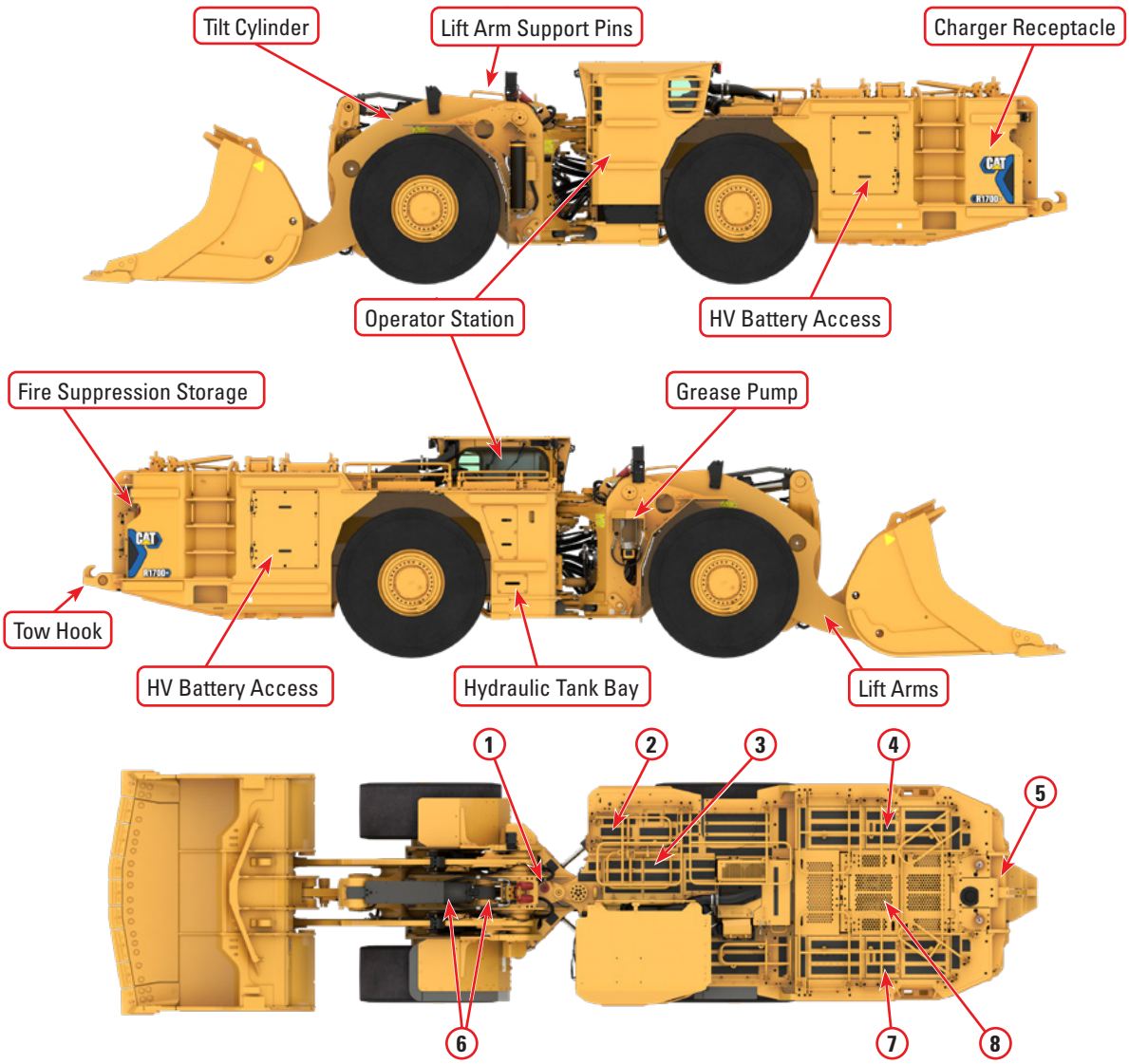
CAT® R1700 XE UNDERGROUND LOADER EMERGENCY GUIDE

INFORMATION FOR FIRST AND SECOND RESPONDERS
EMERGENCY RESPONSE GUIDE MACHINE

R1700 XE
Underground Mining Loader
Li-ion Battery

Li-ion

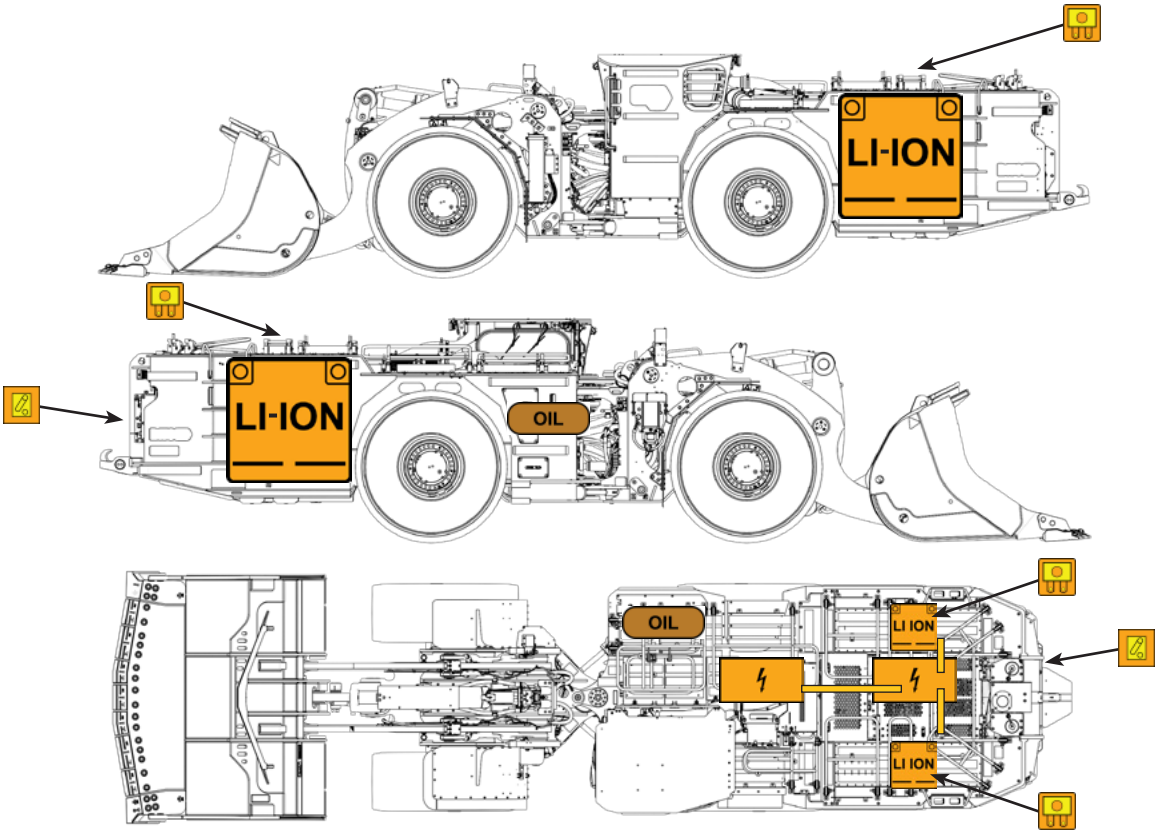


1. Implement Valve
2. Hydraulic Tank Bay
3. ECM Enclosure
4. RHS Battery Disconnects
5. Radiator/Cooling Package
6. Tilt/Lift Cylinders
7. LHS Battery Disconnects
8. 12V Battery Access

CONTENTS

Caterpillar R1700 XE

Load Haul Dumper (2021 – Present)

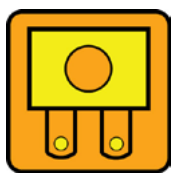


High Voltage lithium-ion battery

High voltage cable

Oil tank

High voltage component



Fuse box disabling high voltage system

Low voltage device that disconnects the high voltage

Field may be used for additional information, e.g. applicable country or region for the vehicle model.	ID Number	Version Number	Page Number

Emblems and Badging

Cat Blue trade dress, which represents battery electric and zero tailpipe carbon emissions, visible on cab door on left hand side of the machine.

Cat Trade dress for Machine Model and designation of Electric Machine, visible on left and right side at rear of machine.

IMMOBILIZATION/STABILIZATION/LIFTING

Immobilize Machine

1. Set Parking Brake (push to engage or pull to engage*).
2. Lower work tools to the ground.
3. Chock the wheels.

Lifting and Tie Downs

Lifting Point – This message is on points that are used to attach lifting devices.

Tie Down Point – This message is on points that are used to attach tie-downs.

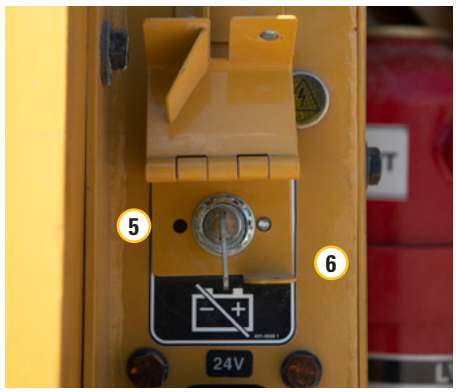
*This is customer option to be either push to engage or pull to engage.

DISABLE DIRECT HAZARDS/SAFETY REGULATIONS

Disable Machine

Primary Procedure

1. If the machine is ON, turn and hold machine key switch (1) to IMMEDIATE OFF momentary position until the battery State of Charge (SoC) reads “0%” on the display (about 5 seconds).
2. Locate machine 24V disconnect at rear of machine and move the switch to the OFF position.



Machine Key Switch Positions

1. Immediate OFF
2. OFF
3. 24V Electrical System ON
4. Machine ON/START
5. 24V battery disconnect switch OFF.
6. 24V battery disconnect switch ON.

Disable Machine

Alternative Procedure

1. If cab is inaccessible, locate the machine 24V disconnect (5 and 6 above) and move the switch to the OFF position.
2. If the machine 24V disconnect (6) is inaccessible, push the Emergency Stop switch at the left rear Side emergency stop switch.

1. If cab is inaccessible, locate the machine 24V disconnect (5 and 6 above) and move the switch to the OFF position.
2. If the machine 24V disconnect (6) is inaccessible, push the Emergency Stop switch at the right rear emergency stop switch.

Alternate Extraction

If the operation cab door is unable to be accessed, the side and rear windows can serve as alternate exits.

1. Pull the locking strip tab to remove the locking strip.
2. Exert steady inwards pressure on a corner of the window until the window separates from the operation station frame.

STORED ENERGY/LIQUIDS/GASES/SOLIDS

	High Voltage Lithium-Ion chemistry battery
	Shock/Electrocution Hazard
	Hydraulic Oil under high pressure, potential skin puncture

IN CASE OF FIRE

Fire Suppression System (if equipped)

If the fire suppression system did not automatically activate, follow these steps to manually activate.
1. Locate the fire suppression monitor in the operator cab and break visual seal to open guard door.
2. Push the red “Push to activate/alarm when Lit” button.

Release circuit immediately activates the connected fire suppression system.

Optional Manual activation
(Rear of Machine)
1. Pull ring and strike RED button on electric manual actuators located at rear of machine near each of the emergency stop switches.

Additional Information – Fire Fighting Measures

Small Fire Extinguishing Media:
Use A, B, or C type fire extinguisher, inert gas, CO_2, dry chemical powder, or foam extinguishers.

Large Fire Extinguishing Media:
Use large quantities of water for the surrounding fire to prevent propagation. If water is used on batteries in operation, caution should be taken to avoid the electrical hazard that may be present.

Special Fire Fighting Procedures:
Fire fighters should wear self-contained breathing apparatus. Use approved/certified vapor respirator to avoid breathing toxic fumes. Wear protective clothing and equipment to prevent potential body contact with electrolyte solution. It is permissible to use any class of extinguishing medium, specified above, on these batteries or their packing material. Cool exterior batteries if exposed to fire to prevent rupture.

Particular Exposure Hazards:
The battery cell can spout vaporized or decomposed electrolyte fumes with fire being heated over 100° C (212° F) or disposed in fire. Solvents within the electrolyte are flammable liquids and must be kept away from any kind of ignition source.

IN CASE OF SUBMERSION

TOWING/TRANSPORTATION/STORAGE

Towing the Machine
Consult your Caterpillar dealer for towing instructions for your machine.

Shipping the Machine
Consult your Caterpillar dealer for shipping instructions for your machine.

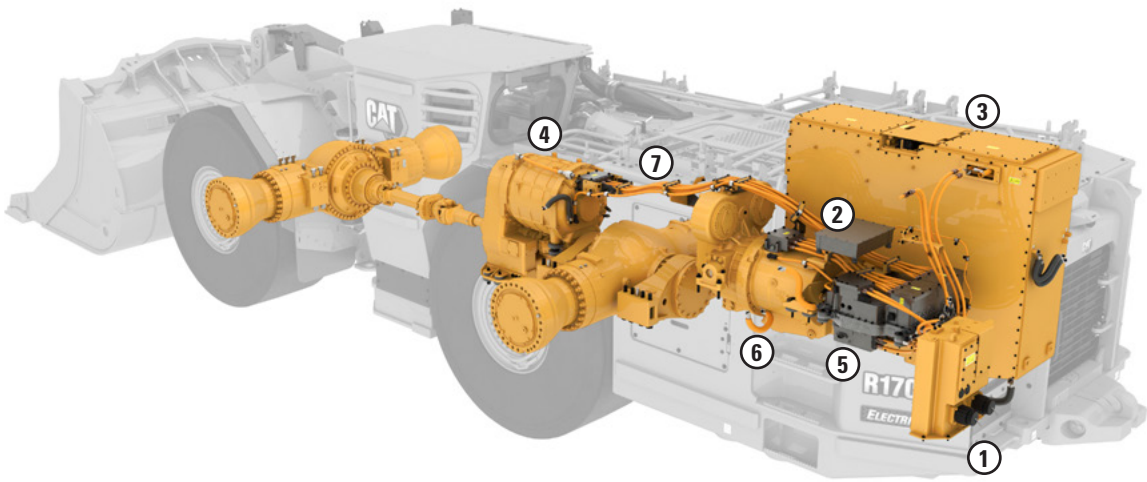
Machine Storage
Consult your Caterpillar dealer for machine storage instructions.

IMPORTANT ADDITIONAL INFORMATION

Additional Battery Information

Product Identification: SAFT (Rechargeable Lithium) Ion Cells, Modules, and Battery Systems	Respiratory protection	In the case of an incident or after an abusive use, in case of leaking or unruptured cells, use a gas mask which covers the whole face and equipped with ABEK type filters or an escape mask such as a Self-Contained Breathing Apparatus. Fire fighters should wear self-contained breathing apparatus.
	Hand protection	Use polypropylene, polyethylene, rubber, or Viton gloves when handling leaking or ruptured cells
	Eye protection	In the case of an incident or after an abusive use, in case of leaking or unruptured cells, wear safety glasses with protected side shields or a mask covering the whole face when handling leaking or ruptured cells.
Emergency Contact: Chemtrec US Services (800) 424-9300 (703) 527-3887	Other	In the event of leaking or ruptured cells, wear a rubber apron and protective clothes.

Hazardous Voltage Identification



Hazardous-Voltage components (one battery module removed for illustration purposes)

1. Charging receptacle
2. Converter
3. Battery module
4. Propulsion module
5. Inverter
6. Pump Module
7. Hazardous-voltage cable (orange)

EXPLANATION PICTOGRAMS USED

AEXQ3726
(Global)