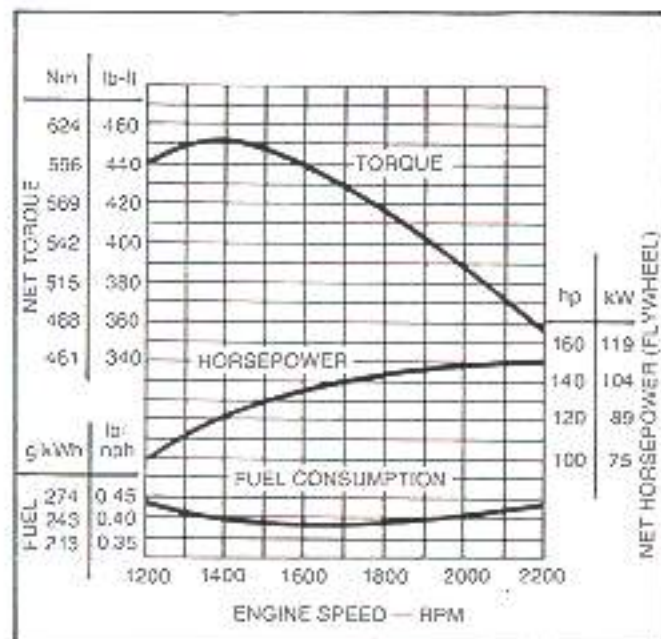




770A MOTOR GRADER



ENGINE PERFORMANCE



FEATURES

- 150 SAE net hp (111.8 kW)
- 12-ft. (3.66 m) blade standard; 13-ft. (3.96 m) and 14-ft. (4.27 m) blades and 2-ft. (610 mm) extensions available
- Power Shift transmission; 8 speeds forward, 4 reverse
- Articulated frame steering
- Differential lock-unlock
- 22-ft. (6.71 m) turning radius
- All-hydraulic control of blade and machine functions
- Closed-center hydraulic system with operational no-leak, drift-free poppet valves
- Pushbutton control
- Hydraulically controlled, 7-position lift arms let you position blade for 90-degree bank cuts, left or right, in approximately one minute, without leaving the seat
- Oscillating front axle and rear tandem
- Hydraulic front-wheel lean
- Roll-over protective structure (ROPS) w/cab

ADD VERSATILITY WITH:

- Scarifier
- Rear-mounted ripper
- Snow plow and wings
- Bulldozer
- Automatic blade control

THE B. MILLER CO., INC.
GERING, NEB.

770A MOTOR GRADER SPECIFICATIONS

(Specifications and design subject to change without notice. Wherever applicable, specifications are in accordance with ICED and SAE Standards. Except where otherwise noted, these specifications are based on a unit equipped with 13.00-24, 12-ply rating, tubeless tires with 8-in. (203 mm) rims, 13-ft. (3.96 m) moldboard with 6-in. (152 mm) cutting edge, and standard equipment. Weights include lubricants, coolants, full fuel tank and 175 lb. (79 kg) operator.)

Power (at 2200 engine rpm):	SAE	DIN
Gross	160 hp (119.3 kW)	
Net	150 hp (111.8 kW)	152 PS

Net engine flywheel power is for an engine equipped with fan, air cleaner, water pump, lubricating oil pump, fuel pump, alternator, and muffler. The gross engine power is without fan. Flywheel power ratings are under SAE standard conditions of 500-ft. altitude and 85 F. temperature, and DIN 70 020 conditions (non-corrected). No derating is required up to 10,000 ft. (3000 m) altitude.

Engine: John Deere turbocharged diesel, vertical 6-cylinder, valve-in-head, 4-stroke cycle

Bore and stroke	4.75x5 in. (120.6x127 mm)
Piston displacement	.531 cu. in. (8.703 L)
Compression ratio	15.8 to 1
Maximum torque @ 1400 rpm	450 lb-ft (610 Nm) (62 kg-m)
NACC or AMA (U.S. Tax) horsepower	54.15
Main bearings	7
Lubrication	Pressure system w/full-flow filter
Cooling	Pressurized w/thermostat and fixed bypass
Fan	Suction
Air cleaner w/restriction indicator	Dry
Electrical system	24-volt w/alternator
Batteries (2)	Reserve capacity: 180 minutes
Transmission	Direct drive full Power Shift with planetary gear reductions. Foot inching pedal

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

Shift Lever Position	Forward			
	mph	km/h	mph	km/h
Reverse				
1	2.3	3.7	3.0	4.8
2	3.3	5.3	4.2	6.8
3	5.2	8.9	6.6	10.6
4	6.7	10.8	8.6	13.9
5	8.8	14.2		
6	11.5	18.5		
7	14.6	23.6		
8	25.1	40.4		

Differential Lock Foot-operated, hydraulically actuated

Rear Drive Inboard planetary final drives with heat-treated, splined steel torque shafts. Oscillating welded construction tandems; nodular cast sprockets driving 2 in. (51 mm) pitch roller chain in oil bath.

Front Axle: Fabricated steel box frame with planetary drives

Total oscillation 30 deg.
Wheel lean (either direction) 20 deg.

Steering:
Front Full hydraulic power system. Steering capabilities without engine power

Rear Hydraulically articulated frame steering (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 Foot-operated, mechanical, dry-disk, effective on 4 tandem wheels

Hydraulic System: Closed-center
Pressure controlled variable-displacement pump 50.2 gpm (3.17 L/s) @ 2200 engine rpm

Moldboard Wear-resistant high-carbon steel
Length 12 ft. (3.66 m)
Height24 in. (610 mm)
Thickness088 in. (22 mm)

Cutting Edge: Dura-Max® through-hardened curved steel
Width and thickness 6x.62 in. (152x16 mm)

Blade Range:
Lift above ground 1 ft. 5 in. (432 mm)
Blade side shift:
Right or left 2 ft. 2.9 in. (683 mm)
Shoulder reach outside wheels:
Right 7 ft. 8.5 in. (2.35 m)
Left 7 ft. 8 in. (2.34 m)
Pitch at ground line 44 deg. forward
10 deg. back

Blade Lifting Mechanism:
Control Dual-lever, hydraulic

Lift Arms: Nodular cast
Positions 7
Control Hydraulic, foot operated

Circle Fabricated steel angle construction
Circle diameter 5 ft. (1.5 m)
Rotation 360 deg.
Drive Hydraulic motor and worm gear w/positive position lock
Sideshift, right and left 31.2 in. (792 mm)

Drawbar Welded box section, 3.5x7x0.5 in. (89x178x13mm) wall w/ball and socket draft connection

Frame:
Rear mainframe Welded flanged box section from articulation joint to mainframe arch
Width, minimum 12.13 in. (308 mm)
Height, minimum 11.88 in. (302 mm)
Thickness, sides050 in. (13 mm)
top and bottom (min.)075 in. (19 mm)
Weight per ft., minimum 112 lb. (167 kg/m)
Minimum vertical section modulus 127 inches cubed (2080 cm cubed)

Front mainframe Welded box section from mainframe arch to front hood
Width 10 in. (254 mm)
Height, minimum 13 in. (330 mm)
Thickness, minimum 0.825 in. (16 mm)
Weight per ft., minimum 117 lb. (174 kg/m)
Minimum vertical section modulus 116 inches cubed (1900 cm cubed)

Tires:
13.00-24, 12-ply rating, G2, standard
14.00-24, 10- or 12-ply rating, G2
17.5-25, 12-ply rating, L2

Dimensions:

Tire Size	Wheel Tread		Width		Ground Clearance (Front Axle)
	Front	Rear	Front	Rear	
13.00-24	76.60 in. (1.94 m)	79.51 in. (2.02 m)	7 ft. 10 in. (2.34 m)	7 ft. 10 in. (2.34 m)	1 ft. 10 in. (559 mm)
14.00-24	76.60 in. (1.94 m)	79.51 in. (2.02 m)	8 ft. (2.44 m)	8 ft. (2.44 m)	1 ft. 10.5 in. (571 mm)
17.5-25	79.36 in. (2.01 m)	82.37 in. (2.09 m)	8 ft. 6 in. (2.59 m)	8 ft. 6 in. (2.59 m)	1 ft. 11.2 in. (589 mm)

Height to top of steering wheel 7 ft. 6 in. (2.29 m)

Capacities	U.S.	Imp.	Liters
Fuel tank	70 gal.	58.3 gal.	265.0
Cooling system	10 gal.	8.3 gal.	37.9
Engine lubrication, including filter	22 qt.	18.3 qt.	20.8
Transmission and hydraulic system	31 gal.	25.8 gal.	117.3
Tandem housings (each)	5 gal.	4.2 gal.	18.9
Worm gearbox	4 qt.	3.3 qt.	3.8

Scarifier (Special Equipment):
V-type for 4 ft. (1.22 m) cut with 3 manual pitch positions and hydraulic float
Number of teeth (9 possible) 5
Lift above ground 1 ft. 10 in. (559 mm)
Penetration 12 in. (305 mm)
Shank size 1.25x4 in. (31.7x102 mm)

Ripper (Special Equipment): 8 ft. (2.44 m) cut width, parallelogram linkage, 2 manual shank vertical positions
Number of shank pockets 5
Number of shanks 3
Lift above ground 1 ft. 2.5 in. (368 mm)
Penetration 1 ft. 2 in. (356 mm)
Shank size 2x5 in. (51x127 mm)
Lift above ground (shank in upper position) 1 ft. 11.5 in. (597 mm)

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Additional Standard Equipment:

Transistorized voltage regulator
 Lights (2 white front w/stop and taillight)
 Work lights (2 front and 2 rear floods)
 Turn signals
 Horn
 Deluxe suspension seat
 Hourmeter
 Ether starting aid
 Precleaner
 Engine side shields
 ROPS cab w/seat belt
 Front and rear windshield wipers
 Floor mat

Gauges:

Water temperature
 Transmission temperature
 Transmission lube pressure
 Transmission pressure
 Engine oil pressure
 Fuel level
 Air filter indicator
 Transmission filter indicator
 Hydraulic function return filter indicator

SAE Operating Weight	On Front Wheels	On Rear Wheels	Total
Standard equipment	8590 lb. (3896 kg)	22,235 lb. (10,086 kg)	30,825 lb. (13,982 kg)
Standard equipment and scarifier	9804 lb. (4447 kg)	22,235 lb. (10,086 kg)	32,039 lb. (14,533 kg)
Standard equipment, scarifier and ripper	9007 lb. (4086 kg)	25,532 lb. (11,581 kg)	34,539 lb. (15,667 kg)

▲ Special Equipment with Weights:

(Add weights of Special Equipment to SAE Standard Equipment operating weights to obtain total operating weight.)

	lb.	kg
Basic scarifier w/five teeth	1214	551
Heavy-duty scarifier w/five teeth	1490	676
Blade lights	12	5
Bench seat	67	30
Cab heater, 19,000 BTU	15	7
Cab heater, 40,000 BTU	29	13
Roof-mounted heater, 25,000 BTU (add to air conditioner)	18	8
Defroster fan	4	2
Air conditioning w/heavy-duty alternator	170	77
Outside rear view mirrors, one side	6	3
Outside rear view mirrors, both sides	12	5
ROPS canopy w/seat belt	-400	-181
Coolant heater	3	1
2-ft. (610 mm) moldboard extensions, right or left (less cutting edge)	220	100
13-ft. (3.96 m) moldboard w/standard cutting edge	81	37
14-ft. (4.27 m) moldboard w/standard cutting edge	162	73
Basic bottom guard	170	77
Heavy-duty bottom guard w/drawbar	460	209
Rear mounted ripper w/drawbar	2500	1134
Automatic blade control	350	159
Rear drawbar	62	28
Toolbox	12	5
Articulation indicator	8	3
Engine disconnect	30	14
Reverse warning alarm	6	3
Sound suppression package (includes bottom guard)	760	345
Sound suppression package (for use w/ripper)	250	113
3-in. (76 mm) seat belt	3	1
6-in. (152 mm) overlay end bits (1 pair)	64	29
8-in. (203 mm) overlay end bits (1 pair)	70	32
8 x .75 in. (203 x 19 mm) Dura-Max [®] cutting edge (per foot)	8.5	(13 kg/m)
Heavy-duty batteries	110	50
14.00-24, 10-ply, G2 tires (6)	48	22
14.00-24, 12-ply, G2 tires (6)	150	68
10-in. (254 mm) rims	480	218
17.5-25, 12-ply, L2 tires w/14-in. (356 mm) rims (6)	1056	480

▲ Indicates change from last printing.

770A MOTOR GRADER DIMENSIONS

