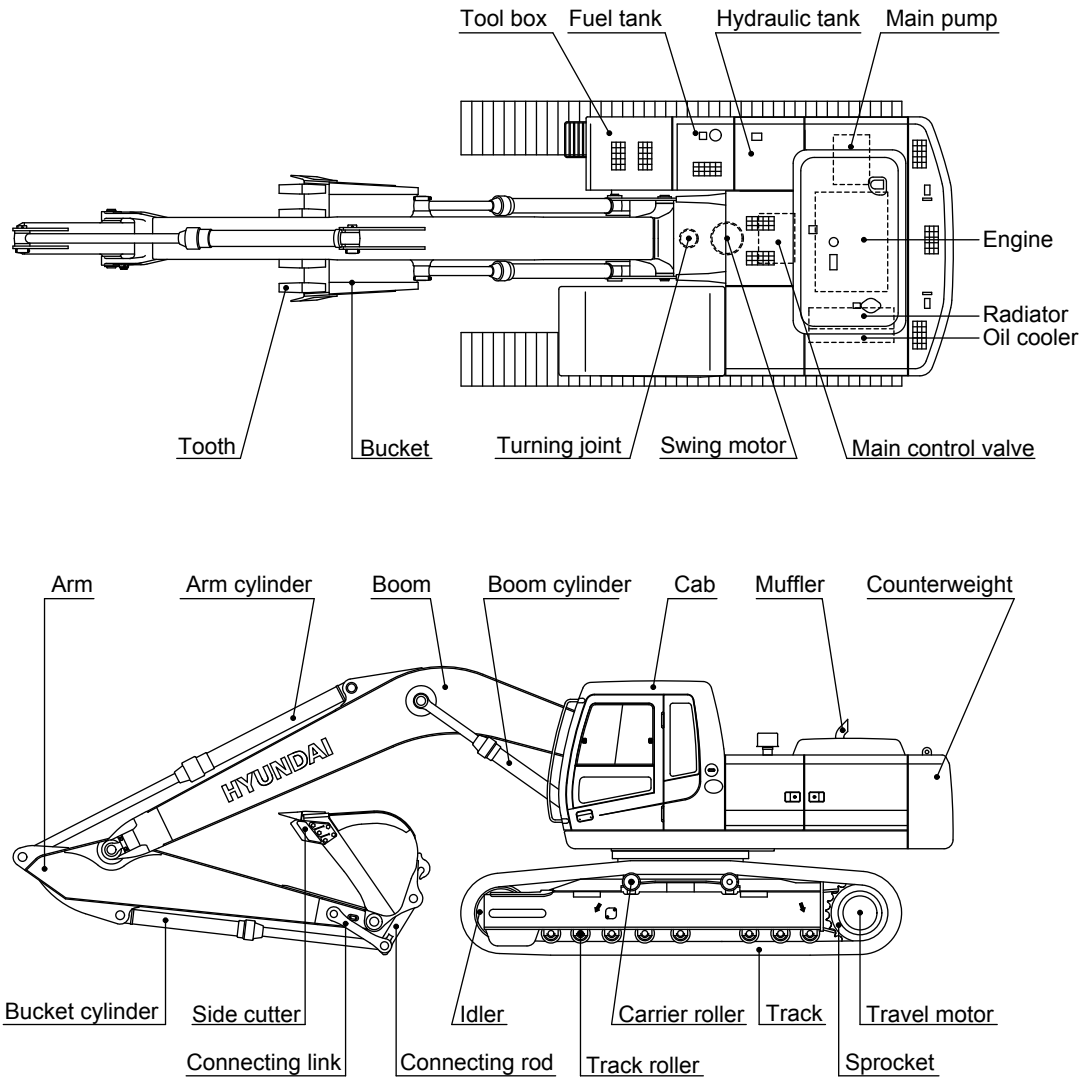


SPECIFICATIONS

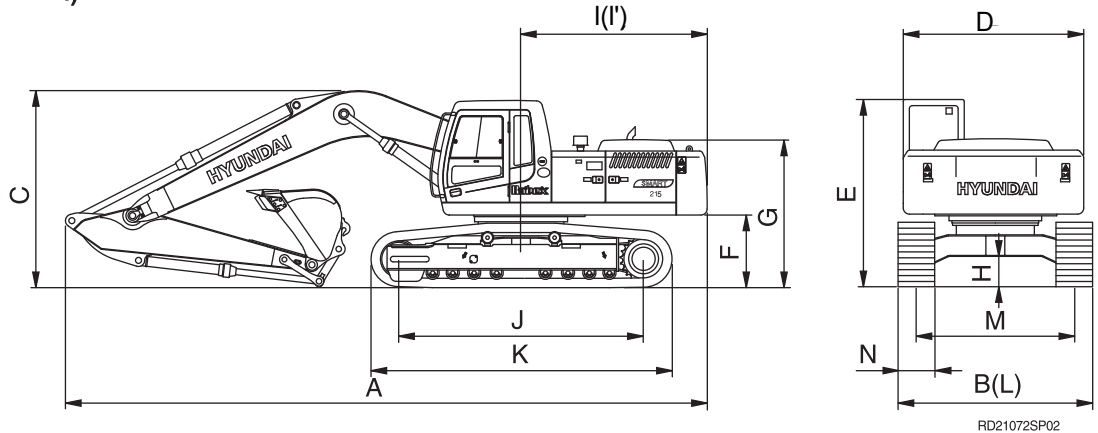
1. MAJOR COMPONENT



RD21072SP01

2. SPECIFICATIONS

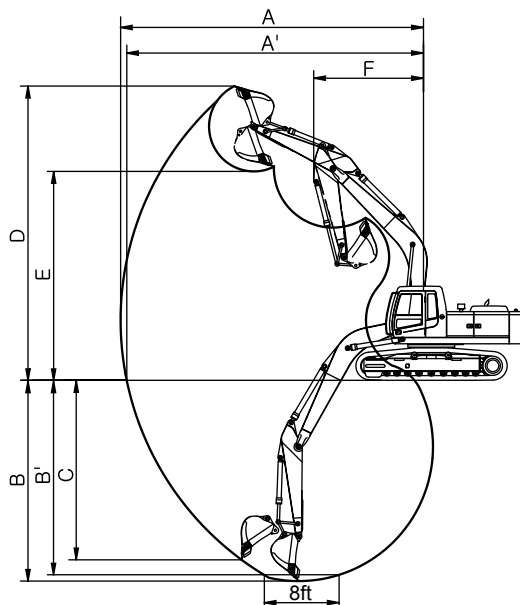
1) R215



Description		Unit	Specification
Operating weight		kg(lb)	21700(47840)
Bucket capacity(SAE heaped), standard		m ³ (yd ³)	0.92(1.20)
Overall length	A	mm(ft-in)	9570(31' 5")
Overall width, with 600mm shoe	B		2890(9' 4")
Overall height	C		3110(10' 2")
Superstructure width	D		2700(8' 10")
Overall height of cab	E		2920(9' 7")
Ground clearance of counterweight	F		1060(3' 6")
Engine cover height	G		2320(7' 7")
Minimum ground clearance	H		480(1' 7")
Rear-end distance	I		2770(9' 1")
Rear-end swing radius	I'		2830(9' 3")
Distance between tumblers	J		3350(11')
Undercarriage length	K		4340(14' 2")
Undercarriage width	L		2890(9' 4")
Track gauge	M		2390(7' 8")
Track shoe width, standard	N		600(2')
Travel speed(Low/high)		km/hr(mph)	3.5/5.2(2.2/3.2)
Swing speed		rpm	11.0
Gradeability		Degree(%)	35(70)
Ground pressure(500mm shoe)		kgf/cm ² (psi)	0.54(7.68)

3. WORKING RANGE

1) R215 [5.68m(18' 8") BOOM]



21072SP03

Description		2.0m(6' 7") Arm	*2.40m(7' 10") Arm	2.92m(9' 7") Arm
Max digging reach	A	9140mm (30' 0")	9500mm (31' 2")	9940mm (32' 7")
Max digging reach on ground	A'	8960mm (29' 5")	9330mm (30' 7")	9780mm (32' 1")
Max digging depth	B	5820mm (19' 1")	6220mm (20' 5")	6740mm (22' 1")
Max digging depth(8ft level)	B'	5580mm (18' 4")	6010mm (19' 9")	6550mm (21' 6")
Max vertical wall digging depth	C	5280mm (17' 4")	5720mm (18' 9")	6120mm (20' 1")
Max digging height	D	9140mm (30' 0")	9340mm (30' 8")	9470mm (31' 1")
Max dumping height	E	6330mm (20' 9")	6520mm (21' 5")	6670mm (21' 11")
Min swing radius	F	3750mm (12' 4")	3740mm (12' 3")	3640mm (11' 11")
Bucket digging force	SAE	133 kN	133 kN	133 kN
		13600 kgf	13600 kgf	13600 kgf
		29980 lbf	29980 lbf	29980 lbf
	ISO	152 kN	152 kN	152 kN
		15500 kgf	15500 kgf	15500 kgf
		34170 lbf	34170 lbf	34170 lbf
Arm digging force	SAE	135 kN	113 kN	97 kN
		13800 kgf	11500 kgf	9900 kgf
		30420 lbf	25350 lbf	21830 lbf
	ISO	142 kN	118 kN	101 kN
		14500 kgf	12000 kgf	10300 kgf
		31970 lbf	26460 lbf	22710 lbf

* : Standard

4. WEIGHT

1) R215

Item	R215	
	kg	lb
Upperstructure assembly	8950	19730
Main frame weld assembly	1720	3790
Engine assembly	430	950
Main pump assembly	120	265
Main control valve assembly	200	440
Swing motor assembly	190	420
Hydraulic oil tank assembly	240	530
Fuel tank assembly	195	430
Counterweight	3800	8380
Cab assembly	310	680
Lower chassis assembly	10360	22839
Track frame weld assembly	3230	7120
Swing bearing	260	570
Travel motor assembly	305	670
Turning joint	55	120
Track recoil spring	140	310
Idler	170	370
Carrier roller	20	45
Track roller	57	125
Track-chain assembly(600 mm standard triple grouser shoe)	1422	3134
Front attachment assembly(5.68m boom, 2.4m arm, 0.92m³ SAE heaped bucket)	4025	8870
5.68m boom assembly	1530	3370
2.4m arm assembly	670	1480
0.92m³ SAE heaped bucket	765	1690
Boom cylinder assembly	180	400
Arm cylinder assembly	290	640
Bucket cylinder assembly	175	390
Bucket control link assembly	170	370

5. LIFTING CAPACITIES

1) R215

(1) 5.68m(18' 8") boom, 2.00m(6' 7") arm equipped with 0.92m³(SAE heaped) bucket, 600mm(20") triple grouser shoe and 3800kg counterweight.

-  : Rating over-front
-  : Rating over-side or 360 degree

Load point height		Load radius								At max. reach		
		3.0m(10ft)		4.5m(15ft)		6.0m(20ft)		7.5m(25ft)		Capacity		Reach
												m(ft)
7.5m (25ft)	kg lb									*3750 *8270	*3750 *8270	6.64 (21.8)
6.0m (20ft)	kg lb					*4150 *9150	*4150 *9150			*3800 *8380	2900 6390	7.78 (25.5)
4.5m (15ft)	kg lb			*5360 *11820	*5360 *11820	*4540 *10010	4420 9740			*3910 *8620	2420 5340	8.43 (27.7)
3.0m (10ft)	kg lb			*6970 *15370	6520 14370	*5240 *11550	4160 9170	*4500 *9920	2850 6280	3830 8440	2200 4850	8.74 (28.7)
1.5m (5ft)	kg lb			*8380 *18470	6000 13230	*5950 *13120	3910 8620	4790 10560	2740 6040	3770 8310	2150 4740	8.73 (28.6)
Ground Line	kg lb			*9020 *19890	5770 12720	*6430 *14180	3740 8250	4700 10360	2660 5860	3980 8770	2260 4980	8.42 (27.6)
-1.5m (-5ft)	kg lb	*13020 *28700	11600 25570	*8960 *19750	5740 12650	*6510 *14350	3690 8140			*4550 *10030	2610 5750	7.76 (25.5)
-3.0m (-10ft)	kg lb	*11620 *25620	*11620 *25620	*8210 *18100	5850 12900	*5910 *13030	3780 8330			*4510 *9940	3470 7650	6.61 (21.7)
-4.5m (-15ft)	kg lb	*8770 *19330	*8770 *19330									

- Note
1. Lifting capacity are based on SAE J1097 and ISO 10567.
 2. Lifting capacity of the ROBEX series does not exceed 75% of tipping load with the machine on firm, level ground or 87% of full hydraulic capacity.
 3. The load point is a hook located on the back of the bucket.
 4. *indicates load limited by hydraulic capacity.

(2) 5.68m(18' 8") boom, 2.40m(7' 10") arm equipped with 0.92m³(SAE heaped) bucket, 600mm(20") triple grouser shoe and 3800kg counterweight.

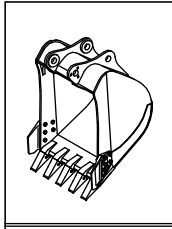
Load point height		Load radius										At max. reach		
		1.5m(5ft)		3.0m(10ft)		4.5m(15ft)		6.0m(20ft)		7.5m(25ft)		Capacity		Reach
														m(ft)
7.5m (25ft)	kg lb											*3450 *7610	*3450 *7610	7.15 (23.5)
6.0m (20ft)	kg lb							*3750 *8270	*3750 *8270			*3520 *7760	2630 5800	8.20 (26.9)
4.5m (15ft)	kg lb							*4190 *9240	*4190 *9240	*3940 *8690	2970 6550	*3630 *8000	2220 4890	8.82 (28.9)
3.0m (10ft)	kg lb					*6420 *14150	*6420 *14150	*4920 *10850	4190 9240	*4240 *9350	2860 6310	3560 7850	2020 4450	9.11 (29.9)
1.5m (5ft)	kg lb					*7960 *17550	6040 13320	*5690 *12540	3910 8620	*4620 *10190	2720 6000	3500 7720	1970 4340	9.10 (29.9)
Ground Line	kg lb			*8300 *18300	*8300 *18300	*8820 *19440	5730 12630	*6260 *13800	3710 8180	4670 10300	2620 5780	3670 8090	2060 4540	8.81 (28.9)
-1.5m (-5ft)	kg lb	*9220 *20330	*9220 *20330	*12750 *28110	11370 25070	*8970 *19780	5650 12460	*6460 *14240	3630 8000			4140 9130	2350 5180	8.18 (26.8)
-3.0m (-10ft)	kg lb	*13340 *29410	*13340 *29410	*12280 *27070	11580 25530	*8430 *18580	5730 12630	*6110 *13470	3670 8090			*4360 *9610	3020 6660	7.12 (23.4)
-4.5m (-15ft)	kg lb			*9840 *21690	*9840 *21690	*6850 *15100	5980 13180							

(3) 5.68m(18' 8") boom, 2.92m(9' 7") arm equipped with 0.92m³(SAE heaped) bucket, 600mm(20") triple grouser shoe and 3800kg counterweight.

Load point height		Load radius										At max. reach		
		1.5m(5ft)		3.0m(10ft)		4.5m(15ft)		6.0m(20ft)		7.5m(25ft)		Capacity		Reach
														m(ft)
7.5m (25ft)	kg lb											*3120 *6880	3080 6790	7.72 (25.3)
6.0m (20ft)	kg lb											*3210 *7080	2390 5270	8.69 (28.5)
4.5m (15ft)	kg lb							*3770 *8310	*3770 *8310	*3590 *7910	3040 6700	*3340 *7360	2040 4500	9.27 (30.4)
3.0m (10ft)	kg lb			*9160 *20190	*9160 *20190	*5760 *12700	*5760 *12700	*4530 *9990	4270 9410	*3950 *8710	2900 6390	3300 7280	1860 4100	9.55 (31.3)
1.5m (5ft)	kg lb			*8660 *19090	*8660 *19090	*7430 *16380	6180 13620	*5380 *11860	3960 8730	*4390 *9680	2750 6060	3240 7140	1810 3990	9.54 (31.3)
Ground Line	kg lb			*9310 *20530	*9310 *20530	*8550 *18850	5780 12740	*6060 *13360	3730 8220	4670 10300	2620 5780	3370 7430	1870 4120	9.26 (30.4)
-1.5m (-5ft)	kg lb	*8550 *18850	*8550 *18850	*12160 *26810	11240 24780	*8950 *19730	5630 12410	*6400 *14110	3610 7960	4590 10120	2560 5640	3740 8250	2100 4630	8.67 (28.4)
-3.0m (-10ft)	kg lb	*11700 *25790	*11700 *25790	*13020 *28700	11400 25130	*8680 *19140	5640 12430	*6280 *13850	3600 7940			*4230 *9330	2610 5750	7.69 (25.2)
-4.5m (-15ft)	kg lb			*11040 *24340	*11040 *24340	*7560 *16670	5820 12830					*4140 *9130	3950 8710	6.09 (20.0)

6. BUCKET SELECTION GUIDE

1) GENERAL BUCKET



※ 0.92m³ SAE
heaped bucket

Capacity		Width		Weight	Recommendation		
					5.68m (18' 8") boom		
SAE heaped	CECE heaped	Without side cutter	With side cutter		2.0m arm (6' 7")	2.4m arm (7' 10")	2.92m arm (9' 7")
※ 0.92m³ (1.20yd³)	0.80m³ (1.05yd³)	1150mm (45.3")	1270mm (50.0")	770kg (1700lb)			

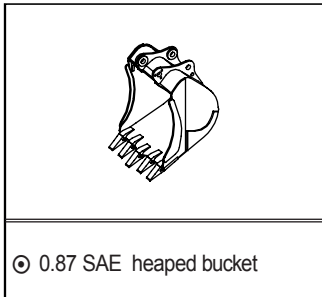
※ : Standard bucket

 Applicable for materials with density of 2000kgf/m³ (3370lbf/yd³) or less

 Applicable for materials with density of 1600kgf/m³ (2700lbf/yd³) or less

 Applicable for materials with density of 1100kgf/m³ (1850lbf/yd³) or less

2) ROCK-HEAVY DUTY BUCKET



◎ 0.87 SAE heaped bucket

Capacity		Width		Weight	Recommendation			
					5.68m (18' 8") boom			
SAE heaped	CECE heaped	Without side cutter	With side cutter		2.0m arm (6' 7")	2.4m arm (7' 10")	2.92m arm (9' 7")	
◎ 0.87m³ (1.14yd³)	0.75m³ (0.98yd³)	1140mm (44.9")	-	900kg (1980lb)				

◎: Rock-Heavy duty bucket

 Applicable for materials with density of 2000kgf/m³ (3370lbf/yd³) or less

 Applicable for materials with density of 1600kgf/m³ (2700lbf/yd³) or less

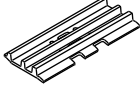
 Applicable for materials with density of 1100kgf/m³ (1850lbf/yd³) or less

7. UNDERCARRIAGE

1) TRACKS

X-leg type center frame is integrally welded with reinforced box-section track frames. The design includes dry tracks, lubricated rollers, idlers, sprockets, hydraulic track adjusters with shock absorbing springs and assembled track-type tractor shoes with triple grousers.

2) TYPES OF SHOES

Model	Shapes		Triple grouser
			
R215	Shoe width	mm(in)	600(24)
	Operating weight	kg(lb)	21700(47840)
	Ground pressure	kgf/cm ² (psi)	0.54(7.68)
	Overall width	mm(ft-in)	2890(9' 4)

3) NUMBER OF ROLLERS AND SHOES ON EACH SIDE

Item	Quantity
Carrier rollers	2EA
Track rollers	8EA
Track shoes	48EA

4) SELECTION OF TRACK SHOE

Suitable track shoes should be selected according to operating conditions.

Method of selecting shoes

Confirm the category from the list of applications in **table 2**, then use **table 1** to select the shoe.

※ **Table 1**

Track shoe	Specification	Category
600mm triple grouser	Standard	A

※ **Table 2**

Category	Applications	Precautions
A	Rocky ground, river beds, normal soil	Travel at low speed on rough ground with large obstacles such as boulders or fallen trees

8. SPECIFICATIONS FOR MAJOR COMPONENTS

1) ENGINE

Item	Specification
Model	Cummins 6BT5.9
Type	4-cycle turbocharged diesel engine, low emission
Cooling method	Water cooling
Number of cylinders and arrangement	6 cylinders, in-line
Firing order	1-5-3-6-2-4
Combustion chamber type	Direct injection type
Cylinder bore × stroke	102 × 120mm(4.02" × 4.72")
Piston displacement	5880cc(359cu in)
Compression ratio	17.4 : 1
Rated gross horse power (SAE J1995)	139Hp at 2000rpm (104kW at 2000rpm)
Maximum torque at 1600rpm	57.6kgf · m(416lbf · ft)
Engine oil quantity	17 l (4.49U.S. gal)
Dry weight	432kg(952lb)
High idling speed	2200+ 50rpm
Low idling speed	1000± 100rpm
Rated fuel consumption	166.3g/Hp · hr at 2000rpm
Starting motor	24V-4.5kW
Alternator	Lucas TVS(24V-4.5A)
Battery	2 × 12V × 100Ah

2) MAIN PUMP

Item	Specification
Type	Variable displacement tandem axis piston pumps
Capacity	2 × 113cc/rev
Maximum pressure	330kgf/cm ² (4694psi)
Rated oil flow	2 × 210 l /min (55.5U.S. gpm/ 46.2U.K. gpm)

3) GEAR PUMP

Item	Specification
Type	Fixed displacement gear pump single stage
Capacity	10cc/rev
Maximum pressure	35kgf/cm ² (500psi)
Rated oil flow	19.5 l /min(5.2U.S. gpm/4.2U.K. gpm)

4) MAIN CONTROL VALVE

Item	Specification
Type	9 spools mono-block
Operating method	Hydraulic pilot system
Main relief valve pressure	330kgf/cm ² (4695psi)
Overload relief valve pressure	390kgf/cm ² (5550psi)

5) SWING MOTOR

Item	Specification
Type	Two fixed displacement axial piston motor
Capacity	151cc/rev
Relief pressure	240kgf/cm ² (3414psi)
Braking system	Automatic, spring applied hydraulic released
Braking torque	59kgf · m(427lbf · ft)
Brake release pressure	33~50kgf/cm ² (470~711psi)
Reduction gear type	2 - stage planetary
Swing speed	11rpm

6) TRAVEL MOTOR

Item	Specification
Type	Variable displacement axial piston motor
Relief pressure	330kgf/cm ² (4695psi)
Reduction gear type	2-stage planetary
Braking system	Automatic, spring applied hydraulic released
Brake release pressure	11kgf/cm ² (156psi)
Braking torque	49.3kgf · m(357lbf · ft)

7) REMOTE CONTROL VALVE

Item		Specification
Type		Pressure reducing type
Operating pressure	Minimum	6.5kgf/cm ² (92psi)
	Maximum	26kgf/cm ² (370psi)
Single operation stroke	Lever	61mm(2.4in)
	Pedal	123mm(4.84in)

8) CYLINDER

Item		Specification
Boom cylinder	Bore dia × Rod dia × Stroke	ø 120 × ø 85 × 1290mm
	Cushion	Extend only
Arm cylinder	Bore dia × Rod dia × Stroke	ø 140 × ø 100 × 1510mm
	Cushion	Extend and retract
Bucket cylinder	Bore dia × Rod dia × Stroke	ø 125 × ø 85 × 1055mm
	Cushion	Extend only

※ **Discoloration of cylinder rod can occur when the friction reduction additive of lubrication oil spreads on the rod surface.**

※ **Discoloration does not cause any harmful effect on the cylinder performance.**

9) SHOE

Item		Width	Ground pressure	Link quantity	Overall width
R215	Standard	600mm(23")	0.54kgf/cm ² (7.68psi)	48	2890mm(9' 4")

10) BUCKET

Item		Capacity		Tooth quantity	Width	
		SAE heaped	CECE heaped		Without side cutter	With side cutter
R215	STD	0.92m ³ (1.20yd ³)	0.80m ³ (1.05yd ³)	5	1150mm(45.3")	1270mm(50.0")
	OPT	⊙0.87m ³ (1.14yd ³)	0.75m ³ (0.98yd ³)	5	1140mm(44.9")	-

⊙ : Rock-Heavy duty bucket

9. 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	17.0(4.49)					SAE 30				
			SAE 10W								
			SAE 10W-30								
				SAE 15W-40							
Swing drive	Gear oil	5.0(1.3)									
Final drive		5.8×2 (1.5×2)		SAE 85W-140							
Hydraulic tank	Hydraulic oil	Tank; 150(39.62)	ISO VG 32								
		System; 260(68.68)		ISO VG 46							
				ISO VG 68 LF*/ ISO VG 68*							
Fuel tank	Diesel fuel	340(90)	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	35(9.2)		Ethylene glycol base permanent type							

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

ISO VG 68 LF : Long Life Oil

ISO VG 68 : Conventional Oil