

PRELIMINARY

ENGINE

Model	Case F4HFE413P Tier 4 Interim Certified
Cylinders	4
Displacement	275 in ³ (4.5 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	2220 +/- 50
Rated – full load	2000
Low idle	1100 +/- 25
Horsepower @ 2220 RPM – SAE J1349:	
Net	112 hp (84 kW)
Gross	120 hp (90 kW)

Engine lubrication:

Pump	Deep sump plate cooler w/ pressurized under-piston nozzles
Pump operating angle ratings:	
Side-to-side	45°
Fore and aft	45°
Oil filtration	Replaceable, spin-on full flow cartridge
Radiator:	
Core size area	298 in ² (0.19 m ²)
Rows of tubes	23
Fan:	
Diameter	21.6 in (550 mm)
Ratio	1.1:1

POWERTRAIN

Dual path hydrostatic:	
Pump	Variable axial piston
Motor	Variable bent axis piston
Max. drawbar pull*	42,813 lb (190.4 kN)
Transmission	Single lever control electronic straight tracking
Oil filter	4-micron, spin-on, replaceable
Travel speeds*:	
Forward	5.8 mph (9.3 kph)
Reverse	5.8 mph (9.3 kph)
Parking brakes	Heavy-duty, spring-applied, hydraulic release disc
Steering brakes	Hydrostatic
Final drive	2 helical gear reduction to planetary output
Ratio	62.4:1
Transmission cooling:	
Type	Oil to water
Core size	377 in ² (0.24 m ²)

NOTE: *Measured using standard track chain. Increase travel speeds by 4% and reduce drawbar pull by 4% w/ the optional CELT track chain.

ELECTRICAL

Alternator	120 amp
Battery	24-volt, low-maintenance 925 cold-cranking amps @ -4° F (-20° C)

OPERATOR ENVIRONMENT

ROPS canopy; Single lever control for speed, steering and direction; Vinyl suspension seat w/ back adjustment; Retractable 2 in (51 mm) seat belt; Adjustable armrests; Foot rests; Rearview mirror; Tool storage; 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; Transmission temperature.

Gauges:

Battery voltage; Fuel level; Digital hour meter/ tachometer/diagnostic/service reminder; Transmission oil temperature; Transmission speed indicator; Water temperature.

Audible warnings:

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

OPERATING WEIGHT

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

Long track	21,560 lb (9779 kg)
Wide track	22,330 lb (10 129 kg)
Low ground pressure	22,830 lb (10 355 kg)

Add-on weights:

Drawbar	85 lb (38 kg)
Ripper	1,400 lb (646 kg)
Winch	1,001 lb (454 kg)
Front counterweight	880 lb (399 kg)
Cab	1,710 lb (766 kg)

CELT chain – per track:

18 in (457 mm)	3,334 lb (1512 kg)
20 in (508 mm)	3,559 lb (1614 kg)
24 in (610 mm)	3,969 lb (1800 kg)
28 in (711 mm)	4,384 lb (1988 kg)

Center rock guard	234 lb (106 kg)
Sweeps	104 lb (47 kg)

HYDRAULICS

Pump flow @ 2000 RPM @ 3,000 psi (207 bar):
20.3 gpm (76.8 L/min)

Lift cylinder	Two (2)
Bore diameter	3.50 in (89.0 mm)
Rod diameter	1.75 in (44.5 mm)
Stroke	14.26 in (362.1 mm)

Angle cylinder	Two (2)
Bore diameter	3.50 in (89.0 mm)
Rod diameter	1.75 in (44.5 mm)
Stroke	5.39 in (139.0 mm)

Tilt cylinder	One (1)
Bore diameter	3.50 in (89.0 mm)
Rod diameter	1.75 in (44.5 mm)
Stroke	14.60 in (370.0 mm)

SERVICE CAPACITY

Fuel tank	50.0 gal (189.0 L)
Engine oil w/ filter	13.0 qt (12.3 L)
Engine oil w/o filter	12.1 qt (11.8 L)
Engine cooling system	5.75 gal (21.8 L)
Hydraulic reservoir	23.75 gal (90.0 L)
Final drive – per side	15.0 qt (14.2 L)
Track rollers – each	0.26 qt (0.25 L)
Front idlers – each	0.52 qt (0.49 L)
Carrier rollers – each	0.25 qt (0.24 L)
DEF tank	12.0 gal (45.4 L)

OTHER SPECIFICATIONS

Undercarriage:

Track adjustment	Hydraulic
Frame	Rigid suspension
Length of track on ground	93 in (2352 mm)
Track link pitch	6.73 in (171 mm)
Track shoe height	2.06 in (52 mm)
Pin diameter	1.32 in (33 mm)

Bushing diameter:	
CLT track	2.24 in (57 mm)
CELT track	3.0 in (76 mm)

Track shoes per side 40

Track rollers per side 7

Carrier rollers per side 1

Track roller rail diameter 7.48 in (190 mm)

Track on ground:

Shoe area:	
18 in (457 mm)	3,334 in ² (21 510 cm ²)
20 in (508 mm)	3,704 in ² (23 897 cm ²)
24 in (610 mm)	4,449 in ² (28 703 cm ²)
28 in (711 mm)	5,186 in ² (33 458 cm ²)

OTHER SPECIFICATIONS (cont.)

Track:

Long track:

18 in (457 mm) closed grousers and CLT
18 in (457 mm) open grousers and CELT
20 in (508 mm) closed grousers and CLT
20 in (508 mm) open grousers and CELT

Wide track:

18 in (457 mm) closed grousers and CLT
18 in (457 mm) open grousers and CELT
20 in (508 mm) closed grousers and CLT
20 in (508 mm) open grousers and CELT
24 in (610 mm) closed grousers and CLT
24 in (610 mm) open grousers and CELT

Track (continued):

Low ground pressure:

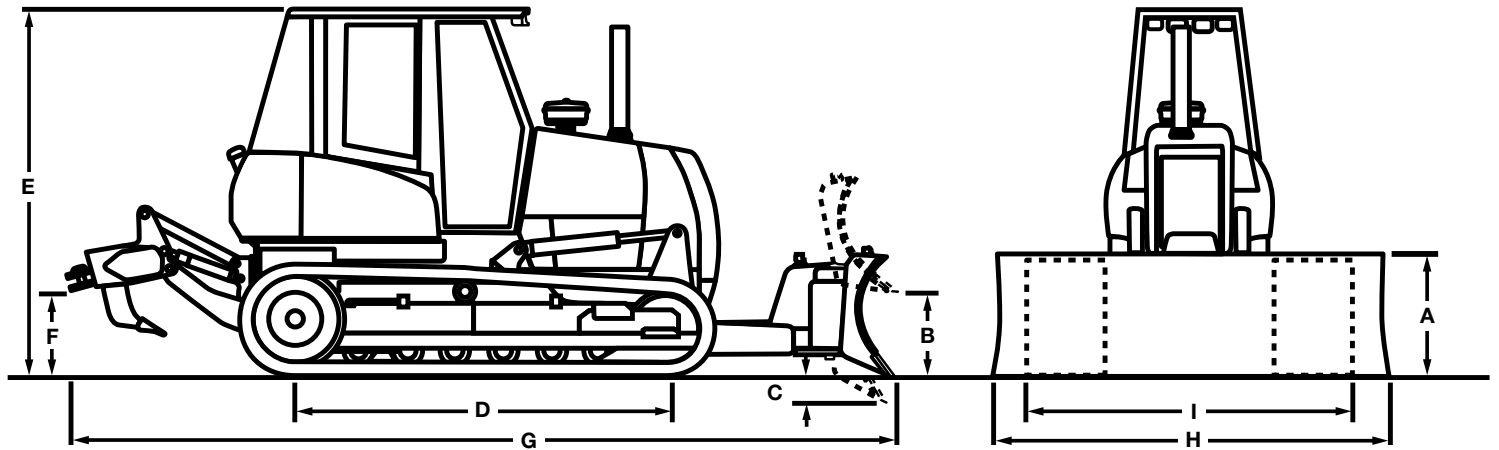
28 in (711 mm) closed grousers and CLT
28 in (711 mm) open grousers and CELT

Blade:

Variable blade pitch	52° forward 60° rearward
Lift speed – per second	18 in (457 mm)
Cutting edge	Reversible, replaceable
Width	8.0 in (203 mm)
Thickness	0.75 in (19 mm)

Ripper:

Max. penetration	14.0 in (356 mm)
Width	72.4 in (1839 mm)
Cut width	70.1 in (1780 mm)
Max. ground clearance	17.3 in (439 mm)
Max. number of shanks	5
Tooth spacing:	
w/ 5 teeth	17.8 in (452 mm)
w/ 3 teeth	34 in (864 mm)
Hydraulic cylinder	Double-acting
Diameter	3.25 in (82.6 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)		Wide Track (WT)		Low Ground Pressure (LGP)
Blade width	104 in (2640 mm)	112 in (2845 mm)	112 in (2845 mm)	120 in (3048 mm)	124 in (3150 mm)
SAE blade capacity	2.16 yd ³ (1.65 m ³)	2.36 yd ³ (1.80 m ³)	2.53 yd ³ (1.93 m ³)	2.53 yd ³ (1.93 m ³)	2.62 yd ³ (2.00 m ³)
A. Blade height	36.0 in (910 mm)	36.0 in (910 mm)	36.0 in (910 mm)	36.0 in (910 mm)	36.0 in (910 mm)
B. Blade lift above ground	34.4 in (874 mm)	34.4 in (874 mm)	34.4 in (874 mm)	34.4 in (874 mm)	34.4 in (874 mm)
C. Blade depth below ground	19.0 in (483 mm)	19.0 in (483 mm)	19.0 in (483 mm)	19.0 in (483 mm)	19.0 in (483 mm)
Blade angle both directions	25°	25°	25°	25°	25°
Blade tilt, each end (up to 8.3°)	8.9 in (226 mm)	8.9 in (226 mm)	8.9 in (226 mm)	9.49 in (241 mm)	9.49 in (241 mm)
Track gauge	62.0 in (1.57 m)	62.0 in (1.57 m)	70.0 in (1.78 m)	70.0 in (1.78 m)	70.0 in (1.78 m)
Maximum shoe width	20.0 in (508 mm)	20.0 in (508 mm)	24.0 in (610 mm)	24.0 in (610 mm)	28.0 in (711 mm)
D. Length of track on ground: CLT	93.0 in (2.35 m)	93.0 in (2.35 m)	93.0 in (2.35 m)	93.0 in (2.35 m)	93.0 in (2.35 m)
Area of track on ground	3,704 in ² (2.38 m ²)	3,704 in ² (2.38 m ²)	4,449 in ² (2.87 m ²)	4,449 in ² (2.87 m ²)	5,186 in ² (3.34 m ²)
Ground pressure	5.3 psi (0.37 bar)	5.3 psi (0.37 bar)	4.5 psi (0.31 bar)	4.5 psi (0.31 bar)	4.0 psi (0.28 bar)
E. Height to top of cab with air conditioning	9 ft 1 in (2770 mm) 9 ft 2 in (2789 mm)	9 ft 1 in (2770 mm) 9 ft 2 in (2789 mm)	9 ft 1 in (2770 mm) 9 ft 2 in (2789 mm)	9 ft 1 in (2770 mm) 9 ft 2 in (2789 mm)	9 ft 1 in (2770 mm) 9 ft 2 in (2789 mm)
F. Ground clearance	14.4 in (366 mm)	14.4 in (366 mm)	14.4 in (366 mm)	14.4 in (366 mm)	14.4 in (366 mm)
Length:					
Blade straight with drawbar	14 ft 6 in (4410 mm)	14 ft 6 in (4410 mm)	14 ft 6 in (4410 mm)	14 ft 6 in (4410 mm)	14 ft 6 in (4410 mm)
G. Blade straight with ripper	17 ft 2 in (5230 mm)	17 ft 2 in (5230 mm)	17 ft 2 in (5230 mm)	17 ft 2 in (5230 mm)	17 ft 2 in (5230 mm)
Width:					
H. Blade straight	8 ft 8 in (2640 mm)	9 ft 4 in (2845 mm)	9 ft 4 in (2845 mm)	10 ft 0 in (3048 mm)	10 ft 4 in (3150 mm)
Blade angled	8 ft 0 in (2450 mm)	8 ft 6 in (2590 mm)	8 ft 6 in (2590 mm)	9 ft 3 in (2820 mm)	9 ft 6 in (2910 mm)
I. Over track	6 ft 8 in (2030 mm)	6 ft 8 in (2030 mm)	7 ft 10 in (2390 mm)	7 ft 10 in (2390 mm)	8 ft 2 in (2490 mm)

NOTE: Ground clearance and overall height dimensions are with the grousers fully penetrated. Add 2.07 in (52.5 mm) if unit is on solid surface.

STANDARD EQUIPMENT

OPERATOR ENVIRONMENT

See page 1

ENGINE

F4HFE413P

Tier 4 Interim Certified

Cold start aid – grid heater:
with dual 12-volt battery

Automatic fan belt tensioner

Integral engine oil cooling

Fuel filter

Dual element air cleaner

120 amp alternator

925 CCA 24-volt battery

Engine side panels

Anti-freeze to -34° F

Pusher fan

POWERTRAIN

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

Final drive:

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

Spring-applied hydraulic release parking brake

BLADE

52°–60° variable pitch,
with integral adjustment tool

Single lever control for blade lift, angle and tilt

UNDERCARRIAGE

Hydraulic track adjusters

Easy clean track covers

Case Lubricated Track Chain

Permanently lubricated track and carrier rollers

Track adjuster guard

Track guides – front and rear

Shock resistance idler mounting

OTHER

Anti-vandalism package

Backup alarm

Horn

Work lights:
2 front
1 rear

Master disconnect switch

Mirror

Pre-cleaner

Front pull hook

Rear transmission guard

OPTIONAL EQUIPMENT

OPERATOR ENVIRONMENT

Cab:
with heat, A/C, defroster, lights

Seat belt – 3 in (76 mm)

Rear wiper for cab

Radio

HYDRAULICS

4-spool hydraulic valve for field-installed ripper

REAR MOUNTED EQUIPMENT

Ripper – 5 position with 3 shanks

Hydraulic pump with PTO

Rear tow hook

Drawbar

BLADES

96 in (2438 mm)

104 in (2630 mm)

112 in (2855 mm)

120 in (3050 mm)

124 in (3150 mm)

GUARDS

Sweeps

Center rock guard

SCREENS

Radiator brush screen

Sandblast screen

OTHER

Environmental drains

Case Extended Life Track

Additional work lights

Front counterweight

Blade guidance ready – Trimble

Blade guidance ready – Leica

Blade guidance ready – Topcon

Rearview mirror



NOTE: All specifications are stated in accordance with SAE Standards or Recommended Practices, where applicable.

NOTE: All engines meet current EPA emissions requirements.

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