



ENGINE

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| Model | FPT F5B FL413 E*B002 |
| 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) |
| Radiator: | |
| Core type | Aluminum bar and plate |
| Core size area | 2.21 ft² (0.206 m²) |
| Rows of tubes | 21 |
| Cap pressure | 16 +/- 2 psi (1.10 +/- 0.14 bar) |
| Fan: | |
| Diameter | 22 in (560 mm) |
| Ratio | 1.1:1 |
| Water pump: | |
| Style | Centrifugal |
| Flow | 47.8 gpm (181 L/min) |
| Engine lubrication pump | Rotor pump w/ deep sump pan, plate cooler and pressurized under-piston nozzles |
| Pump operating angle ratings: | |
| Side to side | 45° |
| Bucket up | 35° |
| Bucket Down | 45° |

LIFT GEOMETRY

Vertical Lift

DRIVETRAIN

| | |
|--------------------------|-------------------------|
| 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) |

| | |
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| 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 (25 bar) |
| System relief pressure | 5,220 psi (360 bar) |

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| Drive motors: | |
| Max. displacement | 28.7 in³ (470 cm³) |
| Displacement – optional: | |
| High speed | 17.2 in³ (282 cm³) |
| Motor RPM @ high idle and 97% efficiency: | |
| Standard 1-speed | 237 |
| Optional 2-speed | 355 |
| Motor torque @ max. displacement and relief pressure, calculated @ 5,220 psi (360 bar): | 1,987 lb-ft (2 694 N-m) |

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| Travel speed: | |
| Low range | 7.7 mph (12.4 kph) |
| High range – optional | 11.5 mph (18.5 kph) |

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| Final drive | Single-reduction chain drive |
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| Drive chain: | |
| Size | ASA #100 |
| Tensile strength | 30,000 lb (133.4 kN) |

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| Axles: | |
| Torque @ max. displacement and relief pressure | 5,957 lb-ft (8 077 N-m) |
| Diameter | 2.44 in (62 mm) |
| Length | 15.6 in (396 mm) |

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| 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. |

ELECTRICAL

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| Alternator | 160 amp |
| Starter | 4.29 hp (3.2 kW) |
| Battery | 12-volt low-maintenance 1,000 cold-cranking amps @ 0° F (-18° C°) |

OPERATOR ENVIRONMENT

Enclosed Cab w/ Heater and AC; Fully sealed and pressurized – FSP; Glass door w/ wiper and washer; Sliding side windows – removable; Heater and air conditioner; AM/FM radio w/ 2 speakers; Keyless start ignition; Tilt ROPS/FOPS;

Rear window w/ emergency escape; Deluxe cloth, air suspension seat, w/ 2 in (51 mm) retractable 3 point lap seat belt, w/ heater and lumbar support; Hand and foot throttle; 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 auxiliary hydraulic control – on joystick; Advanced Instrument Cluster w/ digital hour meter, tachometer, fuel level LCD bar graph w/ alarm, DEF Level, 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; Diesel Exhaust Fluid – DEF; Oil service.

Indicator light:

Engine preheat; Parking brake;
Seat bar reminder.

OPERATING WEIGHT

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|---|---------------------|
| Unit equipped w/ open cab; 165 lb operator; 78 in Heavy-Duty bucket; full of fuel; 14 x 17.5 tires: | 9,100 lb (4 136 kg) |
| Shipping weight | 8,557 lb (3 890 kg) |

Add-on weights:

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|--------------------------|-------------------|
| 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 | 300 lb (136.0 kg) |

HYDRAULICS

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|---------------------|---------------------|
| Implement pump type | Gear |
| Displacement: | |
| Standard aux. | 2.23 in³ (36.6 cm³) |
| High-flow aux. | 1.42 in³ (23.3 cm³) |

Standard flow @ rated engine RPM:

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|-------------------|-----------------------|
| @ 100% efficiency | 24.2 gpm (91.5 L/min) |
|-------------------|-----------------------|

Optional high-flow @ rated engine RPM:

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|-------------------|------------------------|
| @ 100% efficiency | 38.7 gpm (146.5 L/min) |
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Enhanced high-flow @ rated engine RPM:

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|-------------------|------------------------|
| @ 100% efficiency | 35.0 gpm (132.5 L/min) |
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Loader control valve:

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|-----------------|-------------------------------------|
| Type | 3 spool/open center/series - series |
| Relief pressure | 3,450 psi (238 bar) |

Port relief pressures:

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|--------------|---------------------|
| Loader raise | 3,625 psi (250 bar) |
| Bucket curl | 3,916 psi (270 bar) |
| Bucket dump | 3,625 psi (250 bar) |

Hydraulic lines:

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| Tubing | ORFS + 37° JIC Flare |
| Loop hoses | SAE 100 R19 |

HYDRAULICS CONT.

Hydraulic oil cooler:

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| Number of fins | 10 per inch (3.94 per cm) |
| Number of tube rows x columns | 9 bar/plate |
| Area | 138.7 in ² (890 cm ²) |

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| Hydraulic filter | Beta (4) = 75/spin-on |
|------------------|-----------------------|

Lift cylinders:

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|---------------|--------------------|
| Bore diameter | 2.75 in (69.85 mm) |
| Rod diameter | 2.0 in (50.8 mm) |
| Stroke | 34.9 in (886.5 mm) |
| Closed length | 47.4 in (1 205 mm) |

Bucket cylinders:

| | |
|---------------|------------------|
| Bore diameter | 3.0 in (76.2 mm) |
| Rod diameter | 1.5 in (38.1 mm) |
| Stroke | 15.7 in (398 mm) |
| Closed length | 24.0 in (610 mm) |

SERVICE CAPACITIES

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|-----------|-------------------|
| Fuel tank | 25.5 gal (96.5 L) |
|-----------|-------------------|

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|----------------------|----------------|
| Engine oil w/ filter | 8.9 qt (8.5 L) |
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Hydraulic system:

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|-----------|-------------------|
| Reservoir | 6.0 gal (22.7 L) |
| Total | 12.0 gal (45.4 L) |

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|------------------------|------------------|
| Chain tanks – per side | 5.9 gal (22.2 L) |
|------------------------|------------------|

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| Diesel Exhaust Fluid (DEF) Tank | 2.8 gal (10.7 L) |
|---------------------------------|------------------|

PERFORMANCE SPECS

Rated operating capacity – ROC*:

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| 50% of tipping load | 3,400 lb (1 545 kg) |
| w/ additional counterweight | 3,650 lb (1 656 kg) |

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| Tipping load* | 6,800 lb (3 090 kg) |
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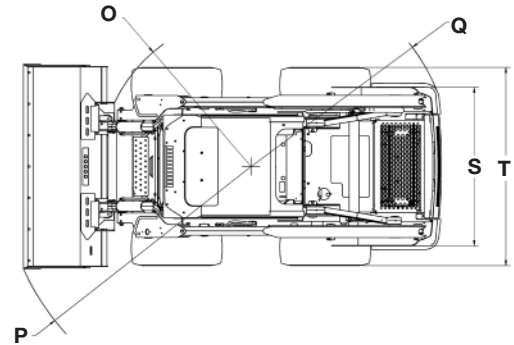
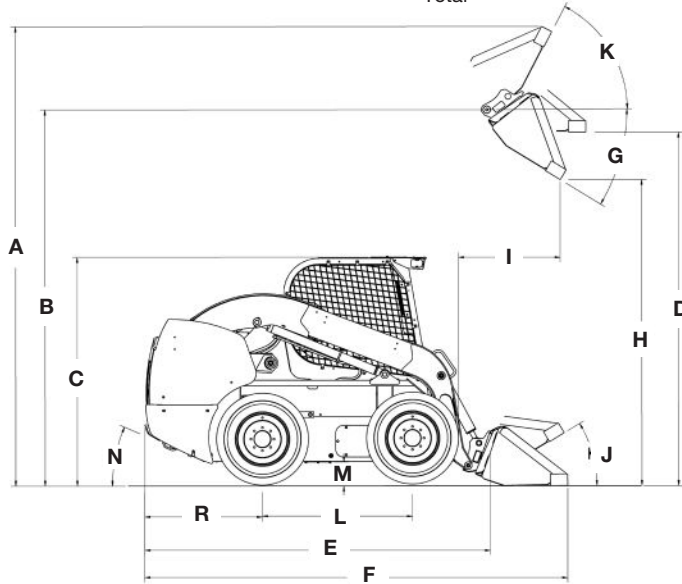
Breakout forces @ 3,150 psi (217 bar)*:

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|----------------------------|--------------------|
| Bucket cylinders | 9,531 lb (42.4 kN) |
| Lift cylinders – tip limit | 6,816 lb (30.3 kN) |

Cycle times:

| | |
|-----------|---------|
| Raise | 4.6 sec |
| Lower | 3.5 sec |
| Dump | 2.6 sec |
| Roll back | 2.0 sec |

NOTE: *Measured using 72 in (1.83 m) dirt and foundry bucket.



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

DIMENSIONS

A. Overall operating height:

| | |
|----------------------------------|-------------------|
| with foundry/excavating bucket | 160.4 in (4.07 m) |
| with low profile bucket | 164.4 in (4.18 m) |
| with low profile extended bucket | 169.5 in (4.30 m) |

Height to:

| | |
|---|-------------------|
| B. Bucket hinge pin | 130.0 in (3.30 m) |
| C. Top of ROPS | 78.8 in (2.00 m) |
| D. Bottom of level bucket, fully raised | 124.8 in (3.17 m) |

Overall length:

| | |
|---|-------------------|
| E. without attachment with coupler | 119.1 in (3.02 m) |
| F. with foundry/excavating bucket on ground | 144.0 in (3.66 m) |
| with low profile bucket | 148.0 in (3.76 m) |
| with low profile extended bucket | 153.1 in (3.89 m) |

| | |
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| G. Maximum dump angle | 46.7° |
|-----------------------|-------|

H. Dump height:

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| with foundry/excavating bucket | 103.5 in (2.63 m) @ 45° |
| with low profile bucket | 100.6 in (2.56 m) @ 45° |

| | |
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| I. Dump reach at maximum height with low profile bucket | 29.3 in (0.74 m) @ 45° |
|---|------------------------|

Maximum attachment rollback:

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|--------------------------|-------|
| J. Bucket on ground | 35.0° |
| K. Bucket at full height | 86.0° |

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|--------------|------------------|
| L. Wheelbase | 52.0 in (1.32 m) |
|--------------|------------------|

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| M. Ground clearance – bottom of belly pan | 8.0 in (0.20 m) |
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| N. Angle of departure | 23.5° |
|-----------------------|-------|

Clearance circle:

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|--|------------------|
| O. without bucket | 56.2 in (1.43 m) |
| P. with 72 in (1.83 m) foundry/excavating bucket in carry position | 84.1 in (2.14 m) |
| with 72 in (1.83 m) low profile bucket on ground | 87.8 in (2.23 m) |
| with 72 in (1.83 m) extended low profile on ground | 71.2 in (2.35 m) |

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| Q. Clearance circle rear | 70.4 in (1.81 m) |
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| R. Rear axle to bumper | 42.4 in (1.08 m) |
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| S. Tread over gauge with spec tires | 56.9 in (1.45 m) |
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| T. Over the tire width spec tires | 69.6 in (1.77 m) |
|-----------------------------------|------------------|

OPTIONAL BUCKETS

| Type | Width | Weight | Heaped Capacity |
|----------------------|----------------|-----------------|---|
| Dirt & Foundry | 72 in (1.83 m) | 420 lb (190 kg) | 16.2 ft ³ (0.46 m ³) |
| | 78 in (1.98 m) | 440 lb (200 kg) | 17.7 ft ³ (0.50 m ³) |
| Low Profile | 72 in (1.83 m) | 480 lb (218 kg) | 14.8 ft ³ (0.42 m ³) |
| Low Profile Extended | 72 in (1.83 m) | 510 lb (232 kg) | 17.7 ft ³ (0.50 m ³) |
| | 78 in (1.98 m) | 540 lb (245 kg) | 19.1 ft ³ (0.54 m ³) |
| | 84 in (2.13 m) | 575 lb (262 kg) | 20.5 ft ³ (0.58 m ³) |
| Light Material | 72 in (1.83 m) | 475 lb (216 kg) | 23.3 ft ³ (0.66 m ³) |
| | 84 in (2.13 m) | 540 lb (245 kg) | 27.5 ft ³ (0.78 m ³) |
| Manure & Slurry | 72 in (1.83 m) | 480 lb (218 kg) | 19.1 ft ³ (0.54 m ³) |
| | 84 in (2.13 m) | 545 lb (248 kg) | 22.6 ft ³ (0.64 m ³) |
| Heavy-Duty | 72 in (1.83 m) | 510 lb (230 kg) | 14.1 ft ³ (0.40 m ³) |
| | 78 in (1.98 m) | 530 lb (240 kg) | 15.5 ft ³ (0.44 m ³) |
| | 84 in (2.13 m) | 550 lb (250 kg) | 17.0 ft ³ (0.48 m ³) |

STANDARD EQUIPMENT

OPERATOR ENVIRONMENT

See page 1

ENGINE

FPT F5B FL413 E*B002
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

OPTIONAL EQUIPMENT

OPERATOR ENVIRONMENT

ROPS/FOPS Level 1 canopy
with side screens
Keyed start ignition
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
Suspension seat, vinyl
Demolition cab door with polycarbonate
FOPS level 2

Fuel filter with water trap
1,000 CCA 12V battery
Master electrical disconnect
Jump start terminal

DRIVETRAIN

2-speed hydrostatic four wheel drive
ASA #100HS drive chain
SAHR disc parking brake

HYDRAULICS

Auxiliary hydraulics:
@ 3,450 psi (238 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
Connect under pressure auxiliary
hydraulic disconnects

HYDRAULICS

High-flow auxiliary hydraulics – combined:
@ 3,450 psi (238 bar) – 38.7 gpm
(146.5 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

LOADER

Hydraulic attachment coupler

LOADER

Auxiliary front electric control
Heavy duty hydraulic attachment coupler
Vertical lift geometry
Loader lift arm support strut
In-cab loader lock

TIRES

12 X 16.5 Heavy duty

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 service
Rear tail lights
Remote oil drain
Remote oil and fuel filters
Block heater
Debris ingress sealing
Mounting points for add-on counterweights
Heavy duty rear door
Deluxe cloth, air suspension seat

OTHER

Language decals
Buckets – see page 3
Bolt-on bucket cutting edges
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

SERVICE PARTS

3 inch (76.2 mm) retractable seat belt

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CASE Construction Equipment is biodiesel-friendly. NOTE: All engines meet current EPA emissions regulations. All specifications are stated in accordance with SAE Standards or Recommended Practices, where applicable.



Always read the Operator's Manual before operating any equipment. Inspect equipment before using it, and be sure it is operating properly. Follow the product safety signs and use any safety features provided.

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SV340

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