

# **Guide for Law Enforcement & First Responders for Interacting with a Cruise Autonomous Vehicle**

**Cruise AV (Chevy Bolt Platform) Version** 

May 2024





## **Document Objective**

This document provides guidance to law enforcement and first responders on how to interact safely with our "Cruise AV." Cruise first introduced supervised autonomous driving in 2015 using the Chevrolet Bolt Electric Vehicle (Bolt EVs) with a modified autonomous driving system (ADS). Beginning in 2017, we manufactured the first of several generations of purpose-built, zero-tailpipe-emission, autonomous vehicles - the Cruise AV - which use the Bolt EV platform and are the subject vehicles of this document.

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Cruise's goal is to develop an autonomous vehicle that improves road safety, and we are committed to doing so in a way that supports the crucial work of public safety officials wherever we operate. If you have additional non-urgent questions regarding the Cruise AV not provided by this guide or you would like to request evidentiary documentation such as video, audio, or other LEO specific information, or issue a request to retain evidentiary documentation, please contact <a href="mailto:firstresponders@getcruise.com">firstresponders@getcruise.com</a>. For all time sensitive inquiries, please call 888-662-7103.

## **Cruise key contacts**

Non-urgent: email firstresponders@getcruise.com

Time sensitive inquiries: call 888-662-7103

## Section One: The Cruise AV (Chevy Bolt-based vehicle)



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

The Cruise AV is a fully integrated self-driving system based on the award-winning all-electric Chevrolet Bolt platform. While many law enforcement officers and first responders are familiar with the Chevrolet Bolt EV platform, the Cruise AV is engineered to operate safely on its own - with or without a driver - within a defined operating environment and under a specific set of safe operating conditions and parameters.

Cruise AVs were built at the General Motors Lake Orion assembly plant in Orion Township, Michigan, which builds thousands of production vehicles every year. In concert with our partner GM, we engineered safety into the vehicle from the ground-up, at every step of design, development, manufacturing, testing and validation. The Cruise AV is



designed with seamless hardware and software integration, built to automotive grade standards, and crash tested as other production vehicles. All suppliers who manufacture components for the Cruise AV are required to make sure their quality meets high standards.

Our self-driving system is integrated into the vehicle from the beginning. Through close coordination between the hardware and software teams at both GM and Cruise, we have evaluated potential failure modes for all systems, addressed them throughout development to ensure a safe and reliable product and built redundancy into every element of critical system functioning.

#### **Identifying the Cruise AV**

Each Cruise AV can be distinguished by orange branding on the exterior, and each vehicle has a unique identifier or vehicle name that can be found at the front hood, rear hatch, and right and left rear quarter panels.



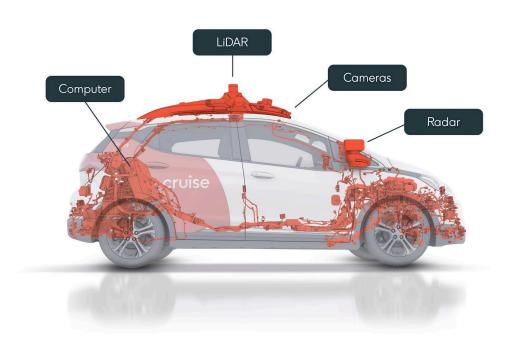
Location of the name on each Cruise AV (Chevy Bolt-based platform).

Some Cruise vehicles have the unique name below the license plate, in lieu of "Self-driver in training" language.



A hallmark of the Cruise AV is its secure hardware sensor suite that is visible on the exterior. The sensor suite does not share information externally, is not tracked by cloud data processing, or retained by third parties in any capacity. This array of sensors enables the Cruise AV to gather information about its environment and inform the system's driving decisions. Inside the trunk of the AV is the computer that comprises the "brain" of the system and that rapidly synthesizes information collected by the hardware suite to inform driving behavior through perception (understanding the environment), prediction (evaluating possible safe paths or trajectories for the vehicle given the environment), and controls (the driving maneuver). More information about how the Cruise autonomous system works and is designed to be a safe driver is available in the 2022 **Cruise Safety Report here**.







#### Inside the Cruise AV

While the Cruise AV is designed to be fully autonomous, public safety officials might encounter the vehicle with Autonomous Vehicle Test Operators (AVTOs) inside. This guide includes information that is relevant whether there are AVTOs inside the vehicle or not.

#### **Vehicle Identification Information**

Each Cruise AV is equipped with documentation that includes the vehicle registration, owner information, proof of insurance and any required permit information and 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 AV

## Section Two: Communicating with the Cruise Team

To reach the appropriate Cruise contact, law enforcement officers and first responders should call Cruise's critical response line **888-662-7103**. Cruise's critical response line is staffed by a remote team that is ready to respond to emergency and non-emergency events and inquiries. 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 (vehicle name located at the front hood, rear hatch, or right and left rear quarter panels)
- Geographic location information, such as address or cross streets.



In addition to Cruise's critical response line, each Cruise AV is equipped with a two-way communications link inside the vehicle that can be used to directly connect with a support team member. The two-way communication link appears as one black "HELP" button above the front and rear seats inside the vehicles.



In-vehicle tactile communications buttons (provided as example, actual may vary)

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.

If the first responder or law enforcement officer does not have access to a cell phone, safely approach the vehicle, trap on the driver's side window, and wait for a Cruise Remote team member Assistance Advisor to connect with the vehicle and assist with AV.

#### **Cruise Remote Team**

When a member of Cruise's remote team is connected, the windows of the AV will open to allow the advisor to communicate via the AV's speaker system. These Cruise remote team members are specially trained to actively monitor the AV. They can maneuver the AV according to the first responder's instructions and can also assist with technical issues related to the vehicle such as unlocking the doors, confirming operating status and disengaging the Cruise AV from autonomous driving mode and ensuring that the Cruise AV remains in a stationary position. In exigent circumstances, this team can also assist first responders in manually moving a Cruise AV.

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

#### **OnStar Emergency Assistance**

Every Cruise AV is also equipped with OnStar functionality. 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 AV even in the event of an incident where an occupant may be unable to press the physical in-cabin Help button. OnStar support is automatically triggered in severe collisions.



### **Section Three: Incidents & Emergency Scenarios**

The Cruise AV is designed to be capable of identifying and responding to emergency and law enforcement vehicles, including having the capacity to 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 AV on the scene of an incident or emergency scenario.

#### **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 option to connect with a Cruise team member, when possible. If the vehicle is not responding in a timely manner, safely approach the vehicle, knock on the driver side window, and you should be connected to a Cruise Remote team member to issue vehicle compliance instructions. Cruise monitors the AV fleet at all times, and Cruise team members are available for relevant questions during driverless operation and can escalate in emergency situations. If possible, please contact them before approaching and interacting with the Cruise AV.

The Cruise AV is designed to be capable of identifying and responding to law enforcement vehicles. In the event of a law enforcement traffic stop, the Cruise AV is designed to detect law enforcement lights and sirens. If the Cruise AV is moving when it detects the lights and sirens, the Cruise AV may continue motion in order to search for a safe stopping location and perform an out of lane pullover maneuver. If the Cruise AV is not moving when it detects the lights and sirens, the Cruise AV will attempt to move out of lane, to the extent possible due to traffic conditions, and will stop. In both situations, once the Cruise AV has stopped, a Cruise Remote Assistance Advisor will be connected. The Cruise Remote Assistance Advisor will remain connected to further assist the law enforcement officer. The law enforcement officer can call Cruise's critical response line at 888-662-7103, or the officer can approach the vehicle and tap on the driver's side glass, in the event that the Cruise team is not already connected. Once the Cruise AV has been disengaged from autonomous mode, the Cruise AV will not move until Cruise is on scene to retrieve the vehicle. For more information on moving the Cruise AV, please refer to the Safety Moving the AV, Towing, and Pushing sections below.

#### Responding to an Emergency

All Cruise AV's are equipped with OnStar. OnStar Emergency Advisors are available 24/7 to receive emergency calls from the Cruise AV automatically through the Automatic Crash Response system upon detecting a severe collision. In addition, Cruise team members monitor the fleet in real time and will immediately identify an emergency scenario should one occur.

In the event of an emergency, the OnStar Emergency Advisor will assess the situation and then inform the appropriate public-safety access point (PSAP) that the situation involves an AV, identify whether the car is or isn't parked and provide the case and callback number. The OnStar Emergency Advisor then informs 911 call takers



and first responders about the AV incident including an analysis of the crash severity and if there is an AVTO present in the vehicle.

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 AV.

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

It is a priority in our training program to educate our team how they should respond to a range of potential incidents, from a flat tire, to another vehicle bumping into the Cruise AV or more severe situations. These specialized experts are also trained to communicate with passengers and third parties during emergency situations. If an emergency arises and Cruise representatives are present, the representative may be able to assist with the following:

- 1. Disable self-driving mode and, if possible and needed, relocate the vehicle to a safe location
- 2. Ensure the vehicle remains immobilized
- 3. Provide vehicle registration and insurance
- 4. Give instructions for towing, if required

#### Approaching the AV - When a Cruise Representative is Not Present

If an incident or emergency arises and a Cruise team member is not already present or not able to serve as a resource, first responders should:

- 1. Call the number **888-662-7103** to be connected to the Cruise Remote Team and follow the verbal instructions from the Advisor on how to approach the Cruise AV from the rear or side, rather than the front
- 2. Receive information from the Cruise Remote Team pertaining to current status of AV
- 3. Continue to follow instruction from the Cruise Remote Team on how to safely interact with the Cruise AV as necessary

#### **Determining Autonomous Mode**

After being connected with the Cruise team and approaching the Cruise AV from the rear or side, the law enforcement official or first responder can also determine whether the vehicle is in autonomous mode or manual mode by looking at the tablet in the center of the car's front panel. The tablet in the front center console should be displaying an information screen, showing that the vehicle is not in autonomous mode and directing first responders to contact Cruise. Cruise can confirm this information.



A Cruise support specialist is on the way to help in person.

First responders should contact Cruise at 888-662-7103

Poppy

Self-driving off

We've parked the car while the issue is resolved.

Images of the types of information shown on Cruise AV (Chevy Bolt-based vehicle) display screens in first responder situations. Specific language and design aspects are subject to change.

#### **Disengaging to Manual Mode**

Our Remote Teams are available to support first responders and safely guide them through the disengagement process. Please contact them via the help line above before attempting to move the vehicle.

#### **Confirming Manual Mode**

The Cruise team will confirm if the vehicle is in manual mode. In addition, the tablet in the center of the car's front panel should depict a white circle icon of the AV if operational in manual mode.

#### Safely Moving the AV

In exigent circumstances, on-duty Law Enforcement Officers and First Responders can manually drive an AV to a safe location if necessary. This can be facilitated by first responders engaging with the Cruise Remote Team. Cruise offers onsite training to first responders on how to interact with Cruise AVs, and in these rare circumstances, manually drive the AV to a safe location. To request a training, email <a href="mailto:firstresponders@getcruise.com">firstresponders@getcruise.com</a>.



For non-exigent circumstances, Cruise will initiate vehicle retrieval when required and if a Cruise team member is on-site, they will provide specific towing instructions. Additionally, first responders can use the following information to move the vehicle, if necessary.

#### **Towing**

First responders should call Cruise's critical response line **888-662-7103** and Cruise will initiate vehicle retrieval. Cruise representatives will be dispatched in the event of a disabled AV 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 AV. In exigent circumstances, the Cruise AV can be towed on a flatbed using standard wheel dollies on rear wheels via the same process that would be used to tow an immobilized Chevy Bolt.

#### **Pushing**

First responders should call Cruise's critical response line **888-662-7103** and Cruise will initiate vehicle retrieval. In exigent circumstances, the Cruise team can facilitate unlocking of doors, disengage the Cruise AV, and confirm that the vehicle is in manual mode. Once in manual, the Cruise AV can be shifted into neutral and pushed like any other vehicle.

#### **Providing Emergency Assistance for Electric Vehicles**

Cruise is proud that all of our autonomous vehicles (AVs) are all electric and operate on the Chevrolet Bolt EV Platform. General Motors has provided training to over 5,000 public safety personnel at no cost in thirty locations across the US and Canada focused on safely interacting with electric vehicles (EVs) at the scene of an emergency. In addition to the on-site trainings, GM has developed online EV training materials accessible to first responders at <a href="https://www.gmevfirstrespondertraining.com">www.gmevfirstrespondertraining.com</a>.

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. There are no increased risks if the vehicle is on fire or immersed in water.

More information can be found at <u>GM First Responder Guides</u> and the <u>Electric Vehicle Safety for Emergency</u> Responders Online Training.



#### **High Voltage and Airbag Disconnect Procedures**

To disconnect the high voltage battery and airbags, open the hood and follow the <u>Cruise AV First Responder</u> Quick Reference Guide.

First Responder (FR) High Voltage & Airbag Disconnect Procedure

Do not cut any orange high voltage cables

FR standard operating procedure
Size-up, approach, immobilize, extinguish



Field scenario
There is NO
increased risk to
first responder
if vehicle is:

- On fire
- Immersed in water

Turn vehicle off
Push Start/Stop button - gauges turn off







#### Preferred disconnect procedure-

Open hood to access labeled 12V cut location

- Pull interior release lever
- Secondary release lever under front center of hood





Cut and remove section of 12V cable covered with a first responder label

Driver side of engine compartment



#### Backup disconnect procedure -

Open hood to access 12V ground wire, cut, and remove section of ground wire

Driver side of engine compartment





Open rear hatch to access 12V ground wire, cut, and remove section of ground wire

Passenger side of rear compartment





#### **Emergency extrication cut points**

**Note:** Removal of articulating radars (in location of side-view mirrors) may be required to improve A-pillar access.

**Caution:** Use caution with removal of roof, center of gravity, and weight are impacted by autonomous vehicle-specific sensors.





### Section Four: Frequently Asked Questions - one-page PDF version

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

Each Cruise AV is equipped with the vehicle registration, owner information, proof of insurance and other documents such as the AV testing permit, accident guide and additional towing information.

#### Will there be a 24-hour policy contact line?

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 general inquiries, incidents, and emergencies. It is also the best line of communication to reach Cruise's remote team before interacting with the AV.

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

Yes. Each Cruise AV is equipped with OnStar emergency services. Through its Automatic Crash Response service, OnStar can connect a trained Emergency Advisor to the AV.

## 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?

If the Cruise AV detects an incident, it will achieve a minimal risk condition and come to a stop. In addition, Cruise monitors the AV fleet while operating on road and can confirm the mode of the Cruise AV and disengage it into manual mode. The vehicle's monitors located on the front dash console and rear of both driver and front passenger seats will have a visual display stating that the vehicle has been taken out of autonomous mode. When possible, Cruise advises that you call Cruise's critical response line to speak to the Cruise team before approaching or interacting with the AV.

#### How can first responders gain access to the interior if it is locked?

The Cruise team can facilitate first responders gaining access to the interior of the Cruise AV. Please call them at **888-662-7103** or tap on the driver's side window.

#### What is the stolen vehicle protocol?

Cruise's team is specially trained to monitor the AV fleet in real time and can work with OnStar to resolve any situation of unauthorized use.

If officials have questions about any Cruise AV, please contact Cruise's critical response line: 888-662-7103.

#### How do you confirm that the vehicle is in manual mode?

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

To determine whether a Cruise AV is in autonomous mode or manual mode, public safety officials can look at the tablet in the center of the car's front panel. If autonomous mode is engaged, the icon in the upper left will be filled



as green or blue. If autonomous mode is disengaged and the vehicle is in manual mode, the icon in the upper left will appear as red.

The Cruise AV also does not operate outside of set environments and conditions - our operational design domain (ODD), which means that the Cruise AV will not drive in weather that falls outside of the ODD. Our Remote Assistance Advisors monitor the fleet at all times to help ensure each Cruise AV remains within our ODD.