

KOMATSU®

HD1500-8

HD
1500

HORSEPOWER

Gross: 1175 kW 1576 HP/1900 min⁻¹

Net: 1103 kW 1479 HP/1900 min⁻¹

RATED PAYLOAD

142 metric tons

BODY CAPACITY (Heaped 2:1, SAE)

78 m³/94 m³



Photos may include optional equipment.

WALK-AROUND





ECOLOGY & ECONOMY

- High Performance Komatsu SDA16V159-3 Engine, U.S. EPA Tier 2 Emission Regulation Equivalent **NEW**
- Energy Saving Operation **NEW**

PERFORMANCE

- Automatic Retard Speed Control (ARSC)
- Komatsu Designed Electronically Controlled Transmission
- Komatsu Traction Control System (KTCS) **NEW**

OPERATOR COMFORT & SAFETY

- Ergonomically Designed Cab **NEW**
- Electronic Hoist Control **NEW**
- Air Suspension Seat, with Heater and Ventilation **NEW**
- Tilt-away Steering Column **NEW**
- Hydropneumatic Suspension
- Built-in ROPS (ISO 3471) / FOPS (ISO 3449) Cab
- Secondary Steering and Brake

INFORMATION & COMMUNICATION TECHNOLOGY (ICT)

- Machine Monitor with High Resolution 7-inch Color Liquid Crystal Display (LCD) Unit **NEW**
- KomVision, All Round Monitor System, with Camera and Radar **NEW**
- Road Condition Analysis System **NEW**
- KOMTRAX Plus

RELIABILITY

- High-rigidity Frame
- Robust Dump Body Design
- Loading Policy
- Payload Meter (PLM)

MAINTENANCE

- Service Center: Engine, Transmission, Brake Oil and Coolant
- Automatic Greasing System, with Refill Port

HD1500-8

HORSEPOWER	Gross:	1175 kW 1576 HP/1900 min ⁻¹
	Net:	1103 kW 1479 HP/1900 min ⁻¹
RATED PAYLOAD		142 metric tons
BODY CAPACITY (Heaped 2:1, SAE)		78 m ³ /94 m ³

ECOLOGY & ECONOMY

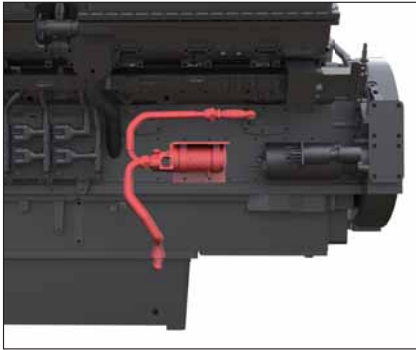
Komatsu SDA16V159-3 Engine

1175 kW (1576 HP) gross horsepower engine is available as U.S. EPA Tier 2 emission equivalent or optimized fuel economy calibration.

Engine Prelub™* System

This system automatically and safely fills filters and all oil passages with oil prior to cranking every time when starting the engine, and avoids dry starts.

* Prelube™ is a trademark of Cummins Inc.

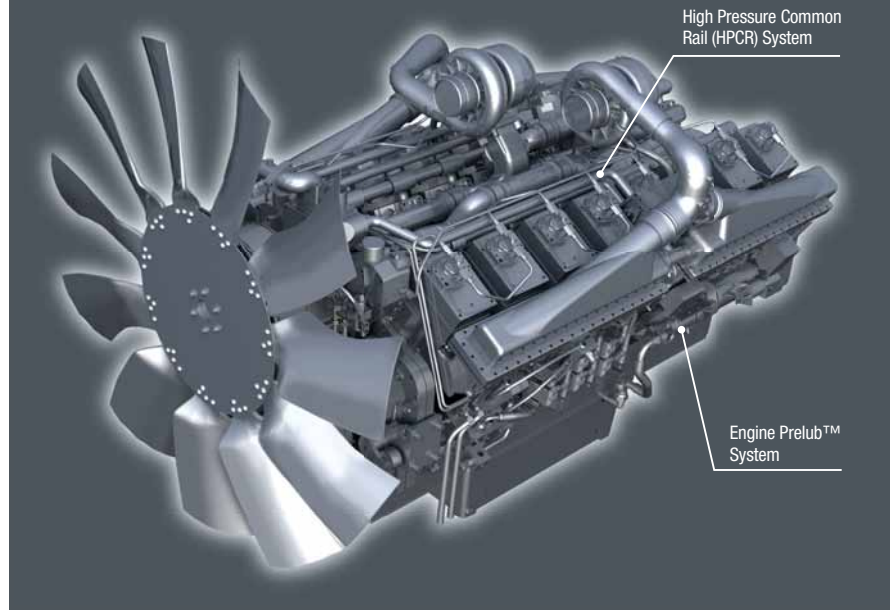


Ether Start System

This system provides maximum cold weather starting assistance for frequent starting below -4°C.

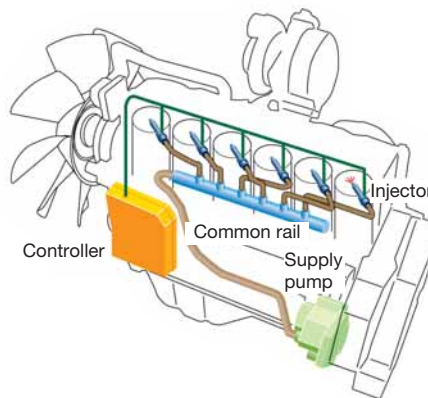


KOMATSU SDA16V159-3 ENGINE



High Pressure Common Rail (HPCR) Fuel Injection System

This system is designed to achieve an optimal injection of high-pressure fuel by means of computerized control, thereby achieving near complete combustion to reduce PM emissions.



Low Fuel Consumption

Latest Komatsu “on demand” energy saving technologies achieve lower fuel consumption while keeping high productivity.

- Variable displacement piston pumps for steering & hoist circuit
- Improvements in management of hydraulic pressure for transmission control

Electronic Control System

The electronic control system performs high-speed processing of all signals from various sensors installed on the vehicle and the engine. This ensures effective integration of machine components. Engine condition is displayed on the monitor inside the cab, providing necessary information to the operator. Additionally, managing the information via KOMTRAX Plus helps customers schedule and track required maintenance actions.

Engine Cooling Fan Clutch

The engine cooling fan is driven using a fan clutch. It is fully engaged, half engaged or off depending on the coolant temperature, etc. It minimizes the fuel loss, and prevents overcool/overheat.



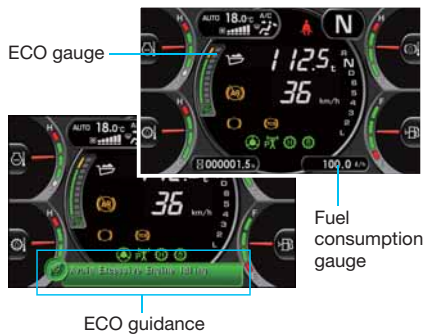
Energy Saving Operation

In order to support optimum operation, an easy-to-read ECO gauge is on the LCD unit of the machine monitor as well as showing L/h on the fuel consumption gauge. The ECO gauge indicates a momentary fuel consumption rate during operation. Operating the vehicle with the gauge in the green zone ensures energy saving operation.

Fuel consumption rate depends on the application and the accelerator pedal operation.

In addition, the following ECO guidance messages are displayed for fuel saving operation.

- **Avoid excessive engine idling.**
- **Release the hoist lever**
- **Operating the accelerator pedal with brake actuated lowers fuel economy, etc.**



Selectable Operating Modes

The operator can choose between two operating modes, Economy Mode or Power Mode, according to machine operating condition and/or course profile.



Power mode

P Appropriate for higher production jobs and uphill hauling applications. The power mode increases the engine maximum output and raises the upshift and downshift engine speeds during operation.

Economy mode

E Appropriate for lighter work on flat ground. The economy mode lowers the engine maximum output along with lowering the upshift and downshift engine speeds during operation.

Brake Cooling Oil Recovery Tank

In order for the environmental conservation, a tank is installed on each front and rear wheel to capture the oil in the event of brake cooling oil leakage from the floating seal.



Lead-free Radiator

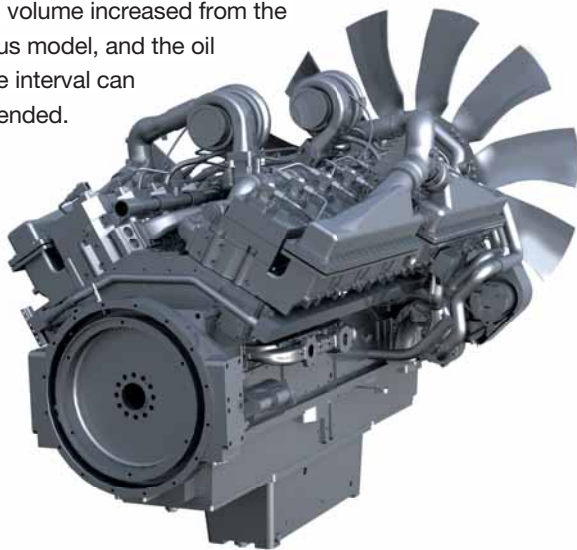
Individual radiator core tube consists of copper tube and aluminum fin is lead-free, and meet the global environmental requirements.



PERFORMANCE

High Performance Komatsu SDA16V159-3 Engine

Powerful and fuel efficient Komatsu SDA16V159-3 engine on HD1500-8 delivers 1175 kW (1576 HP) gross horsepower at 1900 min⁻¹, approx. 6% more than the previous model. It delivers greater acceleration and higher travel speeds with a high horsepower-to-ton rate. High torque at low speeds and impressive acceleration ensure maximum productivity with low fuel consumption. Powertrain components are redesigned to accommodate the increased power. The engine oil pan volume increased from the previous model, and the oil change interval can be extended.



Long Wheelbase and Wide Tread

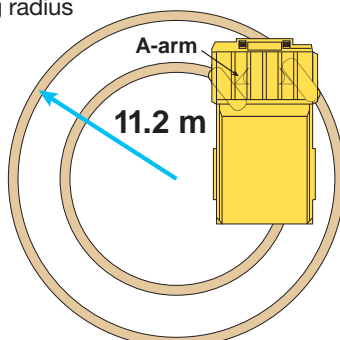
With an extra-long wheelbase, a wide tread and a low center of gravity, the HD1500-8 hauls the load at higher speed for greater productivity, and delivers superior driving comfort over rough terrain.

Small Turning Radius

McPherson strut type front suspension has a special A-arm 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 turning angle provides a smaller turning radius to the vehicle.

Minimum Turning Radius:
11.2 m

Turning radius varies depending on ground conditions and/or vehicle speed.

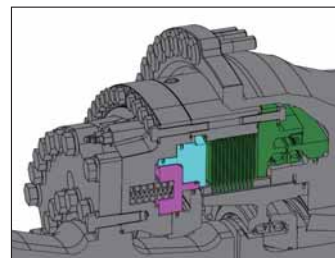


Fully Hydraulic Controlled Wet Multiple-disc Brakes and Retarder

Wet multiple-disc brakes on all 4 wheels ensure highly reliable and stable brake performance. Large-capacity continuously oil cooled multiple-disc brakes on all 4 wheels also function as highly responsive retarder which gives the operator a greater confidence at higher speeds when traveling downhill.

Retarder Absorbing Capacity: 1750 kW*

* At ambient temperature 40°C
Retarder performance varies depending on ambient temperature.



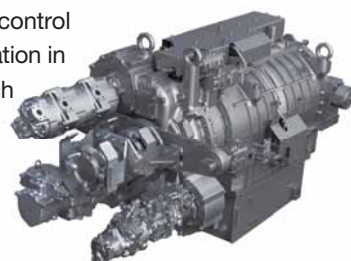
7-speed Fully Automatic Transmission

The transmission is designed to have 7 forward and 1 reverse gears. Fully automatic control selects the optimum gear depending on vehicle speed and the engine speed. The shift point automatically changes depending on the acceleration of the vehicle to minimize unnecessary fuel consumption. The reverse gear ratio can be selected from 2 on the LCD unit.

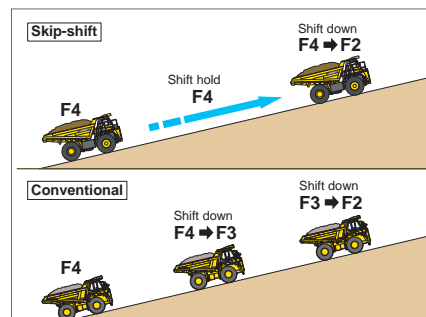


Komatsu Advanced Transmission with Optimum. Modulation Control System (K-ATOMiCS) with Skip Shift Function

K-ATOMiCS, electronic shift control with automatic clutch modulation in all gears, optimizing the clutch engagement oil pressure at every gear position is further improved and provides smoother shifting without torque off.



Skip shift function: Automatically selects a gear position depending on the slope grade when driving uphill without shifting down through each gear. It reduces the number of downshifts, makes the driving smoother, improves the operator's comfort and reduces material spillage.



Automatic Retarder Speed Control (ARSC)

ARSC allows the operator to easily set a downhill travel speed and go down slope at a constant speed. As a result, the operator can concentrate on steering. The speed can be set at an increment of 1 km/h by clicking the control lever (± 5 km/h max.) to adjust the downhill speed appropriate to the slope grade.



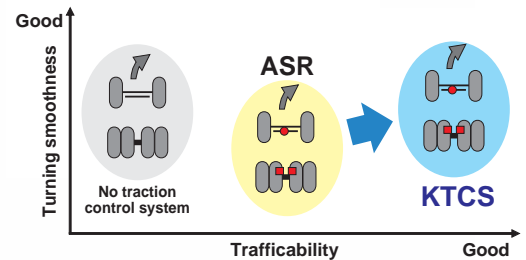
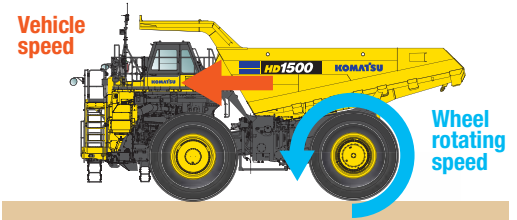
Automatic Idling Setting System

This system facilitates quick engine warm-up and operator cab cooling/warming. When setting the system ON, the engine idle speed is kept at 650 min⁻¹. When setting the system OFF, the engine idle speed is kept at 1000 min⁻¹, but is lowered to 650 min⁻¹ when either the parking brake or the retarder brake is ON.



Komatsu Traction Control System (KTCS)

KTCS continuously monitors the rear wheels' rotating speeds and the vehicle speed for detecting wheel slip. If the system detects excessive wheel slip, it automatically applies the brake to control wheel slip ratio and maintain optimum condition of the tire traction. As a result, KTCS improves productivity and tire life more than the conventional ASR system. KTCS is automatically activated and deactivated without operator intervention.



OPERATOR COMFORT



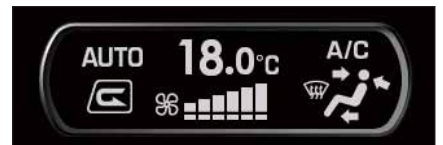
Ergonomically Designed Cab

The ergonomically designed operator's compartment provides the operator with a convenient control layout and comfortable environment for more confident operation and greater productivity.



Automatic Climate Control System

Automatic climate control system allows the operator to easily and accurately set the indoor temperature of the cab by the switch panel on the dash board. Excellent heating/cooling capacity and air flow keep the operator's environment comfortable throughout the year.



Radio with AUX Terminal

By connecting an auxiliary sound device to the input jack, the operator can listen to the sound through the speakers in the cab.



Storage Spaces

Various kinds of storage spaces are provided inside the cab.

Glove box, Lunch box tray, Warm/cool box, and Cup holder



Lunch box tray



Warm/cool box, cup holder

Air Suspension Seat

The fabric covered, air suspension operator seat is adjustable to the operator's weight. The air suspension dampens vibrations transmitted from the cab floor and reduces operator's fatigue. A seat heater and a ventilator are equipped as standard.

Foldable Trainer Seat

The trainer seat with 2-point retractable seat belt is comfortably sized, and its back is foldable to the front for an easy access to the fuses and so on behind the trainer seat.



Tilt-away and Telescopic Steering Column

The tiltable and telescopic steering column allows the operator to set the steering wheel to a desired position. The tilt mechanism incorporates a spring assist for easy adjustment and for easy operator seating and exiting.



Low Noise Design

The spacious cab is mounted with large capacity viscous mounts. The low noise engine, the fan clutch and the cab sealing provide a quiet, low vibration and comfortable operator's environment.



Work Cycle Noise Level at Operator's Ear: 75 dB(A)
(SAE J1166)

DC 12V Outlet

Two DC 12V outlets are standard in the operator's cab. A 12 V cigarette lighter is located on the front side of the center console and an additional 12 V outlet is located on the rear cover behind the operator seat.



Cigarette lighter
(DC 12V)

AUX terminal

DC 12V electrical
outlet



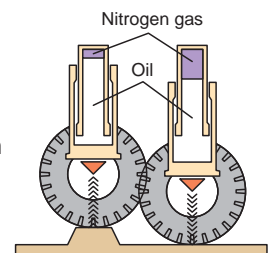
Electronic Hoist Control

Electronically controlled hoist system facilitates the dumping operation with light effort. A sensor is installed to detect the dump body position, and it significantly reduces the shock when the dump body is seating on the main frame.



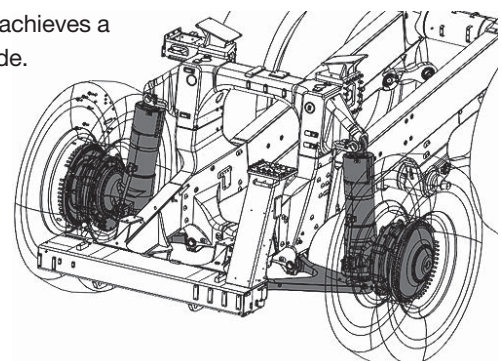
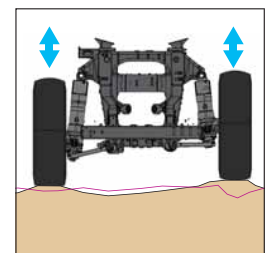
Hydropneumatic Suspension for All Terrains

The hydropneumatic suspension provides a smoother ride over rough terrain to improve the operator's comfort and maximize production.



McPherson Strut Type Front Suspension

McPherson strut type independent suspension is used on the front wheels. The linkage arrangement with low friction allows the front wheel to follow uneven road surface smoothly and achieves a comfortable ride.





Diagonal Stairway

The low angle diagonal stairway provides easy access/egress to/from the cab and the deck. Ladders with gates and handrails are also provided on both LH and RH sides as the secondary egress.

Dimpled Slip-resistant Plates

Stairways and walkways are made with dimpled, slip-resistant plates for better traction.



Dimpled slip-resistant plates are used

Built-in ROPS/FOPS Cab

Operator cab structure conforms to ISO 3471 ROPS standard, and ISO 3449 FOPS Level II standard.



Secondary Engine Shutdown Switch

The engine shutdown switch is located in the cab for emergency use.



LED Rear Combination Lamps

LED lamps are standard for the rear combination lamps. The LED lamp features long service life, excellent visibility and energy-savings.



LED Head Lamps

Rectangular LED lamps are used for the head lamps. Halogen fog lamps are available as option.



Secondary Steering

The secondary steering system is automatically activated if the hydraulic pressure of the steering circuit lowers, for example in case of failure in the hydraulic system. This can also be activated manually by the secondary steering switch in the cab. The pilot lamp on the LCD monitor tells the operator that the system is operable when turning the key switch on.

Conform to:
ISO 5010, SAE J1511



Manual secondary steering switch



Secondary Brake

As an added measure of reliability, a secondary brake is standard. This system is operated by use of the left brake pedal and utilizes an independent hydraulic circuit to simultaneously apply the front and rear parking brakes.

Conform to: ISO 3450, SAE J1473



Protection Functions Supported by Electronic Control

Item	Function
Downshift inhibitor	Even if the operator downshifts accidentally, current transmission gear is kept until the vehicle speed becomes appropriate to the selected gear for preventing over-runs.
Over-run inhibitor	When descending grades, if the vehicle's speed exceeds the maximum speed for the current gear, the front and rear brakes are automatically activated for preventing over-runs.
Reverse inhibitor	The vehicle is prevented from shifting to reverse gear when operating the body.
Forward/Reverse shift inhibitor	This device makes it impossible to shift from/to forward to/from reverse when the vehicle's speed exceeds 4 km/h.
Anti-hunting system	When running near the shift point, the system prevents unnecessary shift up and down for smooth traveling.
Neutral safety	The engine is prevented from starting when the shift lever is not in neutral.
Neutral coast inhibitor	It prevents gear position from shifting to neutral while traveling over a certain speed, even if the shift lever is moved to neutral position.

Speed Limiter (Optional)

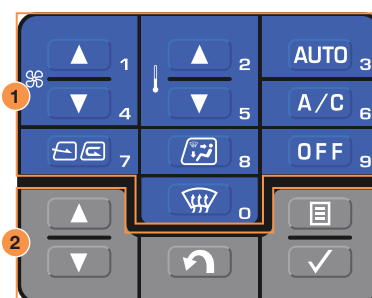
The maximum travel speed is limited to a specific speeds at empty and loaded conditions.

Speed Limiter, Overload (Optional)

The maximum travel speed is limited to 14 km/h when the payload exceeds threshold value.

High Resolution 7-inch Color LCD Unit

The machine monitor displays various machine information and allows for various settings of the vehicle. 7-inch color LCD unit displays various vehicle information in the normal screen. It also allows for various settings of the vehicle. By using the switch panel, the screen can be changed to the user menu screen. The switch panel is also used to control the air conditioner.



Switch Panel

- ① Automatic climate control (A/C) switches / Numeral key pad
- ② Function switches

Machine Monitor

- ① Engine coolant temperature gauge
- ② Torque converter oil temperature gauge
- ③ A/C display
- ④ ECO gauge
- ⑤ Payload / clock
- ⑥ ARSC set travel speed
- ⑦ Shift indicator
- ⑧ Retarder oil temperature gauge
- ⑨ Fuel gauge
- ⑩ LED indicator
- ⑪ Speedometer
- ⑫ Engine tachometer

Maintenance Time Caution

When the time to the next maintenance action is less than the preset hours*, the maintenance time monitor appears.

* The time can be set in the 10 to 200 hours range.



Maintenance screen

Troubleshooting Function

Various meters, gauges and warning functions are centrally arranged on the LCD unit. This unit facilitates the pre-shift inspection and promptly warns the operator with a lamp and a buzzer if any abnormal conditions occur. Abnormal conditions are classified in 4 recommended action levels, and one of the action level codes is displayed on the LCD unit depending on the abnormal condition.



KomVision, All Round Monitoring System

6 cameras and 8 radars are installed. The operator can confirm the safety around the vehicle on KomVision monitor and additional rear view monitor. This system assists the operator when taking off and driving at low speed such as in loading area, at fuel bay and near the maintenance shop.



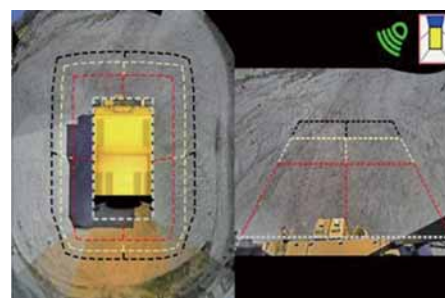
Operation switch

KomVision monitor



Additional rear view monitor

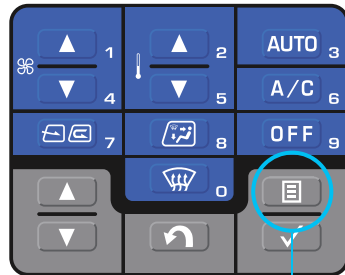
If an object is in the detection area, a small circle is displayed on the monitor screen, and the system informs the operator by an alarm sound.



Visual User Menu

Pressing the menu switch on the switch panel displays the user menu screen. The menus are grouped in 5 tabs by their functions.

Easy-to-understand icons enable intuitive use.

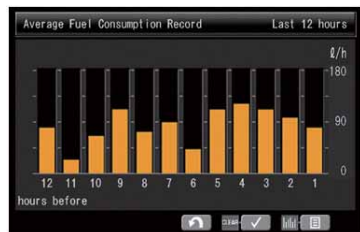


Menu switch



1 ECO guidance

- Operation records
- ECO guidance records
- Average fuel consumption logs
- Configurations



2 Machine setting / information

- Payload meter
- KTCS setting
- ARSC setting
- Dumping counter, etc.



3 Maintenance

- Check and reset of various maintenance intervals/remaining hours

Maintenance	Interval	Remain
Air Cleaner Cleaning / Change	250 h	249 h
Engine Oil	250 h	249 h
Engine Oil Filter	250 h	249 h
Fuel Pre Filter	500 h	499 h
Fuel Main Filter	500 h	499 h

4 Monitor setting

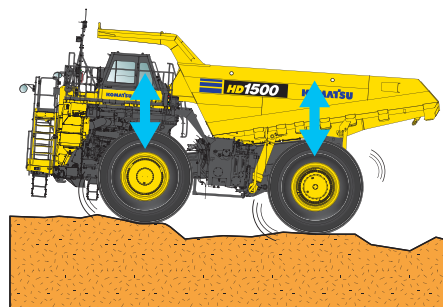
- Rear view monitor setting
- KomVision setting
- Meter select
- Screen adjustment
- Language setting (33 languages), etc.



5 Mail check

Road Condition Analysis

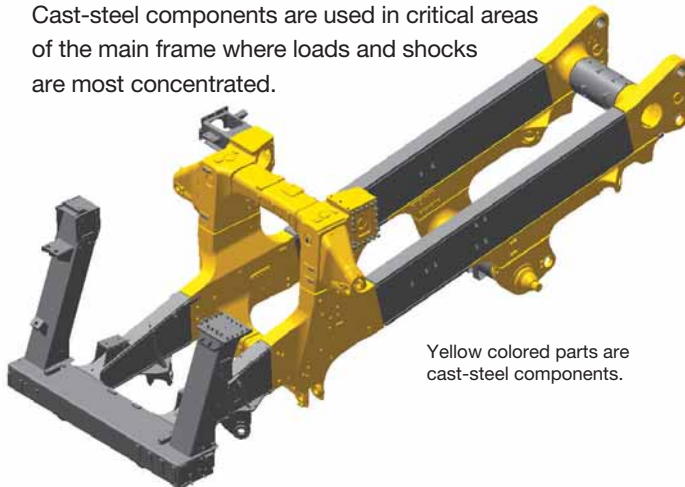
This function maps the haul road condition calculated by all 4 suspension cylinder pressures. The calculated haul road condition will be reported to the customer together with geographical data via KOMTRAX Plus. The report includes recommendations for optimal travel speed and timing of road maintenance as appropriate. This is a useful tool for maximizing the vehicle availability.



RELIABILITY

High-rigidity Frame

Cast-steel components are used in critical areas of the main frame where loads and shocks are most concentrated.



Robust Dump Body Design

The standard dump body is made of high-tensile-strength steel for excellent rigidity and low maintenance cost. The V-shape and V-bottom design contribute to the structural strength. The front, side and bottom plates of the dump body are reinforced with lateral and longitudinal bolsters. 2 kinds of bodies are available depending on application.

78 m³ Body	For high density material such as copper/iron ore and hard overburden Plate thickness: 19/12/9 mm (Bottom/front/side)	
94 m³ Body	For low density material such as loose overburden and dry soil Plate thickness: 16/10/9 mm (Bottom/front/side)	

Loading Policy

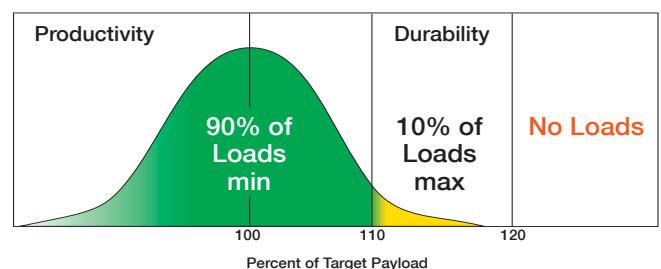
Each dump truck has its own “target payload”. Operating a dump truck with an extraordinary payload causes the following adverse effects.

- Operating an under loaded truck cannot fully utilize the vehicle performance and increases the number of round trips required to haul the same amount of materials, resulting in increased cost-per-ton.
- Operating an overloaded truck causes early wear of brake discs, tires, etc., and shortens the life of components such as drive system etc. resulting in increased maintenance and repair costs.

- 1) Monthly average payload must not exceed the target payload of the truck.
- 2) No less than 90% of all loads must be up to 110% of the target payload of the truck.
- 3) No more than 10% of all loads may be between 110% and 120% of the target payload of the truck.
- 4) Any single load must not exceed 120% of the target payload of the truck.

Following the “Loading Policy” results in maximizing the productivity by full utilization of the vehicle performance, reducing the operating cost, and extending the life of brakes, tires, and other components.

Target payload: Rated gross vehicle weight - Empty vehicle weight (Include all attached options)



PLM

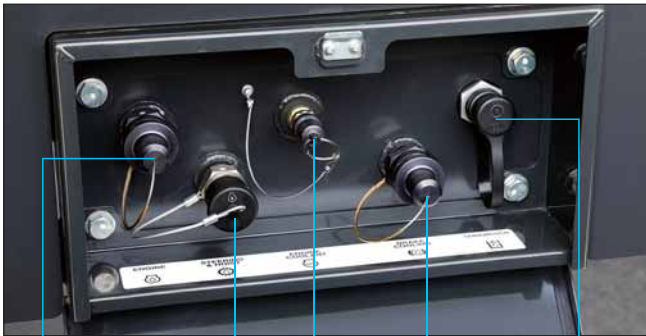
PLM is a tool to manage the payload of each hauling cycle and to analyze the production volume and the working conditions of the dump truck for a specified period of time. Loaded weight is indicated on the payload display (On the LCD unit) and by the external display lamps in real time while loading.



MAINTENANCE

Service Center

A convenient service center is located on the bottom part of the steering/hoist tank. It facilitates engine oil, coolant, transmission oil, steering & hoist oil, and brake cooling oil refilling at the same location.



Engine oil Steering and hoist oil Coolant Brake cooling oil Transmission oil

Centralized Arrangement of Filters

The filters are centralized for easy service.



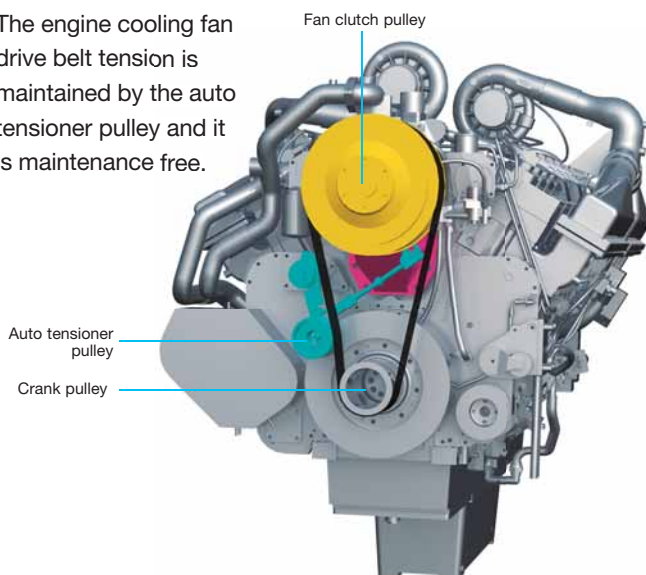
Hydraulic oil filter (Return) Brake cooling oil filter (Return)



Transmission oil filter

Fan Drive with Auto Tensioner

The engine cooling fan drive belt tension is maintained by the auto tensioner pulley and it is maintenance free.



Auto tensioner pulley
Crank pulley

Automatic Greasing System

This system automatically supplies grease to each greasing point every preset hours, and it is not necessary to periodically lubricate by a manual pump. Refill port to the reservoir is accessible from the ground level.



Grease pump and reservoir

Refill port

Electric Circuit Breaker

Circuit breakers are used for important electric circuits which need to be restored quickly when a problem occurs in the electrical system.



Battery Disconnect Switch

For convenience in maintenance/service, a battery disconnect switch is located on the left side of the vehicle, and accessible from the ground level.



Easy Radiator Tube Replacement

Individual cooling tubes are held in headers with flexible seals and easy to remove and install. It is not necessary to replace as an assembly, and only damaged tubes can be replaced.



SPECIFICATIONS



ENGINE

Model	Komatsu SDA16V159-3
Type	Water-cooled, 4-cycle
Aspiration	Overhead valve, direct injection type, turbocharged, and aftercooled
Number of cylinders	16
Bore x stroke	159 mm x 159 mm
Piston displacement	50.3 L
Horsepower	
SAE J1995	Gross 1175 kW 1576 HP
ISO 9249 / SAE J1349*	Net 1103 kW 1479 HP
Rated rpm	1900 min ⁻¹
Fan drive type	Mechanical with electronically controlled fan clutch
Maximum net torque	7170 N·m 731 kg·m
Fuel system	Direct injection
Governor	Electronically controlled
Lubrication system	
Method	Gear pump, forced-lubrication
Filter	Full-flow type
Air cleaner	Dry type with double elements, precleaner and evacuator valve
U.S. EPA Tier 2 emission equivalent or optimized fuel economy calibration.	



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 gears
Maximum travel speed	56.5 km/h



AXLES

Rear Axle	Full-floating
Final drive type	Planetary, double reduction
Ratios:	
Differential	1.720
Planetary	11.482



SUSPENSION SYSTEM

McPherson strut type front suspension and four-link type rear axle suspension with independent, hydropneumatic cylinders.	
Effective cylinder stroke	
Front suspension	400 mm
Rear suspension	160 mm
Rear axle oscillation:	
Oil stopper	3.9°
Mechanical stopper	5.8°



STEERING SYSTEM

Type	Fully hydraulic power steering with two double-acting cylinders
Secondary steering	Automatic/Manual control (Meets ISO 5010 and SAE J1511)
Minimum turning radius	11.2 m
Maximum steering angle	43°



CAB

Standard	FOPS (ISO 3449 level II), ROPS (ISO 3471)
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MAIN FRAME

Type	Box-sectioned structure
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BRAKES

Brakes meet ISO 3450 standard.	
Service brakes:	
Front / Rear	Fully hydraulic control, oil-cooled multiple-disc type
Parking brake	Spring applied, multiple-disc type (On all wheels)
Retarder	Oil-cooled, multiple-disc front and rear brakes act as retarder.
Secondary brake	Manual pedal operation
When hydraulic pressure drops below the specified level, parking brake is automatically actuated.	
Brake surface:	
Front / Rear	67939 cm ² / 97055 cm ²



BODY (GENERAL PURPOSE BODY)

Capacity:	
Struck	50/65 m ³
Heaped (2:1, SAE)	78/94 m ³
Rated payload: 78/94 m ³ body	141.7/141.9 metric tons
Material	Brinell hardness 400/450
Structure	V-shape body with V-bottom
Material thickness:	
Bottom	19/16 mm
Front	12/10 mm
Sides	9 mm
Target area (Inside length x width)	8150 mm x 5800 mm
Dumping angle	45°
Height at full dump	11415 mm
Heating	Exhaust heatings



HYDRAULIC SYSTEM

Hoist cylinder	Twin, 2-stage telescopic type
Relief pressure	24 MPa 245 kg/cm ²
Hoist time: Raise / Lower	13.5 sec. / 12.5 sec.



WEIGHT (APPROXIMATE)

Rated empty vehicle weight	107600 kg
With 94 m ³ body. Excludes optional equipment and operator.	
Rated gross vehicle weight	249575 kg
Includes optional equipment, operator (75 kg) and payload.	
Weight distribution:	
Empty: Front axle / Rear axle	52% / 48%
Loaded: Front axle / Rear axle	32.3% / 67.7%



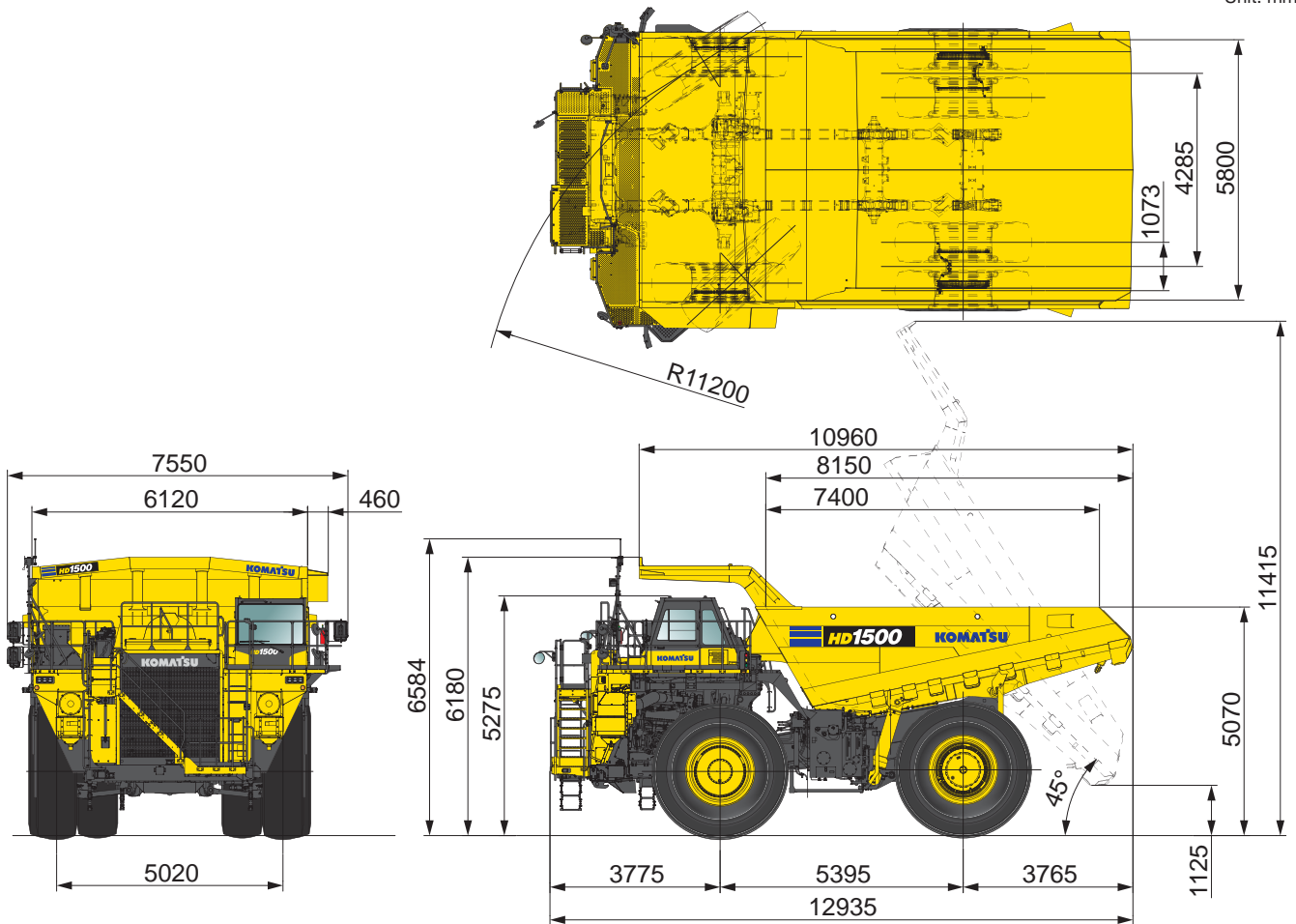
SERVICE REFILL CAPACITIES

Fuel tank	2120 L
Engine oil	230 L
Torque converter and transmission	129 L
Brake cooling	342 L
Brake control	87 L
Differential	439 L
Final drives (Total)	214 L
Hydraulic system	316 L
Suspension (Total)	191.6 L

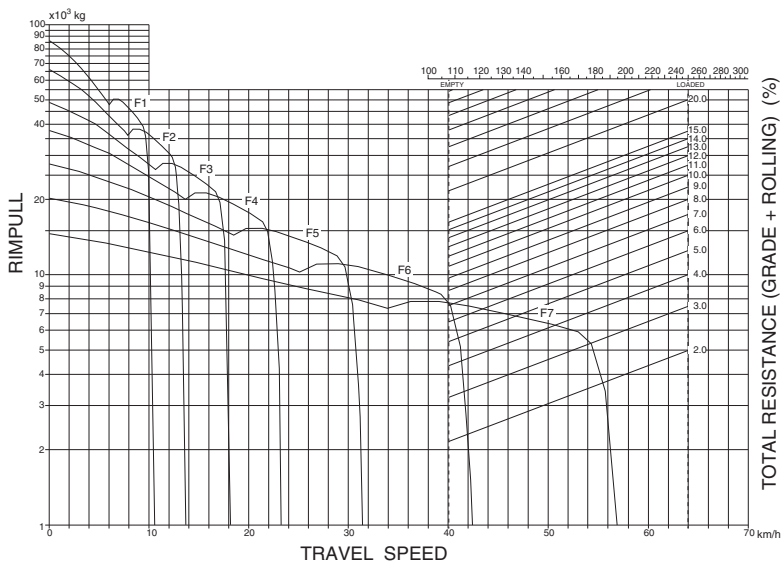


DIMENSIONS

Unit: mm

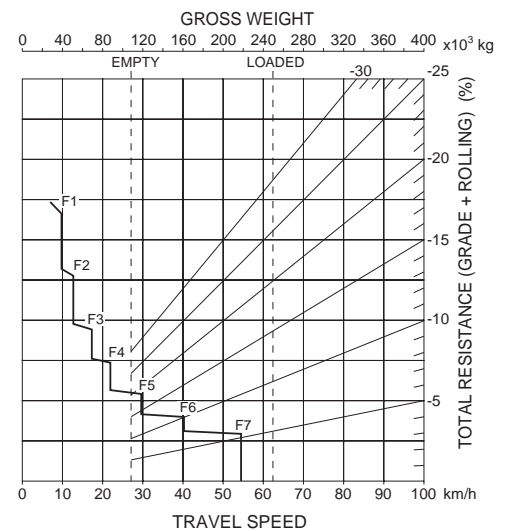


TRAVEL PERFORMANCE



RETARDER PERFORMANCE

GRADE DISTANCE: CONTINUOUS DESCENT



At ambient temperature 40°C
Retarder performance varies depending on ambient temperature.



STANDARD EQUIPMENT

ENGINE:

- Air cleaner, dry type with double elements, pre cleaner and indicator
- Alternator, 140 A/24 V
- Batteries, 4 x 12 V
- Cooling fan clutch
- Engine, KOMATSU SDA16V159-3
- Ether start
- Mode selection system
- Prelub™ system
- Starting motors, 2 x 9.0 kW

CAB:

- Automatic climate control system
- Built-in ROPS (ISO 3471) / FOPS (ISO 3449) cab
- Cigarette lighter and ashtray
- Cup holder
- Electronic hoist control system
- Machine monitor with 7-inch color LCD unit
- Operator seat: air-suspension type with heater, ventilation, and 3-point retractable seat belt (3-inches width)
- Power outlet port, 2 x 12 V
- Power window, LH and RH
- Radio: AM/FM with AUX terminal
- Steering wheel, tiltable and telescopic
- Sun visors
- Tinted glass (Front: laminated glass)
- Trainer seat with 2-point retractable seat belt (3-inches width)
- Two doors, left and right
- Windshield washer and wiper (With intermittent feature)

LIGHTING SYSTEM:

- Back-up lamps
- Engine room lamps
- Headlamps, LED high beam and low beam
- Side working lamps, LH and RH
- Stop/tail lamps, LED
- Turn signal lamps and hazard warning lamps, front and rear, LED

GUARD AND COVERS:

- Drive shaft guards, front and rear
- Engine small unit guard
- Engine under guard
- Exhaust thermal guard
- Fire protective covers
- Transmission under guard

SAFETY EQUIPMENT:

- Alarm, back up
- ARSC
- Battery disconnect switch
- Coolant temperature alarm and warning lamp
- Diagonal stairway, with lamps
- Dimpled slip-resistant plates
- Engine shutdown switch, ground level
- Fully hydraulic controlled wet multiple-disc brakes and retarder system
- Guard rails for platform
- Horn, electric
- Neutral coast inhibitor
- Overrun warning and prevention system
- Overturn warning system
- Parking brake, integrated in front and rear brake
- Preventive Maintenance (PM) clinic service connectors
- Rear view mirrors and under view mirrors
- Secondary brake, pedal type, variable
- Secondary engine shutdown switch (Inside cab)
- Secondary steering, automatic, electrical
- Starter disconnect switch

BODY:

- Body, exhaust heating
- Cab guard (LH, weld type)
- Rock ejector bars
- Safety pin

OTHERS:

- Automatic greasing system, with refill port
- Automatic idling setting system
- Battery jump start
- Brake cooling oil capture tank
- ECO gauge
- ECO guidance
- Electric circuit breakers, 24 V
- Electric priming fuel pump
- Fast fill coupler for fuel tank, RH side
- Full automatic F7-R1 transmission with lock-up clutch
- Hydropneumatic suspensions (Front and rear)
- KOMTRAX Plus with PLM, satellite communication (IRIDIUM) and wireless LAN
- KomVision, camera and radar
- KTCS
- Lead-free radiator, flexible rubber seal type
- Mud guards
- Rims, 24 x 51 (For 33.00 R51 tires)
- Road condition analysis system
- Service center: engine, transmission, brake oil, and coolant
- Transmission oil filter clogging alarm

**OPTIONAL EQUIPMENT****LIGHTING SYSTEM:**

- Fog lamps
- LED side working lamps

GUARD AND COVERS:

- Engine side covers
- Filler cap lock and cover lock

SAFETY EQUIPMENT:

- Speed limiter
- Speed limiter (Overload)
- Rearview mirrors with heater

BODY:

- Deck mounted muffler, less body heating

OTHERS:

- Adjustable tie rod
- Bio fuel ready (B20)
- Body position alarm
- Cold area arrangement
- Disabled truck quick connects
- Dump counter
- Engine coolant and oilpan heaters
- Fast fill coupler for fuel tank, LH side
- Fire extinguisher
- Hydraulic oil heater
- Highest gear limit (F4, F5, F6)
- KomVision, camera only
- PLM software and download cable
- Smart rim
- Wheel chocks

