KOMATSU®

HD465-7

With Tier 3 Engine

GROSS HORSEPOWER
551 kW 739 HP

NET HORSEPOWER
533 kW 715 HP

MAXIMUM GVW
99680 kg 219,760 lb

Photo may include optional equipment.
**Productivity Features**
- High performance Komatsu SAA6D170E-5 engine
  - Net horsepower 533 kW **715 HP**
- Mode selection system
  - (Variable horsepower at Economy mode)
- Automatic Idling Setting System (AISS)
- Automatic Retard Speed Control (ARSC)
- 7-speed, fully automatic K-ATOMICS transmission
- Fully hydraulic controlled wet multiple-disc brakes and retarder; Retarder absorbing capacity (Continuous descent) 785 kW **1,052 HP**
- Long wheelbase and wide tread
- Large high strength body
  - Heaped capacity 34.2 m³ **44.7 yd³**
- Small turning radius 8.5 m **27'11”**

**Environment Friendly**
- Komatsu SAA6D170E-5 engine is North American EPA Tier 3 and EU Stage 3A emission certified
- Low operation noise
- Lead-free radiator
- Brake cooling oil recovery tank

**Reliability Features**
- Komatsu components
- Highly rigid frames
- Rigorous dump body design
- Reliable hydraulic system
- Flat face-to-face O-ring seals
- Sealed DT Connectors
- Antilock Brake System (ABS) (Option)
- Automatic Spin Regulator (ASR) (Option)
- Pedal-operated secondary brake
Operator Environment
- Wide, spacious cab with excellent visibility
- Ergonomically designed cab
- Easy-to-see instrument panel
- Ideal driving position settings
- K-ATOMiCS with “Skip-Shift” function
- Hydropneumatic suspension
- Built-in ROPS/FOPS Level 2
- Viscous cab mounts
- Electric body dump control lever
- Electric operated LH window
- Supplementary steering and secondary brakes
- Three-mode hydropneumatic suspension (Automatic suspension) (Option)

Easy Maintenance
- Advanced monitoring system - on board diagnostics
- Wet multiple-disk brakes and fully hydraulic braking system
- Extended oil change interval
- Centralized arrangement of filters
- Flange type rim
- Electric circuit breaker
- Centralized greasing points
- KOMTRAX Plus with Payload Meter and ORBCOMM (Option)

Photo may include optional equipment.
Komatsu Technology

**ecot3**

Komatsu's new "ecot3" engines are designed to deliver optimum performance under the toughest of conditions while meeting the latest environmental regulations. This engine is Tier 3 EPA, EU Stage 3A and Japan emissions certified. "ecot3" — ecology and economy combined with Komatsu technology to create a high performance engine without sacrificing power or productivity.

**High performance Komatsu SAA6D170E-5 engine**

This engine delivers faster acceleration and higher travel speeds with high horsepower per ton. Advanced technology, such as Common Rail Injection system (CRI), air-to-air aftercooler, efficient turbo-charger, and heavy-duty cooled EGR enables the engine to be North American EPA Tier 3 and EU stage 3A emission certified. High torque at low speed, impressive acceleration, and low fuel consumption ensure maximum productivity.

**Mode selection system**

The system allows selection of the appropriate mode between <Power mode> or <Economy mode> according to each working condition. The mode is easily selected with a switch in the operator's cab.

**Power mode**

Great productivity can be attained by taking full advantage of high output power. It is appropriate for job sites where larger production uphill-hauling is required.

**Economy mode (variable horsepower)**

The engine power automatically changes depending on loaded or unloaded conditions and always uses an optimum gear speed. It is appropriate for light work on flat ground.

**Automatic Idling Setting System (AISS)**

This system facilitates quick engine warm-up and cab cooling/warming. When setting the system ON, engine idle speed is kept at 945 rpm when coolant temperature is 50°C 122°F or lower. Speed automatically returns to 725 rpm when coolant temperature reaches 50°C 122°F.

**7-speed, fully automatic K-ATOMICS transmission**

The K-ATOMICS (Komatsu Advanced Transmission with Optimum Modulation Control System) automatically selects the optimum gear according to vehicle speed, engine speed and the shift position you've chosen. This results in the best gear for any driving situation.

**Automatic Retard Speed Control (ARSC)(Option)**

ARSC allows the operator to simply set the downhill travel speed and go down slopes at a constant speed. As a result, the operator can concentrate on steering. The speed can be set at increments of 1 km/h 0.6 MPH per click (±5 km/h 3.1 MPH of maximum speed adjustment) to match the optimum speed for the slope. Also, since the retarder cooling oil temperature is always monitored, the speed is automatically lowered.
**Fully hydraulic controlled wet multiple-disc brakes and retarder**

Wet multiple-disc brakes ensure highly reliable and stable brake performance. The large-capacity, continuously cooled, wet-multiple disc brakes also function as a highly responsive retarder which gives the operator greater confidence at higher speeds when travelling downhill.

- Retarder Absorbing Capacity (continuous descent): 785 kW
- Brake Surface Area (rear): 64230 cm² 9,956 in²

**Long wheelbase and wide tread**

With an extra-long wheelbase, a wide tread and an exceptionally low center of gravity, the HD465-7 hauls the load at higher speed for more production, and delivers superior driving comfort over rough terrain.

**Large high strength body**

A wide target area makes for easy loading with minimal soil spillage and more efficient hauling. The body is built of 130 kg/mm² 184,900 PSI wear-resistant high-tensile steel with a Brinell hardness of 400. The V-shape design also increases structural strength and provides excellent load stability.

**Small turning radius**

The MacPherson strut type front suspension has a special A-frame between each wheel and the main frame. The wider space created between the front wheels and the main frame increases the turning angle of the wheels. The larger this turning angle, the smaller the turning radius of the truck.
Wide, spacious cab with excellent visibility

Wide windows in the front, side and back, plus plenty of space in the richly upholstered interior, provide quiet, comfortable environment from which to see and control every aspect of operation. Front and side under view mirrors have also been added.

Ergonomically designed cab

The ergonomically designed operator's compartment makes it very easy and comfortable for the operator to use all the controls. The result is more confident operation and greater productivity.

Easy-to-see instrument panel

The instrument panel makes it easy to monitor critical machine functions. In addition, a caution light warns the operator of any problems that may occur. Problems are recorded in the monitor and indicated as service codes. This makes the machine user friendly and easy to service.

Ideal driving position settings

The 5-way adjustable operator seat and the tilt-telescopic steering column create an optimum driving posture for increased driving comfort and more control over the machine's operations. The suspension seat dampens vibrations transmitted from the machine, which reduces operator fatigue and holds the operator securely to assure confident operation. 78 mm 3” width seat belt is provided as standard equipment.

Hydropneumatic suspension for all terrains

The hydropneumatic suspension assures a comfortable ride even over rough terrain and ensures maximum productivity and operator confidence.
K-ATOMiCS with “Skip-shift” function

An electronically controlled valve is provided for each clutch pack in the transmission for independent clutch engagement/disengagement. It enables an ideal change in clutch modulation pressure and torque cut-off timing in response to travel conditions. This system and newly added “skip-shift” function ensure smooth shifting and responsive acceleration.

“Skip-shift” function

Optimum travel speed automatically selected in response to angle of ascent. This reduces the downshift frequency and provides smoother operation.

Built-in ROPS/FOPS Level 2

These structures conform to ISO3471 and SAE J1040 ROPS standards and ISO 3449 and SAE J231 FOPS Level 2 standards.

Viscous cab mounts

Viscous mounts reduce the noise transmitted to the cab and achieve a quiet 77 dB(A) noise level.

Electric body dump control lever

The low effort lever makes dumping easy. A positioning sensor is installed for dump body control which significantly reduces the shock made by the lowering of the dump body.

Supplementary steering and secondary brakes

Supplementary steering and secondary brakes are standard features.
Steering: ISO 5010, SAE J1511, SAE J53
Brakes: ISO 3450, SAE J1473
Komatsu components
Komatsu manufactures the engine, torque converter, transmission, hydraulic units, and electrical parts on this dump truck. Komatsu dump trucks are manufactured with an integrated production system under a strict quality control system.

High-rigidity frame
Cast-steel components are used in the main frame for high-stress areas where loads and shocks are most concentrated.

Rigorous dump body design
The standard dump body is made of 130 kg/mm² 184,900 PSI high-tensile-strength steel for excellent rigidity and reduced maintenance cost. The V-shape design also increases structural strength. The side and bottom plates of the dump section are reinforced with ribs for added strength.

Reliable hydraulic system
The oil cooler is installed in the radiator lower tank, improving the reliability of the hydraulic system during sudden temperature rises. In addition to the main filter, a 25-micron line filter is installed at the entrance to the transmission control valve. This system helps to prevent secondary faults.

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

Antilock braking system (ABS) (Option)
Using its outstanding electronics technology, Komatsu is the first in the industry to introduce ABS on construction machinery. This system prevents the tires from locking, thus minimizes skidding under slippery conditions while applying the service brake.

Automatic spin regulator (ASR) (Option)
ASR automatically prevents the rear tires, on either side, from slipping on soft ground for optimal traction.

Pedal-operated secondary brake
If there should be a failure in the foot brake, the parking brake and front disc brakes are activated as pedal operated secondary brake. In addition, when hydraulic pressure drops below the rated level, the parking brake is automatically actuated.

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.

Protection functions supported by electronic control

<table>
<thead>
<tr>
<th>Item</th>
<th>Function</th>
</tr>
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<tbody>
<tr>
<td>Downshift Inhibitor</td>
<td>Even if the driver downshifts accidentally, a speed appropriate to the current gear is automatically set, preventing over-runs.</td>
</tr>
<tr>
<td>Over-run inhibitor</td>
<td>When descending grades, if vehicle's speed surpasses maximum for current gear, rear brakes automatically operate, preventing over-runs.</td>
</tr>
<tr>
<td>Reverse inhibitor</td>
<td>The vehicle is prevented from moving backward when operating the body.</td>
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<tr>
<td>Forward/Reverse shift inhibitor</td>
<td>This device makes it impossible to shift from forward to reverse when the vehicle's speed surpasses 4 km/hr 2.5 mph.</td>
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<tr>
<td>Anti-hunting system</td>
<td>When running near a shift point, a smooth automatic shifting takes place.</td>
</tr>
<tr>
<td>Neutral engine start system</td>
<td>The engine is prevented from starting when the shift lever is not in neutral.</td>
</tr>
</tbody>
</table>
Advanced monitoring system
The Komatsu advanced monitoring system identifies maintenance items, reduces diagnostic times, indicates oil and filter replacement hours and displays abnormality codes. This monitor system helps to maximize machine production time.

Wet multi-disc brakes and fully hydraulic braking systems mean lower maintenance costs and higher reliability. Wet disc brakes are fully sealed to keep contaminants out, reducing wear and maintenance. Brakes require no adjustments for wear, leading to even lower maintenance. Added reliability is designed in the braking system with three independent hydraulic circuits providing hydraulic backup should one of the circuits fail. Fully hydraulic braking systems eliminate the air system so air bleeding is not required and water condensation, that can lead to contamination, corrosion and freezing, is eliminated.

Extended oil change intervals
In order to minimize operating costs, oil change intervals have been extended:
- Engine oil: 500 hours
- Hydraulic oil: 4,000 hours

Centralized arrangement of filters
The filters are centralized so that they can be serviced easily.

Flange type rim
Flange type rims provide easy removal/installation of tires.

Centralized greasing points
Greasing points are centralized at three locations.

KOMTRAX Plus
As part of a complete service and support program, Komatsu equips every mining and quarry sized machine with KOMTRAX Plus. By using a satellite-based communication system, KOMTRAX Plus offers a new vision of monitoring your valuable assets by providing insight to critical operating metrics and information that can be used to increase availability, lower owning and operating costs and maximize fuel efficiency.

Payload Meter (PLM)
PLM allows the production volume and working conditions on the dump truck to be analyzed and controlled directly via a personal computer. The payload is indicated both in the operator’s cab and with a lamp on the outside of the truck. The system can store up to 2900 working cycles.
HD465-7  Off-Highway Truck

SPECIFICATIONS

**ENGINE**

Model: Komatsu SAA6D170E-5  Type: Water-cooled, 4-cycle
Aspiration: Turbo-charged, air-to-air after-cooled, cooled EGR
Number of cylinders: 6
Bore x stroke: 170 mm x 170 mm 6.69" x 6.69"
Piston displacement: 23.15 ltr 1,413 in³
Horsepower: SAE J1995  Gross 551 kW 739 HP
ISO9249/SAE J1349  Net 533 kW 715 HP
Rated rpm: 2,000 rpm
Fan drive type: Mechanical
Maximum torque: 339 kg•m 2,452 lb•ft
Fuel system: Direct injection
Governor: Electronically controlled
Lubrication system: Method: Gear pump, force-lubrication
Filter: Full-flow type
Air cleaner: Dry type with double elements and precleaner (cyclonpack type), plus dust indicator

EPA Tier 3 and EU Stage 3A emission certified.

**TRANSMISSION**

Torque converter: 3-elements, 1-stage, 2-phase
Transmission: Full-automatic, planetary type
Lockup clutch: Wet, multiple-disc clutch
Forward: Torque converter drive in 1st gear, direct drive in 1st lockup and all higher gears
Reverse: Torque converter drive
Shift control: Electronic shift control with automatic clutch modulation in all gears
Maximum travel speed: 70.0 km/h 43.5 mph

**AXLES**

Rear Axle: Full-floating
Final drive type: Planetary gear
Ratios:
  - Differential: 3.538
  - Planetary: 4.737

**SUSPENSION SYSTEM**

Independent, hydropneumatic suspension cylinder with fixed throttle to dampen vibration
Effective cylinder stroke (front suspension): 303 mm 11.9"
Rear axle oscillation:
  - Oil stopper: 6.8"
  - Mechanical stopper: 7.7"

**STEERING SYSTEM**

Type: Fully hydraulic power steering with two double-acting cylinders
Supplementary steering: Manually controlled (meets ISO 5010, SAE J1511 and SAE J63)
Minimum turning radius: 8.5 m 27'11"
Maximum steering angle: 39°

**CAB**


**MAIN FRAME**

Type: Box-sectioned structure

**BRAKES**

Brakes meet ISO 3450 and SAE 1473 standards.
Service brakes:
  - Front: Full-hydraulic control, caliper disc type
  - Rear: Full-hydraulic control, oil-cooled multiple-disc type
Parking brake:
  - Spring applied, multiple-disc type
Retarder:
  - Oil-cooled, multiple-disc rear brakes act as retarder
Secondary brake:
  - Manual pedal operation
  - When hydraulic pressure drops below the rated level, parking brake is automatically actuated
Brake surface:
  - Front: 1,936 cm² 300 in²
  - Rear: 64230 cm² 9,956 in²

**BODY**

Capacity:
  - Struck: 25.0 m³ 32.7 yd³
  - Heaped (2:1, SAE): 34.2 m³ 44.7 yd³
Payload: 61 U.S. tons 55 metric tons
Material:
  - 130 kg/mm² 184,900 psi high tensile strength steel
Structure:
  - V-shape body with V-bottom
Material thickness:
  - Bottom: 19 mm 0.75"
  - Front: 12 mm 0.47"
  - Sides: 9 mm 0.35"
Target area:
  - (inside length x width): 6450 mm x 3870 mm 21'2" x 12'8"
Dumping angle:
  - 48°
Height at full dump:
  - 8800 mm 28'10"
Heating:
  - Exhaust heating

**HYDRAULIC SYSTEM**

Hoist cylinder:
  - Twin, 2-stage telescopic type
Relief pressure:
  - 20.6 MPa 210 kg/cm² 2,990 psi
Hoist time:
  - 11.5 sec

**WEIGHT (APPROXIMATE)**

Empty weight:
  - 43100 kg 95,020 lb
Max. gross vehicle weight:
  - 99680 kg 219,760 lb
Not to exceed max. gross vehicle weight, including options, fuel and payload
Weight distribution:
  - Empty: Front axle 47%
  - Rear axle 53%
  - Loaded: Front axle 32%
  - Rear axle 68%

**TIRES**

Standard tire
  - 219,760 lb 300 in²

**SERVICE REFILL CAPACITIES**

Fuel tank: 780 ltr 206.1 U.S. Gal
Engine oil: 80 ltr 21.1 U.S. Gal
Torque converter, transmission and retarder cooling: 215 ltr 56.8 U.S. Gal
Differential: 95 ltr 25.1 U.S. Gal
Final drives (total): 42 ltr 11.1 U.S. Gal
Hydraulic system: 122 ltr 32.2 U.S. Gal
Suspension (total): 55.6 ltr 14.7 U.S. Gal
To determine brake performance:
These curves are provided to establish the maximum speed and gearshift position for descents on roads with a given distance. Read from gross weight down to the percent of total resistance. From this weight-resistance point, read horizontally to the curve with the highest obtainable speed range, then down to maximum speed. Usable rimpull depends upon traction available and weight on drive wheels.

To determine travel performance:
Read from gross weight down to the percent of total resistance. From this weight-resistance point, read horizontally to the curve with the highest obtainable speed range, then down to maximum speed. Usable rimpull depends upon traction available and weight on drive wheels.
### STANDARD EQUIPMENT

**ENGINE:**
- AISS (Automatic Idling Setting System)
- Alternator, 75A/24V
- Batteries, 2 x 12V/240Ah
- Engine, Komatsu SAA6D170E-5
- Starting motor, 2 x 7.5 kW
- Variable horsepower system
- ROPS cab with FOPS Level 2, sound suppression type
- Radio, AM/FM with cassette
- Seat, air suspension
- Space for lunch box
- Steering wheel, tilt and telescopic
- Sun visor
- Tinted glass
- Two doors, left and right
- Windshield washer and wiper (with intermittent feature)

**BODY:**
- Body exhaust heating
- Cab guard, left side
- Spill guard, 150 mm 6"

**CAB:**
- 12 Volt outlet port
- Air conditioner/heater/defroster/electronically controlled
- Ashtray and cigarette lighter
- Cup holder
- Electronic hoist control system
- Electronic maintenance display/monitoring system
- Electronic windows
- Operator seat, reclining, suspension type with retractable 78 mm 3" width seat belt
- Passenger seat with retractable 78 mm 3" width seat belt
- 12 Volt outlet port
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- Air conditioner/heater/defroster/electronically controlled
- Ashtray and cigarette lighter
- Cup holder
- Electronic hoist control system
- Electronic maintenance display/monitoring system
- Electronic windows
- Operator seat, reclining, suspension type with retractable 78 mm 3" width seat belt
- Passenger seat with retractable 78 mm 3" width seat belt

**LIGHTING SYSTEM:**
- Back-up light
- Hazard lights
- Headlights with dimmer switch
- Indicator, stop and tail lights

**GUARD AND COVERS:**
- Drive shaft guard (front and rear)
- Engine and transmission guard
- Exhaust thermal guard
- Fire protective covers

**OTHER:**
- Alarm, backup
- Automatic Retard Speed Control (ARSC)
- Centralized greasing
- Coolant temperature alarm and light
- Electric circuit breaker, 24V
- Front brake cut-off system
- Hand rails for platform
- Horn, electric
- KOMTRAX Plus with PLM and ORBCOMM
- Ladders, left and right hand side
- Mud guards
- Overrun warning system
- PLM payload meter
- Rearview mirrors
- Supplementary steering, automatic
- Under view mirrors

### OPTIONAL EQUIPMENT

**BODY:**
- Angled front stairway
- Body liner
- Deck mounted muffler, no body heat
- Deck mounted muffler, with body heat

**LIGHTING SYSTEM:**
- Back work lights, RH and LH side
- Fog lights

**TIRES:**
- 24.00 R35

**OTHER:**
- ASR (Automatic spin regulator)
- ABS (Antilock brake system)
- Fast fill fuel system
- High altitude controller

Standard equipment may vary for each country. This specification sheet may contain attachments and optional equipment that are not available in your area. Please consult your Komatsu distributor for detailed information.