

## ENGINE

Model	FPT F5BFL413B
Emissions Certification	Tier 4 Final
Type	Diesel 4-stroke, turbocharged
Cylinders	4
Bore/Stroke	3.9 x 4.33 in (99 x 110 mm)
Displacement	207 in <sup>3</sup> (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	2330 – 2430
Horsepower @ 2200 RPM:	
Gross	97 hp (72 kW)
Net	95 hp (71 kW)
Maximum torque @ 1400 RPM:	
Gross	334 lb-ft (453 N·m)
Net	333 lb-ft (452 N·m)
Torque rise at rated speed	45% +/- 5%
Radiator:	
Core size area	486 in <sup>2</sup> (3 145 cm <sup>2</sup> )
Rows of tubes	4
39° fan:	
Style	9 blade suction
Diameter	19.65 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.  
\*\*Viscous fan.

## DRIVETRAIN

Transmission – standard:	
Powershift S-Type, 4F-3R power shuttle, synchromesh transmission 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	3.8 (6.1)	4.5 (7.3)
2nd	6.0 (9.7)	7.2 (11.6)
3rd	12.8 (20.6)	15.4 (24.7)
4th	24.0 (38.6)	28.8 (46.3)*

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	3.9 (6.2)	4.6 (7.4)
2nd	6.3 (10.1)	7.5 (12.1)
3rd	13.3 (21.4)	16.0 (25.7)
4th	23.6 (38.0)	—

NOTE: Travel speeds at 2312 engine RPM specified:  
w/ 19.5 L x 24 tires.  
Speeds decrease w/ 17.5 L x 24 rear tires.

Torque converter ratio	2.4
Differential lock	On-the-go push-button activation

Front 4WD/Rear axle:	
Differential ratio	2.0/2.5
Planetary hub ratio	6.0/6.4
Total reduction ratio	12.0/16.0

Service brakes:	
Individually applied, power assisted, hydraulically actuated, maintenance-free, self-adjusting, outboard mounted, wet disc, 2 per side.	
Total disc area	384 in <sup>2</sup> (0.25 m <sup>2</sup> )

Parking brakes	Trans Mounted spring-applied, hydraulic release – SAHR
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## 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; 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  
engagement; Low fuel; Water in fuel;  
Low DEF.

Audible alarms w/ diagnostics:

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

Horn	Dual switched front and rear
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## OPERATING WEIGHT

### Configuration 1 – SAE Transport:

No Operator, GP Loader Bucket, Cab, AC,  
Small Front Counter Weight, 2WD, Full of Fuel,  
SAE Carry T4 Final Engine, Pilot Controls,  
11 L – 16 @ 52 psi front tires, 17.5 L – 24 @  
30 psi rear tires. 17,269 lb (7 883 kg)

### Configuration 2 – SAE Transport:

No Operator, 4:1 Loader Bucket, Ehoe, Cab, big  
front counter weight, Full of Fuel, SAE Carry T4  
Final Engine, Pilot Controls, Galaxy 12 x 16.5 @  
50 psi front tires, Solideal 19.5 L – 24 @  
30 psi rear tires. 19,067 lb (8 649 kg)

### Add-on weights:

Cab-over canopy	309 lb (140 kg)
Fabricated stabilizer pads	141 lb (64 kg)
Counterweights	700 lb (318 kg)
Extendahoe®	286 lb (130 kg)
4WD w/ driveshaft guard	283 lb (128 kg)

## HYDRAULICS

Pump:  
Bosch Rexroth Series 31 Variable  
Displacement Axial Piston Pump

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:  
41 gpm @ 2,340 psi  
(155.2 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 41 gpm @ 2,340 psi  
(0 to 156.2 L/min @ 161 bar)

Backhoe flow @ rated engine RPM:  
41 gpm @ 3,100 psi  
(156.2 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 with "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 125 qt (118 L)  
w/ Extendahoe® 131 qt (123.6 L)  
Reservoir w/ filter 53 qt (50.5 L)  
Reservoir w/o filter 55 qt (52.4 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:

4WD Differential 8.1 qt (7.7 L)  
4WD Planetaries – each 0.5 qt (0.5 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 11.0 L x 16.0, 10-ply rating  
4WD 12.0 L x 16.5, 8-ply rating

Rear tires:

2/4WD 19.5 L x 24.0, 10-ply rating  
2/4WD 17.5 L x 24.0, 10-ply rating

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
<b>Long Lip Bucket</b>			
<b>82 in without bolt-on edge/ 93 w/ bolt-on edge</b>			
82 in (2.08 m)	864 lb (392 kg)	0.88 yd <sup>3</sup> (0.67 m <sup>3</sup> )	1.03 yd <sup>3</sup> (0.79 m <sup>3</sup> )
93 in (2.36 m)	1,188 lb* (539 kg)	1.10 yd <sup>3</sup> (0.89 m <sup>3</sup> )	1.29 yd <sup>3</sup> (0.99 m <sup>3</sup> )
<b>4 IN 1® Bucket w/ bolt-on edge</b>			
82 in (2.08 m)	1,572 lb* (713 kg)	0.85 yd <sup>3</sup> (0.65 m <sup>3</sup> )	1.04 yd <sup>3</sup> (0.80 m <sup>3</sup> )

NOTE: \*Weight of 4 IN 1® bucket includes edges,  
cylinders, and tube lines.

## OTHER SPECIFICATIONS (cont.)

### Turning radius\*: Curb to Curb

2WD:  
Brakes on 10 ft 8 in (3.24 m)  
Brakes off 12 ft 4 in (3.76 m)

4WD – engaged:  
Brakes on 11 ft 4 in (3.45 m)  
Brakes off 13 ft 10 in (4.21 m)

4WD – disengaged:  
Brakes on 11 ft 0 in (3.36 m)  
Brakes off 12 ft 3 in (3.72 m)

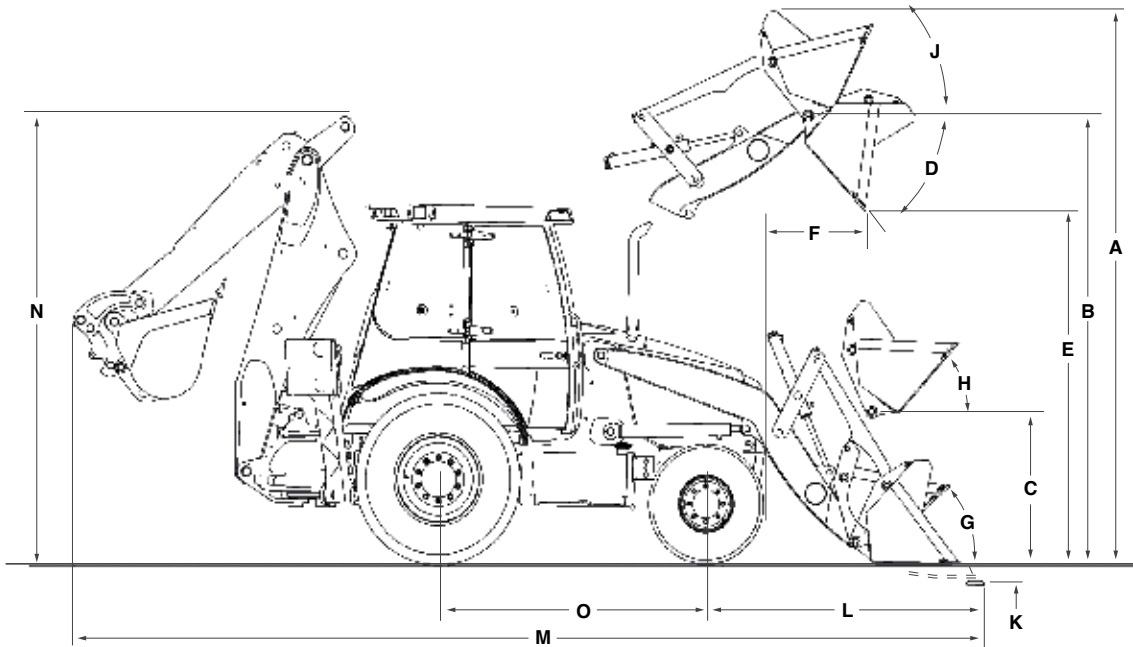
Backhoe:

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

### Backhoe bucket sizes:

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

NOTE: \*Turning radius dimensions curb to curb  
w/ 17.5 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® Bucket
<b>A.</b> Overall operating height – fully raised	13 ft 9 in (4.18 m)	13 ft 8 in (4.16 m)
Height to:		
<b>B.</b> Bucket hinge pin fully raised	11 ft 3 in (3.42 m)	11 ft 3 in (3.42 m)
<b>C.</b> Bucket hinge pin at SAE carry	13.6 in (345 mm)	13.6 in (345 mm)
<b>D.</b> Dump angle at full height	47°	47°
<b>E.</b> Dump clearance at full height, 45° dump:		
Bucket	8 ft 10 in (2.69 m)	8 ft 11 in (2.71 m)
Clam open	—	9 ft 8 in (2.96 m)
<b>F.</b> Dump reach at full height, 45° dump – from bumper:		
Bucket	31.5 in (801 mm)	29.1 in (738 mm)
Clam open	—	15.3 in (388 mm)
Bucket rollback:		
<b>G.</b> @ Groundline	42°	42°
<b>H.</b> @ SAE carry	42°	42°
<b>J.</b> @ Full height	Adjustable	Adjustable
<b>K.</b> Digging depth below grade:		
Bucket flat	6.1 in (155 mm)	4.8 in (122 mm)
Clam open – dozing	—	4.1 in (103 mm)
<b>L.</b> Reach from front axle centerline – bucket on ground	6 ft 10 in (2.07 m)	6 ft 8 in (2.03 m)
Lift capacity to full height – calculated values	7,044 lb (3 195 kg)	6,703 lb (3 040 kg)
Breakout force – calculated values:		
Lift cylinders	9,833 lb (4 460 daN)	9,610 lb (4 359 daN)
Dump cylinders	10,947 lb (4 965 daN)	11,658 lb (5 288 daN)
Bucket cutting edge width	82.5 in (2.09 m)	82.0 in (2.08 m)
Maximum grading angle	114°	114°
Maximum clam opening	—	38.3 in (972 mm)
Moldboard height	—	36.8 in (934 mm)
Raising time to full height – manual/pilot controls	2.6/3.2 sec	2.6/3.2 sec
Bucket dumping time	0.8/1.2 sec	0.8/1.2 sec
Lowering time:		
Power down	1.9/2.1 sec	1.9/2.1 sec
Return-to-dig	2.5/2.2 sec	2.5/2.2 sec
Clam:		
Open time	—	1.1 sec
Close time	—	1.1 sec

NOTE: \*Loader dimensions taken with 4WD, 19.5 L x 24.0 rear tires.

## DIMENSIONS

### 2WD with 17.5 L x 24.0 rear tires

### 4WD with 19.5 L x 24.0 rear tires

<b>M. Overall transport length:</b>		
Long Lip bucket with Quick Coupler	23 ft 5 in (7.14 m)	23 ft 4 in (7.10 m)
4 IN 1 <sup>®</sup> bucket with Quick Coupler	23 ft 3 in (7.07 m)	23 ft 1 in (7.04 m)
Long Lip bucket with Straight Links	23 ft 6 in (7.15 m)	23 ft 4 in (7.12 m)
4 IN 1 <sup>®</sup> bucket with Straight Links	23 ft 3 in (7.09 m)	23 ft 2 in (7.06 m)
Overall transport width	7 ft 2 in (2.17 m)	7 ft 2 in (2.17 m)
Height:		
To top of canopy	8 ft 8 in (2.64 m)	8 ft 9 in (2.66 m)
To top of cab	8 ft 9 in (2.68 m)	8 ft 11 in (2.72 m)
To top of exhaust stack	8 ft 5 in (2.58 m)	8 ft 7 in (2.62 m)
<b>N. Transport</b>	10 ft 10 in (3.29 m)	11 ft 1 in (3.37 m)
Ground clearance at backhoe frame	12 in (304 mm)	15 in (381 mm)
Angle of departure	15.3°	19.0°
Front wheel tread:		
11.0 L x 16.0	67.5 in (1.72 m)	67.5 in (1.72 m)
12.0 L x 16.5	67.7 in (1.72 m)	67.7 in (1.72 m)
19.5 L x 24.0	61.2 in (1.55 m)	61.2 in (1.55 m)
17.5 L x 24.0	63.1 in (1.60 m)	63.1 in (1.60 m)
Width over tires:		
11.0 L x 16.0	79.3 in (2.02 m)	79.3 in (2.02 m)
12.0 L x 16.5	81.1 in (2.06 m)	81.1 in (2.06 m)
19.5 L x 24.0	81.4 in (2.07 m)	81.4 in (2.07 m)
17.5 L x 24.0	81.7 in (2.07 m)	81.7 in (2.07 m)
	<b>2WD</b>	<b>4WD</b>
<b>O. Wheelbase:</b>		
19.5 L x 24.0	84.0 in (2.13 m)	84.5 in (2.15 m)
17.5 L x 24.0	84.0 in (2.13 m)	84.5 in (2.15 m)

## CYLINDERS

	Bore Diameter	Rod Diameter	Stroke	Closed Length
<b>Loader:</b>				
Lift (2)	3.25 in (82.6 mm)	1.75 in (44.5 mm)	28.86 in (733.0 mm)	42.95 in (1 062.0 mm)
Dump (2)	3.00 in (76.2 mm)	1.50 in (38.1 mm)	20.33 in (516.5 mm)	29.90 in (759.5 mm)
4 IN 1 <sup>®</sup> 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)
<b>Backhoe:</b>				
Boom	5.00 in (127.0 mm)	2.50 in (63.5 mm)	38.25 in (971.6 mm)	52.82 in (1 341.6 mm)
Dipperstick	4.75 in (120.7 mm)	2.50 in (63.5 mm)	25.14 in (628.5 mm)	39.65 in (1 007.0 mm)
Bucket	3.50 in (88.9 mm)	2.50 in (63.5 mm)	35.35 in (897.9 mm)	48.17 in (1 223.6 mm)
Extendahoe <sup>®</sup>	3.00 in (76.2 mm)	1.75 in (44.5 mm)	42.05 in (1 068.0 mm)	56.22 in (1 428.0 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)	4.50 in (114.3 mm)	2.25 in (57.2 mm)	21.37 in (542.9 mm)	33.87 in (860.2 mm)

## AXLE RATINGS

	Front – 2WD	Rear	Front – 4WD
Maximum static	70,821 lb (32 124 kg)	90,145 lb (40 889 kg)	64,613 lb (29 308 kg)
Dynamic operating	44,261 lb (20 076 kg)	56,200 lb (25 492 kg)	39,328 lb (17 839 kg)
Static operating	17,704 lb (8 030 kg)	22,480 lb (10 197 kg)	15,732 lb (7 136 kg)
Oscillation – front axle	22° total – 11° side to side	—	22° total – 11° side to side

## BACKHOE LIFT CAPACITIES

	Standard Backhoe		Extendahoe®			
	Standard	Power Lift	Retracted		Extended	
			Standard	Power Lift	Standard	Power Lift
Boom Lift	Lift Capacity lb (kg)	Lift Capacity lb (kg)	Lift Capacity lb (kg)	Lift Capacity lb (kg)	Lift Capacity lb (kg)	Lift Capacity lb (kg)
+16 ft (4.87 m)	—	—	—	—	2,115 (959)	2,298 (1 043)
+14 ft (4.27 m)	3,039 (1 378)	3,285 (1 490)	2,837 (1 287)	3,083 (1 398)	2,395 (1 086)	2,603 (1 181)
+12 ft (3.66 m)	3,413 (1 548)	3,691 (1 674)	3,201 (1 452)	3,479 (1 578)	2,536 (1 151)	2,757 (1 250)
+10 ft (3.05 m)	3,499 (1 587)	3,784 (1 716)	3,281 (1 488)	3,566 (1 618)	2,593 (1 176)	2,818 (1 278)
+8 ft (2.44 m)	3,485 (1 581)	3,768 (1 709)	3,263 (1 480)	3,546 (1 608)	2,564 (1 163)	2,786 (1 264)
+6 ft (1.83 m)	3,438 (1 559)	3,717 (1 686)	3,213 (1 457)	3,492 (1 584)	2,549 (1 156)	2,770 (1 257)
+4 ft (1.22 m)	3,374 (1 530)	3,648 (1 655)	3,146 (1 427)	3,420 (1 551)	2,521 (1 144)	2,741 (1 243)
+2 ft (0.61 m)	3,307 (1 500)	3,575 (1 622)	3,077 (1 396)	3,345 (1 517)	2,489 (1 129)	2,706 (1 227)
<b>Ground Level</b>	3,251 (1 475)	3,513 (1 594)	3,018 (1 369)	3,280 (1 488)	2,489 (1 129)	2,706 (1 227)
-2 ft (0.61 m)	3,201 (1 452)	3,459 (1 569)	2,965 (1 345)	3,223 (1 462)	2,466 (1 118)	2,680 (1 215)
-4 ft (1.22 m)	3,175 (1 440)	3,430 (1 556)	2,935 (1 331)	3,190 (1 447)	2,446 (1 109)	2,659 (1 206)
-6 ft (1.83 m)	3,182 (1 443)	3,437 (1 559)	2,938 (1 333)	3,193 (1 448)	2,443 (1 108)	2,656 (1 205)
-8 ft (2.44 m)	3,258 (1 478)	3,520 (1 597)	3,007 (1 364)	3,269 (1 483)	2,465 (1 118)	2,679 (1 215)
-10 ft (3.05 m)	3,441 (1 561)	3,717 (1 686)	3,175 (1 440)	3,451 (1 565)	2,530 (1 148)	2,750 (1 248)
-12 ft (3.66 m)	—	—	—	—	2,707 (1 228)	2,943 (1 335)
-14 ft (4.27 m)	—	—	—	—	3,239 (1 469)	3,521 (1 597)
<b>Dipper Lift</b>						
+14 ft (4.27 m)	—	—	—	—	4,281 (1 942)	4,281 (1 942)
+12 ft (3.66 m)	5,822 (2 641)	5,822 (2 641)	5,618 (2 548)	5,618 (2 548)	4,046 (1 835)	4,046 (1 835)
+10 ft (3.05 m)	5,600 (2 540)	5,600 (2 540)	5,399 (2 449)	5,399 (2 449)	3,984 (1 807)	3,984 (1 807)
+8 ft (2.44 m)	5,562 (2 523)	5,562 (2 523)	5,360 (2 431)	5,360 (2 431)	3,913 (1 775)	3,913 (1 775)
+6 ft (1.83 m)	6,236 (2 829)	6,236 (2 829)	6,030 (2 735)	6,030 (2 735)	4,166 (1 889)	4,166 (1 889)
+4 ft (1.22 m)	7,424 (3 368)	7,424 (3 368)	7,203 (3 267)	7,203 (3 267)	4,102 (1 861)	4,102 (1 861)
+2 ft (0.61 m)	—	—	—	—	4,850 (2 200)	4,850 (2 200)

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

	Standard Backhoe	Extendahoe®	
		Retracted	Extended
Digging depth:			
Maximum	14 ft 6 in (4.41 m)	14 ft 6 in (4.41 m)	17 ft 11 in (5.47 m)
Maximum with hi-capacity bucket	15 ft 0 in (4.51 m)	15 ft 0 in (4.51 m)	18 ft 6 in (5.63 m)
2 ft (610 mm) flat bottom	14 ft 4 in (4.37 m)	14 ft 4 in (4.37 m)	17 ft 10 in (5.43 m)
8 ft (2.44 m) flat bottom	13 ft 4 in (4.06 m)	13 ft 4 in (4.06 m)	17 ft 1 in (5.19 m)
Overall reach from:			
Rear axle centerline	21 ft 10 in (6.66 m)	21 ft 10 in (6.66 m)	25 ft 3 in (7.69 m)
Swing pivot	18 ft 2 in (5.55 m)	18 ft 2 in (5.55 m)	21 ft 7 in (6.58 m)
Loading height	12 ft 1 in (3.67 m)	12 ft 1 in (3.67 m)	14 ft 5 in (4.38 m)
Loading reach	4 ft 7 in (1.41 m)	4 ft 7 in (1.41 m)	7 ft 3 in (2.20 m)
Swing arc	180°	180°	180°
Bucket rotation:			
Straight links	175.6°	175.6°	175.6°
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:			
Flip pad	9 ft 3 in (2.82 m)	9 ft 3 in (2.82 m)	9 ft 3 in (2.82 m)
Cast pad	9 ft 7 in (2.93 m)	9 ft 7 in (2.93 m)	9 ft 7 in (2.93 m)
Digging force:			
Bucket cylinder – SAE rated 3,460 psi	13,975 lb (61 363 N)	13,975 lb (61 363 N)	13,975 lb (61 363 N)
Bucket cylinder – Power Lift	14,452 lb (64 240 N)	14,452 lb (64 240 N)	14,452 lb (64 240 N)
Dipper cylinder – SAE rated 3,460 psi	8,657 lb (38 508 N)	8,657 lb (38 508 N)	6,305 lb (28 045 N)
Dipper cylinder – Power Lift	9,070 lb (40 345 N)	9,070 lb (40 345 N)	6,606 lb (29 382.7 N)
Leveling angle:			
Flip pad	11.8°	11.8°	11.8°
Cast pad	12.8°	12.8°	12.8°

NOTE: Lift capacities apply straight to the rear of prime mover. 4WD with 19.5 L x 24.0 tires equipped with 24 in (610 mm) heavy-duty bucket and Case coupler except as noted.

## STANDARD EQUIPMENT

### OPERATOR ENVIRONMENT

See page 1

### ENGINE

FPT F5BFL413B 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  
electronic transmission controller and kick  
down in loader control lever – 2WD or 4WD  
with auto function

Front axle:

2WD heavy-duty front axle with  
11.0 L x 16.0 tires

4WD heavy-duty mechanically driven front  
axle with 12.0 L x 16.5 tires and drive  
shaft guard

Rear axle:

2/4WD heavy-duty outboard planetary drive  
with 19.5 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

Pump 41 gpm @ 3,000 psi  
(156.2 L/min @ 207 bar)

Heavy-duty oil cooler

7-micron, spin on oil filter

### LOADER

See page 2

### BACKHOE

See page 2

### OTHER

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

Cab only:

Adjustable halogen work lights – 55 W:

2 front

2 side – left and right

4 rear

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, 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 back rest and lumbar  
support – 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 Powershuttle, 4F-4R Power Shuttle  
Synchromesh transmission

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

Rear axle heavy-duty outboard kick down,  
planetary drive with 17.5 L x 24.0 tires either  
2WD or 4WD

### 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 with flow from  
0 to 41 gal/min (0 to 156.2 L/min)

Extendahoe®

Power Lift

Bolt-on hardened gripper teeth

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

Flip over stabilizer pads

Cemetery/Street pads

Hydraulic bucket quick coupler

Universal coupler – CAT/Deere compatible

Buckets – see page 2

### OTHER

Front:

11.0 L x 16.0 or 12.0 L x 16.5

Rear:

17.5 L x 24.0 or 19.5 L x 24.0

Special paint

Tool box – 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



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.