

# Intake Cleaning System Procedures

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## Port Fuel, Tuned Port and CIS Systems

**WARNING:**

Extreme care must be taken when performing this process. Failure to take the necessary precautions may result in mechanical engine failure.

**IMPORTANT:**

Wear suitable OSHA approved safety goggles before starting this or any other MotorVac CarbonClean Service.

1. Warm up vehicle to operating temperature.
2. Shut off vehicle.
3. Fill the ICS container with a **MAXIMUM** of 4 ounces of MotorVac detergent. ( See page B-10 in Appendix B for ICS kit breakdown .)
4. Pressurize the container with shop air to a minimum of 80 PSI. **Do not exceed 185 PSI.**
5. Shake the ICS container to aerate the mixture.

**NOTE:**

If the ICS container has too much cleaner in it, there may not be enough air volume to force the cleaner out with sufficient velocity to contact the intake air plenum walls. Always be sure to maintain at least 80 pounds of pressure in the ICS container.

6. Be certain that the ICS 30-inch spray tube is free from any kinks or bends.
7. Attach the spray tube to the end of the ICS container.
8. Measure the length of the engine air intake manifold by laying the spray tube outside the manifold.
9. At the throttle plate, grip and hold the tube.

**NOTE:**

This will be the maximum length that the tube may be inserted into the manifold.

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**CAUTION:  
CIS FUEL SYSTEMS**

Do not open or move sensor plate / air door on the engine when the fuel distributor is pressurized. The CIS system will spray fuel into the engine while it is not running.

10. With the engine off and the engine's air duct removed, open the throttle plate wide open or have someone hold it open.
11. Insert the ICS spray tube into the manifold up to the point measured in step 8 and 9.
12. While holding the container upright, press and hold the nozzle of the ICS container and quickly pull the spray tube to the open end of the manifold near the throttle plate.
13. Release the nozzle once the tip of the spray tube gets near the throttle plate.

**NOTE:**

Do not spray outside of the throttle bore housing.

14. If the MotorVac CarbonClean System is in use at the time, press the **STOP** button or **Turn the timer knob to the zero position** to depressurize the engine's fuel system.

**NOTE:**

It is recommended that after each pass with the ICS container, the engine should be "bumped over" using the starter.

**DO NOT ALLOW THE ENGINE TO START**

15. Quickly turn the ignition to the start position then back to the off position to rotate the engine over slightly.
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**NOTE:**

Disconnecting and grounding the secondary ignition will also keep the engine from starting.

16. Repeat these procedures a **maximum** of 3 times.
17. After the air intake tract has been cleaned, it will be necessary to start the engine and continue with the cleaning process.

The continuation of the cleaning service will require the installation of the 6-inch spray tube to clean the Idle Air Control passage while the engine is running.

**NOTE:**

**If you do not understand these instructions completely or have any questions contact MotorVac Technical support at 800-841-8810 BEFORE performing this procedure.**

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## Throttle Body and Carburetor Systems

1. Warm up vehicle to operating temperature.
2. Shut off vehicle and remove air cleaner.
3. Open the **ICS Spray Bottle** and add 4 oz. of intake cleaning detergent. Pressurize with shop air and insert the short (6") **Spray Tube** into the **Nozzle**.

### **IMPORTANT**

**DO NOT EXCEED 185 PSI  
USE SAFETY GLASSES**

4. Spray any exposed areas, air horn, choke plate, etc....with a generous amount of cleaner (one or two ounces) and let soak.
5. Once the exposed areas are coated, insert the 30" **Soak Tube** into the **nozzle**. Open the throttle plate and slide the **Soak Tube** into the manifold through the carburetor or **TBI**. Spray the inside of the intake manifold with cleaner making sure to move the **Soak Tube** in a circular motion so that as much of the floor of the manifold as possible will be soaked with cleaner.

### **IMPORTANT**

**Use only half the contents (4 oz.) at this time.  
Using too much may fill a cylinder in smaller engines.**

6. Start the vehicle. While the vehicle is running, spray the remainder of the cleaner in through the throttle plate in several short bursts. If the vehicle seems to be stalling, stop spraying for a moment to allow the engine to return to a normal idle and repeat.
  7. Re-install air cleaner, start the vehicle and test drive, or return to appropriate cleaning process.
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## Cleaning Through a Vacuum Port for Added Carbon Removal Capabilities

1. Warm up vehicle to operating temperature.
2. Open the **ICS Spray Bottle** and add 8 oz. of intake cleaning detergent. Pressurize with shop air and insert the short (6") **Spray Tube** into the **Nozzle**.

### IMPORTANT

**DO NOT EXCEED 185 PSI  
USE SAFETY GLASSES**

3. Start the vehicle. Locate a suitable vacuum port as close as possible to the throttle plate and insert the short **Soak Tube** into the vacuum hose (in some cases it may be necessary to use the PCV hose as an inlet).
  4. While the engine is idling, hold the **ICS Spray Bottle** upright and begin spraying cleaner into the engine. If the vehicle seems to be stalling, stop spraying for a moment to allow the engine to return to a normal idle and repeat.
  5. When the **ICS Spray Bottle** is empty remove it from the engine, re-install the vacuum hose (or PCV hose) and test drive the vehicle, or return to appropriate cleaning process.
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