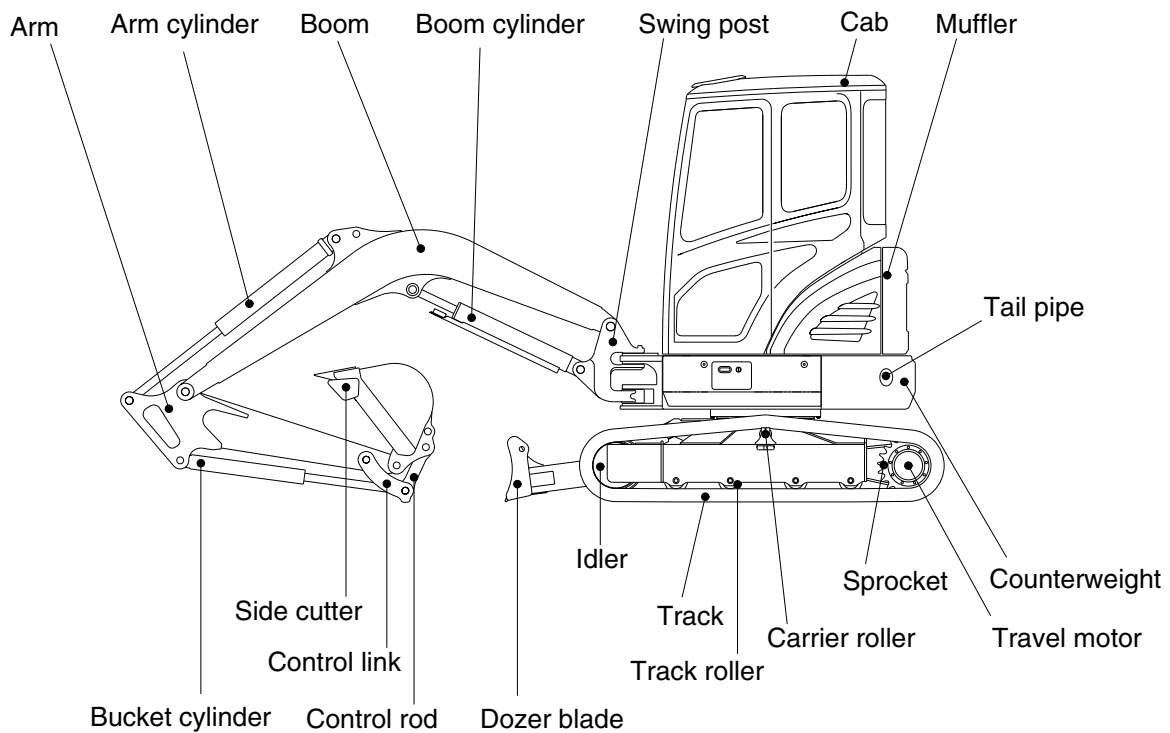
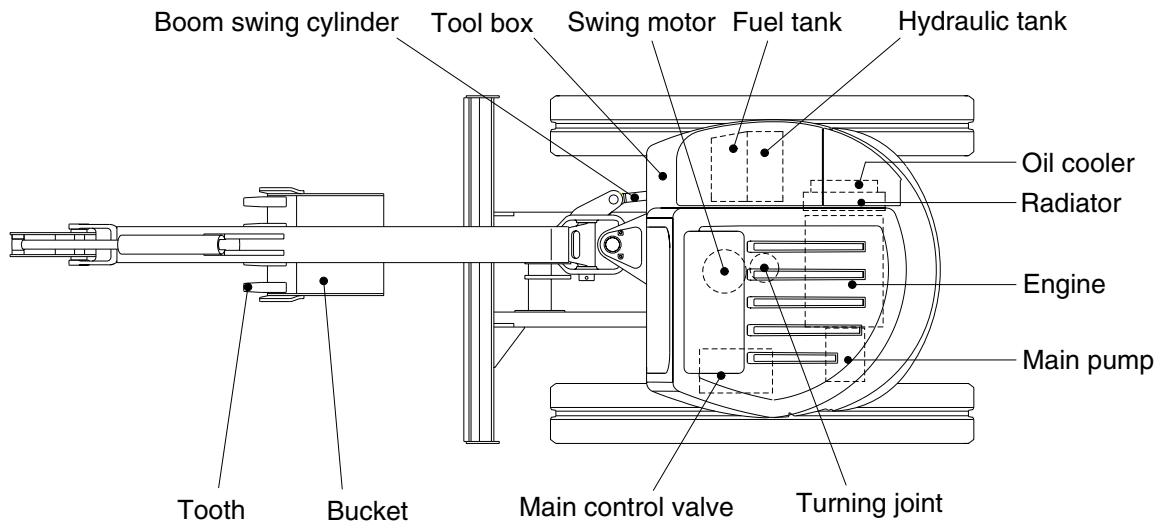


GROUP 2 SPECIFICATIONS

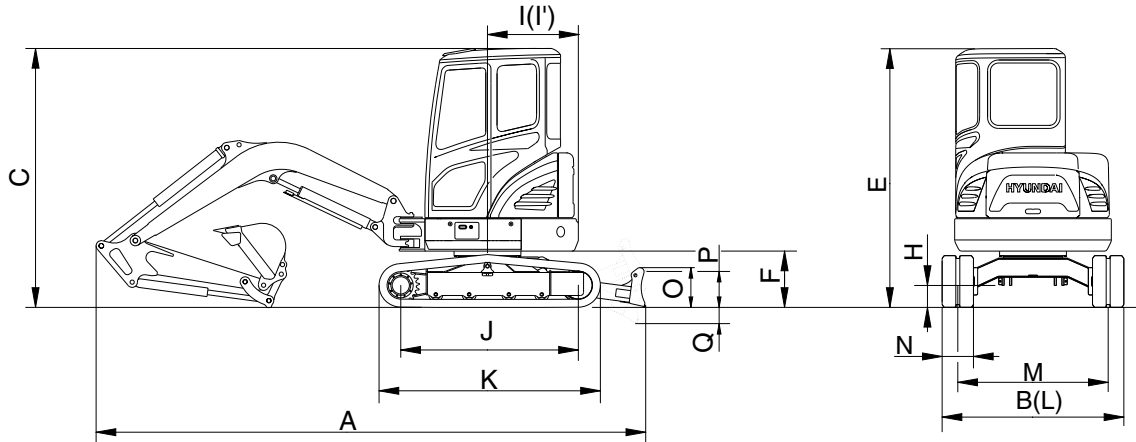
1. MAJOR COMPONENT



R35Z72SP01

2. SPECIFICATIONS

1) 2.5m(8' 2") MONO BOOM, 1.3m(4' 3") ARM, WITH BOOM SWING POST

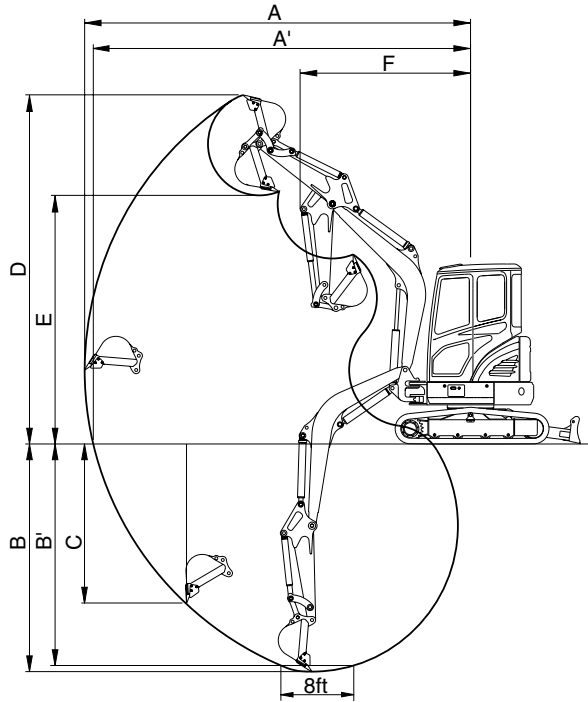


R35Z72SP02

| Description | | Unit | Specification |
|---------------------------------------|----|-----------------------------------|---------------|
| Operating weight | | kg(lb) | 3650(8050) |
| Bucket capacity(SAE heaped), standard | | m ³ (yd ³) | 0.11(0.14) |
| Overall length | A | mm(ft-in) | 4790(15' 9") |
| Overall width, with 300mm shoe | B | | 1740(5' 9") |
| Overall height | C | | 2500(8' 2") |
| Overall height of cab | E | | 2500(8' 2") |
| Ground clearance of counterweight | F | | 540(1' 9") |
| Minimum ground clearance | H | | 290(0' 11") |
| Rear-end distance | I | | 870(2' 10") |
| Rear-end swing radius | I' | | 870(2' 10") |
| Distance between tumbler | J | | 1700(5' 7") |
| Undercarriage length | K | | 2130(7' 0") |
| Undercarriage width | L | | 1740(5' 9") |
| Track gauge | M | | 1440(4' 9") |
| Track shoe width, standard | N | | 300(1' 0") |
| Height of blade | O | | 370(1' 3") |
| Ground clearance of blade up | P | | 375(1' 3") |
| Depth of blade down | Q | | 390(1' 3") |
| Travel speed(Low/high) | | | km/hr(mph) |
| Swing speed | | rpm | 9.5 |
| Gradeability | | Degree(%) | 30(58) |
| Ground pressure(300mm shoe) | | kgf/cm ² (psi) | 0.34(4.83) |

3. WORKING RANGE

1) 2.5m(8' 2") MONO BOOM WITH BOOM SWING POST



R35Z72SP03

| Description | | 1.3m(4' 3") Arm |
|---------------------------------|-----|-----------------|
| Max digging reach | A | 5360mm (17' 7") |
| Max digging reach on ground | A' | 5240mm (17' 2") |
| Max digging depth | B | 3150mm (10' 4") |
| Max digging depth (8ft level) | B' | 2660mm (8' 9") |
| Max vertical wall digging depth | C | 2190mm (7' 2") |
| Max digging height | D | 4830mm (15'10") |
| Max dumping height | E | 3460mm (11' 4") |
| Min swing radius | F | 2350mm (7' 9") |
| Boom swing radius(left/right) | | 75° /50° |
| Bucket digging force | SAE | 27.9 kN |
| | | 2850 kgf |
| | | 6280 lbf |
| | ISO | 31.4 kN |
| | | 3200 kgf |
| | | 7050 lbf |
| Arm crowd force | SAE | 18.9 kN |
| | | 1930 kgf |
| | | 4250 lbf |
| | ISO | 19.5 kN |
| | | 1990 kgf |
| | | 4390 lbf |

4. WEIGHT











| Item | kg | lb |
|--|-------|------|
| Upperstructure assembly | 2100 | 4630 |
| Main frame weld assembly | 480 | 1060 |
| Engine assembly | 155 | 340 |
| Main pump assembly | 25 | 55 |
| Main control valve assembly | 25 | 55 |
| Swing motor assembly | 40 | 90 |
| Hydraulic oil tank assembly | 50 | 110 |
| Fuel tank assembly | 30 | 70 |
| Boom swing post | 80 | 180 |
| Counterweight | 420 | 925 |
| Cab assembly | 210 | 460 |
| Lower chassis assembly | 1170 | 2580 |
| Track frame weld assembly | 400 | 880 |
| Swing bearing | 50 | 110 |
| Travel motor assembly | 35 | 77 |
| Turning joint | 15 | 35 |
| Track recoil spring | 12.5 | 27.5 |
| Yoke | 5 | 11 |
| Idler | 20 | 44 |
| Carrier roller | 2.7 | 6 |
| Track roller | 7.7 | 17 |
| Sprocket | 7.5 | 16.5 |
| Rubber track(300mm) | 127.5 | 281 |
| Dozer blade assembly | 140 | 310 |
| Front attachment assembly (2.5m boom, 1.3m arm, 0.11m ³ SAE heaped bucket) | 460 | 1015 |
| 2.5m boom assembly | 140 | 310 |
| 1.3m arm assembly | 80 | 180 |
| 0.11m ³ SAE heaped bucket | 80 | 180 |
| Boom cylinder assembly | 40 | 90 |
| Arm cylinder assembly | 40 | 90 |
| Bucket cylinder assembly | 30 | 70 |
| Bucket control link assembly | 20 | 45 |
| Dozer cylinder assembly | 30 | 70 |
| Boom swing cylinder assembly | 30 | 70 |

5. LIFTING CAPACITIES

1) 2.5m(8' 2") boom, 1.3m(4' 3") arm equipped with 0.11m³(SAE heaped) bucket and 300mm(12") rubber track, the dozer blade up with 420kg(925lb) counterweight.



•  : Rating over-front











•  : Rating over-side or 360 degree

| Load point height | | Load radius | | | | | | | | At max. reach | | |
|-------------------|----------|---|---|---|---|---|---|---|---|---|---|----------------|
| | | 1.0m(3.3ft) | | 2.0m(6.6ft) | | 3.0m(9.9ft) | | 4.0m(13.2ft) | | Capacity | | Reach |
| | |  |  |  |  |  |  |  |  |  |  | m(ft) |
| 4.0m (13.2ft) | kg lb | | | | | | | | | 600 1320 | 510 1120 | 3.94 (12.9) |
| 3.0m (9.9ft) | kg lb | | | | | | | 560 1230 | 470 1040 | 420 930 | 360 790 | 4.74 (15.6) |
| 2.0m (6.6ft) | kg lb | | | | | 890 1960 | 750 1650 | 540 1190 | 460 1010 | 360 790 | 300 660 | 5.11 (16.8) |
| 1.0m (3.3ft) | kg lb | | | | | 830 1830 | 690 1520 | 520 1150 | 440 970 | 340 750 | 290 640 | 5.18 (17.0) |
| Ground Line | kg lb | | | 1570 3460 | 1260 2780 | 790 1740 | 650 1430 | 500 1100 | 420 930 | 360 790 | 300 660 | 4.98 (16.3) |
| -1.0m (-3.3ft) | kg lb | *2100 *4630 | *2100 *4630 | 1590 3510 | 1270 2800 | 780 1720 | 650 1430 | 500 1100 | 420 930 | 440 970 | 370 820 | 4.45 (14.6) |
| -2.0m (-6.6ft) | kg lb | | | 1630 3590 | 1310 2890 | 810 1790 | 670 1480 | | | | | |

- 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.

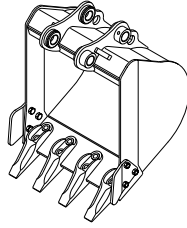
2) 2.5m(8' 2") boom, 1.3m(4' 3") arm equipped with 0.11m³(SAE heaped) bucket and 300mm(12") rubber track, the dozer blade down with 420kg(925lb) counterweight.

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

| Load point height | | Load radius | | | | | | | | At max. reach | | |
|-------------------|----------|---|---|---|---|---|---|---|---|---|---|----------------|
| | | 1.0m(3.3ft) | | 2.0m(6.6ft) | | 3.0m(9.9ft) | | 4.0m(13.2ft) | | Capacity | | Reach |
| | |  |  |  |  |  |  |  |  |  |  | m(ft) |
| 4.0m (13.2ft) | kg lb | | | | | | | | | *700 *1540 | 510 1120 | 3.94 (12.9) |
| 3.0m (9.9ft) | kg lb | | | | | | | *760 *1680 | 470 1040 | *630 *1390 | 360 790 | 4.74 (15.6) |
| 2.0m (6.6ft) | kg lb | | | | | *1780 *3920 | 750 1650 | 1410 3110 | 460 1010 | *620 *1370 | 300 660 | 5.11 (16.8) |
| 1.0m (3.3ft) | kg lb | | | | | 2400 5290 | 690 1520 | 1380 3040 | 440 970 | *650 *1430 | 290 640 | 5.18 (17.0) |
| Ground Line | kg lb | | | *1730 *3810 | 1260 2780 | 2340 5160 | 650 1430 | 1360 3000 | 420 930 | *740 *1630 | 300 660 | 4.98 (16.3) |
| -1.0m (-3.3ft) | kg lb | *2100 *4630 | *2100 *4630 | *2850 *6280 | 1270 2800 | 2330 5140 | 650 1430 | 1350 2980 | 420 930 | *920 *2030 | 370 820 | 4.45 (14.6) |
| -2.0m (-6.6ft) | kg lb | | | *3540 *7800 | 1310 2890 | *2050 *4520 | 670 1480 | | | | | |

- 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. *i indicates load limited by hydraulic capacity.

6. BUCKET SELECTION GUIDE



0.11m³
SAE heaped bucket

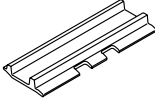
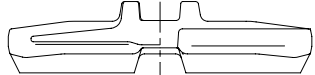
| Capacity | | Width | | Weight | Recommendation |
|--|--|---------------------|------------------|-----------------|--|
| | | | | | 2.5m (8' 2") boom |
| SAE heaped | CECE heaped | Without side cutter | With side cutter | | 1.3m (4' 3") arm |
| 0.11m ³ (0.14yd ³) | 0.09m ³ (0.12yd ³) | 550mm (21.7") | 610mm (24.0") | 80kg (176lb) | Applicable for materials with density of 1600kgf/m ³ (2700lb/yd ³) 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 | | Steel double grouser | Rubber track |
|--------|------------------|---------------------------|---|---|
| | | |  |  |
| R35Z-7 | Shoe width | mm(in) | 300(12") | 300(12") |
| | Operating weight | kg(lb) | 3750(8267) | 3650(8050) |
| | Ground pressure | kgf/cm ² (psi) | 0.34(4.83) | 0.34(4.83) |
| | Overall width | mm(ft-in) | 1740(5' 9") | 1740(5' 9") |

3) NUMBER OF ROLLERS AND SHOES ON EACH SIDE

| Item | Quantity |
|-----------------|----------|
| Carrier rollers | 1EA |
| Track rollers | 4EA |
| Track shoes | 44EA |

8. SPECIFICATIONS FOR MAJOR COMPONENTS

1) ENGINE

| Item | Specification |
|-------------------------------------|-------------------------------------|
| Model | Yanmar 3TNV88 |
| Type | 4-cycle diesel engine, low emission |
| Cooling method | Water cooling |
| Number of cylinders and arrangement | 3 cylinders, in-line |
| Firing order | 1-3-2 |
| Combustion chamber type | Direct injection type |
| Cylinder bore × stroke | 88 × 90mm(3.46" × 3.54") |
| Piston displacement | 1642cc(100.2cu in) |
| Compression ratio | 19.1 : 1 |
| Rated gross horse power(SAE J1995) | 27Hp at 2200rpm(20.3kW at 2200rpm) |
| Maximum torque at 1400rpm | 10.8kgf · m(78.1lbf · ft) |
| Engine oil quantity | 6.7 l (1.8U.S. gal) |
| Dry weight | 155kg(340lb) |
| High idling speed | 2400+ 30rpm |
| Low idling speed | 1100± 30rpm |
| Rated fuel consumption | 185g/Hp · hr at 2200rpm |
| Starting motor | 12V-1.2kW |
| Alternator | 12V-40A |
| Battery | 1 × 12V × 55Ah(5h rating) |

2) MAIN PUMP

| Item | Specification |
|------------------|--|
| Type | Variable displacement tandem axis piston pumps |
| Capacity | 2 × 17.5cc/rev |
| Maximum pressure | 230kgf/cm ² (3270psi) |
| Rated oil flow | 2 × 38.5 l /min (10.2U.S. gpm/ 8.5U.K. gpm) |
| Rated speed | 2200rpm |

3) GEAR PUMP

| Item | Specification |
|------------------|--|
| Type | Fixed displacement gear pump single stage |
| Capacity | 10.7/5.1cc/rev |
| Maximum pressure | 230/30kgf/cm ² (3270/430psi) |
| Rated oil flow | 23.5/11.2 l /min(6.2/3.0U.S. gpm/ 5.2/2.5U.K. gpm) |

4) MAIN CONTROL VALVE

| Item | Specification |
|--------------------------------|----------------------------------|
| Type | Sectional, 10 spools(11 Blocks) |
| Operating method | Hydraulic pilot system |
| Main relief valve pressure | 230kgf/cm ² (3270psi) |
| Overload relief valve pressure | 250kgf/cm ² (3560psi) |

5) SWING MOTOR

| Item | Specification |
|------------------------|--|
| Type | Fixed displacement axial piston motor |
| Capacity | 22cc/rev |
| Relief pressure | 200kgf/cm ² (2845psi) |
| Braking system | Automatic, spring applied hydraulic released |
| Braking torque | 9.2kgf · m(66.5lbf · ft) |
| Brake release pressure | 15~45kgf/cm ² (215~640psi) |
| Reduction gear type | 2 - stage planetary |

6) TRAVEL MOTOR

| Item | Specification |
|------------------------|--|
| Type | Variable displacement axial piston motor |
| Relief pressure | 230kgf/cm ² (3270psi) |
| Reduction gear type | 2-stage planetary |
| Braking system | Automatic, spring applied hydraulic released |
| Brake release pressure | 8kgf/cm ² (114psi) |
| Braking torque | 6.5kgf · m(47lbf · ft) |

7) REMOTE CONTROL VALVE

| Item | | Specification |
|-------------------------|---------|--------------------------------|
| Type | | Pressure reducing type |
| Operating pressure | Minimum | 5kgf/cm ² (71psi) |
| | Maximum | 20kgf/cm ² (284psi) |
| Single operation stroke | Lever | 6.5/8.5mm(0.26/0.33in) |

8) CYLINDER

| Item | | Specification |
|---------------------|-----------------------------|---------------------|
| Boom cylinder | Bore dia × Rod dia × Stroke | ∅ 85 × ∅ 45 × 540mm |
| | Cushion | Extend only |
| Arm cylinder | Bore dia × Rod dia × Stroke | ∅ 80 × ∅ 45 × 585mm |
| | Cushion | Extend and retract |
| Bucket cylinder | Bore dia × Rod dia × Stroke | ∅ 70 × ∅ 45 × 510mm |
| | Cushion | - |
| Boom swing cylinder | Bore dia × Rod dia × Stroke | ∅ 80 × ∅ 45 × 400mm |
| | Cushion | - |
| Dozer cylinder | Bore dia × Rod dia × Stroke | ∅ 95 × ∅ 50 × 152mm |
| | Cushion | - |

※ 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 (Steel track)

| Item | Width | Ground pressure | Link quantity | Overall width |
|--------|------------|-----------------------------------|---------------|----------------|
| R35Z-7 | 300mm(12") | 0.34kgf/cm ² (4.83psi) | 44 | 1740mm(5' 9") |

10) BUCKET

| Item | | Capacity | | Tooth quantity | Width | |
|--------|-----|---|---|----------------|---------------------|------------------|
| | | SAE heaped | CECE heaped | | Without side cutter | With side cutter |
| R35Z-7 | STD | 0.11m ³ (0.14yd ³) | 0.09m ³ (0.12yd ³) | 4 | 550mm(21.7") | 610mm(24.0") |

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 | 6.7(1.8) | | | | | SAE 30 | | | | |
| | | | SAE 10W | | | | | | | | |
| | | | SAE 10W-30 | | | | | | | | |
| | | | | | | SAE 15W-40 | | | | | |
| Final drive | Gear oil | 0.5×2 (0.1×2) | | SAE 85W-140 | | | | | | | |
| Hydraulic tank | Hydraulic oil | Tank: 37(9.8) System: 60(15.9) | ISO VG 32 | | | | | | | | |
| | | | | | | ISO VG 46 | | | | | |
| | | | | | ISO VG 68 | | | | | | |
| Fuel tank | Diesel fuel | 40(10.5) | 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 | 5(1.3) | 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