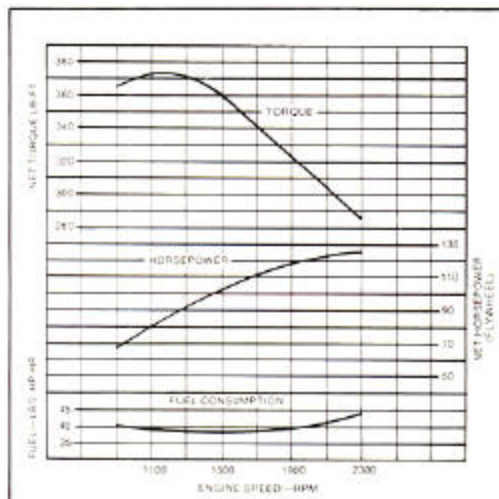




JD670-A MOTOR GRADER



ENGINE PERFORMANCE



FEATURES

125 SAE net hp (126.7 PS)

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 built-in, positive hydraulic locks provides instant response without blade drift or creep

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 wing

Bulldozer

Automatic blade control

JD670-A 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, 8-ply rating, tubeless tires, 12 ft. (3.66 m) moldboard, and standard equipment. Weights include lubricants, coolants, full fuel tank and 175 lb. (79 kg) operator.)

Power (at 2300 engine rpm):	SAE	DIN
Gross	135 hp (100.7 kW)	
Net	125 hp (93.2 kW)	126.7 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	4.19×5 in. (106.5×127 mm)
Piston displacement	414 cu. in. (6784 cm ³)
Compression ratio	16.2 to 1
Maximum torque @ 1300 rpm	372 lb.-ft. (504 Nm) (51.4 kg/m)
NACC or AMA (U.S. Tax) horsepower	42.1
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) 12-volt	Reserve capacity: 180 minutes

Transmission

Direct drive full Power Shift with planetary gear reductions. Foot inching pedal.

Travel Speeds (2300 engine rpm, no tire slip):

Shift Lever Position	Forward		Reverse	
	mph	km/h	mph	km/h
1	2.3	3.6	2.8	4.5
2	3.2	5.1	3.9	6.3
3	4.8	7.8	5.9	9.5
4	6.3	10.1	7.6	12.3
5	8.2	13.2		
6	10.5	17.0		
7	14.1	22.8		
8	23.9	38.4		

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 lane range (either direction)

20 deg.

Steering:

Front

Full hydraulic power system. Steering capabilities without 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

35 gpm (2.2 L/s) @ 2300 engine rpm

Blade:

Length

12 ft. (3.66 m)

Height

24 in. (610 mm)

Thickness

0.88 in. (22 mm)

Blade Range:

Lift above ground

1 ft. 4.10 in. (409 mm)

Blade side shift:

Right or left

2 ft. 2.9 in. (683 mm)

Shoulder reach outside wheels:

Right or left

7 ft. (2.13 m)

Pitch at ground line

44 deg. forward

10 deg. back

Blade Lifting Mechanism:

Control

Dual-lever, hydraulic w/float position

Lift Arms: Nodular cast

Positions

7

Control

Hydraulic, foot operated

Circle: Fabricated steel angle construction

Circle diameter

4 ft. 10 in. (1.47 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, 3.5×7×0.5 in. (89×178×13 mm) wall w/ball and socket draft connection

Frame:

Rear mainframe

Welded box section from articulation joint to mainframe arch

Width, minimum

9.25 in. (235 mm)

Height, minimum

14.65 in. (372 mm)

Thickness, sides

0.63 in. (16 mm)

top and bottom (min.)

0.75 in. (19 mm)

Weight per ft. (m), minimum

110 lb. (164 kg/m)

Minimum vertical section modulus

125 inches cubed (2050 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

0.50 in. (13 mm)

Weight per ft. (m), minimum

110 lb. (164 kg/m)

Minimum vertical section modulus

109 inches cubed (1786 cm cubed)

	U.S.	Imp.	Liters
Capacities			
Fuel tank	60 gal.	50.0 gal.	227.0
Cooling system	7 gal.	5.8 gal.	26.5
Engine lubrication, including filter	20 qt.	16.7 qt.	18.9
Transmission and hydraulic system	28 gal.	23.3 gal.	106.0
Tandem housings (each)	5 gal.	4.2 gal.	18.9
Worm gearbox	3 qt.	2.5 qt.	2.8

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

Mechanical hourmeter

Ether starting aid

Precleaner

Engine side shields

Moldboard float position

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

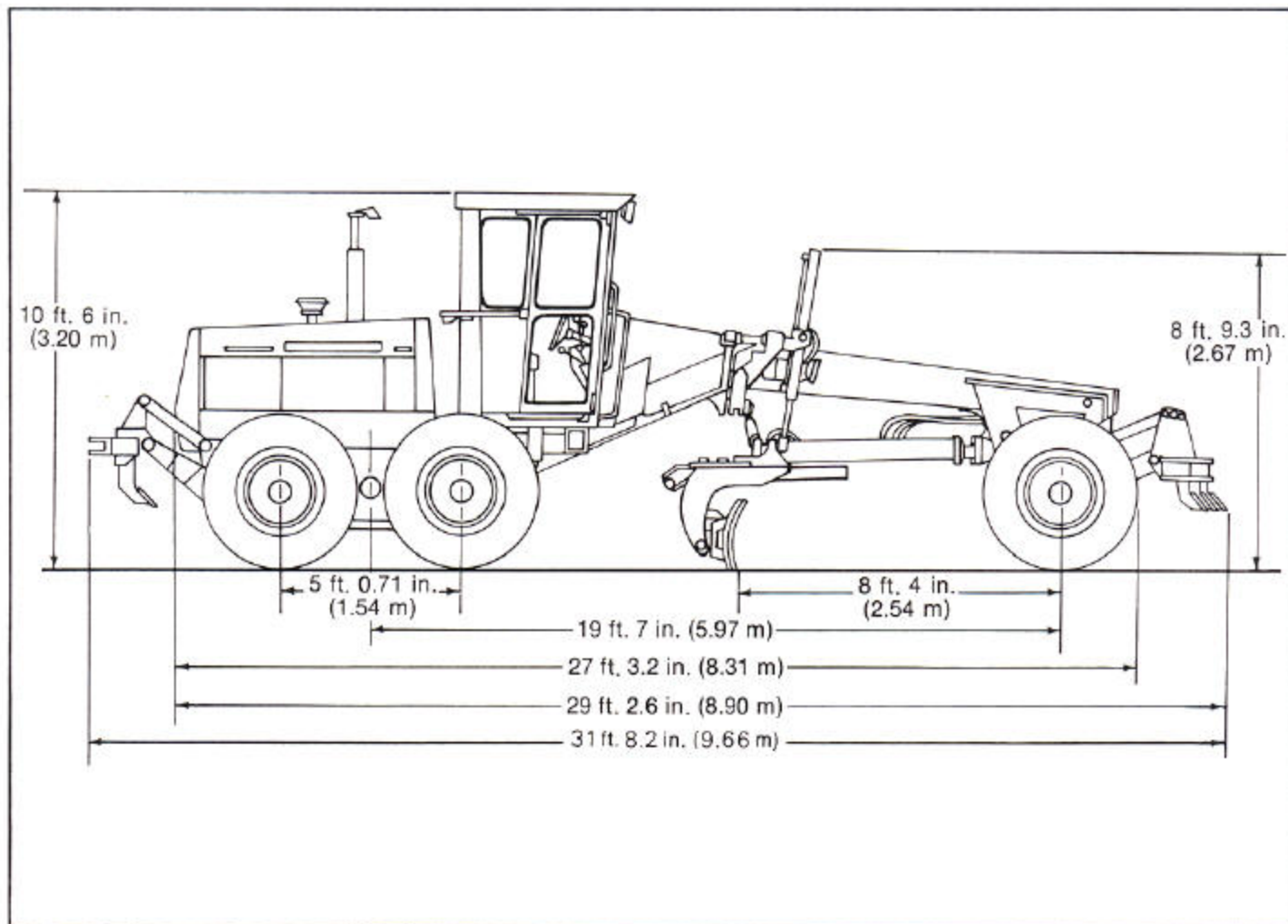
ROPS cab w/seat belt

Front and rear windshield wipers

Floor mat

	On Front Wheels	On Rear Wheels	Total
SAE Operating Weight			
Standard equipment	7728 lb. (3505 kg)	18,252 lb. (8279 kg)	25,980 lb. (11 784 kg)
Standard equipment and scarifier	8828 lb. (4004 kg)	18,252 lb. (8279 kg)	27,080 lb. (12 283 kg)
Standard equipment, scarifier and ripper	8031 lb. (3643 kg)	21,549 lb. (9775 kg)	29,580 lb. (13 417 kg)

JD670-A MOTOR GRADER DIMENSIONS



Tires

- 13.00-24, 8- or 12-ply rating; 8-in. rim
- 14.00-24, 10- or 12-ply rating; 8- or 10-in. rim
- 17.5-25, 12-ply rating; 14-in. rim

Dimensions:

Tire Size	Wheel Tread		Width		Ground Clearance (Front Axle)
	Front	Rear	Front	Rear	
13.00-24	76.60 in. (1.94 m)	79.61 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)	79.61 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. 4.4 in. (2.25 m)

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 1.25 x 4 in. (31.7 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 1 ft. 2.5 in. (368 mm)
- Penetration 1 ft. 2 in. (356 mm)
- Shank size 2 x 5 in. (51 x 127 mm)
- Lift above ground (shanks in upper position) 1 ft. 11.5 in. (597 mm)

Special Equipment:

- Scarifier
- Heavy-duty scarifier
- Below-cab blade lights
- Bench seat
- Cab heater options
- Cab defroster fan
- Air conditioning w/50 amp heavy-duty alternator
- Roof-mounted heater (w/air-conditioner only)
- Outside rear view mirrors
- ROPS canopy w/seat belt
- Coolant heater
- 2-ft. (610 mm) moldboard extensions, right or left
- 13-ft. (3.96 m) and 14-ft. (4.27 m) moldboards

- Overlay end bits
- Transmission bottom guard
- Heavy-duty bottom guard w/drawbar
- Rear-mounted ripper w/drawbar hitch
- Drawbar hitch
- Toolbox
- Articulation indicator
- Engine disconnect
- Reverse warning system
- Sound baffled engine side shields
- 3-in. seat belt
- Heavy-duty cutting edge
- Automatic blade control