LIFT GEOMETRY

Radial Lift

DRIVE TRAIN

Drive pump controls Servo-assist mechanical
Pump to engine ratio 1:1
Displacement 2.81 in³ (46 cm³)
Flow @ rated engine RPM:
  @ 97% efficiency 29.4 gpm (111 L/min)
Charge pressure 360 psi (24.5 bar)
System relief pressure 5,220 psi (360 bar)
Drive pump controls Electro-hydraulic
Pump to engine ratio 1:1
Displacement 2.75 in³ (45 cm³)
Flow @ rated engine RPM:
  @ 97% efficiency 28.8 gpm (109 L/min)
Charge pressure 362 psi (24.5 bar)
System relief pressure 5,220 psi (360 bar)
Drive motors:
  Max. displacement 3.10 in³ (50.9 cm³)
  Displacement – optional:
    High speed 2.02 in³ (33.1 cm³)
  Motor RPM @ high idle and 97% efficiency:
    2-speed 156
  Motor torque @ max. displacement and relief pressure, calculated @ 5,220 psi (360 bar):
    4,654 lb-ft (6,310 N·m)
Travel speed:
  Low range 5.1 mph (8.2 kph)
  High range 8.0 mph (12.9 kph)
Final drive:
  Planetary gearbox w/ 2-speed motor
  Tractive effort 7,414 lb (3,370 kg)
  Parking brake:
    Type Spring-applied, hydraulic
    Release multiple disc.
    Engagement Depress on/off brake button on handle or instrument panel, raise seat bar, get off seat or stop engine.

HYDRAULICS

Implement pump type Gear
Displacement:
  Standard aux. 2.23 in³ (36.6 cm³)
  High-flow aux. 0.76 in³ (12.5 cm³)
Standard flow @ rated engine RPM:
  @ 100% efficiency 24.2 gpm (91.5 L/min)
Optional high-flow @ rated engine RPM:
  @ 100% efficiency 32.4 gpm (122.6 L/min)
Loader control valve:
  Type 3 spool/open center/series - series
  Relief pressure 3,046 psi (210 bar)
  Port relief pressures:
    Loader raise 3,263 psi (225 bar)
    Bucket curl 3,770 psi (260 bar)
    Bucket dump 1,160 psi (80 bar)
Hydraulic lines:
  Tubing 37º JIC Flare
  Loop hoses SAE 100 R19
Hydraulic oil cooler:
  Number of fins 10 per inch (0.94 per cm)
  Number of tube rows x columns 9 x 1
  Area 136.5 in² (880 cm²)
Hydraulic filter Beta (4) = 75/spin-on

auxiliary hydraulic control – on joystick; Advanced Instrument Cluster w/ digital hour meter, tachometer, Fuel level LCD bar graph w/ alarm, diagnostic features and security lockout.

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.

OPERATING WEIGHT

Unit equipped w/ open cab; 165 lb operator;
78 in Dirt & Foundry bucket; full of fuel:
8,880 lb (4 027 kg)

Shipping weight 8,580 lb (3 891 kg)
Add-on weights:
  Side cab glass 47 lb (21.3 kg)
  Polycarbonate cab door 75 lb (34.0 kg)
  Glass cab door w/ wiper 75 lb (34.0 kg)
  Suspension seat 22 lb (10.0 kg)
  Additional counterweight 140 lb (63.8 kg)

Electrical

Alternator 120 amp
Starter 4.29 hp (3.2 kW)
Battery 12-volt low-maintenance
925 cold-cranking amps @ 0º F (-18º C°)

OPERATOR ENVIRONMENT

ROPS/FOPS Level 1 canopy w/ side screens;
  Keyed start ignition; Tilt ROPS/FOPS;
  Rear window w/ emergency escape; Suspension Seat, vinyl w/ 2 in (51 mm) retractable 3 point lap seat belt;
  Hand and foot throttles; Alarm package – back-up and horn; Rearview mirror; Headliner;
  Dome Light; Top window; Cup holder; 12V Power plug socket; Foot rest; Seat pocket; Padded seat bar w/ integral armrests; Loader control lockout system; Electric parking brake control; Operator’s compartment floor cleanout; Proportional
### Dimensions

**A. Overall operating height:**
- with foundry/excavating bucket: 154.3 in (3.92 m)
- with low profile bucket: 158.3 in (4.02 m)
- with low profile extended bucket: 163.2 in (4.15 m)

**Height to:**
- **B. Bucket hinge pin:** 123.0 in (3.12 m)
- **C. Top of ROPS:** 78.7 in (2.00 m)
- **D. Bottom of level bucket, fully raised:** 116.1 in (2.95 m)

**Overall length:**
- **E. without attachment with coupler:** 105.1 in (2.67 m)
- **F. with foundry/excavating bucket on ground:** 129.6 in (3.29 m)
  - with low profile bucket: 133.7 in (3.40 m)
  - with low profile extended bucket: 138.8 in (3.53 m)

**G. Maximum dump angle:** 39.6°

**H. Dump height:**
- with foundry/excavating bucket: 98.2 in (2.50 m) @ 39.6°
- with low profile bucket: 95.6 in (2.43 m) @ 39.6°

**I. Dump reach at maximum height with low profile bucket:** 25.4 in (0.65 m) @ 39.6°

**Maximum attachment rollback:**
- **J. Bucket on ground:** 31.0°
- **K. Bucket at full height:** 98.6°

**L. Track on ground:** 55.9 in (1.42 m)

**M. Ground clearance – bottom of belly pan:** 8.0 in (0.20 m)

**N. Angle of departure:** 32.0°

### Clearances

**O. without bucket:** 50.7 in (1.29 m)

**P. with 72 in (1.83 m) foundry/excavating bucket in carry position:**
- with 72 in (1.83 m) low profile bucket on ground: 83.1 in (2.11 m)
- with 72 in (1.83 m) extended low profile on ground: 87.7 in (2.23 m)

**Q. Clearance circle rear:** 62.9 in (1.60 m)

**R. Track gauge:** 53.4 in (1.36 m)

**S. Over the track width:** 74.3 in (1.89 m)

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**HYDRAULICS CONT.**

- **Lift cylinders:**
  - Bore diameter: 2.75 in (69.85 mm)
  - Rod diameter: 1.75 in (44.5 mm)
  - Stroke: 32.2 in (817.9 mm)
  - Closed length: 45.6 in (1158 mm)

- **Bucket cylinders:**
  - Bore diameter: 3.0 in (76.2 mm)
  - Rod diameter: 1.5 in (38.1 mm)
  - Stroke: 16.4 in (410 mm)
  - Closed length: 24.0 in (610.0 mm)

**SERVICE CAPACITIES**

- **Fuel Tank:** 19.5 gal (73.8 L)
- **Engine oil w/ filter:** 8.9 qt (8.5 L)
- **Hydraulic system:**
  - Reservoir: 5.3 gal (20.0 L)
  - Total: 10 gal (38.1 L)

**PERFORMANCE SPECS**

- **Rated operating capacity – ROC:**
  - 35% of tipping load: 2,170 lb (984 kg)
  - 50% of tipping load: 3,100 lb (1,406 kg)
  - w/ additional counterweight: 3,200 lb (1,451 kg)

- **Tipping load:** 6,200 lb (2,810 kg)

- **Breakout forces @ 3,150 psi (217 bar):**
  - Bucket cylinders: 8,680 lb (38.6 kN)
  - Lift cylinders – hydraulic limit: 6,440 lb (29.0 kN)

- **Cycle times:**
  - Raise: 4.3 sec
  - Lower: 2.6 sec
  - Dump: 2.3 sec
  - Roll back: 1.9 sec

**Line drawings are for illustrative purpose only and may not be exact representation of unit.**

**NOTE:** *Measured using 72 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>15.75 in (400 mm)</td>
<td>1,760 in² (1.13 m²)</td>
<td>5.0 psi (34.5 kPa)</td>
<td>74.3 in (1.89 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>72 in (1.83 m)</td>
<td>420 lb (190 kg)</td>
<td>16.2 ft³ (0.46 m³)</td>
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<tr>
<td></td>
<td>78 in (1.98 m)</td>
<td>440 lb (200 kg)</td>
<td>17.7 ft³ (0.50 m³)</td>
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<tr>
<td>Low Profile</td>
<td>72 in (1.83 m)</td>
<td>480 lb (218 kg)</td>
<td>14.8 ft³ (0.42 m³)</td>
</tr>
<tr>
<td>Low Profile Extended</td>
<td>72 in (1.83 m)</td>
<td>510 lb (232 kg)</td>
<td>17.7 ft³ (0.50 m³)</td>
</tr>
<tr>
<td></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>72 in (1.83 m)</td>
<td>475 lb (216 kg)</td>
<td>23.3 ft³ (0.66 m³)</td>
</tr>
<tr>
<td></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>72 in (1.83 m)</td>
<td>480 lb (218 kg)</td>
<td>19.1 ft³ (0.54 m³)</td>
</tr>
<tr>
<td></td>
<td>84 in (2.13 m)</td>
<td>545 lb (248 kg)</td>
<td>22.6 ft³ (0.64 m³)</td>
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<tr>
<td>Heavy-Duty</td>
<td>72 in (1.83 m)</td>
<td>510 lb (230 kg)</td>
<td>14.1 ft³ (0.40 m³)</td>
</tr>
<tr>
<td></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>575 lb (262 kg)</td>
<td>18.4 ft³ (0.52 m³)</td>
</tr>
<tr>
<td>Heavy-Duty with spillguard</td>
<td>72 in (1.83 m)</td>
<td>585 lb (265 kg)</td>
<td>19.8 ft³ (0.56 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
Particulate Matter Catalyst (PMC)
High Pressure Common Rail (HPCR) fuel injection
Horsepower:
  Gross: 74 hp (55 kW)
  Net: 68 hp (51 kW)
  Peak torque: 232 lb·ft (314 N·m)
120 amp alternator
Dual element air cleaner
Organic Acid Technology (OAT)
Anti-freeze solution to -34°F
Fuel tank - 19.5 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
925 CCA 12V battery
Master electrical disconnect

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

LOADERS

Manual attachment coupler
Radial lift geometry
Loader lift arm support strut
SAE operating load: 3,100 lbs
Tipping load: 6,200 lbs

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
OPTIONAL EQUIPMENT

OPERATOR ENVIRONMENT
Enclosed cab:
- Fully sealed and pressurized – FSP
- Glass door with wiper and washer
- Sliding side windows – removable
- Ventilation system with integrated heater
- Heater and air conditioner
- AM/FM radio with 2 speakers
- Keyless start ignition

Electro-hydraulic controls:
- For drive/steering, loader functions
- Switchable between H and ISO patterns
- Adjustable sensitivity of controls

Mechanical hand controls
- Hand controls the loader drive function
- Foot controls the bucket and boom

Non suspension seat
- Deluxe cloth, air suspension seat, with heater and lumbar support
- Open cab interior trim package
- Demolition cab door with polycarbonate FOPS Level 2
- Heavy duty rear door

HYDRAULICS
High-flow auxiliary hydraulics – combined:
- @ 3,050 psi (210 bar) – 32.4 gpm (122.6 L/min)
- Second auxiliary hydraulics
- Hydraulic one-way self-leveling
- Ride control

LOADER
- Auxiliary front electric control
- Hydraulic attachment coupler

DRIVETRAIN
- 1-speed hydrostatic four wheel drive

OTHER
- 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