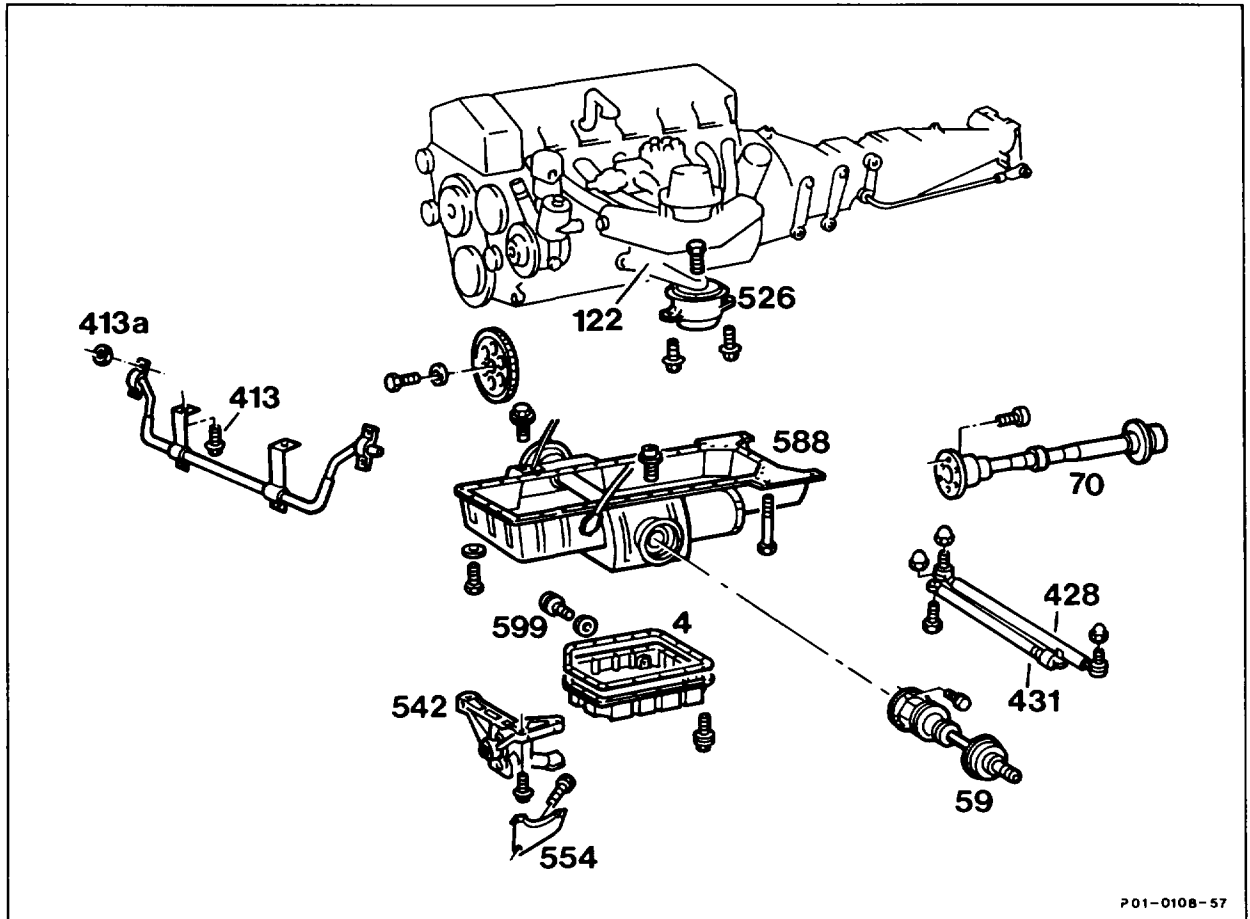


## 01-3200 Removing and installing oil sump (4MATIC front axle housing)

Preceding work:  
 Warning instructions when hood open (01-0085).  
 Air cleaner removed (09-4000).  
 Bottom engine compartment panel removed (Maintenance  
 Manual Volume 2, Op. no. 6190).  
 Fan shroud removed (20-3400)

Operation no. of operation texts and work units or standard texts  
 and flat rates  
 01-7500



Ground cable at battery .....	disconnect, connect
Engine oil .....	drain, pour in (18-0020) (step 2)
Both front engine mounts (526) .....	unbolt from below, bolt on (22-2110)
Torsion bar .....	remove, install (32-300)
Dipstick guide tube .....	remove, install, 10 Nm (steps 5 - 6)
Drag link (428) together with steering damper (431) .....	remove, install

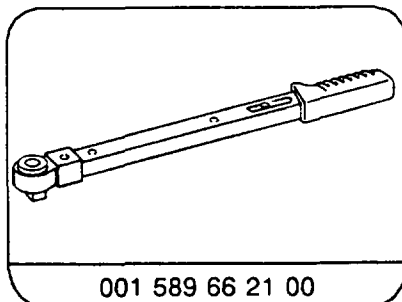
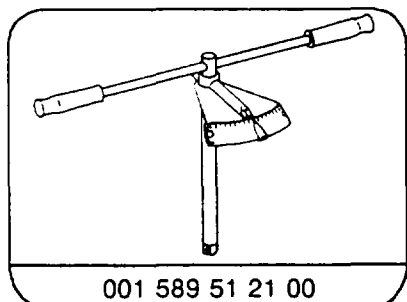
Exhaust system	unbolt at flange of exhaust manifold (step 8)
Front propeller shaft (70)	unbolt, bolt on (step 9)
Front axle shafts (59)	unbolt, bolt on (steps 10 – 11)
Plug connection of oil level switch	unplug at oil sump or front axle housing (step 12)
Bottom part of oil sump (4)	remove, install, 10 Nm (step 13)
Support (554) for oil pump (542)	remove, install (step 14)
Guard plate at component compartment wall	insert, remove (step 15)
Engine	raise, lower (steps 16 – 17)
Pistons of cylinders 3 and 4	position to TDC (step 18)
Left engine support (122) at crankcase	remove, install, M8 20 Nm (step 19)
Front axle housing (588)	unbolt, bolt on (step 20), M6 10 Nm, M8 22 Nm. Apply sealant 001 989 45 20 10 to contact surfaces of front axle housing (step 22)
Oil pump (542)	remove, install, 25 Nm (step 21)

#### Tightening torques in Nm

Oil sump to crankcase	
M6 hexagon bolts	10
M8 hexagon bolts	25
M10 hexagon bolts	40
Oil pipes at oil sump	10
Dipstick guide tube to front axle housing	10



## Special tools



## Shop-made tools

Metal panel for component compartment wall

Dim.: approx. 320 × 380 × 1

Guard plate for radiator/condenser

Dim.: approx. 480 × 600 × 1

## Removal, installation

1 Disconnect ground cable at the battery.

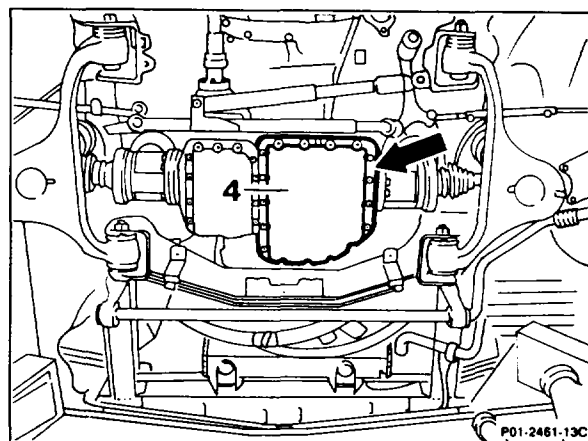
2 Drain engine oil (18-0020)

### Note

Unscrew oil drain plug (arrow) at the large oil sump (4)

3 Unbolt front engine mounts from below, bolt on (22-2110)

4 Remove front torsion bar (32-300)

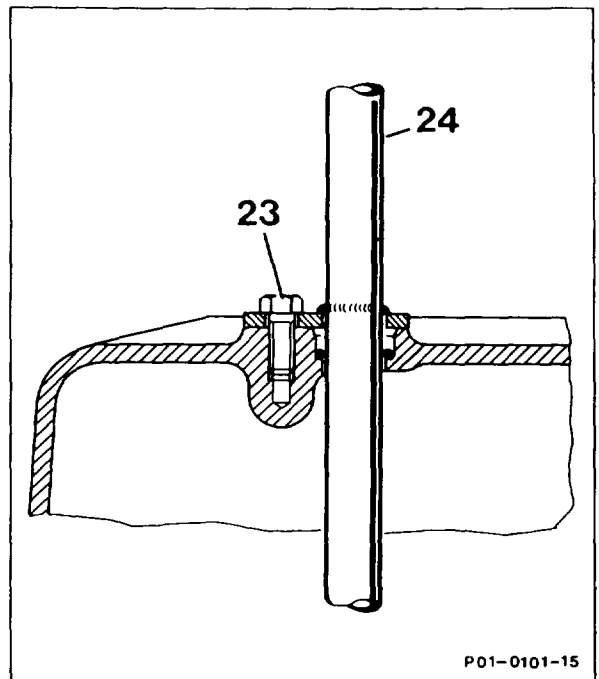


5 Unbolt bracket of dipstick guide tube (24) at the exhaust manifold.

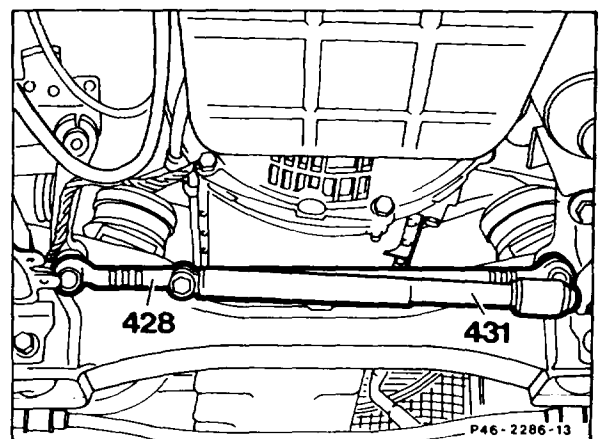
6 Unscrew bolt (23) and pull dipstick guide tube (24) out of front axle housing.

**Installation note**

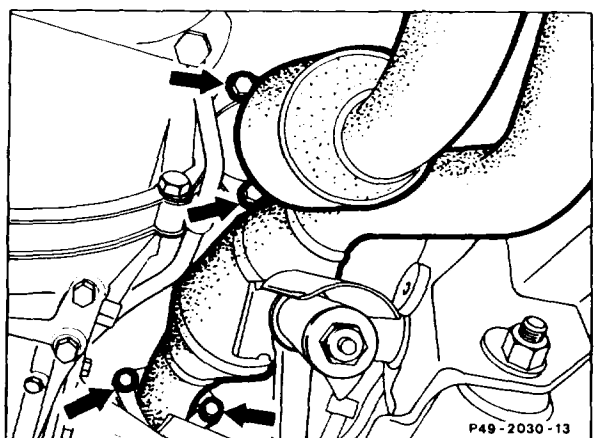
Tightening torque 10 Nm.



7 Unbolt steering damper (431) at body and remove drag link (428).



8 Unscrew bolts (arrows) of the exhaust system at flange of exhaust manifold.



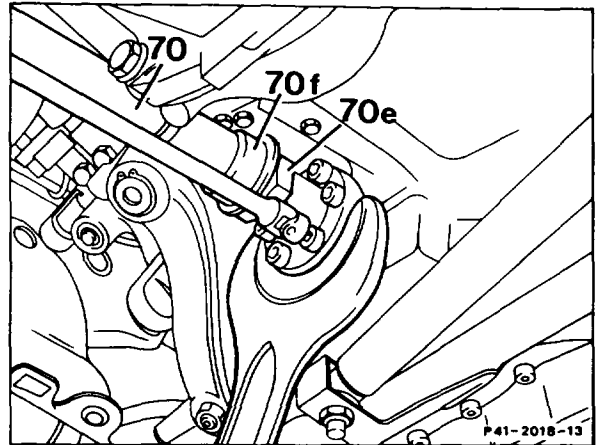
9 Unbolt propeller shaft (70) to front axle at front axle housing. To do this, counter-hold the connecting flange with 65 mm open-end wrench and unscrew six bolts.



Do not counter-hold at the clamping nut (70e). Ensure that the connecting flange is not pushed out of the splines.

**Installation note**

Replace self-locking bolts. Pay attention to tightening torque.

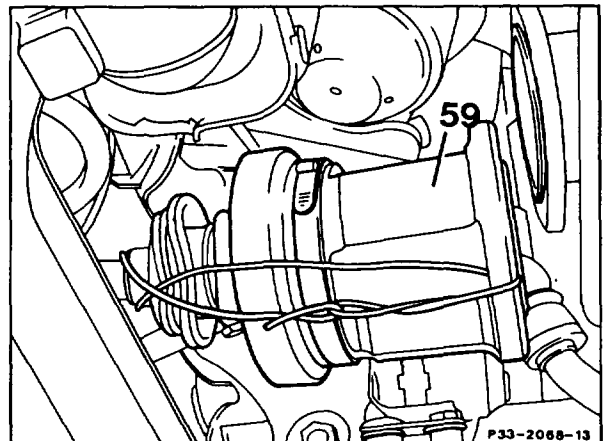


10 Unbolt front axle shafts (59). Operate footbrake in order to slacken the six bolts.

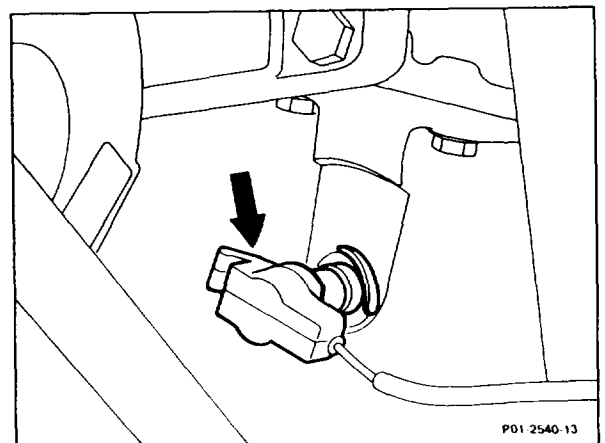
**Installation note**

Replace self-locking bolts. Pay attention to tightening torque.

11 Push front axle shaft (59) together as far as possible and fix in this position with wire. Place front axle shafts down on the wishbone. Do not pull inner joint too far apart and angle in order to prevent the tripod joint rollers of the journals which run in needle bearings dropping out at the tripod cross.



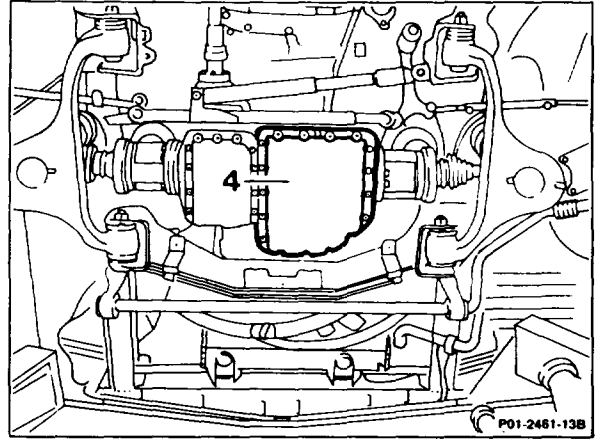
12 Unplug connector (arrow) of the oil level sensor on the left at oil sump and at front axle housing, respectively.



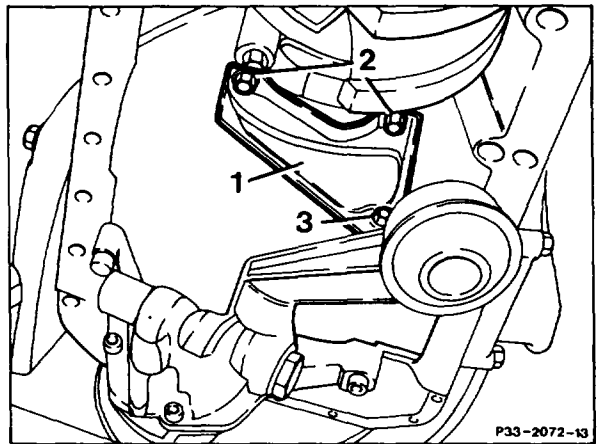
13 Unscrew bolts for bottom section of oil sump (4) and take off bottom section of sump (4).

**Installation note**

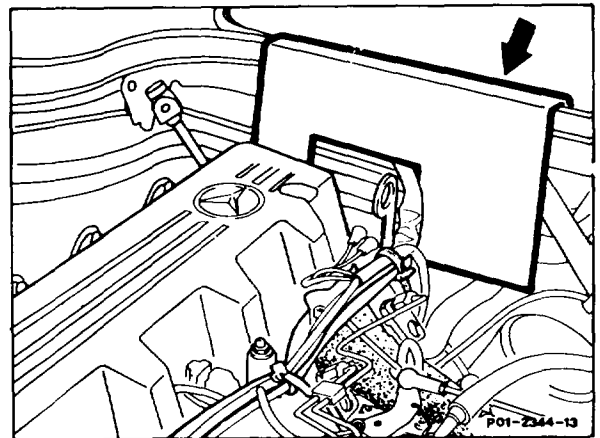
Tightening torque 10 Nm.



14 Unscrew bolts (2) and bolt (3). Take off support (1) at intake snorkel of oil pump.



15 Insert guard plate (arrow) between component compartment wall and engine.

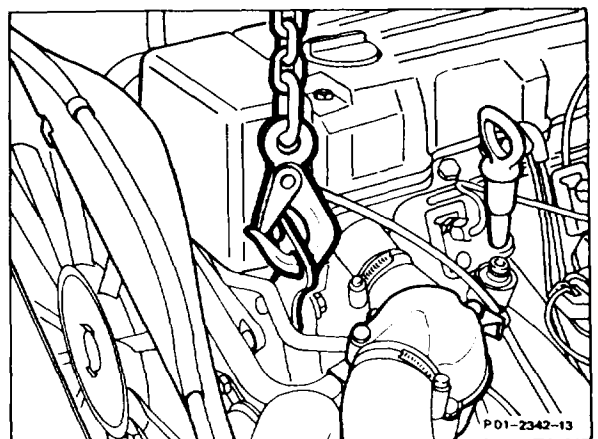


16 Attach engine hoist to front suspension lug.

17 Raise engine slightly.

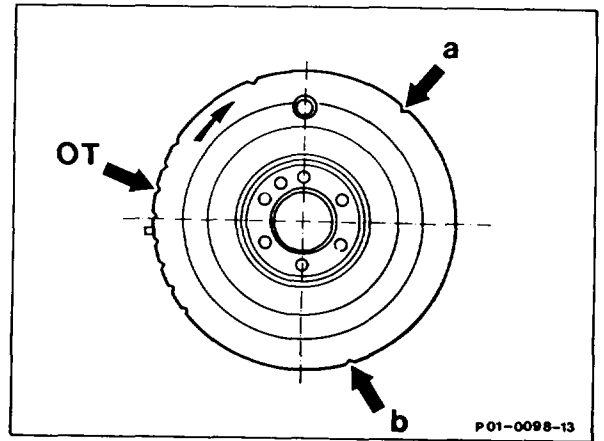


When raising the engine, ensure that the fan does not damage the radiator and also pay attention to the rear suspension lug, oil filter and coolant hoses.



18 Position pistons of cylinders 3 and 4 to TDC.

The pistons of cylinders 3 and 4 are at the TDC position when the marking "a" on the vibration damper is aligned with the TDC pointer.



19 Unbolt left-hand engine support at the crankcase and take off together with engine mount.

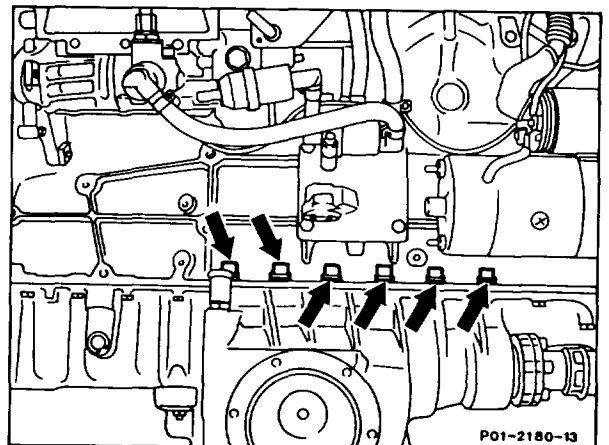
**Installation note**

Tightening torque 25 Nm.

20 Unbolt front axle housing from transmission and crankcase. Support front axle housing. On vehicles fitted with automatic transmission, unbolt the oil pipe from and to the transmission along the front axle housing.

**Note**

The M8 bolts (arrows) on the left side of the engine can be reached from above. To turn the two bolts below the starter, position screwdriver bit between starter and crankcase.



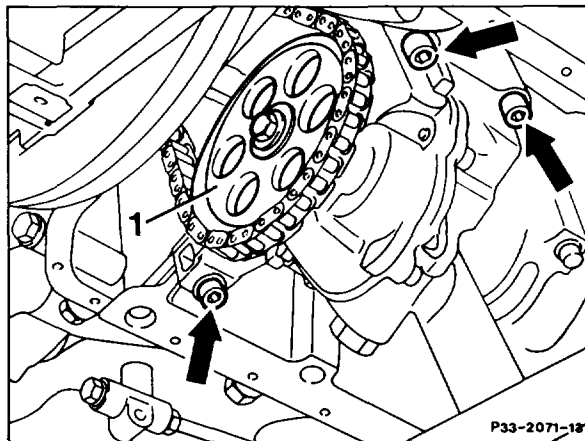
21 Lower front axle housing as far as possible. Unscrew bolt for sprocket (1) and take off sprocket (1). Unscrew bolts (arrows) and take out oil pump downward. Take off front axle housing to the rear. Pay attention to drive chain of oil pump.

**Installation note**

Tightening torques

Bolts of sprocket 30 Nm

Bolts of oil pump 25 Nm



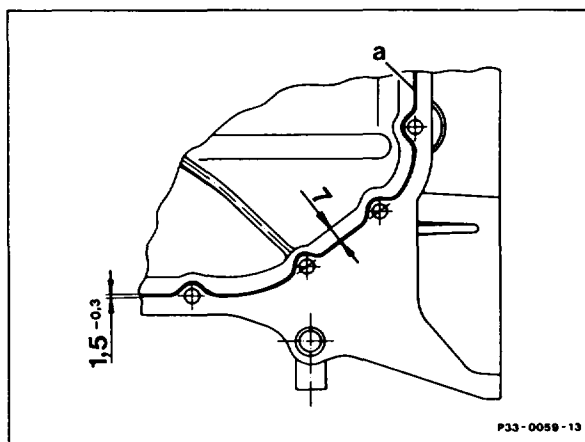
22 Clean contact surfaces on front axle housing. Apply sealant 001 989 45 20 10 to the contact surface on front axle housing (a = silicon bead  $\varnothing$  1.5 mm). First mate front axle housing to the transmission, then bolt to crankcase.

**Installation note**

Pay attention to different lengths of bolts.

Tightening torque M6 : 10 Nm

M8 : 21 Nm



Replace self-locking bolts and nuts.

Installation is performed in the reverse order.