

ENGINE

Model	F5H FL463 A*F001
Emissions Certification	Tier 4 Final
Type	Diesel Turbo – Direct Injection
Cylinders	4
Bore/Stroke	3.9 x 4.3 in (99 x 110 mm)
Displacement	207 in ³ (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	Particulate Matter Catalyst – PM Catalyst
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	74 hp (55 kW)
Net	68 hp (51 kW)
Peak torque @ 1400 RPM	232 lb-ft (314 N·m)
Radiator:	
Core type	All aluminum
Core size area	296 in ² (0.191 m ²)
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, 1.1:1 high-flow
Water pump:	
Style	Centrifugal
Flow	29 gpm (110 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°

DRIVETRAIN

Drive pump controls	Servo-assist mechanical
Pump to engine ratio	1:1
Displacement	2.81 in ³ (46 cm ³)
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 ³ (45 cm ³)
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)

DRIVETRAIN (cont.)

Drive motors:	
Max. displacement	28.7 in ³ (470 cm ³)
Displacement – optional:	
High speed	17.2 in ³ (282 cm ³)
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 (2 694 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 (8 077 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

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; 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

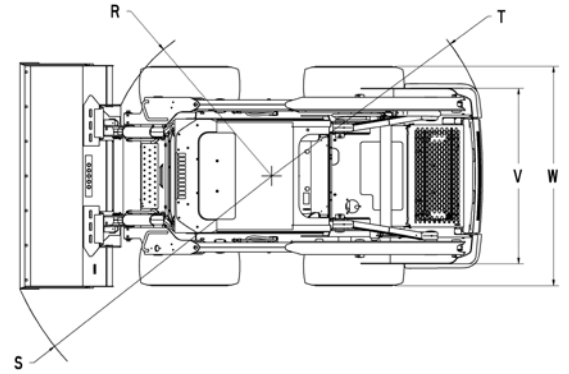
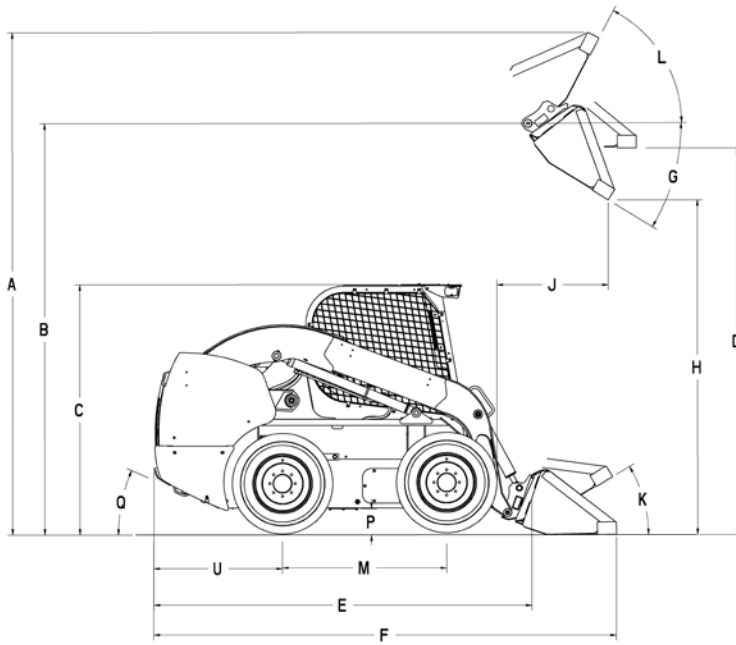
Operating weight	8,090 lb (3 670 kg)
Shipping weight	7,665 lb (3 475 kg)
Add-on weights:	
Side cab glass	47 lb (21.3 kg)
Polycarbonate cab door	75 lb (34.0 kg)
Glass cab door w/ wiper	75 lb (34.0 kg)
Suspension seat	22 lb (10.0 kg)
Additional counterweight	300 lb (136.0 kg)

HYDRAULICS

Implement pump type	Gear
Displacement:	
Standard aux.	2.23 in ³ (36.6 cm ³)
High-flow aux.	1.24 in ³ (20.4 cm ³)
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	3,046 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 ² (843.2 cm ²)
Hydraulic filter	Beta (4) = 75/spin-on
Lift cylinders:	
Bore diameter	2.75 in (69.85 mm)
Rod diameter	2.0 in (50.8 mm)
Stroke	34.9 in (886.5 mm)
Closed length	47.4 in (1 205 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 CAPACITIES

Fuel tank	25.5 gal (96.5 L)
Engine oil w/ filter	8.9 qt (8.5 L)
Hydraulic system:	
Reservoir	6.0 gal (22.7 L)
Total	11.99 gal (45.46 L)
Chain tanks – per side	5.8 gal (22.2 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	2,800 lb (1 270 kg)
with additional counterweight	2,900 lb (1 315 kg)
Tipping load*	
	5,600 lb (2 540 kg)
Breakout forces @ 3,150 psi (217 bar)*:	
Bucket cylinders	8,776 lb (39.0 kN)
Lift cylinders – hydraulic limit	6,011 lb (26.7 kN)
Cycle times:	
Raise	4.6 sec
Lower	3.5 sec
Dump	2.6 sec
Roll back	2.0 sec

NOTE: *Measured using 72 in (1.83 m) foundry/excavating bucket.

DIMENSIONS

A. 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. Bucket hinge pin	130.0 in (3.30 m)
C. Top of ROPS	78.8 in (2.00 m)
D. Bottom of level bucket, fully raised	119.6 in (3.04 m)
Overall length:	
E. without attachment with coupler	117.7 in (2.99 m)
F. 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)
G. Maximum dump angle	53.5°
H. Dump height:	
with foundry/excavating bucket	103.5 in (2.63 m) @ 45°
with low profile bucket	100.6 in (2.56 m) @ 45°
J. Dump reach at maximum height with low profile bucket	29.3 in (0.74 m) @ 45°
Maximum attachment rollback:	
K. Bucket on ground	35.0°
L. Bucket at full height	86.0°
M. Wheelbase	52.0 in (1.32 m)
P. Ground clearance – bottom of belly pan	8.0 in (0.20 m)
Q. Angle of departure	23.5°
Clearance circle:	
R. without bucket	56.2 in (1.43 m)
S. 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)
T. Clearance circle rear	70.4 in (1.79 m)
U. Rear axle to bumper	40.7 in (1.03 m)
V. Tread gage with spec tires	56.9 in (1.45 m)
W. Over the tire width with spec tires	69.6 in (1.77 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)	69.6 in (1.77 m)	110 lb (50 kg)
Premium	12 L x 16.5	—	—	—	56.9 in (1.45 m)	69.6 in (1.77 m)	119 lb (54 kg)
Premium-Lined	12 L x 16.5	—	—	—	56.9 in (1.45 m)	69.6 in (1.77 m)	119 lb (54 kg)
Severe Duty	12 L x 16.5	—	—	—	56.9 in (1.45 m)	69.6 in (1.77 m)	135 lb (61 kg)
Non-Pneumatic – Solid	12 L x 16.5	—	—	—	56.9 in (1.45 m)	69.6 in (1.77 m)	280 lb (127 kg)
Mining	12 L x 16.5	—	—	—	56.9 in (1.45 m)	69.6 in (1.77 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 ³ (0.46 m ³)
	78 in (1.98 m)	440 lb (200 kg)	17.7 ft ³ (0.50 m ³)
Low Profile	72 in (1.83 m)	480 lb (218 kg)	14.8 ft ³ (0.42 m ³)
Low Profile Extended	72 in (1.83 m)	510 lb (232 kg)	17.7 ft ³ (0.50 m ³)
	78 in (1.98 m)	540 lb (245 kg)	19.1 ft ³ (0.54 m ³)
	84 in (2.13 m)	575 lb (262 kg)	20.5 ft ³ (0.58 m ³)
Light Material	72 in (1.83 m)	475 lb (216 kg)	23.3 ft ³ (0.66 m ³)
	84 in (2.13 m)	540 lb (245 kg)	27.5 ft ³ (0.78 m ³)
Manure & Slurry	72 in (1.83 m)	480 lb (218 kg)	19.1 ft ³ (0.54 m ³)
	84 in (2.13 m)	545 lb (248 kg)	22.6 ft ³ (0.64 m ³)
Heavy-Duty	72 in (1.83 m)	510 lb (230 kg)	14.1 ft ³ (0.40 m ³)
	78 in (1.98 m)	530 lb (240 kg)	15.5 ft ³ (0.44 m ³)
	84 in (2.13 m)	550 lb (250 kg)	17.0 ft ³ (0.48 m ³)
Heavy-Duty with spillguard	72 in (1.83 m)	585 lb (265 kg)	18.4 ft ³ (0.52 m ³)
	78 in (1.98 m)	605 lb (275 kg)	19.8 ft ³ (0.56 m ³)
	84 in (2.13 m)	640 lb (290 kg)	21.5 ft ³ (0.61 m ³)

STANDARD 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/AC
AM/FM radio with 2 speakers
Keyless start ignition

Deluxe cloth, air suspension seat,
with heater and lumbar support

ENGINE

F5H FL463 A*F001 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
Block heater

DRIVETRAIN

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
Ride control
Hydraulic one-way self-leveling
Heavy-duty hydraulic 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

Heavy-duty front lights
Rear tail lights
Lockable service access hood
Single-point daily servicing
Pre-wired for rotating beacon
Remote oil drain
Remote oil and fuel filters
Debris reduction seal package

OPTIONAL EQUIPMENT

OPERATOR ENVIRONMENT

Electro-hydraulic controls:
For drive/steering, loader functions
Switchable between H and ISO patterns
Adjustable sensitivity of controls

Vinyl mechanical suspension seat
Non-suspension seat
Interior mirror
3 inch (76.2 mm) retractable seat belt
Open cab interior trim package
Demolition cab door with polycarbonate
FOPS level 2

DRIVETRAIN

2-speed hydrostatic four wheel drive

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
Mechanical attachment coupler

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
Heavy-duty rear door
Special paint
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.

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All Case construction equipment is biodiesel ready.