

At the first and second maintenance jobs,
then every 7 500 km/5 000 miles

Engine M 100

For approved oils see: Operative Materials Page 226 or 225.1

Prescribed viscosity

Year round use	SAE 10 W-40, 10 W-50
Other viscosity classes for consistent ambient temperatures	
Above 0° C, 32° F (Central Europe April to October)	SAE 30, 20 W-40, 20 W-50
Above + 30° C, 84° F approved for use	SAE 40
From + 10° C to -20° C, 50° F to -4° F (Central Europe October to April)	SAE 10 W-30
Below -20° C, -4° F	SAE 5 W-20

Engine oil change and filter maintenance

Every 7 500 km/5 000 miles, at least twice a year (spring and fall)

Oil quantity in liters

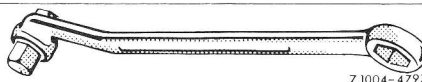
M 100.981	Engine with air oil cooler and oil filter (total quantity)	8.5
M 100.980	Engine with oil filter (total quantity)	8.0
	Oil filter	approx. 1.0
	Air oil cooler	approx. 0.7

Oil dipstick color code black

Tightening torque	Nm	(kpm)
Oil drain plug on oil pan	50	(5)
Oil drain plug on oil cooler	30-35	(3-3.5)
Fixing bolt for filter bowl	40-45	(4-4.5)

Special tools

Pin spanner SW 14 x 17 mm
Insert for pin spanner

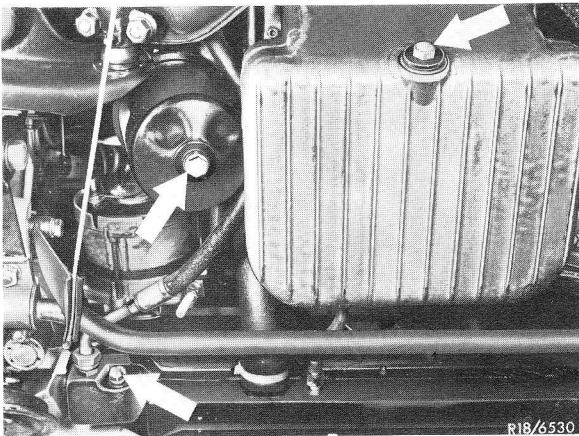


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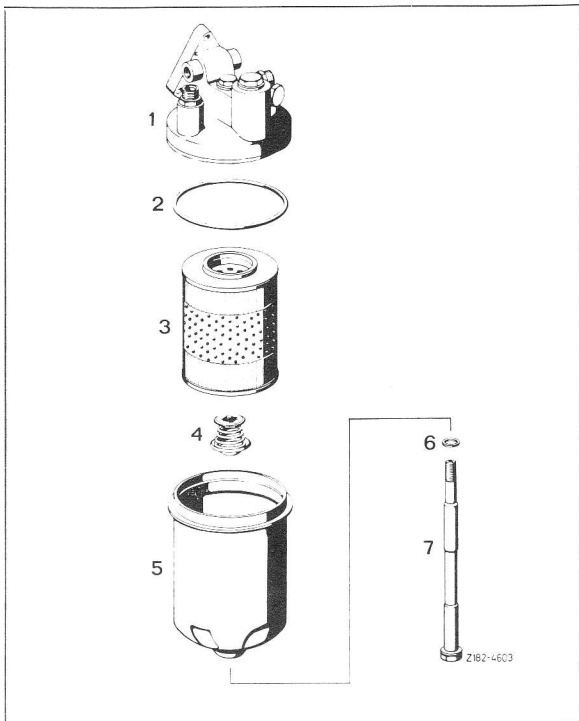
Screw driver insert SW 14 1/2"



commercially available e.g. Hazet 985-14



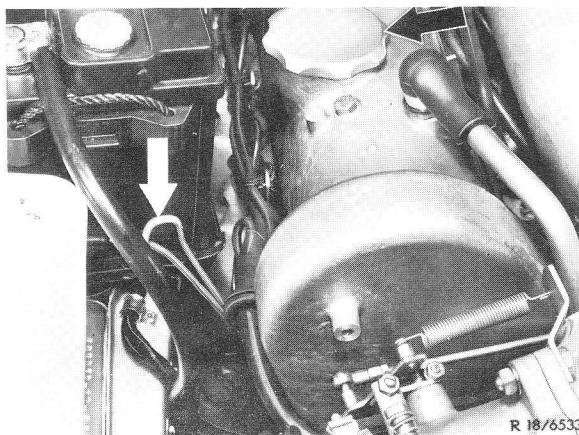
- Drain oil from oil pan and if fitted from air oil cooler.



- Unscrew filter bowl (5) and empty.
- Wash out filter bowl and blow out.
- Check sealing ring (6) and renew if found necessary.

For this purpose pull pressure spring with spring plate (4) from hex. screw (7). When reassembling, **the pressure spring with spring plate must not be forgotten or wrongly installed, under any circumstances.**

- Renew rubber sealing ring (2).
- Fit **new** paper filter element into filter bowl.



- Renew sealing rings on drain plugs and tighten drain plugs.
- Fill with engine oil.
- Run engine and check for leaks.
- Check oil level with the engine switched off.

Engine oil change and filter service

At the first and second maintenance jobs,
then every 7 500 km / 5 000 miles

Engines M 116, 117

For approved oils see: Operative Materials Page 226 or 225.1
Prescribed viscosity

Year round use	SAE 10 W-40, 10 W-50
Other viscosity classes for consistent ambient temperatures	
Above 0° C, 32° F (Central Europe April to October)	SAE 30, 20 W-40, 20 W-50
Above + 30° C, 84° F approved for use	SAE 40
From + 10° C to -20° C, 50° F to -4° (Central Europe October to April)	SAE 10 W-30
Below -20° C, -4° F	SAE 5 W-20

Engine oil change and filter maintenance

Every 7 500 km / 5 000 miles, at least twice a year (spring and fall)

Oil quantity in liters

Engine with oil filter and air oil cooler (total quantity)	8.5
Engine with oil filter without air oil cooler (total quantity)	8.0
Oil pan	7.5
Oil filter	0.75
Air oil cooler	0.4

Oil dipstick color code

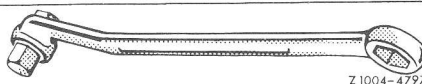
M 116.980/981/990/991 with single-part oil pan, M 117.981	yellow
M 116.980/983/990/993, M 117.983/984/993 with split oil pan	light-blue
M 116.982/992, M 117.982/992	blue

Tightening torques

	Nm	(kpm)
Oil drain plug on oil pan	50	(5)
Oil drain plug on air oil cooler	30–35	(3–3.5)
Fixing bolt for filter bowl	40–45	(4–4.5)

Special tools

Pin spanner SW 14 x 17 mm
Insert for pin spanner



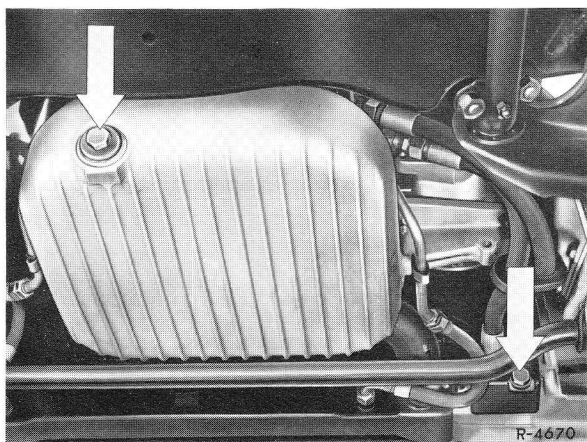
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Screw driver insert SW 14 1/2"

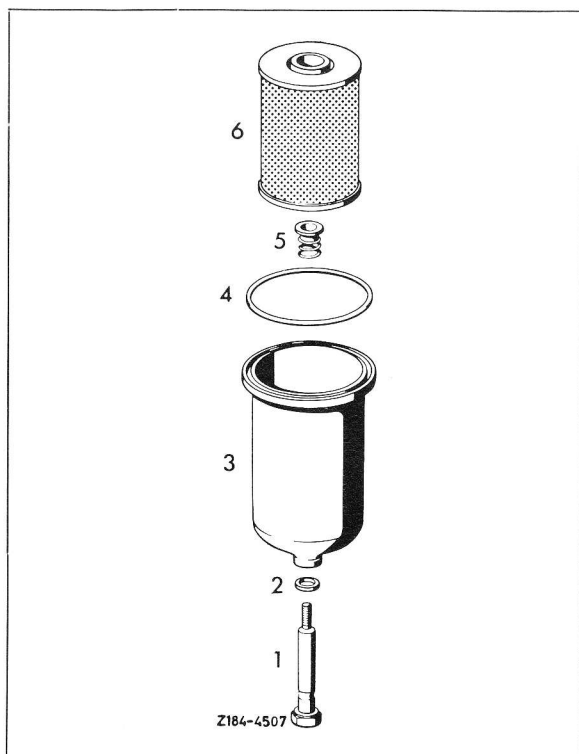


commercially available e.g. Hazet 985-14





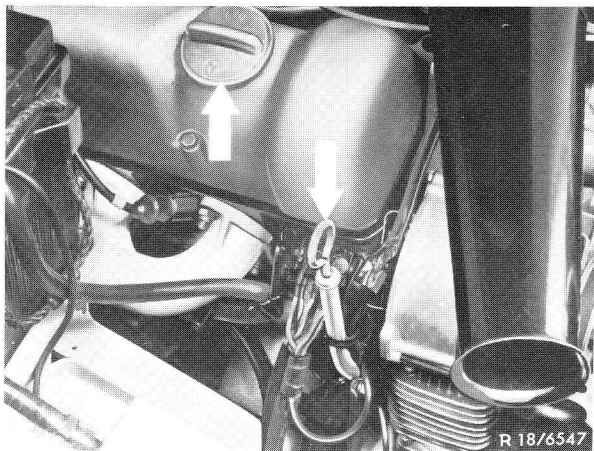
- Drain oil from oil pan and air oil cooler.



- Unscrew oil filter housing (3) and empty.
- Wash out oil filter housing and blow out.
- Check sealing ring (2) and renew if found necessary.

For this purpose pull pressure spring with spring plate (5) from hex. screw (1). **The pressure spring with spring plate must under no circumstances be omitted or wrongly installed** when reassembling.

- Renew rubber sealing ring (4).
- Fit **new** paper filter element into oil filter housing.



- Renew sealing ring on the oil pan drain plug.
- Tighten drain plug.
- Fill with engine oil.
- Run the engine and check for leaks.
- Check oil level with the engine switched off.

At the first and second maintenance jobs,
then every 7 500 km / 5 000 miles

Engines M 114, 115, 130, 180

For approved oils see: Operative Materials Page 226 or 225.1

Prescribed viscosity

Year round use	SAE 10 W-40, 10 W-50
Other viscosity classes for consistent ambient temperatures	
Above 0° C, 32° F (Central Europe April to October)	SAE 30, 20 W-40, 20 W-50
Above + 30° C, 84° F approved for use	SAE 40
From + 10° C to -20° C, 50° F to -4° F (Central Europe October to April)	SAE 10 W-30
Below -20° C, -4° F	SAE 5 W-20

Engine oil change and filter maintenance

Every 7 500 km / 5 000 miles, at least twice a year (spring and fall)

Oil quantity in liters

	M 115			M 114, 130, 180	
	1st version 115.920 115.923 to chassis end-no. 049 764 051 864	2nd version 115.920 115.923 from chassis end-no. 049 765 051 865	3rd version 115.951 115.923 from chassis end-no. 200 001	1st version flat oil pan bottom	2nd version oil pan bottom w/ribs
Total quantity engine with oil filter and air oil cooler	5.0	5.5	6.0	6.5	7.0
w/o air oil cooler	4.5	5.0	5.5	6.0	6.5
Oil pan	4.0	4.5	5.0	5.5	6.0
Oil filter	0.5				

Oil dipstick color code

4-cylinder engines

red

6-cylinder engines

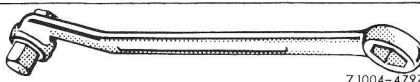
pink

Tightening torques

	Nm	(kpm)
Oil drain plug on the oil pan	50	(5)
Oil drain plug on the air oil cooler	30-35	(3-3.5)
Fixing bolt for filter bowl	40-45	(4-4.5)

Special tools

Pin spanner SW 14 x 17 mm
Insert for pin spanner

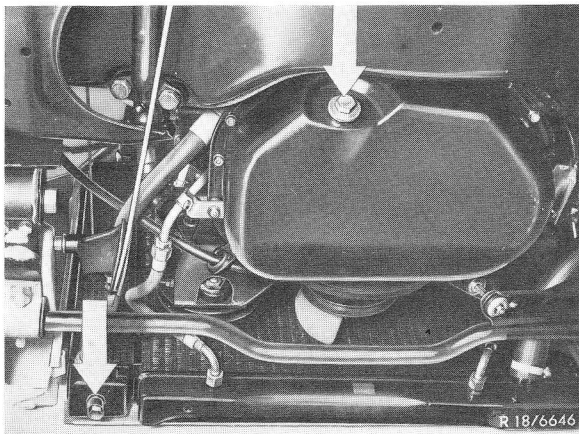


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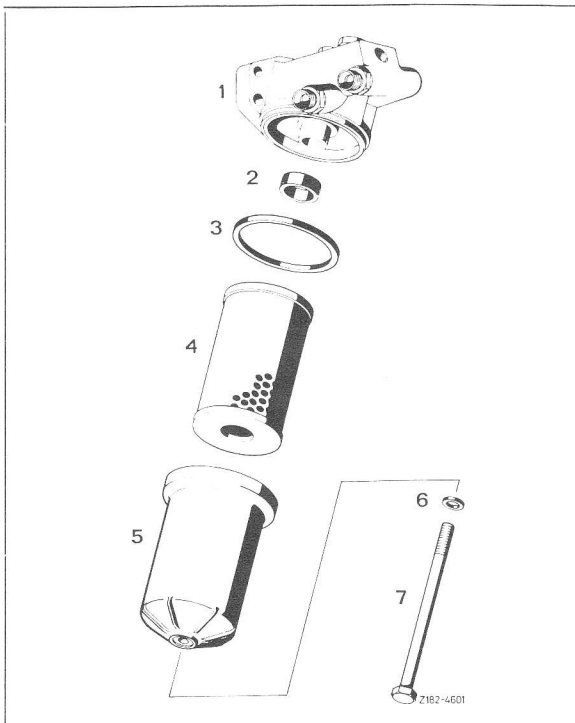
Screw driver insert SW 14 1/2"



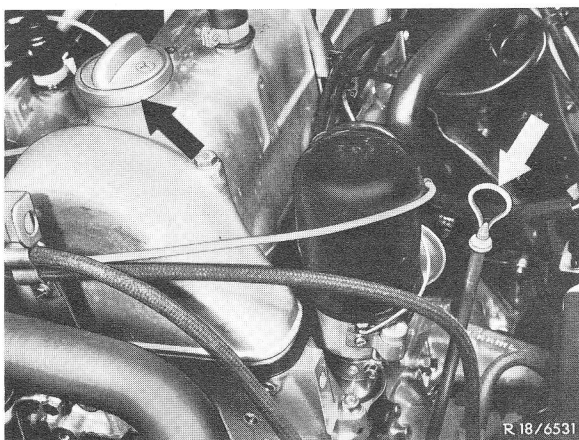
commercially available e.g. Hazet 985-14



- Drain engine oil from oil pan and, if fitted, from air oil cooler.



- Unscrew filter bowl (5) and empty.
- Wash out filter bowl and blow out.
- Check sealing ring (6) and renew if found necessary.
- Renew rubber sealing ring (3).
- Check rubber sealing ring (2) for hardening and damage and renew if found necessary.
- Fit **new** paper filter element into the filter bowl.



- Renew sealing ring on the oil pan drain plug and the air oil cooler drain plug (only steel version).
- Tighten drain plugs.
- Fill with engine oil.
- Run the engine and check for leaks.
- Check oil level with the engine switched off.

At the first und second maintenance jobs,
then every 5 000 km / 3 000 miles

Diesel Engine OM 615, 616

For approved oils see: Operative Materials Page 226

Prescribed viscosity

Year round use	SAE 10 W-40, 10 W-50
Other viscosity classes for consistent ambient temperatures	
Above 0° C, 32° F (Central Europe April to October)	SAE 30, 20 W-40, 20 W-50
Above + 30° C, 84° F approved for use	SAE 40
From + 10° C to -20° C, 50° F to -4° F (Central Europe October to April)	SAE 10 W, SAE 10 W-30
Below -20° C, -4° F	SAE 5 W-20

Engine oil change and filter maintenance

Every 5 000 km/3 000 miles, at least twice a year (spring and fall)

Oil quantity in liters

	OM 615		OM 616
	1st version OM 615.912 OM 615.913 to chassis end-no. 120 829 056 238	2nd version OM 615.912 OM 615.913 from chassis end-no. 120 830 056 239	and 3rd version OM 615.912 OM 615.913 from chassis end-no. 400 001 200 001
Total quantity engine with oil filter and air oil cooler	5.5	6.0	6.5
w/o air oil cooler	5.0	5.5	6.0
Oil pan	4.0	4.5	5.0
Oil filter	1.0		

Oil dipstick color code

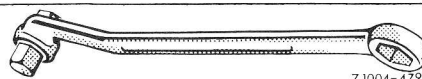
red

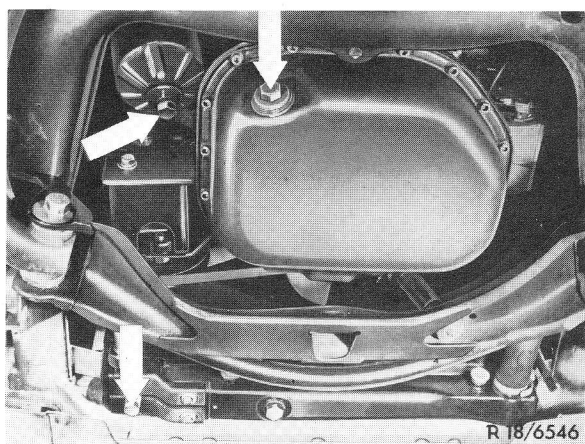
Tightening torques

	Nm	(kpm)
Oil drain plug on oil pan	50	(5)
Oil drain plug on air oil cooler	30-35	(3-3.5)
Fixing bolt for filter bowl	40-45	(4-4.5)

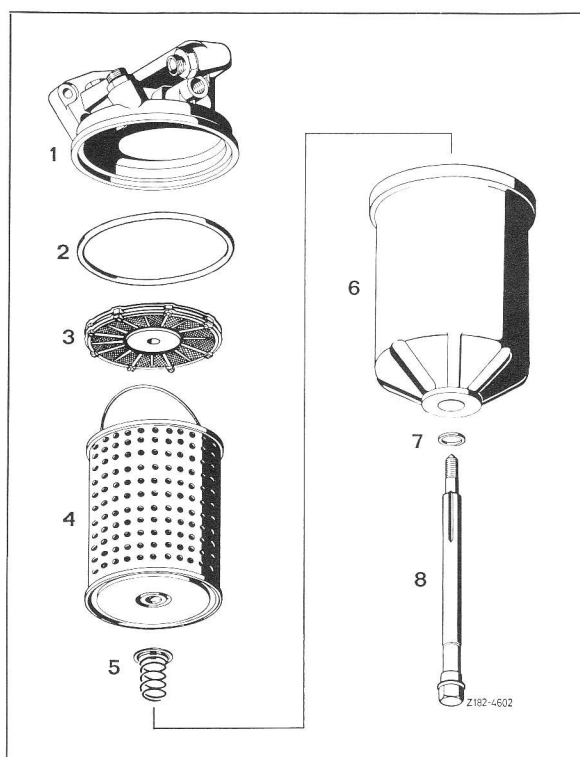
Special tools

Special pliers for oil filter cleaning	110 589 00 68 00
Pin spanner SW x 17 mm	000 589 24 07 00
Insert for pin spanner	000 589 24 07 01
Screw driver insert SW 14 1/2"	commercially available e.g. Hazet 985-14





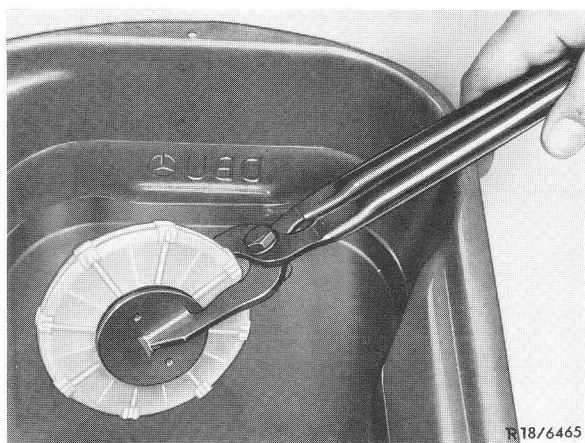
- Drain oil from oil pan, and, if fitted, from air oil cooler.



- Remove filter bowl (6) and empty.
- Wash out filter bowl and blow out.
- Check sealing ring (7) on fixing bolt and renew if found necessary.

For this purpose pull pressure spring with spring plate (5) from hex. bolt (8). When reassembling, **the pressure spring must under no circumstances be omitted or wrongly installed.**

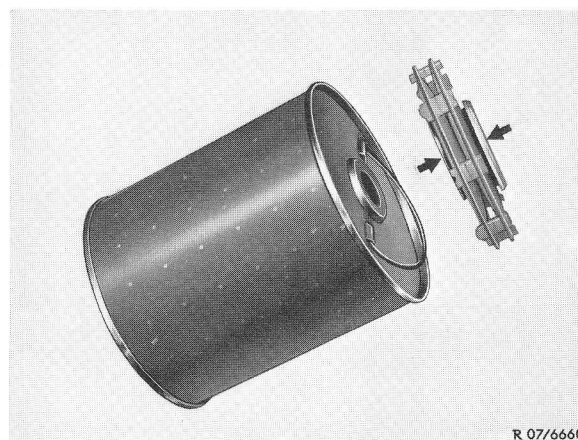
- Renew rubber ring (2).



- Using the special pliers wash the full flow filter element in cleaning gasoline and blow out in a low pressure air stream.

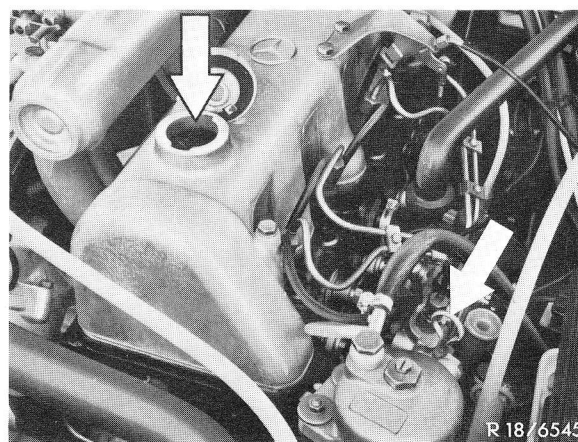
- Fit a **new** filter cartridge and the cleaned full flow fine mesh filter element into the filter bowl as in the adjacent figure.

Note: At the first maintenance job (300–1000 km/ 200–600 miles) the unitary initial operation filter element is to be replaced by a filter cartridge (4) and the full flow fine mesh filter element (3) supplied with the car.



Filter cartridge and fine mesh filter element

- Renew drain plug sealing rings and tighten drain plugs.
- Fill with engine oil.
- Run the engine and check for leaks.
- Check the oil level with the engine switched off.



At the first and second maintenance jobs,
then every 7 500 km / 5 000 miles

Engine M 110

For approved oils see: Operative Materials Page 226 or 225.1

Prescribed viscosity

Year round use	SAE 10 W-40, 10 W-50
Other viscosity classes for consistent ambient temperatures	
Above 0° C, 32° F (Central Europe April to October)	SAE 30, 20 W-40, 20 W-50
Above + 30° C, 84° F approved for use	SAE 40
From + 10° C to -20° C, 50° F to -4° F (Central Europe October to April)	SAE 10 W-30
Below -20° C, -4° F	SAE 5 W-20

Engine oil change and filter maintenance

Every 7 500 km / 5 000 miles, at least twice a year (spring and fall)

Oil quantity in liters

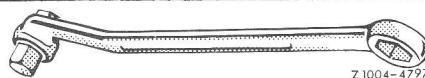
Engine with oil filter and air oil cooler (total quantity)	7.5
Engine with oil filter without air oil cooler (total quantity)	7.0
Oil pan	6.0
Oil filter	0.75
Air oil cooler	0.7

Oil dipstick color code pink

Tightening torques	Nm	(kpm)
Oil drain plug on oil pan	50	(5)
Oil drain plug on oil cooler	30–35	(3–3.5)
Fixing bolt for filter bowl	40–45	(4–4.5)

Special tools

Pin spanner SW 14 x 17 mm
Insert for pin spanner

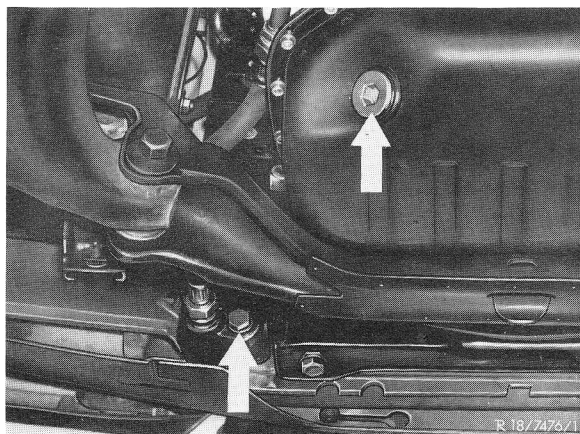


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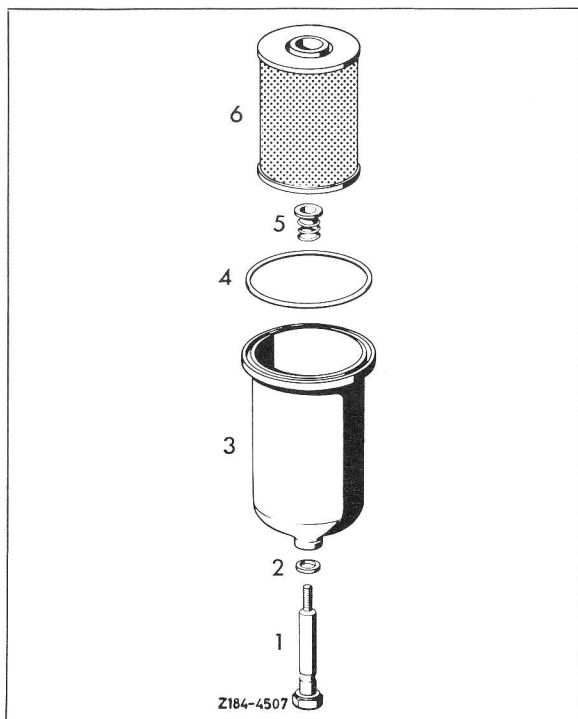
Screw driver insert SW 14 1/2"



commercially available e.g. Hazet 985–14



- Drain oil from oil pan and air oil cooler.



- Unscrew oil filter housing (3) and empty.
- Wash out oil filter housing and blow out.
- Check sealing ring (2) and renew if found necessary.

For this purpose pull pressure spring with spring plate (5) from hex. screw (1). **The pressure spring with spring plate must under no circumstances be omitted or wrongly installed** when reassembling.

- Renew rubber sealing ring (4).
- Fit **new** paper filter element (6) into oil filter housing.
- Renew sealing ring on the oil pan drain plug and on the air oil cooler.
- Tighten drain plugs.
- Fill with engine oil.
- Run the engine and check for leaks.
- Check oil level with the engine switched off.

Note

Oil circuit above air oil cooler is thermostatically controlled. Volume of cold oil in air oil cooler depends on leak oil quantity of control valve in filter top. During short runs of engine with vehicle stopped, air oil cooler will be partially filled only. This reduced volume in air oil cooler is indicated on dipstick as excess quantity.

