

ENGINE**110**

Type	John Deere 4045T with altitude-compensating turbocharger
Rated power	80 SAE net hp (60 kW) @ 2,200 rpm
Cylinders.....	4
Displacement	276 cu. in. (4.5 L)
Maximum net torque	244 lb.-ft. (330 Nm) @ 1,300 rpm
Fuel consumption, typical.....	2.0 to 3.0 gal./hr. (7.6 to 11.4 L/h)
Cooling fan.....	suction-type
Electrical system	24 volt with 45-amp alternator
Batteries (two 12 volt)	reserve capacity: 180 min.
Off-level capacity	100% (45 deg.)

HYDRAULIC SYSTEM

Main pumps.....	two variable-displacement axial-piston
Minimum flow.....	2 x 11 gpm (2 x 41 L/min.)
Maximum flow	2 x 26 gpm (2 x 100 L/min.)
Pilot pump	one gear
Maximum rated flow	8.7 gpm (32.9 L/min.)
Pressure setting	540 psi (3723 kPa)
System operating pressure	
Implement circuits.....	4,980 psi (34 336 kPa)
Travel circuits.....	4,980 psi (34 336 kPa)
Swing circuits.....	4,550 psi (31 371 kPa)
Oil filtration.....	one 10-micron full-flow return filter with by-pass one pilot oil filter

CYLINDERS

Boom (2)	
Bore	3.74 in. (95 mm)
Rod diameter.....	2.76 in. (70 mm)
Stroke	37.0 in. (942 mm)
Arm (1)	
Bore	4.13 in. (105 mm)
Rod diameter.....	2.95 in. (75 mm)
Stroke	40.9 in. (1040 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	0–13.5 rpm
Swing torque.....	19,955 lb.-ft. (27 058 Nm)

UNDERCARRIAGE

Carrier rollers (per side)	1
Track rollers (per side)	6
Shoes (per side)	41
Track guides.....	front
Track adjustment	hydraulic
Travel speed	
Low	0–2.1 mph (0–3.5 km/h)
High	0–3.4 mph (0–5.5 km/h)
Drawbar pull.....	19,400 lb. (8800 kg)

GROUND PRESSURE DATA

Average ground pressure (with blade)	
24-in. (600 mm) triple semi-grouser shoes.....	4.97 psi (34.3 kPa); recommended for rocky terrain, hard ground, and stumps
28-in. (700 mm) triple semi-grouser shoes.....	4.32 psi (29.8 kPa); recommended for general conditions and soft terrain

CAPACITIES

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Fuel tank	66 gal. (250 L)
Cooling system	23 qt. (22 L)
Engine lubrication, including filter.....	13.8 qt. (13 L)
Hydraulic tank.....	20 gal. (76 L)
Hydraulic system	35 gal. (134 L)
Swing gearbox.....	2.6 qt. (2.8 L)
Propel gearbox (each)	3.4 qt. (3.2 L)
Pump drive gearbox.....	0.8 qt. (0.8 L)

OPERATING WEIGHTS

With full fuel tank; 175-lb. (79 kg) operator; 0.79-cu. yd. (0.60 m³), 42-in. (1067 mm), 925-lb. (420 kg) bucket; 9 ft. 3 in. (2.8 m) arm; 3,748-lb. (1700 kg) counterweight; 10 ft. 11 in. (3.34 m) undercarriage length with 6 ft. 6 in. (1.99 m) wide gauge; and backfill blade

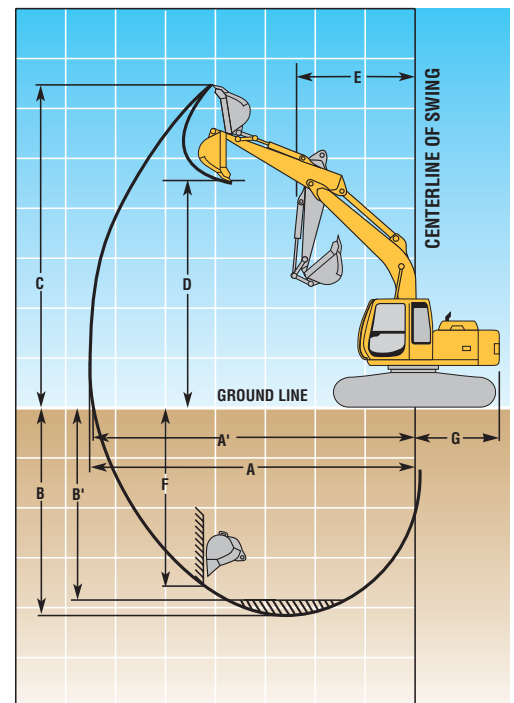
24-in. (600 mm) triple semi-grouser shoes.....	26,725 lb. (12 122 kg)
28-in. (700 mm) triple semi-grouser shoes.....	27,100 lb. (12 292 kg)

COMPONENT WEIGHTS

Upperstructure (less front attachments and 3,748-lb. [1700 kg] counterweight with full fuel tank)	7,039 lb. (3193 kg)
Undercarriage equipped with	
24-in. (600 mm) triple semi-grouser shoes.....	8,889 lb. (4032 kg)
28-in. (700 mm) triple semi-grouser shoes.....	9,264 lb. (4202 kg)
One-piece boom (with arm cylinder).....	1,812 lb. (822 kg)
Arm with bucket cylinder and linkage	
7 ft. 4 in. (2.26 m).....	1,129 lb. (512 kg)
9 ft. 3 in. (2.80 m).....	1,301 lb. (590 kg)
Boom lift cylinders (2) total weight	432 lb. (196 kg)
Counterweight.....	3,748 lb. (1700 kg)
Blade	2,262 lb. (1026 kg)

OPERATING INFORMATION

	<i>Arm Length</i> 7 ft. 4 in. (2.26 m)	<i>Arm Length</i> 9 ft. 3 in. (2.80 m)
Arm force with 0.79-cu. yd. (0.60 m ³) 42-in. (1067 mm) general-purpose bucket.....	12,348 lb. (5600 kg)	10,805 lb. (4900 kg)
Bucket digging force with 0.79-cu. yd. (0.60 m ³) 42-in. (1067 mm) general-purpose bucket	19,640 lb. (8909 kg)	19,640 lb. (8909 kg)
Lifting capacity over front @ ground level 20-ft. (6.1 m) reach.....	4,353 lb. (1974 kg)	4,303 lb. (1952 kg)
A Maximum reach	24 ft. 10 in. (7.58 m)	26 ft. 5 in. (8.06 m)
A' Maximum reach @ ground level	24 ft. 6 in. (7.46 m)	25 ft. 10 in. (7.88 m)
B Maximum digging depth	16 ft. 3 in. (4.96 m)	18 ft. 1 in. (5.51 m)
B' Maximum digging depth @ 8-ft. (2.44 m) flat bottom.....	15 ft. 9 in. (4.80 m)	17 ft. 8 in. (5.38 m)
C Maximum cutting height.....	26 ft. 2 in. (7.99 m)	27 ft. 0 in. (8.23 m)
D Maximum dumping height	19 ft. 1 in. (5.82 m)	20 ft. 0 in. (6.09 m)
E Minimum swing radius	7 ft. 8 in. (2.33 m)	8 ft. 6 in. (2.59 m)
F Maximum vertical wall	14 ft. 9 in. (4.50 m)	16 ft. 5 in. (5.00 m)
G Tail swing radius	7 ft. 0 in. (2.13 m)	7 ft. 0 in. (2.13 m)

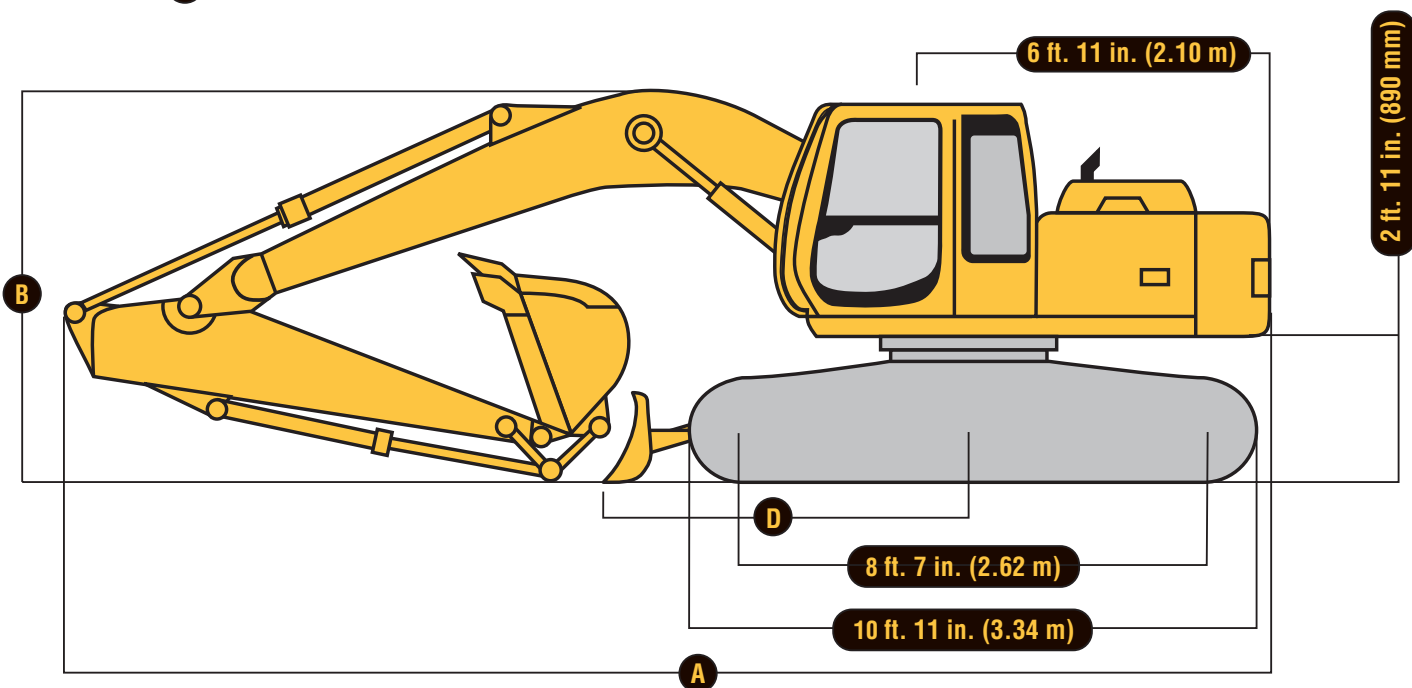
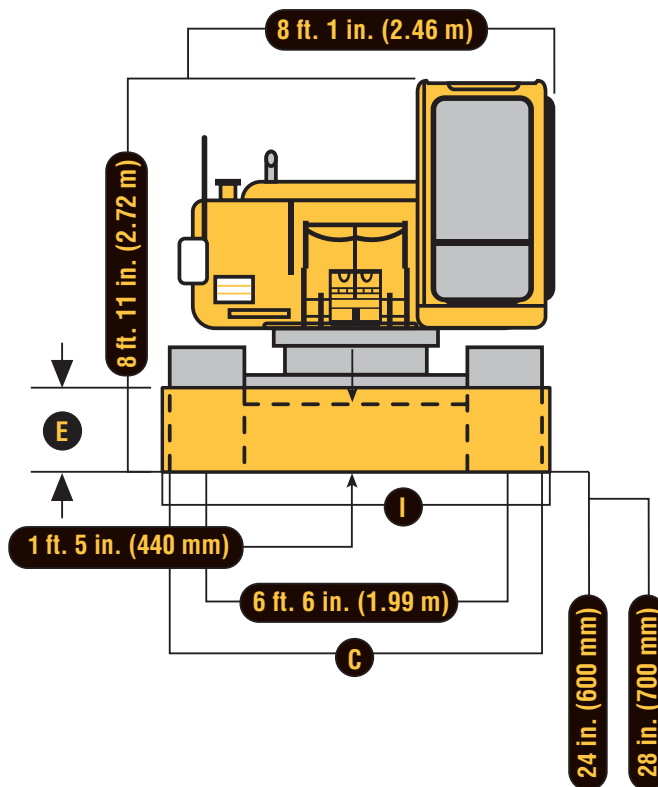
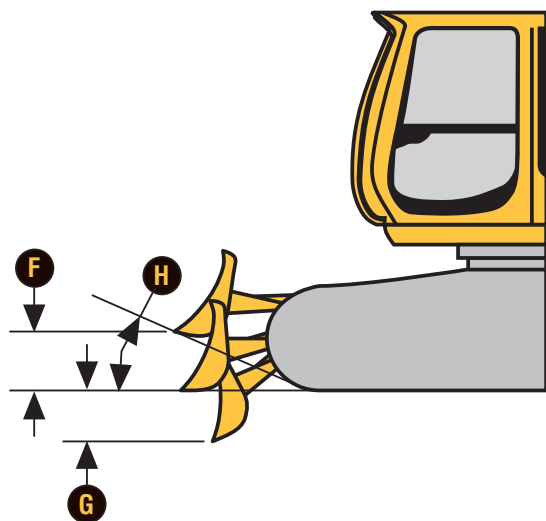


DIMENSIONS

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- A** With 7 ft. 4 in. (2.26 m) arm23 ft. 7 in. (7.19 m)
With 9 ft. 3 in. (2.80 m) arm23 ft. 8 in. (7.21 m)
- B** With 7 ft. 4 in. (2.26 m) arm8 ft. 11 in. (2.72 m)
With 9 ft. 3 in. (2.80 m) arm8 ft. 11 in. (2.72 m)*
- C** With 24-in. (600 mm) semi-grouser shoes8 ft. 6 in. (2.59 m)
With 28-in. (700 mm) semi-grouser shoes8 ft. 10 in. (2.69 m)
- D** Blade length8 ft. 2 in. (2478 mm)
- E** Blade height2 ft. 0 in. (605 mm)
- F** Blade lift height1 ft. 7 in. (489 mm)
- G** Blade cut below grade1 ft. 8 in. (501 mm)
- H** Blade lift angle26 degrees
- I** Blade width8 ft. 2 in. (2490 mm)

*Arm pinned in shipping position.



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 0.79-cu. yd. (0.60 m³), 42-in. (1067 mm) wide, 925-lb. (420 kg) bucket; 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. Lift capacities are based on SAE standard J1097.

Load Point Height	5 ft. (1.52 m)		10 ft. (3.05 m)		15 ft. (4.57 m)		20 ft. (6.10 m)	
	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side
<i>With 7 ft. 4 in. (2.26 m) arm and 28 in. (700 mm) shoes, blade off ground</i>								
15 ft. (4.57 m)					5,099 (2313)	5,099 (2313)		
10 ft. (3.05 m)			6,890 (3125)	6,890 (3125)	6,111 (2772)	6,111 (2772)	4,676 (2121)	3,868 (1754)
5 ft. (1.52 m)					7,269 (3297)	5,933 (2691)	4,513 (2047)	3,713 (1684)
Ground Line			11,563 (5245)	10,434 (4733)	6,885 (3123)	5,576 (2529)	4,353 (1974)	3,560 (1615)
-5 ft. (-1.52 m)	7,321 (3321)	7,321 (3321)	13,472 (6111)	10,363 (4701)	6,727 (3051)	5,428 (2462)	4,288 (1945)	3,498 (1587)
-10 ft. (-3.05 m)			12,197 (5532)	10,542 (4782)	6,797 (3083)	5,493 (2492)		
<i>With 9 ft. 3 in. (2.80 m) arm and 28 in. (700 mm) shoes, blade off ground</i>								
15 ft. (4.57 m)							3,446 (1563)	3,446 (1563)
10 ft. (3.05 m)					5,147 (2335)	5,147 (2335)	4,704 (2134)	3,889 (1764)
5 ft. (1.52 m)			10,760 (4881)	10,760 (4881)	7,011 (3180)	5,999 (2721)	4,505 (2043)	3,699 (1678)
Ground Line			13,631 (6183)	10,487 (4757)	6,882 (3122)	5,564 (2524)	4,303 (1952)	3,506 (1590)
-5 ft. (-1.52 m)	7,039 (3193)	7,039 (3193)	13,314 (6039)	10,208 (4630)	6,636 (3010)	5,335 (2420)	4,183 (1897)	3,392 (1539)
-10 ft. (-3.05 m)	14,344 (6506)	14,344 (6506)	13,322 (6043)	10,291 (4668)	6,623 (3004)	5,322 (2414)		
-15 ft. (-4.57 m)			9,086 (4121)	9,086 (4121)				

BUCKETS

A full line of buckets is offered to meet a wide variety of applications. 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 7 ft. 4 in. (2.26 m)		Arm Dig Force 9 ft. 3 in. (2.80 m)		Bucket Tip Radius		No. Teeth
	in.	mm	cu. yd.	m ³	lb.	kg	lb.	kN	lb.	kN	lb.	kN	in.	mm	
General-Purpose Plate Lip	18	460	0.34	0.26	723	328	17,087	76.0	11,766	52.2	10,369	46.0	50.0	1270	3
	24	610	0.50	0.38	893	405	17,087	76.0	11,766	52.2	10,369	46.0	50.0	1270	4
	30	760	0.64	0.49	1,066	484	17,087	76.0	11,766	52.2	10,369	46.0	50.0	1270	4
	36	915	0.78	0.60	1,081	490	17,087	76.0	11,766	52.2	10,369	46.0	50.0	1270	5
	42	1065	0.79	0.60	926	420	19,640	87.4	12,348	54.8	10,805	47.9	43.5	1105	6
	42	1065	0.92	0.70	1,244	564	17,087	76.0	11,766	52.2	10,369	46.0	50.0	1270	6
Heavy-Duty Plate Lip	48	1220	1.06	0.81	1,441	654	17,087	76.0	11,766	52.2	10,369	46.0	50.0	1270	7
	18	460	0.34	0.26	869	394	17,087	75.9	11,766	52.2	10,369	46.0	50.0	1270	3
	24	610	0.50	0.38	938	425	17,087	75.9	11,766	52.2	10,369	46.0	50.0	1270	4
	30	760	0.62	0.47	1,122	509	17,087	75.9	11,766	52.2	10,369	46.0	50.0	1270	4
Ditching	36	915	0.78	0.60	1,298	589	17,087	75.9	11,766	52.2	10,369	46.0	50.0	1270	5
	48	1220	0.67	0.51	841	381	23,020	102.4	12,991	57.7	11,283	50.1	37.0	940	0
	60	1525	0.90	0.69	937	425	23,020	102.4	12,991	57.7	11,283	50.1	37.0	940	0

*All capacities are SAE heaped ratings.

BUCKET SELECTION CHART

	<i>General-Purpose Bucket*</i>	<i>Heavy-Duty Bucket*</i>
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.

	110		110		110
ENGINE					
Auto-idle system	●	Cab door	●	Interior light	●
Automatic belt tension device	●	Engine hood	●	Mode selectors (illuminated)	●
Batteries (two 12 volt), 180-min. reserve capacity (1,250 CCA)	●	Fuel cap	●	Power modes – three	●
Dual element dry-type air filter	●	Service doors	●	Travel modes – two with automatic shift	●
Electric fuel shutoff	●	Toolbox	●	Work modes – four	●
Enclosed fan guard	●			Monitor system with alarm features	●
Conforms to SAE J1308	●	FRONT ATTACHMENTS		Auto-idle indicator light	●
Engine coolant to -34°F (-37°C)	●	Bucket-to-arm clearance adjustable bushing (except ditching buckets)	●	Engine air cleaner restriction indicator light	●
Fuel filter with water separator	●	Centralized lubrication system	●	Engine coolant temperature indicator light with audible alarm	●
Full-flow oil filter	●	Dirt seals on all bucket pins	●	Engine oil pressure indicator light with audible alarm	●
Radiator trash screen	●	No-boom-arm	●	Fluid level	●
Underhood muffler with vertical curved end exhaust stack	●	Arm, 7 ft. 4 in. (2.26 m)	■	Engine coolant level indicator light	●
Electric ether starting aid	■	Arm, 9 ft. 3 in. (2.80 m)	■	Engine oil level indicator light	●
Engine coolant heater	■	Boom cylinder with plumbing to mainframe	■	Hydraulic oil level indicator light	●
		Buckets		Low alternator charge indicator light	●
HYDRAULIC SYSTEM		Ditching	■	Low fuel indicator light	●
Drift-reduction valve for boom down, arm in	●	General purpose	■	Motion alarm with cancel switch	●
Spring-applied, hydraulically-released automatic swing brake	●	General-purpose high capacity	■	Conforms to SAE J994	■
Auxiliary hydraulic and electric pilot controls	■	Heavy duty	■	Propel pedals and levers	●
Auxiliary hydraulic lines	■	Heavy-duty high capacity	■	Seat belt, 2 in. (51 mm), retractable	●
Hydraulic filter restriction indicator kit	■	Severe-duty cast lip	■	Seat belt, 3 in. (76 mm), retractable	■
Load-lowering control device	■	Severe-duty plate lip	■	Tinted glass	●
		Side cutters and teeth	■	Air conditioning	■
UNDERCARRIAGE		Heavy-duty grapple	■	Alternate pilot control pattern	■
Backfill blade	●	Hydraulic bucket material clamps	■	AM/FM radio	■
Planetary drive	●	Slide-Loc hydraulic quick coupler	■	Cab window vandal protection	■
Propel motor shields	●			Circulation fan	■
Track guides, front idler	●	OPERATOR'S STATION		Protection screens for cab front, rear, and side	■
Triple semi-grouser shoes, 24 in. (600 mm)	●	Adjustable seat with independent control positions (levers-to-seat, seat-to-pedals)	●	24- to 12-volt D.C. converters	■
Triple semi-grouser shoes, 28 in. (700 mm)	●	Deluxe suspension cloth seat with adjustable armrests	●		
Two-speed propel with automatic shift	●	Front windshield wiper with intermittent speed	■	ELECTRICAL	
Upper carrier roller (1)	●	Gauges (illuminated)	●	Blade-type multi-fused circuits	●
		Engine coolant	●	By-pass start safety cover on starter	●
UPPERSTRUCTURE		Fuel	●	Positive terminal battery covers	●
Counterweight, 3,748 lb. (1700 kg)	●	Heater, 20,000 Btu/hr. (5.9 kW) with blower fan	●		
Right- and left-hand mirrors	●	Horn, electric on left control lever	●	LIGHTS	
Toolbox	●	Hourmeter, electric	●	Halogen work lights	●
Vandal locks with ignition key	●	Hydraulic shutoff lever, all controls	●	One mounted on boom	●
				One mounted on frame	●

KEY: ● Standard equipment ■ Optional or special equipment

CONTROL OWNING AND OPERATING COSTS

Total Repair Cost Management (TRCM) is part of John Deere's proactive, fix-before-fail strategy on machine maintenance that will help control costs, increase profits, and reduce stress. Included in this comprehensive lineup of ongoing programs and services are:

OilScan® Plus program – tells you what's going on inside *all* of your machine's major components so you'll know if there's a problem *before* you see a decline in performance. OilScan Plus oil analysis is included in most SECURE®-Extended warranty and preventive-maintenance contracts.

MaintainIt™ program – Flexible, easy-to-use MaintainIt software lets you start your own computerized maintenance program by putting complete machine histories at your fingertips. It features a library of John Deere equipment, a spare-parts inventory list, and a list of maintenance tasks. Compare costs; schedule maintenance procedures by hourmeter or date; or print, fax, or e-mail purchase and work orders with just a few quick keystrokes.

Component life-cycle data – gives you vital information on the projected life span of components and lets you make informed decisions on machine maintenance by telling you approximately how many hours of use you can expect from an engine, transmission, or hydraulic pump. This information can

be used to preempt catastrophic downtime by servicing major components at about 80 percent of their life cycle.

Preventive Maintenance (PM) contracts – give you a fixed cost for maintaining a machine for a given period of time. It also helps you avoid downtime by ensuring that critical maintenance work gets done right and on schedule. On-site preventive maintenance service performed where and when you need it helps protect you from the expense of catastrophic failures and lets you avoid waste-disposal hassles.

SECURE-Extended warranty – gives you a fixed cost for machine repairs for a given period of time so you can effectively manage costs. Whether you work in a severe-service setting or just want to spread the risk of doing business, this is a great way to custom-fit coverage for your operation. And a SECURE-Extended contract also travels well because it's backed by John Deere and is honored by *all* Deere construction dealers.

Customer Support Advisors (CSAs) – Deere believes the CSA program lends a *personal* quality to Total Repair Cost Management. Certified CSAs have the knowledge and skills for helping make important decisions on machine maintenance and repair. Their mission is to help you implement a plan that's right for *your* business and take the burden of machine maintenance off your shoulders.



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 SAE standards. Except where otherwise noted, these specifications are based on a unit with 42-in. (1067 mm) bucket, 24-in. (600 mm) track shoes, 3,748-lb. (1700 kg) counterweight, full fuel tank, and 175-lb. (79 kg) operator.

