490

Maximum digging depth is 19 ft. 7 in. (5.97 m); reach is 28 ft. 1 in. (8.55 m), and dump height is 18 ft. (5.49 m).

Two low-effort levers control all dig and swing functions. Variable-flow hydraulics give maximum power in digging, faster speeds in dumping.

Fast swing, almost 13 rpm, speeds production. Yet, you swing and stop smoothly according to lever stroke.

Easy-to-transport size speeds moves between jobs. On the job, travel speed is 2.2 mph (3.6 km/h). Gradability is 70 percent, continuous.

IF YOU THINK A 26,000-LB.* EXCAVATOR IS LIGHT ON PRODUCTION AND RELIABILITY, TAKE A CLOSE LOOK AT 490

Until you see a 490 in action, you might think it's too small for you. But don't be fooled by its size.

John Deere's 490 offers advanced benefits you might expect only on a larger machine. Twin-pump, variable-flow hydraulics for smooth combined operations. Turbo-charged John Deere diesel with heavy-duty components. A roomy, comfortable cab with low-effort, direct-acting controls.

Plus, you get the advantages of easier hauling, less fuel consumption, faster servicing, and less overall cost.

window slides open for ventilation. Front window wiper. Left control lever can be locked back for easier entry and exit of operator. Centralized monitoring with alarm system is standard equipment.

Seat:
Fully adjustable deluxe reclining seat with armrests.

Controls:
All hydraulic functions are controlled by low-effort direct-acting linkage. Two short levers control swing, boom, arm and bucket functions. Right and left pedals control forward, reverse and counterrotation movements.

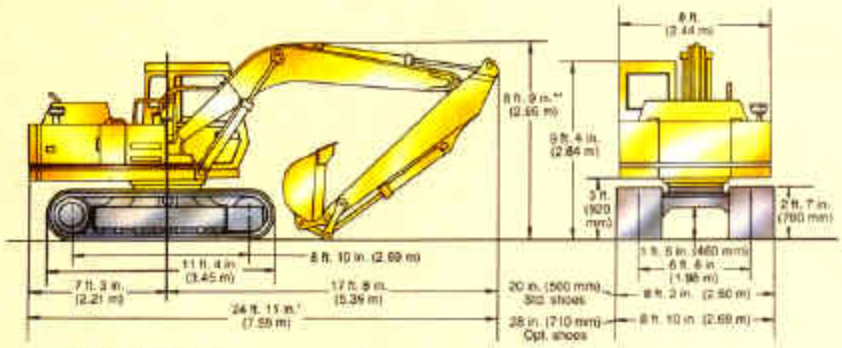
Boom and Arm:
Welded, low-stress, full box-section design. Centralized lubrication system.

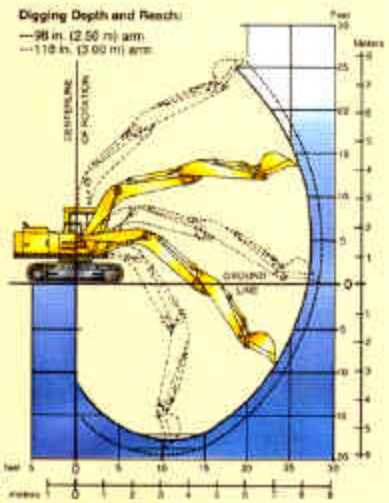
Servicing and Vandal Protection:
Non-slip steps and handrails allow easier servicing and maintenance. Easily accessible engine and hydraulic system covers. Machine covers, fuel cap and cab door are lockable.

Capacities	**U.S.**	**Liters**
Fuel tank	66 gal.	250
Cooling system	32 qt.	30.3
Engine lubrication including filter	20 qt.	18.9
Hydraulic system	42.2 gal.	160
Planetary propel drive (each side)	6.9 qt.	6.5
Swing drive	3.2 qt.	3.0
Weights:	**lb.**	**kg**
Operating weight (w/full fuel tank, operator, less bucket)	25,450	11 544
Upper structure with (2) boom cylinders, undercarriage with 20 in. (500 mm) triple-grouser shoes, full fuel tank and counterweight	22,050	10 002
Undercarriage with 28-in (710 mm) triple-grouser shoes (add)	1210	549
One-piece boom with arm cylinder	2026	919
Std. 98-in (2.5 m) arm with bucket cylinder and linkage	1199	544
Optional 118-in. (3.0 m) arm with bucket cylinder and linkage	1355	615
Counterweight	4190	1900

Additional Standard Equipment: Cab: heater; horn; windshield wiper; interior light; positive-position hand throttle; monitor package with alarm system, includes: alternator charge indicator light; quartz hourmeter; fuel gauge; engine coolant temperature gauge; engine oil pressure warning light w/alarm buzzer; work light indicator; air cleaner restriction warning light; engine coolant temperature warning light w/alarm buzzer. Engine: electric cold weather (ether) starting aid, single heavy-duty fuel filter; oil cooler; bypass oil filter; dual dry-type air filters. Frame: 4190-lb. (1900 kg) counterweight; vandal protection—lockable service doors and fuel filler cap; fully enclosed swing gears. Front attachment: centralized lubrication system; bucket clearance adjusting mechanism w/⅝ cu. yd. (0.5 m³) bucket; dirt seals on all bucket pins. Undercarriage: propel motor and hydraulic line shields; single-flange lower track rollers; 20-in (500 mm) triple-grouser shoes. Lights: one work light mounted on frame, one work light mounted on boom.

Optional or Special Equipment: 118 in. (3.0 m) arm; 28-in. (710 mm) triple-grouser shoes; window covers.





490 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 equipped with 40-in (1016 mm), ¾ cu. yd. (0.5 m³) bucket and standard equipment.

Power (at 2200 engine rpm):

	SAE	DIN
Gross	79 hp (59 kW)	
Net	75 hp (56 kW)	56 kW

Net engine power is with standard equipment including air cleaner, exhaust system, alternator and cooling fan. Gross power is without cooling fan. Power ratings are at standard conditions per SAE J1349 and DIN 6270. No derating is required up to 10,000 feet (3050 m).

Engine: 239 cu. in. (3.92 L) John Deere turbocharged diesel, vertical 4-cylinder, valve-in-head, 4-stroke cycle. 24-volt electrical system with alternator.

Operating information:

Swing speed ..... 12.7 rpm

	ARM	
	98 in. (2.5 m)	**118 in. (3.0 m)**
Digging depth	18 ft. (5.49 m)	19 ft. 7 in. (5.97 m)
Reach at ground level from center of rotation	26 ft. 9 in. (8.15 m)	28 ft. 1 in. (8.55 m)
Dumping height	17 ft. 11 in. (5.46 m)	18 ft. (5.49 m)

Bucket digging force:

½ cu. yd. (0.4 m³) ..... 15,200 lb. (68 kN)
¾ cu. yd. (0.5 m³) ..... 15,200 lb. (68 kN)
Gradability ..... 70 percent
Travel speed (infinitely variable) ..... 0 to 2.2 mph (3.6 km/h)

Hydraulic System: Open center

Two variable-displacement axial-piston pumps and two control valves (5- and 4-spool) provide independent and combined operation of all functions. The 5-spool control valve has one spool for auxiliary attachment function.

Main pumps ..... 2 variable-displacement axial-piston
Pressure setting ..... 3560 psi (24 546 kPa) (250 kg/cm²)
Max. oil flow ..... 2 × 31.7 gpm (2 × 120 L/min)
Pilot pump ..... Gear
Pressure setting ..... 435 psi (3000 kPa) (30.6 kg/cm²)
Max. oil flow ..... 6.20 gpm (23.5 L/min)
System operating pressure ..... 3560 psi (24 546 kPa) (250 kg/cm²)
Relief valves:
Boom ..... 3770 psi (25 994 kPa) (265 kg/cm²)
Arm ..... 3770 psi (25 994 kPa) (265 kg/cm²)
Bucket ..... 3770 psi (25 994 kPa) (265 kg/cm²)
Travel ..... 3560 psi (24 546 kPa) (250 kg/cm²)

Oil filtration: One suction filter, one 10-micron full-flow return filter w/bypass

Cylinders:	**Bore**	**Rod Diameter**	**Stroke**
Boom (2)	4.3 in. (110 mm)	3 in. (75 mm)	41.5 in. (1055 mm)
Arm (1)	4.7 in. (120 mm)	3.1 in. (80 mm)	46.9 in. (1190 mm)
Bucket (1)	3.9 in. (100 mm)	2.6 in. (65 mm)	38.0 in. (965 mm)

Arm cylinder has a built-in hydraulic cushion at each end of the stroke. All cylinder rods are ground, heat treated, chrome plated and polished.

Swing Mechanism:

Swing ..... 360-degree, continuous
Swing lock ..... Manual for transporting
Turntable bearing ..... Single-row, shear-type ball bearing with induction-hardened, lubricated internal gear and pinion, 500-hour lube interval.

Undercarriage:

Propel motors (one for each track) ..... Axial-piston hydraulic motors with planetary drives. Multiple-disk brakes automatically release while propelling and apply when stationary. Independent drive to each track permits continuous counterrotation. Excavator track-type undercarriage with heavy-duty frame and all-welded, stress-relieved structure. Side frames welded to track frame. Permanently lubricated track rollers, idlers and sprockets with floating seals.

Tracks:

Track chain ..... Sealed
Track adjustment ..... Hydraulic with shock absorbing recoil springs

Track Rollers and Shoes (each side):

One upper roller, seven lower rollers. Forty-three track shoes. Track shoes induction-hardened rolled alloy. Heat-treated connecting pins.

Track Shoes: Width	**Shoes**	**Average Ground Contact**	**Average Ground Pressure**
20 in. (500 mm) (standard)	Triple grousers	4670 sq. in. (30 130 cm²)	5.61 psi (38.7 kPa) (0.39 kg/cm²)
28 in. (710 mm) (optional)	Triple grousers	6544 sq. in. (42 220 cm²)	4.21 psi (29.0 kPa) (0.30 kg/cm²)

Cab:

Steel, independent, shock mounted and soundprotected. Safety glass windows. Front window can be stored overhead. Rear

A grease gun is all it takes to maintain proper track tension, extending service life.

Fuel sight gauge near filler spout lets you check fuel level after locking cab at night.

Swing gear oil level is easily checked from a non-skid platform.

EASIER SERVICE KEEPS YOU MORE PRODUCTIVE YEAR AFTER YEAR

In a matter of minutes, you're ready to go to work with 490. A central lube bank for center joint and elevated pins saves time and climbing. Dirt seals on front pins extend lube intervals. Swing gear and pinion are sealed in a grease bath to eliminate frequent lubrication there, too.

You quickly check hydraulic oil level at a sight gauge on the side. A fuel sight gauge lets you watch the fuel level as you fill. There's also a fuel gauge in the cab, so you can keep tabs during operation. A monitor/alarm system keeps you in touch with other vital machine functions. Convenient handrails and non-skid platforms ease checking the engine, swing motor oil level, and batteries.

To protect your machine at night, the cab, fuel cap, and all covers have built-in locks.

Sight gauge speeds hydraulic oil level check.

Central lube bank keeps you from climbing to grease elevated pin joints.

Permanently lubricated rollers, idlers, and large sprockets with floating seals extend durability, improve travel.

LIFTING OVER FRONT OR REAR with 118-in. (3.00 m) OPTIONAL ARM, ½ cu. yd. (0.4 m³) PCSA heaped bucket

Horizontal distance from centerline of rotation:	5 ft. (1.52 m)	10 ft. (3.05 m)	15 ft. (4.57 m)	20 ft. (6.10 m)	25 ft. (7.62 m)
15 ft. (4.57 m)				**4330 (1960)**	
10 ft. (3.05 m)				**5040 (2290)**	3460 (1570)
5 ft. (1.52 m)			**7850 (3560)**	4950 (2250)	3350 (1520
Ground level		**7560 (3430)**	7390 (3350)	4680 (2120)	3230 (1470)
– 5 ft. (– 1.52 m)	**5950 (2700)**	**7590 (3440)**	7130 (3230)	4530 (2050)	
– 10 ft. (– 3.05 m)	**6730 (3050)**	**10,100 (4580)**	7130 (3230)	4540 (2060)	
– 15 ft. (– 4.57 m)		**12,650 (5740)**	7390 (3350)		

LIFTING OVER SIDE OR 360 DEGREES

Horizontal distance from centerline of rotation:	5 ft. (1.52 m)	10 ft. (3.05 m)	15 ft. (4.57 m)	20 ft. (6.10 m)	25 ft. (7.62 m)
15 ft. (4.57 m)				4240 (1920)	
10 ft. (3.05 m)				4050 (1840)	2630 (1190)
5 ft. (1.52 m)			6040 (2740)	3780 (1710)	2520 (1140)
Ground level		**7560 (3430)**	5520 (2500)	3530 (1600)	2410 (1090)
– 5 ft. (– 1.52 m)	**5950 (2700)**	**7590 (3440)**	5280 (2390)	3380 (1530)	
– 10 ft. (– 3.05 m)	**6730 (3050)**	**10,100 (4580)**	5280 (2390)	3390 (1540)	
– 15 ft. (– 4.57 m)		10,640 (4830)	5520 (2500)		

YOU SIT SOLID ON 490'S LONG, STRONG UNDERCARRIAGE

Lifting and placing pipe or traveling over rough terrain, the 490 undercarriage steadies your performance.

The 11-ft. 4-in. (3450 mm) track features permanently lubricated rollers, idlers, and sprockets with floating seals. The stress-relieved track frame is welded, not bolted, to the side frames for more rigid construction. Induction-hardened triple-grouser track shoes are available in 20- or 28-in. (500 or 710 mm) widths. The propel motors are so compact they fit within the shoe width. Independent drive allows counterrotation.

490 travel speed is the fastest in its class, at 2.2 mph (3.6 km/h). Traction force is 16,800 lb-ft. (75 kN), and gradability is 70 percent, continuous.

LIFT CAPACITIES

Ratings at bucket lift hook, machine equipped with 20-in (500 mm) shoes, and standard counterweight, situated on firm, level, 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.

LIFTING OVER FRONT OR REAR with 98-in. (2.50 m) STANDARD ARM, ¾ cu. yd. (0.5 m³) PCSA heaped bucket

Horizontal distance from centerline of rotation:	5 ft. (1.52 m)	10 ft. (3.05 m)	15 ft. (4.57 m)	20 ft. (6.10 m)	25 ft. (7.26 m)
15 ft. (4.57 m)				**4950 (2250)**	
10 ft. (3.05 m)			**6230 (2830)**	5110 (2320)	
5 ft. (1.52 m)			7760 (3520)	4840 (2200)	**2860 (1300)**
Ground level			7280 (3300)	4610 (2090)	
– 5 ft. (– 1.52 m)	**5420 (2460)**	**5980 (2710)**	7110 (3230)	4490 (2040)	
– 10 ft. (– 3.05 m)		**9340 (4240)**	7160 (3250)	4570 (2070)	

LIFTING OVER SIDE OR 360 DEGREES

Horizontal distance from centerline of rotation:	5 ft. (1.52 m)	10 ft. (3.05 m)	15 ft. (4.57 m)	20 ft. (6.10 m)	25 ft. (7.62 m)
15 ft. (4.57 m)				4090 (1860)	
10 ft. (3.05 m)			**6230 (2830)**	3920 (1780)	
5 ft. (1.52 m)			5850 (2650)	3670 (1660)	2420 (1100)
Ground level			5410 (2450)	3450 (1560)	
– 5 ft. (– 1.52 m)	**5420 (2460)**	**5980 (2710)**	5240 (2380)	3340 (1510)	
– 10 ft (– 3.05 m)		**9340 (4240)**	5300 (2400)	3420 (1550)	

ROOMY CAB, LIGHT-TOUCH CONTROLS RELAX YOUR ROUTINE

The 490 is loaded with standard features to keep your own operating efficiency just as high as the machine's.

The cab interior is 50 percent larger than many competitive models in the 26,000-lb (12 t) class. The deep-cushioned, full-reclining seat adjusts to your posture. Two short-throw, low-effort levers control all digging and swing functions. They're mounted near the arm-rests, so you don't have to reach all day.

You keep attuned to vital machine functions through a full complement of gauges and warning lights mounted on your right.

To reduce noise and shock, the cab rests on rubber mounts. Walls and floors are sound-protected, with extra noise-absorbing material between cab and bed. The same material lines engine and hydraulic equipment covers.

For comforting ventilation, the front glass slides and locks to the ceiling. Back glass and top vent open. For excellent visibility, there is no front window crossbar to restrict your view.

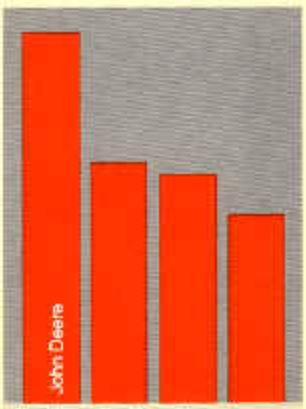
To improve visibility, there's no forward crossbar to restrict your view. Front glass slides up and locks.

Instruments include gauges for fuel level and engine coolant temperature; warning light/buzzer for engine oil pressure and coolant temperature; and indicators for air cleaner restriction, alternator and lights.

Two low-effort, direct-acting levers control all dig and swing functions. Pedals control forward and reverse for each track.

More fuel-saving is designed into the pumps. The axial-piston design increases flow steplessly in proportion to lever stroke. So you get only the flow you need, no more. Also, a special relief valve, set just above operating pressure, reduces discharge back to the tank. The result? Less heat, less power loss at the pump.

The 490 hydraulic system design offers the fuel-saving efficiency you need to hold down operating costs. In fact, in engineering tests the 490 trenched as much as 100 percent more per unit of fuel than competitors with less efficient hydraulic systems. That's an advantage you can take to the bank.



Engineering tests show the 490 digs up to twice as much material per unit of fuel than its competition does.

ENERGY-SAVING ADVANTAGES REDUCE YOUR OPERATING COSTS

Do more work. Use less fuel. That's the advantage of 490's perfectly matched power system.

Variable-displacement pumps automatically give high pressure, low flow or low pressure, high flow to suit job needs. Hydraulic power remains almost constant. So a smaller engine can handle the job. And deliver more digging force, quicker response.

You get fuel-saving advantages in the 75-hp (56 kW) John Deere diesel, too. It's turbocharged to burn each drop of fuel more efficiently. Direct injection gives immediate combustion, with less smoke and noise. You don't waste fuel in a pre-combustion chamber.

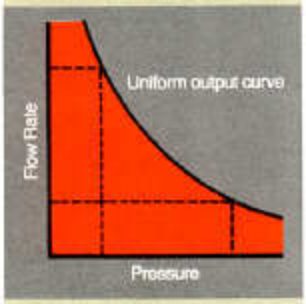
out of soft ground, or to climb steep slopes without curving.

For precise control throughout the cycle, the 490 control system provides smooth speed changes when going from combined to single functions. Because the 490 system eliminates counterbalance valves in the swing circuit, swing is slowed or stopped according to control lever stroke. This decreases sway and reduces soil spill for more production.

To extend service life, a cushion in the arm cylinder absorbs shocks. Speed, precision, reliability. You'll appreciate them on every 490 cycle, whatever job you're doing.

Two axial-piston, variable-flow pumps give you smooth, precise control in combined or single-function operations.

Swing motor provides a fast swing speed of 12.7 rpm, yet you slow or stop smoothly according to lever stroke.



Variable-displacement pumps automatically adjust pressure/flow, so you get more power in tough digging, faster speeds while positioning.

VARIABLE-FLOW HYDRAULICS AUTOMATICALLY RESPOND TO WORK DEMANDS

With the 490's high-efficiency hydraulics, you get shorter cycles, more production at lower costs.

Two variable-displacement pumps let you combine functions for much smoother operation. To speed digging, you can operate the boom and arm simultaneously. The 490's digging forces are among the highest in its class. While loading, swing speed is hardly affected when raising the arm, because priority is given to swing.

You can transport and lay pipe easily, too, because the 490 travels straight even when you use boom, arm, bucket or swing functions. This also makes it easy to pull

Fuel-saving advantages include turbocharged, direct-injection diesel and variable-displacement pumps with a summated control system.

Quick maintenance comes from one-stop daily engine service, centralized lube bank, sealed pivot pins, and completely housed swing gear.

Ground clearance of 18 inches (460 mm) permits worry-free operation over rough ground or in soft conditions.

Straight tracking, even when operating swing or dig functions, simplifies placing pipe or pulling out of boggy conditions.

For digging basements, installing utilities, and many other projects, the 490 is sized right for bidding today's diversified jobs.

If your business has changed in the past few years—to smaller jobs, scattered crews, and tougher bidding—it's time to get the most out of each machine. It's time to get a 490 working for you.

*12 000 kg

JOHN DEERE'S FULL SUPPORT KEEPS YOUR 490 PRODUCTIVE

Whether you depend on us for replacement parts alone or for complete service, we offer the product support you need to stay productive.

From our extensive parts inventory and distribution system to the latest in tools and training, we're equipped to keep your operation on solid ground.

Get the product support you deserve, from the people committed to deliver it. Next time you need parts, service or equipment, come in and talk with us.

JOHN DEERE