



Vehicle and Engine Inspections

September 16-18, 2019



Instructor Information

Janice Chan

U.S. EPA, Region 9

San Francisco, CA

Chan.Janice@epa.gov

415-972-3308

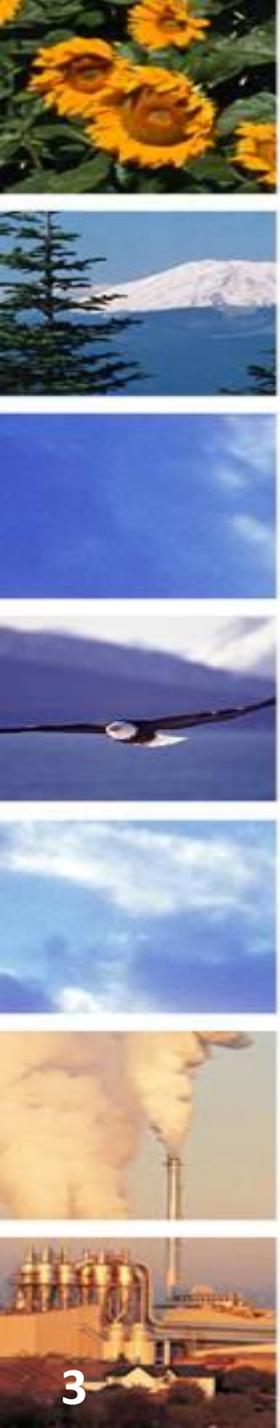
Elfego Felix

U.S. EPA, Office of Enforcement and Compliance Assurance (OECA)

Washington, D.C.

Felix.Efego@epa.gov

202-564-1403



Overview

- Key EPA staff working on Vehicle & Engine (V&E) matters
- Brief Background:
 - The Clean Air Act & Prohibited Acts
 - Regulated Categories of V&E
- EPA Inspections & [Demo](#) (←video link)



Key EPA staff working on Vehicle & Engine (V&E) matters

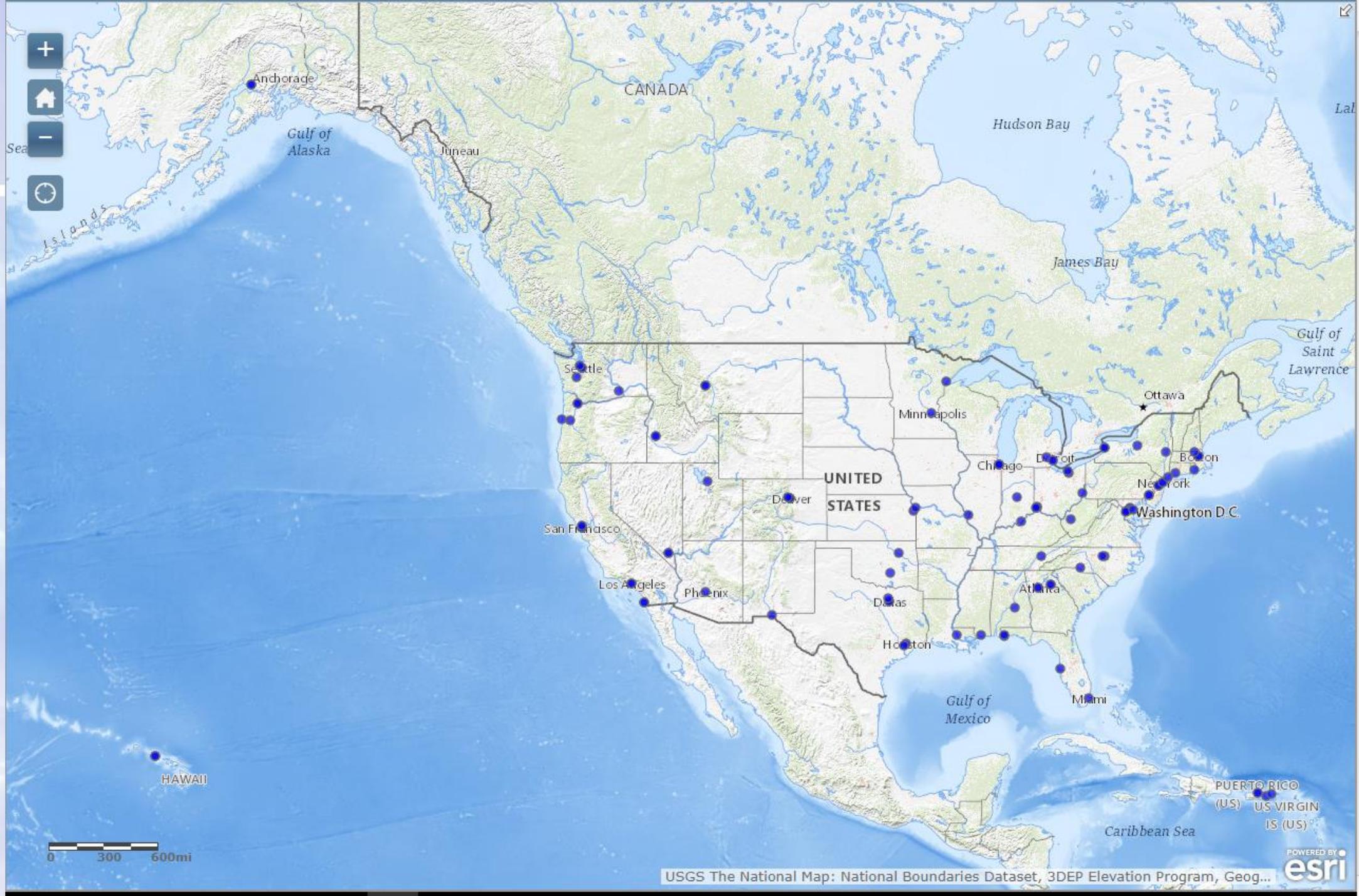
Office of Transportation and Air Quality (OTAQ)

- Certification: Testing, Audits, Recalls, Etc.
- Imports Exemptions/Exclusions, Publications/Guidance, Hotline
- Rules & Regulations

Regional Offices & OECA (**Today's Presentation Team**)

- Inspections/Investigations/Compliance Assistance
- Civil Enforcement Prosecutions (as needed)
 - EPA's Criminal investigation offices also engage as needed
- Coordinate with U.S. Customs & Border Protection (CBP)
- Coordinate with U.S. Department of Justice (DOJ)

Regular coordination between OTAQ, Regional Offices, OECA, DOJ, & CBP





Clean Air Act Title II Vehicle and Engine Road Map

- § 202: Emission standards for motor vehicles
- § 203: Prohibited Acts
- § 204: Injunction Proceedings
- § 205: Civil Penalties
- § 206: Motor Vehicle Compliance Testing and Certification
- § 207: In-Use Compliance of Motor Vehicles (Recall and Warranty)
- § 208: Information Collection
- § 213: Nonroad Engines and Vehicles
- § 215: High Altitude Performance Adjustments
- § 216: Definitions
- § 219: Urban Bus Standards



Clean Air Act § 203: Prohibited Acts

- Under Title II § 203 performing or causing the following acts is prohibited:
 - 203(a)(1): For a manufacturer or importer to introduce into U.S. commerce or **import vehicles or engines that are not covered by a certificate of conformity** unless otherwise excluded or exempted;
 - 203(a)(2): To fail to keep records, perform testing, and make reports as required under CAA § § 202, 206, and 208;
 - 203(a)(3)(A): To **tamper** with certified vehicles or engines;
 - 203(a)(3)(B): To **manufacture, sell, offer to sell, or install a defeat device**;
 - 203(a)(4)(A): For a manufacturer to **fail to attach the required label** to engines/ vehicles at the time of manufacture or import (nonroad engines/ vehicles) or at the time of sale (motor vehicles including motorcycles and heavy duty highway engines);
 - 203(a)(4)(B): For a manufacturer to **fail to warrant** the engines or vehicles;
 - 203(a)(5): violations of **leaded gas engines, Urban bus standards, Clean Fuel Vehicles, etc.**



Clean Air Act § 205: Civil Penalties

- Any person who violates CAA § § 203(a)(1), 203(a)(4), or 203(a)(5), or any manufacturer or dealer who violates § 203(a)(3)(A) shall be subject to a civil penalty of not more than **[\$47,357*]** per violation.
- Any person **other than a manufacturer or dealer** who violates CAA § 203(a)(3)(A) (**tampering**) or any person who violates § 203(a)(3)(B) (**defeat devices**) shall be subject to a civil penalty of not more than **[\$4,735*]** per violation.
- Any person who violates CAA § 203(a)(2) (**recordkeeping**) shall be subject to a civil penalty of not more than **[\$47,357*]** per day of violation.

*Subject to inflation increases in the future



Regulated Categories of Vehicles & Engines

For most recent applicable standards and requirements, consult the relevant regulations at 40 C.F.R.

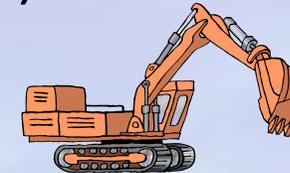
Light Duty Vehicles: 1970s/ 2010 (Exh), 2012 (GHG)



Heavy Duty Engines : 1980s/ 2010 (Exh), 2014 (GHG)



Nonroad Compression Ignition: 1996/ 2014 (Exh)



Nonroad Small Spark Ignition: 1997/ 2012 (Exh and Evap)



Spark Ignition Marine SI: 1998/ 2010 (Exh), 2011(Evap)



Stationary IC engines: Diesel 2007, Gasoline 2009/ 2014 (Exh)



Legend

- Spark Ignition – Gasoline
- Compression Ignition - Diesel

Exh – Exhaust

Evap – Evaporative

GHG – Green House Gasses

Images source: google.com

Regulated Categories of Vehicles & Engines (cont.)

For most recent applicable standards and requirements, consult the relevant regulations at 40 C.F.R.

Locomotive: 2000/ 2010 (idle reduction), 2015 (Exh)



Marine CI: 2004/ 2015 (ECA Exh)



Large SI: 2004/ 2007 (Evap)



Recreational Vehicles: 2006/ 2008 (Evap)



Highway Motorcycles: 1978/ 2006 (Exh), 2008 (Evap)





U.S. EPA Vehicle & Engine Inspections



Vehicle & Engine Inspection Objectives

1. Confirm EPA certification (or valid exemption/exclusion)
2. Verify what is built matches what was certified (or exempted/excluded)
3. Document findings



Where can Inspections happen?

1. U.S. Ports of Entry under CBP authority:
 - EPA provides CBP recommendations, typically within 30-60 days
 - Goods inspected by CBP or EPA personnel
2. On-site at the facilities where vehicles/engines are in U.S. commerce or manufactured

Requests for Information may also be sent by EPA per CAA § 208



What Documentation is Reviewed?

Examples:

- EPA Import Declaration Forms
 - [EPA Standard Form 3520-1](#) for Motor Vehicles/Engines
 - [EPA Standard Form 3520-21](#) for Nonroad and HD Highway
- Packing & Invoice Lists
- VIN or Engine Serial Numbers (ESNs)
- Bills of Lading
- EPA Certificates/Applications or Exemption/Exclusion Letters & Applications
- Manuals & Emission Warranty Statements
- Product Advertisements (e.g. online, magazines, etc.)
- Reports, Testing, & other records as needed

For Imports inspections, EPA may access information submitted through CBP's Automated Commercial Environment (ACE) system



Physical Inspection of Vehicles & Engines

Looking for:

- EPA Required Labels
- Emission Control Devices (e.g. catalysts, filters, etc.)
- Engine design & potential vented emissions
- Part Numbers
- Signs of on-road versus nonroad
- Accompanying documents (e.g. manuals, emissions warranty, etc.)
- Adjustable Parameters

At times:

- Disassembly may be required (e.g. displacement test or to better see engine)
- Samples may be collected (e.g. catalyst, fuel tanks/lines, etc.)

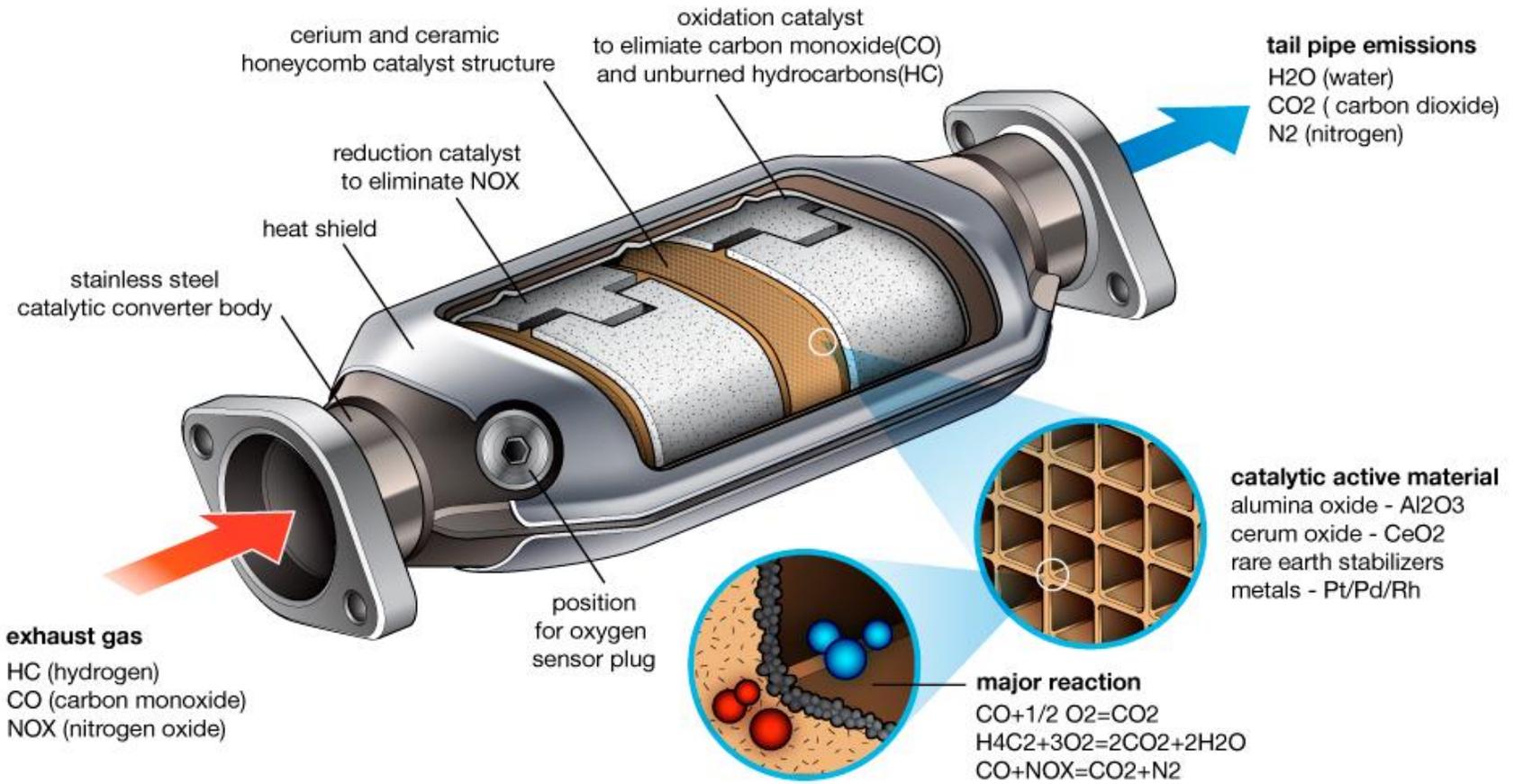


Common Vehicle and Engine Emissions-Related Components Inspected

Labels



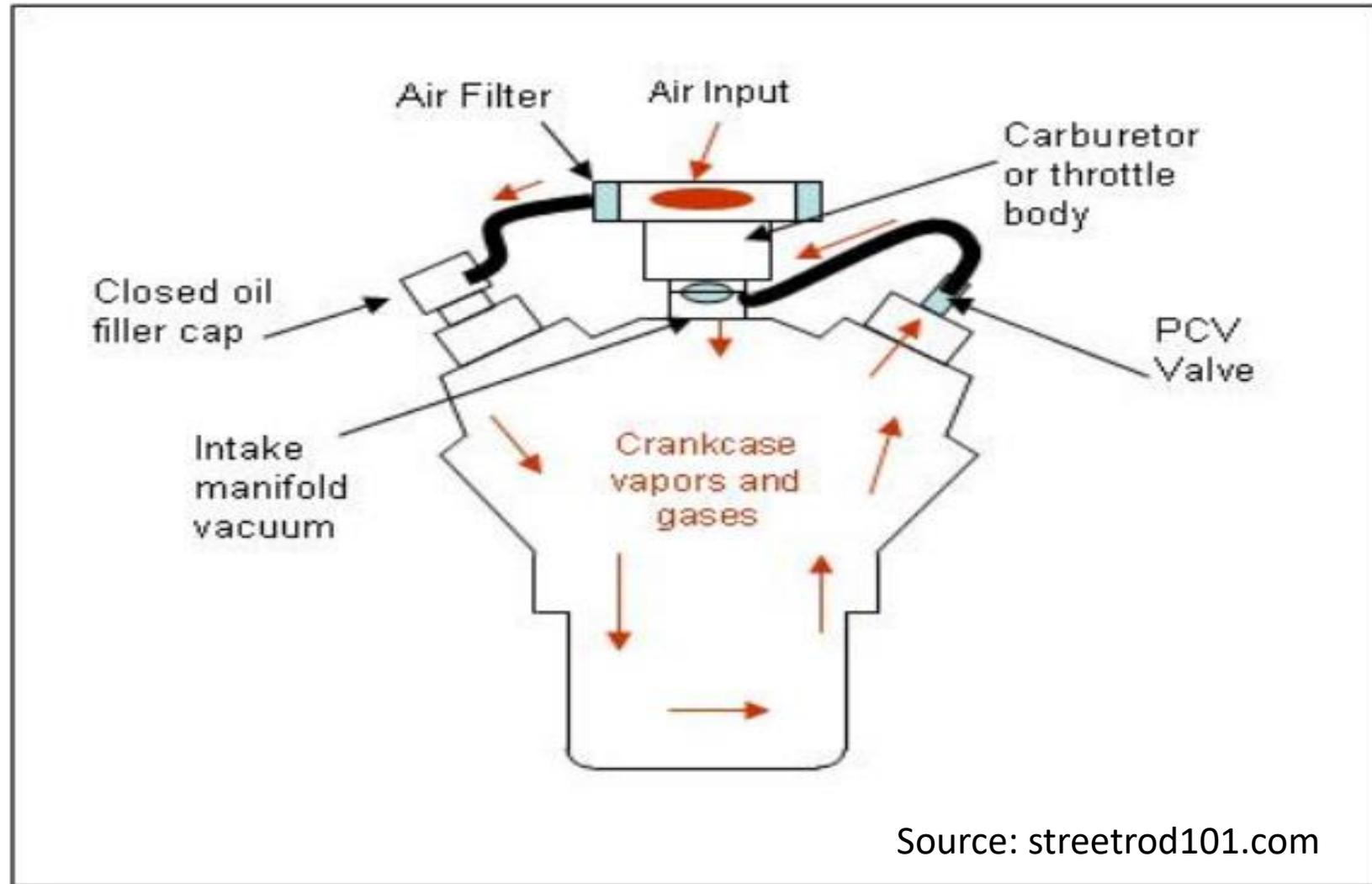
Catalytic Converter



Pulse Air Injection Reactor (PAIR) Valve



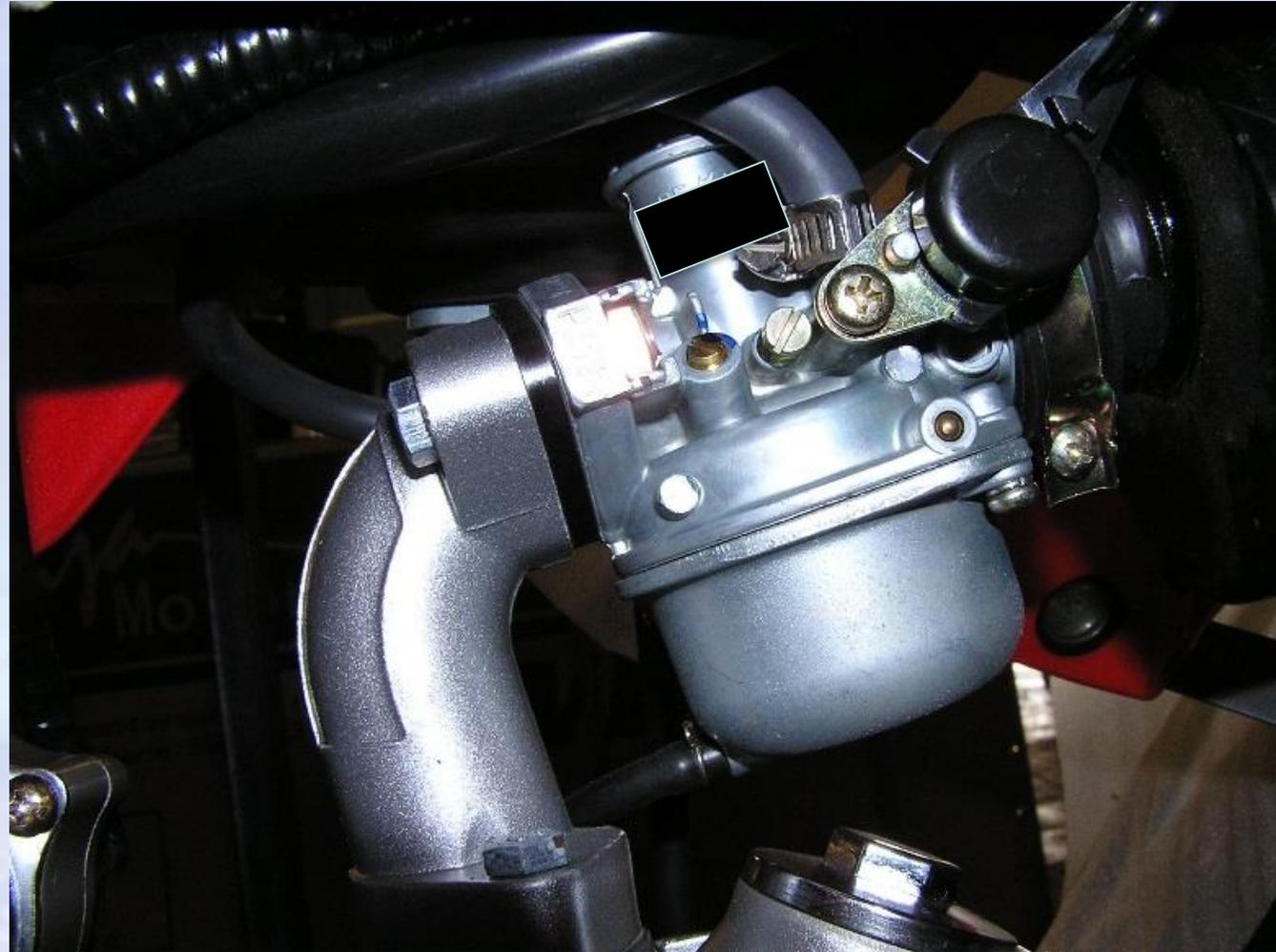
Positive Crankcase Ventilation (PCV)



PCV System in Vehicle



Carburetors



Throttle Body Fuel Injection



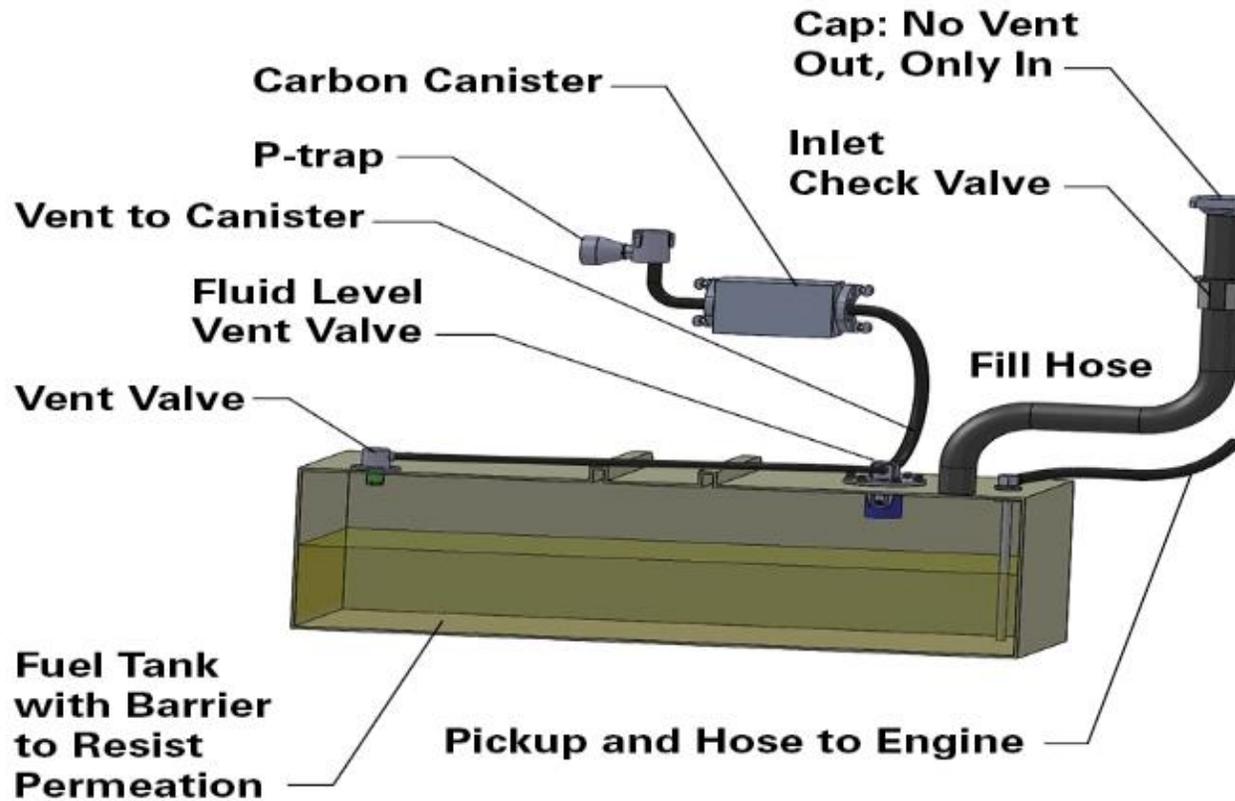
Source: carid.com

Fuel Lines, Tanks, & Evaporative Systems

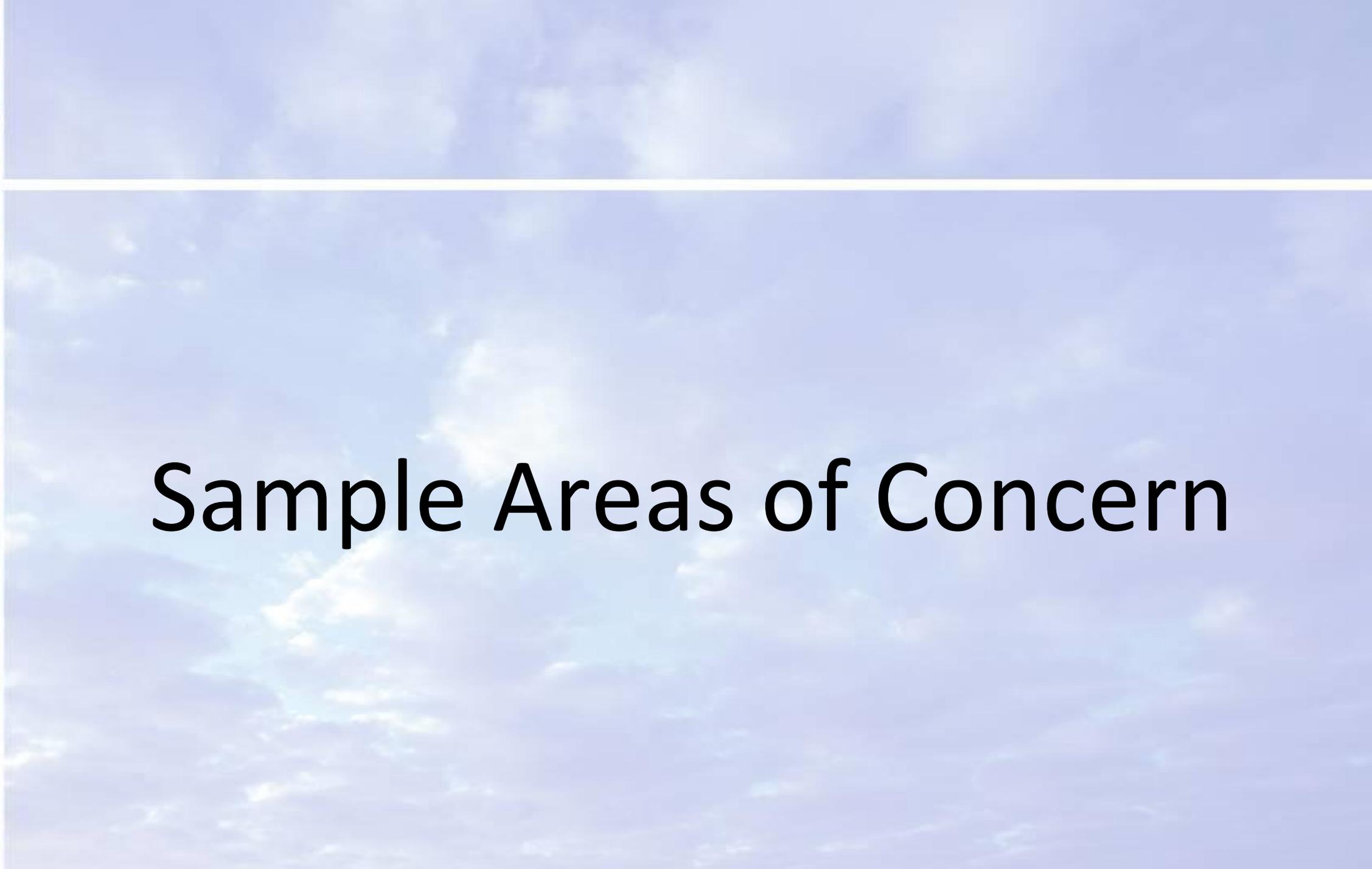


Evaporative Controls

Diurnal Canister System

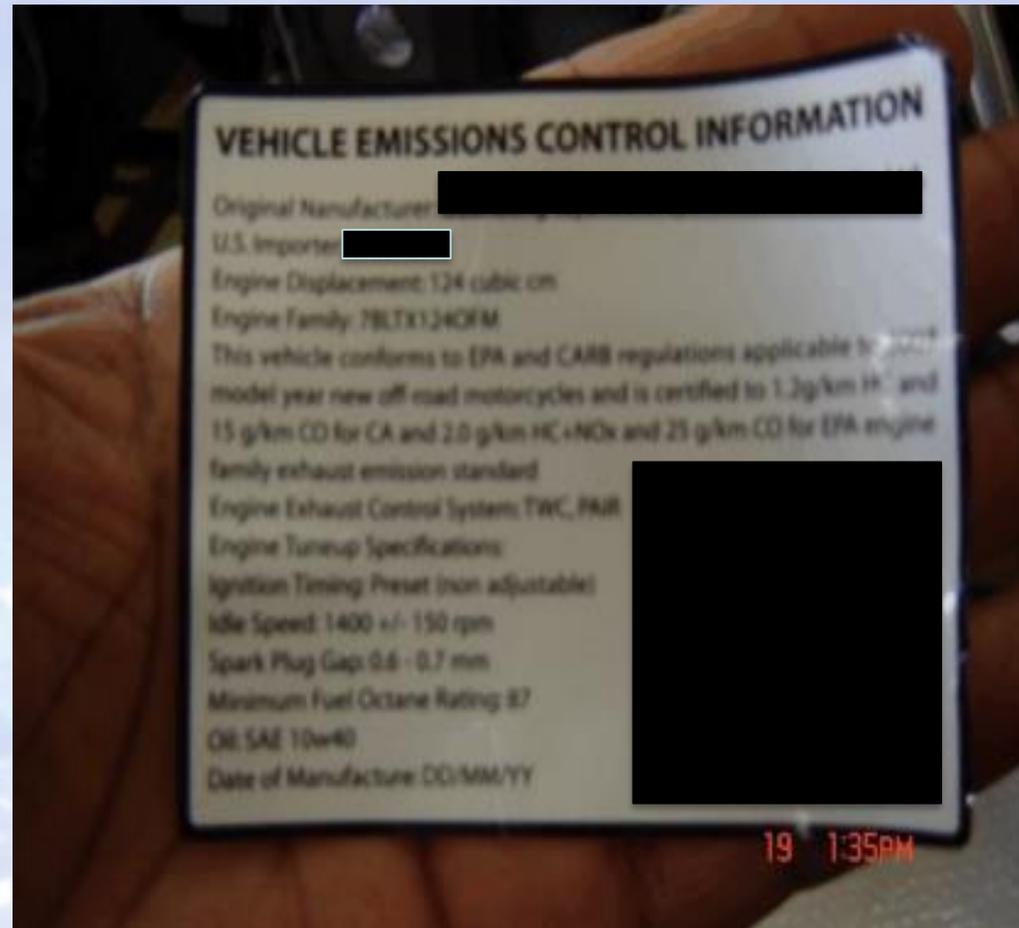


Source: moellermarine.com



Sample Areas of Concern

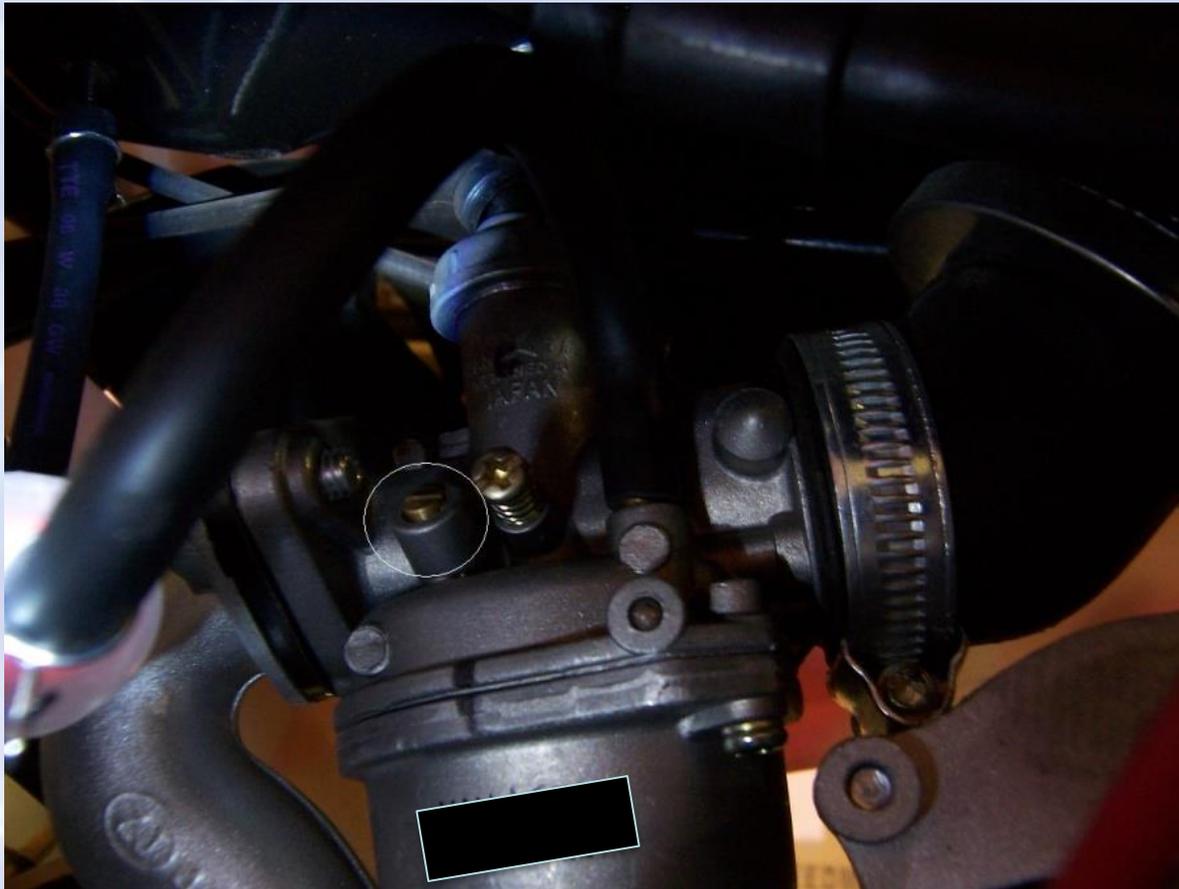
Labels that Can be Removed Without Being Destroyed or Defaced



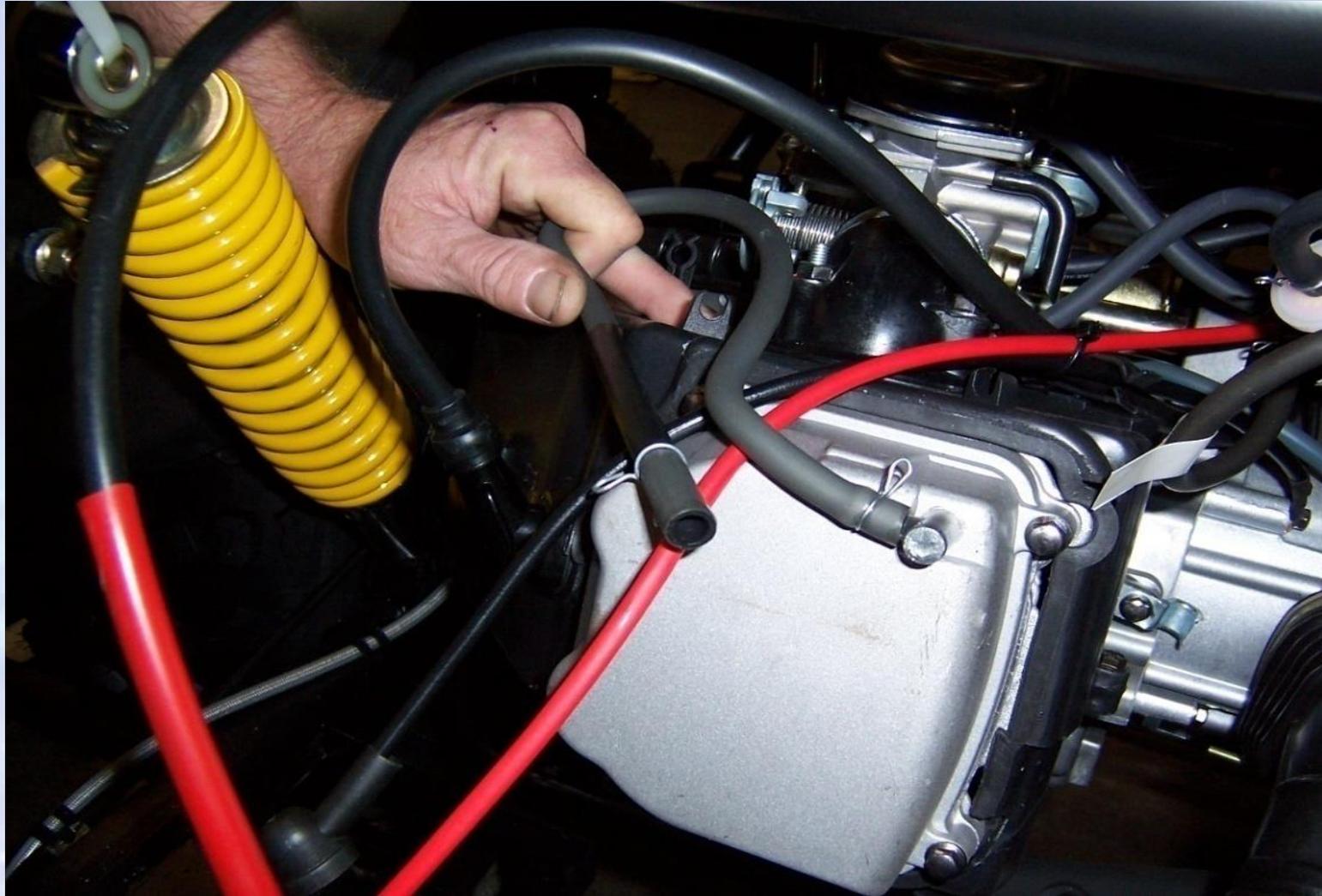
Catalyst is missing



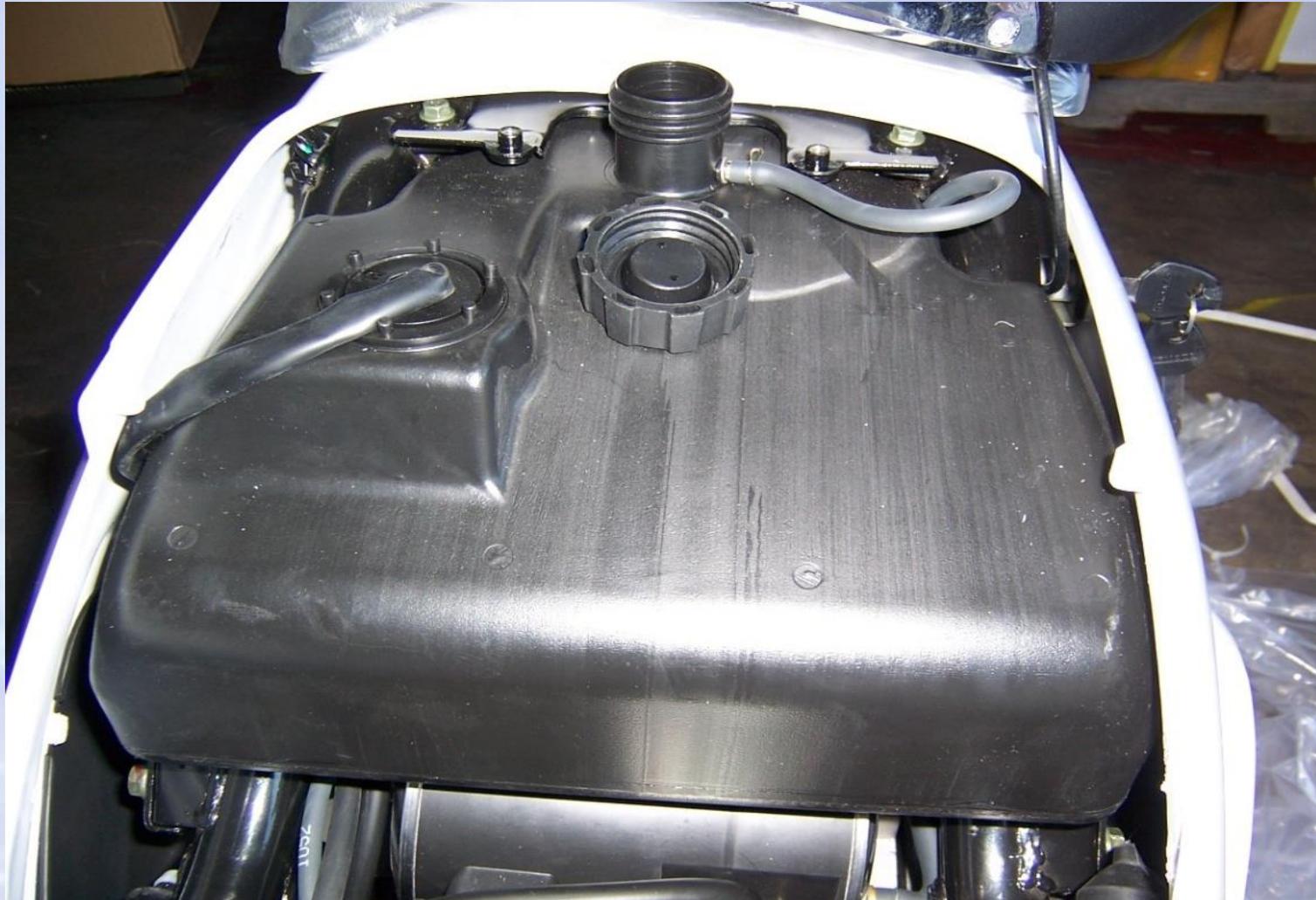
Engine Family Certified with no Adjustable Parameters, but Carburetor has Adjustable Idle Air/Fuel Mixture Screw



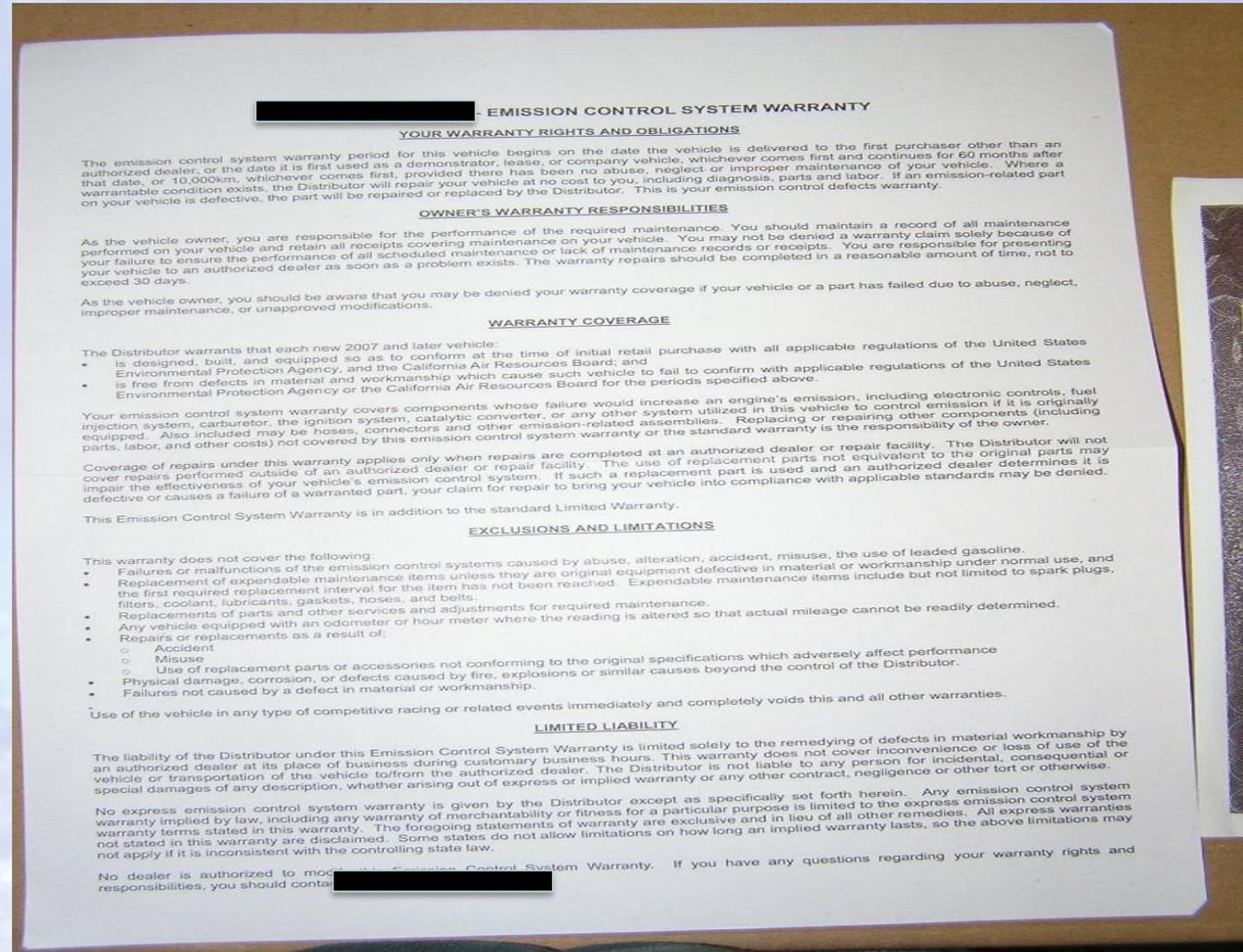
Crankcase vent violates closed crankcase requirement



Plastic tank where vehicle was certified with metal tank



Missing Emissions Warranty





Sample Areas of Concern

Note: This is not a comprehensive list and is subject to change in the future.

- Uncertified
- Misbuild (i.e. built different from certified)
- Labels
- Missing or materially different emission components
- Wrong certification category
- Importation of engines subject to older standards
- Missing/incorrect reporting, testing, records
- Adjustable parameters



The End!