

ENGINE

Model	ISM N844L - F/M4
Type	Diesel 4-stroke, naturally aspirated
Cylinders	4
Bore/Stroke	3.31 x 3.94 in (84 x 100 mm)
Displacement	135.2 in ³ (2.2 L)
Fuel injection	Indirect
Fuel	#2 Diesel
Fuel filter:	
Pre-filter	14 micron/in line
Main filter	10 micron/spin on
Air intake	Naturally aspirated w/o EGR
Exhaust aftertreatment	Diesel particulate filter – DPF
Cooling	Liquid
Engine speeds	RPM
High idle – no load	2825 +/- 25
Rated – full load	2800
Low idle	1200 +/- 50
Horsepower @ 2800 RPM – SAE J1349:	
Gross	48.8 hp (36.4 kW)
Net	45.8 hp (34.1 kW)
Peak torque @ 1800 RPM	105.5 lb-ft (143 N·m)
Radiator:	
Core type	All aluminum
Core size area	2.77 ft ² (0.257 m ²)
Rows of tubes x columns	43 x 3
Cap pressure	16 +/- 2 psi (1.10 +/- 0.14 bar)

Fan:	
Diameter	17.7 in (450 mm)
Ratio	0.89:1
Water pump:	
Style	Centrifugal
Flow	19.0 gpm (71.9 L/min)
Engine lubrication pump	Pressure feed w/ Trichoid pump
Pump operating angle ratings:	
Side to side	35°
Bucket up	35°
Bucket down	35°

POWERTRAIN

Drive pump controls	Direct mechanical
Pump to engine ratio	1:1
Displacement	2.14 in ³ (35 cc)
Flow @ rated engine RPM:	
@ 97% efficiency	25.1 gpm (95 L/min)
Charge pressure	360 psi (24.5 bar)
System relief pressure	5,000 psi (345 bar)
Drive pump controls	Electro-hydraulic
Pump to engine ratio	1:1
Displacement	2.14 in ³ (35 cc)
Flow @ rated engine RPM:	
@ 97% efficiency	25.1 gpm (95 L/min)
Charge pressure	362 psi (24.5 bar)
System relief pressure	5,220 psi (360 bar)

POWERTRAIN (cont.)

Drive motors:	
Displacement	19.8 in ³ (325 cc)
Motor RPM @ high idle, 97% efficiency	313
Max. torque @ 5,000 psi (345 bar):	
	1,315 lb-ft (1783 N·m)
Travel speed	7.4 mph (11.9 kph)
Final drive	Single-reduction chain drive
Drive chain:	
Size	ASA #80
Tensile strength	21,000 lb (93.4 kN)
Axles:	
Torque	4,381 lb-ft (5940 N·m)
Diameter	2.0 in (50.8 mm)
Length	13.2 in (346 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	2.95 hp (2.2 kW)
Battery	12-volt low-maintenance 925 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 panel w/: hour meter, tachometer, fuel level, hydraulic oil temperature, engine coolant temperature, diagnostic features, and security lockout; Non-suspension vinyl seat; 2 in (51 mm) retractable lap seat belt; Hand and foot throttles; Alarm package – back-up and horn; Headliner; Dome light; Top window; 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.

Warning alarms:
Battery voltage – plus display

Indicator light:
Engine preheat; Parking brake; Seat bar reminder.

OPERATING WEIGHT

Operating weight	5,070 lb (2300 kg)
Shipping weight	4,770 lb (2160 kg)
Add-on weights:	
Side cab glass	47 lb (21.3 kg)
Polycarbonate cab door	74 lb (33.6 kg)
Glass cab door w/ wiper	134 lb (60.8 kg)
Suspension seat	22 lb (10 kg)
Additional counterweight	168 lb (76.6 kg)

HYDRAULICS

Implement pump type	Gear
Displacement	1.45 in ³ (23.8 cc)
Standard flow @ rated engine RPM: @ 100% efficiency	17.5 gpm (66.2 L/min)
Loader control valve:	
Type	3 spool/open center/series - series
Relief pressure	3,050 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	9 x 1
Area	130.7 in ² (843.2 cm ²)

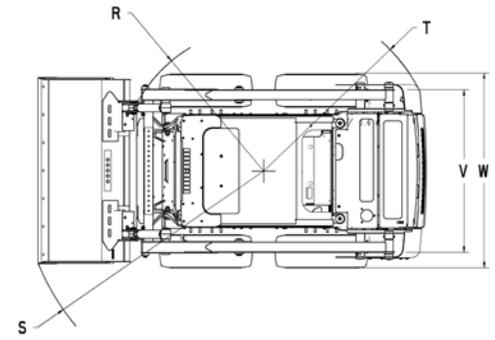
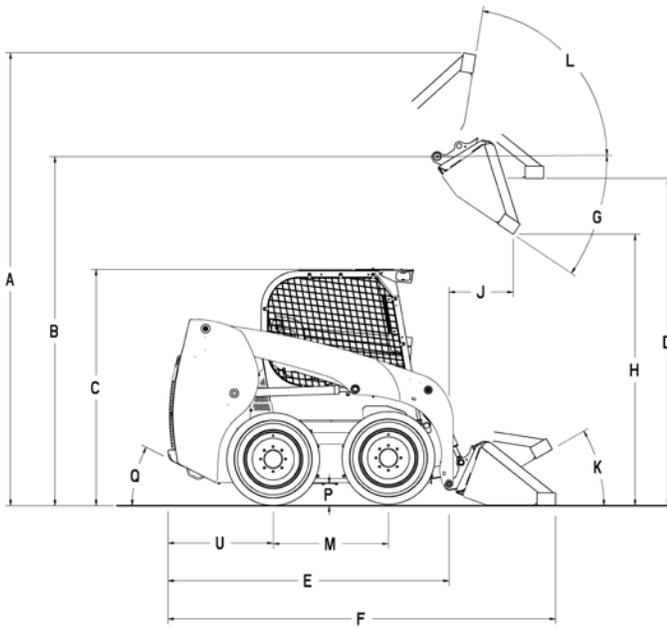
Hydraulic filter	Beta (4) = 75/spin on
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Lift cylinders:	
Bore diameter	2.25 in (57.2 mm)
Rod diameter	1.38 in (34.9 mm)
Stroke	25.4 in (645 mm)
Closed length	38.94 in (989 mm)

Bucket cylinders:	
Bore diameter	2.25 in (57.2 mm)
Rod diameter	1.25 in (31.7 mm)
Stroke	14.57 in (370.1 mm)
Closed length	23.38 in (594 mm)

SERVICE CAPACITY

Fuel tank	16 gal (60.5 L)
Engine oil w/ filter	7.5 qt (7.1 L)
Hydraulic system:	
Reservoir	4.0 gal (15.1 L)
Total	7.71 gal (29.2 L)
Chain tanks – per side	1.65 gal (6.25 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	1,300 lb (590 kg)
with additional counterweight	1,400 lb (635 kg)
Tipping load	2,600 lb (1179 kg)
Breakout forces @ 3,150 psi (217 bar):	
Bucket cylinders	4,180 lb (18.6 kN)
Lift cylinders	2,850 lb (12.7 kN)
Cycle times:	
Raise	3.2 sec
Lower	2.0 sec
Dump	1.8 sec
Roll back	1.3 sec

DIMENSIONS

A. Overall operating height:	
with foundry/excavating bucket	141.4 in (3.59 m)
with low profile bucket	146.9 in (3.73 m)
with low profile extended bucket	152 in (3.86 m)
Height to:	
B. Bucket hinge pin	112 in (2.85 m)
C. Top of ROPS	75.5 in (1.92 m)
D. Bottom of level bucket, fully raised	105.6 in (2.68 m)
Overall length:	
E. without attachment with coupler	95.9 in (2.44 m)
F. with foundry/excavating bucket on ground	119.2 in (3.03 m)
with low profile bucket	125 in (3.18 m)
with low profile extended bucket	129.8 in (3.30 m)
G. Maximum dump angle	40.2°
H. Dump height:	
with foundry/excavating bucket	88.4 in (2.25 m) @ 40.2°
with low profile bucket	84.8 in (2.15 m) @ 40.2°
J. Dump reach at maximum height with low profile bucket	22.7 in (0.58 m) @ 40.2°
Maximum attachment rollback:	
K. Bucket on ground	26.1°
L. Bucket at full height	95.2°
M. Wheelbase	37.0 in (0.94 m)
P. Ground clearance – bottom of belly pan	7.0 in (0.18 m)
Q. Angle of departure	22°
Clearance circle:	
R. without bucket	48.7 in (1.24 m)
S. with 60 in (1.52 m) foundry/excavating bucket in carry position	73.3 in (1.86 m)
with 60 in (1.52 m) low profile bucket on ground	78.5 in (1.99 m)
with 60 in (1.52 m) extended low profile on ground	83.1 in (2.11 m)
T. Clearance circle rear	56.4 in (1.43 m)
U. Rear axle to bumper	33.8 in (0.86 m)
V. Tread gage with spec tires	49.2 in (1.25 m)
W. Over the tire width with spec tires	59.8 in (1.52 m)

STANDARD EQUIPMENT

OPERATOR ENVIRONMENT

See page 1

ENGINE

ISM N844L - F Tier 4 diesel
Over & under radiator and oil cooler
Glow plugs
Fuel filter with water trap
Dual element air cleaner
120 amp alternator
925 CCA 12-volt battery
Master electrical disconnect

POWERTRAIN

1-speed hydrostatic four wheel drive
Servo-assist mechanically-controlled pumps
ASA #80HS drive chain
SAHR disc parking brake

HYDRAULICS

Auxiliary hydraulics:
@ 3,050 psi (210 bar) – 17.5 gpm (59 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

Radial loader arm design
Mechanical 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 flood
Rear tail lights
Lockable service access hood
Single-point daily servicing
Pre-wired for rotating beacon
Remote oil drain
Remote oil and fuel filters

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
Deluxe cloth, air suspension seat,
with heater and lumbar support
Interior mirror
Enclosed cab including glass door with
wiper and washer, sliding side windows,
heater, shoulder belt, radio with speakers,
keyless start
3 inch (76.2 mm) retractable seat belt
Heater and air conditioner
Open cab interior trim package
Demolition cab door with polycarbonate
FOPS level 2

ENGINE

Coolant block heater

HYDRAULICS

Second auxiliary hydraulics

LOADER

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

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 below
Buckets – see below
Bolt-on bucket cutting edges
Bolt-on heavy-duty bucket spill guard
Bolt-on heavy-duty bucket teeth – field kit
42 in (1.07 m) and 48 in (1.22 m) pallet fork
Rear door guard insert
Special paint
Steel tire tracks

TIRE SELECTION

	Size	Ply Rating	Tread Depth	Tire Width	Tread Gage	Over Tires Width	Each Tire Weight
Heavy-Duty	10 L x 16.5	—	—	—	49.2 in (1.25 m)	59 in (1.50 m)	87 lb (39.5 kg)
Premium	10 L x 16.5	—	—	—	49.2 in (1.25 m)	59 in (1.50 m)	96 lb (44.0 kg)
Premium-Lined	10 L x 16.5	—	—	—	49.2 in (1.25 m)	59 in (1.50 m)	63 lb (28.5 kg)
Premium	27 L x 10.5-15	—	—	—	—	64 in (1.63 m)	69 lb (31.0 kg)

OPTIONAL BUCKETS

Type	Width	Weight	Heaped Capacity
Dirt & Foundry	60 in (1.52 m)	300 lb (138 kg)	11.3 ft ³ (0.32 m ³)
	66 in (1.68 m)	385 lb (175 kg)	14.8 ft ³ (0.42 m ³)
	72 in (1.83 m)	420 lb (190 kg)	16.2 ft ³ (0.46 m ³)
Low Profile	60 in (1.52 m)	375 lb (170 kg)	12.0 ft ³ (0.34 m ³)
	66 in (1.68 m)	440 lb (200 kg)	13.4 ft ³ (0.38 m ³)
	72 in (1.83 m)	480 lb (218 kg)	14.8 ft ³ (0.42 m ³)
Low Profile Extended	60 in (1.52 m)	400 lb (182 kg)	14.1 ft ³ (0.40 m ³)
	66 in (1.68 m)	470 lb (214 kg)	15.9 ft ³ (0.45 m ³)
	72 in (1.83 m)	510 lb (232 kg)	17.7 ft ³ (0.50 m ³)
Light Material	60 in (1.52 m)	375 lb (170 kg)	19.4 ft ³ (0.55 m ³)
	72 in (1.83 m)	475 lb (216 kg)	23.3 ft ³ (0.66 m ³)
Manure & Slurry	60 in (1.52 m)	370 lb (168 kg)	15.9 ft ³ (0.45 m ³)
	72 in (1.83 m)	480 lb (218 kg)	19.1 ft ³ (0.54 m ³)
Heavy-Duty	66 in (1.68 m)	450 lb (205 kg)	13.1 ft ³ (0.37 m ³)
	72 in (1.83 m)	510 lb (230 kg)	14.1 ft ³ (0.40 m ³)
Heavy-Duty with spill guard	66 in (1.68 m)	520 lb (235 kg)	16.6 ft ³ (0.47 m ³)
	72 in (1.83 m)	585 lb (265 kg)	18.4 ft ³ (0.52 m ³)



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.