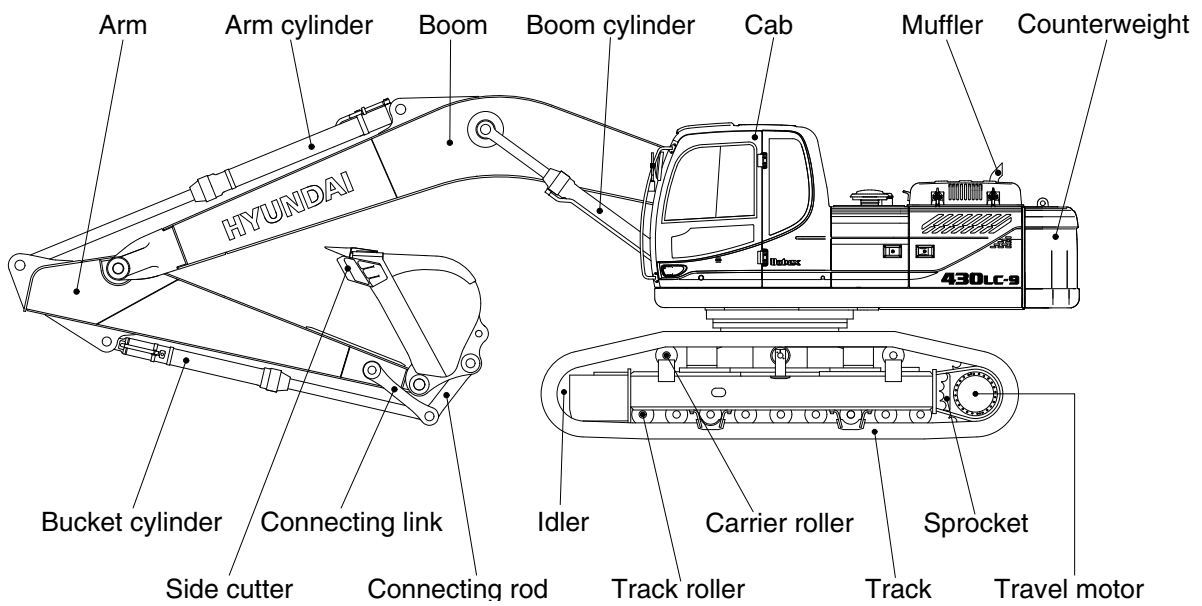
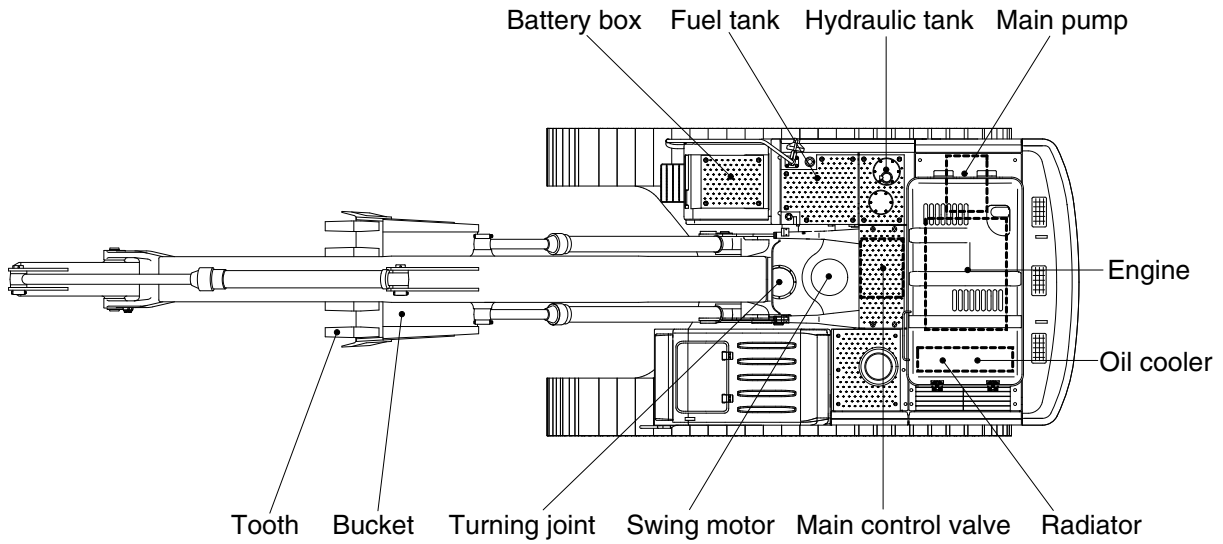


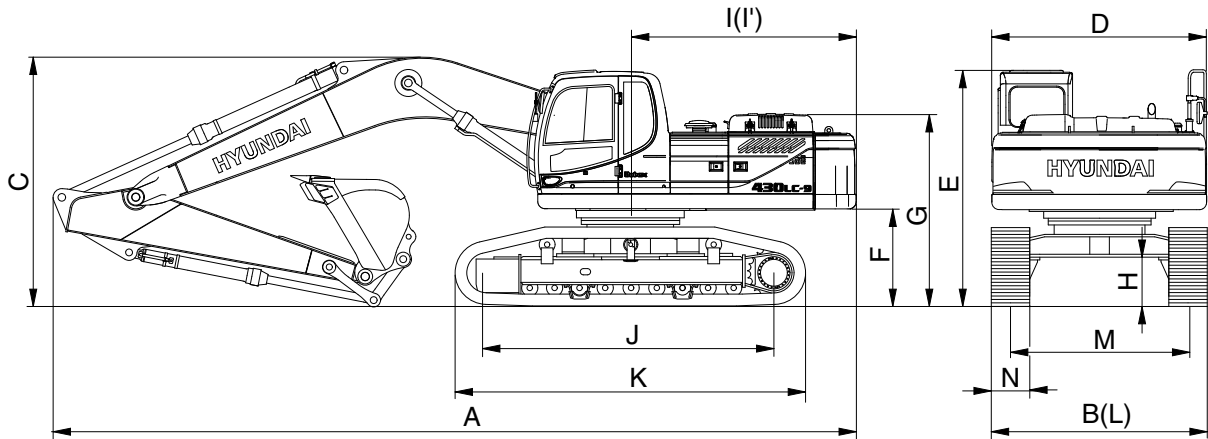
# GROUP 2 SPECIFICATIONS

## 1. MAJOR COMPONENT



43092SP01

## 2. SPECIFICATIONS

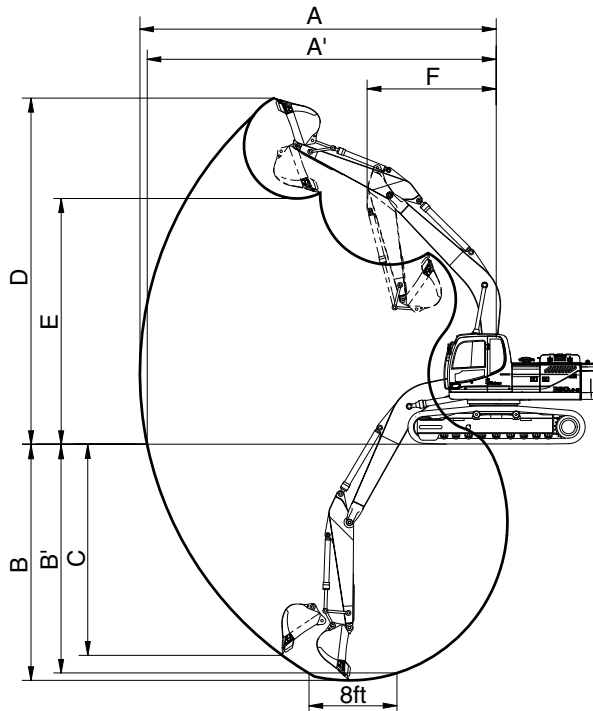


43092SP02

Description		Unit	Specification
Operating weight		kg (lb)	42600 (93920)
Bucket capacity (SAE heaped), standard		m <sup>3</sup> (yd <sup>3</sup> )	1.9 (2.49)
Overall length	A	mm (ft-in)	11120 (36' 6")
Overall width, with 600 mm shoe	B		3340 (10' 11")
Overall height	C		3500 (11' 6")
Superstructure width	D		2980 (9' 9")
Overall height of cab	E		3190 (10' 5")
Ground clearance of counterweight	F		1295 (4' 3")
Engine cover height	G		2795 (9' 2")
Minimum ground clearance	H		555 (1' 10")
Rear-end distance	I		3350 (11' 1")
Rear-end swing radius	I'		3415 (11' 2")
Distance between tumblers	J		4470 (14' 8")
Undercarriage length	K		5462 (17' 11")
Undercarriage width	L		3340 (11' 0")
Track gauge	M		2740 (9' 0")
Track shoe width, standard	N		600 (24")
Travel speed (low/high)			km/hr (mph)
Swing speed		rpm	9.6
Gradeability		Degree (%)	35 (70)
Ground pressure (600 mm shoe)		kgf/cm <sup>2</sup> (psi)	0.74 (10.52)
Max traction force		kg (lb)	34000 (74960)

### 3. WORKING RANGE

· 6.5 m (21' 4") BOOM



38092SP03

Description		3.2 m (10' 6") Arm
Max digging reach	A	11250 mm (36'11")
Max digging reach on ground	A'	11030 mm (36' 2")
Max digging depth	B	7470 mm (24' 6")
Max digging depth (8ft level)	B'	7310 mm (24' 0")
Max vertical wall digging depth	C	6290 mm (20' 8")
Max digging height	D	10630 mm (34' 11")
Max dumping height	E	7470 mm (24' 6")
Min swing radius	F	4450 mm (14' 7")
Bucket digging force	SAE	200.1 [218.2] kN
		20400 [22260] kgf
		44970 [49060] lbf
	ISO	228.6 [249.4] kN
		23310 [25430] kgf
		51390 [56060] lbf
Arm crowd force	SAE	152.2 [166.0] kN
		15520 [16940] kgf
		34220 [37330] lbf
	ISO	157.5 [171.8] kN
		16060 [17520] kgf
		35410 [38630] lbf

[ ] : Power boost

## 4. WEIGHT















Item	R430LC-9	
	kg	lb
Upperstructure assembly	15540	34260
Main frame weld assembly	2995	6600
Engine assembly	740	1630
Main pump assembly	245	540
Main control valve assembly (type 1)	340	750
Main control valve assembly (type 2)	420	930
Swing motor assembly	440	970
Hydraulic oil tank assembly	340	750
Fuel tank assembly	230	510
Counterweight	7000	15430
Cab assembly	490	1080
Lower chassis assembly	19200	42330
Track frame weld assembly	7060	15560
Swing bearing	590	1300
Travel motor assembly	620	1370
Turning joint	65	140
Track recoil spring	310	680
Idler	250	550
Carrier roller	40	90
Track roller	80	180
Track-chain assembly (600 mm standard triple grouser shoe)	2700	5950
Front attachment assembly (6.5 m boom, 3.2 m arm, 1.9 m <sup>3</sup> SAE heaped bucket)	7860	17330
6.5 m boom assembly	3050	6720
3.2 m arm assembly	1410	3110
1.9 m <sup>3</sup> SAE heaped bucket	1675	3690
Boom cylinder assembly	370	820
Arm cylinder assembly	490	1080
Bucket cylinder assembly	320	710
Bucket control linkage assembly	370	820

※ Main control valve assy (type 1 and type 2) : see parts manual.

## 5. LIFTING CAPACITIES

1) 6.5 m (21' 4") boom, 3.2 m (10' 6") arm equipped with 1.90 m<sup>3</sup> (SAE heaped) bucket and 600 mm (24") triple grouser shoe.

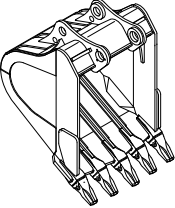
·  : Rating over-front      ·  : Rating over-side or 360 degree

Load point height		Load radius												At max. reach			
		1.5 m (5.0 ft)		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0 ft)		7.5 m (25.0 ft)		9.0 m (30.0 ft)		Capacity	Reach		
																m (ft)	
9.0 m (30 ft)	kg														*5530	*5530	7.74
	lb														*12190	*12190	(25.4)
7.5 m (25.0 ft)	kg								*4110	*4110					*5580	5400	8.91
	lb								*9060	*9060					*12300	11900	(29.2)
6.0 m (20.0 ft)	kg								*6120	*6120					*5720	4450	9.68
	lb								*13490	*13490					*12610	9810	(31.8)
4.5 m (15.0 ft)	kg							*7780	*7780	*6820	*6820	*4030	*4030	*5900	3910	10.14	
	lb							*17150	*17150	*15040	*15040	*8880	*8880	*13010	8620	(33.3)	
3.0 m (10.0 ft)	kg				*13020	*13020	*9470	*9470	*7740	6820	*5960	4860	*6150	3640	10.34		
	lb				*28700	*28700	*20880	*20880	*17060	15040	*13140	10710	*13560	8020	(33.9)		
1.5 m (5.0 ft)	kg				*15860	14580	*11060	9280	*8660	6450	*7130	4670	*6430	3580	10.29		
	lb				*34970	32140	*24380	20460	*19090	14220	*15720	10300	*14180	7890	(33.8)		
Ground Line	kg			*13570	*13570	*17330	13920	*12180	8830	*9380	6170	*6710	4520	*6730	3720	10.01	
	lb			*29920	*29920	*38210	30690	*26850	19470	*20680	13600	*14790	9960	*14840	8200	(32.8)	
-1.5 m (-5.0 ft)	kg	*14160	*14160	*18010	*18010	*17610	13710	*12650	8600	*9700	6020			*7050	4130	9.44	
	lb	*31220	*31220	*39710	*39710	*38820	30230	*27890	18960	*21380	13270			*15540	9110	(31.0)	
-3.0 m (-10.0 ft)	kg	*18350	*18350	*23300	*23300	*16900	13790	*12370	8590	*9400	6030			*7320	4980	8.55	
	lb	*40450	*40450	*51370	*51370	*37260	30400	*27270	18940	*20720	13290			*16140	10980	(28.1)	
-4.5 m (-15.0 ft)	kg	*23090	*23090	*21340	*21340	*15010	14120	*11010	8800					*7330	6900	7.18	
	lb	*50900	*50900	*47050	*47050	*33090	31130	*24270	19400					*16160	15210	(23.6)	
-6.0 m (-20.0 ft)	kg					*10930	*10930										
	lb					*24100	*24100										

- 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.

## 6. BUCKET SELECTION GUIDE

### 1) ROCK-HEAVY DUTY

	
2.10 m <sup>3</sup> SAE heaped bucket	1.90 m <sup>3</sup> SAE heaped bucket

Capacity		Width		Weight	Recommendation	
					6.5 m (21' 4") boom	
SAE heaped	CECE heaped	Without side cutter	With side cutter		2.6 m arm (8' 6")	3.2 m arm (10' 6")
1.90 m <sup>3</sup> (2.49 yd <sup>3</sup> )	1.65 m <sup>3</sup> (2.16 yd <sup>3</sup> )	1660 mm (65.6")	-	1980 kg (4370 lb)		
2.10 m <sup>3</sup> (2.75 yd <sup>3</sup> )	1.84 m <sup>3</sup> (2.41 yd <sup>3</sup> )	1800 mm (70.9")	-	2090 kg (4610 lb)		

Applicable for materials with density of 2000 kg/m<sup>3</sup> (3370 lb/yd<sup>3</sup>) or less

Applicable for materials with density of 1600 kg/m<sup>3</sup> (2700 lb/yd<sup>3</sup>) or less

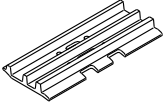
Applicable for materials with density of 1100 kg/m<sup>3</sup> (1850 lb/yd<sup>3</sup>) or less

## 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				
							
R430LC-9	Shoe width	mm (in)	600 (24)	700 (28)	750 (30)	800 (32)	900 (36)
	Operating weight	kg (lb)	42600 (93920)	43140 (95110)	43410 (95700)	43680 (96300)	44220 (97490)
	Ground pressure	kgf/cm <sup>2</sup> (psi)	0.74 (10.52)	0.64 (9.10)	0.60 (8.53)	0.57 (8.11)	0.51 (7.25)
	Overall width	mm (ft-in)	3340 (10' 11")	3440 (11' 3")	3490 (11' 5")	3540 (11' 7")	3640 (11' 11")

### 3) NUMBER OF ROLLERS AND SHOES ON EACH SIDE

Item	Quantity
Carrier rollers	2 EA
Track rollers	9 EA
Track shoes	53 EA

#### 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. Wide shoes (categories B and C) have limitations on applications. Before using wide shoes, check the precautions, then investigate and study the operating conditions to confirm if these shoes are suitable.

Select the narrowest shoe possible to meet the required flotation and ground pressure. Application of wider shoes than recommendations will cause unexpected problem such as bending of shoes, crack of link, breakage of pin, loosening of shoe bolts and the other various problems.

※ **Table 1**

Track shoe	Specification	Category
600 mm triple grouser	Standard	A
700 mm triple grouser	Option	B
750 mm triple grouser	Option	B
800 mm triple grouser	Option	C
900 mm triple grouser	Option	C

※ **Table 2**

Category	Applications	Applications
A	Rocky ground, river beds, normal soil	<ul style="list-style-type: none"> <li>· Travel at low speed on rough ground with large obstacles such as boulders or fallen trees</li> </ul>
B	Normal soil, soft ground	<ul style="list-style-type: none"> <li>· These shoes cannot be used on rough ground with large obstacles such as boulders or fallen trees</li> <li>· Travel at high speed only on flat ground</li> <li>· Travel slowly at low speed if it is impossible to avoid going over obstacles</li> </ul>
C	Extremely soft ground (swampy ground)	<ul style="list-style-type: none"> <li>· Use the shoes only in the conditions that the machine sinks and it is impossible to use the shoes of category A or B</li> <li>· These shoes cannot be used on rough ground with large obstacles such as boulders or fallen trees</li> <li>· Travel at high speed only on flat ground</li> <li>· Travel slowly at low speed if it is impossible to avoid going over obstacles</li> </ul>



## 8. SPECIFICATIONS FOR MAJOR COMPONENTS

### 1) ENGINE

Item	Specification
Model	Cummins QSL / HYUNDAI HE8.9
Type	4-cycle turbocharged charger air cooled diesel engine
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	114 × 145 mm (4.49" × 5.70")
Piston displacement	8900 cc (540 cu in)
Compression ratio	17.8 : 1
Rated gross horse power (SAE J1995)	296 Hp at 1850 rpm (221 kW at 1850 rpm)
Maximum torque	148 kgf · m (1070 lbf · ft) at 1400 rpm
Engine oil quantity	31.7 ℓ (8.4 U.S. gal)
Dry weight	740 kg (1630 lb)
Low idling speed	700 ± 100 rpm
High idling speed	1800 + 50 rpm
Rated fuel consumption	164.8 g/Hp · hr at 1850 rpm
Starting motor	Denso (24V-7.5 kW)
Alternator	Delco Remy 24V-70A
Battery	2 × 12V × 160Ah

### 2) MAIN PUMP

Item	Specification
Type	Variable displacement tandem axis piston pumps
Capacity	2 × 185 cc/rev
Maximum pressure	330 kgf/cm <sup>2</sup> (4690 psi) [360 kgf/cm <sup>2</sup> (5120 psi)]
Rated oil flow	2 × 315 ℓ/min (83.2 U.S. gpm / 69.3 U.K. gpm)
Rated speed	1700 rpm

[ ] : Power boost

### 3) GEAR PUMP

Item	Specification
Type	Fixed displacement gear pump single stage
Capacity	15cc/rev
Maximum pressure	40 kgf/cm <sup>2</sup> (570 psi)
Rated oil flow	25.5 ℓ /min (6.7 U.S. gpm/5.6 U.K. gpm)

### 4) MAIN CONTROL VALVE

Item	Specification
Type	9 spools
Operating method	Hydraulic pilot system
Main relief valve pressure	330 kgf/cm <sup>2</sup> (4690 psi) [360 kgf/cm <sup>2</sup> (5120 psi)]
Overload relief valve pressure (type 1)	390 kgf/cm <sup>2</sup> (5550 psi)
Overload relief valve pressure (type 2)	380 kgf/cm <sup>2</sup> (5400 psi)

[ ] : Power boost ※ Type 1 and type 2 : see parts manual

### 5) SWING MOTOR

Item	Specification
Type	Axial piston motor
Capacity	250 cc/rev
Relief pressure	290 kgf/cm <sup>2</sup> (4120 psi)
Braking system	Automatic, spring applied hydraulic released
Braking torque	107 kgf · m (773 lbf · ft)
Brake release pressure	30~50 kgf/cm <sup>2</sup> (427~711 psi)
Reduction gear type	2 - stage planetary

### 6) TRAVEL MOTOR

Item	Specification
Type	Variable displacement axial piston motor
Relief pressure	360 kgf/cm <sup>2</sup> (5120 psi)
Capacity (max / min)	282.6/160.8 cc/rev
Reduction gear type	3-stage planetary
Braking system	Automatic, spring applied hydraulic released
Brake release pressure	15.3 kgf/cm <sup>2</sup> (218 psi)
Braking torque	143 kgf · m (1034 lbf · ft)

## 7) CYLINDER

Item		Specification
Boom cylinder	Bore dia × Rod dia × Stroke	∅ 160 × ∅ 110 × 1500 mm
	Cushion	Extend only
Arm cylinder	Bore dia × Rod dia × Stroke	∅ 170 × ∅ 120 × 1760 mm
	Cushion	Extend and retract
Bucket cylinder	Bore dia × Rod dia × Stroke	∅ 150 × ∅ 105 × 1295 mm
	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.

## 8) SHOE

Item		Width	Ground pressure	Link quantity	Overall width
R430LC-9	Standard	600 mm (24")	0.74 kgf/cm <sup>2</sup> (10.52 psi)	53	3340 mm (10' 11")
	Option	700 mm (28")	0.64 kgf/cm <sup>2</sup> (9.10 psi)	53	3440 mm (11' 3")
		750 mm (30")	0.60 kgf/cm <sup>2</sup> (8.53 psi)	53	3490 mm (11' 5")
		800 mm (32")	0.57 kgf/cm <sup>2</sup> (8.11 psi)	53	3540 mm (11' 7")
		900 mm (36")	0.51 kgf/cm <sup>2</sup> (7.25 psi)	53	3640 mm (11' 11")

## 9) BUCKET

Item		Capacity		Tooth quantity	Width	
		SAE heaped	CECE heaped		Without side cutter	With side cutter
R430LC-9	Standard	◎1.90 m <sup>3</sup> (2.49 yd <sup>3</sup> )	1.65 m <sup>3</sup> (2.16 yd <sup>3</sup> )	5	1670 mm (65.7")	-
	Option	◎2.10 m <sup>3</sup> (2.75 yd <sup>3</sup> )	1.84 m <sup>3</sup> (2.41 yd <sup>3</sup> )	5	1800 mm (70.9")	-

◎ : Rock - heavy duty bucket

## 9. RECOMMENDED OILS

Use only oils listed below. Do not mix different brand oil.

Please use HYUNDAI genuine oil and grease.

Service point	Kind of fluid	Capacity ℓ (U.S. gal)	Ambient temperature °C ( °F)							
			-50 (-58)	-30 (-22)	-20 (-4)	-10 (14)	0 (32)	10 (50)	20 (68)	30 (86)
Engine oil pan	Engine oil	33.5 (8.8)	★SAE 5W-40				SAE 30			
			SAE 10W				SAE 10W-30			
			SAE 15W-40							
Swing drive	Gear oil	8.0 (2.1)	★SAE 75W-90							
Final drive		12×2 (3.2×2)	SAE 80W-90							
Hydraulic tank	Hydraulic oil	Tank : 210 (55.5) System : 410 (108.3)	★ISO VG 15				ISO VG 32			
			ISO VG 46				ISO VG 68			
Fuel tank	Diesel fuel	550 (145)	★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 soft water★1	50 (13.2)	Ethylene glycol base permanent type (50 : 50)							
			★Ethylene glycol base permanent type (60 : 40)							

**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

★ : Cold region

Russia, CIS, Mongolia

★1 : Soft water

City water or distilled water