



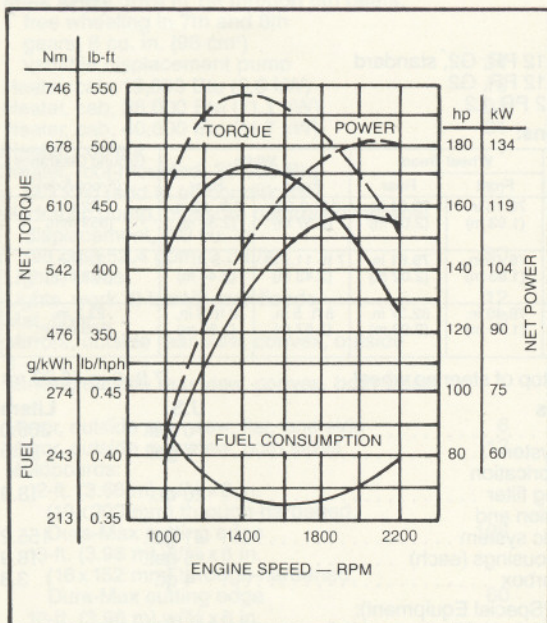
772A-H MOTOR GRADER (Dual Power)

MASTER
BUILT



Model shown may include options

ENGINE PERFORMANCE



FEATURES

180 SAE net hp (134 kW) in gears 4-8

155 SAE net hp (116 kW) in gears 1-3

32,000 to 34,000 (14 515 to 15 422 kg) operating weight with typical options and special equipment

12-ft. (3.65 m) moldboard with 0.62 x 6 in. (16 x 152 mm) through-hardened Dura-Max® cutting edge guaranteed against breakage, standard; longer moldboards and extensions available

Power Shift transmission; 8 speeds forward, 4 reverse

Articulated frame steering

Differential lock-unlock

All-wheel drive, standard system to 6.7 mph (10.8 km/h), optional system to 11.5 mph (18.5 km/h)

22-ft. 6 in. (6.86 m) turning radius

All-hydraulic control of blade and machine functions

Closed-center hydraulic system with drift-free poppet valves and pushbutton controls

Hydraulically controlled, 7-position lift arms allow blade positioning for 90-degree bank cuts, left or right, in approximately one minute, without leaving the seat

Oscillating front axle and tandem rear wheels

Hydraulic front-wheel lean

Rollover protective structure (ROPS) w/cab

ADD VERSATILITY WITH:

Snow plow and wings

Scarifier

Rear-mounted ripper

Bulldozer

Automatic blade control

MASTER

772A-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 with 8-in. (203 mm) rims, 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. (79 kg) operator.)

Rated Power @2200 rpm:	SAE	DIN 70 020
Net	180 hp (134 kW)	134 kW
In gears 1-3	155 hp (116 kW)	116 kW
Gross	190 hp (142 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 gravity. No derating is required up to 10,000 (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	537 lb-ft (728 Nm)
	(74.2 kg-m) — 25% torque rise
	480 lb-ft (651 Nm)
	(74.2 kg-m) — 30% torque rise

Cooling fan	Suction type
Lubrication	Pressure system w/full flow filter
Aspirated air cleaner w/restriction indicator	Dry
Electrical system	24 volt w/42-amp alternator
Battery (two 12-volt)	Reserve capacity: 360 minutes

Transmission Direct drive, full power shift with planetary gear reductions. Foot inching pedal and disconnect for towing.

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	4.2	6.8
3	5.2	8.4	6.6	10.6
4	6.7	10.8	8.6	13.8
5	8.8	14.2		
6	11.5	18.5		
7	14.6	23.5		
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 Drive Standard and optional systems are available to match different applications. Both use a variable-displacement pump, a reversible motor in each wheel, and a flow divider to assure front wheel traction. System has two operational modes and free-wheels at transport speeds or when not in use.

Standard system — effective in gears 1-4 5.03 in³ (89 cm³) pump, 2.03 in³ (33 cm³) motors

High speed system — effective in gears 1-6 6.00 in³ (98 cm³) pump, 2.03 in³ (33 cm³) motors

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 in. (6.86 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 w/pressure controlled 4.0 cu. in. (65 cm³) variable-displacement pump 36 gpm (2.27 L/s) @2200 engine rpm

Moldboard	Wear-resistant high-carbon steel
Length	12 ft. (3.66 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)

Blade Range:

Lift above ground	17 in. (432 mm)
Blade side shift:	
Right or left	26.9 in. (683 mm)
Shoulder reach outside wheels (frame straight):	
Right	88.4 in. (2.25 m)
Left	89.6 in. (2.28 m)
Pitch at ground line	44 deg. forward
	10 deg. back

Blade Lifting Mechanism:

Control Dual-lever, hydraulic

Lift Arms: Cast nodular iron

Positions	7
Control	Hydraulic, foot operated

Circle

Circle diameter	60 in. (1.5 m)
Rotation	360 deg.
Drive	Hydraulic motor and worm gear w/positive position lock

Sideshift, right	32.0 in. (813 mm)
left	33.5 in. (851 mm)

Drawbar Welded box section, 3.5 x 7 x 0.5 in. (89 x 178 x 13 mm) wall w/ball and socket draft connection

Frame:

Rear mainframe	Welded flanged box section from articulation joint to mainframe arch
Width, minimum	12.03 in. (306 mm)
Height, minimum	11.95 in. (304 mm)
Thickness, sides	0.47 in. (12 mm)
top and bottom (min.)	0.87 in. (22 mm)
Weight per ft., minimum	120 lb. (179 kg/m)
Minimum vertical section modulus	143 in ³ (2343 cm ³)

Front mainframe Welded box section from mainframe arch to front hood

Width	10 in. (254 mm)
Height, minimum	13 in. (330 mm)
Thickness, minimum	0.63 in. (16 mm)
Weight per ft., minimum	110 lb. (164 kg/m)
Minimum vertical section modulus	118 in ³ (1935 cm ³)

Tires:

13.00-24, 12 PR, G2, standard
14.00-24, 12 PR, G2
17.5-25, 12 PR, L2

Dimensions:

Tire Size	Wheel Tread		Width		Ground Clearance (Front Axle)
	Front	Rear	Front	Rear	
13.00-24 8" rim (203 mm)	76.15 in. (1.93 m)	79.61 in. (2.02 m)	7 ft. 9.5 in. (2.37 m)	7 ft. 10 in. (2.34 m)	22 in. (559 mm)
14.00-24 10" rim (254 mm)	76.15 in. (1.93 m)	79.61 in. (2.02 m)	7 ft. 11.5 in. (2.43 m)	8 ft. (2.44 m)	22.5 in. (572 mm)
17.5-25 14" rim (356 mm)	78.40 in. (1.99 m)	82.37 in. (2.09 m)	8 ft. 5 in. (2.57 m)	8 ft. 6 in. (2.59 m)	23.2 in. (589 mm)

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

Capacities

	U.S.	Liters
Fuel tank	70 gal.	265.0
Cooling system	7 gal.	26.5
Engine lubrication		
including filter	20 qt.	18.9
Transmission and hydraulic system	41 gal.	155.2
Tandem housings (each)	5 gal.	18.9
Worm gearbox	4 qt.	3.8

Scarifier (Special Equipment):

V-type for 4 ft. (1.22 m) cut with 3 manual pitch positions.	
Number of teeth	5 standard, 9 optional
Lift above ground	24.0 in. (610 mm)
Penetration	13.7 in. (348 mm)
Shank size	1 x 3 in. (25 x 76 mm) or 1 1/4 x 4 in. (32 x 102 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	14.5 in. (368 mm)
Penetration	14 in. (356 mm)
Shank size	2 x 5 in. (51 x 127 mm)
Lift above ground (shank in upper position)	23.5 in. (597 mm)

772A-H MOTOR GRADER (Dual Power) SPECIFICATIONS

Additional Standard Equipment:

Gauges:

Air filter indicator
Engine oil pressure
Front-wheel-drive return filter indicator
Front-wheel-drive charge pressure
Fuel level
Hydraulic function return filter indicator
Transmission clutch pressure
Transmission filter indicator
Transmission lube pressure
Transmission temperature
Water temperature

Horn

Hourmeter

Lights, stop and tail

Lights, driving

Precleaner

Reverse warning alarm

ROPS cab w/seat belt, front wiper and dome light

Seat, cushioned vinyl

Transistorized voltage regulator

Turn signals

SAE Operating Weight	On Front Wheels	On Rear Wheels	Total
Standard equipment	9237 lb. (4190 kg)	21,666 lb. (9827 kg)	30,903 lb. (14 017 kg)
Standard equipment and scarifier	10,548 lb. (4784 kg)	21,470 lb. (9739 kg)	32,018 lb. (14 523 kg)
Standard equipment, scarifier and ripper	9780 lb. (4436 kg)	24,712 lb. (11 209 kg)	34,492 lb. (15 645 kg)

Optional or Special Equipment with Weights:

(Add these weights to SAE Standard operating weights to obtain total operating weights.)

	lb.	kg		lb.	kg
Accelerator-decelerator	7	3	Moldboard extensions, 2-ft. (610 mm), right or left (less cutting edge)	220	100
Air conditioner w/heavy-duty alternator	187	85	Moldboard float	14	6
Automatic blade control	350	159	Overlay end bits (1 pair), 6 in. (152 mm)	62	28
Articulation indicator	6	3	Overlay end bits (1 pair), 8 in. (203 mm)	77	35
Batteries, heavy-duty			Rear hitch	61	28
w/620-minute reserve capacity	101	46	Rims:		
Blade, front bulldozer w/float control	1618	734	10 in. (254 mm) for 14.00-24	452	205
Bottom guard, heavy-duty			14 in. (356 mm) for 17.50-25 tires	645	293
w/rear hitch	459	208	Ripper, rear mounted with hitch	2474	1123
Bottom guard, regular	160	73	ROPS canopy w/seat belt and instrument panel cover	-447	-203
Cold-weather starting aid	3	1	Scarifier, regular w/five teeth 1 x 3 in. (25 x 76 mm)	1115	506
Dura-Max® through-hardened cutting edge, ¾ x 8 in. (19 x 203 mm)	8.5 lb/ft	(13 kg/m)	Scarifier, heavy-duty w/five teeth 1¼ x 4 in. (32 x 102 mm)	1313	596
Engine disconnect, cold weather	30	14	Scarifier float	9	4
Engine side shields	60	27	Seat belt, 3-in. (76 mm)	3	1
Fan, defroster	4	2	Seat, deluxe suspension, cloth covered	111	50
Front wheel drive in 1st through 6th gears, free wheeling in 7th and 8th gears, 6 cu. in. (98 cm³)			Seat, deluxe suspension, vinyl covered	58	26
variable displacement pump	34	15	Sound suppression package (includes bottom guard)	542	246
Heater, cab, 19,000 Btu (5.6 kW)	16	7	Sound suppression package (for use w/ripper)	295	134
Heater, cab, 38,000 Btu (11.1 kW)	31	14	Tires:		
Heater, cab, 40,000 Btu (11.7 kW)	31	14	14.00-24, 12 PR, G2	210	95
Heater, coolant	1	0.5	17.5-25, 12 PR, L2	468	213
Heater, roof-mounted, 25,000 Btu (7.3 kW) (add to air conditioner)	17	8	Toolbox	11	5
Hydraulic pump, pressure controlled variable displacement, 6.0 cu. in. (98 cm³) 52.4 gpm (3.3 L/s)	50	23	Winter door cam for cab	4	2
Lights, blade	4	2	Wiper, rear windshield	4	2
Lights, work, 2 front/2 rear floods	12	5			
Mat, floor	9	4			
Mirrors, outside rear view, convex, outside	3	6			
Mirrors, outside rear view, convex, both sides	5	12			
Mirror, outside rear view, flat, one side	6	3			
Mirror, outside rear view, both sides	12	5			
Moldboards:					
12-ft. (3.66 m) w/¾ x 8 in. (19 x 203 mm) through-hardened, Dura-Max cutting edge	106	48			
13-ft. (3.96 m) w/¾ x 6 in. (16 x 152 mm) through-hardened, Dura-Max cutting edge	60	27			
13-ft. (3.96 m) w/¾ x 8 in. (19 x 203 mm) through-hardened, Dura-Max cutting edge	116	53			
14-ft. (4.27 m) w/¾ x 6 in. (16 x 152 mm) through-hardened, Dura-Max cutting edge	146	66			
14-ft. (4.27 m) w/¾ x 8 in. (19 x 203 mm) through-hardened, Dura-Max cutting edge	155	70			

772A-H MOTOR GRADER (Dual Power) DIMENSIONS

