WHEELED LOADING SHOVEL | 467 ZX

Gross Engine Power: 216kW (290hp) Operating Weight: 23,800kg Full Turn Tipping Load: 15,300kg Standard Bucket Capacity: 4m³

WHEELED LOADING SHOVEL 467 ZX CONTENTS.


JCB
467ZX

LOAD AFTER LOAD OF BENEFITS.

THERE REALLY ARE LOADS OF REASONS TO CHOOSE THE ALL-NEW JCB 467 WHEELED LOADING SHOVEL. FOR STARTERS, IT'S PRODUCTIVE, EFFICIENT, EASY TO MAINTAIN AND EXTREMELY DURABLE.

DRIVETRAIN PRODUCTIVITY.

Cummins QSM11 engine produces high power, torque and economy.

An intelligent clutch cut-off feature gives maximum hydraulic performance and limits vehicle speed when loading.

Limited slip or automatic differential lock axles achieve traction in all conditions.

Transmission options can perfectly match your application.

EFFICIENCY EXEMPLIFIED .

ZX Loader geometry generates maximum breakout force for efficient loading.

A 467 uses innovative load-sensing hydraulics for precise and efficient control.

Our innovative Smoothride suspension system reduces shock loadings and spillages.

The JCB 467 uses a range of cutting edge operator aids to maximise efficiency.

IN COMFORT, IN CONTROL.

The cabin has space, protection (ROPS and FOPS), excellent visibility, intuitive controls and extensive stowage areas.

A stylish full-colour LCD dash display with analogue dials.

Electro-hydraulic servo controls make loader end handling easy.

Climate control and air conditioning heating options are available.

REDUCING DOWNTIME.

Benefit from class-leading service and maintenance access, and 500-hour service intervals.

Greasing is convenient and easy, with remote access in the articulation area.

A side bay offers easy access to pressure test points, transmission filters, emergency steer pump, batteries and isolator.

Our single-faced widecore radiator maintains the optimum operating temperature.

DURABILITY AND STRUCTURAL STRENGTH.

"O" ring face seals on all hydraulic connections guard against leaks.

Large diameter loader and articulation pins and bushes have secondary seals, blocking dirt.

Components are tried, trusted and chosen for durability.

VALUE FOR MONEY.

JCB's customer support is class-leading.

Telemetry gets the most out of your machines and your fleet.

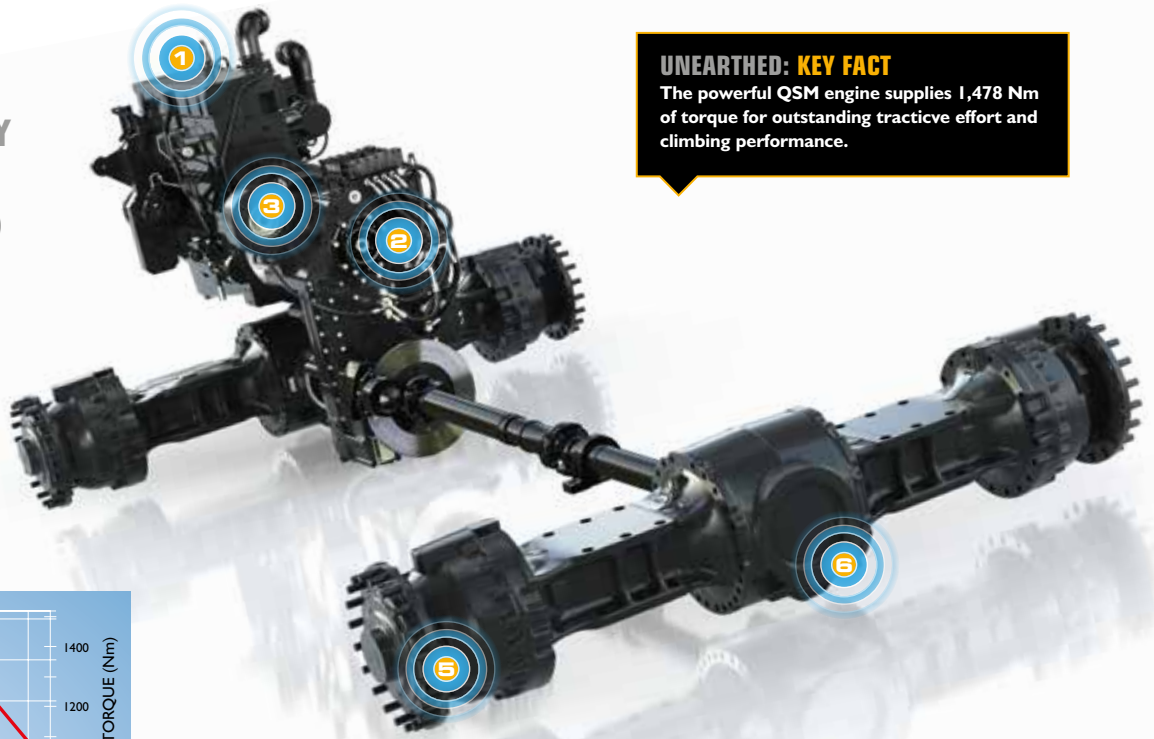
Benefit from design flourishes like an automatic idle shutdown, load-sensing hydraulics and a variable speed fan.

Get exactly the right machine for your requirements with JCB's tailored solutions.


JCB

POWER MEETS PRODUCTIVITY: THE DRIVETRAIN.

SUPREME TRACTION, SEAMLESS TRANSMISSION MATCH AND UNPARALLELED DIGGING ABILITY COME AS STANDARD ON A JCB 467. OUR CUTTING-EDGE DRIVELINE EFFICIENCY PACKAGE OPTIONS (5-SPEED TRANSMISSION WITH LOCK UP CONVERTER, AND AN AUTOMATIC DIFFERENTIAL LOCK) CAN INCREASE PRODUCTIVITY BY UP TO 40% AND LOWER FUEL USE BY UP TO 20%.



UNEARTHED: KEY FACT
The powerful QSM engine supplies 1,478 Nm of torque for outstanding tracticve effort and climbing performance.

The Cummins QSM11.

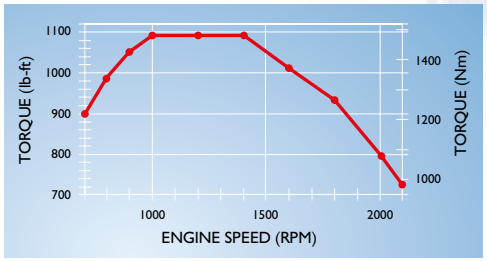
1 The 467's 216kW (290hp), 6-cylinder diesel engine produces high power and torque at low revs. The 10.8 litre unit complies with Stage 3A/Tier 3 and features a reliable Celect electronic injection system for both performance and efficiency. Optional automatic idle shutdown is available to reduce fuel usage.

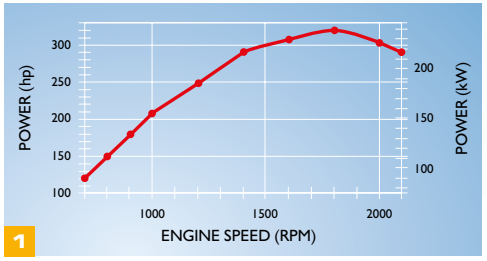
ZF transmission.

2 The JCB 467's standard 4-speed ZF fully automatic powershift transmission provides stepless gear changes and smooth operation. The optional 5-speed unit allows lower engine speeds with smaller steps between gears, reducing fuel consumption.

Lock-up torque converter.

3 Combined with the 5-speed gearbox option, this permits direct drive between the 467's engine and transmission, totally eliminating power loss. Active from 2nd to 5th gears, you'll see improved fuel economy, cycle times, and roading and incline performance.





The 467 features wheel speed braking, engine de-rating and intelligent clutch cut-off as standard. A 5-speed transmission with lockup torque convertor and automatic differential locking axles complete the efficiency package.

4

Intelligent clutch cut-off.

4 JCB's clever electronic management can control progressive clutch cut-off for efficient, productive loader control. This feature automatically diverts maximum power to the loader hydraulics for optimal truck/hopper loading duties. It also controls tractive effort via the transmission to reduce service brake wear and fuel consumption.

ZF Axles.

5 The 467's axles use planetary drive with cylindrical roller bearings for minimal power and heat losses. Meanwhile, wheel speed braking and a low drag coefficient provide maximum power with low fuel use.

Differentials.

6 With limited slip as standard, JCB will always help you keep a grip on productivity. The optional open differential has an automatic locking front axle for 100% traction, giving associated reductions in fuel use, tyre wear and drivetrain wind-up.


4


5


6

EVEN MORE PRODUCTIVITY.

IT'S NOT JUST THE 467'S DRIVETRAIN THAT'S DESIGNED TO BOOST EFFICIENCY AND PRODUCTIVITY. THERE'S A WHOLE HOST OF EXTRA ELEMENTS DESIGNED TO KEEP EVERYTHING FUNCTIONING AT THE OPTIMUM LEVEL.

1

Z-linkage loader geometry.

1 The JCB 467's z-linkage loader design means breakout forces are huge and shovel corners are highly visible. High dump angles provide excellent discharge and retention, while maintenance is reduced through minimising pivots.

Load sensing hydraulics.

For the ultimate in precise, efficient loader control, JCB's innovative variable displacement pumps 2 feed a load-sensing valve block, only consuming power on demand. 3


2


3

Class-leading climbing and stockpiling capability with high power-to-weight ratio and 27° departure angle. Z-Bar loader design delivers 188kN of breakout force.

Smoothride suspension system.

4 The 467's Smoothride load suspension system limits shock loadings. This reduces material spillage and structural stresses, increasing operator comfort as well.

Loader settings.

5 Operating a 467 is simple and efficient; return-to-dig, arm height limitation and float functions are always at hand. Disabling the aids is possible with just the flick of a switch.

UNEARTHED: KEY FACT
The 467's variable displacement piston pump hydraulics provide 395 l/min hydraulic flow for maximised multi-functioning performance.

THE PERFECT PLACE TO WORK.

A FRESH AND ALERT OPERATOR IS NATURALLY PRODUCTIVE. THAT'S WHY JCB HAS DESIGNED THE 467 CABIN TO BE AS COMFORTABLE AS POSSIBLE FOR THE WHOLE WORKING DAY. THE 3M³ ENVIRONMENT HAS PLENTY OF STOWAGE SPACE, EASY ACCESS, LOW NOISE LEVELS, EXCELLENT VISIBILITY AND ERGONOMIC CONTROLS.

1

ROPS/FOPS safety structure.

1 Operator safety is paramount! The JCB 467 cab is isolator-mounted, compliant with ROPS/FOPS standards, and positively pressurised to keep out dust. Air recirculation filters include fresh air, and options of carbon and P3 – HEPA.

LCD from JCB.

2 The 467 has a stylish, modern central dash display combining analogue dials and a colour LCD screen. The screen can display operating, service and machine health information, and much more besides.

Easy loading.

3 The JCB 467's loader end is electro-hydraulically controlled for low effort precision lever operation, with integrated kickdown and differential lock (if fitted). Forward/reverse direction control is just a finger tip away.

A productive climate.

4 JCB's air conditioning or automatic climate control options allow operators to select the perfect working temperature.

2

3

4

The best seats.

5 JCB has a range of seat options, with choices like mechanical or air suspension, vinyl or fabric bases. Our Actimo XXL option is heated, with air suspension, lumbar support, armrests, backrest extension, a headrest and full adjustment for premium comfort.

Visibly better.

6 The 467 has a 3-piece laminated front screen for excellent visibility. Rearward visibility is a step forward too, thanks to interior mirrors, heated exterior mirrors, an optional reverse camera and a sloping rear bonnet design.

5

6

PRODUCTIVITY UP, DOWNTIME DOWN.

SPEND YOUR TIME MORE PRODUCTIVELY – MAKING MONEY. WE'VE REDUCED BOTH ROUTINE AND UNPLANNED MAINTENANCE THROUGH EASY SERVICE ACCESS AND EXTENDED 500-HOUR SERVICE INTERVALS. WHAT'S MORE, DAILY CHECKS CAN BE COMPLETED SAFELY, CONVENIENTLY AND QUICKLY AT GROUND LEVEL.

An electronic monitoring system protects machine and operator through realtime information and alerts.

One-stop service points.

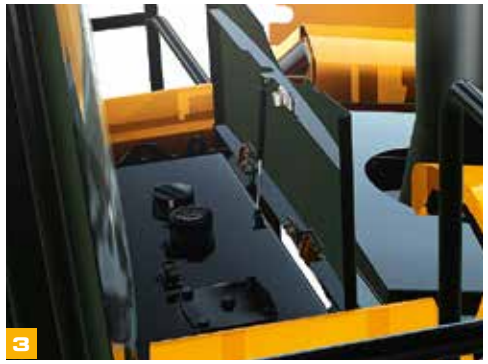
1 To make things simpler the 467 allows quick ground level access to the transmission eye level gauge and filler. Traditionally difficult greasing areas like loader arm pivots, axle pivots and rear steer ram have grouped remote greasing. There's even a simple side bay to house the transmission filters, emergency steer pump, batteries and isolator.

Keeping cool.

2 JCB's single-faced Widecore cooling pack keeps the 467 at the right temperature by allowing large debris to pass through. There's also the option to reverse the airflow at programmable intervals. The fan is variable speed depending on temperature for lower noise and fuel use.

Protecting hydraulics and operators.

3 The hydraulic tank on a JCB 467 is just behind the cab. This keeps it out of harm's way, acting as an engine noise buffer and producing a positive head of pressure eliminating cavitation.



Cab access to key parts.

4 The rear cab panel of the JCB 467 offers access to diagnostic points while the transmission and hydraulic pumps are beneath the floor panel.

Oil Immersed Disc Brakes.

5 The JCB 467 has full hydraulic dual circuit braking with multiple oil immersed disks designed for a long, virtually maintenance-free lifespan.

Keeping things simple.

6 The JCB 467's innovative axles reduce maintenance. The axle beams use readily-accessible fully-sealed self-lubricating plastic bearings for low wear, easy greasing and reduced debris ingress.

BUILT TO LAST.

WHEN YOU BUY A LOADER, YOU NEED TO KNOW IT'LL BE RELIABLE AND LONG-LASTING. THAT'S WHY WE'VE BUILT THE 467 USING ONLY THE BEST POSSIBLE COMPONENTS AND STRUCTURES FROM INDUSTRY-RECOGNISED MANUFACTURERS. SO YOU'LL BE INVESTING IN PERFORMANCE AND PEACE OF MIND, DAY AFTER DAY.

Optimised design of key structures ensures long service life without carrying excess weight.

Structural stress testing.

1 Some stresses are unavoidable so we perform rigorous testing across 1.2 million cycles to emulate the toughest digging and dump situations. All structures are therefore tried and tested to perform the most arduous duties over thousands of hours.

Finite element analysis (FEA).

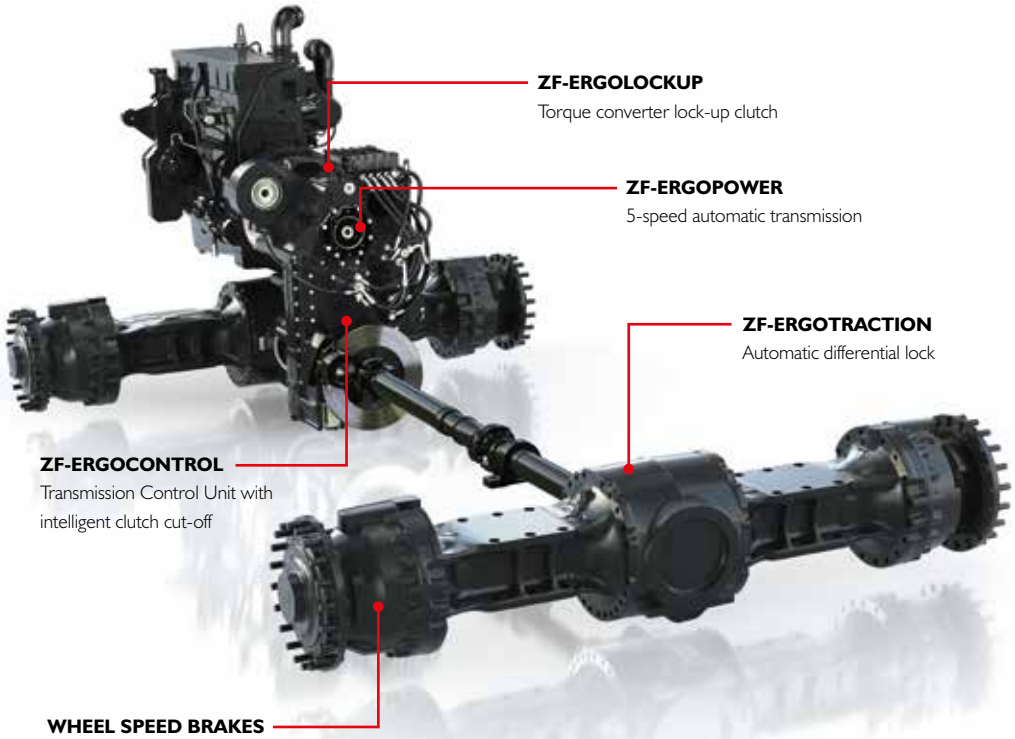
We design the 467 using computer-aided structural analysis to predict and reduce stresses for a robust, durable structure.

ORFS "O-ring" hydraulic couplings.

2 The 467 uses O-ring face couplings to give the very best seals, reducing any leak potential.

Extreme climate testing.

3 JCB 467s are used by customers in every corner of the globe so we've performance tested the machine in climates ranging from -20°C to 50°C.



4

From efficiency to durability.

4 The optional JCB Driveline Efficiency Package reduces drivetrain and brake loads. By doing this, you can reduce running costs and extend the machine's life. Engine de-rating also prevents torque spikes protecting the driveline and lowering fuel use.

Making the little things bigger.

5 We've used large diameter pins and bushes with secondary seals on the 467 to reduce pressure and loadings. Nylon shims help keep dirt out.

5

LIVELINK, WORK SMARTER.

JCB LIVELINK IS AN INNOVATIVE SOFTWARE SYSTEM THAT LETS YOU MONITOR AND MANAGE YOUR MACHINES REMOTELY – ONLINE, BY EMAIL OR BY MOBILE PHONE.

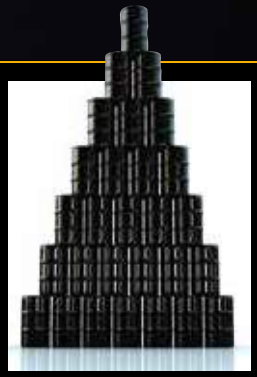
LIVELINK GIVES YOU ACCESS TO A WHOLE HOST OF USEFUL DATA, INCLUDING MACHINE ALERTS, FUEL REPORTS* AND EVENT HISTORY INFORMATION.

ALL YOUR MACHINE INFORMATION IS HANDLED AT A SECURE DATA CENTRE FOR YOUR PEACE OF MIND.

Productivity and cost benefits.

For ultimate productivity and cost-saving, JCB LiveLink provides information like idle time monitoring* and machine fuel consumption* to help reduce your fuel usage. Machine location information can improve fleet efficiency and you may even enjoy reduced insurance costs courtesy of the added security that LiveLink brings.

* These features require an electronic engine.



Maintenance benefits.

JCB LiveLink makes it easy to manage machine maintenance. Accurate hours monitoring and service alerts improve maintenance planning, and real-time location data helps you manage your fleet. You'll also have access to critical machine alerts and maintenance history records.

Security benefits.

Keep your machine operating safely with JCB Livelink. Real-time geofencing alerts tell you when machines move out of predetermined operating zones, and real-time curfew alerts inform you if machines are being used when they're not supposed to be. Real time location information helps you store your machines in the safest places.

VALUE ADDED.

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

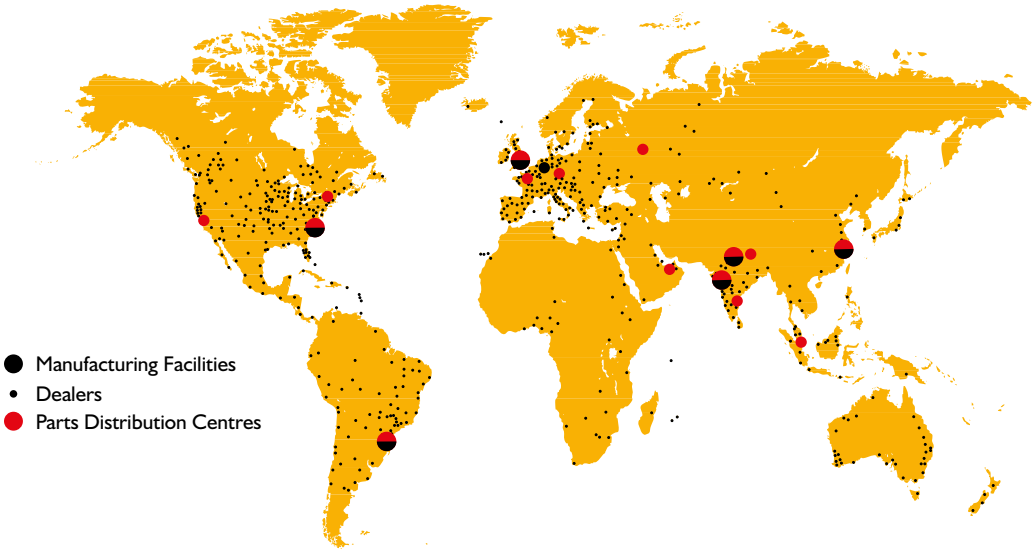

3

2

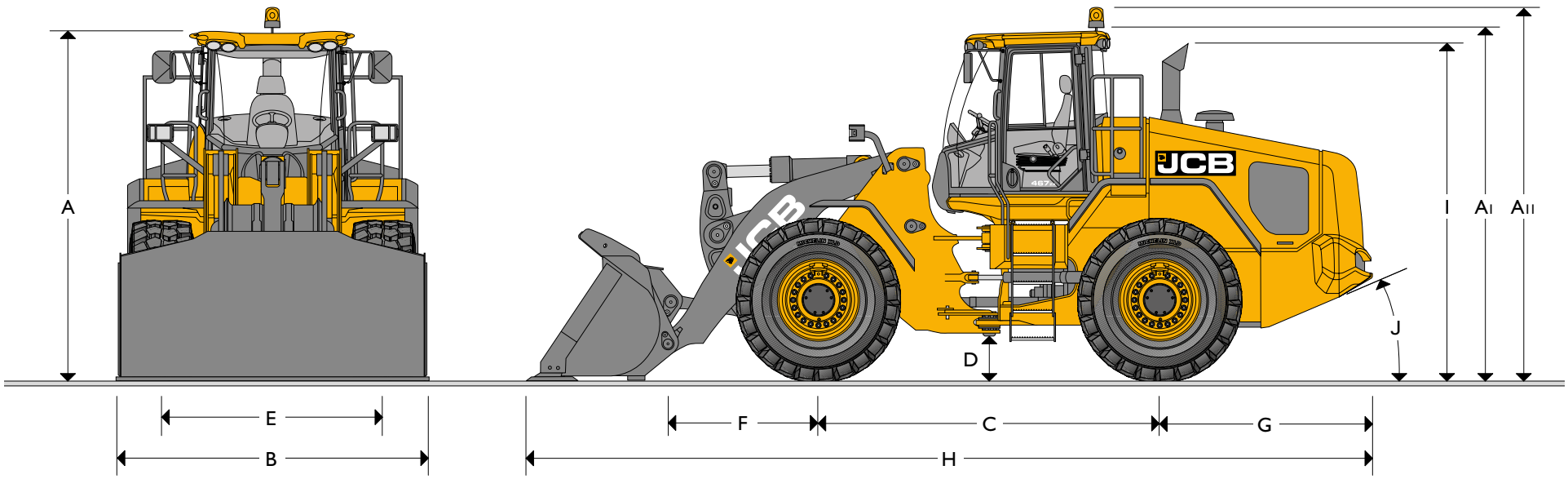
1 Our Technical Support Service provides instant access to factory expertise, day or night, while our Finance and Insurance teams are always on hand to provide fast, flexible, competitive quotes.

2 JCB Assetcare offers comprehensive extended warranties and service agreements, 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.

3 The global network of JCB Parts Centres is another model of efficiency; with 15 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.



RATED ENGINE POWER: 216kW (290hp) FULL TURN TIPPING LOAD: 15300kg OPERATING WEIGHT: 23800kg

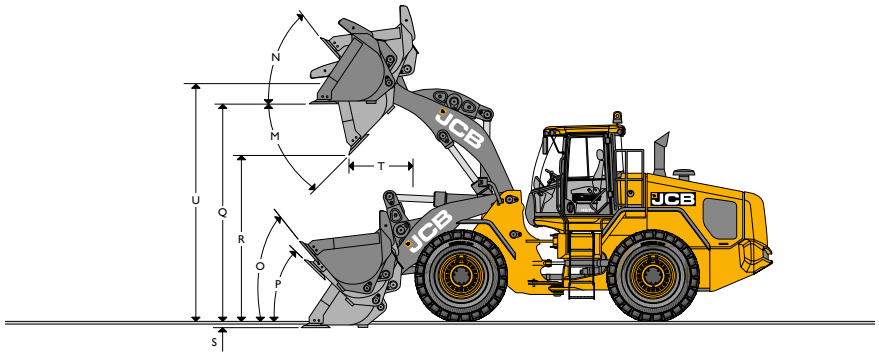


467 ZX – STATIC DIMENSIONS

			mm (ft-in)
A	Height over cab		3595 (11-9)
AII	Overall Height (to top of fixed beacon)		3939 (12-11)
AI	Overall Height (to top of beacon post)		3704 (12-1)
B	Overall Width (over tyres)		2955 (9-8)
C	Wheelbase		3500 (11-5)
D	Ground Clearance (Centre Pivot)		474 (1-6)
E	Wheel Track		2280 (7-5)
F	Front Axle to Pivot Pin		1553 (5-1)
G	Rear Axle to Counterweight Face		2185 (7-2)
H	Total Length		8686 (28-6)
I	Height over exhaust stack		3465 (11-4)
J	Departure Angle	degrees	27°

		mm (ft-in)
Inside Tyre Radius		3755 (12-3)
Outside Radius (edge of tyre)		6705 (22-0)
Max Radius (over shovel)		7910 (25-11)
Articulation Angle	degrees	±37°
Operating Weight	kg (lb)	23800 (52470)
Front Axle Weight	kg (lb)	10980 (24207)
Rear Axle Weight	kg (lb)	12820 (28263)
Options used for Dimension Details		
Tyres		Michelin XHA2 (L3) 26.5R25
Shovel		4m³ pin mounted with toe plate

467ZX – LOADER DIMENSIONS



CHANGES TO OPERATING PERFORMANCE AND DIMENSIONS

Tyre size	Manufacturer	Type	Rating	Op. weight kg (lb)	Tipping loads Straight kg (lb)	Tipping loads Full turn kg (lb)	Dimensions Vertical mm (in)	Dimensions Width mm (in)
26.5 R25	Michelin	XHA2	L3	-	-	-	-	-
26.5 R25	JCB Earthmover	ET6A	L3	+180 (397)	+121 (267)	+104 (229)	-	-
26.5-25	JCB Sitemaster (BKT)	XL-Grip	L3 32ply	-128 (282)	-86 (190)	-74 (163)	+9 (0.4)	+2 (0.1)
26.5 R25	Michelin	XLDD2A	L5	+680 (1499)	+459 (1012)	+393 (866)	+35 (1.4)	+8 (0.3)
26.5 R25	Michelin	XMineD2	L5	+1068 (2355)	+721 (1590)	+617 (1360)	+40 (1.6)	+40 (1.6)
26.5-25	SG Revolution	S2C2 DWL	Solid	+4240 (9348)	+1752 (3863)	+1500 (3307)	+48 (1.9)	-43 (1.7)

Michelin 26.5 R25 XHA (L3) tyres fitted



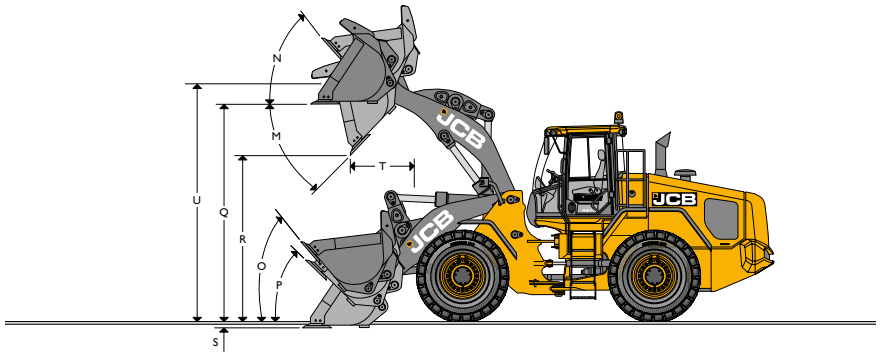





Bucket Mounting		Direct	Direct	Direct	Direct	Direct	Direct	Direct	Direct	Direct
Bucket Type		G.P.	G.P.	G.P.	G.P.	G.P.	G.P.	G.P.	G.P.	G.P.
Bucket Equipment		Teeth	Teeth	Toeplate	Teeth & Toeplate	Teeth	Toeplate	Teeth & Toeplate	Teeth	Toeplate
Bucket Capacity (SAE heaped)	m^3 (yd^3)	3.8 (4.97)	4 (5.23)	4 (5.23)	4 (5.23)	4.2 (5.49)	4.2 (5.49)	4.2 (5.49)	4.4 (5.76)	4.4 (5.76)
Bucket Capacity (struck)	m^3 (yd^3)	3.26 (4.26)	3.47 (4.54)	3.47 (4.54)	3.47 (4.54)	3.67 (4.79)	3.67 (4.79)	3.67 (4.79)	3.84 (5.02)	3.84 (5.02)
Bucket Width	mm (ft-in)	3258 (10-8)	3258 (10-8)	3231 (10-7)	3258 (10-8)	3258 (10-8)	3231 (10-7)	3258 (10-8)	3258 (10-8)	3231 (10-7)
Bucket Weight	kg(lb)	2050 (4520)	2113 (4658)	2098 (4625)	2260 (4982)	2176 (4797)	2161 (4764)	2323 (5121)	2239 (4936)	2224 (4903)
Max. Material Density	kg/m^3 (lb/ ^{3})	2019 (4451)	1907 (4204)	1913 (4217)	1892 (4171)	1805 (3979)	1810 (3990)	1791 (3949)	1712 (3774)	1717 (3785)
Tipping Load Straight	kg (lb)	17460 (38493)	17353 (38257)	17405 (38371)	17221 (37966)	17247 (38023)	17298 (38136)	17114 (37730)	17140 (37787)	17192 (37902)
Tipping Load Full Turn	kg (lb)	15348 (33837)	15254 (33629)	15300 (33731)	15138 (33374)	15161 (33424)	15206 (33524)	15044 (33166)	15067 (33217)	15113 (33318)
Payload	kg (lb)	7674 (16918)	7627 (16815)	7650 (16865)	7569 (16687	7580 (16711)	7603 (16762)	7522 (16583)	7534 (16610)	7556 (16658)
Max. Breakout Force	kN (lbf)	199 (44737)	188 (42264)	187 (42039)	187 (42039)	186 (41815)	180 (40466)	180 (40466)	180 (40466)	175 (39342)
Tractive Effort	kN (lbf)	237 (53280)	237 (53280)	237 (52820)	237 (52820)	237 (52820)	237 (52820)	237 (52820)	237 (52820)	237 (52820)
M Max. Dump Angle	degrees	45.6°	45.6°	45.6°	45.6°	45.6°	45.6°	45.6°	45.6°	45.6°
N Roll Back Angle at Full Height	degrees	51.4°	51.4°	51.4°	51.4°	51.4°	51.4°	51.4°	51.4°	51.4°
O Roll Back at Carry	degrees	49.2°	49.2°	49.2°	49.2°	49.2°	49.2°	49.2°	49.2°	49.2°
P Roll Back at Ground Level	degrees	44.3°	44.3°	44.3°	44.3°	44.3°	44.3°	44.3°	44.3°	44.3°
Q Load Over Height	mm (ft-in)	3938 (12-11)	3938 (12.11)	3965 (13-0)	3938 (12-11)	3938 (12-11)	3965 (13-0)	3938 (12-11)	3938 (12-11)	3965 (13-0)
R Dump Height (45° dump)	mm (ft-in)	2884 (9-5)	2849 (9-4)	3054 (10-0)	2884 (9-5)	2820 (9-3)	3019 (9-10)	2849 (9-4)	2792 (9-1)	2990 (9-9)
S Dig Depth	mm (ft-in)	60 (0-2)	60 (0-2)	95 (0-3)	95 (0-3)	60 (0-2)	95 (0-3)	95 (0-3)	60 (0-2)	95 (0-3)
T Reach at Dump Height	mm (ft-in)	1389 (4-6)	1424 (4-8)	1258 (4-1)	1389 (4-6)	1453 (4-9)	1293 (4-2)	1424 (4-8)	1481 (4-10)	1322 (4-4)
U Height to Bucket Pivot Pin	mm (ft-in)	4350 (14-3)	4350 (14-3)	4350 (14-3)	4350 (14-3)	4350 (14-3)	4350 (14-3)	4350 (14-3)	4350 (14-3)	4350 (14-3)
Reach Maximum (45° dump)	mm (ft-in)	1526 (5-0)	1561 (5-1)	1395 (4-6)	1526 (5-0)	1590 (5-2)	1430 (4-8)	1561 (5-1)	1618 (5-3)	1457 (4-9)
Overall Length	mm (ft-in)	8899 (29-2)	8949 (29-4)	8686 (28-6)	8899 (29-2)	8989 (29-5)	8736 (28-7)	8949 (29-4)	9029 (29-7)	8776 (28-9)
Operating Weight*	kg (lb)	23752 (52364)	23815 (52503)	23800 (52470)	23962 (52,827)	23878 (52642)	23863 (52609)	24025 (52966)	23941 (52781)	23926 (52748)

* (Includes 80kg operator and full fuel tank)

467ZX – LOADER DIMENSIONS



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Michelin 26.5 R25 XHA (L3) tyres fitted							
Bucket Mounting		Direct	Direct	Direct	Direct	Direct	Direct
Bucket Type		G.P.	G.P.	G.P.	G.P.	G.P.	G.P.
Bucket Equipment		Teeth & Toeplate	Teeth	Toeplate	Teeth & Toeplate	Toeplate	Teeth & Toeplate
Bucket Capacity (SAE heaped)	m^3 (yd^3)	4.4 (5.76)	4.6 (6.02)	4.6 (6.02)	4.6 (6.02)	4.8 (6.28)	4.8 (6.28)
Bucket Capacity (struck)	m^3 (yd^3)	3.84 (5.02)	4.02 (5.26)	4.02 (5.26)	4.02 (5.26)	4.17 (5.45)	4.17 (5.45)
Bucket Width	mm (ft-in)	3258 (10-8)	3258 (10-8)	3231 (10-7)	3258 (10-8)	3231 (10-7)	3258 (10-8)
Bucket Weight	kg(lb)	2386 (5260)	2302 (5075)	2287 (5042)	2449 (5399)	2350 (5181)	2512 (5538)
Max. Material Density	kg/m^3 (lb/yd^3)	1699 (3746)	1628 (3589)	1633 (3600)	1615 (3561)	1555 (3428)	1538 (3391)
Tipping Load Straight	kg (lb)	17008 (37496)	17034 (37554)	17086 (37668)	16901 (37260)	16979 (37432)	16795 (37027)
Tipping Load Full Turn	kg (lb)	14951 (32961)	14974 (33012)	15019 (33111)	14857 (32754)	14926 (32906)	14764 (32549)
Payload	kg (lb)	7475 (16480)	7487 (16506)	7510 (16557)	7429 (16378)	7463 (16453)	7382 (16275)
Max. Breakout Force	kN (lbf)	175 (39342)	175 (39342)	171 (38442)	171 (38442)	166 (37318)	166 (37318)
Tractive Effort	kN (lbf)	237 (53280)	237 (53280)	237 (53280)	237 (53280)	237 (53280)	237 (53280)
M Max. Dump Angle	degrees	45.6°	45.6°	45.6°	45.6°	45.6°	45.6°
N Roll Back Angle at Full Height	degrees	51.4°	51.4°	51.4°	51.4°	51.4°	51.4°
O Roll Back at Carry	degrees	49.2°	49.2°	49.2°	49.2°	49.2°	49.2°
P Roll Back at Ground Level	degrees	44.3°	44.3°	44.3°	44.3°	44.3°	44.3°
Q Load Over Height	mm (ft-in)	3938 (12-11)	3938 (12-11)	3965 (13-0)	3938 (12-11)	3965 (13-0)	3938 (12-11)
R Dump Height (45° dump)	mm (ft-in)	2820 (9-3)	2764 (9-0)	2962 (9-8)	2792 (9-1)	2934 (9-7)	2764 (9-0)
S Dig Depth	mm (ft-in)	95 (0-3)	60 (0-2)	95 (0-3)	95 (0-3)	95 (0-3)	95 (0-3)
T Reach at Dump Height	mm (ft-in)	1453 (4-9)	1509 (4-11)	1250 (4-1)	1481 (4-10)	1378 (4-6)	1509 (4-11)
U Height to Bucket Pivot Pin	mm (ft-in)	4350 (14-3)	4350 (14-3)	4350 (14-3)	4350 (14-3)	4350 (14-3)	4350 (14-3)
Reach Maximum (45° dump)	mm (ft-in)	1590 (5-2)	1646 (5-4)	1487 (4-10)	1618 (5-3)	1515 (4-11)	1646 (5-4)
Overall Length	mm (ft-in)	8989 (29-5)	9069 (29-9)	8816 (28-11)	9029 (29-7)	8856 (29-0)	9069 (29-9)
Operating Weight*	kg (lb)	24088 (53105)	24004 (52920)	23989 (52887)	24151 (53244)	24052 (53026)	24214 (53383)

* (Includes 80kg operator and full fuel tank)

ENGINE

6-cylinder turbo-charged and charge air cooled 10.8l diesel engine. Celect electronically controlled high pressure direct injection fuel system ensures "clean burn" for low fuel consumption and emissions.

Manufacturer		Cummins
Model		QSM11
Displacement	ltr (in^3)	10.8 (660)
Bore	mm (in)	125 (4.92)
Stroke	mm (in)	147 (5.79)
Aspiration		Turbocharged
No. of Cylinders		6
Max. Gross Power to SAE J1995/ISO 14396	kW (hp) @ 1800rpm	239 (320)
Rated Gross Power to SAE J1995/ISO 14396	kW (hp) @ 2100rpm	216 (290)
Nett Power to SAE J1349	kW (hp) @ 2100rpm	214 (287)
Gross Torque at 1400rpm	Nm (lbf-ft) @1400rpm	1478 (1090)
Economic Working Range	rpm	800 - 1800
Torque Rise	%	50.4
Valves per Cylinder		4
Wet Weight	kg	984
Air Cleaner		Donaldson 15" 2 stage
Fan Drive Type		Hydraulic
Emissions:		US EPA Tier 3, CARB Tier 3, EU Stage IIIA

TRANSMISSION

4 wheel drive, automatic 4 speed transmission with electro-hydraulically operated selector and "Power-Inch" intelligent clutch cut off technology as standard. Optional 5 speed transmission with auto-locking torque converter available for even more speed and efficiency.

Type		4 speed non- lock up converter	5 speed with lock up torque converter
Make		ZF	ZF
Model		4WG260 (standard)	5WG260 with lock-up (option)
Forward speed 1	kph (mph)	7.3 (4.6)	7.3 (4.6)
Forward speed 2	kph (mph)	12.5 (7.8)	12.8 (7.8)
Forward speed 3	kph (mph)	27.5 (17.1)	19.8 (12.3)
Forward speed 4	kph (mph)	40.0 (24.9)	28.8 (17.9)
Forward speed 5	kph (mph)	-	40.0 (24.9)*
Reverse 1	kph (mph)	7.3 (4.6)	7.3 (4.6)
Reverse 2	kph (mph)	12.5 (7.8)	12.8 (8.0)
Reverse 3	kph (mph)	27.5 (17.1)	28.8 (17.9)

* Denotes speed limited by transmission electronic control unit

AXLES

Type (Differential - Standard)		Limited Slip
Type (Differential – Optional)		Open with auto-locking front
Make and Model		ZF MT-L 3105 MK 2 (front and rear)
Overall Axle Ratio		24.666:1
Rear Axle Oscillation	degrees	± 12.5°

ELECTRICAL SYSTEM

24 volt negative ground system, 70 Amp alternator with 2 x 180 hour low maintenance batteries. Isolator located in battery bay. Ignition key start/stop and pre-heat cold start. Other electrical equipment includes; heated mirrors, work lights, front/rear wash/wipe, road lights, clock, instrument gauges/warning lights.

System voltage	Volt	24
Alternator output	Amp Hours	70
Battery capacity	Amp Hours	180
Cold cranking capacity (SAE)	Amp Hours	1150

CAB

ROPS/FOPS structure (tested in accordance with ROPS: EN ISO 3471:2008, FOPS: EN ISO 3449: 2008 (level 2). Entry/exit is via a rear hinged door, grab handles giving 3 points of contact and anti-slip inclined steps. Forward visibility through a curved, laminated windscreen with lower glazed quarter panels, two interior mirrors and heated exterior mirrors. Instrument cluster includes analogue/digital display gauges along with full colour LCD screen including selectable machine and operator menus along with service and diagnostic screens. Finger tip multi-lever hydraulic controls (hydro-electronic for light precise feel) with integrated transmission kick down. Heating/ventilation provides balanced and filtered air distribution throughout the cab via a powerful 8 kW capacity heater. Air conditioning is offered as standard with an optional climate control system. Provision of speakers and antenna for radio fitment (radio/CD not included). The cab environment is positively pressurised preventing the ingress of dust including in-cab recirculation filter.. Fabric mechanical suspension seat as standard with various options including vinyl material, air suspension, heating and deluxe Grammer Actimo XXL air suspension seat with headrest, twin armrests, lumbar support, backrest extension, heating and full adjustment. Coat hook, cup holder and additional stowage space. Fuse box positioned at rear for access to fuses, relays and diagnostic connectors. Rear floor panel access to hydraulic pump and transmission.
Exterior Noise Level: - 108 dB
Interior Noise Level: - 73 dB

STEERING

Priority steer hydraulic system with secondary steering. Piston pump meters flow through steer valve to provide smooth low effort response. Steering angle ±37°. Steer rams fitted with end rod damping to provide cushioned steering at full articulation.

LOADER HYDRAULICS

Variable displacement piston pumps feed a "load-sensing" system providing fuel efficient and responsive distribution of power as required, main services are actuated via electro-hydraulic joystick lever controls. Accumulator back-up available to control loader in the event of loss of pump pressure.

Pump Type		Bosch/Rexroth Axial Piston, Variable Displacement Pump, Load sensing
Pump 1 Max. Flow	l/min (UK gal/min)	240 (52.8)
Pump 1 Max. Pressure	bar (lb/ cubic in)	280 (4061)
Pump 2 Max. Flow	l/min (UK gal/min)	155 (34.1)
Pump 2 Max. Pressure	bar (lb/ cubic in)	200 (2901)
Hydraulic Cycle Times		
Arms Raise (laden)	seconds	5.2
Arms Lower	seconds	3
Bucket Dump (laden)	seconds	1.9
Bucket Crowd	seconds	1.7
Total Cycle Time	seconds	10.1

Ram Dimensions		Bore	Rod (diameter)	Closed Centres	Stroke
Bucket Rams	(mm)	180	110	1229±2.5	540±2.5
Lift Rams	(mm)	160	95	1425±2.5	777±2.5
Steer Rams	(mm)	90	50	809±2.5	471±2.5

BRAKES

Hydraulic power braking on all wheels, operating pressure 70 bar (1015 psi). Dual circuit with accumulator back-up. In-board mounted, oil immersed, multi-plate disk brakes with environmentally acceptable linings. Parking brake, electro-hydraulic disc type operating on transmission output shaft.

SERVICE CAPACITIES

Hydraulic System	litres (UK gal)	170 (37.4)
Fuel System	litres (UK gal)	325 (71.5)
Engine Oil (includes filter)	litres (UK gal)	41 (9.0)
Engine Coolant	litres (UK gal)	39 (8.5)
Axles	litres (UK gal)	42 (9.2)
Transmission	litres (UK gal)	42 (9.2)

STANDARD EQUIPMENT

Loader: Detents include shovel reset, arm height limiter (kickout) and float, loader control isolator for safety, Z-bar loader geometry provides high breakout forces along with excellent visibility to shovel corners, large diameter pins with secondary sealing preventing material ingress.

Engine: Cummins QSM11, 10.8l, 6 cylinders, 4 valves per cylinder, wastegated turbocharger, charge air cooled, Celect high pressure fuel injection system. In-cylinder emissions technology, 2 stage aspirated dry type air cleaner with rain cap, twin water separating filters, auto-tensioning alternator and air conditioning compressor drive belts, isolated single faced cooling package with variable speed hydraulically driven fan.

Transmission: Fully automatic smoothshift, neutral start, manual speed select through column lever, Direction change and kick-down functions located within loader lever area for ease of use. Progressive intelligent clutch cut off feature limits tractive effort providing maximum power to hydraulics while reducing service brake wear. 4 speed as standard, optional 5 speed with lock-up converter (2-5th) providing increased efficiency and productivity.

Axles: Planetary drive, cylindrical roller bearings, low drag co-efficient, wheel speed braking. Limited slip differential as standard, optional open differential with automatic hydraulic locking differential on front axle only (manual actuation on joystick lever if required).

Brakes: Multi-plate wet disc brakes, dual circuit hydraulic power. Parking disc brake on transmission output shaft.

Hydraulics: Variable displacement piston pumps with priority steer, emergency steer back-up, 2 spool loader circuit with accumulator support, 3rd and 4th spool auxiliary hydraulic circuits available as an option. Multi-lever electro-hydraulic controls. Load suspension option providing cushioning effect reducing shock loadings, increasing material retention and operator comfort.

Steering: Adjustable steering column, "soft feel" steering wheel (4.2 turns lock to lock), end damped rams.

Cab: ROPS/FOPS safety structure, interior light, full colour LCD monitor with analogue gauges, two-speed intermittent front windscreen wipe/wash and self park, single speed rear windscreen wipe/wash and self park. 3 speed heater/demister with replaceable air filter, LH and RH (hinged) opening windows, sun visor, internal rear-view mirrors, heated external mirrors, mechanical suspension seat with lap belt , operator storage facilities, laminated windscreen, loader control isolator, horn, adjustable height arm rest.

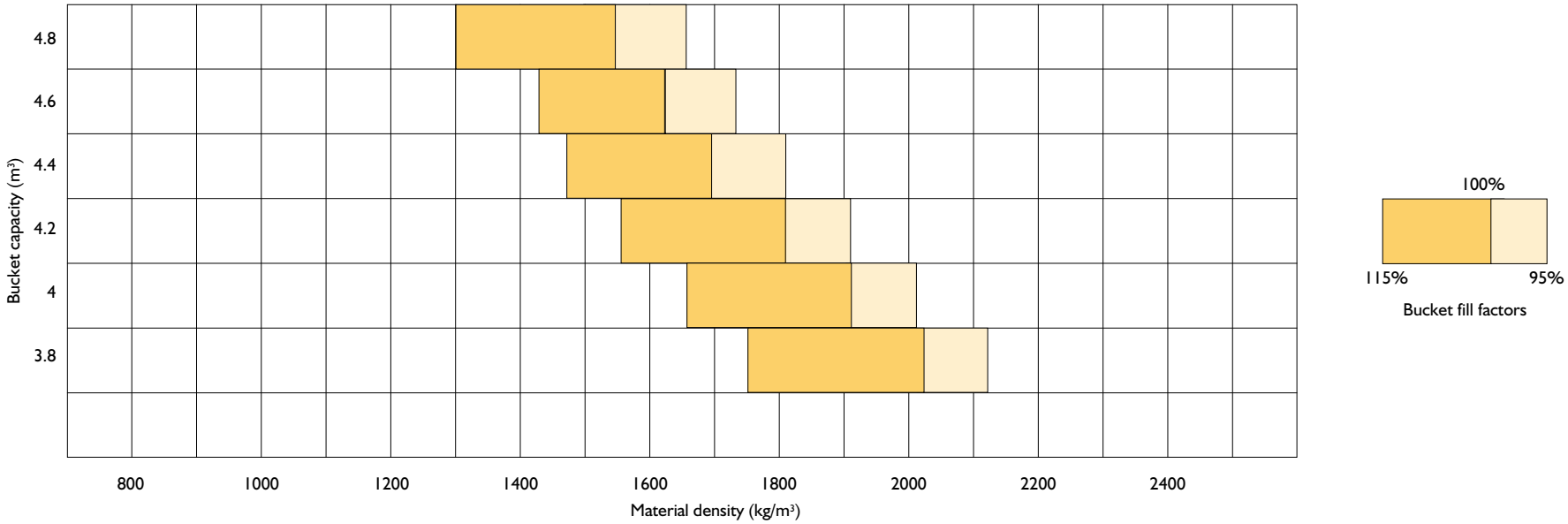
Electrical: Road lights front and rear, front (twin bulb) and rear working lights, reverse alarm (112dba) and light, rear fog light, battery isolator, radio wiring and speakers (radio not included), 70 amp alternator, rotating beacon.

Bodywork: Front and rear fenders, side "gull wing" access panels to engine bay, rear access to wide core cooling package (6.35 Fins per inch), flexible bottom access step, full width rear counterweight, recovery hitch, lifting lugs, hydraulic tank positioned behind cab with eye level gauge, fuel fill at rear access bays for transmission filters, emergency steer pump, batteries and isolator, pressure test ports; remote greasing in articulation region, eye level transmission gauge and fill point.

OPTIONAL EQUIPMENT

Open differential axles with auto-locking front; 5 speed transmission with lock-up torque converter; load suspension (SRS); climate control (Automatic Temperature Control); seating options including – vinyl cloth seat base, 3" (5,000lbs lap belt), air suspension, heated air suspension, deluxe Grammer Actimo XXL with air suspension, heating, lumbar support, headrest, armrests, fully adjustable; non-heated external mirrors; reverse camera; front roller blind; front and rear roller blind; fire extinguisher; 24/12v in-cab converter; P3 (HEPA) air recirculation filter; carbon air recirculation filter; front windscreen guards; turbo 2 engine pre-cleaner; grease gun and cartridge, number plate lighting kit, folding beacon, additional worklights (2 front / 2 rear), automatic reversing fan, 3 and 4 spool hydraulics, smart reverse alarm (112 dba), white noise BBS reverse alarm (102 dba), lift ram safety strut, wax protective coating (transport)

BUCKET SELECTOR



BUCKET SELECTOR

	Loose density		Fill factor
Material	**kg/m³**	**lb/yd³**	**%**
Snow (fresh)	200	337	110
Peat (dry)	400	674	100
Sugar beet	530	894	100
Coke (loose)	570	961	85
Barley	600	1012	85
Petroleum coke	680	1146	85
Wheat	730	1231	85
Coal bitumous	765	1290	100
Fertiliser (mixed)	1030	1737	85
Coal anthracite	1046	1764	100
Earth (dry) (loose)	1150	1939	100
Nitrate fertiliser	1250	2180	85

	Loose density		Fill factor
Material	**kg/m³**	**lb/yd³**	**%**
Sodium chloride (dry) (salt)	1300	2192	85
Cement Portland	1440	2428	100
Limestone (crushed)	1530	2580	100
Sand (dry)	1550	2613	100
Asphalt	1600	2698	100
Gravel (dry)	1650	2782	85
Clay (wet)	1680	2832	110
Sand (wet)	1890	3187	110
Fire clay	2080	3507	100
Copper (concentrate)	2300	3878	85
Slate	2800	4721	100
Magnetite	3204	5402	100

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