

DriveCam Installation



DriveCam Mounting Guidelines

This document provides detailed instructions for mounting the DC3 Video Event Recorder (VER) in a variety of vehicle types and mounting positions, including use of the Standard Mounting Bracket, Extended Mounting Bracket and RAM-Mount Bracket.

Use this document as a supplement to all DC3 Installation Guides

The VER must be mounted in a location that provides an unobstructed view of the interior and exterior (front) of the vehicle. Ideally, the interior-facing lens should capture a view from the outside shoulder of the driver to the outside shoulder of a front seat passenger. The exterior-facing lens should capture a clear view of everything in front of the vehicle, beginning as close to the front of the vehicle as possible without cutting off the horizon.

Important Considerations:

Vehicle Type: Passenger car, light or heavy truck, bus or coach, dump truck or mixer, tractor trailer, etc. Each of these vehicle types typically requires different considerations when selecting a mounting location. Some brackets are better suited for specific vehicle types.

Lens Obstructions: Sun visors, windshield wipers, window tint, circulation fans, mirrors, etc. Be aware of any object that could potentially block the interior or exterior lens and mount the VER in a location clear of all obstructions.

The Driver's View of the Road: The VER cannot be mounted in an area that blocks the driver's view of the road.

Adherence to Applicable Laws & Regulations: Some jurisdictions (including California, New Jersey and Florida) have adopted laws that prohibit or restrict the mounting of objects on a vehicle's windshield. If you plan to operate your vehicle in such jurisdictions and no federal exemptions apply, DriveCam recommends the use of the Extended Mounting Bracket and/or the RAM-Mount Bracket.

- See page 3 for federal exemptions and approved mounting locations on the vehicle windshield and refer to the DriveCam Mounting Regulations for detailed information. See page 7 for links to all **DriveCam Installation Guides**.
- Contact **DriveCam's Implementation Planning team** (implementationservices@drivecam.com) for additional assistance or if federal or state restrictions impact the mounting of VERs in your vehicles.

Available Brackets:

Standard Mounting Bracket: Allows you to attach the VER to the vehicle **windshield**. The bracket is attached with high-strength tape. This is the most commonly used bracket and typically provides the best solution. See pages 2-3.

Extended Mounting Bracket: Allows you to attach the VER to the vehicle **bulkhead** or **ceiling**. The bracket is attached with screws. This is typically used in large commercial vehicles with bulkheads above the windshield. See page 4.

RAM-Mount Bracket: Allows you to attach the VER to a wide variety of surfaces and positions. This bracket is attached with high-strength tape, epoxy or screws. See pages 5-6.

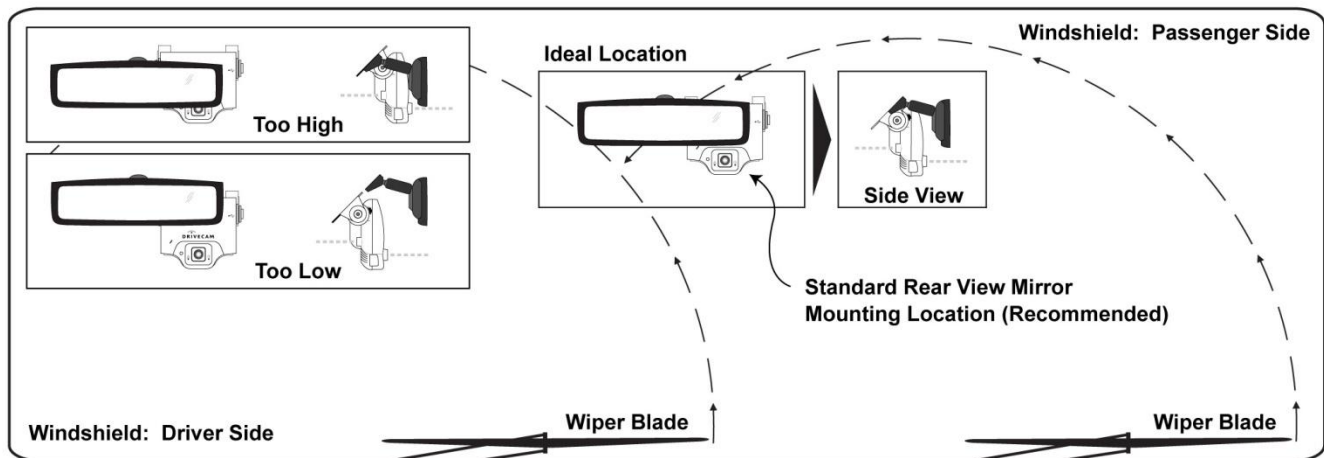
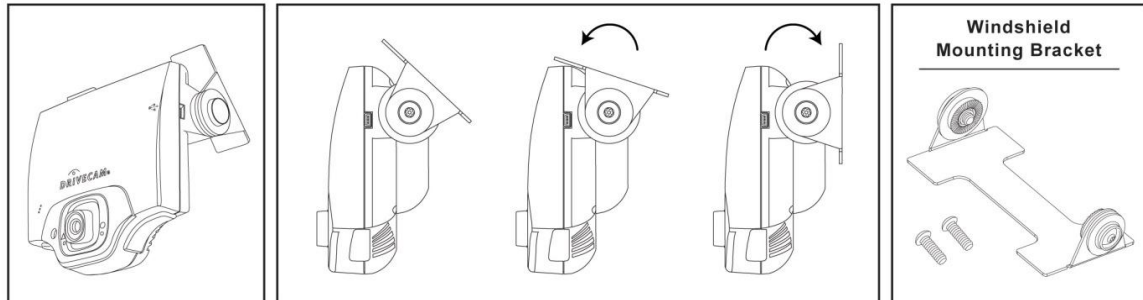
Additional Options:

Articulating Interior Lens: The VER's interior-facing lens can be adjusted to focus on different areas within the vehicle. Though not always necessary, it allows you to adjust the lens to capture the best internal view. See page 7.

Mounting the Standard Bracket behind the Rear View Mirror

The Standard Mounting Bracket allows you to attach the VER directly to the vehicle windshield. The bracket can be rotated to fit slanted windshields (e.g. cars) or vertical windshields (e.g. buses). It is attached with high-strength tape that cannot be easily removed. This placement positions the VER in the most optimal location for the program and is the recommended standard, unless the vehicle will be operated in jurisdictions where such mounting is prohibited.

The following recommendations apply to vehicles with standard rear view mirrors



Vehicles with Standard Rear View Mirrors (sedans, small to mid-sized trucks) should mount the VER so that the interior-facing lens “peeks out” from under the rear view mirror *unless* the location is not allowed in your jurisdiction. These smaller vehicle types may or may not be impacted by the regulatory restrictions described on the previous page.

COMMON MISTAKE: The rear view mirror can potentially block the interior-facing lens. To avoid this, make sure to adjust or move the mirror down to its lowest position before selecting a mounting location. Keep in mind that the mirror typically pivots on two points – one on the windshield and one on the back of the mirror.

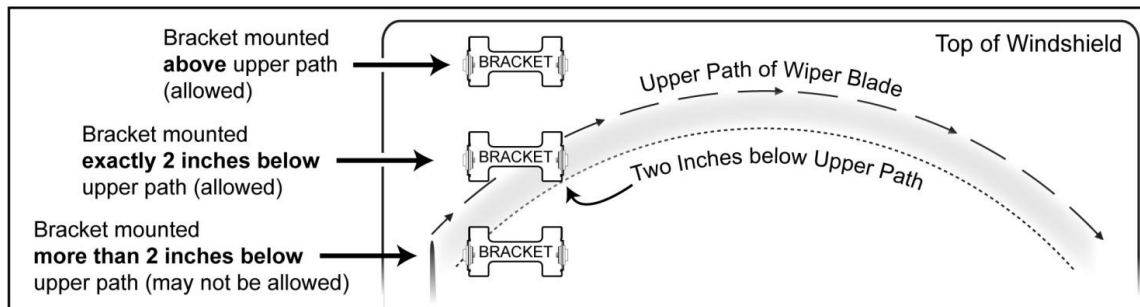
1. Loosen the Torx screws so the VER can rotate in the bracket.
2. Adjust or move the mirror down to its lowest position. Most rear view mirrors can be adjusted up or down. Before selecting the mounting location, adjust the mirror all the way down so that it cannot cover the lens after mounting.
3. Position the assembly behind the mirror, about one inch to the passenger side of the post. This will allow easy access to the Torx screw and power connection.

This mounting option is described in greater detail in the DC3 Installation Guides

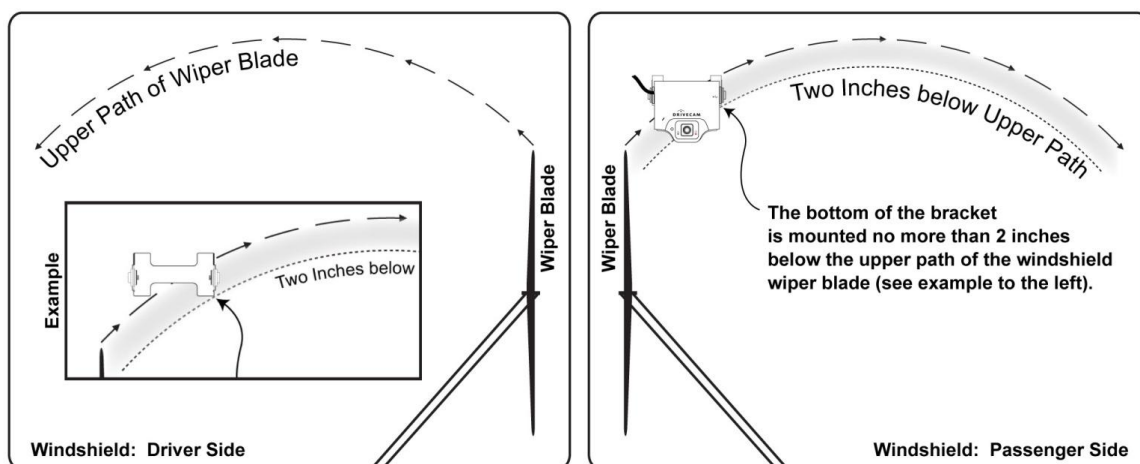
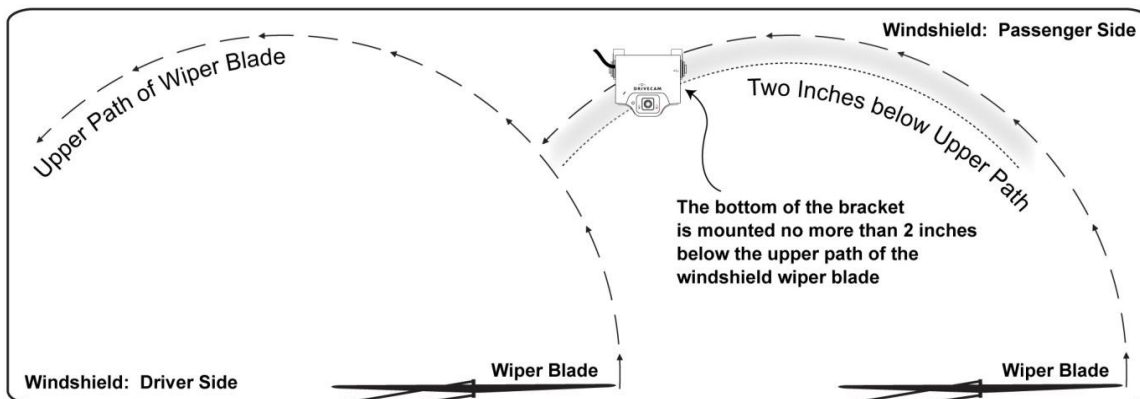
Windshield Mounting Options (Restrictions & Recommendations)

Some states have adopted laws that restrict locations where objects can be attached to the vehicle windshield. The figures below provide recommendations for mounting the VER on the vehicle windshield that work within the guidelines set forth by the **Federal Motor Carrier Safety Administration (FMCSA)**. The Two-Inch Bracket Allowance is a federal exemption for DriveCam Video Event Recorders. Refer to the DriveCam Mounting Regulations for detailed information.

The following recommendations apply to most commercial motor vehicles



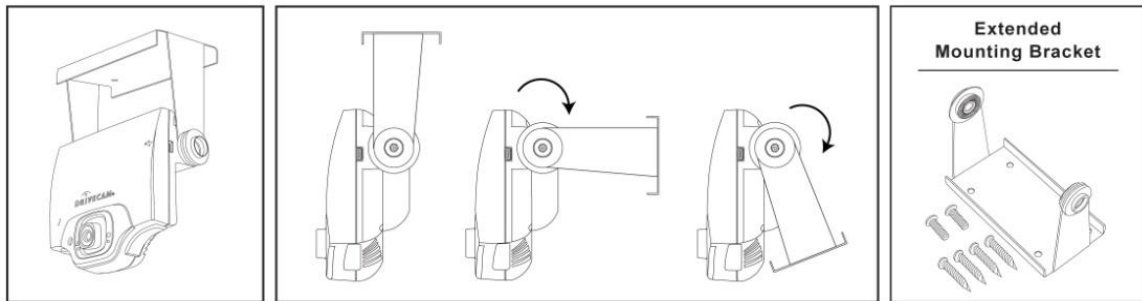
FMCSA Two-Inch Bracket Allowance: Allows the bracket to be mounted anywhere above the path of the windshield wiper blades or within (but not lower than) **two inches of the upper edge of the area swept by the windshield wipers**, provided that the VER is located outside the driver's sight lines to the road and highway signs and signals.



Larger commercial motor vehicles should mount the VER near the center of the windshield on the passenger's side, with the **bottom of the bracket** placed in the "allowed" locations as described above.

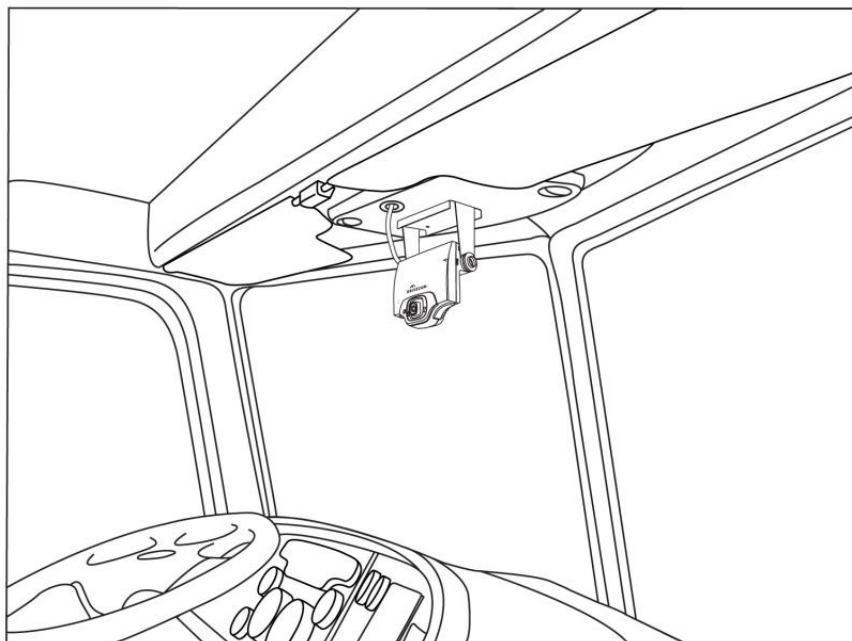
Mounting the Extended Bracket on the Bulkhead or Ceiling

DriveCam's Extended Mounting Bracket is most commonly used in large commercial vehicles where the windshield mount is not always an option. It is also used in vehicles operating in jurisdictions where windshield mounting is restricted. The bracket can be rotated, but is usually hung vertically as close to the windshield and center of the vehicle as possible. There is no tape on the bracket. Instead, four small screws secure it to a bulkhead or ceiling. Adjustment of the interior lens is often required when using this bracket (see page 6).



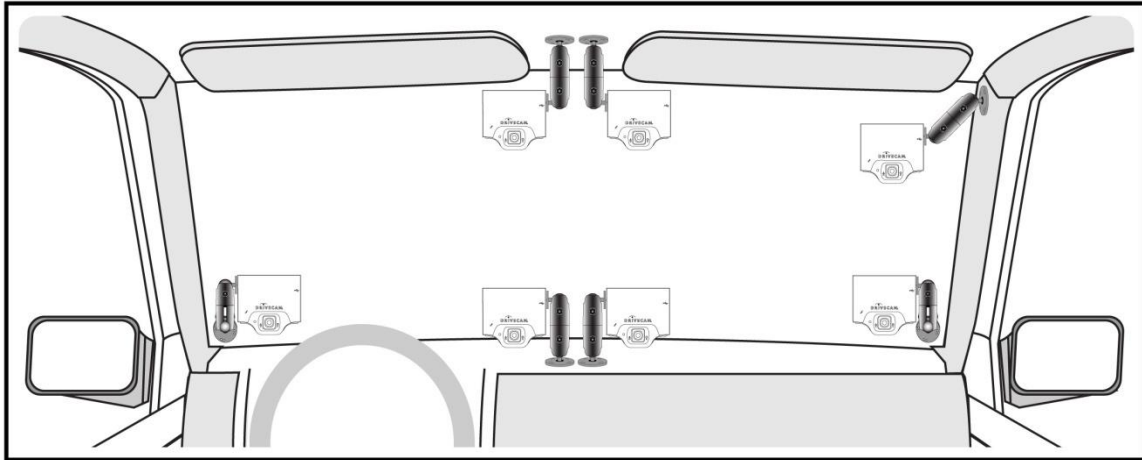
COMMON MISTAKE: Large commercial vehicles often have many objects near the top of the windshield (e.g. large sun visors, window tint, circulation fans, etc.) that can block both the interior and exterior-facing lens. To avoid this, you must carefully consider the mounting location. Hold the VER in a potential location while rotating sun visors, running windshield wipers, etc. until you are certain that the location cannot be obstructed.

1. Loosen the Torx screws so the VER can rotate in the bracket.
2. Position the assembly as close to the windshield and center of the vehicle as possible.
 - Make sure the VER does not block the driver's view of the road
 - Make sure the exterior-facing lens has a clear view out the windshield (look for obstructions)
 - Make sure the interior-facing lens cannot be blocked by sun visors or other objects
 - Make sure the mounting surface is solid, can be safely drilled, and the bracket attached securely with screws
3. Mark the position and pre-drill the screw holes. Be careful not to drill or screw into wires or other components.



Using the RAM-Mount Bracket

The RAM-mount bracket is ball and socket mounting system that can be mounted practically anywhere in the vehicle. It can be attached to the windshield, hung vertically from the bulkhead or ceiling, positioned upright on the dashboard or angled from a side pillar.



By loosening the two Torx screws on the bracket, it can pivot and rotate to practically any angle. It can be attached to the vehicle windshield or other flat, smooth surface with high-strength tape (provided) or epoxy (not provided) or attached to any other surface with screws (not provided). This bracket provides the widest variety of mounting locations.

Center Dashboard

Advantages: Minimal or no impact on the driver's view of the road in large vehicles. Can be attached to the dashboard with adhesive tape in most vehicles; no need to drill or screw into the dashboard.

Considerations: May impact the driver's view of the road in smaller vehicles (sedans, small trucks, etc.). May impact the driver's use of the manual trigger buttons on the bottom of the VER; a Remote Pushbutton may be installed to give the driver easier access to manually triggered events.

Roof or Bulkhead

Advantages: Minimal or no impact on the driver's view of the road. Easy access to the manual trigger buttons.

Considerations: Screws into the roof/ceiling or bulkhead may be required. May not be practical in vehicles with fabric headliners; the roof/ceiling or bulkhead type will determine if screws or adhesive is required.

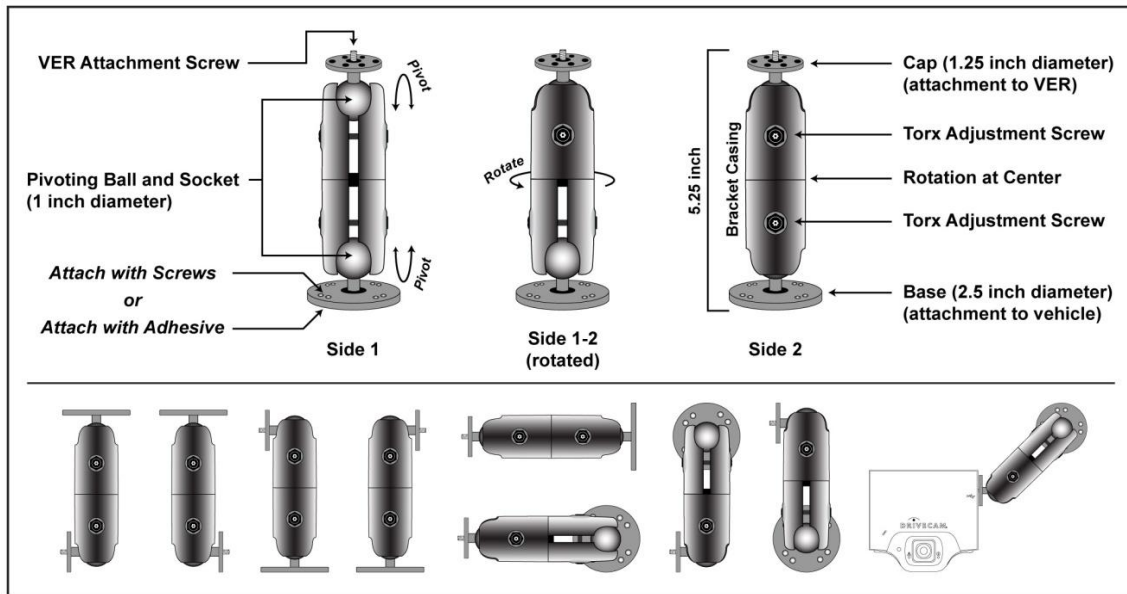
Corner Mounting – This includes the lower right or left windshield placement

Advantages: On left side mount, the internal view of the driver is not severely impacted. Lower right and left windshield corners have exceptions for mounting in the state of CA.

Considerations: Some of the right side views (both interior and exterior) are impacted by this placement. Right side mounts put the manual trigger buttons out of reach of the driver and may require a Remote Pushbutton. The side mount option has different impacts depending on what side of the on which the VER is mounted.

Bracket Specifications & Installation

1. Use the Torx wrench (provided) to loosen both Torx adjustment screws on the side of the bracket until the balls can pivot freely in the sockets and the two halves of the casing can be rotated.



2. Screw the bracket's VER attachment screw into either the left or right side of the VER.
3. Position the assembly (bracket and VER) in various locations within the vehicle to determine the ideal placement. Keep in mind where and how the base of the bracket will be attached (tape, epoxy or screws).
4. When you've found the best location, mark the position of the base with a pen or pencil.
5. Remove the bracket base by loosening the Torx screw enough that the ball can be pulled from the lower socket.
6. Attach the base securely to the vehicle:

Attachment with High-Strength Tape (provided) or High-Strength Epoxy (not provided):

High-strength tape works well on glass or other smooth, flat surfaces. However, it may not adhere firmly to vinyl, plastic or curved surfaces. In these cases, you may want to use a high-strength epoxy (quick-set) or screws to attach the bracket to the surface. Be aware that this will damage the surface where the bracket is mounted.

- a. **IMPORTANT:** Clean the bottom of the bracket base with an alcohol wipe to remove any residue.
- b. Peel the backing from one side of the double-sided tape.
- c. Press the tape firmly to the bottom of the bracket's base.
- d. Peel the backing from the other side of the tape.
- e. Press the bracket's base firmly onto the position marked in step 4.

Attachment with Screws (not provided):

- a. Hold the bracket's base on the position marked in step 4.
- b. Line up the screw holes so that at least three screws can hold firmly into the mounting surface.
- c. Mark the screw holes with a pen or pencil then pre-drill the holes.
- d. Screw the base firmly onto the mounting surface.

7. Reconnect the bracket to the base from step 5.
8. Pivot and/or rotate the bracket so that the VER is in the ideal position.
9. Hold the assembly while you tighten both Torx screws on the bracket. Make sure the assembly is secured firmly and cannot be moved.

Additional Information

DriveCam Technical Support is available 24 hours / 7 days at (866) 910-0403.

For international assistance please call (858) 380-3007. Or, email questions to support@drivecam.com

Technical Support Information is also available online at <http://www.drivecam.com/resource-center/technical-support>

DriveCam Installation Guides are available online at <http://www.drivecam.com/resource-center/installation-how-to-guides>

DriveCam Parts Ordering is available online at <http://drivecam.force.com/partsorders>

Removing a Bracket from the Vehicle Windshield

Use the following procedures to remove a mounting bracket that has been attached with high-strength tape. You'll need the Torx wrench that was shipped with your first order to remove the VER from the bracket and a 3M Tape Removal Tool (or a thin putty knife) to remove the bracket from the windshield or panel. These items can be ordered from DriveCam.

CAUTION: Do not try to pull or pry the bracket off the windshield. It will destroy the bracket and may break the windshield.

Removing the VER from the Mounting Bracket:

1. Remove the left Torx screw completely.
2. GENTLY pull down on the left side of the unit (try not to trigger the unit) and unplug the power cable.
3. Remove the right Torx screw completely then remove the VER from the bracket.

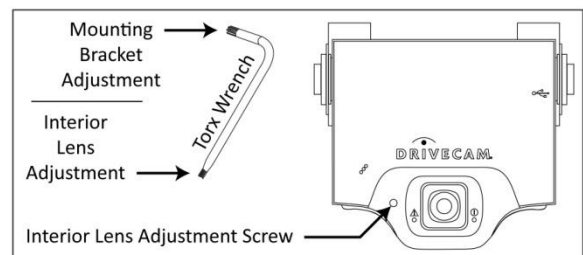
Removing the Mounting Bracket from the Windshield:

1. Use the 3M Tape Removal Tool or a broad, very thin putty knife.
2. Apply a small amount of lubricant (e.g. WD-40) to both sides of the blade.
3. Slide the blade between the bracket and the window and gently rock the blade back and forth while pushing forward until the bracket is completely removed.

Adjusting the Interior-Facing Lens

The interior-facing lens on the DC3 VER can be rotated up to 15 degrees in all directions. This allows you to "point" the lens to focus on different areas of the vehicle interior. This is not typically required when the VER is mounted on the windshield, near the center, at about eye level. In this position, the VERs wide-angle lens will usually capture the optimum internal view. However, if the VER is mounted off to one side or up higher than eye level, the interior lens may need to be re-adjusted.

1. Use the small end of the Torx wrench to loosen the interior lens adjustment screw.
2. Adjust the interior lens to the desired angle.
3. Tighten the interior lens adjustment screw securely so that the lens cannot be moved.



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