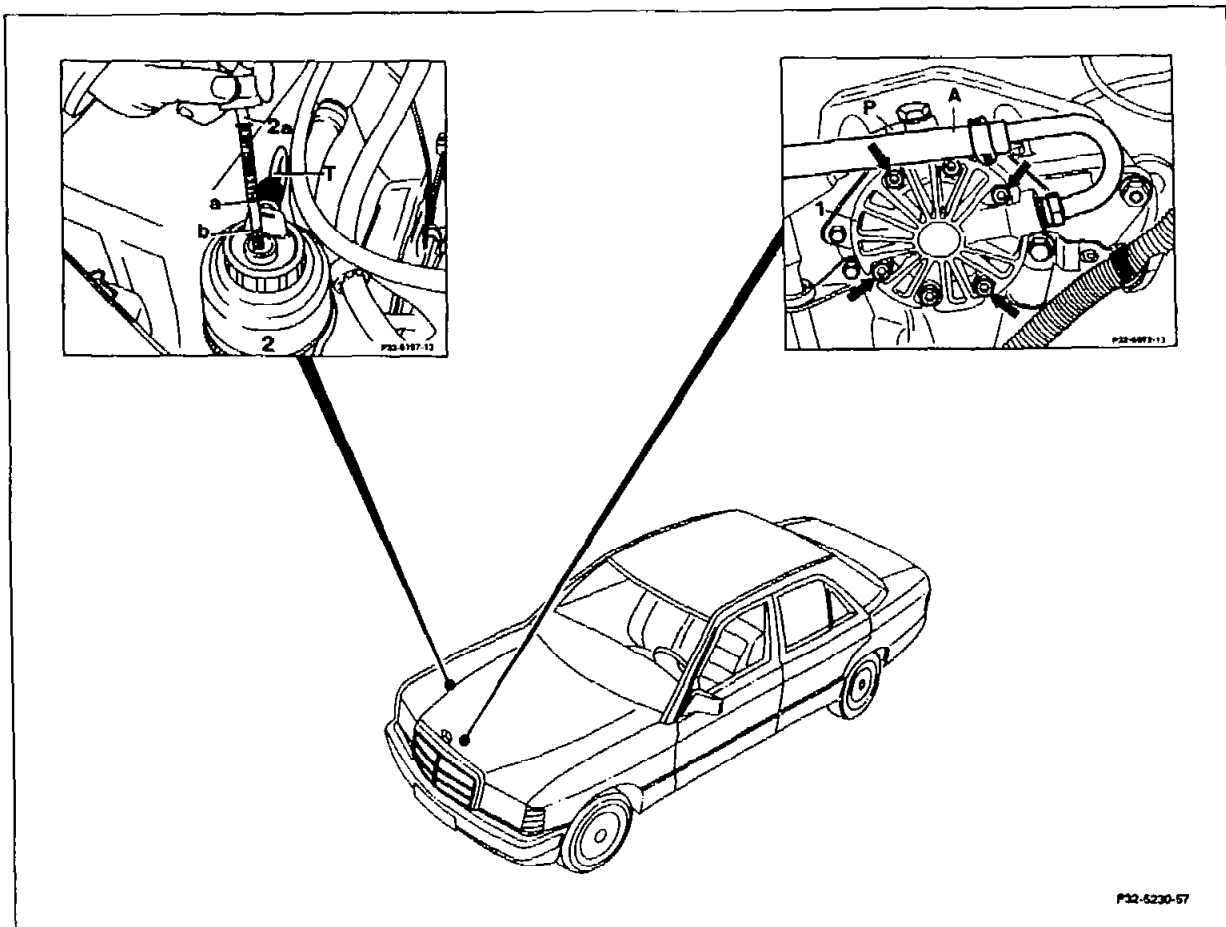


## 32-0640 Removing and installing pressure oil pump

Operation no. of operation texts and work units or standard texts  
and flat rates:  
32-0790

### A. Engines 102, 601, 602 and 603



High-pressure expansion hose (P) .....	Disconnect, connect, 25 Nm. Replace seals.
Suction line (A) .....	Disconnect, connect. Seal off suction line with a plug, 15 Nm.
Hexagon socket bolts (arrows) .....	Unscrew, tighten to 11 Nm (step 2).
Pressure oil pump (1) .....	Remove, install.
Sealing washer (1d) .....	Replace.

Oil reservoir (2) .....

Check oil level. With engine stopped it should be between the "max" and "min" marks on the dipstick. Top up if necessary (step 6).

Pressure oil pump .....

Bleed.

### Note

As a replacement part, the pressure oil pump is only available in the design for hydropneumatic suspension. It is marked with the letters HPF-F or HPF-EK on the front bearing cap beside the production code.



The pressure oil pump has self-lubrication, i.e. the oil delivered serves simultaneously as a lubricant.

### Removing

1 Disconnect high-pressure expansion hose (P) and suction line (A) at pressure oil pump (1). Seal off connection of suction line with a plug.

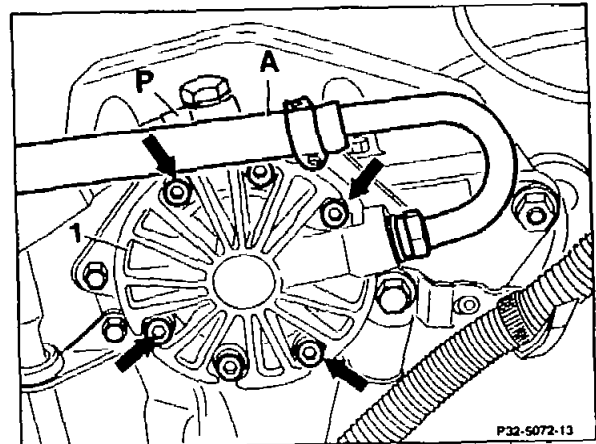
2 Slacken four hexagon socket bolts (arrows) for fixing the pressure oil pump to the cylinder crankcase or cylinder head, pull out pressure oil pump and remove.



The two hexagon socket bolts for fixing the cover of the pump housing must not be slackened, otherwise the pump may leak.

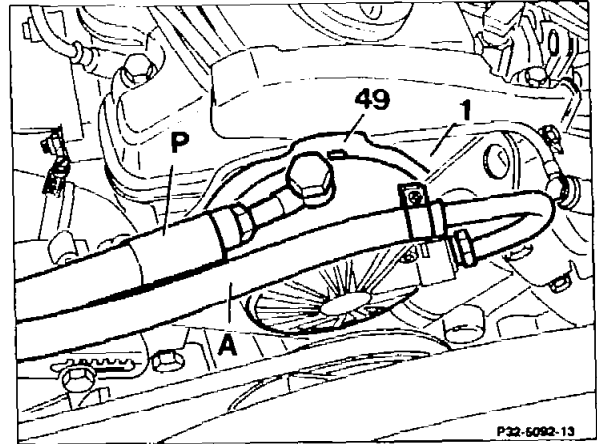
Distinguishing feature of bolts:

The hexagon socket bolts for the cover are provided with a continuous thread, visible between the cover and the housing.



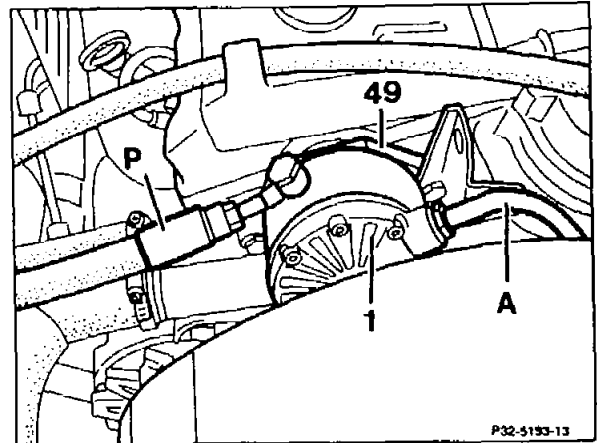
Arrangement on engine 102 up to 01/88

- 1 Pressure oil pump
- 49 Intermediate flange
- A Suction line, oil reservoir - pressure oil pump
- P High-pressure expansion hose, pressure oil pump - level controller



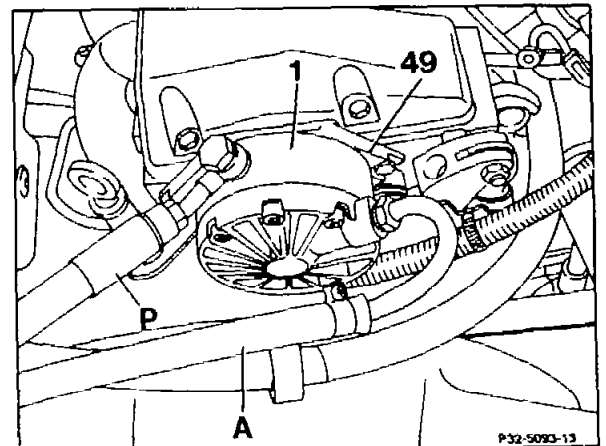
Arrangement on engine 102 as of 02/88 except engines 102.983/990

- 1 Pressure oil pump
- 49 Intermediate flange
- A Suction line, oil reservoir - pressure oil pump
- P High-pressure expansion hose, pressure oil pump - level controller



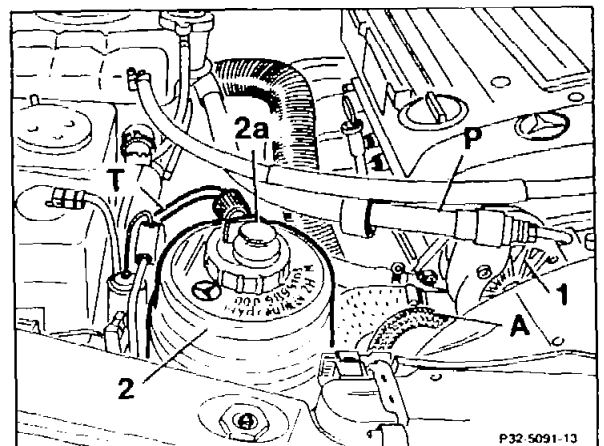
Arrangement on engines 601, 602 and 603

- 1 Pressure oil pump
- 49 Intermediate flange
- A Suction line, oil reservoir - pressure oil pump
- P High-pressure expansion hose, pressure oil pump - level controller



Arrangement on engine 102.983/990/991

- 1 Pressure oil pump
- 2 Oil reservoir
- 2a Cap for oil dipstick
- A Suction line, oil reservoir - pressure oil pump
- P High-pressure expansion hose, pressure oil pump - level controller
- T Return line, distributor fitting - oil reservoir



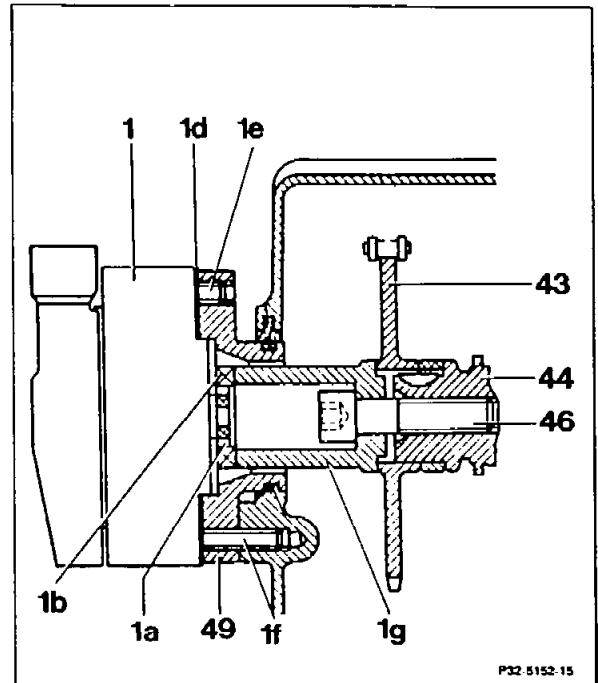
## Installing

3 Check driver and coupling members for pump drive.

4 Fit new sealing washer (1d) and introduce pressure oil pump, ensuring that the driver parts engage correctly. Tighten hexagon socket bolts uniformly to 11 Nm.

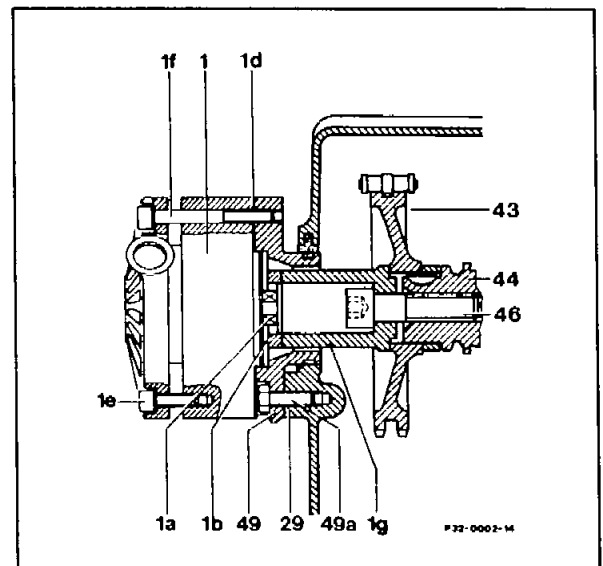
### Arrangement on engine 102 up to 01/88

- 1 Pressure oil pump
- 1a Eccentric shaft
- 1b Driver
- 1d Sealing washer
- 1e Hexagon socket bolt
- 1f Hexagon socket bolt
- 1g Driver sleeve
- 43 Camshaft sprocket
- 44 Camshaft
- 46 Hexagon socket bolt
- 49 Flange



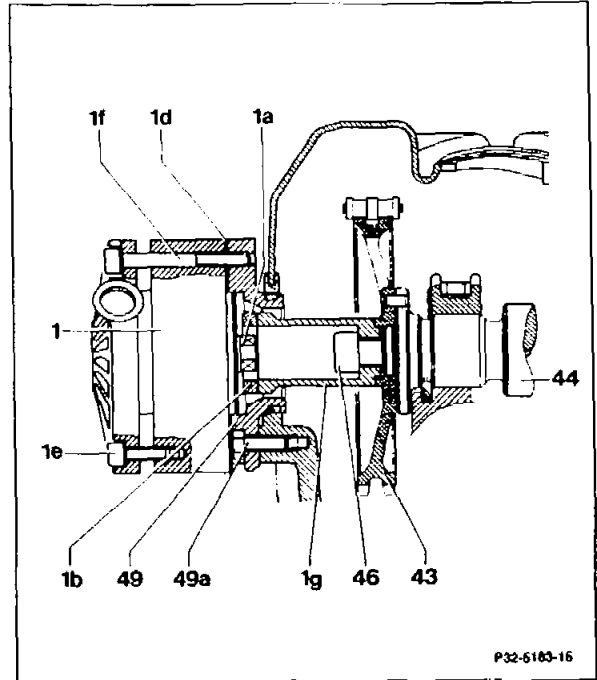
### Arrangement on engine 102 as of 01/88 except engines 102.983/990/991

- 1 Pressure oil pump
- 1a Eccentric shaft
- 1b Driver
- 1d Sealing washer
- 1e Hexagon socket bolt
- 1f Hexagon socket bolt
- 1g Driver sleeve
- 43 Camshaft sprocket
- 44 Camshaft
- 46 Hexagon socket bolt
- 49 Flange
- 49a Hexagon bolt

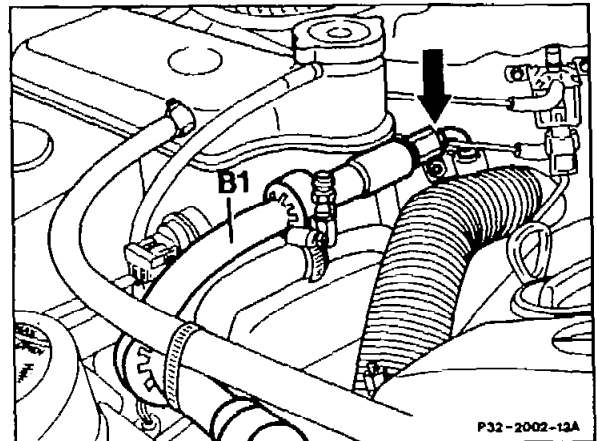


Arrangement on engines 601, 602 and 603

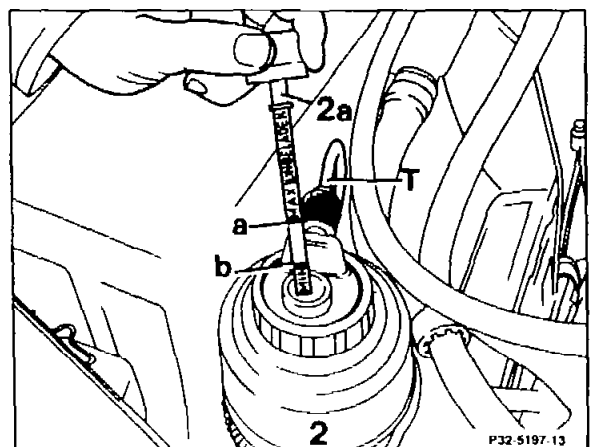
- 1 Pressure oil pump
- 1a Eccentric shaft
- 1b Driver
- 1d Sealing washer
- 1e Hexagon socket bolt
- 1f Hexagon socket bolt
- 1g Driver sleeve
- 44 Camshaft
- 43 Camshaft sprocket
- 46 Hexagon socket bolt
- 49 Flange
- 49a Hexagon bolt



- 5 Connect suction line and high-pressure expansion hose using new seals.
- 6 Check oil level in oil reservoir and top up if necessary. ergänzen.
- 7 Disconnect pressure line (P) and hold the end of the hose in the opening of the oil reservoir with the engine running at moderate speed until an uninterrupted stream of oil emerges. Connect pressure line, 15 Nm.

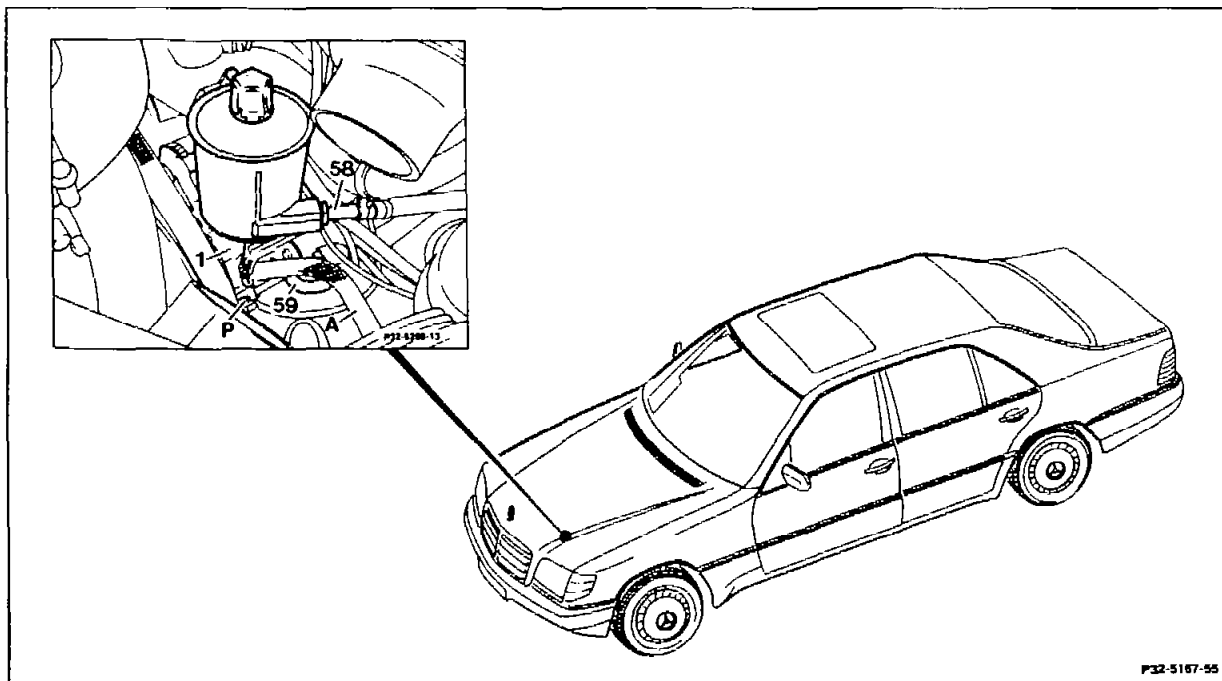


- 8 Check oil level in oil reservoir (2) when engine is not running and correct if necessary. When the system is operational, the oil level should be between the "max" and "min" marks in the ready-to-drive condition.



- 2a Oil dipstick
- T Return line, level controller - oil reservoir

**B. Engines 103, 104, 111 and 119  
Engines 602/603 with exhaust gas turbocharger  
Engines 604 and 605**



**Note**

These engines have a tandem pump which forms a unit together with the power steering pump.

The tandem pump consists of the radial piston pump for the level control system and the vane-type pump for the power steering. The tandem pump is attached to the engine with a support and is driven by a single-belt drive. As before, the pumps operate with ATF fluid for the power steering and hydraulic oil for the level control system.

Both pumps are driven by one shaft.

For removing and installing tandem pump, refer to:

Repair Instructions for steering

Removing and installing power steering pump (46-4000) or Filling and bleeding power steering pump (46-4080).

Level control system: Emptying and filling pressure oil system (32-0630).