

## MASS AIR FLOW SENSOR INSTALLATION INSTRUCTIONS

### ENGLISH

#### WARNING

The Mass air flow sensor is a very precise electronic device that requires specific care during installation. Please follow the instructions below to prevent any damage to the unit or installation errors that may lead to a "check engine light" or engine performance issues.

#### BEFORE REPLACING THE MASS AIR FLOW SENSOR

1. Ensure air filter is in good condition or replace. Remove any loose debris left in the air filter housing as this may contaminate the new mass air flow
2. Inspect and repair any engine vacuum leaks.
3. Inspect for loose air ducts between the mass air flow and throttle.
4. If air ducts are torn or cracked replace as necessary.
5. Replace all damaged or broken air duct clamps or screws
6. Ensure the Positive Crankcase Ventilation system (PCV) is functioning properly.
7. Inspect and repair any wiring related to the mass air flow sensor. (Connector to Engine Computer)
8. Check for any pre-existing trouble codes and fix them first.

**Note:** Some are easy to replace while others are harder to service because of their location. It is recommended to disconnect the negative battery cable during servicing to prevent cooling fan operation or accidental starting of the engine which may cause personal injuries.

#### MASS AIR FLOW REMOVAL

- a) Disconnect the Mass Air Flow sensor electrical connector. (please note the harness connector routing and position for new sensor installation)
- b) If the Mass Air Flow is supported to a bracket, remove the bolts.
- c) Loosen the clamps securing the air duct to the Mass Air Flow.

- d) Some Mass Air Flow models are directly bolted to the throttle assembly; remove the screws or bolts from sensor.

**Note:** Some models will have seals or gaskets between the MAF and the throttle assembly. Inspect the seal or gasket and replace as necessary.

- e) Remove the MAF assembly.

#### MASS AIR FLOW INSTALLATION

**Note:** Make sure that the airflow arrow indicated on the sensor is pointing toward the engine.

- a) Once the sensor is clamped or bolted to the engine side air duct, connect the duct from air filter side to the sensor.
- b) Secure both ends if the complete housing or securely mount sensor to the housing. Ensure no air leaks.
- c) If equipped with a support bracket, install bolts and tighten in place.
- d) Carefully route the electrical connector properly to prevent any damage to the wiring harness and connect to the sensor.
- e) If a weather seal is used on the connector, ensure it is in good condition.
- f) Perform a final visual inspection of all air ducts to prevent any leaks that will cause performance issues.
- g) Connect and secure the negative battery cable.
- h) Run the engine and let it reach normal operating temperature.
- i) If the malfunction indicator lamp (Check Engine) comes on, turn the ignition switch to the "OFF" position and inspect the connection to the sensor and air ducts.
- j) If all visual inspections are not showing any anomalies, repeat previous step.
- k) If the malfunction indicator lamp (Check Engine) is still on, retrieve the trouble codes and refer to the appropriate service manual or technical information for your vehicle for corrective action.