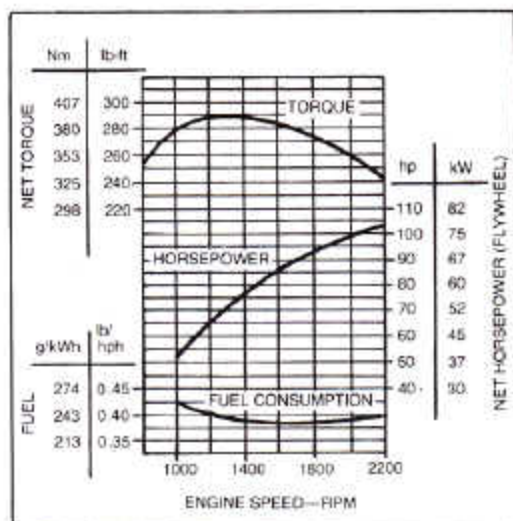




710B BACKHOE LOADER



ENGINE PERFORMANCE



FEATURES

- 100-SAE-net-hp (75 kW) turbocharged John Deere diesel
- Backhoe digging depth (ICED) 17 ft. 10 in. (5.45 m)
- Unitized frame
- Isolated engine and operator's station
- Designed for quietness
- Closed-center hydraulic system
- Weight distributed for working stability
- Self-adjusting hydraulic wet-disk power brakes
- Inboard planetary final drives
- Separate rear axle assembly w/hydraulic power differential lock
- Power-shift transmission w/8 speeds forward, 4 reverse
- Single-lever loader control
- Two-lever backhoe control
- Two-lever stabilizer control
- Multi-adjustable swing-around seat
- Hydrostatic power steering
- Built-in ROPS/FOPS
- Soundproofed cab w/integral ROPS/FOPS
- Vandal protection w/built-in locks

ADD VERSATILITY WITH:
Extendable dipperstick

710B 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 standard machine with 21L-24, 16, PR, R4 rear tires; 14.5/75-16.1, 12 PR, F3 front tires with 75 percent CaCl₂ fill; 1.5-cu.-yd. (1.15 m³) loader bucket; 24-in. (610 mm) backhoe bucket; ROPS/FOPS; full fuel tank and 175-lb. (79 kg) operator.)

Power (@ 2200 engine rpm):	SAE	DIN
Gross	105 hp (78 Kw)	
Net	100 hp (75 kW)	101 hp (74 kW)

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 900-ft. (150 m) altitude and 85 F. (29.5 C) temperature and DIN 70-020 standard conditions of 760 mm Hg barometer (sea level) and 20 C temperature.

Engine: John Deere 6-cylinder turbocharged diesel, valve in head 4-stroke cycle	
Bore and stroke	4.02 x 4.33 in. (102 x 110 mm)
Displacement	329 cu. in. (5.392 L)
Compression ratio	16.2 to 1
Maximum torque @ 1300 rpm	290 lb-ft (393 Nm) (40 kg-m)
NACC or AMA (U.S. Tax) horsepower	38.8
Main bearings	7
Lubrication	Pressure system w/full-flow filter and cooler
Cooling	Pressurized w/thermostat and fixed bypass
Fan	Suction
Air cleaner	Dry
Electrical system	12-volt
Alternator	51 amps w/cab, 35 amps regular

Transmission:

Full power shift, 8 speeds forward, 4 reverse. Modulated, full power shift between forward and reverse in first thru fourth speeds. Reverser operating lever left of steering wheel. Single speed-change lever in right console.

Travel Speeds:	Forward		Reverse	
	mph	km/h	mph	km/h
Gear 1	1.8	2.9	2.2	3.5
2	2.6	4.2	3.2	5.1
3	4.0	6.4	4.9	7.9
4	5.2	8.4	6.4	10.3
5	6.8	11.0		
6	8.8	14.2		
7	11.5	18.5		
8	19.5	31.4		

Final Drives: Planetary, inboard

Brakes: Hydraulic, power actuated, fully enclosed wet-disk. Foot-operated individually or simultaneously; self-equalizing.

Steering: Hydrostatic power

Turning radius (brake applied)	14 ft. 2 in. (4.32 m)
Clearance circle	37 ft. 4 in. (11.40 m)
Steering wheel turns, left to right	3.0
right to left	3.8

Hydraulic System: Closed center (variable flow, constant pressure)

Pressure	2500 psi (17 238 kPa) (175.8 kg/cm ²)
Pump	16 radial pistons, variable flow
Flow @ 2200 psi (15 170 kPa) (154.7 kg/cm ²)	53 gpm (3.34 L/s)
Filter, return oil	10 micron, steel enclosed, replaceable paper element
Screen, pressure oil	50/in. (20/cm) mesh

Hydraulic Cylinders:	Bore	Stroke	Rod
Loader boom (2)	3.75 in. (95 mm)	33.0 in. (840 mm)	2.0 in. (51 mm)
Loader bucket (1)	4.5 in. (114 mm)	26.5 in. (673 mm)	2.0 in. (51 mm)
Backhoe boom (1)	6.0 in. (152 mm)	44.4 in. (1128 mm)	2.75 in. (70 mm)
Backhoe crowd (1)	5.5 in. (140 mm)	35.4 in. (900 mm)	2.75 in. (70 mm)
Backhoe bucket (1)	4.0 in. (102 mm)	37.5 in. (953 mm)	2.5 in. (64 mm)
Backhoe swing (2)	4.5 in. (114 mm)	9.9 in. (251 mm)	2.25 in. (57 mm)

	Bore	Stroke	Rod
Backhoe extendable dipper (1)	3.0 in. (76 mm)	60 in. (1525 mm)	1.5 in. (38 mm)
Backhoe stabilizers (2)	4.5 in. (114 mm)	21.5 in. (546 mm)	2.5 in. (64 mm)
Steering (1) regular axle	2.75 in. (70 mm)	9.0 in. (229 mm)	1.25 in. (32 mm)

Tires:

Front	14.5/75-16.1, 12 PR, F3
Rear	21L-24, 16 PR, R4 20.5-25, 12 PR, L2 or L3

Wheel Treads:

Front	72 in. (1830 mm)
Rear	68 in. (1730 mm)

Wheelbase

Wheelbase	94 in. (2400 mm)
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Axle Ratings: (SAE J43)

Front	12,500 lb. (5670 kg)
Rear	19,400 lb. (8800 kg)

Capacities:

	U.S.	Liters
Engine coolant	28 qt.	26
Engine oil including filter	20 qt.	19
Transmission and hydraulic system	20 gal.	76
Rear axle	18 qt.	17
Fuel tank	33 gal.	125

Additional Standard Equipment

Alternator, 35 amp, w/transistorized voltage regulator
 Backhoe transport lock
 Cast-in counterweight front axle
 Differential lock, foot-engaged hydraulic power
 Electric automatic destroke for hydraulic pump
 Electric combination tachometer/hourmeter
 Electric shutoff on diesel injection pump
 Emergency/parking brake
 Foot and hand throttles
 Fuel tank contaminant sump w/easy access drain
 Gauges for:
 Engine coolant temperature
 Fuel tank level
 Hydraulic/transmission oil temperature
 Horn
 Hydraulic lockouts for stabilizers
 Indicator lights:
 Alternator
 Engine oil pressure
 Parking brake
 Turn signals
 Key switch controls for electrical circuits
 Lights, road operation and work site
 Loader bucket automatic hydraulic, self-leveling
 Loader bucket level indicator
 Multiple-fuse-protected electrical system
 Oil-to-air cooler for hydraulic system and transmission
 Oil-to-air cooler for torque converter and reverser
 Pushbutton safety start switch
 Rear fenders
 Rear reflectors
 Restriction indicator for engine air cleaner
 ROPS/FOPS with roof and seat belt
 Steps and handholds

SAE Operating Weight 21,800 lb. (9890 kg)

710B BACKHOE LOADER SPECIFICATIONS

OPERATING INFORMATION

BACKHOE:

Operator control	Two levers
Digging depth (ICED):	
Maximum	17 ft. 11 in. (5.46 m)
2-ft. (610 mm) flat bottom	17 ft. 10 in. (5.45 m)
8-ft. (2440 mm) flat bottom	17 ft. 0 in. (5.20 m)
Swing arc	180 deg.
Lifting capacity:	
Boom lifting, dipper extended	2800 lb. (1270 kg)
Dipper lifting, boom @ 65°	6000 lb. (2720 kg)
Digging force:	
Bucket cylinder in power-dig position	13,500 lb. (60 kN) (6120 kg)
Crowd cylinder	9600 lb. (42.7 kN) (4350 kg)
Reach:	
From center of swing mast	22 ft. 8 in. (6.90 m)
From center of rear axle	26 ft. 9 in. (8.15 m)
Loading height, truck loading position	
position	13 ft. 2 in. (4.01 m)
Transport height	13 ft. 9 in. (4.20 m)
Bucket rotation	Adjustable for 149 or 159 degrees
Bucket positions	0 or 13 degrees rollback

EXTENDABLE DIPPER OPTION:

Operator control	Right foot treadle
Digging depth, 2-ft. (610 mm) flat bottom	
Extended	22 ft. 8 in. (6.90 m)
Retracted	17 ft. 9 in. (5.40 m)
Reach from center of swing mast	
Extended	27 ft. 1 in. (8.25 m)
Retracted	22 ft. 4 in. (6.80 m)
Loading height, truck loading position	
Extended	15 ft. (4.60 m)
Retracted	12 ft. 11 in. (3.95 m)
Digging force, crowd cylinder	
Extended	6700 lb. (29.8 kN) (3040 kg)
Retracted	9600 lb. (42.7 kN) (4355 kg)

STABILIZERS:

Operator control	Two levers
Transport width	8 ft. (2.44 m)
Spread in operating position	11 ft. 5 in. (3.48 m)
Angle rearward	13 degrees

Optional or Special Equipment:

Automatic return-to-dig
 Auxiliary bolt-on cutting edge for loader bucket
 Auxiliary hydraulic valves and circuits for loader and backhoe
 Bolt-on teeth for loader bucket
 Cab with:
 Alternator, 51 amp
 Fabric-covered swivel seat, suspension or non-suspension
 Front defroster fan
 Front and rear wipers
 Integral ROPS/FOPS
 Standard heater
 Cold weather starting aid, remote mounted
 Engine coolant heater
 Extendable dipperstick for backhoe
 Fire extinguisher
 Front frame-mounted counterweight
 Heavy-duty batteries
 Rear defroster fan
 Rear-view mirror, inside mounted, curved, heavy duty
 Reverse warning alarm
 Rear wheel spacers for tire chain clearance
 Reversible stabilizer pads
 Ripper tooth for backhoe, 24 in. (610 mm)
 Rotating beacon light
 Special loader bucket for bolt-on teeth or auxiliary cutting edge
 Swivel seat, vinyl covered, suspension or non-suspension
 SMV emblem
 3-in. (76 mm) seat belt
 Toolbox

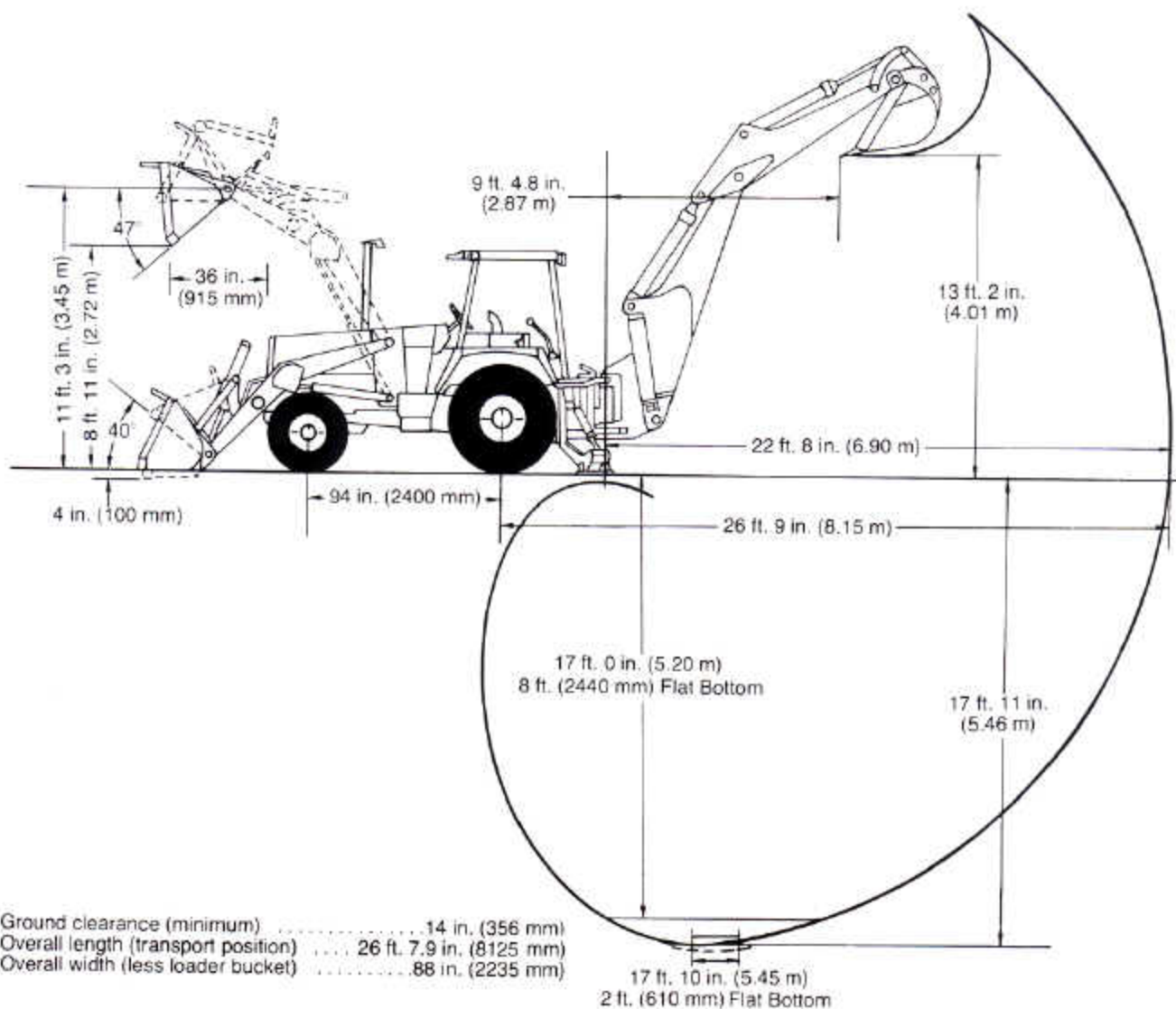
LOADER:

Operator control	Single lever
Rollback @ ground level	40 deg.
Breakout force	10,600 lb. (47.1 kN) (4810 kg)
Digging depth below ground, bucket level	4 in. (100 mm)
Lifting capacity, full height	6900 lb. (3130 kg)
Height to bucket hinge pin, max.	11 ft. 3 in. (3.45 m)
Bucket dump angle, max.	47 degrees
Dump clearance, bucket @ 45 degrees	8 ft. 11 in. (2.72 m)
Reach at full height, bucket @ 45 degrees	36 in. (915 mm)
Raising time to full height	3.8 sec.
Bucket dump time	1.1 sec.
Bucket lowering time (power down)	3.0 sec.

Loader:	Width		Struck Capacity		Heaped Capacity	
	In.	(mm)	Cu. Ft.	(m ³)	Cu. Yd.	(m ³)
	92	(2340)			1.5	(1.15)
Backhoe:	18	(457)	6.7	(0.19)	7.7	(0.22)
	24	(610)	9.4	(0.27)	11.1	(0.31)
	30	(762)	12.2	(0.35)	15.0	(0.42)
	36	(914)	15.0	(0.42)	18.8	(0.53)

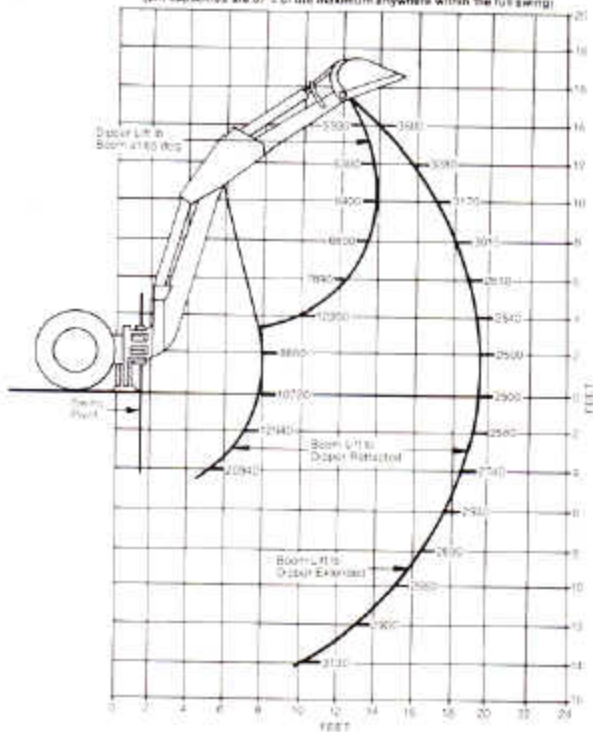


710B BACKHOE LOADER DIMENSIONS



710B BACKHOE LIFT PER SAE J31

(Lift capacities are 87% of the maximum anywhere within the full swing)



710B BACKHOE LIFT PER SAE J31

(Lift capacities are 87% of the maximum anywhere within the full swing)

