

cruise

# cruise

## The Cruise Origin: Driverless Testing Program Guidance for First Responders

February 2024





## Document Objective

This document provides guidance to law enforcement and first responders regarding how to interact safely with Cruise Origin vehicles on the road in a variety of scenarios.<sup>1</sup> Cruise will also continue its ongoing drivered and driverless testing utilizing our Chevy Bolt-base vehicles, and First Responders should continue to refer to the guidance materials specific to those vehicles.<sup>2</sup> Additional information about Cruise’s safety program can be found at [getcruise.com/safety](https://getcruise.com/safety), including the [2022 Cruise Safety Report](#).

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<sup>1</sup> Cruise paused all driverless operations, including Origin driverless testing, in October 2023. Cruise will notify local law enforcement, first responders, and relevant agencies prior to resuming driverless testing.

<sup>2</sup> Cruise Resources for First Responders, <https://www.getcruise.com/firstresponders>.

# Guide for Law Enforcement & First Responder Safe Interaction with the Cruise Origin Autonomous Vehicles

This instructional guide is designed to help equip public safety officials with the information they need to safely interact with the Cruise driverless AV in multiple scenarios. This guide covers the following important material:

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Cruise's goal is to develop autonomous vehicles that improve road safety, and we are committed to doing so in a way that supports the crucial work of public safety officials.

If you have additional non-urgent questions regarding the Cruise Origin not provided by this guide, please check out our dedicated first responders webpage – [www.getcruise.com/firstresponders](http://www.getcruise.com/firstresponders) – or contact [firstresponders@getcruise.com](mailto:firstresponders@getcruise.com). For all time sensitive inquiries, please call **888-662-7103**.

### Cruise key contacts

**Non-urgent:** [firstresponders@getcruise.com](mailto:firstresponders@getcruise.com)

**Time sensitive inquiries:** call 888-662-7103





## Section One: The Cruise Origin Autonomous Vehicle



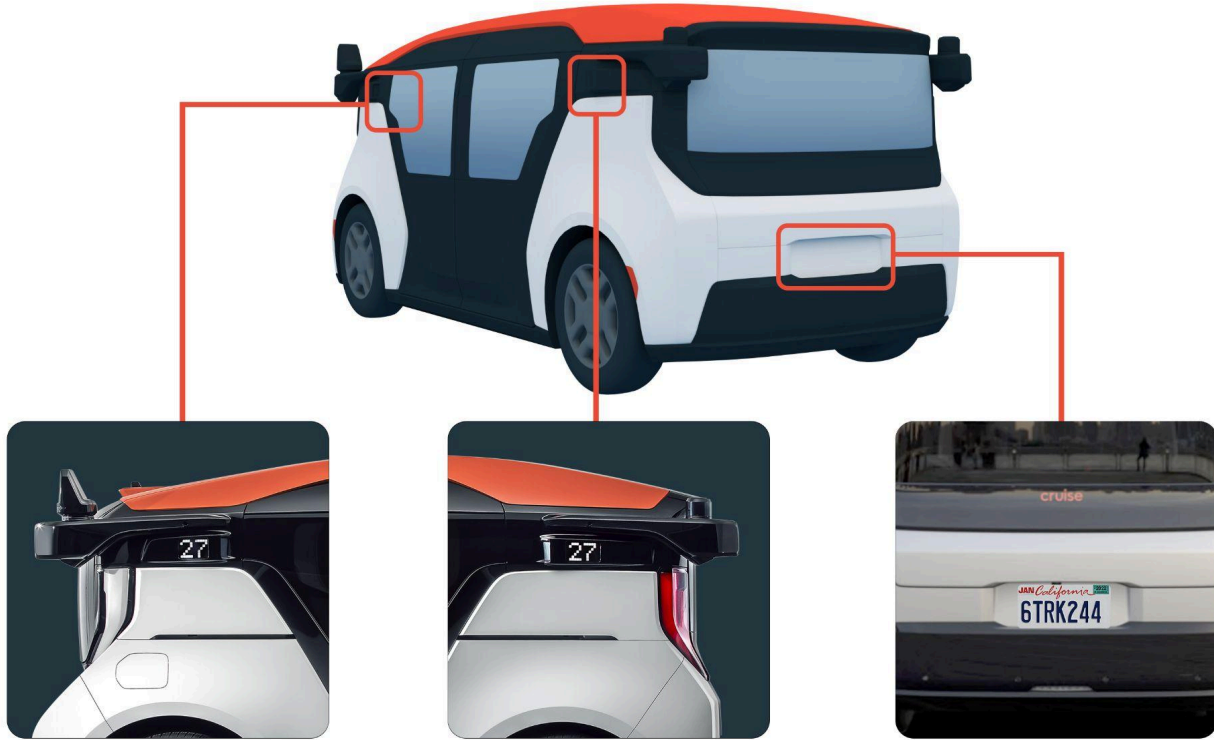
Image of a Cruise Origin self-driving, all-electric vehicle

Cruise Origins use a fully integrated self-driving system incorporated into our purpose-built Origin vehicle, developed in partnership with General Motors (GM) and Honda, and manufactured by GM. The Cruise Origin is engineered to operate safely on its own – with no driver – within a defined operating environment and under a specific set of conditions. More information about those parameters can be found in the Operational Design Domain (ODD) section of this guide.

Cruise's self-driving system is integrated into the Origin through close coordination between the hardware and software teams at both GM and Cruise.

### Identifying the Cruise Origin

Each Cruise Origin will have distinguishing features – including four external displays on the corners of the vehicle that can display characters, symbols, and other information – which users and law enforcement can use to identify vehicles in addition to the distinct alpha numeric combination displayed on each vehicle's license plate. The vehicle is approximately 15 feet long and 6.5 feet tall and wide, the size of a mid- to large-size SUV.

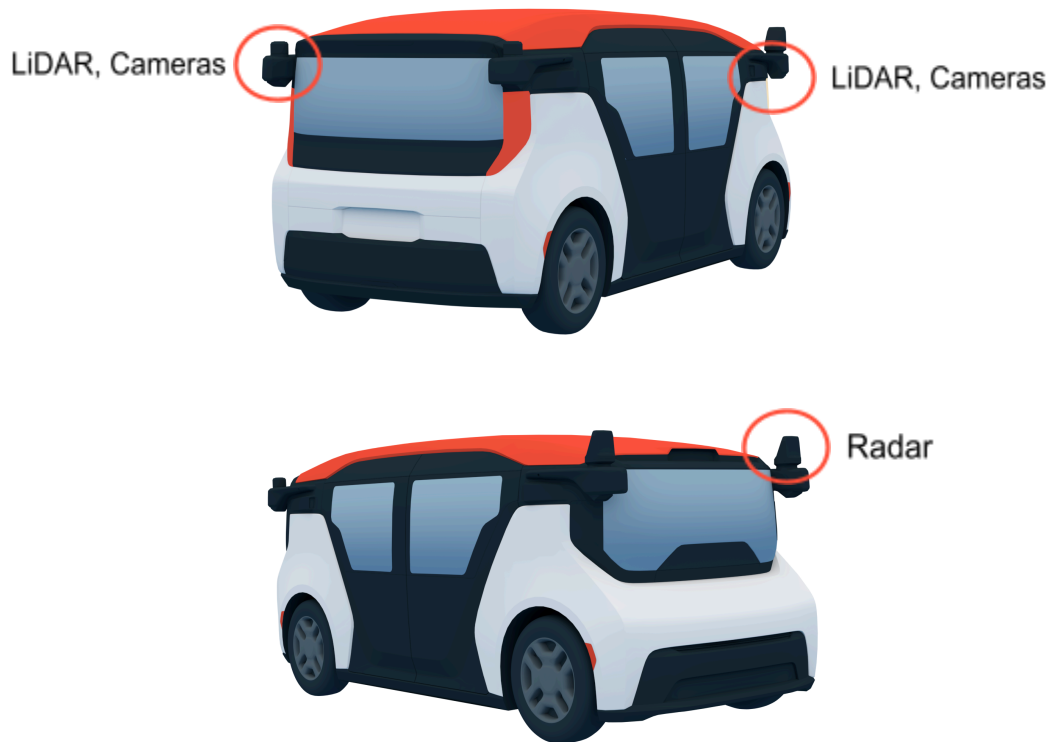


Location of the identifying information on Cruise Origin vehicles

The Cruise Origin is equipped with a sensor suite that consists, in part, of cameras, radars and LiDARs that is visible on the exterior of the Origin. Similar to the Bolt, the array of external sensors enable the Cruise Origin to gather information about its environment and inform the system's driving decisions. Inside the Origin is a computer that comprises the "brain" of the system. The computer, and its redundant back up, will not be visible or accessible to passengers on their trip. The autonomous technology works by rapidly synthesizing information collected by the sensor suite to inform driving behavior through perception (understanding the environment), prediction and planning (evaluating possible safe paths or trajectories for the vehicle given the environment), and controls (the driving maneuver). More information about how the Cruise Origin system works and is designed to be a safe driver is available in the GM Safety Report [here](#) and in our *Under the Hood* presentation.<sup>3,4</sup>

<sup>3</sup> 2018 Self-driving Safety Report, GM, <https://www.gm.com/content/dam/company/docs/us/en/gmcom/gmsafetyreport.pdf>.

<sup>4</sup> 'Under the Hood' virtual event, Cruise video (November, 2021) <https://www.youtube.com/watch?v=uJWNOK26NxQ>.



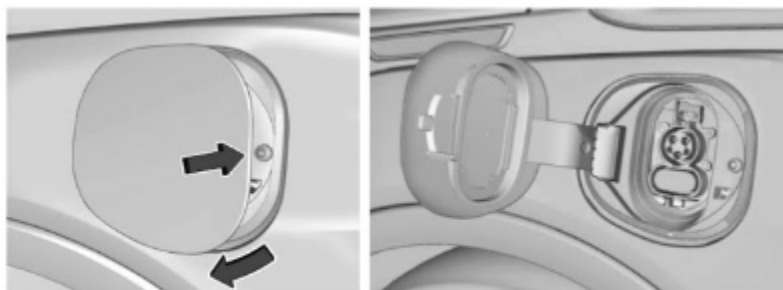
Location of the Cruise hardware sensor suite. Actual sensor locations subject to change. Image above is not meant to be a comprehensive list of sensors in the Cruise Origin suite.

### Inside the Cruise Origin

The Cruise Origin is purpose-built, designed to be fully autonomous, and does not have human-centered driving equipment, so public safety officials might encounter the vehicle with no one inside the cabin.

## Vehicle Identification Information

Each Cruise Origin is equipped with documentation that includes the vehicle registration, owner information, proof of insurance, and AV testing permit. These documents can be found inside the charge port door. Location of the charge port door and instructions for how to open it are included below.



Push the rearward edge of charge port door and release to open the door



Location of charge port door on a Cruise Origin AV





## Section Two: Communicating with the Cruise Team

### Contacting Cruise

To reach the appropriate Cruise contact, police officers and first responders should call Cruise's critical response line **888-662-7103**. Cruise's critical response line is staffed by an escalation team that is ready to respond to emergency and non-emergency events and inquiries. To ensure the high availability and resiliency of this phone number, Cruise hosts the critical response line on a verified third party platform that also serves other safety-critical services.

Once connected with Cruise, first responders will be asked to provide the following information:

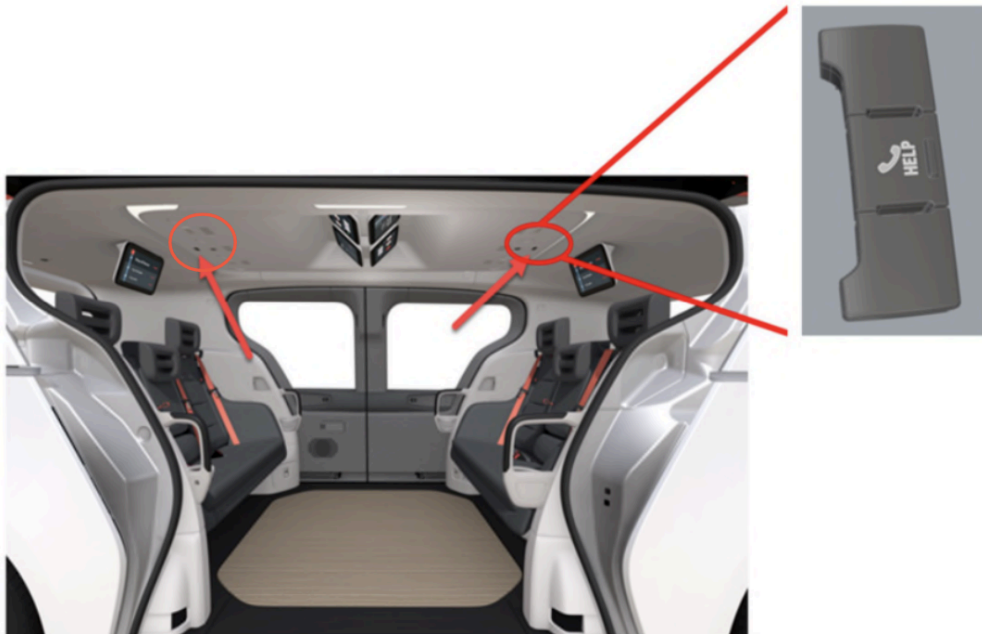
- Reason for your call
- Vehicle identification information (including the data shown on the external displays on the corners of the vehicle or the unique license plate information)
- Geographic location information

In addition to Cruise's critical response line, each Cruise Origin is equipped with a two-way audio communications link inside the vehicle that can be used for direct conversations with the appropriate remote team member depending on the situation. The communications link is accessed using one of the clearly marked help buttons inside the vehicle. These buttons appear above both the front-facing and rear-facing bench seats inside each vehicle.

If the communication link is accessed for an emergency, trained specialists from Cruise will be available to assist. Cruise response time from the two-way communications link is within seconds.

In the event of a serious collision, Cruise teams are trained to respond within seconds whether or not a two-way communication button is pressed by the passenger. Cruise is alerted to potential incidents by both automated and human review processes monitoring the vehicle at all times.

To ensure the best support possible, we advise that public safety officials call the Cruise critical response line at **888-662-7103** rather than using in-car buttons designed for occupants.



Location of customer-accessible 'Help' buttons facing each set of seats in the Cruise Origin

When police officers and first responders call the Cruise critical response line, they will be connected with Cruise team members who are specially trained to assist with issues related to the vehicle in non-emergency and emergency situations. For example, this team can provide information about unlocking the vehicle, confirm operating status, disengage the Cruise Origin from autonomous driving mode and ensure that it remains in a safe, stationary position. These Cruise team members are also trained to communicate with passengers and third parties during emergency situations.

Law enforcement and first responders can contact Cruise Remote Assistance Advisors by calling Cruise's critical response line: **888-662-7103**

## **OnStar Emergency Assistance**

Every Cruise Origin has access to OnStar functionality. OnStar can be contacted by pushing the 'Help' button inside the Cruise Origin. Pressing this button will enable passengers to be connected to a Cruise representative that can add OnStar to the call.

OnStar Emergency Advisors are available 24/7 to respond to medical emergency scenarios and can provide information to first responders before they arrive on the scene of an emergency. In addition, the Automatic Crash Response service can connect a trained Emergency Advisor to the Cruise Origin even in the event of an incident where an occupant may be unable to press the physical Help button.



## Section Three: Incidents & Emergency Scenarios

The Cruise Origin is designed to be capable of identifying and responding to emergency and law enforcement vehicles, including the capacity to identify and safely yield to an emergency vehicle with lights and sirens activated.

In this section, we provide guidance for first responders on how to safely interact with the Cruise Origin on the scene of an incident or emergency scenario. As a precaution and when circumstances allow, we ask responders to call Cruise's critical response line **888-662-7103** to reach Cruise teams before interacting with the vehicle and for additional information and support.

### Cruise Team Member Definitions

Multiple Cruise teams are available to support Cruise Origins in the event of an on-road incident or emergency. Currently, these teams include:

- **Remote Assistance** - Supports Cruise autonomous vehicles when they need help navigating their environment independently.
- **Customer Support** - Interacts with and supports passengers, law enforcement, first responders and other third parties through in-vehicle or other communications channels.
- **Field Support Representatives** - Serves as the on-scene response unit to provide direct, in-person support to passengers or to interact with third parties and public safety officials when necessary.
- **OnStar** - Dispatches First Responders to scene when there is an emergency requiring police or medical help.

### Responding to Non-Emergency Incidents

For a non-emergency event or incident, please call Cruise's critical response line **888-662-7103** where you will have the ability to connect with Cruise's Customer Support. Additionally, Remote Assistance Advisors are monitoring the AV fleet at all times, and they are available to respond to questions during driverless operation and can escalate in emergency situations. Please contact the Cruise remote support before approaching and interacting with the Cruise Origin. If you have additional non-urgent questions regarding the Cruise Origin not provided by this guide, please check out our page – [www.getcruise.com/firstresponders](http://www.getcruise.com/firstresponders) – or contact [firstresponders@getcruise.com](mailto:firstresponders@getcruise.com).

### Responding to an Emergency

Cruise experts are available 24/7 to receive help requests from the Cruise Origin – either from a passenger who pressed the help button inside the AV, automatically through the Automatic Crash Response system, or through an emergency responder who has called the critical response line. In addition, Cruise experts actively stand by to immediately respond to notifications from the AV that it may be in need of assistance.



In the event of an emergency, Cruise teams are trained and are available to provide support to passengers over the two-way audio communications link into the vehicle and to concurrently work with first responders as necessary to prioritize safety of passengers and to maximize efficiency and response times.

Cruise's experts are available on-demand to our passengers for immediate assistance. In addition, Cruise can communicate with passengers in real time via the two-way audio communications link and can further escalate to public safety and first responders as necessary.

Upon arriving at the scene, we recommend that first responders contact Cruise's critical response line by calling **888-662-7103** when possible before approaching or interacting with the Cruise Origin.

In the event of any situation that prevents an Origin from continuing autonomously, Cruise will dispatch a Field Support team to respond to the Origin on-site and can provide in-person support depending on the scenario. Cruise strategically places Field Support Representatives across its operating domain to be able to quickly arrive at a scene as needed.

### **Approaching the AV – When a Cruise Representative is Present**

If an emergency arises and Field Service Representatives are present, the Field Service Representative can ensure the following:

1. Ensure the vehicle's self-driving mode is disabled
2. Ensure the vehicle remains immobilized
3. Provide vehicle registration, insurance, and identification upon request
4. Give instructions for towing, if required

### **Approaching the Origin – When no Cruise Representative is Present**

If an incident or emergency arises, and there are no Cruise team members or Field Service Representatives already present or able to serve as a resource, first responders should:

1. Call the number **888-662-7103** to be connected to a Cruise team member and follow the verbal instructions from the Expert on how to approach the Cruise Origin
2. Receive information from the Cruise team member pertaining to current status of the Origin
3. Continue to follow instructions from the Cruise team member on how to safely interact with the Cruise Origin as necessary

Please note that in the event of an incident or emergency situation, the Cruise Origin will achieve a minimal risk condition and come to a safe and controlled stop.

## Determining Autonomous Mode

The Cruise Origin system is designed to appropriately and safely respond to its surroundings. Although we recommend connecting with a Cruise team member before taking any action, the Cruise Origin will interact safely with anyone approaching the vehicle. After being connected with the Cruise team and approaching the Cruise Origin, Cruise experts can inform the law enforcement official or first responder whether the vehicle is in autonomous mode. Screens in the vehicle will display an information screen, showing that the vehicle is not in autonomous mode and directing first responders to contact Cruise.

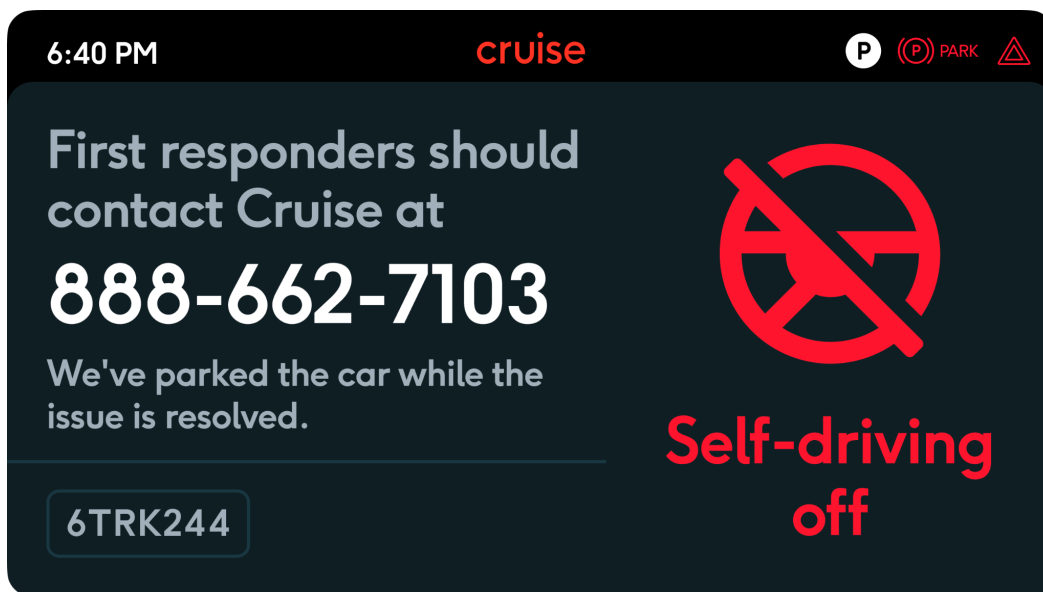


Image of the types of information shown on Cruise Origin display screens in first responder situations. Specific language and design aspects are subject to change.

## Disengaging From Autonomous Mode

Our Remote Assistance team is always available to support first responders and safely guide them through the process of interacting with a Cruise Origin. Please contact them before making any attempts to move the vehicle. Cruise can inform law enforcement officers or first responders of the mode of the Origin and can provide guidance on immobilizing the vehicle, if necessary.

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## Towing

Cruise representatives will be dispatched in the event of a disabled Origin and will facilitate AV retrieval, including towing if required. If needed, via contact information provided in the Law Enforcement Interaction Plan, Cruise can remotely instruct emergency responders on interaction with the Origin. In exigent circumstances, the Cruise Origin can be towed on a flatbed using standard wheel dollies on rear wheels. Tow-eye sockets are accessible in the front and rear bumper fascias, as shown in the diagrams below.

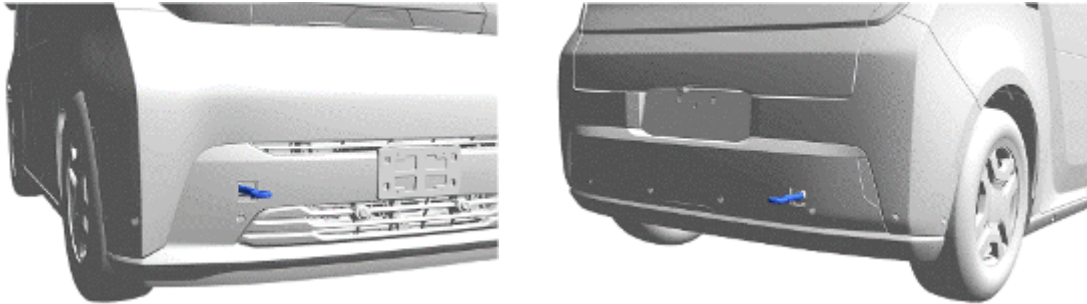


Image of the tow-eye sockets in the front and rear bumper fascias.

## Pushing

First responders should call Cruise's critical response line **888-662-7103** and Cruise will initiate vehicle retrieval. In the event of any situation that prevents an Origin from continuing autonomously, Cruise will dispatch a Field Support team to respond to the Origin on-site and can provide in-person support. Please contact Cruise Remote Assistance before making any attempts to move the vehicle.

## Providing Emergency Assistance for Electric Vehicles

All Origin vehicles are all-electric and operate on the Ultium battery platform. GM has communicated with a range of first responder and public safety organizations on the Ultium battery platform and how to interact with GM-manufactured electric vehicles. There are a few specific safety instructions that first responders should know when responding to a situation involving an EV; however, all standard operating procedures (size-up, approach, immobilize, extinguish) for first responders still apply.

More information can be found at [GM First Responder Guides](#) and the [Electric Vehicle Safety for Emergency Responders Online Training](#).

## High Voltage and Airbag Disconnect Procedures

To disconnect the high voltage battery and airbags, open the hood and follow the [Cruise Origin First Responder Quick Reference Guide](#). Cutting the first responder label shown below or both 12V battery ground cables will remove all power.

## Cruise Origin First Responder Quick Reference

First action is always to contact Cruise at 888-662-7103



Call 888-662-7103 before interacting with the vehicle and provide:

- Reason for your call
- Vehicle ID
- Geographic location



An incident expert will receive the call and can:

- Connect to the AV and disengage it
- Unlock doors to provide AV cabin access
- Provide status information about the AV
- Share field support representative ETA



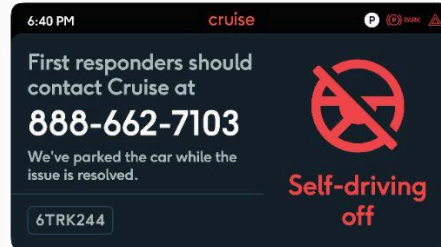
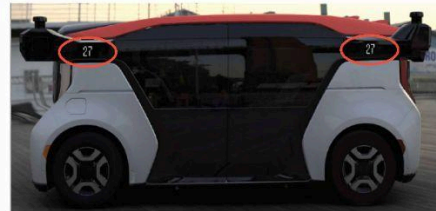
Look for the first responder display →

- Located on in-car tablets - if visible, it means:
- AV is disengaged and safe for approach
- **Field support representative is on the way**

If you do NOT see display: call 888-662-7103

Cruise AV ID can be found on:

The top corners of the vehicle



## High voltage & airbag disconnect procedure

Do not cut any orange high voltage cables or components

1

### Open the Rear Liftgate

Use the touchpad above the license plate or manually actuate the latch to the right of the plate



2

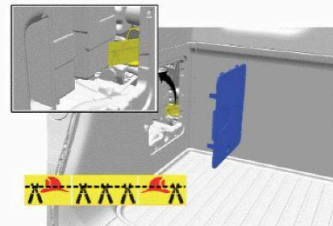
### Remove the Access Cover

Located on the left side of the compartment.

3

### Double Cut the Low-Voltage Cable

Cut on both sides of the yellow tape. Only cut 12V cables when absolutely necessary. Certain safety systems require 12V power.



4

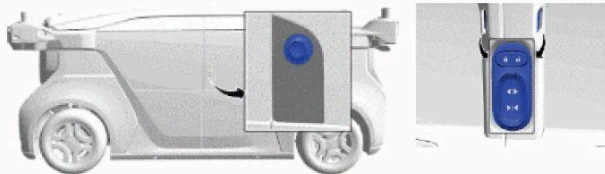
### Remove the Cut Cable Section

This will disable the airbags and high voltage. Wait at least 10 seconds for airbag reserve energy to dissipate and at least 1 minute for high-voltage energy to discharge.

## Cruise Origin First Responder Quick Reference

Do not cut any orange high voltage cables or components

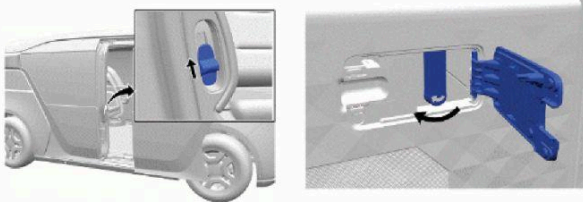
### Accessing occupants



#### Power operation of doors:

**Exterior:** Press button at center of doors

**Interior:** Each door has a button to operate doors on that side, on the center pillar of the doors.



#### Manual operation doors:

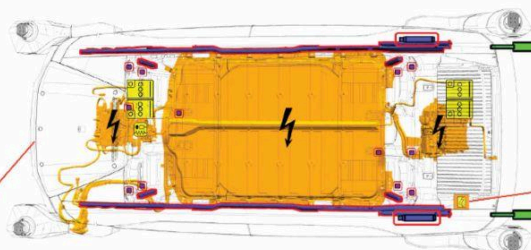
From inside the vehicle, open the spring-loaded hatch on the rear sliding door to access the manual latch handle. Rotate the rear sliding door manual latch handle rearward to unlatch and open the rear sliding door. Press upward on the front sliding door latch lever to unlatch the door and slide forward to open.

Side window glass in the Origin is laminated not tempered.

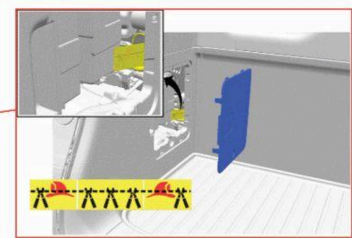
### High-voltage components and locations



Battery warning label

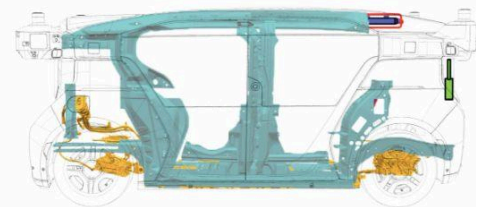
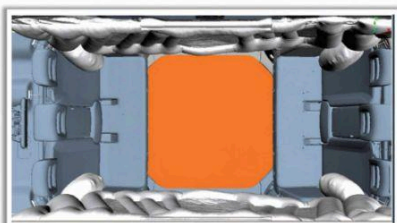


High-voltage components



Low-Voltage cut location

### Air bag & high-strength structure locations







## Section Four: Frequently Asked Questions

### Will contact information be available in each vehicle?

Each Cruise Origin is equipped with documentation that includes the vehicle registration, owner information, proof of insurance and AV testing permit and that can be found inside the charge port door.

### Will there be a 24-hour contact line for first responders?

Yes. Law enforcement officers and first responders can reach Cruise by calling our critical response line: **888-662-7103**. This line is staffed by Cruise team members to handle incidents and emergencies. It is also the best line of communication to reach Cruise's team before interacting with the Origin. If you have additional non-urgent questions regarding the Cruise Origin not provided by this guide, please check out our page – [www.getcruise.com/firstresponders](http://www.getcruise.com/firstresponders) – or contact [firstresponders@getcruise.com](mailto:firstresponders@getcruise.com).

### If there is an emergency on-board the vehicle, can the vehicle notify the police or medical rescue remotely?

Yes. Through its Automatic Crash Response service or passenger-initiated help request, trained Cruise team members can connect with passengers inside the Origin.

### Does the vehicle have additional safety shutdown procedures to make sure the vehicle doesn't drive itself away while first responders are on the scene?

In the event of an incident or emergency, the Cruise Origin will achieve a minimal risk condition and come to a stop. In addition, Cruise's team monitors the AV fleet at all times during testing and can confirm the mode of the Cruise Origin. The Cruise team can bring the Origin to a stop, disengage the Origin from autonomous mode, and immobilize the vehicle. Please call Cruise's critical response line to speak to Cruise experts before approaching or interacting with the Origin.

### How can first responders gain access to the interior of the Origin?

To gain access, please call the Cruise team at **888-662-7103**. This team can facilitate first responders gaining access to the interior of the Cruise Origin.

### What is the stolen vehicle protocol?

Should you suspect unauthorized use of a Cruise vehicle, please contact **888-662-7103** immediately.

### How do you confirm that the vehicle is not in autonomous mode?

Our team can confirm the mode of the vehicle and can disengage the vehicle from autonomous mode.

After being connected with the Cruise team and approaching the Cruise Origin, Cruise experts can inform the law enforcement official or first responder whether or not the vehicle is in autonomous mode. Additionally, the mode of the self-driving system will be displayed on screens within the vehicle.



### **Are there additional power lines, cables, or components we need to be concerned with like in hybrids or EVs that may present a safety issue when cutting into the vehicle?**

All high voltage cables and components are indicated by an orange color and are also found in the Cruise Origin First Responder Quick Reference. Orange cables and components should be treated as if they are powered - do not cut.

### **Are there additional power sources for the vehicle computer and electronics beyond the standard vehicle battery system?**

In addition to the high voltage battery, GM Ultium-platform batteries power the Cruise Origin vehicles. When engaging with the 12V lines, follow the procedure outlined in the Quick Reference guide above to disconnect power to the airbags and from the high voltage battery. Orange cables should be treated as if they are powered - do not cut these lines.

### **Are there any flammable liquids that must be accounted for? Unique flammability concerns with the Origin vehicle?**

The Origin poses no unique flammability concerns. As described in [NFPA standards](#), copious amounts of water should be used to help cool and extinguish in case of battery fire. A battery fire may require more water, for a longer period of time, than a conventional vehicle.

### **Where is the vehicle's HV battery and can it be shut off?**

Similar to other electric vehicles, the Cruise Origin has a HV battery located under the center of the vehicle, under the passenger compartment as indicated in the Cruise Origin First Responder Quick Reference.

Please note that the manual service disconnect for the HV battery is designed for vehicle repair situations or in preparation for vehicle disposal, and not roadside incidents or emergency situations. For incidents and emergencies, first responders can cut the 12V lines found in the rear hatch, underneath the left side cover to remove power from airbags and the HV battery. The 12V cables should be cut only when absolutely necessary to disable airbags or provide additional protection from HV systems. In the event of a battery failure notification, we advise that first responders do not cut the 12V cables, if possible, because additional safety systems, such as HV cooling, are available when 12V power is available.

### **How are the vehicle's sensors impacted by weather?**

The Cruise Origin is designed and built to properly recognize and respond to changing weather conditions. When the Cruise Origin detects changes in weather conditions that are outside of its operational design domain, it is designed to achieve a minimal risk condition. For weather conditions within its operational design domain, the AV may adjust its behavior accordingly; including responding to slow traffic in light rain.



The Cruise Origin does not operate outside our operational design domain (ODD), which means that the Cruise Origin will not drive in weather that falls outside of the ODD. Cruise operators are standing by to immediately respond to notifications from the AV to help ensure each Cruise Origin remains within our ODD.