

**Warning!****Risk of scalding!**

Carry out work on the vehicle only when wearing oil- and heat-resistant protective gloves incl. forearm protection, face guard and protective apron.

**Attention!**

Carry out the engine oil service only when the engine is at operating temperature.

Observe the exact engine oil filling capacity.

Overfilling the engine with engine oil will result in **engine damage**.

Attention!**Risk of damage!**

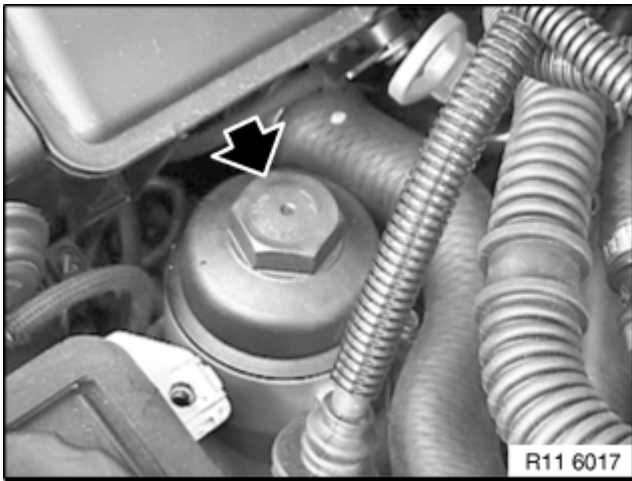
When working on the engine oil, coolant or fuel circuit, it is essential always to protect the alternator against dirt contamination.

Cover alternator with suitable materials.

**Recycling:**

Catch and dispose of drained engine oil in a suitable collecting vessel.

Observe country-specific waste disposal regulations.

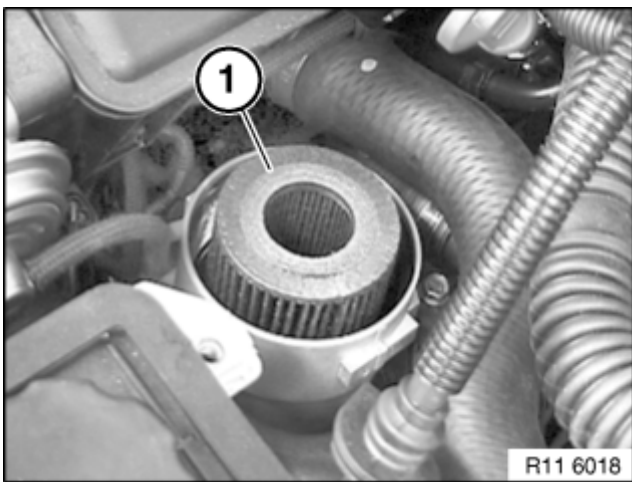


Open oil filter cover with a suitable tool.

Tightening torque [11 42 1AZ](#).

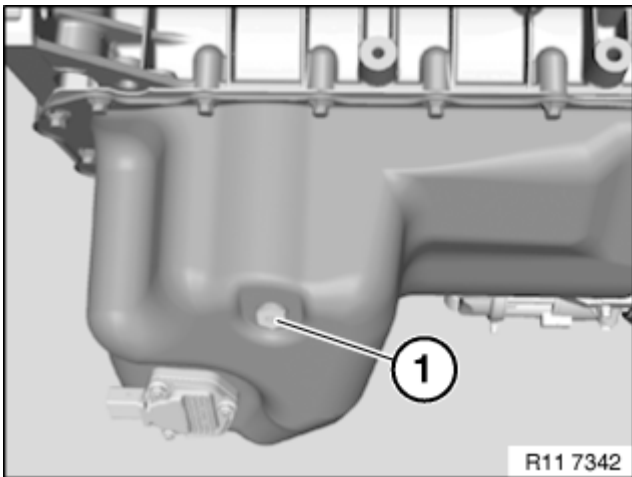
Note:

Engine oil flows out of the oil filter housing and back into the oil sump.



Pull oil filter element (1) out of oil filter housing. *Installation note:*

Replace oil filter element (1).



Note:

Presentation: without underbody protection / reinforcement plate.

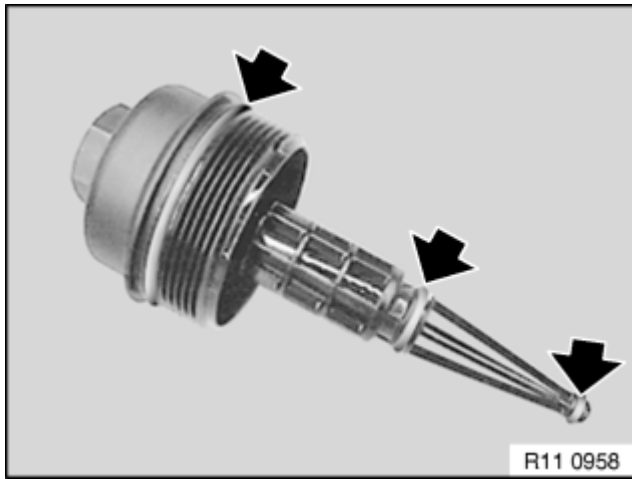
Unclip sensor opening on underbody protection or reinforcement plate.

Remove screw plug (1) from oil sump and drain engine oil.

Tightening torque [11 13 1AZ](#).

Installation note:

Replace sealing ring.



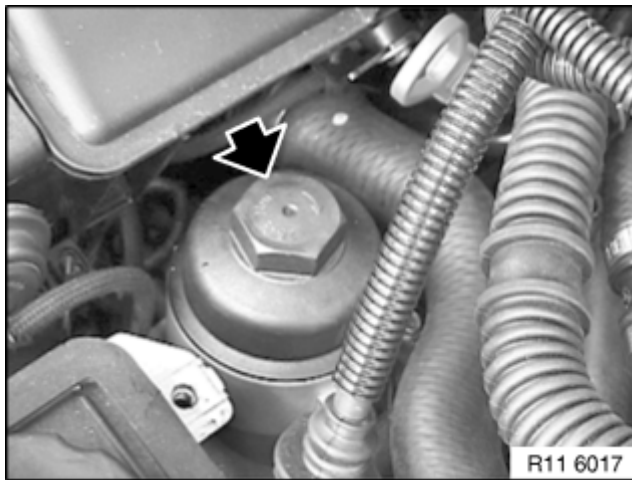
Installation note:

Renew large sealing ring on oil filter cover.

Check small sealing rings, replace if necessary.

Note:

Moisten sealing rings with engine oil.



Close oil filter cover with a suitable tool.

Tightening torque [11 42 1AZ](#).

Note:

Pour in [engine oil](#).

Start engine and run at idle until oil pressure indicator light goes out.

Switch off engine.

Check oil filter cover and screw plug on oil sump for leaks.

Assemble engine.



Checking engine oil level:

- Park vehicle on a horizontal surface
- Using the oil dipstick, check the engine oil level after five minutes on the engine at normal operating temperature
- Top up engine oil if necessary

24 00 023 Removing and installing automatic transmission (GA6HP26Z) M57T2



Special tools required:

- [00 2 030](#)
- [11 6 480](#)
- [23 4 050](#)
- [24 1 110](#)
- [24 1 370](#)
- [24 2 390](#)



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!

After completion of work, check [transmission oil level](#).

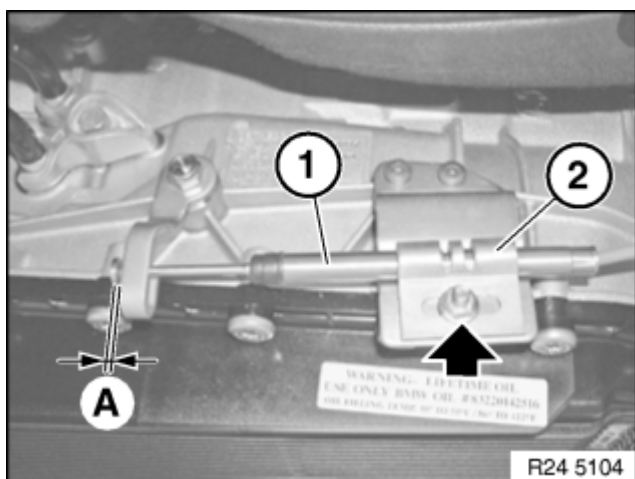
Use only the approved [transmission oil](#).

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



Necessary preliminary tasks:

- Clamp off [battery](#)
- Remove [reinforcement plate](#)
- If necessary, remove [fan cowl](#)
- Remove [exhaust system](#)
- Remove heat shields
- Remove [front propeller shaft](#)
- Remove [propeller shaft](#)
- Release centre mount.
- **Note:**
- Bending the propeller shaft by an excessive angle can cause premature damage to the joint/propeller shaft!
- Tie up propeller shaft to underbody.
- Support engine with lifter when removing transmission.

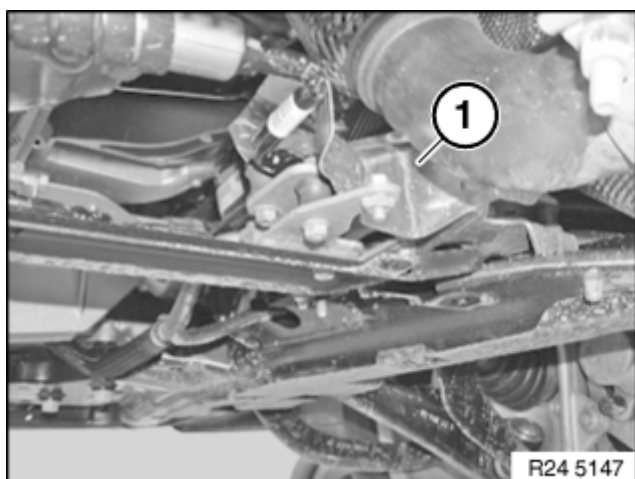


Unfasten nut.

Disconnect cable (1).

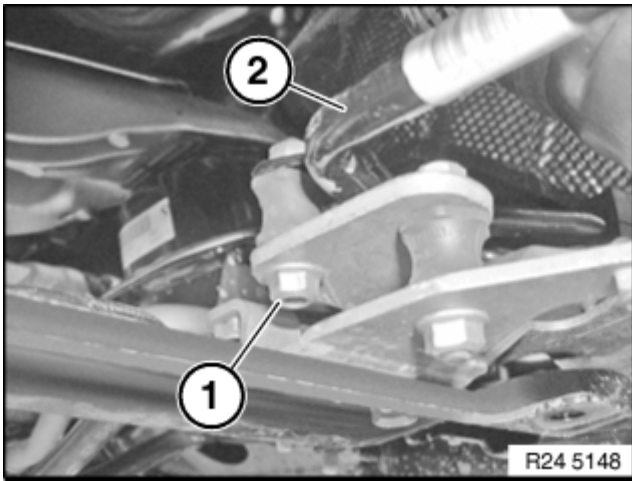
Installation note:

- Unfasten nut.
- Adjust cable by means of holder (2) until distance A = 1 mm is obtained
- Tighten nut.



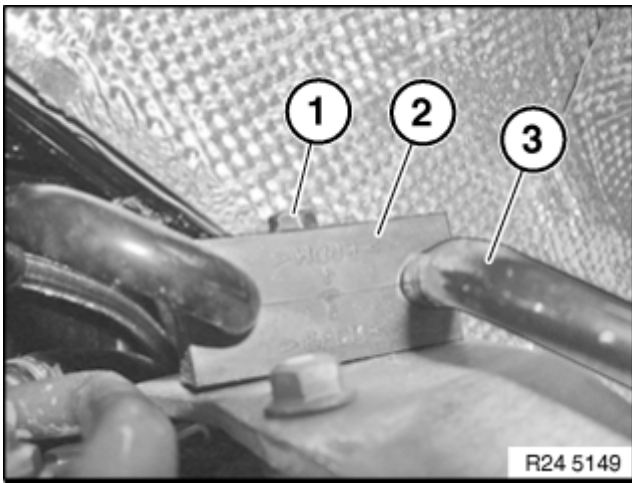
Vehicles with Adaptive Drive:

Remove guard plate (1).



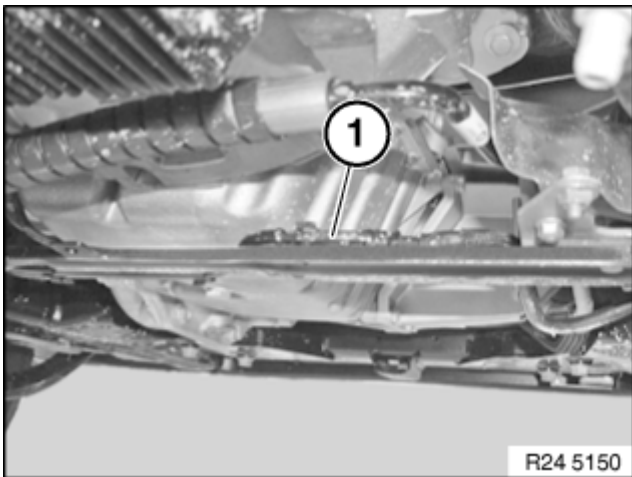
Slacken nut (1).

Detach line (2) with rubber mount from holder.

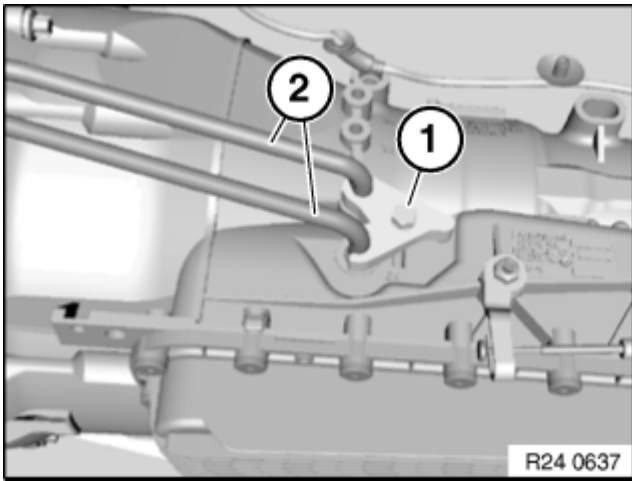


Release screw (1).

Detach rubber mount (2) with line (3) from holder.



Detach line (1) from front axle.

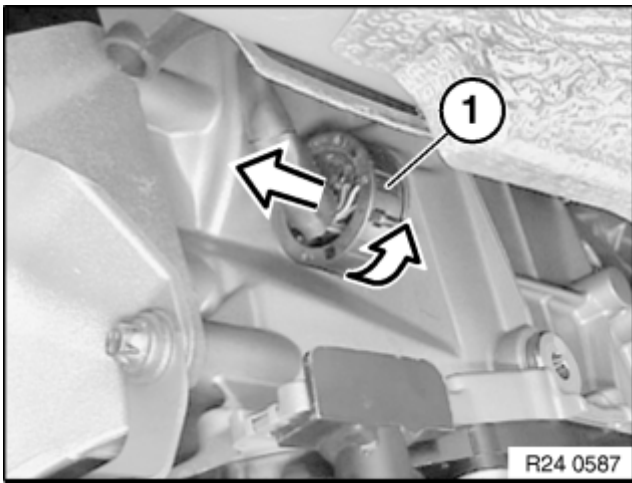


Release screw (1).

Disconnect hydraulic lines (2) to transmission oil cooler.

Installation note:

Replace sealing rings.

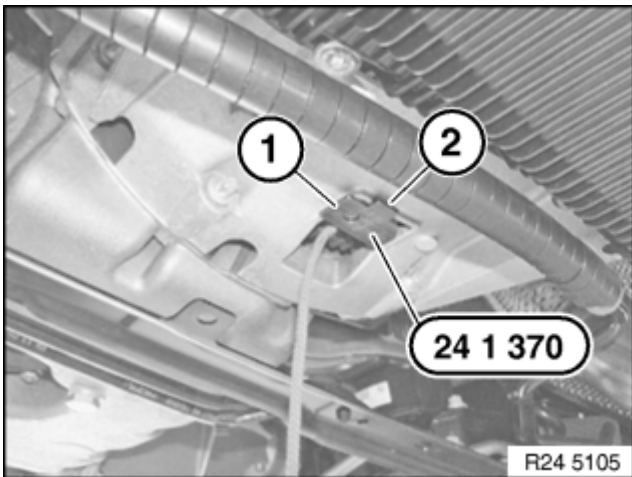


- Unlock connector (1) by turning and disconnect
- Release cable from brackets
- Insert special tool [24 2 390](#) in sealing cup.

Operations are described in:

[Notes on mechatronics](#)

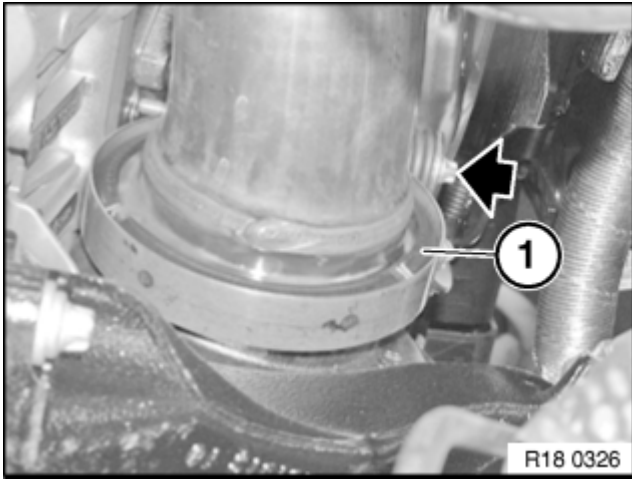
(Important: Observe important note)



Insert special tool [24 1 370](#) into recess of transmission housing and secure with screw (1). *Note:*

Note installation position.

Lug (2) must point in opposite direction to direction of travel.



Release screw on exhaust turbocharger.

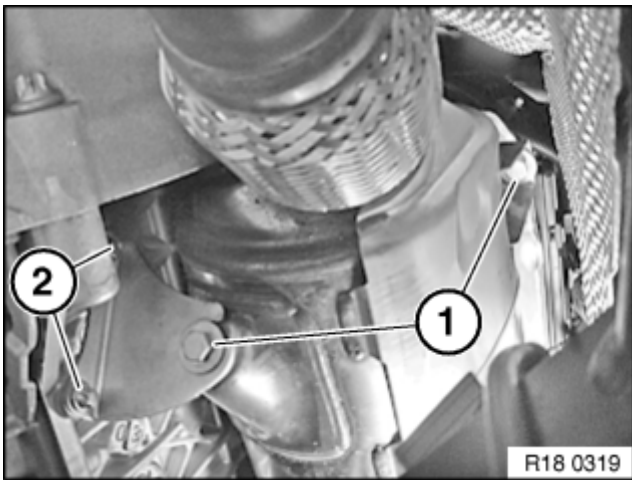
Tightening torque [18 32 1AZ](#).

Remove V-clamp (1).

Installation note:

V-clamp must be replaced each time it is opened.

Replace gasket.



Release bolts (1) of the suspension diesel particulate filter .

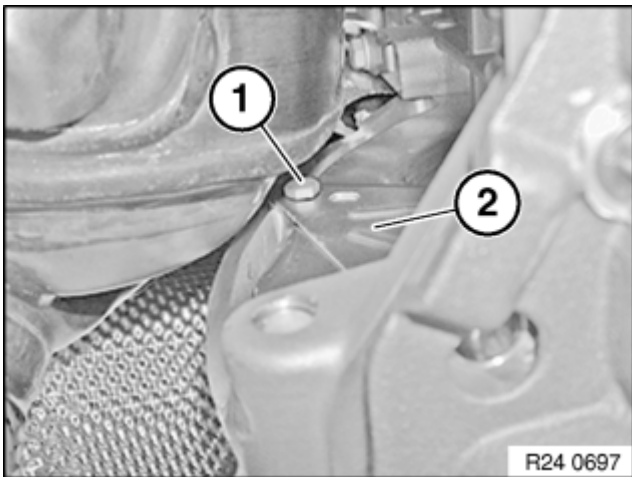
Tightening torque [18 20 2AZ](#).

Release screws (2) from holder and remove.

Tightening torque [18 20 3AZ](#).

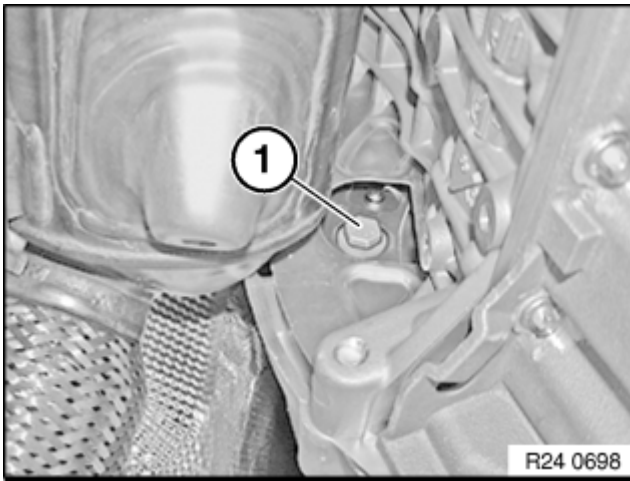
Lay diesel particulate filter to one side.

If necessary remove cable for oxygen sensor and exhaust-gas temperature sensor from holder.



Release screw (1).

Remove panel (2).

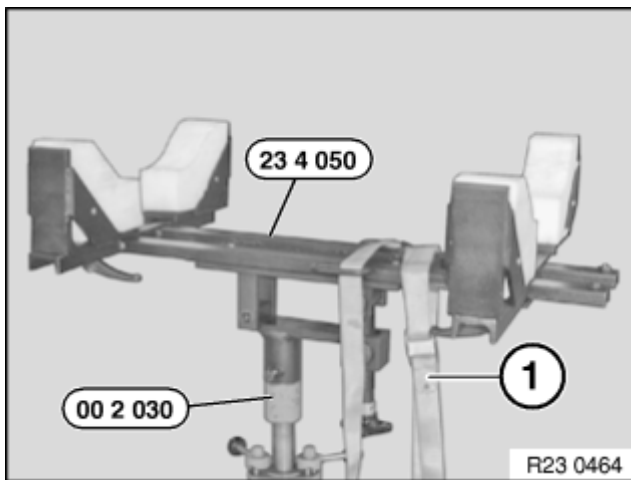


Crank engine at vibration damper with special tool [11 6 480](#) in direction of rotation until bolt (1) is visible in recess.

Release all 4 bolts of torque converter with special tool [24 1 110](#) .

Tightening torque [24 40 1AZ](#).

Replace diesel particulate filter to initial position for lowering the gearbox. Do not screw.



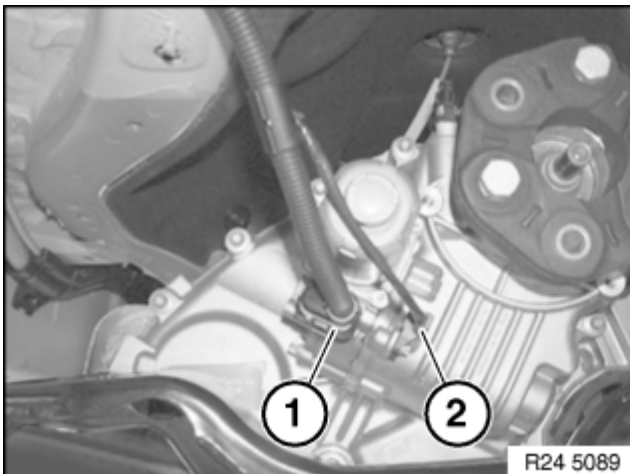
Supporting transmission:

Support transmission with special tools [23 4 050](#) ,[00 2 030](#) .

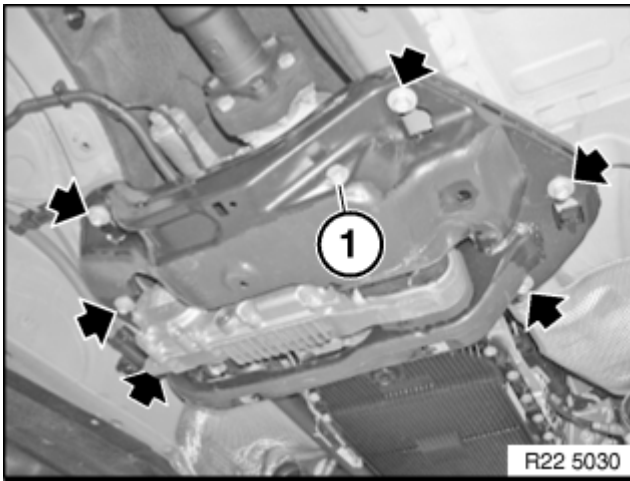
Secure transmission to mounting with tensioning strap (1).

Repair work is described in [Gearbox holder](#).

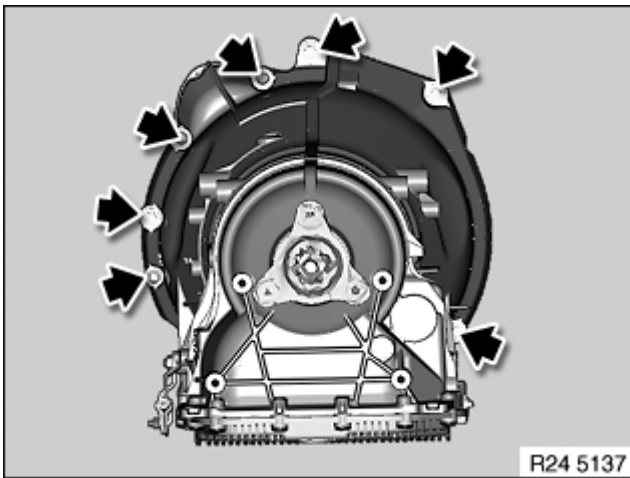
After completion of work, check transmission fluid level.



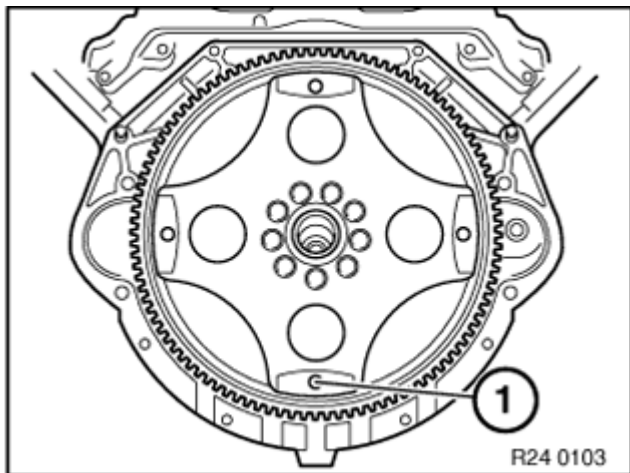
Unlock and detach connectors (1) and (2).



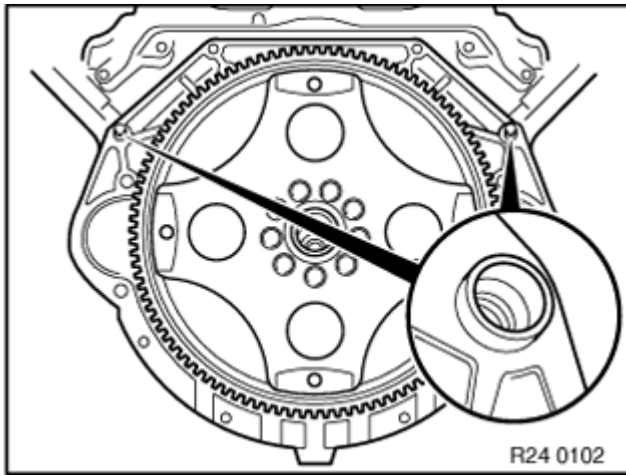
Release screws.
Tightening torque [22 32 4AZ](#).
Release screw (1).
Tightening torque [22 32 5AZ](#).
Remove cross member.



Release screws.
Tightening torque [24 00 1AZ](#).
Unflange transmission.



Installation note:
Bore hole (1) of driving plate must be accessible from recess on engine oil sump.



Check that fitting sleeves are correctly fitted.
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.

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](#)



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](#).

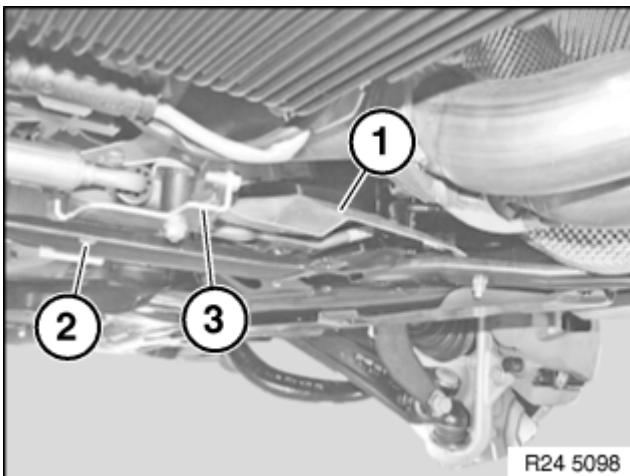
[Use only the approved transmission oil.](#)

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 [reinforcement plate](#)
- Remove complete [exhaust system](#)
- Remove [starter motor](#)
- [Remove](#) front propeller shaft
- Detach [propeller shaft](#) at transfer box, release centre mount
- Tie back propeller shaft to vehicle underbody
- **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

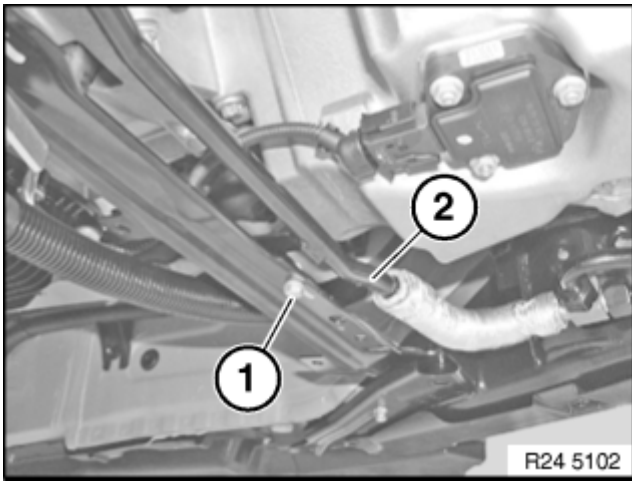


Vehicle with Adaptive Drive.

Remove heat shield (1).

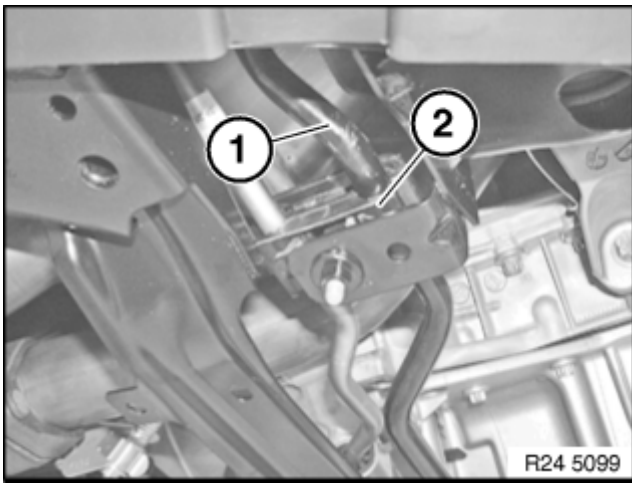
Release screw (2).

Detach bracket (3) from front axle.

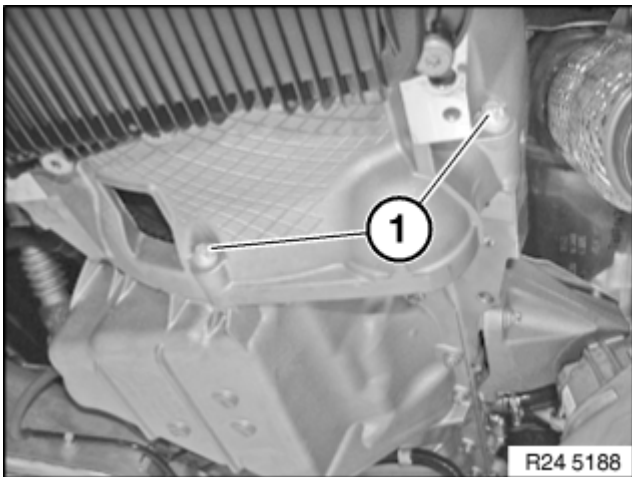


Release screw (1).

Detach oil line (2) from front axle.

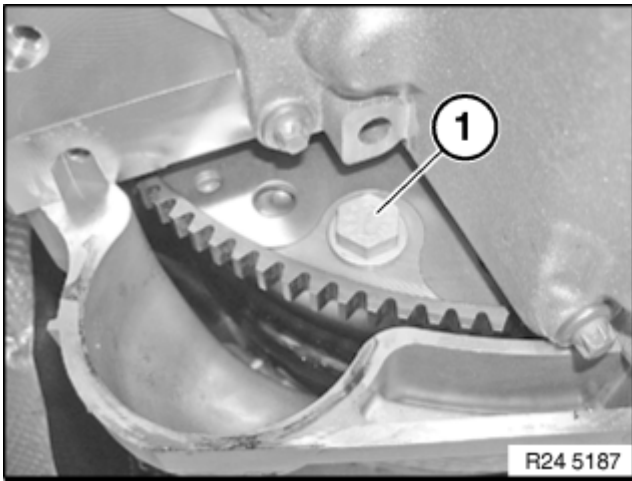


Detach engine oil pipes (1) from holder (2).



Release screws (1).

Tightening torque [24 00 1AZ](#).



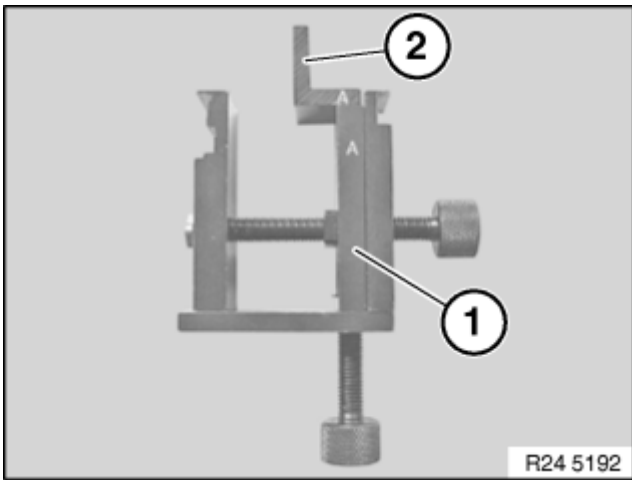
Crank engine with special tool [11 6 480](#) at the vibration damper in direction of rotation until screw (1) is visible in the recess.

Release all 6 bolts of torque converter with special tool [24 1 110](#) .

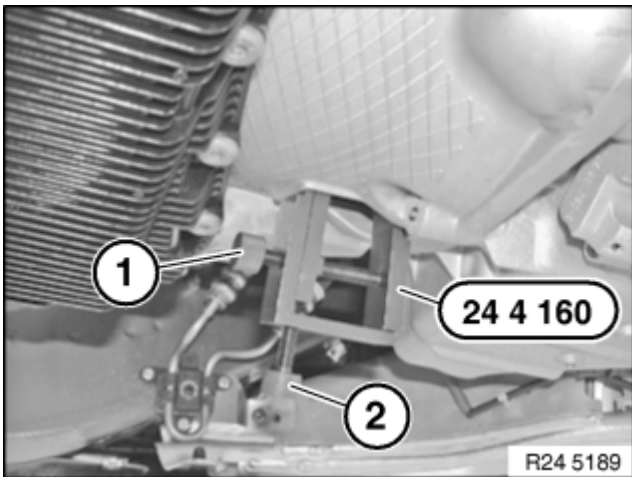
Installation note:

Replace converter screws. Remove any remaining adhesive residue from the thread.

Tightening torque [24 40 1AZ](#).



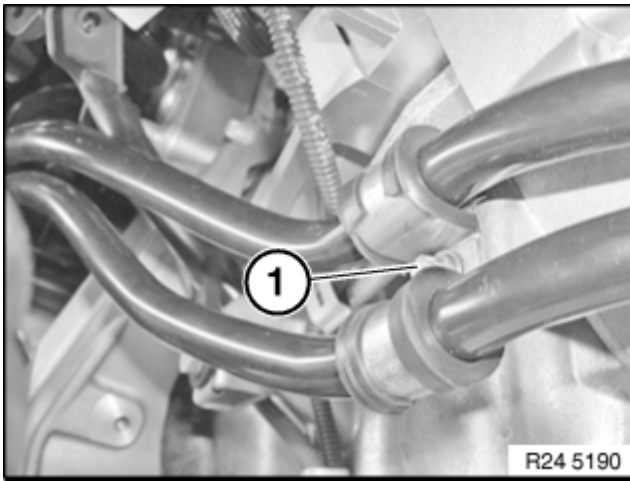
Prepare special tool (1) [24 4 161](#) (A) with shaped element (2) [24 4 164](#) as pictured.



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

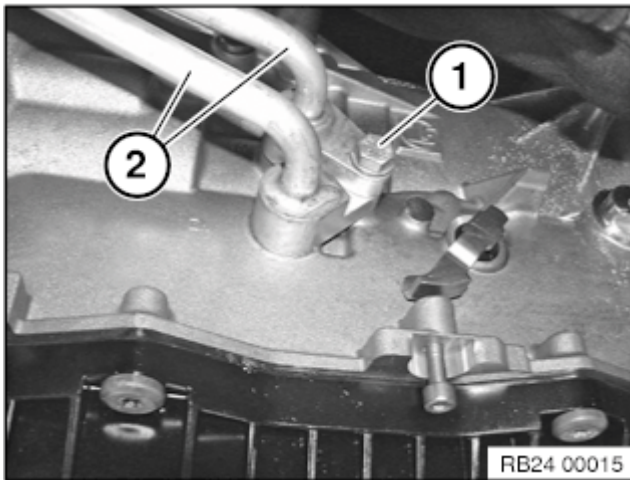
Raise by turning screw (2) and clamp down.

Tighten screw (1).



Release screw (1).

Release holder with transmission fluid lines.



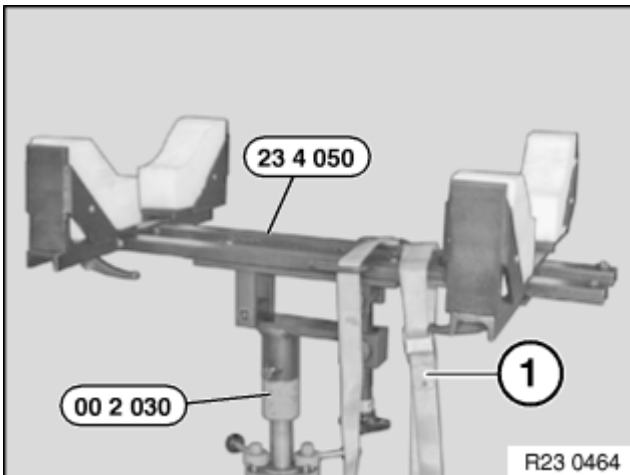
Release screw (1).

Disconnect hydraulic lines (2) to transmission oil cooler.

Tightening torque [17 22 1AZ](#).

Installation note:

Replace sealing rings.



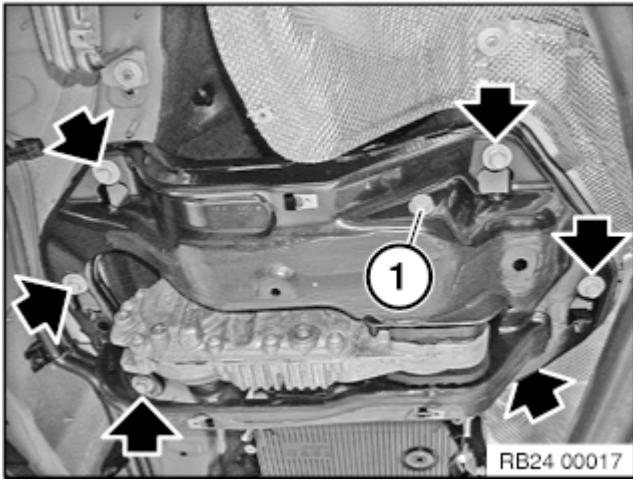
Supporting transmission:

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.



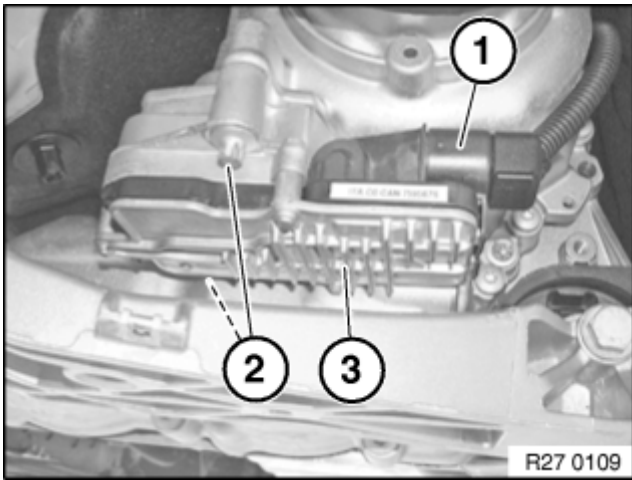
Release screw.

Tightening torque [22 32 4AZ](#).

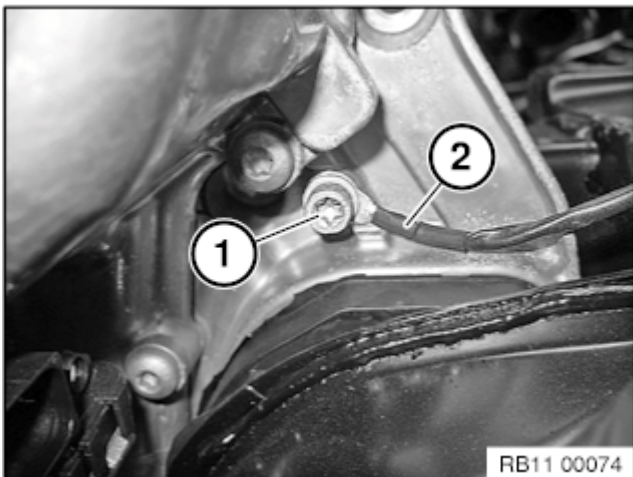
Release screw (1).

Tightening torque [22 32 5AZ](#).

Remove cross member.

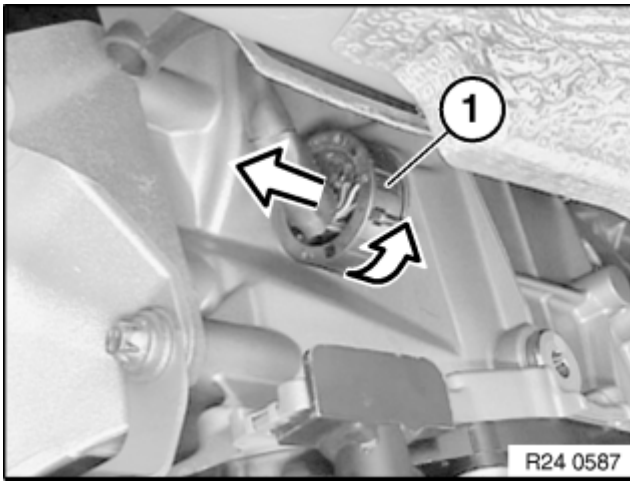


Disconnect connector (1) from transfer box control unit (3) (longitudinal torque module).



Release screw (1).

Remove earth strap (2).



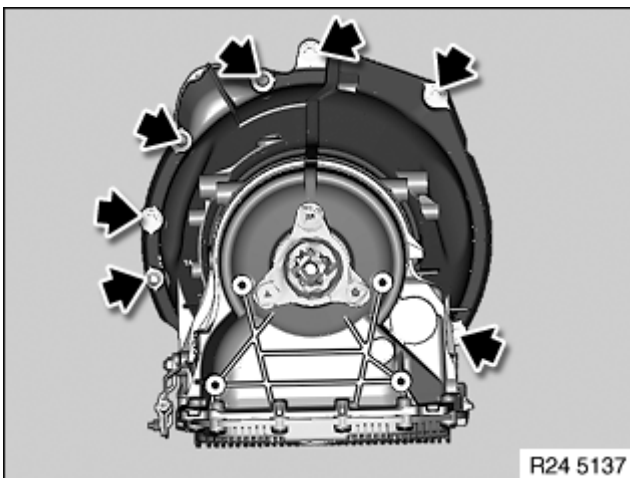
- Unlock connector (1) by turning and disconnect
- Do not touch pins
- Release cable from brackets
- Insert special tool [24 2 390](#) in sealing sleeve

Repair work is described in

[Notes on mechatronics](#)

Important!

Read and comply with important note.



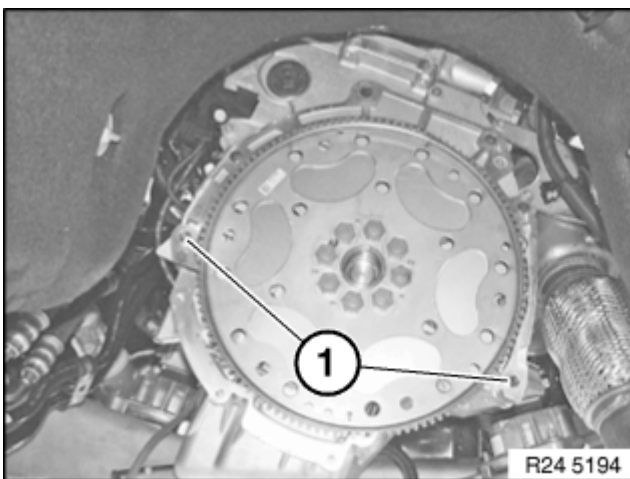
Release bolts and remove transmission.

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.