

# 2050M

XLT/WT/LGP

**TIER 4 FINAL CERTIFIED** 



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Model	FPT F4HFE613J
Emissions Certification	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 @ 2000 RPM - SAE J1349:

Net 214 hp (160 kW) Gross 232 hp (173 kW)

Engine lubrication:

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

Pump operating angle ratings:

Side-to-side 35°
Fore and aft 45°

Oil filtration Replaceable, spin-on full-flow cartridge

Radiator:

Fins per inch 10

Fan:

Type 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:

Type Tube and fin Core size 510.1 in  $^2$  (0.33 m $^2$ )

#### **ELECTRICAL**

Alternator	120 amp	
Battery	(2) 12-volt, low-maintenance	
1200 cold-cranking amps @ 0° F (-18° C)		
Electrical Syste	m 24 Volts	

## **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.

0 ,	
Extra long track	45,414 lb (20 599 kg)
Wide track	46,891 lb (21 269 kg)
Low ground pressure	48,773 lb (22 123 kg)
Add-on weights:	
Drawbar	146 lb (66 kg)
Ripper - 3 shank	4,145 lb (1 880 kg)
Winch	5,512 lb (2 500 kg)
Ultra-Life chain:	
24 in (610 mm)	320 lb (145 kg)
28 in (711 mm)	251 lb (114 kg)
30 in (762 mm)	295 lb (134 kg)
36 in (914 mm)	302 lb (137 kg)
Full rock guard	505 lb (229 kg)
Sweeps	139 lb (63 kg)

## **HYDRAULICS**

Rod diameter

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)

 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)

2.50 in (63.5 mm)

Tilt cylinder – Bulldozer

Bore diameter

Rod diameter

Stroke

Stroke

One (1)

4.50 in (114.3 mm)

2.50 in (63.5 mm)

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
Frame
Pivot shaft and oscillating equalizer beam suspension
Length of track on ground
Track link pitch
Track shoe height
Pin diameter
Pivot shaft and oscillating equalizer beam suspension
128 in (3.25 m)
7.99 in (202.9 mm)
2.81 in (71.5 mm)
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 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 in² (46 171 cm²)

 30 in (762 mm)
 7,668 in² (49 469 cm²)

 36 in (914 mm)
 9,201 in² (59 363 cm²)

Track:

Extra long track:

24 in (610 mm) closed grousers and SALT HD 24 in (610 mm) open grousers and Ultra Life

Wide track:

28 in (711 mm) closed grousers and SALT HD 28 in (711 mm) open grousers and Ultra Life 30 in (762 mm) closed grousers and SALT HD 30 in (762 mm) open grousers and Ultra Life Low ground pressure:

36 in (914 mm) closed grousers and SALT HD 36 in (914 mm) open grousers and Ultra Life

Blade:

Variable blade pitch  $55^{\circ} - 60^{\circ}$ 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

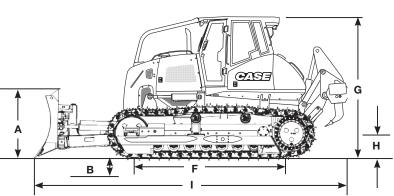
 w/ 3 teeth
 33.6 in (854.3 mm)

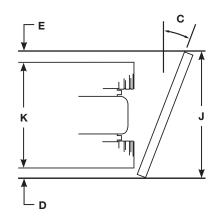
 Hydraulic cylinder
 Double-acting

 Diameter
 6.14 in (156 mm)

 Stroke
 23.5 in (597 mm)

 Rod
 2.75 in (70 mm)





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 yd³ (3.78 m³)	7.12 yd³ (5.54 m³)	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. 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 mm)			
Area of track on ground	7,161 in <sup>2</sup> (4.62 m <sup>2</sup> )	7,161 in <sup>2</sup> (4.62 m <sup>2</sup> )	9,107 in <sup>2</sup> (5.88 m <sup>2</sup> )	9,107 in <sup>2</sup> (5.88 m <sup>2</sup> )	9,107 in² (5.88 m²)
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)				
Height to top of exhaust	9 ft 4 in (2 870.7 mm)				
H. Ground clearance	16.1 in (408.2 mm)				
Length:  Blade straight with drawbar  I. Blade straight with ripper	17 ft 7 in (5 359 mm) 22 ft 5 in (6 833 mm)	19 ft 4 in (5 902 mm) 24 ft 2 in (7 366 mm)	19 ft 3 in (5 867 mm) 22 ft 9 in (6 934 mm)	19 ft 4 in (5 902 mm) 24 ft 2 in (7 366 mm)	19 ft 6 in (5 980 mm) 24 ft 1 in (7 353 mm)
Width: Blade straight J. Blade angled	11 ft 2 in (3 404 mm) -	11 ft 8 in (3 556 mm) 10 ft 9 in (3 287 mm)	12 ft 8 in (3 861 mm) 12 ft 1 in (3 690 mm)	13 ft 3 in (4 039 mm) 11 ft 9 in (3 625 mm)	13 ft 1 in (3 988 mm) -
K. Over track	8 ft 3 in (2 515 mm)	8 ft 3 in (2 515 mm)	10 ft 4 in (3 150 mm)	10 ft 4 in (3 150 mm)	10 ft 4 in (3 166 mm)

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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#### STANDARD EQUIPMENT

## **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

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

## **TELEMATICS**

CASE SiteWatch™ 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

#### OPTIONAL EQUIPMENT

## **OPERATOR ENVIRONMENT**

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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