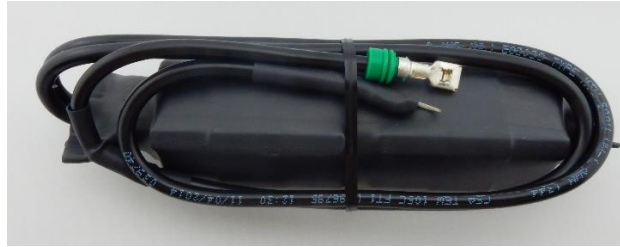


Hewitt Technologies Inc.

Secondary Air Injection System – Pump Replacement Pack for P0418/P0419



Introduction:

This Secondary Air Injection System (SAIS) – Pump Replacement Pack only to be installed in conjunction with a SAIS Bypass kit. In general, the SAIS bypass kit cannot clear trouble codes like P0418/P0419 that are the result of an electrical faulty air injection pump. This is because even though the bypass kits prevent the system from operating the ECM is still expecting the electrical components of the system to be connected and measure within a certain value. As an example it is fairly common to see a P2445 and P0418 code together. In this situation the bypass kit can usually only get the vehicle out of limp mode and clear the P2445 but the CEL will typically still be on because of the P0418. Typically, the only way to get a P0148 code to clear is to replace the air injection pump motor. Unfortunately replacing the pump motor is still very costly just to get the CEL to turn off and even worst if it is on a year/engine where the pump is located underneath the intake manifold. This pump replacement pack will let you clear your P0418 code after you have installed the SAIS bypass kit without the need to purchase a new pump motor or remove the intake manifold to get to it. Installation of the SAIS Bypass Module and SAIS Bypass Kit Block off plates are covered in separate instructions. If you have any questions, please visit us @ www.Hewitt-Tech.com to view our Trouble Codes and FAQ pages or use the “Contact Us” page to contact us directly.

Warnings:

Installation of this device involves modification to the factory wiring harness. Before installing any part of the SAIS Bypass Kit or pump replacement pack any and all risks associated with its use are to be carefully evaluated by the vehicle owner, operator and installer. Improper installation may damage the module, vehicle or cause the potential risk of fire. Please note that it is illegal to remove, dismantle or otherwise cause to be inoperative any pollution control device required by federal or state law that is to be maintained in or on a motor vehicle; as such, the SAIS Bypass Kit and Pump Replacement Pack are to be installed only on vehicles that are exempt from vehicle emission laws or that are intended for off-road use only. By installing or using the SAIS Bypass Kit the vehicle owner and or installer assume ALL risks associated with its use.

Tools/Supplies Needed:

- Small Jeweler type screwdriver or Mechanic’s pick(s)
- Dielectric grease for crimp connectors (optional)
- Alcohol/Solvent for cleaning mounting surface or zip-ties
- 15 min.

Installation Steps:

- 1) Review all installation warnings and Contact us with any questions before starting. Gather the needed tools and installation materials before starting installation.
- 2) Locate the SAIS Air Pump Driver on the inner driver side fender. Some vehicles have two air pump drivers in the same location. For those vehicles with 2 pump drivers, the Bank 1 Pump driver is located towards the rear of the vehicle (P0418) and Bank 2 Pump driver is located near the front of the vehicle (P0419). If you have a P0418 you will install the pump pack on either the only pump driver you see as shown in Figs. 1 and 2 or if you have two pump drivers, you will install it on the pump driver towards the rear of the vehicle.



Figures 1 – 2005-2006 4.7L SAIS Air Pump Driver Bank 1 for P0418



Figure 2 - Disconnect 2 Wire Connector

- 3) **WARNING!** Before continuing you may wish to remove the Air Pump Fuse. Disconnect the large two wire connector of the air pump driver by firmly depressing the locking tab of the connector and pull the connector off of the air pump driver. Terminal #1 of the connector is powered directly from the battery through the Air Pump Fuse. Terminal #2 is the switched power that goes out to existing air pump and is the terminal we will be replacing. You can verify the terminals by measuring +12V of terminal #1 and there should be no voltage on terminal #2 that we are replacing.

- 4) To remove the #2 Terminal, the terminal lock must be disengaged so the terminal retainer can be depressed and the terminal removed. The Terminal lock is the white cap that covers both terminals inside the connector as shown in Figures 4&5. Insert a small flat screwdriver through the body locking tab and push/slide the terminal lock out of the connector (Figure 4). Once disengaged, the little plastic terminal retainer that holds the metal terminal in can be gently held out of the metal terminal with your screwdriver and the terminal can be pulled out of the connector body (Figures 5&6).

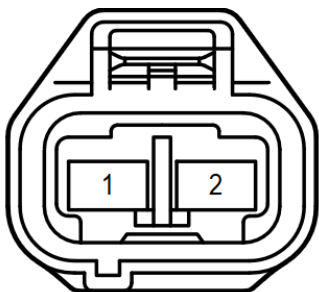


Figure 3 -Bank 1 Pump Driver Connector



Figure 4 - Removing Terminal Lock

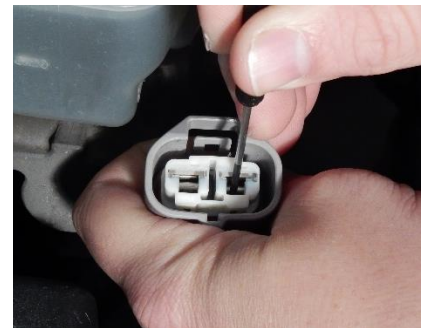


Figure 5 - Disengaging Terminal



Figure 6 - Remove Terminal While Holding Terminal Tab Out Of The Way

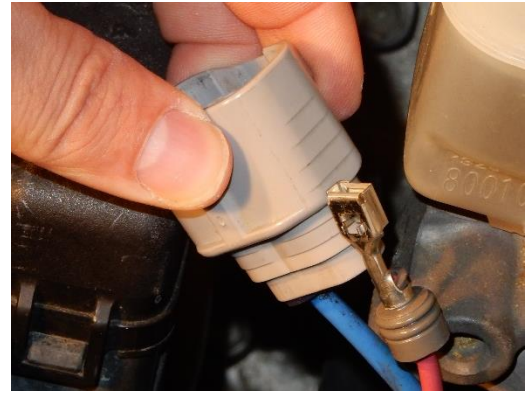


Figure 7 - #2 Terminal Removed

- 5) Fold the removed #2 terminal back to the harness and secure/cover with electrical tape or a zip-tie. If you removed the correct terminal (not the one with +12V from the battery) there should be no concern for the terminal contacting anything or remaining exposed.
- 6) Place Pump Replacement Pack in a convenient location and use the included mounting tape or zip-ties to hold it in place. On this vehicle it was convenient to nestle the pack down between the fuse box and the fender and route the new terminal lead underneath the fuse box to the pump driver. Avoid locations that will interfere with the hood closing.



Figure 8 – Connecting the Pump Pack's GND Connection

- 7) Insert the connector terminal from the Pump Pack into the connector. It only goes in one directions so the retainer tab clicks into place. Relock the terminals by pushing the terminal lock back into the connector then reconnect to the pump driver.
- 8) Next find a local ground point to connect the ring terminal of the Pump Pack. You may want to use a wire brush to clean any corrosion from the terminal before installing. The ideal ground point would be where the negative battery terminal connects to the body but any good clean body ground connection will work.

- 9) Pump Pack installation is now complete. You should now be able to clear your P0418 or P0419 code.

If you have questions or trouble before, during or after installation please contact us directly by visiting our "Contact Us" page on www.Hewitt-Tech.com