# KOMATSU®

# D575A-3 SUPER DOZER

NET HORSEPOWER 858 kW 1,150 HP

**OPERATING WEIGHT** 152600 kg **336,420 lb** 

Super Dozer

**D** 575A





## **D575A-3 Super Dozer**

# 7A7777-57110 77170

**When it comes to crawler dozers, bigger really is better.** Bigger dozers are *more efficient*—they push more material per hour, and per shift, for a lower overall cost per yard. Presenting the most efficient of them all—the **Komatsu D575A-3 Super Dozer**. The largest, most productive *dozer* in the world by a factor of nearly two.



### The Super Dozer

The D575A-3 Super Dozer reduces operating costs (\$/tons) by high dozing productivity.

 Large capacity Super Dozer blade with low dozing resistance
 See page 8. Automatic lockup **torque converter** saves fuel and increases speed and power transmitting efficiency on long pushes.

## D575A-3 SD

SUPER DOZER

**NET HORSEPOWER** 858 kW **1,150 HP** @ 1800 rpm

> OPERATING WEIGHT 152600 kg 336,420 lb

BLADE CAPACITY 69 m<sup>3</sup> 90 yd<sup>3</sup>

### Pentagonal Designed Cab includes:

- Spacious interior
- Excellent visibility
- PCCS (Palm Command Control System) lever
- Pressurized cab
- Adjustable armrests



### **Resilient Equalized Undercarriage** (REU)

improves traction, component durability, and operator comfort. See page 7.



Komatsu's highly productive, innovative technology, environmentally friendly machines built for the 21st century.



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Komatsu developed a new ergonomically designed control system "PCCS" creating an operating environment with "complete operator control."

## Operator-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.

## Fully Adjustable Suspension Seat and Travel Control Console



For improved rear visibility during return part of cycle, the operator can adjust seat 15° to the right. The transmission and steering controls move with the seat for best operator comfort. The travel control console also has adjustment fore and aft and

for height, with an independently adjustable armrest. Each D575A operator can adjust control positions to his individual preference.

### **Fuel Control Dial**

Engine revolution is controlled by an electric signal, providing ease of operation and reducing problems caused by linkage joint seizure.

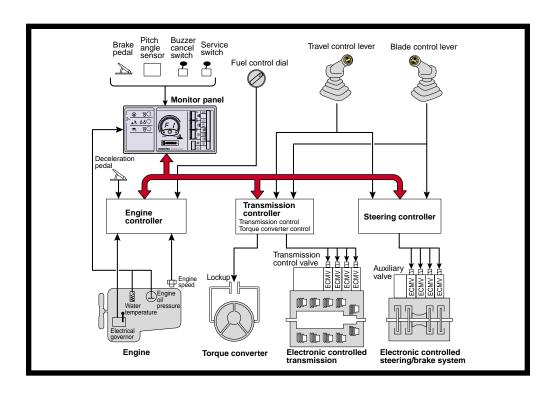
# Palm Command PPC Controlled Blade Control Joystick

Blade control joystick uses the PPC (Proportional Pressure Control) valve and a palm command joystick the same as a travel control joystick. PPC control combined with the highly reliable Komatsu hydraulic system, enables superb fine control. Pitch operation is enabled by depressing switch with thumb.

### **Height Adjustable Blade Control Armrest**

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

# Outline of Electronic Control System



### D575A-3 SD SUPER DOZER

## **Electronic Control System**

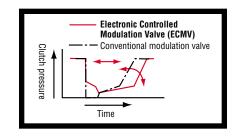
### Smooth and Soft Operation Enabled by New Electronic Control System

D575A-3 Super Dozer uses a newly designed power train electronic control system. Controller registers the amount of operator control (movements of lever and operation of switches) and machine condition signals from each sensor, and calculates to accurately control the torque converter, transmission, steering clutches and brakes for optimized machine operation. The ease of operation and productivity of the new D575A-3 SD is remarkably improved by numerous new functions.

#### **New Power Train Electronic Controls**

### **ECMV (Electronic Controlled Modulation Valve) Controlled Transmission**

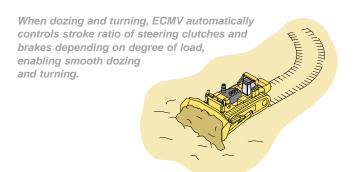
Controller automatically adjusts each clutch engagement depending on travel conditions such as gear speed, revolution, and shifting pattern. This provides shockless smooth clutch engagement, improved component reliability, expansion of component life, and operator riding comfort.

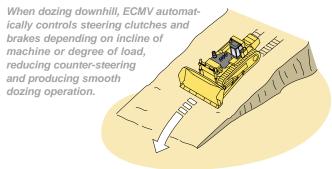


### ECMV (Electronic Controlled Modulation Valve) Controlled Steering Clutches/Brakes

Sensors monitor machine operating conditions, and electronically controls steering clutches and brakes depending on type of job, such as size of load during dozing, incline angle of slope or load, providing smooth and ease of operation by reducing counter-steering on downhill travel etc.

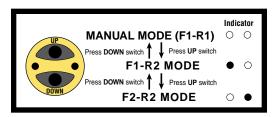
## Effect of ECMV Steering/Brake Control





### **Preset Travel Speed Selection Function**

Preset travel speed selection function is standard equipment, enabling the operator to select fore and aft travel speed among three preset patterns such as F1-R2, F2-R2, and manual shift. When F1-R2 or F2-R2 preset pattern is selected, and travel control joystick moves to forward/rearward direction, the machine travels forward/rearward with F1-R2 or F2-R2 speed automatically. This function reduces operating hours and operator's gear shifting time during repeated round-trip operations.



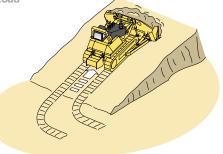




### **Auto-shift Down Function**

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





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## **Operator Comfort**

Operator comfort is essential for safe and productive work. The D575A-3 Super Dozer provides the operator with a quiet, comfortable environment where he can concentrate on the work at hand.

### **Pentagonal Pressurized Cab**

- The large tinted glass windows provide a panoramic view of work area.
- Air filter and a higher internal air pressure combine to prevent dust from entering the cab.



D575A-3 Super Dozer uses a newly designed suspension seat with strengthened seams and breathable fabric. Fore and aft sliding rails and suspension spring are newly designed, increasing strength and rigidity and reducing play of joints. New seat provides excellent support and riding comfort. Fore and aft sliding amount is designed to fit all operators.

### **Monitor with Self-diagnostic Function**

### **Display for User**

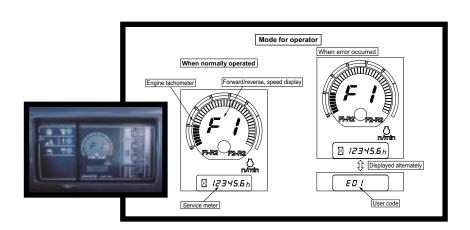
In normal operation the monitor displays engine rpm and forward/reverse gear speed on the upper part of the display, and service meter on the lower part of the display.

### **Continuous Machine Monitoring System**

Check-before-starting and caution items appear on the liquid crystal panel and a warning buzzer. The continuous machine condition check helps prevent the development of serious problems and allows the operator to concentrate his attention on the controls.

### Abnormalities on Electronics System Display with Code

When an error occurs during operation, user code and service meter are displayed alternately. When a high importance user code is displayed, a caution lamp lights up and a warning buzzer sounds to prevent the development of serious problems.









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### **Engine**

The Komatsu SA12V170E engine delivers 858 kW **1,150 HP** at 1800 rpm. The fuel-efficient Komatsu engine, together with the heavy machine weight, makes the D575A-3 Super Dozer a superior crawler dozer in dozing production. The engine is designed to surpass EPA/CARB regulations, and features direct fuel injection, a turbocharger, and an aftercooler to maximize fuel efficiency.

To minimize noise and vibration, the engine is mounted to the main frame with rubber cushions.

### **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.

### Resilient Equalized Undercarriage (REU)

The REU system provides powerful traction, component durability, and operator comfort. Outstanding traction can be achieved because the shoes always follow the contour of the ground. The X-shaped, bogie-structured resilient equalized undercarriage performs independent see-saw movements. To decrease vibration and shock, rubber shock absorbers are mounted on the X-shaped bogies. The bogies and rubber cushions provide different absorption characteristics depending on the ground surface. When the machine travels on flat ground, the REU functions as a conventional rigid undercarriage. When the machine travels on uneven ground, the REU maximizes the suspension effect.

Rubber

Inner bogie



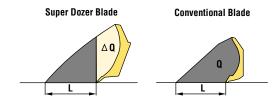
Outer

bogie

## Super Dozer Blade

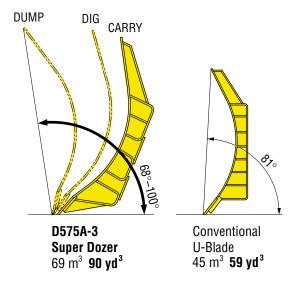
The 69 m³ **90 yd³** capacity Super Dozer blade yields outstanding production with the innovative Super Dozer blade design, which is 15% more productive in level dozing.

- Blade capacity increased by extra holding volume
- Pushing larger volume of material against the same soil resistance
- Optimum machine balance for dozing



Q = Original blade capacity  $\triangle Q = Additional holding volume$  $(\triangle Q = 0.15 \times Q)$ 

L = Soil resistance



Unlike ordinary dozer blades, the Super Dozer blade has a full range of movement. Three basic positions—dig, carry, and dump—create previously unheard-of levels of efficiency. It also includes auto-dump and auto-reposition features.



# MANITENAME ENSY

### **Preventative Maintenance**

Preventative maintenance is the only way to ensure long service life from your equipment. That's why Komatsu designed the D575A-3 Super Dozer with conveniently located maintenance points to make necessary inspections and maintenance quick and easy.

### **Centralized Service Station**

To ensure convenient maintenance, all necessary filters are arranged in a centralized service station next to right side of the cab.

### **Enclosed Hydraulic Piping**

Hydraulic piping for the blade tilt and pitch is completely housed in the push arm ensuring protection from materials.

### **Modular Power Train Design**

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

### **Oil Pressure Check Ports**

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







# SHECHACHIONS



#### **ENGINE**

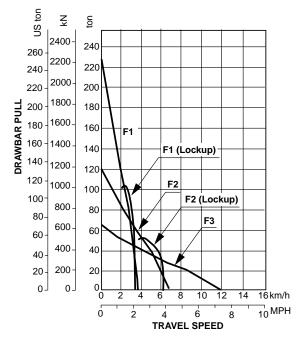
Model Komatsu SA12V170E
Type 4-stroke, water-cooled, direct injection
AspirationTurbocharged, aftercooled
Number of cylinders
Bore x stroke
Piston displacement
Horsepower rating @ 1800 rpm
Net power (SAE J1349)858 kW <b>1,150 HP</b>
Governor All-speed, electrical
Lubrication system
Method Gear pump, force lubrication
Filter Full-flow and bypass combined



### **TORQFLOW TRANSMISSION**

Komatsu TORQFLOW transmission consists of an air-cooled, 3-element, 1-stage, 1-phase torque converter with lockup clutch and a planetary gear, multiple-disc clutch transmission which is actuated by ECMV (Electronic Control Modulation Valve) and force-lubricated for optimum heat dissipation.

Gear	Forward		Rev	erse
1st	3.7 km/h	2.3 mph	4.3 km/h	2.7 mph
2nd	6.6 km/h	4.1 mph	7.7 km/h	4.8 mph
3rd	11.6 km/h	7.5 mph	13.3 km/h	8.3 mph





Triple-reduction final drive uses two-stage spur and single-stage planetary gears (five) to minimize transmission of shock to power train components. Segmented sprocket rims are bolt-on type for easy in-the-field 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.



### UNDERCARRIAGE

Suspension	Oscillating equalizer bar and pivot shaft
Track roller frame	Box-section, high-tensile-strength
	steel construction
Rollers and idlers	Lubricated track rollers

### Resilient equalized undercarriage

Lubricated track rollers are resiliently mounted to the roller frame with a series of X-type bogies 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)	49
Grouser height:	
Single grouser	05 mm <b>4.1</b> "
Shoe width (standard)	60 mm <b>34</b> "
Ground contact area 94342 cm <sup>2</sup>	14,623 in <sup>2</sup>
Ground pressure 159 kPa 1.62 kg/ci	m² <b>23.0 psi</b>
Number of track rollers (each side)	8
Number of carrier rollers (each side)	2

Extreme service shoes			Ground pressure
910 mm <b>36"</b>	570 kg <b>1,260 lb</b>	99827 cm <sup>2</sup> <b>15,473 in</b> <sup>2</sup>	150 kPa 1.53 kg/cm <sup>2</sup> <b>21.8 psi</b>



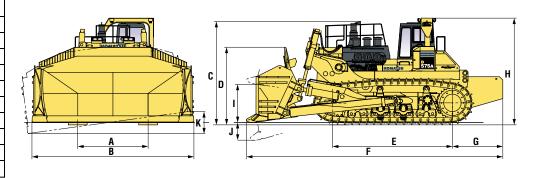
## COOLANT AND LUBRICANT CAPACITY (RESUL)

Fuel tank	555 U.S. gal
Coolant	79 U.S. gal
Engine	52 U.S. gal
Torque converter, transmission,	
bevel gear, and steering system 345 ltr	91 U.S. gal
Final drive (each side)	42 U.S. gal



#### **SUPER DOZER WITH COUNTERWEIGHT**

10'7"	3220 mm	Α
24'3"	7400 mm	В
14'9"	4495 mm	С
11'11"	3640 mm	D
18'0"	5485 mm	Е
38'5"	11720 mm	F
7'7"	2305 mm	G
16'0"	4880 mm	Н
5'9"	1750 mm	_
2'8"	805 mm	J
3'3"	1000 mm	K



Ground Clearance: 745 mm 2'5"





### **HYDRAULIC SYSTEM**

### Hydraulic control unit:

- All-spool control valves
- Multi-chamber gear hydraulic pump

### Control valves:

•	<ul> <li>Two control valves [Super Dozer]</li> </ul>					
	Positions:	Blade lift	Raise, hold, and lower			
		Blade tilt	Right, hold, and left			
		Blade pitch	Forward, hold, and rearward			

Hydraulic cylinders. . . . . . . . . . Double-acting, piston type

	Number of cylinders	Bore
Blade lift	2	225 mm <b>8.86"</b>
Blade tilt and pitch	2	300 mm <b>11.81</b> "



### **DOZER EQUIPMENT**

Blade capacities are based on the SAE recommended practice J1265.

	Overall			Maximum	Maximum	Maximum	Weight	
	length with dozer	Blade capacity	Blade length x height	lift above ground	drop below ground	tilt adjustment	Dozer equipment	Ground pressure*
Super Dozer	10385 mm <b>34'1"</b>	69 m³ <b>90 yd³</b>	7400 mm x 3250 mm <b>24'3" x 10'8"</b>	1750 mm <b>5'9"</b>	805 mm <b>2'8"</b>	1000 mm <b>3'3"</b>	32430 kg <b>71,500 lb</b>	159 kPa 1.62 kg/cm² <b>23.0 psi</b>

<sup>\*</sup>Ground pressure shows tractor with Super Dozer blade, cab, ROPS canopy, counterweight, operator, and standard equipment.



- · Air conditioner with heater and defroster
- Alternator, 75 A/24 V
- AM/FM radio
- Auto-priming system
- Back-up alarm
- Batteries, 200 Ah/4 x 12 V
- Blower fan
- Cab pressurizer
- 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 eight front and four rear lights)
- Lockup torque converter
- Muffler with rain cap
- PCCS lever, steering control
- Power tilt, power pitch blade system
- ROPS
- Segmented sprockets
- Semi-automatic blade repositioner

- Shoes, 860 mm 34"
- Starting motors, 2 x 11 kW/24 V
- Steel cab with FOPS
- Suspension seat with seat belt
- TORQFLOW transmission
- Track frames, eight-track-roller
- Track roller guards (center)
- Travel control console integrated with operator seat
- Vandalism protection locks
- Warning horn
- Wet steering clutches

ROPS	(FOPS)*:

Weight . . . . . . . . . . . . 1970 kg **4,340 lb** 

### Roof dimension:

### Steel cab:

Weight . . . . . . . . . . . . . 480 kg **1,060 lb** 

standards, as well as ISO 3449 FOPS standards

### Dimensions:



- Additional lighting system
- Counterweight, 5400 kg 11,900 lb
- Fast fuel fill

- Fire extinguisher
- ProVision<sup>™</sup> High Precision GPS
- Shoes:

—910 mm **36**"

AESS569-01

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DK4(2.5M)AV

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