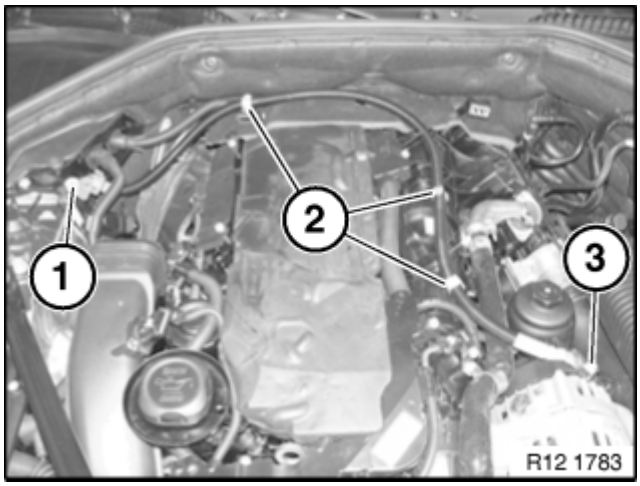
11 00 50 Removing and installing/replacing the engine N57

Special tools required:

- 11 0 070
- 17 2 050

Necessary preliminary tasks:

- Move engine compartment lid into service position.
- Disconnect negative battery cable.
- Remove intake silencer housing.
- Remove bulkhead cover, middle and right.
- Remove radiator.
- Remove left pressure pipe.
- Remove right pressure pipe.
- Draw off A/C system.
- Remove front output shafts (AWD only).
- Remove transmission.

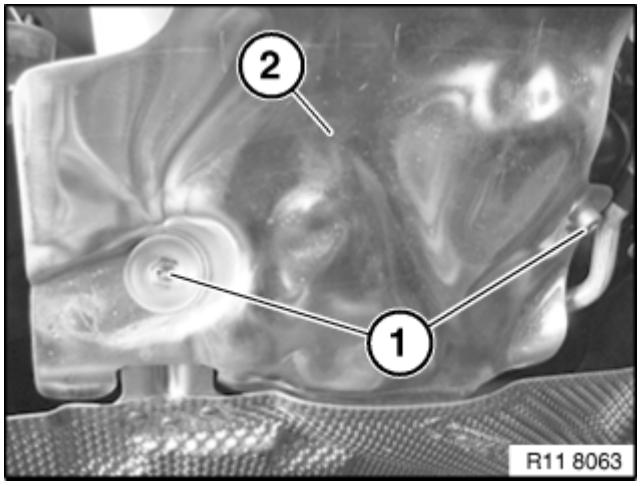


Open cover.

Release nut (1) underneath.

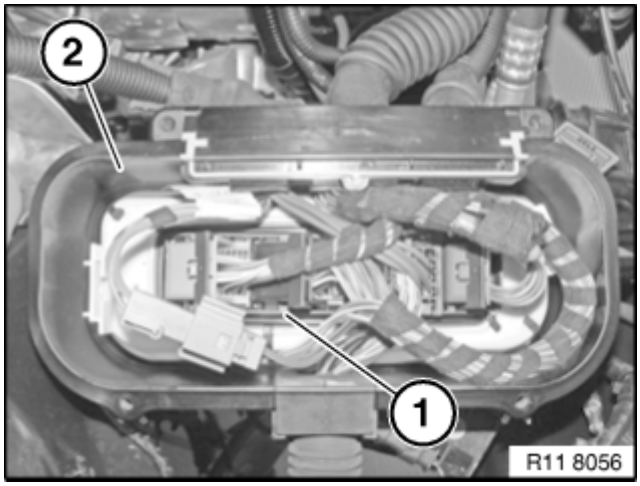
Tightening torque 12 52 4AZ.

Remove positive battery cable from battery positive terminal.



Release nut and screw (1).

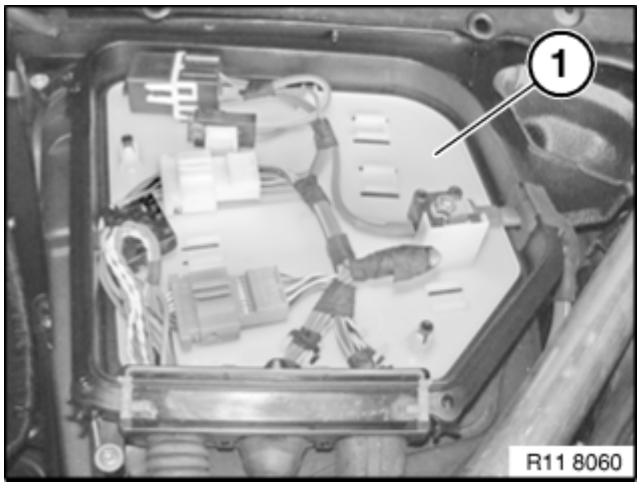
Remove heat shield (2).



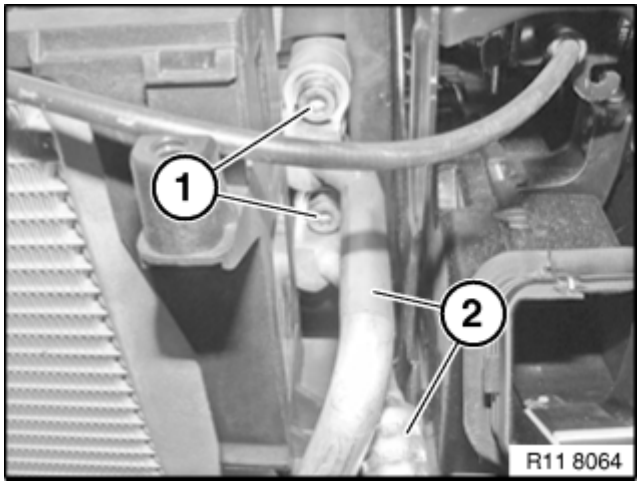
Disconnect plug connections (1) on DDE control unit.

Remove DDE control unit

Remove DDE equipment holder (2).



Disconnect plug connections on equipment holder (1) and remove in upward direction.



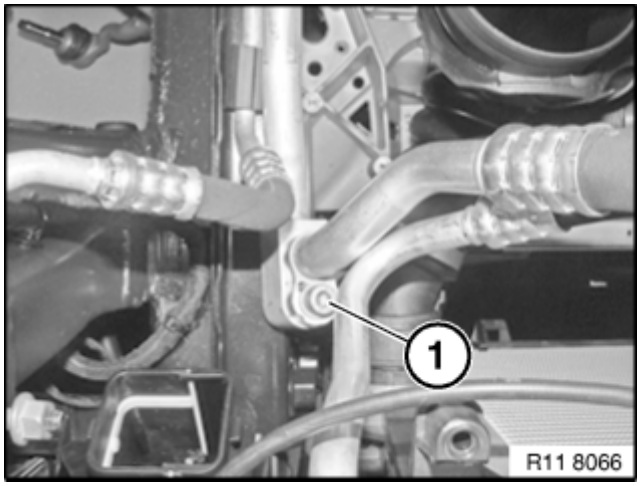
Release screws (1).

Release A/C lines (2).

Installation note:
Replace O-rings and coat with refrigerant oil.

Tightening torque 64 53 3AZ.

Important!
If air conditioner has been opened for more than 24 hours, dryer flask must be replaced

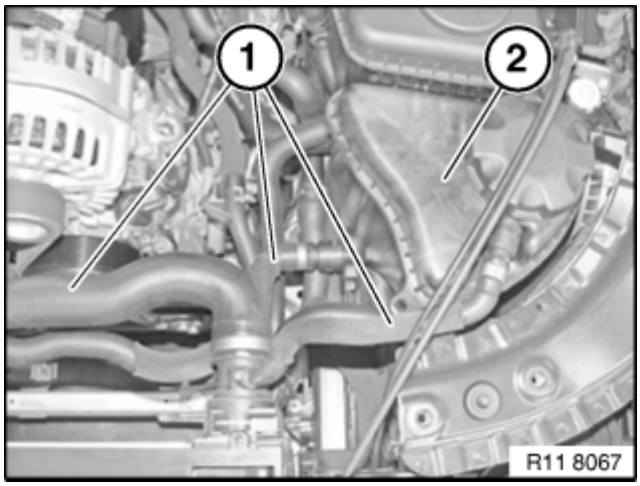


Release screw (1).

Release A/C line.

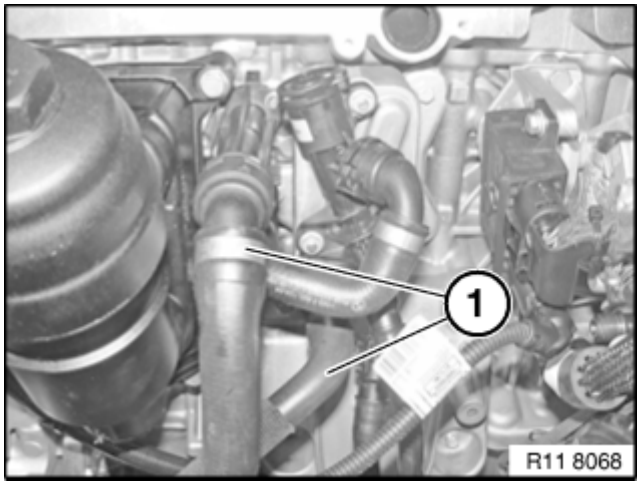
Installation note:
Replace O-ring and coat with refrigerant oil.

Tightening torque 64 53 1AZ.

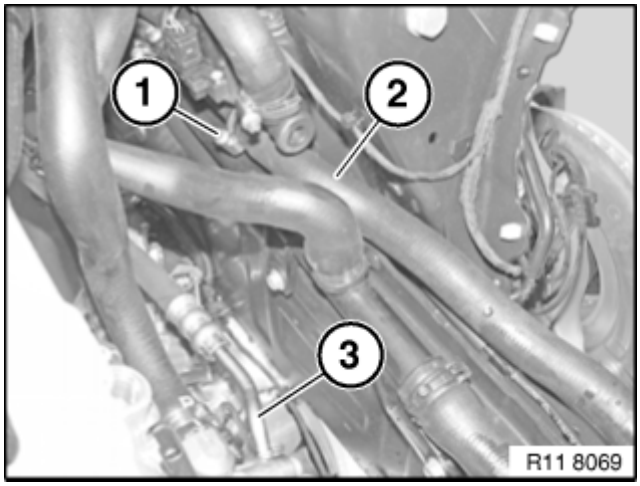


Release and disconnect coolant hoses (1).

Remove coolant expansion tank (2).



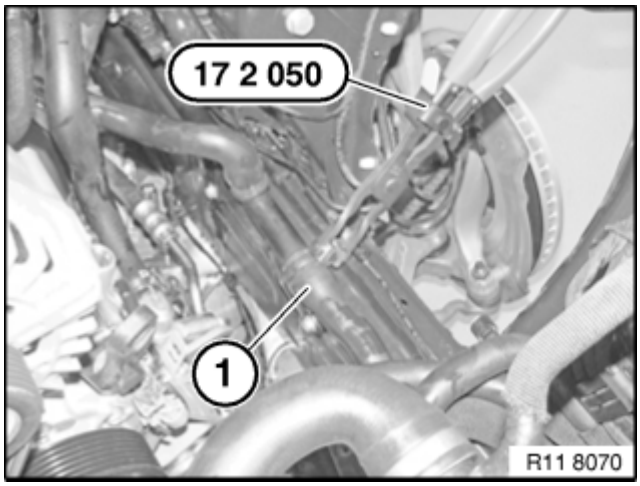
Release and disconnect coolant hoses (1).



Unfasten hose clamp (1).

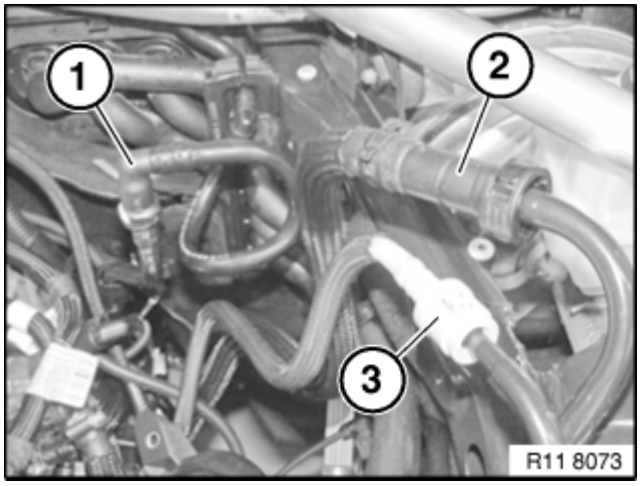
Pull off coolant hose (2) from water valve.

Disconnect pressure line (3) from power steering pump.

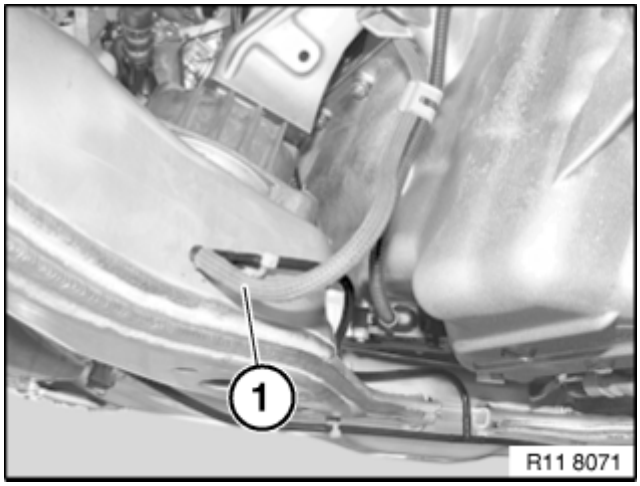


17 2 050 Release hose clip with special tool .

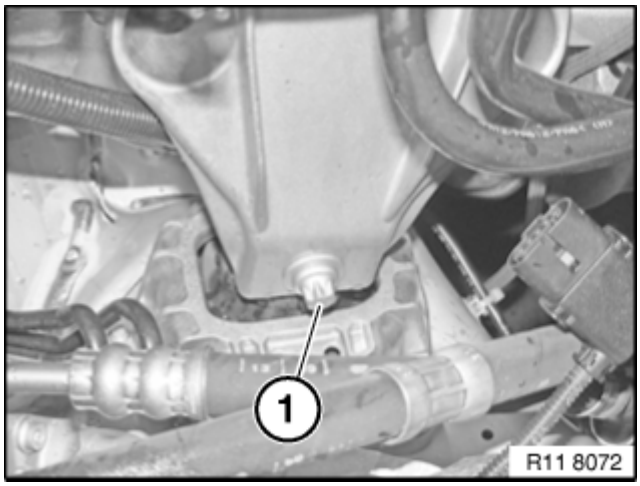
Detach coolant hose (1).



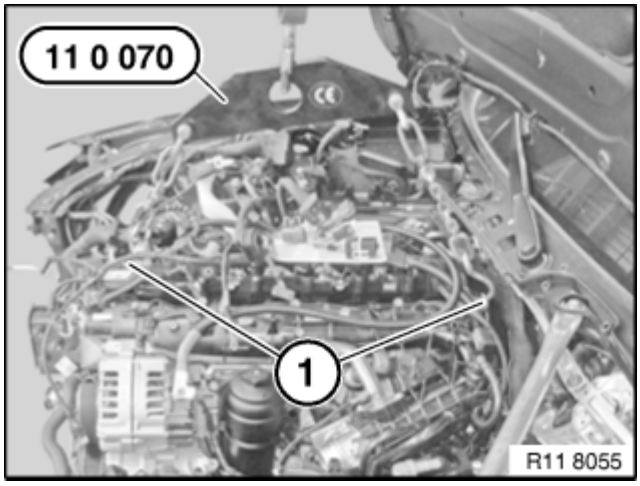
Unlock and disconnect vacuum line (1).
Unlock and disconnect fuel delivery line (2).
Unlock and disconnect fuel return line (3).



Release vacuum line (1) of engine mount.



Release screws (1) on engine mount on left and right.



Suspend special tool from lifting eyes (1) at front and rear.

11 0 070 Lift out engine with special tool.

Assemble engine.

Check cooling system for tightness.

24 00 034 Removing and installing automatic transmission (GA8HP70Z) N57

Special tools required:

- 00 2 030
- 11 6 480
- 11 8 910
- 23 4 050
- 24 2 390
- 24 4 160
- 24 4 161
- 24 4 164
- 24 1 110
- 24 4 166

Important!

To prevent heavy damage to the engine block, the protruding thread of the transmission bolts absolutely must be checked for damage and corrosion **before removal**.

If there are signs of corrosion, the rust must be removed and the threads must be cleaned **before removal**.

Replace rusted, damaged screws.

Failure to comply with this instruction will result in serious damage to the engine block and transmission.

Important!

- Do not let skin come in contact with transmission oil and do not inhale transmission oil vapours.
- Wear protective gloves.
- Ensure adequate ventilation

Important!

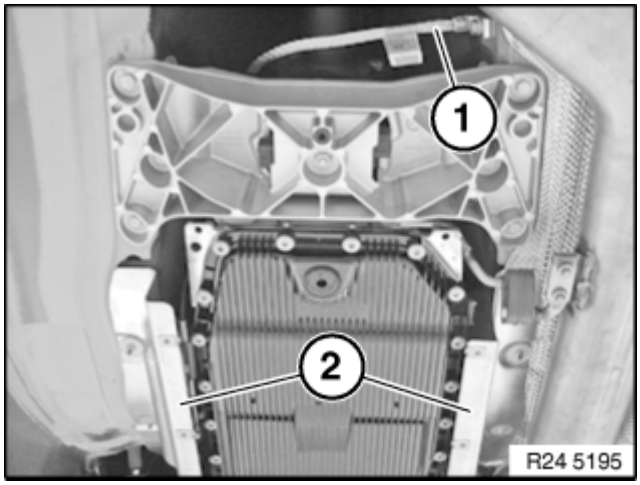
After completion of repair work, check transmission oil level.

Use only the approved transmission oil.

Failure to comply with this requirement will result in serious damage to the automatic transmission!

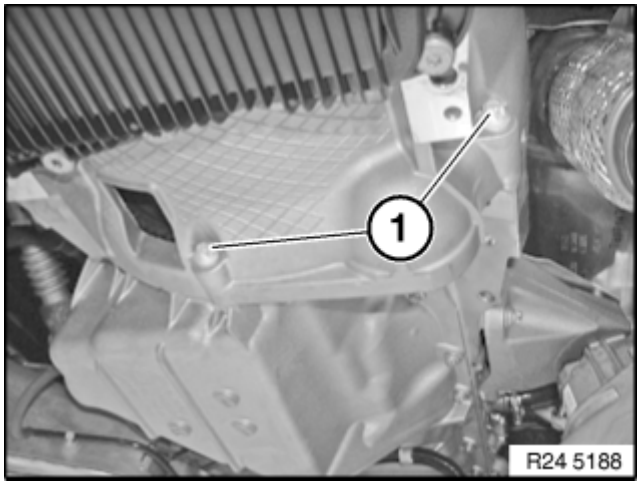
Necessary preliminary tasks:

- Disconnect the battery
- Remove underbody protection at front and rear
- Remove complete exhaust system
- Remove starter motor
- Remove propeller shaft
- **Note:**
- Bending the propeller shaft by an excessive angle can cause premature damage to the joint/propeller shaft!
- Support engine with jack when removing gearbox



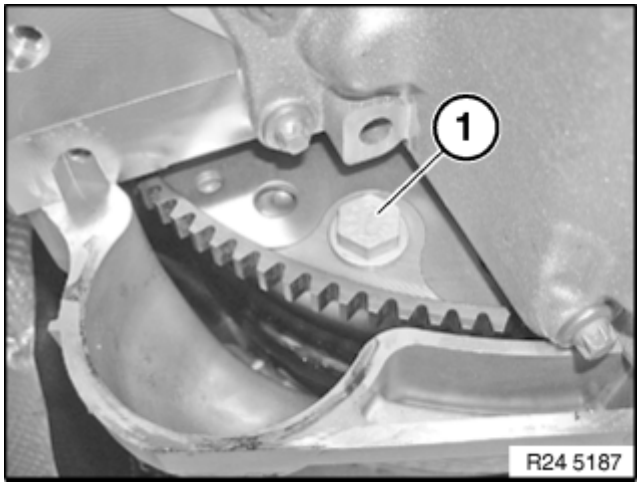
Unfasten ground strap (1).

Remove retaining plates (2).



Release screws (1).

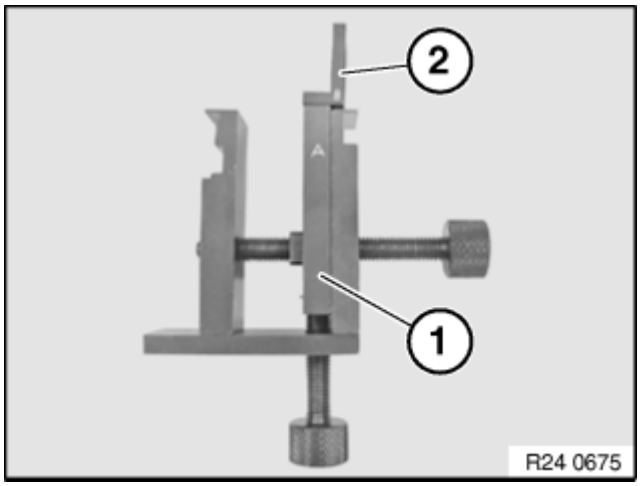
Tightening torque 24 00 1AZ.



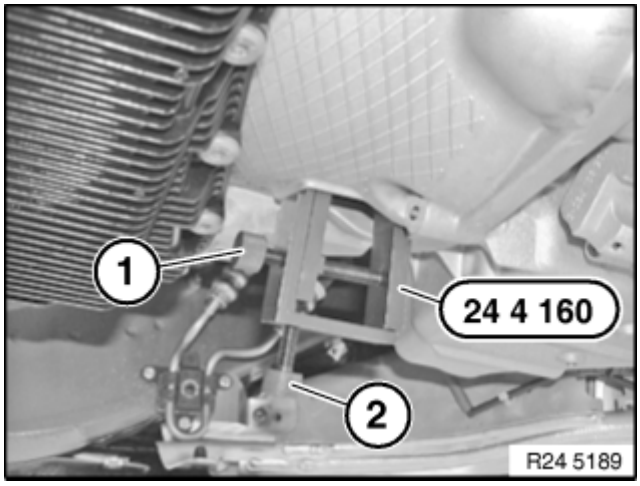
Crank engine with special tool 11 6 480 at the vibration damper in direction of rotation until screw (1) is visible in the recess.

Release all 6 bolts of torque converter with special tool 24 1 110 .

Tightening torque 24 40 1AZ.



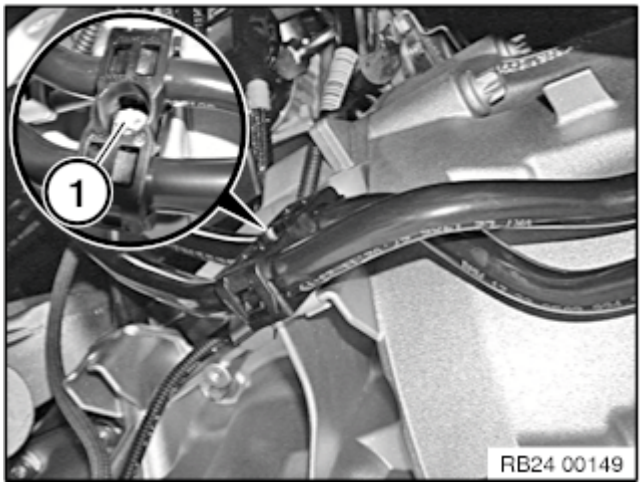
Prepare special tool (1) 24 4 161 (A) with shaped element (2) 24 4 166 as pictured.



Insert special tool 24 4 160 into recess of transmission housing and clamp **gently** with screw (1).

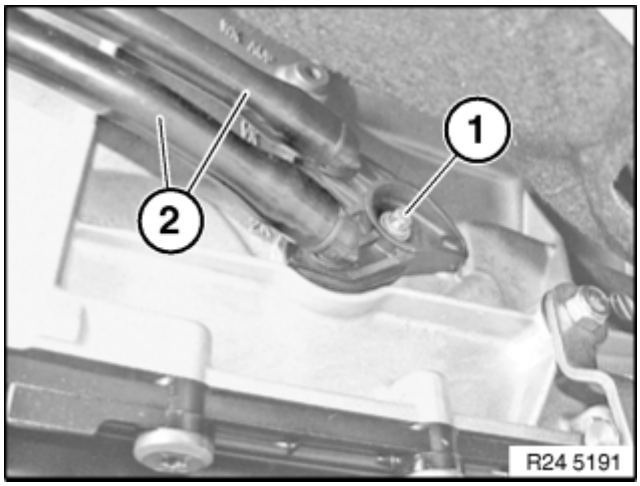
Raise by turning screw (2) and clamp down.

Tighten screw (1).



Release screw (1).

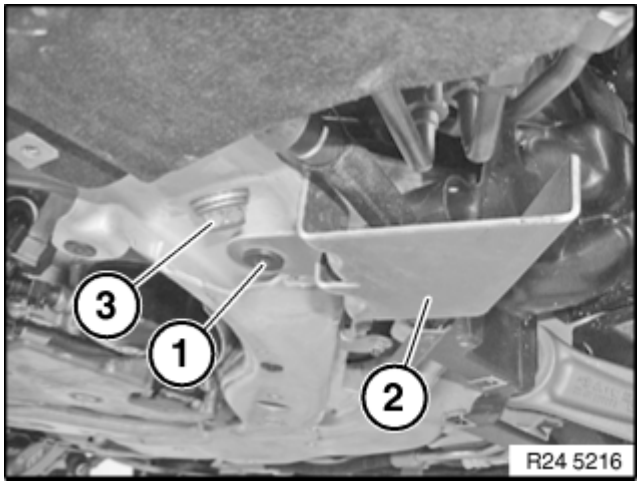
Release holder with transmission fluid lines.



Release screw (1).

Disconnect hydraulic lines (2) to transmission oil cooler.

Installation note:
Replace sealing rings.

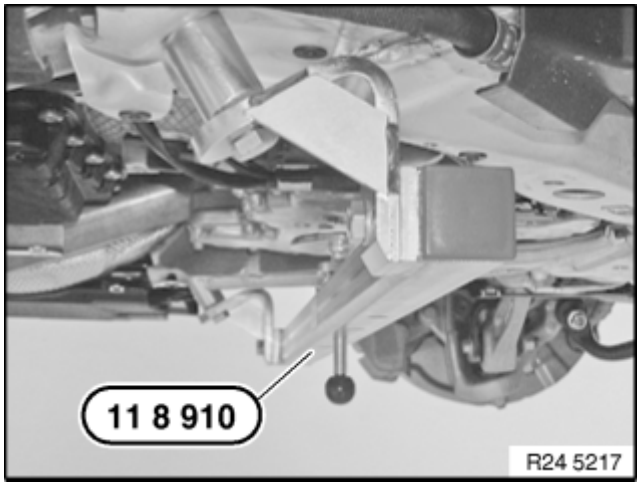


Release screw (1) on left and right of axle.

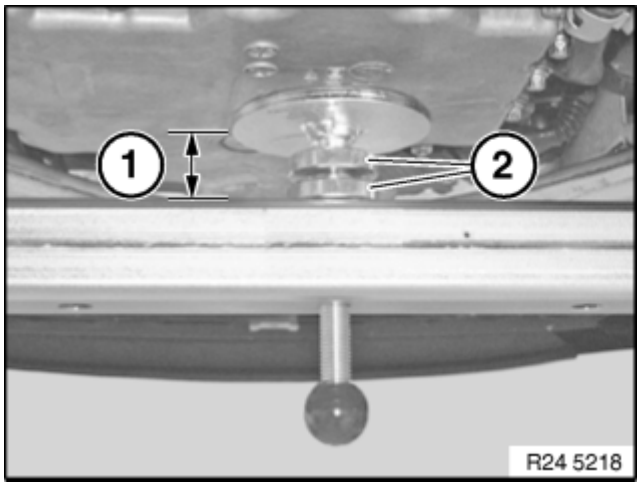
Remove cover plate (2) on left and right of axle.

Remove bolt (3) on left and right of axle.

Tightening torque 31 10 1AZ.



Screw on special tool 11 8 910 .

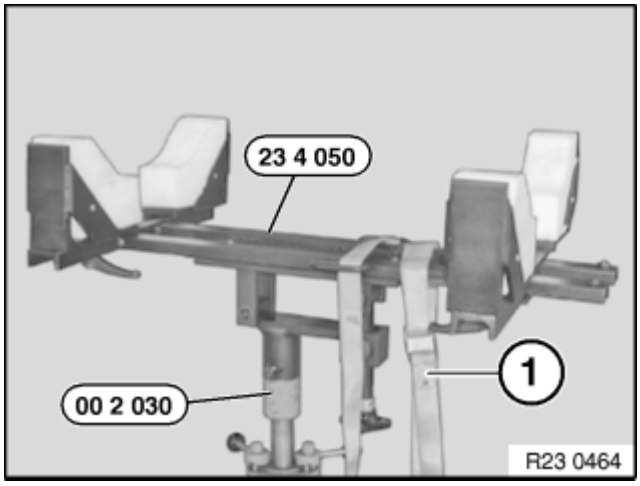


Adjust distance (1) between cross bar and facing using nuts (2).

Nuts (2) must be screwed down in opposite direction after distance has been adjusted.

Important!

Distance: 37 mm



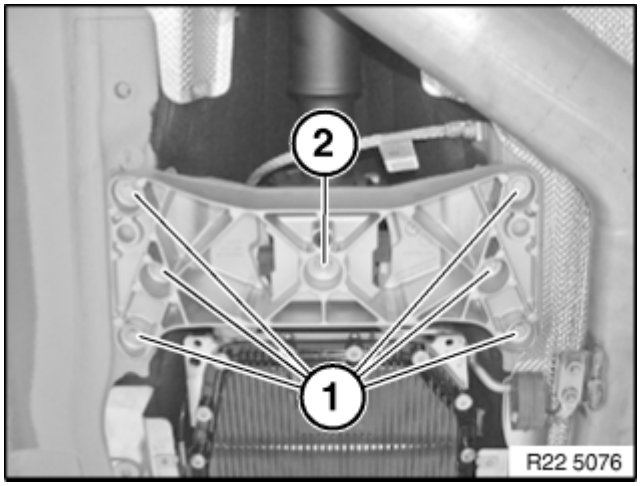
Supporting transmission:

Support transmission with special tools 23 4 050 ,00 2 030 .

Secure transmission to mounting with tensioning strap (1).

Repair work is described in Gearbox holder.

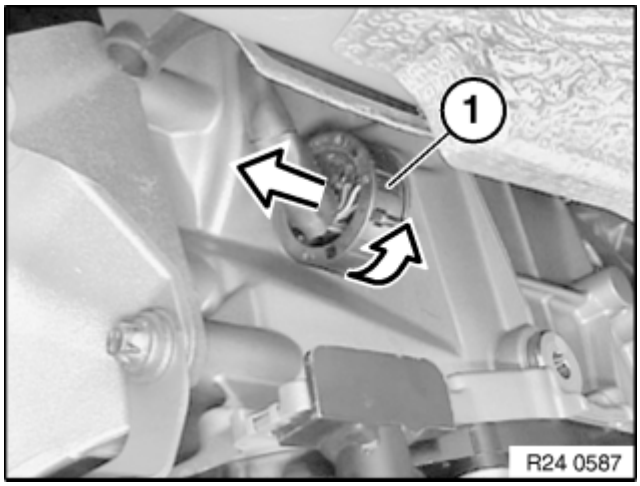
After completion of work, check transmission fluid level.



Release screws (1) and nuts (2).

Remove transmission cross member.

Tightening torque 22 32 3/4AZ.



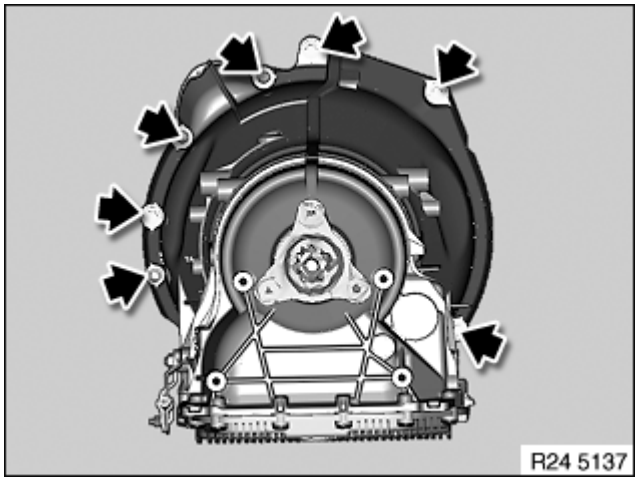
- Unlock connector (1) by turning and disconnect
- Do not touch pins
- Release cable from brackets
- Insert special tool 24 2 390 in sealing sleeve

Repair work is described in

Notes on mechatronics

Important!

Read and comply with important note.

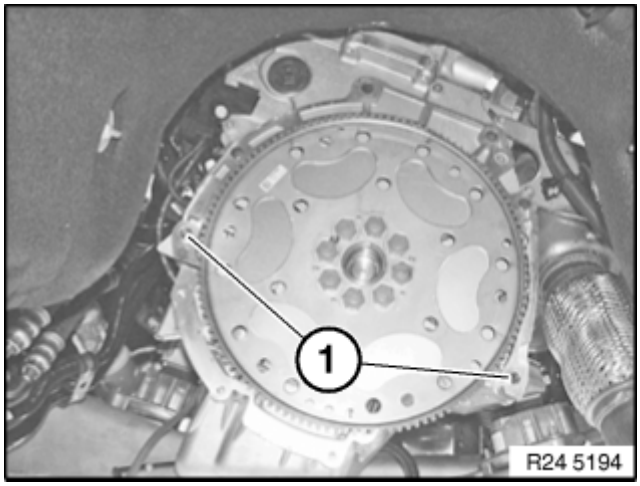


Release bolts and remove transmission.

Tightening torque 24 00 1AZ.

Installation note:
Screws have different lengths.

Note installation position.



Installation note:
Bore hole in drive plate disc must be accessible from recess on oil sump.

Check that fitting sleeves (1) are correctly seated.

Replace damaged fitting sleeves.

Installation note:
Rotate torque converter until bore hole in torque converter is flush with bore hole in drive plate.

Flange automatic transmission to engine.