PRELIMINARY

1650M

CRAWLER DOZER XLT/WT/LGP

TIER 4 FINAL CERTIFIED





ENGINE			
Model	FPT F4HFE6132		
Emissions Certification	Tier 4 Final Certified		
Cylinders	6		
Displacement	409 in ³ (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 High idle - no load Rated - full load Low idle	RPM 2200 +/- 50 2200 800 +/- 25		
Horsepower @ 2000 RP	M – SAE J1349:		
Net Gross	150 hp (112 kW) 164 hp (122 kW)		
Engine lubrication: Pump w/ pressuriz	Deep sump plate cooler zed under-piston nozzles		
Pump operating angle ra	atings:		
Side-to-side Fore and aft	35° 45°		
Oil filtration	Replaceable, spin-on full-flow cartridge		

Fins per inc	h 10
Fan:	
Type	Variable speed/
	Auto reversing/Hydraulic driven
Diameter	27.6 in (700 mm)

Radiator:

DRIVETRAIN		
Dual path hydrosta Pump Motor	tic: Variable axial piston Variable bent axis piston	
Max. drawbar pull	61,200 lb (272.2 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 Reverse	5.8 mph (9.3 kph) 5.8 mph (9.3 kph)	
Parking brakes hy	Heavy-duty, spring-applied, ydraulic pressure release disc	
Steering brakes	Hydrostatic	
Final drive	2 helical gear reduction to planetary output	
Ratio	61.4:1	
Transmission coolir Type Core size	ng: Oil to air 515.1 in² (0.33 m²)	

ELECTRICAL	
Alternator	120 amp
Battery 925 cold	(2) 12-volt, low-maintenance d-cranking amps @ 0° F (-18° C)
Electrical System	n 24 Volts

OPERATOR ENVIRONMENT

Fully enclosed ROPS cab; Single lever control for speed, steering and direction; Cloth air suspension seat w/ back adjustment; Retractable 2 in (51 mm) seat belt; Adjustable armrest; Two foot rest; Rearview mirror; Two door windshield wipers; Dome light; 12-volt accessory outlet; Headliner; Floor mat.

Warning lights:

Air filter; Alternator; Diagnostic fault indicator; Engine coolant temperature; Engine oil pressure; Hydraulic filter; Low fuel 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, front pull hook, rear retrieval hitch, track guides, PAT blade.

Extra Long Track	37,756 lb (17 123 kg)
Wide Track	38,657 lb (17 531 kg)
LGP	39,557 lb (17 940 kg)
Add-on weights:	
Drawbar	3,857 lb (1 749 kg)
Ripper - 3 shank	2,988 lb (1 355 kg)
Winch	2,331 lb (1 087 kg)
CELT chain:	
22 in (559 mm)	222.7 lb (101 kg)
24 in (610 mm)	220.5 lb (100 kg)
28 in (711 mm)	222.7 lb (101 kg)
32 in (813 mm)	222.7 lb (101 kg)
34 in (864 mm)	227.1 lb (103 kg)
Center rock guard	417 lb (189 kg)
Sweeps	139 lb (63 kg)

HYDRAULICS

Pump flow @ 2200 RPN	И @ 2,830 psi
(19 512 kPA)	34.9 gpm (132 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	16.88 in (428.8 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	3.8 in (95.3 mm)
Rod diameter	2.25 in (57.2 mm)
Stroke	35.67 in (906.0 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	1
Fuel tank	85.0 gal (322.0 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	42.0 gal (160.0 L)
Final drive – per side	16.4 qt (15.6 L)
Track rollers - each	0.264 qt (0.250 L)
Front idlers - each	0.349 qt (0.330 L)
Carrier rollers – each	0.285 qt (0.270 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 the ground:

 SALT HD
 121.5 in (3 087 mm)

 ULTRA Life
 121.5 in (3 087 mm)

 Track link pitch
 7.5 in (190 mm)

 Track shoe height
 2.19 in (56 mm)

 Pin diameter
 1.5 in (38 mm)

 Bushing diameter:
 2.56 in (65 mm)

SALT HD track
Ultra Life track
2.56 in (65 mm)
2.57 in (65 mm)
2.58 in (65 mm)
2.59 in (65 mm)
2.59 in (65 mm)
2.59 in (65 mm)
2.50 in (65 mm)

Track on ground:

 Shoe area:
 22 in (559 mm)
 5,349 in² (34 509 cm²)

 24 in (610 mm)
 5,837 in² (37 657 cm²)

 28 in (711 mm)
 6,803 in² (43 893 cm²)

 32 in (813 mm)
 7,779 in² (50 190 cm²)

 34 in (864 mm)
 8,267 in² (53 338 cm²)

Track:

Extra long track:

22 in (559 mm) closed grousers and SALT HD 22 in (559 mm) open grousers and Ultra Life 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 32 in (813 mm) closed grousers and SALT HD 32 in (813 mm) open grousers and Ultra Life

Low ground pressure:

34 in (864 mm) closed grousers and SALT HD 34 in (864 mm) open grousers and Ultra Life

Blade:

 $\begin{tabular}{lll} Variable blade pitch & 55^\circ - 60^\circ \\ Lift speed - per second & 19.0 in (483 mm) \\ Cutting edge & Reversible, replaceable \\ Width & 7.9 in (200 mm) \\ Thickness & 0.8 in (20 mm) \\ \end{tabular}$

Ripper:

Max. penetration
Width
Cut width
Max. ground clearance
Max. number of shanks
Tooth spacing:

21.5 in (546 mm)
76.9 in (1 953 mm)
74.4 in (1 890 mm)
24.1 in (611 mm)
3

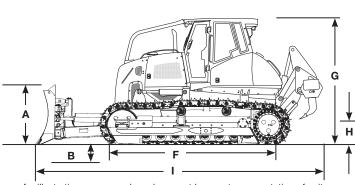
w/ 3 teeth 37.2 in (945 mm)

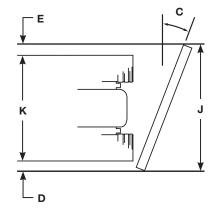
Hydraulic cylinder Double-acting

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	Wide Track (WT) with PAT	Low Ground Pressure (LGP) with PAT
Blade width	131 in (3 322 mm)	130 in (3 302 mm)	156 in (3 962 mm)	156 in (3 962 mm)
SAE blade capacity	6.33 yd ³ (4.84 m ³)	4.28 yd ³ (3.18 m ³)	5.28 yd ³ (4.04 m ³)	5.28 yd ³ (4.04 m ³)
A. Blade height	51.9 in (1 319 mm)	46.3 in (1 176 mm)	46.3 in (1 176 mm)	46.3 in (1 176 mm)
Blade lift above ground	44.3 in (1 124 mm)	42.5 in (1 077 mm)	42.5 in (1 077 mm)	42.5 in (1 077 mm)
B. Blade depth below ground	22.5 in (572 mm)	19.8 in (503 mm)	19.8 in (503 mm)	19.8 in (503 mm)
C. Blade angle both directions	0°+/-	25°	25°	25°
D. Cast reach	16.3 in (414 mm)	17.2 in (457 mm)	20.0 in (507 mm)	19.2 in (487 mm)
E. Cut reach	16.3 in (414 mm)	0.9 in (24 mm)	3.9 in (99 mm)	3.0 in (76 mm)
Blade tilt, each end - up to 8.3°	16.1 in (410 mm)	17.7 in (450 mm)	21.7 in (550 mm)	21.7 in (550 mm)
Track gauge	76 in (1.93 m)	76 in (1.93 m)	86 in (2.18 m)	86 in (2.18 m)
Maximum shoe width	24 in (606 mm)	24 in (610 mm)	32 in (813 mm)	34 in (864 mm)
F. Length of track on ground	121.7 in (3.09 m)	121.7 in (3.09 m)	121.7 in (3.09 m)	121.7 in (3.09 m)
Area of track on ground	5,837 in ² (3.77 m ²)	5,837 in ² (3.77 m ²)	7,770 in ² (5.01 m ²)	8,268 in ² (5.01 m ²)
Ground pressure	6.62 psi (0.46 bar)	6.62 psi (0.46 bar)	5.27 psi (0.36 bar)	4.78 psi (0.33 bar)
G. Height to top of ROPS cab	9 ft 7 in (2 945 mm)	9 ft 7 in (2 945 mm)	9 ft 7 in (2 945 mm)	9 ft 7 in (2 945 mm)
H. Ground clearance	13.5 in (342 mm)	13.5 in (342 mm)	13.5 in (342 mm)	13.5 in (342 mm)
Length: Blade straight with drawbar Blade straight with ripper	19 ft 8 in (5 985 mm) 24 ft 1 in (7 345 mm)	18 ft 8 in (5 678 mm) 23 ft 1 in (7 038 mm)	18 ft 8 in (5 678 mm) 23 ft 1 in (7 038 mm)	18 ft 8 in (5 678 mm) 23 ft 1 in (7 038 mm)
Width: Blade straight J. Blade angled	10 ft 11 in (3 322 mm)	10 ft 10 in (3 302 mm) 9 ft 10 in (3 000 mm)	13 ft 0 in (3 962 mm) 11 ft 10 in (3 602 mm)	13 ft 0 in (3 962 mm) 11 ft 10 in (3 602 mm)
K. Over track	8 ft 2 in (2 490 mm)	8 ft 4 in (2 530 mm)	9 ft 10 in (2 994 mm)	8 ft 2 in (2 490 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

F4HFE6132

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) 925 CCA 12-volt batteries 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, with integral adjustment tool Single lever electro-hydraulic control for blade lift, angle and tilt

UNDERCARRIAGE

Hydraulic track adjusters SALT HD track chain Permanently lubricated track and carrier rollers and idlers Track adjuster guard Track guides - front and rear

OTHER

Anti-vandalism package Backup alarm Horn Work lights: 2 front

1 rear

Master disconnect switch Mirror

Pre-cleaner Front pull hook

TELEMATICS

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

OPTIONAL EQUIPMENT

OPERATOR ENVIRONMENT

Cab air quality system Seat belt – 3 in (76 mm) Rear wiper for cab Radio

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 - 3 position with 3 shanks Rear tow hook Drawbar Drawbar with step

BLADES

PAT - 130 in (3 302 mm) PAT - 156 in (3 974 mm) Foldable PAT - 156 in (3 974 mm) Semi-U - 131 in (3 322 mm)

GUARDS

CAB canopy brush guard Center rock guard

SCREENS

Cab rear screen

OTHER

Environmental drains Case Ultra Life Track Additional work lights Blade guidance ready - Trimble Blade guidance ready - Leica Blade guidance ready - Topcon Rearview mirror Cold start aid - grid heater: with dual 12-volt battery Turbine pre-cleaner

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