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## ENHANCED CRUISE/ENHANCED STABILITY

### Enhanced Stability/ Enhanced Cruise

#### Safety Information

##### DANGER

The ultimate responsibility for the safe operation of the vehicle remains with the driver. Even with the Volvo Enhanced Cruise (VEC), remain alert, react appropriately and in a timely manner. Also, use good driving practices. Failure to follow these instructions and good driving practices can lead to vehicle damage, personal injury, or death.

#### General

All vehicles equipped with Volvo Enhanced Cruise (VEC) are also equipped with the Volvo Enhanced Stability System (VEST). VEST is a constantly on, full-stability system which monitors vehicle performance and, when necessary, automatically intervenes to reduce the throttle and/or applies the foundation brakes to help you maintain stability during potential loss-of-control and/or rollover events.

##### NOTE

For additional information on operating the cruise control see.

##### NOTE

The VEST is always operational when the vehicle is running. The active interventions and select warnings of the Volvo Enhanced Cruise (VEC) are operational when the cruise control is engaged or disengaged.

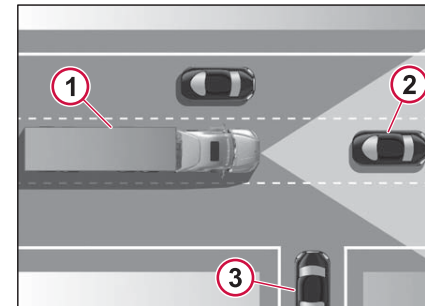
#### Overview

##### WARNING

The Volvo Enhanced Cruise (VEC) system reacts **ONLY** to vehicles moving in the same direction as your vehicle. The system **DOES NOT** respond to side-to-side moving traffic, or oncoming traffic. The system **WILL NOT** slow your vehicle or provide an alert as you approach vehicles in these circumstances.

##### NOTE

The Volvo Enhanced Stability Technology (VEST) system is always operational when the vehicle is running; the active interventions and select warnings of the Volvo Enhanced Cruise are operational when the cruise control is engaged or disengaged.



J307335

- 1 Vehicle Equipped with Volvo Enhanced Stability Technology (VEST)
- 2 Detected Forward Vehicle
- 3 Vehicles Approaching from the Side are Not Detected

Volvo Enhanced Cruise is integrated with the vehicle's normal cruise control.

The Volvo Enhanced Cruise is an additional integrated feature of your cruise control. When using cruise control, your vehicle will now not only maintain the "set" speed, but the system will also intervene, as needed, to help maintain a set following distance behind the vehicle in front of your vehicle.

Using a radar sensor (with a range of approximately 152 m [500 ft]) mounted to the front of your vehicle, the Volvo Enhanced Cruise system reacts to moving vehicles ahead of you.

## ENHANCED CRUISE/ENHANCED STABILITY

As a brief introduction, once the vehicle's cruise control is engaged and maintaining a set following distance between you and the vehicle in front:

If the vehicle in front of you slows down below your cruise control's set speed, the system will intervene and, as necessary, in this order:

- 1 de-throttle the engine,
- 2 apply the engine retarder, and
- 3 apply the foundation brakes,

in an attempt to maintain the set following distance behind the vehicle ahead.

### ⚠ NOTE

If during the intervention, it is necessary to apply the foundation brakes, the vehicle will not automatically resume to the set speed.

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If during the intervention, it is necessary to apply the foundation brakes, the vehicle does not automatically resume to the set speed.

### ⚠ NOTE

The collision warning system following distance alerts cannot be disabled.

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Collision warning system following distance alerts cannot be disabled.

Other system features include a two-stage audible and visual warning system and following distance keeping, which is always on, whether or not you are using cruise control.

Since the VEC operates along with normal cruise control, all the typical features built into cruise control work as usual. For example, limits imposed by factory-set road speed governors are fully supported by the VEC system.

## Alerts

### ⚠ DANGER

Volvo Enhanced Cruise reacts to vehicles moving in the same direction as your vehicle. The system is not responsive to stopped vehicles, side-to-side moving traffic, or oncoming traffic. The system will not slow your vehicle or provide warning as you approach vehicles in these circumstances. Ignoring the limitations of this system can lead to vehicle damage, personal injury or death.

**Driver Indications and Warnings** - Before using this system, fully understand all the audible warnings and visual indicators

the system provides. This manual explains what each of them mean and what actions the driver can be required to take to avoid potential collisions. Any beeping means that your vehicle is too close to the vehicle ahead.

When the system detects a situation that requires intervention, it works with the Volvo Enhanced Stability Technology (VEST) to engage the brakes, however, never rely on the system to stop the vehicle or to avoid a collision. At most, the system applies about two-thirds of the potential braking power. The driver can still apply full braking power, when needed.

**Driver Indications and Warnings** - Before using Volvo Enhanced Cruise (VEC), the driver should fully understand all the audible warnings and visual indicators the system provides. This manual will assist in explaining what each of them mean and what actions the driver may be required to take to avoid potential collisions. Any beeping means that your vehicle is too close to the vehicle ahead.

When the Volvo Enhanced Cruise system detects a situation that requires intervention, it works in conjunction with the Volvo Enhanced Stability Technology (VEST) to engage the brakes, however, the system should never be relied upon to stop your vehicle or to avoid a collision. Be aware that, at most, the

## ENHANCED CRUISE/ENHANCED STABILITY

system will apply up to two thirds of the vehicle's potential braking power. The driver can still apply about two-thirds more braking power, when needed.

- **Animals, non-metallic or limited-metallic Objects:** The system cannot warn or react to animals, non-metallic objects, and limited metal objects.
- **Vehicles:** Always be aware when approaching certain types of vehicles and objects with limited metal surfaces. Such vehicles include recreational vehicles, horse-drawn buggies, motorcycles, logging trailers, and so on, traveling in the lane. The system sensor cannot be able to detect them, nor manage the distance between your vehicle and the vehicle or object ahead. The "Impact Alert" is the most severe warning issued by the system. This warning is only active when the vehicle cruise control is set and the system is operational. The Impact Alert Warning indicates to apply additional braking force or maneuver around the vehicle or object ahead. Text appears on the dashboard screen, and a loud continuous modulating tone sounds. A loud continuous modulating tone warns the driver to apply the brakes because the system's braking

capacity (one-third of the potential braking power) is not sufficient to ensure a safe following distance. The primary condition that activates the brake overuse warning is using the system down steep grades. Approach grades as you normally would, with the appropriate gear selected and at a safe speed. The system cannot be disabled.

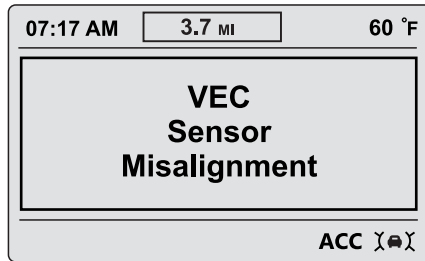
- **Reflective Objects May Impair the Radar:** Objects that are reflective, such as crash barriers, guard rails, construction zone barricades, and tunnel entrances affect radar sensor function.

### Equipment Maintenance

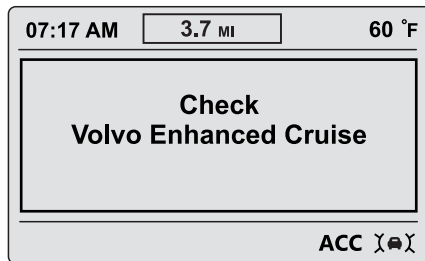
- **Importance of ABS Maintenance** — Optimal Volvo Enhanced Cruise (VEC) braking requires a properly maintained ABS and VEST system. Have any ABS Diagnostic Trouble Codes (DTCs) corrected by a qualified technician at the earliest opportunity.
- **Importance of Brake Maintenance** — Optimal VEC braking requires properly maintained truck foundation brakes (S-Cam or air disc) which meet appropriate safety standards and regulations. Brake performance also requires that the vehicle be

equipped with properly sized and inflated tires, with a safe tread depth. If the VEC system has detected a problem with the detector, etc., and a message displays in the DID. The system determines, depending on the type of problem detected, if the vehicle may continue to have normal cruise control functions (without the benefits of VEC). If not, disable all cruise control functions until servicing is carried out. The system should be serviced as soon as possible to restore full VEC functionality.

- **Sensor Inspection** — The driver should regularly inspect the radar sensor and mounting and remove any mud, snow, ice build-up, or other obstructions.
- **Sensor Damage / Misalignment / Tampering** — In cases where the bumper and/or sensor are found to have sustained any damage, are misaligned, or if you suspect that the sensor has been tampered with, do not use the VEC system until the vehicle has been repaired and the sensor re-aligned. In situations where the sensor is misaligned the "VEC Sensor Misalignment" or "Check Volvo Enhanced Cruise" DID screen displays.



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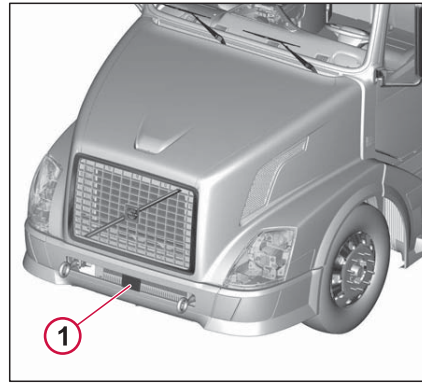
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### Components

The radar sensor that provides the system with its ability to locate and track moving vehicles, is at the front of the vehicle. The antenna is on the center-line of the vehicle just behind the bumper and is visible from the front of the vehicle.

The system radar sensor is pre-aligned at the factory and no adjustment is

needed. If the sensor becomes misaligned (or another system fault is detected) a message, or light on the dash lets the driver know that service is needed.



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1 Radar Sensor

### Integrated Dashboard

The VEC system is fully integrated into the vehicle dashboard so that a separate status/display box is not required. All visual, text and audible indications and warnings come directly from the vehicle's instrument cluster and Driver Information Display (DID). The volume level of the alerts is adjustable, but cannot be switched off.

### Automatic Foundation Brake Applications

The vehicle automatically manages foundation braking priorities among the various vehicle systems that use the foundation brakes, such as Volvo Enhanced Cruise (VEC), Volvo Enhanced Stability Technology (VEST), Automatic Traction Control (ATC) and the Anti-lock Braking System (ABS).

After an event where the foundation brakes are applied, normal cruise will automatically be cancelled. The driver must activate "resume" or "set" in order for the vehicle to throttle up.

### Operating System

#### ! NOTE

For additional information on operating the cruise control see.

#### ! NOTE

The cruise control automatically cancels whenever the VEC applies the foundation brakes. Verify the system is disengaged by observing that the green "cruise" or "set" icon is no longer illuminated. To regain normal cruise functionality and to reengage the system, "resume" or "set" the cruise control.

## ENHANCED CRUISE/ENHANCED STABILITY

### NOTE

Engaging the cruise control also activates the VEC system.

Turn the Volvo Enhanced Cruise (VEC) on or off by pressing the Resume/ON/OFF button. If the VEC is temporarily disabled, press this button to resume cruise control.

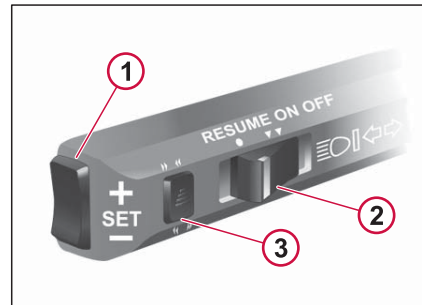
Once the cruise control speed is "set," a green "cruise" icon illuminates on the instrument panel.

The "set" speed displays on the illuminated Light Emitting Diode (LED), above the speedometer, at the set speed mark.



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- 1 Resume/ON/OFF Switch
- 2 Set Button (+/-)



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- 1 Set Button (+/-)
- 2 Resume/ON OFF Switch
- 3 Time Gap Button

The "set" speed displays in the cluster.

The VEC icon displays in the Driver Information Display (DID) when the system is active. When the system is "on" and "set" and the radar detects a vehicle ahead, the Target Detected Icon on the vehicle dashboard illuminates. This alert is an indication to the driver that the system can automatically intervene to maintain the set following distance.

## VEC

Volvo Enhanced Cruise (VEC) ON Icon

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Target Detected Icon

There are two warning levels for the VEC:

- Green: The vehicle in front is at a safe following distance but it detected by the VEC. The approximate speed of the vehicle is not indicated.
- Red: The vehicle in front is too close to follow safely. The driver needs to intervene to avoid a collision.

### NOTE

As mentioned, the cruise control automatically cancels whenever the system applies the foundation brakes. Verify that the system is disengaged by observing the green "cruise" or "set" icon is no longer illuminated. To, regain normal cruise functionality and to re-engage the system resume or set cruise control.

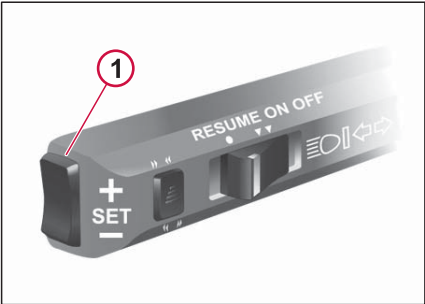
### Adjusting the Cruise Control Speed

Use the Set button (+/-) (1) switch of the vehicle cruise control system to increase (+) the set speed or decrease (-) the set speed.

When adjusted, the new set speed is indicated on the vehicle dash. Typically, the new set speed is displayed on the

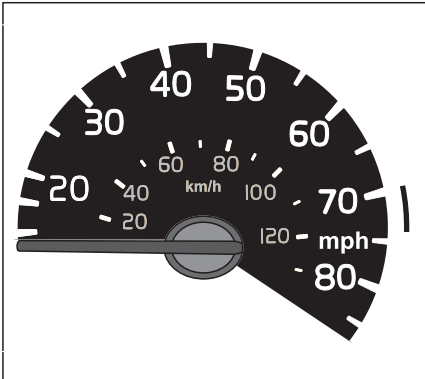
# ENHANCED CRUISE/ENHANCED STABILITY

message center, speedometer, or other location on the dash.



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1 Set Button (+/-)



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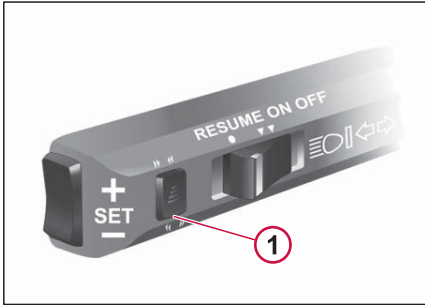
## Following Distance

Following distance refers to the time gap, measured in seconds, between your vehicle and the vehicle ahead. The physical distance between your vehicle and the vehicle ahead varies based on your set cruise speed. This fact is true even though the set time gap remains the same for all set cruise speeds.

The minimum time gap between your vehicle and vehicle ahead is 1.5 seconds. The maximum is 3.5 seconds. In the DID several screens display if there is a following distance alert. The Time Gap screen displays and details the amount of following distance, noting the minimum time gap in seconds. The time gap range is 1.5, 2.3, 2.8 and 3.2 seconds. 2.8 seconds is the default setting when the vehicle is turned on.

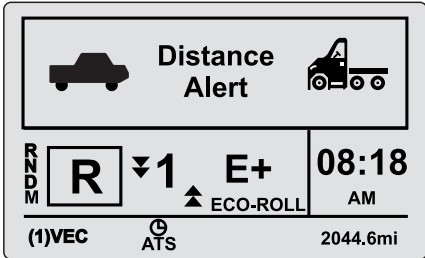
Use the Time Gap button (1) to increase or decrease the time gap.

**NOTE**  
 Not all vehicles with VEC have the Time Gap button available on the Cruise Control stalk. The time gap for these vehicles is preset and cannot be adjusted.





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1 Time Gap Button



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## ENHANCED CRUISE/ENHANCED STABILITY

 Time Gap 3.5 Secs 		
RNDM R	1 E+ ECO-ROLL	08:18 AM
(1)VEC	ATS	2044.6 mi

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## ENHANCED CRUISE/ENHANCED STABILITY

### Operating Results

The following chart illustrates what to expect from Volvo Enhanced Stability Technology (VEST) in various driving situations you can encounter. Both the system indication and action to expect are in the table.

Situation	System Alert	System Reaction
A vehicle is present (in range) ahead of you.	The cruise control "on" indicator and the "Target Detected Icon" illuminates.	The system maintains the set speed and following distance.
The vehicle ahead slows moderately.	The system alerts the driver with the Following Distance Alert (FDA): A fast beeping sound emits.	The vehicle slows due to (in order): <ol style="list-style-type: none"> <li>1 Reducing throttle,</li> <li>2 Engaging the engine retarder, or</li> <li>3 Applying the foundation brakes.</li> </ol> Note: If the foundation brakes are applied, the system cancels after the event; Re-engage the cruise control.
The vehicle ahead slows rapidly.	The Following Distance Alert (fast beeping) is given, followed by the Impact Alert (continuous modulating tone), and a text message appears on the dash screen.	The vehicle is de-throttled, the engine retarder engaged and the foundation brakes applied. The system cancels after the event; Re-engage the cruise control.
With cruise set, but no vehicle ahead detected (vehicles ahead are further away than 152 m [500 ft]).	No alert sounds.	Vehicle maintains "set" speed.
A vehicle cut in front of the truck <i>and speeds away</i> .	<ul style="list-style-type: none"> <li>• If, the vehicle cuts in front of truck at a distance of 6 m (20 ft) or less, a fast beeping warning is given. The warning emits until the vehicle ahead is beyond the 6 m (20 ft) range.</li> <li>• If the vehicle cuts in front further than 6 m (20 ft) away, no warning is given.</li> </ul>	Vehicle maintains "set" speed.
A vehicle cuts in front of the truck within range of the sensor and slows down.	The system alerts using the Following Distance Alert (fast beeping) and dash warnings. Depending on how rapidly the vehicle ahead slows, the system can initiate an Impact Alert.	The system reduces the throttle and retards the engine; The foundation brakes can also engage.

## ENHANCED CRUISE/ENHANCED STABILITY

Situation	System Alert	System Reaction
The vehicle goes down a steep grade.	If, the brakes remain applied for an extended duration "Brake overuse" warning appears on the dash display.	Dethrottling, followed by engine retarder, followed by braking. If the brakes remain on for an extended duration, dash warns driver, the system can be disabled.
A faster vehicle passes on left or right.	No alert sounds.	None. The driver must take appropriate action. <b>Use safe practices to avoid a vehicle collision.</b>
A broken-down vehicle is stationary in the lane in which the truck is traveling.	The system alerts using the Following Distance Alert (fast beeping) and dash warnings. Depending on how rapidly the vehicle ahead slows, the system can initiate an Impact Alert.	The system reduces the throttle and retards the engine; The foundation brakes can also engage.
An animal runs in front of your truck.	No warning is given.	None. The system does not recognize non-metallic objects. <b>Use safe practices to avoid a vehicle collision.</b>
Another vehicle crosses the road perpendicular to your path of travel, such as at an intersection.	The system alerts using the Following Distance Alert (fast beeping) and dash warnings. Depending on how rapidly the vehicle ahead slows, the system can initiate an Impact Alert.	The system reduces the throttle and retards the engine; The foundation brakes can also engage.

### ⓘ NOTE

These represent examples of typical situations and responses that can occur when using the system. Not all possible situations and responses are covered by this chart.

### Action Impact of VEC/VEST

#### DANGER

The ultimate responsibility for the safe operation of the vehicle remains with the driver. Even with the system, remain alert, react appropriately and in a timely manner, and use good driving practices. Failure to follow these instructions and good driving practices can lead to vehicle damage, personal injury, or death.

The following chart illustrates how the Volvo Enhanced Stability Technology (VEST) system reacts to various actions initiated while on the road.

Action	Effect on Volvo Enhanced Stability Technology (VEST)
Step on the brake.	Cruise Control is canceled until = driver pushes "set" or "resume".
Step on the accelerator.	Cruise Control is overridden until the accelerator is released; Cruise control then resumes original set speed automatically.
Turn the cruise control "off".	Maintaining following distance, the driver hears Following Distance Alerts as needed.
Turn the cruise control "on".	Maintaining following distance, and speed.
"Set" the cruise control.	The system is automatically activated, and your vehicle maintains set speed and set following distance from the vehicle ahead.
Cover or block the sensor.	Depending on the type and extent of the blockage, the system is diminished or even disabled. A blockage also affects engine cruise control availability.
Use normal cruise "+/-" switch.	Vehicle speed increased (+) or reduced (-) to achieve the new set speed while actively maintaining the following distance with the vehicle ahead. This state is true if a vehicle is present within 152 m (500 ft).

#### NOTE

The actions presented reflect many, but not all, potential driver actions that can interact with the system.

## ENHANCED CRUISE/ENHANCED STABILITY

### Indications and Warnings

The system is a unique patented system that functions differently than other cruise control/forward collision warning systems. It is important that the driver fully understands system features, especially the driver indications, and warnings.

Two important warnings provided by the system are the Following Distance Alert (FDA) and Impact Alert (IA). FDA warnings alert the driver, whether using cruise control. The driver is only alerted to IAs when in cruise control mode with the system functioning.

#### Following Distance Alert

The Following Distance Alert (FDA) is active whenever the vehicle is moving (whether cruise control is engaged). The alert provides both audible and visual warnings. These warnings occur whenever the following time gap between your vehicle and the vehicle ahead is less than the set time gap and getting closer.

If the following time continues to get shorter, the driver hears beeping that increases in speed. When the time gap reduces to a critical point, Impact Alert telltale illuminates in the cluster.

An icon bar also displays in the instrument cluster. Once the audible

warning is given, the driver must increase the distance between the vehicle and the vehicle ahead until the audible warning stops.

#### NOTE

Any beeping from the VEC system means that your vehicle is too close to the vehicle ahead.

The FDA is accompanied by a “distance alert” icon, displayed in the Instrument Cluster. Once the audible warning is given, the driver must increase the distance between his/her vehicle and the vehicle ahead until the audible warning stops.



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#### Impact Alert Warning

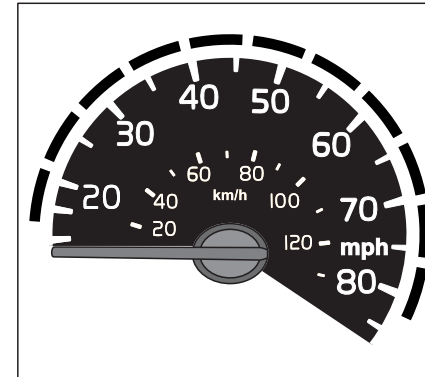
#### DANGER

Ignoring the Impact Alert warning from the VEC can lead to death, personal injury or vehicle damage.

The Impact Alert (IA) is the most severe warning issued by the system. The IA is always active when Volvo Enhanced Stability Technology (VEST) is active. The IA Warning indicates that the driver should apply more braking force

immediately. The instrument cluster illuminates Red LEDs, and a Pop-up comes up requesting the driver act and a continuous tone is sounded.

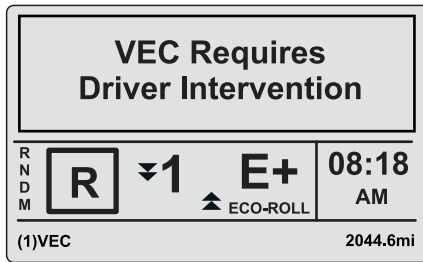
When the IA activates, take evasive action by applying more braking power and/or steering clear of the vehicle ahead to avoid a potential collision.



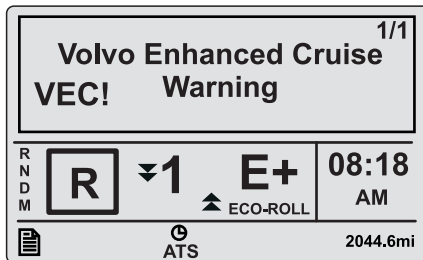
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If an impact alert occurs and driver intervention is required, a continuous audible sound and the “VEC Requires Driver Intervention” screen displays.

## ENHANCED CRUISE/ENHANCED STABILITY



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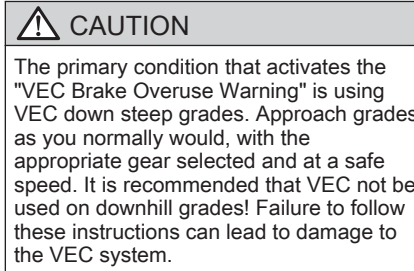


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### Brake Overuse Warning

#### **⚠ DANGER**

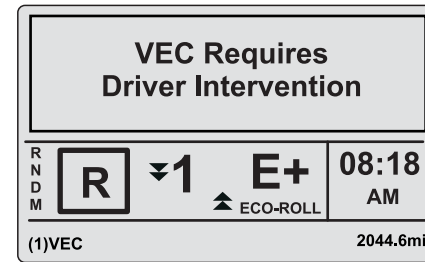
Excessive application of the foundation brakes can cause the brakes to overheat resulting in increasing stopping distances. Increased stopping distances can result in vehicle collision, serious personal injury or death.



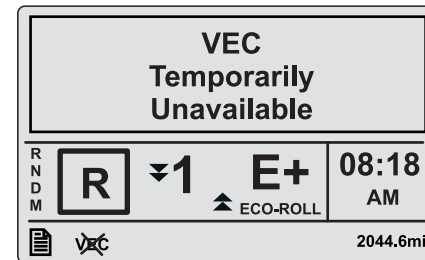
VEC provides a warning when the system is using the foundation brakes excessively. Overuse of the foundation brakes can lead to the brakes overheating and a potential loss of braking performance from brake fade.

For example, the use of VEC on long, steep downhill runs may cause this warning to be activated. The driver should use appropriate gearing and brake techniques, on long, downhill grades.

When the VEC system detects brake overuse, the "VEC Requires Driver Intervention" displays in the DID. After a brief delay, however, if the driver does not respond to the brake overuse warning(s), the VEC will stop functioning and be disabled. The "VEC Temporarily Unavailable" screen displays in the DID. A self-disabled VEC system will be restored the next time the vehicle is started.



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The VEC audible alerts are pre-set in the factory and cannot be turned off, but the volume can be adjusted.

### Potential False Warnings

The VEC system should have significantly less false alerts than earlier systems. Radar technology is not perfect, however, and false alerts sometimes occur. If false alerts occur too frequently (more than twice a day) this may indicate sensor misalignment.

## ENHANCED CRUISE/ENHANCED STABILITY

Service the system at the earliest opportunity. Drivers should take into account the road conditions, and any other factors they are encountering, as they choose how to react to any alerts they receive from the VEC system.

### Operational Notes

#### Passing a Vehicle

When passing a vehicle or changing lanes, the vehicle is no longer tracked by the system.

When the vehicle ahead is out of sensor range and no other vehicle present, after a short safety delay occurs. Then the system accelerates to the last stored set speed.

#### Acquiring a New Target Vehicle

As you approach other vehicles ahead, previously undetected by the sensor, the system automatically locks onto new vehicles and manages the following distance.

#### When No Other Vehicles are Present

When no target vehicle is within range of the sensor, your vehicle will maintain its set speed just like ordinary cruise control. The VEC will continue this behavior until it is either turned off by the operator, a brake application is made, or a vehicle ahead is traveling in the same

lane as your vehicle and comes into sensor range.

#### Tracking Vehicles in a Curve

When taking a curve in the road: In the event that the vehicle ahead is no longer detected as you travel around a sharp curve, the Volvo Enhanced Cruise (VEC) will delay acceleration back to the set speed until it regains contact with the vehicle ahead, or determines that there is no longer a vehicle ahead, after a time gap based on the last following distance recorded.

**Example:** Assume normal cruise control is set at 80 kph (50 mph) and you are following 3 seconds behind a vehicle traveling at 75 kph (45 mph) that just entered a sharp curve. If the vehicle ahead is no longer detected as you travel around the curve, the VEC will delay its acceleration back to 80 kph (50 mph) for 3 seconds. The operator should be especially attentive to the VEC system behavior through curves. In some cases, when traveling around a curve the radar may lose the vehicle ahead and attempt to accelerate when going back into conventional cruise control. It is also possible for the VEC to begin to track vehicles in other lanes when traveling around curves. In the rare case where the VEC system believes that the adjacent-lane vehicle ahead is in fact in your lane, and that unsafe

conditions exist, the system may intervene and begin to make braking applications.

#### Applying the Brakes Manually

If the driver is aware of a possible threatening situation, you should take all necessary and immediate actions; never wait for the VEC system to intervene. Safe operation of the vehicle is the responsibility of the driver. If the driver applies the brakes, cruise control will automatically disengage, and there will not be a VEC intervention if the driver applies more than two-thirds brake application.

#### Approaching Slower Moving Vehicles

When approaching a much slower-moving vehicle ahead, the driver should anticipate this and begin applying the vehicle's brakes early and not wait for the VEC system to intervene.

#### Vehicles Crossing Your Path or Coming Towards You

— The VEC reacts to vehicles moving in the same direction as your vehicle. The system is not responsive to stopped vehicles, side-to-side moving traffic, or oncoming traffic. The system will not slow your vehicle or provide warning as you approach vehicles in these circumstances

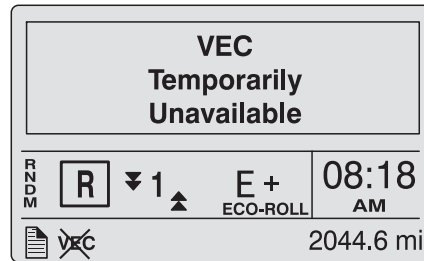
### System Operation Issues

If the Volvo Enhanced Cruise (VEC) system has detected a problem, the Driver Information Display (DID) displays a fault screen. The system also determines, depending on the type of problem detected, if the vehicle may continue to have normal cruise control functions (without the benefits of VEC). If not, disable all cruise control functions until servicing is completed. Service the system as soon as possible to restore full VEC functionality.

When the VEC system is unavailable due to system issues, the following screen and icon display.



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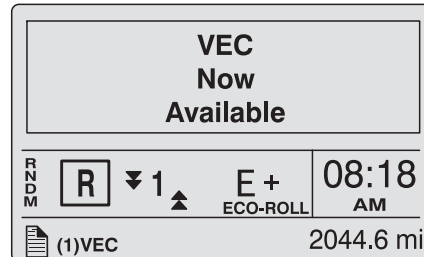


J312967

When the VEC connection is restored, the following screen and icon display.

# VEC

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### Stability System Performance

Importance of ABS Maintenance — The VEC braking requires a properly maintained ABS system. Have any ABS Diagnostic Trouble Codes (DTCs) corrected by a qualified technician at the earliest opportunity.

### System Disruption

If the VEC system has detected a problem, VEC Disabled icon appears and the VEC Temporarily Unavailable DID screen displays. The system will determine, depending on the type of problem detected, if the vehicle may continue to have normal cruise control functions (without the benefits of VEC), or if instead all cruise control functions need to be disabled until servicing is carried out. The system should be serviced as soon as possible to restore full VEC functionality.

When the VEC system is unavailable due to system issues, the following screen and icon displays.

## ENHANCED CRUISE/ENHANCED STABILITY

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### Frequently Asked Questions

- 1 Are automatic foundation brake interventions "always on"? Yes.
- 2 Are the warnings "always on"? Yes. None of the system warnings or alerts will work if the VEC system has detected a problem.
- 3 How can I tell the difference between the different alerts? All alerts where you hear beeping mean that you are following too close to the vehicle ahead. A loud continuous modulating tone means you should actively apply the brakes because the VEC braking capability (one-third of the vehicle's potential braking power) is not enough to ensure a safe following distance. The "Impact Alert" is the most severe warning issued by the VEC system and is only active when the vehicle cruise control is set and the VEC is operational. The Impact Alert Warning indicates that the driver should immediately apply additional braking force or maneuver to avoid, an Impact Warning screen displays in the DID, and a loud continuous modulating tone will sound.
- 4 My current system has a lot of false alerts. How many false alerts can I expect with your system? The VEC system should have significantly less false alerts than earlier systems. Radar technology is not perfect, however, and false alerts sometimes occur. If false alerts occur too frequently (more than twice a day) this may indicate sensor misalignment. Service the system at the earliest opportunity.
- 5 I cannot find a following distance adjustment switch. Can you give me more details about where it is located? The system will typically work without needing any adjustment, by using the preset following distance from the factory. If a following distance adjustment switch is installed at the factory, it is integrated into the end of the turn signal stalk. Consult your vehicle owner's manual for more information.
- 6 Are the brake activations with VEC the same as brake activations I've experienced with most earlier systems? No. In addition to reducing throttle and engaging the engine retarder, the VEC also activates the foundation brakes.
- 7 Does the VEC warn about stationary objects? Yes.



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