



**E10**  
DELIVERY



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  |

### 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 (17,470 kg)                     | 5.7                  | 9.4     | 15      | 19.1    | -       |
| 1:7 (14%) GVM (28,760 kg)                       | 5.7                  | 9.4     | 11.6    | -       | -       |
| 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 (17,470 kg)                     | 5.7                  | 9.4     | 15      | 17.3    | -       |
| 1:7 (14%) GVM (28,760 kg)                       | 5.7                  | 9.4     | -       | -       | -       |
| Cat C7.1 ACERT, 129kW Tier 4 Final (Low Power)  |                      |         |         |         |         |
| Grade   | Vehicle Speed (km/h) |         |         |         |         |
|   | 1st Fwd              | 2nd Fwd | 3rd Fwd | 4th Fwd | 5th Fwd |
| 1:7 (14%) Empty (17,470 kg)                     | 5.7                  | 9.4     | 15      | -       | -       |
| 1:7 (14%) GVM (28,760 kg)                       | 5.7                  | 8.9     | -       | -       | -       |

\*Note: 2% rolling resistance

### Weights

|                                |           |             |
|--------------------------------|-----------|-------------|
| Gross Vehicle Weight (GVM)     | 28,760 kg | 63,401 lb   |
| Tare Weight                    | 17,470 kg | 38,513 lb   |
| HIAB Crane Rated Lift Capacity | 8.8 TM    |             |
| Maximum Payload                | 11,130 kg | 24,537.5 lb |

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

### Standards

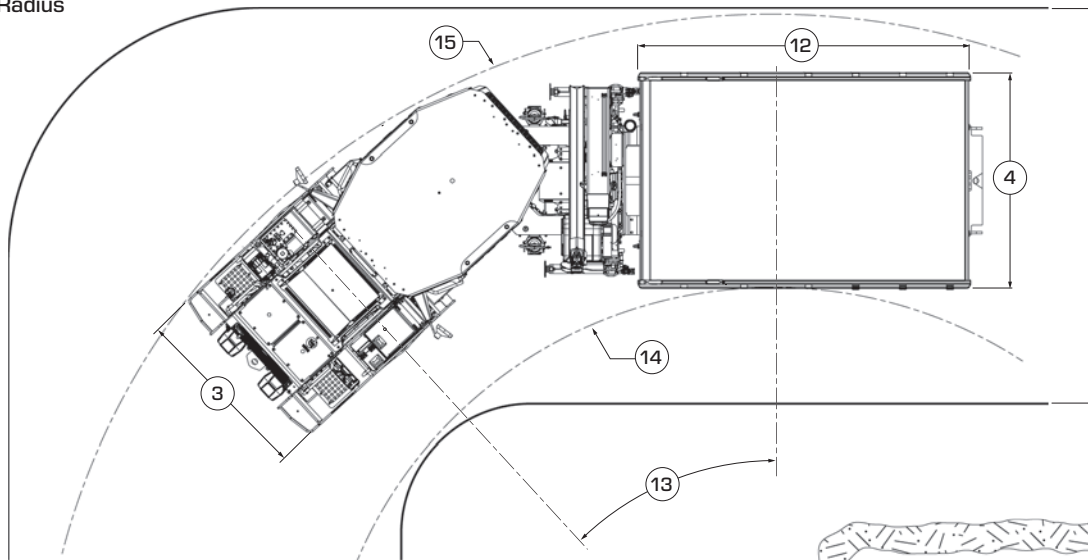
|            |                               |
|------------|-------------------------------|
| ROPS/FOPS  | ISO 3471:2008 / ISO 3449:2005 |
| Steering   | ISO 5010:2007                 |
| Braking    | ISO 3450-2011/CSA-M424.3-M90  |
| HIAB Crane | AS 1418.11-2014               |



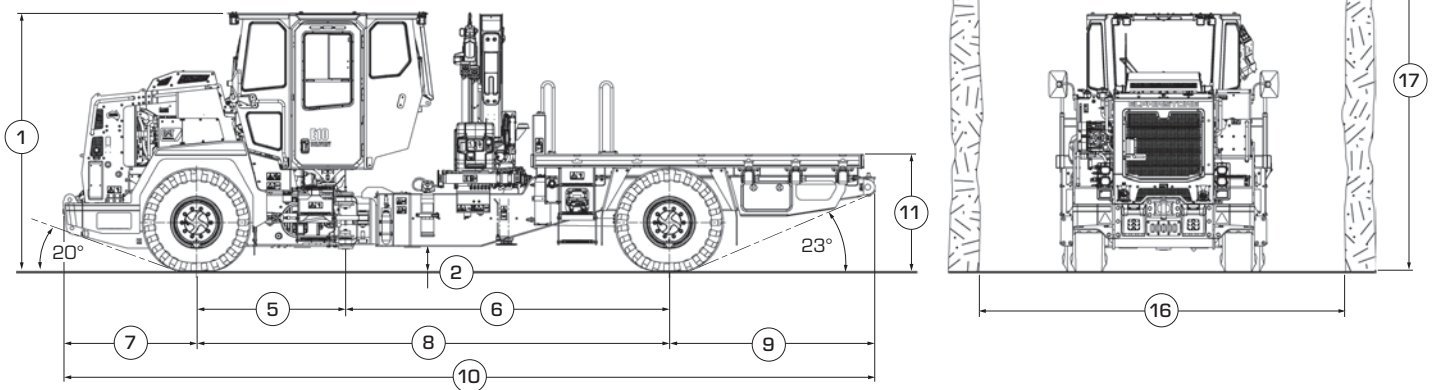


## MACHINE DIMENSIONS

Turning Radius



Side View and Drive Size



### Dimensions

|    |                                 |          |               |
|----|---------------------------------|----------|---------------|
| 1  | Height - Top of Cabin           | 3000 mm  | 9 ft 10.1 in  |
| 2  | Height - Ground Clearance       | 305 mm   | 1 ft          |
| 3  | Width - Machine Front Frame     | 2100 mm  | 6 ft 10.6 in  |
| 4  | Width - Machine Rear Frame      | 2490 mm  | 8 ft 2 in     |
| 5  | Length - Front Axle to Hitch    | 1725 mm  | 5 ft 7.9 in   |
| 6  | Length - Hitch to Rear Axle     | 3750 mm  | 12 ft 3.5 in  |
| 7  | Length - Front Axle to Bumper   | 1545 mm  | 5 ft 1 in     |
| 8  | Length - Wheel Base             | 5475 mm  | 17 ft 11.6 in |
| 9  | Length - Rear Axle to Tow Point | 2385 mm  | 7 ft 9 in     |
| 10 | Length - Overall                | 9405 mm  | 30 ft 10.3 in |
| 11 | Height - Ground to Deck Surface | 1365 mm  | 4 ft 5.7 in   |
| 12 | Length - Deck                   | 3685 mm  | 12 ft 1 in    |
| 13 | Articulation                    | 42.5 deg |               |

### Drive Size

|    |  |         |               |
|----|--|---------|---------------|
| 14 | Radius - Inside Clearance - By design  | 5400 mm | 17 ft 11.4 in |
| 15 | Radius - Outside Clearance - By design | 8600 mm | 28 ft 2.6 in  |
| 16 | Minimum Width Portal (90° corner)      | 4500 mm | 14 ft 9.1 in  |
| 17 | Typical Minimum Height Portal          | 4500 mm | 14 ft 9.1 in  |



## 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   | ● |

### Operator Environment

|  |   |
|--|---|
| Seat, T-Seat, Air Suspension, Operator                         | ● |
| 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  | ● |
| 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)         | ● |
| Camera / Monitor, Reversing                                    | ● |
| Diagnostic Connector   | ● |
| Emergency Stop - Cabin   | ● |
| Emergency Stop - Ground Level, LH Side Front                   | ● |
| Emergency Stop, Adjacent to Manual Crane Controls LH Side Rear | ● |
| Emergency Stop, Adjacent to RH Deck Access                     | ● |
| Emergency Crane Stop, Manual Crane Controls                    | ● |
| Emergency Crane Stop, Remote Crane Controls                    | ● |



## STANDARD AND OPTIONAL EQUIPMENT

● STANDARD ● OPTIONAL ● SAFETY

### Electrical

|   |     |
|---|-----|
| Emergency Stop, Additional, RH Side Front               | ● ● |
| Horn, Warning   | ●   |
| Lights, Beacon (LED), Cab Mounted (Amber/Red/Blue)      | ● ● |
| 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                         | ● |

### Deck and Work Tools

|   |   |
|---|---|
| 2490 mm Wide x 3685 mm Long Flat Deck   | ● |
| 4x Holes to Accommodate Eyebolt Type Tie-down Points  | ● |
| 12x slots (6 each side) to Accommodate Various Ratchet Style Restraint Systems (Removable Type) | ● |
| 3-Point Access System, Both Sides   | ● |
| Tool Box & Storage Compartments Both Sides  | ● |
| HIAB X-HIDUO Q92 B2 Telescoping Knuckle Boom Crane  | ● |
| Manual Lever Control  | ● |
| Wireless Joystick Remote Control for Crane  | ● |
| 8.8 TM Lift Capacity  | ● |

### Deck and Work Tools

|  |   |
|--|---|
| Semi Automatic Folding (Pack-Up)             | ● |
| Automatic Speed Control (ASC)                | ● |
| Pivoting & Extendable Manual Stabiliser Legs | ● |

### Other

|  |     |
|--|-----|
| Brakes, Park, Onboard, Release for Machine Retrieval                             | ● ● |
| Engine, Enclosures, Hinged (Tier 3 only)   | ●   |
| Film, GP Reflective, Fluorescent Yellow  | ● ● |
| Film, GP Reflective, Fluorescent 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 DELIVERY

For more complete information on Elphinstone products, dealer services, and industry solutions, visit [www.elphinstone.com](http://www.elphinstone.com) or contact your local Cat dealer.

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