

3. SPECIFICATION OF 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		ISO VG46(ISO VG32, ISO VG68 based on the ambient temperature)
Transmission oil		SAE 10W-30/15W-40
Axle oil	~#0114(VOLVO)	SAE 80W-90 with LS-ADDITIVE(API GL-5)
	#0115~(ZF)	*Refer to below list
Grease		Lithium base grease NLGI No. 2
Fuel		ASTM D975-No. 2
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
- * Recommended oil list
 - BP TERRAC SUPER TRANSMISSION 10W-30
 - CASTROL AGRI TRANS PLUS 10W-30
 - MOBILFLUID 426
 - SHELL DONAX TD 10W-30
 - TOTAL DYNATRANS MPV

2) RECOMMENDED LUBRICANTS

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	16(4.2)					SAE 30				
			SAE 10W								
			SAE 10W-30								
			SAE 15W-40								
Transmission	Oil	43(11.4)	SAE 10W-30								
			SAE 15W-40								
VOLVO axle (-#0114)	Gear oil	Front : 29(7.7) Rear : 29(7.7)	SAE 80W-90LSD/API GL-5								
ZF axle (#0115-)	UTTO	Front : 29(7.7) Rear : 24(6.3)	*Refer to below list								
Hydraulic tank	Hydraulic oil	Tank: 130(34.4) System: 175(46)	ISO VG 32								
			ISO VG 46								
			ISO VG 68								
Fuel tank	Diesel fuel	295(78)	ASTM D975 NO. 1								
			ASTM D975 NO. 2								
Fitting (Grease nipple)	Grease	As required	NLGI NO. 1								
			NLGI NO. 2								
Radiator	Mixture of antifreeze and water 50 : 50	35(9.2)	Ethylene glycol base permanent type								

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