

ENGINE**490E**

Type	John Deere 4045T with altitude-compensating turbocharger
Rated power	85 SAE net hp (63 kW) / 90 SAE gross hp (67 kW) @ 2,200 rpm
Cylinders	4
Displacement	276 cu. in. (4.523 L)
Maximum net torque	252 lb.-ft. (342 Nm) @ 1,300 rpm
Fuel consumption, typical	1.5 to 2.8 gal./hr. (6 to 11 L/h)
Cooling fan	suction-type
Electrical system	24 volt with 45-amp alternator
Batteries (two 12 volt)	reserve capacity: 180 min.

HYDRAULIC SYSTEM

Main pump	one variable-displacement axial-piston closed center
Maximum rated flow	1 x 52.3 gpm (1 x 198 L/min.)
Pilot pump	one gear
Maximum rated flow	9.8 gpm (37 L/min.)
Pressure setting	710 psi (4895 kPa)
System operating pressure	
Implement circuits	4,980 psi (34 340 kPa)
Travel circuits	4,980 psi (34 340 kPa)
Swing circuits	5,050 psi (34 820 kPa)
Oil filtration	one 10-micron full-flow return filter with by-pass
	one pilot oil filter
	one suction filter

CYLINDERS

Boom (2)	
Bore	4.13 in. (105 mm)
Rod diameter	2.76 in. (70 mm)
Stroke	37.0 in. (939 mm)
Arm (1)	
Bore	4.33 in. (110 mm)
Rod diameter	3.15 in. (80 mm)
Stroke	44.7 in. (1135 mm)
Bucket (1)	
Bore	3.74 in. (95 mm)
Rod diameter	2.56 in. (65 mm)
Stroke	34.4 in. (875 mm)

SWING MECHANISM

Swing speed	0–11 rpm
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UNDERCARRIAGE

Carrier rollers (per side)	1
Track rollers (per side)	7
Idlers (per side)	1
Shoes, triple semi-grouser (per side)	44
Track guides	front
Track adjustment	hydraulic
Travel speed	
Low	0–1.6 mph (0–2.5 km/h)
Medium	0–2.1 mph (0–3.4 km/h)
High	0–3.4 mph (0–5.5 km/h)
Drawbar pull	21,200 lb. (94.3 kN)
Tractive gradability	130% (52 deg.)
Off-level operating limit for oil sump	100% (45 deg.)

GROUND PRESSURE DATA

Average ground pressure	
24-in. (600 mm) triple semi-grouser shoes	4.54 psi (311.4 kPa); recommended for rocky terrain and stumps
28-in. (700 mm) triple semi-grouser shoes	3.94 psi (27.2 kPa); recommended for general/soft terrain
24-in. (600 mm) high-traction semi-grouser shoes	4.56 psi (31.4 kPa); recommended for cross-country pipe laying and slick underfoot conditions / avoid rocky conditions

CAPACITIES

Fuel tank	66 gal. (250 L)
Cooling system	16 qt. (15 L)
Engine lubrication, including filter	13.8 qt. (13 L)
Hydraulic system	35.4 gal. (134 L)
Planetary propel drive (each)	3.4 qt. (3.2 L)
Swing drive	2.8 qt. (2.6 L)

OPERATING WEIGHTS

490E

With full fuel tank; 175-lb. (79 kg) operator; 42-in. (1065 mm), 926-lb. (420 kg) bucket; 9 ft. 11 in. (3.01 m) arm; 5,180-lb. (2350 kg) counterweight; and 28-in. (700 mm) triple semi-grouser shoes26,780 lb. (12 148 kg)

Undercarriage equipped with

24-in. (600 mm) triple semi-grouser shoes.....9,480 lb. (4300 kg)

28-in. (700 mm) triple semi-grouser shoes.....9,900 lb. (4490 kg)

24-in. (600 mm) high-traction semi-grouser shoes.....10,050 lb. (4558 kg)

COMPONENT WEIGHTS

Upperstructure with full fuel tank (less 5,180 lb. [2350 kg] counterweight and front attachments).....6,645 lb. (3014 kg)

One-piece boom (with arm cylinder).....2,140 lb. (970 kg)

Arm with bucket cylinder and linkage

8 ft. 3 in. (2.52 m).....1,190 lb. (540 kg)

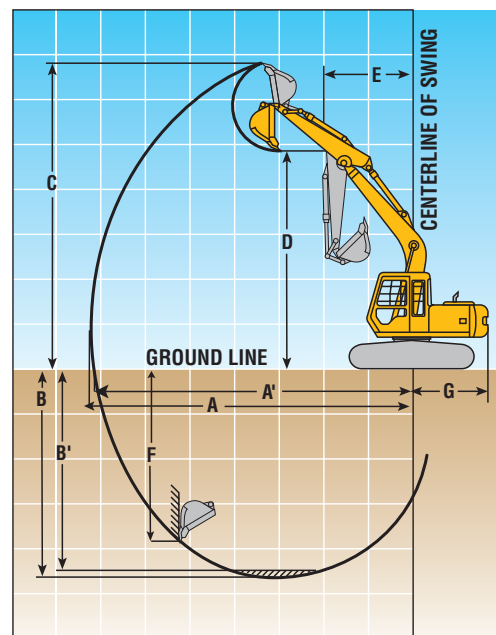
9 ft. 11 in. (3.01 m).....1,370 lb. (621 kg)

Boom lift cylinders (2) total weight470 lb. (213 kg)

Counterweight.....5,180 lb. (2350 kg)

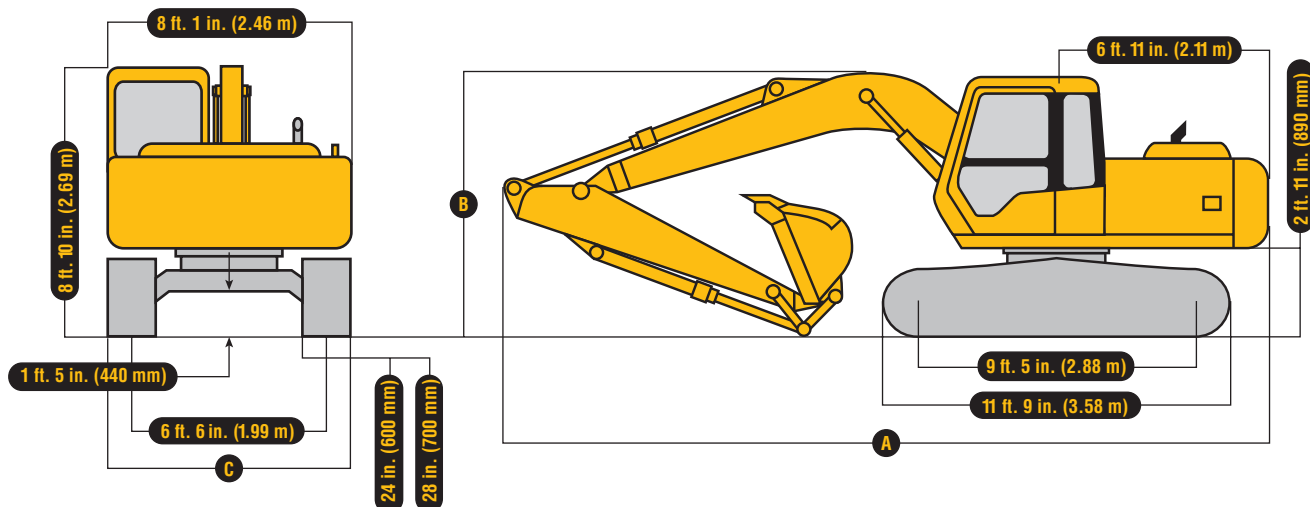
OPERATING INFORMATION

	Arm Length 8 ft. 3 in. (2.52 m)	Arm Length 9 ft. 11 in. (3.01 m)
Arm force with 42-in. (1065 mm) general-purpose bucket13,450 lb. (60 kN)	12,055 lb. (54 kN)	
Bucket tangential force with 42-in. (1065 mm) 1.38 cu. yd. (1.06 m ³) general-purpose bucket.....19,580 lb. (87 kN)	19,580 lb. (87 kN)	
Lifting capacity over front @ ground level 20-ft. (6.1 m) reach.....5,720 lb. (2595 kg)	5,521 lb. (2504 kg)	
A Maximum reach27 ft. 2 in. (8.27 m)	28 ft. 8 in. (8.74 m)	
A' Maximum reach @ ground level26 ft. 8 in. (8.14 m)	28 ft. 3 in. (8.61 m)	
B Maximum digging depth18 ft. 3 in. (5.57 m)	19 ft. 11 in. (6.06 m)	
B' Maximum digging depth @ 8-ft. (2.44 m) flat bottom17 ft. 7 in. (5.36 m)	19 ft. 3 in. (5.88 m)	
C Maximum cutting height.....27 ft. 11 in. (8.52 m)	29 ft. 0 in. (8.84 m)	
D Maximum dumping height20 ft. 1 in. (6.12 m)	21 ft. 2 in. (6.44 m)	
E Minimum swing radius7 ft. 10 in. (2.39 m)	8 ft. 7 in. (2.62 m)	
F Maximum vertical wall16 ft. 4 in. (4.98 m)	17 ft. 11 in. (5.45 m)	
G Tail swing radius7 ft. 0 in. (2.13 m)	7 ft. 0 in. (2.13 m)	



DIMENSIONS

- A** With 8 ft. 3 in. (2.52 m) arm24 ft. 10 in. (7.58 m)
- With 9 ft. 11 in. (3.01 m) arm24 ft. 10 in. (7.58 m)
- B** With 8 ft. 3 in. (2.52 m) arm8 ft. 10 in. (2.69 m)
- With 9 ft. 11 in. (3.01 m) arm8 ft. 9 in. (2.66 m)
- Note:** Boom-to-arm pin in transport position
- C** With 6 ft. 6 in. (1.99 m) undercarriage and
- 24-in. (600 mm) shoes8 ft. 6 in. (2.59 m)
- 28-in. (700 mm) shoes8 ft. 10 in. (2.69 m)



LIFT CAPACITIES

Boldface italic type indicates hydraulic-limited capacities; lightface type indicates stability-limited capacities, in lb. (kg). Ratings at bucket lift hook, machine equipped with 28-in. (700 mm) shoes; 0.79-cu. yd. (0.6 m³) 42-in. (1065 mm) wide, 926-lb. (420 kg) bucket; 5,180-lb. (2350 kg) counterweight; and situated on firm, uniform supporting surface. Total load includes weight of cables, hook, etc. Figures do not exceed 87 percent of hydraulic capacities or 75 percent of weight needed to tip machine.

Load Point Height	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)	
	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side
<i>With 8 ft. 3 in. (2.52 m) arm</i>										
15 ft. (4.57 m)					5,271 (2391)	5,271 (2391)				
10 ft. (3.05 m)					5,822 (2641)	5,822 (2641)	4,621 (2096)	4,178 (1895)		
5 ft. (1.52 m)			7,992 (3625)	7,992 (3625)	7,418 (3365)	6,652 (3017)	5,949 (2698)	4,058 (1841)		
Ground Line			15,465 (7015)	11,433 (5186)	9,178 (4163)	6,124 (2778)	5,720 (2595)	3,845 (1744)		
-5 ft. (-1.52 m)			11,465 (5201)	10,677 (4843)	8,720 (3955)	5,715 (2592)	5,514 (2501)	3,655 (1658)		
-10 ft. (-3.05 m)	7,391 (3353)	7,391 (3353)	16,976 (7700)	10,601 (4809)	8,531 (3870)	5,546 (2516)	5,417 (2457)	3,565 (1617)		
-15 ft. (-4.57 m)	13,916 (6312)	13,916 (6312)	14,803 (6715)	10,786 (4893)	8,587 (3895)	5,595 (2538)				
<i>With 9 ft. 11 in. (3.01 m) arm</i>										
15 ft. (4.57 m)							4,598 (2086)	4,209 (1909)		
10 ft. (3.05 m)					5,489 (2490)	5,489 (2490)	5,458 (2476)	4,052 (1838)	2,914 (1322)	2,583 (1172)
5 ft. (1.52 m)					8,844 (4012)	6,148 (2789)	5,780 (2622)	3,802 (1725)	3,910 (1774)	2,497 (1133)
Ground Line			11,118 (5043)	10,558 (4789)	8,792 (3988)	5,637 (2557)	5,521 (2504)	3,562 (1616)	3,805 (1726)	2,399 (1088)
-5 ft. (-1.52 m)	6,072 (2754)	6,072 (2754)	15,308 (6944)	10,300 (4672)	8,501 (3856)	5,377 (2439)	5,362 (2432)	3,414 (1549)		
-10 ft. (-3.05 m)	13,299 (6032)	13,299 (6032)	16,628 (7542)	10,398 (4717)	8,470 (3842)	5,349 (2426)	5,357 (2430)	3,410 (1547)		
-15 ft. (-4.57 m)			12,490 (5665)	10,775 (4888)	8,390 (3806)	5,562 (2523)				

BUCKETS

A full line of buckets is offered to meet a wide variety of applications. The buckets have an adjustable bushing for side clearance, with the exception of the ditching bucket. Tooth selection includes either the John Deere Fanggs® tooth or the ESCO Vertalok tooth. Replaceable cutting edges are available through John Deere parts. Optional side cutters add 6 inches (150 mm) to bucket widths.

Type Bucket	Bucket Width		Bucket Capacity*		Weight		Bucket Dig Force		Arm Dig Force 8 ft. 3 in. (2.52 m)		Arm Dig Force 9 ft. 11 in. (3.01 m)		Bucket Tip Radius		No. Teeth
	in.	mm	cu. yd.	m ³	lb.	kg	lb.	kN	lb.	kN	lb.	kN	in.	mm	
General-Purpose	18	460	0.34	0.26	723	328	17,035	75.8	12,865	57.2	11,590	51.6	50.0	1270	3
Plate Lip	24	610	0.50	0.38	893	405	17,035	75.8	12,865	57.2	11,590	51.6	50.0	1270	4
	30	760	0.64	0.49	1,066	484	17,035	75.8	12,865	57.2	11,590	51.6	50.0	1270	4
	36	915	0.78	0.60	1,081	490	17,035	75.8	12,865	57.2	11,590	51.6	50.0	1270	5
	42	1065	0.79	0.60	926	420	19,580	87.1	13,450	59.8	12,055	53.6	43.5	1105	6
	42	1065	0.92	0.70	1,244	564	17,035	75.8	12,865	57.2	11,590	51.6	50.0	1270	6
	48	1220	1.06	0.81	1,441	654	17,035	75.8	12,865	57.2	11,590	51.6	50.0	1270	7
Heavy-Duty	18	460	0.34	0.26	869	394	17,035	75.8	12,865	57.2	11,590	51.6	50.0	1270	3
Plate Lip	24	610	0.50	0.38	938	425	17,035	75.8	12,865	57.2	11,590	51.6	50.0	1270	4
	30	760	0.62	0.47	1,122	509	17,035	75.8	12,865	57.2	11,590	51.6	50.0	1270	4
	36	915	0.78	0.60	1,298	589	17,035	75.8	12,865	57.2	11,590	51.6	50.0	1270	5
Ditching	48	1220	0.67	0.51	841	381	23,020	102.4	14,090	62.7	12,555	55.8	37.0	940	0
	60	1525	0.90	0.69	937	425	23,020	102.4	14,090	62.7	12,555	55.8	37.0	940	0

*All capacities are SAE heaped ratings.

BUCKET SELECTION CHART

	General-Purpose Bucket*	Heavy-Duty Bucket*
Material (loose weight)		
Wood chips – 700 lb./cu. yd. (420 kg/m ³)	3.25 cu. yd. (2.5 m ³)	—
Peat, dry – 750 lb./cu. yd. (440 kg/m ³)	2.75 cu. yd. (2.1 m ³)	—
Cinders – 950 lb./cu. yd. (560 kg/m ³)	2.00 cu. yd. (1.5 m ³)	—
Peat, wet – 1,170 lb./cu. yd. (690 kg/m ³)	1.75 cu. yd. (1.3 m ³)	—
Topsoil – 1,600 lb./cu. yd. (950 kg/m ³)	1.38 cu. yd. (1.1 m ³)	—
Coal – 1,780 lb./cu. yd. (1050 kg/m ³)	1.25 cu. yd. (1.0 m ³)	—
Caliche – 2,100 lb./cu. yd. (1250 kg/m ³)	0.88 to 0.63 cu. yd. (0.7 to 0.5 m ³)	0.75 to 0.5 cu. yd. (0.6 to 0.4 m ³)
Earth, loam – 2,100 lb./cu. yd. (1250 kg/m ³)	0.88 cu. yd. (0.7 m ³)	0.75 cu. yd. (0.6 m ³)
Shale – 2,250 lb./cu. yd. (1330 kg/m ³)	0.88 cu. yd. (0.7 m ³)	0.75 cu. yd. (0.6 m ³)
Sand, dry – 2,400 lb./cu. yd. (1420 kg/m ³)	0.88 cu. yd. (0.7 m ³)	0.75 cu. yd. (0.6 m ³)
Clay, dry – 2,500 lb./cu. yd. (1480 kg/m ³)	0.88 to 0.63 cu. yd. (0.7 to 0.5 m ³)	0.75 cu. yd. (0.6 m ³)
Earth, dry – 2,550 lb./cu. yd. (1510 kg/m ³)	0.75 to 0.63 cu. yd. (0.6 to 0.5 m ³)	0.63 cu. yd. (0.5 m ³)
Limestone, broken or crushed – 2,600 lb./cu. yd. (1540 kg/m ³)	0.75 to 0.5 cu. yd. (0.6 to 0.4 m ³)	0.63 to 0.5 cu. yd. (0.5 to 0.4 m ³)
Earth, wet – 2,700 lb./cu. yd. (1600 kg/m ³)	0.75 cu. yd. (0.6 m ³)	0.63 cu. yd. (0.5 m ³)
Clay, wet – 2,800 lb./cu. yd. (1660 kg/m ³)	0.75 cu. yd. (0.6 m ³)	0.63 cu. yd. (0.5 m ³)
Rock, granite, blasted and broken – 2,800 lb./cu. yd. (1660 kg/m ³)	0.88 to 0.63 cu. yd. (0.7 to 0.5 m ³)	0.75 to 0.5 cu. yd. (0.6 to 0.4 m ³)
Sand, moist – 2,850 lb./cu. yd. (1690 kg/m ³)	0.75 cu. yd. (0.6 m ³)	0.63 cu. yd. (0.5 m ³)
Sand and gravel, dry – 2,900 lb./cu. yd. (1720 kg/m ³)	0.75 cu. yd. (0.6 m ³)	0.63 cu. yd. (0.5 m ³)
Sand, wet – 3,100 lb./cu. yd. (1840 kg/m ³)	0.63 cu. yd. (0.5 m ³)	0.50 cu. yd. (0.4 m ³)
Sand and gravel, wet – 3,400 lb./cu. yd. (2020 kg/m ³)	0.63 cu. yd. (0.5 m ³)	0.50 cu. yd. (0.4 m ³)

*Contact your John Deere dealer for optimum bucket and attachment selections. These recommendations are for general conditions and average use. Larger buckets may be possible when using light buckets, for flat and level operations, less compacted materials, and volume loading applications such as mass excavation applications in ideal conditions. Smaller buckets are recommended for adverse conditions such as off-level applications and uneven surfaces. Bucket capacity indicated is SAE heaped.

	490E		490E		490E
ENGINE					
Auto-idle system	●	Fuel cap	●	Mode selectors (illuminated)	●
Automatic belt tension device	●	Hydraulic reservoir	●	Power modes – four	●
Batteries (two 12 volt), 180-min. (1,250 CCA) reserve capacity	●	Service doors	●	Travel modes – three with automatic shift	●
Dual element dry-type air filter	●	Toolbox	●	Work modes – four	●
Electric ether starting aid	●			Monitor system with alarm features	●
Enclosed fan guard	●	FRONT ATTACHMENTS		Auto-idle indicator light	●
Conforms to SAE J1308	●	Bucket-to-arm clearance adjustable bushing (except ditching bucket)	●	Engine air cleaner restriction indicator light	●
Engine coolant to –34°F (–37°C)	●	Centralized lubrication system	●	Engine coolant temperature indicator light with audible alarm	●
Fuel/water separator	●	Dirt seals on all bucket pins	●	Engine oil pressure indicator light with audible alarm	●
Full-flow oil filter	●	Arm, 8 ft. 3 in. (2.52 m)	■	Fluid level	●
Isolation mounted	●	Arm, 9 ft. 11 in. (3.01 m)	■	Engine coolant level indicator light	●
John Deere quick release fuel filter	●	Attachment quick couplers	■	Engine oil level indicator light	●
Key start switch with electric fuel shutoff	●	Boom cylinder with plumbing to mainframe for no-boom-arm option	■	Hydraulic oil level indicator light	●
Radiator trash screen	●	Buckets	■	Hydraulic warm-up indicator light	●
Underhood muffler with vertical curved end exhaust stack	●	Ditching	■	Low alternator charge indicator light	●
		General purpose	■	Low fuel indicator light	●
		Heavy duty	■	Work-lights-on indicator light	●
		Side cutters and teeth	■	Motion alarm with cancel switch	●
		No-boom-arm option	■	Conforms to SAE J994	●
HYDRAULIC SYSTEM				Propel pedals and levers	●
Auxiliary hydraulic valve section	●	OPERATOR'S STATION		Seat belt, 2 in. (51 mm)	●
Anti-drift valve for boom down, arm in	■	Adjustable independent control positions (levers-to-seat, seat-to-pedals)	■	Seat belt, 3 in. (76 mm)	■
Auxiliary pilot and electric controls	■	Alternate pilot control pattern	■	Tinted glass	●
Hydraulic filter restriction indicator kit	■	Deluxe suspension cloth seat with adjustable armrests	■	Air conditioning	■
		Front windshield wiper	■	AM/FM radio	■
UNDERCARRIAGE		Constant speed	■	Defroster fan	■
Planetary drive	●	Intermittent speed	■	Window vandal protection covers	■
Propel motor shields	●	Gauges (illuminated)	■	24- to 12-volt D.C. radio converters	■
Three-speed propel with automatic shift	●	Engine coolant	■		
Track guides, front idler and center	●	Fuel	■	ELECTRICAL	
Upper carrier rollers (2)	●	Heater, 20,000 Btu/hr (5.9 kW) with blower fan	■	Blade-type multi-fused circuits	●
Triple semi-grouser shoes, 24 in. (600 mm)	●			By-pass start safety cover on starter	●
Triple semi-grouser shoes, 28 in. (700 mm)	■	Horn, electric	●	Positive terminal battery covers	●
High-traction semi-grouser shoes, 24 in. (600 mm)	■	Hourmeter, electric	●		
		Hydraulic warm-up control	●	LIGHTS	
UPPERSTRUCTURE		Interior light	●	Work lights	●
Right- and left-hand mirrors	●			Halogen	●
Toolbox	●			One mounted on boom	●
Vandal locks with ignition key	●			Two mounted on frame	●
Cab door	●				

KEY: ● Standard equipment ■ Optional or special equipment

See your John Deere dealer for further information.

THE JDAdvantEDGE

JDAdvantEdge is a wealth of support programs, parts systems, and dealer resources, all designed to give you the edge. This package of special benefits is a major reason why John Deere offers the “best value” for your equipment dollar.

Best parts support – Twelve regional parts depots in North America and others around the world put parts support near your job no matter where in the world it is.

A computerized FLASH™ parts locating system linking these depots to dealerships can find out-of-stock parts in a hurry and get them into your hands fast. Usually within 24 hours.

Best service backup – Dealer service technicians are regularly schooled, at our modern facility in Davenport, Iowa, or by professionals in the field, to diagnose quickly and repair efficiently.

If they're stumped, a phone call to DTAC (Dealer Technical Assistance Center) puts them in touch with a staff of pros at the factory who help them find a solution quickly.

Best dealers – Your John Deere dealer is an important contributor to the JDAdvantEdge. He or she is committed to being the best equipment supplier you can work with.

This is a dollars-and-cents commitment in parts inventory, in service facilities, in field-service trucks. It's a sweat-and-blood commitment in dedicated, skilled, and highly trained and motivated personnel in each and every department at the dealership.

But what sets John Deere dealers apart from all the rest is something more, a factor somewhat difficult to measure ... a caring attitude, and a sincere desire to be the best at meeting the needs of each individual customer.

John Deere Finance Plans – Whether you rent, lease, or buy John Deere equipment, your dealer can explain the John Deere options available. One-stop options that let you free up operating capital, keep other lines of credit open. More solid benefits of the JDAdvantEdge.

Best protection – In addition to the new equipment warranty that meets or exceeds the competition, SECURE® extended coverage, an optional service product for John Deere equipment, is available for repair coverage after the warranty concludes. Full machine or power train coverage is available for a variety of time periods to meet your needs. Consult your dealer for availability and details.



Net engine power is with standard equipment including air cleaner, exhaust system, alternator, and cooling fan, at standard conditions per SAE J1349 and DIN 6270B, using No. 2-D fuel at 35 API gravity. No derating is required up to 10,000 ft. (3050 m) altitude. Gross power is without cooling fan.

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 42-in. (1065 mm) bucket, 28-in. (700 mm) track shoes, 5,180-lb. (2350 kg) counterweight, full fuel tank, and 175-lb. (79 kg) operator.

