

00 Danger of injury if oil comes into contact with eyes and skin



Danger of injury!

Contact with eyes or skin may result in injury!

Possible symptoms are:

- Impaired sight
- Irritation of the eyes
- Reddening of the skin
- Rough and cracked skin



Protective measures/rules of conduct:

- Wear safety goggles.
- Wear oil-resistant protective gloves.
- Observe country-specific safety regulations.



First aid measures:

- Eye contact: Immediately flush eyes with lots of water for at least 15 minutes. In the case that it is available, use an eye wash bottle. If eye irritation persists, consult a doctor.
- Skin contact: Wash off with soap and water immediately. If irritation persists, consult a doctor.

Note: Do not use solvents/thinners.

00 Danger of poisoning if oil is ingested/absorbed through the skin



Danger of poisoning!

Ingesting oil or absorbing through the skin may cause poisoning!

Possible symptoms are:

- Headaches
- Dizziness
- Stomach aches
- Vomiting
- Diarrhoea
- Cramps/fits
- Unconsciousness



Protective measures/rules of conduct:

- Fill oil in appropriately marked containers only.
- Do not fill oil in containers meant for drinking out of. (bottles for beverages, glasses or cups)
- Observe country-specific safety regulations.



First aid measures:

- Do not induce vomiting.

If the person affected is still conscious, he/she must rinse out their mouth with water, drink plenty of water and consult a doctor immediately.

Do not administer anything to an unconscious person via their mouth; place them in a stable position on their side. Call the emergency doctor immediately.

**Warning!**

[Danger of poisoning](#) if oil is ingested/absorbed through the skin!

[Risk of injury](#) if oil comes into contact with eyes and skin!

**Recycling:**

Observe country-specific waste disposal regulations.

**Measures if oil is unintentionally released:**

- Personal precautionary measures: Danger of slipping! Keep non-involved persons away from the work area. Wear personal protective clothing/equipment.
- Environmental protection measures: Prevent oil from draining into drain channels, sewerage systems, pits, cellars, water and the ground.
- Limiting spread: Use oil blocks to prevent the surface spread of oil.
- Cleaning procedure: Bind and dispose of escaped oil with nonflammable absorbents.

Note: Do not flush oil away with water or aqueous cleaning agents.

23 Transmission designations

Breakdown of BMW designation:

A5S 300J (former designation)		
A	Transmission type	- S = Manual gearbox - A = Automatic transmission
5	Number of forward gears	
S	Type of top gear	- D = Direct gear - S = Overdrive gear
300	Max. input torque (Nm)	
J	Code letter of transmission manufacturer	- G = Getrag - J = Jatco - R = GMPT (General Motors Powertrain) - Z = ZF (Zahnradfabrik Friedrichshafen)
SMG	Notes	SMG = Sequential M gearbox/transmission

GS6-37BZ (new designation according to BMW Group Standard GS 90007)		
G	Transmission	
S	Transmission type	- S = Manual gearbox - A = Automatic transmission
6	Number of forward gears	
-		- = Standard with manual gearshift - HP = Hydraulic planetary gear - DKG= twin-clutch gearbox
37	Transmission type	26 = D-transmission 31 = C-transmission 39 = F-transmission 37 = H-transmission 53 = G-transmission 17 = I-transmission 47= J transmission SMG -7-speed 45 = K transmission 36= Transmission DKG
B	Gear set	- B = Petrol gear ratio - D = Diesel gear ratio - S= Sport gear ratio

Z	Code letter of transmission manufacturer	• G = Getrag • Z = ZF (Zahnradfabrik Friedrichshafen) • A = AISIN
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Manual gearbox:

BMW designation	Manufacturer	Manufacturer designation	Remarks
S5D 200G	Getrag	B transmission (220/5)	
S5D 200G	Getrag	B transmission (221/5)	for M41 engine only
S5D 250G	Getrag	B transmission (220/5)	Reinforced version
S5D 260Z	ZF	C-transmission (S5-31 D)	for M51 engine only
S5D 280Z	ZF	C-transmission (S5-31)	
S5D 310Z	ZF	C-transmission (S5-31)	up to 9.95
S5D 320Z	ZF	C-transmission (S5-31)	from 9.95 (reinforced version)
GS5S31BZ (SMG)	ZF	C transmission	SMG
GS5-39DZ	ZF	F transmission	
S6S 420G	Getrag	D-transmission (226/6)	
S6S 420G (SMG)	Getrag	D transmission	SMG
S6S 560G	Getrag	E-transmission (286/6)	
GS6-37BZ	ZF	H-transmission	
GS6S37BZ (SMG)	ZF	H-transmission	
GS6-37DZ	ZF	H-transmission	
GS6-37BG	Getrag	H-transmission	
GS6-53BZ	ZF	G-transmission	
GS6-53DZ	ZF	G-transmission	
GS6-17BG	Getrag	I-transmission	
GS6-17DG	Getrag	I-transmission	
GS7S47BG (SMG)	Getrag	J-transmission (247)	SMG -7-gear
GS7D36SG	Getrag	DKG (436)	DKG -7-gear
GS6- 45BZ	ZF	K transmission	
GS6- 45DZ	ZF	K transmission	
GS6-60DA/BA	AISIN	BG6	

7DCT300	Getrag	7DCT	DKG -7-gear
GS6-58DG/BG	Getrag		
GS6-59DG/BG	Getrag		

Automatic transmission:

BMW designation	Manufacturer	Manufacturer designation	Remarks
A4S 200R	General Motors Powertrain	GM4	
A4S 270R	General Motors Powertrain	THM-R1w	Transmission wide-stepped
A4S 310R	General Motors Powertrain	THM-R1	
A5S 300J	Jatco	Jatco	
A5S 310Z	ZF	5HP-18	
A5S 325Z	ZF	5HP-19	
A5S 440Z	ZF	5HP-24	
A5S 560Z	ZF	5HP-30	
A5S 360R / 390R	GM	GM5	
GA6F21AW	AISIN	GA6F21AW	
GA6HP19Z	ZF	6HP19	
GA6HP26Z	ZF	6HP26	
GA6HP32Z	ZF	6HP32	
GA6L45R	GM	GM6	
GA6F21AW	AISIN	GA6F21AW	
GA8F22AW	AISIN	GA8F22AW	
GA8G45	AISIN	8G45	
GA8HP45Z	ZF	8HP45	
GA8HP50Z	ZF	8HP50	
GA8HP51Z	ZF	8HP51	
GA8HP70Z	ZF	8HP70	
GA8HP75Z	ZF	8HP75	
GA8HP76Z	ZF	8HP76	
GA8P70H	ZF	8P70	Hybrid
GA8P75H	ZF	8P75	Hybrid
GA8HP90Z	ZF	8HP90	
GA8HP95Z	ZF	8HP95	

GA7AHSCD	Daimler	AHS-C	Hybrid
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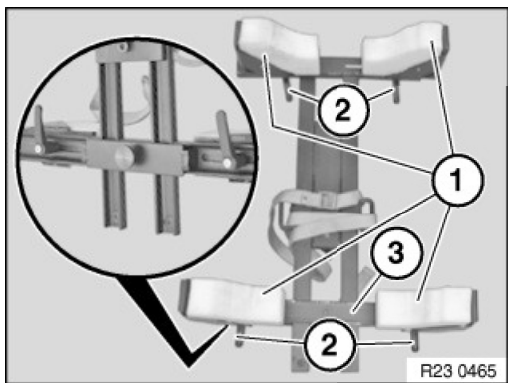
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**Special tools required:**

- [00 2 030](#)
- [23 4 050](#)

**Note:**

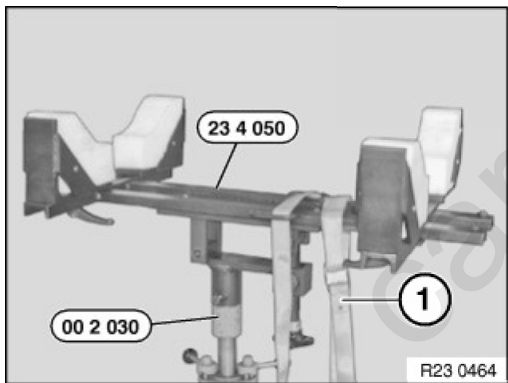
- The universal transmission bracket is introduced for the E60 AWD
- Suitable for manual and automatic transmissions

**Important!**

Front and rear supports (1) can be laterally adjusted by means of screws (2).

Carrier (3) of rear supports (1) can be longitudinally adjusted by means of screw.

Supports must be adapted in length and width to the transmission.

**Supporting transmission:**

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

Important!

Transmission must be secured with tensioning strap (1).

23 Universal transmission retaining bridge



Special tools required:

- 0 495 187
- [24 0 200](#)



Note:

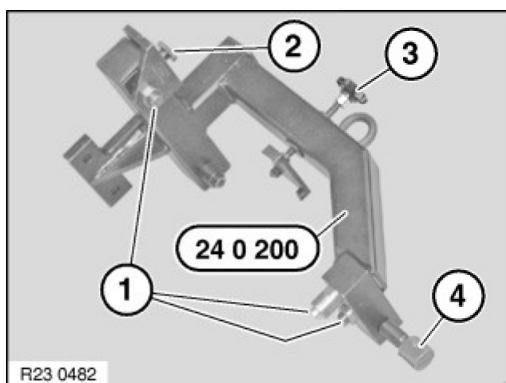
- Transmission retaining bridge [24 0 200](#) is suitable for manual and automatic transmissions



Attention!

The adapter and shaft must be adapted to positively lock with the transmission.

(Danger of injury)



Adapt the adapter (1) and spindle with the thrust piece (3) on the transmission.

Adjust the length using the sliding piece (2).

Screw in spindle (4).

Attention!

Before mounting on assembly stand 0 495 187 check retraining bridge for tight fit.

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GA8F22AW	AISIN	GA8F22AW	
GA8G45	AISIN	8G45	
GA8HP45Z	ZF	8HP45	
GA8HP50Z	ZF	8HP50	
GA8HP51Z	ZF	8HP51	
GA8HP70Z	ZF	8HP70	
GA8HP75Z	ZF	8HP75	
GA8HP76Z	ZF	8HP76	
GA8P70H	ZF	8P70	Hybrid
GA8P75H	ZF	8P75	Hybrid
GA8HP90Z	ZF	8HP90	
GA8HP95Z	ZF	8HP95	

GA7AHSCD	Daimler	AHS-C	Hybrid
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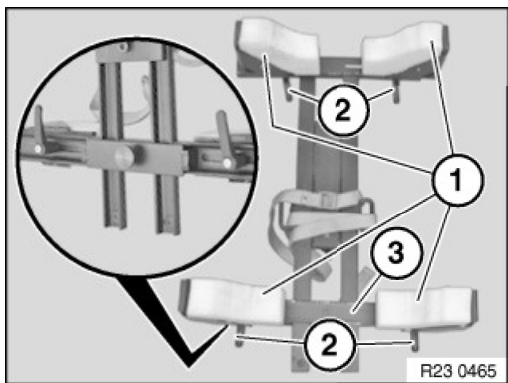
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**Special tools required:**

- [00 2 030](#)
- [23 4 050](#)

**Note:**

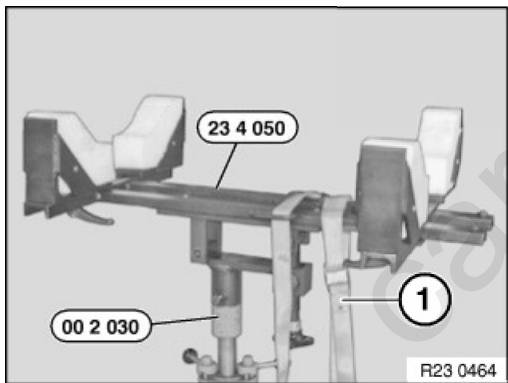
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23 Universal transmission retaining bridge



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- 0 495 187
- [24 0 200](#)



Note:

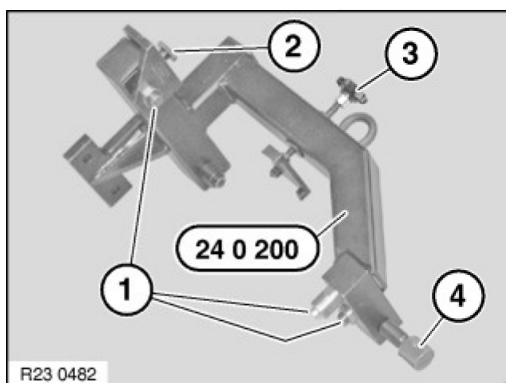
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(Danger of injury)



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Attention!

Before mounting on assembly stand 0 495 187 check retraining bridge for tight fit.

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Protective measures/rules of conduct:

- Wear safety goggles.
- Wear oil-resistant protective gloves.
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First aid measures:

- Eye contact: Immediately flush eyes with lots of water for at least 15 minutes. In the case that it is available, use an eye wash bottle. If eye irritation persists, consult a doctor.
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Note: Do not use solvents/thinners.

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Ingesting oil or absorbing through the skin may cause poisoning!

Possible symptoms are:

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Protective measures/rules of conduct:

- Fill oil in appropriately marked containers only.
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First aid measures:

- Do not induce vomiting.

If the person affected is still conscious, he/she must rinse out their mouth with water, drink plenty of water and consult a doctor immediately.

Do not administer anything to an unconscious person via their mouth; place them in a stable position on their side. Call the emergency doctor immediately.

00 11 500 GA8HP70Z Checking/topping up oil level in automatic transmission (GA8HP45Z,GA8HP50Z,GA8HP90Z)



Special tools required:

- [2 405 614](#)



Important!

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



Important!

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

To set the correct level, it is **mandatory** that the service function "Transmission control unit: oil adjustment" is performed using the diagnosis system.

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

Conditions for the oil adjustment:

- Initial condition: Transmission oil temperature 30 °C to 40 °C
- Final condition: Transmission oil temperature 40 °C to 50 °C

Important! Transmission GA8HP70Z with N57 engine from 03/2011!!

Precondition for oil adjustment

- Transmission oil temperature 30°C to maximum 40°C.

(The transmission oil temperature **must** be maintained. This will increase the oil quantity in the transmission.)



Performing oil-level adjustment:

An oil-level adjustment is necessary for certain fault code entries in the automatic transmission and after repair (e. g. mechatronic replacement, converter replacement, transmission replacement).

- Connect diagnosis and information system.
- Service function (transmission control unit: Oil adjustment) call up
- Carry out oil level check in accordance with instructions

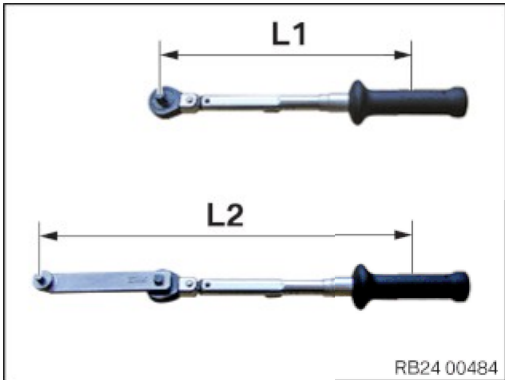


Adding transmission oil:

Stand vehicle on a level surface and secure against rolling off.

Release oil filler screw (1) by means of special tool [2 405 614](#).

Add automatic transmission fluid according to instructions in the BMW diagnosis system.



Important!

When using special tool [2 405 614](#), the setpoint torque deviates from the torque to be set.

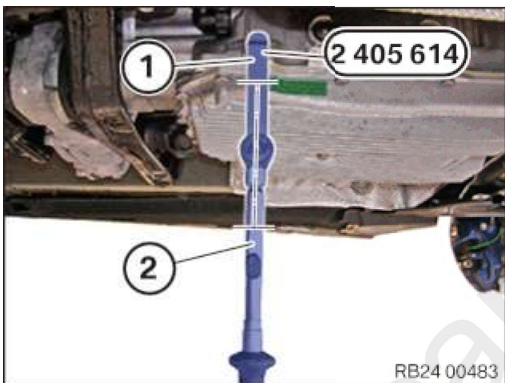
Conversion of setpoint torque -> torque to be set:

(setpoint torque x L1) : L2 = torque to be set.

L1 = Length of handle centre to the ratchet head.

L2 = Length of the handle centre to the action point of special tool.

Desired tightening torque: [24 11 3AZ](#)



Parts: Replace oil filler plug and sealing ring.

Note: Special tool (1) and torque wrench must be aligned in a line at the time of tightening.

Tighten down oil filler plug using

1. Special tool [2 405 614](#).
2. Torque wrench



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 avoid severe damage to the engine block, the protruding threads of the transmission bolts must be checked for corrosion and damage **prior to removal**.

If the threads are corroded, they must be derusted and cleaned **prior to removal**.

Renew rusted, damaged screws.

Non-observance leads to severe damage to the engine block and transmission.



Important!

- Do not let skin come in contact with transmission oil and do not inhale fuel 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!

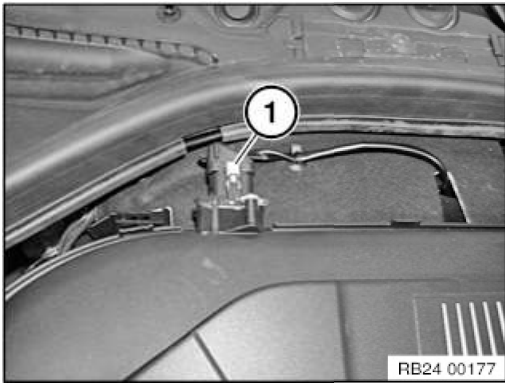


Necessary preliminary tasks:

- Clamp off [battery](#).
- Remove [underbody protection](#) at front and rear.
- Remove [reinforcement plate](#).
- Remove complete [exhaust system](#).
- Remove [starter motor](#).
- Remove [front propeller shaft](#).
- Partially remove [propeller shaft](#).
 - Disconnect propeller shaft at transmission.
 - Release centre mount.
 - Tie up propeller shaft to underbody.

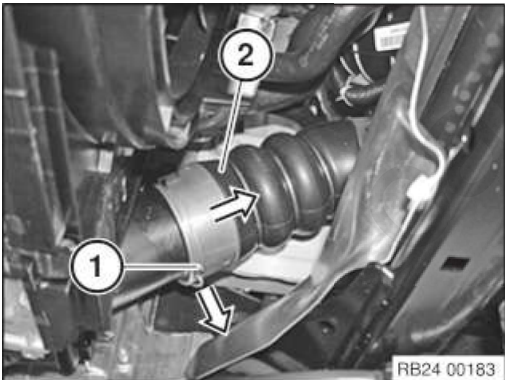
Note:

Bending the propeller shaft by an excessive angle can cause premature damage to the joint/propeller shaft!



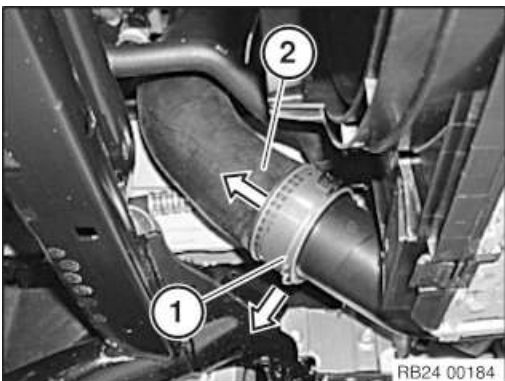
Unlock connector on hot film air mass meter and disconnect.

(Risk of damage when tipping the transmission to release the transmission connection.)



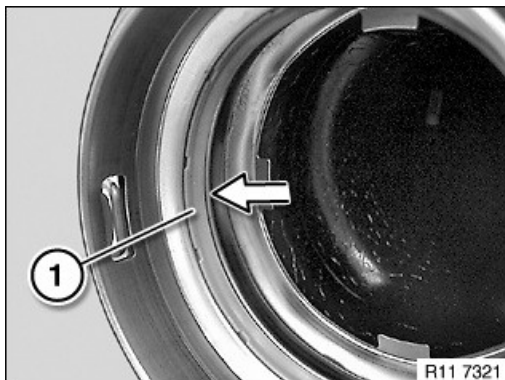
Release lock (1).

Disconnect right pressure pipe (2) from charge air cooler.



Release lock (1).

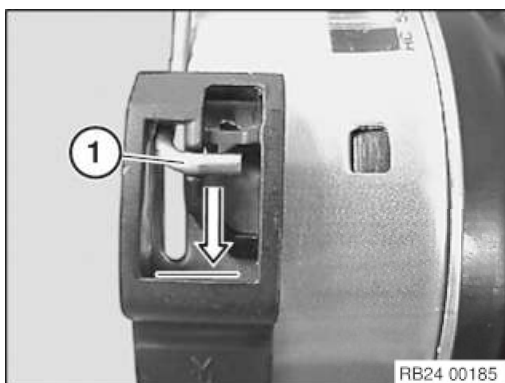
Disconnect left pressure pipe (2) from charge air cooler.



Check sealing lip (1) for damage. *Installation note:*
If sealing lip (1) is damaged, the gasket must be replaced.

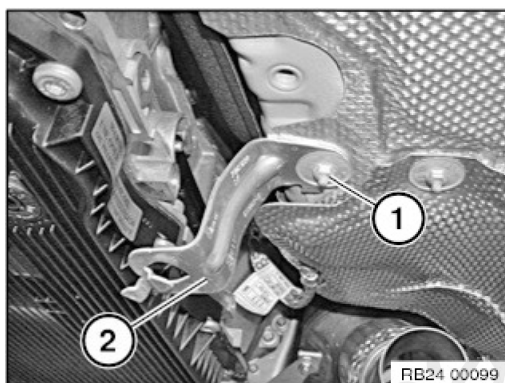
Important!

In the event of a leak at the pressure pipe, there is a **risk of damage** on the exhaust turbocharger!

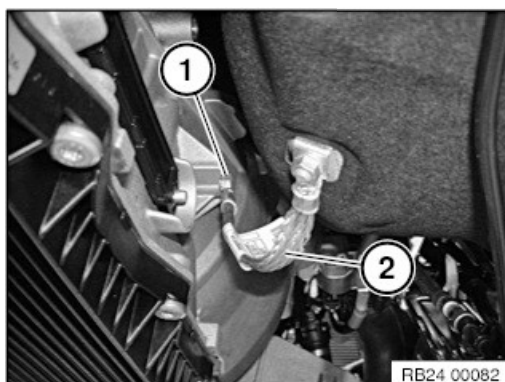


Installation note:

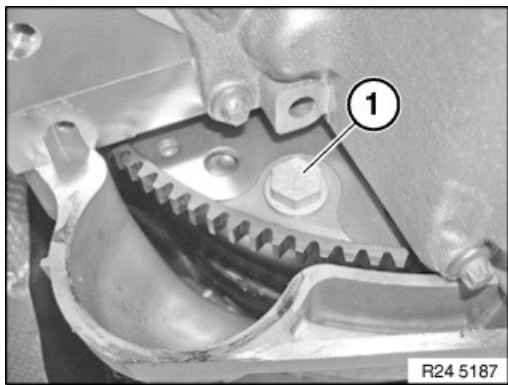
Before reassembly, bring the pressure pipe to charge air cooler lock (1) of the pressure pipes to the initial position.



Slacken nut (1).
Take off holder (2).



Release screw (1) from ground strap (2).
Tightening torque [24 11 7AZ](#).



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

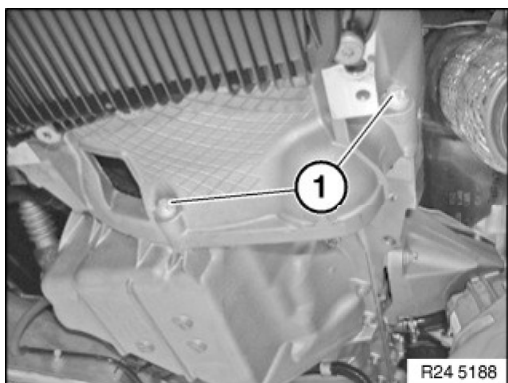
Release all 6 bolts of torque converter with special tool [24 1 110](#).

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

Installation note:

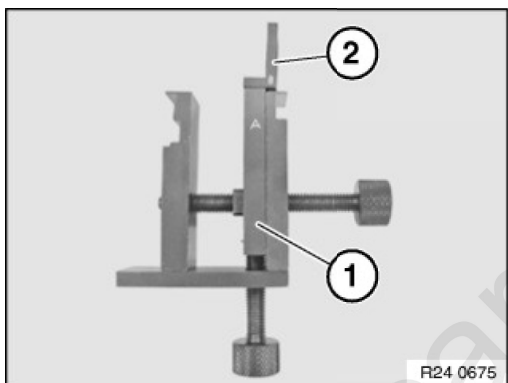
Replace screws (1).

Remove any remaining adhesive residue from the thread of the torque converter.

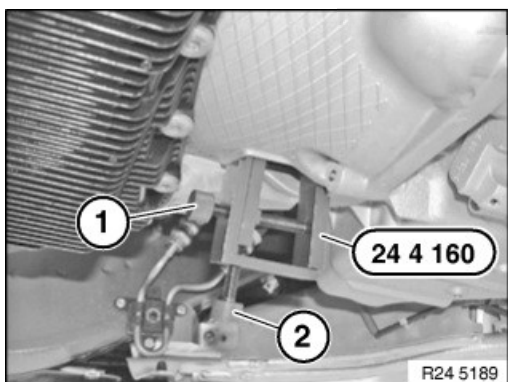


Release screws (1).

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



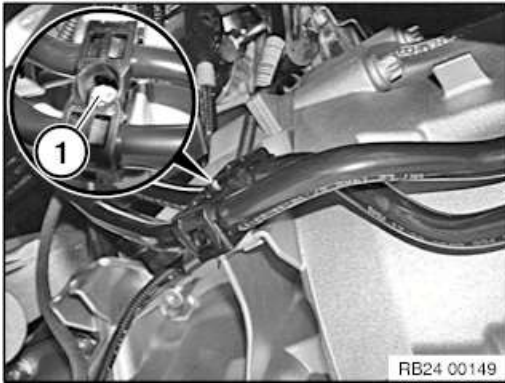
Prepare special tool (1) [24 4 161](#) (A) with shaped element (2) [24 4 164](#) as pictured.



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

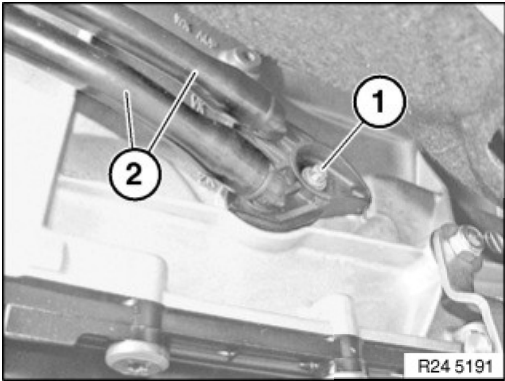
Raise by turning screw (2) and clamp down.

Tighten screw (1).



Release screw (1).

Release holder with transmission fluid lines.



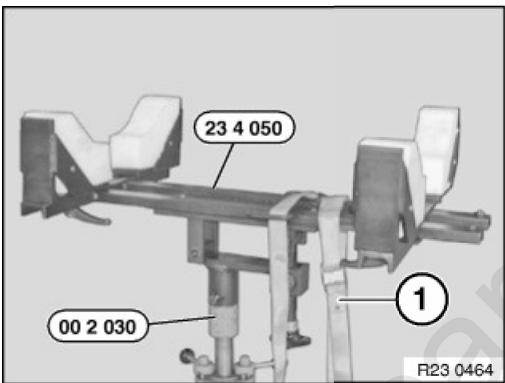
Release screw (1).

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

Disconnect hydraulic lines (2) to transmission oil cooler.

Installation note:

Replace sealing rings.

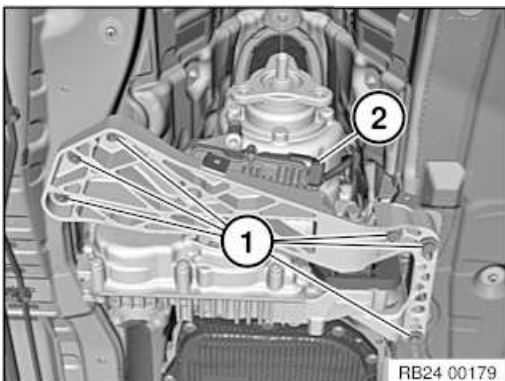


Supporting transmission:

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

Secure transmission to mounting with tensioning strap (1).

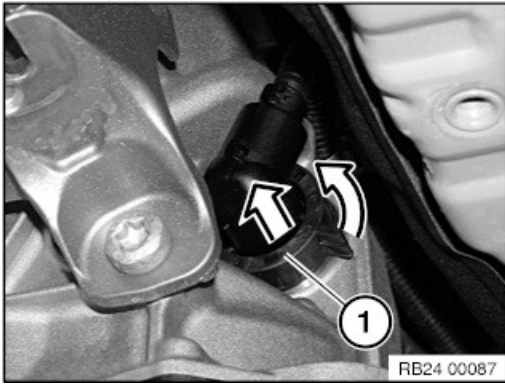
Repair work is described in [Gearbox holder](#).



Disconnect connector (2) from the longitudinal torque module.

Release screws (1).

Tightening torque [22 32 3AZ](#).



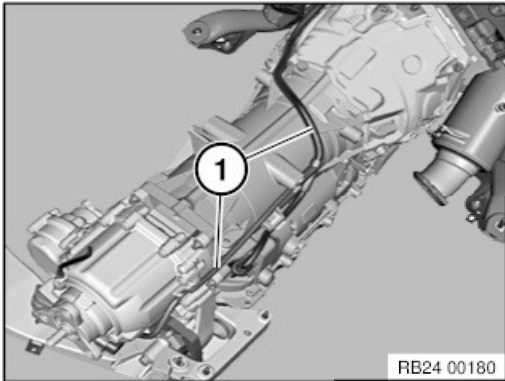
- Unlock connector (1) by turning and disconnect
- Do not touch pins
- Release cable from brackets
- Insert special tool [24 2 390](#) in sealing sleeve

Operations are described in:

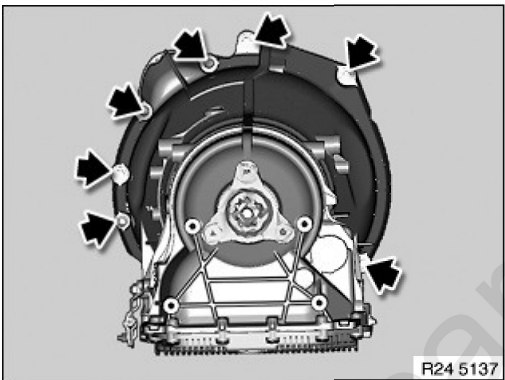
[Notes on mechatronics](#)

Important!

Read and comply with important note.



Release wiring harness (1) from holder.



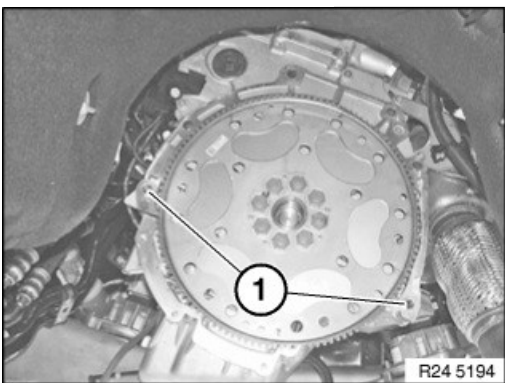
Release bolts and remove transmission.

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.

**Warning!**

[Danger of poisoning](#) if oil is ingested/absorbed through the skin!

[Risk of injury](#) if oil comes into contact with eyes and skin!

**Recycling:**

Observe country-specific waste disposal regulations.

**Measures if oil is unintentionally released:**

- Personal precautionary measures: Danger of slipping! Keep non-involved persons away from the work area. Wear personal protective clothing/equipment.
- Environmental protection measures: Prevent oil from draining into drain channels, sewerage systems, pits, cellars, water and the ground.
- Limiting spread: Use oil blocks to prevent the surface spread of oil.
- Cleaning procedure: Bind and dispose of escaped oil with nonflammable absorbents.

Note: Do not flush oil away with water or aqueous cleaning agents.

23 Transmission designations

Breakdown of BMW designation:

A5S 300J (former designation)		
A	Transmission type	- S = Manual gearbox - A = Automatic transmission
5	Number of forward gears	
S	Type of top gear	- D = Direct gear - S = Overdrive gear
300	Max. input torque (Nm)	
J	Code letter of transmission manufacturer	- G = Getrag - J = Jatco - R = GMPT (General Motors Powertrain) - Z = ZF (Zahnradfabrik Friedrichshafen)
SMG	Notes	SMG = Sequential M gearbox/transmission

GS6-37BZ (new designation according to BMW Group Standard GS 90007)		
G	Transmission	
S	Transmission type	- S = Manual gearbox - A = Automatic transmission
6	Number of forward gears	
-		- = Standard with manual gearshift - HP = Hydraulic planetary gear - DKG= twin-clutch gearbox
37	Transmission type	26 = D-transmission 31 = C-transmission 39 = F-transmission 37 = H-transmission 53 = G-transmission 17 = I-transmission 47= J transmission SMG -7-speed 45 = K transmission 36= Transmission DKG
B	Gear set	- B = Petrol gear ratio - D = Diesel gear ratio - S= Sport gear ratio

Z	Code letter of transmission manufacturer	• G = Getrag • Z = ZF (Zahnradfabrik Friedrichshafen) • A = AISIN
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Manual gearbox:

BMW designation	Manufacturer	Manufacturer designation	Remarks
S5D 200G	Getrag	B transmission (220/5)	
S5D 200G	Getrag	B transmission (221/5)	for M41 engine only
S5D 250G	Getrag	B transmission (220/5)	Reinforced version
S5D 260Z	ZF	C-transmission (S5-31 D)	for M51 engine only
S5D 280Z	ZF	C-transmission (S5-31)	
S5D 310Z	ZF	C-transmission (S5-31)	up to 9.95
S5D 320Z	ZF	C-transmission (S5-31)	from 9.95 (reinforced version)
GS5S31BZ (SMG)	ZF	C transmission	SMG
GS5-39DZ	ZF	F transmission	
S6S 420G	Getrag	D-transmission (226/6)	
S6S 420G (SMG)	Getrag	D transmission	SMG
S6S 560G	Getrag	E-transmission (286/6)	
GS6-37BZ	ZF	H-transmission	
GS6S37BZ (SMG)	ZF	H-transmission	
GS6-37DZ	ZF	H-transmission	
GS6-37BG	Getrag	H-transmission	
GS6-53BZ	ZF	G-transmission	
GS6-53DZ	ZF	G-transmission	
GS6-17BG	Getrag	I-transmission	
GS6-17DG	Getrag	I-transmission	
GS7S47BG (SMG)	Getrag	J-transmission (247)	SMG -7-gear
GS7D36SG	Getrag	DKG (436)	DKG -7-gear
GS6- 45BZ	ZF	K transmission	
GS6- 45DZ	ZF	K transmission	
GS6-60DA/BA	AISIN	BG6	

7DCT300	Getrag	7DCT	DKG -7-gear
GS6-58DG/BG	Getrag		
GS6-59DG/BG	Getrag		

Automatic transmission:

BMW designation	Manufacturer	Manufacturer designation	Remarks
A4S 200R	General Motors Powertrain	GM4	
A4S 270R	General Motors Powertrain	THM-R1w	Transmission wide-stepped
A4S 310R	General Motors Powertrain	THM-R1	
A5S 300J	Jatco	Jatco	
A5S 310Z	ZF	5HP-18	
A5S 325Z	ZF	5HP-19	
A5S 440Z	ZF	5HP-24	
A5S 560Z	ZF	5HP-30	
A5S 360R / 390R	GM	GM5	
GA6F21AW	AISIN	GA6F21AW	
GA6HP19Z	ZF	6HP19	
GA6HP26Z	ZF	6HP26	
GA6HP32Z	ZF	6HP32	
GA6L45R	GM	GM6	
GA6F21AW	AISIN	GA6F21AW	
GA8F22AW	AISIN	GA8F22AW	
GA8G45	AISIN	8G45	
GA8HP45Z	ZF	8HP45	
GA8HP50Z	ZF	8HP50	
GA8HP51Z	ZF	8HP51	
GA8HP70Z	ZF	8HP70	
GA8HP75Z	ZF	8HP75	
GA8HP76Z	ZF	8HP76	
GA8P70H	ZF	8P70	Hybrid
GA8P75H	ZF	8P75	Hybrid
GA8HP90Z	ZF	8HP90	
GA8HP95Z	ZF	8HP95	

GA7AHSCD	Daimler	AHS-C	Hybrid
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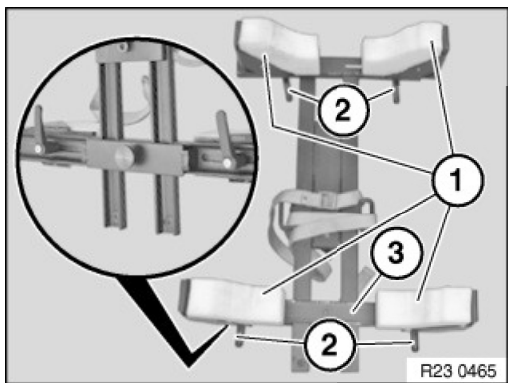
cardiagn.com

**Special tools required:**

- [00 2 030](#)
- [23 4 050](#)

**Note:**

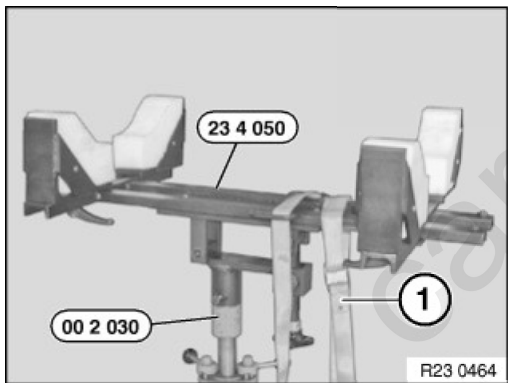
- The universal transmission bracket is introduced for the E60 AWD
- Suitable for manual and automatic transmissions

**Important!**

Front and rear supports (1) can be laterally adjusted by means of screws (2).

Carrier (3) of rear supports (1) can be longitudinally adjusted by means of screw.

Supports must be adapted in length and width to the transmission.

**Supporting transmission:**

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

Important!

Transmission must be secured with tensioning strap (1).

23 Universal transmission retaining bridge



Special tools required:

- 0 495 187
- [24 0 200](#)



Note:

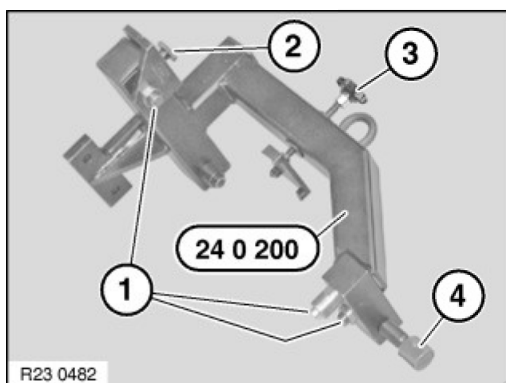
- Transmission retaining bridge [24 0 200](#) is suitable for manual and automatic transmissions



Attention!

The adapter and shaft must be adapted to positively lock with the transmission.

(Danger of injury)



Adapt the adapter (1) and spindle with the thrust piece (3) on the transmission.

Adjust the length using the sliding piece (2).

Screw in spindle (4).

Attention!

Before mounting on assembly stand 0 495 187 check retraining bridge for tight fit.

24 11 015 Removing and installing/sealing or replacing transmission oil sump (GA8HP70Z)



Important!

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



Important!

Remove transmission oil sump only after it has cooled down.

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!

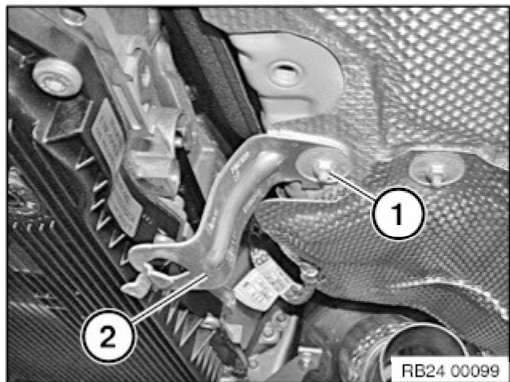
Installation note:

The transmission oil sump must be renewed **every** time it is removed.



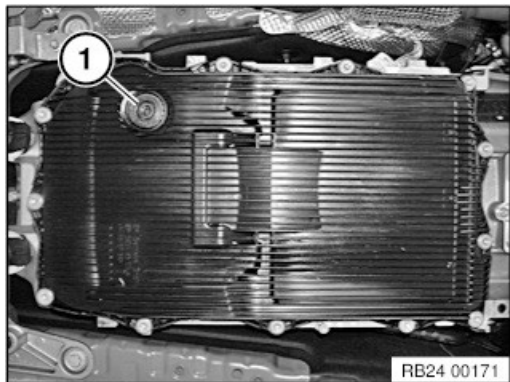
Necessary preliminary tasks:

- Remove rear [underbody protection](#).



Slacken nut (1).

Take off holder (2).



Remove oil drain plug (1).

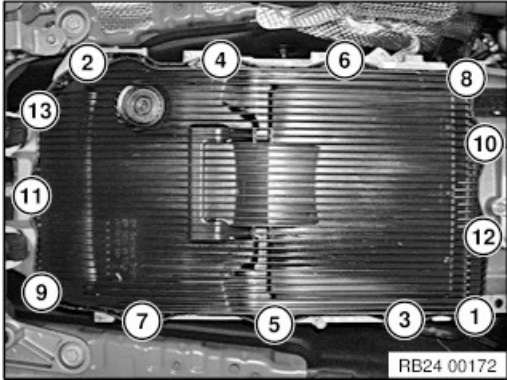
Tightening torque [24 11 2AZ](#).

Drain automatic transmission oil.

**Recycling:**

Catch and dispose of escaping transmission oil.

Observe country-specific waste disposal regulations.



Unscrew all bolts.

Remove transmission oil sump.

Installation note:

Renew transmission oil sump.

Clean the contact surface of the transmission oil sump on the transmission.

Installation note:

Insert new screws until screw heads make contact.

Tighten down screws in sequence 1...13 to specified torque and angle of rotation.

Tightening torque [24 11 4AZ](#).

Important!

Aluminium screws/bolts must be replaced **every** time they are released.

Jointing torque and angle of rotation must be observed without fail (**risk of damage**).

**Special tools required:**

- [00 2 300](#)
- [13 5 250](#)
- [24 0 200](#)
- [24 1 420](#)
- [24 2 410](#)
- [24 1 410](#)

**Important!**

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

**Important!**

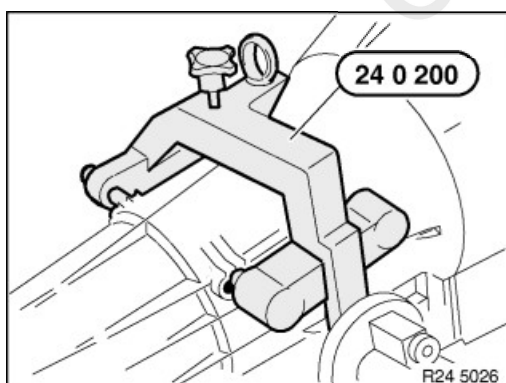
After completion of repair work, check [transmission oil level](#).

Use only approved [transmission oil](#).

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

**Necessary preliminary tasks:**

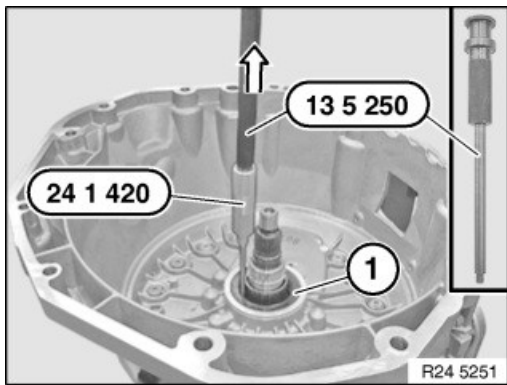
- Remove [torque converter](#).



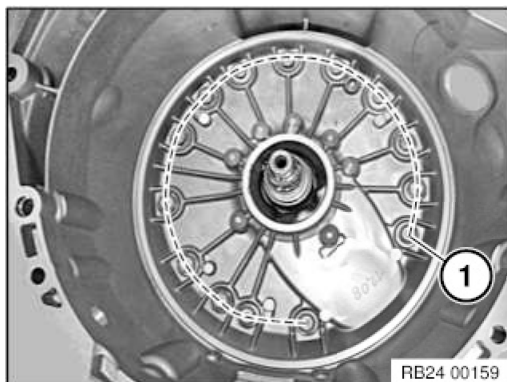
Secure transmission with special tool [24 0 200](#) on assembly stand [00 2 300](#)

Note:

Read and comply with note on installation of [transmission retaining bridge](#).



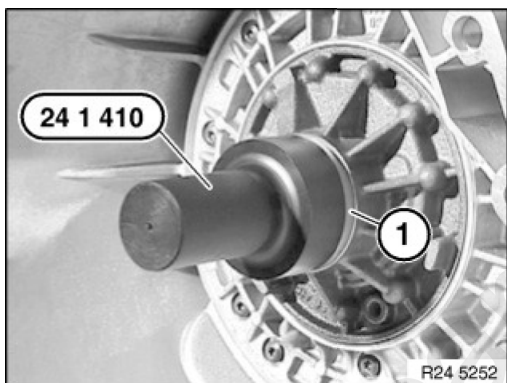
Pull out radial shaft seal (1) with special tools [24 1 420](#) and [13 5 250](#).



The 14 aluminium torx screws contained in the drive repair kit are furnished with a sealing ring and must be **mandatory** replaced as well.

When replacing screws (1) along the dashed line, always change one screw after the other.

Tightening torque [24 30 6AZ](#).



Installation note:

1. Install the O-ring on the drive shaft.
2. Oil sealing lip on shaft seal.
3. Drive in radial shaft seal (1) with special tool [24 1 410](#) as far as it will go.

**Special tools required:**

- [23 0 490](#)
- [23 3 220](#)

**Important!**

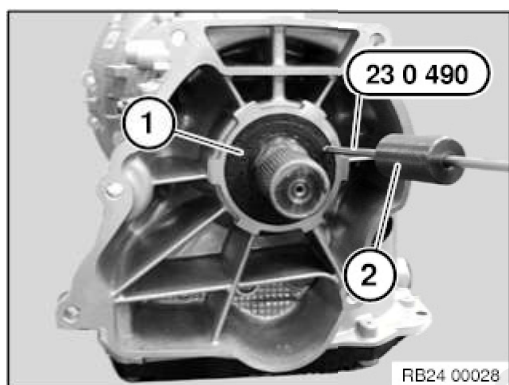
After completion of repair work, check [transmission oil level](#).

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

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

**Necessary preliminary tasks:**

- Remove [transfer box](#).



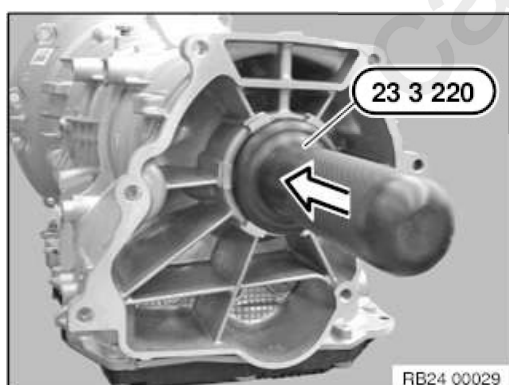
Drive a hole into radial shaft seal (1) using a centre punch.

Important!

Do not use a drill as swarf may result in transmission malfunction.

Thread special tool [23 0 490](#) into radial shaft seal (1).

Drive out radial shaft seal (1) with impact weight (2).

**Installation note:**

Coat sealing lips of new radial shaft seal with clean transmission oil.

Radial shaft seal firmly home with special tool [23 3 220](#).

**Special tools required:**

- [24 5 362](#)
- [24 5 366](#)
- [24 5 367](#)

**Important!**

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

**Important!**

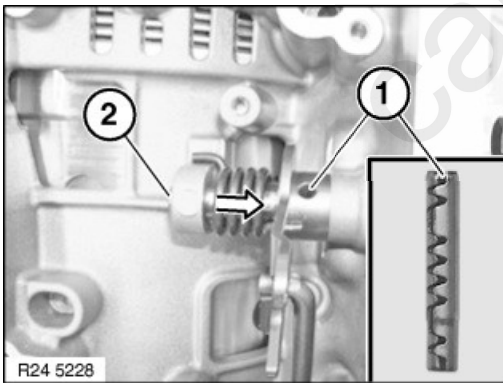
After completion of repair work, check [transmission oil level](#).

Use only approved [gearbox oil](#).

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

**Necessary preliminary tasks:**

- Remove [transmission](#).
- Remove [mechatronics](#).



Using a suitable tool, drive clamping sleeve (1) out of selector shaft.

Withdraw selector shaft (2) outwards.

Note:

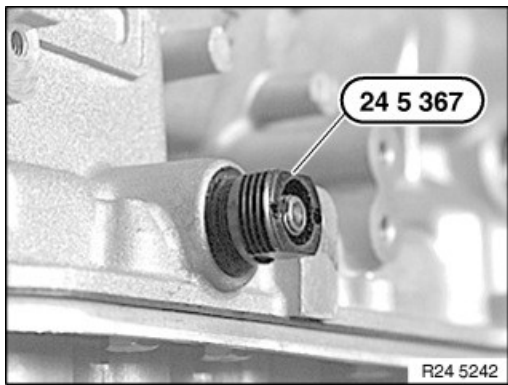
Return spring is under tension.

Installation note:

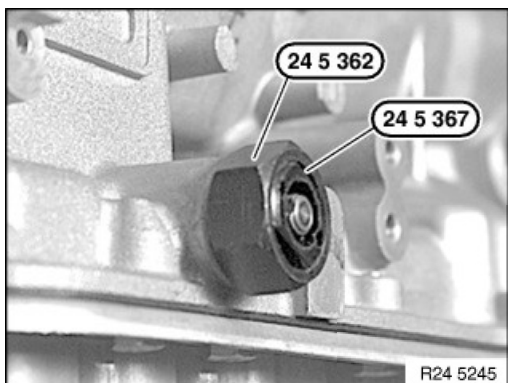
Replace selector shaft (2).

Replace clamping sleeve (1).

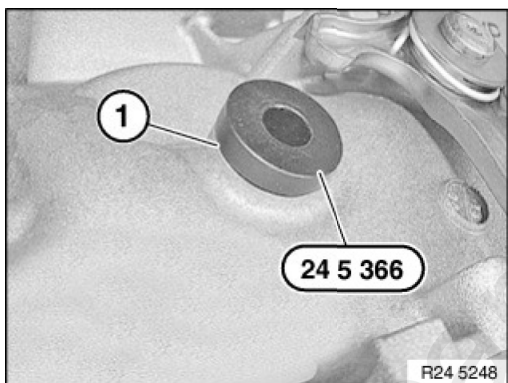
Insert narrower end of clamping sleeve (1) into hole first. Using a suitable tool, drive in clamping sleeve until it is flush with the hole.



Screw in special tool [24 5 367](#) until it is firmly connected with radial shaft seal.



Screw special tool [24 5 362](#) onto special tool [24 5 367](#) and tighten down. This pulls the shaft seal out of the transmission housing.



Oil sealing lip on shaft seal (1).
Drive radial shaft seal (1) fully home using special tool [24 5 366](#) and plastic hammer.

**Important!**

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

**Important!**

Applicable to vehicles from 08/2011

Remove transmission oil sump only after it has cooled down.

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!

Installation note:

The transmission oil sump must be renewed **every** time it is removed.

**Important!**

When the hydraulic impulse storage is exchanged, the spring can be relaxed in pulses due to a mechanical fault in the hydraulic impulse storage, resulting in a sudden escape of oil.

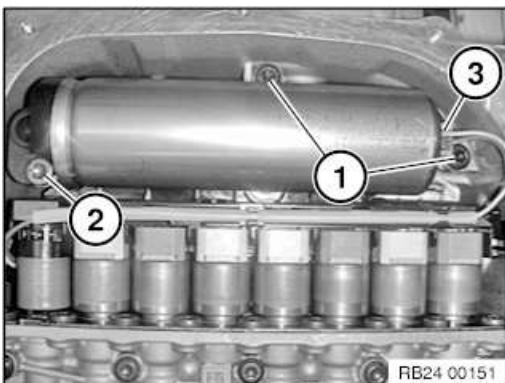
**Necessary preliminary work:**

- [Remove transmission oil sump](#).

**Recycling:**

Catch and dispose of escaping transmission oil.

Observe country-specific waste disposal regulations.



Release screws (1) (M6x20).

Release screw (2) (M6x59).

Tightening torque [24 30 5AZ](#).

Carefully unlock connector (3) with screwdriver.

Carefully pull out oil accumulator.

Important!

Mounting bolts of oil accumulator **must** be replaced after removal.

**Important!**

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

**Important!**

Valid for vehicles manufactured from 08/2011 onward!

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

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

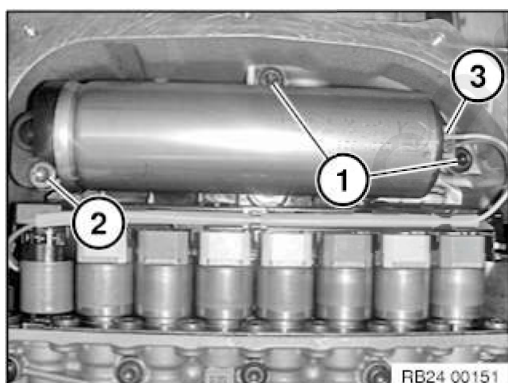
Failure to comply with this requirement will result in serious damage to the automatic transmission!

**Important!**

When the hydraulic impulse storage is exchanged, the spring can be relaxed in pulses due to a mechanical fault in the hydraulic impulse storage, resulting in a sudden escape of oil.

**Necessary preliminary work:**

- [Remove transmission oil sump](#).



Release screws (1) (M6x20).

Release screw (2) (M6x59).

Tightening torque [24 30 5AZ](#).

Carefully unlock connector (3) with screwdriver.

Carefully pull out oil accumulator.

Important!

Mounting bolts of oil accumulator **must** be replaced after removal.

**Special tools required:**

- [00 2 300](#)
- [13 5 250](#)
- [24 0 200](#)
- [24 1 420](#)
- [24 2 410](#)
- [24 1 410](#)

**Important!**

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

**Important!**

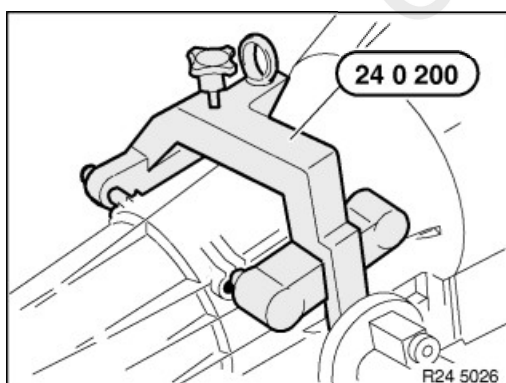
After completion of repair work, check [transmission oil level](#).

Use only approved [transmission oil](#).

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

**Necessary preliminary tasks:**

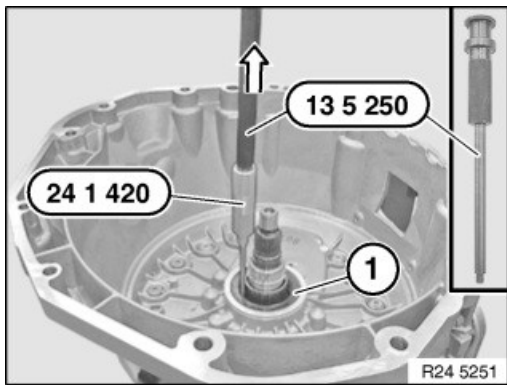
- Remove [torque converter](#).



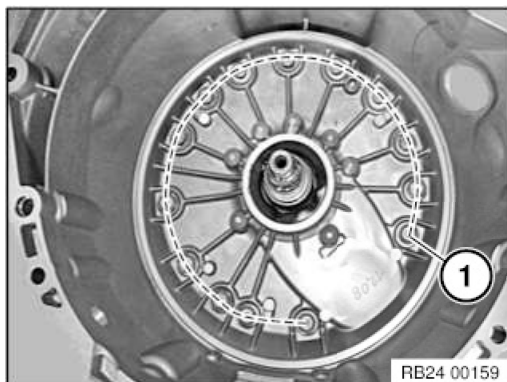
Secure transmission with special tool [24 0 200](#) on assembly stand [00 2 300](#)

Note:

Read and comply with note on installation of [transmission retaining bridge](#).



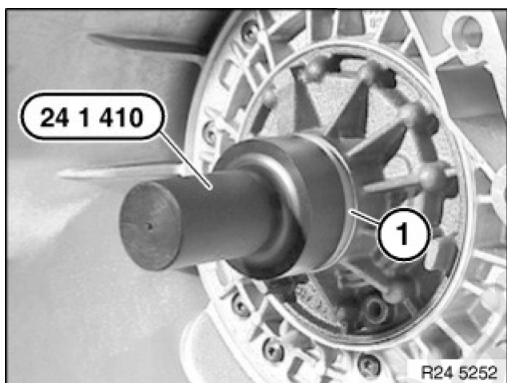
Pull out radial shaft seal (1) with special tools [24 1 420](#) and [13 5 250](#).



The 14 aluminium torx screws contained in the drive repair kit are furnished with a sealing ring and must be **mandatory** replaced as well.

When replacing screws (1) along the dashed line, always change one screw after the other.

Tightening torque [24 30 6AZ](#).



Installation note:

1. Install the O-ring on the drive shaft.
2. Oil sealing lip on shaft seal.
3. Drive in radial shaft seal (1) with special tool [24 1 410](#) as far as it will go.



For various repair work, it is necessary to unlock and lock the parking lock. Secure the vehicle against rolling away before releasing the parking lock.



- The emergency release is only possible if the engine does **not** start and the starter is turning.
- If the emergency release must be activated although the engine starts, the fuse for the electrical fuel pump may be pulled.
- The emergency release is active for 15 minutes.
- As soon as a wheel speed signal is recorded, this period will be extended by another 15 minutes.
- After this period of time, the parking lock will be engaged without message.
- The chronological information depends on the battery capacity.



- Only specially trained Service personnel are permitted to operate both the [mechanical](#) as well as the electronic emergency transmission release system.
- The vehicle must be raised and the underbody panelling removed in order to operate the [mechanical](#) emergency transmission release system.

Important!

To operate the electronic emergency transmission release system the vehicle must **not** be towed but rather only pushed.

In the case of misuse, a corresponding fault is entered in the fault memory.

Electronically releasing the parking lock

- Switch the ignition on.
- Apply the brake pedal and hold it down during the entire procedure.
- Press start/stop button.
- As soon as the starter can be heard to operate (this may take several seconds on diesel engines or at low temperatures).



- Press and hold down the release button (1)



1. The specified time must necessarily be complied with!
2. Push selector lever (2) forward up to point of resistance and hold for 2 seconds.
3. Release the selector lever and quickly move it forward by another level again.



- The selector lever position N is displayed in the instrument cluster.
- The parking lock is now electronically unlocked.
- Release the brake pedal after the parking lock has been successfully unlocked.
- Leave the ignition switched on in order to subsequently move the vehicle.
- The transmission automatically shifts into P when the ignition is turned off.



Important!

The parking lock is reactivated without a message when the start/stop button is pressed again.

If the gearbox cannot be released, turn the ignition off and on again and repeat the previous steps.

Allow the starter to cool down for approx. 10 minutes after unsuccessful attempts.



For various repair work, it is necessary to unlock and lock the parking lock. This can be done from inside the passenger compartment or underneath the vehicle.

Secure the vehicle against rolling away before releasing the parking lock.

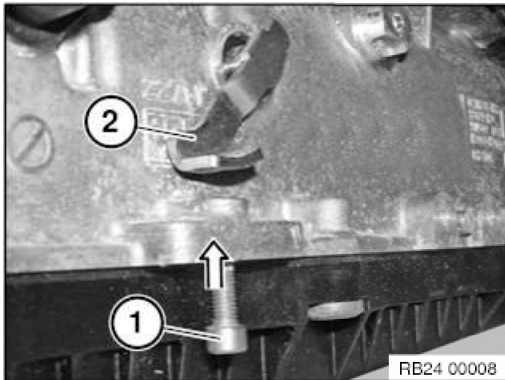


In the event of an open circuit, e.g. flat battery or electrical fault, the parking lock must be released manually, otherwise the wheels will be locked and the vehicle cannot be moved.



Necessary preliminary tasks:

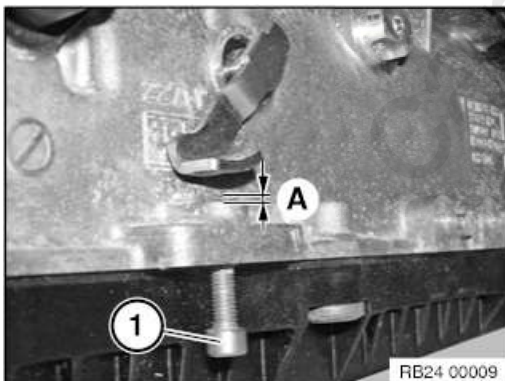
- Remove rear [underbody protection](#).



Raise vehicle.

Manually operate the parking lock emergency release.

- Screw in bolt (1) with hexagon socket (SW5) until parking lock is released by lever (2).
- The screw (1) **must** be renewed.
- Clean thread with screw tap M6X1.0.



Screw new micro-encapsulated screw (1) into thread. **Important!**

Screwing in and adjusting of screw to 1.5 to 2.5 mm above thread lip (A) must occur within 3 minutes.

After 3 minutes, the screw may no longer be turned (hardening of the adhesive); otherwise, it must be replaced.

**Special tools required:**

- [24 2 390](#)

**Important!**

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

**Important!**

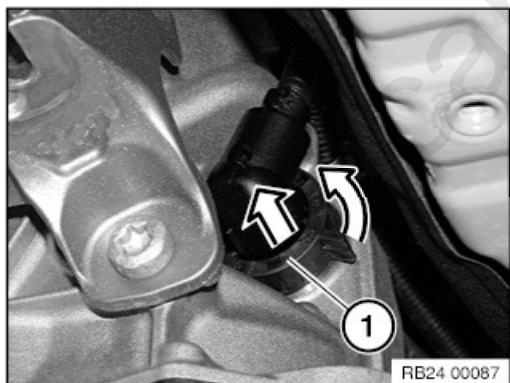
After completing work:

- Load specific data status with the BMW diagnosis system
- Check [transmission oil level](#)
- Use only [approved transmission oil](#).

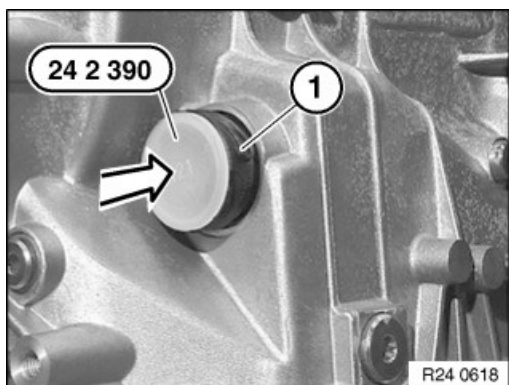
Failure to comply with this requirement will result in serious damage to the automatic transmission!

**Important!**

Read and comply with notes on [protection against electrostatic discharge \(ESD protection\)](#).



Unscrew connector (1) and disconnect.



Insert special tool [24 2 390](#) in sealing sleeve (1).

**Important!**

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

**Important!**

Applicable to vehicles from 08/2011

Remove transmission oil sump only after it has cooled down.

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!

Installation note:

The transmission oil sump must be renewed **every** time it is removed.

**Important!**

When the hydraulic impulse storage is exchanged, the spring can be relaxed in pulses due to a mechanical fault in the hydraulic impulse storage, resulting in a sudden escape of oil.

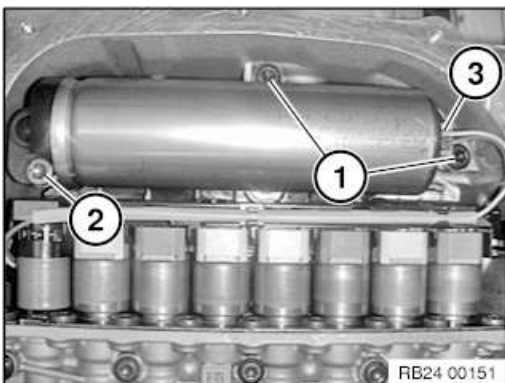
**Necessary preliminary work:**

- [Remove transmission oil sump](#).

**Recycling:**

Catch and dispose of escaping transmission oil.

Observe country-specific waste disposal regulations.



Release screws (1) (M6x20).

Release screw (2) (M6x59).

Tightening torque [24 30 5AZ](#).

Carefully unlock connector (3) with screwdriver.

Carefully pull out oil accumulator.

Important!

Mounting bolts of oil accumulator **must** be replaced after removal.

**Important!**

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

**Important!**

Valid for vehicles manufactured from 08/2011 onward!

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

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

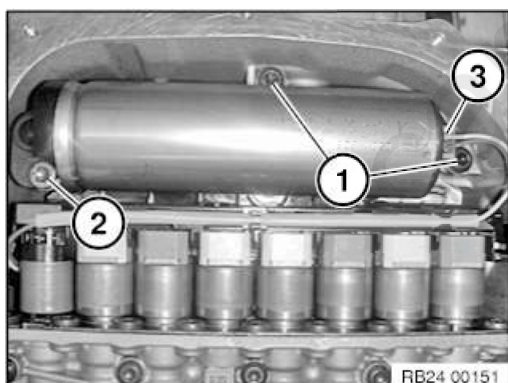
Failure to comply with this requirement will result in serious damage to the automatic transmission!

**Important!**

When the hydraulic impulse storage is exchanged, the spring can be relaxed in pulses due to a mechanical fault in the hydraulic impulse storage, resulting in a sudden escape of oil.

**Necessary preliminary work:**

- [Remove transmission oil sump](#).



Release screws (1) (M6x20).

Release screw (2) (M6x59).

Tightening torque [24 30 5AZ](#).

Carefully unlock connector (3) with screwdriver.

Carefully pull out oil accumulator.

Important!

Mounting bolts of oil accumulator **must** be replaced after removal.

**Special tools required:**

- [24 2 390](#)

**Important!**

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

**Important!**

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

Use only [approved transmission oil](#).

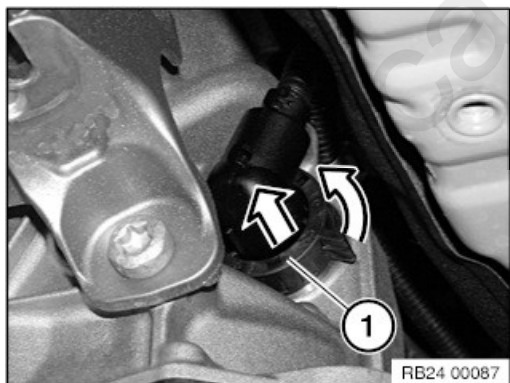
Failure to comply with this requirement will result in serious damage to the automatic transmission!

**Necessary preliminary tasks:**

- Remove [hydraulic impulse storage](#).
- Remove [cross member](#).

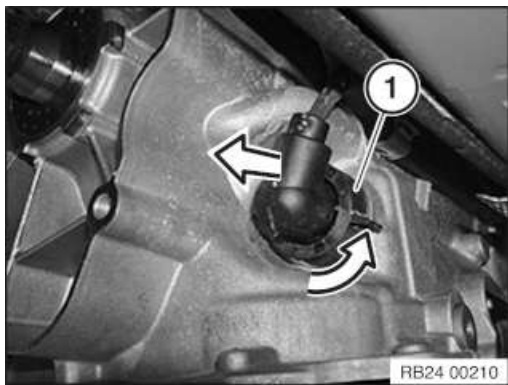
Important!

Support transmission with workshop jack.



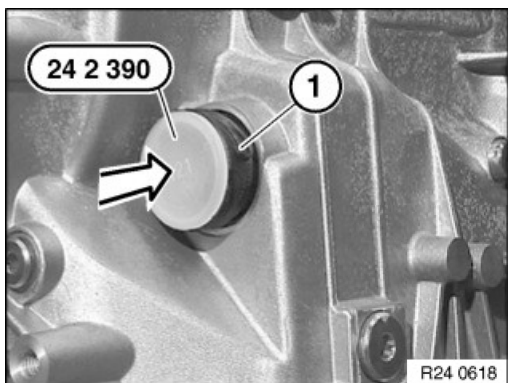
Vehicle with rear-wheel drive:

Unlock and disconnect connector (1) by turning.

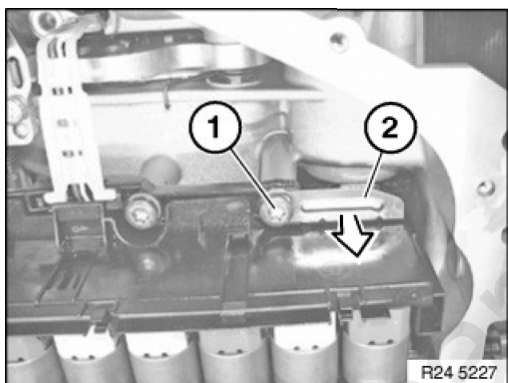


Vehicle with four-wheel drive:

Unlock and disconnect connector (1) by turning.

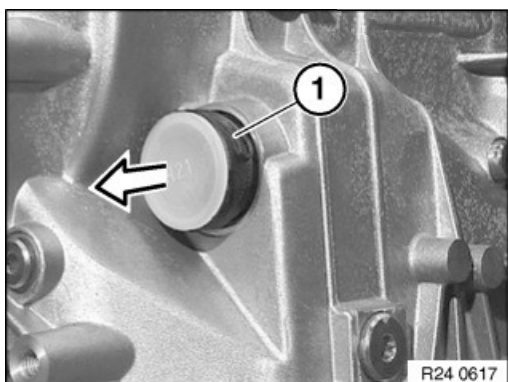


Insert special tool [24 2 390](#) in sealing sleeve (1).



Release screw (1) and unlock sealing cup with slide (2).

Tightening torque [24 30 4AZ](#).



Note:

Make a note of installation position of sealing sleeve.

Pull out sealing cup (1). *Installation note:*

Fit sealing sleeve in position (lug on inner surface). Turn until lug engages in groove of transmission. Slide in sealing cup.

Lug on sealing cup must not be damaged!



Special tools required:

- [00 2 550](#)
- [24 1 440](#)



Important!

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



Important!

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

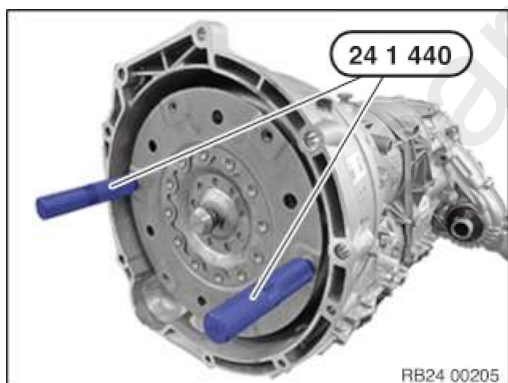
[Use only approved transmission oil.](#)

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



Necessary preliminary tasks:

- Remove [automatic transmission](#).



Fit special tool [24 1 440](#) in torque converter.

Remove torque converter.

Note:

When torque converter is removed, transmission oil flows out.

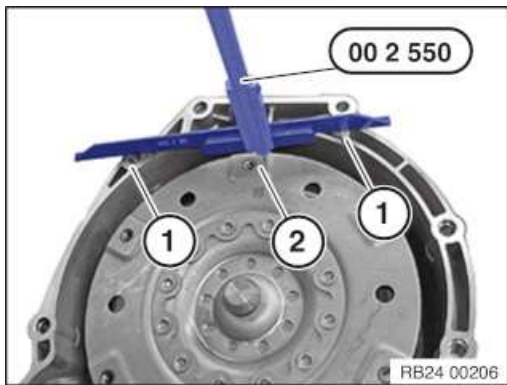
Place torque converter vertically.



Installation note:

When installing, do not damage radial shaft seal and bearing.

If the torque converter is not correctly installed, the driver of the pump impeller may be damaged when the transmission is flanged to the engine.



Installation note:

Determine distance between contact surface (1) and outer edge (2) of bore hole in torque converter with special tool [00 2 550](#).

O-ring on drive shaft, must be replaced when exchanging the torque converter.

Push torque converter through radial shaft seal onto transmission shaft to the limit position.

Press torque converter by hand into converter housing and turn in the process. Converter hub recess must snap into place in driver of pump impeller. Torque converter must be felt to slip inwards.

Note:

The measured value must be ≥ 15 mm!

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