

# Ford Motor Company

James P. Vondale, Director  
Automotive Safety Office  
Environmental & Safety Engineering

August 1, 2005

Mr. George Person, Chief  
Recall Management Division (NVS-215)  
Office of Defects Investigation  
National Highway Traffic Safety Administration  
400 Seventh Street, S.W.  
Washington, DC 20590

RECEIVED  
NVS-215  
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OFFICE OF  
DEFECTS INVESTIGATION

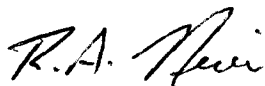
Dear Mr. Person:

Subject: Safety Recall 05V-270  
(Ford Number 05S34)

Pursuant to the requirements set forth in Part 573 of Title 49 of the Code of Federal Regulations -- Defect and Noncompliance Reports, Ford Motor Company is submitting a representative copy of information that relates directly to the subject campaign.

Attached are dealer and owner letters issued by Ford Customer Service Division regarding a recall of certain 2004 and 2005 model year Ford F-250/350/450/550 Super Duty and Excursion vehicles, and certain 2004 model year E-350/450 vehicles, all equipped with 6.0L diesel engines. Specific details were submitted to you in a letter dated June 7, 2005. Owner notification letters were mailed on July 22, 2005.

Sincerely,



J. P. Vondale

Attachment(s)  
05S34 Dealer-Owner Bulletin





Frank M. Ligon  
Director  
Service Engineering Operations  
Ford Customer Service Division

Ford Motor Company  
P. O. Box 1904  
Dearborn, Michigan 48121

June 9, 2005

**TO:** All U.S. Ford and Lincoln Mercury Dealers

**SUBJECT:** Safety Recall 05S34:  
Certain 2004 Model Year F250/350/450/550, Excursion, and E350/450 Vehicles  
Equipped with 6.0L Diesel  
Fuel Injector Control Module Wiring Harness Repair

**Ref:** Customer Satisfaction Program 05B29  
Certain 2004 Model Year F250/350/450/550 and Excursion Vehicles  
Equipped with 6.0L Diesel  
Charge Air Cooler Duct Replacement

### **AFFECTED VEHICLES**

- Certain 2004 model year F250/350/450/550, Excursion vehicles built from September 29, 2003 through May 31, 2004.
- Certain 2004 model year E350/450 vehicles built from December 9, 2003 through May 28, 2004. Affected vehicles are identified in OASIS.

In addition, visit <https://web.fsavinlists.dealerconnection.com> for a list of vehicles assigned to your dealership. This information will be available on June 11, 2005.

### **REASON FOR THIS SAFETY RECALL**

Some of the affected vehicles may have been equipped with Fuel Injector Control Module (FICM) wire harnesses that were built with variability in the harness length. This condition may cause the FICM wire harness to chafe on engine bolts. Some of the affected vehicles may have also been built with improperly crimped Injection Control Pressure (ICP) sensor connectors that could result in intermittent pressure signals. If either condition were to occur, the operator may experience hesitation/surge while driving, and/or stall while driving. The vehicle may or may not restart after stall. An engine stall while driving may increase the possibility of a crash.

### **SERVICE ACTION**

At no charge to the vehicle owner, dealers will inspect the FICM wire harness for chafing, and perform repairs. Also, if applicable, dealers will replace the ICP sensor connector. This must be performed on all of the affected vehicles in your new inventory as well as vehicles that have been delivered to customers. All repair procedures are outlined in the Technical Instructions (Attachments III, IV, and V).

### **CUSTOMER LETTER COMBINED WITH OTHER FIELD SERVICE ACTIONS**

Please Note: It is possible that a vehicle affected by this program may also be affected by other programs such as Customer Satisfaction Program 05B29. For customer convenience, we will be sending affected owners a combined owner notification which, depending on application, build date, and assembly plant, may include 05B29 together with 05S34. In addition, if the customer's vehicle is affected by Customer Satisfaction Program 04B24 launched earlier this year, a reminder will be included in the owner letter. The owner letter sample (when posted), however, will reflect only program 05S34. **PLEASE CONSULT OASIS TO BE SURE YOU ARE ADMINISTERING THE CORRECT PROGRAM(S) AND, IF POSSIBLE, COMPLETE ALL OPEN PROGRAMS IN ONE CUSTOMER VISIT.**

**CUSTOMER ASSURANCE TEST DRIVE**

A special allowance for a test drive is provided for customer owned vehicles after all open Field Service Actions have been completed. The test drive is to identify whether the vehicle has any other engine performance issues. See Attachment II for claiming instructions. Consult OASIS to assure that all open programs have been completed.

To address any customer vehicles that are out of warranty and exhibit engine performance issues after the completion of all open programs, please follow the guidelines in the Warranty & Policy Manual.

NOTE: THIS TEST DRIVE CAN ONLY BE CLAIMED ONCE, AND SHOULD BE PERFORMED AFTER ALL OPEN FIELD SERVICE ACTIONS HAVE BEEN COMPLETED.

**TECHNICIAN REQUIREMENTS**

The repairs required under this program can be performed by any technician trained in electrical, driveability, or diesel repairs. Therefore, a diesel certified technician is not required to perform the repairs specified under this program. However, if any additional engine performance issues are noted after completion of the repairs specified in this program and the Customer Assurance Test Drive, the vehicle should be turned over to a diesel certified technician for normal diagnosis and repair.

**PLEASE NOTE:**

**Federal law requires dealers to complete any outstanding safety recall service before a new vehicle is delivered to the buyer or lessee. Violation of this requirement by a dealer could result in a civil penalty of up to \$5,000 per vehicle. Correct all vehicles in your new vehicle inventory before delivery.**

**ATTACHMENTS**

- Attachment I: Administrative Information
- Attachment II: Labor Allowances and Parts Ordering Information
- Attachment III: Technical Information - E350/450
- Attachment IV: Technical Information - F250/350/450/550 and Excursion (9/29/03-11/30/03)
- Attachment V: Technical Information - F250/350/450/550 and Excursion (12/1/03-5/31/04)
- Attachment VI: Questions and Answers
- Customer Notification Letter (when available)

**QUESTIONS?**

- Claims Information.....1-800-423-8851
- Special Service Support Center
  - Parts (Dealer Only).....1-800-207-2444
  - Technical and All Other (Dealer Only).....1-800-325-5621

Sincerely,

*Frank M. Ligon*

Frank M. Ligon

**Safety Recall 05S34**

Certain 2004 Model Year F250/350/450/550, Excursion, and E350/450 Vehicles  
Fuel Injector Control Module Wiring Harness Repair

**OASIS ACTIVATED?** Yes. OASIS will be activated by June 9, 2005.

**FSA VIN LIST ACTIVATED?** Yes

Available through FMCDealer.com or at <https://web.fsavinlists.dealerconnection.com> by June 11, 2005. Owner names and addresses will be available by July 26, 2005.

NOTE: Your FSA VIN list may contain owner names and addresses obtained from motor vehicle registration records. The use of such motor vehicle registration data for any purpose other than in connection with this recall is a violation of law in several states, provinces, and countries. Accordingly, you must limit the use of this listing to the follow-up necessary to complete this recall action.

**STOCK VEHICLES**

Correct all affected units in your new vehicle inventory before delivery.

**SOLD VEHICLES**

- Owners of affected vehicles will be directed to dealers for repairs.
- Immediately contact any of your affected owners whose vehicles are not on your VIN lists but are identified in OASIS. Give the owner a copy of the Customer Notification Letter (when available) and schedule a service date.
- Correct other affected vehicles identified in OASIS which are brought to your dealership.

**TITLE BRANDED / SALVAGED VEHICLES**

Affected title branded and salvaged vehicles are eligible for this Field Service Action.

**RELATED DAMAGE**

- If a related damage condition exists that you believe to be caused by the covered condition, call the Special Service Support Center to request approval **prior** to the repair of any related damage. Requests for approval after completion of the repair will not be granted.

**ADDITIONAL LABOR TIME**

- If a condition exists that requires additional labor to complete the repair, call the Special Service Support Center to request approval **prior** to performing any additional labor. Requests for approval after completion of the repair will not be granted.
- If you encounter aftermarket equipment or modifications to the vehicle which might prevent the repair of the covered condition, call the Special Service Support Center.

**Safety Recall 05S34**

Certain 2004 Model Year F250/350/450/550, Excursion, and E350/450 Vehicles  
Fuel Injector Control Module Wiring Harness Repair

**OWNER REFUNDS**

- Ford Motor Company is offering a refund for owner-paid repairs covered by this recall if the repair was performed prior to the date indicated in the reimbursement plan, which is posted with this bulletin. This plan is also available to owners through the Customer Relationship Center (CRC). The CRC will direct owners to seek reimbursement through authorized dealers or, at their option, directly through Ford Motor Company at P.O. Box 6251, Dearborn, MI 48121-6251.
- Dealers are also authorized to refund owner-paid emergency repairs that were performed away from an authorized servicing dealer after the end date specified in the reimbursement plan. Refund claims that include other non-covered repairs, or those judged by Ford to be excessive, will not be accepted for reimbursement.
- ***This safety recall must still be performed, even if the customer has paid for a previous repair. Claiming a refund will not close out the VIN for this recall.***
- Refund Claiming Information (Submit on separate repair line.)
  - Program Code: 05S34
  - Misc. Expense: REFUND
  - Misc. Expense: ADMIN
  - Misc. Expense: 0.2 Hrs.

**RENTAL VEHICLES**

Ford Motor Company will pay for a rental vehicle up to \$50/day, except for fuel and insurance which will be at the owner's expense. Enter the word "RENTAL", the number of days the vehicle was used, and the dollar amount in the Miscellaneous Expense area of the claim form.

**CLAIMS PREPARATION AND SUBMISSION**

- Enter claims using Direct Warranty Entry (DWE).
- Related damage must be claimed on a repair line that is separate from the repair line on which the FSA is claimed. (Prior approval is required.)
- "MT" labor should be submitted on a separate repair line with the related damage flag checked. (Prior approval is required.)
- Refer to ACESII manual for claims preparation and submission information.

**Safety Recall 05S34**

Certain 2004 Model Year F250/350/450/550, Excursion, and E350/450 Vehicles  
Fuel Injector Control Module Wiring Harness Repair

**LABOR ALLOWANCES**

| Description  | Labor Operation | Labor Time |
|--|-----------------|------------|
| <u>E-SERIES</u><br>Install ICP Connector Kit   | 05S34B          | 1.5 Hours  |
| <u>F-SUPER DUTY AND EXCURSION</u><br>Inspect FICM Wire Harness and Install FICM Repair Kit                             | 05S34C          | 0.8 Hour   |
| <u>F-SUPER DUTY AND EXCURSION</u><br>Inspect FICM Wire Harness and Replace Harness                                     | 05S34D          | 1.1 Hours  |
| <u>F-SUPER DUTY AND EXCURSION</u><br>Inspect FICM Wire Harness, Install FICM Repair Kit, and Install ICP Connector Kit | 05S34E          | 1.2 Hours  |
| <u>F-SUPER DUTY AND EXCURSION</u><br>Inspect FICM Wire Harness and Replace Harness and Install ICP Connector Kit       | 05S34F          | 1.4 Hours  |
| * <u>CUSTOMER ASSURANCE TEST DRIVE</u>   | 05S34G          | 0.3 Hour   |

\*NOTE: This test drive is to verify that there are no other engine related concerns with the vehicle before returning it to the customer. All vehicles affected by Customer Satisfaction Program 05B29 are also affected by Safety Recall 05S34. Therefore the post-repair test drive labor operation and labor time may only be claimed after completing Safety Recall 05S34.

THIS TEST DRIVE CAN ONLY BE CLAIMED ONCE, AND SHOULD BE PERFORMED AFTER THIS FIELD SERVICE ACTION AND Customer Satisfaction Program 05B29 HAVE BEEN COMPLETED.

**PARTS REQUIREMENTS / ORDERING INFORMATION**

Parts will not be direct shipped for this recall. Order your parts requirements through normal order processing channels.

| Part Number   | Description        | Quantity     |
|---------------|--------------------|--------------|
| 5C3Z-12224-A  | ICP Connector Kit  | 1            |
| 4C3Z-14A099-A | FICM Repair Kit    | 1            |
| 4C3Z-9C891-B  | FICM Wire Harness* | As Necessary |

\*It is expected that less than 2% of FICM wire harnesses will need replacement.

**New! Parts Support Center**

We are introducing several new methods to contact the Parts Support Center for questions or for ordering assistance regarding recall parts:

- E-mail: [Ford@Renkim.com](mailto:Ford@Renkim.com)
- FAX: 1-888-374-8040
- **New!** Phone number: 1-800-207-2444

**Safety Recall 05S34**

Certain 2004 Model Year F250/350/450/550, Excursion, and E350/450 Vehicles  
Fuel Injector Control Module Wiring Harness Repair

When contacting the Parts Support Center please provide:

- Dealer Name and P & A code
- Contact Name
- Phone number and E-mail address
- FSA # 05S34
- Part number and QTY being requested or question / concern regarding part

The DOR/COR for 05S34 parts ordered through the Part Support Center is 50354.

**DEALER PRICE**

For latest prices, refer to DOES II.

**PARTS RETENTION AND RETURN**

Follow the provisions of the Warranty and Policy Manual for "Parts Retention and Return Procedures."

**EXCESS STOCK RETURN**

Excess stock returned for credit must have been purchased from Ford Customer Service Division in accordance with Policy Procedure Bulletin 4000.

**CERTAIN  
2004 MODEL YEAR  
E-SERIES  
VEHICLES**

**EQUIPPED WITH A  
6.0L DIESEL ENGINE**

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**SENSOR CONNECTOR  
REPLACEMENT**





## OVERVIEW

This program involves replacing the injector control pressure (ICP) sensor connector assembly. The harness connector is replaced utilizing the Rotunda Wire Splice Tool Kit 164-R5903.

NOTE: The ICP sensor is located in the right (passenger side) valve cover near the front of the engine. For access to replace the ICP sensor harness connector, the generator must be removed. On vehicles with dual generators, the upper generator must be removed for access.

## GENERATOR REMOVAL

1. Disconnect the dual batteries.
2. Position the cowl harness aside as follows. See Figure 1.
  - a) Remove the bolt and position the manifold absolute pressure (MAP) sensor aside.
  - b) Remove the ground strap bolt.
  - c) Remove the power steering reservoir bolts and position the reservoir aside.
  - d) Remove the cowl panel harness retaining bolts and position the harness aside.

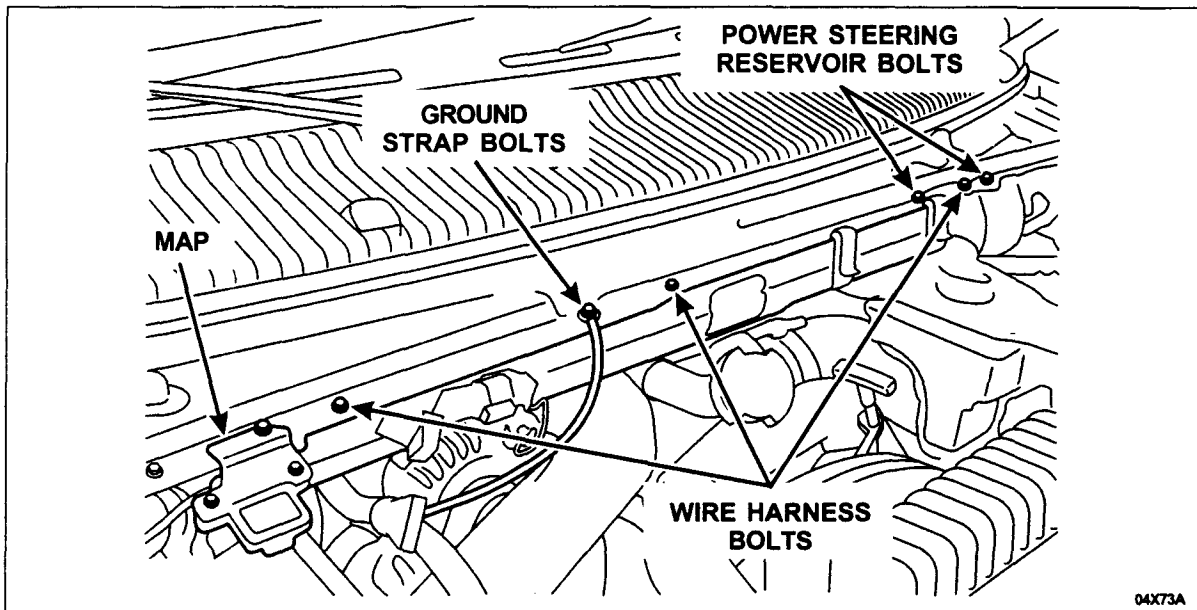
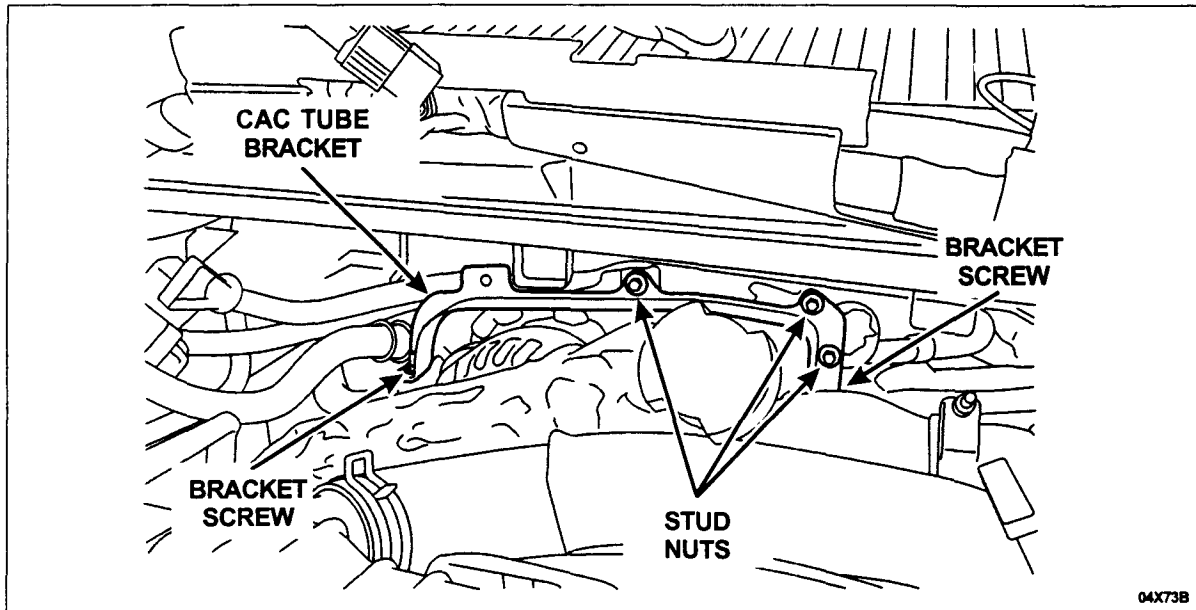


FIGURE 1



3. Remove the charge air cooler (CAC) tube bracket by removing the left- and right-side stud nuts and the bracket screws. See Figure 2.



**FIGURE 2**

4. Remove the CAC tube.
5. Rotate the accessory drive belt tensioner clockwise and remove the drive belt from the generator pulley.
6. Remove the transmission fluid level indicator tube bracket nut from the generator and position the tube aside.



7. Remove the generator as follows. See Figure 3.
  - a) Position the rubber cover aside and disconnect the B+ electrical connector.
  - b) Disconnect the generator electrical connector.
  - c) Remove the generator mounting bolts (two [2] stud bolts and the one [1] hex head bolt).
  - d) Remove the generator from the vehicle.
8. Proceed to Sensor Connector Replacement in this Attachment III.

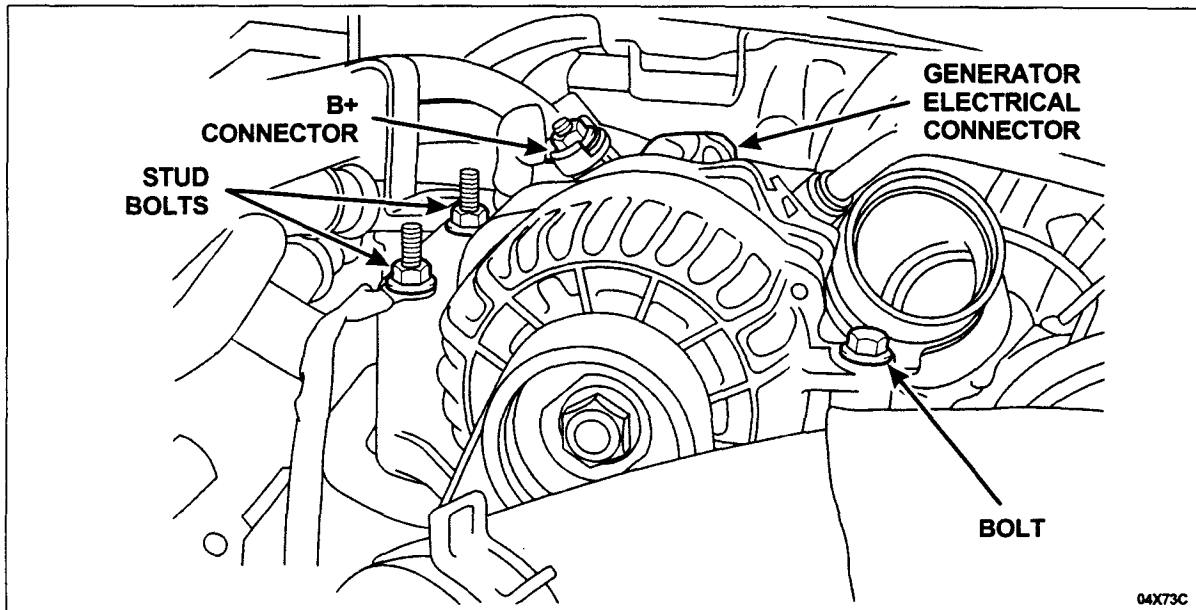


FIGURE 3



## SENSOR CONNECTOR REPLACEMENT

NOTE: All splices are to be made using tools provided in the Rotunda Wire Splice Tool Kit 164-R5903. The repair kit contains the connector and pigtail, butt splice connector and heat shrink tubing.

1. Disconnect the ICP sensor. See Figure 4.

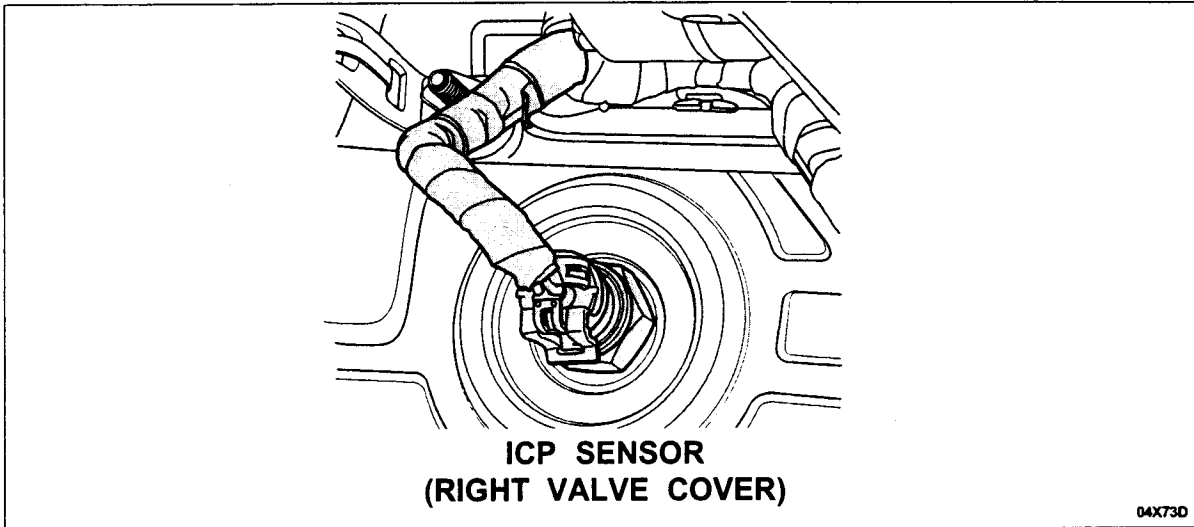


FIGURE 4

2. Remove the tape from the vehicle harness back to the original take-out location.



3. **CAUTION: The replacement connector has only one (1) color wire, so location identification is crucial for a proper repair.**

Identify each wire leading to the connector (Vref, Ground and Signal). Note the locations of each wire relative to the connector face view provided. Place the identification tags at least a few inches away from the connector. See Figure 5.

4. Cut the wires about 25 mm (1 inch) behind the connector on the vehicle harness **MAKING SURE TO LEAVE THE IDENTIFYING TAGS ON THE HARNESS** and retain the old connector for reference. See Figure 5.

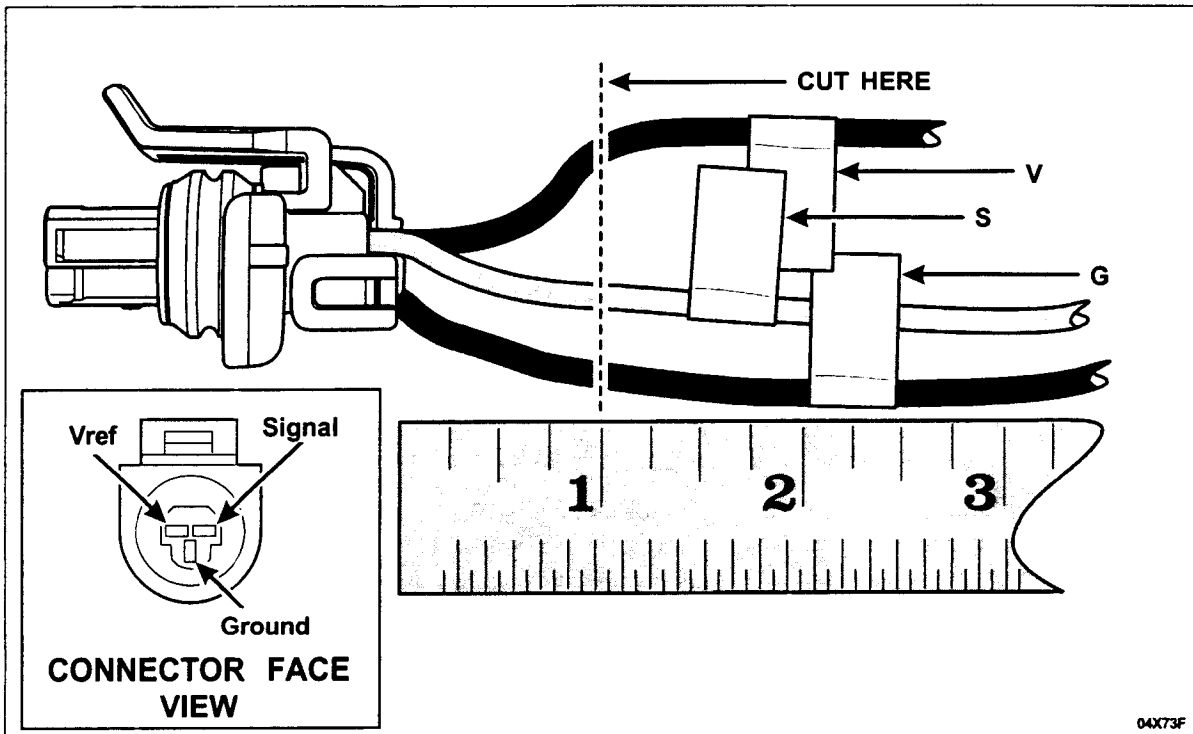


FIGURE 5

5. Strip about 7 mm (1/4 inch) of insulation from the wires on the **new** pigtail.
6. Using the crimp tool provided in the Rotunda Tool Kit, install the butt connectors provided in the service kit onto the replacement connector pigtail.
7. Strip about 7 mm (1/4 inch) of insulation from the wires on the vehicle harness.
8. Position the heat shrink over the wires on the **new** connector.
9. Matching the wires on the pigtail to the identifying tags on the vehicle harness, crimp the **new** butt connectors to the vehicle harness. Lightly tug on the wires to make sure you have a good, tight splice.



10. Position the heat shrink tubing over the butt splice connectors, then using the provided Flameless Heat Gun and deflector, heat the tubes on the vehicle harness until they shrink and adhesive flows from the ends, indicating a water-tight seal.
11. Fold the repaired harness to mirror the original length and tape the harness.
12. Install a length of convolute over the spliced section of harness and secure with tape.
13. Apply electrical grease to the face of the connector, forcing a small amount into all three (3) terminals.
14. Connect the connector.
15. Reinstall the generator. Refer to the procedure provided in this Attachment III.

## GENERATOR INSTALLATION

1. NOTE: Be sure to install the engine-to-body ground strap under the front stud bolt.  
Position the generator and install the mounting bolts. Tighten all to 47 Nm (35 lb-ft).
2. Connect the generator electrical connector, the B+ electrical connector and reposition the rubber boot cover.
3. Install the drive belt.
4. NOTE: Using Motorcraft Metal Brake Parts Cleaner PM-4, thoroughly clean the CAC outlet port and turbocharger inlet port of any oil residue or dirt that would interfere with an air-tight seal.  
Install the CAC tube. Tighten the clamps to 12 Nm (9 lb-ft).
5. Install the CAC tube bracket.
  - Tighten the stud bolts to 25 Nm (18 lb-ft).
  - Tighten the screws to 2 Nm (18 lb-in).
6. Position and install the cowl wire harness as follows:
  - Tighten the wire harness bolts to 2 Nm (18 lb-in).
  - Position the power steering reservoir and install the bolts. Tighten to 8 Nm (71 lb-in).
  - Install the ground strap and tighten the bolt to 8 Nm (71 lb-in).
  - Install the MAP sensor and tighten the bolts to 5 Nm (44 lb-in).
7. Connect the battery terminals.
8. Check OASIS to verify there are no other Field Service Actions applicable to this vehicle prior to releasing the vehicle back to the owner.
9. Proceed to Road Test Procedure in this Attachment III.

## ROAD TEST PROCEDURE

Check OASIS to verify there are no other Field Service Actions applicable to this vehicle prior to performing the Road Test Procedure.

Test drive the vehicle to make sure no drivability concerns exist prior to returning the vehicle to the owner.



**CERTAIN  
2004 MODEL YEAR  
F-SERIES**

**AND  
EXCURSION  
VEHICLES**

**BUILT FROM  
9-29-03 through 11-30-03**

**EQUIPPED WITH A  
6.0L DIESEL ENGINE**

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**FICM HARNESS  
INSPECTION**



## OVERVIEW

This program involves inspecting the fuel injector harness at the fuel injection control module (FICM) for chafing caused by rubbing against intake manifold or rocker cover assembly bolt heads. If only a light amount of chafing has occurred (tape is worn through, the silver shielding and possibly the wire insulation are visible), then protective shields will be installed to prevent further damage. If more extensive chafing has occurred (copper wire strands are visible), the harness must be replaced.

## INSPECTION

1. Remove the air filter cartridge, the outlet tube and the clean air tube. See Figure 1.
2. Disconnect and clamp off the small hose from the passenger side of the degas bottle and plug hole in the bottle. See Figure 1.
3. Remove the two (2) bolts and position the degas bottle aside. See Figure 1.
4. Remove the turbocharger intake tube. See Figure 1.

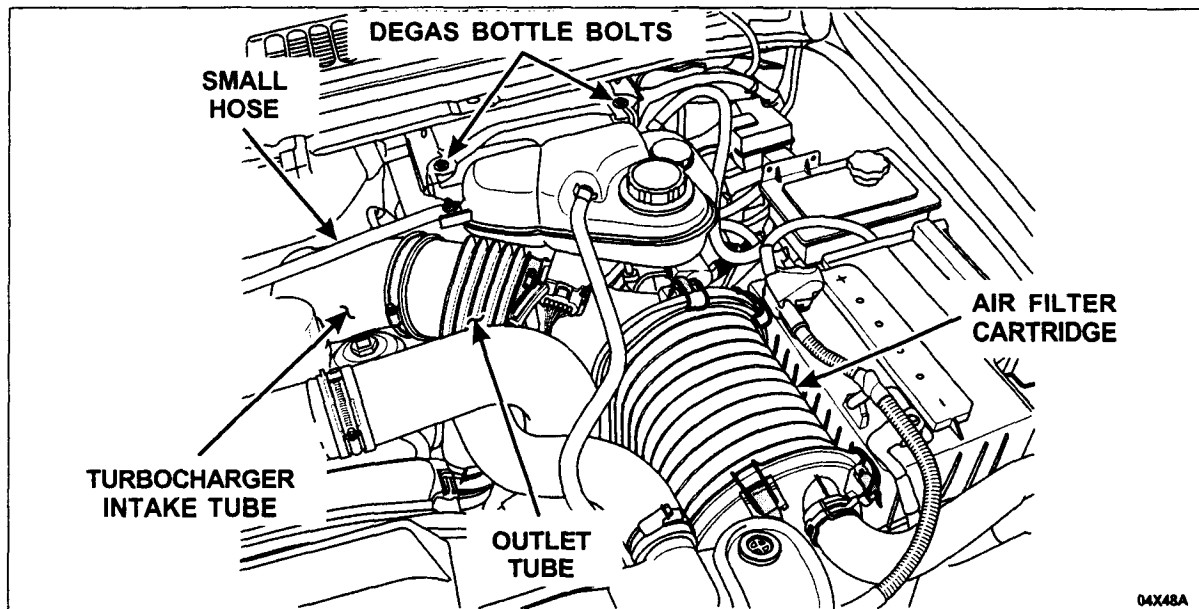
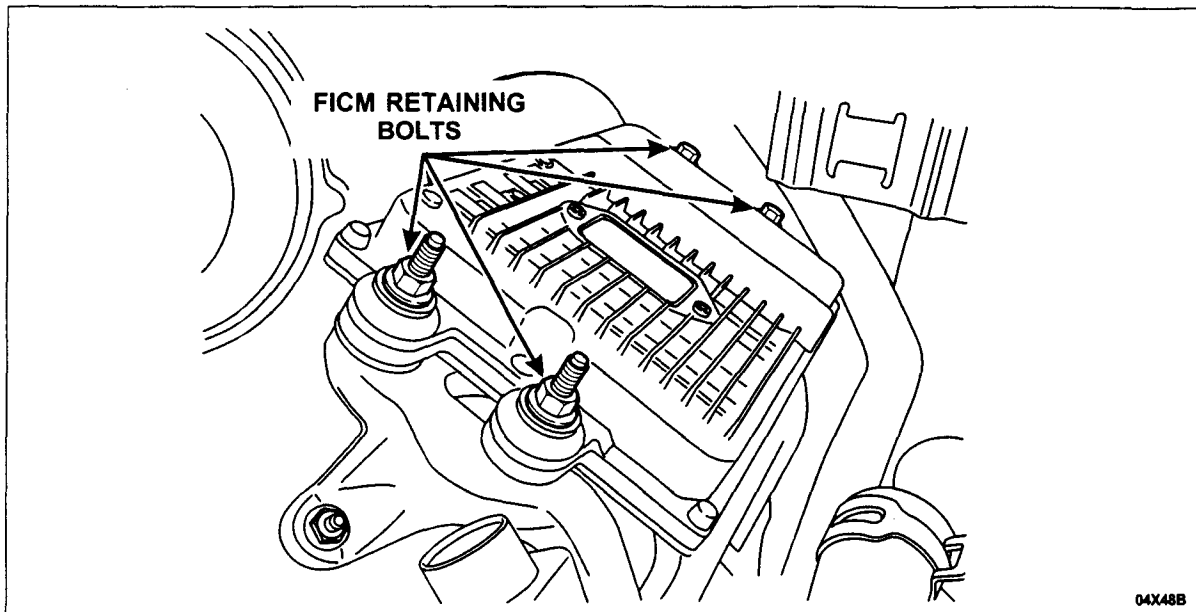


FIGURE 1





5. Remove the four (4) FICM retaining bolts, then disconnect the three (3) harness connectors from the FICM and remove the FICM. See Figure 2.



**FIGURE 2**

6. Disconnect the two (2) rear fuel injector connectors and roll the FICM harness over to view the underside of the two (2) injector harness take-outs leading to the FICM.



7. Inspect the underside of the injector harness in the two (2) areas noted in the illustration. See Figure 3.

NOTE: The harness is constructed of a bundle of insulated copper wires wrapped in a grounded silver-colored shield (much like heavy gauge aluminum foil), then covered with a wrapping of black vinyl tape.

- If the harness is either NOT chafed or only lightly chafed but the copper wire strands ARE NOT visible (outer vinyl tape and possibly the silver-colored shield is worn through), the Harness Protection Kit 4C3Z-14A099-A must be installed. Proceed to FICM Harness Protection Kit Installation in this Attachment IV.
- If chafing has occurred which has exposed the copper strands, the harness must be replaced. Do not attempt to repair a chafed harness if these conditions are found. Proceed to FICM Harness Replacement in this Attachment IV.

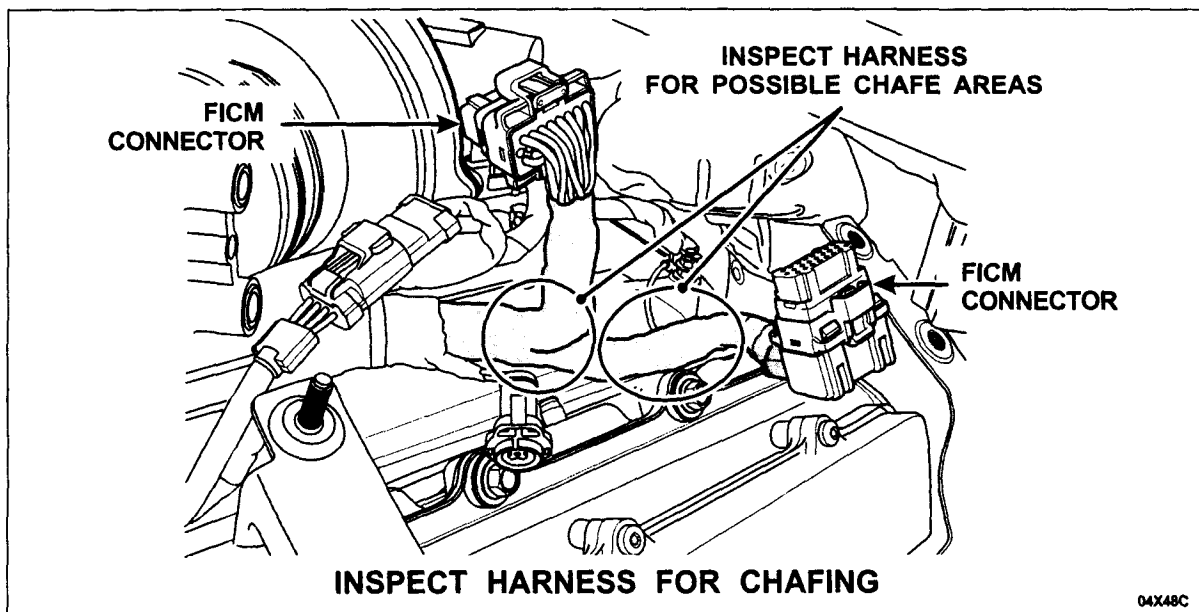


FIGURE 3



## FICM HARNESS PROTECTION KIT INSTALLATION

1. Install the harness connector covers onto **both** FICM injector harness connectors by carefully bending the wires coming out of the connector and snapping the cover in place. See Figure 4.

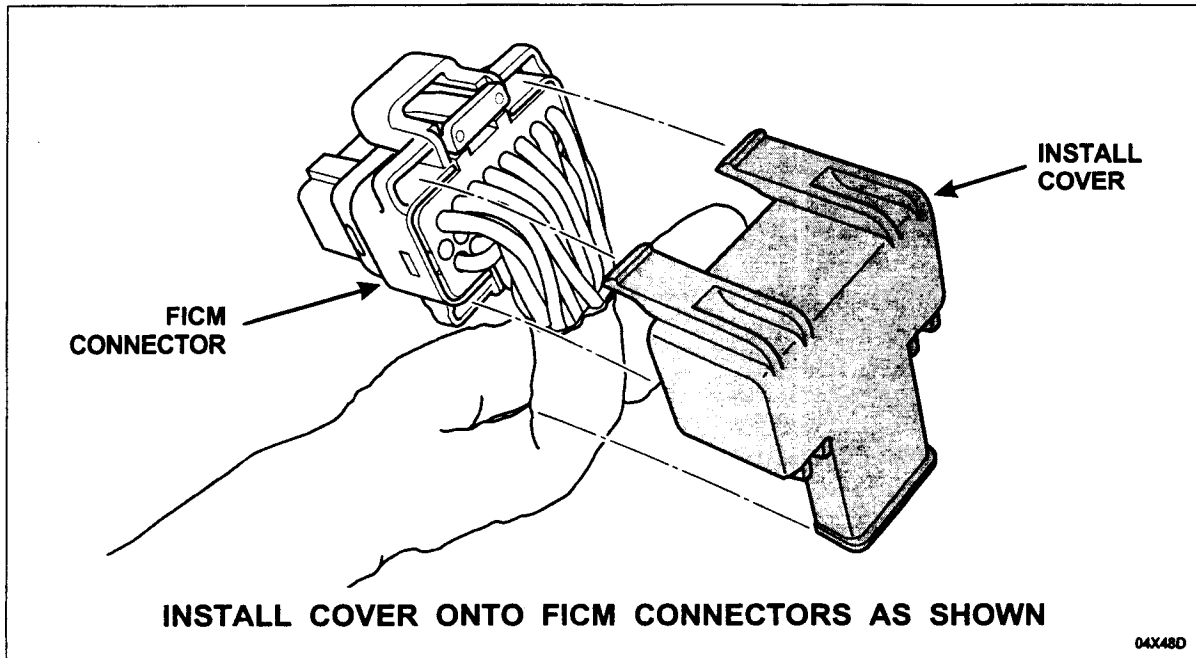
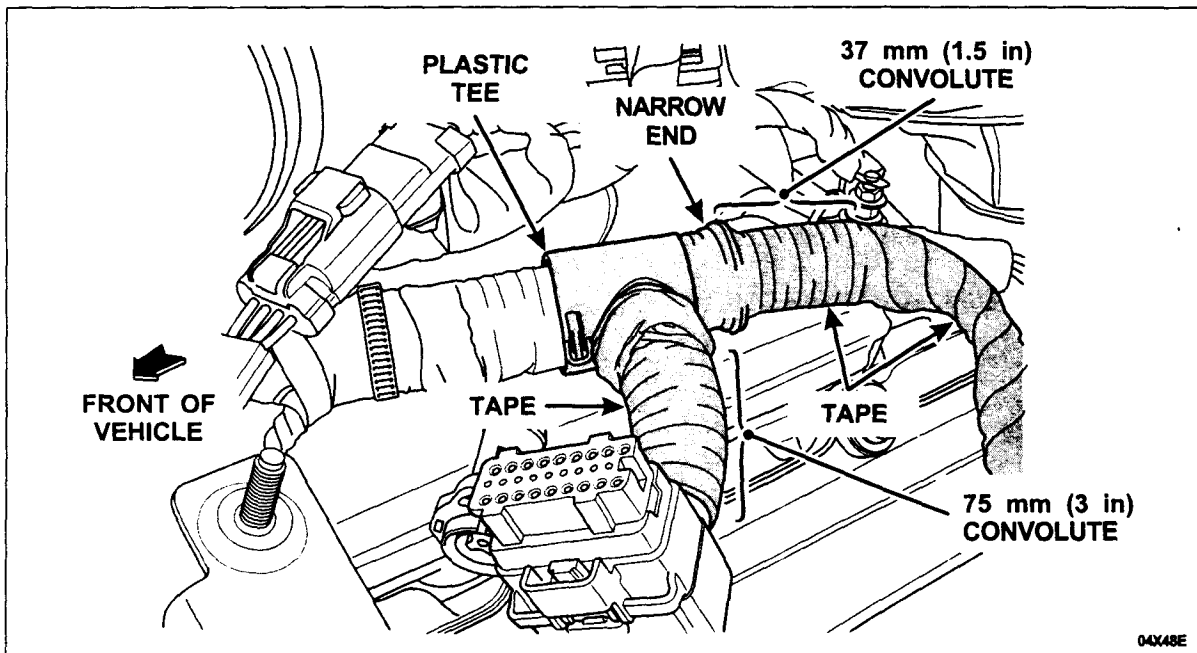


FIGURE 4



2. Position and install the plastic TEE over the forward harness take-out with the narrowed end toward the rear of the vehicle. Do not latch the tee closed at this time. See Figure 5.
3. Cut two (2) pieces of 11/16" convolute: one approximately 75 mm (3 inches) long, the other about 37 mm (1.5 inches) long. See Figure 5.
4. Position the 75 mm (3 inches) section of convolute over the harness takeout from the plastic TEE to the FICM connector. See Figure 5.
5. Position the 37 mm (1.5 inches) section of convolute between the two (2) harness take-outs. See Figure 5.
6. Close the TEE around the harness and over the convolute, making sure that all four (4) latches are engaged. See Figure 5.
7. Using the supplied tape, secure the plastic TEE, both sections of convolute and the connector covers. See Figure 5.



**FIGURE 5**

8. Connect the injector connectors.
9. Position the FICM and connect all three (3) FICM connectors.
10. Install the FICM retainer bolts. Tighten the bolts to 13 Nm (10 lb-ft).
11. Install the turbocharger intake tube. Tighten the clamp to 4 Nm (35 lb-in). Tighten the nuts to 13 Nm (10 lb-ft).
12. Install the air filter cartridge, the outlet tube and clean air tube. Tighten the clamps to 4 Nm (35 lb-in).



13. Reposition the degas bottle and install the two (2) retaining bolts. Tighten the bolts to 10 Nm (89 lb-in).
14. Remove the plug and the clamp, and reconnect the hose to the degas bottle.
15. Check OASIS to verify there are no other Field Service Actions applicable to this vehicle prior to releasing the vehicle back to the owner.
16. Proceed to Road Test Procedure in this Attachment IV.

## FICM HARNESS REPLACEMENT

NOTE: FICM Harness Replacement must only be performed if copper strands have been exposed caused by chafing of the wires inside the harness.

### REMOVAL

1. **CAUTION: While removing the ground stud nut, hold the stud/intake manifold bolt from turning. If the stud/bolt is not held, the intake manifold bolt may loosen causing the ground wire to twist and eventually break.**

Disengage the engine harness from the stud located at the rear of the intake manifold on the driver side of the vehicle, then remove the ground wire from the stud.

2. Disconnect the remaining two (2) fuel injectors on the driver side along with three (3) wire harness locators (two [2] located along the fuel injector manifold assembly and one located under the turbocharger). See Figure 6.

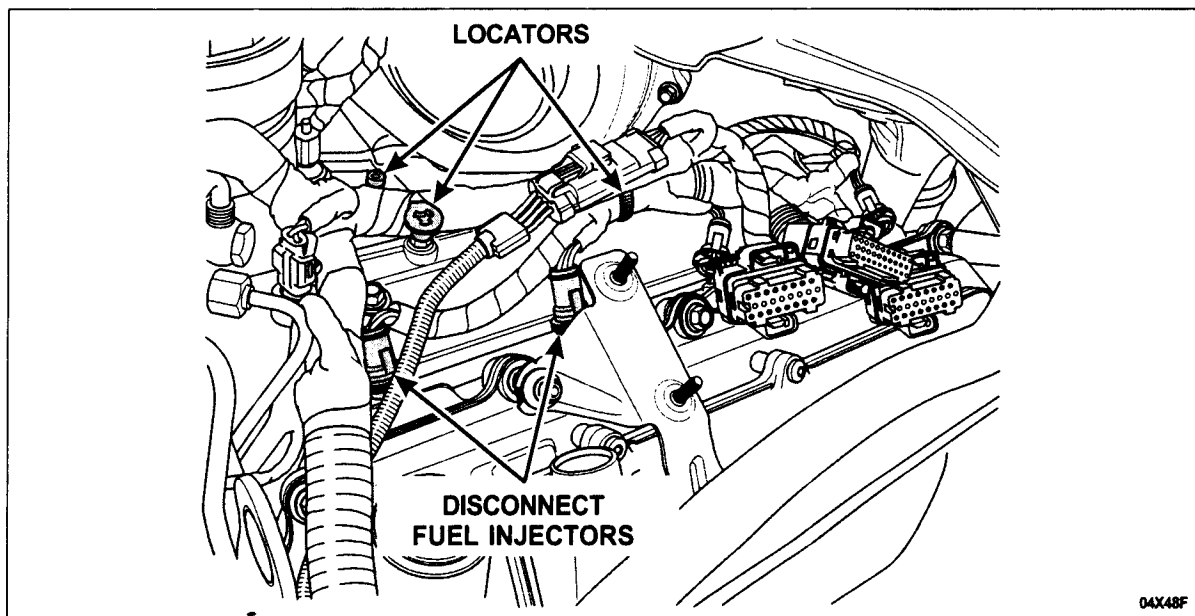


FIGURE 6

3. Remove the charge air cooler (CAC) hot air inlet duct (passenger side of the engine compartment) and the engine oil fill tube from the passenger side valve cover.



4. Disconnect the four (4) passenger-side injector connectors and the one (1) retainer located behind the alternator. Remove the harness from the vehicle by carefully pulling it from under the turbocharger towards the driver side of the vehicle. See Figure 7.

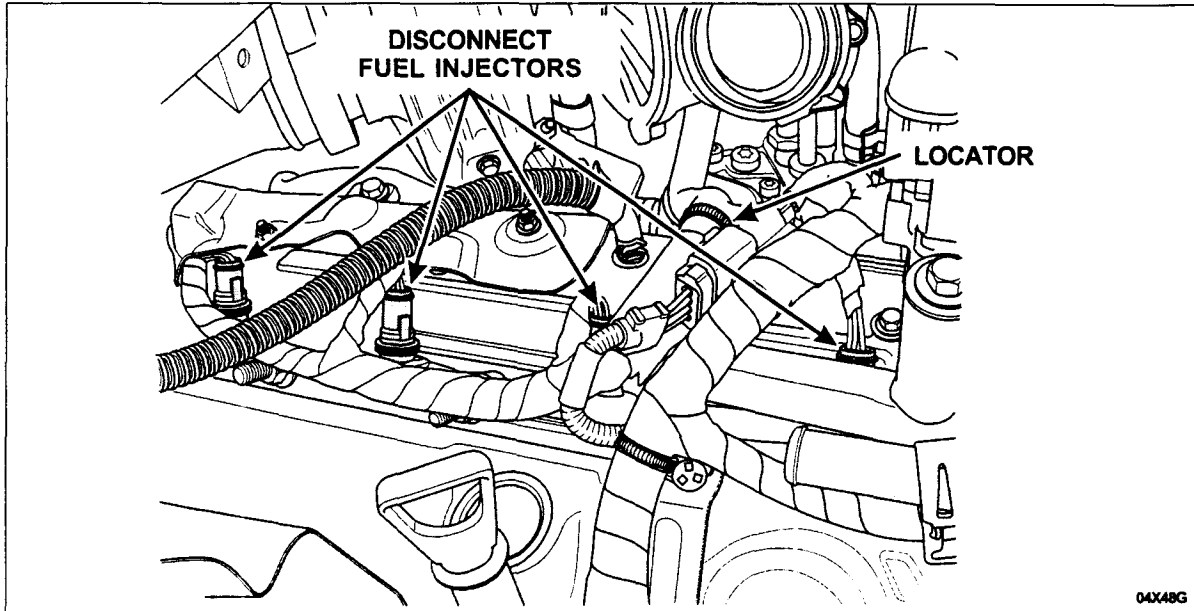


FIGURE 7

## INSTALLATION

1. Route the *new* harness under the turbocharger and secure the retainer behind the alternator.
2. Connect the four (4) injector connectors on the passenger side of the engine.
3. Position the harness along the driver side of the engine and connect the four (4) injector connectors.
4. Secure the three (3) wire harness retainers (two (2) located along the fuel injector manifold assembly and one (1) located under the turbocharger).
5. Connect the ground wire at the intake manifold and reattach the engine harness to the stud. Hold the stud to prevent the ground wire from rotating and twisting.
6. Position the FICM and connect all three (3) FICM connectors.
7. Install the FICM retainer bolts. Tighten the bolts to 13 Nm (10 lb-ft).
8. Install the turbocharger intake tube. Tighten the clamp to 4 Nm (35 lb-in). Tighten the nuts to 13 Nm (10 lb-ft).



9. Install the air filter cartridge, the outlet tube and clean air tube. Tighten the clamps to 4 Nm (35 lb-in).
10. Reposition the degas bottle and install the two (2) retaining bolts. Tighten the bolts to 10 Nm (89 lb-in).
11. Remove the plug and the clamp, the reconnect the hose to the degas bottle.
12. Reinstall the oil fill tube to the passenger side valve cover and hand tighten.
13. NOTE: Using Motorcraft Metal Brake Parts Cleaner PM-4, thoroughly clean the CAC outlet port and turbocharger inlet port of any oil residue or dirt that would interfere with an air-tight seal.  
Reinstall the CAC duct and tighten the marmon clamps to 12 Nm (9 lb-ft).
14. Proceed to Road Test Procedure in this Attachment IV.

## ROAD TEST PROCEDURE

Check OASIS to verify there are no other Field Service Actions applicable to this vehicle prior to performing the Road Test Procedure.

Test drive the vehicle to make sure no drivability concerns exist prior to returning the vehicle to the owner.



**CERTAIN  
2004 MODEL YEAR  
F-SERIES**

**AND  
EXCURSION  
VEHICLES**

**BUILT FROM  
12-1-03 through 5-31-04**

**EQUIPPED WITH A  
6.0L DIESEL ENGINE**

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**FICM HARNESS INSPECTION  
AND  
SENSOR CONNECTOR  
REPLACEMENT**



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DEARBORN, MICHIGAN 48121  
06/05



## OVERVIEW

This program involves inspecting the fuel injector harness at the fuel injection control module (FICM) for chafing caused by rubbing against intake manifold or rocker cover assembly bolt heads. If only a light amount of chafing has occurred (tape is worn through, the silver shielding and possibly the wire insulation are visible), then protective shields will be installed to prevent further damage. If more extensive chafing has occurred (copper wire strands are visible), the harness must be replaced. This program also involves replacing the injector control pressure (ICP) sensor connector assembly. The harness connector is replaced utilizing the Rotunda Wire Splice Tool Kit 164-R5903.

NOTE: The ICP sensor is located in the right (passenger side) valve cover near the front of the engine.

## INSPECTION

1. Remove the air filter cartridge, the outlet tube and the clean air tube. See Figure 1.
2. Disconnect and clamp off the small hose from the passenger side of the degas bottle and plug hole in the bottle. See Figure 1.
3. Remove the two (2) bolts and position the degas bottle aside. See Figure 1.
4. Remove the turbocharger intake tube. See Figure 1.

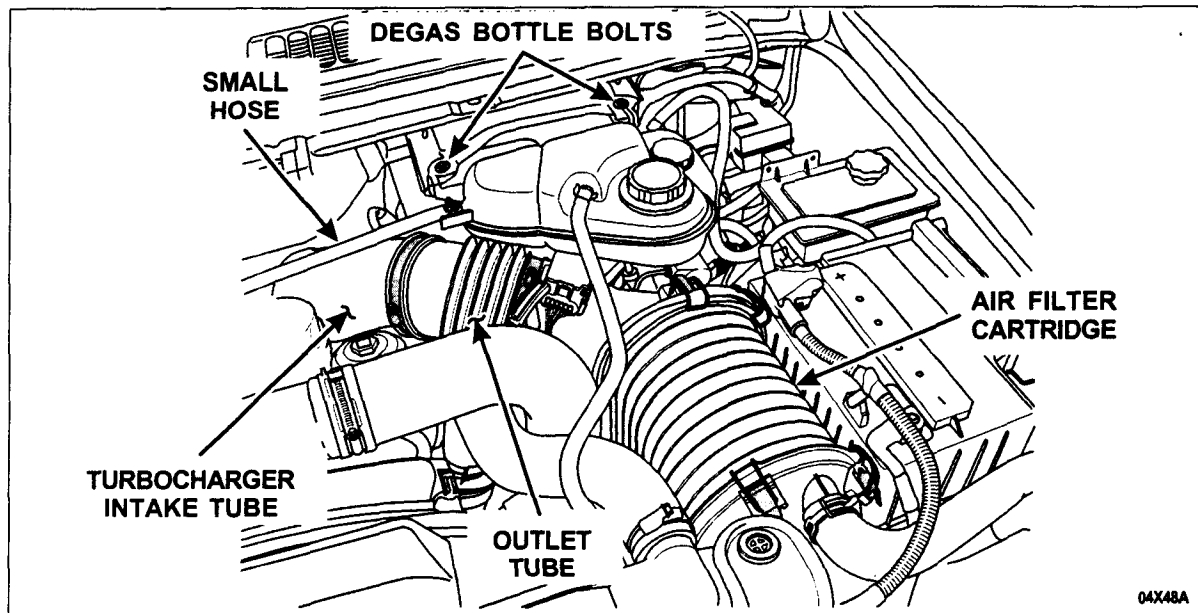
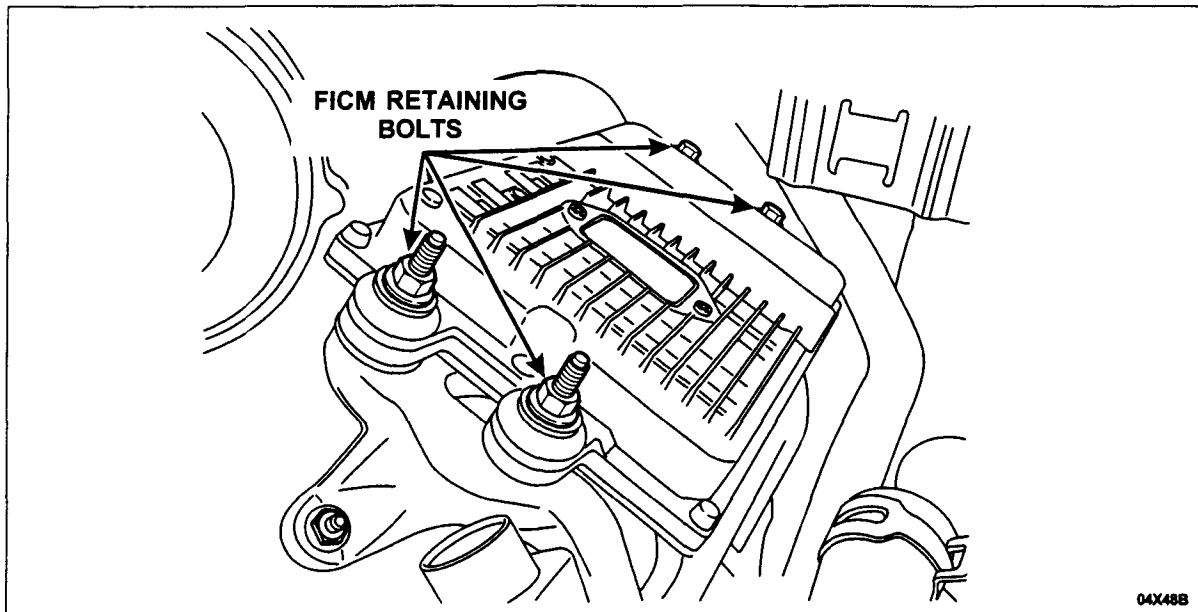


FIGURE 1



5. Remove the four (4) FICM retaining bolts, then disconnect the three (3) harness connectors from the FICM and remove the FICM. See Figure 2.



**FIGURE 2**

6. Disconnect the two (2) rear fuel injector connectors and roll the FICM harness over to view the underside of the two (2) injector harness take-outs leading to the FICM.



7. Inspect the underside of the injector harness in the two (2) areas noted in the illustration. See Figure 3.

NOTE: The harness is constructed of a bundle of insulated copper wires wrapped in a grounded silver-colored shield (much like heavy gauge aluminum foil), then covered with a wrapping of black vinyl tape.

- If the harness is either NOT chafed or only lightly chafed but the copper wire strands ARE NOT visible (outer vinyl tape and possibly the silver-colored shield is worn through), the Harness Protection Kit 4C3Z-14A099-A must be installed. Proceed to FICM Harness Protection Kit Installation in this Attachment V.
- If chafing has occurred which has exposed the copper strands, the harness must be replaced. Do not attempt to repair a chafed harness if these conditions are found. Proceed to FICM Harness Replacement in this Attachment V.

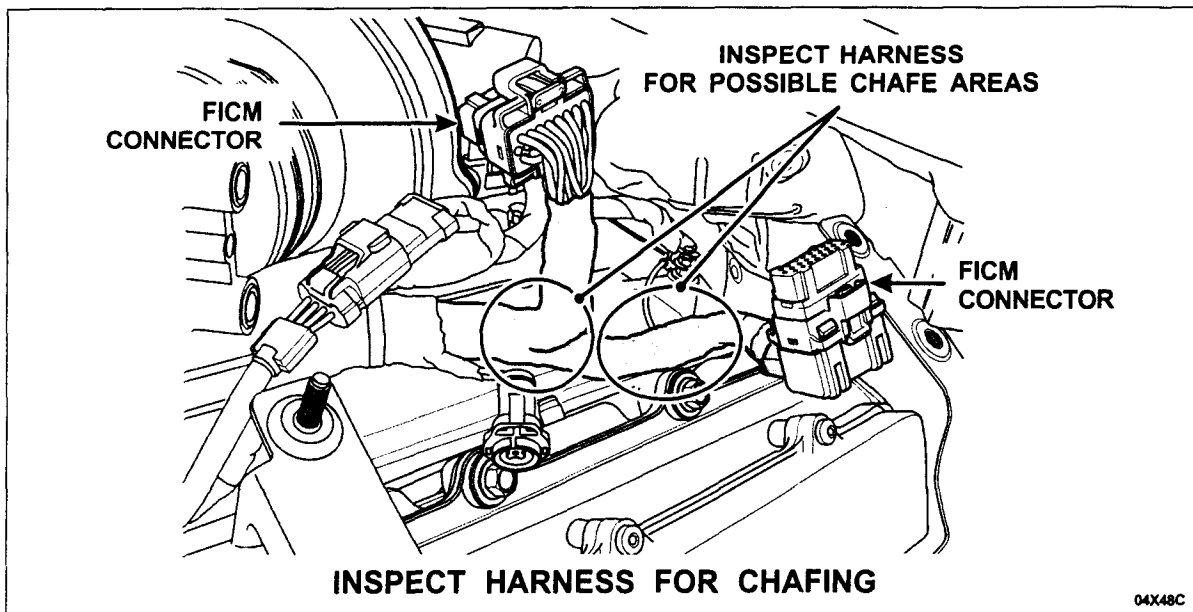


FIGURE 3

04X48C



## FICM HARNESS PROTECTION KIT INSTALLATION

1. Install the harness connector covers onto **both** FICM injector harness connectors by carefully bending the wires coming out of the connector and snapping the cover in place. See Figure 4.

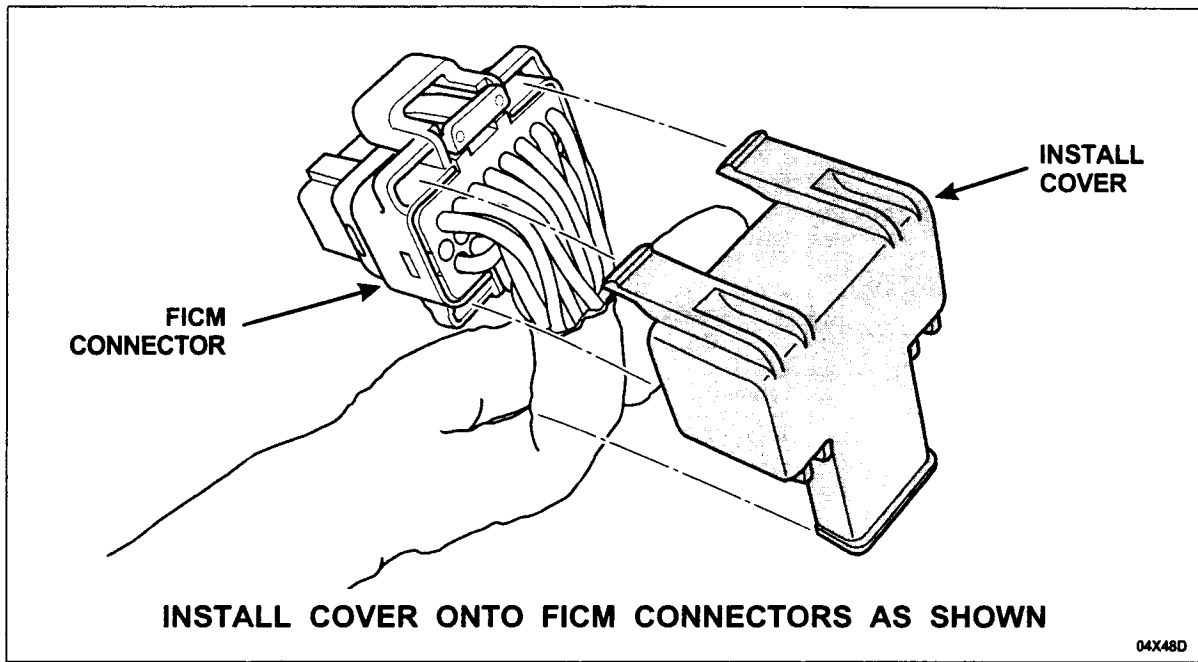


FIGURE 4



2. Position and install the plastic TEE over the forward harness take-out with the narrowed end toward the rear of the vehicle. Do not latch the tee closed at this time. See Figure 5.
3. Cut two (2) pieces of 11/16" convolute: one approximately 75 mm (3 inches) long, the other about 37 mm (1.5 inches) long. See Figure 5.
4. Position the 75 mm (3 inches) section of convolute over the harness takeout from the plastic TEE to the FICM connector. See Figure 5.
5. Position the 37 mm (1.5 inches) section of convolute between the two (2) harness take-outs. See Figure 5.
6. Close the TEE around the harness and over the convolute, making sure that all 4 latches are engaged. See Figure 5.
7. Using the supplied tape, secure the plastic TEE, both sections of convolute and the connector covers. See Figure 5.

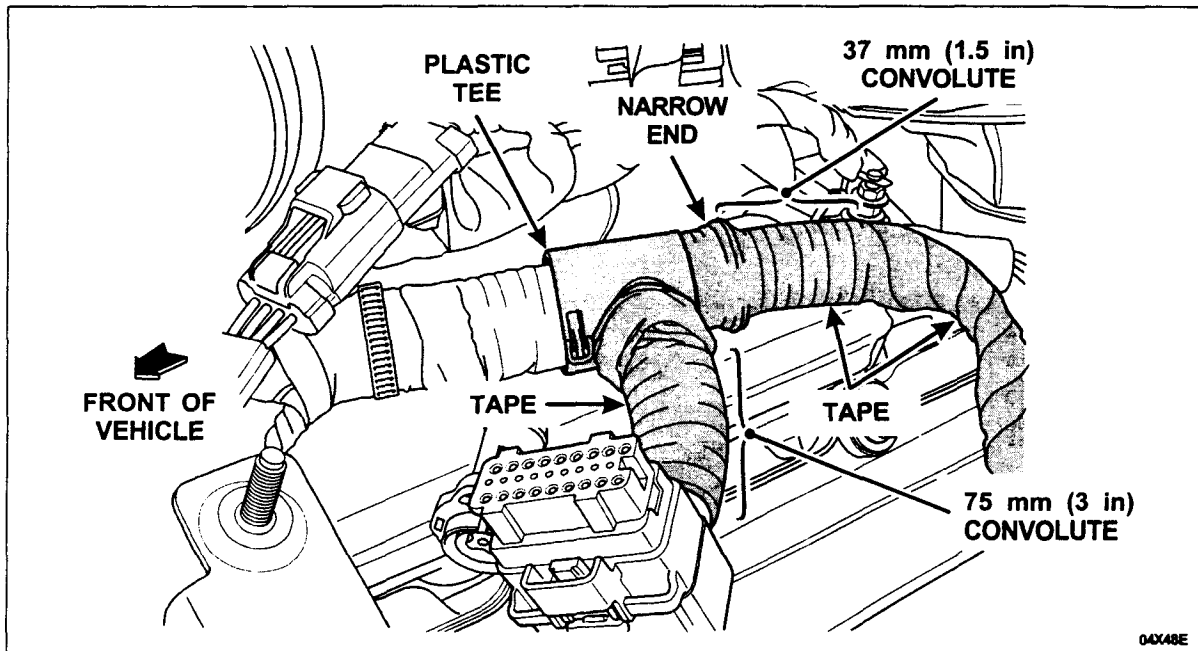


FIGURE 5

8. Connect the injector connectors.
9. Position the FICM and connect all three (3) FICM connectors.
10. Install the FICM retainer bolts. Tighten the bolts to 13 Nm (10 lb-ft).
11. Proceed to Sensor Connector Replacement in this Attachment V.



## FICM HARNESS REPLACEMENT

NOTE: FICM Harness Replacement must only be performed if copper strands have been exposed caused by chafing of the wires inside the harness.

### REMOVAL

1. **CAUTION: While removing the ground stud nut, hold the stud/intake manifold bolt from turning. If the stud/bolt is not held, the intake manifold bolt may loosen causing the ground wire to twist and eventually break.**

Disengage the engine harness from the stud located at the rear of the intake manifold on the driver side of the vehicle, then remove the ground wire from the stud.

2. Disconnect the remaining two (2) fuel injectors on the driver side along with three (3) wire harness locators (two [2] located along the fuel injector manifold assembly and one located under the turbocharger). See Figure 6.

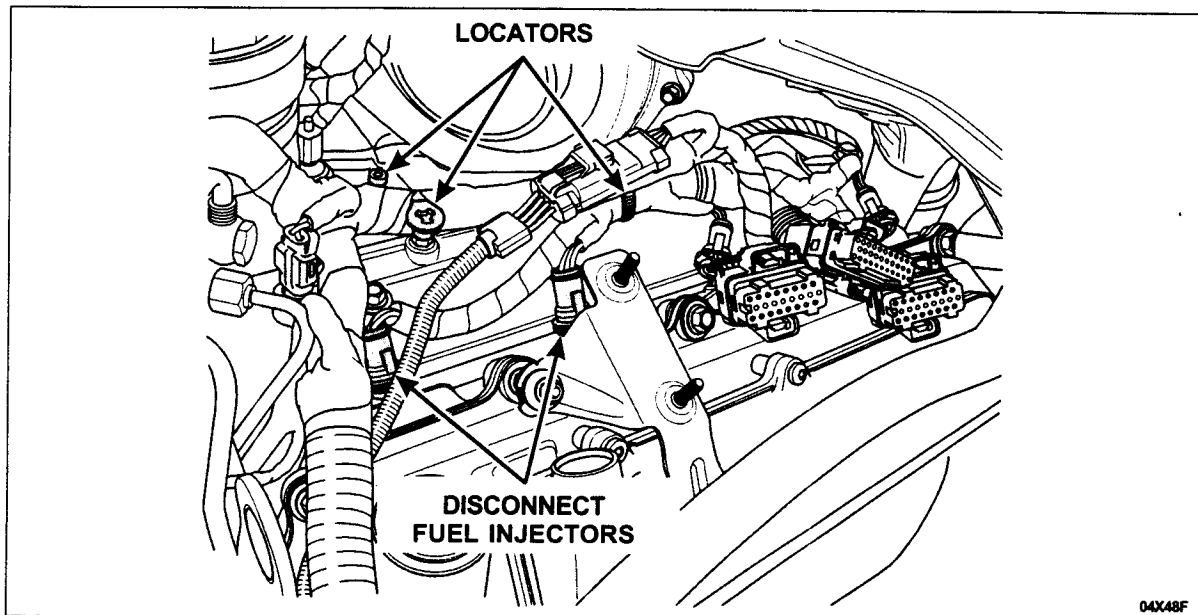


FIGURE 6

3. Remove the charge air cooler (CAC) hot air inlet duct (passenger side of the engine compartment) and the engine oil fill tube from the passenger side valve cover.



4. Disconnect the four (4) passenger-side injector connectors and the one (1) retainer located behind the alternator. Remove the harness from the vehicle by carefully pulling it from under the turbocharger towards the driver side of the vehicle. See Figure 7.

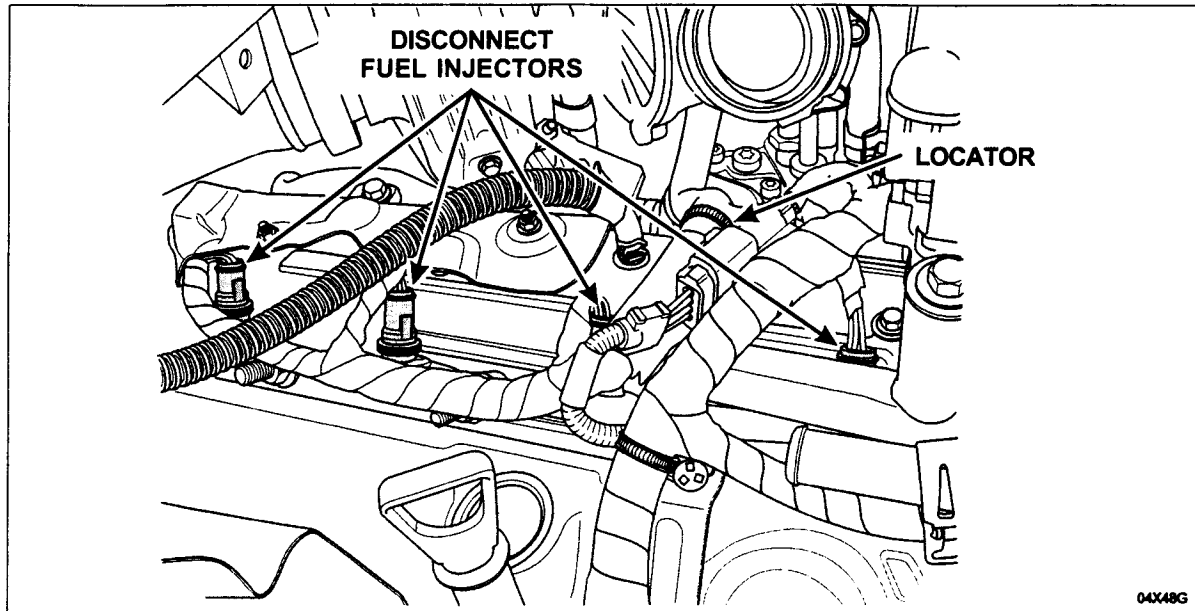


FIGURE 7

## INSTALLATION

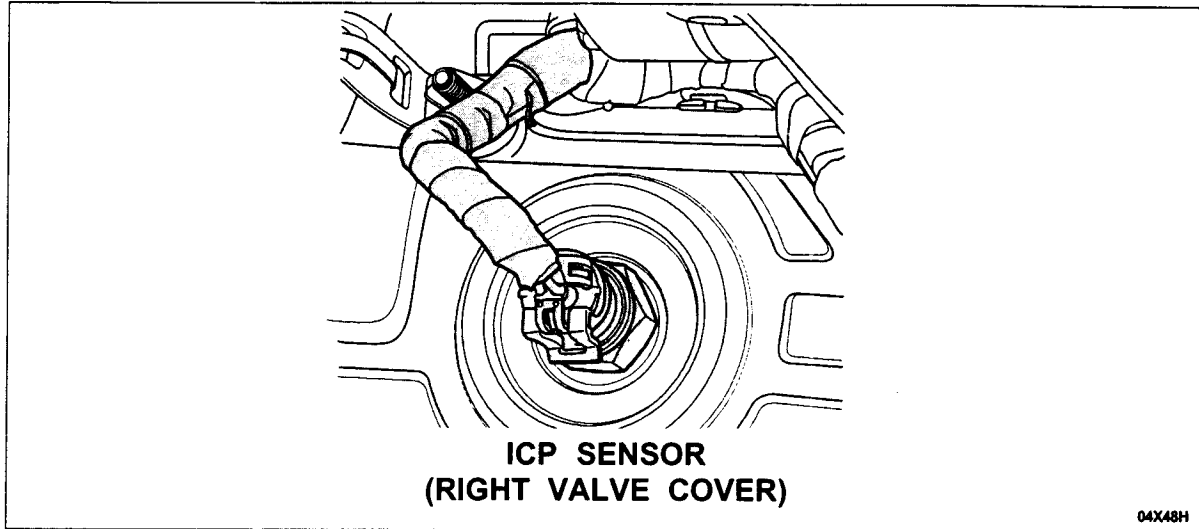
1. Route the **new** harness under the turbocharger and secure the retainer behind the alternator.
2. Connect the four (4) injector connectors on the passenger side of the engine.
3. Position the harness along the driver side of the engine and connect the four (4) injector connectors.
4. Secure the three (3) wire harness retainers (two (2) located along the fuel injector manifold assembly and one (1) located under the turbocharger).
5. Connect the ground wire at the intake manifold and reattach the engine harness to the stud. Hold the stud to prevent the ground wire from rotating and twisting.
6. Position the FICM and connect all three (3) FICM connectors.
7. Install the FICM retainer bolts. Tighten the bolts to 13 Nm (10 lb-ft).
8. Proceed to Sensor Connector Replacement in this Attachment V.



## SENSOR CONNECTOR REPLACEMENT

NOTE: All splices are to be made using tools provided in the Rotunda Wire Splice Tool Kit 164-R5903. The repair kits contain the connector and pigtail, butt splice connector and heat shrink tubing.

1. Remove the CAC duct (hot air inlet duct) from the passenger side of the engine compartment, then disconnect the ICP sensor. See Figure 8.



**FIGURE 8**

2. Remove the tape from the vehicle harness back to the original take-out location.





3. **CAUTION: The replacement connector has only one color wire, so location identification is crucial for a proper repair.**

Identify each wire leading to the connector (Vref, Ground and Signal). Note the locations of each wire relative to the connector face view provided. Place the identification tags at least a few inches away from the connector. See Figure 9.

4. Cut the wires about 25 mm (1 inch) behind the connector on the vehicle harness **MAKING SURE TO LEAVE THE IDENTIFYING TAGS ON THE HARNESS** and discard the old connector. See Figure 9.

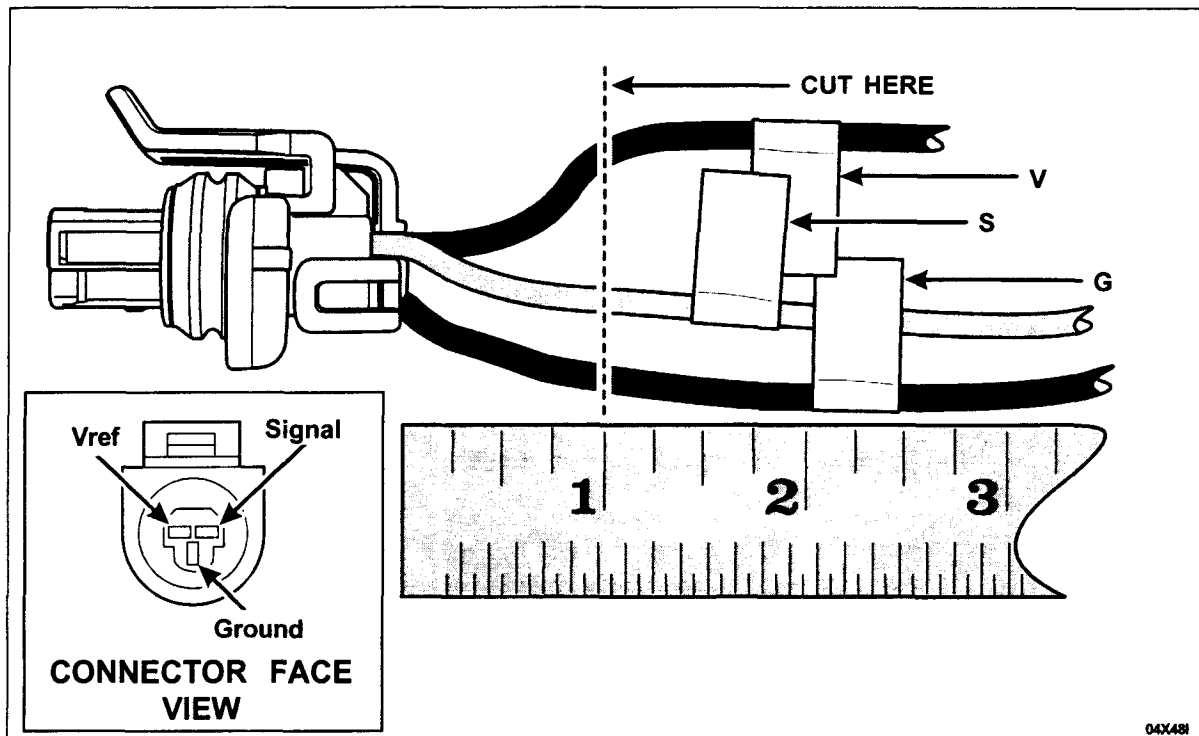


FIGURE 9

5. Strip about 7 mm (1/4 inch) of insulation from the wires on the *new* pigtail.
6. Using the crimp tool provided in the Rotunda Tool Kit, install the butt connectors provided in the service kit onto the replacement connector pigtail.
7. Strip about 7 mm (1/4 inch) of insulation from the wires on the vehicle harness.
8. Position the heat shrink over the wires on the *new* connector.
9. Matching the wires on the pigtail to the identifying tags on the vehicle harness, crimp the *new* butt connectors to the vehicle harness. Lightly tug on the wires to make sure you have a good, tight splice.
10. Position the heat shrink tubing over the butt splice connectors, then using the provided Flameless Heat Gun and deflector, heat the tubes on the vehicle harness until they shrink and adhesive flows from the ends, indicating a water-tight seal.



11. Fold the repaired harness to mirror the original length and tape the harness.
12. Install a length of convolute over the spliced section of harness and secure with tape.
13. Apply electrical grease to the face of the connector, forcing a small amount into all three (3) terminals.
14. Connect the connector.
15. Install the turbocharger intake tube. Tighten the clamp to 4 Nm (35 lb-in). Tighten the nuts to 13 Nm (10 lb-ft).
16. Install the air filter cartridge, the outlet tube and clean air tube. Tighten the clamps to 4 Nm (35 lb-in).
17. Reposition the degas bottle and install the two (2) retaining bolts. Tighten the bolts to 10 Nm (89 lb-in).
18. Remove the plug and the clamp, the reconnect the hose to the degas bottle.
19. Reinstall the oil fill tube to the passenger side valve cover and hand tighten (only if the FICM harness was replaced).
20. NOTE: Using Motorcraft Metal Brake Parts Cleaner PM-4, thoroughly clean the CAC outlet port and turbocharger inlet port of any oil residue or dirt that would interfere with an air-tight seal.  
Reinstall the CAC tube and tighten the marmon clamps to 12 Nm (9 lb-ft).
21. Check OASIS to verify there are no other Field Service Actions applicable to this vehicle prior to releasing the vehicle back to the owner.
22. Proceed to Road Test Procedure in this Attachment V.

## ROAD TEST PROCEDURE

Check OASIS to verify there are no other Field Service Actions applicable to this vehicle prior to performing the Road Test Procedure.

Test drive the vehicle to make sure no drivability concerns exist prior to returning the vehicle to the owner.



**Dealer Questions and Answers**  
**Safety Recall 05S34**

Certain 2004 Model Year F250/350/450/550, Excursion, and E350/450 Vehicles  
Fuel Injector Control Module Wiring Harness Repair

**Q1. Is this a safety recall and which vehicles are affected?**

- A. Ford is voluntarily conducting both a customer satisfaction program and a safety recall on certain vehicles equipped with 6.0L diesel engines. The safety recall involves approximately 198,000 2004 F-Series (250/350/450/550) trucks and Excursion sport utility vehicles built from September 29, 2003 through May 31, 2004, as well as E-Series vans (E-350/450) built from December 9, 2003 through May 28, 2004. Of these 198,000 vehicles affected by the safety recall, approximately 79,000 of the F-Series truck and Excursions built from December 15, 2003 through March 31, 2004 are also a part of a customer satisfaction program to address reduced engine performance.

**NOTE:** There were 88 early production 2005 model year vehicles built before May 31, 2004. Only 27 of these 88 vehicles were delivered to dealers. These 27 vehicles are in the affected population for 05S34 and will be loaded into OASIS. Owners of these vehicles will receive a 05S34 letter from Ford. If one of these vehicles comes into your service department, please use OASIS to check for open Field Service actions and complete any actions that are open.

**Q2. What is the concern?**

- A. These actions are being taken to address the potential for reduced engine performance (such as lack of power, difficulty starting, rough running and possibly stalling). Some combination of the following service repairs will be conducted to address these issues: engine harness inspection and repairs and air intake system repairs.

**Q3. I have heard customers with the 2003 model year 6.0L diesel equipped vehicles are having the same or similar issues as the 2004 model year. Is there an issue with the 2003s and, if so, why are you waiting to conduct the repairs on the 2003 model years?**

- A. We are reviewing and evaluating the data we've received on the 2003 model year vehicles and we continue to monitor reports from the field. If we receive sufficient data that supports an expansion of this program, we will certainly take action if it is warranted.

**Q4. Will customers with expired warranties be required to pay for the repairs?**

- A. Repairs that are part of this service action will be completed at no charge to customers. Repairs for concerns not related to this service action will be covered by Ford's existing five year/100,000 mile warranty on the 6.0 liter diesel engine in most cases.

**Q5. What have you done in production to correct the engine concerns?**

- A. All of these concerns have been corrected and addressed in production.

**Q6. What are you doing to assist customers with transportation and alleviate any inconvenience while the customer's vehicle is being repaired?**

- A. The repairs take less than half a day to complete. We will provide rental vehicles if customers need them.

**Dealer Questions and Answers**

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**Q7. What about customers who use their vehicles for commercial purposes? Are you providing comparable loaner vehicles?**

- A. Many of these vehicles have been customized to suit very specific commercial purposes. In these cases, it would not be possible to provide a comparable vehicle. However, we will do what we can to alleviate the inconvenience to the customer as much as possible and limit time the vehicle is in the dealership for the repairs.

**Q8. How should we handle owners that have modified their 6.0L diesel powered vehicle with the addition of a power chip, or have had their Powertrain Control Module (PCM) re-programmed with non-Ford software?**

- A. Ford policy on vehicle modifications is unchanged. If a vehicle modification prevents the completion of Warranty or Field Service Action repair, then it is the customer's responsibility to return the vehicle back to factory specification. Regarding this specific field action, customer modifications to the PCM should not prevent the completion of the field action repairs. Ford policy also states that if non-Ford product causes a Ford part to fail, the cost of the repair and any related damage are not covered by the Ford New Vehicle Limited Warranty, Service Part Warranty, or Extended Service Plan.