



7.3 Fluids and lubricants

Application	Fluid/lubricant	Specification	Season/temperature	Capacities ¹
Engine (Tier III/Tier IV) ²	Diesel fuel	ASTM D975 grade 2D S15 (USA) ^{3,4}	Summer or winter diesel depending on outside temperatures	83 liters (21.9 gal)
		EN 590 (EU) ^{4,5}		
		BS 2869:2010 class A2 (GB) ^{4,5}		
	Coolant	Distilled water and anti-freeze ASTM D6210	Year-round	16 liters (4.2 gal)
Engine (Tier III)	Engine oil ⁶	API CH-4	-20 °C to +40 °C (-4 °F to 104 °F)	8.0 l (2.1 gal)
		ACEA E5		
		EMA-DHD-1		
Engine (Tier IV)	Engine oil ²	API CJ-4	-18°C to +50°C (0°F to 122°F)	7.2 liters (1.9 gal)
		ACEA E9		
		ECF-3		
Hydraulic oil reservoir	Hydraulic oil	Eurolub HVLP 46 ⁷	Year-round ⁸	60 liters (15.9 gal)
	Biodegradable hydraulic oil ⁹	Panolin HLP Synth 46		
Brake fluid	Hydraulic oil	Eurolub HVLP 46 ⁷	Year-round ⁸	200 ml (12.2 in ³)
Grease zerks	Grease	KPF 2 K-20 ¹⁰ ISO-L-X-BCEB 2 ¹¹	Year-round	As required
Battery terminals	Acid-proof grease ¹²	FINA Marson L2	Year-round	As required
Washer system	Cleaning agent	Glass cleaner and anti-freeze	Year-round	1.2 l (73 in ³)

- The capacities indicated are approximate values; the oil level check alone is relevant for the correct oil level. Capacities indicated are no system fills
- Using biodegradable diesel fuel is prohibited.
- Tier III diesel engine: In countries without regulations on exhaust-gas emissions, diesel fuel with a sulfur content of up to 4000 ppm (0.4%) can be used.
- Sulfur content up to 15 ppm (0.0015 %)
- Sulfur content up to 10 ppm (0.001%)
- According to DIN 51511
- According to DIN 51524 section 3, ISO-VG 46
- Depending on local conditions – see "Engine oil types" on page 7-11
- Biodegradable hydraulic oil based on saturated synthetic esters with an iodine value of < 10, according to DIN 51524, section 3, HVLP, HEES
- According to DIN 51502, lithium-saponified grease
- According to DIN ISO 6743-9, lithium-saponified grease
- Standard acid-proof grease NGLI category 2