

ACCESSORIES & BODY, CAB

BMW Operating Fluids

1.0 ADHESIVES/SEALANTS FOR GLASS

Sikaflex 255 Adhesive is a single component polyurethane with a minimum curing time of 4 hours at 72°F/22°C and 38% relative humidity.

The windshield or rear window must be installed within 10 minutes of applying the adhesive or a skin will form on the adhesive's surface and reduce the adhesive effectiveness.

Sikaflex 255, BMW Part No. 81 22 9 407 497 Cold Kit, or

Sika Ultrafast, BMW Part No. 83 19 9 407 714 in conjunction with Heater, BMW Part No. 83 19 9 407 820.

2.0 OTHER FLUIDS

Cleaning E53 black glossy exterior ornamental trim please use Meguiar's Mirror Glaze Number 9 Professional Swirl Remover 2.0

Glass treatment, all models: Aquapel® Glass Treatment, BMW Part No. 83 19 9 408 523.

3.0 CONTACT CEMENT

A powerful adhesive for leather and leatherette, rubber moldings, felt linings, insulating materials, convertible top adhesive, etc.

(former BMW Part No. 81 22 9 407 524)

3M 1357 High Performance Contact Adhesive

4.0 INSTANT ADHESIVE FOR RUBBER, METAL AND PLASTIC SURFACES

Applications: Rubber profiles on windows, doors, bumpers (soft and hard rubber), seals, inner covers, buttons and controls (plastic/plastic, plastic/steel), circuit elements (electronics), rear lights, turn indicators, ornamental strips and moldings.

(former BMW Part No. 81 22 9 407 143)

3M Part No. 8155

Loctite Part No. 49450

5.0 LOCTITE 380

Black cyanacrylate adhesive for joining metals, but also rubber, PVC etc.

Particularly recommended for attaching rubber door seals on the BMW 5 Series (E34).

(former BMW Part No. 81 22 9 407 394)

3M Part No. 8155

Wurth Part No. 893 4103

Loctite Part No. 38050

2239369 ADAPTER CABLE

2239369 Adapter cable Minimum set: Measuring and testing equipment MP

NOTE: I-cable 104-pin For electrical testing of the airbag control unit ("ACSM4").

Storage Location

R201

SI number

02 08 11 (722)

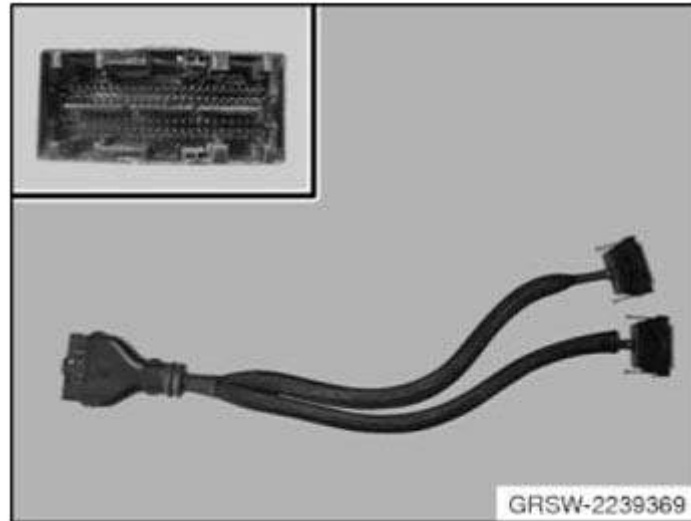


Fig. 4: Identifying Adapter Cable (2239369)

Courtesy of BMW OF NORTH AMERICA, INC.

2232315 ADAPTER CABLE

2232315 Adapter cable Minimum set: Measuring and testing equipment MP

NOTE: I-adapter cable 20-pin For electrical testing of the airbag control unit ("ACSM4").

Storage Location

L205

SI number

02 08 11 (722)

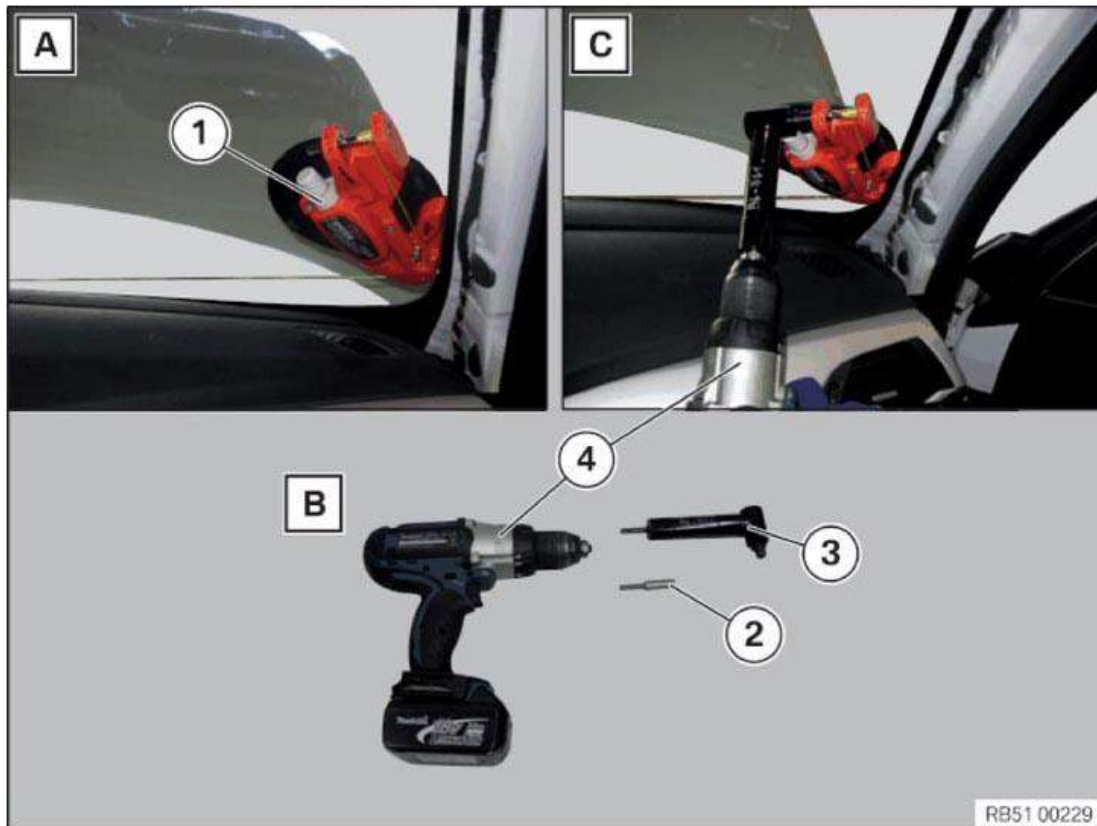


Fig. 390: Identifying Separation Device, Bit Holder And Angle Gear
 Courtesy of BMW OF NORTH AMERICA, INC.

Optimum cutting is guaranteed when the cord is at an acute angle to the adhesive bead. There is a risk of the cord ripping if the angle is too obtuse.

The separation device must be positioned correspondingly to achieve the appropriate angle.

- A. Fix separation device (1) on window glass at bottom right.
- B. Depending on accessibility, attach bit holder (2) or angle gear (3) to cordless screwdriver (4).
- C. Place cordless screwdriver (4) on separation device (1) and start winding cord, observe direction of rotation on separation device.

If required, over trim panel components with plastic protection.

Guide cord with plastic protection around sharp-edged positions.

Cut through adhesive bead up to bottom area of A-pillar.

Turn back cordless screwdriver (4) approx. 2 rotations and remove.

Cutting out procedure

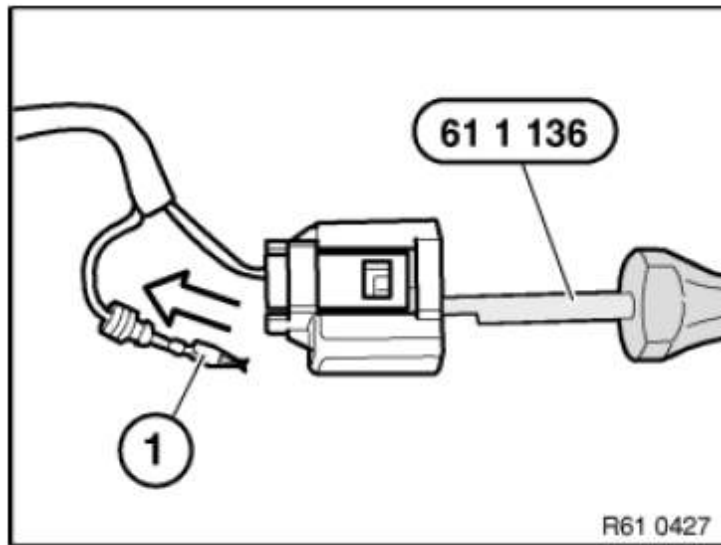


Fig. 99: Pulling Out Cable With Contact Using Special Tool (61 1 136)
 Courtesy of BMW OF NORTH AMERICA, INC.

61 13... IN-LINE PLUGS, 20- PIN, SYSTEM D2.5

Special tools required:

- **61 0 303**

Pull locking slide (1) out of connector (2).

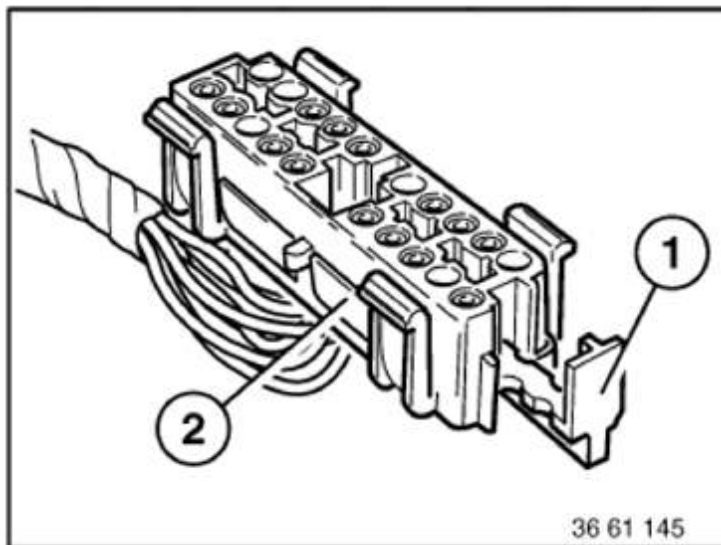


Fig. 100: Identifying Locking Slide Out Of Connector
 Courtesy of BMW OF NORTH AMERICA, INC.

With special tool **61 0 303** , press down retaining hook (3) of corresponding contact and pull out cable with contact.

NOTE: For 2.5 mm round contacts Replaced by special tool 61 0 303 from 09/2005. Replaced by 61 0 303. (0 495 385)

Fig. 197: Identifying Outpusher (0492707)

Courtesy of BMW OF NORTH AMERICA, INC.

0492703 OUTPUSHER

0492703 611110 Outpusher MP

Replaced by: 83300495385

NOTE: (Pressing-off tool for 2.5 mm round contacts) Replaced by 61 0 303. (0 495 385)

0492709 OUTPUSHER

0492709 611134 Outpusher MP

Replaced by: 83300495394

NOTE: For mini flat spring contacts Replaced by special tool 61 0 312 from 09/2005. Replaced by 61 0 312 (0 495 394)

Fig. 198: Identifying Outpusher (0492709)

Courtesy of BMW OF NORTH AMERICA, INC.

0492706 OUTPUSHER

0492706 611131 Outpusher MP

Replaced by: 83300495383

NOTE: As of 09/2005 Replaced by 61 0 301. (0 495 383)

Fig. 199: Identifying Outpusher (0492706)

Courtesy of BMW OF NORTH AMERICA, INC.

0492705 OUTPUSHER

0492705 611130 Outpusher MP

NOTE: (Pressing-off tool set) For contacts Individual tools of this set belong to 61 1 150, not available for delivery as a set

Consisting of:

2 = [0492706](#) Outpusher

NOTE: As of 09/2005 Replaced by 61 0 301. (0 495 383)

2 = [0492707](#) Outpusher

NOTE: For 2.5 mm round contacts Replaced by special tool 61 0 303 from 09/2005. Replaced by 61 0 303. (0 495 385)

Fig. 200: Identifying Outpusher (0492705)

Courtesy of BMW OF NORTH AMERICA, INC.

2 = [0492708](#) Outpusher

NOTE: For 3.5 mm round contacts Replaced by special tool 61 0 305 from 09/2005. Replaced by 61 0 305. (0 495 387)

2 = [0492709](#) Outpusher

NOTE: For mini flat spring contacts Replaced by special tool 61 0 312 from 09/2005. Replaced by 61 0 312 (0 495 394)

2 = [0492710](#) Outpusher

NOTE: For standard flat spring contacts Replaced by special tool 61 0 314 from 09/2005. Replaced by 61 0 314. (0 495 396)

2 = [0492711](#) Outpusher

NOTE: For power timer contacts (G & H) Replaced by special tool 61 0 316 from 09/2005. Replaced by 61 0 316 (0 495 398)

2 = [0492712](#) Outpusher

NOTE: For timer contacts Replaced by special tool 61 0 313 from 09/2005. Replaced by 61 0 313. (0 495 395)

2 = [0492713](#) Socket wrench

NOTE: For indicator lights (Instrument panel)

2 = [0493272](#) Outpusher

NOTE: Slotted sleeve for round contacts by Kostal corporation with 1.5 mm diameter Replaced by special tool 61 0 311 from 09/20 393)

0492712 OUTPUSHER

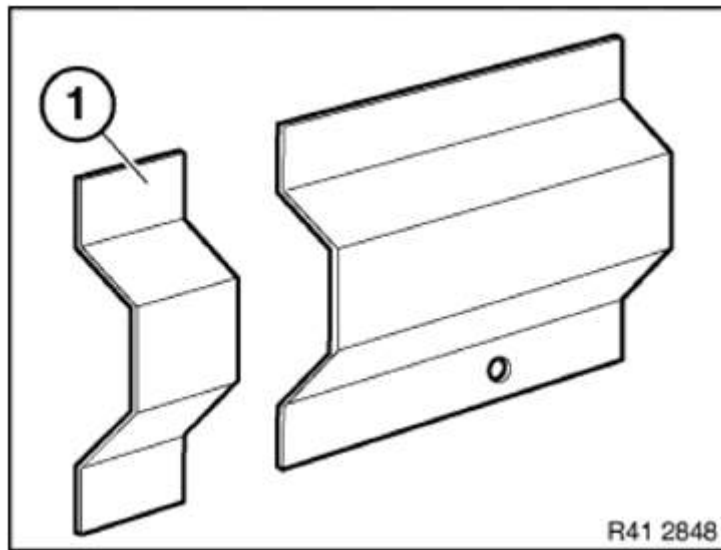


Fig. 93: Identifying Reinforcement Plates From Trim Part
 Courtesy of BMW OF NORTH AMERICA, INC.

Push reinforcement plate (1) into component on body up to half way and plug-weld (3).

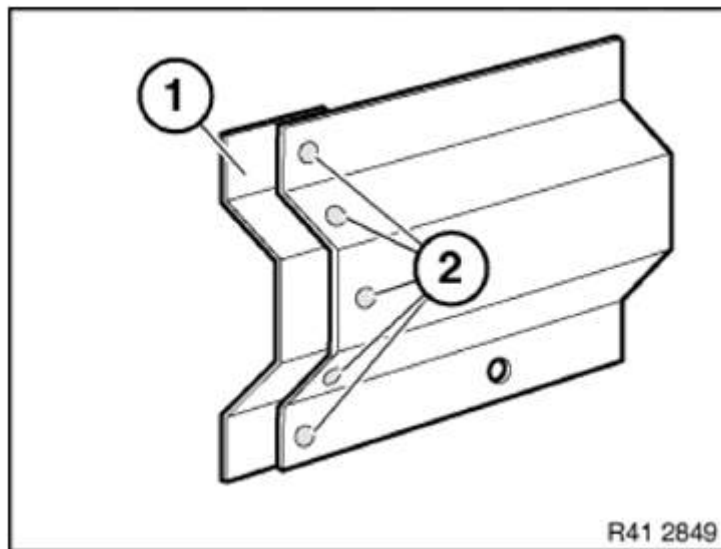


Fig. 94: Identifying Reinforcement Plate And Plug-Weld
 Courtesy of BMW OF NORTH AMERICA, INC.

If applicable, adjust the new part (1) with the alignment bracket or universal tool and plug-weld (2)

MAG weld the joint (3).

Grind and clean weld seam and plug weld spots.

Only visible areas of the outer skin and on the carrier support must be tinned.

All areas which have covers on the vehicle are not to be tinned.

NOTE: Only applicable within the European Union!

European used-vehicle regulations prohibit the use of tin containing lead in motor vehicles introduced after 01.07.2003!

If an already ground brake pad wear sensor has to be replaced although the minimum brake pad thickness has not yet been reached, it is necessary to file down the new sliding contact with a file to the same length as the ground sliding contact.

Necessary preliminary work:

- Remove front left **WHEEL** .

Unclip line from holder (1).

Open housing cover.

Disconnect plug connection (2).

Installation note:

Make sure the plug connections snaps in correctly and the line is fitted correctly in the holders.

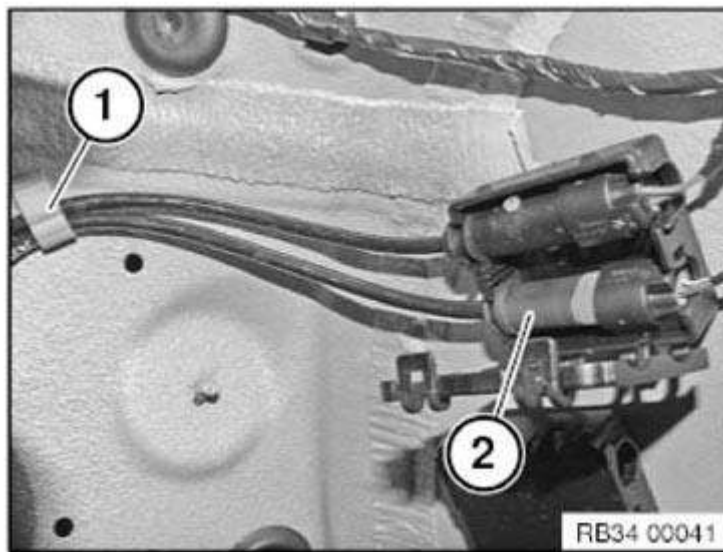


Fig. 179: Removing Line From Holder
Courtesy of BMW OF NORTH AMERICA, INC.

Unclip line from holders (1).

Installation note:

Ensure proper locking of the holders and proper seating of the line in the holders.

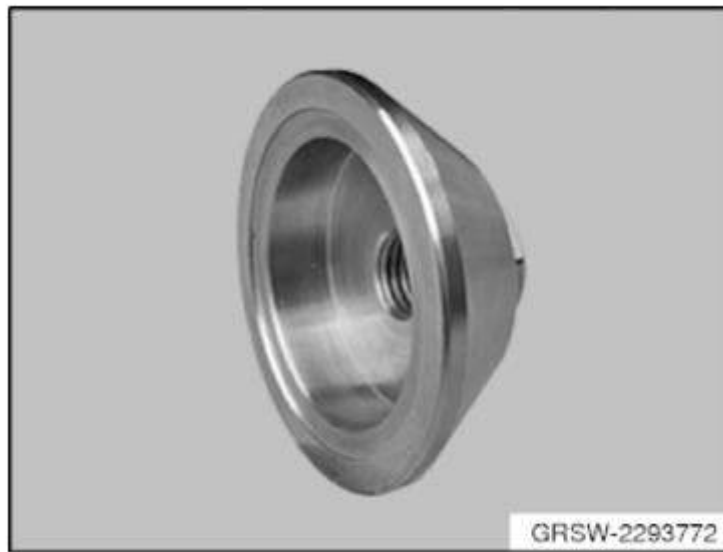
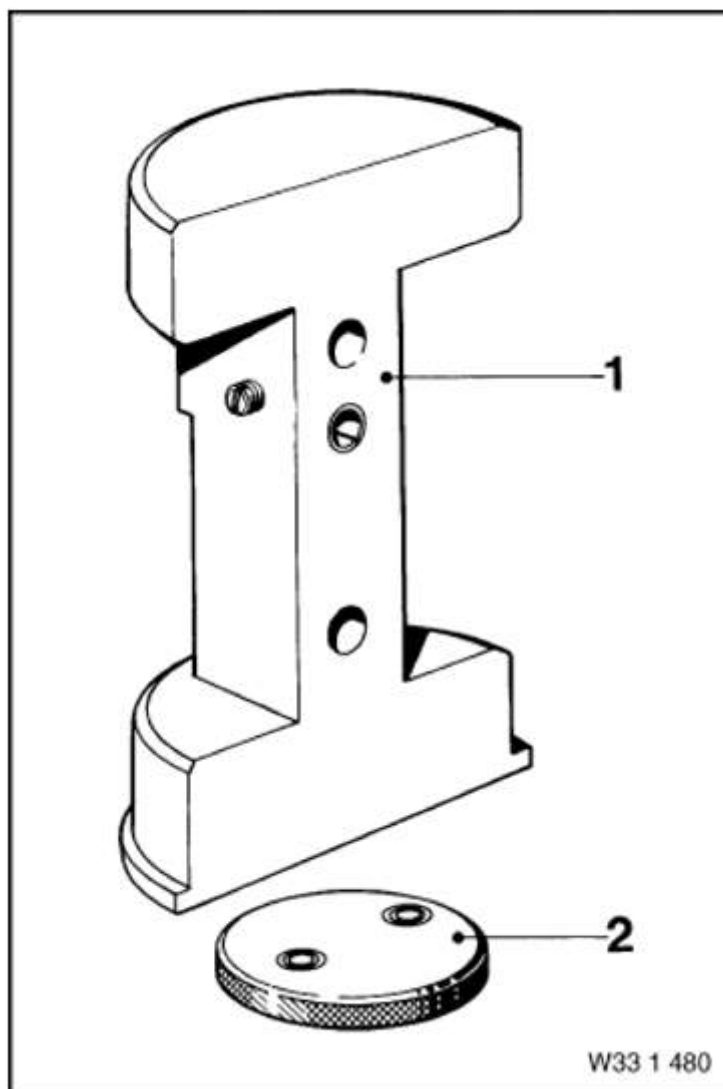


Fig. 305: Identifying Washer (2293772)
Courtesy of BMW OF NORTH AMERICA, INC.

0492163 WASHER

0492163 331482 Washer AM

NOTE: (Measuring disc)



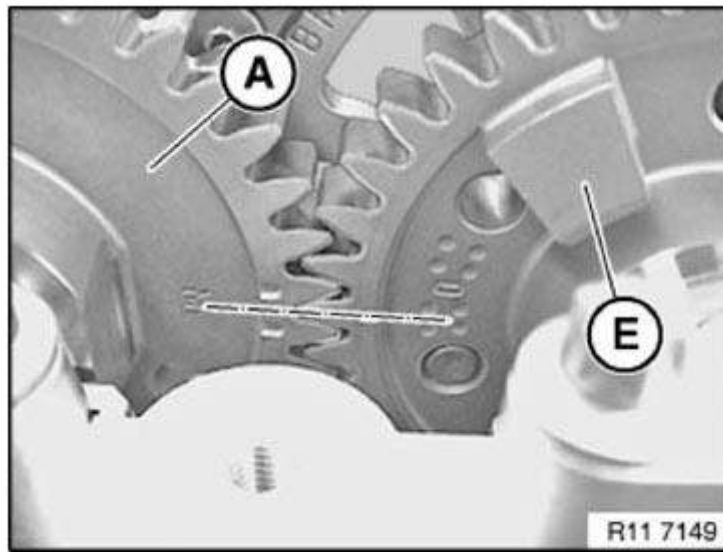


Fig. 989: Identifying Camshaft Sprocket Markings
 Courtesy of BMW OF NORTH AMERICA, INC.

Installation note:

It is not permitted to turn the engine back, measured values are distorted.

Special tool [11 5 320](#) must be exactly in the alignment position.

Remove protective cap of gear case cover.

Turn engine with special tool [11 6 480](#) .

Use special tool [11 5 320](#) to block the crankshaft in the TDC firing position

Cylinder 1

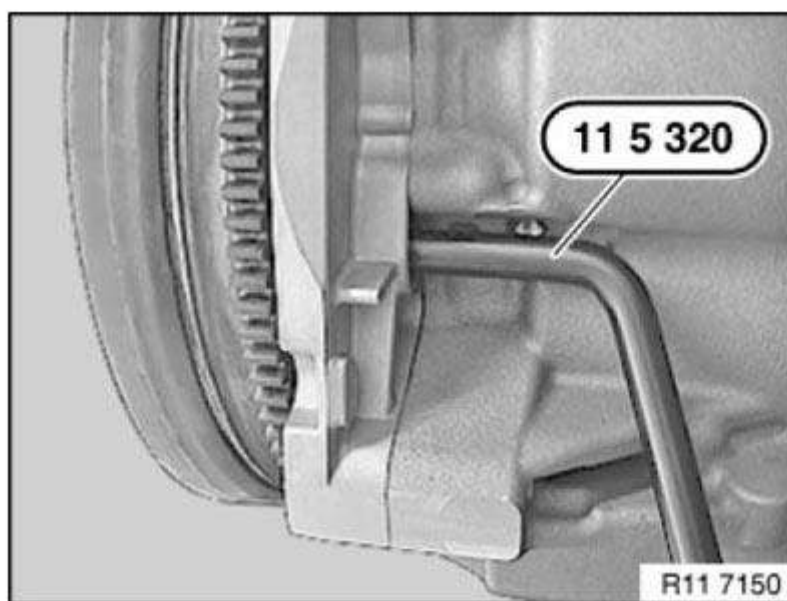


Fig. 990: Identifying Special Tool (11 5 320)
 Courtesy of BMW OF NORTH AMERICA, INC.

Place special tool [11 8 760](#) on exhaust camshaft.

5. [0495725](#) Screw

NOTE: (Screw set) N54 sale of existing inventory then available as part of set of special tools 11 4 340 = 83 30 0 495 014 only - as of 29.11.2011

0493444 DEVICE

[0493444 111490 Device AM](#)

NOTE: (Pressure testing fixture) For pressure-testing the cylinder head for watertightness. Not available as complete special tool, only as separate components.

SI number

01 23 98 (390)

Consisting of:

5 = [0493443](#) Screw

NOTE: (Mounting bolts (9 pieces)) M6 x 20 From 09/2011 remaining inventories will be sold off, followed by discontinuation. There is also no longer a set available

Fig. 217: Identifying Device (0493444)

Courtesy of BMW OF NORTH AMERICA, INC.

1 = [0493445](#) Strip

NOTE: (Sealing strip cylinder row 1 - 4) From 09/2011 remaining inventories will be sold off, followed by discontinuation. There is also no longer a set available.

2 = [0493446](#) Strip

NOTE: (Sealing strip cylinder row 5 - 8) From 09/2011 remaining inventories will be sold off, followed by discontinuation. There is also no longer a set available

3 = [0493447](#) Plate

NOTE: (Sealing plate cylinder row 1 - 4) From 09/2011 remaining inventories will be sold off, followed by discontinuation. There is also no longer a set available

4 = [0493448](#) Plate

NOTE: (Sealing plate cylinder row 5 - 8) From 09/2011 remaining inventories will be sold off, followed by discontinuation. There is also no longer a set available

0490972 DEVICE

[0490972 113330 Device Mechanical tool](#)

NOTE: For uniformly pressing down the camshaft (with bearing cap) when releasing

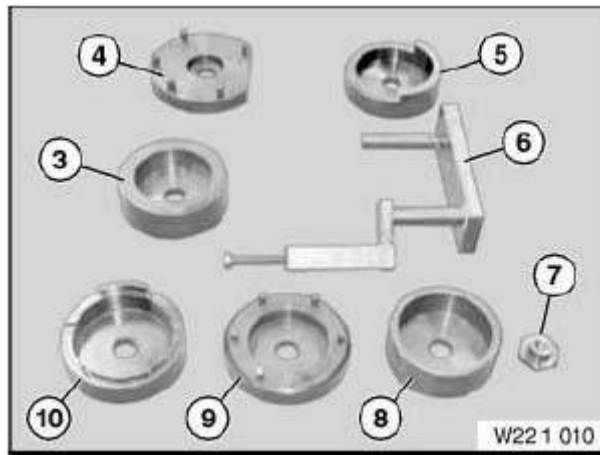


Fig. 12: Identifying Synchronizing Key (0493698)

Courtesy of BMW OF NORTH AMERICA, INC.

0493597 TOOL

0493597 221010 Tool Minimum set: Mechanical tools AM

NOTE: (Tool set) For removing and installing the transfer box rubber mount 22 1 018 for E46/16, E67 and RR

Storage Location

B9

SI number

01 15 99 (483)

Consisting of:

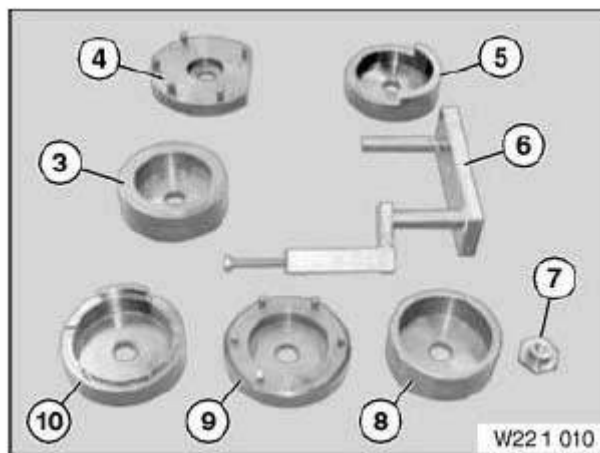


Fig. 13: Identifying Tool (0493597)

Courtesy of BMW OF NORTH AMERICA, INC.

3 = **0493698** Synchronizing key

NOTE: For pulling out the transfer box rubber mount - Replaced by 22 1 018 (0 493 807)

3 = **0493699** Washer

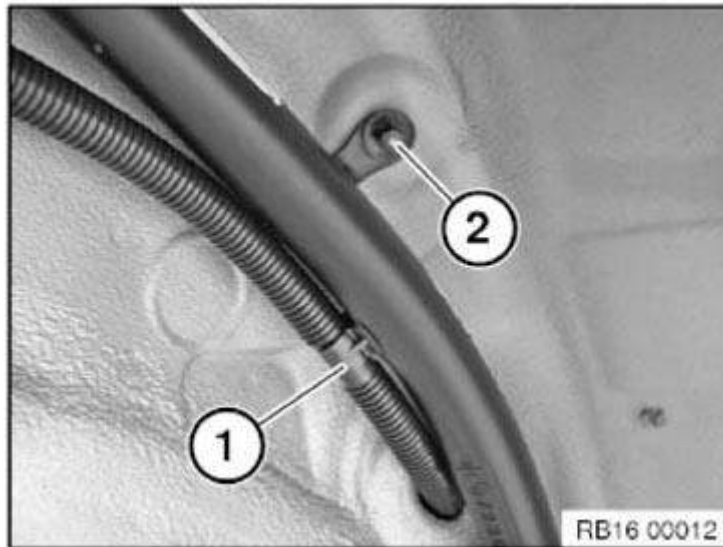


Fig. 24: Identifying Fuel Filler Pipe Line Holder And Plastic Nut
Courtesy of BMW OF NORTH AMERICA, INC.

Release quick-release coupling (1).

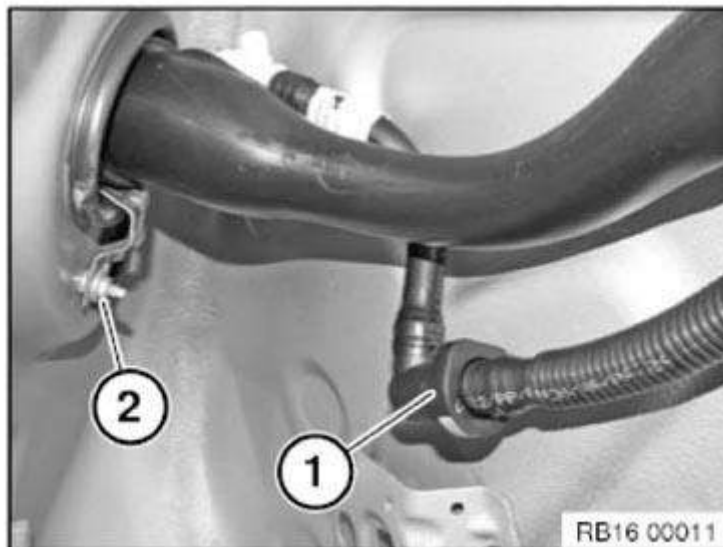


Fig. 25: Identifying Quick-Release Coupling
Courtesy of BMW OF NORTH AMERICA, INC.

IMPORTANT: There may be residual amounts of fuel in the fuel tank!
Catch escaping fuel in a suitable collecting vessel.

Unfasten hose clamp (1).

Installation note:

Check hose clamp, replace if necessary.

Tightening torque: **16 12 1AZ** .

Detach fuel filler pipe (2) from fuel tank.

Courtesy of BMW OF NORTH AMERICA, INC.

0491320 MANDREL

0491320 135340 Mandrel Mechanical tool

NOTE: (alignment pin) For injection pump wheel

Storage Location

X4

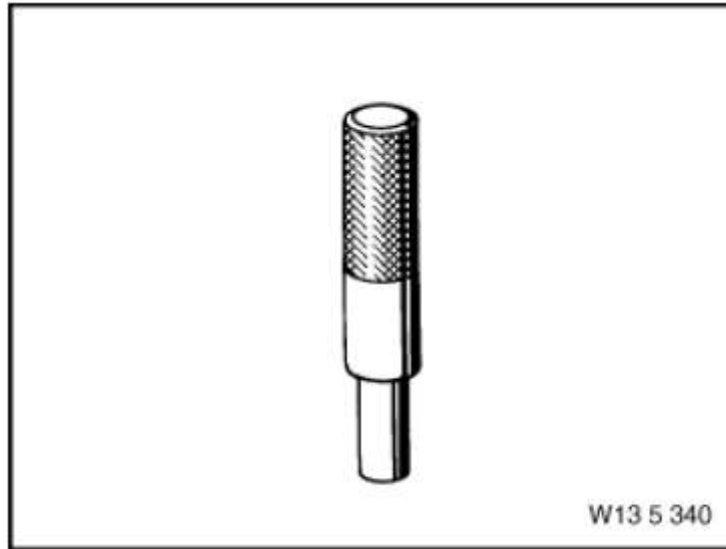


Fig. 107: Identifying Mandrel (0491320)

Courtesy of BMW OF NORTH AMERICA, INC.

0491252 MANDREL

0491252 131120 Mandrel Mechanical tool

NOTE: (Drift) For driving in air correction needle on 2BE carburetor

SI number

01 05 86 (604)

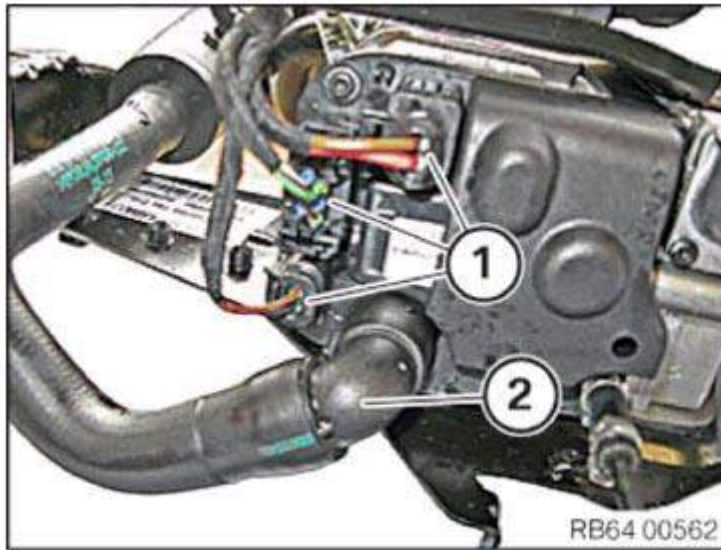


Fig. 48: Identifying Air Intake Hose And Connector

Courtesy of BMW OF NORTH AMERICA, INC.

Release screws (1).

Tightening torque [64 12 3AZ](#).

Remove holder (2) from auxiliary heater (3).

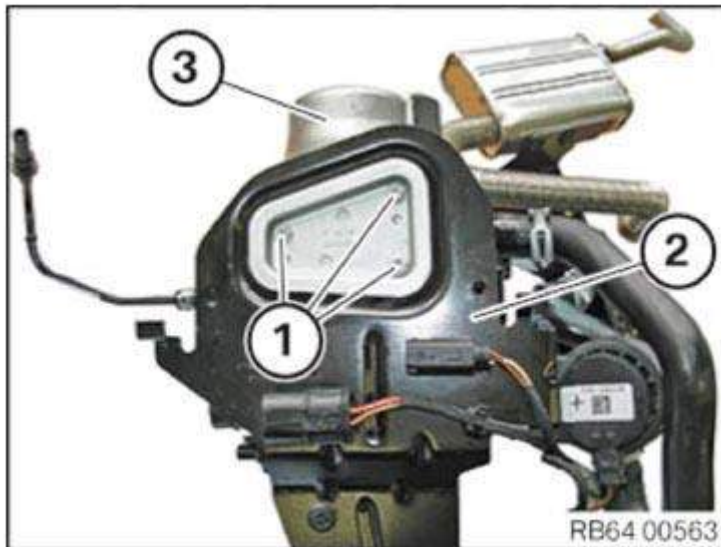


Fig. 49: Identifying Holder From Auxiliary Heater And Screws

Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Position auxiliary heater (2) correctly.

Attach coolant hoses and secure by spring band clamps (1).

Check installation position of gaiter, correct fold if necessary.

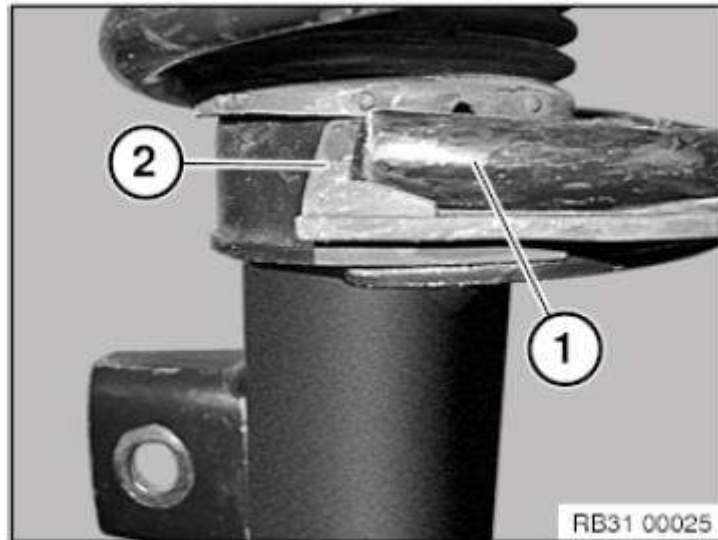


Fig. 9: Identifying Lower End Of Coil Spring Flush With Spring Pad

Courtesy of BMW OF NORTH AMERICA, INC.

Check support bearing and spring pad for damage, replace if necessary.

Attach support bearing to piston rod.

Replace nut and tighten down with special tool 31 0 040 (grip piston rod in the process).

Tightening torque [31 31 2AZ](#) .

Fit cover cap.

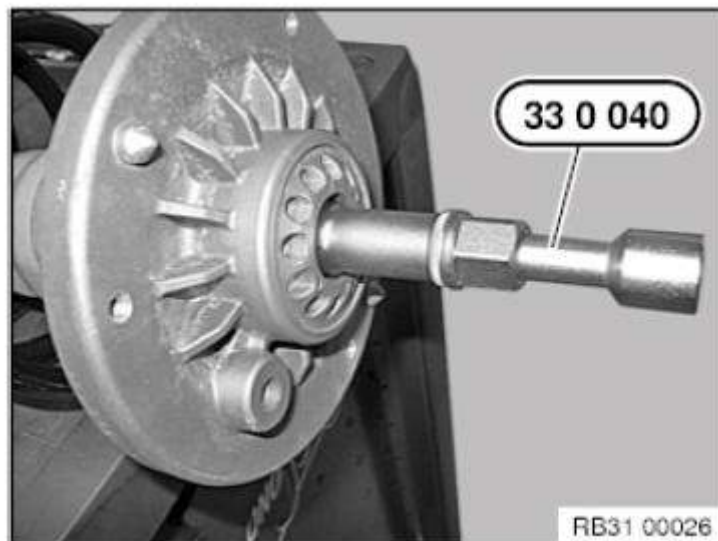


Fig. 10: Removing Support Bearing

Courtesy of BMW OF NORTH AMERICA, INC.

Impact screwdrivers are prohibited!

Risk of damage inside the shock absorber!

After installation:

- Use the diagnosis system to perform the wheel speed accelerator sensor adjustment.