

Super Cruise Brings Hands-Free Driving to 2018 CT6



Super Cruise[™], the automotive industry's first true hands-free driving technology for the freeway, is now available on the 2018 Cadillac CT6. By automatically steering the vehicle to maintain lane position, it offers the convenience of hands-free driving for long-distance travels as well as daily commutes. Plus, its hands-free capability and driver attention system help the driver safely complete common tasks in the vehicle, such as using the navigation system, adjusting the audio system or taking a phone call.

Unlike other driver assistance systems, Super Cruise uses two unique technology systems — a driver attention system and precision LiDAR map data — to ensure safe and confident vehicle operation. These systems are added to the network of cameras and radar sensors in the CT6 to provide a data-rich approach to driver assistance.

Super Cruise is available only on limited access freeways that are separated from opposing traffic. By focusing on freeway driving, the benefits of Super Cruise are available during a large part of many drivers' daily routines in addition to long-distance travels. It eliminates variables such as intersections and other less predictable potential hazards that can be prevalent on rural roads or city streets.

CONTENTS

Super Cruise Brings Hands- Free Driving to 2018 CT6
Questions and Answers on Super Cruise
Water Intrusion into the Air Filter Assembly
Keyless Entry Keypad Accessory Installation 6
Answers to Your GM Accessory Installation Questions

Super Cruise Brings Hands-Free Driving to 2018 CT6 - continued from page 1

How It Works

Super Cruise uses real-time corrections and precision map data to determine the vehicle's location while the Lane Sensing Camera detects the marked lanes on the freeway to help the vehicle automatically steer and maintain lane position. The system works with Adaptive Cruise Control, which accelerates or brakes the vehicle based on surrounding traffic conditions, to maintain a driver-selected following time from a vehicle ahead, even in stop-and-go traffic conditions.

While Super Cruise is engaged, an escalating series of prompts lets the driver know if the Driver Attention System camera senses that more attention should be paid to the road ahead. The steering wheel light bar provides a status of system operation, including when the system is steering and when the driver needs to manually steer the vehicle. Super Cruise can be overridden at any time by steering, braking or accelerating.



The steering wheel light bar indicates system status.

TIP: Super Cruise does not detect or steer through construction zones or steer to avoid any objects, such as other vehicles, animals, potholes, debris, and construction cones. It also does not steer the vehicle in reaction to vehicles next to the vehicle, steer to merge the vehicle into the appropriate lane of traffic or make lane changes.

Driver Attention System

The Driver Attention System uses a small camera located on the top of the steering column that focuses exclusively on the driver. It uses infrared lights to track head position to determine where the driver is looking whenever Super Cruise is in operation. The camera does not record pictures, sound or video.



The camera for the Driver Attention System is located on the steering column.

Existing driver assistance systems only rely upon steering wheel input and warning messages to request driver attention and control. Cadillac is the only manufacturer to monitor driver attention to the road ahead when Super Cruise is engaged.

If the system detects the driver has turned attention away from the road ahead for too long, it will prompt the driver to return attention to the road ahead through an escalation of alerts and warnings. If the system determines continued inattentiveness, a steering wheel light bar guides the driver to look at the road or take back control of the wheel. Additional alerts include visual indicators in the instrument cluster, activation of the Safety Alert Seat and audible alerts, if necessary. In the limited event of an unresponsive driver, the CT6 uses the full capability of onboard driver assistance technologies to bring the car to a controlled stop and contact OnStar to alert first responders, if necessary.

Precision LiDAR Map Data

Super Cruise is the first driving technology that uses precision LiDAR map data in addition to real-time Global Positioning System (GPS) sensing, a network of cameras, and a number of driver assistance system sensors. The real-time data provided by the cameras and sensors govern steering, braking and acceleration.

Super Cruise adds to this formula using advanced laser technology in development for future autonomous vehicles: a LiDAR-scanned map database. Combined with the real-time data from cameras and GPS sensors, the precision map database restricts system use to divided, limited access freeways accessible only by defined entrance and exit ramps where appropriate road conditions are detected. The combination of real-time data with precision mapping also improves vehicle control through curves and hills.

The precision LiDAR map was developed specifically for Super Cruise. Engineers mapped every mile of limited-access freeway in the U.S. and Canada, providing detailed information to the vehicle about the road ahead. Paired with improved accuracy GPS, realtime location is measured four to eight times more precisely than traditional GPS.

Super Cruise map updates are automatically downloaded via the vehicle's OnStar Wi-Fi hotspot. The Wi-Fi option should always be turned on. Go to Settings > Wi-Fi. Super Cruise will be disabled if the map reaches seven months old. The latest Super Cruise map also will be available to dealerships to upload to the vehicle.

Super Cruise Availability

Super Cruise only can be engaged when:

- Adaptive Cruise Control is on.
- Forward Automatic Braking is set to Alert and Brake. Go to Settings > Vehicle > Collision/Detection Systems > Forward Collision System.
- The vehicle is on a limited-access freeway.
- Camera or radar sensors are not obstructed or damaged.
- Lane markings are clearly visible.
- Driver attention is detected.
- Teen Driver is not active.

To engage Super Cruise, press the Adaptive Cruise Control button on the steering wheel to turn on Adaptive Cruise Control. When the Super Cruise symbol illuminates in white on the instrument cluster

Super Cruise Brings Hands-Free Driving to 2018 CT6 - continued from page 2



Super Cruise (A) and Adaptive Cruise Control (B) buttons

(indicating Super Cruise is available), press the Super Cruise button on the steering wheel. When the Super Cruise symbol and steering wheel light bar are green, the driver may release the steering wheel.

Steering Wheel Light Bar

When Super Cruise is not engaged, the light bar is not visible on the steering wheel and the Super Cruise symbol on the instrument cluster is not illuminated. When Super Cruise is engaged, the steering wheel light bar and Super Cruise symbol indicate system status.

TIP: If the driver takes control of the steering wheel AND presses the brake pedal, Super Cruise and Adaptive Cruise Control will disengage.

Solid Green Bar and Solid Green Symbol	Super Cruise is active and automatically steering the vehicle.	
Flashing Green Bar and Solid Green Symbol (1st Alert)	Super Cruise is active, but the system detects the driver needs to pay more attention to the road.	
Pulsing Blue Bar and Solid Blue Symbol	Super Cruise is active, but the system detects the driver is manually steering. To return to automatic steering, position the vehicle in the lane and hold the steering wheel steady until the green indicators ap- pear.	
Flashing Red Bar, Solid Red Symbol, and Safety Alert Seat Pulses or Beeps Sound (2nd Alert)	The driver needs to take steering control immediately. The system cannot operate properly under current conditions. The vehi- cle will begin to coast until the driver takes steering control. Super Cruise must be re- engaged to use the system again.	
Flashing Red Bar, Solid Red Symbol, Safety Alert Seat Pulses or Beeps Sound, and Voice Prompt (3rd Alert)	The driver needs to take steering control immediately. A voice prompt will state to take over steering control. If the driver does not take steering control, the vehicle will steer and brake gradually to a stop. Super Cruise will not be available until the next ignition cycle.	

Super Cruise Status Indicators

S Thanks to Katul Patel and Blake Streling

Questions and Answers on Super Cruise

The Super Cruise[™] system available on the 2018 Cadillac CT6 automatically steers the vehicle when driving on a limited-access freeway, allowing drivers the convenience of hands-free driving. The system uses a variety of advanced technology so customers may have a number of questions about the system, how it operates, and when it can be used. Here are answers to a few frequently asked questions on Super Cruise.



Is Super Cruise driving the vehicle?

No. Super Cruise does not perform all aspects of driving nor does it do everything a driver can do. Super Cruise allows the driver to drive hands-free when conditions allow the feature to be available; but the driver needs to pay close attention to the road at all times.

What is defined as a limited-access freeway?

Super Cruise can only be used on limitedaccess freeways, which generally only allow high-speed traffic, are separated from opposing traffic, and are accessible by entrance and exit ramps only.

Besides being on a limited-access freeway, are there any other limitations for using Super Cruise?

Super Cruise should never be used under difficult or uncertain driving conditions, including in construction zones, when lane markings are poor, when there is limited visibility, while in a tunnel, when towing a trailer, on a road shoulder or service drive, or in slippery or other adverse conditions, including rain, sleet, fog, ice or snow.

To use Super Cruise, verify that Adaptive Cruise Control is on, Teen Driver is not active, Forward Automatic Braking is set to Alert and Brake, and camera and radar sensors are not obstructed or damaged.

What happens if a driver tries to activate Super Cruise when not on a limited-access freeway?

Super Cruise will not activate and a Driver Information Center message will display.

How does Super Cruise know how fast to go?

Super Cruise will use the Adaptive Cruise Control set speed. If the Adaptive Cruise Control speed is not set when Super Cruise is activated, it will use the current speed as the set speed. Super Cruise also will slow down around sharp curves.

When should the driver manually take control of the vehicle?

The vehicle needs to be manually steered when changing lanes or to avoid a traffic condition ahead, such as traffic cones, a pothole, road debris, etc. — even when Super Cruise is engaged. The steering wheel light bar pulses blue when the driver is steering.

To allow Super Cruise to resume steering again, simply position the vehicle in the center of the lane, hold the steering wheel until the light bar turns green and then release the steering wheel when it is safe to do so. If the driver takes control of the steering wheel and presses the brake pedal, Super Cruise and Adaptive Cruise Control will disengage.

Will Super Cruise know when the vehicle is entering a construction zone?

No. Super Cruise does not detect construction zones; the driver should always take control of steering prior to entering and while driving through construction zones.

If there's an obstruction on the freeway, will Super Cruise steer around it?

No. Super Cruise can't steer to avoid any objects (including other vehicles, animals, pedestrians, bicyclists, potholes, debris, construction barriers or cones). It is not a crash avoidance system. It is designed to assist the driver to stay in a single lane and work to keep a set distance between the vehicle and a vehicle ahead.

How is Super Cruise disengaged?

To disengage Super Cruise, press the Super Cruise button on the steering wheel or press the brake pedal.

Is the camera on the steering column recording?

No. The camera is part of the Driver Attention system and estimates driver attention to the road ahead. The camera does not record or share pictures, audio, or video.

Wearing sunglasses, hats or other types of clothing that alter the shape of the head may interfere with camera performance, which could cause Super Cruise not to be available.

Does the driver have to pay attention if Super Cruise is engaged?

It is important to always remember that Super Cruise is a convenience system and cannot accurately detect all situations. Super Cruise cannot determine whether the driver is awake, impaired or properly focused on safe driving. Complete attention is always required while driving, even when using Super Cruise. The driver should always be prepared to take over steering or apply the brakes at any time.

Why does a Super Cruise message appear on the infotainment system display after using it for a few minutes?

If Super Cruise has been steering for several minutes, a chime may sound and a Super Cruise message may be displayed on the infotainment system screen. This is to help ensure the driver is paying attention to the road and that the Driver Attention Camera is working properly. Read the message when it is safe to do so and the message will be removed. If the Driver Attention Camera determines that the driver has not read the message, Super Cruise will alert you.

A bike rack was installed on the vehicle, and now Super Cruise will not activate. Is there a connection?

If, as a result of the bike rack or other type of accessory on the rear bumper triggering collision alerts, the feature is set to the Off or Alert setting, as opposed to Alert and Brake, Super Cruise will not engage. Super Cruise will only work if the Forward Automatic Braking system is set to Alert and Brake. If you have a bike rack or other detectable object on the back of the vehicle, turn off Rear Parking Assist. This will help stop the collision alerts triggered by the accessory without impacting Super Cruise operation.

Why isn't my Super Cruise system working?

Verify the following conditions are met:

- The vehicle is on a limited-access freeway.
- Adaptive Cruise Control is on.
- Lane markings are clearly visible. Do not use Super Cruise in poor weather conditions or when visibility is limited.
- The steering wheel is adjusted, and the driver's face is visible.
- Teen Driver is not active.
- The Wi-Fi hotspot is turned on.
- Forward Automatic Braking is set to Alert and Brake. Go to Settings > Vehicle > Collision/Detection Systems > Forward Collision System.
- The camera or radar sensors are not obstructed or damaged.
- S Thanks to Katul Patel, Blake Streling and Brian Storey

Water Intrusion into the Air Filter Assembly

If water or snow gets into the air filter assembly on some 2017-2018 Silverado and Sierra models equipped with the 6.6L Duramax diesel engine (RPO L5P), it may saturate the air filter and reduce flow to the point that the filter is damaged. Under this condition, the Check Engine lamp may illuminate and DTC P0106 (Manifold Absolute Pressure (MAP) Sensor Performance) also may set.



- 1. Air filter box bracket
- 2. Inner fender
- 3. Hood gasket

The water or snow intrusion may be due to the air induction filter box being out of position or other vehicle modifications, which may alter the seal between the hood and inner fender.

The induction system on the 6.6L Duramax diesel engine is designed to prevent water and snow from entering through the hood duct. If the seal is compromised, water or snow can reach the air cleaner element along with warm air pulled from under the hood. In colder temperatures, moisture in the air filter assembly may freeze and block the air filter with ice.

In addition, if the vehicle is operated in temperatures below 0° F (-17° C) and a front-end grille cover is not used, snow can be pulled through the grill duct and, over a period of time, the filter may accumulate enough ice to reduce airflow.

Air Filter Box Position

Confirm that the air filter box is in position, secured to the air filter box bracket, and that it is sealed to the inner fender and the hood.



A leak is shown at the front edge of tthe gasket seal.

Check the Seal

Check for a proper seal between the air filter box upper gasket and the hood by wetting the gasket (foaming glass cleaner can be used) and closing the hood. Open the hood and look for a contact ring witness mark around the entire hood duct opening to the air cleaner assembly. The gasket photo shows a leak (no contact) at the front edge of the seal.

Vehicle Modifications

Any vehicle modifications to the front grille, hood or fender also can affect the seal between the hood and inner fender. The Original Equipment Manufacturer (OEM) bumper on the Silverado and Sierra have intake air filter assembly protection to help prevent moisture and debris from entering the assembly. Aftermarket bumpers may not be equipped with the same features to properly protect the air filter assembly.



 OEM bumper (top) with air filter assembly protection and aftermarket bumper without protection (bottom)

Thanks to John Stempnik

Keyless Entry Keypad Accessory Installation

The new GM Accessories Keyless Entry Keypad, available for several 2018 GM models, provides the convenience of vehicle entry using a keypad mounted on the driver's door.



Keyless Entry Keypad

The accessory kit includes the keyless entry keypad, an alcohol wipe and installation instructions. The instructions, Keyless Entry Control Module Package Installation, also can be found in the Accessories manual in the Service Information (e.g. Document ID #4694211 for Equinox, #4639288 for Terrain).

Keypad Programming

Be sure to follow each step of the instructions to properly program and install the keypad. Programming the keypad requires that you contact the Techline Customer Support Center (TCSC).

TIP: Check the parts catalog to confirm the correct kit for the vehicle. Do not install the keypad on the vehicle until it has been programmed and you have verified that it is working correctly with the vehicle.

Before contacting TCSC, some information required for processing must be gathered and sent to TCSC via an email message. In the email, with a subject line of Wireless Keypad Accessory, include

- Dealer Code or BAC #,
- Full VIN of the vehicle
- Dealership's name
- Technician's name
- Clear photo of the Keyless Entry Keypad Wallet Card.

You also have the option of scanning the QR code from the wallet card and transferring the file from your device to a PC to include in the email.

Incomplete requests without all required information cannot be processed. Common reasons why a request cannot be completed include that a photo of the wallet card is not included or is blurry or not all needed dealership/VIN information is included.

For your convenience, copy and paste the following template in the body of the email.

Request for Wireless Keypad Accessory Installation

Dealer Code or BAC:

Complete 17-Digit VIN:

Dealership Name:

Technician Name:

Contact Phone Number:

REQUIRED: A clear photo of the wallet card must be attached to this email.

TIP: When taking a photo of the wallet card, be sure that the photo does not have sunlight or flash glare as pictured. The glare on the QR code makes the decoding process difficult for TCSC.

The wallet card must be available in order to complete the request for processing. The wallet card cannot be replaced if it is lost.

Once all required information is received, TCSC will send back a file for programming the keypad using TIS2Web. TIS2Web will now have the "BCM Body Control Module – Accessory only Keypad Learn" option under Supported Controllers.



Include a clear photo, without any glare, of the Keyless Entry Keypad Wallet Card in the email to TCSC.

Once TIS2Web verifies the programming was successful, enter the 5-digit unlock code within 30 seconds. If the driver's door unlocks, the code was successfully entered. Follow the Keypad User Instructions to verify the functionality of the keypad.

Keypad Alignment

Once the keypad has been programmed, install the keypad on the driver's door above the door handle. Be sure to reference the appropriate Service Information for proper placement as different vehicles require different locations and measurements.

The keypad has an adhesive backing. Ensure the keypad is aligned properly when placing it on the door. The adhesive will bond quickly to the paint.

TIP: For proper

alignment, first align the top edge

of the keypad to

masking tape, followed by the right

outer edge to the

referenced mask-

the referenced

After programming, position the keypad on the driver's door following the instructions for the vehicle.

ing tape. Then, toggle the keypad into place.

Contact TCSC and press 1 (GM Accessories) for additional support during installation. If you are having trouble after installing or with programming, press 3 for Service.

() Thanks to John Yadlosky, Keith Bush and Bret Raupp

Answers to Your GM Accessory Installation Questions

Several sources of information are available to technicians for help with installation or parts concerns when installing GM Accessories, whether it's regarding kit part numbers, usage, programming, diagnosis of a particular system, or other issues.

TIP: Installation sheets for GM Accessories can be found in the Accessories Manual in the Service Information. To locate the

elec	t a Document:
	Assist Step Kit Installation (Instruction ID: 22820420 and 22876450)
	Assist Step Kit Installation (Instruction ID: 23150513)
-	Assist Step Kit Installation (Instruction ID: 22929624)
-	Body Emblem Package Installation (Light Duty Instruction ID:23306540)
	Body Emblem Package Installation (Heavy Duty Instruction ID:23306541)
	Body Emblem Package Installation (Bowtie Instruction ID: 84219486)
	Body Side Molding Kit Installation (Heavy Duty Crew and Extended Cab Instruction ID:22998789)
-	Body Side Molding Kit Installation (Light Duty Crew, Light Duty Extended Cab and SUV Instruction ID:22893929)
	Front and Rear Side Door Outside Handle Package Installation (Instruction ID:22940653)
-	Front Fender Mud. Guard Package Installation (Chevy Instruction ID:22894893)
	Front Fender Mud Guard Package Installation (GMC Instruction ID:22896998)
10	Front Grille Kit Installation (Instruction ID: 19353377)
	Front Grille Kit Installation (Instruction ID: 19352966)
	Front Grille Opening Cover Package Installation (GMC Instruction ID:22808190)
9	Front Grille Opening Cover Package Installation (Chevrolet Instruction ID:23444797)
	Front Grille Opening Cover Package Installation (Chevrolet High Country Instruction ID:23208464)
D.	Front Grille Package Installation (Chevrolet Instruction ID:23356033)
D.	Front Grille Package Installation (Chevrolet 2500 3500 Instruction ID:23207685)
	Front Grille Package Installation (GMC 2500 2500 Instruction ID:22972225)
۵	Pickup Box Cover Package Installation (Instruction ID: 84024084)
0	Outside Rearview Mirror Package Installation (Camper Mirrors)
	Pickup Box Carpet Package Installation (Instruction ID:19158258)
D	Pickup Box Cover Side Rail Clamp Kit Installation (Quarter Turn Clamp)
	Pickup Box Cover Side Rail Clamp Kit Installation (Spring Latch Clamp Instruction ID:84082764)
	Pickup Box Endgate Latch Handle Kit Installation (Instruction ID:22967797 22967798 23448686)
1	Pickup Box Liner Package Installation (Instruction ID:23221595)

Installation instructions are listed in the Service Information.

instructions, select the year, make and model of the vehicle from the dropdown menus. Next, from the Publication page, select the Accessories Manual link.

Depending on your questions, the following sources are here to help.

Accessory Distributor Installer, or ADI (U.S.)

Contact your local ADI if your dealership:

- Has not received a Limited Production Option (LPO) part
- Received the incorrect LPO part

Partech

Questions regarding accessories can be directed to Partech for the following:

- Missing instruction sheet (including if the instruction sheet is not found in the Service Information)
- Missing components
- Quality Issue with the kit
- Usage questions (vehicle compatibility, fit of the part on the vehicle, etc.)

Partech can be reached at 1-855-GMCARES (1-855-462-2737). For U.S and Canada (Car and Truck), select the following prompts when calling:

- 1. Select Prompt 2 for ParTech.
- 2. Enter the 6-digit dealer customer code. (Canadian and other 5-digit dealer codes should add a zero at the beginning of the number.)
- 3. Enter the part number of the accessory. If there is a known issue, a message will play.
- 4. If further assistance is needed, select Prompt 2 to speak with a Partech analyst in the Accessory Group.

Techline Customer Support Center

Contact the Techline Customer Support Center (TCSC) for:

• Programming concerns with GM Accessories

Technical Assistance Center

Contact the Technical Assistance Center (TAC) for:

- · Questions about the installation of the accessory
- Help with diagnosing problems with the installation
- S Thanks to Matt Bierlein



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