**ENGINE**

- **Model:** FPT FL413 E*BO02
- **Emissions Certification:** Tier 4 Final
- **Type:** Diesel, Turbo – Direct Injection
- **Cylinders:** 4
- **Bore/Stroke:** 3.9 x 4.3 in (99 x 110 mm)
- **Displacement:** 207 in³ (3.4 L)
- **Fuel injection:** Direct
- **Fuel:** #2 Diesel
- **Fuel filter:**
  - Pre-filter: Beta (30) = 200/spin-on
  - Main filter: Beta (4) = 20/spin-on
- **Air intake:** Turbocharged w/ waste gate and external cooled EGR
- **Exhaust aftertreatment:** Selective Catalytic Reduction (SCR)
- **Cooling:** Liquid
- **Engine speeds:**
  - RPM: High idle – no load 2500 +/− 25
  - Rated – full load 2500
  - Low idle 1150 +/− 25
- **Horsepower @ 2500 RPM – SAE J1349:**
  - Gross: 90 hp (67 kW)
  - Net: 84 hp (63 kW)
- **Peak torque @ 1400 RPM:** 282 lb-ft (383 N·m)

**HYDRAULICS**

- **Implement pump type:** Gear
  - **Displacement:**
    - Optional high-flow @ rated engine RPM: @ 100% efficiency: 24.2 gpm (91.5 L/min)
  - **Standard flow @ rated engine RPM:** @ 100% efficiency: 22.3 gpm (83.6 L/min)
- **Optional high-flow @ rated engine RPM:** @ 100% efficiency: 12.4 gpm (46.6 L/min)
- **Loader control valve:**
  - Type: 3 spool/open center/series - series
  - Relief pressure: 3,046 psi (210 bar)
- **Engine coolant temperature:**
- **Engine oil pressure:**
- **Hydraulic charge pressure:**
- **Warning lights with alarms:**
  - Engine coolant temperature; Engine oil pressure
  - Engine malfunction; Hydraulic charge pressure
  - Hydraulic filter restriction; Hydraulic oil temperature: Critical system stop, Engine system, Hydraulic system, Electrical and diagnostic system.
- **Warning alarms:**
  - Battery voltage – plus display; Oil service.
- **Indicator light:**
  - Engine preheat; Parking brake; Seat bar reminder.

**TRANSMISSION**

- **Low range:** 5.1 mph (8.2 kph)
- **Travel speed:** 4,654 lb·ft (6,310 N·m)

**OPERATING WEIGHT**

- **Unit equipped w/ open cab:** 165 lb operator; 78 in Heavy-Duty bucket; full of fuel: 10,550 lb (4,785 kg)
- **Shipping weight:** 10,207 lb (4,630 kg)
- **Add-on weights:**
  - Side cab glass: 47 lb (21.3 kg)
  - Polycarbonate cab door: 75 lb (34.0 kg)
  - Glass cab door w/ wipe: 75 lb (34.0 kg)
  - Suspension seat: 22 lb (10.0 kg)
  - Additional counterweight: 600 lb (273.0 kg)

**LIFT GEOMETRY**

- **Vertical Lift**
  - Bucket up 35°
  - Side to side 45°
  - Bucket up 35°
  - Bucket Down 45°

**DRIVE TRAINE**

- **Drive motor controls:** Servo-assist mechanical
- **Bucket up:** 35°
- **Side to side:** 45°
- **Pump operating angle ratings:**
  - Bucket up 35°
  - Side to side 45°

**HYDRAULIC FILTERS**

- **Beta (4) = 75/spin-on**
**Dimensions**

A. Overall operating height:
   - with foundry/excavating bucket: 161.9 in (4.11 m)
   - with heavy-duty dirt bucket: 166.0 in (4.22 m)
   - with low profile extended bucket: 171.0 in (4.34 m)

Height to:

B. Bucket hinge pin: 131.6 in (3.34 m)
C. Top of ROPS: 80.4 in (2.04 m)
D. Bottom of level bucket, fully raised: 124.8 in (3.17 m)

Overall length:

E. without attachment with coupler: 119.1 in (2.99 m)
F. with foundry/excavating bucket on ground: 143.2 in (3.60 m)
   - with heavy-duty bucket: 147.3 in (3.71 m)
   - with low profile extended bucket: 152.4 in (3.84 m)

G. Maximum dump angle: 53.5°

H. Dump height:
   - with foundry/excavating bucket: 105.1 in (2.67 m) @ 45°
   - with low profile bucket: 102.2 in (2.60 m) @ 45°

I. Dump reach at maximum height with heavy-duty dirt bucket: 31.4 in (0.80 m) @ 45°

J. Maximum attachment rollback:
   - Bucket on ground: 34.2°
   - Bucket at full height: 86.0°

K. Track on ground: 64.5 in (1.64 m)
M. Ground clearance - bottom of belly pan: 9.5 in (0.24 m)
N. Angle of departure: 32.0°

Clearance circle:

O. without bucket: 56.2 in (1.43 m)
P. with 72 in (1.83 m) foundry/excavating bucket in carry position:
   - with 72 in (1.83 m) heavy-duty bucket on ground: 87.7 in (2.16 m)
   - with 72 in (1.83 m) extended low profile on ground: 91.5 in (2.25 m)
   - with 72 in (1.83 m) extended low profile on ground: 96.0 in (2.35 m)

Q. Clearance circle rear: 71.2 in (1.79 m)
R. Track gauge: 58.3 in (1.48 m)
S. Over the track width: 76.0 in (1.93 m)

**Service Capacities**

- Fuel Tank: 25.5 gal (96.5 L)
- Engine oil w/ filter: 8.9 qt (8.5 L)
- Hydraulic system:
  - Reservoir: 6.0 gal (22.7 L)
  - Total: 11.9 gal (45.4 L)
- Diesel Exhaust Fluid (DEF) Tank: 2.8 gal (10.7 L)

**Performance Specs**

- Rated operating capacity – ROC*:
  - 35% of tipping load: 2,660 lb (1,209 kg)
  - 50% of tipping load: 3,800 lb (1,723 kg)
  - w/ additional counterweight: 4,000 lb (1,814 kg)
- Tipping load*: 7,600 lb (3,447 kg)
- Breakout forces @ 3,150 psi (217 bar)*:
  - Bucket cylinders: 8,776 lb (39.0 kN)
  - Lift cylinders – hydraulic limit: 6,300 lb (28.0 kN)

**Cycle times:**
- Raise: 4.7 sec
- Lower: 2.7 sec
- Dump: 2.6 sec
- Roll back: 2.0 sec

NOTE: *Measured using 78 in (1.98 m) foundry/excavating bucket.
**TRACK SELECTION**

<table>
<thead>
<tr>
<th>Type</th>
<th>Area</th>
<th>Ground Pressure</th>
<th>Width to Outside Track</th>
</tr>
</thead>
<tbody>
<tr>
<td>17.7 in (450 mm)</td>
<td>2,286 in² (1.475 m²)</td>
<td>4.4 psi (30 kPa)</td>
<td>76 in (1.93 m)</td>
</tr>
</tbody>
</table>

**OPTIONAL BUCKETS**

<table>
<thead>
<tr>
<th>Type</th>
<th>Width</th>
<th>Weight</th>
<th>Heaped Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dirt &amp; Foundry</td>
<td>78 in (1.98 m)</td>
<td>440 lb (200 kg)</td>
<td>17.7 ft³ (0.50 m³)</td>
</tr>
<tr>
<td>Low Profile Extended</td>
<td>78 in (1.98 m)</td>
<td>540 lb (245 kg)</td>
<td>19.1 ft³ (0.54 m³)</td>
</tr>
<tr>
<td></td>
<td>84 in (2.13 m)</td>
<td>575 lb (262 kg)</td>
<td>20.5 ft³ (0.58 m³)</td>
</tr>
<tr>
<td>Light Material</td>
<td>84 in (2.13 m)</td>
<td>540 lb (245 kg)</td>
<td>27.5 ft³ (0.78 m³)</td>
</tr>
<tr>
<td>Manure &amp; Slurry</td>
<td>84 in (2.13 m)</td>
<td>545 lb (248 kg)</td>
<td>22.6 ft³ (0.64 m³)</td>
</tr>
<tr>
<td>Heavy-Duty</td>
<td>78 in (1.98 m)</td>
<td>530 lb (240 kg)</td>
<td>15.5 ft³ (0.44 m³)</td>
</tr>
<tr>
<td></td>
<td>84 in (2.13 m)</td>
<td>550 lb (250 kg)</td>
<td>17.0 ft³ (0.48 m³)</td>
</tr>
<tr>
<td>Heavy-Duty with spillguard</td>
<td>78 in (1.98 m)</td>
<td>605 lb (275 kg)</td>
<td>19.8 ft³ (0.56 m³)</td>
</tr>
<tr>
<td></td>
<td>84 in (2.13 m)</td>
<td>640 lb (290 kg)</td>
<td>21.5 ft³ (0.61 m³)</td>
</tr>
</tbody>
</table>

**STANDARD EQUIPMENT**

**OPERATOR ENVIRONMENT**

See page 1

**ENGINE**

FPT F5H FL463 A’F001

207 CID (3.4 L) Turbo

Tier 4 Final Certified

Diesel Oxidation Catalyst (DOC) with

Selective Catalytic Reduction (SCR) muffler

Charged Air Cooler (CAC)

High Pressure Common Rail (HPCR) fuel injection

Horsepower:

Gross: 90 hp (67 kW)

Net: 84 hp (63 kW)

Peak torque: 282 lb·ft (383 N·m)

160 amp alternator

Dual element air cleaner

Organic Acid Technology (OAT)

Anti-freeze solution to -34°F

Fuel tank - 25.5 gal (U.S.)

Over and under radiator and oil cooler

3-stack after cooler/radiator/oil cooler configuration

Glow plugs

Integral engine oil cooler

Fuel filter with water trap

1,000 CCA 12V battery

Master electrical disconnect

Jump Start Terminal

**DRIVETRAIN**

2-speed hydrostatic four wheel drive

SAHR disc parking brake

**HYDRAULICS**

Auxiliary hydraulics:

@ 3,050 psi (210 bar) – 24.2 gpm (91.5 L/min)

6 micron oil filtration system

3-spool loader control valve

Auxiliary hydraulic disconnects, ISO flat-face – connect-under-pressure with case drain

Hydraulic circuit pedal lock

Auxiliary function lockout override

Loader lift lockout override

Heavy-duty hydraulic oil cooler

Loader arm float position

Loader function lockout system

**TRACKS**

HiQual S-Wave Tracks

**OTHER STANDARD FEATURES**

Halogen lights - 2 front, 2 side, 2 rear flood

Heavy duty front lights

Pre-wired for rotating beacon

Lockable service access hood

Single-point daily servicing

Rear tail lights

Remote oil drain

Remote oil and fuel filters

Block heater

Debris ingestion sealing

Mounting points for add-on counterweights

Heavy duty rear door

Heavy Duty Hydraulic attachment coupler

Vertical Lift Geometry

Loader lift arm support strut

SAE operating load: 3,800 lbs

Tipping load: 7,600 lbs

In-CAB loader lock

**TV380** 3 of 4
OPTIONAL EQUIPMENT

OPERATOR ENVIRONMENT
- ROPS/FOPS Level 1 canopy with side screens
- Keyed start ignition
- Ventilation system with integrated heater
- Electro-hydraulic controls:
  - For drive/steering, loader functions
  - Switchable between H and ISO patterns
  - Adjustable sensitivity of controls
- Mechanical hand controls
- Hand and foot controls:
  - Hand controls the loader drive function and foot controls the bucket and boom
- Non suspension seat
- Suspension seat, vinyl
- Open cab interior trim package
- Demolition cab door with polycarbonate FOPS Level 2

- High-flow auxiliary hydraulics – combined:
  - @ 3,050 psi (210 bar) – 37.6 gpm
  - (142.5 L/min)
- Enhanced High-flow auxiliary hydraulics – EHF:
  - @ 4,000 psi (276 bar) – 35.0 gpm
  - (132.5 L/min)
- Second auxiliary hydraulics
- Hydraulic one-way self-leveling
  - Ride control

- Auxiliary front electric control
- Manual attachment coupler

- Language decals
- Factory-installed tires – see page 3
- Buckets – see page 3
- Bolt-on bucket cutting edges
- Bolt-on heavy-duty bucket spill guard
- Special paint
- Offsite service arrangement
- Telematics

FACTORY SUPPLIED ATTACHMENTS
- Add-on counterweights
- Road lights
- Rotating beacon
- Four-corner LED strobe
- Bolt-on heavy-duty bucket teeth
- 48 in (1.22 m) pallet forks

SERVICE PARTS
- 3 inch (76.2 mm) retractable seat belt

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