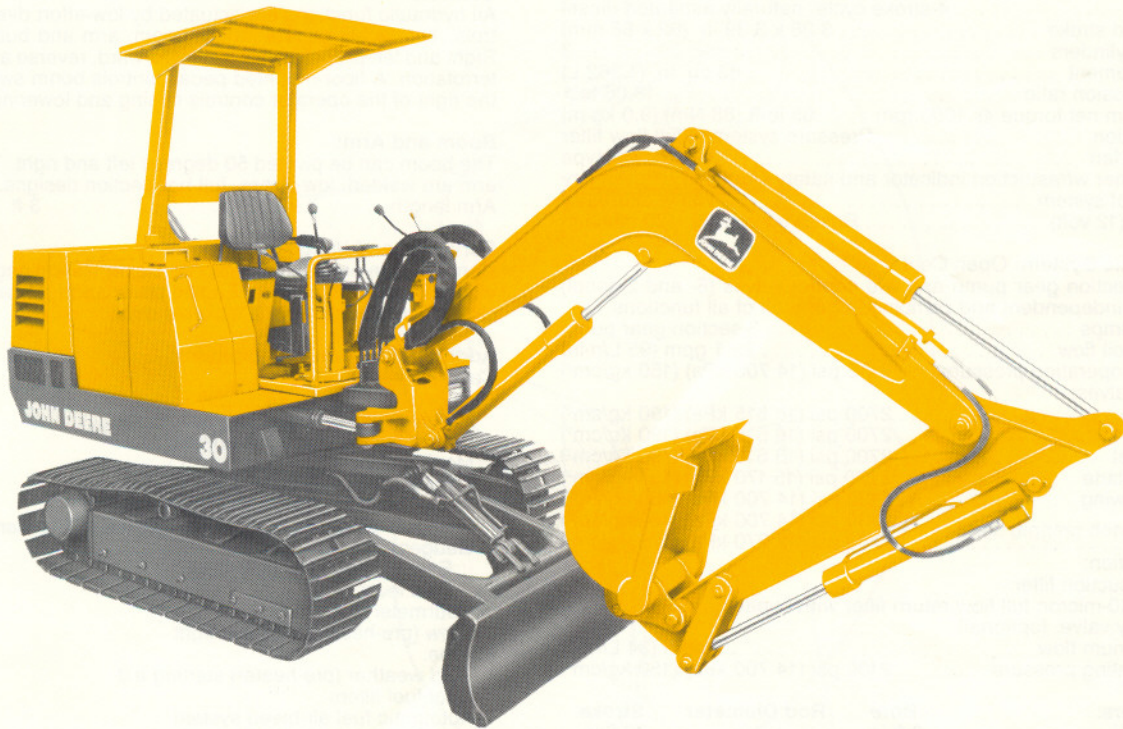




30 EXCAVATOR



Model shown may include options.

FEATURES

24 SAE net hp (18 kW)

6300 lb. (2860 kg) standard operating weight

9 ft. 4 in. (2.85 m) maximum digging depth

14 ft. 11 in. (4.54 m) maximum reach at ground level

Excavator track-type undercarriage with hydraulic track adjustment—1.24 mph (2.0 km/h) maximum travel speed

50-degree pivot boom, left and right, allows tight-quarters digging and adds versatility

Standard dozer blade for backfilling and leveling

Standard walk-through canopy allows easy operator station access—optional high-visibility cab provides all-weather comfort

Exceptionally quiet operation

Easy daily maintenance

30 EXCAVATOR SPECIFICATIONS

Specifications and design subject to change without notice. Wherever applicable, specifications are in accordance with PCSA and SAE Standards. Except where otherwise noted, these specifications are based on a unit with canopy (TOPS), 0.10 cu. yd. (.08 m³) bucket, dozer blade, full fuel tank, 175-lb. (80 kg) operator and standard equipment.

Rated Power @ 2350 rpm:	SAE	DIN 6270
Net	24 hp (18 kW)	18 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 6270, using No. 2-D fuel @ 35 API gravity. No derating is required up to 5000 ft. (1500 m) altitude.

Engine: Yanmar 3TN82-RJB

Type	4-stroke cycle, naturally aspirated diesel
Bore and stroke	3.23 x 3.39 in. (82 x 86 mm)
No. of cylinders	3
Displacement	83 cu. in. (1.362 L)
Compression ratio	18.06 to 1
Maximum net torque @ 1600 rpm	65 lb-ft (88 Nm) (9.0 kg-m)
Lubrication	Pressure system w/full flow filter
Cooling fan	Blower type
Air cleaner w/restriction indicator and safety element	Dry
Electrical system	12 volt w/alternator
Battery (12 volt)	Reserve capacity: 120 minutes

Hydraulic System: Open Center

Three section gear pump and two control valves (6- and 2-spool) provide independent and combined operation of all functions.

Main pumps	3-section gear pump
Max. oil flow	25.1 gpm (95 L/min)
System operating pressure	2130 psi (14 700 kPa) (150 kg/cm ²)
Relief valves:	
Boom	2700 psi (18 615 kPa) (190 kg/cm ²)
Arm	2700 psi (18 615 kPa) (190 kg/cm ²)
Bucket	2700 psi (18 615 kPa) (190 kg/cm ²)
Dozer blade	2200 psi (15 170 kPa) (155 kg/cm ²)
Boom swing	2130 psi (14 700 kPa) (150 kg/cm ²)
Travel	2130 psi (14 700 kPa) (150 kg/cm ²)
Swing	1780 psi (12 270 kPa) (125 kg/cm ²)
Oil filtration:	
One suction filter	
One 10-micron full flow return filter with bypass	
Auxiliary valve: (optional)	
Maximum flow	9 gpm (34 L/min)
Operating pressure	2130 psi (14 700 kPa) (150 kg/cm ²)

Cylinders:	Bore	Rod Diameter	Stroke
Boom (1)	3.2 in. (80 mm)	1.6 in. (40 mm)	23.8 in. (605 mm)
Arm (1)	3.0 in. (75 mm)	1.6 in. (40 mm)	23.6 in. (600 mm)
Bucket (1)	2.8 in. (70 mm)	1.6 in. (40 mm)	20.1 in. (510 mm)
Boom swing (1)	2.8 in. (70 mm)	1.6 in. (40 mm)	14.0 in. (355 mm)
Dozer blade (1)	3.5 in. (90 mm)	2.0 in. (50 mm)	7.3 in. (186 mm)

All cylinders are ground, heat-treated, chrome-plated and polished. Boom cylinder rod end has a built-in hydraulic cushion.

Swing Mechanism:

Swing speed	0-10 rpm
Swing lock	Manual for transporting
Turntable bearing	Single-row, shear-type ball bearing with induction-hardened, lubricated internal gear and pinion.

Undercarriage:

Propel motors (one for each side)

Axial-piston hydraulic motors with planetary drives. Hydraulic brake valve. Independent drive to each track permits counterrotation.

Dozer blade

14 in. (350 mm) high, 5 ft. (1.52 m) wide

Track Frame

Heavy-duty undercarriage frame with all-welded, stress-relieved construction. Side frames welded to track frame.

Tracks and Rollers

Track chain with heat-treated connecting pins. Permanently lubricated track rollers, idlers, and sprockets with floating seals. Hydraulic track adjustment with shock absorbing recoil springs.

Upper rollers (each side)	1
Lower rollers (each side)	4
Track shoes (each side)	40
Track shoe type	Double grouser

Canopy:

Walk-through canopy allows access to operator's station from either side. Canopy frame is a tip-over protective structure (TOPS) with steel roof for operator protection. Both right and left control stands can be locked to prevent unwanted actuation of digging functions. Adjustable vinyl seat, fore and aft.

Controls:

All hydraulic functions are actuated by low-effort direct acting controls. Two levers control swing, boom, arm and bucket functions. Right and left propel levers control forward, reverse and track counterrotation. A floor-mounted pedal controls boom swing. A lever to the right of the operator controls raising and lowering the blade.

Boom and Arm:

The boom can be pivoted 50 degrees left and right. The boom and arm are welded, low-stress, full box-section designs.

Arm length

3 ft. 11 in. (1.20 m)

Servicing and Vandal Protection:

Handrails are provided for easy servicing. Tilt-up engine cover provides unrestricted access. Engine cover and fuel cap have built-in locks. Cab models have a lockable door.

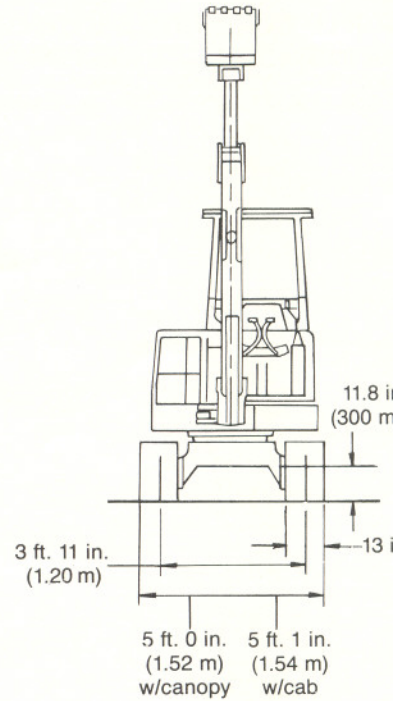
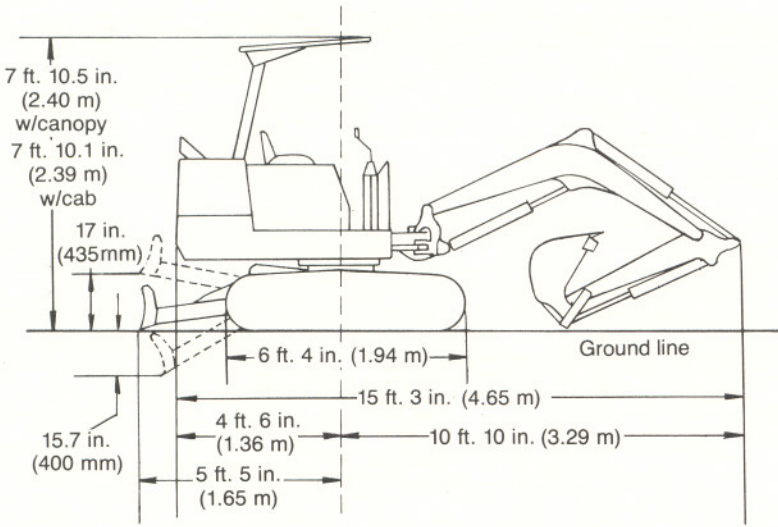
Additional Standard Equipment:

Canopy:	
Horn	
Positive position hand throttle	
Operator's manual compartment	
Monitor system:	
Air cleaner restriction light	
Alternator charge indicator light	
Engine oil pressure warning light w/audible alarm	
Gauges:	
Engine coolant temperature	
Fuel level	
Hourmeter	
Glow (pre-heater) indicator light	
Engine:	
Cold weather (pre-heater) starting aid	
Dual fuel filters	
Automatic fuel air-bleed system	
Lights: (1) Frame mounted	
Front attachment:	
One-piece boom	
Dirt seals on all bucket pins	
Bolt-on bucket teeth	
Undercarriage:	
Propel motor and hydraulic line covers	
Single flange lower track rollers	
Bolt-on rock guards — front idler and drive sprocket	
Seat belt	
Lift hooks	

Optional or Special Equipment:

Cab:	
Cigarette lighter and ashtray	
Coat hook	
Floor mat	
Integral TOPS structure	
Interior light	
Roof hatch	
Vinyl seat with fore and aft adjustment	
Windshield wiper	
Windows:	
Wrap-around split-glass front window, top-half slides vertically	
Roll-down cab door window	
Sliding right-side window	
Auxiliary valve function — for optional attachments	
Control conversion kit (to SAE pattern)	

30 EXCAVATOR SPECIFICATIONS AND DIMENSIONS



Weights:

SAE operating weight w/canopy (TOPS), full fuel tank, operator and bucket	6300 lb. (2860 kg)
Cab (TOPS)	add 310 lb. (140 kg)
Valve auxiliary function	add 66 lb. (30 kg)
Less bucket	deduct 145 lb. (66 kg)

Capacities:

	U.S.	Liters
Fuel tank	11.4 gal.	43
Cooling system	5.8 qt.	5.5
Engine lubrication w/filter	4.2 qt.	4.0
Hydraulic system	22.5 gal.	85
Hydraulic reservoir	17.2 gal.	65
Planetary propel drive (ea. side)	0.5 qt.	0.5
Swing drive	2.4 qt.	2.3

Operating Information:

Dimensions:

Max. digging depth w/o blade	8 ft. 8 in. (2.65 m)
Max. digging depth w/blade	9 ft. 4 in. (2.85 m)
Max. reach @ ground level	14 ft. 11 in. (4.54 m)
Max. dumping height	9 ft. 3 in. (2.83 m)
Max. boom swing angle right/left	50°/50°
Boom offset distance @ maximum	
boom swing angle, right	19.7 in. (500 mm)
left	19.7 in. (500 mm)

Forces:

	3 ft. 11 in. (1.20 m) Arm
Max. arm digging force	2910 lb. (12.9 kN)(1320 kg)
Max. bucket digging force	4520 lb. (20.1 kN)(2050 kg)

Flotation:

	13 in. (320 mm) Shoes
Average ground contact area	1628 sq. in. (10 503 cm ²)
Canopy:	
Average ground pressure	3.87 psi (26.7 kPa)(.272 kg/cm ²)
Cab:	
Average ground pressure	4.05 psi (27.9 kPa)(.285 kg/cm ²)

Performance:

Swing speed	0-10 rpm
Travel speed	1.24 mph (2.0 km/h)
Gradability	58 percent (30 degrees)

BUCKETS:

Bite Width w/Sidecutters	SAE Heaped	Weight
18 in. (450 mm)	.10 cu. yd. (.08 m ³)	145 lb. (66 kg)

30 EXCAVATOR LIFT CAPACITIES WITH CAB

Ratings at bucket lift hook, machine equipped with 13-in. (320 mm) shoes, 0.10 cu. yd. (0.08 m³) PCSA counterweight, situated on firm, uniform supporting surface. **Boldface** type indicates hydraulic-limited capacities, lightface type indicates stability-limited capacities, in lb. (kg). Figures do not exceed 87 percent of hydraulic capacities or 75 percent of weight needed to tip machine.

Blade on Ground

Note: Upper figure - lifting over front (blade end)
Lower figure - lifting over side or 360 degrees

	6 ft. 7 in. (2.0 m)	9 ft. 10 in. (3.0 m)	@ Max. Reach
9 ft. 10 in. (3.0 m)	— —	925 (420) 925 (420)	970 (440) 970 (440)
6 ft. 7 in. (2.0 m)	— —	1102 (500) 1102 (500)	1036 (470) 904 (410)
3 ft. 3 in. (1.0 m)	— —	1500 (680) 1500 (680)	1146 (520) 838 (380)
Ground	3175 (1440) 2050 (930)	1675 (760) 1190 (540)	1190 (540) 794 (360)
-3 ft. 3 in. (-1.0 m)	2755 (1250) 2205 (1000)	1587 (720) 1168 (530)	1278 (580) 970 (440)
-4 ft. 11 in. (-1.5 m)	2645 (1200) 2094 (950)	— —	1389 (630) 1410 (640)

Blade Above Ground

Note: Upper figure - lifting over front or rear
Lower figure - lifting over side or 360 degrees

	6 ft. 7 in. (2.0 m)	9 ft. 10 in. (3.0 m)	@ Max. Reach
9 ft. 10 in. (3.0 m)	— —	925 (420) 925 (420)	970 (440) 970 (440)
6 ft. 7 in. (2.0 m)	— —	1102 (500) 1102 (500)	882 (400) 882 (400)
3 ft. 3 in. (1.0 m)	— —	1500 (680) 1257 (570)	816 (370) 794 (360)
Ground	2160 (980) 2072 (940)	1124 (510) 1124 (510)	772 (350) 772 (350)
-3 ft. 3 in. (-1.0 m)	2249 (1020) 2183 (990)	1124 (510) 1124 (510)	970 (440) 948 (430)
-4 ft. 11 in. (-1.5 m)	2645 (1200) 2116 (960)	— —	1388 (630) 1410 (640)

30 EXCAVATOR LIFT CAPACITIES WITH CANOPY

Ratings at bucket lift hook, machine equipped with 13-in. (320 mm) shoes, 0.10 cu. yd. (0.08 m³) PCSA heaped bucket and s counterweight, situated on firm, uniform supporting surface. **Boldface** type indicates hydraulic-limited capacities, lightface type indicates stability-limited capacities, in lb. (kg). Figures do not exceed 87 percent of hydraulic capacities or 75 percent of weight needed to tip machine.

Blade on Ground

Note: Upper figure - lifting over front (blade end)
Lower figure - lifting over side or 360 degrees

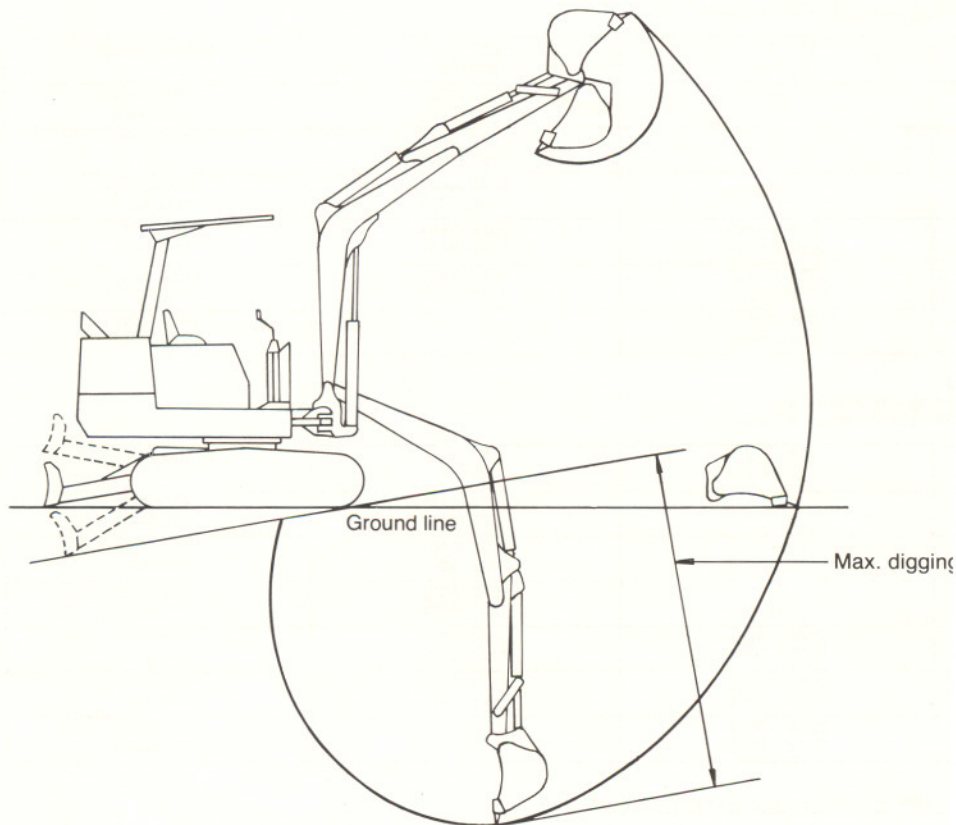
	6 ft. 7 in. (2.0 m)	9 ft. 10 in. (3.0 m)	@ Max. Reach
9 ft. 10 in. (3.0 m)	— —	926 (420) 926 (420)	970 (440) 970 (440)
6 ft. 7 in. (2.0 m)	— —	1102 (500) 1102 (500)	1036 (470) 794 (360)
3 ft. 3 in. (1.0 m)	— —	1500 (680) 1213 (550)	1146 (520) 750 (340)
Ground	3175 (1440) 1984 (900)	1676 (760) 1124 (510)	1190 (540) 728 (330)
-3 ft. 3 in. (-1.0 m)	2756 (1250) 2094 (950)	1587 (720) 1058 (480)	1279 (580) 904 (410)
-4 ft. 11 in. (-1.5 m)	2646 (1200) 2160 (980)	— —	1389 (630) 1124 (510)

Blade Above Ground

Note: Upper figure - lifting over front or rear
Lower figure - lifting over side or 360 degrees

	6 ft. 7 in. (2.0 m)	9 ft. 10 in. (3.0 m)	@ Max. Reach
9 ft. 10 in. (3.0 m)	— —	926 (420) 926 (420)	970 (440) 970 (440)
6 ft. 7 in. (2.0 m)	— —	1102 (500) 1102 (500)	816 (370) 794 (360)
3 ft. 3 in. (1.0 m)	— —	1168 (530) 1146 (520)	728 (330) 728 (330)
Ground	2006 (910) 1874 (850)	1124 (510) 1058 (480)	728 (330) 683 (310)
-3 ft. 3 in. (-1.0 m)	1984 (900) 1984 (990)	1014 (460) 1036 (470)	838 (380) 860 (390)
-4 ft. 11 in. (-1.5 m)	2646 (1200) 2160 (980)	— —	1389 (630) 1124 (510)

Digging Depth and Reach:



Boom swing angle

