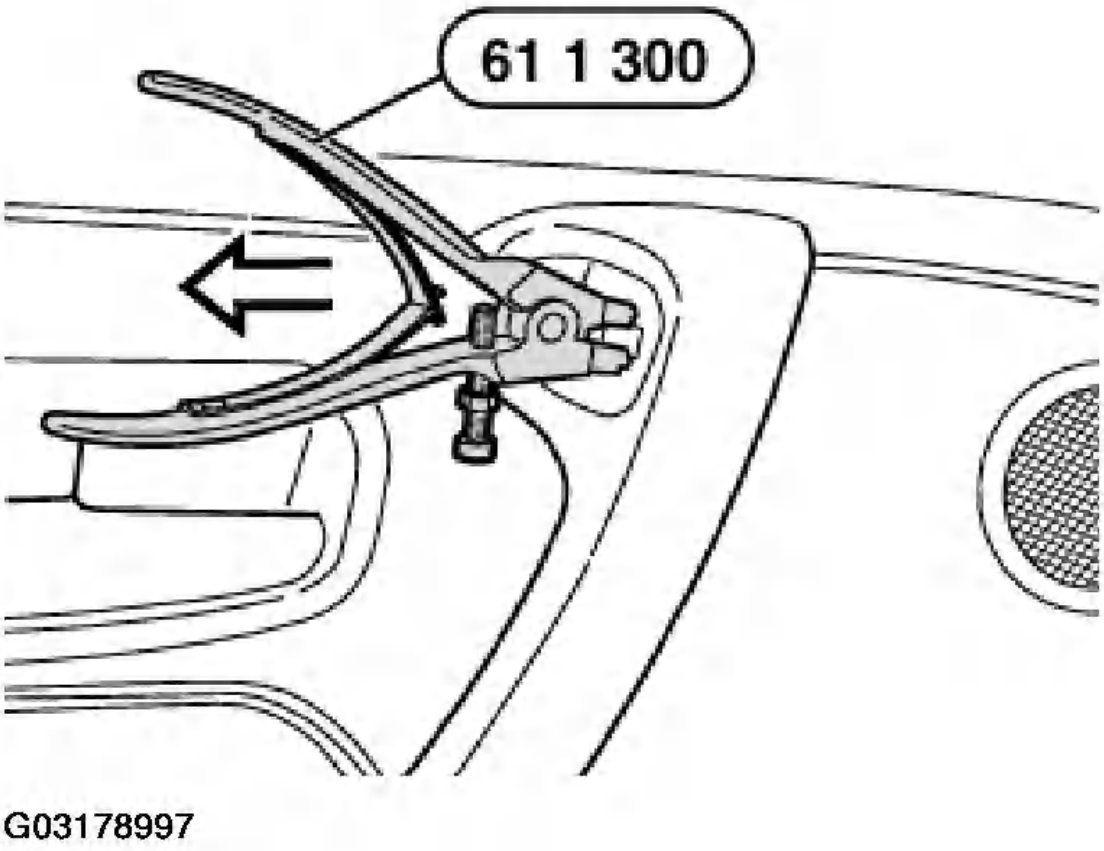


Fig. 194: Removing Mirror Switch
Courtesy of BMW OF NORTH AMERICA, INC.

Align plate forward.

Unscrew screw.

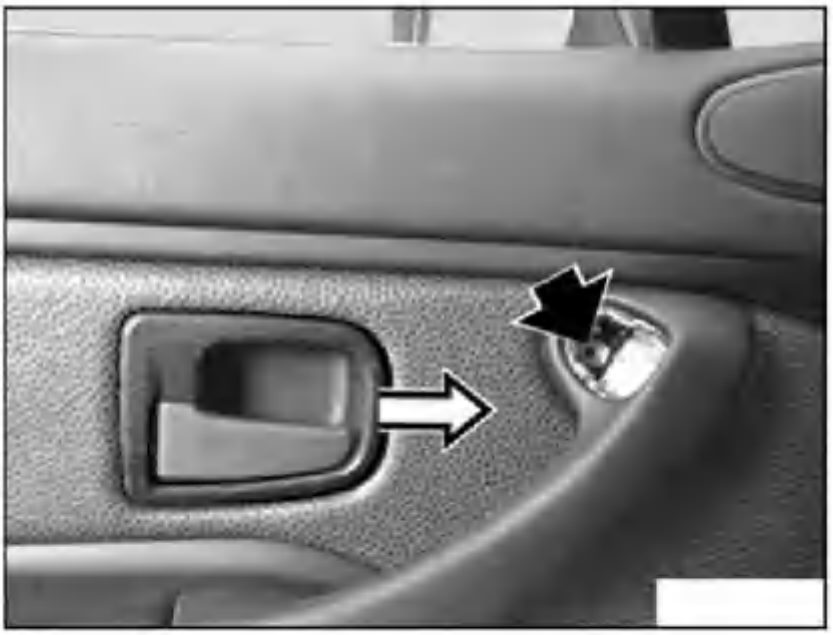


Fig. 195: Aligning Plate Forward
Courtesy of BMW OF NORTH AMERICA, INC.

Model with side airbag:

If necessary, lever out cover cap (1) and release screw underneath.

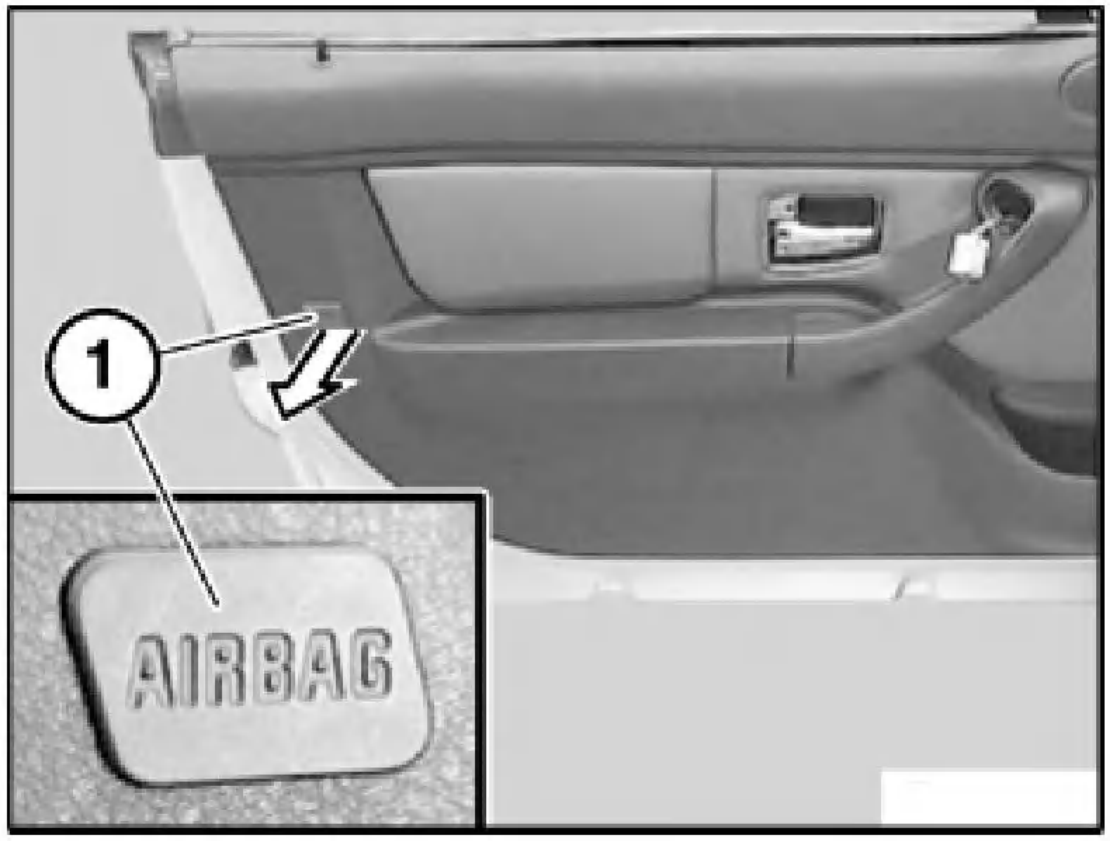


Fig. 196: Identifying Cover Cap
Courtesy of BMW OF NORTH AMERICA, INC.

CAUTION: Do not pull handle (risk of damage).

Unclip door trim panel.

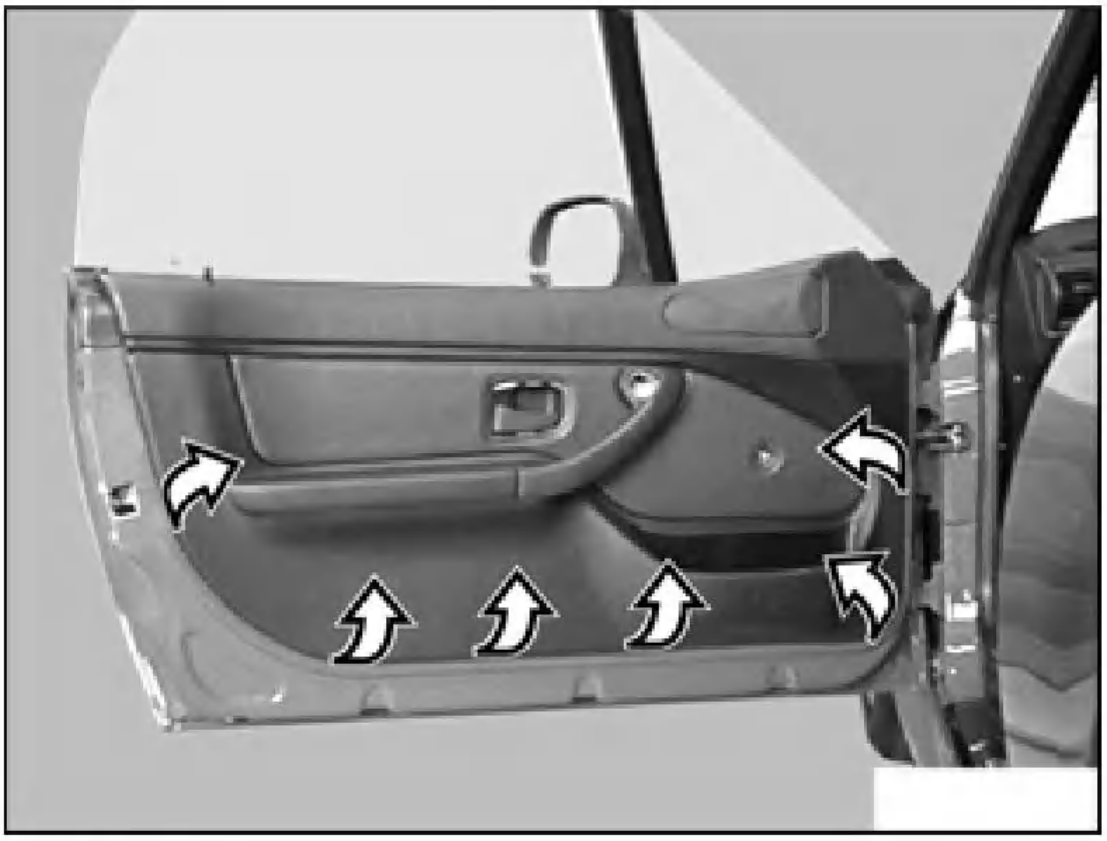


Fig. 197: Unclipping Door Trim Panel
Courtesy of BMW OF NORTH AMERICA, INC.

Lift off door trim panel upwards.

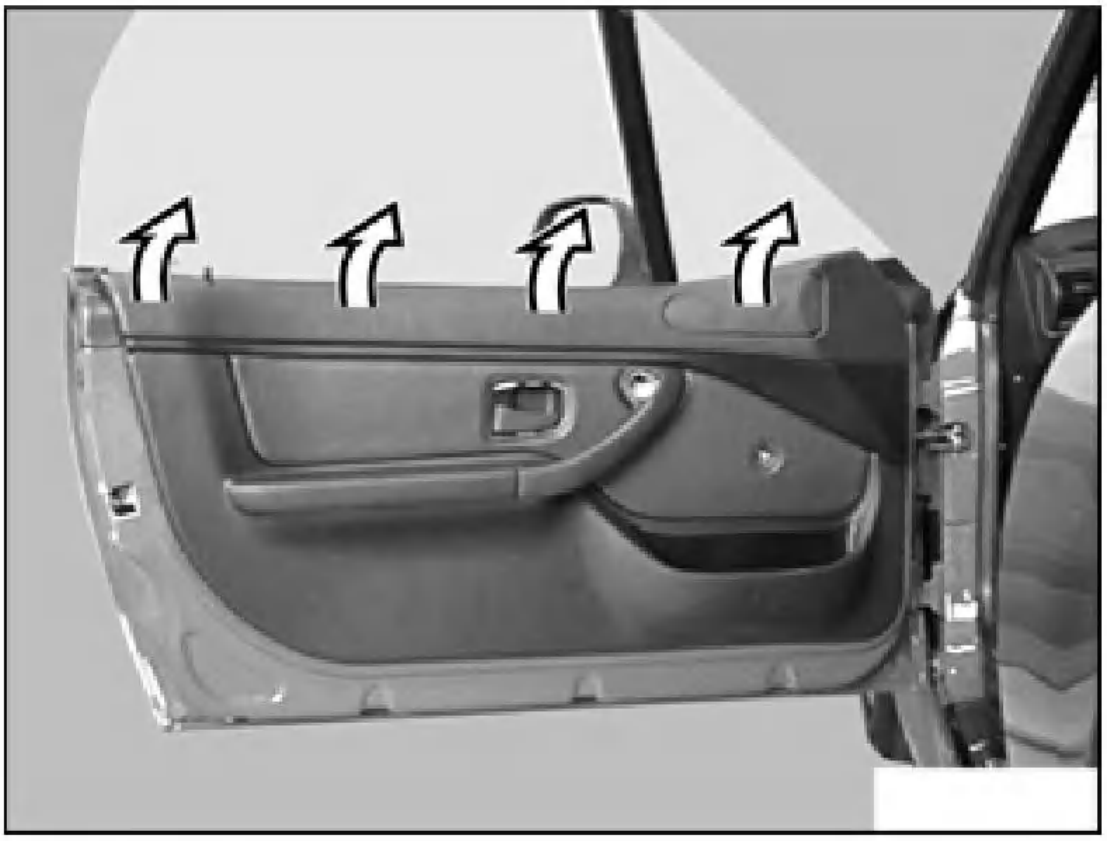


Fig. 198: Lifting Door Trim Panel Upwards
Courtesy of BMW OF NORTH AMERICA, INC.

If necessary, disconnect plug connection on speaker.

Installation:

If necessary, replace damaged clips.

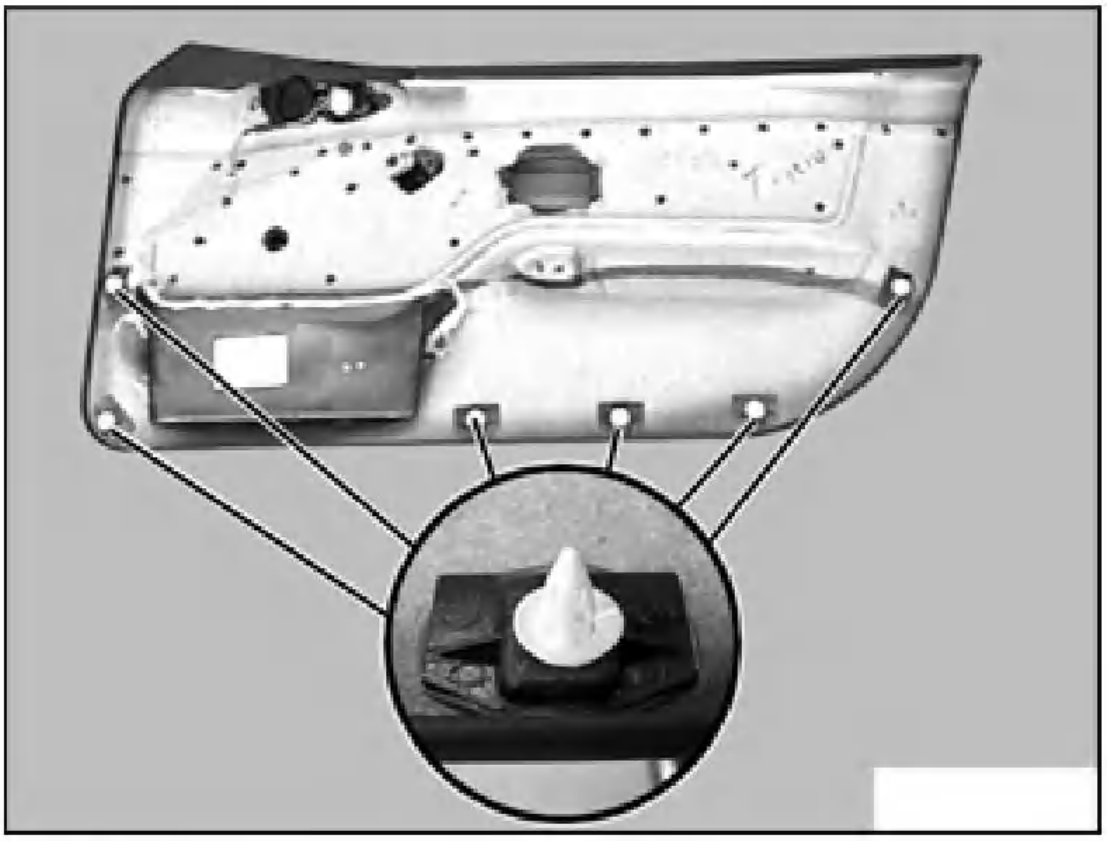


Fig. 199: Identifying Door Clips
Courtesy of BMW OF NORTH AMERICA, INC.

Model with side airbag:

Installation:

If necessary, replace damaged clips.

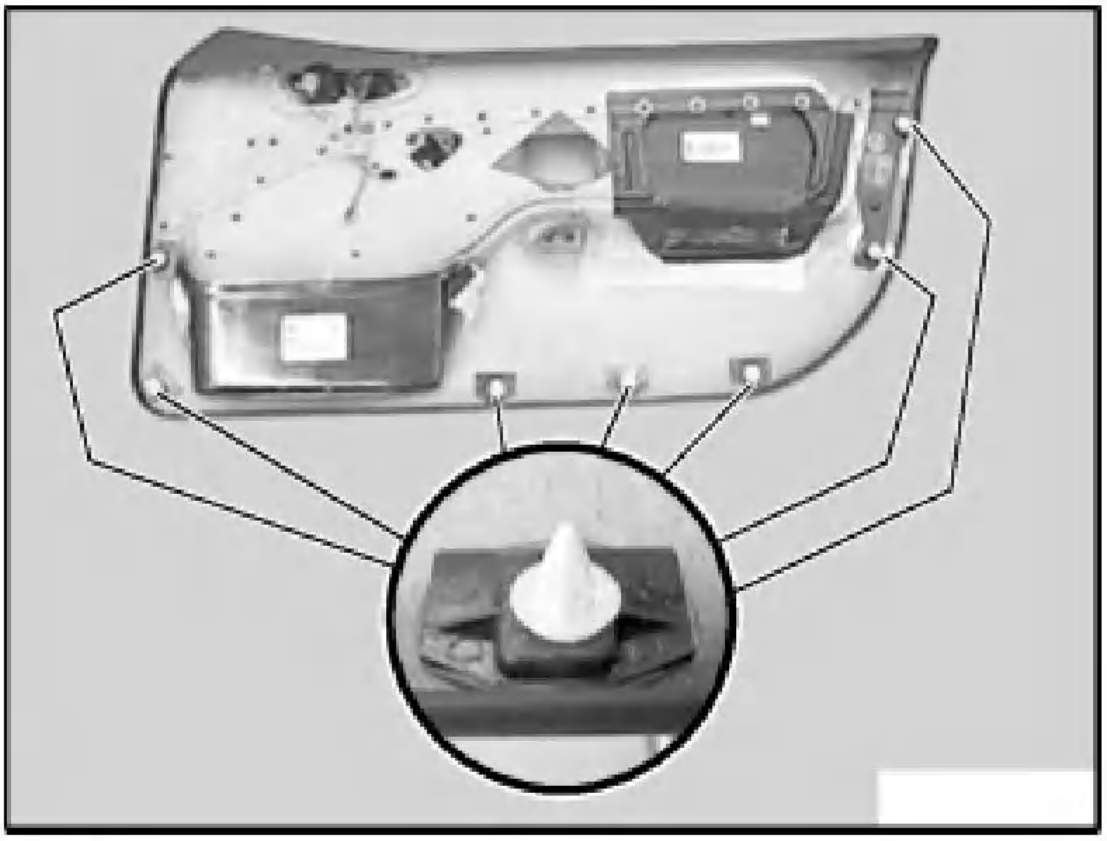


Fig. 200: Identifying Door Clips (Model With Side Airbag)
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Pull inner cavity cover strip (1) upwards to remove.

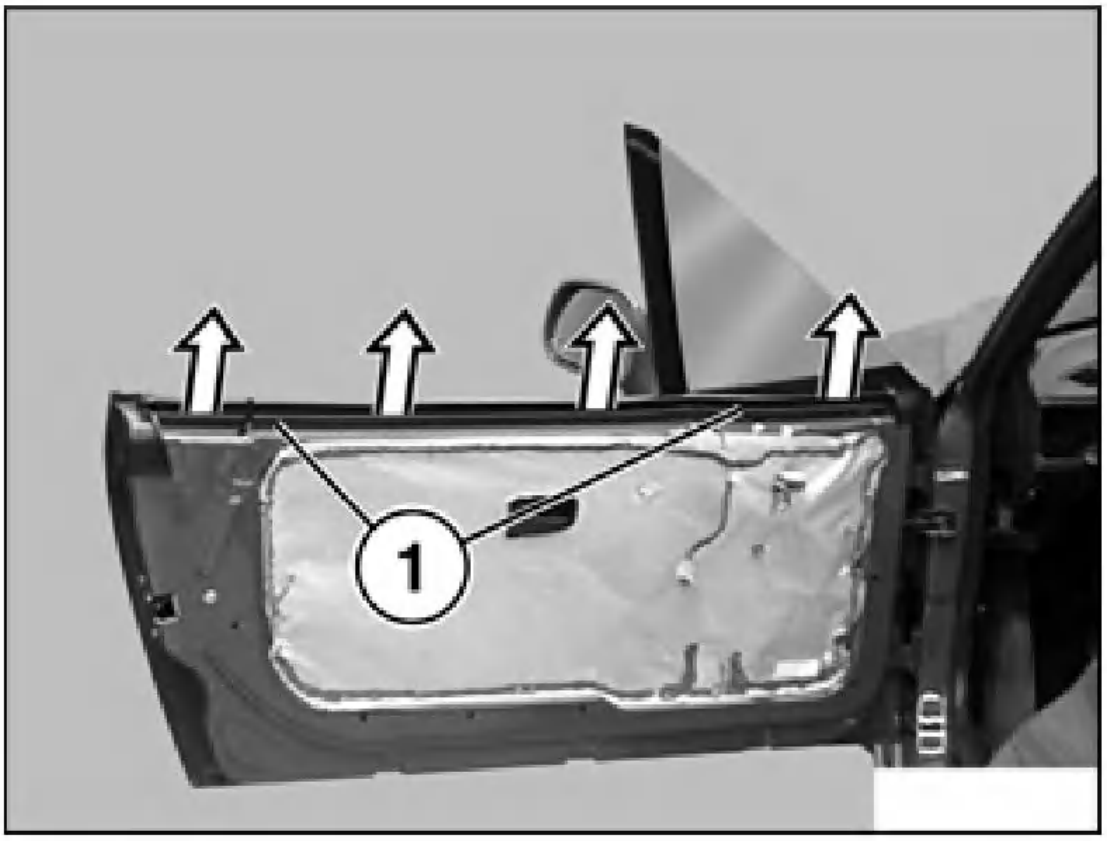


Fig. 201: Removing Inner Cavity Cover Strip
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Fit cavity cover strip (1) at back with distance (A) to door trim (2).

Lift sealing lip (3).

Dimension (A) = approx. 8 mm.

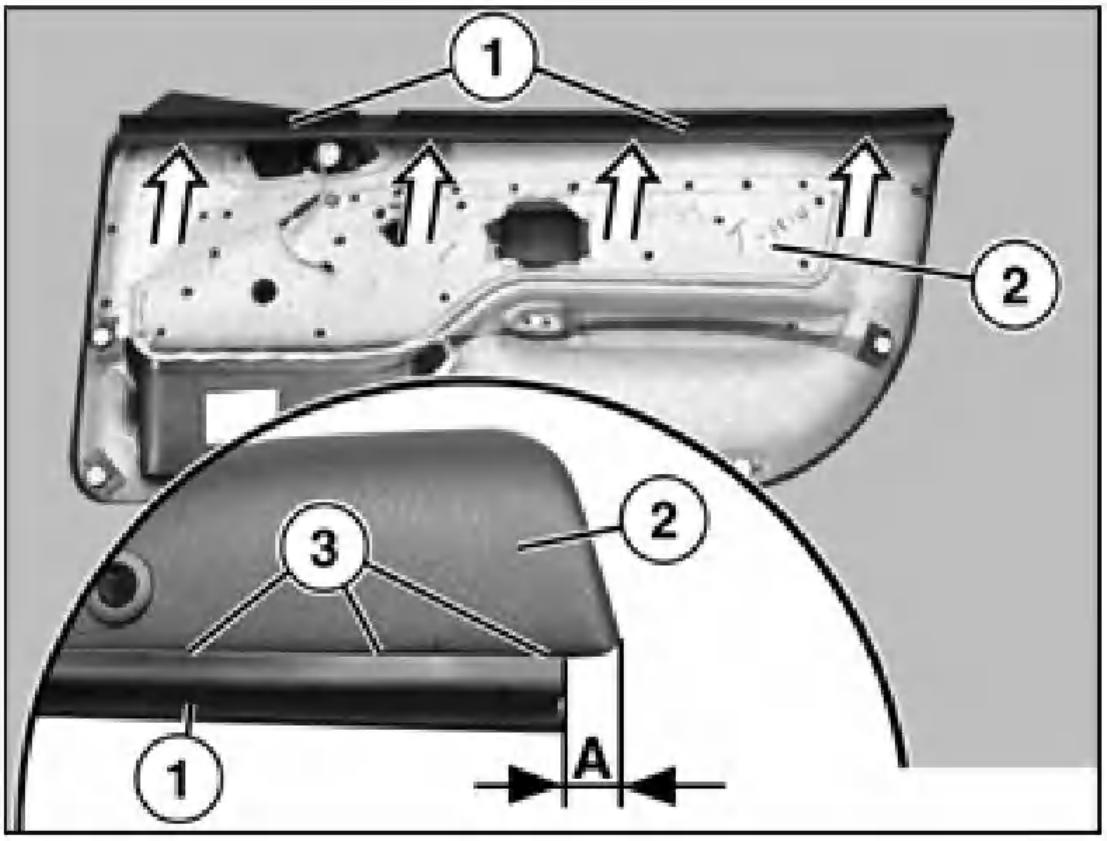


Fig. 202: Installing Cavity Cover Strip
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

After assembling the door trim panel proceed as follows:

- Open door window.
- Lock with vehicle key.
- Check for ease-of-movement on retaining button linkage.
- If necessary, align linkages.

51 41 001 REPLACING DOOR TRIM PANEL, FRONT LEFT OR RIGHT (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE)

Remove door trim panel, refer to 51 41 000 REMOVING AND INSTALLING FRONT LEFT OR RIGHT DOOR TRIM PANEL (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE) .

Lift out finisher strip (1) and remove.

Unfasten screw (2) and remove loudspeaker finisher strip (3).

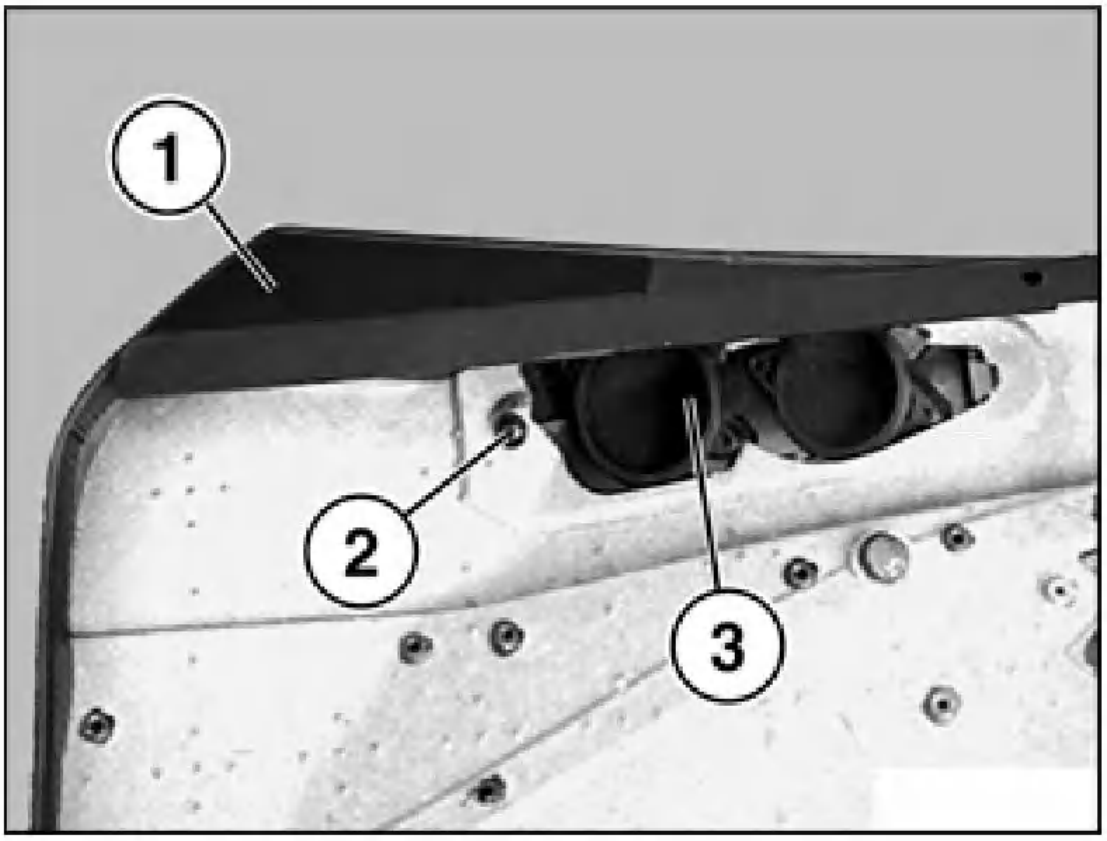


Fig. 203: Removing Finisher Strip
Courtesy of BMW OF NORTH AMERICA, INC.

SIDE COVERING WITH ARMRESTS

51 43 010 REMOVING AND INSTALLING/REMOVING REAR LEFT OR RIGHT UPPER SECTION OF SIDE TRIM PANEL (Z3 ROADSTER, M ROADSTER)

Removing and installing rear oddments box, refer to 51 16 240 REMOVING AND INSTALLING REAR ODDMENTS BOX (Z3 ROADSTER, M ROADSTER) .

Unfasten seatbelt screw (1).

Installation:

Tightening torque, refer to TORQUE SPECIFICATIONS .

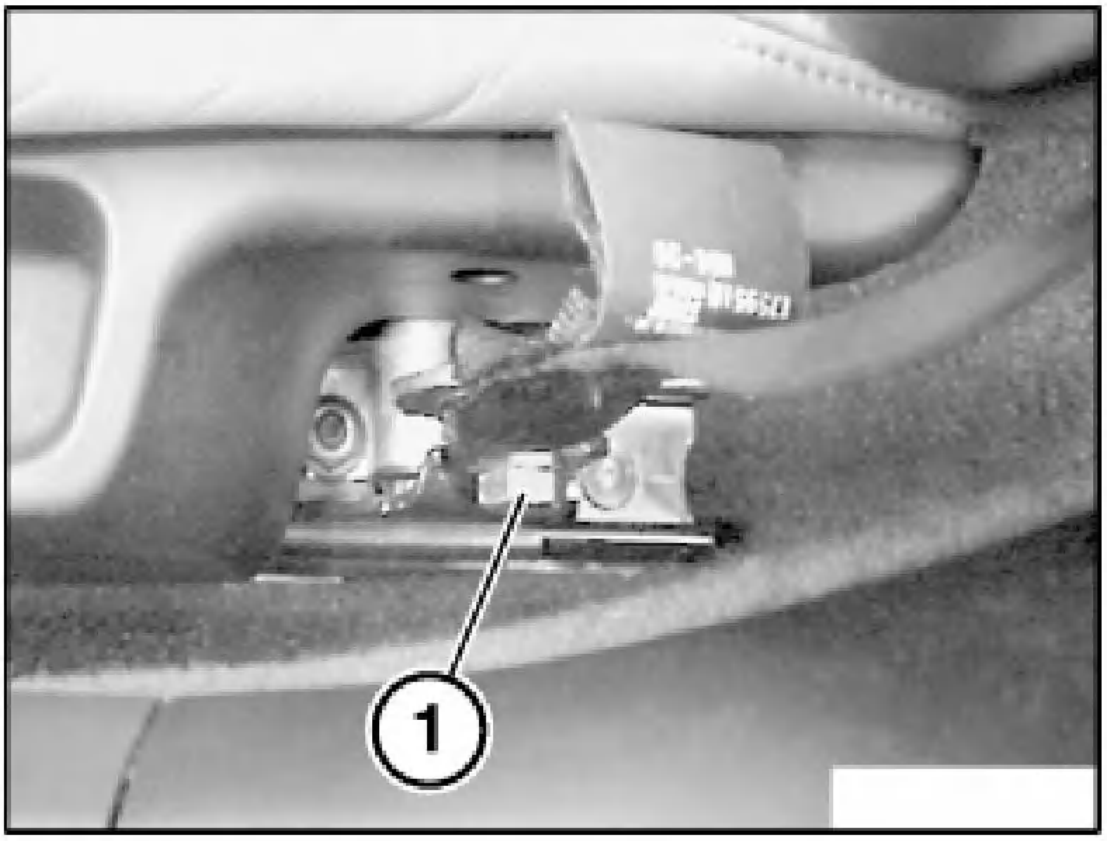


Fig. 204: Removing Seatbelt Screw
Courtesy of BMW OF NORTH AMERICA, INC.

Unfasten cover cap (1) and screw.

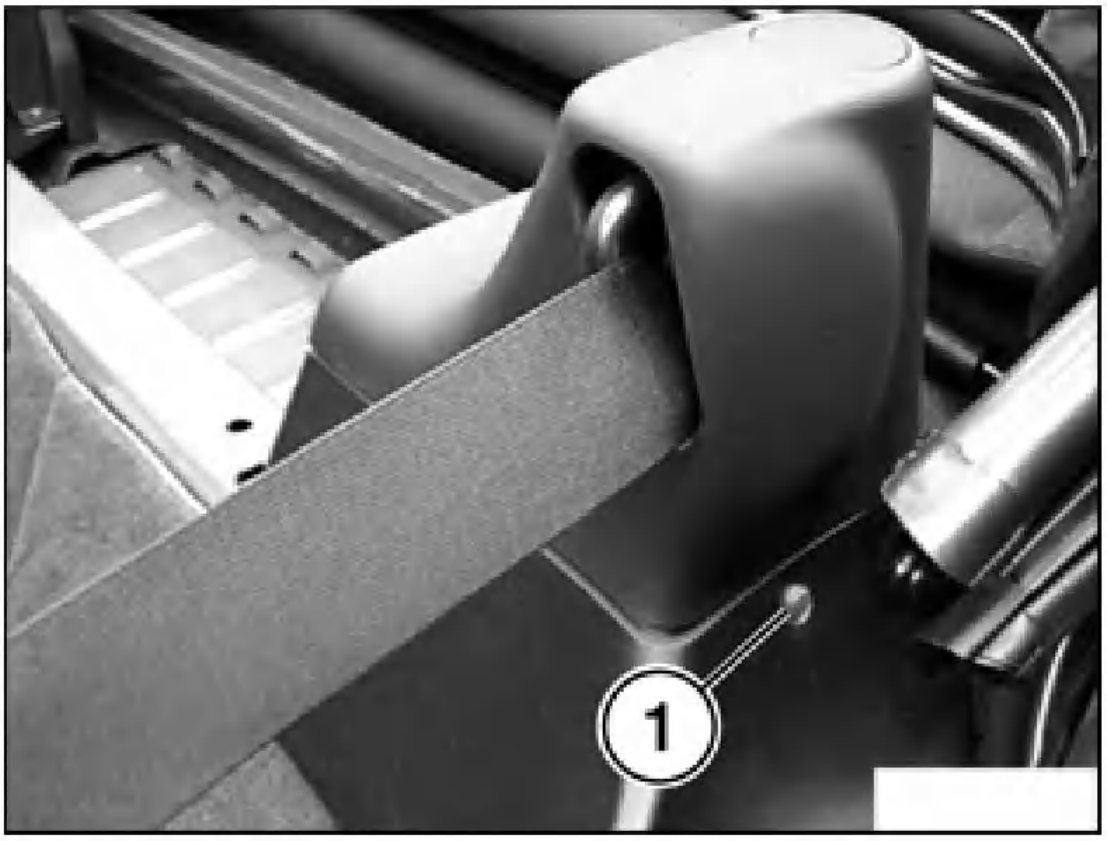


Fig. 205: Removing Cover Cap
Courtesy of BMW OF NORTH AMERICA, INC.

Remove caps (1) and screws. Pull out upper section of side trim panel (2) upward/forward over the seat belt roller (3).

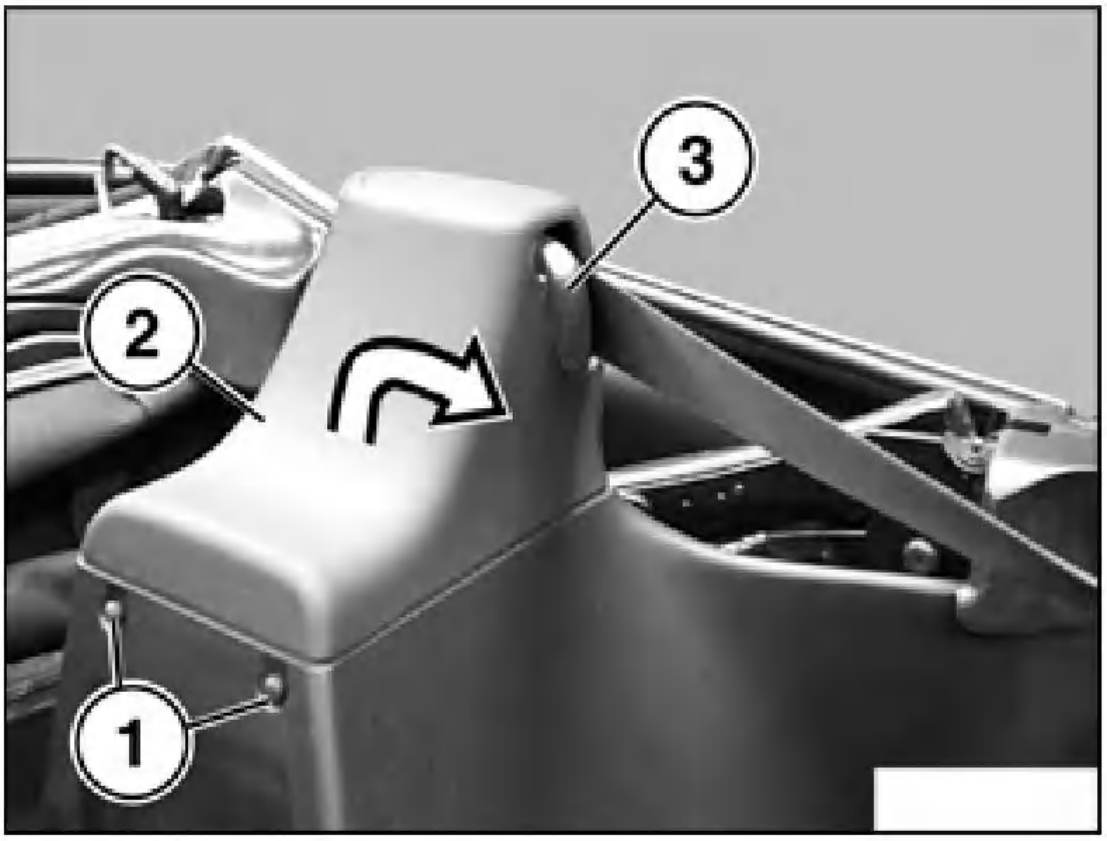


Fig. 206: Removing Upper Section Of Side Trim Panel
Courtesy of BMW OF NORTH AMERICA, INC.

51 43 015 REMOVING AND INSTALLING / REPLACING REAR LEFT OR RIGHT LOWER SECTION OF SIDE TRIM (Z3 ROADSTER, M ROADSTER)

Removing and installing rear upper section of side trim panel, refer to 51 43 010 REMOVING AND INSTALLING/REMOVING REAR LEFT OR RIGHT UPPER SECTION OF SIDE TRIM PANEL (Z3 ROADSTER, M ROADSTER) .

Removing and installing rocker panel cover strip (inside), refer to 51 47 000 REMOVING AND INSTALLING/REPLACING ENTRANCE COVER STRIP (INTERIOR), FRONT LEFT OR RIGHT (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE) .

Version with Hi-Fi system:

Unfasten plug connection (1).

Only replace:

Unfasten screw connection (2) and take off loudspeaker (3).

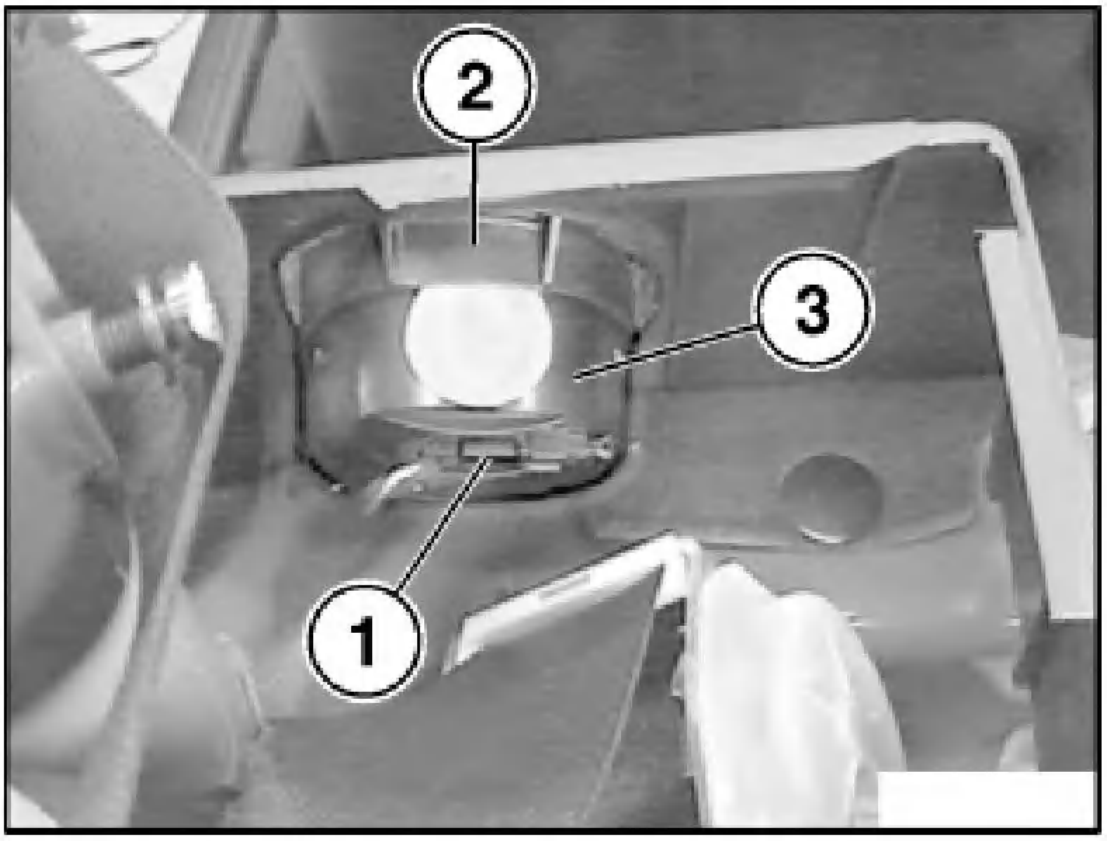


Fig. 207: Removing Screw Connection
Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: The convertible top lid must be closed to remove the side trim panel (4).

Partially unfasten cover (1) and edge protector (2). Unfasten screws (3) and pull lower section of side trim (4) upward/forward over the belt anchor (5).

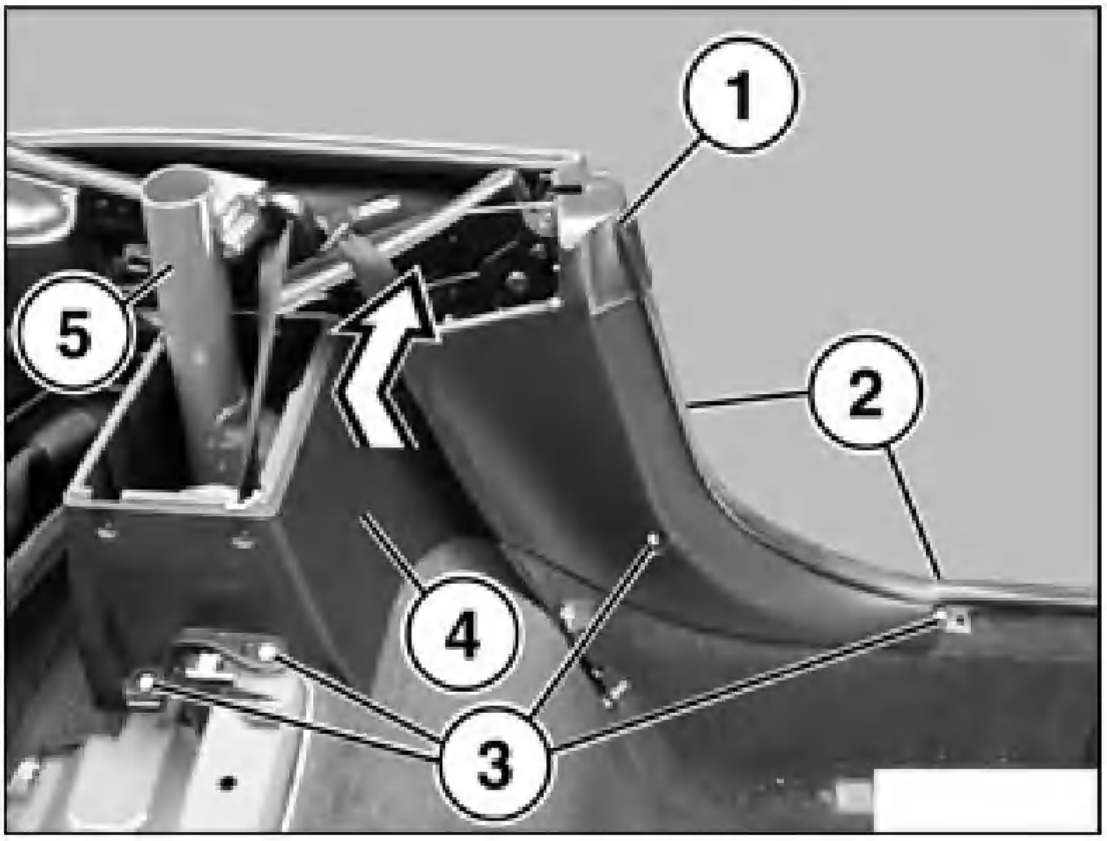


Fig. 208: Removing Cover And Edge Protector
Courtesy of BMW OF NORTH AMERICA, INC.

51 43 201 REMOVING AND INSTALLING/REPLACING PANEL FOR ROOF PILLAR, FRONT LEFT OR RIGHT (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE)

Remove mucket from front roof column (A-column finisher).

Pull trim (1) inwards to unclip; then pull obliquely upwards to remove.

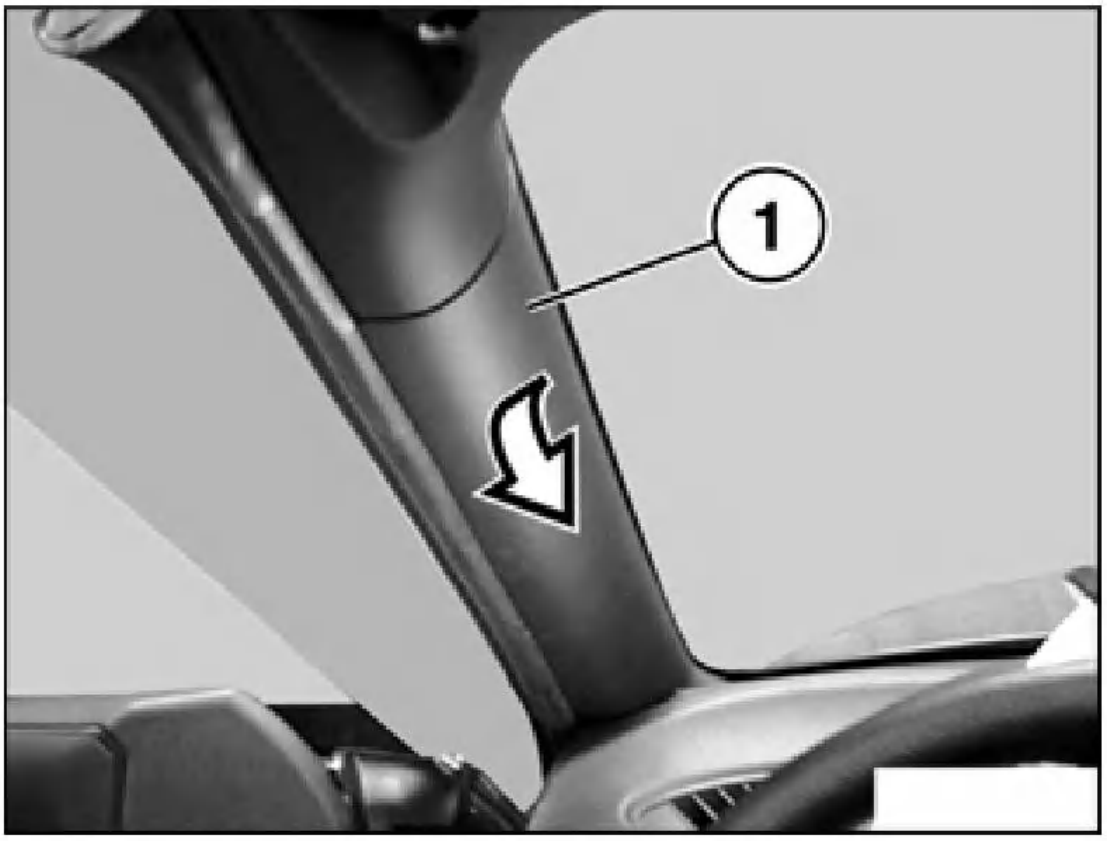


Fig. 209: Removing Trim
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

If necessary, replace damaged clips.

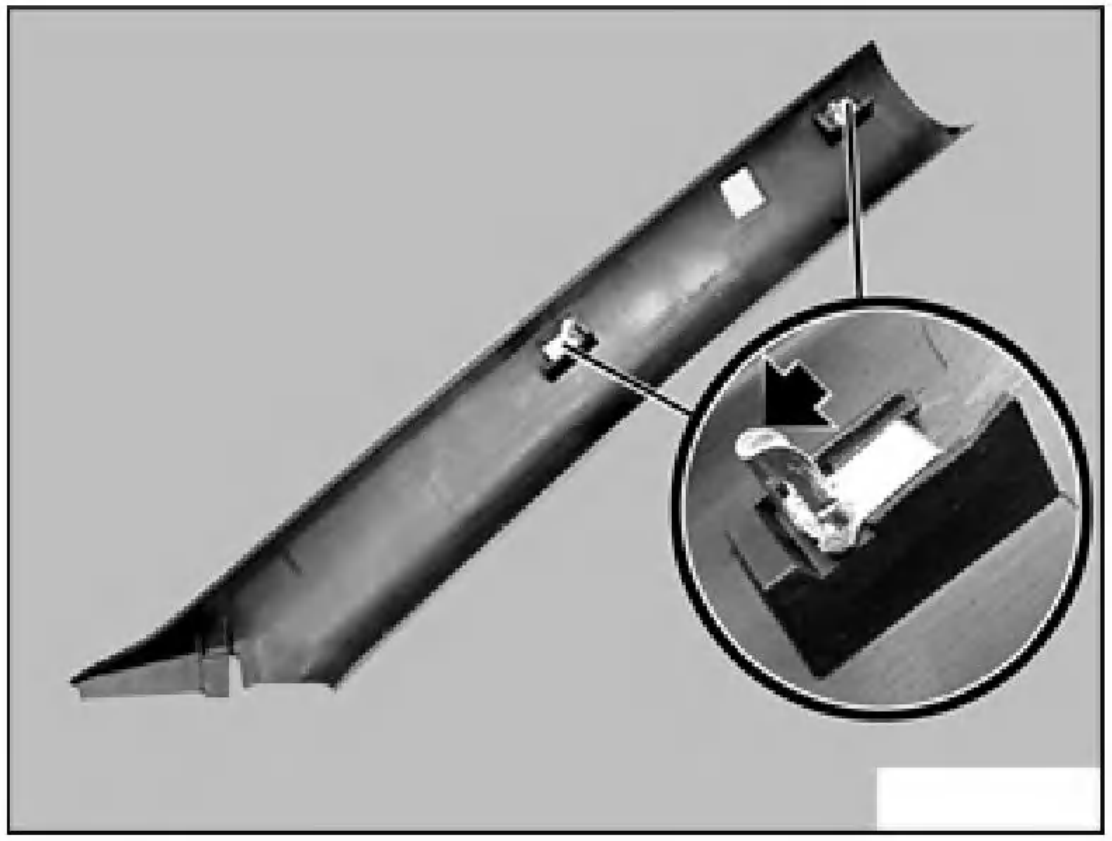


Fig. 210: Replacing Damaged Clips
Courtesy of BMW OF NORTH AMERICA, INC.

ROOF TRIM PANEL

51 44 150 REMOVING AND INSTALLING/REPLACING FINISHER FOR HEADLINER, FRONT (COWL PANEL, TOP) (Z3 ROADSTER, M ROADSTER)

Removing and installing both trim sections for front roof pillar (A-pillar finishers), refer to 51 43 201 REMOVING AND INSTALLING/REPLACING PANEL FOR ROOF PILLAR, FRONT LEFT OR RIGHT (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE) .

Removing and installing both sun visors, refer to 51 16 104 REMOVING AND INSTALLING/REPLACING LEFT OR RIGHT SON VISOR (Z3 ROADSTER) .

Removing and installing complete ceiling light, refer to 63 31 000 REMOVING AND INSTALLING/REPLACING COMPLETE CEILING LIGHT (Z3 ROADSTER) .

Unfasten screw (1) on finisher strip (2).

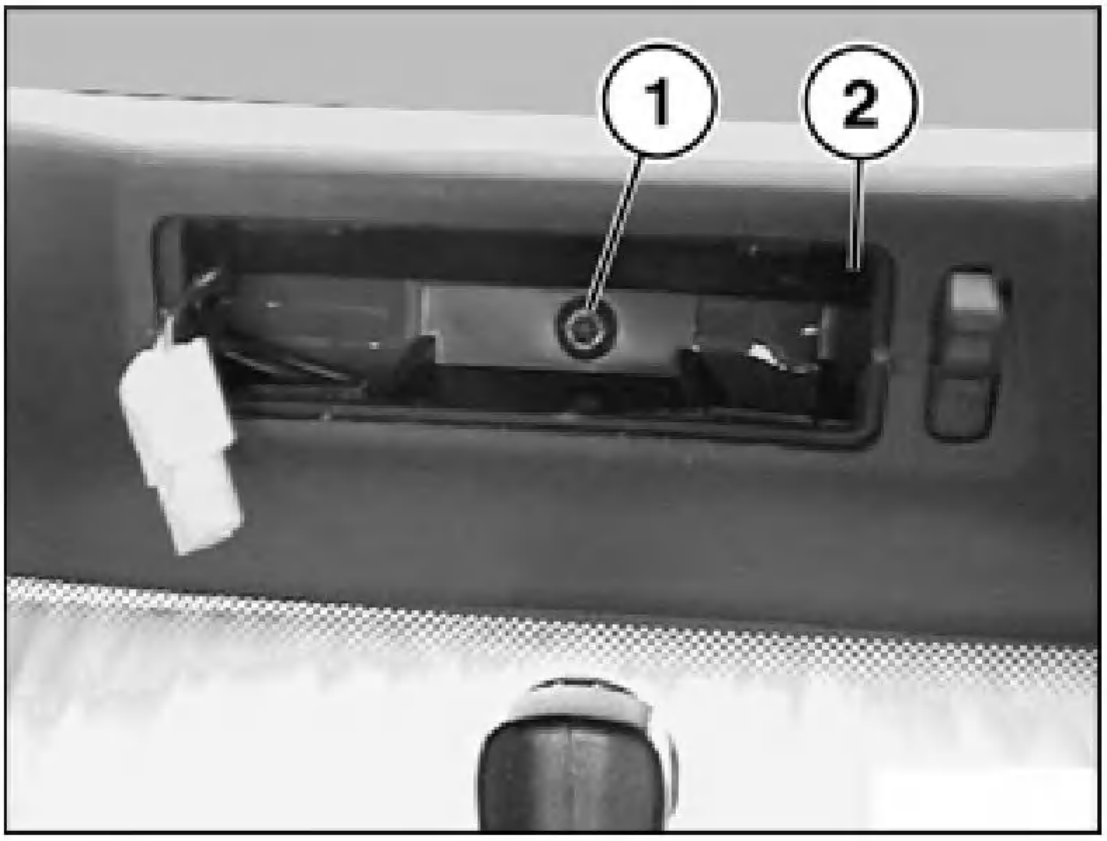


Fig. 211: Removing Screw On Finisher Strip
Courtesy of BMW OF NORTH AMERICA, INC.

Lift finisher strip (1) up sideways and remove.

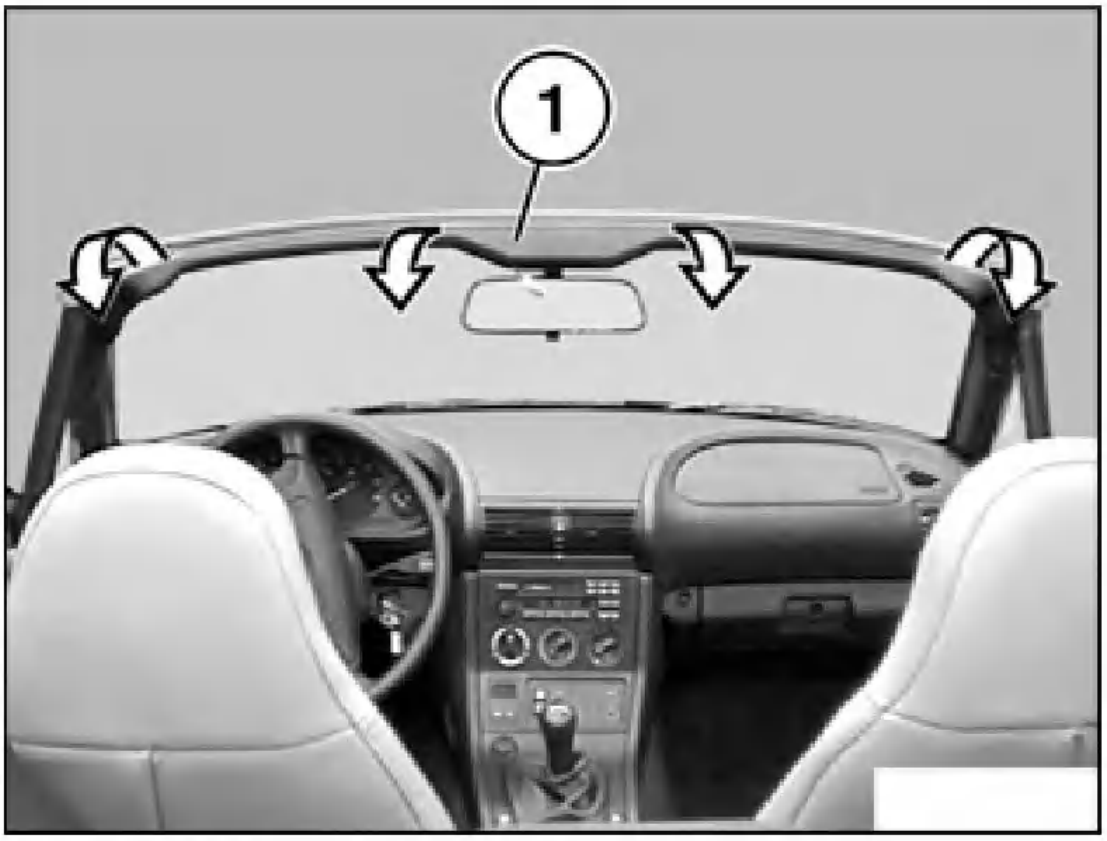


Fig. 212: Removing Finisher Strip
Courtesy of BMW OF NORTH AMERICA, INC.

Disconnect connector (1).

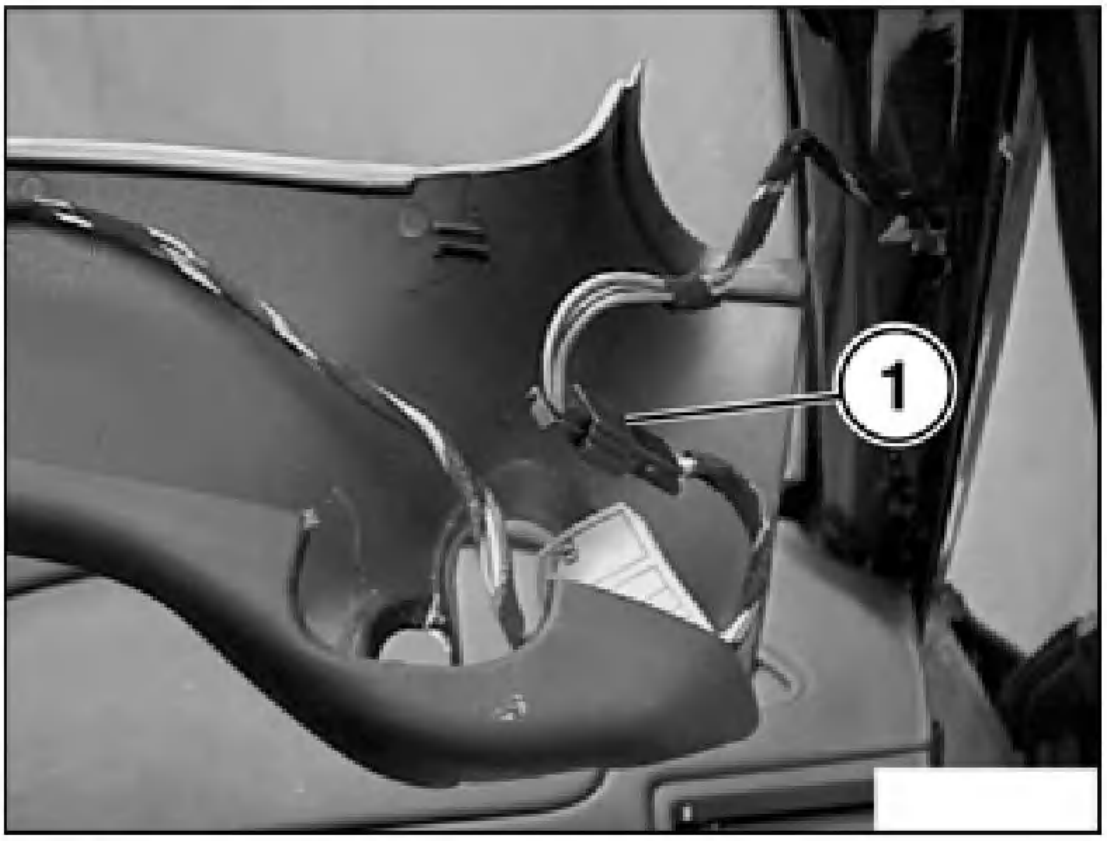


Fig. 213: Disconnecting Connector
Courtesy of BMW OF NORTH AMERICA, INC.

Only replace:

Lift cable (1) out of brackets (2).

Unfasten retaining disks (3) and remove bracket for interior light (4).

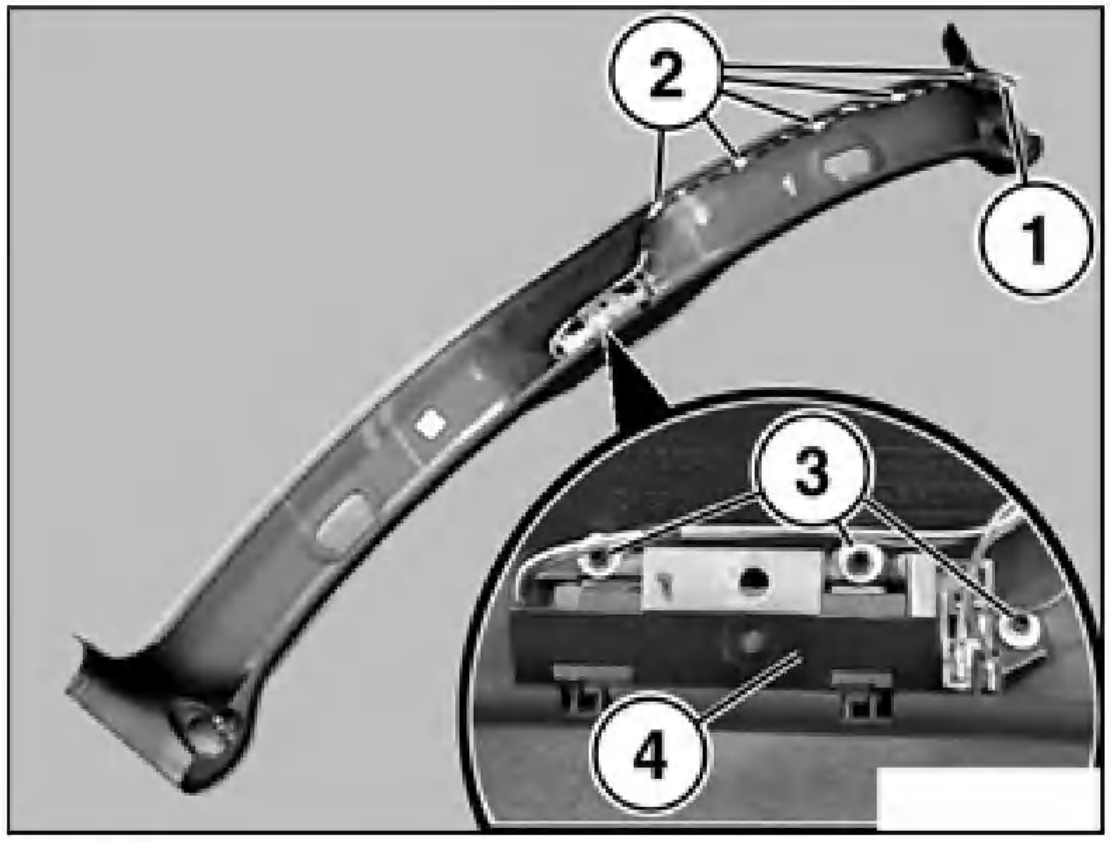


Fig. 214: Removing Bracket For Interior Light
Courtesy of BMW OF NORTH AMERICA, INC.

INSTRUMENT CLUSTER TRIM PANEL

51 45 030 REMOVING AND INSTALLING TRIM FOR INSTRUMENT PANEL (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE)

Removing center console, refer to 51 16 200 REMOVING AND INSTALLING ODDMENTS TRAY (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE) .

Removing airbag module on passenger side, refer to PASSENGER-SIDE AIR BAG MODULE .

Removing complete instrument panel, refer to 62 21 000 REMOVING AND INSTALLING ENTIRE INSTRUMENT CARRIER (Z3 ROADSTER, Z3 COUPE) .

Unfastening switch for windshield wiper and indicator light from steering column, refer to 61 31 040 REPLACING WINDSHIELD WIPER SWITCH

Removing light switch, refer to 61 31 028 REPLACING LIGHT SWITCH (Z3 ROADSTER, Z3 COUPE) .

Removing plate for heating control, refer to CENTER CONSOLE .

Unfasten left/right screws (1).

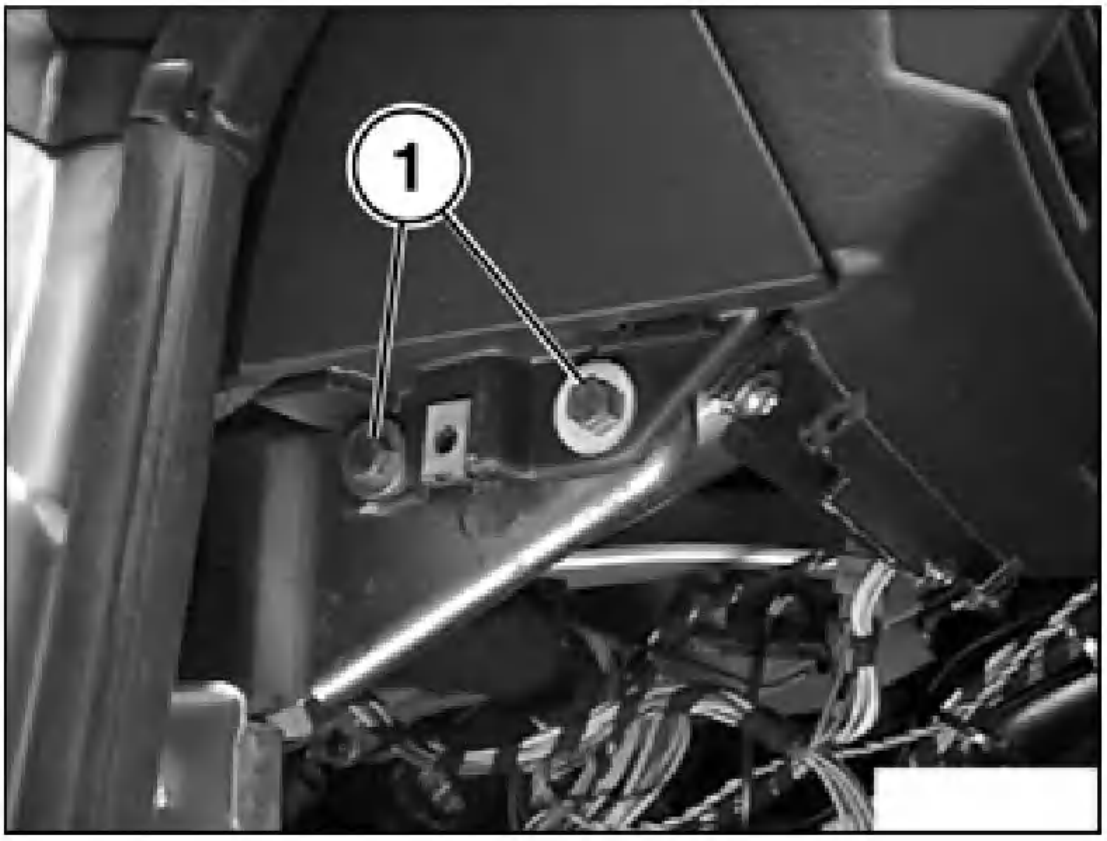


Fig. 215: Removing Plate For Heating Control
Courtesy of BMW OF NORTH AMERICA, INC.

Unfasten screws (1) under center of ventilation grill.

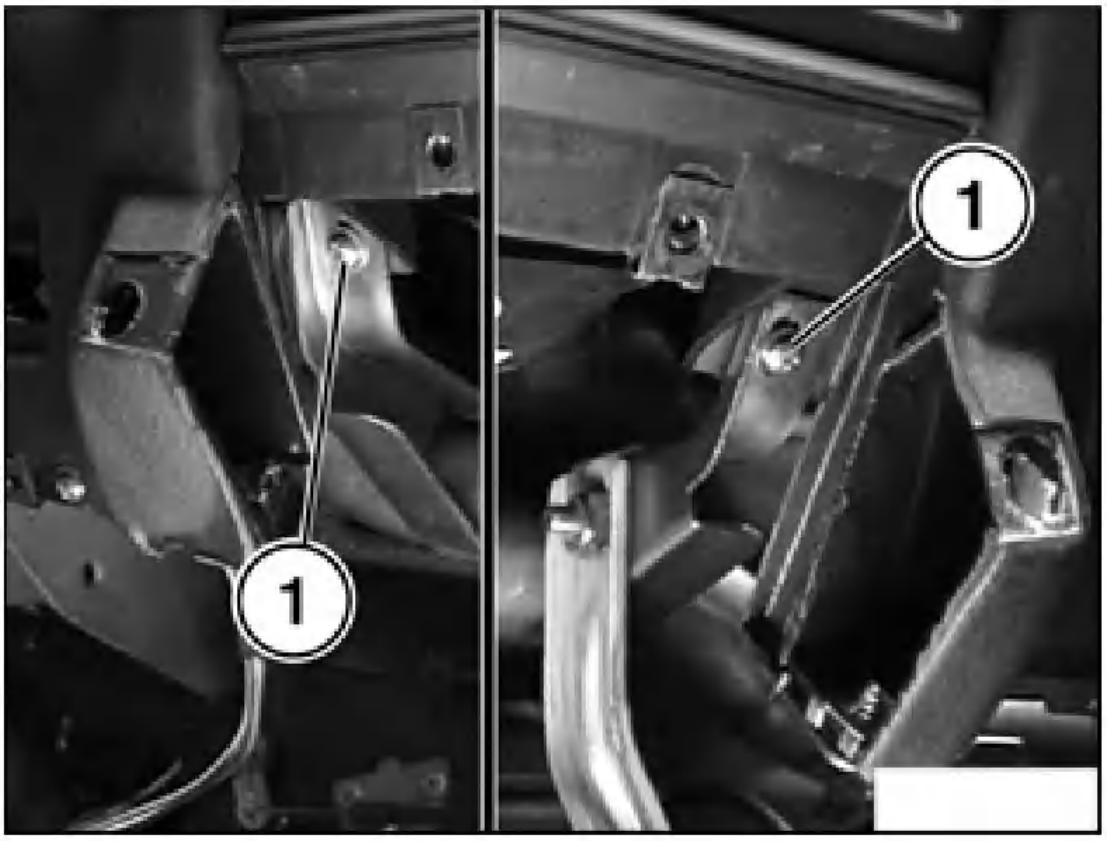


Fig. 216: Removing Ventilation Grill Screws
Courtesy of BMW OF NORTH AMERICA, INC.

Lift out finisher strips (1) and unfasten screws (2).

Installation:

Screw down screws (2) with spacer sleeve (3).

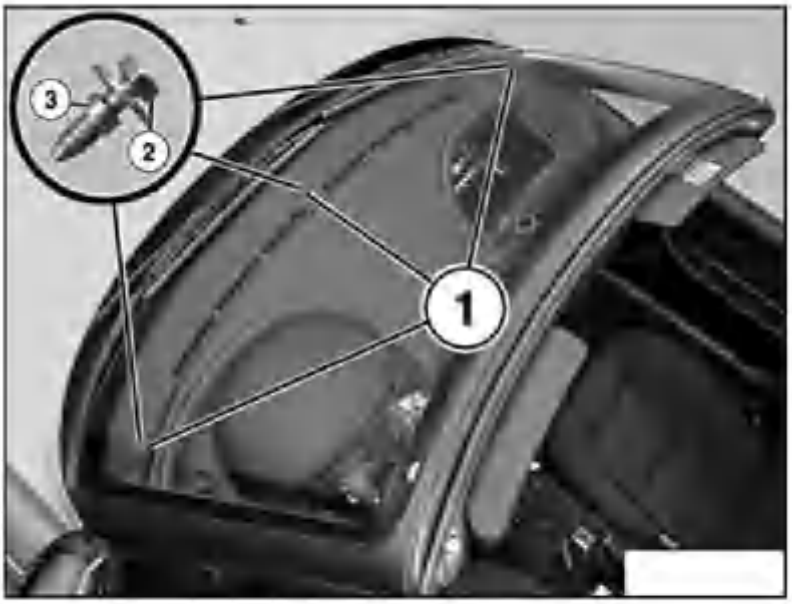


Fig. 217: Identifying Screw With Spacer Sleeve
Courtesy of BMW OF NORTH AMERICA, INC.

Lift instrument panel (1) upwards and backwards (A) and remove on passenger side (B).

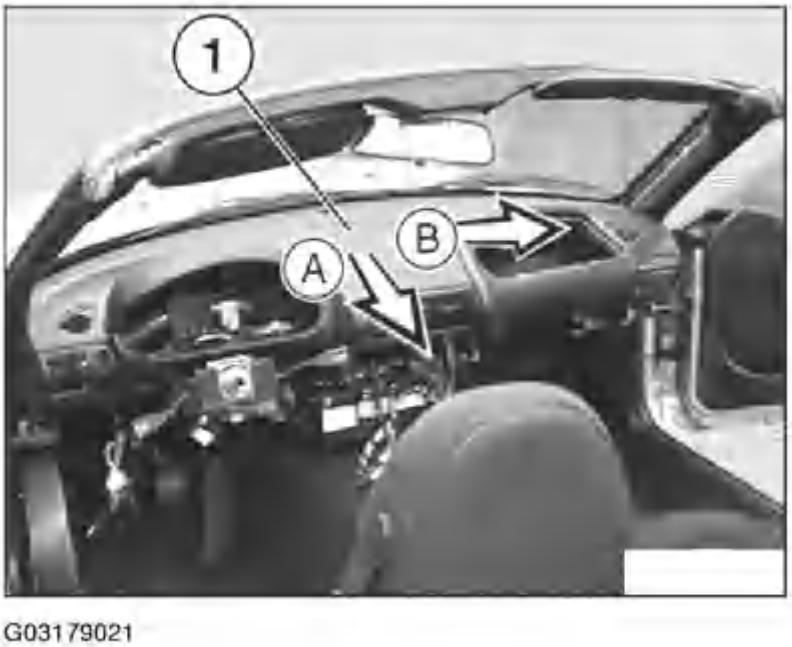


Fig. 218: Removing Passenger Side Instrument Panel
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Slide on speed nuts (1).



Fig. 219: Installing Speed Nuts
Courtesy of BMW OF NORTH AMERICA, INC.

51 45 031 REPLACING TRIM FOR INSTRUMENT PANEL (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE)

Remove trim for instrument panel, refer to 51 45 030 REMOVING AND INSTALLING TRIM FOR INSTRUMENT PANEL (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE) .

Unfasten left/right screw (1) and remove left/right air guide (2).

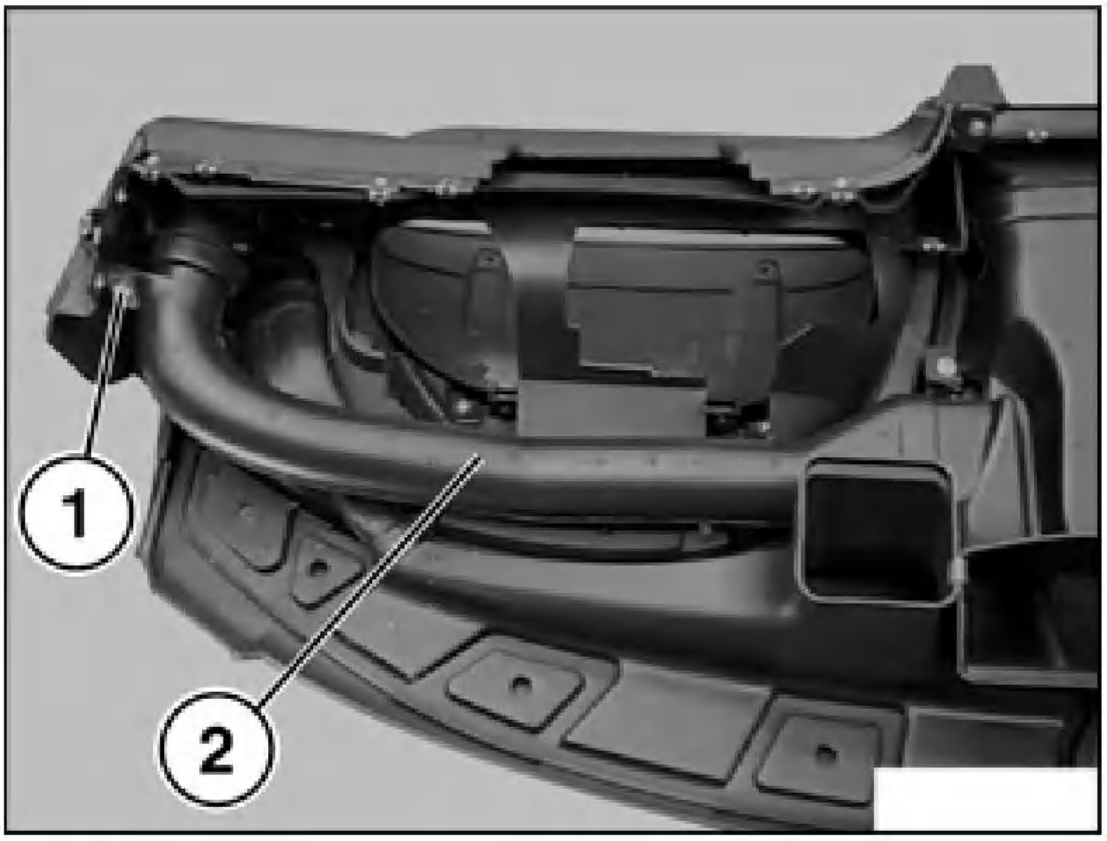


Fig. 220: Removing Left/Right Air Guide
Courtesy of BMW OF NORTH AMERICA, INC.

Unfasten screws (1) and metal tabs (2) and remove center of air guide (3).

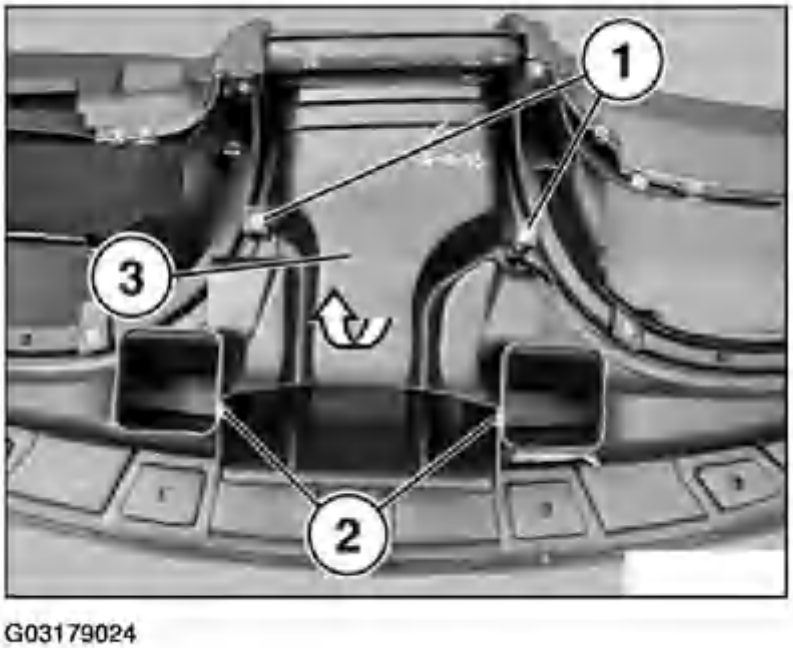


Fig. 221: Removing Center Of Air Guide
Courtesy of BMW OF NORTH AMERICA, INC.

Lift out interlock (1) and pull out center of air vent (2).

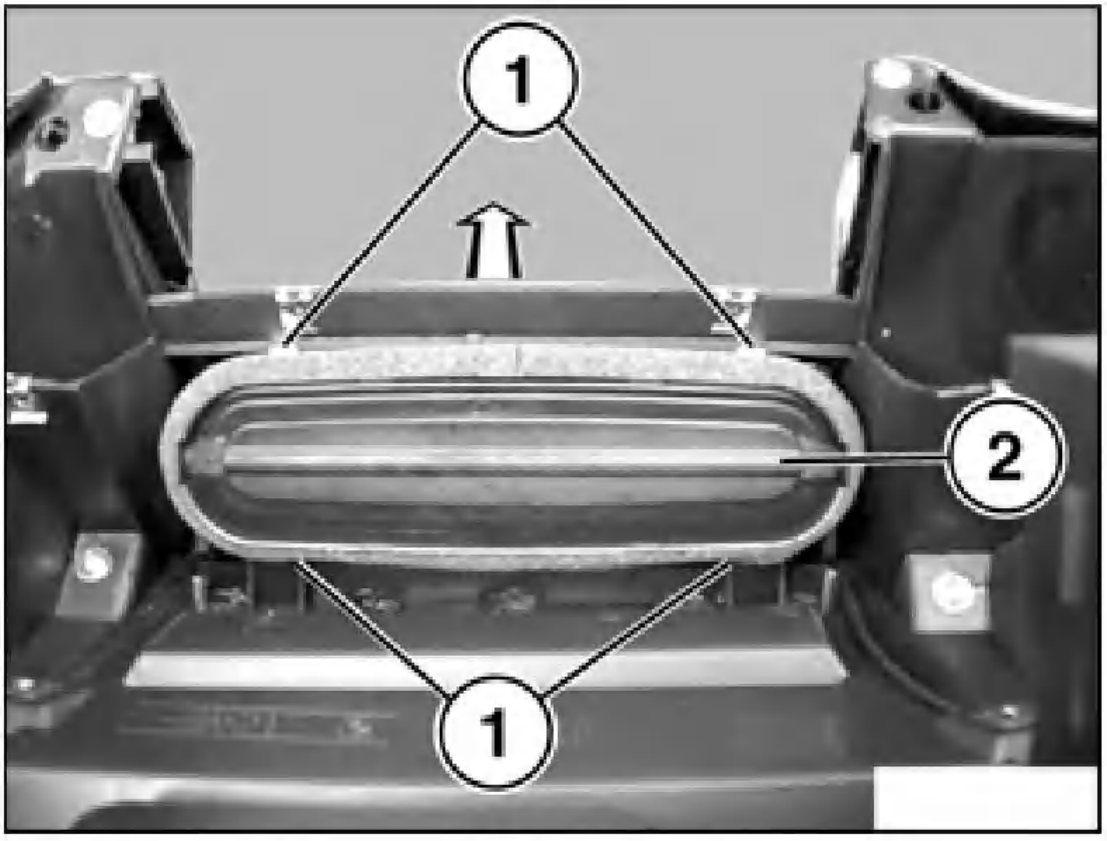


Fig. 222: Removing Center Of Air Vent
Courtesy of BMW OF NORTH AMERICA, INC.

Pull left/right air vent (1) downwards (with feeler gauge) and remove.

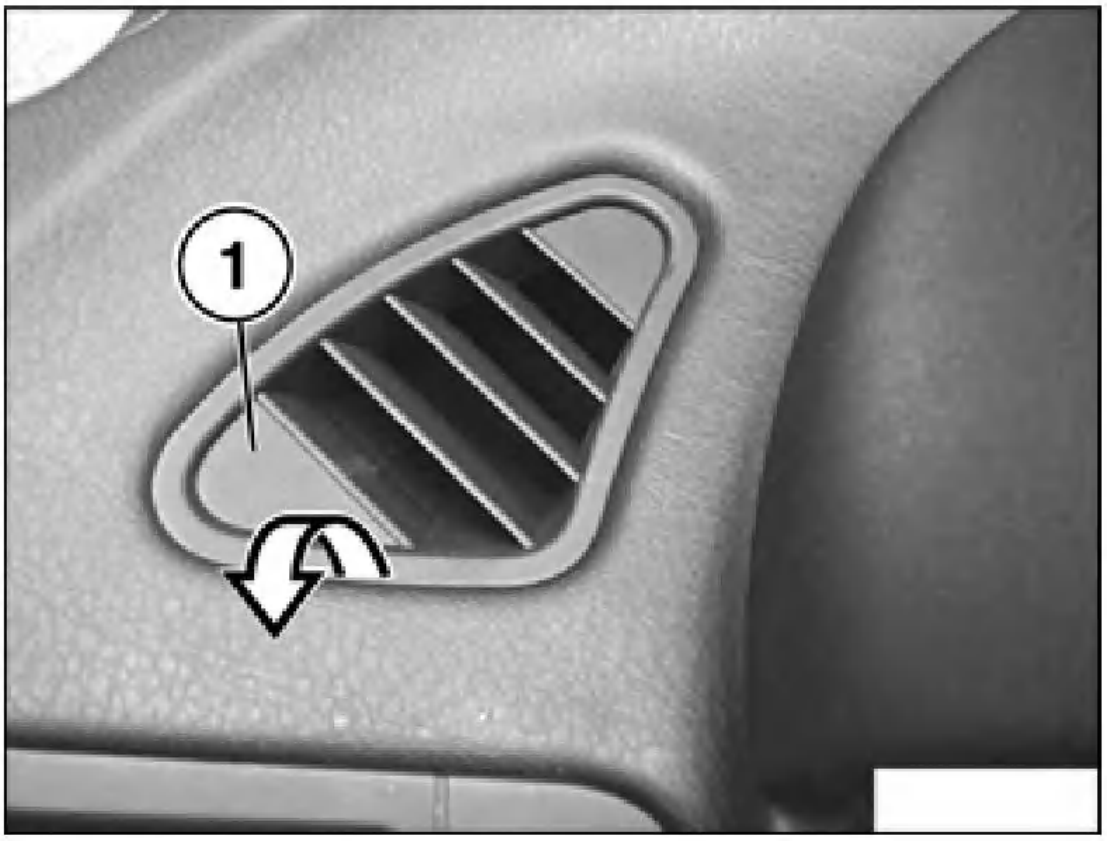


Fig. 223: Removing Left/Right Air Vent
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Interlock (1) and guide (2) on air vent (3) must not be damaged.

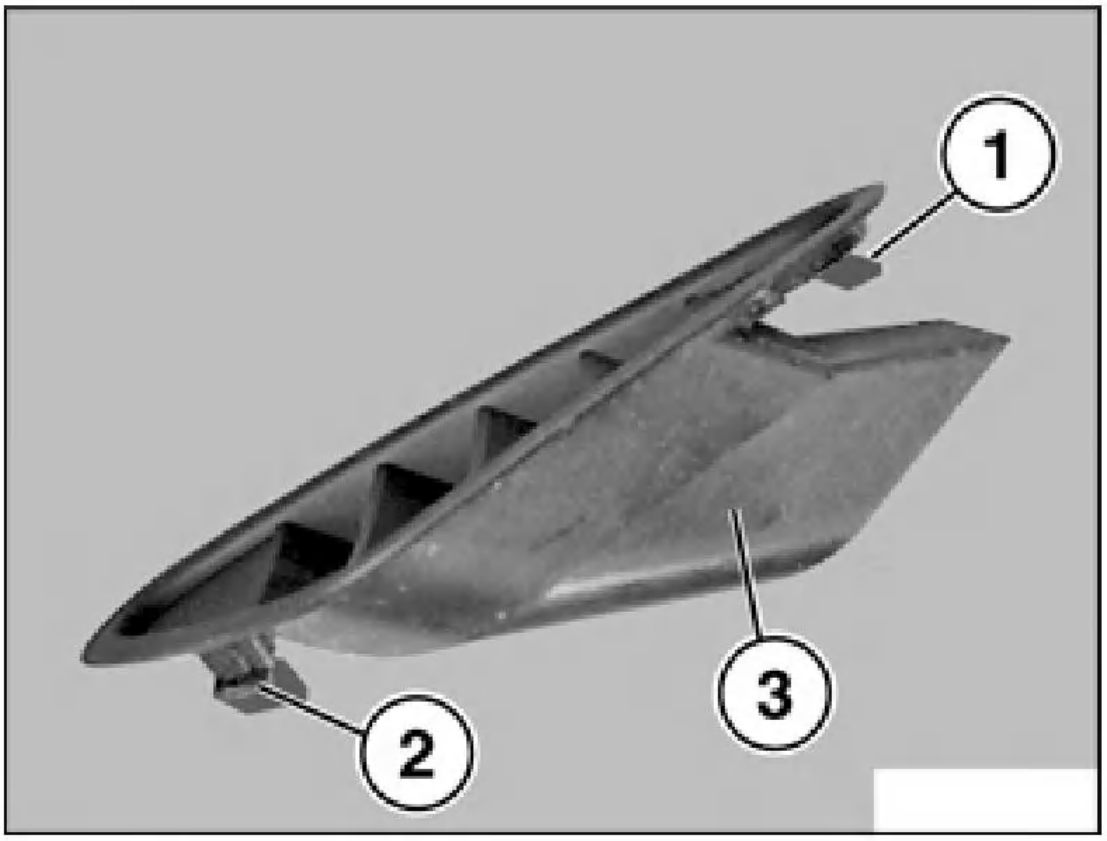


Fig. 224: Installing Guide On Air Vent
Courtesy of BMW OF NORTH AMERICA, INC.

Pull left/right air guide (1) forwards to remove.

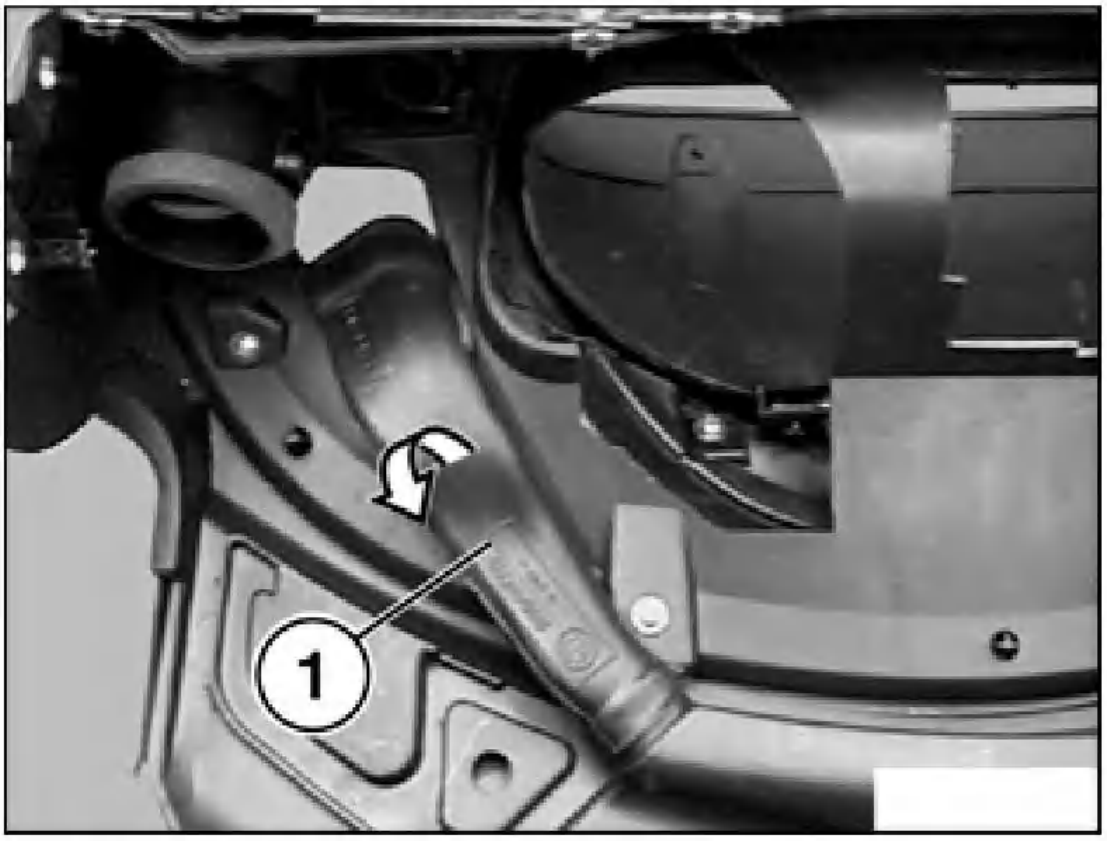


Fig. 225: Removing Left/Right Air Guide
Courtesy of BMW OF NORTH AMERICA, INC.

Unfasten screws (1) and lift off insert (2).

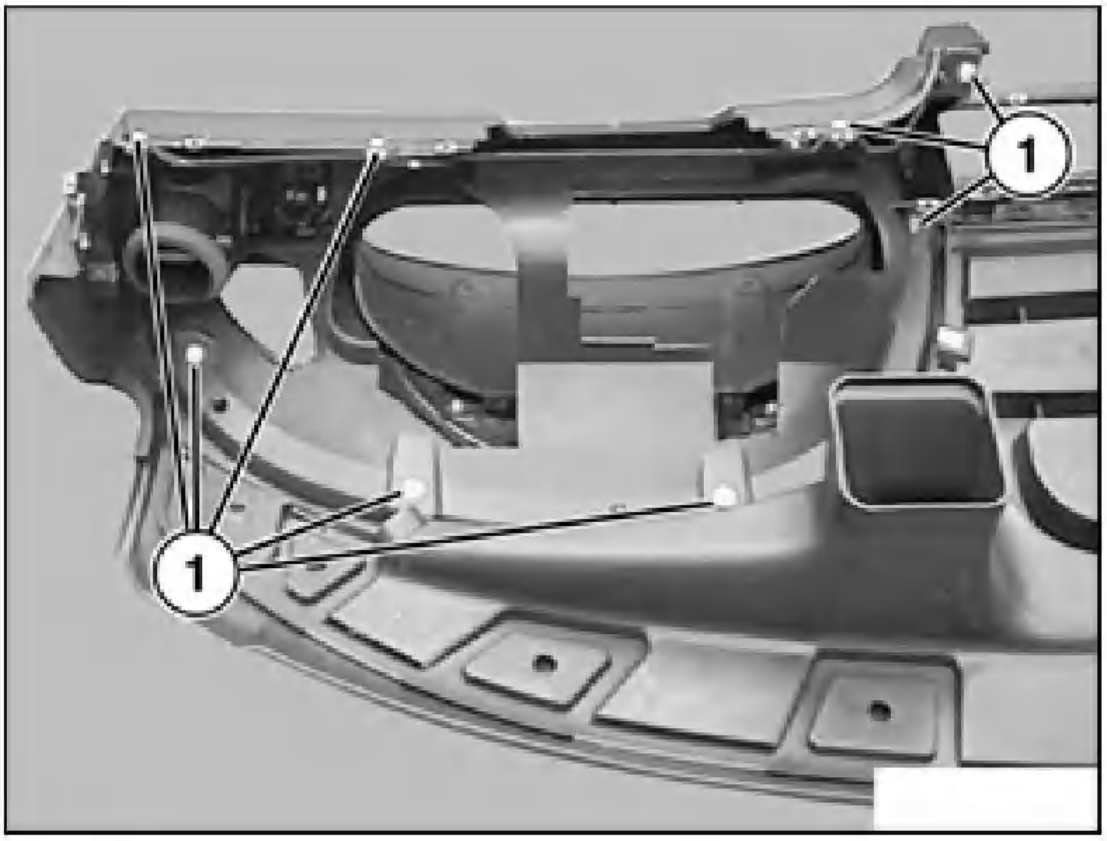


Fig. 226: Removing Insert
Courtesy of BMW OF NORTH AMERICA, INC.

Lift off finisher strips (1) and unfasten screw (2).

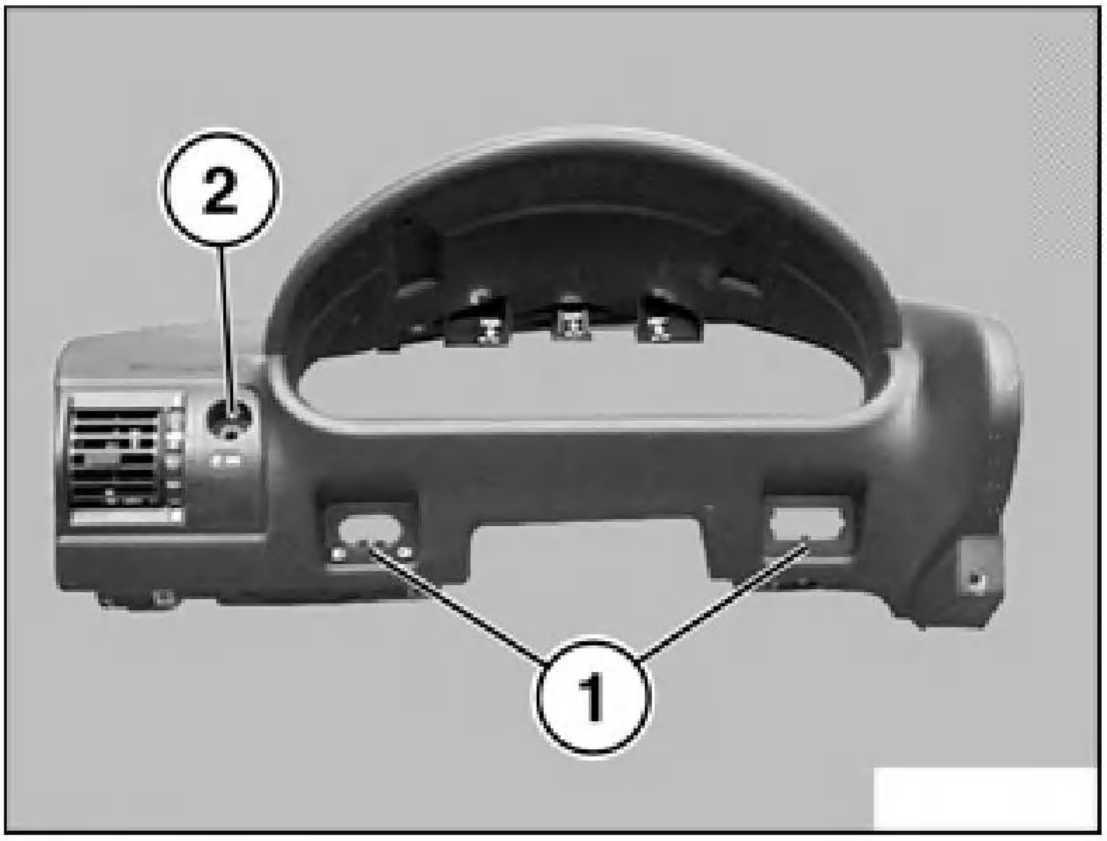


Fig. 227: Removing Finisher Strips
Courtesy of BMW OF NORTH AMERICA, INC.

Lift off interlocks (1) and pull air vents (2) forwards to remove.

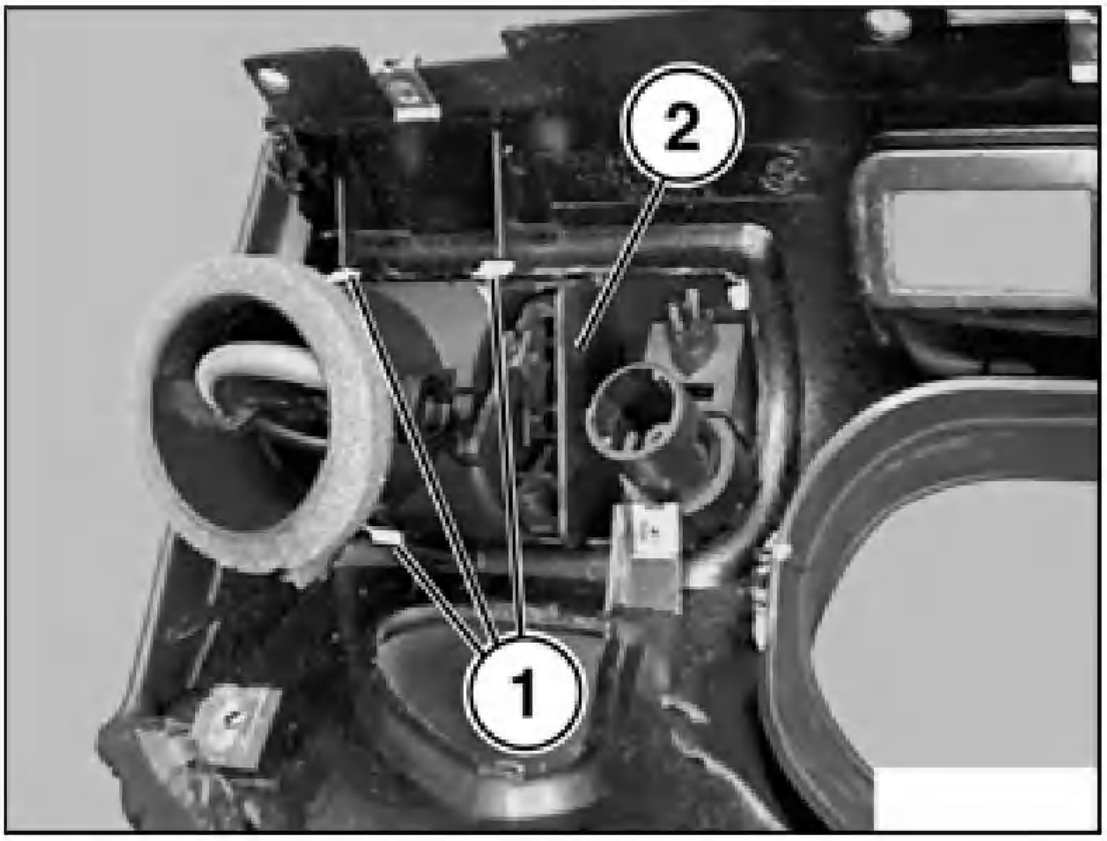


Fig. 228: Removing Air Vents
Courtesy of BMW OF NORTH AMERICA, INC.

Press air vents (1) apart until the interlocks (2) are released and remove light insert (3).

If necessary, remove symbol disc (4).

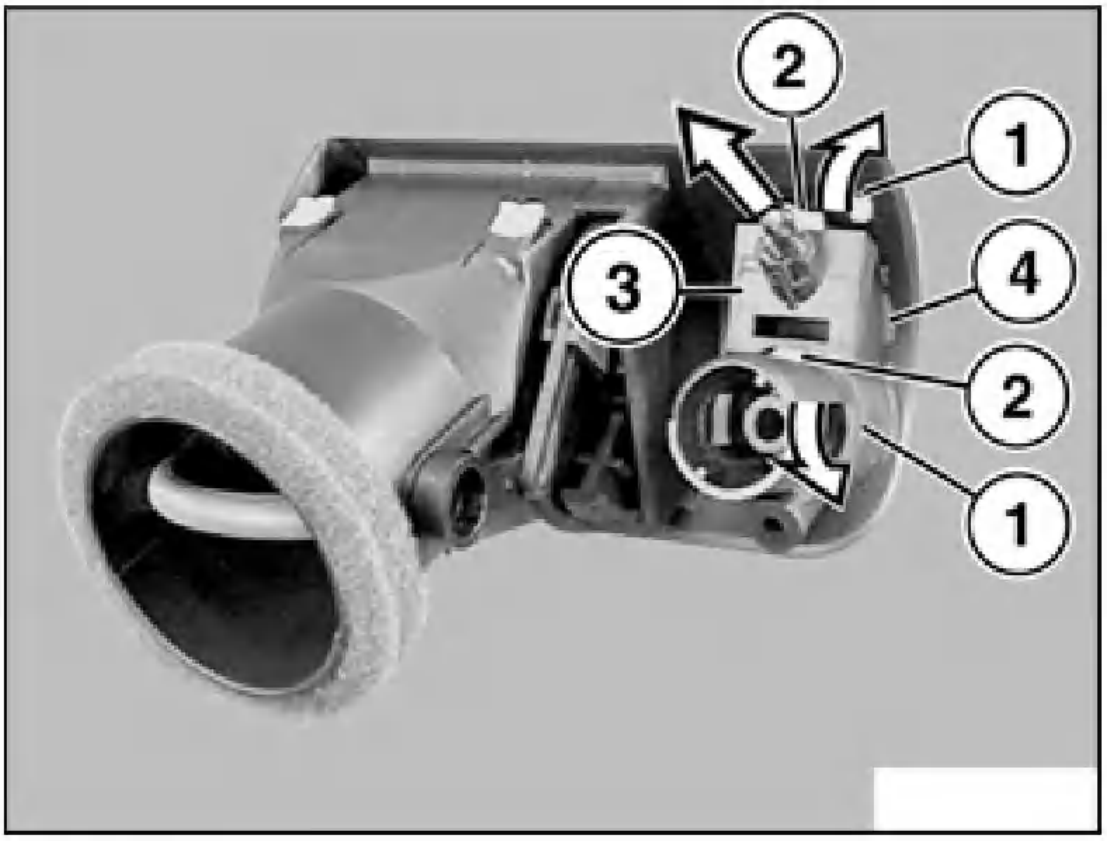


Fig. 229: Removing Symbol Disc
Courtesy of BMW OF NORTH AMERICA, INC.

Remove speed nuts (1).

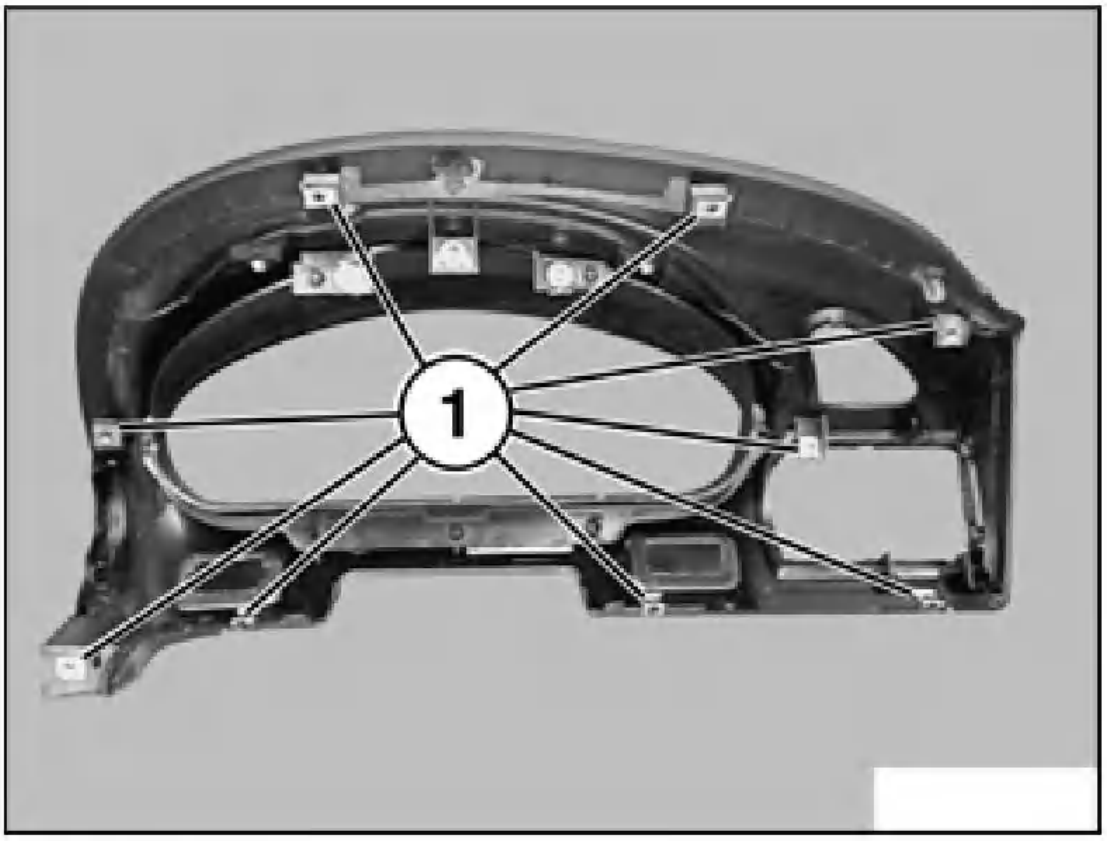


Fig. 230: Removing Speed Nuts
Courtesy of BMW OF NORTH AMERICA, INC.

Unfasten screws (1) and lift off frame (2).

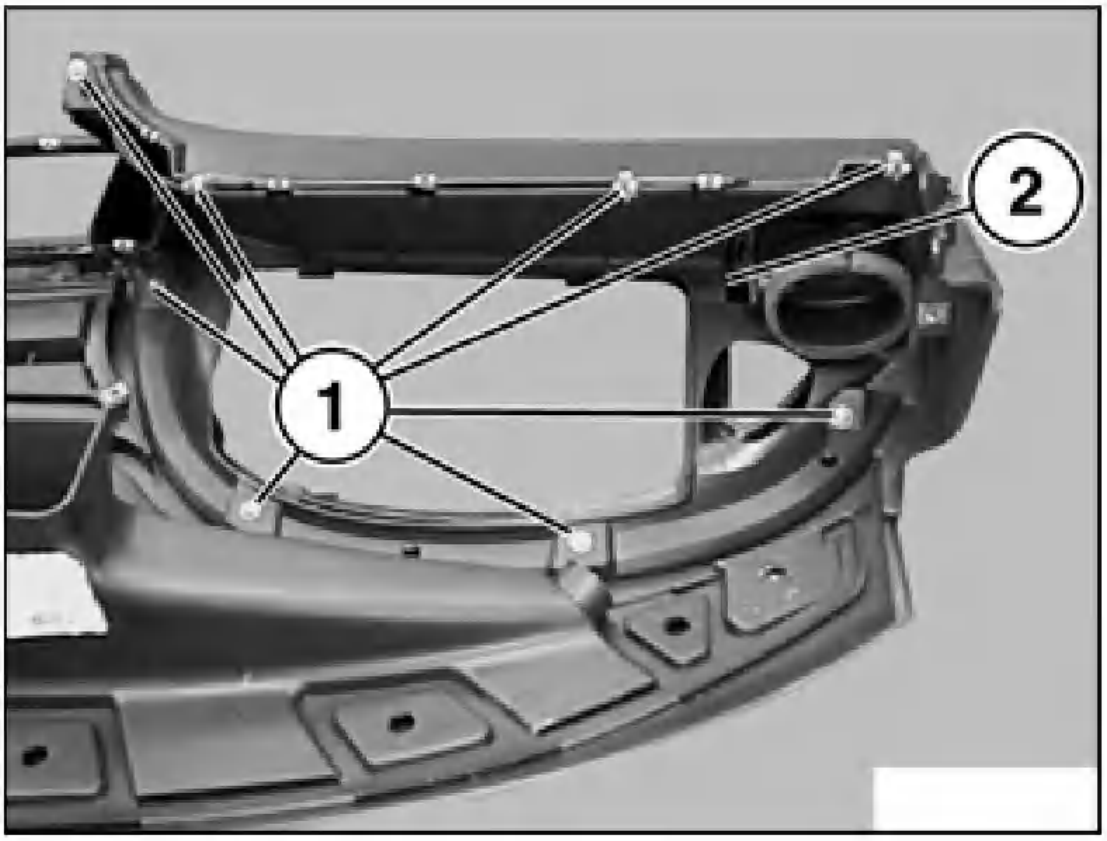


Fig. 231: Removing Frame
Courtesy of BMW OF NORTH AMERICA, INC.

Lift off interlocks (1) and remove air vents (2).

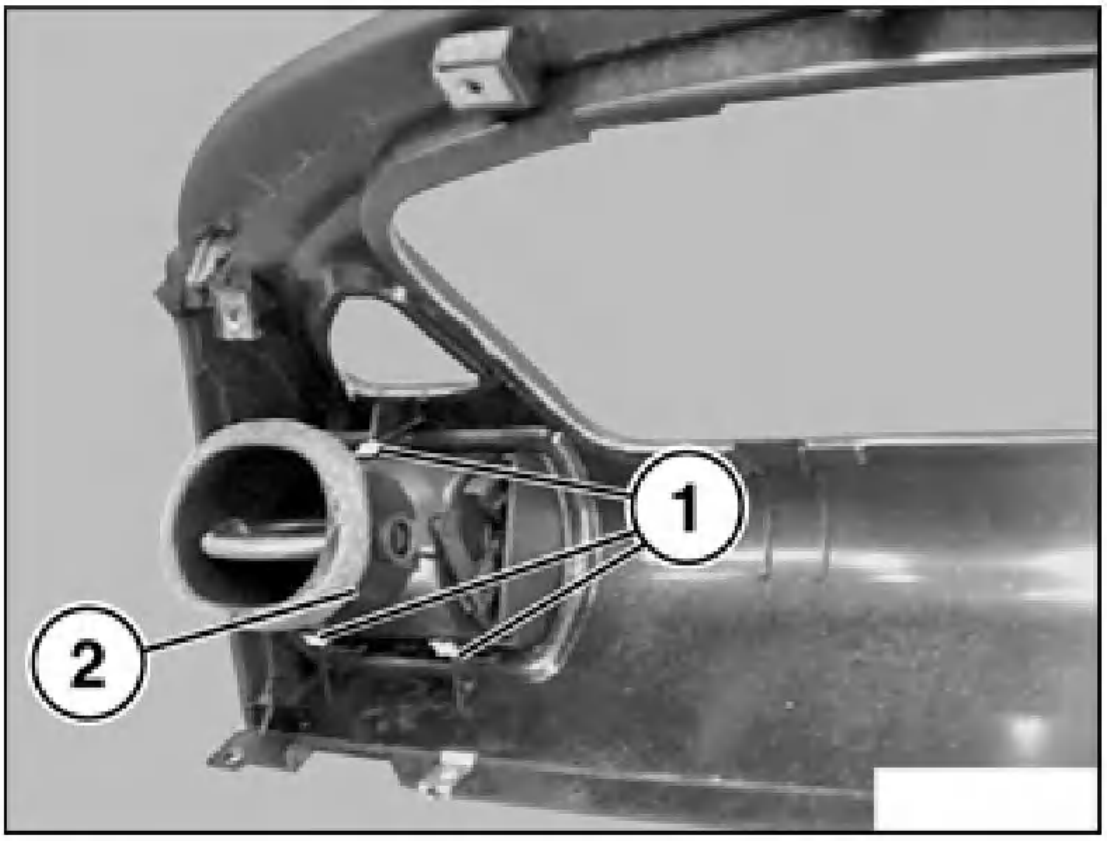


Fig. 232: Removing Air Vents
Courtesy of BMW OF NORTH AMERICA, INC.

Remove speed nuts (1).

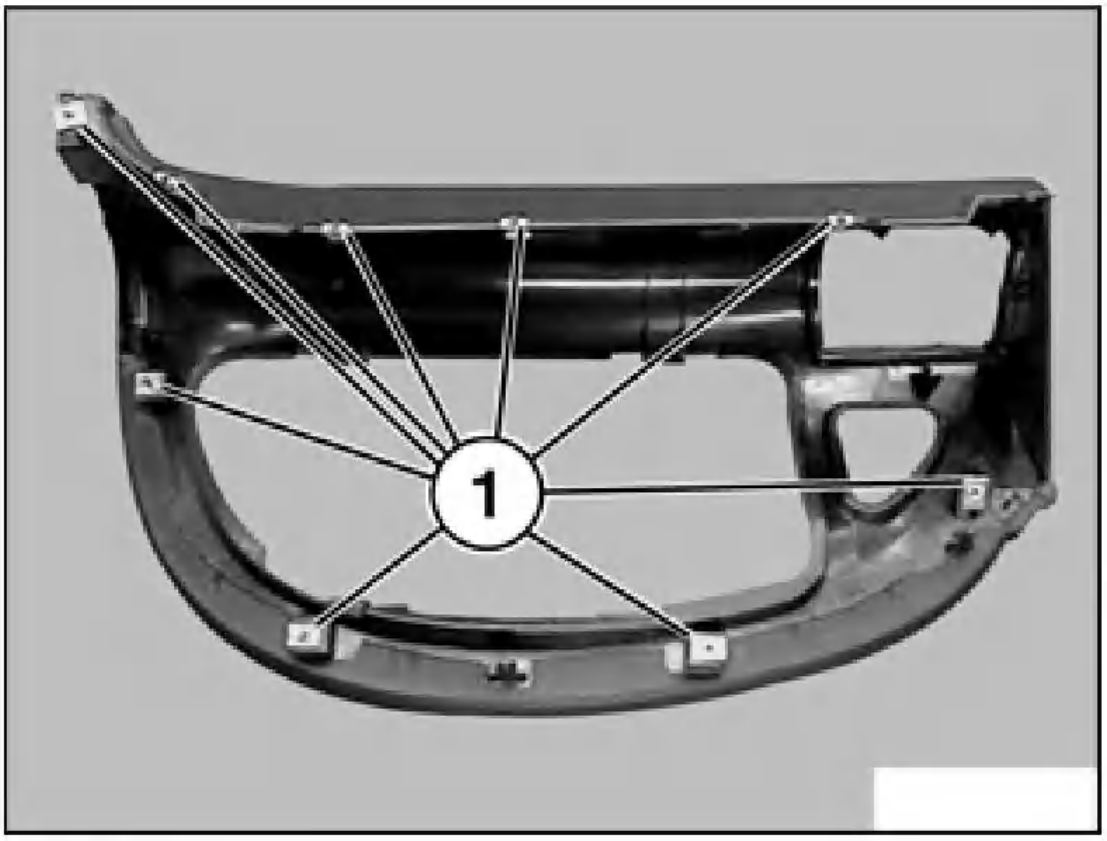


Fig. 233: Removing Speed Nuts
Courtesy of BMW OF NORTH AMERICA, INC.

Remove speed nuts (1).

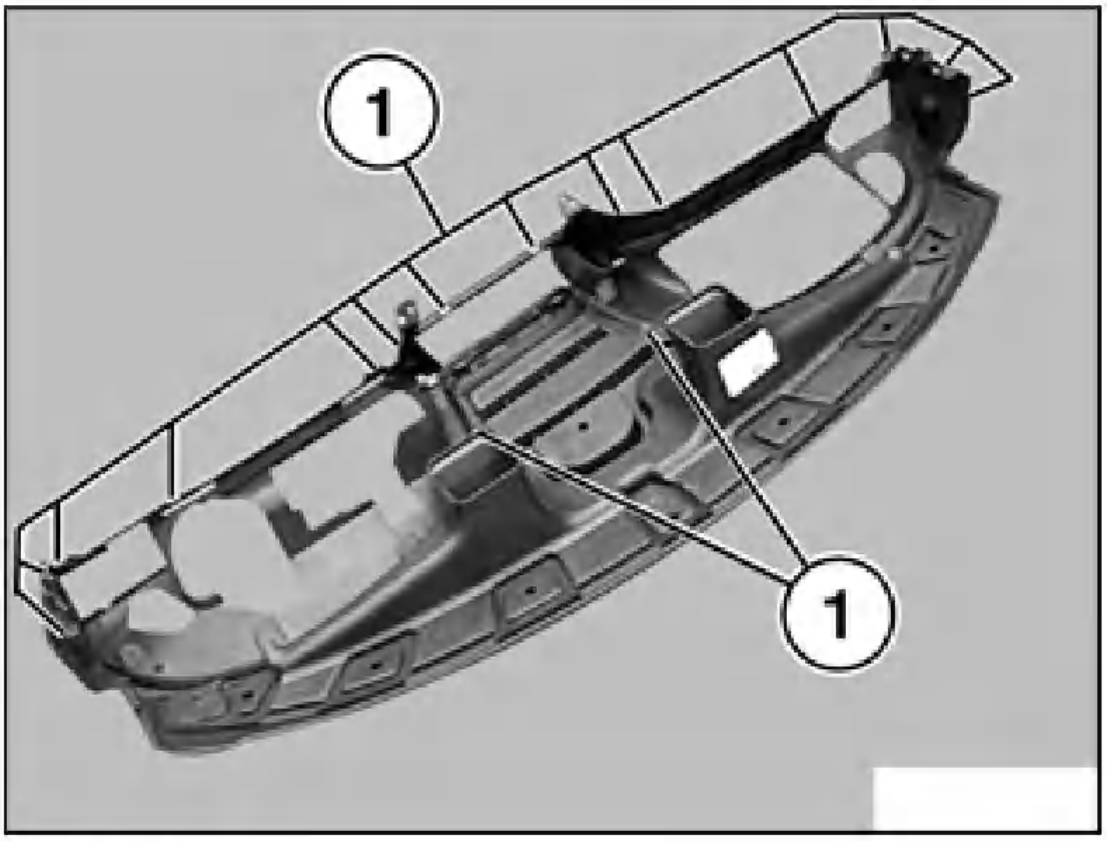


Fig. 234: Removing Speed Nuts From Frame
Courtesy of BMW OF NORTH AMERICA, INC.

51 45 180 REMOVING AND INSTALLING/REPLACING TRIM FOR INSTRUMENT PANEL, BOTTOM LEFT (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE)

Turn rotary clips (1) through 90Â° and remove. Pull trim (2) downwards/backwards to remove.

NOTE: Do not damage the guides (3).

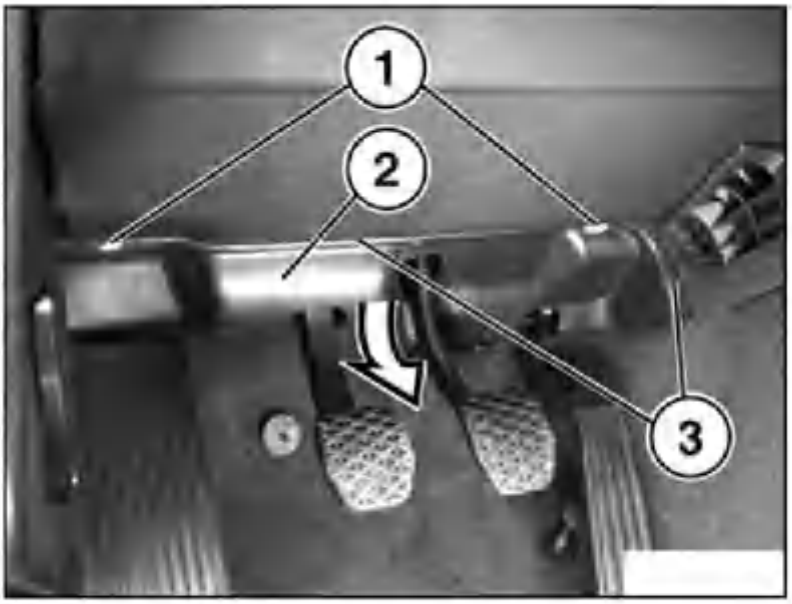


Fig. 235: Identifying Rotary Clips
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Guides (1) on the trim (2) must not be damaged.

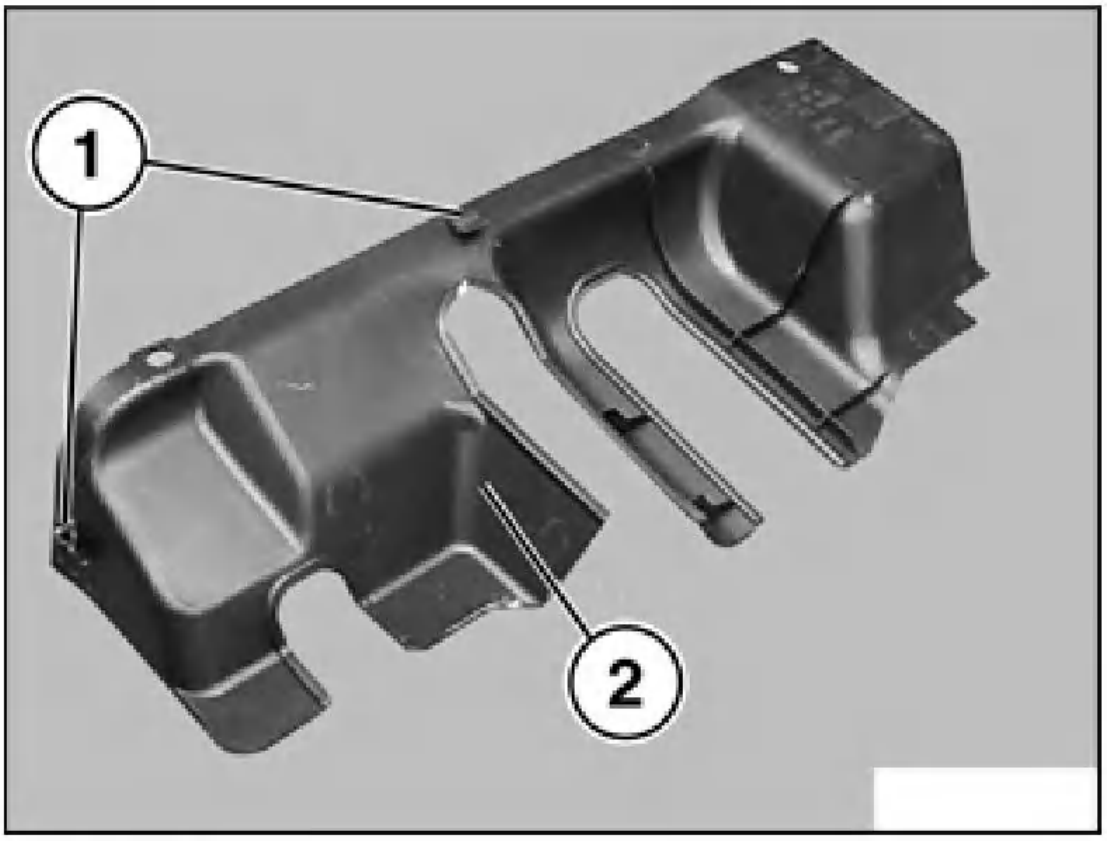


Fig. 236: Identifying Trim Guides
Courtesy of BMW OF NORTH AMERICA, INC.

Remove caps (1) and screws. Unscrew trim (2) and pull outwards/downwards to remove from oddments tray (3).

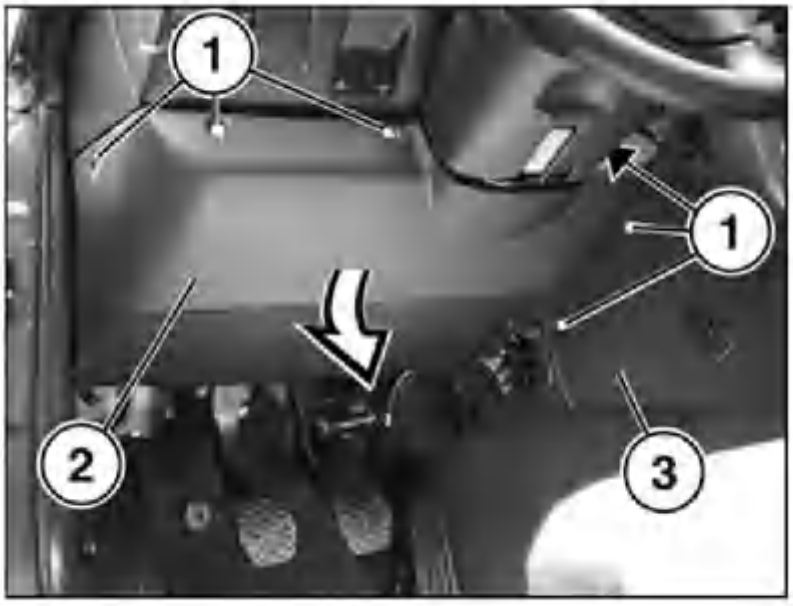


Fig. 237: Removing Trim From Oddments Tray
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Replace defective covers (1).

Installation:

Slide on speed nuts (1). Fit seal (2) on steering column and seal (3) on air outlet (heating) correctly.

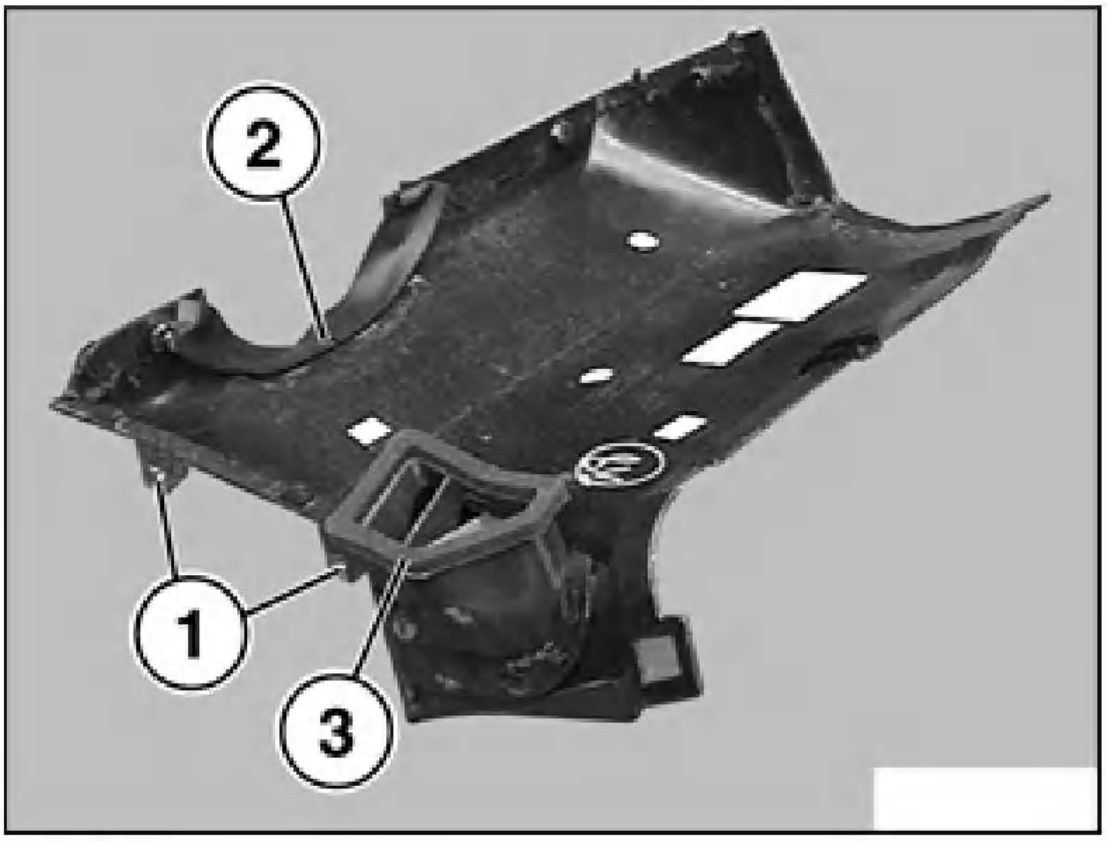


Fig. 238: Installing Steering Column Seal
Courtesy of BMW OF NORTH AMERICA, INC.

PARCEL SHELF TRIM PANEL

51 46 050 REMOVING AND INSTALLING/REPLACING FINISHER FOR TAIL PANEL, TOP (Z3 ROADSTER, M ROADSTER)

Remove Hazard Warning Triangle. Refer To 00 00... INFORMATION / WARNING LABELS .

Remove floor mat (1).

Unfasten screws (2) and expanding rivets (3) and lift off finisher strip.

If necessary, unfasten screws (4).

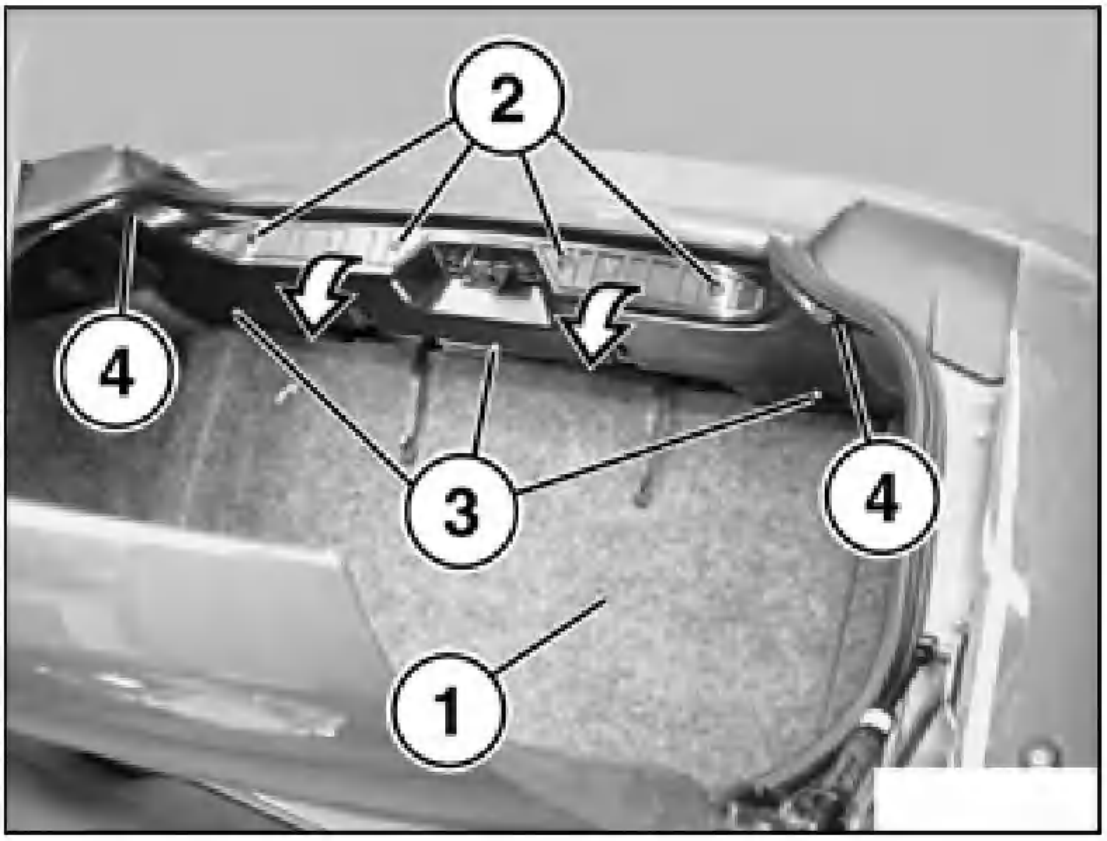


Fig. 239: Removing Finisher Strip
Courtesy of BMW OF NORTH AMERICA, INC.

FLOOR - LUGGAGE COMPARTMENT - ENGINE COMPARTMENT TRIM PANELS

51 47 000 REMOVING AND INSTALLING/REPLACING ENTRANCE COVER STRIP (INTERIOR), FRONT LEFT OR RIGHT (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE)

Pull rocker panel strip upwards to unclip.

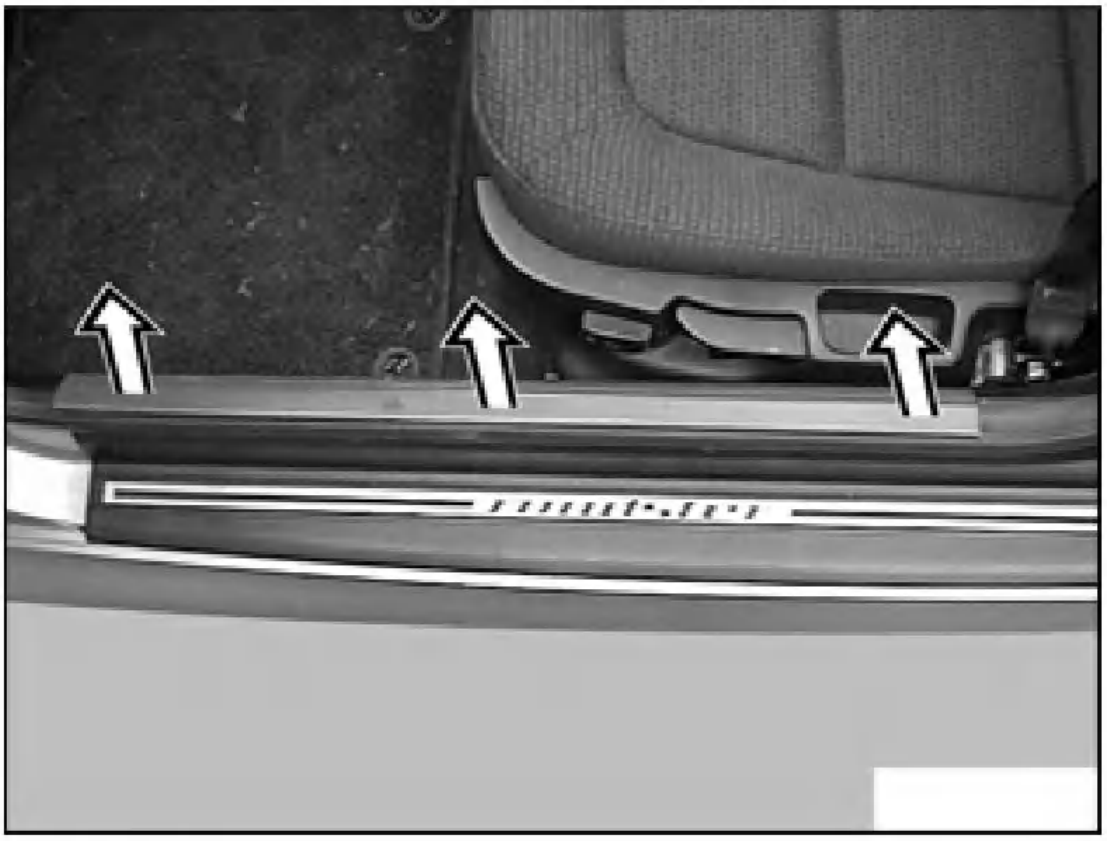


Fig. 240: Removing Rocker Panel Strip Upwards To Unclip
Courtesy of BMW OF NORTH AMERICA, INC.

If necessary, squeeze clips together with pliers and lift out (head of pliers ground smooth).

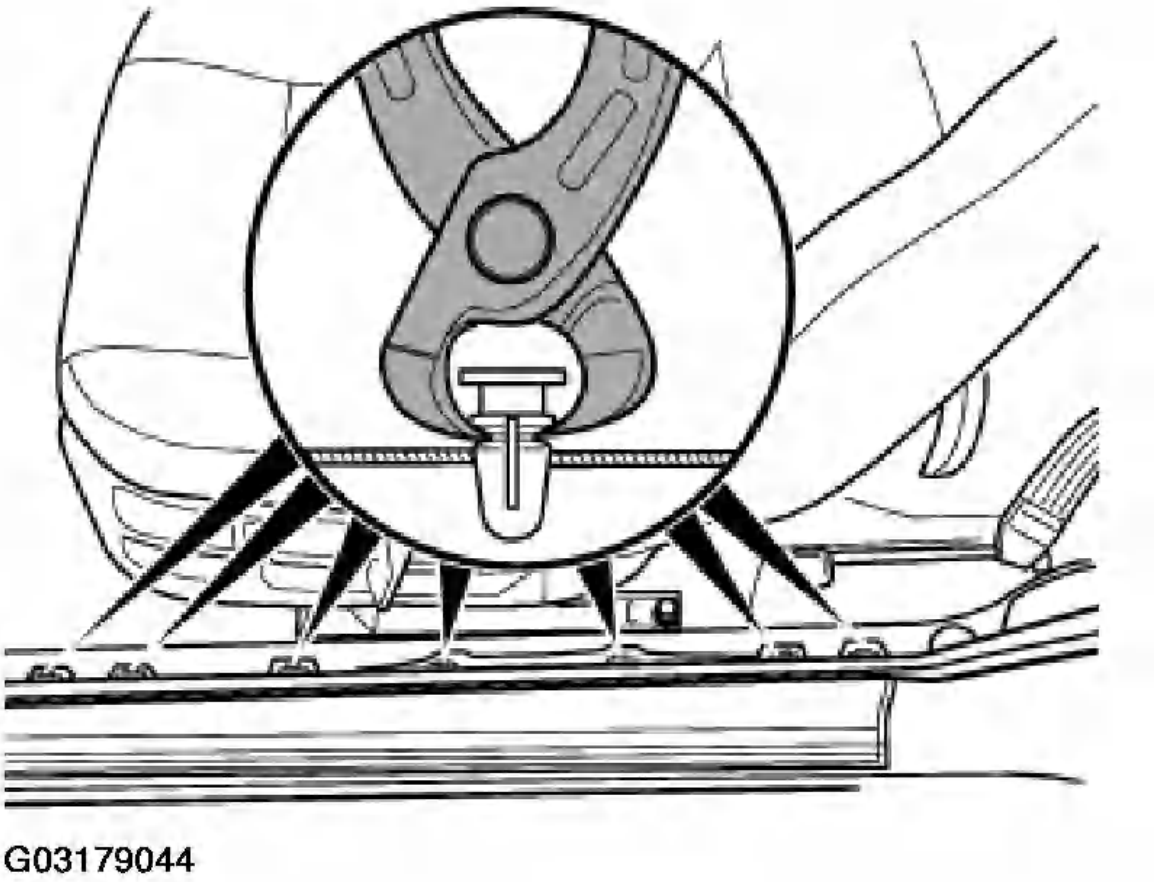


Fig. 241: Removing Clips
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Soak clips in water for a short time.

Slide on clips (1) and align.

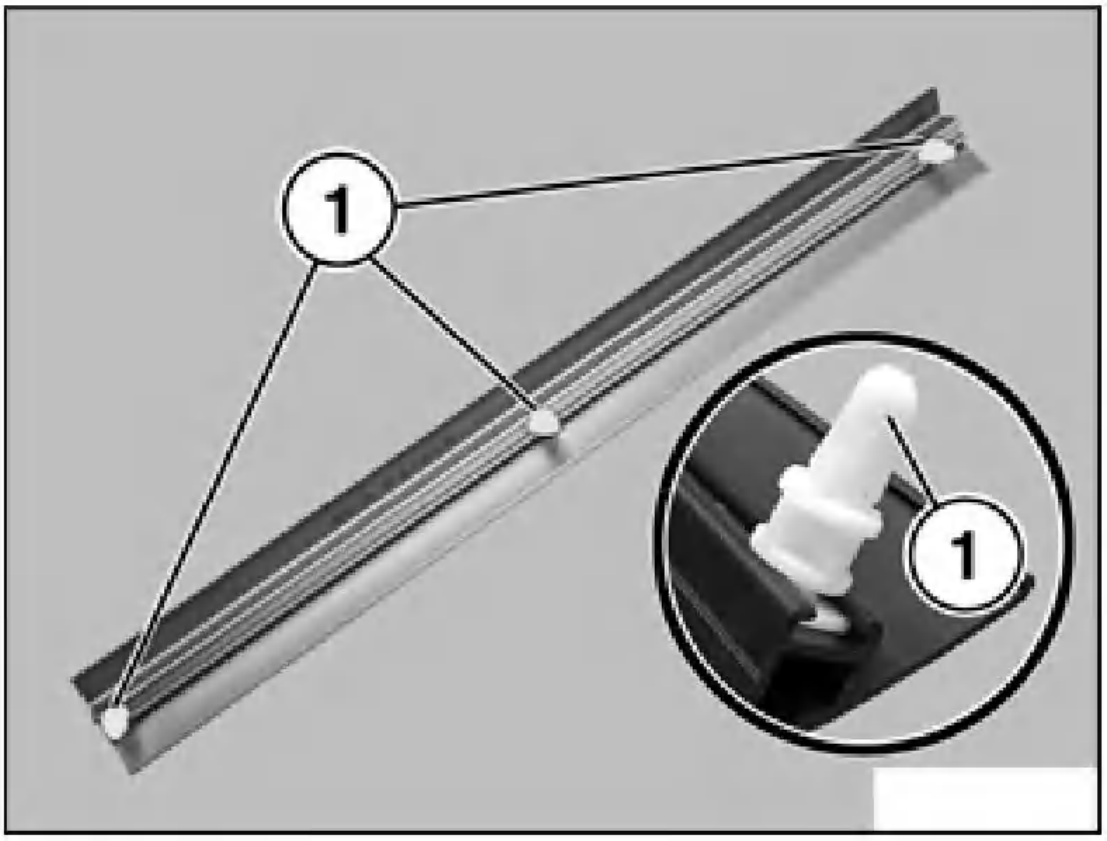


Fig. 242: Identifying Clips
Courtesy of BMW OF NORTH AMERICA, INC.

If necessary, replace damaged clips.

51 47 065 REMOVING AND INSTALLING/REPLACING COVER STRIP AT ENTRANCE, FRONT LEFT OR RIGHT (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE)

Unfasten clip (1).

Carefully pull finisher strip, first upwards then forwards to unclip.

If necessary, lift clips off entrance.

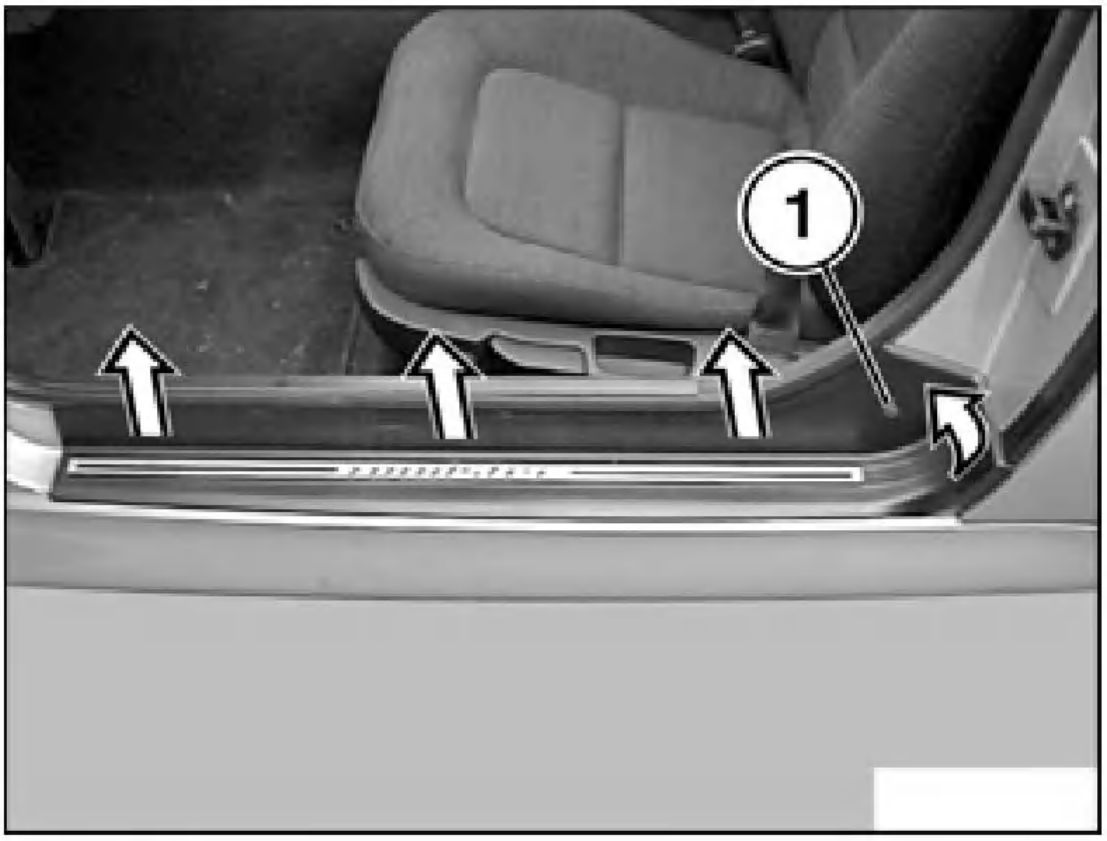


Fig. 243: Removing Clips
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Soak clips in water for a short time.

Install clips and align.

If necessary, replace damaged clips.

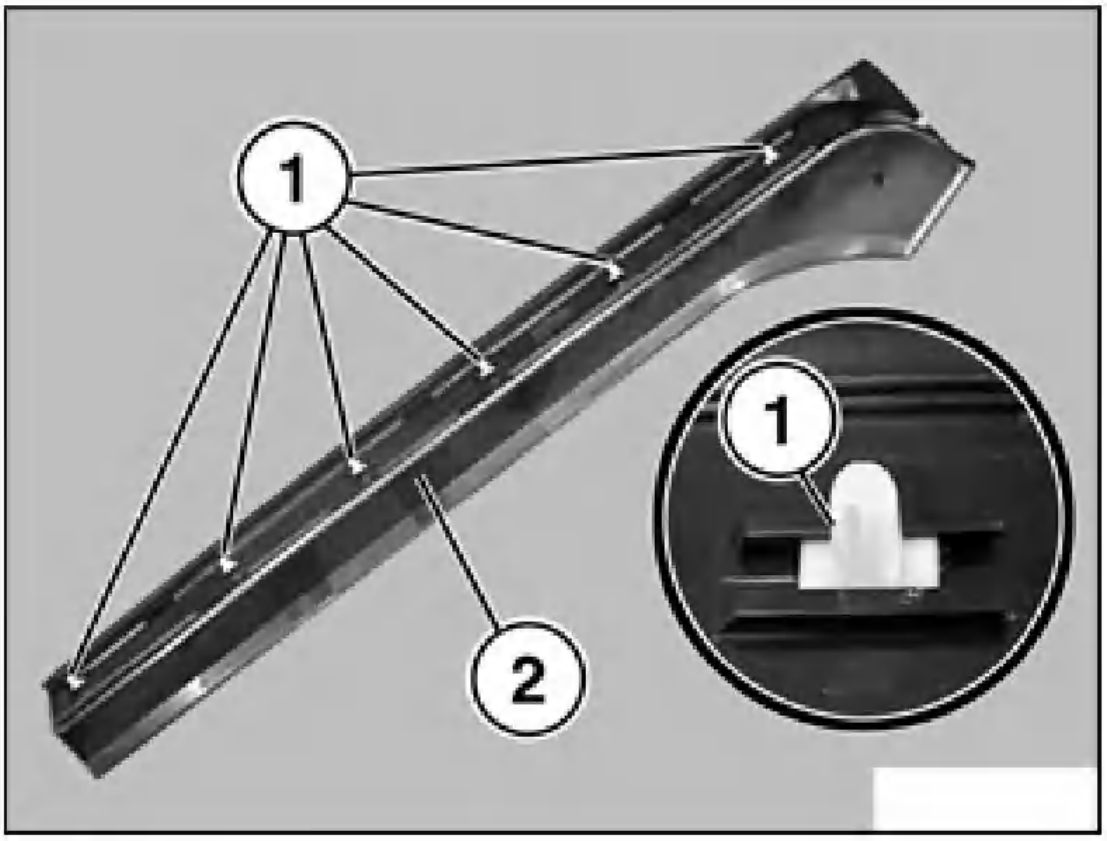


Fig. 244: Installing Clips And Aligning
Courtesy of BMW OF NORTH AMERICA, INC.

Only replace:

Remove seal (1) from finisher strip (2).

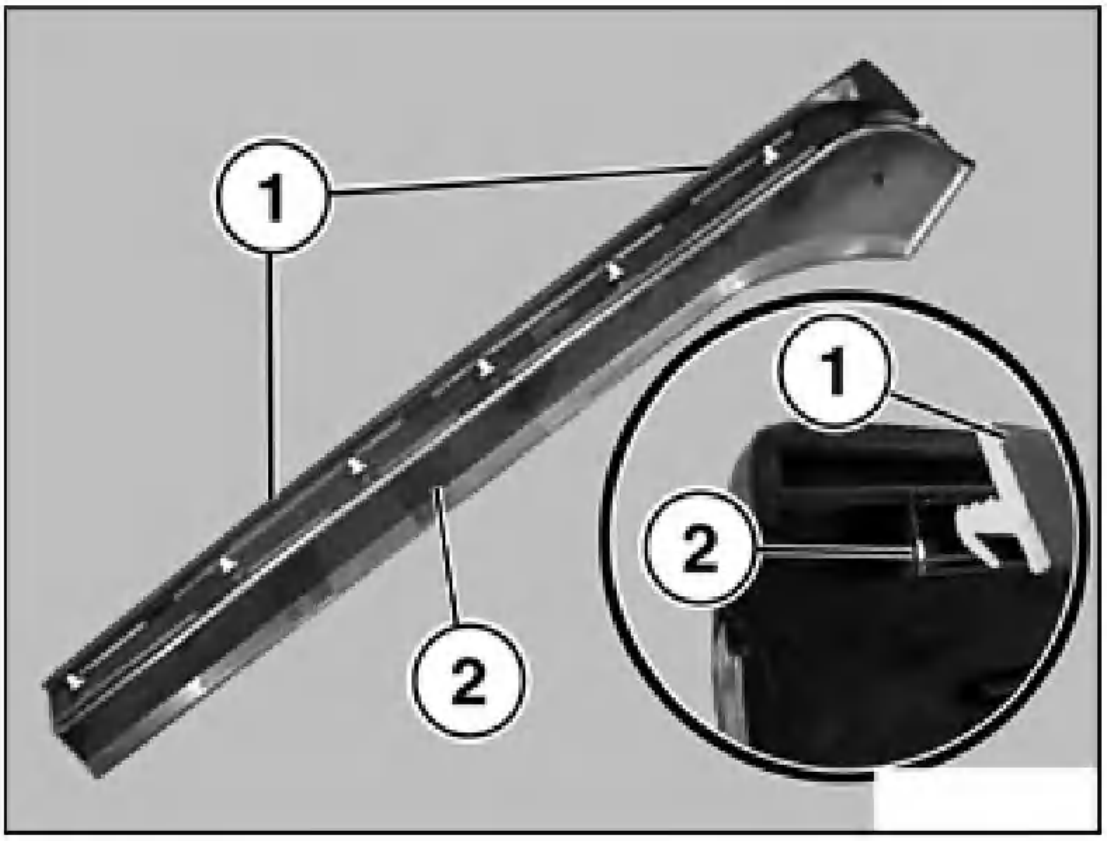


Fig. 245: Removing Seal From Finisher Strip
Courtesy of BMW OF NORTH AMERICA, INC.

51 47 080 REMOVING AND INSTALLING/REPLACING FINISHER ON B-PILLAR, LEFT OR RIGHT (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE)

Remove finisher strip off front rocker panel, refer to 51 47 065 REMOVING AND INSTALLING/REPLACING COVER STRIP AT ENTRANCE, FRONT LEFT OR RIGHT (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE) .

Pull finisher strip (1) forwards to unclip.

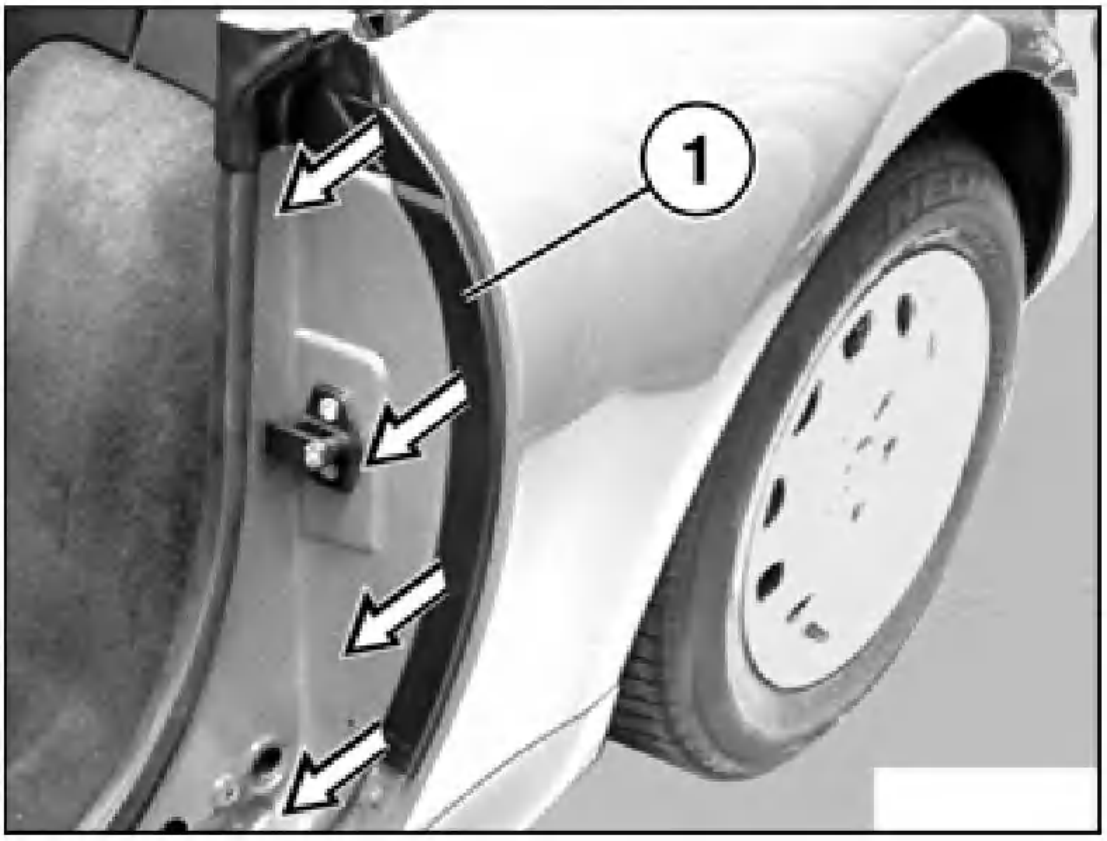


Fig. 246: Removing Finisher Strip
Courtesy of BMW OF NORTH AMERICA, INC.

If necessary, lift clips off panel.

Installation:

Soak clips (1) in water for a short time.

Slide on clips (1).

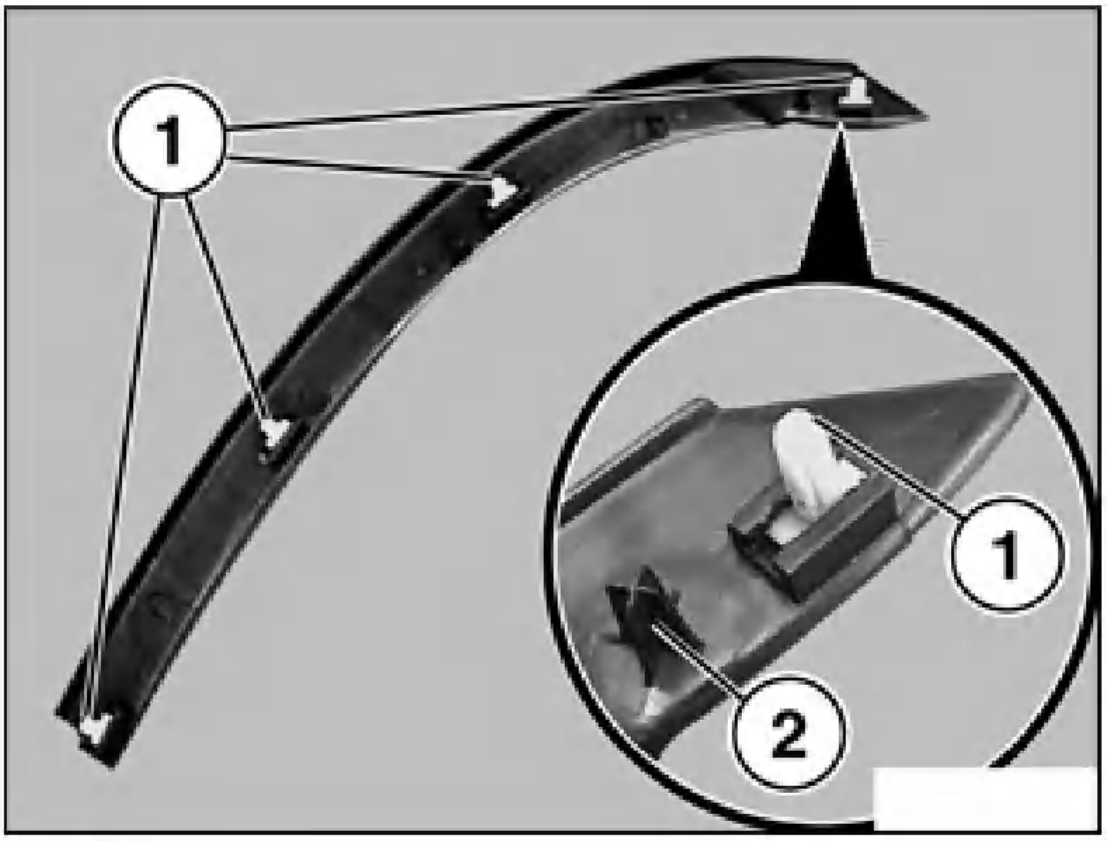


Fig. 247: Replacing Clips
Courtesy of BMW OF NORTH AMERICA, INC.

If necessary, replace defective clips (1).

Guide (2) must not be damaged.

51 47 140 REMOVING AND INSTALLING / REPLACING PANEL FOR LUGGAGE COMPARTMENT SEPARATING WALL (Z3 ROADSTER, M ROADSTER)

Removing and installing/replacing left trunk wheel housing trim, refer to 51 47 151 REMOVING AND INSTALLING/REPLACING LEFT TRUNK WHEEL HOUSING TRIM (Z3 ROADSTER, M ROADSTER) .

Removing and installing/replacing right trunk wheel housing trim, refer to 51 47 161 REMOVING AND INSTALLING / REPLACING RIGHT TRUNK WHEEL HOUSING TRIM (Z3 ROADSTER, M ROADSTER) .

Removing and installing luggage compartment light, refer to 63 31 080 REMOVING AND INSTALLING/REPLACING LUGGAGE COMPARTMENT LIGHT (Z3, M ROADSTER) .

Version Without Hi-Fi System, Without CD Changer:

Unfasten clips (1) and remove trim (2) for luggage compartment separating wall.

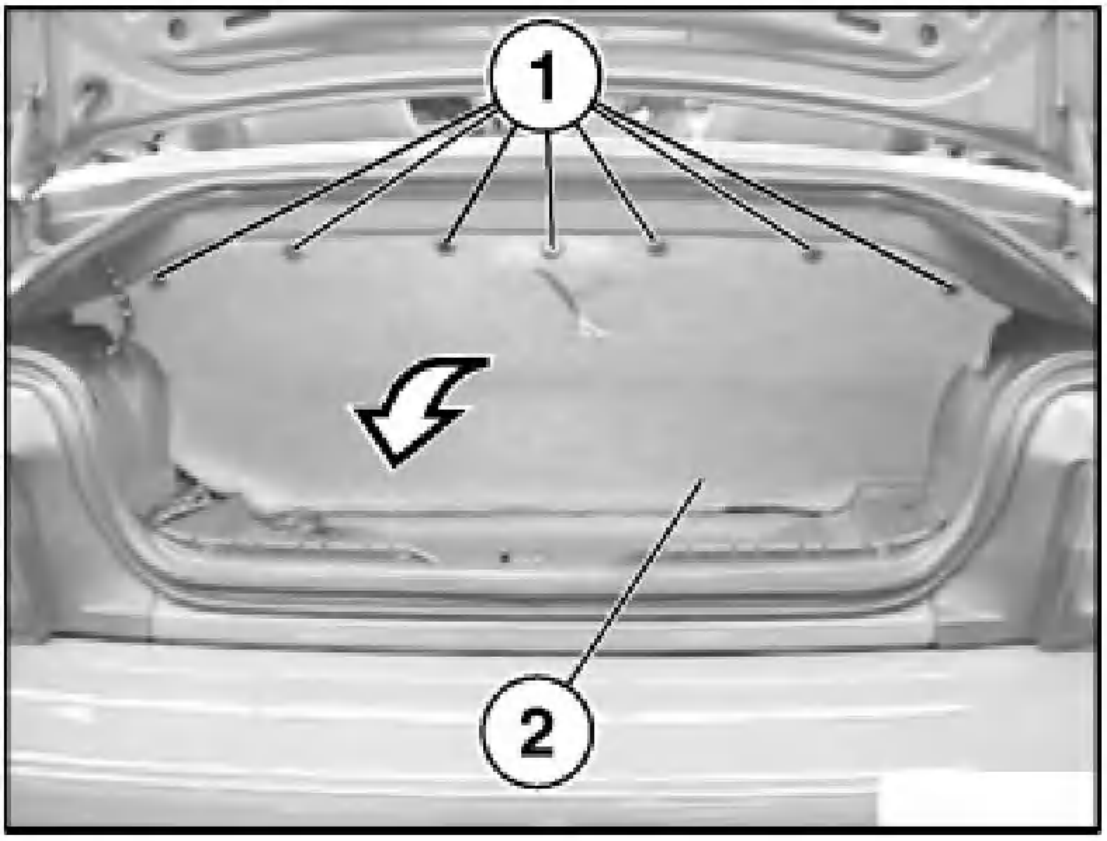


Fig. 248: Removing Trim For Luggage Compartment (Without Hi-Fi System)
Courtesy of BMW OF NORTH AMERICA, INC.

Version With Hi-Fi System:

Unfasten clips (1) and remove trim (2) for luggage compartment separating wall.

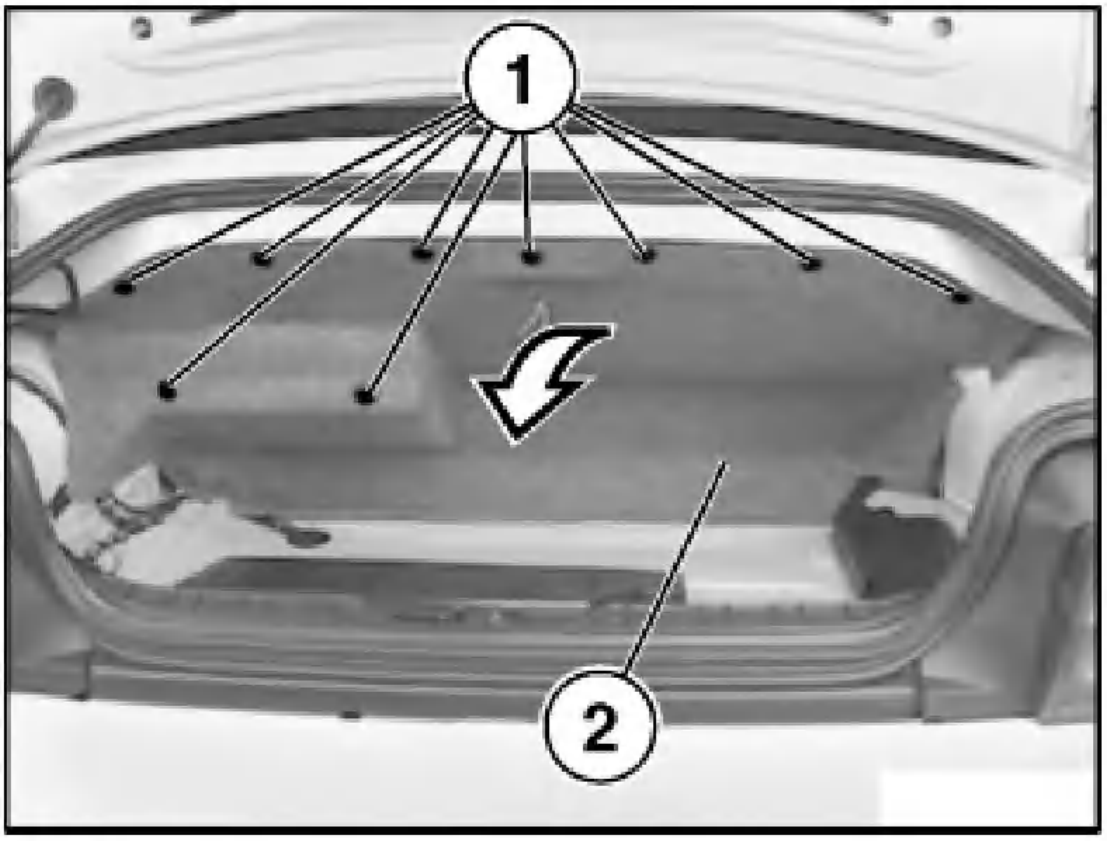


Fig. 249: Removing Trim For Luggage Compartment (With Hi-Fi System)
Courtesy of BMW OF NORTH AMERICA, INC.

Version With CD Changer (3):

Unfasten clips (1), lift out trim (2) for luggage compartment separating wall of CD changer (3) and remove.

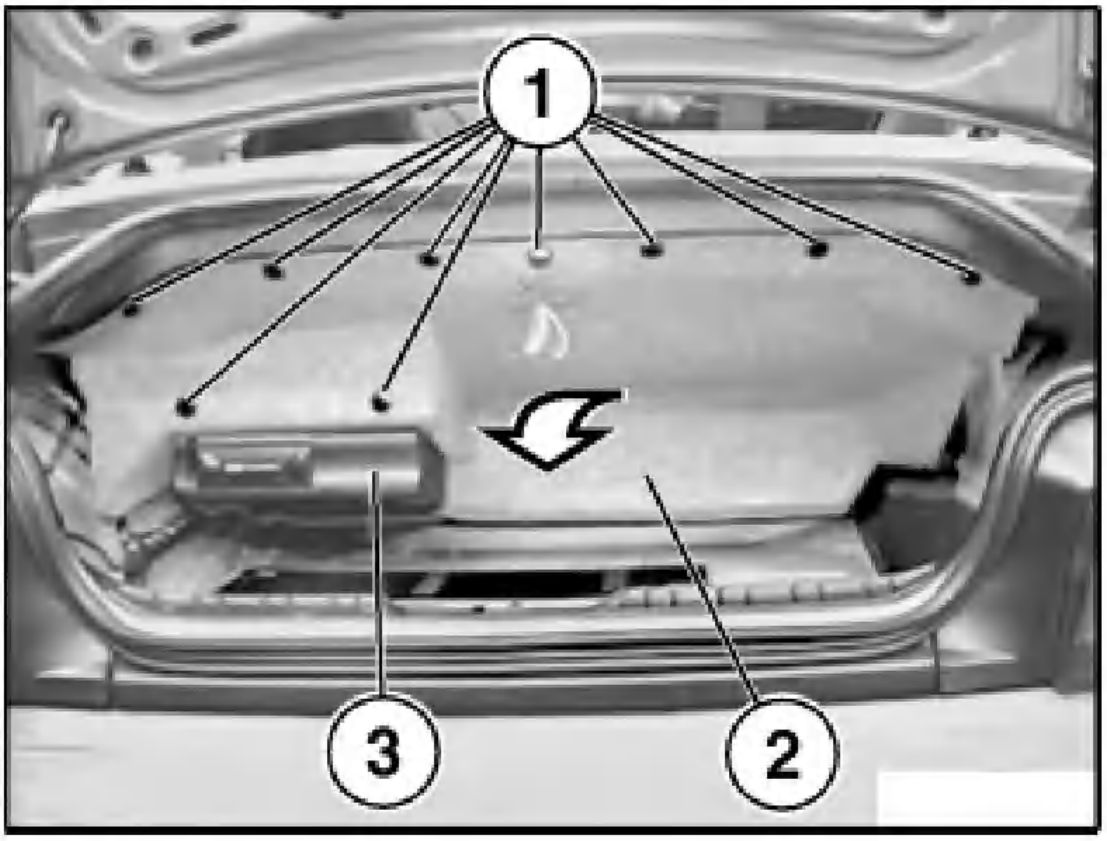


Fig. 250: Removing Trim For Luggage Compartment (With CD Changer)
Courtesy of BMW OF NORTH AMERICA, INC.

51 47 151 REMOVING AND INSTALLING/REPLACING LEFT TRUNK WHEEL HOUSING TRIM (Z3 ROADSTER, M ROADSTER)

Necessary Preliminary Tasks:

- If necessary, remove first aid kit.
- Remove floor mat.

Without EH convertible top:

- Remove socket housing for left rear light. Refer to 63 21 055 REPLACING SOCKET HOUSING FOR LEFT OR RIGHT TAIL LIGHT (Z3 ROADSTER) .

Version Without Electrohydraulic Convertible Top, Without Battery In The Luggage Compartment:

- Release fastener (1).
- If necessary, remove holder (2) for first aid kit.
- Release clip (3).
- Remove luggage compartment wheel arch trim (4).

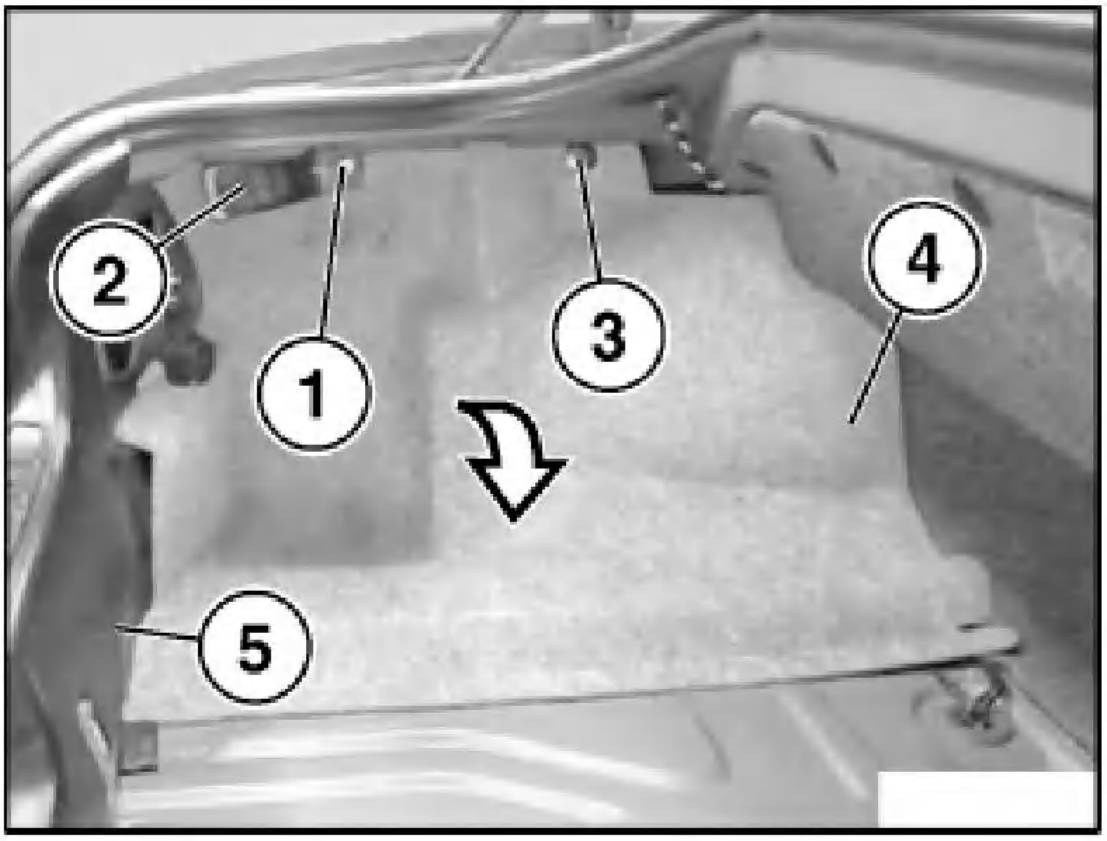


Fig. 251: Installing Luggage Compartment Wheel Arch Trim
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Insert luggage compartment wheel arch trim (4) at bottom into rear panel trim (5).

Version With Battery In Luggage Compartment:

- Release clips (1).
- Remove luggage compartment wheel arch trim (2).

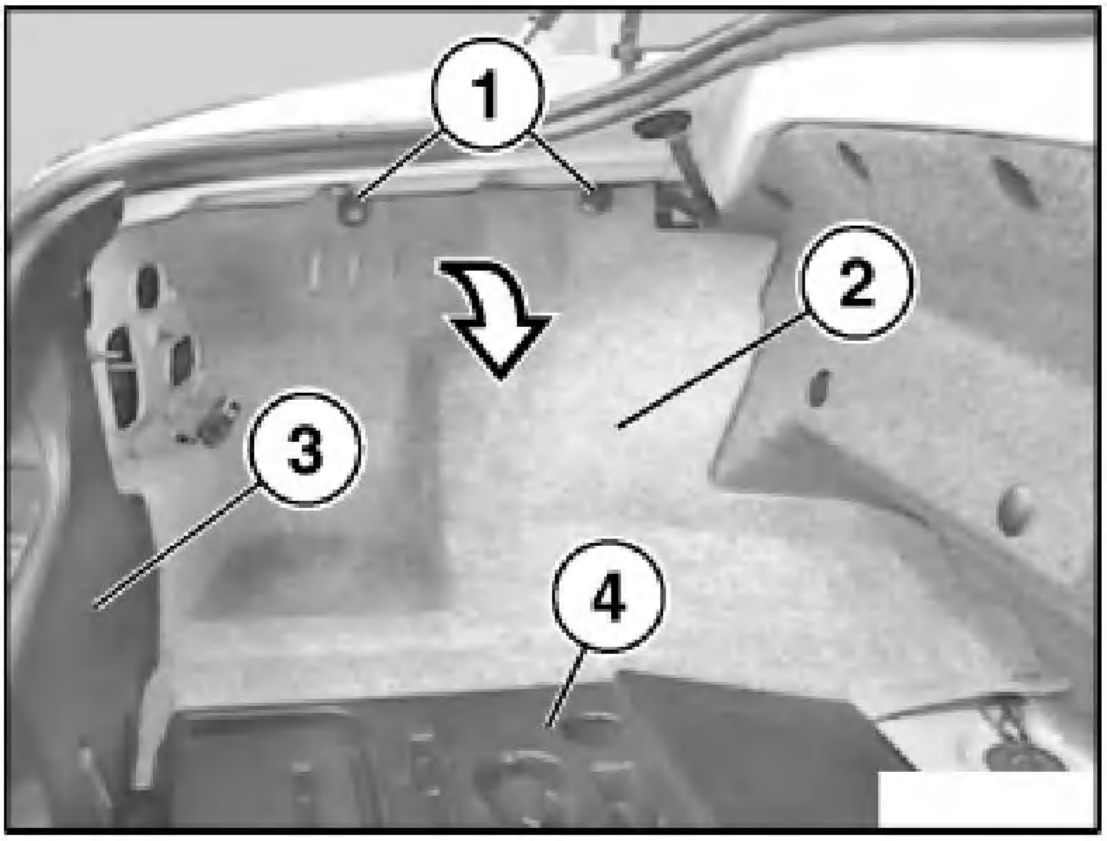


Fig. 252: Installing Luggage Compartment Wheel Arch Trim
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Insert luggage compartment wheel arch trim (2) at bottom into rear panel trim (3) and storage compartment (4).

Version With EH Convertible Top:

- Release fastener (1).
- Release clip (2).
- Feed out luggage compartment wheel arch trim (3) at socket housing (4) and remove.

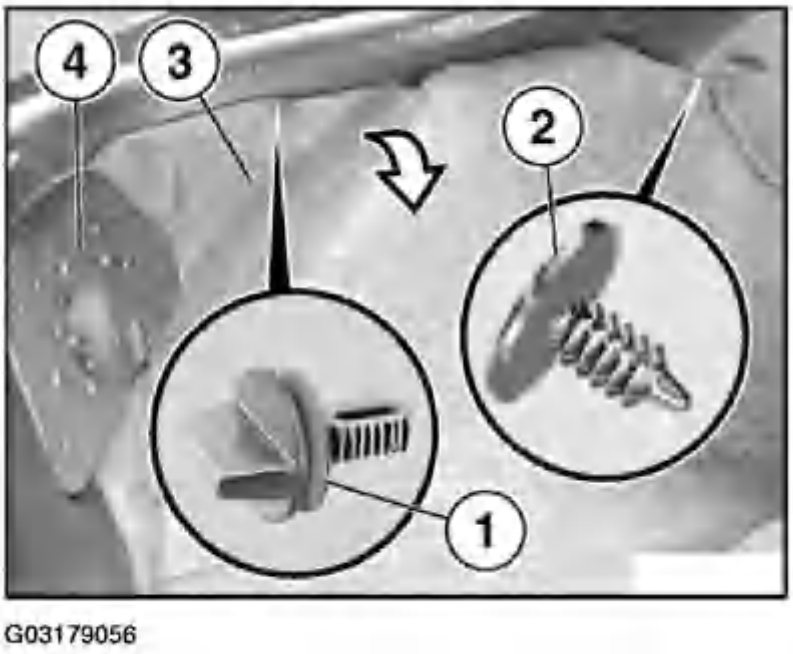


Fig. 253: Installing Luggage Compartment Wheel Arch Trim Behind Socket Housing
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Insert luggage compartment wheel arch trim (3) behind socket housing (4) and if necessary below storage compartment.

51 47 161 REMOVING AND INSTALLING / REPLACING RIGHT TRUNK WHEEL HOUSING TRIM (Z3 ROADSTER, M ROADSTER)

Removing and installing socket housing for right tail light, refer to 63 21 055 REPLACING SOCKET HOUSING FOR LEFT OR RIGHT TAIL LIGHT (Z3 ROADSTER) .

Remove floor mat.

Version without battery in the luggage compartment:

Unfasten clip (1) and remove trunk wheel housing trim (2).

Installation:

Guide trunk wheel housing trim (2) into the rear apron trim (3) at the bottom.

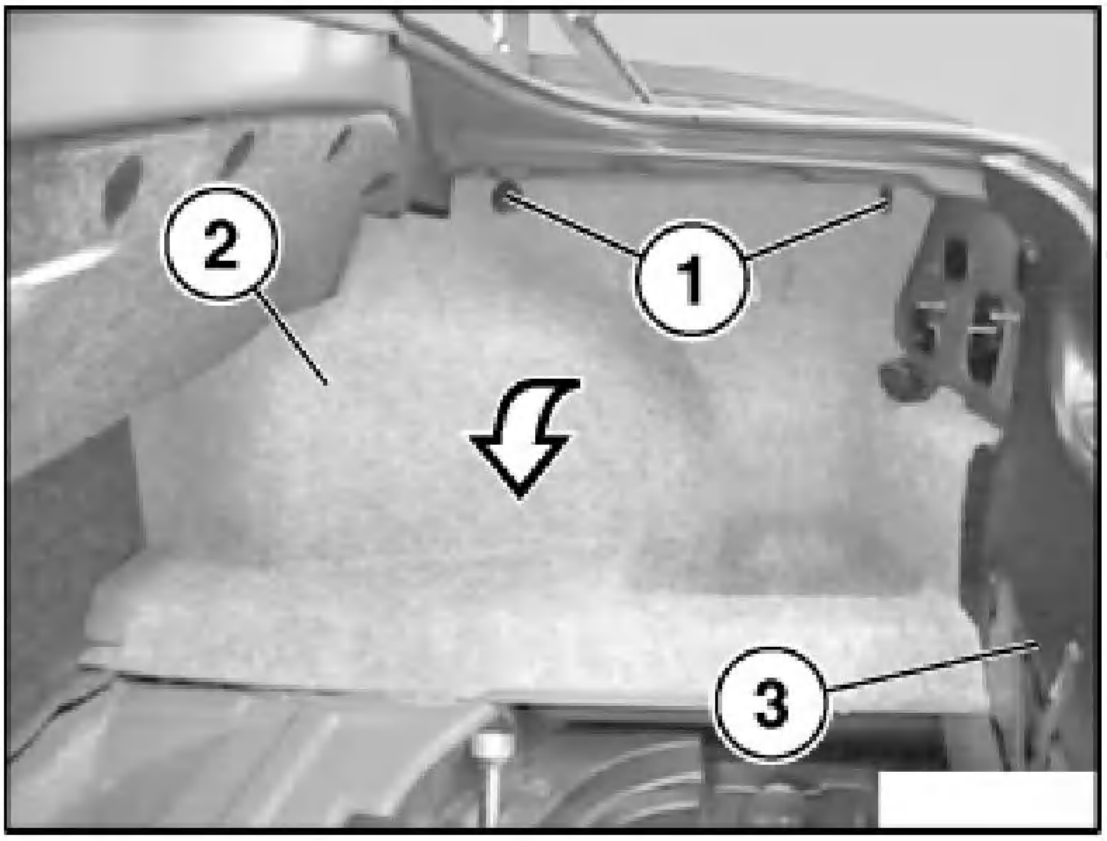


Fig. 254: Removing Trunk Wheel Housing Trim
Courtesy of BMW OF NORTH AMERICA, INC.

Version with battery in the luggage compartment:

Unfasten nut (1) and take out tray (2).

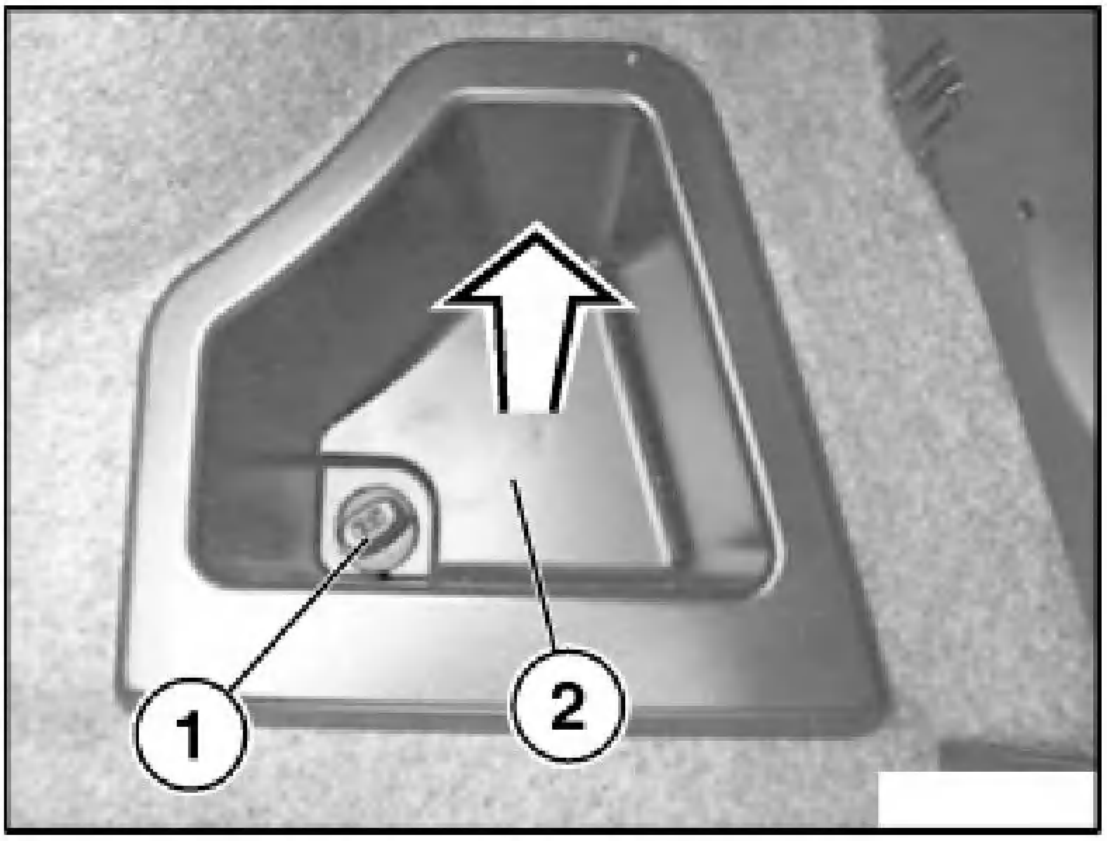


Fig. 255: Removing Tray
Courtesy of BMW OF NORTH AMERICA, INC.

Version with battery in luggage compartment:

Unfasten clips (1) and remove trunk wheel housing trim (2).

Installation:

Guide trunk wheel housing trim (2) into the rear apron trim (3) at the bottom.

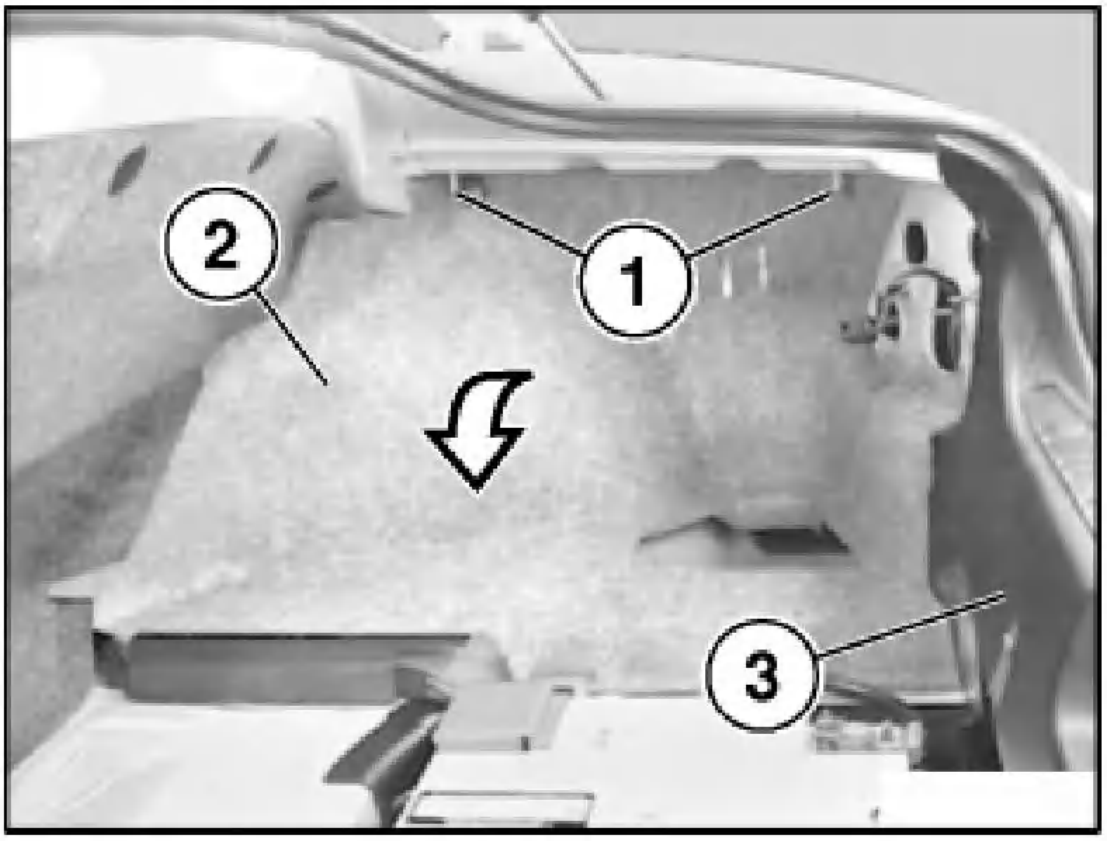


Fig. 256: Guiding Trunk Wheel Housing Trim
Courtesy of BMW OF NORTH AMERICA, INC.

LOOSE BODY PARTS

51 71 041 REMOVING AND INSTALLING/REPLACING WHEEL ARCH COVER, REAR LEFT OR RIGHT (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE)

Remove rear wheel, refer to 36 10 300 REMOVING OR INSTALLING FRONT OR REAR WHEEL .

Unfasten screws (1) and nuts (2).

Lever out and remove wheel arch trim (3).

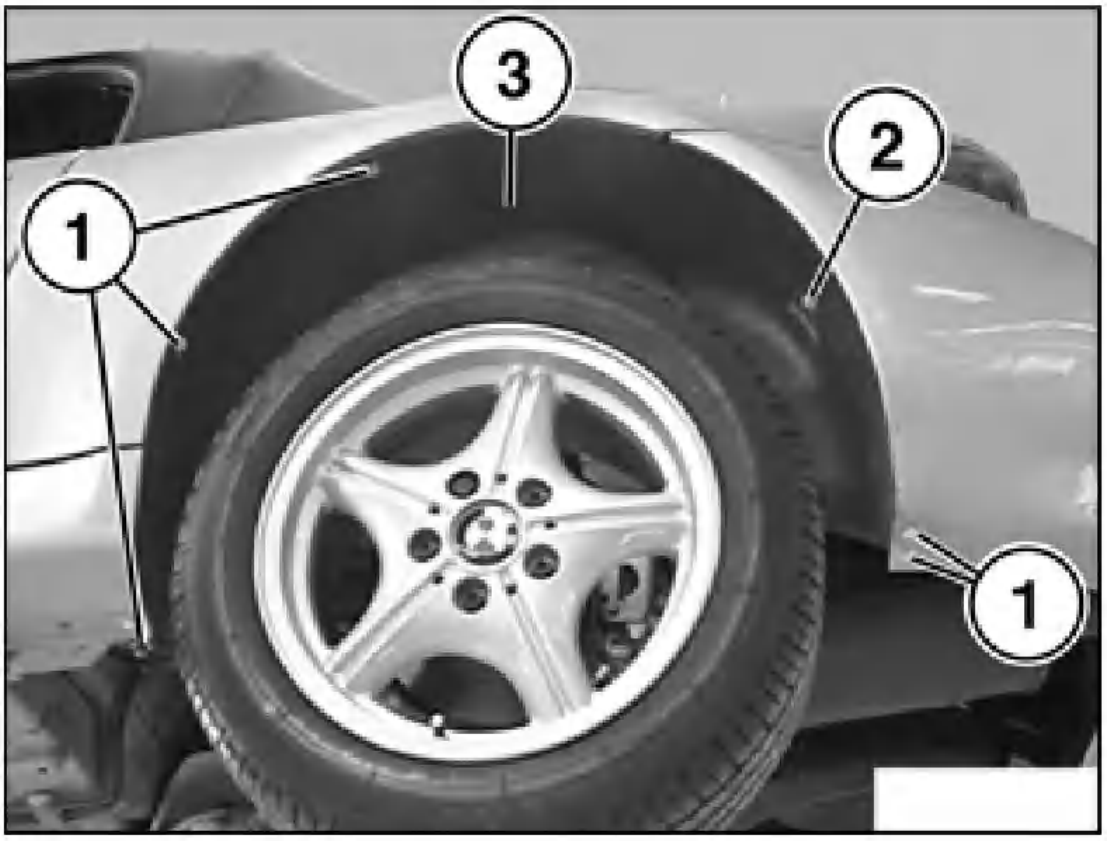


Fig. 257: Removing Wheel Arch Trim
Courtesy of BMW OF NORTH AMERICA, INC.

51 71 380 REMOVING AND INSTALLING/REPLACING VIBRATION DAMPER (Z3 ROADSTER, M ROADSTER)

Remove rear bumper, refer to 51 12 000 REMOVING AND INSTALLING COMPLETE REAR BUMPER (Z3 ROADSTER, M ROADSTER, Z3 COUPE, M COUPE) .

Loosen nut (1) and pull vibration damper (2) backwards to remove.

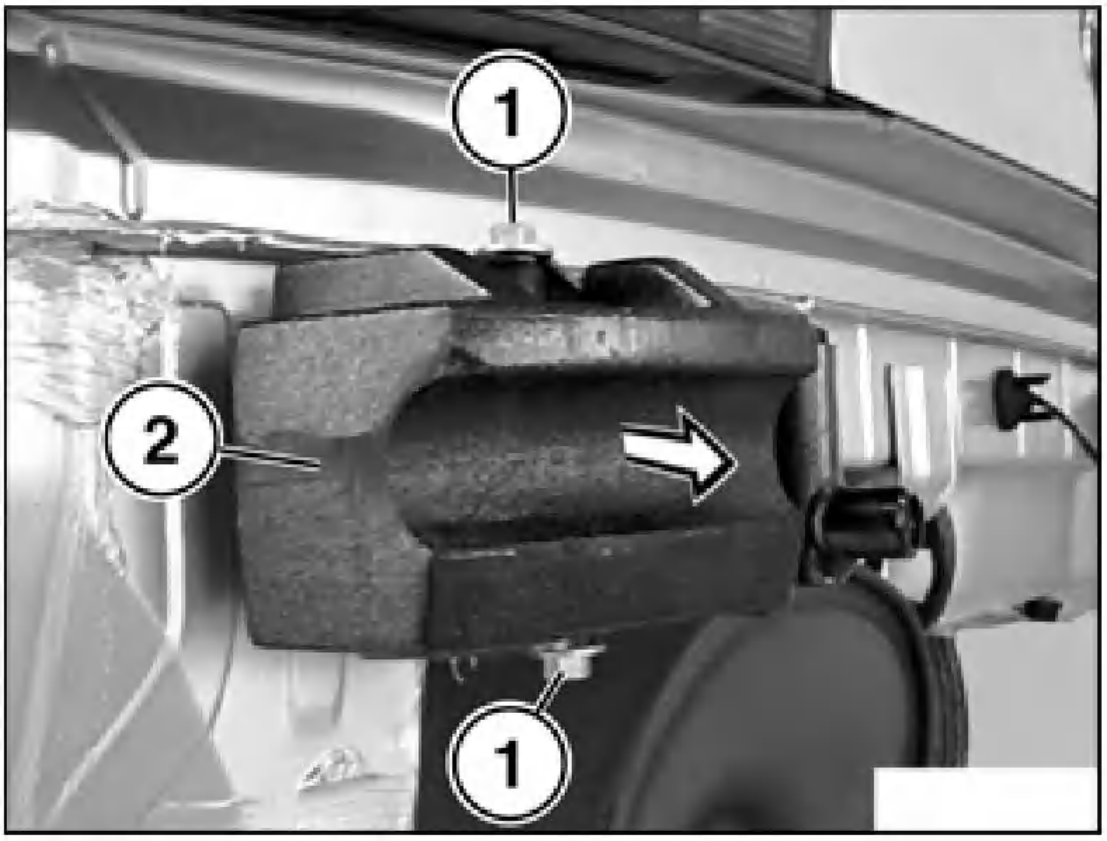


Fig. 258: Removing Vibration Damper
Courtesy of BMW OF NORTH AMERICA, INC.

Article GUID: A00202363

SLIDE - TILT SUNROOF AND CONVERTIBLE TOP

54 3 160 SOCKET WRENCH SOCKET

SOCKET WRENCH SOCKET GENERAL SPECIFICATION

Note:	With WAF 2.5 mm hexagon socket for setting tensioning cable of convertible top, headliner and microswitches in convertible top linkage
Series:	E36/C
Storage location:	A15
SI number:	1 06 93(673)
Order number:	54 3 160
Â	Socket wrench socket

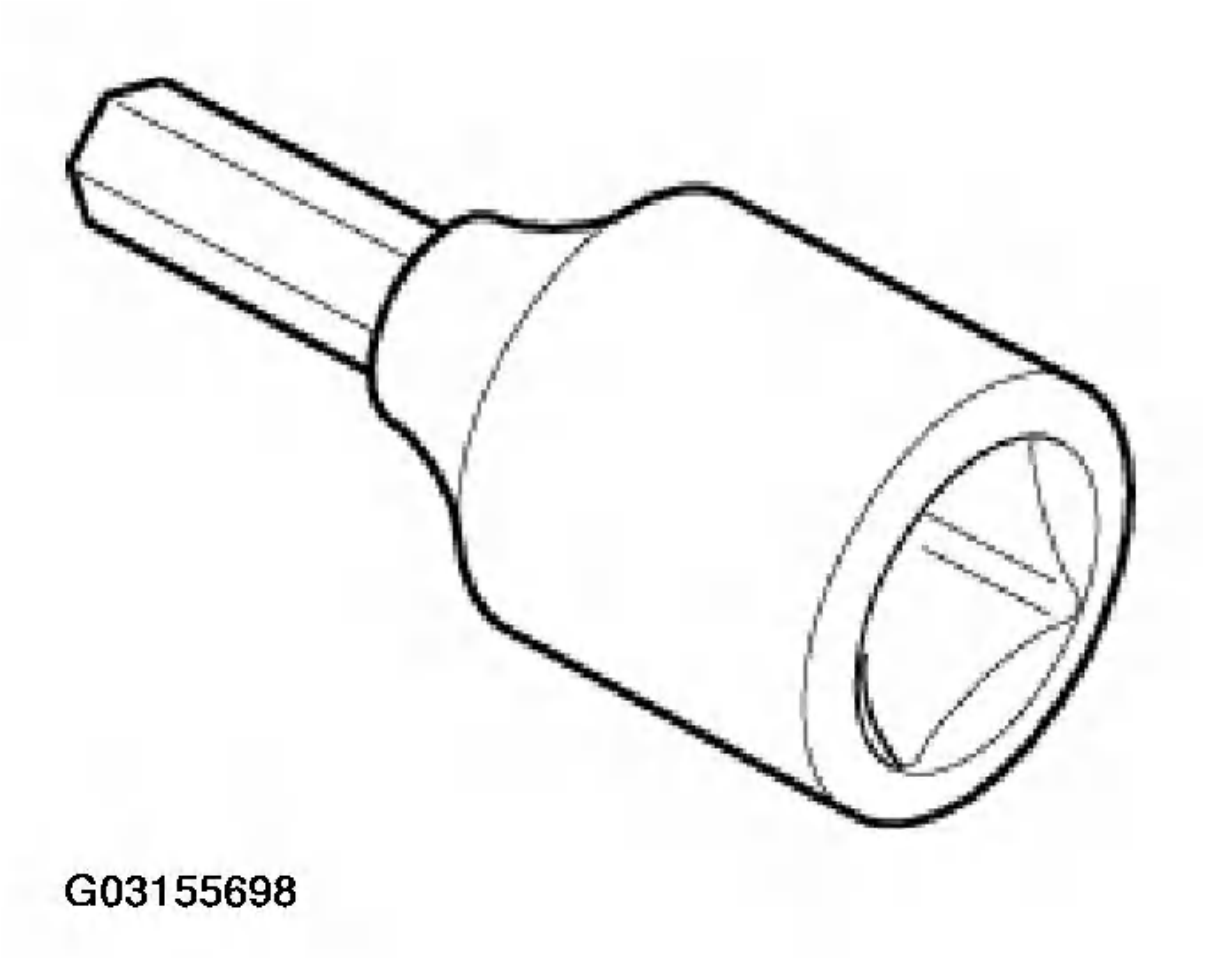


Fig. 1: Identifying Socket Wrench Socket
Courtesy of BMW OF NORTH AMERICA, INC.

SUNROOF

54 0 ... REPAIR INSTRUCTIONS FOR BONDED SEALS

1. General information on handling rubber seal profiles:
   - If seals reveal partly detached protective film on delivery, they must not be bonded.
   - Store seals at 15 Â°C to 25 Â°C.
   - If, during the handling, the protective film has come off before bonding, it can still be bonded.
   - Bonding at room and object temperature >20 Â°C. Temperatures between 40 and 50 Â°C significantly increase initial adhesion.
   - Seals, which are subjected to temperatures above 80 Â°C after gluing, will be very difficult to remove.
2. Damage pattern and repair

   2.1 Partially detached bond (rubber-adhesive tape or adhesive tape-paint)
   - Up to 120 mm for retouching without auxiliary resources
   - Up to 200 mm repaired with pressing-on tools on straight surfaces

   a. Cleaning damaged areas:
   - Degrease bonded area with adhesive cleaner and remove other residues.

   NOTE: Use necessary cotton- or fluff-free paper towel once only.
   When using solvent:
   expose repair area to air for at least 2 minutes.

   b. Applying adhesive:
   - With a fine nozzle, apply a wafer-thin bead to adhesive tape.

   NOTE: Use contact adhesive (e.g. Terokal 2444)

   CAUTION: Avoid contact to skin!
   Do not apply adhesive to visible painted surfaces.

   c. Pressing on rubber seal:
   - Press down seal using contact pressure (forced pressure not necessary) for at least 1 minute.

   CAUTION: Load can only be applied to the bond after a period of 2 minutes.
   This waiting time is absolutely essential.

   2.2 Larger defects (mechanical damage and larger separations of seal)
   - A complete replacement of the rubber seal is necessary.

   a. Peeling off damaged rubber seal:
   - Pull off rubber seal slowly at an angle of 15 to 25Â°.

   NOTE: Make sure the connection between adhesive tape and seal is retained.
   If the connection between adhesive tape and seal is detached:
   Carefully and slowly detach adhesive tape at an angle of 15 to 25Â° from roof opening or lid.

If, in the case of older seals, you are peeling off using a hot air blower: Do not damage paintwork.
Do not detach rubber-adhesive tape connection if at all possible.

b. Cleaning bonded area:

- Degrease bonded area with adhesive cleaner and remove other residues.

NOTE: Use necessary cotton- or fluff-free paper towel once only.
When using solvent:
expose repair area to air for at least 2 minutes.

c. Detaching protective film from bonded area:

- Detach protective film from rubber seal in sections.

CAUTION: Once the protective film has been removed, do not under any circumstances touch the exposed bonded area.

d. Applying rubber seal:

- Apply rubber seal on roof opening edge beginning at rear centre. Use upper lip as application edge. Press on seal continuously by hand. Carefully unwrap seal at radii without tension and press down (critical area).

NOTE: If positioned incorrectly, the seal can still be pulled off, repositioned and pressed on again.

e. Establishing seal joint:

- Mark contact point at joint by pressing down loose end on seal of already bonded end. Then cut and press down loose end at same height.

NOTE: Small areas of seal can remain stuck to adhesive tape of loose end.

f. Pressing on seal:

- Press on seal using a roller
- Adhesive tape width up to 5 mm Application pressure approx. 5N
- Adhesive tape width up to 10 mm Application pressure approx. 10 N

Seal on sliding sunroof E83 only:

- Press against seal strongly with a roller. Application pressure approx. 70 N.

Seal on sliding sunroof E36 only:

- Application pressure approx. 30 N.
- Tear off tear-off lip at rear and side in area of narrower flange.

NOTE: Firm thumb pressure has approx. 35 N/cm^2

3. Checking rubber seal

- Check the bonded seals for correct positioning and perfect adhesion. The bonding can be checked by pressing back the sealing lip.
- The force required to peel off the seal immediately after gluing must be greater than 10 N/cm.

54 10 004 ADJUSTING GLASS TILT ROOF COVER (Z3 COUPE, M COUPE)

NOTE: The adjustment is checked when the glass tilt roof cover is completely closed (zero position).

Ideal adjustment:

Distance (A) of glass roof cover to roof at front and rear must be the same.

Insert credit or identity card between seal and glass roof cover. The card must encounter the same resistance.

Height:

Front - flush to 1 mm deeper

Rear - flush to 1 mm higher

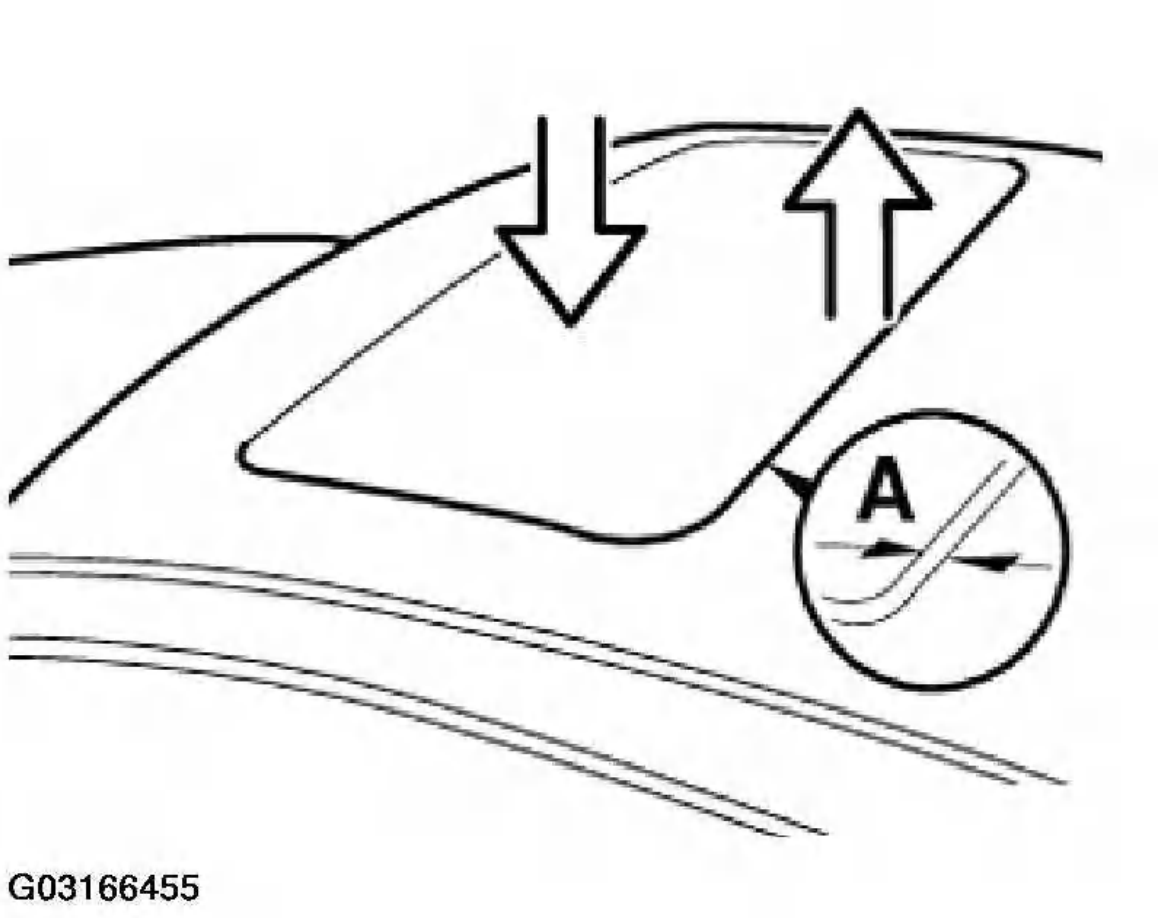


Fig. 1: Identifying Distance Of Glass Roof Cover To Roof
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Height of cover (1) to roof (2) is measured with special tool 00 9 315 (gap measuring wedge).

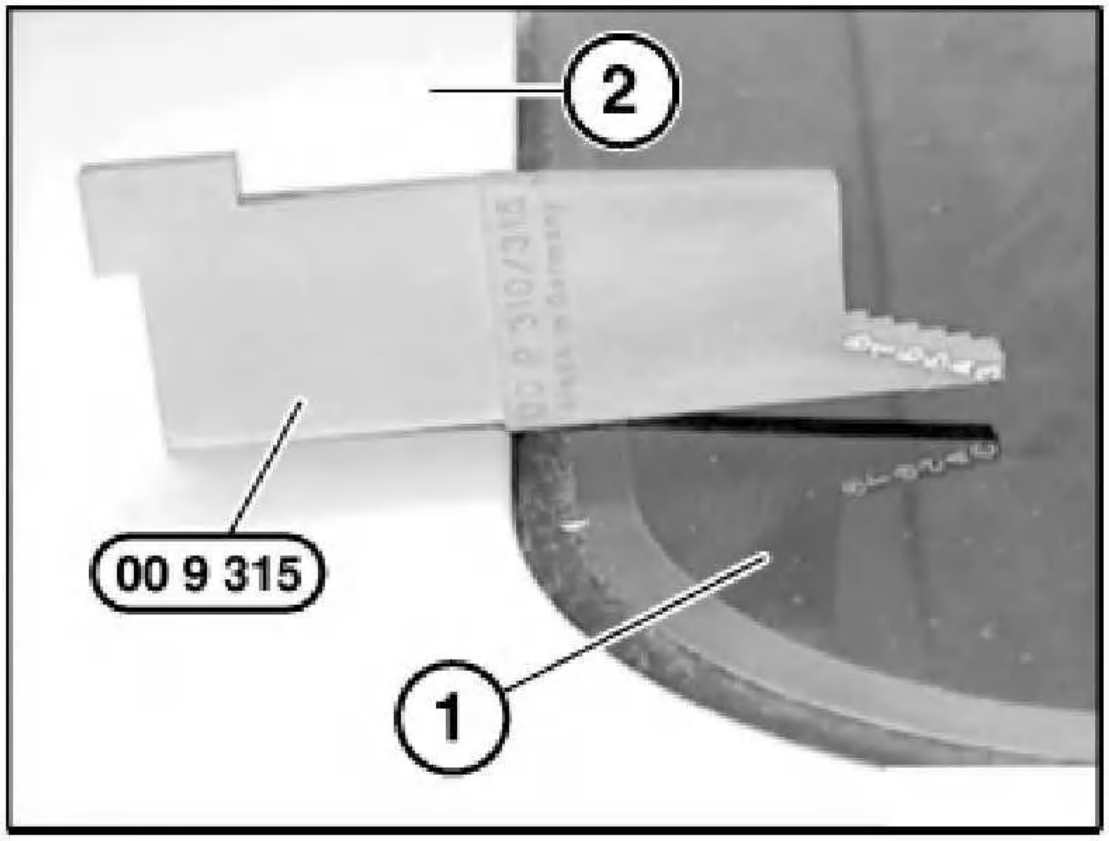


Fig. 2: Measuring Height Of Cover To Roof With Special Tool
Courtesy of BMW OF NORTH AMERICA, INC.

Measure and note down front/rear, left/right deviation.

NOTE: Upward adjustment of glass roof cover is possible at any time, downward adjustment might be critical (adhesive).

Remove glass tilt roof cover, refer to 54 10 100 REMOVING AND INSTALLING GLASS TILT ROOF COVER (Z3 COUPE, M COUPE) .

Adjustment, rear:

Press roof liner down a little and slacken screws (1) (do not release).

Balancing vertical deviation upwards:

Insert washer (available in 1 mm thickness, U-shape) between glass roof frame and cover kinematics.

Installation:

Tightening Torque, refer to SLIDE/TILT ROOF AND CONVERTIBLE TOP - TIGHTENING SPECIFICATIONS .

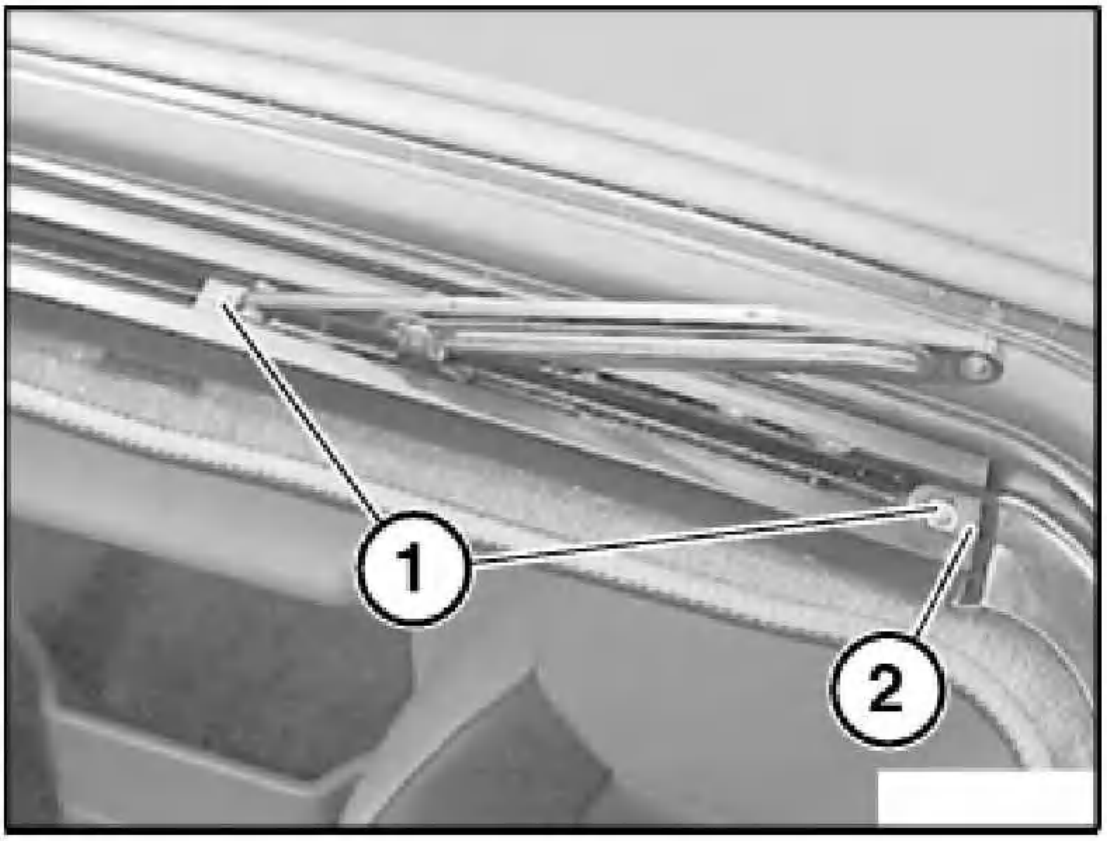


Fig. 3: Pressing Roof Liner Down Little
Courtesy of BMW OF NORTH AMERICA, INC.

Adjustment, front:

Slacken screws (1) (do not release).

Balance vertical deviation at cover mount (2).

NOTE: If the cover cannot be adjusted further downwards: Release screws (1) and remove shoehorn hinge (2).

Installation:

Tightening Torque, refer to SLIDE/TILT ROOF AND CONVERTIBLE TOP - TIGHTENING SPECIFICATIONS .

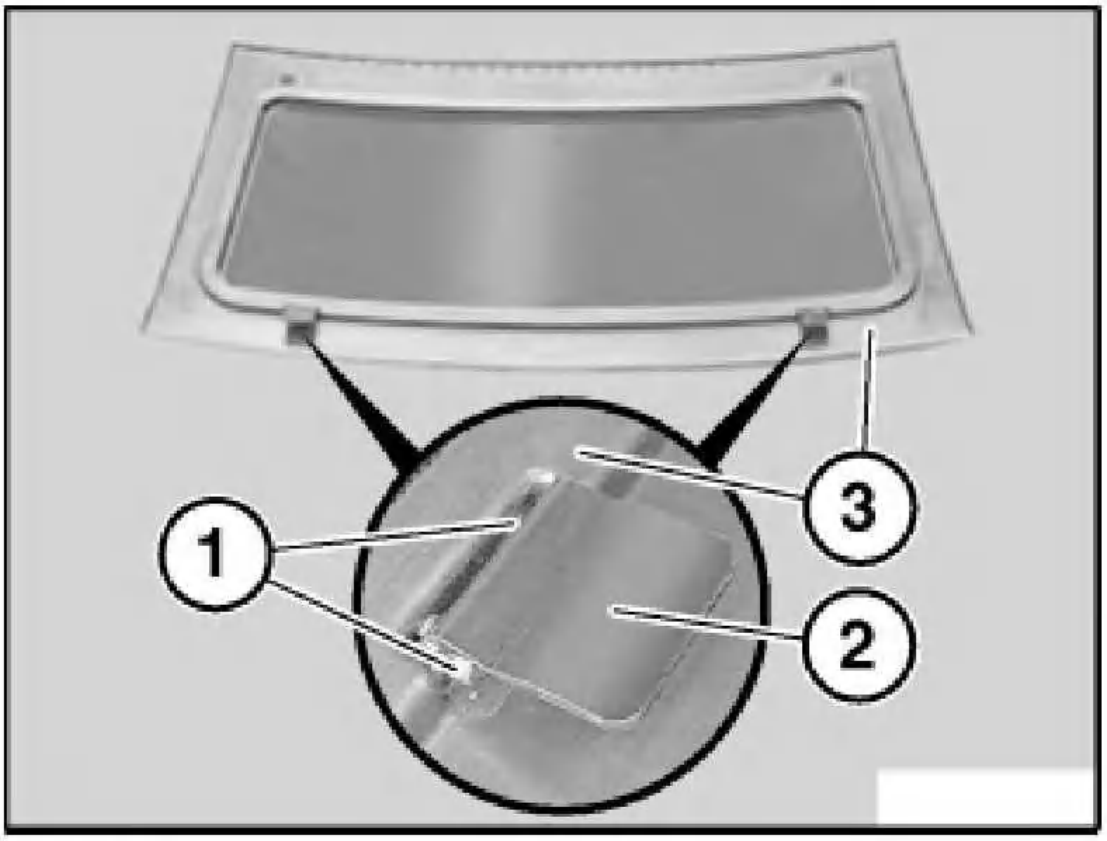


Fig. 4: Removing Shoehorn Hinge
Courtesy of BMW OF NORTH AMERICA, INC.

Grind off cover mount (1) at contact surface (2).

NOTE: Boss (3) must not be ground.

Installation:

Protect ground surface (2) against rust (priming).

Before installing glass roof cover:

Coat contact surface (4) with door brake lubricating grease "Renax GL2" (sourcing reference: BMW Parts Service).

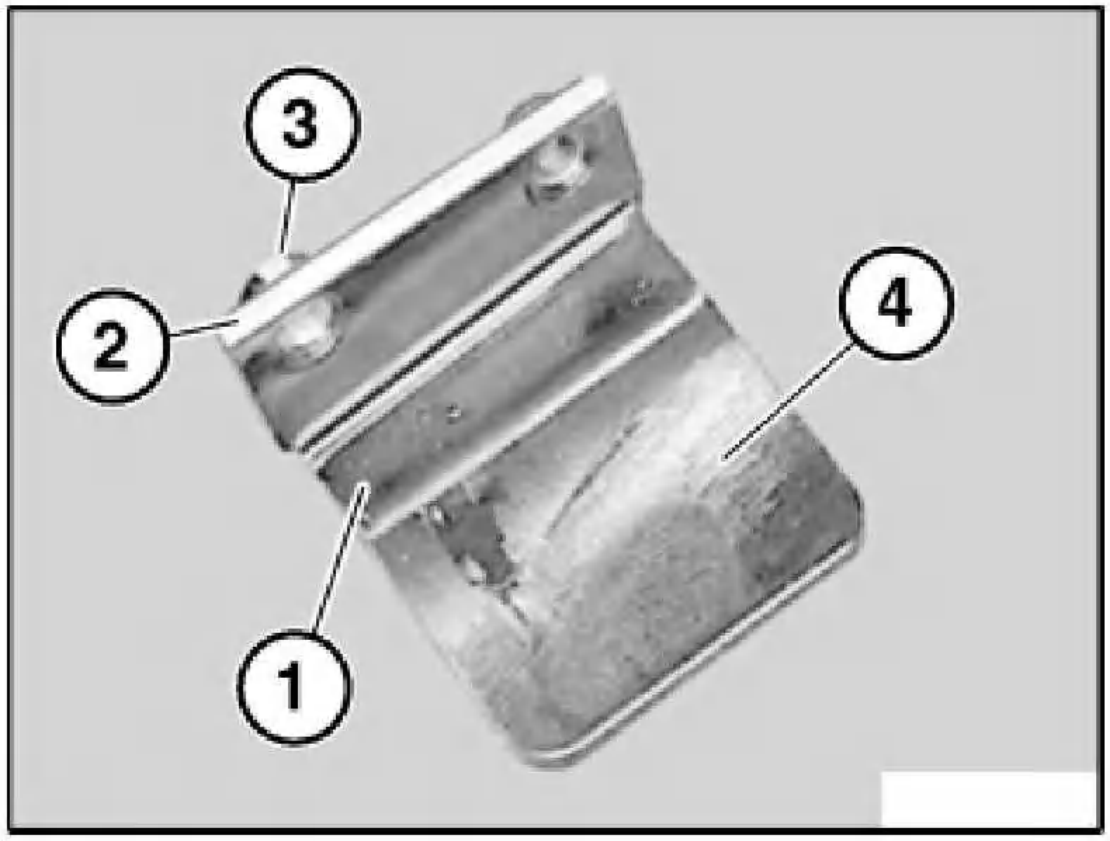


Fig. 5: Grinding Off Cover Mount At Contact Surface
Courtesy of BMW OF NORTH AMERICA, INC.

CAUTION: Check that glass roof cover is securely seated.
Press glass roof cover at front/rear, left/right with palms of hands from bottom upwards.
Glass roof cover must not be able to be raised upwards.

54 10 010 REMOVING AND INSTALLING/REPLACING MOTOR AND GEAR FOR GLASS TILT ROOF ACTUATION (Z3 COUPE, M COUPE)

Lower roof liner (do not remove), 51 44 150 REMOVING AND INSTALLING/REPLACING F .

Exposing cable:

The cable (1) is secured in the corners with fabric adhesive tape (2) and on the stud bolts with cable ties (3).

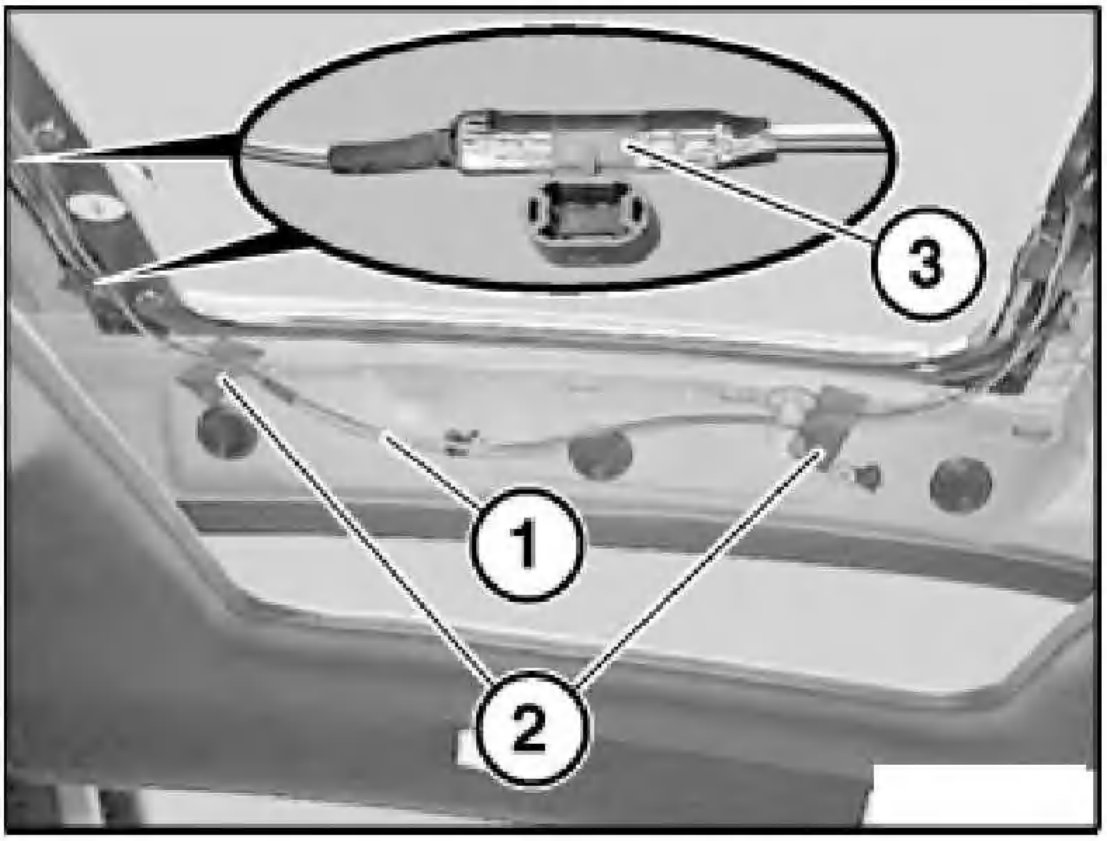


Fig. 6: Identifying Cable Location (1 Of 2)
Courtesy of BMW OF NORTH AMERICA, INC.

The cable (1) is secured with fabric adhesive tape (2) and on the stud bolts with cable ties (3).

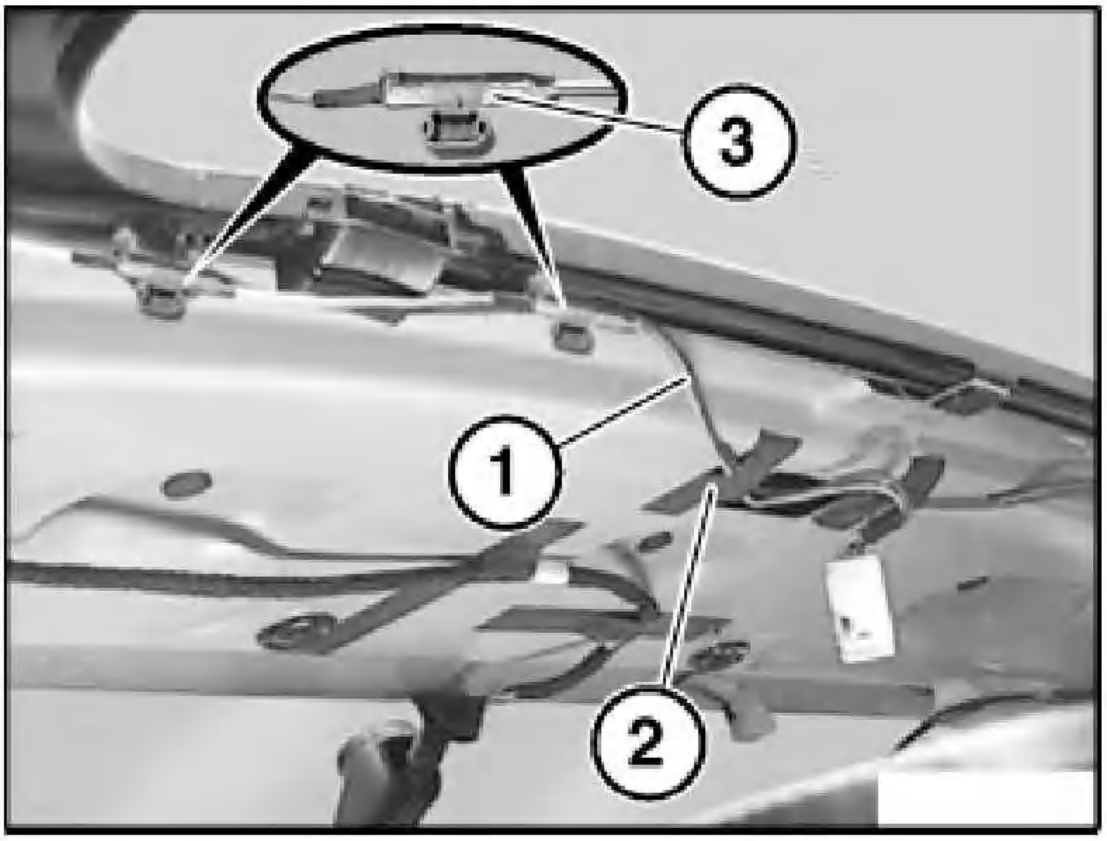


Fig. 7: Identifying Cable Location (2 Of 2)
Courtesy of BMW OF NORTH AMERICA, INC.

Unpinning plug:

Note down colors and contact numbers. Special tool 61 1 132 is required for unpinning.

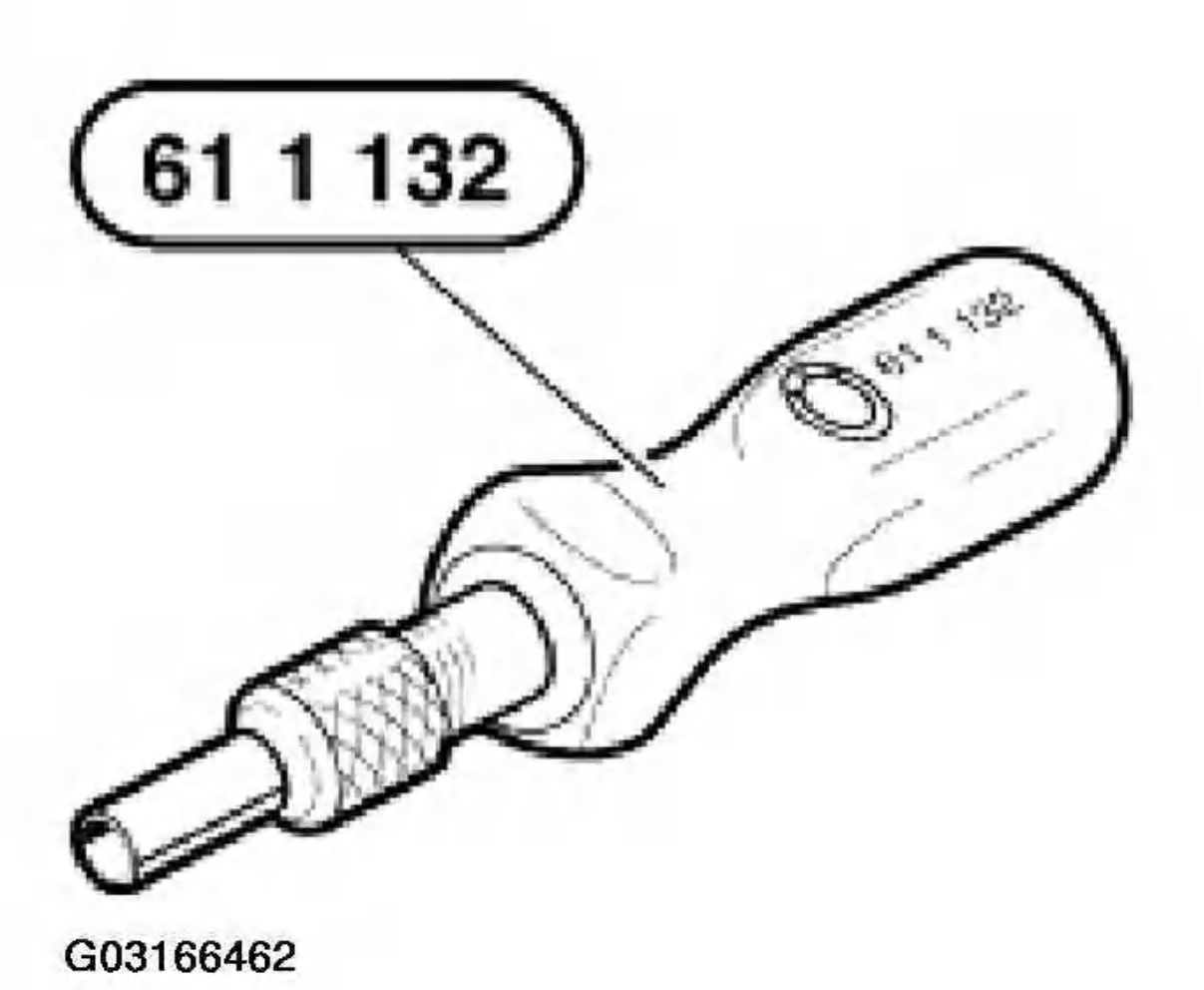


Fig. 8: Identifying Special Tool
Courtesy of BMW OF NORTH AMERICA, INC.

Open cover (1). Unpin both elbow contacts (2) with special tool 61 1 132 from cable plug (3).

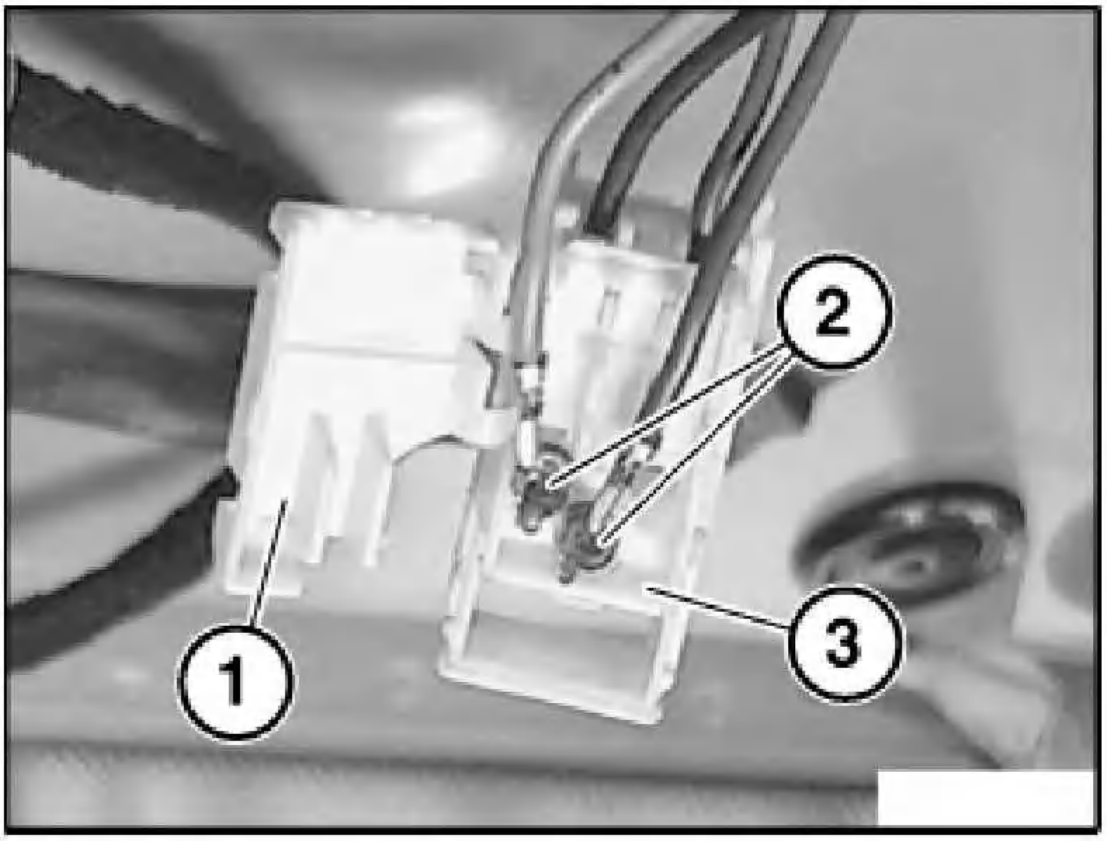


Fig. 9: Unpinning Both Elbow Contacts With Special Tool From Cable Plug
Courtesy of BMW OF NORTH AMERICA, INC.

Lever out cover (1) and remove from cable plug (2).

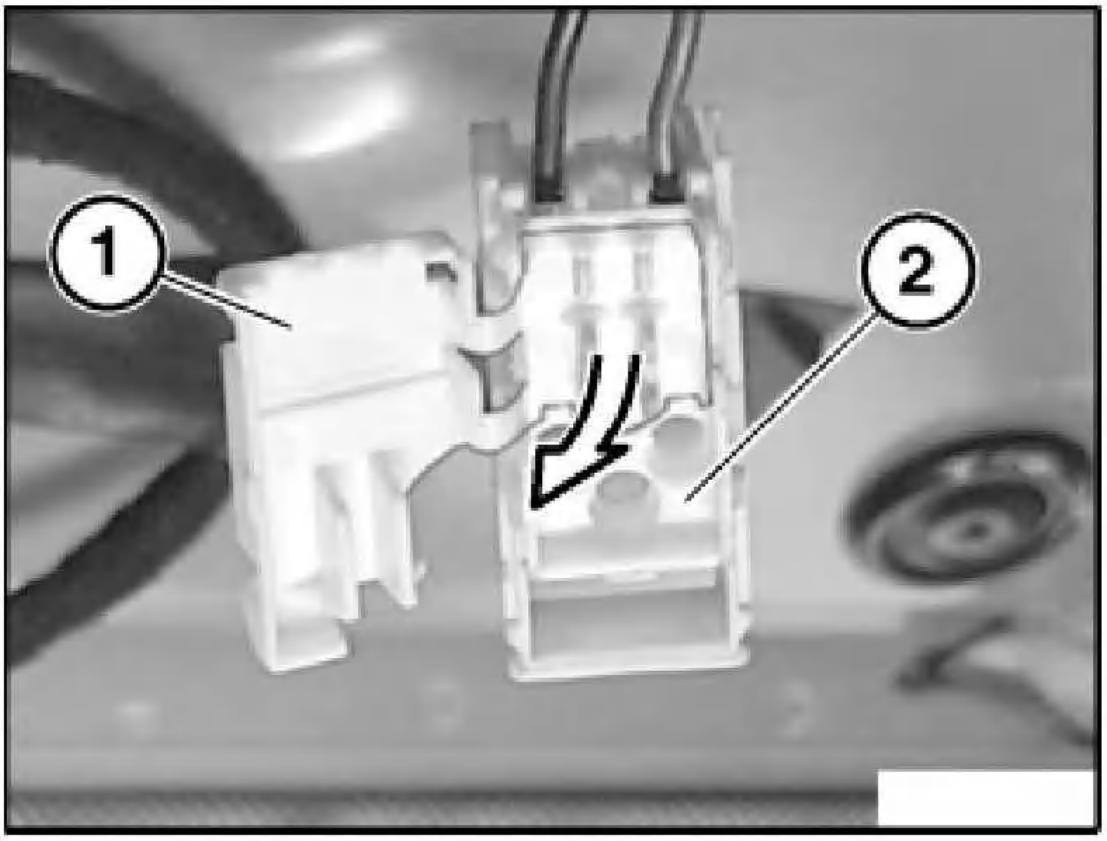


Fig. 10: Removing Cover From Cable Plug
Courtesy of BMW OF NORTH AMERICA, INC.

Unpin both elbow contacts (1) with special tool 61 1 132 from cable plug (2).

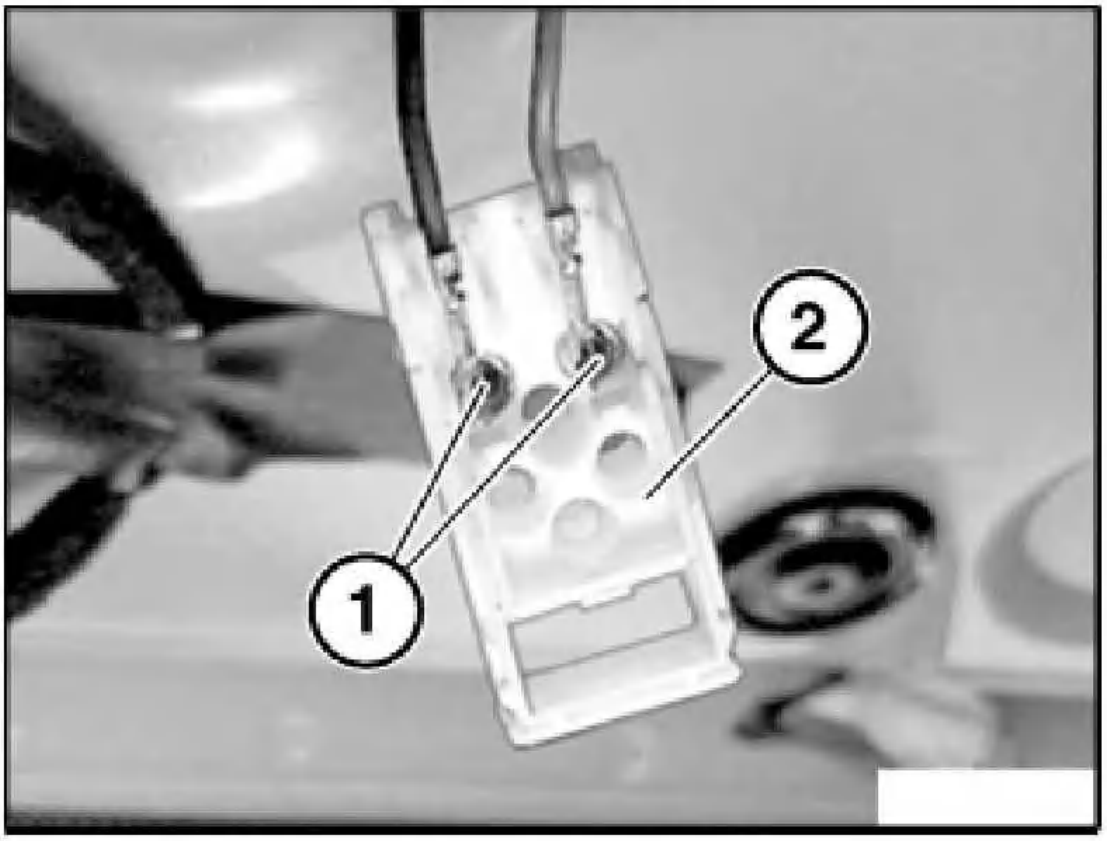


Fig. 11: Unpinning Both Elbow Contacts With Special Tool From Cable Plug
Courtesy of BMW OF NORTH AMERICA, INC.

Releasing motor and gear:

Release screws (1) and remove motor/gear (2).

Installation:

Replace screws.

Tightening Torque, refer to SLIDE/TILT ROOF AND CONVERTIBLE TOP - TIGHTENING SPECIFICATIONS .

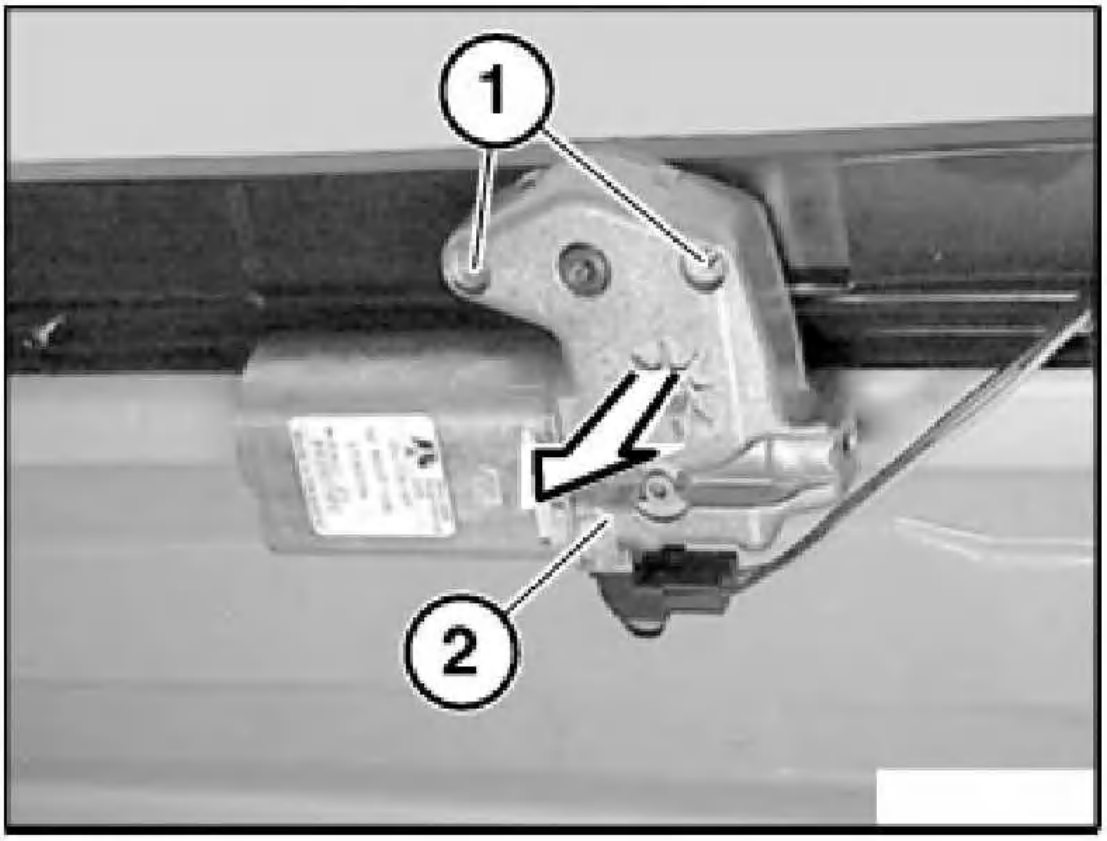


Fig. 12: Removing Motor/Gear
Courtesy of BMW OF NORTH AMERICA, INC.

Unpin cable plug from new motor/gear (1) as described above so that elbow contacts (2) are free.

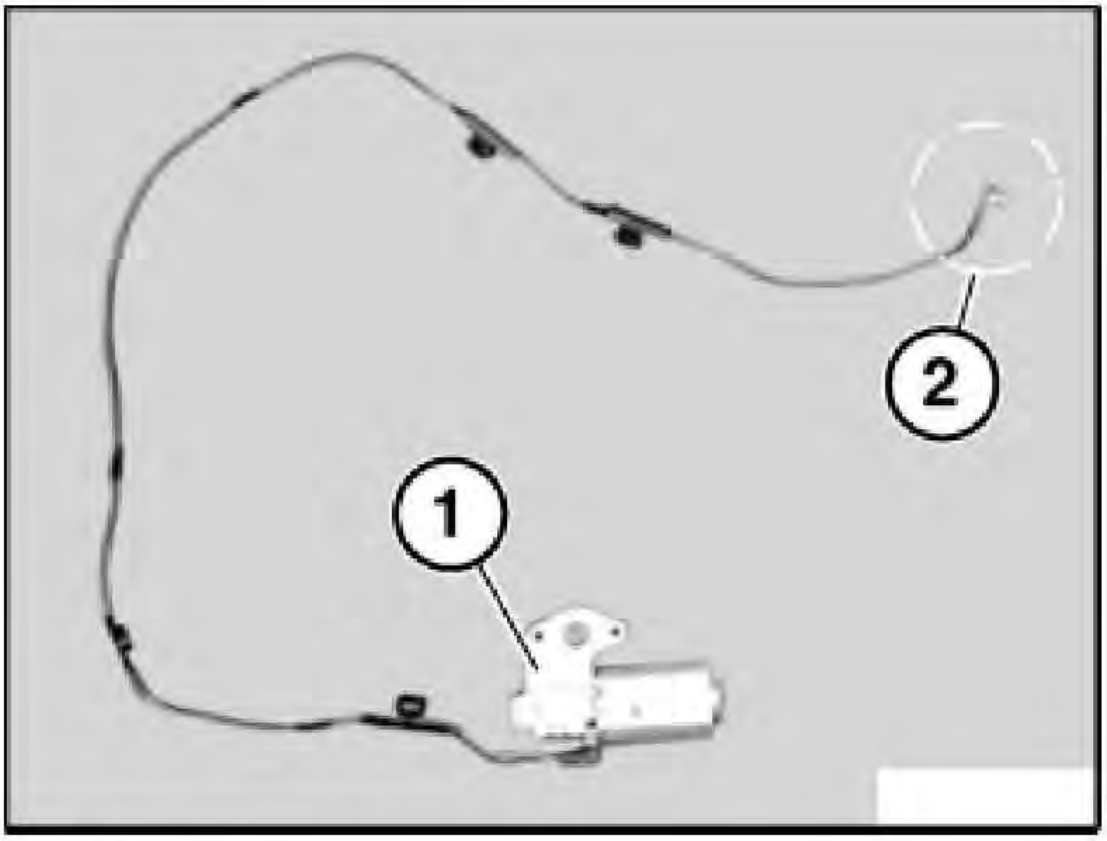


Fig. 13: Unpinning Cable Plug From New Motor/Gear
Courtesy of BMW OF NORTH AMERICA, INC.

Check screw plate (2) for damage.

Press screw plate (2) upwards over thread (1) and remove.

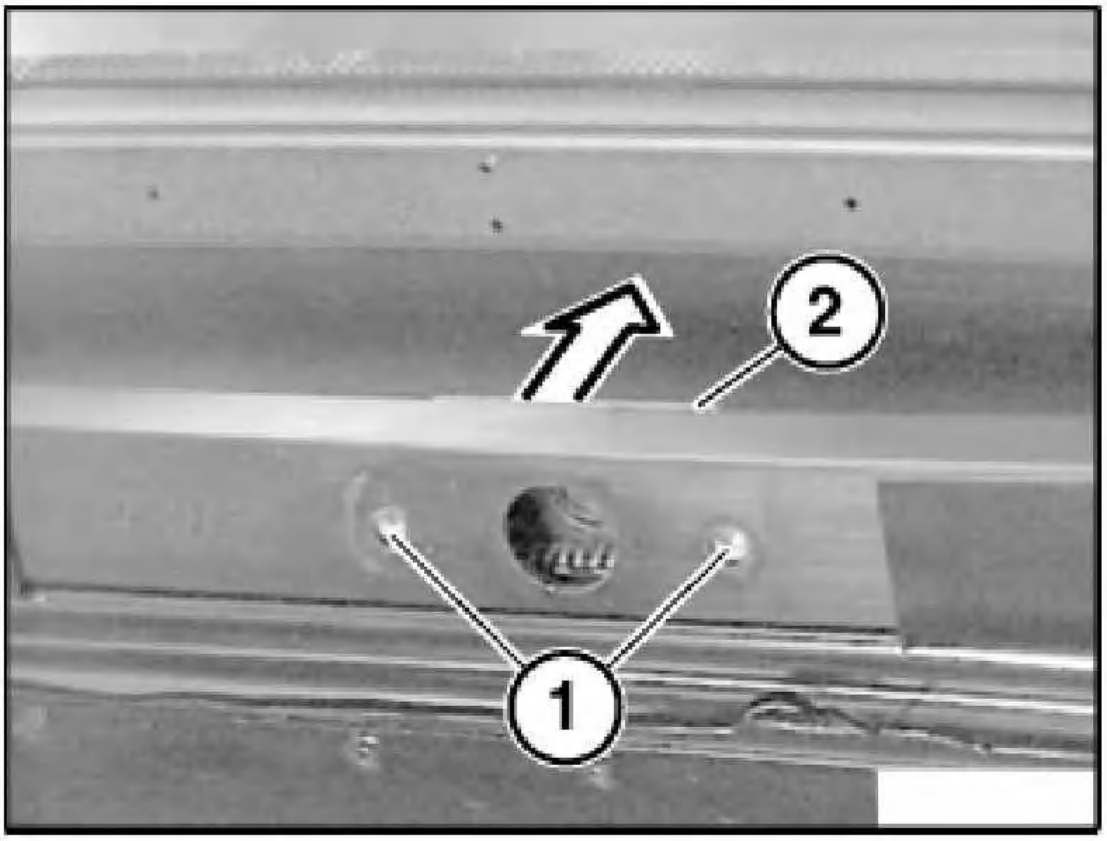


Fig. 14: Removing Screw Plate
Courtesy of BMW OF NORTH AMERICA, INC.

Thread (1) and plastic insert (2) must not be damaged.

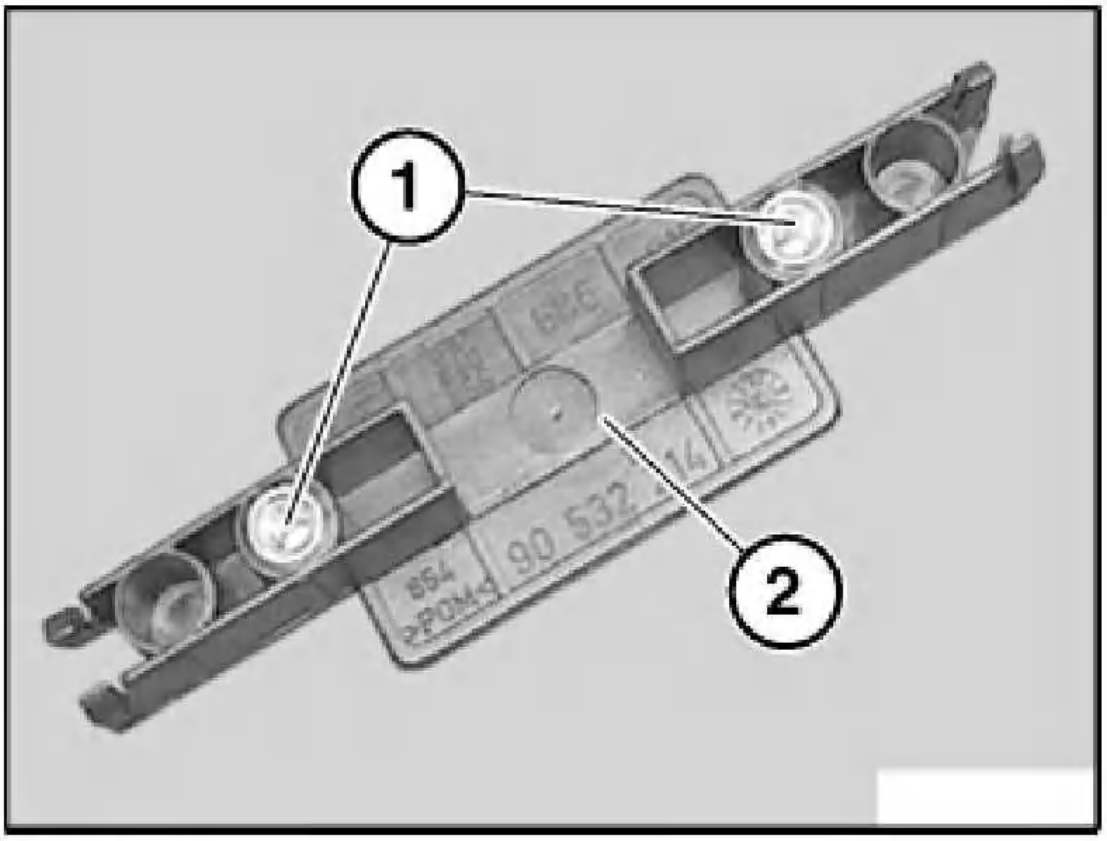


Fig. 15: Identifying plastic insert
Courtesy of BMW OF NORTH AMERICA, INC.

54 10 100 REMOVING AND INSTALLING GLASS TILT ROOF COVER (Z3 COUPE, M COUPE)

Press button and open glass roof cover.

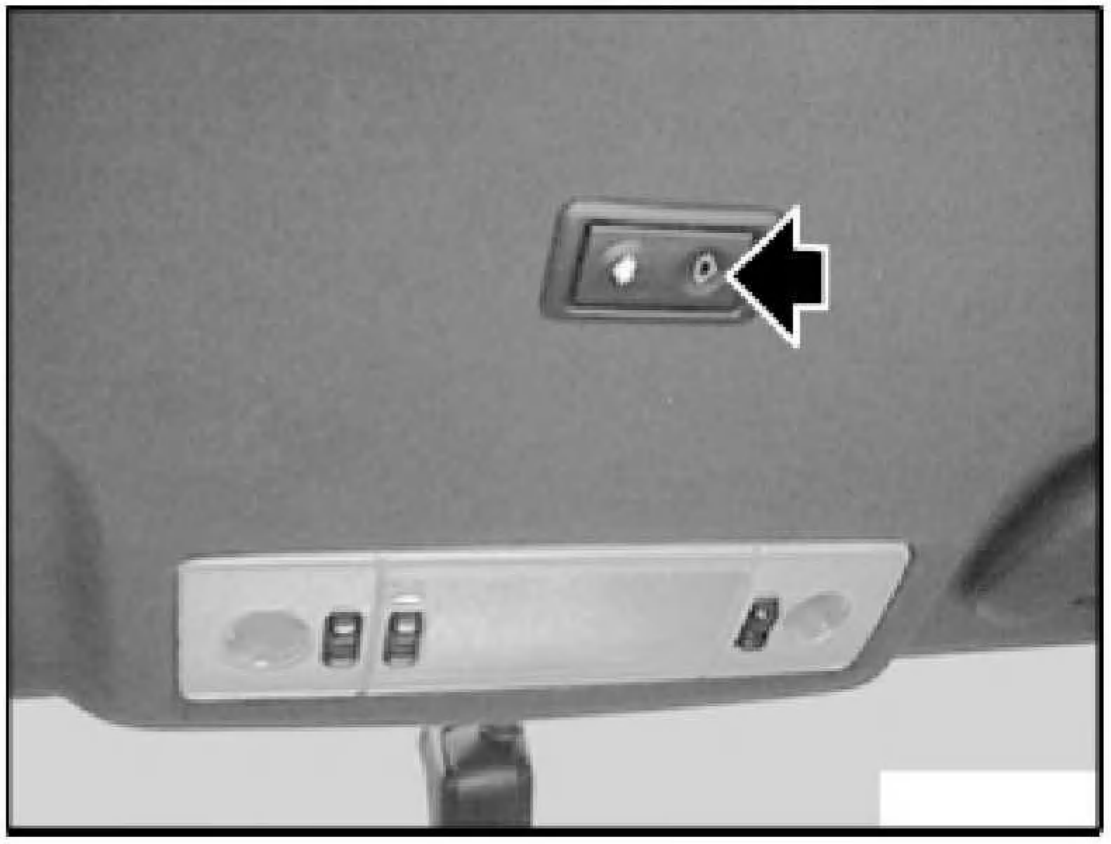


Fig. 16: Opening Glass Roof Cover
Courtesy of BMW OF NORTH AMERICA, INC.

Release locking washer (1) on left/right and drive out pin (2) towards rear.

Installation:

If the pin cannot be installed at one end, close the glass roof cover a little.

Push on new locking washer (1).

CAUTION: During installation, make sure locking washers (1) are correctly seated, otherwise the glass roof cover will fly off.

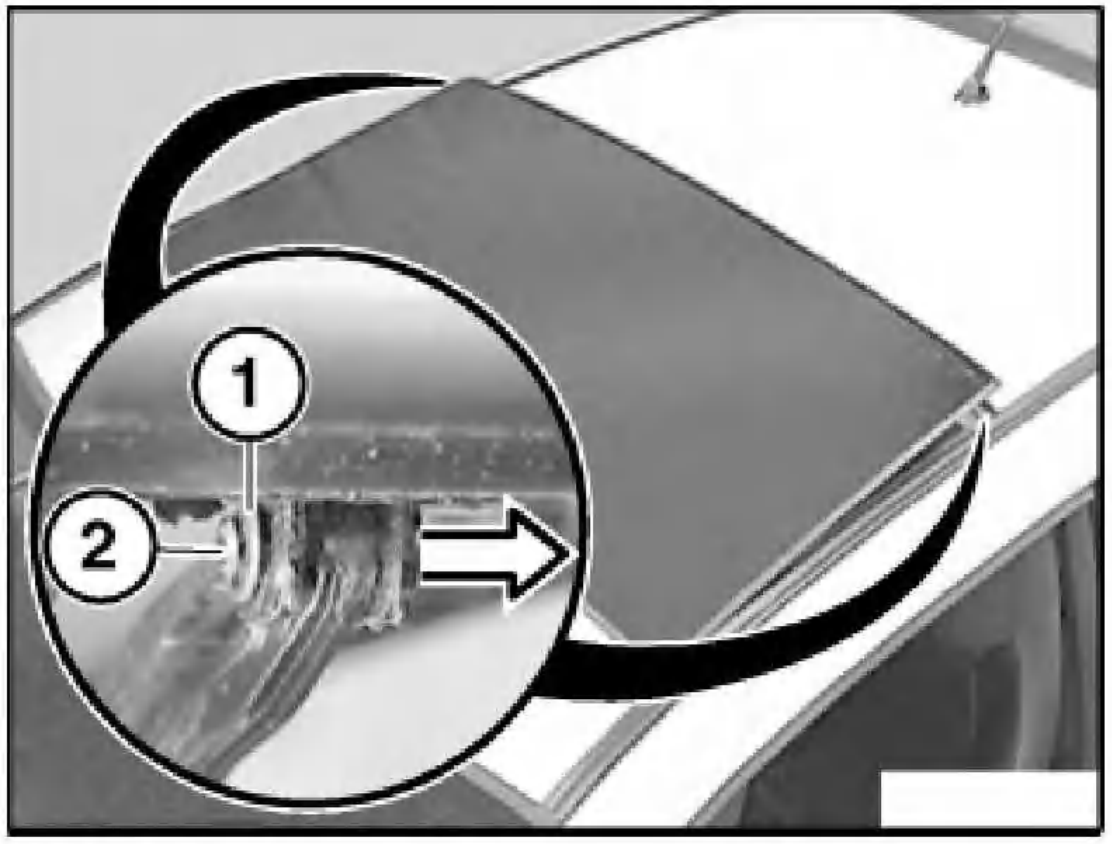


Fig. 17: Releasing Locking Washer On Left/Right
Courtesy of BMW OF NORTH AMERICA, INC.

Raise roof cover (1) at rear and remove towards rear.

Place roof cover on a clean surface.

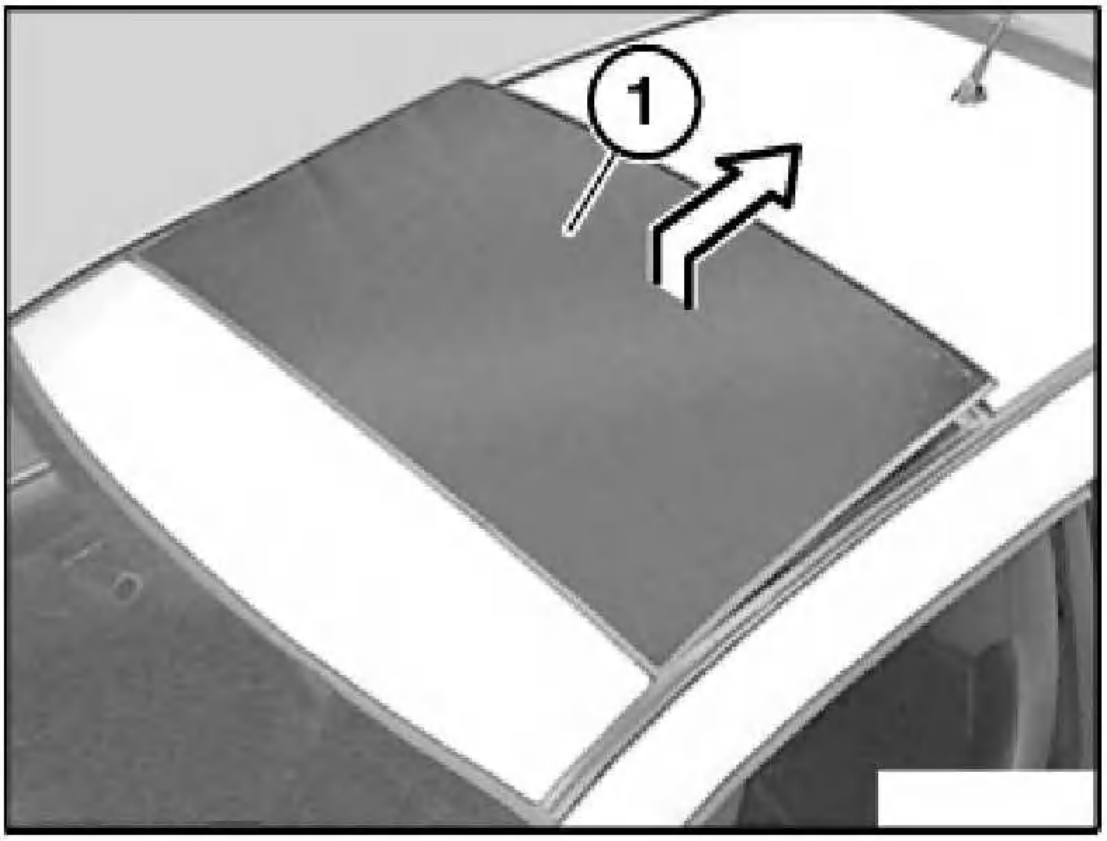


Fig. 18: Placing Roof Cover On Clean Surface
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Side sealing lips on roof cover (2) must not be crushed.

Slide shoehorn hinges (1) on roof cover (2) into cover mount (3) on frame (4) and position roof cover (2) at rear on cover kinematics.

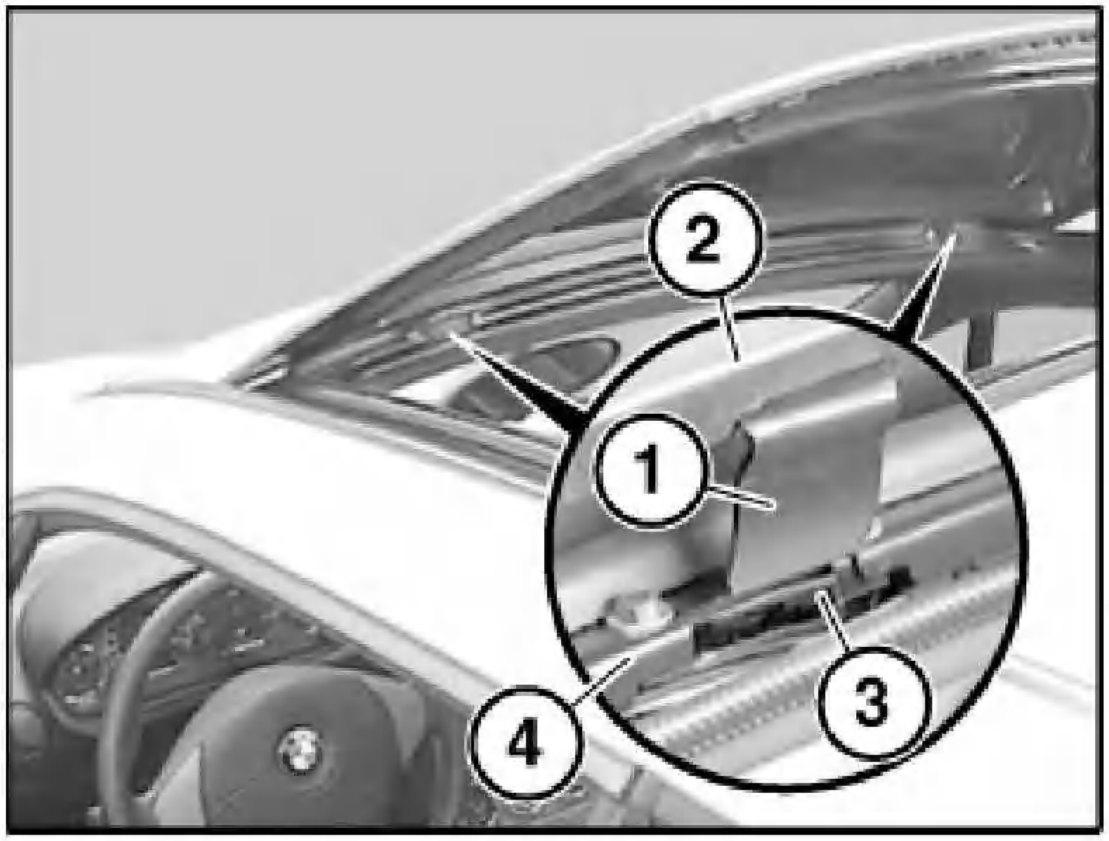


Fig. 19: Installing Glass Tilt Roof Cover
Courtesy of BMW OF NORTH AMERICA, INC.

CAUTION: Check that glass roof cover is securely seated.
Press glass roof cover at front/rear, left/right with palms of hands from bottom upwards.
Glass roof cover must not be able to be raised upwards (wind noises).
Make sure locking washers (1) are correctly seated.

Installation:

Check setting of glass roof cover; to do so, close roof cover completely.

Ideal setting:

Distance (A) of glass roof cover to roof at front and rear must be the same.

Insert credit or identity card between seal and glass roof cover. The card must encounter the same resistance.

Height:

Front - flush to 1 mm deeper

Rear - flush to 1 mm higher

If necessary, adjust glass tilt roof cover, refer to 54 10 004 ADJUSTING GLASS TILT ROOF COVER (Z3 COUPE, M COUPE) .

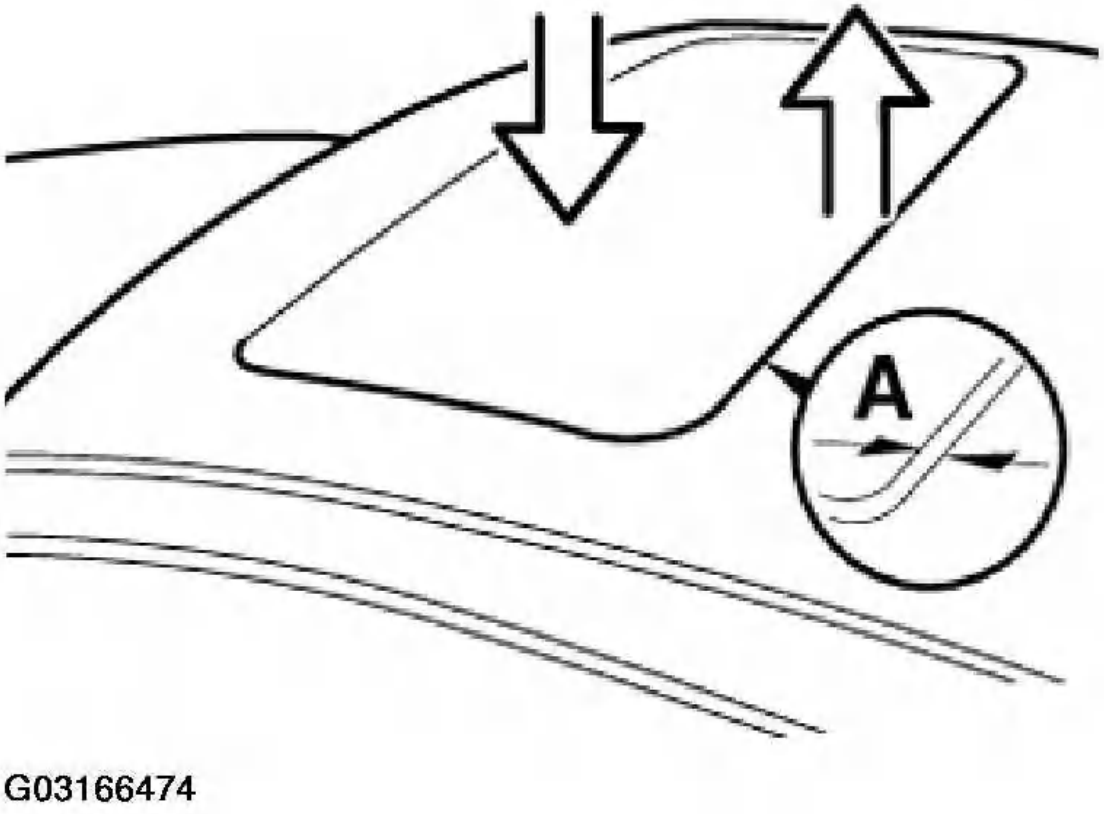


Fig. 20: Identifying Distance Of Glass Roof Cover To Roof
Courtesy of BMW OF NORTH AMERICA, INC.

54 10 101 REPLACING GLASS TILT ROOF COVER (Z3 COUPE, M COUPE)

Remove glass tilt roof cover, refer to 54 10 100 REMOVING AND INSTALLING GLASS TILT ROOF COVER (Z3 COUPE, M COUPE) .

Release screws (1) and remove shoehorn hinges (2) from glass roof cover (3).

Installation:

Adjust glass tilt roof cover, refer to 54 10 004 ADJUSTING GLASS TILT ROOF COVER (Z3 COUPE, M COUPE) .

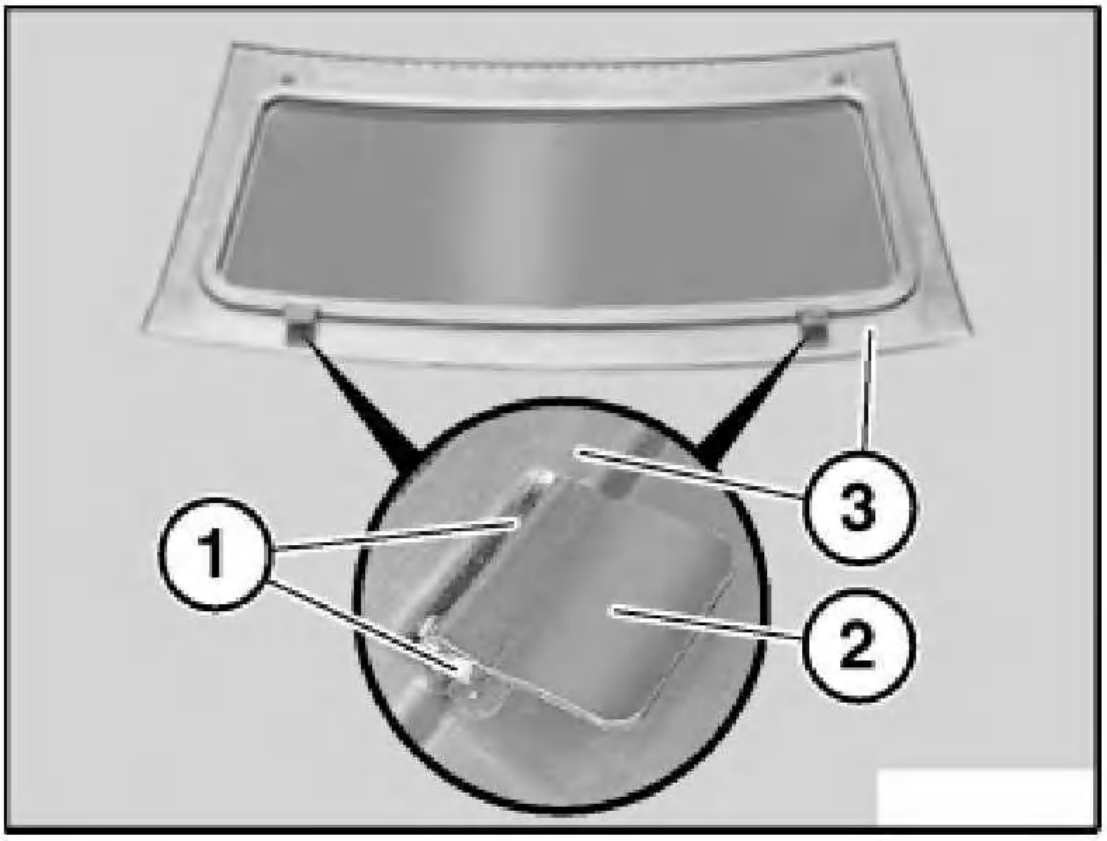


Fig. 21: Removing Shoehorn Hinges From Glass Roof Cover
Courtesy of BMW OF NORTH AMERICA, INC.

54 10 125 REMOVING AND INSTALLING/REPLACING BOTH COVER MOUNTS (Z3 COUPE, M COUPE)

Remove glass tilt roof cover, refer to 54 10 100 REMOVING AND INSTALLING GLASS TILT ROOF COVER (Z3 COUPE, M COUPE) .

NOTE: When releasing screws (1):
Do not lose nuts underneath.

Release screws (1) on left/right and remove cover mount (2) from roof frame (3).

Installation:

Tightening Torque, refer to SLIDE/TILT ROOF AND CONVERTIBLE TOP - TIGHTENING SPECIFICATIONS .

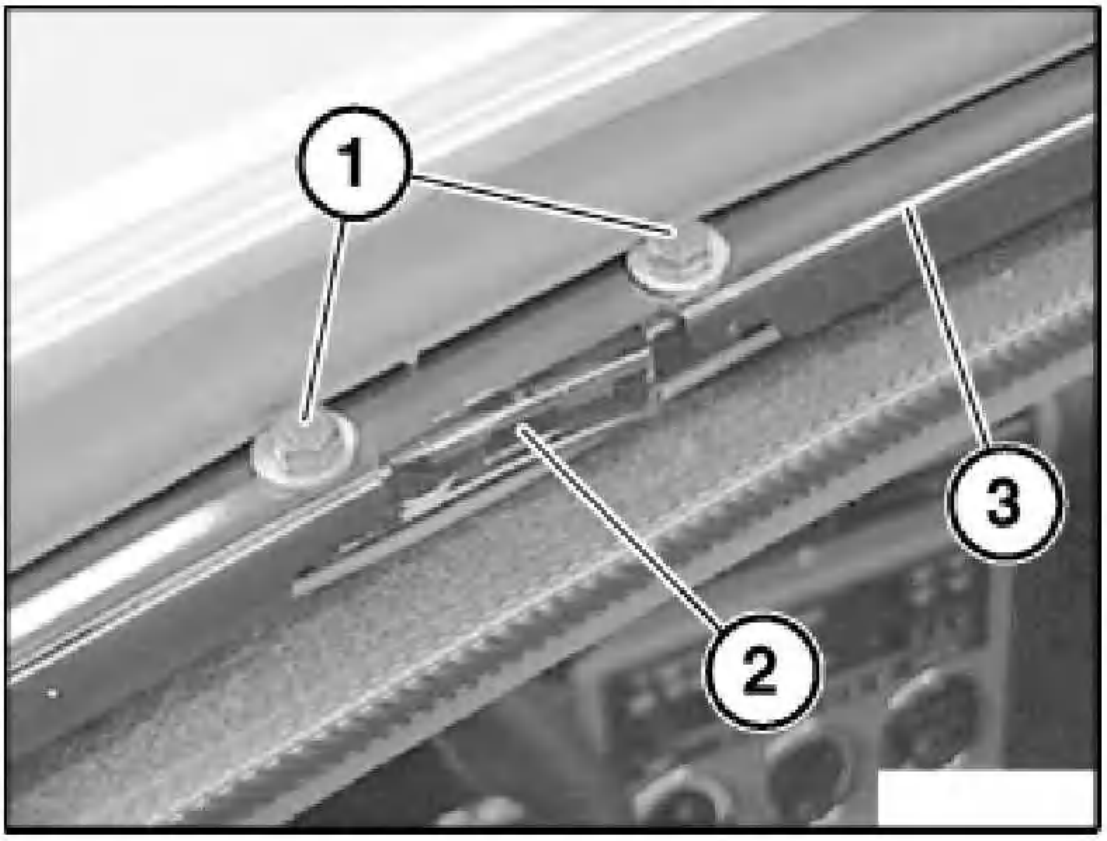


Fig. 22: Removing Cover Mount From Roof Frame
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

If necessary, glue nuts (1) in cover mount (2).

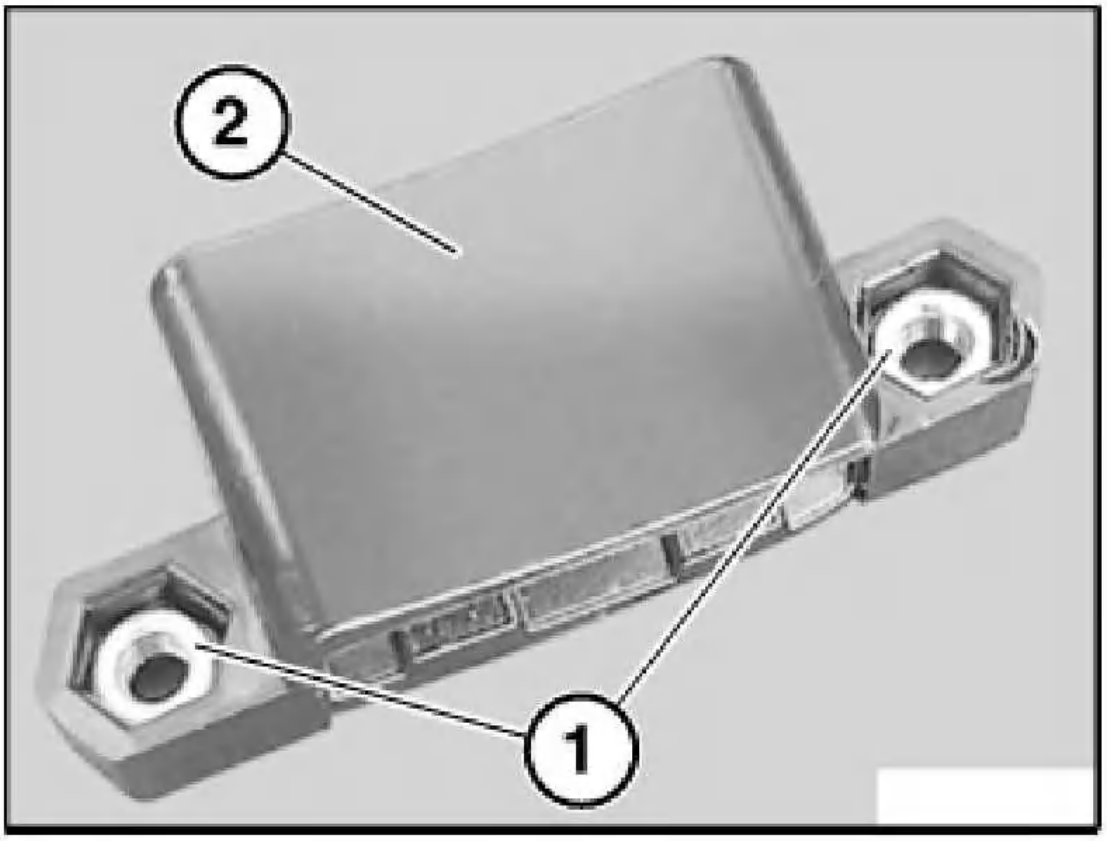


Fig. 23: Installing Cover Mount To Roof Frame
Courtesy of BMW OF NORTH AMERICA, INC.

Release screws (1) and remove cover mount (2) from roof cover (3).

Installation:

Adjust glass tilt roof cover, refer to 54 10 004 ADJUSTING GLASS TILT ROOF COVER (Z3 COUPE, M COUPE) .

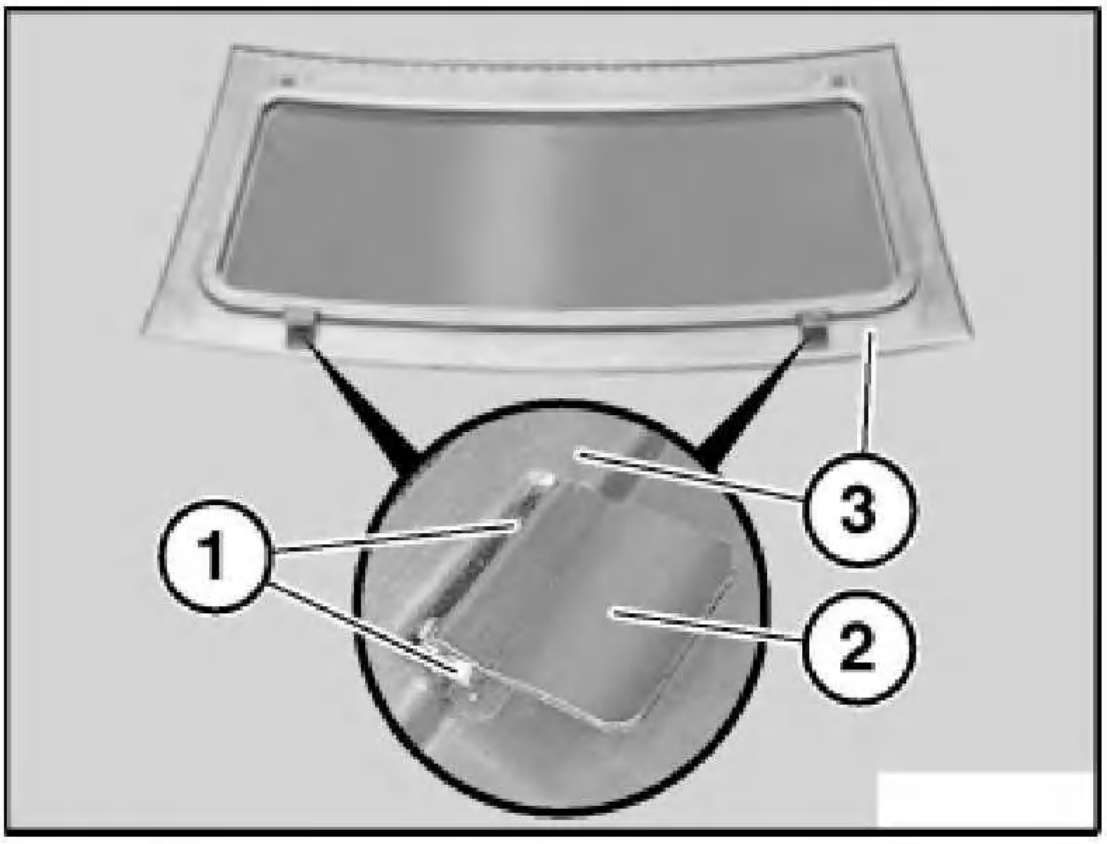


Fig. 24: Removing Cover Mount From Roof Cover
Courtesy of BMW OF NORTH AMERICA, INC.

54 10 127 REMOVING AND INSTALLING/REPLACING COVER KINEMATICS (Z3 COUPE, M COUPE)

Remove glass tilt roof cover, refer to 54 10 100 REMOVING AND INSTALLING GLASS TILT ROOF COVER (Z3 COUPE, M COUPE) .

Detach motor and gear for glass roof actuation (do not remove completely), refer to 54 10 010 REMOVING AND INSTALLING/REPLACING MOTOR AND GEAR FOR GLASS TILT ROOF ACTUATION (Z3 COUPE, M COUPE) .

Unfasten left/right screws (1).

NOTE: Don not lose outer stop (2) on left/right.

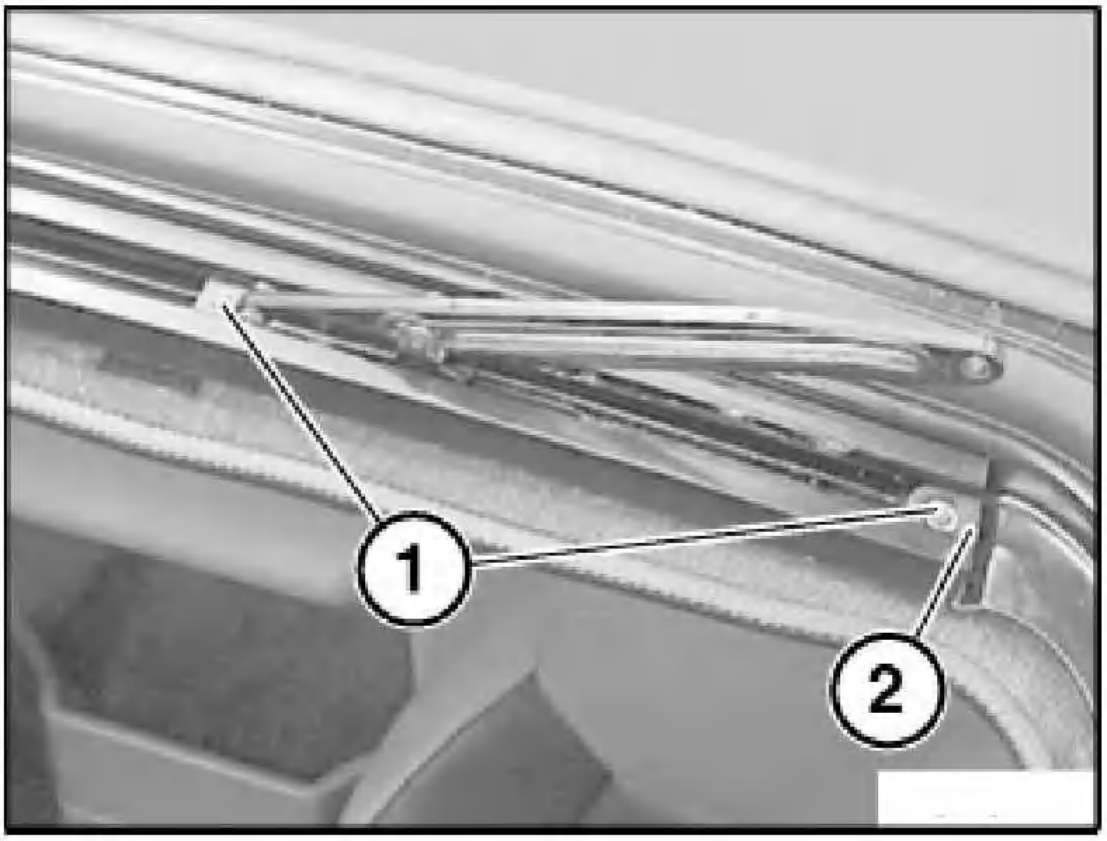


Fig. 25: Unfastening Left/Right Screws
Courtesy of BMW OF NORTH AMERICA, INC.

Remove cover kinematics (1).

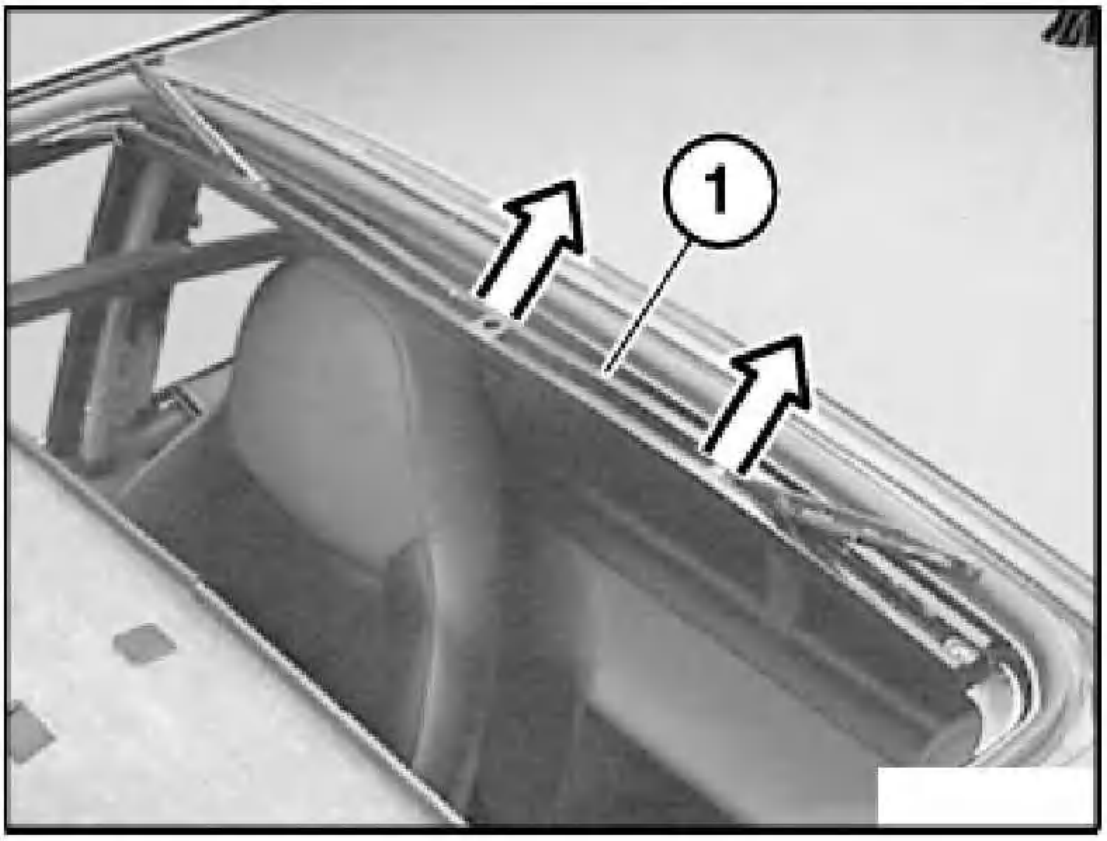


Fig. 26: Removing Cover Kinematics
Courtesy of BMW OF NORTH AMERICA, INC.

When reusing cover kinematics (2):

Insert locating clip (1) in mount for cover kinematics (2).

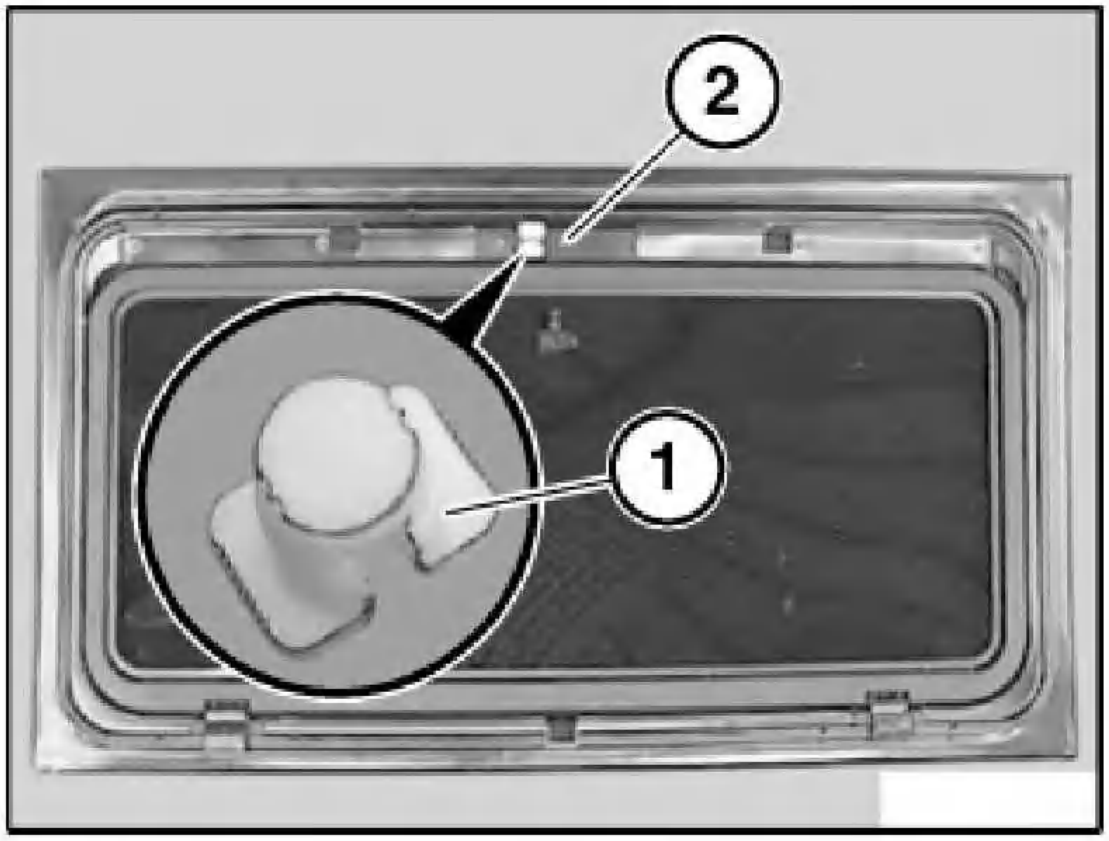


Fig. 27: Inserting Locating Clip In Mount For Cover Kinematics
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

In event of sluggish movement, apply a light coat of "Renax GL1" (manufactured by Fuchs) to guide channel.

The door brake lubricating grease "Renax GL2" (sourcing reference: BMW Parts Service) is also permitted.

54 10 200 REMOVING AND INSTALLING COMPLETE GLASS TILT (FRAME) (Z3 COUPE, M COUPE)

NOTE: For gluing the glass roof frame, adhesives for cold and hot working are permitted.
Remove trim strip on roof frame, left and right, refer to ROOF TRIM PANEL .
Remove glass tilt roof cover, refer to 54 10 100 REMOVING AND INSTALLING GLASS TILT ROOF COVER (Z3 COUPE, M COUPE) .
Detach motor and gear for glass roof actuation (do not remove completely), refer to 54 10 010 REMOVING AND INSTALLING/REPLACING MOTOR AND GEAR FOR GLASS TILT ROOF ACTUATION (Z3 COUPE, M COUPE) .

Cold processing:

Comply with instructions on gluing windows.

Warm processing:

Open aluminum membrane at rear end of cartridge.

Place cartridge in cartridge oven.

Heat glue cartridges to 80Â° C for one hour in oven (Sourcing Reference: BMW Parts Service).

Comply with instructions on gluing windows.

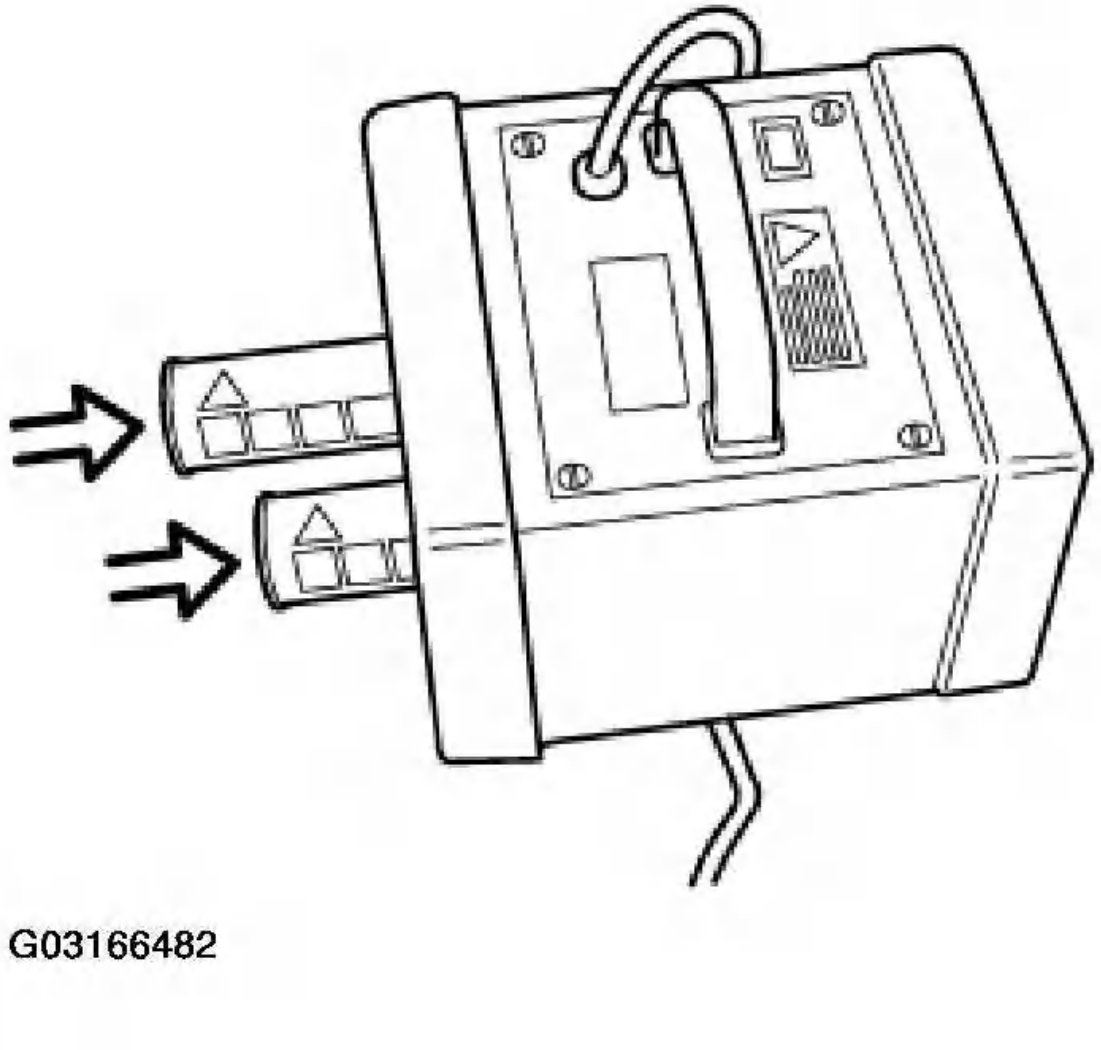


Fig. 28: Placing Cartridge In Cartridge Oven
Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: Cover interior of car and roof outer skin panel with protective covers.

If necessary, pull off seal (1) on left/right and seal (2) at rear.

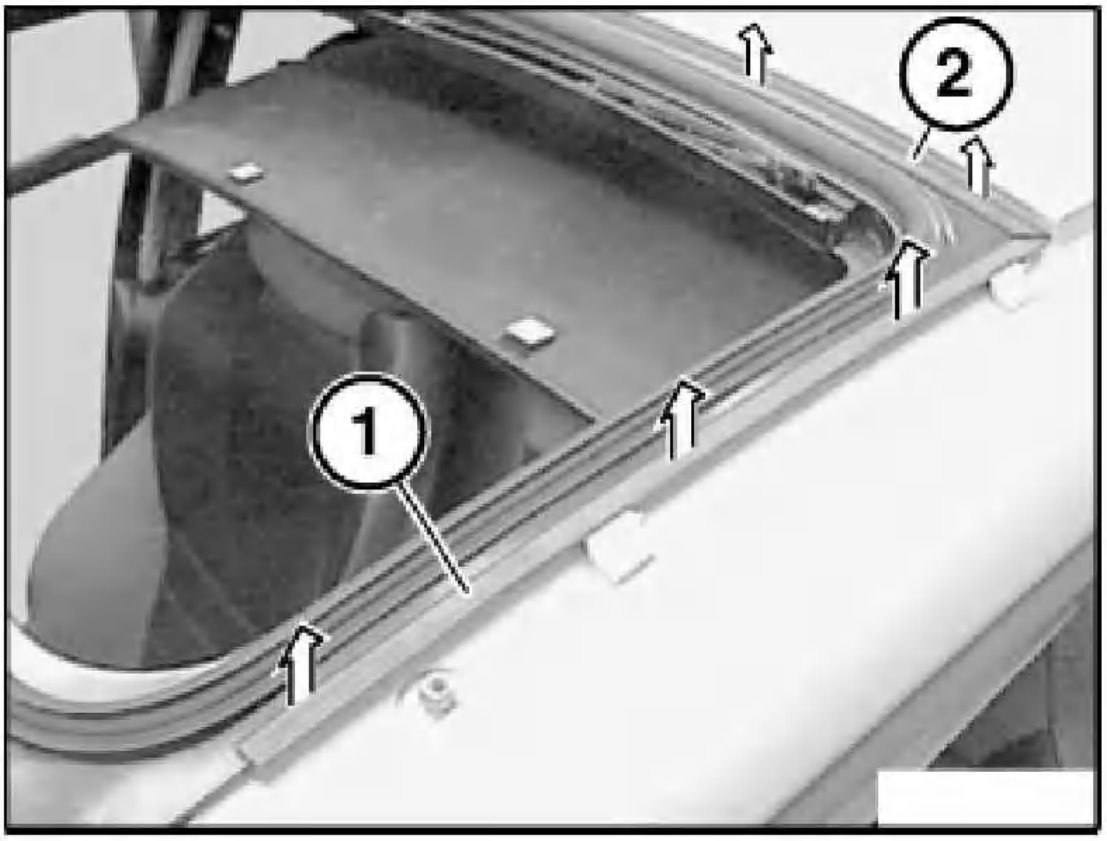


Fig. 29: Pulling Off Seal On Left/Right
Courtesy of BMW OF NORTH AMERICA, INC.

Mask body along roof connection with narrow fabric adhesive tape (e.g. Tesa).

1. Glass tilt roof frame
2. Glue bead
3. Body opening
4. Fabric adhesive tape

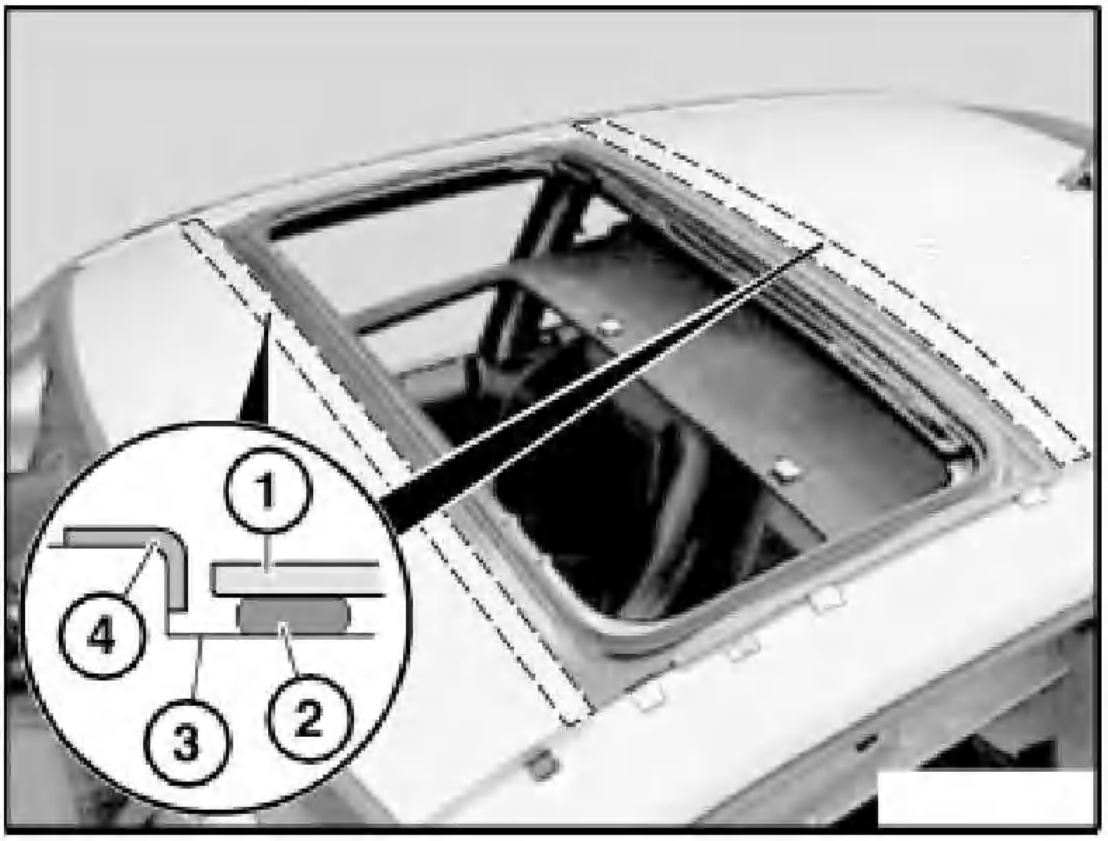


Fig. 30: Identifying Fabric Adhesive Tape Installed Position
Courtesy of BMW OF NORTH AMERICA, INC.

Fit short knife (19.5 mm blade length, sourcing reference: BMW Parts Service) to the tool.

In the corners, if necessary, fit a long knife (36 mm blade length, sourcing reference: BMW Parts Service) to the tool.

NOTE: Resharpen knife with machine running.

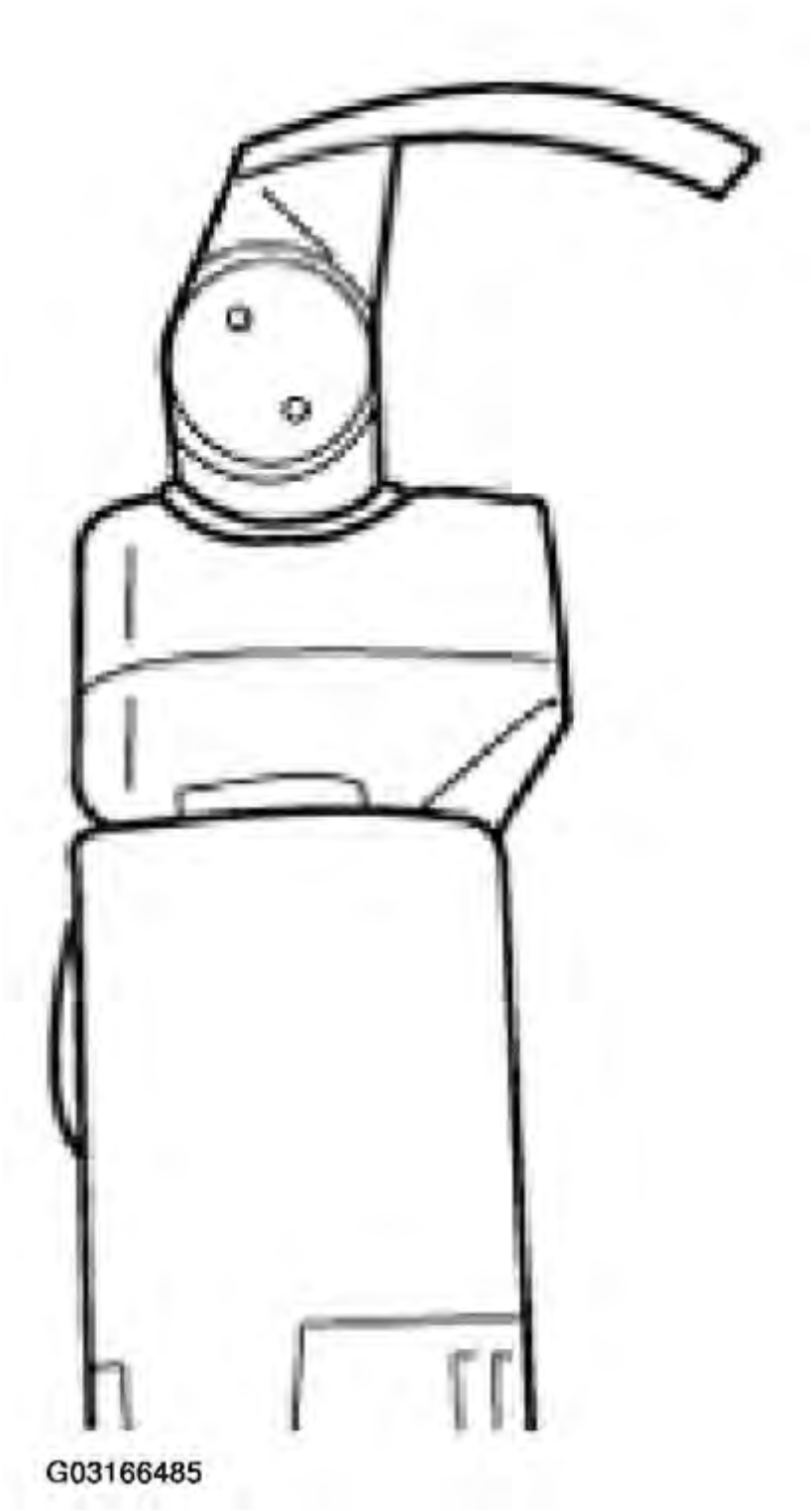


Fig. 31: Fitting Short Knife To The Tool
Courtesy of BMW OF NORTH AMERICA, INC.

Carefully insert knife (1) between body (2) and roof frame (3).

Fig. 32: Inserting Knife Between Body And Roof Frame
Courtesy of BMW OF NORTH AMERICA, INC.

Pass blade of knife parallel to roof frame.

Fig. 33: Passing Blade Of Knife Parallel To Roof Frame

Courtesy of BMW OF NORTH AMERICA, INC.

Cut through glue bead all around and as close as possible to roof frame.

1. Body opening
2. Glue bead
3. Knife
4. Glass tilt roof frame

Lever out roof frame (4).

Pull off adhesive tapes all round.

Fig. 34: Pulling Off Adhesive Tapes All Round
Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: If the glass roof frame cannot be removed:
Using a heavy-duty scalpel (1), cut through glue bead from inside.

Fig. 35: Cutting Through Glue Bead From Inside Using Heavy-Duty Scalpel
Courtesy of BMW OF NORTH AMERICA, INC.

CAUTION: To ensure long-term corrosion protection, it is absolutely essential to repair paintwork damage (scratches and large-surface damage), refer to

Remove glue residue in body cutout down to approx. 0.5 mm.

Cut off old glue carefully with a heavy-duty scalpel to avoid damaging the paint finish in body cutout.

Fig. 36: Cutting Off Old Glue
Courtesy of BMW OF NORTH AMERICA, INC.

When reusing glass roof frame:

Remove glue residue (1) on roof frame (2) with a heavy-duty scalpel down to approx. 0.5 mm.

Fig. 37: Removing Glue Residue On Roof Frame
Courtesy of BMW OF NORTH AMERICA, INC.

When reusing glass roof frame:

If necessary, clean adhesive area with adhesive cleaner (sourcing reference: BMW Parts Service).

Install new seals (1) and (2).

Fig. 38: Installing New Seals
Courtesy of BMW OF NORTH AMERICA, INC.

CAUTION: The basic filler must have hardened!

Treat glass roof frame and body around glued area with BMW-approved materials (repair kit, sourcing reference: BMW Parts Service).

NOTE: Note ventilation time!

Fig. 39: Identifying Treat Glass Roof Frame And Body Around Glued Area
Courtesy of BMW OF NORTH AMERICA, INC.

Before installing glass roof frame:

Install trim strip on roof frame, refer to ROOF TRIM PANEL .

Install glass roof cover and close fully with motor/gear (zero position), refer to 54 10 100 REMOVING AND INSTALLING GLASS TILT ROOF COVER (Z3 COUPE, M COUPE) .

Disassemble motor/gear again.

Insert locating clip (1) in mount for cover kinematics (2).

Installation:

Open a side window to prevent a pressure buildup in the car interior when the door is closed.

Fig. 40: Inserting Locating Clip In Mount For Cover Kinematics
Courtesy of BMW OF NORTH AMERICA, INC.

Mount glass roof frame (1) with special tool 51 3 010 on tool trolley.

Fig. 41: Mounting Glass Roof Frame With Special Tool On Tool Trolley
Courtesy of BMW OF NORTH AMERICA, INC.

Cut nozzle to size.

Dimensions:

A. 7.5_{-1} mm

B. 8_{-1} mm

Check expiry date of glue!

Fig. 42: Identifying Cut Nozzle To Size
Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: For an even application of adhesive bead:
Use a cartridge gun (operated pneumatically or electrically, sourcing reference: BMW Parts Service).

If necessary, apply a test bead before gluing.

Cartridge must be held perpendicular to the glass roof frame.

Fig. 43: Applying Test Bead Before Gluing
Courtesy of BMW OF NORTH AMERICA, INC.

Shape of glue bead:

A. 7.5_{-1} mm

B. 8_{-1} mm

Fig. 44: Identifying Shape Of Glue Bead
Courtesy of BMW OF NORTH AMERICA, INC.

CAUTION: Apply glue bead quickly and insert glass roof frame. Skin formation time of glue, maximum 10 minutes.

GLUE BEAD REFERENCE

(A) = 4 +/- 1 mm	Distance of glue bead to glass roof edge (frame) all round
(R) = 5 mm	Drag glue bead outwards as far as possible into corner
(1)	Application point of glue bead

Fig. 45: Identifying Distance Of Glue Bead To Glass Roof Edge All Round
Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: Side sealing lips on glass roof cover and trim strips on roof frame must not be crushed.

Installation of glass roof frame:

- Take special tool 51 3 010 from tool trolley
- Align at front (centering)
- Lower towards rear

Adjust glass roof cover (refer to next work step).

Fig. 46: Identifying Glass Roof Frame
Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: The glass roof cover is adjusted immediately after installation by pressing the glass roof frame down.
It is better to adjust the cover one millimeter lower because only upward adjustment is possible once the glue has hardened.

Ideal setting:

Distance (A) of glass roof cover to roof at front and rear must be the same.

Insert credit or identity card between seal and glass roof cover. The card must encounter the same resistance.

Height:

Front - flush to 1 mm deeper

Rear - flush to 1 mm higher

Fig. 47: Identifying Distance Of Glass Roof Cover To Roof At Front
Courtesy of BMW OF NORTH AMERICA, INC.

CAUTION: Remove dirt from residual glue with Sika-Entferner 208 (Sourcing Reference: BMW Parts Service) before glue is hard. In doing so, do not press out glass roof frame again.

Hardened glue can only be removed by machine.

Assemble car.

After hardening time, remove support.

NOTE: Any leakages are located by spraying water under the sealing lips or by using an ultrasonic leak detector (sourcing reference: BMW Parts Service) and sealed with the appropriate nozzle.

54 10 210 REPLACING GLASS TILT ROOF (Z3 COUPE, M COUPE)

Operation is described in:

Removing and installing complete glass tilt roof, refer to 54 10 200 REMOVING AND INSTALLING COMPLETE GLASS TILT (FRAME) (Z3 COUPE, M COUPE) .

Article GUID: A00203000

CONVERTIBLE TOP

54 31 CONVERTIBLE TOP, FRAME AND ACTUATION (MECHANICAL COMPONENTS)

TIGHTENING TORQUE SPECIFICATIONS - CONVERTIBLE TOP, FRAME AND ACTUATION (MECHANICAL COMPONENTS)

Application	Type	Measure
Guide To Convertible Top Lock	E36	8 N.m
Headliner To Finisher Strip (Convertible Top Lock)	E36	1 N.m

MOTOR-DRIVEN CONVERTIBLE TOP (HYDRAULIC COMPONENTS)

TIGHTENING TORQUE SPECIFICATIONS - MOTOR-DRIVEN CONVERTIBLE TOP (HYDRAULIC COMPONENTS)

Application	Type	Measure
Hydraulic Unit To Body Or Carrier	Z3 & M Roadster	10 N.m
Lines To Hydraulic Unit	Z3 & M Roadster	16 N.m
Oil Filler Plug To Hydraulic Unit	Z3 & M Roadster	11 N.m

54 61 ROLLOVER PROTECTION SYSTEM, FIXED

TIGHTENING TORQUE SPECIFICATIONS - ROLLOVER PROTECTION SYSTEM, FIXED

Application	Type	Thread	Measure
Rollover Protection Bar To Body	Z3/M Roadster	M8	22 N.m
Bracket For Rollover Protection Bar To Body, Nut	Z3/M Roadster	M8	10 N.m
Bracket For Rollover Protection Bar To Body	Z3/M Roadster	M8	22 N.m

SUNROOF

54 10 GLASS TILT SUNROOF

TIGHTENING TORQUE SPECIFICATIONS - GLASS TILT SUNROOF

Application	Type	Thread	Tightening Specification	Measure
1AZ Motor on glass tilt sunroof frame	Â	Â	Â	Â
Replace screw	E36/Z3 Coupe, M Coupe	M5	Â	6 Nm
2AZ Lid kinematics on glass tilt sunroof frame	E36/Z3 Coupe, M Coupe	Â	Â	3.5 +/- 0.5 Nm
3AZ Shoehorn hinge on glass tilt sunroof lid	E36/Z3 Coupe, M Coupe	Â	Â	4 +/-0.5 Nm
4AZ Lid bearing on glass tilt sunroof frame	E36/Z3 Coupe, M Coupe	Â	Â	3.5 +/- 0.5 Nm
Â	E63	Â	Hinge, front	4.6 Nm
5AZ Glass sunroof lid to drive case	E63	Â	Replace screws	4.6 Nm

6AZ Drive case to body	E63	Â	Â	8 Nm
7AZ Floating roof liner to gate	E63	Â	Â	3 Nm

54 13 ELECTRIC SUN ROOF COMPONENTS

54 13 ELECTRIC SUN ROOF COMPONENTS

TIGHTENING TORQUE SPECIFICATIONS - ELECTRIC SUN ROOF COMPONENTS

Application	Type	Measure
1AZ Drive to cassette	E83 / E53 / E46 / E39 / E38 / E36 / E34 / E32 / E31	2.8 Nm
Â	E34 Touring / E60 / E61 / E63 / E65 / E66 / E87	3.5 Nm

54 12 MECHANICAL SUN ROOF COMPONENTS

54 12 MECHANICAL SUN ROOF COMPONENTS

TIGHTENING TORQUE SPECIFICATIONS - MECHANICAL SUN ROOF COMPONENTS

Application	Type	Thread	Tightening Specification	Measure
1 AZ Cable cover to cassette	E36	Â	Â	1.3 Nm
Â	E38	Â	Â	1.6 Nm
2AZ (Glass) cover to gate Always use new nuts and bolts.	E34 / Touring	Â	Â	5 Nm
Â	E38 / E46 / E87 / E90	Â	Â	4.5 Nm
Â	All others	Â	Â	6 Nm
Â	All others	Â	Â	6 Nm
Â	E53 / E61 / E83 / E91	Â	Â	4 +/-$^{0.5}$ Nm
3AZ Rail to cassette	E31 / E32 / E34	M4	Â	1.8 Nm
Â	E32 / E34	M5	Â	2.8 Nm
4AZ Cable cover to cassette	E36	Â	Â	2.8 Nm
5AZ Floating roof liner to gate	E36	Â	Â	1.5 Nm
Â	E38 / E39	M4x6	Â	1.5 Nm
Â	E46	Â	Â	0.9 Nm
6AZ Cassette to body	E36 / E34 / Touring	M5	Â	3.5 Nm
Â	E46	M6x14	Â	5.2 Nm
Â	E65	M6	Â	5.5 Nm
Â	E53 / E61 / E83 / E87 / E90 / E91	M6	Self-tapping screw	5.4 +/-$^{0.5}$ Nm
7AZ Mount for wind deflector on cassette	E38 / E34	Â	Â	1.2 Nm
Â	E46	Â	Â	1 Nm

8AZ Stop to floating headliner (glass slide/tilt sunroof)	E38	M4x8	Â	0.9 Nm
9AZ Cover, cross-member	E53 / E61 / E83	Â	Â	3.5 +/-0.5 Nm
Â	E91	Â	Â	2 +/-0.5 Nm
10AZ Front floating roofliner to detent element	E53 / E61 / E83 / E91	Â	Â	1.5 +/-0.2 Nm
11 AZ Rear floating roofliner to detent element	E53 / E61 / E83 / E91	Â	Â	1 +/-0.2 Nm

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Article GUID: A00204893