

ENGINE

Model	Case 432T / M3
Type	Diesel 4-stroke, Turbo, D.I.
Cylinder	4
Bore/stroke	3.9 x 4.1 in (99 x 104 mm)
Displacement	195 cu in (3.2 L)
Fuel injection	Direct
Fuel	#2 diesel
Fuel filter	In-line strainer
Air intake	Turbocharged w/ external EGR
Cooling	Liquid
Engine speeds	
High idle - no load (rpm)	2675 +/- 75
Rated -full load (rpm)	2500
Low idle (rpm)	1075 +/- 75
Horsepower per SAE J1349	
Gross	90 hp (67 kW) @ 2500 rpm
Net	84 hp (63 kW) @ 2500 rpm
Peak torque	251 lb-ft (340 Nm) @ 1400 rpm

ENGINE COOLING

Radiator -	
Core type	All aluminum
Core size area	0.266 m ²
Rows of tubes	42
Cap pressure	16 +/- 2 psi

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°

Oil filtration	Replaceable, full-flow cartridge
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POWERTRAIN

Drive pump - Electro Hydraulic	
Pump to engine ratio	1:1
Displacement cc (cu in)	2.81 cu in (46 cc)
Flow at rated engine rpm	
@100% efficiency	30.4 gpm (115 L/min)
Charge Pressure	363 psi (25 bar)
System relief	5,220 psi (360 bar)
Control	Electro Hydraulic

Drive motors	
Drive motors	
Max. displacement	3.1 cu in (50.9 cc)
Displacement - optional	
high speed	2.0 cu in (33.1 cc)
Speed @ high idle engine rpm	
(100% eff. at rated engine rpm)	105
Speed @ optional high speed rpm	161
Torque @ max. displacement and relief pressure (calculated, 345 bar)	4,635 lb-ft (6283 N-m)

Travel speed -	
Low range	5.8 mph
High range (optional)	8.3 mph

Final drive	Planetary reduction
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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

HYDRAULIC SYSTEM

Standard equipment pump -	
Type	Gear
Displacement -	
Standard Aux.	2.08 cu in (34.1 cc)
High Flow Aux.	1.12 cu in (18.3 cc)
Pump flow @ rated engine rpm	
@ 100 % efficiency	22.5 gpm (85 L/min)
Optional high flow @ rated engine rpm	
@ 100 % efficiency	12.1 gpm (46 L/min)

Loader control valve -	
Type	3 Spool / Open Center / Series
Relief pressure	3000 (+145/-0) PSI (207 Bar)

Port relief pressures -	
Loader raise	3263 psi (225 bar)
Bucket dump	3481 psi (240 bar)
Bucket curl	3336 psi (230 bar)

Hydraulic lines -	
Tubing	37° JIC Flare
Loop hoses	SAE 100 R13

Hydraulic oil cooler -	
Number of fins	10 per inch (3.94 per cm)
Number of Tubes	11
Area	130.7 sq in (843 cm ²)

Hydraulic filter	6 micron / Spin on
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INSTRUMENTATION

Indicators
Digital Hourmeter
Fuel level LCD bar graph with alarm
Warning lights with 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

ELECTRICAL SYSTEM

Alternator 95 amp
Starter 4.0 kW
Battery
12-volt low-maintenance 1000 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

CYLINDERS

Lift cylinder –	
Bore diameter	2.5 in (63.5 mm)
Rod diameter	1.75 in (44.5 mm)
Stroke	32.2 in (817.9 mm)
Closed length	45.6 in (1158 mm)
Bucket cylinders –	
Bore diameter	3.0 in (76.2 mm)
Rod diameter	1.5 in (38.1 mm)
Stroke	16.14 in (410.0 mm)
Closed length	24 in (610.0 mm)

WEIGHTS

Operating weight	9,600 lb (4355 kg)
Shipping weight	9,265 lb (4200 kg)
Add-on weights –	
Side cab glass	46.9 lb (21.3 kg)
Lexan door	74 lb (33.6 kg)
Glass door with wiper	134 lb (60.8 kg)
Suspension seat	22.1 lb (10 kg)

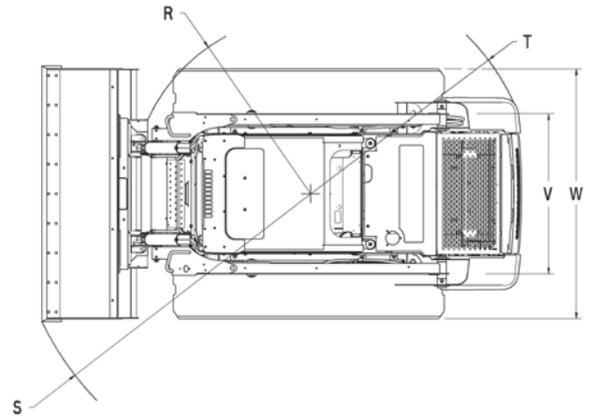
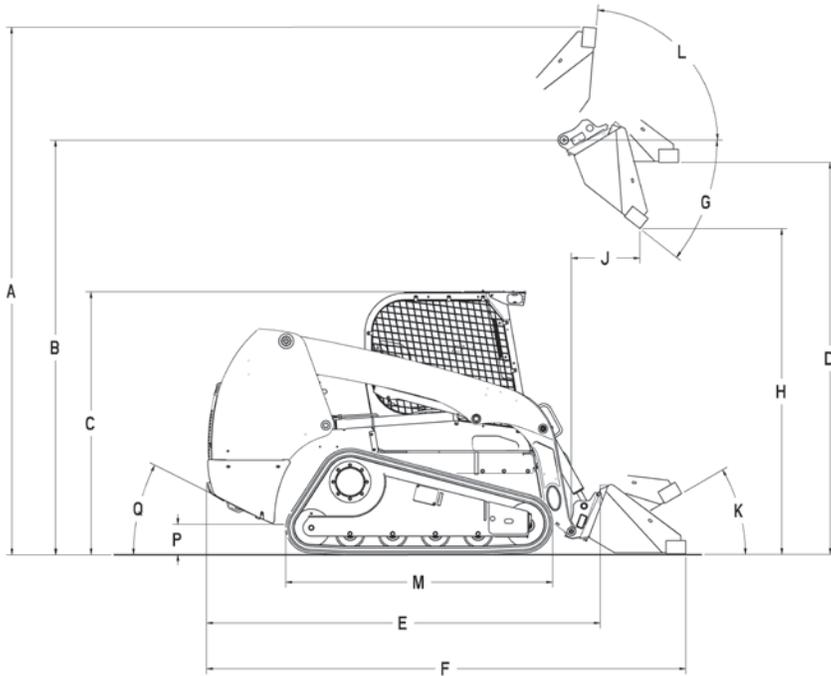
SERVICE CAPACITIES

Fuel tank	25.5 gal (96.5 L)
Engine oil with filter	10.5 qt (9.5 L)
Hydraulic system –	
Reservoir	5.9 gal (22.4 L)
Total	11.75 gal (44.5 L)

TRACK SELECTION

	Area sq in (cm ²)	Ground pressure psi (kPa)	Width to Outside of track in (m)
15.7 in (400 mm)	2,038 (13 120)	4.8 (33)	74 (1.88)
17.7 in (450 mm)	2,293 (13 776)	4.3 (29.7)	76 (1.93)

DIMENSIONS



A. Overall operating height - in (m) – with foundry/excavating bucket short lip with low profile/standard lip bucket with low profile extended / long lip bucket	157.8 (4.0) 161.8 (4.1) 166.8 (4.3)
Height to - in (m) –	
B. Bucket hinge pin	126.5 (3.2)
C. Top of ROPS	80.4 (2.0)
D. Bottom of level bucket, fully raised	119.6 (3.0)
Overall length - in (m) –	
E. without attachment with coupler	117.4 (3.0)
F. with foundry excavation bucket on ground with low profile bucket with low profile extended bucket	142 (3.6) 146 (3.7) 151 (3.8)
G. Dump angle	38.3°
H. Dump height - in (m) – with foundry/excavating bucket short lip with low profile/standard lip bucket	102.2 (2.6) 99.6 (2.5)
J. Dump reach (max. height) - in (m)	21.2 (540)
Maximum attachment rollback –	
K. Bucket on ground	29.7°
L. Bucket at full height	99.7°
M. Track on ground - in (m)	63.1 (1.6)
P. Ground clearance (bottom of belly pan) - in (m)	9.5 (243)
Q. Angle of departure	32°
Clearance circle - in (m) –	
R. without bucket	55.1 (1.4)
S. with 78-inch (2.0 m) foundry bucket in carry position with 78-inch (2.0 m) low profile bucket on ground with 78-inch (2.0 m) extended low profile on ground	85.5 (2.2) 88.7 (2.3) 93 (2.4)
T. Clearance circle rear - in (m)	70.4 (1.8)
V. Track width	58.3 (1.5)
W. Over the track width	76 (1.9)

PERFORMANCE SPECS

Rated Operating Load – lb (kg)	
50%	3,200 (1451)
35%	2,240 (1018)
Tipping load	6,400 lb (2903 kg)
Breakout forces (calculated @ 3150 psi) –	
Lift cylinder	6,125 lb (27.2 kN)
Bucket cylinder	8,585 lb (38.2 kN)
Cycle Times (seconds)–	
Raise	3.7
Lower	1.9
Dump	2.7
Roll back	2.0

OPTIONAL BUCKETS

Type	Width inch (m)	Weight lb (kg)	Heaped Capacity ft ³ (m ³)
Dirt & Foundry	78 (2.0)	435 (197)	18.4 (0.52)
Low Profile Extended	78 (2.0)	502 (228)	18.6 (0.53)
	84 (2.1)	607 (275)	20.2 (0.57)
Light Material	84 (2.1)	497 (225)	27.9 (0.79)
Manure & Slurry	84 (2.1)	535 (243)	22.5 (0.64)
Heavy Duty	78 (2.0)	527 (239)	15.9 (0.45)
	84 (2.1)	758 (344)	25.7 (0.473)

STANDARD EQUIPMENT

OPERATOR'S COMPARTMENT

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

LOADER

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

ENGINE

Case/Iveco 432T/M3 diesel
No maintenance belt
Over & under radiator and oil cooler
Glow plug
Integral engine oil cooling
Fuel filter w/water trap
Dual element air cleaner
95 amp alternator
1000 CCA 12-volt battery

POWERTRAIN

Switchable EH controls
Planetary reduction final drive
2 speed ground drive
SAHR disc parking brakes

HYDRAULICS

Auxiliary hydraulics 3050 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

OTHER

Deluxe instrument panel
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'S COMPARTMENT

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

LOADER

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

HYDRAULICS

High-flow auxiliary hydraulics
3050 psi (210 bar) – 33.2 gpm (126 L/min)
Second auxiliary hydraulics
Attachment case drain plumbing

ENGINE

Coolant block heater
Battery disconnect switch

OTHER

Road lights
Rotating beacon
Lift hooks
Special paint
Language decals
Buckets – see page 3
Bolt-on bucket cutting edges



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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