

ACCESSORIES AND BODY, CAB

Trailers - Repair Instructions - X6

LOADING PLATFORM

00 00 ... BODY AND UNDERBODY: CHECKING FOR CORROSION AND DAMAGE

Inspect chassis, underbody and wheel arches and check for corrosion and damage.

NOTE: It is absolutely essential to rectify any identified faults after consulting the customer and to issue a separate invoice.

00 00 ... RAISING BMW MULTI-TRAILER

CAUTION: Twin-strut underfloor platforms and twin-pillar lifting platforms are suitable for raising the BMW multi-trailer.
Lifting platforms with drive-on surfaces are not suitable for raising in order to carry out maintenance and repair work.

The lifting platform must comply with the relevant statutory accident prevention regulations and be serviced according to the manufacturer's instructions. It is essential to follow the lifting platform operating instructions, in particular the safety instructions and carrying capacity!

Make sure you adhere to the BMW-recommended work area of 5 x 7 m and to an escape route of 0.6 m between two lifting platforms.

Before raising the BMW multi-trailer, please observe the following points:

- Raise the trailer only when it is unloaded
- Remove a supplied loading ramp from the loading ramp frame so that all chassis areas of the BMW multi-trailer are freely accessible
- There must be sufficient clearance between the carrier arms/flat girder bridges and the GFK aprons or the front guard of the BMW multi-trailer
- The BMW multi-trailer must always be positioned in the middle of the lifting platform.

CAUTION: You will need special additional supports for the lifting platform in order to bridge the difference in height between longitudinal member and lower edge of GFK side apron or front guard of the BMW multi-trailer. The minimum height of the additional supports is 145 mm. Use only the additional supports approved by the platform manufacturer or specified in these repair instructions.

You will find appropriate examples in the repair instructions for the majority of lifting platforms present in BMW workshops. For lifting platforms that are not named, the relevant manufacturers will offer you

appropriate additional supports. Please contact directly the manufacturer of the lifting platform used in your dealership.

CAUTION: The BMW multi-trailer may only be raised by its longitudinal members. Do not under any circumstances raise the BMW multi-trailer by the GFK aprons. Make sure the additional supports bear the longitudinal members over their entire width and no attachments or wiring harnesses are touched or jammed. Check the securing equipment of the additional supports for correct seating. Under no circumstances should any work be carried out underneath the BMW multi-trailer if it is not adequately secured against slipping off the lifting platform.

The areas (2) on the longitudinal members (1) marked in the adjacent diagram are the best areas for attaching the additional supports.

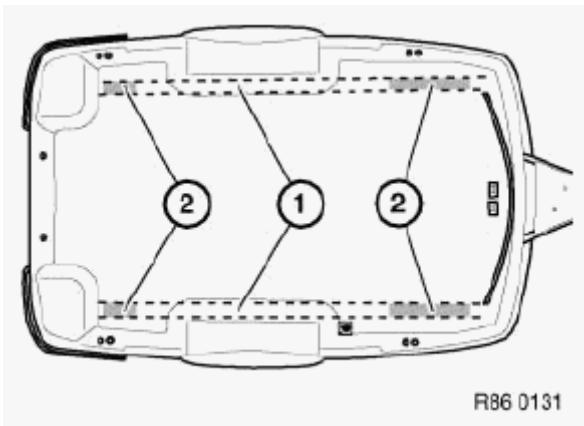


Fig. 1: Identifying Longitudinal Members
Courtesy of BMW OF NORTH AMERICA, INC.

General notes on using twin-pillar lifting platforms

For the twin-pillar lifting platforms described, the BMW multitrailer is positioned in the direction of travel on the platform. For lifting platforms which do not create sufficient clearance between disk wheel and carrier arms, move the BMW multitrailer against the direction of travel onto the platform.

Becker & Sohne twin-strut underfloor platform

The BMW multi-trailer can only be raised if it is supported at right angles to the direction of travel. For raising, use the high additional supports (1) of Becker & Sohne.

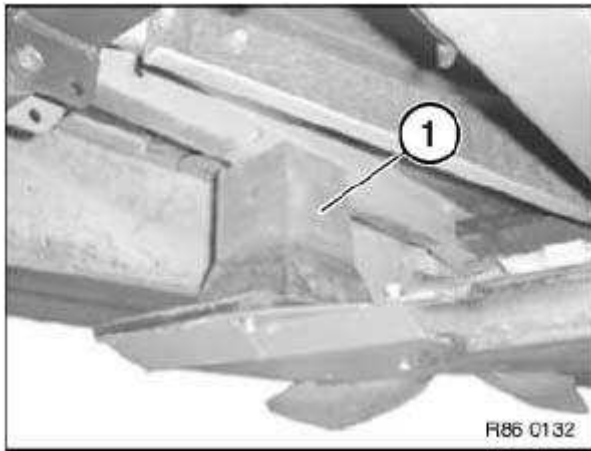


Fig. 2: Supporting Underfloor Platform
 Courtesy of BMW OF NORTH AMERICA, INC.

CAUTION: Also lash the BMW multi-trailer to the flat girder bridges of the lifting platform. Flag the protruding tow hitch and the drawbar member of the BMW multi-trailer conspicuously so as to prevent injury, e.g. with a red cloth.

MAHA twin-pillar lifting platform

The BMW multi-trailer can only be raised if you use the support plate attachment sleeves for transporters (1). Position the axle of the BMW multi-trailer in the direction of travel in front of the pillars of the platform in order to obtain the specified lifting ranges and to establish sufficient clearance between disk wheel and carrier arms. The long carrier arms raise the front and the short carrier arms raise the rear of the BMW multi-trailer.

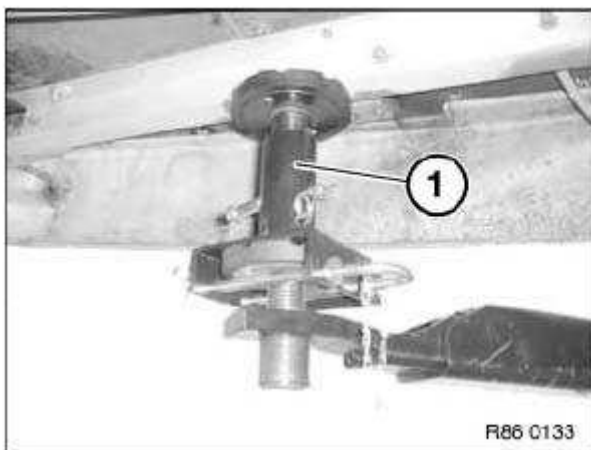


Fig. 3: Identifying MAHA Twin-Pillar Lifting Platform
 Courtesy of BMW OF NORTH AMERICA, INC.

Romaico-Lift twin-pillar lifting platform

The BMW multi-trailer can only be raised if you use the 146 mm high attachments (1). Position the axle of the BMW multi-trailer in the direction of travel in front of the pillars of the platform in order to obtain the specified lifting ranges and to establish sufficient clearance between disk wheel and carrier arms. The long carrier arms raise the front and the short carrier arms raise the rear of the BMW multi-trailer.

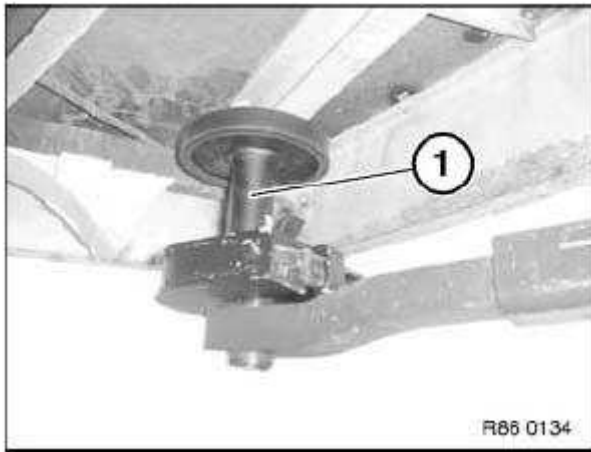


Fig. 4: Identifying Romaico-Lift Twin-Pillar Lifting Platform
Courtesy of BMW OF NORTH AMERICA, INC.

Working pit

The BMW multi-trailer can be serviced or repaired in conjunction with a working pit if the following measures are taken into consideration. The BMW multi-trailer must be secured against slipping/tilting sideways. The drawbar jockey wheel must be firmly secured against rolling.

86 10 ... ADJUSTING BRAKE SYSTEM

Proper adjustment of the brake system is only possible if the brake Bowden cables and all brake system moving parts move freely and are ready for operation.

The wheels must be completely fitted and able to rotate freely. Always adjust both brake sides. The left and right sides are adjusted in the same way.

Pull out overrunning equipment (1) fully in direction of arrow.

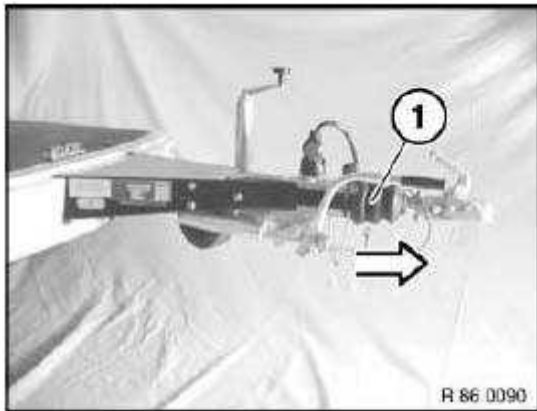


Fig. 5: Pulling Out Overrunning Equipment In Direction Of Arrow
 Courtesy of BMW OF NORTH AMERICA, INC.

Reversing lever (1) must rest directly on innerlying tow tube of overrunning brake.

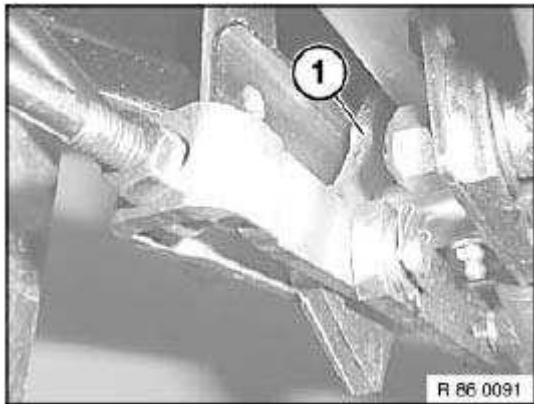


Fig. 6: Identifying Reversing Lever
 Courtesy of BMW OF NORTH AMERICA, INC.

Screw brake linkage (1) into nut (2) until distance (3) (nut (2) - end of brake linkage (1)), is 10 - 15mm. Lock brake linkage (1) in position with nut (4).

Check distance (3) and nuts (2, 4) with brake linkage installed.

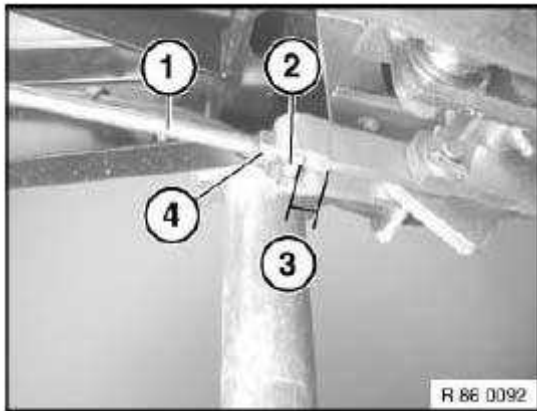


Fig. 7: Checking Distance And Nuts With Brake Linkage Installed
 Courtesy of BMW OF NORTH AMERICA, INC.

Insert pull rod (1) in brake compensator (2) and screw nut (3) onto pull rod (2).

Tighten nut (3) until pull rod (1) is free of play.

Check pull rod (1) already fitted for zero play.

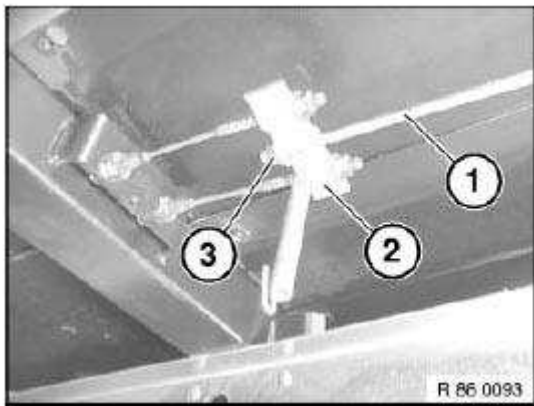


Fig. 8: Inserting Pull Rod In Brake Compensator And Screw Nut
 Courtesy of BMW OF NORTH AMERICA, INC.

Hook tension spring (1) to tension spring mount (2).

Installation:

The brake shoes are adjusted in two work steps. In the first step, the distance between the lower half of the brake shoes and the brake drum is adjusted. In the second step, the distance between the upper half of the brake shoes and the brake drum is adjusted.

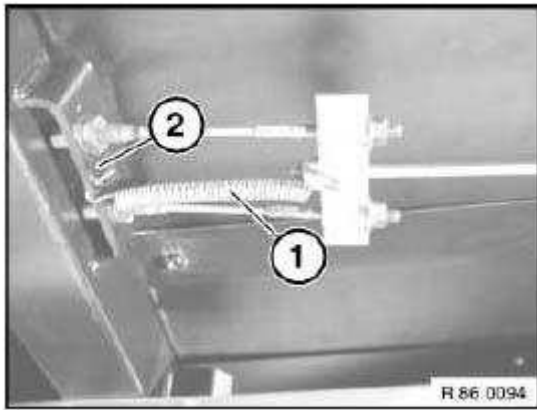


Fig. 9: Identifying Hook Tension Spring To Tension Spring Mount
 Courtesy of BMW OF NORTH AMERICA, INC.

Rotate road wheel (1) in direction of travel and simultaneously turn adjusting screw (2) in direction of arrow.

Tighten adjusting screw (2) until road wheel (1) can no longer be turned.

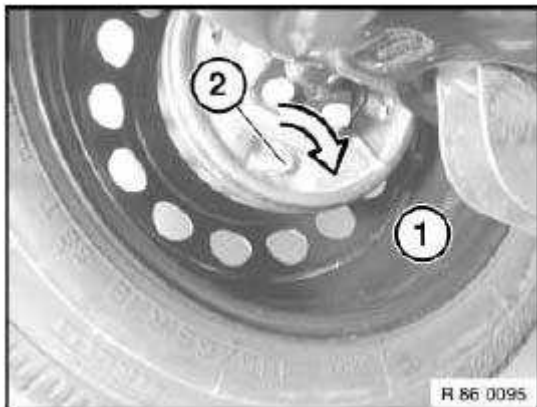


Fig. 10: Rotating Road Wheel In Direction Of Arrow
 Courtesy of BMW OF NORTH AMERICA, INC.

Turn adjusting screw (1) in direction of arrow and release slowly until road wheel (2) can rotate.

Finish adjustment procedure when slight grinding noises can be heard in lower brake shoe halves.

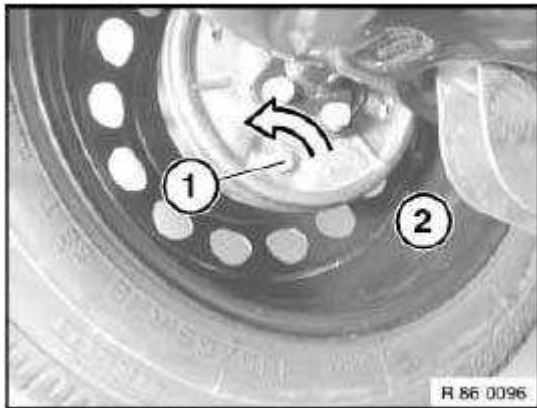


Fig. 11: Turning Adjusting Screw In Direction Of Arrow
Courtesy of BMW OF NORTH AMERICA, INC.

Firmly tighten handbrake lever three to five times.

Depending on road wheel side, tighten nut (1) or (2) until slight grinding noises can be heard in upper brake shoe halves.

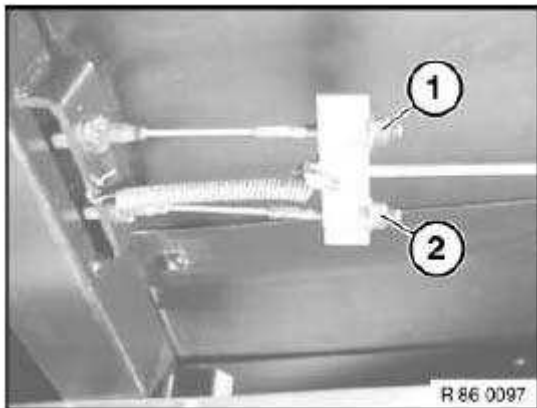


Fig. 12: Identifying Nuts (1) or (2)
Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... ADJUSTING SPRING FORCE ACCUMULATOR

The spring force accumulator requires no maintenance and generally does not need to be readjusted.

Adjustment dimension, spring force accumulator: distance between end of support tube - internal washer (1) is 90 mm.

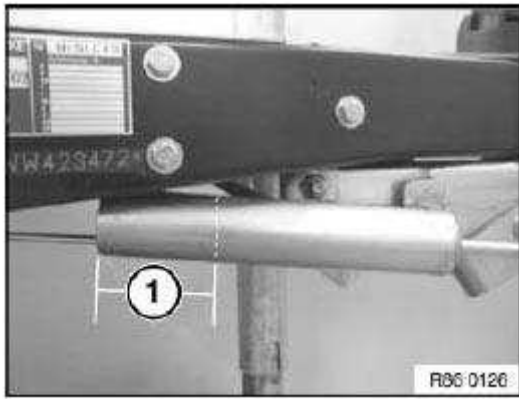


Fig. 13: Identifying Distance Between End Of Support Tube - Internal Washer
Courtesy of BMW OF NORTH AMERICA, INC.

To tension spring force accumulator: turn nut (2) located in support tube (1) clockwise.

To relieve tension on spring force accumulator: turn nut (2) located in support tube (1) counterclockwise.

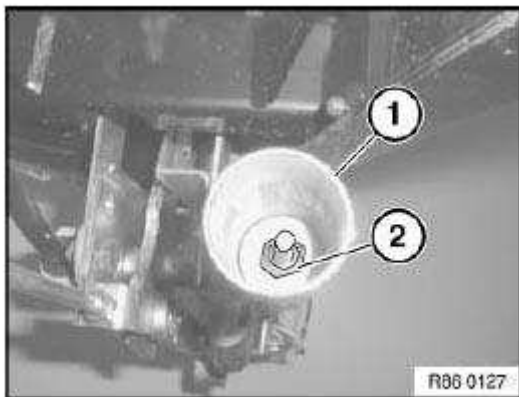


Fig. 14: Identifying Support Tube And Nut
Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... DISASSEMBLY OF CAMLOCK RETAINING CAM

Unscrew bolts (1).

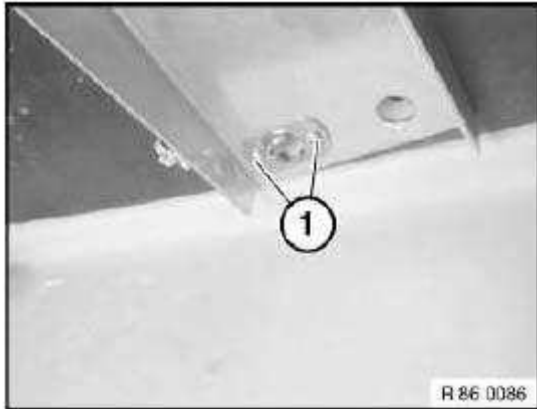


Fig. 15: Identifying Camlock Retaining Cam And Bolts
 Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... DISASSEMBLY OF BASE PLATE

NOTE:

- Disassembly of bar
 refer to **86 10 ... REPLACING BAR**
- Disassembly of lashing plate
 refer to **86 10 ... REPLACING LASHING PLATE AND LASHING EYE**
- Disassembly of 12 volt socket
 refer to **86 10 ... REPLACING 12 VOLT SOCKET**
- Remove plastic bush/metal bush
 refer to **86 10 ... REMOVING PLASTIC BUSH/METAL BUSH**
- Disassembly of light guard
 refer to **86 10 ... REPLACING REAR LIGHT**
- Disassembly of front apron
 refer to **86 10 ... DISASSEMBLY OF FRONT APRON**
- Disassembly of left and right aprons
 refer to **86 10 ... DISASSEMBLY OF LEFT AND RIGHT APRONS**
- Disassembly of left and right wheel boxes
 refer to **86 10 ... DISASSEMBLY OF LEFT AND RIGHT WHEEL BOXES**
- Disassembly of rear apron
 refer to **86 10 ... DISASSEMBLY OF REAR APRON**
- Disassembly of left and right lamp housings
 refer to **86 10 ... DISASSEMBLY OF LEFT AND RIGHT LAMP HOUSINGS**
- Disassembly of rivet connection, rear support

Unscrew bolts (1).

CAUTION: Before drilling out rivet heads, drive in rivet pins with a punch.
 Drill out rivet connections (2).

Tightening Torque,

refer to 86 10 32AZ, see **86 10 PLATFORM** .

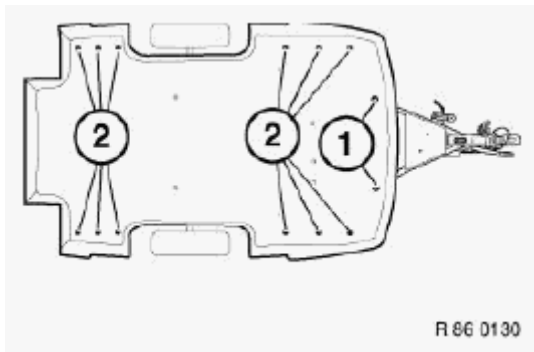


Fig. 16: Drilling Out Rivet Connections And Bolts
Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... DISASSEMBLY OF BRACKET ON PLATFORM BASE

Unscrew bolts (1).

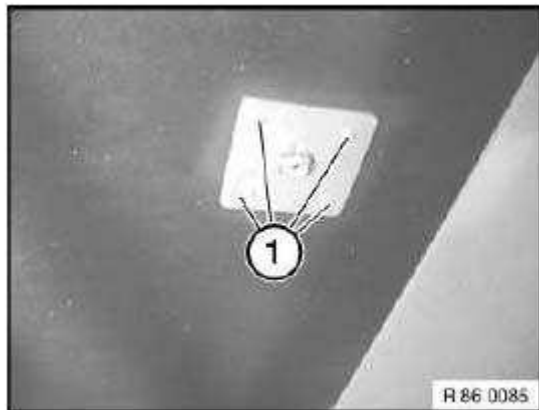


Fig. 17: Identifying Bracket On Platform Base And Bolts
Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... DISASSEMBLY OF FRONT APRON

Drill out rivets (1) on lower apron edge.

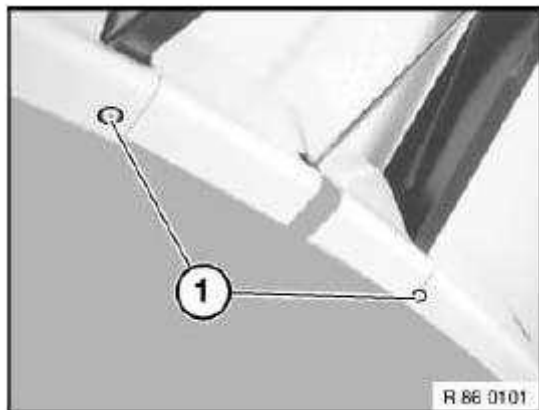


Fig. 18: Drilling Out Rivets On Lower Apron Edge
 Courtesy of BMW OF NORTH AMERICA, INC.

Remove sealing compound (1).

Drill out rivets (2).

Installation

Use Sikaflex 221 as sealing compound.

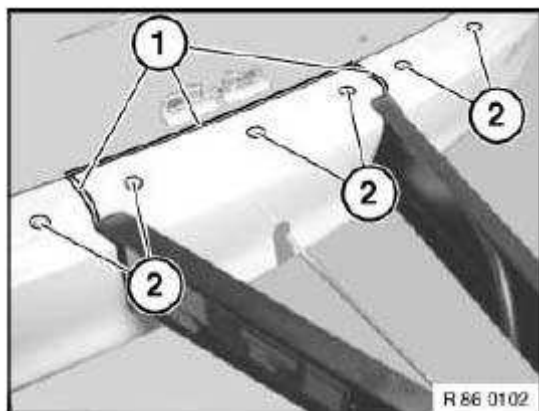


Fig. 19: Identifying Sealing Compound And Rivets
 Courtesy of BMW OF NORTH AMERICA, INC.

Press side sections (1) to side in direction of arrow. Tilt center section (2) downwards and remove to side.

Installation

Use Sikaflex 221 as sealing compound.

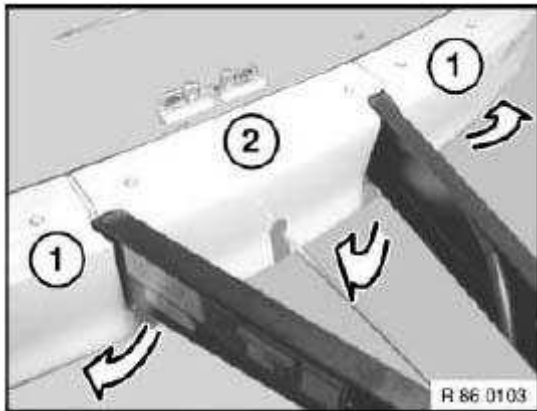


Fig. 20: Pressing Side Sections To Side In Direction Of Arrow
 Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... DISASSEMBLY OF FRONT PROTECTION BAR

Release screws (1) on cross-member (2).

Installation

Use new self-locking nuts.

Tightening Torque,

refer to 86 10 4AZ, see **86 10 PLATFORM** .

Installation

Tightening Torque,

refer to 86 10 5AZ, see **86 10 PLATFORM** .

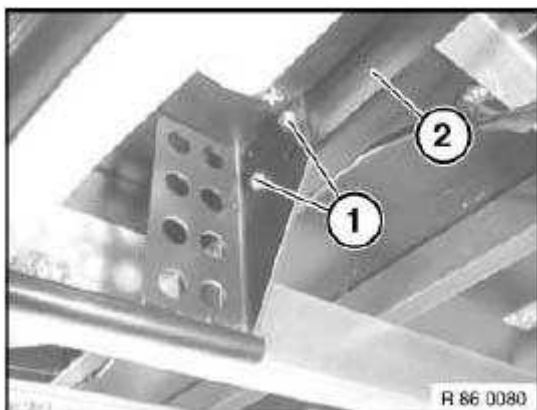


Fig. 21: Identifying Screws On Cross-Member
 Courtesy of BMW OF NORTH AMERICA, INC.

Release screws (1) on longitudinal member (2).

Installation

Tightening Torque,

refer to 86 10 5AZ, see **86 10 PLATFORM** .

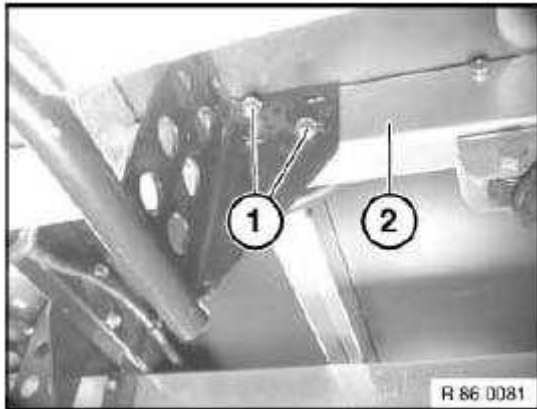


Fig. 22: Identifying Screws On Longitudinal Member
Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... DISASSEMBLY OF JOCKEY WHEEL OR JOCKEY WHEEL MOUNT

Turn clamping lever (1) in direction of arrow and release clamping connection. Open clamping bracket (2) and remove jockey wheel (3). Release screws on mount (4) and remove screws.

Installation

Tightening Torque,

refer to 86 10 11AZ, see **86 10 PLATFORM** .

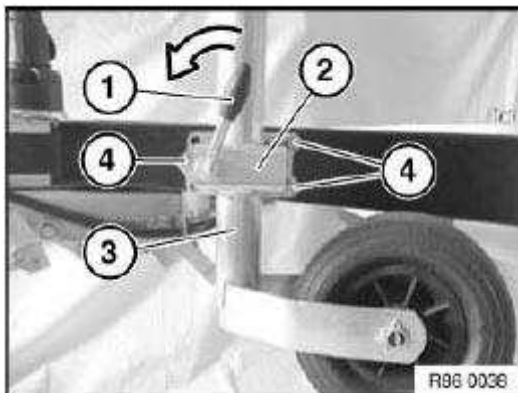


Fig. 23: Turning Clamping Lever In Direction Of Arrow

Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... DISASSEMBLY OF LEFT AND RIGHT APRONS

NOTE: Remove position light,
refer to 86 10 ... REPLACING POSITION LIGHT.

Remove rear light,

refer to 86 10 ... REPLACING REAR LIGHT.

Remove plastic bush/metal bush

refer to 86 10 ... REMOVING PLASTIC BUSH/METAL BUSH.

Drill out rivets (1) on lower apron edge.

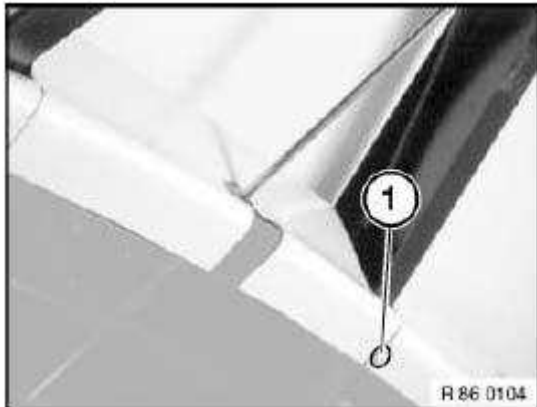


Fig. 24: Drilling Out Rivets On Lower Apron Edge
Courtesy of BMW OF NORTH AMERICA, INC.

Remove sealing compound (1).

Drill out all rivets (2) along apron edge.

Installation

Use Sikaflex 221 as sealing compound.

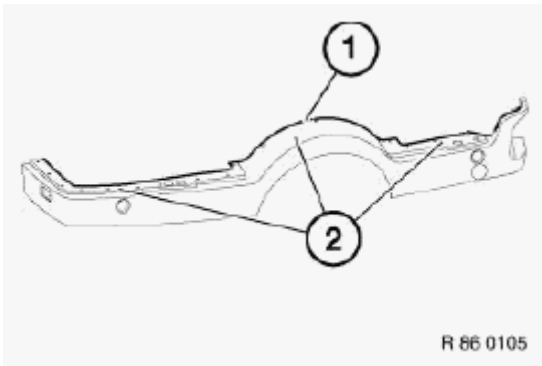


Fig. 25: Identifying Sealing Compound And Rivets
Courtesy of BMW OF NORTH AMERICA, INC.

Remove sealing compound (1).

Drill out rivets (2) on lower apron edge.

Installation

Use Sikaflex 221 as sealing compound.

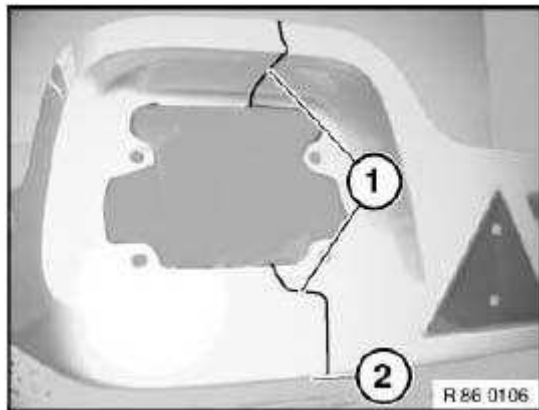


Fig. 26: Drilling Out Rivets On Lower Apron Edge
Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... DISASSEMBLY OF LEFT AND RIGHT LAMP HOUSINGS

Cut through sealing compound (1) and remove.

Drill out rivet connections (2).

Installation

Use Sikaflex 221 as sealing compound.

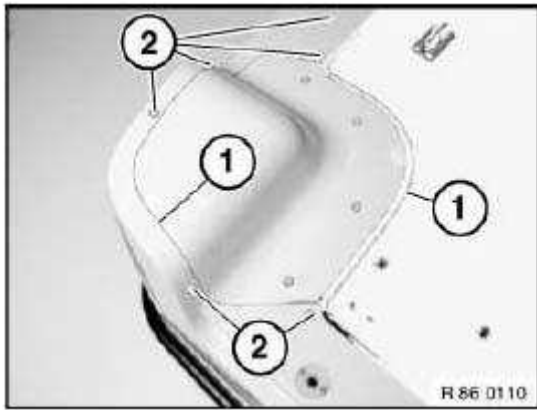


Fig. 27: Identifying Left And Right Lamp Housings
Courtesy of BMW OF NORTH AMERICA, INC.

Drill out rivet connections (1).

Raise side sections (2, 3).

Pull out lamp housing (4) towards inside in direction of platform.

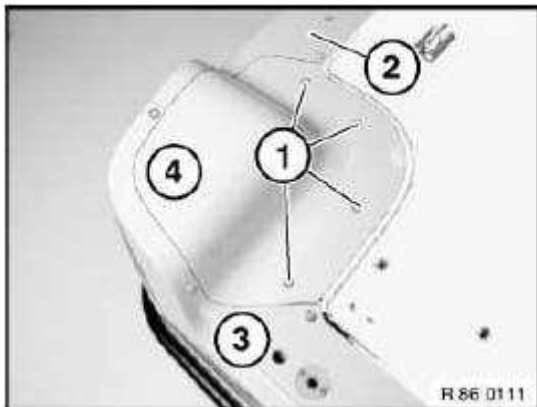


Fig. 28: Drilling Out Rivet Connections And Lamp Housing
Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... DISASSEMBLY OF LEFT AND RIGHT WHEEL BOXES

Remove sealing compound (1).

Drill out rivets (2).

Raise side apron (3). Pull out wheel box (4) towards rear.

Installation

Use Sikaflex 221 as sealing compound.

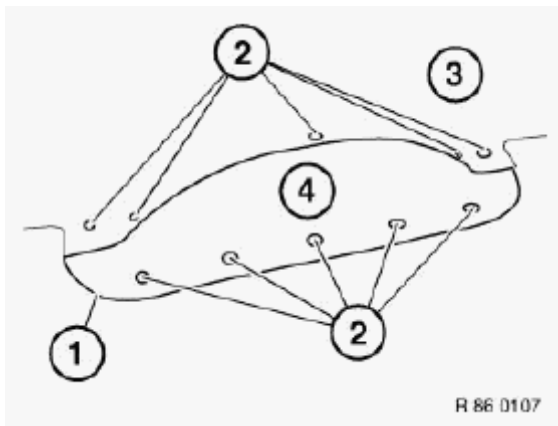


Fig. 29: Identifying Left And Right Wheel Boxes
 Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... DISASSEMBLY OF LICENCE PLATE MOUNTING PLATE

CAUTION: Once the connecting screws (1) have been removed, the closing spring of the hinge retracts. Risk of trapping!

Release screws (1) in loading ramp frame (2) on left and right sides.

Installation

Use new self-locking nuts.

Tightening Torque,

refer to 86 10 7AZ, see **86 10 PLATFORM** .

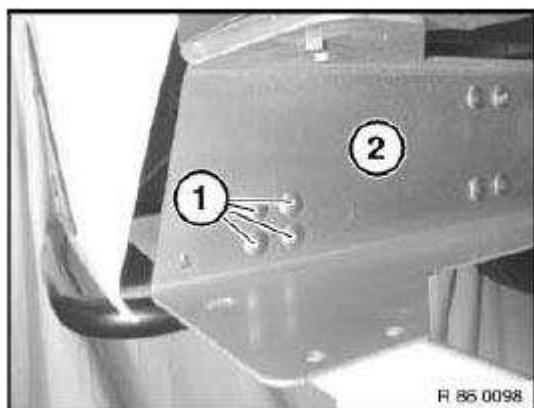


Fig. 30: Identifying Loading Ramp Frame And Screws
 Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... DISASSEMBLY OF LOADING RAMP FRAME/DISASSEMBLY OF RAIL, LEFT/RIGHT

NOTE: Two persons are required to disassemble the loading ramp frame.
Disassemble license plate mounting plate
Disassemble pull rod.
Refer to Removing overrunning equipment/maintaining or replacing guide bush/installing overrunning equipment.

Release screws (1) of loading ramp frame (2) on cross-strut (3).

Installation

Tightening Torque,

refer to 86 10 7AZ, see 86 10 PLATFORM .

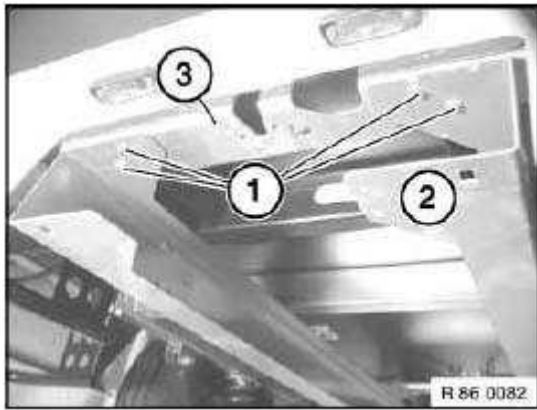


Fig. 31: Identifying Loading Ramp Frame On Cross-Strut And Screws
Courtesy of BMW OF NORTH AMERICA, INC.

Release screws (1, 2) on left and right sides of loading ramp frame (3).

Installation

Use new self-locking nuts.

Tightening Torque,

refer to 86 10 8AZ, see 86 10 PLATFORM .

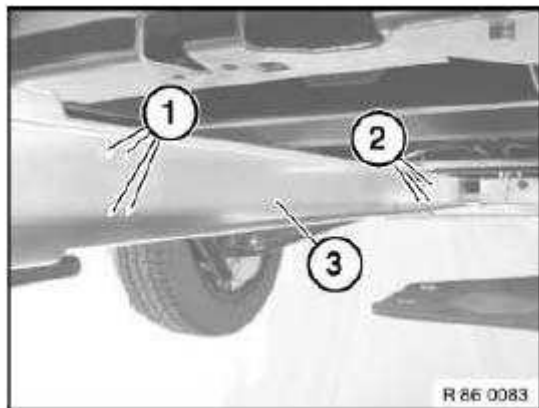


Fig. 32: Identifying Loading Ramp Frame And Screws
 Courtesy of BMW OF NORTH AMERICA, INC.

Release screws (1, 2, 3).

Installation

Use new self-locking nuts.

Tightening Torque,

refer to 86 10 9AZ, see **86 10 PLATFORM** .

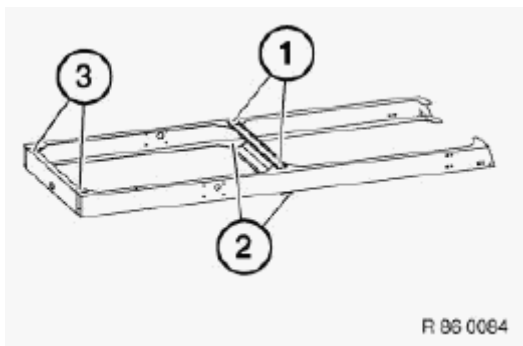


Fig. 33: Identifying Screws
 Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... DISASSEMBLY OF REAR APRON

NOTE: Remove rear light,
 refer to **86 10 ... REPLACING REAR LIGHT.**
 Remove plastic bush/metal bush
 refer to **86 10 ... REMOVING PLASTIC BUSH/METAL BUSH.**

Cut through sealing compound (1) on left and right and remove.

Drill out rivets (2) on left and right sides on lower apron edge.

Installation

Use Sikaflex 221 as sealing compound.

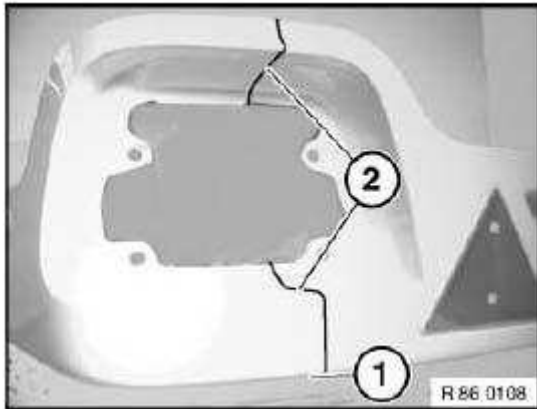


Fig. 34: Drilling Out Rivets On Lower Apron Edge
Courtesy of BMW OF NORTH AMERICA, INC.

Cut through sealing compound (1) and remove.

Drill out rivets (2).

Installation

Use Sikaflex 221 as sealing compound.

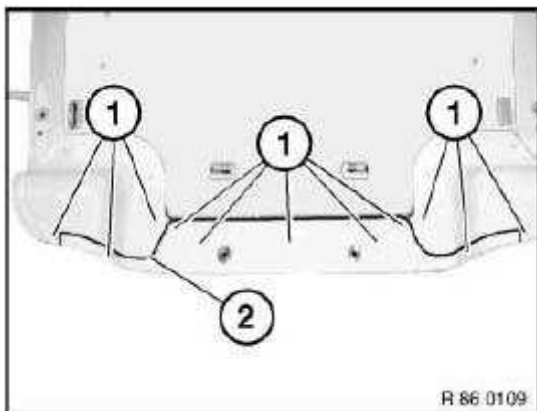


Fig. 35: Cutting Sealing Compound
Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... DISCONNECTING PLUG CONNECTION, WIRING HARNESS, FRONT/REAR

Spread levers (1) on socket housing apart in direction of arrow and disconnect female connector (2) in direction

of arrow towards bottom.

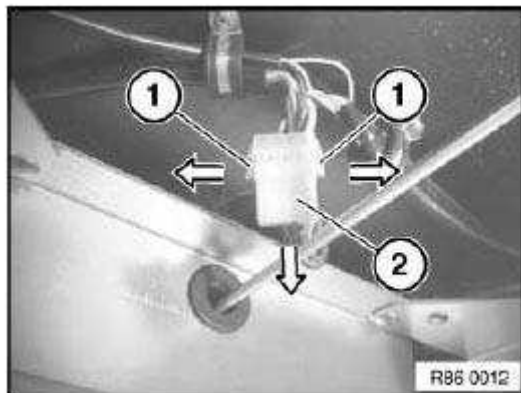


Fig. 36: Disconnecting Female Connector In Direction Of Arrow
Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... INSTALLATION POSITION OF BMW LETTERING

Top edge of lettering at same height as recess for position light (1).

Distance between drawbar member and lettering (2) is 300 mm.

Installation

Remove grease from gluing surfaces.

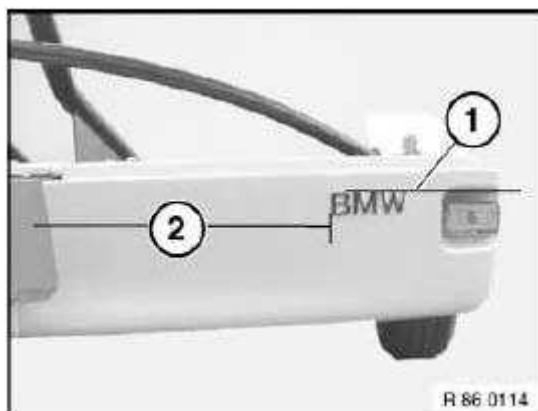


Fig. 37: Identifying Distance Between Drawbar Member And Lettering
Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... POSITIONING OF MULTITRAILER HOOD FOR MAINTENANCE AND REPAIR WORK

IMPORTANT: At least two persons are needed to install and remove the hood from the platform.

Before installing and removing the hood, secure the BMW multitrailer and the

entire combination against rolling. For this purpose, use the parking brake and the chocks of the BMW multitrailer.

The hood can also be set up and lowered with the aid of the universal lift available from BMW in conjunction with the roof racks and the hood adapter. Under no circumstances should work of any kind be carried out below the suspended hood.

For maintenance and repair work, raise the hood using a lifting platform. Twin-column lifting platforms, body lifting platforms and twin-stamp underfloor platforms are suitable. The seating plates and areas of the lifting platform must be adjustable according to the dimensions of **Fig. 38**.

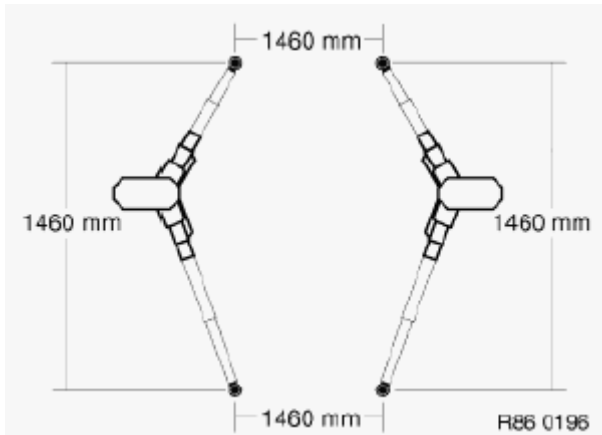


Fig. 38: Identifying Lifting Platform Dimensions
Courtesy of BMW OF NORTH AMERICA, INC.

The lifting platform must conform to the relevant legal provisions of the accident prevention regulations and be serviced as specified. Comply with the lifting platform operating instructions, in particular the safety instructions and the carrying capacity.

Make sure you adhere to the BMW-recommended work area of 5 x 7 m and to an escape route of 0.6 m between two lifting platforms.

Please comply with the following instructions before raising the hood:

- Raise only when it is unloaded;
- Ensure sufficient clearance between the seating plates/seating areas and the GFP edge of the hood;
- The hood must always be positioned in the middle of the lifting platform.

IMPORTANT: The hood may only be raised at the pin (1). Under no circumstances may the hood be raised at the GFP edge of the hood (2). See **Fig. 39**. Exclusively for removal of pin (1), raise the hood in the GFP area.

Also refer to:

86 21 ... REMOVING CENTERING PIN FROM MOUNTING BRACKET.

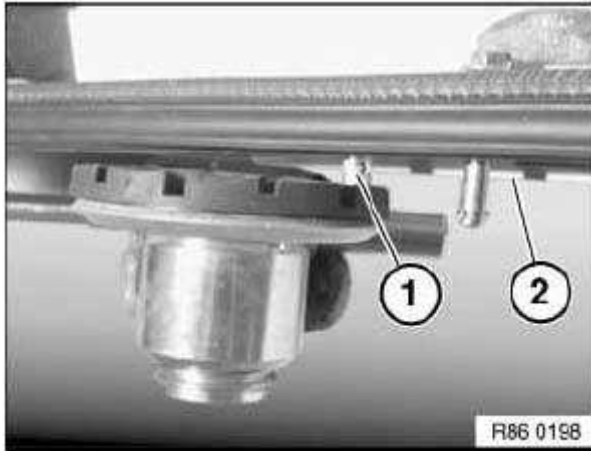


Fig. 39: Identifying Pin And Hood In GFP Area
 Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... REMOVING CAMLOCK RETAINING CAM ON LOADING RAMP

Drill out rivets (1).

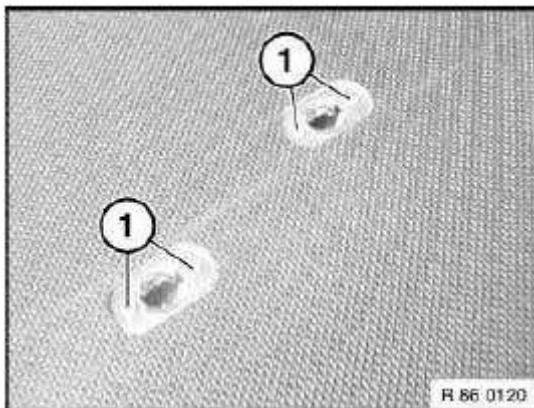


Fig. 40: Identifying Camlock Retaining Cam On Loading Ramp And Rivets
 Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... REMOVING CAMLOCK SCREW CAP

Bend back edges (1) of tab washer (2). Remove tab washer (2) over cross pin (3) towards bottom.

Installation

Replace lockplate.

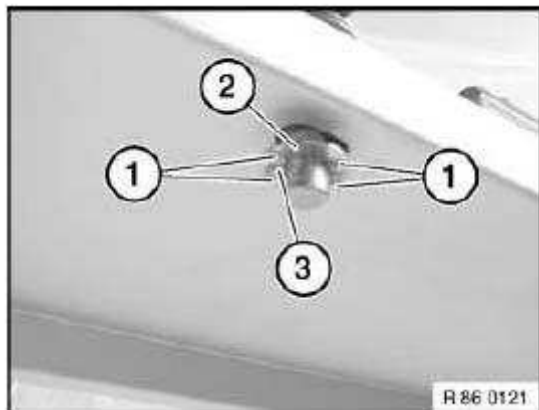


Fig. 41: Bend Back Edges Of Tab Washer
 Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... REMOVING AND INSTALLING OR REPLACING LEFT OR RIGHT COIL SPRING

Release screw (1) and remove, tilt shock absorber (2) in direction of arrow towards rear.

Installation

Use new self-locking nut.

Hold shock absorber vertically and protective cap points upwards. Completely press in shock absorber once and pull out up to required installation length. Do not tilt shock absorber further than is needed for installation.

Tightening Torque,

refer to 86 10 21AZ, see **86 10 PLATFORM** .

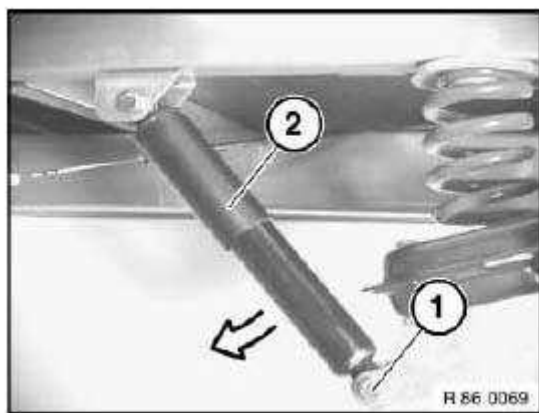


Fig. 42: Removing Tilt Shock Absorber And Screw
 Courtesy of BMW OF NORTH AMERICA, INC.

The trailing arm folds down once the coil spring on the arm has been released.

No persons should be located underneath trailing arm. Risk of injury!

Release screw (1) between trailing arm (2) and coil spring.

Installation

Tightening Torque,

refer to 86 10 22AZ, see **86 10 PLATFORM** .

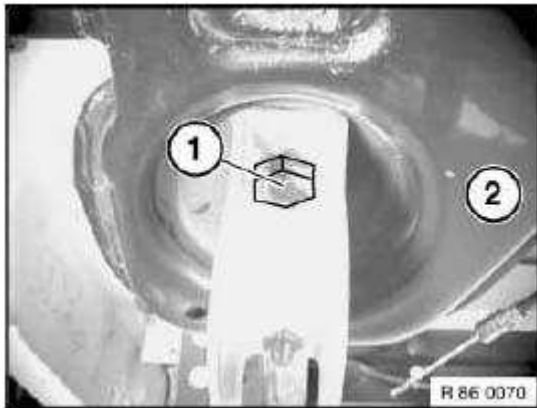


Fig. 43: Identifying Trailing Arm And Screw
Courtesy of BMW OF NORTH AMERICA, INC.

Remove pressure plate (1) from coil spring (2).

Installation

Use pressure plate with nut.

Fit pressure plate (1) according to its shape (3) into pressure spring (2).

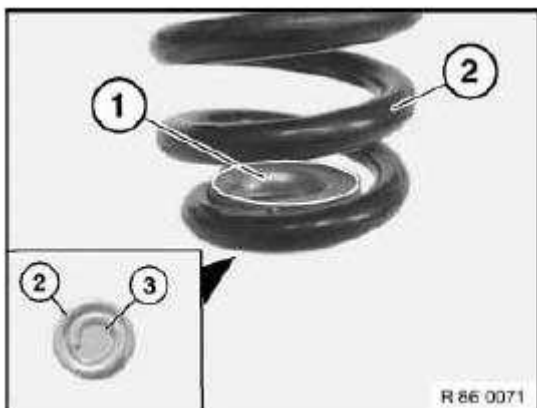


Fig. 44: Fit Pressure Plate (1) According To Its Shape (3) Into Pressure Spring (2)
Courtesy of BMW OF NORTH AMERICA, INC.

Release screw (1) between coil spring (2) and longitudinal member (3). Remove small pressure plate (4) and large pressure plate (5).

Installation

Use pressure plate without nut.

Fit small pressure plate (4) according to its shape (6) into pressure spring (2).

Tightening Torque,

refer to 86 10 23AZ, see **86 10 PLATFORM** .

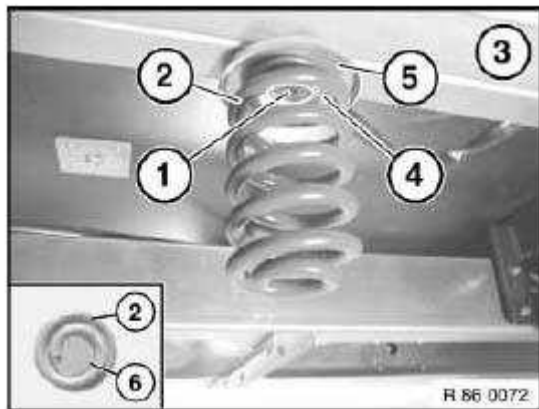


Fig. 45: Identifying Small Pressure Plate And Large Pressure Plate
Courtesy of BMW OF NORTH AMERICA, INC.

Installation

Two persons are needed to install the coil spring correctly. One person presses down the pressure plate (2) seated inside the coil spring (1) and tightens the coil spring (1)/trailing arm (3) screw connection. At the same time, the second person levers the coil spring (1) with a screwdriver into its correct seat.

Tightening Torque for coil spring (1)/trailing arm (3),

refer to 86 10 22AZ, see **86 10 PLATFORM** .

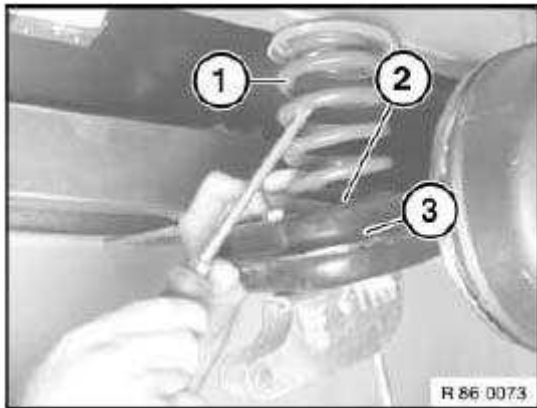


Fig. 46: Identifying Pressure Plate, Coil Spring And Trailing Arm
 Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... REMOVING BOLT ON LOADING RAMP

Insert a drift into hole (1) of bolt (2) and turn clockwise.

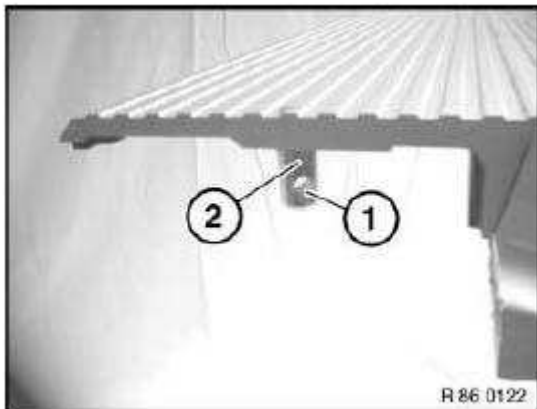


Fig. 47: Identifying Bolt On Loading Ramp
 Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... REMOVING BRAKE SHOES

The wheels of the multi-trailers must be able to rotate freely. Adjust and check brake system after installing brake shoes.

Unhook tension spring (1) from tension spring mount (2).

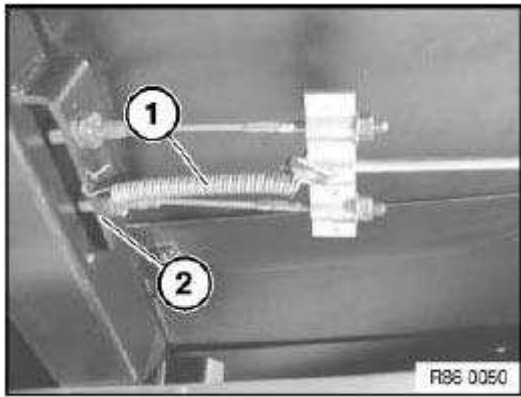


Fig. 48: Unhook Tension Spring From Tension Spring Mount
 Courtesy of BMW OF NORTH AMERICA, INC.

CAUTION: Once nut (1) of pull rod (2) has been released, do not move handbrake lever. Handbrake lever can flick upwards.

Release nut (1) on pull rod (2) and remove hexagon nut. Slide brake compensator (3) towards rear.

Installation

Use new self-locking nut.

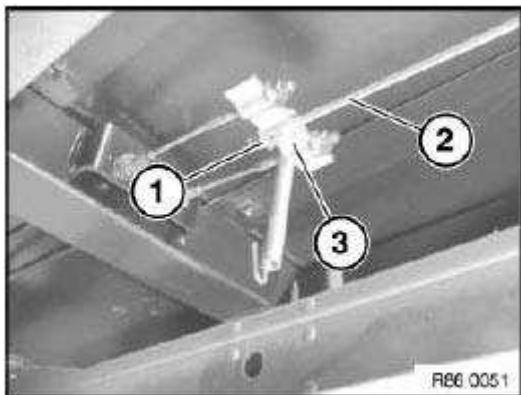


Fig. 49: Identifying Pull Rod And Nut
 Courtesy of BMW OF NORTH AMERICA, INC.

Grip openings (1) in wheel trim (2) with both hands and pull off wheel trim (2).

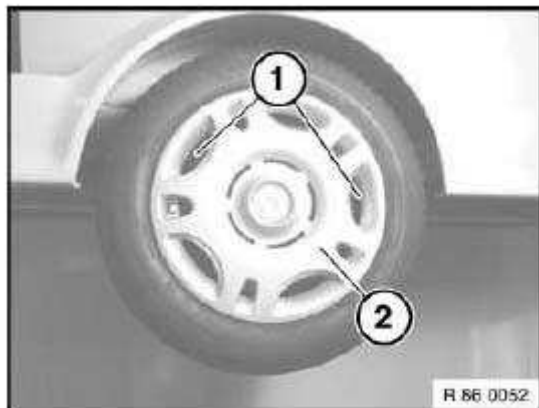


Fig. 50: Grip Openings In Wheel Trim With Both Hands
 Courtesy of BMW OF NORTH AMERICA, INC.

Release wheel bolts (1) and remove disk wheel (2).

Installation

Tightening Torque,

refer to 86 10 19AZ, see **86 10 PLATFORM** .

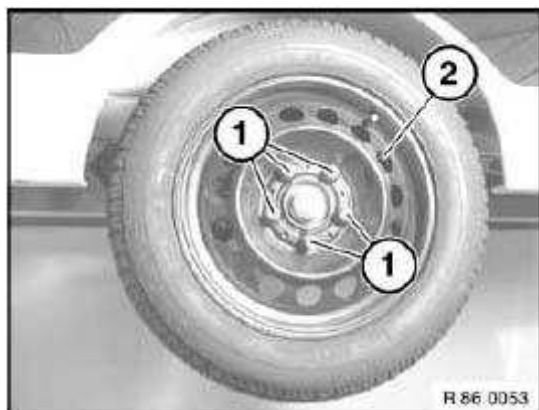


Fig. 51: Identifying Wheel Bolts And Disk Wheel
 Courtesy of BMW OF NORTH AMERICA, INC.

Turn brake shoe adjusting screw (2) on brake carrier (1) in direction of arrow and release fully. The brake shoes do not rest against the drum.

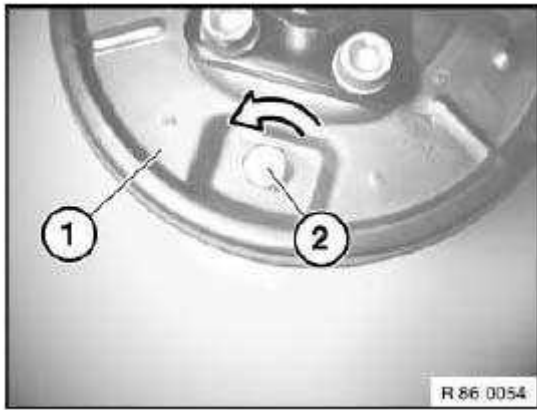


Fig. 52: Turning Brake Shoe Adjusting Screw On Brake Carrier
Courtesy of BMW OF NORTH AMERICA, INC.

Lever off cap (1).

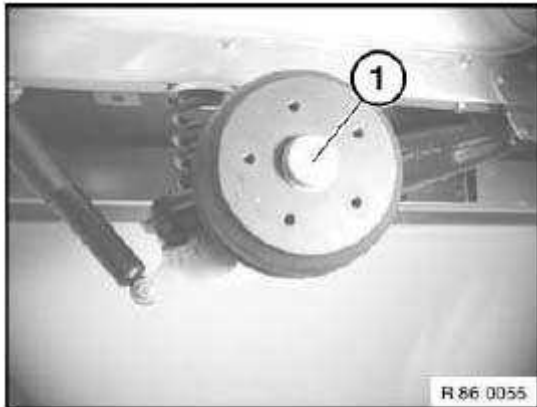


Fig. 53: Lever Off Cap
Courtesy of BMW OF NORTH AMERICA, INC.

Release nut (1) and remove. Pull off brake hub (2) with both hands.

Installation

Only a new nut is permitted for reinstallation.

Tightening Torque,

refer to 86 10 20AZ, see **86 10 PLATFORM** .

Do not screw off brake hub under any circumstances.

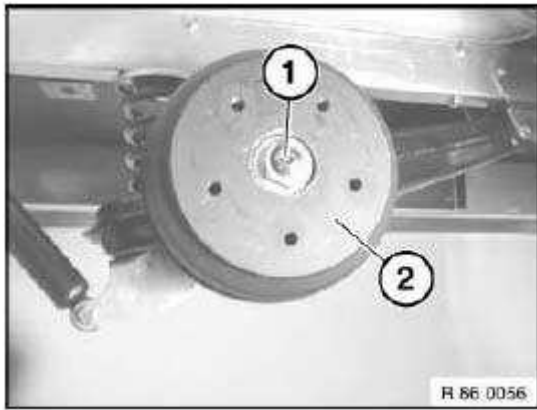


Fig. 54: Identifying Brake Hub And Nut
Courtesy of BMW OF NORTH AMERICA, INC.

To illustrate more clearly the work steps in **Fig. 55**, **Fig. 56** and **Fig. 57**, the wheel brake has been detached from the axle.

This procedure is not necessary for removing the brake shoes.

Push back cable (1).

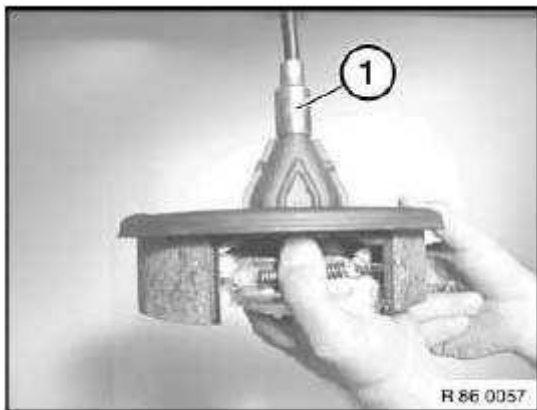


Fig. 55: Pushing Back Cable
Courtesy of BMW OF NORTH AMERICA, INC.

Remove shell (1).

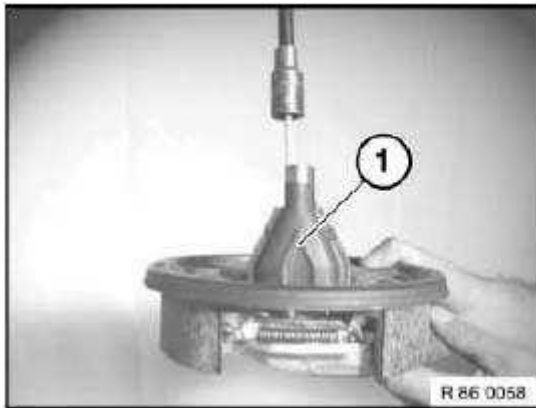


Fig. 56: Removing Shell
 Courtesy of BMW OF NORTH AMERICA, INC.

Remove brake cable (1) from mounting (2).

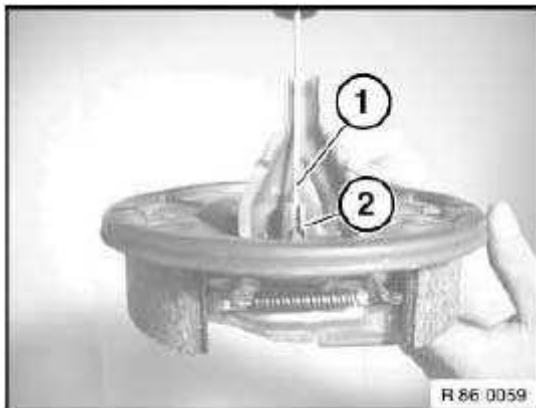


Fig. 57: Removing Brake Cable From Mounting
 Courtesy of BMW OF NORTH AMERICA, INC.

Unhook pressure spring (1) from fixed brake shoe (2) and brake carrier (3).

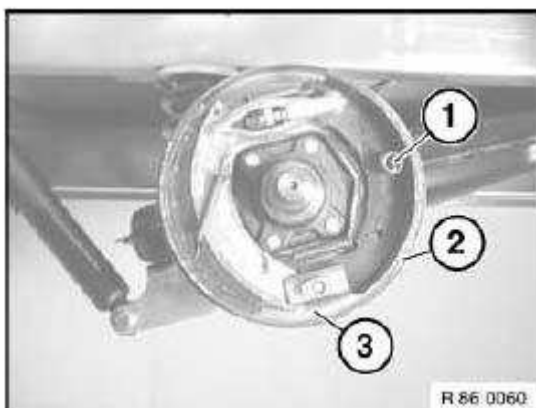


Fig. 58: Unhook Pressure Spring From Brake Shoe And Brake Carrier
Courtesy of BMW OF NORTH AMERICA, INC.

Remove tension spring (1) from both brake shoe fixtures (2).

Remove brake lever assembly (3).

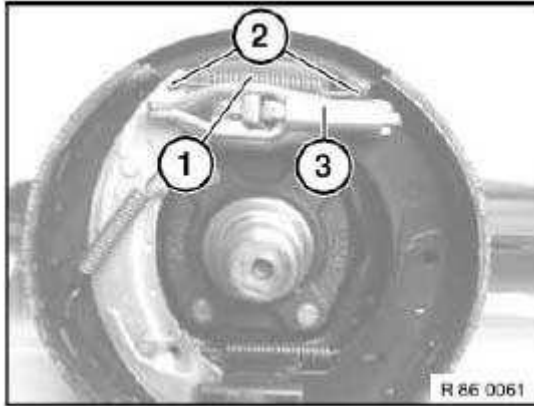


Fig. 59: Identifying Tension Spring And Brake Shoe Fixtures
Courtesy of BMW OF NORTH AMERICA, INC.

Installation

The fixed part of the brake lever assembly (3) is seated on the moving brake shoe. The moving part of the brake lever assembly is seated on the fixed brake shoe.

Pull brake shoes (1) apart in direction of arrow, tilt forward and remove from adjustment device (2).

Installation

Always replace the four shoes and use the same make.

Minimum lining thickness: 1.5 mm

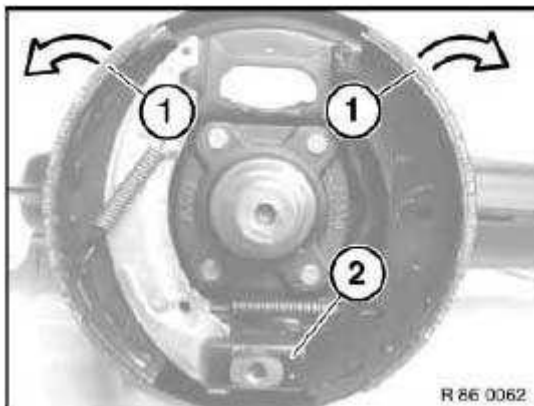


Fig. 60: Pulling Brake Shoes Apart In Direction Of Arrow
Courtesy of BMW OF NORTH AMERICA, INC.

Check adjustment device (1).

Check wedge (2) and setting pins (3) for ease of movement and wear.

Apply grease if necessary.

Check brake cables for ease of movement and wear.

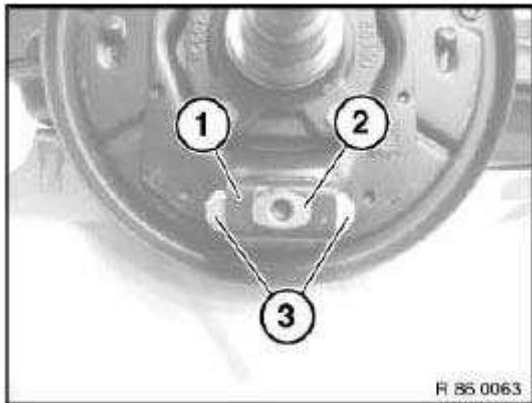


Fig. 61: Identifying Adjustment Device, Wedge And Setting Pins
Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... REMOVING ENTRY PROFILE SECTION ON LOADING RAMP, LEFT, RIGHT AND CENTER

CAUTION: Before drilling out rivets, drive in rivet pins with a punch.

Drill out rivets (1). Remove entry profile section (2) towards front.

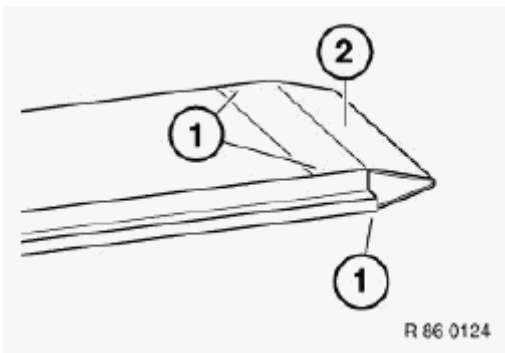


Fig. 62: Remove Entry Profile Section Toward Front
Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... REMOVING LEFT OR RIGHT SHOCK ABSORBER

Inspect the shock absorber while installed to ascertain whether it needs to be replaced.

Replace shock absorber if it is leaking. Replace shock absorber if it can be easily pushed in or pulled out when removed.

Release screw (1) and remove. Tilt shock absorber in direction of arrow. Release screw (2) and remove shock absorber.

Installation

Hold shock absorber vertically: protective cap points upwards. Completely press in shock absorber once and pull out up to required installation length. Do not tilt shock absorber further than is needed for installation.

Tightening Torque,

refer to 86 10 21AZ, see **86 10 PLATFORM** .

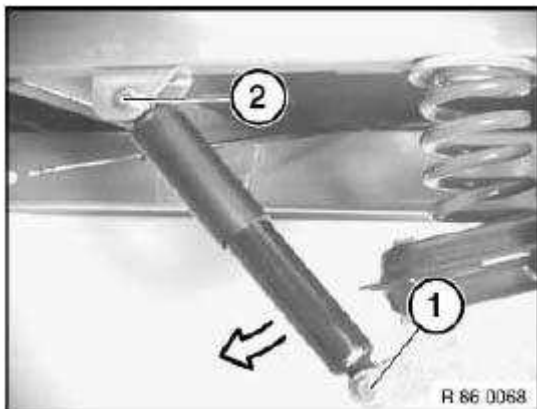


Fig. 63: Tilt Shock Absorber In Direction Of Arrow
Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... REMOVING LOADING RAMP LOCK

Unscrew bolts (1).

Installation

Tightening Torque,

refer to 86 10 28AZ, see **86 10 PLATFORM** .

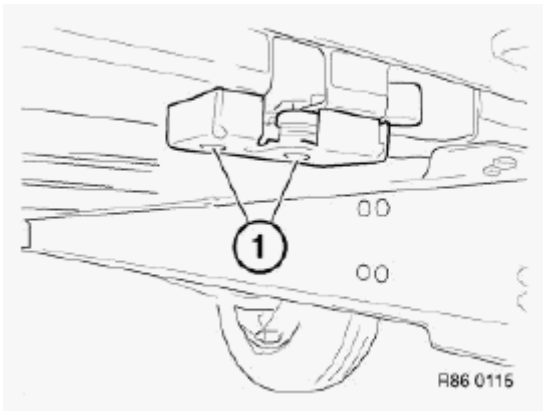


Fig. 64: Identifying Loading Ramp Lock And Bolts
Courtesy of BMW OF NORTH AMERICA, INC.

Pass lever (1) of rotary striker lock (2) out of square hole (3) by twisting from side to side.

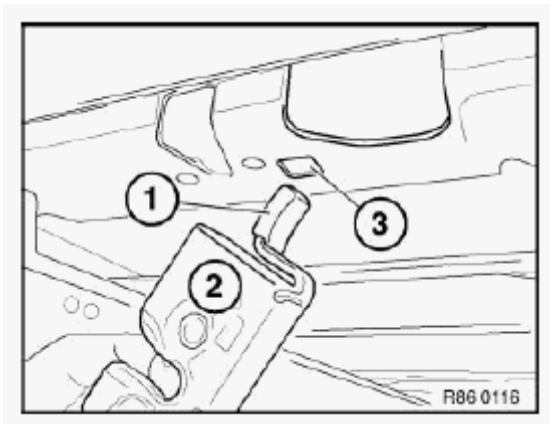


Fig. 65: Pass Lever (1) Of Rotary Striker Lock (2)
Courtesy of BMW OF NORTH AMERICA, INC.

Unscrew bolts (1).

Installation

Opening for securing clip (2) points to front or rear.

Square-head nut (3) rests with its square surface parallel to bearing pedestal (4).

Tightening Torque,

refer to 86 10 29AZ, see **86 10 PLATFORM** .

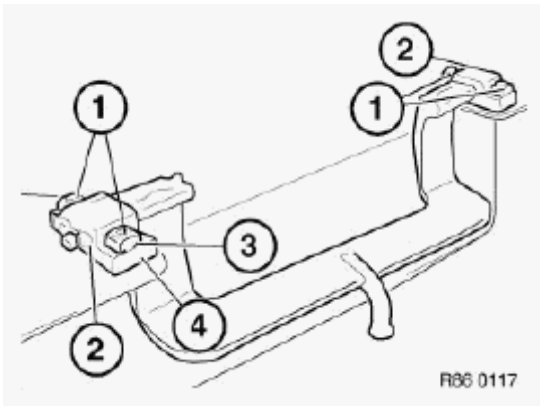


Fig. 66: Square-Head Nut (3) Rests With Its Square Surface Parallel To Bearing Pedestal (4)
 Courtesy of BMW OF NORTH AMERICA, INC.

Raise edge (1) of securing clip and slide in direction of arrow towards rear.

Detach bearing pedestal (2).

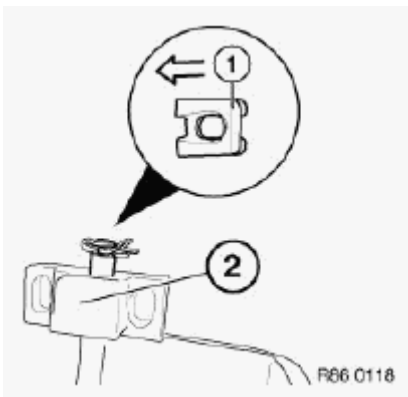


Fig. 67: Detaching Bearing Pedestal
 Courtesy of BMW OF NORTH AMERICA, INC.

Installation

Install bearing pedestal (1) on stub (3) of locking bracket (3).

Off-center bore (4) in bearing pedestal (1) points with short distance (A) to locking bracket (3).

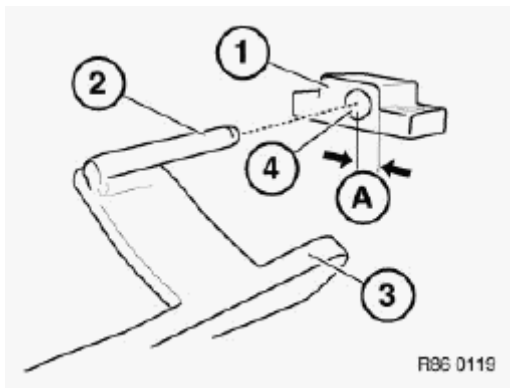


Fig. 68: Identifying Off-Center Bore In Bearing Pedestal Points With Short Distance
Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... REMOVING MOUNTING BRACKET SEALING CAP

Cut out mounting bracket (3) along markings (1, 2) and lever out of apron (4).

Installation

For gluing, use two-component adhesive ICEMA R 101 and hardener 7.

Mixture ratio: ICEMA R 101 7 parts; hardener 7 1 part.

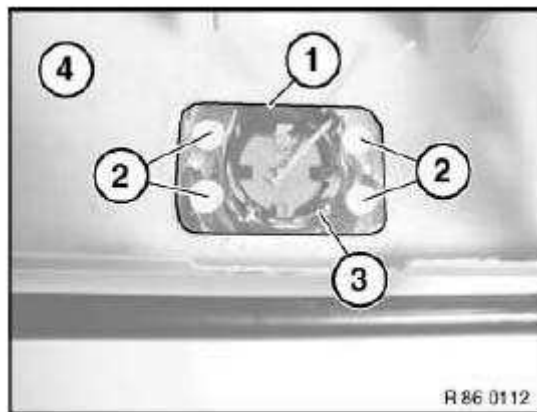


Fig. 69: Identifying Mounting Bracket Sealing Cap
Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... REMOVING MOUNTING BRACKET, CENTER, LEFT AND RIGHT

NOTE: Disassembly of Camlock retaining cam,
refer to **86 10 ... DISASSEMBLY OF CAMLOCK RETAINING CAM**

Unscrew bolts (1).

Installation

Tightening Torque,

refer to 86 10 31AZ, see **86 10 PLATFORM** .

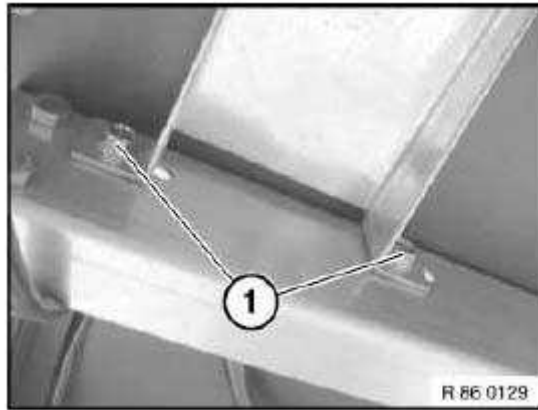


Fig. 70: Identifying Mounting Bracket, Center And Bolts
Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... REMOVING OUTER PULL ROD MOUNT, LEFT AND RIGHT

Release screws (1) and remove pull rod mount (2).

Installation

Tightening Torque,

refer to 86 10 30AZ, see **86 10 PLATFORM** .

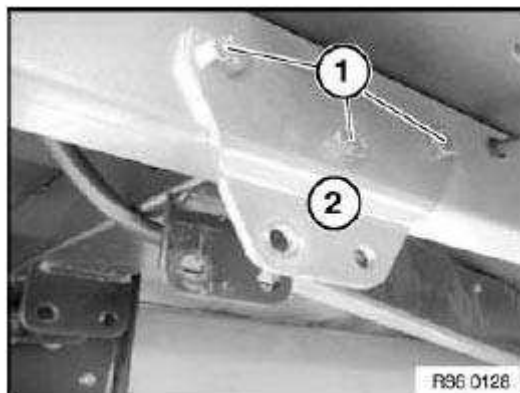


Fig. 71: Identifying Pull Rod Mount And Screws
Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... REMOVING OVERRUNNING EQUIPMENT/MAINTAINING OR REPLACING GUIDE BUSH/INSTALLING OVERRUNNING EQUIPMENT

After installing overrunning equipment, readjust brake system,

refer to **86 10 ... ADJUSTING BRAKE SYSTEM**

Check the guide bush while installed to ascertain whether it needs to be replaced. Raise ball end area and replace guide bush if play is detected in ball end area.

NOTE: After installing, readjust and check brake system.

Release round head screws (1) and remove running board (2) towards top.

Installation

Use new self-locking nuts.

Tightening Torque,

refer to 86 10 10AZ, see **86 10 PLATFORM** .

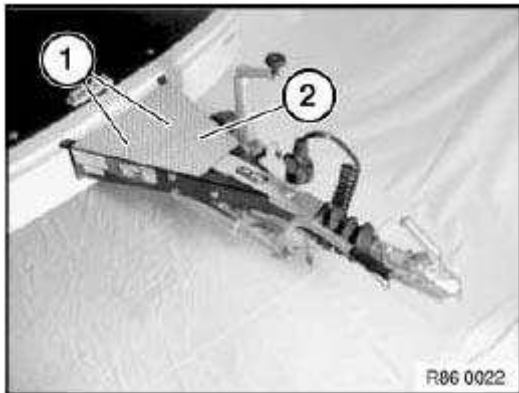


Fig. 72: Identifying Round Head Screws And Running Board
Courtesy of BMW OF NORTH AMERICA, INC.

Unhook tension spring (1) from tension spring mount (2).

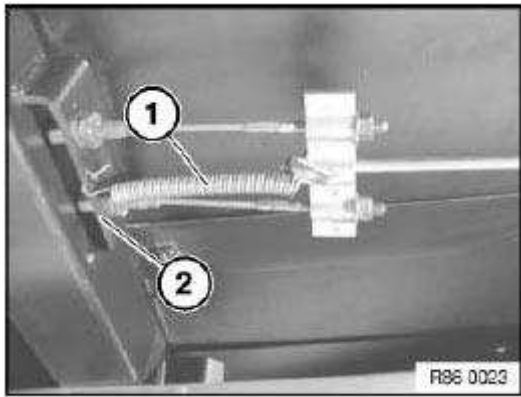


Fig. 73: Unhook Tension Spring From Tension Spring Mount
 Courtesy of BMW OF NORTH AMERICA, INC.

CAUTION: Once nut (1) of pull rod (2) has been released, do not move handbrake lever. Handbrake lever can flick upwards.

Release screw (1) on pull rod (2) and remove hexagon nut.

Slide brake compensator (3) towards rear.

Installation

Use new self-locking nut.

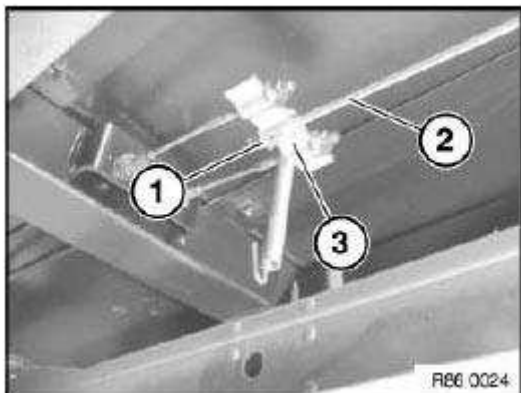


Fig. 74: Identifying Screw On Pull Rod And Hexagon Nut
 Courtesy of BMW OF NORTH AMERICA, INC.

Release screws (1) on jockey wheel mount and remove.

Release wiring harness mount (2) and remove. Reinstall screw and tighten until hand-tight.

Installation

Tightening Torque for jockey wheel mount (1),

refer to 86 10 11AZ, see **86 10 PLATFORM** .

Tightening Torque for wiring harness mount (2),

refer to 86 10 12AZ, see **86 10 PLATFORM** .

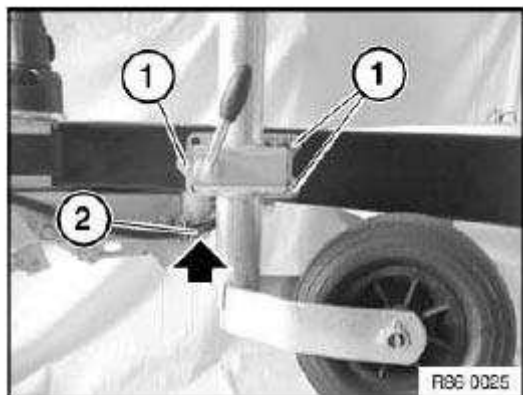


Fig. 75: Identifying Screws On Jockey Wheel Mount
Courtesy of BMW OF NORTH AMERICA, INC.

Release screw on socket holder (1) and remove. Cut through strap (2) and lay wiring harness to one side. Pull gaiter (3) in direction of arrow.

Installation

Use new self-locking nut.

Tightening Torque,

refer to 86 10 13AZ, see **86 10 PLATFORM** .

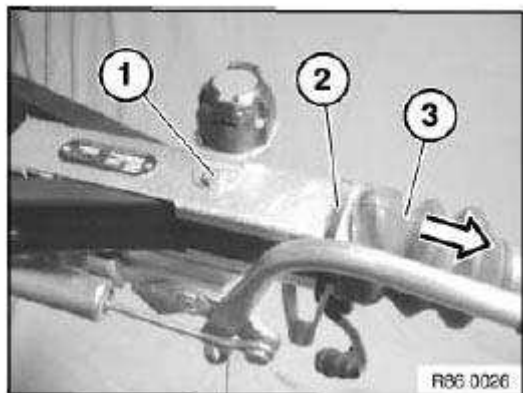


Fig. 76: Identifying Screw On Socket Holder And Gaiter

Courtesy of BMW OF NORTH AMERICA, INC.

Remove protective caps (1).

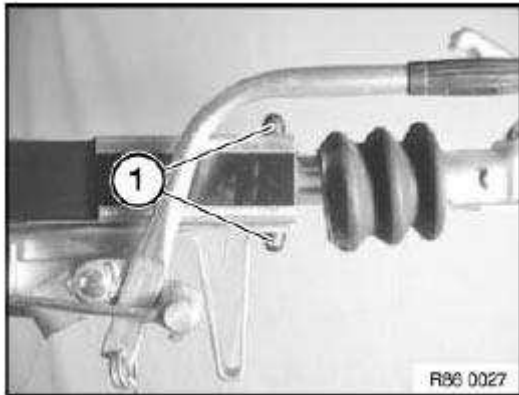


Fig. 77: Identifying Protective Caps And Nuts
Courtesy of BMW OF NORTH AMERICA, INC.

Release nuts (1) and remove.

Installation

Use new self-locking nuts.

Tightening Torque,

refer to 86 10 14AZ, see **86 10 PLATFORM** .

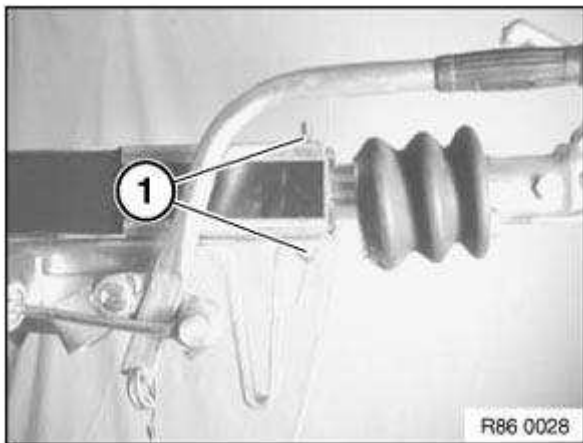


Fig. 78: Identifying Protective Caps And Nuts
Courtesy of BMW OF NORTH AMERICA, INC.

Tilt top reversing housing (1) in direction of arrow towards rear.

Slide out top reversing housing (1) and bottom reversing housing with handbrake lever unit (2) in direction of arrow towards rear.

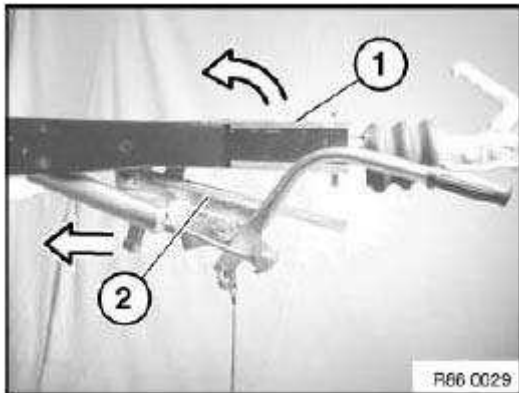


Fig. 79: Tilting Top Reversing Housing In Direction Of Arrow
Courtesy of BMW OF NORTH AMERICA, INC.

Remove holder (1) towards bottom.

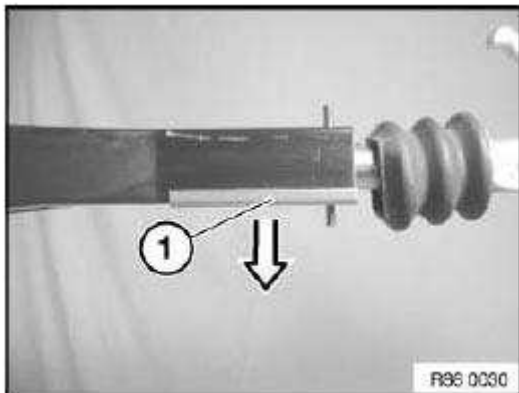


Fig. 80: Removing Holder Towards Bottom
Courtesy of BMW OF NORTH AMERICA, INC.

Pull drawbar member (1) in direction of arrow and pull out
overrunning equipment (2) in direction of arrow towards front.

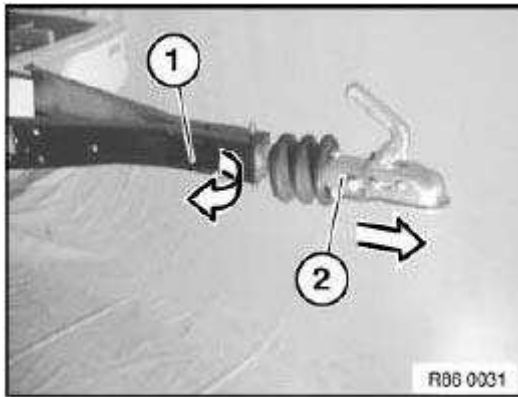


Fig. 81: Pulling Drawbar Member In Direction Of Arrow
Courtesy of BMW OF NORTH AMERICA, INC.

Remove spacer tubes (1) and threaded pins (2) from guide bush (3).

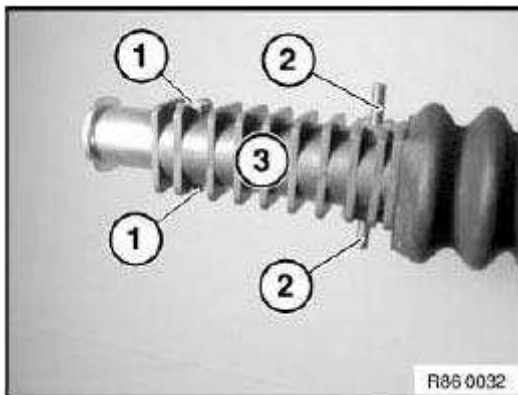


Fig. 82: Remove Spacer Tubes And Threaded Pins From Guide Bush
Courtesy of BMW OF NORTH AMERICA, INC.

Press pins (1) inwards. Detach counter support (2) and guide bush (3).

Maintenance

Grease tow tube (4) and attach guide bush (3).

Installation

Secure counter support (2) with new clamping sleeves to tow tube (4).

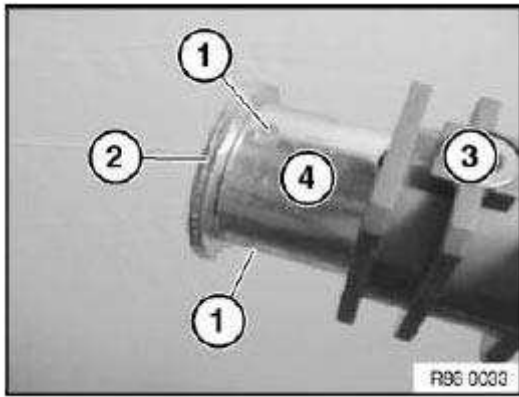


Fig. 83: Identifying Pins, Counter Support And Guide Bush
Courtesy of BMW OF NORTH AMERICA, INC.

Insert spacer tubes (1) and threaded pins (2) in guide bush (3).

Make sure spacer tubes (1) are correctly seated in guide bush (3).

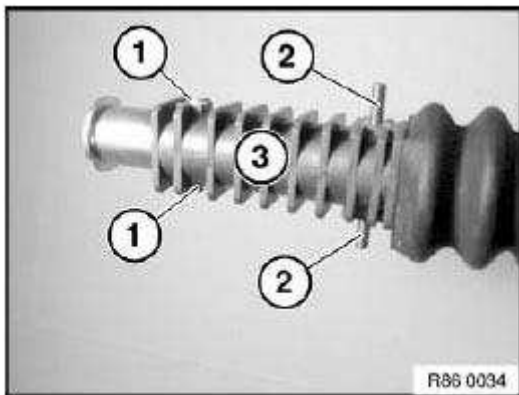


Fig. 84: Inserting Spacer Tubes And Pins In Guide Bush
Courtesy of BMW OF NORTH AMERICA, INC.

Using a screwdriver, link spacer tubes (1) and shock absorber located in tow tube. This ensures that the shock absorber remains in the correct installation position. Pull drawbar member (2) in direction of arrow and push in overrunning equipment (3) in direction of arrow towards rear.

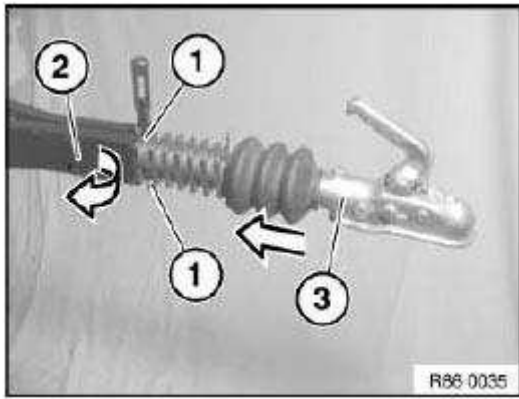


Fig. 85: Pulling Drawbar Member In Direction Of Arrow
 Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... REMOVING PLASTIC BUSH/METAL BUSH

Release countersunk metal screws (1).

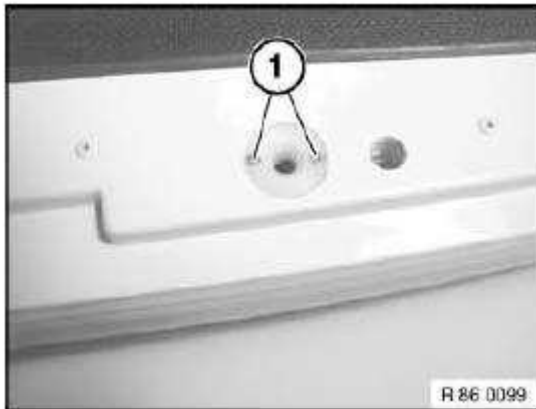


Fig. 86: Identifying Countersunk Metal Screws
 Courtesy of BMW OF NORTH AMERICA, INC.

Lever out plastic bush/metal bush (1) with a screwdriver.

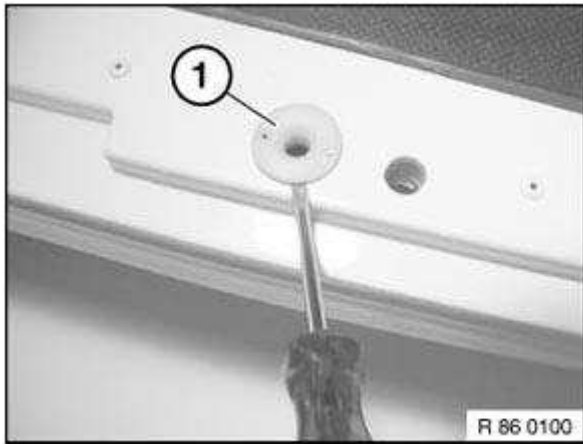


Fig. 87: Lever Out Plastic Bush/Metal Bush
Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... REMOVING REAR SUPPORTS AND BRACKET

Release screws (1) and remove rear support (2) from bracket (3).

Installation

Tightening Torque,

refer to 86 10 26AZ, see **86 10 PLATFORM** .

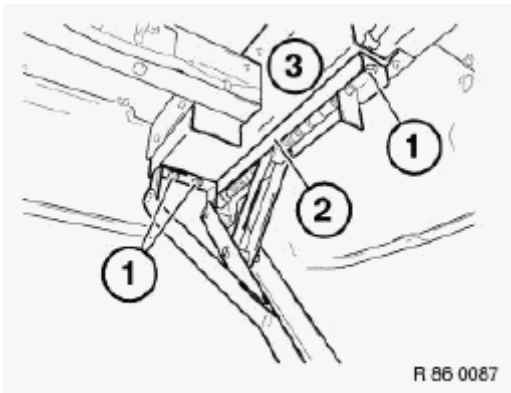


Fig. 88: Identifying Rear Support From Bracket And Screws
Courtesy of BMW OF NORTH AMERICA, INC.

Remove cable holders (1) from bracket (2). Release screws (3) on left and right sides of bracket (2). Drill out rivets (4) from underside of platform. Drill out rivets (5) from upper side of platform.

Installation

Tightening Torque,

refer to 86 10 27AZ, see **86 10 PLATFORM** .

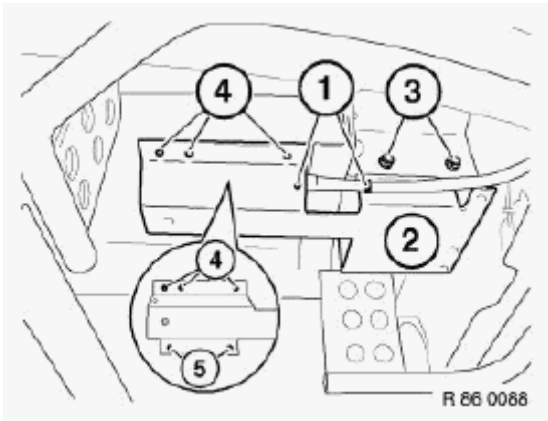


Fig. 89: Remove Cable Holders From Bracket
Courtesy of BMW OF NORTH AMERICA, INC.

Installation

Feed cable for rear light (1) through opening (2). Fit cable holders (4) in holes (3).

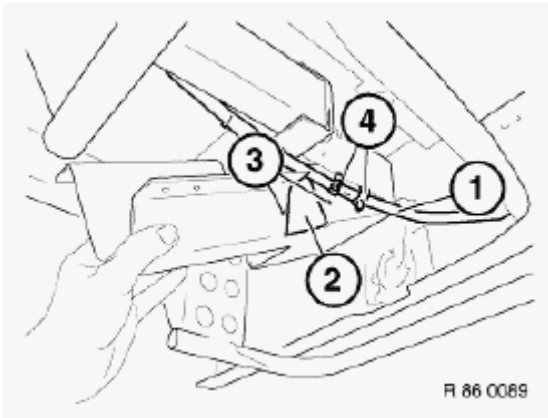


Fig. 90: Fitting Cable Holders In Holes
Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... REMOVING REFLECTING REAR LIGHT

From rear side of GFK apron, drive out plastic pins (1) with a drift.

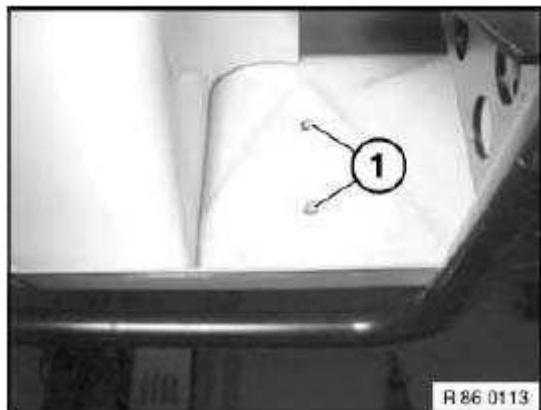


Fig. 91: Drive Out Plastic Pins With Drift
 Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... REMOVING REST ON LOADING RAMP, LEFT, RIGHT AND CENTER

CAUTION: Before drilling out rivets, drive in rivet pins with a punch.

Drill out rivets (1). Remove rest (2) towards front.

Installation

Stick on new sealing tape.

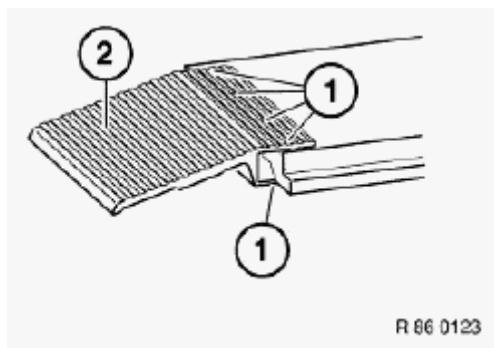


Fig. 92: Drill Out Rivets (1) And Remove Rest (2) Toward Front
 Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... REMOVING SHOCK ABSORBER FROM OVERRUNNING EQUIPMENT

Check the overrunning equipment shock absorber while installed to ascertain whether it needs to be replaced.

Apply handbrake. Push in and pull out tow ball end by hand. If it is very easy to pull out the tow ball end, the shock absorber must be replaced.

NOTE: Complete disassembly of overrunning equipment and guide bush, refer to Disassembly of overrunning equipment.

Release screw (1) and remove. Pull out internal shock absorber (2) from opening in tow tube (3) towards rear.

Installation

Tightening Torque,

refer to 86 10 15AZ, see **86 10 PLATFORM** .

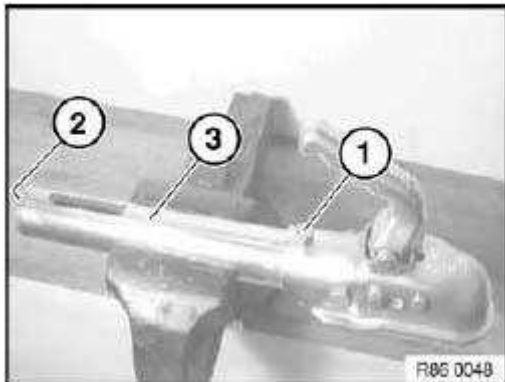


Fig. 93: Identifying Shock Absorber And Screw
Courtesy of BMW OF NORTH AMERICA, INC.

Push in new shock absorber (1) as shown in illustration through opening in tow tube (2).

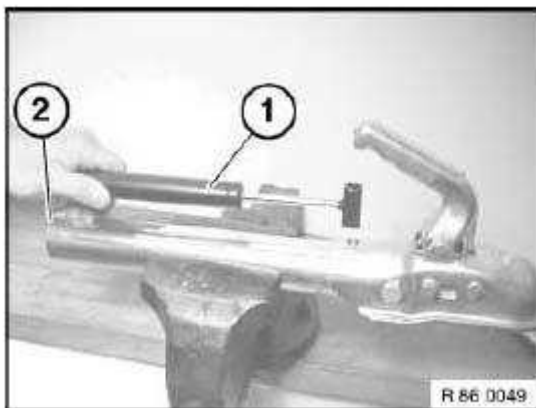


Fig. 94: Pushing In Shock Absorber
Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... REMOVING TRAILING ARM, REMOVING AND INSTALLING OR REPLACING MOUNTING

Replace bearing in trailing arm if there is play in trailing arm.

NOTE: Remove brake cable,
refer to **86 10 ... REMOVING BRAKE SHOES.**
Remove shock absorber and coil spring,
refer to removing and installing **coil spring.**

Release screws (1) between wheel brake (2) and trailing arm (3) and remove complete wheel brake (2).

Installation

Do not reuse screws (1). Use only the socket-head cap screws intended for this purpose. Stamped arrow on the reverse side of the brake carrier points in the direction of travel and stands at the 12 o'clock position.

Tightening Torque,

refer to 86 10 24AZ, see **86 10 PLATFORM** .

The trailing arm folds down once the coil spring on the arm has been released.

No persons should be located underneath trailing arm. Risk of injury!

Release screws (1, 2). Use assembly hole (3) to release screw connection (2).

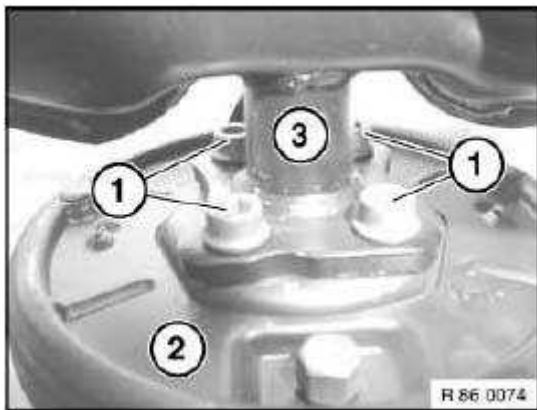


Fig. 95: Use Assembly Hole (3) To Release Screw Connection (2)
Courtesy of BMW OF NORTH AMERICA, INC.

Press out screws (1, 2) with a mandrel.

Installation

Use new self-locking nut.

Tightening Torque,

refer to 86 10 25AZ, see **86 10 PLATFORM** .

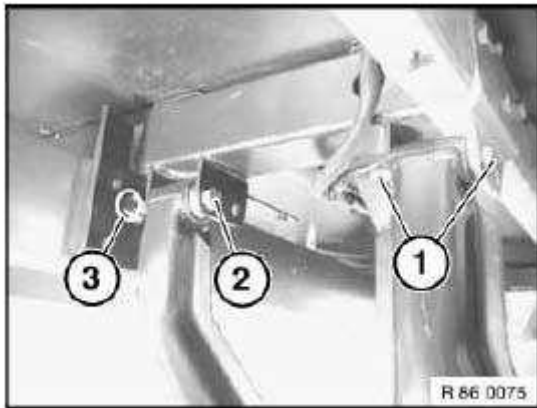


Fig. 96: Identifying Screws And Assembly Hole
Courtesy of BMW OF NORTH AMERICA, INC.

Installation

Mount trailing arms (1) at rear mounts (4) only, viewed in direction of travel, with screws (2, 3).

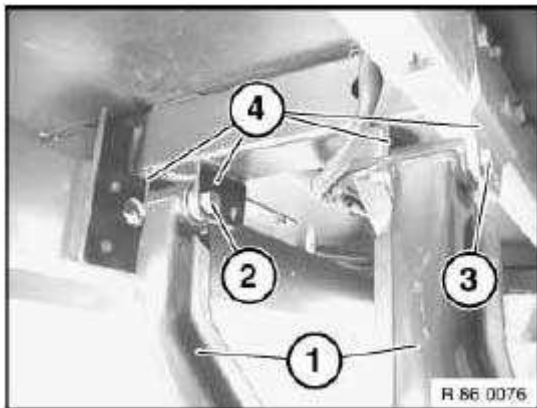


Fig. 97: Mount Trailing Arms At Rear Mounts
Courtesy of BMW OF NORTH AMERICA, INC.

Do not damage trailing arm with drill when drilling.

Drill spacer tube (1) with a 4 mm drill at three evenly offset points. Place drill as near as possible to compensating bush (2).

Bores relieve tension on material of spacer tube.

Press out spacer tube (1) and compensating bush (2) with a drift.

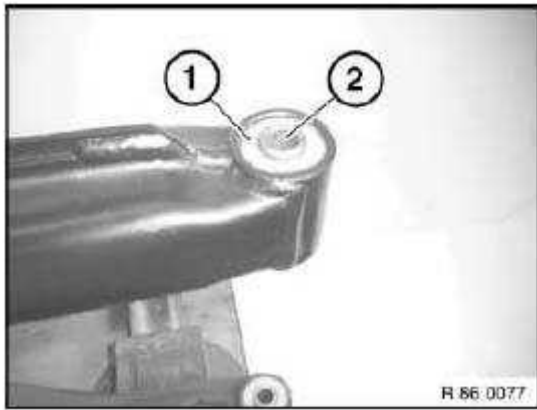


Fig. 98: Press Out Spacer Tube And Compensating Bush
Courtesy of BMW OF NORTH AMERICA, INC.

Grease new spacer tube (1) for installation with Syntheso Glep I. Drive new spacer tube (1) with a rubber mallet into trailing arm mount (2).

Installation

Make sure spacer tube (1) is not tilted when driven in.

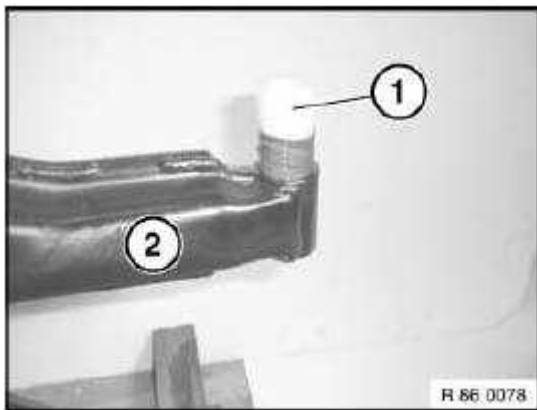


Fig. 99: Identifying Trailing Arm Mount And Spacer Tube
Courtesy of BMW OF NORTH AMERICA, INC.

Drive compensating bush (1) with a drift into spacer tube (2).

Set compensating bush (1) and spacer tube (2) centrally in trailing arm mount (3).

Installation

Make sure compensating bush (1) is not tilted when driven in.

Install coil spring,

refer to coil spring.

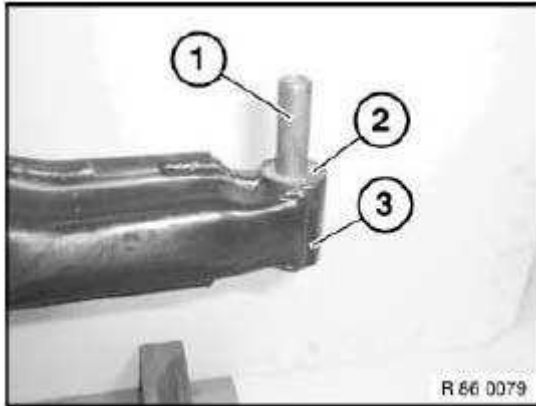


Fig. 100: Set Compensating Bush (1) And Spacer Tube (2) Centrally In Trailing Arm Mount (3)
Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... REMOVING WHEEL BEARING

The angular-contact ball bearings do not require maintenance and have lifetime lubrication. The bearings cannot be readjusted.

Remove brake drum,

refer to **86 10 ... REMOVING BRAKE SHOES**.

Lever out both snap rings (1).

Installation

Replace expanded or damaged snap rings (1). Ensure correct seating.

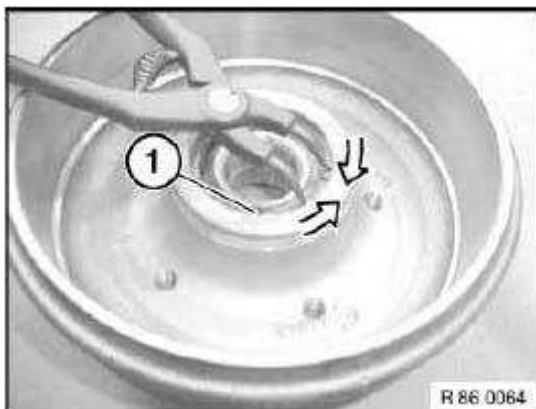


Fig. 101: Removing Snap Rings
Courtesy of BMW OF NORTH AMERICA, INC.

Press out wheel bearing with special tool 24 1 010.

CAUTION: Do not reuse old wheel bearing.



Fig. 102: Press Out Wheel Bearing With Special Tool 24 1 010
Courtesy of BMW OF NORTH AMERICA, INC.

Place new wheel bearing (1) with lathe-turned end (2) in center of bore in brake drum (3).

Installation

Before pressing in new wheel bearing, check bearing seat for possible damage.

Make sure wheel bearing is not tilted when pressed in.



Fig. 103: Placing Wheel Bearing With Lathe-Turned End In Center Of Bore In Brake Drum
Courtesy of BMW OF NORTH AMERICA, INC.

Press in new wheel bearing (1) with special tool 23 2 150 and 33 1 374.

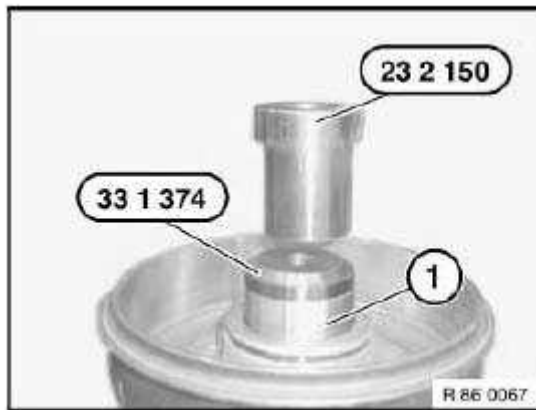


Fig. 104: Press In Wheel Bearing With Special Tool 23 2 150 And 33 1 374
 Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... REMOVING WOODEN REST ON LOADING RAMP, LEFT, RIGHT AND CENTER

CAUTION: Before drilling out rivets, drive in rivet pins with a punch.

Drill out rivets (1).

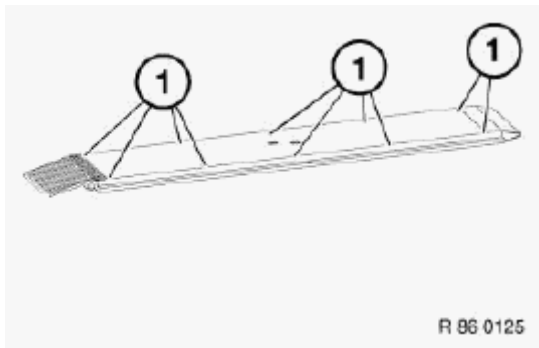


Fig. 105: Drilling Out Rivets
 Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... REPAIR WORK ON GFP COMPONENTS WITH GELCOAT SURFACE

Scratches in Gelcoat surface

Scratches in the Gelcoat surface which do not allow the GFP mat structure to show through can be touched up. Sand out scratches with water and 800 wet sandpaper. Then sand with water and 2000 wet sandpaper. Prepare repair area for polishing.

Cracks in Gelcoat surface

Sand the cracked area in a V shape beyond the end of the crack and clean.

There must be no grease or oil residues, moisture or dust remaining in the crack to be repaired.

When repairing holes such as e.g. rivet holes, deburr hole edge and heavily roughen large area around hole.

Prepare required amount of Gelcoat paste with 2% hardener and fill prepared repair area with spatula.

Apply Gelcoat paste in several applications to repair areas.

Adhere to mixture ratio (2 parts hardener to 100 parts Gelcoat paste) as precisely as possible.

Too much added hardener slows down the hardening time and changes the paint color.

The hardening period is at least 12 hours at 20°C room temperature.

The hardening period can be longer depending on the temperature.

Once the Gelcoat paste has hardened, sand the touched-up area with water and 800 wet sandpaper. Sand with water and 2000 wet sandpaper and prepare for polishing.

86 10 ... REPLACING 12 VOLT SOCKET

From underside of platform, cut through cable tie (1) and remove. Disconnect plug with grommet (2) from socket (3) towards bottom.

Installation

Position all seals correctly. Also secure plug with grommet (2) using new cable tie to other socket.



Fig. 106: Identifying Cable Tie

Courtesy of BMW OF NORTH AMERICA, INC.

On upper side of platform, release Phillips screws (1) on mounting bracket (2).

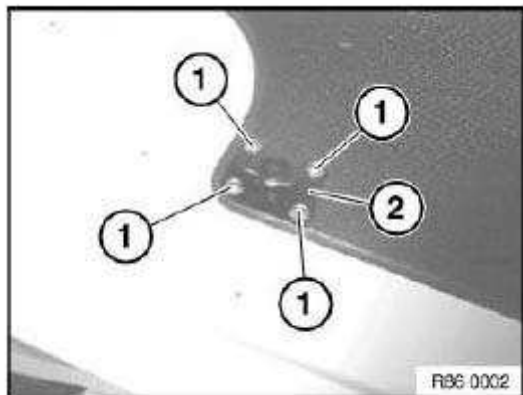


Fig. 107: Identifying Phillips Screws On Mounting Bracket
Courtesy of BMW OF NORTH AMERICA, INC.

Remove sealing compound along white marking (1).

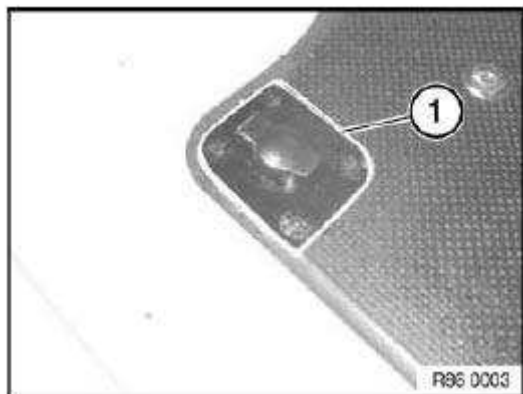


Fig. 108: Remove Sealing Compound Along White Marking
Courtesy of BMW OF NORTH AMERICA, INC.

Installation

Make sure cable is correctly laid.

Use Sikaflex 221 as sealing compound.

Grip under mounting bracket (1) with a screwdriver and lever out bracket (1) towards top. Remove bracket (1).

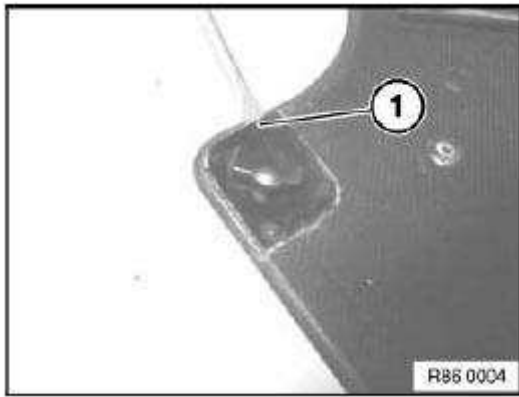


Fig. 109: Gripping Under Mounting Bracket
Courtesy of BMW OF NORTH AMERICA, INC.

Release nut (1). Remove socket (2) from mounting bracket (3).

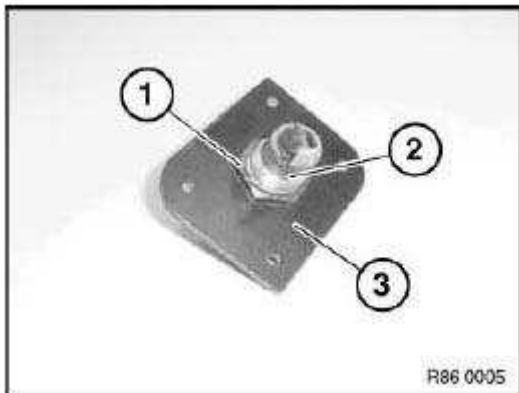


Fig. 110: Remove Socket From Mounting Bracket And Nut
Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... REPLACING BAR

NOTE: Disassembly of lashing eyes,
refer to **86 10 ... REPLACING LASHING PLATE AND LASHING EYE.**

Remove lashing eyes (1).

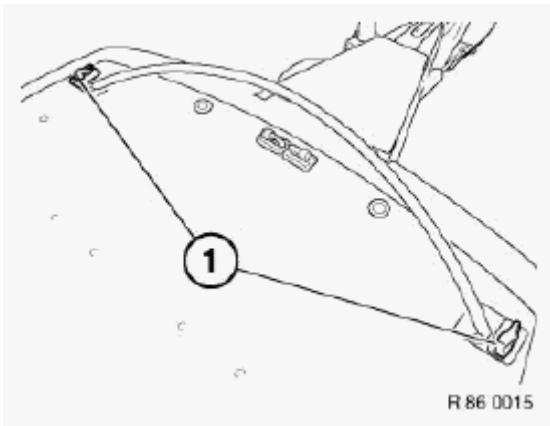


Fig. 111: Identifying Lashing Eyes
Courtesy of BMW OF NORTH AMERICA, INC.

Remove protective caps (1) on left/right.

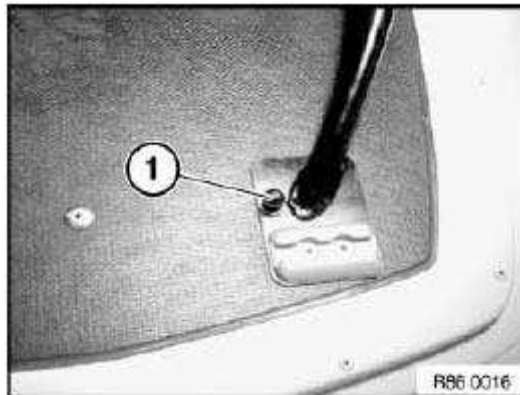


Fig. 112: Identifying Protective Caps
Courtesy of BMW OF NORTH AMERICA, INC.

Release hexagon screws (1) and countersunk head screws (2) on left/right.

Remove bar.

Installation

Tightening Torque for hexagon screw,
 refer to 86 10 2AZ, see **86 10 PLATFORM** .

Tightening Torque for countersunk head screw,
 refer to 86 10 3AZ, see **86 10 PLATFORM** .

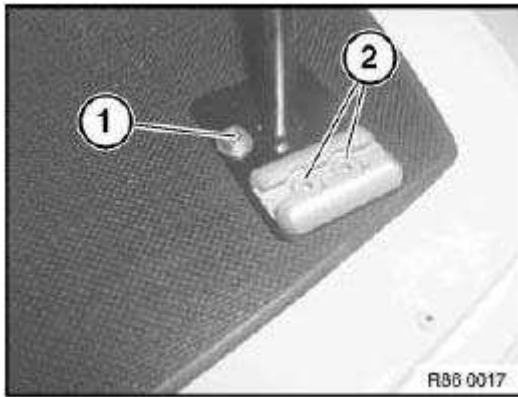


Fig. 113: Identifying Hexagon Screws And Countersunk Head Screws
 Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... REPLACING DRAWBAR MEMBERS, LEFT AND RIGHT

NOTE: Disassembly of overrunning equipment,
 refer to Removing overrunning equipment/maintaining or replacing guide
 bush/installing overrunning equipment.
 Remove complete brake pull rod.
 Removal of position light cable,
 refer to 86 10 ... REPLACING LICENSE PLATE LIGHT.

Release screws (1) on cross-member (2). Pull out crossmember (2) towards rear.

Installation

Tightening Torque,

refer to 86 10 16AZ, see 86 10 PLATFORM .

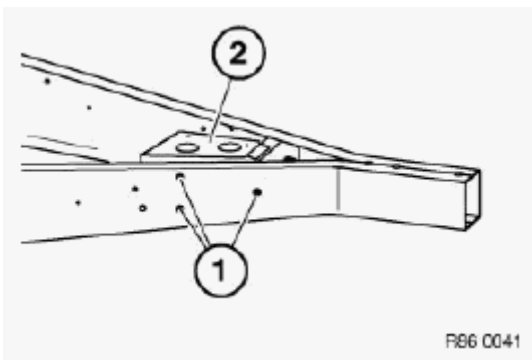


Fig. 114: Identifying Screws On Cross-Member
 Courtesy of BMW OF NORTH AMERICA, INC.

Release countersunk head screws (1) and remove.

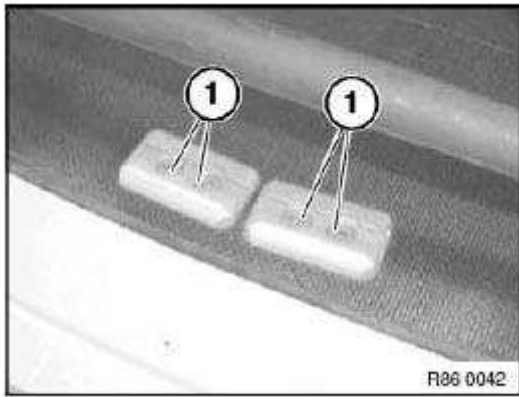


Fig. 115: Identifying Countersunk Head Screws
 Courtesy of BMW OF NORTH AMERICA, INC.

Installation

Tightening Torque,

refer to 86 10 3AZ, see **86 10 PLATFORM** .

Remove cable holder (1) and remove wiring harness (2) from drawbar member (3).

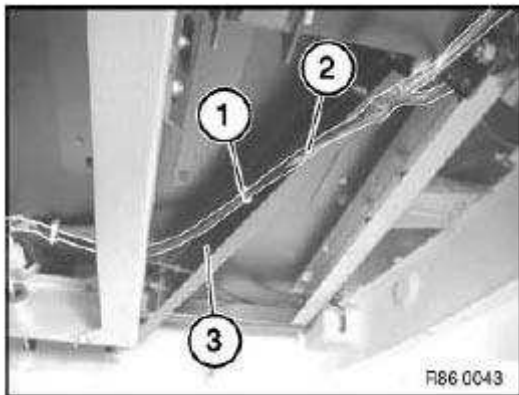


Fig. 116: Identifying Cable Holder, Wiring Harness And Drawbar Member
 Courtesy of BMW OF NORTH AMERICA, INC.

Remove cable (1) from position light housing (2). Pull out cable (1) through drawbar member aperture (3).

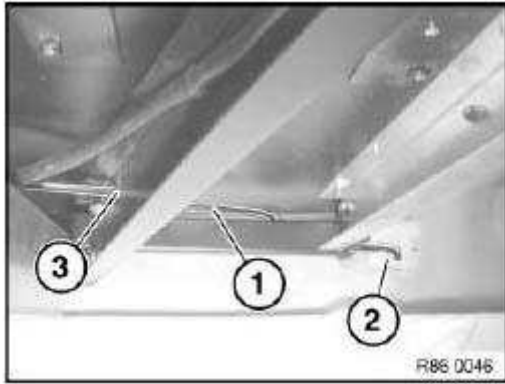


Fig. 117: Identifying Position Light Housing And Cable
Courtesy of BMW OF NORTH AMERICA, INC.

Release all screws on cross-member (1) and remove crossmember (1).

If necessary, release screws on mounting brackets (2) and remove cross-members (3).

Installation

Use new self-locking nuts.

Tightening Torque,

refer to 86 10 17AZ, see **86 10 PLATFORM** .

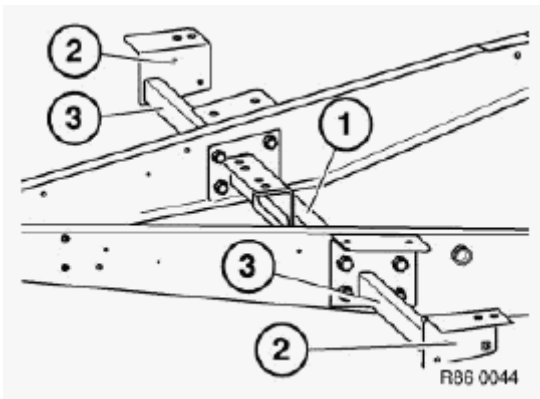


Fig. 118: Identifying Screws On Mounting Brackets And Cross-Members
Courtesy of BMW OF NORTH AMERICA, INC.

Unscrew bolt (1). Grip nut from rear through assembly hole (2) in cross-member.

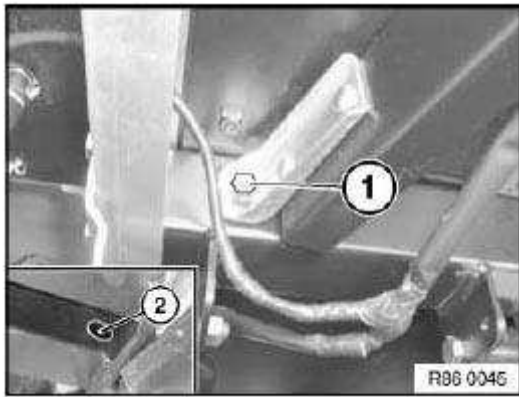


Fig. 119: Identifying Hole And Bolt
 Courtesy of BMW OF NORTH AMERICA, INC.

Installation

Use new self-locking nuts.

Tightening Torque,

refer to 86 10 18AZ, see **86 10 PLATFORM** .

Tilt drawbar member (1) down in direction of arrow A and pull out towards rear in direction of arrow B.

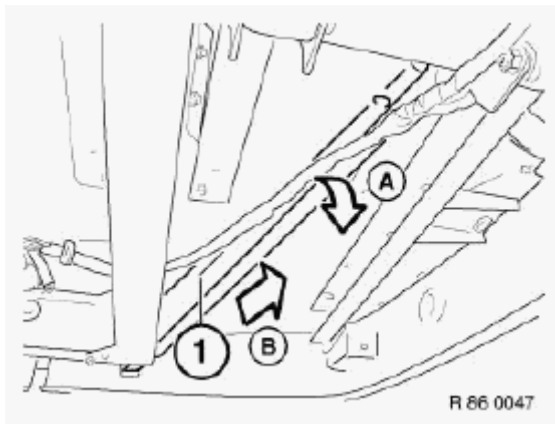


Fig. 120: Tilt Drawbar Member (1) Down In Direction Of Arrow
 Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... REPLACING GAITER

Position brake lever fully towards rear.

Release screws (1) and (2) and remove. Pull off towing attachment (3) in direction of arrow.

Installation

Tightening Torque,

refer to 86 10 15AZ, see **86 10 PLATFORM** .

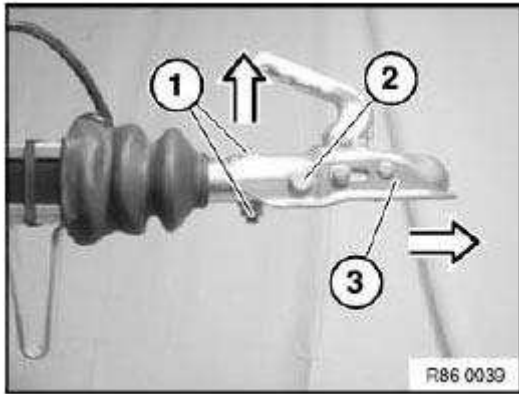


Fig. 121: Pulling Off Towing Attachment In Direction Of Arrow
Courtesy of BMW OF NORTH AMERICA, INC.

Pull off gaiter (1) in direction of arrow.

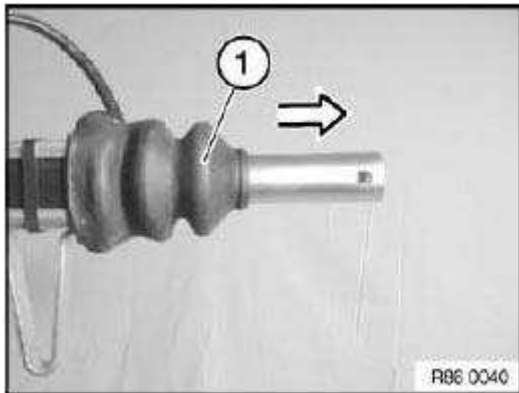


Fig. 122: Pulling Off Gaiter In Direction Of Arrow
Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... REPLACING HOLDER FOR CHOCK

Pull bar (1) down in direction of arrow A. Pull out chock (2) in direction of arrow B at an angle towards bottom.

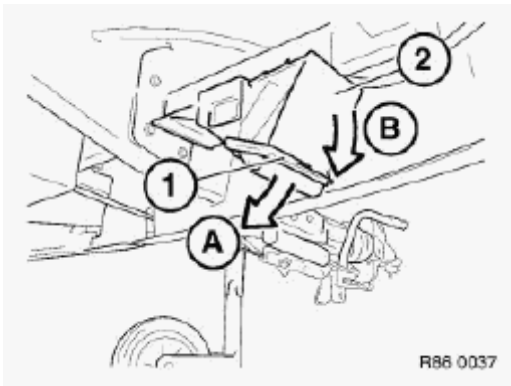


Fig. 123: Pulling Out Chock In Direction Of Arrow
Courtesy of BMW OF NORTH AMERICA, INC.

Release and unscrew cheese head tapping screws (1) on holder (2).

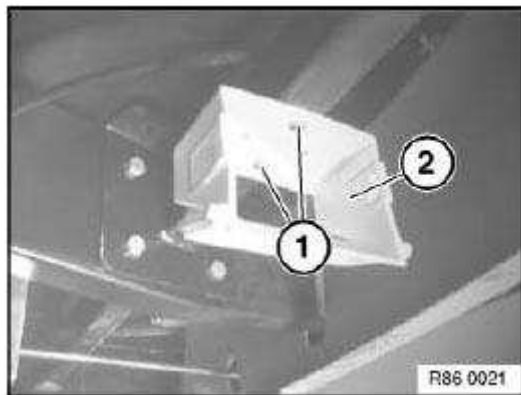


Fig. 124: Identifying Cheese Head Tapping Screws On Holder
Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... REPLACING LASHING PLATE AND LASHING EYE

Releasing lashing eye

Pull spring bar (1) upwards in direction of arrow A. Slide lashing eye (3) in direction of arrow B and remove from lashing plate (2).

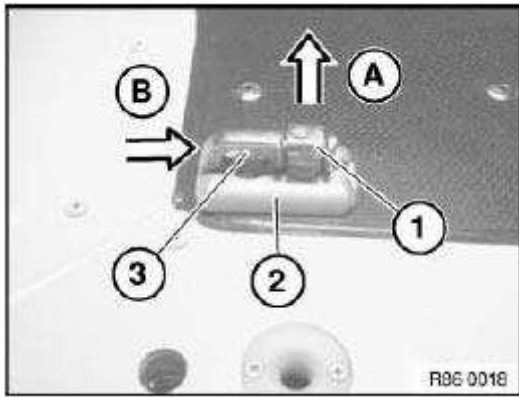


Fig. 125: Pulling Spring Bar
Courtesy of BMW OF NORTH AMERICA, INC.

Release countersunk head screws (1) and remove lashing plate.

Installation

Tightening torque,

refer to 86 10 3AZ, see **86 10 PLATFORM** .

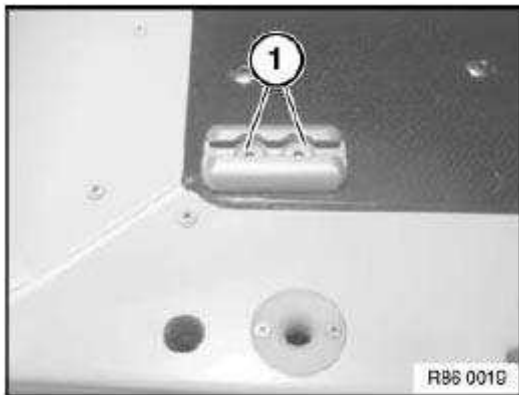


Fig. 126: Identifying Countersunk Head Screws
Courtesy of BMW OF NORTH AMERICA, INC.

Locking lashing eye

Position lashing eye (1) on circular openings on lashing plate (2). Press lashing eye (1) in direction of arrow A into lashing plate (2). In this position, slide lashing eye (1) in direction of arrow B. Spring bar (3) snaps in, anchors and secures lashing eye (1) in lashing plate (2).

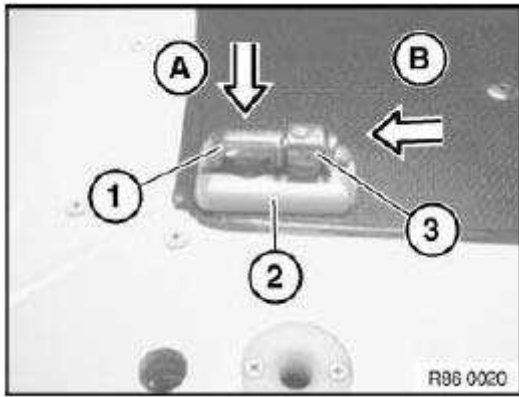


Fig. 127: Pressing Lashing Eye
 Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... REPLACING LICENSE PLATE LIGHT

Release screws (1) and remove license plate light (2) from mounting.

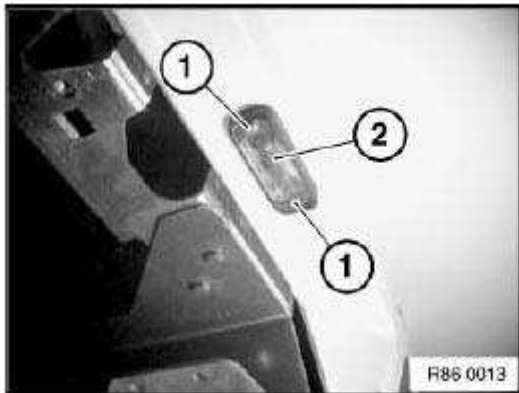


Fig. 128: Identifying License Plate Light And Screws
 Courtesy of BMW OF NORTH AMERICA, INC.

Disconnect flat connector (1) in direction of arrow.

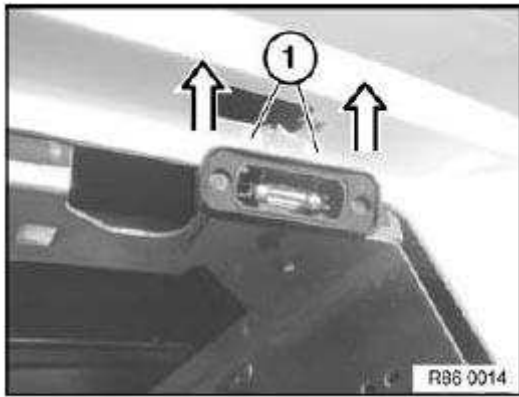


Fig. 129: Disconnecting Flat Connector
 Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... REPLACING POSITION LIGHT

Unclip cover (1) on side recess (arrow).

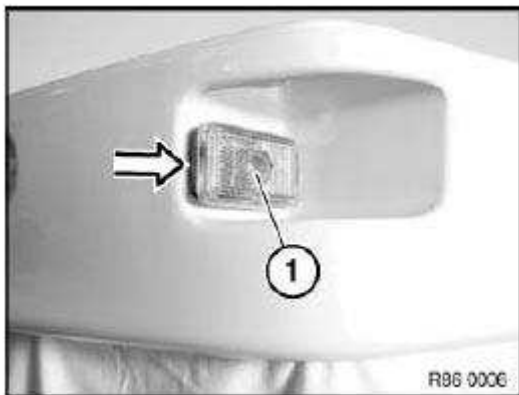


Fig. 130: Identifying Cover On Side Recess
 Courtesy of BMW OF NORTH AMERICA, INC.

Pull flat connector (1) from flat contact.

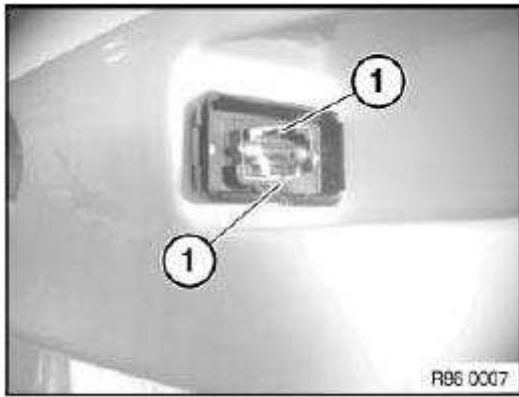


Fig. 131: Identifying Flat Connector
Courtesy of BMW OF NORTH AMERICA, INC.

Pull out cable (1) completely.

CAUTION: Before drilling out rivet heads, drive in rivet pins with a punch.
Drill out rivet heads (2) and remove position light housing from front.

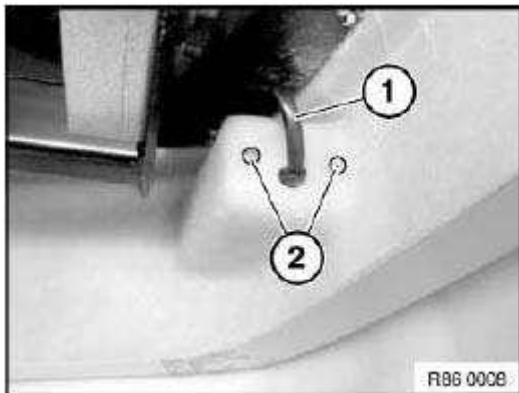


Fig. 132: Identifying Rivet Heads And Cable
Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... REPLACING REAR LIGHT

Release thumb screws (1), slide light guard (2) in direction of middle of car and tilt out towards rear.

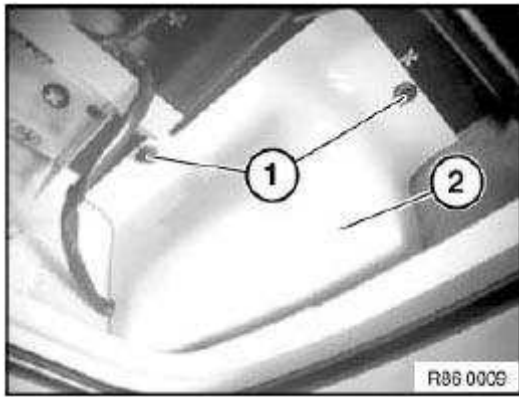


Fig. 133: Identifying Light Guard And Screws
Courtesy of BMW OF NORTH AMERICA, INC.

Turn handwheel (1) counterclockwise in direction of arrow and remove base (2).

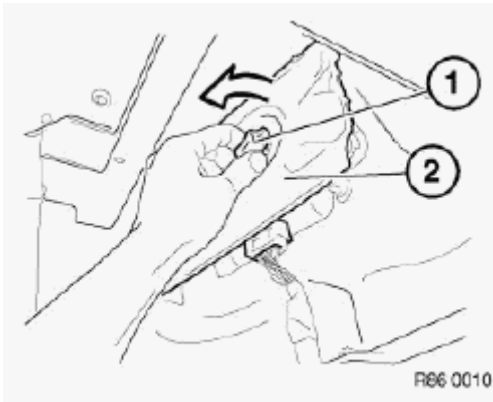


Fig. 134: Turning Handwheel And Remove Base
Courtesy of BMW OF NORTH AMERICA, INC.

Release nuts (1) and press rear light (2) out towards front.

Installation

Use new self-locking nuts.

Tightening Torque,

refer to 86 10 1AZ, see **86 10 PLATFORM** .

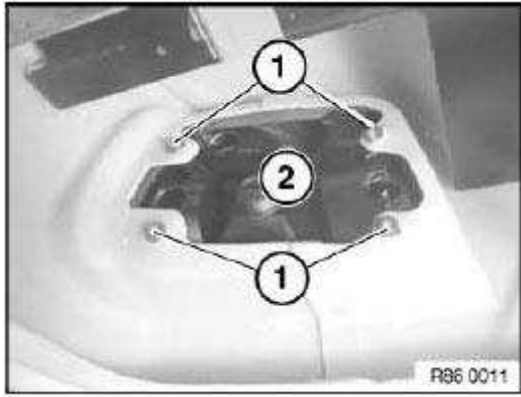


Fig. 135: Identifying Rear Light And Nuts
 Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... TROUBLESHOOTING ON MULTI-TRAILER

MULTI-TRAILER TROUBLESHOOTING CHART

Fault	Cause	Remedy
Trailer already brakes when foot is taken off accelerator	Shock absorber of overrunning equipment faulty	Replace shock absorber of overrunning equipment
Reversing sluggish or not possible	Brake system adjusted too strongly	Adjust brake system
NOTE: When automatic reversing is activated, there is a residual braking torque caused by the design. This results	Brake shoes jammed	Free brake shoes, replace complete brake shoes with brake shoe carrier if necessary
in slightly heavier overrunning.	Cables overtensioned	Adjust brake system
Handbrake effect too weak	Faulty adjustment	Adjust brake system
	Faulty spring force accumulator	Adjust spring force accumulator
	Brake cables heavily contaminated, corroded or kinked	Free cables, replace if necessary
Wheel brakes overheating	Brake system incorrectly adjusted	Adjust brake system
	Overrunning equipment is sluggish	Lubricate overrunning equipment
	Brake cables heavily contaminated, corroded or kinked	Free cables, replace if necessary
	Cables overtensioned	Adjust brake system
	Wheel brakes contaminated	Clean wheel brakes

	Reversing lever of overrunning equipment jammed	Remove reversing lever, clean and grease with conventional BMW lubricants
Braking effect too weak	Excessive play in brake system	Adjust brake system
	Brake linings glazed, fouled by oil, damaged or worn	Replace complete brake shoes, clean brake drums, replace if necessary
	Overrunning equipment is sluggish	Lubricate overrunning equipment
	Brake cables heavily contaminated, corroded or kinked	Free cables, replace if necessary
Jolting braking or starting off	Excessive play in brake system	Adjust brake system
	Shock absorber of overrunning equipment faulty	Replace shock absorber of overrunning equipment
	Brake shoes jammed	Replace complete brake shoes with brake shoe carrier
Brakes squeal or rattle	Wheel brakes contaminated or worn	Clean wheel brakes, replace brake shoes and/or brake drums if necessary
	Out-of-round or banging brake drum	Replace brake drums
	Pad loose	Replace brake shoes
	Wheel-bearing play excessive	Replace wheel bearings
Brakes pull to one side	Tire pressure incorrect	Correct tire pressure
	Brake linings glazed, fouled by oil, damaged or worn	Replace complete brake shoes, clean brake drums, replace if necessary
	Suspension shock absorber has no effect	Replace suspension shock absorber
Brake pads worn at angle	Wheel-bearing play excessive	Replace wheel bearings
	Pads worn to less than minimum thickness	Replace brake shoes
Towing attachment fails to engage after connection	Internal attachment parts contaminated	Clean and lubricate attachment

HOOD

86 21 ... ADJUSTING HOOD PRETENSION - CAMLOC FASTENER WITH SPACERS

NOTE: At least two persons are needed to install and remove the hood. Before installing and removing the hood, secure the BMW multitrailer and the entire combination against rolling. For this purpose, use the parking brake and the chocks of the BMW multitrailer.
To help adjust the hood pretension, you will need four blocks with a minimum height of 60 mm.

Installation

Before attaching the hood, thoroughly clean the top side of the GFP apron of the BMW multitrailer.

It is particularly important to clean the contact surface of the GFP apron (1) (marked in gray) on which the rubber seal of the hood rests. Refer to **Fig. 136**.

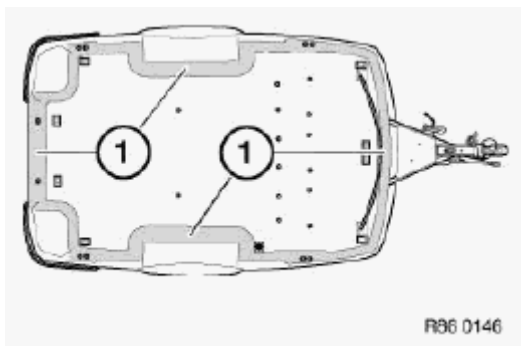


Fig. 136: Identifying GFP Apron (Marked In Gray)
Courtesy of BMW OF NORTH AMERICA, INC.

The following text describes how to adjust the hood pretension as an example at one support area of the platform or at one hood fastener. The pretension is adjusted at the other support areas and fasteners in the same sequence.

The hood must be fixed on the platform in such a way that the rubber seal of the hood is placed under pretension or compressed. Only with this pretension is it possible to obtain a tight seal between hood and platform. Pretension is achieved with the Camloc fasteners and by using spacers.

Two different types of spacers (2) are available for each Camloc fastener (1): one thick and one thin. You can fit one, two or no spacer (2) on the Camloc fastener (1).

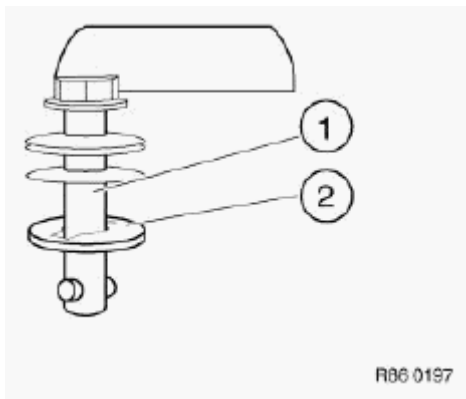


Fig. 137: Identifying Spacer On Camloc Fastener
 Courtesy of BMW OF NORTH AMERICA, INC.

Access to hood lighting plug (1):

Right side lid.

Open out spring-loaded cap (2) on socket (3) and remove hood lighting plug (1). Close cap (2). Insert hood lighting plug (1) into plug receptacle (4).

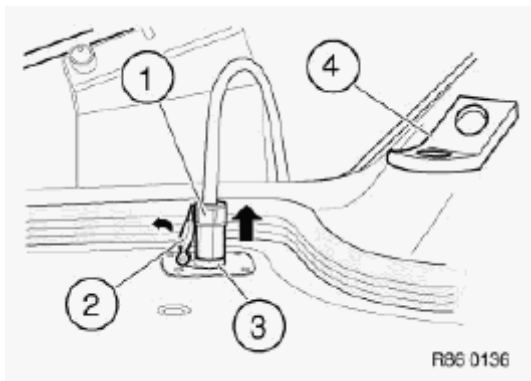


Fig. 138: Inserting Hood Lighting Plug Into Plug Receptacle
 Courtesy of BMW OF NORTH AMERICA, INC.

Unlocking Camloc fastener:

Wing (1) of Camloc fastener (2) is parallel to outer edge of hood. Turn Camloc fastener (2) counterclockwise until it is heard and felt to unlock.

Locking

Press hood in lid frame downwards by hand. Turn Camloc fastener clockwise until it is heard and felt to lock into place. Wing (1) of Camloc fastener is parallel to outer edge of hood.

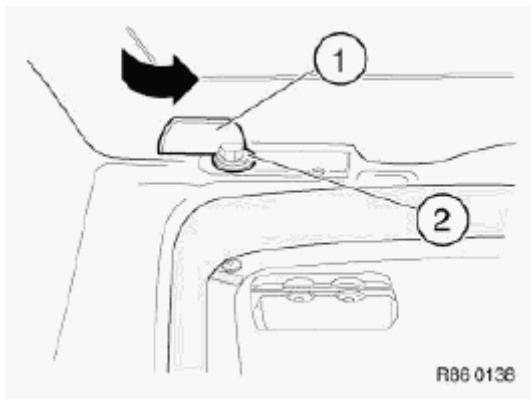


Fig. 139: Identifying Wing Of Camloc Fastener
 Courtesy of BMW OF NORTH AMERICA, INC.

Raise hood and place block (1) between centering pin (2) and platform. Lower hood and position centering pin (2) on block (1).

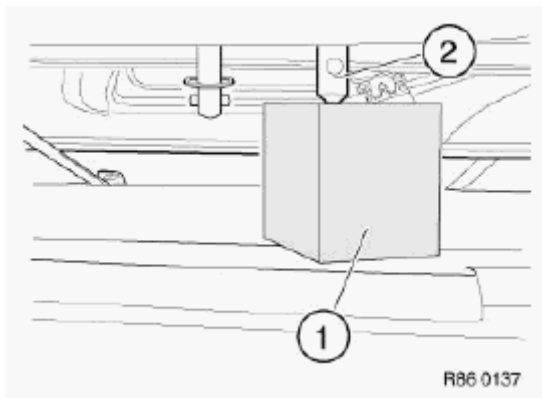


Fig. 140: Identifying Centering Pin On Block
 Courtesy of BMW OF NORTH AMERICA, INC.

Remove spring nut (1) from Camloc fastener (2).

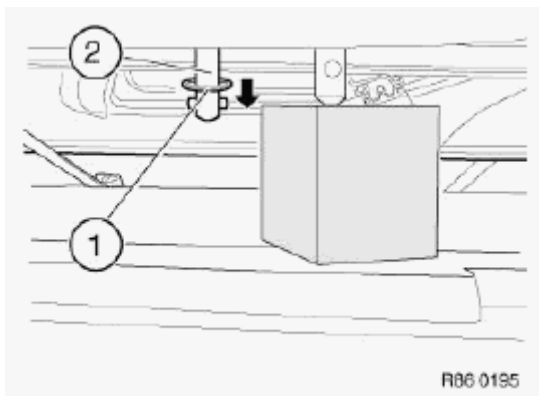


Fig. 141: Remove Spring Nut From Camloc Fastener
 Courtesy of BMW OF NORTH AMERICA, INC.

Installation

Use new spring nut.

Remove Camloc fastener (1) from locating hole (2).

Installation

Press Camloc fastener (1) downwards until contact is made with hood stop. Wing (3) of Camloc fastener points to middle of hood.

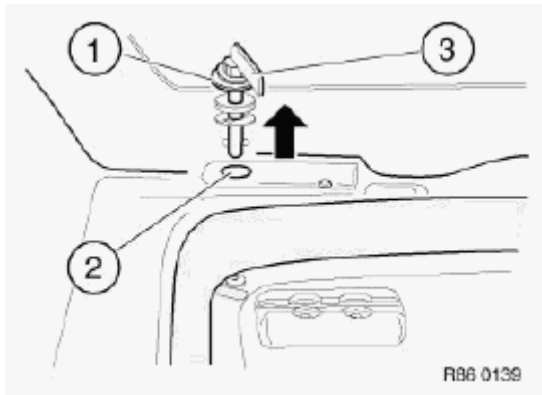


Fig. 142: Press Camloc Fastener Downward Until Contact Is Made
Courtesy of BMW OF NORTH AMERICA, INC.

Replacing spacer:

Remove spacer (1) from Camloc fastener (4) by aligning opening (2) over lateral pin (3).

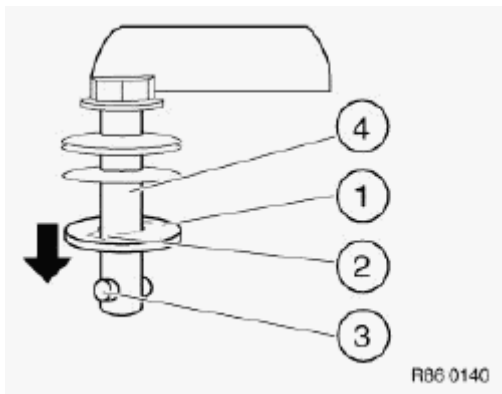


Fig. 143: Identifying Spacer, Camloc Fastener And Lateral Pin
Courtesy of BMW OF NORTH AMERICA, INC.

Reducing pretension:

Reduce spacer thickness, replace spacer or install Camloc fastener without spacer.

Increasing pretension:

Fit a thicker spacer or two spacers.

Installation

Place spacer (1) on Camloc fastener (4) and turn until it is in a secure position.

Check that hood seal is correctly seated.

Check that Camloc fasteners are locked. Lift hood by handle recesses. Hood must not be able to move with respect to platform of BMW multitrailer.

86 21 ... ADJUSTING REAR LID TO FIT

NOTE: The following text describes how to adjust the rear lid to fit at one mounting point as an example. Proceed in the same way for the other mounting points.

Height adjustment of rear lid:

Release screws (1) and move rear lid in direction of arrows.

Depth adjustment of rear lid:

Release screws (2) and move rear lid in direction of arrows.

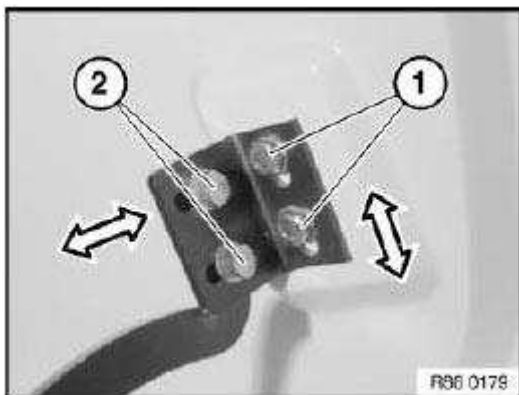


Fig. 144: Adjusting Rear Lid And Screws
Courtesy of BMW OF NORTH AMERICA, INC.

Installation

Tightening Torque, height adjustment,

refer to 86 21 7AZ, see **86 21 HOOD** .

Tightening Torque, depth adjustment,

refer to 86 21 9AZ, see **86 21 HOOD** .

Adjust gap (A) evenly all around without displacement and correct if necessary.

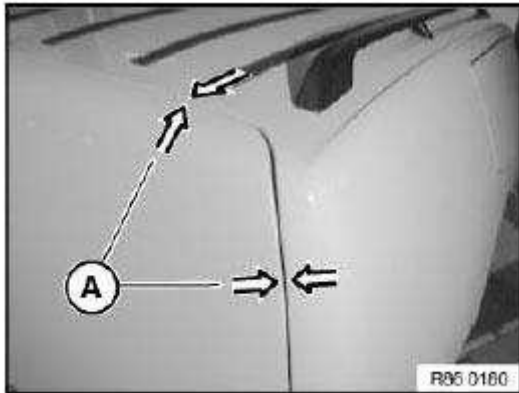


Fig. 145: Identifying Gap

Courtesy of BMW OF NORTH AMERICA, INC.

Check lid in transition (B) to hood for displacement and correct if necessary (flush).

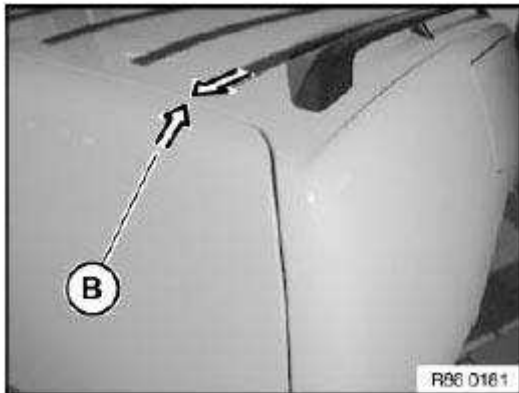


Fig. 146: Checking Lid In Transition To Hood

Courtesy of BMW OF NORTH AMERICA, INC.

To align lid in transverse direction, you can install or remove plastic washers (3) between hinge bracket (1) and mounting bracket (2).

Installation

There must always be a plastic washer (3) fitted on left and right sides of mounting bracket (2). Plastic washers are available in thicknesses of 1 mm and 3 mm.

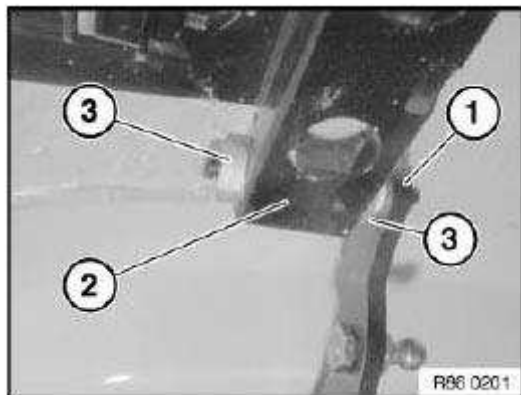


Fig. 147: Identifying Plastic Washers, Hinge Bracket And Mounting Bracket
 Courtesy of BMW OF NORTH AMERICA, INC.

Check lid in transition (C) to hood (flush) and correct if necessary. Correction is made by inserting or omitting plastic washers (refer to **Fig. 147**).

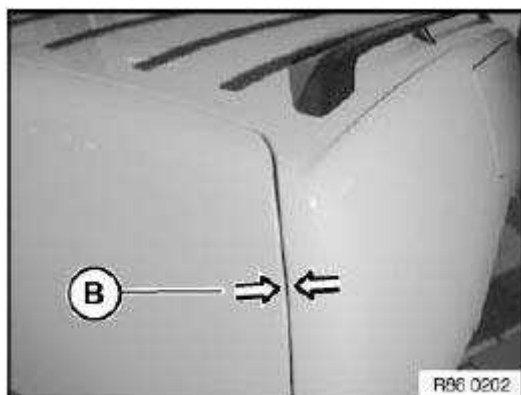


Fig. 148: Checking Lid In Transition To Hood
 Courtesy of BMW OF NORTH AMERICA, INC.

86 21 ... ADJUSTING ROTARY STRIKER LOCK

The following text describes how to adjust the rotary striker lock on the rear lid as an example. Proceed in the same way for the side lids. Adjust the lock while the lid is open.

Release screws (1) and adjust rotary striker lock (2) in elongated hole area in direction of arrows.

Installation

Tightening Torque,

refer to 86 21 12AZ, see **86 21 HOOD** .

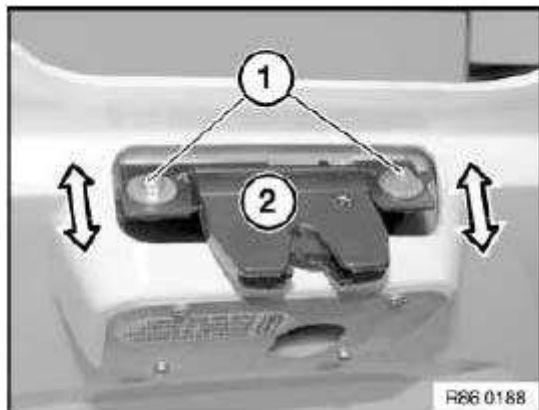


Fig. 149: Identifying Rotary Striker Lock And Screws
 Courtesy of BMW OF NORTH AMERICA, INC.

86 21 ... ADJUSTING SIDE LID TO FIT

NOTE: The following text describes how to adjust the side lid to fit at one mounting point as an example. Proceed in the same way for all other mounting points.

Height adjustment of side lid:

Release screws (1) and move side lid in direction of arrows.

Installation

Tightening Torque,

refer to 86 21 7AZ, see **86 21 HOOD** .

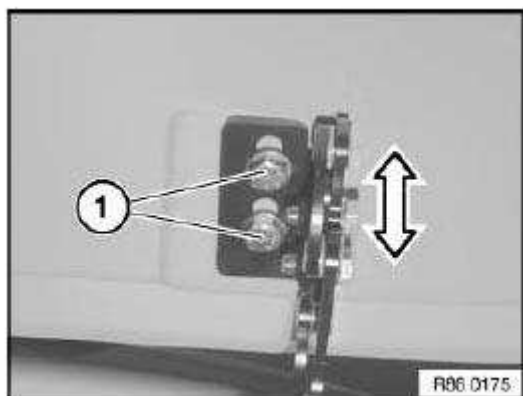


Fig. 150: Adjusting Side Lid And Screws
 Courtesy of BMW OF NORTH AMERICA, INC.

Depth adjustment of side lid:

Release screws (1) and move side lid in direction of arrows.

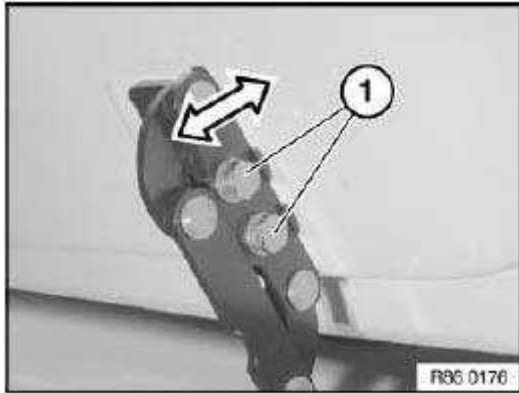


Fig. 151: Moving Side Lid And Screws
Courtesy of BMW OF NORTH AMERICA, INC.

Installation

Tightening Torque,

refer to 86 21 7AZ, see **86 21 HOOD** .

Adjust gap (A) evenly all around and correct if necessary.

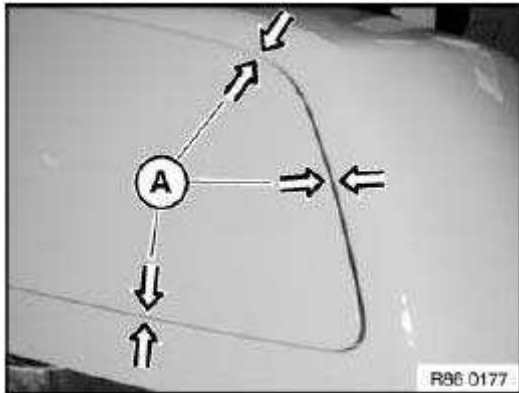


Fig. 152: Adjusting Gap (A)
Courtesy of BMW OF NORTH AMERICA, INC.

Check lid in transition (B) to hood for displacement and correct if necessary (flush).

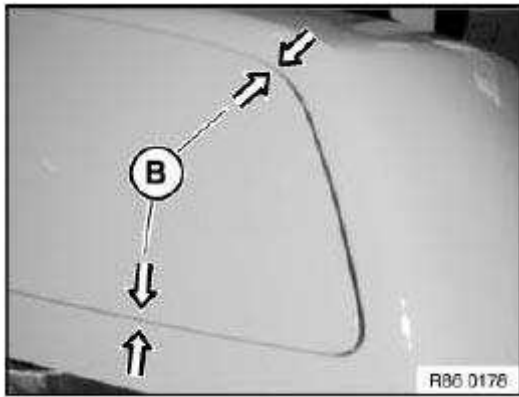


Fig. 153: Checking Lid In Transition To Hood
 Courtesy of BMW OF NORTH AMERICA, INC.

To align lid in direction of travel, you can install or remove a spacer plate (3) between mounting bracket (1) and hinge (2).

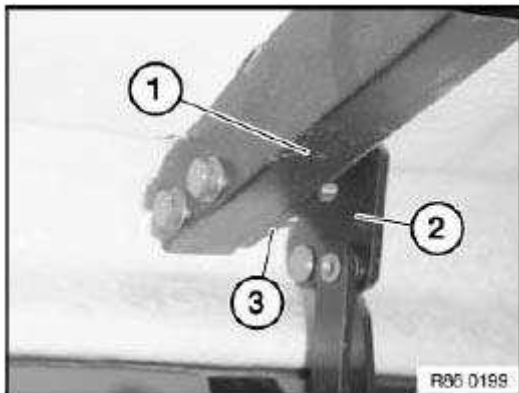


Fig. 154: Identifying Spacer Plate Between Mounting Bracket And Hinge
 Courtesy of BMW OF NORTH AMERICA, INC.

Check lid in transition (C) to hood for displacement and correct if necessary (flush). Correction is made by inserting or omitting spacer plates (refer to **Fig. 154**).

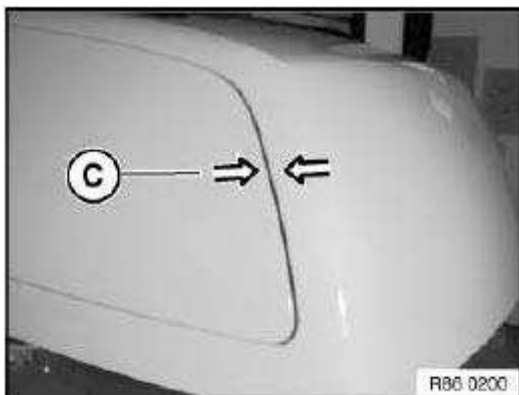


Fig. 155: Checking Lid In Transition To Hood
Courtesy of BMW OF NORTH AMERICA, INC.

86 21 ... ATTACHING/REPLACING BMW BADGE

Position of attachment: inside of rear lid

Remove plastic cover (1) from bore holes (2).

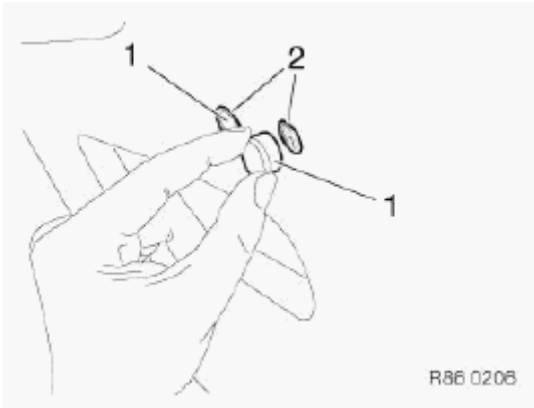


Fig. 156: Identifying Plastic Cover And Bore Holes
Courtesy of BMW OF NORTH AMERICA, INC.

Inserting a set of pointed pliers through bore holes (1), detach retaining washers (2) from pins of BMW badge.

Installation:

Use only new retaining washers.

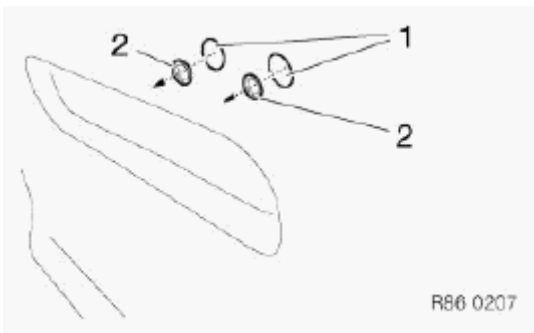


Fig. 157: Identifying Retaining Washers And Bore Holes
Courtesy of BMW OF NORTH AMERICA, INC.

CAUTION: Instruction for removing BMW badge:

Slide a blunt object (e.g. a wooden wedge) under the BMW badge and carefully lever off the badge.

Position of attachment: outside of rear lid

The BMW badge must be attached at room temperature.

Degrease bonding area with petroleum ether.

Rub down bonding area with a dry cloth.

Peel off protective film on BMW badge (1).

Insert BMW badge (1) with pin (2) into bore hole (3). If bore holes (3) are considerably larger than pin (2), optically align BMW badge (1) exactly.

Press down BMW badge (1) firmly.

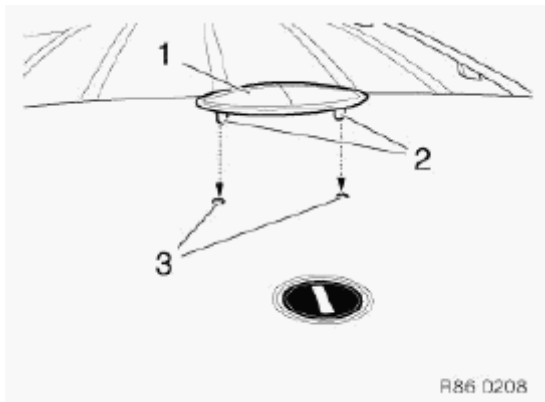


Fig. 158: Inserting BMW Badge With Pin Into Bore Hole
Courtesy of BMW OF NORTH AMERICA, INC.

Position of attachment: inside of rear lid

By inserting a 1/4" ratchet with extension and socket wrench insert (7 mm A/F) through bore holes (2), attach a retaining washer (1) in each case to pin of BMW badge. In so doing, press down on outside of rear lid with one hand on BMW badge and grip.

Push on relevant retaining washer (1) as far as it will go.

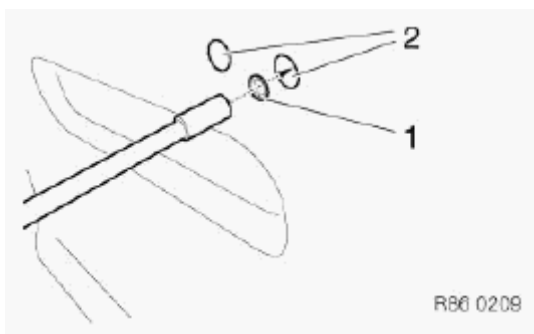


Fig. 159: Identifying Retaining Washer And Bore Holes
Courtesy of BMW OF NORTH AMERICA, INC.

Position of attachment: inside of rear lid

Insert plastic cover (1) in bore holes (2).

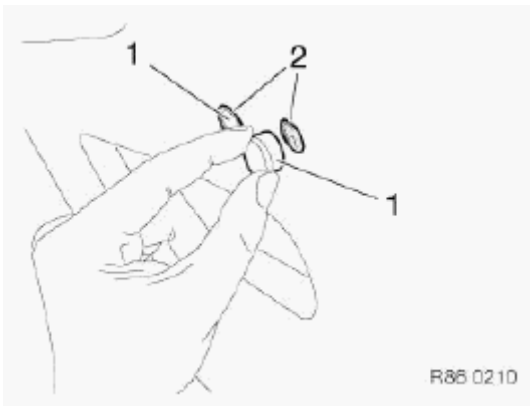


Fig. 160: Inserting Plastic Cover In Bore Holes
Courtesy of BMW OF NORTH AMERICA, INC.

86 21 ... FITTING BMW LOGO

Distance between hood edge and lower edge of BMW logo (1) is 100 mm.

Distance between middle of lock and lettering (2) is 300 mm.

Installation

Degrease bonding areas with benzine. Rub down bonding area with a dry cloth.

Position of BMW logo (1): parallel to lower edge.

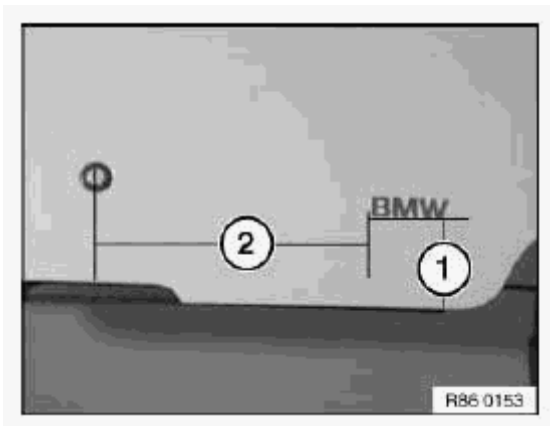


Fig. 161: Identifying BMW Logo And Lettering Distance
Courtesy of BMW OF NORTH AMERICA, INC.

86 21 ... INSTALLING HOOD SEAL

NOTE: **Removing old seal:**
In a straight area of hood, grip old seal piping with a pair of pliers and pull off horizontally. Grip detached seal with both hands and uniformly pull away from hood ridge.

Push seal piping (1) by hand onto hood ridge (2). Using a rubber hammer, gently tap seal piping (1) as far as it will go onto hood ridge (2). Make sure piping is evenly positioned especially in radii of hood ridge.

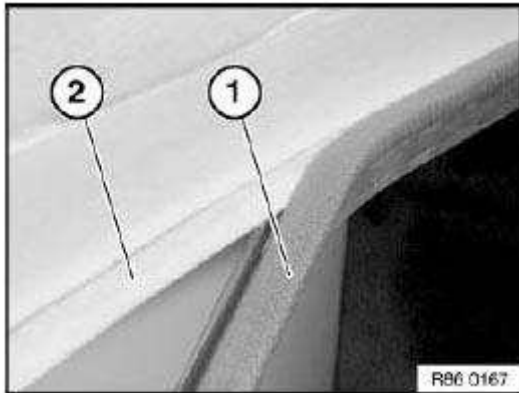


Fig. 162: Pushing Seal Piping Onto Hood Ridge
Courtesy of BMW OF NORTH AMERICA, INC.

Installation

Position end face of seal at front end of hood in a straight area. Lay seal from front to rear.

86 21 ... INSTALLING RUBBER ROOF STRIP

NOTE: **Pull off old rubber roof strip and remove remaining traces of adhesive with universal cleaner. Rub down with a dry cloth.**

Select rubber roof strip according to length of roof recess (1).

Arrange chamfered ends of rubber roof strip to match shape of roof recess (1).

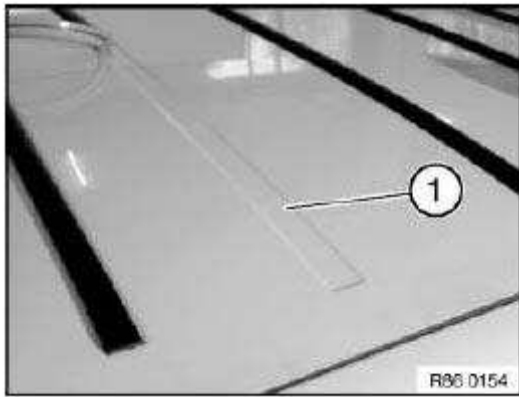


Fig. 163: Identifying Roof Recess

Courtesy of BMW OF NORTH AMERICA, INC.

Installation

Pretreat bonding area and stick on rubber roof strip according to manufacturer's instructions.

86 21 ... INSTALLING SEAL FOR REAR LID AND SIDE LID

NOTE: The following text describes how to install the seal for the rear lid as an example. Proceed in the same way for the side lids.
Removing old seal:
 Open lid. Grip seal piping with both hands and pull seal off hood ridge. Remove old seal over lid.

Push seal piping (1) by hand onto hood ridge (2). Using a rubber hammer, gently tap seal piping (1) as far as it will go onto hood ridge (2). Make sure piping (1) is evenly positioned especially in radii of hood ridge.

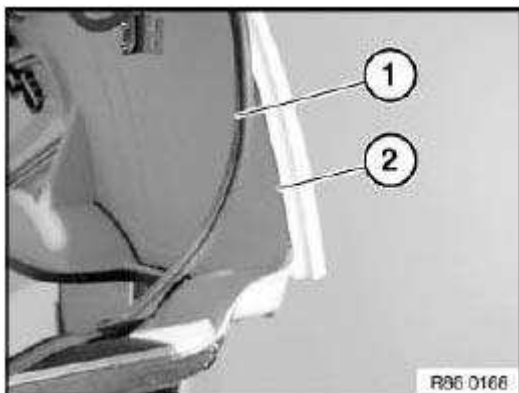


Fig. 164: Installing Seal Piping Onto Hood Ridge

Courtesy of BMW OF NORTH AMERICA, INC.

Installation

Always position end face of seal in a straight area only:

e.g. on cross-member or on upper hood ridge of rear lid.

Suitable areas on side lids:

Upper and lower hood ridge.

Sealing lip of seal must point outwards.

After installing from inside and outside, check correct seating between lid seal and lid. Lid must rest without air on lid seal.

86 21 ... INSTALLING SPONGE RUBBER SEAL

NOTE: **Removing old sponge rubber seal: Pull off old sponge rubber seal. Remove remaining traces of adhesive with universal cleaner.**

Sponge rubber seal runs along area marked gray (1).

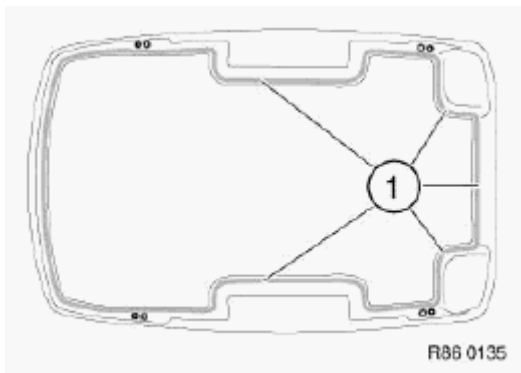


Fig. 165: Identifying Gray Marked Area Of Rubber Seal
Courtesy of BMW OF NORTH AMERICA, INC.

Lay sponge rubber seal (1) in middle of hood contact surface (2).

Installation

Degrease contact surface (2) with benzine and rub down with a dry cloth. Stick on sponge rubber seal (1) according to manufacturer's instructions. Position end face of seal (1) in a straight area.

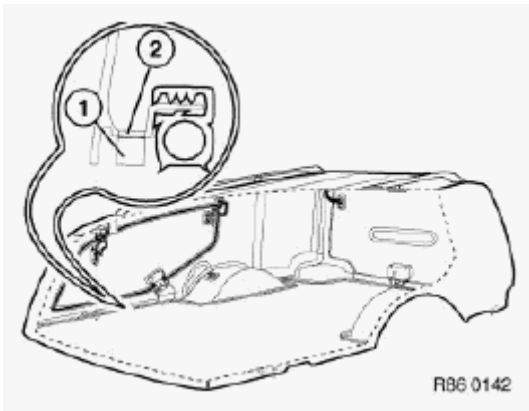


Fig. 166: Identifying Rubber Seal In Middle Of Hood Contact Surface
 Courtesy of BMW OF NORTH AMERICA, INC.

86 21 ... REMOVING BALL PIVOT

NOTE: Remove gas spring,
 refer to **86 21 ... REMOVING GAS SPRING**.

NOTE: The following text describes how to remove the ball pivot from the hinge retaining bracket on the rear lid as an example. Proceed in the same way for the other ball pivots.
 Make sure the attachments are reinstalled in the correct sequence. Only in this way will the gas springs open and close properly.

Grip ball pivot (1) at hexagon mount (2) and release nut (3).

Installation

Use new self-locking nut.

Tightening Torque,

refer to 86 21 10AZ, see **86 21 HOOD** .

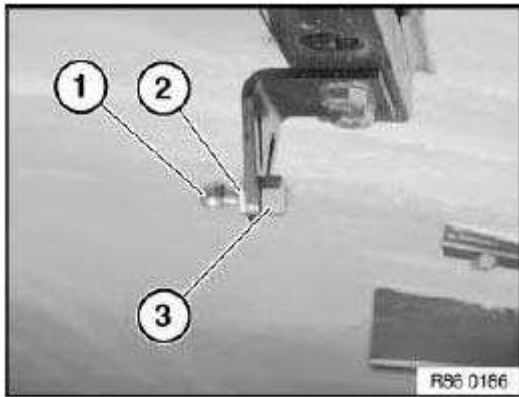


Fig. 167: Identifying Ball Pivot, Hexagon Mount And Nut
 Courtesy of BMW OF NORTH AMERICA, INC.

86 21 ... REMOVING CENTERING PIN FROM MOUNTING BRACKET

NOTE: Exclusively for removal of pin, raise the hood in the GFP area. For raising, use a wooden block with a maximum width of 35 mm and a height of 45 mm. The length must be selected depending on the lifting platform securing point. Ensure the hood is secure on the blocks.

Position block (1) so that it is only located in area of sponge rubber seal (2).

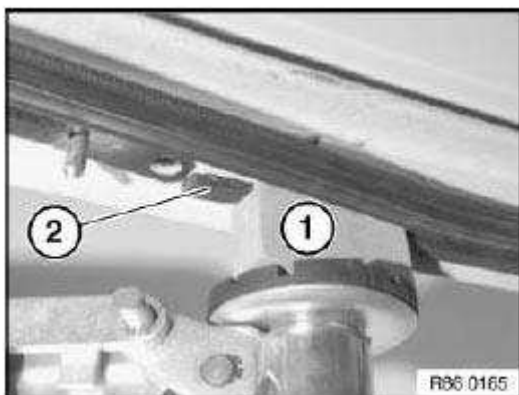


Fig. 168: Block (1) So That It Is Only Located In Area Of Sponge Rubber Seal (2)
 Courtesy of BMW OF NORTH AMERICA, INC.

Insert a mandrel into hole (1) of pin (2) and turn counterclockwise.

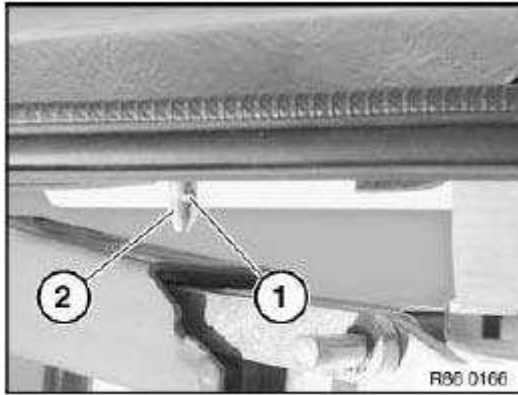


Fig. 169: Insert A Mandrel Into Hole (1) Of Pin (2) And Turn Counterclockwise
Courtesy of BMW OF NORTH AMERICA, INC.

86 21 ... REMOVING GAS SPRING

Only remove the gas spring while the lid is open. The gas spring will then not be subjected to load and the spring piston will not jump out of the spring housing. Prop the lid open with one hand to prevent it dropping closed. Remove the gas spring with your other hand.

NOTE: **Side lids are each fitted with a gas spring. Rear lid is fitted with two gas springs. The following text describes how to remove the gas spring at one mounting point as an example. Proceed in the same way for all other mounting points.**
Rear lid:
Replace gas springs in pairs only.

Lever out retaining clip (1) in recess (2) and push on gas spring head (3) in direction of arrow. Detach spring head (3) from ball pivot.

INSTALLATION

Push retaining clip (1) back into its original position. Press spring head (3) onto ball pivot until spring head (3) snaps audibly into place.

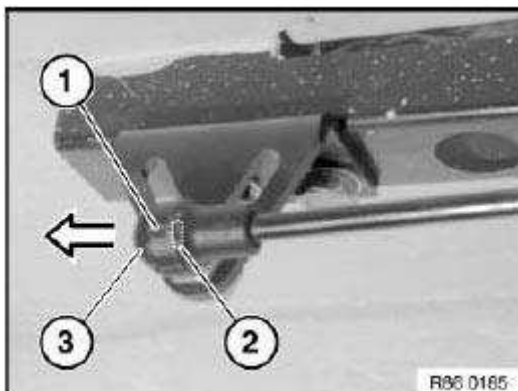


Fig. 170: Push Retaining Clip (1) Back Into Its Original Position
Courtesy of BMW OF NORTH AMERICA, INC.

86 21 ... REMOVING GAS SPRING RETAINING BRACKET

NOTE: Remove gas spring,
refer to **86 21 ... REMOVING GAS SPRING.**
Remove ball pivot,
Refer to **86 21 ... REMOVING BALL PIVOT.**

Release screws (1) and remove gas spring retaining bracket (2) from mounting bracket (3).

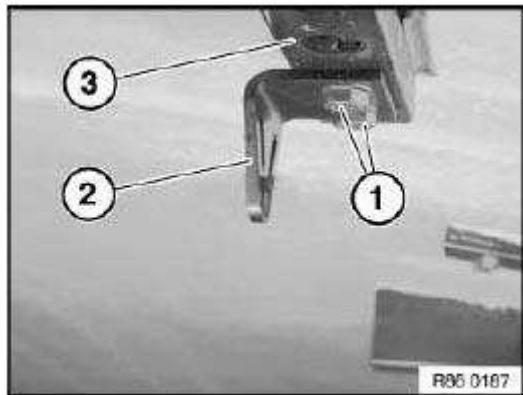


Fig. 171: Release Screws (1) And Remove Gas Spring Retaining Bracket (2) From Mounting Bracket (3)
Courtesy of BMW OF NORTH AMERICA, INC.

Installation

Install retaining bracket so that it is centered in elongated holes.

Tightening Torque,

refer to 86 21 11AZ, see **86 21 HOOD** .

86 21 ... REMOVING HINGE BRACKET ON REAR LID

NOTE: Remove rear lid,
refer to **86 21 ... REMOVING LID.**
Remove gas spring, remove gas spring on hinge side only,
refer to **86 21 ... REMOVING GAS SPRING.**

Raise edge (1) of retaining clip (2) and slide in direction of arrow towards rear.

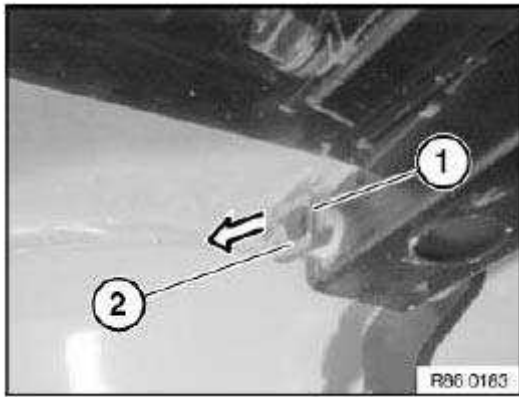


Fig. 172: Sliding Retaining Clip

Courtesy of BMW OF NORTH AMERICA, INC.

Remove plastic washer (1). Pull hinge bracket (2) in direction of arrow out of mounting bracket (3).

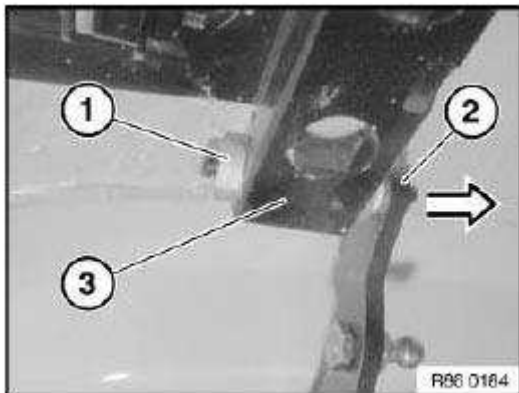


Fig. 173: Pull Hinge Bracket In Direction Of Arrow

Courtesy of BMW OF NORTH AMERICA, INC.

Installation

There must always be a plastic washer (1) fitted on left and right sides of mounting bracket (3).

86 21 ... REMOVING LID

NOTE: Adjusting side lid to fit,
refer to R8621 ... ADJUSTING SIDE LID TO FIT.
Adjusting rear lid to fit,
refer to R8621 ... ADJUSTING REAR LID TO FIT.

NOTE: The text describes how to remove the lid at one rear lid mounting point as an example. Proceed in the same way for the side lids. Spare part lids are always supplied without complete locking systems.

Two persons are required for this task.

NOTE: **Open lid.**

Loosen screws (1). Remove lid (2).

Installation

Rear lid: shoulder (3) points to middle of hood.

Side lid: shoulder (3) points to outside of hood.

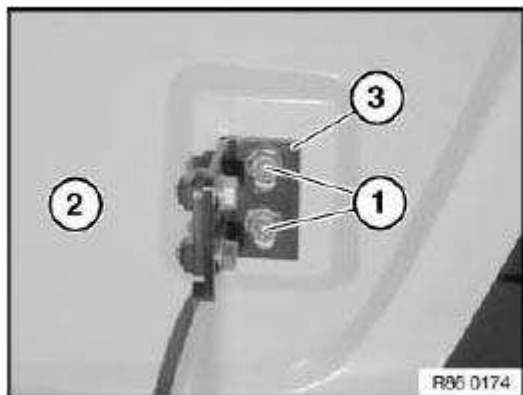


Fig. 174: Loosen Screws And Remove Lid
Courtesy of BMW OF NORTH AMERICA, INC.

Tightening Torque:

refer to 86 21 7AZ, see **86 21 HOOD** .

86 21 ... REMOVING LOCK BARREL

NOTE: The following text describes how to remove the lock barrel on the rear lid as an example.
Proceed in the same way for the side lids. Remove the lock barrel while the lid is open.
Remove cover, spring nut and pull rod,
refer to **86 21 ... REMOVING ROTARY STRIKER LOCK**.

Slide retainer (1) in direction of arrow away from lock barrel (2). Remove lock barrel (2).

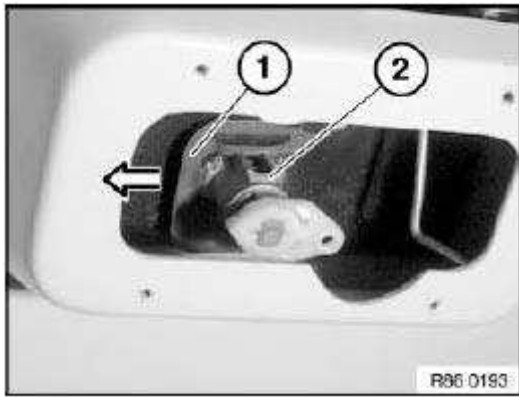


Fig. 175: Identifying Retainer And Lock Barrel
 Courtesy of BMW OF NORTH AMERICA, INC.

Installation

Examine rubber backing for damage and replace if necessary. When replacing lock barrel, make sure coding of new lock barrel matches coding of fitted lock barrel (simultaneous closing).

86 21 ... REMOVING LOCK STRIKER FIXTURE ON REAR LID

Grip rubber seal on seal piping (1) and pull off in area of lock striker fixture (2). Grip lid seal (3) on seal piping (4) and pull off in area of lock striker fixture (2).

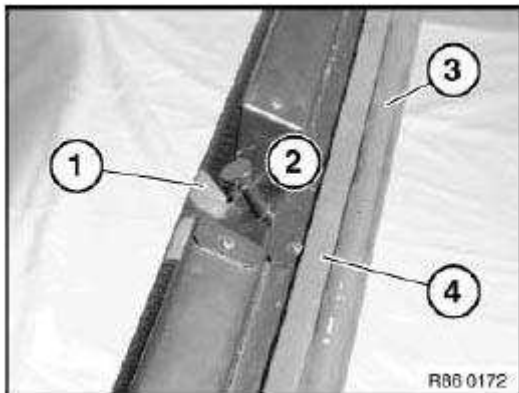


Fig. 176: Grip Rubber Seal On Seal Piping
 Courtesy of BMW OF NORTH AMERICA, INC.

CAUTION: Before drilling out rivets, drive in rivet pins with a punch.
 Drill out rivets (1+2) and remove lock striker fixture (3).

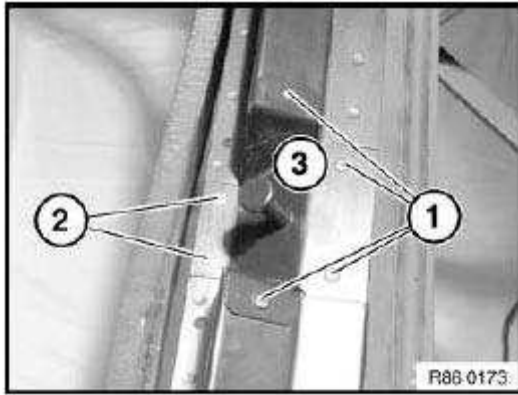


Fig. 177: Drill Out Rivets And Remove Lock Striker Fixture
 Courtesy of BMW OF NORTH AMERICA, INC.

Installation

Rivets (1) have black heads and long shanks. Rivets (2) have silver heads and short shanks.

86 21 ... REMOVING PLUG FOR INSIDE LIGHT

NOTE: Two different types of plugs are used for the inside light. Both types function in the same way, only their designs are different.

Type 1:

Release screw (1) and separate housing plug (2).

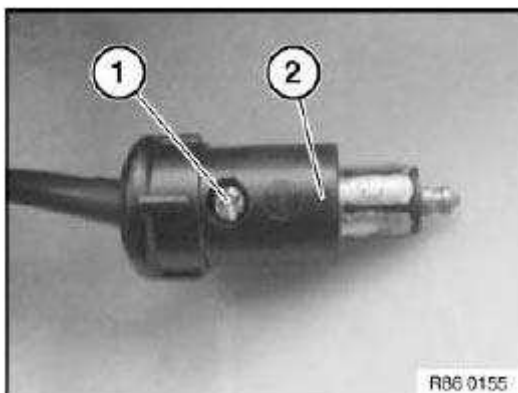


Fig. 178: Identifying Housing Plug And Screw
 Courtesy of BMW OF NORTH AMERICA, INC.

Release screws (1) and disconnect cables (2) from screw clamp.

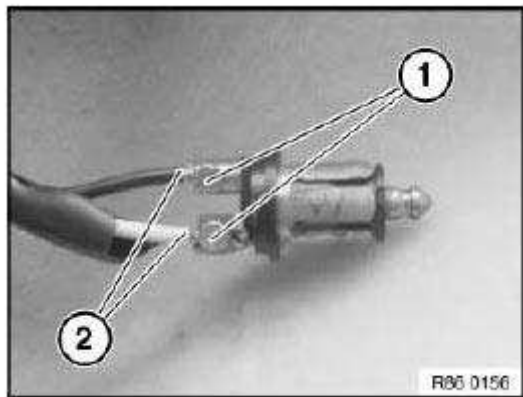


Fig. 179: Identifying Cables And Screws
 Courtesy of BMW OF NORTH AMERICA, INC.

Type 2:

Release screw (1) and separate housing plug (2).

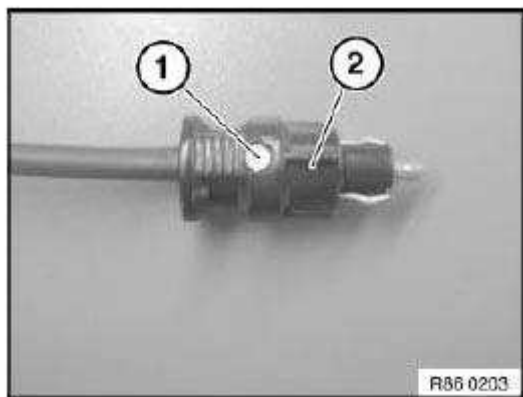


Fig. 180: Identifying Housing Plug And Screw
 Courtesy of BMW OF NORTH AMERICA, INC.

Remove contact parts (1+2).

Installation

When installing, make sure contact parts (1+2) are in correct installation position.

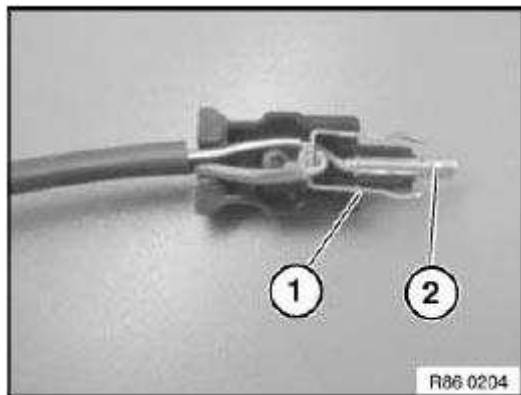


Fig. 181: Identifying Contact Parts
 Courtesy of BMW OF NORTH AMERICA, INC.

86 21 ... REMOVING ROOF RAILING

NOTE: The text describes how to remove the roof railing at one mounting point as an example. Proceed in the same way for the other mounting points.

Open cover (1) and fold down.

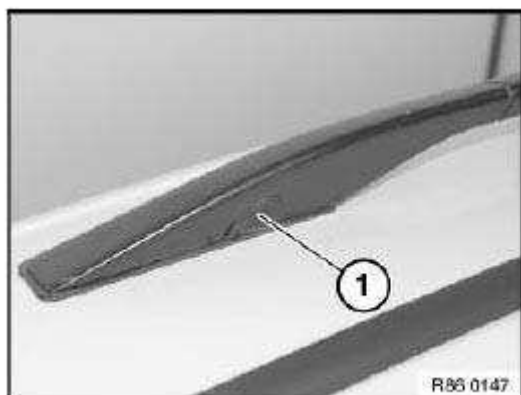


Fig. 182: Identifying Roof Railing Cover
 Courtesy of BMW OF NORTH AMERICA, INC.

Unscrew bolt (1).

After releasing three retaining screws, lift off roof railing (2).

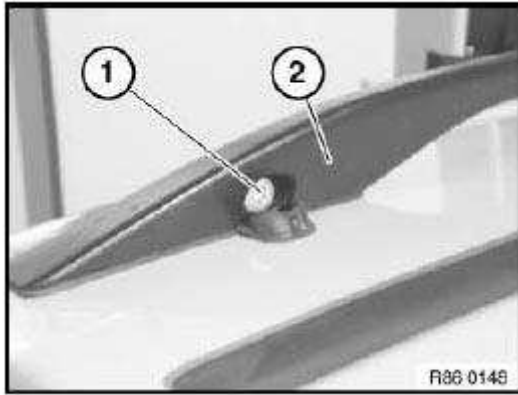


Fig. 183: Identifying Roof Railing Bolts
Courtesy of BMW OF NORTH AMERICA, INC.

Installation

Check molded sealing parts for faults and replace if necessary. Pay attention to identification of molded sealing parts and position accordingly.

Check butylene tape seal.

Use new screws. Coat all screws with OKS 90 thread locking adhesive.

First screw down railing adapter in middle. Then press roof railing downwards with a force of approx. 50 N. Then screw down railing adapter at front and rear.

Tightening Torque for roof railing at front and rear,

refer to 86 21 1AZ, see **86 21 HOOD** .

Tightening Torque for roof railing in middle,

refer to 86 21 2AZ, see **86 21 HOOD** .

86 21 ... REMOVING ROOF RAILING ADAPTER

NOTE: **Removing roof railing,**
 refer to 86 21 ... REMOVING ROOF RAILING

Remove molded sealing part (1).

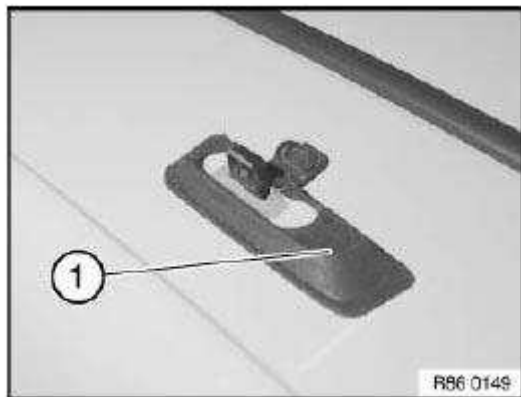


Fig. 184: Identifying Molded Sealing Part
 Courtesy of BMW OF NORTH AMERICA, INC.

Installation

All molded sealing parts must rest flat on hood. Molded sealing parts are marked according to their position.

Cut butylene tape (1) out of railing adapter (2) along dotted line (3) with a knife.

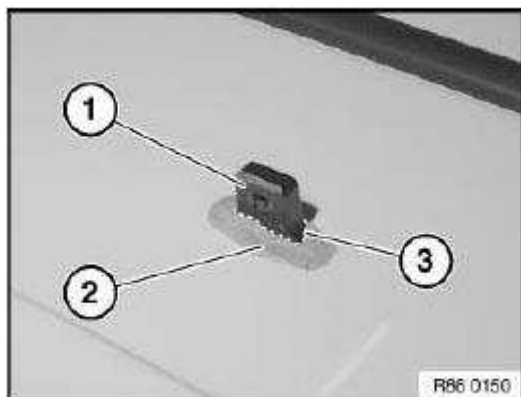


Fig. 185: Cutting Butylene Tape Of Railing Adapter With Knife
 Courtesy of BMW OF NORTH AMERICA, INC.

Installation

Use butylene tape, 5 mm round, for sealing railing adapter on hood roof.

Railing adapters at front and rear: Release screws (1) from inside of hood. Pull out railing adapter (2) and spacer plate (3) towards bottom.

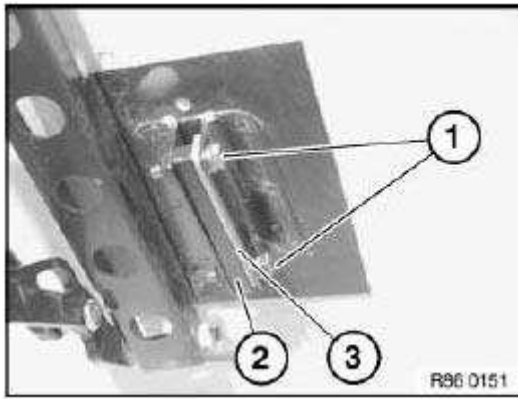


Fig. 186: Pull Out Railing Adapter (2) And Spacer Plate (3) Towards Bottom
 Courtesy of BMW OF NORTH AMERICA, INC.

Installation

Use new screws. Coat all screws with OKS 90 thread locking adhesive. Install spacer plate (3) in its original position.

Tightening Torque for railing adapters at front and rear,

refer to 86 21 3AZ, see **86 21 HOOD** .

Railing adapter in middle: Release screws (1) from inside of hood. Twist out railing adapter from outside.

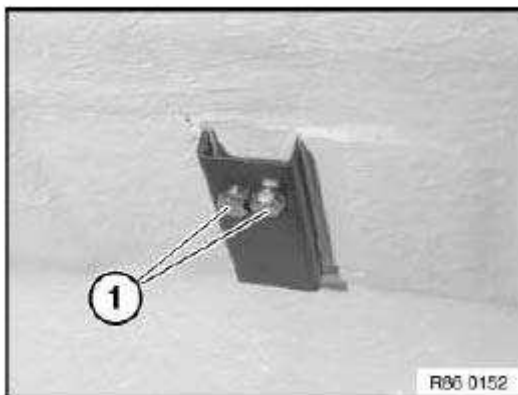


Fig. 187: Release Screws (1) From Inside Of Hood
 Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Use new screws. Tightening Torque for railing adapter in middle,

refer to 86 21 4AZ, see **86 21 HOOD** .

86 21 ... REMOVING ROTARY STRIKER LOCK

The following text describes how to remove the rotary striker lock on the rear lid as an example. Proceed in the same way for the side lids. Remove the lock while the lid is open.

Release screws (1) and remove cover (2). On rear lid, remove red cap (3).

Installation, rear lid only:

Place red cap back on pull rod. Red cap serves to indicate rear lid emergency unlocking facility.

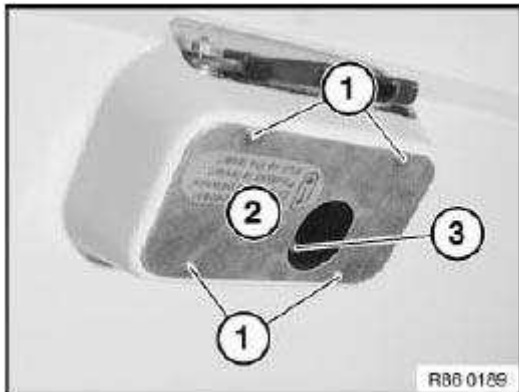


Fig. 188: Release Screws (1) And Remove Cover (2); On Rear Lid, Remove Red Cap (3)
Courtesy of BMW OF NORTH AMERICA, INC.

Remove spring nut (1) from pull rod (2).

Installation

Use new spring nut.

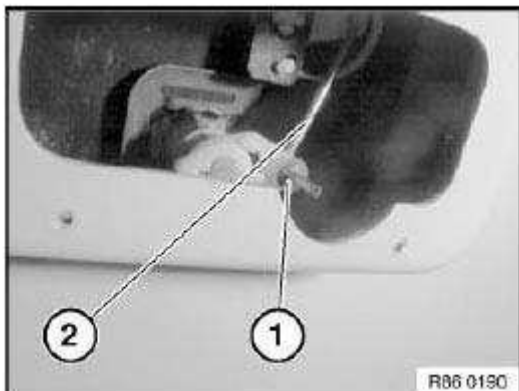


Fig. 189: Identifying Spring Nut And Pull Rod
Courtesy of BMW OF NORTH AMERICA, INC.

Unhook pull rod (1) from rocker (2).

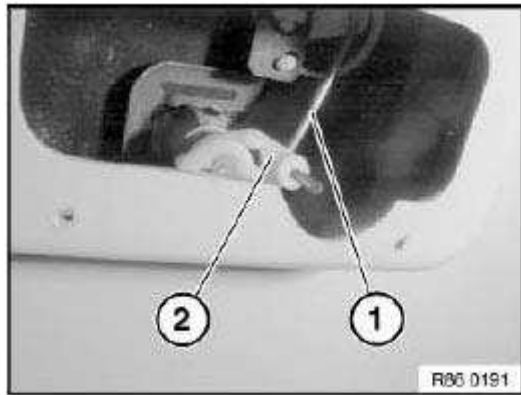


Fig. 190: Unhook Pull Rod From Rocker
Courtesy of BMW OF NORTH AMERICA, INC.

Release screws (1) and remove rotary striker lock (2) from opening (3).

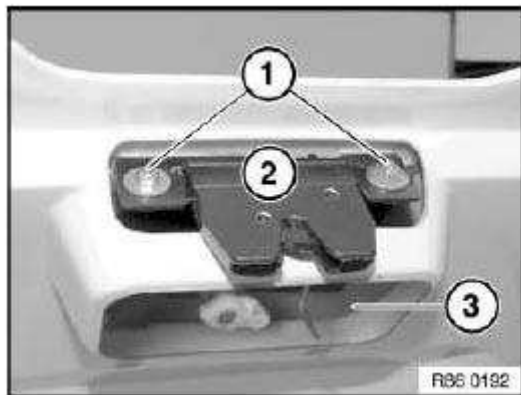


Fig. 191: Release Screws And Remove Rotary Striker Lock From Opening
Courtesy of BMW OF NORTH AMERICA, INC.

Installation

Tightening Torque,

refer to 86 21 12AZ, see **86 21 HOOD** .

Use new Stover nuts.

Detach spring nut (1) from pull rod (2). Remove pull rod (2) from rotary striker lock (3).

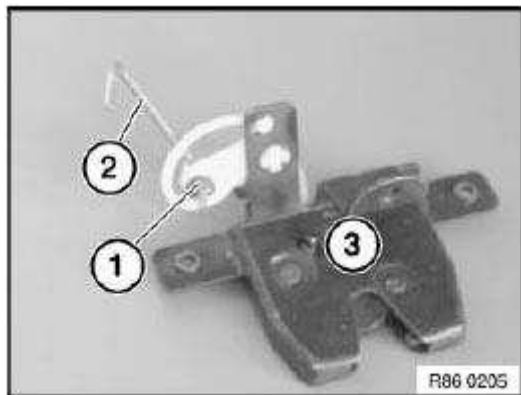


Fig. 192: Detaching Spring Nut From Pull Rod
 Courtesy of BMW OF NORTH AMERICA, INC.

Installation

Use new spring nut.

86 21 ... REMOVING SIDE LID HINGE

NOTE: Remove side lid,
 refer to **86 21 ... REMOVING LID.**
 Remove gas spring, remove gas spring on hinge side only,
 refer to **86 21 ... REMOVING GAS SPRING.**

Unscrew bolt (1). Remove hinge (2). If fitted, remove spacer plate(s) (3).

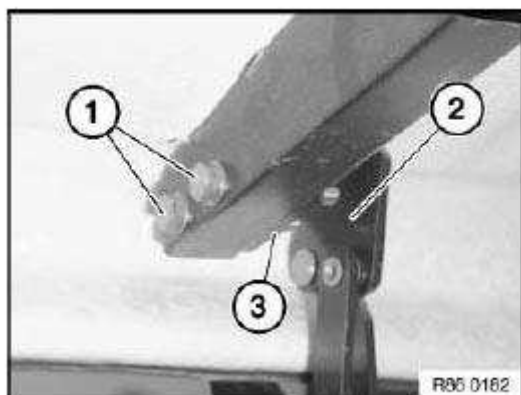


Fig. 193: Unscrew Bolt And Remove Hinge
 Courtesy of BMW OF NORTH AMERICA, INC.

Installation

Pass screws (1) again through spacer tubes. Reinstall existing spacer plate(s) in its/their original position(s). Use new self-locking nuts.

Tightening Torque,

refer to 86 21 6AZ, see **86 21 HOOD** .

86 21 ... REPLACING INSIDE LIGHT

Unclip cover (1) at side recess (arrowed) and remove towards bottom.

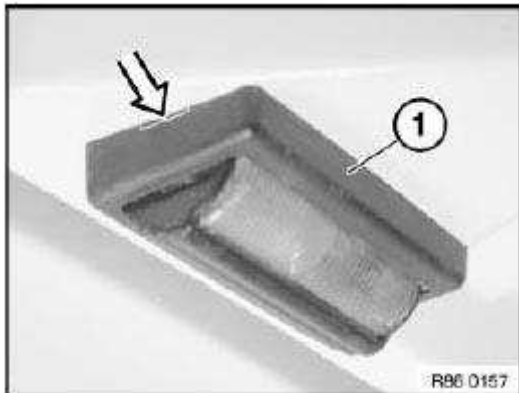


Fig. 194: Unclipping Cover At Side Recess
Courtesy of BMW OF NORTH AMERICA, INC.

Unclip lamp housing (1) at side recess (arrowed).

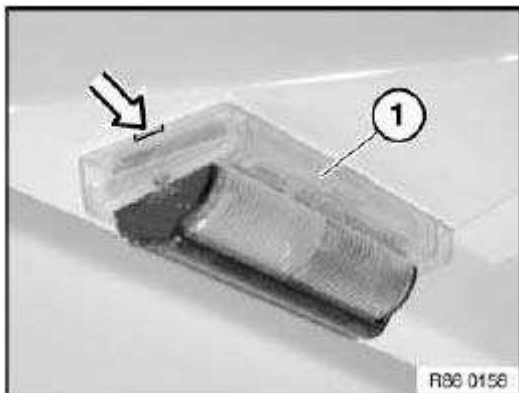


Fig. 195: Unclipping Lamp Housing At Side Recess
Courtesy of BMW OF NORTH AMERICA, INC.

Disconnect flat connector (1) from flat connector contact.

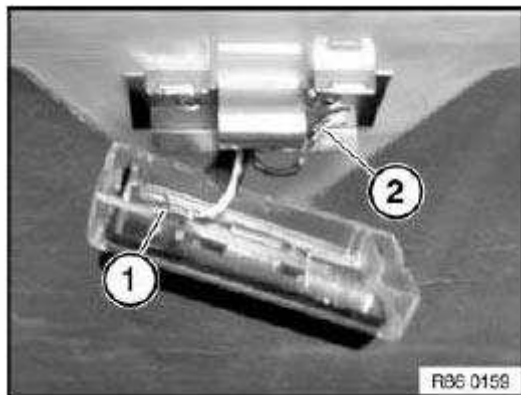


Fig. 196: Disconnecting Flat Connector From Flat Connector Contact
 Courtesy of BMW OF NORTH AMERICA, INC.

CAUTION: Before drilling out rivets, drive in rivet pins with a punch.
 Drill out rivets (1). Pull off inside light mounting bracket (2) over flat connector (3).

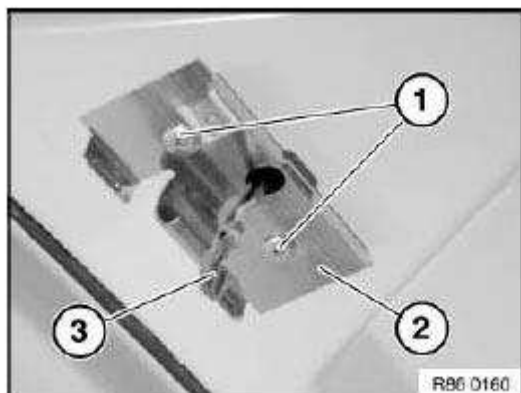


Fig. 197: Drill Out Rivets (1) And Pull Off Inside Light Mounting Bracket (2) Over Flat Connector (3)
 Courtesy of BMW OF NORTH AMERICA, INC.

86 21 ... REPLACING INSIDE LIGHT POWER CABLE

NOTE: Remove inside light cover and lamp housing, refer to **86 21 ... REPLACING INSIDE LIGHT.**
 Remove inside light plug, refer to **86 21 ... Removing plug for inside light.**

Carefully remove adhesive bonds of power cable (1) from hood surface.

Installation

Carefully remove traces of old adhesive with a scraper.

Use standard heat gun adhesive as adhesive.

Carefully remove adhesive bonds of power cable (1) from hood surface.

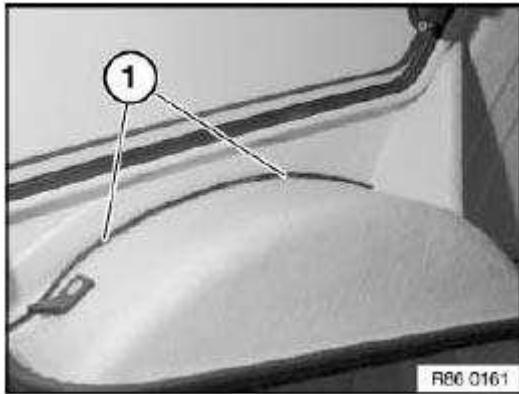


Fig. 198: Remove Adhesive Bonds Of Power Cable From Hood Surface
Courtesy of BMW OF NORTH AMERICA, INC.

Installation

Carefully remove traces of old adhesive with a scraper. Use standard heat gun adhesive as adhesive.

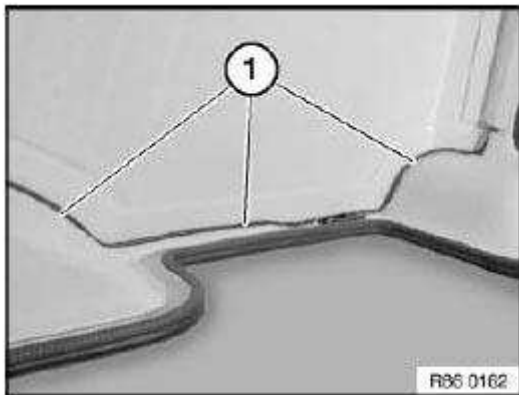


Fig. 199: Remove Traces Of Old Adhesive
Courtesy of BMW OF NORTH AMERICA, INC.

Remove flat connectors (1). Strip cable ends (2) and connect to a new cable. Feed cable connection through opening (3).

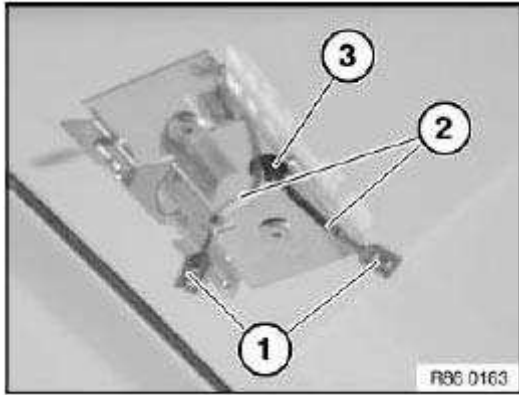


Fig. 200: Feed Cable Connection Through Opening (3)
Courtesy of BMW OF NORTH AMERICA, INC.

Lay new power cable with old power cable through duct (1).

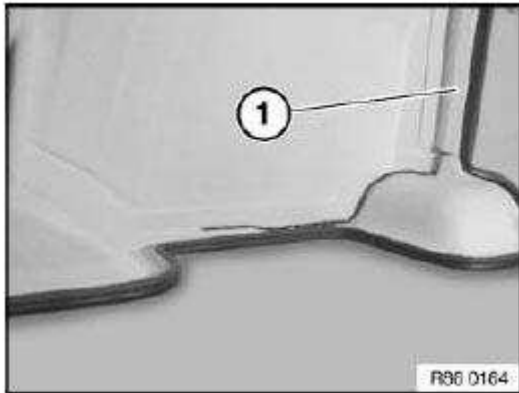


Fig. 201: Lay New Power Cable With Old Power Cable Through Duct (1)
Courtesy of BMW OF NORTH AMERICA, INC.

ACCESSORIES & EQUIPMENT

Trailers - Tightening Torques

LOADING PLATFORM

86 10 PLATFORM

PLATFORM-TIGHTENING TORQUE SPECIFICATIONS

	Type	thread	tightening specification	Measure
1AZ Nut to retaining thread, rear light		M5		7 Nm
2AZ Bar to platform		M8x35		23 Nm
3AZ Lashing plate to platform		M8x35		15 Nm
4AZ Front guard to cross-member		M8x55		28 Nm
5AZ Front guard to longitudinal member		M8x25		34 Nm
6AZ Saucer head screw to rail		M5x15		7 Nm
7AZ Rail, loading ramp frame to cross strut		M6x16		11.5 Nm
8AZ Rail, loading ramp frame to longitudinal member mount		M6x16		11.5 Nm
9AZ Cross strut to rail		M6x16		5.5 Nm
10AZ Footplate to drawbar member		M6x25		11.5 Nm
11AZ Bracket to drawbar member		M8x25		34 Nm
12AZ Wiring harness mount to reversing housing		M10x1x20		58 Nm
13AZ Socket holder to drawbar		M10x95		55 Nm
14AZ Top reversing housing and bracket to drawbar member		M10		55 Nm
15AZ Towing attachment to tow tube		M12x70		96 Nm
16AZ Drawbar member to cross-member		M8x20		28 Nm
17AZ Cross-member to drawbar member		M8x25		40 Nm
18AZ Drawbar member to cross-member		M8x25		28 Nm
19AZ Disk wheel to brake hub				100 Nm
20AZ Brake hub to axle				280 Nm
21AZ Shock absorber to bracket		M12x55		96 Nm
22AZ Trailing arm to coil spring		M10x35		46 Nm
23AZ Coil spring to longitudinal member		M10x25		46 Nm
24AZ Wheel brake to trailing arm		M10x1.5x30		145 Nm
25AZ Trailing arm to mount		M12x85		96 Nm
26AZ Rear apron to bracket		M8x25		26 Nm
27AZ Bracket to mounting bracket		M6x16		11 Nm
28AZ Rotary striker lock to cross strut		M8x35		18 Nm
29AZ Bearing pedestal to loading ramp frame		M6x16		10 Nm

30AZ Outer towbar mount to longitudinal member		M10x25		55 Nm
31AZ Mounting bracket to longitudinal member		M10x25		78 Nm

HOOD

86 21 HOOD

HOOD-TIGHTENING TORQUE SPECIFICATIONS

	Type	thread	tightening specification	Measure
1AZ Roof railing, front and rear, to roof railing adapter		M8		22.5 Nm
2AZ Roof railing, middle, to roof railing adapter		M8		22.5 Nm
3AZ Roof railing, front and rear, to support		M6		15 Nm
4AZ Roof railing, middle, to support		M6		10 Nm
5AZ Upper lock striker fixture to lower lock striker fixture		M8		27 Nm
6AZ Hinge, side lid, to support		M8		27 Nm
7AZ Support, lid to lid		M8		23 Nm
8AZ Screw, depth adjustment, side lid		M8		27 Nm
9AZ Screw, depth adjustment, rear lid		M8		27 Nm
10AZ Ball pivot to retaining bracket		M8		23 Nm
11AZ Retaining bracket to support		M8		27 Nm
12AZ Rotary striker lock to support		M5		7 Nm