1. ENGINE TIER 3

Type: Water-cooled, 6-cycle diesel, 6-cylinder in line, High pressure common rail system (electric control), Turbocharger with air cooled intercooler.

Model: FPT NEF6 F4HE0687A*J101

Rated flywheel horse power:
- NET (SAE J1349, ISO 9249) 110.2 kW at 1800 min⁻¹ (rpm)
- GROSS (ISO 14396) 116.9 kW at 1800 min⁻¹ (rpm)

Piston displacement: 6727.8 cc

Maximum torque:
- NET (SAE J1349, ISO 9249) 546.3 N·m at 1600 min⁻¹ (rpm)
- GROSS (ISO 14396) 556.3 N·m at 1600 min⁻¹ (rpm)

Bore and stroke: 104 mm X 132 mm

Voltage: 24 V

Alternator: 70 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 211 liter/min at 1800 min⁻¹
- Working circuit pressure: 34.3 MPa
- Boom/Arm/Bucket: 36.8 MPa with auto power up
- Swing circuit: 29.4 MPa
- Travel circuit: 34.3 MPa

Pilot pump:

- Max. oil flow: 18 liter/min
- 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: 11.5 min⁻¹ (rpm)
- Swing torque: 64,000 N·m

Cylinders:

- Boom (STD & ME): 2 – Ø 120 mm X Ø 85 mm X 1255 mm
- Arm (STD): 1 – Ø 140 mm X Ø 100 mm X 1460 mm
- Arm (ME): 1 – Ø 135 mm X Ø 95 mm X 1558 mm
- Bucket (STD): 1 – Ø 120 mm X Ø 85 mm X 1010 mm
- Bucket (ME): 1 – Ø 125 mm X Ø 85 mm X 1075 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
- Work mode display (SP, H, Auto)
- Machine condition
- 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 ISO 7096 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
- 188 KN

Number of carrier rollers
- 2 (each side)

Number of track rollers
- 8 (each side)

Number of shoes
- 49 (each side)

Type of shoe
- Triple grouser shoe

Link pitch
- 190 mm

Width of shoe
- 600 mm (STD) | 700 mm (OPT) | 800 mm (OPT)

Grade-ability
- 70% (35°)

7. MASS

Operating mass
- 21,400 kg with 2.94m Arm, 1.2m³ GP Wide Bucket, 600 mm grouser shoe, operator, lubricant, coolant and full fuel tank

Counter weight mass
- 4,250 kg (STANDARD)
- 4,500 kg (MASS EXCAVATOR)

Ground pressure
- STD 0.044 MPa
- (with 2.94 m Arm, 1.2m³ GP Wide Bucket, 600 mm grouser shoe)

8. DIGGING FORCE

(ISO 6015)

Arm digging force
- 103 kN

With auto power up
- 110 kN

Bucket digging force
- 142 kN

With auto power up
- 152 kN
9. DIMENSIONS

(2.94 m Arm)

- Overall length (without attachment): 4950 mm
- Overall length (with attachment): 9400 mm
- Overall height (with attachment): 2970 mm
- Cab height: 2950 mm
- Upper structure overall width: 2770 mm
- Swing (rear end) radius: 2750 mm
- Clearance height under upper structure: 1040 mm
- Minimum ground clearance: 440 mm
- Wheel base (Center to center of wheels): 3660 mm
- Crawler overall length: 4470 mm
- Track gauge: 2390 mm
- Undercarriage overall width (with 600 mm shoes): 2990 mm
- Crawler tracks height: 920 mm

10. WORKING RANGES

(2.94 m Arm)

- Boom length: 5700 mm
- Bucket radius: 1450 mm
- Bucket wrist action: 177º
- Maximum reach at GRP: 9730 mm
- Maximum reach: 9900 mm
- Max. digging depth: 6650 mm
- Max. digging height: 9610 mm
- Max. dumping height: 6810 mm

11. SYSTEM FLUID CAPACITIES AND SPECIFICATIONS

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