



770 B-H

MOTOR GRADER (DUAL POWER)



Model shown may include options

**SAE Net
Horsepower**
155-185 hp
(116-138 kW)

Transmission
Direct Drive
Power Shift

**SAE
Operating
Weight**
31,300 lb.
(14,195 kg)

ENGINE

John Deere engineered and manufactured six-cylinder diesel engine. Replaceable wet-type cylinder liners ensure superior heat dissipation, longer engine life. High-strength alloy heads include replaceable valve seat inserts. Dual power control provides 19 percent more power to meet requirements of higher speed applications. High 35 percent torque rise in both power modes provides greater lugging ability with fewer gear speed changes.

Engine: John Deere 6466A

Rated power @ 2200 rpm
in gears 1-3 155 SAE net hp (116 kW)
165 SAE gross hp (123 kW)

Rated power @ 2200 rpm
in gears 4-8 185 SAE net hp (138 kW)
195 SAE gross hp (145 kW)

Turbocharged aftercooled

Number of cylinders 6

Displacement 466 cu. in. (7.658 L)

Fuel consumption, typical
(depending on duty cycle) 4.0 to 7.5 gal/hr (15 to 28 L/h)

Net torque at 1400 rpm
in gears 1-3 (35% torque rise) 500 lb-ft (678 Nm)

in gears 4-8 (35% torque rise) 597 lb-ft (810 Nm)

Lubrication pressure system w/full flow filter and cooler

Aspirated air cleaner with
restriction indicator dual element, dry

Electrical system 24 volt with 42-amp (1120 W) alternator

Batteries two 12-volt with 180 minute reserve capacity

TRANSMISSION

Direct drive, planetary power shift transmission with modulated shift on-the-go speed selections in all eight forward and four reverse gears. There are five working speeds below 9 mph (15 km/h). Standard equipment also includes an inching pedal and tow disconnect.

TRAVEL SPEEDS

(At 2200 engine rpm with 14.00-24 tires and no tire slip)

Shift Lever Position	Forward		Reverse	
	mph	(km/h)	mph	(km/h)
1	2.3	3.7	3.0	4.8
2	3.3	5.3	4.3	6.9
3	5.2	8.4	6.7	10.8
4	6.7	10.8	8.6	13.8
5	8.9	14.3		
6	11.5	18.5		
7	14.7	23.7		
8	25.2	40.6		

FINAL DRIVE

Inboard-mounted planetary final drives are sealed in cool, filtered oil. The operator-controlled differential lock/unlock system allows the differential to easily be locked for maximum traction and unlocked for maneuverability in tight turns. Two-inch (51 mm) pitch tandem drive chains are sized for long life.

BRAKES

Foot-operated hydraulic wet-disk power brakes are sealed in cool, filtered oil. They're self-adjusting and maintenance free. Standard equipment also includes a hand-operated, mechanical dry-disk parking brake. Both independent braking systems are effective on all four tandem wheels.

FRONT AXLE

Heavy-duty, welded box construction
Front axle oscillation (total) 32 degrees
Wheel lean (each direction) 20 degrees

STEERING

A John Deere innovation — all hydraulic power frame articulation provides maximum maneuverability and productivity. Crab steering reduces side drift, positions the tandems on firm ground and increases sideslope stability.

Frame articulation (both right and left) 25 degrees
Minimum turning radius 22 ft. (6.7 m)

HYDRAULICS

The closed-center hydraulic system uses a pressure-controlled variable-displacement single hydraulic pump. Integral hydraulic control valve lockouts eliminate cylinder drift. O-ring face seal and fittings eliminate hydraulic leaks.

Hydraulic pump 6.0 cu. in. (98 cm³)
Rated flow at 2200 engine rpm 52.4 gpm (198 L/min)

TIRES AND RIMS

Tire Size	Wheel Tread		Overall Width		Ground Clearance
	Front	Rear	Front	Rear	Front Axle
13.0-24 8 in. rim (203 mm)	75.60 in. (1.94 m)	79.61 in. (2.02 m)	7 ft. 10 in. (2.39 m)	7 ft. 10 in. (2.39 m)	22 in. (559 mm)
14.00-24 10 in. rim (254 mm)	75.60 in. (1.94 m)	79.61 in. (2.02 m)	8 ft. (2.44 m)	8 ft. (2.44 m)	22.5 in. (572 mm)
17.5-25 14 in. rim (356 mm)	79.36 in. (2.01 m)	82.37 in. (2.09 m)	8 ft. 6 in. (2.59 m)	8 ft. 5 in. (2.59 m)	25.2 in. (643 mm)

CAPACITIES

	U.S.	
Fuel tank	90 gal.	(340 L)
Cooling system	7 gal.	(26.5 L)
Engine lubrication, including filter	26 qt.	(24.6 L)
Transmission and hydraulic system (refill)	23 gal.	(87 L)
Tandem housings (each)	5 gal.	(18.9 L)
Circle gearbox	4 qt.	(3.8 L)

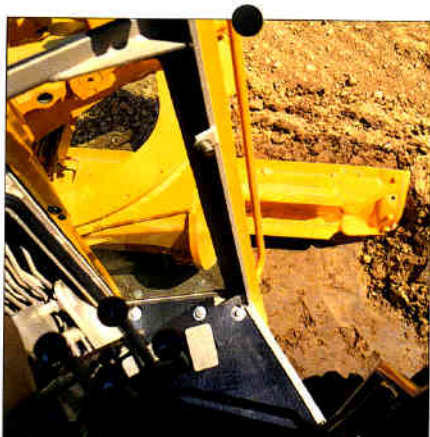
OPERATING WEIGHTS

SAE	On Front Wheels	On Rear Wheels	Total
With standard equipment:	8,700 lb. (3946 kg)	22,600 lb. (10,249 kg)	31,300 lb. (14,195 kg)
With standard equipment and scarifier	10,640 lb. (4825 kg)	22,390 lb. (10,155 kg)	33,030 lb. (14,980 kg)
With standard equipment, scarifier and ripper	9870 lb. (4476 kg)	25,630 lb. (11,624 kg)	35,500 lb. (16,100 kg)
Typically equipped operating weights range from 31,090 lb. (14,100 kg) to 38,520 lb. (17,470 kg)			



BLADE

All blade sliding components are precision machined for close adjustment with minimum looseness. Replaceable wear strips eliminate component wear over the life of the grader. All structural members are designed to handle both low speed dirt work and high speed snow removal.



OPERATOR'S STATION

Excellent visibility and low noise, along with numerous climate control options, result in a comfortable and productive work environment. Unmatched visibility to and through the working tool allow the operator to precisely locate and control blade position.



CONTROL CONSOLE

Industry standard control locations with independently adjustable console and steering wheel provide the most comfortable operating position. The electronic monitoring system supplies routine operational information and warns of impending critical function problems before they become catastrophic.



DUAL HORSEPOWER

The dual horsepower grader is designed to provide high levels of performance at maximum operational efficiency. Power levels increase automatically but only when needed. All John Deere grader components are designed for long life, along with ease of routine maintenance and service.

SCARIFIER

V-type manual three-pitch position with hydraulic float	4 ft. (1.22 m)
Width of cut	5 standard, 9 optional
Number of teeth	21.8 in. (554 mm)
Lift above ground	13.3 in. (338 mm)
Maximum penetration	1 x 3 in. (25 x 76 mm)
Shank size	

RIPPER

Parallelogram linkage with electric valve control	8 ft. (2.44 m)
Width of cut	3 standard, 5 optional
Number of shanks	14.5 in. (368 mm)
Lift above ground	14 in. (356 mm)
Maximum penetration	2 x 5 in. (51 x 127 mm)
Shank size	

ADDITIONAL STANDARD EQUIPMENT

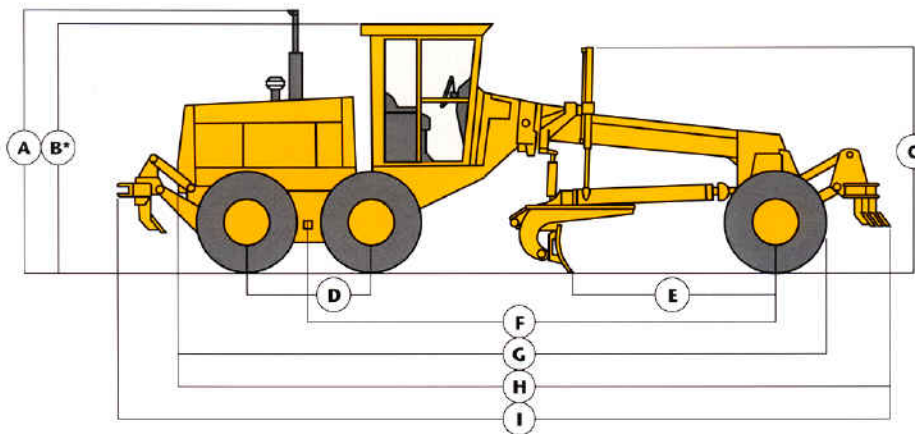
Articulation indicator	Second level warning: (Yellow CAUTION light and white function indicator light)	Restricted hydraulic filter	Hourmeter
Dual-level monitor system	Restricted engine air filter light	Disengaged lift arm lock	Lights, driving
First level warning: (Red STOP light, audible alarm and white function indicator light)	Low electrical voltage	Function indicator only: (Green function indicator light)	Lights, stop and tail
Low engine oil pressure	High transmission temperature	Engaged differential lock	Low profile cab w/ROPS, cushioned vinyl seat and seat belt
Very high engine coolant temperature	Low transmission clutch pressure	Turn signals	Mirror, rearview, inside
Low brake pressure	Restricted transmission filter	Hazard warning signals	Reverse warning alarm
Very high transmission temperature		Engine air precleaner	Tow disconnect
Engaged park brake (in gear)		Front windshield wiper	Turn signals/hazard warning lights
		Fuel gauge	
		Horn	

OPTIONAL OR SPECIAL EQUIPMENT WITH APPROXIMATE WEIGHTS

(Add these weights to SAE standard equipment operating weight to obtain total operating weight.)

	lb.	kg		lb.	kg
Air conditioner with heavy-duty alternator	177	80	Mirrors, outside, rearview, convex, both sides	12	5
Alternator, 50-amp (1400 W)	17	8	Moldboard w/through hardened Dura-Max cutting edges:		
Auxiliary function valve (rear mounted)	50	23	12-ft. (3.66 m) w/ 88 x 8 in. (19 x 203 mm) cutting edge	106	48
Batteries, heavy-duty with 320 min. (1000 CCA) reserve capacity	101	46	14-ft. (4.27 m) w/ 62 x 6 in. (16 x 152 mm) cutting edge	146	66
Beacon wiring and switch	2	1	14-ft. (4.27 m) w/ 88 x 8 in. (19 x 203 mm) cutting edge	155	70
Blade, front dozer	1490	676	Moldboard extensions, 2-ft. (610 mm), right or left (less cutting edge)	220	100
Bottom guard, general purpose	160	73	Overlay end bits (1 pair), 6 in. (152 mm)	62	28
Bottom guard, heavy-duty with rear hitch	510	231	Overlay end bits (1 pair), 8 in. (203 mm)	77	35
Cab, full height with ROPS	82	37	Rear hitch	61	28
Canopy, low profile with ROPS	-226	-103	Rims for 17.50-25 tires	674	306
Cold-weather starting aid	3	1	Ripper, rear mounted with hitch and 3 shanks	2470	1120
Control conversion (moves LH blade control to RH side)	2	1	Scarifier with five teeth, 1 x 3 in. (25 x 76 mm)	1730	785
Dura-Max through-hardened cutting edge, ¾ x 8 in. (19 x 203 mm)	8.5 lb/ft (13 kg/m)		Seat belt, 5-in. (76 mm)	3	1
Engine side shields	60	27	Seat, deluxe suspension, cloth covered	90	41
Fan, defroster	4	2	Seat, deluxe suspension, vinyl covered	90	41
Fans, dual defroster	8	4	Tires:		
Heater, coolant	2	1	13.00-24, 12 PR, G2	-210	-95
Heater, cab, 20,000 Btu/hr (5.9 kW)	16	7	17.50-25, 12 PR, L2	258	117
Heater, cab, 40,000 Btu/hr (11.7 kW)	31	14	Toolbox	11	5
Heater, roof-mounted, 25,000 Btu/hr (7.3 kW) (add to air conditioner)	17	8	Washer, front and rear windshield	15	7
Lights, 2 blade	4	2	Weight, front	600	272
Lights, work, 2 front/2 rear floods	12	5	Wiper, rear window	5	2
Mat, floor	9	4	Wipers, lower front windows	7	3

DIMENSIONS



Key

A	Height to top of exhaust	10 ft. 4.5 in. (3.16 m)
B	Height to top of cab	10 ft. 1.5 in. (3.09 m)
C	Height to top of blade lift cylinders	9 ft. 8 in. (2.95 m)
D	Tandem axle spacing	5 ft. 0.7 in. (1.54 m)
E	Bladebase	8 ft. 9 in. (2.67 m)
F	Wheelbase	19 ft. 7 in. (5.97 m)
G	Overall length	27 ft. 11 in. (8.51 m)
H	Overall length with scarifier	30 ft. 3 in. (9.22 m)
I	Overall length with scarifier and ripper	32 ft. 7 in. (9.93 m)

*Add 8.3 in. (210 mm) for full height cab
Add 1.0 in. (25.5 mm) for cab with air conditioning

BLADE FUNCTION

All hydraulic, industry preferred hand lever placement of blade function controls (standard equipment). Blade lift controls include a float position. Conversion from two hand to one-hand control is easily accomplished. Seven blade lift arm positions provide excellent blade positioning capabilities.

BLADE RANGE

Lift above ground	18.5 in. (470 mm)
Blade side shift, right or left	26.9 in. (683 mm)
Shoulder reach outside wheels (frame straight):	
Right	83.0 in. (2.11 m)
Left	85.0 in. (2.16 m)
Pitch at ground line	49 deg. forward 5 deg. back

MAINFRAME

Welded box construction	
Width, minimum	12.07 in. (306.5 mm)
Height, minimum	10.63 in. (270 mm)
Thickness, sides	0.63 in. (16 mm)
top and bottom	1.00 in. (25 mm)
Weight per ft., minimum	118 lb. (175.5 kg/m)
Minimum vertical section modulus	117 in ³ (1917 cm ³)
Average vertical section modulus at saddle	149 in ³ (2448 cm ³)

DRAWBAR

Welded box construction machined for flatness with double ball and socket pivot connection.

CIRCLE

Welded construction, heat-treated for strength and machined for flatness.

Circle diameter	60 in. (1.5 m)
Rotation	360 degree
Drive	hydraulic motor and worm gear with positive position lock
Sideshift, right	28.5 in. (724 mm)
left	31.0 in. (787 mm)

MOLDBOARD

High strength, wear resistant high carbon steel	
Length	12 ft. (3.65 m)
Height	24 in. (610 mm)
Thickness	0.88 in. (22 mm)

CUTTING EDGE

Dura-Max® through hardened steel	
Thickness and width	0.62 x 6.0 in. (16 x 150 mm)

Automatic blade controls
Compactors
Dozer blades
Fenders

Grade and slope indicators
Push blocks
Slopers

Snow plows and wings
Tire chains
Windrow eliminators

* See your John Deere dealer for further information

JOHN DEERE 'BEST VALUE' EXTRAS

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 has made a significant commitment 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 he serves.

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.

Best warranty protection—All John Deere construction equipment has a 6-month warranty on the entire machine and a full 24-month warranty on the power train. SECURE, a John Deere service product, is offered for repair coverage after warranty concludes. Full machine or power train coverage is available for a variety of time periods to meet your needs. Your dealer will explain the details.

TED B. MILLER CO., INC.

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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 55 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 14-00-24, 12 PR tubeless tires, 12-ft. (3.65 m) midboard with .62 x 6-in. (16 x 150 mm) cutting edge, and standard equipment. Weights include lubricants, coolants, full fuel tank and 175 lb. (79 kg) operator.

