

 **Kawasaki**

65 **TMV-2**

ENGINE POWER **111kW(149hp)** OPERATING WEIGHT **12ton** BUCKET CAPACITY **1.6-2.0m³**

W H E E L L O A D E R



Performance that never

Wheel loaders that deliver premium power...



Backed by more than 45 years of innovative experience...

Durability and reliability you can count on...



er quits...



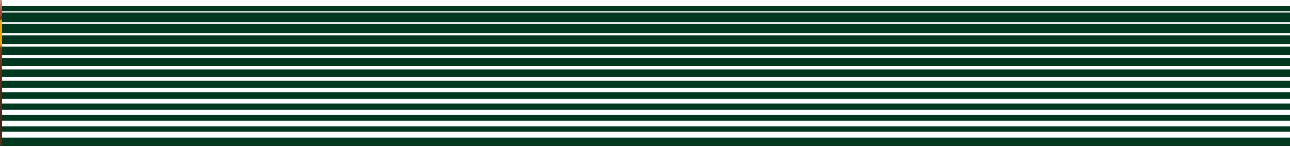
As the oldest on-going manufacturer of rubber tire wheel loaders in the world, Kawasaki specializes in the design and manufacture of articulated wheel loaders.

You get a machine with a 45-year heritage of successful innovations.

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

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

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



P **OWER AND** **PERFORMANCE** **PROVIDE UNMATCHED** **PRODUCTIVITY**



COMPUTER CONTROLLED ENGINE

Isuzu is the leader in meeting and exceeding global exhaust emission standards. Isuzu uses I-CAS (Isuzu Clean Air Solutions) technology to meet the Euro stage IIIA and EPA tierIII emission standards without sacrificing efficiency or fuel economy.

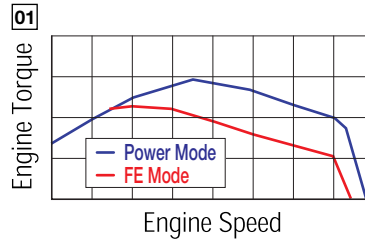
- I-CAS
- Optimal Combustion Technology
- Post-Combustion Treatment Technology (Common Rail Type Fuel Injection System)
- Electronic Control Technology
- Extended Oil Change intervals
- Increased Peak Torque provides improved performance, better rimpull.



Use Kawasaki recommended fuel to prevent engine from damage. Consult your local Kawasaki dealer about Kawasaki recommended fuel.

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.

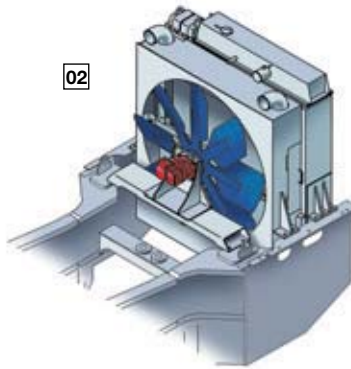


ALUMINUM RADIATOR CORE

The high efficiency radiator cores maintain proper operating temperatures better.

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.



INBOARD 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.

TPD 04

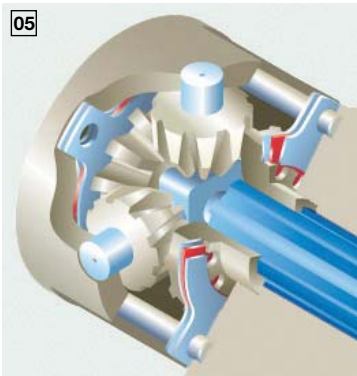
Standard Torque Proportioning Differentials (TPD) improve traction in slippery conditions.



ELS (Efficient Loading System : OPT) 06

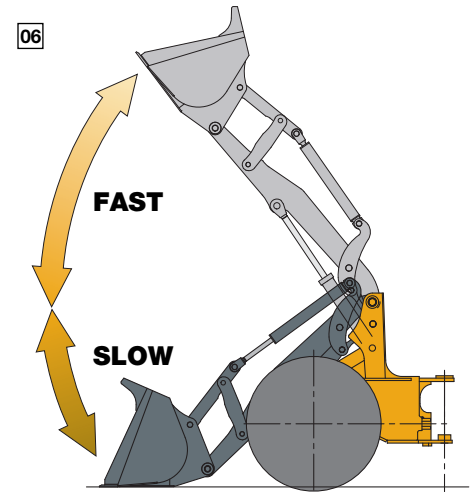
Increases rimpull power and slows bucket movement when digging while demanding less fuel.

Increases productivity and fuel efficiency. Switch on instrument control panel allows operator to activate from cab.



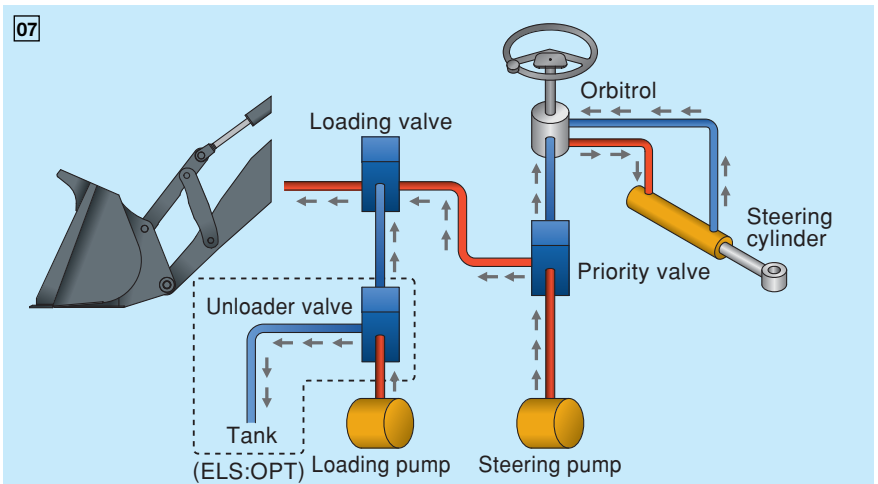
LSD (OPT) 05

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



LOAD SENSING HYDRAULIC SYSTEM FOR STEERING LINE 07

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.



DURABLE AND DEPENDABLE

LIFT ARMS/BUCKETS 01

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

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

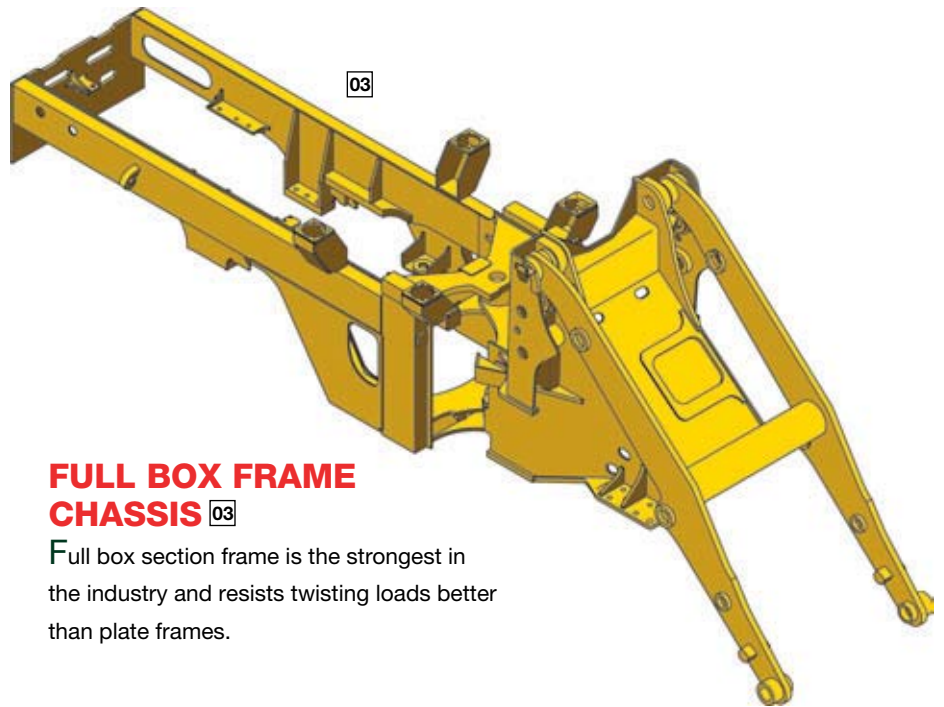
Buckets are designed for easy loading and are equipped with bolt-on cutting edges for easy changing.

The bucket leveler and boom kickout are standard.



INCREASED GREASING INTERVALS FOR UNIVERSAL JOINTS 02

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



FULL BOX FRAME CHASSIS 03

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

RIDE CONTROL FEATURE (OPT) 04

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

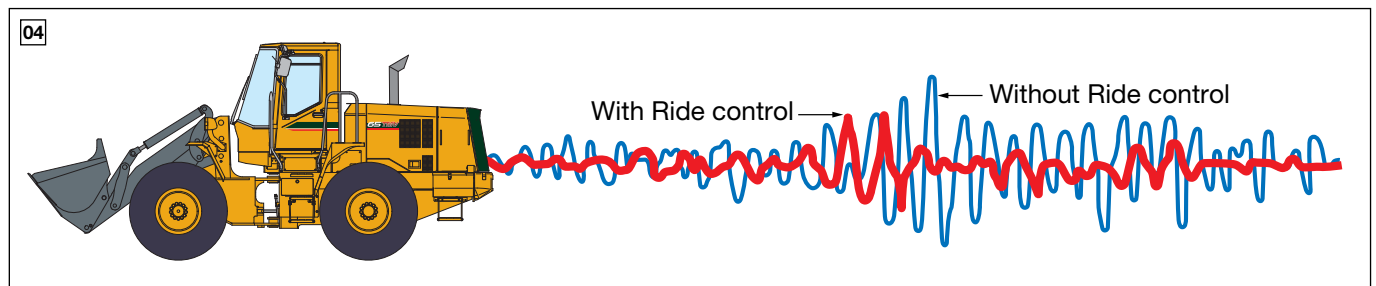
BUFFER RINGS IN HYDRAULIC CYLINDERS

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

KAWASAKI MADE HYDRAULIC VALVES

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

Pilot assisted controls offer fingertip operation.



EASY ACCESS SIMPLIFIES SERVICING



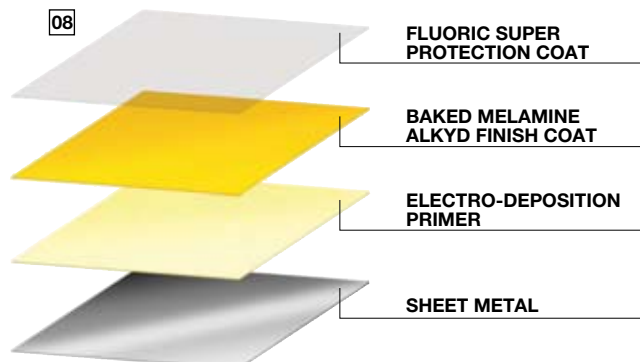
EASY ACCESS SIMPLIFIES SERVICING

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 ⁰⁸

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



HALOGEN HEAD LAMPS ⁰⁵

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

LED REAR LAMPS (OPT) ⁰⁶

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

These lights are very bright and durable.



DT CONNECTORS ⁰⁷

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.

MULTI ADJUSTABLE FUNCTION OPERATOR'S SEAT

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.



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.

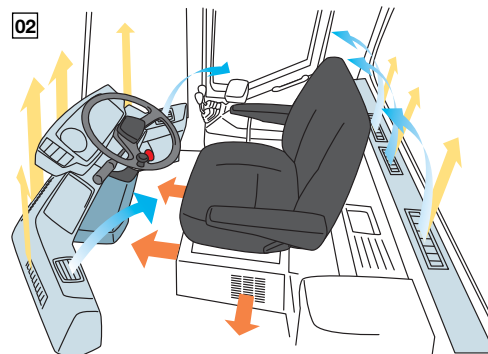


FULLY AUTOMATIC HEATER AND AIR CONDITIONER ⁰²

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 pressurising the cab, the climate control system keeps dust out of the cab.





SINGLE SHIFT CHANGE LEVER

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

MODM 03

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.



TILT AND TELESCOPIC STEERING

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

DOWNSHIFT BUTTON 04

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



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.

ADDITIONAL DIRECTIONAL SWITCH (OPT)

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

IN-CAB SELECTABLE LEVELER SWITCH FOR BUCKET AND FORK 05

Bucket/Fork leveler switch located at the back of the boom control lever.

The setting change of the bucket and the fork can be easily done at the press of a button in the cab.



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

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.

RADIO (OPT) AND UTILITY BOXES

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

65TMV-2 OPERATING SPECIFICATIONS

Engine

Make & model	ISUZU "4HK1X" diesel engine
Type	4-cycle, water-cooled, direct injection, EGR with turbocharged and air cooled intercooler
Rated power	Gross 115 kW (154 hp)/2,200 rpm Net 111 kW (149 hp)/2,200 rpm
Maximum torque	Gross 600 N·m (61 kgf·m)/1,500 rpm
Number of cylinders (bore X stroke)	4 115 mm X 125 mm
Total displacement	5.19 lit
Cooling type	Hydraulic drive pusher type fan Pressurized radiator
Fuel injection pump	High-Pressure Common Rail (HPCR)
Governor	All-speed electrical type
Air cleaner	Dry type (Double element)
Generator	AC 24V 1.2 kW (50 ampere)
Starter motor	DC 24V 5.0 kW (6.7 hp)
Batteries	DC 12V 88 Ah X 2

Transmission & Torque converter

Transmission make & type	Kawasaki, Full power shift		
Torque converter make & type	Kawasaki 3-element, one-stage, one-phase		
Traveling speed		Forward	Reverse
	1st	8.5 km/h	8.5 km/h
	2nd	13.9 km/h	13.8 km/h
	3rd	21.7 km/h	21.7 km/h
	4th	37.7 km/h	37.6 km/h
Note	With 20.5 (L3)		

Axles & Final Drives

Type	4-wheel drive
Axle make & type	Kawasaki make Semi-floating type
Differential gear	Spiral bevel gear, torque proportioning, single stage reduction
Final reduction gear	Inboard mounted, Internal planetary gear
Rear axle oscillation angle	±12°
Tire(standard)	20.5-25-12PR (L2)

Weight change

Option item	Operating weight(kg)	Tipping load(kg)		Overall width(mm) (outside tire)	Overall height(mm)	Overall length(mm)	
		Straight	Full turn				
Tires	17.5R25 (L3)	-220	-160	-140	-30	-70	+60
	20.5R25 (L3)	+280	+210	+180	±0	±0	-
	550/65 R25	+170	+125	+100	+20	-40	+35
	17.5-25-12PR (L2)	-360	-265	-230	-30	-70	+70
	17.5-25-12PR (L3)	-300	-220	-190	-30	-70	+60
	20.5-25-12PR (L2)	±0	±0	±0	±0	±0	-
20.5-25-12PR (L3)	+120	+90	+80	-	-	-	
Counter weight	+295	+705	+605	-	-	+100	
Belly guard	+100	+130	+110	-	-	-	

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, direct operated type
Steering valve	Orbitrol
Full articulation angle	40° to each side

Loading system

Type	Front end loading, Parallelogram linkage system	
Hydraulic cycle time	Lifting(at full load)	5.8 sec
	Lowering(empty)	2.9 sec
	Dumping	2.2 sec
	Total cycle time	10.9 sec



Hydraulic system

Oil pump	Steering oil pump	Gear type, 105 lit/min, 6.9 MPa (70 kg/cm ²) @ 2,200 rpm
	Main oil pump	Gear type, 61 lit/min, 6.9 MPa (70 kg/cm ²) @ 2,200 rpm
	Pilot oil pump	Gear type, 33 lit/min, 6.9 MPa (70 kg/cm ²) @ 2,200 rpm
Lift cylinder	type	Double acting piston
	number,bore x stroke	2 X 120 mm bore X 730 mm stroke
Tilt cylinder	type	Double acting piston
	number,bore x stroke	2 X 100 mm bore X 810 mm stroke
Steering cylinder	type	Double acting piston
	number,bore x stroke	2 X 65 mm bore X 374 mm stroke
Relief set pressure	Control valve	20.6 MPa (210 kg/cm ²)
	Steering valve	20.6 MPa (210 kg/cm ²)

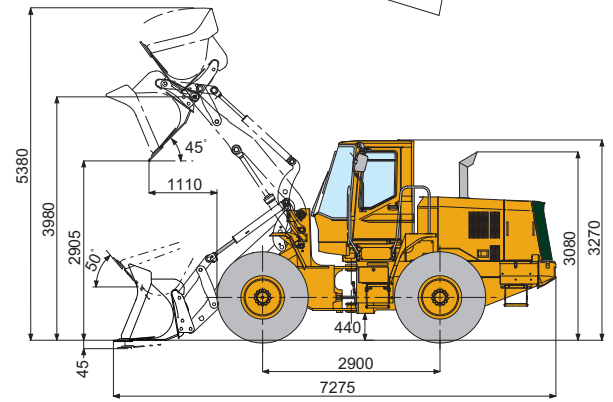
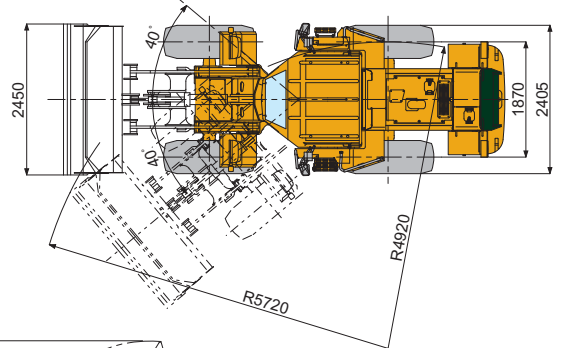
Service refill

Fuel tank	210 lit
Engine lubricant(including oil pan)	16 lit
Engine cooling water	30 lit
T/M & T/C	30 lit
Axle front/rear	50 lit
Hydraulic oil tank	70 lit
Hydraulic system(including oil tank)	130 lit

Bucket

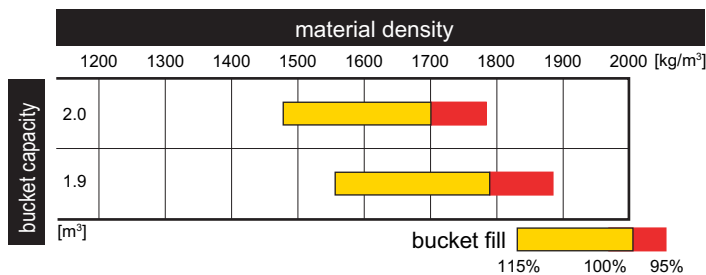
			Standard boom	
			General purpose	
			Bolt-on edges	Teeth
			QGSC	QGST
				
Bucket capacity	heaped	m ³	2.0	1.9
	struck	m ³	1.7	1.6
Max. dumping clearance		mm	2,905	2,815
Max. dumping reach		mm	1,110	1,175
Max. hinge pin height		mm	3,980	
Digging depth (with bucket level)		mm	25	40
Breakout force		kN	107.2 (10,930)	113.6 (11,580)
Bucket tilt-back angle (at carry position)		deg	50	
Overall length		mm	7,275	7,380
Overall height	up to cab top	mm	3,270	
	bucket full raise	mm	5,380	
Overall width	outside tire	mm	2,405	
	outside bucket	mm	2,450	
Tread		mm	1,870	
Wheel base		mm	2,900	
Min. turning radius (at carry position)	at outside bucket	mm	5,720	5,755
	at center of outside tire	mm	4,920	
Min. ground clearance		mm	440	
Full articulation angle		deg	40	
Operating weight	with ROPS CAB	kg	12,030	11,990
Static tipping load	straight	kg	8,410	8,520
	full turn	kg	7,200	7,290

The weight and load figure includes 20.5-25-12PR (L2) tubeless tire, hydraulic coupler, ROPS cab, lubricant, coolant, full fuel tank and operator.



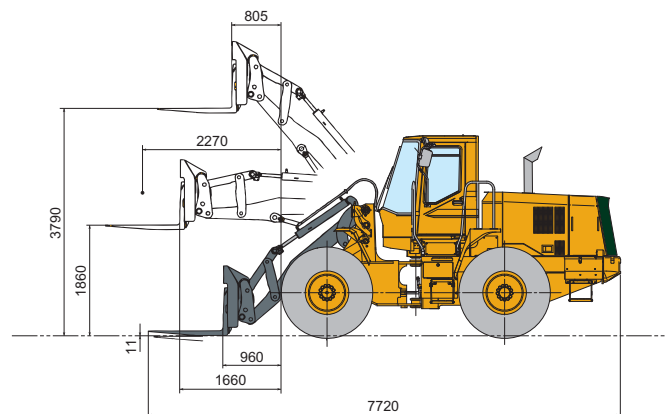
Equipped with QGSC bucket, 20.5-25-12PR (L2) tubeless tire and ROPS cab.

Bucket selection charts



Construction Utility Fork

Fork Tine length	mm	1,220
Overall Length	mm	7,720
Static tipping load with level arms and forks (straight)	Kg	6,390
Static tipping load with level arms and forks (full turn)	Kg	5,470
Operating load (full turn)	Kg	2,800
Operating weight	Kg	12,190



Remarks

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

Please contact your local Kawasaki dealer 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.

STANDARD EQUIPMENT

(Standard specifications may vary. Contact your Kawasaki dealer for specifics.)

Electrical

50 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 4 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
Speedometer
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
Retractable 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
ISUZU 4HK1X diesel engine
Full hydraulic enclosed wet-disc brakes
Hydraulic engine radiator cooling fan
Kawasaki auto shift transmission
Kawasaki axles, torque proportioning differentials (front/rear)
Kawasaki torque converter
Low maintenance drive shafts
Tires, 20.5 (L2) tubeless

Others

Adjustable kickout device
Bucket leveler
Bucket and fork leveler switch
Drawbar hitch with pin
Handrails
Ladders, left and right
Loading linkage, sealed Z-bar type
Secondary brake

OPTIONAL ITEMS

Additional counterweight
Additional F-R directional switch
Anti corrosion specifications
Automatic reversible cooling fan
Cassette player with radio (AM/FM stereo)
Cushion dump valve
Efficient loading system
Emergency steering
Front and rear wide fenders
Hydraulic circuit for quick coupler pins

Hydraulic three spool valve system
LED rear lamps
Limited slip differential (LSD) for both axles
Utility fork package
Mudflaps
Open ROPS/FOPS canopy
Pre cleaner
Quick coupler
Radio ready kit
(12V converter, antenna and wiring, stereo speakers)

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

65TMMV-2



<http://www.khi.co.jp/kenki/english/>