

Hills Machinery Company

ENGINE

Model	FPT F5BFL413A
Emissions Certification	Tier 4 Final
Type	Diesel 4-stroke, turbocharged
Cylinders	4
Bore/Stroke	3.90 x 4.33 in (99 x 110 mm)
Displacement	207 in ³ (3.4 L)
Fuel injection	Direct, high pressure common rail – HPCR
Fuel	Diesel
Engine speeds*	RPM
Rated speed – full load	2200
Low idle	900 – 1000
High idle – no load	2320 – 2430
Horsepower @ 2200 RPM:	
Gross	110 hp (82 kW)
Net	108 hp (81 kW)
Maximum torque @ 1400 RPM:	
Gross	339 lb-ft (460 N-m)
Net	338 lb-ft (459 N-m)
Torque rise at rated speed	29% +/- 5%
Radiator:	
Core type	Square wave
Core size area	486 in ² (3 145 cm ²)
Rows of tubes	4
Fan:	
Style	9 blade viscous suction
Diameter	19.685 in (500 mm)
Ratio	1.4:1
Pump operating angle ratings:	
Side to side	Rated 35°
Fore and aft	Rated 35°
Oil filtration	Replaceable, full flow cartridge

NOTE: *Engine speeds w/ standard transmission.
Meets federal emission regulations.

DRIVETRAIN

Transmission – standard:	
Powershift S-Type, 4F-3R Power Shuttle Synchromesh w/ hydraulic gear shifting	
Transmission – optional:	
4F-4R Power Shuttle Synchromesh transmission manual gear shift, fully synchronized	

DRIVETRAIN (cont.)

Specifications below apply to both Power Shuttle and Powershift S-Type transmission unless otherwise indicated.

Gear ratios	Forward/Reverse	
1st	5.603/4.643	
2nd	3.481/2.884	
3rd	1.584/1.313	
4th	0.793/0.657*	
Travel speeds	Forward mph (kph)	Reverse mph (kph)
1st	4.1 (6.6)	4.9 (7.9)
2nd	6.5 (10.5)	7.8 (12.6)
3rd	13.8 (22.3)	16.5 (26.5)
4th	25.2 (40.6)	29.0 (46.7)*

NOTE: *4R not available on Powershift S-Type.

Transmission – optional:
Powershift H-Type, 4F-3R hydraulic clutch
shifting w/ auto function

Gear ratios	Forward/Reverse	
1st	5.533/4.549	
2nd	3.359/2.762	
3rd	1.533/1.260	
4th	0.811/ —	
Travel speeds	Forward mph (kph)	Reverse mph (kph)
1st	4.0 (6.4)	4.8 (7.7)
2nd	6.5 (10.5)	7.8 (12.6)
3rd	13.7 (22.0)	16.4 (26.4)
4th	23.0 (37.0)	—

NOTE: Travel speeds at 2306 engine RPM specified:
w/ 21.0 L x 24.0 rear tires.

Torque converter ratio	2.4
Differential lock	On-the-go push-button activation
Front 4WD/Rear axle:	
Differential ratio	2.1/2.5
Planetary hub ratio	6.0/6.4
Total reduction ratio	12.8/16.0

Service brakes:	
Individually applied, power assisted, hydraulically actuated, maintenance-free, self-adjusting, outboard mounted, wet disc, 2 per side.	
Total disc area	384 in ² (0.25 m ²)
Parking brakes	Trans Mounted spring-applied hydraulic release – SAHR

ELECTRICAL

Voltage	12 Volts, negative ground
Alternator	160 amp
Battery	850 cold-cranking amps
Opt. batteries (2)	850 cold-cranking amps
Power plugs (2)	30 amps total

OPERATOR ENVIRONMENT

ROPS/FOPS certified protective canopy;
Anti-vandalism cover for dash – w/ canopy only;
Rear fenders extensions; Coat hook w/ garment
strap; Interior rearview mirror, convex
3.54 in (90 mm) wide x 10.83 in (275 mm) high;
Non-suspension seat – 180° swivel – Vinyl; 2
in (50 mm) retractable seat belt; Cup holder/
storage tray mounted on left-hand fender;
Right-hand storage compartment w/ lid.

Gauges:

Engine water temperature; Converter oil
temperature; Fuel level; Tachometer/
hourmeter; DEF level.

Warning lights:

Air cleaner restriction; Alternator; A/C high
pressure; Cold start; Engine oil pressure;
Hydraulic oil filter bypass; Parking brake;
Low fuel; Water in fuel; Low DEF fluid.

Audible alarms w/ diagnostics:

Coolant temperature; Engine oil pressure;
Parking brake engagement; Converter oil
temperature; Shuttle engagement/seat
position; Backup alarm; Low DEF fluid.

Horn Dual switched front and rear

OPERATING WEIGHT

Configuration – SAE Transport:

No Operator, 4:1 Loader Bucket, Hoe, Cab w/
heat and AC, Ride Control, Eco Mode, Heavy
Lift, Fully Fueled, 24 in HD BH Bucket 4 WD,
Boom Guard, Big Front Counterweight, Quick
Couple BH, BH aux., Pilot BH Controls, Galaxy
14-17.5 @ 50 psi front tires Goodyear 21 L-24
@ 28 psi Rear Tires. 20,532 lb (9 309 kg)

Add-on weights:

Cab-over canopy	309 lb (140 kg)
Fabricated Stabilizer pads	141 lb (64 kg)
Counterweights	700 lb (318 kg) 1,100 lb (500 kg)
Extendahoe®	335 lb (152 kg)
4WD w/ driveshaft guard	393 lb (178 kg)

HYDRAULICS

Pump:
Bosch Rexroth Series 31 Variable Displacement Axial Piston Pump, dual mode torque regulation, mode selected by solenoid

Main relief pressure:
Standard 3,450 +/- 50 psi (238 +/- 3.5 bar)
Power Lift 3,625 +/- 50 psi (250 +/- 3.5 bar)

Filtration:
7-micron, full flow replaceable cartridge on return line, condition indicator light for filter.

Oil cooler Heavy-duty

Loader flow @ rated engine RPM:
43 gpm @ 2,340 psi (162.6 L/min @ 161 bar)

Loader control valve w/ pilot or manual backhoe controls:

Two or three-spool closed center sectional control valve. Single lever manual control for lift and tilt functions. The three-spool valve uses a proportional Electro-Hydraulic control for the auxiliary function. The lift lever has a positive hold "Float" position and a "return-to-dig" feature.

Loader auxiliary hydraulics w/ proportional thumb switch w/ detent on loader control handle:

0 to 43 gpm (0 to 162.6 L/min)

Backhoe flow @ rated engine RPM:
43 gpm @ 3,100 psi (162.6 L/min @ 214 bar)

Manual backhoe control valve:

Six or seven-spool monoblock open center control valve. Features "Pro-Control" which includes custom designed spools for each individual function along w/ "swing cushioning" valve for zero-wag swing control. Basic control valve has an open center parallel circuit for all functions.

Pilot backhoe control valve:

Six, seven or eight-spool sectional closed center control valve. Features "Pro-Control" which includes custom designed spools for each individual function along w/ "swing cushioning" valve for zero-wag swing control. Basic control valve is closed center, w/ circuits in parallel w/ a post-compensated, flow sharing feature for simultaneous operation of all circuits.

Unidirectional auxiliary hydraulics:

Unidirectional hydraulic valve is equipped w/ an adjustable LS relief valve to control attachment pressure and a 6 position flow control selector for 6 detented, distinct flow settings.

Actuation:

Manual backhoe controls – cab floor pedal
Pilot controls – left-hand joystick

Bidirectional auxiliary hydraulics*:

Actuation:

Activate the bidirectional Switch located on the rear console
Manual shift – bidirectional linkage on far right of backhoe tower
Pilot controls – left-hand joystick

NOTE: *Available w/ Combo Aux. Hyd. option.

SERVICE CAPACITIES

Fuel tank 35.0 gal (132.0 L)

DEF tank 3.6 gal (13.5 L)

Hydraulic system:
Total 138 qt (130.7 L)
w/ Extendahoe* 144 qt (135.7 L)
Reservoir w/ filter 55 qt (52.4 L)
Reservoir w/o filter 53 qt (50.5 L)

Transmission – total system:
2WD Standard 18 qt (17.0 L)
2WD Powershift S-Type 23 qt (21.7 L)
4WD Standard 21 qt (19.4 L)
4WD Powershift S-Type 22 qt (20.7 L)
4WD Powershift H-Type 19 qt (18.0 L)

Front axle:
2WD each hub 0.8 qt (0.8 L)
4WD Differential 9.1 qt (8.6 L)
4WD Planetaries – each 1.1 qt (1.0 L)

Rear axle:
Differential and planetaries 14.4 qt (13.6 L)

Engine oil w/ filter 8.5 qt (8.0 L)

Cooling system:
w/ heater 19.0 qt (18.0 L)
w/o heater 18.3 qt (17.3 L)

Window washer reservoir 3.0 qt (2.8 L)

OTHER SPECIFICATIONS

Front tires:
2WD 14.0 L x 17.5, 10-ply Industrial Rib
4WD 14.0 L x 17.5, 10-ply SGL SS

Rear tires:
2/4WD 21.0 L x 24.0, 10-ply R4

Loader:

Bucket position indicator; Lifting lugs on standard bucket; Single lever control w/ self-leveling and return-to-dig; Hand operated clutch disconnects on loader and shift levers, single lever 4-function loader control: lift, dump, clutch cut-out, differential lock.

Loader bucket sizes:

Width	Weight	Struck	Heaped
Long Lip Bucket			
w/ lift points and bolt-on cutting edge			
93 in (2.36 m)	1,188 lb (539 kg)	1.1 yd ³ (0.84 m ³)	1.3 yd ³ (0.99 m ³)
96 in (2.44 m)	1,415 lb (642 kg)	1.27 yd ³ (0.97 m ³)	1.5 yd ³ (1.15 m ³)
4 IN 1[®] Bucket			
93 in (2.36 m)	1,685 lb (764 kg)	1.0 yd ³ (0.76 m ³)	1.2 yd ³ (0.92 m ³)

OTHER SPECIFICATIONS (cont.)

Turning radius*: Curb to Curb

2WD:
Brakes on 11 ft 6 in (3.55 m)
Brakes off 12 ft 8 in (3.86 m)

4WD – engaged:
Brakes on 12 ft 6 in (3.81 m)
Brakes off 14 ft 4 in (4.36 m)

4WD – disengaged:
Brakes on 11 ft 8 in (3.55 m)
Brakes off 12 ft 8 in (3.86 m)

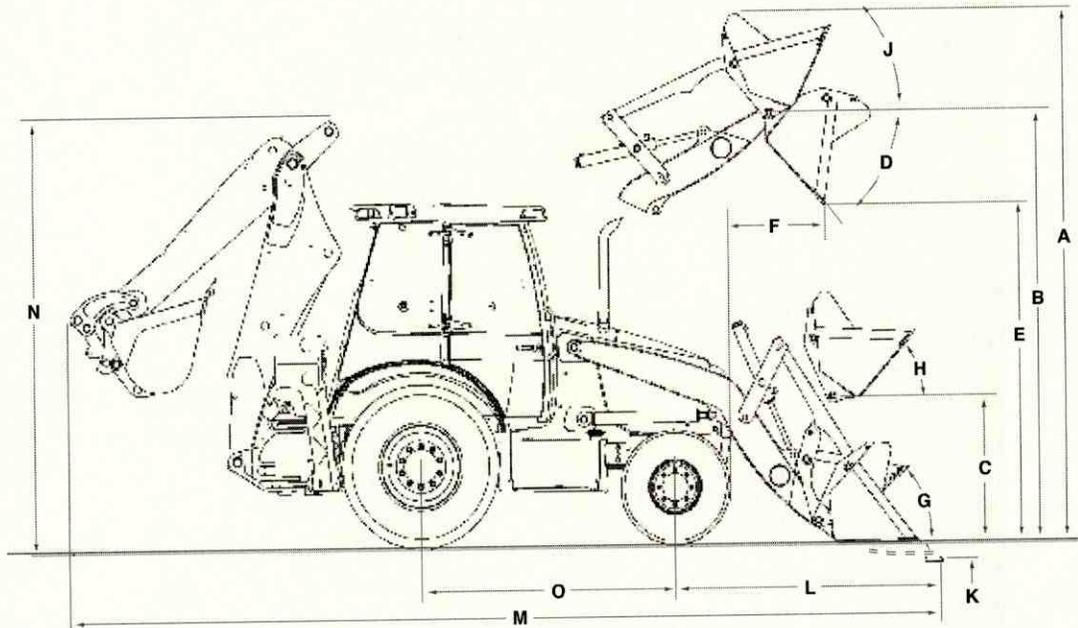
Backhoe:

Over center design, fabricated "S" boom; Pro Control System; Dipperstick integrated serrated gripper teeth; Case mechanical coupler; Power Lift.

Backhoe bucket sizes:

Width	Weight	Heaped
Universal Buckets		
12 in (305 mm)	295 lb (134 kg)	3.40 ft ³ (0.10 m ³)
18 in (457 mm)	356 lb (162 kg)	5.30 ft ³ (0.15 m ³)
24 in (610 mm)	427 lb (194 kg)	7.70 ft ³ (0.22 m ³)
30 in (762 mm)	489 lb (222 kg)	10.20 ft ³ (0.29 m ³)
36 in (914 mm)	552 lb (251 kg)	12.70 ft ³ (0.36 m ³)
High Capacity Buckets		
24 in (610 mm)	447 lb (203 kg)	8.50 ft ³ (0.24 m ³)
30 in (762 mm)	502 lb (228 kg)	10.60 ft ³ (0.30 m ³)

NOTE: *Turning radius dimensions curb to curb w/ 21 L x 24 tires.



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

LOADER DIMENSIONS

	Long Lip Bucket*	4 IN 1 st Bucket
A. Overall operating height – fully raised	13 ft 11 in (4.24 m)	13 ft 10 in (4.22 m)
Height to:		
B. Bucket hinge pin fully raised	11 ft 6 in (3.50 m)	11 ft 6 in (3.50 m)
C. Bucket hinge pin at SAE carry	12.8 in (325 mm)	12.8 in (325 mm)
D. Dump angle at full height	45°	45°
E. Dump clearance at full height, 45° dump:		
Bucket	8 ft 11 in (2.72 m)	9 ft 1 in (2.77 m)
Clam open	—	9 ft 10 in (3.01 m)
F. Dump reach at full height, 45° dump – from bumper:		
Bucket	29.2 in (741 mm)	27.8 in (707 mm)
Clam open	—	13.8 in (351 mm)
Bucket rollback:		
G. @ Groundline	40°	41°
H. @ SAE carry	46°	46°
J. @ Full height	Adjustable	Adjustable
K. Digging depth below grade:		
Bucket flat	6.2 in (157 mm)	5.9 in (150 mm)
Clam open – dozing	—	3.5 in (89 mm)
L. Reach from front axle centerline – bucket on ground	6 ft 7 in (2.05 m)	6 ft 5 in (1.99 m)
Lift capacity to full height – calculate values	8,202 lb (3 721 kg)	7,807 lb (3 541 kg)
Breakout force – calculate values:		
Lift cylinders	11,463 lb (5 099 daN)	11,225 lb (4 993 daN)
Dump cylinders	12,776 lb (5 683 daN)	13,177 lb (6 102 daN)
Bucket cutting edge width	92.7 in (2.36 m)	93.0 in (2.36 m)
Maximum grading angle	106°	106°
Maximum clam opening	—	38.3 in (972 mm)
Moldboard height	—	36.8 in (934 mm)
Raising time to full height	3.7 sec	3.7 sec
Bucket dumping time	2.0 sec	2.0 sec
Lowering time:		
Power down	2.5 sec	2.5 sec
Return-to-dig	3.8 sec	3.8 sec
Clam:		
Open time	—	1.3 sec
Close time	—	1.1 sec

NOTE: *Loader dimensions taken with 4WD.

DIMENSIONS

	Standard Backhoe		Extendahoe®	
			Retracted	Extended
M. Overall transport length:				
Long Lip bucket	23 ft 10 in (7.25 m)		23 ft 10 in (7.25 m)	—
4 IN 1* bucket	23 ft 7 in (7.20 m)		23 ft 7 in (7.20 m)	—
Overall transport width	7 ft 9 in (2.36 m)		7 ft 9 in (2.36 m)	—
Height:				
To top of canopy	8 ft 9 in (2.68 m)		8 ft 9 in (2.68 m)	8 ft 9 in (2.68 m)
To top of cab	8 ft 11 in (2.71 m)		8 ft 11 in (2.71 m)	8 ft 11 in (2.71 m)
To top of exhaust stack	8 ft 9 in (2.67 m)		8 ft 9 in (2.67 m)	8 ft 9 in (2.67 m)
N. Transport	11 ft 7 in (3.54 m)		11 ft 8 in (3.54 m)	—
Ground clearance at backhoe frame	14.2 in (360 mm)		14.2 in (360 mm)	14.2 in (360 mm)
Angle of departure	18.7°		18.7°	18.7°
Front wheel tread:				
14.0 L x 17.5 Industrial Rib	74.3 in (1.89 m)		74.3 in (1.89 m)	—
14.0 L x 17.5	74.3 in (1.89 m)		74.3 in (1.89 m)	—
Rear wheel tread:				
21.0 L x 24.0	69.6 in (1.77 m)		69.6 in (1.77 m)	—
O. Wheelbase:				
2WD	84.0 in (2.13 m)		84.0 in (2.13 m)	—
4WD	84.5 in (2.15 m)		84.5 in (2.15 m)	—

NOTE: Dimensions taken with 21.0 L x 24.0 rear tires and 14.5/75.0 L x 16.1 front tires except that data marked 4WD is taken with 14.0 L x 17.5 front tires.

CYLINDERS

	Bore Diameter	Rod Diameter	Stroke	Closed Length
Loader:				
Lift (2)	3.50 in (88.9 mm)	1.875 in (47.6 mm)	29.13 in (740.0 mm)	41.54 in (1 055.0 mm)
Dump (2)	3.25 in (82.6 mm)	1.75 in (44.5 mm)	20.33 in (516.5 mm)	30.78 in (781.8 mm)
4 IN 1* clam (2)	3.00 in (76.2 mm)	1.75 in (44.5 mm)	9.08 in (230.6 mm)	19.62 in (498.3 mm)
Backhoe:				
Boom	5.50 in (139.7 mm)	2.75 in (69.9 mm)	40.57 in (1 030.5 mm)	57.05 in (1 449.0 mm)
Dipperstick	5.25 in (133.4 mm)	2.75 in (69.9 mm)	23.53 in (597.7 mm)	38.49 in (977.7 mm)
Bucket	3.50 in (88.9 mm)	2.50 in (63.5 mm)	38.95 in (989.4 mm)	51.78 in (1 315.2 mm)
Extendahoe®	3.00 in (76.2 mm)	1.75 in (44.5 mm)	48.03 in (1 220.0 mm)	64.02 in (1 626.0 mm)
Swing (2)	4.00 in (101.6 mm)	2.00 in (50.8 mm)	11.50 in (292.0 mm)	24.44 in (620.8 mm)
Stabilizer (2)	5.25 in (133.4 mm)	2.50 in (63.5 mm)	20.40 in (518.1 mm)	33.57 in (852.7 mm)

AXLE RATINGS

	Front – 2WD	Rear	Front – 4WD
Maximum static	65,506 lb (29 713 kg)	70,848 lb (32 136 kg)	67,883 lb (30 791 kg)
Dynamic operating	44,261 lb (20 077 kg)	49,494 lb (22 450 kg)	47,426 lb (21 512 kg)
Static operating	17,704 lb (8 031 kg)	19,798 lb (8 980 kg)	18,969 lb (8 604 kg)
Oscillation – front axle	22° total – 11° each side	—	22° total – 11° each side

BACKHOE LIFT CAPACITIES

	Standard Backhoe		Extendahoe®			
	Standard	Power Lift	Retracted		Extended	
Boom Lift	Lift Capacity lb (kg)					
+18 ft (5.50 m)	—	—	—	—	2,548 (1 156)	2,710 (1 229)
+16 ft (4.87 m)	—	—	—	—	2,783 (1 262)	2,961 (1 343)
+14 ft (4.27 m)	3,942 (1 788)	4,177 (1 895)	3,688 (1 673)	3,923 (1 779)	2,967 (1 346)	3,156 (1 431)
+12 ft (3.66 m)	4,160 (1 887)	4,409 (2 000)	3,898 (1 768)	4,147 (1 881)	3,037 (1 378)	3,231 (1 465)
+10 ft (3.05 m)	4,204 (1 907)	4,456 (2 021)	3,937 (1 786)	4,188 (1 900)	3,051 (1 384)	3,246 (1 472)
+8 ft (2.44 m)	4,180 (1 896)	4,430 (2 009)	3,908 (1 773)	4,158 (1 886)	3,052 (1 384)	3,247 (1 473)
+6 ft (1.83 m)	4,128 (1 873)	4,374 (1 984)	3,853 (1 748)	4,099 (1 859)	3,037 (1 378)	3,231 (1 466)
+4 ft (1.22 m)	4,064 (1 843)	4,305 (1 953)	3,785 (1 717)	4,027 (1 827)	3,011 (1 366)	3,203 (1 453)
+2 ft (0.61 m)	4,001 (1 815)	4,239 (1 923)	3,720 (1 687)	3,957 (1 795)	2,983 (1 353)	3,174 (1 440)
Ground Level	3,942 (1 788)	4,175 (1 894)	3,657 (1 659)	3,891 (1 765)	2,970 (1 347)	3,160 (1 433)
-2 ft (0.61 m)	3,893 (1 766)	4,123 (1 870)	3,606 (1 635)	3,836 (1 740)	2,946 (1 336)	3,134 (1 422)
-4 ft (1.22 m)	3,863 (1 752)	4,091 (1 856)	3,572 (1 620)	3,800 (1 724)	2,929 (1 329)	3,116 (1 413)
-6 ft (1.83 m)	3,861 (1 751)	4,088 (1 854)	3,565 (1 617)	3,793 (1 720)	2,924 (1 326)	3,111 (1 411)
-8 ft (2.44 m)	3,910 (1 774)	4,141 (1 878)	3,609 (1 637)	3,839 (1 741)	2,941 (1 334)	3,129 (1 419)
-10 ft (3.05 m)	4,088 (1 854)	4,329 (1 964)	3,776 (1 713)	4,017 (1 822)	2,985 (1 354)	3,175 (1 440)
-12 ft (3.66 m)	4,245 (1 925)	4,494 (2 038)	3,900 (1 769)	4,149 (1 882)	3,102 (1 407)	3,300 (1 497)
-14 ft (4.27 m)	—	—	—	—	3,307 (1 500)	3,519 (1 596)
Dipper Lift						
+16 ft (4.87 m)	—	—	—	—	4,312 (1 956)	4,312 (1 956)
+14 ft (4.27 m)	6,102 (2 768)	6,102 (2 768)	5,853 (2 655)	5,853 (2 655)	4,020 (1 823)	4,020 (1 823)
+12 ft (3.66 m)	6,651 (3 017)	6,651 (3 017)	6,409 (2 907)	6,409 (2 907)	5,252 (2 382)	5,252 (2 382)
+10 ft (3.05 m)	6,891 (3 126)	6,891 (3 126)	6,650 (3 016)	6,650 (3 016)	4,849 (2 200)	4,849 (2 200)
+8 ft (2.44 m)	7,147 (3 243)	7,147 (3 243)	6,903 (3 131)	6,903 (3 131)	4,945 (2 243)	4,945 (2 243)
+6 ft (1.83 m)	7,178 (3 256)	7,178 (3 256)	6,928 (3 142)	6,928 (3 142)	4,670 (2 118)	4,670 (2 118)
+4 ft (1.22 m)	8,226 (3 731)	8,226 (3 731)	7,953 (3 608)	7,953 (3 608)	4,424 (2 007)	4,424 (2 007)
+2 ft (0.61 m)	—	—	—	—	5,103 (2 315)	5,103 (2 315)

NOTE: Boom and Dipper Lift Capacities are rated per SAE J31 and are 87% of the maximum hydraulic lift force available with the specified options.

BACKHOE OPERATIONAL DATA - 4WD

	Standard Backhoe	Extendahoe®	
		Retracted	Extended
Digging depth:			
Maximum	15 ft 6 in (4.72 m)	15 ft 6 in (4.72 m)	19 ft 6 in (5.94 m)
Maximum with hi-capacity bucket	16 ft 0 in (4.88 m)	16 ft 0 in (4.88 m)	20 ft 0 in (6.10 m)
2 ft (610 mm) flat bottom	15 ft 5 in (4.69 m)	15 ft 5 in (4.69 m)	19 ft 5 in (5.92 m)
8 ft (2.44 m) flat bottom	14 ft 5 in (4.40 m)	14 ft 5 in (4.40 m)	18 ft 8 in (5.63 m)
Overall reach from:			
Rear axle centerline	23 ft 3 in (7.10 m)	23 ft 3 in (7.10 m)	27 ft 2 in (8.28 m)
Swing pivot	19 ft 7 in (5.98 m)	19 ft 7 in (5.98 m)	23 ft 6 in (7.17 m)
Loading height	13 ft 1 in (4.00 m)	13 ft 1 in (4.00 m)	15 ft 9 in (4.81 m)
Loading reach – dipper retracted	5 ft 1 in (1.56 m)	5 ft 1 in (1.56 m)	8 ft 1 in (2.47 m)
Swing arc 1	180°	180°	180°
Bucket rotation:			
Mechanical coupler	198.0°	198.0°	198.0°
Hydraulic coupler – Extendahoe® dipper	194.8°	194.8°	194.8°
Hydraulic coupler – standard dipper	198.0°	198.0°	198.0°
Stabilizer spread – operating – centers:			
Flip pad	10 ft 9 in (3.26 m)	10 ft 9 in (3.26 m)	10 ft 9 in (3.26 m)
Cast pad	11 ft 1 in (3.37 m)	11 ft 1 in (3.37 m)	11 ft 1 in (3.37 m)
Digging force:			
Bucket cylinder – SAE rated 3,460 psi	15,132 lb (67 310 N)	15,132 lb (67 310 N)	15,132 lb (67 310 N)
Bucket cylinder – Power Lift	15,853 lb (70 520 N)	15,853 lb (70 520 N)	15,853 lb (70 520 N)
Dipper cylinder – SAE rated 3,460 psi	10,575 lb (47 041 N)	10,575 lb (47 041 N)	7,392 lb (32 882 N)
Dipper cylinder – Power Lift	11,080 lb (49 285 N)	11,080 lb (49 285 N)	7,744 lb (34 450 N)
Leveling angle:			
Flip pad	11.2°	11.2°	11.2°
Cast pad	12.0°	12.0°	12.0°

NOTE: Lift capacities apply straight to the rear of prime mover. 4WD equipped with 24 in (610 mm) Universal HD trenching bucket and Case coupler except as noted.

STANDARD EQUIPMENT

OPERATOR ENVIRONMENT

See page 1

ENGINE

FPT F5BFL413A diesel
Diesel Oxidation Catalyst with SCR
Full flow engine oil filter
Air cleaner – replaceable dry type with radial seal
Aspirated air cleaner
Fuel filter with water trap
Radiator with de-aeration bottle
Antifreeze to -34° F (-37° C)
Electronic throttles – foot and rotary hand
Self adjusting belt
High Pressure Common Rail computer controlled injection with diagnostic features

DRIVETRAIN

Powershift S-Type transmission, 4F-3R
Power Shuttle synchromesh transmission with hydraulic gear shifting controller and kick down in loader control valve lever – 2WD or 4WD and auto function

Front axle:

2WD heavy-duty front axle with 14.0 L x 17.5 tires with Industrial Rib tread

4WD heavy-duty mechanically driven front axle with 14.0 L x 17.5 tires and drive shaft guard

Rear axle:

2/4WD heavy-duty outboard planetary drive with 21.0 L x 24.0 tires

Torque converter – 11.8 in (300 mm)

On-the-go electric 4WD control

Electric F/R shuttle control

Electric differential lock control, push-button

Park brake, spring-applied hydraulic release – SAHR

HYDRAULICS

Ground level remote hydraulic test ports

Variable displacement axial piston pump

Pump 43 gpm @ 3,000 psi
(162.6 L/min @ 207 bar)

Heavy-duty oil cooler

7-micron, spin on oil filter

LOADER

See page 2

BACKHOE

Power Lift

See page 2

OTHER

14.0 L x 17.5, 10 PR – 4WD front tires

21.0 L x 24.0, 10 PR rear tires

Forward tilt engine hood

Replaceable, molded front bumpers

Front/Rear tie downs

Reflective logos

Lights – cab and canopy:

2 front driving

2 rear tail/stop

2 front flashers/turn

2 rear flashers/turn

Lights – cab only:

Adjustable halogen work lights – 55 W:

2 front

2 side – left and right

4 rear

Lights – canopy only:

Adjustable halogen work lights – 55 W:

2 front

2 side – left and right

4 rear

TELEMATICS

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

OPTIONAL EQUIPMENT

OPERATOR ENVIRONMENT

Speed selectable Auto Ride Control – 4WD models
Standard Ride Control – 2WD models
Comfort Steering with momentary latching switch, two-speed steering pump and 3rd/4th gear cutout
ROPS/FOPS certified protective cab with rear wipers and floor mat
Cab Convenience Package containing pull-down sun visor, window washer – front and rear, left-hand storage tray, deluxe interior package, Sound Reduction Package for cab models – levels reduced to 72 dB (A), right-hand threshold storage box
Air-conditioning for cab models
Mechanical suspension seat with flip-up armrests, 180° swivel, heated cloth or vinyl, adjustable seat and weight, backrest angle, lumbar and cushion angle
Air Ride suspension seat with flip-up armrests, 180° swivel, heated, electric height adjustment, adjustable backrest – cab units cloth, canopy units vinyl
Pull-down sun visor for canopy models
Radio, AM/FM Stereo/WB, MP3 auxiliary input – cab models
3 in (75 mm) seat belt for mechanical and air-suspension seat

ENGINE

Cold Weather Starting Aid
with dual 12 Volt batteries and glow plugs

Block heater

DRIVETRAIN

Standard Power Shuttle, 4F-4R Power Shuttle Synchromesh transmission

Powershift H-Type transmission, 4F-3R hydraulic clutch shifting with auto function

LOADER

Auxiliary hydraulics for loader-mounted equipment with thumb-operated proportional control

Hydraulic front quick coupler

Loader linkage without loader bucket

Tool portfolio of additional attachments

Buckets – see page 2

BACKHOE

Auxiliary backhoe unidirectional hydraulics

Auxiliary backhoe combo hydraulics:

Hand lever operated for bidirectional manual controls

Button operated for pilot controls, includes unidirectional and bidirectional

Auxiliary hydraulics flow from 0 to 43 gal/min (0 to 162.6 L/min)

Bolt on hardened gripper teeth

Extendahoe®

Two-lever control – backhoe or Extendahoe®

BACKHOE (continued)

Pilot operated control system:

Fingertip proportional Electro-Hydraulic stabilizer controls

Thumb-operated proportional Electro-Hydraulic Extendahoe® control

Thumb-operated horn button

Thumb-operated auxiliary hydraulic control

Infinitely adjustable towers

In-cab switchable “excavator to backhoe” control pattern change Standard dipper

Flip over stabilizer pads

Cemetery/Street pads

Hydraulic bucket coupler

Universal coupler – CAT/Deere compatible

Buckets – see page 2

OTHER

Front:

14.0 L x 17.5 10 PR

Rear:

21 L x 24, 10 PR

Special paint

Toolbox – bolt-on, step mounted

Front counterweights:

700 lb and 1,100 lb (318 kg and 500 kg)

Rotating beacon

Master disconnect switch and remote jump-start terminals

Eco-Mode – Detent on backhoe hand throttle, push switch on dash

CASE Customer Assistance
1-866-54-CASE6

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

NOTE: All engines meet current EPA emissions requirements.

IMPORTANT: Case Construction Inc. reserves the right to change these specifications without notice and without incurring any obligation relating to such change. Case Construction Inc. does not warrant the safety or reliability of attachments from other manufacturers.

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All Case construction equipment is biodiesel ready.