

**Special tools required:**

- [00 2 080](#)

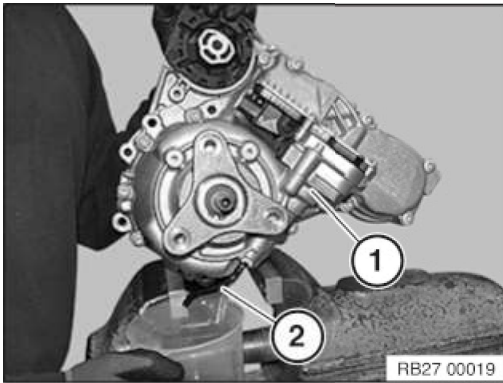
**Important!**

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

Failure to comply with this requirement will result in serious damage to the transfer box!

**Necessary preliminary tasks:**

- Remove [transfer box](#).



Place oil collecting apparatus underneath.

Drain and dispose of the transmission oil using the transmission breather (2).

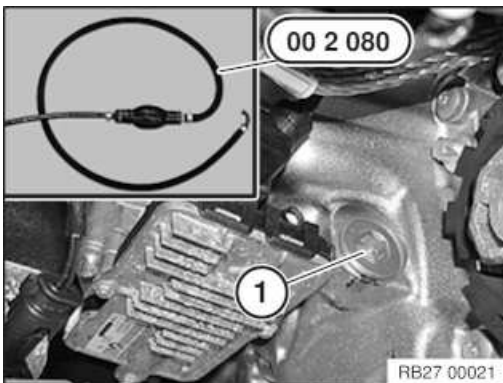
- Observe country-specific waste disposal regulations

Note:

Do not drain transmission oil through the oil filler plug because complete emptying cannot be guaranteed using the oil filler plug!



Install [transfer box](#).



Undo oil filler plug (1).

Tightening torque [27 10 2AZ](#).

Use special tool [00 2 080](#) to top the transmission oil up to the lower edge of the filler screw opening.

Installation note:

Renew oil filler plug with O-ring.

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.

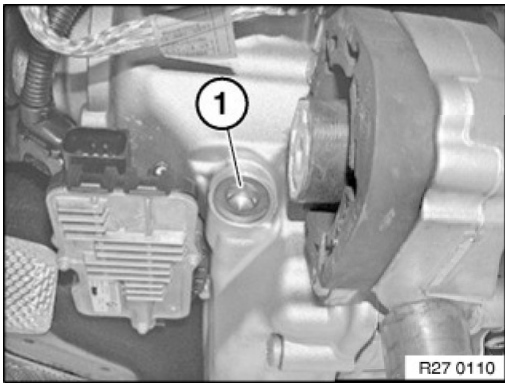
**Important!**

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

Failure to comply with this requirement will result in serious damage to the transfer box!

**Necessary preliminary tasks:**

- Remove [cross member](#).

Check/adjust transfer box oil level:

Undo oil filler plug (1).

Check transfer case oil level. Transmission oil must flow/drip gently out of the oil filler opening.

If necessary, pour in transmission oil up to lower edge of oil filler opening (1).

Installation note:

Replace oil filler plug (1).

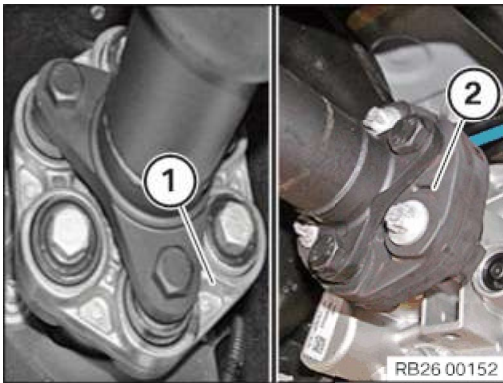
Tightening torque [27 10 2AZ](#).

**Special tools required:**

- [11 2 030](#)
- [00 5 500](#)

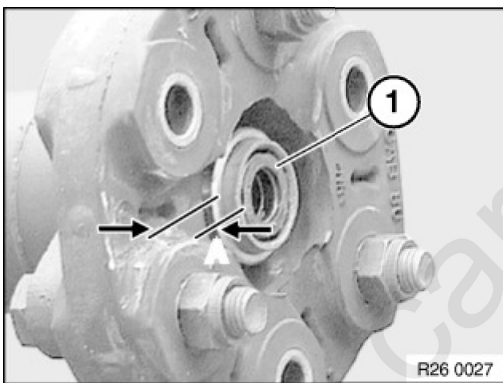
**Recycling:**

Catch and dispose of escaping transmission oil.
Observe country-specific waste disposal regulations

**Attention!**

In vehicles with installed aluminium flexible disc (1), it must be replaced with a rubber part flexible disc (2) without fail when replacing the transfer box.

Also refer to the Electronic Parts Catalogue.

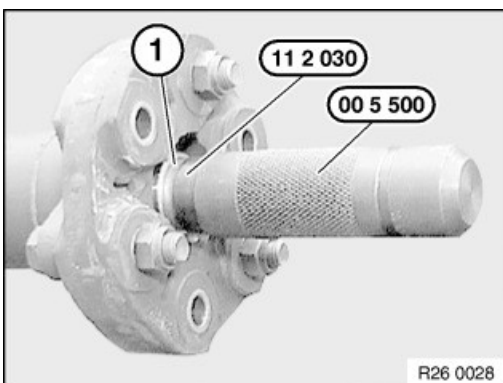
**Attention!**

When changing to the rubber part flexible disc, the protrusion (dimension A) of the centring sleeve (1) must be adjusted without fail.

Non-observance leads to damage to the propeller shaft!

Protrusion dimension (A) = 4 mm

Drive in centring sleeve, see the following operation!



Carefully drive centring sleeve (1) with special tool [11 2 030](#) and [00 5 500](#) into the propeller shaft to dimension (A).

Grease centring.

- Grease: BMW Service [Operating Fluids](#).



Necessary preliminary work:

- Drain off [transmission oil](#).

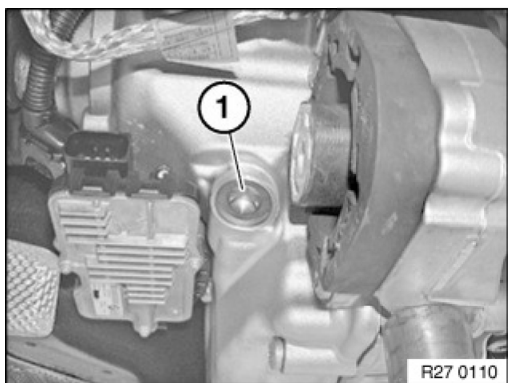
Attention: In a warranty case, leave the transmission oil in the transfer box (for analysis, if required). Correctly drain and dispose it after the agreed storage time.

- Remove [transfer box](#).
- Install a new [rubber mount for the transmission bearing](#) in the replacement transfer box.



Remount the following parts:

- Covers and protective caps
- Drive shaft transportation retainer
- Vent hose of transfer box
- Holder for exhaust system on transmission cross-member



Attention!

After completing work, check gear oil level and top up if necessary.

- Undo oil filler plug (1).
Tightening torque [27 10 2AZ](#).
- Check oil level.
- Pour in transmission oil up to lower edge of opening for oil filler plug (1).

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

Failure to comply with this requirement will result in serious damage to the transfer box!



After replacement:

- Carry out [coding/programming](#).

**Special tools required:**

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

**Attention!**

After completion of repair work, [check transmission oil level](#) and top up if necessary.

Failure to comply with this requirement will result in serious damage to the transfer box!

**Necessary preliminary work:**

- Clamp off [battery earth lead](#).
- Remove rear [underbody protection](#).
- Remove complete [exhaust system](#).
- Remove heat shields.
- Partially remove [propeller shaft](#).
 - Disconnect propeller shaft at transmission.
 - Release centre mount.
 - Tie up propeller shaft to underbody.

Attention:

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

- Support gearbox with jack when removing the transfer box.



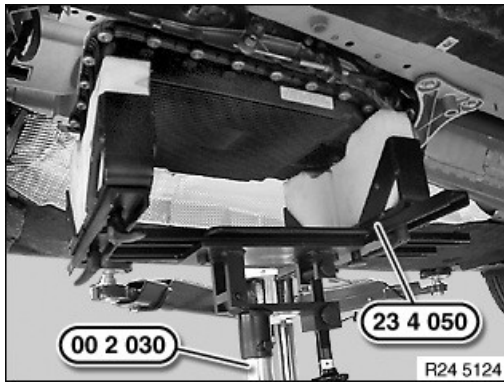
Loosen screws (1) of the propeller shaft at the front on the transfer box.

Tightening torque [26 11 7AZ](#).

Remove front propeller shaft from transfer box and tie to one side.

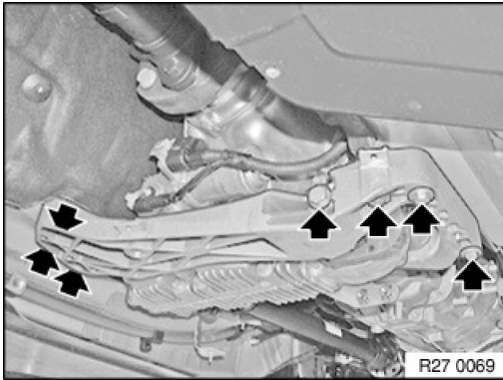
Installation note:

Renew screws (1).



Note:

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

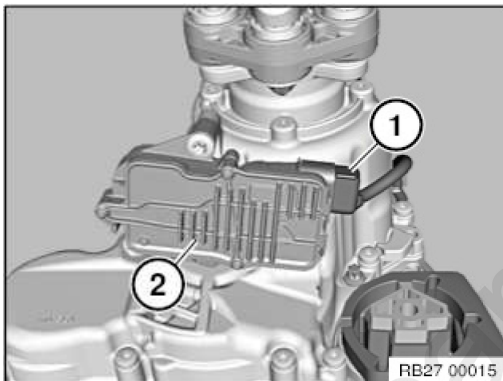


Loosen screws.

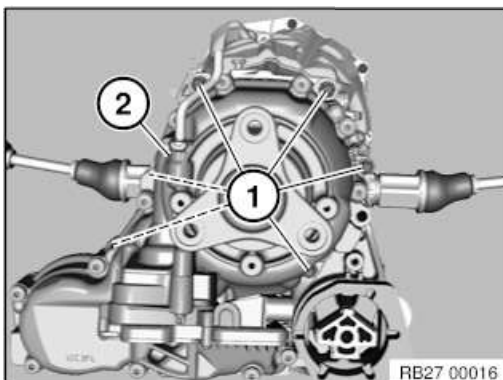
Remove transmission cross member.

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

Tightening torque, [22 32 6AZ](#).



Disconnect connector (1) from transfer box control unit (linear force module) (2).

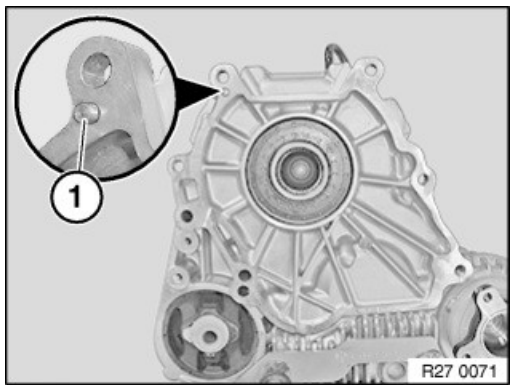


Slightly lower gearbox.

Loosen screws (1).

Tightening torque [27 10 1AZ](#).

Take off transfer box (2).



Installation note:

Pay attention to dowel pin (1).

Grease dowel pin (1).

Apply a thin coat of grease to gearing.

Grease: Roller bearing grease 81 22 9 407 174.

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**Important!**

Do not move vehicle with drive power once propeller shaft has been removed.

Replace output flange **only** together with a new radial shaft seal.

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

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

Failure to comply with this requirement will result in serious damage to the transfer box!



Operation is identical to [Replacing radial shaft seal for front axle output](#).

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**Important!**

After completing repair work, check [transmission oil level](#) and top up if necessary.

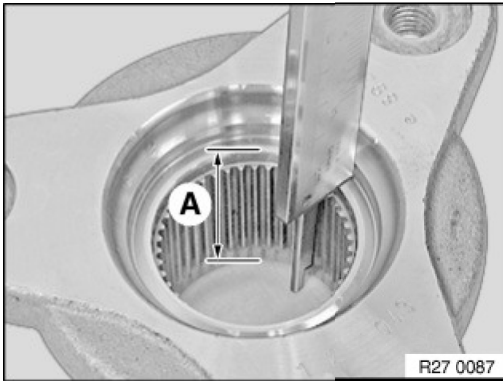
Use only the [approved transmission oil](#).

*Note:*

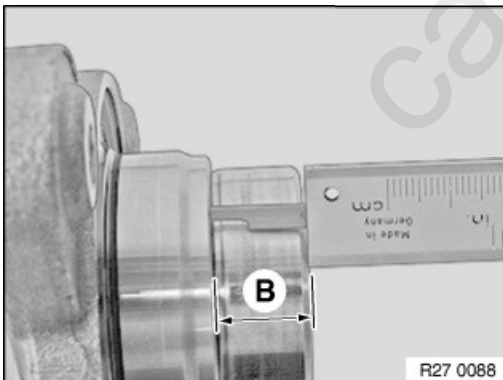
- Replace output flange **only** together with a new radial shaft seal.
- Operations for removal of output flange are identical to replacing [radial shaft seal](#) for output flange.

Installation note:

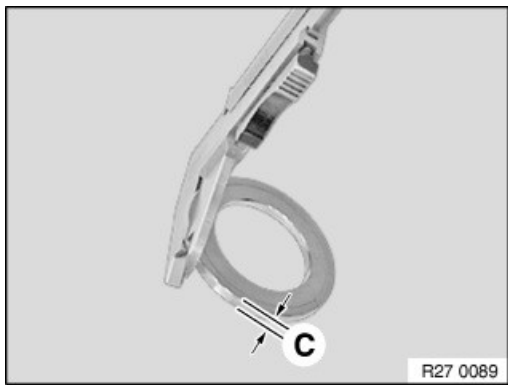
- Thickness of new shim must be determined before output flange is installed.



Determine and note down dimension A of output flange (old and new).



Determine and note down dimension B of output flange (old and new).



Determine old dimension C, thickness of shim.



Installation note:

Calculate thickness of new shim:

1. Add old dimension A of output flange (previous) and old dimension C of shim
Then subtract old dimension B from old result $A+C$
2. Subtract dimension B from dimension A of output flange (new)
3. Then subtract result of step 2 from result of step 1.

**Special tools required:**

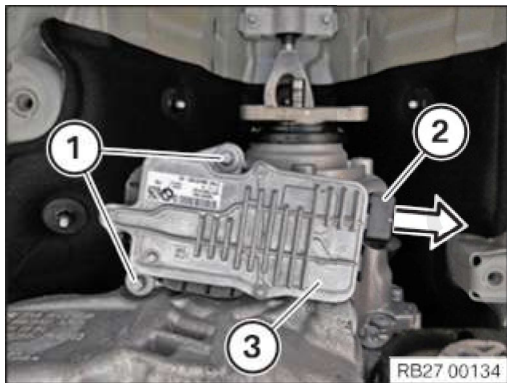
- [11 1 200](#)
- [11 1 380](#)
- [23 0 490](#)

**Attention!**

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

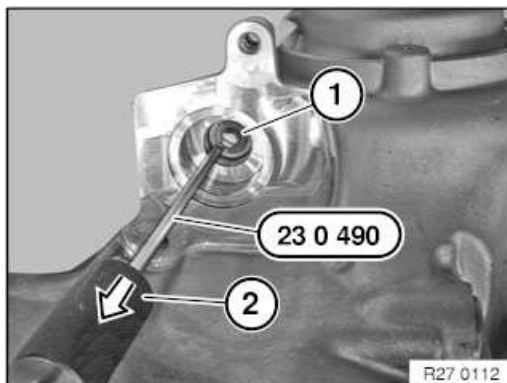
**Necessary preliminary tasks:**

- Disconnect [battery earth lead](#).
- Remove [cross member](#).

**Removal:**

Disconnect connector (2).

Loosen screws (1) and remove transfer box control unit (longitudinal torque module) (3).

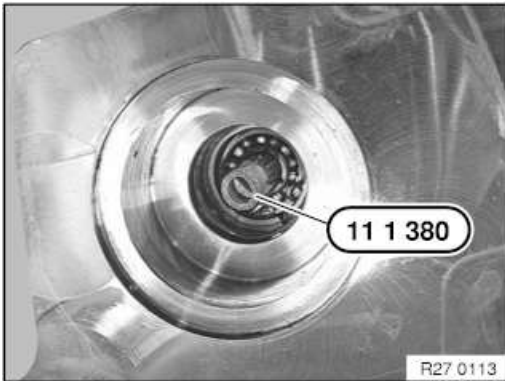


Thread special tool [23 0 490](#) into radial shaft seal (1).

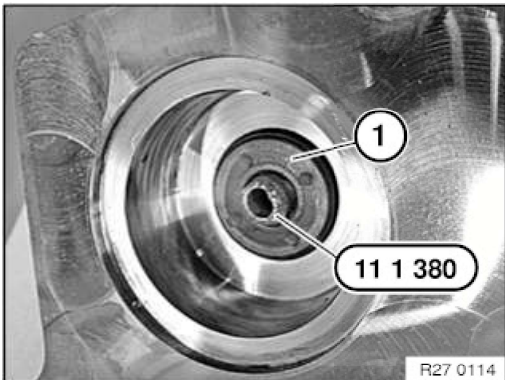
Drive out radial shaft seal (1) with impact weight (2).



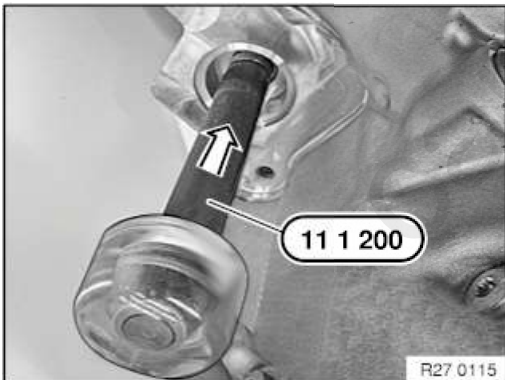
Installation:



Push the assembly sleeve [11 1 380](#) over the actuator shaft. **Attention!**
Nonobservance involves a risk of damage to the radial shaft seal.

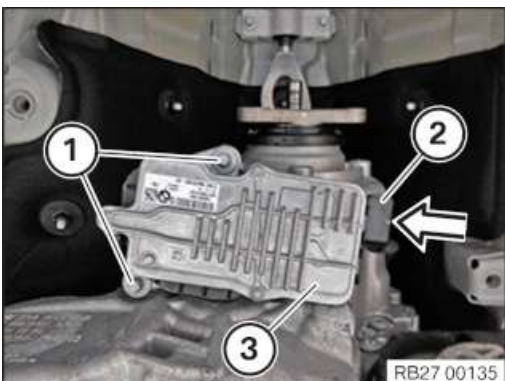


Slide the new radial shaft seal (1) over the assembly sleeve [11 1 380](#) onto actuator shaft.



Drive radial shaft seal fully home using special tool [11 1 200](#) and plastic hammer.

Remove the assembly sleeve.



Install transfer box control unit (longitudinal torque module) (3).

Tighten down screws (1).

Tightening torque [27 10 3AZ](#).

Connect connector (2).

Parts: Replace O-ring.

Note:

The radial shaft seal for the actuator shaft must also be replaced.



Required follow-up work:

- Install [cross member](#).
- Connect [battery earth lead](#).

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Special tools required:

- [11 1 200](#)
- [11 1 380](#)
- [23 0 490](#)



Important!

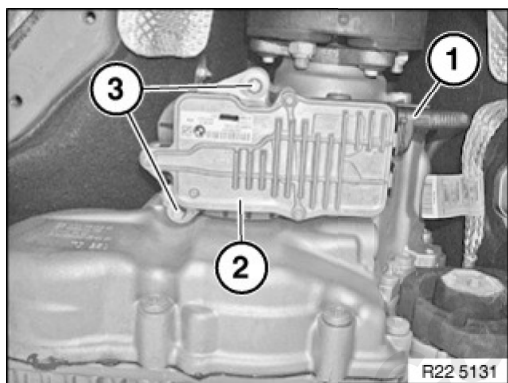
Before and after replacement, execute the "Repair" service function with the BMW diagnosis system.

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



Necessary preliminary tasks:

- Disconnect [battery negative lead](#).
- Remove [cross member](#).



Disconnect connector (1).

Release screws (3) and remove transfer box control unit (longitudinal torque module) (2).

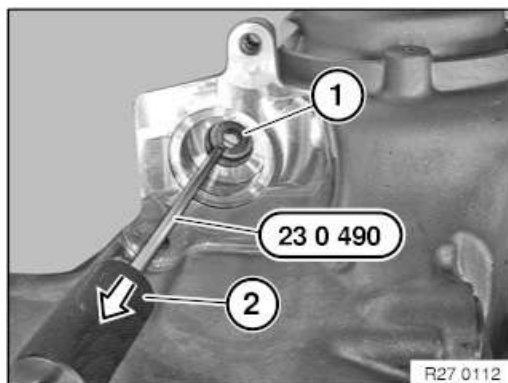
Tightening torque [27 10 3AZ](#).

Installation note:

Replace O-ring.

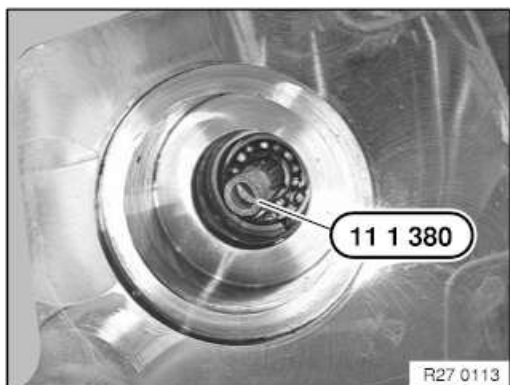
Note:

Radial shaft seal of actuator shaft must be replaced as well.

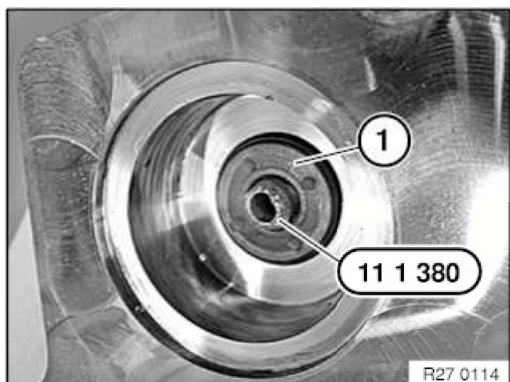


Thread special tool [23 0 490](#) into radial shaft seal (1).

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



Push the assembly sleeve [11 1 380](#) over the actuator shaft. **Important!**
Nonobservance involves a risk of damage to the radial shaft seal.



Slide the new radial shaft seal (1) over the assembly sleeve (2) onto the actuator shaft.



Drive radial shaft seal fully home using special tool [11 1 200](#) and plastic hammer.

Remove the assembly sleeve.



After replacement:

[Carry](#) out programming/encoding.

**Special tools required:**

- [23 0 490](#)
- [27 1 430](#)

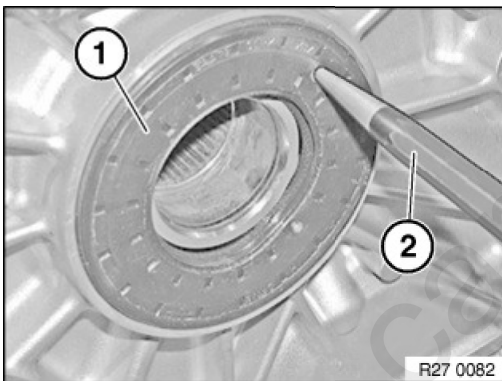
**Attention!**

After completing repair work, check [transmission oil level](#) and top up if necessary.

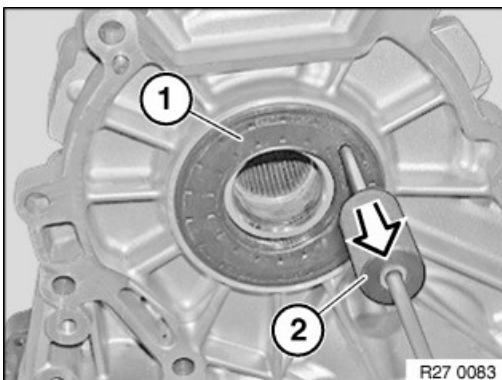
Use only the [approved transmission oil](#).

**Necessary preliminary tasks:**

- Remove [transfer box](#).

**Removal:**

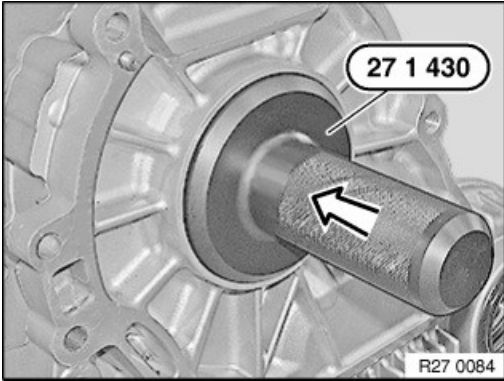
Drive a hole into radial shaft seal (1) using a centre punch (2). **Attention!**
Do not use a drill as swarf may result in transmission malfunction.



Screw special tool [23 0 490](#) into radial shaft seal.
Drive out radial shaft seal (1) with impact weight (2).



Installation:



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

Drive in radial shaft seal with special tool [27 1 430](#) .



Reassemble the vehicle.

Check [transmission oil level](#).

Check transmission for leaks.



Required follow-up work:

- Install [transfer box](#).
- Check transmission for leaks

**Important!**

After completing repair work, check [transmission oil level](#) and top up if necessary.

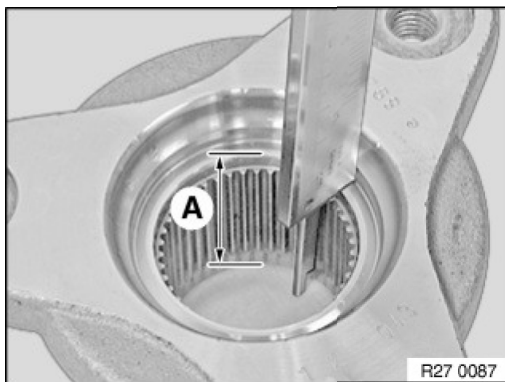
Use only the [approved transmission oil](#).

*Note:*

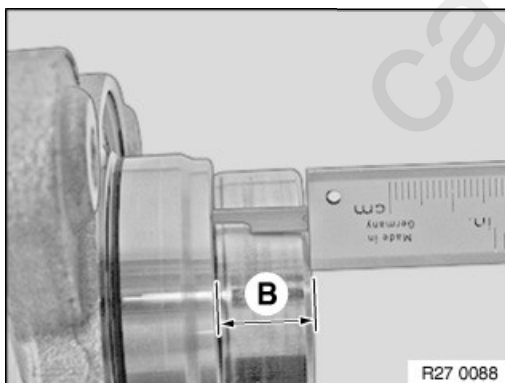
- Replace output flange **only** together with a new radial shaft seal.
- Operations for removal of output flange are identical to replacing [radial shaft seal](#) for output flange.

Installation note:

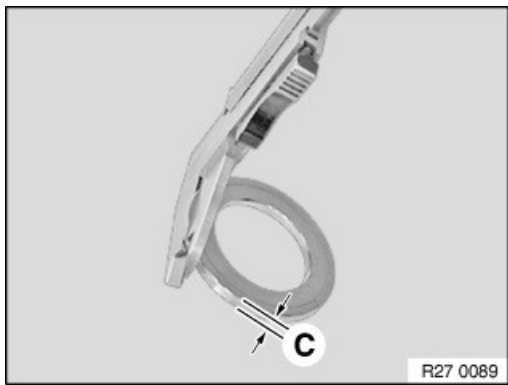
- Thickness of new shim must be determined before output flange is installed.



Determine and note down dimension A of output flange (old and new).



Determine and note down dimension B of output flange (old and new).



Determine old dimension C, thickness of shim.



Installation note:

Calculate thickness of new shim:

1. Add old dimension A of output flange (previous) and old dimension C of shim
Then subtract old dimension B from old result $A+C$
2. Subtract dimension B from dimension A of output flange (new)
3. Then subtract result of step 2 from result of step 1.

**Special tools required:**

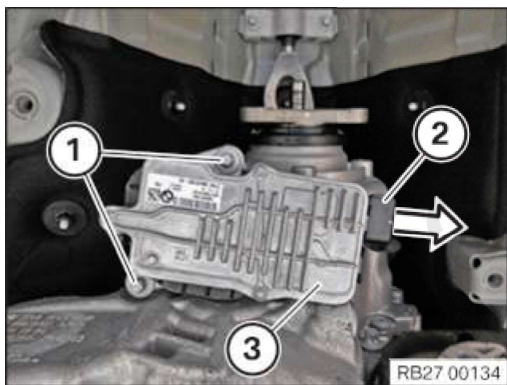
- [11 1 200](#)
- [11 1 380](#)
- [23 0 490](#)

**Attention!**

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

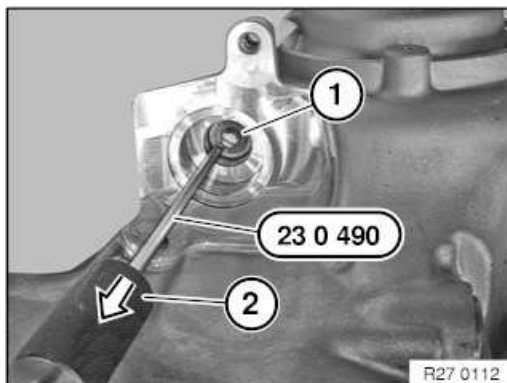
**Necessary preliminary tasks:**

- Disconnect [battery earth lead](#).
- Remove [cross member](#).

**Removal:**

Disconnect connector (2).

Loosen screws (1) and remove transfer box control unit (longitudinal torque module) (3).

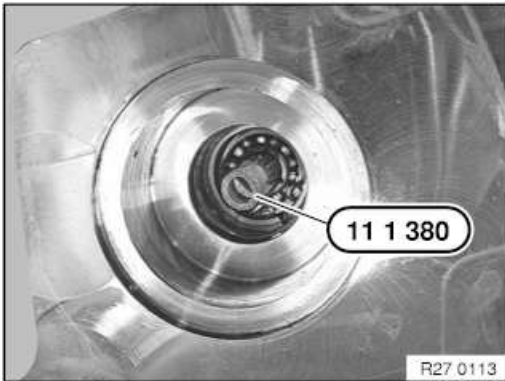


Thread special tool [23 0 490](#) into radial shaft seal (1).

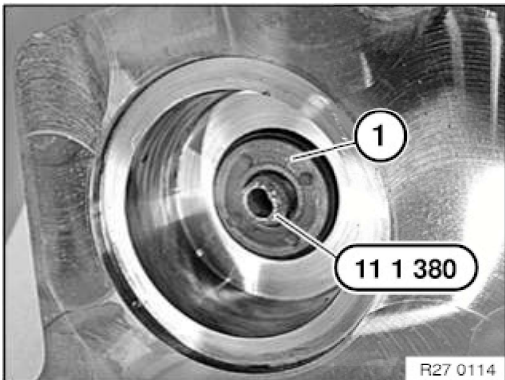
Drive out radial shaft seal (1) with impact weight (2).



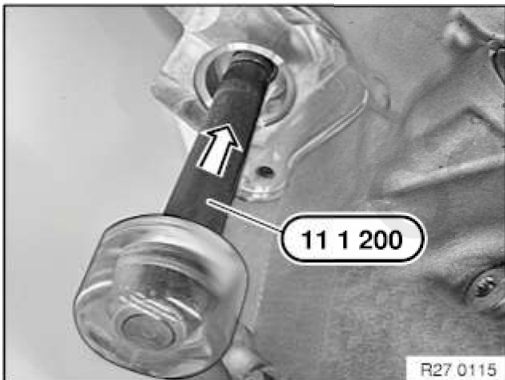
Installation:



Push the assembly sleeve [11 1 380](#) over the actuator shaft. **Attention!**
Nonobservance involves a risk of damage to the radial shaft seal.

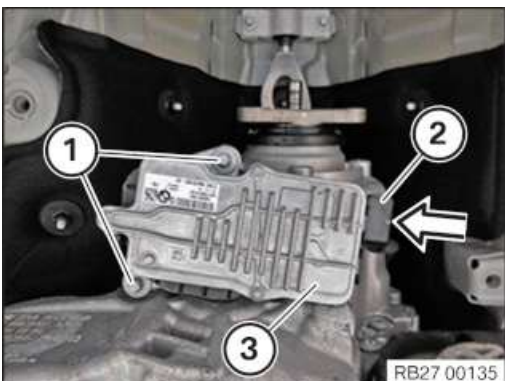


Slide the new radial shaft seal (1) over the assembly sleeve [11 1 380](#) onto actuator shaft.



Drive radial shaft seal fully home using special tool [11 1 200](#) and plastic hammer.

Remove the assembly sleeve.



Install transfer box control unit (longitudinal torque module) (3).

Tighten down screws (1).

Tightening torque [27 10 3AZ](#).

Connect connector (2).

Parts: Replace O-ring.

Note:

The radial shaft seal for the actuator shaft must also be replaced.



Required follow-up work:

- Install [cross member](#).
- Connect [battery earth lead](#).

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**Special tools required:**

- [27 1 440](#)

**Attention!**

After completing repair work, check [transmission oil level](#) and top up if necessary.

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

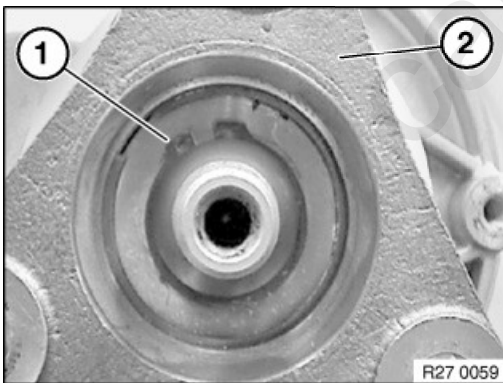
**Necessary preliminary tasks:**

- 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!

- Support gearbox with jack when removing the transfer box.

**Removal:**

Release circlip (1).



Release output flange with three-claw extractor tool.

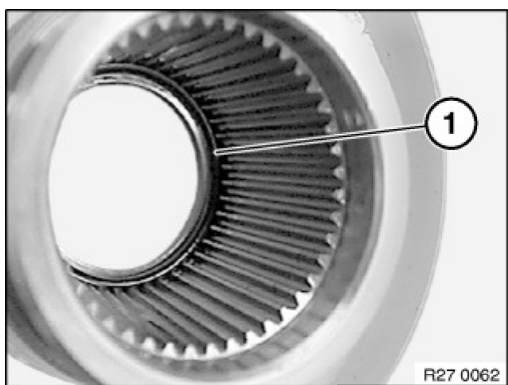
Lever radial shaft seal out of housing with a suitable tool.

Attention!

Do not damage housing.

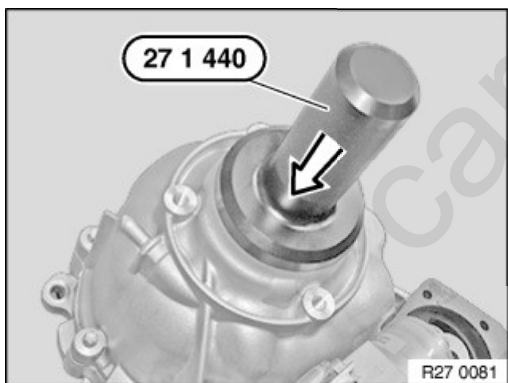


Installation:



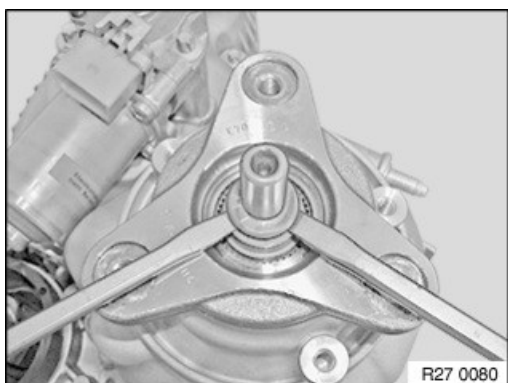
Replace O-ring in output flange.

Check that O-ring is in correct position.



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

Drive in radial shaft seal with special tool [27 1 440](#).



Push on output flange

Press output flange towards the bottom using 2 screwdrivers.

Mount shim.

Continue pressing output flange towards the bottom until retaining groove is completely visible.

Fit circlip.



Required follow-up work:

- Install [propeller shaft](#).

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**Special tools required:**

- [27 1 450](#)

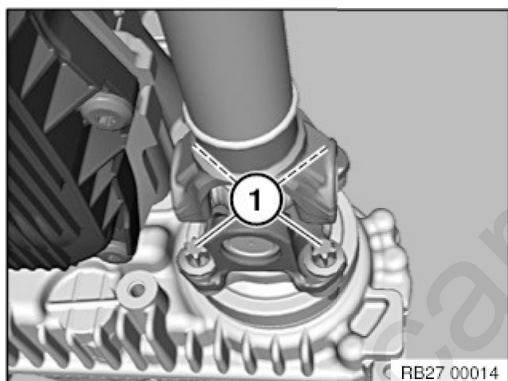
**Attention!**

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

For these transfer boxes, use [approved transmission oil](#) only.

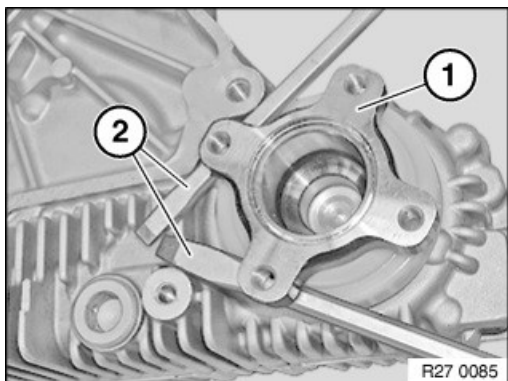
**Necessary preliminary tasks:**

- Remove rear [underbody protection](#).
- If necessary, remove left bracket for underbody protection.

**Removal:**

Loosen screws (1).

Remove front propeller shaft at output flange of transfer box and tie to one side.



Lever output flange (1) out of housing with screwdriver (2).

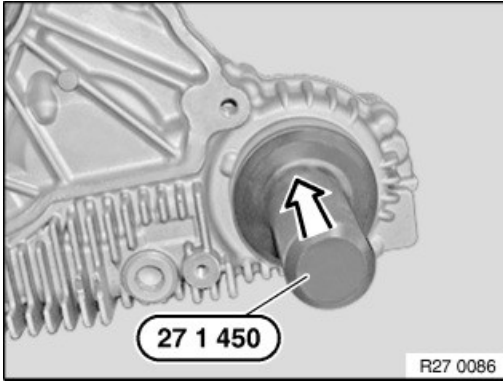
Lever radial shaft seal out of housing with a suitable tool.

Attention!

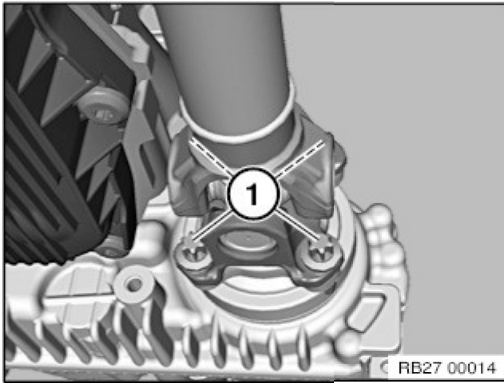
Do not damage housing.



Installation:



Drive in radial shaft seal with special tool [27 1 450](#) .



Tighten down screws (1).

Parts: Renew screws (1).

Tightening torque [26 11 7AZ](#).



Required follow-up work:

- If necessary, install left bracket for underbody protection.
- Install the rear [underbody protection](#).

**Special tools required:**

- [00 2 080](#)

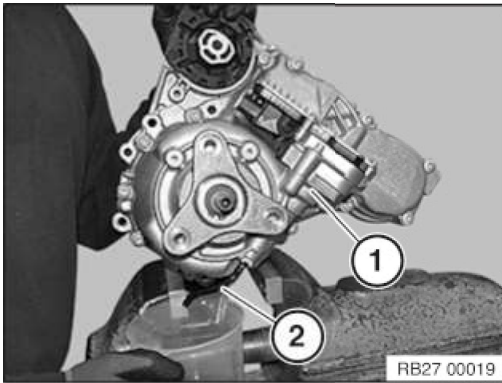
**Important!**

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

Failure to comply with this requirement will result in serious damage to the transfer box!

**Necessary preliminary tasks:**

- Remove [transfer box](#).



Place oil collecting apparatus underneath.

Drain and dispose of the transmission oil using the transmission breather (2).

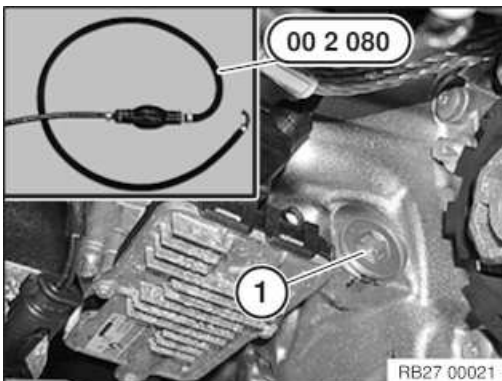
- Observe country-specific waste disposal regulations

Note:

Do not drain transmission oil through the oil filler plug because complete emptying cannot be guaranteed using the oil filler plug!



Install [transfer box](#).



Undo oil filler plug (1).

Tightening torque [27 10 2AZ](#).

Use special tool [00 2 080](#) to top the transmission oil up to the lower edge of the filler screw opening.

Installation note:

Renew oil filler plug with O-ring.

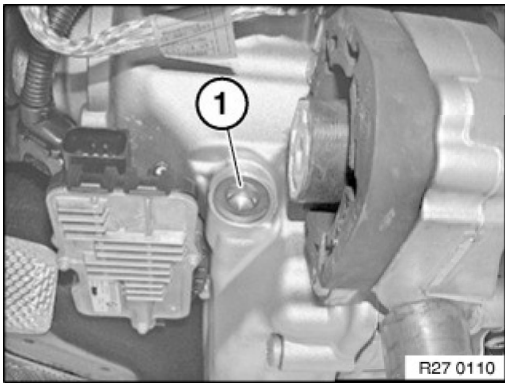
**Important!**

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

Failure to comply with this requirement will result in serious damage to the transfer box!

**Necessary preliminary tasks:**

- Remove [cross member](#).

Check/adjust transfer box oil level:

Undo oil filler plug (1).

Check transfer case oil level. Transmission oil must flow/drip gently out of the oil filler opening.

If necessary, pour in transmission oil up to lower edge of oil filler opening (1).

Installation note:

Replace oil filler plug (1).

Tightening torque [27 10 2AZ](#).