

### 3. FUEL, COOLANT AND LUBRICANTS

#### 1) NEW MACHINE

New machine used and filled with following lubricants.

Description	Specification
Engine oil	SAE 15W-40 (API CH-4)
Hydraulic oil	Hyundai genuine long life hydraulic oil (ISO VG 46, VG 68) Conventional hydraulic oil (ISO VG 32 only)
Swing and travel reduction gear	SAE 30 (API CD)
Grease	Lithium base grease NLGI No. 2
Fuel	ASTM D975-No. 2
Coolant	Mixture of 50% ethylene glycol base antifreeze and 50% water.

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API : American Petroleum Institute

ISO : International Organization for Standardization

NLGI : National Lubricating Grease Institute

ASTM : American Society of Testing and Material

## 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	4.2 (1.1)				SAE 30				
			SAE 10W							
			SAE 10W-30							
						SAE 15W-40				
Final drive	Gear oil	0.33×2 (0.09×2)		SAE 30						
Hydraulic tank	Hydraulic oil	Tank: 20 (5.3) System: 30 (7.9)	ISO VG 32							
			ISO VG 46							
			ISO VG 68							
Fuel tank	Diesel fuel	25 (6.6)	ASTM D975 NO.1							
			ASTM D975 NO.2							
Fitting (Grease nipple)	Grease	As required	NLGI NO.1							
			NLGI NO.2							
Radiator (Reservoir tank)	Mixture of antifreeze and water 50 : 50	3.5 (0.9)	Ethylene glycol base permanent type							

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