HORSEPOWER
Gross: 266 kW 357 HP @ 1900 rpm
Net: 263 kW 353 HP @ 1900 rpm

BUCKET CAPACITY
4.3–5.6 m³ 5.6–7.3 yd³

Photo may include optional equipment.
High Productivity & Low Fuel Consumption

- High performance Komatsu SAA6D140E-5 engine
- Low fuel consumption
- Dual-mode engine power select system
- Automatic transmission with shift timing select system
- Lock-up Torque Converter (Optional)
- Variable displacement piston pump & CLSS
- Increased bucket capacity
- Long wheelbase

See pages 4 and 5.

Excellent Operator Environment

- Automatic transmission with ECMV
- Low-noise designed cab
- Electronic controlled transmission lever
- Variable transmission cut-off system
- Engine RPM set system with auto decel
- “EPC” (Electronic Pilot Control) levers
- Pillar-less large ROPS/FOPS integrated cab
- Easy entry/exit, rear-hinged door
- Telescopic / tilt steering column

See pages 8 and 9.

Harmony with Environment

- EPA Tier 2 and EU Stage 2 emissions equivalent
- Low exterior noise
- Low fuel consumption
Increased Reliability

- Reliable Komatsu designed and manufactured components
- Sturdy main frame
- Maintenance-free, fully hydraulic, wet multiple-disc service and parking brakes
- Hydraulic hoses use flat face O-ring seals

See page 6.

- Cation electrodeposition process is used to apply primer paint
- Powder coating process is used to apply main structure paint
- Sealed DT connectors for electrical connections

Easy Maintenance

- “EMMS” (Equipment Management Monitoring System)

See page 7.

- Ease of radiator cleaning
- Modular radiator core system

Photo may include optional equipment.
High Productivity and Low Fuel Consumption

High Performance Komatsu SAA6D140E-5 Engine

Electronic Heavy Duty Common Rail fuel injection system provides optimum combustion of fuel. This system also provides fast throttle response to match the machine’s powerful tractive effort and fast hydraulic response.

- **Net:** 263 kW 353 HP

This engine is EPA Tier 2 and EU Stage 2 emissions equivalent.

Low Fuel Consumption

The fuel consumption is reduced greatly because of the low-noise, high-torque engine and the large-capacity torque converter with maximum efficiency in the low-speed range.

Dual-mode Engine Power Select System

This wheel loader offers two selectable operating modes—E and P. The operator can adjust the machine’s performance with the selection switch.

- **E Mode:** This mode provides maximum fuel efficiency for general loading.
- **P Mode:** This mode provides maximum power output for hard digging operation or hill climb.

Automatic Transmission with Mode Select System

This operator controlled system allows the operator to select manual shifting or two levels of automatic shifting (low, and high).

Auto L mode is for fuel saving operation with the gear shift timing set at lower speeds than Auto H mode. Therefore Auto L mode keeps the engine in a relatively low rpm range for fuel conservation while yielding adequate tractive force by depressing the accelerator pedal.

Lock-up Torque Converter (Optional)

The Komatsu designed lock-up torque converter provides increased production efficiency, reduced cycle times and optimum fuel savings in load & carry or hill-climb operations. This optional feature allows the operator to activate the system on/off with a switch located on the right-side control panel.

Variable Displacement Piston Pump & CLSS

New design variable displacement piston pump combined with the Closed-center Load Sensing System delivers hydraulic flow just as the job requires preventing wasted hydraulic pressure. Minimized waste loss contributes to better fuel economy.

- **New Variable Displacement Piston Pump:** The pump delivers only necessary amounts minimizing waste loss.
- **Fixed Displacement Piston Pump:** The pump delivers the maximum amount at any time and the unused flow is disposed.

The eco indicator will help an operator to promote energy saving.
Increased Bucket Capacity Matches with One Class Higher Dump Truck

The WA500 enables loading onto 32t (40 Short ton) with the standard spec whereas WA500-6 necessitates the high lift boom with the 4.5m³ bucket for it. Operator can get good visibility because of high his eye point.

Dumping Clearance: 3295 mm 10’10"
Dumping Reach: 1500 mm 4’11"
(5.6 m³ 7.3 yd³ bucket with B.O.C.)

Long Wheelbase/Articulation Angle of 40°

The widest tread in class and the long wheelbase provide improved machine stability in both longitudinal and lateral directions. Since the articulation angle is 40°, the operator can work efficiently even in the tightest job sites.

<table>
<thead>
<tr>
<th>Tread</th>
<th>2400 mm 7’10”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheelbase</td>
<td>3780 mm 12’5”</td>
</tr>
<tr>
<td>Minimum turning radius (center of outside tire)</td>
<td>6430 mm 21’1”</td>
</tr>
</tbody>
</table>
Komatsu Components
Komatsu manufactures the engine, torque converter, transmission, hydraulic units, electric parts, on this wheel loader. Komatsu loaders are manufactured with an integrated production system under a strict quality control system.

Wet Multiple-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 maintenance. Brakes require no adjustments for wear, meaning even lower maintenance. The new parking brake is also an adjustment-free, wet multiple-disc for high reliability and long life.
Added reliability is designed into the braking system by the use of two independent hydraulic circuits. Provides hydraulic backup should one of the circuits fail.
Fully hydraulic brakes mean no air system to bleed, or the condensation of water in the system that can lead to contamination, corrosion, and freezing.

High-rigidity Frames and Loader Linkage
The front and rear frames and the loader linkage have more torsional rigidity to secure resistance against increased stress due to the use of a larger bucket.
Frame and loader linkage are designed to accommodate actual working loads, and simulated computer testing proves its strength.

Flat Face-to-face O-ring Seals
Flat face-to-face O-ring seals are used to securely seal hydraulic hose connections and to prevent oil leakage. In addition, buffer rings are installed to the head side of the all-hydraulic cylinders to lower the load on the rod seals and maximize the reliability.

Cation Electrodeposition Primer Paint/Powder Coating Final Paint
Cation electrodeposition paint is applied as a primer paint and powder coating is applied as topcoat to the exterior sheet metal parts. This process results in a beautiful rust-free machine, even in the most severe environments. Some external parts are made of plastic providing long life and high impact resistance.

Sealed DT Connectors
Main harnesses and controller connectors are equipped with sealed DT connectors providing high reliability, water resistance and dust resistance.
EASY MAINTENANCE

EMMS (Equipment Management Monitoring System)
Monitor is mounted in front of the operator for easy viewing, allowing the operator to easily check gauges and warning lights. A specially designed two-spoke steering wheel allows the operator to easily see the instrument panel.

Maintenance Control and Troubleshooting Functions
- **Action code display function**: If abnormality occurs, the monitor displays action details on the character display at the bottom center of the monitor.
- **Monitor function**: Controller monitors engine oil level, pressure, coolant temperature, air cleaner clogging, etc. If controller finds abnormalities, the error is displayed on LCD.
- **Replacement time notice function**: Monitor informs replacement time of oil and filters on LCD when replacement intervals are reached.
- **Trouble data memory function**: Monitor stores abnormalities for effective troubleshooting.

Gull-wing Type Engine Side Doors Open Wide
The operator can open and close each gull-wing type engine side door easily with the assistance of a gas spring to perform daily service checks from the ground.

Modular Radiator Core System
The modular radiator core is easy to replace without removing the entire radiator assembly.

Ease of Radiator Cleaning
If the machine is operating in adverse conditions, the operator can reverse the hydraulic cooling fan from inside the cab by turning a switch on the control panel.
Easy Operation

Automatic Transmission with ECMV

Automatic transmission with ECMV automatically selects the proper gear speed based on travel speed, engine speed, and other travel conditions. The ECMV (Electronically Controlled Modulation Valve) system engages the clutch smoothly to prevent lags and shocks when shifting. This system provides efficient machine operation and a comfortable ride.

- **Kick-down switch**: 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.

- **Hold switch**: Auto shift is selected and if the operator turns on this switch when the lever is at the 3rd or 4th gear speed position, the transmission is fixed to that gear speed.

Electronically Controlled Transmission Lever

Easy shifting and directional changes with Komatsu two-lever electronic shifting. Change direction or shift gears with a touch of the fingers without removing the shifting hand from the steering wheel. Solid state electronics and conveniently located direction and gear shift controls make this possible. Automatic shifts in ranges two through four keep production high and manual shifting at a minimum.

Variable Transmission Cut-off System

The operator can continuously adjust the transmission cut-off pressure desired for the left brake pedal using switch located on the right-side control panel. The operator can improve the working performance by setting the cut-off pressure properly depending on working condition.

- **High cut-off pressure** for digging operations.
- **Low cut-off pressure** for truck-loading operations.

Engine RPM Set System with Auto Decel

Engine Low idle RPM can be easily preset using a push button switch. The system provides auto decel for better fuel consumption.
Comfortable Operation

Low-noise Design
Noise at operator’s ear noise level: 76 dB(A)
Dynamic noise level (outside): 109 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 cushions, and the cab sealing is improved to provide a quiet, low-vibration, dustproof with pressurizing, and comfortable operating environment. Also, exterior noise is lowest in this class.

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

The cab area is the largest in its class providing maximum space for the operator. Increased seat slide adjustment to backward by introducing front mounted air conditioner unit.

Rear-hinged Full Open Cab Door
The cab door hinges are installed to the rear side of the cab providing a large opening angle for the operator to enter and exit. The steps are designed like a staircase, so that the operator can get on and off the cab easily.

EPC (Electronic Pilot Control) Levers
The EPC work equipment control lever is a finger controlled lever having light operating effort and short stroke. The operator can operate easy and comfortable with full adjustable large size arm rest. Combined with CLSS, this system allows following new functions for easy and efficient operation.

- Remote Boom Positioner with shockless stop function: The highest and lowest position of the bucket can be set from cab to match of any truck body. Once the positioner is set, the bucket is smoothly stopped at desired position with no shock.

- Remote bucket digging angle control: The digging bucket angle can be easily set from cab to match of ground condition.

- Semi-auto digging system (optional): Bucket tilt operation can be automatically done when digging.

Telescopic/Tilt Steering Column
The operator can tilt and telescope the steering column to provide a comfortable working position.
### ENGINE

- **Model**: Komatsu SAA6D140E-5
- **Type**: Water-cooled, 4-cycle
- **Aspiration**: Turbocharged, aftercooled
- **Number of cylinders**: 6
- **Bore x stroke**: 140 mm x 165 mm (5.51" x 6.50")
- **Piston displacement**: 15.24 ltr (930 in³)
- **Governor**: All-speed, electronic
- **Horsepower**:
  - *SAE J1995*: Gross 266 kW (357 HP)
  - *ISO 9249/SAE J1349*: Net 263 kW (353 HP)
- **Rated rpm**: 1900 rpm
- **Fan drive method for radiator cooling**: Direct injection
- **Rated rpm for radiator cooling fan**: 248 kW (332 HP)

### TRANSMISSION

- **Torque converter**:
  - Type: 3-element, single-stage, single-phase
- **Type**: Full-powershift, planetary type
- **Travel speed**:
  - **Forward**: 7.7, 4.8, 12.5, 7.8, 22.3, 13.9, 37.0, 23.0
  - **Reverse**: 8.6, 5.3, 13.0, 8.1, 24.8, 15.4, 39.0, 24.2

### AXLES AND FINAL DRIVES

- **Drive system**: Four-wheel drive
- **Front**: Fixed, full-floating
- **Rear**: Center-pin support, full-floating, 24° total oscillation

### BRAKES

- **Service brakes**: Hydraulically actuated, wet multiple-disc brakes actuate on four wheels
- **Parking brake**: Wet multiple-disc brake
- **Emergency brake**: Parking brake is commonly used

### STEERING SYSTEM

- **Type**: Articulated type, full-hydraulic power steering
- **Steering angle**: ±40° each direction
- **Minimum turning radius at the center of outside tire**: 6.430 mm (21")
- **Final reduction gear**: Planetary gear, single reduction
- **Reduction gear**: Spiral bevel gear
- **Governor**: All-speed, electronic
- **Relief valve setting**: 250 kgf/cm² (3,550 psi)
- **Bucket cylinder**:
  - **Capacity**: 100 mm x 486 mm (3.9" x 19.1")
- **Control positions**: Raise, hold, lower, and float
- **Control cycle time (rated load in bucket)**:
  - **Raise**: 7.2 sec
  - **Dump**: 1.7 sec
  - **Lower (Empty)**: 4.2 sec

### HYDRAULIC SYSTEM

- **Type**: Double-acting, piston type
- **Number of cylinders—bore x stroke**: 160 mm x 898 mm (6.3" x 35.4")
- **Bucket cylinder**: 185 mm x 675 mm (7.3" x 26.6")
- **Control valve**: 2-spool-type
- **Control positions**: Tilt-back, hold, and dump
- **Hydraulic cycle time (rated load in bucket)**:
  - **Raise**: 7.2 sec
  - **Dump**: 1.7 sec
  - **Lower (Empty)**: 4.2 sec

### SERVICE REFILL CAPACITIES

- **Engine oil**: 89.0 U.S. gal
- **Hydraulic oil**: 34.3 ltr (350 kgf/cm²)
- **Transmission oil**: 320 ltr/min (84.5 U.S. gal/min)
- **Final drive oil**: 124.9 U.S. gal
- **Cooling system**: 120 ltr (31.7 U.S. gal)

### BUCKET SELECTION GUIDE

- **Material density**:
  - **31.7 U.S. gal**: 2023 kg/m³ (115 lb/yd³)
  - **89.0 U.S. gal**: 2360 kg/m³ (200 lb/yd³)
  - **124.9 U.S. gal**: 2698 kg/m³ (250 lb/yd³)

### WA500-6R WHEEL LOADER SPECIFICATIONS

**General Purpose Bucket with BOC**

**Excavating Bucket with Teeth**

**Rock Bucket with Teeth (Spade Nose)**

**BRAKES**

- Service brakes: Hydraulically actuated, wet multiple-disc brakes actuate on four wheels
- Parking brake: Wet multiple-disc brake
- Emergency brake: Parking brake is commonly used
**WHEEL LOADER**

**WA500-6R**

**DIMENSIONS**

Measured with 29.5-25-22PR (L3) tires

<table>
<thead>
<tr>
<th>Bucket capacity: heaped</th>
<th>Standard boom</th>
<th>High lift boom</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Straight edge</strong></td>
<td><strong>Excavating Buckets</strong></td>
<td><strong>Rock Buckets</strong></td>
</tr>
<tr>
<td><strong>Bolt-on Cutting edges</strong></td>
<td><strong>Spade nose Teeth and Segments</strong></td>
<td><strong>Spade nose Teeth</strong></td>
</tr>
<tr>
<td><strong>Strait edge</strong></td>
<td><strong>Bolt-on Cutting edges</strong></td>
<td><strong>Straight edge Teeth</strong></td>
</tr>
<tr>
<td><strong>Bolt-on Teeth</strong></td>
<td><strong>Bolt-on Teeth</strong></td>
<td><strong>Straight edge Teeth</strong></td>
</tr>
<tr>
<td><strong>Bolt-on Teeth and Segments</strong></td>
<td><strong>Bolt-on Teeth and Segments</strong></td>
<td><strong>Bolt-on Teeth</strong></td>
</tr>
</tbody>
</table>

**Bucket width**

- Standard boom: 3400 mm (11'2'')
- High lift boom: 3265 mm (10'9'')

**Bucket weight**

- Standard boom: 3110 kg (6,855 lb)
- High lift boom: 3265 mm (7,130 lb)

**Dumping clearance, max. height and 45° dump angle**

- Standard boom: 3295 mm (10'10'')
- High lift boom: 3265 mm (10'9'')

**Reach at max. height**

- Standard boom: 1500 mm (4'11'')
- High lift boom: 1495 mm (4'11'')

**Reach with arm horizontal and bucket level**

- Standard boom: 2300 mm (7'8'')
- High lift boom: 2285 mm (7'6'')

**Operating height (fully raised)**

- Standard boom: 6430 mm (21'1'')
- High lift boom: 6360 mm (20'9'')

**Overall length**

- Standard boom: 9815 mm (32'2'')
- High lift boom: 9670 mm (31'9'')

**Loader clearance circle (bucket at carry, outside corner of bucket)**

- Standard boom: 15390 mm (50'6'')
- High lift boom: 15230 mm (50'1'')

**Digging depth: 0°**

- Standard boom: 135 mm (5'')
- High lift boom: 155 mm (6'')

**10°**

- Standard boom: 435 mm (1'5'')
- High lift boom: 485 mm (1'7'')

**Static tipping load: straight**

- Standard boom: 24300 kg (53,570 lb)
- High lift boom: 21000 kg (46,295 lb)

**40° full turn**

- Standard boom: 24450 kg (53,900 lb)
- High lift boom: 21130 kg (46,580 lb)

**Breakout force**

- Standard boom: 245 kN (56,530 kgf)
- High lift boom: 226 kN (50,270 kgf)

**Operating weight**

- Standard boom: 33360 kg (73,545 lb)
- High lift boom: 33360 kg (73,545 lb)

---

* 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.

Apply the following weight changes to operating weight and static tipping load.

<table>
<thead>
<tr>
<th>Weight Change</th>
<th>Standard boom</th>
<th>High lift boom</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Adding counterweight</strong></td>
<td><strong>Adding counterweight</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Increasing tire size</strong></td>
<td><strong>Increasing tire size</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Attaching other attachments</strong></td>
<td><strong>Attaching other attachments</strong></td>
<td></td>
</tr>
</tbody>
</table>
### WEIGHT CHANGES

<table>
<thead>
<tr>
<th>Tires or attachments</th>
<th>Operating weight</th>
<th>Tipping load straight</th>
<th>Tipping load full turn</th>
<th>Width over tires</th>
<th>Ground clearance</th>
<th>Change in vertical dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>kg</td>
<td>lb</td>
<td>kg</td>
<td>lb</td>
<td>mm</td>
<td>ft in</td>
</tr>
<tr>
<td>29.5-25-22PR(L-3)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3190</td>
<td>10’6&quot;</td>
</tr>
<tr>
<td>Install additional counterweight</td>
<td>+900</td>
<td>+2000</td>
<td>+1000</td>
<td>+2200</td>
<td>+1845</td>
<td>+60&quot;</td>
</tr>
<tr>
<td>Air conditioner</td>
<td>+65</td>
<td>+145</td>
<td>+33</td>
<td>+75</td>
<td>+30</td>
<td>+65</td>
</tr>
<tr>
<td>Emergency steering</td>
<td>+70</td>
<td>+155</td>
<td>+65</td>
<td>+145</td>
<td>+55</td>
<td>+120</td>
</tr>
<tr>
<td>Lock-up clutch</td>
<td>+70</td>
<td>+155</td>
<td>+65</td>
<td>+145</td>
<td>+55</td>
<td>+120</td>
</tr>
<tr>
<td>torque converter</td>
<td>+45</td>
<td>+100</td>
<td>+60</td>
<td>+130</td>
<td>+50</td>
<td>+110</td>
</tr>
<tr>
<td>ECSS (Electronically Controlled Suspension System)</td>
<td>+120</td>
<td>+265</td>
<td>+13</td>
<td>+30</td>
<td>+11</td>
<td>+24</td>
</tr>
</tbody>
</table>

### STANDARD EQUIPMENT

- 2-spool valve for boom and bucket controls
- Air conditioner
- Alternator, 75 A/24 V
- Auto shift transmission with mode select system
- Back-up alarm
- Back-up lamp
- Batteries, 170 Ah/12 V x 2
- Counterweight
- Directional signal
- Engine, Komatsu SAA6D140E-5 diesel
- Engine shut-off system, electric
- EPC fingertip control levers with automatic leveler and positioner
- Floormat
- Front fender
- Hard water area arrangement (corrosion resister)
- Hydraulic-driven fan with reverse rotation
- Lift cylinders and bucket cylinder
- Main monitor panel with EMMS (Equipment Management Monitoring System)
- Radiator mask, lattice type
- Rear under view mirror
- Rearview mirror for cab
- Rear window washer and wiper
- ROPS/FOPS cab
- Seat, air-suspension type with reclining seat belt
- Service brakes, wet disc type
- Starting motor, 11.0 kW/24 V
- Steering wheel, tiltable
- Sun visor
- Tires (29.5-25-22PR tubeless) and rims
- Transmission, 4 forward and 4 reverse
- Vandalism protection kit

### OPTIONAL EQUIPMENT

- 12V converter
- Additional counterweight
- Alternator, 90A/24V
- AM/FM radio
- AM/FM stereo radio cassette
- Batteries, 220 Ah/12V x 2
- Battery disconnect switch
- Brake cooling system
- Bucket teeth (bolt-on type)
- Bucket teeth (tip type)
- Cab heater and defroster
- Cutting edge (bolt-on type)
- ECSS (Electronically Controlled Suspension System)
- Emergency steering (SAE)
- Fire extinguisher
- FNR directional change switch
- Fuel quick coupler
- High lift boom
- In-line filter
- Joystick steering
- Load meter, new type
- Lock-up clutch torque converter
- Ordinary spare parts
- Power train guard
- Seat, air suspension with automatic weight adjustment
- Segment edges
- Tool kit
- Limited slip differential (F&R)