

ENGINE

Model	F5CE 5454 B* A005
Emissions Certification	Tier 3
Type	Diesel, Turbo – Direct Injection
Cylinder	4
Bore/Stroke	3.9 x 4.1 in (99 x 104 mm)
Displacement	195 in ³ (3.2 L)
Fuel injection	Direct
Fuel	#2 diesel
Fuel filter	In-line strainer
Oil filtration	Spin-on – full-flow cartridge
Air intake	Turbocharged w/o waste gate
Cooling	Liquid
Engine speeds	RPM
High idle – no load	2675 +/- 75
Rated – full load	2500
Low idle	1075 +/- 75
Horsepower – SAE J1349 @ 2500 RPM:	
Gross	82 hp (61 kW)
Net	76 hp (57 kW)
Peak torque	225 lb-ft (305 N·m) @ 1400 RPM
Radiator:	
Core type	All Aluminum
Core size area	412 in ² (0.266 m ²)
Rows of tubes	44 x 4
Cap pressure	16 +/- 2 psi (110 +/- 14 bar)
Fan:	
Diameter	20.4 in (518 mm)
Ratio	0.96:1
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 control	Mechanical
Pump to engine ratio	1:1
Displacement	2.81 in ³ (46 cm ³)
Flow at rated engine RPM	
@ 100% efficiency	29.4 gpm (111 L/min)
Charge pressure:	
360 +/- 10 psi (24.5 +/- 0.5 bar)	
System relief	5,220 psi (360 bar)
Drive pump control	Electro-hydraulic
Pump to engine ratio	1:1
Displacement	2.75 in ³ (46 cm ³)
Flow at rated engine RPM	
@ 100% efficiency	28.8 gpm (109 L/min)
Charge pressure	362 psi (15 bar)
System relief	5,220 psi (360 bar)

DRIVETRAIN (cont.)

Drive motors:	
Max. displacement	28.7 in ³ (470 cm ³)
Optional high speed	17.2 in ³ (282 cm ³)
Speed @ high idle engine RPM	
100% efficiency @ rated engine RPM	241
Speed @ optional high speed RPM	355
Torque @ max. displacement and relief pressure	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	6,620 lb-ft (8 975 N·m)
Diameter	2.44 in (62 mm)
Length	15.6 in (396 mm)
Parking brake:	
Type	Spring-applied, hydraulic release 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	3.2 kW
Battery	12-volt low-maintenance 1,000 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; Instrument panels; Suspension vinyl seat; 2 in (51 mm) retractable seat belt; Hand throttle; Foot throttle; Alarm package; Headliner; Top window; Cup holder; 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.

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

OPERATING WEIGHT

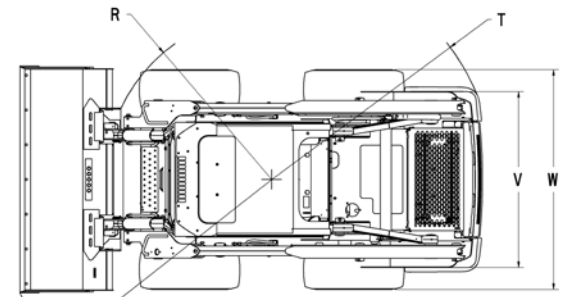
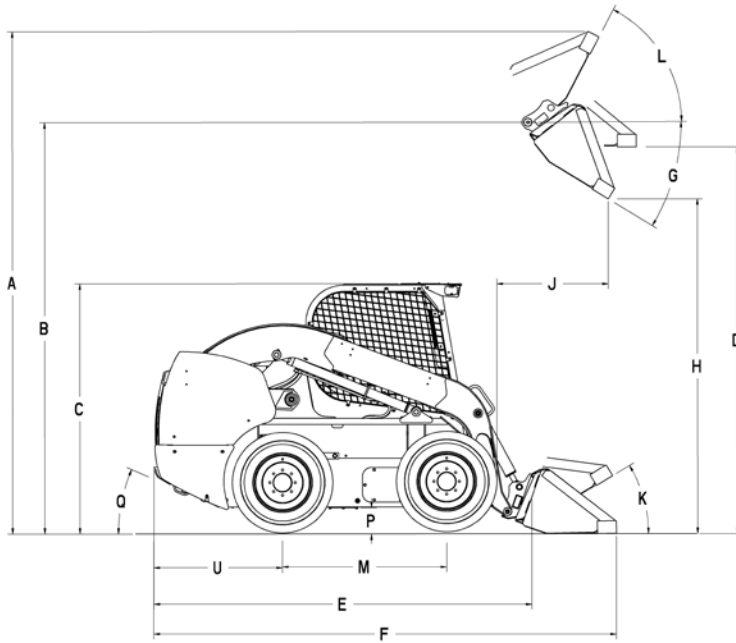
Shipping weight	7,665 lb (3 475 kg)
Operating weight	8,000 lb (3 630 kg)
Add-on weights:	
Side cab glass	47 lb (21.3 kg)
Lexar® door	74 lb (33.6 kg)
Glass door w/ wiper	134 lb (60.8 kg)
Suspension seat	22 lb (10 kg)

HYDRAULICS

Standard equipment pump type	Gear
Displacement:	
Standard aux.	2.08 in ³ (34.1 cm ³)
High flow aux.	1.1 in ³ (18.3 cm ³)
Pump flow @ rated engine RPM:	
@ 100% efficiency	22.5 gpm (85 L/min)
Optional high flow @ rated engine RPM:	
@ 100% efficiency	34.6 gpm (131 L/min)
Loader control valve:	
Type	3 Spool/Open center/Series
Relief pressure	3,000 psi (207 bar)
Port relief pressures:	
Loader raise	3,263 psi (225 bar)
Bucket dump	3,770 psi (260 bar)
Bucket curl	1,160 psi (80 bar)
Hydraulic lines:	
Tubing	37° JIC Flare
Loop hoses	SAE 100 R13
Hydraulic oil cooler:	
Number of fins	10 per in (3.94 per cm)
Number of tubes	11
Area	130.7 in ² (843 cm ²)
Hydraulic filter	6 micron/Spin on
Lift cylinder:	
Bore diameter	2.5 in (63.5 mm)
Rod diameter	1.75 in (44.5 mm)
Stroke	47.2 in (1 200 mm)
Closed length	35 in (891.5 mm)
Bucket cylinders:	
Bore diameter	3.0 in (76.2 mm)
Rod diameter	1.5 in (38.1 mm)
Stroke	16.1 in (410.0 mm)
Closed length	24 in (610.0 mm)

SERVICE CAPACITIES

Fuel tank	25.5 gal (96.5 L)
Engine oil w/ filter	10 qt (9.5 L)
Hydraulic system:	
Reservoir	6 gal (22.7 L)
Total	47 qt (44.5 L)
Chain tanks – per side	29.5 qt (27.9 L)



PERFORMANCE SPECS

Rated operating load:	
50%	2,500 lb (1 135 kg)
Tipping load	
	5,000 lb (2 270 kg)
Breakout forces @ 3,150 psi (217 bar):	
Lift cylinder	4,800 lb (21.4 kN)
Bucket cylinder	7,570 lb (33.7 kN)
Cycle times:	
Raise	4.1 sec
Lower	2.6 sec
Dump	2.7 sec
Roll back	2.0 sec

DIMENSIONS

A. Overall operating height:	
with foundry/excavating bucket short lip	160.4 in (4 073 mm)
with low profile/standard lip bucket	164.4 in (4 176 mm)
with low profile extended/long lip bucket	169.5 in (4 304 mm)
Height to:	
B. Bucket hinge pin	130 in (3 302 mm)
C. Top of ROPS	78.8 in (2 002 mm)
D. Bottom of level bucket, fully raised	119.6 in (3 169 mm)
Overall length:	
E. without attachment with coupler	117.7 in (2 990 mm)
F. with foundry excavation bucket on ground	141.9 in (3 604 mm)
with low profile bucket	146 in (3 708 mm)
with low profile extended bucket	151 in (3 835 mm)
G. Dump angle	53.5°
H. Dump height:	
with foundry/excavating bucket short lip	103.5 in (2 629 mm)
with low profile/standard lip bucket	100.6 in (2 556 mm)
J. Dump reach – max. height	29.3 in (744 mm)
Maximum attachment rollback:	
K. Bucket on ground	35°
L. Bucket at full height	86°
M. Wheelbase	52 in (1 322 mm)
P. Ground clearance – bottom of belly pan	8 in (203 mm)
Q. Angle of departure	23.5°
Clearance circle:	
R. without bucket	56.2 in (1 428 mm)
S. with 72 in (1.8 m) foundry bucket in carry position	84.1 in (2 136 mm)
with 72 in (1.8 m) low profile bucket on ground	87.8 in (2 230 mm)
with 72 in (1.8 m) extended low profile on ground	92.4 in (2 347 mm)
T. Clearance circle rear	70.4 in (1 789 mm)
U. Rear axle to bumper	40.7 in (1 034 mm)
Rolling radius	
	16.1 in (409 mm)
V. Tread width with spec tires	56.9 in (1 448 mm)
W. Over the tire width with spec tires	69.6 in (1 768 mm)

TIRE SELECTION

	Size	Ply Rating	Tread Depth	Tire Width	Width Tread Width	Over Tires	Tire Weight*
Heavy-Duty	12 x 16.5	—	—	—	57 in (1 465 mm)	70 in (1 785 mm)	—
Premium	12 x 16.5	—	—	—	57 in (1 465 mm)	70 in (1 785 mm)	—
Premium-Lined	12 x 16.5	—	—	—	57 in (1 465 mm)	70 in (1 785 mm)	—
Severe Duty	12 x 16.5	—	—	—	57 in (1 465 mm)	70 in (1 785 mm)	—
Mining	12 x 16.5	—	—	—	57 in (1 465 mm)	70 in (1 785 mm)	—
Non-Pneumatic	12 x 16.5	—	—	—	57 in (1 465 mm)	70 in (1 785 mm)	—
Flotation	33 x 15.5	—	—	—	60 in (1 544 mm)	76 in (1 930 mm)	—
Premium	14 x 17.5	—	—	—	62 in (1 579 mm)	76 in (1 930 mm)	—

NOTE: *Tire weight does not include the wheel weight.

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 (2.0 m)	440 lb (200 kg)	18.4 ft ³ (0.52 m ³)
Low Profile	72 in (1.83 m)	420 lb (190 kg)	14.8 ft ³ (0.42 m ³)
Low Profile Extended	72 in (1.83 m)	420 lb (190 kg)	17.7 ft ³ (0.50 m ³)
	78 in (2.0 m)	440 lb (200 kg)	18.6 ft ³ (0.53 m ³)
	84 in (2.1 m)	575 lb (262 kg)	20.2 ft ³ (0.57 m ³)
Light Material	72 in (1.83 m)	420 lb (190 kg)	23.3 ft ³ (0.66 m ³)
	84 in (2.1 m)	575 lb (262 kg)	27.9 ft ³ (0.79 m ³)
Manure & Slurry	72 in (1.83 m)	420 lb (190 kg)	19.1 ft ³ (0.54 m ³)
	84 in (2.1 m)	575 lb (262 kg)	22.5 ft ³ (0.64 m ³)
Heavy-Duty	72 in (1.83 m)	420 lb (190 kg)	14.1 ft ³ (0.40 m ³)
	78 in (2.0 m)	440 lb (200 kg)	15.9 ft ³ (0.45 m ³)
	84 in (2.1 m)	575 lb (262 kg)	19.4 ft ³ (0.55 m ³)

STANDARD EQUIPMENT

OPERATOR ENVIRONMENT

ROPS/FOPS level 1 canopy with side screens
Tilt ROPS/FOPS
Rear window with emergency escape
Instrument panels
2 in (51 mm) retractable seat belt
Hand throttle
Foot throttle
Alarm package
Headliner
Top window
Cup holder
Power plug socket
Foot rest
Storage tray
Low effort ergonomic hand controls
Padded seat bar with integral armrests
Loader control lockout system
Electric parking brake control
Floor cleanout panel

ENGINE

Case/Iveco 432T/M3 diesel
No maintenance belt
Over & under radiator and oil cooler
Glow plug
Integral engine oil cooling
Fuel filter with water trap
Dual element air cleaner
95 amp alternator
1,000 CCA 12-volt battery

DRIVETRAIN

Hydrostatic four wheel drive
Servo controlled pumps
ASA #100HS drive chain
SAHR disc parking brakes

HYDRAULICS

Auxiliary hydraulics:
3,050 psi (210 bar) – 23.8 gpm (90 L/min)
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

2 speed transmission
Add-on counterweights
Lockable service access hood
Single-point daily servicing
Halogen lights, 2-front, 2 side,
2-rear – halogen
Rear tail lights
Remote oil drain

OPTIONAL EQUIPMENT

OPERATOR ENVIRONMENT

Vinyl suspension seat
Deluxe cloth suspension seat with heater and lumbar support
Interior mirror
Electric auxiliary hydraulic control
Glass front door with wiper & washer
Sliding side windows
3 in retractable seat belt
Heater and AC
Radio
Demolition door

ENGINE

Coolant block heater
Battery disconnect switch

LOADER

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

HYDRAULICS

High-flow auxiliary hydraulics:
3,050 psi (210 bar) – 33.2 gpm (126 L/min)
Second auxiliary hydraulics
Attachment case drain plumbing

OTHER

Deluxe instrument panel
Road lights
Rotating beacon
Lift hooks
Special paint
Language decals
Factory-installed tires – see page 2
Buckets – see page 3
Bolt-on bucket cutting edges
42 in (1.07 m) and 48 in (1.22 m) pallet forks
Steel 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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