









32-640 R and R pressure oil pump

Driver for pressure oil pumps

Engine	Pressure oil pump Make	Driver Part No.		
102	MB	102 236 00 16		
110	MB	116 236 02 16 ¹⁾		
		110 236 01 16 ²⁾		
114, 115, 123, 130, 180	MB	116 236 01 16		
	Teves ³⁾	114 236 00 16		
116, 117	MB	116 236 00 16		
615, 616, 617	MB			
	Teves ³⁾	615 236 00 16		

¹⁾ Former version

²⁾ Present version

³⁾ Standard up to March 1972. Starting April 1972 only MB pressure oil pumps have been mounted.

Intermediate flange for pressure oil pump on engines 114, 130, 180¹⁾

Version	Part No.	Hex. socket screw Part No.	Threads
1. up to November 1971	114 236 00 45	007984 006009	M 6
2. starting December 1971	114 236 01 45	114 990 01 12	M 8

¹⁾ Important when installing an exchange engine.

Tightening torques

Hex. socket screws for attaching
pressure oil pump to engine

Nm

11

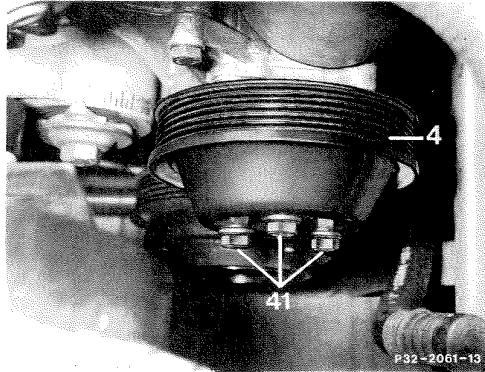
Hollow screw for HP expanding hose
on pressure oil pump

25

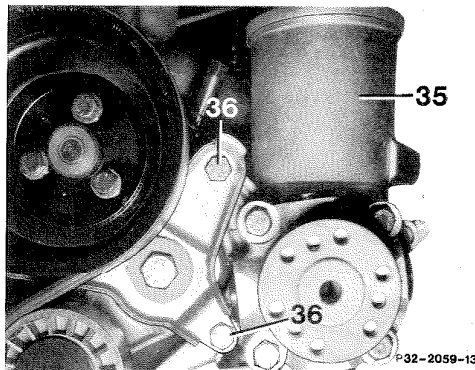
32-640 R and R pressure oil pump

8 Slacken single-belt drive (13-340).

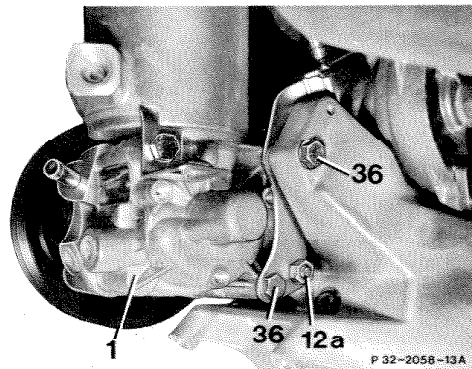
9 Unscrew hex. screws (41) for fastening pulley and remove pulley from drive shaft.



10 Unscrew hex. screws (36).



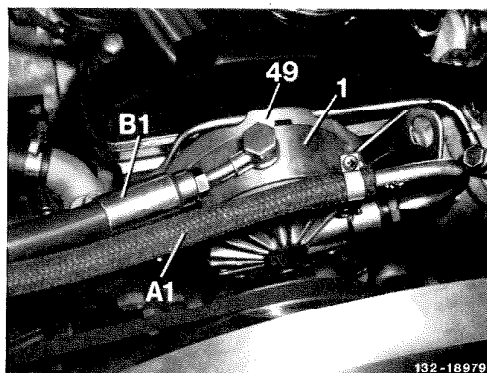
11 Remove power steering pump.



Engine 110

Engine 110

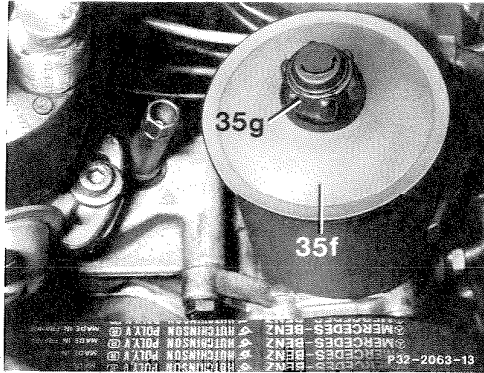
A Suction line fluid reservoir - pressure oil pump
B1 Pressure line pressure oil pump - level controller



32-640 R and R pressure oil pump

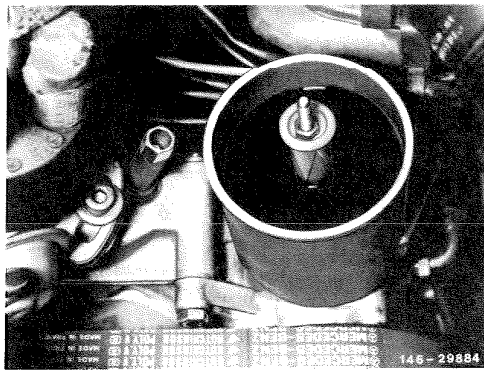
Engine 103

3 Unscrew wing nut or vent cap (35g) from pump housing and remove closing cap.

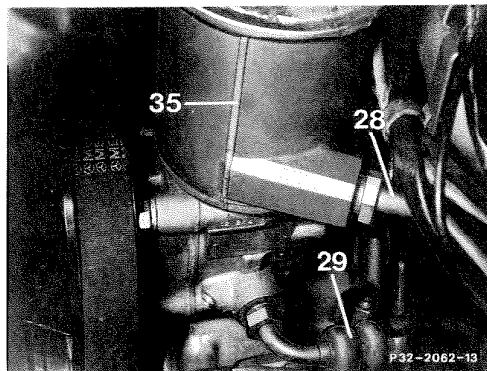


4 Unscrew hex. nut, remove plastic sleeve from stud.

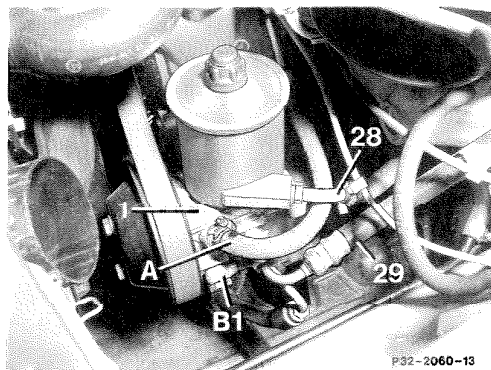
5 Remove compression spring and filter element from fluid reservoir and suck off oil by means of a syringe.



6 Loosen high-pressure expanding hose (29) and return flow hose (28).



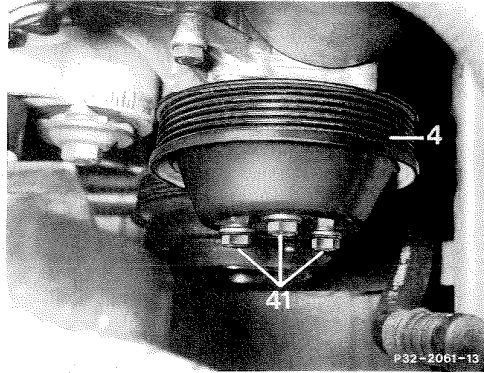
7 Loosen suction line (A) from fluid reservoir and pressure line (B1) to level controller. Pinch suction line with a hose clamp so that the fluid reservoir will not run dry.



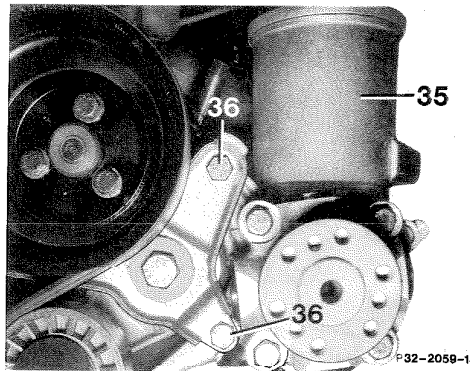
32-640 R and R pressure oil pump

8 Slacken single-belt drive (13-340).

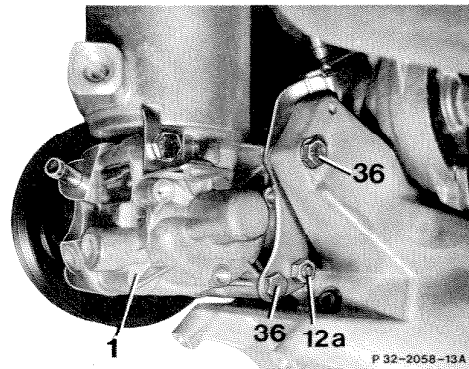
9 Unscrew hex. screws (41) for fastening pulley and remove pulley from drive shaft.



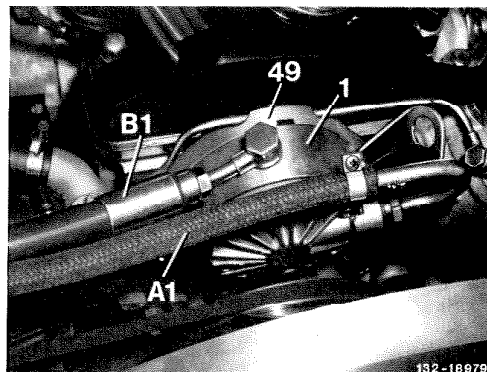
10 Unscrew hex. screws (36).



11 Remove power steering pump.



Engine 110



Engine 110

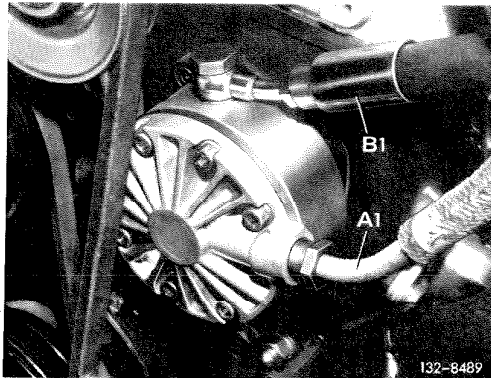
A Suction line fluid reservoir – pressure oil pump
 B1 Pressure line pressure oil pump – level controller

32-640 R and R pressure oil pump

12 On engines 116, 117, remove ignition distributor (07.5-530), additionally loosen tensioning roller on engines with air-conditioning or automatic climate control and push in downward direction. To remove suction line (A), loosen holder on cylinder crankcase.

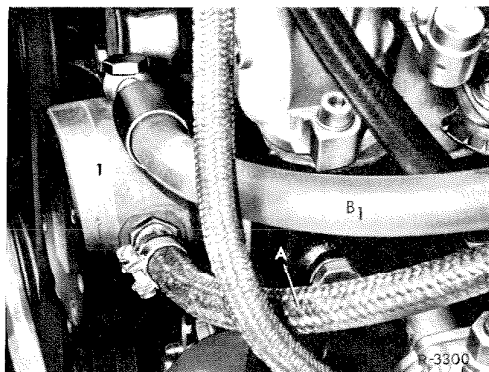
Engines 114, 115, 123, 130, 180
with pressure oil pump MB

A1 Suction line fluid reservoir – pressure oil pump
B1 Pressure line pressure oil pump – level controller



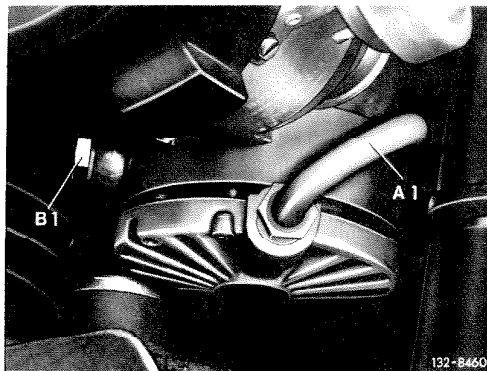
Engines 114, 115, 130, 180 with pressure oil pump
Teves

1 Pressure oil pump
A Suction line fluid reservoir – pressure oil pump
B1 Pressure line pressure oil pump – level controller



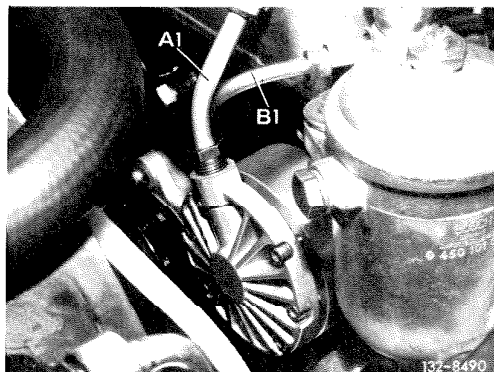
Engines 116, 117

A1 Suction line fluid reservoir – pressure oil pump
B1 Pressure line pressure oil pump – level controller



Engines 615, 616, 617 with pressure oil pump MB
1st version up to January 1979

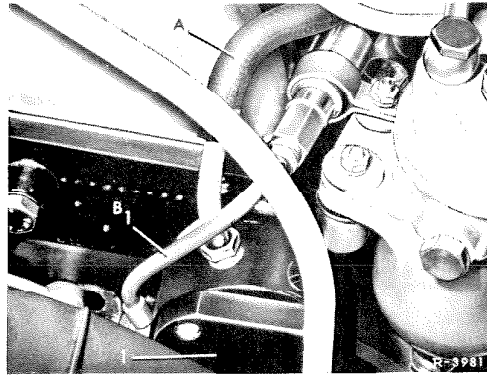
A1 Suction line fluid reservoir – pressure oil pump
B1 Pressure line pressure oil pump – level controller



32-640 R and R pressure oil pump

Engine 615 with pressure oil pump Teves
1st version

A1 Pressure oil pump
B1 Pressure line pressure oil pump – level controller



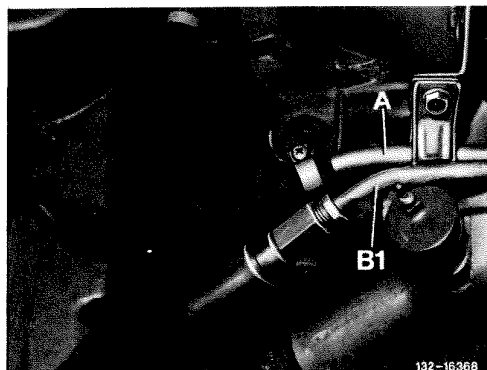
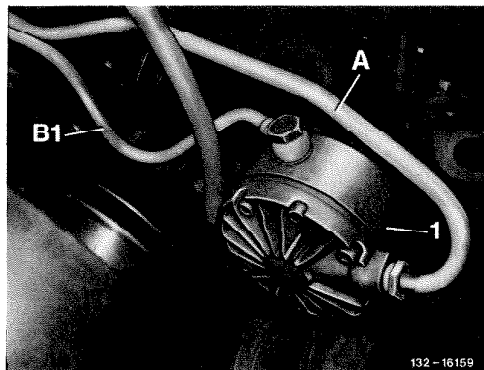
Note: On vehicles with diesel engine 615, 616 and 617, the location of the pressure oil pump on cylinder head, as well as the suction and pressure line connection on pressure oil pump have been changed since February 1979 by displacing the fluid reservoir from the left to the right engine compartment.

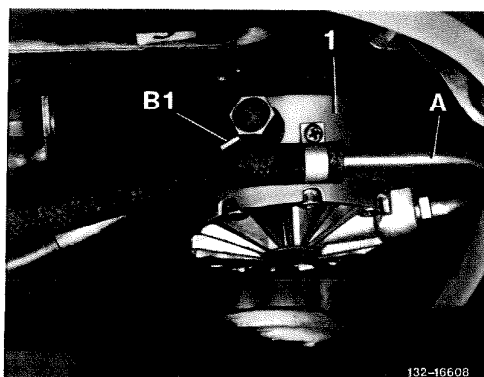
The HP expanding hose with steel line to pressure oil pump installed from February to end of May 1979 is no longer available as a spare part.

In the event of repairs, these vehicles should therefore be converted to the third version. Refer to conversion of suction and pressure line for models 123 with diesel engine (32-641).

Engine 615, 616, 617 with pressure oil pump MB
2nd version from February to May 1979

A Suction line
B1 Pressure line (steel)





Engine 615, 616, 617 with pressure oil pump MB
3rd version starting June 1979

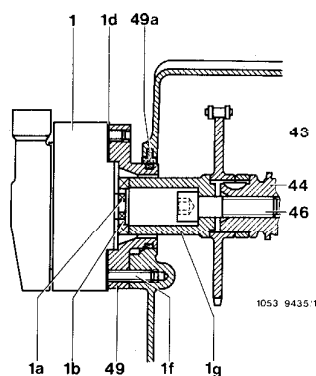
- 1 Pressure oil pump
- A Suction line fluid reservoir — pressure oil pump
- B1 Pressure line pressure oil pump — level controller (HP expanding hose)

Installation

- 13 Check driver and coupling members for pump drive.
- 14 Mount new gasket (1d), introduce pump, making sure that driver components are correctly meshing. Tighten hex. socket screws **uniformly** to 11 Nm.
- 15 Connect suction line (A) and pressure line (B1).

Engine 102

- | | |
|----------------------|----------------------|
| 1 Pressure oil pump | 43 Camshaft gear |
| 1a Camshaft | 44 Camshaft |
| 1b Driver | 46 Hex. socket screw |
| 1d Gasket | 49 Flange |
| 1f Hex. socket screw | 49a O-ring |
| 1a Driving sleeve | |



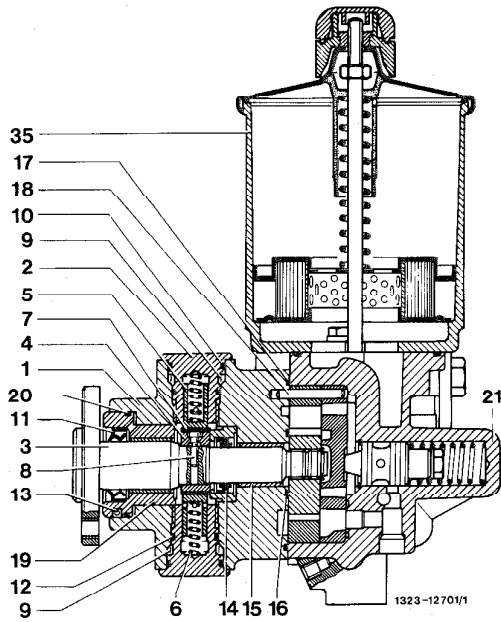
Engine 103

Note: Make sure that a power steering pump is installed, the pressure relief valve of which opens at 82 bar. The opening pressure of the pressure relief valve is stamped into type rating plate of pump. In addition, the type rating plate has a blue background.

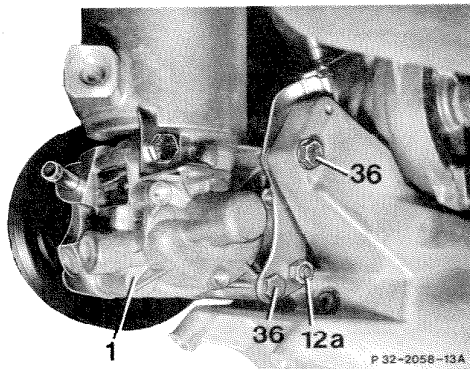


32-640 R and R pressure oil pump

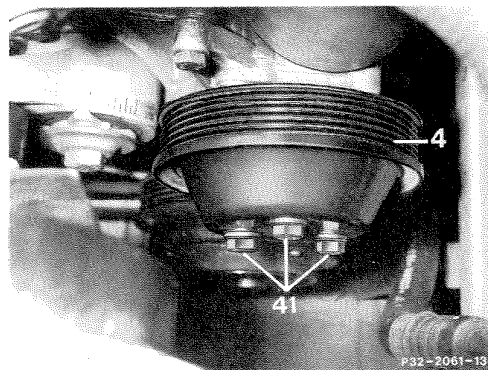
- | | |
|--------------------------|--|
| 1 Housing | 13 Locating pin |
| 2 Piston inserts | 14 Sealing ring carrier with radial sealing ring |
| 3 Drive shaft | 15 Bearing |
| 4 Eccentric | 16 O-ring |
| 5 Piston | 17 O-ring |
| 6 Compression spring | 18 Fitted bolt |
| 7 Race | 19 Bearing bushings with plain bearing |
| 8 Shearing pin | 20 O-ring |
| 9 Reaction seating strip | 21 Power steering pump |
| 10 O-ring | 35 Reservoir for power steering |
| 11 Radial seal | |
| 12 O-ring | |



16 Fasten power steering pump to carrier. Tightening torque of hex. screws (36) 25 Nm.

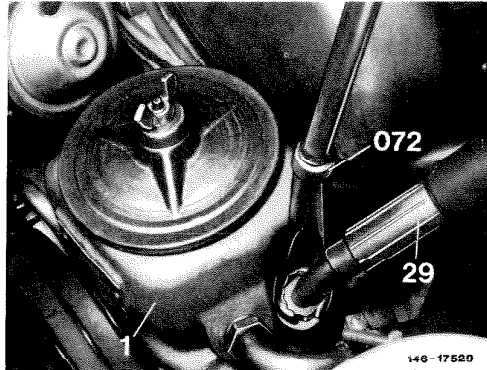


17 Fasten pulley to input shaft. Tighten hex. head screws to 25 Nm.



32-640 R and R pressure oil pump

18 Connect high-pressure expanding hose (29) to power steering pump. Tighten coupling screw of hose by means of open box wrench insert or open box wrench (072) to 25 Nm.



19 Connect pipe elbow (28) including return flow hose to power steering pump. Tightening torque of coupling nut 35-40 Nm.

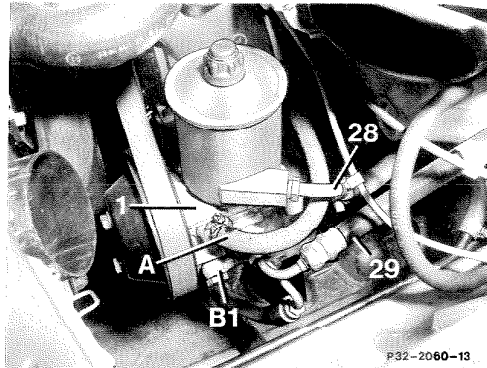
20 Connect suction line (A).

21 Connect pressure oil line (B1).

22 Use new sealing rings. Tightening torque of hollow screw 25-30 Nm.

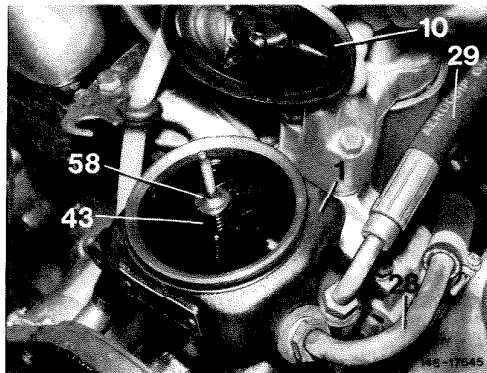
Note:

Pay attention to perfect hose installation of all hoses.



23 Mount V-belt and tension (13-340).

24 Insert filter element or steadying plate into fluid reservoir, mount compression spring with locking spring or plastic sleeve and hex. nut.



25 Fill specified oil into fluid reservoir. Top-up oil with engine running.

26 Turn steering several times completely to the left and right to vent the system.

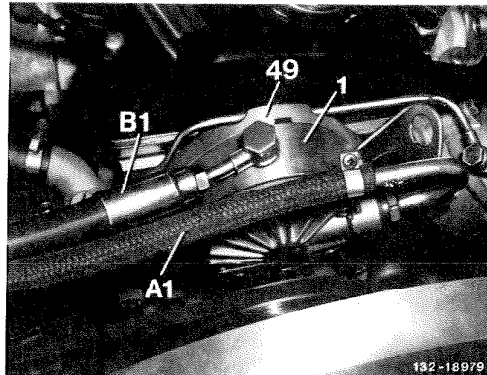
Check oil level and power steering system for leaks (32-030).

Note: With cold oil, the oil level should be 6-8 mm below mark.

32-640 R and R pressure oil pump

Engine 110

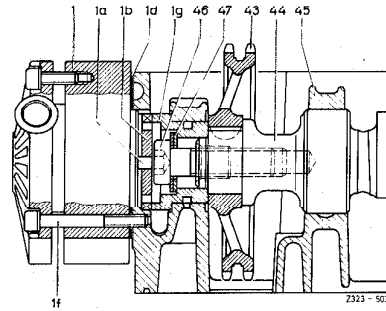
The pressure oil pump is flanged to camshaft housing at the front.



- 1 Pressure oil pump
- 49 Intermediate flange
- A Suction line fluid reservoir – pressure oil pump
- B1 Pressure line pressure oil pump – level controller

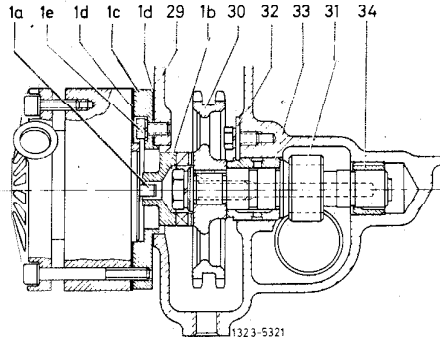
Drive is transmitted from outlet camshaft (44) via spacing sleeve (1g) and driver (1b).

- 1 Pressure oil pump
- 1a Camshaft
- 1b Driver
- 1d Gasket
- 1f Hex. socket screw
- 1g Spacer sleeve
- 43 Camshaft gear
- 44 Camshaft
- 45 Camshaft housing
- 46 Hex. socket screw
- 47 Disk washer



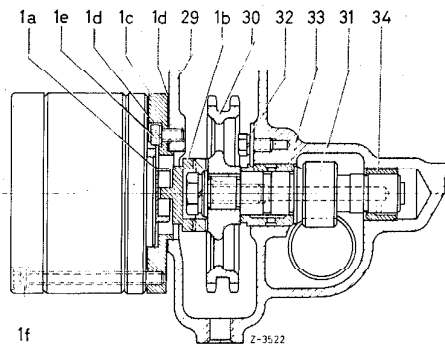
Engines 114, 115, 123, 130, 180
with pressure oil pump MB

- 1a Cam
- 1b Driver
- 1c Intermediate flange
- 1d Gasket
- 1e Hex. socket screw with special head
- 1f Hex. socket screw
- 29 Cylinder crankcase
- 30 Intermediate gear
- 31 Intermediate gear shaft
- 32 Washer
- 33 Front bearing bushing
- 34 Rear bearing bushing



Engines 114, 115, 130, 180
with pressure oil pump Tovo

- 1a Cam
- 1b Driver
- 1c Intermediate flange
- 1d Gasket
- 1e Hex. socket screw with special head
- 1f Hex. socket screw
- 29 Cylinder crankcase
- 30 Intermediate gear
- 31 Intermediate gear shaft
- 32 Washer
- 33 Front bearing bushing
- 34 Rear bearing bushing



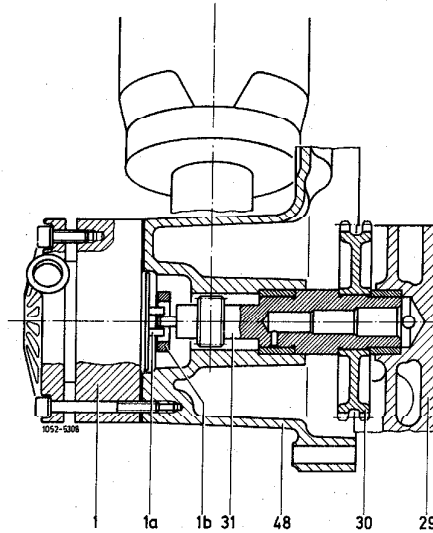
32-640 R and R pressure oil pump

27 Check oil level in fluid reservoir and top-up, if required.

28 Install ignition distributor on engines 116, 117 (07.5-530). On engines with air-conditioning or automatic climate control, tension V-belt of refrigerant compressor.

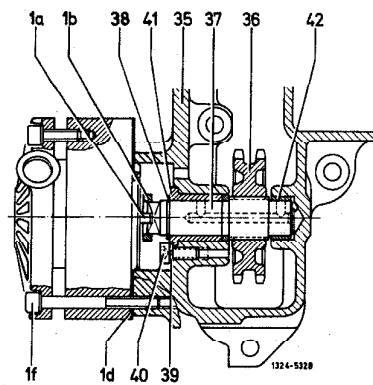
29 Set firing point (07.5-515).

30 Tighten holder of suction line (A) on cylinder crankcase.



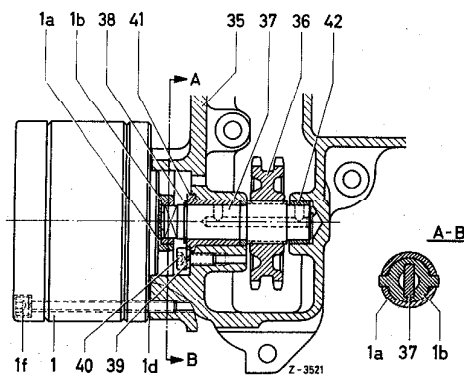
Engines 116, 117

- | | |
|----|-------------------------|
| 1 | Pressure oil pump |
| 1a | Camshaft |
| 1b | Driver |
| 29 | Cylinder crankcase |
| 30 | Intermediate gear |
| 31 | Intermediate gear shaft |
| 48 | Timing housing cover |



Engines 615, 616, 617 with pressure oil pump MB

- | | | | |
|----|-------------------|----|-------------------------------------|
| 1a | Cam | 38 | Locking ring |
| 1b | Driver | 39 | Snap ring |
| 1d | Gasket | 40 | Hex. socket screw with special head |
| 1f | Hex. socket screw | 41 | Front bearing bushing |
| 35 | Cylinder head | 42 | Rear bearing bushing |
| 36 | Guide wheel | | |
| 37 | Shaft | | |



Engine 615 with pressure oil pump Teves

- | | | | |
|----|-------------------|----|-------------------------------------|
| 1 | Pressure oil pump | 38 | Locking ring |
| 1a | Camshaft | 39 | Snap ring |
| 1b | Driver | 40 | Hex. socket screw with special head |
| 1d | Gasket | 41 | Front bearing bushing |
| 35 | Cylinder head | 42 | Rear bearing bushing |
| 36 | Guide wheel | | |
| 37 | Shaft | | |