

KOMATSU®

WA700-3

With Advanced Joystick Steering System
(AJSS)

NET HORSEPOWER
502 kW **672 HP** @ 2000 rpm

OPERATING WEIGHT
71020 – 73000 kg
156,570 – 161,150 lb

BUCKET CAPACITY
8.0 – 9.4 m³ **10.5 – 12.3 yd³**

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Photos may include optional equipment.

WALK-AROUND

Komatsu-integrated design for the best value, reliability, and versatility. Hydraulics, power train, frame, and all other major components are engineered and built by Komatsu. You get a machine whose components are designed to work together for higher production, greater reliability, and more versatility.

New Easier Access to Engine for Servicing

Large swing-out hood doors lock with cab key. Radiator grill is also hinged with radiator clean-out doors on both sides.

Automatic transmission and kick-down switch are production enhancing, standard features.

Rear lights mounted high out of harm's way.

Check Battery Easily

Low mount battery boxes for easy checking and servicing.

The Komatsu SAA6D170-E-3, engine provides an output of 502 kW **672 HP @ 2000 rpm** for superior performance and productivity, and is Tier 2 EPA, EU and Japan emissions certified.

Sight gauge for hydraulic tank

allows ground level check without opening the compartment.

Rear-mounted fuel tank

allows for ground level fueling. Fuel tank prepared to accept Wiggins fast fuel fittings.

Ground level grease bank

lubrication reduces maintenance.



Designed for better value through improved reliability and enhanced versatility. That's why the WA700-3 means value, and anything less is just another Wheel Loader.

New cab for increased operator productivity.

New operator's cab provides improved visibility with a pillarless flat glass windshield and power windows. A KAB air suspension seat with retractable seat belt keeps the operator comfortable.

Special rubber-mounted cab for operator comfort. Special silicone-filled rubber cab mounts reduce vibration and noise that can fatigue the operator and reduce his efficiency.

Service monitor with diagnostics including an air cleaner sensor keeps the operator informed. True three level monitoring provides the operator with prestart level checks, cautions, and warnings.

New dual mode hydraulics match system output to operating conditions and application.

New Hensley 550 Bladesaver System™

offers full protection for the bucket lip and good digging performance while leaving a smooth quarry floor.

Spade nose bucket capacity increased to 8.7 m³ **11.4 yd³**.

Photos may include optional equipment.

Fully-hydraulic brake system means less maintenance and more reliability.

New Advanced Joystick Steering System (AJSS)

offers single lever control of steering, transmission range, direction and horn.



OPERATOR'S COMPARTMENT

Ask the people who run one—they will tell you the operator's cab sets the Komatsu Wheel Loader apart from the others. That's a productivity feature you can't ignore. No matter how a machine specs out, or how much is promised for productivity, unless the operator can work a full shift without becoming fatigued, you will never get the full measure of promised productivity.

The cab improvements on the WA700-3 go beyond providing a large cab with a comfortable seat. Improvements include many production-enhancing standard features.

New Three-piece flat glass windshield provides the operator an unobstructed view of the working area and attachment. Power windows offer ventilation at the touch of a finger.

Two-door Walk-through Cab

Good for ventilation as well as easy entry and exit from either side of the cab.

Silicone-filled rubber mounts dampen noise and vibration, reduces fatigue caused by noise. Helps keep the operator productive longer.

Low-effort brake pedals actuate fully hydraulic brakes. Parking brake provides effective braking with the touch of a finger.

Steer with Ease

Komatsu's Advanced Joystick Steering (AJSS) offers precise low-effort steering performance in demanding V-cycle applications. AJSS has proven popular with operators throughout the world on Komatsu's flagship wheel loader, the WA1200-3.

Cloth covered high-back bucket seat features air suspension with its own self-contained air compressor.



Kick-down switch is conveniently located on the boom lever. A simple motion of the thumb actuates this valuable productivity feature.

Easy Shifting and Directional Changes

The multi-function steering lever also contains the transmission direction and range controls. Solid state electronics and conveniently located direction and gear shift controls make this possible. Standard automatic transmission allows automatic shifts in ranges two through four, keeping production high and manual shifting at a minimum.

At-a-glance Instrument Monitor

Travel data is mounted in front of the operator and is tilted for easy view, allowing the operator to easily check gauges and warning lights.



Cab Comforts

Value options for productivity and those little added touches that make work a little easier.

Keep cool, keep productive with a **five-mode air conditioner**. Thirteen strategically located vents direct cool air to the operator, maintaining productivity on even the hottest days.

There's nothing more refreshing than a cold drink on a hot day. The WA700-3 offers a large lunch box holder. The hot/cold box will keep a beverage cool on a hot day. That's something to look forward to at lunch or break-time.

Make the time go faster with an auto-tuning **AM/FM cassette radio** with a digital clock.

Five-mode air conditioner



Cool box



AM/FM cassette radio



KOMATSU DESIGNED POWER TRAIN

Engine

The **Komatsu SAA6D170-E-3** delivers the power and efficiency to get the job done quickly and cost effectively while meeting emission requirements.

The **SAA6D170-E-3** is an electronically controlled, water-cooled, four-stroke cycle, six-cylinder in-line, turbocharged and air-to-air aftercooled direct injection engine that produces high performance and excellent fuel economy.

Komatsu electronically controlled fuel system features continuously variable timing and higher injection pressure to control emissions and white smoke, improve cold-start performance, and allow higher torque rise.


SAA6D170-E-3 improvements include:

- Air-to-air-aftercooling
- Addition of a fuel cooler
- Larger radiator core
- Dual fuel filter option now standard

Large swing-out doors allow easy access to the engine and radiator for routine maintenance and cleaning.

Spin-on filters and easily accessible lubrication points mean reduced maintenance time and less chance of missing these important maintenance items. Extended 500 hour oil and filter change intervals reduce service time while minimizing waste oil disposal costs.

With a piston displacement of 23.15 ltr 1412 in³, the Komatsu SAA6D170-E-3 has a net flywheel horsepower of 502 kW 672 HP @ 2000 rpm.



Komatsu integrated design means components are matched to provide most efficient use of power whether you're working the face of a material bank or traveling with a loaded bucket.

Four-Speed Transmission

Provides maximum forward speed in fourth gear of up to 30.0 km/h **18.6 mph** and in reverse of 32.3 km/h **20.1 mph**. The transmission is a full power shift, planetary transmission.

Other features include:

- Solid state electronic shifting control that reduces wear, increases reliability, and provides easy directional shifts.
- Four forward and four reverse gears to better match the cycle conditions. You get higher efficiency and better fuel economy.
- Fingertip-shifting from forward to reverse or from one gear to another.
- Standard automatic offers autoshift in ranges two through four to keep productivity high.

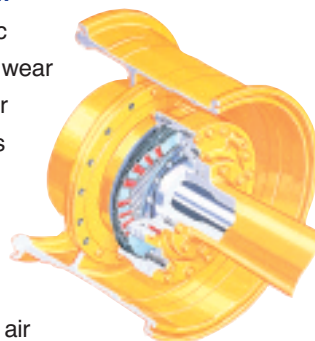
Consider this valuable feature for added productivity. Kick-down switch automatically downshifts with the touch of a finger from second to first when beginning the digging cycle. Automatically upshifts from first to second when reverse direction is selected. The result is increased rim pull for better bucket penetration and reduced cycle times for higher productivity.

Komatsu designed axles and final drives for rugged reliability and low maintenance. Axle shafts are full-floating, the front axle is fixed. The rear axle is a center-pin support design that provides a total oscillation of up to 22 degrees.

The differential reduction gear is a heavy-duty spiral bevel gear for strength and reliable performance. Rugged, outboard planetary final drives carry the total gear reduction of the drive train to the wheel which is mounted to the axle hub.

Wet, multi-disc brakes and fully hydraulic braking system

mean lower maintenance costs and higher reliability. Wet disc brakes are fully sealed. Contaminants are kept out, reducing wear and resulting maintenance. Brakes require no adjustments for wear, meaning even lower maintenance. The parking brake is also an adjustment-free, dry disc mounted to the front driveline for high reliability and long life. Added reliability is designed into the braking system by the use of two independent hydraulic circuits, providing hydraulic back-up should one of the circuits fail. Full hydraulic brakes mean no air system to bleed, or the condensation of water in the system that can lead to contamination and corrosion.



Advanced Joystick Steering System (AJSS)



Komatsu's exclusive AJSS


reduces operator fatigue and increases total productivity while achieving exceptional control in tight loading conditions. The seat-mounted controller allows a full range of adjustments for the most comfortable fit. The joystick provides a convenient, comfortable, efficient steering system for every operating condition. With AJSS the operator enjoys exceptional legroom and easy access in and out of the dual entry cab.

EASY MAINTENANCE

Servicing With a Smile

It would be better if most of us approached routine maintenance and service as something that made us smile. That's why Komatsu designed the WA700-3 Wheel Loader to make servicing as easy as possible. We know by doing this, routine maintenance and servicing are less likely to be skipped, which can mean a reduction in costly downtime later on. Here are some of the many service features found on the WA700-3.

- Large service doors provide easy access to the engine compartment.
- Ground Level Greasing—all grease points are easily reached from ground level, and grease banks are provided in strategic areas to reduce maintenance time.
- New radial seal dry-type air cleaner with safety element offers improved sealing and fast change-outs.
- Sight gauges allow for easy hydraulic level checks without risking system contamination.
- Full hydraulic brakes eliminate air system maintenance.
- Batteries are located in the counterweight for ground level access.
- Sealed Loader Linkage Pins—designed to keep grease contained longer, prevent the entrance of dust, thereby lengthening greasing intervals.
- Swing-out rear grill facilitates radiator cleaning.
- Repositioned hydraulic breather mounting allows easy access for quick service while protecting breathers from contamination.



The WA700-3 can be configured to load 35–65 ton haulers with room to spare.

SPECIFICATIONS



ENGINE

Model Komatsu SAA6D170E-3
 Type Water-cooled, 4-cycle
 Aspiration Turbocharged, air-to-air aftercooled
 Number of cylinders 6
 Bore x stroke 170 mm x 170 mm **6.7" X 6.7"**
 Piston displacement 23.15 ltr **1,412 in³**
 Governor Electrical, all-speed control
 Horsepower rating @ 2000 rpm
 Gross horsepower 510 kW **684 HP**
 Net flywheel horsepower 502 kW **672 HP**
 Fuel system High pressure direct injection
 Lubrication system:
 Method Gear pump, force lubrication
 Filter Full-flow
 Air cleaner Radial seal dry-type with safety element, automatic dust evacuator, and dust indicator on monitor



TRANSMISSION

Torque converter Three-element, single-stage, single-phase
 Transmission Full power shift, automatic planetary gear

Travel Speed*	Forward		Reverse	
1st	6.4 km/h	4.0 mph	7.1 km/h	4.4 mph
2nd	11.1 km/h	6.9 mph	12.2 km/h	7.6 mph
3rd	18.7 km/h	11.6 mph	20.5 km/h	12.7 mph
4th	30.0 km/h	18.6 mph	32.3 km/h	20.1 mph

*Measured with 40/65-39, 36PR (L5) tires



AXLES AND FINAL DRIVES

Drive system Four-wheel drive
 Front Fixed, full-floating
 Rear Center-pin support, full-floating 22° total oscillation
 Reduction gear Spiral bevel gear
 Differential gear Straight bevel gear
 Final reduction gear Planetary gear, single reduction, oil bath



BRAKES

Service Brakes Hydraulically articulated, wet-disc
 brakes actuate on four wheels
 Parking Brake Dry-disc, hydraulically-released, spring-applied
 on front axle input shelf



BUCKET CONTROLS

Control positions:

Boom Raise, hold, lower, and float
 Bucket Rollback, hold, and dump



HYDRAULIC SYSTEM

Capacity (discharge flow) @ engine rated rpm:

Loader pump 405 ltr/min **107 U.S. gal/min**
 Steering pump 203 ltr/min **53.6 U.S. gal/min**
 Switch pump 203 ltr/min **53.6 U.S. gal/min**

Relief valve setting:

Loader 320 kg/cm² **4,550 psi**
 Steering 320 kg/cm² **4,550 psi**

Control valve:

A two-spool open center

Hydraulic cylinders	Number of cylinders	Bore		Stroke	
Boom	2	225 mm	8.9"	1196 mm	47.1"
Bucket	1	280 mm	11.0"	729 mm	28.7"
Steering	2	130 mm	5.1"	532 mm	20.9"



SERVICE REFILL CAPACITIES

Cooling system 219 ltr **57.9 U.S. gal**
 Fuel tank 1100 ltr **290.6 U.S. gal**
 Engine 52 ltr **13.7 U.S. gal**
 Hydraulic system 470 ltr **124.2 U.S. gal**
 Axle (each front and rear) 245 ltr **64.7 U.S. gal**
 Torque converter and transmission 105 ltr **27.7 U.S. gal**



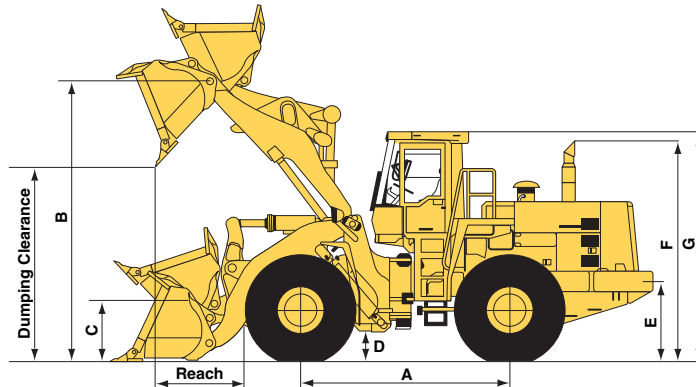
STEERING SYSTEM

Type Articulated, full-hydraulic power steering
 independent of engine rpm

Steering angle 40° each direction
 Turning radius outside corner of bucket
 with teeth or BOCE 8280 mm **31'7"**



DIMENSIONS



Tread	3030 mm	9'11"
Width over tires	4080 mm	13'5"
A Wheelbase	4800 mm	15'9"
B Hinge pin height at Max. height:	Standard Boom	6030 mm 19'9"
	High Lift Boom	6590 mm 21'7"
C Hinge pin height at carry position:	Standard Boom	760 mm 2'6"
	High Lift Boom	950 mm 3'1"
D Ground clearance	580 mm	1'11"
E Hitch height	1570 mm	5'2"
F Overall height, top of stack	4865 mm	16'0"
G Overall height ROPS cab	4830 mm	15'10"

All specs are with teeth and 41.25/75-39, 34PR (L5) tires, steel cab, ROPS canopy, lubricant, full fuel, optional counterweight, and operator.

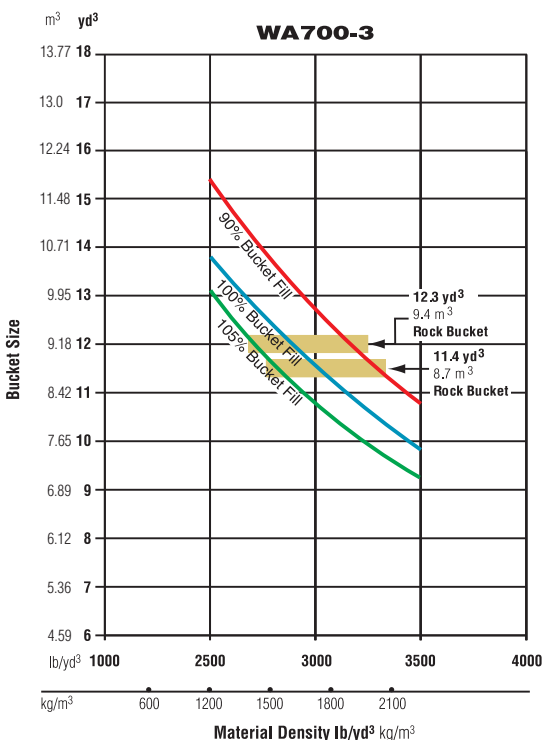
		Straight Edge Rock With Teeth		Spade Nose Rock With Teeth		Spade Nose Rock With Teeth (HL)	
Bucket capacity	SAE rated	8.7 m³	11.4 yd³	8.7 m³	11.4 yd³	8.0 m³	10.5 yd³
	Struck	7.6 m³	9.9 yd³	7.6 m³	9.9 yd³	7.0 m³	9.2 yd³
Bucket width		4570 mm	15'0"	4570 mm	15'0"	4570 mm	15'0"
Bucket weight		6770 kg	14,925 lb	7150 kg	15,760 lb	6830 kg	15,080 lb
Static tipping loads	Straight	46830 kg	103,240 lb	46480 kg	102,600 lb	42330 kg	93,440 lb
	Full turn (40°)	41100 kg	90,610 lb	40770 kg	90,000 lb	36770 kg	81,170 lb
Dump clearance, maximum height and 45° dump angle		4320 mm	14'2"	4080 mm	13'5"	4685 mm	15'4"
Reach at 7' 2130 mm and 45° dump angle		2995 mm	9'10"	3210 mm	10'7"	3530 mm	11'7"
Reach at maximum height and 45° dump angle		1890 mm	6'2"	2135 mm	7'0"	2120 mm	6'11"
Operating height	Fully raised	8210 mm	26'11"	8210 mm	26'11"	8665 mm	28'5"
Overall length	Bucket ground	12140 mm	39'10"	12480 mm	40'11"	13295 mm	43'7"
Turning radius*		9620 mm	31'7"	9615 mm	31'6"	9840 mm	32'3"
Digging depth	0°	130 mm	5"	130 mm	5"	145 mm	6'0"
	10°	470 mm	1'7"	520 mm	1'8"	530 mm	1'9"
Breakout force (bucket cylinder)		64700 kg	142,640 lb	52700 kg	116,180 lb	55800 kg	123,180 lb
Operating weight		71020 kg	156,570 lb	71400 kg	157,410 lb	73000 kg	161,150 lb

*Turning radius measured with bucket at carry position, outside corner of bucket with teeth.

- Specifications and ratings conform to all applicable standards recommended by the Society of Automotive Engineers. SAE standard J732 JUN 92 and J742 FEB 85.
- Static tipping load and operating weight shown include 41.25/75-39, 34PR (L5) tires, enclosed cab, ROPS canopy, lubricant, full fuel tank, optional counterweight, and operator.
- Machine's stability and operating weight are affected by counterweight, tire size, and other weight changes to operating weights and static tipping load.

Weight Changes

	Change in Operating Weight			Change in Static Tipping Load					
				Straight			Full Turn (40°)		
Tires/Bucket	S/E With Teeth	S/N With Teeth	S/N With Teeth (HL)	S/E With Teeth	S/N With Teeth	S/N With Teeth (HL)	S/E With Teeth	S/N With Teeth	S/N With Teeth (HL)
45/65 R39 (L5)	71500 kg 157,630 lb	71880 kg 158,470 lb	73480 kg 161,995 lb	47160 kg 103,970 lb	46810 kg 103,198 lb	42660 kg 94,049 lb	41400 kg 91,271 lb	41070 kg 90,543 lb	37070 kg 81,725 lb

**BUCKET SELECTION GUIDE**

This guide, representing bucket sizes not necessarily manufactured by Komatsu, will help you select the proper bucket size for material density, loader configuration, and operating conditions. Optimum bucket size is determined after adding or subtracting all tipping load changes due to optional equipment. Bucket fill factors represent the approximate amount of material as a percent of rated bucket capacity. Fill factors are primarily affected by material, ground conditions, breakout force, bucket profile, and the cutting edge of the bucket used.

Material (loose weight)	kg/m³	lb/yd³
Clay and gravel, dry	1420	2,400
Clay and gravel, wet	1540	2,600
Coal, anthracite, broken	1100	1,850
Coal, bituminous, broken*	830	1,400
Earth, dry, packed	1510	2,550
Earth, loam	1250	2,100
Earth, wet, excavated	1600	2,700
Granite, broken or large crushed	1660	2,800
Gravel, dry	1510	2,550
Gravel, dry 13 to 50 mm 1/2" to 2"	1690	2,850
Gravel, pit run (graveled sand)	1930	3,250
Gravel, wet 13 to 50 mm 1/2" to 2"	2020	3,400
Limestone, broken or crushed	1540	2,600
Phosphate rock	1280	2,160
Sand and gravel, dry	1720	2,900
Sand and gravel, wet	2020	3,400
Sand, dry	1420	2,400
Sand, wet	1840	3,100
Stone, crushed	1600	2,700
Topsoil	950	1,600

* Use 9.4 m³ 12.3 yd³ bucket furnished by outside vendor.
Contact Komatsu Sales Engineering.



STANDARD EQUIPMENT

ENGINE AND RELATED ITEMS:

- Air cleaner, 2-stage dry radial seal type with auto dust evacuator
- Air intake extension
- Electric cut-off
- Engine, KOMATSU SAA6D170-E-3 turbocharged and air-to-air aftercooled, direct injection, Tier 2 emission certified, diesel
Gross HP: 510 kW **684 HP** @ 2000 rpm
Net HP: 502 kW **672 HP** @ 2000 rpm
- Exhaust pipe with sound suppression, glasswool
- Fan, blower
- Radiator, staggered core type

ELECTRICAL SYSTEM:

- Alternator, 75 ampere, 24V
- Back-up alarm
- Back-up light
- Batteries, 200 Ah, 2 x 12V
- Battery auto-disconnect switch
- Horn, electric
- Instrument monitor panel with speedometer
- Starting motor, 2 x 7.5 kW, 24V direct electric
- Lights:
 - stop and tail
 - turn signal (2 front, 2 rear) with hazard switch
 - working (4 front fender mount, 2 front cab mount, 2 rear grill mount)

POWER TRAIN AND CONTROLS:

- Axles full floating with conventional differentials
- Brakes, parking, dry disc

- Brakes, service, wet, multiple-disc, axle by axle
- Transmission, planetary F4-R4
- Transmission control, electric with kick-down switch
- Automatic transmission shift control

OPERATOR ENVIRONMENT:

- ROPS/FOPS canopy Level 2
- Cab, steel (RH and LH entrance)
 - Air conditioner, heater, defroster, and pressurizer
 - Cigarette lighter/ashtray
 - Dome light
 - Floor mat
 - Wiper/washer front and rear, front intermittent
 - Lunch box holder
 - Power windows
 - Rearview mirrors, inside cab mount/outside mount (LH and RH)
 - Rear underview mirror
 - Seat, air suspension, reclining, with armrests (fabric)
 - Seat belt, 78 mm **3"** retractable
 - Steering, Advanced Joystick Steering System (AJSS) single lever controlled steering system
 - Sun visor

MAIN MONITOR—ELECTRONIC DISPLAY:

- Central warning lamp for check items
- Central warning lamp for caution items
- Head lamp high beam pilot
- Speedometer, MPH
- Service meter
- Transmission shift indicator
- Turn signal pilot

MAINTENANCE MONITOR—ELECTRONIC DISPLAY:

- Air cleaner check
- Battery charge
- Brake oil pressure
- Engine oil level
- Engine oil pressure
- Engine water level
- Engine water temperature
- Fuel gauge
- Parking brake warning light
- Torque converter temperature

HYDRAULICS AND CONTROLS:

- Active power-up dual hydraulic speed system
- 2-valves for boom and bucket controls with Pressure Proportional Control (PPC)
- Lift cylinders and bucket cylinder

VANDALISM PROTECTION:

- Battery box lock
- Caplock and cover for fuel tank
- Radiator, filler lock, and cover

OTHER STANDARD EQUIPMENT:

- Air horn
- Boom kick-out, automatic
- Bucket leveler, automatic
- Counterweight, standard and additional, 3365 kg **7,418 lb**
- Front fenders (LH and RH)
- Fuel filter arrangement for poor fuel
- PM service kit
- Rear steps (LH) with partial fenders
- Tow hitch

NOTE: Tires and rims are not included as standard equipment.
Rims must be ordered as a required attachment.



OPTIONAL EQUIPMENT

OPERATOR ENVIRONMENT:

- Auxiliary steering, ground driven with indicator
- AM/FM stereo radio cassette

TIRES ONLY (TUBELESS) SET OF FOUR:

- 41.25/70-39, 36PR (L5) Bias tires
- 45/65, R39, (L4) Radial tires
- 45/65, R39, (L5) Radial tires

RIMS ONLY, LESS TIRES:

- Rims only for 41.25/70-39 tires
- Rims only for 45/65-39 tires

BUCKETS:

- Straight edge rock, 8.7 m³, bare **11.4 yd³**
- Spade nose rock, 8.7 m³ **11.4 yd³** with Hensley 550 Bladesaver edge system™

AUXILIARY EQUIPMENT:

- Transmission guard
- Wiggins fast fuel system

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