

## ENGINE

Model	FPT F5H FL413 H*A001
Type	Diesel 4-stroke, Turbo, D.I.
Cylinders	4
Bore/Stroke	3.9 x 4.3 in (99 x 110 mm)
Displacement	207 in <sup>3</sup> (3.4 L)
Fuel injection	Direct, high pressure common rail – HPCR
Fuel	#2 Diesel
Fuel filter:	
Pre-filter	Beta (30) = 200/spin-on
Main filter	Beta (4) = 20/spin-on
Air intake	Turbocharged w/ external EGR
Exhaust aftertreatment	Diesel particulate filter – DPF
Cooling	Liquid
Engine speeds	RPM
High idle – no load	2500 +/- 25
Rated – full load	2500
Low idle	1150 +/- 25
Horsepower @ 2500 RPM – SAE J1349:	
Gross	82 hp (61 kW)
Net	76 hp (57 kW)
Peak torque @ 1400 RPM	257 lb-ft (349 N·m)
Radiator:	
Core type	All aluminum
Core size area	2.06 ft <sup>2</sup> (0.191 m <sup>2</sup> )
Rows of tubes x columns	31 x 4
Cap pressure	13 +/- 2 psi (0.90 +/- 0.14 bar)
Fan:	
Diameter	20.4 in (518 mm)
Ratio	0.96:1 standard, 1:1 high-flow
Water pump:	
Style	Centrifugal
Flow	47.8 gpm (181 L/min)
Engine lubrication pump:	
Rotor pump w/ deep sump pan, plate cooler and pressurized under-piston nozzles	
Pump operating angle ratings:	
Side to side	45°
Bucket up	35°
Bucket down	45°

## POWERTRAIN

Drive pump controls	Servo-assist mechanical
Pump to engine ratio	1:1
Displacement	2.81 in <sup>3</sup> (46 cc)
Flow @ rated engine RPM:	
@ 97% efficiency	29.4 gpm (111 L/min)
Charge pressure	360 psi (24.5 bar)
System relief pressure	5,220 psi (360 bar)
Drive pump controls	Electro-hydraulic
Pump to engine ratio	1:1
Displacement	2.75 in <sup>3</sup> (45 cc)
Flow @ rated engine RPM:	
@ 97% efficiency	28.8 gpm (109 L/min)
Charge pressure	362 psi (25 bar)
System relief pressure	5,220 psi (360 bar)

## POWERTRAIN (cont.)

Drive motors:	
Max. displacement	28.7 in <sup>3</sup> (470 cc)
Displacement – optional:	
High speed	17.2 in <sup>3</sup> (282 cc)
Motor RPM @ high idle and 97% efficiency:	
Standard 1-speed	237
Optional 2-speed	355
Motor torque @ max. displacement and relief pressure, calculated @ 5,220 psi (360 bar):	
	1,987 lb-ft (2694 N·m)
Travel speed:	
Low range	7.0 mph (11.3 kph)
High range – optional	10.5 mph (16.9 kph)
Final drive	Single-reduction chain drive
Drive chain:	
Size	ASA #100
Tensile strength	30,000 lb (133.4 kN)
Axles:	
Torque @ max. displacement and relief pressure	5,957 lb-ft (8077 N·m)
Diameter	2.44 in (62 mm)
Length	15.6 in (396 mm)
Parking brake:	
Type	Spring-applied, hydraulic release multiple disc.
Engagement	Depress on/off brake button on handle or instrument panel, raise seat bar, get off seat or stop engine.

## ELECTRICAL

Alternator	120 amp
Starter	4.29 hp (3.2 kW)
Battery	12-volt low-maintenance 925 cold-cranking amps @ 0° F (-18° C)

## OPERATOR ENVIRONMENT

ROPS/FOPS level 1 canopy w/ side screens;  
Tilt ROPS/FOPS; Rear window w/ emergency  
escape; Top window; Instrument panel  
w/: hour meter, tachometer, fuel level, hydraulic  
oil temperature, engine coolant temperature,  
diagnostic features and security lockout;  
Non-suspension vinyl seat; 2 in (51 mm)  
retractable lap seat belt; Hand and foot throttles;  
Alarm package – back-up and horn; Headliner;  
Dome light; Cup holder; 12-volt power plug  
socket; Foot rest; Storage tray; Low effort  
ergonomic hand controls; Padded seat bar  
w/ integral armrests; Loader control lockout  
system; Electric parking brake control; Floor  
cleanout panel; Proportional auxiliary hydraulic  
control – on joystick.

Indicators:	Digital hourmeter; Fuel level LCD bar graph w/ alarm.
Warning lights w/ alarms:	Engine coolant temperature; Engine oil pressure; Engine malfunction; Hydraulic charge pressure; Hydraulic filter restriction; Hydraulic oil temperature.

## OPERATOR ENVIRONMENT (cont.)

Warning alarms:	Battery voltage – plus display
Indicator light:	Engine preheat; Parking brake; Seat bar reminder.

## OPERATING WEIGHT

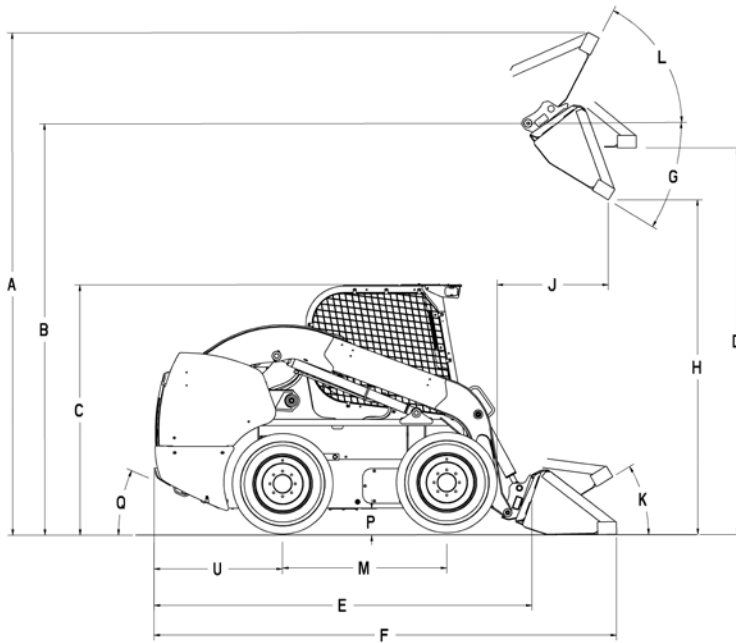
Operating weight	8,000 lb (3630 kg)
Shipping weight	7,665 lb (3475 kg)
Add-on weights:	
Side cab glass	47 lb (21.3 kg)
Polycarbonate cab door	74 lb (33.6 kg)
Glass cab door w/ wiper	134 lb (60.8 kg)
Suspension seat	22 lb (10.0 kg)
Additional counterweight	300 lb (136.0 kg)

## HYDRAULICS

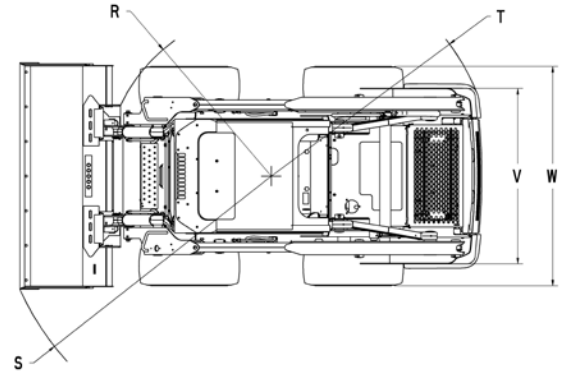
Implement pump type	Gear
Displacement:	
Standard aux.	2.23 in <sup>3</sup> (36.6 cc)
High-flow aux.	1.24 in <sup>3</sup> (20.4 cc)
Standard flow @ rated engine RPM: @ 100% efficiency	24.2 gpm (91.5 L/min)
Optional high-flow @ rated engine RPM: @ 100% efficiency	37.6 gpm (142.5 L/min)
Loader control valve:	
Type	3 spool/open center/series - series
Relief pressure	3,050 psi (210 bar)
Port relief pressures:	
Loader raise	3,263 psi (225 bar)
Bucket curl	3,770 psi (260 bar)
Bucket dump	1,160 psi (80 bar)
Hydraulic lines:	
Tubing	37° JIC Flare
Loop hoses	SAE 100 R19
Hydraulic oil cooler:	
Number of fins	10 per inch (3.94 per cm)
Number of tube rows x columns	11 x 2
Area	130.7 in <sup>2</sup> (843.2 cm <sup>2</sup> )
Hydraulic filter	Beta (4) = 75/spin-on
Lift cylinders:	
Bore diameter	2.5 in (63.5 mm)
Rod diameter	1.75 in (44.5 mm)
Stroke	35.0 in (891.5 mm)
Closed length	47.2 in (1200.0 mm)
Bucket cylinders:	
Bore diameter	3.0 in (76.2 mm)
Rod diameter	1.5 in (38.1 mm)
Stroke	16.4 in (410.0 mm)
Closed length	24.0 in (610.0 mm)

## SERVICE CAPACITY

Fuel tank	25.5 gal (96.5 L)
Engine oil w/ filter	10.0 qt (9.4 L)
Hydraulic system:	
Reservoir	6.0 gal (22.7 L)
Total	11.75 gal (44.5 L)
Chain tanks – per side	7.4 gal (27.9 L)



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



## PERFORMANCE SPECS

Rated operating capacity – ROC*:	
50% of tipping load	2,500 lb (1135 kg)
with additional counterweight	2,700 lb (1225 kg)
Tipping load*	
	5,000 lb (2270 kg)
Breakout forces @ 3,150 psi (217 bar)*:	
Bucket cylinders	7,570 lb (33.7 kN)
Lift cylinders – hydraulic limit	4,800 lb (21.4 kN)
Cycle times:	
Raise	3.9 sec
Lower	2.5 sec
Dump	2.6 sec
Roll back	2.0 sec

NOTE: \*Measured using 72 in (1.83 m) low profile bucket.

## DIMENSIONS

<b>A.</b> Overall operating height:	
with foundry/excavating bucket	160.4 in (4.07 m)
with low profile bucket	164.4 in (4.18 m)
with low profile extended bucket	169.5 in (4.30 m)
Height to:	
<b>B.</b> Bucket hinge pin	130.0 in (3.30 m)
<b>C.</b> Top of ROPS	78.8 in (2.00 m)
<b>D.</b> Bottom of level bucket, fully raised	119.6 in (3.04 m)
Overall length:	
<b>E.</b> without attachment with coupler	117.7 in (2.99 m)
<b>F.</b> with foundry/excavating bucket on ground	141.9 in (3.60 m)
with low profile bucket	146.0 in (3.71 m)
with low profile extended bucket	151.0 in (3.84 m)
<b>G.</b> Maximum dump angle	53.5°
<b>H.</b> Dump height:	
with foundry/excavating bucket	103.5 in (2.63 m) @ 45°
with low profile bucket	100.6 in (2.56 m) @ 45°
<b>J.</b> Dump reach at maximum height with low profile bucket	29.3 in (0.74 m) @ 45°
Maximum attachment rollback:	
<b>K.</b> Bucket on ground	35.0°
<b>L.</b> Bucket at full height	86.0°
<b>M.</b> Wheelbase	52.0 in (1.32 m)
<b>P.</b> Ground clearance – bottom of belly pan	8.0 in (0.20 m)
<b>Q.</b> Angle of departure	23.5°
Clearance circle:	
<b>R.</b> without bucket	56.2 in (1.43 m)
<b>S.</b> with 72 in (1.83 m) foundry/excavating bucket in carry position	84.1 in (2.14 m)
with 72 in (1.83 m) low profile bucket on ground	87.8 in (2.23 m)
with 72 in (1.83 m) extended low profile on ground	92.4 in (2.35 m)
<b>T.</b> Clearance circle rear	70.4 in (1.79 m)
<b>U.</b> Rear axle to bumper	40.7 in (1.03 m)
<b>V.</b> Tread gage with spec tires	56.9 in (1.45 m)
<b>W.</b> Over the tire width with spec tires	70.0 in (1.78 m)

## TIRE SELECTION

Type	Size	Ply Rating	Tread Depth	Tire Width	Tread Gage	Over Tires Width	Tire Weight
Heavy-Duty	12 L x 16.5	—	—	—	56.9 in (1.45 m)	70 in (1.78 m)	110 lb (50 kg)
Premium	12 L x 16.5	—	—	—	56.9 in (1.45 m)	70 in (1.78 m)	119 lb (54 kg)
Premium-Lined	12 L x 16.5	—	—	—	56.9 in (1.45 m)	70 in (1.78 m)	119 lb (54 kg)
Severe Duty	12 L x 16.5	—	—	—	56.9 in (1.45 m)	70 in (1.78 m)	135 lb (61 kg)
Non-Pneumatic – Solid	12 L x 16.5	—	—	—	56.9 in (1.45 m)	70 in (1.78 m)	280 lb (127 kg)
Mining	12 L x 16.5	—	—	—	56.9 in (1.45 m)	70 in (1.78 m)	380 lb (173 kg)
Flotation	33 L x 15.5 x 16.5	—	—	—	59.0 in (1.50 m)	76 in (1.93 m)	143 lb (65 kg)
Premium	14 L x 17.5	—	—	—	62.0 in (1.58 m)	76 in (1.93 m)	148 lb (67 kg)

## OPTIONAL BUCKETS

Type	Width	Weight	Heaped Capacity
Dirt & Foundry	72 in (1.83 m)	420 lb (190 kg)	16.2 ft <sup>3</sup> (0.46 m <sup>3</sup> )
	78 in (1.98 m)	440 lb (200 kg)	17.7 ft <sup>3</sup> (0.50 m <sup>3</sup> )
Low Profile	72 in (1.83 m)	480 lb (218 kg)	14.8 ft <sup>3</sup> (0.42 m <sup>3</sup> )
Low Profile Extended	72 in (1.83 m)	510 lb (232 kg)	17.7 ft <sup>3</sup> (0.50 m <sup>3</sup> )
	78 in (1.98 m)	540 lb (245 kg)	19.1 ft <sup>3</sup> (0.54 m <sup>3</sup> )
	84 in (2.13 m)	575 lb (262 kg)	20.5 ft <sup>3</sup> (0.58 m <sup>3</sup> )
Light Material	72 in (1.83 m)	475 lb (216 kg)	23.3 ft <sup>3</sup> (0.66 m <sup>3</sup> )
	84 in (2.13 m)	540 lb (245 kg)	27.5 ft <sup>3</sup> (0.78 m <sup>3</sup> )
Manure & Slurry	72 in (1.83 m)	480 lb (218 kg)	19.1 ft <sup>3</sup> (0.54 m <sup>3</sup> )
	84 in (2.13 m)	545 lb (248 kg)	22.6 ft <sup>3</sup> (0.64 m <sup>3</sup> )
Heavy-Duty	72 in (1.83 m)	510 lb (230 kg)	14.1 ft <sup>3</sup> (0.40 m <sup>3</sup> )
	78 in (1.98 m)	530 lb (240 kg)	15.5 ft <sup>3</sup> (0.44 m <sup>3</sup> )
	84 in (2.13 m)	550 lb (250 kg)	17.0 ft <sup>3</sup> (0.48 m <sup>3</sup> )
Heavy-Duty with spillguard	72 in (1.83 m)	585 lb (265 kg)	18.4 ft <sup>3</sup> (0.52 m <sup>3</sup> )
	78 in (1.98 m)	605 lb (275 kg)	19.8 ft <sup>3</sup> (0.56 m <sup>3</sup> )
	84 in (2.13 m)	640 lb (290 kg)	21.5 ft <sup>3</sup> (0.61 m <sup>3</sup> )

## STANDARD EQUIPMENT

### OPERATOR ENVIRONMENT

See page 1

### ENGINE

FPT F5H FL413 H\*A001 diesel  
Over & under radiator and oil cooler  
Glow plugs  
Integral engine oil cooling  
Fuel filter with water trap  
Dual element air cleaner  
120 amp alternator  
925 CCA 12-volt battery  
Master electrical disconnect

### POWERTRAIN

1-speed hydrostatic four wheel drive  
Servo-assist mechanically-controlled pumps  
ASA #100HS drive chain  
SAHR disc parking brake

### HYDRAULICS

Auxiliary hydraulics:  
@ 3,050 psi (210 bar) – 24.2 gpm (91.5 L/min)  
Auxiliary hydraulic disconnects, ISO flat-face –  
connect-under-pressure with case drain  
Hydraulic circuit pedal lock  
Loader arm-mounted ISO flat-face connectors  
Auxiliary function lockout override  
Loader function lockout system  
Loader lift lockout override  
3-spool loader control valve  
Heavy-duty oil cooler  
Loader arm float position

### LOADER

Vertical loader arm design  
Mechanical attachment coupler  
Loader lift arm support strut

### OTHER

Machine protection auto shutdown  
Mounting points for add-on counterweights  
Halogen lights:  
2 front  
2 side  
2 rear  
Rear tail lights  
Lockable service access hood  
Single-point daily servicing  
Pre-wired for rotating beacon  
Remote oil drain  
Remote oil and fuel filters

## OPTIONAL EQUIPMENT

### OPERATOR ENVIRONMENT

Enclosed cab:  
Fully sealed and pressurized – FSP  
Glass door with wiper and washer  
Sliding side windows – removable  
3-point seat belt – 2 in (51 mm) width  
Ventilation system with integrated heater  
AM/FM radio with 2 speakers  
Keyless start ignition  
Electro-hydraulic controls:  
For drive/steering, loader functions  
Switchable between H and ISO patterns  
Adjustable sensitivity of controls  
Vinyl mechanical suspension seat  
Deluxe cloth, air suspension seat,  
with heater and lumbar support  
Interior mirror  
3 inch (76.2 mm) retractable seat belt  
Heater and air conditioner  
Open cab interior trim package  
Demolition cab door with polycarbonate  
FOPS level 2

### POWERTRAIN

2-speed hydrostatic four wheel drive

### ENGINE

Coolant block heater

### HYDRAULICS

High-flow auxiliary hydraulics – combined:  
@ 3,050 psi (210 bar) – 37.6 gpm (142.5 L/min)  
Second auxiliary hydraulics

### LOADER

Auxiliary front electric control  
Ride control  
Hydraulic attachment coupler  
Hydraulic one-way self-leveling

### OTHER

Add-on counterweights  
Road lights  
Rotating beacon  
Four-corner LED strobe  
Lift points – four-point or single-point  
Language decals  
Factory-installed tires – see page 3  
Buckets – see page 3  
Bolt-on bucket cutting edges  
Bolt-on heavy-duty bucket spillguard  
Bolt-on heavy-duty bucket teeth – field kit  
42 in (1.07 m) and 48 in (1.22 m) pallet forks  
Rear door guard insert  
Special paint  
Debris reduction seal package  
Steel tire tracks



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

Case is a registered trademark of CNH America LLC. Any trademarks referred to herein, in association with goods and/or services of companies other than CNH America LLC, are the property of those respective companies.

Form No. CCE201307SV250  
Replaces form no. CCE201304SV250

Printed in U.S.A.  
SV250 • Page 4 of 4



[www.casece.com](http://www.casece.com)

© 2013 CNH America LLC  
All Rights Reserved



All Case construction equipment is biodiesel ready.