**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 with 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 m²
  - **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

**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**
  - **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**: 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
- **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)
  - **Charge Pressure**
    - @ 100% efficiency: 22.5 gpm (85 L/min)
  - **System relief**
    - @ 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 cm²)
- **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 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

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

<table>
<thead>
<tr>
<th>Area</th>
<th>Ground pressure</th>
<th>Width to Outside of track</th>
</tr>
</thead>
<tbody>
<tr>
<td>sq in</td>
<td>psi (kPa)</td>
<td>in (m)</td>
</tr>
<tr>
<td>-------</td>
<td>-----------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>15.7 in (400 mm)</td>
<td>2,038 (13 120)</td>
<td>4.8 (33)</td>
</tr>
<tr>
<td>17.7 in (450 mm)</td>
<td>2,293 (13 776)</td>
<td>4.3 (29.7)</td>
</tr>
</tbody>
</table>
DIMENSIONS

**A.** Overall operating height - in (m) —
- with foundry/excavating bucket short lip 157.8 (4.0)
- with low profile/standard lip bucket 161.8 (4.1)
- with low profile extended / long lip bucket 166.8 (4.3)

**B.** Height to - in (m) –
- Bucket hinge pin 126.5 (3.2)
- Top of ROPS 80.4 (2.0)
- Bottom of level bucket, fully raised 119.6 (3.0)

**C.** Overall length - in (m) –
- without attachment with coupler 117.4 (3.0)
- with foundry excavation bucket on ground 142 (3.6)
- with low profile bucket 146 (3.7)
- with low profile extended bucket 151 (3.8)

**D.** Dump angle 38.3°

**E.** Dump height - in (m) –
- with foundry/excavating bucket short lip 102.2 (2.6)
- with low profile/standard lip bucket 99.6 (2.5)

**F.** Dump reach (max. height) - in (m)
- Maximum attachment rollback –
  - Bucket on ground 29.7°
  - Bucket at full height 99.7°

**G.** Track on ground - in (m) 63.1 (1.6)

**H.** Ground clearance (bottom of belly pan) - in (m) 9.5 (243)

**I.** Angle of departure 32°

**J.** Clearance circle - in (m) –
- without bucket 55.1 (1.4)
- with 78-inch (2.0 m) foundry bucket in carry position 85.5 (2.2)
- with 78-inch (2.0 m) low profile bucket on ground 88.7 (2.3)
- with 78-inch (2.0 m) extended low profile on ground 93 (2.4)

**K.** Clearance circle rear - in (m) 70.4 (1.8)

**L.** Track width 58.3 (1.5)

**M.** Over the track width 76 (1.9)

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**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

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**OPTIONAL BUCKETS**

<table>
<thead>
<tr>
<th>Type</th>
<th>Width inch (m)</th>
<th>Weight lb (kg)</th>
<th>Heaped Capacity ft³ (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dirt &amp; Foundry</td>
<td>78 (2.0)</td>
<td>435 (197)</td>
<td>18.4 (0.52)</td>
</tr>
<tr>
<td>Low Profile</td>
<td>78 (2.0)</td>
<td>502 (228)</td>
<td>18.6 (0.53)</td>
</tr>
<tr>
<td>Extended</td>
<td>84 (2.1)</td>
<td>607 (275)</td>
<td>20.2 (0.57)</td>
</tr>
<tr>
<td>Light Material</td>
<td>84 (2.1)</td>
<td>497 (225)</td>
<td>27.9 (0.79)</td>
</tr>
<tr>
<td>Manure &amp; Slurry</td>
<td>84 (2.1)</td>
<td>535 (243)</td>
<td>22.5 (0.64)</td>
</tr>
<tr>
<td>Heavy Duty</td>
<td>78 (2.0)</td>
<td>527 (239)</td>
<td>15.9 (0.45)</td>
</tr>
</tbody>
</table>

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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

LOADERS
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

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

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

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

ENGINE
Coolant block heater
Battery disconnect switch

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

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

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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