ENGINE

John Deere engineered and manufactured. Replaceable wet type cylinder liners provide superior heat dissipation, longer life. High strength alloy heads have replaceable valve seat inserts. The forged steel, 5-main-bearing crankshaft is statically and dynamically balanced for smooth operation. Cast aluminum pistons provide good heat transfer and pistons are sprayed with cooling oil for longer life.

Engine: John Deere 4039D - Naturally Aspirated
Rated power @ 2200 rpm .................. 70 SAE net hp (52.2 kW)
74 SAE gross hp (55.8 kW)
with optional turbocharger .................... 75 SAE net hp (56 kW)
79 SAE gross hp (59 kW)
Cylinders ................................................. 4
Displacement ........................................... 239 cu. in. (3,917 L)
Fuel consumption, typical .................... 1.0 to 2.0 gal/hr (3.8 to 7.6 L/h)
Torque rise, standard at 1200 rpm ............ 20 percent
with optional turbocharger .................... 25 percent
Maximum net torque at 1200 rpm .............. 215 lb-ft (292 Nm)
with optional turbocharger .................... 291 lb-ft (395 Nm)
Lubrication ................ pressure system w/full flow filter and cooler
Air cleaner ............................................. dual stage dry type with safety element and precleaner
Electrical system .................... 12 volt with 78-amp alternator

TRANSMISSION

John Deere designed and built 4-speed helical gear, synchronized in all four gears, collar shift transmission with hydraulic reverse. Uses single stage, dual phase, 11-inch (280 mm) torque converter with 2.83:1 stall ratio.

TRAVEL SPEEDS

<table>
<thead>
<tr>
<th>Gear</th>
<th>Forward mph (km/h)</th>
<th>Reverse mph (km/h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3.8 (6.1)</td>
<td>3.4 (5.5)</td>
</tr>
<tr>
<td>2</td>
<td>6.5 (10.5)</td>
<td>5.8 (9.4)</td>
</tr>
<tr>
<td>3</td>
<td>13.9 (22.3)</td>
<td>12.5 (20.1)</td>
</tr>
<tr>
<td>4</td>
<td>25.3 (40.7)</td>
<td>22.8 (36.6)</td>
</tr>
</tbody>
</table>

FINAL DRIVES

Heavy-duty, inboard mounted planetary type. Evenly distributes axle shock loads over three gears that run in a cooling oil bath.

BRAKES

Hydraulic wet disk service brakes are mounted inboard and are pressure cooled and lubricated. They're self-adjusting, self-equalizing, require no periodic service. Individual pedals allow them to be applied together or separately. Parking/emergency brake is an independent system that is spring-applied, hydraulically released and controlled by an electric switch on the control console. A mechanical V-groove band applies pressure on differential ring gear. All brakes conform to SAE J1473.

STEERING

Hydrostatic power steering gives superior control at all speeds. Excellent steering torque allows easy maneuvering with heavy loads. Emergency steering conforms to SAE J55.

Non-powered axle
Curb turning radius with brakes ............. 11 ft. 9 in. (3.57 m)
without brakes .................................. 13 ft. 3 in. (4.04 m)
Bucket clearance circle with brakes ........... 31 ft. 6 in. (9.61 m)
without brakes .................................. 34 ft. 7 in. (10.55 m)
Steering wheel turns, stop to stop ............ 2.2 to 2.9
Mechanical-front-wheel drive
Curb turning radius with brakes ............. 10 ft. 11 in. (3.44 m)
without brakes .................................. 13 ft. 8 in. (4.17 m)
Bucket clearance circle with brakes ........... 29 ft. 9 in. (9.07 m)
without brakes .................................. 35 ft. 3 in. (10.74 m)
Steering wheel turns, stop to stop ............ 2.5
Axle oscillation stop to stop, both axles .......... 22 degrees

AXLE RATINGS

<table>
<thead>
<tr>
<th>Static</th>
<th>Dynamic</th>
<th>SAEJ43</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front</td>
<td>56,000 lb (25 500 kg)</td>
<td>56,000 lb (25 500 kg)</td>
</tr>
<tr>
<td>Rear</td>
<td>43,500 lb (19 700 kg)</td>
<td>58,000 lb (26 300 kg)</td>
</tr>
</tbody>
</table>

HYDRAULICS

System ....................................................... open center
Pressure, main relief ...................... 2700 psi (18 620 kPa)
Pump ....................................................... gear type
Flow at 2200 rpm ......................... 35 gpm (135 L/min)
Filter, return oil ......................... 10 micron, spin-on enclosed
replaceable element

TYRES

Front .............................................. 11L-16, 12 PR, F5
Rear .................................................. 16.9-28, 8 PR, R4
With mechanical-front-wheel drive ........... 10.5/8-18, 8 PTG2

CAPACITIES

U.S. ..................................................
Fuel tank ........................................... 28 gal. (106 L)
Engine coolant ................................. 17 qt. (16 L)
Engine oil including filter ............... 9 qt. (8.5 L)
Torque converter and reverse system ..... 8 qt. (7 L)
Hydraulic system ............................... 21 gal. (79 L)
Transaxle with MFWD ...................... 6 gal. (23 L)

OPERATING WEIGHTS

| SAE | | |
|-----|----------------|
| 315D | 14,000 lb (6350 kg) |
| cab adds | 500 lb (227 kg) |
| mechanical-front-wheel drive | 220 lb (100 kg) |
| extendable dipperstick excluding required | 430 lb (195 kg) |
| counterweight adds | 370 lb (169 kg)* |
| optional front counterweight | 770 lb (349 kg)* |
| backhoe bucket coupler adds | 200 lb (91 kg) |
See backhoe and loader performance data for bucket weights

* Denotes 30 lb. (14 kg) weight reduction when front bumper removed.
**DIMENSIONS**

**Key:**
A. Loading height, truck loading position
B. Reach from center of swing mast
C. Reach from center of rear axle
D. Maximum digging depth
E. Digging depth (SAE):
   1. 2-ft. (610 mm) flat bottom
   2. 8-ft. (2440 mm) flat bottom
F. Ground clearance, minimum
G. Bucket rotation
H. Transport height
J. Overall length, transport
K. Side-shift from tractor centerline
L. Wall to swing centerline
M. Stabilizer width – pads turned in
N. Overall width (less loader bucket)
O. Stabilizer width – pads turned out

**Backhoe**
- 11 ft. 11 in. (3.63 m)
- 17 ft. 9 in. (5.41 m)
- 21 ft. 9 in. (6.63 m)
- 14 ft. 1 in. (4.29 m)

**Extendable Dipperstick**
- Retracted
  - 12 ft. 2 in. (3.71 m)
  - 17 ft. 9 in. (5.41 m)
  - 21 ft. 9 in. (6.63 m)
  - 14 ft. 1 in. (4.29 m)
- Extended
  - 13 ft. 11 in. (4.25 m)
  - 17 ft. 9 in. (5.41 m)
  - 21 ft. 9 in. (6.63 m)
  - 18 ft. 0 in. (5.49 m)

**Backhoe Performance**
- Digging force, bucket cylinder (power dig position)
  - 11,570 lb. (51.5 kN)
- Digging force, crowd cylinder
  - 6650 lb. (29.6 kN)
- Swing arc
  - 180 degrees
- Operator control
  - Two levers
- Bucket positions
  - 12 or 21 degree rollback
- Lifting capacity, maximum, boom at 65 deg.
  - 4600 lb. (2087 kg)
- Leveling angle
  - 8 degrees

*Backhoe specifications are with 24-in. x 7.5 cu. ft. (610 mm x 0.21 m³) bucket.*