

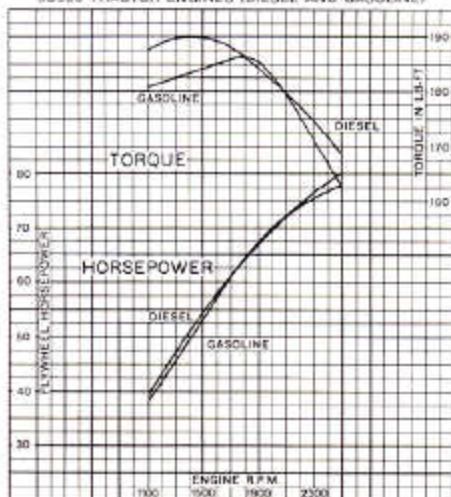


# JD500 TRACTOR



## ENGINE PERFORMANCE

JD500 TRACTOR ENGINES (DIESEL AND GASOLINE)



CURVES SHOWN ARE FOR A COMPLETE ENGINE DIRECT CONNECTED TO AN ELECTRIC DYNAMOMETER. DATA SHOWN ARE OBSERVED.

## FEATURES

**Compact low-profile design for good stability, easy maneuverability, excellent operator visibility**

**Smooth-running 4-cylinder engine—Diesel or gasoline. Precise fuel metering and extra-capacity breathing characteristics assure lowest operating costs**

**Power Shift Transmission provides on-the-go shifting without clutching—8 forward speeds—4 reverse speeds. Collar Shift Transmission also available**

**Approximately 7,500 pounds drawbar pull**

**Power steering, power brakes for easy, full-time positive control**

**Available with loader and backhoe**  
**Also accommodates drawn or 3-point-hitch-mounted equipment.**  
**Powers PTO-driven machines**

## SPECIFICATIONS

*(Specifications and design are subject to change without notice. Wherever applicable, specifications are in accordance with IEMC and SAE Standards.)*

### HORSEPOWER (at 2,500 rpm):

Net engine flywheel (at 500-ft. altitude and 85° F. temp.):

Diesel .....	80.0
Gasoline .....	77.7

### Engine options: John Deere

- 4-cycle, 4-cylinder Diesel
- 4-cycle, 4-cylinder Gasoline

Operating range (rpm)..... 1500-2500

### Bore and stroke; Displacement:

- Diesel: 4-1/4 x 4-3/4; 270 cu. in. displ.
- Gasoline: 4-1/4 x 4; 227 cu. in. displ.

### Transmission options and speed ranges:

- Power Shift: 8 fwd. speeds from 1.6 to 17.0 mph; 4 rev. speeds from 1.9 to 5.4 mph.
- Collar Shift: 8 fwd. speeds from 1.7 to 15.3 mph; 2 rev. speeds from 3.5 to 5.4 mph.

### Shipping weight, approx.:

Diesel.....	7173 lb.
Gasoline.....	7033 lb.

## SPECIFICATIONS

(Specifications and design are subject to change without notice. Wherever applicable, specifications are in accordance with IEMC and SAE Standards.)

<b>HORSEPOWER</b> (at 2,500 engine rpm):	<b>Gasoline</b>	<b>Diesel</b>
Net engine flywheel (at 500-ft. altitude and 85° F. temp.):	77.7	80.0

**TRAVEL SPEEDS** (at 2,500 engine rpm):

Shift Lever Position	Travel Speeds (mph)*	
	Power Shift	Collar Shift
1st	1.6	1.7
2nd	2.3	2.7
3rd	3.6	3.6
4th	4.6	4.6
5th	6.0	5.6
6th	7.7	7.5
7th	10.2	9.4
8th	17.0	15.3
Rev. 1	1.9	3.5
Rev. 2	2.7	5.4
Rev. 3	4.2	
Rev. 4	5.4	

\*Travel speeds based on 16.9-28 tires; without slip.

**ENGINE:** Vertical, 4-cylinder, valve-in-head, 4-stroke cycle, gasoline or Diesel.

	<b>DIESEL</b>	<b>GASOLINE</b>
Bore and stroke	4-1/4 x 4-3/4	4-1/4 x 4
Piston displacement	270 cu. in.	227 cu. in.
Compression ratio	16.5 to 1	7.6 to 1
Governed speed range	600-2500 rpm	600-2500 rpm
Maximum torque	189 lb. ft.	186 lb. ft.
RPM at maximum torque	1400	1800
Lubrication	Full pressure, full flow with bypass relief valve, replaceable micronic filter	
Crankshaft	Induction-hardened, Counterbalanced counterbalanced	
Main and connecting rod bearings	Steel-backed, copper-lead-tin lined, removable.	
Main bearings:		
Number	5	3
Diameter	3.375 in.	3.375 in.
Length	1.385 in.	1.385 in.
Cooling	Pressurized with water pump, thermostat and fixed bypass.	
Governor	Integral with injection pump	Enclosed flyball type
Carburetor		Up draft type with load and idle adjustment
Fuel injection pump	Opposed plunger, inlet metering, single cylinder distributor type	
▲ Air cleaner	Dry type	Dry type
Electrical system	24-volt (two 12-volt batteries) with alternator; 12-volt accessories	
Starting	24-volt electric starter	12-volt electric starter

**ENGINE CLUTCH:**

Power Shift: No engine clutch.

Collar Shift: Engine clutch is foot-operated, spring-loaded, dry-disk type. Single plate (12-inch) with 149 sq. in. facing area (both sides); no allowance for grooves or rivet holes. Torque capacity: 4490 lb. in. at 2500 engine rpm.

**TRANSMISSION:**

Power Shift: Full-power shift, 8 forward speeds. Power shift from forward to reverse in first 4 gears. Left-hand reverser lever.

Collar Shift: Constant mesh, manual transmission. 8 forward speeds and 2 reverse selections. Left-hand reverser lever.

<b>FINAL DRIVE:</b> Planetary type	<b>Power Shift</b>	<b>Collar Shift</b>
Gear reduction ratio in first gear	227 to 1	214 to 1
Gear reduction ratio in high gear	21.8 to 1	24.2 to 1

▲ INDICATES CHANGE FROM LAST PRINTING.

**BRAKES:** Foot-operated individually or simultaneously. Hydraulically power actuated, wet disk type.**STEERING:** Power. Entirely hydraulic—actuated by the central hydraulic pump.  
Turning radius (brake applied) ..... Approx. 147 in.  
Turning radius (brakes released) ..... Approx. 150 in.**Vehicle clearance circle:**With brakes ..... Approx. 302 in. dia.  
Without brakes ..... Approx. 312 in. dia.  
Number of turns, far left to far right ..... 4-2/3**HYDRAULIC SYSTEM:** A central hydraulic system, constant pressure. Oil supplied from transmission and differential. Variable displacement pump driven from front of engine; maximum output at 2100 rpm, 24.5 gpm at 2000 psi. Provides power for power steering, power brakes, 3-point hitch rockshaft, and single or dual selective control function for remote cylinders and loader, backhoe, or similar equipment.**POWER TAKEOFF:** Special equipment. Independent "Live," 540-1000 rpm rear PTO. Hand lever clutch. Front power takeoff for 1000-rpm equipment.**TIRES** (Sizes and plies\*):Front: 7:50-16, 8-ply HD Truck    Rear: 16.9-28, 8-ply, Industrial  
\*Additional tire sizes available to meet special requirements.**WHEEL TREADS:**Front ..... 56 in. (fixed)  
Rear ..... 63 in. and 73 in. (14.9-28, 16.9-28, and 14.00-24 tires)**DIMENSIONS** (with 16.9-28 rear tires, 7:50-16 front tires):Height to top of hood ..... 59-5/8 in.  
Over-all height ..... 81-7/8 in.  
Over-all width ..... 96 in.  
Over-all length ..... 126-1/4 in.  
Wheelbase ..... 82 in.  
Ground clearance ..... 12-5/8 in.**WEIGHT** (approximate):

	Power Shift		Collar Shift	
	Diesel	Gasoline	Diesel	Gasoline
Shipping (8:25-16, 10-ply and 16.9-28, 6-ply tires)	7173 lb.	7033 lb.	6945 lb.	6805 lb.
Operating (no ballast)	7433 lb.	7293 lb.	7205 lb.	7065 lb.

**CAPACITIES:**Cooling system ..... 19 qt.  
Fuel tank, gasoline and Diesel ..... 25 gal.  
Engine lubrication, including filter ..... 8 qt.  
**Transmission-Hydraulic System:**  
  Power Shift ..... 14 gal.  
  Collar Shift ..... 9-1/2 gal.**STANDARD EQUIPMENT:**Power steering ..... Cigarette lighter  
Muffler ..... Trans temp. gauge (Power Shift)  
Front, rear and panel lights ..... Tachometer  
Fuel gauge ..... Key ignition switch  
Oil pressure indicator light ..... starting fluid applicator for Diesel engine  
Generator charge indicator light ..... Air cleaner  
Water temperature gauge ..... Fenders  
Trans. lube pressure gauge (Power Shift) ..... Drawbar  
Push-button starter ..... Seat: Deluxe with suspension  
Muffler cover**OPTIONAL EQUIPMENT:**Engine: Gasoline or Diesel.  
Transmission: Power Shift or Collar Shift.  
Tires: Sizes, plies, and types as listed.  
Differential lock.**SPECIAL EQUIPMENT:**Hydraulic system: ..... Front-end weights  
  Rockshaft ..... Rear-wheel weights  
  Single or dual remote cylinder control ..... Electric hour meter  
  Hydraulic stop remote cylinder with override (3 x 8) ..... Vertical air stack with pre-cleaner  
  Universal 3-point hitch ..... Muffler extension  
  Equipment quik-coupler ..... Pre-screener  
  Dual speed PTO (540 and 1,000 rpm) ..... Oil heater element  
  1,000-rpm PTO ..... High-altitude pistons  
  Belt pulley ..... Equipment warning light  
  ..... Instrument panel cover  
  ..... Electric horn