



7.3 Engine/vehicle fluids

Application	Fluid/lubricant	Specification	Season/temperature	Capacities ¹
Engine ²	Diesel fuel ³	ASTM D975-94: 1D, 2D (USA)	Year-round	22 liters (5.8 gal)
		EN 590 (EU)		
		ISO 8217 DMX (International)		
		BS 2869-A1, A2 (GB)		
		JIS K2204 (Japan)		
		KSM-2610 (Korea)		
		GB252 (China)		
	Biodiesel	EN 14214		3.5 l (0.9 gal)
		ASTM D-6751		
	Coolant	Distilled water and anti-freeze SF D12 Plus/ ASTM D4985 (reddish) ⁴		
		Distilled water and anti-freeze D40 Super/ ASTM 6210 (violet) ⁵		
Engine	Engine oil ⁶	SAE 10W-40	-15 °C (-5 °F) +45 °C (+104 °F)	About 3.5 l (0.9 gal)
Hydraulic oil reservoir	Hydraulic oil	Eurolub HVLP 46 ⁷	Year-round ⁸	11 liters (2.9 gal)
	Biodegradable hydraulic oil ⁹	Panolin HLP Synth 46		
		BP BIOHYD SE-S 46		
Grease zerks	Roller and friction bearings	KPF 2 K-20 ¹⁰ ISO-L-X-BCEB 2 ¹¹	Year-round	As required
	Open transmissions live ring: ball bearing			
	Live ring gears			
	Grease zerks			
Battery terminals	Acid-proof grease ¹²	FINA Marson L2	Year-round	As required
Control lever base	Adhesive fluid grease	Förch S401	Year-round	As required

1. The capacities indicated are approximate values; the sight glass or the dipstick alone is relevant for the correct level.

Capacities indicated are no system fills

2. Sulfur content below 0.05 %, cetane number over 45

3. In countries where level IIIA (or higher) or Tier IV interim (or higher) exhaust emission regulations apply, use diesel fuels with a maximum sulfur content of 0.0015 % (= 15 mg/kg).

4. Up to serial number WNCE1301CPAL00399

5. From serial number WNCE1301APAL00400

6. According to DIN 51511 (API CF, CF-4, CI-4; ACEA E3, E4, E5; JASO DH-1)

7. According to DIN 51524 section 3, ISO-VG 46.

8. Depending on local conditions – see *“Engine oil types” on page 7-14*.

9. Biodegradable hydraulic oil based on saturated synthetic esters with an iodine value of < 10, according to DIN 51524, section 3, HVLP, HEES.

10. KPF 2 K-20 according to DIN 51502 lithium-saponified grease.

11. ISO-L-X-BCEB 2 according to DIN ISO 6743-9, lithium-saponified grease.

12. Standard acid-proof grease NGLI category 2.



Hydraulic oil types

Viscosity class	Ambient temperature			
	min. °C	min. °F	max. °C	max. °F
ISO VG32	-20	-4	30	86
ISO VG46	-5	23	40	104
ISO VG68	5	41	50	122

Replacement intervals

Replace the hydraulic oil and hydraulic oil filter depending on the percentage of hammer operation.

Percentage of hammer work	Hydraulic oil	Hydraulic oil filter
20%	800 o/h	300 o/h
40%	400 o/h	
60%	300 o/h	100 o/h
Over 80 %	200 o/h	

Important information regarding operation with biodegradable hydraulic oil

- Use only the biodegradable oils that have been tested and released by Wacker Neuson.
- Add only biodegradable oil of the same type. In order to avoid misunderstandings, attach a clear label to the hydraulic oil filler neck providing clear information regarding the type of oil currently used. The joint use of two different biodegradable oils can affect the quality of one of the oil types. Therefore ensure that the remaining amount of biodegradable oil complies with the national and regional regulations as you replace it. Observe the manufacturer's indications.
- Do not add mineral oil – the content of mineral oil should not exceed 2 % of the system fill in order to avoid foaming problems and to ensure biological degradability.
- When running the machine with biodegradable oil, the same oil and filter replacement intervals are valid as for mineral oil.
- Always have the condensation water in the hydraulic oil reservoir drained by a Wacker Neuson service center before the cold season. The water content may not exceed 0.1 % by weight.
- The instructions in this Operator's Manual concerning environmental protection are also valid for the use of biodegradable oil.
- Subsequent change from mineral oil to biodegradable oil may only be performed by a Wacker Neuson service center.



Engine oil types

Viscosity grade (SAE)	Ambient temperature			
	min. °C	min. °F	max. °C	max. °F
10W	-20	-4	10	50
20W	-10	14	10	50
10W40	-20	-4	40	104
15W40	-15	5	40	104
20	0	32	20	68
30	10	50	30	86
40	20	68	40	104