

KOMATSU

HM
350



HM350-1

HM350-1

ARTICULATED DUMP TRUCK

MAXIMUM PAYLOAD
32,3 tonnes

NET HORSEPOWER
290 kW 389 HP

HEAPED CAPACITY
19,8 m³

WALK-AROUND

The HM350-1 offers all around maximum productivity with faster travel speed and many features that enhance efficiency, while reducing maintenance costs. From construction sites to landfill - the HM350-1 excels.

Wide, spacious cab

- The wide cab offers a comfortable operator environment
- Viscous mounts support the cab while absorbing vibrations and noise
- Interior noise level ISO 6394 76 dB(A)

Tiltable cab

can be tilted rearward to provide easy service.

High performance and environment-friendly SAA6D140E-3 engine

- Net horsepower 290 kW / 389 HP
- Meets stage II directive 97/68/EC EU emissions

Fully hydraulic articulated steering

- Light and easy operation
- Minimum turning radius 8,4 m

Differential locks for excellent traction in rough terrain.

The oil-cooled multiple-disc interaxle lock can be turned on and off during travel. In addition, the limited slip differentials prevent the tires on either side from slipping on soft ground for maximum traction.



Komatsu designed, electronically controlled transmission for a comfortable ride.

F6-R2 counter-shaft type transmission with K-ATOMiCS (Komatsu Advanced Transmission with Optimum Modulation Control System).

MAXIMUM PAYLOAD

32,3 tonnes

NET HORSEPOWER

290 kW 389 HP @ 2000 rpm

HEAPED CAPACITY

19,3 m³

Easy-to-Load Body

- Heaped capacity 19,8 m³
- Low loading height 2.840 mm
- Robust body constructed of thick wear-resistant steel with 400 Brinell hardness



All Terrain Hydropneumatic Suspension.

The hydropneumatic suspension in both front and rear suspensions assures a comfortable ride even over rough terrain.

Maintenance-free oscillating pivot with tapered roller bearings

means lower operating costs by eliminating the need for pivot lubrication.

Reliable, continuously cooled, wet type multiple-disc brake and retarder

- Fully hydraulic controlled wet multiple-disc brake
- Retarder Absorbing Capacity (continuous descent)
405 kW 543 HP
583 kW 782 HP (with engine exhaust brake)
(Meets ISO 3450-1996, SAE J1473).

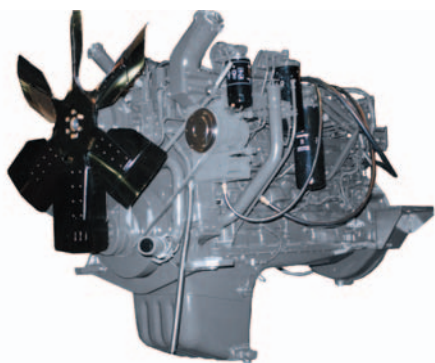


PRODUCTIVITY FEATURES

The combination of high travel speeds and an efficient engine with low emissions delivers maximum productivity at the lowest cost.

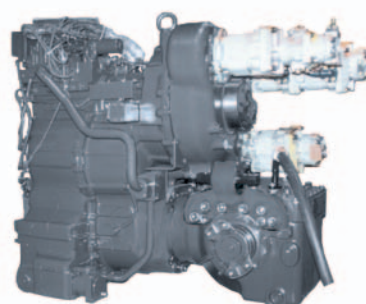
High Performance SAA6D140E-3 Komatsu Engine

This engine delivers faster acceleration and higher travel speeds with the highest horsepower per ton in its class. Advanced technology, such as the Common Rail Injection system (CRI), air to air aftercooler, and an efficient turbo-charger enables the engine to meet the European stage II emission requirements. High torque at low speed, impressive acceleration, and low fuel consumption ensures maximum productivity.



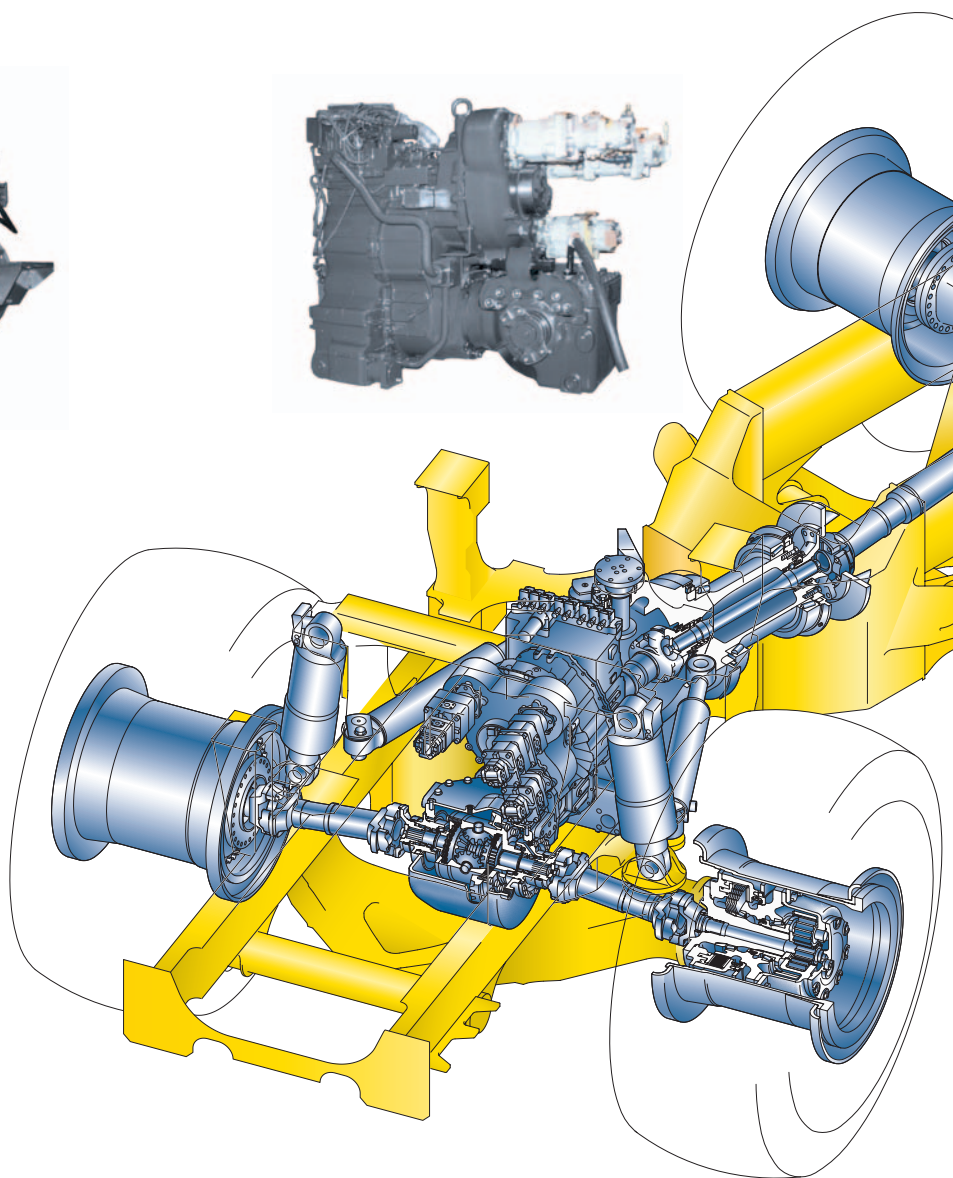
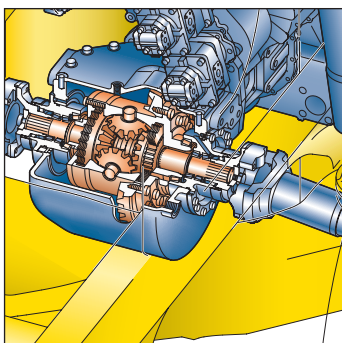
Komatsu Designed Electronically Controlled Countershaft Transmission

The Komatsu designed Electronically Controlled Transmission called K-ATOMiCS has been successfully employed in Komatsu's rigid dump trucks. The electronic clutch modulation system ensures proper clutch pressure when the clutch is engaged. The total control system controls both the engine and transmission by monitoring the vehicle conditions. This high technology system assures smooth shifts without shock.



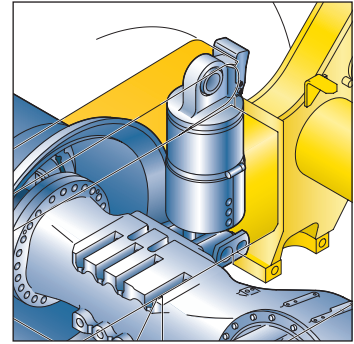
Komatsu Designed Differential Locking Systems

The full-time six-wheel drive system reduces slippage. A wet multiple-disk interaxle clutch also locks the three axles in unison for greater traction. The interaxle lock can be switched on and off while the truck is travelling, thereby boosting productivity. In addition, limited slip differentials prevent the tires on either side from slipping on soft ground.



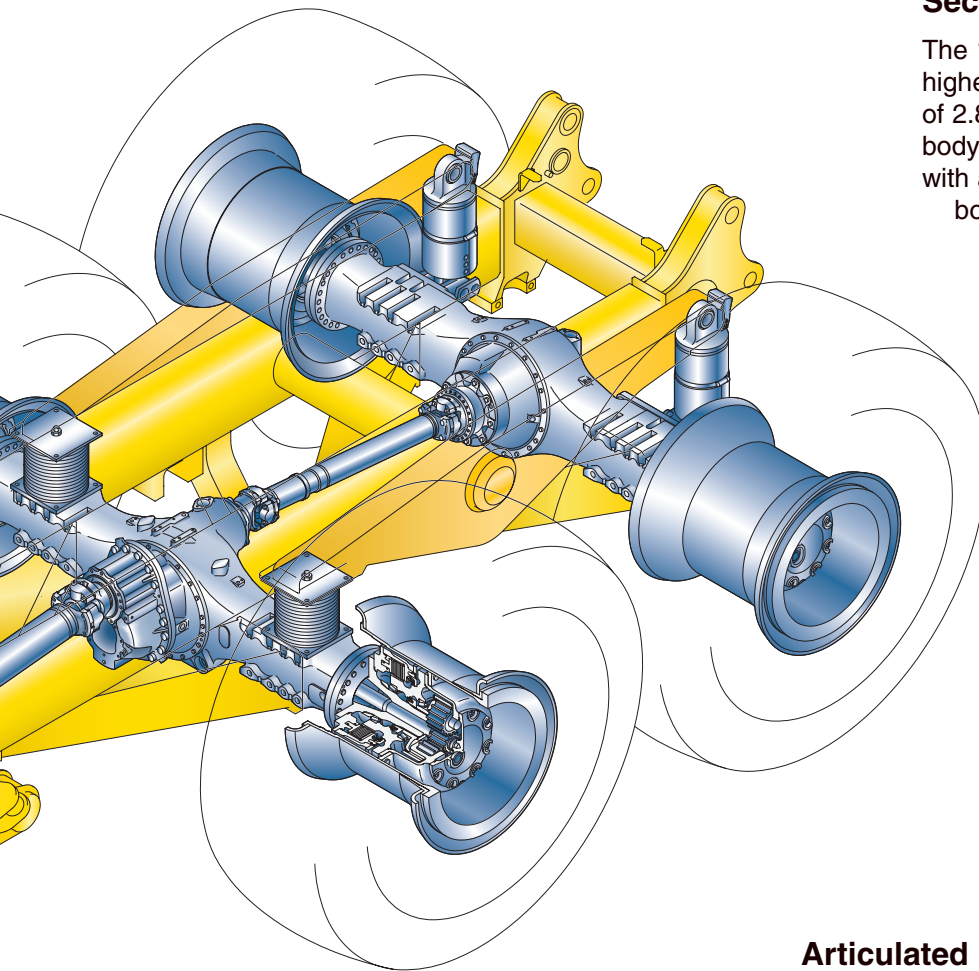
Hydro-pneumatic Suspension

The hydro-pneumatic suspension has been proven on Komatsu's rigid dump trucks. The front axle hydro-pneumatic suspension employs "De Dion" type design, allowing the machine to ride more smoothly over bumps. The rear-axles are mounted on a dynamic equalizer structure equipped with hydro-pneumatic suspension. The entire vehicle's suspension delivers a comfortable ride and maximizes productivity.



Large Capacity Body and Box Section Frame Structure

The 19,8 m³ heaped capacity is among the highest in its class. The low loading height of 2.840 mm enables easy loading. The body is built of thick wear-resistant steel with a Brinell hardness of 400, and the body shape provides excellent load stability. Rugged enough for the toughest jobs, the HM350's frame is designed using a rigid box structure with high strength low alloy steel.

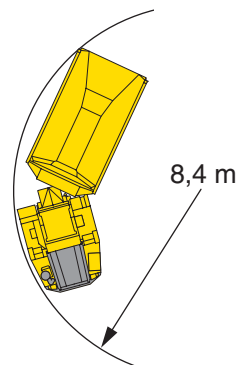


Hydraulically Controlled Wet Multiple-Disc Brakes and Retarder

Wet multiple-disc brakes have been proven on Komatsu rigid dump trucks and wheel loaders ensuring highly reliable and stable brake performance.

Articulated Steering

Fully hydraulic articulated steering offers low-effort operating performance and maneuverability. A minimum turning radius of only 8,4 m provides the freedom to move about in confined areas.



OPERATOR ENVIRONMENT

Komatsu has developed a state-of-the-art, wide comfortable cab. The low level of vibration and noise ensure maximum productivity from the operator.

Wide, Spacious Cab with Excellent Visibility

The wide cab provides a comfortable space for the operator and a full size trainer seat with underseat storage space. Large electrically operated windows and the operator's seat positioned to the left side ensures 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.



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.



Built-in ROPS/FOPS

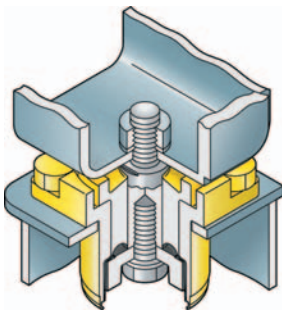
These structures conform to ISO 3471 and SAE J1040-1988 standards.

All Terrain Hydro-pneumatic Suspension

The hydro-pneumatic 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 76 dB(A) noise level (ISO 6394).



Air Suspension Seat

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

Electric Body Dump Control Lever

The low effort lever makes dumping easier than ever.

Supplementary steering is a standard feature

Meets ISO 5010-1992, SAE J1511



EASY MAINTENANCE

The HM350-1 has been designed to keep service time down and productivity up by having a maintenance-free oscillating pivot, a reduced number of grease points, easy access to filters, and longer intervals between oil changes.

Tiltable Cab

The cab can be tilted rearward to provide easy maintenance/service for the engine and transmission.



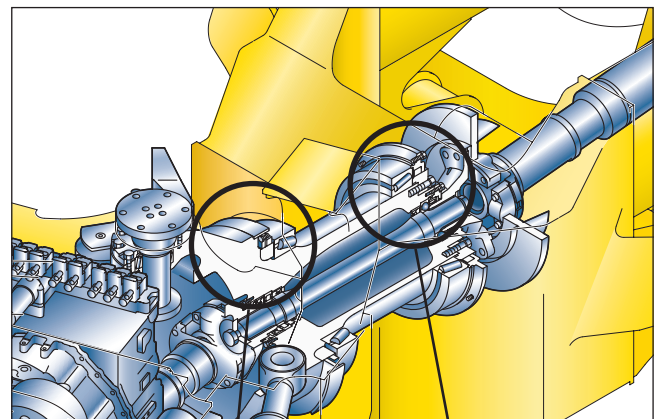
Fewer Grease Points

The number of grease points are minimized by using maintenance-free rubber bushings and a maintenance-free oscillating hitch.

Extended Service Intervals

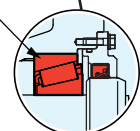
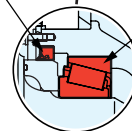
In order to minimize operating costs, service intervals have been extended:

- Engine oil 500 hours
- Transmission oil 1,000 hours
- Engine and transmission filters 500 hours



Oil seal

Taper roller bearing



Guards

The following guards are provided as standard:

- Protective grill for rear window
- Engine underguard
- Transmission underguard
- Propeller shaft guards
- Exhaust thermal guard
- Fire prevention covers

Easy access for filters and lubricants



SPECIFICATIONS



ENGINE

ModelKomatsu SAA6D140E-3
 TypeWater-cooled, 4-cycle
 AspirationTurbo-charged and air-to-air after-cooled
 Number of cylinders6
 Bore140 mm
 Stroke165 mm
 Piston displacement15,24 ltr
 Performance:
 Gross horsepower298 kW 399 HP
 Flywheel horsepower290 kW 389 HP
 Rated RPM2.000 RPM
 Maximum torque199 kg·m
 Fuel systemDirect injection
 GovernorElectronically controlled
 Lubrication system
 MethodGear pump, force-lubrication
 FilterFull-flow type
 Air cleanerDry type with double elements and
 pre-cleaner (cyclopack type), plus dust indicator



TRANSMISSION

Torque converter3-elements, 1-stage, 2-phase
 TransmissionFull-automatic, counter-shaft type
 Speed range6 speeds forward and 2 reverse
 Lockup clutchWet, single-disk clutch
 ForwardTorque converter drive in 1st gear,
 direct drive in 1st lockup and all higher gears
 ReverseTorque converter drive and direct drive in all gear
 Shift controlElectronic shift control with automatic
 clutch modulation in all gear
 Maximum travel speed57,0 km/h

	FORWARD						REVERSE	
Gear	1	2	3	4	5	6	1	2
km/h	7,0	10,7	16,5	25,4	38,6	57,1	7,2	17,0
miles p/h	4,3	6,6	10,3	15,8	24,0	35,5	4,5	10,6



AXLES

Full time all wheel drive with limited slip differentials in all axles.
 Final drive typePlanetary gear
 Ratios:
 Differential3.231
 Planetary4.941



SUSPENSION SYSTEM

FrontHydro-pneumatic suspension
 RearCombined hydro-pneumatic
 and rubber suspension system



STEERING SYSTEM

TypeArticulated type, fully hydraulic power steering
 with two double-acting cylinders.
 Supplementary steeringAutomatically actuated,
 electrically powered (meets SAE J695B)
 Minimum turning radius, wall to wall8,4 m
 Articulation angle45° each direction



BRAKES

Service brakesFull-hydraulic control, oil-cooled
 multiple-disc type.
 Parking brakeSpring applied, caliper disc type
 RetarderFront and center axle brakes act as retarder



MAIN FRAME

TypeArticulated type, box-sectioned
 construction on front and rear



BODY

Capacity:
 Struck14,6 m³
 Heaped (2:1, SAE)19,8 m³
 Payload32,3 metric tons
 Material130 kg/mm²
 high tensile strength steel
 Material thickness:
 Bottom16 mm
 Front8 mm
 Sides12 mm
 Target area
 (inside length x width)5.285 mm x 2.995 mm



HYDRAULIC SYSTEM

Hoist cylinderTwin, 2-stage telescopic type
 Relief pressure20,6 Mpa 210 kg/cm²
 Hoist time12 sec



ENVIRONMENT

Engine emissions Fully complies with European stage 2 exhaust
 emission regulations
 Noise levels at operators ear
 inside cabin (dynamic)LpA 76 dB(A) ISO 6394

SPECIFICATIONS



CAB

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



WEIGHT (APPROXIMATE)

Empty weight28.440 kg
 Gross vehicle weight60.815 kg
 Weight distribution:
 Empty: Front axle55,5%
 Center axle22,25%
 Rear axles22,25%
 Loaded: Front axle30,4%
 Center axle34,8%
 Rear axles34,8%



GROUND PRESSURE

At 75 mm ground penetration and with specified weights and tire pressures:

With tires	26.5 R25	775/65 R29
<i>Unloaded</i>		
Front	130 kpa	120 kpa
Rear	80 kpa	70 kpa
<i>Loaded</i>		
Front	160 kpa	130 kpa
Rear	170 kpa	150 kpa



TIRES

Standard tire26,5 R25



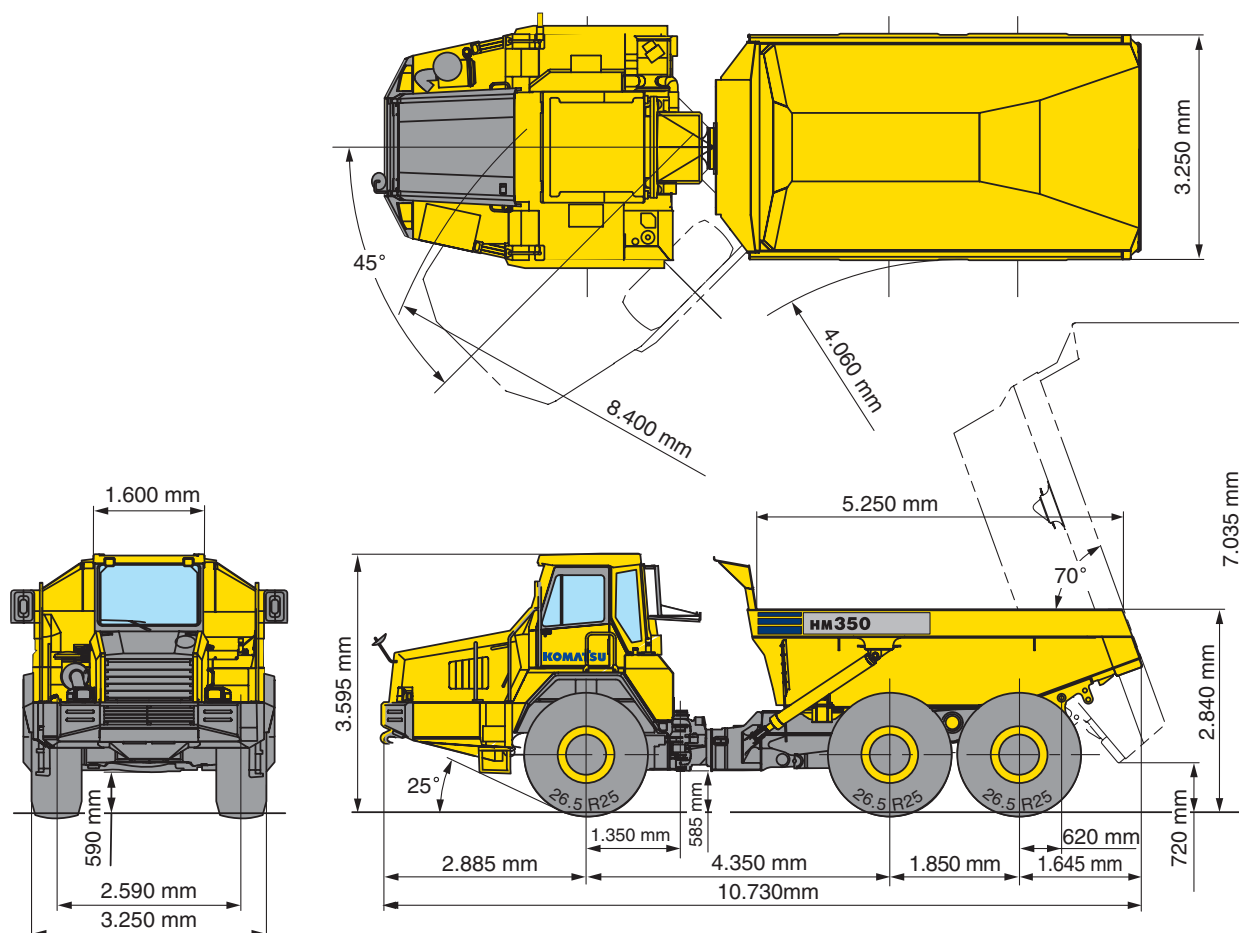
SERVICE REFILL CAPACITIES

Fuel tank495 ltr.
 Engine oil52 ltr.
 Torque converter, transmission and
 retarder cooling115 ltr.
 Differentials (total)96,5 ltr.
 Final drives (total)18,5 ltr.
 Hydraulic system180 ltr.
 Suspension (total)20.4 ltr.



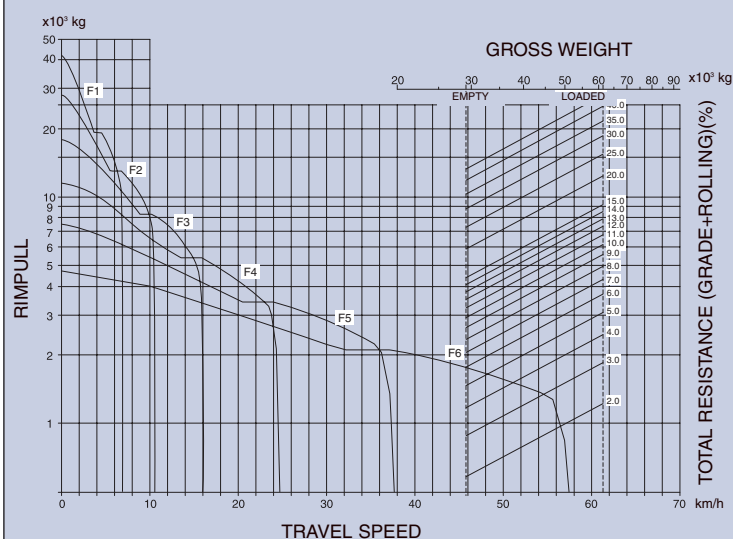


DIMENSIONS

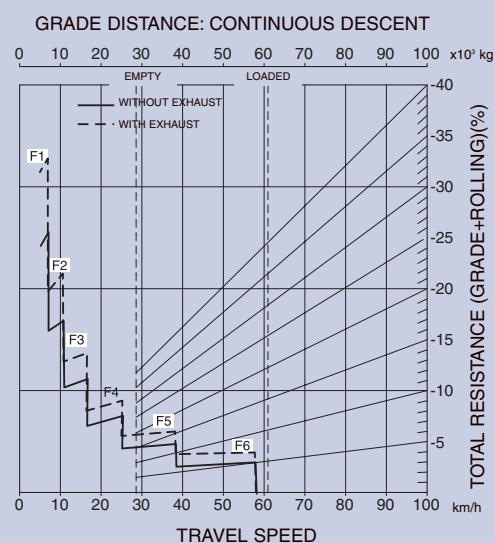


No increase in width by using 875/65R29 tyres. With tyres 775/65R29 width +213 mm, height -40 mm.

TRAVEL PERFORMANCE



BRAKE PERFORMANCE



ARTICULATED DUMP TRUCK



STANDARD EQUIPMENT

ENGINE

- Alternator 75/A24V
- Dual element air cleaner
- Batteries, 170 Ah/2 x 12V
- Engine Exhaust brake
- Electric Governor
- Komatsu SAA6D140E-3 engine
- Exhaust muffler with stack
- Fully automatic K-ATOMIC transmission
- 11 KW starter
- Fuel/water separator

CAB

- ROPS FOPS
- Dual entry
- Air suspension seat with 78mm seat belt
- Trainer's seat
- Air conditioner/heater/defroster

- Provision for Radio Cassette
- Electric windows
- 12 Volt Electrical Outlet
- Cigarette Lighter & Ashtray
- Cupholder
- Hazard Warning Lights
- Electronic Hoist control
- Telescopic & Tilting Steering Wheel
- EMS Instrument Panel
- Tilttable cab for easy serviceability
- Windscreen washer and wiper – front and rear

BODY

- 19.8m³ body
- Muffler No body heating
- Mudflaps in front of leading rear wheels

LIGHTING SYSTEM

- Reverse light
- Hazard light system
- Headlights with dimmer switch
- Stop, tail and turn signal lights
- Front working lights
- Side working lights

STANDARD TYRES

- 26.5 R25 tyres

GENERAL

- Spare Parts for First Service
- General Tool Kit
- Cap & Overall

MACHINE PROTECTION/ SECURITY

- Transmission Guard
- Engine UnderGuard

- Front Propshaft Guard
- Rear Propshaft Guard
- Rear Window Guard
- Supplementary steering
- Emergency Brake
- Overturn warning system
- Underview Mirror
- Rearview Mirrors
- Retarder /brake system continuously cooled

MACHINE

- Cab tilt Cylinder
- Central greasing
- Limited Slip Differentials in all axles
- Back up alarm
- Platform hand rails
- Electric horn
- Interaxle lock clutch type
- Ladders, left & right sides

OPTIONAL EQUIPMENT

TIRES

- 775/65 R29 tyres

LIGHTS

- Fog Light
- Flashing Amber Beacon
- Light for Ladder

BODY

- Heated Body
- Wire Operated Overhung
- 20 cm side extensions
- Body wear plates

SECURITY

- Rear view TV Monitor
- Fire Extinguisher
- Additional Rear view Mirrors

- Electric Fan
- Cold Area Arrangement (-30)
- Hot and Sandy Arrangement
- Automatic lubrication system
- Engine Oil & Coolant Heater
- 30 Ton Jack
- Suspension Gas Tool
- 100% Differential Lock
- Engine exhaust brake

KOMATSU

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