



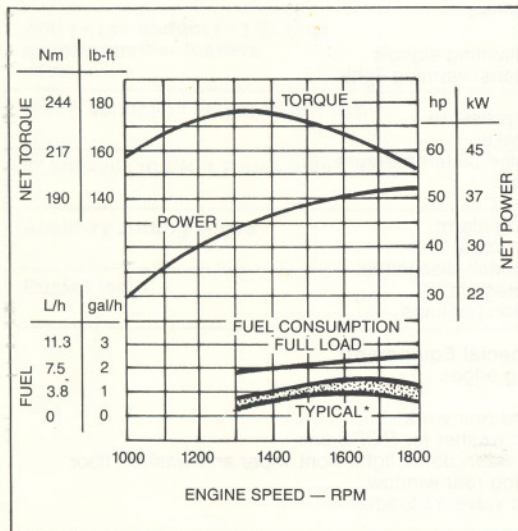
1837-1987
150

84 LOADER



Model shown may include options

ENGINE PERFORMANCE



* Depending on operating variables

FEATURES

52 SAE net hp (39 kW)

Four-wheel drive

1.0 cu. yd. (.8 m³) bucket

Torque converter with Power Shift transmission: three speeds forward, one reverse

Power steering; articulated frame

Four-wheel wet-disk brakes and disk parking brake

Inboard planetary final drives

Single-lever loader control with standard automatic return-to-dig

Roll-over protective structure (ROPS) with canopy. Meets criteria of SAE J394, SAE J1040A, and ISO 3471. Also meets FOPS (falling object protective structure) criteria SAE J231 and ISO 3449

Standard vandal protection

ADD VERSATILITY WITH:

Bucket teeth

Auxiliary cutting edge

Snow removal equipment

84 LOADER SPECIFICATIONS

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 machine with all standard equipment, 17.5/65-20, 10 PR, L2 tires, ROPS cab, full fuel tank, and 175-lb. (80 kg) operator.

Rated Power @ 1800 rpm:	SAE	DIN 70 020
Net	52 hp (39 kW)	40 kW
Gross	55 hp (41 kW)	

Net engine power is with standard equipment including air cleaner, exhaust system, alternator, and cooling fan, at standard conditions per SAE J1349 and DIN 70 020, using No. 2-D fuel @ 35 API gravity. No derating is required up to 5000 feet (1500 m) altitude. Gross power is without cooling fan.

Engine: Yanmar 4TN100

Type	4-stroke cycle, naturally aspirated diesel
Bore and stroke	3.9 x 4.3 in. (100 x 110)
No. of cylinders	4
Displacement	211 cu. in. (3.458 L)
Maximum net torque @ 1200 rpm	174 lb-ft (236 Nm) (24 kg-m)
Cooling fan	Blower
Air cleaner w/restriction indicator	Dry
Electrical system	24 volt w/25-amp alternator
Batteries (two 12 volt)	
25 amps at 80°F (27°C)	Reserve capacity: 81 min. each
BCI group 24 cold cranking capacity at 0°F (-18°C) ..	278 amp

Torque Converter:

Type	Single phase
Torque multiplication	3.00 to 1

Transmission

Power Shift

Forward Speeds:	mph	(km/h)
1	0-5.6	0-9.0
2	0-9.6	0-15.5
3	0-17.7	0-28.5

Reverse Speeds:	mph	(km/h)
1	0-7.1	0-11.5

Differentials:

Front and rear conventional

Drive Axles Inboard-mounted planetary gears to each wheel. Front axle fixed. Rear axle oscillates 16 degrees.

Steering Full power steering. Frame articulated 80 degrees by one hydraulic cylinder.

Turning radius (measured to centerline of outside tire)	12 ft. 6 in. (3.82 m)
Cylinder size: Stroke	9.65 in. (245 mm)
Rod diameter	1.18 in. (30 mm)
Bore	2.36 in. (60 mm)

Brakes:

Service Dual hydraulic, 4-wheel inboard-mounted, wet disk. Foot-operated by either pedal.
Parking 10.9 in. (277 mm) diameter disk on transmission output shaft, hand-operated with warning light.

Hydraulic Systems:

Steering and loader functions An engine-driven gear-type pump delivers 21.1 gpm (1.33 L/s) at 2500 psi (17 238 kPa) (175 kg/cm²) and 1800 engine rpm. Loader function relief valve pressure setting is 2500 psi (17 238 kPa) (175 kg/cm²). Maximum steering pressure is 1850 psi (12 756 kPa) (130 kg/cm²).

Control Single-lever, dual hydraulic valve. Optional triple hydraulic valve with separate lever.

Loader hydraulic operating cycle times at full throttle:

Raise	5.4 sec.
Dump	1.0 sec.
Lowering: float	4.5 sec.
power	3.5 sec.

Maximum lift capacity with 1.0 cu. yd. (.8 m³) general purpose bucket:

Maximum height	4850 lb. (2200 kg)
Ground level	6835 lb. (3100 kg)

Hydraulic Cylinders:

	Bore	Stroke
Boom, two	3.15 in. (80 mm)	22.5 in. (571 mm)
Bucket, one	3.15 in. (80 mm)	18.5 in. (470 mm)
Boom and bucket cylinder rods		1.77 in. (45 mm) dia.

Tires: 17.5/65-20, 10 PR, L2 tubeless w/valve stem protectors

Tread width	61 in. (1550 mm)
Width over tires	79 in. (2005 mm)

Capacities:

	U.S.	Liters
Cooling system	21 qt.	20
Fuel tank	15.3 gal.	58
Crankcase	12 qt.	11.5
Crankcase, including filter	13 qt.	12.5
Transmission case and filters	24 qt.	23
Front and rear differential	10 qt.	9.5
Loader hydraulic sump	74 qt.	70

Additional Standard Equipment:

Adjustable, cushioned vinyl seat
Antifreeze
Articulation transport lock
Automatic return to dig
Counterweight, rear w/drawbar and service step
Differential, conventional
Dual hydraulic valve for loader
Electrical system, 24-volt
Front and rear fenders
Fuel filter
Fuel shut-off, manual
Gauges:
Coolant temperature
Electric hourmeter
Transmission oil pressure
Sight gauges —
Brake oil
Fuel tank
Hydraulic reservoir
Transmission
Hand grips
Horn
Key switch
Lights:
Driving
Stop and tail
Indicator lights —
Engine pre-heat
Hi-beam
Turn and flashing signals
Instrument panel warning lights —
Alternator
Engine oil pressure
Parking brake
Transmission oil temperature
Mirrors, rearview
Muffler
Reverse warning alarm
ROPS canopy w/seat belt
Transmission clutch disconnect
Valve stem protectors
Vandal protection package

Optional or Special Equipment:

Auxiliary cutting edges
Bucket teeth
Lights, front and rear work
Rear wiper and washer for ROPS cab
ROPS cab w/heater, dome light, front wiper and washer, floor mat and sliding rear window
Triple hydraulic valve for loader

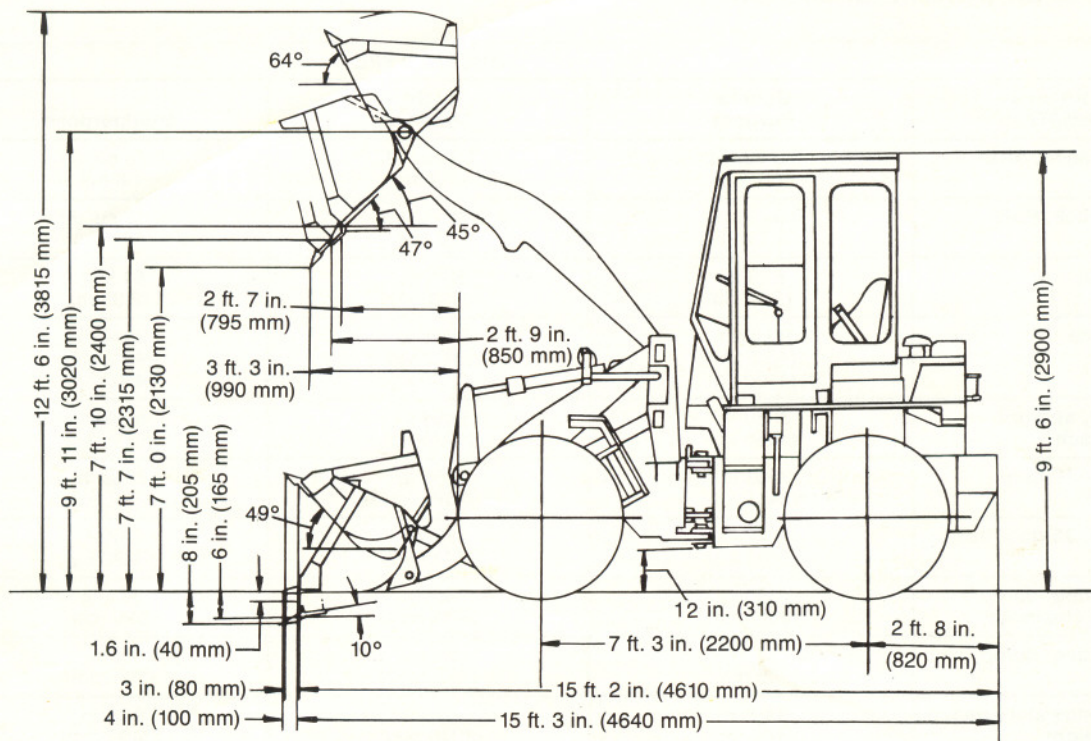
84 LOADER OPERATING INFORMATION

OPERATING INFORMATION	BUCKET TYPE		
	General Purpose	Light Material	Multipurpose
Capacity, heaped, SAE	1.0 cu. yd. (.8 m ³)	1.3 cu. yd. (1.0 m ³)	0.78 cu. yd. (.6 m ³)
Capacity, struck, SAE	0.9 cu. yd. (.7 m ³)	1.17 cu. yd. (.9 m ³)	0.67 cu. yd. (.51 m ³)
Bucket width	81.9 in. (2.08 m)	81.9 in. (2.08 m)	81.9 in. (2.08 m)
Breakout force, SAE J732C	9040 lb. (40.2 kN) (4100 kg)	7795 lb. (34.7 kN) (3535 kg)	9040 lb. (40.2 kN) (4100 kg)
Tipping load, straight, maximum reach	8930 lb. (4050 kg)	8864 lb. (4020 kg)	8192 lb. (3715 kg)
Tipping load, 40-deg. full turn, SAE	7508 lb. (3405 kg)	7453 lb. (3380 kg)	6880 lb. (3120 kg)
Tipping load, 35-deg. turn	7740 lb. (3510 kg)	7682 lb. (3485 kg)	7100 lb. (3220 kg)
Reach at 45-deg. dump, 7 ft. (2.13 m) clearance	39 in. (990 mm)	40 in. (1015 mm)	39.2 in. (995 mm)
Reach at 45-deg. dump, full height	31 in. (790 mm)	34 in. (865 mm)	31 in. (790 mm)
Dump clearance at 45-deg. dump, full height	94.7 in. (2405 mm)	92 in. (2340 mm)	94.5 in. (2400 mm)
Overall length	15 ft. 3 in. (4.65 m)	15 ft. 7 in. (4.75 m)	15 ft. 3 in. (4.65 m)
Loader clearance circle, bucket in carry position	28 ft. 8 in. (8.74 m)	28 ft. 10 in. (8.79 m)	28 ft. 8 in. (8.74 m)
Operating weight	11,246 lb. (5100 kg)	11,316 lb. (5130 kg)	11,742 lb. (5325 kg)

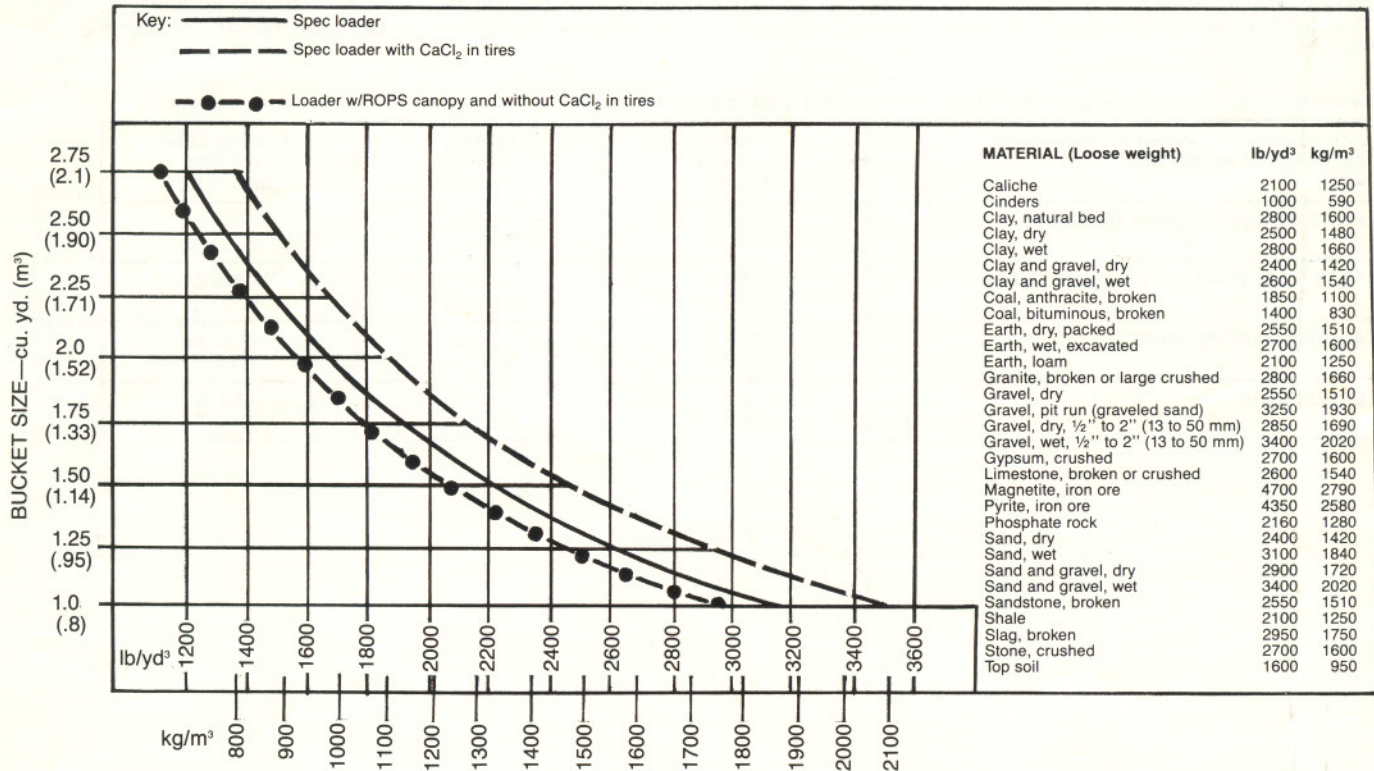
Loader operating information is based on machine with all standard equipment, 17.5/65-20, 10 PR tires with ROPS cab, full fuel tank, 175-lb. (80 kg) operator. Operating information is affected by tire size, ballast and attachments. For selected items, add or subtract the following:

Adjustments to operating weights and tipping loads for 1.0 cu. yd. (.8 m³) bucket

Add (+) or deduct (–) lb. (kg) as indicated for loaders with:	Loader Operating Weight	Tipping Load Straight	Tipping Load 40° Full Turn, SAE
ROPS canopy in lieu of ROPS cab	– 512 lb. (232 kg)	– 529 lb. (240 kg)	– 452 lb. (205 kg)
17.5/65-20, 10 PR, L2 tires with CaCl ₂	+ 750 lb. (340 kg)	+ 1050 lb. (475 kg)	+ 895 lb. (405 kg)
Auxiliary cutting edges	+ 125 lb. (57 kg)	– 155 lb. (70 kg)	– 130 lb. (59 kg)
Bucket teeth	+ 51 lb. (23 kg)	– 62 lb. (28 kg)	– 53 lb. (24 kg)



84 BUCKET SELECTION GUIDE*



*This guide, representing buckets not necessarily manufactured by Deere will help you in selecting proper bucket size for material density and loader configurations. However, specific bucket size should only be determined after adding or subtracting all the tipping load changes due to specifications.