

# KOMATSU®

## HD785-8R

### OFF-HIGHWAY TRUCK

# HD785



Photos may include optional equipment.

#### **HORSEPOWER**

Gross: 895 kW 1200 HP/1900 min<sup>-1</sup>  
Net: 879 kW 1180 HP/1900 min<sup>-1</sup>

#### **RATED PAYLOAD**

95.0 metric tons

#### **BODY CAPACITY** (Heaped 2:1, SAE)

Standard body: 60.0 m<sup>3</sup>  
Overburden body: 65.0 m<sup>3</sup>

# WALK-AROUND

*Most advance machine model  
with higher efficiency and safety  
on the basis of high reliability*

HD785-8R



## **HORSEPOWER**

Gross: 895 kW 1200 HP/1900 min<sup>-1</sup>  
Net: 879 kW 1180 HP/1900 min<sup>-1</sup>

## **RATED PAYLOAD**

95.0 metric tons

## **BODY CAPACITY** (Heaped 2:1, SAE)

Standard body: 60.0 m<sup>3</sup>  
Overburden body: 65.0 m<sup>3</sup>



## Performance Features

- Improved work efficiency (t/L) **NEW**
- Selectable operating modes
- Variable horsepower control
- Komatsu Traction Control System (KTCS) **NEW**
- Automatic Retard Speed Control (ARSC)
- Highest engine output and retarder capacity in class

## Ecology & Economy Features

- Low fuel consumption
- Auto idle stop **NEW**
- High power density axle **NEW**
- Energy saving operation ecology guidance **NEW**
- Brake cooling oil recovery tank

## Operator Comfort & Environment

- Ergonomically designed cab **NEW**
- Air suspension seat **NEW**
- Electronic hoist control
- Low noise design **NEW**
- Automatic climate control system
- Hydropneumatic suspension

## Safety

- KomVision, all around monitoring system **NEW**
- Diagonal access stairway (Optional)
- Built-in ROPS (ISO 3471) / FOPS (ISO 3449) cab
- Secondary steering and brake
- LED head lamps & rear combination lamps **NEW**

## Information & Communication Technology (ICT)

- Machine monitor with high resolution 7-inch color Liquid Crystal Display (LCD) monitor **NEW**

## Maintenance Features

- Centralized and ground level access arrangement of filters and greasing points
- Ground level battery disconnect switch and emergency engine stop switch
- Battery jumpstart (Optional) **NEW**
- Tie-off anchor points for maintenance **NEW**
- Service center (Optional)

# PERFORMANCE FEATURES

## Improved Work Efficiency (t/L)

Work efficiency is greatly improved with high work performance, various control technologies, and fuel consumption reduction technology.

### Work efficiency (t/L)

# 6.9% up

Calculated value compared with former model (HD785-7).  
The actual effect may vary with work content.

## High Performance Komatsu SAA12V140E-3 Engine

Powerful and fuel-efficient Komatsu SAA12V140E-3 engine on the HD785-8R delivers 895 kW at 1900 min<sup>-1</sup>. This contributes to good acceleration and shorter cycle time for productivity. Power train components are redesigned to accommodate the increased power.

**Engine Gross Horsepower: 895 kW**



## 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



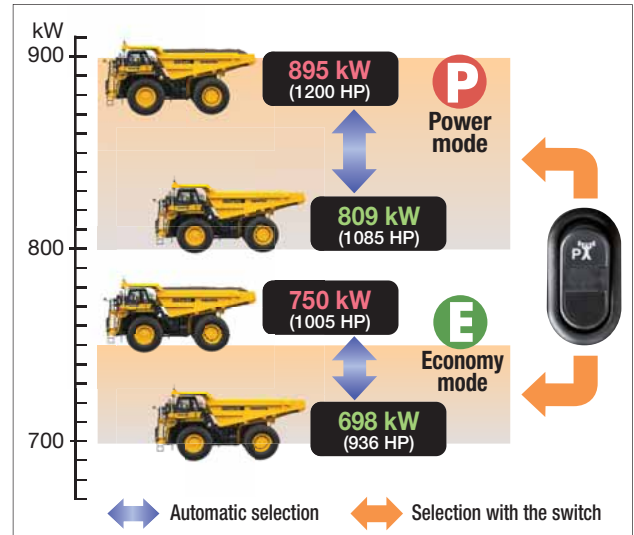
The Power mode increases the engine maximum output and raises the upshift and downshift engine speeds during operation.

### Economy mode

The Economy mode lowers the engine maximum output along with lowering the upshift and downshift engine speeds during operation.

## Variable Horsepower Control

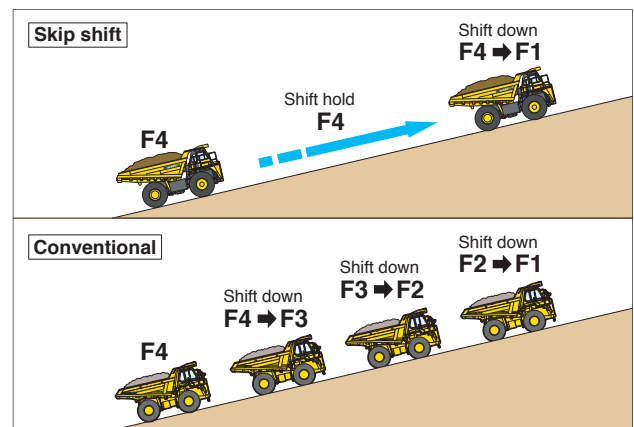
Both in Power and Economy modes, the Variable Horsepower Control system detects automatically whether machine condition is loaded or unloaded and selects optimum horsepower setting mode, providing both high production and low fuel consumption.



## 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, optimizes 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.

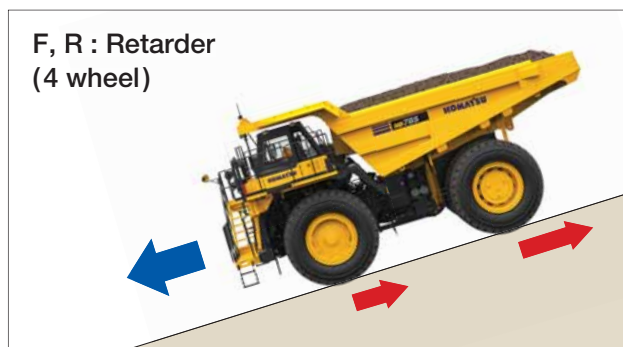


### Fully Hydraulic Controlled Wet Multiple-disc Brakes and Retarder

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

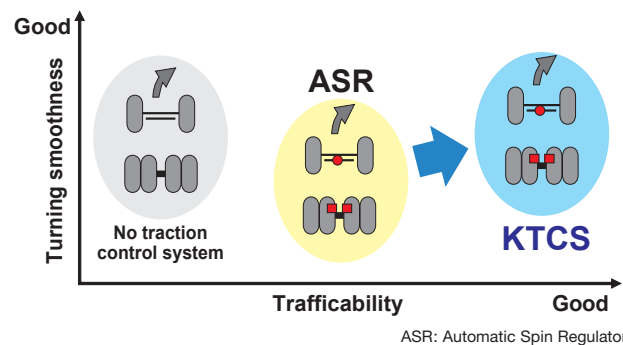
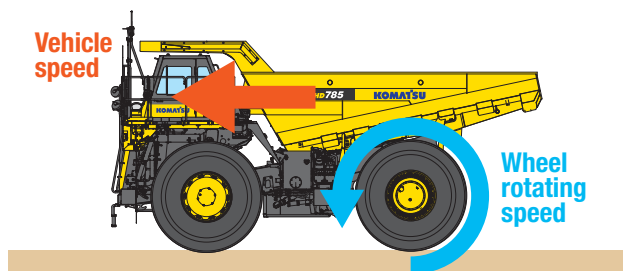
#### Retarder Absorbing Capacity: 1092 kW\*

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



### Komatsu Traction Control System (KTCS)

KTCS continuously monitors the rear wheels' rotating speed and vehicle speed for detecting slippage. If the system detects excessive wheel slip, it automatically applies the brake to control wheel slip ratio and maintain optimum condition of 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 interaction.



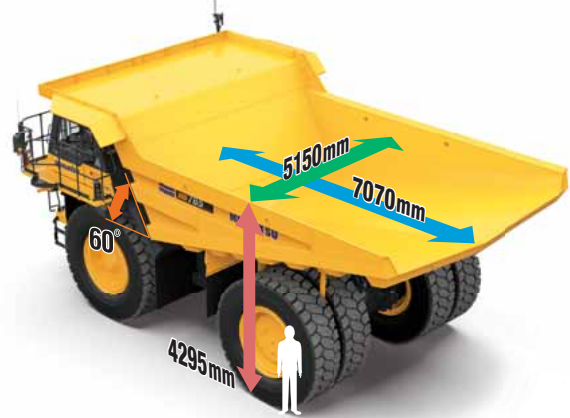
### Increased Payload

Payload is increased while keeping the powerful run and durability.

#### Payload

**95.0 t (3.3 t up)**

Compared to HD785-7. Payload varies with installed equipment.



### Long Wheelbase and Wide Tread

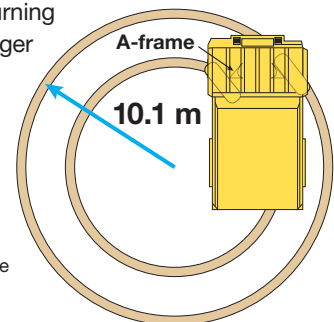
With an extra-long wheelbase, a wide tread and an exceptionally low center of gravity, the HD785-8R hauls the load at higher speed for greater productivity, and delivers superior driving comfort over rough terrain.

### 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 for the truck.

**Minimum Turning Radius: 10.1 m**

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



### Selection of Reverse High/Low Travel Speed to Increase Mobility and Work Efficiency

The operator can select better one of "High (RH)" or "Low (RL)" reverse travel speed in loading places or dumping pits, depending on the distance, road grade, etc. In addition, this machine shows excellent mobility and work efficiency and low fuel consumption in various working conditions, since it is equipped with the lockup clutch. The operator can select RH or RL with the control switches on the panel.

# PERFORMANCE FEATURES

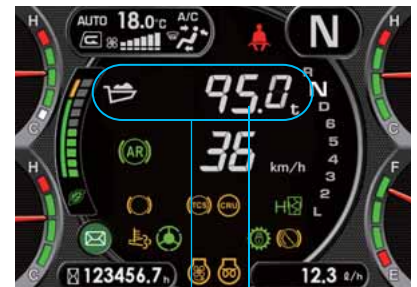
## Automatic Retard Speed Control (ARSC)

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



## Payload Meter (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 monitor) and by the external display lamps in real time while loading.



## PLM Scoreboard (Optional)

PLM scoreboard can be equipped as option. The scoreboard shows payload tonnage on a truck and supports to achieve good payload management.



# ECOLOGY & ECONOMY FEATURES

## Low Fuel Consumption

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

- Variable displacement piston pumps for steering and hoist circuit
- Improvements in management of hydraulic pressure for transmission control
- Controlling engine output according to hydraulic drive fan rotation speed and maintaining constant net output

### Fuel consumption (L/h)

# 3.1% down

Calculated value compared to former model (HD785-7).  
The actual effect may vary with work content.

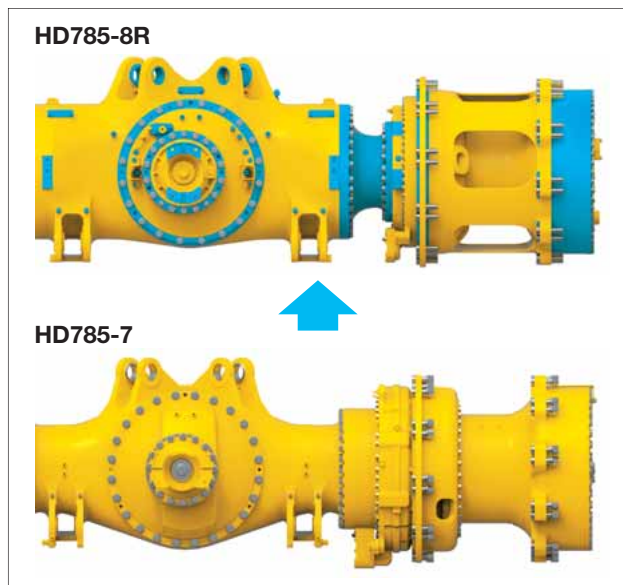
## Auto Idle Stop

When the engine is idling for a certain time (Able to be set from 5 to 60 minutes), the engine will automatically stop to reduce unnecessary fuel consumption and unwanted exhaust emissions.



## High Power Density Axle

Installing smaller gear of high strength and optimizing shape of casting reduce overhaul cost and improve fuel efficiency due to weight reduction.



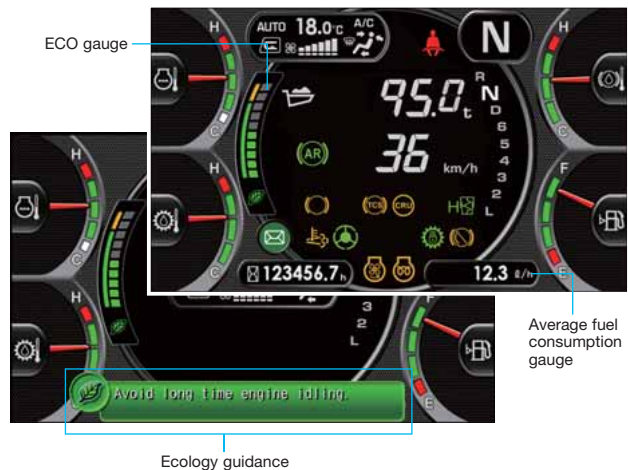
## Energy Saving Operation

In order to support optimum operation, an easy-to-read ECO gauge is included at the LCD unit of the machine monitor. The ECO gauge indicates a momentary fuel consumption rate during operation. Operating the vehicle with the gauge in the green zone ensures the most energy efficient operation.

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

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

- Avoid long time engine idling.
- Release the hoist lever
- Depressing accelerator pedal with brake actuated lowers fuel economy. etc.



## Automatic Idling Setting System

This system facilitates quick engine warmup and operator cab cooling/warming. When setting the system ON, the engine idle speed is kept at 650 min<sup>-1</sup>. When setting the system OFF, the engine idle speed is kept at 945 min<sup>-1</sup>, but is lowered to 650 min<sup>-1</sup> when either the parking brake or the retarder brake is ON.



## Brake Cooling Oil Recovery Tank

In order for the environmental conservation, a tank is installed on all 4 wheel to capture the oil in the event of brake cooling oil leakage from the floating seal.



# OPERATOR COMFORT & ENVIRONMENT



## Ergonomically Designed Cab

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



## Sun Visor, Screen (Optional)



## 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 machine and reduces operator's fatigue. And seat heater function & 3-point seat belt are included as standard.

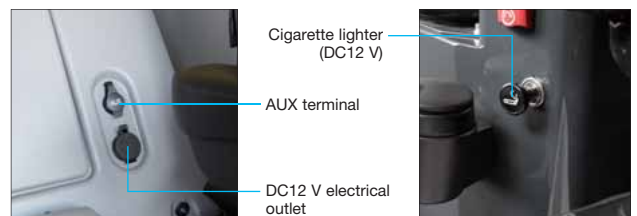
## Foldable Trainer Seat

The foldable trainer seat, with 2-point retractable seat belt, is comfortably sized.



## DC12 V Outlet

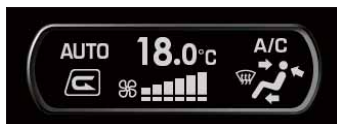
Two DC12 V outlets are standard in the operator's cab. A 12 V cigarette lighter is located on the front side of the center console and an additional 12 V outlet is located on the rear cover behind the operator seat.





### Automatic Climate Control System

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



### High Performance Radio

It has functions of AM/FM radio and AUX, USB and Bluetooth® wireless technology enabled products can be connected.



### Storage Spaces

Generous storage spaces are provided inside the cab. **Glove box, Lunch box tray, Hot or cool box, and Cup holder**



Lunch box tray



Hot or cool box, cup holder

### Low Noise Design

The low noise engine, hydraulic driven fan, cab sealing design, double cab floor structure for hydraulic piping and large capacity viscous mount provide a quiet, low vibration and comfortable operator's environment.

### Noise level at operator's ear (SAE J1166)

**72 dB(A)**

(Reference) HD785-7: 75 dB(A)

### Tilt-away and Telescopic Steering Column

The tilting and telescoping 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 operator seating and exiting.



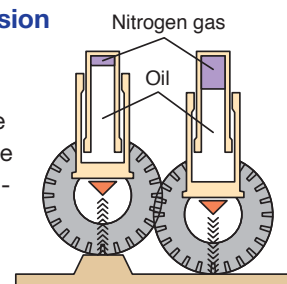
### Electronic Hoist Control

Electronically controlled hoist lever 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 maximize production and operator comfort.



### 3-mode Automatic Suspension which Selects Best Operator Comfort According to Operating Conditions (Optional)

The "3-mode automatic suspension" is installed as standard. It automatically changes the cushioning and damping performance of front suspension to 3 levels (S, M, and H) according to the operating conditions. High operator comfort and high machine stability are attained at high levels.

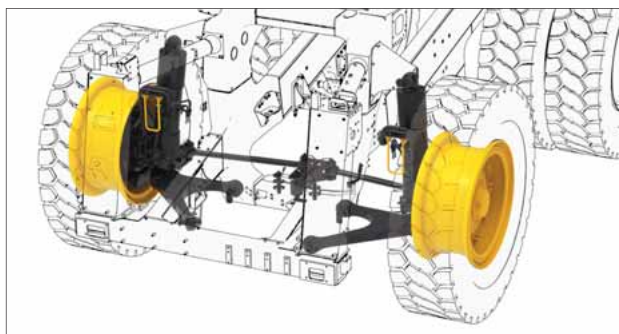
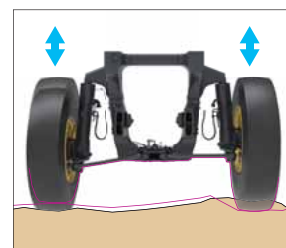
Mode selection of 3-mode automatic suspension

|   | When Empty | When Loaded |
|---|------------|-------------|
| During Stop, Normal Travel              | S          | M           |
| During High Speed Travel (60 km/h min.) | S          | H           |
| During Sharp Turn                       | S          | H           |
| During Braking                          | M          | H           |
| During Dumping                          | H          | H           |

S: Soft mode, M: Medium mode, H: Hard mode

### 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 for a comfortable ride.

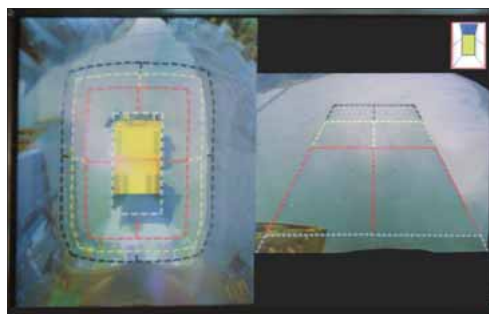


# SAFETY



## KomVision, All Around Monitoring System

The operator can confirm the safety around the vehicle on KomVision monitor. 6 cameras are installed for KomVision. 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.

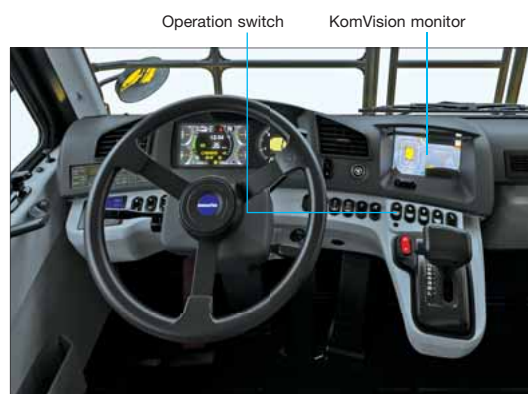


## Rear View Monitor System

The operator can view the rear of the vehicle on the full color monitor. This monitor can be always ON or ON only when the shift lever is in the reverse position. Visual distance guidelines can be added for the operator's convenience.



Rear view monitor



Operation switch

KomVision monitor



Rear view monitor



Rear view camera

KomVision camera

### Built-in ROPS/ FOPS Cab

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



### Engine Shutdown Secondary 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

LED lamps are used for the head lamps and also turn signals & hazard lamps.

Head lamp (Low beam)  
Head lamp (High beam)



### Diagonal Access Stairway (Optional)

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 L.H. and R.H. sides as the secondary egress.



### Dimpled Slip-resistant Plates

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

### Secondary Steering

The secondary steering system is automatically activated if the hydraulic pressure of the steering circuit lowers due to a 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

### Three Independent Brake Systems

The front, rear, and parking brake control hydraulic circuits are independent from each other and equipped with respective accumulators. Even if any of them fails, danger is avoided by the other 2 systems.

### 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 driver 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 surpasses the maximum speed for the current gear, the rear brakes are automatically activated, 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

The maximum travel speed is limited to a specific speed of both empty and loaded conditions independently.

### Speed Limiter, Overload

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

## MACHINE MONITOR WITH LARGE HIGH RESOLUTION LCD UNIT

### Machine Monitor with High Resolution 7-inch Color Liquid Crystal Display (LCD) Monitor

The machine monitor displays various machine information and allows for various settings of the machine. 7-inch color LCD monitor displays various machine information in the normal screen. And it also allows for various setting 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 (A/C).



#### Machine Monitor

- 1 Engine coolant temperature gauge
- 2 Torque converter oil temperature gauge
- 3 A/C display
- 4 ECO gauge
- 5 Shift indicator
- 6 Retarder oil temperature gauge
- 7 Fuel gauge
- 8 LED indicator
- 9 Speedometer
- 10 Engine tachometer

#### Switch Panel

- 1 A/C switches / Numeral key pad
- 2 Function switches

### 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

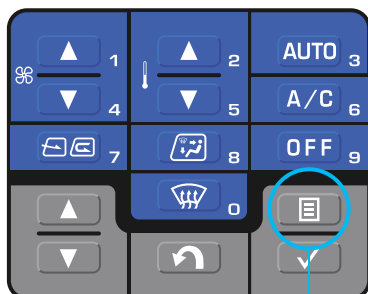
### Troubleshooting Function

Various meters, gauges and warning functions are centrally arranged on the LCD monitor. This monitor facilitates the start-up inspection and promptly warns the operator with a lamp and a buzzer if any abnormal conditions occur. Each abnormal condition is indicated according to one of four recommended action levels.



## Visual User Menu

Pressing the menu switch on the switch panel displays the user menu screen. The menus are grouped by their functions. Easy-to-understand icons enable intuitive use.



Machine setting / information



User menu screen

### 1 Energy saving guidance

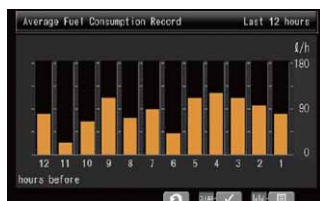
- Operation records
- ECO guidance records
- Average fuel consumption record



Operation records



ECO guidance records



Average fuel consumption record

#### Operation records:

Actual operation hours, average fuel consumption, idling time, E mode time ratio, etc. are displayed. The daily data or the data in a set period (Split measurement) are helpful to machine operation improvement or energy saving operation.

#### ECO guidance records:

The number of display count of each guidance is displayed. Fuel consumption can be reduced by operating so that the number of display count is reduced.

#### Average fuel consumption record:

The hourly fuel consumption in the past 12 hours (Service meter reading) or daily fuel consumption in the last week is displayed in graphs.

### 2 Machine setting / information

- KTCS setting
- ARSC setting etc.



### 3 Maintenance

- Check and reset of various maintenance remainings



### 4 Monitor setting

- Language setting (14 languages)
- Rear view monitor setting
- Measurement unit setting
- Screen brightness adjustment etc.



### 5 Mail check

## KOMTRAX Plus

Monitors large machines' health and supports customers' machine management.

### Support for Machine Management

KOMTRAX Plus is a management system for large machines. With this system, you can grasp "health condition" and "operating condition" of the machines from distant places via satellite communication, and accordingly you can prevent machine troubles and streamline the machine management.

### Machine Management with KOMTRAX Plus

- **Maintenance management:** Manage maintenance schedule and failure prevention maintenance
- **Machine management:** Check lists of jobsites, service meter readings, etc.
- **Operation management:** Check operating condition of each machine
- **Check machine locations:** Check detailed machine sites on map
- **Support in energy saving operation:** Check fuel consumption and CO<sub>2</sub> emissions, and make energy saving operation support report
- **Make forms:** Download displayed data and use them as forms
- **Road surface management:** Check road surface condition on map data and use it for road maintenance and travel speed setting



### Energy Saving Operation Support Report

It is possible to provide energy saving operation support report and other information useful to customers on the basis of work information such as fuel consumption, idling time, etc.

# MAINTENANCE FEATURES

## Centralized Arrangement of Filters

The filters are centralized for easy service.



## Filters Centralized for Access from Ground

Filters are centralized and can be accessed from ground level.

Brake cooling oil filter

Hydraulic oil return filter



## Electric Circuit Breaker

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



## Centralized Greasing Points

Greasing points are located to be accessible from ground level. Centralized greasing points at three locations makes daily maintenance easier.



## Electric Priming Pump

Electric engine priming pump is standard.



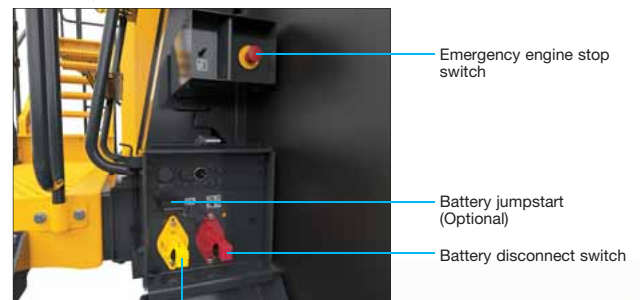
## Long Oil Change Intervals

Long oil change intervals minimize operating cost.

- Engine oil 500 hours
- Hydraulic oil 4000 hours
- Transmission oil 1000 hours

## Ground Level Battery Disconnect Switch and Emergency Engine Stop Switch

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



Starter disconnect switch

Emergency engine stop switch

Battery jumpstart (Optional)

Battery disconnect switch



**Battery Jumpstart (Optional)**

When the battery is dead, the engine can be started by connecting another battery to the connector. (DC24 V input)

**Tie-off Anchor Points for Maintenance**

Anchor points to fix safety harnesses are installed to the machine in order to secure safety during maintenance.

**Fuel Quick Charge System**

A fuel quick charge coupler to add fuel from the ground can be installed to the fuel tank.

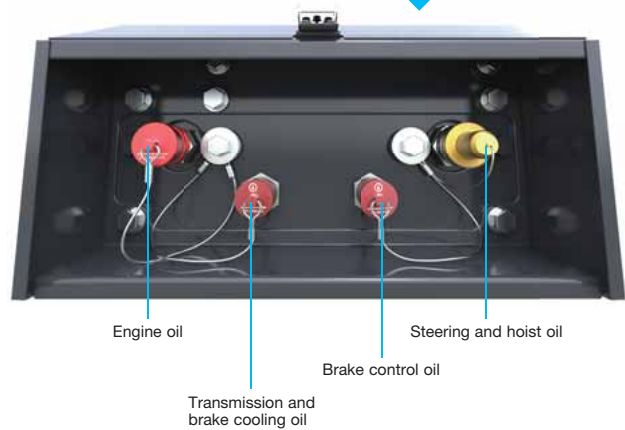
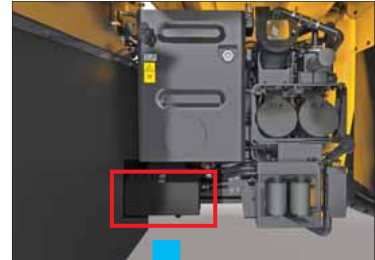
**Plastic Chocks (Optional)**

Light plastic chocks are optional equipment. They are easy to carry around.



**Service Center (Optional)**

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



# LOADING POLICY

## For Better Operation Management and Safety

The first step for effective use of HD785-8R in actual operation management is to record the payload of each loading. For this purpose, Komatsu provides "Payload Meter (PLM)" as standard. Furthermore, Komatsu proposes the "Loading Policy" as a standard to continue better operation management based on the recorded data.

## Loading Policy

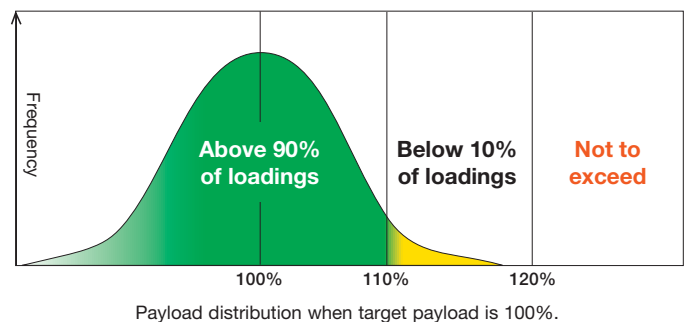
Each dump truck has its own "target payload". Operating it with an extraordinary payload causes the following adverse effects.

- Operating an under loaded truck cannot fully utilize the vehicle performance and increases the number of round trips required to haul the same quantity 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.

Komatsu proposes the "Loading Policy" based on the data of "PLM" on the premise that every HD785-8R is equipped with the PLM and can record the payload of each loading.

- 1) The target payload must be the value obtained by subtracting the empty vehicle weight (Including attached options) from the rated gross vehicle weight.
- 2) The average payload must not exceed the target payload of the truck (Set as 100%).
- 3) The payload must not exceed 110% of the target payload of the truck in down to 90% of loadings.
- 4) The payload may be 110 - 120% of the target payload of truck in up to 10% of loadings.
- 5) The payload must not exceed 120% of the target payload of the truck.






Following the "Loading Policy" increases the productivity by fully utilizing HD785-8R's performance, reducing the operating cost, and extending the lives of brakes, tires, and other components.



## BODY SELECTION

You can select one of two kinds of dump body according to operations or loads. In addition, you can install optional side extensions or spill guards to prevent the material from spilling.

\* When the unloaded machine weight and payload vary with the selected dump body or accessories to it, check the target payload on the basis of the loading policy shown above.

| Material   | Hydraulic Excavator / Backhoe, Wheel Loader<br>(Body Load: Low - High)   | Body Accessory<br>* Exclude overburden body  |
|--|--|--|
| <b>Civil Engineering, Overburden, Limestone</b><br>(Body Load: Low - Medium) |  <p><b>General purpose body</b> (Standard)<br/>This body is designed for general purpose. Major portions of this body are made of abrasion resistant steel plates to assure high durability.<br/>Major thickness<br/>Bottom plate / Side plate / Front plate = t19 / 9 / 12</p>                                 |  <p><b>Side extension</b><br/>(Body capacity with this option: 65.5 m<sup>3</sup>)<br/>Side extensions are for prevention of material spillage from body sides and for carrying low density material.</p> |
| <b>Ore, Crushed Stone, (Limestone)</b><br>(Body Load: High)                  |  <p><b>Rock body</b> (Optional)<br/>This rock body is made by attaching liner plates to the general purpose body. Recommended for carrying high load such as ore.<br/>Main liners<br/>Bottom plate / Side plate / Front plate center, outside of center = t19 / 12 / 16, 12</p>                                 |  |
| <b>Loose Overburden, Dry soil</b><br>(Body Load: Low)                        |  <p><b>Overburden body</b> (Optional)<br/>For low density material such as loose overburden and dry soil. Weight of overburden body is lighter than general purpose body by about 1.5 tonne because of light duty operation.<br/>Major thickness<br/>Bottom plate / Side plate / Front plate = t16 / 8 / 12</p> |  <p><b>Spill guard</b><br/>Spill guard is option to protect machine body and operator from forward spillage of material.</p>  |





## STANDARD EQUIPMENT FOR BASE MACHINE

### FUNCTION AND HYDRAULIC SYSTEM

- Auto idle stop function
- Automatic idling setting system
- Automatic Retard Speed Control (ARSC)
- Ecology guidance
- Electronic hoist control system
- Engine control with selectable operating modes
- Full automatic F7-R2 transmission with lockup clutch
- Fully hydraulic controlled wet multiple disc brakes and retarder system
- Komatsu Traction Control System (KTCS)
- Payload Meter (PLM)
- Variable horsepower control

### BODY

- 60.0 m<sup>3</sup> body (Bottom 19 mm)
- Body, exhaust heating
- Cab guard (L.H., bolt on type)

### CAB

- Ashtray
- Automatic climate control system
- Built-in ROPS (ISO 3471) / FOPS (ISO 3449) cab
- Cigarette lighter
- Cup holder
- Hot or cool box
- Machine monitor with 7-inch color LCD monitor

- Operator seat: air-suspension type with heater and 3-point seat belt (3-inch width)
- Power outlet port, 2 x 12 V
- Power window, L.H. and R.H.
- Radio: AM/FM with AUX terminal, USB, and Bluetooth®
- Sun visor
- Tilt-away and telescopic steering column
- Trainer seat with 2-point retractable seat belt (3-inch width)
- Windshield washer and wiper (With intermittent feature)

### LIGHTING SYSTEM

- Hazard warning lamps, LED
- Head lamps, LED high beam and low beam
- Ladder lamp
- LED side working lamp
- Starter disconnect switch
- Stop/tail/turn signal lamps, LED

### SAFETY EQUIPMENT

- Alarm, back up
- Anti-hunting system
- Battery disconnect switch
- Downshift inhibitor
- Emergency engine stop switch, ground level
- Engine shutdown secondary switch (Inside cab)

- Forward/reverse shift inhibitor
- KomVision, all around monitor with cameras
- Neutral coast inhibitor
- Neutral safety
- Overrun warning and prevention system
- Rear view mirrors
- Rear view monitor system
- Reverse inhibitor
- Secondary brake, pedal type, variable
- Secondary steering, automatic, electrical
- Under view mirror

### GUARD AND COVERS

- Drive shaft guards, front and rear
- Engine under guard
- Exhaust thermal guard
- Transmission under guard

### TYRES

- 27.00 R49

### OTHERS

- Brake cooling oil capture tank
- Centralized greasing points
- Electric circuit breakers, 24 V
- Fast fill coupler for fuel tank
- Filler cap lock and cover lock
- KOMTRAX Plus
- Speed limiter
- Speed limiter (Overload)



## OPTIONAL EQUIPMENT

### FUNCTION AND HYDRAULIC SYSTEM

- Automatic suspensions, 3-mode

### BODY

- Body, exhaust heating less (With muffler)
- Overburden body, 65.0 m<sup>3</sup>
- Platform guard, R.H., bolt on type
- Rock body
- Side extensions, 200 mm weld type
- Spill guard, 300 mm weld type
- Steel liners

### CAB

- Operator seat: air-suspension type with heater and ventilation and 3-point seat belt (3-inch width)
- Sun Visor, Screen

### LIGHTING SYSTEM

- Back-up lamp, additional
- Battery jump start
- Engine room lamp
- Fog lamps
- Warning lamp, amber color beacon

### SAFETY EQUIPMENT

- Diagonal access stairway
- Dump caution
- Exhaust brake
- KomVision, camera and radar
- Machine lockout switch system
- Power ladder
- Rear view mirrors with heater

### OTHERS

- Disabled truck quick connects
- Dump counter
- Engine coolant and oil pan heaters
- Fast fill coupler for coolant
- Fire extinguisher
- Plastic chocks
- PLM scoreboard
- Preventive Maintenance (PM) clinic service connectors
- Service center

# SPECIFICATIONS



## ENGINE

|                       |  |
|-----------------------|--|
| Model                 | Komatsu SAA12V140E-3   |
| Type                  | Water-cooled, 4-cycle  |
| Aspiration            | Overhead valve, direct injection type, turbocharged, and aftercooled |
| Number of cylinders   | 12   |
| Bore x stroke         | 140 mm x 165 mm  |
| Piston displacement   | 30.48 L  |
| Horsepower            |  |
| SAE J1995             | Gross 895 kW 1200 HP   |
| ISO 9249 / SAE J1349* | Net 879 kW 1180 HP   |
| Rated rpm             | 1900 min <sup>-1</sup>   |
| Fan drive type        | Mechanical drive   |
| Maximum net torque    | 5080 N·m 518 kgf·m   |
| 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, precleaner and evacuator valve        |



## TRANSMISSION

|                      |   |
|----------------------|---|
| Torque converter     | 3-elements, 1-stage, 2-phase  |
| Transmission         | Full-automatic, planetary type  |
| Speed range          | 7 speeds forward and 2 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 and direct (Lockup)  |
| Shift control        | Electronic shift control with automatic clutch modulation in all gears              |
| Maximum travel speed | 65.0 km/h   |



## AXLES

|                  |                |
|------------------|----------------|
| Rear Axle        | Full-floating  |
| Final drive type | Planetary gear |
| Ratios:          |                |
| Differential     | 2.944          |
| Planetary        | 7.235          |



## SUSPENSION SYSTEM

|   |        |
|---|--------|
| McPherson strut type front suspension and four-link type rear axle suspension with independent, hydropneumatic cylinders. |        |
| Effective cylinder stroke   |        |
| Front suspension  | 320 mm |
| Rear suspension   | 127 mm |
| Rear axle oscillation:  |        |
| Oil stopper   | 5.3°   |
| Mechanical stopper  | 6.0°   |



## 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 | 10.1 m  |
| Maximum steering angle | 41°   |



## CAB

|          |   |
|----------|---|
| Standard | FOPS (ISO 3449 level II), ROPS (ISO 3471) |
|----------|---|



## MAIN FRAME

|      |                         |
|------|-------------------------|
| Type | Box-sectioned structure |
|------|-------------------------|



## BRAKES

|  |   |
|--|---|
| Brakes meet ISO 3450 standard.                           |   |
| Service brakes:  |   |
| Front  | Fully hydraulic control, oil-cooled multiple-disc type          |
| Rear   | Fully hydraulic control, oil-cooled multiple-disc type          |
| Parking brake  | Spring applied, multiple-disc type                              |
| 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  | 39195 cm <sup>2</sup>   |
| Rear   | 71858 cm <sup>2</sup>   |



## BODY

|                                     |   |
|-------------------------------------|---|
| Capacity:                           |   |
| Struck                              | 40.0 m <sup>3</sup>                               |
| Heaped (2:1, SAE)                   | 60.0 m <sup>3</sup>                               |
| Rated payload                       | 95.0 metric tons                                  |
| Material                            | .400 brinell hardness high tensile strength steel |
| Structure                           | V-shape body with V-bottom                        |
| Material thickness:                 |   |
| Bottom                              | 19 mm   |
| Front                               | 12 mm   |
| Sides                               | 9 mm  |
| Target area (Inside length x width) | 7070 mm x 5150 mm                                 |
| Dumping angle                       | 48°   |
| Height at full dump                 | 10080 mm  |
| Heating                             | Exhaust heating                                   |



## HYDRAULIC SYSTEM

|                        |                                  |
|------------------------|----------------------------------|
| Hoist cylinder         | Twin, 2-stage telescopic type    |
| Relief pressure        | 20.6 MPa 210 kgf/cm <sup>2</sup> |
| Hoist time (Hi idling) | 11.5 sec.                        |



## WEIGHT (APPROXIMATE)

|                            |           |
|----------------------------|-----------|
| Rated empty vehicle weight | 71000 kg  |
| Rated gross vehicle weight | 166000 kg |
| Weight distribution:       |           |
| Empty:                     |           |
| Front axle                 | 49.3%     |
| Rear axle                  | 50.7%     |
| Loaded:                    |           |
| Front axle                 | 31.8%     |
| Rear axle                  | 68.2%     |



## TIRES

|               |           |
|---------------|-----------|
| Standard tire | 27.00 R49 |
|---------------|-----------|

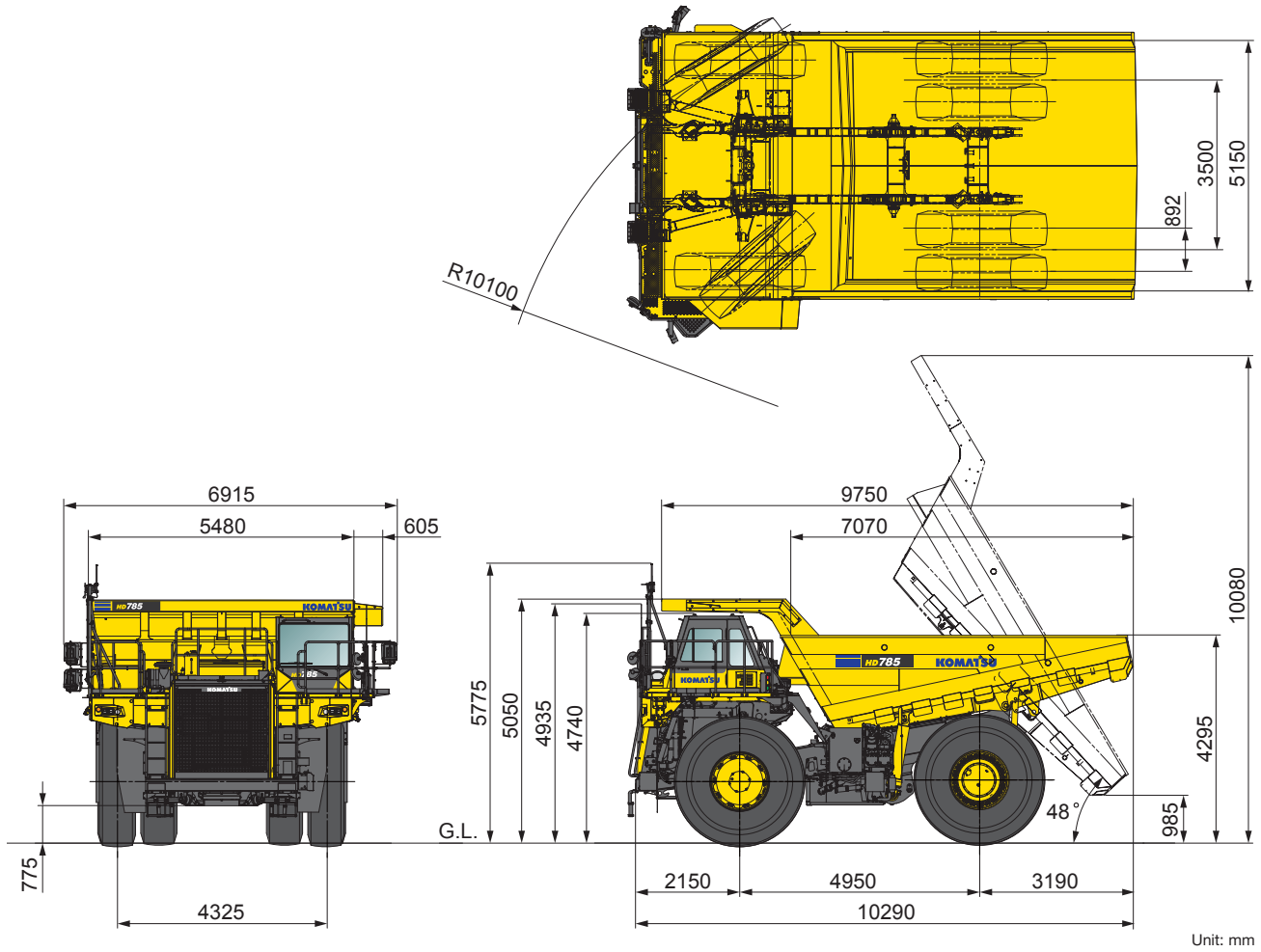


## SERVICE REFILL CAPACITIES

|   |        |
|---|--------|
| Fuel tank   | 1322 L |
| Engine oil  | 134 L  |
| Torque converter, transmission and retarder cooling | 540 L  |
| Differential  | 203 L  |
| Final drives (Total)                                | 116 L  |
| Hydraulic system                                    | 366 L  |
| Suspension (Total)                                  | 92.6 L |

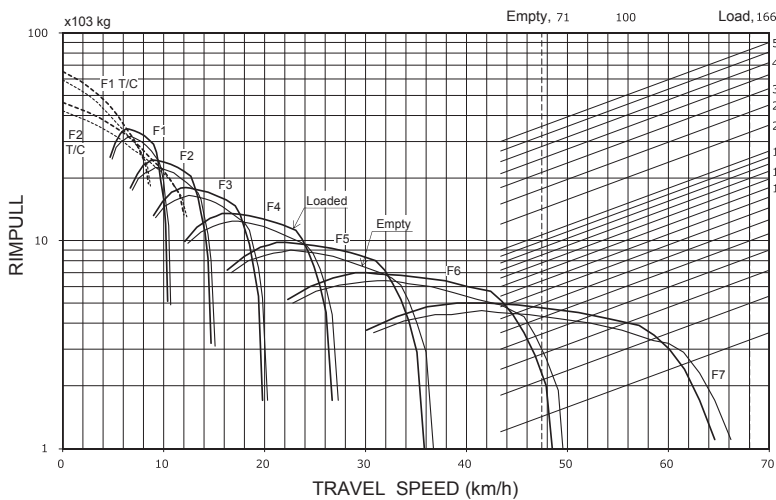


## DIMENSIONS

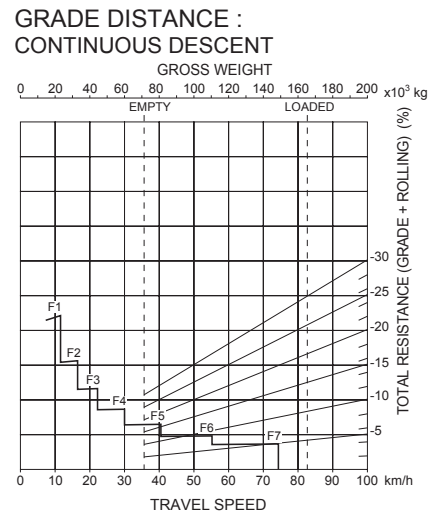


Unit: mm

## TRAVEL PERFORMANCE



## BRAKE PERFORMANCE



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

The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by Komatsu group is under license. Other trademarks and trade names are those of their respective owners.  
Up to 20% blended biodiesel fuel and paraffine fuel can be used. Please consult your Komatsu distributor for detail.

<https://home.komatsu/en/>

Printed in Japan 202101 IP.As

