

## The **CHOICE** is yours

As the leading manufacturer of engine management products, Standard® has earned a reputation for producing quality components that exceed all expectations. Because we are a basic manufacturer, we control the production process from beginning to end, resulting in consistently superior parts which are always equal to or better than OE.

To meet your needs, we offer the choice of Standard® Blue Streak, Standard®, and Standard® T-Series. We are continually improving our products by investing in research and development, as well as upgrading and expanding the lines to ensure that we always have the best parts in the aftermarket. Standard® carries over 30,000 SKUs, including a wide variety of engine management products for import and domestic cars and light trucks. With ninety years of expertise behind us, our customer service and training are considered to be second to none.

Standard® products are manufactured to strict form, fit and function specifications; a replacement part with enhanced design and superior performance. When OE fails...trust Standard®.

**STANDARD**

**STANDARD  
BLUE STREAK**

**STANDARD  
T-SERIES**



# **STANDARD**

the **CHOICE**  
is **YOURS**



**STANDARD**

**STANDARD  
BLUE STREAK**

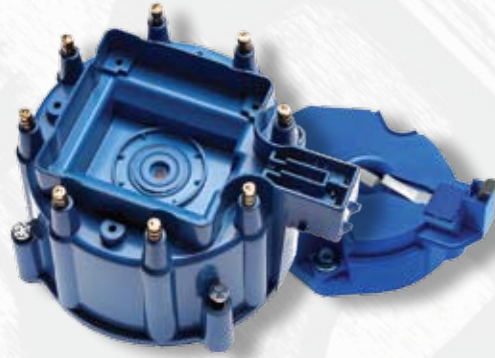
**STANDARD  
T-SERIES**

## STANDARD BLUE STREAK

## STANDARD

Standard® and Standard® Blue Streak engine management parts provide the perfect form, fit and function demanded by today's technicians for both import and domestic applications. As a basic manufacturer, Standard® has complete control of the manufacturing process from componentry to finished product. You can trust that all Standard® professional parts meet or exceed OE specifications to deliver exceptional performance and extended service life.

### Distributor Caps and Rotors



- Standard® Blue Streak caps and rotors are made of high dielectric strength, glass/mineral reinforced polyester resin for less carbon tracking, greater resistance to electrical breakdown, and superior performance.
- Solid brass terminals make better connections and greater resistance to electrical pitting and corrosion. Standard® Blue Streak caps simply last longer and perform better.
- Standard® Blue Streak rotors have solid brass segments for better conductivity and higher voltage spark to the plugs.

### Starter Solenoids



- Standard® Blue Streak starter solenoids contain heavy-duty copper contacts that reduce the effect of arcing and extend solenoid life.
- Pure copper windings create a stronger magnetic field and pure copper battery terminal studs reduce resistance to permit higher current flow, even in the hottest environments, for better performance.
- Our polyester-insulated magnet wire, cadmium-plated copper discs and solid contact bolts reduce voltage drop and deliver full battery power to the starter while providing greater protection against electrical overload.

### DIS Ignition Coils



- Standard® Blue Streak DIS ignition coils use pure copper windings in both bobbins to improve durability and provide higher resistance to internal shorts and dielectric breakdown. Standard® Blue Streak coils can run hotter without breaking down.
- A full E-Lam core of silicon steel and solid brass high voltage terminals protects against corrosion. Standard® Blue Streak DIS coils are built for maximum output voltage.

### EGR Valves



- Standard® EGR valves are designed as direct-fit OE replacements.
- All stainless steel internal components and fully encapsulated copper windings and connections on Standard® electronic EGR valves ensure precision operation and greater protection against the tough operating environment.
- Standard® premium EGR valves are engineered for an extended service life.

### Ignition Control Modules



- Standard® control modules feature double wire bonds for better connections, greater dependability and longer life despite being subjected to intense vibration and the tough operating environment.
- Copper slug heat sinks provide better heat dissipation to prevent heat from damaging the module.
- Standard® ignition modules will respond to a weak signal from the crankshaft position sensor and begin energizing the coils immediately for better starts in cold weather.

### Voltage Regulators



- Standard® premium voltage regulators use only the highest grade components and are engineered with Standard® manufactured circuit boards for precise operation, greater reliability, and extra durability for a longer service life.
- Standard® electronic voltage regulator PC boards are encapsulated in epoxy to deliver improved performance and resistance to failure that may be caused by vibration and corrosion of electrical connections.

## STANDARD T-SERIES

Standard® T-Series is a competitively priced line containing some of the most popular part numbers to help you meet your market needs. The Standard® T-Series offering represents two-thirds of the total engine management line. Standard® T-Series is a fit whenever a commercially acceptable product is called for.



- Standard® T-Series distributor caps use glass-filled polyester resin or high grade polyester and aluminum inserts to match OE performance.
- Made of durable phenolic plastic or high-grade polyester with a stainless steel spring, Standard® T-Series rotors are designed for dependable service.



- Standard® T-Series solenoids feature copper windings for a strong magnetic field to ensure reliable operation.
- High quality terminal studs eliminate stripping and provide full power delivery to ensure that all Standard® T-Series starter solenoids perform like the original.



- Standard® T-Series DIS ignition coil terminals are steel or aluminum, as indicated by OE.
- High efficiency laminations optimize magnetic field build-up to produce high spark energy and reliable performance.



- Standard® T-Series EGR valves rotate 360° and along with the necessary washers they accommodate multi-fit applications.
- All Standard® T-Series EGR valves are built for a long life of dependable performance.



- Standard® T-Series modules have an OE-style single-wire bond for all connections, for a dependable service life.
- Standard® T-Series module have an OE-type backplate for heat dissipation to prevent premature failure.



- Standard® T-Series voltage regulators have a riveted circuit board for long life and reliable performance.
- A clear finish on the cover makes Standard® T-Series voltage regulators corrosion resistant for a long life.

# Just the Facts

## Don't Get PO'ed with P0401 Codes

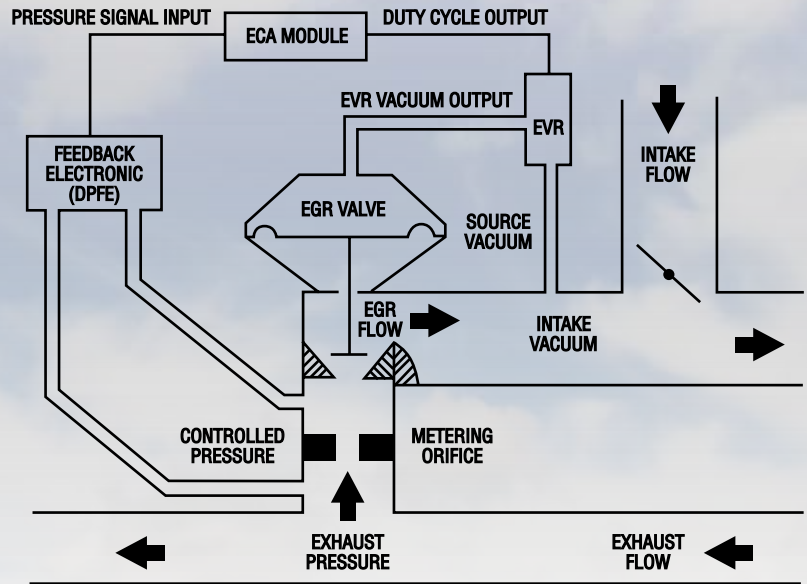
### Ford P0401 Issues

The Ford EGR Pressure Feedback system is known for persistent P0401 EGR low flow code issues. Bear in mind, low flow can be caused by several issues.

The most common issue is the failure of the EGR Pressure Feedback sensor commonly known as the DPFE sensor. If the diaphragm in the sensor becomes weak or the sensor is contaminated with moisture it can fail to supply the computer with the correct reference voltage. When this occurs, the computer increases the vacuum supply to the EGR valve causing the vehicle to run poorly. When the low flow signal is unable to be corrected by the computer's adjustment, then the computer sets a P0401 code for EGR flow.

The other parts that commonly get overlooked are the EGR Valve Regulator (EVR), which is cataloged as an EGR control solenoid, the DPFE hoses, and carbon build-up inside the EGR system. The EVR is responsible for supplying the proper vacuum to the EGR valve. Any resistance in this control circuit or failure of the EVR can cause a P0401 code. The original DPFE hoses are a special high-temperature hose. These hoses can crack or collapse internally over time due to intense thermal cycling that takes place within the EGR system.

To prevent a reoccurrence of the P0401 code, Standard recommends inspecting and replacing if necessary, the EVR and DPFE hoses when replacing the DPFE sensor. To further guard against a P0401 code, a de-carbonization treatment of the EGR system should be performed.



System Diagram



DPFE Sensor  
VP8



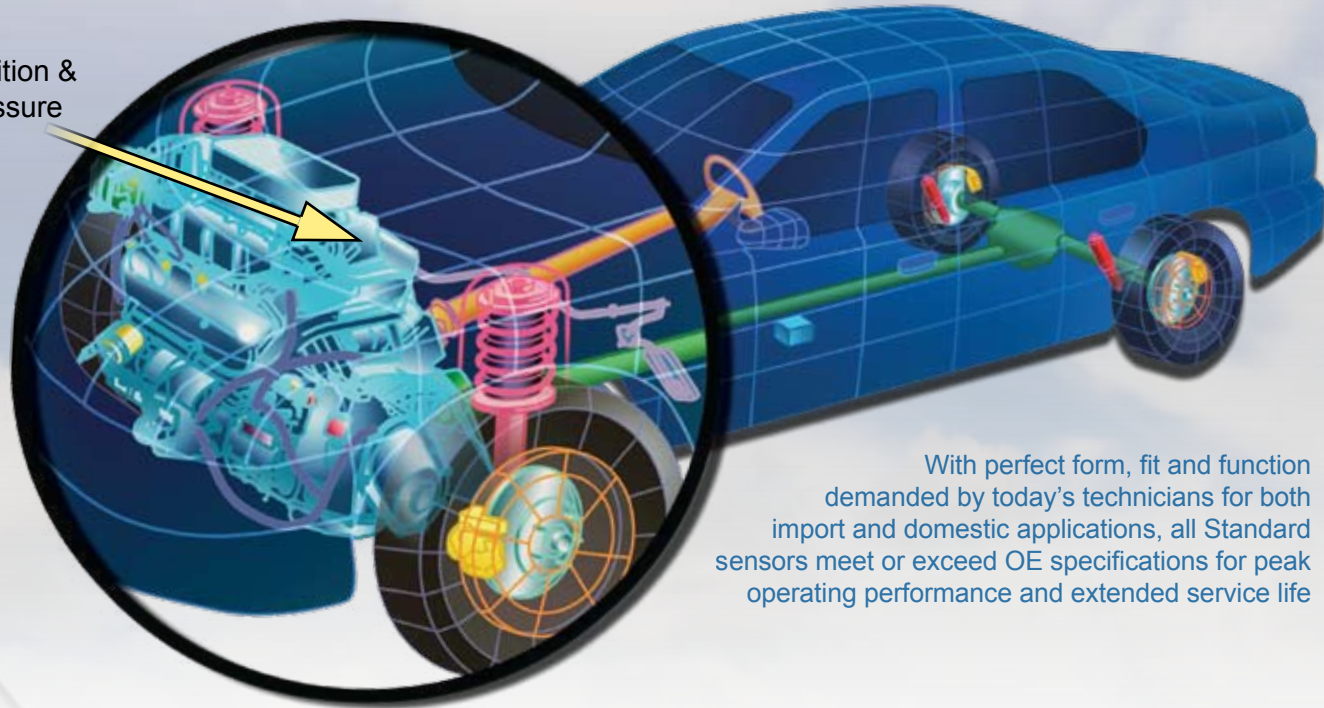
EVR  
VS63

**STANDARD**

# Just the Facts

## EGR Position and EGR Pressure Sensors

EGR Position &  
EGR Pressure  
Sensor



With perfect form, fit and function demanded by today's technicians for both import and domestic applications, all Standard sensors meet or exceed OE specifications for peak operating performance and extended service life

### What does an EGR Position Sensor do?

The EGR Position sensor detects the movement and position of the EGR valve pintle. The EGR Pressure sensor detects exhaust gas flow through the EGR passage.

### Where are these sensors located?

Mechanical EGR valve position sensors are mounted on the top of the EGR valve. EGR pressure sensors will be located close to the EGR valve as the exhaust gas hose must be connected to the sensor as well as the valve.

### Will a malfunctioning EGR Position or Pressure Sensor illuminate the check engine light or affect vehicle operation?

Yes, a failing sensor can illuminate the MIL, and may cause drivability problems. The signal is critical to the performance of the engine management system. Too much flow and the engine will stall or have a rough idle. Too little flow and emission gasses (especially NOx) will be elevated and detonation will occur.

### What are the common causes of failure?

Typical failure is due to opens, shorts or intermittent signals. A DTC P0400 – P0408 can be set due to gas flow malfunctions including no flow, too much or too little flow.

### How to determine if these sensors are malfunctioning.

A scan tool can be used to monitor the EGR Position or EGR Pressure data for changes during EGR operation.

### What makes Standard EGR Sensors the best.

- Standard EGR sensors use the finest components including multiple precious metal contacts and polymer thick film resistors to provide extended service life
- Meticulous quality control and manufacturing processes assure that each EGR sensor's voltage output measurement will always be accurate
- Each sensor undergoes a rigorous end-of-line test validating output voltages to exacting specifications for reliable, trouble-free operation



Ford  
VP1



Ford  
VP11



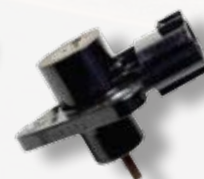
Ford  
VP8



Ford  
VP16



Ford  
VP3



Toyota  
VP20

**STANDARD**

**Intermotor**  
Genuine Import Parts 

**Times are changing...Cars are changing...So are Tune-Ups!**

**21st Century**  <sup>TM</sup>  
**TUNE-UP**



21ST CENTURY TUNE-UP  
NEXT EXIT

**Keep Your Shop on the Cutting Edge.**

**Develop an annual Tune-Up program for your customers and keep their cars in your bays!**

**STANDARD**<sup>®</sup>  
Engine Performance Specialists

# 21st Century <sup>TM</sup> TUNE-UP

**THE 21ST CENTURY TUNE-UP** initially consists of a customer interview and a series of 18 "quick test" vehicle inspections, followed by diagnostic testing as needed. The customer interview gives you the opportunity to find out how the customer feels about the vehicle's performance, how the vehicle is treated and a sense of the vehicle's history. The "Quick Test" (QT) vehicle inspections are designed to be completed in about 30 minutes.

## CUSTOMER INTERVIEW

- Have you noticed poor performance?
- Are you planning a long vacation trip?
- Are you aware of any specific problem?
- When and how does the problem occur?
- How confident are you in your vehicle?
- Has the check engine light ever been on?
- What services have been done recently?
- When was your last emissions inspection?
- Have the fuel injectors ever been cleaned?
- Have the oxygen sensors ever been replaced?

The vehicle owner is concerned with the reliability of the vehicle. He may have a wife and small children or they may be older couples who want to minimize the chance of a breakdown occurring. Whether preparing for a change of seasons, a vacation or handing the car down to a child, investing a reasonable cost to ensure family safety is easily accepted by the vehicle owner.



After the interview, the "quick test" inspections will give you an accurate report on the vehicle health, pointing to systems that need further diagnostic tests and allowing you to explain all options to your customer.

### The 21st Century Tune-Up program will:

- Improve reliability
- Reduce air pollution
- Improve performance
- Improve fuel economy
- Create customer confidence



## BATTERY, CHARGING & STARTING SYSTEM

- QT - Visual inspection of parts
- QT - No load battery voltage
- QT - Cranking voltage
- QT - Charging voltage
- DT - Load test battery

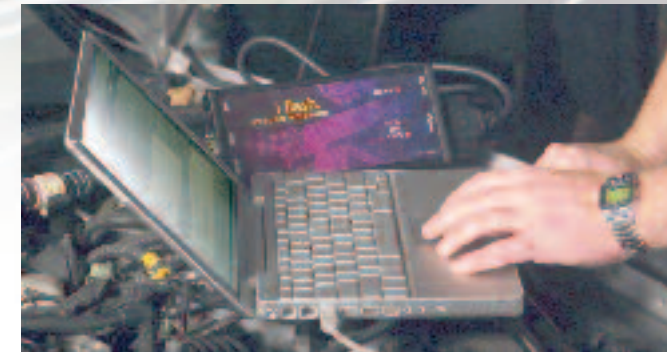


## ENGINE MECHANICAL

- QT - Idle vacuum
- QT - 2000 RPM vacuum
- QT - Gauge fluctuations
- QT - Coolant level
- QT - Coolant condition
- DT - Coolant flow

Often a poorly maintained base system will cause significant problems in the electronic control systems. Low engine vacuum can point to mechanical problems in the engine. Poor cooling system performance will affect the computer controls on the engine.

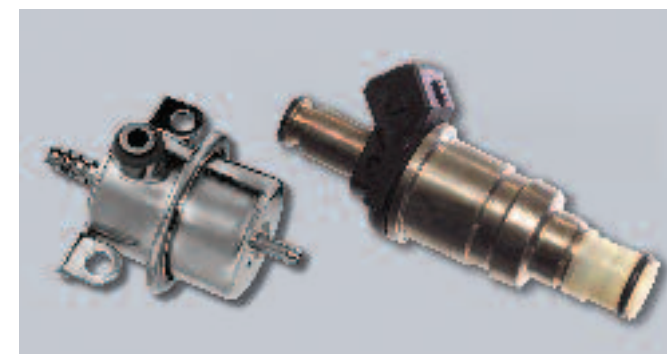
QT = Quick Test DT = Diagnostic Testing



## POWERTRAIN CONTROL

Computer recalibration may correct what seems to be a mechanical problem and is often called for in technical service bulletins. Using the history codes and readiness monitors will help you determine overall powertrain conditions.

- QT - Computer recalibration updates
- QT - Diagnostic trouble codes
- QT - History codes
- QT - Snap shot data
- QT - OBD II readiness monitors
- QT - Scan tool sensor data
- DT - Technical service bulletins



## FUEL SYSTEM

Long term fuel trim will point you to possible mechanical fuel system problems causing the computer to compensate by adjusting fuel delivery. Unequal fuel distribution can cost up to six percent in fuel economy before tripping the check engine light.

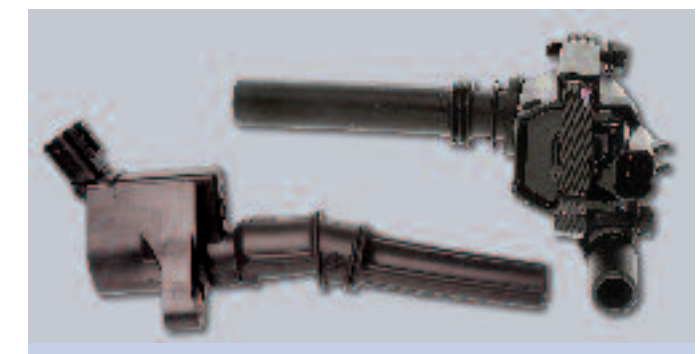
- QT - Fuel trim specification
- DT - Fuel pressure
- DT - Fuel volume
- DT - Perform injector balance test



## EMISSION SYSTEM

Worn or "lazy" oxygen sensors can cost your customer up to six percent fuel economy! The emissions systems check can be performed on your inspection machine at the same time as the exhaust gas analysis.

- QT - Oxygen sensor operation
- DT - EGR system operation
- DT - PCV system operation
- DT - EVAP system operation
- DT - Catalytic converter efficiency
- DT - Perform exhaust gas analysis



## IGNITION SYSTEM

Inadequate primary system voltage will always lead to poor performance. A secondary ignition misfire can cause up to a five percent loss in fuel economy.

- QT - Secondary circuit voltage
- DT - Primary circuit voltage
- DT - Primary circuit current draw
- DT - Base timing at idle
- DT - Knock sensor operation