

KOMATSU®

MOTOR GRADER

GD535-5

HORSEPOWER

Gross: 154 hp (115 kW) @ 2,000 rpm

Net: 151 hp (113 kW) @ 2,000 rpm

OPERATING WEIGHT

15,700 kg

BLADE LENGTH

3.71 m



ORIGIN BRAZIL / KDB

Photos of the equipment are referential, may include optional equipment.

GD535-5 WALK-AROUND

**NET
ENGINE
POWER
151 hp**



*Photo may include optional equipment.

»Productivity

- »High productivity with low fuel consumption.
- »Transmission with lock-up torque converter.
- »Long wheelbase and small swing radius.

»Ecology and economy

- »Komatsu technology.
- »High performance and low emission engine.
- »Engine power mode selection system.

»Comort

- »Excellent visibility.
- »ROPS/FOPS cab/canopy (ISO 3471/ISO 3449).

»Maintenance

- »Easy maintenance design.
- »Easy radiator cleaning with manual reversing fan.
- »Maintenance information display.

»Reliability

- »Fault-preventing components, increasing equipment's reliability.

»Attachments

- »Original Komatsu tools and attachments.

»ICT and Komtrax

- »High-resolution LCD color 3.5" monitor.
- »KOMTRAX system.

PRODUCTIVITY

»Transmission with lock-up torque converter

»This feature was specially designed for Komatsu Motor Graders and its purpose is to deliver direct shifting as well as easy auto-shifting.

1) Transmission mode selection

•Auto mode (torque converter)

»Torque converter offers the operator an amazing drawbar pull and low speed control, without shifting or using the inching pedal. Auto mode shifting in F8 and R4 positions is made through F4-F8 or R2-R4 positions, according to the equipment's speed.

•Manual mode (direct drive)

»When torque converter is in lockup state, the transmission starts acting as direct drive for all gears, functioning as a PowerShift equipped motor grader.

»Longer wheelbase and small swing radius

»A bigger wheelbase allows a great leveling performance and easier blade position adjustment. Added to a wide articulation angle, this feature expands blade's reach.

»Also, its small swing radius and wide steering angle, allows for a higher maneuverability.



*Photo may include optional equipment.

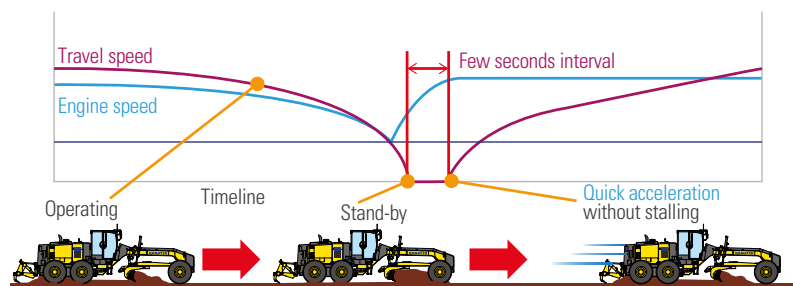
2) Stalling prevention function

»Manual and automatic mode combination is highly efficient in light operations performed at low speed, avoiding stalling.

3) Electronic overrun prevention system

»This system helps preventing damages produced to the engine and transmission due to premature downshifting and downhill overruns.

Due to rpm deceleration, shifting mode goes from direct to automatic mode with torque converter.



*Photo may include optional equipment.

ECOLOGY AND ECONOMY

»Komatsu technology

- »Komatsu exclusively develops all major components, including total control systems, such as engine, electronics, and hydraulic components.
- »With this investment in new technologies and customer feedback, Komatsu has achieved great advancements in technology.
- »The result is a new generation of high-performance and environmentally friendly products.



»Manual and hydraulic reversing cooling fan

- »It diminishes power loss during operations at low temperatures and it also reduces engine noise.

»High performance and low emission engine

- »Komatsu SAA6D107E-1, turbo-charged and air-to-air aftercooled engine provides high productivity and low fuel consumption.
- »Common rail injection system provides precise throttle control, delivering higher working speeds and even higher horsepower.
- »The two working modes available (P mode and E mode) optimize output and help to reduce fuel consumption.



*Photo may include optional equipment.



Photo may include optional equipment.

»Engine power mode selection system

»The system allows the operator to select from the two working modes, “P mode” or “E mode”, according to the working conditions. The selector switch can be accessed easily on the machine console.

•P mode

»This mode maximizes production by taking full advantage of the engine output.
 »It is appropriate for job sites which require higher productivity.

•E mode

»This mode is suited for lighter operations. It provides the sufficient power to the machine, with emphasis on fuel economy, and prevents tire slippage to extend the tires service life.

»Electric throttle control

»Throttle is electronically controlled and the operator can manually set the optimal engine speed according to the job at hand.



① Engine speed set switch.

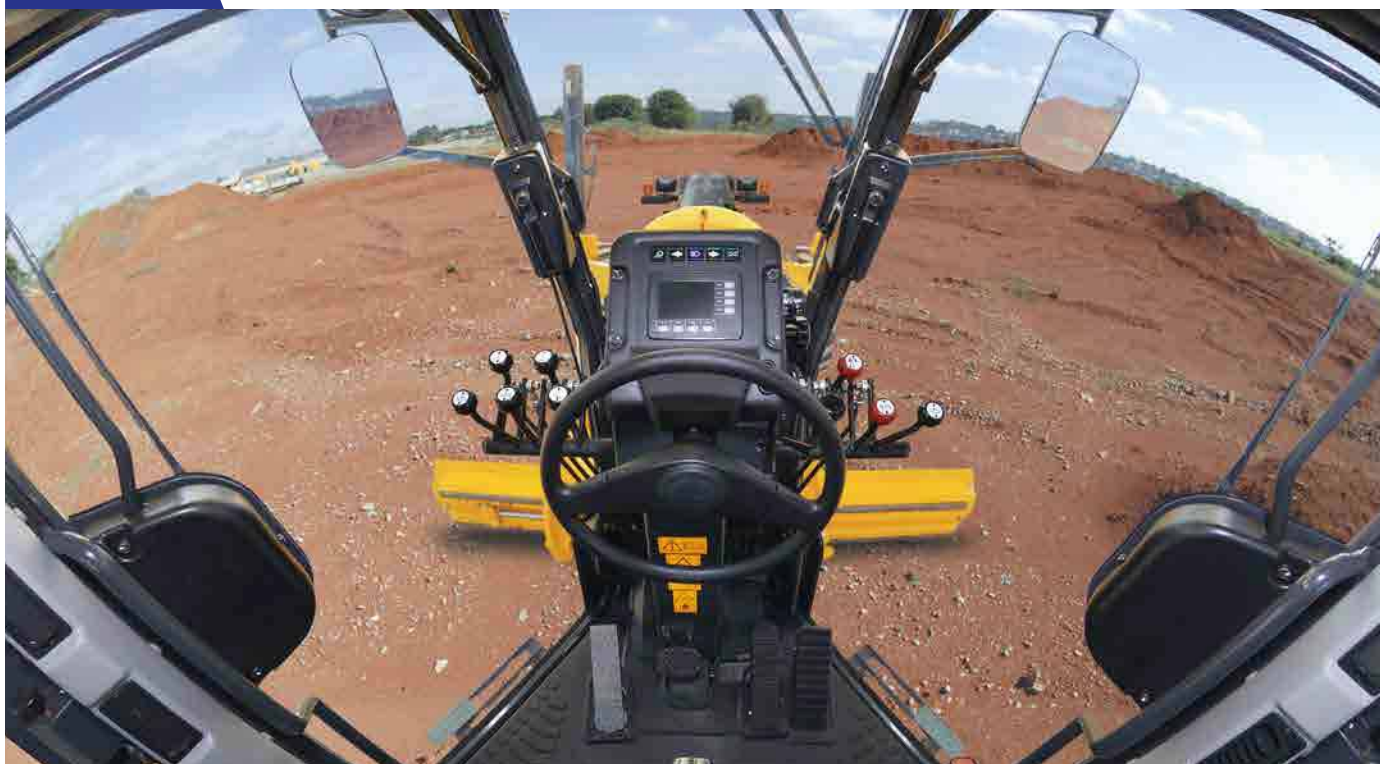
② Power mode selector switch.

COMFORT

»Excellent visibility

»Hexangular floor and rear layout side pillar cab provides the operator with an exceptional visibility, boosting the operator's productivity and confidence in all grader applications. The strategically positioned blade linkage provides an unobstructed view of the blade and front tires.

»Front view



»Rear view



»ROPS/FOPS structure



»Cab

»The cab was specially designed to comply with ROPS/FOPS ISO 3471/ ISO 3449 certification.

»Adjustable control console



»Control console can be adjusted back and forth, so the operator can easily get in and out of the compartment. The steering wheel can also be tilted to suit the operator's preference.

»Multi-use holder



»There are compartments at the left and right sides of the operator seat to store personal effects.

»Cab accessories

»Suspension seat

»The machine is equipped with high-rigidity suspension seats to better absorb the vibration produced when contacting the ground.



»Air conditioner

»The renewed design of air outlets increase air flow rate, improving operator's comfort.



»12 V outlet



»Ashtray

MAINTENANCE

»Easy maintenance design

Ground refueling

»Easy refueling from ground level eliminates the need for climbing on and down the tandem.



Service access platform

»The punched metal plates on the tandem and the handrails ensure safety during inspection and maintenance procedures.



Easy access to service points

»Wide hinged engine covers improve accessibility to service points. All major service points are accessible from ground level.



Larger fuel filter and pre-filter with water separator

»Larger filters provide enhanced filtering performance, effectively removing water and debris from fuel to prevent fuel supply failures.



Fuel pre-filter

Easy radiator cleaning with reversing fan

»Dust stuck to the radiator and cooler fins is blown off by reversing the hydraulic drive fan.



Reversing cooling fan

»Maintenance information display

“Maintenance interval caution lamp” display

»When the remaining time for maintenance become less than 30 hours*, the maintenance time monitor will be displayed. The maintenance screen can be displayed by pressing the key switches on the monitor.

*This setting can be change within a range of 10 - 200 hours.

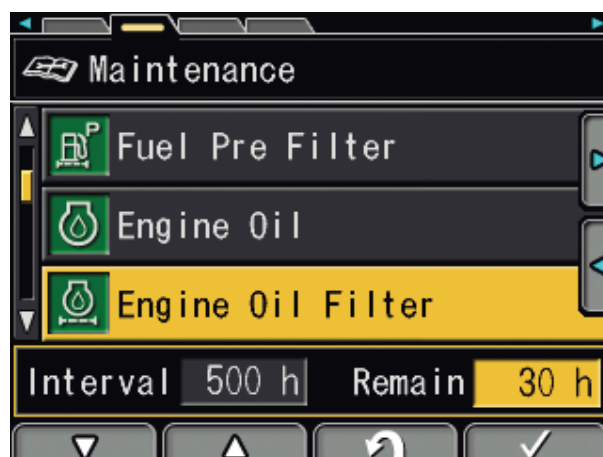


Photo may include optional equipment.

RELIABILITY

»Components designed to prevent machine failure and improve reliability

»Slip clutch circle drive

»This feature protects the work equipment from shock load when the blade hits an obstacle.



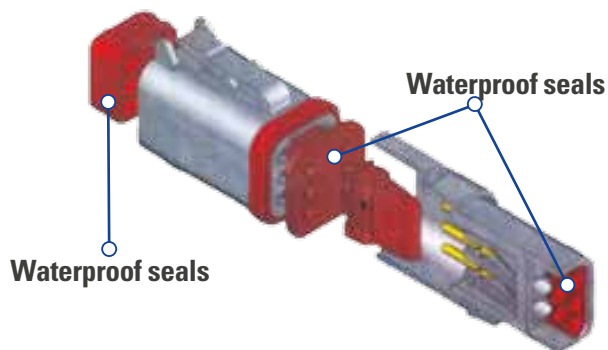
»Hydraulically controlled wet multi-disc brake

»The brake system is completely sealed and adjustment-free. Large braking surface provides dependable braking capability and extends service life before possible overhauls.



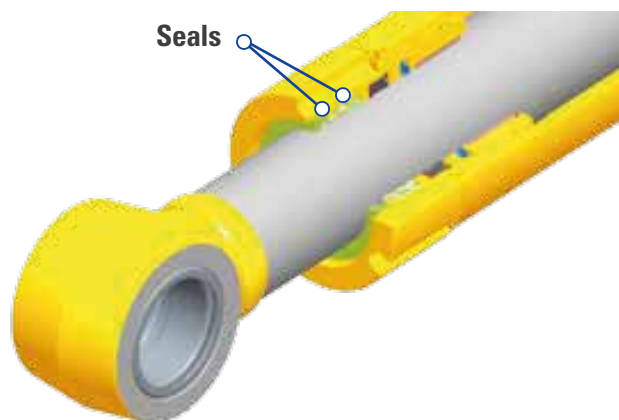
»Sealed connectors

»Main wiring harness and controller are connected by sealed connectors providing reliability, as well as water and dust resistance.



»Double-seal cylinder (blade side shift cylinder)

»A double-seal design has been developed for the blade side shift cylinder, which could be damaged by dust buildup due to being mounted near the ground.



»Battery location

»The battery compartment is high from the ground and prevents particulate matter and other debris from entering to the battery and power supply circuit.



I ATTACHMENTS

KOMATSU GENUINE ATTACHMENTS

»Blade

»Made of high-rigidity carbon steel. It includes replaceable metal wear inserts, cutting edge, and end bits, all of them made of tempered steel.



»Ripper

»It can dig up hard material that cannot be removed by the blade.
»The ripper can also accommodate up to 5 shanks.



Photo may include optional equipment.

ICT AND KOMTRAX

KOMATSU NEW MONITOR TECHNOLOGY



»High resolution 3.5" color LCD monitor

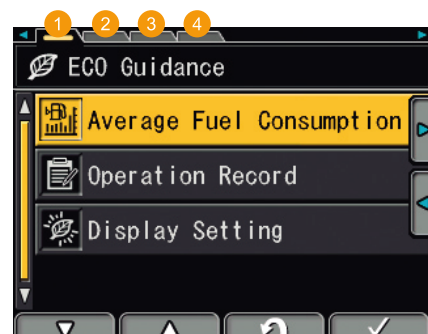
»The high-resolution 3.5 inch color LCD monitor improves visibility. The function switches are simple and easy to operate. The operator can easily access the different user menus, such as maintenance information and operation record, as well as the machine adjustment settings.

Indicators and switches

- | | |
|--|---------------------------------------|
| 1 LCD unit. | 8 Speedometer. |
| 2 Warning lamp. | 9 Tachometer. |
| 3 Pilot lamp. | 10 Articulation display. |
| 4 Caution lamp. | 11 Shift indicator. |
| 5 Engine coolant temperature gauge. | 12 Fuel level gauge. |
| 6 Torque converter oil temperature gauge. | 13 Gear shift lever position display. |
| 7 Service meter / odometer / clock / fuel consumption gauge. | 14 Function switches. |

»Visual user menu

»The menus are grouped according to each function and easy to understand icons which enable the operator to get the information intuitively.

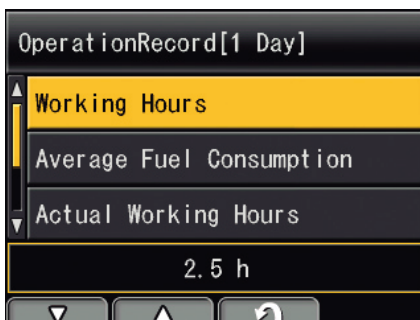


- 1 ECO gauge.
- 2 Maintenance items.
- 3 Monitor settings.
- 4 Message display.

»Operation record and fuel consumption history

»The Eco guide menu (economy mode operations) enables the operator to check the operation record and fuel consumption history by pushing a button.

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



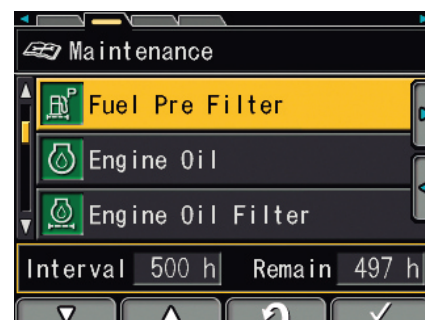
Operation record



Fuel consumption record

»Maintenance history

»The system can record maintenance history such as engine oil changes.



SPECIFICATIONS



ENGINE

MODEL	Komatsu SAA6D107E-1.
TYPE	Water-cooled, 4-cycle, direct injection.
ASPIRATION	Turbocharged and air to air aftercooled.
NUMBER OF CYLINDERS	6.
BORE	107 mm.
STROKE	124 mm.
PISTON DISPLACEMENT	6.69 L.
HORSEPOWER (MANUAL MODE):	
P-MODE	
SAE J1995	Gross 154 hp (115 kW) / 2,000 rpm.
ISO 9249 / SAE J1349	Net 151 hp (113 kW) / 2,000 rpm.
E-MODE	
SAE J1995	Gross 143 hp (107 kW) / 2,000 rpm.
ISO 9249 / SAE J1349	Net 142 hp (106 kW) / 2,000 rpm.
MAXIMUM TORQUE	665 Nm 67.9 kgm / 1,450 rpm.
TORQUE RISE	24%.
FAN SPEED	Max 1,300 rpm.
AIR CLEANER	2-stage, dry-type.
PROCONVE/MAR-1 emission certified.	



TRANSMISSION AND TORQUE CONVERTER

Powershift type with lockup torque converter. Speeds (at rated engine speed):

Gear	Forward	Reverse
1st	4.3 km/h	4.8 km/h
2nd	6.1 km/h	9.4 km/h
3rd	8.3 km/h	18.4 km/h
4th	11.6 km/h	35.2 km/h
5th	16.2 km/h	—
6th	22.7 km/h	—
7th	31.1 km/h	—
8th	43.4 km/h	—

Maximum travel speed with engine at high idle: 46.0 km/h



TANDEM

OSCILLATING, WELDED BOX SECTION	490 mm x 203 mm.
SIDE WALL THICKNESS: INNER	22 mm.
OUTER	19 mm.
WHEELBASE	1,525 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°.
TOTAL OSCILLATION	32°.



REAR AXLE

Alloy steel, heat treated, full floating axle with optional lock/unlock differential.



STEERING

Hydraulic drive steering which allows steering operations even with the engine stopped, complying with ISO 5010.

MINIMUM TURNING RADIUS	7.0 m.
MAXIMUM STEERING RANGE, RIGHT OR LEFT	49°.
ARTICULATION	25°.



BRAKES

SERVICE BRAKE	Wet multi-disc brakes, sealed and hydraulically actuated. Foot pedal operated on four tandem wheels.
PARKING BRAKE	Manually actuated, spring applied and hydraulically released 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 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)	1,410 mm.
CIRCLE ROTATION HYDRAULIC REVERSING CONTROL	360°.



BLADE

Hydraulic side shift, fabricated with high-density carbon steel. Including replaceable metal wear plates, cutting edge and end bits. Cutting edge and end bits are hardened.

DIMENSIONS	3,710 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	
BASE GVW	8,545 kg.
GVW WITH RIPPER	9,200 kg.
BLADE DOWN PRESSURE	
BASE GVW	6,285 kg.
GVW WITH RIPPER	6,680 kg.



BLADE RANGE

BLADE SIDE SHIFT:	
RIGHT	1,050 mm.
LEFT	970 mm.
MAXIMUM SHOULDER REACH OUTSIDE REAR TIRES (FRAME STRAIGHT)	
RIGHT	1,975 mm.
LEFT	1,905 mm.
MAXIMUM LIFT ABOVE GROUND	500 mm.
MAXIMUM CUTTING DEPTH	545 mm.
MAXIMUM BLADE ANGLE, RIGHT OR LEFT	90°.
BLADE TILT ANGLE	40° forward, 3° backward.



HYDRAULICS

Hydraulic pumps:
Tandem gear pump for steering and work equipment control.

CAPACITY	72 L / min + 36 L / min.
RELIEF VALVE SETTING:	
WORK EQUIPMENT	19.1 MPa 195 kg / cm ² .
STEERING SYSTEM	17.7 MPa 180 kg / cm ² .



INSTRUMENTS

ELECTRONIC MONITORING SYSTEM WITH
TROUBLESHOOTING FUNCTIONS:

GAUGES:
STANDARD Articulation, coolant temperature, fuel level, speedometer, transmission shift indicator, engine tachometer, torque converter oil temperature.

INDICATORS/WARNING LIGHTS:
STANDARD Battery charge, brake oil pressure, inching control temperature, directional indicator, engine oil pressure, hydraulic oil temperature, heater signal, lift arm lock, parking brake, torque converter oil temperature, Eco-gauge, P mode, fan reversing, engine speed selection, high beam and working lamps indicator.



CAPACITIES (REFILLING)

FUEL TANK	271 L.
COOLING SYSTEM	26 L.
ENGINE OIL PAN	23.1 L.
TRANSMISSION	45 L.
FINAL DRIVE	13 L.
TANDEM CASE (EACH)	51 L.
HYDRAULIC SYSTEM	51.5 L.
CIRCLE REVERSE HOUSING	4.1 L.



OPERATING WEIGHT (APPROXIMATE)

Including lubricants, coolant, full fuel tank, ROPS/FOPS cab, 14.00-24 tires and single-piece rims:

TOTAL	14,630 kg.
ON REAR WHEELS	10,680 kg.
ON FRONT WHEELS	3,950 kg.
WITH REAR MOUNTED RIPPER AND FRONT PUSH PLATE	
TOTAL	15,700 kg.
ON REAR WHEELS	11,500 kg.
ON FRONT WHEELS	4,200 kg.



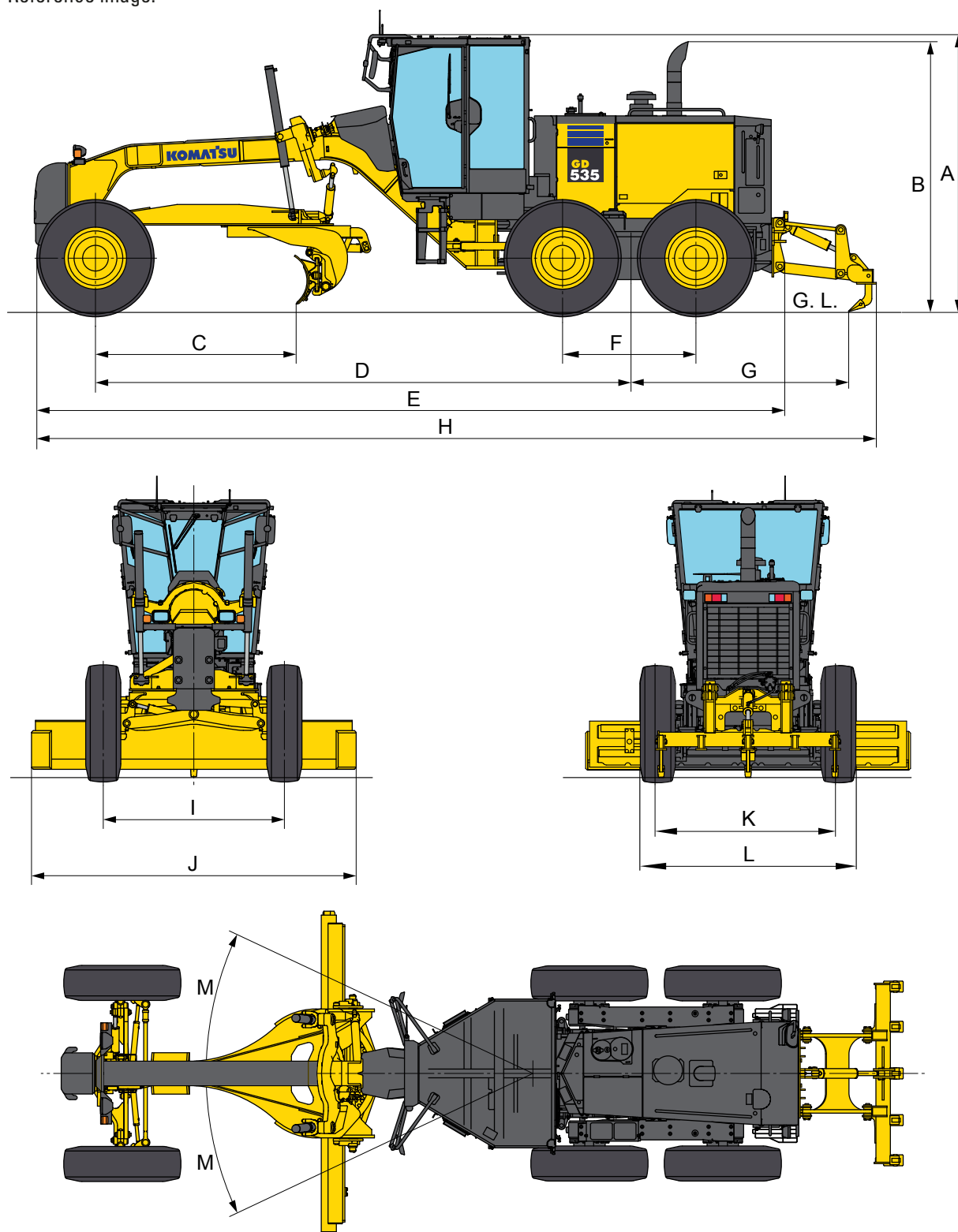
RIPPER

MAXIMUM RIPPING DEPTH	273 mm.
RIPPER SHANK HOLDER	5.
RIPPER SHANK HOLDER SPACING	459 mm.
PENETRATION FORCE	7,610 kg.
PRY OUT FORCE	3,225 kg.
MACHINE LENGTH INCREASE, RAISED SHAFT	1,008 mm.



DIMENSIONS

Reference image.





DIMENSIONS

A	Height to top of cab	3,250 mm ^{*2}
B	Height to exhaust	3,075 mm ^{*2}
C	Cutting edge to front axle center	2,265 mm
D	Distance from axles to tandem center	6,100 mm
E	Distance from front tires to rear bumper	8,565 mm ^{*2}
F	Distance between tandem axles	1,525 mm
G ^{*1}	From tandem center to ripper tip from ground	2,510 mm
H ^{*1}	Overall length	9,595 mm
I	Gauge (front)	2,070 mm
J	Standard blade width	3,710 mm
K	Gauge (rear)	2,060 mm
L	Width outside tires	2,455 mm ^{*2}
M	Left and right articulation	25°

*1: Optional

*2: With 14.00-24 tires



FRONT AND REAR WHEELS

Tires	Rim size	Wheel group
13.00-24	9"	Single-piece
14.00-24	9"	Single-piece
14.00-24	10"	Multi-piece
14.00-R24	10"	Multi-piece



STANDARD EQUIPMENT

»Engine and related items

- »Air intake extension.
- »Double-element air cleaner, with maintenance indicator.
- »Engine: Komatsu SAA6D107E-1, PROCONVE/MAR-I emission certified, turbocharged and air-to-air aftercooled, 142 HP/151 HP net horsepower.
- »Fuel pre-filter.
- »Pre-cleaner.
- »Reversing cooling fan, hydraulic drive, blower type, plastic fins and guard cover.

»Electric systems

- »Backup alarm.
- »Alternator, 24 V/60 A.
- »Battery, 2 x 12 V/150 Ah.
- »Electric horn.
- »Indicators: parking brake, turn signal, high beam headlamps, brake oil pressure.
- »Satellite KOMTRAX system.
- »Lamps: backup, brake, tail, directional, headlights (2 halogen type, front bar mounted).
- »Color multi-monitor.
- »License plate light.
- »Battery disconnect switch.
- »Reversing cooling fan.

»Operator environment

- »Adjustable console with panel instrument monitoring system.
- »Cab floor mat.
- »Exterior rear-view mirrors, right and left side.
- »Adjustable seat with upholstery (cab).
- »Retractable seat belt, 50 mm.
- »ROPS/FOPS ISO 3471/ ISO 3449 cab.

»Power train

- »Full-floating rear axle, planetary type.
- »Dry parking brake, spring applied and hydraulically released.
- »PowerShift dual-mode transmission (8F-4R), direct drive and torque converter with auto shift, engine stall prevention function.
- »Fully hydraulic, wet disc service brake.
- »Differential lock/unlock function.

»Cab accessories

- »Air conditioner.
- »Cup holder.
- »Heater with defroster.
- »12 V outlet.
- »Room rear-view mirror.
- »Front and rear glass wiper and washer.
- »Room light.
- »Cigarette lighter.
- »Ashtray.

»Work equipment and hydraulics

- »9 section hydraulic control valve.
- »Circle, drawbar mounted, 360° rotation, blade lift and circle side shift.
- »Circle swing clutch.
- »Blade: 3,710 mm x 645 mm x 16 mm, with 152 mm x 16 mm replaceable heat-treated end bits and cutting edges, hydraulic blade side shift.
- »Hydraulic blade tilt control system.
- »Fully hydraulic steering, with steering wheel and front wheels tilt, frame articulation with anti-drift check valves.

»Other standard equipment

- »Fuel tank with ground level access.
- »Komatsu standard color scheme painting.
- »Steps and handrails, rear, right and left sides.
- »Vandalism protection with lockable access to fuel tank, battery cover and side engine covers.
- »Rear 3-shank ripper.
- »Front push plate.
- »Tires and rims: 14.00 x 24 – 12-ply (L2/G2), installed on 3-piece 10" rims.



OPTIONAL EQUIPMENT

- »Working lights: front (2), rear (1).
- »Rear-view mirror on the back.
- »2 additional shanks on rear ripper.
- »14.00 x 24 – 16-ply L2/G2 tires.

**Optional equipment may not be available in your country.
Please contact your Distributor for further information.**



SATELLITE MONITORING SYSTEM

KOMTRAX is a revolutionary tracking system designed to save time and money. Nowadays, the equipment can be tracked anytime and anywhere. This valuable data, received via the KOMTRAX website, can be used to optimize planning of the movements and performance of the equipment.

FEATURES

» LOCATION

KOMTRAX uses a satellite positioning network to inform the location of the equipment.

» GEOFENCE

In partnership with their Komatsu Distributor, owners can create virtual fences (Geo) to receive alerts when the equipment enters or leaves the designated range for operations.

» SERVICE METER READING

Daily report of the equipment's working hours, which allows planning maintenance and replacement of components.

» KOMTRAX OPERATION MAPS

In the operation maps you can check the times of the day when the equipment is in operation and if the workers are performing their duties in the stipulated times.

» FUEL MEASUREMENT LEVEL

Shows the amount of fuel at the end of the working day.

» WATER TEMPERATURE DAILY RECORD

Constant record of the increase of engine water temperature with a daily report at the end of the day.

» CAUTIONS

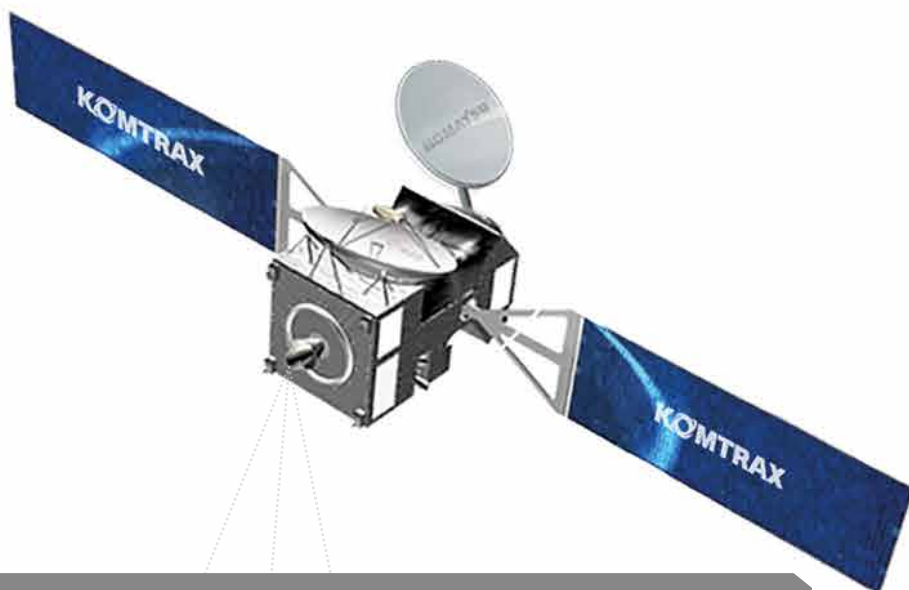
If a light turns on in the cab of the equipment, it indicates that a problem occurs. From the website of the application you can check the reason for the problem, the time it occurred and a record number will be generated.

» ABNORMALITY CODES

Abnormality codes are transmitted to the Komatsu Distributor for troubleshooting before technicians arrive at the workplace. An email notification is also sent with the code of what happened.

» NOTICE OF MAINTENANCE REPLACEMENT

The system generates alerts to inform that the equipment requires replacement of elements like filters and oil.



FEATURES

» EQUIPMENT KEY HOURS

Detailed information on key equipment hours such as excavation, travel, unloading and elevation. This can help to monitor and compare equipment performance, in addition to working hours and idle times.

» LOADING FREQUENCY

Information on the load factor of the equipment to know if it is performing in a light, medium or heavy work.

Check with your Komatsu dealer for the information available for your model and service availability in your country.



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