**ENGINE**

John Deere engineered and manufactured 6-cylinder diesel engine. Replaceable wet-type cylinder liners help ensure superior heat dissipation, longer engine life. High-strength alloy heads include replaceable valve seat inserts. The forged steel, 7-main bearing crankshaft is statically and dynamically balanced for smooth operation. Cast aluminum pistons reduce rod bearing loads and provide vital heat transfer; pistons are sprayed with cooling oil for longer life.

- **Engine:** John Deere 6466A
- **Rated power at 1800 rpm:** 165 SAE net hp (123 kW)
- **175 SAE gross hp (131 kW)**
- **Turbocharger:** aftercooled
- **Cylinders:** 6
- **Displacement:** 466 cu. in. (7.638 l)
- **Fuel consumption, typical:** 4.3 to 6.4 gal/hr (16.3 to 24.2 L/h)
- **Maximum net torque at 1200 rpm:** 578 lb.-ft (784 Nm)
- **Lubrication:** pressure system with full-flow filters
- **Air cleaner:** dry type with restriction indicator
- **Electrical system:** 24-volt with 40-amp alternator
- **Cooling fan:** blower

**TRANSMISSION**

Automatic, dual-path, hydrostatic drive provides infinitely variable speeds to 6.5 mph (10.5 km/h). The transmission's load sensing feature automatically adjusts speed and power to match changing load conditions. Each track is powered by a variable displacement piston pump and motor combination. The speed and direction of each track can be individually controlled.

**TRAVEL SPEEDS**

- **Forward and reverse:** infinite to 6.5 mph (0 to 10.5 km/h)

**FINAL DRIVES**

Double-reduction, planetary final drives transfer torque loads over three gear sets instead of one. The final drives are mounted independently of the track frames to isolate them from shock loads for increased life and reliability.

**BRAKES**

Hydrostatic (dynamic) braking stops the crawler when the transmission control lever is moved to neutral. Wet, multi-disk parking brakes are automatically applied when the engine stops, or can be operator-applied by engaging the center brake pedal.

**STEERING**

Steering is done hydrostatically by varying track speed and/or direction. Depressing a pedal slows or varies the speed of the track, all the way to a stop if desired. Continuing to depress the pedal will cause the track to reverse for counterrotation. Hydrostatic steering eliminates the need for steering clutches and steering brakes, as well as the need for cross-steering when working on steep slopes.

**HYDRAULICS**

- **System:** open center
- **Pressure:** 2250 psi (15,514 kPa)
- **Pump:** vane
- **Flow at 1800 rpm:** 44 gpm (166 L/min)

**TRACKS**

7-roller, 107-in. (2720 mm) track frame with front and rear track guides and sprocket guard. Duratrax™ undercarriage features deep-heat-treated, sealed and lubricated track links and through-hardenened sealed and lubricated rollers for maximum wear resistance.

- **Grouser:** 24 in. (610 mm)
- **Shoes, each side:** 40
- **Ground contact area with 24-in. (610 mm) shoes:** 5136 sq. in. (33 135 cm²)
- **Ground pressure:** 7.65 psi (52.7 kPa)
- **Ground clearance, minimum:** 16.4 in. (417 mm)
- **Length of track on ground:** 107 in. (2720 mm)
- **Track gauge, standard:** 74 in. (1880 mm)
- **Oscillation:** 11.5 in. (292 mm)
- **Carrier rollers each side:** 2
- **Adjustment:** hydraulic

**CAPACITIES**

- **Fuel tank:** 82 gal. (310.4 l)
- **Cooling system:** 9 gal. (34 l)
- **Crankcase:** 32 qt. (30.3 l)
- **Crankcase, including filter:** 34 qt. (32.2 l)
- **Splitter drive:** 1.5 gal. (5.7 l)
- **Final drive each: Inner compartment:** 5.5 gal. (20.8 l)
- **Outer compartment:** 3.5 gal. (13.2 l)
- **Hydraulic system:** 25 gal. (132.5 l)

**OPERATING WEIGHT**

- **850B Long-Track:** 39,315 lb. (17 835 kg)
### DOZER SPECIFICATIONS

<table>
<thead>
<tr>
<th>Blade</th>
<th>Capacity per SAE J1265</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>Total Operating Weight (Tractor with Blade)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>in. (mm)</td>
<td>in. (mm)</td>
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<td>in. (mm)</td>
<td>in. (mm)</td>
<td>in. (mm)</td>
<td>lb. (kg)</td>
</tr>
<tr>
<td>Straight</td>
<td>3.89 (2.97)</td>
<td>42.0 1067</td>
<td>44.5 1130</td>
<td>20.6 523</td>
<td>214 5436</td>
<td>127 3226</td>
<td>15.0 381</td>
<td>4600 2086</td>
</tr>
<tr>
<td>Semi U</td>
<td>5.40 (4.13)</td>
<td>43.0 1092</td>
<td>46.5 1181</td>
<td>20.2 513</td>
<td>222 5630</td>
<td>138 3500</td>
<td>15.0 381</td>
<td>5020 2277</td>
</tr>
<tr>
<td>Angle</td>
<td>3.77 (2.88)</td>
<td>38.8 985</td>
<td>40.0 1016</td>
<td>18.7 475</td>
<td>214 5436</td>
<td>152 3860</td>
<td>13.23 336</td>
<td>5035 2284</td>
</tr>
</tbody>
</table>

*Includes cupped end bit
HYDROSTATIC DRIVETRAIN

Dual-path hydrostatic drive provides many advantages over mechanical crawler drivetrains in the areas of machine performance and reliability.

**Live power turns.** Both tracks remain fully powered during turns. This affords greater maneuverability with larger loads and less ground disturbance. This feature also provides improved capability for working on soft ground, as well as the ability to counterbalance blade-corner loads when benching, ditching or backfilling.

**Counterrotation.** Separate control allows the two transmissions to be driven in opposite directions, permitting spot turns with excellent maneuverability. Quick blade position changes can be made.

**Infinite speed selection.** Infinitely variable ground speeds, from 0 to 6.5 mph (0–10.5 km/h), allow precise matching of machine speed to your application. Ground speed can be reduced without slowing engine rpm, so hydraulic power remains high and response time remains fast.

**Automatic load sensing.** As a load increases and engine rpm lessens, the transmission automatically reduces ground speed to match load changes. This feature works at all throttle settings, providing full drawbar pull even at reduced engine speed.

**Dynamic braking.** Positive speed reduction is provided on slopes. When shifted to neutral, oil flow between the pump and motor is blocked. The crawler stops without use of the service brakes.

**Efficiency.** Overall, hydrostatic drive is more efficient in delivering horsepower to the tracks than systems that use torque converters. The greatest efficiency advantages are in the 1.5 to 3.5 mph (2.4 to 5.6 km/h) range, the main work speed range of a crawler dozer.

**Simplicity.** Hydrostatic drive design uses, on the average, 150 fewer parts than the design of an ordinary drive system. Fewer parts mean increased reliability. Some of our hydrostatic drive crawlers have accumulated more than 35,000 hours of use without any major transmission repairs.

FORESTRY APPLICATION

The 850B Long-Track Dozer can be equipped for forestry applications with the addition of limb risers and screens for the rollover protective structure.

**DRAWBAR PULL**

Drawbar pull
At 1.2 mph (1.9 km/h) ........................................33,500 lb. (149 kN)
At 2.0 mph (3.2 km/h) ........................................21,000 lb. (95 kN)

![Drawbar Pull Diagram](image-url)