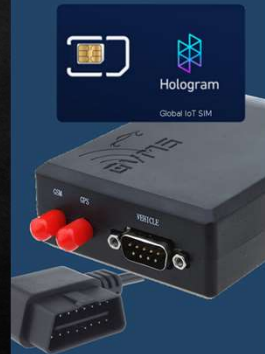


OVMSv3 Hardware Installation Pictures



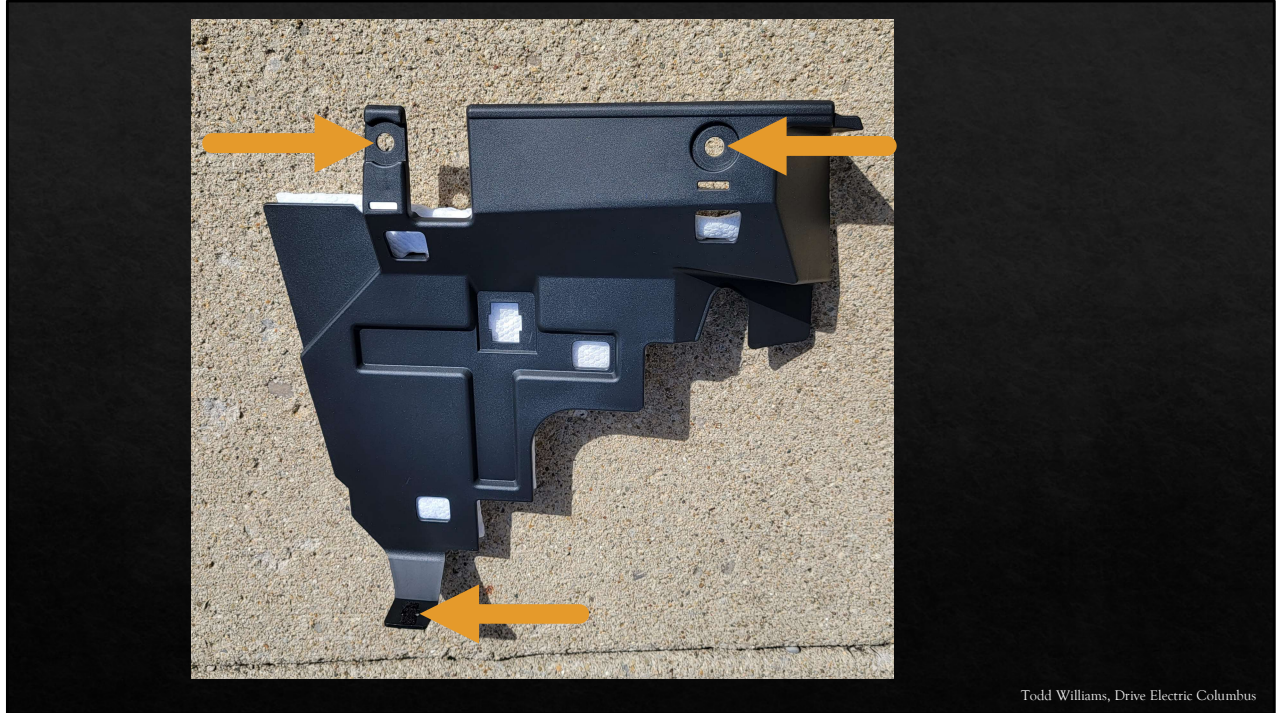
Open Vehicle Monitoring System



Todd Williams, Drive Electric Columbus

Driver's Side (OBD2 Plugs)

Todd Williams, Drive Electric Columbus



Todd Williams, Drive Electric Columbus

LEAF Driver's foot panel removed, attachment locations shown.

Take out the push-pins (x2 arrows above) with a Phillips screwdriver and trim tool, then remove the rear plastic nut (x1 arrow below). Unscrewing the nut should only require a finger and thumb. Save these pieces for later. The panel will drop down and can be pulled out and away from the protruding screw at the very back of the footwell from which you removed the plastic nut.



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LEAF Driver's side foot panel (opposite side, turned over)

Clip attachment locations, you will have to gently pull down on the panel to pop loose the clips.

Use your plastic trim tool if you start to struggle once the push pins are removed and the nut is off.



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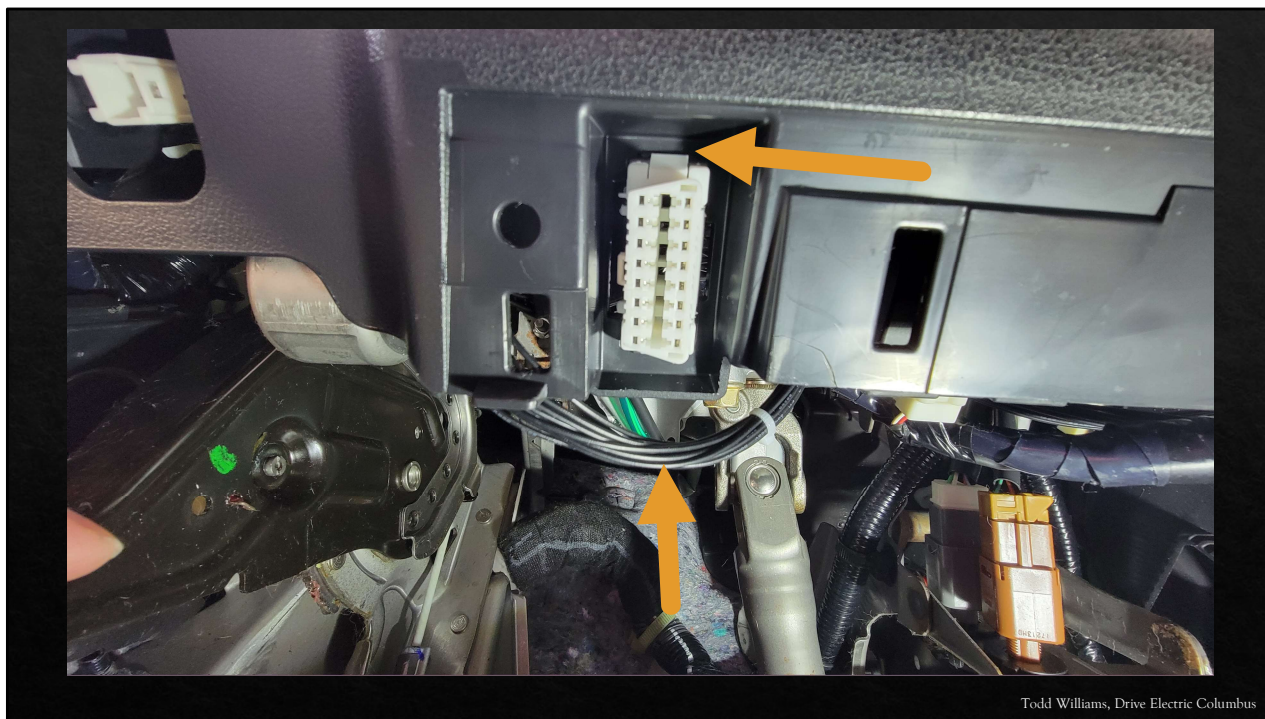
LEAF - Showing Driver's Side foot/knee panel removed

Left: Original Manufacturer's OBD2 port

Right (Top): Connection to OVMS OBD2 cable and OBD2-splitter end

Right (Side): Footwell panel, trim attachment push-pin with plastic screw

Yellow box: Where you'll find the only nut we have to remove (by hand)



LEAF - Factory OBD2 connector (with matching clips) showing the replacement plug (middle) installed

Remember the "larger" side of the "D-shaped" OBD2 connector goes to the right (center/console)

Extra wire shown by arrow below (not yet zip-tied)



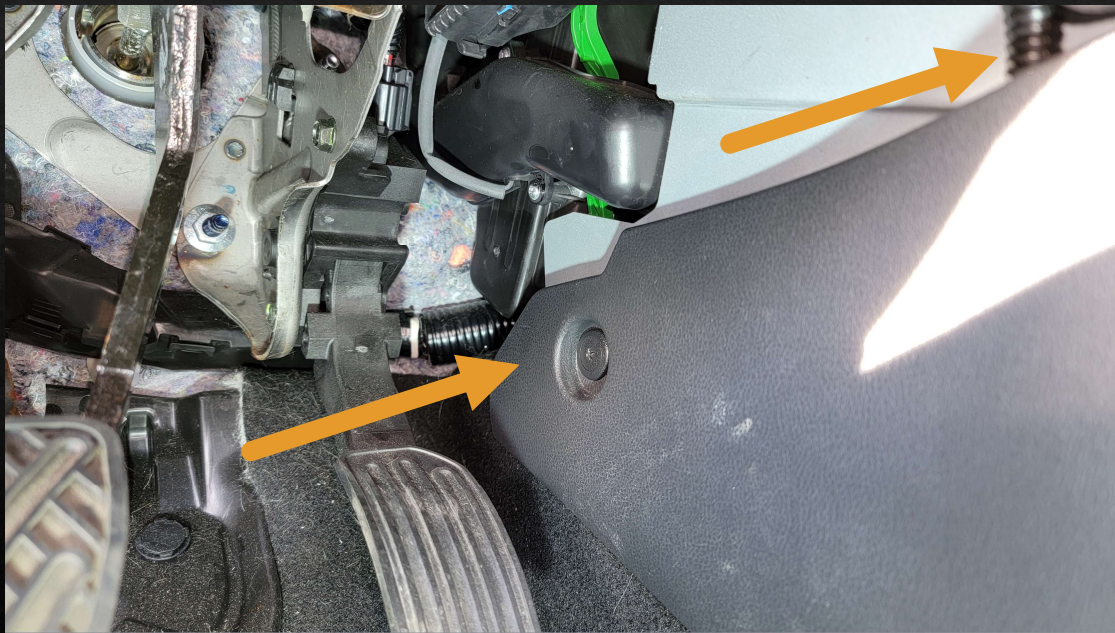
LEAF - View from below, within the driver's side foot well, looking back at the driver's seat...

Left side arrow is the OVMS OBD2 attached to the end of the OBD2-splitter

Right side arrow is the original OBD2 port location with splitter wire

-- Not yet zip-tied here.

Be sure to ZIP TIE excess cabling to avoid potential interference with steering and braking operations



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LEAF

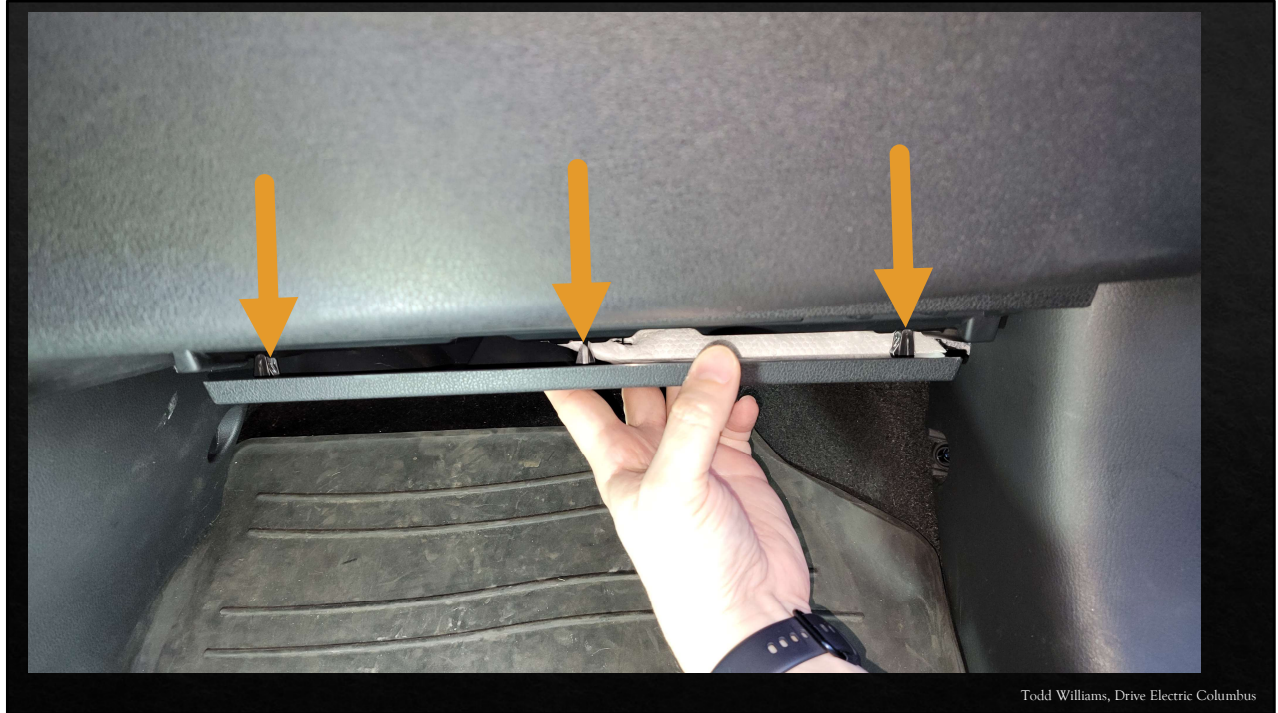
- 1) Remove the push-pin to flex the driver's console floor panel enough to route the OBD2 cable with Split Loom covering down into the panel where space allows (right upper arrow) 2) Then take and push the DB-9 connector end through the gap behind the center console against the firewall. 3) Run the entire remaining length of cable behind the center dash panel where the left arrow indicates. Having someone with smaller fingers on the other side to receive the DB-9 connector and to gently pull the remaining wire through is a huge help. 4) You may want to wait before buttoning up the panel piece here, but don't forget to do it at some point!



LEAF – Driver's side foot well with trim piece re-installed, the beveled end of the foot trim piece can be a bit of a challenge to work around with the plug, but this seemed to be a safe place for the connector.

Passenger Side (Everything else)

Todd Williams, Drive Electric Columbus



LEAF Passenger side Lower Glovebox foot panel cover (prior to removal) with the glove box door still in place, panel clips indicated by arrows. There are also two enclosed “finger holes” in this panel with additional panel clips higher up to hold the panel in place within the glove box cavity.



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LEAF Passenger side Lower Glovebox foot panel cover after removal, arrows indicate finger holes also useful for re-installation and panel alignment



Todd Williams, Drive Electric Columbus

LEAF Empty the Glove Box!



Todd Williams, Drive Electric Columbus

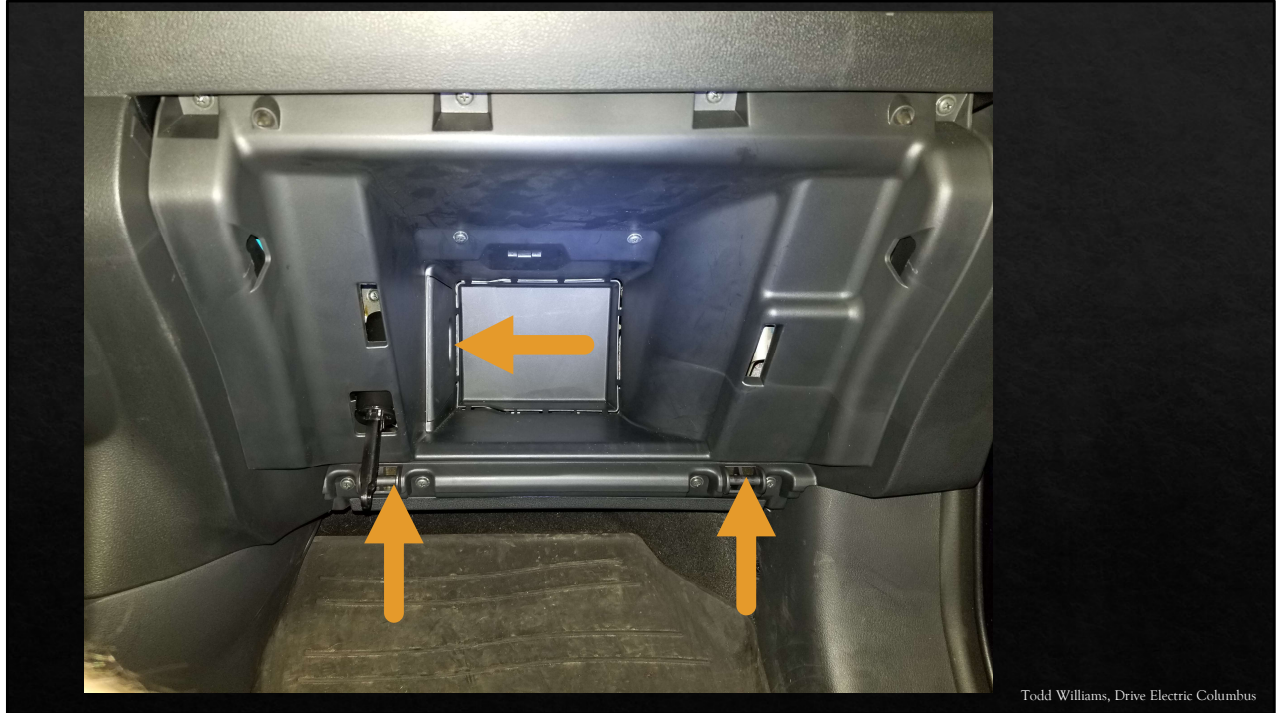
LEAF – Glove Box Door Hinge Damper & Clip

NOTE: Remove carefully by depressing raised portion of the clip and gently slide the dampener rod off of the left side

(Not required if you do not plan to remove the glove box door itself.)



LEAF – Glove Box Hinge Damper – Plastic Spring Clip disconnected



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LEAF – Glove Box – All ten screws to be removed are viewable after the glove box door is unclipped from the hinges and damper. HOWEVER – You do not need to remove the glove box door if you don't want to, it can stay (closed) as a complete assembly. Upper arrow points to the removable cover/hatch, lower arrows point to glove box door hinge clips (with door removed).



LEAF – Glove Box interior, removable flap cover on left



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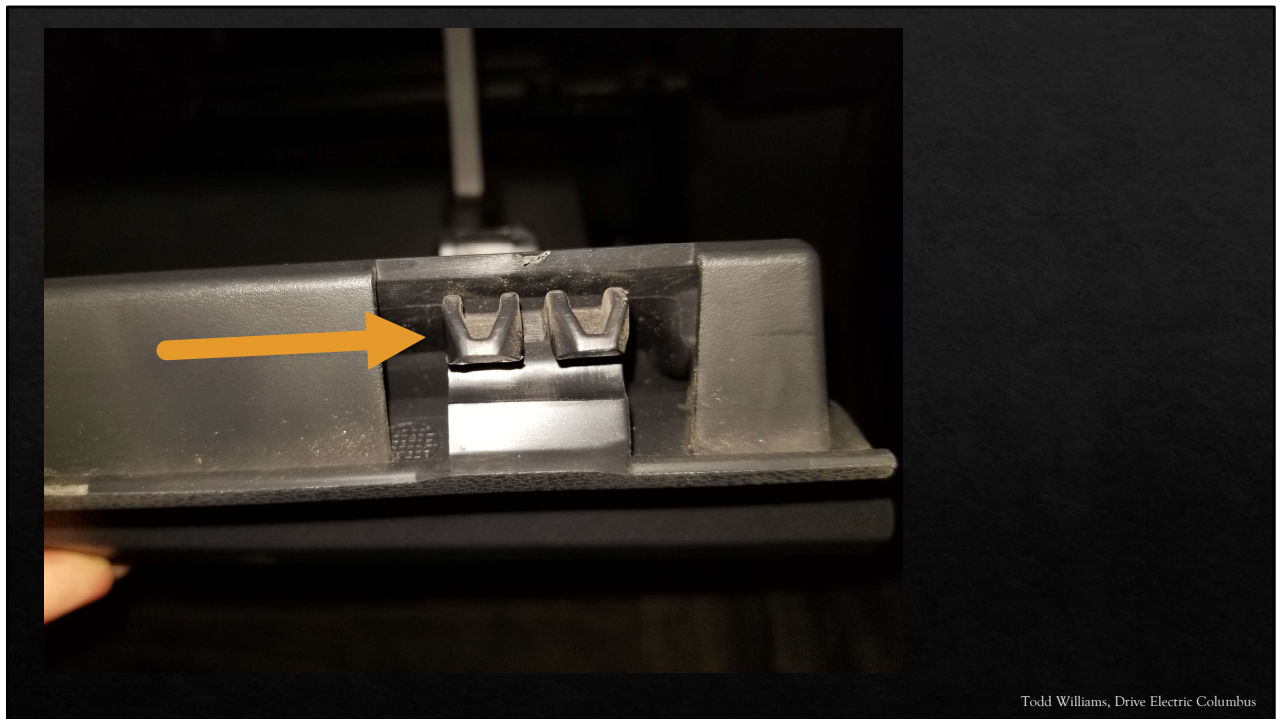
LEAF – Glove Box interior, hidden secret door (removed) – an inside view of the cover door
This cover can be used to hide access to the dedicated USB Micro Cable connected to the OVMS box.

There is nothing else useful behind this cover, at least not on my 2017 LEAF.



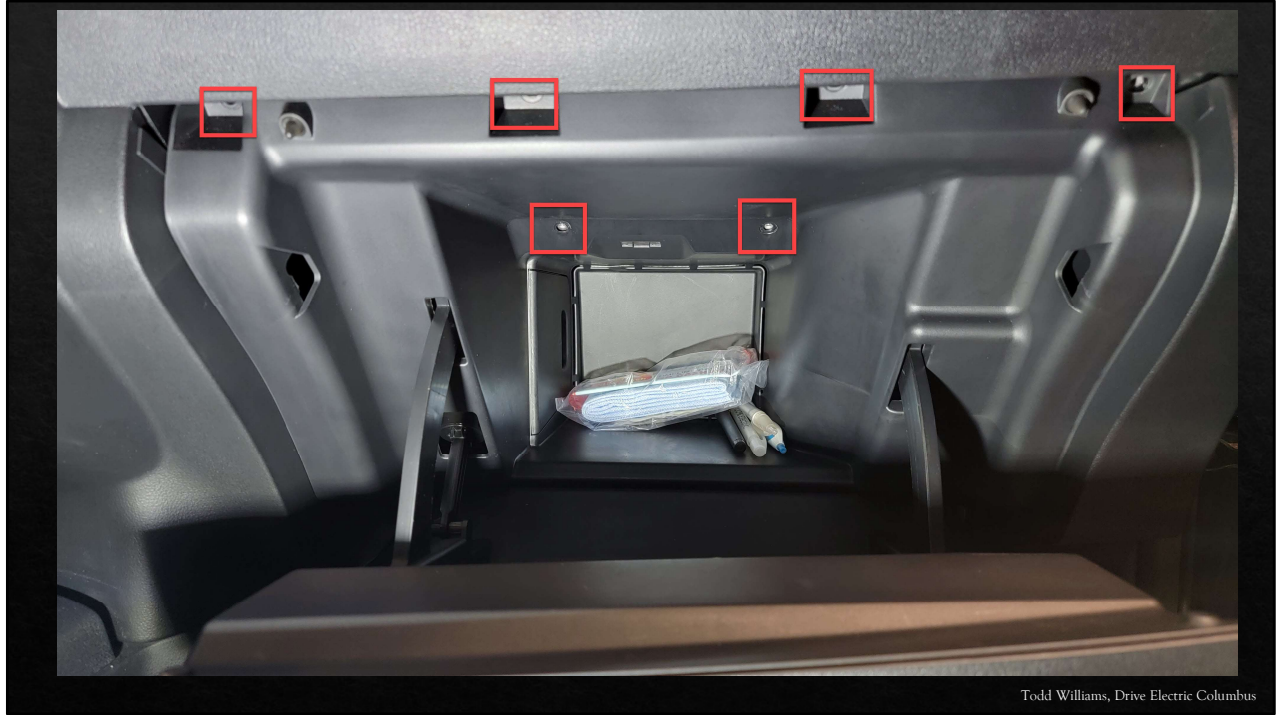
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LEAF – Glove box door hinge side (one of two)



Todd Williams, Drive Electric Columbus

LEAF - Underside view of Glove Box Door hinge clip, be careful if you do decide to remove the door -- clips on both sides of the door from the hinge swivel points



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LEAF Glove Box Upper Screw Locations, remove all 6



LEAF

- 1) Glove Box Lower Screw Locations (shown here with glove box door removed). Remove all four screws.
- 2) Arrow points to Passenger side Lower foot panel cover below the glovebox (must be removed, two finger holes with clips on the upper ends). Remove the lower panel



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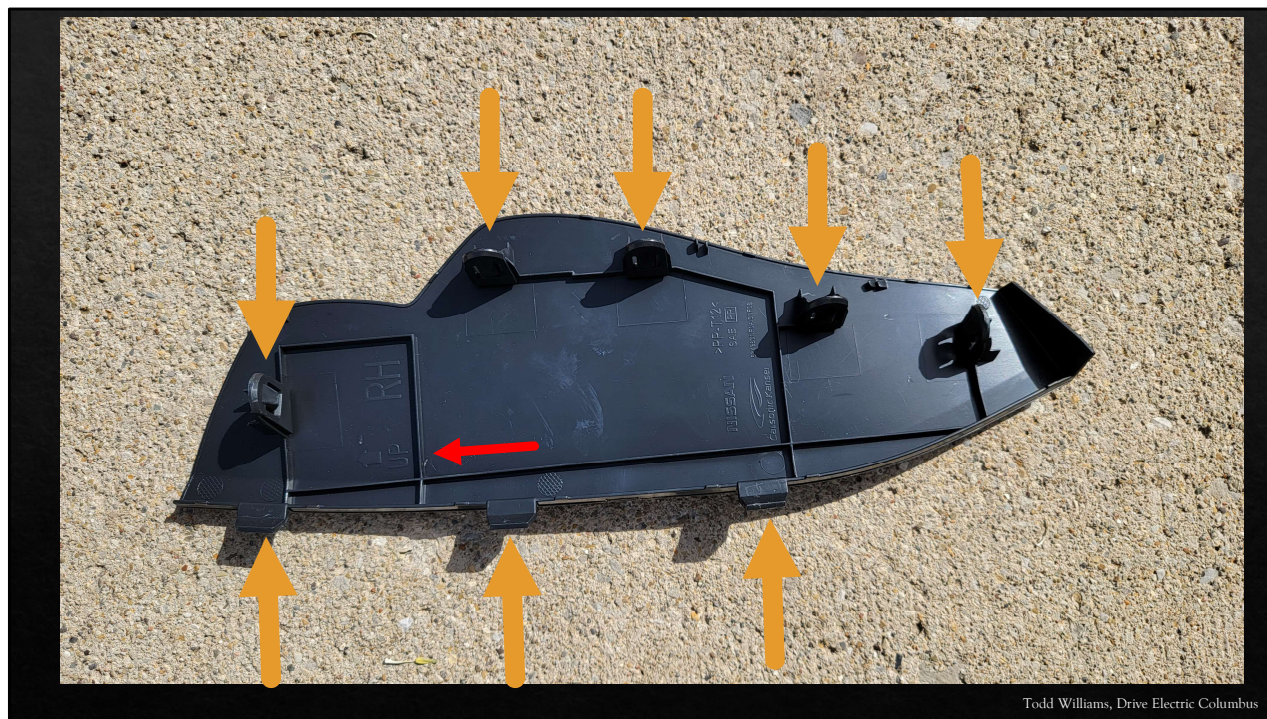
LEAF Glove Box Compartment Side, arrows indicate the glove box assembly tab/clips which hold the glove box assembly in place. If you find you are somehow unable to GENTLY remove the entire glove box assembly, you may have to remove the door end cap panel piece to free these two attachment points.



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LEAF Glove Box Compartment Side Cap and Trim Clip Locations – Removal makes glove box removal easier

- NOTE: Watch out for the tab on the bottom of this piece when you're removing the end cap with a trim removal tool



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LEAF Passenger side, glovebox side panel cover after removal – tabs (3 lower arrows) and clip (5 upper arrow) locations
(Tabs on the lower side of the picture -- are inserted into slots next to the door trim, the other tabs are plastic clips)

Red arrow indicates up, RH indicates passenger Right Hand side.

Re-installing this piece can be a bit aggravating!

LEAF Cabin Air Filter

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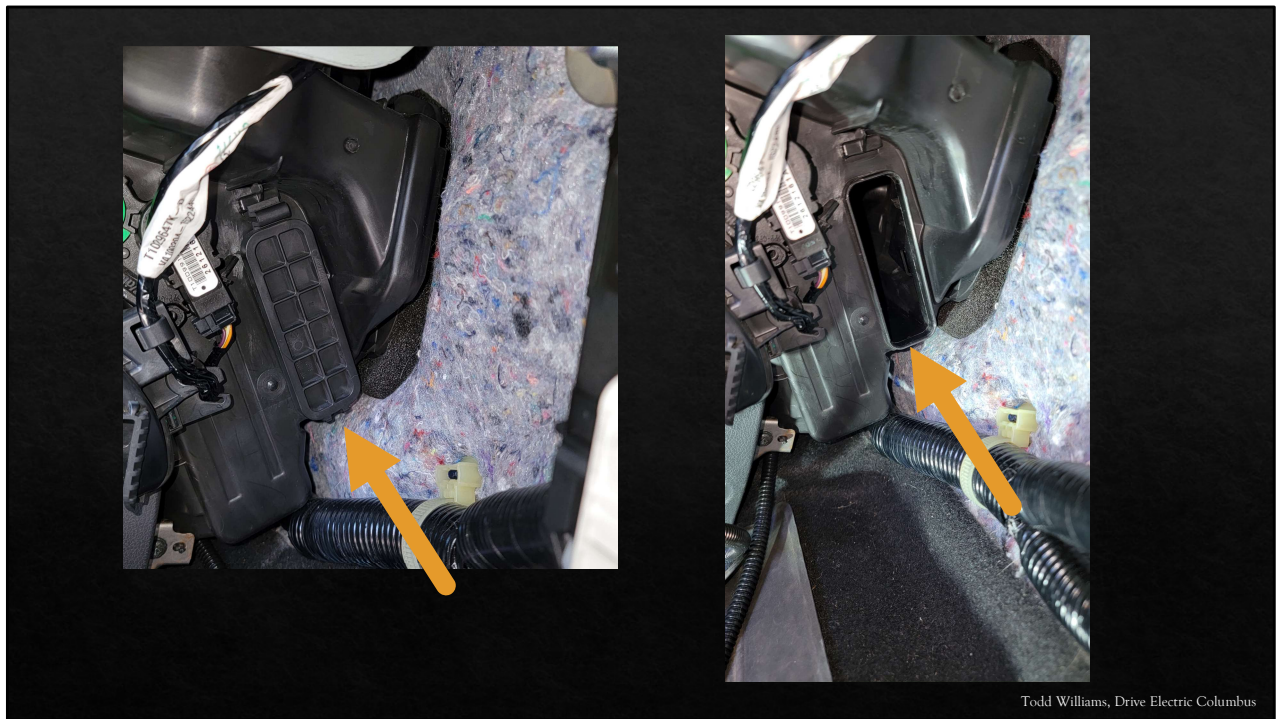
Might as well do this while we're here and going through the effort of taking everything apart.



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LEAF Glove Box Assembly Removed

Location of Cabin Air Filter - far forward within the glove box hold, right next to the firewall at the front of the passenger foot well



LEAF Cabin Air Filter cover location, close-up also indicating air filter cover removed on the picture on the right

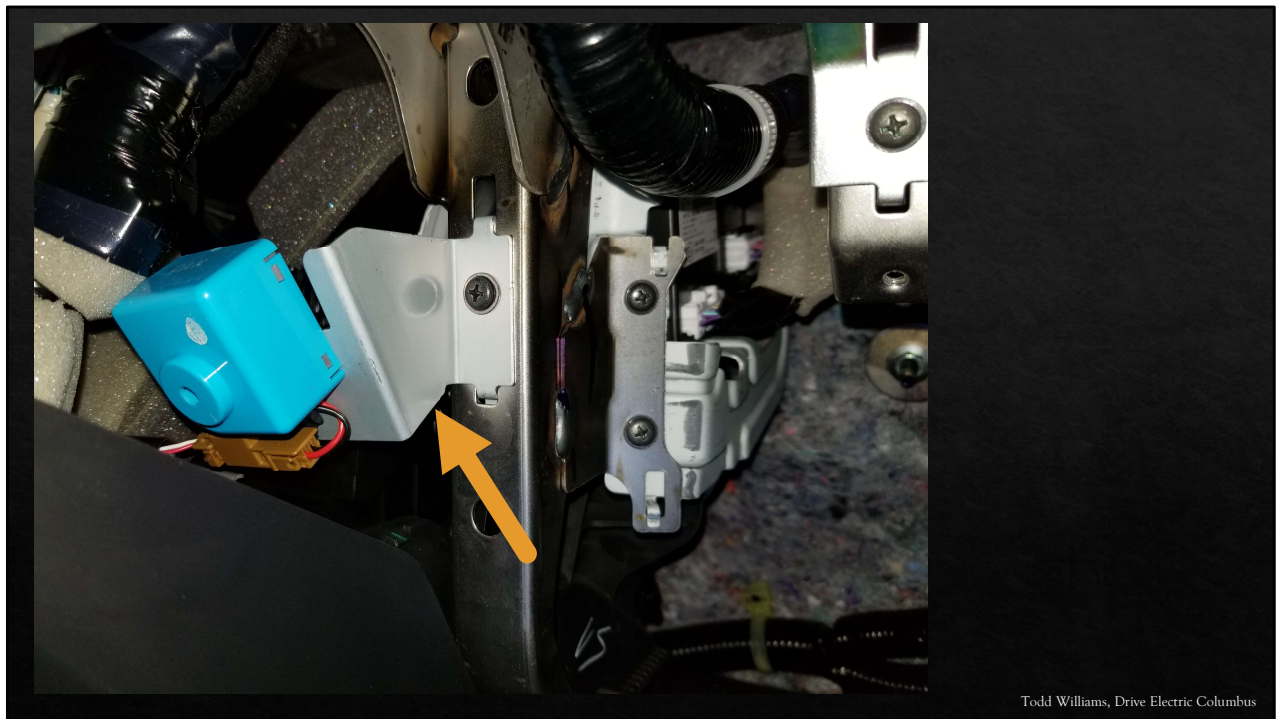


LEAF Cabin Air Filter comparing air filter size (size of the HOLE since the compartment cover is sitting on top of the filter.

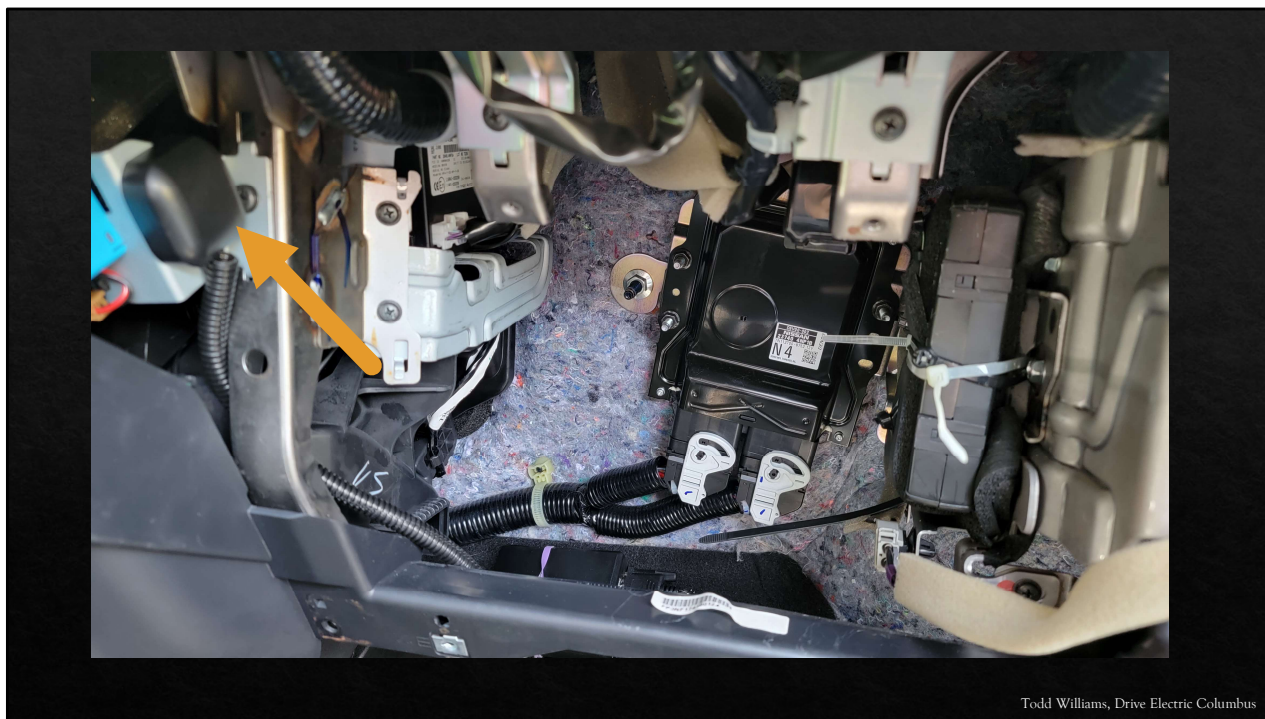
Right picture shows the replacement Cabin Air Filter Installed. Make sure you install the filter the right way... (Look for airflow arrows, and the tab should be facing outward. The filter removal tab (shown by arrow on the right) needs to remain reachable for the next filter change!

Passenger Side GPS Antenna Installation

Todd Williams, Drive Electric Columbus

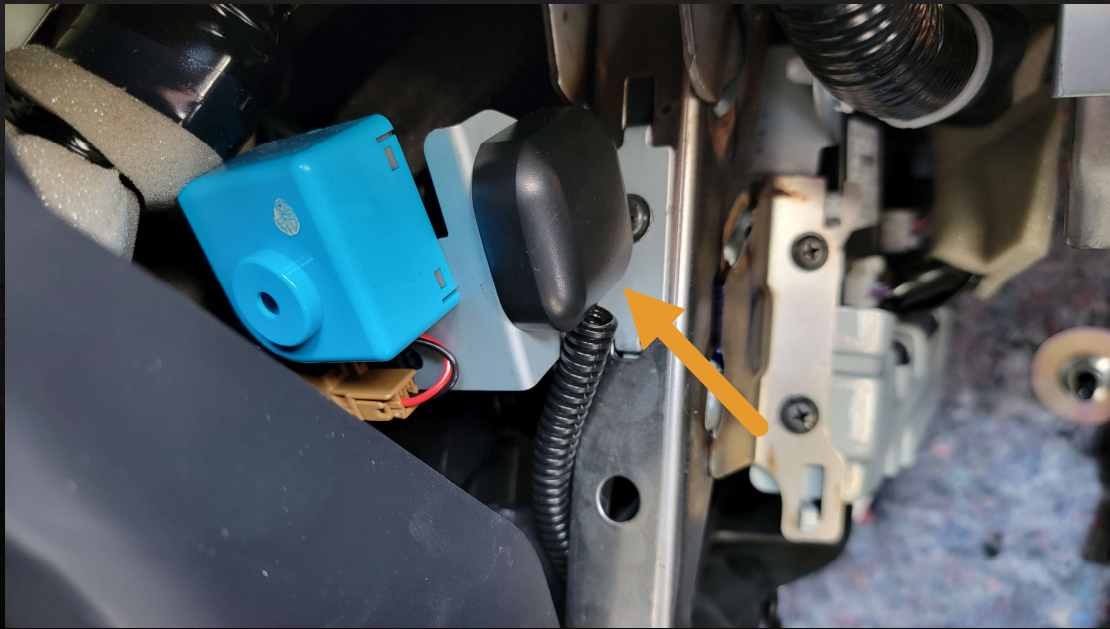


LEAF – Perfect location for magnetic GPS antenna mount (Left side of glovebox assembly “hole” – close-up view)



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LEAF GPS Antenna Magnetic Mount Installation Location – broader view, with antenna magnetically attached



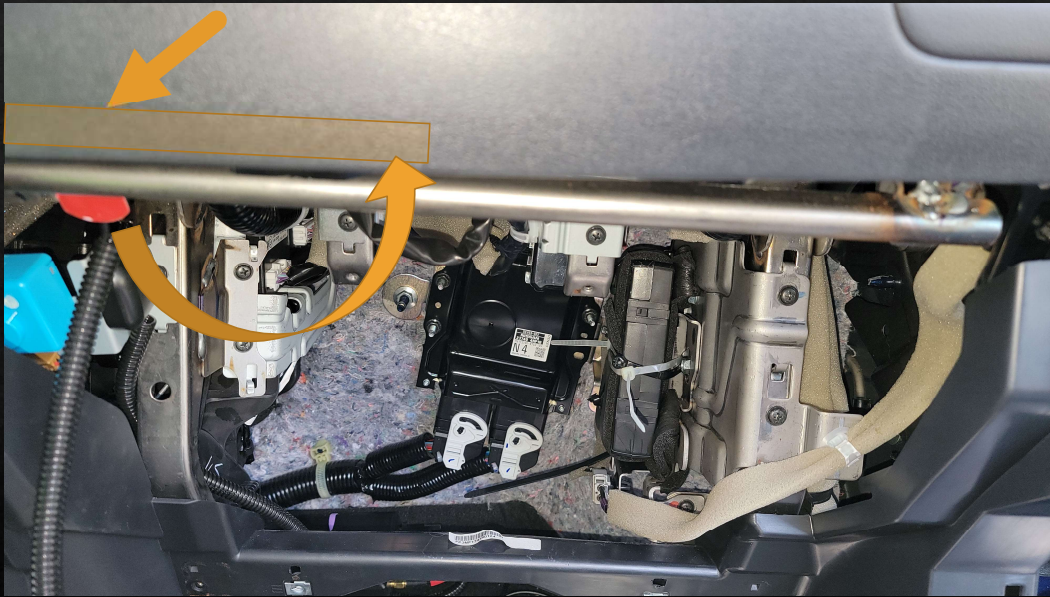
Todd Williams, Drive Electric Columbus

LEAF GPS Magnetic Antenna mount close-up, wire routing shown with wire and loom routing

Passenger Side GSM Antenna Installation

Todd Williams, Drive Electric Columbus

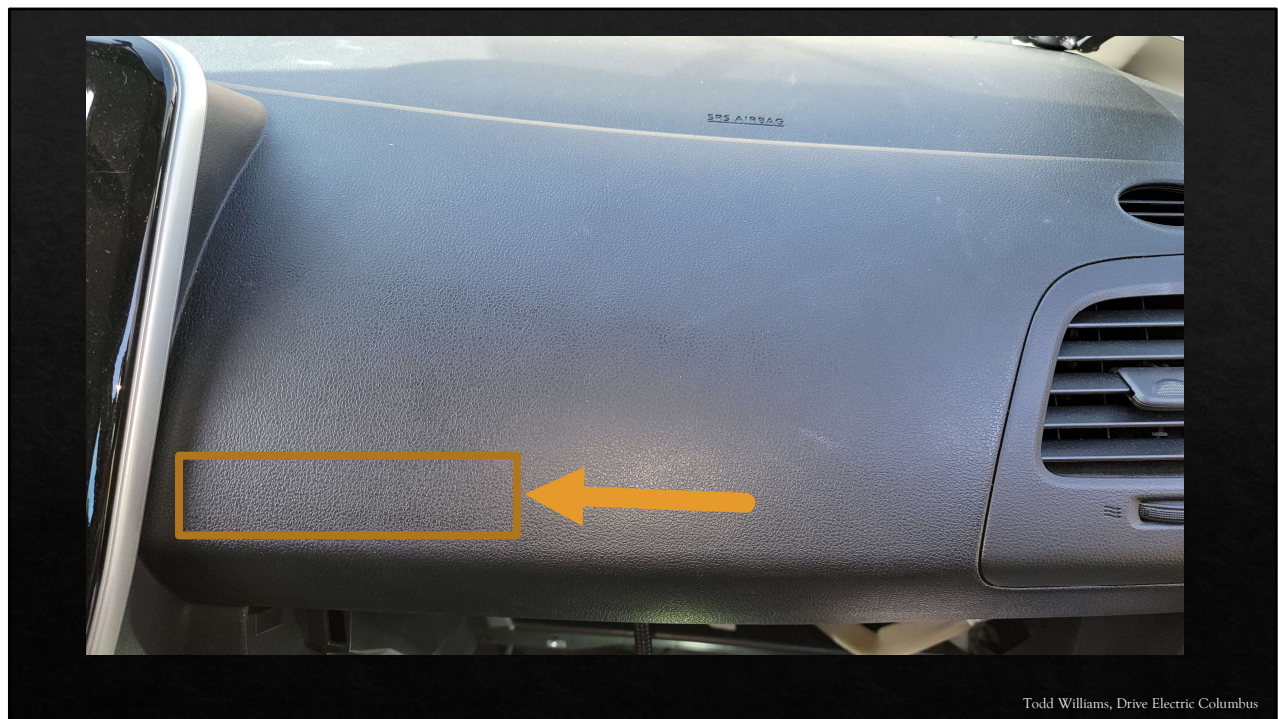
Cellular antenna



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LEAF GSM Cellular Antenna Installation Location Recommendation

- NOTE: There is a horizontal/flat half-inch shelf space inside the dash at the top of the glove box hold, reachable by your fingertips. This tiny “shelf” can be where you stick down the GSM antenna
- Picture here is showing the cable end of the GSM Cellular Antenna sticking out, sitting on that flat edge up inside the dash, it lays horizontally as shown by the longer shaded box, with the 3M sticker aimed down to the floor to hold it in place



LEAF GSM Cellular Antenna location within the dash, far away from the air-bag and any of the air-bag actuator circuitry

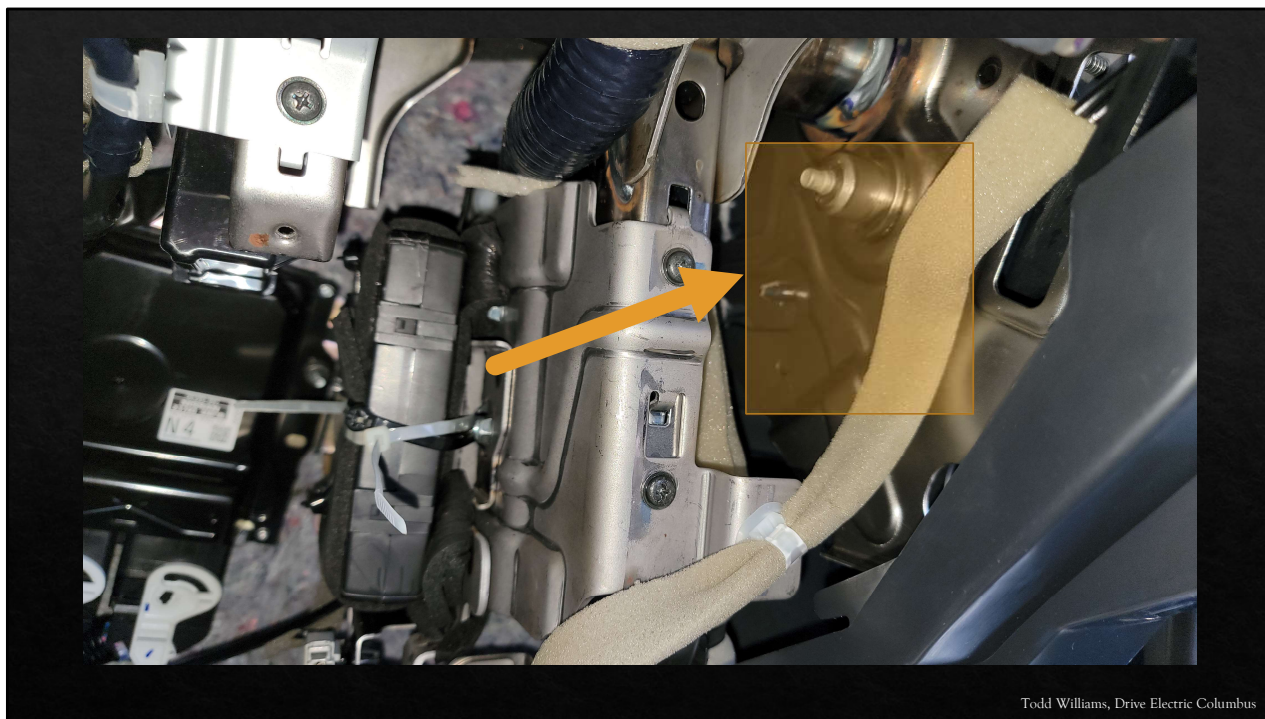


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LEAF GSM Cellular Antenna "shelf" location shown from an underside view, looking upward (toward the sky from the bottom of the passenger footwell)

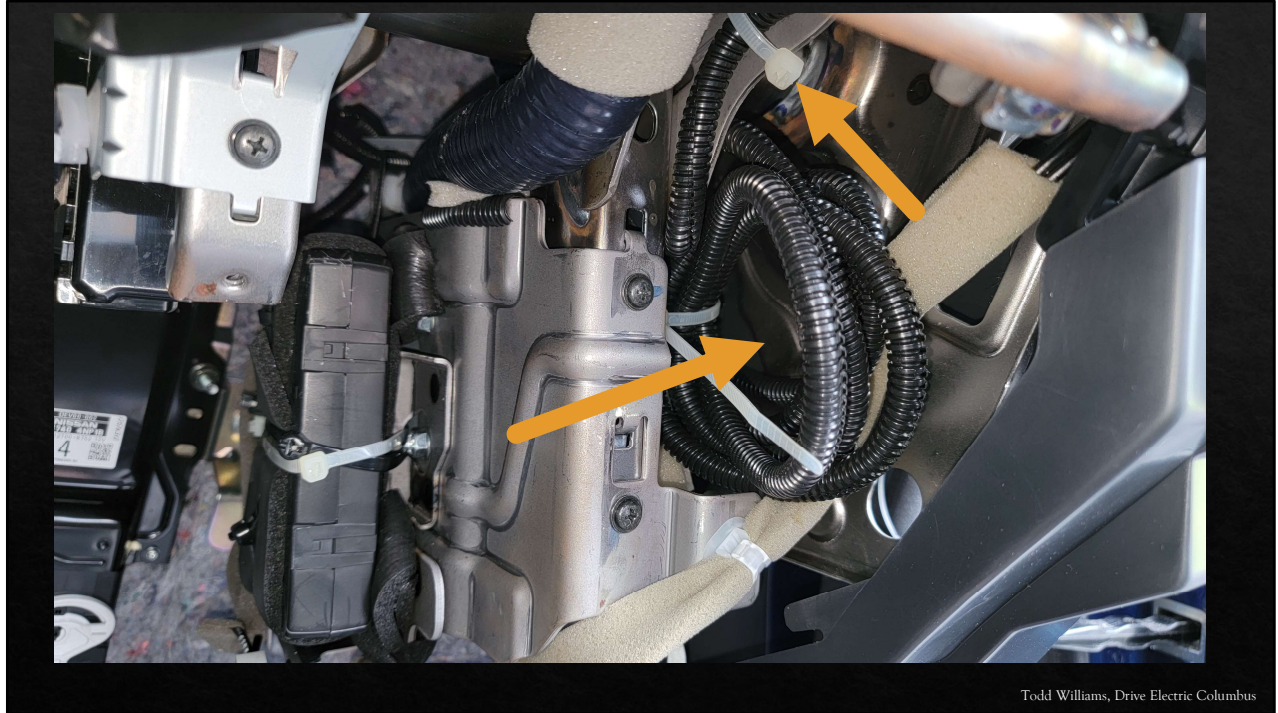
Cable Routing and OVMS Module Mounting

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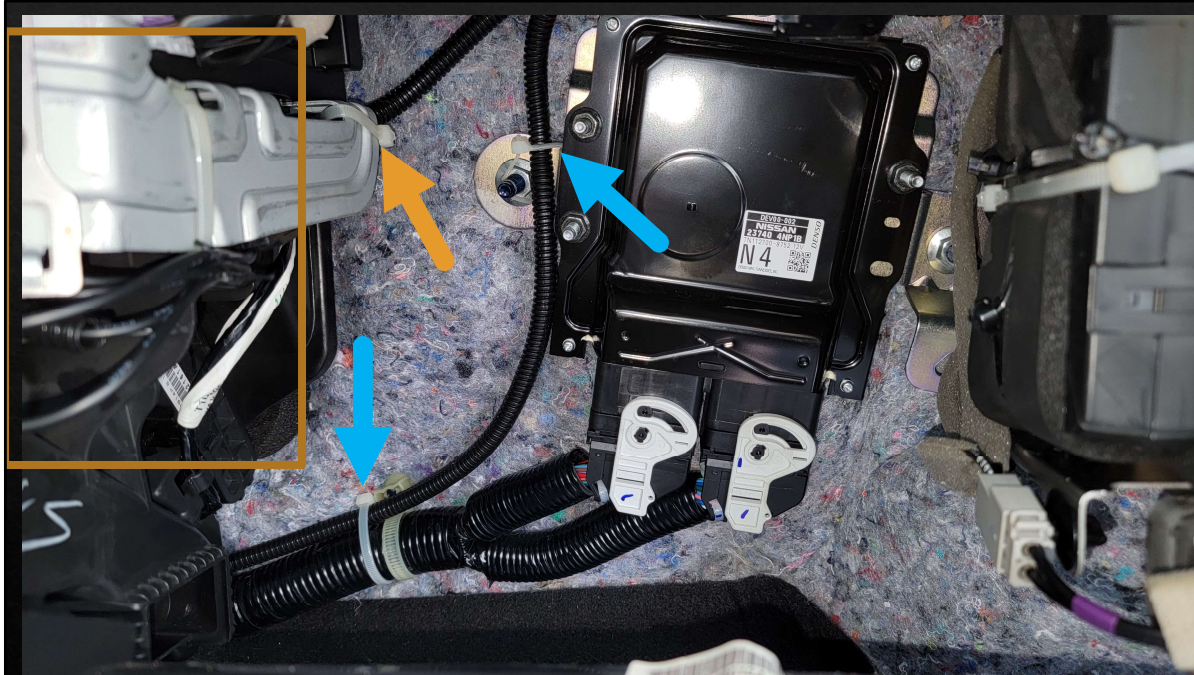
Todd Williams, Drive Electric Columbus

LEAF Interior space where you might spool and zip-tie up extra antenna cabling and wire loom, to the right side of the glove box compartment, behind the foam-insulated cable shown by the shaded box



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LEAF Interior space showing extra GSM cellular antenna cabling in wire loom, to the right of the glove box compartment
GSM antenna cable is routed behind the factory modules to the back and to the OVMS module which we'll see in a moment.



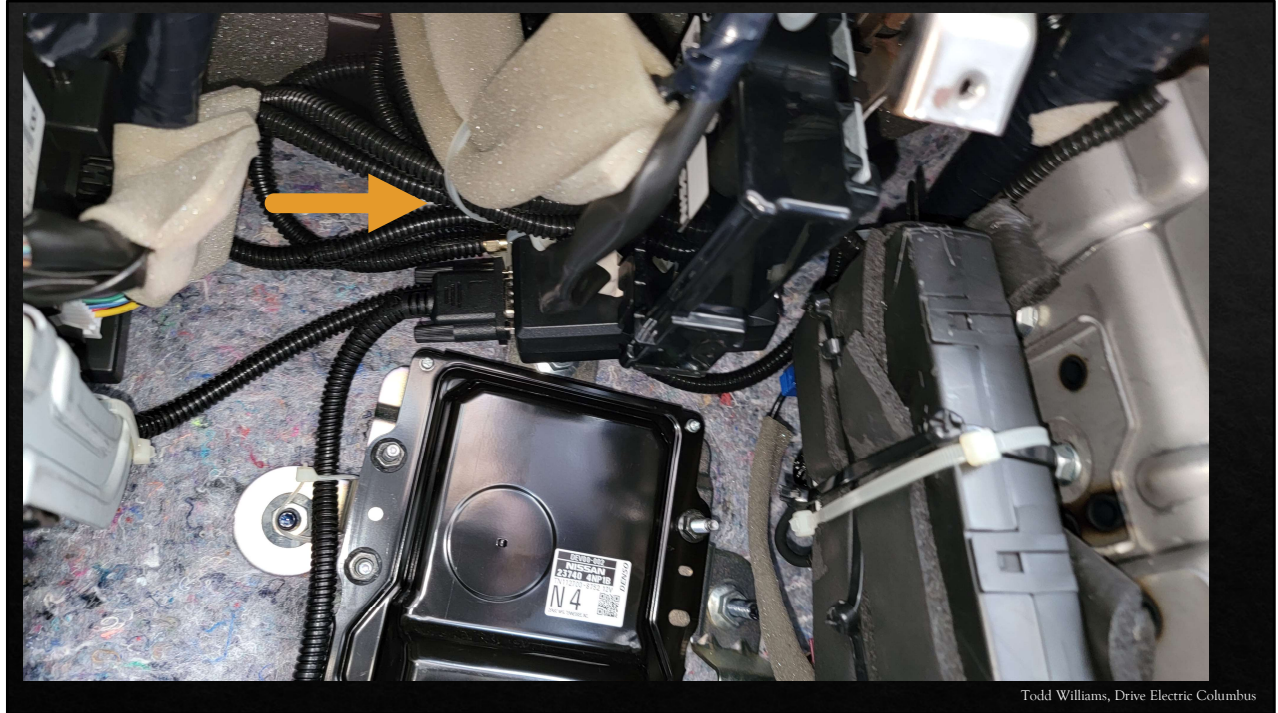
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Bottom & Right-most Middle Blue Arrows: OBD2 cable run (from the driver side) with zip ties, attached beside the ECU module
GPS antenna cable run from the front of the compartment zip tied to the bracket at the back

Shown in the Box: USB Micro Cable (Insurance Policy) wound up with a twist tie. Accessible through the glove box trap door.

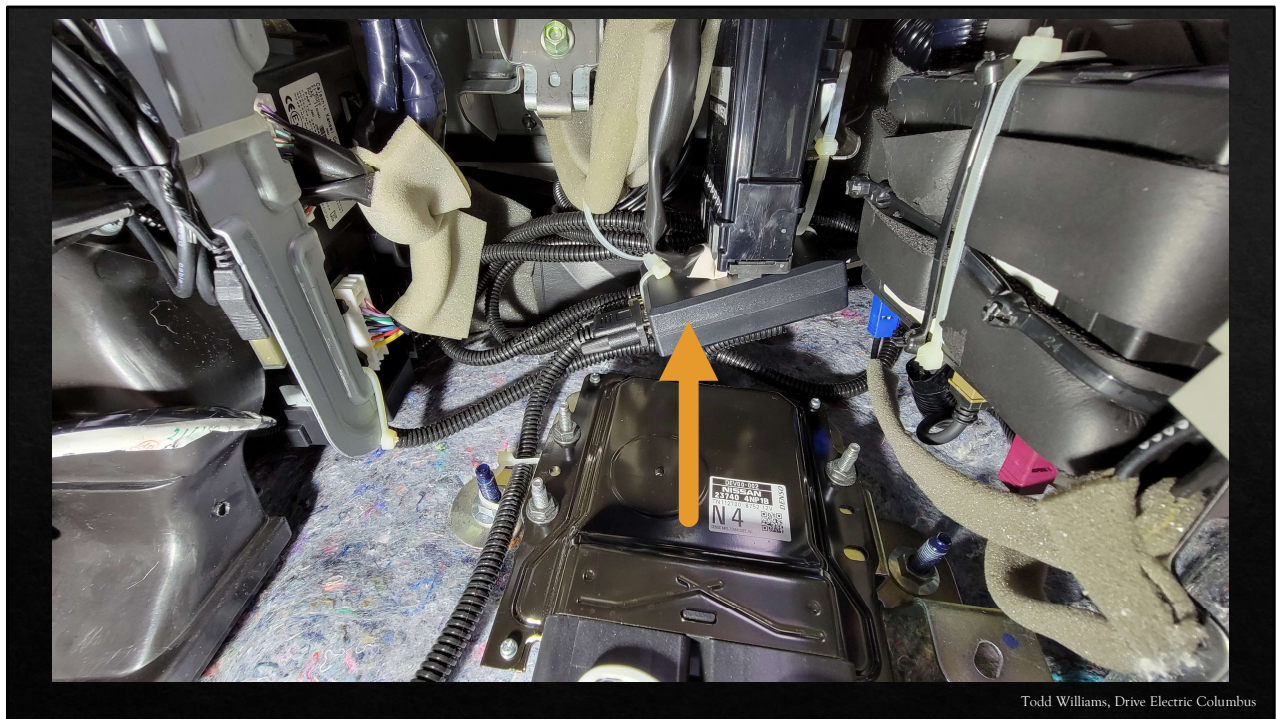


GPS antenna cable in loom routed to be zip-tied up with the other wrapped cables above the ECU module



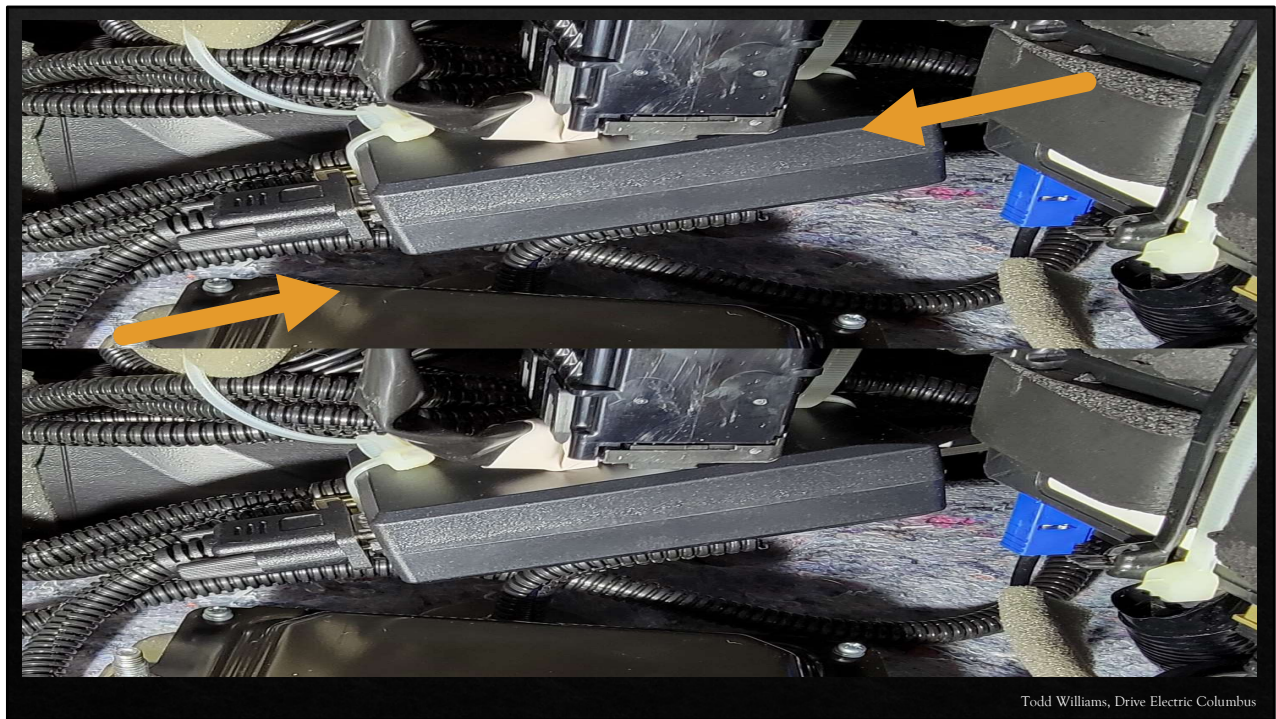
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OVMS Module box and excess GPS antenna cable in loom tied to other wrapped cables above the ECU module



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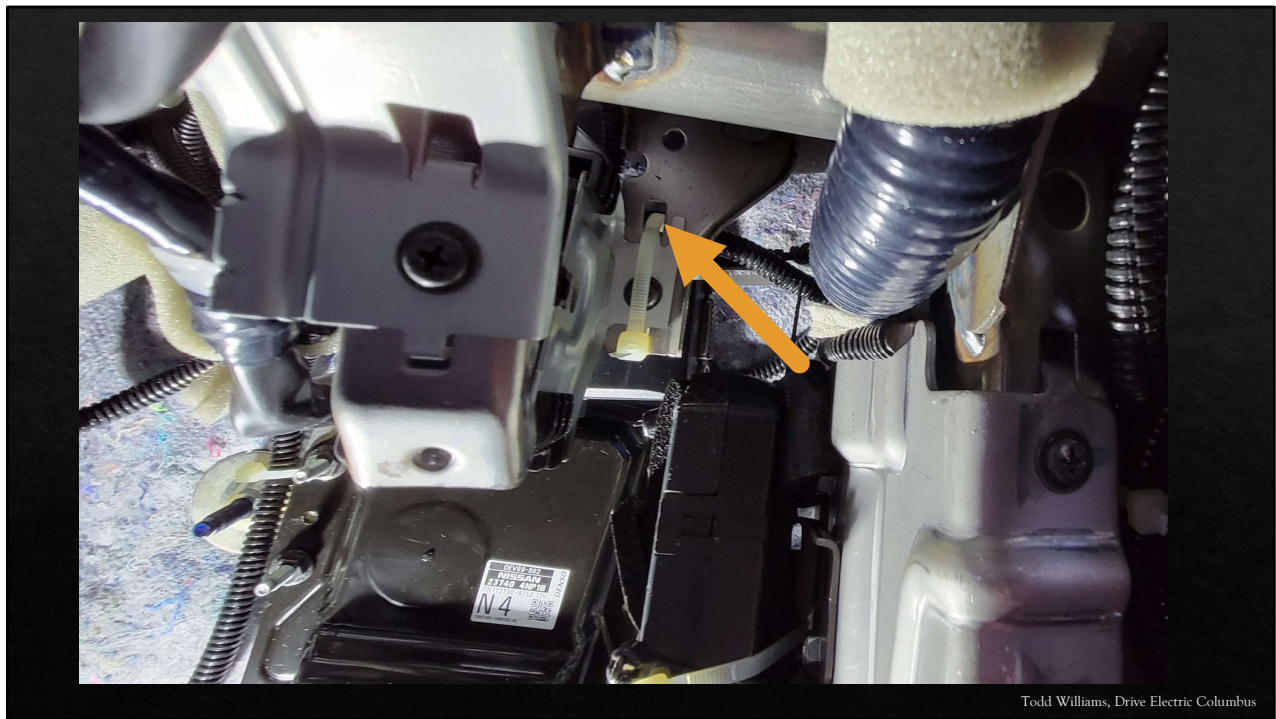
LEAF – OVMS Module Mounted (Hung) Location



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LEAF – OVMS Module Mounted (Hung) Location

Zip-tie (daisy-chained) and wrapped completely around the box, between the DB-9 and the antenna connectors so that it stays in place. This horizontal zip tie is then used to hang the unit via one or more vertical zip ties.



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Optional Zip-tie location for hanging wire bundle and/or OVMS module box

Re-assembly

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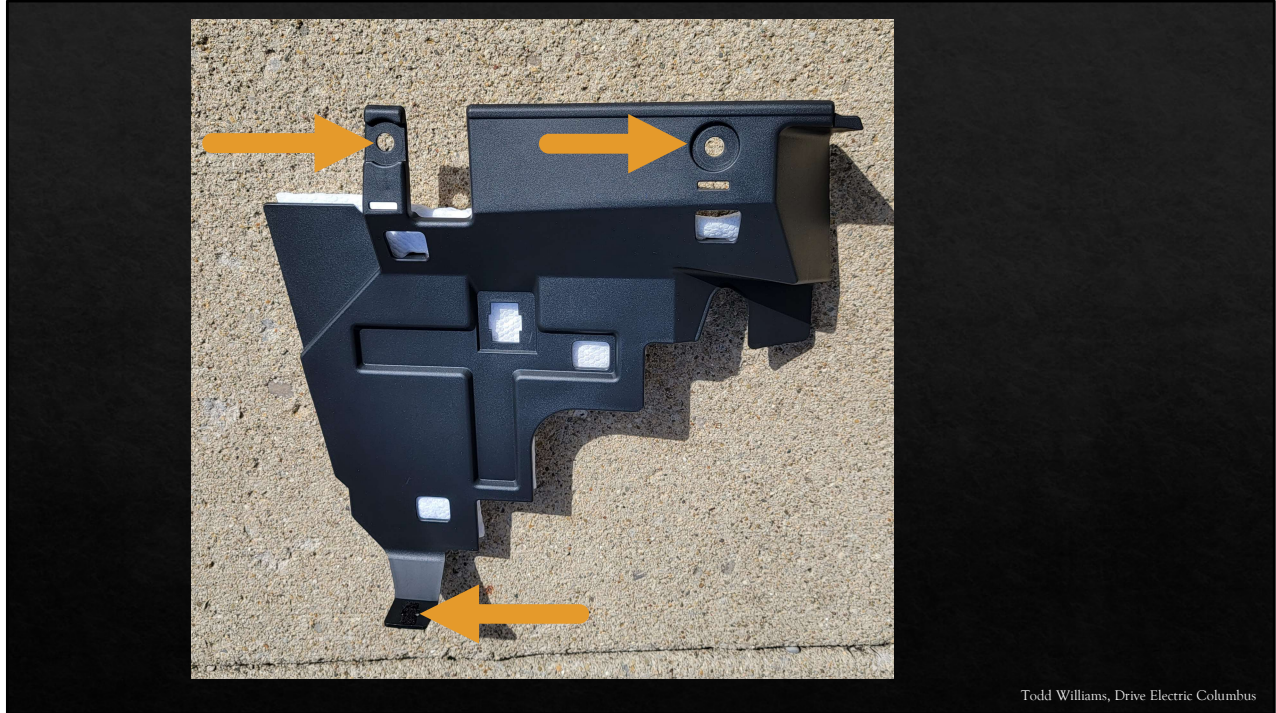
Re-attach the trim pieces after mounting the antennas, securing cables, and the main unit.



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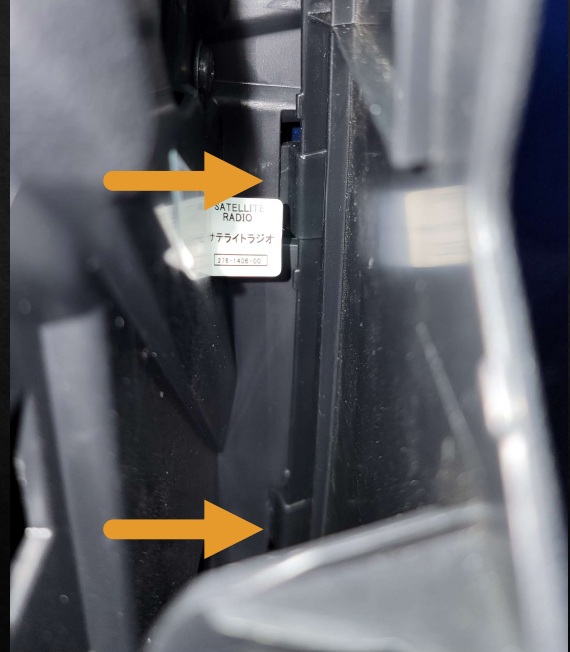
LEAF

Did you remember to re-align and replace the driver's side console floor panel and push-pin?



LEAF Driver's Side foot panel, attachment locations shown.

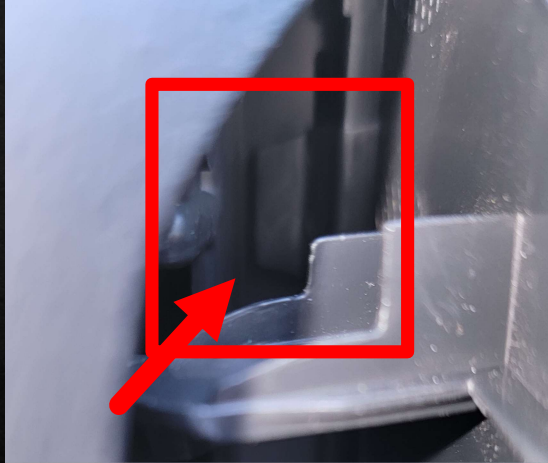
Replace the panel by setting the forward-most part of the panel on the protruding screw coming out of the firewall. Due to the beveled edge on the right hand side of the panel, you may want to use a finger to push/hold the OBD2 connector in place while you raise the panel into proper alignment with the mating panel body. Snap in the clips once you are certain the panel is re-aligned correctly. Replace the two push-pins (x2 arrows above) and re-install and tighten the rear plastic nut (x1 arrow below) with your finger and thumb.



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LEAF – Glove box re-assembly, end cap tabs.

Illustrating bottom two tabs correctly inserted on the right.



Upper end cap tab
NOT inserted
properly!

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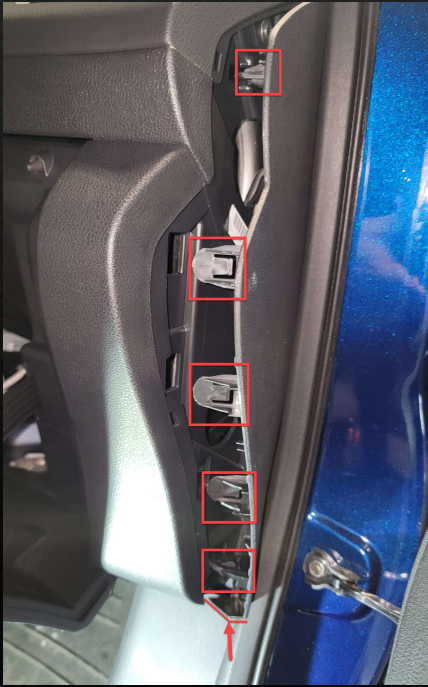
LEAF – Passenger side door end cap piece, tab laying on top of the interior trim fitment, not actually into the slot.



With the lower two tabs already aligned and properly inserted, using the trim tool pry outward gently on the upper tab, and it should slide neatly into place.

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LEAF – Passenger side door end cap piece, with the lower two tabs already inserted properly, use the trim tool to gently pry the upper remaining third tab outward into the slot so that the panel can easily be reattached via the front five (5) plastic clip tabs.



Once the forward/interior tabs are properly inserted and in place, you can snap in the five remaining clips.

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LEAF Glove Box Compartment Side Cap and Trim Clip Locations

Gently align and snap the remaining five tab clips into place. Don't force it. If you have to press extremely hard, you're doing something wrong. 😊 Step back, take a moment, use your flashlight and check the alignment of the tabs before trying again. If you have to, take the piece back out and look it over to make sure none of the tabs are bent out of shape.

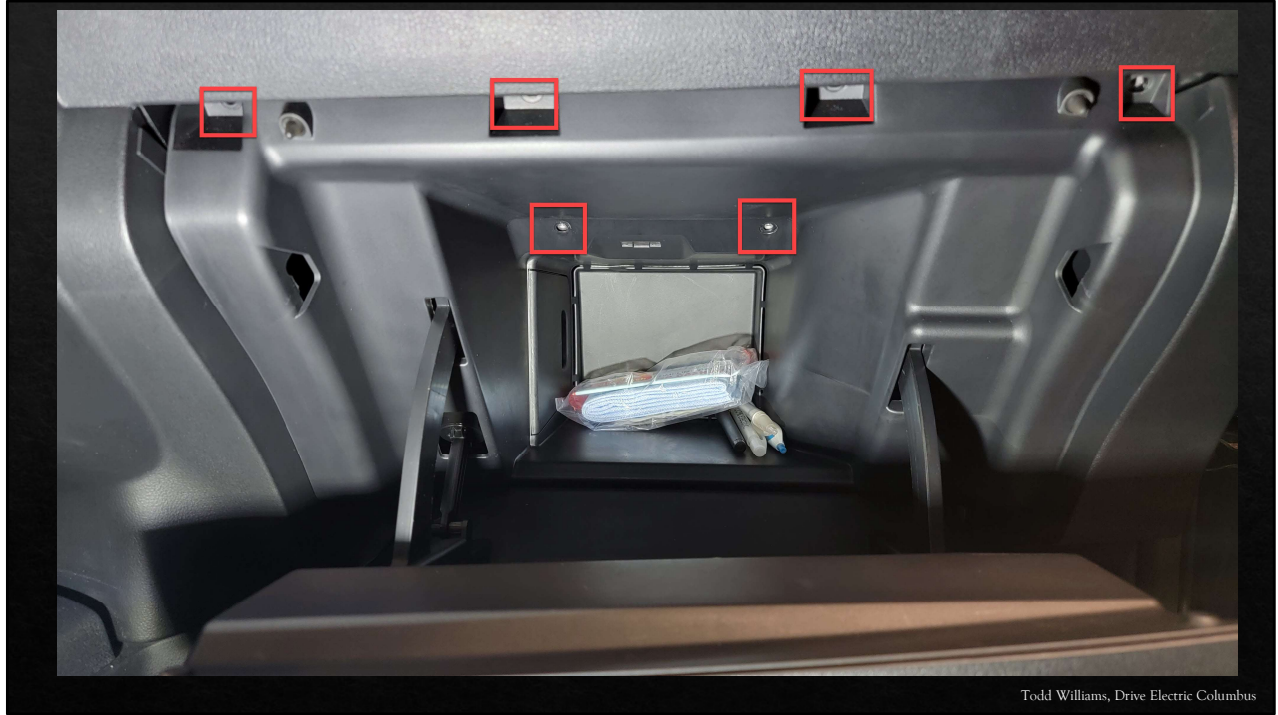


Properly aligned and
attached passenger
side end-cap panel.

Take your time, and
don't force it. 😊

Todd Williams, Drive Electric Columbus

LEAF – Passenger side end panel properly re-installed



Todd Williams, Drive Electric Columbus

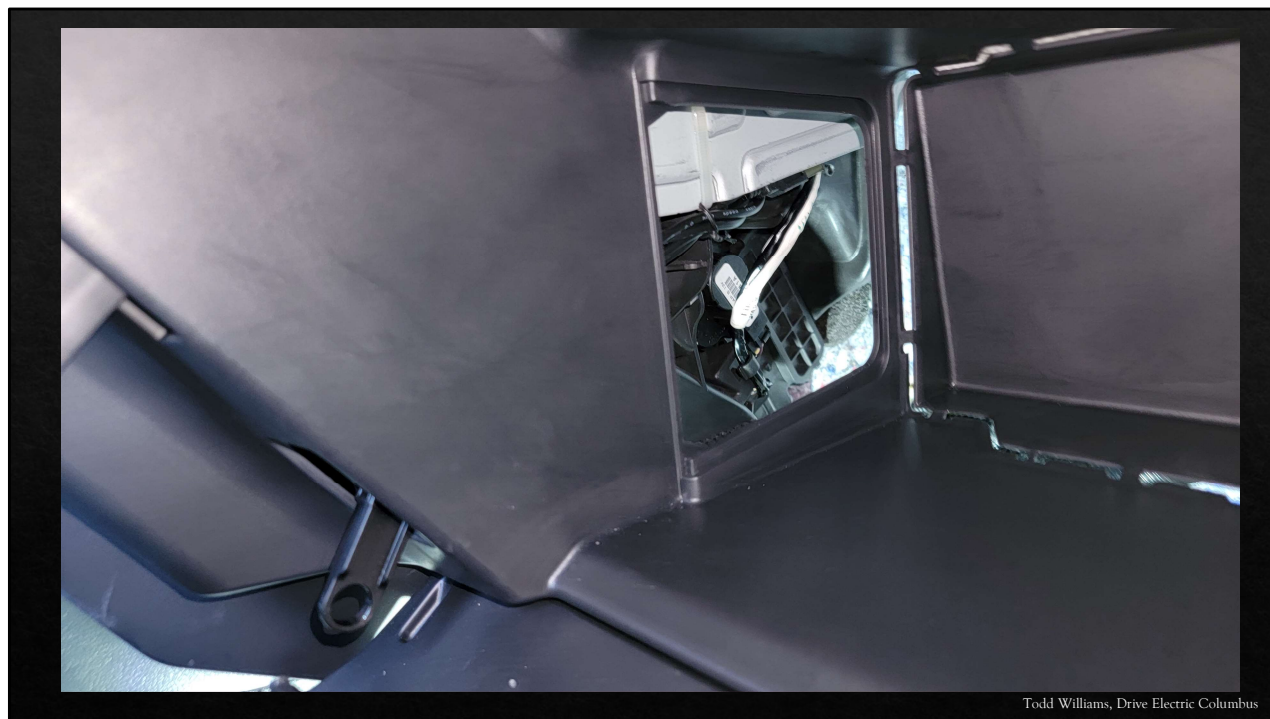
LEAF Glove Box Upper Screw Locations, re-install all 6 screws



Todd Williams, Drive Electric Columbus

LEAF

- 1) Glove Box Lower Screw Locations (shown here with glove box door removed). Replace all four screws.
- 2) Arrow points to Passenger side Lower foot panel cover below the glove box. Re-install the lower panel via finger holes and all four friction-fit clips



LEAF – Glove box re-installed. Looking at Glove Box interior with cover removed ...



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LEAF – Glove box interior with cover removed, USB Micro cable is reachable (removable with a twist tie) in the case you need to access the unit's USB port for any reason down the road.



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LEAF – Glove box interior with cover removed, USB Micro cable end with USB port cover (optional, sold separately)



LEAF – Glove Box interior, hidden trap door (removable flap on left)

Re-install the cover. Re-attach the door if you removed it previously.

Re-attach the glove box door dampener to the door pin, lift the door to an appropriate level and snap the dampener onto the pin with the clip.