



John Deere, Inc.
1415 Deere Drive
Moline, Illinois 61701
Contact your dealer

710C

BACKHOE LOADER



**SAE Net
Horsepower**

115 hp
(86 kW)

**Digging
Depth**

18 ft.
(5.49 m)

**Loader
Lift**

6600 lb.
(2990 kg)

Model shown may include options

ENGINE

John Deere engineered and manufactured. Replaceable wet type cylinder liners provide superior heat dissipation, longer life. High strength alloy heads have replaceable valve seat inserts. The forged steel, 7-main bearing crankshaft is statically and dynamically balanced for smooth operation. Cast aluminum pistons provide good heat transfer and pistons are sprayed with cooling oil for longer life.

Engine: John Deere 6059T	115 SAE net hp (86 kW)
Rated power @ 2200 rpm	120 SAE gross hp (90 kW)
Cylinders	6
Displacement	359 cu. in. (5.884 L)
Fuel consumption, typical	2.0 to 3.3 gal/hr (7.6 to 12.5 L/h)
Torque rise	25 percent
Maximum net torque	343 lb-ft (465 Nm)
Lubrication	pressure system w/full-flow filter and cooler
Air cleaner	dual stage dry type with safety element and precleaner
Electrical system	12 volt with 78-amp alternator

TRANSMISSION

John Deere designed and built power shift transmission with modulated full power shifting between forward and reverse. Uses single stage, dual phase 12.2-inch (310 mm) torque converter with 1.99:1 stall ratio.

TRAVEL SPEEDS

	Gear	Forward		Reverse	
		mph	(km/h)	mph	(km/h)
With standard 21L-24 rear and 14.5/75-16.1 front tires	1	3.1	5.0	3.4	5.4
	2	5.4	8.7	6.0	9.6
	3	11.1	17.9		
	4	19.0	30.6		
With MFWD and required 21L-28 rear and 15-19.5 front tires	1	3.4	5.5	3.7	6.0
	2	6.0	9.6	6.6	10.6
	3	12.3	19.8		
	4	21.0	33.9		

FINAL DRIVES

Heavy-duty, inboard mounted planetary type. Evenly distributes axle shock loads over three gears that run in a cooling oil bath.

BRAKES

Hydraulic wet disk brakes are mounted inboard and are pressure cooled and lubricated. They're self-adjusting, self-equalizing, require no periodic service. Individual pedals allow them to be applied together or separately. Parking/emergency brake is an independent system that uses a caliper and disk on the rear axle input pinion.

CAPACITIES

	U.S.
Fuel tank	37 gal. (140 L)
Engine coolant	28 qt. (26 L)
Engine oil including filter	20 qt. (19 L)
Transmission system	6 gal. (23 L)
Hydraulic system	40 gal. (151 L)
Rear axle	18 qt. (17 L)

STEERING

Hydrostatic power steering gives superior control at all speeds. Excellent steering torque allows easy maneuvering with heavy loads.

Non-powered axle	
Curb turning radius with brakes	14 ft. 4 in. (4.37 m)
without brakes	15 ft. 2 in. (4.63 m)
Bucket clearance circle with brakes	36 ft. 2 in. (11.02 m)
without brakes	37 ft. 10 in. (11.54 m)
Axle oscillation stop to stop	20 degrees
Mechanical-front-wheel drive	
Curb turning radius with brakes	14 ft. 5 in. (4.39 m)
without brakes	15 ft. 7 in. (4.76 m)
Bucket clearance circle with brakes	36 ft. 3 in. (11.06 m)
without brakes	38 ft. 9 in. (11.80 m)
Axle oscillation stop to stop	18 degrees
Steering wheel turns stop to stop, both axles	3.0 to 3.8

Axle ratings:	Static	Dynamic	SAEJ43
Front	78,700 lb. (35,700 kg)	78,700 lb. (35,700 kg)	12,500 lb. (5670 kg)
Rear	74,000 lb. (33,600 kg)	98,800 lb. (44,900 kg)	19,400 lb. (8800 kg)

HYDRAULICS

System	closed center
Pressure, main relief	2550 psi (17,500 kPa)
Pump	radial pistons
Flow at 2200 rpm	53 gpm (201 L/min)
Filter, return oil	10 micron, spin-on replaceable element

CYLINDERS

	Bore		Stroke		Rod	
	in.	(mm)	in.	(mm)	in.	(mm)
Loader boom (2)	3.84	100	34.25	870	2.20	56
Loader bucket (1)	4.53	115	32.32	821	2.20	56
Backhoe boom (1)	6.30	160	44.37	1127	3.15	80
Backhoe crowd (1)	5.51	140	35.35	898	2.76	70
Backhoe bucket (1)	3.94	100	37.46	952	2.48	63
Backhoe swing (2)	4.50	114	9.88	251	2.25	57
Backhoe extendable dipper (1)	3.00	76	60.00	1525	1.50	38
Backhoe stabilizer (2)	4.53	115	21.34	542	2.48	63
Steering (1) regular axle	2.76	70	9.06	230	1.26	32

TIRES

Rear	Front
21L-24, 16 PR R4	14.5/75-16.1, 10 PR F3
20.5-25, 12 PR L2	14.5/75-16.1, 10 PR F3
With mechanical-front-wheel drive	
21L-28, 14 PR R4	15-19.5, 8 PR, lug tread

OPERATING WEIGHTS

SAE	
710C	22,500 lb. (10,200 kg)
cab adds	450 lb. (204 kg)
mechanical-front-wheel drive adds	1300 lb. (590 kg)
extendable dipperstick with required counterweight adds	1362 lb. (618 kg)
optional front counterweighting adds	700 lb. (318 kg)
reversible stabilizer pads add	90 lb. (41 kg)

See backhoe and loader performance data for bucket weights



MAINFRAME

All drivetrain components are mounted independently to the massive unitized mainframe where they are isolated from working stress and shock loads. And each drivetrain component can be removed independently of the others to speed repairs, reduce downtime.



FRONT-WHEEL DRIVE

This rugged, industrial-duty axle can be engaged under load on-the-go. A limited slip differential is mounted to the side to provide maximum ground clearance. The axle's sealed design with no breathers prevents entry of water and mud. Turning radius remains near that of a two-wheel drive.



OPERATOR'S STATION

The industry standard. Large door swings open to the front, can be left open during operation. Sixty-six percent of the glass area opens for superior ventilation. Electronic monitor provides audible and visible warnings for vital functions. There are four seat options and three control options.



LOADER DESIGN

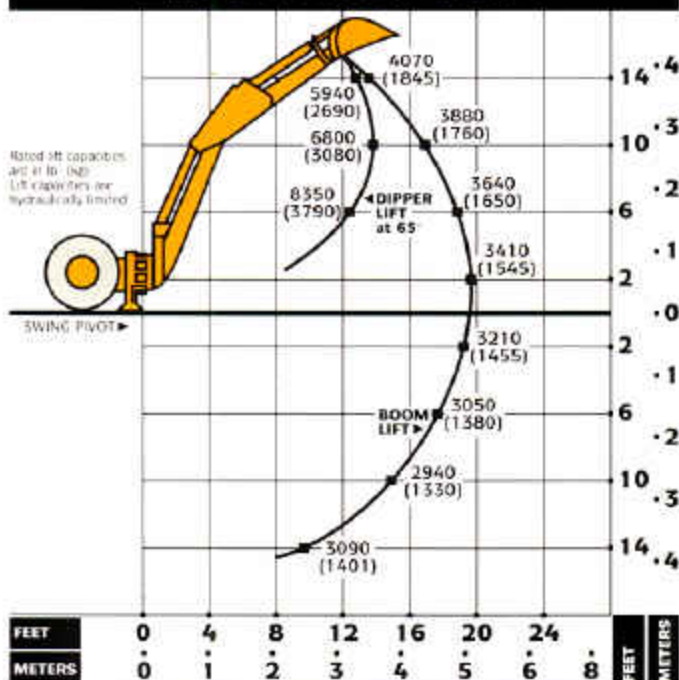
A single dump cylinder on the loader bucket gives the operator an unobstructed view to the bucket. Simpler linkage and one less cylinder reduces weight. It also means there are fewer pivot points and fewer lubrication points reducing maintenance time and expense.

BACKHOE PERFORMANCE

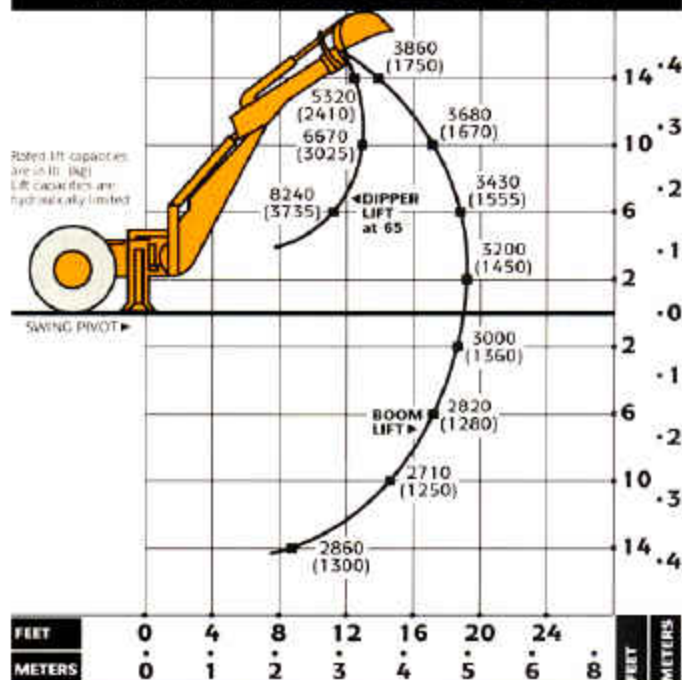
Digging force, bucket cylinder (power dig position)	13,500 lb. (60 kN)	13,500 lb. (60 kN)	13,500 lb. (60 kN)
Digging force, crowd cylinder	9600 lb. (42.7 kN)	9600 lb. (42.7 kN)	6700 lb. (29.8 kN)
Swing arc	180 deg.	180 deg.	180 deg.
Operator control	Two levers	Two levers	Two levers
Bucket positions	0 to 3 deg. rollback	0 to 3 deg. rollback	0 to 3 deg. rollback
Stabilizer angle rearward	13 deg.	13 deg.	13 deg.
Lifting capacity, maximum, boom at 65 deg.	7300 lb. (3300 kg)	6300 lb. (2850 kg)	3300 lb. (1500 kg)
Leveling angle	13 deg.	13 deg.	13 deg.

* Backhoe specifications are with 24 in. x 11.1 cu. ft. (610 x 0.31 m³) bucket.

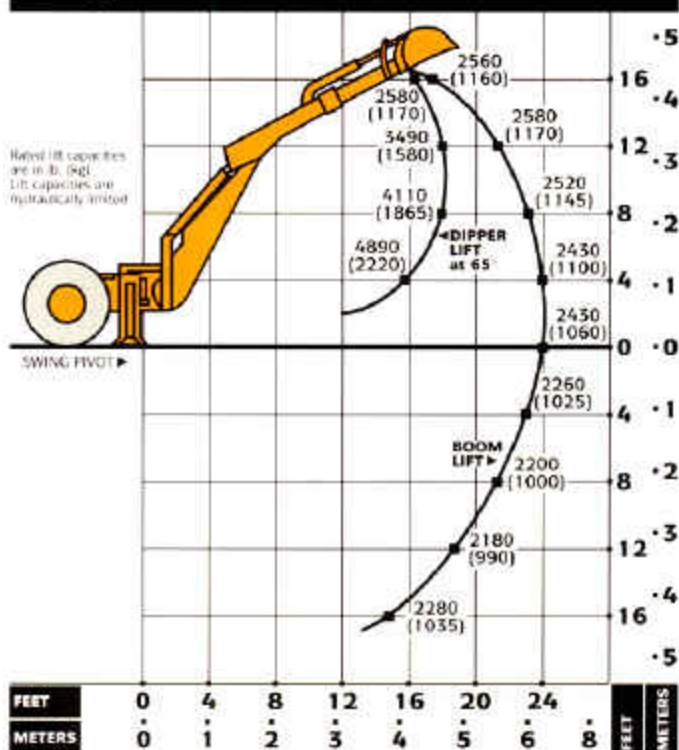
LIFT CAPACITY Backhoe with standard dipperstick. Based on SAE J31.



LIFT CAPACITY Backhoe with extendable dipperstick, retracted. Based on SAE J31.



LIFT CAPACITY Backhoe with extendable dipperstick, extended. Based on SAE J31.



BACKHOE BUCKETS

in.	Width (mm)	Capacity		Weight	
		cu. ft.	(m ³)	lb.	(kg)
18	(457)	7.7	(0.22)	532	(241)
24	(610)	11.1	(0.31)	592	(268)
30	(762)	15.0	(0.42)	642	(291)
36	(914)	18.8	(0.53)	700	(317)

LOADER PERFORMANCE

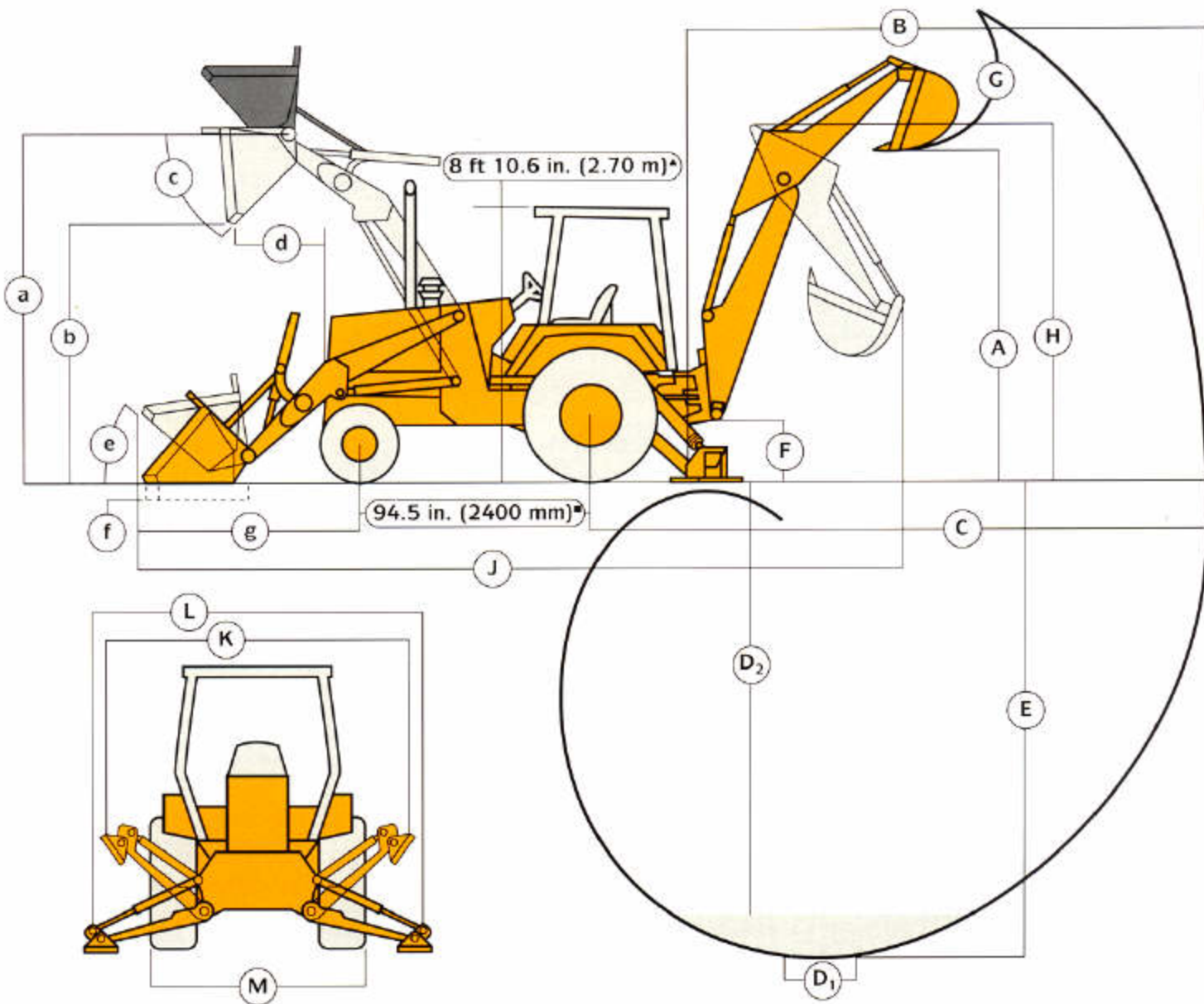
	W/1.5 cu. yd. (1.15 m ³) Bucket	W/1.7 cu. yd. (1.3 m ³) Bucket and MFWD
Operator control	single lever	single lever
Breakout force	13,560 lb. (60.3 kN)	11,870 lb. (52.8 kN)
Lifting capacity, full height	7100 lb. (3250 kg)	6600 lb. (2990 kg)
a) Height to bucket hinge pin, max.	11 ft. 10 in. (3.60 m)	12 ft. 0 in. (3.65 m)
b) Dump clearance, bucket at 40 degrees	9 ft. 7 in. (2.92 m)	9 ft. 7 in. (2.92 m)
c) Bucket dump angle, max.	40 degrees	40 degrees
d) Reach at full height, bucket at 40 degrees	29 in. (737 mm)	31 in. (789 mm)
e) Rollback at ground level	40 degrees	40 degrees
f) Digging depth below ground bucket level	4 in. (100 mm)	2 in. (50 mm)
g) Distance from front axle centerline to bucket cutting edge	81.5 in. (2070 mm)	82 in. (2080 mm)
Raising time to full height	4.3 sec.	4.3 sec.
Bucket dump time	1.3 sec.	1.3 sec.
Bucket lowering time	3.2 sec.	3.2 sec.

LOADER BUCKETS

Loader:	Width		Heaped Capacity		Weight	
	in.	(mm)	cu. yd.	(m ³)	lb.	(kg)
	92	(2340)	1.5	(1.15)	960	(435)
	96	(2440)	1.75	(1.34)	1500	(680)
Multipurpose	96	(2440)	1.375	(1.0)	1780	(807)

DIMENSIONS

See loader performance (a-g)



▲ ROPS and Cab
 ■ MFWD 96.5 in. (2450 mm)

Key:

	Backhoe*
A. Loading height, truck loading position	13 ft. 2 in. (4.01 m)
B. Reach from center of swing mast	22 ft. 8 in. (6.90 m)
C. Reach from center of rear axle	26 ft. 9 in. (8.15 m)
D. Digging depth (SAE):	
(1) 2-ft. (610 mm) flat bottom	17 ft. 10 in. (5.45 m)
(2) 8-ft. (2440 mm) flat bottom	17 ft. 0 in. (5.18 m)
E. Maximum digging depth	18 ft. 0 in. (5.49 m)
F. Ground clearance, minimum	14 in. (356 mm)
G. Bucket rotation	149 deg./159 deg.
H. Transport height	13 ft. 9 in. (4.20 m)
J. Overall length, transport	26 ft. 7.9 in. (8.13 m)
K. Stabilizer width – transport	8 ft. (2.44 m)
L. Stabilizer spread – operating	11 ft. 5 in. (3.48 m)
M. Overall width (less loader bucket)	88 in. (2235 mm)

* See backhoe performance

Extendable Dipperstick

	Retracted	Extended
A. Loading height, truck loading position	12 ft. 11 in. (3.94 m)	15 ft. 0 in. (4.57 m)
B. Reach from center of swing mast	22 ft. 4 in. (6.81 m)	27 ft. 1 in. (4.26 m)
C. Reach from center of rear axle	26 ft. 6 in. (8.08 m)	31 ft. 2 in. (9.50 m)
D. Digging depth (SAE):		
(1) 2-ft. (610 mm) flat bottom	17 ft. 9 in. (5.41 m)	22 ft. 0 in. (6.71 m)
(2) 8-ft. (2440 mm) flat bottom	17 ft. 0 in. (5.18 m)	22 ft. 8 in. (6.91 m)
E. Maximum digging depth	17 ft. 10 in. (5.45 m)	22 ft. 9 in. (6.93 m)
F. Ground clearance, minimum	14 in. (356 mm)	14 in. (356 mm)
G. Bucket rotation	149 deg./159 deg.	149 deg./159 deg.
H. Transport height	13 ft. 9 in. (4.20 m)	13 ft. 9 in. (4.20 m)
J. Overall length, transport	26 ft. 7.9 in. (8.13 m)	26 ft. 7.9 in. (8.13 m)
K. Stabilizer width – transport	8 ft. (2.44 m)	8 ft. (2.44 m)
L. Stabilizer spread – operating	11 ft. 5 in. (3.48 m)	11 ft. 5 in. (3.48 m)
M. Overall width (less loader bucket)	88 in. (2235 mm)	88 in. (2235 mm)

ADDITIONAL STANDARD EQUIPMENT:

Engine:

Air cleaner, dry type with safety element
Air precleaner
Engine coolant to -34°F (-37°C)
Under hood muffler with vertical curved end exhaust stack

Drivetrain:

Unitized mainframe
Front axle without mechanical front-wheel drive
Brakes, power wet disk service
Brakes, emergency parking
Power differential lock

Backhoe:

Regular dipperstick
Two lever control

Regular stabilizers with anti-drift lockouts
Counterweights, front and side
Less bucket
Boom transport lock

Loader:

Hydraulic self leveling with single lever control and bucket indicator
Return-to-dig
Less bucket

Operator's Station:

ROPS/FOPS canopy, isolation mounted with molded roof
Floor mat
Hand and foot throttle
Headliner

Gauges and indicators
Air cleaner restriction
Alternator
Coolant temperature
Engine oil pressure
Fuel
Park brake indicator
Tachometer/hourmeter
Torque converter temperature

Key start switch:

Lights, halogen driving/working
Two front, two rear
Stop and tail (two)
Flashing and turn signals (two)
Seat, swivel, vinyl
2-in. (51 mm) seat belt
Steps and handholds

Overall Vehicle:

Rear fenders
Rear reflectors

Vandal protection, locking provision for
Engine access doors
Fuel tank cap
Instrument panel

Electrical:

Horn
Electric fuel shutoff
Multi-fused circuits
Single battery, 180-min. reserve capacity

Hydraulics:

Auto electric destroke for starting
Bucket cylinders
Crowd and backhoe boom
Oil-to-air cooler
Power steering
Relief valve protection on individual circuits
Supercharged, closed center, pressure compensated

OPTIONAL OR SPECIAL EQUIPMENT:

Auxiliary hydraulic valves
Auxiliary bolt-on cutting edge for loader buckets*
Backhoe lift eye*
Backup alarm
Bolt-on teeth for loader bucket*
Cab with:
Fabric-covered swivel seat, suspension or non-suspension
Front defroster fan
Front and rear wipers
Heater, standard
15,000 Btu/hr (5.6 kW)
Integral ROPS/FOPS

Cab, quarter (front windshield and door)
Cold-weather starting aid, remote mounted
Deluxe heater with fresh air intake - 40,000 Btu/hr (11.7 kW)*
Economy seat, vinyl covered, suspension or non-suspension
Engine coolant heater
5 ft. (1.52 m) extendable dipperstick for backhoe
Fan blast baffles

Fire extinguisher
Four-lever backhoe controls
Grille guard*
Heavy-duty batteries
Loader bucket chain hooks, outer*
Light materials/snow loader buckets*
Mechanical front-wheel drive
MFWD driveshaft guard
Multipurpose loader buckets*
Rear wheel spacers for tire chain clearance
Pressurizer*

Reversible stabilizer pads
Ripper tooth for backhoe, 24 in. (610 mm)
Rotating beacon light
Radio or radio cassette*
SMV emblem
2 cu. yd. (1.5 m³) loader bucket*
3-in. (76 mm) seat belt
Three-lever, pedal-swing backhoe controls*
Toolbox
* 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 are 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 70 020, using No. 2-D fuel at 35 API gravity. No derating is required up to 10,000 feet (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 21L-24, 16 PR, R4 rear tires, 14.5/75-16.1, 10 PRFS front tires, 1.5 cu. yd. (1.15 m³) loader bucket, 24 in. x 11.1 cu. ft. (610 mm x 0.31 m³) backhoe bucket.

