

43: Auxiliary transmission, bevel gear and overdrive, B6294T, L.H.D

XC90 (-16), 2004, B6294T, 4T65 AWD, L.H.D

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**43: Auxiliary transmission, bevel gear and overdrive,
B6294T, L.H.D**

**Replacing the
bevel gear/chain
housing**

Special tools:

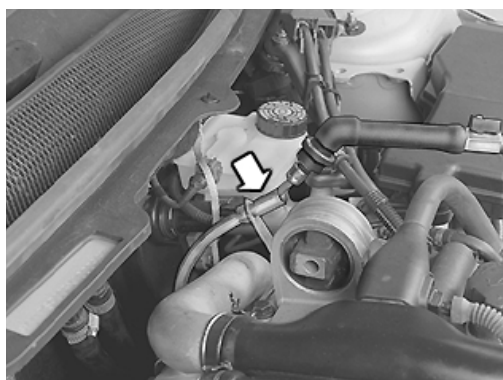
999 5462

999 7057

999 7063

**Note! Since
illustrations in this
service information
are used for
different model
years and/or
models, some
variation may
occur. However,
the essential
information is
always correct.**

**Removal
Preparations**



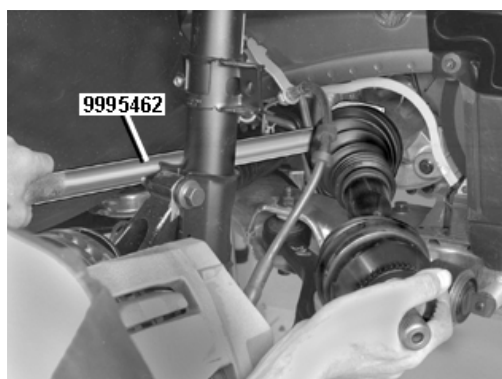
Drain the gearbox fluid.
Use an oil suction device to drain
approximately 4 liters of gearbox
fluid.

Remove the sub-frame. See: Sub-
frame front, replacing .

**Removing the right
drive shaft**

Angle the wheel hub out. Remove
the drive shaft from the hub. Use
a tensioner band to pull the stub
axle - wheel hub backwards.

Remove the drive shaft from the
gearbox. Use Jimmy bar 999 5462



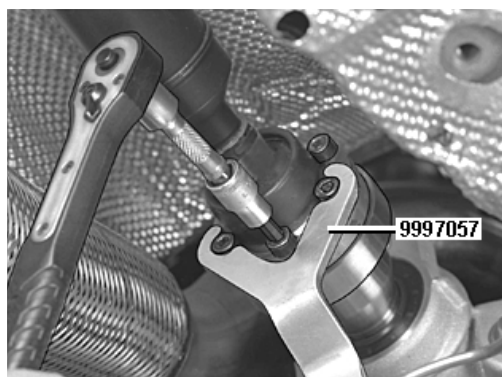
B (modified according to the Workshop Guide Bulletin).
Install sealing plug 999 7063 .

Pay attention to the following when removing propeller shaft

Follow instructions.

Refer to: Propeller shaft, special information

Removing the propeller shaft

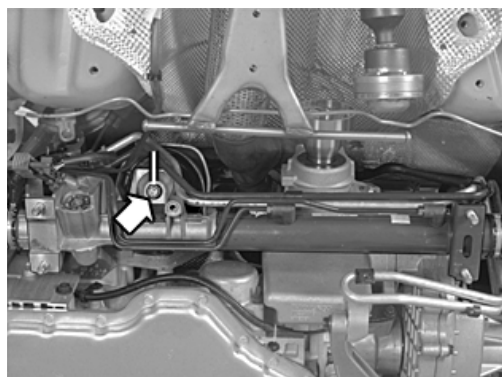


Mark the propeller shaft CV joint in relation to the bevel gear flange.

Remove:

- the 2 screws for the centre bearing mounting
- the propeller shaft screws.
Use counterhold 999 7057 .
Press the propeller shaft joints together. Move the propeller shaft to one side and tie it up.

Disconnecting the steering gear from the engine pad

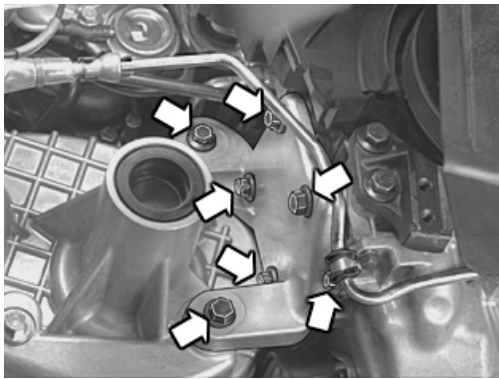


Mark up the position of the steering gear in relation to the engine pad.

Remove the screw for the steering gear and engine pad.

Move the steering gear towards the bulkhead. Hold it up using tie straps.

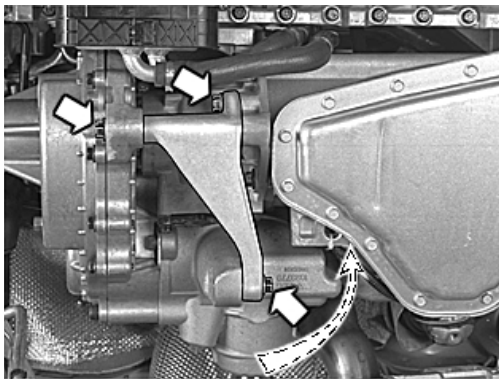
Removing the chain housing bracket



Remove:

- the screw in the clamp for the fuel line
- the bracket for the chain housing/engine.

Removing the bevel gear/chain housing



Remove:

- the screw for the bevel gear/engine. The screw is positioned on top of the bevel gear. The screw can be accessed from the centre
- the screw between the chain housing/bracket and the other screws in the bracket.

Pull the chain housing/bevel gear 5-10 mm out from the gearbox. Then remove the bracket. The bracket is upturned with a guide sleeve in the gearbox end.

Note! Two people are required to carry out the following procedure as the bevel gear - chain housing is relatively large.

Remove the bevel gear/chain housing by first pulling it straight out from the gearbox.

Note! Do not damage the seal ring in the transmission end.

Then turn the unit so that it can be removed to the side and downwards.

Checking the sealing ring

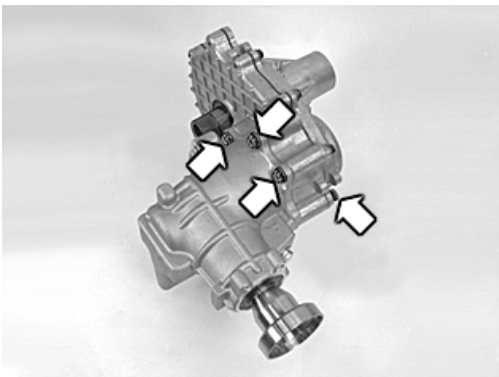
Check that the sealing ring in the gearbox end is undamaged. Replace the sealing ring with a new sealing ring if damaged, see Seal, drive shaft, replacing: Remove the drive shaft seal and /or Seal, drive shaft, replacing: Install the drive shaft seal .



Separating the bevel gear/chain housing

Remove the 4 screws. Pull the chain housing straight out from the bevel gear.

Note! Do not place the chain housing with the opening for the bevel gear facing down, oil will run out.

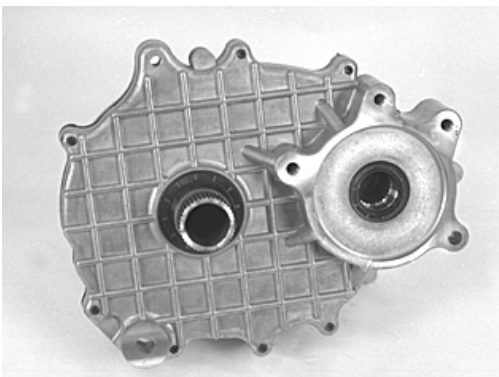


Checking the chain housing

Check that the sealing rings and mating surfaces are not damaged. Check for leakage. Replace the chain housing in the event of leakage.

Hint:

A new chain housing is not filled with oil.

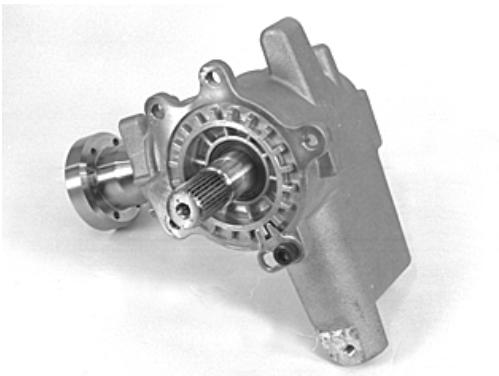


Checking the bevel gear

Check that the sealing rings and mating surfaces are not damaged. Check for leakage. Replace the bevel gear in the event of leakage or damage.

Hint:

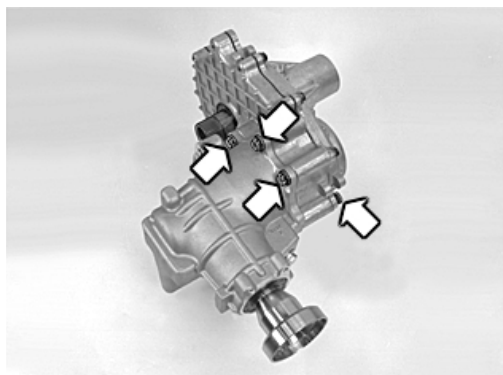
A new bevel gear is filled with oil, however, always check the oil level before test driving.



Installation

Note! For tightening torques, see Tightening torque .

Assembling the bevel gear/chain housing

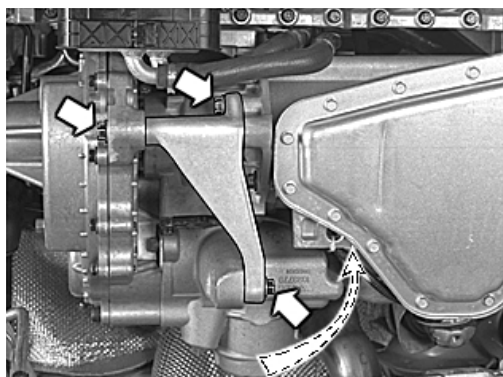


Lubricate the seal using gearbox fluid, P/N 116 1745-3 (1 liter container) when replacing the chain housing.

Do not damage the sealing ring when installing the chain housing on the bevel gear.

Install the 4x M10 screws. Tighten crosswise lightly. Then tighten the screws.

Installing the bevel gear / chain housing



Note! Two people are required to carry out the following procedure as the bevel gear/chain housing is relatively large.

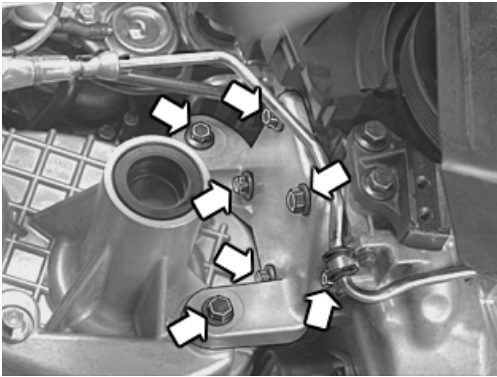
Note! Make sure that the chain housing's shaft journal does not damage the seal in the transmission end.

Lift up the unit and align the shaft journal in the gearbox. Do not press the unit end in. Install the bracket and guide sleeve in the gearbox. Press in the unit.

Install all 4x M10 screws loosely. Tighten crosswise lightly. Then tighten the screws.

Installing the bracket

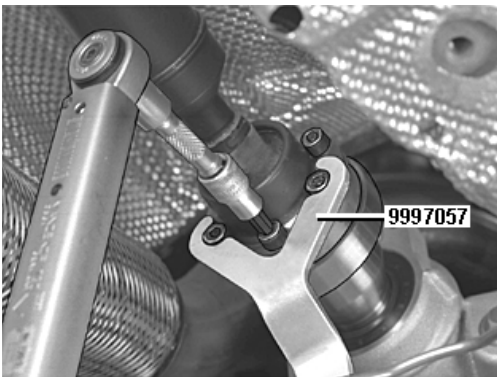
Install the bracket on the cylinder block and chain housing using 6x M10 screws.



First tighten the screws for the bracket/cylinder block so that the bracket can move slightly. Then tighten the two screws to the bracket - chain housing alternately lightly. Then tighten all the screws.

Install the screws for the fuel line clamp. Tighten.

Installing the propeller shaft

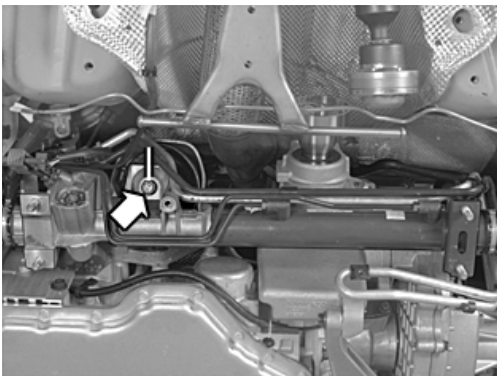


Install the propeller shaft using the marking made earlier.

Check carefully that the mating surfaces on the propeller shaft and flange are clean. Install the 6x M8 screws and washers. Tighten. See Tightening torque: Summary of tightening torques for specific components. Use counterhold 9997057.

Install the 2x M8 screws to the propeller shaft centre bearing. Tighten.

Installing the steering gear to the engine pad



Install the 1 M10 screw for the steering gear and engine pad. Align the steering gear in relation to the engine pad, using the marking made earlier. Tighten.

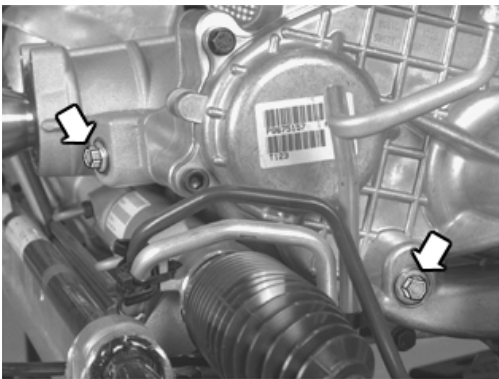
Installing the right drive shaft

Lubricate the seal using gearbox fluid, P/N 116 1745-3 (1 liter container) if the chain housing or its sealing ring has been replaced.

Press the drive shaft into the gearbox. Check that the snap ring is in its groove by carefully pulling



it in the inner constant velocity joint.
Locate the drive shaft in the wheel hub.



Filling and checking oil

Fill and check the oil in:

- bevel gear. Use the right oil. See: Lubrication transmission . Correct volume 650 ml. Fill with oil up to the filling plug. Draw out 0.1 l oil. Tighten the filling plug. See Tightening torque .
- chain housing. Only use oil with P/N 116 1745-3 (1 liter). Tighten according to Tightening torque

Finishing

Install the sub-frame.
See Sub-frame front, replacing .

Fill the gearbox with exactly the same amount of new oil as was drained off. Only use automatic gearbox fluid, P/N 116 1521 (1 liter container) or 116 1621 (4-litre container).
Check the gearbox oil. See Oil level, checking .

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