



E15

TILT TRAY



Elphinstone Underground Support Solutions
elphinstone.com

ELPHINSTONE

UNDERGROUND RELIABILITY



**E15
TILT TRAY**



ELPHINSTONE



PURPOSE-BUILT TILT, SLIDE, AND WINCH CAPABILITY.

Reliability and performance in harsh conditions

The E15 Tilt Tray is the fourth model in the series to be released, adding another application to the expanding range of E15 Underground Hard Rock Support Vehicles.

Operator safety and class-leading comfort

With safety as a priority, the E15 is engineered with onboard machine diagnostics for rapid fault identification, increasing the availability and productivity of the machine.

The certified ROPS/FOPS air-conditioned operator cabin seats three persons comfortably. The ergonomic controls, central driving position, excellent 180 degree view, and LED lighting increase safety and reduce operator fatigue.

The oscillating hitch, nitrogen-charged front suspension (optional) and air-ride seats provide unrivalled comfort for the operator. The electromagnetic braking retarder, adjustable from the operator's seat, provides superior and reliable braking capability.

Safety features include two emergency stops located both sides at ground level and inside the cab, a wireless remote, optional front jack legs with park brake, standard rear stabilising legs fitted with operation warning lights, and tray tilt and tray slide locking mechanisms (maintenance only).

Maintenance and Serviceability

All service points such as tanks, filters, lubrication points and compartment drains are conveniently located at ground level for servicing.

Machine Application

A flexible purpose-built transport solution featuring tilt, slide and winch capability ideal for transporting refuge containers, parts, components, equipment, and maintenance personnel safely (3-seat cabin) and securely throughout the mine site.

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SAFE AND EFFECTIVE LOAD HANDLING AND STATIC PAYLOAD UP TO 13,175 KG.

Machine application

- » Flexible purpose-built for underground transport solution with tilt, slide and winch capability.
- » Large heavy-duty tray features a maximum static payload of up to 13,175 kg and 8,275 kg tilt and slide loading capacity.
- » Transports refuge containers, parts, components, equipment, and maintenance personnel safely (3-person cabin) and securely throughout the mine site.

Reliable load handling

The 6,875 mm long x 2,500 mm wide heavy-duty tray with reinforced deck lip is bordered by lashing rail and multiple tie-down points with the provision for ratchet load binders. Four three-point access boarding step locations with drop-in removable handrails on both sides of the tray. A cleverly designed drop-in removable guardrail system and access gates are optional.

Features Includes:

- » 12.5-tonne hydraulic planetary drive winch.
- » Heavy-duty H-frame for lateral stability.
- » Tray and winch controlled with wireless remote.
- » Four container locks, standard fitment (10 ft ISO footprint).
- » Inbuilt dampening on tilt cylinders.

Onboard storage

Large undertray open storage compartments are located on both sides of the machine with smaller storage boxes positioned forward of the headboard.



Front and rear hydraulic jack legs

Optional front stabiliser jacks feature a park function to allow the operator to safely exit the cabin with the machine running. Rear stabiliser jack legs are a standard fitment for added stability. All jacks can be utilised to raise the machine off the ground while changing tyres.

Optional features include:

- » Air-ride seats for the operator are standard and optional for passengers.
- » Optional front hydraulic stabiliser legs with park brake. (Rear stabiliser legs are standard for this application)
- » Removeable guardrail system.
- » Optional in-cab filtration complying with ISO 23875.
- » Optional partial-flow DPF can be fitted in place of standard muffler on Tier 3 models.
- » An air-cooled compartment for lunch box storage, cupholders and phone charging ports.
- » Ratchet load binders.
- » Hydraulically filled nitrogen-charged suspension cylinders.



STRENGTH AND SUPERIOR BRAKING PERFORMANCE.

High-capacity Electromagnetic retarder

Fitted to the rear frame, the electronically controlled retarder provides superior braking performance on grade, featuring diagnostic capabilities with alarm and fault conditions reported back to the operator display.

The integrated Retarder Control System (iRCS) combines both the control and power functions into a single unit. The innovative electronic design significantly reduces the retarder's energy consumption, preserving electric circuits.

The retarder, factory set with a percentage of retardation, is controlled via an integrated multi-function joystick controller located on the operator's right-side armrest.

Speed Control

The intelligent grade-sensing electronic 'speed control' utilises the high-capacity retarder, engine speed, and the correct transmission gear to control speed while descending into the mine, hence reducing wear and tear on the service breaks, parts and components.

Oscillating hitch

The oscillating hitch provides superior operator comfort, 4-wheel ground contact and reduced wear on the hitch and steering components. Includes a heavy duty deep frame section through oscillating hitch area with +/- 42.5° steering articulation and +/- 10° oscillation.



Extended rear frame

The common rear frame has been extended for this application to accommodate a long heavy-duty tray. The design features high tensile steel box section construction with an average thickness of 12mm (0.47in).

Heavy duty front frame

The robust, heavy-duty, and purpose design front frame utilises a high tensile steel construction with an average plate thickness of 20mm (0.80in). The frame design is common to both E15 front and E10 centre-mounted operator cabin along with the Tier 3 or Tier 4 engine options.

Front suspension comes standard on the E15 while the E10 can be optioned with either front suspension or rigid axle.

The front suspension mounting points and fuel tank are incorporated into the common frame. The frame includes an access cover for cleaning and inspecting the fuel tank if required.



COMFORTABLE AND EASY TO OPERATE.

Front mounted cab with 180 degree view

The E15 features an air-conditioned, 3-seat enclosed cabin (pictured above). The enclosed cabin features ergonomics for operator comfort, user-friendly intuitive controls, and excellent 180-degree view.

The cabin includes the following features:

- » Front-mounted to machine.
- » ROPS/FOPS certified design.
- » 300mm (12in) touch screen operator display.
- » Fingertip controls mounted to operators seat.
- » 3 full size seats. Air-ride suspension seat standard for driver, non-suspended seats for occupants. Optional Air-ride suspension seats for all persons.
- » Air conditioning and cab pressurisation.
- » Air-cooled compartment for lunch box storage, cupholders and smartphone charging ports.
- » Seat belts with occupant detection systems on operator seat.
- » Emergency stop inside cab.
- » Easy access and storage of wireless remote control.

Integrated multi-function joystick controller

The operator's right arm rest features an integrated multi-function joystick controller providing finite control in transit for agitator speed and adjustment of retardation braking.

Transmission controls

The keypad transmission control is conveniently located near the operator's right hand, with forward and reverse gears changed effortlessly with finger touch accuracy reducing driver fatigue.

High level of operator comfort

The front axle suspension, oscillating hitch, and air-suspended seats deliver a high level of machine comfort to the operator and passengers.

The oscillating hitch ensures 4-wheel ground contact and reduced wear on the hitch and steering components. Nitrogen-charged hydraulic suspension cylinders provide superior front axle ride quality over rough terrain.

Touch screen operator display

The 300mm (12in) touch screen displays vital machine status information. Data collected includes engine coolant and transmission oil temperature, pitch and roll indicators, engine oil pressure, engine speed, an integrated camera system (up to 4x), and vehicle speed and fuel level.

Advanced Machine Diagnostics

Elphinstone's advanced onboard machine diagnostics system continuously monitors all critical machine functions and system status. The operator's dash includes a user-friendly troubleshooting section for rapid fault identification, increasing the availability and productivity of the machine.

Machine health monitoring system

The monitoring system and alarm strategy provides a 3-tier warning and shutdown functionality alerting the operator of any abnormalities and automatically limits the machine's functions.



OPERATOR SAFETY IS OUR PRIORITY.

Machine isolation

All engine and machine isolation functions are conveniently located on one panel accessible from ground level. Switches have been designed to incorporate the requirement for the site tag in/out machine isolation process.

- » Battery isolation switch.
- » Starter isolation switch.
- » Jump start receptacle.
- » Fire system activation (optional).

Cabin protective structure

The operator cabin has an integrated Rollover Protective Structure (ROPS) certified to ISO 3471:2008 and Falling Object Protective Structure (FOPS) certified to ISO 3449:2005.

Speed control

The E15 also features intelligent electronic 'speed control' which utilises the high-capacity electromagnetic driveline retarder, engine speed, and the correct transmission gear to control speed while descending into the mine, hence reducing wear and tear on the service breaks, parts and components. When on flat ground the operator can accelerate over the maximum set speed, but when the accelerator pedal is released, the machine speed will revert to the original maximum speed setting.

Steering

Full hydraulic controlled steering via opposed cylinders at the oscillating hitch. Secondary emergency steering is also provided as standard. Steering system meets ISO 5010:2007.

Braking

Service brakes are hydraulic applied wet disc brakes. Emergency brakes are spring applied hydraulic release at the wheel ends. Braking systems meet ISO 3450:2011.

Machine access

Handrails are fitted standard in accordance with ISO 2867:2011. All handrails are painted green and designed for 3-point access to cab and machine.

The tray is fitted with rear and front access points on both sides, featuring heavy-grip steps and high-visibility removable handrails, easily stored away in onboard compartments. An optional drop-in guardrail system and access gates are available for added safety.

Additional safety features

- » Enclosed manual PGV valve (maintenance only).
- » Lockable tray up and tray slide locking mechanisms (maintenance only).
- » Wireless remote control.
- » Anti-skid step surfaces.
- » Inertia reel retractable seat belt.
- » Steering frame lock.
- » Electrical wiring segregation from all hydraulic hosing.
- » Ground level access allows safe and convenient servicing to tanks, filters, lubrication points and compartment drains.
- » Fire resistant sheathing on electrical harnesses and fuel lines.
- » Firewall/heatshields.
- » 4 Pole machine isolators (Battery and Starter) for additional protection.
- » Integrated fire suppression systems (optional).
- » Hydraulic hosing covered with burst protection sleeves.
- » Operator presence systems.
- » Door lighting for better step visibility.
- » Window egress cord for ease of cab window removal.
- » Rear view camera.
- » Park brake interlocking.
- » Front jacks operate with a "park" function to enable the operator to safely exit the cabin with the engine operating.
- » Front and rear jacks feature flashing operation lights.
- » Rear jacks are a standard feature providing added stability.
- » Additional cab pressurisation with HEPA filter to comply with ISO 23875:2023.

DELIVERS POWER, PERFORMANCE AND DURABILITY.

C7.1 engine

The Cat C7.1 uses Caterpillar's breakthrough ACERT™ Technology to meet exhaust emission reduction standards. It features efficient fuel delivery, air management and electronic control for high productivity and exceptional service life.

The C7.1 ACERT Tier 3 engine arrangement rated at 168 kW (228 hp) is standard for regions that may not have Ultra Low Sulphur Fuel or more stringent emission regulations. An optional diesel particulate filter can be fitted.

The C7.1 ACERT Tier 4 Final engine arrangement is available as an option, adhering to EU Stage IV exhaust emission standards. This arrangement rated at 151kW (202 hp).

ADEM A4 engine control module

The ADEM A4 module controls the fuel injector solenoids to monitor fuel injection. It also provides automatic altitude compensation, and will not allow the engine to start until it has oil pressure, acting as cold start protection and a form of pre-lube.

Maintenance

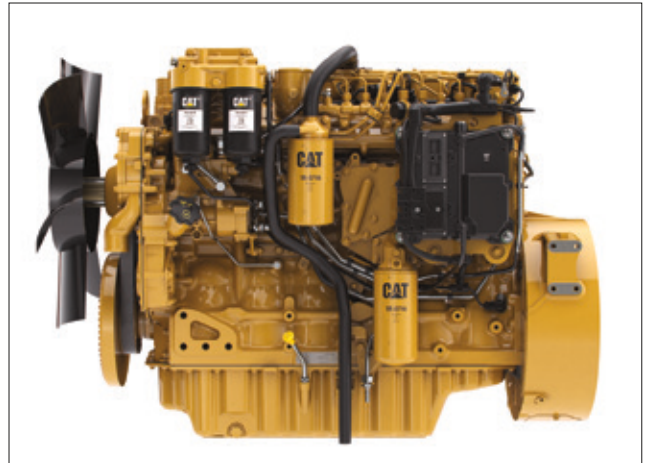
The C7.1 engine reduces costs and downtime with 500-hour oil change intervals. The E15 is equipped with Caterpillar high efficiency oil filters, a design which doubles efficiency without increasing the change interval.

Engine protection system

An engine protection system is fitted that will shut down the engine if low engine oil pressure, low coolant level, or coolant over temperature conditions are experienced.

Commonality

The Caterpillar C7.1 engine is found in several Caterpillar products and applications such as Medium Wheel Loaders, Excavators, Motor Graders, Marine and Industrial services. This means the E15 shares component commonality across many applications, providing the highest level of reliability and durability, as well as superior parts availability worldwide through the Caterpillar Dealer Network.





PERFORMANCE AND RELIABILITY IN TOUGH CONDITIONS.

Caterpillar five-speed transmission

The field proven Cat power shift countershaft transmission easily matches engine power to the load size and ground conditions. Gear changes are simplified with ergonomically positioned electronic fingertip controls, reducing operator fatigue.

High-capacity Electromagnetic retarder

Fitted to the rear frame, the electronically controlled retarder provides superior braking performance on grade, featuring diagnostic capabilities with alarm and fault conditions reported back to the operator display.

The integrated Retarder Control System (iRCS) combines both the control and power functions into a single unit. The innovative electronic design significantly reduces the retarder's energy consumption, preserving electric circuits. The retarder is controlled via an integrated multi-function joystick controller located on the operator's right-side armrest.

Reduced shifting

The multiplication capability of the torque converter reduces the need for the operator to continually shift the transmission. This reduces operator effort and improves machine productivity.

All wheel drive (AWD)

All-wheel drive provides excellent power distribution, increases traction of the machine reducing tire slippage, improving performance, handling and manoeuvrability in tough and challenging terrain.

Front and rear axles

The front axle features front suspension as a standard fitment. The rear axle is rigidly mounted to the rear frame.

Tyres

Tyres are an integral part in a machine's ability to carry its load at higher speeds. Fitted with the larger 16:00 R20 radial tires ensures the E15 stays within the tires TKPH limits.

This allows the E15 to carry larger loads at faster speeds than conventional utility equipment.

Service brakes

Hydraulically applied brake system. Brake components are oil immersed inside the axles, protecting them from contamination. Modulated braking provides smooth deceleration for precision stopping and operator control.



Parking brake

The parking brake is a spring applied oil released "fail to safe" enclosed wet disc on all 4-wheel ends.

Brake design

With large discs and plates for reliable, adjustment free operation and performance. Oil cooled disc brakes are completely enclosed to prevent contamination and reduce maintenance.

Emergency braking

When the E15 safety system detects loss of critical drive pressure or brake pressure the operator will receive a warning and then the parking brake system will be safely applied.

Load sensing

A load sensing variable displacement pump and pressure compensating system continually monitor hydraulic power requirements, then provides power based on demand. This improves fuel economy and reduces emissions.

Other features include suction circuits, pump case-drain and steering return, filtered fan/brake pressure circuit, and closed loop hydraulic system.



FEATURE OVERVIEW

PURPOSE-BUILT AND SAFE TRANSPORT SOLUTION WITH TILT AND SLIDE CAPABILITY.

● Standard ● Optional ● Safety

RETARDER DIAL CONTROLLER

Located on the operator's arm rest

MACHINE RETRIEVAL POINTS 2x

Painted red

ROPS/FOPS CERTIFIED 3-SEAT ENCLOSED CABIN WITH AIR CONDITIONING

Superior operator comfort featuring ergonomic central driving position, air ride seats, air-cooled compartment, cupholders, and smartphone ports

LED LIGHTING

All operational lighting

EMERGENCY STOP

Located on both sides

FAST FILL FUEL INTAKE

● BEACON
Rotating amber

ENCLOSED BATTERY COMPARTMENT

AUTO LUBRICATION SYSTEM

Automatically supplies grease to all lubricating points with ground level access RHS of machine

FIRE SUPPRESSION SYSTEM

Mounted at ground level for access and includes nozzles mounted throughout the engine compartment

FIRE SUPPRESSION ACTUATION

HEAVY DUTY H-FRAME FOR ADDED STABILITY

CENTRE MACHINE RETRIEVAL POINT

Painted red

FRONT HYDRAULIC JACK LEGS

Featuring park brake interlock

MACHINE ISOLATION

4 Pole isolators located at ground level adjacent to operator's cabin

WHEEL CHOCKS 2x

TILT LOCKING MECHANISM (LOCKABLE)

EASY-TO-OPERATE WIRELESS REMOTE

Controls tilt, slide, winch, and jack leg functionality and easily accessible at ground level inside the cabin

MACHINE TIE DOWN POINTS

GROUND LEVEL ACCESS TO ALL FILTERS AND SERVICE POINTS

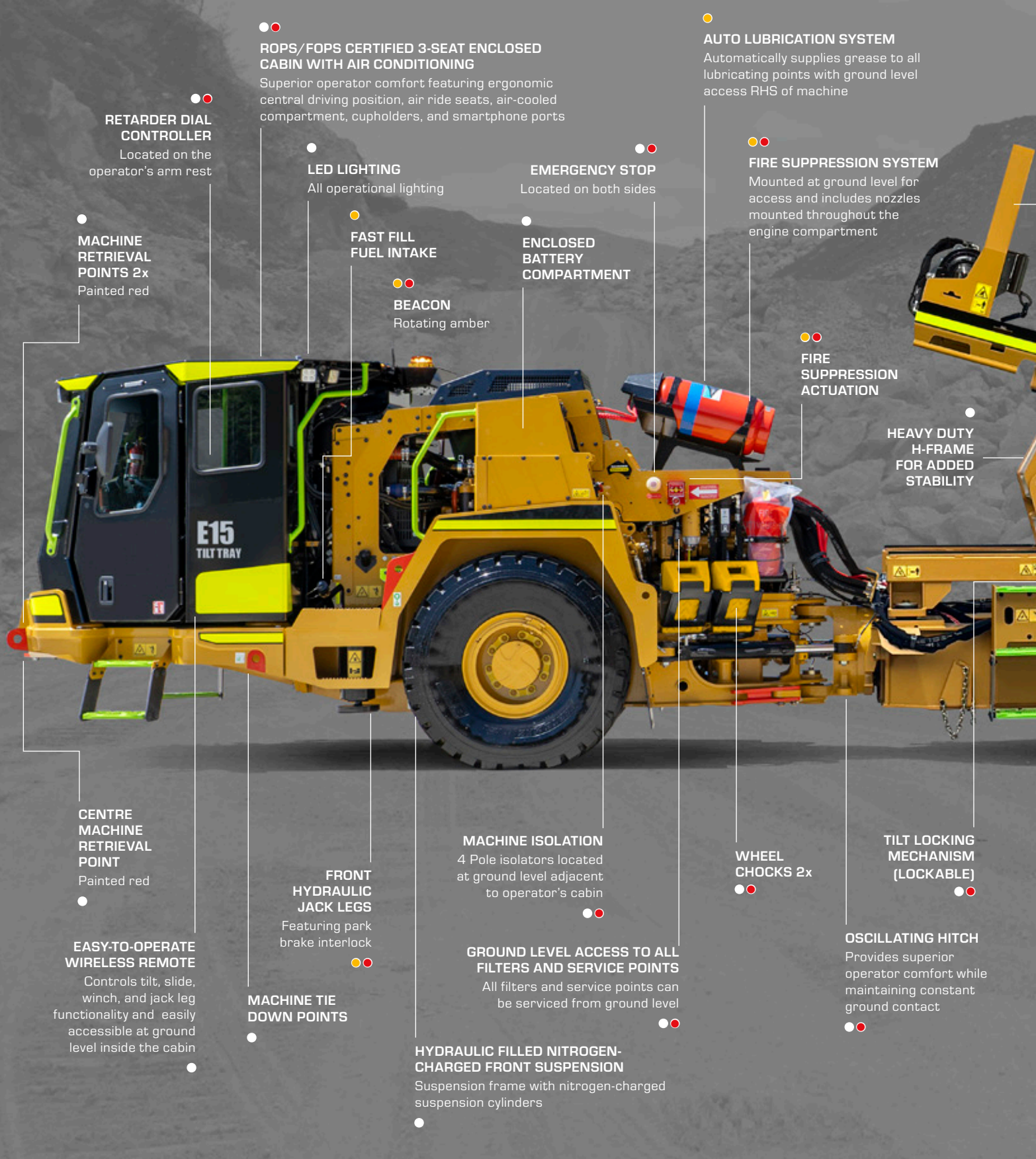
All filters and service points can be serviced from ground level

HYDRAULIC FILLED NITROGEN-CHARGED FRONT SUSPENSION

Suspension frame with nitrogen-charged suspension cylinders

OSCILLATING HITCH

Provides superior operator comfort while maintaining constant ground contact



HEAVY DUTY HEADBOARD

Featuring work lights and turning indicators

12.5-TONNE HYDRAULIC PLANETARY DRIVE WINCH

Featuring open storage on both sides of winch

4 RETRACTABLE CONTAINER LOCKS

(10-foot ISO footprint)

INBUILT DAMPENING ON TILT CYLINDERS

REMOVABLE GUARDRAIL SYSTEM

A cleverly designed drop-in guardrail system and access gates

6.875M X 2.5M HEAVY DUTY TRAY

Features maximum static payload of 13,175 kg and tilt and slide loading capacity of 8,275 kg

15° LOADING APPROACH ANGLE

Transports refuge containers, parts, components, equipment, and maintenance personnel

MULTIPLE TIE DOWN POINTS

Includes a lashing rail and provision for various ratchet style load binders (optional)

JACK LEG WARNING LIGHTS

HANDWASH STATION

ELPHINSTONE

LARGE OPEN ONBOARD STORAGE COMPARTMENTS

Positioned on both sides of the deck at ground level for easy access

**3-PIECE WHEEL RIMS
16:00 R20 TYRES**

REMOTE MOUNTED BRAKE BLEED VALVE

(Maintenance only)

REAR HYDRAULIC JACK LEGS

SLIDE LOCKING MECHANISM (LOCKABLE)

HEAVY DUTY REINFORCED DECK LIP

REAR VIEW CAMERA

**FRONT ACCESS SYSTEM
RHS AND LHS**

Includes heavy grip steps accompanied by high-visibility removable handrails stored away in onboard compartments

ENCLOSED MANUAL PGV VALVE

(Maintenance only)

**REAR ACCESS SYSTEM
RH AND LH**

Includes heavy grip steps accompanied by high-visibility removable handrails stored away in onboard compartments



GROUND LEVEL ACCESS REDUCES DOWNTIME.

Ground-level serviceability

All service points are conveniently located at ground level for servicing. Downtime during maintenance is reduced markedly on the E15 due to clever engineering and design features, incorporated with service personnel in mind.

Quick change air filters and 500-hour oil service intervals reduce downtime and keep machines in operation longer. A centralised onboard service centre includes fast fill, evacuation, and fluid sample points for analysis.

Standard high-visibility green steps and handrails enhance 3-point contact for safe and easy access to the cab, service platform and operation areas.

Machine Commonality

The Caterpillar C7.1 engine is common to both the E10 and E15 range of underground support vehicles.

The component commonality between the E10, E15 and many other Cat® applications, provides the highest level of reliability and durability, as well as superior parts availability worldwide through Elphinstone and the Cat® Dealer Network.

These factors and more contribute to a reduction in the total cost of operation (TCO), part stocking, and simplified maintenance and operation of the machine.

Tray maintenance

The tray assembly is modular allowing for individual part replacement. Tray tilt and tray slide locking mechanisms keep service and maintenance teams safe.

Electrical system

The 24V electrical system delivers a reliable electrical capacity for engine starting and additional lighting. Wiring circuits are colour coded and numbered for easy diagnosis and repair. All circuits are protected by circuit breakers.

Wiring is double insulated with sealed electrical connectors to prevent moisture and dirt access. Harnesses are covered with fire resistant material for additional protection.

On-board diagnostic systems

The monitoring system continuously checks all critical machine functions and components and helps locate faults quickly for faster repair.

Hitch hoses

- » The pilot hoses, pressure line and load sense lines have all been routed above the hitch and bulk-headed for easy hose replacement and fast service.
- » Spin-on oil filters.
- » Spin-on fuel and engine oil filters shorten downtime.
- » Electronic transfer pump eliminates the need to manually prime the fuel system.



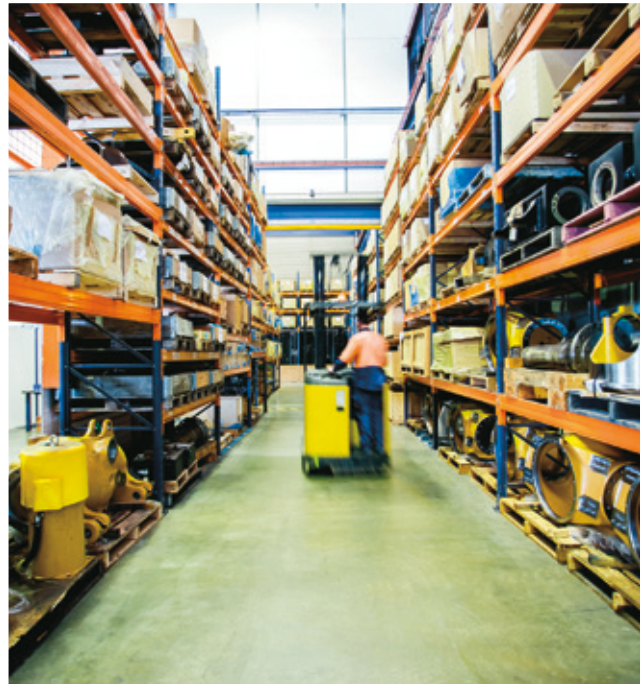
CUSTOMER SUPPORT

WHEN UPTIME REALLY COUNTS.

Renowned Cat dealer support

From helping you choose the right machine to financing and ongoing support, your Cat dealer provides the best in sales and service.

- » Manage your costs with preventive maintenance programs like SOS™ fluids analysis, coolant sampling.
- » Stay productive with best-in-class parts availability.
- » Our Cat dealer can also help you boost efficiency with operator training.
- » When it's time for component replacement, your Cat® dealer can help you save even more. Genuine Cat® remanufactured parts carry the same warranty and reliability as new products at savings of 40 to 70 percent for powertrain and hydraulic components.
- » Technical training and maintenance planning are also part of the Dealer offerings.
- » Would you like the dealer to do more? Programs such as Customer Service Agreements (CSA), to a full maintenance and repair contract are available.
- » The E15 Tilt Tray contains >75% Genuine Cat® Parts.



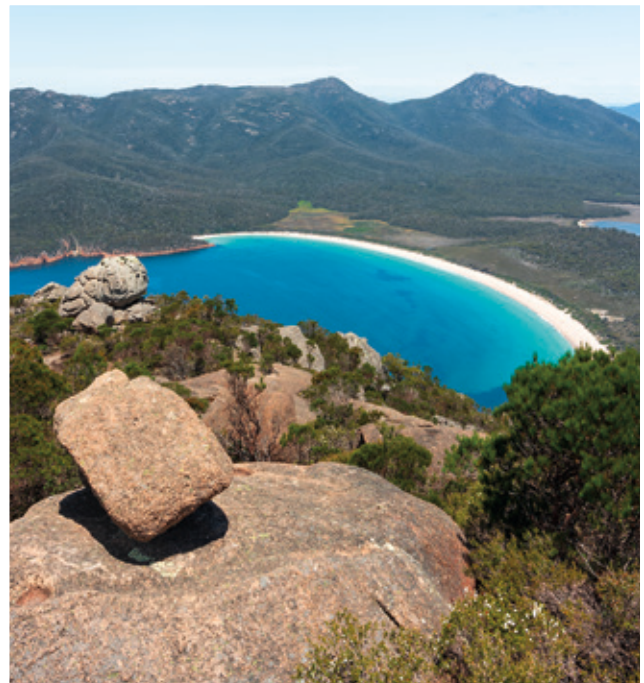
FUTURE SUSTAINABILITY

THINKING INTO THE FUTURE.

Elphinstone machines are produced in Tasmania, Australia where our facilities operate on 100% renewable energy.

Sustainable waste and cost management

- » Integrated machine systems and technologies improve productivity for greater accuracy, lower fuel use and reduce machine wear.
- » Replaceable wear parts save maintenance time and cost and extend major component life.
- » Ecology drains help make draining fluids more convenient and help prevent spills.
- » Major components are built to be rebuilt, eliminating waste and saving customers money by giving the machine and/or major components a second – and even third life rebuilds.
- » A variety of safety features help safeguard operators and others on the job.





TECHNICAL SPECIFICATIONS

Engine

| | | | | |
|--------------------------|---------------------|---------------------|-------------------------|---------------------|
| Engine Tier | Tier 3 - Standard | | Tier 4 Final (Optional) | |
| Engine Model | Cat C7.1 ACERT (TA) | | Cat C7.1 ACERT (TA) | |
| Gross Power SAE J1995 | 168 kW | 225 hp | 151 kW | 202 hp |
| Displacement | 7.0131 L | 428 in ³ | 7.0131 L | 428 in ³ |
| Bore | 105 mm | 4.1 in | 105 mm | 4.1 in |
| Stroke | 135 mm | 5.3 in | 135 mm | 5.3 in |
| Number of Cylinders | 6 | | 6 | |
| Max Torque @ Rated Speed | 1028 Nm @ 1400 rpm | | 870 Nm @ 1400 rpm | |
| Derating Altitude | 3000 m | 9843 ft | 3000 m | 9843 ft |
| Emission Certification | EPA Tier 3 | | EPA Tier 4 Final | |
| Alternator | 150 amp | | 150 amp | |
| Electrical System | 24 V | | 24 V | |
| Battery - Quantity | 2 | | 2 | |
| Battery - Volts | 12 V | | 12 V | |
| Battery - Capacity | 1000CCA | | 1000CCA | |
| Starting System | Direct Electric | | Direct Electric | |

- Power ratings apply at 2200 rpm when tested under the specified standard conditions.
- Based on standard air conditions of 25° C (77° F) and 99 kPa (29.32 in Hg) dry barometer. Used 35° API gravity fuel having an LHV of 42,780 kJ/kg (18,390 BTU/lb) when used at 30° C (86 F) [ref. A fuel density of 838.9 g/L (7.001 lb/gal)].

Powertrain

| | | |
|------------------------------|--|----------|
| Travel Speed - Fwd. 1st | 6.2 km/h | 3.9 mph |
| Travel Speed - Fwd. 2nd | 10.2 km/h | 6.3 mph |
| Travel Speed - Fwd. 3rd | 16.4 km/h | 10.2 mph |
| Travel Speed - Fwd. 4th | 21.9 km/h | 13.6 mph |
| Travel Speed - Fwd. 5th | 35.1 km/h | 21.8 mph |
| Travel Speed - Rev. 1st | 6.2 km/h | 3.9 mph |
| Travel Speed - Rev. 2nd | 10.2 km/h | 6.3 mph |
| Travel Speed - Rev. 3rd | 21.9 km/h | 13.6 mph |
| Torque Converter Type | Lock-up clutch | |
| Transmission | 5 fwd / 3 rev countershaft powershift | |
| Steering, Frame Articulation | 42.5 degrees | |
| Brakes - Service Type | Hydraulic applied inboard WET disc enclosed | |
| Brakes - Parking Type | Internal Spring Applied Hydraulically Released wheel ends (SAHR) | |
| Tyres | 16.00 R20 | |

Service Refill

| | | |
|--|--------|----------|
| Fuel Tank | 340 L | 89.8 gal |
| Cooling System | 50 L | 13.2 gal |
| Differential, Final Drive - F | 18.5 L | 4.9 gal |
| Differential, Final Drive - R | 20.5 L | 5.4 gal |
| Engine Oil | 13.5 L | 3.6 gal |
| Transmission, Torque Converter | 31 L | 8.2 gal |
| Hydraulic Tank | 150 L | 39.6 gal |
| Diesel Exhaust Fluid (DEF) (Tier 4 Final Only) | 16 L | 4.2 gal |

Speed on Grade

Cat C7.1 ACERT, 168kW Tier 3

| Grade | Vehicle Speed (km/h) | | | | |
|-----------------------------|----------------------|---------|---------|---------|---------|
| | 1st Fwd | 2nd Fwd | 3rd Fwd | 4th Fwd | 5th Fwd |
| 1:7 (14%) Empty (22,685 kg) | 6.2 | 10.2 | 14.9 | - | - |
| 1:7 (14%) GVM (35,860 kg) | 6.2 | 9.7 | - | - | - |

Cat C7.1 ACERT, 151kW Tier 4 Final (High Power)

| Grade | Vehicle Speed (km/h) | | | | |
|-----------------------------|----------------------|---------|---------|---------|---------|
| | 1st Fwd | 2nd Fwd | 3rd Fwd | 4th Fwd | 5th Fwd |
| 1:7 (14%) Empty (22,685 kg) | 6.2 | 10.2 | 13.4 | - | - |
| 1:7 (14%) GVM (35,860 kg) | 6.2 | 8.4 | - | - | - |

*Note: 2% rolling resistance

Weights

| | | |
|---------------------------------------|-----------|-------------|
| Gross Vehicle Weight (GVM) | 35,860 kg | 79057.8 lb |
| Tare Weight | 22,685 kg | 50,011.9 lb |
| Hydraulic Winch Capacity | 12,500 kg | 27,557.8 lb |
| Maximum Payload | 13,175 kg | 29,045.9 lb |
| Maximum Deck Uniform Distributed Load | 11,195 kg | 24,680.8 lb |
| Maximum Payload Using Slide Function | 8,275 kg | 18,243.3 lb |

*Tare weight includes one operator and a full tank of fuel.

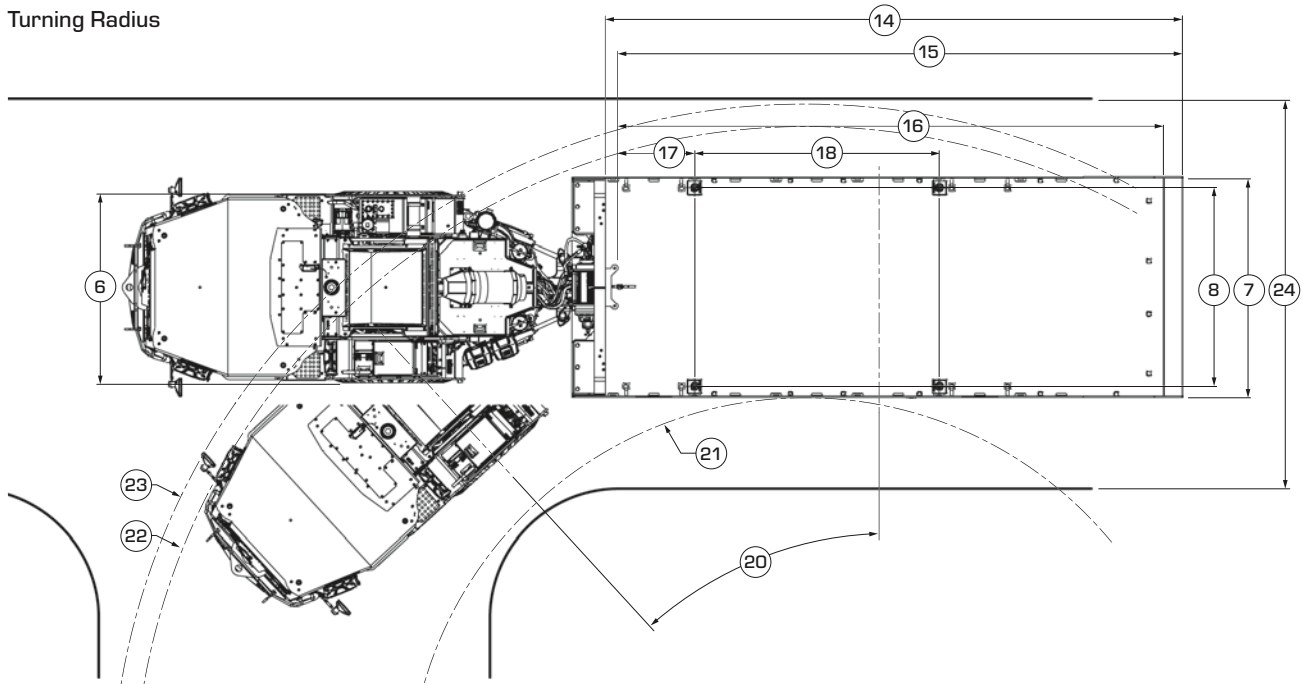
Standards

| | |
|------------|-------------------------------|
| ROPS/FOPS | ISO 3471:2008 / ISO 3449:2005 |
| Steering | ISO 5010:2007 |
| Braking | ISO 3450-2011/CSA-M424.3-M90 |
| Tow Trucks | AS 5400 |

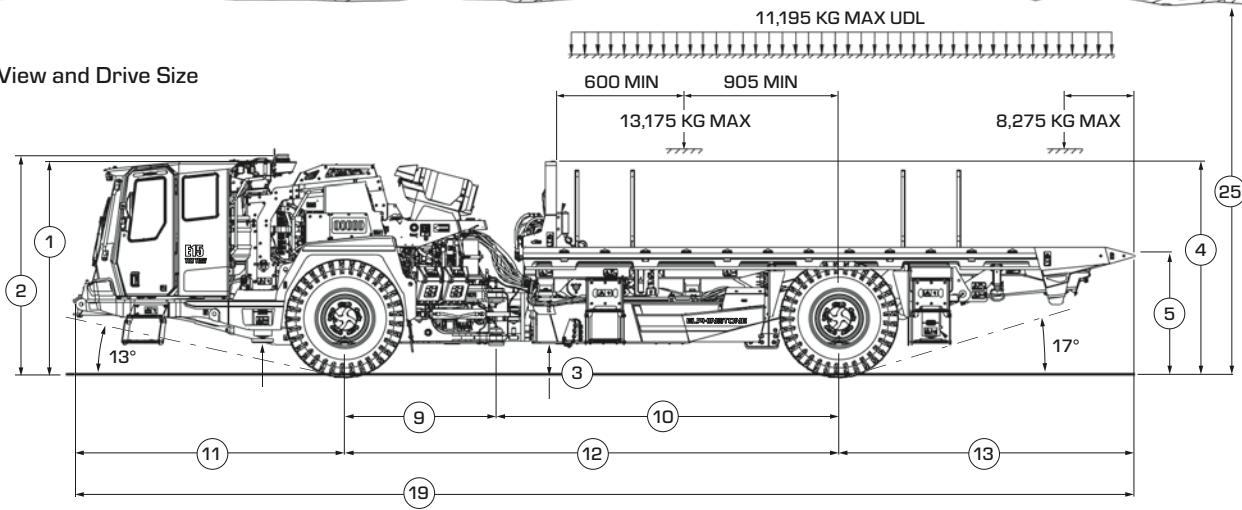


MACHINE DIMENSIONS

Turning Radius



Side View and Drive Size



Dimensions

| | | | |
|----|--------------------------------|---------|--------------|
| 1 | Height - Top of Cabin | 2425 mm | 8 ft 0.3 in |
| 2 | Height - Top of Beacon | 2490 mm | 8 ft 2.0 in |
| 3 | Height - Ground Clearance | 350 mm | 1 ft 1.8 in |
| 4 | Height - Top of Headboard | 2400 mm | 7 ft 10.5 in |
| 5 | Height - Top of Deck | 1400 mm | 4 ft 7.1 in |
| 6 | Width - Machine Front Frame | 2175 mm | 7 ft 1.6 in |
| 7 | Width - Machine Rear Frame | 2500 mm | 8 ft 2.4 in |
| 8 | Width - Between Twist Locks | 2259 mm | 7 ft 4.9 in |
| 9 | Length - Front Axle to Hitch | 1725 mm | 5 ft 7.9 in |
| 10 | Length - Hitch to Rear Axle | 3900 mm | 12 ft 9.5 in |
| 11 | Length - Front Axle to Bumper | 3090 mm | 10 ft 1.8 in |
| 12 | Length - Wheel Base | 5625 mm | 18 ft 5.6 in |
| 13 | Length - Rear Axle to Deck Lip | 3365 mm | 11 ft 0.5 in |
| 14 | Length - Overall Flat Deck | 6580 mm | 21 ft 7.1 in |

Dimensions

| | | | |
|----|-------------------------------------|----------|--------------|
| 15 | Length - Winch to Deck Lip | 6440 mm | 21 ft 1.5 in |
| 16 | Length - Flat Deck Surface | 6215 mm | 20 ft 4.7 in |
| 17 | Length - Winch to Front Twist Locks | 875 mm | 2 ft 10.4 in |
| 18 | Length - Front to Rear Twist Locks | 2787 mm | 9 ft 1.7 in |
| 19 | Length - Overall | 12075 mm | 39 ft 7.4 in |
| 20 | Articulation | 42.5 deg | |

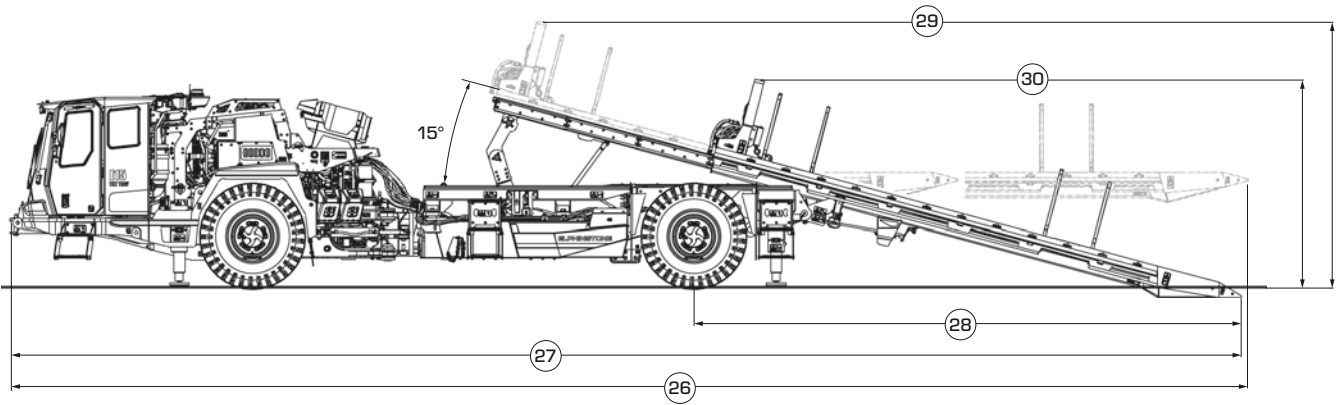
Drive Size

| | | | |
|----|-------------------------------------|---------|--------------|
| 21 | Radius - Inside Clearance | 5559 mm | 18 ft 2.9 in |
| 22 | Radius - Outside Clearance (Cabin) | 8980 mm | 29 ft 2.7 in |
| 23 | Radius - Outside Clearance (Mirror) | 9224 mm | 30 ft 3.1 in |
| 24 | Minimum Width Portal (90° corner) | 4500 mm | 14 ft 9.1 in |
| 25 | Typical Minimum Height Portal | 4500 mm | 14 ft 9.1 in |

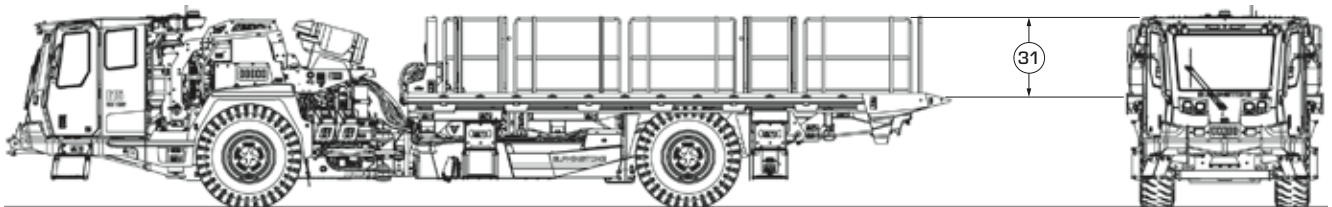


MACHINE DIMENSIONS

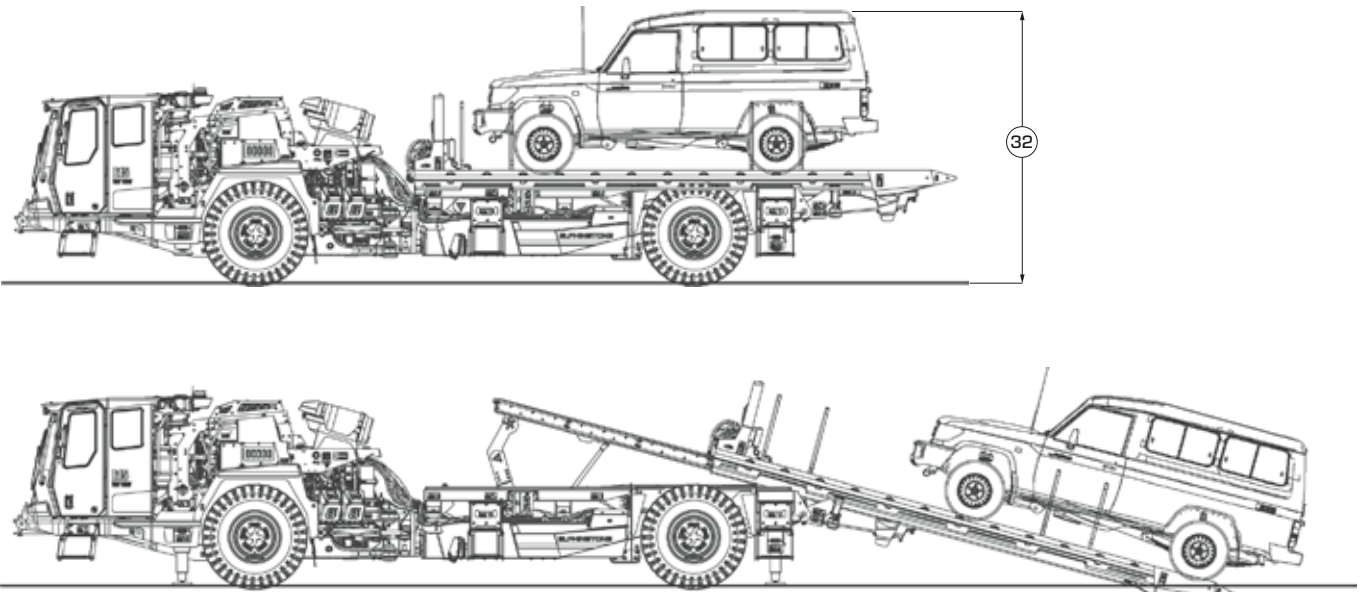
Tilt and Slide Parameters



Optional Deck Guardrail System



Loading/Unloading Toyota Landcruiser 70 Series Troop Carrier



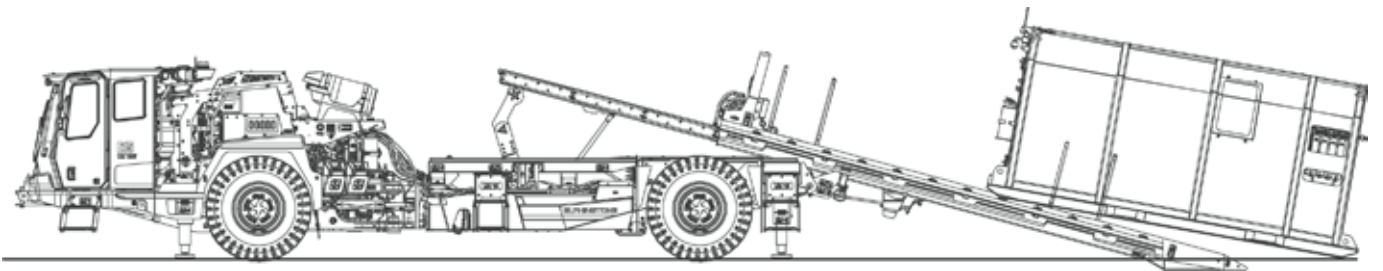
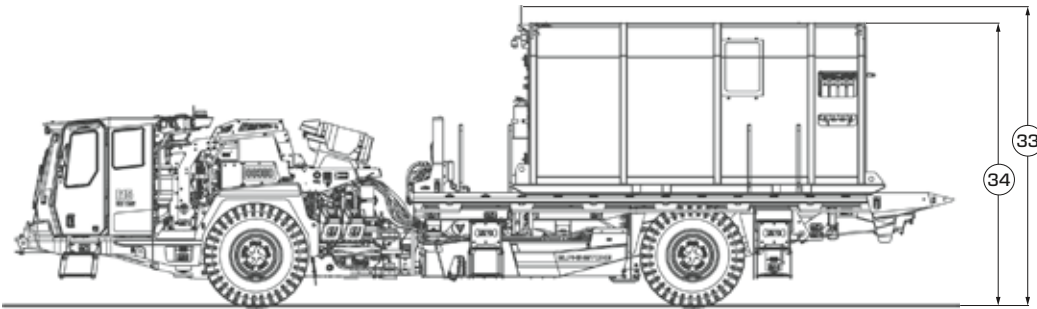
Dimensions

| | | | |
|----|--|-----------|---------------|
| 26 | Length - Fully Extended, Maximum Slide | 15,775 mm | 51 ft 9 in |
| 27 | Length - Fully Extended, Maximum Tilt and Slide | 15,695 mm | 51 ft 5.9 in |
| 28 | Length - Fully Extended, Maximum Tilt and Slide, Rear Axle to Deck Lip | 6985 mm | 22 ft 11 in |
| 29 | Height - Headboard, Maximum Tilt | 3365 mm | 11 ft 0.5 in |
| 30 | Height - Headboard, Fully Extended, Maximum Tilt and Slide | 2620 mm | 8 ft 7.1 in |
| 31 | Height - Deck Surface to Guardrail Top Edge | 1000 mm | 39.4 in |
| 32 | Height - Ground to Roof, Toyota Landcruiser 70 Series Troop Carrier | 3485 mm* | 11 ft 5.2 in* |

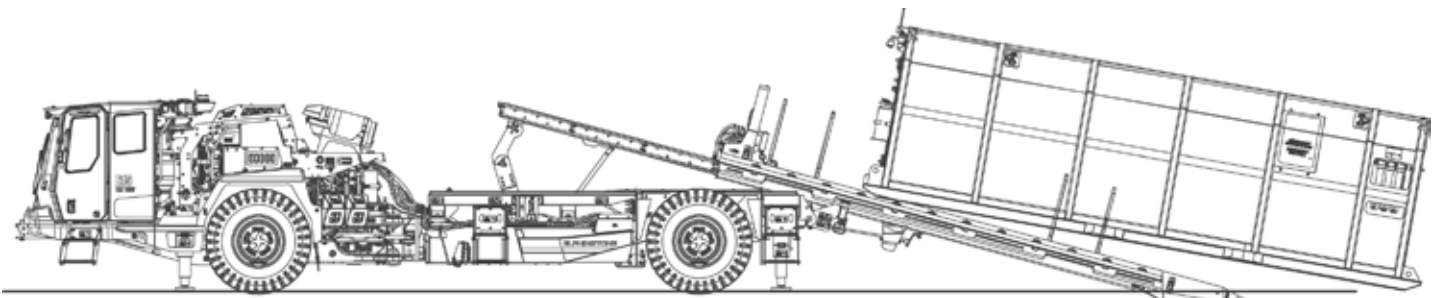
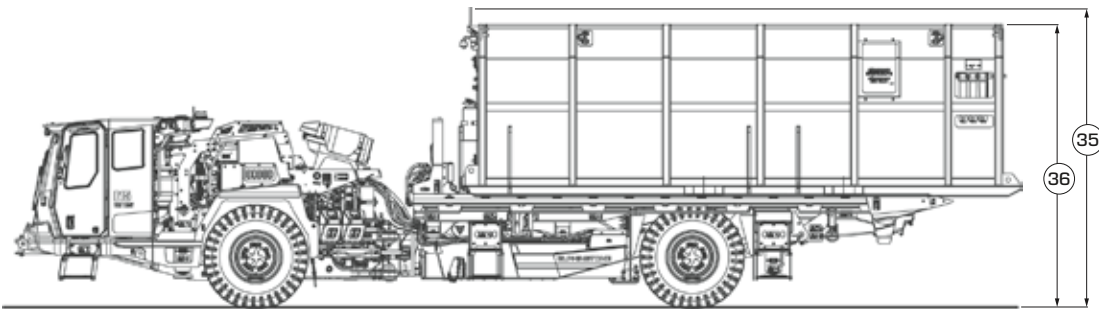
*Approximate Dimensions



Loading/Unloading MineARC 12 Person HRM Series IV Refuge Chamber



Loading/Unloading MineARC 20 Person HRM Series IV Refuge Chamber



Dimensions

| | | | |
|----|--|----------|----------------|
| 33 | Height - Overall, MineARC 12 Person HRM Series IV Refuge Chamber | 3835 mm* | 12 ft 6.9 in* |
| 34 | Height - Ground to Roof Line, MineARC 12 Person HRM Series IV Refuge Chamber | 3610 mm* | 11 ft 10.1 in* |
| 35 | Height - Overall, MineARC 20 Person HRM Series IV Refuge Chamber | 3820 mm* | 12 ft 6.4 in* |
| 36 | Height - Ground to Roof Line, MineARC 20 Person HRM Series IV Refuge Chamber | 3610 mm* | 11 ft 10.1 in* |

*Approximate Dimensions



STANDARD AND OPTIONAL EQUIPMENT

● Standard ● Optional ● Safety

Powertrain

| | |
|---|---|
| Air Cleaner, 2-Stage With Integral Pre-Cleaner | ● |
| All Wheel Drive with Lock-up Torque Converter | ● |
| Axle Breathers, Remote Mounted | ● |
| Brakes - Parking, Four Wheel Spring Applied, Enclosed Disc | ● |
| Brakes - Service, Four-Wheel Pressure Applied Enclosed Disc | ● |
| Brake - Driveline, Electromagnetic Retarder | ● |
| Driveline Slip-joint, Lubed for Life | ● |
| Engine, Cat C7.1, ACERT Technology, ATAAC - Tier 3 | ● |
| Engine, Cat C7.1, ACERT Technology, ATAAC - Tier 4 Final | ● |
| Fan, Sucker | ● |
| Filters, Engine Air, Primary/Secondary | ● |
| Filters, Fuel, Primary/Secondary | ● |
| Final Drives, Outboard Planetary | ● |
| Fuel Transfer Pump (Electric) | ● |
| Fuel Lines - Double Wire Braided | ● |
| Fuel Shutoff Valves Supply & Return | ● |
| Lock - Wheel Nut (Torque Retention) | ● |
| Muffler/Catalytic Converter (Tier 3 Only) | ● |
| Oscillating Hitch | ● |
| Radiator | ● |
| Steering, Rotary Metering Pump | ● |
| Suspension, Front Axle | ● |
| Transmission, Countershaft Powershift (5F/3R) | ● |
| Universal Joints, Lubed for Life | ● |
| Fast-Fill Systems | |
| Coolant, Engine Oil, Hydraulic Oil, Transmission Oil | ● |
| Fuel, Non-pressurised | ● |

Antifreeze

| | |
|---|---|
| Coolant, Extended Life for -35°C (-30°F) | ● |
| Coolant, Arctic Extended Life for -50°C (-58°F) | ● |

Operator Environment

| | |
|---|----|
| 300 mm (12 in) Touch Screen Operator Display | ● |
| Air-cooled Compartment (for Lunchbox Storage) | ● |
| Brake Retarder Control | ● |
| Cabin, Enclosed, FOPS/ROPS, Climate Control HVAC System | ● |
| Cabin, Pressuriser | ● |
| RESPA Recirculation Filter | ● |
| Camera/Monitor, Reversing | ●● |
| Cupholders | ● |
| Diagnostic Connector | ● |
| Engine Idle Timer | ● |
| Fire Extinguisher 1.5 kg, Hand Held Dry Chemical Powder 3A:40B:E LH and RH Side | ●● |
| Interior Lamps (LED) | ● |
| Mirrors, Rear View | ● |
| Seat Belt, 3x Retractable, Occupancy Indicator | ● |
| Seat, T-Seat, Air Suspension, Operator | ● |
| 2x Seat, T-Seat, Air Suspension, Companion | ● |
| Seat Covers, Operator and Companion | ● |
| Steering Wheel, Tilt and Telescoping | ● |
| Device Charging Ports | ● |

Operator Environment

| | |
|---|---|
| Instrumentation, Gauges | |
| Brake, Accumulator Pressure | ● |
| Brake, Oil Pressure | ● |
| Diesel Exhaust Fluid (DEF) (Tier 4 Final Only) | ● |
| Engine, Coolant Temperature | ● |
| Engine, Oil Pressure | ● |
| Fuel, Level | ● |
| Hydraulic, Oil Temperature | ● |
| Pressuriser Air Filter, High Efficiency Particulate Air | ● |
| Pressuriser Air Filter, Activated Charcoal | ● |
| Speedometer | ● |
| Steering, System Pressure | ● |
| Tachometer | ● |
| Torque Converter, Oil Temperature | ● |

| | |
|--|---|
| Instrumentation, Warning Indicators | |
| Brake, Accumulator Oil Pressure | ● |
| Brake, Fault | ● |
| Brake, Park Indicator | ● |
| Cabin, Door Open | ● |
| Electrical System | ● |
| Emergency Stop | ● |
| Engine, Coolant Temperature | ● |
| Engine, Fault | ● |
| Engine, Oil Pressure | ● |
| Hydraulic, Oil Level | ● |
| Hydraulic, Oil Temperature | ● |
| Steering, Primary | ● |
| Steering, Secondary | ● |
| Torque Converter, Oil Temperature | ● |
| Transmission, Fault | ● |
| Transmission, Oil Filter Bypass | ● |

| | |
|--|---|
| Instrumentation, Digital Data | |
| Gear and Direction | ● |
| Driveline Retarder, Braking Percentage | ● |
| Service Hour, Meter | ● |

Electrical

| | |
|--|----|
| Accessory Power Port (12 V) & (24 V) | ● |
| Alarm, Back-up | ● |
| Alternator, 150 amp | ● |
| Auxiliary Start Receptacle | ● |
| Batteries, Maintenance Free (2x1000 CCA) | ● |
| Battery Isolation, Lockable Disconnect Switch (4 Pole) | ● |
| Emergency Stop - Cabin | ●● |
| Emergency Stop, LH Side Front | ●● |
| Emergency Stop, RH Side Front | ●● |
| Horn, Warning | ● |
| Lights, Beacon (LED), Cab Mounted (Amber/Red/Blue) | ●● |
| Lights, Beacon (LED), (Amber Rotating) | ●● |
| Lights, Headlights (LED) | ● |
| Lights, Reversing | ● |
| Lights, Stop/ Tail/ Turn (LED) | ● |



STANDARD AND OPTIONAL EQUIPMENT

● Standard ● Optional ● Safety

Electrical

| | |
|---|---|
| Lights, Work, Front/Rear - Cab Mounted (LED) | ● |
| Lights, Work, Front/Rear - Cab Mounted (LED) Additional | ● |
| Product Link, Cellular | ● |
| Radio, Ready, Communications | ● |
| Radio, AM/FM/USB/Bluetooth | ● |
| Sealed Electrical Connectors | ● |
| Starter, Electric, Heavy Duty | ● |
| Starter Isolator, Lockable Disconnect Switch (4 Pole) | ● |
| Starting and Charging System, 24 V | ● |

Hydraulics

| | |
|--|---|
| Case Drain Return Screen | ● |
| Closed Center-load Sensing System | ● |
| Hydraulic Oil Cooler | ● |
| Hydraulic Oil Filling System, Filtered | ● |
| Line Filter, Full Flow Return | ● |
| Suction Screen | ● |

Deck and Work Tools

| | |
|--|-----|
| Automatic Speed Control (ASC) | ● |
| Boarding Steps, 4x, 3-Point Access, Front & Rear, Both Sides, Removeable Handrail System | ● ● |
| Container Locks, 4x, Retractable (10-ft ISO Footprint) | ● |
| Deck, 6,785 mm x 2,500 mm | ● |
| Jack Legs, Hydraulic, Front, Park Function (LH and RH Side) | ● |
| Jack Legs, Hydraulic, Rear (LH and RH Side) | ● |
| Jack Legs, Warning Lights, Flashing | ● ● |
| Manual PGV valve, Enclosed (Maintenance only) | ● |
| Restraint Systems Slots, 12x (6 each side) to Accommodate Various Ratchet Style Systems (Removable Type) | ● |
| Ratchet Load Binders, Rail-mounted, Removable | ● |
| Storage Compartments, Open, Both Sides | ● |
| Storage Compartments, Open, Both Sides, Headboard | ● |
| Tray Up Locking Mechanism, Lockable, Front | ● ● |
| Tray Slide Locking Mechanism, Lockable, Rear | ● ● |
| Winch, Hydraulic Planetary Drive, 12.5-Tonne | ● |
| Wireless Remote Control, Tilt, Slide, and Winch | ● |

Other

| | |
|--|-----|
| Brakes, Park, Onboard, Release for Machine Retrieval | ● ● |
| Film, GP Reflective, Flourescent Yellow | ● ● |
| Fire Extinguisher, 4.5 kg, Hand Held Dry Chemical Powder 4A:60B:E LH and RH Side | ● ● |
| Fire Extinguisher, 9 kg, Hand Held Dry Chemical Powder 6A:80B:E LH and RH Side | ● ● |
| Fire Suppression System, Ansul A101 Dry Chemical Powder, Engine Shutdown | ● ● |
| Fire Suppression System, Sandvik Aqueous-Film Forming Foam, Engine Shutdown | ● ● |
| Grease Lubrication System, Centralised, Manual | ● |
| Grease Lubrication System, Automatic | ● |
| Lift, Tie Down and Retrieval Points (Front and Rear) | ● |
| Mudguards | ● |
| Radiator, Cap, Manual Pressure Release | ● |
| Scheduled Oil Sampling (SOS) ports | ● |
| Steering, Frame Lock Link | ● |
| Steering, Secondary | ● |
| Tyres, Tubeless Rims (16.00 R20) | ● |
| Tyre and Rim, Spare (16.00 R20) | ● |
| Unit Number Placard | ● |
| Wheel Chocks | ● ● |

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