

## Delphi Small Engine Evaporative Emissions Canisters

Delphi Small Engine Evaporative Emissions canisters help limit the amount of gasoline vapors released into the environment by gasoline fuel storage or a fuel delivery system through a process called adsorption.

In adsorption, as gasoline vapors and condensed liquid from the fuel tank enter the canister through the tank tube, the hydrocarbon molecules are attracted to and stored upon the surfaces of the carbon material inside the canister. The canister holds onto the molecules until the carbon material is cleaned, or purged. Using engine manifold vacuum to draw outside air through the carbon bed, the hydrocarbon molecules are pulled into the intake manifold for combustion.

Delphi offers a family of Small Engine Evaporative Emissions Canisters that are compact and easy to package. Delphi can also tailor a canister to meet specific customer needs.

### ► Benefits

- Optimized to help manufacturers of motorcycles and small gasoline engine products meet new evaporative emissions regulatory standards such as California Air Resources Board (CARB) TP-902 requirements
- Designed to help protect the environment, the canisters can contribute to the development of a "green" image for a small engine product brand
- Flexible mounting and packaging with multiple orientations available
- Volume compensation in most models prevents degradation of carbon pack enabling increased durability
- Impact-modified nylon shell provides high impact resistance
- Cost competitive designs offer excellent value
- Global manufacturing and technical support facilities

### ► Typical Applications

Delphi Small Engine Evaporative Emissions Canisters are designed specifically for motorcycles, commercial lawn equipment, pressure washers, stationary power generators, and many other products that are powered by small gasoline engines. They are compatible with ethanol-blended fuel programs.



**Delphi offers a family of Small Engine Evaporative Emissions Canisters**

▶ **Canister Sizing**

Canister Size (cc or liters)	Maximum Fuel Tank Size (gallons)	Working Capacity per TP-902 (grams)	CARB Executive Order Number
200 cc	2.3	12.3	Q-08-029
550 cc	5.5	29.6	Q-08-015a
850 cc	8.6	46.0	Q-09-017
1.2 L	15.5	82.2	Q-017-013A
1.5 L	16.8	89.3	Q-07-014
2.1 L	24.5	130.0	Q-07-015b
3.1 L	37.0	196.5	Q-07-016
3.3 L	44.1	233.8	Q-07-017

This chart shows the recommended canister size for fuel tanks based on California Air Resources Board (CARB) guidelines.

▶ **Performance Advantages**

Delphi Small Engine Evaporative Emissions Canisters are specifically designed for small engine applications. They are compact and feature durable plastic designs and shapes that enable convenient packaging in a range of product programs and with various fuel tank sizes. The technology has been repeatedly proven in some of the most demanding engine and emissions applications.

Delphi Small Engine Evaporative Emissions Canisters are pre-tested to meet vibration, thermal, impact, vapor cycling and humidity environment requirements. Delphi employs an exhaustive analysis, testing, and validation process to verify that an evaporative emissions canister will work properly before it is manufactured. Advanced testing facilities enable Delphi to validate performance through durability and functional testing. Delphi can also customize testing for all emissions requirements.

▶ **The Delphi Advantage**

Delphi is one of the world's leading manufacturers of evaporative emissions canisters, producing millions annually and providing customers with world class quality and performance. Delphi offers the benefits of more than 35 years' experience, and the in-depth knowledge of evaporative emissions canister design and market requirements. Delphi offers low-cost manufacturing in North America, Asia and Europe. Delphi has full engineering capabilities in North America and Europe to help manufacturers meet evolving evaporative emissions criteria.

As a global leader in engine management systems technology, Delphi can help manufacturers around the world meet emissions requirements, improve fuel economy and enhance performance. Delphi is a source for high value solutions and our systems expertise is built into every product. Delphi's flexible engineering approach encourages collaboration. And, Delphi has a thorough understanding of markets around the world and a global network of resources.