



E10

SCISSOR LIFT



Elphinstone Underground Support Solutions
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ELPHINSTONE

UNDERGROUND RELIABILITY



TECHNICAL SPECIFICATIONS

Engine

Engine Tier	Tier 3 - Standard		Tier 4 Final (Low Power)		Tier 4 Final (High Power)	
Engine Model	Cat C7.1 ACERT (TA)		Cat C7.1 ACERT (TA)		Cat C7.1 ACERT (TA)	
Gross Power SAE J1995	168 kW	225 hp	129 kW	173 hp	151 kW	202 hp
Displacement	7.0131 L	428 in3	7.0131 L	428 in3	7.0131 L	428 in3
Bore	105 mm	4.1 in	105 mm	4.1 in	105 mm	4.1 in
Stroke	135 mm	5.3 in	135 mm	5.3 in	135 mm	5.3 in
Number of Cylinders	6		6		6	
Max Torque @ Rated Speed	1028 Nm @ 1400 rpm		842 Nm @ 1400 rpm		870 Nm @ 1400 rpm	
Derating Altitude	3000 m	9843 ft	3000 m	9843 ft	3000 m	9843 ft
Emission Certification	EPA Tier 3		EPA Tier 4 Final		EPA Tier 4 Final	
Alternator	150 amp		150 amp		150 amp	
Electrical System	24 V		24 V		24 V	
Battery - Quantity	2		2		2	
Battery - Volts	12 V		12 V		12 V	
Battery - Capacity	1000CCA		1000CCA		1000CCA	
Starting System	Direct Electric		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 (860 F) [ref. A fuel density of 838.9 g/L (7.001 lb/gal)].

Powertrain

Travel Speed - Fwd. 1st	5.7 km/h	3.5 mph
Travel Speed - Fwd. 2nd	9.4 km/h	5.8 mph
Travel Speed - Fwd. 3rd	15.0 km/h	9.3 mph
Travel Speed - Fwd. 4th	20.0 km/h	12.4 mph
Travel Speed - Fwd. 5th	32.2 km/h	20.0 mph
Travel Speed - Rev. 1st	5.7 km/h	3.5 mph
Travel Speed - Rev. 2nd	9.4 km/h	5.8 mph
Travel Speed - Rev. 3rd	20.0 km/h	12.4 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	14.00 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	18.5 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

Weights

Gross Vehicle Weight (GVM)	23,400 kg	51,588 lb
Tare Weight	18,400 kg	40,565 lb
Scissor Lift Platform Weight Limit	5,000 kg	11,023 lb
Scissor Lift Platform Rated Capacity	4 persons, plus 4,600 kg	4 persons, plus 10,141 lbs

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

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 (18,400 kg)	5.7	9.4	15.0	18.2	-
1:7 (14%) GVM (23,400 kg)	5.7	9.4	14.4	-	-

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 (18,400 kg)	5.7	9.4	15	16.4	-
1:7 (14%) GVM (23,400 kg)	5.7	9.4	13.0	-	-

Cat C7.1 ACERT, 129kW Tier 4 Final (Low Power)

Grade	-				
	1st Fwd	2nd Fwd	3rd Fwd	4th Fwd	5th Fwd
1:7 (14%) Empty (18,400 kg)	5.7	9.4	13.7	13.7	-
1:7 (14%) GVM (23,400 kg)	5.7	9.4	10.9	-	-

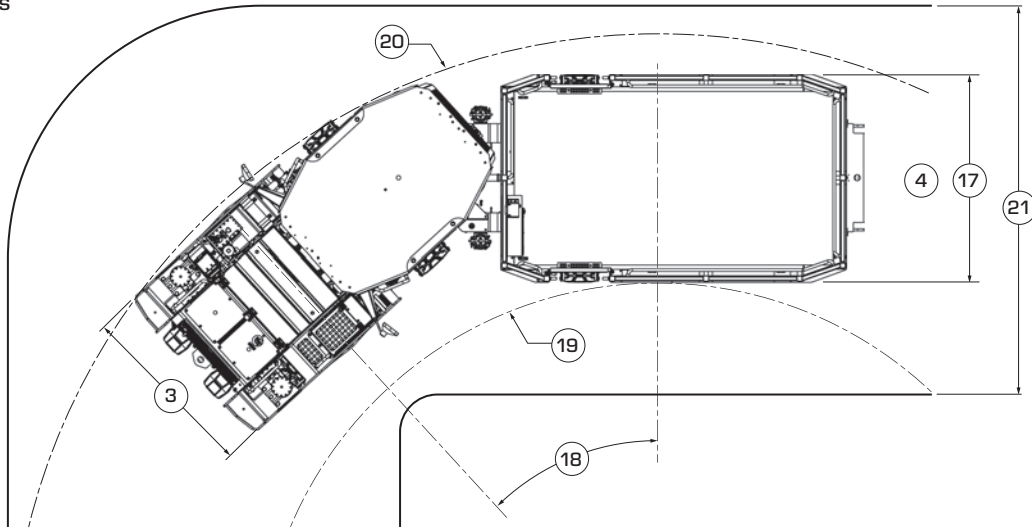
*Note: 2% rolling resistance

Standards

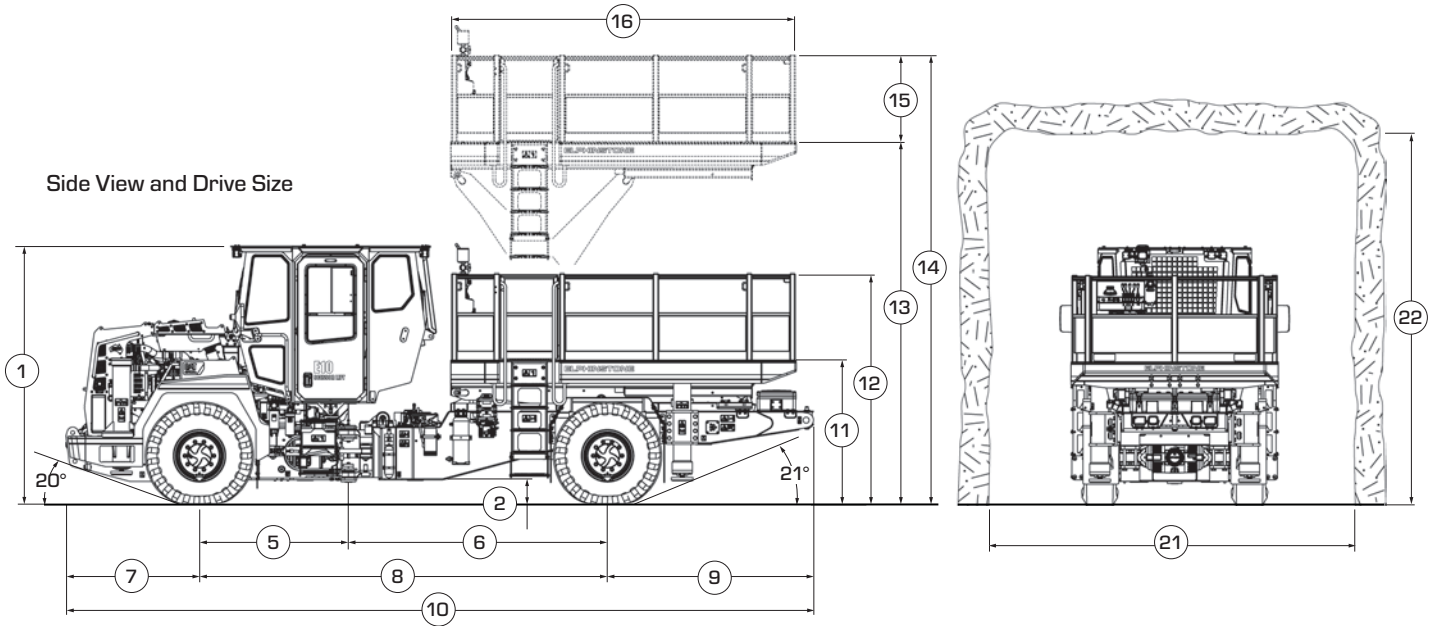
ROPS/FOPS	ISO 3471:2008 / ISO 3449:2005
Steering	ISO 5010:2007
Braking	ISO 3450-2011/CSA-M424.3-M90
EWP (Platform)	AS 1418.10:2011 (Group A, Type 1)



Turning Radius



Side View and Drive Size



Dimensions

1	Height - Top of Cabin	3000 mm	9 ft 10 in
2	Height - Ground Clearance	305 mm	0 ft 12 in
3	Width - Machine Front Frame	2100 mm	6 ft 11 in
4	Width - Machine Rear Frame	2100 mm	6 ft 11 in
5	Length - Front Axle to Hitch	1725 mm	5 ft 8 in
6	Length - Hitch to Rear Axle	3000 mm	9 ft 10 in
7	Length - Front Axle to Bumper	1545 mm	5 ft 1 in
8	Length - Wheel Base	4725 mm	15 ft 6 in
9	Length - Rear Axle to Tow Point	2385 mm	7 ft 9 in
10	Length - Overall	8655 mm	28 ft 4 in
11	Height - Ground to Platform Floor (Lowered)	1680 mm	5 ft 6 in
12	Height - Ground to Platform Rail (Lowered)	2690 mm	8 ft 9 in

Dimensions

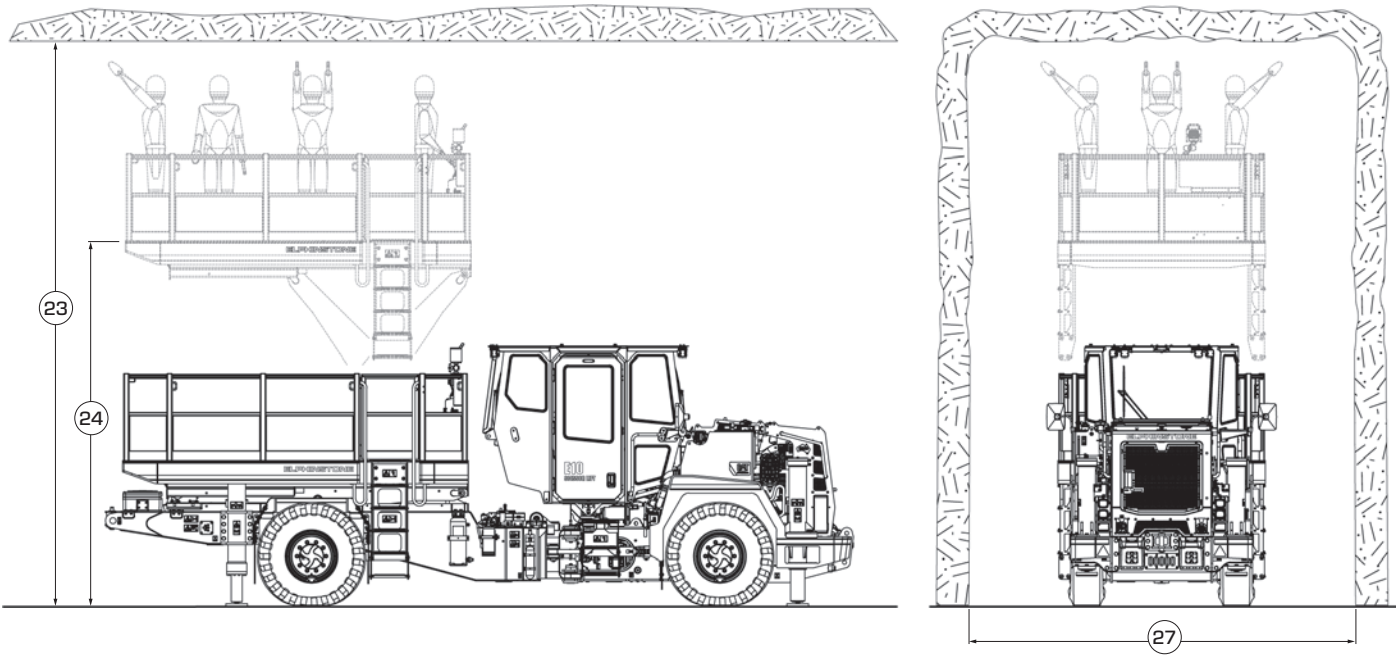
13	Height - Ground to Platform Floor (Raised)	4200 mm	13 ft 9 in
14	Height - Ground to Platform Rail (Raised)	5200 mm	17 ft
15	Height - Platform Floor to Rail	1000 mm	3 ft 3 in
16	Length - Platform	4000 mm	13 ft 1 in
17	Width - Platform	2400 mm	7 ft 10 in
18	Articulation	42.5 deg	

Drive Size

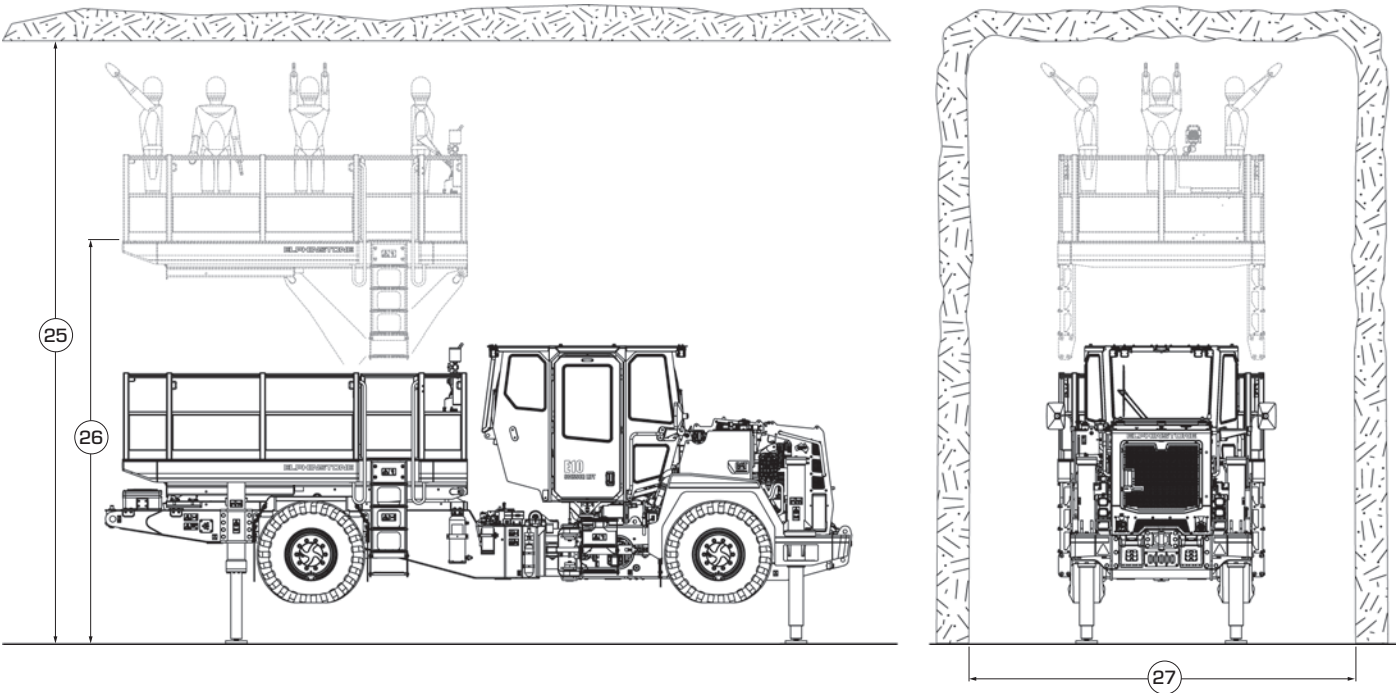
19	Radius - Inside Clearance - By design	4630 mm	15 ft 2 in
20	Radius - Outside Clearance - By design	7510 mm	28 ft 3 in
21	Minimum Width Portal [90° corner]	4500 mm	14 ft 9 in
22	Typical Mimum Height Portal	4500 mm	14 ft 9 in



Maximum Clearance EWP Fully Extended



Maximum Clearance EWP Fully Extended with Jacking Legs

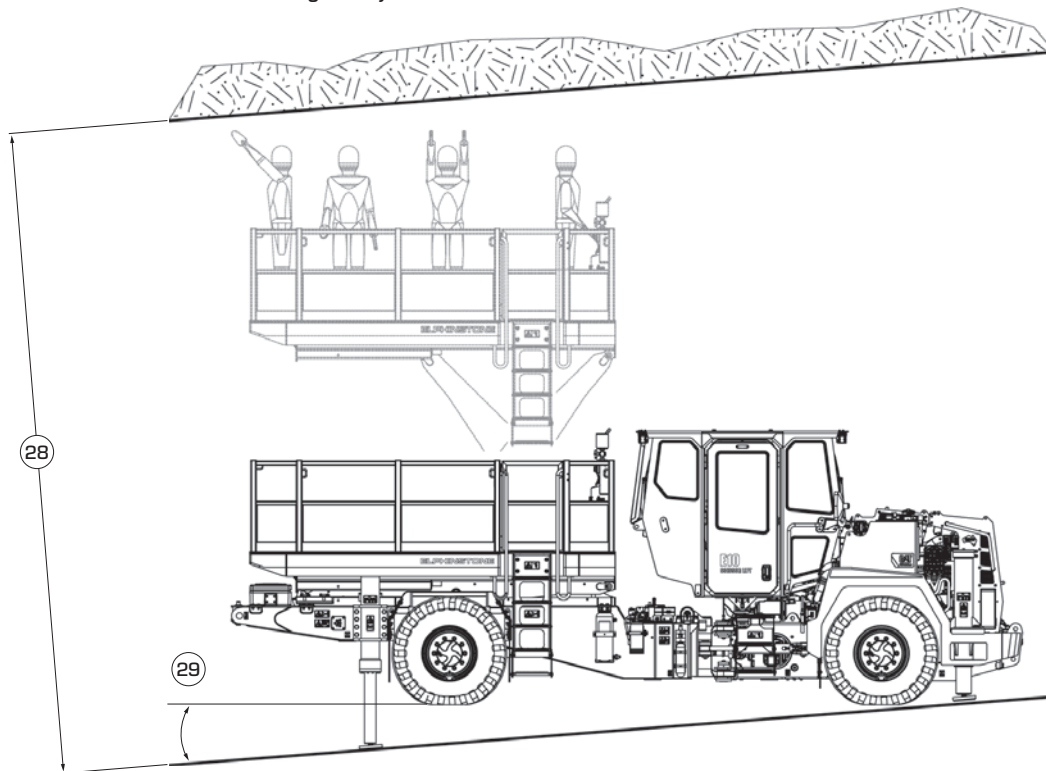


EWP Maximum Working Heights

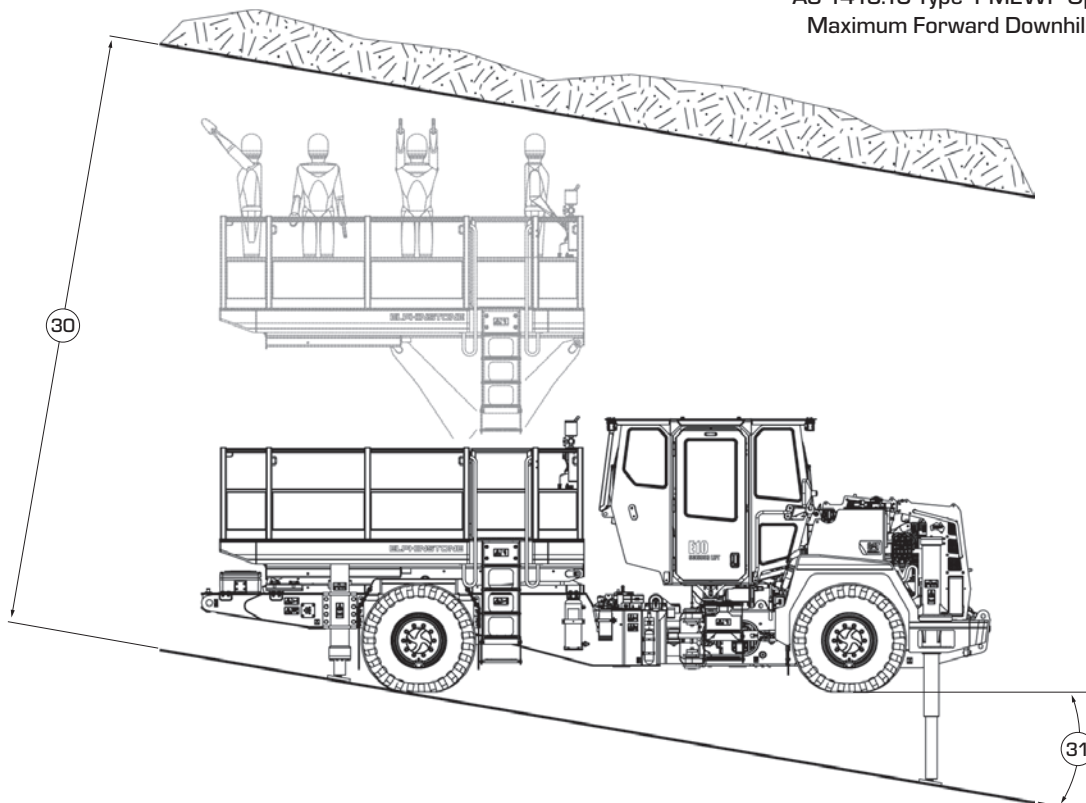
23	Height - Platform at Maximum Elevation	6500 mm	21 ft 4 in
24	Height - Platform Floor at Maximum Elevation	4200 mm	13 ft 9 in
25	Height - Platform at Maximum Elevation, Jacking Legs Extended	7000 mm	23 ft
26	Height - Platform Floor at Maximum Elevation, Jacking Legs Extended	4655 mm	15 ft 3 in
27	Minimum Width Portal (90° corner)	4500 mm	14 ft 9 in
28	Height - Maximum Rearward Downhill Levelling, Platform Fully Extended, Rear Jacking Legs Down	7000 mm	23 ft
29	Slope - Maximum Rearward	4.7°	8%
30	Height - Maximum Forward Downhill Levelling, Platform Fully Extended, Front Jacking Legs Down	6500 mm	21 ft 4 in
31	Slope - Maximum Forward	10°	17.5%



AS 1418.10 Type 1 MEWP Operational Mode
Maximum Rearward Downhill Levelling Ability



AS 1418.10 Type 1 MEWP Operational Mode
Maximum Forward Downhill Levelling Ability





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	●
Clean Emission Module (Tier 4 Final Only)	●
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	●
Brake Retarder Control	●
Cabin, Open, FOPS/ROPS	●
Cabin, Enclosed, FOPS/ROPS, Climate Control Modular 24 V HVAC System, Sliding Door Window	●
Cabin, Pressuriser	●
Cabin, Rear Window Wiper and Washer	●
Cabin, Tilt Supports	●
Cabin, Tilt Supports, Reduced Height	●
Cabin, Window Guard, Rear	●
Camera/Monitor, Reversing	●
Diagnostic Connector	●
Engine Idle Timer	●
Fire Extinguisher 2.5 kg, Hand Held Dry Chemical Powder 3A:40B:E LH Side	●
Fire Extinguisher 2.5 kg, Hand Held Dry Chemical Powder 3A:40B:E RH Side	●
Interior Lamps (LED)	●
Mirrors, Rear View	●
Occupancy Indicator, Operator	●
Seat Belt, 3x Retractable	●
Seat, T-Seat, Air Suspension, Operator	●

Operator Environment

2x Seat, T-Seat, Air Suspension, Companion	●
Seat Covers, Operator and Companion	●
Steering Wheel, Tilt and Telescoping	●
Instrumentation, Gauges	
Brake, Accumulator Pressure	●
Brake, Oil Pressure	●
Engine, Coolant Temperature	●
Engine, Oil Pressure	●
Diesel Exhaust Fluid (DEF) (Tier 4 Final Only)	●
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)	●
Camera / Monitor, Reversing	●
Diagnostic Connector	●
Emergency Stop - Cabin	●
Emergency Stop - Ground Level, LH Side Front	●
Emergency Stop, Additional, RH Side Front	●
Horn, Warning	●
Lights, Beacon (LED), Cab Mounted (Amber/Red/Blue)	●



STANDARD AND OPTIONAL EQUIPMENT

● STANDARD ● OPTIONAL ● SAFETY

Electrical

Lights, Headlights (LED)	●
Lights, Reversing	●
Lights, Stop/Tail/Turn (LED)	●
Lights, Work, Front/Rear - Cab Mounted (LED)	●
Lights, Work, Front/Rear - Cab Mounted (LED) Additional	●
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	●

Scissor Platform

Cylinders, Levelling, LH, RH Side, Front and Rear	●
Gates, Self Closing and Latching	●
Ladder, Platform Access, LH Side Front	●
Ladder, Platform Access, RH Side Front	●
Platform, Group A Type 1 - 5000 kg	●
Platform lock, LH and RH Side Rear	●
Mesh Sections	●
Storage, Toolbox	●
Work Lights, LED, Flood	●
Scissor Lift Control Panel	
Emergency Stop	● ●
Fingertip Control, Levelling, Platform and Cylinders	●
Fire Suppression, Actuator	● ●
Horn	●
Indicators, Level	●
Light, Fault, Red	● ●
Light, Interlock, Amber	●
Light, Operation, Green	●
Power Outlets, 12 and 24 Volt	●
Pump, Manual Lowering, Emergency Platform	●
Switch, Deadman	● ●
Switch, Flood Light	●
Switch, Machine Start / Stop	●
Operator Display	
Gauge, Machine Inclination, Machine Roll	●
Gauge, Machine Inclination, Machine Pitch	●
Indicator, Ground Control Station Active, Flashing, Green	●
Indicator, Lock, Steering (Red Unlocked, Green Locked)	●
Indicator, Levelling Cylinder, Grounded/Ungrounded, Green	●
Indicator, Levelling Cylinder Load (Flash Red on Overloaded)	●
Indicator, Oscillation Angle	●
Indicator, Oil Pressure, Cylinder Rod	●
Indicator, Oil Pressure, Cylinder Head	●
Indicator, Oil Pressure, Levelling Cylinder	●
Indicator, Platform Control Station Active, Flashing, Green	●
Indicator, Platform Height, Graduated Scale, Flashing, Green	●

Other

Brakes, Park, Onboard, Release for Machine Retrieval	● ●
Engine, Enclosures, Hinged	●
Film, GP Reflective, Flourescent Yellow	● ●
Film, GP Reflective, Flourescent Orange	● ●
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 (14.00 R20)	●
Tyre and Rim, Spare (14.00 R20)	●
Unit Number Placard	●
Wheel Chocks	● ●

OVER 45 YEARS IN THE MINING INDUSTRY.

Elphinstone Pty Ltd is an established Caterpillar Original Equipment Manufacturer with over 45 years' experience in the mining industry. Elphinstone specialises in the design, manufacture and support of quality equipment for the global underground and surface mining industries.

The Elphinstone range of Underground Mining Support Vehicles combines practical design, the latest technology and quality manufacturing to ensure reliable performance.

The current product range includes specialised underground support vehicles, mine extraction devices, extended distance off-highway haulage trucks and water tanks customised to suit Caterpillar articulated trucks.

As an authorised Caterpillar Original Equipment Manufacturer, all Elphinstone products are sold and supported via the global Cat® dealer network.

E10 SCISSOR LIFT

For more complete information on Elphinstone products, dealer services, and industry solutions, visit www.elphinstone.com or contact your local Cat dealer.

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