

95ZV-2

WHEEL LOADER

Direct-injection, turbocharged 268kW(359hp) engine

Operating weight 33ton, Bucket capacity 4.5-5.5m³

Strong and robust main structures

Tough and proven hydraulic components

Productive and dependable performance



Performance that new

Wheel loaders that deliver premium power...



Backed by more than 50 years of innovative experience...

Durability and reliability you can count on...



ver quits...

As the oldest on-going manufacturer of rubber tire wheel loaders in the world, KCM specializes in the design and manufacture of articulated wheel loaders.

You get a machine with a 50-year heritage of successful innovations.

The power and productivity that a KCM wheel loader brings to the job is a result of that experience.

KCM loaders are designed with durability to provide years of reliable service.

Backed by a distributor network of heavy equipment experts and dedicated support staff in the KCM parts and service organization, your investment in a KCM loader is an excellent choice that will pay dividends for years to come.

POWER AND PERFORMANCE PROVIDE UNMATCHED PRODUCTIVITY



COMPUTER CONTROLLED ENGINE

The Engine Control Module (ECM) allows the engine performance to be modified to fit the application requirements. It also provides a wide range of operating data and fault codes to assist in diagnostic and troubleshooting. Cummins provides diagnostic tools to allow technicians to quickly recover engine information for fast, accurate analysis.

Euro Stage IIIA and EPA Tier III emission standards are met by using proven technologies that keep the overall design simple and less costly to maintain.



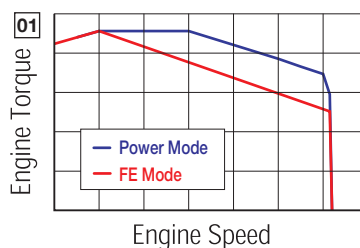
Use KCM recommended fuel to prevent engine from damage. Consult your local KCM distributor about KCM recommended fuel.

IMPROVED PERFORMANCE OF RIMPULL FORCE AND ACCELERATION

The powertrain has been designed for more efficient operation in a wide variety of applications. Improved torque characteristics and efficient match between the engine and torque converter provide outstanding performance.

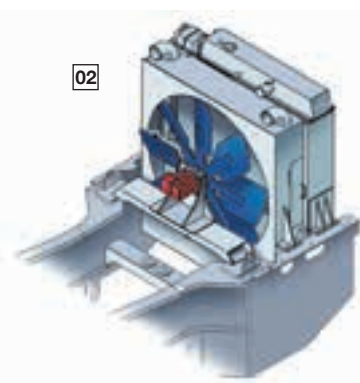
POWER/FUEL EFFICIENT MODE SELECTION ⁰¹

The engine mode switch allows the operator to select either the power mode for maximum power in extreme applications or the fuel efficient mode, for most applications, which provides better fuel economy.



ADVANCED HYDRAULIC COOLING FAN CONTROL FEATURES ⁰²

The hydraulically driven cooling fan's speed is controlled by the cooling system temperatures which reduces fan noise and improves fuel efficiency.



TPD ⁰⁴

Standard Torque Proportioning Differentials (TPD) improve traction in slippery conditions.

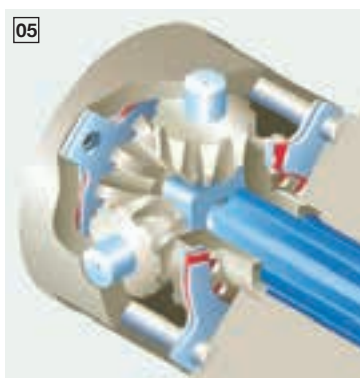
Z-LINK AND CENTER PIN ARTICULATION

As a pioneer of Z-linkage, KCM loaders provide outstanding breakout force from a simple, reliable linkage. KCM center pin design is rugged and durable, providing thousands of hours of trouble free operation.



LOAD SENSING HYDRAULIC SYSTEM FOR STEERING LINE

An energy efficient design of the hydraulic system provides for steering flow to supplement the main circuit once steering demand is met. This allows for full utilization of the pump capacity for efficient operation in all conditions.



IDLE MANAGEMENT SYSTEM

The idle management system allows for lower idle speed when idling for extended periods to conserve fuel. It also increases idle speed and reduces fan speed when the engine is cold to reduce warm up time, for better productivity.

OUTBOARD WET DISC BRAKE ⁰³

Sealed wet disc brakes provide high capacity braking and protection from contamination. The dual brake system separates the front and rear axles for added safety.

LSD (OPT) ⁰⁵

For applications with extreme traction requirements, the Limited Slip Differential (LSD) provides additional traction capability.

LOCK UP TORQUE CONVERTER (OPT)

An optional lock-up clutch in the torque converter provides direct drive efficiency in the top speed ranges. This significantly improves fuel economy in long haul, load and carry applications and improves performance in hill climbing applications.

ACTIVE TRACTION CONTROL (OPT)

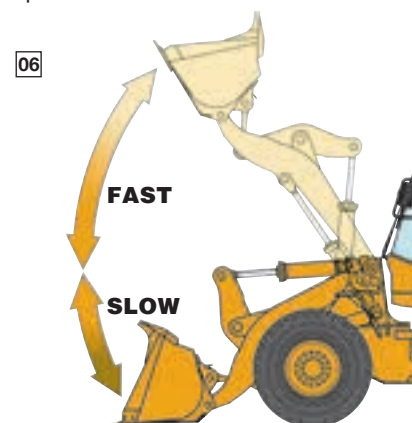
Traction Control reduces wheel slippage by automatically dropping engine speed when conditions indicate wheel spin.

ELS (Efficient Loading System) ⁰⁶

Increases rimpull power and slows bucket movement when digging while demanding less fuel.

Increases productivity and fuel efficiency.

Switch on instrument control panel allows operator to activate from cab.



DURABLE AND DEPENDABLE

LIFT ARMS/BUCKETS 01

With the strongest lift arms and linkage in the industry, KCM loaders perform well in a wide variety of applications.

High breakout force and excellent bucket rollback mean bigger loads and better load retention.

Buckets are designed for easy loading and are equipped with bolt-on cutting edges for easy changing.

The bucket leveler and boom kickout are standard.



SEALED BUCKET HINGE PINS 02

The special seal in the bucket hinge pin provides excellent sealing and grease retention which extends pin life.



INCREASED GREASING INTERVALS FOR UNIVERSAL JOINTS 03

Sealed universal joints only require greasing every 12000 hours. This reduces maintenance costs significantly and provides greater durability.



WET DISC PARKING BRAKE

The high capacity, wet disc parking brake supplies ample braking force to meet all brake capacity regulations.

FULL BOX FRAME CHASSIS 04

Full box section frame is the strongest in the industry and resists twisting loads better than plate frames.

RIDE CONTROL FEATURE (OPT) 05

Ride control offers a smooth ride to improve load retention and increase travel speeds.

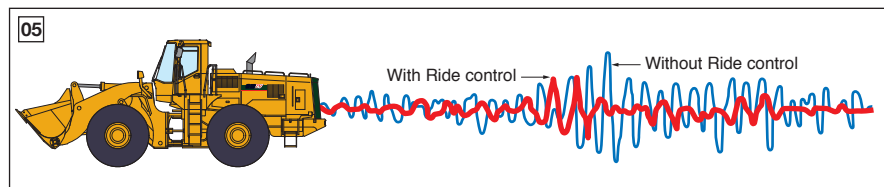
BUFFER RINGS IN HYDRAULIC CYLINDERS

The hydraulic cylinders utilize a buffer ring to improve sealing capability to reduce leakage.

KCM MADE HYDRAULIC VALVES

As a leading manufacturer of precision hydraulic components, KCM offers high quality control valves for precise operation.

Pilot assisted controls offer fingertip operation.



EASY ACCESS SIMPLIFIES SERVICING



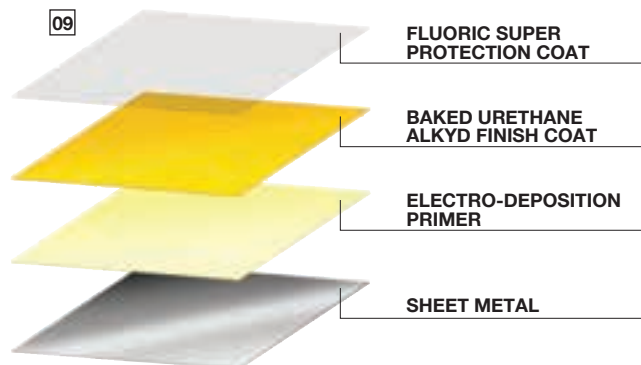
EASY ACCESS SIMPLIFIES SERVICING

Maintenance is enhanced with the engine access panels that can be opened wide for better access.

Filters are conveniently located for easy change and the grease fittings are grouped to reduce maintenance time and insure proper lubrication.

HIGH QUALITY FINISH PAINT FOR SHEET METAL PARTS ⁰⁹

KCM's sophisticated painting process utilizes ED (Electro-deposition) primer, a baked Urethane Alkyd finish coat as well as a fluoric super protection coat for a durable and attractive finish.



HALOGEN HEAD LAMPS ⁰⁶

Front and rear working lights are bright, halogen lamps for improved safety and visibility.

LED REAR LAMPS (OPT) ⁰⁷

Long life, LED lamps are available as an option for the rear tail lights.

These lights are very bright and durable.



DT CONNECTORS ⁰⁸

Sealed Deutsch DT electrical connectors are used throughout the system to reduce corrosion and provide a positive connection.



C THE COMFORT ZONE



CAB

Excellent visibility in all directions is enhanced with both inside and outside mirrors.

The front windshield is flat glass mounted in rubber gaskets that make windshield replacement fast and easy.

Viscous mounting of the cab reduces vibration and noise.

ROPS AND FOPS CAPABILITY ⁰¹

The operator's cab is fully certified to meet all ROPS (Rollover Protective Structure) and FOPS (Falling Object Protective Structure) regulations.



MULTI ADJUSTABLE FUNCTION OPERATOR'S SEAT ⁰³

The fully adjustable suspension seat offers excellent comfort to reduce operator fatigue and increase productivity.

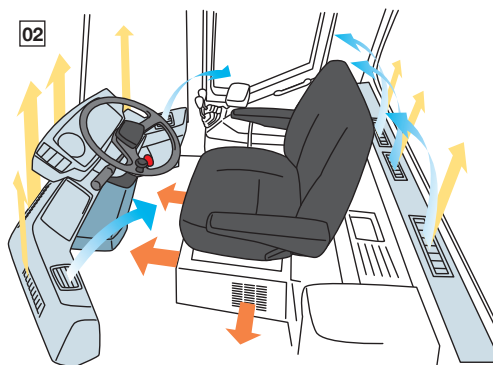
The optional air suspension seat provides higher capacity and overall comfort and reliability.

FULLY AUTOMATIC HEATER AND AIR CONDITIONER ⁰²

The thermostatically controlled air conditioner/heater provides automatic adjustment to keep the operator comfortable in any environment.

The high capacity vents provide adequate airflow for efficient defrosting and an even temperature distribution.

By pressurizing the cab, the climate control system keeps dust out of the cab.





TILT AND TELESCOPIC STEERING

The tilt and telescopic steering column adjusts to fit a variety of operator needs and offers greater comfort and efficiency.

ADJUSTABLE DECLUTCH PRESET SWITCH [06]

The adjustable declutch system allows the operator to select the location of the left brake pedal where the declutch engages. This allows the operator to adjust for varying operating conditions easily.



IMPROVED KICKOUT FEATURE [06]

Dual boom kickout can be set by the operator from inside the cab.

A high kickout can be set for loading trucks or hoppers while a low kickout can be set to return the boom to the proper height for digging.

SHIFT HOLD SWITCH (OPT)

The shift hold switch allows the operator to hold the transmission in the current range with a convenient button located on the hydraulic control lever when the transmission is in the automatic mode.

K-LEVER (OPT) [07]

K-LEVER joystick steering reduces operator fatigue and increases productivity.

Transmission speed selection is done with buttons on the K-Lever and direction changes are handled with the convenient trigger switch.

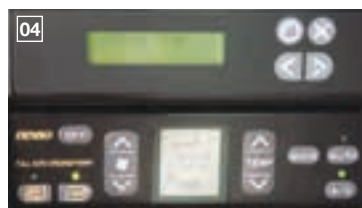


SINGLE SHIFT CHANGE LEVER

Single, twist grip transmission shift lever is conveniently mounted on the steering column.

MODM [04]

The MODM, Machine Operation Diagnostic Module, offers information to make the operation, maintenance and troubleshooting more efficient. With this information operators, maintenance and technical personnel can quickly determine key operating data.



RADIO (OPT) AND UTILITY BOXES

Operators appreciate the convenience of the radio, glove box, cup holder and climate controlled storage box.

ADDITIONAL DIRECTIONAL SWITCH (OPT) [05]

The directional switch located near the hydraulic control levers allows the operator to easily make directional shifts without removing his left hand from the steering wheel.



DOWNSHIFT BUTTON [05]

The downshift button located on the boom control lever provides for quick, convenient downshifting from 2nd gear to 1st gear.

95ZV-2 OPERATING SPECIFICATIONS

Engine

Make & model	CUMMINS "QSX15" diesel engine
Type	4-cycle, water-cooled, direct injection, with turbocharged and air cooled intercooler
Rated power	Gross 291 kW(390 hp)/2,000 rpm Net 268 kW(359 hp)/2,000 rpm
Maximum torque	Gross 1,825 N·m(186.2 kgf·m)/1,400 rpm
Number of cylinders (bore × stroke)	6 137 mm × 169 mm
Total displacement	14.95 lit
Cooling type	Hydraulic drive pusher type fan Pressurized radiator
Fuel injection pump	Cummins high pressure injection
Governor	All-speed electrical type
Air cleaner	Dry type (Double element)
Generator	AC 24V 1.8 kW (75 ampere)
Starter motor	DC 24V 8.3 kW (11.1 hp)
Batteries	DC 12V 140 Ah × 2

Transmission & Torque converter

Transmission make & type		KCM, Full power shift	
Torque converter make & type		KCM 3-element, one-stage, one-phase	
Traveling speed		Forward	Reverse
	1st	7.7 km/h	8.3 km/h
	2nd	14.5 km/h	15.6 km/h
	3rd	24.4 km/h	26.1 km/h
	4th	34.8 km/h	—
	Note	With 29.5(L3)	

Axles & Final Drives

Type	4-wheel drive
Axle make & type	KCM Full-floating type
Differential gear	Spiral bevel gear, torque proportioning, single stage reduction
Final reduction gear	Outboard mounted, Internal planetary gear
Rear axle oscillation angle	±12°
Tire(standard)	29.5(L3) Tubeless

Weight change

Option item	Operating weight(kg)	Tipping load(kg)			Overall width(mm) (outside tire)	Overall height(mm)	Overall length(mm)
		Straight	at 37°	Full turn			
Tires	26.5R25(L3)	-680	-520	-430	-420	-90	+40
	26.5R25(L4)	-280	-210	-170	-170	-60	+20
	26.5R25(L5)	+60	+40	+30	+30	-60	+10
	29.5R25(L3)	±0	±0	±0	±0	±0	±0
	29.5R25(L4)	+500	+380	+310	+310	+10	+35
	29.5R25(L5)	+840	+640	+540	+530	+10	+40
	26.5-25-24PR(L3)	-420	-320	-260	-260	-90	+40
	26.5-25-24PR(L4)	-20	-10	-10	-10	-60	+20
	26.5-25-24PR(L5)	+570	+430	+350	+350	-60	+10
	29.5-25-24PR(L3)	±0	±0	±0	±0	±0	±0
	29.5-25-24PR(L4)	+730	+560	+470	+460	+10	+35
	29.5-25-24PR(L5)	+1080	+830	+690	+680	+10	+40
Counter weight	+410	+1000	+830	+820	±0	±0	±0
Soft cab	-300	-290	-250	-250	—	±0	—
Belly guard	+230	+390	+320	+320	±0	±0	±0
CE package	+190	+220	+180	+180	±0	±0	±0

Brake system

Service brake	4-wheel wet-disc Controlled by fully hydraulic system Dual circuits
Parking brake	Spring applied oil pressure released type located on front driveline

Steering system

Type	Articulated frame steering, hydraulic power steering unit, pilot operated type
Steering valve	Orbitrol and spool type
Full articulation angle	40° to each side

Loading system

Type	Front end loading, Z bar linkage system	
Hydraulic cycle time	Lifting(at full load)	6.1 sec
	Lowering(empty)	4.0 sec
	Dumping	1.5 sec
	Total cycle time	11.6 sec






Hydraulic system

Oil pump	Steering oil pump	Gear type, 358 lit/min 6.9 MPa(70 kg/cm ²) @ 2,000 rpm
	Main oil pump	Gear type, 190 lit/min, 6.9 MPa(70 kg/cm ²) @ 2,100 rpm
	Pilot oil pump	Gear type, 169 lit/min, 6.9 MPa(70 kg/cm ²) @ 2,100 rpm
Lift cylinder	type	Double acting piston
	number,bore × stroke	2 × 190 mm bore × 953 mm stroke
Tilt cylinder	type	Double acting piston
	number,bore × stroke	2 × 160 mm bore × 605 mm stroke
Steering cylinder	type	Double acting piston
	number,bore × stroke	2 × 90 mm bore × 600 mm stroke
Relief set pressure	Control valve	20.6 MPa(210 kg/cm ²)
	Steering valve	20.6 MPa(210 kg/cm ²)

Service refill

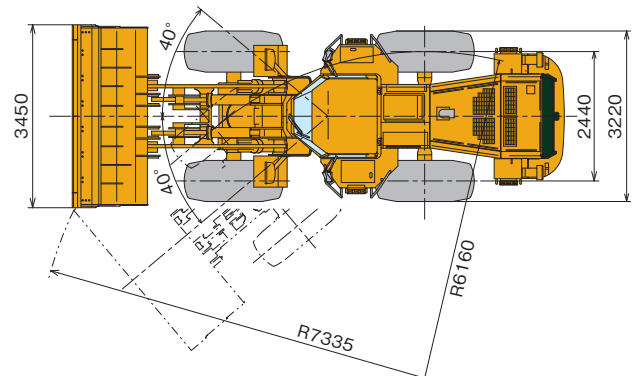
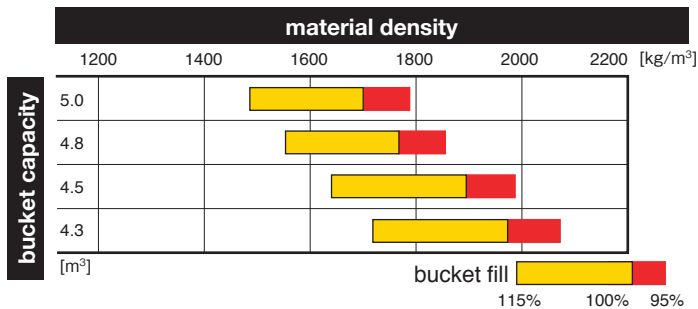
Fuel tank	465 lit
Engine lubricant(including oil pan)	50 lit
Engine cooling water	100 lit
T/M & T/C	70 lit
Axle front/rear	200 lit
Hydraulic oil tank	150 lit
Hydraulic system(including oil tank)	265 lit

Bucket

			Standard boom				
			General purpose(stock pile)		Rock straight	Rock V-edge	Coal
			Bolt-on edges	Teeth	Teeth	Teeth	Bolt-on edges
			GSC	GST	RST	RVT	
							
Bucket capacity	heaped	m³	5.0	4.8	4.3	4.5	7.5
	struck	m³	4.3	4.1	3.7	3.8	6.4
Max. dumping clearance		mm	3,220	3,105	3,100	2,970	3,135
Max. dumping reach		mm	1,350	1,420	1,425	1,550	1,430
Max. hinge pin height		mm	4,490				
Digging depth (with bucket level)		mm	80	110	110	110	80
Breakout force		kN	245	265	265	226	223
Bucket tilt-back angle	at carry position	deg	49°				
Overall length		mm	9,280	9,420	9,420	9,600	9,410
Overall height	up to cab top	mm	3,760				
	bucket full raise	mm	6,130	6,130	6,190	6,190	6,415
Overall width	outside tire	mm	3,220				
	outside bucket	mm	3,450	3,465	3,465	3,465	4,090
Tread		mm	2,440				
Wheel base		mm	3,600				
Min. turning radius (bucket carry position)	at outside bucket	mm	7,335	7,380	7,380	7,380	7,660
	at center of outside tire	mm	6,160				
Min. ground clearance		mm	500				
Full articulation angle		deg	40°				
Operating weight	with ROPS CAB	kg	30,540	30,360	30,830	30,950	31,110
Static tipping load	straight	kg	23,260	23,420	22,980	22,640	22,060
	at 37°	kg	19,490	19,620	19,260	19,130	18,490
	full turn	kg	19,140	19,280	18,920	18,640	18,160

The weight and load figure includes 29.5(L3) tubeless tire, ROPS cab, lubricant, coolant, full fuel tank and operator.

Bucket selection charts



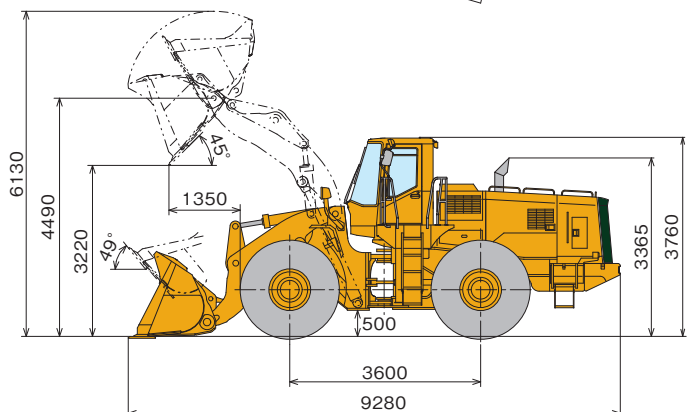
Remarks

This specification sheet may contain attachments and optional equipment which are not available in your area.

Please contact your local KCM distributor for those items which you require.

Materials and specifications are subject to change without notice and without obligation on the part of the manufacturer.

The specifications supplied, while believed to be completely reliable, are not to be taken as warranty for which we assume legal responsibility.



Equipped with GSC bucket, 29.5 (L3) tubeless tire and ROPS cab.

STANDARD EQUIPMENT (Standard specifications may vary. Contact your KCM distributor for specifics.)

Electrical

75 ampere alternator
Back up alarm
Brake & tail lights
Electric starter
Halogen headlights with high and low beams (2 front)
Halogen working lights (4 front and 2 rear)
Turn signals with four-way flasher

Gauges and indicators

Air cleaner warning lamp
Auto shift indicator lamp
Battery charge lamp
Brake pressure warning lamp
Engine coolant temperature gauge and warning lamp
Engine oil pressure warning lamp
Fuel level gauge
High beam indicator lamp
Hour meter
Neutral indicator lamp
Parking brake indicator lamp
Tachometer
Torque converter oil temperature gauge and warning lamp
Transmission control warning lamp
Transmission declutch lamp
Transmission status monitor
Working light indicator lamp

Operator environment

Adjustable operator seat with suspension
Ashtray
Cup holder
Boom/bucket control dual levers
Cigarette lighter
Machine Operation Diagnostic Module (MODM)
Electric dual horn
Floor mat
Front and rear wiper and washers
Full automatic air conditioner
Down shift button (Power up switch)
Lockable doors with sliding windows by regulator handles (left and right)
ROPS/FOPS cab (left and right doors, walk-through design)
Rearview mirrors (interior and exterior)
Seat belt
Storage compartment
Sun visor
Tilt and telescopic steering wheel
Tinted safety glass (laminated)
Transmission declutch adjust switch

Power train

Air cleaner double elements dry type
Cummins QSX15 diesel engine
Full hydraulic enclosed wet multi-disc brakes
Hydraulic engine radiator cooling fan
KCM auto shift transmission
KCM axles, torque proportioning differentials (front/rear)
KCM torque converter
Low maintenance drive shafts
Tires, 29.5 (L3) tubeless

Others

Adjustable kickout device
Bucket leveler
Drawbar hitch with pin
Efficient loading system
Handrails
Ladders, left and right
Loading linkage, sealed Z-bar type dual bucket cylinders
Secondary brake
Wet disc parking brake

OPTIONAL ITEMS

Active traction control
Additional F-R directional switch
Additional working light (2 rear)
Anti corrosion specifications
Automatic reversible cooling fan
Emergency steering
Front and rear wide fenders
High lift boom arm
Hot slag handling package
Hydraulic circuit for quick coupler pins

Hydraulic three spool valve system
LED rear lamps
Limited slip differential (LSD) for both axles
Lock up torque converter
Log handling package
Mudflaps
Noise reduction kit (109dB(A))*
Optional counterweight
Pre cleaner
Quick coupler

Radio
Ride control (speed sensitive automatic)
Several bucket and tire options are available
Shift hold switch
Short boom
Single lever hydraulic control
Soft cab
Transmission belly guard
Vandalism protection kit
Waste handling package

※Sound level for the machine is equipped with Noise reduction kit.

Airborne sound power level 109 dB(A)
Measurement is obtained in accordance with ISO6395.

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KCM Corporation

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