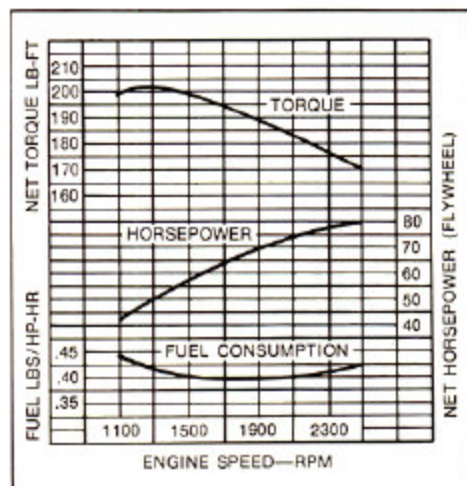




# JD510 BACKHOE LOADER



## ENGINE PERFORMANCE



## FEATURES

- 80 SAE net hp (59.7 kW)
- Backhoe digging depth (ICED)—17 ft. 2 in. (5.23 m)
- Power Shift transmission
- Choice of 2 self-leveling loader buckets
- Single-lever loader control
- Single, swing-around seat
- Choice of 4 heavy-duty backhoe buckets
- Choice of 9 ADCO™ buckets specially designed for rock, frost and other tough digging conditions
- Two-lever backhoe control
- Extendable dipperstick available
- Power steering
- Self-adjusting wet-disk power brakes
- Inboard planetary final drives
- Roll-over protective structure (ROPS)

TED B. MILLER CO., INC  
GERING, NEB.

# JD510 BACKHOE LOADER SPECIFICATIONS

(Specifications and design subject to change without notice. Wherever applicable, specifications are in accordance with ICED and SAE Standards. Except where otherwise noted, these specifications are based on a unit equipped with 1½ cu. yd. (0.86 m³) loader bucket, 24 in. (610 mm) backhoe bucket, diesel engine and standard equipment.)

<b>Power (@ 2500 engine rpm):</b>	<b>SAE</b>	<b>DIN</b>
Gross .....	83 hp (61.9 kW)	
Net .....	80 hp (59.7 kW)	85.0 PS

Net engine flywheel power is for an engine equipped with fan, air cleaner, water pump, lubricating oil pump, fuel pump, alternator, and muffler. Gross engine power is without fan. Flywheel power ratings are under SAE standard conditions of 500-ft. altitude and 65° F. temperature and DIN 70 020 standard conditions of 760 mm Hg barometer (sea level) and 20° C. temperature.

**Engine:** John Deere diesel, 4-cylinder, 4-stroke cycle

Bore and stroke .....	4.25 × 4.75 in. (108 × 121 mm)
Piston displacement .....	270 cu. in. (4.425 L)
Compression ratio .....	17.3 to 1
Maximum torque @ 1,300 rpm ..	202 lb-ft (274 Nm) (27.9 kg-m)
NACC or AMA (U.S. Tax) horsepower ..	28.9
Main bearings .....	5
Lubrication .....	Pressure system w/full-flow filter
Cooling .....	Pressurized w/thermostat and fixed bypass
Fan .....	Suction
Air cleaner w/restriction indicator .....	Dry
Electrical system .....	12-volt w/alternator
Batteries (2 6 volt) .....	Reserve capacity: 340 minutes each

### Transmission:

Full power shift, 8 speeds forward, 4 reverse: Power shift from forward to reverse in first 4 gears.

Gear:	Travel Speeds:	
	mph	km/h
Forward 1	1.7	2.7
2	2.4	3.9
3	3.8	6.1
4	4.9	7.9
5	6.3	10.1
6	8.1	13.0
7	10.8	17.4
8	18.0	29.0
Rev. 1	2.0	3.2
2	2.8	4.5
3	4.4	7.1
4	5.7	9.2

**Final Drives** .....

**Brakes** .....

### Steering: Power

Turning radius (brake applied) .....

Loader clearance (brake applied) .....

Number of turns, far left to far right .....

### Hydraulic System: Closed-center

Max. pressure .....

Loader control .....

Backhoe control .....

Pump .....

60 gpm (3.78 L/s) @ 2500 engine rpm

Filter .....

Hydraulic Cylinders:	Bore	Stroke
Loader boom .....	3.75 in. (95 mm)	28.7 in. (729 mm)
Loader bucket .....	3.5 in. (89 mm)	27.3 in. (693 mm)
Backhoe boom .....	5.5 in. (140 mm)	41.75 in. (1060 mm)
Backhoe crowd .....	5.5 in. (140 mm)	37.5 in. (953 mm)
Backhoe bucket .....	4 in. (102 mm)	37.5 in. (953 mm)
Backhoe swing .....	4.5 in. (114 mm)	9.9 in. (251 mm)
Stabilizer .....	4.5 in. (114 mm)	21.5 in. (546 mm)
Cylinder rods .....	Ground, heat-treated, chrome-plated, polished	
Loader cylinder rods .....	2 in. (51 mm) dia.	
Backhoe boom, crowd, bucket and stabilizer cylinder rods .....	2.5-in. (64 mm) dia.	
Backhoe swing cylinder rods .....	2 in. (51 mm) dia.	

### Tires:

Front: 14.5/75-16.1, 10-ply-rating, F3  
Rear: 18.4-28, 12-ply-rating, R4

### Wheel Treads:

Front .....

Rear .....

Capacities:	U.S.	Imp.	Liters
Cooling system .....	4.75 gal.	4.0 gal.	18.0
Fuel tank .....	34 gal.	28.3 gal.	128.7
Engine lubrication, including filter .....	8 qt.	6.7 qt.	7.6
Transmission and hydraulic system .....	29.9 gal.	25.0 gal.	113.2

## OPERATING INFORMATION

### LOADER:

Rollback at ground level .....

Breakout force .....

Digging depth below ground level (with bucket level) .....

Lifting capacity, full height .....

Height to bucket hinge pin .....

Maximum dump angle .....

Clearance, bucket dumped at 45 degrees ..

Reach at maximum height, bucket dumped at 45 degrees .....

Raising time to full height .....

Bucket dump time .....

Lowering time (power) .....

### BACKHOE:

Digging depth (ICED):

Maximum .....

2-ft. (610 mm) flat bottom .....

8 ft. (2.44 m) flat bottom .....

Swing arc .....

Lifting capacity:

Boom at full reach and full height .....

Dipper lifting, boom holding, full height ..

Digging force (Bucket cylinder in power-dig position) .....

▲ Digging force (Bucket cylinder in power-dig position) .....

Digging force, crowd cylinder .....

Reach from center of swing mast .....

Reach from center of rear axle .....

Loading height (truck-loading position) ..

Transport height .....

Bucket rotation .....

Bucket positions .....

### Stabilizer Width:

Transport position .....

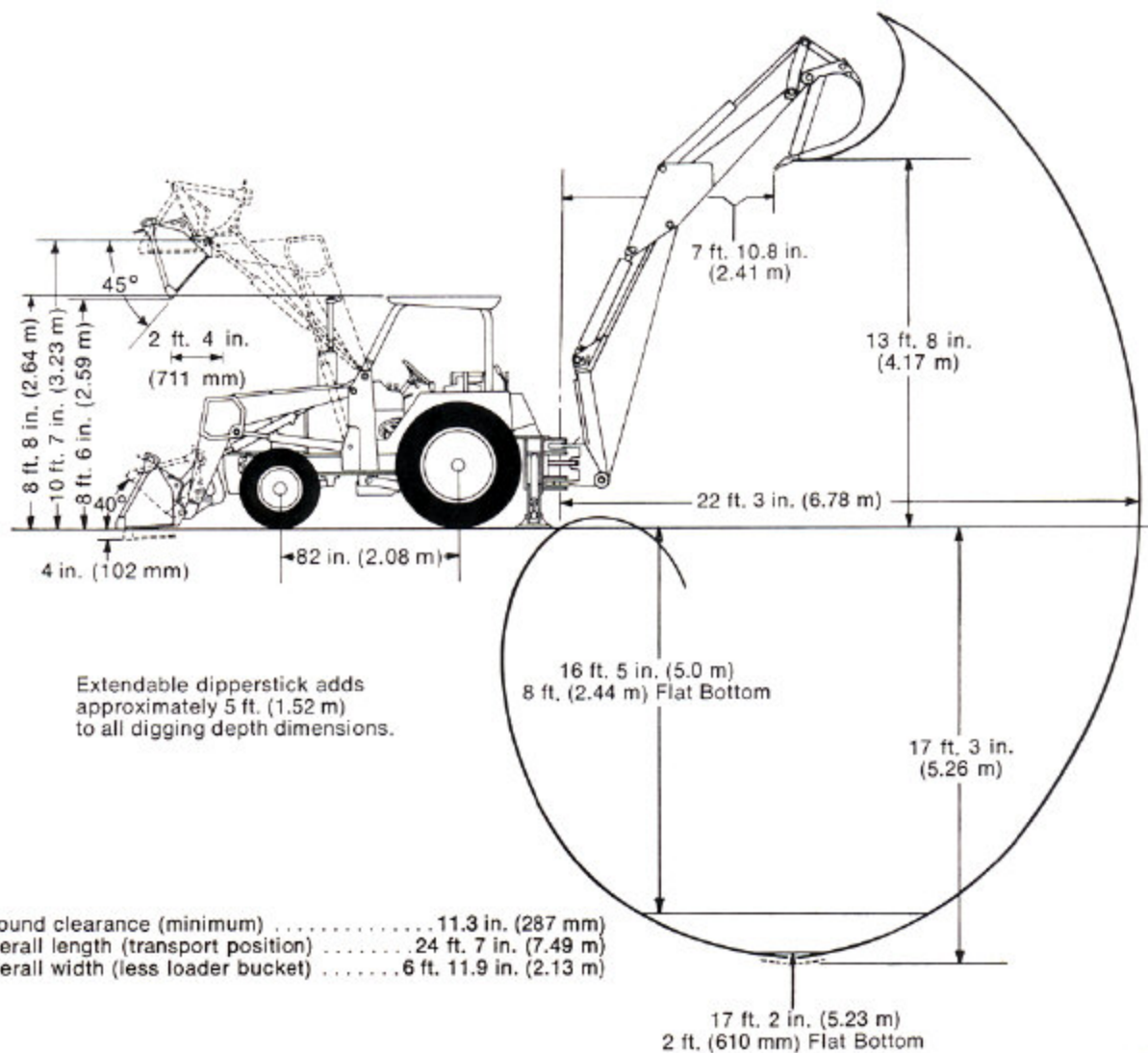
Operating position (overall) .....

Operating position (ICED) .....

### Buckets:

LOADER	Nominal Heaped Capacity	Width
	1½ cu. yd. (0.86 m³)	90.5 in. (2.30 m)
	1½ cu. yd. (1.15 m³)	94 in. (2.39 m)
BACKHOE	Struck Capacity	Width
	8 cu. ft. (0.227 m³)	18 in. (457 mm)
	10 cu. ft. (0.283 m³)	24 in. (610 mm)
	12 cu. ft. (0.340 m³)	30 in. (762 mm)
	14 cu. ft. (0.396 m³)	36 in. (914 mm)

# JD510 BACKHOE LOADER DIMENSIONS



## Additional Standard Equipment:

Vertical muffler w/ rain cap  
 Differential lock  
 Fuel gauge  
 Lights  
 Oil pressure indicator light  
 Alternator charge indicator light  
 Water temperature gauge  
 Transmission oil pressure indicator light  
 Cigarette lighter  
 Transmission oil temperature gauge  
 Tachometer  
 Key switch w/ push-button safety start  
 Fenders  
 Vandal protection  
 Horn  
 Hand throttle  
 Foot throttle  
 Electric hourmeter  
 Deluxe swing-around seat  
 Antifreeze  
 Ether starting aid  
 Bucket level indicator  
 Rear reflector  
 Transistorized voltage regulator  
 Flat deck w/ skid-proof platform

SAE Operating Weight ..... 20,560 lb. (9326 kg)

## Special Equipment:

ROPS w/ canopy and seat belt  
 Cab (includes ROPS and seat belt)  
 Heater  
 Defroster  
 Pressurizer for cab  
 Exhaust extension  
 Bolt-on stabilizer street pads  
 Extendable dipperstick  
 Reversible stabilizer pads  
 Parking brake  
 ▲ Backup alarm