



ENGINE

Model	FPT F5H FL463 B
Emissions Certification	Tier 4 Final
Type	4-stroke
Cylinders	4
Bore/Stroke	3.9 x 4.3 in (99 x 110 mm)
Displacement	207 in ³ (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	58 hp (43 kW)
Net	55 hp (41 kW)
Peak torque @ 1400 RPM:	
Gross	181 lb-ft (250 N-m)
Net	181 lb-ft (250 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:	Limited Slip, front and rear	
Front axles:	Z-bar	
Differential ratio	3.63	
Planetary ratio	4.24	
Final axle ratio	15.34	
Gear box:	2.56	
1st ratio	2.56	
Planetaries	Outboard	
Service brakes:	Master cylinder hydraulically actuated	
Z-bar	Drum brake system	
Parking brake:	Mechanical	
Z-bar	Drum brake system	
Travel speeds	Forward	Reverse
	mph (kph)	mph (kph)
1st Low	4.7 (7.0)	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

Base and Deluxe Cab w/ heater and AC; 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; 3rd function auxiliary hydraulics; 4 Corner Strobes; Display w/ encoder; SSL compatible coupler; Cup holder; High visibility orange seat belt; 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; Storage tray and Telescopic steering wheel w/ Deluxe Cab.

Electronic information center

Displays/Gauges:
Fuel Level, Engine Coolant temperature, Engine RPM, Vehicle Speed, Floating Functionality On/Off, Vehicle Hours, Vehicle Direction F/R, Gear number engaged, Clock.

Indicator lights:
Main hydraulic enabled; Turn signal – 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; 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 & A/C, standard counterweight, 12.5-18 PRMPT Dunlop tires, front and rear fenders, 0.92 yd³ (0.7 m³) general purpose bucket w/ bolt on edge, full fuel, 165 lb (75 kg) operator:
10,518 lb (4 771 kg)

HYDRAULICS

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

Fixed gear type:
Max. 17.7 gpm @ 2500 RPM @ 3,046 psi
(Max. 67 L/min @ 2500 RPM @ 21 000 kPa)

Electro-Hydraulic (EH) joystick loader control:
Forward/Neutral/Reverse switch, Floating switch, Low/High Travel mode switch, 3rd Function Auxiliary Roller control

EH Joystick loader control adjustability switch for lift and tilt functions; Return to dig; Skid steer style; Connect under pressure connectors; Remote drain of hydraulic oil; Auxiliary hydraulic drain line coupling

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

Main relief pressure:
Z-bar 3,046 psi (21 000 kPa)

Filtration:
10-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:	
Z-bar	0.8 gal (3.8 L)
Rear Axle:	
Z-bar	0.99 gal (4.5 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 cylinder – Z-Bar	Two (2)
Bore diameter	4 in (101.6 mm)
Rod diameter	2.0 in (50.8 mm)
Stroke	27.68 (703 mm)

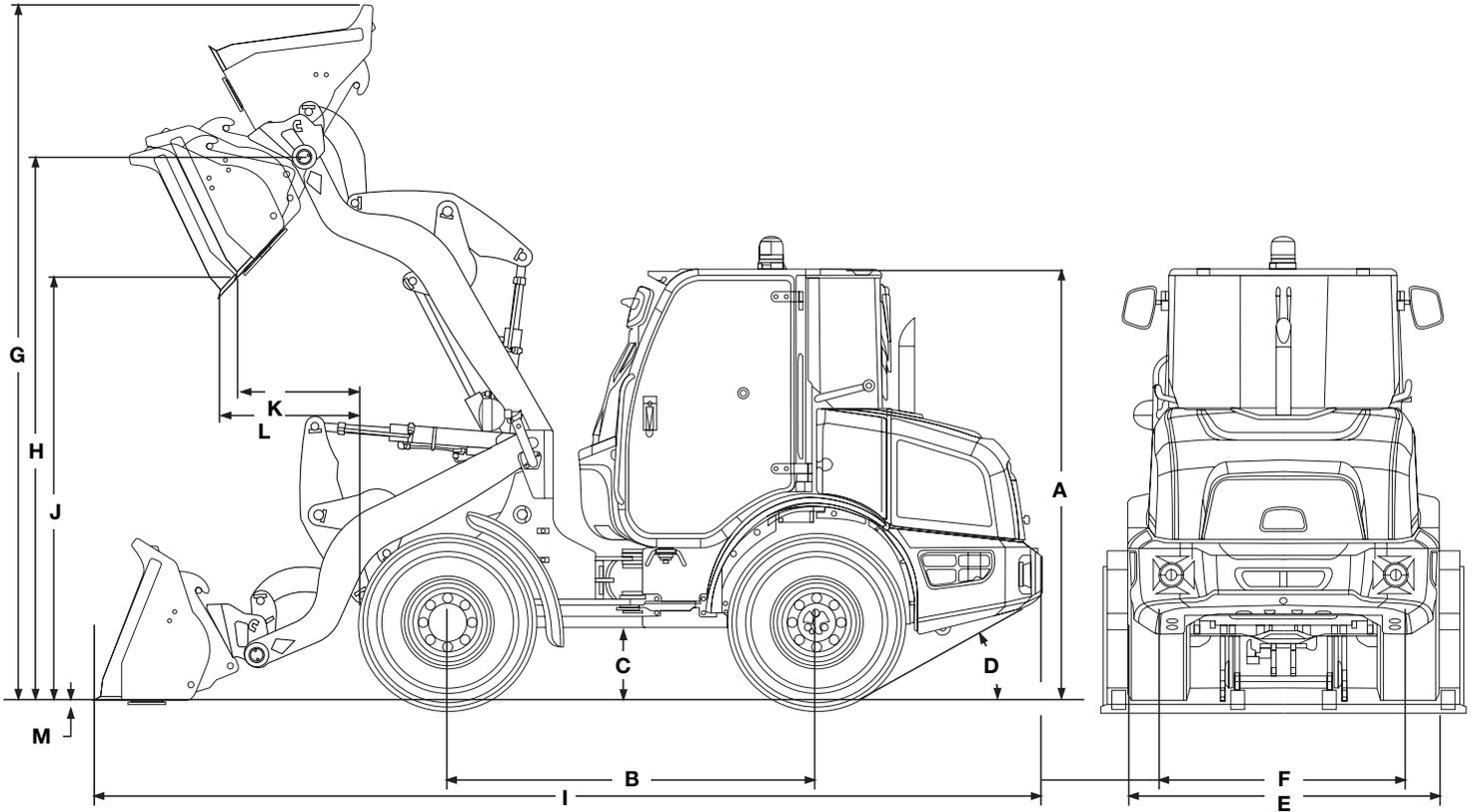
Tilt cylinder – Z-Bar:	
Bore diameter	3.75 in (95.3 mm)
Rod diameter	2.0 in (50.8 mm)
Stroke	12.6 (306 mm)

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	96.8 in (2 458 mm)
B. Wheelbase	81.7 in (2 075 mm)
C. Ground clearance under shaft	17.5 in (444 mm)
Ground clearance 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

21F Z-Bar	0.92 yd³ GP (0.7 m³) GP Bucket with Bolt-on Edge	1.31 yd³ GP (1.0 m³) LM Bucket with Bolt-on Edge
ISO bucket capacity – struck	0.65 yd ³ (0.5 m ³)	1.05 yd ³ (0.8 m ³)
Heaped	0.92 yd ³ (0.7 m ³)	1.31 yd ³ (1.0 m ³)
Bucket width – outside	74.8 in (1 900 mm)	80.7 in (2 050 mm)
Bucket weight – includes coupler and added components	972 lb (441 kg)	1,091 lb (495 kg)
G. Operating height – fully raised with spillguard	160.7 in (4 081 mm)	166.1 in (4 220 mm)
H. Hinge pin height – fully raised	123.5 in (3 137 mm)	123.5 in (3 137 mm)
I. Overall length – bucket level on ground	220.9 in (5 612 mm)	224.4 in (5 699 mm)
Dump angle – fully raised	46°	46°
J. Dump height – fully raised, 45° dump	90.6 in (2 266 mm)	86.8 in (2 204 mm)
K. Bucket reach – fully raised, 45° dump	36.7 in (933 mm)	39.2 in (995 mm)
L. Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	42.3 in (1 073 mm)	42.2 in (1 072 mm)
M. Dig depth	4.9 in (125 mm)	4.9 in (125 mm)
Operating Load (ROC) - ISO	2,768 lb (1 256 kg)	2,718 lb (1 233 kg)
Maximum material density – ISO	3,023 lb/yd ³ (1 794 kg/m ³)	2,078 lb/yd ³ (1 233 kg/m ³)
Tipping load – ISO:		
Straight	6,501 lb (2 949 kg)	6,233 lb (2 904 kg)
40° turn	5,536 lb (2 511 kg)	5,285 lb (2 465 kg)
Lift capacity:		
Full height	6,720 lb (3 048 kg)	6,651 lb (3 017 kg)
Maximum reach	7,620 lb (3 456 kg)	7,517 lb (3 410 kg)
Ground	10,388 lb (4 712 kg)	10,308 lb (4 675 kg)
Breakout force with tilt cylinder	8,301 lb (3 765 kg)	7,364 lb (3 340 kg)
Maximum rollback:		
@ Ground	45°	45°
@ Carry position	52°	52°
@ Maximum reach	57°	57°
@ Full height	71°	71°
Maximum grading angle with bucket – back dragging	47°	52°
Loader clearance circle with bucket	345.2 in (8 768 mm)	352.7 in (8 959 mm)

FORKS

21F Z-Bar	
Fork length	47.2 in (1 200 mm)
Fork weight – includes coupler	869 lb (394 kg)
Operating load – level ground	3,261 lb (1 479 kg)
Operating mass	10,238 lb (4 644 kg)
Tipping load – straight	4,756 lb (2 157 kg)
Tipping load – 40° turn	4,077 lb (1 849 kg)
Fork load center	19.7 in (500 mm)

STANDARD EQUIPMENT

OPERATOR ENVIRONMENT

See page 1

ENGINE

FPT F5H FL463 B
Fuel filter with water trap
Dual element air cleaner

LOADER

See page 2

DRIVETRAIN

4-wheel drive
Open – Front and rear
Hydrostatic transmission
Outboard planetary axles
Mechanical parking brake

HYDRAULICS

3-spool loader control valve
Single joystick with electronic speed shift control F/N/R switch and proportional loader control
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
Tool box
Rotating beacon
Wired for radio
Bucket position indicator
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 mp3 - usb

LOADER

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

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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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.

Form No. CCE20240421F
Replaces Form No. CCE20221221F