

# 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)

## 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)

## DRIVETRAIN

Dural math hurdus station

Duai path hydrostatic	<b>;</b> :
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  $510.1 \text{ in}^2 (0.33 \text{ m}^2)$ 

#### **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; Blue-tooth 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 includes cab, full fuel and hydraulic tanks, 77kg (170 lb) operator, 24" salt hd chain, 142" blade width, drawbar w/ step, and all other standard equipment

Extra long track	45,642 lb (20 703 kg)
WT/LGP	45,651 lb (20 707 kg)
Add-on weights:	
Drawbar w/Step	Incl. 229 lb (104 kg)
Ripper - 3 Shank	4,262 lb (1 933 kg)
Brush Sweeps	139 lb (63 kg)
Winch	2,331 lb (1 057 kg)
Full Rock Guards	675 lb (306 kg)
Radiator Brush Screen	19 lb (8.7 kg)
Rear Screen	71 lb (32 kg)
Cab Air Quality	88 lb (40 kg)
Universal	99 lb (45 kg)
Leica CoPilot	151 lb (68 kg)
Leica 2D	225 lb (102 kg)
Leica 3D	205 lb (93 kg)

#### Blades:

 142 in Blade
 Incl. 2,983 lb (1 353 kg)

 157.5 in Blade
 278 lb (126 kg)

 160 in Folding Blade
 1,808 lb (820 kg)

#### Tracks

SALT Chain 24 in Incl. 8,135 lb (3 690 kg)
SALT Chain 30 in 1,190 lb (540 kg)
SALT Chain 36 in 2,324 lb (1 054 kg)
Ultra Life Closed Chain 24 in and Rollers
1,047 lb (475 kg)

Ultra Life Closed Chain 30 in and Rollers

2,176 lb (987 kg)

Ultra Life Closed Chain 36 in and Rollers 3,343 lb (1 517 kg)

# HYDRAULICS

Pump flow @ 2200 RPM @ 2,830 psi

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)		

#### OTHER SPECIFICATIONS

Undercarriage:

Track adjustment Hydraulic Frame Pivot shaft and oscillating

equalizer beam suspension

Length of track on ground 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
Ultra Life track
2.87 in (72.9 mm)
45
45
45
46
47 rack rollers per side
Carrier rollers per side
2 rack roller rail diameter
3 8.94 in (227 mm)

Track on ground: Shoe area:

24 in (600 mm) 6,038 in² (38 592 cm²) 30 in (750 mm) 7,547 in² (48 890 cm²) 36 in (905 mm) 9,107 in² (58 753 cm²)

Track:

Extra long track:

24 in (600 mm) closed grousers and SALT HD 24 in (600 mm) open grousers and Ultra Life

Wide track:

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

36 in (905 mm) closed grousers and SALT HD 36 in (905 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:

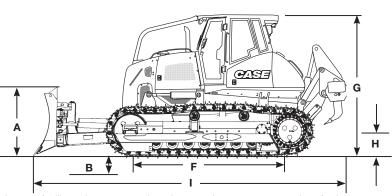
 w/ 3 teeth
 33.6 in (854.3 mm)

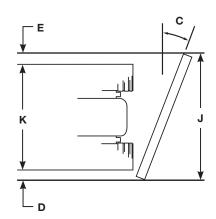
 Hydraulic cylinder
 Double-acting

 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.

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
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)
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 yd³ (6.10 m³)
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)
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)
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)
_	25°	_	25°	_
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)
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)
17 in (433 mm)	21.7 in (550 mm)	16.2 in (411 mm)	21.7 in (550 mm)	15.7 in (400 mm)
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)
24 in (600 mm)	24 in (600 mm)	36 in (905 mm)	36 in (905 mm)	36 in (905 mm)
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)
6,038 in <sup>2</sup> (3.90 m <sup>2</sup> )	6,038 in <sup>2</sup> (3.90 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)
7.52 psi (0.52 bar)	7.52 psi (0.52 bar)	5.35 psi (0.36 bar)	5.35 psi (0.36 bar)	5.35 psi (0.36 bar)
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)
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)
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)
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)
11 ft 2 in (3 404 mm) - 8 ft 3 in (2 515 mm)	11 ft 8 in (3 556 mm) 10 ft 9 in (3 287 mm) 8 ft 3 in (2 515 mm)	12 ft 8 in (3 861 mm) 12 ft 1 in (3 690 mm) 10 ft 4 in (3 150 mm)	13 ft 3 in (4 039 mm) 11 ft 9 in (3 625 mm) 10 ft 4 in (3 150 mm)	13 ft 1 in (3 988 mm) - 10 ft 4 in (3 166 mm)
	with Semi-U  134.7 in (3 422 mm)  7.29 yd³ (5.57 m³)  56 in (1 418 mm)  49 in (1 237.7 mm)  21.5 in (546.8 mm)   17.3 in (438.9 mm)  17 in (438.9 mm)  76 in (1.94 m)  24 in (600 mm)  128 in (3.25 m)  6,038 in² (3.90 m²)  7.52 psi (0.52 bar)  10 ft 4 in (3 150 mm)  9 ft 4 in (2 870.7 mm)  16.1 in (408.2 mm)  17 ft 7 in (5 359 mm)  22 ft 5 in (6 833 mm)	with Semi-U         with PAT           134.7 in (3 422 mm)         142 in (3 607 mm)           7.29 yd³ (5.57 m³)         6.32 yd³ (4.83 m³)           56 in (1 418 mm)         53.8 in (1 366 mm)           49 in (1 237.7 mm)         44.5 in (1 130 mm)           21.5 in (546.8 mm)         21.4 in (542.8 mm)           -         25°           17.3 in (438.9 mm)         22.7 in (576.4 mm)           17.3 in (438.9 mm)         5.7 in (145.7 mm)           17 in (433 mm)         21.7 in (550 mm)           76 in (1.94 m)         76 in (1.94 m)           24 in (600 mm)         24 in (600 mm)           128 in (3.25 m)         128 in (3.25 m)           6,038 in² (3.90 m²)         6,038 in² (3.90 m²)           7.52 psi (0.52 bar)         7.52 psi (0.52 bar)           10 ft 4 in (2 870.7 mm)         9 ft 4 in (2 870.7 mm)           16.1 in (408.2 mm)         19 ft 4 in (5 902 mm)           22 ft 5 in (6 833 mm)         24 ft 2 in (7 366 mm)           11 ft 2 in (3 404 mm)         11 ft 8 in (3 556 mm)           10 ft 9 in (3 287 mm)	with Semi-U         with PAT         (LGP) with Straight PT           134.7 in (3 422 mm)         142 in (3 607 mm)         154 in (3 900 mm)           7.29 yd³ (5.57 m³)         6.32 yd³ (4.83 m³)         4.94 yd³ (3.78 m³)           56 in (1 418 mm)         53.8 in (1 366 mm)         43.5 in (1 105 mm)           49 in (1 237.7 mm)         44.5 in (1 130 mm)         46 in (1 169 mm)           21.5 in (546.8 mm)         21.4 in (542.8 mm)         20.0 in (507.8 mm)           21.5 in (546.8 mm)         22.7 in (576.4 mm)         14.3 in (363 mm)           17.3 in (438.9 mm)         22.7 in (576.4 mm)         14.3 in (363 mm)           17.3 in (438.9 mm)         5.7 in (145.7 mm)         14.3 in (363 mm)           17 in (433 mm)         21.7 in (550 mm)         16.2 in (411 mm)           76 in (1.94 m)         76 in (1.94 m)         89 in (2.26 m)           24 in (600 mm)         24 in (600 mm)         36 in (905 mm)           128 in (3.25 m)         128 in (3.25 m)         128 in (3.25 m)           6,038 in² (3.90 m²)         6,038 in² (3.90 m²)         9,107 in² (5.88 m²)           7.52 psi (0.52 bar)         7.52 psi (0.52 bar)         5.35 psi (0.36 bar)           10 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 (6833 mm)         1	with Semi-U         with PAT         (LGP) with Straight PT         (LGP) with PAT           134.7 in (3 422 mm)         142 in (3 607 mm)         154 in (3 900 mm)         157.5 in (4 064 mm)           7.29 yd³ (5.57 m³)         6.32 yd³ (4.83 m³)         4.94 yd³ (3.78 m³)         7.12 yd³ (5.54 m³)           56 in (1 418 mm)         53.8 in (1 366 mm)         43.5 in (1 105 mm)         53.9 in (1 369 mm)           49 in (1 237.7 mm)         44.5 in (1 130 mm)         46 in (1 169 mm)         44.5 in (1 130 mm)           21.5 in (546.8 mm)         21.4 in (542.8 mm)         20.0 in (507.8 mm)         21.4 in (542.8 mm)           21.5 in (438.9 mm)         22.7 in (576.4 mm)         14.3 in (363 mm)         18.6 in (472.1 mm)           17.3 in (438.9 mm)         5.7 in (145.7 mm)         14.3 in (363 mm)         1.7 in (43.0 mm)           17.3 in (438.9 mm)         5.7 in (145.7 mm)         14.3 in (363 mm)         1.7 in (43.0 mm)           17.3 in (438.9 mm)         5.7 in (145.7 mm)         14.3 in (363 mm)         1.7 in (43.0 mm)           17.6 in (1.94 m)         76 in (1.94 m)         89 in (2.26 m)         89 in (2.26 m)           24 in (600 mm)         24 in (600 mm)         36 in (905 mm)         36 in (905 mm)           128 in (3.25 m)         128 in (3.25 m)         128 in (3.25 m)         128 in (3.25 m)      <

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

Premium LED work light package:

4 total in front

2 total in rear

Ground Level Master disconnect switch

Mirror

Turbine Pre-cleaner

Front pull hook

4-spool hydraulic valve (PAT Blade)

3-spool hydraulic valve (Semi-U / Straight Blade)

Hinged Grill

Operator's manual enclosure

Rear drawbar with step

**Environmental Drain** 

Grid Heater/Cold Start

**Transport Protection** 

Anti-vandalism package

Rear Transmission guard

## **TELEMATICS**

CASE SiteWatch™ 4G Telematics - includes hardware and a 5-yr Advanced data subscription

## PROCARE

CASE ProCare - Full Machine Protection Factory Warranty (3-yr/3000-hr), Planned Maintenance (3-yr/2000-hr) and SiteWatch 4G 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 Rear Aux. Hydraulic Ready (Ready for ripper or winch field installation including implement joystick)

## BLADES

PAT - 142 in (3 607 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)

## **GUARDS**

Sweeps

Waste Handler Guarding Package

## **SCREENS**

Cab rear screen

#### OTHER

CASE Ultra Life Track

Severe Cold Weather Package

Cab air quality system

## **PRECISION**

Factory Fit CoPilot

Factory Fit 2D Laser

Factory Fit 3D GNSS

Universal Blade Guidance:

Compatible with Leica, Trimble and Topcon

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SAFETY™ 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. CCE2024122050M Replaces Form No. CCE2021122050M

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