**Engine**

Type: DaimlerChrysler OM442LA
Configuration: V8, integral engine valve brake, camshaft-driven PTO
Cooling system: liquid cooled, with a crankshaft-driven viscous fan and air-to-air aftercooler
Aspiration: turbocharged and aftercooled
Rated power (conforms to SAE J1349): 410 SAE net hp (306 kW) / 429 SAE gross hp (320 kW) @ 2,100 rpm
Maximum net torque: 1,290 lb.-ft. (1,750 Nm) @ 1,200 rpm
Displacement: 892 cu. in. (14.6 L)

**Transmission**

Configuration: Allison HD4560 engine mounted automatic planetary, hydraulically actuated multiple-disc clutches, electronic control, hydrodynamic torque converter with lock-up
Stall torque ratio: 1.91 to 1
Vehicle speeds (full load, 2% rolling resistance):

<table>
<thead>
<tr>
<th>Gear</th>
<th>Forward (low range)</th>
<th>Reverse (low range)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3 mph (5 km/h)</td>
<td>4 mph (7 km/h)</td>
</tr>
<tr>
<td>2</td>
<td>7 mph (11 km/h)</td>
<td>11 mph (18 km/h)</td>
</tr>
<tr>
<td>3</td>
<td>9 mph (15 km/h)</td>
<td>16 mph (26 km/h)</td>
</tr>
<tr>
<td>4</td>
<td>14 mph (23 km/h)</td>
<td>24 mph (38 km/h)</td>
</tr>
<tr>
<td>5</td>
<td>18 mph (29 km/h)</td>
<td>31 mph (49 km/h)</td>
</tr>
</tbody>
</table>

**Transfer Box**

Configuration: remote two-speed, helical geared with lockable torque-proportioning interaxle differential
Output torque split: 28 front / 72 rear

**Axles**

Differential type: spiral bevel gear with controlled traction
Final drive type: outboard heavy-duty planetary reduction hub

**Braking System**

Service brake: dual-circuit, air-over-hydraulic, dry-disc brakes on all six wheels
Park and secondary: spring-applied, air-released, automatic slack-adjusting mechanical caliper, driveline-mounted, dry disc
Auxiliary brake: automatic engine valve brake actuation (includes butterfly exhaust brake valve)
Maximum retardation: 340 hp (250 kW)

**Pneumatic System**

Type: four-way pressure protected with air drier, heater and integral unloader valve
System pressure: 135 psi (930 kPa)

**Electrical System**

Voltage: 24 volt
Battery type: twin maintenance free
Battery capacity: 2 x 100 A.h.
Alternator rating: 28 volt, 55 amp

**Steering System**

Type: hydraulically articulated with two double-acting hydraulic cylinders
Angle: 42 degrees side to side
Lock-to-lock turns: 6

**Hydraulic System**

Type: closed-center, load-sensing system
Main pump: axial piston, variable displacement
Application: steering and body-tipping
Flow: 58 gpm (220 L/min.) @ governed engine speed
Pressure: 3625 psi (25,000 kPa)
Secondary pump: axial piston, variable displacement
Application: secondary steering, assist main steering
Flow: 32 gpm (122 L/min.) @ full ground speed

**Flow**

Application: steering and body-tipping
Flow: 58 gpm (220 L/min.) @ governed engine speed
Pressure: 3625 psi (25,000 kPa)
Secondary pump: axial piston, variable displacement
Application: secondary steering, assist main steering
Flow: 32 gpm (122 L/min.) @ full ground speed
Retardation
1. Read from total weight down to % total resistance (diagonal line). 2. From that point, read horizontally to curve with highest attainable speed range. 3. Read down to maximum descent speed.

HIGH RANGE
1. Machine Weight x 1000

LOW RANGE
1. Machine Weight x 1000

*Gear 1 lock-up not engaged automatically, engages only when Gear 1 selected manually.

**2% rolling resistance assumed in chart.
Gradeability
1. Read from total weight down to % total resistance (diagonal line). 2. From that point, read horizontally to curve with highest attainable speed range. 3. Read down to maximum speed.

*Gear 1 lock-up not engaged automatically, engages only when Gear 1 selected manually.

**2% rolling resistance assumed in chart.

HIGH RANGE
1. Machine Weight x 1000

LOW RANGE
1. Machine Weight x 1000
**Tires/Wheels 400C**

- **Type**: radial earthmover
- **Size**: 29.5R25
- **Maximum ground pressure (loaded)**: 23 psi (156 kPa) middle

**Suspension**

- **Front type**: semi-independent axle movement, leading A-frame supported on oil/nitrogen suspension struts
- **Rear type**: load-equalizing pivoting walking beams on each axle with laminated suspension blocks

**Body**

- **Capacity**
  - **Struck**: 22 cu. yd. (17 m³)
  - **Heaped**: 29 cu. yd. (22 m³) @ 2 to 1 SAE ratio
  - **Rated payload**: 80,468 lb. (36,500 kg)
  - **Power-down time**: 10 sec.
  - **Raise time**: 19 sec.
  - **Tipping angle**: 70 degrees

**Service Capacities**

- **Fuel tank**: 106 gal. (400 L)
- **Engine oil**: 8.9 gal. (34 L)
- **Engine coolant**: 16.9 gal. (64 L)
- **Transmission fluid (refill)**: 7.3 gal. (28 L)
- **Transfer case oil**: 2.2 gal. (8.5 L)
- **Hydraulic reservoir**: 36.9 gal. (140 L)
- **Axle oil (front)**: 11.8 gal. (45 L)
- **Axle oil (middle)**: 11.8 gal. (45 L)
- **Axle oil (rear)**: 11.8 gal. (45 L)

**Operating Weights**

- **Empty**
  - **Front**: 31,284 lb. (14,190 kg)
  - **Middle**: 16,050 lb. (7,280 kg)
  - **Rear**: 15,388 lb. (6,980 kg)
  - **Total**: 62,722 lb. (28,450 kg)
- **Loaded**
  - **Front**: 45,702 lb. (20,730 kg)
  - **Middle**: 48,965 lb. (22,210 kg)
  - **Rear**: 48,524 lb. (22,010 kg)
  - **Total**: 143,190 lb. (64,950 kg)

**SAE Turning Radius Dimensions**

- **Inside turning circle radius**: 16 ft. 4 in. (4987 mm)
- **Outside turning circle radius**: 30 ft. 9 in. (9208 mm)
Control Owning and Operating Costs

Total Repair Cost Management (TRCM) is part of John Deere’s proactive, fix-before-fail strategy on machine maintenance that will help control costs, increase profits, and reduce stress. Included in this comprehensive lineup of ongoing programs and services are:

- **OilScan® Plus program** – tells you what’s going on inside all of your machine’s major components so you’ll know if there’s a problem before you see a decline in performance. OilScan Plus oil analysis is included in most SECURE®-Extended warranty and preventive-maintenance agreements.

- **Component life-cycle data** – gives you vital information on the projected life span of components and lets you make informed decisions on machine maintenance and replacement.

- **Preventive Maintenance (PM) agreements** – give you a fixed cost for maintaining a machine for a given period of time. They also help you avoid downtime by ensuring that critical maintenance work gets done right and on schedule. On-site preventive maintenance service performed where and when you need it helps protect you from the expense of catastrophic failures and lets you avoid waste-disposal hassles.

- **SECURE-Extended warranty** – gives you a fixed cost for machine repairs for a given period of time so you can effectively manage costs. Whether you work in a severe-service setting or just want to spread the risk of doing business, this is a great way to custom-fit coverage for your operation. And a SECURE-Extended contract also travels well because it’s backed by John Deere and is honored by all Deere construction dealers.

- **Customer Support Advisors (CSAs)** – Deere believes the CSA program lends a personal quality to Total Repair Cost Management. Certified CSAs have the knowledge and skills for helping make important decisions on machine maintenance and repair. Their mission is to help you implement a plan that’s right for your business and take the burden of machine maintenance off your shoulders.

Specifications and design subject to change without notice. Wherever applicable, specifications are in accordance with SAE standards. Except where otherwise noted, these specifications are based on a unit with ROPS cab; 29.5R25, radial earthmover tires; full fuel tank; 175-lb. (79 kg) operator; and standard equipment. Capacity and loaded weights are based on 2,800-lb./cu. yd. (1660 kg/m³) material.