

85Z^{IV}-2



 **Kawasaki**

THE RUGGED, DEPENDABLE **85Z^{IV}-2**

A COMPLETE SOLUTION

- Emissions-compliant 226 HP Cummins diesel
- 4.0 – 4.75 cu. yard bucket standard
- Accepts a wide assortment of attachments to handle many jobs
- Redesigned ROPS cab optimizes productivity and visibility
- Ride Control provides stable load handling, standard
- Powershift transmission with four forward and reverse speeds
- Outboard-mounted, four-wheel, dual circuit sealed wet disc brakes for reliability and long service life
- Torque-proportioning differentials for longer brake and tire life
- Heavy duty three-piece tire rims for easy servicing
- Easy access to drains, filters and fittings



The 85Z^{IV}-2 is designed with rapid cycle times in mind. These machines incorporate over 35 years of field-proven experience to dramatically enhance productivity and performance.

THE POWER TO PERFORM!

The 85Z^{IV}-2 loader is a versatile, high productivity wheel loader for a wide range of applications from asphalt and concrete plants to road construction. Featuring a Cummins M11-C diesel engine producing 226 flywheel horsepower, a 4.0–4.75 cu. yard bucket, a certified ROPS cab and a host of other features that provide high operating efficiency, ease of maintenance and safety, the 85Z^{IV}-2 is always ready for the heavy duty jobs.



OPERATOR PRODUCTIVITY AND SAFETY

The 85Z^{IV}-2 features a completely redesigned ROPS cab with an operator's compartment that offers unmatched comfort and is designed to maximize efficiency and productivity. The cab is accessible by ladders on both sides, features a wrap-around tinted windshield, has front and rear wipers and includes many other features which contribute to improved safety, visibility and comfort. The 85Z^{IV}-2 comes standard with an AM/FM cassette player and standard 25,000 BTU air conditioner.



Kawasaki and their dealer organization offer comprehensive support and service programs designed to keep you on the job.

PUTTING THE **85Z₃-2** TO WORK

Like all Kawasaki loaders, the **85Z₃-2** has a 35-year heritage of strength and reliability. Dual-lever hydraulic control and single twist-grip automatic transmission control offer ease of operation.

The **85Z₃-2** comes equipped with a 4.0–4.75 cubic yard bucket with a bolt-on cutting edge. A third spool valve, control lever, linkage and line are available to handle a number of attachments and extend the **85Z₃-2**'s versatility. Other buckets, Quick Couplers and attachments are also available.

The outboard-mounted, four-wheel sealed wet disc brakes are designed for long life and easy access and overhaul. Standard spin-on filters, remote mounted grease fittings and oil drain simplify maintenance. The standard 26.5 x 25-20PR (L3) tires and optional L4 and L5 tires use heavy duty three-piece rims for easy servicing in the field.



UNMATCHED SUPPORT

Kawasaki maintains a large inventory of new components to ensure outstanding parts availability and minimal downtime. In addition, a predictive oil analysis program helps eliminate unnecessary maintenance and helps find problems before they occur. Kawasaki also stocks an array of cost-effective rebuilt components.

BUILT TO STAY ON THE JOB

Kawasaki loaders are designed with the durability to provide years of service. Backed by a dealer network of heavy equipment experts and a 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.

POWER AND PERFORMANCE UNMATCHED PRODUCTIVITY

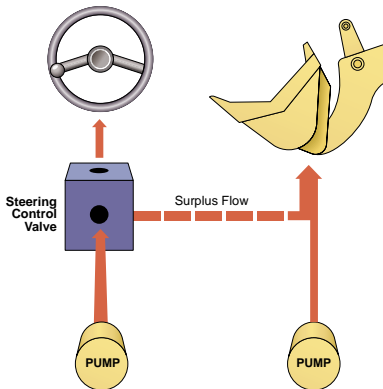
The Kawasaki *ES250-2* means business. It incorporates the best in design and technology, giving your operators the tool they need to get the job done.

Because Kawasaki specializes in the design and manufacture of articulated wheel loaders, you get a machine with a 35-year heritage of successful innovations. The power and productivity that the *ES250-2* brings to the job is a result of that experience.



WORLD-CLASS ENGINES

- 226 HP emissions-compliant Cummins M11-C diesel
- Complies with tough new emissions standards for 2001
- Totally reengineered for longer service life
- Reliable and fuel efficient
- Extensive distribution system
- 24 volt battery system for reserve power



HIGH EFFICIENCY HYDRAULIC SYSTEM

- Dry, reliable
- Cast iron gear pump
- Energy efficient, steering circuit supplements main
- Easy access to two-spool control valve
- Large oil reservoir keeps oil cooler



TRANSMISSION

- Automatic four-speed transmission with powershift
- Single lever control
- Left brake pedal activates transmission declutch switch
- Downshift button speeds cycle times and reduces operator fatigue

PROVIDE



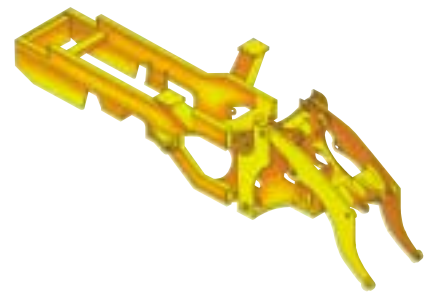
AXLES/BRAKES

- Heavy-duty torque proportioning differential
- 26.5 x 25-20PR (L-3) tires standard
- 26.5 x 25-20PR (L-4, L-5 and radial) and 23.5 x 25-16PR (L-2, L-3, L-4, L-5 and radial) tires available
- 3-piece wheel rims standard
- Outboard-mounted, four-wheel, dual-circuit wet disc brakes
- Easy maintenance
- High capacity
- Long life



LIFT ARMS/BUCKETS

- Z-linkage
- High breakout force
- Optional high lift arms available
- 4.0–4.75 cu. yard bucket standard
- Easy loading
- Excellent load retention
- Full assortment of edges and teeth
- Complete array of attachments available
- Heel plates extend bucket life
- Bucket leveler and boom kick-out standard



STRONG, RUGGED BOX FRAME

- Massive center pins and bearings
- High strength loader tower
- Heavy box frame rear chassis
- All pins of the loading system are fully sealed with grease to provide dependable service with minimum maintenance



THE COMFORT ZONE

Kawasaki has taken a from-the-ground-up approach to create a cab designed with the operator in mind. The new cab focuses on providing the ultimate environment for productivity, comfort and safety. The high visibility, quiet, temperature controlled cab offers the operator ideal surroundings for putting the Kawasaki loader through its paces.

New Features

- Adjustable tilt steering with interlocking instrument panel
- AM/FM cassette radio, standard
- Viscous isolation-mounted to reduce vibration
- Wrap-around tinted windshield for excellent visibility
- Reduced sound levels
- Personal storage space and coat hook
- Intermittent front wiper

Redesigned Features

- Single twist grip transmission lever redesigned for easy gripping and smoother shifting
- All systems monitored with lights and alarms
- Dual, pilot-assisted hydraulic controls—fingertip control
- One rearview and two side mirrors

Standard Features

- Air Conditioner
- Certified ROPS
- Rear cab light
- Doors latch back
- Side windows slide down
- 40,000 BTU heater standard
- Pressurized air control
- Left brake pedal activates transmission declutch switch
- Front and rear wipers and washers
- Seven-way adjustable seat with lumbar support, headrest and adjustable arm rests
- Heavy duty suspension

Optional Features

- Air ride seat
- Single lever hydraulic control



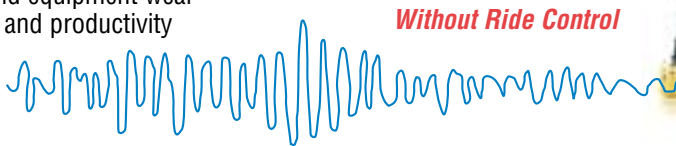
EASY ACCESS SIMPLIFIES SERVICING

- Hinged grille makes radiator cleaning easy
- Engine side covers open wide for optimum access
- Filters positioned within easy reach
- Easy access to drains, filters and fittings
- Grease fittings are grouped for easy lubrication
- Readily available Fleetguard and Donaldson filters
- Starters and alternators available through Cummins national distribution network
- 3-piece wheel rims standard for easy field service
- Ladders on both sides of the machine
- Pressurized air control reduces dust in cab and control boxes

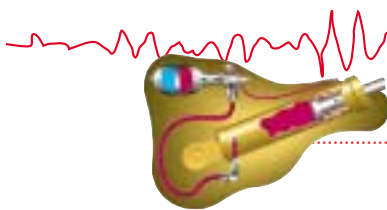


RIDE CONTROL, STANDARD

- Stable load handling
- Reduces operator fatigue
- Cuts vibration and equipment wear
- Improves safety and productivity
- Less spillage
- Faster travel speed



Without Ride Control



With Ride Control



Illustration representative of similar models.

OPTIONS

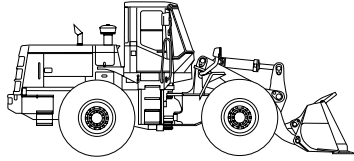
QUICK COUPLER ATTACHMENT

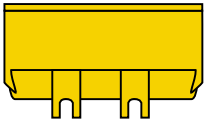
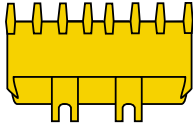
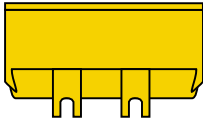
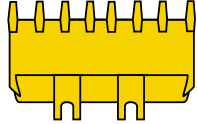
The JRB Quick Coupler, can be used in conjunction with a variety of attachments, including:

- General and multi-purpose buckets
- Side dump bucket
- Construction utility forks
- Utility pallet forks
- Extendable boom
- Paddle top clamp forks
- Grapple bucket
- Loader rake and loader rake with hydraulic clamps



85Z^{IV}-2 BUCKET DATA



			Standard Boom—General Purpose		Material Handling	High Lift Boom
			With Bolt-on Cutting Edge	With Teeth	With Bolt-on Cutting Edge	With Teeth
						
Capacity	Heaped	yd ³ (m ³)	4.3 (3.3)	4.0 (3.1)	4.75 (3.6)	4.0 (3.1)
	Struck	yd ³ (m ³)	3.75 (2.8)	3.5 (2.7)	4.25 (3.25)	3.5 (2.7)
Maximum dumping clearance		ft-in (mm)	9'10" (3000)	9'5 1/2" (2885)	9'7 7/8" (2945)	11'6 3/16" (3510)
Dumping reach (to front of bucket edge or tooth)		ft-in (mm)	3'7 1/8" (1095)	3'10 1/4" (1175)	3'9 1/4" (1150)	4'2" (1270)
Bucket hinge pin height		ft-in (mm)	13'6 3/8" (4125)	13'6 3/8" (4125)	13'6 3/8" (4125)	15'7" (4750)
Digging depth		ft-in (mm)	2 1/2" (65)	3 1/4" (85)	2 1/2" (65)	5 1/2" (140)
Breakout force		lb (kg)	41,225 (18,700)	43,650 (19,300)	38,140 (17,300)	41,887 (19,000)
Bucket tilt-back angle	at ground level		43°	43°	43°	43°
	at carry position		50°	50°	50°	50°
Overall	Length	ft-in (mm)	26'3 1/4" (8010)	26'9 3/4" (8175)	26'6 1/2" (8090)	28'10 7/16" (8800)
	Height	ft-in (mm)	11'7 3/16" (3535)	11'7 3/16" (3535)	11'7 3/16" (3535)	11'7 3/16" (3535)
	Width (outside tire)	ft-in (mm)	9'7 3/8" (2930)	9'7 3/8" (2930)	9'7 3/8" (2930)	9'7 3/8" (2930)
	Width (outside bucket)	ft-in (mm)	10'2" (3100)	10'2" (3100)	10'2" (3100)	10'2" (3100)
Wheel base		ft-in (mm)	10'9 7/8" (3300)	10'9 7/8" (3300)	10'9 7/8" (3300)	10'9 7/8" (3300)
Minimum turning radius	at outside bucket	ft-in (mm)	21'9 1/8" (6635)	21'10 3/4" (6675)	21'10" (5355)	22'10 7/16" (6970)
	at center of outside tire	ft-in (mm)	18'7" (5665)	18'7" (5665)	18'7" (5665)	18'7" (5665)
Minimum ground clearance		ft-in (mm)	1'8 3/8" (520)	1'8 3/8" (520)	1'8 3/8" (520)	1'8 3/8" (520)
Full articulation angle		degree	40°	40°	40°	40°
Operating weight (with ROPS Cab)		lb (kg)	43,770 (19,850)	43,570 (19,760)	43,970 (19,940)	45,140 (20,475)
Static Tipping Load (with ROPS cab)	Straight	lb (kg)	31,990 (14,510)	32,260 (14,630)	31,800 (14,420)	24,135 (10,920)
	Full turn	lb (kg)	27,410 (12,430)	27,670 (12,550)	27,210 (12,340)	20,485 (9,490)

* Full fuel tank and operator. Measured in accordance with SAEJ732C & J742. The weight and load figure includes optional counterweight, Enclosed ROPS Cab. 26.5-25-20PR (L-3) tires.

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.

WEIGHTS AND DIMENSIONS (SUPPLEMENTAL DATA)

		Operating Weight	Tipping Load			Overall Width (Outside Tire)	Tread	Vertical Dimensions	Overall Length
			Straight	Full Turn					
ROPS Canopy (Instead of ROPS Cab)	lb (kg)	-440 (-200)	-395 (-180)	-395 (-180)	in (mm)				
Remove ROPS Canopy and Cab (for transport only)	lb (kg)	-1145 (-520)			in (mm)			-1'8 ⁵ / ₈ " (-525)	
Remove Counterweight	lb (kg)	-550 (-250)	-1345 (-610)	-1135 (-515)	in (mm)				
Tires: 23.5-25-16PR (L-2)	lb (kg)	-1785 (-810)	-1400 (-635)	-1235 (-560)	in (mm)	-3 ¹ / ₄ " (-85)		-2 ³ / ₈ " (-60)	+2" (+50)
23.5-25-16PR (L-4)	lb (kg)	-465 (-210)	-365 (-165)	-320 (-145)	in (mm)	-3 ¹ / ₄ " (-85)		-2 ³ / ₈ " (-60)	+2" (+50)
23.5-25-16PR (L-5)	lb (kg)	+595 (+270)	+465 (+210)	+420 (+190)	in (mm)	-3 ¹ / ₄ " (-85)		-2 ³ / ₈ " (-60)	+2" (+50)
23.5-25-16PR (L-3)	lb (kg)	-1435 (-650)	-1125 (-510)	-990 (-450)	in (mm)	-3 ¹ / ₄ " (-85)		-2 ³ / ₈ " (-60)	+2" (+50)
26.5-25-20PR (L-4)	lb (kg)	+615 (+280)	+485 (+220)	+430 (+195)	in (mm)				
26.5-25-20PR (L-5)	lb (kg)	-2225 (-1010)	+1740 (+790)	+1545 (+700)	in (mm)				
23.5-25-16PR (L-3) with 75% CaCl ₂ for logging	lb (kg)	-950 (-430)	+2625 (+1190)	+2315 (+1050)	in (mm)				
26.5-25-20PR (L-3) with 75% CaCl ₂ for logging	lb (kg)	+3220 (+1460)	+5050 (+2290)	+4475 (+2030)	in (mm)				
Air conditioner	lb (kg)	+220 (+100)	+245 (+110)	+220 (+100)	in (mm)				
Belly Guard (rear frame)	lb (kg)	+245 (+110)	+245 (+110)	+220 (+100)	in (mm)				

Base Tire 26.5-25-20PR (L-3)

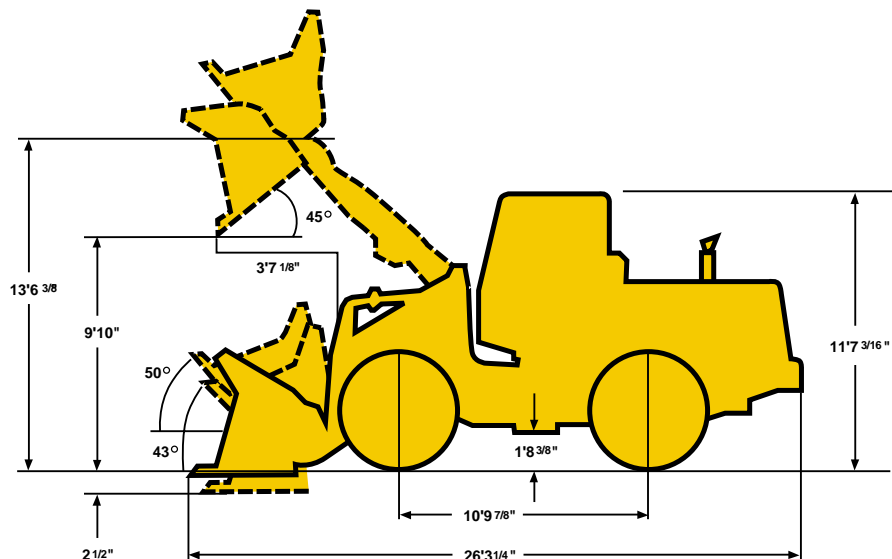
Tread7'3³/₄" (2230mm)

Width (outside tire)9'7³/₈" (2685mm)

Width (outside bucket)10'2" (3100mm)

Equipped with GSC bucket with bolt on cutting edge

26.5-25-20PR (L-3) Tire and ROPS Cab



85Z^{IV}-2 OPERATING SPECIFICATIONS

ENGINE

Make/Model/Fuel Type	Cummins M11-C
Type	4-cycle, watercooled, turbocharged, direct injection
Net flywheel horsepower	226HP/2100 RPM
Maximum torque	723 ft/lb @ 1300 RPM
Number of cylinders	6
Bore and stroke	4.92" x 5.79" (114mm x 147mm)
Total displacement	660 in3 (10,817 cm3)
Alternator	AC24V-1800W (75 amp)
Starting motor	24V-7.3kw (9.8HP)
Battery	12V-150AH, 2 units
Governor	All-speed, mechanical type

TORQUE CONVERTER AND TRANSMISSION

Torque converter	3 elements, single stage
Torque stall ratio	3.32:1
Main clutches	Wet hydraulic, multi-disc type
Cooling method	Forced circulation type
Transmission	Full powershift, 4 forward, 4 reverse with automatic mode (2nd-4th) with downshift switch for 2nd-1st downshifting
Speeds	Forward
	1st: 4.6 MPH (7.4 km/hr) 2nd: 7.6 MPH (12.3km/hr) 3rd: 13.0 MPH (20.9 km/hr) 4th: 21.1 MPH (34.0 km/hr)
Speeds	Reverse
	1st: 4.7 MPH (7.6 km/hr) 2nd: 7.9 MPH (12.7 km/hr) 3rd: 13.4 MPH (21.5 km/hr) 4th: 21.6 MPH (34.7 km/hr)

SERVICE REFILL CAPACITY

LOCATION	CAPACITY:	Gallons	Liters
Engine (coolant)		14.8	(56)
Fuel tank (diesel fuel)		79.3	(300)
Engine oil (oil pan)		9.7	(37)
Front axle (gear oil)		19.8	(75)
Rear axle (gear oil)		21.1	(80)
Steering box		0.1	(0.4)
Torque converter and transmission (engine oil)		14.0	(53)
Hydraulic system (including tank hydraulic oil)		55.5	(210)
Brake oil tank (engine oil)		0.7	(2.5)

HYDRAULIC AND STEERING SYSTEM

Steering type	Articulated frame steering	
Steering mechanism	Hydraulic power steering unit, mechanical follow-up	
Lift (boom) cylinder	Two (2) double-acting piston type: 6.3" x 32.0" (160mm x 814mm)	
Tilt (bucket) cylinder	One (1) double-acting piston type: 7.5" x 21.2" (190mm x 538mm)	
Steering cylinder	Two (2) double-acting piston type: 3.54" x 17.3" (90mm x 440mm)	
Steering oil pump	Gear type: 57.3 GPM/1000psi @ 2100 RPM (217 LPM/70kg/cm2 @ 2100 RPM)	
Main oil pump	Gear type: 21.1 GPM/1000psi @ 2100 RPM (80 LPM/70kg/cm2 @ 2100 RPM)	
Pilot oil pump	Gear type: 13.5 GPM/1000psi @ 2100 RPM (51 LPM/70kg/cm2 @ 2100 RPM)	
Relief valve set pressure	Loading	3000 psi (210 kg/cm2)
	Steering	3000 psi (210 kg/cm2)
HYDRAULIC CYCLE TIME*		
Lifting time (at full load)	6.3 sec.	
Lowering time (empty)	3.5 sec.	
Bucket dumping time	1.4 sec.	
TOTAL	11.2 sec.	

* Measured in accordance with SAE J732C

AXLE SYSTEM

Drive system	4-wheel drive	
Front and rear axle	Full floating banjo type	
Tires	Standard	26.5 x 25-20PR (L-3)
	Optional	23.5 x 25-16PR (L-2) (L-4) (L-5) (L-3) 26.5 x 25-20PR (L-2) (L-4) (L-5)
Reduction and differential gear	Spiral bevel/gear, 1 stage reduction, torque proportioning type	
Final reduction gear	Outboard mounted, internal planetary gear	
Oscillation angle	±11° (total 22°)	

BRAKE SYSTEM

Service brakes	4 wheel air over hydraulic wet disc brakes, Dual circuit
Parking/Emergency brake	Spring applied air release type, located in front driveline. Meets MSHA requirements

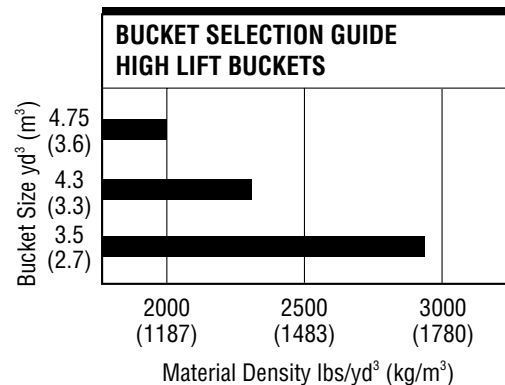
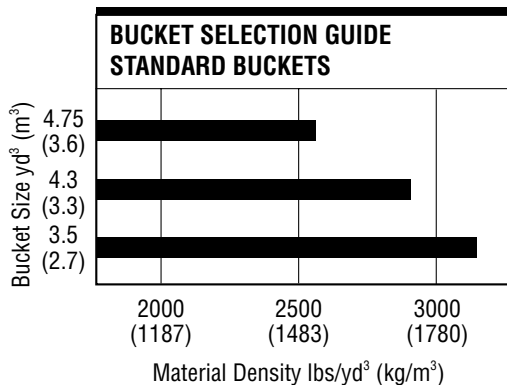
85Z^{II}-2 EQUIPMENT DATA

STANDARD EQUIPMENT

Adjustable Steering Column	Spring applied; Air released, Drum type	Hydraulic Oil Level Tachometer	Radiator Grille, Hinged
Air Cleaner (Double Element Donaldson with Precleaner)	Brakes (Service)	Heater/Pressurizer (40,000 BTU)	Reverse Alarm
Air Conditioner	Oil/Air Actuation	Hoodsides (Hinged)	Ride Control
Alarms (Audible):	Enclosed Wet Disc Dual System	Horn (Electric)	ROPS Cab: Enclosed cab with sound suppression, front lights, front and rear wipers and washers, one rear view and two side mirrors, tinted glass, and sliding side windows
Air Master Overstroke	Bucket Control Lever Dual, Pilot Assisted	Hydraulic Oil Cooler	Safety Articulation Locking Bar
Air Pressure	Bucket Leveler	Indicators:	Seat (Super Deluxe, Adjustable Suspension, Headrest and Adjustable Arm Rests)
Brake Oil Level	Boom Kickout	High Beam	Seat Belt, Retractable, 3" wide
Engine Oil Pressure	Coat Hook	Parking Brake	Shift Control Unit for Automatic Shift
Alarms (Visual):	Cold Start Aid	Transmission Declutch	Torque Proportioning Differentials
Air Filter	Cup Holder	Transmission Shift Monitor	Transmission Declutch Selector Switch
Air Master Overstroke	Downshift Button	Working Light	Vandalism Protection
Air Pressure	Drawbar	Linkage (Z-type, Sealed)	Wiper, Front Intermittent
Battery Discharge	Electrical System (24 volt)	Lights:	Wrist Rest, Adjustable
Brake Oil Level	Fan (Blower)	4 Front	
Converter Oil Temperature	Fenders (Front and Rear)	4 Rear	
Engine Oil Pressure	Gauges:	2 Stop/Tail	
Engine Coolant Temperature	Air Pressure	2 Backup	
Parking Brake	Converter Oil Temperature	Muffler	
Alternator (75 amp)	Engine Coolant Temperature	Neutral Safety Start	
AM/FM Cassette Radio	Fuel Level	Operator's Manual Box	
Batteries: 12V-150AH (2 units)	Hour Meter	Radiator:	
Brake Line Protection (Front)		Heavy Duty Plate Fin Type	
Brake (Parking)			

OPTIONAL EQUIPMENT

Air Dryer	Counterweight	Hydraulic System, 3-Spool Valve	Seat, Air Ride
Belly Guard	Cushion Dump Valve	Lighting System	Single Lever Hydraulic Control
Bolt-On Cutting Edge Segments	Easy Clean Radiator Side-by-Side	No Spin Differential	Turn Signal With Four-Way Flasher
Bucket Teeth	Emergency Steering	Quick Coupler and Attachments	
Converter 12v	High Lift Arm	ROPS Canopy	



Measured in accordance with SAE J732C & J742

KAWASAKI LOADERS

More Than A Machine, A Complete Solution

Kawasaki Construction Machinery Corp. of America, a division of Kawasaki Heavy Industries, is a leading supplier of a full range of high quality wheel loaders. In fact, Kawasaki is the oldest on-going manufacturer of articulated, rubber-tired wheel loaders in the world. With over 35 years of proven performance history, Kawasaki wheel loaders have continuously evolved to bring you the best in equipment and support services, backed by a carefully selected dealer network.

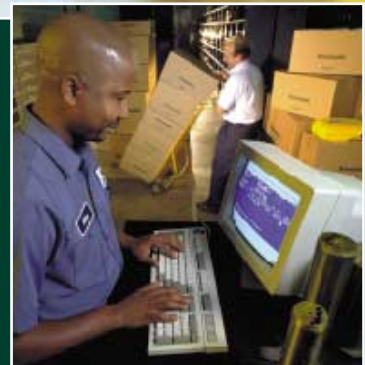
Kawasaki articulated wheel loaders incorporate innovative design features coupled with extensive knowledge and experience gained from real-world applications. Kawasaki pioneered Z-Link design to provide unmatched utility, high breakout force and efficiency in its machines. Powered by proven emissions-compliant Cummins diesel engines, durability and serviceability are designed into every Kawasaki loader.

Kawasaki loaders are assembled at the company's modern facilities in Newnan, GA. Service and support operations are headquartered in Kennesaw, GA.

A state-of-the-art parts distribution system links dealers with the main parts warehouse, allowing them to order parts directly. Qualified craftsmen rebuild components for all Kawasaki models at our fully-equipped rebuild center, making component exchange easier and faster. An independent oil analysis program allows monitoring of critical systems to reduce unscheduled downtime.



The independent dealers that represent and support Kawasaki loaders are experts in their markets and are dedicated to providing you with the best service available. Together, we are committed to making your investment in a Kawasaki loader a sound business decision that will pay dividends for years to come.



 **Kawasaki**
KAWASAKI CONSTRUCTION MACHINERY
CORP. OF AMERICA

2140 Barrett Park Drive • Suite 101
P.O. Box 1657
Kennesaw, Georgia 30144
Tel: 770-499-7000
Fax: 770-421-6842
www.kawasakiloaders.com

