

From: Technology Category: Fuel System Service Distribute to: Sales Team, Distributors & Customers

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## Subject: Correct Vacuum Source for Induction Cleaner Applications

Choose the correct vacuum source for Induction Cleaner applications to:

- Clean the intake manifold.
- Distribute Induction Cleaner evenly to all intake runners and cylinders.

## Intake manifold configurations differ from engine to engine. Therefore, the correct vacuum source may also differ. Use the following procedure to choose the correct vacuum source:

- 1. Find the central vacuum source closest to the throttle body (see illustration).
- 2. Connect the Induction Cleaner Applicator to this vacuum source.
- 3. Proceed with Induction Cleaner application, following directions.



Intake air flows through the throttle body, through the intake manifold, then into each intake runner and cylinder.

- Induction Cleaner flows downstream from the vacuum source inlet, with the air flow.
- Using the **wrong** vacuum sources may lead to:
  - Overheated catalytic converters
  - Possible engine damage.
  - Will not clean the intake manifold, and may clean only one intake runner and cylinder.
- Using the correct vacuum source will distribute Induction Cleaner to the intake manifold, and to all intake runners and cylinders.
- **Note**: In the above illustration, do **not** use the brake booster hose (lower right). **Never** use a vacuum source that connects to an individual intake runner.

## **The Canister Purge System**

## A great way to identify the correct vacuum source

Environmental regulation in the United States began in earnest in the early 1970s, and as a result, cars have had evaporative emission control (EVAP) systems ever since. These systems are designed to store and dispose of fuel vapors before they can escape into the atmosphere. A typical system consists of a small canister full of charcoal, valves, hoses, vents in the fuel lines and a sealed fuel tank cap. When fuel evaporates inside the gas tank, the excess vapors are transferred to the charcoal canister. They're stored there until they can safely be transferred back to the engine to be burned with the normal air-fuel mixture. When that's ready to happen, a valve creates a vacuum that draws the vapors into the engine. Fresh air is also drawn in through the vents and valves to mix with the vapors for better combustion.

The canister purge valve always connects to a centrally located manifold vacuum source. If we trace the hoses back from the identifying green valve cap on the E.V.A.P. system test port we can locate this vacuum source for correct application of induction cleaner.

Below are illustrations of this system:

