

# WHEELED FELLER BUNCHERS

643L / 843L



JOHN DEERE



INTRODUCING THE  
**L-SERIES**



***YOU RAISED  
THE BAR.  
WE CHANGED  
THE GAME.***



FD55

**TO DEVELOP THESE NEXT-GENERATION MACHINES,** we met with loggers all over the world — the ones who live it every day. Our customers spoke. **And we listened.**

Through Customer Advocate Groups (CAGs), we collected fresh insight on what works and what doesn't. Over 250,000 engineering hours, combined with over 11,500 hours of testing in everyday, real-world conditions, ensure these machines are our most reliable and productive ever.

These new wheeled feller bunchers redefine uptime, productivity, and low daily operating costs. And will change your expectations about what your logging operation can accomplish.



*Over the last few years, we've seen our brainstorming and ideas transformed into a machine that has conformed to the high standards we set. We helped create a machine that's even more durable, more efficient, and more operator friendly than we even imagined.*

**Jack McFarland, CAG member**  
McFarland Timber, Winnfield, Louisiana



**BUILT TO THE HILT**

# Never lets up. Or lets you down.

You need a machine that works as long and hard as you do. L-Series Wheeled Feller Bunchers feature robust hydraulic and electrical systems designed to help keep your operation up and running, and boost your bottom line.

## **Simplified electrical system**

Sealed-switch module (SSM) consolidates many switches in one location, eliminating numerous unsealed connections and mechanical rocker switches, for maximum durability.

## **Tougher pins, bushings, and hydraulic cylinders**

Pins and bushings on the booms and masthead are more robust, for longer life. Straight bushings are more reliable and easier to replace. Larger lift and tilt hydraulic cylinders feature heavy-duty wiper seals to keep out water, dust, and debris.

## **Reliable maneuverability**

Durable heavy-duty axles help deliver stability and hill-climbing power under the toughest forest conditions.

## **Turbo cool-down**

Automatic turbo cool-down extends idle time for a predetermined interval at shutdown when the engine is hot, to help maximize component life.



## COMFORTABLE AND IN CONTROL

## Redesigned cab and ergonomics.

Designed by loggers for loggers, the updated cab is significantly quieter. It's roomier and more comfortable, too, boasting a more efficient HVAC system, operator-configurable controls, and plenty of storage space.

**Larger, quieter cab**

The spacious, comfortable cab is 25-percent larger, with half the noise. And 21-percent-more front window area dramatically improves visibility.

**Power-management system**

By adjusting the power to the felling head and drive motors, the operator can optimize multifunction performance to suit the application and operating conditions.

**Configurable controls**

Smooth, one-of-a-kind electrohydraulic (EH)-enabled controls allow operators to configure joystick buttons to their own individualized preference. Optional joystick and foot controls deliver smooth, low-effort control to help reduce operator fatigue over long shifts. The ability to tailor machine controls to the operator creates a customized environment, improving comfort and boosting productivity.



*John Deere really looks after loggers. They are really responsive to our needs, and it's evident in this machine. The cab comfort is great — I don't think you can make it any better. And the visibility is a vast improvement.*

**Frank Texler, CAG member**  
Wadesboro, North Carolina



**25%**  
LARGER  
CAB

**21%**  
LARGER FRONT  
WINDOWS



**1/2 THE NOISE**

**GET MORE DONE**

# A cut above.

What operator wouldn't be more productive in an L-Series Wheeled Feller Buncher? Combining up to 11-percent more horsepower, 12-percent faster cycle times, and best-in-class power-to-weight ratio, along with a new push-button Quick Dump function, these hard workers provide the muscle and finesse you need to jumpstart productivity in the woods.

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## **New one-button Quick Dump**

Simply press a button to open both accumulating and grab arms simultaneously, releasing trees from the pocket. Head-tilt and arm functions are combined into a single, smooth motion, minimizing fatigue while improving productivity.

## **Enhanced lighting options**

Six high-intensity halogen driving lights are standard when you need to extend your workday beyond daylight. For additional illumination, opt for a working-light or LED package.

## **Impressive power-to-weight ratio**

L-Series machines boast significantly more horsepower for superb responsiveness. Unsurpassed power-to-weight ratio ensures steady multifunction performance in wet or hilly conditions.

## **More stable, more able**

Optimal weight distribution and longer wheelbase improve balance, for better stability when climbing hills and controlling trees. The 643L and 843L are 229-mm (9 in.) and 381-mm (15 in.) longer, respectively, than their previous model.





FD45

WARNING

DANGER



UP TO **110%** MORE HORSEPOWER

## FT4 COMPLIANCE

# Tiers without fears.

You asked for the best technology choice to meet EPA Final Tier 4 (FT4)/EU Stage IV emission regulations, and we listened. We understand your concerns, so we've always focused on adding the right engine technologies at the right time. This smart approach to meeting emission regulations doesn't compromise on power, reliability, or ease of operation.



# 60.5M

**TEST HOURS TOWARDS FT4**



### **FT4 engines**

Our FT4/Stage IV diesel engines meet emission regulations without sacrificing power or torque. We built on our EPA Interim Tier 4 (IT4)/EU Stage IIIB solution to deliver the best combination of performance, efficiency, and reliability. These technologies are simple and fluid efficient.

### **Low total fluid consumption**

John Deere FT4 engines maintain engine performance while minimizing total fluid consumption — diesel fuel plus diesel exhaust fluid (DEF). The exceptionally low DEF consumption rate reduces the need for DEF by four to six times compared to some other FT4 systems.

### **Minimal impact on operation**

During normal operating conditions, the engine's natural heat breaks down trapped particulate matter and cleans the exhaust filter (DPF) without impacting machine operation. Ash-service intervals for the diesel particulate filter are condition based, meaning the machine will notify the operator before service is required. Typically, ash service is not necessary until the first engine overhaul. Machine application, regular maintenance practices, and type of lubricating oil impact ash-service intervals.



+21°

**TILT-FORWARD**  
FOR BETTER STABILITY  
AND BUNCH CONTROL



## HEAD-TO-HEAD COMPARISON

# Disk-saw felling heads for every need.

Deere offers you a choice of three different felling heads for the 643L and 843L. By matching the right felling head to your application, tree type, and conditions, you can improve productivity while extending the life of the carrier.

### FD45

- Open area between post for good tree visibility
- High productivity in thinning applications
- Deepest accumulation pocket (largest of the three), to improve productivity for thinning small trees
- Best paired with a 643L for both flat and hilly applications in dry or muddy conditions

### FD55

- Multipurpose for harvesting applications from thinning through clear-cutting
- Large accumulation area; suited for handling a wide range of tree diameters
- Good visibility to tree being cut
- Best paired with 843L in hilly or muddy applications, and with 643L in flat conditions

### FD22B

- Best option for large, mature trees
- Designed for centering large trees, while big enough to accumulate several midsized trees
- Improved cutting-zone visibility
- Best paired with 843L in hilly or muddy applications, and with 643L in flat conditions



*We wanted the cutting head to tilt forward more, for better stability and bunch control. Deere really delivered by adding 21 deg. of forward tilt.*

**Jim Ard, CAG member**  
Ard Timber, Inc., Ruth, Mississippi





**ULTIMATE UPTIME, FORESTSIGHT™, TIMBERNAVI™**  
**Because time is money.**

As a logger, you demand more uptime. Fast, accurate diagnosis of machine problems. Rapid, effective service response and the right part, the first time. And closer tracking of machines and operators for efficient operation. John Deere forestry technology solutions are there to help you.

#### **Ultimate Uptime**

In addition to the base John Deere ForestSight features, our dealers work with you to build an uptime package that meets your specific needs, including customized maintenance and repair agreements, onsite parts availability, extended warranties, fluid sampling, response-time guarantees, and more.

#### **Work faster with TimberNavi**

Get a clearer picture of your operations with the optional new TimberNavi. This easy-to-use GPS-mapping technology provides locations of site features such as streams, roads, and electricity lines on a rugged color touchscreen display, enabling operators to work with confidence. Precise knowledge of machine position relative to cut-block boundaries will help you maximize efficiency, so you can move more wood to the landing at less cost.



### **John Deere ForestSight**

With a JDLink™ subscription, alerts can be sent to your computer or mobile device — or your dealer, if you choose — to inform you of immediate machine issues. If downtime does occur, exclusive remote diagnostics and programming enable your Deere dealer to minimize the time and cost associated with sending a technician to the logging site for an initial diagnostic visit. You can also receive reminders of periodic scheduled maintenance on your computer or mobile device, or from your dealer.

### **Remote diagnostics**

When your machine is equipped with JDLink, fast, accurate remote diagnostics, rapid service response with the right part the first time, industry-leading parts availability, and dealer service are always within easy reach.

### Simplified serviceability

Daily service checks, including fluid levels and greasing, are easier on an L-Series. Grouped service points also simplify daily maintenance. Fresh-air cab filter is quickly serviced from ground level. Plus large panels are easily removed for wide-open access to the engine compartment, and the cab tilts to provide quick access to other components.

### Hydraulic reversing fan

Reversing fan automatically reverses airflow at 30-min. intervals to eject debris from the cooler cores, conserving power and fuel. Variable-speed fan runs only as fast as needed, or if conditions demand more frequent cleaning, simply press a button to actuate the reversing cycle.

### Grease-thru pins

Grease-thru pins eliminate hunting around for zerks, allowing easier access for quick servicing.



# MAINTENANCE



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### Wide-open access to cooling package

Cooling fan and other cooling system components swing out for quick and easy cleaning. Air-intake compartment is sealed off from the engine compartment to keep things cool.

### Auto-idle and shutdown

Auto-idle automatically reduces engine speed after an operator-configurable interval of inactivity, reducing fuel consumption and noise, while extending component life. Auto shutdown turns off the engine after a preset length of time, further reducing engine wear and fuel costs.

### Extended filter-change interval

Hydraulic filter service has been extended from 2,000 to 4,000 hours, decreasing planned downtime and expense. Most customers will be able to work a whole season without a change interrupting production.



# E MADE EASY.

## 643L / 843L

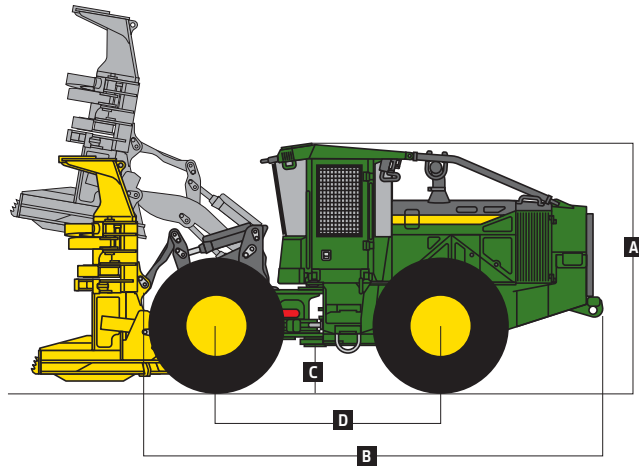
Engine	643L	John Deere PowerTech™ 6.8L	843L	John Deere PowerTech PSS 6.8L
Manufacturer / Model	John Deere PowerTech™ PSS 6.8L	John Deere PowerTech™ 6.8L	John Deere PowerTech PSS 6.8L	John Deere PowerTech PSS 6.8L
Off-Road Emission Standards	EPA Final Tier 4 / EU Stage IV	EPA Tier 2 / EU Stage II	EPA Final Tier 4 / EU Stage IV	EPA Final Tier 4 / EU Stage IV
Gross Power	157 kW (211 hp)	157 kW (211 hp)	201 kW (270 hp)	201 kW (270 hp)
Gross Torque	923 Nm (680 ft.-lb.)	923 Nm (680 ft.-lb.)	1141 Nm (841 ft.-lb.)	1141 Nm (841 ft.-lb.)
Number of Cylinders	6			
Valves per Cylinder	4			
Engine Displacement	6.8 L (414 cu. in.)			
Engine Bore and Stroke	106 x 127 mm (4.19 X 5.00 in.)			
Fuel System	High-pressure common rail			
Aspiration	Turbocharged and charge-air cooled			
Air Cleaner	Dual stage with safety element and dust unloader valve			
Engine Cold-Start System	Glow plugs			
<b>Cooling</b>	<b>643L / 843L</b>			
Cooling System	Heavy-duty radiator with continuous deaeration tank and recovery reservoir			
Fan Drive	Hydraulic, variable speed, reversing			
<b>Powertrain</b>				
Transmission	Infinite variable hydrostatic with 2-speed gearbox			
Number of Gears, Forward and Reverse	2			
Maximum Speed with 28L-26 Tires				
Low Gear	8.0 km/h (5.0 mph)			
High Gear	17.5 km/h (10.8 mph)			
<b>Axles</b>				
Front Axle Oscillation, Stop to Stop	30 deg.			
Options	1400 Extreme Duty and SWEDA™			
Differential (front and rear)	Hydraulic-locking, operated-on-the-go, closed-center differential lock			
Steering	Fully hydraulic, joystick			
Articulation Angle	45 deg. each direction			
Service Brakes	Inboard-mounted, wet-disc, oil-cooled, self-adjusting and self-equalizing front and rear axles			
Parking Brake	Automatically spring-applied, hydraulically released, sealed and lubricated, wet multi-disc			
<b>Hydraulics</b>				
Main Pump	Open circuit, axial piston, variable displacement			
Maximum Displacement	90 cc/rev. (5.49 ci/rev.)			
<b>Electrical System</b>				
Voltage	24 volt			
Number of Batteries (12 volt)	2			
Battery Capacity (each)	950 CCA			
Alternator Rating	150 amp			
Lights	6 (10 optional)			
<b>Refill Capacities</b>				
Fuel Tank	396 L (104.6 gal.)			
Hydraulic Reservoir	169.1 L (44.7 gal.)			
Diesel Exhaust Fluid (DEF) Tank	20.9 L (5.5 gal.)			
<b>Operating Weights</b>				
Machine Weight (less felling head)	13 910 kg (30,704 lb.)			
With Saw, FD45	16 383 kg (36,120 lb.)			
With Saw, FD22B	17 081 kg (37,659 lb.)			
With Saw, FD55	17 000 kg (37,480 lb.)			

Specifications are subject to change without notice.

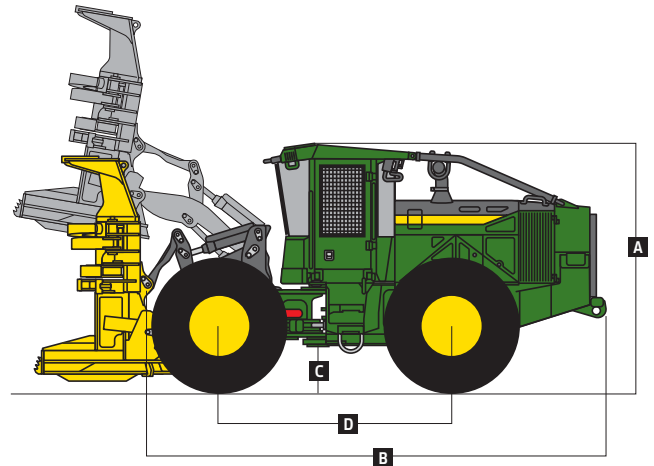


Machine Dimensions		643L	843L
Tire Size		28L-26	28L-26
<b>A</b>	Overall Height	3216 mm (126.6 in.)	3216 mm (126.6 in.)
	Overall Width (with 711-mm [28 in.] tires [1400 axles])	2913 mm (114.7 in.)	2913 mm (114.7 in.)
<b>B</b>	Overall Length (less felling head)	6293 mm (247.7 in.)	6293 mm (247.7 in.)
<b>C</b>	Ground Clearance	484 mm (19 in.)	484 mm (19 in.)
<b>D</b>	Wheelbase	3023 mm (119 in.)	3175 mm (125 in.)
Felling Head Information		643L / 843L	
Head		<i>FD45 DSFH – Twin Post</i>	<i>FD22B DSFH – Single Post</i>
Maximum Cutting Capacity		508 mm (20.0 in.)	559 mm (22.0 in.)
Maximum Accumulation Capacity		0.65 m <sup>2</sup> (7.0 sq. ft.)	0.48 m <sup>2</sup> (5.2 sq. ft.)
Opening at Front of Housing		864 mm (34.0 in.)	1290 mm (50.8 in.)
Blade Diameter		1346 mm (53.0 in.)	1422 mm (56.0 in.)
Number of Teeth		18	18
Width at Saw Housing		1582 mm (62.3 in.)	1618 mm (63.7 in.)
Height		2515 mm (99.0 in.)	2954 mm (116.3 in.)
Weight (no blade cover or tilt links)		2424 kg (5,345 lb.)	3071 kg (6,770 lb.)

643L Wheeled Feller Buncher



843L Wheeled Feller Buncher



Machine not exactly as shown. Illustrations for dimensioning purposes only.



You never quit, so we had to build a machine tough enough to keep up. Building on 178 years of groundbreaking innovation and a half-century of experience in the woods. Designed with proven components to withstand whatever the woods throw your way. Our new feller bunchers are modeled after the hardest worker in the forest. You.

We're for Loggers



**JOHN DEERE**