

3. FUEL, COOLANT AND LUBRICANTS

1) NEW MACHINE

New machine used and filled with following lubricants.

Description	Specification
Engine oil	SAE 15W-40(API CI-4)
Hydraulic oil	ISO VG 46(SAE 10W)
Swing and travel reduction gear	SAE 85W-140(API GL-5)
Grease	Lithium base grease NLGI No. 2
Fuel	ASTM D975-No. 2(Low sulfur fuel or ultra low sulfur fuel)
Coolant	Mixture of 50% ethylene glycol base antifreeze and 50% water.

SAE : Society of Automotive Engineers

API : American Petroleum Institute

ISO : International Organization for Standardization

NLGI : National Lubricating Grease Institute

ASTM : American Society of Testing and Material

- Low sulfur fuel : sulfur content $\leq 500\text{ppm}$
- Ultra low sulfur fuel : sulfur content $\leq 15\text{ppm}$

2) RECOMMENDED OILS

Use only oils listed below or equivalent.

Do not mix different brand oil.

Service point	Kind of fluid	Capacity l (U.S. gal)	Ambient temperature °C(°F)						
			-20 (-4)	-10 (14)	0 (32)	10 (50)	20 (68)	30 (86)	40 (104)
Engine oil pan	Engine oil	11.6(3.1)							
Swing drive	Gear oil	1.5(0.4)							
Final drive		1.2×2 (0.3×2)							
Hydraulic tank	Hydraulic oil	Tank: 70(18.5) System: 120(31.7)							
Fuel tank	Diesel fuel	120(31.7)							
Fitting (Grease nipple)	Grease	As required							
Radiator (Reservoir tank)	Mixture of antifreeze and water 50 : 50	10(2.6)							