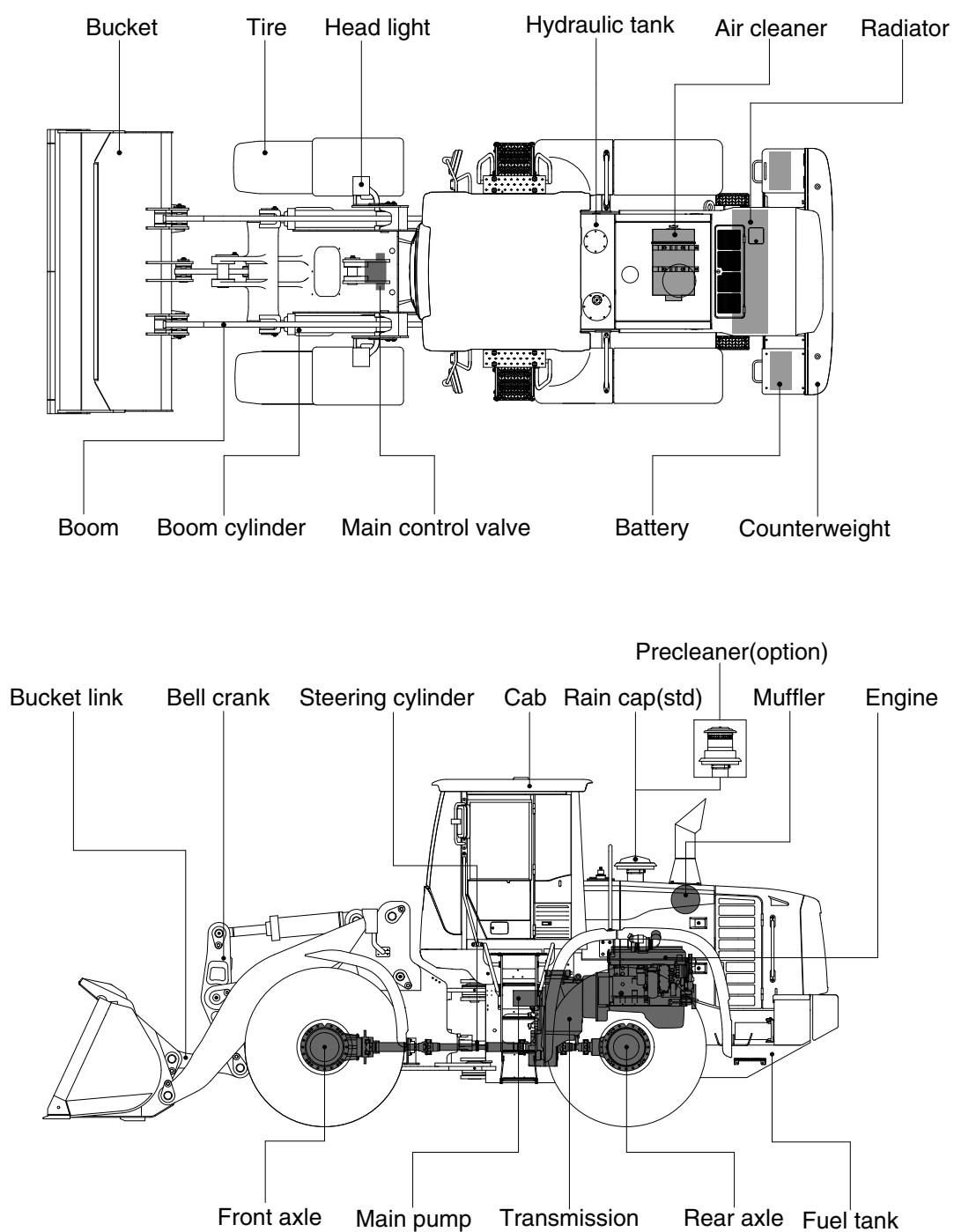


GROUP 2 SPECIFICATIONS

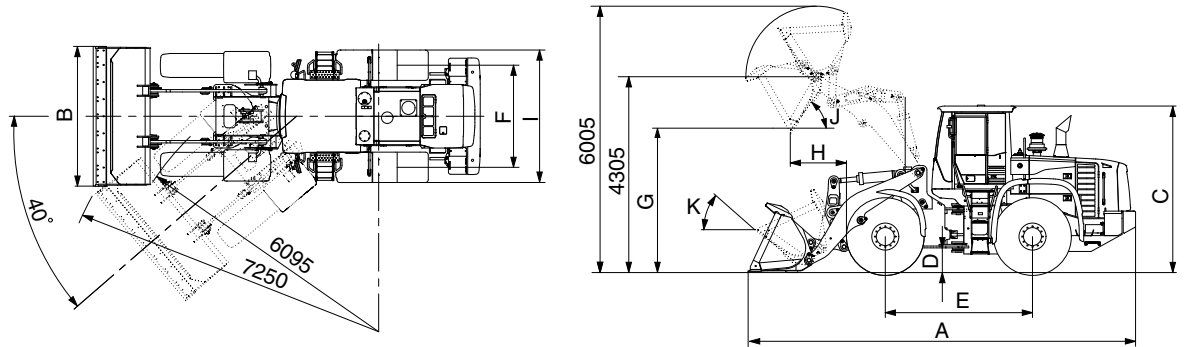
1. MAJOR COMPONENT



7709S2SE01

2. SPECIFICATIONS

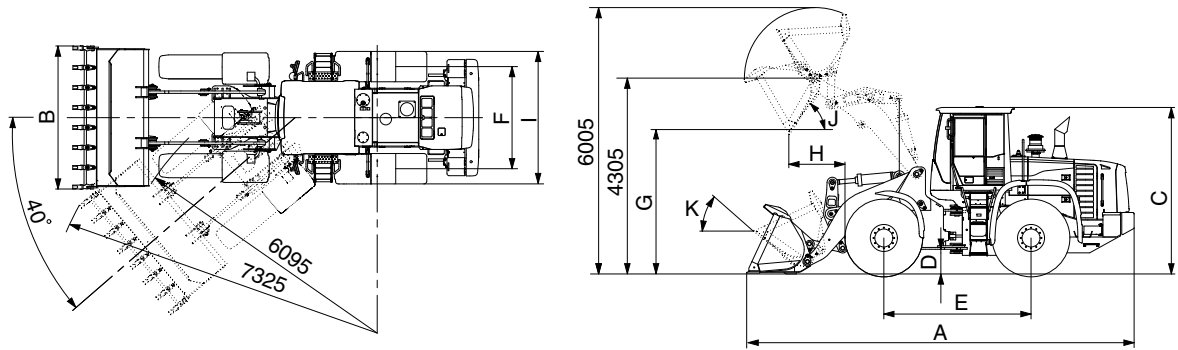
1) WITH BOLT-ON CUTTING EDGE TYPE BUCKET (HL775-9)



77592SE03

Description			Unit	Specification
Operating weight			kg (lb)	24670 (54390)
Bucket capacity	Struck		m³ (yd³)	4.0 (5.2)
	Heaped			4.7 (6.1)
Overall length	A		mm (ft-in)	9060 (29' 9")
Overall width	B			3250 (10' 8")
Overall height	C			3600 (11' 10")
Ground clearance	D			443 (1' 5")
Wheelbase	E			3520 (11' 7")
Tread	F			2300 (7' 7")
Dump clearance at 45°	G			3040 (9' 12")
Dump reach (full lift)	H			1330 (4' 4")
Width over tires	I			2980 (9' 9")
Dump angle	J		degree (°)	48
Roll back angle (carry position)	K			48
Cycle time	Lift (with load)		sec	5.4
	Dump (with load)			1.3
	Lower (empty)			3.4
Maximum travel speed			km/hr (mph)	39.0 (24.2)
Braking distance			m (ft-in)	12.7 (41' 8")
Minimum turning radius (center of outside tire)				6.095 (19' 11")
Gradeability			degree (°)	30
Breakout force			kg (lb)	20650 (45530)
Travel speed	Forward	First gear	km/hr (mph)	7.1 (4.4)
		Second gear		12.5 (7.8)
		Third gear		26.7 (16.6)
		Fourth gear		39.0 (24.2)
	Reverse	First gear		7.1 (4.4)
		Second gear		12.5 (7.8)
		Third gear		26.7 (16.6)

2) WITH TOOTH TYPE BUCKET (HL775-9)



77592SE04

Description			Unit	Specification
Operating weight			kg (lb)	24600 (54235)
Bucket capacity	Struck		m³ (yd³)	3.8 (4.97)
	Heaped			4.5 (5.89)
Overall length	A		mm (ft-in)	9210 (30' 3")
Overall width	B			3300 (10' 10")
Overall height	C			3600 (11' 10")
Ground clearance	D			443 (1' 5")
Wheelbase	E			3520 (11' 7")
Tread	F			2300 (7' 7")
Dump clearance at 45°	G			2915 (9' 7")
Dump reach (full lift)	H			1415 (4' 8")
Width over tires	I			2980 (9' 9")
Dump angle	J		degree (°)	48
Roll back angle (carry position)	K			48
Cycle time	Lift (with load)		sec	5.4
	Dump (with load)			1.3
	Lower (empty)			3.4
Maximum travel speed			km/hr (mph)	39.0 (24.2)
Braking distance			m (ft-in)	12.7 (41' 8")
Minimum turning radius (center of outside tire)				6.095 (19' 11")
Gradeability			degree (°)	30
Breakout force			kg (lb)	21820 (48105)
Travel speed	Forward	First gear	km/hr (mph)	7.1 (4.4)
		Second gear		12.5 (7.8)
		Third gear		26.7 (16.6)
		Fourth gear		39.0 (24.2)
	Reverse	First gear		7.1 (4.4)
		Second gear		12.5 (7.8)
		Third gear		26.7 (16.6)

3. WEIGHT

Item	kg	lb
Front frame assembly	2127	4690
Rear frame assembly	2532	5585
Front fender (LH/RH)	46	105
Rear fender (LH/RH)	32	75
Counterweight	1800	3970
Cab assembly	1167	2575
Engine assembly	984	2170
Transmission assembly	753	1665
Drive shaft (front)	41	95
Drive shaft (center)	37	85
Drive shaft (rear)	21	50
Front axle (include differential)	1200	2650
Rear axle (include differential)	1200	2650
Tire assy (26.5 R25 ★★ L3), 1EA	711	1570
Hydraulic tank assembly	289	640
Fuel tank assembly	270	595
Main pump assembly	84	190
Fan & brake pump assembly	14	35
Main control valve (2 spool/3 spool)	58/100	130/225
Steering valve (priority valve)	28	65
Boom assembly	1629	3595
Bell crank assembly	487	1075
Bucket link	81	179
Quick coupler assy (ISO Type)	678	1,495
Bolt-on cutting Edge (4.4 m³)	2,266	5,000
Bolt-on cutting Edge (4.7 m³)	2,339	5,160
Bolt-on cutting Edge (4.4 m³), Quick coupler	2,241	4,945
1-Bolt-on tooth (4.2 m³)	2,207	4,870
1-Bolt-on tooth (4.5 m³)	2,267	5,000
1-Bolt-on tooth (4.2 m³), Quick coupler	2,182	4,815
Boom cylinder assembly (LH / RH)	204	450
Bucket cylinder assembly (LH / RH)	206	455
Steering cylinder assembly (LH / RH)	43	95
Seat (Including suspension and armrest)	33	75
Battery (1EA)	53	120
Under Guard Kit / Cowl assy	81 / 490	180 / 1085
Mud Guard Assy (LH / RH)	67	150

4. SPECIFICATION FOR MAJOR COMPONENTS

1) ENGINE

Item	Specification
Model	Cummins QSM11
Type	4-cycle turbocharged, charge air cooled diesel engine
Control type	Electronic control
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	125 × 147 mm(4.92" × 5.79")
Piston displacement	10800cc (659 cu in)
Compression ratio	16.3 : 1
Gross power	335 hp (250 kW) at 2100 rpm
Net power	330 hp (246 kW) at 2100 rpm
Maximum power	365 hp (272 kW) at 1800 rpm
Peak gross torque	171 kgf · m (1235 lbf · ft) at 1400 rpm
Engine oil quantity	34 ℓ (9.0 U.S. gal)
Wet weight	984 kg (2170 lb)
Starting motor	24 V - 7.8 kW
Alternator	24 V - 70 Amp
Battery	2 × 12 V × 220 Ah

2) MAIN PUMP

Item		Specification
Type		Load sensing hydraulic system
Pump		Variable piston pump
Rated oil quantity		368 ℓ /min (97.2 U.S.gpm)
System pressure		280 kgf/cm ² (4061 psi)

3) STEERING PUMP

Item		Specification
Type		Load sensing hydrostatic articulated steering
Pump		Variable piston pump
Rated oil quantity		237 ℓ /min (62.6 U.S.gpm)
System pressure		210 kgf/cm ² (3046 psi)

4) MAIN CONTROL VALVE

Item		Specification
Type		2 spool / 3 spool
Operating method		Hydraulic pilot assist
Main relief valve pressure		280 kgf/cm ² (3980 psi)
Overload relief valve pressure		340 kgf/cm ² (4840 psi)

5) REMOTE CONTROL VALVE

Item		Specification
Type		Pressure reducing type
Operating pressure	Minimum	5 kgf/cm ² (71 psi)
	Maximum	30 kgf/cm ² (427 psi)
Single operation angle	degree	17

6) CYLINDER

Item		Specification
Boom cylinder	Bore dia × Rod dia × Stroke	Ø 160 × Ø 95 × 765 mm
Bucket cylinder	Bore dia × Rod dia × Stroke	Ø 180 × Ø 95 × 570 mm
Steering cylinder	Bore dia × Rod dia × Stroke	Ø 100 × Ø 50 × 480 mm

7) DYNAMIC POWER TRANSMISSION DEVICES

Item			Specification
Transmission	Model		ZF 4WG260
	Type	Converter	Single-stage, single-phase
		Transmission	Full-automatic power shift
	Gear shift		Forward fourth gear, reverse third gear
	Control		Electrical single lever type, kick-down system Automatic kick down from 2nd to 1st gear
Axle	Drive devices		4-wheel drive
	Front		Front fixed location
	Rear		Oscillation $\pm 12^\circ$ of center pin-loaded
Wheels	Tires		26.5 R25 ★★ L3
Brakes	Travel		Four-wheel, wet-disc type, full hydraulic
	Parking		Spring applied, hydraulic released brake
Steering	Type		Full hydraulic, articulated
	Steering angle		40° to both right and left angle, respectively

5. TIGHTENING TORQUE

Use following table for unspecified torque.

1) BOLT AND NUT

(1) Coarse thread

Bolt size	8.8T		10.9T		12.9T	
	kgf · m	lbf · ft	kgf · m	lbf · ft	kgf · m	lbf · ft
M 6×1.0	0.8 ~ 1.2	5.8 ~ 8.6	1.2 ~ 1.8	8.7 ~ 13.0	1.5 ~ 2.1	10.9 ~ 15.1
M 8×1.25	2.0 ~ 3.0	14.5 ~ 21.6	2.8 ~ 4.2	20.3 ~ 30.4	3.4 ~ 5.0	24.6 ~ 36.1
M10×1.5	4.0 ~ 6.0	29.0 ~ 43.3	5.6 ~ 8.4	40.5 ~ 60.8	6.8 ~ 10.0	49.2 ~ 72.3
M12×1.75	6.8 ~ 10.2	50.0 ~ 73.7	9.6 ~ 14.4	69.5 ~ 104	12.3 ~ 16.5	89.0 ~ 119
M14×2.0	10.9 ~ 16.3	78.9 ~ 117	16.3 ~ 21.9	118 ~ 158	19.5 ~ 26.3	141 ~ 190
M16×2.0	17.9 ~ 24.1	130 ~ 174	25.1 ~ 33.9	182 ~ 245	30.2 ~ 40.8	141 ~ 295
M18×2.5	24.8 ~ 33.4	180 ~ 241	34.8 ~ 47.0	252 ~ 340	41.8 ~ 56.4	302 ~ 407
M20×2.5	34.9 ~ 47.1	253 ~ 340	49.1 ~ 66.3	355 ~ 479	58.9 ~ 79.5	426 ~ 575
M22×2.5	46.8 ~ 63.2	339 ~ 457	65.8 ~ 88.8	476 ~ 642	78.9 ~ 106	570 ~ 766
M24×3.0	60.2 ~ 81.4	436 ~ 588	84.6 ~ 114	612 ~ 824	102 ~ 137	738 ~ 991
M30×3.5	120 ~ 161	868 ~ 1164	168 ~ 227	1216 ~ 1641	202 ~ 272	1461 ~ 1967

(2) Fine thread

Bolt size	8.8T		10.9T		12.9T	
	kgf · m	lbf · ft	kgf · m	lbf · ft	kgf · m	lbf · ft
M 8×1.0	2.1 ~ 3.1	15.2 ~ 22.4	3.0 ~ 4.4	21.7 ~ 31.8	3.6 ~ 5.4	26.1 ~ 39.0
M10×1.25	4.2 ~ 6.2	30.4 ~ 44.9	5.9 ~ 8.7	42.7 ~ 62.9	7.0 ~ 10.4	50.1 ~ 75.2
M12×1.25	7.3 ~ 10.9	52.8 ~ 78.8	10.3 ~ 15.3	74.5 ~ 110	13.1 ~ 17.7	94.8 ~ 128
M14×1.5	12.4 ~ 16.6	89.7 ~ 120	17.4 ~ 23.4	126 ~ 169	20.8 ~ 28.0	151 ~ 202
M16×1.5	18.7 ~ 25.3	136 ~ 182	26.3 ~ 35.5	191 ~ 256	31.6 ~ 42.6	229 ~ 308
M18×1.5	27.1 ~ 36.5	196 ~ 264	38.0 ~ 51.4	275 ~ 371	45.7 ~ 61.7	331 ~ 446
M20×1.5	37.7 ~ 50.9	273 ~ 368	53.1 ~ 71.7	384 ~ 518	63.6 ~ 86.0	460 ~ 622
M22×1.5	51.2 ~ 69.2	370 ~ 500	72.0 ~ 97.2	521 ~ 703	86.4 ~ 116	625 ~ 839
M24×2.0	64.1 ~ 86.5	464 ~ 625	90.1 ~ 121	652 ~ 875	108 ~ 146	782 ~ 1056
M30×2.0	129 ~ 174	933 ~ 1258	181 ~ 245	1310 ~ 1772	217 ~ 294	1570 ~ 2126

2) PIPE AND HOSE (FLARE type)

Thread size	Width across flat (mm)	kgf · m	lbf · ft
1/4"	19	4	28.9
3/8"	22	5	36.2
1/2"	27	9.5	68.7
3/4"	36	18	130
1"	41	21	152
1-1/4"	50	35	253

3) PIPE AND HOSE (ORFS type)

Thread size	Width across flat (mm)	kgf · m	lbf · ft
9/16-18	19	4	28.9
11/16-16	22	5	36.2
13/16-16	27	9.5	68.7
1-3/16-12	36	18	130
1-7/16-12	41	21	152
1-11/16-12	50	35	253

4) FITTING

Thread size	Width across flat (mm)	kgf · m	lbf · ft
1/4"	19	4	28.9
3/8"	22	5	36.2
1/2"	27	9.5	68.7
3/4"	36	18	130
1"	41	21	152
1-1/4"	50	35	253

5) TIGHTENING TORQUE OF MAJOR COMPONENT

No.	Descriptions		Bolt size	Torque	
				kgf · m	lbf · ft
1	Engine	Engine mounting bolt, nut (rubber, 2EA)	M24 × 3.0	100 ± 15	723 ± 108
2		Engine mounting bolt (bracket, 6EA)	M10 × 1.5	6.9	49.9
3		Engine mounting bolt (flywheel housing, 12EA)	3/8-16UNC	5.6 ± 1.0	40.5 ± 7.2
4		Radiator mounting bolt	M16 × 2.0	29.7 ± 4.5	215 ± 32.5
5		Fuel tank mounting bolt, nut	M16 × 2.0	29.7 ± 4.5	215 ± 32.5
6	Hydraulic system	Main pump housing mounting bolt	M16 × 2.0	29.7 ± 4.5	215 ± 32.5
7		Fan & brake pump housing mounting bolt	M10 × 1.5	6.9 ± 1.4	50 ± 10.1
8		Main control valve mounting bolt	M12 × 1.75	12.8 ± 3.0	92.6 ± 21.7
9		Steering unit mounting bolt	M10 × 1.5	6.9 ± 1.4	50 ± 10.1
10		Flow amplifier mounting bolt	M10 × 1.5	6.9 ± 1.4	50 ± 10.1
11		Brake valve mounting bolt	M8 × 1.25	2.5 ± 0.5	18.1 ± 3.6
12		Cut-off valve mounting bolt	M12 × 1.75	12.8 ± 3.0	89 ± 21.7
13		Remote control lever mounting bolt	M6 × 1.0	1.1 ± 0.2	8.0 ± 1.4
14		Safety valve	M8 × 1.25	2.5 ± 0.5	18.1 ± 3.6
15		Hydraulic oil tank mounting bolt	M20 × 2.5	57.9	419
16	Power train system	Transmission bolt, nut (rubber, 4EA)	M24 × 3.0	100 ± 15	723 ± 108
17		Transmission bolt (bracket, engine side)	M16 × 2.0	28.5 ± 3.0	206 ± 21.7
18		Transmission bolt (bracket, T/M side)	M20 × 2.5	57.0 ± 5.0	412 ± 36.2
19		Front axle mounting bolt, nut	M33 × 2.0	225 ± 20	1630 ± 144
20		Rear axle support mounting bolt, nut	M36 × 3.0	308 ± 46.2	2228 ± 334
21		Tire mounting nut	M22 × 1.5	79 ± 2.5	571 ± 18
22	Others	Drive shaft joint mounting bolt, nut	1/2-20UNF	15 ± 2.0	108 ± 14.5
23		Counterweight mounting bolt	M30 × 3.5	199 ± 30	1439 ± 217
24		Operator's seat mounting bolt	M8 × 1.25	3.4 ± 0.8	24.6 ± 5
25		Cab mounting bolt (4EA)	M30 × 3.5	199 ± 30	1440 ± 217
26		Cab mounting nut (4EA)	M16 × 2.0	20.5 ± 4.7	148 ± 40

6. RECOMMENDED 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 32, VG 46, VG 68) Conventional hydraulic oil (ISO VG 15★)
Transmission oil	SAE 15W-40 / ★ Dextron ATF
Axle oil	★Refer to below list
Grease	Lithium base grease NLGI No. 2
Fuel	ASTM D975-No. 2
Coolant (DCA4)	ASTM D6210 Mixture of 50% ethylene glycol base antifreeze and 50% water. Mixture of 60% ethylene glycol base antifreeze and 40% 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

DCA4 : Brand name of Chemical Additive
manufactured by the Cummins Fleetguard Co

★ 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

★Cold region

Russia, CIS, Mongolia

2) RECOMMENDED LUBRICANTS

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	34 (9.0)	★ ¹ SAE 5W-40							
			SAE 30							
			SAE 10W							
			SAE 10W-30							
			SAE 15W-40							
Transmission	Engine oil	51 (13.5)	SAE 10W-30							
			SAE 15W-40							
			★ ¹ Dextron ATF							
Axle	UTTO	Front : 42 (11.1)	★Refer to below list							
		Rear : 42 (11.1)								
Hydraulic tank	Hydraulic oil	Tank: 227 (60.0)	★ ¹ ISO VG 15							
		System: 361 (95.4)	ISO VG 32							
			ISO VG 46							
			ISO VG 68							
Fuel tank	Diesel fuel	362 (95.6)	★ ¹ ASTM D975 NO.1							
			ASTM D975 NO.2							
Fitting (grease nipple)	Grease	As required	★ ¹ NLGI NO.1							
			NLGI NO.2							
Radiator (reservoir tank)	Mixture of antifreeze and soft water★ ²	46 (12.1)	Ethylene glycol base permanent type (50 : 50)							
			★ ¹ 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
- UTTO : Universal Tractor Transmission Oil

- ★ 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

★¹ Cold region : Russia, CIS, Mongolia

★² Soft water : City water or distilled water