STANDARD EQUIPMENT FOR BASE MACHINE

ENGINE:
- Automatic Idling Setting System (AISS)
- Alternator, 90A/24V
- Batteries, 2 x 12V/300Ah
- 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
- Operator seat, reclining, suspension type
- Passenger seat with retractable seat belt
- Power window (LH)
- ROPS cab with FOPS, sound suppression type
- Seat belt, 78 mm (3") width, retractable, 2-point
- Space for lunch box
- Steering wheel, tilt and telescopic
- Sunvisor
- Laminated glass, front

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

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

SAFETY EQUIPMENT:
- Alarm, backup
- Automatic Retard Speed Control (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
- Split guard, 150mm (6"

TIRES:
- 24.00 R35

OPTIONAL EQUIPMENT

CAB:
- Air conditioner
- Operator seat, air suspension type
- Radio, AM/FM with cassette
- Seat belt, 50 mm (2") width, retractable, 2-point
- Seat belt, 50 mm (2") width, retractable, 3-point
- Sunvisor, additional
- Power window (RH)

BODY:
- Platform guard, right hand side
- Split guard, 300mm (12"
- Without body heating (with muffler)

LIGHTING SYSTEM:
- Fog lights
- Yellow beacon

SAFETY:
- Antilock Brake System (ABS)
- Automatic Spin Regulator (ASR)
- Automatic supplementary steering
- Rear view camera and monitor

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
- Payload meter
- Payload meter with overload limiter
- Muffler (no body heating type)
- Radiator shutter, canvas type
- Spare parts for first service
- Speed limiter
- Stairway
- Three-mode hydropneumatic suspension
- Tool kit
- Transmission underguard
- Vandalism protection
- Vehicle Health Monitoring System (VHMS)
- VHMS with satellite communication kit
- Wheel chocks

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.

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Komatsu is a trademark of Komatsu Ltd. Japan
Productivity Features
- High performance Komatsu SAA6D170E-5 engine
  Net horsepower 533kW 715HP
- Mode selection system
  (Variable horsepower control in Economy mode)
- Automatic idling setting system (ASS)
- 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) 785kW 1,052HP
- Long wheelbase and wide tread
- Large body
  Heaped capacity 40.0m³ 52.3yd³
  Small turning radius 8.5m 27'11"
- Payload meter (PLM) (Option)

Harmony with Environment
- Low operation noise
- Lead-free radiator
- Brake cooling oil recovery tank

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 cab
- Viscous cab mounts
- Electric body dump control
- Supplementary steering and secondary brake
- Three-mode hydropneumatic suspension
  (Automatic suspension) (Option)

Reliability Features
- Komatsu components
- High-rigidity frame
- Rigorous dump body design
- Reliable hydraulic system
- Flat face-to-face O-ring seals
- Sealed DT connectors
- Antiblock Brake System (ABS) (Option)
- Automatic Spin Regulator (ASR) (Option)
- Pedal-operated secondary brake

Easy Maintenance
- Advanced monitoring system
- Wet multiple-disc brakes and fully hydraulic controlled braking system
- Extended oil change interval
- Centralized arrangement of filters
- Disc wheels (Flange type rims)
- Electric circuit breaker
- Centralized greasing points
- Vehicle health monitoring system (VHMS) (Option)

Machine shown may include optional equipment.
PRODUCTIVITY FEATURES

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 750 rpm when coolant temperature reaches 50°C (122°F).

7-speed, fully automatic K-ATOMiCS transmission
The K-ATOMiCS (Komatsu Advanced Transmissions 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.

Auto 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.

Hydraulically controlled wet multiple-disc brakes and retarder
Wet multiple-disc brakes ensures 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 traveling downhill.
- Retarder Absorbing Capacity (continuous descent): 785 kW 1,052 HP
- Brake Surface Area (rear): 64,230 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 HD605-7R hauls the load at higher speed for greater productivity, and delivers superior driving comfort over rough terrain.

Payload meter (PLM) (Option)
PLM allows the production volume and the working conditions on the dump truck to be analyzed and controlled directly via a personal computer. And also the loadage is indicated with the outside lamp. The system can store up to 2900 working cycles.

Small turning radius
The MacPherson strut type front suspension has a special A-frame between each wheel and the main frame. The larger 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.

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.

Hydraulically controlled wet multiple-disc brakes and retarder
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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.
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.

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 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. 78mm 3” width seat belt is provided as standard equipment.

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.

Hydropneumatic suspension for all terrains
The hydropneumatic suspension assures a comfortable ride even over rough terrain and ensures maximum productivity and operator confidence.

Three-mode hydropneumatic suspension (Auto-suspension) (Option)
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.

Built-in ROPS/FOPS cab
These structures conform to ISO3471 ROPS standard, and ISO 3449 FOPS standard.

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
The low effort lever makes dumping easier than ever. 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 brake
Supplementary steering and secondary brakes are standard features.
Steering: ISO 5010, SAE J1511
Brakes: ISO 3450

Machine shown may include optional equipment.
**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.

**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.

**Centralized greasing points**

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

**Vehicle Health Monitoring System (VHMS)**

VHMS 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.

**Extended oil change intervals**

In order to minimize operating costs, oil change intervals have been extended:

- Engine oil 500 hours
- Hydraulic oil 4000 hours

**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.

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**RELIABILITY FEATURES**

**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 frames**

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 body is built of 160 kg/mm² 227,520 PSI wear-resistant high-tensile steel with a Brinell hardness of 500. 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.

**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.

**Sealed DT connectors**

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

**Automatic Spin Regulator (ASR)**

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

**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.

**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.

**Comprehensive monitoring system**

This monitor system helps to maximize machine production time.

**Protection functions supported by electronic control**

<table>
<thead>
<tr>
<th>Item</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Downshift inhibitor</td>
<td>Ensures the driver/downshifts accidentally, a speed appropriate to the current gear is automatically set, preventing over runs.</td>
</tr>
<tr>
<td>Overrun inhibitor</td>
<td>When changing gears, the operator prevents the transmission from moving to a higher gear. The main 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>
### Specifications

#### Engine
- **Model**: Komatsu SAA6D170E-5
- **Type**: Turbo-charged, air-to-air after-cooled, 6-cylinder, 4-cycle
- **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 551 kW 739 HP ISO 5049 / SAE J1349 Net 533 kW 715 HP
- **Rated rpm**: 2000 rpm
- **Fan drive type**: Mechanical
- **Maximum torque**: 339 kg-m 2,452 lb. ft
- **Fuel system**: Direct injection
- **Governor**: Electronically controlled
- **Lubrication system**: Gear pump, force-lubrication
- **Air cleaner**: Dry type with double elements and precleaner/cyclonpack type, plus dust indicator
- **Method**: Mechanical
- **Maximum steering angle**: 39°
- **Maximum travel speed**: 73.9 km/h 45.5 mph

#### Transmission
- **Torque converter**: 3 elements, 1-stage, 2-phase
- **Transmission**: Full-automatic, planetary gear type
- **Speed range**: 7 speeds forward and 1 reverse
- **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 gear
- **Maximum travel speed**: 70.0 km/h 43.5 mph

#### Brakes
- **Capacity**: SAE 3450 standard.
- **Service brakes**:
  - **Front**: 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 as an retarder.
- **Secondary brake**: Manually operated
- **Maximum brake pressure**: 2196 psi 15.5 bar

#### Body
- **Capacity**:
  - **Liters**: 28.9 m³ 551 kW
  - **Gal**: 780 ltr.
- **Payload**: 63.3 metric tons 69.4 U.S. tons
- **Material**: 160 kg/m³ 27.550 psi
- **Structure**: High tensile strength steel V-shape body with V-bottom
- **Material thickness**:
  - **Bottom**: 25 mm 0.98"
  - **Front**: 16 mm 0.63"
  - **Sides**: 14 mm 0.55"
- **Target area**:
  - **(inside length x width)**: 6600 mm x 3870 mm 21'11" x 12'9"
  - **Dip angle**: 48°
  - **Height at full dump**: 8600 mm 28'10"
- **Heating**: Exhaust heating

#### Hydraulic System
- **Hold cylinder**: Twin, 2-stage telescopic type
- **Relief pressure**: 20.6 MPa 210 kg/cm² 2,990 psi
- **Hold time**: 11.5 sec

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

#### Suspension System
- **Independent, hydro pneumatically suspended**: with fixed throttle to dampen vibration.
- **Effective cylinder stroke (front suspension)**: 303 mm 11.9"
- **Rear axle oscillation**: 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 27'11"
- **Maximum steering angle**: 39°

#### Tires
- **Standard tire**: 24.00 R35

#### 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 58.6 U.S. Gal
- **Differential**: 95 ltr 26.1 U.S. Gal
- **Final drives (total)**: 42 ltr 11.1 U.S. Gal
- **Hydraulic system**: 122 ltr 32.3 U.S. Gal
- **Suspension (total)**: 55.6 ltr 14.7 U.S. Gal

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

#### Main Frame
- **Type**: Box-sectioned structure

### 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.