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Gen-II Secondary Air Injection System (SAIS) Bypass Kit

2.7L Tacoma Installation Instructions

Introduction:

Before installing the bypass module, it is highly recommended to address codes not related to the SAIS. It is also important to inspect the wiring and make any necessary repairs for certain circuit-related fault codes. For the Gen-II kit to work correctly, the wiring, pins, connectors, and the engine control module (ECM), cannot be damaged. The related wiring is between the remote mount pressure sensor, the air injection control driver, and the ECM. Further troubleshooting, pressure sensor replacement or, in EXTREME cases, ECM replacement may be required if there is damage to the ECM caused by driving for an extended period with circuit fault codes.

The Gen-II units emulate operation of the SAIS and allow you to clear your trouble codes/CEL, preventing the vehicle from entering limp mode. The Gen-II SAIS bypass module installs by replacing the factory air injection control driver (AID) and by connecting between the remote mounted pressure sensor and its factory harness. With the Gen-II unit and block off plates installed, air pumps, air tubes/plumbing and the factory air injection control driver is no longer required. Regardless of the bypass kit or SAIS, the vehicle still requires a functioning pressure sensors as they are utilized by the engine control module (ECM) as barometric pressure sensors and as part of a sensor test involving the evap. system's pressure sensor. Because of this, the Gen-II unit will typically need the air switching valves to remain in place because these sensors are in them. If your air switching valve pressure sensors are damaged, you can replace them or use our Pressure Sensor Replacement Options (PSO). One PSO is needed for each damaged sensor. Once an air switching valve is replaced with a PSO, the ASV is no longer needed. If you have questions about the installation or use of this kit, please visit us at www.Hewitt-Tech.com to view our Trouble Codes and FAQ pages. You can also contact us directly using the information found on the "Contact Us" page.

You can also view our install videos on our YouTube channel by searching "Hewitt-Tech". Or, click Hewitt Tech YouTube Channel if you're viewing these instructions electronically. If you have questions about any part of the installation, kits or your codes, please call us toll-free at 1-844-307-7671 or email us at support@hewitt-tech.com.

Important: It is illegal to remove, dismantle or otherwise cause to be inoperative any pollution control device required by federal, state, or local emissions law. The Gen-II bypass kits are sold for off-road or competition use only, no other applications are intended or implied. By installing or using this SAIS bypass kit, the vehicle owner and installer acknowledges and assumes ALL risks associated with its installation and use.

Needed for Installation:

- #2 Philips or Flat/Head Screwdriver
- 10mm ratchet/wrench
- Electrical tape
- Zip ties (optional)
- 0.5-1 hours

Installation Steps:

1) Open the hood and disconnect the negative battery terminal. This will reset the computer and trouble codes during installation. When resetting the computer this way, the engine may initially stall when first started and run rough until the computer has time to retune itself. This is perfectly normal and will correct itself in 5-10 minutes of idle or drive time.

2) Locate the air injection control driver (AID) in the engine bay. It is located on the inner passenger side of the fender.

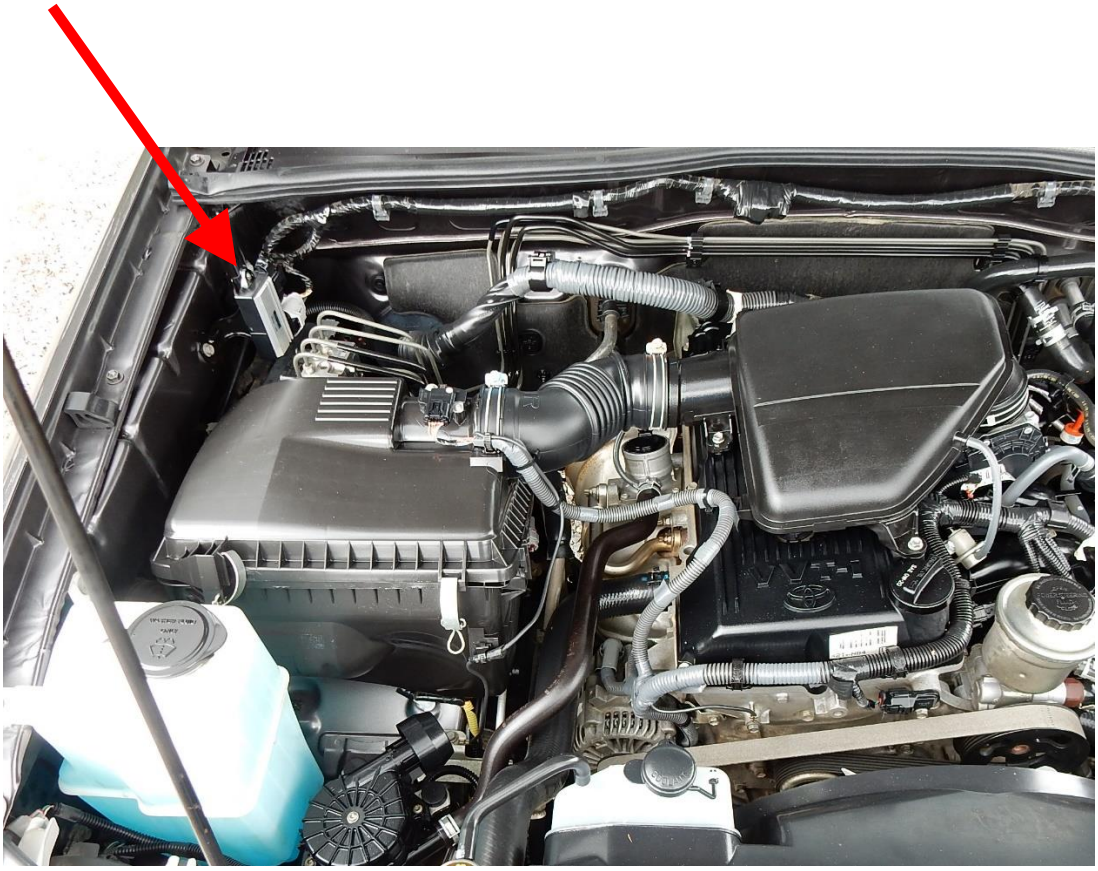

Figure 1 - Engine Compartment Viewed from Driver's Side Fender

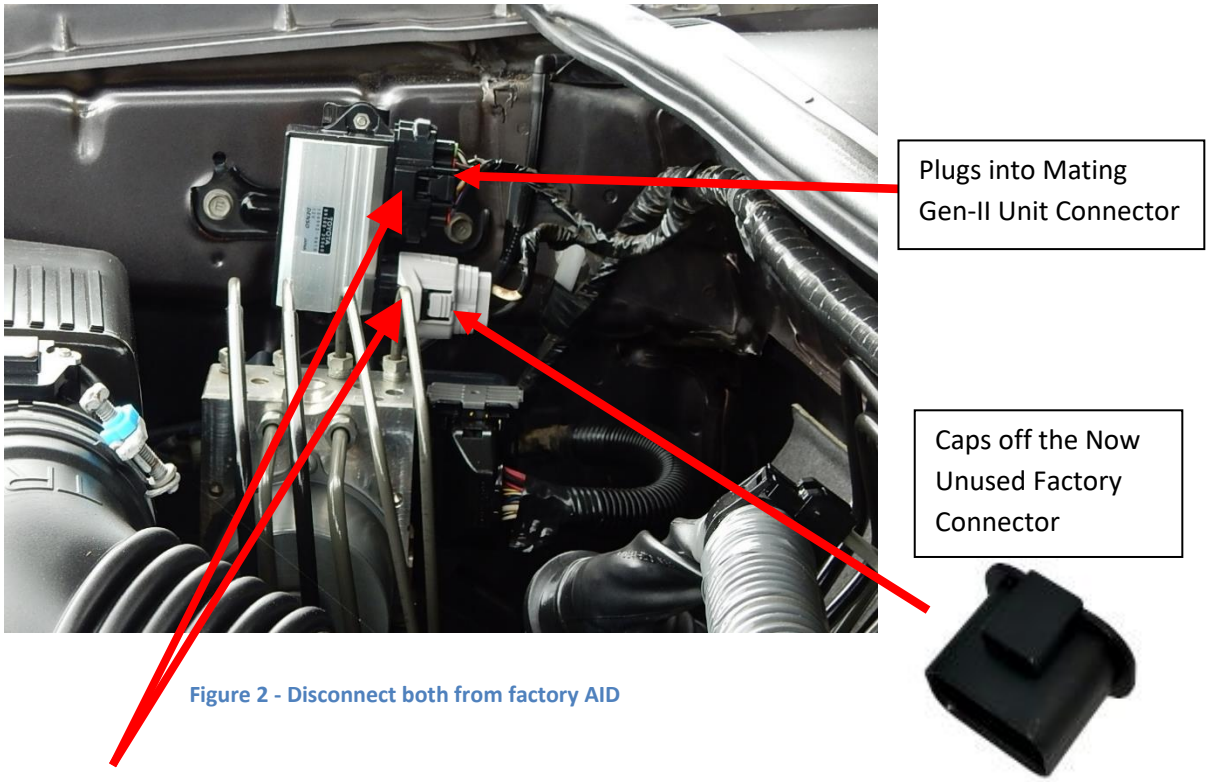

Figure 2 - Disconnect both from factory AID

3) Disconnect both connectors from the factory air injection control driver (AID).

4) Install the custom plug cap into the large factory two wire connector and tuck or zip tie out of the way. This permanently disconnects the +B supply from the air pump fuse and the air pump motor.

5) Unbolt the AID bracket from the fender. Remove the AID from the bracket by removing the two Philips screws.

Figure 3 - Remove the factory AID from the Bracket and Mount the Gen-II unit.

6) Set aside the factory air injection control driver, it is no longer needed.

7) Use the included stainless-steel hardware to mount the GenII unit to the bracket. The connectors should face the same direction of the factory connections. Bolt the bracket back to the inner fender.

Plugs into Gen-II unit

Plug into remote mounted pressure sensor.

Plugs into the factory harness that was connected to the remote mounted pressure sensor.

8) Connect the factory AID harness into the mating connector of the Gen-II unit. This is the connector mentioned in Figure 2.

9) Plug the Gen-II harness into the Gen-II unit and route to the firewall over the remote air pressure sensor mounted on the back of the intake tube.

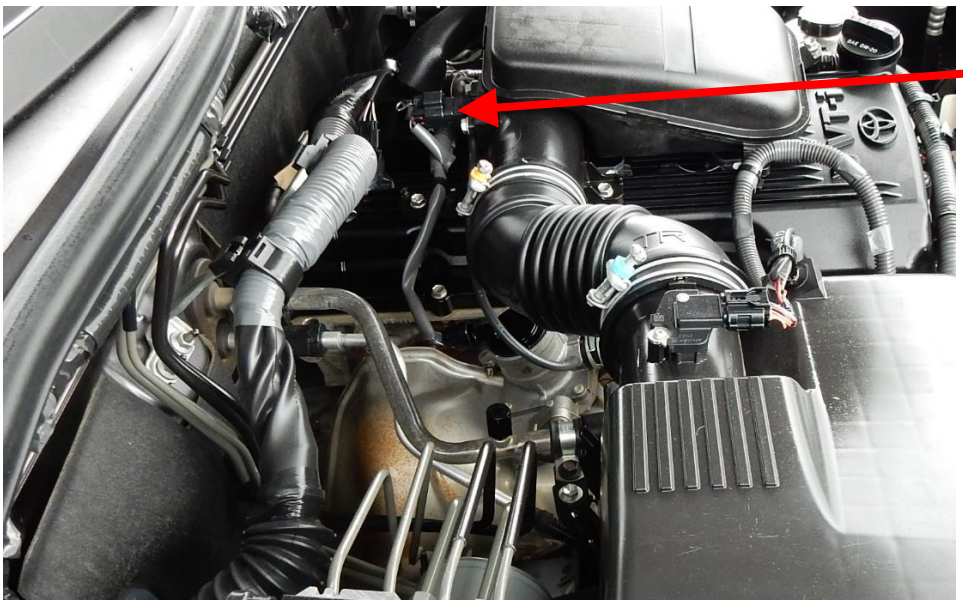

Figure 3 - Remote Pressure Sensor Location

10) Disconnect the remote pressure sensor.

11) Plug the factory connector into the male three pin Gen-II connector and the three pin Gen-II connector into the pressure sensor. There should be nothing left unplugged at this point except the large capped off factory connector.

12) Secure the harness with zip-ties to the harness across the firewall.

13) Install the block off plate if it was not already installed. The block off plates are covered in separate instructions.

14) Reconnect the negative batter terminal and start the engine.

    NOTE: Disconnecting the negative battery terminal to reset the codes will also reset engine tuning parameters, such as fuel trims. It is normal for the engine to run rough, off idle, and even stall after the first start. A few minutes of idle and drive time is all that is needed for the computer to relearn this tuning data.

15) At this point, there should be no active or pending codes stored for the secondary air injection system. The CEL should remain off assuming there are no other problems with the vehicle. If this is a 2009 or newer vehicle, any permanent codes scanned for the secondary air injection system will clear the next time the secondary air system is commanded to operate.

16) If the CEL comes back on for the secondary air injection, disconnect and reconnect all connections with the ignition off making sure there are no bent or pushed out pins. The connectors should click nicely together when fully connected.

17) Congratulations! You are finished with the installation and should never have a problem with the secondary air injection system again.

If you have questions or trouble before, during, or after installation, please contact us directly.

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