

650M

CRAWLER DOZER
LT/WT/LGP

TIER 4 FINAL CERTIFIED



Model	FPT F5C F5HFL463D*G003
Emissions Certificat	ion Tier 4 Final Certified
Cylinders	4
Displacement	207.5 in ³ (3.4 L)
Fuel injection	Common rail
Fuel	#2 Diesel
Fuel filter	Spin-on w/
	in-line strainer
Air intake	Cross-flow
Cooling	Liquid
Engine speeds	RPM
High idle - no load	2340 +/- 50
Rated - full load	2200
Low idle	1100 +/- 25
Horsepower @ 2200) RPM – SAE J1349:

Engine lubrication:

Net

Gross

Pump Deep sump plate cooler w/ pressurized under-piston nozzles

68 hp (50.6 kW)

73.8 hp (55 kW)

full-flow cartridge

Pump operating angle ratings:

Side-to-side	35°
Fore and aft	45°
Oil filtration	Replaceable, spin-on

Radiator:

Core size area 367.5 in² (2 370.8 cm²) Rows of tubes 24

Fan:

Diameter 20 in (500 mm) Ratio 1.1:1

Dual path hydrosta	tic:
Pump	Variable axial piston
Motor	Variable bent axis piston
Max. drawbar pull*	39,086 lb (173.9 kN)
Transmission	Single lever control -
	electronic straight tracking
Transmission oil filt	ter 4 micron, spin-on
	replaceable
Travel speeds*:	
Forward	5.0 mph (8 kph)
Reverse	5.0 mph (8 kph)
Parking brakes	Heavy-duty, spring-applied,
	hydraulic pressure release
Steering brakes	Hydrostatic
Final drive	2 helical gear
	reduction to planetary output
Ratio	62.4:1

Transmission cooling:

DRIVETRAIN

Type Oil to air Core size 216.9 in² (1 399.3 cm²)

NOTE: *Measured using standard track chain. Increase travel speeds by 4% and reduce drawbar pull by 4% with the optional Max-Life track chain.

ELECTRICAL

Alternato	or 120 amp
Battery	12-volt low-maintenance
	925 cold-cranking amps @ 0° F (-18 C)

Electrical system 12 Volts

OPERATOR ENVIRONMENT

Optional ROPS cab; Single lever control for speed, steering and direction; Forward/reverse speed ratio selector; Adjustable armrests; Foot rests; Retractable seat belt, 2 in (51 mm); Rear view mirror; Seat tilts for access.

Warning lights:

Air filter; Alternator; Engine oil pressure; Diagnostic fault indicator; Engine coolant; temperature; Engine oil pressure; Low fuel level; Park brake engaged; Service soon indicator; Transmission temperature; Hi range; Hydraulic filter; Transmission filter; Transmission pressure.

Gauges:

Battery voltage; Fuel level; Digital hourmeter/tachometer/diagnostics/service reminder; Transmission oil temperature; Water temperature.

Audible warnings:

Engine oil pressure; Transmission pressure; Engine coolant temperature; Low fuel level; Transmission charge pressure; Transmission/hydraulic temperature.

OPERATING WEIGHT

Unit equipped w/ ROPS, full fuel tank, 170 lb (77 kg) operator, track guides, backup alarm, horn and lights.

Long track	15,803 lb (7 168 kg)
Wide track	16,405 lb (7 441 kg)
Low ground pressure	16,839 lb (7 638 kg)
Add-on weights:	
Drawbar	128 lb (58 kg)
Ripper - 3 shank	1,400 lb (635 kg)
Winch	1,861 lb (844 kg)
Front counterweight	838 lb (380 kg)
Cab	1,874 lb (850 kg)
Max-Life chain	115 lb (52 kg)
Center rockguard	157 lb (71 kg)
Sweeps	110 lb (50 kg)
Dual batteries	60 lb (27 kg)
90 in blade	925 lb (420 kg)
96 in blade	1,001 lb (454 kg)
109 in blade	1,121 lb (508 kg)
120 in blade	1,235 lb (560 kg)
SALT w/ 15.6 in closed show	e 2,533 lb (1 149 kg)
Max-Life w/ 15.6 in open sh	oe2,595 lb (1 177 kg)
SALT w/ 20 in closed shoe	2,889 lb (1 310 kg)
Max-Life w/ 20 in open shoe	e 2,951 lb (1 338 kg)
SALT w/ 24 in closed shoe	3,210 lb (1 456 kg)
Max-Life w/ 24 in open shoe	e 3,272 lb (1 484 kg)

HYDRAULICS

Pump flow @ 2000 RPM @ 3,000 psi (20 880 kPA) 20.3 gpm (78.8 L/min) Lift cylinder Two (2) Bore diameter 3.50 in (88.9 mm) Rod diameter 1.75 in (44.4 mm) Stroke 15.53 in (394.5 mm) Angle cylinder Two (2) Bore diameter 3.50 in (88.9 mm) 1.75 in (44.5 mm) Rod diameter 13.46 in (342.0 mm) Stroke Tilt cylinder One (1) Bore diameter 3.50 in (88.9 mm) Rod diameter 1.75 in (44.4 mm)

SERVICE CAPACITIES

Stroke

Fuel tank	40.8 gal (154.4 L)
Engine oil w/ filter	13 qt (12.3 L)
Engine oil w/o filter	12.2 qt (11.5 L)
Engine cooling system	23.9 qt (22.6 L)
Hydraulic reservoir	16.5 gal (72.7 L)
Final drive – per side	16 qt (15.1 L)
Track rollers – each	0.16 qt (0.15 L)
Front idlers – each	0.34 qt (0.326 L)
Carrier rollers – each	0.13 qt (0.136 L)

5.39 in (137 mm)

OTHER SPECIFICATIONS

Undercarriage:

Track adjustment Hydraulic Frame Rigid suspension

Length of track on ground:

85 in (2 159 mm) 6.125 in (155.575 mm)

 Track link pitch
 6.125 in (155.575 mm)

 Track shoe height
 2.06 in (52 mm)

 Pin diameter
 1.125 in (28.575 mm)

Bushing diameter:

SALT track

Max-Life track

Bolt diameter

Track shoes per side

Carrier rollers per side

Track roller per side

Track roller rail diameter

2.13 in (54 mm)

2.68 in (68 mm)

0.625 in (16 mm)

40

Track rollers per side

5.98 in (152 mm)

Track on ground:

Shoe area:

15.6 in (395 mm) 2,644 in² (17 056 cm²) 20 in (508 mm) 3,372 in² (21 755 cm²) 24 in (610 mm) 4,083 in² (26 340 cm²)

Track:

Long Track:

15.6 in (395 mm) closed grousers and SALT 15.6 in (395 mm) open grousers and Max-Life

Wide Track:

15.6 in (395 mm) closed grousers and SALT 15.6 in (395 mm) open grousers and Max-Life 20 in (508 mm) closed grousers and SALT 20 in (508 mm) open grousers and Max-Life LGP:

24 in (610 mm) closed grousers and SALT 24 in (610 mm) open grousers and Max-Life

Blade:

 $\begin{tabular}{llll} Variable blade pitch & 52^\circ - 60^\circ \\ Lift speed - per second & 19.7 in (500 mm) \\ Cutting edge & Reversible, replaceable \\ Width & 8.0 in (203 mm) \\ Thickness & 0.625 in (16 mm) \\ \end{tabular}$

Ripper:

Max. penetration:

15.3 in (389 mm) w/ grousers

penetrated - see below

 Width
 73.1 in (1 856 mm)

 Cut width
 70.1 in (1 781 mm)

 Max. ground clearance
 15.5 in (393 mm)

 Points
 Replaceable

Max. number of shanks Tooth spacing:

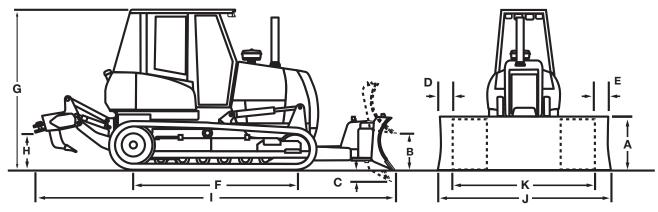
 w/ 3 teeth
 31 in (785 mm)

 Hydraulic cylinder
 Double-acting

 Diameter
 3.9 in (99.02 mm)

 Stroke
 8.4 in (213 mm)

 Rod
 1.75 in (44.5 mm)



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

DIMENSIONS				
	Long Track (LT)	Long Track (LT, WT)	Wide Track (WT)	Low Ground Pressure (LGP
Blade width	90 in (2 286 mm)	96 in (2 438 mm)	109 in (2 769 mm)	120 in (3 048 mm)
SAE blade capacity	1.58 yd ³ (1.21 m ³)	1.69 yd ³ (1.29 m ³)	2 yd³ (1.48 m³)	2.15 yd ³ (1.64 m ³)
A. Blade height	33.1 in (841 mm)			
B. Blade lift above ground	35.1 in (892 mm)			
C. Blade depth below ground	21.0 in (533 mm)			
Blade angle both directions	22.7°	22.7°	22.7°	22.7°
D. Cast reach	11.4 in (288.4 mm)	14.1 in (358.7 mm)	12.3 in (312.7 mm)	15.4 in (390.7 mm)
E. Cut reach	-0.37 in (-9.5 mm)	2.39 in (60.8 mm)	0.58 in (14.7 mm)	3.65 in (92.8 mm)
Blade tilt, each end – up to 9.7°	7.72 in (196 mm)	8.23 in (209 mm)	9.33 in (237 mm)	10.28 in (261 mm)
Track gauge	56.47 in (1.43 m)	56.47 in (1.43 m)	68 in (1.73 m)	68 in (1.73 m)
Maximum shoe width	15.6 in (395 mm)	15.6 in (395 mm)	20 in (508 mm)	24 in (610 mm)
F. Length of track on ground:				
Max-Life	85 in (2.16 m)			
Area of track on ground	2,644 in ² (1.71 m ²)	2,644 in ² (1.71 m ²)	3,400 in ² (2.19 m ²)	4,083 in ² (2.63 m ²)
Ground pressure	5.98 psi (41.2 kPa)	5.98 psi (41.2 kPa)	6.07 psi (41.9 kPa)	4.12 psi (28.4 kPa)
G. Height to top of ROPS	8 ft 8 in (2 648 mm)			
Height to top of cab	0 # 0 != (0 050 ====)	0.4.0 :- (0.050)	0 ft 0 in (0 050 mm)	0.4.0 :- (0.050
with air conditioning	8 ft 9 in (2 653 mm)			
H. Ground clearance	13.07 in (332 mm)			
Length:				
Blade straight with drawbar	13 ft 8 in (4 180 mm)			
I. Blade straight with ripper	16 ft 3 in (4 951 mm)			
Width:				
J. Blade straight	7 ft 6 in (2 286 mm)	8 ft 0 in (2 438 mm)	9 ft 1 in (2 769 mm)	10 ft 0 in (3 048 mm)
Blade angled	7 ft 1 in (2 159 mm)	7 ft 7 in (2 299 mm)	8 ft 7 in (2 613 mm)	9 ft 5 in (2 871 mm)
K. Over track	6 ft 0 in (1 829 mm)	6 ft 0 in (1 829 mm)	7 ft 0 in (2 122 mm)	7 ft 8 in (2 337 mm)

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STANDARD EQUIPMENT

OPERATOR ENVIRONMENT

See page 1

ENGINE

FPT F5C F5HFL463D*G003

Tier 4 Final Certified

Dual DOC

CEGR

Automatic fan belt tensioner

Integral engine oil cooling

Fuel filter

Dual element radial seal air cleaner

120 amp alternator

925 CCA 12-volt battery

Engine side panel

Anti-freeze to -34°F

Pusher fan

Radiator - Anti-sandblast

DRIVETRAIN

Dual path infinitely variable, single-lever controlled hydrostatic drive with electronic straight tracking & counter-rotation

Final drive:

Triple reduction; helical gear/planetary decelerator with hydrostatic drive retardation Decelerator with hydrostatic drive retardation

Automatic spring-applied parking brake

10 incremental speed settings - Operator preference settings for max speed, shuttle sensitivity and steering sensitivity

BLADE

52° – 60° variable pitch

Single lever control for blade lift, angle and tilt

90 in (2.29 m) blade 650M LT

96 in (2.44 m) blade 650M LT/WT

109 in (2.8 m) blade 650M WT

120 in (3.0 m) blade 650M LGP

UNDERCARRIAGE

Hydraulic track adjusters

Easy clean track covers

Case sealed and lubricated track chain

Permanently lubricated track and

carrier rollers

H.D. track covers

Track adjuster quard

Track gauge - 56 in or 68 in

Track guides - front and rear Length of track on ground - 85 in

High visibility track idler

Heavy duty track frame, sprocket and mounting pads

OTHER

Anti-vandalism package

Backup alarm

Hinged grill

Decelerator

Final drive seal guard

Hand throttle

Horn

Work lights:

2 front

1 rear

Master disconnect switch

Operator's manual enclosure

O-ring face seal hydraulic fittings

Pre-cleaner

Vertical spin-on hydraulic/filters

Hydraulics - 3 spool valve

Fuse circuit protection

Single key start switch

Pre-wired for work lights

Two additional power sources availabe for heater, air seat or auxiliary 12 volt power port

Transmission bottom

CASE ProCare - 3-vr/3000-hr factory warranty, 3-yr/2000-hr planned

maintenance and SiteWatch™ Telematics

TELEMATICS

CASE SiteWatch™ Telematics - includes hardware and a 3-yr Advanced data subscription

OPTIONAL EQUIPMENT

OPERATOR ENVIRONMENT

Cab with heater, 22,700 BTU (6.65 kW)/hr air conditioner, defroster, front windshield washer and 2F-1R lights

3 in (76 mm) seat belt

Deluxe air suspension seat

HYDRAULICS

4 spool hydraulic valve for field-installed ripper

REAR MOUNTED EQUIPMENT

Ripper, parallelogram 5 slots with 3 shanks

BLADES

90 in (2.29 m)

96 in (2.44 m)

109 in (2.77 m)

120 in (3.05 m)

GUARDS

Brush guards (Sweeps) Center rockguard

SCREENS

Rear ROPS and cab

Side ROPS

Radiator brush screen

OTHER

Case Max-Life track

Cold start aid (Grid Heater)

Counterweight, front

Drawbar

Front pull hook

Lights - halogen, 2 front, 1 rear for

cab or ROPS

Retrieval hitch

Special paint

Turbo precleaner

Winch drive PTO

Rear Wiper for cab

Lights without brush guard Lights with brush guard

Diagnostics check fittings

Environmental drains

Lift/Tow decals (Export)

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