



5.21 Fluids and lubricants

Component/application	Fluid/lubricant		Season/tem-	Capacities 1	
		Specification	perature	50Z3	6003
Diesel engine	Engine oil ²	SAE10W-40	-20 °C (-4 °F) +40 °C (+104 °F)	7.81 (2.06 gal)	10.2 l (2.69 gal)
Travelling drive	Gearbox oil ³	SAE80W-90 ⁴	Year-round	About 1.3 I each (0.34 gal)	
Hydraulic oil tank	Hydraulic oil	HVLP 46 ⁵		73 I (19.3 gal)	
		HV 46 ⁷	Year-round ⁶		
	Biodegradable oil 8	HLP Synth 46	Tear-round		
		BIOHYD SE-S 46			
Grease	Roller and friction bearings			As required	
	Open transmissions live ring: ball bearing	KPF 2 K-20 ⁹ ISO-L-X-BCEB 2 ¹⁰	Grease		
	Live ring gears	1 16 S			
	Grease nipples				
Grease nipples	Multipurpose grease	KPF 2 K-20 ¹¹	Year-round	As rec	uired
Battery terminals	Acid-proof grease ¹²	FINA Marson L2	Year-round	As rec	uired
Fuel <mark>tank</mark>	Diesel fuel ¹³	ASTM D975-94: 1D, 2D (USA)		78 I (20.6 gal)	
		EN 590 : 96 (EU)			
		ISO 8217 DMX (International)			
		BS 2869-A1, A2 (GB)	Summer or win-		
		JIS K2204 (Japan)	ter diesel depending on outside temper- atures		
		KSM-2610 (Korea)	atures		
		GB252 (China)			
	Biodegradable diesel fuel	EN 14214			
		ASTM D-6751			
Engine cooling system	Coolant	Soft water + antifreeze SF D12 Plus	Year-round	71(1.8	5 gal)
Air conditioning	Refrigerant	R134a ¹⁴	Year-round	750 g (1	.65 lbs.)
	Compressor oil	Sanden SP10	Year-round	116.5 cm ³	(7.11 in³)
Washer system	Cleaning agent	Water + antifreeze	Year-round	21(0.5	3 gal)
Control lever base	Adhesive fluid grease	Förch S401	Year-round	As rec	uired

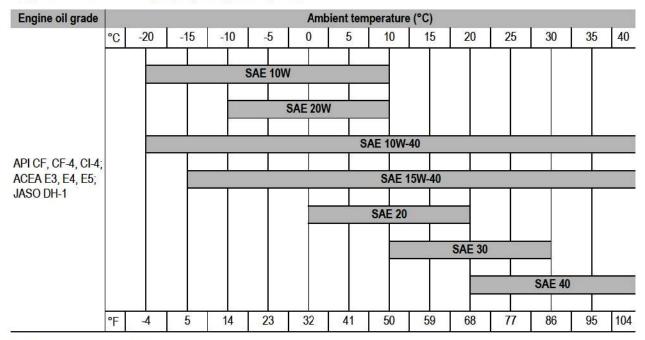
- 1. The capacities indicated are approximate values; the oil level check alone is relevant for the correct oil level Capacities indicated are no system fills
 2. According to DIN 51511 (API CF, CF-4, CI-4; ACEA E3, E4, E5; JASO DH-1).
 3. Hypoid gearbox oil based on basic mineral oil (SAE80W-90 according to DIN 51502), API GL5.
 4. According to DIN 51502 on a mineral oil basis. Do not mix gearbox oils.
 5. According to DIN 51524 section 3, ISO-VG 46.
 6. Depending on local conditions See Hydraulics oil grade on page 5-56.
 7. According to ISO 6743/4.
 8. Biodegradable hydraulic oil based on saturated synthetic esters with an iodine value of < 10, according to DIN 51524, section 3, HVLP, HEES.
 6. KPE 2 K-20 according to DIN 51502 multinumose lithium grease.
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- KPF 2 K-20 according to DIN 51502 multipurpose lithium grease.
- 10. ISO-L-X-BCEB 2 according to DIN ISO 6743-9.
- 11. KPF 2 K-20 according to DIN 51502 multipurpose lithium grease.
 12. Standard acid-proof grease NGLI category 2.
 13. Sulphur content below 0.05 %, cetane number over 45
 14. According to DIN 8960.

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Oil grades for the diesel engine, depending on temperature



Additional oil change and filter replacement (hydraulic system)



Caution!

An additional oil change and filter replacement can be required depending on how the machine is used. Failure to observe these replacement intervals can cause damage to hydraulic components.

■ Observe the following intervals

Application		Hydraulic oil	Hydraulic oil filter insert	
Normal work (excavation work)		Every 1000 s/h	Replace the first time after 50 s/h, then every 500 s/h	
Percentage of hammer work	20 %	Every 800 s/h	300 s/h	
	40 %	Every 400 s/h		
	60 %	Every 300 s/h	100 s/h	
	Over 80 %	Every 200 s/h		



Notice!

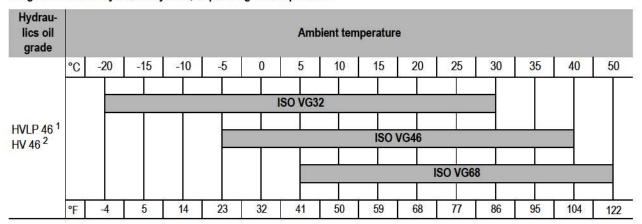
Please refer to the maintenance plan on page 5-57 for additional maintenance work.

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Oil grades for the hydraulic system, depending on temperature



- According to DIN 51524 section 3, ISO-VG 46. According to ISO 6743/4.