CASE CONSTRUCTION

121F

COMPACT WHEEL LOADER

TIER 4 FINAL CERTIFIED



ENGINE

Model	FPT F5H FL463 C*F001
Emissions Certification	Tier 4 Final
Type	4-stroke
Cylinders	4
Bore/Stroke	3.9 x 4.3 in (99 x 110 mm)
Displacement	207 in³ (3.4 L)
Fuel injection	High pressure, common rail injection
Fuel	Diesel
Fuel filter	Spin on, Beta (4) = 20
Air filter	Dry type element w/ warning restriction indicator
Exhaust aftertreatment: Cooled Exhaust Gas Recirculation (CEGR) w/ Diesel Oxidation Catalyst (DOC)	
Radiator:	
Core type	All aluminum
Fan:	
Style	Direct drive
Lubrication/cooling oil pump:	
Style	Integral
Engine oil:	
Pump: Rotor Pump w/ deep sump pan, plate cooled & pressurized under piston nozzles	
Pump operating angle ratings:	
Side-to-side	Rated 35°
Fore and aft	Rated 35°
Oil filtration	Spin on, full flow
Engine speeds	RPM
Rated – full load	2500
Low idle	950
High idle – no load	2500
Horsepower @ 2500 RPM:	
Gross	64 hp (48 kW)
Net	60 hp (45 kW)
Peak torque @ 1400 RPM:	
Gross	192 lb·ft (260 N·m)
Net	188 lb·ft (255 N·m)

NOTE: Gross horsepower and torque per SAE J1349. Net horsepower and torque per SAE J1349.

DRIVETRAIN

Transmission	Hydrostatic transmission
Pump relief	6,092 psi (42 000 kPa)
Pump flow @ 2500 RPM	26.4 gpm (100 L/min)
Differential: Open standard/limited slip optional	
Front axles:	
Differential ratio	3.67
Planetary ratio	6.00
Final axle ratio	22.00
Gear box:	
1st ratio	1.85
Planetaries	Outboard
Service brakes: Master cylinder hydraulically actuated, caliper on front axle	
Parking brake: Mechanical, caliper on front axle	

Travel speeds	Forward mph (kph)	Reverse mph (kph)
1st Low	3.1 (5.0)	3.1 (5.0)
2nd High	12.4 (20.0)	12.4 (20.0)

ELECTRICAL

Voltage	12 Volts
Alternator	120 amp
Batteries	95 AHR, 900 CCA

OPERATOR ENVIRONMENT

ROPS: ISO 3471: 2,008 lb (6 800 kg); Base and Deluxe Cab w/ heater and A/C; Key start; Articulated power steering w/ tilt column; Full adjustable, cloth suspension seat; Foot throttle; Single joystick w/ electronic speed shift control F/N/R switch, proportional loader control and proportional hydraulic auxiliary w/detent switch hydraulic; Cup holder; Retractable high vis orange seat belt; Storage tray on Deluxe Cab; Sun screen – front; Opening side window; Dome light; Wipers – front and rear; 12-volt auxiliary power; Lighter cigar and ashtray; Pocket cellular phone; Coat hook; External rearview mirrors; Loader control lockout; 4 Corner Strobes; Display w/ encoder; SS compatible coupler.

Electronic information center

Displays/Gauges: Vehicle speed; Hourmeter; Floating functionality on; Clock; Vehicle directions; Gear number engaged; PM Catalyst icons.

Indicator lights: Main hydraulic enabled; Turn light – left and right; Rear work lamps; Work lamps; Main high beam; Side lights; Stop; Warning signal; Rabbit; Hand brake; Brake fluid level; Quick coupler on; Ride Control on; Creep speed; PM Catalyst; Low fuel level; Clogging air filter; Engine oil pressure; Glow plug; Alternator changing.

Audible alarms: Caution alarm; Critical alarm; Backup alarm.

Horn

NOTE: If equipped w/ option.

OPERATING WEIGHT

Z-Bar: Unit equipped w/ ROPS/FOPS cab w/ heater, standard HD counterweight, 335/80 R18 Dunlop Tires, front and rear fenders, 1.05 yd³ (0.8 m³) general purpose bucket w/ edge, full fuel, 165 lb (75 kg) operator: 11,826 lb (5 364 kg)

HYDRAULICS

Pump – steering/implement: Open-centered pressure/flow compensated

Fixed gear type: Max. 17.7 gpm @ 3,336 psi (Max. 67 L/min @ 230 bar)

Loader control valve: Open-center, Hydraulic Loader Control w/ single lever includes: Forward/Neutral/Reverse switch, Floating switch, Low/High Travel mode switch, Auxiliary Function Roller

Loader auxiliary steering: Hydraulic orbital center-pivot articulating w/ on-demand oil flow

Main relief pressure	3,336 psi (23 000 kPa)

Filtration: 15-micron, full flow replaceable cartridges on return line

SERVICE CAPACITIES

Fuel tank	22.7 gal (86.0 L)
Hydraulic system:	
Reservoir	10.6 gal (40.0 L)
Total	14.0 gal (53.0 L)
Front and rear axle:	
Front axle	1.7 gal (7.6 L)
Rear axle	1.8 gal (8.4 L)
Engine oil w/ filter	1.8 gal (7.0 L)
Cooling*	3.4 gal (13.0 L)

NOTE: *1.72 gal (6.5 L) antifreeze + 1.72 gal (6.5 L) water.

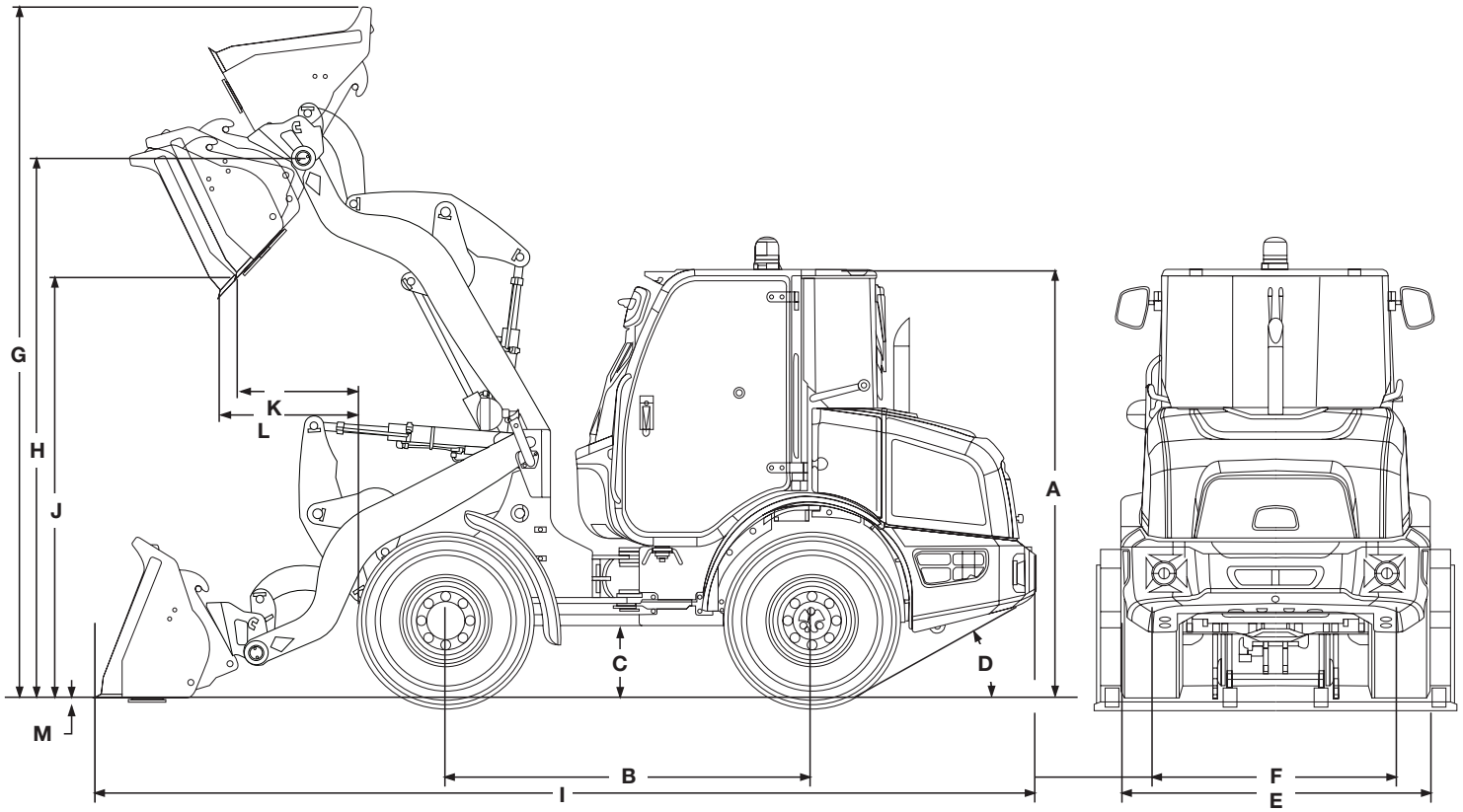
OTHER SPECIFICATIONS

Lift cylinders – Z-Bar	Two (2)
Bore diameter	4.0 in (101.6 mm)
Rod diameter	2.0 in (50.8 mm)
Stroke	27.68 (703 mm)
Tilt cylinder – Z-Bar:	
Bore diameter	3.75 in (95.3 mm)
Rod diameter	2.0 in (50.8 mm)
Stroke	12.6 (306 mm)

Loader:
- Z-Bar:
  - Z-Bar loader linkage
  - Single control for lift and tilt
  - Positive hold float
  - Hydraulic attachment coupler:
    - Skid steer compatible/horizontal pin compatible

Cycle time:
- Z-Bar:

Raise w/ rated bucket load	6.3 sec
Dump w/ rated bucket load	1.7 sec
Lower – empty	3.8 sec



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

DIMENSIONS - Z-BAR AND XR

A. Height to top of ROPS cab	96.7 in (2 457 mm)
B. Wheelbase	81.7 in (2 075 mm)
C. Ground clearance under shaft	17.5 in (444 mm)
Ground clearence under axles	12.6 in (321 mm)
D. Angle of departure	28°
Width:	
E. Overall without bucket	68.5 in (1 740 mm)
F. Centerline tread	55.1 in (1 400 mm)
Turning radius – outside	146.5 in (3 721 mm)
Turning angle:	
From center	40°
Total angle	80°
Rear axle oscillation – total	18°

PERFORMANCE SPECS

121F Z-Bar	1.05 yd³ GP (0.8 m³) GP Bucket with Bolt-on Edge	1.44 yd³ GP (1.1 m³) LM Bucket with Bolt-on Edge
ISO bucket capacity – struck	0.78 yd³ (0.6 m³)	1.18 yd³ (0.9 m³)
Heaped	1.05 yd³ (0.8 m³)	1.44 yd³ (1.1 m³)
Bucket width – outside	80.7 in (2 050 mm)	82.7 in (2 100 mm)
Bucket weight – includes coupler and added components	1,025 lb (465 kg)	1,127 lb (511 kg)
G. Operating height – fully raised with spillguard	163.5 in (4 154 mm)	169.3 in (4 301 mm)
H. Hinge pin height – fully raised	125 in (3 176 mm)	125 in (3 176 mm)
I. Overall length – bucket level on ground	224.1in (5 693 mm)	228 in (5 792 mm)
Dump angle – fully raised	46°	46°
J. Dump height – fully raised, 45° dump	90.3 in (2 293 mm)	87.5 in (2 223 mm)
K. Bucket reach – fully raised, 45° dump	39.7 in (979 mm)	41.3 in (1 049 mm)
L. Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	48.1 in (1 146 mm)	45.2 in (1 147 mm)
M. Dig depth	6.3 in (159 mm)	6.3 in (159 mm)
Operating Load (ROC) – ISO	3,364 lb (1 526 kg)	3,322 lb (1 507 kg)
Maximum material density – ISO	3,215 lb/yd³ (1 908 kg/m³)	2,309 lb/yd³ (1 370 kg/m³)
Tipping load – ISO:		
Straight	7,869 lb (3 569 kg)	7,789 lb (3 533 kg)
40° turn	6,727 lb (3 052 kg)	6,644 lb (3 014 kg)
Lift capacity:		
Full height	6,512 lb (2 954 kg)	6,465 lb (2 932 kg)
Maximum reach	7,363 lb (3 340 kg)	7,274 lb (3 299 kg)
Ground	10,579 lb (4 798 kg)	10,532 lb (4 777 kg)
Breakout force with tilt cylinder	8,971 lb (4 069 kg)	8,035 lb (3 645 kg)
Maximum rollback:		
@ Ground	44°	44°
@ Carry position	52°	52°
@ Maximum reach	57°	57°
@ Full height	71°	71°
Maximum grading angle with bucket – back dragging	49°	55°
Loader clearance circle with bucket	353.2 in (8 972 mm)	355.7 in (9 036 mm)

FORKS

121F Z-Bar	
Fork length	47.2 in (1 200 mm)
Fork weight – includes coupler	869 lb (394 kg)
Operating load – level ground	3,925 lb (1 780 kg)
Operating mass	11,668 lb (5 293 kg)
Tipping load – straight	5,932 lb (2 691 kg)
Tipping load – 40° turn	5,080 lb (2 304 kg)
Fork load center	19.7 in (500 mm)

STANDARD EQUIPMENT

OPERATOR ENVIRONMENT

See page 1

ENGINE

FPT F5H FL463 C*F001
Fuel filter with water trap
Dual element air cleaner

LOADER

See page 2

DRIVETRAIN

4-wheel drive
Open – front and rear axles
Hydrostatic transmission
Single joystick with electronic speed shift control F/N/R switch and proportional loader control
Outboard planetary axles
Caliper service brakes
Mechanical parking brake

HYDRAULICS

Hydraulic remote control
3-spool loader control valve
3 Diagnostic quick couplers
Adjustable electro hydraulic (EH) loader controls
Smooth, moderate & aggressive settings for both lift and tilt responsiveness:
Return to Dig
Hydraulic skid steer compatible coupler
Connect under pressure connectors
Remote drain of hydraulic oil
Aux. Hydraulic drain line coupling

OTHER

Front and rear fenders
Lights:
2 Front driving headlights – high/low beam
2 Rear flood lights
2 Stop tail lights and backup light
Front and rear turn signal/flash
Drawbar pin
Articulation locking pin
Tie-down and Lift-up point – front and rear
Backup alarm
Toolbox
Rotating Beacon
Wired for radio
Bucket position indicator
Heavy Duty counterweight
Front electrical socket for powered attachments
CASE SiteWatch™ Telematics includes hardware and a 5-yr Advanced data subscription

OPTIONAL EQUIPMENT

OPERATOR ENVIRONMENT

Creep speed 0 – 3.1 mph (5 kph)
TeleScop adjustable steering column on Deluxe Cab
Canopy cab
Horizontal pin coupler
Radio antenna and speakers

LOADER

Buckets – see performance data:
General purpose standard
General purpose light material
STD forks
Auto Ride Control w/speed settings
Cold weather with Block Heater - Two 680 CCA batteries and Low-temp Hytran oil
Limited slip – front and rear axles

TIRES

12.5-18 1PRMPT-04TBL MITAS
335/80 R18 EM MITAS
335/80 R18 SPT9 L2 DUNL – Standard
365/70 R18 EM MITAS
365/70 R18 SPT9 L2 DUNL

OTHER

LED work lights, 2 front and 2 Rear

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