

01-310 Removal and installation of oil pan

Oil capacity in liters

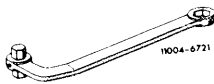

Model	107	126
Oil pan max./min.	7.5/5.5	
Oil filter	0.5	
Air-oil cooler	0.5	0.4
Oil dipstick color coding	gentian blue	light blue or grey ¹⁾

¹⁾ As of 1985.

Tightening torques

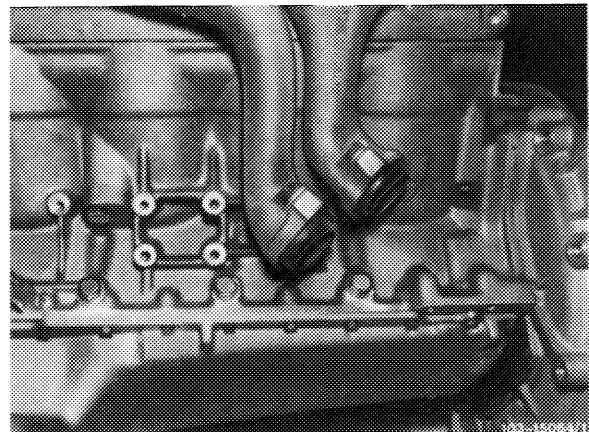
		Nm
Oil drain plug on oil pan	M 26	50
	M 12	40
Oil drain plug on air-oil cooler		35
Attaching screws for oil pan lower part and oil pan	M 6	11

Special tools

Allen box wrench 13 x 14 mm		117 589 02 07 00
Installation tool for oil dipstick guide tube		117 589 00 31 00

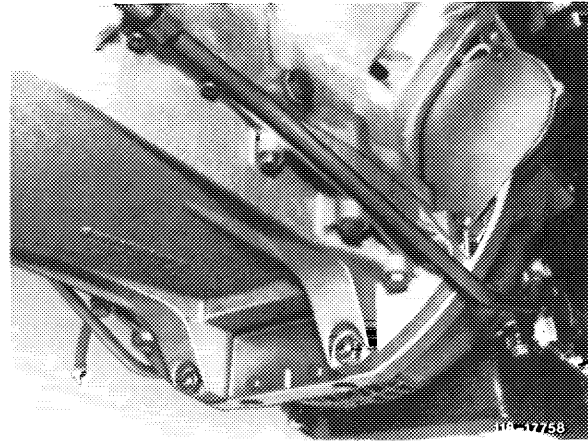
Note

The engines 117.960 (1st version) with intermediate flange, up to end No. 001681, with the exception of engine end No. 001613-001617 and 001636-001640, were fitted with a one-piece oil pan together with a gasket coated on one side with graphite, similar to the engine 117.985, however with additional supporting angles between engine and intermediate flange.



The engines 116.960 and 117.960 (2nd version) as well as 116.962 and 117.962 are fitted with the one-piece oil pan, the engines 116.961/963 and 117.961/963 are fitted with the two-piece oil pan, both with integrated supporting angles, together with a gasket graphite-coated on one side.

The hole pattern for the oil pan of all engines 116.96 and 117.96 are identical and differ from the hole pattern for the cast-iron engines 116.98 and 117.98.



A protective bead was added in the area of the oil drain plug at the oil pan lower part in order to avoid engine cracks.

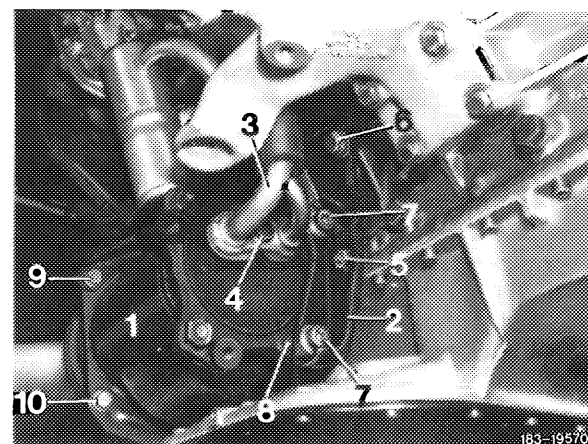
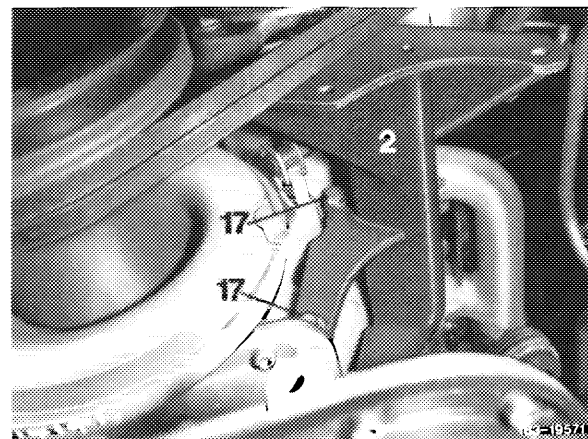
Introduction: July 1983

Engine No. 116.963 12 037 088
117.963 12 032 251

If the refrigerant compressor carrier is bolted to the crankcase during oil pan removal and installation it is necessary to ensure tension-free assembly.

The carrier (steel version) must be checked for distortion. There should be no gap between contact points of the support angle and the crankcase. This condition must be verified before attaching the angle. The bolts must be tightened in the following sequence:

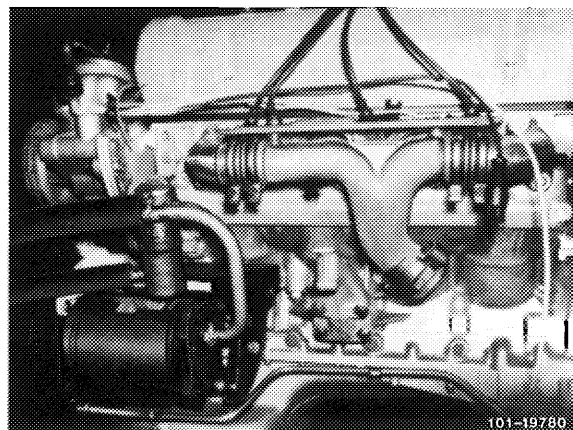
- a) Install bolts (17, 6 and 5) finger-tight.
- b) Tighten bolts (17) at engine front.
- c) Tighten bolt (6) and nut (5) at side of engine.



A. Model 107

Removal

- 1 Remove fan shroud and fan.
- 2 Remove front axle (33–100).
- 3 Remove refrigerant compressor with carrier (83–522).



Engine 116.961 (USA) 1981

- 4 Remove support angle from transmission (1st version engine 117.960 with intermediate flange).
- 5 Unscrew bracket for oil dipstick guide tube.
- 6 Unscrew oil pan and remove downwards together with oil dipstick guide tube.

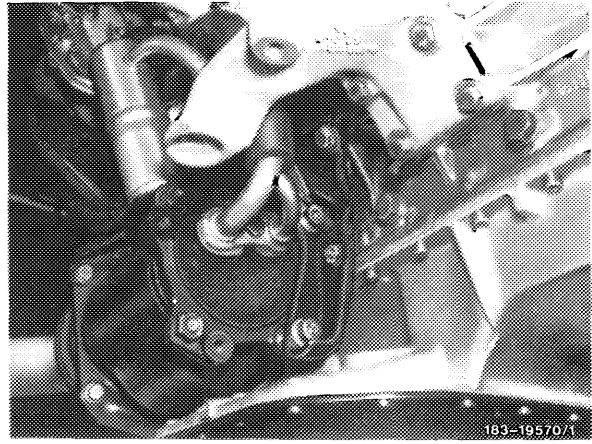
Installation

- 7 Prior to installation, use grease to attach new gasket to the oil pan.
- 8 The further installation takes place in the sequence vice versa to the removal.

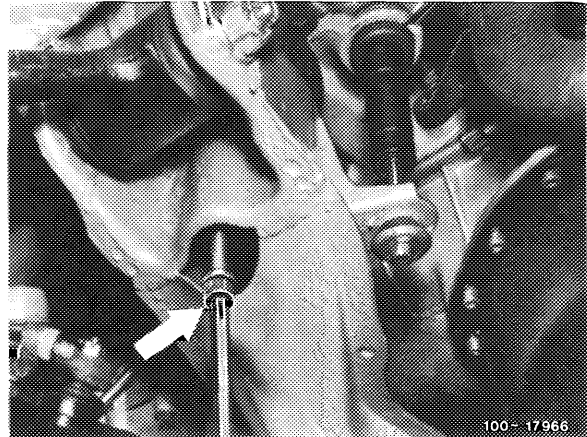
B. Model 126

Removal

- 1 Remove refrigerant compressor with carrier and tension pulley without disconnecting the pipe assembly.
- 2 Remove control linkage.
- 3 Remove oil pan lower part.
- 4 Remove oil dipstick guide tube.
- 5 Remove oil pump.
- 6 Unscrew oil pan upper part.



- 7 Unscrew both mounting bolts for engine mounts (arrow).
- 8 Loosen both engine shock absorbers at the bottom.



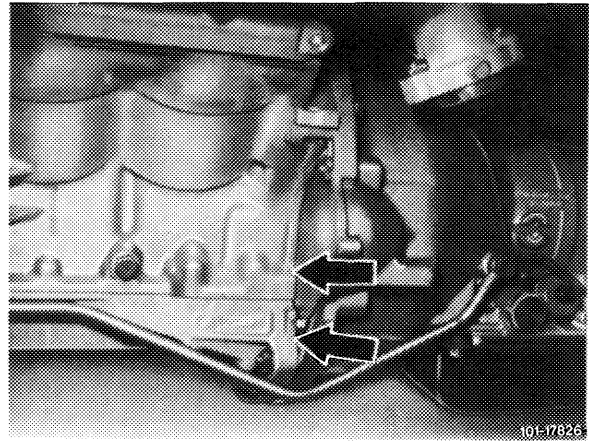
- 9 Disconnect fan shroud.
- 10 Lift engine with hoist until the oil pan can be removed.

Installation

- 11 Before the installation, use grease to attach a new gasket to the oil pan.
- 12 Further installation takes place in the sequence vice versa to the removal.

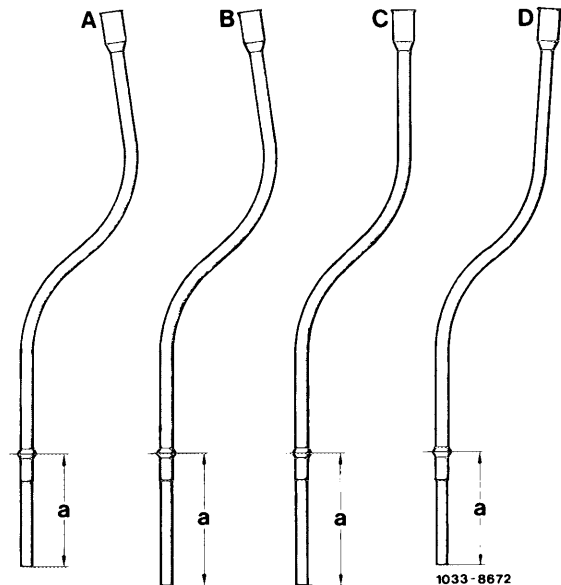
Caution!

The rear mating surface of the oil pan must be lined up with the rear mating surface of the crankcase (arrows). If the oil pan is not lined up with the crankcase, this can lead to complaints of noise and vibration.



Ensure that oil dipstick guide tubes are neither swapped during assembly nor interchanged with those of cast-iron engines, as this would result in false oil level readings.

They can be distinguished by means of the drawing and table below.



A	Engine 116.985,	117.986	a = 125.5 mm
B	Engine 116.984,	117.985	a = 135.5 mm
C	Engine 116.960/962/ 964,	117.960/962/ 964/967	a = 135.5 mm
D	Engine 116.961/963/ 965,	117.961/963/ 965/968	a = 125.5 mm