Unit 8: Pollution: module 4.45: reduction of air pollution

- prevention
- conservation
- regulation

Example: vapor recovery nozzle: reduces VOC emissions



Screenshot 2026-02-11 at 1.53.31 PM.png

Catalytic converters:

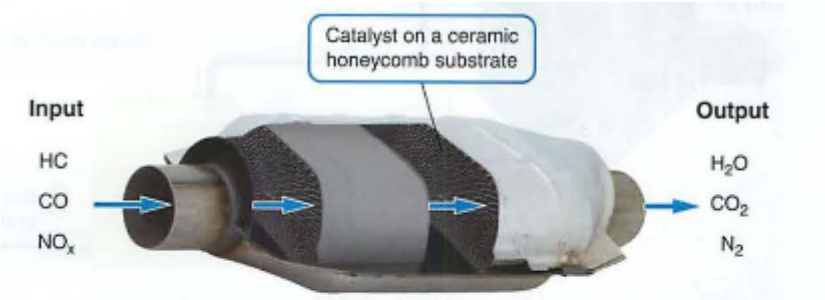


FIGURE 45.3 Catalytic converter. This honeycomb device coated with a metal such as platinum, treats pollutant gases from the engine such as nitrogen oxides, carbon monoxide, and hydrocarbons and converts them into nitrogen gas, carbon dioxide, and water. Because the device can be damaged by the metal lead, Clean Air Act legislation that required the catalytic converter also mandated that lead no longer be added to gasoline.

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Smokestack scrubber: Note that ash at the bottom is toxic, and must be removed to a toxic waste dump

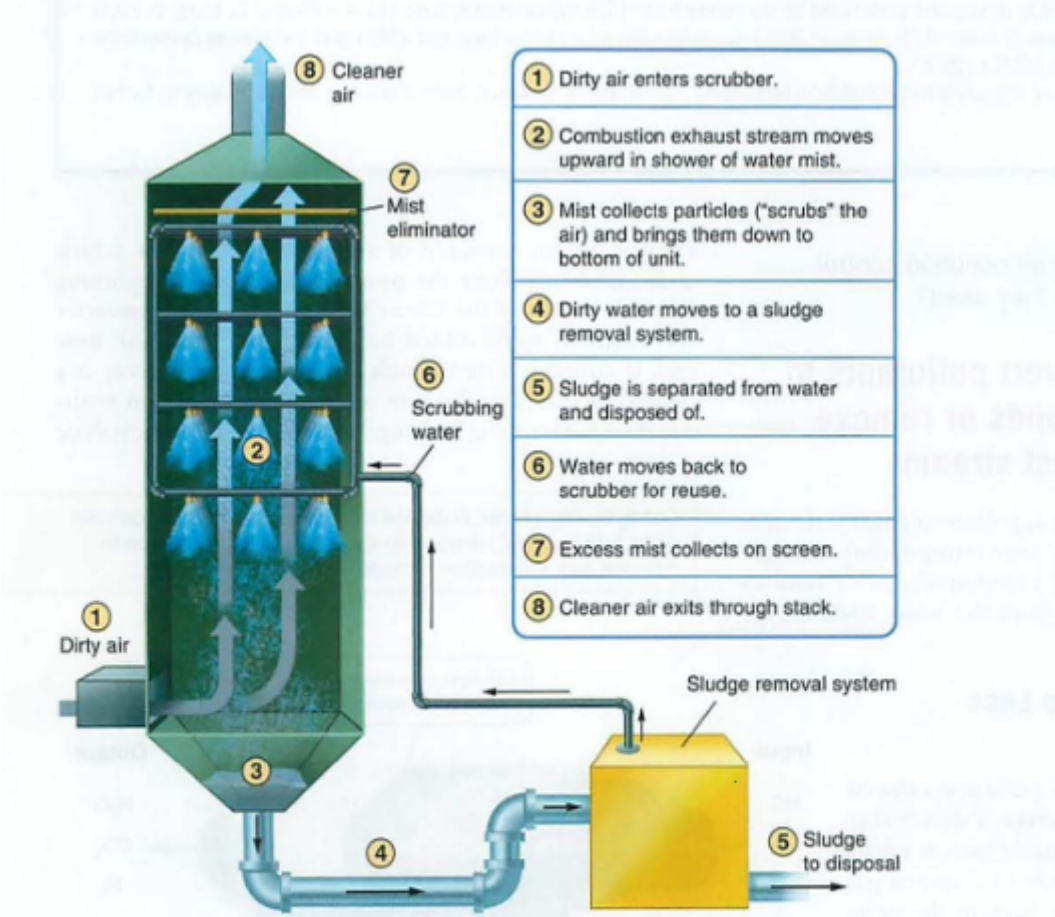


FIGURE 45.4 The scrubber, wet variety. In this air pollution control device, particles and sulfur dioxide are "scrubbed" from the exhaust stream by water droplets and air. A water-particle "sludge" is collected and processed for disposal. Another variation, the dry scrubber, uses compounds such as lime and air to remove particles.

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Migrated from Apple Server Wiki. Original page ID: Q700A7E7_

Revision #2
Created 2026-09-29 15:59:08 UTC by Admin
Updated 2026-09-29 16:21:21 UTC by Admin