Photos may include optional equipment.
High Reliability

High strength main frame and tough power train make it easy to complete heavy-duty jobs.

Main Frame
The main frame is a flanged box section structure. Side plates have been added to increase strength and thereby improve durability. This durable structure guards against bending and twisting forces generated by the load on the blade.

Engine
The job-proven KOMATSU 6D125 and S6D125 diesel engine deliver a healthy 116kW (155HP) and 134kW (180HP) - more than enough for the most rugged tasks. The torque rise increases by 30% in the 155HP engine, and by 13% in the 180HP engine to give the machines unrivaled performance in heavy duty work.

Transmission
The HYDROSHIFT transmission is controlled by a single lever for ease of use, and is designed to minimize engine power loss. The High-Low clutch has been moved to the upper part of the transmission. Therefore, transmitting efficiency has been increased while preventing the transmission from overheating. With the installation of a reduction gear in the transmission input shaft, the revolutions of each transmission clutch is reduced.

Final Drive
The final reduction gear has a simple structure - a one-stage reduction of the spiral bevel gear.

Axles
- Front Axle
  The front axle is a Reverse-Elliot type, in which the wheel shaft revolves. The axle diameter is enlarged to increase durability. The pitman arm is higher off the ground than on conventional types, which facilitates travel over rocks or other obstacles.
- Rear Axle
  The full-floating type axle is superior in durability because bending moment does not affect the drive shaft.

Ideal Productivity
Ideal weight distribution enables the blading of harder ground with excellent machine stability.

The blade load on the GD663A is superior for grading and trenching in hard soil. The load ratio on the front wheel is at approximately 30% - an ideal value for superior grader operations for eliminating the side-slip of the front wheel. Therefore, turning and digging operations can be performed with outstanding stability.

Wide blade range and frame articulation make this machine ready for versatile operations.

Because it provides a large shoulder reach, blade lift height, and digging depth, the GD663A facilitates various kinds of work. Bank cut pin control can be carried out easily from the operator's compartment. By increasing the shoulder-reach (blade overhang from rear wheels an additional 815 mm) by using articulation, the shoulder of a road can be finished without traveling on the shoulder. With a minimum turning radius of 7.1 m, the machine exhibits unrivaled maneuverability.

Enhanced Operator Comfort

Reliable and efficient hydraulic system provides powerful and fine blade control.

The hydraulic circuits for the work equipment employ a highly reliable one-pump with a flow-divider system that reduces mechanical friction loss. The circular revolution speed is 11 degrees per second and fine control is easy. Pilot check valves are provided on blade lift, tire leaning, and articulation and drawbar side shift circuit mechanisms, thus preventing the GD663A from hydraulic drift. The GD663A provides high accuracy surface finishing - a vital role of the motor grader.

Operator’s compartment is mounted on rear frame, giving the driver excellent visibility and easy operation.

The operator faces the machine’s direction of travel even during offset operation. Therefore, perception is always at an optimum angle. When the machine is articulated, the operator steers with similar feeling of an automobile because the operator’s compartment is mounted on the rear frame. On the GD663A, articulation does not hamper the visibility. The compact engine compartment provides excellent rear visibility. Moreover, the optional cab with wide range of glass ensures excellent visibility.
### ENGINE

<table>
<thead>
<tr>
<th>Model: Komatsu 6D125</th>
<th>Komatsu 6D125</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type: 4-cycle, water-cooled, over-head-valve, diesel engine</td>
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</tr>
<tr>
<td>Aspiration: Natural aspiration</td>
<td>Turbocharged</td>
</tr>
<tr>
<td>No. of cylinders: 6</td>
<td>6</td>
</tr>
<tr>
<td>Bore x Stroke: 125 mm x 150 mm</td>
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</tr>
<tr>
<td>Piston Displacement: 11.05 L</td>
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</tr>
<tr>
<td>Flywheel Horsepower: 134 kW 180 HP @ 2200 min⁻¹ (SAE J1349)</td>
<td>116 kW 155 HP @ 2200 min⁻¹ (SAE J1349)</td>
</tr>
<tr>
<td>Governor: All-speed</td>
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</tr>
<tr>
<td>Electrical starting motor: 24 V/7.5 kW</td>
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</tr>
<tr>
<td>Alternator: 24 V/35 A</td>
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### AXLES

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### HYDROSHIFT TRANSMISSION

- The Komatsu HYDROSHIFT transmission consists of planetary gears and hydraulically actuated and force-lubricated multiple-disc clutches, assuring light-touch, effort-minimizing shifting. Both speed shifting and direction changes are completed by a single lever. With the inching pedal, precise finishing operation and smooth machine starts are assured. A super wide range of 6 forward and 6 reverse speeds match all job requirements. Accidental machine starts are prevented by a gearshift lock device. The engine starts only when the shift lever is set in the neutral position.
- Travel speeds (at rated engine speed)
  - **Forward**
    - 1st: 3.7 km/h
    - 2nd: 6.6 km/h
    - 3rd: 11.3 km/h
    - 4th: 15.5 km/h
    - 5th: 27.6 km/h
    - 6th: 47.2 km/h
  - **Reverse**
    - 1st: 4.5 km/h
    - 2nd: 8.1 km/h
    - 3rd: 13.8 km/h
    - 4th: 18.9 km/h
    - 5th: 33.6 km/h
    - 6th: 57.6 km/h
  - Max. drawbar pull: 7550 kg

### STEERING

- Full-hydraulic orbital valve type steering control system with two or one steering cylinders are directly actuated on the knuckle arm. Maximum steering angle of front wheels is 49° to left and right. Frame articulation angle: 26°, left and right. Min. turning radius (frame articulated): 7.1 m

### BRAKES

- Service brakes: Foot-operated hydraulically actuated internal expanding type on 4 rear wheels. Hydraulic booster for sure braking.
- Parking brake: Mechanical Internal expanding type actuated on transmission shaft.

### FRAMES

- Frames are articulated by two hydraulic cylinders. Box-sectional front frame is steel-plate-welded constructed and connected with an articulation pin. One-piece-frame design for the frame on which hydraulic piping are installed offers excellent front visibility for more precise operations.
- **Front Frame**
  - Section (width height): 280 mm x 300 mm
  - Plates thickness (top and bottom, side): 25 mm
  - Linear weights maximum, minimum: 229 kg/m, 165 kg/m
  - Section modules minimum: 2013 cm²
  - Rear Frame: Solid and steady frame which is constructed with square bars.

### BLADE RANGE

- All blade movements and positionings can be hydraulically controlled from the operator’s seat. Maximum lift above ground: 450 mm
- Max. drop below ground: 535 mm
- Circle center shift (Left/Right): 785 mm/925 mm
- Mudboard sideshift (Left/Right): 815 mm/815 mm
- Max. load capacity: 2000 mm
- Max. bank cutting angle: 90°
  - Cutting angle: 29° to 77°

### BLADE EQUIPMENT

- **Drawbar**
  - A shaped, U-section press-formed and welded structure for maximum strength.
  - Circle diameter (outer): 1350 mm / 1410 mm
  - No. of teeth: 58 / 64
- **Moldboard**
  - Box-section constructed with wear-resistant steel.
  - Hydraulic blade side shift and manual tip control. Reversible side edges and overlay end bits are attached.
  - Length x height x thickness: 3710 mm x 845 mm x 19 mm
  - Blade base right: 2650 mm
  - Blade load: 6490 kg
- **Cutting edges**
  - Curved type cutting edges meet SAE standard J739b.
  - No. of cutting edges: 2
  - Length x height x thickness: 1609 mm x 152 mm x 16 mm
  - Bolt diameter: 16 mm

### SERVICE REFILL CAPACITIES

- Coolant: 50 L
- Fuel tank: 285 L
- Engine: 30 L
- Transmission: 35 L
- Tandem case (total): 70 L
- Final drive case: 16 L
- Hydraulic oil: 30 L
- Hydraulic tank capacity: 82 L
- Circle drive housing: 4 L

### OPERATING WEIGHT (APPROXIMATE)

- Operating weight, including rated capacity of lubricant, coolant, full fuel tank, hydraulic equipment, operator, 3710 mm blade, 14.00-24-10PR (G-2), traction-type tires, and the standard equipment.
- On front wheels: 9435 kg
- On rear wheels: 13350 kg
- On rear wheels: 3915 kg

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**Final Drive**

- Spiral bevel gear, single reduction, no-spin differential is optionally available.

**Tandems**

- Roller-chains: Double strand for obtaining a large reduction ratio. Tandem case swings up to 13°, assuring high machine stability and positive traction during operation.
- Dimensions of Tandem:
  - Height x width: 580 mm x 221 mm
  - Sidewall thickness, Inner/Outer: 22 mm/19 mm
  - Wheel axle spacing: 1535 mm
  - Drive chain pitch (double strand type): 31.75 mm
  - Ground clearance: 320 mm
### Engine And Transmission:
- Accelerator and inching pedals
- Automatic dust evacuator
- Corrosion resistor
- Dry-type air cleaner with built-in centrifugal pre-cleaner
- Engine key stop system
- Hand throttle
- HYDROSHIFT transmission
- Muffler
- Pusher type fan
- 116 kW (155 HP) / 134 kW (180HP) diesel engine
- 24/67.5 kW starting motor
- 24 V/35 A alternator
- 2 x 12 V/140 Ah batteries

### Moldboard:
- Blade manual tip control
- Hydraulic blade sideshift
- Reversible end bits and overlay end bits
- 90°bank cut structure

### Brakes:
- Foot-operate, internal-expanding type service brakes with hydraulic booster
- Hand operated, internal-expanding type parking brake

### Tires:
- 14.00-24-10PR (G-2) traction-type tubed tires (front and rear)

### Lighting System:
- Hazard light
- Inspection light
- Licence-plate lights
- Warming beacon

### Mirrors:
- Rear view mirror, cab center mount
- Rear view mirror, cab center mount

### Engine And Power Train:
- Air compressor (for tire inflation)
- Brake, oil disc, four-wheel, air actuated
- Differential, lock-unlock
- Large capacity alternator (50 A)
- Large capacity batteries (200 Ah)
- Large capacity starting motor (11 kW)
- No-spin differential
- Suction type fan
- Transmission-under guard
- Water separator

### OPTIONS EQUIPMENT

### Attachments and Optional Equipment

#### Front blade:
- This is an indispensable work tool for volume push - carry operations and for facilitating difficult spreading jobs involving large heaps of materials unloaded from dump trucks.
- Type: V-type, 2-stage adjustable, hydraulically controlled
- Number of teeth: 203 mm (11 teeth type)
- Blade length: 2524 mm
- Blade height: 850 mm
- Max. lift above ground: 548 mm
- Max. drop below ground: 157 mm

#### Scarifier:
- This attachment digs up hard ground, like asphalt, old pavement and frozen surfaces, which are not removable by the blade. The number of teeth can be changed according to ground hardness.
- Type: V-type, 2-stage adjustable, hydraulically controlled
- Number of teeth: 11
- Digging width: 1325 mm
- Max. lift above ground: 320 mm
- Scarifier base: 970 mm
- Additional weight: 710 kg

### Work Equipment:
- Blade accumulator
- Brake cylinder guards
- Front blade
- Hydraulic blade tip control
- Push plate, front mounted
- Ripper
- Scarifier (11 teeth type)
- 12" blade with 203 mm x 16 t edge
- 13" blade
- 13" blade with 203 mm x 19 t edge
- 14" blade

### Other:
- Cold area arrangement (-30°C)
- Engine oil pan and coolant heater
- Fire extinguisher
- Fuel tank, radiator and hydraulic tank cap lock
- High altitude arrangement
- Horn, additional
- Hydraulic jack
- Rain cap for exhaust pipe
- Tire inflation kit
- Vandalism protection