Dorch Engineering B58 ECA Install

DE-58-ECA-14(XXX)
DE-58-ECA-57(XXX)
DE-58-ECA-X34(XXX)

NOTE: These instructions are to be used in conjunction with the B58 HPFP installation instructions. All preliminary disassembly steps are thoroughly detailed in the B58 HPFP installation instructions manual.

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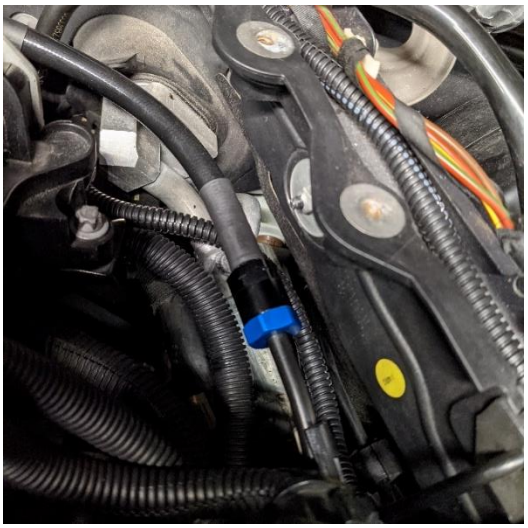
Dorch HPFP Version:

1. Start by removing the negative battery terminal.
2. Begin with the shorter hose's 5/16" (smaller) fitting and fasten it to the OEM feed line as pictured. Push the hose onto the OEM line first, then thread the nut on. Be very careful not to cross-thread the nut as these are very fine aluminum threads. It will thread effortlessly when lined up properly.

   Once the nut is fully threaded, use a 19mm wrench to lightly snug the nut. You may need to hold the hose in place by using an 11/16" wrench on the hex portion of the hose fitting.

   Tip: Aluminum AN wrenches should be used to avoid damage or scratches on the finish of the fittings/nuts.



3. Pull the other end of the hose up on top of the intake manifold (pictured) to attach both hoses to the ethanol sensor. For the sensor fittings, you will need to slide the nut on the sensor first (via the nut's slot) and then push the hose onto the sensor. Take note of the orientation of the sensor:

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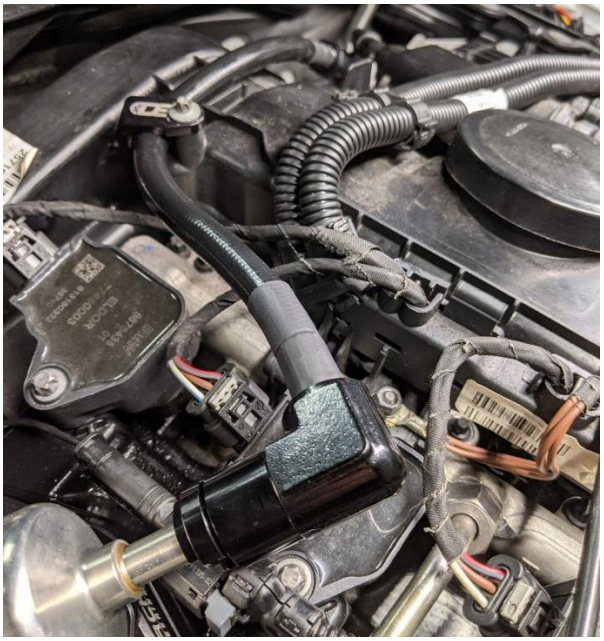
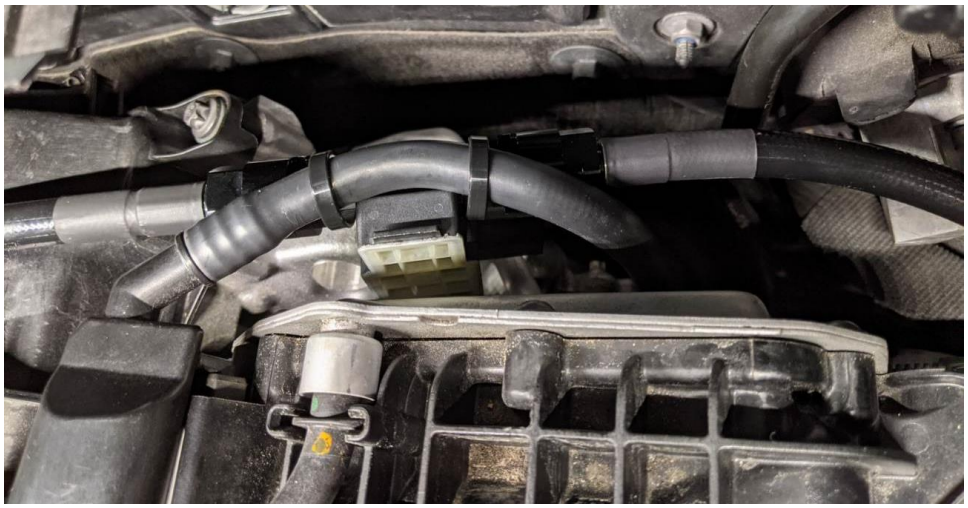
4. Next, connect the elbow fitting to the HPFP by first pushing the fitting onto the HPFP and then threading the collar nut onto the hose.

   NOTE: We recommend one drop of Blue Loctite on the HPFP hose nut.

5. With all the hose connections complete, tuck the hose back into the groove where your original hose fit and reinstall your hold down clamp.



6. The sensor should tuck nicely behind the intake manifold (as pictured below) with plenty of room for the electrical connection. For extra security, 2 zip ties can be used on the sensor itself:



TU HPFP Version:

A. Start by removing the negative battery terminal.

B. Begin by assembling the sensor with the supplied adapter fitting and hose. For the sensor fittings, you will need to slide the nut on the sensor first (via the nut's slot) and then push the hose onto the sensor. **Take note of the orientation of the sensor**

Tighten this assembly using a 5/8" wrench for the nuts and a 18mm wrench on the adapter fitting flats.

Tip: Aluminum AN wrenches should be used to avoid damage or scratches on the finish of the fittings/nuts.

C. Now, slide the hose end of the assembly onto the chassis fitting first. Then slide the adapter fitting onto the HPFP hardline by slightly bending the hose. Do not force any of these connections on. They will slide freely onto the car's barbs.

D. Once the assembly has been slipped onto each of the car's barbs, simply thread the blue nuts onto each fitting and tighten them down with a 19mm wrench

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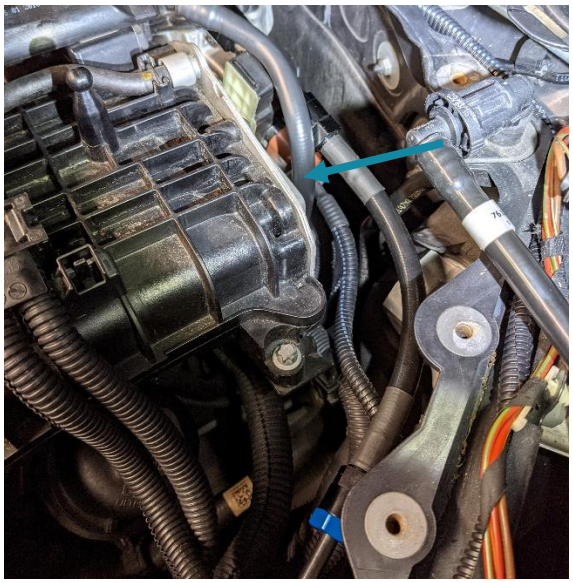
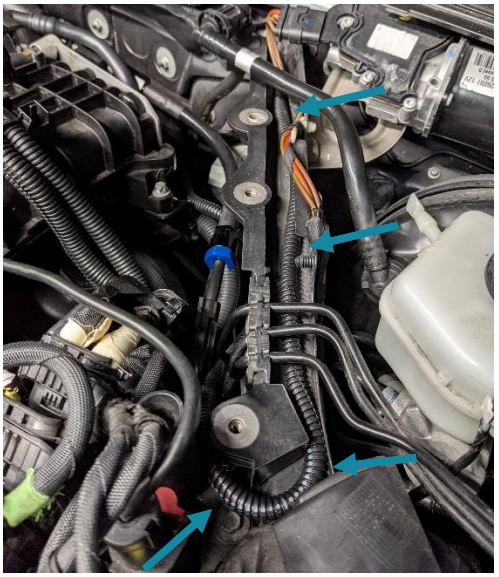
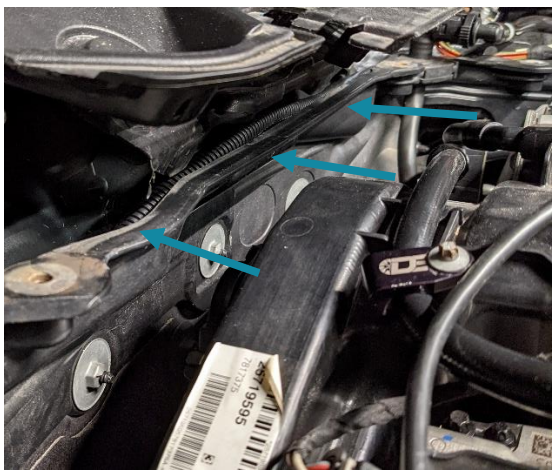
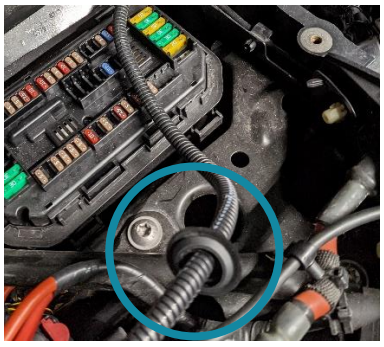
7. Now, plug in the supplied electrical harness to the ethanol sensor and tuck the cable neatly along the firewall track as shown. Also remove the fuse box cover for more access (squeeze clips in and pull up):


8. Now remove and discard the grommet behind the fuse box (left photo) as this will be the entry point into the cabin. Also, make sure the Dorch supplied grommet has been slid back over the harness in the proper orientation, leaving about 2ft of length from the grommet to the end of the harness (right photo):

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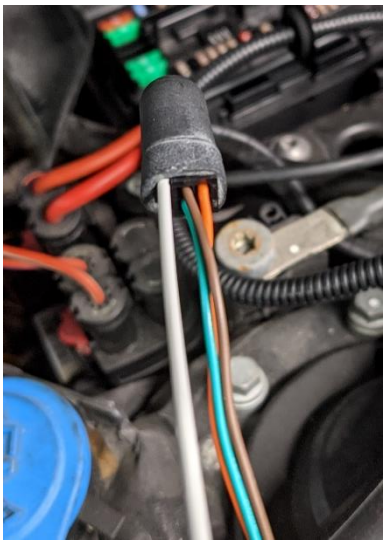
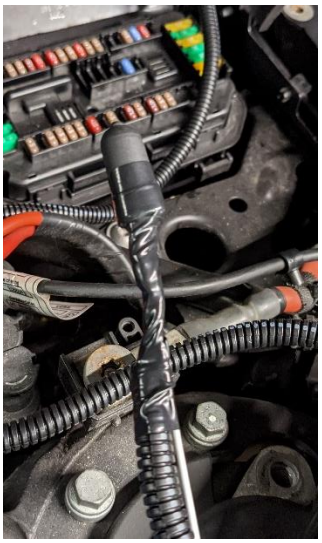
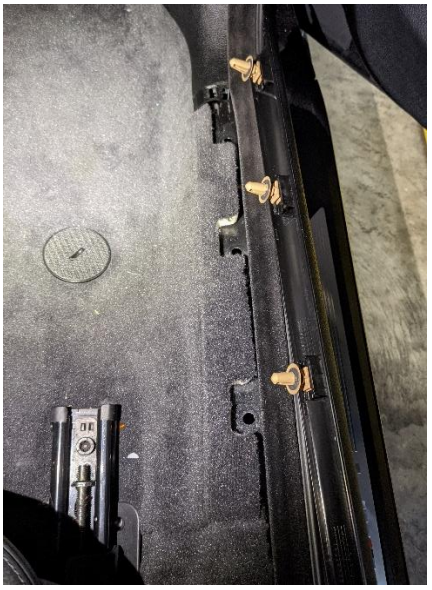
9. Now that the grommet (behind the fuse box) is removed, there will be a layer of foam within the empty hole. Using a long screwdriver or something similar, lightly poke a hole through the foam for your cable entry point.

10. In order to make this quick and easy, we have included a rubber cap. Place the supplied rubber cap over the harness connector (left photo). You will then need something stiff to push the cable through the hole such as a piece of a metal coat-hanger or a welding rod. This will slide right into the rubber cap next to the connector latch (center photo). Lastly, tightly wrap this assembly in electrical tape as shown (right photo). The assembly can now be pushed through the foam and into the passenger footwell.

11. Now inside the passenger footwell, remove the door sill trim by simply pulling up:

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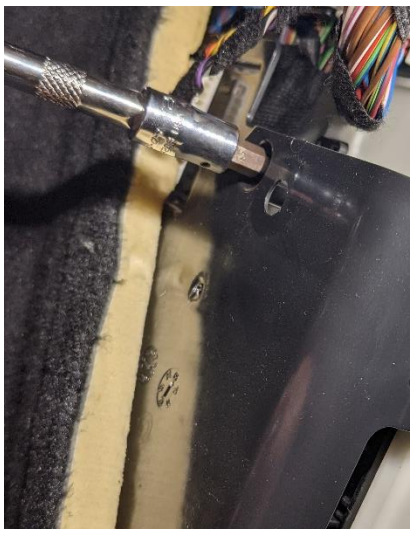
12. Remove the lower dash panel below the glovebox. First remove the 10mm nuts towards the fire wall, and then lightly pull back and down on the panel from just below the glovebox to release the clips:

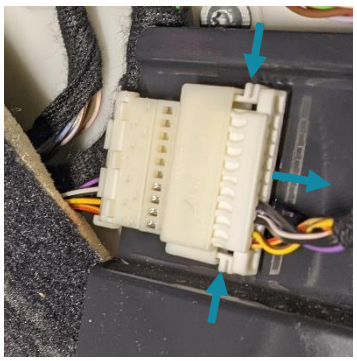
To remove the panel entirely, remove the 12V socket harness and the footwell light harness by simply pulling them out:

13. Now remove the footwell side panel by pulling directly towards the center of the vehicle at the three clip locations:


14. Next remove the module cover. There is one T20 Torx, followed by two clips. The clips only have latches on the outer tangs. Push in each outer tang with a screwdriver and pull out to remove the cover:

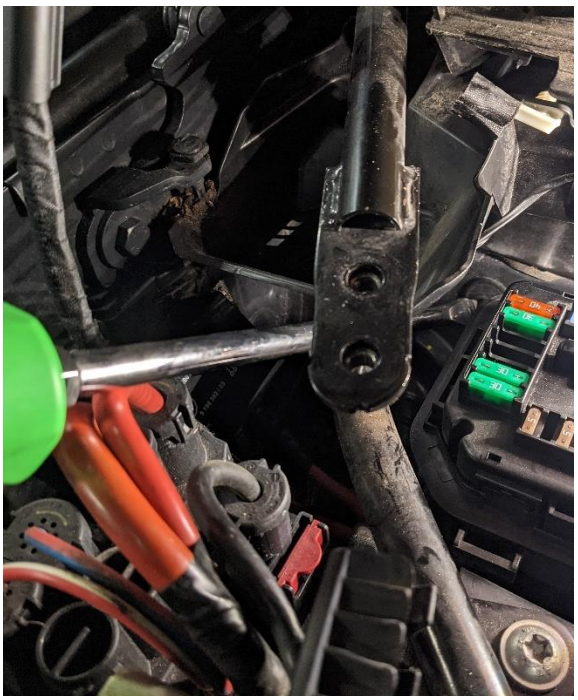


15. (Optional Step) If you'd like to get the cover out of your way, first disconnect the white connector from its mate. Then push the tang down to release the connector from the module cover:




16. Now that the interior is prepped for plugging in the supplied wiring harness, you will see the sensor harness that was pushed through the firewall. Pull that harness through until the grommet is flush against the hole in the engine bay.

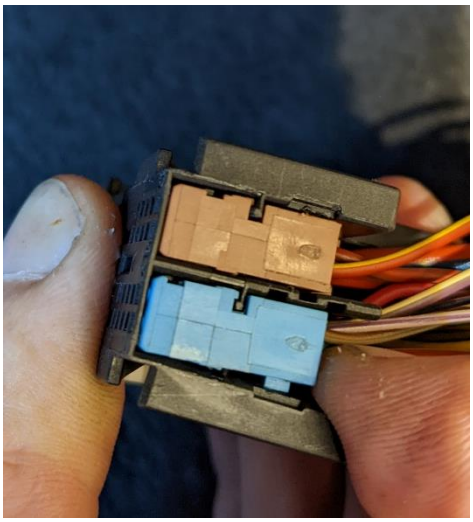
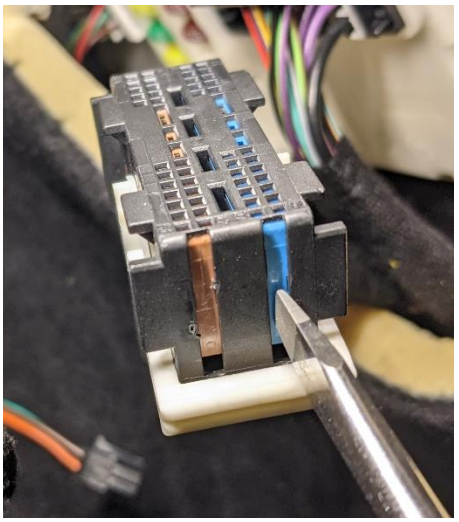
    Using a long flat screwdriver, carefully press the grommet into place to reseal the cabin:




    At this point, you are now finished in the engine bay. The rubber cap, pushing rod, and electrical tape can now be removed from the sensor harness which is now in the footwell of the interior.

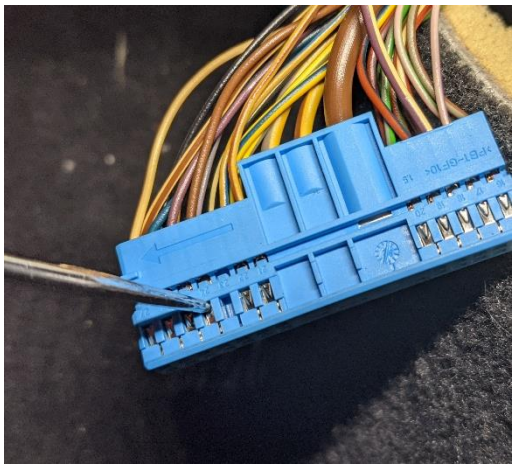
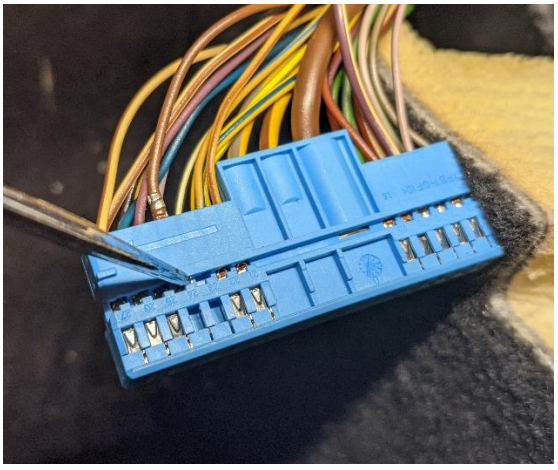
17. Remove “Connector A” from the module by pushing in the tab and then swinging over the latch:

18. Now remove just the blue half of the connector. Take note of the small (blue) tab that locks in the connector. This this can be released by bending out the black housing with your finger (left picture below). Simultaneously lightly push the blue connector out (right picture below). This will slide out effortlessly when the blue tab is free.

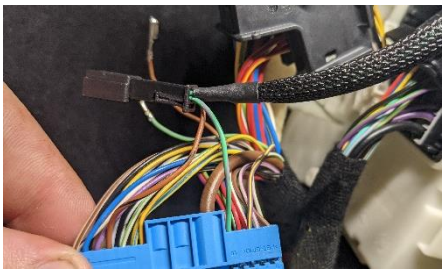



19. One side of this blue connector will be marked with pins 16-27. On this side of the connector, you will swap the terminals out with the supplied Dorch harness (terminal locations and colors are included in the kit and should match the car's original wire colors)

    The terminals slide out very easily. First, using a small pick, push in the terminal locking tab in on the lower position while very lightly pulling up on the wire (left picture below). It will slide halfway out and then you need to use the same technique in the upper position (right picture below). Simply push in with a pick and lightly pull on the wire. The terminal will come all the way out after the second, upper release.

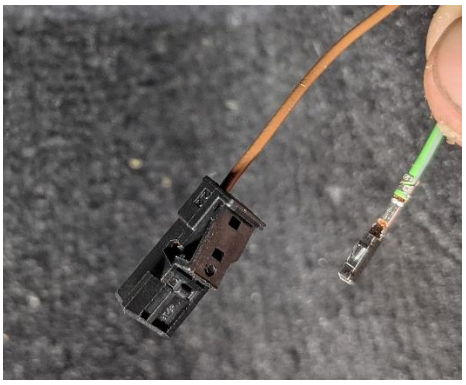



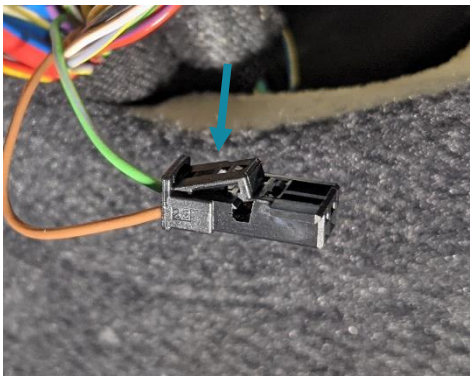
20. Slide the Dorch harness terminals into place in the blue connector (locations and colors are included in the kit and should match the car's original wire colors). There will be an audible click when they lock in, lightly pull back to ensure they're locked in.



21. You will now have two loose wires on the car's harness (previously removed from the blue connector). Slide these terminals into the small black Dorch supplied connector. Slide the terminals in with their locking tabs facing up towards the hinge on the connector (left picture below). The connector is marked for position 1 and 2.

Pos. 1 = GREEN
Pos. 2 = BROWN



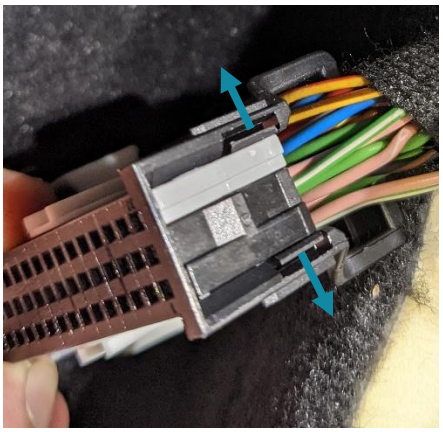
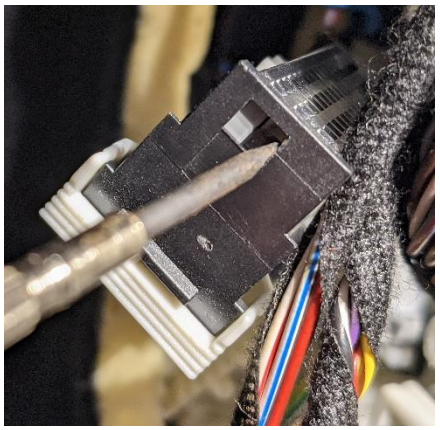


Once the terminals slide all the way in, squeeze the connector hinge in (shown in the right picture above in the open position). This hinge will only close if the terminals are all the way in.

22. Now, slide the blue connector back into the "Connector A" housing, followed by connecting the two black Dorch harness connectors together as shown below (left). Connector A can now be plugged back into the module.

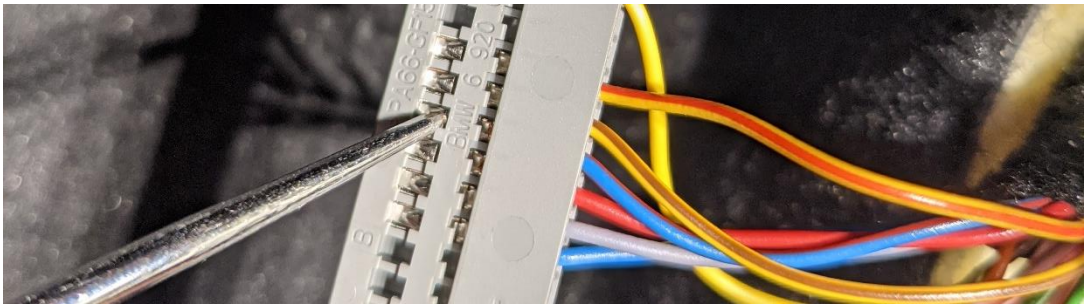
23. The last step is to now repeat the same process for the “Connector B”. Remove “Connector B” from the module and then slide out the black and gray halves. To do this, pull the small tabs outward (left photo below) while simultaneously lightly pushing out with a small screwdriver (center photo below).

    NOTE: The black side needs to be released first, otherwise the gray side won’t budge.


Once the tabs are released, the “Connector B” housing will effortlessly slide off (above right).

24. Now that the connector housing is removed, you will have access to the gray connector terminals. This will be the gray side marked with pin numbers 37-54. The same technique will be used to remove and swap the terminals with the Dorch supplied harness terminals. The terminal locations and colors are included in the kit and should match the car’s original wire colors.



25. You will now have two loose wires on the car’s harness (previously removed from the gray connector). Slide these terminals into the small black Dorch supplied connector. Slide the terminals in with their locking tabs facing up towards the hinge on the connector. The connector is marked for position 1 and 2.

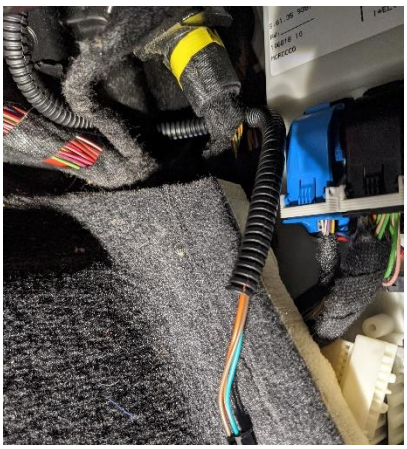
    Pos. 1 = BLUE
    Pos. 2 = RED

    Once the two terminals are fully seated into the Dorch connector, lock the connector hinge (see step 21 for details on this).

26. Now, slide the black and gray connectors back into the “Connector B” housing. You will then connect the two black Dorch harness connectors together as shown below. Connector B can now be plugged back into the module.


27. Next, stick one side of the supplied adhesive lock-strips to the module (but avoid covering any text/numbers):

28. Now route the sensor harness (from the engine bay) as shown on the left and connect both the sensor harness and the Dorch signal harness to the Zeitronix ECA.




29. Be sure to apply the other side of the adhesive lock-strip to the back of the Zeitronix ECA, and then snap it into place as shown below:

At this point, the installation is complete. Zip-tie any excess sensor harness length up and out of the way neatly. You now have a fully reversible plug and play ECA that communicates directly with the DME. The parts can all be reinstalled in reverse order and the battery can be reconnected. Once everything is buttoned up, you will need to make sure you are running the appropriate software via MHD, BM3, or Ecutek.

BM3 ECA Operation:

For BM3, simply make sure you are running a "CustomROM" file and your ethanol content will show up in the dashboard and all logs. To check ethanol content without the BM3 app, press and hold the Cruise Control UP/DOWN button in the **1st DOWN** position. The Engine RPM (Tach) in the dash will show current ethanol content. Example: 1000rpm, 10% ethanol, 5500rpm 55% ethanol.

MHD ECA Operation:

For MHD, you can see your ethanol content in all logs and on the "Monitor" tab by using the Zeitronix "ECA Preset" flashing option. This option is available for any OTS MHD+ maps and all custom maps.