

90 Z^{IV}

Kawasaki



Get What You Need

90 Z^{IV}

The new **90 Z^{IV}** offers everything you ever wanted in a wheel loader: productivity, durability, versatility. The **90 Z^{IV}** has it all ... including support you can rely on ... close to home.

More Than 30 Years of Quality Wheel Loaders

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. With over 30 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 manufacturing 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.



In A Heavy-Duty Loader...

Improved Operator Comfort Means Greater Productivity

CAB

- Certified ROPS, FOPS
- Isolation-mounted to reduce vibration
- Doors latch back
- Side windows slide down
- Tinted windshields
- Front & rear wipers and washers

SEAT

- Best seat in the industry
- New six-way adjustable seat with lumbar support
- Heavy-duty suspension
- Side bolsters

CLIMATE CONTROL

- 25,000 BTU air conditioner available
- 40,000 BTU heater standard
- Pressurizer reduces dust, standard
- Touch pad controls



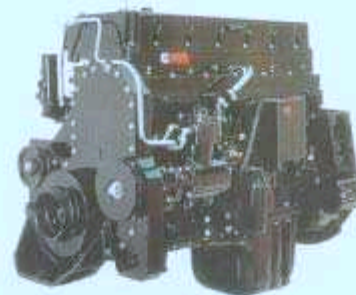
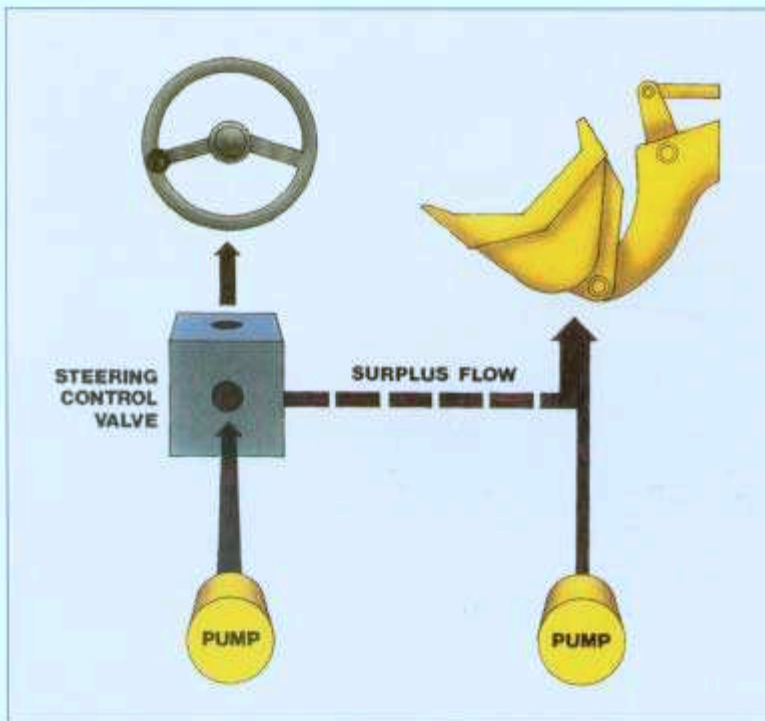
CONTROLS

- Dual, pilot-assisted hydraulic controls—fingertip control
- Adjustable wrist-rest
- Low-effort steering
- Tilt steering wheel adjusts to the operator's needs
- Single, twist-grip transmission shift lever
- Low profile dash improves visibility
- Gauges include tachometer
- Systems monitored with lights and alarms
- Transmission declutch switch activates left brake pedal as declutch

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Kawasaki Powertrain Components

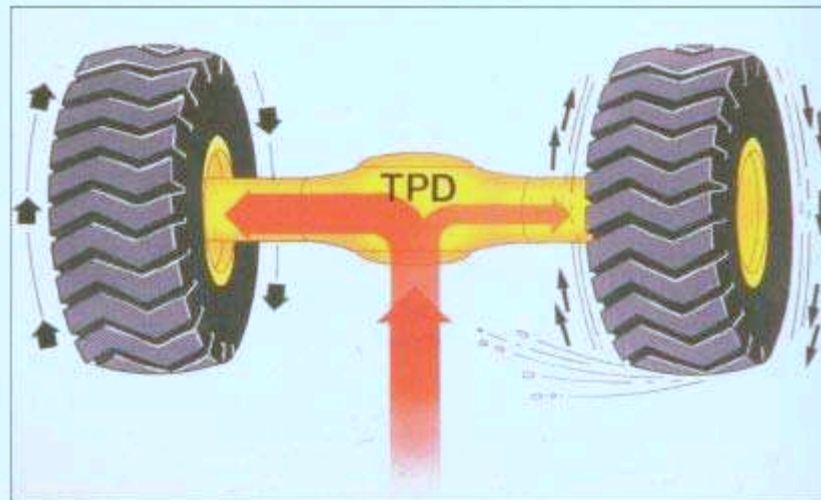


ENGINE

- Cummins M11-C
- 256 flywheel horsepower
- High torque, fuel efficient
- Cummins electrical components
- Reliable
- Worldwide distribution system
- Meets emission standards

A HYDRAULIC SYSTEM DESIGNED FOR EFFICIENT PERFORMANCE

- Dry, reliable
- Cast iron gear pumps
- Energy efficient system, steering supplements main
- Easy access to two-spool control valve
- SAE flange type hoses
- Large oil reservoir — (keeps oil cooler)
- Supplemental oil cooler standard



AXLES

- Heavy-duty torque proportioning differentials
- Outboard-mounted final drives
- Improved rear axle trunnion sealing
- 26.5 x 25 20PR (L3) tires standard
- L4, L5 and radial tires available

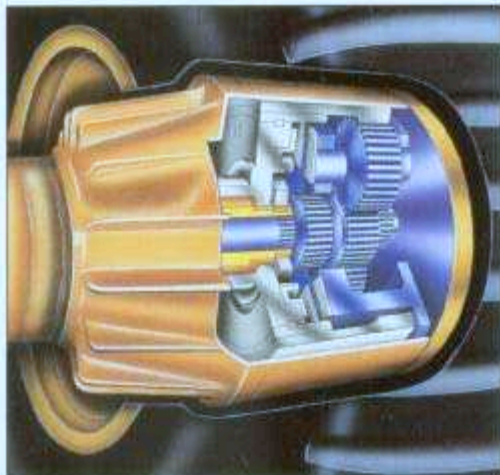
90 Z

ments Offer Built-In Reliability



TRANSMISSION

- Four-speed, countershaft, powershift
- Heavy duty design increases reliability
- Automatic shift speeds cycles
- Large, Standard SAE universal joints
- Long life clutch material



BRAKES

- Outboard wet disc brakes
- High capacity, dual system for safety
- Long life
- Unique design—mounted to low torque side
- Easy access—mounted directly behind planetaries
- Fewer brake discs needed
- Auto-adjusters maintain brake feel

RIDE CONTROL (optional)

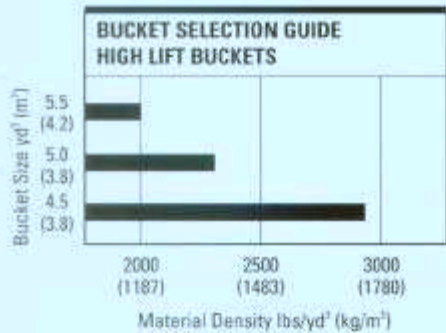
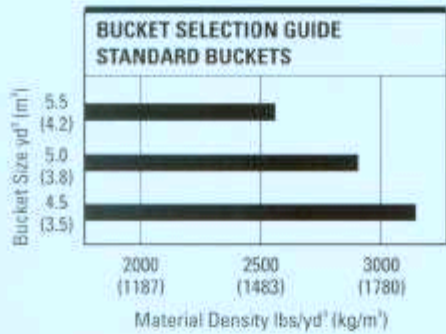
- Reduces bounce
- Speeds cycles
- Increased operator comfort
- Reduce spillage
- Load sensitive
- Automatic

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Kawasaki 90Z Loaders Are Built

BUCKETS

- Rugged and durable buckets
- Box floor for rigidity
- Easy loading
- Excellent load retention
- Full assortment of edges and teeth
- Bolt-on wear plates standard



FRAME

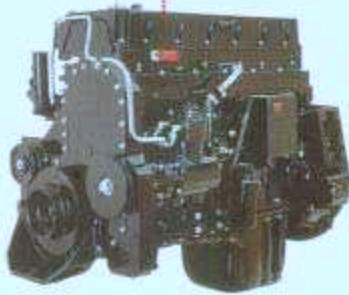
- Heavy, full box-section rear chassis
- Large center pins and bearings
- High strength loader tower

LIFT ARMS

- Heaviest in the class
- Unique dual Z-linkage spreads load and improves visibility
- Special triple-sealed lower bucket pins



For Performance And Durability



Kawasaki Delivers Service and Support... Because You Just Don't Buy a Loader, You Live With It.

SERVICEABILITY

- Hinged radiator grille improves access
- Engine side covers open wide for better access to engine
- Donaldson & Fleetguard filters—easily accessible
- Remote engine oil and coolant drain
- Common key for ignition and vandalism covers
- Grease fittings are grouped for efficient lubrication
- Fusible link protects against electrical surges

SUPPORT

- Economical, effective, "KLEW" oil sampling system
- Factory rebuilt exchange program includes six month warranty
- Outstanding parts availability
- Extended powertrain warranty available
- Extensive qualified independent distribution network

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Operating Specifica

ENGINE

Make/Model/Fuel Type	Cummins M11-C Diesel
Type	4-cycle, watercooled, turbocharged and after cooled, direct injection
Net flywheel horsepower	256HP/2100 RPM
Maximum torque	832 ft/lb @ 1300 RPM
Number of cylinders	6
Bore and stroke	4.921" x 5.787" (125mm x 136mm)
Total displacement	660 in ³ (10,817 cm ³)
Alternator	AC24V-1800W (75 amp)
Starting motor	24V-7.3kw (9.8HP)
Battery	12V-150AH, 2 units BCI# 4D
Governor	All-speed, mechanical type

TORQUE CONVERTER AND TRANSMISSION

Torque converter	3 elements, single stage, 1-phase
Torque stall ratio	3.25:1
Main clutches	Wet hydraulic, multi-disk 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. Autobrake protects from overspeeding
Speeds Forward	1st: 4.2 MPH (6.8km/hr) 2nd: 7.2 MPH (11.5km/hr) 3rd: 12.1 MPH (19.4 km/hr) 4th: 20.5 MPH (33.0 km/hr)
Speeds Reverse	1st: 4.4 MPH (7.0 km/hr) 2nd: 7.3 MPH (11.8 km/hr) 3rd: 12.4 MPH (20.0 km/hr) 4th: 20.8 MPH (33.5 km/hr)

SERVICE REFILL CAPACITY

LOCATION	CAPACITY:	Gallons	Liters
Engine (coolant)		14.8	(56)
Fuel tank (diesel fuel)		84.5	(320)
Engine oil (oil pan)		9.7	(37)
Front axle (gear oil)		19.8	(75)
Rear axle (gear oil)		21.1	(80)
Torque converter and transmission (engine oil)		15.9	(60)
Hydraulic system (including tank hydraulic oil)		71.3	(270)
Brake oil tank (engine oil)		0.7	(2.5)

HYDRAULIC AND STEERING SYSTEM

Steering type	Articulated frame steering	
Steering mechanism	Hydraulic power steering unit	
Lift (boom) cylinder	Two (2) double-acting piston type: 6.69" x 33.46" (170mm x 850mm)	
Tilt (bucket) cylinder	Two (2) double-acting piston type: 5.51" x 24.37" (140mm x 619mm)	
Steering cylinder	Two (2) double-acting piston type: 3.54" x 17.72" (90mm x 450mm)	
Steering oil pump	Gear type: 60 GPM @ 2100 RPM (228 LPM @ 2100 RPM)	
Main oil pump	Gear type: 19.5 GPM @ 2100 RPM (144 LPM @ 2100 RPM)	
Pilot oil pump	Gear type: 16 GPM @ 2100 RPM (66 LPM @ 2100 RPM)	
Relief valve set pressure	Loading	3000 psi (210 kg/cm ²)
	Steering	3000 psi (210 kg/cm ²)
HYDRAULIC CYCLE TIME*		
Lifting time (at full load)	6.1 sec.	
Lowering time (empty)	3.0 sec.	
Bucket dumping time	1.5 sec.	
TOTAL	10.6 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	26.5 x 25-20PR (L-2) (L-4) (L-5) 26.5 x R25 (Radial)
Reduction and differential gear	Spiral bevel/gear, 1 stage reduction torque proportioning	
Final reduction gear	Outboard mounted, internal planetary gear	
Oscillation angle	±12° (total 24°)	

BRAKE SYSTEM

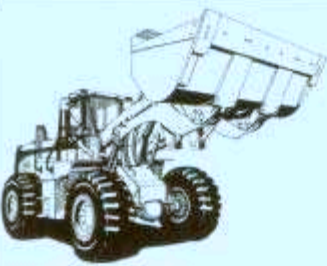
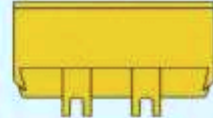
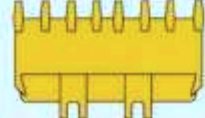
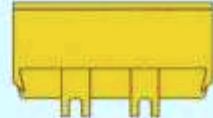
Service brakes	4 wheel, adjustment free, wet type multiple disk, controlled by air over hydraulic dual circuit
Parking/Emergency brake	Spring applied air released and oil applied accumulator type, located in front driveline.

tions and Bucket Data



			Standard Boom						
			General Purpose		Rock Straight		Rock-V-Edge		Material Handling
			Straight Edge With Bolt-on Cutting Edge	Straight Edge With Teeth	Straight Edge Without Teeth	Straight Edge With Teeth	Spade Nose Edge Without Teeth	Spade Nose With Teeth	Straight Edge With Bolt-on Cutting Edge
Capacity	Heaped	yd ³ (m ³)	5.0 (3.8)	4.75 (3.6)	4.5 (3.5)	4.5 (3.5)	4.5 (3.5)	4.5 (3.5)	5.5 (4.2)
	Struck	yd ³ (m ³)	4.25 (3.25)	4.0 (3.1)	3.9 (3.0)	3.9 (3.0)	3.9 (3.0)	3.9 (3.0)	4.85 (3.7)
Maximum dumping clearance		ft-in (mm)	9'10 ¹ / ₈ " (3020)	9'6 ¹ / ₁₆ " (2900)	10'2 ¹ / ₁₆ " (3120)	9'6 ¹ / ₁₆ " (2900)	9'9 ¹ / ₁₆ " (2980)	9'11 ¹ / ₁₆ " (2790)	9'7 ¹ / ₄ " (2940)
Dumping reach (to front of bucket edge or tooth)		ft-in (mm)	4'1 ¹ / ₈ " (1240)	4'4" (1320)	3'10 ¹ / ₈ " (1190)	4'4" (1320)	4'4 ¹ / ₈ " (1330)	4'8 ¹ / ₁₆ " (1430)	4'4" (1320)
Bucket hinge pin height		ft-in (mm)	13'11 ¹ / ₁₆ " (4260)	13'11 ¹ / ₁₆ " (4260)	13'11 ¹ / ₁₆ " (4260)	13'11 ¹ / ₁₆ " (4260)	13'11 ¹ / ₁₆ " (4260)	13'11 ¹ / ₁₆ " (4260)	13'11 ¹ / ₁₆ " (4260)
Digging depth		ft-in (mm)	2 ³ / ₁₆ " (65)	3 ¹ / ₄ " (95)	1 ¹ / ₈ " (30)	3 ¹ / ₄ " (95)	1 ¹ / ₈ " (30)	3 ¹ / ₄ " (95)	2 ³ / ₁₆ " (65)
Breakout force		lb (kg)	46,075 (20,900)	50,045 (22,700)	50,045 (22,700)	50,045 (22,700)	43,000 (19,500)	43,000 (19,500)	42,550 (19,300)
Bucket tilt-back angle	at ground level		43°	43°	43°	43°	43°	43°	43°
	at carry position		50°	50°	50°	50°	50°	50°	50°
Overall	Length	ft-in (mm)	27'4 ¹ / ₈ " (8335)	27'10 ¹ / ₈ " (8500)	26'10 ¹ / ₄ " (8200)	27'10 ¹ / ₈ " (8500)	27'6 ¹ / ₈ " (8450)	28'4 ¹ / ₈ " (8660)	27'8 ¹ / ₄ " (8445)
	Height	ft-in (mm)	11'7" (3530)	11'7" (3530)	11'7" (3530)	11'7" (3530)	11'7" (3530)	11'7" (3530)	11'7" (3530)
	Width (outside tire)	ft-in (mm)	9'7 ¹ / ₈ " (2930)	9'7 ¹ / ₈ " (2930)	9'7 ¹ / ₈ " (2930)	9'7 ¹ / ₈ " (2930)	9'7 ¹ / ₈ " (2930)	9'7 ¹ / ₈ " (2930)	9'7 ¹ / ₈ " (2930)
	Width (outside bucket)	ft-in (mm)	10'2 ¹ / ₈ " (3100)	10'2 ¹ / ₁₆ " (3120)	10'2 ¹ / ₁₆ " (3100)	10'2 ¹ / ₁₆ " (3120)	10'2 ¹ / ₁₆ " (3100)	10'2 ¹ / ₁₆ " (3120)	10'2 ¹ / ₁₆ " (3100)
Wheel base		ft-in (mm)	11'1 ¹ / ₈ " (3400)	11'1 ¹ / ₈ " (3400)	11'1 ¹ / ₈ " (3400)	11'1 ¹ / ₈ " (3400)	11'1 ¹ / ₈ " (3400)	11'1 ¹ / ₈ " (3400)	11'1 ¹ / ₈ " (3400)
Minimum turning radius	at outside bucket	ft-in (mm)	22'4 ¹ / ₁₆ " (6825)	22'6 ¹ / ₈ " (6880)	22'3 ¹ / ₁₆ " (6790)	22'6 ¹ / ₈ " (6880)	22'3 ¹ / ₁₆ " (6790)	22'6 ¹ / ₈ " (6880)	22'5 ¹ / ₄ " (6895)
	at center of outside tire	ft-in (mm)	19 ³ / ₈ " (5800)	19 ¹ / ₂ " (5800)	19 ³ / ₈ " (5800)	19 ³ / ₈ " (5800)	19 ¹ / ₈ " (5800)	19 ³ / ₈ " (5800)	19 ³ / ₈ " (5800)
Minimum ground clearance		ft-in (mm)	20 ¹ / ₄ " (515)	20 ¹ / ₄ " (515)	20 ¹ / ₄ " (515)	20 ¹ / ₄ " (515)	20 ¹ / ₄ " (515)	20 ¹ / ₄ " (515)	20 ¹ / ₄ " (515)
Full articulation angle		degree	40°	40°	40°	40°	40°	40°	40°
Operating weight (with ROPS Cab)		lb (kg)	47,215 (21,870)	47,930 (21,740)	48,040 (21,790)	48,460 (21,980)	48,260 (21,890)	48,680 (22,080)	48,040 (21,790)
Static Tipping Load (with ROPS cab)	Straight	lb (kg)	35,405 (16,060)	36,025 (16,340)	35,935 (16,300)	35,385 (16,050)	35,470 (16,090)	34,920 (15,840)	35,055 (15,900)
	Full turn	lb (kg)	30,400 (13,790)	30,975 (14,050)	30,910 (14,020)	30,360 (13,770)	30,470 (13,820)	25,915 (13,570)	30,050 (13,630)

The weight and load figure includes optional counterweight, Enclosed ROPS Cab, 26.5-25-20PR (L-3) tires, Full fuel tank and operator.

			High Lift Boom		
			General Purpose		Material Handling
			With Bolt-on Cutting Edge	With Teeth	With Bolt-on Cutting Edge
					
Capacity	Heaped	yd ³ (m ³)	4.25 (3.25)	4.0 (3.1)	5.0 (3.8)
	Struck	yd ³ (m ³)	3.75 (2.8)	3.5 (2.7)	4.25 (3.25)
Maximum dumping clearance		ft-in (mm)	11'8 ¹ / ₁₆ " (3560)	11'3 ¹ / ₁₆ " (3440)	11'5 ¹ / ₁₆ " (3500)
Dumping reach (to front of bucket edge or tooth)		ft-in (mm)	3'11 ¹ / ₁₆ " (1210)	4'2 ¹ / ₁₆ " (1290)	4'2" (1270)
Bucket hinge pin height		ft-in (mm)	15'6 ¹ / ₄ " (4730)	15'6 ¹ / ₄ " (4730)	15'6 ¹ / ₄ " (4730)
Digging depth		ft-in (mm)	2 ¹ / ₁₆ " (65)	3 ¹ / ₁₆ " (90)	2 ¹ / ₁₆ " (65)
Breakout force		lb (kg)	49,385 (22,400)	53,790 (24,400)	46,075 (20,900)
Bucket tilt-back angle	at ground level		41°	41°	41°
	at carry position		48°	48°	48°
Overall	Length	ft-in (mm)	28'6 ¹ / ₄ " (8705)	29'1" (8865)	28'10 ¹ / ₄ " (8795)
	Height	ft-in (mm)	11'7" (3530)	11'7" (3530)	11'7" (3530)
	Width (outside tire)	ft-in (mm)	9'7 ¹ / ₈ " (2930)	9'7 ¹ / ₈ " (2930)	9'7 ¹ / ₈ " (2930)
	Width (outside bucket)	ft-in (mm)	10'2 ¹ / ₁₆ " (3100)	10'2 ¹ / ₁₆ " (3120)	10'2 ¹ / ₁₆ " (3100)
Wheel base		ft-in (mm)	11'1 ¹ / ₈ " (3400)	11'1 ¹ / ₈ " (3400)	11'1 ¹ / ₈ " (3400)
Minimum turning radius	at outside bucket	ft-in (mm)	22'11 ¹ / ₈ " (6995)	23'1 ¹ / ₈ " (7055)	23'3 ¹ / ₈ " (7020)
	at center of outside tire	ft-in (mm)	19'3 ¹ / ₈ " (5800)	19'3 ¹ / ₈ " (5800)	19'3 ¹ / ₈ " (5800)
Minimum ground clearance		ft-in (mm)	20'1 ¹ / ₄ " (515)	20'1 ¹ / ₄ " (515)	20'1 ¹ / ₄ " (515)
Full articulation angle		degree	40°	40°	40°
Operating weight (with ROPS Cab)		lb (kg)	48,545 (22,020)	48,260 (21,890)	48,655 (20,070)
Static Tipping Load (with ROPS cab)	Straight	lb (kg)	29,320 (13,300)	29,760 (13,500)	29,100 (13,200)
	Full turn	lb (kg)	24,910 (11,300)	23,350 (11,500)	24,690 (11,200)

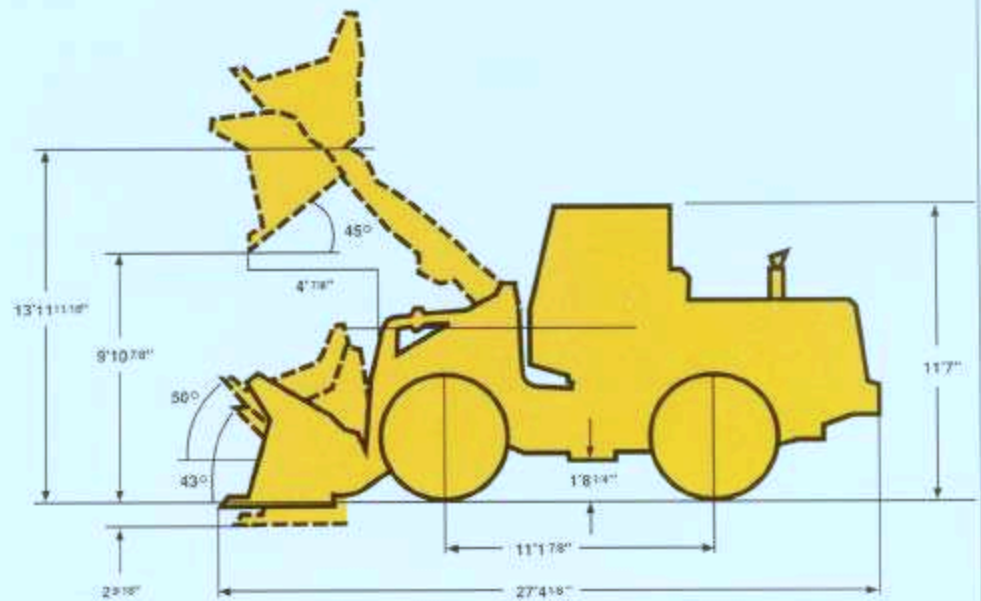
tions and Equipment Data

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)	-705 (-320)	-640 (-290)	-615 (-280)	in (mm)		
Remove ROPS Canopy and Cab (for transport only)	lb (kg)	-1480 (-670)			in (mm)	no change	
Tires: 26.5-25-20PR (L-2)	lb (kg)	-397 (-180)	-390 (-140)	-265 (-120)	in (mm)	no change	no change
26.5-25-20PR (L-4)	lb (kg)	+617 (+280)	+465 (+210)	+400 (+180)	in (mm)	no change	no change
26.5-25-20PR (L-5)	lb (kg)	+2230 (+1010)	+1676 (+760)	+1477 (+670)	in (mm)	no change	no change
26.5-25 (75% CaCl ₂)	lb (kg)	+3220 (+1460)	+4830 (+2190)	+4255 (+1930)	in (mm)	no change	no change
Air conditioner/Heater	lb (kg)	+220 (+100)	+243 (+110)	+220 (+100)	in (mm)		
Belly Guard (rear frame)	lb (kg)	+243 (+110)	+243 (+110)	+243 (+110)	in (mm)		

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

Tread7'3³/₁₆" (2230mm)
 Width (outside tire)9'7¹/₁₆" (2930mm)
 Width (outside bucket)10'2¹/₁₆" (3100mm)
 Equipped with GSC bucket with bolt on cutting edge
 26.5-25-20PR (L-3) Tire and ROPS Cab



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CORP. OF AMERICA

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STANDARD EQUIPMENT

Adjustable Steering Column	Brake (Parking)	Hour Meter	Reverse Alarm
Air Cleaner (Double element Donaldson with Precleaner)	Brakes (Service): Air/Oil Actuation Enclosed Wet Disc Dual System	Hydraulic Oil Level	ROPS Cab: Enclosed cab with sound suppression, front lights, front & rear wipers and washers, 2 rear view and 2 side mirrors, tinted glass, sliding side windows
Alarms Audible: Air Pressure Air Master Overstroke Brake Fluid Level Engine Oil Pressure	Bucket Control Lever (Dual, Pilot Assisted)	Tachometer	Safety Locking Bar
Alarms Visual: Air Filter Air Master Overstroke Air Pressure Battery Discharge Brake Fluid Level Converter Oil Temperature Engine Oil Pressure Engine Coolant Temperature Parking Brake	Bucket Leveler	Heater/Pressurizer (40,000 BTU)	Seat (Super Deluxe, Adjustable, Suspension)
Alternator: 75 amp	Boom Kickout	Hoodsides (Hinged)	Seat Belt, Retractable, 3" wide
Brake Line Protection (Front)	Coat Hook	Horn (Electric)	Shift Control for Automatic Shift
	Cold Start Aid	Indicators: High Beam Parking Brake Transmission Switch Monitor Working Light	Torque Proportioning Differential
	Cup Holder	Lights: 2 Front 2 Rear 2 Stop/Tail	Transmission Declutch Switch
	Downshift Button	Linkage (Z-type sealed)	Vandalism Protection
	Drawbar	Muffler	Wrist Rest, Adjustable
	Electrical System (24 Volt)	Neutral Safety Start	
	Fan (Blowers)	Operators Manual Box	
	Fenders (Front and Rear)	Radiator: Heavy Duty Plate Fin Type	
	Gauges: Air Pressure Converter Oil Temperature Engine Coolant Temperature Fuel Level	Radiator Grille, Hinged	
		Radio Ready	

OPTIONAL EQUIPMENT

Air Conditioner (R134 Refrigerant)	Belly Guard	Emergency Steering	No Spin Differential
Air Dryer	Bolt-On Cutting Edge Segments	High Lift Arm	ROPS Canopy
AM/FM Cassette Player	Counterweight	Hydraulic System, 3-Spool Valve	Turn Signal w/4 way flasher
	Cushion Dump Valve	Lighting System	