VETS
VORTEX EMISSIONS
TARGET SOLUTION

Vortex in Partnership with Altronic and Dynamic Catalyst Systems Present

Affordable
Cost Effective Solutions
To Our Present and Future
Emissions Guidelines

Vortex
PRODUCTION SERVICES

altronic
HOERBIGER Engine Solutions

DCS
DYNAMIC CATALYST SYSTEMS

the System

VETS
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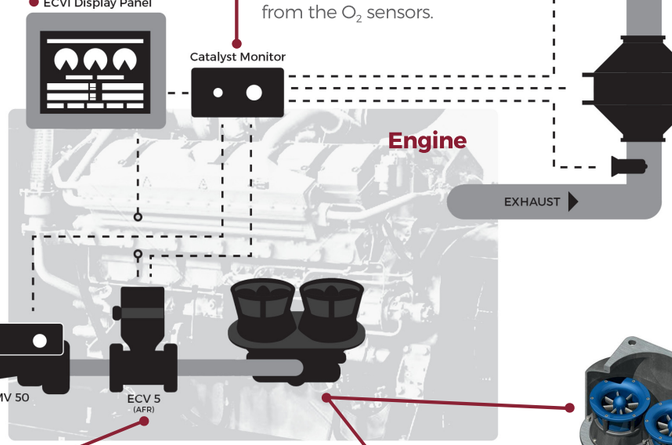
TARGET SOLUTION

Catalyst Monitor
- Meets Rice Mact Parameter Monitoring
- Customizable for Specific I/O
- Can provide feedback to EGC or ECV via Can Bus

The Catalyst (Cat) Monitor
The Cat Monitor interfaces the wide band O_2 sensors and NO_x sensor with the ECV5. The Cat Monitor can make minor adjustments to the O_2 sensor set point within the ECV5 by looking at the NO_x sensor.

The Catalyst Monitor should be mounted near the exhaust and no more than 30 feet from the O_2 sensors.

ECVI Display Panel
- Meets Rice Mact Parameter Monitoring
- Customizable for Specific I/O
- Can provide feedback to EGC or ECV via Can Bus



NO_x Sensor
- Advanced Diagnostics
- NO_x, NO, O_2 Data over CAN

NOx Sensors
The NO_x sensor is located in the exhaust. On rich-burn engines, the NO_x sensor is located after the catalyst. The NO_x sensor is connected to the Cat Monitor via CANbus.

Fuel Measurement Venturi*
- Very Accurate Flow Measurement
- Minimal Pressure Drop
- Fuel Totalizer
- Current, Daily, Weekly, Monthly, Annual
- Sized for Specific Requirements

O_2 Sensor

Venturi* Inserts for Impco Carburetors
- Simple Installation
- Same Benefits as a SA-MV
- Ideal for Aftermarket Retrofit
- Converts Standard Impco 600
- To a Much More Effective
- Mixing Venturi

Fuel Valves
- Full Authority
- Fast Acting / Voice Coil Actuated
- Low Friction
- Long Life

The ECV5 AFR Control Valve
The ECV5 contains a microprocessor that reads a voltage from an oxygen sensor and modulates the outlet pressure of the valve to control the air to fuel ratio of the engine.

The system configuration may contain one or two ECV5's depending on if the application is a single or dual bank engine.

Stand Alone Mixing Venturi*
- Better Mixing
- No Moving Parts
- No Maintenance
- Always The Right Mix
- At Every Load Without Adjustment
- Relatively Low Cost

*Venturi
The venturi serves as a fuel mixer assuring even distribution of the fuel through the airflow. The venturi is located downstream of the ECV5 and somewhere on the air inlet of the engine.

The venturi may be standalone or a "drop-in" style that replaces the diaphragm assembly inside the carburetor.

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AIR FUEL RATIO CONTROLS
The Altronic line of Air Fuel Ratio controls with a proven track record have lead the way in achieving the strict rules enforced by the state of California.

ECV5 VALVES
The ECV5 valves are an electronic pressure regulator, operated by a voice coil to insure accuracy in milliseconds. No mechanical or gas activation to create delay in responsiveness. Guided by a wide band O_2 sensor gives the ECV5 a range of accuracy and achievable targets.

Similar to the catalyst, the O_2 sensors have in the past been branded as a problem area, this new wide band sensor design has extended life expectancy.

VOLTAGE & AMPERAGE REQUIREMENTS
The customer is required to provide a 24 VDC with a 15 - 20 Amp supply.

CATALYST ELEMENTS & HOUSINGS
Catalysts have received a bad reputation for being a problem area for troubled engines. However, if your engine has a good AFR, is tuned, and in good mechanical operating condition, the catalyst will run trouble free for years.

Vortex partners with Dynamic Catalyst and designed a Catalyst housing that not only guarantees zero exhaust slippage but can be modified to fit any restricted areas. Monitoring and product controls insures our customers if a problem were to arise, we can provide testing and troubleshooting to provide solutions.

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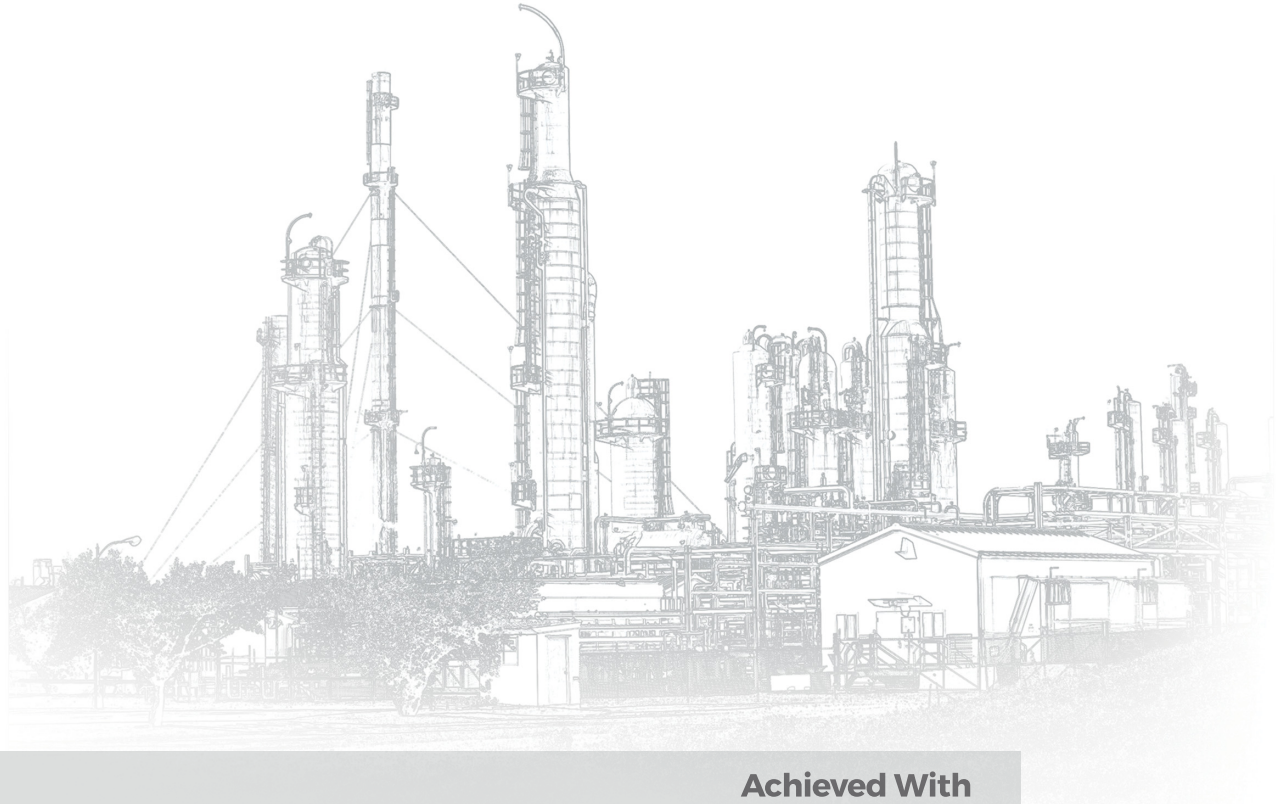

Environment Canada – Nox Emission Limits

Achieved With VETS VORTEX EMISSIONS TARGET SOLUTION

January 1, 2021

Per-engine Approach – 4g/kWh or 210 ppmvd (50% of engines)	☑
Yearly-average Approach – 8 g/kWh or 421 ppmvd	☑

January 1, 2026

All Engines – 4 g/kWh or 210 ppmvd	☑

Alberta Energy Regulator
Methane Reduction Requirements

Incorporate **VETS** into your "Methane Reduction Retrofit Compliance Plan" to accelerate your compliance schedule. More efficient combustion, catalytic conversion, and lower fuel consumption will all contribute to your methane reduction goals.

Get in Touch
With Us!

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