

WA500-3 *avance*[®] *plus*

BUCKET CAPACITY

5.6 – 7.2 yd³

4.3 – 5.5 m³

KOMATSU[®]



WA500-3

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WA500-3 *avance plus* Wheel Loader Features:

WALK-AROUND

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

Easy access to engine for servicing. Large doors lock with cab key. Easy access to all engine service points and filters.

Rear-mounted fuel tank allows for ground level fueling and large capacity.

avance plus **New toolbox** for grease gun and tool storage.

avance plus **The new emissionized Tier II** Komatsu SA6D140E-3 diesel engine provides greater productivity, serviceability, and reliability. Engine oil and filter change intervals have been increased from 250 hours to 500 hours. See page 6.

avance plus **New operator's air ride seat** is standard with a document holder on seat back.

avance plus **New electric power windows.**

avance plus **New optional joystick steering system** for precise control in V-type loading applications.



Underhood mounted muffler provides operator with great rearward vision.

Low mount battery boxes for easy checking and servicing.

Ground level greasing in centralized service banks reduces and simplifies maintenance. See page 8.

It all adds up to more value and better return for your investment. It's what you should expect when you select Komatsu.

NET HORSEPOWER
315 HP 235 kW @ 2100 rpm

OPERATING WEIGHT
67,120 lb 30440 kg

BUCKET CAPACITY
5.6 – 7.2 yd³
4.3 – 5.5 m³

avance plus Quieter operator's environment.

avance plus 20% larger cab increases operator productivity. New operator's cab provides better visibility, increased comfort, see-at-a-glance console, two-door walk-through, and finger-touch shifting. See page 4.

avance plus Flat glass cab windows for improved visibility.

avance plus New retractable seat belt.

avance plus Special rubber-mounted cab improves operator's overall comfort and productivity. Special silicone-filled rubber cab mounts reduce vibration, noise, and operator fatigue. See page 4.

Cylinder buffer rings reduce shock loads to the cylinder packings and prolong cylinder life by 30%.

avance plus New external mounted halogen lights.

avance plus New Optional Electrically Controlled Suspension System. Takes the bounce out of travel on rough ground surfaces. Provides greater comfort and confidence for the operator as well as increased travel speed and steering stability, while improving the material retention in the bucket.

Low mounted bucket hinge pins are double sealed to provide better pile penetration and long life.

avance plus Higher dumping clearance with the optional highlift boom arrangement.

Automatic transmission with kick-down and transmission hold switch is standard. See page 7.

Optional bucket teeth meet the demands of the toughest applications.



OPERATOR'S COMPARTMENT

Comfortable high-back bucket seat features:

- Air suspension ride fabric seat
- Six-way adjustable seat with armrests, headrest, and lumbar support to fit any size operator
- Retractable seat belt
- Rear-mounted document holder



Ask the man who runs one—he 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 WA500-3 Avance Plus go beyond providing a 20% larger cab with a comfortable air ride seat. Improvements include these production-enhancing standard and optional features:

The WA500-3 Avance Plus has the largest cab ever offered on a Komatsu wheel loader.

A **large flat glass windshield** provides the operator an unobstructed view of the working area and attachment.

Electric power windows allow the operator to open windows without reaching or leaving the comfortable air ride seat.

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, reducing fatigue caused by noise. Helps keep the operator productive, all day.

Low-effort brake pedals actuate fully hydraulic brakes. Both the service and parking brakes are wet disc type.

Steer with ease. Komatsu's fully hydraulic steering provides fast response with low effort, even at low engine rpm.

Optional joystick/steering wheel control.

The optional joystick and steering wheel control system provides precise steering operation. The joystick steering is ideal in V-type cycle loading, and the steering wheel

is ideal in load and carry operations. The combination of these two systems provides a convenient, comfortable, and versatile option to fit all operators and operating conditions.

See the monitor through the steering wheel, not around it. A specially designed two-spoke steering wheel allows the operator to easily see the instrument panel.

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

Automatic transmission. Automatic shift control gives the operator maximum control with minimum effort. The transmission hold switch allows the operator to select either automatic or manual shifting. The unique combination of the transmission hold and kick-down switches, located on the hydraulic boom lever, offers the operator optimum control in all conditions.

At-a-glance instrument monitor. Monitor is mounted in front of the operator and is tilted for easy view, allowing the operator to easily check gauges and warning lights.

The **EDIMOS II instrument gauge cluster display** monitors all machine functions and systems, which are only a glance away on the side panel.

Optional ECSS ride control. This option is ideal in load and carry operations by providing a smooth ride in rough ground surfaces. Productivity is optimized by improving material retention in the bucket and increasing operator comfort and control.





Value Options

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, keeping him productive on the hottest days.

There's nothing more refreshing than a cold drink on a hot day. The large **lunch box holder** will help keep your lunch and beverage cool. 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



Lunch box holder



AM/FM cassette radio



KOMATSU DESIGNED POWER TRAIN

Engine

The Komatsu SA6D140E-3 delivers the power and efficiency to get the job done quickly and cost-effectively while meeting North America Tier II emission requirements.

Komatsu SA6D140E-3 is a water-cooled, four-stroke cycle, six-cylinder in-line, turbocharged, aftercooled, direct injection engine that produces high performance and excellent fuel economy.

The **gear pump-driven force lubrication** has full flow filtration while all fuel and oil filters are spin-on for easy maintenance.

Komatsu SA6D140E-3 features include:

- Environmentally friendly, meets EPA and EV emission standards for NOX, CO, and HC.
- Engine oil and filter change intervals have been increased from 250 hours to 500 hours.
- CRI (Common Rail Injection) fuel system provides excellent low-speed torque and optimum fuel efficiency.

- Large capacity muffler mounted under the hood reduces noise and increases operator visibility.
- Wet type cylinder liners dissipate heat better and are replaceable for easier engine rebuild.
- Dry, two-stage cyclonic air cleaner with a centrifugal type precleaner.

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

Spin-on filters and easily accessible lubrication points reduce maintenance time and the chance of missing maintenance items.

With a piston displacement of 930 in³ 15.2 ltr, the Komatsu SA6D140E-3 has a net flywheel horsepower of 315 HP 235 kW at 2100 rpm.

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

APS—Automatic Power Speed Hydraulic System

Four-Speed Automatic Transmission

Provides maximum speed of **21.6 mph** 34.8 km/h in forward and **23.7 mph** 38.1 km/h in reverse. The transmission is a full power shift, countershaft transmission.

Other features include:

- **Gear indicator** conveniently located on the monitor panel allows the operator to easily check gear-shifts during operations.
- **Solid state electronic, fingertip shifting** provides easy directional changes from forward to reverse or from one gear to another.
- **Automatic gear selection** with a hold switch on the boom control lever provides control with low effort.
- **Four forward and four reverse gears** help match cycle conditions, providing increased efficiency and fuel economy.

Consider this valuable feature for added productivity. With the touch of a finger, the kick-down switch automatically downshifts from second to first when beginning the digging cycle. It automatically upshifts from first to second when the direction control lever is placed in reverse. This results in increased rim pull for better bucket penetration and reduced cycle times for higher productivity.

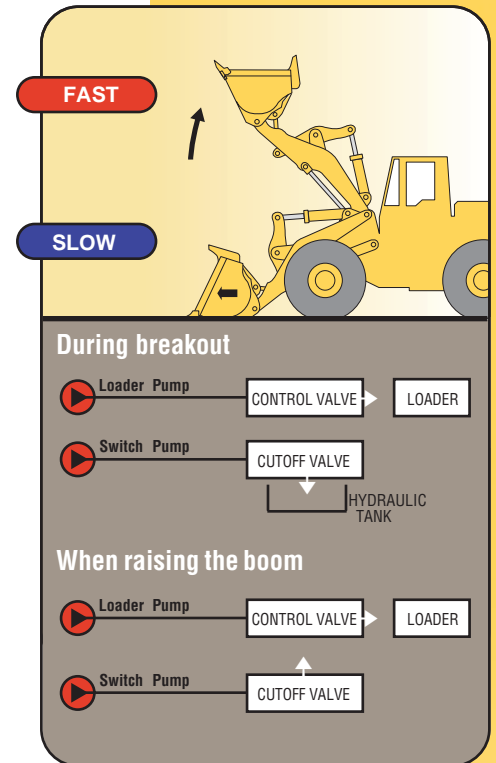
Komatsu designed axles and final drives provide rugged reliability with low maintenance. Axle shafts are full-floating. The front axle is fixed, while the rear axle is a center-pin support design that provides a total oscillation of up to 30 degrees.

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.

Optional front and rear limited slip differentials are also available to provide improved traction in adverse ground conditions.

Wet multi-disc brakes (front and rear) are fully sealed. Contaminants are kept out, reducing wear and maintenance. Brakes require no adjustments for wear, further reducing maintenance costs. There is no air system to bleed, which eliminates the condensation of water in the system that can lead to contamination and corrosion. Braking system reliability is increased with the use of two independent hydraulic circuits, providing hydraulic backup should one circuit fail.

The parking brake is also an adjustment-free, wet multi-disc with increased reliability and long life.



APS—Automatic Power Speed Hydraulic System is a dual-hydraulic speed system from Komatsu, which increases operational efficiency by matching the hydraulic demands to work conditions.

Oil from the switch pump is completely returned to the tank when digging and breaking out; therefore hydraulic flow to the loader is reduced and pressure is increased. This reduces horsepower demand from the engine and makes the operation more efficient. The result of this new Advance Dash-3 technology is greater productivity at the lowest operating cost.

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 WA500-3 Avance Plus 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 WA500-3 Avance Plus:

- Large service doors provide easy access to all engine service points and filters, and are lockable using the ignition key.
- Ground Level Greasing—all grease points are easily reached from ground level and grease banks are provided in strategic areas to reduce maintenance time.
- Large platforms provide easy access to cab windows.
- Full hydraulic service and parking brakes eliminate air system maintenance.
- Sealed Loader Linkage Pins—designed to keep grease contained longer and prevent the entrance of dust, thereby lengthening greasing intervals.
- Cylinder buffer rings reduce shock loads to the cylinder packings and prolong cylinder life by 30%.
- Batteries are located next to the counterweight for ground level access.
- Easy to reach toolbox for grease gun and tool storage.
- Optional automatic lubrication system and Wiggins fast fuel system are available to reduce maintenance time.



SPECIFICATIONS



ENGINE

Model Komatsu SA6D140E-3
 Type Water-cooled, 4-cycle, direct injection
 Aspiration Turbocharged and waterjacket aftercooled
 No. of cylinders 6
 Bore x stroke **5.5" x 6.5"** 140 mm x 165 mm
 Piston displacement **930 in³** 15.2 ltr
 Governor Electrical all speed
 Horsepower rating @ 2100 rpm (SAE J1349)
 Gross power **335 HP** 250 kW
 Flywheel/net power **315 HP** 235 kW
 Meets 2001 North American emissions regulations

Gear pump-driven force lubrication with full-flow filters. All filters are spin-on for easy maintenance. Exhaust aspirated 34 tubes strata precleaner, dry air cleaner with primary and secondary elements, and dust indicator. **24 V** electric starting motor; **24 V/50 A** alternator, **2 x 12 V/200 Ah** batteries.



TRANSMISSION

3-element, single-stage, single-phase torque converter. Full power shift, automatic planetary gear transmission. An electronically controlled transmission allows fingertip control with speed and directional change levers. A modulating function ensures shockless range and directional changes.

Travel Speed*	Forward		Reverse	
	1st	4.4 mph	7.1 km/h	4.9 mph
2nd	7.8 mph	12.6 km/h	8.6 mph	14.1 km/h
3rd	13.2 mph	21.2 km/h	14.6 mph	23.5 km/h
4th	21.6 mph	34.8 km/h	23.7 mph	38.1 km/h

*Measured with 29.5/25 tires



AXLES AND FINAL DRIVES

4-wheel drive system. Fixed, full-floating front axle. Center-pin supported, full-floating rear axle has 30° total oscillation. Spiral bevel gear for reduction and straight bevel gear for differential. Final reduction through a single reduction planetary gear set in an oil bath.



BRAKES

Service brakes: 4-wheel, separate front-rear wheel, hydraulically actuated, multiple wet disc.
 Parking brake: Wet disc brake.



STEERING

Articulated, fully hydraulic power steering. 40° steering angle each direction. Minimum turning radius of **20'2"** 6160 mm at the center of the outside tire. Stick-steer control system is optional.



ROPS AND CAB

Dimensions comply with ISO 3471 and SAE J1040c ROPS (Roll-Over Protective Structure) standards, as well as ISO 3449 FOPS (Falling Object Protective Structure) standards. The cab is mounted on viscous dampening mounts.



BUCKET CONTROLS

Control positions

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



HYDRAULIC SYSTEM

The dual hydraulic speed system makes it possible to reduce cycle times.

- Powerful rim pull is maintained when entering the pile, so the digging capacity is increased.
- Boom speed is increased while raising the boom to minimize cycle time.

Capacity (discharge flow) @ engine rated rpm

Loader pump **88.2 U.S. gal/min** 333.8 ltr/min
 Steering pump **43.5 U.S. gal/min** 164.6 ltr/min
 Switch pump **34.3 U.S. gal/min** 129.9 ltr/min
 Pilot pump **15.6 U.S. gal/min** 59.1 ltr/min
 (Gear Pumps)

Loader Total **122.5 U.S. gal/min** 463.7 ltr/min
 Steering Total **77.8 U.S. gal/min** 294.5 ltr/min

Relief valve setting

Loader **3,000 psi** 210 kg/cm²

Control valve

Spool

Hydraulic Cylinders	Number of Cylinders	Bore		Stroke	
		Boom	2	7.9"	200 mm
Bucket	1	8.9"	225 mm	24.13"	613 mm
Steering	2	4.3"	110 mm	19.1"	486 mm

Hydraulic cycle time = **11.6 sec**

Raise...**6.4 sec**/Dump...**1.7 sec**/Lower (empty)...**3.5 sec**



SERVICE REFILL CAPACITIES

Cooling system **28.4 U.S. gal** 106 ltr
 Fuel tank **118.4 U.S. gal** 448 ltr
 Engine **11.0 U.S. gal** 42 ltr
 Hydraulic system **46.2 U.S. gal** 175 ltr
 Differential, final drive (each axle)..... **20.6 U.S. gal** 78 ltr
 Torque converter and transmission **16.4 U.S. gal** 62 ltr

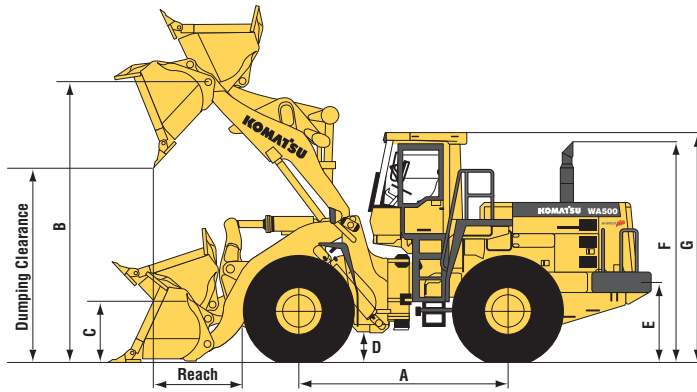


TIRES

Select ideal tires depending on job requirements. 29.5/25-22PR (L3) standard



DIMENSIONS



Tires	29.5/25-22PR (L3)
Tread	7'10" 2400 mm
Width over tires	10'6" 3190 mm
A Wheelbase	11'10" 3600 mm
B Bucket pin height, maximum height	14'9" 4500 mm
Bucket pin height, highlift boom	16'1" 4905 mm
C Bucket pin height, carry position	1'10" 565 mm
D Ground clearance	1'5" 450 mm
E Hitch height	4'1" 1240 mm
F Overall height, top of stack	12'2" 3705 mm
G Overall height, ROPS canopy	12'8" 3860 mm

Bucket		General Purpose Straight Edge with Bolt-on Cutting Edge		Loose Material Straight Edge with Bolt-on Cutting Edge		Highlift Boom General Purpose Straight Edge with BOCE	
Bucket Capacity	SAE rated	6.5 yd³	5.0 m ³	7.2 yd³	5.5 m ³	5.6 yd³	4.28 m ³
	Struck	6.0 yd³	4.6 m ³	6.6 yd³	5.1 m ³	4.7 yd³	3.6 m ³
Bucket Width		11'2"	3400 mm	11'2"	3400 mm	11'2"	3400 mm
Bucket Weight		6,072 lb	2760 kg	6,445 lb	2923 kg	4,828 lb	2190 kg
Static Tipping Load	Straight	52,920 lb	24000 kg	52,322 lb	23728 kg	47,984 lb	21765 kg
	40° full turn	45,427 lb	20602 kg	44,928 lb	20376 kg	41,447 lb	18800 kg
Dumping Clearance, maximum height and 45° dump angle		10'5"	3170 mm	10'2"	3095 mm	12'2"	3700 mm
Reach at 7' 2130 mm 45° dump angle		6'8"	2025 mm	6'11"	2108 mm	8'0"	2430 mm
Reach at maximum height and 45° dump angle		4'6"	1365 mm	4'9"	1448 mm	4'9"	1448 mm
Operating Height	Fully raised	20'3"	6175 mm	20'4"	6198 mm	21'5"	6520 mm
Overall Length	Bucket at carry	29'10"	9105 mm	30'2"	9195 mm	32'1"	9790 mm
Turning Radius*		24'0"	7315 mm	24'2"	7366 mm	24'3"	7390 mm
Digging Depth	0°	6"	150 mm	3.7"	94 mm	5.7"	145 mm
	10°	14.8"	375 mm	15.1"	384 mm	14.4"	365 mm
Breakout Force		52,259 lb	23700 kg	47,500 lb	21542 kg	62,721 lb	28450 kg
Operating Weight		67,120 lb	30440 kg	67,493 lb	30609 kg	67,605 lb	30665 kg

Static tipping load and operating weight shown include lubricants, coolant, full fuel tank, ROPS cab, front fenders, optional counterweight, 29.5/25-22PR (L3) tubeless tires, and operator. Machine stability and operating weight are affected by counterweight, tire size, and other attachments.

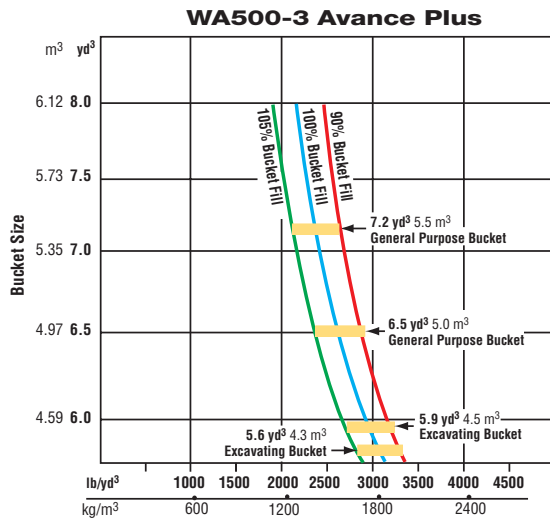
Do not use tire ballast with optional counterweight.

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

Weight Changes	Change in Operating Weight		Change in Tipping Load			
			Straight		Full Turn	
	Remove Steel Cab	-670 lb	-305 kg	-570 lb	-260 kg	-550 lb
Deduct Additional Counterweight	-2,200 lb	-1000 kg	-5,280 lb	-2400 kg	-4,400 lb	-2000 kg



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



STANDARD EQUIPMENT

- Air cleaner, 2-stage dry with auto dust evacuator
- Air conditioner, heater, defroster, pressurizer
- Alternator, **50 A**
- Axles, full floating with conventional differentials
- Back-up alarm
- Batteries, **2 x 12 V/200 Ah**
- Boom kickout, automatic
- Bucket positioner, automatic
- Cooling fan, blower
- Counterweight, standard **4,960 lb/2250 kg**
- Electrical manifold preheat
- Electronic display monitoring system
- Engine key stop
- Engine water conditioner
- Engine, Komatsu SA6D140E-3
- Exhaust pipe, curved
- Fan guard
- Fenders, full front and partial rear with steps
- Floormat
- Handrails, front, LH and RH
- Hitch, pin type, rear
- Horn, electric
- Hydraulic oil cooler
- Hydraulic system, two-stage, automatic power speed
- Ladders (right and left)
- Lifting eyes
- Lights
 - Back-up light (rear)
 - Stop and tail
 - Turn signal with hazard switch (2F, 2R)
 - Working lights, halogen, (2F) high/low beam with indicator, (2R, 2F) outside cab-mounted
- Parking brake, wet disc
- Power windows
- Rearview mirrors, inside/outside cab mount (LH, RH)
- ROPS/FOPS canopy
- Seat belt, **3"** width, retractable
- Seat, air suspension, reclining, with armrests (fabric)
- Service brakes, hydraulic, wet multi-disc, axle-by-axle (outboard)
- Speedometer (mph)
- Starting motor, direct electric **24 V** 11.1 kW
- Steel cab with front and rear intermittent washer/wiper, sun visor, dome light, cigarette lighter/ashtray, RH and LH entry
- Steering wheel, tiltable, full hydraulic power
- Tires, 29.5/25-22PR (L3), tubeless and rims (4 each)
- Transmission, full power shift automatic (4F, 4R), soft shift, planetary type
- Transmission control, electric with kickdown switch
- 2-spool valve for boom and bucket controls with PPC
- Vandalism protection kit



OPTIONAL EQUIPMENT

- Additional counterweight **2,200 lb/1000 kg**
- Auto-tuning AM/FM cassette stereo
- Auxiliary steering
- Bucket, teeth (with segmented cutting edges)
- Bucket, **5.6 yd³** 4.28 m³ straight (highlift)
- Bucket, **6.5 yd³** 4.96 m³ straight (general purpose)
- Bucket, **7.2 yd³** 5.50 m³ straight (light material)
- Cutting edge (bolt-on)
- **ECSS** (Electronically Controlled Suspension System)
- Fuel quick fill, Wiggins
- High pressure inline filter
- Highlift boom, bucket and CWT
- Hydraulic adapter kit
- **LSD** (Limited-Slip Differential), front and rear
- Logging arrangement, bucket cylinder, counterweight, 3 spool valve/lever/piping
- Lubrication system, automatic
- Stick-steer controls
- Tires (bias ply)
 - 29.5/25-22PR (L4)
 - 29.5/25-22PR (L5)
- Tires (radial ply)
 - 29.5/R25XHA 1-Star (L3)
 - 29.5/R25XLDD1A 1-Star (L4)
 - 29.5/R25XLDD2 1-Star (L5)
 - 29.5/R25XMINE D2 (L5)

SUPPORT

Count on Komatsu and your local distributor for the support you deserve. Our success depends on satisfying your need for productive equipment and supporting that equipment. That's why we have one of the largest and strongest heavy-equipment distributor organizations in North America. Their personnel are not only trained to help you select the equipment that is best-matched for your business but to support that equipment.



Finance Through its finance company, Komatsu can offer you a wide variety of financing alternatives designed to meet your needs. Programs include municipal leases for governmental agencies, conditional sales contracts, and leases with \$1 purchase options for customers interested in owning their equipment. Ask your distributor about Komatsu leasing. We offer finance and operating leases and the unique *Advantage Lease* which offers you predetermined purchase, return, and renewal options.



Parts Three computer-linked parts distribution centers provide fast access to anywhere in the U.S. and Canada. Most parts are available overnight. Plus, Komatsu distributors keep a large assortment of commonly used parts in stock for immediate access.



Remanufactured parts Save money and still have the same warranty as new parts at a fraction of the cost with like-new remanufactured parts.



Maintenance Take advantage of the experience we have gained and ask your distributor about our factory-supported programs including: regular scheduled maintenance, oil and wear analysis, diagnostic inspections, undercarriage inspections, training, special service tools, parts programs, and even a special software program to help your distributor keep track of and manage service-related data.

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