

SPECIFICATION



WHEEL LOADER | 435S

Engine power: 282hp (210kW) Operating weight: 15,534kg Tipping load: 9,142kg Standard shovel capacity: 2.4m³



UNSTOPPABLE FORCE

The JCB 435S wheel loader is a machine designed to give you loads more productivity and versatility in comfort. Weighing just over 15 tonnes but delivering 282hp, it has a best in class power-to-weight ratio of 19hp per tonne, producing unstoppable pushing, lifting, climbing and roading performance. What more could you want?



UNRIVALLED PRODUCTIVITY

Choose between Standard Power Mode (230hp/171kW) for greater fuel efficiency, or Dynamic Power Mode (282hp/210kW) for increased productivity.



INCREASED VERSATILITY

The 435S is available with both standard lift and high lift arms. An optional tow hitch with integrated camera, provides even greater versatility.



EXCEPTIONAL COMFORT

Our proven JCB CommandPlus cab is fitted as standard on the 435S. The spacious 3.4m³ cab provides excellent all-round visibility and a well laid out, ergonomic interface.



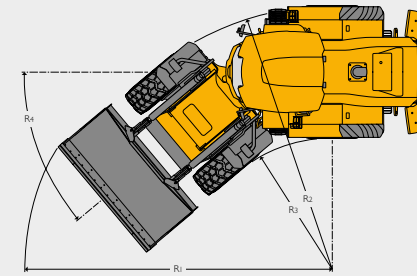
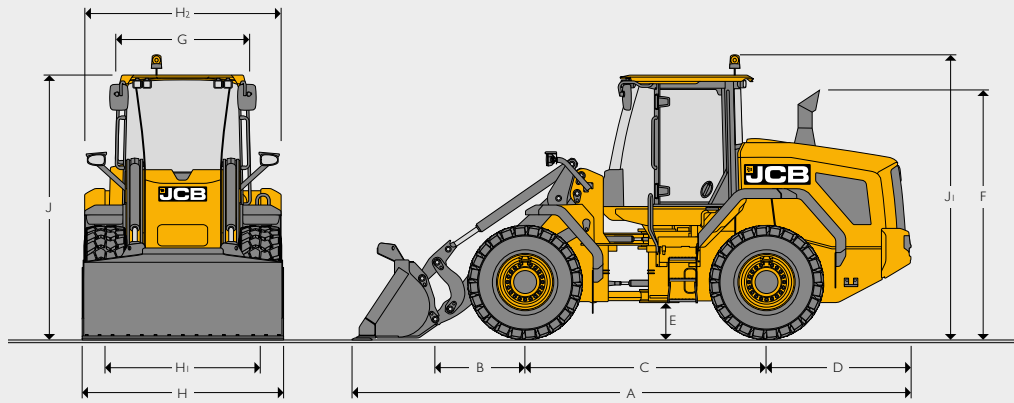
OPTIMUM UPTIME

A large single-faced widecore cooling pack with automatic reversing fan removes build up chaff ensuring an optimum working temperature.

IMPROVED QUALITY

Advanced manufacturing techniques, including robot welding, accurate machining and precision paint technology, provide a robust, long-lasting machine.

STATIC DIMENSIONS



		435S	435S HL
A	Overall length	mm 7203	7524
B	Axle to pivot pin	mm 1252	1252
C	Wheel base	mm 3050	3050
D	Axle to counterweight face	mm 1841	1841
E	Minimum ground clearance	mm 491	491
F	Height over exhaust	mm 3154	3154
G	Width over cab	mm 1594	1594
H	Max width over tyres	mm 2961	2961
H1	Wheel track	mm 2229	2229
H2	Max width over fenders	mm 2961	2961
J	Height over cab lowered beacon	mm 3742	3742
J1	Height over cab raised beacon	mm 4102	4102
	Pin height (maximum)	mm 3876	4306
	Front axle weight	kg 6200	6424
	Rear axle weight	kg 8766	8733
	Total weight	kg 14966	15157

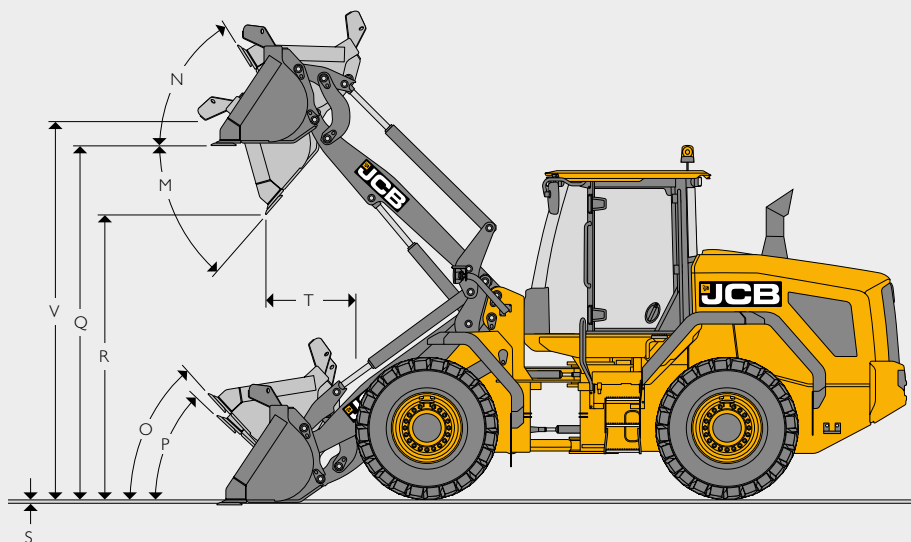
		435S	435S HL
R1	Maximum turn radius over shovel	mm 5902	6035
R2	Maximum turn radius over tyre	mm 5483	5483
R3	Inside turn radius	mm 2707	2707
R4	Articulation angle	degrees 40	40

Data based on machine equipped with Michelin 750/65R26 MegaXBib tyres and direct mount 1.9m³ shovel and toe plate with auxiliary fuel tank.

LOADER DIMENSIONS 435S

Model	435S									435S HL									
	Direct mount			Quickhitch			Grain shovel	Direct mount			Quickhitch			Grain shovel					
Shovel mounting	General purpose			General purpose				General purpose			General purpose								
Shovel type	Reversible toeplate			Reversible toeplate			Reversible toeplate			Reversible toeplate									
Shovel Equipment	Reversible toeplate			Reversible toeplate			Reversible toeplate			Reversible toeplate									
Shovel capacity (SAE heaped)	m ³	1.9	2.1	2.4	2.7	1.9	2.1	2.4	2.7	4.0	1.9	2.1	2.4	2.7	1.9	2.1	2.4	2.7	4.0
Shovel capacity (struck)	m ³	1.616	1.83	2.057	2.346	1.616	1.83	2.057	2.346	4	1.616	1.83	2.057	2.346	1.616	1.83	2.057	2.346	4
Shovel width	mm	2550	2550	2700	2700	2550	2550	2700	2700	2750	2550	2550	2700	2700	2550	2550	2700	2700	2750
Shovel weight	kg	810	850	1163	1236	810	850	1136	1211	1430	810	850	1163	1236	810	850	1136	1211	1415
Maximum material density	kg/m ³	3064	2747	2347	2060	2496	2236	1905	1670	1028	2638	2366	2014	1769	2072	1856	1573	1379	849
Tipping load (straight)	kg	11906	11797	11518	11377	11099	10998	10741	10607	9726	9909	9819	9546	9427	9256	9172	8920	8806	8088
Tipping load (full turn)	kg	11643	11537	11264	11126	9484	9392	9142	9019	8227	10026	9936	9668	9550	7875	7797	7552	7447	6796
Payload	kg	5822	5768	5632	5563	4742	4696	4571	4510	4114	5013	4968	4834	4775	3937	3899	3776	3723	3398
Maximum Breakout Force	kN	138	128	123	115	121	113	106	99	53	138	128	123	115	121	113	106	99	53
M Dump angle maximum	degrees	49	49	49	49	49	49	49	49	49	45	45	45	45	45	45	45	45	45
N Roll back angle full height	degrees	58	58	58	58	58	58	58	58	58	58	58	60	60	58	58	60	60	60
O Roll back carry	degrees	48	48	48	48	48	48	48	48	48	50	50	54	54	50	50	54	54	54
P Roll back at ground level	degrees	43	43	43	43	43	43	43	43	43	48	48	45	45	48	48	45	45	45
Q Load over height	mm	3673	3673	3671	3673	3673	3673	3671	3671	3671	4103	4103	4101	4101	4103	4103	4101	4101	4101
R Dump height (45 deg dump)	mm	3005	2957	2921	2857	2909	2836	2800	2737	2175	3435	3387	3351	3287	3339	3266	3230	3167	2605
S Dig depth	mm	0	0	0	0	0	0	0	0	0	49	49	49	49	49	49	49	49	49
T Reach at dump height	mm	897	963	1011	1070	1003	1069	1088	1146	1547	1059	1109	1011	1070	1165	1231	1088	1146	1146
V Pin height	mm	3937	3937	3937	3937	3937	3937	3937	3937	3937	4367	4367	4367	4367	4367	4367	4367	4367	4367
Reach maximum (45 deg dump) horizontal arm	mm	1644	1694	1850	1914	1751	1816	1935	1999	2367	1992	2042	2340	2404	2099	2164	2425	2489	2489
Operating weight		14956	15000	15272	15335	15241	15285	15534	15596	15872	15147	15191	15463	15526	15432	15476	15725	15787	16063

* Assumes machine is fitted with Michelin MegaXBib 750/65R26 tyres, 6 speed transmission and auxiliary fuel tank.



TYRE SIZE

Tyre size	Manufacturer	Type	Operating weight (kg)	435S		435S HL		Dimensions	
				STL kg	F TTL kg	STL kg	F TTL kg	Vertical mm	Width mm
620/75R26	MICHELIN	MegaXBib	-200	-137	-117	-118	-101	-13	-278

ENGINE			
Manufacturer		Cummins	
Model		B Series	
Capacity	litres	6.7	
Aspiration		Turbo Charged	
Cylinders		6	
Max gross power to SAE J1995/ISO 14396	kW (hp) @ 1900 rpm	210 (282)	
Rated gross power to SAE J1995/ISO 14396	kW (hp) @ 2200 rpm	194 (260)	
Nett power to ISO 9249	kW (hp) @ 2200 rpm	191 (257)	
Max torque	Nm @1300 rpm	1200	
Valves per cylinder		4	
Air cleaner		Cyclonic pre filter with engine fan scavenge system	
Fan drive type		Hydraulically driven cooling fan	
Emissions		Stage V	

TRANSMISSION			
		6 Speed LUC Converter (ZF)	
Type		ZF 6WG210 with lock-up engaged	
Gear		Forward Dynamic Mode	Reverse Dynamic Mode
1	kph	5.87	6.13
2	kph	9.18	15.53
3	kph	14.73	36.68
4	kph	22.55	–
5	kph	34.86	–
6	kph	48	–

* Max road speed limited to 48 kph

AXLES			
Type		Limited slip differential	Open differential with auto-locking front
Make & Model		ZF MT-L 3095 MK 2 (front and rear)	ZF MT-L 3095 MK 2 (front and rear)
Overall axle ratio		23.334:1	23.334:1
Rear axle oscillation		+/-8	+/-8
Bias ratio		30%	100% (when locked)

2 axle options available: Limited slip differentials or Open differentials with automatic locking.
All axle options feature wheel speed braking and lower heat build up and longer service life.

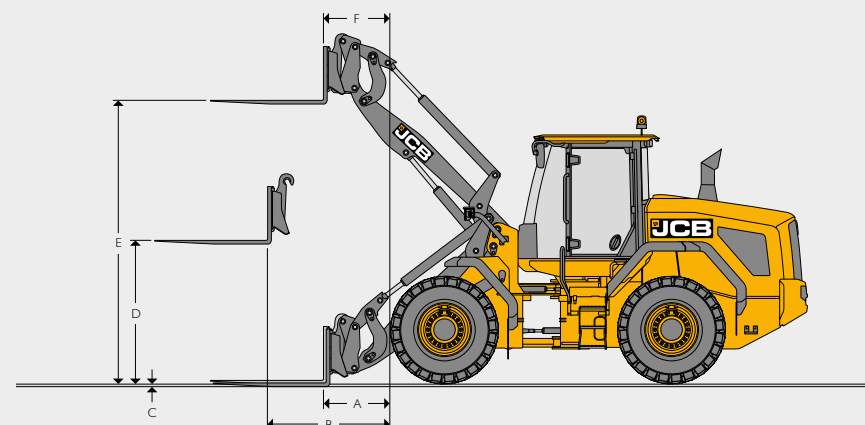
ELECTRICAL SYSTEM			
System voltage	Volt	24	
Alternator output	Amp hour	120	
Battery capacity	Amp hour	2 x 110	

SERVICE FILL CAPACITIES			
Hydraulic system	litres	210	
Fuel tank + Auxiliary	litres	400	
DEF Tank	litres	75	

HYDRAULICS			
Pump type		Twin variable displacement piston pumps	
Pump 1 max. flow	l/min	132	
Pump 1 max. pressure	bar	250	
Pump 2 max. flow	l/min	132	
Pump 2 max. pressure	bar	160	
Hydraulic cycle times at full engine revs			
Arms raise (full bucket)	Seconds	4.7	
Bucket dump (full bucket)	Seconds	1.8	
Arms lower (empty bucket)	Seconds	2.8	
Total cycle	Seconds	9.3	

LOADER DIMENSIONS WITH FORKS			
		435S	435S HL
Fork carriage width	mm	1500	1500
Length of tines	mm	1220	1220
A Reach at ground level	mm	722	1140
B Reach at arms horizontal	mm	1480	1829
C Top of tine above ground with arms down	mm	60	-2
D Arms, horizontal height	mm	1895	1894
E Arms, maximum height	mm	3726	4090
F Reach at maximum height	mm	741	803
Tipping load straight	kg	7676	7496
Tipping load full turn (40°)	kg	6586	6410
Payload*	kg	5269	5128
Attachment weight	kg	429	430
Operating weight (includes 75Kg operator and full fuel and Urea tanks)	kg	14886	15078

*At the centre of gravity distance 600mm. Based on 80% of FTTL as defined in ISO 8313. Machine equipped with Michelin 750/65R26 MegaXBib tyres & direct mount 1.9m³ shovel and toe plate with standard fuel tank



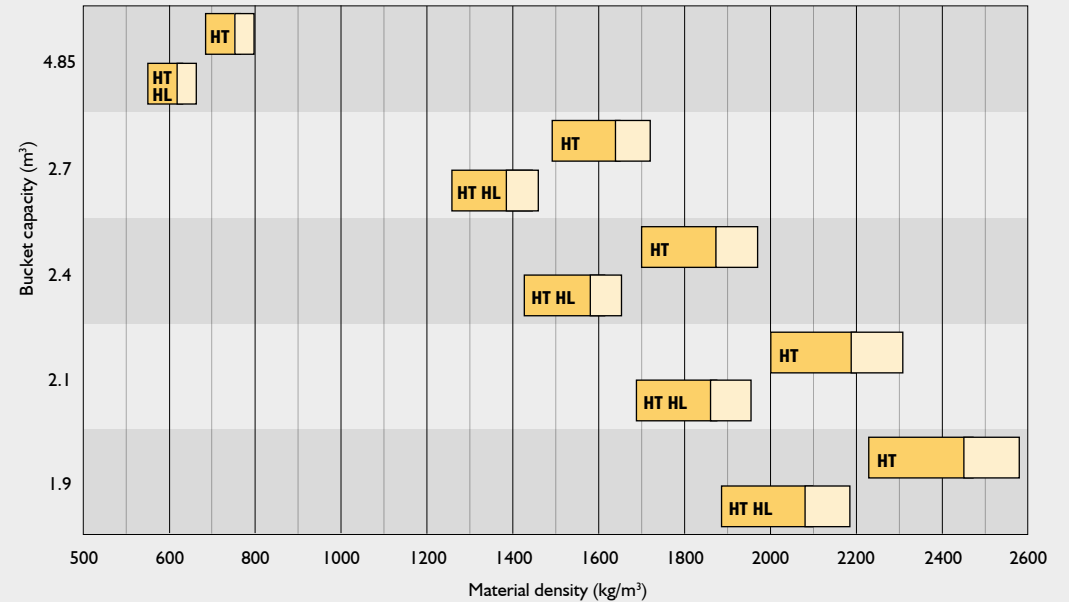
MATERIAL DENSITY

Material	Loose density kg/m ³	Fill factor %
Snow (fresh)	200	110
Peat (dry)	400	100
Sugar beet	530	100
Coke (loose)	570	85
Barley	600	85
Petroleum coke	680	85
Wheat	730	85
Coal bituminous	765	100
Fertiliser (mixed)	1030	85
Coal anthracite	1046	100
Earth (dry) (loose)	1150	100
Nitrate fertiliser	1250	85
Sodium chloride (dry) (salt)	1300	85
Cement portland	1440	100
Limestone (crushed)	1530	100
Sand (dry)	1550	100
Asphalt	1600	100
Gravel (dry)	1650	85
Clay (wet)	1680	110
Sand (wet)	1890	110
Fire clay	2080	100
Copper (concentrate)	2300	85
Slate	2800	100
Magnetite	3204	100

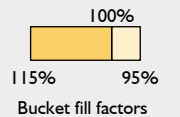
NOISE AND VIBRATION

			Uncertainty	Measurement conditions.
Noise at the operator station	LpA	68 dB	+/- 1 dB	Determined in accordance with the test method defined in ISO 6396 and the dynamic test condition defined on 2000/14/EC.
Noise emission from the machine	LWA	104 dB	+/- 1 dB	Guaranteed equivalent sound power (external noise) determined in accordance with the dynamic test conditions defined in 2000/14/EC.
Whole body vibration	m/s ²	0.42	+/- 0.11 dB	ISO 2632-1:1997 normalised to an 8h reference period and based upon a test cycle comprising of loader work (soil).
Hand-arm vibration	m/s ²	<2.5	N/A	ISO 5349-2:2001 dynamic test conditions.

BUCKET CAPACITIES



HT = Standard height arm HL = High Lift arm



EQUIPMENT

SERVICE AND MAINTENANCE

LiveLink telematics	•
Engine oil remote drain and fill	•
Grouped pressure test points	•
Lockable tool box	•
Lubrication points accessible from ground level	•

ENGINE

Air cleaner – cyclonic pre filter with engine fan scavenge system	•
Automatically reversing cooling fan	•
Crankcase breather oil trap	•
DEF fluid	•
Electrical opening rear bonnet	•
Epoxy coated radiator / coolers	+
Fixed mounted fan	•
Fuel filter	•
Fuel pre-filter with water trap	•
Hydraulically driven cooling fan	•
Manual override rear bonnet opening	•
-20° cold start	•
DOC / DPF / SCR Exhaust emission control	•
Swing out fan	•
Waste gated turbo	•
Widecore radiator	•
Auto engine idle shut down timer (in cab adjustable)	•

ELECTRICAL

120 amp alternator	•
Amber rotating beacon	•
Electrical adjustable mirrors	•
Heated mirrors	•
External battery isolator	•
Fold down beacon arm	•
Green seatbelt beacon	+
Halogen front and rear work lights	•
LED front and rear work lights	+
360 degree work lights	+
Hazard warning lights	•
Integrated rear view camera	•
Number plate light kit	•
Parking lights	•
Radio wiring and speakers	•
Rear fog light	•
Reverse alarm and light	•
Reversing object detection system	+
Road lights front and rear	•
Smart reverse alarm and light	+
Turn signals	•
White noise reverse alarm and light	+

ELECTRICAL (CONTINUED)

Work lights in rear grille	•
Bonnet operation alarm	•
Blue LED reverse lights	+
Amber LED reverse lights	+
24v Trailer electrics	+
12v Trailer electrics	+

DRIVE TRAIN

Operator controlled driving modes - Standard & Dynamic	•
6 speed transmission with lock-up torque converter	•
Epicyclical wheel hub reduction	•
Fixed front axle	•
Gear kick down on loader control lever	•
Indicator glass for transmission oil level	•
Loader lever direction control	•
Neutral start	•
Limited slip differentials front and rear	+
Open differential with automatic locking -100% (front axle only)	+
Oscillating rear axle	•
Power-inch intelligent clutch cut off on footbrake (selectable)	•
Selectable automatic power shift	•
Speed limiter 48 km/h	+
Steering column single lever shift control (direction and gear)	•
Transmission cooler bypass	•

BRAKE SYSTEM

Multi-plate wet disc brakes	•
Sintered brake pads	•
Dual circuit hydraulic power	•
Wheel speed braking	•
Parking disc brake on transmission output shaft	•
Electrical hydraulic park brake actuation	•
Trailer brake hydraulic supply	+

OPERATOR STATION

Fully glazed cab	•
Air conditioning	•
Climate control	+
Single lever joystick	•
Multi-lever hydraulic controls	+
Proportional electro hydraulic auxiliary control	+
Deluxe heated air suspension cloth seat	•
Super deluxe heated & cooled air suspension half leather seat	+
Front roller blind	•
Rear roller blind	•
Cab air intake filter	•

OPERATOR STATION (CONTINUED)

Carbon cab air intake filter	+
12V in cab power socket	•
2 x 12V in cab power socket	•
24V in cab power socket	+
Reversing camera (colour)	•
Fold away adjustable steering column	•
ROPS/FOPS safety structure	•
Interior light	•
Front primary display screen	•
Secondary A post display screen, rotary control menu interface	•
A post mounted membrane switches	•
Variable fan speed control on climatic control system	+
50 mm seatbelt	•
75 mm seat belt	+
Fire extinguisher (UK only)	+
Two speed intermittent front windscreen wipe/wash and self-park	•
Single speed rear windscreen wipe/wash and self-park	•
3 speed heater/demisting	•
LH and RH sliding opening windows	•
Floor mat	•
Cup holder	•
Steering wheel spinner knob	•
Internal rear view mirror	•
Tinted cab glass	•
Multi-media port (USB and 3.5mm)	•
Operator stowage	•
Laminated windscreen	•
Heated rear screen	•
Loader control isolator	•
Horn	•
Adjustable armrest	•
Removable storage rubber mats	•
Adjustable seat mounted controls	•

FRONT PRIMARY DISPLAY

Warning lights	
Direction indicators	•
Master warning	•
High coolant temperature	•
Battery charging condition	•
Low fuel level	•
Engine oil pressure	•
Hazard lamps	•
Park brake state	•
Road lights	•
Main beam lights	•
Rear fog lights	•
Engine pre-heat	•

EQUIPMENT (CONTINUED)

FRONT PRIMARY DISPLAY (CONTINUED)		RIGHT HAND SECONDARY DISPLAY		EXTERNAL EQUIPMENT	
Brake system pressure	•	Clock	•	Front and rear fenders	•
Differential lock	•	Climate control	•	Front adjustable mud flaps	•
Low steering pressure	•	Fan speed	•	Front wheel spray guards	•
Buzzer alerts		In cab temperature set	•	Rear fender chevrons	•
Engine air filter blocked	•	Machine hours	•	Full tyre coverage fenders	•
Diesel exhaust fluid (DEF)	•	Rear view camera	•	Automatic greasing system	+
Torque reduction in case of malfunction	•	Fuel use	•	Grease gun and cartridge	+
Amber warning lamp	•	Time and date	•	One piece electrical opening bonnet	•
Stop engine	•	Auxiliary flow rate	•	Mesh air intake screens	•
Gauge display		Hydraulic oil temperature	•	Flexible bottom step	•
Engine speed	•	Transmission oil temperature	•	Full width rear counterweight	•
Coolant temperature	•	Auto engine shutdown	•	Recovery hitch	•
Fuel level	•	Automatic front and rear worklights	•	Lifting / tie down lugs	•
LCD screen display		Machine settings screen		Rear counterweight chevrons	+
Current gear	•	Coolant temperature	•	Folding stainless steel rear step	•
Stop engine	•	Engine oil pressure	•		
Torque reduction in case of malfunction	•	Air filter	•	PROTECTIVE EQUIPMENT	
Amber warning lamp	•	Transmission sump temperature	•	Rear grille guard	+
Diesel Exhaust Fluid (DEF)	•	Transmission torque convertor temperature	•	Fire suppression system	+
Engine air filter blocked	•	Transmission sump temperature	•	Safety strut loader arm	•
Secondary steer system pressure	•	Hydraulic oil temperature	•	Light guards	+
Torque lockup	•	Park brake pressure	•	Rear belly guard	•
Steer mode	•	Battery voltage	•	Articulation joint safety strut	•
Ground speed	•	Help display	•		
Engine Speed (numeric display)	•	On-screen Handbook	•	OTHER EQUIPMENT	
Clock	•			High lift loader end (HT loader only)	+
Hydraulic state	•	HYDRAULIC SYSTEM		Rockinger tow hitch - 38mm Ø pin	+
SRS (Smooth ride system)	•	Smoothride system (SRS)	•		
Beacon	•	Hydraulic quick hitch with in cab isolation	•	STANDARD	•
Front work lamps	•	Auxiliary ARV kit	+	OPTIONAL	+
Rear work lamps	•	Auxiliary hydraulic service	•		
Heated rear screen	•	Twin auxiliary hydraulic service	+		
Transmission sump temperature	•	Twin piston pumps with priority steer	•		
Data screens		Emergency steer back-up	•		
DEF level	•	JCB biodegradable hydraulic oil	+		
Hydraulic oil temperature	•	Electronic hydraulic isolation	•		
Torque convertor temperature	•	Automatic boom kick-out.	•		
Volume of fuel remaining	•	Automatic bucket positioner	•		
Total fuel used (resettable)	•	Front loader float	•		
Instantaneous fuel use	•	Indicator glass for hydraulic oil level	•		
Average fuel use (resettable)	•	Hydraulic oil cooler	•		
Current date	•				
Machine hours	•				
Trip Distance (resettable)	•				
Hours to Service	•				
Daily checks					
Engine oil level pre start check	•				
DEF level	•				



ONE COMPANY, OVER 300 MACHINES.

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