

# WA70-1

## WHEEL LOADER



ROPS canopy is optionally available.  
Photo shown may include other optional equipment.

## KOMATSU VANGUARD SERIES

- Z-bar loader linkage offers greater breakout force and shorter cycle time.
  - Komatsu 4D95L-W diesel engine gives high output power, fuel efficiency and low operating noise.
  - F3/R3 transmission matches a wide range of operating modes.
  - Maintenance-free wet, disc brakes provided.
  - Fully tiltable engine hood and radiator subtank facilitate inspection and maintenance.
  - Two smoothly operated column shift transmission control levers and a single work-equipment control lever make it easy to perform precise operations.
  - A wide range of optional attachments are provided to meet specific job requirements.
- Flywheel horsepower: 55 HP (41 kW) at 2200 RPM  
Bucket capacity: 0.8 m<sup>3</sup> (1.0 cu.yd)  
Operating weight: 4485 kg (9,890 lb)

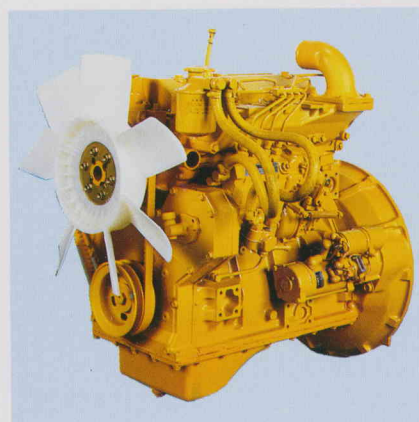
## Operating versatility promotes labor-savings

With high operating efficiency and responsive controls, the WA70-1 tackles a versatile range of small-scale civil engineering jobs including earth-moving, pipe and cable laying, gardening and others. With use of the WA70-1 wheel loader, you can reduce labor costs and greatly shorten construction time.

## Powerful, responsive operation



**Z-bar loader linkage design** assures dynamic digging force. This plus powerful traction enable the WA70-1 to excavate and scoop materials with speed and assurance. In addition, large dumping clearance and reach facilitate loading operations.



**The Komatsu 4D95L-W diesel engine** generates high output power of 55 HP (41 kW) for excellent operating and traveling performance. A low fuel consumption design also maximizes fuel efficiency. Engine noise is minimized with rubber-pad mountings and a swirl combustion chamber system.

**Komatsu-built transmission** offers F3/R3 soft-shifting speed ranges, matching a wide range of job requirements such as loading, hauling, leveling, snow-removal and many others. A high travel speed setting makes the WA70-1 a highly maneuverable machine for increased operating efficiency.





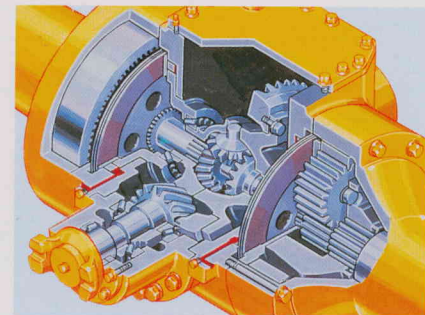
## Easy-to-control features

- Excellent front and rear visibility.
- Rational arrangement of control levers. Transmission control is smooth with two column-shift type levers. A single work-equipment control lever with different control sensitivities for tilting and lifting operations makes control use easy and certain.
- Light-touch steering action is possible even at low engine speeds.
- Clustered gauges are ergonomically arranged for easy reading.
- Engine starts and stops are quick and easy like in passenger cars.

## Simple maintenance features

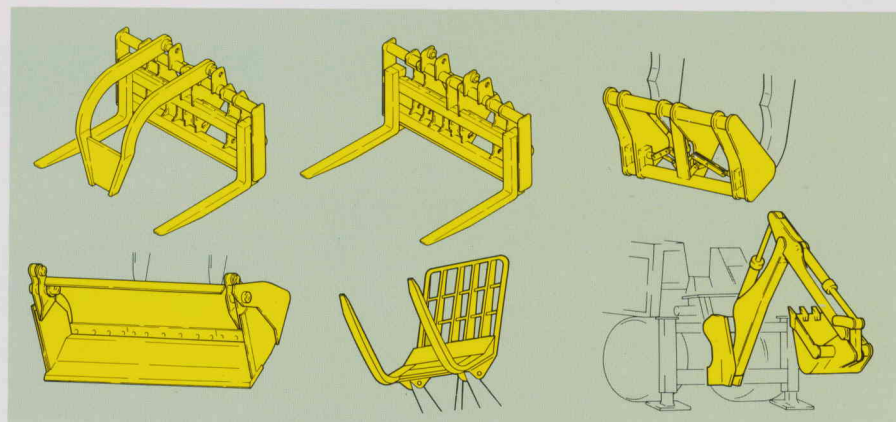


The full-tilt engine hood opens widely with a single touch, exposing the engine and hydraulic and other equipment for easy maintenance. The engine coolant level can be instantly checked by the radiator subtank.



Sealed, wet, disc brakes are adjustment-free and protected from water, dust and other foreign elements. This results in sure braking performance at all times.

**A wide range of attachments**  
Various attachments such as a large bucket, dumping fork, lumber fork, grapple quick coupler, etc., are provided to meet specific job requirements.



# SPECIFICATIONS



## ENGINE

The Komatsu 4D95L-W, is a 4-stroke, water-cooled, overhead valve diesel engine. It includes four cylinders with a 95 mm (3.7") bore x 115 mm (4.5") stroke and a 3.26 ltr. (199 cu.in) piston displacement.

Flywheel horsepower:

55 HP (41 kW) at 2200 RPM (SAE J1349)

56 PS (41 kW) at 2200 RPM (DIN 6270 NET)

Swirl combustion chamber. All-speed mechanical governor. Gear-pump-driven force-lubrication with full-flow filters. All filters are spin-on type for easy maintenance. Dry, cyclopack air cleaner with dust evacuation valve for longer element service. 24 V/2.8 kW electric starting motor. 24 V/25 A alternator. 2 x 12 V/65 Ah batteries.



## TRANSMISSION

3-element, single-stage, single-phase torque converter. Full powershift, counter shaft type transmission. A modulating function assures shockless speed and directional changes without braking. A neutral circuit allows starting only when the directional control lever is in neutral.

Travel speed km/h (MPH)

	Forward	Reverse
1st	0- 7.6 ( 4.7)	0- 7.8 ( 4.7)
2nd	0-13.3 ( 8.3)	0-13.8 ( 8.6)
3rd	0-32.0 (19.9)	0-33.1 (20.6)



## AXLES & FINAL DRIVES

Four-wheel drive system. A semi-floating front axle is fixed to the front frame. Center-pin-supported, semi-floating rear axle with a large oscillation of  $\pm 11^\circ$ . A spiral bevel gear for reduction in the axle and a planetary-gear, single-reduction final drives. Front and rear differentials of the straight bevel gear.



## BRAKES

**Service brakes:** Hydraulically actuated, inboard-mounted, wet, disc brakes actuate all four wheels. Independent front and rear brake systems. Two pedals provided. The right for normal braking; the left offers braking + transmission neutralizing.

**Parking brake:** Dry disc type applied on front axle pinion shaft.



## TIRES

Front and rear: 17.5/65-20-10PR (L-2)  
Rims: W14Lx 20



## STEERING SYSTEM

Center-pivot frame articulation. Full-hydraulic power assisted steering independent of engine RPMs. A wide articulation angle of  $40^\circ$  on each side for a minimum turning radius of 4380 mm (14'4") at the outside corner of the bucket.



## BOOM & BUCKET

Z-bar loader linkages are designed for maximum rigidity and offer powerful excavation. Rap-out loader linkage design enables shock dumping to shake off sticky materials. Sealed loader linkage pins with dust seals extend greasing intervals. Bucket corner teeth (optional) not only minimize bucket wear but also increase penetrating force.



## BUCKET CONTROLS

Little effort is required to operate the bucket and boom control lever, assuring smooth, responsive bucket/boom action.

**Control positions:**

Boom . . . . . Raise, hold, lower and float  
Bucket . . . . . Tilt-back, hold and dump



## HYDRAULIC SYSTEM

A gear pump for steering and loader control.

**Capacity** (discharge flow) at engine 2200 RPM:

Loader . . . . . 71 ltr. (18.8 U.S. gal)/min.

**Relief valve setting:**

Loader . . . . . 210 kg/cm<sup>2</sup> (2990 PSI/20.6 MPa)

**Control valves:**

A 2-spool type control valve.

Hydraulic cylinders	Number of cylinders	Bore	Stroke
Boom lift	2	80 mm (3.1")	557 mm (21.9")
Bucket	1	80 mm (3.1")	358 mm (14.1")

**Hydraulic cycle time:**

Rated load in bucket

Raise . . . . . 5.7 sec.  
Dump . . . . . 1.0 sec.  
Lower (empty) . . . . . 4.0 sec.



## SERVICE REFILL CAPACITIES

Cooling system . . . . . 14 ltr. ( 3.7 U.S. gal)  
Fuel tank . . . . . 60 ltr. (15.8 U.S. gal)  
Engine . . . . . 7 ltr. ( 1.8 U.S. gal)  
Brake oil tank . . . . . 1 ltr. ( 0.3 U.S. gal)  
Hydraulic system . . . . . 19 ltr. ( 5.0 U.S. gal)  
Differential and final drive case  
(each side) . . . . . 8 ltr. ( 2.1 U.S. gal)  
Torque converter and  
transmission . . . . . 12 ltr. ( 3.2 U.S. gal)



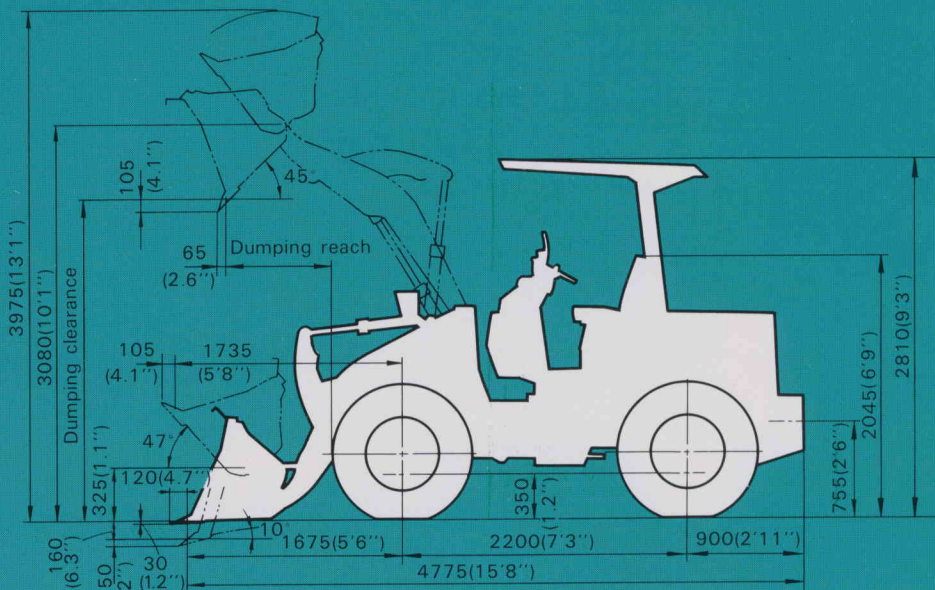
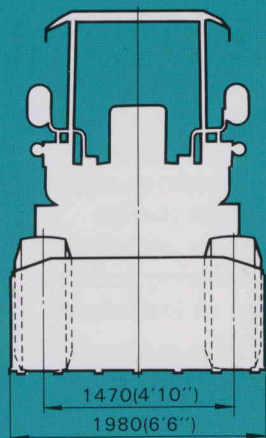
## OPERATING WEIGHT

Operating weight, including rated capacity of lubricant, coolant, full fuel tank, 17.5/65-20-10PR (L-2) tubeless, 0.8 m<sup>3</sup> (1.0 cu.yd) SAE heaped capacity bucket and other standard equipment . . . . . 4485 kg (9,890 lb)



## DIMENSIONS

Unit : mm (ft.in)



Usage		Stockpile	Light material	Multipurpose
Bucket type		Straight edge	Straight edge	Straight edge
Bucket capacity	SAE rated	0.8 m <sup>3</sup> (1.0 cu.yd)	1.0 m <sup>3</sup> (1.3 cu.yd)	0.6 m <sup>3</sup> (0.8 cu.yd)
	Struck	0.6 m <sup>3</sup> (0.8 cu.yd)	0.8 m <sup>3</sup> (1.0 cu.yd)	0.5 m <sup>3</sup> (0.7 cu.yd)
Bucket width		1980 mm (78")	1980 mm (78")	2005 mm (79")
Static tipping load	Straight	3100 kg (6,830 lb)	3035 kg (6,690 lb)	3140 kg (6,920 lb)
	Full turn	2635 kg (5,810 lb)	2580 kg (5,690 lb)	2670 kg (5,890 lb)
Dumping clearance, max: height and 45° dump angle		2505 mm (8'3")	2425 mm (7'11")	2455 mm (8'1")
Reach at 2130 mm (7') cut edge clearance and 45° dump angle		1130 mm (3'8")	1155 mm (3'9")	1070 mm (3'6")
Reach at max. height and 45° dump angle		830 mm (2'9")	910 mm (3')	800 mm (2'8")
Reach with arm horizontal and bucket level		1755 mm (5'9")	1855 mm (6'1")	2985 mm (9'10")*
Operating height (fully raised)		3975 mm (13'1")	4135 mm (13'7")	4080 mm (13'5")
Overall length	Bucket on ground	4775 mm (15'8")	4875 mm (16')	4835 mm (15'10")
	Bucket at carry	4835 mm (15'10")	4905 mm (16'1")	4895 mm (16'1")
Turning radius (bucket at carry, outside corner of bucket)		4380 mm (14'4")	4415 mm (14'6")	4410 mm (14'6")
Digging depth	0°	40 mm (1.6")	40 mm (1.6")	100 mm (3.9")
	10°	160 mm (6.3")	180 mm (7.1")	215 mm (8.5")
Lifting capacity (SAE carry)		4250 kg (9,370 lb)	4180 kg (9,220 lb)	4310 kg (9,500 lb)
Breakout force (bucket cylinder)		4230 kg (9,330 lb)	3625 kg (7,990 lb)	3920 kg (8,640 lb)
Rated load		1280 kg (2,820 lb)	1280 kg (2,820 lb)	960 kg (2,120 lb)
Operating weight		4485 kg (9,890 lb)	4525 kg (9,980 lb)	4720 kg (10,400 lb)

• All dimensions, weights and performance values based on SAE J-732C and J742b standards.

• Static tipping load and operating weight shown include 17.5/65-20PR (L-2) tires without ballast in rear, lubricants, coolant, full fuel tank and operator. Machine stability and operating weight are affected by counterweight, tire size and other attachments. Add the following weight changes to operating weight and static tipping load.

\*Bottom dumping clearance.

## Weight changes

Option	Change in operating weight	Change in tipping load	
		Straight	Full turn
Canopy	+45 kg ( 99 lb)	+50 kg (110 lb)	+40 kg ( 88 lb)
Steel cab	+270 kg (395 lb)	+250 kg (551 lb)	+215 kg (474 lb)
ROPS canopy	+250 kg (551 lb)	+295 kg (650 lb)	+250 kg (551 lb)
Bucket teeth (bolt-on, unitized)	+25 kg ( 55 lb)	-30 kg ( 66 lb)	-25 kg ( 55 lb)
Bucket teeth (bolt-on, tip type)	+30 kg ( 66 lb)	-25 kg ( 55 lb)	-20 kg ( 44 lb)
Cutting edges	+30 kg ( 66 lb)	-35 kg ( 77 lb)	-30 kg ( 66 lb)

## STANDARD EQUIPMENT

**Engine and cooling system:** Starter. Alternator. Preheater.

**Electrical components:** Headlights (2). Brake lamps or tail lamps. Turn indicators (front and rear).

**Gauges:** Fuel level. Coolant temperature. Torque converter oil temperature. Service meter. Voltmeter.

**Pilot lamps:** Engine preheating. High-beam. Turn indicators. Parking brake applied.

**Caution lamps:** Engine oil pressure lowering. Brake oil level.

**Others:** Sight gauges (hydraulic reservoir level, transmission oil level, coolant level and brake oil level). General-purpose bucket, 0.8 m<sup>3</sup> (1.0 cu.yd). Adjustable operator's seat.

## OPTIONAL EQUIPMENT

ROPS canopy  
Canopy  
Steel cab  
Seat belt  
Heater and defroster  
Windshield wiper and washer  
Floor mat  
Sun visor  
Fire extinguisher  
Suspension seat  
Rear fenders  
Vandalism protection kit  
Backup alarm  
Back lamp  
Rear working light (1)  
Working lights (2), cab-mount type  
Yellow warning lamp  
Rearview mirrors  
Room mirror  
Ashtray and cigarette lighter  
Electric fan  
Speedometer (with odometer)  
Pilot lamps

**Work equipment:**  
Bucket teeth (bolt-on, unitized)  
Bucket teeth (bolt-on, tip type)  
Bucket corner teeth  
Bolt-on cutting edges  
3-spool control valve  
Hydraulic adaptor kit  
Lumber fork for quick coupler  
Dumping fork for quick coupler  
Lumber grapple  
General-purpose bucket for light material, 1.0 m<sup>3</sup> (1.3 cu.yd),  
Multipurpose bucket, 0.6 m<sup>3</sup> (0.8 cu.yd)

**Others:**  
17.5/65-20-10PR (L-2) tubed tires  
Tire chains

This specification sheet may contain attachments and optional equipment that are not available in your area. Please consult your local Komatsu distributor for those items you may require. Materials and specifications are subject to change without notice.



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