



Minnesota
Pollution
Control
Agency

Metro District,
Operations &
Planning

Engine Switching

Air/December 1998

The federal Clean Air Act limits the amount of pollution motor vehicles may emit, but automakers decide how to achieve those limits.

Manufacturers design and build their vehicles according to certain specifications allowing the vehicle to meet clean-air standards. These specifications are placed on all emission-related parts, engine calibrations and other design parameters for each type of engine and chassis combination in light-duty and heavy-duty vehicles.

According to the U.S. Environmental Protection Agency (EPA) guidelines, the transfer of an engine from one vehicle to another is illegal unless the resulting vehicle has the same engine calibrations, emission control parts and engine design parameters of the original vehicle or newer model chassis. For example, you may not install a 1975 model year engine in a 1980 model year chassis.

Allowable engine installations

Under EPA guidelines, engine exchanges are permitted as long as the installed engine is:

- The same model year or newer than the chassis;
- Made by the same manufacturer as the chassis;
- The same size as the engines produced for chassis model year or newer;

- Properly connected to the emission control systems designed for the chassis model year or newer models; and
- The same weight class (light-duty, heavy-duty) as the chassis.

In general, the resulting vehicle should be identical to the certified design configuration of the chassis.

Resources for vehicle specifications

If you are unsure what your vehicle's exact specifications and calibrations are, you may wish to consult one of the following resources:

- The Vehicle Emissions Control Information label, usually located under the vehicle's hood;
- Recent service manuals or bulletins from your vehicle manufacturer; or
- Chilton's Emission Control Systems Application (this manual usually can be found at public libraries, automotive schools or repair shops).

Emissions testing for vehicles with exchanged engines

In general, 1976 and newer gasoline-powered vehicles in the Twin Cities seven-county area are inspected each year. The five newest model-year vehicles are exempt from inspection.



Vehicles are tested to state emission levels that are set for the chassis model year, unless car owners can document that their vehicles have older engines.

For the purpose of the vehicle inspection program only, some vehicles with exchanged engines older than 1976 can receive an exemption to the annual inspection. However, owners of these vehicles are still required to comply with federal and state tampering laws.

To correct this apparent inconsistency between the vehicle inspection program and the tampering laws, 1992 and later model year vehicles will be tested to the emission levels set for the chassis model year, regardless of the engine model year.

NOTE: Car owners may find it difficult, if not impossible, to adequately demonstrate the engine model year. In these cases, the vehicle will continue to be inspected according to the chassis year.

Where Can I Call to Find Out More?

Questions about the Minnesota Vehicle Inspection Program may be directed to the information hotline at (612) 884-8000 (voice).

Other questions may be directed to the MPCA:

St. Paul	(651) 296-6300
	toll-free/TDD (800) 657-3864
Brainerd	(218) 828-2492
Detroit Lakes	(218) 847-1519
Duluth	(218) 723-4660
Marshall	(507) 537-7146
Rochester	(507) 285-7343