

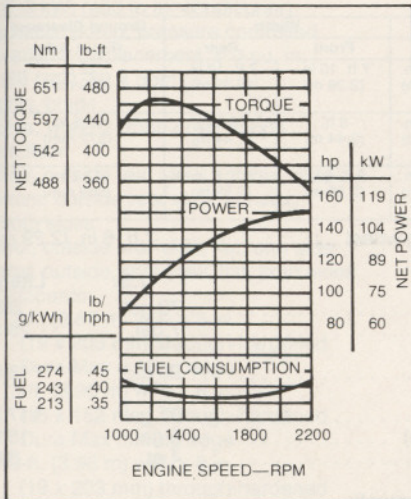


770A MOTOR GRADER



Model shown may include options

ENGINE PERFORMANCE



FEATURES

- 150 SAE net hp (112 kW)
- 12-ft. (3.65 m) moldboard with 0.62 x 6 in. (16 x 152 mm) through-hardened Dura-Max® cutting edge; 13- and 14-ft. (3.95 and 4.25 m) moldboards and 2-ft. (610 mm) extensions available
- Power shift transmission; 8 speeds forward, 4 reverse
- Articulated frame steering
- Differential lock-unlock
- 22-ft. (6.70 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
- Rollover protective structure (ROPS) w/cab

ADD VERSATILITY WITH::

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

770A MOTOR GRADER 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 | 150 hp (112 kW) | 112 kW |
| Gross | 160 hp (119 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 ft. (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 @1300 rpm | 465 lb-ft (630 Nm) (64 kg-m) |
| Lubrication | Pressure system w/full-flow filter |
| Cooling fan | Suction type |
| Aspirated air cleaner w/restriction indicator | Dry |
| Electrical system | 25 volt w/42 amp alternator |
| Batteries (two 12-volt) | Reserve capacity: 360 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 | | 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 Axle: Fabricated steel box frame with steel spindles

| | |
|---|---------|
| Total oscillation | 30 deg. |
| Wheel lean range (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 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. (3.65 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)

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 Lift Mechanism:

Control .. Dual-lever, hydraulic

Lift Arms: Nodular cast iron

Positions .. 7
Control .. Hydraulic, foot operated

Circle: .. Fabricated steel angle construction

| | |
|------------------------|--|
| 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 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. (255 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) | 76.60 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" 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" 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. (2.59 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 |
| Cooling system | 7 gal. | 26.5 |
| Engine lubrication, including filter | 20 qt. | 18.9 |
| Transmission and hydraulic system | 31 gal. | 117.3 |
| 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 in. (610 mm) |
| Penetration | 13.7 in. (348 mm) |
| Shank size | 1 x 3 in. (25 x 76 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) |

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Additional Standard Equipment:

| | |
|--|--|
| Gauges: | Horn |
| Air filter indicator | Hourmeter |
| Engine oil pressure | Lights, stop and tail |
| Fuel level | Lights, driving |
| Hydraulic function return filter indicator | Precleaner |
| Transmission clutch pressure | Reverse warning alarm |
| Transmission filter indicator | ROPS cab w/seat belt, front wiper and dome light |
| Transmission lube pressure | Seat, cushioned vinyl |
| Transmission temperature | Turn signals |
| Water temperature | |

| SAE Operating Weight | On Front Wheels | On Rear Wheels | Total |
|--|-----------------------|---------------------------|---------------------------|
| Standard equipment | 8548 lb. (3877 kg) | 21,712 lb. (9848 kg) | 30,260 lb. (13 726 kg) |
| Standard equipment and scarifier | 9859 lb. (4472 kg) | 21,516 lb. (9759 kg) | 31,375 lb. (14 231 kg) |
| Standard equipment, scarifier and ripper | 9091 lb. (4124 kg) | 24,758 lb. (11 230 kg) | 33,849 lb. (15 354 kg) |

Optional or Special Equipment with Weights:

(Add these weights to SAE Standard Equipment 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 control | 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 w/620-minute reserve capacity | 101 | 46 | Rear hitch | 61 | 28 |
| Blade, front bulldozer w/float control | 1618 | 734 | Rims: | | |
| Bottom guard, heavy-duty w/rear hitch | 459 | 208 | 10 in. (254 mm) for 14.00-24 tires | 472 | 214 |
| Bottom guard, regular | 160 | 73 | 14 in. (356 mm) for 17.50-25 tires | 674 | 306 |
| Cold-weather starting aid | 3 | 1 | Ripper, rear mounted with hitch | 2474 | 1123 |
| Dura-Max through-hardened cutting edge, 3/4 x 8 in. (19 x 203 mm) | 8.5 lb/ft | (13 kg/m) | ROPS canopy w/seat belt and instrument panel cover | -447 | -203 |
| Engine disconnect, cold weather | 30 | 14 | Scarifier, regular w/five teeth 1 x 3 in. (25 x 76 mm) | 1115 | 506 |
| Engine side shields | 60 | 27 | Scarifier float control | 9 | 4 |
| Fan, defroster | 4 | 2 | Seat belt, 3-in. (76 mm) | 3 | 1 |
| Heater, cab, 19,000 BTU (5.6 kW) | 16 | 7 | Seat, deluxe suspension, cloth covered | 111 | 50 |
| Heater, cab, 38,000 BTU (11.1 kW) | 31 | 14 | Seat, deluxe suspension, vinyl covered | 58 | 26 |
| Heater, cab, 40,000 BTU (11.7 kW) | 31 | 14 | Sound suppression package (includes bottom guard) | 542 | 246 |
| Heater coolant | 1 | 0.5 | Sound suppression package (for use w/ripper) | 295 | 134 |
| Heater, roof-mounted, 25,000 BTU (7.3 kW) (add to air conditioner) | 17 | 8 | 14.00-24, 12 PR, G2 | 270 | 122 |
| Hydraulic pump, pressure controlled variable displacement, 6.0 cu. in. (98 cm ³), 52.4 gpm (3.3 L/s) | 50 | 23 | 17.5-25, 12 PR, L2 | 528 | 239 |
| Lights, blade | 4 | 2 | Toolbox | 11 | 5 |
| Lights, work, 2 front/2 rear floods | 12 | 5 | Winter door cam for cab | 4 | 2 |
| Mat, floor | 9 | 4 | Wiper, rear windshield | 4 | 2 |
| Mirror, outside rear view, convex, outside | 6 | 3 | | | |
| Mirrors, outside rear view, convex, both sides | 12 | 5 | | | |
| Mirror, outside rear view, flat, one side | 6 | 3 | | | |
| Mirror, outside, rear view, flat, both sides | 12 | 5 | | | |
| Moldboards: | | | | | |
| 12-ft. (3.66 m) w/3/4 x 8 in. (19 x 203 mm) through-hardened Dura-Max cutting edge | 106 | 48 | | | |
| 13-ft. (3.96 m) w/5/8 x 6 in. (16 x 152 mm) through-hardened Dura-Max cutting edge | 60 | 27 | | | |
| 13-ft. (3.96 m) w/3/4 x 8 in. (19 x 203 mm) through-hardened Dura-Max cutting edge | 116 | 53 | | | |
| 14-ft. (4.27 m) w/3/4 x 8 in. (19 x 203 mm) through-hardened Dura-Max cutting edge | 146 | 66 | | | |
| 14-ft. (4.27 m) w/5/8 x 6 in. (16 x 152 mm) through-hardened Dura-Max cutting edge | 155 | 70 | | | |

770A MOTOR GRADER DIMENSIONS

