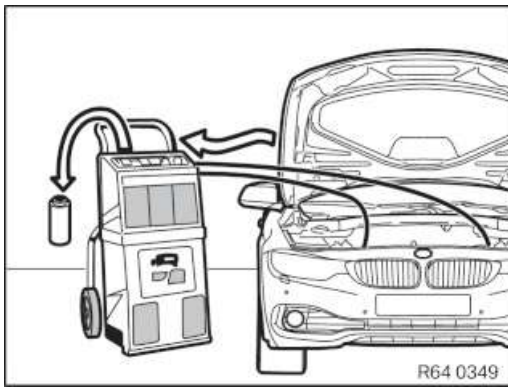


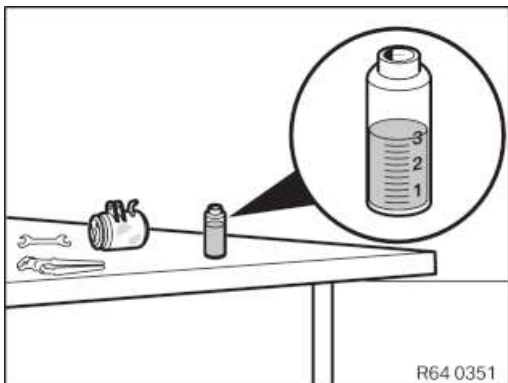


- Draw off A/C system.
- Note down the amount of refrigerant oil shown on the A/C service station display.

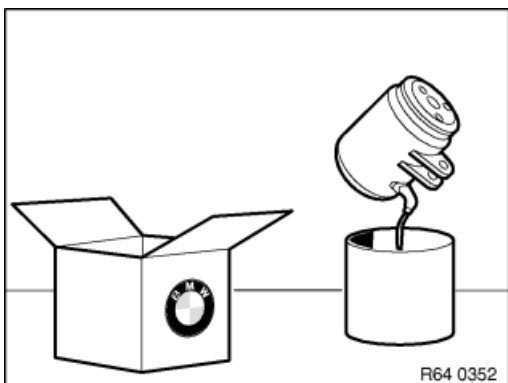
i When evacuating the air conditioning system, refrigerant oil is also extracted and collected in the oil separator of the A/C service station. This amount of refrigerant oil is displayed after the extraction of the air conditioning on the display of the A/C service station.



- Transfer all of the refrigerant oil remaining in the previous air conditioning compressor into a measuring cup via the oil filler plug.
- Turn the belt pulley during the filling process. This allows more refrigerant oil to flow out of the previous air conditioning compressor.



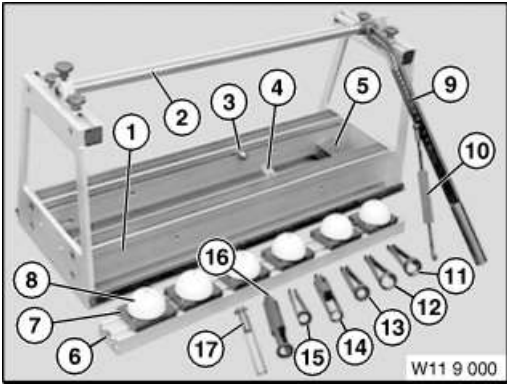
- Read the amount of refrigerant oil at the measuring cup.



- Open oil filler plug. Tightening torque 64 52 2AZ.
- Fill the entire contents of the new air conditioning compressor in a clean collecting vessel.

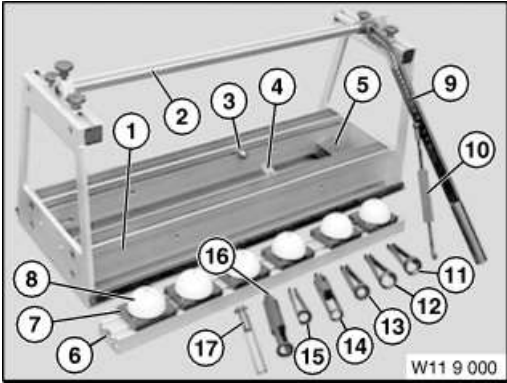


0 494 371 (11 9 006) Insert



Common		Used in step	101113
Usage	(Aluminium strip)		
Included in the tool or work	0 494 362		
Storage location			
Replaced by			
In connection with			
SI-Number			

0 494 372 (11 9 007) Shaped part



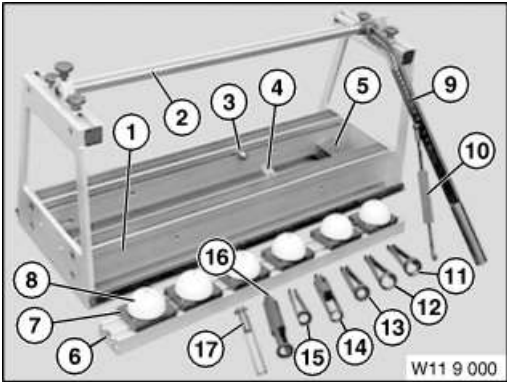
Common		Used in step	1013
Usage	(Shaped part)		
Included in the tool or work	0 494 362		
Storage location			
Replaced by			
In connection with			
SI-Number			

0 494 373 (11 9 008) Shaped part



Common		Used in step	1013
Usage	(Shaped part) Shaped part made of plastic		
Included in the tool or work	0 494 362		
Storage location			
Replaced by			
In connection with			
SI-Number			

0 494 370 (11 9 005) Quick fastener

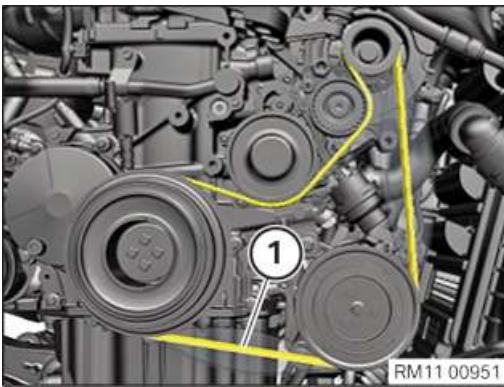


Common		Used in step	10111314
Usage			
Included in the tool or work	0 494 362		
Storage location			
Replaced by			
In connection with			
SI-Number			

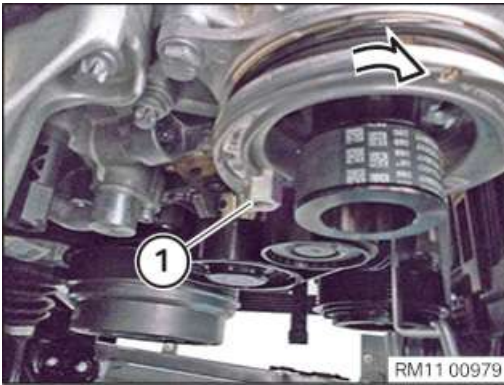
0 494 362 (11 9 000) Device

Common		Used in step	10
Usage	(Cylinder head expander tool)		
Included in the tool or work			

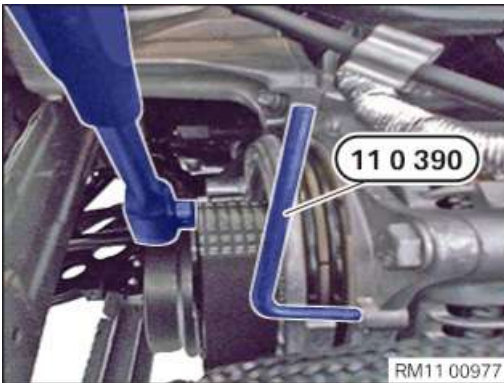




- Check the drive belt for the alternator (1) for coolant and oil residues and renew if necessary.
- Fit the drive belts (1) on the ancillary component and the deflecting element as shown.
- Make sure the drive belt (1) is fitted correctly.

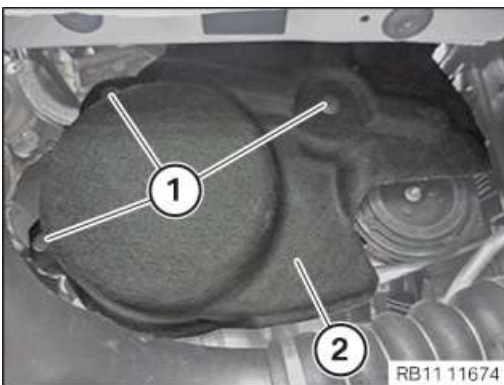


- Increase the pretension of the belt tensioner on the hexagon head (1) in the direction of arrow, till the special tool [0 496 268 \(11 0 390\)](#) can be removed.



- Remove special tool [0 496 268 \(11 0 390\)](#) from belt tensioner.
- Stretch drive belt for alternator.

9 – Install the acoustic cover for the engine at the front



- Feed the acoustic cover (2) for the engine in at the front and install.
- Position and secure expanding rivets (1).

10 – Installing the front right wheel arch cover

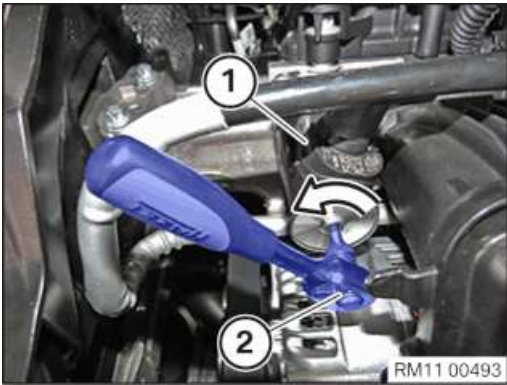


NOTICE

Description is for left component only. Procedure on the right side is identical.

► Installing the front wheel arch cover



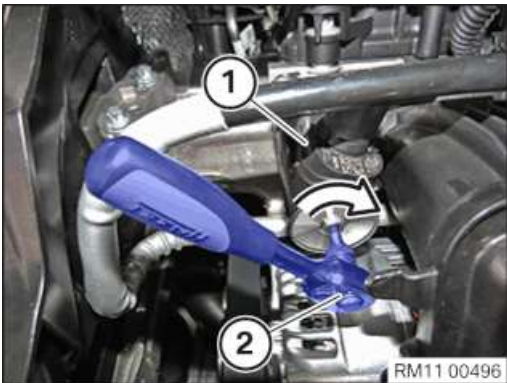


- Turn the drive shaft of the servomotor (1) with a standard tool (2) in the direction of the arrow.
- Make sure that the drive shaft of the servomotor (1) is not turned beyond the end stop of the eccentric shaft.
- Guide out and remove the servomotor (1).
- Catch and dispose of emerging engine oil.

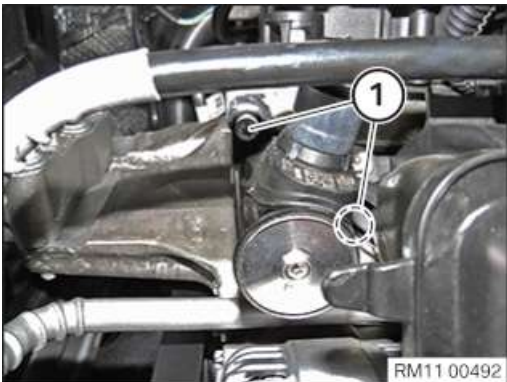
3 – Installing servomotor for the eccentric shaft



- Renew sealing ring (1).
- Parts:** Sealing ring
- Insert the new sealing ring (1) into the housing to the limit position and install.



- Insert the servomotor (1) to the gearing on the cylinder head.
- Turn the drive shaft of the servomotor (1) in the direction of the arrow with a standard tool (2) until the servomotor (1) is flush with the cylinder head.



- Tighten the screws (1).

Electrical servomotor to cylinder head

M6		Tightening torque	8 Nm
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- Connect and lock the connector (1).
The connector (1) must engage audibly.



Oil drain plug			Used in step	6
M12x16		Renew the sealing ring.		25 Nm
Camshaft sprocket to oil vacuum pump			Used in step	9
M8	Important - left-hand thread Renew screw.	1. Jointing torque 2. Angle of rotation		5 Nm 90 °
Oil vacuum pump to crankcase			Used in step	10
M8	Renew screw.	1. Jointing torque 2. Angle of rotation		15 Nm 45 °
Oil sump to crankcase			Used in step	11
M8x30		Tightening torque		24 Nm
M8x110		Tightening torque		24 Nm
Transmission to oil sump			Used in step	11
M8		Tightening torque		19 Nm
Bracket to oil sump			Used in step	11
M12		Tightening torque		100 Nm
Holder to front axle support			Used in step	11
M12		Tightening torque		100 Nm
Bracket to oil sump			Used in step	11
M6		Tightening torque		8 Nm
Pressure pipe to oil sump			Used in step	11
M6x35				8 Nm
Starter motor to transmission			Used in step	12
M8x45		Tightening torque		19 Nm
Battery positive lead to starter			Used in step	12
M8		Tightening torque		13,5 Nm
Underbody protection to body			Used in step	13
Screw		Tightening torque		2.5 Nm

Overview of Special Tools

2 463 965 Socket wrench



Common		Used in step	8
Usage	with T30, T40 and torx 45		
Included in the tool or work			
Storage location	B6		
Replaced by			
In connection with			
SI-Number	01 07 17 (487)		





- Have the special tool ready.



TECHNICAL INFORMATION

For more information see: 11 00 ... Overview of consumables in Electronic Parts Catalogue

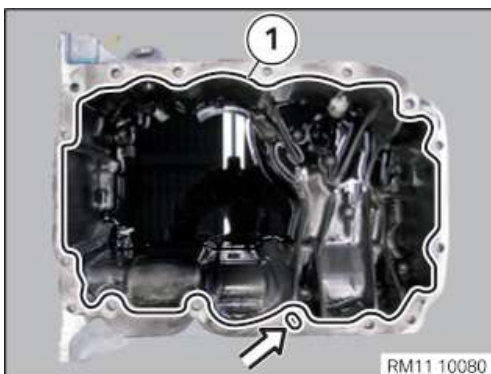
- Position the sealing compound (1) on the special tool as shown.

Parts: Sealing compound

Sealing compound

Loctite 5970 liquid sealing compound	50 ml, Cartridge	83190404517
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Overview of consumables (Electronic Parts Catalogue)



TECHNICAL INFORMATION

The sealing surfaces must be free from oils, grease and cleaning agents.



TECHNICAL INFORMATION

The maximum application time of the liquid sealing compound is 12 minutes.

- **Applying sealing compound without replacing front bottom gear case cover:**
Apply the sealing bead along the inner edge (1) of the oil sump.
- Completely surround the oil return orifice (arrow) with the sealing compound.
The sealing compound must **not** enter the oil return orifice.

Height of the sealing bead

2,0 mm ... 2,5 mm





1. Position the high-pressure rail with injectors from the top on the cylinder head.
 - a. Make sure the injector tips catch the corresponding holes in the cylinder head.
 - b. Make sure the guides on the injector are properly inserted into the guide bores in the cylinder head.
2. As soon as you feel a resistance when you press down the component, position the M6x70 screws (A) and (B) and tighten them by hand.
3. Alternately tighten the screws (A) and (B) in 180° steps until the high-pressure rail is in contact with the cylinder head (see figure RB13-012-60).
4. Insert the screws (C) and (D).
5. Tighten the screws to **5 Nm** in the following sequence:
 1. Tighten screw (A) by 5 Nm.
 2. Tighten screw (D) by 5 Nm.
 3. Tighten screw (B) by 5 Nm.
 4. Tighten screw (C) by 5 Nm.

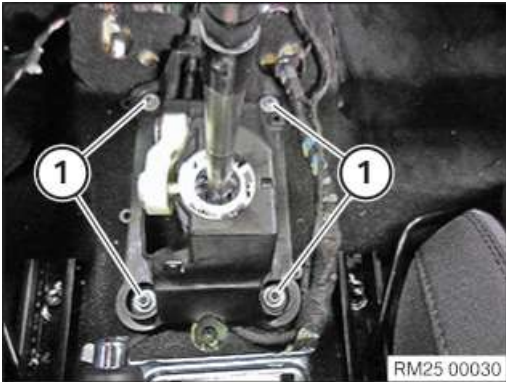


The high-pressure rail (1) is fully in contact with the cylinder head.

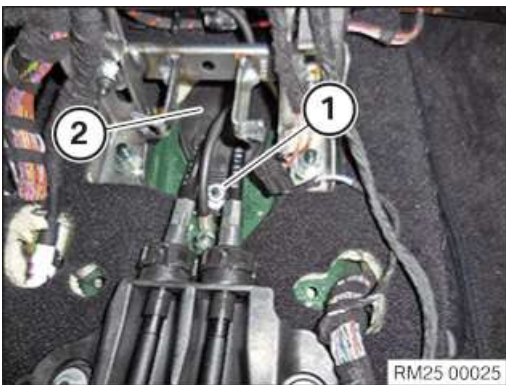




Detach the gear selector cables (1) from the vehicle underbody.



Release nuts (1) and remove the gearshift bracket.

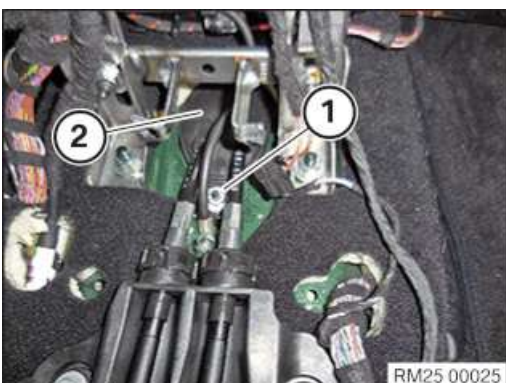


Release the nut (1) and pull out the gear selector cable with the cable grommet (2). **Attention!**

Make sure that the sealing plate with the lower retaining lugs is not damaged when pulling out the tunnel sealing (2).



Installation:



Guide the gear selector cables through the opening and tighten the cable grommet (2) with the nut (1).

Tightening torque 25 11 1AZ .



28 60 090 Removing and installing/replacing electric motor for shift drum 2 (7DCT300) (Top)



CAUTION

Materials harmful to health.

Contact with fluids harmful to health!

- Note and follow safety information on containers.
- Conduct all work in appropriate personal protective equipment only.



CAUTION

Acid burns may result from skin contact with oil or inhaling oil vapours.

Risk of acid burns from contact with oil!

- Wear safety goggles and protective gloves.
- Ensure adequate ventilation.



TECHNICAL INFORMATION

It is essential to adhere to conditions of absolute cleanliness.
Any dirty parts must be cleaned before removing the electric motor.



TECHNICAL INFORMATION

Collect and dispose of emerging fluids. Observe country-specific waste disposal regulations.



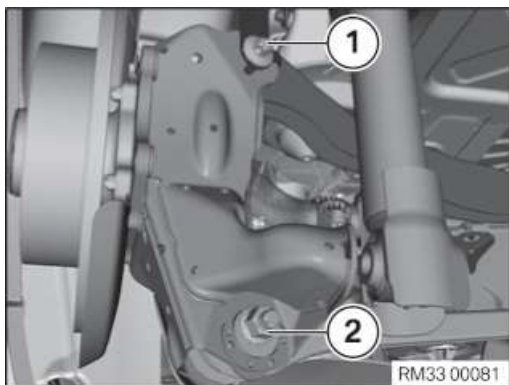
TECHNICAL INFORMATION

After completing work:
Check transmission oil level and only use the approved transmission oil.
While refilling/renewing the transmission oil:
Carry out the "Reset transmission oil wear values" service function with the diagnosis system.
Failure to comply with this instruction will result in serious damage to the double-clutch transmission (DKG).

PRELIMINARY WORK

1 – Disconnecting all battery earth leads





Release nut and remove screws (1).

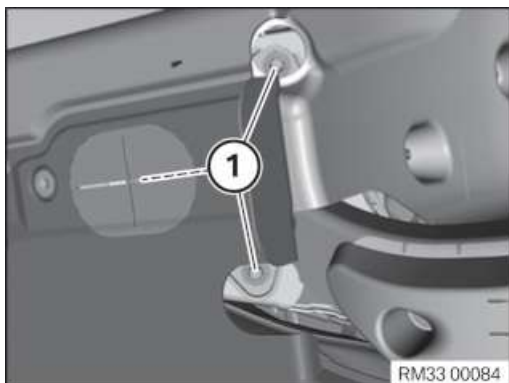
Mark position of eccentric adjustment washer to trailing arm to simplify subsequent adjustment of rear axle.

Slacken nut (2).

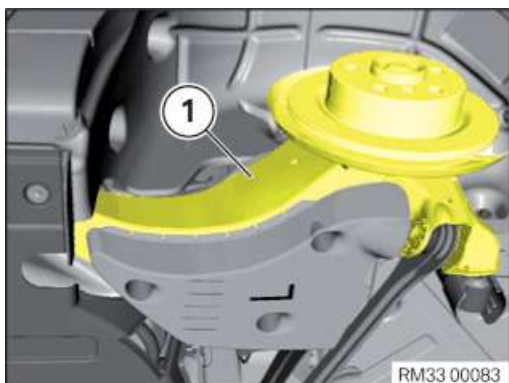
Remove eccentric washer and unscrew screw.

Installation note:

Tighten screw connection (2) in normal position.



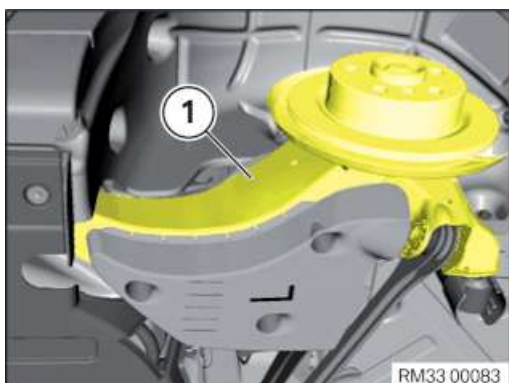
Undo screws (1) on trailing arm bearing support on the body.



Remove trailing arm (1) with trailing arm bearing support.



Installation:



Position trailing arm (1) with trailing arm bearing support at the vehicle.





Insert spring strut into tensioned coil spring.

Renew nut.

Parts: Nut

Tighten nut with special tool 2 360 213 , reversible ratchet with extension, socket SW10 and torque wrench with ring spanner insert SW21.

Tightening torque 31 31 2AZ.



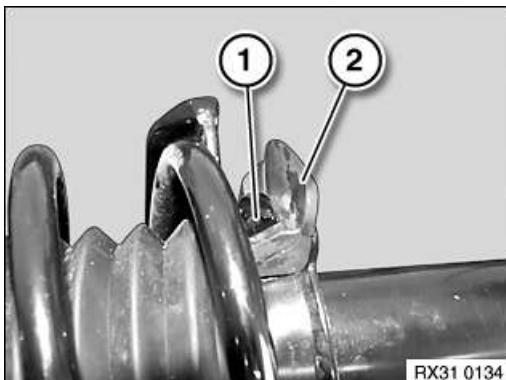
Impact screwdrivers are prohibited!

Risk of damage inside the shock absorber!



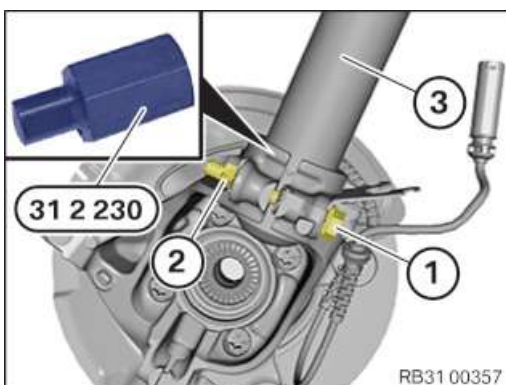
Check installation position of protective tube, correct if necessary.

The coil spring end at the top must rest against the spring pad.



The coil spring end at the bottom (1) must rest against spring pad (2).

Align all components correctly to each other and relieve tension on the coil spring.



Spread swivel bearing with the special tool 31 2 230 .

Align the swivel bearing using the gap to the positioning pin on the rear side of the spring strut (3) and push it on as far as it will go.

Position the brake hose bracket.

Renew screw (1) and nut (2).

Parts: Bolt and nut

Insert bolt (1).

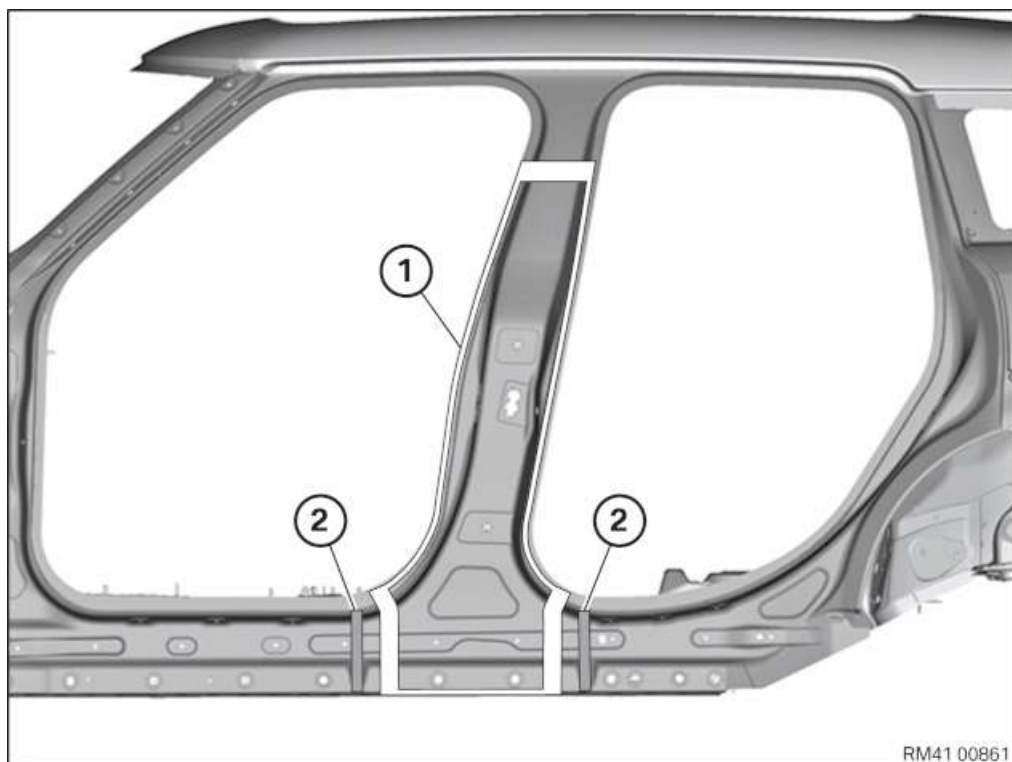
Tighten nut (2).

Tightening torque 31 31 3AZ.





Install new part and reinforcement plate with alignment bracket or universal fixture and weld in designated areas (1). Note: When installing the new part, the panel thickness of the B-pillar outer skin must be taken into consideration depending on the manufacturer of the straightening system.



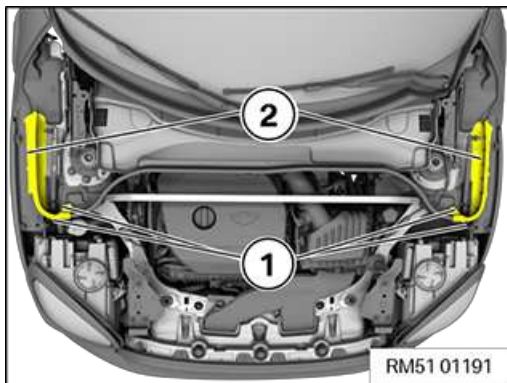
Install new part and reinforcement plate and weld in area (1). Attention! Risk of damaging the cavity sealings (2). Avoid excessive application of heat.



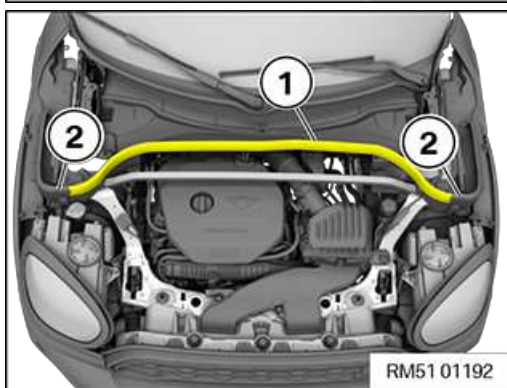
51 13 115 Removing and installing/replacing the cowl panel cover (front)

PRELIMINARY WORK

1 – Remove the seal for the rear bonnet



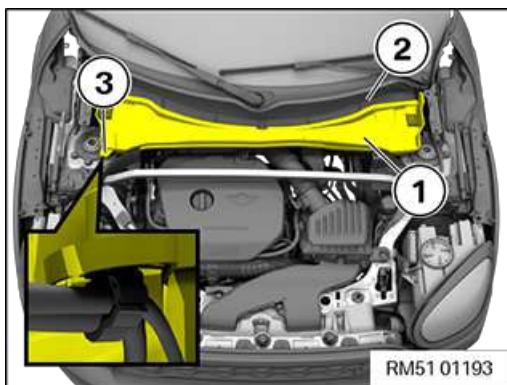
- Unclip the front mountings (1) of the sealing of the front side panel (2) on the left and right.



- Raise the bonnet seal in the rear (1) to the top and remove it below the sealings of the front side panel (2) on the left and right.

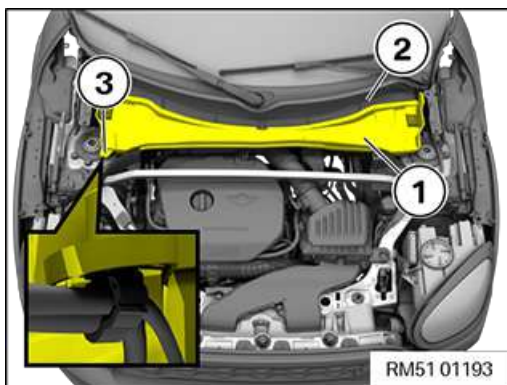
MAIN WORK

2 – Removing front cowl panel cover



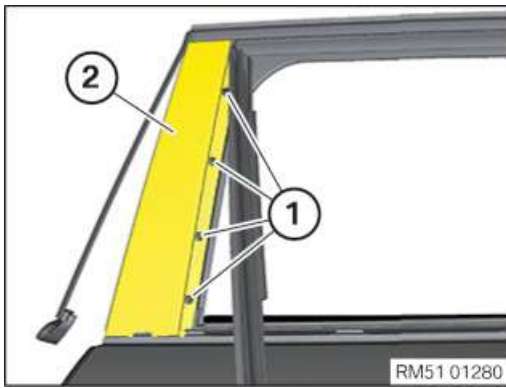
- Pull the cowl panel cover (1) forward out of the cover (2).
- Open the clamp (3) and detach the hose pipes it holds.
- Remove the cowl panel cover (1).

3 – Installing front cowl panel cover



- Position the cowl panel cover (1) on the cover (2).
- Insert the hose pipes into the clamp (3) and close the clamp (3).
- Insert the cowl panel cover (1) toward the rear into the cover (2).



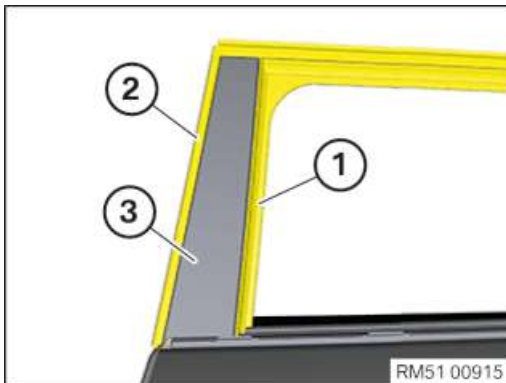


Thread in window frame trim (2).

Correctly position window frame trim (2) at top rubber window seal.

Tighten down screws (1).

Tightening torque 51 35 1AZ.



Connect rubber seal (2) to window frame trim (3).

Coat rubber window seal (1) with lubricant and feed into window guide.

Note:

Make sure that the rubber window seal (1) and rubber seal (2) are fitted correctly on the window frame trim (3).



Required follow-up work:

- Close rear side window
- Install weather strip onto rear door



65 12 051 Removing and installing/replacing central bass speaker on driver's side (under front seat)

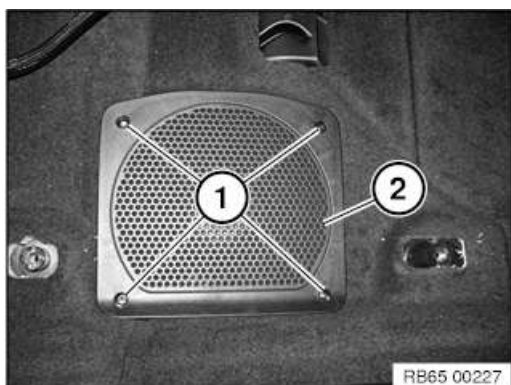


Necessary preliminary tasks:

- Remove front seat
- Remove door sill cover strip

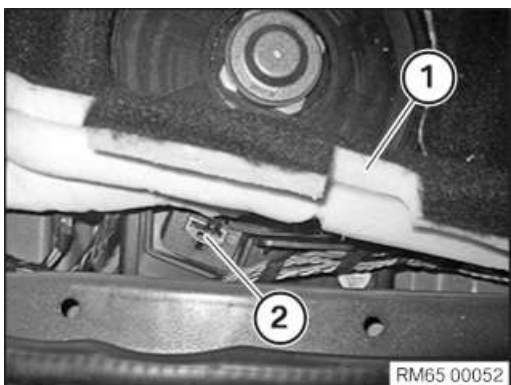


Removal:



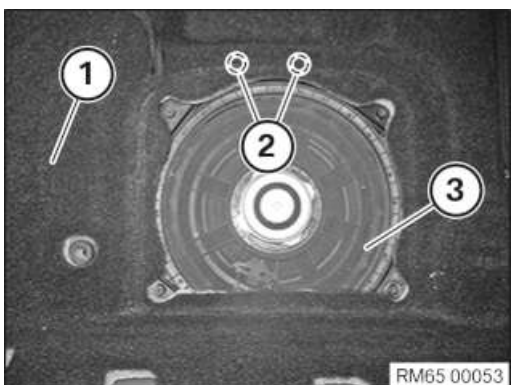
Release screws (1).

Remove cover of bass speaker (2).



Fold up the carpet (1) as shown.

Unfasten plug connection (2) and disconnect.



Fold up carpet (1) slightly and release nuts (2) underneath.

Feed out bass speaker (3).

