

## Dozer





## THE FOUNDATION OF THE WORK YOU DO

You've been in the construction industry for a long time. So you know that your work is about more than just moving material. The success of your operation depends on your dozer and the productivity and retention of able operators. Input from customers like you has helped us design and manufacture dozers for almost 75 years, and our 650 P-Tier is built on the bedrock of some of your best ideas. This dynamo includes proven standard features plus innovative options like flexible grade-control solutions that can be easily and economically upgraded — all to enhance the operating experience and help you manage ownership costs.

#### Set things up

Because no two operators have the same work skill or technique, adjustable hydraulic and transmission settings can be customized to individual user preferences, for responsive control, smooth stability, and precise grading performance.

#### It's all about the operator

Next-generation cab is 14-percent larger than the previous model, to elevate operator comfort. Redesigned controls that minimize hand and arm movements, advanced touch-screen displays with configurable settings, and optional premium heated/ ventilated seat and automatic temperature control (ATC) system help get operators up to speed and in the productive zone.

#### Visibility matters

A lower hood line and 14-percent more glass area expand visibility to the blade and jobsite ahead. Optional rearview camera boosts awareness of the activity behind the machine. LED light package brings things into focus in darker environments.

#### Put progress on display

Standard on electrohydraulic configurations, eight-inch touchscreen primary display reveals machine health and configurable settings plus rearview camera and Slope Control (if equipped). Additional 10-inch touch-screen display for navigating the gradecontrol interface is added when the machine is outfitted with dual-laser receivers.



GRADE-MANAGEMENT OPTIONS STREAMLINE GRADING TASKS & LEARNING CURVES



#### 650 P-TIER DOZER



## GRADE-MANAGEMENT SOLUTIONS

Our suite of factory-integrated grademanagement technologies including standard EZ Grade, optional Slope Control, SmartGrade™ Ready Including 2D Grade Control, SmartGrade with Topcon, and SmartGrade with Leica simplify difficult grading tasks. These intuitive offerings are easy for operators of any experience level to master. All technology solutions are fully supported by the John Deere dealer network and can be efficiently upgraded as your operation evolves:

- EZ Grade aids operators in manually grading smooth finish passes by making small blade corrections automatically.
- Slope Control assists in grading and maintaining flat, smooth, and sloping surfaces. Operators can view and set blade slope while the system automatically controls the blade to the desired slope percentage.
- Slope Control With Dual Laser enables operators to automatically control the blade to a specific slope and elevation using a rotating laser.
- Fully integrated SmartGrade features nextgeneration components and integration, enabling the highest levels of productivity and grading performance. SmartGrade is now available in your choice of Topcon or Leica packages.
- Electrohydraulic (EH) controls make it easy to add the grade-control system of your choice.

#### **Operator detection**

Operator-presence system uses new sensor technology to detect that the seat of both cab and canopy models is occupied before the park brake is released, to prevent unintentional machine movement.

#### Management fundamentals

Simply set maximum desired ground speed and the power-management system automatically maintains peak engine speed and power efficiency without stalling or shifting.

#### Take your turn

Counter-rotation boosts productivity by enabling operators to overcome heavy corner loads and quickly reposition the blade on the go.

#### Tough where it counts

Thickened SC-2 coating on the bushings of the optional Maximum Life undercarriage helps reduce wear life by up to 75 percent over standard heavy-duty sealed and lubricated (SALT) undercarriages, to keep working longer. Routings of hydraulic hoses and electrical harnesses have been optimized to reduce leaks, rubbing, and timeconsuming replacement.

#### **Fuel saver**

Standard Eco mode automatically adjusts engine speed and powertrain settings based on load, to maximize fuel usage by up to 20 percent compared to standard operating mode, without loss of performance.

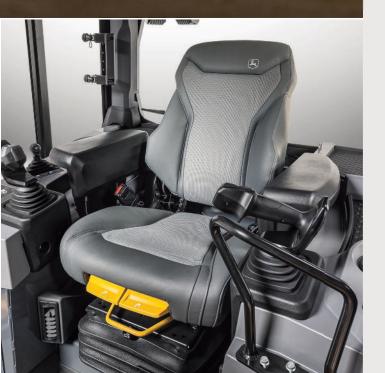
#### Get a full measure

Integrated welded-on spill sheet on the large 128-inch-wide blade increases capacity and helps reduce damage caused by material spillage behind the blade.









### 650 P-TIER DOZER



#### **Connected machines**

John Deere construction equipment comes with in-base connectivity — free from subscriptions or annual renewals. Analyze critical machine data, track utilization, review diagnostic alerts, and more from **the John Deere Operations Center™**. The Operations Center also enables **John Deere Connected Support™**, which uses data from thousands of connected machines to proactively address issues before they arise. With your approval, your dealer can also remotely monitor machine health, diagnose problems, and even update machine software without a trip to the jobsite.\*

\*Availability varies by region and product. Options not available in every country.



#### 650 P-TIER DOZER 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                             | 650 P-TIER XLT / 650 P-TIER LGP   |
|------------------------------------|---|
| Manufacturer and Model             | John Deere PowerTech <sup>™</sup> PWS 4045 John Deere PowerTech <sup>™</sup> PWX 4045   |
| Ion-Road Emission Standard         | EPA Final Tier 4/EU Stage V     EPA Tier 3/EU Stage IIIA  |
| Displacement                       | 4.5L (276 cu. in.) 4.5L (276 cu. in.)   |
| SAE Net Rated Power                | 78 kW (104 hp) at 1,900 rpm 78 kW (104 hp) at 1,900 rpm   |
| Net Peak Torque                    | 492 Nm (363 ftlb.) at 1,400 rpm 450 Nm (332 ftlb.) at 1,300 rpm   |
| Aspiration                         | Turbocharged with charge-air cooler Turbocharged with charge-air cooler   |
| Air Cleaner                        | Dual-stage dry tube with tangential unloader Dual-stage dry tube with tangential unloader   |
| Cooling                            |   |
| Туре                               | Variable-speed suction fan with optional reversing feature  |
| Engine Coolant Rating              | –37 deg. C. (–34 deg. F)  |
| Engine Radiator                    | 8.47 fins per in.   |
| Powertrain                         | er in more than the second s |
| Transmission                       | Automatic, dual-path, hydrostatic (HST) drive; load-sensing feature automatically adjusts speed and power to match  |
|                                    | changing load conditions; each individually controlled track is powered by a variable-displacement piston pump and variable-displacement motor combination; ground-speed selection buttons and direction-control switch on single-leve steering control; independently selectable reverse speed ratios of 100%, 115%, or 130% of forward ground speed; decelerate pedal controls ground speed to stop   |
| System Relief Pressure             | 42 692 kPa (6,192 psi)  |
| Travel Speeds                      |   |
| Forward and Reverse                | 8.0 km/h (5.0 mph)  |
| Maximum (optional)                 | 9.7 km/h (6.0 mph)  |
| Steering                           | Single-lever steering, speed, direction control, and counter-rotation; full power turns and infinitely variable track speed   |
| Steering                           | provide unlimited maneuverability and optimum control; HST steering eliminates steering clutches and brakes   |
| Final Drives                       | Triple-reduction final drives mounted   |
|                                    | independently of track frames and dozer   |
|                                    | push frames for isolation from shock loads  |
| TullDut                            |   |
| Total Ratio                        | 52.13 to 1 650 P-Tier Drawbar Pull vs. Ground Speed   |
| Drawbar Pull                       |   |
| Maximum                            | 152 kN (34,250 lb.) ₅.  |
| At 1.9 km/h (1.2 mph)              | 104 kN (23,330 lb.)   |
| At 3.2 km/h (2.0 mph)              | 65 kN (14,685 lb.)  |
| Brakes                             |   |
| Service                            | HST (dynamic) braking stops the machine<br>when the direction-control switch is moved<br>to neutral or the decelerator is depressed<br>to the detent  |
| Parking                            | Engages wet, multiple-disc brakes when-   |
|                                    | ever the engine stops, the decelerator is   |
|                                    | depressed to the end of travel, or motion is  |
|                                    | detected while the transmission control is  |
|                                    | in neutral; machine cannot be driven with   |
|                                    | brake applied, minimizing wearout; spring   |
|                                    | applied, hydraulic release GROUND SPEED   |
| Hydraulics                         | uppileu, ityuituure reieuse   |
| Туре                               | Open-center hydraulic system with fixed-displacement gear pump  |
| Pump Displacement                  | 35.4 cc   |
| System Relief Pressure             | 20 684 kPa (3,000 psi)  |
| Maximum Flow at Unloaded High Idle |   |
| Control                            | 71.5 L/m (19 gpm)   |
|                                    | 3-function direct-acting T-bar grip with proportional roller angle function   |
| Electrical                         |   |
| Voltage                            | 24 volts  |
| Capacity                           |   |
| Battery                            | 950 CCA   |
| Reserve                            | 190 min.  |
| Alternator Rating                  |   |
| Cab                                | 100 amp   |
| Canopy                             | 100 amp   |
|                                    | Cab mounted (4) standard / Cab-mounted LED (8) optional   |

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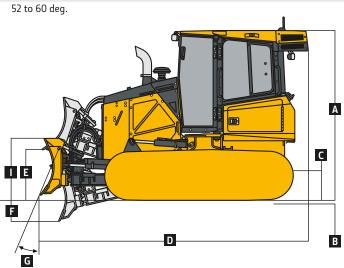
| Undercarriage  | 650 P-TIER XLT                         | 650 P-TIER LGP  |  |
|--|--|---|--|
| Tracks   |  | atures large deep-heat-treated components; pins and bus | shings are sealed for life; rollers ar |
|  | idlers are permanently seale           |   |  |
| Track Gauge  | 1550 mm (61 in.)                       | 1753 mm (69 in.)  |  |
| Grouser Width  | 457 mm (18 in.)                        | 711 mm (28 in.)   |  |
| Chain  | Sealed and lubricated                  | Sealed and lubricated                                   |  |
| Shoes, Each Side   | 40                                     | 40  |  |
| Track Rollers, Each Side   | 7                                      | 7   |  |
| Track Length on Ground   | 2349 mm (92 in.)                       | 2349 mm (92 in.)  |  |
| Ground Contact Area  | 23 998 cm <sup>2</sup> (3,720 sq. in.) | 37 336 cm <sup>2</sup> (5,787 sq. in.                   | 1                                      |
|  |  | 29.6 kPa (4.3 psi)                                      | 1                                      |
| Ground Pressure  | 44.1 kPa (6.4 psi)                     | · · · · · ·   |  |
| Track Pitch  | 171 mm (6.7 in.)                       | 171 mm (6.7 in.)  |  |
| Operator Station   | 650 P-TIER XLT / 650 P-TIE             | RLGP  |  |
| ROPS (ISO 3471 – 2008) and FOPS (ISO 344   | 49 – 2005)                             |   |  |
| Serviceability   |  |   |  |
| Refill Capacities  |  | Refill Capacities (continued)                           |  |
| Fuel Tank With Lockable Cap  | 202 L (53.45 gal.)                     | Engine Oil With Filter                                  | 14.7 L (15.5 qt.)                      |
| Diesel Exhaust Fluid (DEF) Tank  | 12.4 L (3.3 gal.)                      | Hydraulic/HST Oil (common reservoir) With Filters       | 70.5 L (18.6 gal.)                     |
| Cooling System With Recovery Tank  | 16.9 L (4.5 gal.)                      | Final Drive (each)                                      | 8.5 L (2.3 gal.)                       |
| Operating Weights  | 650 P-TIER XLT                         | 650 P-TIER LGP  |  |
| Base Weight (with standard equipment,  | 9600 kg (21,165 lb.)                   | 10 198 kg (22,484 lb.)                                  |  |
| rollover protective structure [ROPS], full<br>fuel tank, and 79-kg [175 lb.] operator) | 5000 kg (21,105 lb.)                   | 10 150 kg (22,404 10.)                                  |  |
| Optional Components  |  |   |  |
| Cab With Pressurizer and Heater/   | 261 kg (706 lb )                       |   |  |
| Air Conditioner  | 361 kg (796 lb.)                       | 361 kg (796 lb.)  |  |
| Front and Door Screens   | 88 kg (193 lb.)                        | 88 kg (193 lb.)   |  |
| Rear Screen  | 50 kg (110 lb.)                        | 50 kg (110 lb.)   |  |
| Side Screens   | 60 kg (132 lb.)                        | 60 kg (132 lb.)   |  |
| Limb Risers  | 239 kg (528 lb.)                       | 239 kg (528 lb.)  |  |
| Condenser Guard  | 53 kg (117 lb.)                        | 53 kg (117 lb.)   |  |
| ROPS Canopy  | 55 kg (117 lb.)                        | ן.מו זוו) א ככ  |  |
| 12   |  |   |  |
| Heater   | 62 kg (136 lb.)                        | 62 kg (136 lb.)   |  |
| Front and Door Screens   | 74 kg (163 lb.)                        | 74 kg (163 lb.)   |  |
| Rear Screen  | 28 kg (61 lb.)                         | 28 kg (61 lb.)  |  |
| Side Screens   | 37 kg (82 lb.)                         | 37 kg (82 lb.)  |  |
| Limb Risers  | 239 kg (528 lb.)                       | 239 kg (528 lb.)  |  |
| Counterweight  | 2                                      | -   |  |
| Front  | 109 kg (240 lb.)                       | 109 kg (240 lb.)  |  |
| Rear   | 150 kg (330 lb.)                       | 150 kg (210 lb.)  |  |
| Retrieval Hitch  | 5                                      |   |  |
|  | 23 kg (50 lb.)                         | 23 kg (50 lb.)  |  |
| Drawbar, Extended Rigid  | 33 kg (72 lb.)                         | 33 kg (72 lb.)  |  |
| Winch  | 652 kg (1,437 lb.)                     | 652 kg (1,437 lb.)                                      |  |
| Fairlead, 4 Roller   | 85 kg (187 lb.)                        | 85 kg (187 lb.)   |  |
| Center Chain Guides  | 33 kg (73 lb.)                         | 33 kg (73 lb.)  |  |
| Full-Length Rock Guards  | 41 kg (90 lb.)                         | 41 kg (90 lb.)  |  |
| Maximum Life Undercarriage   | 80 kg (175 lb.)                        | 80 kg (175 lb.)   |  |
| Track Shoes  |  |   |  |
| 457 mm (18 in.)  |  |   |  |
| Heavy Duty   | In base                                | –464 kg (–1,023 lb.)                                    |  |
| Extended Life  | 16 kg (35 lb.)                         | -448 kg (-988 lb.)                                      |  |
| Maximum Life   |  |   |  |
|  | 143 kg (315 lb.)                       | –321 kg (–708 lb.)                                      |  |
| 508 mm (20 in.)  |  |   |  |
| Heavy Duty   | 96 kg (212 lb.)                        | -368 kg (-811 lb.)                                      |  |
| Extended Life  | 64 kg (141 lb.)                        | –400 kg (–882 lb.)                                      |  |
| Maximum Life   | 192 kg (423 lb.)                       | –272 kg (–600 lb.)                                      |  |
| 610 mm (24 in.)  |  |   |  |
| Heavy Duty   | _                                      | –162 kg (–357 lb.)                                      |  |
| Extended Life  | -                                      | –187 kg (–412 lb.)                                      |  |
| Maximum Life   | -                                      | –60 kg (–132 lb.)                                       |  |
| 710 mm (28 in.)  |  |   |  |
|  |  | I   |  |
| Heavy Duty   | -                                      | In base   |  |
| Extended Life<br>Maximum Life  | -                                      | -42 kg (-93 lb.)  |  |
|  | _                                      | 85 kg (187 lb.)   |  |

### 650 P-TIER

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| Machine Dimensions  | 650 P-TIER XLT / 650 P-TIER LGP |
|---|---------------------------------|
| A Overall Height to Roof (includes antenna base and grouser height) | 2899 mm (9 ft. 6 in.)           |
| Overall Height With Limb Risers<br>(includes grouser height)        | 2928 mm (9 ft. 7 in.)           |
| <b>B</b> Tread Depth With Single-Bar Grouser                        | 49 mm (1.9 in.)                 |
| <b>C</b> Ground Clearance in Dirt                                   | 345 mm (13.6 in.)               |
| D Overall Length  | 4250 mm (13 ft. 11 in.)         |
| Overall Length With Standard Drawbar                                | 4250 mm (13 ft. 11 in.)         |
| Overall Length With Extended Drawbar                                | 4414 mm (14 ft. 6 in.)          |
| Overall Length With Winch and Fairlead<br>Rollers                   | 4974 mm (16 ft. 4 in.)          |
| E Blade Lift Height   | 801 mm (31.5 in.)               |
| F Blade Digging Depth   | 538 mm (21.2 in.)               |
|   |                                 |

G Blade Cutting-Edge Angle, Adjustable 52

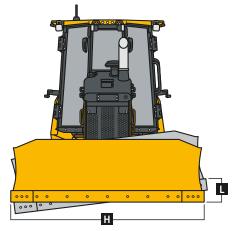


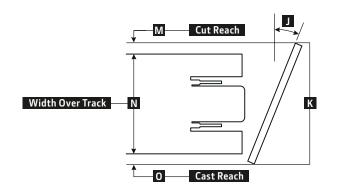
#### 650 P-TIER XLT / 650 P-TIER LGP

| achine Dimensions (continued)           | 650 P-TIER XLT   | 650 P-TIER LGP   |  |  |  |
|---|--|--|--|--|--|
| raight Blade                            |  |  |  |  |  |
| Blade Width                             | 2667 mm (105 in.) (8 ft. 9 in.)  | 2921 mm (115 in.) (9 ft. 7 in.)  |  |  |  |
| Blade Height                            | 1067 mm (3 ft. 6 in.)  | 955 mm (3 ft. 2 in.)   |  |  |  |
| SAE Capacity                            | 2.2 m³ (2.9 cu. yd.)   | 2.0 m <sup>3</sup> (2.6 cu. yd.)   |  |  |  |
| Weight                                  | 608 kg (1,340 lb.)   | 628 kg (1,385 lb.)   |  |  |  |
| C-Frame Assembly Weight (without blade) | 512 kg (1,129 lb.)   | 512 kg (1,129 lb.)   |  |  |  |
| Blade Angle                             | 22.9 deg.  | 22.9 deg.  |  |  |  |
| Overall Width With Blade Angled         | 2456 mm (8 ft. 1 in.)  | 2689 mm (8 ft. 10 in.)   |  |  |  |
| Blade Tilt                              | 363 mm (14.3 in.)  | 393 mm (15.5 in.)  |  |  |  |
| Cut Reach                               | 81 mm (3.2 in.)  | –36 mm (–1.4 in.)  |  |  |  |
| Width Over Track                        | 2007 mm (6 ft. 7 in.)  | 2464 mm (8 ft. 1 in.)  |  |  |  |
| Cast Reach                              | 368 mm (14.5 in.)  | 261 mm (10.3 in.)  |  |  |  |
| raight Blade (option)                   |  |  |  |  |  |
| Blade Width                             | 2921 mm (115 in.) (9 ft. 7 in.)  | 3150 mm (124 in.) (10 ft. 4 in.)   |  |  |  |
| Blade Height                            | 955 mm (3 ft. 2 in.)   | 894 mm (35 in.)  |  |  |  |
| SAE Capacity                            | 2.0 m³ (2.6 cu. yd.)   | 2.3 m³ (3.1 cu. yd.)   |  |  |  |
| Weight                                  | 628 kg (1,385 lb.)   | 631 kg (1,391 lb.)   |  |  |  |
| C-Frame Assembly Weight (without blade) | 512 kg (1,129 lb.)   | 512 kg (1,129 lb.)   |  |  |  |
| Blade Angle                             | 22.9 deg.  | 22.9 deg.  |  |  |  |
| Overall Width With Blade Angled         | 2689 mm (8 ft. 10 in.)   | 2899 mm (9 ft. 6 in.)  |  |  |  |
| Blade Tilt                              | 393 mm (15.5 in.)  | 429 mm (16.9 in.)  |  |  |  |
| Cut Reach                               | 193 mm (7.6 in.)   | 73 mm (2.9 in.)  |  |  |  |
| Width Over Track                        | 2007 mm (6 ft. 7 in.)  | 2464 mm (8 ft. 1 in.)  |  |  |  |
| Cast Reach                              | 490 mm (19.3 in.)  | 362 mm (14.3 in.)  |  |  |  |
|   | raight Blade Blade Width Blade Height SAE Capacity Weight C-Frame Assembly Weight (without blade) Blade Angle Overall Width With Blade Angled Blade Tilt Cut Reach Width Over Track Cast Reach raight Blade (option) Blade Width Blade Height SAE Capacity Weight C-Frame Assembly Weight (without blade) Blade Angle Overall Width With Blade Angled Blade Tilt Cut Reach Width Over Track Cast Reach Cast Reach Blade Height SAE Capacity Weight C-Frame Assembly Weight (without blade) Blade Angle Overall Width With Blade Angled Blade Tilt Cut Reach Width Over Track | raight Blade           Blade Width         2667 mm (105 in.) (8 ft. 9 in.)           Blade Height         1067 mm (3 ft. 6 in.)           SAE Capacity         2.2 m³ (2.9 cu. yd.)           Weight         608 kg (1,340 lb.)           C-Frame Assembly Weight (without blade)         512 kg (1,129 lb.)           Blade Angle         2.9 deg.           Overall Width With Blade Angled         2456 mm (8 ft. 1 in.)           Blade Tilt         363 mm (14.3 in.)           Cut Reach         81 mm (3.2 in.)           Width Over Track         2007 mm (6 ft. 7 in.)           Cast Reach         368 mm (14.5 in.)           Taight Blade (option)         291 mm (115 in.) (9 ft. 7 in.)           Blade Height         955 mm (3 ft. 2 in.)           SAE Capacity         2.0 m³ (2.6 cu. yd.)           Weight         628 kg (1,385 lb.)           C-Frame Assembly Weight (without blade)         512 kg (1,129 lb.)           Blade Angle         22.9 deg.           Overall Width With Blade Angled         2689 mm (8 ft. 10 in.)           Blade Angle         22.9 deg.           Overall Width With Blade Angled         2689 mm (8 ft. 10 in.)           Blade Tilt         393 mm (15.5 in.)           Cut Reach         193 mm (7.6 in.) |  |  |  |

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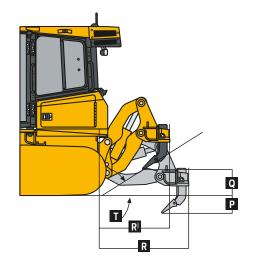
#### 650 P-TIER XLT 650 P-TIER LGP Machine Dimensions (continued) Straight Blade (option) H Blade Width 3251 mm (128 in.) (10 ft. 8 in.) I Blade Height 1126 mm (3 ft. 8 in.) 2.6 m<sup>3</sup> (3.4 cu. yd.) SAE Capacity 714 kg (1,574 lb.) Weight C-Frame Assembly Weight (without blade) 512 kg (1,129 lb.) \_ Blade Angle 22.9 deg. J K Overall Width With Blade Angled 3019 mm (9 ft. 11 in.) \_ Blade Tilt 433 mm (17 in.) L \_ M Cut Reach 127 mm (5 in.) \_ N Width Over Track 2464 mm (8 ft. 1 in.) \_ 0 Cast Reach 424 mm (16.7 in.)

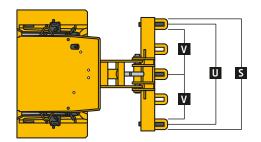




**650 P-TIER** 

| R                | Rear Ripper                              | 650 P-TIER XLT / 650 P-TIER LGP |
|------------------|--|---------------------------------|
| Ν                | /lulti-shank parallelogram ripper with 5 | pockets and 3 shanks            |
| Weight           |  | 981 kg (2,163 lb.)              |
| Ρ                | Maximum Penetration                      | 508 mm (20 in.)                 |
| Q                | Maximum Clearance Under Tip              | 508 mm (20 in.)                 |
| R                | Overall Length, Lowered Position         | 1450 mm (57 in.) (4 ft. 9 in.)  |
| $\mathbf{R}^{ }$ | Overall Length, Raised Position          | 1015 mm (40 in.) (3 ft. 4 in.)  |
| S                | Overall Beam Width                       | 1830 mm (6 ft. 0 in.)           |
| Т                | Slope Angle (full raise)                 | 40 deg.                         |
| U                | Ripping Width                            | 1670 mm (5 ft. 6 in.)           |
| v                | Distance Between Shanks                  | 806 mm (32 in.)                 |





# Additional equipment

#### 650 P Engine

- Turbocharged and air-to-air aftercooled
- Electronic control with automatic engine protection
- Eco mode
- Dual safety element dry-type air cleaner, evacuator valve
- Exhaust filter, under hood, with vertical stack
- Engine glow-plug starting system
- Automatic turbo cool-down timer
- Programmable auto-idle and auto shutdown
- Wet-sleeve cylinder liners
- Remote-mounted fuel filters with automatic electronic priming
- ▲ Engine coolant heater, 110 volts
- ▲ Rotary ejector engine air pre-cleaner
- ▲ Severe-duty fuel filter and water separator with heating element
- 100-amp alternator, cab and canopy
   Cooling
- Hydraulically driven cooling fan, variable-speed suction type
- Automatic, programmable reversingfan-drive fan
- Engine cooling rated –37 deg. C (–34 deg. F)
- Enclosed safety fan guard (conforms to SAE J1308 and ISO3457)
- Perforated engine side shields
- Heavy-duty, trash-resistant radiator and high-ambient cooling package
- ▲ Heavy-duty perforated grille

Key: ● Standard ▲ Optional or special

#### 650 P Powertrain

- Dual-path hydrostatic (HST) transmission
- Reverse-speed ratios (100%, 115%, and 130% presets)
- Remote diagnostic test ports
- Operator-selectable decelerator function (hydrostats and engine or hydrostats only)
- Wet, multi-disc parking brake
- Full power turns with infinitely variable track speed
- Single-lever steering with counterrotate function
- HST (dynamic) service brakes
- Automatic cold-weather transmission warmup system
- Automatic transmission derating for exceeded system temperatures
- 2,000-hour vertical spin-on transmission filter

#### Hydraulic System

- Open-center fixed-displacement hydraulic gear pump
- 3-spool manual control valve
- 3-spool electrohydraulic (EH) control valve
- ▲ 4-spool manual-control valve
- ▲ 4-spool EH control valve with single auxiliary
- 2,000-hour vertical spin-on hydraulic filter
- ▲ Drive-through hydraulic pump for use with winch
- ▲ Fire Dozer Ready including 5-spool valve with float
- ▲ Electrohydraulics with EZ Grade

See your John Deere dealer for further information.

- 650 P Precision Construction Solutions
  - ▲ 2D Grade Control
- ▲ SmartGrade<sup>™</sup> Ready Including 2D Grade Control
- ▲ SmartGrade with Topcon
- ▲ SmartGrade with Leica

#### Overall Vehicle

- Front tow loop, bolt-on
- Reinforced engine and mid-frame bottom guards
- Integral transmission guard
- Vandal protection: Engine access door / Side tank access doors / Fuel tank / Instrument panel / Transmission reservoir / Hydraulic reservoir
- ▲ Fluid-sample valves
- ▲ Quick-service ports
- Forestry limb risers (sweeps)
   Attachments

#### Attachments

- ▲ Counterweight, front, 109 kg (240 lb)
- ▲ Retrieval hitch with pin
- Extended rigid drawbar with pin for pull-type implements
- Drawbar, extended for winch (with or without fairlead)
- Rear ripper, parallelogram, 3 shank, 5 pocket
- ▲ Winch, John Deere 4000, power in/ free spool out OR power out
- Winch, John Deere 4000, low speed, power in/free spool out OR power out
- ▲ 4-roller fairlead for winch
- ▲ Root-rake blade attachment

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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 a unit with standard equipment, rollover protective structure (ROPS), full fuel tank, and 79-kg (175 lb.) operator.

## Additional equipment (continued)

Key: ● Standard ▲ Optional or special

See your John Deere dealer for further information.

| 650 P  | Undercarriage   |        |     | Operator's Station /  |        |     | Operator's Station /                                       |
|--------|---|--------|-----|---|--------|-----|--|
|        | Front idler quards  | Canopy | Cab | Electrical (continued)  | Canopy | Cab | Electrical (continued)                                     |
|        | Rear chain guides   |        | ۲   | Wipers, intermittent with   | •      | ۲   | Keyless start with multiple                                |
|        | Center chain guides   |        |     | washers: front window and   |        |     | security modes   |
|        | Track adjuster relief valves                                  |        |     | left and right doors  | •      |     | Battery, dual, 24 volts                                    |
| •      | Maximum Life undercarriage system                             |        |     | Rear wiper and washer   |        |     | External-mounted attach-                                   |
|        | with SC-2 <sup>™</sup> bushings                               |        |     | Rearview camera   |        |     | ment mirror  |
|        | Extended Life undercarriage with SC-2                         |        |     | Cab step (bolt on)  | •      |     | JDLink <sup>™</sup> wireless communi-                      |
|        | bushings  |        |     | Beacon light (roof mounted)                                       |        |     | cation system (available in                                |
|        | Heavy-duty sealed and lubricated                              |        |     | Full screens  |        |     | specific countries; see your                               |
|        | undercarriage   |        |     | Side screens  |        |     | dealer for details)  |
|        | Full-length rock guards                                       |        |     | Rear window screen  |        | _   | Trim Packages  |
| •      | Double-flange rollers   |        | •   | Under-seat heater   |        |     | Level 1: Black exhaust stack,                              |
| XLT    | LGP 650 P-Tier Shoes  | •      |     | Lockable master electrical  |        |     | halogen lights (cab front [4]                              |
| •      | ▲ 457-mm (18 in.) moderate                                    |        |     | disconnect switch   |        |     | and cab rear [2]), AM/FM/<br>Weather Band (WB) radio       |
| ·      | service   | •      |     | Multifunction/multi-lan-  |        |     |  |
|        | ▲ 508-mm (20 in.) moderate                                    |        |     | guage LCD monitor: Analog   |        |     | with USB and auxiliary port,<br>standard seat (fabric with |
|        | service with clipped corners                                  |        |     | display (fuel level, coolant                                      |        |     | heavy-duty air suspension),                                |
|        | ▲ 610-mm (24 in.) moderate                                    |        |     | temperature, and engine oil                                       |        |     | and manual HVAC tempera-                                   |
|        | <ul> <li>service</li> <li>710-mm (28 in.) moderate</li> </ul> |        |     | pressure) / Digital display                                       |        |     | ture adjustment  |
|        | service with clipped corners                                  |        |     | (engine rpm, charge pressure,<br>hours, diesel particulate filter |        |     | Level 2: Chrome exhaust                                    |
|        | Operator's Station /  |        |     | (DPF)-soot level, and trans-                                      |        | -   | stack, LED lights (cab front                               |
| Canop  |   |        |     | mission direction/speed range)                                    |        |     | [4], cab rear [4]), AM/FM/WB                               |
| Callop | <ul> <li>Retractable seat belts,</li> </ul>                   |        |     | Multifunction/multi-lan-  |        |     | radio with Bluetooth <sup>®</sup> , remote-                |
| •      | 76 mm (3 in.) (conform to                                     | -      | •   | quage 8-inch touch-screen   |        |     | mounted USB, auxiliary port,                               |
|        | SAE J386)   |        |     | LCD monitor: Digital display                                      |        |     | and microphone, premium                                    |
|        | <ul> <li>Accessories: Convex wide-</li> </ul>                 |        |     | (fuel level, coolant temper-                                      |        |     | heated/ventilated seat (leather                            |
|        | angle interior rearview                                       |        |     | ature, engine oil pressure,                                       |        |     | bolstered with heavy-duty air                              |
|        | mirror / Thigh cushions (2) /                                 |        |     | engine rpm, charge pressure,                                      |        |     | suspension), and automatic                                 |
|        | Cup holders (2)   |        |     | hours, DPF-soot level, trans-                                     |        |     | temperature controlled (ATC)                               |
| •      | <ul> <li>Power port (cab includes</li> </ul>                  |        |     | mission direction/speed range,                                    |        |     | HVAC system  |
|        | power ports [2])  |        |     | clock engine hours, and slope                                     |        |     | Level 1: Black exhaust stack                               |
| •      | <ul> <li>Dash-mounted storage</li> </ul>                      |        |     | control (if equipped)   |        |     | and halogen lights (cab front                              |
|        | compartment   | ٠      |     | Built-in diagnostics:   | •      |     | [4] and cab rear [2])                                      |
|        | <ul> <li>Air conditioner and heater,</li> </ul>               |        |     | Diagnostic-code details /   |        |     | Level 2: Chrome exhaust                                    |
|        | 24,000 Btu  |        |     | Sensor values / Calibrations /                                    |        |     | stack and LED lights (cab                                  |
|        | <ul> <li>Dome light</li> </ul>                                |        |     | Individual circuit tester   |        |     | front [4], cab rear [4])                                   |
|        |   |        |     |   |        |     |  |

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 a unit with standard equipment, rollover protective structure (ROPS), full fuel tank, and 79-kg (175 lb.) operator.



