

WHEELED FELLER BUNCHERS

643J 843J

FULL TREE SYSTEM

HARVESTING

TRANSPORTING

LOADING



JOHN DEERE

REDEFINING NEW AND IMPROVED.

The new J-Series feller bunchers are loaded with improvements to make you more productive and your equipment more reliable.



The sloped rear engine section gives the operator better visibility and keeps debris from building up.

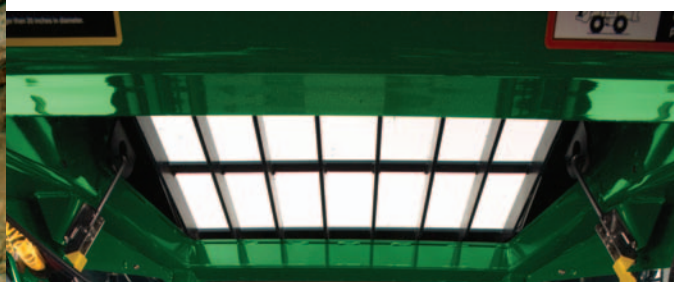
FULL TREE SYSTEM		
HARVESTING	TRANSPORTING	LOADING

Full Tree System—No one offers the extensive product line, dealer network and tough, purpose-built machines of John Deere.

New instrument package features a digital display for at-a-glance operating condition readouts and engine error code displays.

Larger skylight is removable, providing a third exit as well as greatly improving upward visibility.

The new fuel gauge takes the guesswork out of fuel levels and allows the operator to determine when to refuel for maximum production.



	643J	843J
John Deere Engine Rated Power	6068H—174 hp 130 kW@ 2,200 rpm	6068H—225 hp 168 kW@ 2,200 rpm
John Deere Engine Max Power	6068H—201 hp 150 kW@ 2,000 rpm	6068H—235 hp 175 kW@ 2,000 rpm
Standard Operating Weight, Less Felling Head	27,990 lb. 12 696 kg	27,990 lb. 12 696 kg

From the horsepower boost of the 6068H engine (increasing your multi-functioning capabilities) to the new FD22B single-post felling head (with faster saw recovery and increased accumulating capacity) the new 643J and 843J feller bunchers have been engineered to give you more productivity and uptime on every shift, while costing you less to operate at the end of the day.

The list of new design features that benefit your productivity and uptime continues with the optional light package that extends your hours of operation, the larger fuel tank that lets you work longer between refueling and the reversing cooling fan that keeps debris buildup to a minimum. And that's just the beginning.

MORE HURRY UP. LESS WAIT.


WHEELED FELLER BUNCHERS

643J 843J



Optional light package for 24-hour operation.

Improved tilt-back geometry with the FD22B and new link gives you better stability and load transfer capabilities, especially on sloped ground.



Larger skylight gives the operator excellent upward visibility to the tree tops as well as a third exit.

Forward-sloping windshield provides best-in-class visibility and less debris buildup.

Industry-leading cab features an adjustable suspension seat with optional four-point seat harness, high-efficiency climate controls and either wheel steering or lever steering controls for unsurpassed operator comfort and maximum productivity.

Reversible cooling fan automatically blows out debris, keeping buildup to a minimum and allowing you to work instead of cleaning out the engine compartment.

Swing-out A/C condenser unit makes it easy to clean out debris and easier to service.

Increased engine oil changing intervals from 250 hours to 500 hours cost you less in money and time.

New hydraulic hand pump allows the operator to refill hydraulic oil in the woods and features an inline filter that keeps harmful contaminants out of vital components.

New emission-compliant 6068H diesel engine, with 174 hp in the 643J and 225 hp in the 843J, for better multi-functioning and faster cycle times.

PRODUCTIVITY BEGINS AT THE ENGINE.

Both J-Series models feature the more powerful, emission-compliant 6068H engine that greatly improves the machine's performance.

The new 6068H diesel engine gives the 643J a boost up to 174 rated horsepower and 225 rated horsepower in the 843J. That means more power for improved multi-functioning capabilities and faster cycle times so you can make your next cut much quicker. The new "Managed Horsepower" system allocates power to the hydraulic functions and disc saw felling head attachment to balance demand and keep them running at peak performance at the same time.

When you work on sloped ground or with big timber, the increased tilt-back angle of the FD22B saw head will give you better load transfer capabilities and stability. You'll work more confidently with the best-in-class cab, which provides excellent visibility upward through the larger skylight and forward through the forward-sloping windshield. This design also keeps debris from collecting and blocking your view, as well as reducing the effect of rain and snow.

The new optional lighting package enables you to work longer shifts for increased productivity.



The 643J has an increased wheelbase of 110 inches for better stability on sloped ground and a tighter turning radius for better maneuverability in first thinnings.

The comfortable, spacious cab John Deere is known for, comes with either wheel steering or lever steering controls. The cab is well appointed with an adjustable suspension seat, AM/FM/CD stereo and high-efficiency climate controls to make the operator as productive as possible. An optional four-point seatbelt package is available to help stabilize the operator working in rough terrain.

WORK CLEANER. WORK LONGER.

All the new improvements to the J-Series feller bunchers keep debris buildup and contamination to a minimum so you can stay in the woods.



The J-Series features best-in-class serviceability access with a tilt cab and full-service access panels. The air cleaner assembly is angled for easy replacement.

- Glow plugs enable cold weather starting, even when the temperature drops below freezing.
- Separate reservoirs for the differential and hydraulic circuits allow you to use the appropriate oil for each, providing optimum performance.
- New weldment design around the lift arm cylinders protects hoses from debris buildup and reduces downtime.



The heavy-duty rear grill has been designed to filter out fine particles before they get to the coolers and cause big problems. The swing-out design makes for easy access.

Keeping harmful debris out of your feller buncher's vital components is crucial to your uptime. The new hydraulically reversing cooling fan automatically blows debris off the grill screen for better airflow into the engine, allowing it to run much cooler. And the sucker fan has been designed to draw air through the rear and out the sides to significantly reduce buildup under the cab and around the engine manifold.

Other new anti-contamination improvements to the J-Series include a new hand pump on the hydraulic system, which allows the operator to add hydraulic oil in the woods. The system pumps oil through a filter before it goes to the tank, ensuring contaminant-free oil is going into the machine. And there's the swing-out A/C condenser unit that allows you to easily get behind it to clean out debris. When it comes to servicing, the swing-out feature puts the unit where you can work on it without busting your knuckles.

NEW HEAD HAS FEATURES TO BENEFIT YOUR BOTTOM LINE.

Introducing the new FD22B disc saw felling head. The increased horsepower from the new engine gives you faster saw recovery speeds, as well as new design updates that improve accumulation and more effective load handling.



The offset horn design and gathering arm profile lines up with the butt plate, keeping stems aligned for larger bunches and better control.

Wider spacing between the gathering and accumulation arms enables better stem control.

Accumulator arms have been rotated to pull stems off to the side, maximizing accumulation.

Offset butt plate and pocket increase accumulation area capacity by up to 20%.

The patent-pending, three-piece saw housing is bolted, not welded, for easy replacement. Available in either hardened steel or Technodur[®], the wear plate helps extend the life of the saw housing.

FELLING HEADS	FD22B	FD45	FB20 SHEAR
Cutting Capacity	22 in. 56 cm	20 in. 51 cm	20 in. 51 cm
Style	Single-post center pocket	Twin-post side pocket	Twin-post side pocket
Accumulating Capacity	5.17 sq. ft. 0,48 m ²	6.9 sq. ft. 0,64 m ²	5.2 sq. ft. 0,48 m ²
Weight	6,640 lb. 3 012 kg	4,850 lb. 2 200 kg	6,300 lb. 2 858 kg



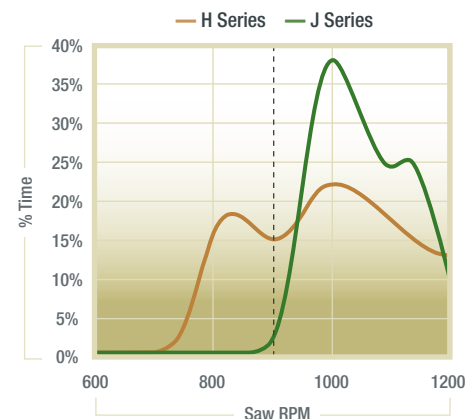
The FD45 felling head has best-in-class size and productivity, with an offset pocket to gather multiple small stems. Single-side accumulating and gathering arms reliably gather and move stems to the pocket cut after cut. The twin-post design gives the operator a clear view of what he's cutting.

The FB20 shear head has high accumulation capacity and strength for high productivity in heavy going with one fixed blade and one moveable shear blade. Its twin-post design with side pocket gives you the confidence to handle bigger stems in thinning operations.

With the added horsepower from the 6068H engine, the FD22B's saw recovers much quicker after the cut. Those faster speeds will allow you to make more cuts per shift. The slightly offset accumulation pocket, new arm geometry and horn design of the FD22B increases its accumulation capacity up to 20% more than the previous model. Being able to gather bigger bunches improves your productivity. We increased the grabbing arm's holding capacity as well so you have better control of those larger bunches.

The FD22B saw housing has been redesigned with tapered sidewalls and brush-away plate to keep chips and debris from getting lodged in the saw housing, greatly reducing the hassle and time-consuming chore of unplugging the head.

843 SAW RPM MULTI-STEM HARDWOOD



When it comes to production, it's all about time. And your time should be spent cutting, not waiting. To cut effectively, the saw speed should stay above an average speed of 900 rpm (depending on the application). The new J Series, with increased horsepower and power management, can maintain higher saw speeds for longer periods of time, even in demanding hardwood applications. Simply stated, the saw is available to cut more often, resulting in a significant productivity increase.

AT THE END OF THE DAY, IT'S ALL ABOUT SAVING MONEY.

Extended service intervals, smart design and longer wearing components keep your daily operating costs under control.



Rest assured that your purpose-built John Deere Forestry equipment is supported by the most extensive dealer network in the industry and unsurpassed parts availability. That's our promise.

Of course the 643J's and 843J's load-sensing hydraulics that run all functions simultaneously improve productivity. And easy service access to maintenance points on both machines makes service a quicker and easier process to get you back up and running sooner. But there's so much more.

The new 6068H diesel engine meets all standards for reduced emissions. The service interval between oil changes has been extended from 250 hours to every 500 hours. Less oil changes mean less money on oil and less downtime changing the oil. Then there's the new fuel filtration system that increases the life of the fuel filter. And at the end of the day, a dollar saved is a dollar earned.

OPERATOR'S STATION

Air conditioner (R134A refrigerant)

AM-FM stereo radio and CD player with two (2) remote-mounted speakers

Cab tilt with onboard hydraulics

Cab with integral forestry guarding, FOPS, OPS, and ROPS protective structure

Coat hook

Cup holder

Defroster fan (right front of cab)

Fire extinguishers, dry chemical and pressurized water

Floor mat

Full-function monitor instrumentation with audible warning for: Engine air intake temperature / Engine coolant temperature / Engine oil pressure

Monitor indicator lights for: Engine air filter restriction / Low alternator voltage / Park brake / Transmission (hydraulic) oil filter restriction / Hydraulic low level indicator / Diff lock engaged / Saw engaged / Engine derate (Stop) indicators / Glow plug start light

Gauges, illuminated: Engine coolant temperature / Hydrostatic transmission oil tank temperature / Fuel gauge / Engine monitor

Hand throttle—potentiometer electric

Headliner

Heater, 40,000 Btu

Horn

Hourmeter, illuminated

Interior light

Lockable cab door

Lunch cooler storage area

Pressurizer, dual-zone, three-speed with fresh air inlet—with suction fan

Rearview mirror, interior mounted

Seat, fabric covered, adjustable suspension, knee action with: Height and weight adjustment / Seat armrest height adjustment / High back with headrest / Seat backrest angle adjustment

Seat belt, 2-in 51 mm wide with retractor (conforms to SAE J386)

Secondary exit (right side window)

Large third exit window (skylight)

Sliding side windows (2)

Tinted polycarbonate windows

Storage in left-hand door

STANDARD EQUIPMENT

Engine

John Deere 6068, 414 cu-in 6,8 L 174 rated hp 130 kW (643J only) 201 max hp 150 kW (643J only)

John Deere 6068, 414 cu-in 6,8 L 225 rated hp 168 kW (843J only) 235 max hp 175 kW (843J only)

4-valve High Pressure Common Rail fuel system

Antifreeze to -34°F -37°C

Cooling fan, enclosed with guard / Hydraulic reversing fan / First air sucker / With deflection baffle

Ground speed limiter control

Wheel steering, telescopic and tilt column, steering wheel spinner knob

Coolant recovery tank

Electric fuel shutoff with start switch key

Fuel filters, dual stage, quick release

Fuel water separator

Isolation-mounted engine

Oil drain shutoff for spill-free oil changes

Oil-to-water engine oil cooler

Electrical

Battery disconnect in operator's station

Dual, heavy-duty, low-maintenance batteries

Transmission

Infinitely variable hydrostatic transmission

Oil cooler, oil to air, heavy-duty in-line core, side-by-side with radiator

Oil filter, 10-micron spin-on type

Hydraulic fill through hand pump with quick disconnect fill hose and tube provided

Quick disconnect diagnostic ports

Protected electric/hydraulic range shift of two-speed gearbox

Axles

Front and rear axle differential lock, hydraulically operated with filtration, on-the-go

Standard-duty front axle, John Deere 1200 Series

Rear axle, John Deere 1200 Series

Brakes

Service: Disc type, mounted inboard of axle final drives, front axle / Sealed and lubricated / Self adjusting and self equalizing

Park: Spring-applied, hydraulically released, driveline mounted, completely enclosed in oil

Steering

Frame articulation, with 90 degrees total articulation, rubber frame stops (with 28L x 26 tires (std))

Hydraulic System

Low-effort pilot controls

Oil filter, tank mounted return, 10 micron with bypass

Oil cooler, heavy-duty in-line core, side-by-side with radiator

Pressure-compensating load-sense hydraulics for machine

Quick disconnect diagnostic ports

Continuous disc saws with axial piston pump

STANDARD EQUIPMENT, CONTINUED

Tires

28L x 26 - 14 ply

Felling Head

None

Overall Vehicle

Articulation transport lock pin

Hand grips

Hose shields on lift and tilt cylinders

Lift arm lock

Lockable heavy-duty engine side shields

Lockable hinged access doors over fuel tank

Pressurized water reservoir with pressure gauge, hose, and spray nozzle

Tow hook

OPTIONAL EQUIPMENT

CB radio

Light package—4 forward, 2 side and 2 rear

30.5 x 32 16 ply tire option with articulation stops

Lever steering, left handed armrest-mounted control

Heavy-duty front axles, John Deere 1400 Series

AFEX fire suppression system

Heavy duty front axles—John Deere 1400 Series

4 pt seat belt harness

Continuous disc saw

Shear (643 only)

Net engine power is with standard equipment including air cleaner, alternator, and cooling fan, at standard conditions per SAE J1349 and DIN 70 020, using No 2-D fuel at 35 API gravity. No derating is required up to 10,000 ft (3050 m) altitude. Gross power is without cooling fan. 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 full fuel tank, 175-lb (79 kg) operators, and standard equipment.

TECHNICAL DATA 643J 843J WHEELED FELLER BUNCHERS

ENGINE

643J

843J

Type	John Deere 6068H with altitude-compensating turbocharger	John Deere 6068H with altitude-compensating turbocharger
Horsepower Rated @ 2,200 rpm	174 130 kW	225 168 kW
Horsepower Maximum @ 2,000 rpm	201 150 kW	235 175 kW
Cylinders	6	6
Displacement	414 cu-in 6,8 L	414 cu-in 6,8 L
Maximum Net Torque @ 1,400 rpm	634 lbf 860 Nm	754 lbf 1023 Nm
Fuel Filters	Two, with water separation	Two, with water separation
Air Cleaner	Dual stage with safety element and dust unloader valve	Dual stage with safety element and dust unloader valve
Cooling System	Heavy-duty radiator with coolant recovery reservoir	Heavy-duty radiator with coolant recovery reservoir, and side-by-side charged air cooler
Cooling Fan	First air (sucker) hydraulic controlled – reversing fan	First air (sucker) hydraulic controlled – reversing fan
Engine Lubrication	Pressure system with oil cooler (oil to water)	Pressure system with oil cooler (oil to water)
Oil Filter	Vertically mounted spin-on oil	Vertically mounted spin-on oil

HYDRAULIC SYSTEM

643J

843J

Main Pumps		
Main Pump	Variable-displacement axial piston main pump,	Variable-displacement axial piston main pump, closed-center with priority for steering
Saw Pump	Variable-displacement axial piston pump for attachment	Variable-displacement axial piston pump for attachment
Ground Drive	Variable-displacement axial piston pump and motor	Variable-displacement axial piston pump and motor
Filter	Vertically mounted 10-micron spin-on return oil with bypass plus tank-mounted insert with bypass	

ELECTRICAL

Alternator, 12 Volts	95 amps
Batteries (2), 12 Volt	
Reserve Minutes	180 minutes each
Cold Cranking Capacity	925 cold cranking amps each

TRANSMISSION

Type	Infinitely variable hydrostatic with two-speed gearbox
Filter	10-micron, spin-on type
Travel Speeds, With 28L-26 Tires Forward and Reverse	
Low Range	0–5 mph 0–8 kph
High Range	0–12.5 mph 0–20 kph

AXLES

Final Drives	Heavy-duty planetary, mounted inboard
Differentials	Hydraulic lock, operated on-the-go front and rear – standard with filtration

BRAKES

Service Brakes	Inboard-mounted hydraulic wet-disc, bathed in cooling oil, long life, self adjusting, self equalizing, front axle
Parking Brake	Automatically spring applied, hydraulically released, driveline mounted, completely enclosed in oil

STEERING

Frame Articulation	90 degrees total articulation, stop-to-stop (with 28L x 26 tires)
Steering Wheel	Standard
Lever Steering	Optional

CYLINDERS

	643J	843J
	Bore	Rod Diameter
Lift Arm (2)	3.92-in 100 mm	2.24-in 56 mm
Head Tilt (2)	3.92-in 100 mm	2.24-in 56 mm

FELLING HEAD INFORMATION

Shear	FB20	
Continuous-Type Disc Saw	FD22B - Single post FD45 - Twin post	FD22B - Single post

TIRES

Standard	28L-26 14 PR	28L-26 14 PR
Optional	30.5-32 LS2 16 PR	30.5-32 LS2 16 PR

GROUND PRESSURE DATA

	643J/FD45	843J/FD22B
Ground Pressure*	28L-26 14 Ply 10.6 psi 73 kPa	28L-26 14 Ply 11.2 psi 77 kPa
Ground Pressure*	30.5-32 16 Ply 8.9 psi 61 kPa	30.5-32 16 Ply 9.3 psi 64 kPa

*Data is for saw-equipped unit, tires inflated to recommended pressures, and 3-in 76 mm ground penetration.

CAPACITIES

Fuel Tank	84 gal 320 L	84 gal 320 L
Cooling System	36 qt 34 L	36 qt 34 L
Engine Lubrication, Including Filter	28.5 qt 27 L	28.5 qt 27 L
Hydraulic Reservoir	70 gal 265 L	70 gal 265 L
Two-Speed Gearbox	5.2 qt 4,9 L	5.2 qt 4,9 L
Pump Drive Gearbox	5 qt 4,7 L	5 qt 4,7 L

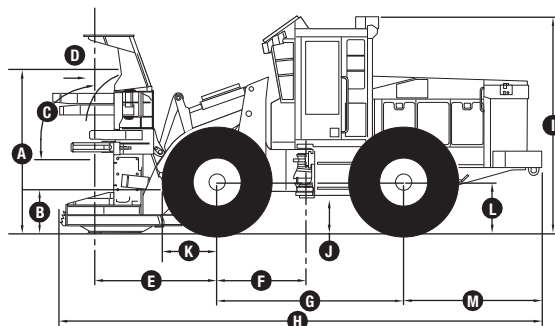
OPERATING WEIGHTS

Standard Equipment, Less Felling Head	27,990 lb 12 696 kg	27,990 lb 12 696 kg
With Shear (FB20)	34,290 lb 15 500 kg	N/A
With Saw, Continuous (FD45)	32,840 lb 14 895 kg	
With Saw, Continuous (FD22B)	34,630 lb 15 708 kg	34,630 lb 15 708 kg

DIMENSIONS

	643J/FD45	843J/FD22B
A Maximum Height at Saw Head Attaching Pin	8-ft 0.3-in 2 446 mm	8-ft 0.3-in 2 446 mm
B Ground to Saw Head Attaching Pin	23.5-in 595 mm	26.6-in 676 mm
C Saw Head Tilt Back (at 2 ft Above Ground)	27 degrees	28 degrees
D Saw Head Tilt Forward (Skis at Ground Level)	59 degrees	50 degrees
E Front Axle to 20-in Tree Centerline	6-ft 3-in 1 988 mm	6-ft 3-in 1 988 mm
F Machine Articulation to Front Axle	4-ft 5-in 1 346 mm	4-ft 5-in 1 346 mm
G Wheelbase	9-ft 2-in 2 794 mm	9-ft 2-in 2 794 mm
Overall Width (With 28-in Wide Tires)	9-ft 6-in 2 900 mm	9-ft 10.2-in 3 002 mm
H Overall Length	24-ft 2-in 7 367 mm	24-ft 2-in 7 367 mm
I Overall Height	10-ft 6-in 3 233 mm	10-ft 6-in 3 233 mm
J Ground Clearance	20-in 508 mm	20-in 508 mm
K Saw Head Attaching Pin to Axle	3-ft 7.8-in 1 111 mm	3-ft 7.8-in 1 111 mm
L Ground to Axle	29.2-in 741,7 mm	29.2-in 741,7 mm
M Rear Axle to Rear of Unit	6-ft 9.8-in 2 078 mm	6-ft 9.8-in 2 078 mm

With 28L-26 14 ply Tires



W H E E L E D F E L L E R B U N C H E R S

643J 843J



NOTHING RUNS LIKE A DEERE.™

Maybe those words are the reason why almost every other professional logger is a John Deere customer.

They're just five simple words. Yet they have profound impact on your company. Because at their heart they mean equipment that is built forest tough, with greater productivity, more uptime and lower daily operating costs. They mean a dealer network over 380 locations strong, with immediate access to parts and experts that understand your industry. They mean a dedicated lender

in John Deere Credit, committed to helping loggers succeed with competitive financing to enhance cash flow. And they mean a global forestry equipment leader that invests more in R & D than any other manufacturer.

But most of all, these words represent the confidence that comes with over 168 years of heavy equipment experience.

Your world is logging. So is ours. John Deere Forestry. Leading the way, worldwide.

FULL TREE SYSTEM

ADVANCED HARVESTING SYSTEM



PRODUCTIVITY | UPTIME | LOW DAILY OPERATING COSTS

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