DUMP TRUCK

HD985-5

Max. Payload: **105metric tons**/116U.S.tons
Max. Vehicle Weight: **178,775kg**/394,130lb.

Model shown may include optional equipment.

Excellent Productivity&Fuel Economy

- High-output Komatsu SA12V140 engine with low fuel consumption
- Seven-speed, fully automatic K-ATOMiCS (Komatsu Advanced Transmission with Optimum Modulation Control System) transmission
- Oil-cooled multiple-disc retarder and optional exhaust retarder

Operator Comfort & Safety

- K-ATOMiCS transmission provides smooth acceleration and deceleration
- Hydropneumatic suspension for a smoother ride
- Wide, sound-suppressing cab ensures comfortable operator environment
- Maintains constant downhill travel speed (ARSC, Option)

More Uptime

- Sturdy, well-designed frame and tough body construction
- Monitoring system for operational safety and reliability
- Adjustment-free caliper discs used for front wheel brakes

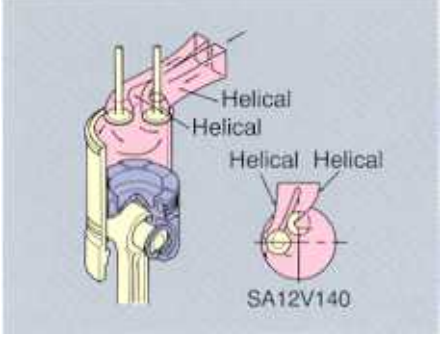
KOMATSU

Excellent Productivity & Fuel Economy

High-output Komatsu SA12V140 engine: The 30.5-liter power plant with turbocharger and aftercooler has an output of 1050 HP(783kW) at 2100 RPM, the highest in its class.


Komatsu SA12V140 diesel engine

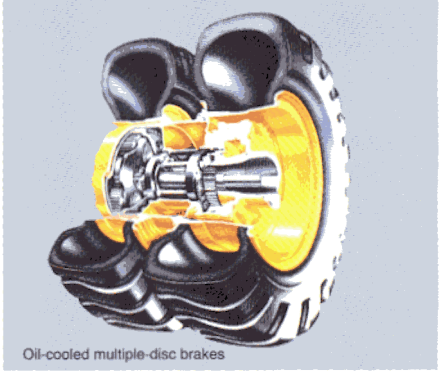
Low fuel consumption:
High injection pressure creates an ideal fuel-air mixture for better combustion efficiency, while the ductile cast-iron pistons greatly reduce friction loss. For even higher combustion efficiency, each cylinder has four valves—two for intake, two for exhaust. The two helical intake ports produce optimum swirl for excellent combustion. The exhaust gas is smoothly and quickly ejected from the combustion chamber through the exhaust ports. All this helps to make the Komatsu-built engine fuel efficient.



Seven-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.


K-ATOMiCS (Komatsu Advanced Transmission with Optimum Modulation Control System)

Oil-cooled multiple-disc retarder and optional exhaust retarder:
The truck can be decelerated without frequent use of the brakes, allowing you to travel more safely at higher speeds, even down long, steep slopes.

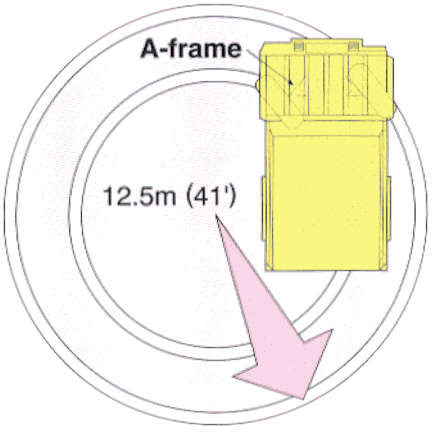

Oil-cooled multiple-disc brakes

A More Stable Ride in a More Maneuverable Truck

Long wheelbase and wide tread:
With an extra-long wheelbase, a wide tread and an exceptionally low center of gravity, the HD985-5 hauls loads at higher speeds for better productivity, and delivers excellent driving comfort over rough terrain.

Big body:
A wide target area of 64m³ makes for easy loading with minimal soil spillage and more efficient hauling.

Small turning radius:
The MacPherson strut 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.

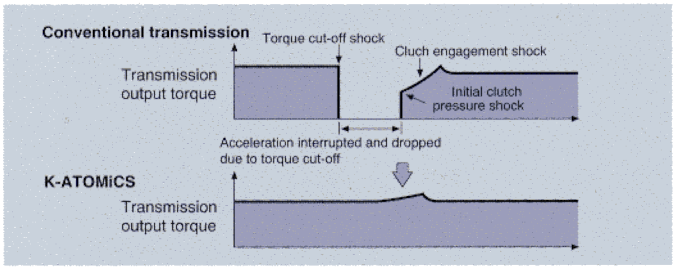



Model shown may include optional equipment.

Enhanced Operating Comfort

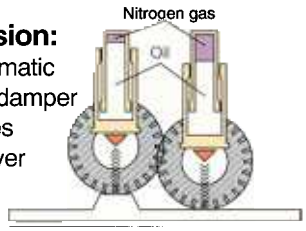
K-ATOMiCS—smooth acceleration / deceleration:

An electronically controlled valve is provided for each clutch pack in the transmission, allowing independent clutch engagement/ disengagement. Moreover, it enables an ideal change in clutch modulation pressure and torque cut-off timing in response to traveling conditions. The result is smooth shifting and responsive acceleration.



Hydropneumatic suspension:

All four wheels have hydropneumatic suspension with a fixed throttle damper control valve that greatly reduces pitching, rolling and bouncing over rough terrain.



Ideal driving position settings:

The five-way adjustable operator seat and the tilt-telescopic steering column ensure an optimum driving posture, for increased driving comfort and more control over the machine's operations.

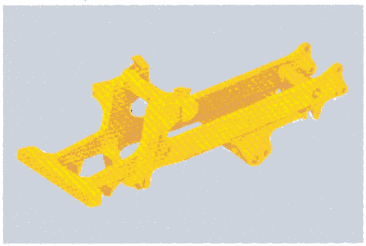
See everything in quiet comfort:

Wide windows in the front, side and back, plus plenty of space in the richly upholstered interior, give you a quiet, comfortable environment from which to see and control every aspect of your work.

More Uptime

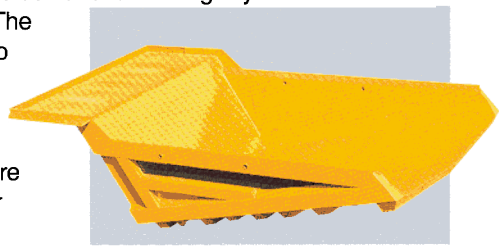
Sturdy, well-designed frame:

Cast-steel components are employed in the main frame in 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 costs. The V-shaped design also increases structural strength. The side and bottom plates of the dump section are reinforced with ribs for added strength.



Adjustment-free brakes:

The front service brakes are the adjustment-free caliper disc type.

Easy maintenance:

Greasing points have been centralized at three locations. Fuel and engine oil filters are also located together on the left-hand remote mount, for easy inspection from the ground.

Reliable hydraulic system:

The oil cooler is installed below the retarder, improving the reliability of the hydraulic system 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.

Excellent footwork and durable power train:

By adopting electronic modulation on all shifting points, peak torque when shifting is reduced, raising the endurance of the power train.

Electronic devices for excellent operation:

In the harness connection, a dual-lock connector is used to prevent loosening from vibrations and contact failure. Also, the base boards for controllers and other devices are fixed by molding (with resin), realizing high resistance to water, dust and vibration.

Advanced Monitoring System

Vehicle monitoring system makes operation easier

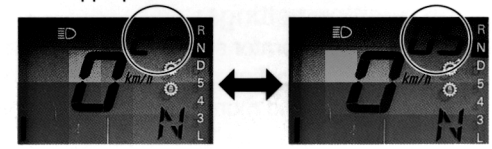
The electronic display panel shows current vehicle conditions. If an abnormality occurs, the action code and service code are displayed. Thus, vehicle operation is easier and working efficiency is higher. At the same time, monitoring data is saved for later troubleshooting.

Service code display and memory function

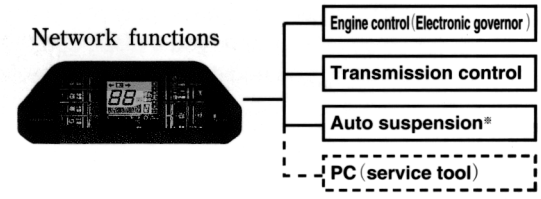
The contents of each controller are displayed on the electronic display panel in service codes. The stored vehicle information can be downloaded to a personal computer (service tool). This enables a quick response to problems and shortens maintenance time. This also shows the truck's current condition and facilitates operation.

Action code display function

If an abnormality occurs on the truck, an "E" appears on the electronic display panel with the appropriate action code, which notifies the operator how to deal with the situation. This means the operator never misses an abnormality and can take appropriate corrective action.



Messages interchange once every second.



※OPTION

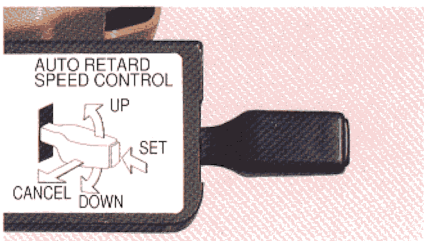
Protection Functions Supported by Electronic Control

Item	Function
Downshift inhibitor	Even if the driver downshifts accidentally, a speed appropriate to the current gear is automatically set, preventing over-runs.
Over-run inhibitor	When descending grades, if the vehicle's speed surpasses the maximum setting for the current gear, the rear brakes automatically operate, preventing over-runs.
Reverse inhibitor	The vehicle is prevented from moving backward when operating the body.
Forward/Reverse shift inhibitor	This device makes it impossible to shift from forward to reverse when the vehicle's speed surpasses 4 km/hour.
Anti-hunting system	When running near a shift point, shiffting is smooth and automatic.
Neutral safety	The engine is prevented from starting when the shift lever is not in neutral.

Value-Enhancing Options

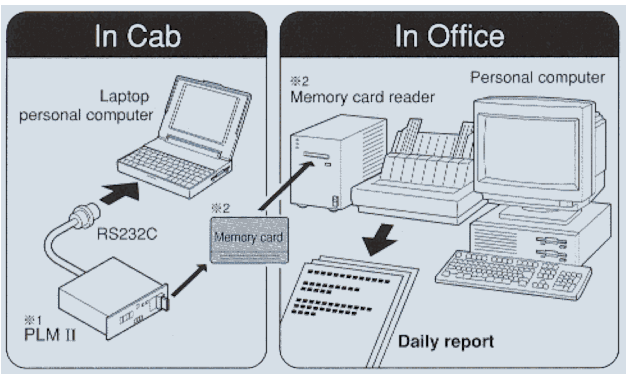
Maintaining constant downhill travel speed
Auto Retard Speed Control (ARSC)

ARSC is available as an option. This allows you to simply set the downhill travel speed and go down slopes at a constant speed. As a result, you can concentrate on steering. The speed can be set at increments of l km/h per click (±5km/h of maximum speed adjusting) to match the optimum speed for the slope. Also, since the retarder cooling oil temperature is always monitored, the speed is automatically lowered to prevent overheating.



PLMⅡ (Memory card payload meter)

This system 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.



※1 The PLMⅡ is standard.
※2 The memory card, card reader and software for data processing are available as options.

Mode-Changing System

Electronic Engine Control Provides Superior Climbing Ability and Outstanding Fuel Economy

High-power mode, which offers superior operating power, should be selected at job sites where a high percentage of time is spent working on inclines. Economy mode, which reduces fuel consumption and operating noise, should be used when working on level sites or under conditions where the machine load is lighter.

Stairway

A stairway at the front of the radiator grill is available as an option. This stairway simplifies such everyday operations as getting on and off the machine. In addition, the stairway makes it easier to move parts and materials during machine maintenance.

Engine exhaust retarder:

The retarder capacity is 30% higher, permitting faster speeds on downhill slopes. This improves safety and hauling performance.

Three-mode hydropneumatic suspension:

To further enhance driving comfort, automatic three-mode suspension is available as an option. This enables the operator to select one of three cushioning effects (SOFT, MEDIUM or HARD), depending on road conditions, for improved damping control.

Antilock braking system (ABS)

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, causing skidding under slippery conditions while applying the service brake.

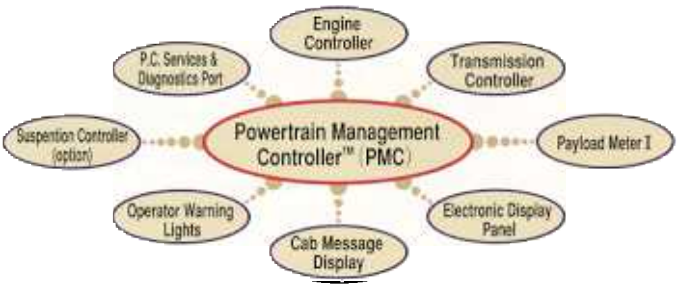
Roll-Over Protective Structure (ROPS):

This structure protects the operator and cab should the truck turn over.

Powertrain Management Controller ™

Electronic intelligence gives the operator increased control and reduces downtime.

The HD985's superior electronic systems monitor all critical machine functions, and all monitoring systems are then integrated into one – the Komatsu Powertrain Management Controller™ (PMC). The PMC keeps the operator informed about the machine's status at all times. And service technicians can access valuable systems and function information for quick downloading and analysis through a computer interface connection right on the truck. The PMC monitors more than 250 items, including historical performance date, to help keep the HD985 operating at top form. The PMC software organizes the downloaded information into usable management data and reports. Operators can quickly check primary systems, including:
1)Engine 2)Transmission 3)Payload meter Ⅱ



The Maintenance and Operation's Display Screen, located in the console, provides the operator and service personnel with valuable real-time information about the truck's condition.

HD985-5 SPECIFICATIONS

ENGINE

Model ..... KOMATSU SA12V140
Type ..... Water-cooled, 4-cycle
Aspiration ..... Turbocharged and aftercooled
No. of cylinders 12
Bore x stroke ..... **140 mm x 165 mm** 5.5"x6.5"
Piston displacement ..... **30.50 ltr.** 1860 cu.in
Performance:
Gross horsepower ..... **1050 HP** 783 kW
Flywheel horsepower ..... **1010 HP** 753kW (SAE J1349)
Rated RPM ..... 2100 RPM
Max. torque ..... **425 kg-m** 3074 ft-lb/**4.17 kN-m**at 1500 RPM
Fuel system ..... Direct injection
Governor ..... Electrical, all speed control
Lubrication system:
Lubrication method ..... Gear pump, force-lubrication
Filter ..... Full-flow type
Air cleaner ..... Dry type with double elements and precleaner, plus dust indicator

TRANSMISSION

Torque converter 3-elements, 1-stage, 2-phase
Lockup clutch ..... Wet, double-disk clutch
Transmission ..... Full-automatic, planetary gear type hydraulically actuated
Speed range ..... 7 speeds forward and one reverse
Foward ..... 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
Max. travel speed ..... **70 km/h** 43.5 MPH

AXLES AND FINAL DRIVES

Final drive type ..... Planetary
Rear axle ..... Full-floating
Rations:
Differential 3.467
Planetary 6.500

SUSPENSION

Independent, hydropneumatic suspension cylinder with fixed throttle to dampen vibration.

STEERING

Type ..... Fully hydraulic power steering with two double-acting cylinder
Emergency steering ..... Manual contorol
Min. turning radius ..... **12.5 m** 41'

BRAKES

Service brakes:
Front ..... Air-over-hydraulic, caliper disc type
Rear ..... Air-over-hydraulic, oil-cooled, multiple-disc type
Parking brake ..... Spring applied, caliper disc type actuates on drive shaft.
Retarder ..... Air-over-hydraulic, oil-cooled, multiple-disc type rear breakes act as retarders.
Emergency brake ..... An emergency relay valve automatically actuates the service brakes when air pressure drops below the rated level. Manual operation is also possible.

FRAME

Type ..... Box-sectioned construction
Main frame material ..... High-tensile-strength steel plate

BODY

Structure ..... V-shape body with V-bottom
Material ..... **130 kg/mm²** 184860 PSI/**20.6MPa** high-tensile-strength steel
Heating ..... Exhaust heating
Material thickness:
Floor ..... **19 mm** 0.75"
Front ..... **12 mm** 0.47"
Sides ..... **9 mm** 0.35"
Target area (inside length x width) ..... **7550 mm x 4870mm** 24'9" x 16'

BODY HOIST

Hoist cylinder ..... Twin, 2-stage telescopic type
Hydraulic pump capacity ..... **668 ltr./min.** 176.5 U.S. gal/min
Relief valve setting ..... **210 kg/cm²** 3000 PSI/**20.6 MPa**
Hoist time ..... 13 sec.

CAPACITY

Standard body:
Struck ..... **45 m³** 58.9 cu.yd
Heaped (2:1,SAE) ..... **64 m³** 83.7 cu.yd
Pavload,maximum ..... **105 metric tons** 116 U.S. tons

WEIGHT (approximate)

Empty weight ..... **73700 kg** 162480 lb
Max. gross vehicle weight ..... **178,775 kg** 394,130 lb
Not to exceed Max. gross vehicle weight, including options, fuel and payload.
Notes: 1. Remain under max. gross vehicle weight and ton-kilometers per hour, which are determined by tires.
2. Select tires that are appropriate for vehicle operating conditions.
Weight distribution:
Empty,front axle 47%
rear axle 53%
Loaded,front axle 33%
rear axle 67%

SERVICE REFILL CAPACITIES

Coolant	225 ltr.	59.4 U.S. gal
Fuel tank	1250 ltr.	330.0 U.S. gal
Engine oil	130 ltr.	34.3 U.S. gal
Torque converter and transmission	102 ltr.	26.9 U.S. gal
Differential	132 ltr.	34.9 U.S. gal
Final drive (left and right)	118 ltr.	31.2 U.S. gal
Retarder cooling	246 ltr.	65.0 U.S. gal
Hydraulic system	153 ltr.	40.4 U.S. gal
Suspension (total)	75 ltr.	19.8 U.S. gal

CAB AND ROPS

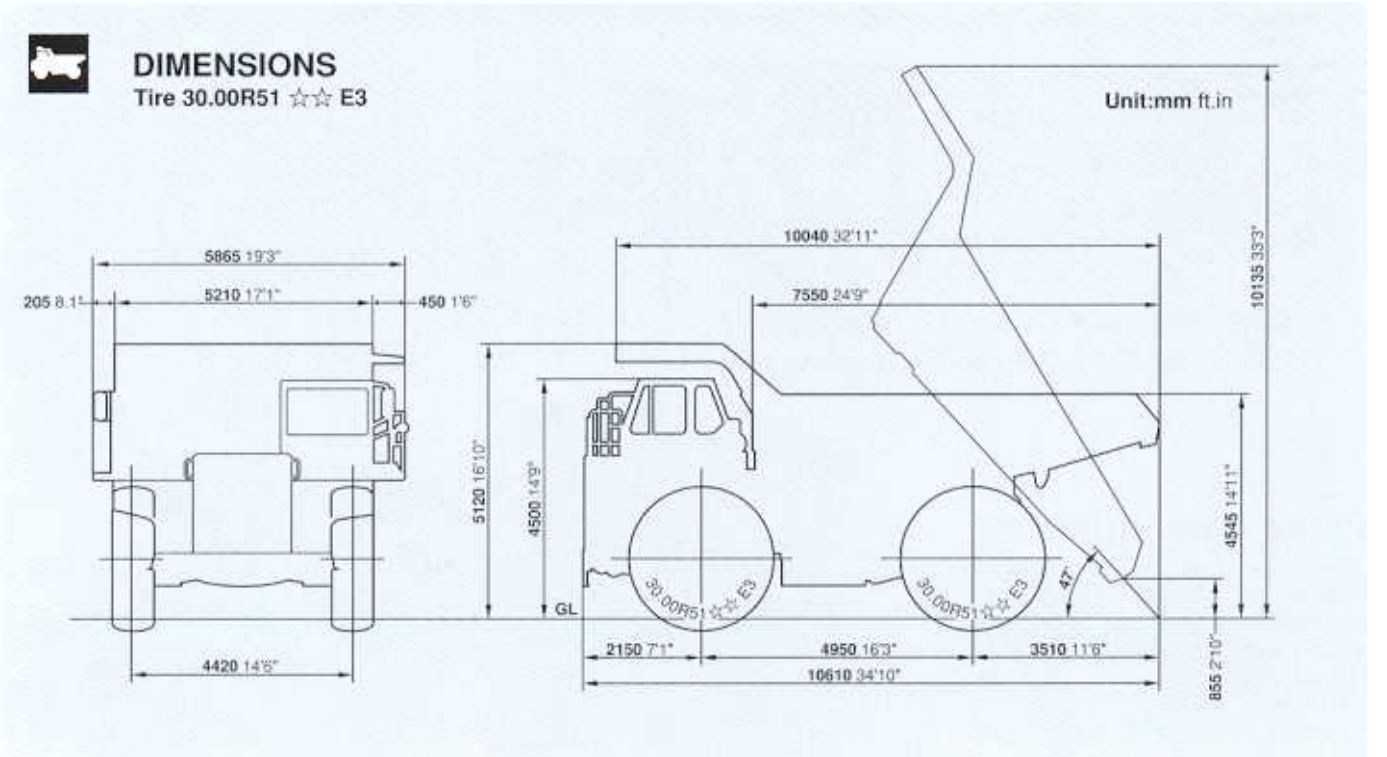
Dimensions comply with ISO 3471 and SAE J1040-1988c ROPS (Roll-Over Protective Structure) standards. The cab is mounted on rubber pads and well insulated.

TIRES

Standard,front and rear ..... 30.00R51☆☆ (E3)

DIMENSIONS

Tire 30.00R51 ☆☆ E3



STANDARD EQUIPMENT

Engine:
- Alternator, 50-ampere
- Engine,Komatsu SA12V140, electronic governor

Tire:
- 30.00R51☆☆

Cab:
- Adjustable suspension seat
- Door pocket
- Floor mat
- Passenger's seat
- Sliding window
- Cab,steel, sound suppression type
- Tilt and telescopic steering wheel
- Windowshield washer and wiper (with intermittent feature)

Safety:
- Air horn
- Cab guard
- Caliper disc parking brake
- Canopy spill guard
- Catwalk with handrails
- Deck rail
- Ladder
- Manual emergency steering
- Rearview mirror
- Rock ejector bar
- Safety pin for body
- Three-way emergency brake system

Instrument panel:
- Electronic display/monitor system (EDIMOS)

Others:
- Body positioner
- Brake oil flow control valve (BCV)
- Circuit breaker
- Exhaust heating body
- Front brake ratio valve
- Fuel sight gauge
- Fuel tank ladder
- Full-automatic transmission with all-speed electronic modulation
- Hydropeumatic suspensions
- Mud guards
- Payload meter II (Memory card type)
- Tire guards
- Towing hooks

OPTIONAL EQUIPMENT

Engine:
- Alternator, 75/90-ampere

Cab:
- Air conditioner
- AM radio
- AM-FM stereo with cassete
- Cigarette lighter and ashtray
- Electric fan
- Heater with defroster
- Sun visor, additional
- Tinted glass
- Wide seat belt (meets SAE J386A criteria)

Body:
- Body liner (welded)
- Non-exhaust heating body

Tire:
- 30.00R51☆☆(E4)

Lighting system:
- Fog lights
- Work light, RH and LH side

Safety:
- ABS [Anti-lock Braking System]
- Additional rearview mirror (R.H)
- ARSC [Auto-retard speed control]
- ASR [Automatic Spin Regulator]
- Automatic emergency steering
- Exhaust retarder
- Fire extinguisher
- ROPS [1015kg]
- ROPS with FOPS [1095kg]
- Tire stopper blocks
- Under-view mirror

Guard:
- Canopy spill guard, additional (Height:300mm) [180kg]
- Engine side covers [105kg]
- Engine underguard [75kg]
- Propeller shaft guard [50kg]
- Transmission underguard

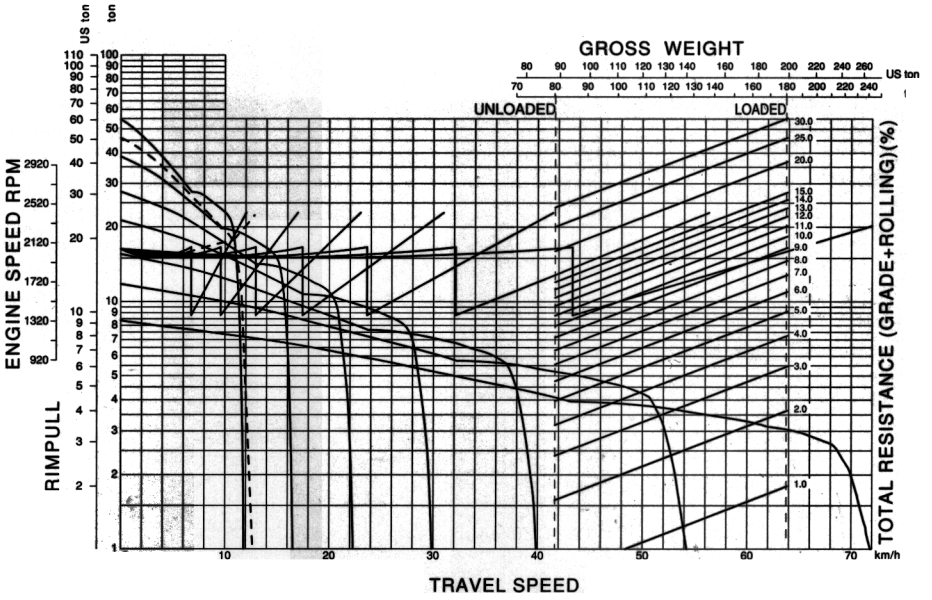
Gauge:
- Power-train Management Controller™(PMC)
- Payload meter I (Printer type)
- Revograph
- Revo-tachograph
- Tachograph

Others:
- Air dryer
- Air tank auto-drain valve
- Automatic three mode suspension (requires EDIMOS)
- Card reader for payload meter II
- Differential lock [110kg]
- Fast fill fuel system
- First service spare parts
- Front brake cut-off system
- Large-capacity battery
- Oil pan heater
- Radiator curtain
- Stairway [250kg]
- Tool kit
- Vandalism protection kit
- Water separtor

] shows the amount of increased weight

TRAVEL PERFORMANCE

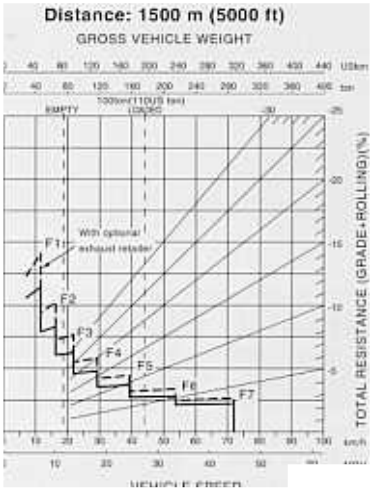
To determine travel performance: Read from gross weight down to the percent of total resistance. From this weight-resistance point, read horizontally to the curve with the highest obtainable speed range, then down to maximum speed. Usable rimpull depends upon traction available and weight on drive wheels.



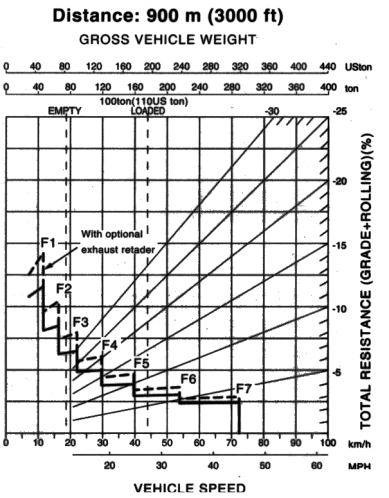
BRAKE PERFORMANCE

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.

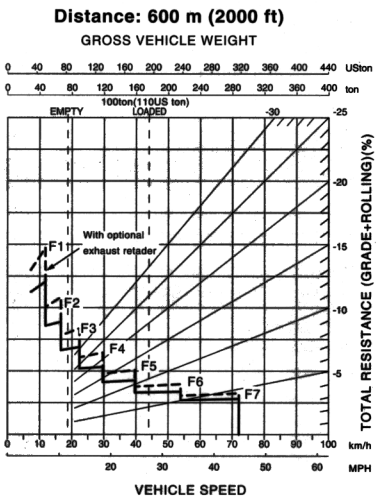
Distance: 1500 m (5000 ft)



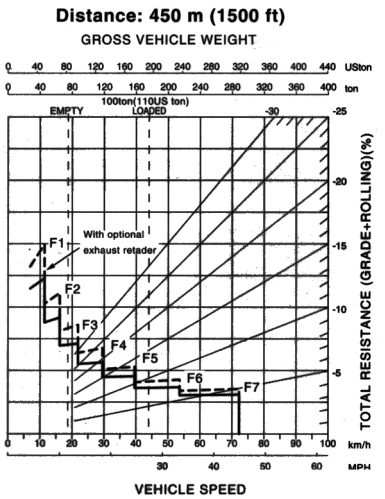
Distance: 900 m (3000 ft)



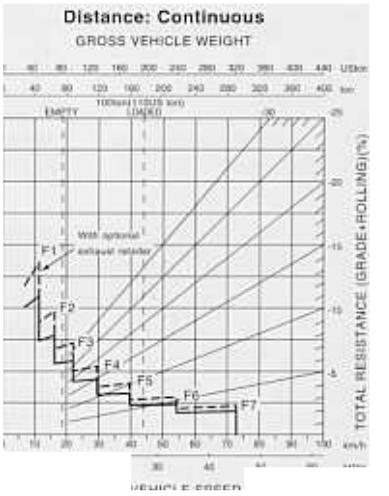
Distance: 600 m (2000 ft)



Distance: 450 m (1500 ft)



Distance: Continuous



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.

KOMATSU

Form No. HESS619100

Printed in Japan 8320 B/ξ (30)