

# KOMATSU®

## HD605-7

*Quarry*

**GROSS HORSEPOWER**

551 kW **739 HP**

**NET HORSEPOWER**

533 kW **715 HP**

**MAXIMUM GVW**

109,900 kg **242,290 lb**



**HD**  
**605**



Photo may include optional equipment

## OFF-HIGHWAY TRUCK

## HD605-7 Off-Highway Truck

# WALK-AROUND

*The all new Komatsu HD605-7 has arrived. This outstanding off-highway truck uses ultra-high tensile steel for its large capacity body, has ideal weight balance, and utilizes radial tires for unrivalled production and durability.*

### Productivity Features

- High Performance SAA6D170E-3 Komatsu Engine
- Automatic Idling Setting System (AISS)
- Mode-Changing System
- Hydraulically Controlled Wet Multiple-Disc Brakes and Retarder
- Auto Retard Speed Control (ARSC)
- Original Quarry Body
- Small Turning Radius
- ABS (Anti-Lock Braking System) (Option)
- ASR (Automatic Spin Regulator) (Option)
- PLM II (Memory Card Type Payload Meter) (Option)

See page 4 and 5.

# GALEO

Building on the technology and expertise Komatsu has accumulated since its establishment in 1921, GALEO presents customers worldwide with a strong, distinctive image of technological innovation and exceptional value. The GALEO brand will be employed for Komatsu's full lineup of advanced construction and mining equipment. Designed with high productivity, safety and environmental considerations in mind, the machines in this line reflect Komatsu's commitment to contributing to the creation of a better world.

*Genuine Answers for Land & Environment Optimization*



### Harmony with Environment

- Meets North American EPA Tier II Emission Regulations for 2002 and Meets Stage II Directive 97/68/EC EU Emissions
- Low Operation Noise
- Low Fuel Consumption



### ***Operator Environment***

- Wide, Spacious Cab with Excellent Visibility
- Ergonomically Designed Cab
- Easy-to-See Instrument Panel
- Suspension Seat
- Tilttable, Telescoping Steering Wheel and Low Effort Pedals
- Electric Body Dump Control Lever
- K-ATOMICS with "Skip-Shift" Function
- Hydropneumatic Suspension for All Terrains
- Viscous Cab Mounts
- Built-in ROPS/FOPS
- Supplementary Steering and Secondary Brakes
- Three-Mode Hydropneumatic Suspension (Auto-Suspension) (Option)

See page 6 and 7.

## **HD605-7**

*Quality*  
**OFF-HIGHWAY TRUCK**

**GROSS HORSEPOWER**  
551 kW 739 HP @ 2000 rpm

**NET HORSEPOWER**  
533 kW 715 HP @ 2000 rpm

**MAXIMUM GVW**  
109,900 kg 242,290 lb



### ***Reliability Features***

- Fully Hydraulic Braking System
- Reliable Komatsu Manufactured Major Components
- High-Rigidity Frames
- Wet Multiple-Disc Brakes
- Flat Face-to-Face O-Ring Seals
- Sealed DT Connectors
- Highly Reliable Hydraulic System

See page 8.

### ***Easy Maintenance***

- Extended Oil Change Interval
- Centralized Greasing Points
- Centralized Arrangement of Filters
- Flanged Type Rim with Radial Tire
- Vehicle Health Monitoring System (VHMS) (Option)

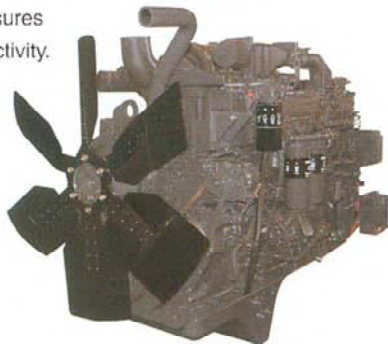
See page 9.



# PRODUCTIVITY FEATURES

## High Performance SAA6D170E-3 Komatsu Engine

This engine delivers faster acceleration and higher travel speeds with high horsepower per ton. Advanced technology, such as High Pressure Injection system (HPI), air to air aftercooler, and an efficient turbo-charger enables the engine to meet the North American EPA Tier II emission regulations and to meet Stage II Directive 97/68/EC EU Emissions. High torque at low speed, impressive acceleration, and low fuel consumption ensures maximum productivity.



## 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.



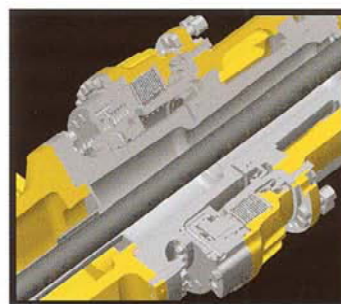
## Mode-Changing System

Electronic engine control provides superior climbing ability and outstanding fuel economy. High power mode with superior operating power suited to job sites where more time is spent working on inclines. Economy mode with reduced fuel consumption and operating noise should be used when working on level sites or under conditions where machine load is lighter.

## 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 travelling downhill.

- Retarder Absorbing Capacity (continuous descent): 785 kW  
**1,052 HP**
- Brake Surface (rear): 64230 cm<sup>2</sup> **9,956 in<sup>2</sup>**



## 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 **0.4 MPH** per click (±5 km/h **3.1 MPH** of maximum speed adjusting) to match the optimum speed for the slope. Also, since the retarder cooling oil temperature is always monitored, then the speed is automatically lowered.





## HD605-7 Quarry OFF-HIGHWAY TRUCK

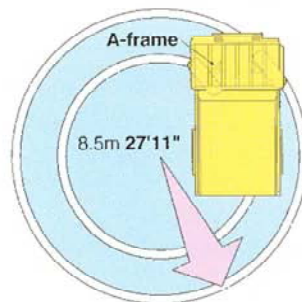
### Original Quarry Body

KOMATSU has worked in cooperation with a Japanese steel manufacturer to develop the ideal dump body. The developed body uses the ideal body material (Brinell Hardness 500), 25% stronger than on standard machines, and incorporates the latest in body design.



### 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 is the turning radius of the truck.



### ABS (Anti-Lock Braking System) (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.

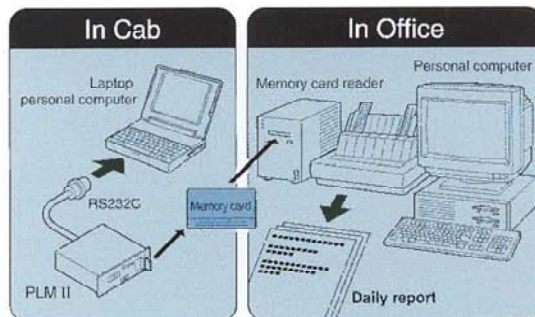
Note) Although you could not select ABS and ARSC together in HD605-5, you can select ABS and ARSC together in HD605-7.

### ASR (Automatic Spin Regulator) (Option)

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

### PLM II (Memory Card Type Payload Meter) (Option)

PLM II allows the production volume and the working conditions on the dump truck to be analyzed and controlled directly via a personal computer. The system can store up to 2900 working cycles.



Note) The memory card, card reader and software for data processing are available as options.



# OPERATOR ENVIRONMENT

## Wide, Spacious Cab with Excellent Visibility

The wide cab provides a comfortable space for the operator and a full size buddy seat. Large electrically operated windows ensure superior visibility.

## 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 by operators 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 very friendly and easy to service.

## Suspension Seat

The suspension, fabric-covered seat which is adjustable to the operator's weight is provided as standard. The suspension seat dampens vibrations transmitted from the machine and reduces operator fatigue as well as holding the operator securely to assure confident operation.



## Steering Wheel and Pedals

Low effort pedals reduce operator fatigue when working continuously for long periods. The tiltable, telescoping steering column enables operators to maintain the optimum driving position at all times.

## Electric Body Dump Control Lever

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.





## HD605-7

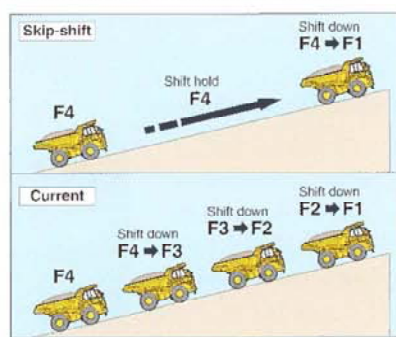
Quarry  
OFF-HIGHWAY TRUCK

### K-ATOMICs with "Skip-Shift" Function

The K-ATOMICs (Komatsu Advanced Transmission with Optimum Modulation Control System) ensures proper clutch modulation pressure when the clutch is engaged. The total control system controls both the engine and transmission by monitoring the vehicle conditions. This system and newly added "skip-shift" function ensure smooth shifting and responsive acceleration.

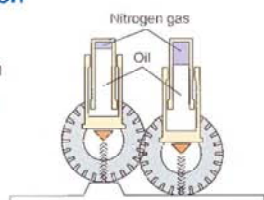
#### "Skip-shift" function

Optimum travel speed automatically selected in response to angle of ascent. Reduced frequency of shift downs and smoother operation are provided.



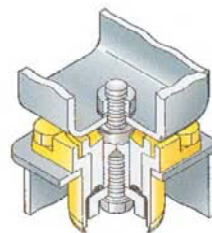
### Hydropneumatic Suspension for all Terrains

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



### Viscous Cab Mounts

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



### Built-in ROPS/FOPS

These structures conform to ISO 3471 and SAE J1040 standards.



### 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

### 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.



# 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 a strict quality control system.

## High-Rigidity Frames

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



## 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 three independent hydraulic circuits. Provides hydraulic backup should one of the circuits fail.

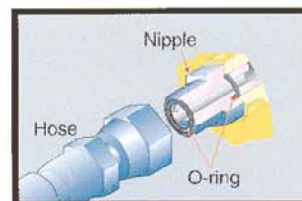
Fully hydraulic brakes system means no air system to bleed, or condensation of water that can lead to contamination, corrosion, and freezing.



Accumulator for braking system

## 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.



## Reliable Hydraulic System

A large capacity oil cooler is installed in each hydraulic circuit, improving the reliability of the hydraulic units during sudden temperature rises. Further, in addition to the main filter, a 52-micron line filter is located at the entrance to the transmission control valve. This system helps prevent secondary faults.





# EASY

# MAINTENANCE

**HD605-7**  
Quarry  
OFF-HIGHWAY TRUCK

## 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 Greasing Points

Greasing points are centralized at three locations.



## Centralized Arrangement of Filters

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

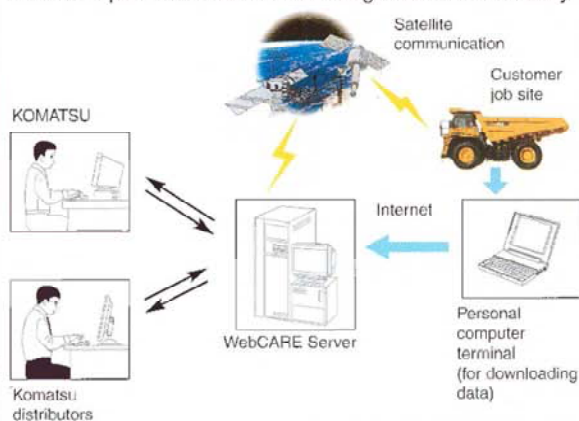


## Flange Type Rim with Radial Tire

Tires occupy a large part of the running cost of an off-highway truck. The HD605-7 has flange type rims for ease of tire installation and removal, and is equipped with radial tires as standard to reduce the fuel consumption and increase traction on slippery roads.

## VHMS (Vehicle Health Monitoring System) (Option)

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.



# SPECIFICATIONS



## ENGINE

Model	Komatsu SAA6D170E-3
Type	Water-cooled, 4-cycle
Aspiration	Turbo-charged and air-to-air after-cooled
Number of cylinders	6
Bore	170 mm 6.69"
Stroke	170 mm 6.69"
Piston displacement	23.15 ltr 1,413 in <sup>3</sup>
Performance:	
Gross horsepower	551 kW 739 HP
Flywheel horsepower	533 kW 715 HP
Rated rpm	2000 rpm
Maximum torque	332 kg•m 2,401 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



## 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
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



## AXLES

Final drive type	Planetary gear
Rear Axle	Full-floating
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 J53)
Minimum turning radius	8.5 m 27'11"
Maximum steering angle	39°



## CAB

Dimensions comply with ISO 3471 and SAE J1040-1988c ROPS (Roll-Over Protective Structure) standards.



## MAIN FRAME

Type	Box-sectioned construction
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## BRAKES

Brakes meet ISO J3450 and SAE J1473 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	1936 cm <sup>2</sup> 300 in <sup>2</sup>
Rear	64230 cm <sup>2</sup> 9,956 in <sup>2</sup>



## BODY

Capacity:

Struck	29.0 m <sup>3</sup> 37.9 yd <sup>3</sup>
Heaped (2:1, SAE)	40.0 m <sup>3</sup> 52.3 yd <sup>3</sup>
Payload	63.0 metric tons 69.4 U.S. tons
Material	160 kg/mm <sup>2</sup> 227,500 psi

high tensile strength steel

Structure V-shape body with V-bottom

Material thickness:

Bottom	25 mm 0.99"
Front	16 mm 0.64"
Sides	14 mm 0.55"

Target area

(inside length x width) 6600 mm x 3870 mm 21'8" 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/cm <sup>2</sup> 2,990 psi
Hoist time	11.5 sec



## WEIGHT (APPROXIMATE)

Empty weight	45900 kg 101,190 lb
Max. gross vehicle weight	109900 kg 242,290 lb
Not to exceed max. gross vehicle weight, including options, fuel and payload.	
Weight distribution:	
Empty: Front axle	47%
Rear axles	53%
Loaded: Front axle	32%
Rear axles	68%



## TIRES

Standard tire	24.00 R35
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## SERVICE REFILL CAPACITIES

Fuel tank	780 ltr. 206.1 U.S. Gal
Engine oil	57 ltr. 15.1 U.S. Gal
Torque converter, transmission and retarder cooling	190 ltr. 50.2 U.S. Gal
Differentials (total)	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

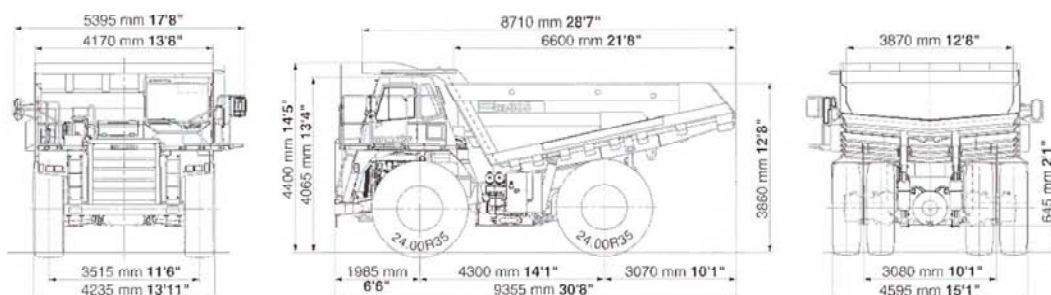


# HD605-7

Quarry  
OFF-HIGHWAY TRUCK

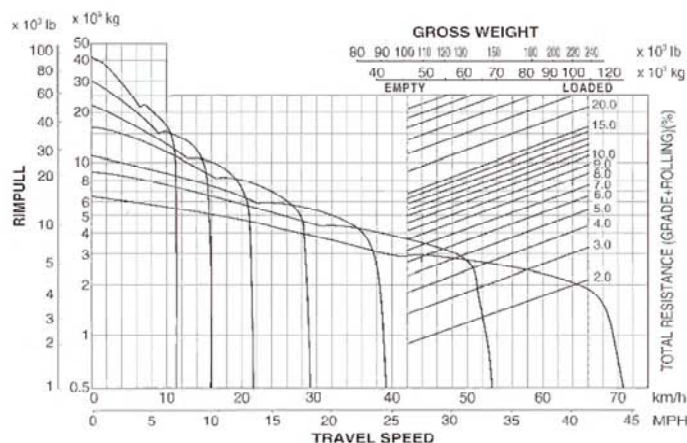


## DIMENSIONS



## TRAVEL PERFORMANCE

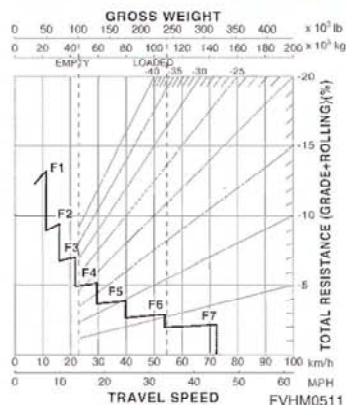
To determine travel performance: Read from gross weight down to the percent of total resistance. From this weight-resistance point, read horizontally to the curve with the highest obtainable speed range, then down to maximum speed. Usable rimpull depends upon traction available and weight on drive wheels.



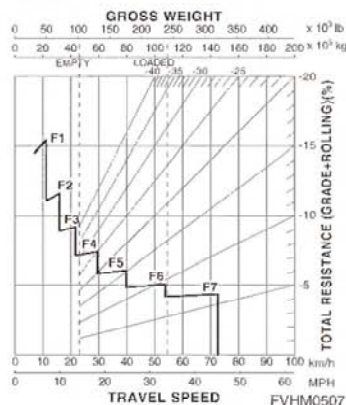
## BRAKE PERFORMANCE

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 speed the brakes can safely handle without exceeding cooling capacity.

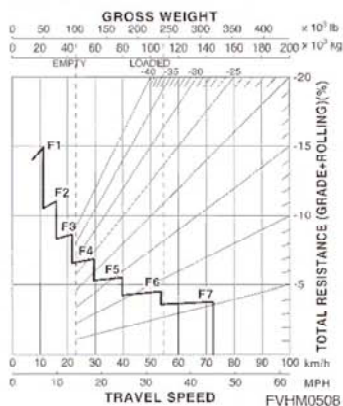
### Grade distance: Continuous Descent



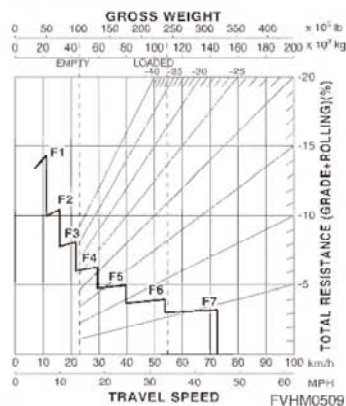
### Grade distance: 450 m



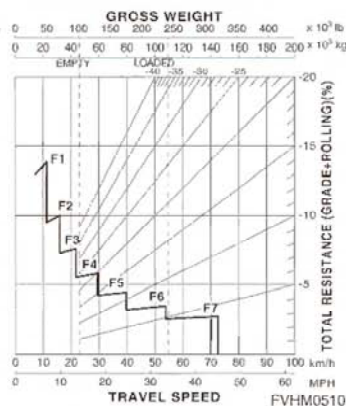
### Grade distance: 600 m



### Grade distance: 900 m



### Grade distance: 1500 m





## STANDARD EQUIPMENT FOR BASE MACHINE

### ENGINE:

- AISS (Automatic Idling Setting System)
- Alternator, 75A/24V
- Batteries, 2 x 12V/200Ah
- Engine, Komatsu SAA6D170E-3
- Mode-changing system
- Starting motor, 2 x 7.5 kW

### CAB:

- Ashtray
- Cigarette lighter
- Cup holder
- Electronic hoist control system
- Electronic maintenance display/monitoring system
- Operator seat, reclining, suspension type with retractable 50 mm 2" width seat belt
- Passenger seat
- Power windows
- ROPS cab with FOPS, sound suppression type
- Space for lunch box
- Steering wheel, tilt and telescopic
- Sunvisor
- Tinted glass

- Two doors, left and right
- Windshield washer and wiper (with intermittent feature)

### LIGHTING SYSTEM:

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

### GUARD AND COVERS:

- Exhaust thermal guard
- Fire prevention covers

### SAFETY EQUIPMENT:

- Alarm, backup
- ARSC (Auto Retard Speed Control)
- Coolant temperature alarm and light
- Front brake cut-off system
- Hand rails for platform
- Horn, electric
- Ladders, left and right hand side
- Overrun warning system
- Rearview mirrors
- Supplementary steering

### OTHER:

- Centralized greasing
- Electric circuit breaker, 24V
- Mud guards

### BODY:

- Body exhaust heating
- Cab guard, left hand side
- Spill guard, 150mm 6"

### TIRES:

- 24.00 R35



## OPTIONAL EQUIPMENT

### CAB:

- Air conditioner
- Heater and defroster
- Operator seat, air suspension type
- Radio, AM/FM with cassette
- Seat belt, 78 mm 3" width for operator seat
- Seat belt, 50 mm 2" width for passenger seat
- Seat belt, 78 mm 3" width for passenger seat
- Sunvisor, additional

### BODY:

- Body liner
- Platform guard, right hand side
- Without body heating (with muffler)

### LIGHTING SYSTEM:

- Back work lights, left and right side
- Fog lights
- Yellow beacon

### SAFETY:

- ABS (Anti-lock Braking System)
- ASR (Automatic Spin Regulator)
- Automatic supplementary steering
- Rear view camera and monitor
- Under view mirrors

### ARRANGEMENT:

- Batteries for cold area arrangement
- Cold area arrangement (from -30°C -22°F to -40°C -40°F)
- Poor fuel (contained water) arrangement
- Sandy and dusty area arrangement

### OTHER:

- Autogreasing system
- Drive shaft guard
- Engine coolant heater
- Engine oilpan heater
- Engine side cover
- Engine underguard
- Fire extinguisher

- Fuel quick charge
- Payload meter II
- Muffler (no body heating type)
- Radiator shutter, canvas type
- Spare parts for first service
- Three-mode hydropneumatic suspension
- Tool kit
- Transmission underguard
- Vandalism protection
- VHMS (Vehicle Health Monitoring System)
- VHMS with satellite communication kit

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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