

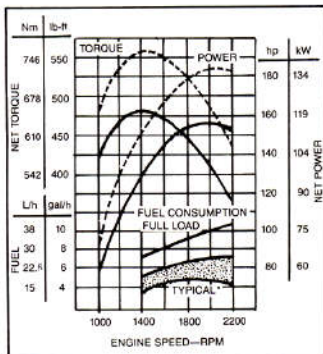


# 770B-H MOTOR GRADER (Dual Power)



Model shown may include options

## ENGINE PERFORMANCE



\*Depending on operating variables

## FEATURES

Productivity boosting dual-power system:  
185 SAE net hp (138 kW) in gears 4-8  
155 SAE net hp (116 kW) in gears 1-3

30,350 to 37,780 lb. (13 767 to 17 137 kg)  
operating weight with typical options and  
special equipment

Planetary power shift transmission; 8 speeds  
forward, 4 reverse

Articulated frame steering

Power wet-disk brakes and differential lock-  
unlock

Hydraulic control of all blade and machine  
functions—lockout valves prevent blade drift -  
blade float adds versatility

12-ft. (3.65 m) moldboard with 0.62 x 6 in. (16 x  
152 mm) through-hardened Dura-Max<sup>®</sup> cutting  
edge

7-position lift arms allow blade positioning for  
90-degree bank cuts, left or right, in  
approximately one minute

Cab or canopy with integral rollover protective  
structure (ROPS)

90 gallon (340 L) fuel capacity

New, fully adjustable control console and tilt  
steering wheel

Dual level monitor system improves machine  
protection

## ADD VERSATILITY WITH:

- Scarifier
- Rear-mounted ripper
- Snow plow and wing
- Dozer blade
- Automatic blade control

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# 770B-H MOTOR GRADER (Dual Power) SPECIFICATIONS

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 13.00-24, 12-PR, tubeless tires, 12-ft. (3.65 m) moldboard with 6-in. (152 mm) cutting edge, and standard equipment. Weights include lubricants, coolants, full fuel tank and 175 lb. (80 kg) operator.

Rated Power @ 2200 rpm:	SAE	DIN 70 020
Net	185 hp (138 kW)	138 kW
In gears 1-3	155 hp (116 kW)	116 kW
Gross	195 hp (145 kW)	
In gears 1-3	165 hp (123 kW)	

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 @ 35 API gravity. No derating is required up to 10,000 feet (3050 m) altitude. Gross power is without cooling fan.

**Engine:** John Deere 6-466A

Type	4-stroke cycle, turbocharged and intercooled diesel
Bore and stroke	4.56 x 4.75 in. (116 x 121 mm)
No. of cylinders	6
Displacement	466 cu. in. (7.638 L)
Compression ratio	14.9 to 1
Maximum net torque @ 1400 rpm	552 lb-ft (749 Nm) (76 kg-m)
	480 lb-ft (651 Nm) (66.4 kg-m)
Lubrication	Pressure system w/full-flow filter
Cooling fan	Suction type
Aspirated air cleaner w/restriction indicator	Dual element, dry
Electrical system	24 volt w/42-amp alternator
Batteries (two 12 volt)	Reserve capacity: 180 minutes

**Transmission:** Direct drive, planetary power shift with foot inching pedal

**Travel Speeds:** (2200 engine rpm, no tire slip 14.00-24 tires)

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		

**Differential Lock:** Foot-operated hydraulically actuated

**Rear Drive:** Inboard planetary final drives. Oscillating tandems with 2-in. (51 mm) pitch roller chain in oil bath.

**Front Axle:** Fabricated steel box frame with steel spindles

Oscillation (total)	32 deg.
Wheel lean (either direction)	20 deg.

**Steering:**

Front wheels	Full hydraulic power system
	(Allows steering without engine power)
Frame articulation	Hydraulically actuated—25 deg. left or right
Minimum turning radius	22 ft. (6.7 m)

**Brakes:**

Service	Foot-operated, hydraulically actuated, wet-disk, effective on 4 tandem wheels
Parking	Hand-operated, mechanical, dry-disk, effective on 4 tandem wheels

**Hydraulic System:** Closed center w/pressure controlled 4.0 in<sup>3</sup> (65 cm<sup>3</sup>) variable-displacement pump

	36 gpm (136 L/min)
	at 2200 engine rpm

**Moldboard:** 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 curved steel

Thickness and width	0.62 x 6 in. (16 x 152 mm)
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**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	44 deg. forward
	10 deg. back

**Blade Lift Mechanism:**

Control	Dual-lever, hydraulic w/float position
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**Lift Arms:** Nodular cast iron

Positions	7
Control	Hydraulic, hand operated

**Circle:** Fabricated steel construction

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

**Drawbar:** Welded box section, 3.5 x 7 x 0.500 in. (89 x 178 x 13 mm) wall w/ball and socket draft connection

**Main Frame:** Welded box section from articulation joint to front axle support

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 <sup>3</sup> (1917 cm <sup>3</sup> )
Average vertical section modulus at saddle	149 in <sup>3</sup> (2448 cm <sup>3</sup> )

## Dimensions:

Tire Size	Wheel Tread		Overall Width		Ground Clearance (Front Axle)
	Front	Rear	Front	Rear	
13.00-24 8 in. rim (203 mm)	76.60 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)	76.60 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. 6 in. (2.60 m)	23.2 in. (589 mm)

**Capacities:**

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

**Scarifier:** (Special Equipment)

V-type with three pitch positions (manual) and hydraulic float

Width of cut	4 ft. (1.22 m)
Number of teeth	5 standard, 9 optional
Lift above ground	21.8 in. (554 mm)
Maximum penetration	13.3 in. (338 mm)
Shank size	1 x 3 in. (25 x 76 mm)

**Ripper:** (Special Equipment)

Parallelogram linkage

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

## Additional Standard Equipment:

Articulation indicator	Engine air precleaner
Dual-level monitor system	Front windshield wiper
Two-level warnings:	Fuel gauge
Engine coolant temperature	Horn
Transmission temperature	Hourmeter
Single-level warnings:	Lights, driving
Air filter restricted	Lights, stop and tail
Hydraulic filter restricted	Mirror, rear view, inside
Lift arm lock disengaged	Reverse warning alarm
Low brake pressure	ROPS cab, low profile
Low electrical voltage	w/cushioned vinyl seat
Low engine oil pressure	and seat belt
Low transmission clutch pressure	Tow disconnect
Parking brake on (in gear)	Turn signals
Transmission filter restricted	
Indicator only:	
Differential lock engaged	

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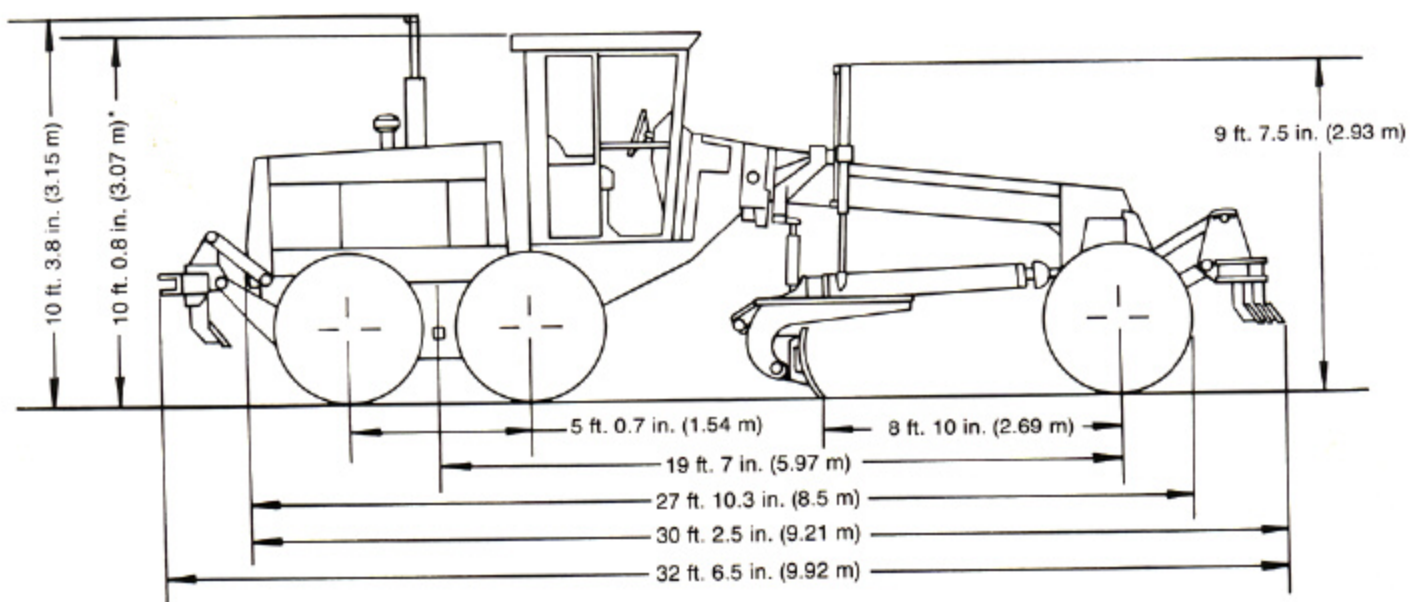
SAE Operating Weight	On Front Wheels	On Rear Wheels	Total
Standard equipment	8100 lb. (3674 kg)	22,250 lb. (10 093 kg)	30,350 lb. (13 767 kg)
Standard equipment and scarifier	10,040 lb. (4554 kg)	22,040 lb. (9997 kg)	32,080 lb. (14 551 kg)
Standard equipment scarifier and ripper	9270 lb. (4205 kg)	25,280 lb. (11 467 kg)	34,550 lb. (15 672 kg)

## Optional or Special Equipment with Approximate Weights:

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

	lb.	kg		lb.	kg
Air conditioner w/heavy-duty alternator	177	80	Toolbox	11	5
Alternator, 50 amp	17	8	Washer, front and rear windshield	3	1
Auxiliary function valve (rear mounted)	50	23	Weight, front	600	272
Batteries, heavy-duty w/310 min. reserve capacity	101	46	Wiper, rear window	5	2
Blade, front dozer	1490	676			
Bottom guard, general purpose	160	73			
Bottom guard, heavy-duty w/rear hitch	510	231			
Cab, full height w/ROPS	82	37			
Canopy, low profile w/ROPS	- 226	- 103			
Cold-weather starting aid	3	1			
Control conversion (moves LH blade control to RH side)	2	1			
Dura-Max through-hardened cutting edge, 3/4 x 8 in. (19 x 203 mm)	8.5 lb/ft	(13 kg/m)			
Engine side shields	60	27			
Fan, defroster	4	2			
Heater, coolant	2	1			
Heater, cab, 20,000 Btu/hr (5.9 kW)	16	7			
Heater, cab, 40,000 Btu/hr (11.7 kW)	31	14			
Heater, roof-mounted, 25,000 Btu/hr (7.3 kW) (add to air conditioner)	17	8			
Hydraulic pump, pressure controlled, variable displacement, 6.00 in <sup>3</sup> (98 cm <sup>3</sup> ) 52.4 gpm (198 L/min) @ 2200 engine rpm	50	23			
Lights, 2 blade	4	2			
Lights, work, 2 front/2 rear floods	12	5			
Mat, floor	9	4			
Mirror, outside rear view, convex, one side	6	3			
Mirrors, outside rear view, convex, both sides	12	5			
Mirror, outside rear view, flat, one side	6	3			
Mirrors, outside, rear view, flat, both sides	12	5			
Mirrors, outside rear view, convex and flat one side	9	4			
Mirrors, outside rear view, convex and flat both sides	18	8			
Moldboard w/through hardened Dura-Max cutting edges:					
12-ft. (3.66 m) w/3/4 x 8 in. (19 x 203 mm) cutting edge	106	48			
13-ft. (3.96 m) w/5/8 x 6 in. (16 x 152 mm) cutting edge	60	27			
13-ft. (3.96 m) w/3/4 x 8 in. (19 x 203 mm) cutting edge	116	53			
14-ft. (4.27 m) w/5/8 x 6 in. (16 x 152 mm) cutting edge	146	66			
14-ft. (4.27 m) w/3/4 x 8 in. (19 x 203 mm) cutting edge	155	70			
Moldboard extensions, 2-ft. (610 mm), right or left (less cutting edge)	220	100			
Overlay end bits (1 pair), 6 in. (152 mm)	62	28			
Overlay end bits (1 pair), 8 in. (203 mm)	77	35			
Rear hitch	61	28			
Rims: for 17.50-25 tires	674	306			
Ripper, rear mounted with hitch and 3 shanks	2470	1120			
Scarifier with five teeth, 1 x 3 in. (25 x 76 mm)	1730	785			
Seat belt, 3-in. (76 mm)	3	1			
Seat, deluxe suspension, cloth covered	90	41			
Seat, deluxe suspension, vinyl covered	90	41			
Tires:					
13.00-24, 12 PR, G2	—	—			
14.00-24, 12 PR, G2	210	95			
17.50-25, 12 PR, L2	468	212			

# 770B-H MOTOR GRADER (Dual Power) DIMENSIONS



\*Add 8.3 in. (210 mm) for full height cab  
Add 1.0 in. (25.4 mm) for cab with air conditioning

