

KOMATSU®

D375A-5R

HORSEPOWER

Gross: 451 kW 605 HP @ 1800 rpm

Net: 391 kW 525 HP @ 1800 rpm

OPERATING WEIGHT

68370 kg 150,730 lb

D
375A

CRAWLER DOZER



Photo may include optional equipment.

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Printed in Japan 200801 IP. AD (10)

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CEN00203-01

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WALK-AROUND

SAA6D170E-5 turbocharged after-cooled diesel engine provides an output of **391 kW** 525 HP with excellent productivity. See page 6.

Preventative maintenance

- Centralized service station
- Enclosed hydraulic piping
- Modular power train design
- Oil pressure checking ports

See page 9.

Automatic lockup **torque converter** saves fuel and increases speed and power transmission efficiency on long pushes. See page 6.

Large blade capacities:
18.5 m³ 24.2 yd³ (Semi-U dozer)
and **22.0 m³** 28.8 yd³ (U dozer)

Simple hull frame

and monocoque track frame with pivot shaft for greater reliability.

The Dual tilt dozer

(option) increases productivity while reducing operator effort. See page 7.

Komatsu-integrated design

for the best value, reliability, and versatility. Hydraulics, power train, frame, and all other major components are engineered by Komatsu. You get a machine whose components are designed to work together for higher production, greater reliability, and more versatility.

Hydraulic driven radiator cooling fan

controlled automatically, reduces fuel consumption and operating noise levels. See page 6.

New hexagonal designed cab includes:

- Spacious interior
 - Comfortable ride with new cab damper mounting and K-Bogie undercarriage
 - Excellent visibility
 - High capacity air conditioning system (optional)
 - Palm Command Control System (PCCS) lever
 - Pressurized cab (optional)
 - Adjustable left armrest
 - Travel control console integrated with operator seat
- See page 8.

Extra-low machine profile

provides excellent machine balance and low center of gravity.

Filtration

Fuel and hydraulic oil filtration improvements reduce fuel and hydraulic system contamination and enhance machine reliability. See page 10.

Electronic Controlled Modulation Valve (ECMV) controlled steering clutch/brake system facilitates smooth and shockless steering operation.

See page 5.



Photo may include optional equipment.

New track link design

reduces maintenance cost by making turning pins easier, with improved pin reuse. See page 9.

Low-drive, long-track, seven roller undercarriage

provides outstanding grading ability and stability.

Track shoe slip control system (option)

reduces operator fatigue. See page 7.

K-Bogie undercarriage system

improves traction, component durability, and operator comfort. See page 8.

Rippers (option):

- Variable giant
- Multi-shank

See page 7.

PALM COMMAND CONTROL SYSTEM (PCCS)

Komatsu's new ergonomically designed control system "PCCS" creates an operating environment with "complete operator control."

Human-machine interface

Palm command electronic controlled travel control joystick

Ergonomically designed palm command travel joystick provides the operator with a relaxed posture and superb fine control without operator fatigue. Transmission gear shifting is simply carried out with thumb.

Left-hand joystick



Blade and ripper control joystick



Fully adjustable suspension seat and travel control console

For improved rear visibility during return part of cycle, the operator can adjust the seat 15° to the right. The transmission and steering controls move with the seat for best operator comfort. The travel control console has adjustments fore and aft and for height. With an independently adjustable armrest, each D375A operator can adjust control positions to his individual preference, providing optimum operational posture for all operators.

Facing front



When turned 15°



Fuel control dial

Engine RPM is controlled by electric signals, providing ease of operation eliminating maintenance of linkage and joints.

Palm command PPC controlled blade control joystick

Blade control joystick uses the PPC (Proportional Pressure Control) valve and the same palm command type joystick as travel control joystick. PPC control, combined with the highly reliable Komatsu hydraulic system, provides superb fine control. (Dual tilt and pitch operation are activated by depressing switch with a thumb. This is available with optional dual tilt dozer.)

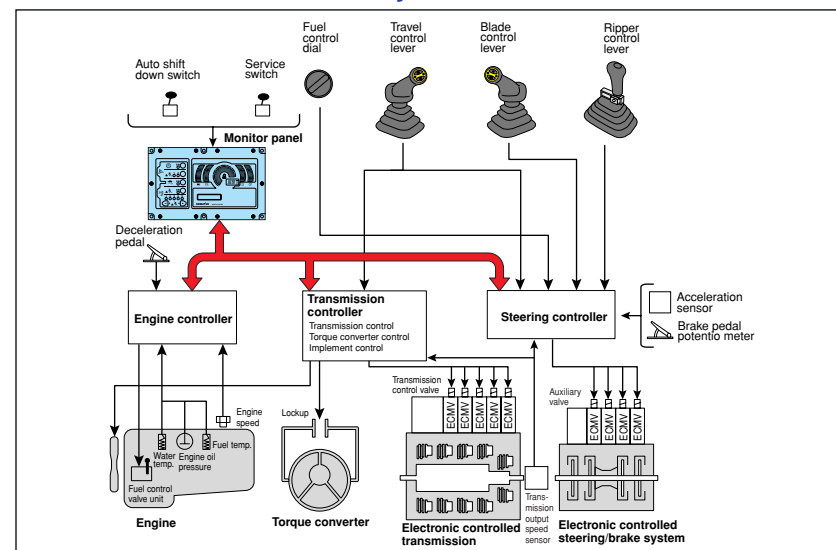
Height adjustable blade control armrest

Blade control armrest is height adjustable without any tools in three stages, providing the operator with firm arm support and ideal armrest positioning.

Position adjustable ripper control lever

Ripper control lever is position adjustable, providing optimum operation posture for all operators during ripping operations facing front or watching ripper point.

Outline of electronic control system



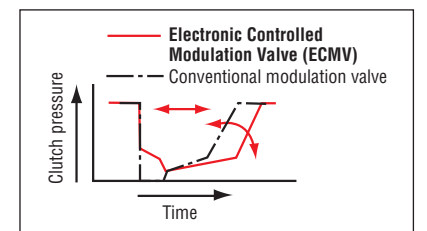
Power train electronic control system

Smooth and soft operation

D375A-5R uses a newly designed power train electronic control system. The controller registers the amount of operator control (movements of lever and operation of switches) along with machine condition signals from each sensor to accurately calculate the control of the torque converter, transmission, steering clutches and brakes for optimized machine operation. The ease of operation and productivity of the new D375A-5R is greatly improved through these new features.

Electronic Controlled Modulation Valve (ECMV) controlled transmission

Controller automatically adjusts each clutch engagement depending on travel conditions such as gear speed, RPM and shifting pattern. This provides shockless, smooth clutch engagement, improved component reliability, improved component life and operator ride comfort.

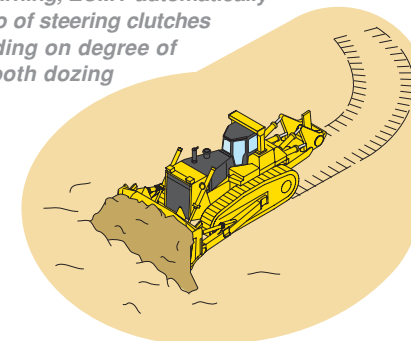


Electronic Controlled Modulation Valve (ECMV) controlled steering clutches/brakes

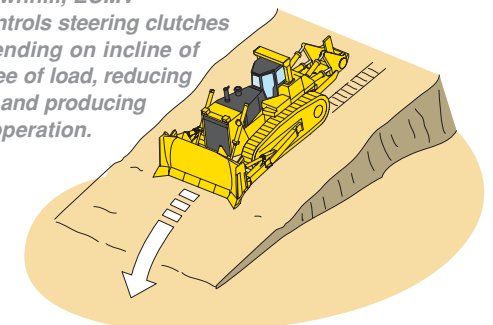
Sensors monitor machine operating conditions and electronically control steering clutches and brakes. Monitoring application parameters, such as size of load during dozing, incline angle of slope, and load provides smooth and easy counter-steering on downhill travel, etc.

Effect of ECMV steering clutches/brake control

When dozing and turning, ECMV automatically controls stroke ratio of steering clutches and brakes depending on degree of load, enabling smooth dozing and turning.

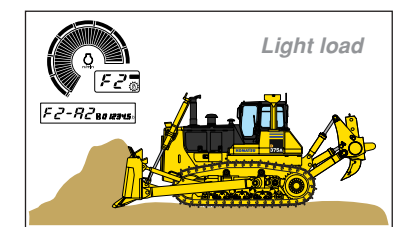
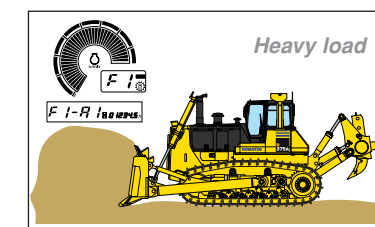
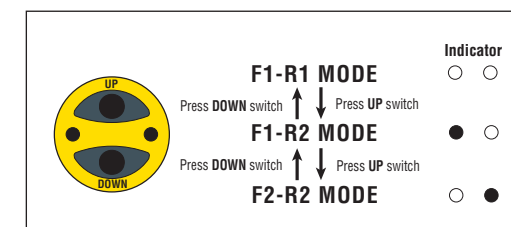


When dozing downhill, ECMV automatically controls steering clutches and brakes depending on incline of machine or degree of load, reducing counter-steering and producing smooth dozing operation.



Preset travel speed selection function

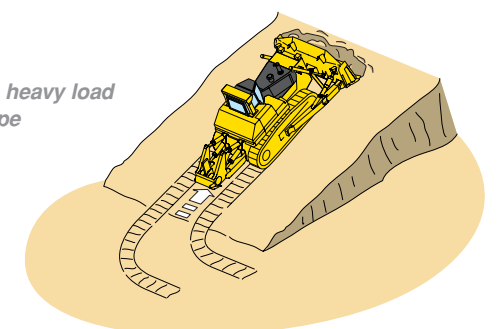
Preset travel speed selection function is standard equipment, enabling the operator to select fore and aft travel speed from three preset patterns; F1-R1, F1-R2 and F2-R2 by using the UP/DOWN switch. When the F1-R2 or F2-R2 preset pattern is selected and the travel control is moved into forward or reverse, the machine travels in the preset gear range automatically. This function reduces manual gear shifting frequency during machine operation, enabling the operator to focus on directional and hydraulic control. Preset travel speed selection is especially helpful when used in combination with the Auto-Downshift Function and reduces cycle times during repeated round trip operations.



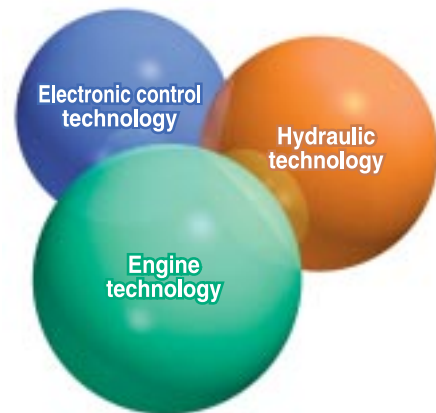
Auto downshift function

Controller monitors engine speed travel gear and travel speed. When load is applied and machine travel speed is reduced, the controller automatically downshifts to optimum gear speed to provide high fuel efficiency. This function provides comfortable operation and high productivity without manual downshifting. (This function can be cancelled with cancel switch.)

Actuated on heavy load or steep slope



PRODUCTIVITY FEATURES



Engine

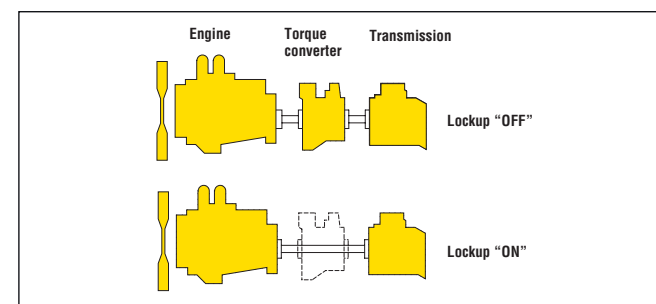
The Komatsu SAA6D170E-5 engine delivers **391 kW** 525 HP at 1800 rpm. The fuel-efficient Komatsu engine, together with the heavy machine weight, make the D375A-5R a superior crawler dozer in both ripping and dozing production. The engine features direct fuel injection, turbocharger, and air-to-air aftercooler to maximize fuel efficiency. To minimize noise and vibration, the engine is mounted to the main frame with rubber cushions.

Hydraulic driven radiator cooling fan

Fan rotation is automatically controlled depending on coolant and hydraulic oil temperature, saving fuel consumption and providing great productivity with a quiet operating environment.

Automatic torque converter lockup system

For greater efficiency during long pushes, the lockup mode allows the system to automatically engage the torque converter lockup clutch. Locking up the torque converter transmits all the engine power directly to the transmission, increasing ground speed thus achieving efficiencies equal to a direct drive. The result is efficient use of engine power, less fuel consumption, and faster cycle times.



K-Bogie undercarriage system

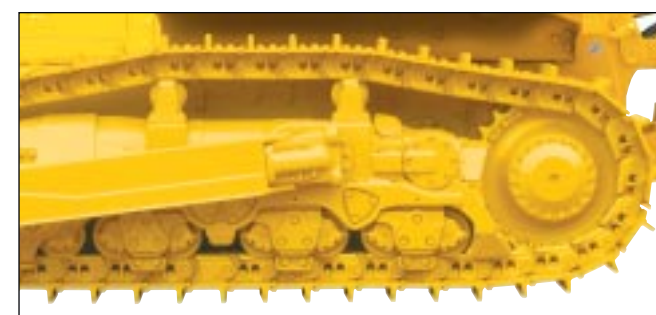
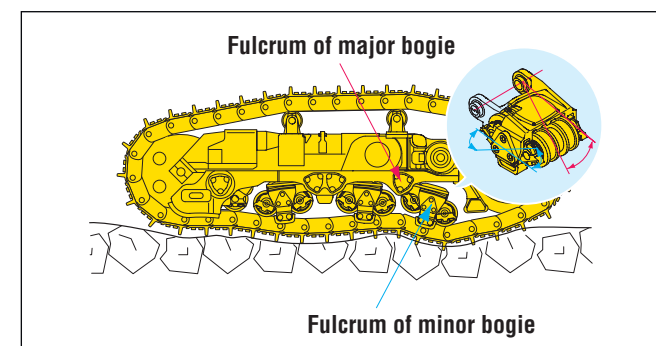
New K-Bogie undercarriage system combines prior advantages with new additional features.

Current features:

- Effective length of track on ground is consistent. Shoe slippage is minimized, resulting in higher traction.
- The idler does not oscillate under load, providing excellent machine balance. Blade and ripper penetration force remains stable for increased productivity.

New features on K-Bogie undercarriage system

- K-Bogies oscillate with two fulcrums, and track roller vertical travel is greatly increased. Impact loading to undercarriage components is reduced and component durability is improved since track rollers are always in contact with track link.
- Undercarriage life is improved due to better control of track chain alignment with track rollers.
- Riding comfort is improved by reducing vibration and shock when traveling over rough terrain.



Large blade

Capacities of **18.5 m³** 24.2 yd³ (Semi-U dozer) and **22.0 m³** 28.8 yd³ (U dozer) yield outstanding production. High-tensile-strength steel comprising the front and sides of the blade increase durability.

Dual tilt dozer (option)

The dual tilt dozer increases productivity while reducing operator effort.

- Optimum blade cutting angle for all types of materials and grades can be selected on-the-go for increased load and production.
- Digging, hauling, and dumping are easy and smooth with less operator fatigue.
- Dozer tilt angle and tilt speed are twice that of a conventional single tilt system.



Rippers (option)

- The variable giant ripper features a long sprocket center-to-ripper point distance, making ripping operation easy and effective while maintaining high penetration force.
- The variable giant ripper is a parallelogram single shank ripper ideal for ripping tough material. The ripping angle is variable, and the depth is adjustable in three stages by a hydraulically controlled pin puller.
- The multi-shank ripper is a hydraulically controlled parallelogram ripper with three shanks.

Track shoe slip control system (option)



Track shoe slip control panel

- Eliminates the need for the operator to constantly control engine power output with the decelerator while ripping. Operator fatigue is substantially reduced.
- Maneuverability is improved because the operator is free to focus on the ripping application without having to monitor the track shoe slippage.
- Repair costs are significantly lowered and undercarriage life is prolonged with the reduction in track shoe slippage.
- The track shoe slip control system will contribute to lower fuel costs, because the engine output is automatically controlled to optimum levels for operation.



WORKING ENVIRONMENT

Operator comfort

Operator comfort is essential for productive work. The D375A-5R provides the operator with a quiet, comfortable environment where the operator can concentrate on the work at hand.

Hexagonal pressurized cab

- The cab's new hexagonal design and large tinted glass windows provide excellent front, side and rear visibility.
- Air filters and a higher internal air pressure combine to help prevent dust from entering the cab.

Comfortable ride with new cab damper mounting and K-Bogie undercarriage

D375A-5R's cab mount uses a new cab damper mounting which further improves viscous damper and provides excellent shock and vibration absorption capacity with its long stroke. The cab damper mounting, combined with new K-Bogie undercarriage, softens shocks and vibrations while traveling over adverse condition that are impossible to absorb with conventional cab mounting methods. The soft spring cab damper isolates the cab from machine body, suppressing vibrations and providing a quiet, comfortable operating environment.

New suspension seat

D375A-5R uses a new suspension seat. Fore and aft sliding rails and suspension spring increases strength and rigidity. New seat provides excellent support and riding comfort. Fore and aft sliding amount is designed to fit all operators.

Fresh air intake from rear of engine hood

The air conditioner air intake port is now located at the rear of the engine hood where there is minimal dust. As a result, the air inside the cab is cleaner. Cleaning interval of the filter is greatly extended, and use of a new structure filter element facilitates cleaning and replacement.

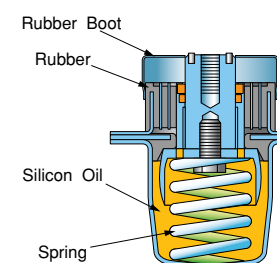


Photo may include optional equipment.



Photo may include optional equipment.

Cab damper mounting



MAINTENANCE

Preventative maintenance

Preventative maintenance is the only way to ensure long service life from your equipment. That's why Komatsu designed the D375A-5R with conveniently located maintenance points to make necessary inspections and maintenance quick and easy.

Monitor with self-diagnostic function

When the starting switch turned ON, the monitor displays P on the upper part of the display, service meter on the lower part of the display and Check-before-starting and caution items appear on the right part of the liquid crystal panel. If the monitor finds abnormalities, corresponding warning lamp blinks and warning buzzer sounds. The monitor displays engine rpm and forward/reverse gear speed on the upper part of the display during operation. If an error occurs during operation, and a high importance user code is displayed, a caution lamp blinks and warning buzzer sounds to prevent the development of serious problems.



Centralized service station

To ensure convenient maintenance, the transmission and torque converter oil filters are both arranged next to the power train oil level gauge.

Oil pressure checking ports

Pressure checking ports for power train components are centralized to promote quick and simple diagnosis.

Enlarged engine room

Engine room space is enlarged by increasing engine hood height, facilitating maintenance of the engine and related equipment. Solid engine hood prevents dust and rain from entering and keeps the engine clean.

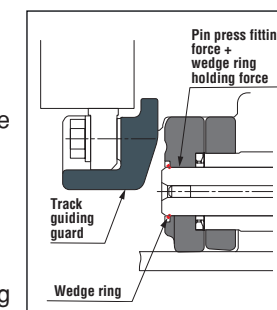
Gull-wing engine side covers

Gull-wing engine side covers facilitate engine maintenance and filter replacement. Side covers are a thick two-piece structure with bolt-on latch to improve durability and repairability.

Low maintenance costs

Track link with wedge ring

New D375A-5R track links feature reduced press-fit force and a wedge ring. Conventional track pins are retained only with a large press-fit force. The new track link divides pin forces between the wedge ring and press-fit force. This results in easier service with reduced pin damage when turning pins and bushings. The result is improved undercarriage life and reduced maintenance cost through reduced wear, greater pin reusability, and reduced maintenance man-hours.



Highly reliable electric circuit

The electrical circuit reliability is increased by utilizing dust, vibration and corrosion resistant "DT connectors". The reinforced electrical wiring harnesses include a circuit breaker and are covered with a heat-resistant material to

increase mechanical strength, provide longer life, and protect the system from damage.

Flat face O-Ring seals

Flat face O-ring seals are used to securely seal all hydraulic hose connections and to prevent oil leakage.

Enclosed hydraulic piping

Hydraulic piping for the blade tilt cylinder is completely housed in the push arm protecting it from damage.

Modular power train design

Power train components are sealed in a modular design that allows the components to be dismantled and mounted without oil spillage, making servicing work clean, smooth, and easy.

Adjustment-free disc brakes

Wet disc brakes require less maintenance.

RELIABILITY FEATURES

Filtration

Engine

Newly added main fuel filter of 2μ and water separator help protect the engine against dust and water in the fuel.



The fuel tank is equipped with a high-filtration breather with pressure valve to help prevent dust from entering.



Hydraulic

The hydraulic tank is equipped with a high-filtration breather with pressure valve to help prevent dust from entering.



SPECIFICATIONS



ENGINE

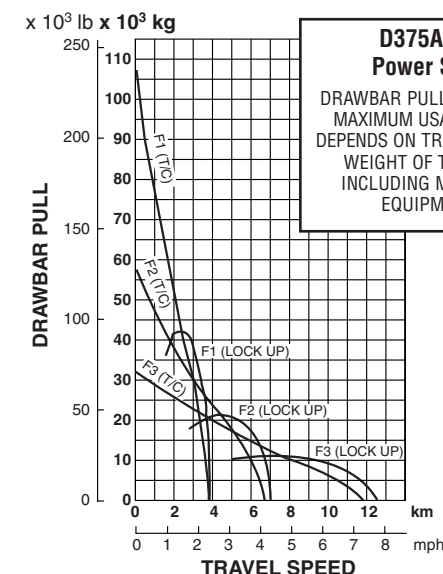
Model Komatsu SAA6D170E-5
Type 4-cycle, water-cooled, direct injection
Aspiration Turbocharged, air-to-air aftercooled
Number of cylinders 6
Bore x stroke **170 mm x 170 mm** 6.69" x 6.69"
Piston displacement **23.15 ltr** 1,413 in³
Governor All-speed, electronic
Horsepower
SAE J1995 Gross **451 kW** 605 HP
ISO 9249 / SAE J1349* Net **391 kW** 525 HP
Rated rpm 1800 rpm
Fan drive type Hydraulic
Lubrication system
Method Gear pump, force lubrication
Filter Full-flow
*Net horsepower at the maximum speed of radiator cooling fan **391 kW** 525 HP
*Net horsepower of this machine is controlled to be constant regardless of the fan speed.



TORQFLOW TRANSMISSION

Komatsu TORQFLOW transmission consists of a water-cooled, 3-element, 1-stage, 1-phase, torque converter with lockup clutch and a planetary gear, multiple-disc clutch transmission which is hydraulically actuated and force-lubricated for optimum heat dissipation. Gearshift lock lever and neutral switch prevent accidental starts.

Gear	Forward		Reverse	
1st	3.5 km/h	2.2 mph	4.6 km/h	2.9 mph
2nd	6.8 km/h	4.2 mph	9.2 km/h	5.7 mph
3rd	11.8 km/h	7.3 mph	15.8 km/h	9.8 mph



FINAL DRIVES

Double-reduction final drive of spur and planetary gear sets to increase tractive effort and reduce gear tooth stresses for long final drive life. Segmented sprocket teeth are bolt-on for easy replacement.



STEERING SYSTEM

PCCS lever, joystick controlled, wet multiple-disc steering clutches are spring-loaded and hydraulically released. Wet multiple-disc, pedal/lever controlled steering brakes are spring-actuated hydraulically released and require no adjustment. Steering clutches and brakes are interconnected for easy, responsive steering.

Minimum turning radius **4.2 m** 13'9"



UNDERCARRIAGE

Suspension Oscillating equalizer bar and pivot shaft
Track roller frame Cylindrical, high-tensile-strength steel construction

Rollers and idlers Lubricated track rollers

K-Bogie undercarriage

Lubricated track rollers are resiliently mounted to the track frame with a bogie suspension system whose oscillating motion is cushioned by rubber pads.

Extreme service track shoes

Lubricated tracks. Unique seals prevent entry of foreign abrasives into pin to bushing clearances to provide extended service life. Track tension is easily adjusted with grease gun.

Number of shoes (each side) 40

Grouser height:

Single grouser **93 mm** 3.7"

Shoe width (standard) **610 mm** 24"

Ground contact area **46850 cm²** 7,262 in²

Ground pressure (tractor) **106 kPa** 1.08 kg/cm² 15.4 psi

Number of track rollers 7

Number of carrier rollers 2

Extreme service shoes	Additional weight	Ground contact area	Ground pressure
710 mm 28"	660 kg 1,460 lb	54530 cm² 8,452 in²	125 kPa 1.27 kgf/cm² 18.1 psi
810 mm 32"	1330 kg 2,930 lb	62210 cm² 9,643 in²	110 kPa 1.12 kgf/cm² 15.9 psi



COOLANT AND LUBRICANT CAPACITY (REFILL)

Fuel tank **1050 ltr** 277 U.S. gal

Coolant **120 ltr** 31.7 U.S. gal

Engine **.86 ltr** 22.7 U.S. gal

Torque converter, transmission,

bevel gear, and steering system **.150 ltr** 39.6 U.S. gal

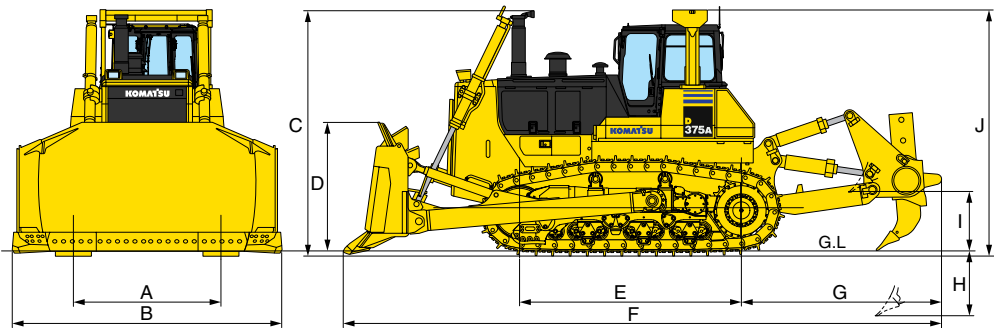
Final drive (each side) **.65 ltr** 17.1 U.S. gal





DIMENSIONS

SEMI-U DOZER WITH GIANT RIPPER



Ground Clearance: 610 mm 2'0"

A	2500 mm	8'2"	F	10410 mm	34'2"
B	4695 mm	15'5"	G	3450 mm	11'4"
C	4215 mm	13'10"	H	1420 mm	4'8"
D	2265 mm	7'5"	I	1420 mm	4'8"
E	3840 mm	12'7"	J	4235 mm	13'11"



OPERATING WEIGHT

Tractor weight **50720 kg** 111,820 lb
Including rated capacity of lubricant, coolant, full fuel tank,
operator, and standard equipment.

Operating weight **68370 kg** 150,730 lb
Including Semi-U tilt dozer, giant ripper, cab,
ROPS, operator, standard equipment, rated capacity of
lubricant, coolant, and full fuel tank.

Ground pressure **143 kPa** 1.46 kg/cm² 20.8 psi



HYDRAULIC SYSTEM

Hydraulic control unit:
Maximum flow 405 ltr/min 107 U.S. gal/min
Relief valve setting. **20.6 MPa** 210 kg/cm² 2,990 psi
● All-spool control valves are externally mounted on the
hydraulic tank.
● Hydraulic gear pump.

Control valves:
● Two control valves for semi-U tilt dozer and U dozer
Positions: Blade lift Raise, hold, lower, and float
Blade tilt. Right, hold, and left
● Additional control valve required for ripper
Positions: Ripper lift Raise, hold, and lower
Ripper tilt
(digging angle). Increase, hold, and decrease

Hydraulic cylinders Double-acting, piston

	Number of cylinders	Bore
Blade lift	2	150 mm 5.9"
Blade tilt	1	225 mm 8.9"
Ripper lift	2	225 mm 8.9"
Ripper tilt	2	200 mm 7.9"

Hydraulic oil capacity (refill):
Semi-U dozer or U dozer **138 ltr** 36.5 U.S. gal
Ripper equipment (additional volume):
Giant ripper. **70 ltr** 18.5 U.S. gal
Multi-shank ripper (variable) **70 ltr** 18.5 U.S. gal
Multi-shank ripper (fixed). **44 ltr** 11.6 U.S. gal

D375A-5R CRAWLER DOZER



DOZER EQUIPMENT

Blade capacities are based on the SAE recommended practice J1265.

	Overall length with dozer	Blade capacity	Blade length x height	Maximum lift above ground	Maximum drop below ground	Maximum tilt adjustment	Weight		Ground Pressure*
							Dozer equipment	Hydraulic oil	
Semi-U dozer	7715 mm 25'4"	18.5 m³ 24.2 yd³	4695 mm x 2265 mm 15'5" x 7'5"	1660 mm 5'5"	715 mm 2'4"	1065 mm 3'6"	10860 kg 23,940 lb	50 kg 110 lb	143 kPa 1.46 kgf/cm² 20.8 psi
Strengthened U dozer	8130 mm 26'8"	22.0 m³ 28.8 yd³	5140 mm x 2265 mm 16'10" x 7'5"	1660 mm 5'5"	715 mm 2'4"	1165 mm 3'10"	12370 kg 27,270 lb	50 kg 110 lb	146 kPa 1.49 kgf/cm² 21.2 psi
Dual tilt Semi-U dozer	7715 mm 25'4"	18.5 m³ 24.2 yd³	4695 mm x 2265 mm 15'5" x 7'5"	1660 mm 5'5"	715 mm 2'4"	1150 mm 3'9"	11230 kg 24,760 lb	60 kg 130 lb	144 kPa 1.47 kgf/cm² 20.9 psi
Strengthened dual tilt U dozer	8130 mm 26'8"	22.0 m³ 28.8 yd³	5140 mm x 2265 mm 16'10" x 7'5"	1660 mm 5'5"	715 mm 2'4"	1260 mm 4'2"	12740 kg 28,090 lb	60 kg 130 lb	147 kPa 1.50 kgf/cm² 21.3 psi

*Ground pressure shows tractor with cab, ROPS, giant ripper, standard equipment and applicable blade.



STANDARD EQUIPMENT

- Alternator, 60 ampere/24 V
- Back-up alarm
- Batteries, 170 Ah/2 x 12 V
- Blower fan
- Decelerator pedal
- Dry-type air cleaner with dust evacuator and dust indicator
- Final drive case wear guard
- Hinged front mask
- Hinged underguard with front pull hook
- Hydraulic track adjusters
- Lighting system (including four front and two rear lights)
- Lockup torque converter
- Muffler with rain cap
- Palm lever steering control
- Perforated side covers
- Radiator reserve tank
- ROPS brackets
- Segmented sprockets
- Seven-roller track frames
- Shoes, 610 mm 24" extreme service, single-grouser
- Starting motors, 2 x 7.5 kW/24 V
- Suspension seat
- TORQFLOW transmissions
- Track roller guards
- Warning horn
- Wet steering clutches

ROPS*:

Weight700 kg 1,540 lb

Roof dimensions:

Width1980 mm 6'6"

Height from

compartment floor1872 mm 6'2"

*Meets ISO 3471, SAE J/ISO 3471 ROPS standards.

Steel cab*:

Weight570 kg 1,260 lb

Dimensions:

Length1875 mm 6'2"

Width1740 mm 5'9"

Height from compartment, floor to ceiling1630 mm 5'4"

*Meets ISO 3449 FOPS standard.



OPTIONAL EQUIPMENT

- Air conditioner with heater and defroster
- Alternator, 90 ampere/24 V
- Batteries, 200 Ah/2 x 12 V
- Car stereo
- Counterweight
- Cushion push block
- Dual tilt dozer
- Eight-roller track frames
- Fire extinguisher
- Hitch
- Hydraulics for ripper
- Light for ripper point
- Mirror, rearview
- Panel cover
- Pusher plate
- Seat belt
- Shoes:
 - 710 mm 28"
 - 810 mm 32"
- Spill guard for Semi-U dozer
- Spill guard for U dozer
- Strengthened Semi-U blade
- Strengthened U blade
- Sun visor
- Seat
 - Air suspension seat
 - Fabric seat
 - Suspension seat
 - Fabric seat
 - Fabric seat, high backrest
- Track shoe slip control system
- Vandalism protection kit
- VHMS or VHMS with Orbcomm

Multi-shank ripper:

Hydraulically controlled parallelogram ripper with three shanks. Ripping angle available, stepless adjustable.

Weight (including hydraulic

control unit)6720 kg 14,810 lb

Beam length2854 mm 9'4"

Maximum lift above ground1090 mm 3'7"

Maximum digging depth1170 mm 3'10"

Variable giant ripper:

Variable, parallelogram single-shank ripper ideal for ripping up tough material. Ripping angle is variable. Ripping depth is adjustable in three stages by a hydraulically controlled pin puller.

Weight (including hydraulic

control unit)5470 kg 12,060 lb

Beam length.....1367 mm 4'6"

Maximum lift above ground.....1420 mm 4'8"

Maximum digging depth.....1420 mm 4'8"