*G-SERIES 4WD*

# *MOTOR GRADERS*

JOHN DEERE

*620G/GP / 670G/GP / 770G/GP / 870G/GP*


## *CHOOSE HOW YOU WORK*


*MORE CONTROL OPTIONS*

+

*FACTORY EQUIPPED WITH OPTIONAL SMARTGRADE™*


DEERE
MORE WAYS TO GET
MORE DONE.

*TAKING GRADING PERFORMANCE*

# *TO THE NEXT LEVEL.*

**John Deere motor graders have earned a reputation for exceptional control and effortless grading precision.** And now, thanks to the best ideas of customers like you, we've added exclusive automation on Grade Pro (GP) models to our list of featured firsts. Along with Customer Advocate Group-tested dual-joystick controls, wide-ranging grade-control system options including integrated SmartGrade models, and the small and economical 620G, it's just one more example of all the ways we're leading the way to move your operation in a whole new direction.

**WHEN YOU ASK, WE LISTEN: THE 620G GRADER.**

Our competitively priced 620G offers contractors, townships, and municipalities the grader they've been asking for, with just the right amount of power and fuel savings of up to 10 percent over our larger models. It's equipped — not stripped — with many of the same features found on its larger siblings, including a superior cooling package and ground-level service.

# *RIGHT ON THE MONEY*

## *ENHANCED PERFORMANCE, MORE OPTIONS, LOWER COST.*

Boasting exceptional balance, improved performance specs, and more maximum capability, G-Series Graders help you do your level best — whether you're a major contractor, working for the county, or running a land-leveling crew.

**Innovation in action**

New John Deere automation features designed to move you ahead in a big way include Machine-Damage Avoidance, Machine Presets, Auto-Articulation, Auto-Gain for Cross Slope, and Auto-Pass (available on GP models; see page 6 for all the details).

**Go forward**

Auto-Shift PLUS simplifies operation of both GP and G-Series models, for machine operation without using the inching pedal.

**The right power for the job**

G-Series Graders deliver the right amount of power when you need it. Horsepower and torque are optimized for each gear to maximize performance no matter your application.

**Unlimited grade control**

Industry-first John Deere SmartGrade Motor Graders are fully integrated and calibrated from the factory, arriving at your jobsite ready to work. In-cylinder position sensing allows the machine to stay on grade no matter what blade pitch, articulation angle, or circle offset you're running.

**Improved horsepower and torque**

Increased engine horsepower, torque, and blade pull produce generous power and lugging ability, to deliver more power to the ground, easily pull through tough spots, or tackle steep hills.

**Smarter from day one**

Integration of SmartGrade into the cabin and structures helps shield key grade-control components such as wire harnesses and sensors from damage and theft. And without external grade-control components to impede maneuverability, final-grade machines can be involved earlier and more effectively in site development.

**INDUSTRY-FIRST AUTOMATION FEATURES & SMARTGRADE CONFIGURATIONS**

# GET AHEAD OF IT

## THE JOHN DEERE DIFFERENCE.

Set yourself apart from the competition. Because with industry-exclusive Auto-Gain for Cross Slope, Auto-Pass, and Auto-Shift PLUS, it's push-button easy to take the lead. Our automation advantages for all Grade Pro (GP) models are also available as field kits that can be unlocked on SmartGrade models.


**1** Exclusive **Auto-Shift PLUS** — also available on all G-Series models – allows operators to work without using the inching pedal.

**2** **Auto-Gain for Cross Slope** automatically adjusts gain settings based on ground speed to maximize performance.

**3** **Auto-Articulation** allows the operator to increase the maneuverability of coordinated steering and articulation while using only the joystick-steering function to steer and operate other necessary functions without manually articulating the machine.

**4** **Machine-Damage Avoidance** eliminates the risk of blade damage to machine structures during any operation, even complex orientations.

**5** Exclusive **Auto-Pass** makes grading easy by automatically placing the blade on the ground and activating the grade-control system (when equipped) at the start of the pass, then automatically raising and resetting the blade at the end of it.

**6** Preparing the machine for transport is push-button easy with **Machine Presets.** Stow the blade and ripper, turn on the lights including the hazards, and enable Auto-Shift with one button press, for speedy jobsite transitions.

**Optional premium circle**

Featuring a fully sealed bearing and pinion that run smoother and quieter, this industry-leading design reduces operating costs while delivering 40-percent more torque and 15-percent more speed than a traditional circle. Contractors no longer have to compensate for wear in the circle, improving accuracy when using a grade-control system — especially impactful when coupled with the innovative John Deere SmartGrade™ system. And greasing intervals of only four zerks every 500 hours make the premium circle essentially maintenance free.

# *FREEDOM OF CHOICE*

## *WITHOUT LIFTING A FINGER.*

Our G-Series Graders give you more choice of how work gets done. On our GP models opt for dual-joystick controls or choose state-of-the-art fingertip armrest controls. Or have the best of both worlds — a field kit allows you to easily swap between the two. Our G models offer conventional lever-operated controls. And based on customer feedback, all models still have a steering wheel. The choice is yours.

**Joystick option**

Our dual-joystick controls provide intuitive control with minimal hand motion during direction changes and gear shifts. By eliminating the twisting wrist motion or uncomfortable combinations common to other joystick systems, dual-joystick controls help reduce operator fatigue.

**Fine control with less fatigue**

Articulation and circle-rotate functions are actuated using proportional roller switches instead of twisting the controller.

**Return-to-straight**

At the touch of a button, return-to-straight automatically straightens an articulated frame, for quicker work cycles.

**Automated cross slope**

Dual-joystick controls and finger-tip armrest controls both come equipped with cross slope and are ready to run the grade-control system of your choice. Automated cross slope simplifies holding a consistent slope by reducing operation to a single lever. It's a GP feature that helps veteran operators be their best and new operators get up to speed more quickly.

### CHOICE OF CONTROLS

- DUAL-JOYSTICK CONTROLS (GP MODELS)
- FINGERTIP ARMREST MOUNTED (GP MODELS)
- CONVENTIONAL LEVER OPERATED (G MODELS)
- STEERING WHEEL (STANDARD ON ALL MODELS)


CAUTION


# SIGHT FOR SORE EYES

## *ENVISION MORE PRODUCTIVITY.*

With their exceptional visibility, an LCD high-visibility monitor, and smooth gate-less shifting, it's easy to see why G-Series Graders have become a favorite on a wide range of jobsites.

**Exceptional view**

All-around visibility is virtually unobstructed, with a clear view to the heel and toe, and behind the moldboard. You can even see the area beneath the front axle, for increased awareness of oncoming obstacles.

**Store your stuff**

Generous storage space includes numerous overhead compartments, plus a place for a beverage, cooler, cell phone, and other carry-ons.

**Lighting the way**

Courtesy lighting stays on after machine shutdown and then automatically turns itself off, making it safer to exit the cab after dark, while conserving battery power.

**Easy-access park brake**

Sealed-switch module provides push-button control of key machine functions, including the parking brake, for more convenient access and easier operation.

**LCD hi-vis monitor streamlines access to vital data**

LCD hi-vis monitor provides intuitive, push-button access to vital machine information displayed via simple, easy-to-navigate icons and menus.

**Now you see it**

Contractors will benefit from improved visibility to the tandems on GP models while working around obstacles such as water mains and hubs.

# KEEP DOWNTIME DOWN.

## ***SO MUCH TO DO,*** *SO LITTLE TIME*

Uptime isn't everything. It's the only thing. Which is why G-Series Graders are loaded with durability-enhancing advantages that help deliver years of trouble-free service.


**Fuel-efficient, cool-on-demand fan with reversing option**

Variable-speed hydraulically driven fan runs only as fast or as often as necessary to keep things cool. Helps conserve power and fuel, while reducing noise. Standard reversible fan (optional on 620G/GP) speeds core cleanout in high-debris applications.

**Auto shutdown reduces fuel use and wear**

Auto shutdown turns off the engine after an operator-determined period of idling. Saves fuel and reduces wear on engine, transmission, and hydraulic components.

**Robust, easy-to-clean cooling package**

Cooling package eliminates stacked coolers. Together with the hinged swing-out fan, access to the cores is quick and cleaning is easy.

**Multipurpose for your multiple purposes**

Redesigned heavy-duty front and rear axles combined with increased maximum operating weights enable more versatility and better blade pull for utilizing attachments.

**Save fuel with Eco mode**

When engaged, Eco mode reduces engine rpm in gears 1–5, optimizing fuel usage and decreasing operating costs by up to 10 percent.

Get valuable insight with

## *PRECISION CONSTRUCTION*

This suite of construction technology delivers **Productivity Solutions** to help you get more done, more efficiently. The in-base JDLink™ subscription provides machine location, utilization data, and alerts to help you maximize productivity and efficiency. Other productivity solutions include grade-management options for multiple machine forms and payload weighing for wheel loaders and articulated dump trucks.

To maximize uptime and lower costs, JDLink also enables **John Deere Connected Support.™** John Deere's centralized Machine Health Monitoring Center analyzes data from thousands of connected machines, identifies trends, and develops recommended actions, called Expert Alerts, to help prevent downtime. Dealers use Expert Alerts to proactively address conditions that may otherwise likely lead to downtime. Your dealer can also monitor machine health and leverage remote diagnostics and programming capability to further diagnose problems and even update machine software without a time-consuming trip to the jobsite.


# *GET IT DONE WITH EASE.*

**Fast, simple ground-level access**

All daily service points, including fueling and diesel exhaust fluid (DEF), are grouped on the left side for quick and convenient ground-level access. On the right side, maintenance personnel will appreciate the easy-access engine oil, fuel, hydraulic, transmission, and differential filter bank.

# 620G / GP SPECIFICATIONS

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| **Engine** | **620G/GP** | | |
|---|---|---|---|
| Manufacturer and Model | John Deere PowerTech™ PSS 6.8L | John Deere PowerTech™ Plus 6.8L | John Deere PowerTech™ 6.8L |
| Non-Road Emission Standard | EPA Final Tier 4/EU Stage V | EPA Tier 3/EU Stage IIIA | EPA Tier 2/EU Stage II |
| Cylinders | 6 | 6 | 6 |
| Displacement | 6.8L (414 cu. in.) | 6.8L (414 cu. in.) | 6.8L (414 cu. in.) |
| Net Engine Power | | | |
| Gear 1 | 112 kW (150 hp) | 112 kW (150 hp) | 112 kW (150 hp) |
| Gear 2 | 123 kW (165 hp) | 123 kW (165 hp) | 123 kW (165 hp) |
| Gear 3 | 134 kW (180 hp) | 130 kW (175 hp) | 130 kW (175 hp) |
| Gear 4 | 142 kW (190 hp) | 134 kW (180 hp) | 134 kW (180 hp) |
| Gear 5 | 149 kW (200 hp) | 142 kW (190 hp) | 138 kW (185 hp) |
| Gear 6 | 153 kW (205 hp) | 146 kW (195 hp) | 138 kW (185 hp) |
| Gear 7 | 157 kW (210 hp) | 149 kW (200 hp) | 138 kW (185 hp) |
| Gear 8 | 160 kW (215 hp) | 149 kW (200 hp) | 138 kW (185 hp) |
| Net Peak Torque | 1005 Nm (750 lb.-ft.) | 915 Nm (682 lb.-ft.) | 831 Nm (620 lb.-ft.) |
| Net Torque Rise | 40% | 37% | 44% |
| Aspiration | Series turbocharged, charge-air cooled | Turbocharged, charge-air cooled | Turbocharged, charge-air cooled |
| Lubrication | Full-flow spin-on filter and integral cooler | Full-flow spin-on filter and integral cooler | Full-flow spin-on filter and integral cooler |
| Air Cleaner With Restriction Indicator | Dual element, dry | Dual element, dry | Dual element, dry |
| **Cooling** | | | |
| Engine Coolant, Extended Life, Rating | –37 deg. C (–34 deg. F) | | |
| **Powertrain** | | | |
| **Transmission** | Direct-drive John Deere PowerShift Plus™, modulated shift-on-the-go, Event-Based Shifting (EBS), inching pedal; independent transmission reservoir with separate filtration and cooling system with 117-L/min. (31 gpm) gear pump | | |
| Gears | | | |
| Forward | 8 | | |
| Reverse | 8 | | |
| **Maximum Travel Speeds** | *No tire slip at 2,180 rpm, 14.0-R24 tires* | | *No tire slip at 2,180 rpm, 14.0-R24 tires* |
| Gear 1 | 4.0 km/h (2.5 mph) | Gear 5 | 16.4 km/h (10.2 mph) |
| Gear 2 | 5.6 km/h (3.5 mph) | Gear 6 | 23.2 km/h (14.4 mph) |
| Gear 3 | 7.7 km/h (4.8 mph) | Gear 7 | 32.3 km/h (20.1 mph) |
| Gear 4 | 10.9 km/h (6.8 mph) | Gear 8 | 45.5 km/h (28.3 mph) |
| **Front Axle** | Heavy-duty welded fabrication | | |
| Oscillation (total) | 32 deg. | | |
| Wheel Lean Angle (each direction) | 20 deg. | | |
| **Differentials** | Spiral bevel; hydraulically actuated, clutch type can be applied on-the-go; selectable manual or automatic differential lock | | |
| **Steering (all models include steering wheel)** | All-hydraulic power-frame articulation for maneuverability and productivity; crab steering reduces side drift, positions tandems on firm ground, and increases side-slope stability; return-to-straight control included in Grade Pro (GP) option | | |
| Turning Radius (front steer and articulation) | 7.21 m (284 in.) (23 ft. 8 in.) | | |
| Articulation (both right and left) | 22 deg. | | |
| **Final Drives** | Inboard-mounted planetary sealed in cooled, filtered oil | | |
| **Brakes** | Foot-controlled, hydraulically operated, multiple wet-disc brakes sealed in pressurized, cooled, filtered oil; both independent systems effective on all 4 tandem wheels | | |
| Primary and Secondary Brakes | Hydraulically actuated, inboard of tandem pivot, self-adjusting, sealed in cooled and filtered oil, multi-disc (ISO 3450) | | |
| Parking Brake | Automatically spring applied, hydraulically released, oil cooled, self-adjusting (ISO 3450) | | |
| **Hydraulics** | | | |
| Type | Closed-center, pressure-compensated load-sensing (PCLS), variable-displacement piston pump | | |
| Maximum Pump Flow | 212 L/min. (56 gpm) | | |
| Maximum System Pressure | 18 961 kPa (2,750 psi) | | |
| Pump Displacement | 90 $cm^3$ (5.5 cu. in.) | | |

# 620G / GP *SPECIFICATIONS*

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| **Blade Function** | **620G/GP** | |
|---|---|---|
| All-hydraulic, industry-standard lever placement of blade-function controls; includes float position; 7 discrete saddle positions | | |
| **Blade Range** | | |
| Lift Above Ground | 490 mm (19.3 in.) | |
| Blade Side Shift (right or left) | 683 mm (26.9 in.) | |
| Pitch at Ground Line | | |
| Forward | 42 deg. | |
| Back | 5 deg. | |
| Shoulder Reach Outside Wheels (frame straight, right or left) | 2083 mm (82.0 in.) (6 ft. 10 in.) | |
| Bank Cut Angle (right or left) | 90 deg. | |
| **Blade Pull** | | |
| At Maximum Operating Weight | 14 091 kg (31,066 lb.) | |
| **Electrical** | | |
| Solid-state load center and sealed-switch module | *EPA Final Tier 4/EU Stage V* | *EPA Tier 3/EU Stage IIIA and EPA Tier 2/EU Stage II* |
| Voltage | 24 volt | 24 volt |
| Number of Batteries | 2 | 2 |
| Battery Capacity | 1,400 CCA | 950 CCA |
| Reserve Capacity | 440 min. | 190 min. |
| Amp-Hour Rating | 224 amp-hour | 110 amp-hour |
| Alternator Rating | | |
| Base | 130 amp | 100 amp |
| Optional | 200 amp | 130 amp |
| **Lights** | Driving lights; 2 high- and 2 low-beam halogen headlights; front and rear LED turn signals and marker lights; LED brake and hazard warning lights | |
| **Mainframe** | | |
| Type | Welded box construction | |
| Width (minimum) | 307 mm (12.1 in.) | |
| Height (minimum) | 307 mm (12.1 in.) | |
| Thickness | | |
| Side | 16 mm (0.63 in.) | |
| Top and Bottom Plate | 23 mm (0.89 in.) | |
| Modulus | | |
| Minimum Vertical Section | 1445 $cm^3$ (88 cu. in.) | |
| Average Vertical Section at Saddle | 2245 $cm^3$ (137 cu. in.) | |
| **Draft Frame (drawbar)** | | |
| Welded box construction machined for flatness and double ball-and-socket pivot connection | | |
| **Circle** | | |
| Welded construction, heat-treated, and machined for flatness | | |
| | *Standard Circle* | *Premium Circle* |
| Circle Diameter | 1524 mm (60 in.) | 1524 mm (60 in.) |
| Rotation | 360 deg. | 360 deg. |
| Surface | Quick-change bronze or nylon wear inserts | Sealed and lubricated roller element slewing bearing |
| Pinion/Ring-Gear Connection | Adjustable backlash and open for serviceability | No adjustment; fully sealed and lubricated |
| Drive | Hydraulic motor and worm gear with positive lock | Hydraulic motor and worm gear with positive lock |
| Slip Clutch | Option | Standard |
| Circle Side Shift (right and left) | 787 mm (31 in.) | 787 mm (31 in.) |
| **Moldboard** | | |
| High-strength, pre-stressed for higher strength; wear-resistant, high-carbon steel and reversible end bits; blade side-shift wear system includes quick-change replaceable wear inserts and quick-adjust jackscrew system | | |
| Base Length | 3.66 m (144 in.) (12 ft. 0 in.) | |
| Height (measured along arc, including cutting edge) | 610 mm (24 in.) | |
| Thickness | 22 mm (0.88 in.) | |

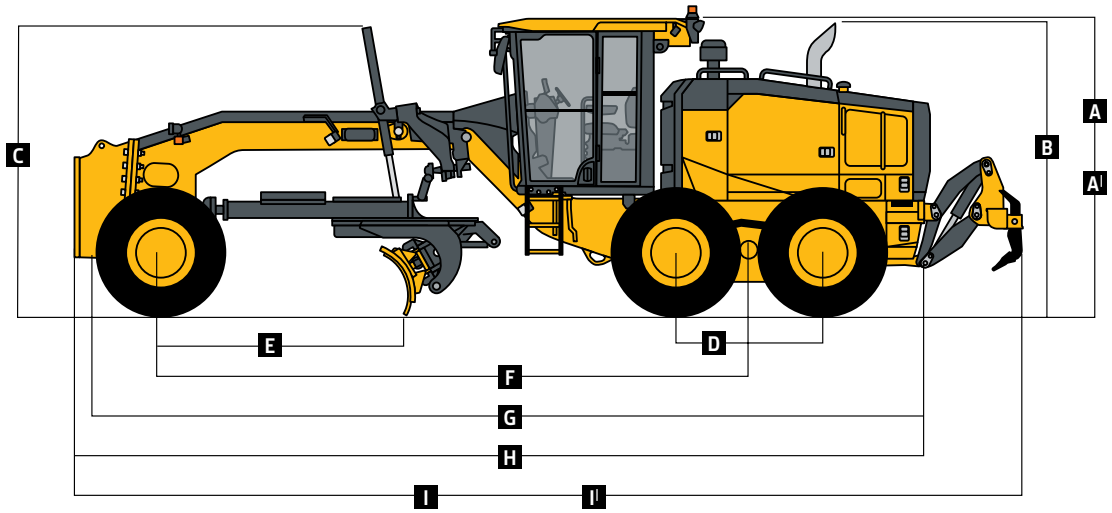
# 620G/GP

While general information, pictures, and descriptions are provided, some illustrations and text may include product options and accessories NOT AVAILABLE in all regions, and in some countries products and accessories may require modifications or additions to ensure compliance with the local regulations of those countries.

| **Cutting Edge** | **620G/GP** | | |
|---|---|---|---|
| Dura-Max™ through-hardened steel edge | | | |
| Thickness | 16 mm (0.62 in.) | | |
| Width | 152 mm (6 in.) | | |
| **Scarifiers** | | | |
| | *Front* | *Mid-mount* | |
| Type | V-type toolbar with 2-pitch positions and hydraulic float | Radial linkage, with NeverGrease™ pin joints; V-type manual 3-pitch positions and hydraulic float | |
| Width of Cut | 1.20 m (48 in.) (4 ft. 0 in.) | 1.19 m (46.7 in.) (3 ft. 11 in.) | |
| Number of Shanks/Teeth | 5 (maximum capacity 9) | 11 | |
| Lift Above Ground | 589 mm (23.2 in.) | 335 mm (13.2 in.) | |
| Maximum Depth | 335 mm (13.2 in.) | 325 mm (12.8 in.) | |
| Shank | | | |
| Spacing | 146 mm (5.75 in.) | 117 mm (4.6 in.) | |
| Size | 25 x 76 mm (1 x 3 in.) | 25 x 76 mm (1 x 3 in.) | |
| **Front Lift Group (Balderson-style)** | | | |
| Parallel linkage, mechanical pins, and hydraulic float | | | |
| Lift | | | |
| Above Ground (top of tube) | 1864 mm (73.4 in.) | | |
| Range | 988 mm (38.9 in.) | | |
| **Rear Ripper/Scarifier** | | | |
| Parallel linkage, with NeverGrease pin joints, hydraulic float, and integrated hitch | | | |
| | *Ripper* | *Scarifier* | |
| Width of Cut | 2.21 m (87.2 in.) (7 ft. 3 in.) | 2.18 m (86 in.) (7 ft. 2 in.) | |
| Number of Shanks/Teeth | 3 (maximum capacity 5) | None standard (maximum capacity 9) | |
| Lift Above Ground | 602 mm (23.7 in.) | 810 mm (31.9 in.) | |
| Maximum Depth | 426 mm (16.8 in.) | 323 mm (12.7 in.) | |
| Force | | | |
| Penetration | 9,302 kg (20,508 lb.) | — | |
| Pry-Out | 11,253 kg (24,808 lb.) | — | |
| Shank Size | 61.5 x 133 mm (2.42 x 5.25 in.) | 25 x 76 mm (1 x 3 in.) | |
| **Operator Station** | | | |
| Low-profile cab with ROPS (ISO 3471-2008) and FOPS (ISO 3449-2005) | | | |
| **Tires/Wheels** | | | |
| | *13x24 on 254-mm (10 in.) Rim* | *14R24 on 254-mm (10 in.) Rim* | *17.5R25 on 356-mm (14 in.) Rim* |
| Wheel Tread on Ground | 2.08 m (82 in.) | 2.08 m (82.0 in.) | 2.16 m (85.0 in.) |
| Overall Width | 2.49 m (98 in.) | 2.49 m (98.0 in.) | 2.64 m (104.0 in.) |
| Ground Clearance (front axle) | 557 mm (21.9 in.) | 587 mm (23.1 in.) | 587 mm (23.1 in.) |
| **Serviceability** | | | |
| **Refill Capacities** | *EPA Final Tier 4/EU Stage V* | *EPA Tier 3/EU Stage IIIA and EPA Tier 2/EU Stage II* | |
| Fuel Tank | 416.5 L (110 gal.) | 303 L (80 gal.) | |
| Diesel Exhaust Fluid (DEF) Tank | 22.5 L (6 gal.) | — | |
| Cooling System | 51.0 L (13.5 gal.) | 44.0 L (11.6 gal.) | |
| Engine Oil With Filter | 31.5 L (8.3 gal.) | 26.0 L (6.9 gal.) | |
| Transmission Fluid | 28.4 L (7.5 gal.) | 28.4 L (7.5 gal.) | |
| Differential Housing | 38.0 L (10 gal.) | 38.0 L (10 gal.) | |
| Tandem Housings (each) | 74.0 L (19.5 gal.) | 74.0 L (19.5 gal.) | |
| Circle Gearbox | 5.7 L (1.5 gal.) | 5.7 L (1.5 gal.) | |
| Hydraulic Reservoir | 60.5 L (16 gal.) | 53.0 L (14 gal.) | |
| **Operating Weights** | | | |
| With Full Fuel Tank, 3.66-m x 610-mm x 22-mm (12 ft. x 24 in. x 0.88 in.) Moldboard With 152-mm x 16-mm (6 in. x ⅝ in.) Cutting Edges, 14-24 Bias L2 Tires, and 79-kg (175 lb.) Operator | *EPA Final Tier 4/EU Stage V* | *EPA Tier 3/EU Stage IIIA and EPA Tier 2/EU Stage II* | |
| Front | 4193 kg (9,243 lb.) | 4222 kg (9,308 lb.)* | |
| Rear | 11 577 kg (25,523 lb.) | 10 681 kg (23,548 lb.)* | |
| Total | 15 770 kg (34,767 lb.) | 14 904 kg (32,857 lb.)* | |
| Typical Operating Weight With Front Push Block, Rear Ripper/Scarifier, and Other Equipment | | | |
| Front | 4940 kg (10,890 lb.) | 5096 kg (11,235 lb.) | |
| Rear | 13 386 kg (29,510 lb.) | 12 439 kg (27,423 lb.) | |
| Total | 18 325 kg (40,400 lb.) | 17 535 kg (38,658 lb.) | |
| Maximum Operating Weight | 22 680 kg (50,000 lb.) | 22 680 kg (50,000 lb.) | |
| **With 13-24 Bias L2 tires.* | | | |

| Option Weights | 620G/GP |
|---|---|
| Moldboards With Through-Hardened Dura-Max Cutting Edge | |
| 3.66 m x 610 mm x 22 mm (12 ft. x 24 in. x ⅞ in.) with 152-mm x 16-mm (6 in. x ⅝ in.) cutting edge and 16-mm (⅝ in.) hardware | 0 kg (0 lb.) |
| 3.66 m x 610 mm x 22 mm (12 ft. x 24 in. x ⅞ in.) with 203-mm x 19-mm (8 in. x ¾ in.) cutting edge and 16-mm (⅝ in.) hardware | 45 kg (99 lb.) |
| 4.27 m x 610 mm x 22 mm (14 ft. x 24 in. x ⅞ in.) with 152-mm x 16-mm (6 in. x ⅝ in.) cutting edge and 16-mm (⅝ in.) hardware | 105 kg (231 lb.) |
| 4.27 m x 610 mm x 22 mm (14 ft. x 24 in. x ⅞ in.) with 203-mm x 19-mm (8 in. x ¾ in.) cutting edge and 16-mm (⅝ in.) hardware | 157.4 kg (347 lb.) |
| Extensions, 610 mm (2 ft.) (right or left) | |
| For Use With 610-mm (24 in.) Moldboards | 116 kg (255 lb.) |
| Overlay End Bits, Reversible (one pair) | |
| For 152-mm (6 in.) Cutting Edge | 19.5 kg (43 lb.) |
| For 203-mm (8 in.) Cutting Edge | 23 kg (51 lb.) |
| Circle-Drive Slip Clutch | 9 kg (20 lb.) |
| Circle | |
| Standard | 0 kg (0 lb.) |
| Premium | 289 kg (638 lb.) |
| Moldboard Impact-Absorption System | 43 kg (95 lb.) |
| Ripper, 3 Shank, No Scarifier | 1052 kg (2,319 lb.) |
| Ripper/Scarifier, Rear Mounted With Hitch and Ripper Shanks (3) | 1139 kg (2,510 lb.) |
| Scarifier Shanks With Teeth (9 for rear ripper/scarifier) | 68 kg (150 lb.) |
| Rear Counterweight With Integral Rear Hitch | 727 kg (1,603 lb.) |
| Rear Hitch | 54.4 kg (120 lb.) |
| Push Block, Front | 907 kg (2,000 lb.) |
| Scarifier | |
| Front Mount With Teeth (5) | 831 kg (1,833 lb.) |
| Mid-Mount With Teeth (11) | 1481 kg (3,265 lb.) |
| Front Lift Group (Balderson-style) | 763 kg (1,682 lb.) |
| **Machine Dimensions** | |
| **A** Height to Top of Cab | 3.18 m (10 ft. 5 in.) |
| **A**[I] Height to Top of Full-Height Cab | 3.40 m (11 ft. 2 in.) |
| **B** Height to Top of Exhaust | 3.10 m (10 ft. 2 in.) |
| **C** Height to Top of Blade-Lift Cylinders | 3.05 m (10 ft. 0 in.) |
| **D** Tandem Axle Spacing | 1.54 m (5 ft. 1 in.) |
| **E** Blade Base | 2.57 m (8 ft. 5 in.) |

| Option Weights *(continued)* | 620G/GP |
|---|---|
| Tires | |
| 13.00-24, 12 PR G2 | –79 kg (–174 lb.) |
| 14.00-24, 12 PR G2 | 0 kg (0 lb.) |
| 17.5-25, 12 PR G2/L2 | 114 kg (252 lb.) |
| 14.00-R24, Radial, G2/L2 General Purpose | 220 kg (486 lb.) |
| 14.00-R24, Radial, G2/L2 Snow | 261 kg (576 lb.) |
| 17.5-R25, Radial, L2 General Purpose | 272 kg (600 lb.) |
| 17.5-R25, Radial, G2/L2 Snow | 316 kg (696 lb.) |
| 17.5-R25, Radial, G3/L3 General Purpose | 362 kg (798 lb.) |
| 1-Piece Rims | |
| 229 mm x 610 mm (9 in. x 24 in.) | 0 kg (0 lb.) |
| 330 mm x 635 mm (13 in. x 25 in.) | 65 kg (144 lb.) |
| Multi-Piece Rims | |
| 254 mm x 610 mm (10 in. x 24 in.) | 180 kg (396 lb.) |
| 356 mm x 635 mm (14 in. x 25 in.) | 267 kg (588 lb.) |
| Fenders | |
| Front | 99 kg (218 lb.) |
| Rear | 141 kg (310 lb.) |
| Low Cab With Opening Front and Side Windows | 14.5 kg (32 lb.) |
| Premium Air-Suspension, Heated Seat With Adjustable Arm- and Headrests | 13 kg (28 lb.) |
| Coolant Heater | 4 kg (9 lb.) |
| Quick Service | 11 kg (24 lb.) |
| Sound-Absorption Package (machines equipped with Tier 3/Stage IIIA and Tier 2/Stage II engines only) | 14 kg (31 lb.) |
| Secondary Steering | 26 kg (58 lb.) |
| Beacon Bracket | 8 kg (18 lb.) |
| Fire Extinguisher | 14.5 kg (32 lb.) |
| Lighting Packages | |
| 10 Halogen Lights | 4.5 kg (10 lb.) |
| 18 Halogen Lights | 8 kg (18 lb.) |
| 18 LED Lights | 7 kg (16 lb.) |
| High-Front Light Bar for Snowplowing | 20 kg (44 lb.) |
| Auxiliary Hydraulic Control Valve Section and Controls | 7 kg (15 lb.) |
| Hydraulics for Front-Mounted Equipment | 9 kg (19 lb.) |
| **Machine Dimensions** *(continued)* | |
| **F** Wheelbase | 6.16 m (20 ft. 3 in.) |
| **G** Overall Length | 8.89 m (29 ft. 2 in.) |
| **H** Overall Length With Scarifier | 9.69 m (31 ft. 9 in.) |
| **I** Overall Length With Push Block and Ripper | 9.99 m (32 ft. 9 in.) |
| **I**[I] Overall Length With Scarifier and Ripper | 10.59 m (34 ft. 9 in.) |
| *For Overall Width see Tires/Wheels on page 16.* | |



# 670G / GP SPECIFICATIONS

While general information, pictures, and descriptions are provided, some illustrations and text may include product options and accessories NOT AVAILABLE in all regions, and in some countries products and accessories may require modifications or additions to ensure compliance with the local regulations of those countries.

| **Engine** | **670G/GP** | | |
|---|---|---|---|
| Manufacturer and Model | John Deere PowerTech™ PSS 9.0L | John Deere PowerTech™ Plus 9.0L | John Deere PowerTech™ 9.0L |
| Non-Road Emission Standard | EPA Final Tier 4/EU Stage V | EPA Tier 3/EU Stage IIIA | EPA Tier 2/EU Stage II |
| Cylinders | 6 | 6 | 6 |
| Displacement | 9.0L (548 cu. in.) | 9.0L (548 cu. in.) | 9.0L (548 cu. in.) |
| Net Engine Power | | | |
| Gear 1 | 134 kW (180 hp) | 134 kW (180 hp) | 134 kW (180 hp) |
| Gear 2 | 142 kW (190 hp) | 142 kW (190 hp) | 142 kW (190 hp) |
| Gear 3 | 153 kW (205 hp) | 149 kW (200 hp) | 149 kW (200 hp) |
| Gear 4 | 157 kW (210 hp) | 153 kW (205 hp) | 153 kW (205 hp) |
| Gear 5 | 164 kW (220 hp) | 157 kW (210 hp) | 157 kW (210 hp) |
| Gear 6 | 168 kW (225 hp) | 164 kW (220 hp) | 164 kW (220 hp) |
| Gear 7 | 172 kW (230 hp) | 168 kW (225 hp) | 168 kW (225 hp) |
| Gear 8 | 175 kW (235 hp) | 172 kW (230 hp) | 172 kW (230 hp) |
| Net Peak Torque | 1225 Nm (913 lb.-ft.) | 1196 Nm (892 lb.-ft.) | 1196 Nm (892 lb.-ft.) |
| Net Torque Rise | 56% | 56% | 56% |
| Aspiration | Series turbocharged, charge-air cooled | Turbocharged, charge-air cooled | Turbocharged, charge-air cooled |
| Lubrication | Full-flow spin-on filter and integral cooler | Full-flow spin-on filter and integral cooler | Full-flow spin-on filter and integral cooler |
| Air Cleaner With Restriction Indicator | Dual element, dry | Dual element, dry | Dual element, dry |
| **Cooling** | | | |
| Engine Coolant, Extended Life, Rating | –37 deg. C (–34 deg. F) | | |
| **Powertrain** | | | |
| **Transmission** | Direct-drive John Deere PowerShift Plus™, modulated shift-on-the-go, Event-Based Shifting (EBS), inching pedal; independent transmission reservoir with separate filtration and cooling system with 117-L/min. (31 gpm) gear pump | | |
| Gears | | | |
| Forward | 8 | | |
| Reverse | 8 | | |
| **Maximum Travel Speeds** | *No tire slip at 2,180 rpm, 14.0-R24 tires* | | *No tire slip at 2,180 rpm, 14.0-R24 tires* |
| Gear 1 | 4.0 km/h (2.5 mph) | Gear 5 | 16.4 km/h (10.2 mph) |
| Gear 2 | 5.6 km/h (3.5 mph) | Gear 6 | 23.2 km/h (14.4 mph) |
| Gear 3 | 7.7 km/h (4.8 mph) | Gear 7 | 32.3 km/h (20.1 mph) |
| Gear 4 | 10.9 km/h (6.8 mph) | Gear 8 | 45.5 km/h (28.3 mph) |
| **Front Axle** | Heavy-duty welded fabrication | | |
| Oscillation (total) | 32 deg. | | |
| Wheel Lean Angle (each direction) | 20 deg. | | |
| **Differentials** | Spiral bevel; hydraulically actuated, clutch type can be applied on-the-go; selectable manual or automatic differential lock | | |
| **Steering (all models include steering wheel)** | All-hydraulic power-frame articulation for maneuverability and productivity; crab steering reduces side drift, positions tandems on firm ground, and increases side-slope stability; return-to-straight control included in Grade Pro (GP) option | | |
| Turning Radius (front steer and articulation) | 7.21 m (284 in.) (23 ft. 8 in.) | | |
| Articulation (both right and left) | 22 deg. | | |
| **Final Drives** | Inboard-mounted planetary sealed in cooled, filtered oil | | |
| **Brakes** | Foot-controlled, hydraulically operated, multiple wet-disc brakes sealed in pressurized, cooled, filtered oil; both independent systems effective on all 4 tandem wheels | | |
| Primary and Secondary Brakes | Hydraulically actuated, inboard of tandem pivot, self-adjusting, sealed in cooled and filtered oil, multi-disc (ISO 3450) | | |
| Parking Brake | Automatically spring applied, hydraulically released, oil cooled, self-adjusting (ISO 3450) | | |
| **Hydraulics** | | | |
| Type | Closed-center, pressure-compensated load-sensing (PCLS), variable-displacement piston pump | | |
| Maximum Pump Flow | 212 L/min. (56 gpm) | | |
| Maximum System Pressure | 18 961 kPa (2,750 psi) | | |
| Pump Displacement | 90 $cm^3$ (5.5 cu. in.) | | |

# 670G / GP *SPECIFICATIONS*

While general information, pictures, and descriptions are provided, some illustrations and text may include product options and accessories NOT AVAILABLE in all regions, and in some countries products and accessories may require modifications or additions to ensure compliance with the local regulations of those countries.

| **Blade Function** | **670G/GP** | |
|---|---|---|
| All-hydraulic, industry-standard lever placement of blade-function controls; includes float position; 7 discrete saddle positions | | |
| **Blade Range** | | |
| Lift Above Ground | 490 mm (19.3 in.) | |
| Blade Side Shift (right or left) | 683 mm (26.9 in.) | |
| Pitch at Ground Line | | |
| Forward | 42 deg. | |
| Back | 5 deg. | |
| Shoulder Reach Outside Wheels (frame straight, right or left) | 2083 mm (82.0 in.) (6 ft. 10 in.) | |
| Bank Cut Angle (right or left) | 90 deg. | |
| **Blade Pull** | | |
| At Maximum Operating Weight | 15 501 kg (34,173 lb.) | |
| **Electrical** | | |
| Solid-state load center and sealed-switch module | *EPA Final Tier 4/EU Stage V* | *EPA Tier 3/EU Stage IIIA and EPA Tier 2/EU Stage II* |
| Voltage | 24 volt | 24 volt |
| Number of Batteries | 2 | 2 |
| Battery Capacity | 1,400 CCA | 1,400 CCA |
| Reserve Capacity | 440 min. | 440 min. |
| Amp-Hour Rating | 224 amp-hour | 224 amp-hour |
| Alternator Rating | | |
| Base | 130 amp | 100 amp |
| Optional | 200 amp | 130 amp |
| **Lights** | Driving lights; 2 high- and 2 low-beam halogen headlights; front and rear LED turn signals and marker lights; LED brake and hazard warning lights | |
| **Mainframe** | | |
| Type | Welded box construction | |
| Width (minimum) | 307 mm (12.1 in.) | |
| Height (minimum) | 307 mm (12.1 in.) | |
| Thickness | | |
| Side | 16 mm (0.63 in.) | |
| Top and Bottom Plate | 23 mm (0.89 in.) | |
| Modulus | | |
| Minimum Vertical Section | 1445 $cm^3$ (88 cu. in.) | |
| Average Vertical Section at Saddle | 2245 $cm^3$ (137 cu. in.) | |
| **Draft Frame (drawbar)** | | |
| Welded box construction machined for flatness with double ball-and-socket pivot connection | | |
| **Circle** | | |
| Welded construction, heat-treated, machined for flatness | | |
| | *Standard Circle* | *Premium Circle* |
| Circle Diameter | 1524 mm (60 in.) | 1524 mm (60 in.) |
| Rotation | 360 deg. | 360 deg. |
| Surface | Quick-change bronze or nylon wear inserts | Sealed and lubricated roller element slewing bearing |
| Pinion/Ring-Gear Connection | Adjustable backlash and open for serviceability | No adjustment; fully sealed and lubricated |
| Drive | Hydraulic motor and worm gear with positive lock | Hydraulic motor and worm gear with positive lock |
| Slip Clutch | Option | Standard |
| Circle Side Shift (right and left) | 787 mm (31 in.) | 787 mm (31 in.) |
| **Moldboard** | | |
| High-strength, pre-stressed for higher strength; wear-resistant, high-carbon steel and reversible end bits; blade side-shift wear system includes quick-change replaceable wear inserts and quick-adjust jackscrew system | | |
| Base Length | 3.66 m (144 in.) (12 ft. 0 in.) | |
| Height (measured along arc, including cutting edge) | 610 mm (24 in.) | |
| Thickness | 22 mm (0.88 in.) | |

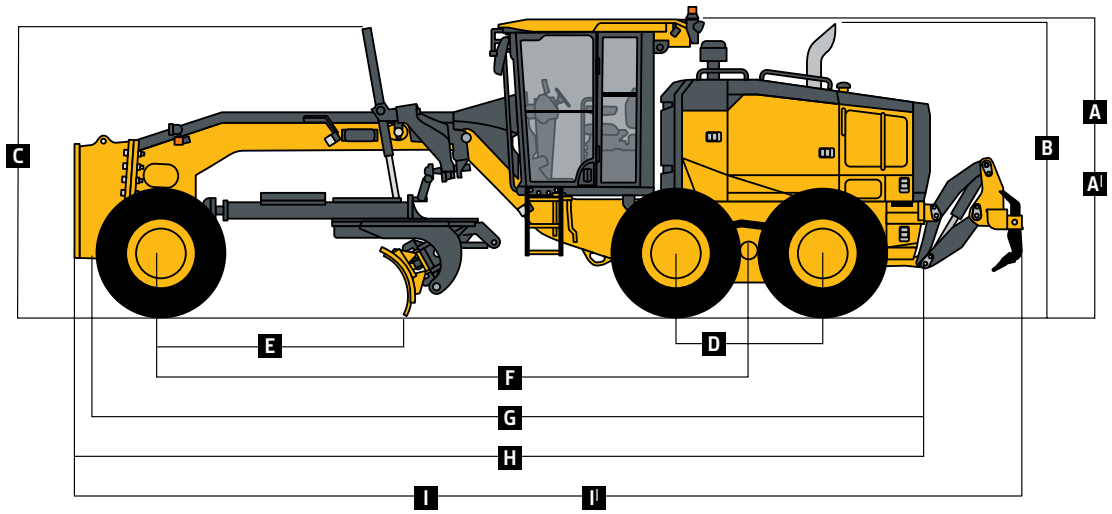
# 670G/GP

While general information, pictures, and descriptions are provided, some illustrations and text may include product options and accessories NOT AVAILABLE in all regions, and in some countries products and accessories may require modifications or additions to ensure compliance with the local regulations of those countries.

| **Cutting Edge** | **670G/GP** | |
|---|---|---|
| Dura-Max™ through-hardened steel edge | | |
| Thickness | 16 mm (0.62 in.) | |
| Width | 152 mm (6 in.) | |
| **Scarifiers** | | |
| | *Front* | *Mid-mount* |
| Type | V-type toolbar with 2-pitch positions and hydraulic float | Radial linkage, with NeverGrease™ pin joints; V-type manual 3-pitch positions and hydraulic float |
| Width of Cut | 1.20 m (48 in.) (4 ft. 0 in.) | 1.19 m (46.7 in.) (3 ft. 11 in.) |
| Number of Shanks/Teeth | 5 (maximum capacity 9) | 11 |
| Lift Above Ground | 589 mm (23.2 in.) | 335 mm (13.2 in.) |
| Maximum Depth | 335 mm (13.2 in.) | 325 mm (12.8 in.) |
| Shank | | |
| Spacing | 146 mm (5.75 in.) | 117 mm (4.6 in.) |
| Size | 25 x 76 mm (1 x 3 in.) | 25 x 76 mm (1 x 3 in.) |
| **Front Lift Group (Balderson-style)** | | |
| Parallel linkage, mechanical pins, and hydraulic float | | |
| Lift | | |
| Above Ground (top of tube) | 1864 mm (73.4 in.) | |
| Range | 988 mm (38.9 in.) | |
| **Rear Ripper/Scarifier** | | |
| Parallel linkage, with NeverGrease pin joints, hydraulic float, and integrated hitch | | |
| | *Ripper* | *Scarifier* |
| Width of Cut | 2.21 m (87.2 in.) (7 ft. 3 in.) | 2.18 m (86 in.) (7 ft. 2 in.) |
| Number of Shanks/Teeth | 3 (maximum capacity 5) | None standard (maximum capacity 9) |
| Lift Above Ground | 602 mm (23.7 in.) | 810 mm (31.9 in.) |
| Maximum Depth | 426 mm (16.8 in.) | 323 mm (12.7 in.) |
| Force | | |
| Penetration | 9526 kg (21,000 lb.) | — |
| Pry-Out | 12 580 kg (27,734 lb.) | — |
| Shank Size | 61.5 x 133 mm (2.42 x 5.25 in.) | 25 x 76 mm (1 x 3 in.) |
| **Operator Station** | | |
| Low-profile cab with ROPS (ISO 3471-2008) and FOPS (ISO 3449-2005) | | |
| **Tires/Wheels** | | |
| | *14R24 on 254-mm (10 in.) Rim* | *17.5R25 on 356-mm (14 in.) Rim* |
| Wheel Tread on Ground | 2.08 m (82.0 in.) | 2.16 m (85.0 in.) |
| Overall Width | 2.49 m (98.0 in.) | 2.64 m (104.0 in.) |
| Ground Clearance (front axle) | 587 mm (23.1 in.) | 587 mm (23.1 in.) |
| **Serviceability** | | |
| **Refill Capacities** | *EPA Final Tier 4/EU Stage V* | *EPA Tier 3/EU Stage IIIA and EPA Tier 2/EU Stage II* |
| Fuel Tank | 416.5 L (110 gal.) | 416.5 L (110 gal.) |
| Diesel Exhaust Fluid (DEF) Tank | 22.5 L (6 gal.) | — |
| Cooling System | 55.0 L (14.5 gal.) | 48.5 L (12.8 gal.) |
| Engine Oil With Filter | 28.4 L (7.5 gal.) | 28.0 L (7.4 gal.) |
| Transmission Fluid | 28.4 L (7.5 gal.) | 28.4 L (7.5 gal.) |
| Differential Housing | 38.0 L (10 gal.) | 38.0 L (10 gal.) |
| Tandem Housings (each) | 74.0 L (19.5 gal.) | 74.0 L (19.5 gal.) |
| Circle Gearbox | 5.7 L (1.5 gal.) | 5.7 L (1.5 gal.) |
| Hydraulic Reservoir | 60.5 L (16 gal.) | 53.0 L (14 gal.) |
| **Operating Weights** | | |
| With Full Fuel Tank, 3.66-m x 610-mm x 22-mm (12 ft. x 24 in. x 0.88 in.) Moldboard With 152-mm x 16-mm (6 in. x ⅝ in.) Cutting Edges, 14-24 Bias L2 Tires, and 79-kg (175 lb.) Operator | *EPA Final Tier 4/EU Stage V* | *EPA Tier 3/EU Stage IIIA and EPA Tier 2/EU Stage II* |
| Front | 4193 kg (9,245 lb.) | 4203 kg (9,265 lb.) |
| Rear | 11 807 kg (26,030 lb.) | 11 327 kg (24,972 lb.) |
| Total | 16 000 kg (35,275 lb.) | 15 530 kg (34,237 lb.) |
| Typical Operating Weight With Front Push Block, Rear Ripper/Scarifier, and Other Equipment | | |
| Front | 5522 kg (12,175 lb.) | 5488 kg (12,100 lb.) |
| Rear | 13 708 kg (30,220 lb.) | 13 063 kg (28,800 lb.) |
| Total | 19 230 kg (42,395 lb.) | 18 552 kg (40,900 lb.) |
| Maximum Operating Weight | 24 948 kg (55,000 lb.) | 24 948 kg (55,000 lb.) |

| Option Weights | 670G/GP |
|---|---|
| Moldboards With Through-Hardened Dura-Max Cutting Edge | |
| 3.66 m x 610 mm x 22 mm (12 ft. x 24 in. x ⅞ in.) with 152-mm x 16-mm (6 in. x ⅝ in.) cutting edge and 16-mm (⅝ in.) hardware | 0 kg (0 lb.) |
| 3.66 m x 610 mm x 22 mm (12 ft. x 24 in. x ⅞ in.) with 203-mm x 19-mm (8 in. x ¾ in.) cutting edge and 16-mm (⅝ in.) hardware | 45 kg (99 lb.) |
| 3.96 m x 686 mm x 25 mm (13 ft. x 27 in. x 1 in.) with 203-mm x 19-mm (8 in. x ¾ in.) cutting edge and 16-mm (⅝ in.) hardware | 180 kg (396 lb.) |
| 4.27 m x 610 mm x 22 mm (14 ft. x 24 in. x ⅞ in.) with 152-mm x 16-mm (6 in. x ⅝ in.) cutting edge and 16-mm (⅝ in.) hardware | 105 kg (231 lb.) |
| 4.27 m x 610 mm x 22 mm (14 ft. x 24 in. x ⅞ in.) with 203-mm x 19-mm (8 in. x ¾ in.) cutting edge and 16-mm (⅝ in.) hardware | 157.4 kg (347 lb.) |
| 4.27 m x 686 mm x 25 mm (14 ft. x 27 in. x 1 in.) with 203-mm x 19-mm (8 in. x ¾ in.) cutting edge and 16-mm (⅝ in.) hardware | 251 kg (554 lb.) |
| 4.27 m x 686 mm x 25 mm (14 ft. x 27 in. x 1 in.) with 203-mm x 19-mm (8 in. x ¾ in.) cutting edge and 19-mm (¾ in.) hardware | 261 kg (575 lb.) |
| Extensions, 610 mm (2 ft.) (right or left) | |
| For Use With 610-mm (24 in.) Moldboards | 116 kg (255 lb.) |
| For Use With 686-mm (27 in.) Moldboards | 120 kg (265 lb.) |
| Overlay End Bits, Reversible (one pair) | |
| For 152-mm (6 in.) Cutting Edge | 19.5 kg (43 lb.) |
| For 203-mm (8 in.) Cutting Edge | 23 kg (51 lb.) |
| Heavy-Duty Dual-Input Circle-Drive Gearbox | 14 kg (31 lb.) |
| Circle-Drive Slip Clutch | 9 kg (20 lb.) |
| Circle | |
| Standard | 0 kg (0 lb.) |
| Premium | 289 kg (638 lb.) |
| Moldboard Impact-Absorption System | 43 kg (95 lb.) |
| Ripper/Scarifier, Rear Mounted With Hitch and Ripper Shanks (3) | 1139 kg (2,510 lb.) |
| Scarifier Shanks With Teeth (9 for rear ripper/scarifier) | 68 kg (150 lb.) |
| Ripper Shanks and Teeth (2) | 63 kg (139 lb.) |
| Rear Counterweight With Integral Rear Hitch | 727 kg (1,603 lb.) |
| **Machine Dimensions** | |
| **A** Height to Top of Cab | 3.18 m (10 ft. 5 in.) |
| **A**[I] Height to Top of Full-Height Cab | 3.40 m (11 ft. 2 in.) |
| **B** Height to Top of Exhaust | 3.10 m (10 ft. 2 in.) |
| **C** Height to Top of Blade-Lift Cylinders | 3.05 m (10 ft. 0 in.) |
| **D** Tandem Axle Spacing | 1.54 m (5 ft. 1 in.) |
| **E** Blade Base | 2.57 m (8 ft. 5 in.) |

| Option Weights *(continued)* | 670G/GP |
|---|---|
| Rear Hitch | 54.4 kg (120 lb.) |
| Push Block, Front | 1338 kg (2,950 lb.) |
| Scarifier | |
| Front Mount With Teeth (5) | 831 kg (1,833 lb.) |
| Mid-Mount With Teeth (11) | 1481 kg (3,265 lb.) |
| Front Lift Group (Balderson-style) | 763 kg (1,682 lb.) |
| Tires | |
| 14.00-24, 12 PR G2 | 0 kg (0 lb.) |
| 17.5-25, 12 PR G2/L2 | 114 kg (252 lb.) |
| 14.00-R24, Radial, G2/L2 General Purpose | 220 kg (486 lb.) |
| 14.00-R24, Radial, G2/L2 Snow | 261 kg (576 lb.) |
| 17.5-R25, Radial, L2 General Purpose | 272 kg (600 lb.) |
| 17.5-R25, Radial, G2/L2 Snow | 316 kg (696 lb.) |
| 17.5-R25, Radial, G3/L3 General Purpose | 362 kg (798 lb.) |
| 1-Piece Rims | |
| 229 mm x 610 mm (9 in. x 24 in.) | 0 kg (0 lb.) |
| 330 mm x 635 mm (13 in. x 25 in.) | 65 kg (144 lb.) |
| Multi-Piece Rims | |
| 254 mm x 610 mm (10 in. x 24 in.) | 180 kg (396 lb.) |
| 356 mm x 635 mm (14 in. x 25 in.) | 267 kg (588 lb.) |
| Fenders | |
| Front | 99 kg (218 lb.) |
| Rear | 141 kg (310 lb.) |
| Low Cab With Opening Front and Side Windows | 14.5 kg (32 lb.) |
| Premium Air-Suspension, Heated Seat With Adjustable Arm- and Headrests | 13 kg (28 lb.) |
| Coolant Heater | 4 kg (9 lb.) |
| Quick Service | 11 kg (24 lb.) |
| Sound-Absorption Package (machines equipped with Tier 3/Stage IIIA and Tier 2/Stage II engines only) | 14 kg (31 lb.) |
| Secondary Steering | 26 kg (58 lb.) |
| Beacon Bracket | 8 kg (18 lb.) |
| Fire Extinguisher | 14.5 kg (32 lb.) |
| Lighting Packages | |
| 10 Halogen Lights | 4.5 kg (10 lb.) |
| 18 Halogen Lights | 8 kg (18 lb.) |
| 18 LED Lights | 7 kg (16 lb.) |
| High-Front Light Bar for Snowplowing | 20 kg (44 lb.) |
| Auxiliary Hydraulic Control Valve Section and Controls | 7 kg (15 lb.) |
| Hydraulics for Front-Mounted Equipment | 9 kg (19 lb.) |
| **Machine Dimensions** *(continued)* | |
| **F** Wheelbase | 6.16 m (20 ft. 3 in.) |
| **G** Overall Length | 8.89 m (29 ft. 2 in.) |
| **H** Overall Length With Scarifier | 9.69 m (31 ft. 9 in.) |
| **I** Overall Length With Push Block and Ripper | 9.99 m (32 ft. 9 in.) |
| **I**[I] Overall Length With Scarifier and Ripper | 10.59 m (34 ft. 9 in.) |
| *For Overall Width see Tires/Wheels on page 20.* | |



# 770G / GP SPECIFICATIONS

While general information, pictures, and descriptions are provided, some illustrations and text may include product options and accessories NOT AVAILABLE in all regions, and in some countries products and accessories may require modifications or additions to ensure compliance with the local regulations of those countries.

| **Engine** | **770G/GP** | | |
|---|---|---|---|
| Manufacturer and Model | John Deere PowerTech™ PSS 9.0L | John Deere PowerTech™ Plus 9.0L | John Deere PowerTech™ 9.0L |
| Non-Road Emission Standard | EPA Final Tier 4/EU Stage V | EPA Tier 3/EU Stage IIIA | EPA Tier 2/EU Stage II |
| Cylinders | 6 | 6 | 6 |
| Displacement | 9.0L (548 cu. in.) | 9.0L (548 cu. in.) | 9.0L (548 cu. in.) |
| Net Engine Power | | | |
| Gear 1 | 149 kW (200 hp) | 149 kW (200 hp) | 149 kW (200 hp) |
| Gear 2 | 157 kW (210 hp) | 157 kW (210 hp) | 157 kW (210 hp) |
| Gear 3 | 168 kW (225 hp) | 164 kW (220 hp) | 164 kW (220 hp) |
| Gear 4 | 172 kW (230 hp) | 168 kW (225 hp) | 168 kW (225 hp) |
| Gear 5 | 179 kW (240 hp) | 172 kW (230 hp) | 172 kW (230 hp) |
| Gear 6 | 183 kW (245 hp) | 179 kW (240 hp) | 179 kW (240 hp) |
| Gear 7 | 187 kW (250 hp) | 183 kW (245 hp) | 183 kW (245 hp) |
| Gear 8 | 190 kW (255 hp) | 187 kW (250 hp) | 187 kW (250 hp) |
| Net Peak Torque | 1314 Nm (980 lb.-ft.) | 1288 Nm (961 lb.-ft.) | 1288 Nm (961 lb.-ft.) |
| Net Torque Rise | 54% | 55% | 55% |
| Aspiration | Series turbocharged, charge-air cooled | Turbocharged, charge-air cooled | Turbocharged, charge-air cooled |
| Lubrication | Full-flow spin-on filter and integral cooler | Full-flow spin-on filter and integral cooler | Full-flow spin-on filter and integral cooler |
| Air Cleaner With Restriction Indicator | Dual element, dry | Dual element, dry | Dual element, dry |
| **Cooling** | | | |
| Engine Coolant, Extended Life, Rating | –37 deg. C (–34 deg. F) | | |
| **Powertrain** | | | |
| **Transmission** | Direct-drive John Deere PowerShift Plus™, modulated shift-on-the-go, Event-Based Shifting (EBS), inching pedal; independent transmission reservoir with separate filtration and cooling system with 117-L/min. (31 gpm) gear pump | | |
| Gears | | | |
| Forward | 8 | | |
| Reverse | 8 | | |
| **Maximum Travel Speeds** | *No tire slip at 2,180 rpm, 14.0-R24 tires* | | *No tire slip at 2,180 rpm, 14.0-R24 tires* |
| Gear 1 | 4.0 km/h (2.5 mph) | Gear 5 | 16.4 km/h (10.2 mph) |
| Gear 2 | 5.6 km/h (3.5 mph) | Gear 6 | 23.2 km/h (14.4 mph) |
| Gear 3 | 7.7 km/h (4.8 mph) | Gear 7 | 32.3 km/h (20.1 mph) |
| Gear 4 | 10.9 km/h (6.8 mph) | Gear 8 | 45.5 km/h (28.3 mph) |
| **Front Axle** | Heavy-duty welded fabrication | | |
| Oscillation (total) | 32 deg. | | |
| Wheel Lean Angle (each direction) | 20 deg. | | |
| **Differentials** | Spiral bevel; hydraulically actuated, clutch type can be applied on-the-go; selectable manual or automatic differential lock | | |
| **Steering (all models include steering wheel)** | All-hydraulic power-frame articulation for maneuverability and productivity; crab steering reduces side drift, positions tandems on firm ground, and increases side-slope stability; return-to-straight control included in Grade Pro (GP) option | | |
| Turning Radius (front steer and articulation) | 7.21 m (284 in.) (23 ft. 8 in.) | | |
| Articulation (both right and left) | 22 deg. | | |
| **Final Drives** | Inboard-mounted planetary sealed in cooled, filtered oil | | |
| **Brakes** | Foot-controlled, hydraulically operated, multiple wet-disc brakes sealed in pressurized, cooled, filtered oil; both independent systems effective on all 4 tandem wheels | | |
| Primary and Secondary Brakes | Hydraulically actuated, inboard of tandem pivot, self-adjusting, sealed in cooled and filtered oil, multi-disc (ISO 3450) | | |
| Parking Brake | Automatically spring applied, hydraulically released, oil cooled, self-adjusting (ISO 3450) | | |
| **Hydraulics** | | | |
| Type | Closed-center, pressure-compensated load-sensing (PCLS), variable-displacement piston pump | | |
| Maximum Pump Flow | 212 L/min. (56 gpm) | | |
| Maximum System Pressure | 18 961 kPa (2,750 psi) | | |
| Pump Displacement | 90 $cm^3$ (5.5 cu. in.) | | |

# 770G / GP *SPECIFICATIONS*

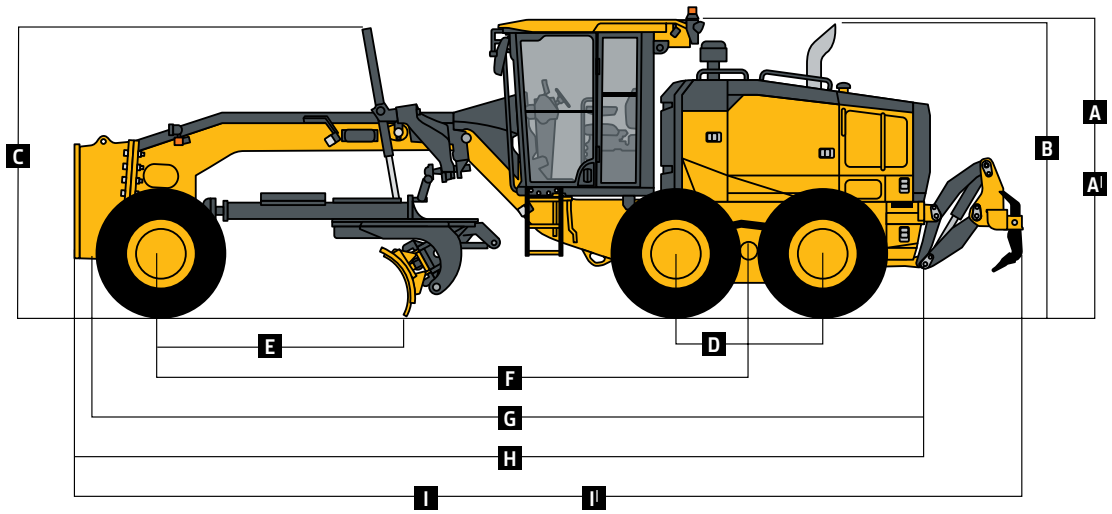
While general information, pictures, and descriptions are provided, some illustrations and text may include product options and accessories NOT AVAILABLE in all regions, and in some countries products and accessories may require modifications or additions to ensure compliance with the local regulations of those countries.

| **Blade Function** | **770G/GP** | |
|---|---|---|
| All-hydraulic, industry-standard lever placement of blade-function controls; includes float position; 7 discrete saddle positions | | |
| **Blade Range** | | |
| Lift Above Ground | 490 mm (19.3 in.) | |
| Blade Side Shift (right or left) | 683 mm (26.9 in.) | |
| Pitch at Ground Line | | |
| Forward | 42 deg. | |
| Back | 5 deg. | |
| Shoulder Reach Outside Wheels (frame straight, right or left) | 2083 mm (82.0 in.) (6 ft. 10 in.) | |
| Bank Cut Angle (right or left) | 90 deg. | |
| **Blade Pull** | | |
| At Maximum Operating Weight | 15 501 kg (34,173 lb.) | |
| **Electrical** | | |
| Solid-state load center and sealed-switch module | *EPA Final Tier 4/EU Stage V* | *EPA Tier 3/EU Stage IIIA and EPA Tier 2/EU Stage II* |
| Voltage | 24 volt | 24 volt |
| Number of Batteries | 2 | 2 |
| Battery Capacity | 1,400 CCA | 1,400 CCA |
| Reserve Capacity | 440 min. | 440 min. |
| Amp-Hour Rating | 224 amp-hour | 224 amp-hour |
| Alternator Rating | | |
| Base | 130 amp | 100 amp |
| Optional | 200 amp | 130 amp |
| **Lights** | Driving lights; 2 high- and 2 low-beam halogen headlights; front and rear LED turn signals and marker lights; LED brake and hazard warning lights | |
| **Mainframe** | | |
| Type | Welded box construction | |
| Width (minimum) | 307 mm (12.1 in.) | |
| Height (minimum) | 307 mm (12.1 in.) | |
| Thickness | | |
| Side | 16 mm (0.63 in.) | |
| Top and Bottom Plate | 23 mm (0.89 in.) | |
| Modulus | | |
| Minimum Vertical Section | 1770 $cm^3$ (108 cu. in.) | |
| Average Vertical Section at Saddle | 2245 $cm^3$ (137 cu. in.) | |
| **Draft Frame (drawbar)** | | |
| Welded box construction machined for flatness with double ball-and-socket pivot connection | | |
| **Circle** | | |
| Welded construction, heat-treated, machined for flatness | | |
| | *Standard Circle* | *Premium Circle* |
| Circle Diameter | 1524 mm (60 in.) | 1524 mm (60 in.) |
| Rotation | 360 deg. | 360 deg. |
| Surface | Quick-change bronze or nylon wear inserts | Sealed and lubricated roller element slewing bearing |
| Pinion/Ring-Gear Connection | Adjustable backlash and open for serviceability | No adjustment; fully sealed and lubricated |
| Drive | Hydraulic motor and worm gear with positive lock | Hydraulic motor and worm gear with positive lock |
| Slip Clutch | Option | Standard |
| Circle Side Shift (right and left) | 787 mm (31 in.) | 787 mm (31 in.) |
| **Moldboard** | | |
| High-strength, pre-stressed for higher strength, wear-resistant, high-carbon steel and reversible end bits; blade side-shift wear system includes quick-change replaceable wear inserts and quick-adjust jackscrew system | | |
| Base Length | 3.66 m (144 in.) (12 ft. 0 in.) | |
| Height (measured along arc, including cutting edge) | 610 mm (24 in.) | |
| Thickness | 22 mm (0.88 in.) | |

| **Cutting Edge** | **770G/GP** | | |
|---|---|---|---|
| Dura-Max™ through-hardened steel edge | | | |
| Thickness | 16 mm (0.62 in.) | | |
| Width | 152 mm (6 in.) | | |
| **Scarifiers** | | | |
| | *Front* | *Mid-mount* | |
| Type | V-type toolbar with 2-pitch positions and hydraulic float | Radial linkage, with NeverGrease™ pin joints; V-type manual 3-pitch positions and hydraulic float | |
| Width of Cut | 1.20 m (48 in.) (4 ft. 0 in.) | 1.19 m (46.7 in.) (3 ft. 11 in.) | |
| Number of Shanks/Teeth | 5 (maximum capacity 9) | 11 | |
| Lift Above Ground | 589 mm (23.2 in.) | 335 mm (13.2 in.) | |
| Maximum Depth | 335 mm (13.2 in.) | 325 mm (12.8 in.) | |
| Shank | | | |
| Spacing | 146 mm (5.75 in.) | 117 mm (4.6 in.) | |
| Size | 25 x 76 mm (1 x 3 in.) | 25 x 76 mm (1 x 3 in.) | |
| **Front Lift Group (Balderson-style)** | | | |
| Parallel linkage, mechanical pins, and hydraulic float | | | |
| Lift | | | |
| Above Ground (top of tube) | 1864 mm (73.4 in.) | | |
| Range | 988 mm (38.9 in.) | | |
| **Rear Ripper/Scarifier** | | | |
| Parallel linkage, with NeverGrease pin joints, hydraulic float, and integrated hitch | | | |
| | *Ripper* | *Scarifier* | |
| Width of Cut | 2.21 m (87.2 in.) (7 ft. 3 in.) | 2.18 m (86 in.) (7 ft. 2 in.) | |
| Number of Shanks/Teeth | 3 (maximum capacity 5) | None standard (maximum capacity 9) | |
| Lift Above Ground | 602 mm (23.7 in.) | 810 mm (31.9 in.) | |
| Maximum Depth | 426 mm (16.8 in.) | 323 mm (12.7 in.) | |
| Force | | | |
| Penetration | 9616 kg (21,200 lb.) | — | |
| Pry-Out | 12 730 kg (28,066 lb.) | — | |
| Shank Size | 61.5 x 133 mm (2.42 x 5.25 in.) | 25 x 76 mm (1 x 3 in.) | |
| **Operator Station** | | | |
| Low-profile cab with ROPS (ISO 3471-2008) and FOPS (ISO 3449-2005) | | | |
| **Tires/Wheels** | | | |
| | *14R24 on 254-mm (10 in.) Rim* | *17.5R25 on 356-mm (14 in.) Rim* | *550/65R25 on 432-mm (17 in.) Rim* |
| Wheel Tread on Ground | 2.08 m (82.0 in.) | 2.16 m (85.0 in.) | 2.21 m (87.0 in.) |
| Overall Width | 2.49 m (98.0 in.) | 2.64 m (104.0 in.) | 2.82 m (111.0 in.) |
| Ground Clearance (front axle) | 587 mm (23.1 in.) | 587 mm (23.1 in.) | 612 mm (24.1 in.) |
| **Serviceability** | | | |
| **Refill Capacities** | *EPA Final Tier 4/EU Stage V* | *EPA Tier 3/EU Stage IIIA and EPA Tier 2/EU Stage II* | |
| Fuel Tank | 416.5 L (110 gal.) | 416.5 L (110 gal.) | |
| Diesel Exhaust Fluid (DEF) Tank | 22.5 L (6 gal.) | — | |
| Cooling System | 55.0 L (14.5 gal.) | 48.5 L (12.8 gal.) | |
| Engine Oil With Filter | 28.4 L (7.5 gal.) | 28.0 L (7.4 gal.) | |
| Transmission Fluid | 28.4 L (7.5 gal.) | 28.4 L (7.5 gal.) | |
| Differential Housing | 38.0 L (10 gal.) | 38.0 L (10 gal.) | |
| Tandem Housings (each) | 74.0 L (19.5 gal.) | 74.0 L (19.5 gal.) | |
| Circle Gearbox | 5.7 L (1.5 gal.) | 5.7 L (1.5 gal.) | |
| Hydraulic Reservoir | 60.5 L (16 gal.) | 53.0 L (14 gal.) | |
| **Operating Weights** | | | |
| With Full Fuel Tank, 3.66-m x 610-mm x 22-mm (12 ft. x 24 in. x 0.88 in.) Moldboard With 152-mm x 16-mm (6 in. x ⅝ in.) Cutting Edges, 14R24 L2 Tires, and 79-kg (175 lb.) Operator | *EPA Final Tier 4/EU Stage V* | *EPA Tier 3/EU Stage IIIA and EPA Tier 2/EU Stage II* | |
| Front | 4320 kg (9,525 lb.) | 4330 kg (9,545 lb.) | |
| Rear | 12 095 kg (26,665 lb.) | 11 451 kg (25,245 lb.) | |
| Total | 16 416 kg (36,190 lb.) | 15 780 kg (34,790 lb.) | |
| Typical Operating Weight With Front Push Block, Rear Ripper/Scarifier, and Other Equipment | | | |
| Front | 5588 kg (12,320 lb.) | 5625 kg (12,400 lb.) | |
| Rear | 13 837 kg (30,505 lb.) | 13 186 kg (29,070 lb.) | |
| Total | 19 425 kg (42,825 lb.) | 18 810 kg (41,470 lb.) | |
| Maximum Operating Weight | 24 948 kg (55,000 lb.) | 24 948 kg (55,000 lb.) | |

| Option Weights | 770G/GP |
|---|---|
| Moldboards With Through-Hardened Dura-Max Cutting Edge | |
| 3.66 m x 610 mm x 22 mm (12 ft. x 24 in. x ⅞ in.) with 152-mm x 16-mm (6 in. x ⅝ in.) cutting edge and 16-mm (⅝ in.) hardware | 0 kg (0 lb.) |
| 3.66 m x 610 mm x 22 mm (12 ft. x 24 in. x ⅞ in.) with 203-mm x 19-mm (8 in. x ¾ in.) cutting edge and 16-mm (⅝ in.) hardware | 45 kg (99 lb.) |
| 3.96 m x 686 mm x 25 mm (13 ft. x 27 in. x 1 in.) with 203-mm x 19-mm (8 in. x ¾ in.) cutting edge and 16-mm (⅝ in.) hardware | 180 kg (396 lb.) |
| 4.27 m x 610 mm x 22 mm (14 ft. x 24 in. x ⅞ in.) with 152-mm x 16-mm (6 in. x ⅝ in.) cutting edge and 16-mm (⅝ in.) hardware | 105 kg (231 lb.) |
| 4.27 m x 610 mm x 22 mm (14 ft. x 24 in. x ⅞ in.) with 203-mm x 19-mm (8 in. x ¾ in.) cutting edge and 16-mm (⅝ in.) hardware | 157.4 kg (347 lb.) |
| 4.27 m x 686 mm x 25 mm (14 ft. x 27 in. x 1 in.) with 203-mm x 19-mm (8 in. x ¾ in.) cutting edge and 16-mm (⅝ in.) hardware | 251 kg (554 lb.) |
| 4.27 m x 686 mm x 25 mm (14 ft. x 27 in. x 1 in.) with 203-mm x 19-mm (8 in. x ¾ in.) cutting edge and 19-mm (¾ in.) hardware | 261 kg (575 lb.) |
| Extensions, 610 mm (2 ft.) (right or left) | |
| For Use With 610-mm (24 in.) Moldboards | 116 kg (255 lb.) |
| For Use With 686-mm (27 in.) Moldboards | 120 kg (265 lb.) |
| Overlay End Bits, Reversible (one pair) | |
| For 152-mm (6 in.) Cutting Edge | 19.5 kg (43 lb.) |
| For 203-mm (8 in.) Cutting Edge | 23 kg (51 lb.) |
| Heavy-Duty Dual-Input Circle-Drive Gearbox | 14 kg (31 lb.) |
| Circle-Drive Slip Clutch | 9 kg (20 lb.) |
| Circle | |
| Standard | 0 kg (0 lb.) |
| Premium | 289 kg (638 lb.) |
| Moldboard Impact-Absorption System | 43 kg (95 lb.) |
| Ripper/Scarifier, Rear Mounted With Hitch and Ripper Shanks (3) | 1139 kg (2,510 lb.) |
| Scarifier Shanks With Teeth (9 for rear ripper/scarifier) | 68 kg (150 lb.) |
| Ripper Shanks and Teeth (2) | 63 kg (139 lb.) |
| Rear Counterweight With Integral Rear Hitch | 727 kg (1,603 lb.) |
| Rear Hitch | 54.4 kg (120 lb.) |
| **Machine Dimensions** | |
| **A** Height to Top of Cab | 3.18 m (10 ft. 5 in.) |
| **A**[I] Height to Top of Full-Height Cab | 3.40 m (11 ft. 2 in.) |
| **B** Height to Top of Exhaust | 3.10 m (10 ft. 2 in.) |
| **C** Height to Top of Blade-Lift Cylinders | 3.05 m (10 ft. 0 in.) |
| **D** Tandem Axle Spacing | 1.54 m (5 ft. 1 in.) |
| **E** Blade Base | 2.57 m (8 ft. 5 in.) |

| Option Weights *(continued)* | 770G/GP |
|---|---|
| Push Block, Front | 1338 kg (2,950 lb.) |
| Scarifier | |
| Front Mount With Teeth (5) | 831 kg (1,833 lb.) |
| Mid-Mount With Teeth (11) | 1481 kg (3,265 lb.) |
| Front Lift Group (Balderson-style) | 763 kg (1,682 lb.) |
| Tires | |
| 14.00-24, 12 PR G2 | –220.4 kg (–486 lb.) |
| 17.5-25, 12 PR G2/L2 | –106 kg (–234 lb.) |
| 14.00-R24, Radial, G2/L2 General Purpose | 0 kg (0 lb.) |
| 14.00-R24, Radial, G2/L2 Snow | 40.8 kg (90 lb.) |
| 17.5-R25, Radial, L2 General Purpose | 51.7 kg (114 lb.) |
| 17.5-R25, Radial, G2/L2 Snow | 95.3 kg (210 lb.) |
| 17.5-R25, Radial, G3/L3 General Purpose | 141.5 kg (312 lb.) |
| 550/65R25 XLD70 G3/L3 Radial, General Purpose | 495.3 kg (1,092 lb.) |
| 1-Piece Rims | |
| 229 mm x 610 mm (9 in. x 24 in.) | 0 kg (0 lb.) |
| 330 mm x 635 mm (13 in. x 25 in.) | 65.3 kg (144 lb.) |
| Multi-Piece Rims | |
| 254 mm x 610 mm (10 in. x 24 in.) | 179.6 kg (396 lb.) |
| 356 mm x 635 mm (14 in. x 25 in.) | 266.7 kg (588 lb.) |
| 432 mm x 635 mm (17 in. x 25 in.) | 321.1 kg (708 lb.) |
| Fenders | |
| Front | 99 kg (218 lb.) |
| Rear | 141 kg (310 lb.) |
| Low Cab With Opening Front and Side Windows | 14.5 kg (32 lb.) |
| Premium Air-Suspension, Heated Seat With Adjustable Arm- and Headrests | 13 kg (28 lb.) |
| Coolant Heater | 4 kg (9 lb.) |
| Quick Service | 11 kg (24 lb.) |
| Sound-Absorption Package (machines equipped with Tier 3/Stage IIIA and Tier 2/Stage II engines only) | 14 kg (31 lb.) |
| Secondary Steering | 26 kg (58 lb.) |
| Beacon Bracket | 8 kg (18 lb.) |
| Fire Extinguisher | 14.5 kg (32 lb.) |
| Lighting Packages | |
| 10 Halogen Lights | 4.5 kg (10 lb.) |
| 18 Halogen Lights | 8 kg (18 lb.) |
| 18 LED Lights | 7 kg (16 lb.) |
| High-Front Light Bar for Snowplowing | 20 kg (44 lb.) |
| Auxiliary Hydraulic Control Valve Section and Controls | 7 kg (15 lb.) |
| Hydraulics for Front-Mounted Equipment | 9 kg (19 lb.) |
| **Machine Dimensions** *(continued)* | |
| **F** Wheelbase | 6.16 m (20 ft. 3 in.) |
| **G** Overall Length | 8.89 m (29 ft. 2 in.) |
| **H** Overall Length With Scarifier | 9.69 m (31 ft. 9 in.) |
| **I** Overall Length With Push Block and Ripper | 9.99 m (32 ft. 9 in.) |
| **I**[I] Overall Length With Scarifier and Ripper | 10.59 m (34 ft. 9 in.) |
| *For Overall Width see Tires/Wheels on page 24.* | |



# 870G / GP SPECIFICATIONS

While general information, pictures, and descriptions are provided, some illustrations and text may include product options and accessories NOT AVAILABLE in all regions, and in some countries products and accessories may require modifications or additions to ensure compliance with the local regulations of those countries.

| **Engine** | **870G/GP** | | |
|---|---|---|---|
| Manufacturer and Model | John Deere PowerTech™ PSS 9.0L | John Deere PowerTech™ Plus 9.0L | John Deere PowerTech™ 9.0L |
| Non-Road Emission Standard | EPA Final Tier 4/EU Stage V | EPA Tier 3/EU Stage IIIA | EPA Tier 2/EU Stage II |
| Cylinders | 6 | 6 | 6 |
| Displacement | 9.0L (548 cu. in.) | 9.0L (548 cu. in.) | 9.0L (548 cu. in.) |
| Net Engine Power | | | |
| Gear 1 | 168 kW (225 hp) | 164 kW (220 hp) | 164 kW (220 hp) |
| Gear 2 | 175 kW (235 hp) | 172 kW (230 hp) | 172 kW (230 hp) |
| Gear 3 | 187 kW (250 hp) | 179 kW (240 hp) | 179 kW (240 hp) |
| Gear 4 | 190 kW (255 hp) | 183 kW (245 hp) | 183 kW (245 hp) |
| Gear 5 | 198 kW (265 hp) | 187 kW (250 hp) | 187 kW (250 hp) |
| Gear 6 | 201 kW (270 hp) | 194 kW (260 hp) | 194 kW (260 hp) |
| Gear 7 | 205 kW (275 hp) | 198 kW (265 hp) | 198 kW (265 hp) |
| Gear 8 | 209 kW (280 hp) | 201 kW (270 hp) | 201 kW (270 hp) |
| Net Peak Torque | 1430 Nm (1,066 lb.-ft.) | 1330 Nm (991 lb.-ft.) | 1330 Nm (991 lb.-ft.) |
| Net Torque Rise | 53% | 48% | 48% |
| Aspiration | Series turbocharged, charge-air cooled | Turbocharged, charge-air cooled | Turbocharged, charge-air cooled |
| Lubrication | Full-flow spin-on filter and integral cooler | Full-flow spin-on filter and integral cooler | Full-flow spin-on filter and integral cooler |
| Air Cleaner With Restriction Indicator | Dual element, dry | Dual element, dry | Dual element, dry |
| **Cooling** | | | |
| Engine Coolant, Extended Life, Rating | –37 deg. C (–34 deg. F) | | |
| **Powertrain** | | | |
| **Transmission** | Direct-drive John Deere PowerShift Plus™, modulated shift-on-the-go, Event-Based Shifting (EBS), inching pedal; independent transmission reservoir with separate filtration and cooling system with 121-L/min. (32 gpm) gear pump | | |
| Gears | | | |
| Forward | 8 | | |
| Reverse | 8 | | |
| **Maximum Travel Speeds** | *No tire slip at 2,180 rpm, 17.5-R25 tires* | | *No tire slip at 2,180 rpm, 17.5-R25 tires* |
| Gear 1 | 3.9 km/h (2.4 mph) | Gear 5 | 16.7 km/h (10.4 mph) |
| Gear 2 | 5.6 km/h (3.5 mph) | Gear 6 | 23.3 km/h (14.5 mph) |
| Gear 3 | 7.9 km/h (4.9 mph) | Gear 7 | 32.2 km/h (20.0 mph) |
| Gear 4 | 10.9 km/h (6.8 mph) | Gear 8 | 45.0 km/h (28.0 mph) |
| **Front Axle** | Heavy-duty welded fabrication | | |
| Oscillation (total) | 32 deg. | | |
| Wheel Lean Angle (each direction) | 20 deg. | | |
| **Differentials** | Spiral bevel; hydraulically actuated, clutch type can be applied on-the-go; selectable manual or automatic differential lock | | |
| **Steering (all models include steering wheel)** | All-hydraulic power-frame articulation for maneuverability and productivity; crab steering reduces side drift, positions tandems on firm ground, and increases side-slope stability; return-to-straight control included in Grade Pro (GP) option | | |
| Turning Radius (front steer and articulation) | 7.21 m (284 in.) (23 ft. 8 in.) | | |
| Articulation (both right and left) | 22 deg. | | |
| **Final Drives** | Inboard-mounted planetary sealed in cooled, filtered oil | | |
| **Brakes** | Foot-controlled, hydraulically operated, multiple wet-disc brakes sealed in pressurized, cooled, filtered oil; both independent systems effective on all 4 tandem wheels | | |
| Primary and Secondary Brakes | Hydraulically actuated, inboard of tandem pivot, self-adjusting, sealed in cooled and filtered oil, multi-disc (ISO 3450) | | |
| Parking Brake | Automatically spring applied, hydraulically released, oil cooled, self-adjusting (ISO 3450) | | |
| **Hydraulics** | | | |
| Type | Closed-center, pressure-compensated load-sensing (PCLS), variable-displacement piston pump | | |
| Maximum Pump Flow | 218 L/min. (57.5 gpm) | | |
| Maximum System Pressure | 18 961 kPa (2,750 psi) | | |
| Pump Displacement | 90 $cm^3$ (5.5 cu. in.) | | |

# 870G / GP *SPECIFICATIONS*

While general information, pictures, and descriptions are provided, some illustrations and text may include product options and accessories NOT AVAILABLE in all regions, and in some countries products and accessories may require modifications or additions to ensure compliance with the local regulations of those countries.

| **Blade Function** | **870G/GP** | |
|---|---|---|
| All-hydraulic, industry-standard lever placement of blade-function controls; includes float position; 7 discrete saddle positions | | |
| **Blade Range** | | |
| Lift Above Ground | 452 mm (17.8 in.) | |
| Blade Side Shift (right or left) | 683 mm (26.9 in.) | |
| Pitch at Ground Line | | |
| Forward | 42 deg. | |
| Back | 5 deg. | |
| Shoulder Reach Outside Wheels (frame straight, right or left) | 2329 mm (91.7 in.) (7 ft. 8 in.) | |
| Bank Cut Angle (right or left) | 90 deg. | |
| **Blade Pull** | | |
| At Maximum Operating Weight | 15 501 kg (34,173 lb.) | |
| **Electrical** | | |
| Solid-state load center and sealed-switch module | *EPA Final Tier 4/EU Stage V* | *EPA Tier 3/EU Stage IIIA and EPA Tier 2/EU Stage II* |
| Voltage | 24 volt | 24 volt |
| Number of Batteries | 2 | 2 |
| Battery Capacity | 1,400 CCA | 1,400 CCA |
| Reserve Capacity | 440 min. | 440 min. |
| Amp-Hour Rating | 224 amp-hour | 224 amp-hour |
| Alternator Rating | | |
| Base | 130 amp | 100 amp |
| Optional | 200 amp | 130 amp |
| **Lights** | Driving lights; 2 high- and 2 low-beam halogen headlights; front and rear LED turn signals and marker lights; LED brake and hazard warning lights | |
| **Mainframe** | | |
| Type | Welded box construction | |
| Width (minimum) | 307 mm (12.1 in.) | |
| Height (minimum) | 307 mm (12.1 in.) | |
| Thickness | | |
| Side | 16 mm (0.63 in.) | |
| Top and Bottom Plate | 30 mm (1.17 in.) | |
| Modulus | | |
| Minimum Vertical Section | 1770 $cm^3$ (108 cu. in.) | |
| Average Vertical Section at Saddle | 2635 $cm^3$ (161 cu. in.) | |
| **Draft Frame (drawbar)** | | |
| Welded box construction machined for flatness with double ball-and-socket pivot connection equipped with quick-change replaceable wear inserts | | |
| **Circle** | | |
| Welded construction, heat-treated, machined for flatness, equipped with quick-change replaceable wear inserts | | |
| | *Standard Circle* | *Premium Circle* |
| Circle Diameter | 1524 mm (60 in.) | 1524 mm (60 in.) |
| Rotation | 360 deg. | 360 deg. |
| Surface | Quick-change bronze or nylon wear inserts | Sealed and lubricated roller element slewing bearing |
| Pinion/Ring-Gear Connection | Adjustable backlash and open for serviceability | No adjustment; fully sealed and lubricated |
| Drive | Hydraulic motor and worm gear with positive lock | Hydraulic motor and worm gear with positive lock |
| Slip Clutch | Option | Standard |
| Circle Side Shift (right and left) | 787 mm (31 in.) | 787 mm (31 in.) |
| **Moldboard** | | |
| High-strength, pre-stressed for higher strength, wear-resistant, high-carbon steel and reversible end bits; blade side-shift wear system includes quick-change replaceable wear inserts and quick-adjust jackscrew system | | |
| Base Length | 4.27 m (168 in.) (14 ft. 0 in.) | |
| Height (measured along arc, including cutting edge) | 686 mm (27 in.) | |
| Thickness | 25 mm (1 in.) | |

# 870G/GP

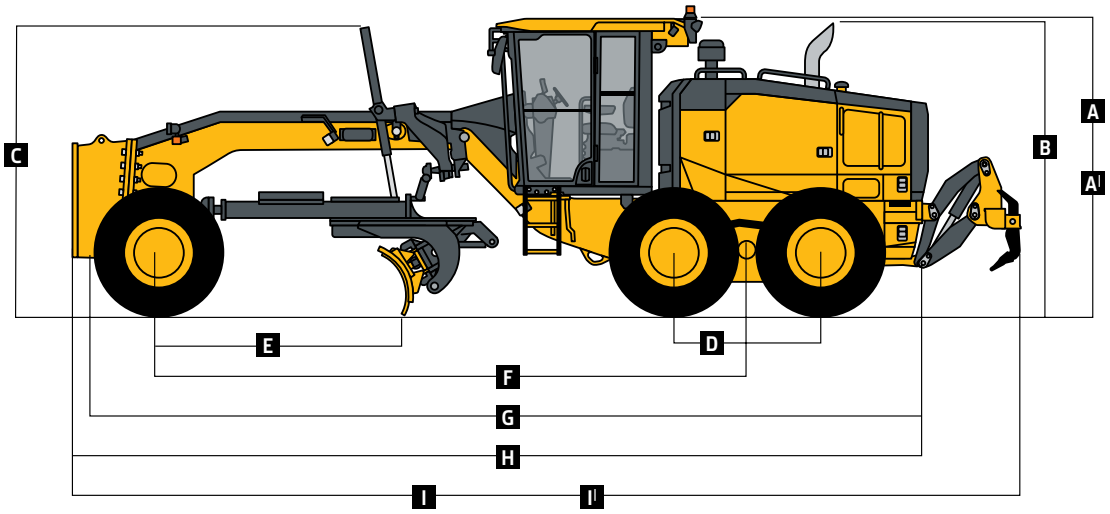
While general information, pictures, and descriptions are provided, some illustrations and text may include product options and accessories NOT AVAILABLE in all regions, and in some countries products and accessories may require modifications or additions to ensure compliance with the local regulations of those countries.

| **Cutting Edge** | **870G/GP** | | |
|---|---|---|---|
| Dura-Max™ through-hardened steel edge | | | |
| Thickness | 19 mm (0.75 in.) | | |
| Width | 203 mm (8 in.) | | |
| **Scarifiers** | | | |
| | *Front* | *Mid-mount* | |
| Type | V-type toolbar with 2-pitch positions and hydraulic float | Radial linkage, with NeverGrease™ pin joints; V-type manual 3-pitch positions and hydraulic float | |
| Width of Cut | 1.20 m (48 in.) (4 ft. 0 in.) | 1.19 m (46.7 in.) (3 ft. 11 in.) | |
| Number of Shanks/Teeth | 5 (maximum capacity 9) | 11 | |
| Lift Above Ground | 589 mm (23.2 in.) | 335 mm (13.2 in.) | |
| Maximum Depth | 335 mm (13.2 in.) | 325 mm (12.8 in.) | |
| Shank | | | |
| Spacing | 146 mm (5.75 in.) | 117 mm (4.6 in.) | |
| Size | 25 x 76 mm (1 x 3 in.) | 25 x 76 mm (1 x 3 in.) | |
| **Front Lift Group (Balderson-style)** | | | |
| Parallel linkage, mechanical pins, and hydraulic float | | | |
| Lift | | | |
| Above Ground (top of tube) | 1864 mm (73.4 in.) | | |
| Range | 988 mm (38.9 in.) | | |
| **Rear Ripper/Scarifier** | | | |
| Parallel linkage, with NeverGrease pin joints, hydraulic float, and integrated hitch | | | |
| | *Ripper* | *Scarifier* | |
| Width of Cut | 2.21 m (87.2 in.) (7 ft. 3 in.) | 2.18 m (86 in.) (7 ft. 2 in.) | |
| Number of Shanks/Teeth | 3 (maximum capacity 5) | None standard (maximum capacity 9) | |
| Lift Above Ground | 602 mm (23.7 in.) | 810 mm (31.9 in.) | |
| Maximum Depth | 426 mm (16.8 in.) | 323 mm (12.7 in.) | |
| Force | | | |
| Penetration | 10 240 kg (22,574 lb.) | — | |
| Pry-Out | 13 623 kg (30,034 lb.) | — | |
| Shank Size | 61.5 x 133 mm (2.42 x 5.25 in.) | 25 x 76 mm (1 x 3 in.) | |
| **Operator Station** | | | |
| Low-profile cab with ROPS (ISO 3471-2008) and FOPS (ISO 3449-2005) | | | |
| **Tires/Wheels** | | | |
| | *17.5R25 on 356-mm (14 in.) Rim* | *550/65R25 on 432-mm (17 in.) Rim* | *20.5R25 on 432-mm (17 in.) Rim* |
| Wheel Tread on Ground | 2.16 m (85.0 in.) | 2.21 m (87.0 in.) | 2.32 m (92 in.) |
| Overall Width | 2.64 m (104.0 in.) | 2.82 m (111 in.) | 2.8 m (110 in.) |
| Ground Clearance (front axle) | 587 mm (23.1 in.) | 612 mm (24.1 in.) | 640 mm (25.2 in.) |
| **Serviceability** | | | |
| **Refill Capacities** | *EPA Final Tier 4/EU Stage V* | *EPA Tier 3/EU Stage IIIA and EPA Tier 2/EU Stage II* | |
| Fuel Tank | 416.5 L (110 gal.) | 416.5 L (110 gal.) | |
| Diesel Exhaust Fluid (DEF) Tank | 22.5 L (6 gal.) | — | |
| Cooling System | 55.0 L (14.5 gal.) | 48.5 L (12.8 gal.) | |
| Engine Oil With Filter | 28.4 L (7.5 gal.) | 28.0 L (7.4 gal) | |
| Transmission Fluid | 23.5 L (6.2 gal.) | 28.4 L (7.5 gal.) | |
| Differential Housing | 38.0 L (10 gal.) | 38.0 L (10 gal.) | |
| Tandem Housings (each) | 74.0 L (19.5 gal.) | 74.0 L (19.5 gal.) | |
| Circle Gearbox | 5.7 L (1.5 gal.) | 5.7 L (1.5 gal.) | |
| Hydraulic Reservoir | 60.5 L (16 gal.) | 53.0 L (14 gal.) | |
| **Operating Weights** | | | |
| With Full Fuel Tank, 4.27-m x 686-mm x 25-mm (14 ft. x 27 in. x 1.0 in.) Moldboard With 203-mm x 19-mm (8 in. x ¾ in.) Cutting Edges, 17.5R25 L2 Tires, and 79-kg (175 lb.) Operator | *EPA Final Tier 4/EU Stage V* | *EPA Tier 3/EU Stage IIIA and EPA Tier 2/EU Stage II* | |
| Front | 4547 kg (10,025 lb.) | 4556 kg (10,045 lb.) | |
| Rear | 12 499 kg (27,555 lb.) | 11 854 kg (26,134 lb.) | |
| Total | 17 046 kg (37,580 lb.) | 16 410 kg (36,179 lb.) | |
| Typical Operating Weight With Front Push Block, Rear Ripper/Scarifier, and Other Equipment | | | |
| Front | 5980 kg (13,184 lb.) | 6035 kg (13,305 lb.) | |
| Rear | 14 734 kg (32,484 lb.) | 13 805 kg (30,435 lb.) | |
| Total | 20 715 kg (45,668 lb.) | 19 840 kg (43,740 lb.) | |
| Maximum Operating Weight | 24 948 kg (55,000 lb.) | 24 948 kg (55,000 lb.) | |

| Option Weights | 870G/GP |
|---|---|
| Moldboards With Through-Hardened Dura-Max Cutting Edge | |
| 3.96 m x 686 mm x 25 mm (13 ft. x 27 in. x 1 in.) with 203-mm x 19-mm (8 in. x ¾ in.) cutting edge and 16-mm (⅝ in.) hardware | –72 kg (–159 lb.) |
| 4.27 m x 686 mm x 25 mm (14 ft. x 27 in. x 1 in.) with 203-mm x 19-mm (8 in. x ¾ in.) cutting edge and 16-mm (⅝ in.) hardware | 0 kg (0 lb.) |
| 4.27 m x 686 mm x 25 mm (14 ft. x 27 in. x 1 in.) with 203-mm x 19-mm (8 in. x ¾ in.) cutting edge and 19-mm (¾ in.) hardware | 9.5 kg (21 lb.) |
| 4.88 m x 686 mm x 25 mm (16 ft. x 27 in. x 1 in.) with 203-mm x 19-mm (8 in. x ¾ in.) cutting edge and 19-mm (¾ in.) hardware | 137 kg (302 lb.) |
| Extensions, 610 mm (2 ft.) (right or left) | |
| For Use With 686-mm (27 in.) Moldboards | 120 kg (265 lb.) |
| Overlay End Bits, Reversible (one pair) | |
| For 152-mm (6 in.) Cutting Edge | 19.5 kg (43 lb.) |
| For 203-mm (8 in.) Cutting Edge | 23 kg (51 lb.) |
| Heavy-Duty Dual-Input Circle-Drive Gearbox | 14 kg (31 lb.) |
| Circle-Drive Slip Clutch | 9 kg (20 lb.) |
| Circle | |
| Standard | 0 kg (0 lb.) |
| Premium | 255 kg (562 lb.) |
| Moldboard Impact-Absorption System | 43 kg (95 lb.) |
| Ripper/Scarifier, Rear Mounted With Hitch and Ripper Shanks (3) | 1139 kg (2,510 lb.) |
| Scarifier Shanks With Teeth (9 for rear ripper/scarifier) | 68 kg (150 lb.) |
| Ripper Shanks and Teeth (2) | 63 kg (139 lb.) |
| Rear Counterweight With Integral Rear Hitch | 727 kg (1,603 lb.) |
| Rear Hitch | 54.4 kg (120 lb.) |
| Push Block, Front | 1338 kg (2,950 lb.) |
| Scarifier | |
| Front Mount With Teeth (5) | 831 kg (1,833 lb.) |
| Mid-Mount With Teeth (11) | 1481 kg (3,265 lb.) |
| **Machine Dimensions** | |
| **A** Height to Top of Cab | 3.18 m (10 ft. 5 in.) |
| **A**[I] Height to Top of Full-Height Cab | 3.40 m (11 ft. 2 in.) |
| **B** Height to Top of Exhaust | 3.10 m (10 ft. 2 in.) |
| **C** Height to Top of Blade-Lift Cylinders | 3.05 m (10 ft. 0 in.) |
| **D** Tandem Axle Spacing | 1.54 m (5 ft. 1 in.) |
| **E** Blade Base | 2.53 m (8 ft. 4 in.) |

| Option Weights *(continued)* | 870G/GP |
|---|---|
| Front Lift Group (Balderson-style) | 763 kg (1,682 lb.) |
| Tires | |
| 17.5-R25, Radial, L2 General Purpose | 0 kg (0 lb.) |
| 17.5-R25, Radial, G2/L2 Snow | 43.5 kg (96 lb.) |
| 17.5-R25, Radial, G3/L3 General Purpose | 90 kg (198 lb.) |
| 550/65R25 XLD70 G3/L3 Radial, General Purpose | 444 kg (978 lb.) |
| 20.5-R25, Radial, G2/L2 Snow | 414 kg (913 lb.) |
| 20.5-R25, Radial, G3/L3 General Purpose | 474 kg (1,045 lb.) |
| 1-Piece Rims | |
| 330 mm x 635 mm (13 in. x 25 in.) | –201.4 kg (–444 lb.) |
| Multi-Piece Rims | |
| 356 mm x 635 mm (14 in. x 25 in.) | 0 kg (0 lb.) |
| 432 mm x 635 mm (17 in. x 25 in.) | 54.4 kg (120 lb.) |
| Fenders | |
| Front | 99 kg (218 lb.) |
| Rear | 141 kg (310 lb.) |
| Low Cab With Opening Front and Side Windows | 14.5 kg (32 lb.) |
| Premium Air-Suspension, Heated Seat With Adjustable Arm- and Headrests | 13 kg (28 lb.) |
| Coolant Heater | 4 kg (9 lb.) |
| Quick Service | 11 kg (24 lb.) |
| Sound-Absorption Package (machines equipped with Tier 3/Stage IIIA and Tier 2/Stage II engines only) | 14 kg (31 lb.) |
| Secondary Steering | 26 kg (58 lb.) |
| Beacon Bracket | 8 kg (18 lb.) |
| Fire Extinguisher | 14.5 kg (32 lb.) |
| Lighting Packages | |
| 10 Halogen Lights | 4.5 kg (10 lb.) |
| 18 Halogen Lights | 8 kg (18 lb.) |
| 18 LED Lights | 7 kg (16 lb.) |
| High-Front Light Bar for Snowplowing | 20 kg (44 lb.) |
| Auxiliary Hydraulic Control Valve Section and Controls | 7 kg (15 lb.) |
| Hydraulics for Front-Mounted Equipment | 9 kg (19 lb.) |
| **Machine Dimensions** *(continued)* | |
| **F** Wheelbase | 6.16 m (20 ft. 3 in.) |
| **G** Overall Length | 8.89 m (29 ft. 2 in.) |
| **H** Overall Length With Scarifier | 9.69 m (31 ft. 9 in.) |
| **I** Overall Length With Push Block and Ripper | 9.99 m (32 ft. 9 in.) |
| **I**[I] Overall Length With Scarifier and Ripper | 10.59 m (34 ft. 9 in.) |

*For Overall Width see Tires/Wheels on page 28.*



# Additional equipment

**Key:** ● Standard ▲ Optional or special  See your John Deere dealer for further information.

| 620 | 670 | 770 | 870 | Operator's Station |
|---|---|---|---|---|
| ● | ● | ● | ● | Low-profile ROPS/FOPS cab with HVAC (ROPS ISO 3471 / FOPS SAE 3449 Level II) |
| ▲ | ▲ | ▲ | ▲ | Low-profile ROPS/FOPS cab utilizing laminated glass with fixed lower front and side opening windows |
| ▲ | ▲ | ▲ | ▲ | Opening front and side windows (standard with Grade Pro) |
| ● | ● | ● | ● | Keyless start with multiple security modes |
| ● | ● | ● | ● | Fabric air-suspension seat with armrests and headrest |
| ▲ | ▲ | ▲ | ▲ | Premium heated, leather/fabric, high-wide-back, air-suspension seat with armrests (standard with Grade Pro) |
| ● | ● | ● | ● | Sealed-switch module with function indicators |
| ● | ● | ● | ● | Electric rear-window defroster |
| ● | ● | ● | ● | Upper front windshield washers with intermittent wipers |
| ▲ | ● | ● | ● | Upper rear windshield washers with intermittent wipers |
| ▲ | ▲ | ▲ | ▲ | Lower front intermittent wiper and washer |
| ▲ | ▲ | ▲ | ▲ | Powered cab precleaner |
| ▲ | ▲ | ▲ | ▲ | Decelerator pedal |
| ▲ | ▲ | ▲ | ▲ | Flip-down, right- and/or left-hand cab beacon with bracket |
| ● | ● | ● | ● | Cab prewired for beacon, radio, and auxiliary circuit |
| ● | ● | ● | ● | Front window sun visor |
| ▲ | ▲ | ▲ | ▲ | Retractable rear sunshade |
| ● | ● | ● | ● | Rearview mirrors, exterior (2) (SAE J985) |
| ▲ | ▲ | ▲ | ▲ | Heated exterior mirrors (2) (SAE J985) |
| ▲ | ▲ | ▲ | ▲ | Fire extinguisher |
| ● | ● | ● | ● | High-resolution rear camera with dedicated in-cab monitor (in some markets) |
| ▲ | ▲ | ▲ | ▲ | High-resolution front/rear-camera combination with dedicated in-cab monitor |
| ● | ● | ● | ● | Retractable seat belt, 76 mm (3 in.) (SAE 386) |
| ▲ | ▲ | ▲ | ▲ | AM/FM radio with auxiliary and Weather Band (WB) |
| ▲ | ▲ | ▲ | ▲ | AM/FM radio with Bluetooth®, auxiliary, and WB ready |
| ● | ● | ● | ● | Push-button-activated cruise control |

| 620 | 670 | 770 | 870 | Electrical |
|---|---|---|---|---|
| ● | ● | ● | ● | 100-amp alternator (Tier 3/Stage IIIA and Tier 2/Stage II) |
| ● | ● | ● | ● | 130-amp alternator (FT4/Stage V [optional for Tier 3/Stage IIIA and Tier 2/Stage II]) |
| ▲ | ▲ | ▲ | ▲ | 200-amp alternator (FT4/Stage V) |
| ● | ● | ● | ● | Batteries (2), 1,400 CCA with 440-min. reserve capacity |
| ▲ | ● | ● | ● | Left-hand engine compartment service-check light |
| ▲ | ▲ | ▲ | ▲ | Right-hand engine compartment service-check light |
| ● | ● | ● | ● | Transporting lights (4 halogen) |
| ▲ | ▲ | ▲ | ▲ | Grading lights (10 halogen lights) |
| ▲ | ▲ | ▲ | ▲ | Deluxe grading lights (18 halogen lights) |
| ▲ | ▲ | ▲ | ▲ | Premium grading lights (18 LED lights) |
|  | ▲ | ▲ | ▲ | Tall front snowplow light bar |
| ● | ● | ● | ● | Multifunction/multi-language diagnostic LCD color monitor |
| ● | ● | ● | ● | Reverse warning alarm (SAE J994) |
| ● | ● | ● | ● | LED brake and turn lights |
|  |  |  |  | **Moldboard** |
|  |  |  |  | **Patented pre-stressed, high strength, wear resistant:** |
| ● | ● | ● |  | 3.66 m x 610 mm x 22 mm (12 ft. x 24 in. x ⅞ in.) |
|  | ▲ | ▲ | ▲ | 3.96 m x 686 mm x 25 mm (13 ft. x 27 in. x 1 in.) |
| ▲ | ▲ | ▲ |  | 4.27 m x 610 mm x 22 mm (14 ft. x 24 in. x ⅞ in.) |
|  | ▲ | ▲ | ● | 4.27 m x 686 mm x 25 mm (14 ft. x 27 in. x 1 in.) |
|  |  |  | ▲ | 4.88 m x 686 mm x 25 mm (16 ft. x 27 in. x 1 in.) |
| ● | ● | ● | ● | Quick-change and jackscrew-adjustable moldboard side-shift extreme-duty wear inserts |
| ▲ | ▲ | ▲ |  | 610-mm (24 in.) left- or right-hand extensions for 610-mm (24 in.) moldboard |
|  |  | ▲ | ▲ | 610-mm (24 in.) left- or right-hand extensions for 686-mm (27 in.) moldboard |
| ▲ | ▲ | ▲ | ▲ | Reversible overlay endbits |
|  |  |  |  | **Overall Vehicle** |
| ● | ● | ● | ● | JDLink™ wireless communication system (available in specific countries; see your dealer for details) |
| ● | ● | ● | ● | Ground-level fuel and diesel exhaust fluid (DEF) filling |
| ▲ | ● | ● | ● | Fluid-sampling ports for engine oil and coolant, hydraulic oil, and axle and transmission fluids |

**While general information, pictures, and descriptions are provided, some illustrations and text may include product options and accessories NOT AVAILABLE in all regions, and in some countries products and accessories may require modifications or additions to ensure compliance with the local regulations of those countries.**

Net engine power is with standard equipment including air cleaner, exhaust system, alternator, and cooling fan at test conditions specified per ISO9249. No derating is required up to 3050-m (10,000 ft.) altitude. 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 units with standard equipment; 14.0 x 610-mm (24 in.) 12 PR G2, Bias tires and 3.66-m x 610-mm x 22-mm (12 ft. x 24 in. x ⅞ in.) high-strength, wear-resistant moldboards with 16-mm x 152-mm (0.63 in. x 6 in.) Dura-Max® through-hardened-steel cutting edges for the 620G, 670G, and 770G; and 17.5 R 635-mm (25 in.) L2, Radial tires and 4.27-m x 688-mm x 25-mm (14 ft. x 27 in. x 1 in.) high-strength, wear-resistant moldboards with 16-mm x 152-mm (0.63 in. x 6 in.) Dura-Max through-hardened-steel cutting edges for the 870G. Weights include lubricants, coolants, full fuel tanks, and 79-kg (175 lb.) operators.

# Additional equipment *(continued)*

**Key:** ● Standard ▲ Optional or special  See your John Deere dealer for further information.

| 620 | 670 | 770 | 870 | Overall Vehicle *(continued)* |
|---|---|---|---|---|
| ● | ● | ● | ● | Vandal-protection locking for: Cab doors / Top tank radiator-access door / Engine coolant surge tank / Hydraulic reservoir cap / Battery-disconnect switch / Ground-level electrical master disconnect switch / Fuel-tank door and cap / Toolbox |
| ● | ● | ● | ● | Environmental drains with hoses for engine, transmission, hydraulic, differential fluids, and engine coolant |
| ▲ | ● | ● | ● | Hydraulically driven cool-on-demand reversing fan |
| ● | ● | ● | ● | Banked easy-access vertical spin-on filters for hydraulic, transmission, and axle fluids |
| ● | ● | ● | ● | Engine rotary ejector precleaner |
| ● | ● | ● | ● | Automatic differential lock |
| ● | ● | ● | ● | Engine-stall prevention and auto shutdown |
| ▲ | ▲ | ▲ | ▲ | Adjustable rotary engine precleaner (FT4/Stage V) |
| | ▲ | ● | ● | Heavy-duty air cleaner (FT4/Stage V) |
| ● | ● | ● | | Single-input circle drive |
| ▲ | ▲ | ▲ | | Single-input circle drive with slip clutch |
| | ▲ | ▲ | ● | Heavy-duty dual-input circle drive without slip clutch |
| | ▲ | ▲ | ▲ | Heavy-duty dual-input circle drive with slip clutch |
| ▲ | ▲ | ▲ | ▲ | Premium circle |
| ▲ | ▲ | ▲ | ▲ | Auto-Shift transmission |
| ▲ | ▲ | ▲ | ▲ | Auto-Shift PLUS transmission |
| ▲ | ▲ | ▲ | ▲ | Blade-impact-absorption system |
| ▲ | ▲ | ▲ | ▲ | Front and/or rear wheel fenders |
| ▲ | ▲ | ▲ | ▲ | Quick-service bank for transmission, hydraulic, engine oil, and engine coolant fluid changes |
| ▲ | ▲ | ▲ | ▲ | Secondary steering |
| | ▲ | ▲ | ▲ | Sound-absorption package (Tier 3/Stage IIIA and Tier 2/Stage II) |
| ▲ | ▲ | ▲ | ▲ | Wheel chocks |
| | | | | **Automation (standard on SmartGrade™ models, optional on GP models)** |
| ▲ | ▲ | ▲ | ▲ | Automation Suite |
| ▲ | ▲ | ▲ | ▲ | Auto-Articulation |
| ▲ | ▲ | ▲ | ▲ | Auto-Gain for Cross Slope |
| ▲ | ▲ | ▲ | ▲ | Auto-Pass |
| ▲ | ▲ | ▲ | ▲ | Blade Flip |
| ▲ | ▲ | ▲ | ▲ | Machine Presets |
| ▲ | ▲ | ▲ | ▲ | Machine-Damage Avoidance |

| 620 | 670 | 770 | 870 | Front Attachments |
|---|---|---|---|---|
| ▲ | ▲ | ▲ | ▲ | Front push block |
| ▲ | ▲ | ▲ | ▲ | V-type front scarifier with float position, 5 shanks |
| ▲ | ▲ | ▲ | ▲ | Mid-mount scarifier with float position, 11 shanks |
| ▲ | ▲ | ▲ | ▲ | Front Balderson-style lift group with float position |
| ▲ | ▲ | ▲ | ▲ | Front-mounted dozer blades |
| | | | | **Rear Attachments** |
| ● | ● | ● | ● | Full bottom guard with access panel and side guards for rear vehicle protection |
| ▲ | ▲ | ▲ | ▲ | Rear-mounted ripper/scarifier combination with rear hitch and pin, 3 ripper shanks |
| ▲ | ▲ | ▲ | ▲ | Rear counterweight with rear hitch and pin |
| ▲ | ▲ | ▲ | ▲ | Rear hitch and pin |
| ▲ | ▲ | ▲ | ▲ | Extra scarifier shanks (9) with teeth for rear ripper scarifier |
| | ▲ | ▲ | ▲ | Extra ripper shanks (2) with teeth for rear ripper/ scarifier |
| | | | | **Grade Pro (GP) Option** |
| ● | ● | ● | ● | Low-profile GP cab with opening lower front and side windows |
| ▲ | ▲ | ▲ | ▲ | Low-profile GP cab utilizing laminated glass with fixed lower front and side opening windows |
| ● | ● | ● | ● | Premium heated, leather/fabric, high-wide-back, air-suspension seat with armrests |
| ▲ | ▲ | ▲ | ▲ | Dual-joystick controls |
| ▲ | ▲ | ▲ | ▲ | Fingertip armrest-mounted controls including steering lever |
| ● | ● | ● | ● | Steering wheel |
| ● | ● | ● | ● | Cross slope |
| ● | ● | ● | ● | Return to straight |
| | | | | **Grade Control** |
| ▲ | ▲ | ▲ | ▲ | SmartGrade available on GP models |
| ▲ | ▲ | ▲ | ▲ | Mast mounts |
| ▲ | ▲ | ▲ | ▲ | Topcon ready available on G and GP models |
| ▲ | ▲ | ▲ | ▲ | Trimble ready available on G and GP models |



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