# DOZER xlt/wt/lgp



# SINCE 1842.

# 2050M

#### MOTOR

Model	FPT F4HFE613J
Emissions Certific	ation Tier 4 Final Certified
Cylinders	6
Displacement	409 in <sup>3</sup> (6.7 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	2200 +/- 50
Rated - full load	2000
Low idle	800 +/- 25
Horsepower @ 20	00 RPM – SAE J1349:
Net	214 hp (160 kW)
Gross	232 hp (173 kW)
Engine lubrication:	:
Pump	Deep sump plate cooler
w/ p	pressurized under-piston nozzles
Pump operating a	ngle ratings:
Side-to-side	35°
Fore and aft	45°
Oil filtration	Replaceable, spin-on
	full-flow cartridge+
Radiator:	
Fins per inch	10
Fan:	
Туре	Variable speed/
	Auto reversing/Hydraulic driven
Diameter	27.6 in (700 mm)

# DRIVETRAIN

Dual path hydrostatic:			
Pump	Variable axial piston		
Motor	Variable bent axis piston		
Max. drawbar pull	81,000 lb (360 kN)		
Transmission	Single lever control –		
	electronic straight tracking		
Transmission oil filter	4 micron at beta 75,		
replaceable w/ 100 mesh suction screen			
Travel speeds:			
Forward	6.1 mph (9.8 kph)		
Reverse	6.1 mph (9.8 kph)		
Parking brakes	Heavy-duty, spring-applied,		
	hydraulic pressure release		
Steering brakes	Hydrostatic		
Final drive	2 helical gear		
	reduction to planetary output		
Ratio	48.75:1		
Transmission cooling:			
Туре	Tube and fin		
Core size	510.1 in2 (0.33 m2)		

#### **ELECTRICAL**

Alternato	r 120 am	р
Battery	(2) 12-volt, low-maintenanc	e
	1200 cold-cranking amps @ 0° F (-18° C	2)
Electrica	System 24 Volt	s

# **OPERATOR ENVIRONMENT**

Fully enclosed ROPS cab; Single lever control for speed, steering and direction; Cloth air suspension seat w/ back adjustment; Retractable 3 in (76 mm) seat belt; Adjustable armrest; Two foot rest; Rearview mirror; Two door windshield wipers; Dome light; 12-volt accessory outlet; Headliner; Floor mat; Rear Wiper; Radio; Heat/AC.

#### Warning lights:

Air filter; Alternator; Diagnostic fault indicator; Engine coolant temperature; Engine oil pressure; Hydraulic filter; Low fuel

level; DEF fluid level;

Park brake engaged; Service soon indicator; Transmission filter;

Transmission charge pressure.

#### Gauges:

Battery voltage; Fuel level; Digital hour meter/ tachometer/diagnostic/service

reminder; Transmission oil temperature;

Transmission speed indicator;

Water temperature; Diesel Exhaust Fluid (DEF) level.

#### Audible warnings:

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

### **OPERATING WEIGHT**

Unit equipped w/ cab, full fuel tank, 170 lb (77 kg) operator, rear retrieval hitch, track guides, PAT blade.

HYDRALILICS			
Sweeps	139 lb (63 kg)		
Full rock guard 505 lb (2			
36 in (914 mm)	302 lb (137 kg)		
30 in (762 mm)	295 lb (134 kg)		
28 in (711 mm)	251 lb (114 kg)		
24 in (610 mm)	320 lb (145 kg)		
Ultra-Life chain:			
Winch	5,512 lb (2 500 k		
Ripper – 3 shank	4,145 lb (1 880 kg)		
Drawbar	146 lb (66 kg)		
Add-on weights:			
Low ground pressure	48,773 lb (22 123 kg)		
Wide track	46,891 lb (21 269 kg)		
Extra long track	45,414 lb (20 599 kg)		
blade.			

#### HYDRAULICS

Pump flow @ 2200 RPM @ 2,830 psi			
(19 512 kPA)	40.4 gpm (153 L/min)		
Lift cylinder w/ PAT	Two (2)		
Bore diameter	4.50 in (114.3 mm)		
Rod diameter	2.50 in (63.5 mm)		
Stroke	19.21 in (488.0 mm)		
Angle cylinder w/ PAT	Two (2)		
Bore diameter	4.50 in (114.3 mm)		
Rod diameter	2.50 in (63.5 mm)		
Stroke	19.79 in (502.7 mm)		
Tilt cylinder w/ PAT	One (1)		
Bore diameter	5.00 in (127.0 mm)		
Rod diameter	2.50 in (63.5 mm)		
Stroke	5.84 in (148.4 mm)		
Lift cylinder – Bulldozer	Two (2)		
Bore diameter	3.68 in (93.5 mm)		

Rod diameter	2.25 in (57.2 mm)		
Stroke	35.67 in (906 mm)		
Tilt cylinder – Bulldozer	One (1)		
Bore diameter	4.50 in (114.3 mm)		
Rod diameter	2.50 in (63.5 mm)		
Stroke	3.89 in (98.9 mm)		

# SERVICE CAPACITIES

Fuel tank	107.0 gal (405.0 L)		
Engine oil w/ filter	17.3 qt (16.4 L)		
Engine oil w/o filter	16.5 qt (15.6 L)		
Engine cooling system	8.0 gal (30.28 L)		
Hydraulic reservoir	55.0 gal (210.0 L)		
Final drive – per side	26.4 qt (25.0 L)		
Track rollers – each	0.376 qt (0.356 L)		
Front idlers – each	0.349 qt (0.330 L)		
Carrier rollers – each	0.328 qt (0.310 L)		
DEF tank	14.0 gal (52.0 L)		

#### OTHER SPECIFICATIONS

Undercarriage:	
Track adjustment	Hydraulic
Frame	Pivot shaft and oscillating
	equalizer beam suspension
Length of track on grou	und 128 in (3.25 m)
Track link pitch	7.99 in (202.9 mm)
Track shoe height	2.81 in (71.5 mm)
Pin diameter	1.75 in (44.5 mm)
Bushing diameter:	
SALT HD track	2.87 in (72.9 mm)
Ultra Life track	2.87 in (72.9 mm)
Track shoes per side	45
Track rollers per side	8
Carrier rollers per side	2
Track roller rail diameter	er 8.94 in (227 mm)

Track on ground:			
Shoe area:			
24 in (610 mm)	5,233 in2 (33 760 cm²)		
24 in (610 mm)	6,134 in² (39 575 cm²)		
28 in (711 mm)	7,157 in <sup>2</sup> (46 171 cm <sup>2</sup> )		
30 in (762 mm)	7,668 in² (49 469 cm		
36 in (914 mm)	9,201 in <sup>2</sup> (59 363 cm <sup>2</sup> )		
Track:			
Extra long track:			
24 in (610 mm) closed g	rousers and SALT HD		
24 in (610 mm) open gro	ousers and Ultra Life		
Wide track:			
28 in (711 mm) closed g	rousers and SALT HD		
28 in (711 mm) open gro	ousers and Ultra Life		
30 in (762 mm) closed g	rousers and SALT HD		
30 in (762 mm) open gro	ousers and Ultra Life		
Low ground pressure:			
36 in (914 mm) closed g	rousers and SALT HD		
36 in (914 mm) open gro	ousers and Ultra Life		
Blade:			
Variable blade pitch	55° – 60°		
Lift speed – per second	19.0 in (483 mm)		
Cutting edge – PAT	Reversible, replaceable		
Width	10.0 in (254 mm)		
Thickness	0.8 in (20 mm)		
Ripper:			
Max. penetration	18.6 in (472.5 mm)		
Width	76.3 in (1 937 mm)		
Cut width	74.4 in (1 890 mm		
Max. ground clearance	23.7 in (601.7 mm)		
Max. number of shanks	3		
Tooth spacing:			
w/ 3 teeth	33.6 in (854.3 mm)		

Double-acting

6.14 in (156 mm)

23.5 in (597 mm)

2.75 in (70 mm)

Hydraulic cylinder

Diameter

Stroke

Rod



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

#### DIMENSIONS

	Extra Long Track (XLT) with Semi-U	Extra Long Track (XLT) with PAT	Low Ground Pressure (LGP) with Straight PT	Low Ground Pressure (LGP) with PAT	Low Ground Pressure (LGP) with Semi-U
Blade width	134.7 in (3 422 mm)	142 in (3 607 mm)	154 in (3 900 mm)	157.5 in (4 064 mm)	157 in (3 988 mm)
SAE blade capacity	7.29 yd <sup>3</sup> (5.57 m <sup>3</sup> )	6.32 yd <sup>3</sup> (4.83 m <sup>3</sup> )	4.94 yd <sup>3</sup> (3.78 m <sup>3</sup> )	7.12 yd <sup>3</sup> (5.54 m <sup>3</sup> )	7.98 yd <sup>3</sup> (6.10 m <sup>3</sup> )
A. Blade height	56 in (1 418 mm)	53.8 in (1 366 mm)	43.5 in (1 105 mm)	53.9 in (1 369 mm)	53 in (1 349 mm)
Blade lift above ground	49 in (1 237.7 mm)	44.5 in (1 130 mm)	46 in (1 169 mm)	44.5 in (1 130 mm)	48.4 in (1 228 mm)
<b>B.</b> Blade depth below ground	21.5 in (546.8 mm)	21.4 in (542.8 mm)	20.0 in (507.8 mm)	21.4 in (542.8 mm)	21.6 in (548 mm)
C. Blade angle both directions	-	25°	-	25°	_
D. Cast reach	17.3 in (438.9 mm)	22.7 in (576.4 mm)	14.3 in (363 mm)	18.6 in (472.1 mm)	16.2 in (411 mm)
E. Cut reach	17.3 in (438.9 mm)	5.7 in (145.7 mm)	14.3 in (363 mm)	1.7 in (43.0 mm)	16.2 in (411 mm)
Blade tilt, each end	17 in (433 mm)	21.7 in (550 mm)	16.2 in (411 mm)	21.7 in (550 mm)	15.7 in (400 mm)
Track gauge	76 in (1.94 m)	76 in (1.94 m)	89 in (2.26 m)	89 in (2.26 m)	89 in (2.26 m)
Maximum shoe width	24 in (609 mm)	24 in (609 mm)	36 in (914 mm)	36 in (914 mm)	36 in (914 mm)
F. Length of track on ground	128 in (3.25 m)	128 in (3.25 m)	128 in (3.25 m)	128 in (3.25 m)	128 in (3.25 mm)
Area of track on ground	7,161 in² (4.62 m²)	7,161 in <sup>2</sup> (4.62 m <sup>2</sup> )	9,107 in² (5.88 m²)	9,107 in² (5.88 m²)	9,107 in <sup>2</sup> (5.88 m <sup>2</sup> )
Ground pressure	7.33 psi (0.51 bar)	7.33 psi (0.51 bar)	5.35 psi (0.36 bar)	5.35 psi (0.36 bar)	5.35 psi (0.36 bar)
G. Height to top of ROPS cab	10 ft 4 in (3 150 mm)	10 ft 4 in (3 150 mm)	10 ft 4 in (3 150 mm)	10 ft 4 in (3 150 mm)	10 ft 4 in (3 150 mm)
Height to top of exhaust	9 ft 4 in (2 870.7 mm)	9 ft 4 in (2 870.7 mm)	9 ft 4 in (2 870.7 mm)	9 ft 4 in (2 870.7 mm)	9 ft 4 in (2 870.7 mm)
H. Ground clearance	16.1 in (408.2 mm)	16.1 in (408.2 mm)	16.1 in (408.2 mm)	16.1 in (408.2 mm)	16.1 in (408.2 mm)
Length:					
Blade straight with drawbar	( )	19 ft 4 in (5 902 mm)	19 ft 3 in (5 867 mm)	19 ft 4 in (5 902 mm)	19 ft 6 in (5 980 mm)
I. Blade straight with ripper	22 ft 5 in (6 833 mm)	24 ft 2 in (7 366 mm)	22 ft 9 in (6 934 mm)	24 ft 2 in (7 366 mm)	24 ft 1 in (7 353 mm)
Width:					
Blade straight	11 ft 2 in (3 404 mm)	11 ft 8 in (3 556 mm)	12 ft 8 in (3 861 mm)	13 ft 3 in (4 039 mm)	13 ft 1 in (3 988 mm)
<ul><li>J. Blade angled</li><li>K. Over track</li></ul>	– 8 ft 3 in (2 515 mm)	10 ft 9 in (3 287 mm) 8 ft 3 in (2 515 mm)	12 ft 1 in (3 690 mm) 10 ft 4 in (3 150 mm)	11 ft 9 in (3 625 mm) 10 ft 4 in (3 150 mm)	– 10 ft 4 in (3 166 mm)
	o it o iii (2 0 10 11111)	3 IL 3 III (2 3 I3 IIIIII)	1011 4111 (3-150 11111)	10 11 4 111 (3 130 11111)	

NOTE: Ground clearance and overall height dimensions are with the grousers fully penetrated. Add 2.19 in (56 mm) if unit is on solid surface.

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#### **OPERATOR ENVIRONMENT**

#### SEE PAGE 1

#### ENGINE

F4HFE613J Tier 4 Final Certified V-Shape Cooling package with hydraulic-driven reversing fan Integral engine oil cooling Fuel filter Dual element radial seal air cleaner 120 amp alternator (2) 950 CCA 12-volt batteries Coolant Heated DEF Lines Hinged engine side panels

#### DRIVETRAIN

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

Triple reduction; helical gear/planetary decelerator with hydrostatic

drive retardation Automatic spring-applied parking brake

#### BLADE

55° – 60° variable pitch

Single lever electro-hydraulic control for blade lift, angle and tilt

#### UNDERCARRIAGE

Hydraulic track adjusters Sealed and Lubricated Track Chain (SALT) Permanently lubricated track and carrier rollers Track adjuster guard Track guides – front and rear Robust Smooth One Piece Track Frames with Easy Clean-out Robust Rock Guards Enhanced Track Recoil System Central Grease point for Pivot Shaft and Equalizer Beam

#### OTHER

Backup alarm Horn Work lights: 2 front 1 rear Ground Level Master disconnect switch Mirror Turbine Pre-cleaner Front pull hook Rear tow hook Environmental Drain Grid Heater/Cold Start Transport Protection Anti-vandalism package Rear Transmission guard

# **OPTIONAL EQUIPMENT**

#### TELEMATICS

CASE SiteWatch<sup>™</sup> Telematics – includes hardware and a 3-yr Advanced data subscription

#### PROCARE

CASE ProCare – Full Machine Protection Factory Warranty (3-yr/3000-hr), Planned Maintenance (3-yr/2000-hr) and SiteWatch telematics

#### **OPERATOR ENVIRONMENT**

Cab air quality system

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Cab air quality system

#### HYDRAULICS

4-spool hydraulic valve for
field-installed ripper
3-spool hydraulic valve without plugs for
field-installed ripper
3-spool hydraulic valve with plugs

#### REAR MOUNTED EQUIPMENT

Ripper – 2 position with 3 shanks Drawbar Drawbar with step

#### BLADES

PAT – 142 in (3 607 mm) High Visibility Blade 48 in height PAT – 142 in (3 607 mm) 54 in height PAT – 157.5 in (4 000.5 mm) 54 in height Folding PAT – 160 in (4 064 mm) HS Straight (WT/LGP) – 154 in (3 900 mm) Semi-U – 135 in (3 422 mm) Larger Bull Dozer LGP Semi-U Blade – 157 in (3 988 mm) HS Straight (XLT) – 131 in (3 334 mm)

#### GUARDS

CAB canopy brush guard Full length rock guards Sweeps Waste Handler Guarding Package

### SCREENS

Cab rear screen

#### OTHER

CASE Ultra Life Track Additional work lights

#### PRECISION

Factory Fit CoPilot Factory Fit 2D Laser Factory Fit 3D GNSS Universal Blade Guidance: Compatible with Leica, Trimble and Topcon Leica Blade Guidance Ready Trimble Blade Guidance Ready Topcon Blade Guidance Ready



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