1. ENGINE TIER 3
Type Water-cooled, 4-cycle diesel, 4-cylinder in line, High pressure common rail system (electric control), Turbocharger with air cooled intercooler.
Model ISUZU GJ-4JJ1X
Rated flywheel horse power
(SAE J1349, ISO 9249) 70.9 kW at 2000 min⁻¹ (rpm)
(ISO 14396) 73.0 kW at 2000 min⁻¹ (rpm)
Piston displacement 2999 cc
Maximum torque
(SAE J1349, ISO 9249) 340 N-m at 1600 min⁻¹ (rpm)
(ISO 14396) 346 N-m at 1600 min⁻¹ (rpm)
Bore and stroke 95.4 mm X 104.9 mm
Voltage 24 V
Alternator 50 Amp
Starter 24 V 4.0 kW

2. HYDRAULIC SYSTEM
Main pumps
2 variable displacement axial piston pumps with regulating system
- Max. oil flow 2 X 129 liter/min at 2000 min⁻¹
- Working circuit pressure 34.3 MPa
- Boom/Arm/Bucket 36.3 MPa with auto power up
- Swing circuit 27.9 MPa
- Travel circuit 34.3 MPa
Pilot pump 1 gear pump
- (1) Max. oil flow 20 liter/min
- (2) Working circuit pressure 3.9 MPa

Control valves
With Boom/Arm holding valve
One 4-spool valve for Right track travel, Bucket, Boom and Arm acceleration
One 5-spool valve for Left track travel, Auxiliary, Swing, Boom acceleration and Arm

Swing device
- Motor Fixed displacement axial piston motor
- Brake Mechanical disc brake
- Final drive Planetary gear reduction
- Turn table bearing Ball bearing type with internal gear
- Maximum swing speed 14.1 min⁻¹ (rpm)
- Swing torque 33,000 N-m

Cylinders
No. of cylinders – bore X Rod diameter X Stroke
- Boom 2 – Ø 105 mm X Ø 70 mm X 961 mm
- Arm 1 – Ø 115 mm X Ø 80 mm X 1108 mm
- Bucket 1 – Ø 95 mm X Ø 65 mm X 881 mm

3. HYDRAULIC CONTROLS
Boom/Arm/Bucket/Swing Pilot pressure control system (ISO control pattern)
Travel Pilot pressure control system
Work mode select
- SP – mode
- H – mode
- Auto – mode
Travel mode select (2-speed travel)
Attachment cushion control
Hydraulic lock (gate lock, left side tilt console)
4. ELECTRICAL SYSTEM

Engine control
- Dial type throttle control
- One touch idle / Auto deceleration / Auto idle shutdown system
- Emergency stop

Monitor system
- Message display (Caution, condition, etc…)
- Work mode display (SP, H, Auto)
- Machine condition (Power boost, etc…)
- Alarm display and buzzer
- Water temperature
- Hydraulic oil temperature
- Fuel level
- Diagnosis system

Wire harness
- Waterproof type connector

Safety
- Travel alarm
- Double horn
- Battery 2 X 12 V 100 Ah / 20 HR

Lights
- Working light Upper 24 V 70 W X 1
- Boom 24 V 70 W X 2
- CAB 24 V 70 W X 2
- Operator’s cab Room 24 V 10 W X 1

5. OPERATOR ENVIRONMENT

Operator’s cab
- Smooth and round shape design cab, fabricated by press work
- Safety glass for all windows
- Shock-less cab suspension by 4-point fluid mounting
- Sliding front window with auto lock
- Built-in type full-color LCD monitor display
- Membrane switch on monitor display
- Windshield wiper & washer
- AM/FM Radio with auto-tuner
- Floor mat
- Polycarbonate roof hatch & Sun shade
- Auto air conditioner
- Roll-over protective structure (ROPS)
- Top guard OPG level 1 (in CAB structure)

Operator’s seat
- Low frequency mechanical suspension with helical springs and double acting hydraulic damper. (Achieves ISO7096 in category EM6)
  - With following features
  - Manual weight adjustment
  - Backrest angle adjustment
  - Seat height adjustment
  - Adjustable pivoting armrests linked to consoles
  - Adjustable headrest
  - Retractable seat belt
  - Adjustable lumbar support
  - Control consoles adjust independently of seat

Others
- Rear view mirror (Cab side & Right side)

6. UNDERCARRIAGE

Travel motor Variable displacement axial piston motor
Brake Mechanical disc brake
Hydraulic service brake Brake valve
Final drive Planetary gear reduction

Travel speeds
- High 5.6 km/h (Automatic travel speed shifting)
- Low 3.4 km/h

Drawbar pull 117 KN
Number of carrier rollers 2 (each side)
Number of track rollers 7 (each side)
Number of shoes 46 (each side)
Type of shoe Triple grouser shoe
Link pitch 171.5 mm
Width of shoe 600 mm (STD)
Grade-ability 70% (35º)

7. MASS

Operating mass 12,900 kg
Counter weight mass 2,200 kg
Ground pressure 0.032 MPa

8. DIGGING FORCE

<table>
<thead>
<tr>
<th>ISO 6015</th>
<th>(2.50 m Arm)</th>
<th>(3.00 m Arm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arm digging force</td>
<td>62 kN</td>
<td>56 kN</td>
</tr>
<tr>
<td>With auto power up</td>
<td>66 kN</td>
<td>60 kN</td>
</tr>
<tr>
<td>Bucket digging force</td>
<td>90 kN</td>
<td>90 kN</td>
</tr>
<tr>
<td>With auto power up</td>
<td>95 kN</td>
<td>95 kN</td>
</tr>
</tbody>
</table>
9. DIMENSIONS

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall length (without attachment)</td>
<td>3880 mm</td>
</tr>
<tr>
<td>Overall length (with attachment)</td>
<td>7620 mm</td>
</tr>
<tr>
<td>Overall height (with attachment)</td>
<td>2810 mm</td>
</tr>
<tr>
<td>Cab height</td>
<td>2790 mm</td>
</tr>
<tr>
<td>Upper structure overall width</td>
<td>2540 mm</td>
</tr>
<tr>
<td>Swing (rear end) radius</td>
<td>2130 mm</td>
</tr>
<tr>
<td>Clearance height under upper structure</td>
<td>890 mm</td>
</tr>
<tr>
<td>Minimum ground clearance</td>
<td>440 mm</td>
</tr>
<tr>
<td>Wheel base (Center to center of wheels)</td>
<td>3040 mm</td>
</tr>
<tr>
<td>Crawler overall length</td>
<td>3760 mm</td>
</tr>
<tr>
<td>Track gauge</td>
<td>1990 mm</td>
</tr>
<tr>
<td>Undercarriage overall width (with 600 mm shoes)</td>
<td>2590 mm</td>
</tr>
<tr>
<td>Crawler tracks height</td>
<td>790 mm</td>
</tr>
</tbody>
</table>

10. WORKING RANGES

<table>
<thead>
<tr>
<th>Range</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boom length</td>
<td>4650 mm</td>
</tr>
<tr>
<td>Bucket radius</td>
<td>1210 mm</td>
</tr>
<tr>
<td>Bucket wrist action</td>
<td>178°</td>
</tr>
<tr>
<td>Maximum reach at GRP</td>
<td>8170 mm</td>
</tr>
<tr>
<td>Maximum reach</td>
<td>8310 mm</td>
</tr>
<tr>
<td>Max. digging depth</td>
<td>5540 mm</td>
</tr>
<tr>
<td>Max. digging height</td>
<td>8770 mm</td>
</tr>
<tr>
<td>Max. dumping height</td>
<td>6390 mm</td>
</tr>
</tbody>
</table>

11. SYSTEM FLUID CAPACITIES AND SPECIFICATIONS

<table>
<thead>
<tr>
<th>Capacity</th>
<th>Capacity (liters)</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydraulic system</td>
<td>157</td>
<td>ISO VG 46</td>
</tr>
<tr>
<td>Hydraulic sump tank</td>
<td>82</td>
<td>ISO VG 46</td>
</tr>
<tr>
<td>Fuel tank</td>
<td>260</td>
<td>Light oil (Diesel)</td>
</tr>
<tr>
<td>Cooling system</td>
<td>16.2</td>
<td>Coolant 50%, Water 50%</td>
</tr>
<tr>
<td>Final drive case (per side)</td>
<td>2.1</td>
<td>API GL-4 90</td>
</tr>
<tr>
<td>Swing drive case</td>
<td>2.2</td>
<td>API GL-5 90</td>
</tr>
<tr>
<td>Engine crank case (With Remote Oil Filter)</td>
<td>17.0</td>
<td>API CD SAE 10W-30</td>
</tr>
</tbody>
</table>
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Telefone: 31 2104-3111

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