NET HORSEPOWER 641 kW **860 HP** @ 2000 rpm

OPERATING WEIGHT 106195 kg **234,287 lb**

KOMATSU®

D475A-5

475A







WALK-AROUND

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.

Unique and unrivaled noise-suppression

641 kW **860 HP** turbocharged, aftercooled engine provides plenty of power

The **Dual Tilt Dozer**

increases productivity while reducing operator effort

Extra-low Machine Profile

provides excellent machine balance and low center of gravity

Preventative Maintenance

- Centralized Service Station
- Enclosed Hydraulic Piping
- Modular Power Train Design
- Oil Pressure Checking Ports

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



Large Blade Capacities:

27.2 m³ **35.6 yd**³ (Semi-U dozer), 34.4 m³ 45.0 yd³ (U dozer), and 76 m³ 100 yd³ (Coal)

New Track Link Design

reduces maintenance cost by making turning pins easier, with improved pin reuse

CRAWLER DOZER

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
- PCCS (Palm Command Control System) lever controls
- · Pressurized cab
- Adjustable armrest
- Travel control console integrated with operator seat

FLYWHEEL HORSEPOWER 641 kW 860 HP @ 2000 rpm

OPERATING WEIGHT 106195 kg 234,287 lb

BLADE CAPACITY

Semi-U: 27.2 m³ 35.6 yd³ Full-U: 34.4 m³ 45.0 yd³ Coal : 76.4 m³ 100 yd³

VHMS (Vehicle Health Monitoring System) with ORBCOMM



ECMV (Electronic Controlled Modulation Valve) Controlled Steering Clutch/Brake System

facilitates smooth and shockless steering operation

Rear Attachments (optional)

- Variable giant ripper
- Multi-shank ripper
- Counterweight

K-Bogie Undercarriage System improves traction, component durability, and operator comfort

Track shoe slip control system

reduces operator fatigue

Low-drive, long-track, seven roller undercarriage

ensures outstanding grading ability and stability

Photos may include optional equipment.



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

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

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 push buttons.



For improved rear visibility

during the return 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 operator seat is also tiltable for facilitating down hill dozing. The travel control console has adjustments fore and aft, and for height. With an independently adjustable armrest, each D475A operator can adjust control positions to their individual preference, providing optimum operational posture for all operators.

Left-hand Joystick



Blade and Ripper Control Joystick



Fuel Control Dial

Engine revolution 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, enables superb fine control (Dual tilt and pitch operation are enabled by depressing switch with a thumb).

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.

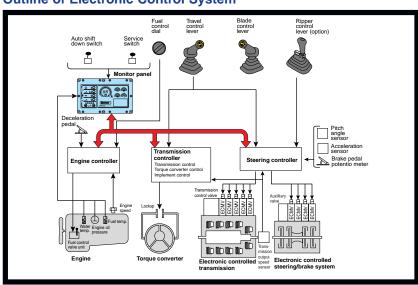
Facing Front



When Turned 15°



Outline of Electronic Control System



Power Train Electronic Control System

Smooth and Soft Operation

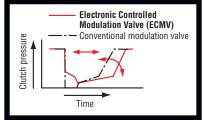
The D475A-5 utilizes a newly designed power train electronic control system. The controller registers the amount of operator control (movements of lever and operation of switches) along with machine condition signals from each sensor to accurately calculate the control of the torque converter, transmission, steering clutches and brakes for optimized machine operation. The

ease of operation and productivity of the new D475A-5 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 shockless smooth clutch engagement, improved component reliability, improved component life and operator ride comfort.



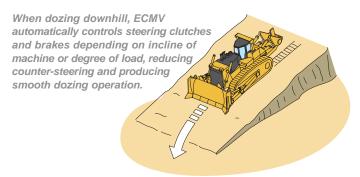
ECMV (Electronic Controlled Modulation Valve) Controlled Steering Clutches/Brakes

Sensors monitor machine operating conditions, and electronically control 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 Clutches/Brake Control

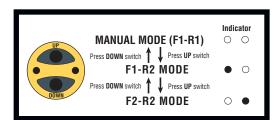
When dozing and turning, ECMV automatically controls stroke ratio of steering clutches and brakes depending on degree of load, enabling smooth dozing and turning.



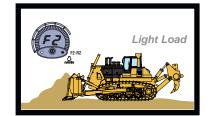


Preset Travel Speed Selection Function

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/reverse with F1-R2 or F2-R2 speed automatically. This function reduces gear shifting time during repeated round-trip operations.

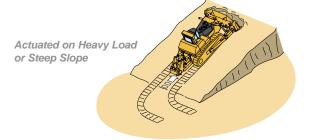






Auto-shift Down Function

The 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 the cancel switch).



PRODUCTIVITY FEATURES

Engine

The Komatsu SDA12V140E engine delivers 641 kW **860 HP** at 2000 rpm. These features, together with the heavy machine weight, make the D475A-5 a superior crawler dozer in both ripping and dozing production. The engine is Tier 2 EPA, EU, and Japan emissions certified and features direct fuel injection, turbocharger, and aftercooler to maximize fuel efficiency.

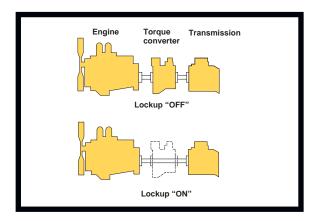
To minimize noise and vibration, the engine is mounted to the main frame with rubber cushions. For further convenience, fuel adjustment is unnecessary up to an altitude of 3000 m **9,840 ft.**

Hydraulic Driven Engine 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

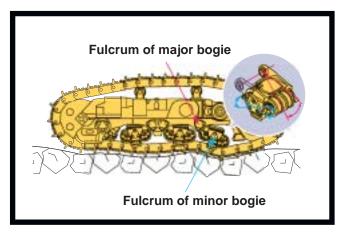
New K-Bogie Undercarriage System combines prior advantages, with new additional features.

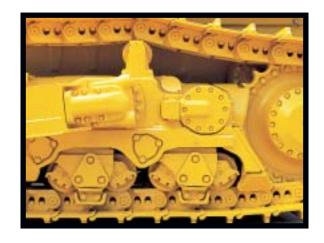
Current features:

- Effective length of track on ground is consistent. Shoe slippage is minimized, 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 loading to undercarriage components is 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





Large Blade

Capacities of 27.2 m³ **35.6 yd³** (Semi-U dozer), 34.4 m³ **45.0 yd³** (U dozer), and 76.4m³ **100 yd³** (coal) yield outstanding production. High-tensile-strength steel has been incorporated into the front and sides of the blade for increased durability

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, 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 up tough
 material. The ripping angle is variable, and the depth is adjustable in four stages by a
 hydraulically controlled pin puller
- The multi-shank ripper is a hydraulically controlled parallelogram ripper with three shanks.

 The ripping angle is variable and depth is adjustable in two stages





Track Shoe Slip Control Panel

Track Shoe Slip Control System

- 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 safe and productive work. The D475A-5 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.
- Improved cab sealing, air filters and increased internal air pressure combine to prevent dust from entering the cab.
- The floor mat and door sill are the same height to facilitate easy cleaning.
- The high quality cab interior is fully lined with sound absorbing material.

Comfortable Ride with New Cab Damper Mounting and K-Bogie Undercarriage

D475A-5's cab mount uses a newly designed 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 conditions 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.

Low Sound Levels

The D475A-5 features a unique and unrivaled low noise design. This is accomplished by improvements not only in the cab but throughout the machine. The cab features an insulated double floor to reduce power train noise, thicker glass in the door and increased pressurization from

improved window seals. Engineered baffles on the machine absorb and reduce the fan noise. Cool air inlet ducts are lined with sound absorbing material that direct the air to the hydraulic fan and a double insulated engine hood with additional sound absorbing material further reduce engine noise. These improvements help the D475A-5 achieve remarkably low sound levels.

- Operator noise: 70dB(A) (Engine at high idle, fan speed at 70%, and air conditioner OFF)
- Dynamic noise (outside): 110dB(A) (As per ISO 6395)

Improved Visibility in Rear of Blade

The shape of the blade heel and the position of the operator's seat are changed so that the operator can check the ground in the rear of the blade during dozing. Accordingly, the operator can work more accurately. In addition, the position of the exhaust pipe is changed for better front visibility.

New Suspension Seat

D475A-5 uses a newly designed suspension seat. Fore and aft sliding rails and suspension spring are newly designed, increasing strength and rigidity, and reducing joint play. In addition to turning function for ripper operation, the seat is also tiltable to facilitate downhill dozing. A heavy-duty air suspension seat is also available.

Relocated Air Intake Ports of Air Conditioner

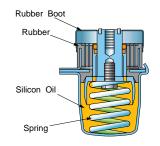
The air conditioner fresh air inlet is located above the fender to prevent dust from the undercarriage from entering the cab. The inside air recirculation inlet is located behind the operator's seat, away from the dirt and dust of the floor mat, to provide an increased cleaning/replacement interval.







Cab Damper Mounting



EASY MAINTENANCE

Preventative Maintenance

Preventative maintenance is the only way to ensure long service life from your equipment. That's why Komatsu designed the D475A-5 Dozer with conveniently located maintenance points to make necessary inspections and maintenance quick and easy.

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.

Monitor with Self-Diagnostic Function

If the monitor finds abnormalities, corresponding warning lamp blinks and warning buzzer sounds. When abnormalities



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

Gull-wing Engine Side Covers

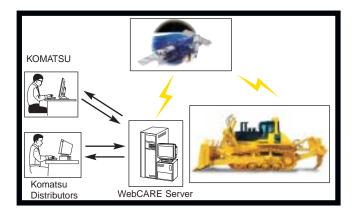
Dual insulated gull-wing engine side covers facilitate engine maintenance and filter replacement. Side covers are a thick one-piece structure with bolt-on latch to improve durability, repairability and facilitate easy opening.

Oil Pressure Checking Ports

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

VHMS (Vehicle Health Monitoring System)

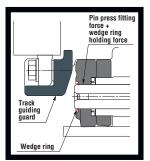
VHMS controller monitors the health conditions of major components and enables remote analysis of the machine and its operation. This process is supported by the Komatsu distributors, factory and design team. This contributes to reduced repair costs and to maintaining maximum availability through proactive service.



Low Maintenance Costs

Track Link with Wedge Ring

New D475A-5 Dozer track links feature reduced press-fit force and a wedge ring. Conventional track pins are retained only with a large 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 dismounted and mounted without oil spillage, making servicing work clean, smooth, and easy.

Maintenance-Free Disc Brakes

Wet disc brakes require less maintenance and provide excellent service life.

SPECIFICATIONS



ENGINE

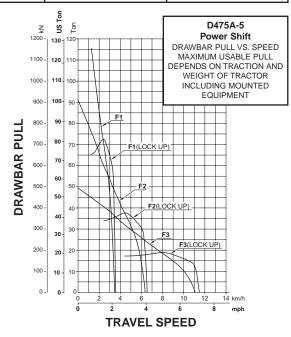
Model
Type 4-stroke, water-cooled, direct injection
Aspiration Turbocharged, aftercooled
Number of cylinders
Bore x stroke
Piston displacement
Flywheel horsepower
SAE J1349 641 kW 860 HP at 2000rpm
DIN6270
Governor
Lubrication system
Method Gear pump, force lubrication
Filter Full-flow and bypass combined



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	Forv	vard	Rev	erse
1st	3.5 km/h	2.2 mph	4.7 km/h	2.9 mph
2nd	6.3 km/h	3.9 mph	8.4 km/h	5.2 mph
3rd	10.9 km/h	6.8 mph	14.3 km/h	8.9 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 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 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 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
Shoe width (standard)
Ground contact area
Ground pressure (Tractor) 125 kPa 1.27 kg/cm² 18.1 psi
Number of track rollers
Number of carrier rollers2

Extreme service shoes	Additional weight	Ground contact area	Tractor ground pressure
810 mm 32 "	870 kg 1,920 lb	70713 cm² 10,960 in²	111 kPa 1.13 kg/cm² 16.1 psi
910 mm 36"	1800 kg 3,970 lb	79443 cm ² 12,314 in ²	99 kPa 1.01 kg/cm² 14.4 psi



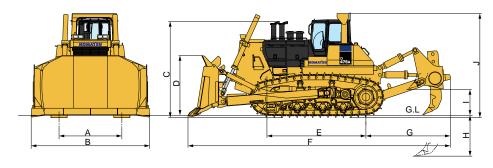
COOLANT AND LUBRICANT CAPACITY (REFILL)

Fuel tank	441 U.S. gal
Coolant	72.6 U.S. gal
Engine	32.0 U.S. gal
Torque converter, transmission,	
bevel gear, and steering system 210 ltr	55.5 U.S. gal
Final drive (each side)	19.8 U.S. gal



SEMI-U DOZER WITH GIANT RIPPER

Α	2770 mm	9'1"
В	5265 mm	17'3"
С	4240 mm	13'11"
D	2690 mm	8'10"
Е	4365 mm	14'4"
F	11565 mm	37'11"
G	3720 mm	12'2"
Н	1800 mm	5'11"
I	1140 mm	3'9"
J	4590 mm	15'1"



Ground Clearance: 655 mm 2'2"





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 542 ltr/min 143 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 Semi-U tilt dozer and Full-U tilt dozer

Spool control valves for variable digging angle multi-shank ripper and

giant ripper.

Hydraulic cylinders Double-acting, piston

	Number of cylinders	Bore
Blade lift	2	180 mm 7.09 "
Blade tilt	1	250 mm 9.84"
Ripper lift	2	225 mm 8.86"
Ripper tilt	2	225 mm 8.86"

Hydraulic oil capacity (refill):

Semi-U tilt dozer	48 U.S. gal
U tilt dozer180 ltr	48 U.S. gal
Ripper equipment (additional volume):	
Giant ripper130 ltr	34 U.S. gal



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*
Semi-U	8700 mm	27.2 m³	5265 mm x 2690 mm	1620 mm	1010 mm	770 mm	16500 kg	162 kPa 1.65 kg/cm²
dozer	28'7"	35.6 yd³	17'3" x 8'10"	5'4"	3'4"	2'6"	36,376 lb	23.5 psi
U dozer	9200 mm	34.4 m³	6205 mm x 2610 mm	1620 mm	1010 mm	905 mm	18500 kg	166 kPa 1.69 kg/cm²
	30'2"	45.0 yd³	20'4" x 8'7"	5'4"	3'4"	3'	40,786 lb	24.1 psi
Dual tilt	8700 mm	27.2 m³	5265 mm x 2690 mm	1620 mm	1010 mm	1145 mm	16800 kg	163 kPa 1.66 kg/cm²
Semi-U dozer	28'7"	35.6 yd³	17'3" x 8'10"	5'4"	3'4"	3'9"	37,038 lb	23.6 psi
Dual tilt	9200 mm	34.4 m³	6205 mm x 2610 mm	1620 mm	1010 mm	1350 mm	18800 kg	166 kPa 1.69 kg/cm²
U dozer	30'2"	45.0 yd³	20'4" x 8'7"	5'4"	3'4"	4'5"	41,447 lb	24.0 psi

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

- · Air conditioner with heater and defroster
- Alternator, 100 A/24 V
- Auto-priming system
- Back-up alarm
- Batteries, 200 Ah/4 x 12 V
- Blower fan
- Decelerator pedal
- Dry-type air cleaner with dust evacuator and dust indicator
- · Dual tilt dozer
- Engine prelubrication system
- Final drive case wear guard
- Heavy duty wiring harness
- Hinged underguard with front pull hook



- · Hydraulic track adjusters
- Hydraulics for ripper
- Lighting system (including four front and two rear lights)
- Lockup torque converter
- Mirror
- Mirror, rearview
- Muffler with rain cap
- Oil-suspension seat
- Perforated front mask
- Radiator reserve tank
- Radio, AM/FM cassette
- **ROPS** brackets
- Seat belt, 76 mm 3" retractable

ROPS*:	
Weight	940 kg 2,070 lb

Dimension:

Width 1940 mm 6'4"

*Meets ISO 3471, SAE J1040 APR88, ROPS

- · Segmented sprockets
- Seven-roller track frames
- Shoes, 710 mm 28" extreme service, single-grouser
- Starting motors, 2 x 7.5 kW/24 V
- Steel cab
- Sun visor
- TORQFLOW transmission
- Track roller guards
- Track shoe slip control system
- VHMS (with ORBCOMM)
- · Warning horn
- Water separator
- · Wet steering clutches

Steel cab**:

Weight 455 kg 1,000 lb Dimension: Length 1790 mm 5'10"

Width 1455 mm 4'9" Height from compartment

floor to ceiling 1530 mm 5'0" **Meets ISO 3449 FOPS standards.



OPTIONAL EQUIPMENT

- Additional cab heater
- Additional lighting package (2 front, 2 rear)
- Air-suspension seat
- Alternator, 150 A/24V
- Battery isolator
- Coal dozer
- Counterweight

- Double wiper
- Fast fuel fill
- Head rest
- Light for ripper
- Pro Vision ™ High Precision GPS
- Push plate
- Safety glass (MSHA)

Variable giant ripper:

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

Weight (including hydraulic

control unit) 7300 kg 16,090 lb Beam length. 1477 mm 4'10" Maximum lift above ground . . 1140 mm 3'9" Maximum digging depth . . . 1800 mm 5'11"

- · Shoes:
 - -710 mm 28"
 - -810 mm 32"
- -910 mm 36"
- · Spill guards
- Semi-U blade with liner
- U blade with liner

Multi-shank ripper:

Hydraulically controlled parallelogram ripper with three shanks. Ripping angle variable and depth adjustable in two stages.

Weight (including hydraulic

control unit) 9720 kg 21,430 lb Beam length............... 3085 mm 10'1" Maximum lift above ground . . 1140 mm 3'9" Maximum digging depth . . . 1180 mm 3'10"

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