

ENGINE

Model	ISM N844T / M3 diesel
Type	4-stroke, turbocharged
Cylinder	4
Bore/stroke	3.31 x 3.54 in (84 x 90 mm)
Displacement	122 cu in (2.0 L)
Fuel injection	Indirect
Fuel	#2 diesel
Fuel filter	In-line strainer
Air intake	Turbocharged w/ internal EGR
Cooling	Liquid
Engine speeds	
High idle - no load (rpm)	3140 +/- 50
Rated -full load (rpm)	2900
Low idle (rpm)	1080 +/- 50
Horsepower per SAE J1349	
Gross	52 hp (38.8 kW) @ 2900 rpm
Net	49 hp (36.3 kW) @ 2900 rpm
Peak torque	109 lb-ft (148 Nm) @ 1750 rpm

ENGINE COOLING

Radiator –	
Core type	All aluminum
Core size area	0.226 m ²
Rows of tubes	43
Cap pressure	16 +/- 2 psi
Fan –	
Diameter	17.7 in (450 mm)
Ratio	0.89:1
Water pump	
Style	Centrifugal
Flow	13.2 gpm (50.1 L/min)
Engine lubrication	
Pump	Pressure feed w/ Trichoid pump & plate cooler
Pump operating angle ratings	
Side to side	35°
Bucket up	35°
Bucket down	35°
Oil filtration	Replaceable, full-flow cartridge

POWERTRAIN

Drive pump – Mechanical	
Pump to engine ratio	1:1
Displacement	2.14 cu in (35 cc)
Flow at rated engine rpm	
@100% efficiency	26.9 gpm (102 L/min)
Flow	Bi-directional
Charge pressure	363 psi (25 bar)
System relief	5,000 psi (345 bar)
Control	Direct Mechanical
Drive pump – Electro Hydraulic	
Pump to engine ratio	1:1
Displacement	2.14 cu in (35 cc)
Flow at rated engine rpm	
@100% efficiency	26.9 gpm (102 L/min)
Flow	Bi-directional
Charge pressure	363 psi (25 bar)
System relief bar (psi)	5,220 psi (360 bar)
Control	Electro Hydraulic
Drive motors	Fixed displacement radial piston
Max. displacement	19.83 cu in (325 cc)
Speed @ rated engine rpm	313
Torque @ max. displacement and relief pressure	1316 lb-ft (1784 N-m)
Travel speed –	
Low range	6.7
Final drive	Single-reduction chain drive
Drive chain –	
Size	ASA #80
Tensile strength	21,000 lb (93.4 KN)
Axles	
One-piece, forged induction-hardened high carbon steel	
Torque @ max. displacement and relief pressure	4,868 lbf-ft (6600 N-m)
Diameter	2 in (50.8 mm)
Length	13.62 in (346 mm)
Parking Brake	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	1.24 cu in (20.4 cc)
Pump flow @ rated engine rpm	
@ 100 % efficiency	15.6 gpm (59 L/min)
Optional high flow @ rated engine rpm	
@ 100 % efficiency	N/A
Loader control valve	
3 Spool / Open Center / Series	
Relief pressure	3000 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	9
Area	120.2 sq in (775.5 cm ²)
Hydraulic filter	6 micron / Spin on

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	120 amp
Starter	2.0 kW
Battery	
12-volt low-maintenance 1000 cold-cranking amps @ 0° F (-18° C)	

OPERATOR ENVIRONMENT

ROPS/FOPS level 1 canopy w/side screens
Control lockout system
Tilt ROPS/FOPS
Rear window w/ 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 w/integral armrests
Loader control lockout system
Electric parking brake control
Floor cleanout panel

CYLINDERS

Lift cylinder –	
Bore diameter	2.25 in (57.2 mm)
Rod diameter	1.375 in (34.9 mm)
Stroke	25.4 in (645 mm)
Closed length	38.9 in (989 mm)
Bucket cylinders –	
Bore diameter	2.25 in (57.2 mm)
Rod diameter	1.25 in (31.8 mm)
Stroke	14.6 in (370 mm)
Closed length	23.4 in (594 mm)

WEIGHTS

Unit equipped with 10.00 x 16.5 Galaxy Beefy Baby II tires, 60 in (1.5 m) foundry/excavating bucket, mechanical attachment coupler, full fuel tank and 165 lb (75 kg) operator	
	5,300 lb (2400 kg)
Shipping weight	5,000 lb (2270 kg)
Add-on weights –	
Side cab glass	+46.9 lb (21.3 kg)
Lexan® door	+74 lb (33.6 kg)
Glass door with wiper	+70 lb (31.8 kg)
Suspension Seat	+22.1 lb (10 kg)

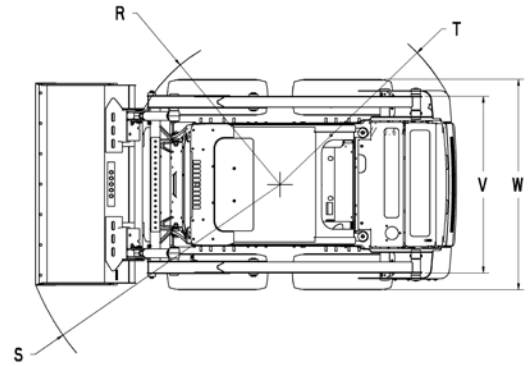
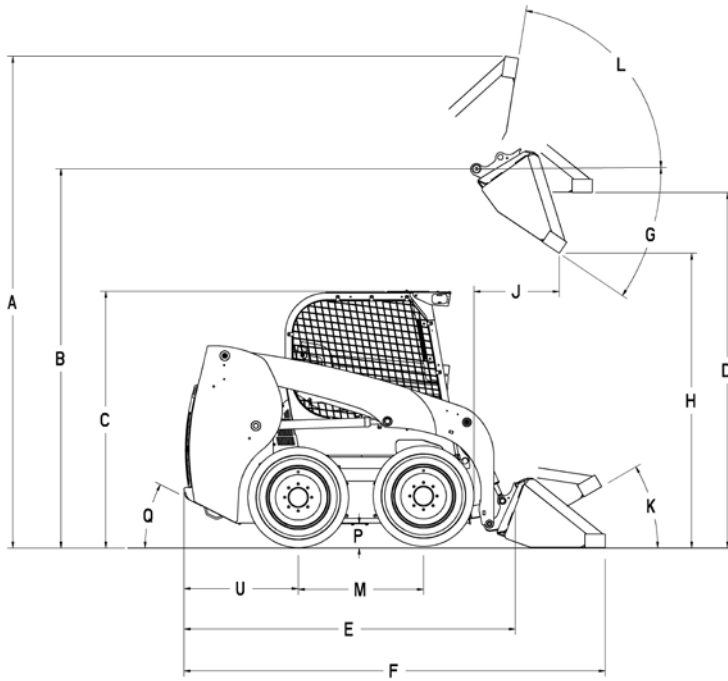
SERVICE CAPACITIES

Fuel tank	16 gal (60.5 L)
Engine oil with filter	7.9 qt (7.5 L)
Hydraulic system –	
Reservoir	4 gal (15.13 L)
Chain tanks (per side)	6.7 qt (6.3 L)

TIRE SELECTION

	Size	Ply Rating	Tread Depth	Tire Width	Width Tread Width	Over Tires	Tire Weight*
Heavy-Duty	10 x 16.5	–	–	–	49 (1248)	59 (1517)	–
Premium	10 x 16.5	–	–	–	49 (1248)	59 (1517)	–
Premium-Lined	10 x 16.5	–	–	– (1248)	49 (1517)	59	–
Premium	27 x 15	–	–	–	–	–	–

*Tire weight does not include the wheel weight



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	141.4 (3.60) 146.9 (3.73) 152 (3.86)
Height to - in (m) –	
B. Bucket hinge pin	112 (2.84)
C. Top of ROPS	75.5 (1.92)
D. Bottom of level bucket, fully raised	105.6 (2.68)
Overall length - in (m) –	
E. without attachment with coupler	95.9 (2.44)
F. with foundry excavation bucket on ground with low profile bucket with low profile extended bucket	119.2 (3.03) 125 (3.18) 129.8 (3.30)
G. Dump angle	40.2°
H. Dump height - in (m) –	
with foundry/excavating bucket short lip with low profile/standard lip bucket with low profile extended bucket	88.4 (2.25) 84.8 (2.15) NA
J. Dump reach (max. height) - in (m)	18.5 (0.47)
Maximum attachment rollback –	
K. Bucket on ground	26.1°
L. Bucket at full height	95.2°
M. Wheelbase - in (m)	37.1 (0.94)
P. Ground clearance (bottom of belly pan) - in (m)	7 (0.18)
Q. Angle of departure	22°
Clearance circle - in (m) –	
R. without bucket	48.7 (1.24)
S. with 60-in (1.52 m) foundry bucket in carry position with 60-in (1.52 m) inch low profile bucket on ground with 60-in (1.52 m) inch extended low profile on ground	75.6 (1.92) 78.5 (1.99) 83.1 (2.11)
T. Clearance circle rear - in (m)	56.4 (1.43)
U. Rear axle to bumper - in (m)	33.8 (0.86)
V. Tread width with spec tires - in (m)	49.15 (1.25)
W. Over the tire width with spec tires - in (m)	59.75 (1.52)

PERFORMANCE SPECS

Rated operating load –	
50%	1,500 lb (680 kg)
Tipping load	
	3,030 lb (1374 kg)
Breakout forces –	
Lift cylinder	4,275 lb (19 kN)
Bucket cylinder	4,160 lb (18.5 kN)
Cycle times – (seconds)	
Raise	3.4
Lower	2.1
Dump	1.9
Roll back	1.3

OPTIONAL BUCKETS

Type	Width inch (m)	Weight lb (kg)	Heaped Capacity ft ³ (m ³)
Dirt & Foundry	60 (1.5)	270 (122)	11.5 (0.33)
	66 (1.6)	370 (168)	15.2 (0.43)
	72 (1.8)	390 (177)	16.7 (0.47)
	72 (1.8)	425 (193)	14.5 (0.41)
Low Profile	60 (1.5)	330 (150)	11.5 (0.33)
	66 (1.6)	400 (181)	13.2 (0.37)
	72 (1.8)	425 (193)	14.5 (0.41)
	72 (1.8)	493 (224)	17.1 (0.48)
Low Profile Extended	60 (1.5)	360 (163)	14.3 (0.40)
	66 (1.6)	434 (197)	15.5 (0.44)
	72 (1.8)	477 (216)	17.1 (0.48)
	72 (1.8)	545 (247)	19.1 (0.54)
Light Material	60 (1.5)	350 (159)	19.7 (0.56)
	72 (1.8)	434 (197)	23.7 (0.67)
	72 (1.8)	465 (211)	23.7 (0.67)
Manure & Slurry	60 (1.5)	340 (154)	16.7 (0.47)
	72 (1.8)	465 (211)	19.1 (0.54)
	72 (1.8)	501 (227)	21.1 (0.59)
Heavy Duty	66 (1.6)	474 (215)	13.3 (0.37)
	72 (1.8)	501 (227)	14.6 (0.41)
	72 (1.8)	545 (247)	16.7 (0.47)

STANDARD EQUIPMENT

OPERATOR'S COMPARTMENT

ROPS/FOPS level 1 canopy w/side screens
Control lockout system
Tilt ROPS/FOPS
Rear window w/ emergency escape
Instrument panels
2 in (51 mm) retractable seat belt
Hand throttle
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Headliner
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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

ISM N844T / M3 diesel
Integral engine oil cooling
Fuel filter w/water trap
Dual element air cleaner
120 amp alternator
1000 CCA 12-volt battery
Glow plug
Over & under radiator and oil cooler
Spark arresting muffler

POWERTRAIN

Hydrostatic four wheel drive
Servo controls
ASA #80HS drive chain
SAHR disc parking brakes

HYDRAULICS

Auxiliary hydraulics 3050 psi
(210 bar) – 19.5 gpm (73.8 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 flood (halogen)
Rear tail lights
Options harness
Remote oil drain

OPTIONAL EQUIPMENT

OPERATOR'S COMPARTMENT

Vinyl suspension seat
Deluxe cloth suspension seat w/ heater and lumbar support
3 in (76 mm) retractable seat belt
Interior mirror
Radio
Heat
Demo door
Glass front door w/wiper & washer
Sliding side windows

LOADER

Ride control
Hydraulic one-way self-leveling
EH controls
Attachment case drain plumbing

ENGINE

Coolant block heater

OTHER

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
Battery disconnect switch
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.

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.

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All Case construction equipment is biodiesel ready.