

ENGINE

Model	
Case 445T/M3 diesel, Tier III certified	
Type	4-stroke, turbocharged
Cylinders	4
Bore/Stroke	4.1 in x 5.2 in (104 mm x 132 mm)
Displacement	274 in ³ (4.5 L)
Fuel injection	Direct
Fuel	#2 Diesel
Fuel filter	In-line strainer
Air intake	Cross-flow
Cooling	Liquid
Engine speeds (rpm)	
High idle – no load	2415±60
Rated – full load	2300
Low idle	1075±75
Horsepower per SAE J1349	
Gross	90 (67 kW) @ 2300 rpm
Net	83 (63 kW) @ 2300 rpm
Peak torque	
@ 1300 rpm	288 lb-ft (390 N·m)

ENGINE COOLING

Radiator	
Core type	Square wave serpentine
Core size area	377 in ² (.243 m ²)
Rows of tubes	4
Cap pressure	14.0 psi (97.0 kPa)
Fan	
Diameter	18.9 in (480 mm)
Ratio	1.09:1
Water pump	
Style	Integral
Flow	29.0 gpm (110 L/min)
Engine lubrication	
Pump	Deep sump with plate cooler and pressurized under-piston nozzles
Pump operating angle ratings	
Side-to-side	Rated 35°
Fore and aft	Rated 35°
Oil filtration	Replaceable, full-flow cartridge

POWERTRAIN

Drive pump	
Tandem, axial piston hydrostatic transmission w/integral charge pump driven directly off engine flywheel	
Pump to engine ratio	1:1
Displacement	0 to 2.81 in ³ (46 cc)
Pump flow @ high idle engine rpm	29.4 gpm (111 L/min)
Flow	Bi-directional
Charge pressure	360 psi (24.8 bar)
System relief	5220 psi (360 bar)
Controls	
Pilot	
Drive motors	
Fixed displacement radial piston	
Maximum displacement	18.9 in ³ (309 cc)
Speed @ high idle engine rpm @ max displacement	359 rpm
Torque @ max displacement and relief pressure	1308 lb-ft (1774 N·m)
Travel speed mph (km/h)	
Low range	5.1 (8.2)
High range	8.0 (12.9)
Final drive	
Single-reduction planetary	
Undercarriage	
Torque @ max displacement and relief pressure	3103 lb-ft (4208 N·m)
Track adjustment	Hydraulic
Frame	Rigid
Length of track on ground	56.6 in (1438 mm)
Track rollers per side	3
Front idler diameter	13.7 in (350 mm)
Rear Idler diameter	11.4 in (290 mm)
Bottom Rollers	
Outer flange diameter	7.8 in (200 mm)
Center flange diameter	8.4 in (214 mm)
Sprocket Teeth	
Number	17
Width	1.8 in (46 mm)
Track rollers and idlers sealed with duo cone face seals and permanently lubricated bushings	
Parking brakes	
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 pump
Displacement	2.2 in ³ /rev (36 cc)
Pump flow @ rated engine rpm	
Total	21.9 gpm (83 L/min)
Optional high flow @ rated engine rpm	
Total	37.8 gpm (143.1 L/min)
Loader control valve	
3-spool open-center series with power beyond port	
Relief pressure	3050 psi (210 bar)
Port relief pressures	
Loader Raise	3120 psi (215 bar)
Bucket Dump	3800 psi (260 bar)
Bucket Curl	3350 psi (230 bar)
Hydraulic lines	
Tubing	37° JIC Flare
Loop hoses	SAE 100 R12
Hydraulic oil cooler	
Core type	4 row in line
Hydraulic filter	
6 micron spin-on replaceable element on the return line with warning indicator	

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	2.7 kW
Battery	
12-volt low-maintenance 1125 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	1.5 in (38.1 mm)
Stroke	35.8 in (910 mm)
Closed length	46.8 in (1190 mm)
Bucket cylinder	
Bore diameter	3.0 in (76.2 mm)
Rod diameter	1.5 in (38.1 mm)
Stroke	14.6 in (370 mm)
Closed length	26.9 in (683 mm)

OPERATING WEIGHTS

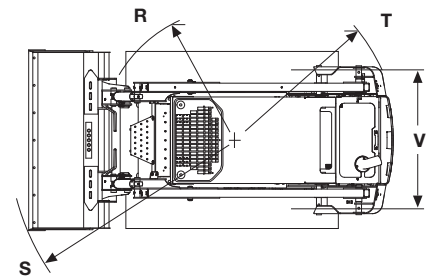
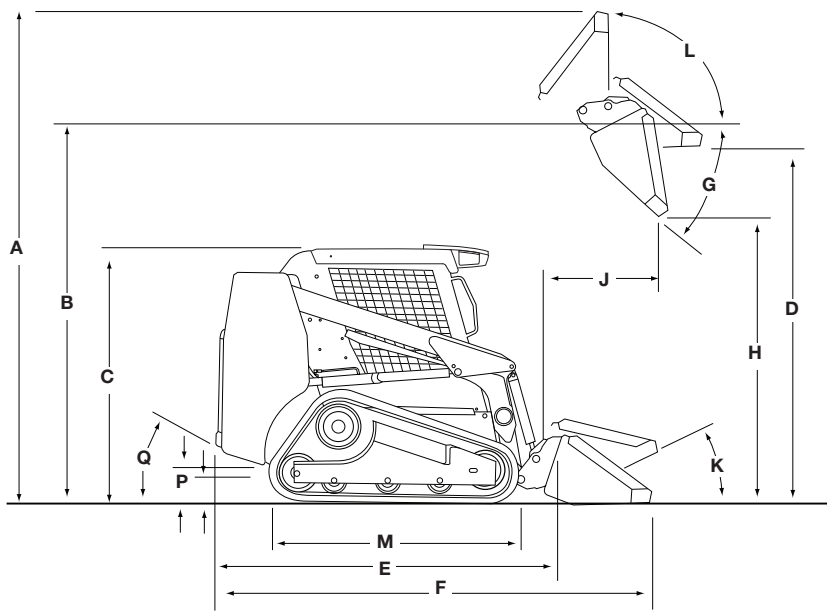
Unit equipped with 15.7 in (400 mm) track, 72 in (1.8 m) foundry/excavating bucket, mechanical attachment coupler, full fuel tank and 165 lb (75 kg) operator		8,925 lb (4048 kg)
Shipping weight		8255 lb (3744 kg)
Add-on weights		
Side cab glass	+70 lb (32 kg)	
Glass door with wiper	+77 lb (35 kg)	
Suspension seat	+10 lb (4.5 kg)	

SERVICE CAPACITIES

Fuel tank	23.3 gal (88.2 L)
Engine oil w/filter	12.7 qt (12 L)
Engine cooling system	3 gal (11.4 L)
Hydraulic system	
Reservoir	7.1 gal (26.8 L)
Total	13.2 gal (50 L)
Chain tanks (per side)	8 qt (7.6 L)

TRACK SELECTION

	Area in ² (cm ²)	Ground Pressure psi (kPa)	Width to Outside of Track in (mm)
15.7 in (400 mm)	1,780 (11 488)	5.0 (34.5)	71.3 (1812)



DIMENSIONS*

A. Overall operating height	
w/foundry/excavating bucket – short lip	154.0 in (3.91 m)
w/low profile bucket – standard lip	159.6 in (4.05 m)
w/low profile extended bucket – long lip	164.6 in (4.18 m)
Height to	
B. Bucket hinge pin	121.7 in (3.09 m)
C. Top of rollover protective structure	80.6 in (2.05 m)
D. Bottom of level bucket, loader arm fully raised	114.2 in (2.90 m)
Overall length	
E. w/o attachment w/coupler	102.5 in (2.6 m)
F. w/foundry/excavating bucket on ground	129.4 in (3.29 m)
F. w/low profile bucket on ground	135.1 in (3.43 m)
F. w/low profile extended bucket on ground	143.6 in (3.65 m)
G. Dump angle at maximum height	39°
H. Dump height – loader arm fully raised*	
w/foundry/excavating bucket	96.0 in (2.43 m)
w/low profile bucket	92.5 in (2.35 m)
w/low profile extended bucket	89.4 in (2.27 m)
J. Dump reach – loader arm fully raised	
w/foundry/excavating bucket	24.6 in (0.62 m)
w/low profile bucket	29.1 in (0.74 m)
w/low profile extended bucket	32.9 in (0.84 m)
Maximum attachment rollback	
K. Bucket on ground	29°
L. Bucket at full height	96°
M. Length of track on ground	56.6 in (1.4 m)
Ground clearance	
P. Bottom of belly pan	9.3 in (236 mm)
Q. Angle of departure	34°
Clearance circle front	
R. Less bucket	53.6 in (1.36 m)
S. w/72 in (1.8 m) foundry/excavating bucket on ground	79.4 in (2.02 m)
S. w/72 in (1.8 m) low profile bucket on ground	83 in (2.10 m)
S. w/72 in (1.8 m) low profile extended bucket on ground	87.5 in (2.22 m)
T. Clearance circle rear	57.0 in (1.45 m)
V. Track gauge, centerline to centerline	55.6 in (1.41 m)

NOTE:*Equipped with 15.7 in (400 mm) track

PERFORMANCE SPECS

Operating load @ 35%	2,100 lb (952 kg)
Operating load @ 50%	3,000 lb (1361 kg)
Tipping load	6,000 lb (2721 kg)
Breakout force	
Lift cylinder	5,000 lbf (22 241 N)
Bucket cylinder	7,400 lbf (32 917 N)
Dig depth	
w/bucket flat	0 in (0 mm)
Cycle time	
Raise	4.1 seconds
Lower	2.6 seconds
Dump	1.7 seconds
Rollback	1.9 seconds

NOTE: SAE rated lift capacities.

OPTIONAL BUCKETS

Type	Width inch (m)	Weight lb (kg)	Heaped Capacity ft ³ (m ³)
Foundry/ Excavating	72 (1.8)	390 (177)	16.7 (0.47)
	78 (2.0)	435 (197)	18.4 (0.52)
Low Profile	72 (1.8)	425 (193)	14.5 (0.41)
Low Profile Extended	72 (1.8)	477 (216)	17.1 (0.48)
	78 (2.0)	502 (228)	18.6 (0.53)
Utility/Light Material	72 (1.8)	434 (197)	23.7 (0.67)
	84 (2.1)	497 (225)	27.9 (0.79)
Heavy Duty Dirt	72 (1.8)	501 (227)	14.6 (0.41)
	78 (2.0)	527 (239)	15.9 (0.45)

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 445T/M3 diesel
Tier III certified
Automatic fan belt tensioner
Battery disconnect switch w/jumpstart terminals
Side-by-side radiator and oil cooler
Grid heater
Integral engine oil cooling
Fuel filter w/water trap
Dual element air cleaner
95 amp alternator
1125 CCA 12-volt battery

POWERTRAIN

Pilot controls
SAHR disc parking brakes
2 speed ground drive

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

Integral bumper counterweight
Lockable service access hood
Single-point daily servicing
Halogen lights, 2-front, 2 side, 1-rear (halogen)
Rear tail lights
Two speed ground drive
Lift cylinder plumbing guards
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 (deluxe)
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

OTHER

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

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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