

SHVCS DEFEATER INSTALLATION MANUAL 1.0

INSTALLATION AND USER MANUAL

1 INTRODUCTION

Thank you for your purchase of the SHVCS Defeater. The kit contains 3 pieces that should be included in your package.

Package Contents

1. Plug and play male connector with included resistor
2. Velcro wrap (1 or more)
3. Factory female Delphi pigtail to repair harness and/or plug battery coolant connector



1.1 READ - WARNING- Before you install the product

You should use caution when installing this product. It is recommended you disconnect the onboard 12v battery to prevent any additional codes from being triggered by the installation of this product. This information is available in your vehicle's user manual. If you do not disconnect the 12v battery during installation, it is likely you will trigger other codes that may require a costly PCM reflash. Please read through this manual in entirety before installing the Defeat Plug.

1.2 NOTE: If "Service High Voltage Charging System (SHVCS)" is currently displayed on the dash

You need to clear this code before installing the Defeat Plug. This can be done at the dealership or if you are technically inclined, you can purchase a VCXNano GDS2 (\$100+) and install GM software on your laptop to reflash the ECU firmware. This procedure is only recommended for mechanics or technicians. Please validate the coolant level is correct in the reservoir before bringing the vehicle to the dealership or repair facility. Once all codes have been cleared you can then move forward installing the defeat plug, which will prevent unnecessary trips to the dealership due to the defective and unreliable battery coolant sensor on the 2011-2015 Volt, Ampera and ELR vehicles. All P1FFx codes must be cleared.

1.3 Theory of Operation

Once the SHVCS defeat plug is installed, this should prevent future check engine codes with the P1FFx series and prevent future SHVCS messages. This particular defeat plug will only bypass the defective latching codes present from the poorly designed battery coolant sensor system. The particular sensor uses a 2-pin connector. The ECU sends a

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+5v signal to the battery coolant sensor. Based on the level of the fluid, the sensor then attenuates the signal to a lower level which the ECU maps to an acceptable or unacceptable level based on the return voltage. The SHVCS def eater mimics the behavior of the sensor so that the return voltage to the ECU is within the expected range. If you did happen to run the battery coolant level too low, other DTCS (or check engine lights) might be present on the dash to prevent damage to the battery system such as the coolant temperature sensor. The owners manual recommends a monthly check of the coolant level. Only utilize GM recommended coolant specified in your owners manual. Once the SHVCS def eater is installed, you will be responsible for checking the level every 30 days. Failure to check the coolant level may generate other DTC's or check engine lights if the level becomes too low and the battery temperatures become elevated.

1.4 Legal

Eastman Research LLC has reached out to consultants in the aftermarket auto industry regarding the legal use of this product. The California Air Resources Board (CARB) has mandated that all modifications to a vehicle that could change the emission limits require CARB testing in the State of California. The EPA has ruled that if a product meets CARB compliance, it will meet the EPA standard. Based on the current legal understanding of CARB, we believe the use of this product will not cause any emission related problems as the purpose is to bypass the defective battery coolant sensor. Nothing is modified that affects the onboard generator.

1.5 Indemnity

You agree that by using this product you indemnify Eastman Research and/or any person associated with Eastman Research including affiliates, employees, etc from any and all legal liability associated with your use of this product. You use this product at your own risk. You take full responsibility for the proper use of this product.

1.6 Product Warranty

This product contains a 90 day warranty. To claim a warranty, you will need to ship the product back to us for repairs at your shipping expense. Problems caused by misuse and acts of god are not covered under the warranty.

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INSTALLATION

1.7 Tools

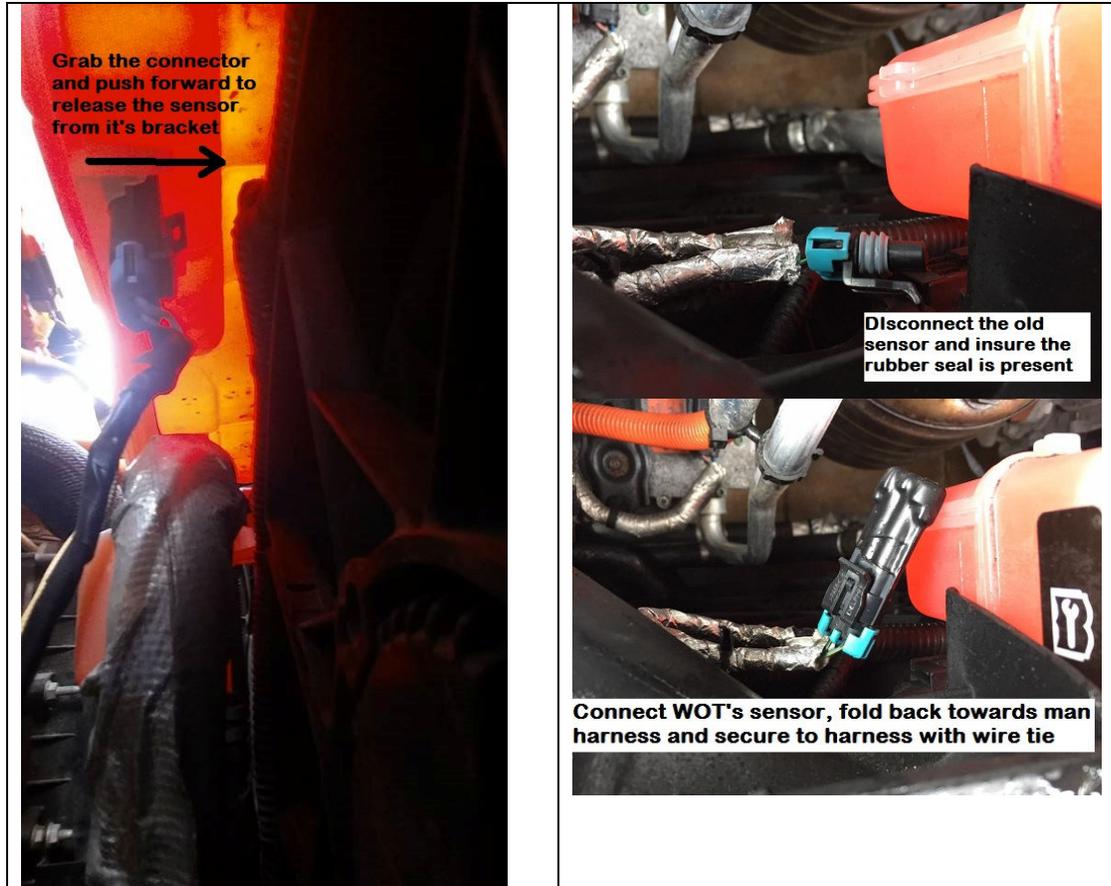
Before installing this product, ensure you have the required tools to install this product.

1. A medium sized flathead screwdriver. (Optional, and only used if the connector is stuck to the battery coolant reservoir.)
2. ODB2 code reader (optional to try and clear codes if they exist)

1.8 INSTALLATION

1. Make sure the vehicle is turned off and the charger is not connected.
2. Open the hood and rear hatch.
3. Using a 10mm wrench, loosen the battery negative clamp from the 12v battery. This is located in the plastic floor of the rear storage area.
4. Once disconnected, leave the rear hatch open and continue with the defeat plug installation steps below.
 - a. Disconnect the 2-wire connector on the bottom of the battery coolant reservoir. The connector should be able to be released with your finger. The release clip is faced towards the radiator. Only use a screwdriver to release the clip if you have exhausted all other options. The connector should easily come out of the sensor when the release clip is properly depressed and moderate tension is applied to pull the connector from the sensor.
 - b. Insert the defeat plug into the connector you just removed from the coolant reservoir. Make sure it is completely inserted and secured by the connector clip. If the connector becomes unplugged during operation it will trigger latch codes that will require dealer intervention to clear.
 - c. Secure the wire with the attached defeat plug to an existing harness under the hood with the supplied Velcro straps. The Velcro straps prevent you from having to cut any zip ties under the hood and can be re-used.
5. Upon completion of the above, reconnect the negative lead on the 12v battery.
6. Start the car and make sure there are no Service High Voltage code warnings present.
7. Close the hood and trunk.
8. Use the provided female connector to plug into the original battery coolant sensor to avoid corrosion over time.
9. You have now successfully completed this modification.
See related pictures below.

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End of Pictures