

6.0L Diesel Talk LIVE



***2003 & Early 2004 Inferred
Exhaust 06E17 FSA Overview***

May 10, 2006

Diesel Talk Live

- **Today - 2003 & Early 2004 Inferred Exhaust Back Pressure (EBP) Calibration Overview**
- **May 24 1:00PM - 6.0L Air Mgmt System Diagnosis**
 - **Part 2 - EGR Sub-System**
- **June 7 1:00PM - 6.0L Fuel & High Pressure Oil Sub-System Diagnosis**

- **Feedback used to pick today's topic.**
- **Survey emails and message boards.**
- **Today is last day for the FMCDealer survey.**
- **Today's will be shorter. Last broadcast was packed with information.**

Diesel Talk Live –

Topics to be Covered

- Diesel Engine Operation and Repairs
- PCED has been Updated for Inferred EBP
- This applies only to vehicles that were recalibrated under Field Service Action **06E17**
 - WDS release B41.8 or B42.1 or later.

Inferred EBP Overview

5/5/2006

Brien Fulton

Inferred EBP Description

06E17 for 2003 & 2004 MY 6.0L F-Series, Excursion built to 9/29/2003 eliminates use of EBP sensor.

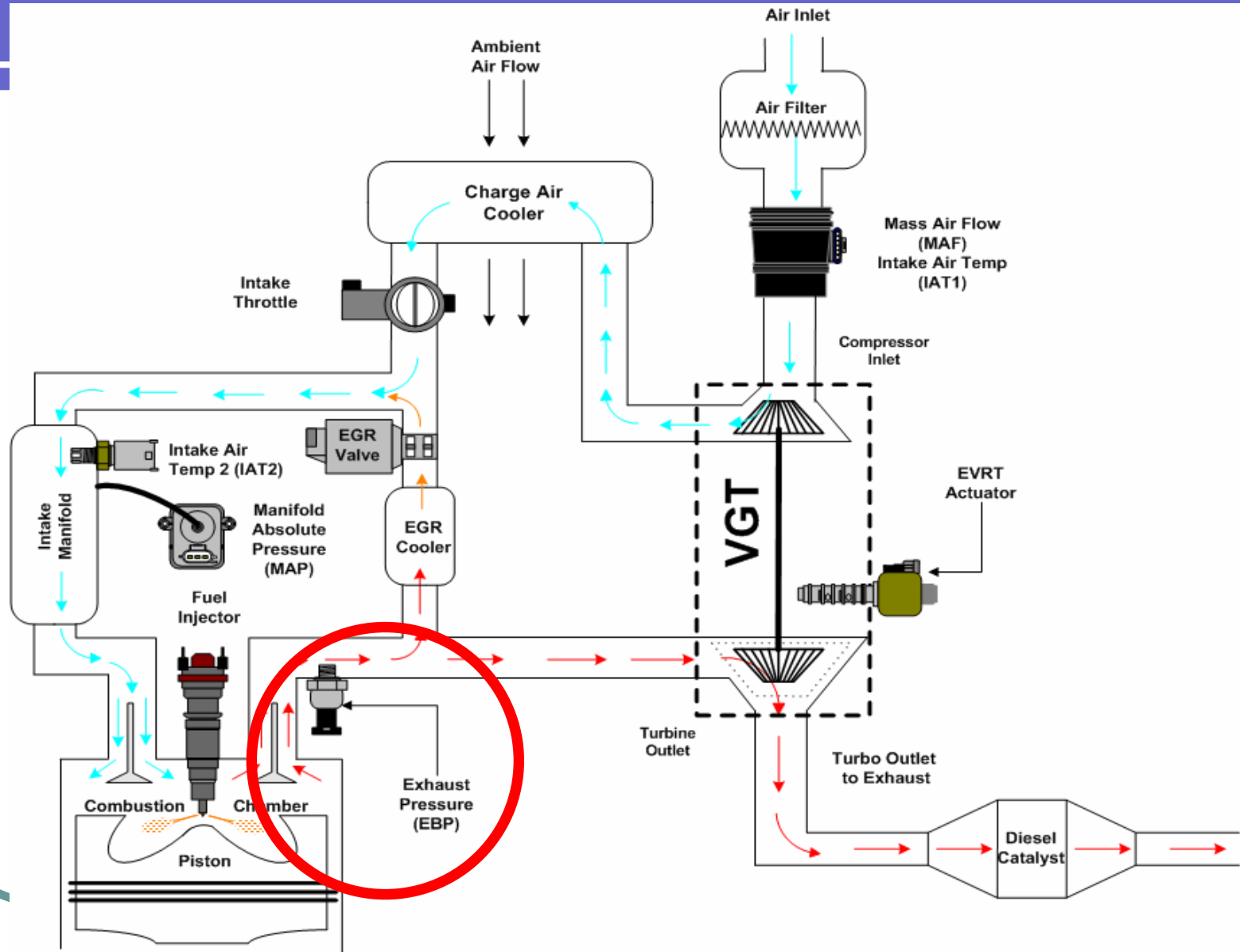
- Exhaust Backpressure is now “**Inferred**” through MAF, MAP, BARO, and EOT

Inferred EBP Description

Common issues affecting FIRTFT

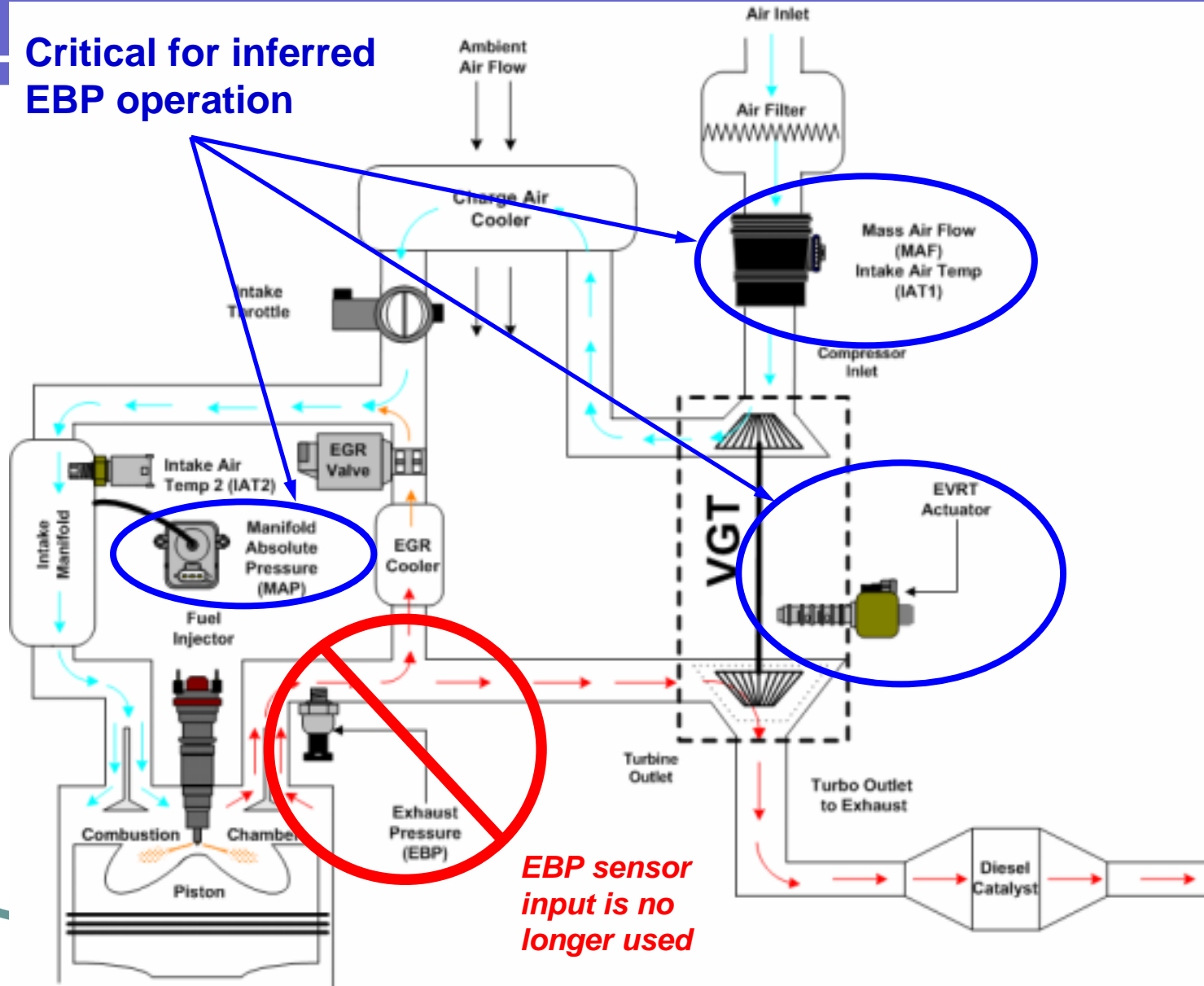
- WDS/IDS software
- Intake & Exhaust Leaks
 - Aftermarket modifications
- Not completing Turbo Learn Strategy
 - After Reflash
 - After Keep Alive Memory (KAM) erase

6.0L EBP Sensor Overview



6.0L Inferred EBP Overview

Critical for inferred EBP operation



Adaptive Turbocharger Description

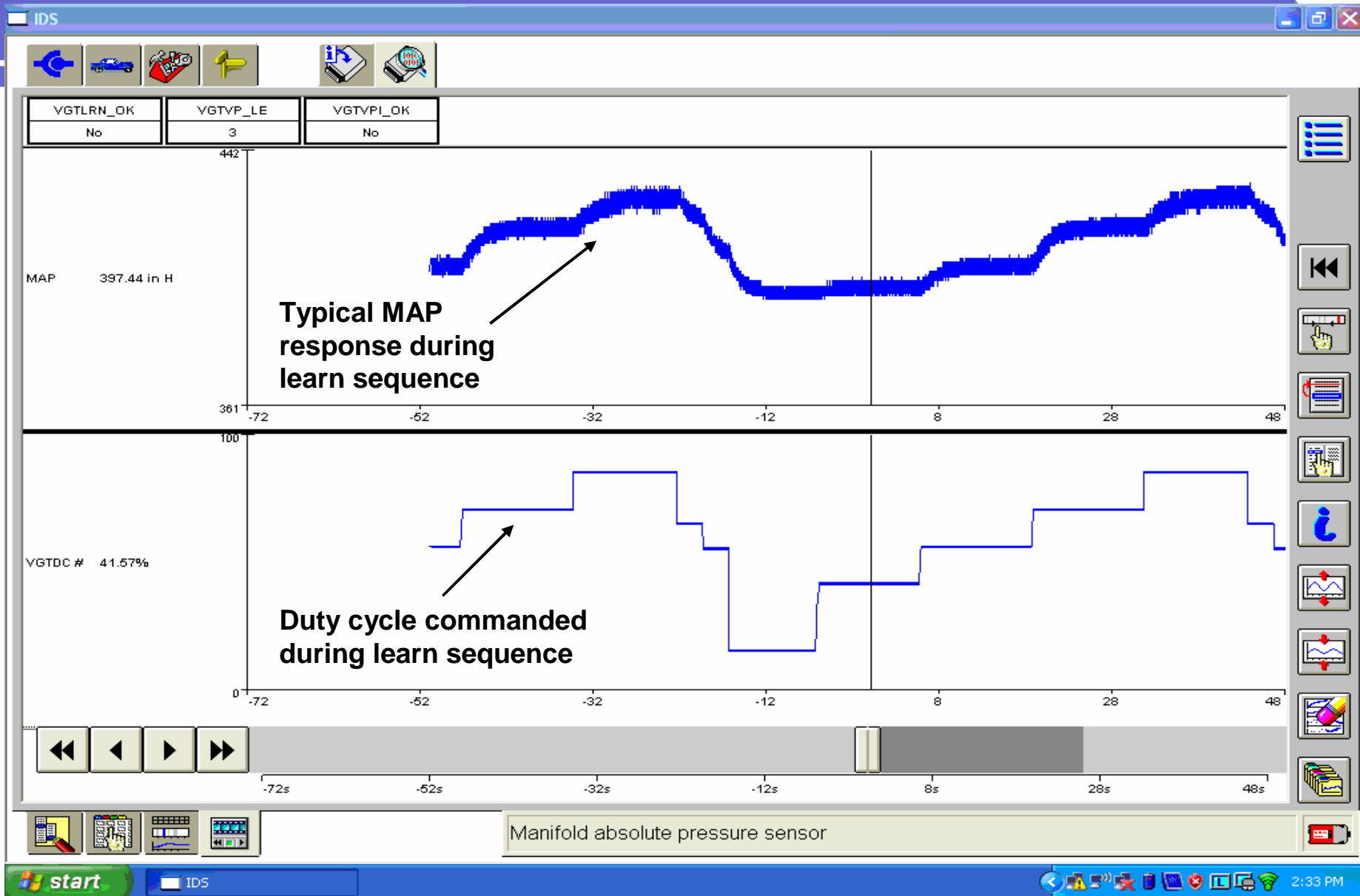
Adaptive Turbocharger Learn

- The turbocharger exercised over the full duty cycle 15-85% while the PCM samples MAP.
- Runs at idle at certain conditions.

Learn Feature Entry Conditions

- ↳ Engine Oil Temp (EOT) from 120°-250°F (50°-120°C)
- ↳ Idle speed from 570 to 780 rpm
- ↳ Vehicle Speed (VSS) stopped
- ↳ Pedal position (APP) below 1.5%
- ↳ EGR is commanded off (EGR DC = 0)
- ↳ No DTCs for critical sensors/actuators
MAP / EOT / MAF / BARO / VGT are present

Turbo learning illustration



Turbo Learning State

How to Determine if Learn cycle is Complete

- VGTVLP_LE - number of learn cycles
- VGTLRN_OK = Yes - When 5 learn cycles have completed (VGTVLP_LE > 5).

Turbo Learning State

- **PCM executes a single learn sequence every key cycle even if the VGTLRN_OK PID indicates YES.**
- **PCM may attempt numerous learn cycles even if the VGTLRN_OK PID indicates YES.**

Enhanced Diagnostics

2 new fault codes P132B and P006A

- Issues with turbocharger, MAF sensor, MAP sensor/hose, intake leaks, exhaust leaks, etc.
- Updated diagnostics in on-line PC/ED.
- These DTC's may be generated right after **06E17** Reflash. (SSM 19141)

Enhanced Diagnostics – P132B

P132B can be set by 3 methods

1. MAP (boost) levels. (P132B_STK)
2. Continuous boost monitor checks boost vs. VGT_DC. (P132B_CM)
3. Excessive number of learn cycles (P132B_VAR)

Enhanced Diagnostics – P132B

P132B fault code diagnosis

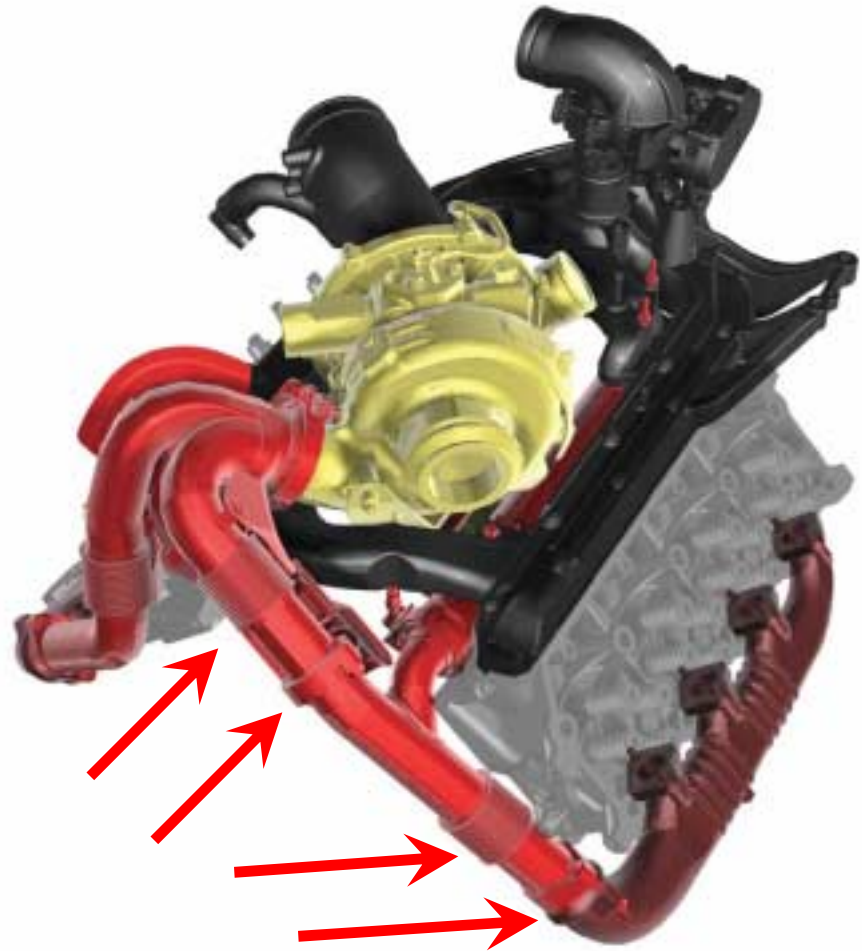
- Before replacing a turbocharger please perform the 2003.25 MY KA pinpoint test to verify the root cause.
- ⚠ **Do not skip any steps in the KA test**
- If you have a P132B code, the PCM will continue to cycle the turbocharger full range (15 to 85%) to try to break it loose.

Enhanced Diagnostics – P132B

P132B - Exhaust Leaks

Exhaust leak areas that have been difficult to diagnose are between the engine and turbocharger inlet.

Smoke testing will find these leaks very quickly.



Enhanced Diagnostics – P006A

P006A is a new MAF fault code.

- Monitor does not run at idle
- PCED Pinpoint Test J for P006A
- Critical to check for intake leaks between MAF sensor and intake manifold
- Verify EGR valve is not stuck open

06E17 – EBP Sensor

Note:

After reflashing **06E17**, the EBP sensor is not used in the vehicle Powertrain anymore. **Do not remove or replace the EBP sensor unless:**

- Vref intermittent connection or Vref short
- Smoke test Exhaust (ensure tube is not plugged)

Inferred EBP – Reference

- 06E17-S1 FSA Bulletin
- SSM#19141 – Inferred EBP Calibration Service Tips
- Power Stroke Central - 3 presentations
 - Functional Overview
 - New PID List
 - Q&A sheet

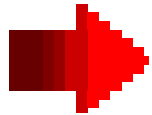
Taped Rebroadcast Dates

Ford Dealer TV – Channel 11

<i>Topic</i>	<i>Date</i>	<i>Time (ET)</i>
2003 & Early 2004 Inferred Exhaust Back Pressure (EBP) Calibration Overview	5/11/06	10:00 – 11:00 am
	5/16/06	5:00 – 6:00 pm
	5/17/06	8:00 – 9:00 pm
	5/18/06	9:00 – 10:00 am
	5/23/06	2:00 – 3:00 pm
	5/24/06	8:00 – 9:00 am

Next 6.0L Diesel Talk *LIVE*

6.0L Air Mgmt System Diagnosis *Part 2* – EGR Sub-System



Wednesday, May 24

1:00 – 2:00 PM (ET)

Channel 16 / Host 34

Question ?

1. What should you do if you receive P132B after Performing a 06E17 Reflash?
 - A. Replace MAF Sensor
 - B. Refer to updated 2003 PC/ED
 - C. Go to Pinpoint KA step 12
 - D. Replace EBP Sensor

Question ?

2. What is the best way to isolate Intake and Exhaust System leaks?
 - A. Compare EBP pid with MAF and MAP
 - B. Smoke Test
 - C. Tighten all CAC and exhaust connections
 - D. Boost Test

Question ?

3. Were you aware of the Adaptive Turbocharger Learn process before this broadcast?

A. Yes

B. No

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Q & A

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