HD465-7R

HORSEPOWER
Gross: 551 kW 739 HP/2000 min⁻¹
Net: 533 kW 715 HP/2000 min⁻¹

MAXIMUM PAYLOAD
55 metric tons

BODY CAPACITY (Heaped 2:1, SAE)
34.2 m³

Photos may include optional equipment.
PERFORMANCE FEATURES

- High Performance Komatsu SAA6D170E-5 Engine
- Mode Selection System
- Automatic Retard Speed Control (ARSC)
- K-ATOMiCS with "Skip-Shift" Function
- Small Turning Radius
- Automatic Spin Regulator (ASR) (Optional)
- Long Wheelbase and Wide Tread
- Payload Meter (PLM) (Optional)
- Fully Hydraulic Controlled Wet Multiple-Disc Brakes and Retarder
- Large Body

OPERATOR ENVIRONMENT

- Ergonomically Designed Cab
- Easy-to-See Instrument Panel
- Viscous Cab Mounts
- Built-in ROPS/FOPS Cab
- Supplementary Steering and Secondary Brake
- Hydropneumatic Suspension for All Terrains
- Three-Mode Automatic Hydropneumatic Suspension (Optional)
- Electronic Hoist Control System

RELIABILITY

- Komatsu Components
- Robust Dump Body Design
- Protection Functions Supported by Electronic Control
- Sealed DT Connectors
- Flat Face-to-Face O-ring Seals
- High-Rigidity Frame
- Reliable Hydraulic System
- Lead-Free Radiator
- Brake Cooling Oil Recovery Tank

EASY MAINTENANCE

- Advanced Monitoring System
- Wet Multiple-Disc Brakes and Fully Hydraulic Controlled Braking Systems
- Centralized Arrangement of Filters
- Disc Wheels (Flange Type Rims)
- Extended Oil Change Intervals
- Electric Circuit Breaker
- Centralized Greasing Points
- KOMTRAX Plus

HD465-7R

| HORSEPOWER | Gross: 551 kW 739 HP/2000min⁻¹ | Net: 533 kW 715 HP/2000min⁻¹ |
| MAXIMUM PAYLOAD | 55 metric tons |
Komatsu Technology

Komatsu develops and produces all major components, such as engines, electronics and hydraulic components, in house. With this “Komatsu Technology,” and adding customer feedback, Komatsu is achieving great advancements in technology. To achieve both high levels of productivity and economical performance, Komatsu has developed the main components with a total control system. The result is a new generation of high performance and environment friendly machines.

High Performance Komatsu SAA6D170E-5 Engine

Powerful turbocharged and air-to-air aftercooled Komatsu SAA6D170E-5 engine provides 533 kW 715 HP (Net). This engine realizes high power in low fuel consumption with Common Rail Injection system (CRI), and thus it delivers higher travel speeds with high horsepower. Also 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 two modes <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 control)
The engine power automatically changes depending on loaded or unloaded conditions always to use an optimum speed gear. It is appropriate for light work on flat ground.
### Automatic Idling Setting System

This system facilitates quick engine warm-up and cab cooling/warming. When setting the system ON, engine idle speed is kept at 945 min⁻¹ when coolant temperature is 50°C or lower. Speed automatically returns to 750 min⁻¹ when coolant temperature reaches 50°C.

### 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. The result: the best gear for any driving situation.

### Automatic Retard Speed Control (ARSC)

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 setting 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.

### 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. Reduced frequency of downshift and smoother operation are provided.
Small Turning Radius

The MacPherson strut type front suspension has a special A-frame between each wheel and the main frame. The wider spaces created between the front wheels and the main frame increase the steering angle of the wheels. The larger this steering angle, the smaller the turning radius of the truck. Turning radius varies depending on ground conditions and/or vehicle speed.

Automatic Spin Regulator (ASR) (Optional)

ASR automatically prevents the rear tires on either side from slipping on soft ground for optimal traction.

Long Wheelbase and Wide Tread

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

Payload Meter (PLM) (Optional)

PLM allows the production volume and the working conditions of the dump truck to be analyzed directly via a personal computer (PC). The PLM data can be downloaded directly from HD465-7R to your PC by connecting the cable. The loaded weight is indicated on the payload display (character display) and the external display lamp while loading.
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 1,052 HP
- Brake Surface Area (rear): 64,230 cm²

Large Body

A wide target area makes for easy loading with minimal soil spillage and more efficient hauling. The V-shape design also increases structural strength, and provides excellent load stability.
**OPERATOR ENVIRONMENT**

**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.

**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 under view mirrors and side under view mirrors have been added to improve safety.

**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.

**Viscous Cab Mounts**

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

**Ideal Driving Position Settings**

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

Machine shown may include optional equipment.
The hydropneumatic suspension assures a comfortable ride even over rough terrain and ensures maximum productivity and operator confidence.

Hydropneumatic Suspension for All Terrains

These structures conform to ISO 3471 ROPS standard, and ISO 3449 FOPS standard.

Built-in ROPS/FOPS Cab

Supplementary steering and secondary brakes are standard features.

Supplementary Steering and Secondary Brake

Steering: ISO 5010, SAE J1511
Brakes: ISO 3450
If there should be a failure in the foot brake, the parking brake and front disc brakes are activated as a pedal operated secondary brake. In addition, when hydraulic pressure drops below the rated level, the parking brake is automatically actuated.

Supplementary steering and secondary brakes are standard features.

Three-Mode Automatic Hydropneumatic Suspension (Optional)
Suspension mode is automatically switched to one of three stages (Soft, medium and hard) according to load and operating conditions, for a more comfortable and stable ride.

Nitrogen gas
Oil

Antilock Brake System (ABS) (Optional)
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.

Electronic Hoist Control System
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.
**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 strict quality control system guidelines.

**High-Rigidity Frame**

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

**Robust Dump Body Design**

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 and V-bottom design also increase 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 underneath of the radiator, improving the reliability of the hydraulic system during sudden temperature rises. Further, in addition to the main filter, a 25 micron line filter is at the entrance to the transmission control valve. This system helps to prevent secondary faults.

**Protection Functions Supported by Electronic Control**

<table>
<thead>
<tr>
<th>Item</th>
<th>Function</th>
</tr>
</thead>
<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 the vehicle's speed surpasses the maximum for the current gear, the 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>
</tr>
<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/hour.</td>
</tr>
<tr>
<td>Anti-hunting system</td>
<td>When running near a shift point, smooth automatic shifting takes place.</td>
</tr>
<tr>
<td>Neutral safety</td>
<td>The engine is prevented from starting when the shift lever is not in neutral.</td>
</tr>
</tbody>
</table>

**Sealed DT Connectors**

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

**Lead-Free Radiator**

In addition to compliance with emission regulations, a lead-free aluminum core is used for the radiator to meet global environmental requirements.

**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.

**Brake Cooling Oil Recovery Tank**

To protect the environment, a tank is installed to recover brake cooling oil in the event of brake floating seal leakage.
**EASY MAINTENANCE**

### 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.

### Extended Oil Change Intervals

In order to minimize operating costs, oil change intervals have been extended:
- Engine oil 500 hours
- Hydraulic oil 4000 hours

### Wet Multiple-Disc Brakes and Fully Hydraulic Controlled Braking Systems

Wet multiple-disc brakes and fully hydraulic controlled braking systems realize 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, meaning even lower maintenance. The parking brake is also an adjustment-free, wet multiple-disc system for high reliability and long life. Added reliability is designed into the braking system by the use of 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.

### Centralized Greasing Points

Greasing points are centralized at three locations, it enables to approach from ground level.

### Centralized Arrangement of Filters

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

### Disc Wheels (Flange Type Rims)

Disc wheels (Flange type rims) provide easy removal/ installation for the tires.

### Electric Circuit Breaker

A circuit breaker is adopted in important electric circuits that should be restored in a short time when a problem occurs in the electrical system.

### KOMTRAX Plus

KOMTRAX Plus controller monitors the health conditions of major components, enables remote analysis of the machine and its operation. This process is supported by the Komatsu distributors, factory and design team. This contributes to reduced repair costs and to maintaining maximum availability.
To keep your machine available and minimize operation cost when you need it, Komatsu Distributor is ready to provide variety of support before and after procuring the machine.

**Fleet recommendation**
Komatsu Distributor can study the customer’s job site and provide the most optimum fleet recommendation with detailed information to meet all of your application needs when you are considering to buy new machines or replace the existing ones from Komatsu.

**Technical support**
Komatsu product support service (Technical support) are designed to help customer. Komatsu Distributor offers a variety of effective services how much Komatsu is dedicated to the maintenance and support of Komatsu machine.
- Preventive Maintenance (PM) clinic
- Oil & Wear analysis program

**Repair & maintenance service**
Komatsu Distributor offers quality repair and maintenance service to the customer, utilizing and promoting Komatsu developed programs.

**Komatsu Reman (Remanufactured) components**
Komatsu Reman products are the result of the implementation of the Komatsu global policy which establishes and agrees to reduce the owning, operating and total Life Cycle Costs (LCC) to Komatsu’s customer through high quality, prompt delivery and competitively priced in own remanufactured products (QDC).

**Product support**
Komatsu Distributor gives the proactive support and secures the quality of the machinery that will be delivered.

**Parts availability**
Komatsu Distributor is available for emergency inquiry by the customers for genuine, quality guaranteed Komatsu parts.
## Specifications

### Engine
- **Model**: Komatsu SAA6D170E-5
- **Type**: Water-cooled, 4-cycle
- **Number of cylinders**: 6
- **Bore x stroke**: 170 mm x 170 mm
- **Piston displacement**: 23.15 L
- **Horsepower**: 533 kW / 715 HP
- **Fan drive type**: Mechanical
- **Maximum torque**: 3320 N·m / 339 kg·m
- **Governor**: Direct injection
- **Air cleaner**: Dry type with double elements and precleaner (cyclonpack type), plus dust indicator

### Transmission
- **Torque converter**: 3-elements, 1-stage, 2-phase
- **Transmission**: Full-automatic, planetary type
- **Speed range**: 7 speeds forward and 1 reverse
- **Lockup clutch**: Wet, multiple-disc clutch
- **Reverse**: Torque converter drive in 1st gear, direct drive in 1st lockup and all higher gears
- **Shift control**: Electronic shift control with automatic clutch modulation in all gear
- **Maximum travel speed**: 70.0 km/h

### Axles
- **Rear axles**: Full-floating
- **Final drive type**: Planetary gear
- **Differential**: 3.538
- **Planetary**: 4.737

### Suspension System
- **Independent, hydro pneumatic suspension cylinder with fixed throttle to dampen vibration**
- **Effective cylinder stroke (front suspension)**: 303 mm
- **Oil stopper**: 6.8°
- **Mechanical stopper**: 7.7°

### Steering System
- **Type**: Fully hydraulic power steering with two double-acting cylinders
- **Supplementary steering**: Manual control (meets ISO 5010 and SAE J1511)
- **Minimum turning radius**: 8.5 m
- **Maximum steering angle**: 39°

### Cab
- Dimensions comply with ISO 3471 ROPS (Roll-Over Protective Structure) standard, and ISO 3449 FOPS standard.

### Brakes
- Brakes meet ISO 3450 standard.
  - **Service brakes**: Fully hydraulic control, caliper disc type
  - **Rear**: Fully 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: 1936 cm²
    - Rear: 64230 cm²

### Body
- **Capacity**:
  - **Struck**: 25.0 m³
  - **Heaped (2:1, SAE)**: 34.2 m³
- **Payload**: 55 metric tons
- **Material**: 130 kg/mm² high-tensile-strength steel
- **Structure**: V-shape body with V-bottom
- **Material thickness**:
  - **Bottom**: 19 mm
  - **Front**: 12 mm
  - **Sides**: 9 mm
- **Target area (inside length x width)**: 6450 mm x 3870 mm
- **Dumping angle**: 48°
- **Height at full dump**: 8800 mm
- **Exhaust heating**

### Hydraulic System
- **Hoist cylinder**: Twin, 2-stage telescopic type
- **Relief pressure**: 20.6 MPa / 210 kg/cm²
- **Hoist time**: 11.5 sec

### Weight (Approximate)
- **Empty weight**: 43100 kg
- **Max. gross vehicle weight**: 99680 kg
- **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**: 24.00-35-36PR

### Service Refill Capacities
- **Fuel tank**: 780 L
- **Engine oil**: 80 L
- **Transmission and retarder cooling, oil**: 95 L
- **Differential**: 42 L
- **Final drives (total)**: 122 L
- **Hydraulic system**: 55.6 L
TRAVEL PERFORMANCE
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.

BRAKE PERFORMANCE
To determine brake performance: These curves are provided to establish the maximum speed and gearshift position for safer 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 descent speed the brakes can safely handle without exceeding cooling capacity.
**STANDARD EQUIPMENT**

**ENGINE:**
- Automatic Idling Setting System
- Alternator, 90A/24V
- Batteries, 2 x 12V/200Ah
- Engine, Komatsu SAA6D170E-5
- Mode selection system
- Starting motor, 2 x 7.5 kW

**CAB:**
- Ashtray
- Cigarette lighter
- Cup holder
- Electronic dump control system
- Electronic maintenance display/monitoring system
- Laminated glass, front
- Operator seat, reclining, suspension type
- Passenger seat with retractable seat belt
- Power window (LH)
- ROPS cab with FOPS, sound suppression type
- Seat belt for operator seat, 78 mm width, retractable, 2 point
- Space for lunch box
- Steering wheel, tilt and telescopic
- Sunvisor

**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)
- Exhaust thermal guard
- Fire protective covers

**SAFETY EQUIPMENT:**
- Alarm, backup
- ARSC
- Coolant temperature alarm and light
- Front brake cut-off system
- Hand rails for platform
- Horn, electric
- Ladders, left and right hand sides
- Overrun warning system
- Rearview mirrors and under view mirrors
- Supplementary steering

**OTHER:**
- Centralized greasing
- Electric circuit breaker, 24V
- Mud guards

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

**TIRES:**
- 24.00-35-36PR

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**OPTIONAL EQUIPMENT**

**CAB:**
- Air conditioner
- Operator seat, air suspension type
- Power window (RH)
- Radio, AM/FM with cassette
- Seat belt for operator seat, 50 mm width, retractable, 3-point
- Sunvisor, additional

**BODY:**
- Body liners
- Platform guard, right hand side
- Rock body
- Upper side extension, 200 mm
- Without body heating (with muffler)

**LIGHTING SYSTEM:**
- Back work lights, left and right sides
- Fog lights
- Yellow beacon

**SAFETY:**
- ABS
- ASR
- Automatic supplementary steering
- Rear view camera and monitor
- Stairway

**ARRANGEMENT:**
- Batteries for cold area arrangement
- Cold area arrangement
- Sandy and dusty area arrangement

**OTHER:**
- Auto-greasing system
- Engine coolant heater
- Engine oil pan heater
- Engine side cover
- Engine underguard
- Fire extinguisher
- Fuel quick charge
- KOMTRAX Plus

**TIRES:**
- 24.00 R35

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Rear view camera and monitor

Stairway

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