



Photos may include optional equipment.

- Up to 20% blended biodiesel fuel and paraffine fuel can be used. Please consult your Komatsu distributor for detail.
- Materials and specifications are subject to change without notice.
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Motor grader

Engine power

Gross : 110 kW / 148 HP@2000 min⁻¹
Net : 107 kW / 144 HP@2000 min⁻¹

Operating weight

15040 kg

Blade length

3.71 m

Exceptional workability and environmental performance

Engine power

Gross : 110 kW / 148 HP@2000 min⁻¹

Net : 107 kW / 144 HP@2000 min⁻¹

Operating weight

15040 kg

Blade length

3.71 m

Productivity Features

- Auto-manual selectable lock-up torque converter transmission
- Long wheelbase & short turning radius

Ecology & Economy Features

- Komatsu's new CEV Stage-V emission regulations-compliant engine **New**
- Engine power mode selection system

Operator Environment Features

- Excellent visibility
- ROPS/FOPS canopy (ISO 3471/ISO 3449)
- Engine shutdown secondary switch **New**
- Operator seat with height adjustment **New**
- Work equipment lock lever **New**

Maintenance Features

- Maintenance information display
- Improved cooling unit cleaning efficiency using reverse hydraulic-driven fan **New**
- Maintenance-free battery **New**
- Battery disconnect switch **New**

Reliability Features

- Components that prevent machine failure and improve machine reliability

Information and Communication Technology (ICT)

- High resolution 3.5-inch Liquid Crystal Display (LCD) color monitor



Productivity Features



2) Creep mode

Torque converter transmission introduces Creep mode which provides constant low speed without acceleration and brake control. Optimized machine speed and great stability of torque converter boosts up precise control during fine grading.

3) Low effort inching pedal

Gives the operator precise control of machine movement. This is especially important for operators who have previous experience with operating a manual mode motor grader.

4) Electronic over-speed protection

Restricts downshifting until reducing the travel speed to the safe range of shift changing.

Long wheelbase & short turning radius

The long wheelbase enables high leveling performance and easier to set the blade position. Long wheelbase also contributes to expanding blade reach in combination with large articulation angle. Additionally the minimum turning radius still short with wide steering angle, serves high maneuverability.

Lock-up torque converter transmission

The lock-up torque converter transmission is specially designed for Komatsu graders. This provides both efficiency of direct shifting and operability of automatic shifting.

1) Transmission mode selection

• Auto mode

Drive with Torque Converter in all shift position. This mode provides high controllability and torque multiplication. Additionally Lock-up will work in F5-F8 and R3-R4 position. For example shifting F8 position serves automatic shifting through F4-F8 in response to machine speed.

• Manual mode

Works like a same way as conventional power shift, by engaging lock-up clutch with all gears as the engine speed increases. This mode provides both ease of operation of torque converter and maximum efficiency over mid engine speed range. In reverse traveling, works same way as Auto mode, serves less operation frequency.

| | Shift lever position | | | | | | | | Shift lever position | | | |
|-------------|----------------------|----|----|----|----|----|----|----|----------------------|----|----|----|
| | F1 | F2 | F3 | F4 | F5 | F6 | F7 | F8 | R1 | R2 | R3 | R4 |
| Auto mode | ○ | ○ | ○ | ○ | ⊙ | ⊙ | ⊙ | ⊙ | ○ | ○ | ⊙ | ⊙ |
| Manual mode | ⊙ | ⊙ | ⊙ | ⊙ | ⊙ | ⊙ | ⊙ | ⊙ | ○ | ○ | ⊙ | ⊙ |

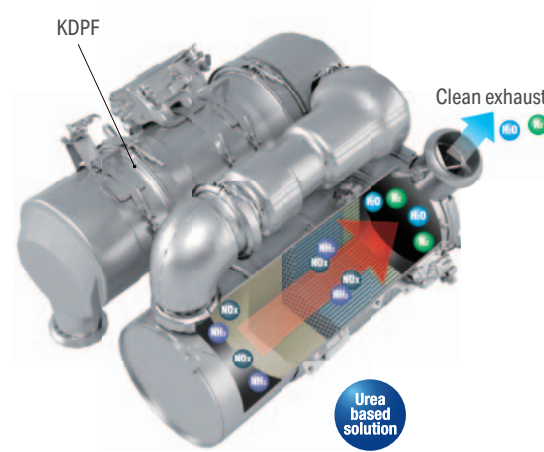
○ : In torque converter state
 ⊙ : As the machine speed increases, torque converter state changes to lockup state



Ecology & Economy Features

Komatsu's new emission regulations-compliant engine New

The Komatsu CEV Stage-V engine is productive, dependable and efficient. With ultra-low emissions, it provides a lower environmental impact and a superior performance to help reduce operating costs and lets the operator work in complete peace of mind.

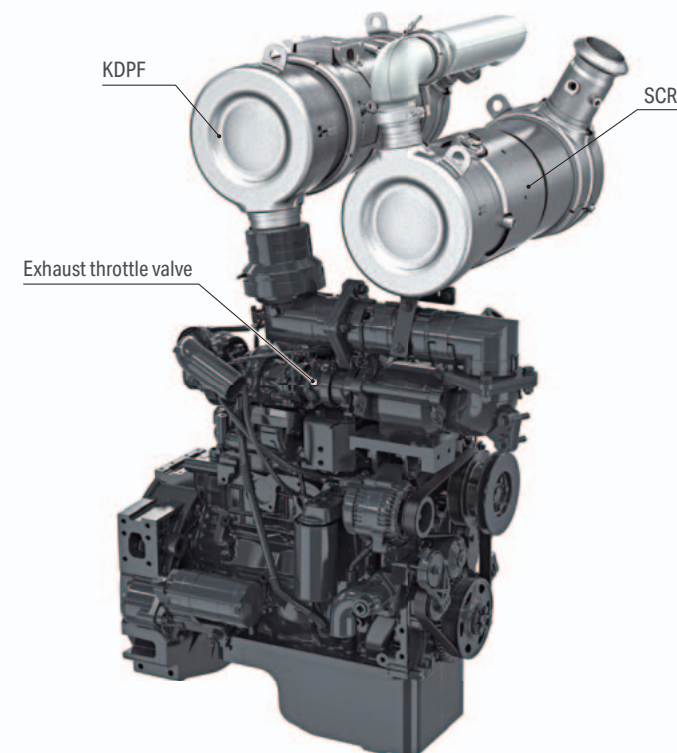


Heavy-duty aftertreatment

This new system combines a Komatsu Diesel Particulate Filter (KDPF) and Selective Catalytic Reduction (SCR). The SCR NOx reduction system injects the correct amount of Diesel Exhaust Fluid (DEF) at the proper rate, thereby decomposing NOx into non-toxic water (H₂O) and nitrogen gas (N₂).

Electronic control system

The electronic control system performs high-speed processing of all signals from sensors installed on the machine and engine to ensure total control of equipment in all applications. Conditions of the engine are displayed on the monitor inside the cab, providing necessary information to the operator. Furthermore, managing the information via KOMTRAX helps customers track required maintenance.



High-Pressure Common Rail (HPCR)

The system is designed to achieve an optimal injection of fuel to reduce Particulate Matter (PM) emissions. The system operates at higher pressure, thereby reducing both PM emissions and fuel consumption across all engine operating conditions.

Exhaust throttle valve

Exhaust throttle valve controls the exhaust temperature and optimizes the functions of KDPF and SCR assembly by throttling the exhaust passage.



Electric throttle control

Throttle is electronically controlled and the operator can set the optimal engine RPM at hand.

Engine power mode selection system

The system allows the operator to select from the two modes, <P mode> or <E mode>, according to the working conditions. The selector switch which is on the console is easy to access.

• P mode

Maximize production by taking full advantage of engine output. Appropriate for job sites which emphasize productivity.

• E mode

Suited for carrying out lighter work economically. This feature provides the sufficient power, better fuel consumption, and prevents tire slipping to extend tire life.



1 RPM set switch

2 Power mode selector switch

Operator Environment Features

Excellent visibility

Excellent visibility of hexangular floor and rear layout side pillar boosts operator's confidence and productivity in all grader applications. Well-positioned blade linkage provides an unobstructed view of the moldboard and front tires.



Rear view



ROPS/FOPS structure

Low profile canopy are designed to ensure ROPS/FOPS (ISO 3471/ISO 3449) certification.



Adjustable control console

The control console moves back and forth and the operator easily gets in and out of the operator compartment. The steering wheel also tilts to suit the operator's preference.



Low noise

New hydraulically driven fan and redesigned layout of the cooling system achieve a low noise level.

Circumference dynamic noise level (ISO 6395)

107 dB (A)

(Typical test data at Komatsu test center)

Engine shutdown secondary switch New

The engine stop switch is incorporated to allow shutdown of the machine when accessing the key switch is not possible.



Seat belt caution indicator New

A warning indicator on the monitor appears when the seat belt is not fastened.



Suspension seat New

High-rigidity suspension seat optimizes damper hardness and various seat adjustments for enhanced vibration absorption.



Work equipment lock lever New

A lever lock is equipped as standard for improved safety during maintenance. It is easy to use and the locked/unlocked status can be seen at a glance.



Maintenance Features

Ground refueling

Easily refueling from the ground eliminates the need for climbing on and down from the tandem.



Fuel filter and fuel pre-filter with water separator

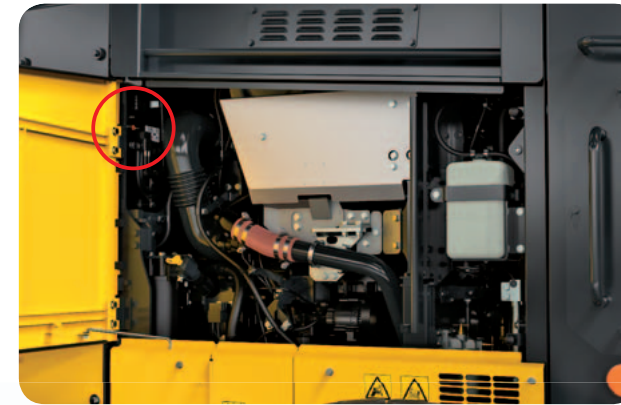
Provides the large filter with enhanced filtering performance, surely removes water and dirt in fuel to prevent fuel system troubles.



Fuel pre-filter

Battery disconnect switch New

For inspection and maintenance, the batteries can be disconnected with this switch when repairing the machine or checking batteries.



Service access platform

The punched metal foot plates on the tandem and grab rails ensure safety maintenance and inspection.



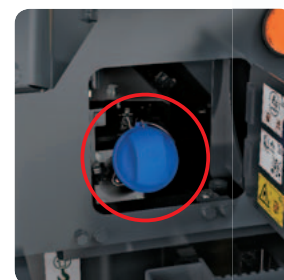
Easy access to service points

Wide-open engine hood doors improve accessibility to service points. All major service points are accessible from the ground level.



Easy access DEF tank New

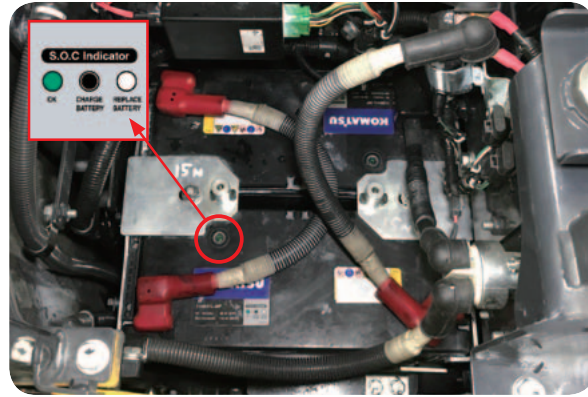
Located at the right rear side of radiator grill, for easy to access. A convenient sight gauge is provided.



Maintenance Features

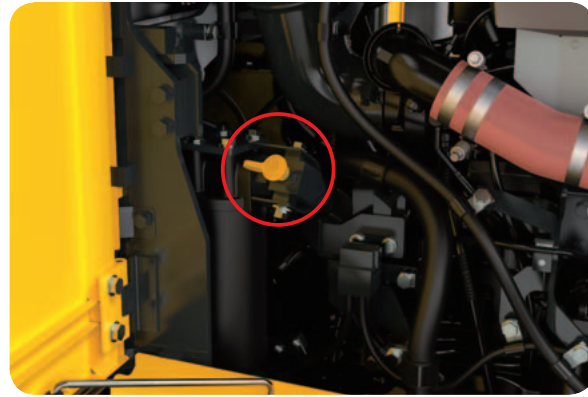
Maintenance-free battery New

Maintenance-free battery saves maintenance time. Operator needs only to check the indicator to know the status. (OK/Charge/Replace)



Easy sampling New

Added sampling port for oil and coolant on machine, so you can sample very easily.



Hydraulic-driven fan New

Hydraulic-driven fan cools down radiator, charge air cooler (CAC), and hydraulic oil cooler. Fan reverse mode blows dust and dirt away, for easier radiator cleaning. It can be operated on the monitor display easily.

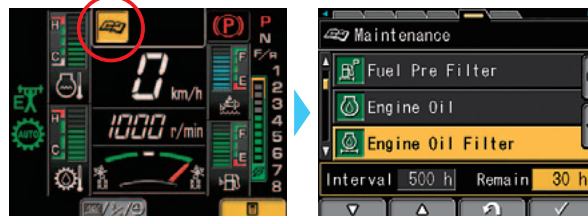


Fan reverse rotation indicator

"Maintenance time caution lamp" display

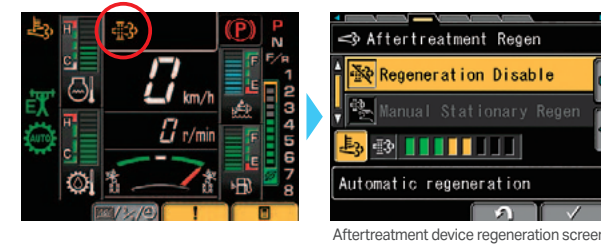
When the remaining time before maintenance becomes less than 30 hours*, the maintenance time monitor appears. Pressing the key switches on the monitor to change to the maintenance screen.

* The setting can be changed within the range between 10 and 200 hours.



Aftertreatment devices regeneration automatic display

When it is necessary to carry out manual regeneration (the manual stationary regeneration) of the KDPF, the display automatically switches to the aftertreatment device regeneration screen to inform the operator.

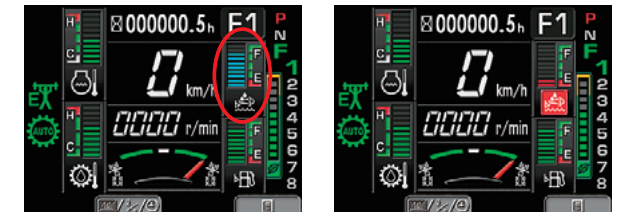


Aftertreatment device regeneration screen

Supports the DEF level and refill timing

The DEF level gauge is displayed continuously on the right side of the monitor screen. In addition, when the refill timing* is reached, the DEF low level guidance appears as a pops up display to inform the operator in real time.

* The CEV Stage-IV emission regulation covering specific special automobile exhaust gases stipulates that when the DEF level becomes very low, the engine output is limited by law.



DEF level gauge



Reliability Features

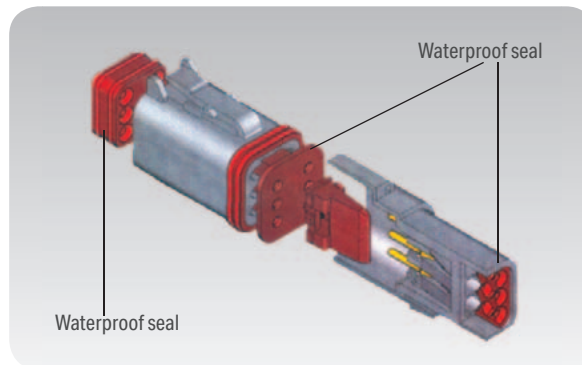
Slip clutch circle drive

Protects the work equipment from shock load when the blade hits an obstruction.



Sealed connectors

Wiring harnesses and controller are connected by sealed connectors providing high reliability, water resistance, and dust resistance.



Battery location

The battery bay is elevated from the ground and prevents intrusion of dusts into the battery and power supply circuit.

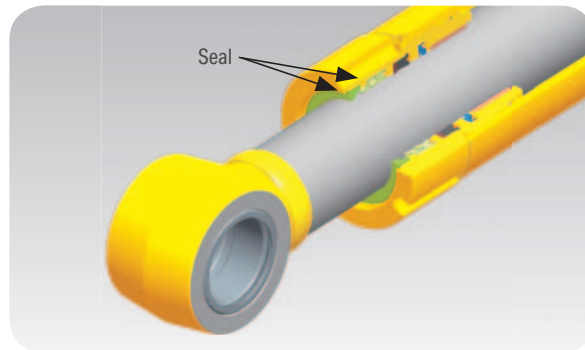
Hydraulically controlled wet multiple-disc brake

This brake system is completely sealed and adjustment-free. The large braking surface provides dependable braking capability and extends life before an overhaul.



Double seal cylinder (Blade side shift cylinder)

A double-seal design is used for the blade side shift cylinder, which is installed near the ground and possibly gets dirt.



Attachments

Moldboard

Includes replaceable metal wear inserts, cutting edge and end bits. Cutting edge and end bits are hardened.



Scarifier

Digs up hard material cannot be removed by the blade. This scarifier can accommodate up to 9 teeth.



Information and Communication Technology (ICT)



High resolution 3.5-inch Liquid Crystal Display (LCD) color monitor

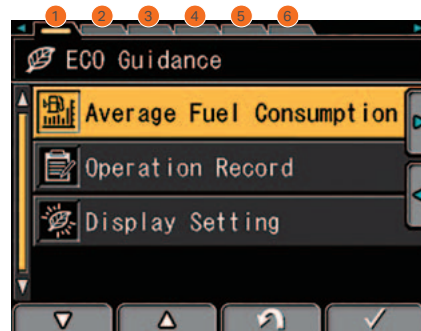
The high resolution 3.5-inch color LCD monitor improves its visibility. The function switches are simple and easy to operate. The operator easily accesses various user menus like maintenance information, and operation record, also adjusts the machine settings.

Indicator, switches

- | | |
|---|--------------------------------------|
| 1 LCD unit | 9 Tachometer |
| 2 Warning lamp | 10 Articulation indicator |
| 3 Pilot lamp | 11 Shift indicator |
| 4 Pilot display | 12 Fuel gauge |
| 5 Engine coolant temperature gauge | 13 Gear shift lever position display |
| 6 Torque converter oil temperature gauge | 14 Function switches |
| 7 Service meter / Odometer / Clock / Fuel consumption gauge display | 15 Seat belt caution lamp |
| 8 Speedometer | 16 DEF gauge |
| | 17 ECO gauge |

Visual user menu

The menus are grouped according to each function with easily understandable icons which enable the operator to reach the information intuitively.

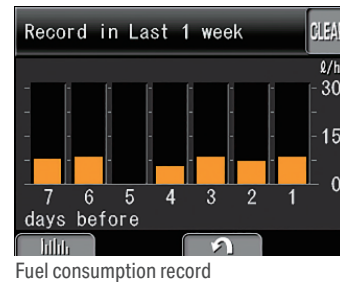


- 1 ECO Guidance
- 2 Machine Setting and Info Reverse Mode
- 3 Aftertreatment Regen
- 4 SCR Information
- 5 Maintenance
- 6 Monitor Setting

Operation record and fuel consumption history

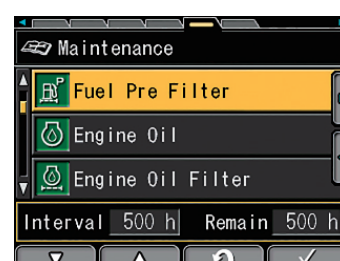
The ECO guidance menu enables the operator to check the operation record and fuel consumption history by pushing the button.

The records can be used to reduce the overall fuel consumption.



Maintenance history

The monitor system can record the maintenance history such as changing the engine oil.

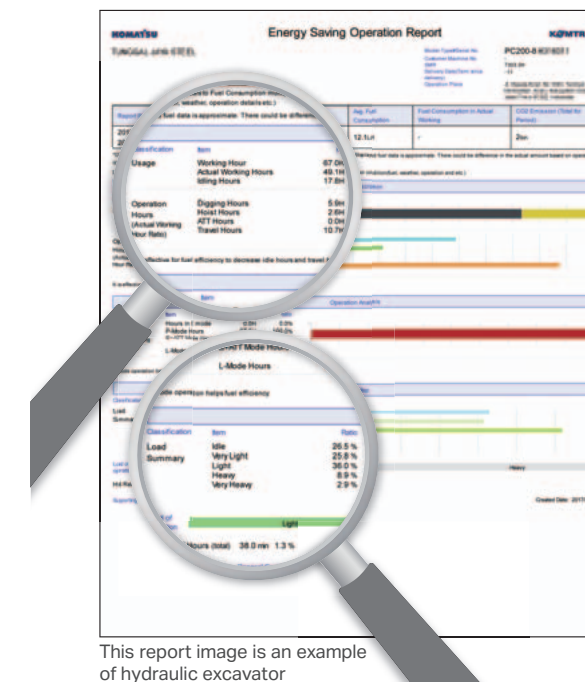


KOMTRAX

The Komatsu remote monitoring and management technology provides insightful data about your equipment and fleet in user-friendly format.

Energy saving operation report

KOMTRAX delivers the energy-saving operation report based on the operating information such as fuel consumption, load summary and idling time, which helps you efficiently run a business.



This report image is an example of hydraulic excavator

Energy saving operation report

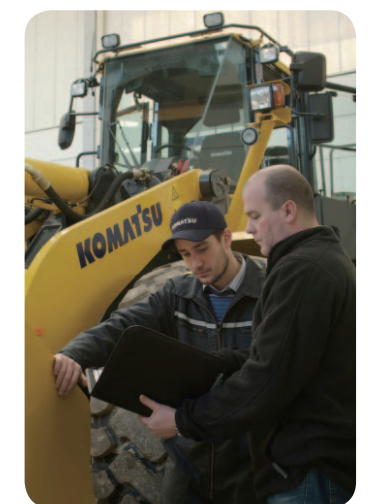
KOMTRAX delivers the energy-saving operation report based on the operating information such as fuel consumption, load summary and idling time, which helps you efficiently run a business.



The report contents and data depend on the machine model.

Optimal strategy for efficient work

The detailed information that KOMTRAX puts at your fingertips helps you manage your fleet conveniently on the web anytime, anywhere. It gives you the power to make better daily and long-term strategic decisions.



Support



Komatsu total support

To keep your machine available and minimize operation cost when you need it, Komatsu Distributor is ready to provide a variety of supports before and after procuring the machine.

Fleet recommendation

Komatsu Distributor can study the customer's job site and provide the most optimum fleet recommendation with detailed information to meet all of your application needs when you are considering to buy new machines or replace the existing ones from Komatsu.

Product support

Komatsu Distributor gives the proactive support and secures the quality of the machinery that will be delivered.

Parts availability

Komatsu Distributor is available for emergency inquiry by the customers for genuine, quality guaranteed Komatsu parts.

Technical support

Komatsu product support service (Technical support) is designed to help customer. Komatsu Distributor offers a variety of effective services to show how much Komatsu is dedicated to the maintenance and support of Komatsu machine.

- Preventive Maintenance (PM) clinic
- Oil & Wear analysis program

Repair & maintenance service

Komatsu Distributor offers quality repair and maintenance service to the customer, utilizing and promoting Komatsu developed programs.

Komatsu Reman (Remanufactured) components

Komatsu Reman products are the result of the implementation of the Komatsu global policy which establishes and agrees to reduce the owning, operating and total Life Cycle Costs (LCC) to Komatsu's customer through high quality, prompt delivery and competitively priced in own remanufactured products (QDC).



Specifications

Engine

| | |
|--|--|
| Model | Komatsu SAA4D107E-5 |
| Type | Water-cooled, 4-cycle, direct injection |
| Aspiration | Turbocharged and air to air aftercooled |
| No. of cylinders | 4 |
| Bore | 107 mm |
| Stroke | 124 mm |
| Piston displacement | 4.46 L |
| Engine power (Manual mode) | |
| SAE J1995 | Gross 110 kW 148 HP/2000 min ⁻¹ |
| ISO 9249 (net engine power) | Net 107 kW 144 HP/2000 min ⁻¹ |
| Maximum torque | 640 Nm 65.3 kgf·m/1500 min ⁻¹ |
| Torque rise | 22% |
| Fan speed | Max 1300 min ⁻¹ |
| Air cleaner | 2-stage, dry-type |
| India CEV Stage-V emissions certified. | |

Transmission and torque converter

Full power shift transmission with torque converter and lock-up.
Speeds (at engine Hi idling)

| Gear | Forward | Reverse |
|------|-----------|-----------|
| 1st | 4.3 km/h | 4.8 km/h |
| 2nd | 6.1 km/h | 9.4 km/h |
| 3rd | 8.2 km/h | 18.3 km/h |
| 4th | 11.6 km/h | 34.9 km/h |
| 5th | 16.1 km/h | - |
| 6th | 22.5 km/h | - |
| 7th | 30.9 km/h | - |
| 8th | 43.0 km/h | - |

Travel speeds calculated with 14.00-24-16PR tires.

Tandem drive

| | |
|--------------------------------|--------------------------|
| Oscillating welded box section | 490 mm x 202 mm |
| Side wall thickness: Inner | 22 mm |
| Outer | 19 mm |
| Wheel axle spacing | 1525 mm |
| Tandem oscillation | 11° forward, 13° reverse |

Front axle

| | |
|---------------------------------|--|
| Type | Solid bar construction welded steel sections |
| Ground clearance at pivot | 600 mm |
| Wheel lean angle, right or left | 16° |
| Oscillation, total | 32° |

Rear axle

Alloy steel, heat treated, full floating axle.

Steering

| | |
|--|-------|
| Hydraulic power steering providing stopped engine steering meeting ISO 5010. | |
| Minimum turning radius | 7.0 m |
| Maximum steering range, right or left | 49° |
| Articulation | 25° |

Brakes

| | |
|---------------|--|
| Service brake | Foot operated, wet multiple-disc brakes, hydraulically actuated on four tandem wheels. |
| Parking brake | Manually actuated, spring applied, hydraulically released caliper disc type. |

Frame

| | |
|-----------------------|--------|
| Front Frame Structure | |
| Height | 300 mm |
| Width | 280 mm |
| Side | 22 mm |
| Upper, Lower | 28 mm |

Drawbar

| | |
|---|----------------|
| A-shaped, welded construction for maximum strength with a replaceable drawbar ball. | |
| Drawbar frame | 220 mm x 16 mm |

Circle

| | |
|---|---------|
| Single piece rolled ring forging. Four circle support shoes with replaceable wear plates. | |
| Diameter (outside) | 1410 mm |
| Circle reversing control hydraulic rotation | 360° |

Specifications

Moldboard

| | |
|---|--------------------------|
| Hydraulic power shift fabricated from steel. Includes replaceable metal wear inserts, cutting edge and end bits. Cutting edge and end bits are hardened. | |
| Dimensions | 3710 mm x 645 mm x 16 mm |
| Arc radius | 329 mm |
| Cutting edge | 152 mm x 16 mm |
| Replaceable/Reversible side edges | 229 mm x 496 mm x 13 mm |
| Blade pull | 8560 kgf |
| Blade down pressure | 6905 kgf |

Blade range

| | |
|--|--------------------------|
| Moldboard side shift: | |
| Right | 625 mm |
| Left | 625 mm |
| Maximum shoulder reach outside rear tires (frame straight) | |
| Right | 1975 mm |
| Left | 1905 mm |
| Maximum lift above ground | 500 mm |
| Maximum cutting depth | 545 mm |
| Maximum blade angle, right or left | 90° |
| Blade tip angle | 40° forward, 3° backward |

Hydraulics

| | |
|--|----------------------------------|
| Hydraulic pumps: | |
| Gear pump for work equipment steering control Capacity (at engine rated rpm) | 77 L/min |
| Relief valve setting: | |
| Work equipment | 19.1 MPa 195 kgf/cm ² |
| Steering | 17.7 MPa 180 kgf/cm ² |

Instrument

| | |
|--|---|
| Electric monitoring system with diagnostics: | |
| Gauges: | |
| Standard | articulation, engine coolant temperature, fuel level, speedometer, transmission shift indicator, engine tachometer, torque converter oil temperature, DEF level |
| Warning lights/Indicator: | |
| Standard | battery charge, brake oil pressure, inching temperature, directional indicator, engine oil pressure, hydraulic oil temperature, heater signal, lift arm lock, parking brake, torque converter oil temperature, eco, P mode, rpm set, high beam, working lights, seat belt |

Capacities (refilling)

| | |
|------------------------|--------|
| Fuel tank | 224 L |
| DEF tank | 36 L |
| Cooling system | 21.6 L |
| Crank case | 14.2 L |
| Transmission | 45 L |
| Final drive | 13 L |
| Tandem housing (each) | 51 L |
| Hydraulic system | 51.5 L |
| Circle reverse housing | 4.1 L |

Operating weight (approximate)

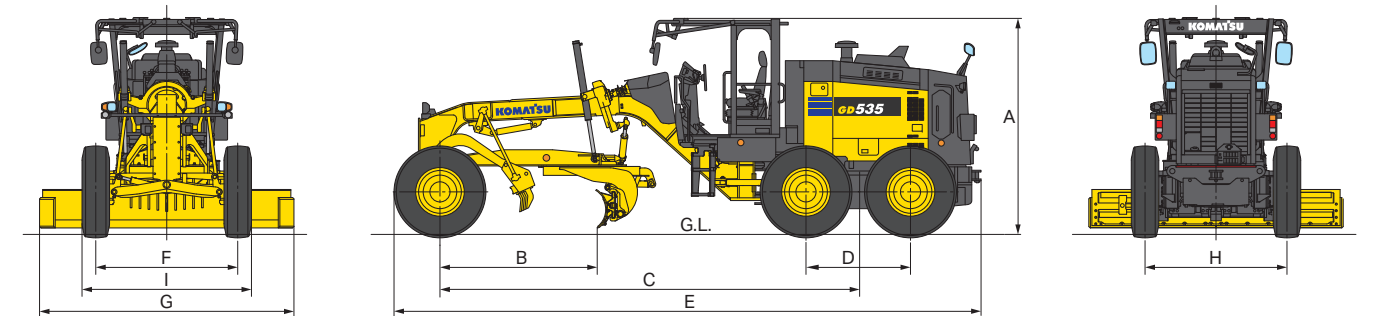
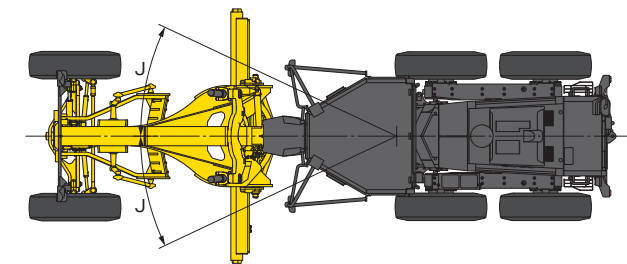
| | |
|---|----------|
| Includes lubricants, coolant, full fuel tank, ROPS/FOPS canopy, 14.00-24 tires and multi piece rims, scarifier: | |
| Total | 15040 kg |
| On front wheels | 4340 kg |
| On rear wheels | 10700 kg |

Scarifier (optional)

| | |
|---------------------------------|---------|
| Middle, V-type | |
| Working width | 1065 mm |
| Scarifying depth, maximum | 180 mm |
| Scarifier shank holders | 9 |
| Scarifier shank holders spacing | 130 mm |

Machine dimensions

| | | |
|---|--------------------------------------|---------|
| A | Height | 3165 mm |
| B | Cutting edge to center of front axle | 2265 mm |
| C | Wheelbase to center of tandem | 6100 mm |
| D | Tandem wheelbase | 1525 mm |
| E | Overall length | 8565 mm |
| F | Tread (front) | 2070 mm |
| G | Width of standard moldboard | 3710 mm |
| H | Tread (rear) | 2060 mm |
| I | Width over tires | 2455 mm |
| J | Articulation, left or right | 25° |



Wheels, front and rear

| Tire | Rim size | Wheel group |
|----------|----------|-------------|
| 14.00-24 | 10" | Multi-piece |

