

Vehicle and Engine Inspections

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Instructor Information

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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 & <u>Demo</u> (←video link)



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

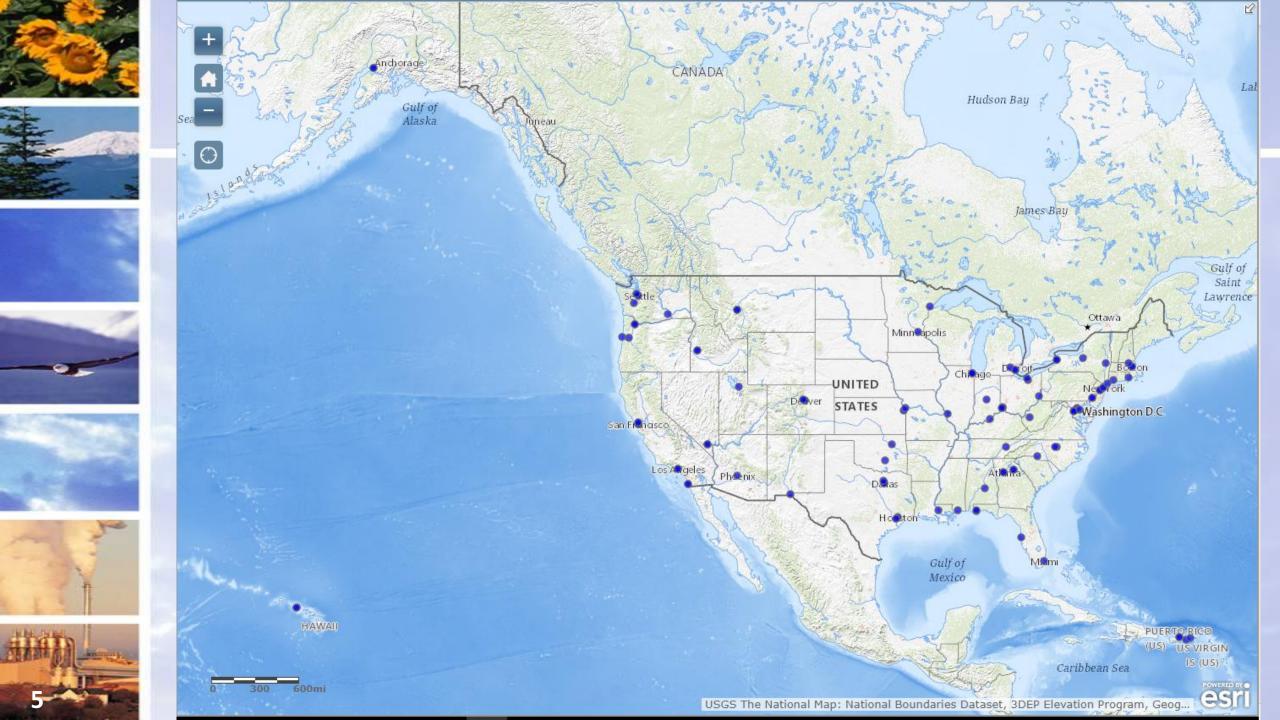
Office of Transportation and Air Quality (OTAQ)

- 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.

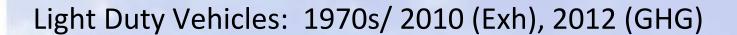


^{*}Subject to inflation increases in the future



Regulated Categories of Vehicles & Engines

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





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)



- Spark Ignition Gasoline
- Compression Ignition Diesel

Exh – Exhaust

Evap – Evaporative

GHG – Green House Gasses



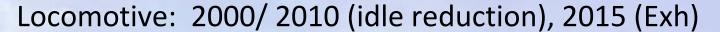


Images source: google.com



Regulated Categories of Vehicles & Engines (cont.)

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





Marine CI: 2004/2015 (ECA Exh)



Large SI: 2004/ 2007 (Evap)



Recreational Vehicles: 2006/2008 (Evap)



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





Images source: google.com



U.S. EPA Vehicle & Engine Inspections



Vehicle & Engine Inspection Objectives

- 1. Confirm EPA certification (or valid exemption/exclusion)
- 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





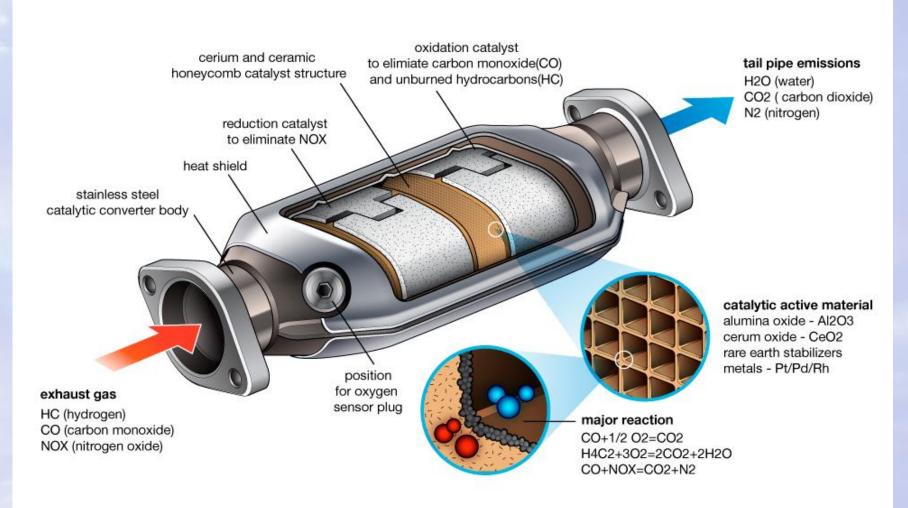








Catalytic Converter



Source: catsays.blogspot.com



Pulse Air Injection Reactor (PAIR) Valve





Positive Crankcase Ventilation (PCV)

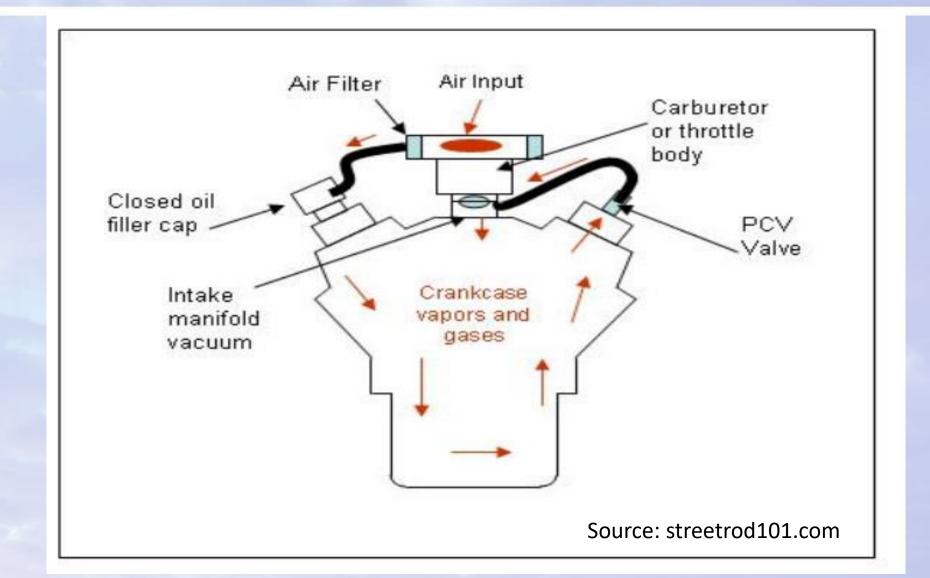












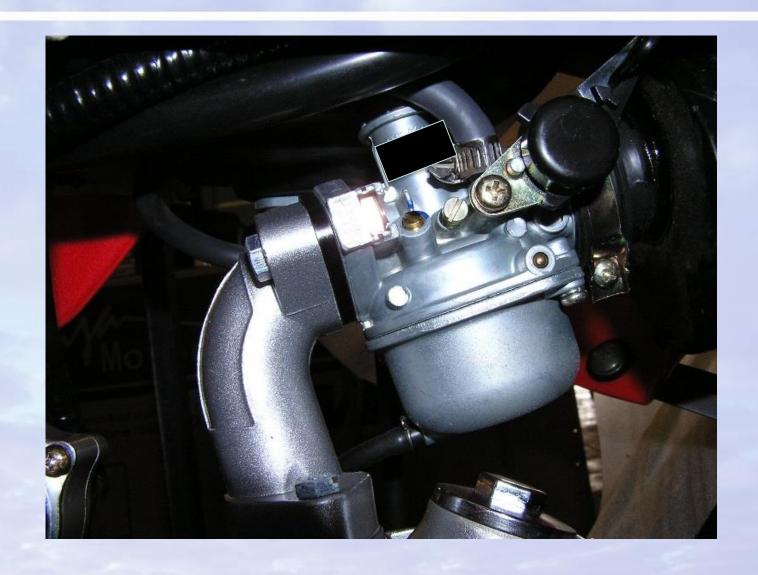


PCV System in Vehicle





Carburetors





Throttle Body Fuel Injection

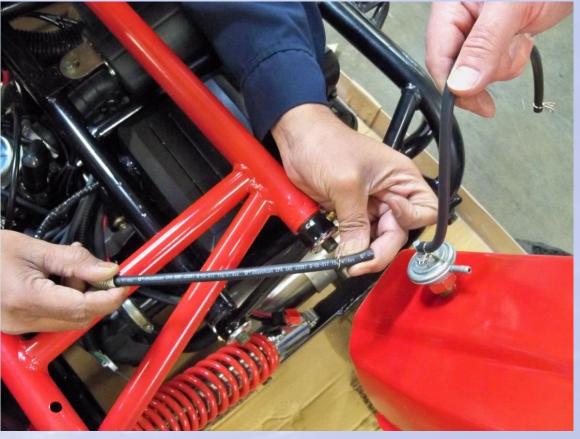


Source: carid.com



Fuel Lines, Tanks, & Evaporative Systems









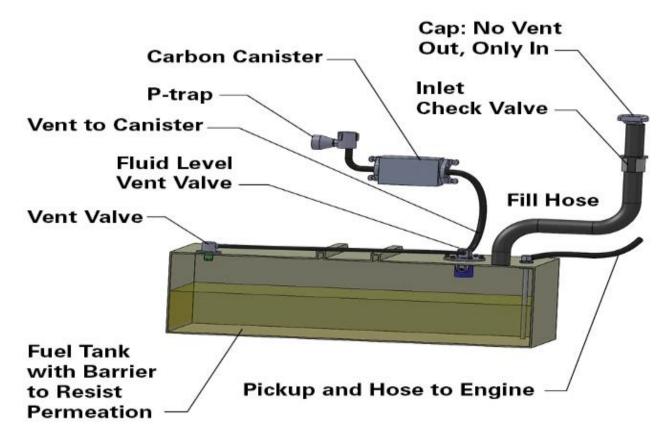






Evaporative Controls

Diurnal Canister System



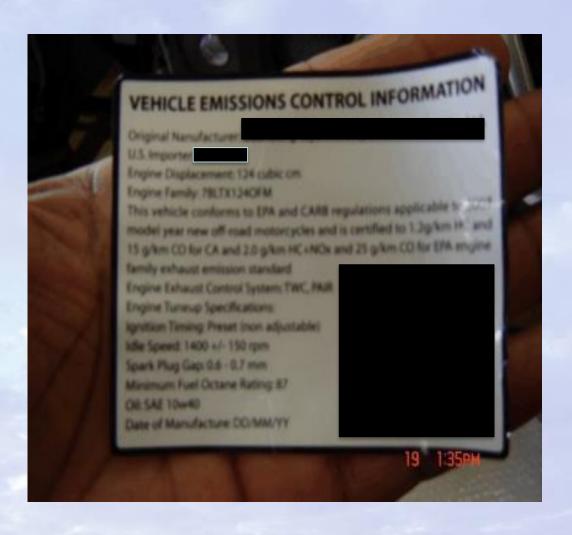
Source: moellermarine.com



Sample Areas of Concern



Labels that Can be Removed Without Being Destroyed or Defaced

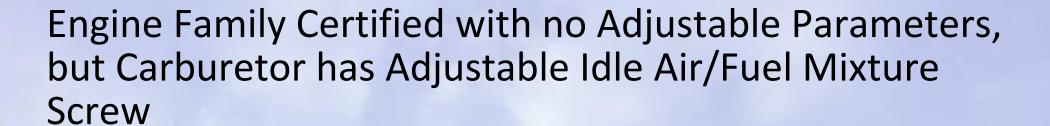




Catalyst is missing







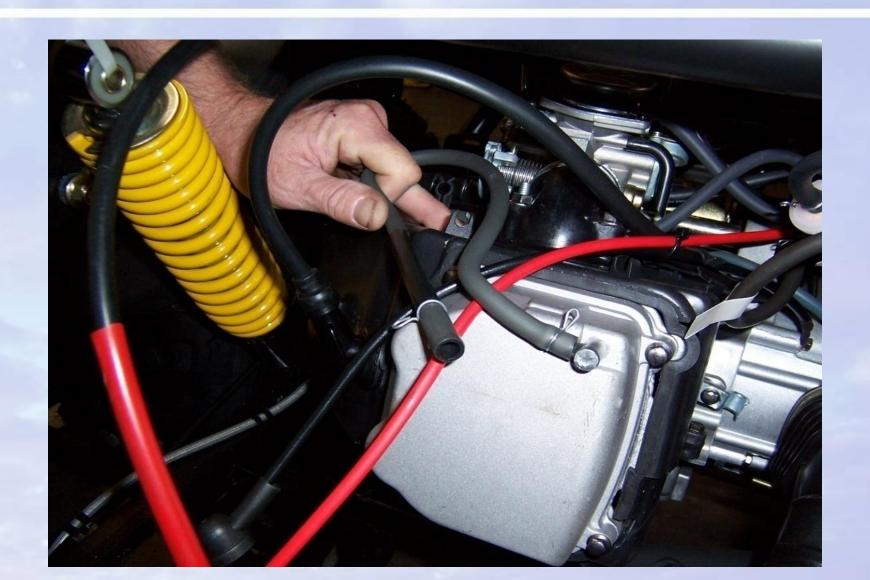








Crankcase vent violates closed crankcase requirement





Plastic tank where vehicle was certified with metal tank

















Missing Emissions Warranty

EMISSION CONTROL SYSTEM WARRANTY

YOUR WARRANTY RIGHTS AND OBLIGATIONS

The emission control system warranty period for this vehicle begins on the date the vehicle is delivered to the first purchaser other than an authorized dealer or the date it is first used as a demonstrator, lease, or company vehicle, whichever comes first and continues for 80 months after authorized dealer or the date it is first used as a demonstrator, lease, or company vehicle, whichever comes first and continues for 80 months after that date, or 10,000 km, whichever comes first, provided there has been no abuse, neglect an expect that date. Beginning that the part warrantable condition exists, the Distributor will repair your vehicle at no cost to you, included undiagnosis, parts and labor. If an emission-related part warrantable condition exists, the Distributor will repair your vehicle is defective, the part will be repaired or replaced by the Distributor. This is your emission control defects warranty.

OWNER'S WARRANTY RESPONSIBILITIES

As the vehicle owner, you are responsible for the performance of the required maintenance. You should maintain a record of all maintenance performed on your vehicle and retain all receipts covering maintenance on your vehicle. You may not be denied a warranty claim solely because of your failure to ensure the performance of ack of maintenance records or receipts. You are responsible of governments of the performance of ack of maintenance records or receipts. You are responsible of governments and the performance of ack of maintenance or lock of maintenance records or receipts. You are responsible of the your vehicle to an authorized dealer as soon as a problem exists. The warranty repairs should be completed in a reasonable amount of time, not to

As the vehicle owner, you should be aware that you may be denied your warranty coverage if your vehicle or a part has failed due to abuse, neglect. improper maintenance, or unapproved modifications

WARRANTY COVERAGE

The Distributor warrants that each new 2007 and later vehicle:

is designed, built, and equipped so as to conform at the time of initial retail purchase with all applicable regulations of the United States Environmental Protection Agency, and the California Air Resources Board, and

is free from defects in material and workmanship which cause such vehicle to fail to confirm with applicable regulations of the United States is free from the defects in material and workmanship which cause such vehicle to fail to confirm with applicable regulations of the United States Environmental Protection Agency or the California Air Resources Board for the periods specified above.

Your emission control system warranty covers components whose failure would increase an engine's emission, including electronic controls, fuel injection system, carburetor, the ignition system, catalytic converter, or any other system utilized in this vehicle to control emission if it is originally injection system, carburetor, the ignition system, catalytic converter, or any other system utilized in this vehicle to control emission if it is originally injection system, carburetor, the ignition system, carburetor, the ignition system components (including equipped. Also included may be hoses, connectors and other emission-related assemblies. Replacing or repairing other components (including equipped, Also included may be hoses, connectors and other emission control system warranty or the standard warranty is the responsibility of the owner.

Coverage of repairs under this warranty applies only when repairs are completed at an authorized dealer or repair facility. The Distributor will not cover repairs performed outside of an authorized dealer or repair facility. The use of replacement parts not equivalent to the original parts may cover repairs performed outside of an authorized dealer determines it is used and an authorized dealer determines it is impair the effectiveness of your vehicle's emission control system. If such a replacement part is used and an authorized dealer determines it is defective or causes a failure of a warranted part, your claim for repair to bring your vehicle into compliance with applicable standards may be denied.

This Emission Control System Warranty is in addition to the standard Limited Warranty

EXCLUSIONS AND LIMITATIONS

- swarranty does not cover the following:

 Failures or malfunctions of the emission control systems caused by abuse, alteration, accident, misuse, the use of leaded gasoline.

 Replacement of expendable maintenance items unless they are original equipment defective in material or workmanship under normal use, and the first required replacement interval for the item has not been reached. Expendable maintenance items include but not limited to spark plugs, filters, coolant, lubricants, gaskets, hoses, and belts.

 Replacements of nars and other senders and adjustments for required maintenance.
- Replacements of parts and other services and adjustments for required maintenance.

 Any vehicle equipped with an odometer or hour meter where the reading is altered so that actual mileage cannot be readily determined.
- Repairs or replacements as a result of;
- Use of replacement parts or accessories not conforming to the original specifications which adversely affect performance of Use of replacement parts or accessories not conforming to the original specifications which adversely affect performance or physical damage, corrosion, or defects caused by fire, explosions or similar causes beyond the control of the Distributor.
- Failures not caused by a defect in material or workmanship.

Use of the vehicle in any type of competitive racing or related events immediately and completely voids this and all other warranties.

LIMITED LIABILITY

The liability of the Distributor under this Emission Control System Warranty is limited solely to the remedying of defects in material workmanship by an authorized dealer at its place of business during customary business hours. This warranty does not cover inconvenience or loss of use of the an authorized dealer at its place of business during customary business hours. This warranty does not cover inconvenience or loss of use of the authorized dealer. The Distributor is not liable to any person for incidental, consequential or vehicle or transportation of the vehicle to form the authorized dealer. The Distributor is not liable to any person for incidental, consequential or special damages of any description, whether arising out of express or implied warranty or any other contract, negligence or other tort or otherwise.

No express emission control system warranty is given by the Distributor except as specifically set forth herein. Any emission control system warranty implied by law, including any warranty of merchantability or fitness for a particular purpose is limited to the express emission control system warranty terms stated in this warranty. The foregoing statements of warranty are exclusive and in lieu of all other remedies. All express warranties warranty terms stated in this warranty. The foregoing statements of warranty are exclusive and in lieu of all other remedies. All express warranties not stated in this warranty are disclaimed. Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply if it is inconsistent with the controlling state law. not apply if it is inconsistent with the controlling state law.

No dealer is authorized to mo responsibilities, you should conta otrol System Warranty. If you have any questions regarding your warranty rights and



Sample Areas of Concern

Note: This is <u>not</u> 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

