



## WHEEL LOADER | 427/437 AGRI

427 – Gross engine power: 133kW (179hp) Operating weight: 14,418kg Full turn tipping load: 8,603kg Standard shovel capacity: 2.4m<sup>3</sup>

437 – Gross engine power: 145kW (195hp) Operating weight: 15,781kg Full turn tipping load: 9,625kg Standard shovel capacity: 2.7m<sup>3</sup>



# FULLY LOADED

**The new JCB 427 and 437 Agri Stage V wheel loaders are fully loaded with new and innovative features. A 6% more powerful, efficient and clean Stage V Cummins engine, and improved fuel efficiency with new auto engine shutdown feature.**

The 427 Agri has a unique 6-speed gearbox as standard while the 437 Agri has a 5-speed with optional torque converter lock-up. Both machines have one of the most comfortable and operator friendly cabs on the market with 2 new power modes for greater versatility.

With 50 years of proven wheel loader production, we're confident you'll be fully impressed with our latest models.

**STAGE V**





## FULLY TESTED.

THE NEW JCB 427 AND 437 AGRIS HAVE BEEN BUILT USING ONLY THE MOST ADVANCED PRODUCTION TECHNIQUES AND PREMIUM COMPONENTRY FOR SUPERIOR STRUCTURAL STRENGTH. THEY'VE BEEN TESTED TO THE LIMITS ON SITES ALL OVER THE WORLD TO MAKE SURE THAT, WHEREVER YOU'RE OPERATING, YOU'LL MAINTAIN TOTAL PRODUCTIVITY AT ALL TIMES.



### Designed to work harder.

**1** Your new JCB 427 or 437 Agri has benefitted from finite element analysis and rig testing of up to 1 million cycles, to ensure superior structural strength and durability. For further peace of mind, cold cell testing guarantees starting performance down to -20°C.

**2** High tolerances and accurate location of pins and bushes are guaranteed with JCB's precision machining techniques.

**3** State-of-the-art manufacturing processes like robot machining, precision paint technology and innovative assembly techniques help achieve the very highest levels of build quality.



## Designed to last.

**4** A solid cast counterweight protects the rear of your 427 and 437 Agri, including the rear lights and cooling pack, from damage.

**5** Hoses are neatly routed and clamped through the articulation joint, away from any pinch points.

**6** The articulation joint has a heavy-duty centre pin and oversized bush, as well as twin taper roller bearings on the bottom box joints. This enables it to tolerate both vertical and horizontal loadings for greater durability and rigidity.

**7** New rear grille, cooling pack sealing and mudguard fitment for greater overall quality.



## FULLY PRODUCTIVE.

TIME IS OF THE ESSENCE ON ANY FARM SO THE NEW JCB 427 AND 437 AGRIS ARE DESIGNED TO PROVIDE THE FASTEST CYCLE TIMES IN THE BUSINESS. CHOOSE THE 427 WITH 6-SPEED TRANSMISSION OR THE 437'S 5-SPEED WITH OPTIONAL TORQUE LOCK-UP. WITH POWERFUL TWIN HYDRAULIC PUMPS, A LOAD SENSING VALVE BLOCK, BOTH PROVIDE SPEED, ACCURACY AND PRODUCTIVITY IN ABUNDANCE.

### Powering it all.

**1** The Stage V Cummins B6.7-litre engine fitted to the new JCB wheel loaders produces impressive performance with a substantial 145kW (195hp) of power in the 437 Agri up on our previous model and 881Nm of torque. Meanwhile the 427 Agri delivers 133kW (179hp) with 841Nm of torque. What's more, it produces all of this at low revs for an incredibly responsive operating experience.

### Loading productivity.

**2** Choose the optional JCB Quickhitch and you'll find attachment changing is quick and efficient.

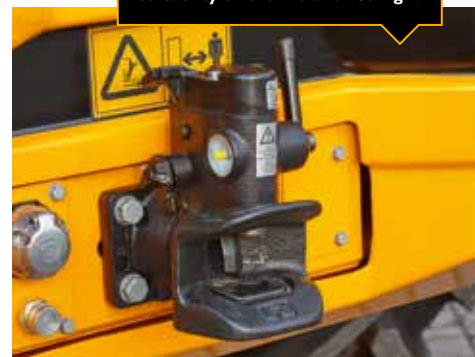
**3** Powerful twin variable displacement piston pump hydraulics can circulate a massive 252 l/min for fast cycles and excellent multi-functional capability.



### COMMANDPLUS controls.

A choice of 3 or 4-spool hydraulics gives you the scope for invaluable extra versatility. Flow can be adjusted from the cab via the all-new Command Plus controls.

**1** Optional 8 tonne tow hitch with hydraulic trailer brakes and 12V trailer electrics further improve versatility on the 427 and 437 Agri.



4 Specify your perfect loader arm.

Choose a HT High Lift on the 427 or 437 Agri, or HT Super High Lift on the 437 to equip them for applications involving high loading heights.

5 With maximum breakout forces of 153kN, this wheel loader has the power to carry out extremely arduous loading jobs.

Drivetrain productivity.

6 A unique 6-speed transmission is fitted as standard to the 427 Agri making operation even more slick, with closer gear ratios for improved acceleration, hill climbing and roading performance. The 437 Agri has a 5-speed transmission as standard with optional torque converter lock-up to eliminate losses, providing even faster cycle times and improved efficiency.

7 Tailor a 427 or 437 Agri to any application with two axle options:

- > Limited slip differentials is perfect for soft, muddy terrain with reduced traction.
- > Open differential with an automatic locking front axle differential provide excellent traction in varied ground conditions.



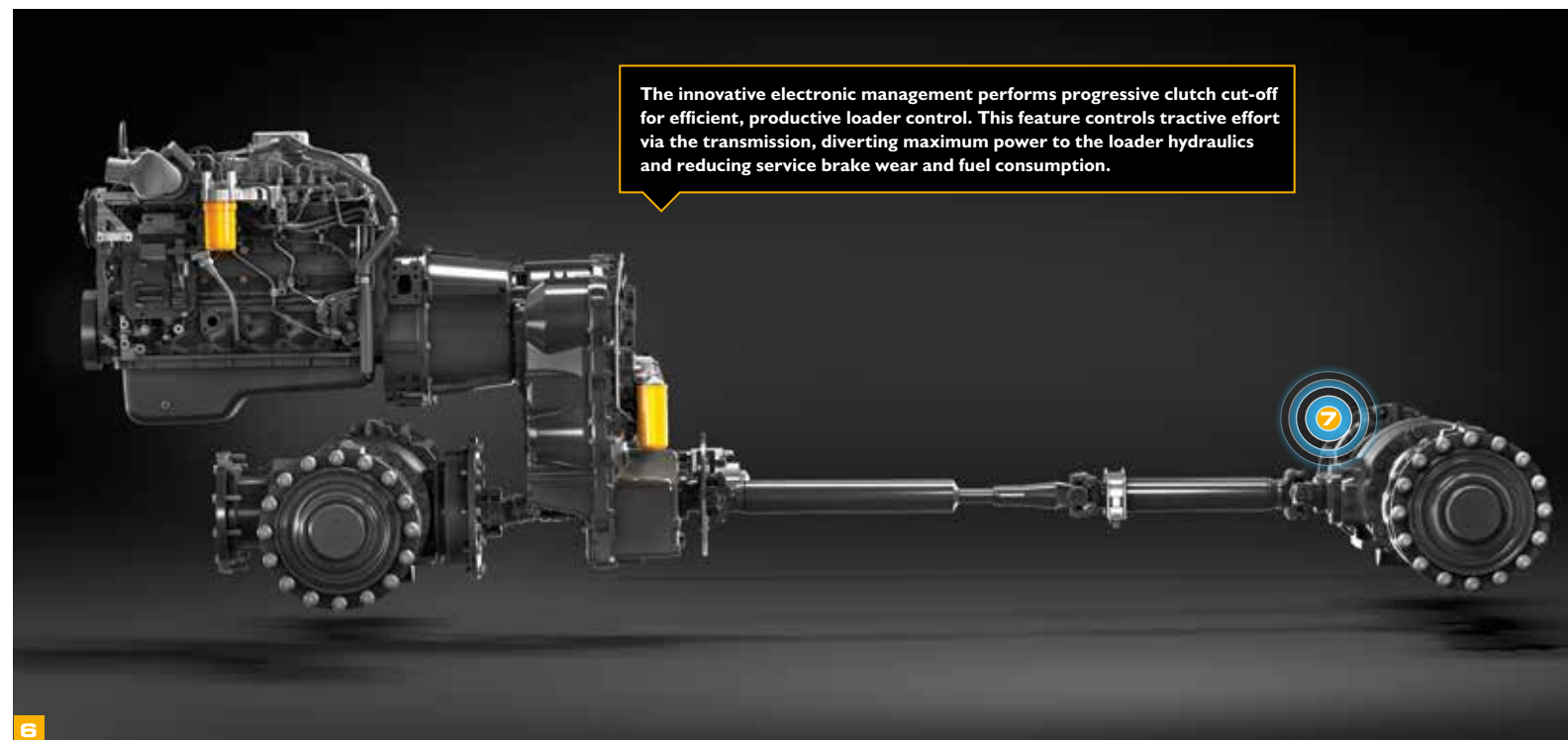
4 HT Standard Lift

HT High Lift

HT Super High Lift



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The innovative electronic management performs progressive clutch cut-off for efficient, productive loader control. This feature controls tractive effort via the transmission, diverting maximum power to the loader hydraulics and reducing service brake wear and fuel consumption.

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# FULLY POWERED.

POWER WITHOUT COMPROMISE HAS LONG BEEN THE ROLE OF ANY LARGE WHEEL LOADER AND THE NEW 427 AND 437 AGRIS TAKE THIS ETHOS TO ANOTHER LEVEL. THEIR CUTTING-EDGE STAGE V CUMMINS ENGINES BOAST POWER APLENTY, WHILE THEIR EFFICIENT, SMOOTH ZF DRIVELINES AND LOW FUEL CONSUMPTION HELP MAKE YOUR DECISION TO BUY JCB EVEN EASIER.

## Driving efficiency.

- 1 The new JCB 427 and 437 Agri's Stage V Cummins engine offers you plenty of low-end torque and maintains it over a wide engine speed range.
- 2 A hydraulic cooling fan automatically reacts to ambient temperature and adjusts the 427 and 437 Agri's fan speed to optimise cooling and reduce fuel consumption. This also lowers noise on your farm.
- 3 Two new power modes at the flick of a switch. Standard Mode reduces engine power for light duty work to 168hp on the 427 Agri and 171hp on the 437 Agri, helping to conserve fuel. Dynamic Mode increases power to a maximum 179hp on the 427 Agri and 195hp on the 437 Agri.



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The 427 Agri has a 6-speed transmission as standard. Opt for the torque lock-up 5-speed transmission on the 437 Agri and you'll get 100% efficiency in second to fifth gears for improved fuel economy.

Automatic idle returns the engine to 700rpm after 30 seconds of inactivity.



A new auto engine shutdown saves fuel by switching off the engine when the machine is left idling. Idle time can be set by the operator from the cab seat.

- 4 Wheel speed braking means the brakes rotate at the same speed as the wheels for heat and drag reduction, as well as improved fuel economy and access for maintenance and repairs.
- 5 Unloaded spool valves in the valve block allow the arms to lower under gravitation rather than hydraulic force; this reduces fuel consumption still further.
- 6 JCB's innovative variable displacement pumps feed a load-sensing valve block which only consumes power on demand, providing precise, efficient loader control.
- 7 A choice of 3 or 4-spool hydraulics gives you the scope for invaluable extra versatility.
- 8 Selectable loader arm detents let operators control loader arm height limitations, return to dig settings and float functions, improving safety and productivity.

**COMMANDPLUS controls.**  
**JCB Smoothride load suspension limits shock loadings and therefore reduces material spillage and structural stress, as well as increasing operator comfort. The speed of engagement is adjustable from within the cab using the latest state-of-the-art CommandPlus controls.**



## FULLY IN COMMAND.

THE JCB COMMANDPLUS CAB IS ONE OF THE BEST CABS ON THE MARKET, WITH THE LATEST IN ERGONOMIC DESIGN PROVIDING AN OPTIMAL CONTROL LAYOUT AND DRIVER POSITION FOR GREATER COMFORT AND VISIBILITY, ENABLING EVEN GREATER OPERATOR PRODUCTIVITY.

### See the difference.

**1** The A-pillars are positioned to the same width as the rear of the cab, providing a larger interior with a superb panoramic front windscreen. All switches and auxiliary controls are located on the right-hand A-pillar for easier access.

**2** Using your machine's simple, dedicated menu interface is easily done with an intuitive optional rotary controller.

**3** Controlling the loader is easy as all of the controls are seat-mounted and even move with the seat suspension. Simply select the control system that's best for your operators: we offer single lever joystick or multi-lever configurations.

**4** There are two full colour LCD screens to navigate your machine's operating menus with one doubling as a monitor for the rear-view camera.

For even greater operator comfort, the machines are equipped with end damped steering for smoother steering from lock to lock.



The noise level in the cab is an incredibly low 68dB(a): so quiet you can hardly hear the engine running.

5 To keep the operator environment comfortable for working at all times, we've positively pressurised the cab to eliminate dust and fumes.

6 After extensive research into operator ergonomics, we've devised the Command Driving Position, which boasts the very optimal control layout for a multitude of different driver shapes and sizes. You can also choose from an air suspension standard seat to a super deluxe half leather seat, featuring fully adjustable heating and cooling functionality, electrically adjustable lumbar support and adjustable dampers.

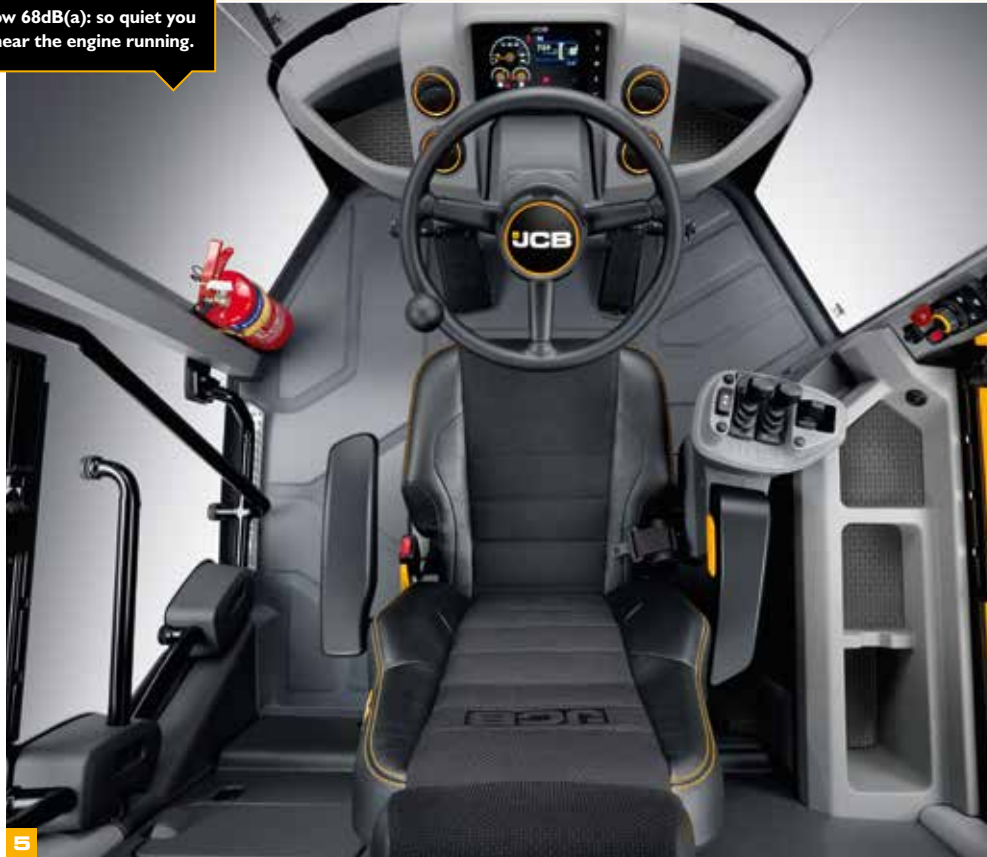
7 A set and forget feature makes operator access even easier by storing your preferred steering wheel position. It can be instantly returned to, even after you've folded the wheel away.

Specify your 427 or 437 Agri with either air conditioning or automatic climate control to create perfect working temperatures.

With a dedicated media port on board, you can be assured of superb connectivity for all your electronic devices.

A sliding window on both sides of the cab allows easy communication with people outside the machine.

The electronic handbrake offers numerous advantages: it's quick and easy to operate, and, because there's no cable, there are fewer holes in the cab. This helps to isolate the operator environment further.



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## FULLY SERVICEABLE.

MAXIMISING YOUR FLEET'S UPTIME IS OUR NUMBER ONE PRIORITY AND WE'VE CERTAINLY PULLED OUT ALL THE STOPS ON THE NEW 427 AND 437 AGRIS. A ONE-PIECE BONNET, EASY GROUND LEVEL ACCESS TO KEY COMPONENTS, LIVELINK TELEMATICS AND WORLD-CLASS AFTERCARE ALL COME AS STANDARD, WITH TAILORED SERVICE PACKAGES AVAILABLE TO SUIT.

### Routine maintenance.

**1** It's easy to get to the engine on a new JCB 427 and 437 Agri with a large single-piece bonnet.

**2** Accessing the diesel and DEF (Diesel Exhaust Fluid) tanks is also straightforward, via the lockable grille at the rear of the machine.

You can check washer fluid level, engine oil and coolant from inside the cab, with all other routine checks and grease points located at ground level. This makes life both easier and safer.

**3** The standard widecore cooling package is a large, single-faced unit so you can be assured of quick, easy and safe cleaning.

**4** Fold down rear access steps provide better access to service filters and fluid drain points.



### Less servicing, more service.

**E** The CommandPlus cab relays machine condition with real-time alerts, safeguarding both the machine and the operator.

The intuitive CommandPlus help function provides the operator with meaningful descriptions of in-cab switch functions. Using the “?” button allows new or unfamiliar operators to quickly and easily understand them without having to refer to the operator’s manual.

**E** By using premium components: Cummins engine, ZF transmissions and axles, Rexroth pumps and Parker valve block, we’ve built in long service life as standard.

**Z** Full hydraulic dual circuit braking with multiple oil immersed discs gives the braking system a virtually maintenance-free lifespan.

**E** A cyclonic engine fan scavenge filter provides four times the filtering capacity of a standard air filter. It’s a longer life system with fewer components and a higher level of efficiency, making for better engine protection.

Heating and ventilation filters are conveniently located behind an external access panel. The main fuse board and relays have been repositioned next to the door for easy access.



**E**



**E**



**E**



### COMMANDPLUS controls.

If you're planning to use your wheel loader in environments with large amounts of airborne debris, opt for the adjustable reversing fan. The fan can be operated via the CommandPlus controls, and even swings out for easy cleaning access.

There's a large fuel tank fitted (400 litres on the 427 Agri and 270 litres on the 437 Agri) which ensures maximum working hours between refills.



**E**



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## FULLY PROTECTED.

OPERATORS, BYSTANDERS AND YOUR FLEET ARE WELL PROTECTED AT ALL TIMES BY THE NEW JCB 427 AND 437 AGRIS. GREAT VISIBILITY INSIDE AND OUT, NON-SLIP SURFACES AND EXCELLENT AIR FILTRATION ARE JUST THE BEGINNING.

### Safely does it.

- 1 Access steps on the 427 and 437 Agri are inclined and equally spaced, complemented by well positioned grab handles for three points of contact at all times.
- 2 On the new JCB 427 and 437 Agri, you'll find the rear-view mirrors mounted in front of the A-pillars for improved all-round visibility. Interior mirrors, heated exterior mirrors and bonnet mirrors all combine to offer excellent views to every corner of your machine.
- 3 Our rear-view camera displays an unobstructed rearward view on the in-cab colour monitor onboard your 427 and 437 Agri.
- 4 Superb visibility in dark conditions is guaranteed with JCB's optional LED lighting.





6 The new front fender flaps have been carefully designed and honed to keep forward spray to a minimum. This increases safety and decreases debris build-up.

6 Door hinges are mounted on the B-pillar; giving much better access via a larger and wider door aperture. It also means you can access the rear of your loader more safely.

Non-slip walkways and additional grab handle options allow for safe movement around the machine.

7 Roof mounted camera option provides additional visibility when large capacity attachments are fitted.

The new 427 and 437 Agri cabs are isolator-mounted, compliant with ROPS/FOPS standards, and positively pressurised against dust. You can choose from fresh air and carbon recirculation filters as well.





## LIVELINK TELEMATICS.

LiveLink telematics helps you monitor and manage your machine fleet remotely anywhere in the world by radically improving the efficiency, productivity, safety and security of all your JCB and non JCB machine fleet.

**MACHINE EFFICIENCY:** Keep track of your machine's daily activity with regular performance reports which provide information about idle time, location, machine health, error codes for diagnostics, engine utilisation by power band, safety alerts, and fuel consumption. JCB LiveLink ensures machines are kept running for maximum uptime and return on investment.

**MACHINE RELIABILITY:** Accurate hours and service alerts improve maintenance planning to optimise machine productivity.

**MACHINE SECURITY:** LiveLink's real time geo-fencing alerts tell you when machines move out of predetermined zones. Curfew alerts inform you of unauthorised usage.



Track the location of any asset via Bluetooth connection.



An after market telematics solution which can be retrofitted to any machine.



## COMPLETE CONTROL FOR YOUR FLEET.

LiveLink Fleet enables you to track every aspect of your equipment to maximise efficiency and machine uptime.

**GUESS LESS, KNOW MORE:** Equipment issues and service reminders are logged as soon as they occur, helping you to react quickly.

**YOUR EYES ON THE GROUND:** Integrate LiveLink Fleet with the JCB Operator mobile app and data from your operators' daily equipment checks feed instantly into your dashboard.

**TOTAL PEACE OF MIND:** Operator safety alerts help to ensure machines are being used efficiently and safely.

**SMARTER TOOLS. SMARTER DECISIONS:** From hours worked to fuel wastage, access custom analytics on your fleet to make smarter decisions, quicker.

**EFFORTLESS MEETS PAPERLESS:** Access certificates, warranty information, quick start machine guides and manuals.

## The JCB Operator app

### THEY SPOT IT, YOU KNOW IT.

The JCB Operator app gives you faster, clearer and more accurate information about your fleet, direct from the people using your equipment each day.

**STAY IN TOUCH:** Get regular checks on your machine with visibility in the LiveLink Fleet portal.

**TAILOR YOUR CHECKS:** Customise your checklists to suit any application, customer or site.

**UPLOAD TO KEEP UPDATED:** Upload useful information with photos and comments.

**FULLY COMPATIBLE:** The JCB Operator app works with non telemetry related machines and assets.

**ACCESS ALL INFORMATION:** Get access to documentation such as quick start guides.

\*The individual features of LiveLink Telematics, LiveLink Fleet and Operator App vary per region, engine and machine type.



## FULLY SUPPORTED.

JCB'S WORLDWIDE CUSTOMER SUPPORT IS FIRST CLASS. WHATEVER YOU NEED AND WHEREVER YOU ARE, WE'LL BE AVAILABLE QUICKLY AND EFFICIENTLY TO HELP MAKE SURE YOUR MACHINERY IS PERFORMING TO ITS FULL POTENTIAL.



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1 Our Technical Support Service provides instant access to factory expertise, day or night, while our Finance and Insurance teams are always on hand to provide fast, flexible, competitive quotes.

2 The global network of JCB Parts Centres is another model of efficiency; with 18 regional bases, we can deliver around 95% of all parts anywhere in the world within 24 hours. Our genuine JCB parts are designed to work in perfect harmony with your machine for optimum performance and productivity.



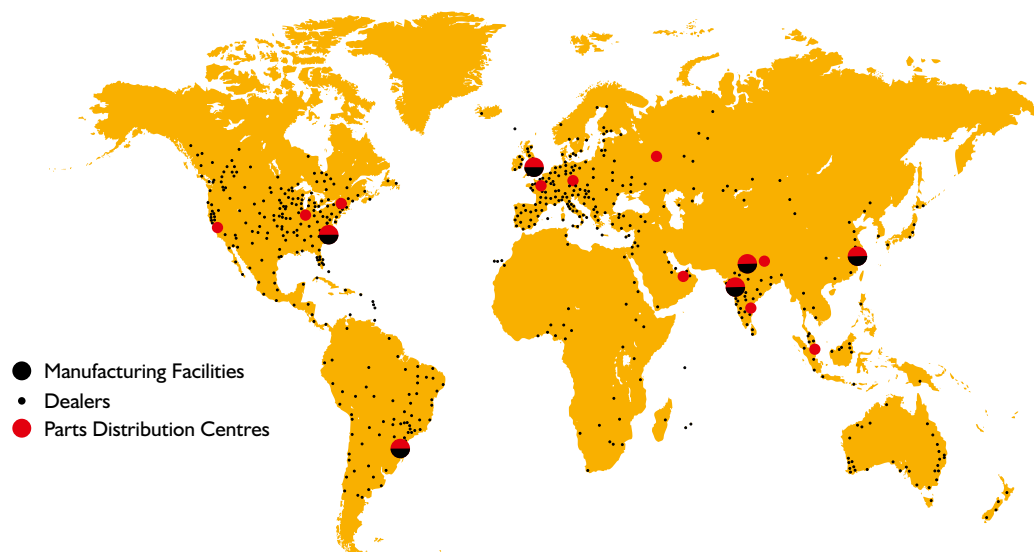
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3 JCB offers comprehensive extended warranties as well as service-only or repair and maintenance contracts. Irrespective of what you opt for, our Maintenance teams around the world charge competitive labour rates, and offer non-obligation quotations as well as fast, efficient insurance repair work.

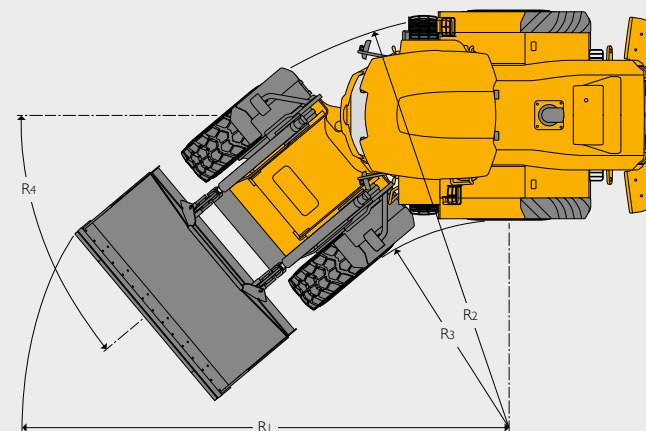
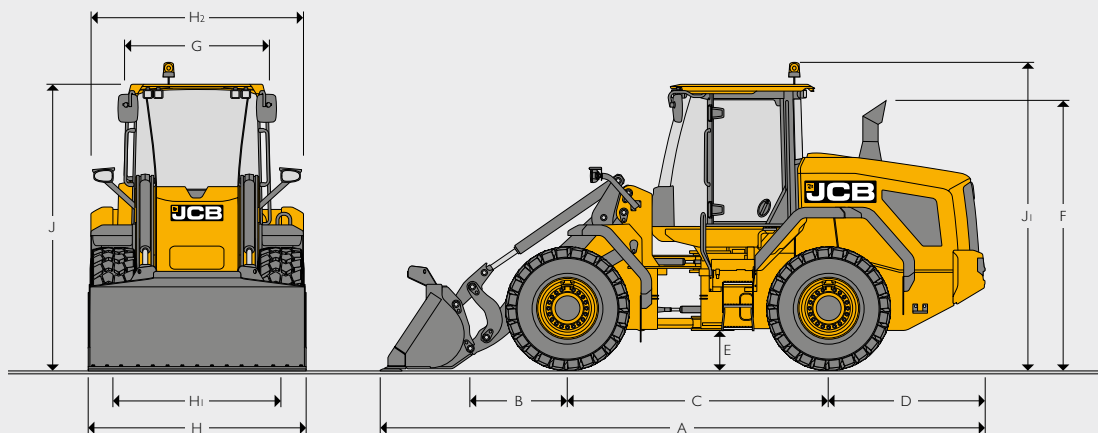


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Note: JCB LIVELINK and JCB extended warranty packages may not be available in your region, so please check with your local dealer.



STATIC DIMENSIONS

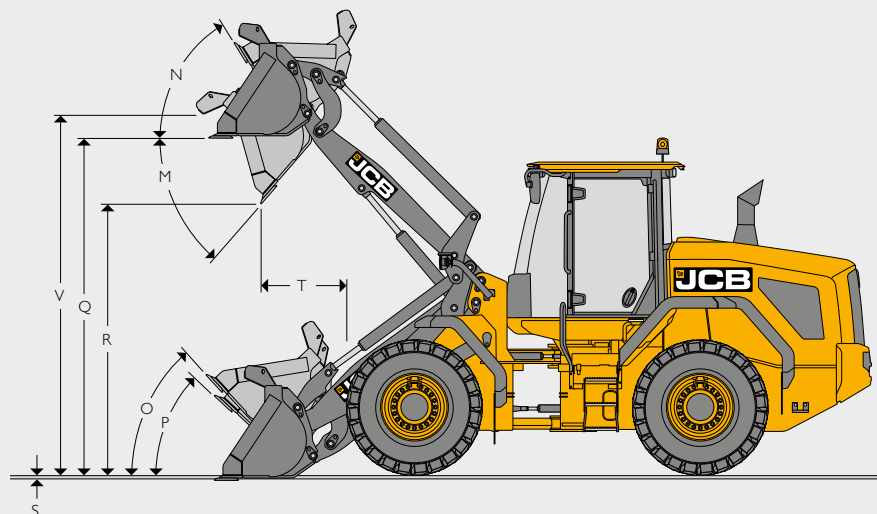


		427HT	427 HT HL	437HT	437 HT HL	437 HT SHL	
A	Overall length	mm	7070	7532	7301	7928	8485
B	Axle to pivot pin	mm	1134	1596	1246	1873	2430
C	Wheelbase	mm	3050	3050	3050	3050	3050
D	Axle to counterweight face	mm	1833	1833	1833	1833	1833
E	Minimum ground clearance	mm	472	472	472	472	472
F	Height over exhaust	mm	3159	3159	3159	3159	3159
G	Width over cab roof	mm	1582	1582	1582	1582	1582
H	Max. width	mm	2583	2583	2598	2598	2598
H <sub>1</sub>	Wheel track	mm	2152	2152	2070	2070	2070
H <sub>2</sub>	Max width over fenders	mm	2658	2658	2556	2556	2556
J	Height over cab roof and lowered beacon	mm	3360	3360	3360	3360	3360
J <sub>1</sub>	Height over raised beacon	mm	3722	3722	3722	3722	3722
	Front axle weight	kg	7901	8125	6456	7230	8269
	Rear axle weight	kg	5726	5693	8652	8652	7756
	Total weight	kg	13627	13818	15108	15881	16024
	Height over engine cover from ground fully open	mm	3611	3611	3611	3611	3611
	Increase in vehicle length with bonnet open (rear grille shut)	mm	+928	+928	+928	+928	+928

		427HT	427 HT HL	437 HT	437 HT HL	437 HT SHL	
R <sub>1</sub>	Maximum turn radius over shovel	mm	5902	6035	6021	6286	6626
R <sub>2</sub>	Maximum turn radius over tyre	mm	4350	4350	4350	4350	4350
R <sub>3</sub>	Inside turn radius	mm	2892	2892	2896	2896	2896
R <sub>4</sub>	Articulation angle	degrees	40	40	40	40	40

427 HT based on a machine equipped with Michelin 620/75R26 MegaXBib agricultural tyres & direct mount 1.9m<sup>3</sup> shovel and toe plates & standard counterweight.

437 HT based on a machine equipped with Michelin 20.5 R25 XHA2 (L3) radial tyres & direct mount 2.3m<sup>3</sup> shovel and toe plates & standard counterweight.



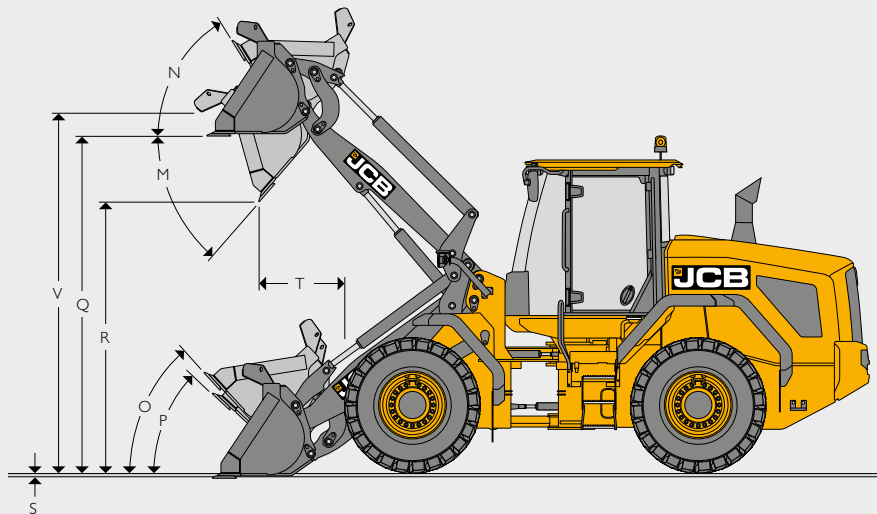
## TYRE SIZE 427 HT/HT HL

Tyre size	Manufacturer	Type	Rating	Operating weight (kg)	HT		HT HL		Dimensions	
					STL kg	FTTL kg	STL kg	FTTL kg	Vertical mm	Width mm
20.5R25	MICHELIN	XHA2	L3	248	175	151	149	91	-68	-108
20.5R25	MICHELIN	XTLA	L2	208	154	132	133	113	-7	4
550/65R25	MICHELIN	XLD	L3	-72	-51	-44	-43	-26	-44	21
20.5R25	MICHELIN	XSNOPLUS	L2	244	181	155	156	133	-11	6
620/75R26	MICHELIN	MEGAXBIB	N/A	0	0	0	0	0	0	0
650/65R25	MICHELIN	XLD	L3	868	644	551	554	473	-10	249
750/65R26	MICHELIN	MEGAXBIB	N/A	252	187	160	161	137	81	474
20.5-25	G/YEAR	SGL (16 ply)	L2	84	62	53	54	46	-5	4
20.5-25	G/YEAR	HRL (16 ply)	L3	296	220	188	189	161	37	4
20.5R25	G/YEAR	TL-3A+	L3	612	454	388	390	334	11	4
20.5R25	JCB	Earthmover	L3	468	347	297	298	225	41	12
20.5-25	JCB	Sitemaster (16ply)	L3	428	317	272	273	233	21	-7
20.5R25	NOKIAN	GRIP TL	L3	120	89	76	77	65	4	-7

## LOADER DIMENSIONS 427 HT/HT HL

Model	427 HT												427 HT HL												
	Direct						Quickhitch						Direct						Quickhitch						
	General purpose						General purpose						General purpose						General purpose						
Shovel mounting	Direct						Quickhitch						Direct						Quickhitch						
Shovel type	General purpose						General purpose						General purpose						General purpose						
Shovel equipment	Reversible toeplate						Tipped teeth						Reversible toeplate						Tipped teeth						
Shovel capacity (SAE heaped 100%)	m <sup>3</sup>	1.8	2	1.9	2.1	2.4	2.7	1.8	2	1.9	2.1	2.4	2.7	1.8	2	1.9	2.1	2.4	2.7	1.8	2	1.9	2.1	2.4	2.7
Shovel capacity (struck)	m <sup>3</sup>	1.556	1.765	1.616	1.83	2.057	2.346	1.554	1.749	1.594	1.787	2.057	2.346	1.556	1.765	1.616	1.83	2.057	2.346	1.554	1.749	1.594	1.787	2.057	2.346
Shovel width	mm	2550	2550	2550	2550	2700	2700	2550	2550	2550	2550	2700	2700	2550	2550	2550	2550	2700	2700	2550	2550	2550	2550	2700	2700
Shovel weight	kg	810	850	810	850	1136	1211	800	850	800	850	1136	1211	810	850	810	850	1136	1211	800	850	800	850	1136	1211
Maximum material density*	kg/m <sup>3</sup>	2707	2412	2564	2297	1954	1713	2512	2238	2380	2132	1813	1590	2242	1997	2124	1902	1609	1411	2082	1855	1973	1767	1503	1318
Tipping load straight*	kg	11243	11137	11243	11137	10859	10722	10466	10368	10466	10368	10112	9981	9343	9255	9343	9255	8983	8867	8713	8630	8713	8630	8427	8322
Tipping load full turn*	kg	9745	9648	9745	9648	9378	9252	9042	8953	9042	8953	8703	8583	8070	7989	8070	7989	7725	7617	7496	7420	7496	7420	7216	7118
Payload*	kg	4872	4824	4872	4824	4689	4626	4521	4476	4521	4476	4352	4292	4035	3995	4035	3995	3862	3809	3748	3710	3748	3710	3608	3559
Maximum breakout force	kN	138	128	138	128	123	115	121	113	121	113	106	99	138	128	138	128	123	115	121	113	121	113	106	99
M Dump angle maximum	degrees	49	49	49	49	49	49	49	49	49	49	49	49	45	45	45	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	58	58	58	58	58	58	58	58	58	58	58	58	58
O Roll back at carry	degrees	48	48	48	48	48	48	48	48	48	48	48	48	50	50	50	50	50	50	50	50	50	50	50	50
P Roll back at ground level	degrees	43	43	43	43	43	43	43	43	43	43	43	43	48	48	48	48	48	48	48	48	48	48	48	48
Q Load over height	mm	3627	3627	3612	3612	3610	3610	3627	3627	3612	3612	3610	3610	4057	4057	4042	4042	4040	4040	4057	4057	4042	4042	4040	4040
R Dump height (45 deg dump)	mm	2871	2767	2944	2896	2860	2796	2697	2647	2848	2775	2739	2676	3247	3197	3374	3326	3290	3226	3212	3127	3278	3205	3169	3106
S Dig depth	mm	50	50	47	47	47	47	50	50	47	47	47	47	113	113	110	110	110	110	128	113	110	110	110	110
T Reach at dump height	mm	1022	1072	897	963	979	1043	1142	1191	1003	1069	1100	1164	1184	1934	1059	1109	1141	1205	1195	1204	1165	1231	1262	1326
V Pin height	mm	3876	3876	3876	3876	3876	3876	3876	3876	3876	3876	3876	3876	4306	4306	4306	4306	4306	4306	4306	4306	4306	4306	4306	4306
Reach maximum (45 deg dump) horizontal arm	mm	1769	1819	1644	1694	1726	1790	1889	1938	1751	1816	1847	1911	2117	2167	1992	2042	2074	2138	2128	2237	2099	2164	2195	2259
Operating weight	kg	13627	13671	13627	13671	13943	14006	13912	13956	13912	13956	14205	14267	13818	13862	13818	13862	14134	14197	14103	14147	14103	14147	14396	14458

\*Assumes machine is fitted with Michelin 620/75R26 MegaXBib agricultural tyres, 6 speed transmission and non parallel links.



**TYRE SIZE 437 HT/HT HL/HT SHL**

Tyre size	Manufacturer	Type	Rating	Operating weight (kg)	HT		HT HL		HT SHL		Dimensions	
					STL kg	F TTL kg	STL kg	F TTL kg	STL kg	F TTL kg	Vertical mm	Width mm
20.5R25	MICHELIN	XHA	L3	0	0	0	0	0	0	0	0	0
20.5R25	MICHELIN	XTLA	L2	-116	-78	-67	-63	-37	-36	-25	-7	4
550/65R25	MICHELIN	XLD	L3	-72	-48	-42	-39	-23	-22	-16	-44	21
20.5R25	MICHELIN	XSNOPLUS	L2	-60	-40	-35	-33	-19	-19	-13	-11	6
620/75R26	MICHELIN	MEGAXBIB	N/A	-248	-166	-144	-135	-79	-77	-54	68	-7
650/65R25	MICHELIN	XLD	L3	652	438	378	356	206	203	142	-10	134
750/65R26	MICHELIN	MEGAXBIB	N/A	4	3	2	2	1	1	1	81	359
20.5-25	G/YEAR	SGL (16 ply)	L2	-200	-134	-116	-109	-63	-62	-44	-5	26
20.5R25	G/YEAR	TL-3A+	L3	272	183	158	148	86	85	59	11	17
20.5-25	G/YEAR	HRL (16 ply)	L3	4	3	2	2	1	1	1	37	26
20.5R25	JCB	Earthmover	L3	128	86	74	70	41	40	28	41	12
20.5-25	JCB	Sitemaster (16ply)	L3	100	67	58	55	32	31	22	21	-7
20.5R25	NOKIAN	GRIP TL	L3	-200	-134	-116	-109	-63	-62	-44	4	-7
Optional Heavy Duty Counterweight				312	642	580	527	476	435	393	-	-

**LOADER DIMENSIONS 437 HT/HT HL/HT SHL**

Model	437 HT								437 HT HL								437 HT SHL								
	Direct				Quickhitch				Direct				Quickhitch				Direct				Quickhitch				
Shovel mounting	General purpose				General purpose				General purpose				General purpose				General purpose								
Shovel type	Tipped teeth		Reversible toeplate		Tipped teeth		Reversible toeplate		Tipped teeth		Reversible toeplate		Tipped teeth		Reversible toeplate		Tipped teeth		Reversible toeplate		Tipped teeth		Reversible toeplate		
Shovel equipment																									
Shovel capacity (SAE heaped 100%)	m <sup>3</sup>	2.3	2.6	2.4	2.7	2.3	2.6	2.4	2.7	2.3	2.6	2.4	2.7	2.3	2.6	2.4	2.7	2.3	2.6	2.4	2.7	2.3	2.6	2.4	2.7
Shovel capacity (struck)	m <sup>3</sup>	1.984	2.27	2.057	2.346	1.984	2.27	2.057	2.346	1.984	2.27	2.057	2.346	1.984	2.27	2.057	2.346	1.984	2.27	2.057	2.346	1.984	2.27	2.057	2.346
Shovel width	mm	2740	2740	2700	2700	2740	2740	2700	2700	2740	2740	2700	2700	2740	2740	2700	2700	2740	2740	2700	2700	2740	2740	2700	2700
Shovel weight	kg	1151	1224	1163	1236	1124	1199	1136	1211	1151	1224	1163	1236	1124	1199	1136	1211	1151	1224	1163	1236	1124	1199	1136	1211
Maximum material density*	kg/m <sup>3</sup>	2067	1805	1985	1742	1923	1679	1847	1620	1608	1403	1545	1355	1499	1307	1440	1262	1239	1078	1191	1041	1145	995	1101	961
Tipping load straight*	kg	11221	11085	11240	11104	10479	10350	10498	10369	8789	8683	8809	8701	8234	8130	8252	8149	6844	6741	6862	6760	6367	6267	6384	6285
Tipping load full turn*	kg	9510	9385	9529	9405	8848	8729	8867	8748	7396	7297	7415	7315	6894	6798	6912	6816	5701	5605	5718	5623	5266	5174	5284	5192
Payload*	kg	4755	4693	4764	4702	4424	4365	4433	4374	3698	3648	3707	3658	3447	3399	3456	3408	2850	2803	2859	2812	2633	2587	2642	2596
Maximum breakout force	kN	147	134	147	134	131	122	131	122	147	134	147	134	131	122	131	122	153	139	153	139	136	124	136	127
M Dump angle maximum	degrees	49	49	49	49	49	49	49	49	45	45	45	45	45	45	45	45	50	50	50	50	50	50	50	50
N Roll back angle full height	degrees	58	58	58	58	58	58	58	58	60	60	60	60	60	60	60	60	58	58	58	58	58	58	58	58
O Roll back at carry	degrees	48	48	48	48	48	48	48	48	54	54	54	54	54	54	54	54	48	48	48	48	48	48	48	48
P Roll back at ground level	degrees	43	43	43	43	43	43	43	43	45	45	45	45	45	45	45	45	43	43	43	43	43	43	43	43
Q Load over height	mm	3760	3760	3755	3755	3760	3760	3755	3755	4414	4414	4409	4409	4414	4414	4409	4409	4981	4981	4976	4976	4981	4981	4976	4976
R Dump height (45 deg dump)	mm	2794	2730	2962	2871	2709	2645	2850	2786	3448	3384	3616	3525	3363	3299	3504	3440	4011	3947	4179	4088	3926	3862	4067	4003
S Dig depth	mm	132	132	106	106	132	132	106	106	127	127	101	101	127	127	101	101	105	105	79	79	105	105	79	79
T Reach at dump height	mm	1115	1174	1011	1070	1192	1250	1088	1146	1115	1174	1011	1070	1192	1250	1088	1146	1139	1198	1035	1094	1216	1274	1112	1197
V Pin height	mm	4021	4021	4021	4021	4021	4021	4021	4021	4675	4675	4675	4675	4675	4675	4675	4675	5242	5242	5242	5242	5242	5242	5242	5242
Reach maximum (45 deg dump) horizontal arm	mm	1954	2018	1850	1914	1739	2103	1935	1999	2444	2508	2340	2404	2229	2593	2425	2489	2919	2983	2815	2879	2704	3068	2900	2964
Operating weight (includes 75kg operator and full fuel and DEF tanks)	kg	15123	15186	15108	15171	15385	15447	15370	15432	15511	15574	15496	15559	15773	15835	15758	15820	16040	16103	16024	16087	16302	16364	16286	16348

\*Assumes machine is fitted with Michelin 20.5R25 XHA2 (L3) tyres, 5 speed transmission and non parallel links.

ENGINE		427	437
Manufacturer		Cummins	
Model		B Series	
Capacity	litres	6.7	
Aspiration		Turbo Charged	
Cylinders		6	
Max gross power to SAE J1995/ISO 14396	kW (hp)	133 (179) @ 1700rpm	145 (195) @ 2000rpm
Rated gross power to SAE J1995/ISO 14396	kW (hp)	118 (158) @ 2100	129 (173) @ 2200rpm
Nett power to ISO 9249	kW (hp)	115 (155) @ 2200	127 (170) @ 2200rpm
Max torque	Nm	841 @ 1300rpm	881 @ 1300rpm
Valves per cylinder		4	
Air cleaner		Cyclonic pre filter with cooling fan scavenge system	
Fan drive type		Hydraulically driven cooling fan	
Emissions		EU Stage V, US EPA Tier 4F	

TRANSMISSION			
		427	
Type		ZF 6WG210 LUC	
Gear		Forward Dynamic Mode	Reverse Dynamic Mode
1	kph	5.99	6.25
2	kph	9.39	15.18
3	kph	14.41	34.66
4	kph	22.11	
5	kph	32.91	
6	kph	48.00*	

Please note the above data is based on Michelin 750/65R26 MegaXBib tyres, figures may vary depending on tyres fitted.

\*Speed limited to 48kph maximum.

		437			
		ZF 5WG190		ZF 5WG190 LUC	
Gear		Forward Dynamic Mode	Reverse Dynamic Mode	Forward Dynamic Mode	Reverse Dynamic Mode
1	kph	7.00	7.39	7.00	7.40
2	kph	12.59	13.25	12.96	13.67
3	kph	18.81	29.10	19.83	32.21
4	kph	27.83		30.61	
5	kph	39.44		40.00*	

Please note the above data is based on XHA tyres, figures may vary depending on tyres fitted.

\*Speed limited to 40kph maximum.

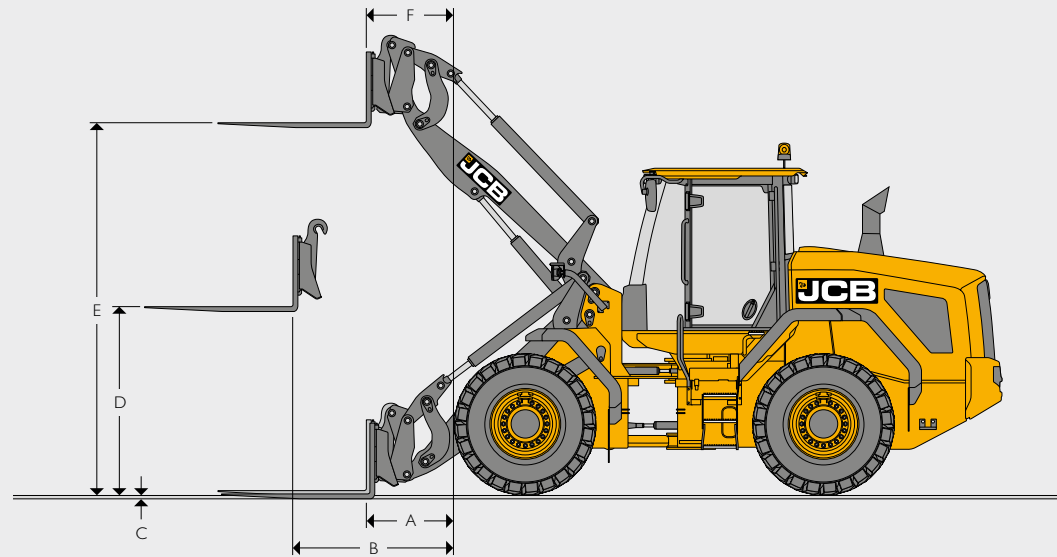
AXLES		
	427	437
Model		
Type	Standard	
Make and model	ZF MT-L 3085 II (front), ZF MT-L 3075 II (rear)	ZF MT-L 3085 II (front), ZF MT-L 3085 II (rear)
Overall axle ratio	20.182 : 1	21.53 : 1
Rear axle oscillation	+/- 10.5 Degrees	

All available with open differential, Limited slip differential, Open differential with auto-locking front

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

HYDRAULICS			
	427	437	
Pump type	Variable displacement		
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	6.24
Shovel dump (full bucket)	Seconds	1.8	1.96
Arms lower (empty bucket)	Seconds	2.8	4.63
Total cycle	Seconds	9.3	12.83

SERVICE FILL CAPACITIES			
	427	437	
Hydraulic system	litres	210	
Fuel tank	litres	400	290
DEF Tank	litres	75	



**LOADER DIMENSIONS WITH FORKS**

		427HT	427HT HL	437HT	437HT HL	437 HT SHL
Fork carriage width	mm	1500	1500	1500	1500	1500
Length of tines	mm	1220	1220	1220	1220	1220
A Reach at ground level	mm	769	1238	882	1518	2079
B Reach at arms horizontal	mm	1546	1895	1636	2126	2596
C Top of tine above ground with arms down	mm	-52	11	8	3	-11
D Arms, horizontal height	mm	1906	1906	1946	1946	1936
E Arms, maximum height	mm	3718	4148	3828	4482	5035
F Reach at maximum height	mm	802	848	873	875	907
Tipping load straight	kg	8148	7071	8210	6836	5718
Tipping load full turn (40°)	kg	7068	6113	6993	5794	4806
Payload*	kg	5655	4891	5594	4635	3845
Attachment weight	kg	430	430	430	430	430
Operating weight (includes 80kg operator and full fuel and Urea tanks)	kg	13557	13749	14753	15141	15670

\* At the centre of gravity distance 600mm. Based on 80% of FTTL as defined in ISO 8313. Manual fork spacing's at 50mm increments. Class 4A forks (section 150mm x 60mm). HT machines have parallel lift loader end. Assume the fitment of Michelin 23.5R25 XHA2 tyres.

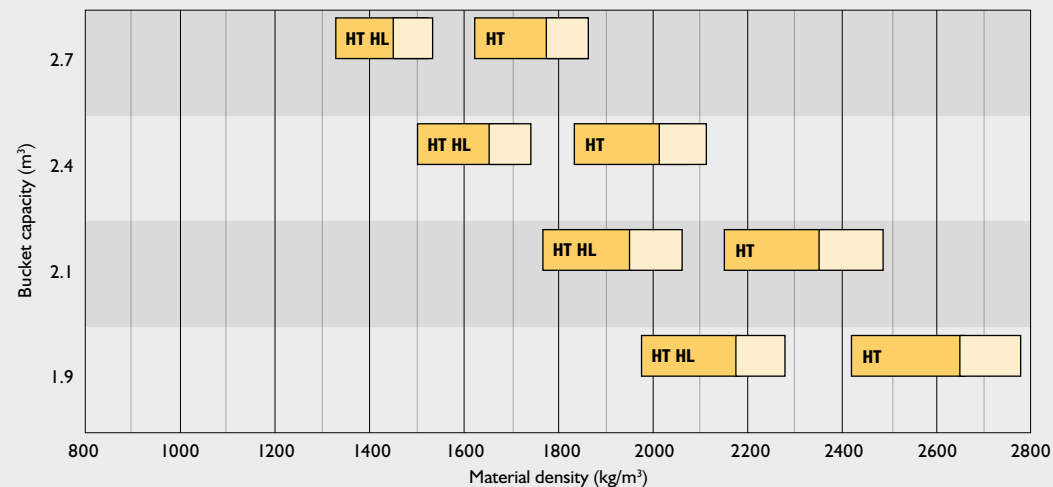
## MATERIAL DENSITY

Material	Loose density kg/m <sup>3</sup>	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

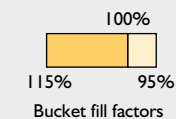
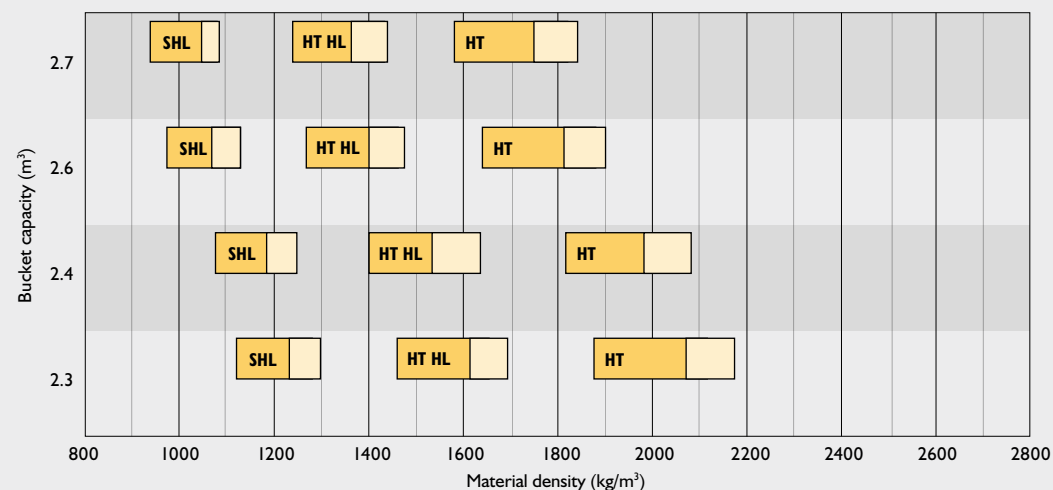
## NOISE AND VIBRATION

			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 <sup>2</sup>	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 <sup>2</sup>	<2.5	N/A	ISO 5349-2:2001 dynamic test conditions.

## BUCKET CAPACITIES – 427



## BUCKET CAPACITIES – 437



HT = Standard height arm HL = High Lift arm SHL = Super 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	•
SCR DPF engine emission control	•
Swing out fan	+
Waste gated turbo	•
Widecore radiator	•
110V/240V engine block heater	+

## ELECTRICAL

120 amp alternator	•
Amber rotating beacon	•
Electrical adjustable mirrors	•
Heated mirrors	•
External battery isolator	•
Fold down beacon arm	•
Halogen front and rear work lights	•
LED front and rear work lights	+
360 degree LED 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	+
Work lights in rear grille	•

## ELECTRICAL (CONTINUED)

Bonnet operation alarm	•
Blue LED reverse lights	+

## DRIVE TRAIN

Operator controlled driving modes – Standard & Dynamic	•
5 speed transmission (437 Agri only)	•
5 speed transmission with lock-up torque converter (437 Agri only)	+
6 speed transmission with torque lock-up converter (427 Agri only)	•
Epicyclical wheel hub reduction	•
Gear kick down on loader control lever	•
Indicator glass for transmission oil level	•
Loader lever direction control	•
Neutral start	•
Open differential	•
Open differential with automatic locking - 100% (front axle only)	+
Limited slip differentials front and rear	+
Oscillating rear axle	•
Power-inch intelligent clutch cut off on footbrake (selectable)	•
Selectable automatic power shift	•
Speed limiter 20km/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	•

## OPERATOR STATION

Fully glazed cab	•
Windscreen guards	+
Air conditioning	•
Climate control	+
Single lever joystick	•
Multi-lever hydraulic controls	+
Proportional electro hydraulic auxiliary control	+
Air suspension cloth seat	•
Deluxe heated air suspension cloth seat	+
Super deluxe heated and cooled air suspension half leather seat	+
Front roller blind	•
Rear roller blind	+
Cab air intake filter	•
Carbon cab air intake filter	+
12V in cab power socket	•
2 x 12V in cab power socket	+
24V in cab power socket	+

## OPERATOR STATION (CONTINUED)

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	•
Convex mirror kit (1 on each side)	+
Adjustable seat mounted controls	•
In-cab cool box	+
Cab floor mat	+

## 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	•
Brake system pressure	•



## EQUIPMENT (CONTINUED)

## FRONT PRIMARY DISPLAY (CONTINUED)

Differential lock	•
Low steering pressure	•
<b>Buzzer alerts</b>	
Engine air filter blocked	•
Diesel exhaust fluid (DEF)	•
Torque reduction in case of malfunction	•
Amber warning lamp	•
Stop engine	•
<b>Gauge display</b>	
Engine speed	•
Coolant temperature	•
Fuel level	•
<b>LCD screen display</b>	
Current gear	•
Stop engine	•
Torque reduction in case of malfunction	•
Amber warning lamp	•
Diesel exhaust fluid (DEF)	•
Engine air filter blocked	•
Secondary steer system pressure	•
Torque lockup	•
Steer mode	•
Ground speed	•
Engine speed (numeric display)	•
Clock	•
Hydraulic state	•
Smooth Ride System (SRS)	+
Beacon	•
Front work lamps	•
Rear work lamps	•
Heated rear screen	•
Transmission sump temperature	•
<b>Data screens</b>	
DEF level	•
Hydraulic oil temperature	•
Torque convertor temperature	•
Volume of fuel remaining	•
Total fuel used (resettable)	•
Instantaneous fuel use	•
Average fuel use (resettable)	•
Current date	•
Machine hours	•
Trip distance (resettable)	•
Hours to service	•
<b>Daily checks</b>	
Engine oil level	•
DEF level	•
DPF status	•

## RIGHT HAND SECONDARY DISPLAY

Clock	•
Climate control	•
Fan speed	•
In cab temperature set	•
Machine hours	•
Rear view camera	•
Fuel use	•
Time and date	•
Auxiliary flow rate	+
Hydraulic oil temperature	•
Transmission oil temperature	•
Auto engine shutdown	•
<b>Machine settings screen</b>	
Coolant temperature	•
Engine oil pressure	•
Air filter	•
Transmission sump temperature	•
Transmission torque convertor temperature	•
Transmission sump temperature	•
Hydraulic oil temperature	•
Park brake pressure	•
Battery voltage	•
Help display	•
On-screen handbook	•
<b>HYDRAULIC SYSTEM</b>	
Smooth Ride System (SRS)	+
Hydraulic quick hitch with in cab isolation	+
Auxiliary ARV kit	+
Auxiliary hydraulic service	+
Twin auxiliary hydraulic service	+
Twin piston pumps with priority steer	•
Emergency steer back-up	•
JCB biodegradable hydraulic oil	+
Electronic hydraulic isolation	•
Automatic boom kick-out (detent)	•
Automatic bucket positioner	•
Front loader float	•
Indicator glass for hydraulic oil level	•
Hydraulic oil cooler	•

## EXTERNAL EQUIPMENT

Front and rear fenders	•
Full rear fenders	•
Front adjustable mud flaps	•
Front wheel spray guards	•
Rear fender chevrons	•
Full tyre coverage fenders	•
Automatic greasing system	+
Grease gun and cartridge	+
One piece electrical opening bonnet	•
Mesh air intake screens	•
Flexible bottom step	•
Full width rear counterweight	•
Recovery hitch	•
Lifting / tie down lugs	•
Rear counterweight chevrons	+
8000kg Rockinger tow hitch with trailer brakes (12v or 24v electrics) (427 Agri only)	+
Heavy duty counterweight +315kg (437 Agri only)	+

## PROTECTIVE EQUIPMENT

Rear belly guard kits	+
Articulation joint safety strut	•
Rear fender hand rails	•

## OTHER EQUIPMENT

High lift loader end (HT loader only)	+
Super high lift loader end (HT loader only)	+

**STANDARD** •  
**OPTIONAL** +







**ONE COMPANY, OVER 300 MACHINES.**

**Wheel Loader 427/437**

427 – Gross engine power: 133kW (179hp) Operating weight: 14,418kg  
 Full turn tipping load: 8,603kg Standard shovel capacity: 2.4m<sup>3</sup>

437 – Gross engine power: 145kW (195hp) Operating weight: 15,781kg  
 Full turn tipping load: 9,625kg Standard shovel capacity: 2.7m<sup>3</sup>

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