

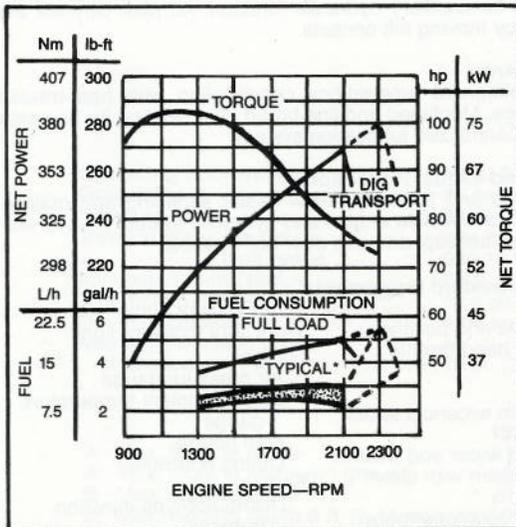


# 595D EXCAVATOR



Model shown may include options

## ENGINE PERFORMANCE



\*Depending on operating variables

## FEATURES

John Deere turbocharged diesel engine  
 95 SAE net hp (71 kW) in digging mode  
 100 SAE net hp (75 kW) in travel mode

36,575 lb. (16 590 kg) maximum operating weight

20 ft. 8 in. (6.30 m) maximum digging depth

30 ft. 8 in. (9.35 m) maximum reach at ground level

18.6 mph (30 km/h) travel speed—rubber-tired mobility

High-efficiency, variable-flow hydraulic system with fuel-saving, mode control features

Automatic engine idling system

Large cab for improved operator comfort and visibility. Includes all controls for transporting and excavating

Two-lever, low-effort, all hydraulic pilot control of boom, arm, bucket, and 360-degree continuous swing

Complete instrumentation/warning system continuously monitors vital machine functions

Hydrostatic drive with Hi-Lo ranges provides excellent on- and off-road versatility

Vandal protection with lockable service doors

# 595D 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 full fuel tank, 175-lb. (80 kg) operator and standard equipment.

<b>Rated Power @ 2100 rpm (Dig Mode):</b>	<b>SAE</b>	<b>DIN 70 020</b>
Net .....	95 hp (71 kW)	71 kW
Gross .....	100 hp (75 kW)	
<b>Rated Power @ 2300 rpm (Travel Mode):</b>		
Net .....	100 hp (75 kW)	75 kW
Gross .....	105 hp (78 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 10,000 ft. (3050 m) altitude. Gross power is without cooling fan.

## Engine: John Deere 4276T

Type .....	4-stroke cycle, turbocharged diesel
Bore and stroke .....	4.19 x 5.00 in. (106.5 x 127 mm)
No. of cylinders .....	4
Displacement .....	276 cu. in. (4.524 L)
Compression ratio .....	17.2 to 1
Maximum net torque @ 1300 rpm .....	284 lb-ft (385 Nm) (39.3 kg-m)
Lubrication .....	Pressure system with full-flow filter
Cooling fan .....	Suction type
Electrical system .....	24-volt with 42-amp alternator
Batteries (two 12-volt) .....	Reserve capacity: 180 minutes

## Hydraulic System: Open Center

Variable-flow, constant horsepower hydraulic system provides independent and combined operation of all functions. Load-sensing adjusts hydraulic flow and pressure to individual function demands. Pump displacement is automatically reduced when controls are returned to neutral.

<b>Main pumps: 2 variable-displacement, axial-piston</b>	
Pressure setting .....	4620 psi (31 860 kPa) (325 kg/cm <sup>2</sup> )
Maximum oil flow .....	2 x 44.1 gpm (2 x 167 L/min)
<b>Pilot pump: Gear</b>	
Pressure setting .....	570 psi (3930 kPa) (40 kg/cm <sup>2</sup> )
Maximum oil flow .....	6.6 gpm (25 L/min)
<b>Steering pump: Gear</b>	
Pressure setting .....	1778 psi (12 258 kPa) (125 kg/cm <sup>2</sup> )
Maximum oil flow .....	7.93 gpm (30.0 L/min)
<b>Control valve Nine-spool valve</b>	
<b>System relief valves operating pressure:</b>	
Travel .....	4620 psi (31 860 kPa) (325 kg/cm <sup>2</sup> )
Front end .....	4050 psi (27 950 kPa) (285 kg/cm <sup>2</sup> )
<b>Circuit relief valves:</b>	
Boom .....	4270 psi (29 420 kPa) (300 kg/cm <sup>2</sup> )
Arm .....	4270 psi (29 420 kPa) (300 kg/cm <sup>2</sup> )
Bucket .....	4270 psi (29 420 kPa) (300 kg/cm <sup>2</sup> )
Stabilizers .....	4050 psi (27 950 kPa) (285 kg/cm <sup>2</sup> )
<b>Cross-over relief valves:</b>	
Travel .....	4690 psi (32 340 kPa) (330 kg/cm <sup>2</sup> )
Swing .....	3560 psi (24 450 kPa) (250 kg/cm <sup>2</sup> )

Cylinders:	Bore		Rod Diameter		Stroke	
	in.	(mm)	in.	(mm)	in.	(mm)
Boom (2)	4.72	120	3.15	80	46.46	1180
Arm	4.92	125	3.35	85	52.95	1345
Bucket	4.72	120	3.15	80	36.22	920
Stabilizer	5.12	130	3.35	85	14.88	378
Steering	2.36	60	.98	25	8.35	212
Blade	4.33	110	2.76	70	6.69	170
Axle lock	4.13	105	4.72	120	3.94	100

Arm cylinder has a built-in hydraulic cushion at each end of the stroke. Boom and bucket cylinders have a cushion on the rod end.

## Swing Mechanism:

Swing speed .....	0 to 14.5 rpm
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.

## Wheeled Undercarriage:

The undercarriage is available with a blade and (2) stabilizers or with (4) stabilizers. The frame is an all-welded, stress-relieved structure.

<b>Drive system</b> .....	low speed range—all wheels drive high-speed range—rear wheels drive
<b>Travel motor</b> .....	Variable displacement axial piston motor with hydraulic retarding valve for preventing overspeeding when traveling downhill.
<b>Transmission</b> .....	Constant mesh with high and low speed range.
<b>Travel speeds:</b>	
Low speed range .....	0 to 5.6 mph (0 to 9.0 km/h) forward and reverse
High speed range .....	0 to 18.6 mph (0 to 30.0 km/h) forward
<b>Maximum traction force-high</b> .....	5950 lb. (26.5 kN) (2700 kg)
<b>Gradability</b> .....	-low .....
	19,800 lb. (88.1 kN) (9000 kg)
	65 percent (33 degrees)

## Steering System:

Full hydraulic power steering using two steering cylinders. Provides manual steering without engine power. Steering system mode selection provides normal steering in both transport and work positions.

Bore .....	2.4 in. (60 mm)
Rod diameter .....	1 in. (25 mm)
Stroke .....	8.35 in. (212 mm)

## Brakes:

<b>Service</b> .....	Air over hydraulic brakes acting at each wheel—internal-expanding shoe type
<b>Parking</b> .....	Spring actuated, air-released, internal-expanding shoe type, acting on horizontal drive shaft

Note: Applying brakes with switch also locks oscillating axle

## Axles:

Front .....	Oscillating axle with locking hydraulic cylinders, 12.4 degrees total oscillation
Rear .....	Fixed to frame

## Tires: (Traction type tread pattern)

10.00-20.0 x 14 PR, duals
18.00-19.5 x 18 PR, singles

## Stabilizers:

Each stabilizer cylinder is fitted with a pilot-operated check valve for positive locking. Left and right stabilizers can be operated independently.

## Dozer Blade:

Width .....	8 ft. 1 in. (2470 mm)
Height .....	1 ft. 11 in. (590 mm)

## Cab:

Large, isolation-mounted, with sound-absorbing materials on ceiling and sidewalls. Safety glass windows. Front window can be stored overhead. Rear window, door, and roof hatch open for ventilation.

## Seat:

Deluxe, fully cushioned, cloth covered, with adjustable backrest, headrest and padded fold-up armrests. Independent horizontal and vertical adjustments. Seat suspension is adjustable to operator weight.

## Controls:

All hydraulic functions are pilot controlled for precision metering and low operator effort. Two short levers control swing, boom, arm and bucket functions. Stabilizer control operates left or right side. Foot control for auxiliary hydraulic function. All pilot controls are neutralized by moving left console.

## Boom and Arm:

Internally reinforced tapered-box construction with heat-treated steel bushings. Machined and line-bored after welding for accurate alignment. Centralized lubrication system.

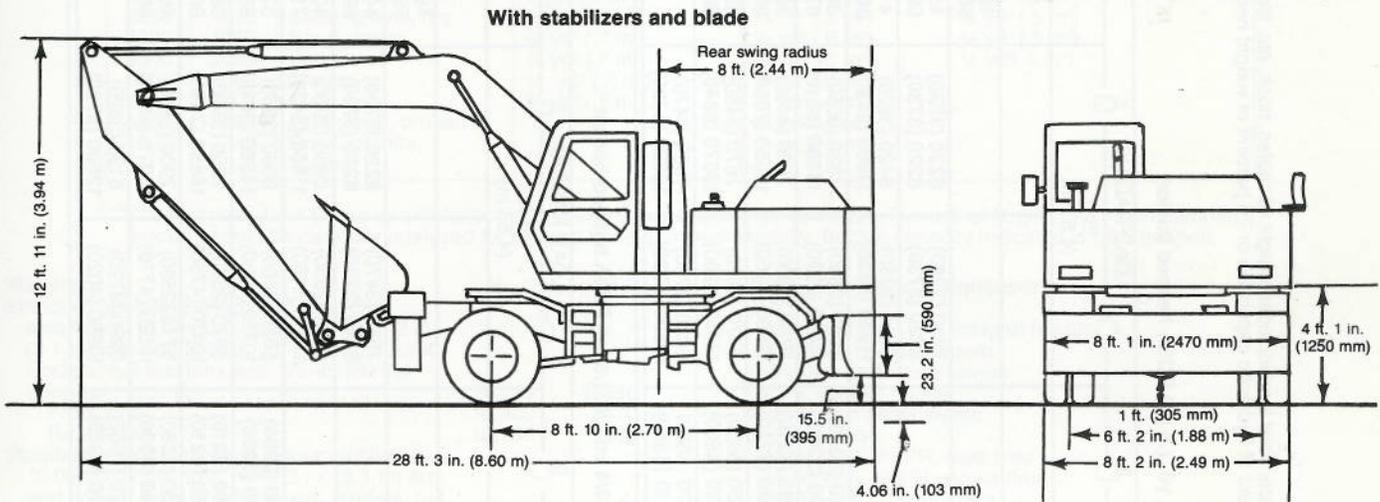
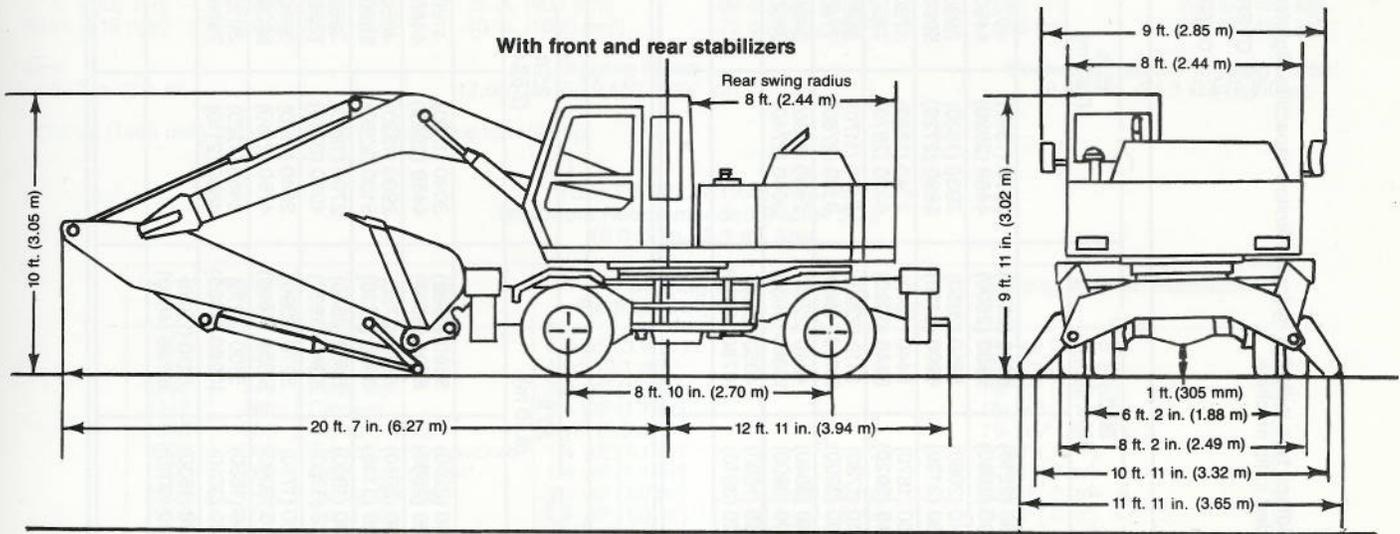
## Servicing and Vandal Protection:

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.

## Additional Standard Equipment:

<b>Cab:</b>	Turn indicator lights
Foot throttle and positive position hand throttle	Work light indicator light
<b>Gauges:</b>	
Heater	Air pressure gauge
Horn	Engine coolant temperature gauge
Travel alarm w/cancel switch	Fuel gauge
Interior light	Quartz hourmeter
Windshield wiper and washer	<b>Engine:</b>
Monitor system with alarm features:	Distributor-type injection pump
Engine coolant temperature warning light w/audible alarm	Dual dry-type air filter
Engine oil pressure warning light w/audible alarm	Electric cold weather (ether) starting aid
Low brake air pressure w/audible alarm	Equipped with 15 CFM (708 m <sup>3</sup> /s), 100 psi (689.5 kPa) (7.03 kg/cm <sup>2</sup> ) air compressor system
Engine air cleaner restriction indicator light	Full-flow oil filter
Engine alternator charge indicator light	Heavy-duty fuel filter
Axle lock indicator light	Isolated engine mounting
Hazard indicator light	Underhood muffler
High-beam indicator light	Work lights—one boom mounted and two frame mounted
Low fuel warning light	
Park brake indicator light	
Service brake indicator light	

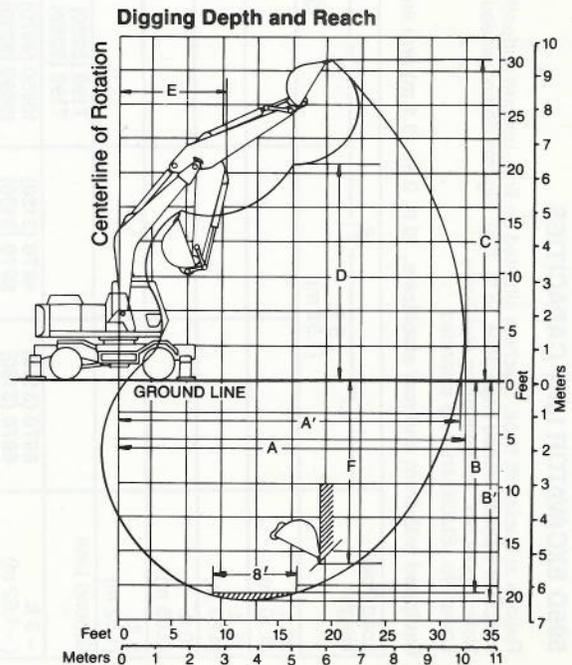
# 595D EXCAVATOR SPECIFICATIONS AND DIMENSIONS



**Operating Information:**

Gradability	65 percent (33 degrees)
Swing speed	0 to 14.5 rpm
Travel speeds: low range	0 to 5.6 mph (0 to 9 km/h)
high range	0 to 18.6 mph (0 to 30 km/h)
Minimum turning radius	23 ft. 7 in. (7.19 m)
Total front axle oscillation	12.4 degrees
Depth of blade cut	4.06 in. (103 mm)
Maximum blade to ground clearance	16 in. (395 mm)

	<b>10 ft. 2 in. (3.1 m) Arm</b>
A Max. digging reach	31 ft. 4 in. (9.56 m)
A' Max. digging reach (on ground)	30 ft. 8 in. (9.35 m)
B Max. digging depth	20 ft. 8 in. (6.3 m)
B' Max. digging depth 8 ft. (2.44 m) level	20 ft. 0 in. (6.09 m)
C Max. cutting height	29 ft. 8 in. (9.03 m)
D Max. dumping height	20 ft. 7 in. (6.28 m)
E Min. swing radius (front end)	10 ft. 3 in. (3.13 m)
F Max. vertical wall	17 ft. 11 in. (5.46 m)





## 595D EXCAVATOR BUCKETS

Nominal Width	Bite Width		SAE Heaped	CECE Heaped	Weight
	w/o Sidecutters	w/Sidecutters			
31 in. (785 mm)	34 in. (865 mm)	35 in. (900 mm)	.62 cu. yd. (.5 m <sup>3</sup> )	(.45 m <sup>3</sup> )	992 lb. (450 kg)
36 in. (915 mm)	39 in. (995 mm)	40 in. (1030 mm)	.75 cu. yd. (.6 m <sup>3</sup> )	(.55 m <sup>3</sup> )	1080 lb. (490 kg)
<b>Arm</b>	<b>Arm Digging Force</b>		<b>Bucket Tangential Digging Force*</b>		
10 ft. 2 in. (3.1 m)	12,800 lb. (56.9 kN) (5800 kg)		18,960 lb. (84.3 kN) (8600 kg)		
*57.7 in. (1465 mm) radius bucket pin centerline to tooth tip.					

### BUCKET SELECTION CHART Maximum Recommended Bucket Size\*\* 10 ft. 2 in. (3.1 m) Arm

lb/yd <sup>3</sup>	kg/m <sup>3</sup>	Material	Digging with Stabilizers		Digging Without Stabilizers
			Regular Duty	Heavy Duty	
700	420	Wood chips	4 1/2 yd <sup>3</sup> (3.4 m <sup>3</sup> )	-	2 3/4 yd <sup>3</sup> (2.1 m <sup>3</sup> )
800	470	Peat, dry	4 yd <sup>3</sup> (3.1 m <sup>3</sup> )	-	2 1/2 yd <sup>3</sup> (1.9 m <sup>3</sup> )
1250	740	Peat, wet	2 1/2 yd <sup>3</sup> (1.9 m <sup>3</sup> )	-	1 5/8 yd <sup>3</sup> (1.2 m <sup>3</sup> )
1450	860	Cinders	2 1/4 yd <sup>3</sup> (1.7 m <sup>3</sup> )	-	1 3/8 yd <sup>3</sup> (1.1 m <sup>3</sup> )
1600	950	Topsoil, loose	2 yd <sup>3</sup> (1.5 m <sup>3</sup> )	-	1 1/4 yd <sup>3</sup> (.95 m <sup>3</sup> )
2300	1360	Topsoil, heavy-packed	1 3/8 yd <sup>3</sup> (1.1 m <sup>3</sup> )	-	7/8 yd <sup>3</sup> (.7 m <sup>3</sup> )
2300	1360	Coal, natural bed	1 3/8 yd <sup>3</sup> (1.1 m <sup>3</sup> )	-	7/8 yd <sup>3</sup> (.7 m <sup>3</sup> )
2600	1540	Earth, dry loam	1 1/4 yd <sup>3</sup> (1.0 m <sup>3</sup> )	1 yd <sup>3</sup> (.8 m <sup>3</sup> )	3/4 yd <sup>3</sup> (.6 m <sup>3</sup> )
2700	1600	Sand, dry	1 1/4 yd <sup>3</sup> (1.0 m <sup>3</sup> )	1 yd <sup>3</sup> (.8 m <sup>3</sup> )	3/4 yd <sup>3</sup> (.6 m <sup>3</sup> )
3200	1900	Earth, moist loam	1 yd <sup>3</sup> (.8 m <sup>3</sup> )	7/8 yd <sup>3</sup> (.7 m <sup>3</sup> )	5/8 yd <sup>3</sup> (.5 m <sup>3</sup> )
3250	1930	Sand, gravel, dry	1 yd <sup>3</sup> (.8 m <sup>3</sup> )	7/8 yd <sup>3</sup> (.7 m <sup>3</sup> )	5/8 yd <sup>3</sup> (.5 m <sup>3</sup> )
3300	1960	Sand, moist	7/8 yd <sup>3</sup> (.7 m <sup>3</sup> )	3/4 yd <sup>3</sup> (.6 m <sup>3</sup> )	5/8 yd <sup>3</sup> (.5 m <sup>3</sup> )
3500	2080	Sand, wet	7/8 yd <sup>3</sup> (.7 m <sup>3</sup> )	3/4 yd <sup>3</sup> (.6 m <sup>3</sup> )	5/8 yd <sup>3</sup> (.5 m <sup>3</sup> )
3500	2080	Shale	7/8 yd <sup>3</sup> (.7 m <sup>3</sup> )	3/4 yd <sup>3</sup> (.6 m <sup>3</sup> )	1/2 yd <sup>3</sup> (.4 m <sup>3</sup> )
3600	2100	Clay, wet	7/8 yd <sup>3</sup> (.7 m <sup>3</sup> )	3/4 yd <sup>3</sup> (.6 m <sup>3</sup> )	-
4200	2490	Limestone, broken	-	5/8 yd <sup>3</sup> (.5 m <sup>3</sup> )	-
4600	2730	Rock, granite, blasted	-	1/2 yd <sup>3</sup> (.4 m <sup>3</sup> )	-

\*\*Contact your John Deere dealer for optimum bucket and attachment selection. The use of larger than recommended bucket should be carefully analyzed for digging force and load capacity. Bucket capacity indicated is SAE heaped.

#### Weights:

	lb.	kg
Standard operating weight w/blade, two stabilizers, 10.00-20.0 dual tires, 10 ft. 2 in. (3.1 m) arm and 3/4 cu. yd. (.57 m <sup>3</sup> ) bucket, fenders, full fuel tank and 175-lb. (80 kg) operator	36,222	16430
Front axle	16,469	7470
Rear axle	19,754	8960
Standard operating weight w/four stabilizers, 10.00-20.0 dual tires, 10 ft. 2 in. (3.1 m) arm and 3/4 cu. yd. (.57 m <sup>3</sup> ) bucket, fenders, full fuel tank and 175-lb. (80 kg) operator	36,575	16590
Front axle	16,888	7660
Rear axle	19,688	8930
Undercarriage with blade and two stabilizers and w/tires	14,440	6550
Undercarriage with four stabilizers and w/tires	14,795	6710
10.00 x 20.0 dual tires (8)	1,733	786
18.00 x 19.5 single tires (4)	1,420	644
One-piece boom with arm cylinder and boom cylinders	3,485	1581
10 ft. 2 in. (3.1 m) arm w/bucket cylinder and pins	1,808	820
5/8 cu. yd. (.51 m <sup>3</sup> ) SAE heaped bucket w/o pins	961	436
3/4 cu. yd. (.63 m <sup>3</sup> ) SAE heaped bucket w/o pins	1,051	477
Two boom cylinders w/pins	705	320
Air conditioning	44	20
Cab window covers	110	50
Upperstructure w/main counterweight (not including boom, boom cylinders, arm and bucket)	15,543	7050
Main counterweight	5,510	2500

#### Optional or Special Equipment:

- Cab:
  - Air conditioner with integral heater
  - Alternate control pattern
  - Window protection covers
- Engine coolant heater
- Buckets and attachments
- Undercarriage:
  - 10.00-20.0, 14 PR, dual tires
  - 18.00-19.5, 18 PR, single tires
  - Blade with (2) stabilizers
  - Stabilizers (4)

#### Capacities:

	U.S. Gal.	Liters
Fuel tank	66.1	250
Engine coolant	5.5	21
Engine oil	3.5	13
Swing device	1.3	5.0
Transmission	1.7	6.3
Front axle case	1.85	7.0
Rear axle case	2.9	11.0
Wheel gear reduction, each	.61	2.3
Hydraulic system	52.9	200
Hydraulic tank	34.4	130