HORSEPOWER

Gross: 337 kW 452 HP @ 2000 rpm

Net: 335 kW 449 HP @ 2000 rpm

OPERATING WEIGHT 51,530 kg 113,600 lb

KOMATSU®

D275AX-5E0

ecot3 275ax



CRAWLER DOZER

WALK-AROUND

OUTSTANDING PRODUCTIVITY

Innovative SIGMADOZER reduces digging resistance and demonstrates smooth material roll up to increase blade load.

Blade capacity 14.6 m3 19.1 yd3. See page 6.

SAA6D140E-5 turbocharged after-cooled diesel engine provides an output of **335 kW** 449 HP with excellent productivity. This machine is EPA Tier 3 and EU stage 3A emission certified. See page 6.

Preventative maintenance

- Centralized service station
- Enclosed hydraulic piping
- Modular power train design
- Oil pressure checking ports See page 9.

Simple hull frame

and monocoque track frame with pivot shaft for greater reliability.

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

New track link design

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

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 drive radiator cooling fan



HORSEPOWER Gross: 337 kW 452 HP @ 2000 rpm Net: 335 kW 449 HP @ 2000 rpm

> OPERATING WEIGHT 51,530 kg 113,600 lb

BLADE CAPACITY

SIGMADOZER: 14.6 m3 19.1 yd3

Semi-U: 13.7 m3 17.9 yd3

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)
- PCCS (Palm Command Control System) lever controls
- Pressurized cab (optional)
- Adjustable armrest

• Travel control console integrated with operator seat See page 8.



Extra-low machine profile provides excellent machine balance and low center of gravity.



HSS (Hydrostatic Steering System)
provides smooth, quick and powerful control
in varying ground conditions. See page 5.

Low-drive, **long-track**, **seven roller undercarriage** ensures outstanding grading ability and stability.

Track shoe slip control system (option) reduces operator fatique. See page 7.

K-Bogie undercarriage system

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

Photo may include optional equipment.

PCCS (PALM COMMAND CONTROL SYSTEM)

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

Palm command travel joystick provides the operator with a relaxed posture and superb fine control without operator fatigue. Transmission gear shifting is simplified with thumb push buttons.

Left-hand joystick



Fully adjustable suspension seat and travel control console

For improved rear visibility during reverse operations, the operator can adjust seat 15° to the right. The transmission and steering controls move with the seat for optimum operator comfort. The travel control console also has adjustment fore and aft, and height. The armrest is independently adjustable up and down, providing optimum operation posture for all operators.

Facing front



When turned 15°



Palm command PPC controlled blade control joystick

Blade control joystick uses the PPC (Proportional Pressure Control) valve and palm command joystick similar to the travel control joystick. PPC control combined with the

Blade and ripper control joystick



highly reliable Komatsu hydraulic system enables superb fine control. (Dual tilt and pitch operation are enabled by depressing switch with a thumb. This is available when optional dual tilt dozer is installed.)

Fuel control dial

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

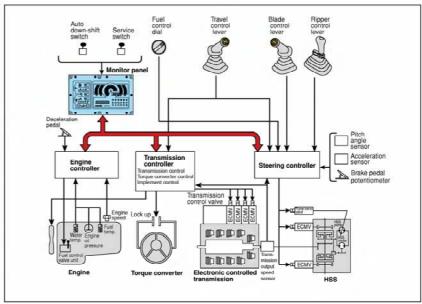
Height adjustable blade control armrest

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

Position adjustable ripper control lever

Ripper control lever position is adjustable, providing optimum operator posture during all types of ripping operations.

Outline of electronic control system



Power Train Electronic Control System

Smooth and soft operation

D275AX-5E0 utilizes 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 calculate accurately the control of the torque converter, transmission, HSS (Hydrostatic Steering System) and brakes for optimal machine operation. The ease of operation and productivity of the new D275AX-5E0 is greatly improved through these new features.

ECMV (Electronic Controlled Modulation Valve) controlled transmission

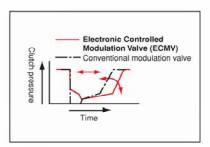
Controller automatically adjusts each clutch engagement depending on travel conditions such as gear speed, revolution and shifting pattern. This provides smooth shockless clutch engagement, improved component reliability, improved component life and operator ride comfort.

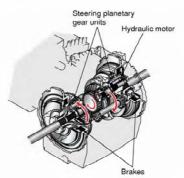
Hydrostatic Steering System—smooth, powerful turning

The Hydrostatic Steering System (HSS) is powered by an independent hydraulic pump with engine power transmitted to both tracks without power interruption on the inside track. When the machine turns, the outside track moves faster and the inside slower, for smooth, powerful turns. Counter-rotation is available for minimum turning radius providing excellent maneuverability. Shock-free steering reduces machine vibration and minimizes operator fatigue.

D275AX-5E0 HSS system is equipped with a pivot turn mode switch on the dashboard. When the pivot turn mode is selected or the machine reaches the limit of HSS during a turn, the turning side brake is engaged. This results in a pivot turn with a short turning radius.

- Turning while dozing— the machine turns by driving the left and right tracks under power at different speeds allowing the machine to travel at the same speed as in straight dozing.
- Side cutting— when side-loading the blade, straight travel can be maintained utilizing HSS.

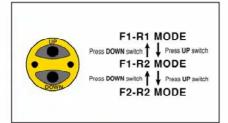


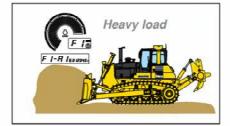


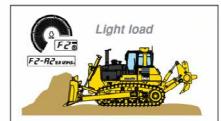
- On downhill slopes— the machine doesn't require countersteering. The joystick provides the same steering response on downhill slopes as on flat ground.
- Grading— can be done efficiently without damaging the ground, because the inside track is not locked during turning.

Preset travel speed 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.

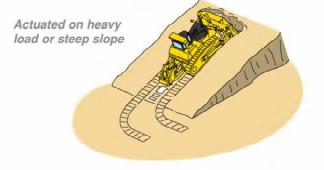






Auto downshift function

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.



PRODUCTIVITY FEATURES



Engine

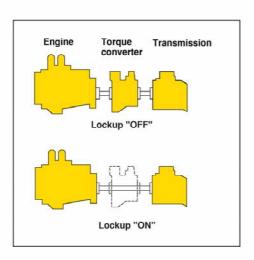
The Komatsu SAA6D140E-5 engine delivers **335 kW** 449 HP at 2000 rpm. The fuel-efficient Komatsu engine, together with the heavy machine weight, make the D275AX-5E0 a superior crawler dozer in both ripping and dozing production. The engine is EPA Tier 3 and EU stage 3A emission regulations certified, and features direct fuel injection, turbocharger, airto-air aftercooler and cooled EGR system to maximize fuel efficiency. To minimize noise and vibration, the engine is mounted to the main frame with rubber cushions.

Hydraulic drive 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

In the lockup configuration, the system automatically engages the torque converter lockup clutch with all the engine power transmitted directly to the transmission, increasing ground speed and thus achieving efficiencies equal to a direct drive. The result is efficient use of engine power, less fuel consumption, and faster cycle times.



Outstanding Productivity

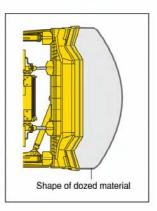
SIGMADOZER

Production increased by 15%

(compared with our conventional model)

Based on a completely new digging theory, SIGMADOZER dramatically improves dozing performance and increases productivity. A new frontal design concept adopted for digging and rolling up material at the center of the blade increases material holding capacity, simultaneously reducing sideway spillage. Reduced digging resistance produces smoother flow of material, enabling the dozing of larger quantities of material with less power. In addition, adoption of a new blade linkage system holds the blade closer to the tractor for improved visibility, enhanced digging force and reduced lateral sway of the blade.





SIGMADOZER



Shape of dozed material

Semi-U blade

Undercarriage

K-Bogie system

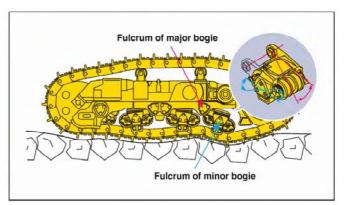
New K-Bogie undercarriage system retains prior advantages, with new additional features.

Current features:

- Effective length of track on ground is consistent. Shoe slippage is minimized; therefore, high traction is obtained.
- 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 load on all undercarriage components has been reduced and durability of components 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.





Dual tilt dozer

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, dozing (carry), and dumping (spreading) are easy and smooth with less operator fatigue.
- Dozer tilt angle and tilt speed are twice that of a conventional single tilt system.

Rippers

- 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 in 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 D275AX-5E0 provides a quiet, comfortable environment where the operator can concentrate on the work at hand.



Hexagonal pressurized cab (optional)

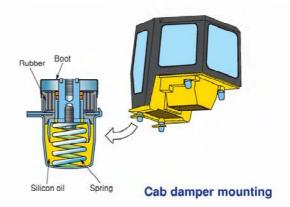
- The cab's new hexagonal design and large tinted glass windows provide excellent front, side, and rear visibility.
- Air filters and a higher internal air pressure combine to prevent dust from entering the cab.



Photo may include optional equipment.

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

D275AX-5E0's cab mount uses a new cab damper which provides excellent shock and vibration absorption capacity with its long stroke. Cab damper mounts combined with new K-Bogie undercarriage, softens shocks and vibration while traveling over adverse conditions, that are impossible to absorb with conventional cab mounting methods. The soft spring of cab damper isolates the cab from machine body, suppressing vibration and providing a quiet, comfortable operating environment.



New suspension seat

D275AX-5E0 uses a new suspension seat. Fore and aft sliding rails and suspension spring are reinforced and play

of joints is reduced. In addition to turning function for ripper operation, the seat is also tiltable to facilitate down hill dozing. Air suspension seat is also available.



EASY MAINTENANCE

Preventative Maintenance

Preventative maintenance is the only way to ensure long service life from your equipment. That's why Komatsu designed the D275AX-5E0 with conveniently located maintenance points to make necessary inspections and maintenance quick and easy.

Centralized service station

To assure convenient maintenance, the transmission and HSS oil filters, power train oil level gauges and hydraulic tank are arranged in the right side of the machine.



All warning and monitor lamps are lit for photo shooting.

Monitor with self-diagnostic function

With the starting switch turned ON, the monitor displays P on the display, check-before-starting and caution items appear on the lower right part of the 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 monitor during operation. When abnormalities occur during operation, action code and service meter are displayed alternately. When a critical action code is displayed, the caution lamp blinks and a warning buzzer sounds to prevent the development of serious problems.

Enclosed hydraulic piping

Hydraulic piping for the blade tilt cylinder is completely housed in the push arm, ensuring damage protection from materials.

Low Maintenance Costs

Track link with wedge ring

New D275AX-5E0 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.

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.

Oil pressure checking ports

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



Maintenance free disc brakes

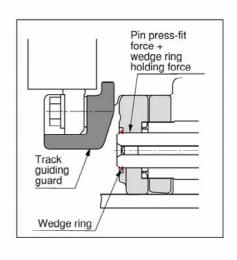
Wet disc brakes require less maintenance.

Enlarged engine room

Engine room space is enlarged by increasing engine hood height, facilitating maintenance of the engine and related equipment. Perforated holes on the engine hood are discontinued, preventing dust and rain entering and to keep engine area clean.

Gull-wing engine side covers

The opening area is further enlarged when gull-wing engine side covers are opened, facilitating engine maintenance and filter replacement. Side covers have been changed to a thick one-piece structure with a bolt-on catch to improve durability.



SPECIFICATIONS



ENGINE

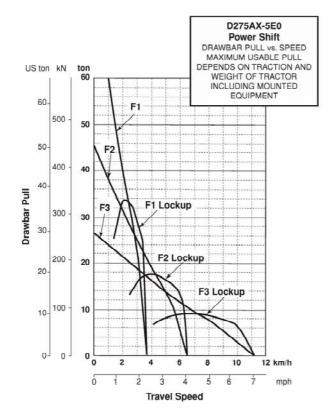
Model	Komatsu SAA6D140E-5
Type	cycle, water-cooled, direct injection
Aspiration Turbocharged,	
Number of cylinders	
Bore x stroke	
Piston displacement	
Governor	
Horsepower	
SAE J1995	Gross 337 kW 452 HP
ISO 9249 / SAE J1349*	Net 335 kW 449 HP
Rated rpm	2000 rpm
Fan drive type	
Lubrication system	-
Method	Gear pump, force lubrication
	Full-flow
*Net horsepower at the maximum spo	eed of
radiator cooling fan	306 kW 410 HP



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 safety switch prevent accidental starts.

Gear	Forward		Rev	erse
1st	3.6 km/h	2.2 mph	4.7 km/h	2.9 mph
2nd	6.7 km/h	4.2 mph	8.7 km/h	5.4 mph
3rd	11.2 km/h	7.0 mph	14.9 km/h	9.3 mph





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 rims are bolt-on for easy replacement.



STEERING SYSTEM

PCCS lever controls for all directional movements. Pushing the PCCS lever forward results in forward machine travel, while pulling it rearward reverses the machine. Simply tilt the PCCS lever to left to make a left turn.

Hydrostatic Steering System (HSS) is powered by steering planetary units and an independent hydraulic pump and motor. Counterrotation turns are also available. Wet, multiple-disc, pedal-controlled service brakes are spring-actuated and hydraulically released. Gear shift lock lever also applies parking brake.



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 roller frame with a series of K-Bogies whose oscillating motion is cushioned by rubber pads.

Extreme service track shoes

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

Number of shoes (each side)	39
Grouser height:	
Single grouser	88 mm 3.5"
Shoe width (standard)	610 mm 24"
Ground contact area	
Ground pressure (tractor only) 87.3 kPa	0.89 kg/cm ² 12.7 psi
Number of track rollers	
Number of carrier rollers	2

Extreme service shoes	Additional weight	Ground contact area	Ground pressure		
710 mm 28"	570 kg 1,260 lb	49416 cm² 7,659 in²	103 kPa 1.05 kg/cm ² 15.0 psi		
760 mm 30"	850 kg 1,870 lb	52,896 cm² 8,199 in²	97 kPa 0.99 kg/cm ² 14.1 psi		



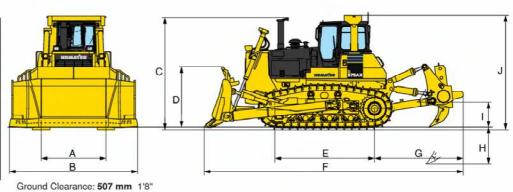
COOLANT AND LUBRICANT CAPACITY (REFILL)

Fuel tank	222 U.S. gal
Coolant	26.4 U.S. gal
Engine	13.7 U.S. gal
Torque converter, transmission,	
bevel gear, and steering system 90 ltr	23.8 U.S. gal
Final drive (each side)	10.6 U.S. gal



SIGMADOZER WITH GIANT RIPPER

Α	2260 mm	7'5"
В	4440 mm	14'7"
С	3915 mm	12'10"
D	2150 mm	7'1"
E	3480 mm	11'5"
F	8995 mm	29'6"
G	3030 mm	9'11"
Н	1300 mm	4'3"
1	870 mm	2'10"
J	3990 mm	13'1"





OPERATING WEIGHT



HYDRAULIC SYSTEM

Closed-center Load Sensing System (CLSS) designed for precise and responsive control, and for efficient simultaneous operation.

Hydraulic control units:

All spool valves externally mounted beside the hydraulic tank. Plunger type hydraulic pump with capacity (discharge flow) of 230 ltr/min 60.8 U.S. gal/min at rated engine rpm.

Relief valve setting 27.5 MPa 280 kg/cm² 3,980 psi

Control valves:

Spool control valves for SIGMADOZER, Semi-U tilt dozer and Full-U tilt dozer

Additional control valve required for variable digging angle multi-shank ripper and giant ripper.

 Hydraulic cylinders Double-acting, piston

	Number of cylinders	Bore		
Blade lift	2	120 mm 4.72"		
Blade tilt	1(Single tilt), 2(Dual tilt)	180 mm 7.09"		
Ripper lift	2	180 mm 7.09"		
Ripper tilt	2	160 mm 6.30"		

Hydraulic oil capacity (refill):

SIGMADOZER or Semi-U dozer or Full-U dozer

..... 130 ltr 34.3 U.S. gal

Ripper equipment (additional volume):



DOZER EQUIPMENT

Blade capacities are based on the SAE recommended practice J1265.

	Overall			Maximum	Maximum	Maximum	Weight*		Weight*	
	length with dozer	Blade capacity	Blade length x height	lift above ground	drop below ground	tilt adjustment	Dozer equipment	Hydraulic oil	Ground pressure**	
Strengthened Dual tilt SIGMADOZER	6665 mm 21'10"	14.6 m³ 19.1 yd³	4440 mm x 2150 mm 14'7" x 7'1"	1390 mm 4'7"	745 mm 2.5°	1070 mm 3'6°	9110 kg 20,080 lb	35 kg 77 lb	119 kPa 1.21kg/cm ² 17.2 psi	
Strengthened	6665 mm	14.6 m³ 19.1 yd³	4440 mm x 2150 mm	1390 mm	745 mm	1000 mm	9030 kg	29 kg	119 kPa	
SIGMADOZER	21'10"		14'7" x 7'1"	4'7"	2'5"	3'3"	19,910 lb	64 lb	1.21kg/cm ² 17.2 psi	
Semi-U tilt	6930 mm	13.7 m³	4300 mm x 1960 mm	1450 mm	640 mm	1000 mm	7480 kg 16,490 lb	29 kg	115 kPa	
dozer	22'9"	17.9 yd³	14'1" x 6'5"	4'9"	2'1"	3'3"		64 lb	1.17kg/cm ² 16.6 psi	
Full-U tilt	7265 mm	16.6 m³	4615 mm x 1973 mm	1450 mm	640 mm	1070 mm	8405 kg	29 kg	118 kPa	
dozer	23'10"	21.7 yd³	15'2" x 6'6"	4'9"	2'1"	3'6"	18,530 lb	64 lb	1.20 kg/cm ² 17.1 psi	
Dual tilt	6930 mm	13.7 m³	4300 mm x 1960 mm	1450 mm	640 mm	1140 mm	7560 kg 16,670 lb	35 kg	116 kPa	
Semi-U dozer	22'9"	17.9 yd³	14'1" x 6'5"	4'9"	2'1"	3'9"		77 lb	1.18 kg/cm ² 16.8 psi	
Dual tilt	7265 mm	16.6 m³ 21.7 yd³	4615 mm x 1973 mm	1450 mm	640 mm	1220 mm	8485 kg	35 kg	118kPa	
Full-U dozer	23'10"		15'2" x 6'6"	4'9"	2'1"	4'0"	18,710 lb	77 lb	1.20 kg/cm² 17.1 psi	

^{*} Additional weight to obtain the weight of strengthened type dozer equipment.

For strengthened Semi-U dozer: + 1050 kg For strengthened Full-U tilt dozer: + 1200 kg

When calculating the operating weight of dual tilt dozer, add the 50 kg weight of additional hydraulic system to the tractor weight.

^{**} Ground pressure shows tractor, cab, ROPS, operator, giant ripper standard equipment and applicable blade.



- Alternator 75 ampere/24V
- Backup alarm
- Batteries 170 Ah/2 x 12V
- 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
- Hydrostatic Steering System (HSS)
- Lighting system (including four front and two rear lights)
- Lockup torque converter
- Muffler with rain cap
- Palm lever steering control
- · Radiator reserve tank
- ROPS brackets
- · Segmented sprockets

- · Seven-roller track frames
- Shoes, 610 mm 24" extreme service, single-grouser
- Starting motors 11 kW/24 V
- Suspension seat
- TOROFLOW transmission
- Track roller guards
- Warning horn

ОРТІО

OPTIONAL EQUIPMENT

- Air conditioner with heater and defroster
- Alternator 90 ampere/24 V
- Batteries 200 Ah/2 x 12V
- Counterweight
- Cushion dozer
- Cushion push block
- Fire extinguisher
- Hitch
- Hydraulics for ripper
- Light for ripper point
- Mirror, rearview

- Panel cover
- · Perforated engine side covers
- Perforated single door radiator mask
- Pusher plate
- Radio, stereo
- Seat

Air suspension seat Suspension seat

- -Fabric seat
- -Fabric seat, high backrest
- Seat belt

- · Shoes:
 - -710 mm 28"
 - -760 mm 30"
- Spill guard for Semi-U dozer
- Spill guard for Full-U dozer
- Sun visor
- Track shoe slip control system
- · Vandalism protection kit

ROPS:*

Multi-shank ripper:

Hydraulically controlled parallelogram ripper with three shanks. Ripping angle infinitely adjustable.

Weight (including hydraulic

Variable giant ripper:

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

Weight (including hydraulic

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Printed in Japan 200712 IP.AD (10)

