

# Emission Control Systems

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## **Source of Exhaust Emissions**

The combustion process produces carbon monoxide (CO), oxides of nitrogen (NO<sub>x</sub>) and hydrocarbons (HC). Control of hydrocarbons and oxides of nitrogen is very important because, under certain conditions, they react to form photochemical smog when subjected to sunlight. Carbon monoxide does not react in the same way, but it is toxic.

Honda Motor Co., Ltd. utilizes various systems to reduce carbon monoxide, oxides of nitrogen and hydrocarbons.

## **Exhaust Emission Control System**

The exhaust emission control system includes a PGM-FI system, two three-way catalytic converters, a secondary air injection system, an ignition timing control system, and two heated oxygen sensors or two air fuel ratio sensors.

No adjustment to these systems should be made although periodic inspection of the components is recommended.

### ***PGM-FI System***

The PGM-FI system has four subsystems: Air Intake, Engine Control, Fuel Control, and Exhaust Control.

The Engine Control Module (ECM) uses various sensors to determine how much air is going into the engine. It then controls how much fuel is injected under all operating conditions.

### ***Ignition Timing Control System***

The system constantly adjusts the ignition timing, reducing the amount of HC, CO and NO<sub>x</sub> produced.

### ***Secondary Air Injection System***

The secondary air injection system introduces filtered air into the exhaust gases in the exhaust port. The secondary air injection system helps improve emission control performance.

### ***Three-Way Catalytic Converters***

The three-way catalytic converters are in the exhaust system. Through chemical reactions, they convert HC, CO, and NO<sub>x</sub> in the engine's exhaust to carbon dioxide (CO<sub>2</sub>), nitrogen (N), and water vapor.