

KOMATSU®

MOTOR GRADER

GD535-5

HORSEPOWER

Gross: 154 hp (115 kW) @ 2,000 min⁻¹
Net: 145 hp (108 kW) @ 2,000 min⁻¹

OPERATING WEIGHT

13,680 kg

BLADE LENGTH

3.71 m³



ORIGIN JAPAN / KLTD

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

GD535-5 WALK-AROUND

NET
HORSEPOWER
145 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.
- »Maintenance information display.

»Reliability

- »Components that prevent machine failure and improve machine reliability.

»Attachments

- »Komatsu genuine attachment tools.

»ICT and Komtrax

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

I PRODUCTIVITY

»High productivity & low fuel consumption

»Improvements in transmission and axles raises efficiency, and the sophisticated electronic engine and transmission control offers optimized output - all combined - realizing 15% better production and 14% better fuel consumption in the field compared with the GD511A-1.

Production 15% up (P mode)
Fuel consumption 14% reduction (E mode)

(Compared with GD511A-1)

*Fuel consumption varies depending on the job conditions.



*Photo may include optional equipment.

»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. This mode maximize efficiency of direct shifting. In reverse travelling, works same way as Auto mode, serves less operation frequency.

2) Anti stall

»Prevents engine stalling while Lock-up, never needs to restart the engine and shift the gear.

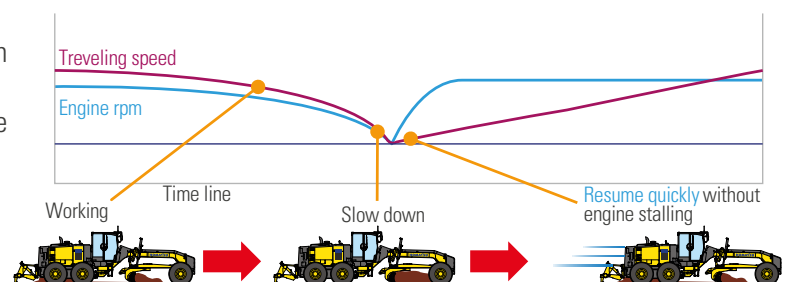
3) Electronic over-speed protection

»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.

Engine speed is down and transmission shift mode is changed from direct to torque converter auto mode.



ECOLOGY AND ECONOMY

»Komatsu technology

- »Komatsu exclusively develops all major component, 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.

ecot3

ecology & economy - technology 3

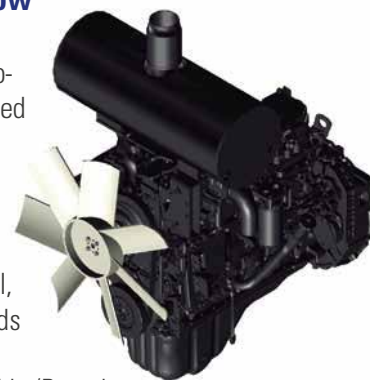
Hydraulic
technology

Electronic
control
technology

Engine
technology

»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.

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»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

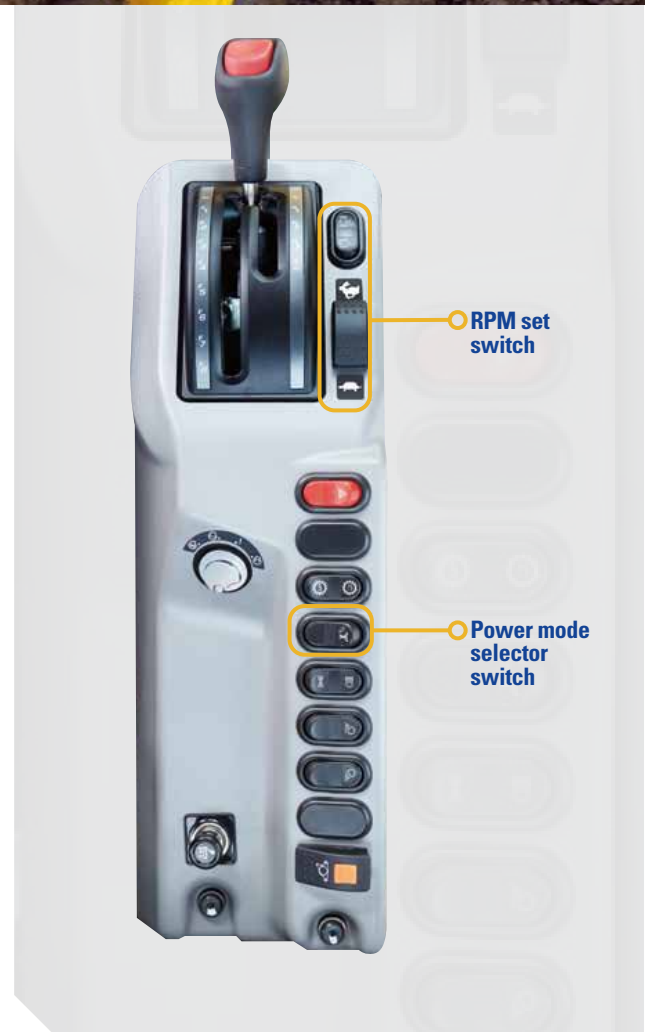
»Maximize production by taking full advantage of engine output. Appropriate for job sites which emphasize productivity.

• 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.

»Electric throttle control

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



COMFORT

»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.

»Front view



»Rear view



»ROPS/FOPS structure



»Cab

»Low profile cab and 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.

»Lunch box tray and cup holder

»The tray and cup holder for personal items, placed at the left side of the operator's seat for cab.

»Large tray for canopy.



»Other cab accessories

»Air conditioner (A/C)

»Increase air flow rate by refurbishing the shape of air outlets.



»Suspension seat (optional)

»Adopt high-rigidity suspension seat to enhance vibration absorption.



»12V Outlet



»Ashtray



»Mobile phone tray



EASY MAINTENANCE



»Ground refueling

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

»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.



»Large 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.

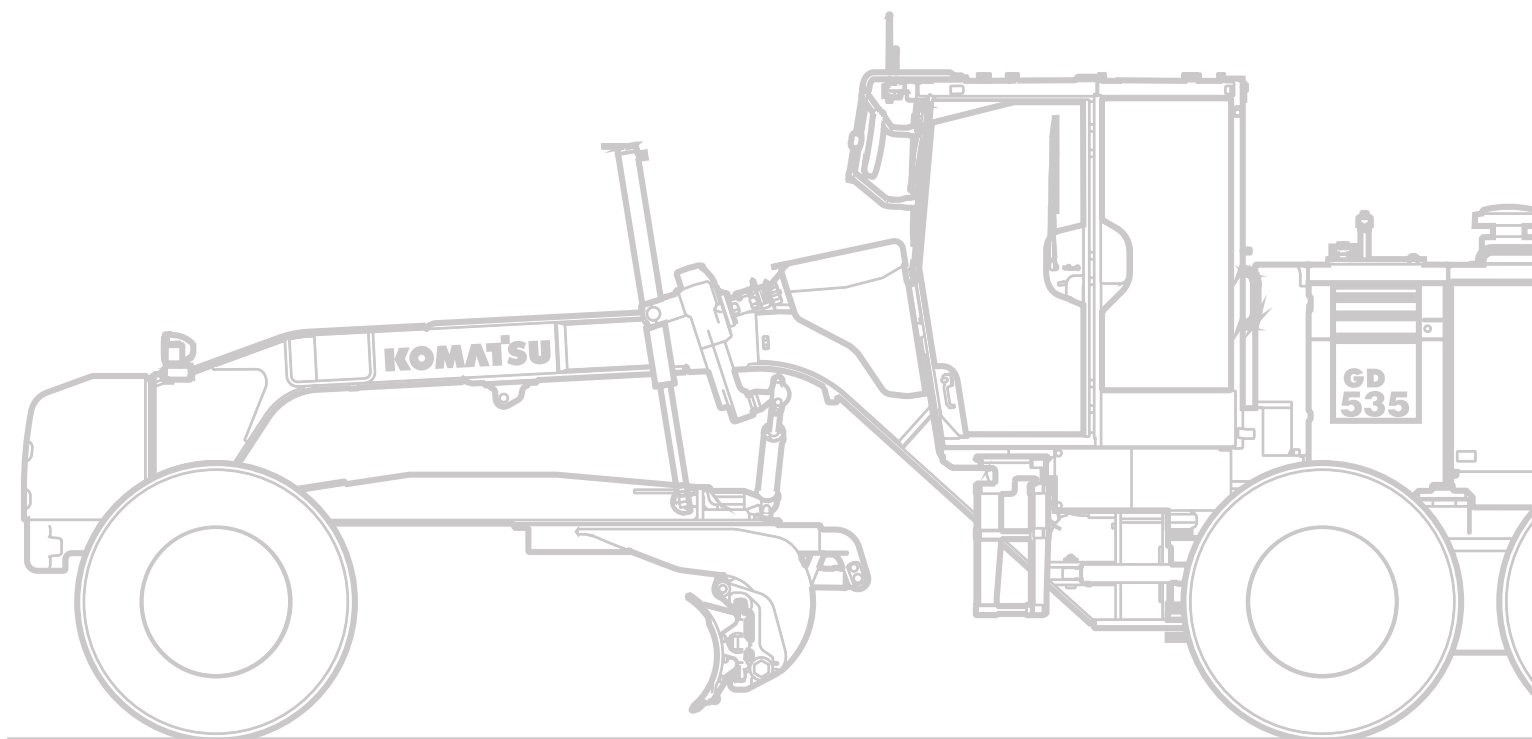
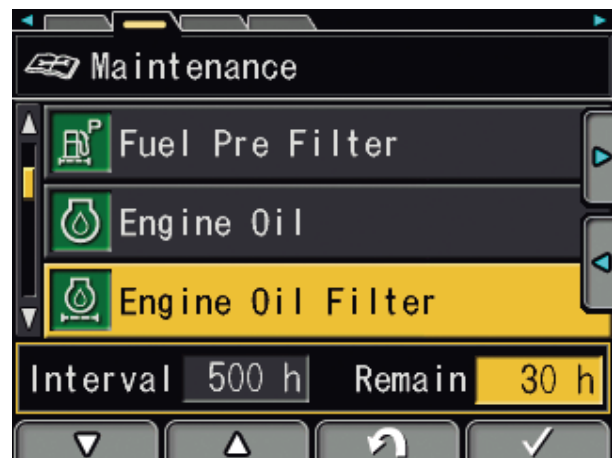
Fuel pre-filter

MAINTENANCE INFORMATION DISPLAY

»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.



RELIABILITY

»Components that prevent machine failure and improve machine reliability

»Slip clutch circle drive

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



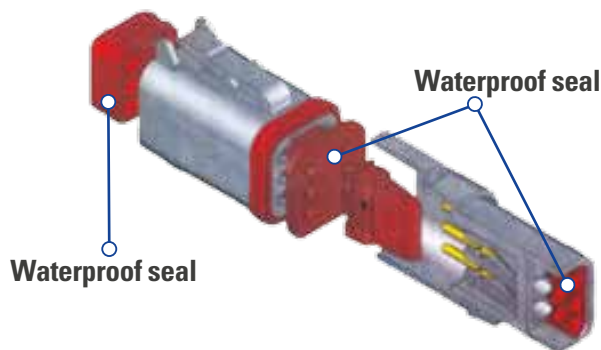
»Hydraulically controlled wet multi-disc brake

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



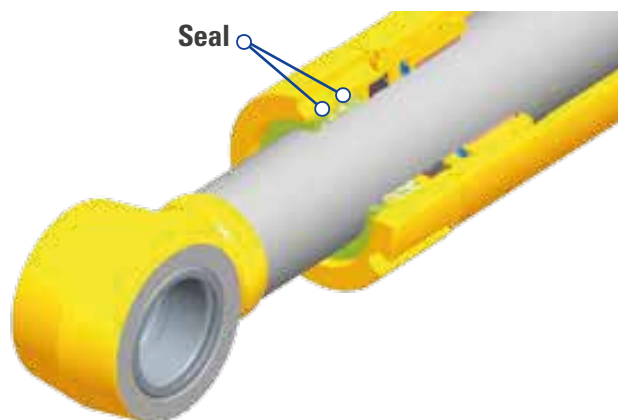
»Sealed connectors

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



»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.



»Battery location

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



KOMATSU GENUINE ATTACHMENT TOOLS

»Moldboard

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



»Scarifier and ripper

»Digs up hard material cannot be removed by the blade. This scarifier can accommodate up to 9 teeth. The ripper also can accommodate up to 5 shanks.



ICT AND KOMTRAX

KOMATSU NEW ENGINE TECHNOLOGIES



»High resolution 3.5" color LCD monitor

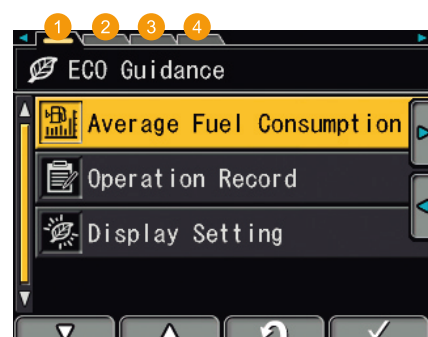
»The high-resolution 3.5 inch color LCD monitor improves visibility. The function switches are simple and easy to operate. The operator can easily access the different user menus, such as maintenance information and operation record, as well as the machine adjustment settings.

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.

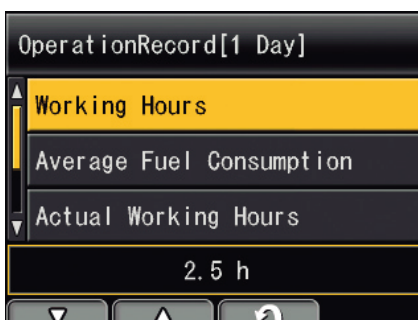
»Operation record and fuel consumption history

»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.

»Maintenance history

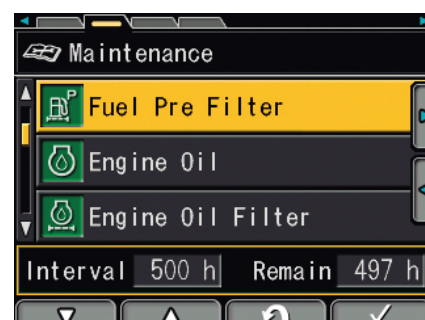
»The system can record maintenance history such as engine oil changes.



Operation record



Fuel consumption record



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 min ⁻¹ .
ISO 9249 / SAE J1349	Net 145 hp (108 kW) / 2,000 min ⁻¹ .
E-MODE	
SAE J1995	Gross 143 hp (107 kW) / 2,000 min ⁻¹ .
ISO 9249 / SAE J1349	Net 135 hp (101 kW) / 2,000 min ⁻¹ .
MAXIMUM TORQUE	658 Nm 67.1 kgm / 1,450 min ⁻¹ .
TORQUE RISE	24%.
FAN SPEED	Max 1,628 min ⁻¹ .
AIR CLEANER	2-stage, dry-type.
EPA Tier 3 and EU Stage 3A emissions equivalent.	



TRANSMISSION AND TORQUE CONVERTER

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

Gear	Forward	Reverse
1st	4.2 km/h	4.7 km/h
2nd	5.9 km/h	9.1 km/h
3rd	8.0 km/h	17.8 km/h
4th	11.3 km/h	34.1 km/h
5th	15.7 km/h	—
6th	22.0 km/h	—
7th	30.1 km/h	—
8th	42.0 km/h	—

Maximum travel speed at engine high idle is 46.0 km/h.



TANDEM DRIVE

OSCILLATING WELDED BOX SECTION	490 mm x 203 mm.
SIDE WALL THICKNESS: INNER	22 mm.
OUTER	19 mm.
WHEEL AXLE SPACING	1,525 mm.
TANDEM OSCILLATION	11° forward, 13° reverse.



FRONT AXLE

TYPE	Solid bar construction welded steel sections.
GROUND CLEARANCE AT PIVOT	580 mm
WHEEL LEAN ANGLE, RIGHT OR LEFT	16°
OSCILLATION, TOTAL	32°



REAR AXLE

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



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)	1,410 mm.
CIRCLE REVERSING CONTROL HYDRAULIC ROTATION	360°.



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	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	7,945 kg.
WITH SCARIFIER GVW	8,015 kg.
WITH RIPPER GVW	8,510 kg.
BLADE DOWN PRESSURE	
BASE GVW	5,835 kg.
WITH SCARIFIER GVW	6,575 kg.
WITH RIPPER GVW	7,175 kg.



BLADE RANGE

MOLDBOARD SIDE SHIFT	
RIGHT	1,050 mm.
LEFT	970 mm.
MAXIMUM SHOULDER REACH OUTSIDE REAR TIRES (FRAME STRAIGHT)	
RIGHT	1,990 mm.
LEFT	1,920 mm.
MAXIMUM LIFT ABOVE GROUND	480 mm.
MAXIMUM CUTTING DEPTH	565 mm.
MAXIMUM BLADE ANGLE, RIGHT OR LEFT	90°.
BLADE TIP ANGLE	40° forward, 3° backward.



HYDRAULICS

HYDRAULIC PUMPS:	
TANDEM GEAR PUMP FOR WORK EQUIPMENT STEERING CONTROL CAPACITY	72 L / min + 36 L / min.
RELIEF VALVE SETTING:	
WORK EQUIPMENT	19.1 MPa 195 kg / cm ² .
STEERING	17.7 MPa 180 kg / 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.

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.



CAPACITIES (REFILLING)

FUEL TANK	271 L.
COOLING SYSTEM	26 L.
CRANK CASE	23.1 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 cab/canopy, 14.00-24 tires and single-piece rims.

TOTAL (CAB)	13,680 kg.
(CANOPY)	13,310 kg.
ON REAR WHEELS (CAB)	9,985 kg.
(CANOPY)	9,670 kg.
ON FRONT WHEELS (CAB)	3,695 kg.
(CANOPY)	3,640 kg.
WITH FRONT MOUNTED SCARIFIER	
TOTAL (CAB)	14,235 kg.
(CANOPY)	13,865 kg.
ON REAR WHEELS (CAB)	10,070 kg.
(CANOPY)	9,755 kg.
ON FRONT WHEELS (CAB)	4,165 kg.
(CANOPY)	4,110 kg.
WITH REAR MOUNTED RIPPER AND FRONT PUSH PLATE	
TOTAL (CAB)	15,150 kg.
(CANOPY)	14,785 kg.
ON REAR WHEELS (CAB)	10,640 kg.
(CANOPY)	10,325 kg.
ON FRONT WHEELS (CAB)	4,510 kg.
(CANOPY)	4,460 kg.



SCARIFIER (OPTIONAL)

MIDDLE, V-TYPE	
WORKING WIDTH	1,065 mm.
SCARIFYING DEPTH, MAXIMUM	200 mm.
SCARIFIER SHANK HOLDERS	9.
SCARIFIER SHANK HOLDERS SPACING	130 mm.



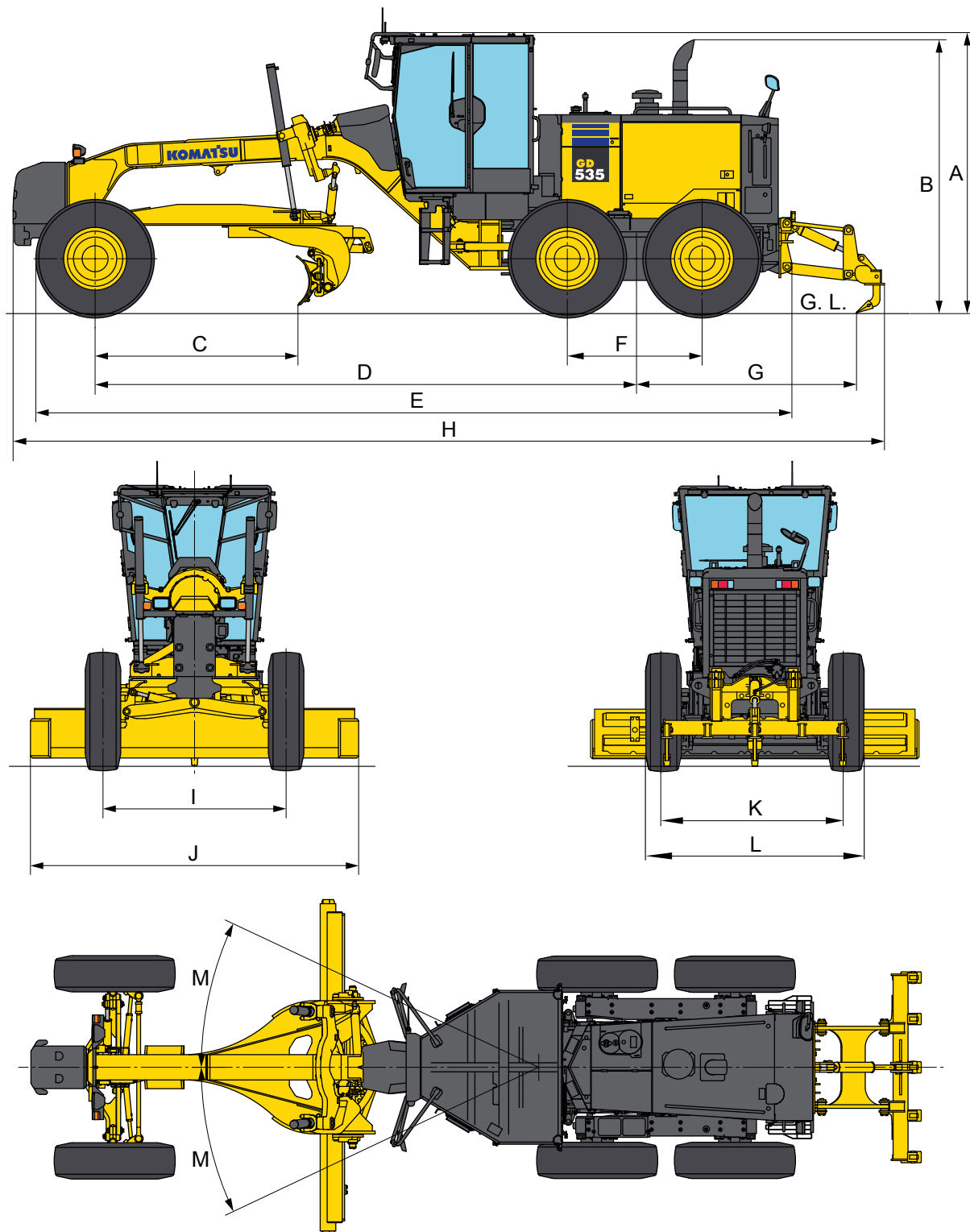
RIPPER (OPTIONAL)

RIPPING DEPTH, MAXIMUM	273 mm.
RIPPER SHANK HOLDERS	5
3 SHANKS ARE STANDARD ADDITIONAL 2 SHANKS AS A OPTIONAL	
RIPPER SHANK HOLDER SPACING	459 mm.
PENETRATION FORCE	7,610 kg.
PRY OUT FORCE	3,225 kg.
MACHINE LENGTH INCREASE, BEAM RAISED	1,008 mm.



DIMENSIONS

Reference image.





DIMENSIONS

A	Height : Cab	3,250 mm ^{*2}
B	Height : Muffler (cab)	2,840 mm ^{*2}
	Height : Muffler (canopy)	3,075 mm ^{*2}
C	Cutting edge to center of front axle	2,265 mm
D	Wheelbase to center of tandem	6,100 mm
E	Front tire to rear bumper (rear hook)	8,565 mm ^{*2}
F	Tandem wheelbase	1,525 mm
G ^{*1}	Center of tandem to back of ripper	2,510 mm
H ^{*1}	Overall length	9,565 mm
I	Tread (front)	2,070 mm
J	Width of standard moldboard	3,710 mm
K	Tread (rear)	2,060 mm
L	Width over tires	2,455 mm ^{*2}
M	Articulation, left or right	25°

*1: Optional

*2: When equipped with 14.00-24 tires



WHEELS, FRONT AND REAR

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 and dust indicator.
- »Engine: Komatsu SAA6D107E-1, U.S.
- »EPA Tier 3 and EU Stage 3A emissions equivalent, turbocharged and air-to-air aftercooled, 135 hp / 145 hp net horsepower.
- »Fuel pre-filter.

»ELECTRICAL SYSTEMS

- »Alarm, back-up.
- »Alternator, 24 V / 35A.
- »Battery, 2 x 12 V / 112 Ah.
- »Horn, electric.
- »Indicators: parking brake, turn signal, lighting, high beam, brake oil pressure.
- »KOMTRAX, 3G or Orbcmm.
- »Lights: back-up, stop, tail, directional, headlights (2 halogen type, front bar mounted).
- »Multi color monitor.

»OPERATOR ENVIRONMENT

- »Console, adjustable with instrument panel monitoring system.
- »Floor mat.
- »Mirrors: right and left exterior mirrors.
- »Seat, vinyl with seat belt.

»POWER TRAIN

- »Axe, rear full floating, planetary type.
- »Brake, parking, spring applied, hydraulic release, cariper disc type.
- »Dual mode transmission (F8-R4) power shift, direct drive and torque converter with auto shift, engine stall prevention function.
- »Service brakes, fully hydraulic wet disc.

»CAB ACCESSORIES

- »Air conditioner.
- »Cup holder.
- »12V outlet.
- »Room mirror.
- »Wiper and washer.

»WORK EQUIPMENT AND HYDRAULICS

- »9 section hydraulic control valve.
- »Circle, drawbar mounted, 360° rotation hydraulic blade lift and circle side sift.
- »Circle slip clutch.
- »Moldboard: 3,710 mm x 645 mm x 16 mm with replaceable end bits, through- hardened cutting edges 152 mm x 16 mm, hydraulic blade side shift.
- »Steering, full hydraulic with tilt steering wheel plus leaning front wheels and frame articulation w/anti-drift check valves.

»OTHER STANDARD EQUIPMENT

- »Fuel tank, ground level access.
- »Painting, Komatsu standard color scheme.
- »Steps and handrails, rear, right and left side.
- »Vandalism protection includes lockable access to fuel tank, battery cover and engine side covers.
- »Work lamps: front (2), rear (1).



OPTIONAL EQUIPMENT

- »Adjustable seat, fabric (cab).
- »Alternator, 24V/60A.
- »AM/FM radio (cab).
- »Battery disconnect switch.
- »Cab mount floodlight (cab).
- »Differential, lock/unlock.
- »Fire extinguisher.
- »General toolkit.
- »Hydraulic blade tip.
- »Large capacity batteries, 2 x 12 V/120 Ah.
- »Licence-plate light.
- »Pre-cleaner.

- »Push plate.
- »Rear view camera (cab, hydraulic fan).
- »Ripper.
- »Scarifier.
- »Steering cylinder guard.
- »Tool box with lock.
- »Transmission under guard.
- »Warning light, amber beacon.

»HYDRAULIC COOLING FAN

- »Changes in horsepower.

»P-mode.

- »SAE J 1995.
- »Gross 153 hp (114.5 kW) / 2,000 min⁻¹.
- »ISO 9249 / SAE J1349.
- »Net 151 hp (113 kW) / 2,000 min⁻¹.

»E-mode.

- »SAE J 1995.
- »Gross 143 hp (107 kW) / 2,000 min⁻¹.
- »ISO 9249 / SAE J1349.
- »Net 142 hp (106 kW) / 2,000 min⁻¹.

**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 review 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

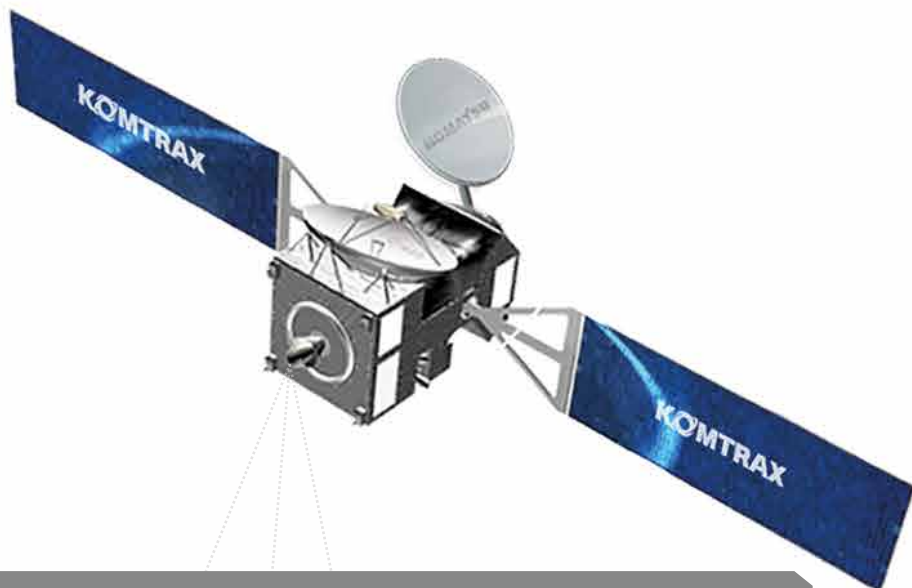
The system generates alerts to inform that the equipment requires change of elements like filters and oil.

» EQUIPMENT KEY HOURS

Detailed information on key equipment hours such as excavation, moving, digging, alleviating 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 a light, medium or heavy work.



FEATURES

» ANTI-THEFT ENGINE LOCK

KOMTRAX has a system to lock and unlock the motor of the equipment, which will allow the operation only on preset days, hours and areas.

» FUEL CONSUMPTION

On new Komatsu equipment, you can get the actual status of the fuel gallons consumed, besides an average of the fuel spent per hour during the period of operation.

» MONTHLY AND ANNUAL DATA REPORTS

KOMTRAX generates summaries of all critical system data to help with analysis of fleet utilization, equipment scheduling, future equipment purchases, labor costs, etc.

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



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