

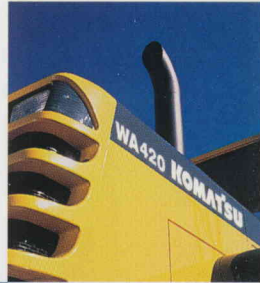
WA420-3

BUCKET CAPACITIES

4.1 - 4.8 yd³

3.1 - 3.7 m³

KOMATSU



WA420-3

WHEEL LOADER
WA420-3

H u m a n F i r s t



WA420-3 WHEEL LOADER

Flywheel Horsepower:
215 HP @ 2200 RPM

Bucket Capacities:
4.1 - 4.8 yd³
3.1 - 3.7 m³

Operating Weight:
42,065 lb
15080 kg

- **Operator Comfort**

All controls are ergonomically designed so that operator fatigue is minimized. The new *Avance Dash-3* technology has the comfort of a luxury car with the productivity of a state-of-the-art wheel loader.

- **Comfortable Operator's Seat**

The fabric covered operator's seat has a reclining suspension design with headrest for support and maximum comfort.



Engineering



- **Light-touch Operations**

The work equipment uses a hydraulic pilot *PPC* (Proportional Pressure Control) valve. When compared to the mechanical type, operating effort is lighter and lever travel is shorter. The boom lever is equipped with a quick kickdown switch allowing the operator to downshift from second to first gear. This provides loading operations with one-handed control for maximum productivity.



- **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 hold and kickdown switches, located on the hydraulic boom lever, offers the operator the optimum control in all conditions.



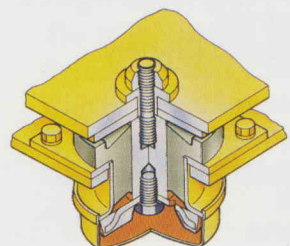
- **Unique Two-Lever Design**

Komatsu's two-lever design makes shifting gears effortless. The gear shift levers are designed to be adjustable in length and customized to the operator. Therefore, the operator can shift gears without removing a hand from the steering wheel; a feature unique to Komatsu.



- **Adjustable Steering Column**

The steering column angle can be easily changed to the most comfortable position with a lever. The two-spoke design ensures clear visibility of the monitors.



- **Low Vibration and Noise**

The floor is supported by viscous dampening hydro-mounts. Hydro-mounts feature a rubber housing filled with silicon oil to dampen vibration and noise. In addition, all hydraulic equipment is mounted on high-resistance rubber to further minimize vibration and noise.

- **Easy Maintenance**

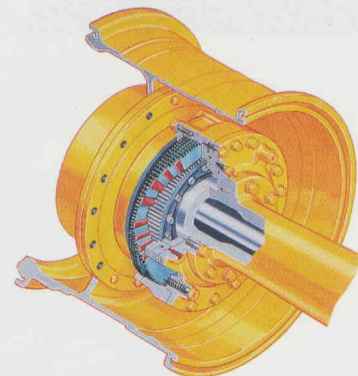
The *EDIMOS II* (Electronic Display Monitoring System) instrument gauge cluster has a well-equipped diagnostic display and a functional design. Main and maintenance monitors are conveniently located and highly visible on the instrument panels for a quick view of all critical machine functions.



- **Dependable Braking System**

The service brake system employs two independent hydraulic brakes circuits. In addition, the service brake system and parking brake are the wet disc type. Wet disc brakes are fully sealed, locking out contaminants and are adjustment-free.

Since the braking system does not use air, water corrosion is not a problem. There is a reduction in both charging time after engine start-up and pedal effort.



Features at a Glance



WA420-3 WHEEL LOADER

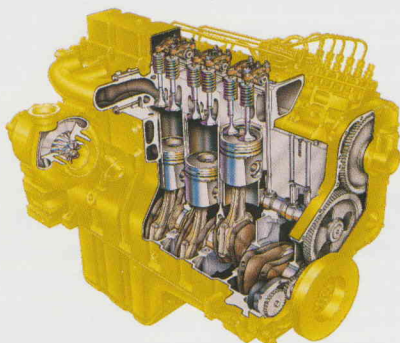
- APS - Automatic Power Speed Hydraulic System
- Low-Effort PPC Hydraulic Controls
- Cab - Full View with Integrated ROPS/FOPS
- Rear Opening Cab Door
- Halogen Lights
- Full Powershift, Countershaft Automatic Transmission
- Steering Wheel, Two Spoke, Tilttable
- Unique Transmission Controls - Two Lever Design
- New Digital Heater/Air Conditioner Controls
- Maintenance Monitor, Electronic Diagnostic Display - EDIMOS II
- Transmission Kick-Down Switch
- Cab Hydro-Mounts
- Komatsu SAA6D114E-1 8.3 Liter Direct-Injection Engine
 - Horsepower: 215 HP @ 2200 RPM
 - Meets 1996 EPA Emission Regulations
- Torque Proportioning Differentials (Standard)
- Limited-Slip Differentials (Optional)
- Z-Bar Loader Linkage

- **Komatsu Engine**

Komatsu's SAA6D114E-1 turbocharged engine has all the capabilities needed for today's tough operations, including meeting the 1996 EPA emission regulations in North America.

- **Engine Power**

The Komatsu SAA6D114E-1 is a 4-stroke, inline-6 cylinder, water cooled, overhead valve direct-injection, air-to-air after-cooled turbocharged diesel engine. The SAA6D114E-1 engine has been specifically designed with both performance and heavy-duty features to maximize power and reliability, and to minimize both operating cost and noise.



- **Reliable Power**

Engine and drivetrain components, such as torque converter, transmission, hydraulic equipment and electrical parts, undergo strict quality control checks to ensure reliability and durability. Komatsu-designed components are matched to ensure maximum performance.

Engine access and daily service checks are made simple by the gull-wing side covers which open and close in a one-touch operation. This allows the exposed engine and filters to be easily serviced from the ground.

- **High-Strength Frames**

The high-strength low-alloy, solid plate frames and loader linkages are designed with structural box sections to resist loading stress and shock, providing maximum rigidity and endurance in all operating conditions.

- **Z-Bar Loader Linkage**

Z-bar loader linkage is made of high-tensile strength steel to ensure maximum strength and life. Sealed loader linkage pins provide longer greasing intervals.

- **Torque Proportioning Differentials - Standard**

Torque proportioning axles are standard, front and rear, which provides better traction and reduced tire slippage.

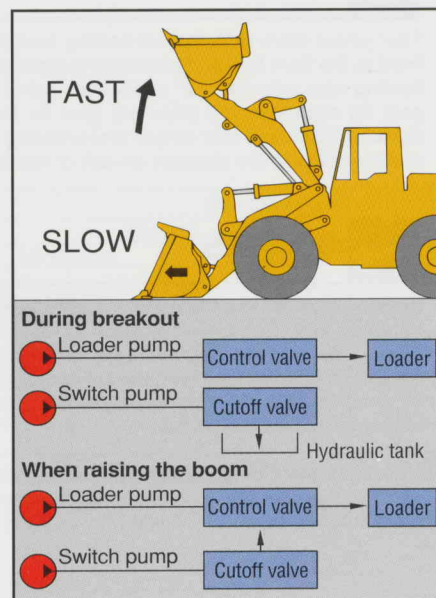
- **Limited Slip Differentials - Optional**

For the toughest operating conditions, there is an optional limited slip differential, which is capable of maintaining maximum control and productivity by supplying power to both wheels.

- **APS - Automatic Power Speed Hydraulic System**

APS, Automatic Power Speed Hydraulic System, is a dual-hydraulic speed system from Komatsu, which increases operational efficiency by matching the hydraulic demands to the actual 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 *Avance Dash-3* technology means greater productivity at the lowest operating cost.



Specifications



ENGINE

- Model Komatsu SAA6D114E-1
- Type Direct-Injection
- Aspiration Turbocharged & Air-to-Air Aftercooled
- No. of cylinders 6
- Bore x Stroke 4.5" 114 mm x 5.3" 135 mm
- Piston displacement 505 in³ 8.27 ltr.
- Governor All-speed mechanical

Horsepower Rating @ 2200 RPM

	HP	kW
Gross power	230	172
Net Power	215	160

SAE J1349

Meets 1996 EPA emission regulations.

Gear pump-driven force-lubrication with full-flow filters. All filters are spin-on type for easy maintenance. Dry, 2-stage Cyclopac[®] air cleaner for longer element service intervals. 24V/7.5 kW electric starting motor; 24 V/50 A alternator, 2 x 12 V/170 AH batteries.



TRANSMISSION

3-element, single-stage, single-phase torque converter. Full powershift, countershaft type transmission. An auto-shift transmission is standard. A modulating function assures shockless speed and directional changes without braking. An electrically-controlled transmission allows fingertip control with speed and directional change levers. A neutral safety circuit allows starting only when the directional control lever is in neutral. The transmission kickdown switch allows the operator to downshift from second to first gear without taking a hand off the work control levers. The combination of the kickdown switch and the auto-shift allows the best load and carry operation.

Travel

Speed*	Forward	Reverse
1st	4.2 MPH 0- 6.8 km/h	4.4 MPH 0- 7.1 km/h
2nd	7.9 MPH 0-12.7 km/h	8.2 MPH 0-13.2 km/h
3rd	13.7 MPH 0-22.1 km/h	14.2 MPH 0-22.9 km/h
4th	21.4 MPH 0-34.5 km/h	22.4 MPH 0-36 km/h

*with 26.5-25-20 PR (L3) tires



AXLES & FINAL DRIVES

Four-wheel drive system. Full-floating front axle is fixed to the front frame. Center-pin-supported, full-floating rear axle has 26° oscillation. Spiral bevel gear for reduction and planetary gear for final reduction. Front and rear torque proportioning differentials minimize tire slippage on soft or wet terrain.



BRAKES

Service brakes: Hydraulically actuated, outboard-mounted, wet disc brakes actuate all four wheels. Two brake pedals are provided. Either can be used for normal braking; however, the left pedal can also be used for braking and transmission neutralizing simply by actuating a switch.

Parking brake: Spring applied, hydraulically released, wet disc type, located inside the transmission case (adjustment-free).



STEERING SYSTEM

Center-pivot frame articulation. Full-hydraulic power steering independent of engine RPMs. A wide articulation angle of 40° on each side allows a minimum turning radius of 21'8" 6595 mm at the outside corner of the bucket with bolt-on cutting edge.



BOOM & BUCKET

Z-bar loader linkage is designed for maximum rigidity and offers powerful breakout. Rap-out loader linkage design enables shock dumping for removing sticky materials. Sealed loader linkage pins with dust seals extend greasing intervals. The bucket is made of high-tensile-strength steel.



BUCKET CONTROLS

The use of a PPC hydraulic control valve offers lighter operating effort for the work equipment control levers. The reduction in the lever force and travel makes it easy to operate the work equipment.

Control positions:

Boom	Raise, hold, lower and float
Bucket	Roll-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 2200 RPM

Loader Pump	57.3 gal/min	217 ltr./min
Steering Pump	36.2 gal/min	137 ltr./min
Switch Pump	29.3 gal/min	111 ltr./min
Pilot Pump	16.4 gal/min	62 ltr./min

(Gear Type Pumps)

Relief valve setting:

Loader	3000 PSI	210 kg/cm ²
--------	----------	------------------------

Control valves:

A 2-spool type control valve and a steering valve with a demand valve provides optimum flow.

Hydraulic cylinders	Number of cylinders	Bore	Stroke
Boom	2	6.3" 160 mm	33.3" 846 mm
Bucket	1	7.9" 200 mm	19.6" 498 mm
Steering	2	3.6" 90 mm	17.4" 442 mm

Hydraulic cycle time (rated load in bucket): Total 11.4 sec.
Raise ... 6.5 sec./Dump 1.4 sec./Lower (empty) 3.5 sec.

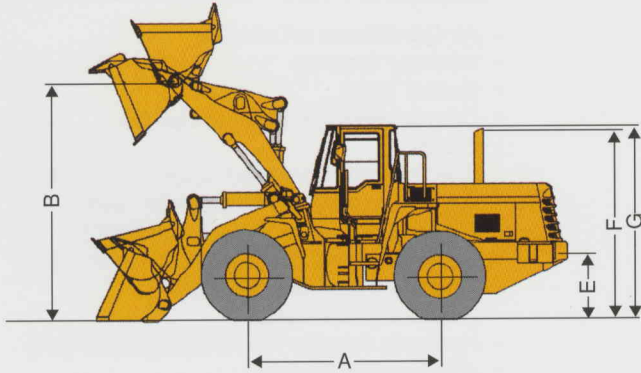


SERVICE REFILL CAPACITIES

Cooling system	13.2 gal	50 ltr
Fuel tank	89.8 gal	340 ltr
Engine	5.9 gal	22.4 ltr
Hydraulic system	36.4 gal	138 ltr
Axle (each front & rear)	15.8 gal	60 ltr
Torque converter and transmission	17.2 gal	65 ltr

WA420-3
WHEEL LOADER

Dimensions



Tires	26.5-25-20PR(L3)	
Tread	7'5"	2250 mm
Width over tires	9'8"	2950 mm
A Wheelbase	10'10"	3300 mm
B Hinge pin height, max. height	13'9"	4200mm
C Hinge pin height, carry position	1'6"	455 mm
D Ground Clearance	1'9"	525 mm
E Hitch Height	4'1"	1240 mm
F Overall Height, top of stack	11'2"	3405 mm
G Overall Height, ROPS Cab	11'4"	3525 mm

Bucket Type		General Purpose w/Bolt-on Cutting Edge		Excavating w/Bolt-on Cutting Edge		Excavating w/Teeth	
Bucket Capacity	SAE Rated	4.8 yd³	3.7 m ³	4.3 yd³	3.3 m ³	4.1 yd³	3.1 m ³
	Struck	4.2 yd³	3.2 m ³	3.7 yd³	2.8 m ³	3.4 yd³	2.6 m ³
Bucket Width		10'0"	3050 mm	10'0"	3050 mm	10'0"	3050 mm
Bucket Weight		3,680 lb	1670 kg	4,030 lb	1830 kg	3,910 lb	1775 kg
Static Tipping Loads	Straight	33,375 lb	15140 kg	32,650 lb	14841 kg	32,770 lb	14865 kg
	Full Turn (40°)	28,915 lb	13143 kg	28,330 lb	12877 kg	28,440 lb	12927 kg
Dump Clearance, max. height and 45° dump angle		10'1"	3075 mm	10'3"	3130 mm	9'10"	3005 mm
Reach at 7' 2130 mm and 45° dump angle		5'6"	1685 mm	5'5"	1650 mm	5'7"	1695 mm
Reach at max. height and 45° dump angle		3'5"	1050 mm	3'3"	995 mm	3'7"	1090 mm
Height to hinge pin		13'9"	4200 mm	13'9"	4200 mm	13'9"	4200 mm
Operating Height	Fully raised	18'11"	5410 mm	18'4"	5600 mm	18'4"	5600 mm
Overall Length	Bucket ground	26'6"	8070 mm	26'3"	7990 mm	26'9"	8145 mm
	Bucket at carry	26'5"	8045 mm	26'3"	7990 mm	26'7"	8115 mm
Turning Radius*		21'7"	6595 mm	21'6"	6560 mm	21'8"	6605 mm
Digging Depth	0°	2.4"	60 mm	2.4"	60 mm	3"	75 mm
	10°	11.2"	285 mm	10'6"	270 mm	1'0"	315 mm
Breakout Force		39,904 lb	18100 kg	42,970 lb	19490 kg	46,960 lb	21300 kg
Operating Weight		41,976 lb	19080 kg	42,415 lb	19240 kg	42,295 lb	19185 kg

- Static tipping load and operating weight shown include lubricants, coolant, full fuel tank, ROPS cab, front fenders, optional counterweight, 26.5-25-20PR (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.** Add the following weight changes to operating weight and static tipping load.

Weight Changes

Tire & Options	Change in Operating Weight				Change in Static Tipping Load							
	No Ballast		Ballast		Straight				Full Turn (40°)			
	lb	kg	lb	kg	No Ballast		Ballast		No Ballast		Ballast	
23.5-25-16PR(L2)	-1,655	-750	-55	-25	-1,320	-600	+310	+140	-1,170	-530	+350	+160
23.5-25-16PR(L3)	-840	-380	+760	+345	-670	-305	+960	+435	-595	-270	+925	+420
23.5-25-20PR(L2)	-1,520	-690	+75	+35	-1,225	-555	+405	+185	-1,080	-490	+440	+200
23.5-25-20PR(L3)	-980	-445	+615	+280	-660	-300	+970	+440	-585	-265	+935	+425
26.5-25-16PR(L3)	-155	-70	+2,170	+985	-120	-55	+2,645	+1200	-110	-50	+2,400	+1090
26.5-25-20PR(L3)	0	0	+2,325	+1055	0	0	+2,765	+1255	0	0	+2,515	+1140
Opt. Cwt. Removed	-715 lb		-325 kg		-1,975 lb		-895 kg		-1,655 lb		-750 kg	

- All dimensions, weights and performance values based on SAE J-732C and J-742B standards. *Turning radius measured at bucket at carry position, outside corner of bucket.

Standard Equipment

- Alternator, **50 amp**
- APS-Automatic Power Speed Hydraulic System
- Automatic Transmission, Full Powershift – 4F-4R, Soft-Shift, Countershaft
- Back-up Alarm and Light
- Batteries, **2 x 12V/170AH**
- Blower Fan
- Boom Kick-out, Automatic
- Bucket Positioner, Automatic
- Counterweight, Standard
- Dome Light
- Electric Horn
- Electrical Shut-Off (w/key)
- Engine, Komatsu **SAA6D114E-1**
215 HP @ 2200 RPM
Turbocharged and Air-to-Air After-Cooled Diesel
- Engine Shut-down System – (key-type)
- Engine Water Conditioner
- Ether Starting Aid
- Exhaust Pipe, Curved
- Floor Mat
- Front Fenders, Partial Rear w/Steps
- Hydraulic Oil Cooler
- Lifting Eyes
- Lighter and Ashtray
- Lights: Stop & Tail with Hazard Switch
 - Turn Signals (2 Front, 2 Rear)
 - Halogen Work Lights (2 Front, 2 Rear)
- Main Monitor Panel – Electronic Display
- Maintenance Monitor Panel – Electronic EDIMOS II Monitor
- Rearview Mirror (inside cab mount)
- ROPS/FOPS Cab w/Inside Halogen Work Lights
- Seat, Suspension, Reclining Type w/Armrests and Headrest, Seatbelt, Retractable
- Service Brakes, Wet Multiple-Disc Type, Outboard
- Starting Motor, **24V**
- Steering Wheel, Tilttable
- Storage Box
- Sun Visor
- Tires and Rims (**26.5-25-20PR, L3**)
- Torque Proportioning Differentials
- Transmission Control, Electric w/Kickdown Switch
- 2-Spool Valve, Standard w/**PPC** Controls
- Vandalism Protection Kit
- Window Washer/Wiper, front and rear
- Z-bar Loader Linkage

*ROPS Canopy or ROPS Cab must be ordered for all machines.

AESS402-01 C-2/96

KOMATSU

Komatsu America International Company

Optional Equipment

- Air Conditioner w/Cold Box
- Auxiliary Steering
- Bucket Teeth
- Counterweight, Additional Options
- **ECSS**
(Electronically Controlled Suspension System)
- **4.1 yd³** Excavating Bucket with Teeth
- **4.3 yd³** Excavating Bucket with BOCE
- **4.8 yd³** General Purpose Bucket with BOCE
- Fenders, Full Front and Rear
- Heater and Defroster
- Hydraulic Adapter Kit – 3-Spool with Piping
- JRB Coupler System
- Limited-Slip Differential, Front and Rear
- Lubrication System, Automatic
- Mirrors, Outside Cab
- Mono-Lever, Loader Control for 2-Spool Valve
- Mono-Lever, Loader Control
(plus one lever for 3-spool valve)
- Radio with Cassette Stereo, Auto Tuning
- Rearview Mirror (outside cab mount)
- ROPS/FOPS Canopy
- 3-Spool Valve (add-on type valve)
- Tool Kit

Optional Tires

Bias Ply

- 23.5-25-16PR (L2)
- 23.5-25-16PR (L3)
- 23.5-25-20PR (L3)
- 26.5-25-20PR (L2)
- 26.5-25-20PR (L3)

Radial Ply

- 23.5-R25 XHAT 1-Star (L3)
- 26.5-R25 XHAT 1-Star (L3)

BOCE – Bolt-On Cutting Edge.

Photos shown may include optional equipment.

Materials and specifications are subject to change without notice.

ÉQUIPEMENT FEDERAL QUÉBEC LTÉE
1590, BOUL. DU ROYAUME OUEST
CHICOUTIMI, QC
G7H 5B1
TÉL.: (418) 549-0022
TÉL.: 1-800-463-6550