51 NET FLYWHEEL HORSEPOWER
- Four-cylinder, 188 c.i.d. Case diesel engine

TORQUE CONVERTER
Increases push power and automatically adjusts to load demand

TRANSMISSION
Four speed powershift with torque converter

UNDERCARRIAGE
Sealed track and permanently lubricated track rollers, carrier rollers and idlers

ANGLE/TILT DOZER
Hydraulically angle or tilt the blade to match job conditions

CONTROLLED TRANSMISSION STEERING OR BRAKE STEERING
Choice of power turns or brake turns for operator convenience and unmatched performance

Unit shown is equipped with non-standard items
Manufactured by J I Case Company, Racine Wisconsin USA

J I Case
A Tenneco Company
450 SPECIFICATIONS

ENGINE
Case Model G188D, 4 cycle, naturally aspirated diesel. Open chamber design. Uses No. 2 diesel fuel. Five main bearings. Positive pressure oil lubrication with full flow filtering and internal cooling. Aluminum alloy pistons with full skirt, 3-ring design. 12-volt direct electric starting. Dry type, two-stage air cleaner with service indicator. Two stage full flow replaceable element fuel filters.

Maximum rated horsepower
(1) Gross ................. 57 @ 2000 rpm
(2) SAE net ................ 51 @ 2000 rpm
Displacement ........... 188 cu. in. (3,1 lit)
Number cylinders ........... 4
Bore and stroke ........... 3 1/8" × 4 1/8" (97 mm × 105 mm)
Compression ratio ........... 17.5:1
Torque, maximum, lbs.-ft. (kg-m)
Sea level, 60°F .................. 156 @ 1400 rpm
(21.6 @ 1400 tr/min)
500' (152 m) altitude, 85°F ....... 150 @ 1400 rpm
(20.7 @ 1400 tr/min)

(1) Manufacturer's rating of maximum engine horsepower as applied to this vehicle when equipped with oil and water pumps, generator, air cleaner, fan and muffler. Corrected to sea level — 29.22" (760 mm) Hg and 60°F (15°C) dry air.
(2) SAE net flywheel horsepower of engine as applied to this vehicle when equipped with operating accessories including oil and water pumps, generator, air cleaner, fan and muffler. Corrected to 500' (152 m) altitude with 38" (9.5 mm) Hg vapor pressure 29.38" (746 mm) Hg observed barometer and 85°F (29°C) air (per SAE J866).

TORQUE CONVERTER
Single stage, hydrokinetic type, 11" (279 mm) diameter with 2.1:1 ratio.

TRANSMISSION
Constant-mesh, four-speed powershift with Hi-Lo range selector. Four speeds forward, four speeds reverse.

TRAVEL SPEEDS

<table>
<thead>
<tr>
<th></th>
<th>1st (mph) (km/h)</th>
<th>2nd (mph) (km/h)</th>
<th>3rd (mph) (km/h)</th>
<th>4th (mph) (km/h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forward</td>
<td>2.1 (3.4)</td>
<td>3.7 (6.0)</td>
<td>4.3 (6.9)</td>
<td>7.2 (11.6)</td>
</tr>
<tr>
<td>Reverse</td>
<td>2.3 (3.7)</td>
<td>4.1 (6.6)</td>
<td>4.7 (7.6)</td>
<td>7.9 (12.7)</td>
</tr>
</tbody>
</table>

GROUND SPEED VS. DRAWBAR PULL

DRAWBAR PULL LBS. (KG)

1st GEAR

2nd GEAR

3rd GEAR

4th GEAR

SPEED - MPH (km/h)

0 1 2 3 4 5 6 7 8 9 10 11 12

0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000

STEEERING
Steering controlled by independent hydraulic clutches in transmission or by hydraulic brakes. Three types of turns: power, gradual and brake turns.

FINAL DRIVES
Spur and bull gear type, single reduction. One-piece line bored case with final drive seal guards.

BRAKES
Hydraulically actuated disc brakes controlled by two foot brake pedals that may be interlocked or used independently; and which neutralize power drive. Hand-operated over-center parking brake.

UNDERCARRIAGE
Sealed track, hydraulic track adjusters. Track rollers, carrier rollers, drum type idlers permanently lubricated. Solid disc hunting tooth sprockets.

Track frame ............... Rigid
Track rollers (each side) .... 5
Carrier rollers (each side) ... 1
Track gauge .................. 52" (1320 mm)
Length of track on ground ....... 66.5" (1740 mm)
Shoes per track (each side) ...... 36
Area, track on ground .......... (14" shoes) 1918 sq.in. (1.24 m²)
(16" shoes) 2192 sq.in. (1.41 m²)
Height of grouser ............... 1.8" (45.7 mm)
Track shoe widths available: 12" (305 mm) 14" (355 mm) 16" (406 mm)

DOZER HYDRAULIC SYSTEM
Full hydraulic control of moldboard lift, lower, angle and tilt functions. Positive-hold “float” position in lift circuit.

Pump: Gear type, front mounted, direct drive. 21 gpm @ 2000 rpm @ 1650 psi (79.5 lit/min @ 2000 tr/min @ 116 kg/cm²)

Control valve: Open center, parallel. Three spool valve.

System relief pressure: 1650 psi @ 21 gpm (116 kg/cm²) @ 79.5 lit/min.

Cylinders:
Lift: (2) 2.5" dia. × 27.375" stroke × 1.25" rod
(63.5 mm dia. × 695 mm stroke × 31.8 mm rod)
Angle: (2) 4" dia. × 8.3125" stroke × 2" rod
(102 mm dia. × 211 mm stroke × 50.8 mm rod)
Tilt: (1) 3.5" dia. × 8" stroke × 2" rod
(88.9 mm dia. × 203 mm stroke × 50.8 mm rod)

SERVICE REFiLL CAPACITIES

<table>
<thead>
<tr>
<th></th>
<th>U.S. Gal.</th>
<th>(liters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel tank</td>
<td>20</td>
<td>(75.7)</td>
</tr>
<tr>
<td>Engine crankcase (with filter)</td>
<td>1.75</td>
<td>(6.6)</td>
</tr>
<tr>
<td>Hydraulic system</td>
<td>7.5</td>
<td>(28.4)</td>
</tr>
<tr>
<td>Transmission and torque converter</td>
<td>8</td>
<td>(30.3)</td>
</tr>
<tr>
<td>Final drives (each side)</td>
<td>1.5</td>
<td>(5.7)</td>
</tr>
<tr>
<td>Cooling system</td>
<td>5.25</td>
<td>(19.9)</td>
</tr>
</tbody>
</table>
OPERATING DIMENSIONS

Overall Lengths:
- Dozer with ripper raised .............. 14' 1/2" (4280 mm)
- Dozer with winch .................. 13' 3/4" (4051 mm)

Ground clearance (at drawbar) ........... 12" (305 mm)
Turning clearance circle (pivot turn) .... 18' 2" (5537 mm)
Overall width (at track, 16" shoes) .......... 68" (1727 mm)
Height dimensions taken from bottom face of shoe.

DOZER SPECIFICATIONS

Dozer, hydraulic .................. Angle/Tilt

Coldboard
- Depth .................. 88" (2235 mm)
- Height .................. 26" (711 mm)
- Lift above ground .......... 33.5" (850 mm)
- Drop below ground .......... 17.4" (441 mm)
- Angle, hyd. - both directions ..... 0° - 30°
- Tilt, hyd. - either end .......... 12" (305 mm)
- Pushbeam .................. Inside

End Bits (Replaceable)
- Standard Duty
  Length .............. 12" (305 mm)
  Width .............. 6" (152.4 mm)
  Thickness .......... 1/2" (12.7 mm)
- Cast Heavy Duty
  Length .............. 14.5" (368 mm)
  Width .............. 7.4" (188 mm)
  Thickness .......... 1/2" (12.7 mm)

Cutting Edge (Reversible)
- Length .................. 64" (1625 mm)
- Width .................. 6" (152.4 mm)
- Thickness .................. 3/8" (12.7 mm)
- Maximum track shoe allowable .......... 16" (406 mm)

Tractor dozer dimensions
- Overall length
  (blade straight) .......... 12' 1" (3683 mm)
  (blade angled) .......... 13' 7" (4140 mm)
- Overall width
  (blade straight) .......... 88" (2235 mm)
  (blade angled) .......... 79" (2007 mm)
- Operating weight (approx.) ........... 10,900 lbs. (4944 kg)
  With ROPS .................. 11,524 lbs. (5227 kg)
OPTIONAL EQUIPMENT

Approximate add-on weight

| Backhoe, 12½'                       | 3200 lbs.  | 1452 kg. |
| Extendahoe, 12½' - 15½'             | 3850 lbs.  | 1746 kg. |
| Counterweight, front                | 1000 lbs.  | 454 kg.  |
| Drawbar, swinging                   | 60 lbs.    | 27.2 kg. |
| Drawbar, for winch                  | 110 lbs.   | 49.8 kg. |
| Fan, pusher                         | n.c.       | n.c.     |
| Front inner rock guards             | 84 lbs.    | 38.1 kg. |
| Grille, heavy duty                  | 35 lbs.    | 16 kg.   |
| Hook, front pull                    | 10 lbs.    | 4.5 kg.  |
| Lockout for clutch cutoff           | 10 lbs.    | 4.5 kg.  |
| Lookup kit                          | 12 lbs.    | 5.4 kg.  |
| Moldboard end bits (cast)           | 4 lbs.     | 1.8 kg.  |
| Muffler, spark arresting            | 6 lbs.     | 2.7 kg.  |
| Noise suppression kit               | 103 lbs.   | 46.7 kg. |
| Ripper, three tooth                 | 1270 lbs.  | 576 kg.  |
| Rock guards                         | 330 lbs.   | 150 kg.  |
| Roll Over Protective Structure      | 534 lbs.   | 242 kg.  |
| ROPS, front sweeps                  | 90 lbs.    | 40.8 kg. |
| Side shields, engine                | 35 lbs.    | 16 kg.   |
| Transmission guard, rear            | 59 lbs.    | 26.3 kg. |
| Winch                               | 1111 lbs.  | 504 kg.  |
| Winch, fairlead (3 roller)          | 200 lbs.   | 90.7 kg. |
| Fourth roller for fairlead          | 24 lbs.    | 11 kg.   |

WINCH

Type: Gearmatic #19

Winch drive: Mechanical

Control: Hydraulic

Cable drum capacity: ½" (12.7 mm) 362' (110 m)

Drum rotation: Overwind

Drum diameter: 8.5" (216 mm)

Rated line pull: 21,300 lbs. (9662 kg)

Weight: 1111 lbs. (504 kg)

STANDARD EQUIPMENT


NOTE: All specifications are stated in accordance with IEMC or SAE standards where applicable.

IMPORTANT

J I Case Company reserves the right to change these specifications without notice and without incurring any obligation relating to such changes.

Sold and serviced by: