

6.0L Diesel Talk LIVE



6.0L Air Mgmt System Diagnosis

***Part 1* – Turbocharger Sub-System**

April 26, 2006

Diesel Talk Live

- **Today - 6.0L Air Mgmt System Diagnosis**
 - *Part 1* - Turbocharger Sub-System
- **May 10 1:00PM - 6.0L Air Mgmt System Diagnosis**
 - *Part 2* - EGR Sub-System
- **May 24 1:00PM - 6.0L Fuel & High Pressure Oil Sub-System Diagnosis**

Diesel Talk Live –

Technician Survey

- FMCDealer.com and select "Parts & Service" tab.
- Under "Survey Corner" (lower left of screen), select "6.0L Diesel Diagnostic Information."
- Survey posted until 5/10/06.

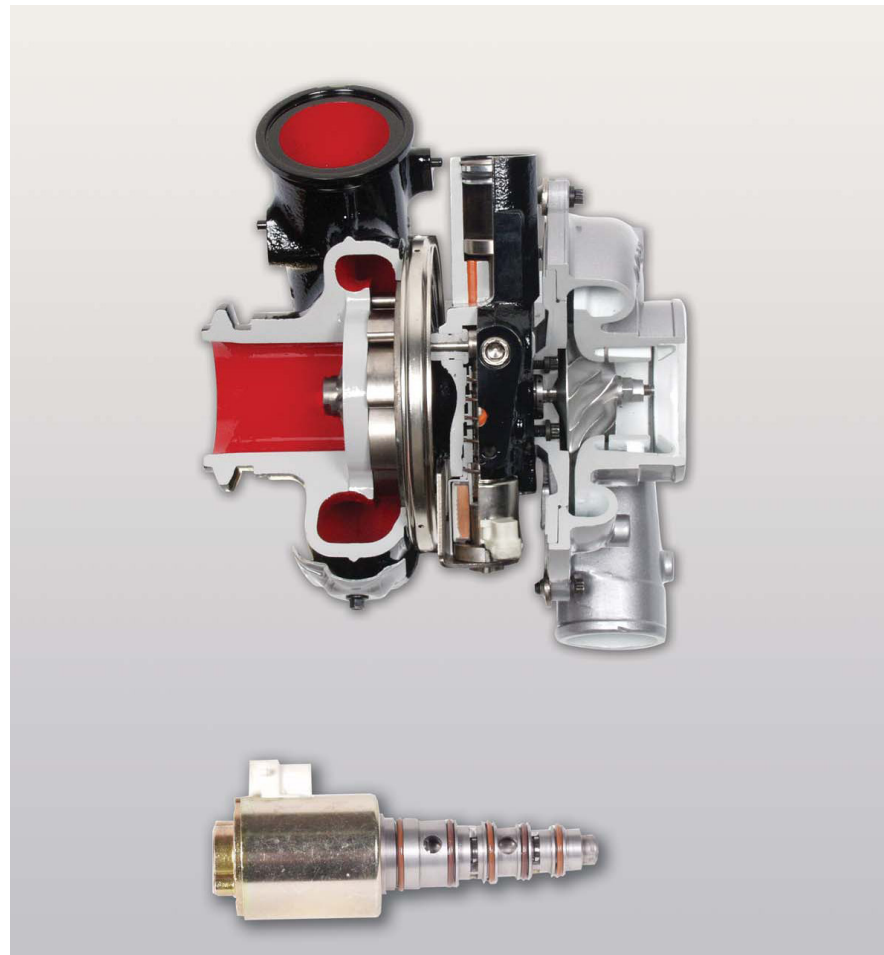
Diesel Talk Live – Topics Covered

- Diesel Engine Operation and Repairs
- Updated Diagnostic Procedures
- Turbo Sticking and Coking Deposit Diagnostics

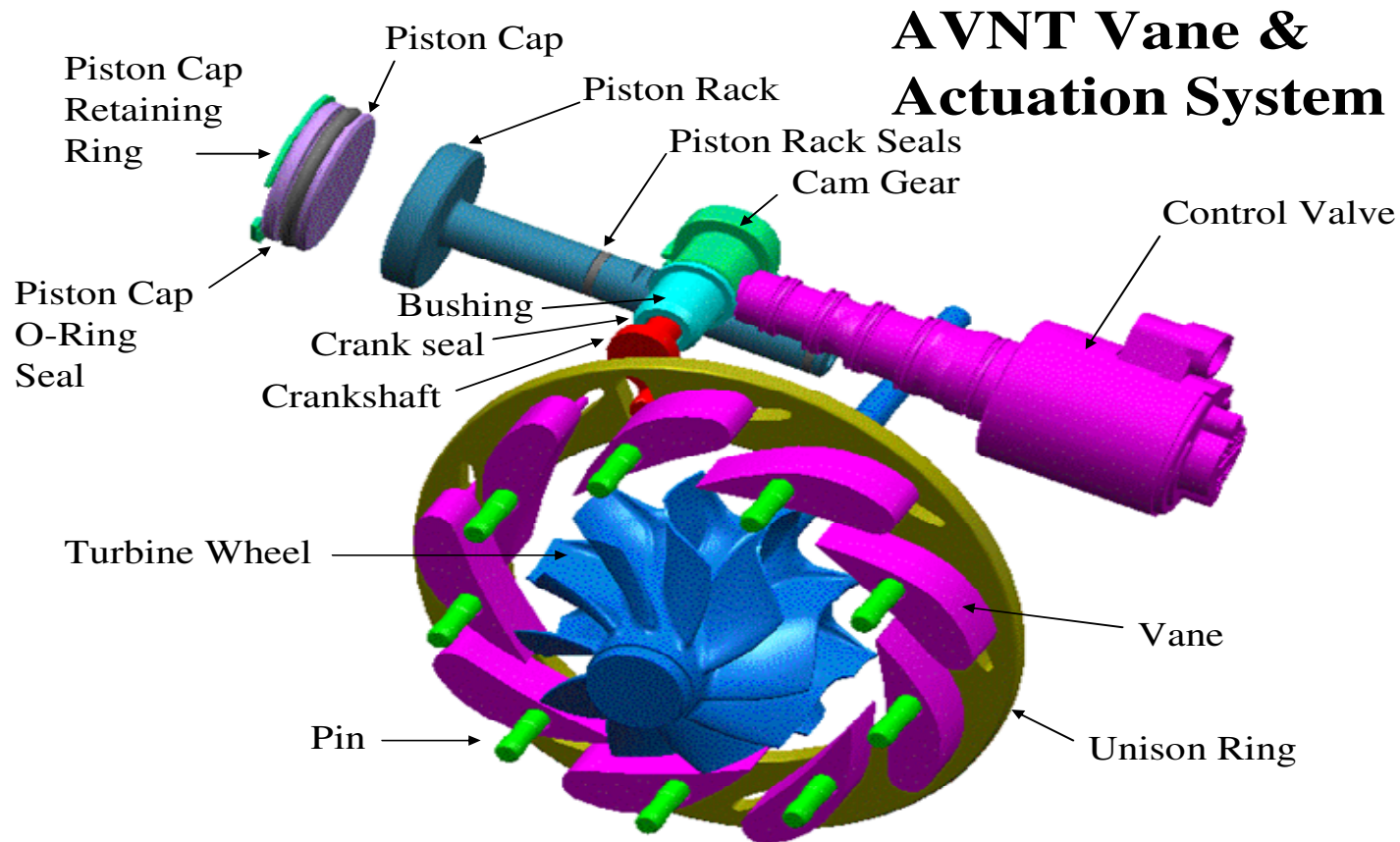
Diesel Talk Live – Topics *NOT* Covered

- Service Labor Time Standards (SLTS)
 - General Questions: SLTS@ford.com
 - Specific Labor Time Operation Question, Submit a Dealer Request for Review (DRR)
- Live Demos of Repair and Diagnosis
 - Tech Time Plus Broadcasts
- Warranty Performance Measurement (126 Report)

Diesel Talk – 6.0L Turbocharger System

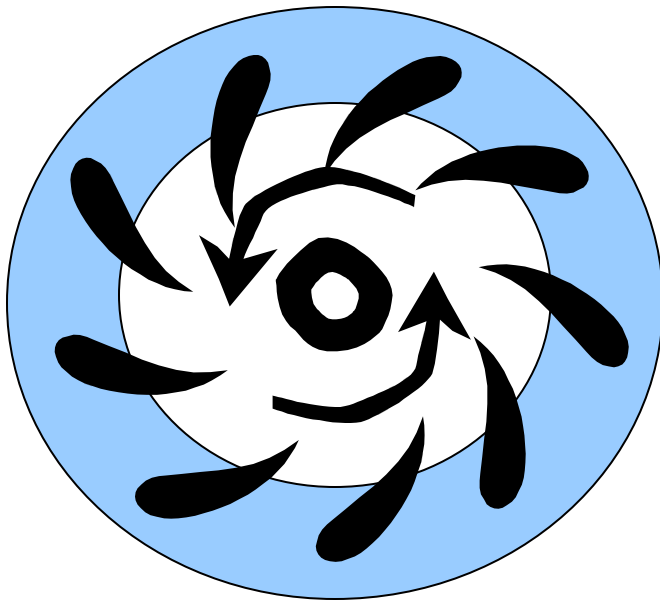


Advanced Variable Nozzle Turbocharger



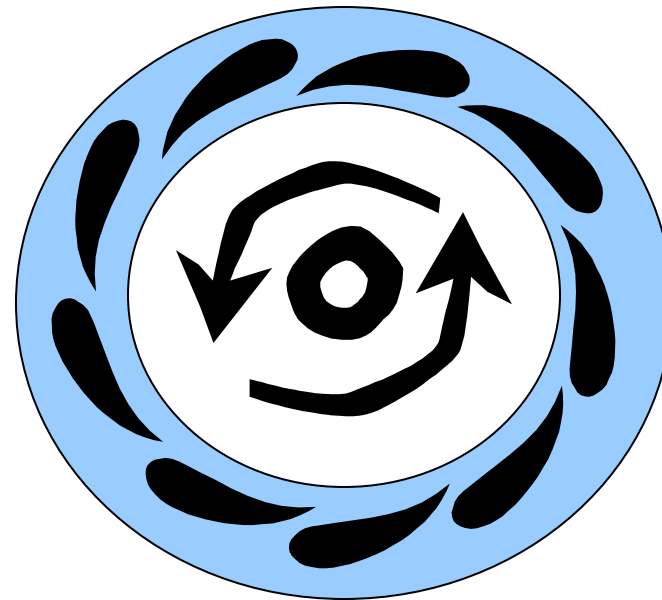
Advanced Variable Nozzle Turbocharger – Vane Position

15% VGTDC
Counter Clockwise
Unison Ring Rotation



Less Exhaust
Gas Spiral

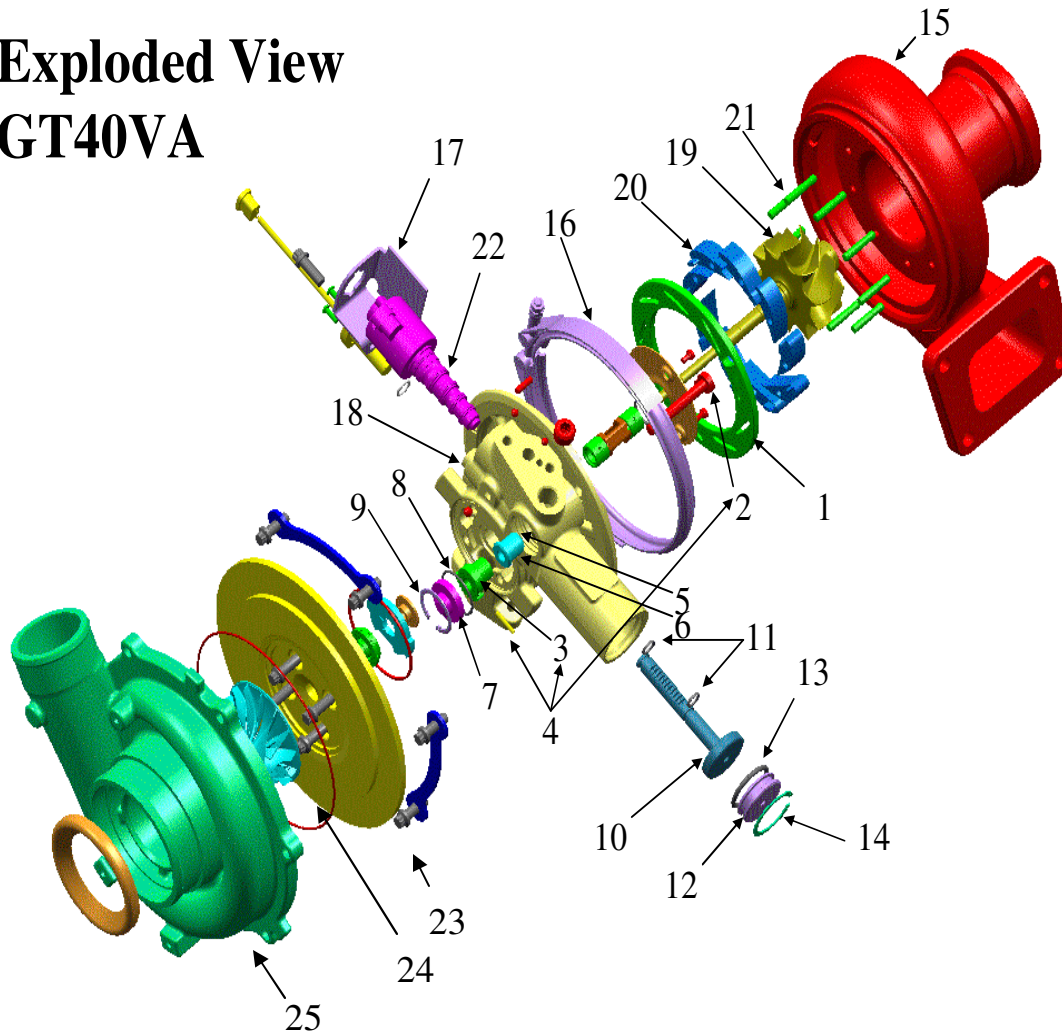
85% VGTDC
Clockwise Unison
Ring Rotation



More Exhaust
Gas Spiral

'03 MY 6.0L Diesel Turbo

Exploded View GT40VA



1. Unison Ring
2. Crankshaft
3. Cam Gear
4. Crankshaft Assembly (items 2, 3, pin)
5. Crankshaft C-Ring
6. Bushing
7. End Bearing
8. End Bearing Seal
9. End Bearing Retaining Ring
10. Piston Rack
11. Piston Rack Seals
12. Piston End Cap
13. Piston Cap O-Ring Seal
14. Piston Cap Retaining Ring
15. Turbine Housing
16. V-Band
17. Solenoid Heat Shield
18. Center Housing
19. Turbine Wheel
20. Stemless Vane
21. Pin
22. Control Valve
23. Back Plate
24. Compressor Wheel
25. Compressor Housing

6.0L TURBOCHARGER IMPROVEMENTS

MY03-MY06

TURBOCHARGER IMPROVEMENTS

MY04

CHANGED TURBINE WHEEL: ADDED 3 FINS
CHANGED LOCATION OF REAR MOUNTING BOLT
CHANGED TURBOCHARGER MOUNTING BRACKET
ADDED EGR THROTTLE PLATE
INCREASED CONTROL VALVE SPOOL CLEARANCE (9)

MY05

CHANGED 2 CENTER HOUSING BEARINGS
INCREASED CONTROL VALVE SPOOL CLEARANCE W/SCREEN (13)
DELETED EGR THROTTLE PLATE
ADDED SCOOP IN Y PIPE

MY05-J2

MODIFIED VANE SHAPE COMPRESSOR WHEEL
UPDATED CALIBRATION
CHANGED VGT CONNECTOR CLIP: PLASTIC SNAP (Part Number 3C3Z 14489 A)
DELETED MAF ALL STATES W/EXCEPTION OF CA
CHANGED TURBOCHARGER MOUNTING BRACKET

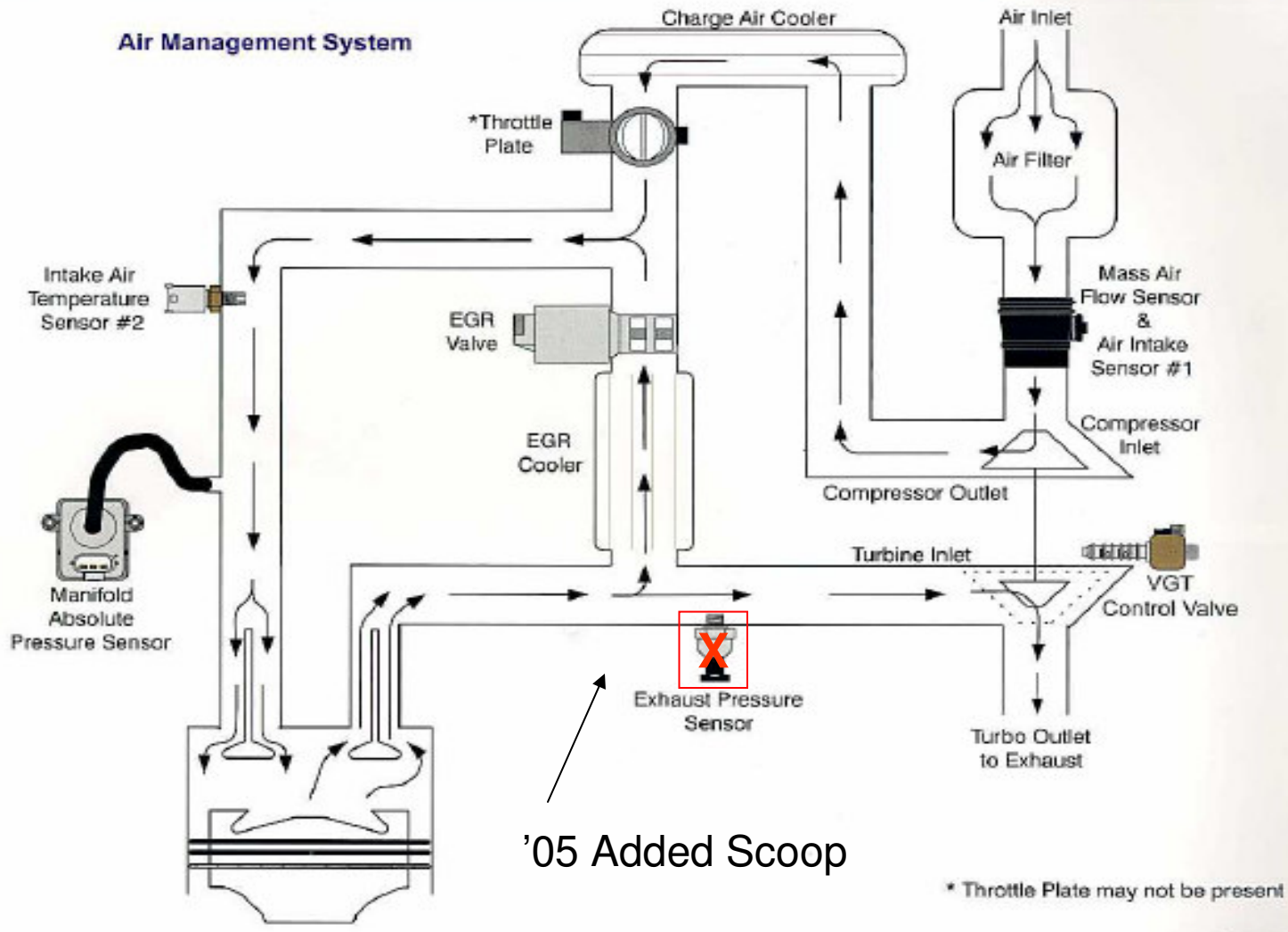
MY06

MACHINED RECESS DESIGN CENTER HOUSING
ADDED MAF FOR ALL STATES
CHANGED OIL SUPPLY LINE: SOLID

***** Correct Turbocharger Based on Vehicle Build Date *****

'03 MY 6.0L Diesel

AIR MANAGEMENT SYSTEM



Link to PC/ED KA Pinpoint Test



Adobe Acrobat 7.0
Document

Coking Deposit

Diagnostics TSB 06-04-12



Adobe Acrobat 7.0
Document

Concerns / Observations

- White smoke, black smoke, lacks power, exhaust odor, surges, or no start.
 - Un-combusted or incompletely combusted hydrocarbons (fuel or oil).
 - Shiny black, flat black, or light brown sticky layer deposit.
1. PC/ED
 2. OASIS
 3. Good clean fuel
 4. Proper oil and maintenance
 5. Oil carryover / Vent and Turbo
 6. Fuel pressure
 7. Cooling system
 8. Calibration
 9. Injection / EGR / Boost system performance

Taped Rebroadcast Dates

Ford Dealer TV – *Channel 11*

<i>Topic</i>	<i>Date</i>	<i>Time (ET)</i>
6.0L Air Mgmt System Diag <i>Part 1 – Turbocharger System</i>	5/2/06	8:00 – 9:00 am
	5/3/06	5:30 – 6:30 pm
	5/4/06	9:00 – 10:00 pm
	5/9/06	6:00 – 7:00 pm
	5/10/06	10:30 – 11:30 am

Next 6.0L Diesel Talk *LIVE*

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



Wednesday, May 10

1:00 – 2:00 PM (ET)

Channel 16 / Host 34

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April 26, 2006