

ENGINE		410D		510D		
Type.....	John Deere 404ST Turbocharged	John Deere 404ST Turbocharged		John Deere 404ST Turbocharged		
Rated power @ 2,200 rpm	85 SAE net hp (63.5 kW) / 90 SAE gross hp (67 kW)	95 SAE net hp (71 kW) / 100 SAE gross hp (75 kW)		95 SAE net hp (71 kW) / 100 SAE gross hp (75 kW)		
Cylinders	4	4		4		
Displacement	276 cu. in. (4.524 L)	276 cu. in. (4.524 L)		276 cu. in. (4.524 L)		
Fuel consumption, typical	1.0 to 2.0 gal./hr. (3.8 to 7.6 L/h)	1.6 to 2.6 gal./hr. (6.0 to 9.8 L/h)		1.6 to 2.6 gal./hr. (6.0 to 9.8 L/h)		
Torque rise	25 percent	25 percent		25 percent		
Maximum net torque.....	254 lb.-ft. (344 Nm)	268 lb.-ft. (363 Nm)		268 lb.-ft. (363 Nm)		
Lubrication	pressure system with full-flow spin-on filter and cooler	pressure system with full-flow filter and cooler		pressure system with full-flow filter and cooler		
Air cleaner	dual stage dry type with safety element and precleaner	dual stage dry type with safety element and precleaner		dual stage dry type with safety element and precleaner		
Electrical system.....	12 volt with 95-amp alternator	12 volt with 95-amp alternator		12 volt with 95-amp alternator		
Sucker-type cooling fan						
TRANSMISSION		four-speed, helical cut gear, collar shift transmission synchronized in all gears with hydraulic reverser				
Torque converter, single stage, dual phase		11 in. (280 mm)		11 in. (280 mm)		
with 2.23:1 stall ratio	11 in. (280 mm)					
Travel speeds	with 19.5L-24 rear tires	with 21L-24 rear tires		with 21L-24 rear tires		
	Forward	Reverse		Forward	Reverse	
Gear 1	3.4 mph (5.5 km/h)	3.9 mph (6.3 km/h)		3.4 mph (5.5 km/h)	3.9 mph (6.3 km/h)	
Gear 2	5.9 mph (9.5 km/h)	6.8 mph (10.9 km/h)		5.9 mph (9.5 km/h)	6.8 mph (10.9 km/h)	
Gear 3	12.6 mph (20.3 km/h)	14.5 mph (23.3 km/h)		12.6 mph (20.3 km/h)	14.5 mph (23.3 km/h)	
Gear 4	19.7 mph (32.7 km/h)	22.6 mph (36.4 km/h)		19.7 mph (32.7 km/h)	22.6 mph (36.4 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 (with ground level fueling).....	34 gal. (129 L)	34 gal. (129 L)		34 gal. (129 L)		
Engine coolant	17 qt. (16 L)	17 qt. (16 L)		17 qt. (16 L)		
Engine oil including filter.....	9 qt. (8.5 L)	9 qt. (8.5 L)		9 qt. (8.5 L)		
Torque converter and reverser system.....	14 qt. (13 L)	14 qt. (13 L)		14 qt. (13 L)		
Hydraulic system	21 gal. (79 L)	21 gal. (79 L)		21 gal. (79 L)		
Transaxle with MFWD	5.5 gal. (21 L)	5.5 gal. (21 L)		5.5 gal. (21 L)		
STEERING		hydrostatic power steering conforms to SAE J1151, emergency steering to SAE J53				
Non-powered axle						
Curb turning radius with brakes	11 ft. 8 in. (3.55 m)	11 ft. 8 in. (3.55 m)		11 ft. 8 in. (3.55 m)		
Without brakes	13 ft. 3 in. (4.04 m)	13 ft. 3 in. (4.04 m)		13 ft. 3 in. (4.04 m)		
Bucket clearance circle with brakes.....	31 ft. 8 in. (9.64 m)	31 ft. 8 in. (9.64 m)		31 ft. 8 in. (9.64 m)		
Without brakes	34 ft. 9 in. (10.60 m)	34 ft. 9 in. (10.60 m)		34 ft. 9 in. (10.60 m)		
Steering wheel turns, stop to stop.....	2.2 to 2.9	2.2 to 2.9		2.2 to 2.9		
Mechanical-front-wheel drive						
Curb turning radius with brakes	11 ft. 5 in. (3.49 m)	11 ft. 5 in. (3.49 m)		11 ft. 5 in. (3.49 m)		
Without brakes	13 ft. 6 in. (4.11 m)	13 ft. 6 in. (4.11 m)		13 ft. 6 in. (4.11 m)		
Bucket clearance circle with brakes.....	29 ft. 7 in. (9.02 m)	29 ft. 7 in. (9.02 m)		29 ft. 7 in. (9.02 m)		
Without brakes	33 ft. 8 in. (10.26 m)	33 ft. 8 in. (10.26 m)		33 ft. 8 in. (10.26 m)		
Steering wheel turns, stop to stop.....	2.5	2.5		2.5		
Axle oscillation, stop to stop, both axles.....	22 degrees	22 degrees		22 degrees		
Axle ratings	Static	Dynamic	SAE J43	Static	Dynamic	SAE J43
Front	56,000 lb. (25 300 kg)	56,000 lb. (25 300 kg)	(8800 kg)	56,000 lb. (25 300 kg)	56,000 lb. (25 300 kg)	21,100 lb. (9500 kg)
Rear.....	51,000 lb. (23 100 kg)	68,000 lb. (30 800 kg)	(7200 kg)	51,000 lb. (23 100 kg)	68,000 lb. (30 800 kg)	16,800 lb. (7600 kg)
HYDRAULIC SYSTEM						
System	closed center	closed center		closed center		
Pressure, main relief.....	2,755 psi (19 000 kPa)	2,755 psi (19 000 kPa)		2,755 psi (19 000 kPa)		
Pump.....	radial pistons	radial pistons		radial pistons		
Flow @ 2,200 rpm	35 gpm (133 L/min.)	35 gpm (133 L/min.)		35 gpm (133 L/min.)		
Filter, return oil	10-micron, spin-on vertical replaceable element	10-micron, spin-on vertical replaceable element		10-micron, spin-on vertical replaceable element		
CYLINDERS						
	Bore	Stroke	Rod	Bore	Stroke	Rod
Loader boom (2).....	3.54 in. (90 mm)	29.84 in. (758 mm)	1.77 in. (45 mm)	3.54 in. (90 mm)	29.84 in. (758 mm)	1.77 in. (45 mm)
Loader bucket (1)	3.54 in. (90 mm)	28.19 in. (718 mm)	1.77 in. (45 mm)	3.94 in. (100 mm)	28.19 in. (718 mm)	1.97 in. (50 mm)
Backhoe boom (1)	4.53 in. (115 mm)	38.54 in. (979 mm)	2.48 in. (63 mm)	5.00 in. (127 mm)	42.72 in. (1085 mm)	2.50 in. (64 mm)
Backhoe crowd (1)	3.94 in. (100 mm)	32.24 in. (819 mm)	2.20 in. (56 mm)	4.53 in. (115 mm)	34.57 in. (878 mm)	2.48 in. (63 mm)
Backhoe bucket (1)	3.54 in. (90 mm)	31.00 in. (788 mm)	1.97 in. (50 mm)	3.54 in. (90 mm)	31.00 in. (788 mm)	1.97 in. (50 mm)
Backhoe swing (2).....	3.94 in. (100 mm)	9.49 in. (241 mm)	1.97 in. (50 mm)	3.94 in. (100 mm)	9.49 in. (241 mm)	1.97 in. (50 mm)
Backhoe extendable dipper (1)	3.15 in. (80 mm)	48.00 in. (1200 mm)	1.77 in. (45 mm)	3.15 in. (80 mm)	59.21 in. (1504 mm)	1.77 in. (45 mm)
Backhoe stabilizer (2)	3.94 in. (100 mm)	19.96 in. (507 mm)	1.97 in. (50 mm)	3.94 in. (100 mm)	19.96 in. (507 mm)	1.97 in. (50 mm)
Steering (1) non-powered axle.....	1.97 in. (50 mm)	9.49 in. (241 mm)	0.98 in. (25 mm)	1.97 in. (50 mm)	9.50 in. (241 mm)	0.98 in. (25 mm)
Steering (1) MFWD	2.36 in. (60 mm)	7.90 in. (202 mm)	0.98 in. (25 mm)	2.36 in. (60 mm)	7.90 in. (202 mm)	0.98 in. (25 mm)
410D heavy-lift option						
Backhoe boom	5.00 in. (127 mm)	42.72 in. (1085 mm)	2.50 in. (64 mm)			
Backhoe crowd (1)	4.53 in. (115 mm)	34.57 in. (878 mm)	2.48 in. (63 mm)			
Backhoe extendable dipper (1).....	3.15 in. (80 mm)	59.21 in. (1504 mm)	1.77 in. (45 mm)			

TIRES	410D		510D	
	Rear	Front	Rear	Front
With non-powered front axle.....	19.5L-24, 10 PR R4 21L-24, 10 PR R4	11L-16, 12 PR F3 14.5/75-16.1, 10 PR F3	19.5L-24, 10 PR R4 21L-24, 10 PR R4 19.5L-24, 12 PR R4	11L-16, 12 PR F3 14.5/75-16.1, 10 PR F3 11L-16, 12 PR F3
With mechanical-front-wheel drive.....	21L-24, 10 PR R4 18.4-28, 12 PR R4 19.5-24, 10 PR R4	12.00-16.5, 8 PR, lug tread 14-17.5, 10 PR 12.00-16.5, 8 PR	21L-24, 10 PR R4 18.4-28L, 12 PR R4 19.5L-24, 12 PR R4	12.00-16.5, 8 PR, Sure Grip 14.00-17.5, 10 PR, Sure Grip 12.00-16.5, 8 PR, Sure Grip

SAE OPERATING WEIGHTS

Standard	15,600 lb. (7075 kg)	16,000 lb. (7260 kg)
Cab adds	500 lb. (227 kg)	500 lb. (227 kg)
Mechanical-front-wheel drive adds	190 lb. (86 kg)	190 lb. (86 kg)
Standard extendable dipperstick.....	4 ft. (1.22 m)	5 ft. (1.52 m)
Excluding required counterweight adds	350 lb. (158 kg)	589 lb. (267 kg)
Optional front counterweight(s) add(s)	1,050 lb. (476 kg)	700 lb. (317 kg)
Backhoe bucket coupler adds	200 lb. (91 kg)	200 lb. (91 kg)
410D heavy-lift option	16,250 lb. (7371 kg)	
5 ft. (1.52 m) extendable dipperstick		
Excluding required counterweight adds	589 lb. (267 kg)	
See backhoe and loader performance data for bucket weights.		

LOADER BUCKETS

	Width	Heaped Capacity	Weight	Width	Heaped Capacity	Weight
Heavy-duty long lip*.....	86 in. (2184 mm)	1.12 cu. yd. (0.86 m ³)	918 lb. (417 kg)	92 in. (2340 mm)	1.42 cu. yd. (1.09 m ³)	965 lb. (438 kg)
	92 in. (2340 mm)	1.42 cu. yd. (1.09 m ³)	965 lb. (438 kg)	92 in. (2340 mm)	1.62 cu. yd. (1.24 m ³)	1,160 lb. (527 kg)
General-purpose long lip.....	89 in. (2270 mm)	1.25 cu. yd. (0.96 m ³)	775 lb. (351 kg)	89 in. (2270 mm)	1.25 cu. yd. (0.96 m ³)	750 lb. (340 kg)
Multipurpose.....	92 in. (2340 mm)	1.25 cu. yd. (0.96 m ³)	1,560 lb. (708 kg)	92 in. (2340 mm)	1.25 cu. yd. (0.96 m ³)	1,560 lb. (708 kg)

*With auxiliary cutting edge and skid shoes standard.

NOTE: All other buckets pre-drilled for auxiliary cutting edge.

BACKHOE PERFORMANCE

	410D	410D	410D	510D
	With Standard Dipperstick*	With Heavy-Lift Package**	With Standard 4 Ft. (1.22 m) Extendable Dipperstick* Retracted Extended	With Standard Dipperstick**
Digging force, bucket cylinder (power dig position)	11,700 lb. (52 kN)	11,120 lb. (49.5 kN)	11,700 lb. (52 kN)	11,100 lb. (49.5 kN)
Digging force, crowd cylinder	6,450 lb. (29 kN)	8,100 lb. (36 kN)	7,000 lb. (31 kN)	7,600 lb. (33.8 kN)
Swing arc.....	180 degrees	180 degrees	180 degrees	180 degrees
Operator control	two levers	two levers	right foot treadle	two levers
Bucket positions (rollback)	9 or 18 degrees	8 or 17 degrees	8 or 17 degrees	8 or 17 degrees
Stabilizer angle rearward.....	14.5 degrees	14.5 degrees	14.5 degrees	14.5 degrees
Lifting capacity, maximum	4,802 lb. (2183 kg)	6,746 lb. (3066 kg)	4,995 lb. (2270 kg)	6,780 lb. (3074 kg)
Leveling angle.....	13 degrees	13 degrees	13 degrees	13 degrees

*Backhoe specifications are with 24 in. x 7.5 cu. ft. (610 mm x 0.21 m³) bucket.**Backhoe specifications are with 24 in. x 8.8 cu. ft. (610 mm x 0.25 m³) bucket.

	410D	510D
	With Heavy Lift 5 Ft. (1.52 m) Extendable Dipperstick** Retracted Extended	With 5 Ft. (1.52 m) Extendable Dipperstick** Retracted Extended
Digging force, bucket cylinder (power dig position)	11,000 lb. (48.9 kN)	11,230 lb. (49.9 kN)
Digging force, crowd cylinder	8,100 lb. (36 kN)	8,390 lb. (37 kN)
Swing arc.....	180 degrees	180 degrees
Operator control	right foot treadle	right foot treadle
Bucket positions (rollback)	8 or 18 degrees	8 or 18 degrees
Stabilizer angle rearward.....	14.5 degrees	14.5 degrees
Lifting capacity, maximum	6,441 lb. (1781 kg)	7,232 lb. (3279 kg)
Leveling angle.....	13 degrees	13 degrees

**Backhoe specifications are with 24 in. x 8.8 cu. ft. (610 mm x 0.25 m³) bucket.

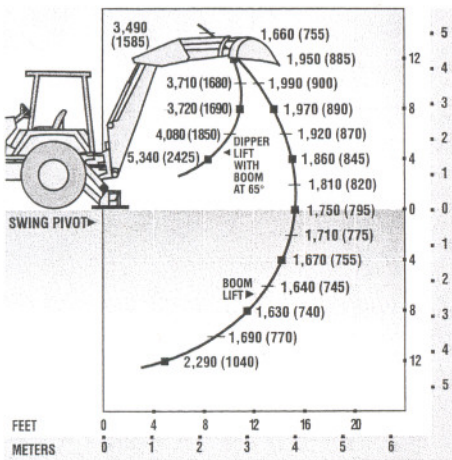
BACKHOE BUCKETS FOR 410D AND 510D

	Width	Capacity	Weight		Width	Capacity	Weight
Standard duty.....	12 in. (305 mm)	2.5 cu. ft. (0.07 m ³)	244 lb. (111 kg)	Heavy duty.....	12 in. (305 mm)	2.5 cu. ft. (0.07 m ³)	258 lb. (117 kg)
	18 in. (457 mm)	5.1 cu. ft. (0.14 m ³)	322 lb. (146 kg)		18 in. (457 mm)	5.1 cu. ft. (0.14 m ³)	334 lb. (151 kg)
	24 in. (610 mm)	7.5 cu. ft. (0.21 m ³)	370 lb. (168 kg)		24 in. (610 mm)	7.5 cu. ft. (0.21 m ³)	396 lb. (180 kg)
	30 in. (762 mm)	10.0 cu. ft. (0.28 m ³)	410 lb. (186 kg)		24 in. (610 mm)	8.8 cu. ft. (0.25 m ³)	476 lb. (216 kg)
	36 in. (914 mm)	10.0 cu. ft. (0.28 m ³)	430 lb. (195 kg)		30 in. (762 mm)	10.0 cu. ft. (0.28 m ³)	444 lb. (201 kg)
	36 in. (914 mm)	14.5 cu. ft. (0.41 m ³)	556 lb. (252 kg)		36 in. (914 mm)	10.0 cu. ft. (0.28 m ³)	470 lb. (214 kg)
Extra heavy duty.....	18 in. (457 mm)	5.1 cu. ft. (0.14 m ³)	362 lb. (164 kg)	Ditch cleaning	36 in. (914 mm)	10.0 cu. ft. (0.28 m ³)	370 lb. (168 kg)
	24 in. (610 mm)	7.5 cu. ft. (0.21 m ³)	424 lb. (192 kg)		36 in. (914 mm)	14.5 cu. ft. (0.41 m ³)	500 lb. (235 kg)
	30 in. (762 mm)	10.0 cu. ft. (0.28 m ³)	474 lb. (215 kg)				

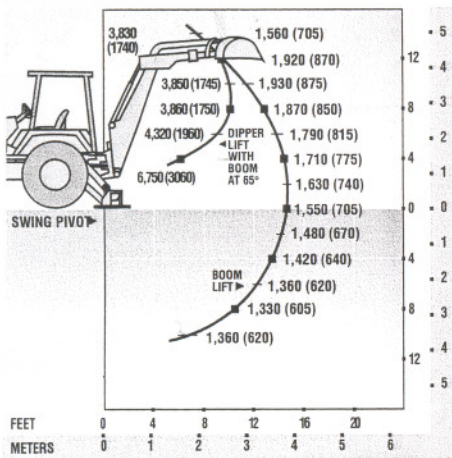
LIFT CAPACITIES* / DIMENSIONS

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

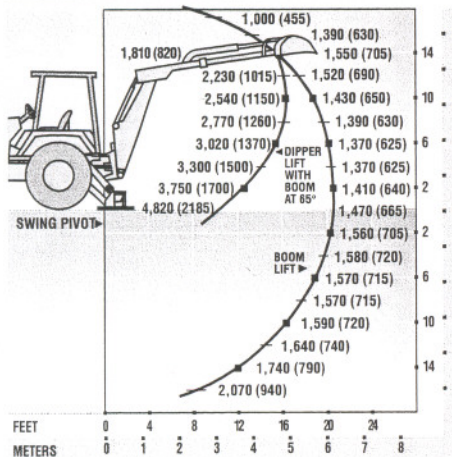
410D BACKHOE WITH
STANDARD DIPPERSTICK



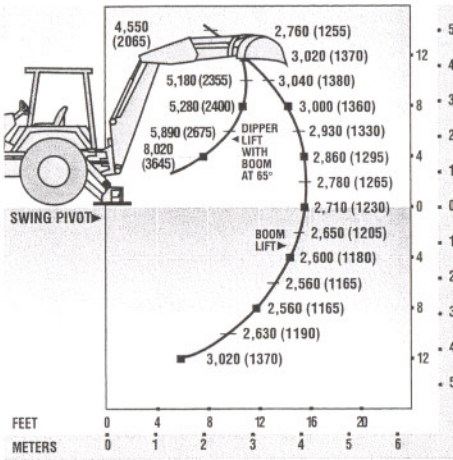
410D BACKHOE WITH 4 FT. (1.22 M)
DIPPERSTICK, RETRACTED



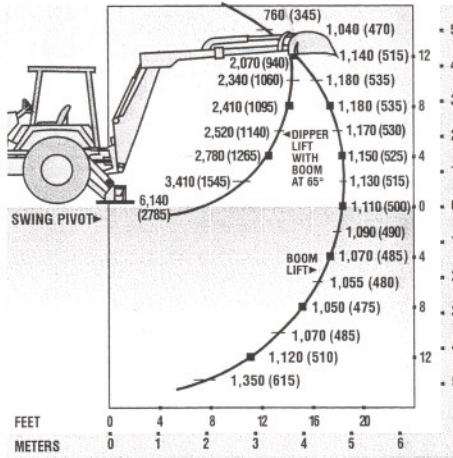
410D HEAVY-LIFT PACKAGE/510D BACKHOE
WITH 5 FT. (1.52 M) DIPPERSTICK, EXTENDED*



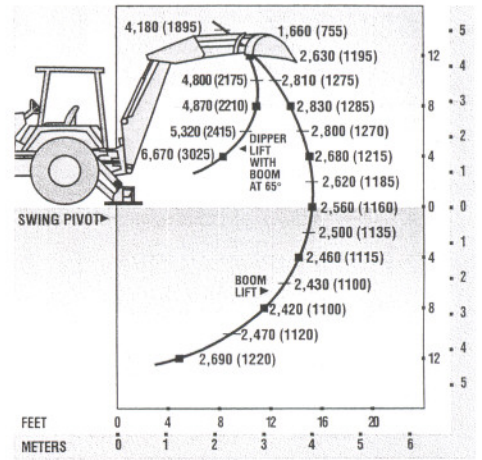
410D BACKHOE WITH OPTIONAL
HEAVY-LIFT PACKAGE



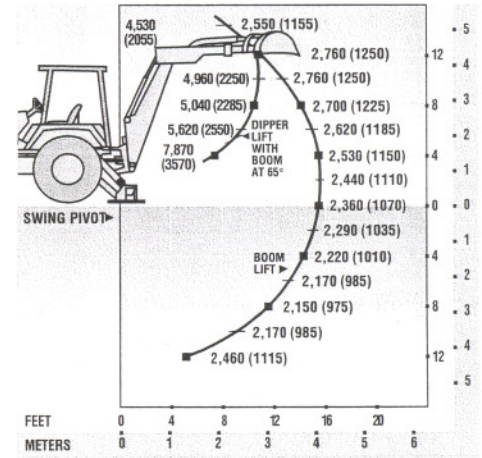
410D BACKHOE WITH 4 FT. (1.22 M)
DIPPERSTICK, EXTENDED



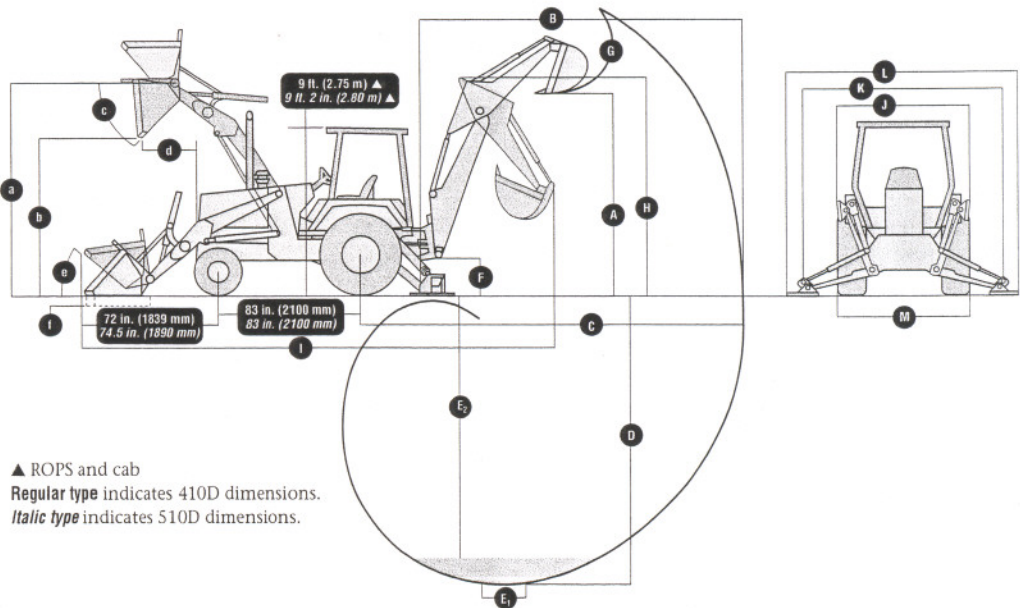
510D BACKHOE WITH
STANDARD DIPPERSTICK



410D HEAVY-LIFT PACKAGE/510D BACKHOE
WITH 5 FT. (1.52 M) DIPPERSTICK, RETRACTED*



DIMENSIONS (SEE PAGE 19.)



BACKHOE	410D	410D	410D		510D
	With Standard Dipperstick*	With Heavy-Lift Package**	With Standard 4 Ft. (1.22 m) Extendable Dipperstick*	Extended	With Standard Dipperstick**
A Loading height, truck loading position.....	12 ft. 3 in. (3.72 m)	12 ft. 2 in. (3.70 m)	11 ft. 9 in. (3.59 m)	12 ft. 9 in. (3.89 m)	12 ft. 7 in. (3.84 m)
B Reach from center of swing mast	18 ft. 4 in. (5.59 m)	19 ft. 3 in. (5.87 m)	17 ft. 8 in. (5.40 m)	21 ft. 4 in. (6.50 m)	19 ft. 11 in. (6.07 m)
C Reach from center of rear axle.....	22 ft. 1 in. (6.73 m)	23 ft. (7.01 m)	21 ft. 5 in. (6.53 m)	25 ft. 1 in. (7.64 m)	23 ft. 8 in. (7.21 m)
D Maximum digging depth.....	15 ft. 3 in. (4.66 m)	15 ft. 10 in. (4.84 m)	14 ft. 7 in. (4.45 m)	18 ft. 4 in. (5.60 m)	16 ft. 8 in. (5.07 m)
E Digging depth (SAE):					
(1) 2-ft. (610 mm) flat bottom.....	15 ft. 2 in. (4.61 m)	15 ft. 9 in. (4.80 m)	14 ft. 5 in. (4.40 m)	18 ft. 3 in. (5.57 m)	16 ft. 6 in. (5.03 m)
(2) 8-ft. (2440 mm) flat bottom.....	14 ft. 1 in. (4.30 m)	14 ft. 9 in. (4.49 m)	13 ft. 4 in. (4.07 m)	17 ft. 5 in. (5.32 m)	15 ft. 7 in. (4.74 m)
F Ground clearance, minimum	12 in. (305 mm)	13 in. (330 mm)	12 in. (305 mm)	12 in. (305 mm)	13 in. (330 mm)
G Bucket rotation	160 or 180 degrees	160 or 180 degrees	160 or 180 degrees	160 or 180 degrees	160 or 180 degrees
H Transport height	11 ft. 10 in. (3.61 m)	12 ft. 4 in. (4.51 m)	12 ft. 4 in. (3.78 m)	12 ft. 4 in. (3.78 m)	12 ft. 4 in. (4.51 m)
I Overall length, transport	23 ft. 5 in. (7.14 m)	22 ft. 11 in. (6.99 m)	23 ft. (7.01 m)	23 ft. (7.01 m)	23 ft. 4 in. (7.11 m)
J Stabilizer width – transport	7 ft. 8 in. (2.34 m)	7 ft. 8 in. (2.34 m)	7 ft. 8 in. (2.34 m)	7 ft. 8 in. (2.34 m)	7 ft. 8 in. (2.34 m)
K Stabilizer spread – operating	9 ft. 10 in. (3.00 m)	9 ft. 10 in. (3.00 m)	9 ft. 10 in. (3.00 m)	9 ft. 10 in. (3.00 m)	9 ft. 10 in. (3.00 m)
L Stabilizer overall width – operating.....	11 ft. 4 in. (3.45 m)	11 ft. 4 in. (3.45 m)	11 ft. 4 in. (3.45 m)	11 ft. 4 in. (3.45 m)	11 ft. 4 in. (3.45 m)
M Width over tires	86 in. (2.62 m)	86 in. (2.62 m)	86 in. (2.62 m)	86 in. (2.62 m)	86 in. (2.62 m)

BACKHOE	410D	510D	
	With Heavy-Lift 5 Ft. (1.52 m) Extendable Dipperstick**	Retracted	Extended
A Loading height, truck loading position.....	12 ft. 1 in. (3.69 m)	15 ft. (4.58 m)	12 ft. 1 in. (3.69 m)
B Reach from center of swing mast	19 ft. 3 in. (5.87 m)	23 ft. 11 in. (7.29 m)	19 ft. 3 in. (5.87 m)
C Reach from center of rear axle.....	23 ft. (7.01 m)	27 ft. 8 in. (8.43 m)	23 ft. (7.01 m)
D Maximum digging depth.....	15 ft. 11 in. (4.86 m)	20 ft. 10 in. (6.34 m)	15 ft. 11 in. (4.86 m)
E Digging depth (SAE):			
(1) 2-ft. (610 mm) flat bottom.....	15 ft. 10 in. (4.82 m)	20 ft. 8 in. (6.30 m)	15 ft. 11 in. (4.86 m)
(2) 8-ft. (2440 mm) flat bottom.....	14 ft. 10 in. (4.51 m)	20 ft. (6.09 m)	14 ft. 10 in. (4.51 m)
F Ground clearance, minimum	13 in. (330 mm)	13 in. (330 mm)	13 in. (330 mm)
G Bucket rotation	160 or 180 degrees	160 or 180 degrees	160 or 180 degrees
H Transport height	13 ft. 5 in. (4.90 m)	13 ft. 5 in. (4.90 m)	13 ft. 5 in. (4.90 m)
I Overall length, transport	23 ft. (7.01 m)	23 ft. (7.01 m)	23 ft. (7.01 m)
J Stabilizer width – transport	7 ft. 8 in. (2.34 m)	7 ft. 8 in. (2.34 m)	7 ft. 8 in. (2.34 m)
K Stabilizer spread – operating	9 ft. 10 in. (3.00 m)	9 ft. 10 in. (3.00 m)	9 ft. 10 in. (3.00 m)
L Stabilizer overall width – operating.....	11 ft. 4 in. (3.45 m)	11 ft. 4 in. (3.45 m)	11 ft. 4 in. (3.45 m)
M Width over tires	86 in. (2.62 m)	86 in. (2.62 m)	86 in. (2.62 m)

*Backhoe specifications are with 24 in. x 7.5 cu. ft. (610 mm x 0.21 m³) bucket.

**Backhoe specifications are with 24 in. x 8.8 cu. ft. (610 mm x 0.25 m³) bucket.

410D LOADER PERFORMANCE WITH BUCKET OPTIONS

	1.12 cu. yd. (0.86 m ³) Heavy-Duty Long-Lip	1.25 cu. yd. (0.96 m ³) General-Purpose Long-Lip	1.42 cu. yd. (1.09 m ³) Heavy-Duty Long-Lip	1.25 cu. yd. (0.96 m ³) Multipurpose
Operator control	single lever	single lever	single lever	dual lever
Breakout force	10,000 lb. (45.0 kN)	9,500 lb. (42.0 kN)	9,900 lb. (44.0 kN)	9,700 lb. (43.1 kN)
Lifting capacity, full height	7,116 lb. (3228 kg)	6,900 lb. (3130 kg)	7,200 lb. (3265 kg)	7,000 lb. (3170 kg)
a Height to bucket hinge pin, maximum.....	11 ft. 1 in. (3.38 m)	11 ft. 1 in. (3.38 m)	11 ft. 1 in. (3.38 m)	11 ft. 1 in. (3.38 m)
b Dump clearance, bucket at 45 degrees	9 ft. (2.74 m)	8 ft. 5 in. (2.58 m)	8 ft. 9 in. (2.67 m)	8 ft. 7 in. (2.63 m)
c Bucket dump angle, maximum	43 degrees	43 degrees	43 degrees	43 degrees
d Reach at full height, bucket at 45 degrees	29.1 in. (739 mm)	34 in. (868 mm)	29.8 in. (758 mm)	31 in. (787 mm)
e Rollback angle at ground level	40 degrees	40 degrees	40 degrees	40 degrees
f Digging depth below ground, bucket level	4.2 in. (107 mm)	3.5 in. (88 mm)	4.2 in. (107 mm)	5.0 in. (125 mm)
Raising time to full height	4.5 sec.	4.5 sec.	4.5 sec.	4.5 sec.
Bucket dump time.....	1.0 sec.	1.0 sec.	1.0 sec.	1.0 sec.
Bucket lowering time (power down)	3.0 sec.	3.0 sec.	3.0 sec.	3.0 sec.

510D LOADER PERFORMANCE WITH BUCKET OPTIONS

	1.42 cu. yd. (1.09 m ³) Heavy-Duty Long-Lip	1.25 cu. yd. (0.96 m ³) General-Purpose Long-Lip	1.62 cu. yd. (1.24 m ³) Heavy-Duty Long-Lip	1.25 cu. yd. (0.96 m ³) Multipurpose
Operator control	single lever	single lever	single lever	single lever
Breakout force	10,410 lb. (46.3 kN)	9,900 lb. (44.0 kN)	9,900 lb. (44.0 kN)	9,700 lb. (43.1 kN)
Lifting capacity, full height	7,300 lb. (3310 kg)	7,050 lb. (3195 kg)	7,050 lb. (3195 kg)	7,000 lb. (3170 kg)
a Height to bucket hinge pin, maximum.....	11 ft. 1 in. (3.38 m)	11 ft. 1 in. (3.38 m)	11 ft. 1 in. (3.38 m)	11 ft. 1 in. (3.38 m)
b Dump clearance, bucket at 45 degrees	8 ft. 9 in. (2.67 m)	8 ft. 5 in. (2.58 m)	8 ft. 7 in. (2.63 m)	8 ft. 7 in. (2.63 m)
c Bucket dump angle, maximum	45 degrees	45 degrees	45 degrees	45 degrees
d Reach at full height, bucket at 45 degrees	29.1 in. (739 mm)	34 in. (868 mm)	31 in. (787 mm)	28.5 in. (724 mm)
e Rollback angle at ground level	40 degrees	40 degrees	40 degrees	40 degrees
f Digging depth below ground, bucket level	4.0 in. (100 mm)	4.0 in. (100 mm)	4.0 in. (100 mm)	5.0 in. (125 mm)
Raising time to full height	4.4 sec.	4.4 sec.	4.4 sec.	4.4 sec.
Bucket dump time.....	1.0 sec.	1.0 sec.	1.0 sec.	1.0 sec.
Bucket lowering time (power down)	3.0 sec.	3.0 sec.	3.0 sec.	3.0 sec.