# KOMATSU® WA150-5

**FLYWHEEL HORSEPOWER** 

**Gross: 74 kW** 99 HP @ 2000 rpm **Net: 71 kW** 96 HP @ 2000 rpm

**OPERATING WEIGHT 7410 – 7495 kg** 16,336 – 16,524 lb

**BUCKET CAPACITY** 

**1.3 –1.7 m³** 1.7 –2.2 yd³

WA 150



Photo may include optional equipment.

## **WALK-AROUND**

Komatsu-integrated design offers the best value, reliability, and versatility. Hydraulics, powertrain, 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.

**Reduced operator noise** to 70 dB(A)

**Expanded main monitor** and troubleshooting display

**Larger cab** with new layout design

**New tilt** steering column



**Maintenance-free** fully hydraulic wet-disc service and parking brakes

**Electronically controlled Hydrostatic Transmission** (**HST**) with variable shift control system

Traction control system

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Powerful and low emission Komatsu SAA4D102E-2 *engine* 



**Staircase-type steps** with large rear-hinged doors

Sealed DT electrical connectors

Photos may include optional equipment.

# **PRODUCTIVITY FEATURES**

### High Productivity and Low Fuel Consumption

#### **Powerful and Low Emission Engine**

A powerful SAA4D102E-2 turbocharged air-to-air aftercooled diesel engine provides an output (net) of **71 kW** 96 HP for the WA150-5. This engine is EPA Tier 2 and EU Stage 2 emissions certified.

#### **Low Fuel Consumption**

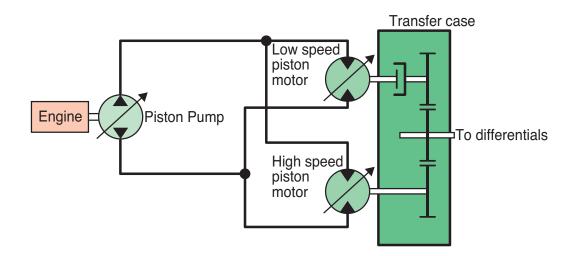
The fuel consumption is reduced up to 10%\* due to the hightorque engine and Hydrostatic Transmission (HST) with maximum efficiency in the low-speed range.

\*V-shape loading (25 sec. cycle time)

## **Electronically-Controlled HST Using a 1-Pump, 2-Motor System**

- The 1-pump, 2-motor system allows for high-efficiency and high tractive effort. Engine power is transmitted hydraulically to a transfer case, then manually out to the differentials and out to the four driving wheels.
- HST provides quick travel response and aggressive drive into the pile. The variable displacement system automatically adjusts to the tractive effort demand to provide maximum power and efficiency.
- Full auto-shifting eliminates any gear shifting and kickdown operation to allow the operator to concentrate on digging and loading.

- When high drive torque is needed for digging, climbing or initiating movement, the pump feeds both motors. This combination makes the loader very aggressive and quick.
- Under deceleration, the HST system acts as a dynamic brake on the mechanical drive system. The dynamic brake can hold the loader in position on most workable slopes. This can be an advantage in stockpiling and ramp loading.
- As the machine moves and gains ground speed, the torque demand decreases and the low speed motor is effectively removed from the drive system by a clutch. At this point, the flow is going to the high-speed motor and the low-speed motor is not causing a drag on the system.
- An inching pedal gives the operator excellent simultaneous control of his travel and equipment hydraulic speeds.
  By depressing the inching pedal, drive pump flow to the motors will decrease, reducing ground speed and allowing the operator to use his accelerator to increase flow to his equipment hydraulics. Depressing the inching pedal further will activate the service brakes.



## **Electronically-Controlled HST with Variable Shift Control System**

The operator can choose between first, second, third or fourth maximum speeds by dialing the speed range selector switch.

For v-cycles, the operator can set the speed control switch to

1 or 2, which will give him aggressive digging, quick response and fast hydraulics. For load and carry, he can select 3 or 4 which will still give aggressive digging but with much faster travel speed.



The variable shift switch allows the

operator to adjust his machine speed in confined v-loading applications. When in 1, the operator can adjust his travel speed using the variable shift switch to match his machine speed and hydraulics to the distance he must travel.

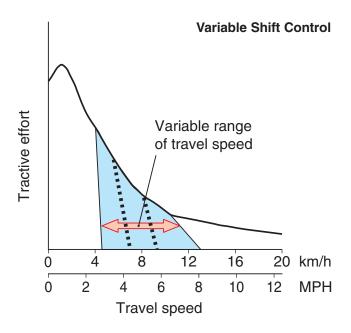
#### **Traction Control System**

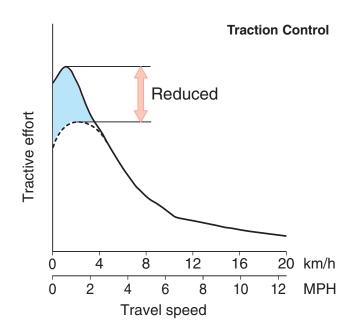
In limited traction situations where the operator would like to avoid tire slippage (such as sandy or wet surface operations), he can automatically reduce slippage by activating the traction control feature. Putting the traction control switch in the "ON" position limits the maximum amount of

tractive effort.

Traction control will be an advantage in certain appplications such as transfer stations where the loader may be working on slippery concrete.







# INCREASED RELIABILITY AND SERVICEABILITY

## Main Monitor - EMMS (Equipment Management Monitoring System)

Komatsu's new main monitor keeps the operator informed of all machine functions at a glance. The monitor is located behind the steering wheel and displays various different machine functions including fluid/filter change intervals and troubleshooting memory display functions. The main gauges are analog type for easy viewing and other functions utilize light symbols or LCD readouts.



#### **Swing-Out Radiator**

The new Komatsu cooling system is isolated from the engine to provide more efficient cooling and low noise. The swing-out hydraulic fan allows the operator to quickly clean out the cooling system.



The radiator, air-to-air cooler and oil cooler are mounted side-by-side for more efficient cooling and easy cleaning. A fully-opening, gas spring assisted rear grill gives the operator excellent access to the swing-out fan and coolers.

#### **Full Side-Opening Gull-Wing Engine Doors**

Ground level engine service and daily service checks are made easy with the gas spring assisted full side opening gull-wing doors.



#### **Extended Service Interval**

#### Extended engine oil change interval:

250 H → 500 H

Extended drive shaft greasing interval:

1,000 H → 4,000 H



#### **Overrun Prevention System**

When the machine descends a slope of six degrees or less, maximum travel speed is automatically restricted to approximately 43 km/h 27 MPH, for safety protection against damage of power train components and brakes by sensing the travel speed and controlling the discharge amount of the HST pump and motor. When the machine descends a steep slope and the travel speed reaches 40 km/h 25 MPH, the caution lamp lights up to inform the operator to reduce the travel speed.

Note: When the machine descends a steep slope, the use of the service brake is necessary to limit travel speed.

#### **Fully Hydraulic Wet Multi-disc Service Brakes**

The dual wet disc brakes at each wheel are fully sealed and adjustment free to reduce contamination, wear and maintenance. The result is lower maintenance costs and higher reliability.

Added dependability is designed into the braking system by the use of two independent hydraulic circuits, providing hydraulic backup should one of the circuits fail.

If the brake oil pressure drops, the warning lamp flashes and the warning buzzer sounds intermittently.

The parking brake is mechanically controlled by a lever in the cab.

#### **Parking Brake**



#### **Service Brakes**

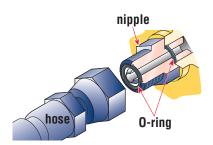


#### **High-rigidity Frames**

The front and rear frames along with the loader linkage have high rigidity to withstand repeated twisting and bending loads to the loader body and linkage. Both the upper and lower center pivot bearings use tapered roller bearings for increased durability. The structure is similar to those of large sized loaders and the reinforced loader linkage ensures high strength.

#### Flat Face-to-Face O-Ring Seals

Flat face-to-face O-ring seals are used to securely seal all hydraulic hose connections and to prevent oil leakage.



## Cathion Electrodeposition Primer Paint/Powder Coating Final Paint

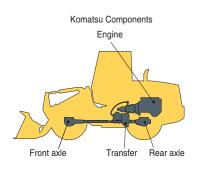
Cathion electrodeposition paint is applied as a primer paint and powder coating is applied as a topcoat to the exterior metal sheet parts. This process results in a durable rust-free machine, even in the most severe environments. Some external parts are made of plastic to provide long life and high impact resistance.

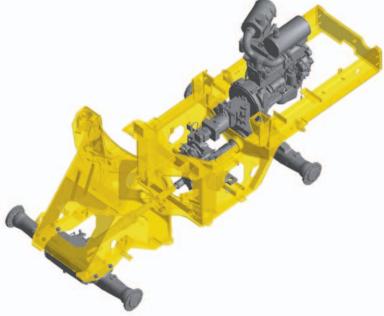
#### **Sealed DT Connectors**

Main harnesses and controller connectors are equipped with sealed DT connectors providing high reliability and dust and corrosion resistance.

#### **Komatsu Components**

Komatsu manufactures the engine, transfer case, differentials and electric parts on this wheel loader. Komatsu loaders are manufactured with an integrated production system under a strict quality control system.





# **OPERATOR COMFORT**

#### **New Cab Layout**

Komatsu's new cab layout provides the operator with a roomy, quiet and efficient work environment. The low noise level inside the cab leads the industry at 70 dB(A) and loader controls are ergonomically designed to reduce operator fatigue and increase productivity.

#### **Two Door Walk-Through Cab**

Entry and exit into the new Komatsu cab starts with sloped staircase type steps and large diameter handrails for added safety and comfort. The large cab doors are rear-hinged to open 130 degrees offering easy entry/exit and will not hamper visibility when operating the machine with the doors latched open. A

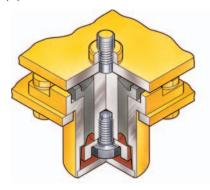


wide pillar-less flat glass provides for excellent visibility. The wiper arm covers a large area to provide great visibility even on rainy days.

#### **Low-noise Design**

Operator noise: 70 dB(A)

The large cab is mounted with Komatsu's unique ROPS/FOPS viscous mounts. The low-noise engine, hydraulically driven fan, and hydraulic pumps are mounted with rubber cush-



ions, and the cab sealing is improved to provide a quiet, low-vibration, and comfortable operating environment. Pressurization in the cab keeps dirt out further enhancing the operator's comfort.

#### **Easy-to-operate Loader Control Mono-lever**

A new mono-lever using PPC (Proportional Pressure Control) allows the operator to easily operate the work equipment, to reduce operator fatigue and to increase controllability. The adjustable wrist rest provides the operator with a variety of comfortable operating positions.



#### **Electrically Controlled Directional Lever**

The operator can change direction with a touch of his fingers without removing his hand from the steering wheel. Solid state electronics makes this possible.



#### **Tiltable Steering Column**

The operator can tilt the steering column to allow maximum comfort and control. The two-spoke steering wheel allows maximum visibility of the monitor panel and forward work environment.



#### **Comforts of Home**

The large cab allows room for a large lunch box holder and a variety of cup holders. Optional air conditioning and the optional AM/FM stereo cassette system create a comfortable and controlled work environment.





# **SPECIFICATIONS**



#### **ENGINE**

Type	
Governor	Mechanical, all-speed control
Flywheel horsepower ISO 9249 / SAE J1349	
Rated rpm	2000 rpm
Meets EPA emissions regulations	i
Fuel system	Direct injection
Filter	Gear pump, force-lubrication Full-flow type with double radial-sealed elements
· · · · · · · · · · · · · · · · · · ·	and dust evacuator, plus dust indicator

EPA Tier 2 and EU Stage 2 emissions certified.



#### **TRANSMISSION**

Travel speed (Both Forward and Reverse)

	16.9-2	24 tires	17.5-2	25 tires
1st*	<b>4.6 - 13.0 km/h</b> 2.9 - 8.1 mph		5.0 - 13.6 km/h	3.1 - 8.5 mph
2nd	<b>13.0 km/h</b> 8.1 mph		13.6 km/h	8.5 mph
3rd	20.0 km/h	12.4 mph	21.0 km/h	13.0 mph
4th	38.0 km/h	23.6 mph	39.0 km/h	24.2 mph

<sup>\*1</sup>st speed can be set variably



#### **AXLES AND FINAL DRIVES**

heel drive
ni-floating
ni-floating
oscillation
evel gear
portioning
reduction



#### **BRAKES**

**Service brakes:** Hydraulically-actuated, wet disc brakes actuate on four wheels.

Parking brake: Wet, multi-disc brake on transfer output shaft.

Emergency brake: Parking brake is commonly used.



#### STEERING SYSTEM

Type	Full-hydraulic power
	steering independent of engine rpm
Steering angle	40° each direction
Minimum turning radius at the	
center of outside tire	



#### **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 effort and travel makes it easy to operate in the work environment.

#### **Control positions**

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



#### **HYDRAULIC SYSTEM**

#### Capacity (discharge flow) @ engine-rated rpm

Relief valve setting

(Gear-type pumps)

#### **Control valve**

2-spool open center type

#### Hydraulic cylinders

Loader and steering . . . . . . . . . . . . . . . Double-acting, piston

Hydraulic Cylinders	Number of Cylinders	Во	re	Str	oke
Lift	2	110 mm	4.3"	628 mm	24.7"
Bucket	1	110 mm	4.3"	452 mm	17.8"
Steering	2	55 mm	2.2"	375 mm	14.8"

#### Hydraulic cycle time (rated load in bucket)

Raise5	.8 sec
Dump	.1 sec
Lower (empty)	.6 sec
Total cycle time	.5 sec

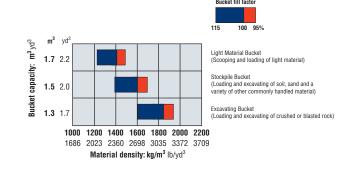


#### SERVICE REFILL CAPACITIES

Cooling system	4.5 U.S. gal
Fuel tank	35.1 U.S. gal
Engine	3.3 U.S. gal
Hydraulic system 47.0 ltr	12.4 U.S. gal
Front axle	3.7 U.S. gal
Rear axle	3.8 U.S. gal
Transmission	1.2 U.S. gal



#### **BUCKET SELECTION GUIDE**





B H 46

	mm ft.in									
		16.9-24-	10PR(L2)	14.00-24	-12PR(L2)	15.5-25-8PR(L2)	17.5-25-1	12PR(L2)		
	Tread	1780	5'10"	1780	5'10"	<b>1780</b> 5'10"	1780	5'10"		
	Width over tires	2250	7'5"	2185	7'2"	<b>2180</b> 7'2"	2220	7'3"		
Α	Wheelbase	2600	8'6"	2600	8'6"	<b>2600</b> 8'6"	2600	8'6"		
В	Hinge pin height at max. height	3485	11'5"	3510	11'6"	<b>3475</b> 11'5"	3510	11'6"		
С	Hinge pin height at carry position	360	1'2"	355	1'2"	<b>360</b> 1'2"	355	1'2"		
D	Ground clearance	400	1'4"	425	1'5"	<b>390</b> 1'3"	425	1'5"		
Ε	Hitch height	800	2'7"	825	2'8"	<b>790</b> 2'7"	825	2'8"		
F	Overall height, top of stack	2420	7'11"	2445	8'0"	<b>2410</b> 7'11"	2445	8'0"		
G	Overall height, ROPS cab	3035	9'11"	3060	10'0"	<b>3025</b> 9'11"	3060	10'0"		
Н	See Dumping Clearance Below									

#### Measured with 16.9-24-10PR (L2) tires

Bucket		e Bucket Cutting Edge		ng Bucket Cutting Edge	Light Material Bucket With Bolt-On Cutting Edge		
Bucket Capacity	Heaped	1.5 m³	2.0 yd <sup>3</sup>	1.3 m <sup>3</sup>	1.7 yd <sup>3</sup>	1.7 m³	2.2 yd <sup>3</sup>
bucket Gapacity	Struck	1.25 m³	1.6 yd <sup>3</sup>	1.1 m³	1.4 yd <sup>3</sup>	1.5 m³	2.0 yd <sup>3</sup>
Bucket Width		2390 mm	7'10"	2390 mm	7'10"	2390 mm	7'10"
Bucket Weight		595 kg	1,312 lb	580 kg	1,279 lb	665 kg	1,466 lb
Static Tipping Load	Straight	6370 kg	14,043 lb	6410 kg	14,132 lb	6280 kg	13,845 lb
Static Tipping Load	40° full turn	5540 kg	12,213 lb	5570 kg	12,280 lb	5460 kg	12,037 lb
Dumping Clearance, maximum height and 45° dump angle (H)**		2705 mm	8'10"	2745 mm	9'0"	2630 mm	8'8"
Reach at 2130 mm 7' 45° dump angle**		1385 mm	4'7"	1365 mm	4'6"	1420 mm	4'8"
Reach at maximum heig and 45° dump angle**	ht	970 mm	3'2"	930 mm	3'1"	1045 mm	3'5"
Reach with arm horizon and bucket level**	al	2055 mm	6'9"	1995 mm	6'6"	2160 mm	7'1"
Operating Height Fully raised		4630 mm	15'2"	4560 mm	15'0"	4710 mm	15'5"
Overall Length E	Bucket on Ground	6320 mm	20'9"	6260 mm	20'6"	6425 mm	21'1"
Turning Radius*		5185 mm	17'0"	5180 mm	17'0"	5225 mm	17'2"
Digging Depth	0°	90 mm	3.5"	90 mm	3.5"	90 mm	3.5"
ույցցույց ուշինո	10°	255 mm	10.0"	245 mm	9.6"	270 mm	10.6"
Breakout Force		7400 kg	16,314 lb	8010 kg	17,659 lb	6530 kg	14,396 lb
Operating Weight		7425 kg	16,369 lb	7410 kg	16,336 lb	7495 kg	16,524 lb

<sup>\*</sup>Bucket at carry, outside corner of bucket. \*\*At the end of B.O.C.

All dimensions, weights, and performance values based on SAE J732c and J742b standards. Static tipping load and operating weight shown include lubricant, coolant, full fuel tank, ROPS cab and operator. Machine stability and operating weight affected by counterweight, tire size, and other attachments.

#### **Weight Changes**

	Change in		Change in Operating Weight		•			Change in Tipping Load Straight Full Turn		Width Over Tire		Ground Clearance		Change in Vertical Dimensions		Change in Reach	
	Operating	weigni	Stra	ignt	Full Turn												
14.00-24-12PR (L2)	130 kg	287 lb	95 kg	209 lb	85 kg	187 lb	2185 mm	7'2"	425 mm	1'5"	25 mm	1.0"	–25 mm	-1.0"			
15.5-25-8PR (L2)	10 kg	22 lb	10 kg	22 lb	5 kg	11 lb	2180 mm	7'2"	390 mm	1'3"	-10 mm	-0.4"	10 mm	0.4"			
17.5-25-12PR (L2)	150 kg	331 lb	110 kg	243 lb	95 kg	209 lb	2220 mm	7'3"	425 mm	1'5"	25 mm	1.0"	−25 mm	-1.0"			
Install ROPS canopy (instead of cab)	-110 kg	-243 lb	-110 kg	-243 lb	-95 kg	-209 lb											
Additional counterweight	200 kg	441 lb	380 kg	838 lb	330 kg	728 lb											
Air conditioner	70 kg	154 lb	80 kg	176 lb	70 kg	154 lb											



- Alternator, 35A, 24 volt
- Axles, semi floating with torque proportioning
- Back-up alarm
- Back-up light, rear
- Batteries, 92 Ah/2 x 12 V,
- Bucket positioner, automatic
- Cab (ROPS/FOPS) with cigarette lighter/ash tray, dome light, floor mat, front (intermittent) and rear wiper/washer, rear view mirrors (2 outside, 1 inside), right hand and left hand door access with steps, sun visor
- Counterweight
- · Differentials, torque proportioning
- EMMS (Equipment Management Monitoring System)
  - —Gauges (Speedometer, engine water temperature, fuel level, HST oil temperature)
  - —LCD displays (filter/oil replacement time, HST selection, odometer, service meter, trouble shooting)

- —Lights (Axle oil temperature, battery charge, brake oil pressure, central warning, directional indicator, engine oil pressure, engine pre-heater, HST oil filter clogging, high beam, maintenance, parking brake reminder, parking brake warning, steering oil pressure, transmission speed range, turn signals)
- Engine, Komatsu SAA4D102E-2-B
- Engine shut-off system, electric
- Engine water separator
- Fan, hydraulic driven, swing out
- · Fenders, rear
- Hard water area arrangement (corrosion resister)
- Horn, electric
- Lift cylinders and bucket cylinder
- Lifting eyes
- Lights
  - -Stop and tail
  - —Turn signal (2 front, 2 rear)
  - -Working (2 front, 2 rear, 2 outside cab)
- Loader linkage with standard lift boom

- Mono-lever loader control
- Parking brake, wet disc
- Radiator mask, hinged
- Seat belt, 3" wide
- Seat, rigid type, reclining with a document holder
- Service brakes, hydraulic, wet multi-disc, inboard
- Speedometer (km/h)
- · Starting aid, intake manifold preheater
- Starting motor, 5.5 kW/24 V
- Steering wheel, tiltable
- Tires 16.9-24-10PR (L2), tubeless and rims
- Transmission (Hydrostatic with speed range select), automatic
- Transmission control, electric, steering column
- 2-spool valve for boom and bucket controls with PPC



- Air conditioner with heater/defroster/ pressurizer
- Alternator, 60A, 24V
- Auxiliary steering
- Boom kick-out
- Bucket, excavating, 1.3 m<sup>3</sup> 1.7 yd<sup>3</sup>
- Bucket, stockpile, 1.5 m<sup>3</sup> 2.0 yd<sup>3</sup>
- Bucket, light material, 1.7 m³ 2.2 yd³
- Bucket teeth, bolt-on
- Cold area arrangement
- Counterweight, additional
- Cutting edge, bolt-on, reversible
- ECSS (Electronically Controlled Suspension System)

- · Fenders, front
- Fenders, rear full
- Heater and defroster
- Hydraulic adapter kit (3rd spool), includes valve, lever, and piping
- Limited-slip differential, front and rear
- Radio, AM/FM
- Radio, AM/FM stereo with cassette
- Rims only, less tires
  —Fits 16.9 and 17.5-25 tire
- ROPS canopy
- Seat, cloth, suspension, reclining with armrests, headrest, and a document holder

- Seat, vinyl, suspension, reclining with armrests, headrest, and a document holder
- Seat belt, retractable, 3" wide
- Spare parts
- 3-spool valve, lever, piping
- Tires (bias ply)
  - —14.00-24-12PR (L2)
  - --15.5-25-8PR (L2)
- —17.5-25-12PR (L2)

   Tool kit
- Vandalism protection kit

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