

KOMATSU®

HM400-1

GROSS HORSEPOWER

331 kW 444 HP

NET HORSEPOWER

321 kW 430 HP

MAXIMUM GVW

66,875 kg 147,435 lb

HM
400

ARTICULATED DUMP TRUCK



Photo may include optional equipment

GALEO

HM400-1 Articulated Dump Truck

WALK-AROUND

The HM400-1 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 HM400-1 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 76 dB(A)

Tiltable cab can be tilted rearward to provide easy service.

High performance and environment-friendly SAA6D140E-3 engine

- Gross horsepower 331 kW **444 HP**
- Meets North American EPS Tier II emission regulations for 2001



Fully hydraulic articulated steering

- Light and easy operation
- Minimum turning radius 8.7 m **28'7"**

Interaxle and differential locks for excellent traction in rough terrain. The oil-cooled multiple-disk interaxle lock and differential locks can be turned on and off during travel. In addition, the differential locks can lock up all three axles' differentials for maximum traction.

HM400-1

ARTICULATED DUMP TRUCK

GROSS HORSEPOWER
331 kW **444 HP** @ 2000 rpm

NET HORSEPOWER
321 kW **430 HP** @ 2000 rpm

MAXIMUM GVW
66,875 kg **147,435 lb**

Komatsu designed electronically controlled transmission for a comfortable ride.

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

Easy-to-Load Body

- Heaped capacity 22.3 m³ **29.2 yd³**
- Low loading height 2970 mm **9'9"**
- Robust body constructed of thick wear-resistant steel having 400 Brinell hardness



Hydropneumatic Suspension for all terrains.

The hydropneumatic suspension assures a comfortable ride even over rough terrain.

Maintenance-free oscillating hitch

means lower operating costs by eliminating the need to lubricate the hitch.

Reliable wet type multiple-disk brake and retarder

- Fully hydraulic controlled wet multiple-disk brake
- Retarder Absorbing Capacity (continuous descent)
405 kW **544 HP**
583 kW **782 HP** (with optional exhaust retarder)

GALEO

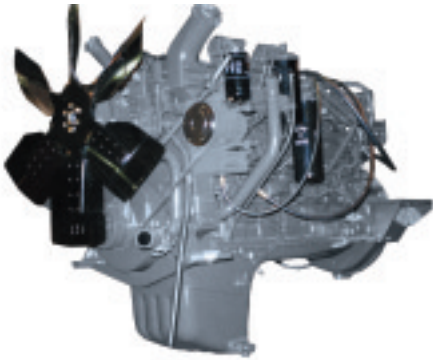
Komatsu's highly productive, innovative technology, environmentally friendly machines built for the 21st century.

PRODUCTIVITY FEATURES

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

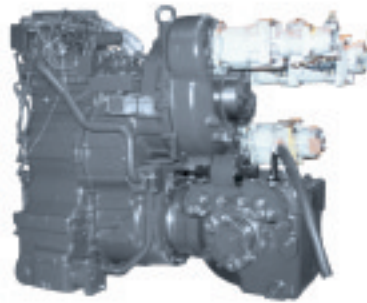
High Performance SAA6D140E-3 Engine

This engine delivers faster acceleration and higher travel speeds with the highest horsepower per ton in its class. Advanced technology, such as high-pressure electronic controlled injection system (CRI), air to air aftercooler, and an efficient turbocharger enabling the engine to meet the North American EPA Tier II emission requirements. High torque at low speed, impressive acceleration, and low fuel consumption ensures maximum productivity.



Komatsu Designed Electronically Controlled Transmission

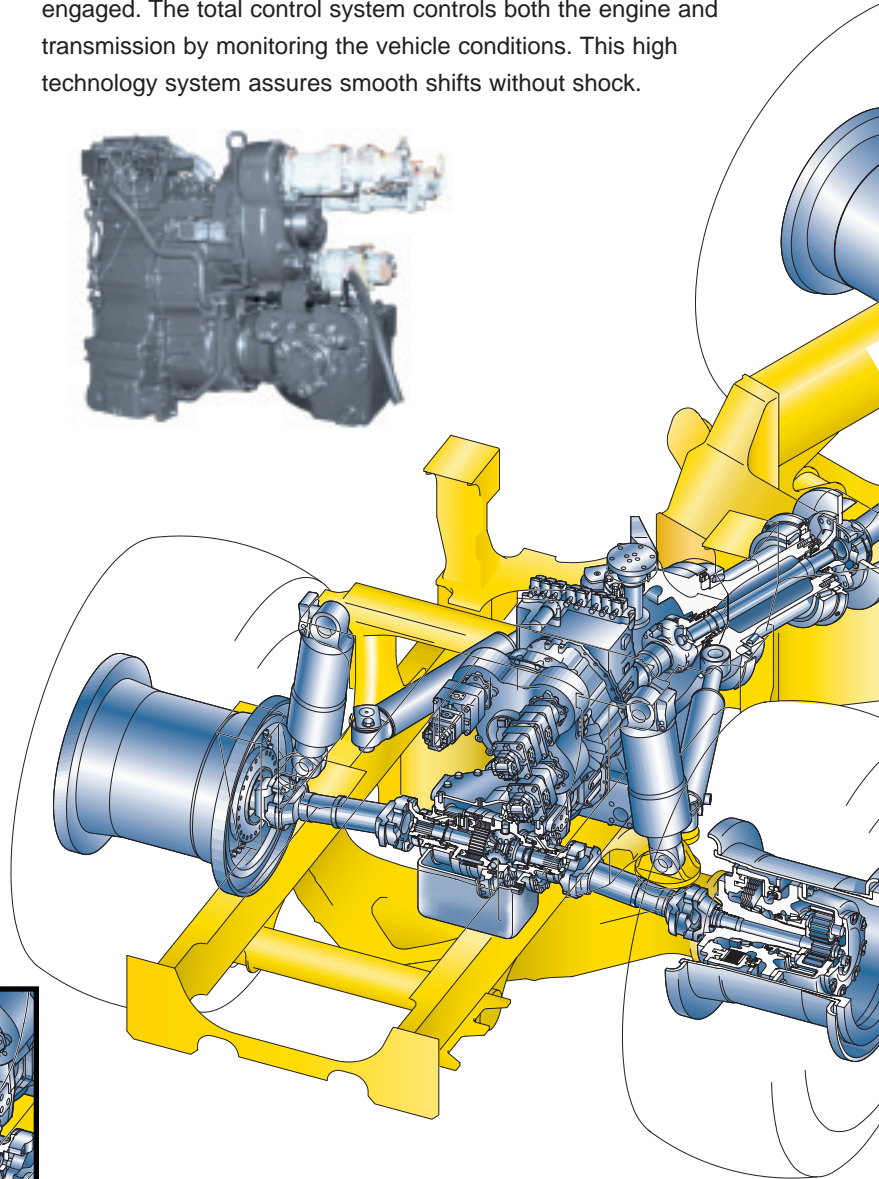
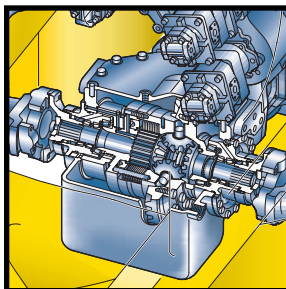
The Komatsu designed Electronically Controlled Transmission called K-ATOMiCS has been successfully employed in Komatsu's rigid dump trucks. The electronic clutch modulation system ensures proper clutch pressure when the clutch is engaged. The total control system controls both the engine and transmission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



Interaxle and Differential Locking Systems

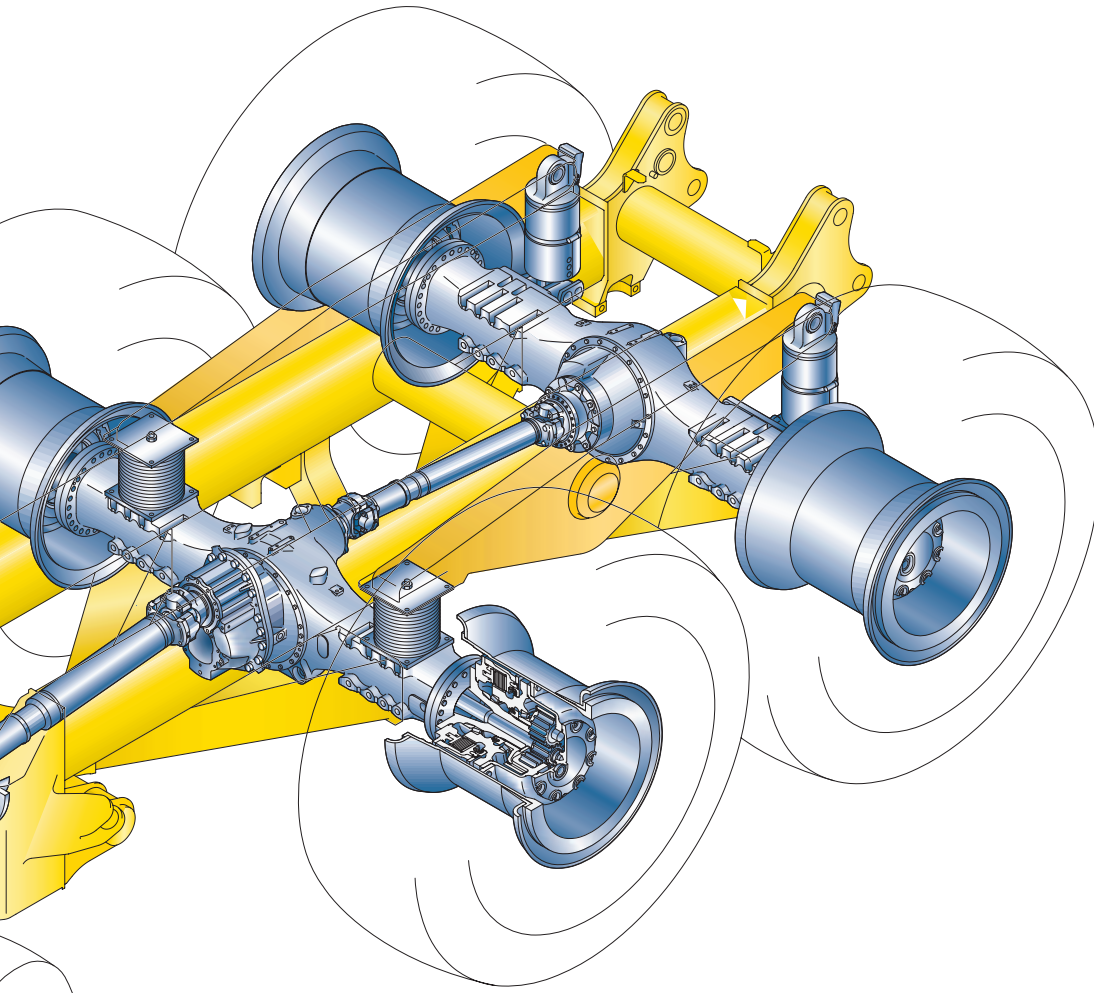
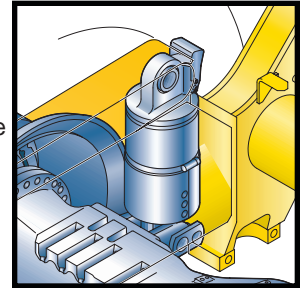
The full-time six-wheel drive system reduces slippage. A wet multiple-disk interaxle clutch also locks the three axles in unison for greater traction. The interaxle lock and differential locks can be switched on and off while the truck is travelling, thereby boosting productivity.

In addition, the differential lock switch, which is a three position switch, can lock up the rear axle differentials only, or all axles for maximum performance in the worst conditions.



Hydropneumatic Suspension

The hydropneumatic suspension has been proven on Komatsu's rigid dump trucks. The front axle 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 hydropneumatic suspension. The entire vehicle's suspension delivers a comfortable ride and maximizes the productivity.



Large Capacity Body and Box Section Frame Structure

The 22.3 m³ 29.2 yd³ heaped capacity is among the highest in its class. The low loading height of 2970 mm 9'9" 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 HM400's frame is designed using a rigid box structure with high strength low alloy steel.

Fully Hydraulically Controlled Wet Multiple-Disk Brakes and Retarder

Wet multiple-disk brakes have been proven on Komatsu dump trucks and wheel loaders. They ensure highly reliable and stable brake performance. The large-capacity wet-multiple disk brakes also function as a highly responsive retarder which gives the operator greater confidence when travelling downhill.

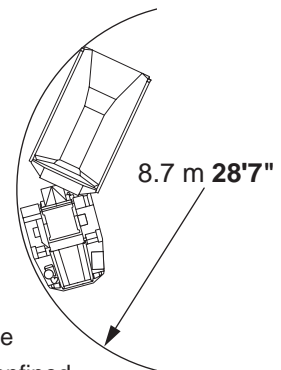
Retarder Absorbing Capacity (continuous descent):

405 kW **544 HP**

583 kW **782 HP** (with optional exhaust retarder)

Articulated Steering

Fully hydraulic articulated steering offers low-effort operating performance and maneuverability. A minimum turning radius of only 8.7 m 28'7" 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

The wide cab provides a comfortable space for the operator and a full size buddy seat. 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.

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 76 dB(A) noise level



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 and Secondary Brakes

Supplementary steering and secondary brakes are standard features.

Steering: ISO 5010-1992, SAE J1511

Brakes: ISO 3450-1996, SAE J1473



Photo may include optional equipment

EASY

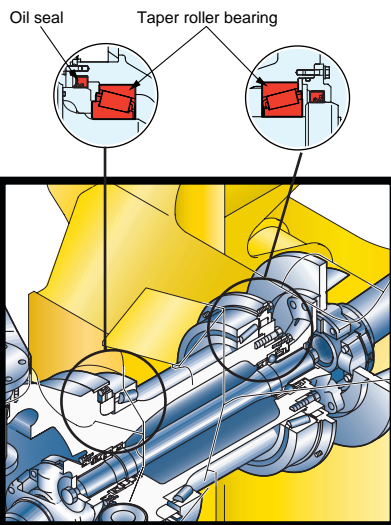
MAINTENANCE

The HM400-1 has been designed to keep service time down and productivity up by having a maintenance-free oscillating hitch, 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.

Note: An external hydraulic pump is required to tilt the cab or a service crane can be used.



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 1000 hours
- Engine and transmission filters 500 hours

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



SPECIFICATIONS



ENGINE

Model	Komatsu SAA6D140E-3
Type	Water-cooled, 4-cycle
Aspiration	Turbo-charged and air-to-air after-cooled
Number of cylinders	6
Bore	140 mm 5.51"
Stroke	165 mm 6.50"
Piston displacement	15.2 ltr 928 in³
Performance:	
Gross horsepower	331 kW 444 HP
Flywheel horsepower	321 kW 430 HP
Rated RPM	2000 RPM
Maximum torque	208.5 kg•m 1,508 ft. lb
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, plus dust indicator



TRANSMISSION

Torque converter	3-elements, 1-stage, 2-phase
Transmission	Full-automatic, counter-shaft type
Speed range	6 speeds forward and 2 reverse
Lockup clutch	Wet, single-disk clutch
Forward	Torque converter drive in 1st gear direct drive in 1st lockup and all higher gears
Reverse	Torque converter drive and direct drive in all gear
Shift control	Electronic shift control with automatic clutch modulation in all gear
Maximum travel speed	58.6 km/h 36.4 mph



AXLES

Full time all wheel drive with 100% differential lock in all axles.	
Final drive type	Planetary gear
Ratios:	
Differential	3.417
Planetary	4.941



SUSPENSION SYSTEM

Front	Hydropneumatic suspension
Rear	Combined hydropneumatic and rubber suspension system



STEERING SYSTEM

Type	Articulated type, fully hydraulic power steering with two double-acting cylinders.
Supplementary steering	Automatically actuated, electrically powered (meets SAE J695B)
Minimum turning radius, wall to wall	8.7 m 28'7"
Articulation angle	45° each direction



BRAKES

Service brakes	Full-hydraulic control, oil-cooled multiple-disc type on all wheels
Parking brake	Spring applied, caliper disc type
Retarder	Front and center axle brakes act as retarder



MAIN FRAME

Type	Articulated type, box-sectioned construction on front and rear
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BODY

Capacity:	
Struck	16.5 m ³ 21.6 yd³
Heaped (2:1, SAE)	22.3 m ³ 29.2 yd³
Payload	36.5 metric tons 40 U.S. tons
Material	130 kg/mm ³ 184925 psi high tensile strength steel
Material thickness:	
Bottom	16 mm 0.63"
Front	8 mm 0.31"
Sides	12 mm 0.47"
Target area	
(inside length x width)	5629 mm x 3194 mm 18'6" x 10'6"
Heating	Exhaust heating (option)



HYDRAULIC SYSTEM

Hoist cylinder	Twin, 2 -stage telescopic type
Relief pressure	20.6 Mpa 210 kg/cm ² 2,990 psi
Hoist time	12 sec



CAB

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



WEIGHT (APPROXIMATE)

Empty weight	30300 kg 66,800 lb
Gross vehicle weight	66875 kg 147,435 lb
Weight distribution:	
Empty: Front axle	55%
Rear axles	45%
Loaded: Front axle	28%
Rear axles	72%



TIRES

Standard tire	29.5 R25
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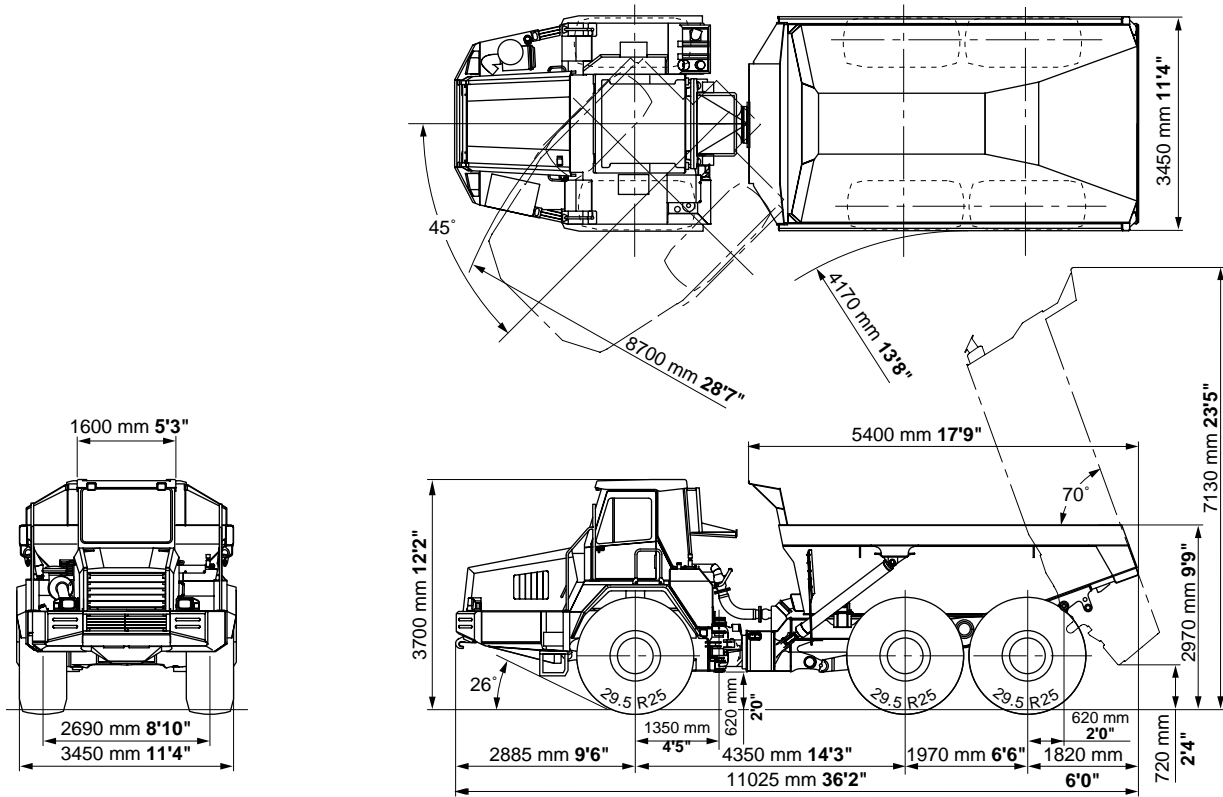


SERVICE REFILL CAPACITIES

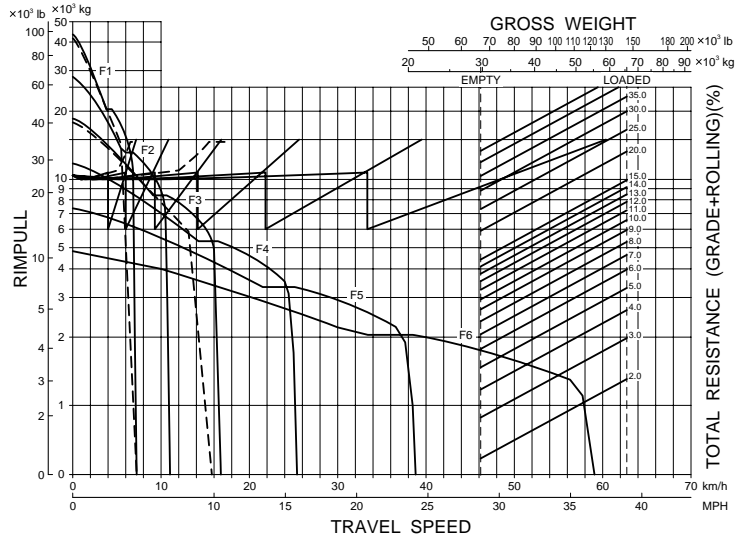
Fuel tank	495 ltr. 130.8 U.S. Gal
Engine oil	52 ltr. 13.7 U.S. Gal
Torque converter, transmission and retarder cooling	115 ltr. 30.4 U.S. Gal
Differentials (total)	54.5 ltr. 14.4 U.S. Gal
Final drives (total)	35 ltr. 9.2 U.S. Gal
Hydraulic system	180 ltr. 47.6 U.S. Gal
Suspension (total)	28.4 ltr. 7.5 U.S. Gal



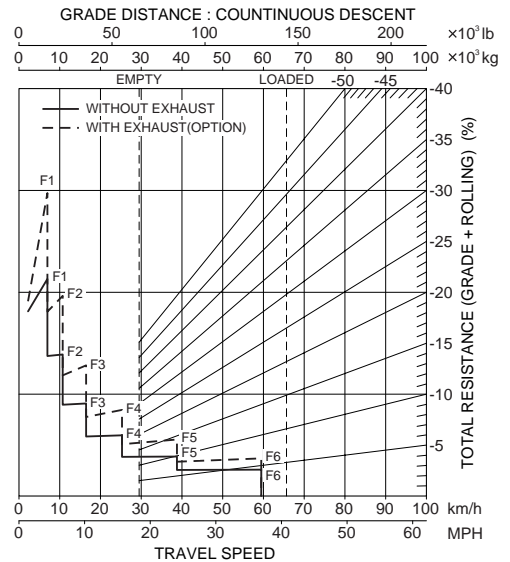
DIMENSIONS



TRAVEL PERFORMANCE



BRAKE PERFORMANCE





STANDARD EQUIPMENT FOR BASE MACHINE

ENGINE:

- Alternator, 50A/24V
- Air cleaner, dry type with double elements and precleaner, plus dust indicator
- Batteries, 170 Ah/2 x 12V
- Electric governor
- Engine, Komatsu SAA6D140E-3, turbo-charged and air to air aftercooled, high pressure common rail injection system, 2001 NA Tier II certified, diesel
- Exhaust muffler with stack
- Full-automatic F6 R2 transmission with K-ATOMiC shift control and automatic T/C lockup
- Starting motor, 11.0 kW
- Separator, fuel/water

CAB:

- Air conditioner/heater/defroster, electronically controlled
- Ashtray and cigarette lighter
- Cup holder
- Dual entry
- Electronic hoist control system
- Electronic maintenance display/monitoring system
- Floor mat
- Power windows
- Radio AM/FM with cassette
- Rear window guard
- Seat, air suspension, reclining (fabric)
- Seat, passenger, with 3" seat belt

- Seat belt, operator's, 3" width, retractable
- Storage space under seat and right arm-rest
- Sun visor, front window
- Tilt and telescopic steering wheel
- Tilt cab arrangement for easy service-ability
- Tinted glass
- Windshield washer and wiper (front and rear)

LIGHTING SYSTEM:

- Back-up light
- Hazard light system
- Headlights with dimmer switch
- Stop, tail and turn signal lights
- Working lights, front

GUARD AND COVERS:

- Engine oil pan
- Driveline guards, front and rear
- Transmission underguard
- Mudguards for front and rear tires
- Exhaust/muffler thermal guard

MONITORING SYSTEM:

- Instrument panel (digital display with service meter and odometer, fuel gauge, speedometer, tachometer, coolant temperature, torque converter oil temperature, retarder oil temperature)

- Warning light and alarm system (parking brake, dump body float, fuel, secondary steering, coolant temperature, torque converter oil temperature, retarder oil temperature, battery charge, steering oil temperature, engine oil pressure, retarder oil pressure, tilt caution, engine system, transmission system, retarder system)

OTHER STANDARD EQUIPMENT:

- Alarm, backup
- Body, 22.3 m³ 29.2 yd³
- Centralized greasing
- Differential lock in all axles, clutch type with electric controls
- Electric circuit breaker, 24 volt
- Electronic hoist control system
- Hand rails for platform
- Horn, electric
- Hydropneumatic suspension, front and rear
- Interaxle lockup, clutch type
- Ladders, left and right hand side
- Rearview mirrors
- Rearview mirrors, additional, left and right hand side
- Retarder/brake system, continuously cooled
- Steering system, automatic electric supplemental
- Tire, 29.5R25 Bridgestone VLT with rims
- Under view mirror, front



OPTIONAL EQUIPMENT

BODY:

- Delete body
- Body exhaust heating kit
- Tail gate

LIGHTING SYSTEM:

- Fog lights
- Side working lights, left and right side

OTHER:

- Alternator, 75A, 24V
- Batteries, large capacity

TIRES:

- Bridgestone – 29.5R25 VLTS
- Michelin – 29.5R25 XADN
– 29.5R25 XADT
- Goodyear – 875/65 R29 GP4D

SUPPORT

Count on Komatsu and your local distributor for the support you deserve. Our success depends on satisfying your need for productive equipment and supporting that equipment. That's why we have one of the largest and strongest heavy-equipment distributor organizations in North America. Their personnel are not only trained to help you select the equipment that is best-matched for your business but to support that equipment.



Finance Through its finance company, Komatsu can offer you a wide variety of financing alternatives designed to meet your needs. Programs include municipal leases for governmental agencies, conditional sales contracts, and leases with \$1 purchase options for customers interested in owning their equipment. Ask your distributor about Komatsu leasing. We offer finance and operating leases and the unique *Advantage Lease* which offers you predetermined purchase, return, and renewal options.



Parts Three computer-linked parts distribution centers provide fast access to anywhere in the U.S. and Canada. Most parts are available overnight. Plus, Komatsu distributors keep a large assortment of commonly used parts in stock for immediate access.



Remanufactured parts Save money and still have the same warranty as new parts at a fraction of the cost with like-new remanufactured parts.



Maintenance Take advantage of the experience we have gained and ask your distributor about our factory-supported programs including: regular scheduled maintenance, oil and wear analysis, diagnostic inspections, undercarriage inspections, training, special service tools, parts programs, and even a special software program to help your distributor keep track of and manage service-related data.

KOMATSU®

Komatsu America International Company
440 N. Fairway Dr., Vernon Hills, IL 60061

