

RIDGWAY Rentals

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WHEEL LOADER | 457

Gross engine power: 210kW (282hp) Operating weight: 19,999kg Full turn tipping load: 13,470kg Standard shovel capacity: 3.5m³



FULLY LOADED

The new JCB 457 Stage V wheel loaders are fully loaded with new and innovative features. A 9% more powerful, efficient and clean Stage V Cummins engine. Improved fuel efficiency with new auto engine shutdown feature.

Unique 5-speed gearbox as standard with optional torque converter lock-up and 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 model.

STAGE V





FULLY TESTED.

THE NEW JCB 457 HAS BEEN BUILT USING ONLY THE MOST ADVANCED PRODUCTION TECHNIQUES AND PREMIUM COMPONENTRY FOR SUPERIOR STRUCTURAL STRENGTH. IT'S BEEN TESTED TO THE LIMIT 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 457 will have 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 You can specify a 457 for heavy-duty applications like waste or corrosive material handling.

4 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.

6 A solid cast rear counterweight protects the rear of your 457, including the rear lights and cooling pack, from damage.

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

7 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.

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

The 457's articulation joint has a heavy-duty box section that's much stronger than a single plate with a boss. Its steering rams are positioned high up and well protected from possible impact and site damage.



FULLY PRODUCTIVE.

TIME IS OF THE ESSENCE ON ANY WORKSITE SO THE NEW JCB 457 IS DESIGNED TO PROVIDE THE FASTEST CYCLE TIMES IN THE BUSINESS. POWERFUL TWIN HYDRAULIC PUMPS, A LOAD SENSING VALVE BLOCK AND 5-SPEED TRANSMISSION AS STANDARD WITH OPTIONAL TORQUE LOCK-UP, PROVIDE SPEED, ACCURACY AND PRODUCTIVITY IN ABUNDANCE.

Powering it all.

1 The Cummins B6.7-litre engine fitted to the new JCB 457 produces impressive performance with a substantial 210kW (282hp) of power; up 9% on our previous model, and 1350Nm of torque; up 17.4%. What's more, it produces all of this at low revs for an incredibly responsive operating experience.



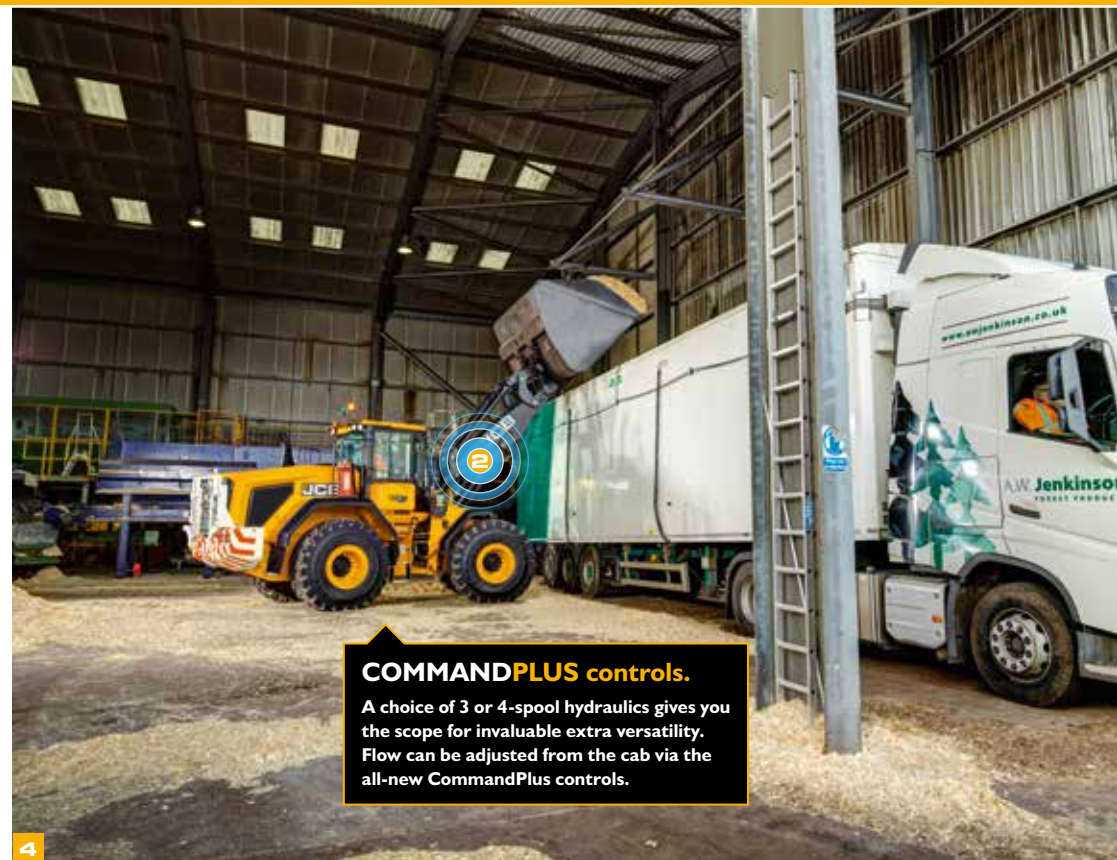
A variable geometry turbocharger provides increased performance at low engine speed for improved cycle times and tractive effort.

Loading productivity.

2 Powerful twin variable displacement piston pump hydraulics can circulate a massive 306 l/min for fast cycle times and excellent multifunctional capability.



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



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 CommandPlus controls.



Z bar (ZX)

HT Standard Lift

HT High Lift

HT Super High Lift

4 Specify your perfect loader arm: Z-bar linkage (ZX) for high breakout applications or high torque (HT) for parallel lifting and multi-attachment work. High lift or Super high lift option equips your 457 for applications involving high loading heights, such as hopper and lorry loading.

5 With maximum breakout forces of 176kN, this wheel loader has the power to carry out extremely arduous loading jobs.

Drivetrain productivity.

6 A unique 5-speed transmission is fitted as standard making operation even more slick, with closer gear ratios for improved acceleration, hill climbing and roading performance. An optional 5-speed transmission with torque convertor lock-up to eliminate losses, provides even faster cycle times and improved efficiency.

7 Tailor a 457 to any application with a range of axle options:

- > A limited slip differential is perfect for soft, muddy terrain with reduced traction.
- > Open differentials are ideal for hard standing ground conditions.
- > Open differentials with an automatic locking front diff provide excellent traction in varied ground conditions.

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



FULLY POWERED.

POWER WITHOUT COMPROMISE HAS LONG BEEN THE ROLE OF ANY LARGE WHEEL LOADER AND THE NEW JCB 457 TAKES THIS ETHOS TO ANOTHER LEVEL. ITS CUTTING-EDGE STAGE V CUMMINS ENGINE BOASTS POWER APLENTY, WHILE THE EFFICIENT, SMOOTH ZF DRIVELINE AND LOW FUEL CONSUMPTION HELP MAKE YOUR DECISION TO BUY JCB EVEN EASIER.

Driving efficiency.

- 1** The new JCB 457'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 457's fan speed to optimise cooling and reduce fuel consumption. This also lowers noise on your site.
- 3** Opt for the torque lock up 5-speed transmission and you'll get 100% efficiency in second to fifth gears for improved fuel economy.
- 4** Two new power modes at the flick of a switch. Comfort Mode reduces engine power by 20% for light duty work to 224hp, helping to conserve fuel. Dynamic Mode increases power to a maximum 282hp for greater output.



A new auto engine shutdown feature 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.

5 Wheel speed braking means the brakes on the new 457 rotate at the same speed as the wheels, for heat and drag reduction plus improved fuel economy.

6 Unloaded spool valves in the valve block allow the arms to lower under gravitation rather than hydraulic force; this reduces fuel consumption still further.

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.



JCB's innovative variable displacement pumps feed a load-sensing valve block which only consumes power on demand, providing precise, efficient loader control.

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 to 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 the JCB 457'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 457's operating menus, with one doubling as a monitor for the rear view camera.

For even greater operator comfort, the machine is 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 provides the most 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.

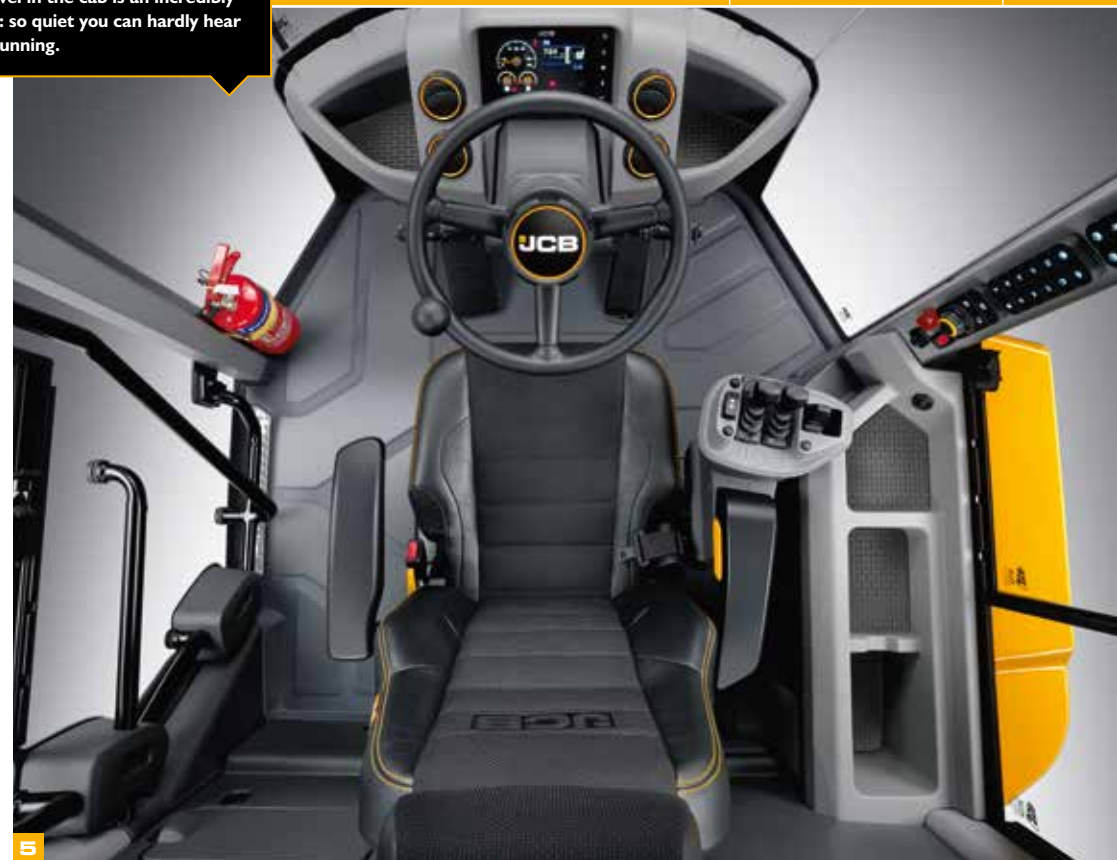
7 A set and forget feature makes operator access even easier by storing your preferred steering wheel position. It can be instantly returned to, even after you've folded the wheel away.

Specify your 457 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.



FULLY SERVICEABLE.

MAXIMISING YOUR FLEET'S UPTIME IS OUR NUMBER ONE PRIORITY AND WE'VE CERTAINLY PULLED OUT ALL THE STOPS ON THE NEW JCB 457. 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 457 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.

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

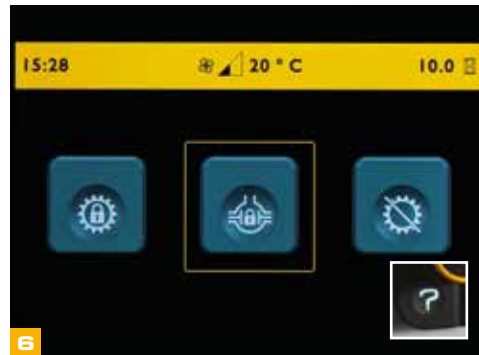
The intuitive CommandPlus help function provides the operator with meaningful descriptions of in-cab switch functions. Using the "?" button allows new or unfamiliar operators to quickly and easily understand them without having to refer to the operator's manual.

7 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.

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

8 A cyclonic engine fan scavenge filter provides four times the filtering capacity of a standard air filter. Its longer life system has fewer components and a higher level of efficiency, making for better engine protection.

9 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.

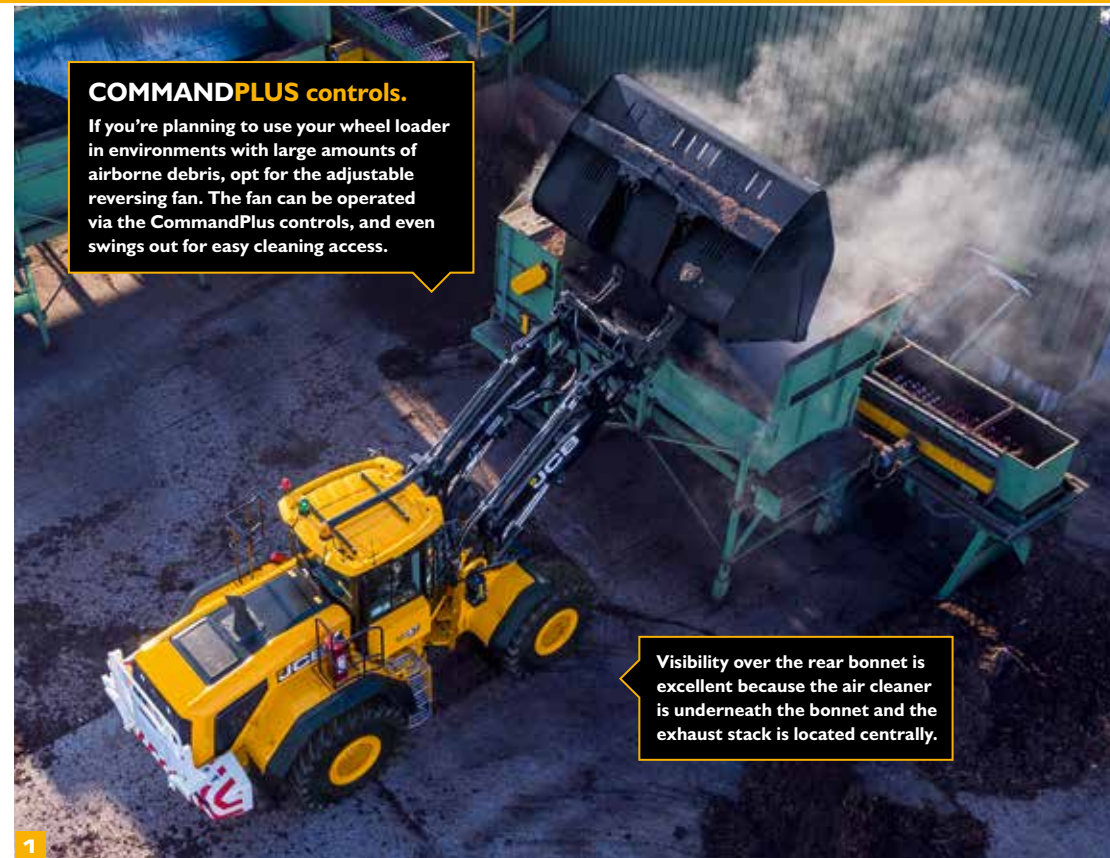


FULLY PROTECTED.

OPERATORS, BYSTANDERS AND YOUR FLEET ARE WELL PROTECTED AT ALL TIMES BY THE NEW JCB 457. GREAT VISIBILITY INSIDE AND OUT, NON-SLIP SURFACES AND EXCELLENT AIR FILTRATION ARE JUST THE BEGINNING.

Safely does it.

- 1 If you plan to use your wheeled loader for quarry work, it's worth specifying the dedicated quarry safety pack. This includes blue flashing reverse lights, a green operator presence beacon, a rear object detection system and hi-viz exterior chevrons.
- 2 Access steps are inclined and equally spaced, complemented by well positioned grab handles for three points of contact at all times.
- 3 On the new JCB 457, 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.
- 4 Our rearward camera displays an unobstructed view from the back of the machine.
- 5 Superb visibility in dark conditions is guaranteed with JCB's optional LED lighting.



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.

Visibility over the rear bonnet is excellent because the air cleaner is underneath the bonnet and the exhaust stack is located centrally.



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

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.

7 The new 457's cab is isolator-mounted, compliant with ROPS/FOPS standards, and positively pressurised against dust. You can choose from fresh air and carbon recirculation filters as well.

8 Door hinges are mounted on the A-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.





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 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.

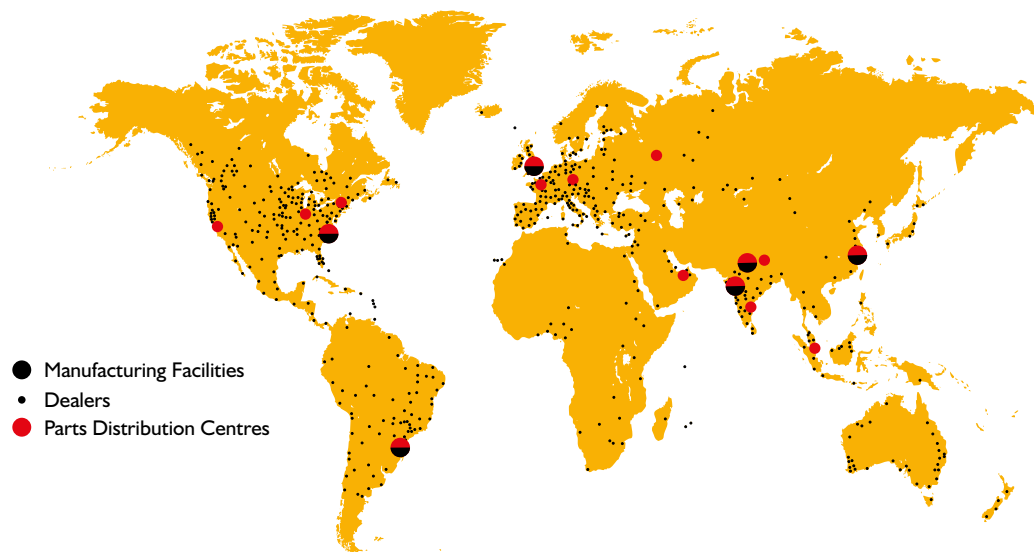


1 Our Technical Support Service provides instant access to factory expertise, day or night, while our Finance and Insurance teams are always on hand to provide fast, flexible, competitive quotes.

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.

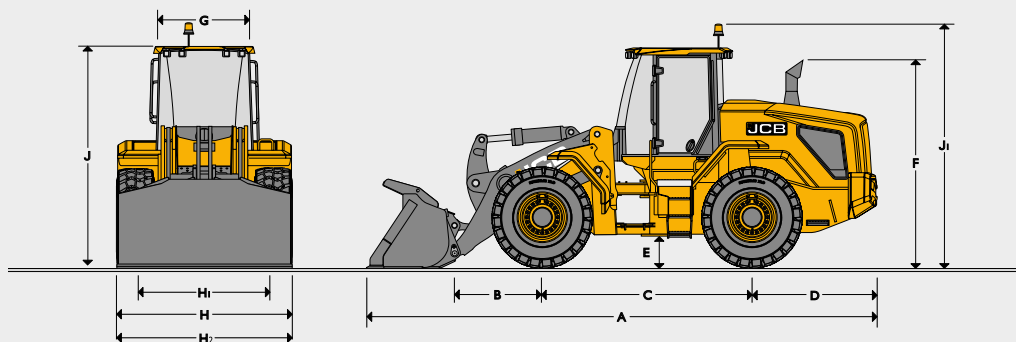


3 JCB offers comprehensive extended warranties as well as service-only or repair and maintenance contracts. Irrespective of what you opt for, our Maintenance teams around the world charge competitive labour rates, and offer non-obligation quotations as well as fast, efficient insurance repair work.



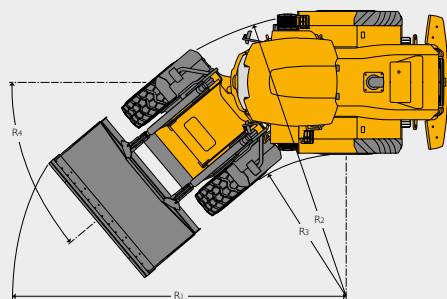
Note: JCB LIVELINK and JCB extended warranty packages may not be available in your region, so please check with your local dealer.

STATIC DIMENSIONS



		457 HT	457 HT HL	457 HT SHL	457 ZX
A	Overall length	mm 8508	8950	9451	7961
B	Axle to pivot pin	mm 1577	2018	2727	1622
C	Wheel base	mm 3300	3300	3300	3300
D	Axle to counterweight face	mm 1971	1971	1971	1971
E	Minimum ground clearance	mm 487	487	487	473
F	Height over exhaust	mm 3197	3197	3197	3224
G	Width over cab	mm 1600	1600	1600	1446
H	Max width over tyres	mm 2698	2698	2698	2699
H1	Wheel track	mm 2100	2100	2100	2100
J	Height over cab	mm 3427	3427	3427	3423
	Pin height (maximum)	mm 4307	4750	5273	4110
	Front axle weight	kg 8244	8855	9801	8985
	Rear axle weight	kg 11997	11697	11140	11014
	Total weight	kg 20240	20552	20941	19999

Data based on machine equipped with direct mounted 3.5 m³ bucket with toe plate and Michelin 23.5 R25 XHA2 (L3) tyres. HT machines include Heavy Duty counterweight.



		457 HT	457 HT HL	457 HT SHL	457 ZX
R1	Maximum turn radius over shovel	mm 6527	6822	6933	6507
R2	Maximum turn radius over tyre	mm 5883	5883	5883	5883
R3	Inside turn radius	mm 3183	3183	3183	3183
R4	Articulation angle	degrees +/-40	+/-40	+/-40	+/-40

TRANSMISSION

Type	5 Speed Non LUC Converter (ZF)				5 Speed LUC Converter (ZF) *Assumes LUC Engaged			
	ZF 5WG210				ZF 5WG210 with lock-up			
Gear	Forward Dynamic Mode	Reverse Dynamic Mode	Forward Comfort Mode	Reverse Comfort Mode	Forward Dynamic Mode	Reverse Dynamic Mode	Forward Comfort Mode	Reverse Comfort Mode
1	kph 6.37	6.74	5.44	5.75	6.02	6.37	5.40	5.70
2	kph 11.67	12.30	10.02	10.56	11.29	11.90	10.20	10.75
3	kph 17.77	28.17	15.21	23.36	17.30	28.16	15.62	25.40
4	kph 26.90		22.37		26.75		24.13	
5	kph 38.68		31.09		40.70		36.38	

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 1350
Valves per cylinder	4
Air cleaner	Cyclonic pre filter with engine fan scavenge system
Fan drive type	Hydraulically driven cooling fan
Emissions	EU Stage V, US EPA Tier 4F

AXLES

Type	Open differential	Limited slip differential	Open differential with auto-locking front
Make and model	ZF MT-L 3095 MK 2 (front and rear)	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	23.334:1
Rear axle oscillation	+/-12.5°	+/-12.5°	+/-12.5°

All available with open differential, limited slip differential, open differential with auto-locking front.

ELECTRICAL SYSTEM

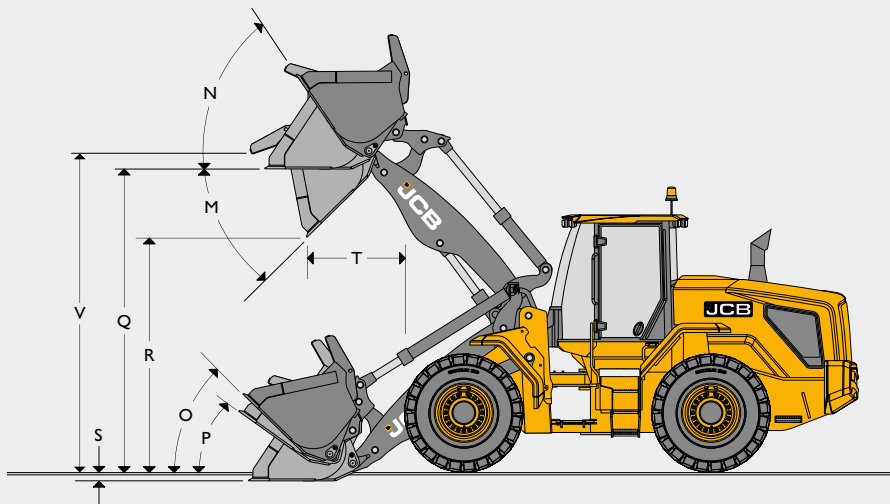
System voltage	Amps	24
Alternator output	Amps	100
Battery capacity	Amp hour	2 x 110

HYDRAULICS

Pump type	Variable displacement	
Pump 1 maximum flow	l/min	153
Pump 1 maximum pressure	bar	220
Pump 2 maximum flow	l/min	153
Pump 2 maximum pressure	bar	170

Hydraulic cycle times at full engine RPM

Arms raise (full bucket)	Seconds	5.8
Shovel dump (full bucket)	Seconds	1.2
Arms lower (empty bucket)	Seconds	4.1
Total cycle	Seconds	11.1



TYRE SIZE

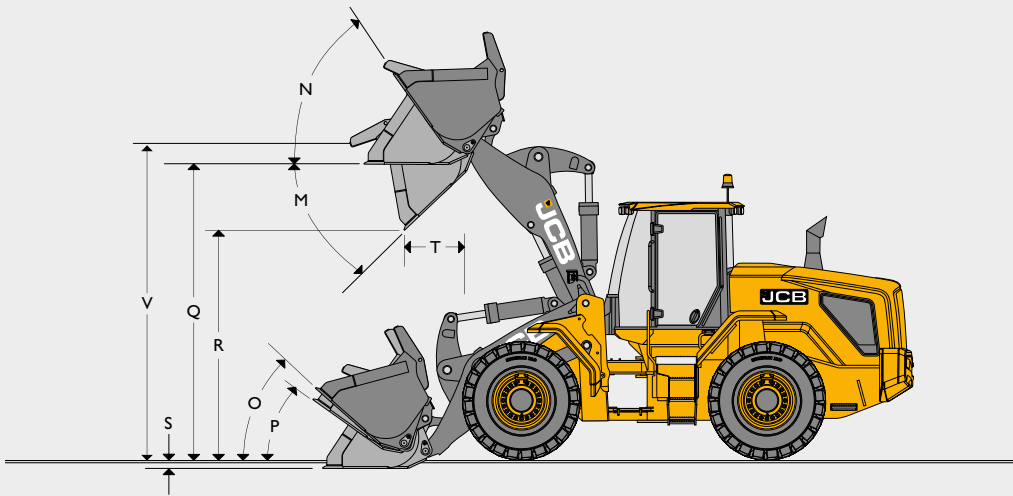
Tyre size	Manufacturer	Type	Rating	Op weight kg	457HT std arms		457HT HL arms		457HT SHL arms		Dimensions	
					STL kg	FTTL kg	STL kg	FTTL kg	STL kg	FTTL kg	Vertical	Width
23.5R25 (Radial)	Michelin	XTLA	L2	-12	-8	-6	-7	-6	-6	-5	-2	-3
650/65R25 (Radial)	Michelin	XLD	L3	-92	-58	-49	-51	-43	-44	-38	-56	35
23.5R25 (Radial)	Goodyear	TL-3A+	L3	324	204	174	178	152	155	132	19	0
23.5R25 (Radial)	Goodyear	RT-3B	L3	176	111	95	97	83	84	72	10	0
23.5-25 (Crossply)	Goodyear	HRL-3A (20ply)	L3	-100	-63	-54	-55	-47	-48	-41	15	0
23.5-25 (Crossply)	JCB	SITEMASTER (24 Ply)	L3	-92	-58	-49	-51	-43	-44	-38	6	1
23.5R25 (Radial)	JCB	EARTHMOVER	L3	160	101	86	88	75	76	65	1	6
23.5R25 (Radial)	Michelin	XLDD2A	L5	548	344	295	301	257	261	224	27	13
23.5R25 (Radial)	Michelin	XMINE D2	L5	828	520	445	455	389	395	338	37	38
23.5R25 (Radial)	Goodyear	RL-5K	L5	792	498	426	435	372	378	323	9	24
23.5R25 (Solid cushion)	SG Revolution	S2 C2 DWL	-	3124	1964	1680	1715	1467	1490	1275	51	-24

*Heavy duty counterweight replaced by standard counterweight when solid tyres are fitted.

LOADER DIMENSIONS

Model	457 HT														457HT HL										457 HT SHL														
	Shovel mounting	Direct						Quickhitch								Direct					Quickhitch					Direct					Quickhitch								
		Shovel equipment	Tipped teeth	Reversible toepate		Tipped teeth and toepate segments		Tipped teeth	Reversible toepate		Tipped teeth and toepate segments		Tipped teeth	Reversible toepate		Tipped teeth and toepate segments		Tipped teeth	Reversible toepate		Tipped teeth and toepate segments		Tipped teeth	Reversible toepate		Tipped teeth and toepate segments		Tipped teeth	Reversible toepate		Tipped teeth and toepate segments								
Shovel capacity (SAE heaped 100%)	m ³	3.1	3.3	3.3	3.5	3.3	3.5	3.1	3.3	3.3	3.5	3.3	3.5	2.8	3.1	3.3	3.3	3.5	3.3	3.5	3.1	3.3	3.3	3.5	3.3	3.5	2.8	3.1	3.3	3.3	3.5	3.3	3.5	3.1	3.3	3.3	3.5	3.3	3.5
Shovel capacity (struck)	m ³	2.497	2.687	2.648	2.844	2.648	2.844	2.497	2.687	2.648	2.844	2.648	2.844	2.210	2.497	2.687	2.648	2.844	2.648	2.844	2.497	2.687	2.648	2.844	2.648	2.844	2.210	2.497	2.687	2.648	2.844	2.648	2.844	2.497	2.687	2.648	2.844	2.648	2.844
Shovel width	mm	2837	2837	2800	2800	2837	2837	2837	2837	2800	2800	2837	2837	2837	2837	2837	2800	2800	2837	2837	2837	2837	2800	2800	2837	2837	2837	2837	2837	2800	2800	2837	2837	2837	2837	2800	2800	2837	2837
Shovel weight	kg	1519	1565	1629	1675	1667	1713	1426	1417	1536	1581	1574	1619	1447	1519	1565	1629	1675	1667	1713	1426	1417	1536	1581	1574	1619	1447	1519	1565	1629	1675	1667	1713	1426	1417	1536	1581	1574	1619
Maximum material density*	kg/m ³	2118	1975	1972	1846	1963	1837	1996	1863	1858	1740	1853	1732	1978	1791	1670	1666	1559	1657	1551	1690	1577	1571	1471	1566	1463	1655	1468	1369	1363	1275	1355	1267	1384	1290	1284	1201	1279	1193
Tipping load straight*	kg	15609	15506	15480	15387	15432	15327	14760	14670	14643	14552	14609	14492	13183	13254	13165	13139	13050	13081	12991	12552	12474	12439	12360	12405	12302	11110	10951	10874	10840	10762	10783	10705	10370	10302	10259	10191	10227	10134
Tipping load full turn*	kg	13130	13035	13014	12919	12956	12860	12377	12295	12263	12180	12229	12122	11076	11105	11024	10994	10911	10937	10854	10478	10407	10367	10295	10335	10238	9270	9104	9032	8995	8923	8940	8867	8580	8517	8472	8408	8440	8353
Payload*	kg	6565	6518	6507	6460	6478	6430	6189	6148	6131	6090	6115	6061	5538	5553	5512	5497	5456	5468	5427	5239	5203	5184	5148	5167	5119	4635	4552	4516	4498	4461	4470	4434	4290	4258	4236	4204	4220	4177
Maximum breakout force	kN	161	153	150	143	150	143	144	138	135	130	135	130	176	163	155	151	154	151	154	146	140	135	129	135	129	175	163	155	152	145	152	145	146	140	137	132	137	132
M Dump angle maximum	degrees	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45		
N Roll back angle full height	degrees	57	57	57	57	57	57	57	57	57	57	57	56	56	56	56	56	56	56	56	56	56	56	56	56	58	58	58	58	58	58	58	58	58	58	58	58		
O Roll back at carry	degrees	52	52	52	52	52	52	52	52	52	52	52	48	48	48	48	48	48	48	48	48	48	48	48	48	54	54	54	54	54	54	54	54	54	54	54			
P Roll back at ground level	degrees	46	46	46	46	46	46	46	46	46	46	46	43	43	43	43	43	43	43	43	43	43	43	43	43	46	46	46	46	46	46	46	46	46	46	46			
Q Load over height	mm	3999	3999	4031	4031	3999	3999	3999	4031	4031	3999	3999	4446	4443	4443	4447	4447	4383	4443	4443	4443	4447	4447	4443	4443	4443	4962	4965	4965	4997	4997	4965	4965	4965	4965	4997	4997		
R Dump height (45 deg dump)	mm	2923	2881	3072	3030	2923	2881	2817	2775	2966	2924	2817	2772	3264	3328	3370	3476	3435	3328	3370	3222	3180	3371	3329	3222	3180	3953	3889	3847	4037	3996	3889	3847	3783	3741	3932	3890	3783	3741
S Dig depth	mm	120	120	88	88	120	120	120	88	88	120	120	120	120	120	120	120	152	152	120	120	120	120	120	120	120	120	88	88	120	120	120	120	120	88	88	120	120	
T Reach at dump height	mm	1326	1368	1216	1258	1326	1368	1432	1474	1322	1364	1432	1474	1350	1286	1350	1286	1244	1396	1354	1286	1244	1180	1138	1290	1248	1319	1383	1425	1273	1315	1383	1425	1489	1531	1379	1421	1489	1531
V Pin height	mm	4307	4307	4307	4307	4307	4307	4307	4307	4307	4307	4307	4750	4750	4750	4750	4750	4750	4750	4750	4750	4750	4750	4750	4750	5273	5273	5273	5273	5273	5273	5273	5273	5273	5273	5273			
Reach maximum (45 deg dump) horizontal arm	mm	2303	2345	2193	2232	2303	2345	2409	2451	2299	2438	2409	2451	2603	2667	2709	2557	2599	2667	2709	2773	2814	2663	2705	2773	2814	3038	3102	3144	2992	3034	3102	3144	3208	3249	3098	3140	3208	3249
Operating weight	kg	20050	20096	20146	20192	20194	20240	20337	20382	20433	20478	20461	20526	20110	20362	20408	20458	20504	20506	20552	20649	20694	20745	20790	20773	20838	20499	20751	20797	20847	20893	20895	20941	21038	21083	21134	21179	21162	21227

*Assumes machine is fitted with Michelin 23.5R25 XHA2 (L3) tyres.



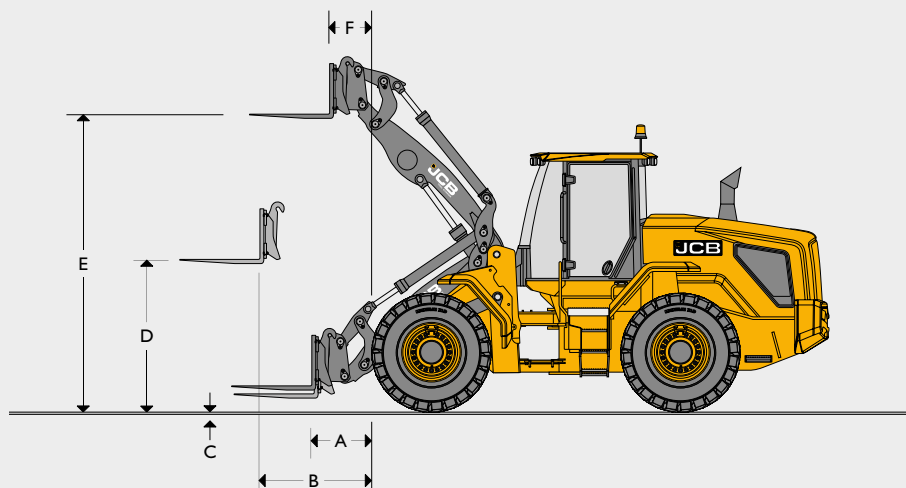
TYRE SIZE					457ZX std arms		Dimensions		
Tyre size	Manufacturer	Type	Rating	Op weight kg	STL kg	FTTL kg	Vertical mm	Width mm	
23.5R25 (Radial)	Michelin	XTLA	L2	-12	-9	-8	-2	-3	
650/65R25 (Radial)	Michelin	XLD	L3	-92	-69	-59	-56	35	
23.5R25 (Radial)	Goodyear	TL-3A+	L3	324	243	208	19	0	
23.5R25 (Radial)	Goodyear	RT-3B	L3	176	132	113	10	0	
23.5-25 (Crossply)	Goodyear	HRL-3A (20ply)	L3	-100	-75	-64	15	0	
23.5-25 (Crossply)	JCB	SITEMASTER (24 Ply)	L3	-92	-69	-59	6	1	
23.5R25 (Radial)	JCB	EARTHMOVER	L3	160	120	103	1	6	
23.5R25 (Radial)	Michelin	XLDD2A	L5	548	412	352	27	13	
23.5R25 (Radial)	Michelin	XMINE D2	L5	828	622	532	37	38	
23.5R25 (Radial)	Goodyear	RL-5K	L5	792	595	509	9	24	
23.5R25 (Solid cushion)	SG Revolution	S2 C2 DWL	-	3124	2347	2008	51	-24	
Heavy Duty Counterweight				-	774	1752	1566	51	-24

*Heavy duty counterweight not available with L5 & solid tyres

LOADER DIMENSIONS

Model	457 ZX												
	Direct						Quickhitch						
	General purpose						General purpose						
Shovel mounting	Direct						Quickhitch						
Shovel type	General purpose						General purpose						
Shovel equipment	Tipped teeth		Reversible toeplate		Tipped teeth and toeplate segments		Tipped teeth		Reversible toeplate		Tipped teeth and toeplate segments		
Shovel capacity (SAE heaped)	m³	3.1	3.3	3.3	3.5	3.3	3.5	3.1	3.3	3.3	3.5	3.3	3.5
Shovel capacity (struck)	m³	3	3	3	3	3	3	2	3	3	3	3	3
Shovel width	mm	2837	2837	2800	2800	2837	2837	2837	2837	2800	2800	2837	2837
Shovel weight	kg	1613	1656	1723	1766	1761	1804	1426	1471	1536	1581	1574	1619
Maximum material density *	kg/m³	2217	2068	2064	1933	2055	1924	2122	1984	1975	1854	1970	1845
Tipping load straight *	kg	16494	16390	16364	16269	16313	16208	15846	15780	15725	15658	15690	15596
Tipping load full turn *	kg	13743	13648	13626	13530	13566	13470	13156	13094	13037	12975	13002	12915
Payload *	kg	6872	6824	6813	6765	6783	6735	6578	6547	6519	6488	6501	6457
Maximum breakout force	kN	172	165	161	154	161	154	153	147	143	137	143	137
M Dump angle maximum	degrees	45	45	45	45	45	45	45	45	45	45	45	45
N Roll back angle full height	degrees	67	67	67	67	67	67	67	67	67	67	67	67
O Roll back at carry	degrees	45	45	45	45	45	45	45	45	45	45	45	45
P Roll back at ground level	degrees	39	39	39	39	39	39	39	39	39	39	39	39
Q Load over height	mm	3802	3802	3834	3834	3802	3802	3802	3802	3834	3834	3802	3802
R Dump height (45 deg dump)	mm	2740	2698	2890	2848	2740	2698	2620	2578	2770	2728	2620	2578
S Dig depth	mm	120	120	88	88	120	120	120	120	88	88	120	120
T Reach at dump height	mm	1301	1343	1191	1233	1301	1343	1421	1463	1311	1353	1421	1463
V Pin height	mm	4110	4110	4110	4110	4110	4110	4110	4110	4110	4110	4110	4110
Reach maximum (45 deg dump) horizontal arm	mm	2140	2182	2029	2071	2140	2182	2260	2302	2149	2191	2260	2302
Operating weight	kg	19811	19854	19907	19950	19956	19999	20170	20215	20266	20311	20295	20360

*Assumes machine is fitted with Michelin 23.5R25 XHA2 (L3) tyres.



LOADER DIMENSIONS WITH FORKS

		457 HT	457 HT HL	457 HT SHL	457 ZX
Fork carriage width	mm	1500	1500	1500	1500
Length of tines	mm	1220	1220	1220	1220
A Reach at ground level	mm	1198	1649	2158	1003
B Reach at arms horizontal	mm	1847	2213	2647	1697
C Top of tine above ground with arms down	mm	28.5	28.5	28.5	28.5
D Arms, horizontal height	mm	1935	1935	1935	1935
E Arms, maximum height	mm	4143	4598	5109	5109
F Reach at maximum height	mm	875	902.5	933.5	933.5
Tipping load straight	kg	18146	13375	9646	15240
Tipping load full turn (40°)	kg	15496	11325	8126	12823
Payload*	kg	8000	8000	6500	8000
Attachment weight	kg	610	610	610	610
Operating weight (includes 80Kg operator and full fuel and Urea tanks)	kg	19512	19824	20213	19346

* 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. ZX machines do not. HT machines have heavy duty counterweight

SERVICE FILL CAPACITIES

Hydraulic system	litres	240
Fuel tank	litres	300

STEERING Hydraulic power steering.

BRAKES Hydraulic power braking on all wheels. In-board mounted, oil immersed, multi-plate disc brakes.
Parking brake, electro-hydraulic disc type operating on transmission output shaft.

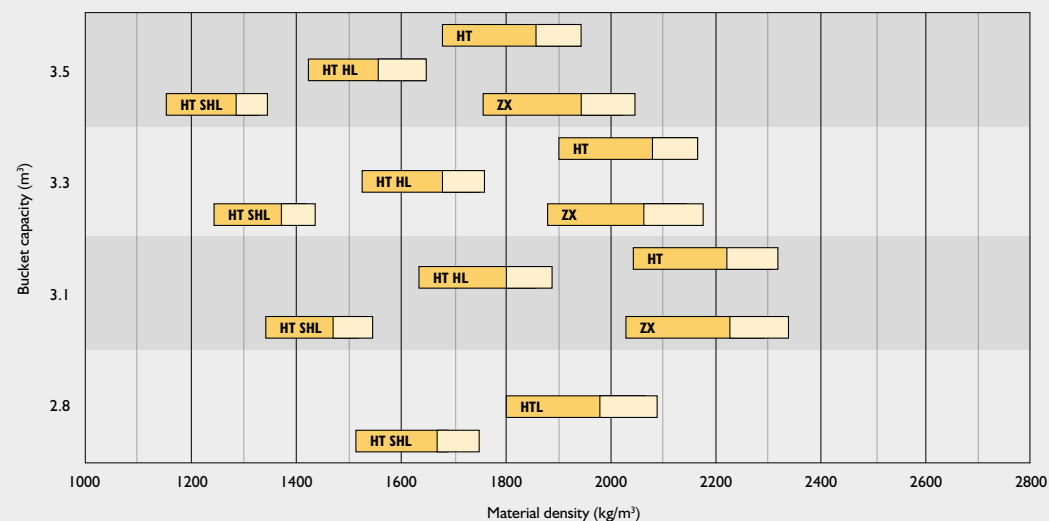
NOISE AND VIBRATION

			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	102 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	0.63	+/- 0.11 m/s ²	ISO 2631-1:1997 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.

MATERIAL DENSITY

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

BUCKET CAPACITIES



HT = Standard height arm HL = High lift arm SHL = Super high lift arm ZX = Z bar

100%
115% 95%
Bucket fill factors

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	•
Green seat belt beacon	+
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	+
Smart reverse alarm and light	+

ELECTRICAL (CONTINUED)

Turn signals	•
White noise reverse alarm and light	+
Work lights in rear grille	•
Bonnet operation alarm	•
Blue LED reverse lights	+

DRIVE TRAIN

5 speed transmission	•
5 speed transmission with lock-up torque converter	+
Operator controlled driving modes – Comfort & Dynamic	•
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	•

OPERATOR STATION (CONTINUED)

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	+
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 seat belt	•
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 coolbox	+
Cab floor carpet	+

FRONT PRIMARY DISPLAY

Warning lights	
Direction indicators	•
Master warning	•
High coolant temperature	•
Battery charging condition	•

EQUIPMENT

FRONT PRIMARY DISPLAY (CONTINUED)

Warning lights (continued)	
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	•
Differential lock	•
Low steering pressure	•
Buzzer alerts	
Engine air filter blocked	•
Diesel exhaust fluid (DEF)	•
Torque reduction in case of malfunction	•
Amber warning lamp	•
Stop engine	•
Gauge display	
Engine speed	•
Coolant temperature	•
Fuel level	•
LCD screen display	
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	•
Data screens	
DEF level	•
Hydraulic oil temperature	•

FRONT PRIMARY DISPLAY (CONTINUED)

Data screens (continued)	
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	•
Daily checks	
Engine oil level	•
DEF level	•
DPF status	•
RIGHT HAND SECONDARY DISPLAY (OPTIONAL)	
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	•
Machine settings screen	
Coolant temperature	•
Engine oil pressure	•
Air filter	•
Transmission sump oil temperature	•
Transmission torque convertor temperature	•
Hydraulic oil temperature	•
Park brake pressure	•
Battery voltage	•
Help display	•
On-screen handbook	•
HYDRAULIC SYSTEM	
Smooth Ride System (SRS)	+
Hydraulic quick hitch with in cab isolation	+
Auxiliary ARV kit	+
Auxiliary hydraulic service	+

HYDRAULIC SYSTEM (CONTINUED)

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	+
Heavy duty rear counterweight (+774kg)	+
PROTECTIVE EQUIPMENT	
Front cab screen guards	+
Wastemaster package: includes front and rear light guards, front screen guard, front and rear belly guards, rear light guards, Wastemaster decal.	+
Rear grille guard	+
Fire system	+
Safety strut loader arm	•
Light guards	+
Front belly guard kits	+
Rear belly guard kits	+
Articulation joint safety strut	•
Front rubber apron mat	+
OTHER EQUIPMENT	
High lift loader end (HT only)	+
Super high lift loader end (HT loader only)	+

STANDARD • OPTIONAL +



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Wheel Loader 457

Gross engine power: 210kW (282hp) Operating weight: 19,999kg
 Full turn tipping load: 13,470kg Standard shovel capacity: 3.5m³

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