

B A C K H O U S E
710D



MILLER
SINCE 1924
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710D's exclusive limited-slip MFWD automatically provides up to 80 percent of the power to the wheel with the best traction. For true all-wheel drive, all the time.

Coming or going, no other backhoe comes close

Make no mistake, the 710D is a big backhoe. This massive machine delivers the kind of digging force and lift capacity you may have thought possible only from an excavator.

Up front, an equally impressive loader breakout force keeps the big 1.62-cubic-yard (1.24 m³) bucket heaped full. Equipped with available mechanical front-wheel drive, 710D rivals the production-loading performance of many 4-wheel-drive loaders.

But a 710D brings eye-popping specs, commonsense working environment. 710D such a

more to the jobsite than big size and You also get day-after-day durability, controls, and a safe, comfortable ment. Advantages that make the valuable asset.

Single bucket cylinder utilizes the piston-end for powerful breakout, and the rod-end for fast dump cycles. Visibility is better than two cylinder designs, too.

Unless it's a Deere, you won't find a backhoe as quiet. Even without cab, the thick-padded floor mat, headliner, and underhood muffler make the 710D easy on ears.

"Torque tube" bucket construction prevents twisting. C-shape backwall fills quickly and resists packing. Wide skid shoes, reversible bolt-on cutting edge, box-constructed spill sheet, and built-in lift loops come standard.

BACKHOE
7100

	<i>With Standard Backhoe*</i>	<i>With Extendable Dipperstick*</i>	
		<i>Retracted</i>	<i>Extended</i>
A Loading height, truck loading position	13 ft. 3 in. (4.03 m)	13 ft. 1 in. (3.98 m)	15 ft. 3 in. (4.65 m)
B Reach from center of swing pivot	22 ft. 8 in. (6.90 m)	22 ft. 8 in. (6.90 m)	27 ft. 3 in. (8.31 m)
C Reach from center of rear axle	26 ft. 9 in. (8.15 m)	26 ft. 9 in. (8.15 m)	31 ft. 4 in. (9.56 m)
D Digging depth (SAE):			
(1) 2-ft. (610 mm) flat bottom	18 ft. 2 in. (5.53 m)	18 ft. 1 in. (5.51 m)	23 ft. 1 in. (7.03 m)
(2) 8-ft. (2440 mm) flat bottom	17 ft. 3 in. (5.26 m)	17 ft. 2 in. (5.24 m)	22 ft. 4 in. (6.82 m)
E Maximum digging depth	18 ft. 2 in. (5.55 m)	18 ft. 1 in. (5.52 m)	23 ft. 1 in. (7.04 m)
F Ground clearance, minimum	14 in. (356 mm)	14 in. (356 mm)	14 in. (356 mm)
G Bucket rotation	162 or 152 degrees	162 or 152 degrees	162 or 152 degrees
H Transport height	13 ft. 10 in. (4.21 m)	13 ft. 11 in. (4.31 m)	13 ft. 11 in. (4.31 m)
I Overall length, transport	26 ft. 8 in. (8.13 m)	26 ft. 8 in. (8.13 m)	26 ft. 8 in. (8.13 m)
J Stabilizer width – transport	8 ft. (2.44 m)	8 ft. (2.44 m)	8 ft. (2.44 m)
K Stabilizer spread – operating	11 ft. 5 in. (3.48 m)	11 ft. 5 in. (3.48 m)	11 ft. 5 in. (3.48 m)
L Stabilizer overall width – operating	13 ft. 2 in. (4.01 m)	13 ft. 2 in. (4.01 m)	13 ft. 2 in. (4.01 m)
M Width over tires	90.5 in. (2.29 m)	90.5 in. (2.29 m)	90.5 in. (2.29 m)

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

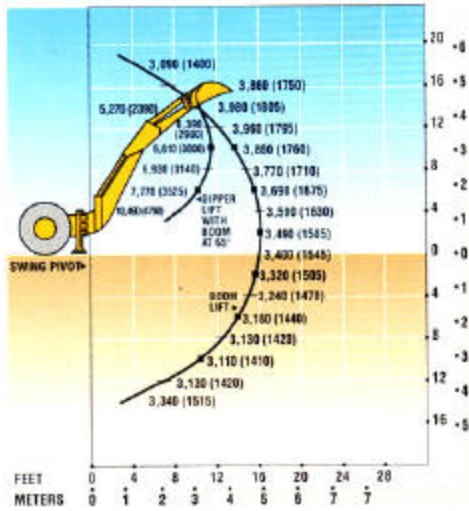
LOADER PERFORMANCE WITH BUCKET OPTIONS

	<i>1.62 cu. yd. (1.24 m³) Standard-Duty Bucket</i>	<i>1.87 cu. yd. (1.34 m³) Standard-Duty Bucket and MFWD</i>	<i>1.375 cu. yd. (1.00 m³) Multipurpose Bucket and MFWD</i>
Operator control	single lever	single lever	
Breakout force	14,050 lb. (62.5 kN)	13,100 lb. (58.4 kN)	13,500 lb. (60.1 kN)
Lifting capacity, full height	7,733 lb. (3503 kg)	7,257 lb. (3287 kg)	7,295 lb. (3305 kg)
a Height to bucket hinge pin, maximum	11 ft. 8 in. (3.57 m)	11 ft. 10 in. (3.61 m)	11 ft. 10 in. (3.61 m)
b Dump clearance, bucket at 40 degrees	9 ft. 6 in. (2.88 m)	9 ft. 5 in. (2.87 m)	9 ft. 5 in. (2.87 m)
c Bucket dump angle, maximum	40 degrees	40 degrees	40 degrees
d Reach at full height, bucket at 40 degrees	33.5 in. (0.85 m)	36.8 in. (0.93 m)	32.9 in. (0.84 m)
e Rollback angle at ground level	40 degrees	40 degrees	40 degrees
f Digging depth below ground, bucket level	5.8 in. (147 mm)	4.0 in. (101 mm)	6.0 in. (152 mm)
g Distance from front axle centerline to bucket cutting edge	80.5 in. (2044 mm)	82.6 in. (2098 mm)	81.2 in. (2063 mm)
Raising time to full height	4.3 sec.	4.3 sec.	4.3 sec.
Bucket dump time	1.3 sec.	1.3 sec.	1.3 sec.
Bucket lowering time (power down)	3.2 sec.	3.2 sec.	3.2 sec.

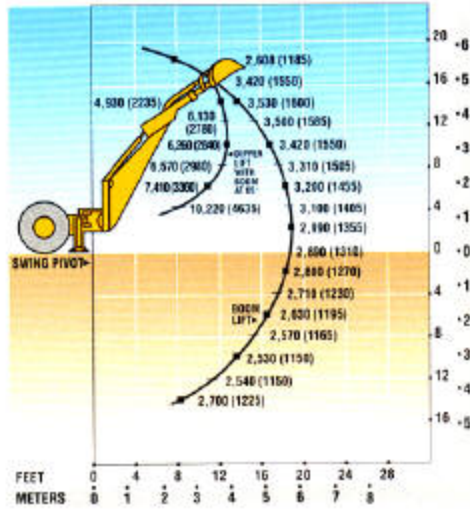
LIFT CAPACITIES* / DIMENSIONS

*Based on SAE J31. Rated lift capacities are in lb. (kg). Maximum lift capacities may be stability and/or hydraulically limited.

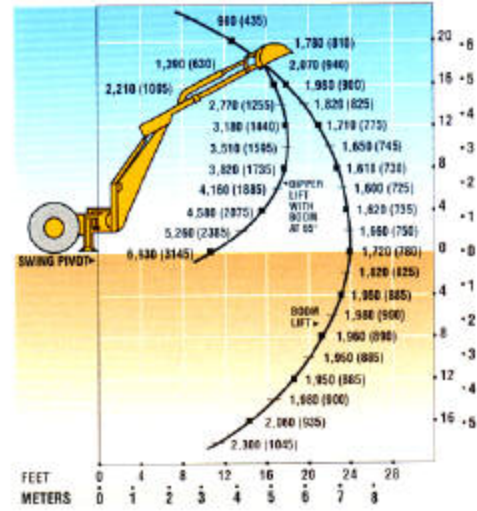
710D BACKHOE WITH
STANDARD DIPPERSTICK



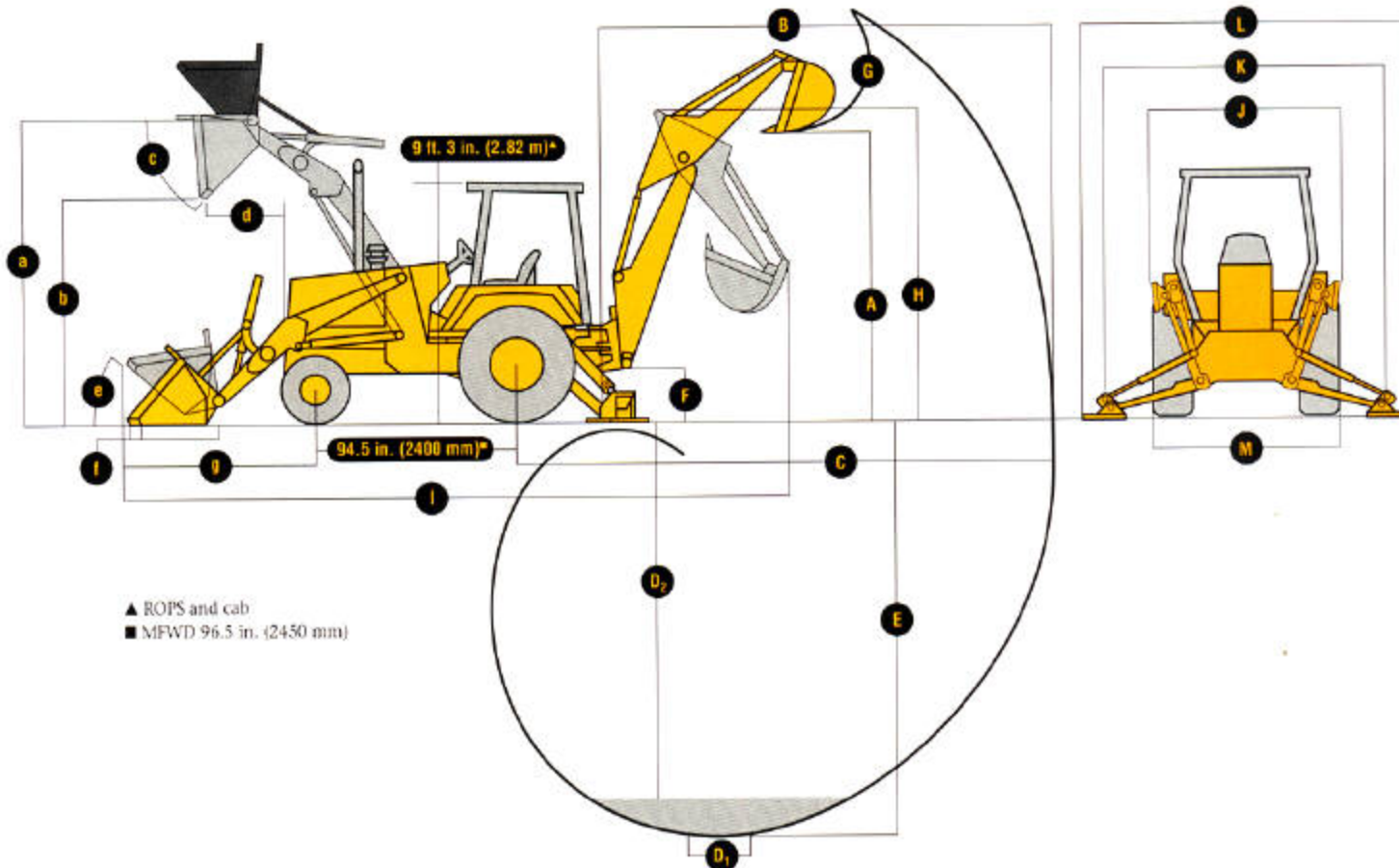
710D BACKHOE WITH
EXTENDABLE DIPPERSTICK, RETRACTED



710D BACKHOE WITH
EXTENDABLE DIPPERSTICK, EXTENDED



DIMENSIONS (SEE PAGE 7.)



CYLINDERS**7100**

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

TIRES

	<i>Rear</i>	<i>Front</i>
With non-powered front axle.....	21L-24, 16 PR R4	14.5/75-16.1, 10 PR F3
	21L-28, 14 PR R4	14.5/75-16.1, 10 PR F3
	21L-28, 14 PR R4	16.5L-16.1, 10 PR L1
With mechanical-front-wheel drive.....	21L-28, 14 PR R4	15-19.5, 8 PR, Sure Grip
	20.5-25, 12 PR L2	15-19.5, 8 PR, Sure Grip

SAE OPERATING WEIGHTS

Standard.....	23,000 lb. (10,450 kg)
Cab adds.....	560 lb. (254 kg)
Mechanical-front-wheel drive (less tires) adds.....	240 lb. (109 kg)
Extendable dipperstick with required counterweight adds.....	856 lb. (390 kg)
Optional front counterweight adds.....	700 lb. (318 kg)
Reversible stabilizer pads add.....	90 lb. (41 kg)

See backhoe and loader performance data for bucket weights.

LOADER BUCKETS

	<i>Width</i>	<i>Heaped Capacity</i>	<i>Weight</i>
General purpose.....	92 in. (2340 mm)	1.62 cu. yd. (1.24 m ³)	960 lb. (435 kg)
	96 in. (2440 mm)	1.87 cu. yd. (1.34 m ³)	1,500 lb. (680 kg)
Multipurpose.....	96 in. (2440 mm)	1.375 cu. yd. (1.00 m ³)	1,780 lb. (807 kg)

BACKHOE PERFORMANCE

	<i>With Standard Backhoe*</i>	<i>With Extendable Dipperstick*</i>	
		<i>Retracted</i>	<i>Extended</i>
Digging force, bucket cylinder (power dig position).....	12,940 lb. (57.5 kN)	12,940 lb. (57.5 kN)	12,940 lb. (57.5 kN)
Digging force, crowd cylinder.....	9,600 lb. (42.7 kN)	9,600 lb. (42.7 kN)	6,700 lb. (29.8 kN)
Swing arc.....	180 degrees	180 degrees	180 degrees
Operator control.....	two levers	right foot treadle	right foot treadle
Bucket positions (rollback).....	-2 to -14 degrees	-2 to -14 degrees	-2 to -14 degrees
Stabilizer angle rearward.....	13 degrees	13 degrees	13 degrees
Lifting capacity, maximum.....	10,300 lb. (4679 kg)	10,045 lb. (4556 kg)	6,800 lb. (3090 kg)
Leveling angle.....	13 degrees	13 degrees	13 degrees

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

	<i>Width</i>	<i>Capacity</i>	<i>Weight</i>
Heavy duty with lift loop.....	18 in. (457 mm)	7.7 cu. ft. (0.22 m ³)	532 lb. (241 kg)
	24 in. (610 mm)	11.1 cu. ft. (0.31 m ³)	592 lb. (268 kg)
	30 in. (762 mm)	15.0 cu. ft. (0.42 m ³)	642 lb. (291 kg)
	36 in. (914 mm)	18.8 cu. ft. (0.53 m ³)	700 lb. (317 kg)
Severe duty with lift loop.....	18 in. (457 mm)	7.9 cu. ft. (0.22 m ³)	640 lb. (290 kg)
	24 in. (610 mm)	10.9 cu. ft. (0.31 m ³)	725 lb. (330 kg)
	30 in. (762 mm)	14.0 cu. ft. (0.40 m ³)	820 lb. (373 kg)
	36 in. (914 mm)	17.1 cu. ft. (0.48 m ³)	910 lb. (414 kg)

ENGINE

7100

Type.....	John Deere 6059T Turbocharged
Rated power @ 2,200 rpm	115 SAE net hp (86 kW) 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 with full-flow filter and cooler
Air cleaner	dual stage dry type with safety element and precleaner
Electrical system.....	12 volt with 95-amp alternator
Sucker-type cooling fan	

TRANSMISSION

power shift with modulated full power shifting between forward and reverse

Torque converter, single stage, dual phase with 1.99:1 stall ratio.....	12.2 in. (310 mm)
Travel speeds	
With standard 21L-24 rear and 14.5/75-16.1 front tires.....	<i>Forward</i> <i>Reverse</i>
Gear 1.....	3.1 mph (5.0 km/h) 3.4 mph (5.4 km/h)
Gear 2.....	5.4 mph (8.7 km/h) 6.0 mph (9.6 km/h)
Gear 3.....	11.1 mph (17.9 km/h)
Gear 4.....	19.0 mph (30.6 km/h)
With MFWD and required 21L-28 rear and 15-19.5 front tires	<i>Forward</i> <i>Reverse</i>
Gear 1.....	3.4 mph (5.5 km/h) 3.7 mph (6.0 km/h)
Gear 2.....	6.0 mph (9.6 km/h) 6.6 mph (10.6 km/h)
Gear 3.....	12.3 mph (19.8 km/h)
Gear 4.....	21.0 mph (33.9 km/h)

FINAL DRIVES

heavy-duty, inboard planetary final drives evenly distribute shock loads over three gears

BRAKES

hydraulic wet disk, mounted inboard, pressure cooled and lubricated, self adjusting and self equalizing

CAPACITIES

Fuel tank.....	44 gal. (166 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 conforms to SAE J1151, emergency steering to SAE J53

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 oscillations 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 oscillations stop to stop	18 degrees		
Steering wheel turns stop to stop, both axles.....	3.0 to 3.8		
Axle ratings	<i>Static</i>	<i>Dynamic</i>	<i>SAE J43</i>
Front.....	78,700 lb. (35,700 kg)	78,700 lb. (35,700 kg)	30,460 lb. (13,800 kg)
Rear.....	74,000 lb. (33,600 kg)	98,800 lb. (44,900 kg)	23,700 lb. (10,700 kg)

HYDRAULIC SYSTEM

System	closed center
Pressure, main relief	2,550 psi (17,500 kPa)
Pump	radial pistons
Flow @ 2,200 rpm.....	53 gpm (201 L/min.)
Filter, return oil	10-micron, spin-on replaceable element



Two levers are standard, three-lever/foot-pedal controls are no-cost factory or field-installed options.

Cab climate-control system blends fresh air and directs it through automotive-type vents for effective defrosting, heating, and cooling (air-conditioning available).

Low-effort, single-lever loader/bucket control with thumb-activated transmission-disconnect speeds cycles.

Electronic monitor keeps a vigilant watch on vital machine functions, issuing both visible and audible warnings.



Short-throw lever lets you change gears or direction with your hands on the steering wheel. Built-in detents give smooth, positive control. Neutral-start switch prevents accidental starting in gear.



Rearward-angled stabilizers and no-drift cylinders provide rock-solid stability for craning and precise placement of heavy objects.

Fanggs® tooth-equipped heavy-duty and severe-duty buckets are available from 18- to 36-inches (457 to 914 mm) wide.

	7100		7100		7100
ENGINE		LOADER		LIGHTS	
John Deere Model 6059T - 5.9 liter, 115 SAE net hp	●	Alternate buckets	■	Two additional halogen front work lights	●
Dual safety element dry-type air cleaner with pre-cleaner, aspirator, and restriction monitor on console	●	Long-lip configuration / Multipurpose	●	Two front and two rear turn signal/flashings	●
Electric ether starting aid	●	Auxiliary loader hydraulics	●	Two front driving/working and two rear working halogen	●
Enclosed safety fan guard	●	Bolt-on auxiliary cutting edge	●	35,200 candlepower each	●
Engine coolant heater - 1,000 watts	●	Bucket level indicator	■	Two rear reflectors	●
Engine coolant -34°F (-37°C)	●	Hydraulic self leveling	●	Conform to SAE J99	●
Fuel filter and water separator	●	Less bucket with bucket pins	■	Two rear stop and tail	●
Muffler, underhood, with vertical curved end exhaust stack	●	Loader boom service lock	●		
Oil-to-water engine oil cooler	●	Return to dig feature	●	OVERALL VEHICLE	
Prewired for ether starting aid	●	Single lever control with electric clutch cutoff	●	Auxiliary toolbox - internal	■
Spin-on engine oil filter	●			Chrome exhaust extension	■
Sucker-type cooling fan	●	OPERATOR'S STATION		Counterweight package, 1,062 lb. (482 kg)	●
Turbocharged, isolation mounted	●	Built-in beverage and Thermos® bottle holder	●	Includes main weight, cover plate, and two side weights	■
Turbocharger provides spark arresting	●	Built-in Operator's Manual storage compartment with manual	●	Counterweights, front	■
		Cab (includes as optional equipment):		1,450 lb. (657 kg)	●
POWER TRAIN		Air conditioning - 27,000 Btu/hr (7.9 kW) capacity, CFC free R134a, Conforms to SAE J1503 / Deluxe fabric suspension seat / Front quarter cab* - Front doors only / Radio - AM/FM weather band / Seat belt, 3 in. (76 mm), retractable / Tilt steering / Windshield washers		Dent resistant rear fenders	●
Differential lock	●	Cab (includes as standard equipment):		Engine side shields with "tip up" access	●
Electric clutch cutoff on gearshift and loader lever	●	Cab pressurizer - 0.25-in. Hg pressurization / Deluxe headliner - Deluxe dome light / Door preplumbed for windshield wiper / Door that opens within vehicle width / Fresh air intake heater/defroster/pressurizer - 40,000 Btu/hr (11.7 kW) heater, Conforms to SAE J1503, J1535D / Fresh air pre-cleaner / One rear and two front wipers / Prewired for ether starting aid / Prewired for radio / Prewired for rotating beacon / Tinted safety glass		Exterior toolbox located in right step and lockable with start switch key	●
Engine-mounted powershift transmission and reverser with torque converter	●			Fire extinguisher*	■
Isolation mounted to mainframe	●	Coat hook	●	Front fenders*	■
Hydraulic service brakes	●	Electric monitor system with audible and visual warning	●	Front grille guard*	■
Inboard, wet disc, self adjusting and self equalizing / Conform to SAE J1473, ISO3450	●	Air cleaner restriction / Engine coolant temperature / Engine oil pressure / Hydraulic filter indicator / Low alternator voltage / Park brake on-off indicator / Seat belt indicator / Torque converter temperature indicator	●	Front grille screen*	■
Hydrostatic power steering with emergency manual mode	●			Fuel tank, 44 gal. (167 L)	●
Mechanical-front-wheel drive	■	Floor mat	●	Built-in water strainer / Ground level fueling / Sump with drain / Wide-mouth filler cap with padlock	●
Drive shaft guard / Electric on/off control / Heavy-walled drive shaft / Limited slip differential / Sealed axle	●	Fuel gauge	●	High ambient temperature engine cooling kit*	■
Non-powered front axle	●	Hand throttle	●	High-flotation tires	●
Parking/emergency brakes	●	Headliner	●	Laser machine control system	●
Independent of service brakes / Spring-applied, hydraulic release with electric switch control	●	Horn	●	One-piece unitized construction mainframe	●
Planetary final drives	●			Outside rearview mirrors	●
Oil-to-air cooler	●	Conforms to SAE J994, J1446	●	Rear fender extensions	■
Reverser/torque converter / Transaxle and brakes	●	Interior rearview mirror	●	Rear wheel spacers for use with chains	●
		Conforms to SAE J985	●	Remote grease bank for front axle	●
BACKHOE		Key start switch with electric fuel shutoff	●	Rental decal kit	●
Alternate stabilizer feet	■	Left and right front access	●	Reverse warning alarm	●
Auxiliary backhoe hydraulics for breaker, compactor	■	Modular design ROPS/POPS canopy	●	Switchable to 97 db(A) or 111 db(A) / Conforms to SAE J994, J1446	●
Backhoe bucket coupler*	■	Isolation mounted with molded roof / Conforms to SAE J1040	●	Rotating beacon	■
Backhoe controls	■	Non-suspension vinyl seat with flip-up armrests, fore, aft, and vertical adjustment	●	SMV emblem	■
Case pattern with three-lever foot swing / Ford pattern with four levers / SAE excavator two-lever pattern*	■	Conforms to SAE J899	●	Special color paint*	■
Backhoe transport lock lever	●	Padded foot throttle	●	Tie downs, two front and two rear, built-in	●
Digging depth 18 ft. 2 in.	●	Seat belt, 2 in. (51 mm), with retractors	●	Tires	●
Dirt foot stabilizer pad	●	Adjusts independent of seat position / Conforms to SAE J386	●	14.5/75-16.1, 10 PR 13 front / 211-24, 16 PR R4 rear - 90.5 in. (2.29 m) overall width	●
Enclosed single boom cylinder	●	Slip-resistant steps and ergonomically-located handholds	●	Vandal protection locking with start switch key for engine access doors, instrument panel	●
Extendable dipperstick	■	Conforms to SAE J185	●		
Five-foot extension / Full-width wear strips	■	Tachometer/hourmeter	●	ELECTRICAL	
Extra function backhoe valve with pedal or lever	■			Alternator, 95 amp	●
Heavy-duty and severe-duty backhoe buckets	■			Blade-type multi-fused circuits	●
Built-in lift loop	●			By-pass start safety cover on starter	●
Independent isolation-mounted stabilizer valve with two-direction anti-drift valves	●			Dual batteries - 300 reserve 1,500 CCA	●
Less bucket with bucket pins	●			Positive terminal battery covers	●
SAE controlled lowering device*	●			Prewired for rotating beacon	●
Stabilizer cylinder guards*	●			Prewired for two additional front halogen worklights	●
Spring locking pin stored in operator's station	●			12-volt system	●
Two lever backhoe controls	●			HYDRAULIC SYSTEM	

KEY: ● Standard equipment ■ Optional or special equipment

*See your John Deere dealer for further information.



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-O 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 211-24, 16 PR R4 rear tires, 14.5/75-16.1, 10 PR 13 front tires, 1.82 cu. yd. (1.24 m³) loader bucket, 24 in. x 11.1 cu. ft. (610 mm x 0.31 m³) backhoe bucket.

