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, **Cummins M11**
  264 HP @ 2140 RPM Turbocharged 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, Tiltable
- 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

Optional Equipment

- Air Conditioner w/Cold Box
- Auxiliary Steering
- Bucket Teeth
- Counterweight, Additional Options
- ***ECSS***
  (Electronically Controlled Suspension System)
- **4.7 yd³** Excavating Bucket with Teeth
- **5.0 yd³** Excavating Bucket with BOCE
- **5.5 yd³** General Purpose Bucket with BOCE
- **6.8 yd³** Light Material 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

- 23.5-25-20PR (L3)
- 26.5-25-20PR (L3)
- 26.5-25-20PR (L5)

Radial Ply

- 26.5-R25 XHAT 1-Star (L3)
- 26.5-R25 XLDDIAT 1-Star (L4)
- 26.5-R25 XLDD2A 1-Star (L5)
- 26.5-R25 XMINE D2T (L5)

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

BOCE – Bolt-On Cutting Edge.
Photos shown may include optional equipment.
Materials and specifications are subject to change without notice.

AESS403-02 C-10/96

KOMATSU
Komatsu America International Company

Printed in USA

WA450-3

KOMATSU

BUCKET CAPACITIES
4.7 - 5.5 yd³
3.6 - 4.2 m³

WA450-3

WHEEL LOADER

Human First

WA450-3
WHEEL LOADER

Flywheel Horsepower:
264 HP @ 2140 RPM

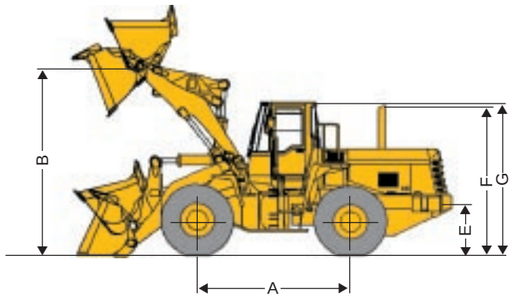
Bucket Capacities:
4.7 - 5.5 yd³
3.6 - 4.2 m³

Operating Weight:
49,350 lb
22385 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.

Dimensions



	Tires		26.5-25-20PR(L3)
	Tread	**7'7"**	2300 mm
	Width over tires	**9'10"**	3010 mm
A	Wheelbase	**11'2"**	3400 mm
B	Hinge pin height, max. height	**13'11"**	4235 mm
C	Hinge pin height, carry position	**2'0"**	610 mm
D	Ground Clearance	**1'8"**	525 mm
E	Hitch Height	**4'1"**	1240 mm
F	Overall Height, top of stack	**11'4"**	3450 mm
G	Overall Height, ROPS Cab	**11'8"**	3555 mm

Bucket Type		General Purpose w/Bolt-on Cutting Edge		Excavating w/Bolt-on Cutting Edge		Excavating w/Teeth	
Bucket Capacity	SAE Rated	**5.5 yd³**	4.2 m³	**5.0 yd³**	3.8 m³	**4.7 yd³**	3.6 m³
	Struck	**4.7 yd³**	3.6 m³	**4.3 yd³**	3.3 m³	**4.1 yd³**	3.1 m³
Bucket Width		**10'5"**	3170 mm	**10'5"**	3170 mm	**10'6"**	3190mm
Bucket Weight		**4,610 lb**	2035 kg	**4,850 lb**	2200 kg	**4,700 lb**	2130 kg
Static Tipping Loads	Straight	**39,303 lb**	17865 kg	**38,460 lb**	17445 kg	**38,615 lb**	17515 kg
	Full Turn (40°)	**34,115 lb**	15475 kg	**33,255 lb**	15085 kg	**33,410 lb**	15155 kg
Dump Clearance, max. height and 45° dump angle		**10'1"**	3065 mm	**10'3"**	3115 mm	**9'10"**	2990 mm
Reach at **7'** 2130 mm and 45° dump angle		**5'11"**	1795 mm	**5'9"**	1755 mm	**5'11"**	1805 mm
Reach at max. height and 45° dump angle		**3'10"**	1175 mm	**3'8"**	1125 mm	**4'**	1220 mm
Height to hinge pin		**13'11"**	4235 mm	**13'11"**	4235 mm	**13'11"**	4235 mm
Operating Height	Fully raised	**19'2"**	5835 mm	**19'0"**	5790 mm	**19'0"**	5790 mm
Overall Length	Bucket ground	**27'6"**	8390 mm	**27'4"**	8340 mm	**27'10"**	8480 mm
	Bucket at carry	**27'4"**	8340 mm	**27'2"**	8290 mm	**27'7"**	8410 mm
Turning Radius*		**22'6"**	6832 mm	**22'5"**	6830 mm	**22'7"**	6875 mm
Digging Depth	0°	**3.3"**	85 mm	**3.3"**	85 mm	**3.7"**	95 mm
	10°	**1'0"**	315 mm	**11.8"**	300 mm	**1'2"**	345 mm
Breakout Force		**42,730 lb**	19380 kg	**45,190 lb**	20500 kg	**49,190 lb**	22310 kg
Operating Weight		**49,350 lb**	22385 kg	**49,715 lb**	22527 kg	**49,560 lb**	22480 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							
					Straight				Full Turn			
	No Ballast		Ballast		No Ballast		Ballast		No Ballast		Ballast	
	lb	kg	**lb**	kg	**lb**	kg	**lb**	kg	**lb**	kg	**lb**	kg
23.5-25-20PR(L2)	**-1,720**	-780	**-285**	-130	**-1,345**	-610	**-65**	-30	**-1,190**	-540	**+35**	+15
23.5-25-20PR(L3)	**-1,035**	-470	**+395**	+180	**-805**	-365	**+475**	+215	**-715**	-325	**+505**	+231
26.5-25-20PR(L3)	**0**	0	**+2,160**	+980	**0**	0	**+2,380**	+1080	**0**	0	**+2,195**	+995
26.5-25-20PR(L4)	**+575**	+260	**+2,735**	+1240	**+460**	+210	**+2,845**	+1290	**+405**	+185	**+2,600**	+1180
26.5-25-20PR(L5)	**+1,675**	+760	**+3,835**	+1740	**+1,320**	+600	**+3,705**	+1680	**+1,155**	+525	**+3,350**	+1520
Opt. Cwt. Removed	**-880 lb**		-400 kg		**-2,225 lb**		-1010 kg		**-1,860 lb**		-845 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.

Specifications

WA450-3
WHEEL LOADER

ENGINE

- Model ..... Cummins M11
- Type ..... Direct-Injection
- Aspiration ..... Water-cooled
- No. of cylinders 6
- Bore x Stroke ..... **4.9"** 125 mm x **5.8"** 147 mm
- Piston displacement ..... **661 in³** 10.88 ltr.
- Governor ..... All-speed mechanical

Horsepower Rating @ 2140 RPM

	HP	kW
Gross power	**290**	216
Net Power	**264**	197

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 operations.

Travel Speed*	Forward		Reverse	
1st	**4.1 MPH**	0- 6.6 km/h	**4.2 MPH**	0- 6.8 km/h
2nd	**7.6 MPH**	0-12.3 km/h	**8.0 MPH**	0-12.8 km/h
3rd	**13.5 MPH**	0-21.8 km/h	**14.1 MPH**	0-22.7 km/h
4th	**21.1 MPH**	0-34.0 km/h	**22.4 MPH**	0-36.0 km/h

*with 26.5-25-20 PR (L3)

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 30° 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 assisted steering independent of engine RPMs. A wide articulation angle of 40° on each side allows a minimum turning radius of **22'5"** 6845 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 2140 RPM			
Loader Pump	**79.8 gal/min**	302 ltr./min
Steering Pump	**44.4 gal/min**	168 ltr./min
Switch Pump	**32.2 gal/min**	122 ltr./min
Pilot Pump (Gear Type Pumps)	**16.4 gal/min**	62 ltr./min

Relief valve setting:
Loader **3000 PSI** 210 kg/cm²

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

Hydraulic cylinders	Number of cylinders	Bore	Stroke
Boom	2	**7.1"** 180 mm	**30.0"** 764 mm
Bucket	1	**7.9"** 200 mm	**21.7"** 550 mm
Steering	2	**3.9"** 100 mm	**17.3"** 440 mm

Hydraulic cycle time (rated load in bucket): Total **11.3 sec.**
Raise ... **6.2 sec.**/Dump ... **1.4 sec.**/Lower (empty) **3.7 sec.**

SERVICE REFILL CAPACITIES

Cooling system	**14.5 gal**	55 ltr.
Fuel tank	**100.6 gal**	381 ltr.
Engine	**9.0 gal**	34 ltr.
Hydraulic system	**54.4 gal**	206 ltr.
Differential, final drive (each axle)	**17.2 gal**	65 ltr
Torque converter and transmission	**17.2 gal**	65 ltr.

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

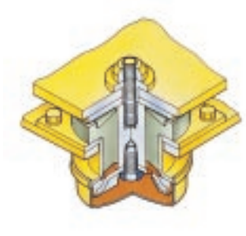
Automatic shift control gives the operator maximum control with minimum effort. The transmission hold switch allows the operator to select either automatic or manual shifting. The unique combination of the hold and kickdown switches, located on the hydraulic boom lever, offers the operator the optimum 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 brake 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 pedal effort and charging time after engine start-up.

Features at a Glance

WA450-3
WHEEL LOADER

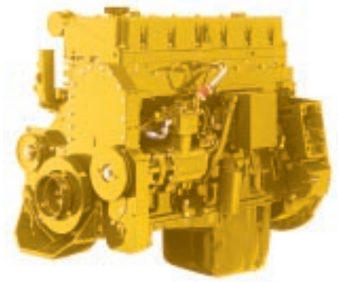
- *APS* - Automatic Power Speed Hydraulic System
- Low-Effort *PPC* Hydraulic Controls
- Cab - Full View with Integrated ROPS/FOPS
- Rear Opening Cab Door
- Halogen Lights
- Full Powershift, Countershaft Automatic Transmission
- Steering Wheel, Two Spoke, Tiltable
- Unique Transmission Controls - Two Lever Design
- New Digital Heater/Air Conditioner Controls
- Maintenance Monitor, Electronic Diagnostic Display – EDIMOS II
- Transmission Kick-Down Switch
- Cab Hydro-Mounts
- M11– 11 Liter Direct-Injection Engine
  - — Horsepower: 264 HP @ 2140 RPM
  - — Meets 1996 EPA Emission Regulations
- Torque Proportioning Differentials (Standard)
- Limited-Slip Differentials (Optional)
- Z-Bar Loader Linkage

• Engine

The Cummins M11 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 Cummins M11 is a 4-stroke, inline-6 cylinder, water cooled, overhead valve direct-injection, turbocharged diesel engine. The Cummins M11 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.