

## 2005 Ford Excursion

2005 ENGINE Engine - 6.0L Diesel - Excursion

### CYLINDER HEAD

#### Material

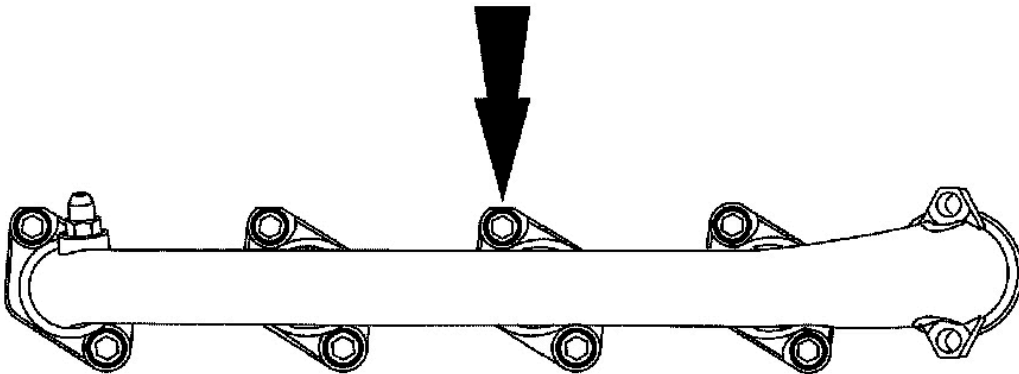
#### MATERIAL REFERENCE

Item	Specification
High Temperature Nickel Anti-Seize Lubricant XL-2	ESE-M12A4-A

#### Disassembly

1. Remove the lifting bracket from the cylinder head.
2. Prior to removing the exhaust manifold, inspect the exhaust manifold for warpage with a feeler gauge between the manifold and cylinder head. Record the measurement and compare with the specifications.

**NOTE:** LH exhaust manifold shown, RH similar.

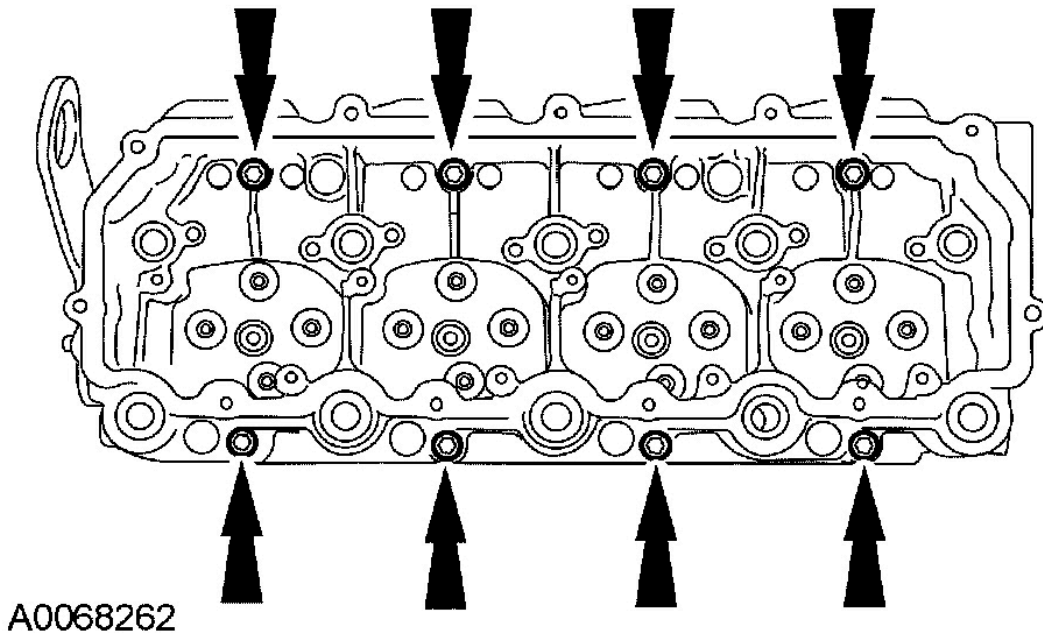


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**Fig. 634: Removing Bolts Exhaust Manifolds**  
Courtesy of FORD MOTOR CO.

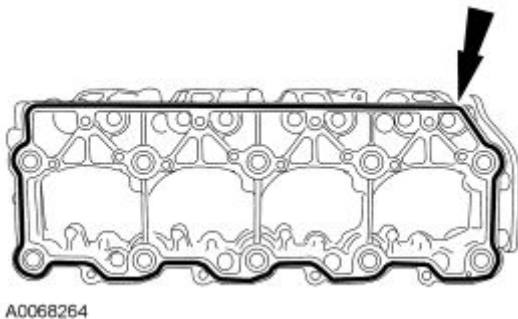
3. Remove the bolts and the exhaust manifolds.

**NOTE:** Left cylinder head shown, right cylinder head similar.



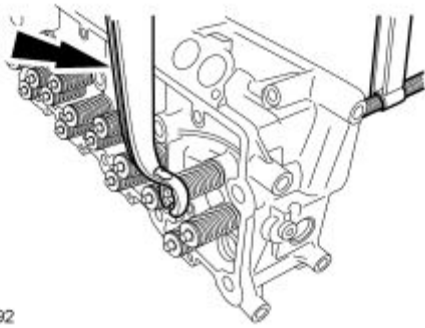
**Fig. 635: Identifying Rocker Arm Carrier Bolts**  
Courtesy of FORD MOTOR CO.

4. Remove the bolts and separate the rocker arm carrier from the cylinder head.
5. Remove the press-in-place gasket.
  - Clean and inspect the gasket. Install a new gasket if necessary.
  - Remove the cylinder head dowels.
  - Clean and inspect the sealing surfaces.



**Fig. 636: Identifying Press-In-Place Gasket**  
Courtesy of FORD MOTOR CO.

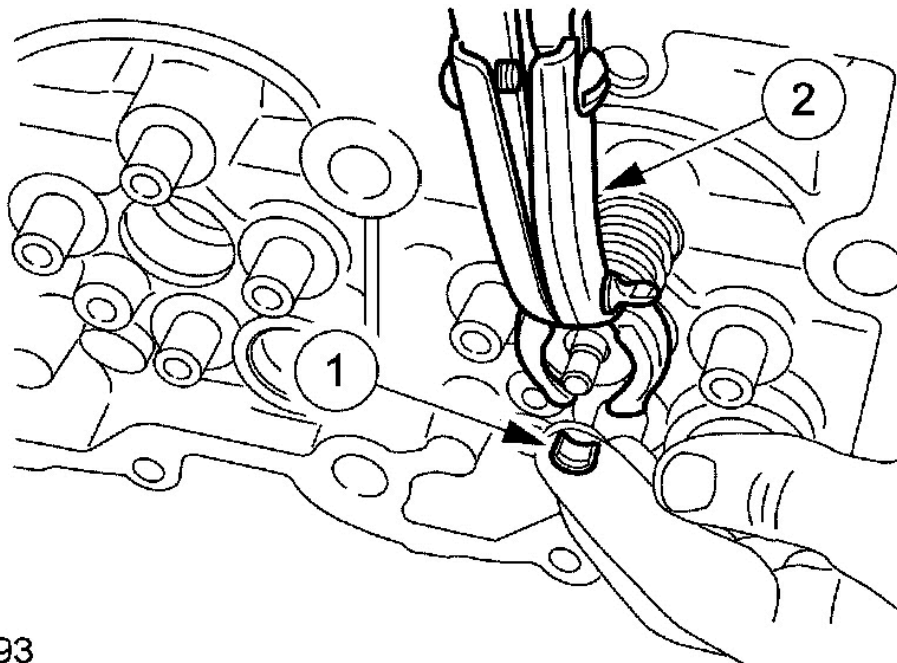
6. Install the valve spring compressor.



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**Fig. 637: Installing Valve Spring Compressor**  
Courtesy of FORD MOTOR CO.

**NOTE:** If necessary, strike the valve stem end with a plastic-tipped hammer to loosen the valve spring retainer keys.

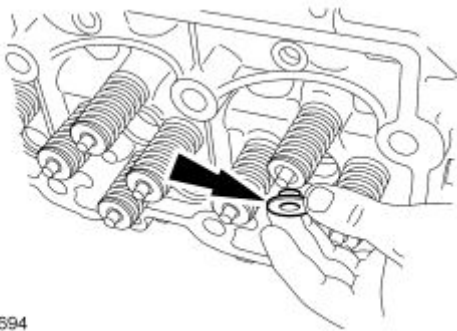


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**Fig. 638: Removing Valve Spring Retainer Keys**  
Courtesy of FORD MOTOR CO.

7. Remove the valve spring retainer keys.
  1. Remove the valve spring retainer keys.
  2. Remove the valve spring compressor.

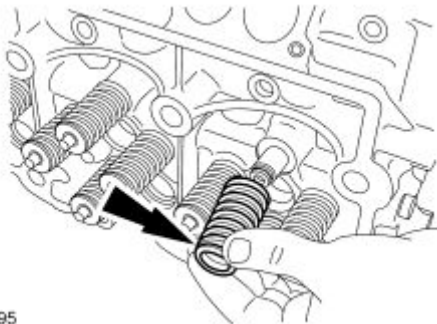
8. Remove the valve spring rotator.



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**Fig. 639: Removing Valve Spring Rotator**  
Courtesy of FORD MOTOR CO.

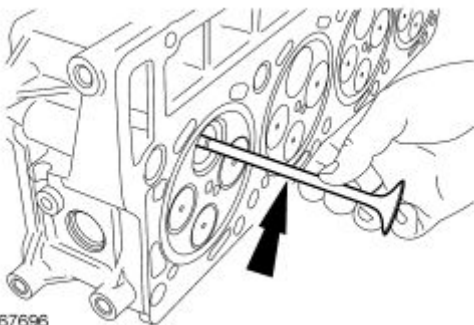
9. Remove the valve spring.



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**Fig. 640: Removing Valve Spring**  
Courtesy of FORD MOTOR CO.

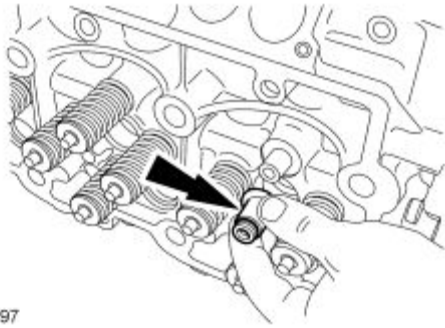
10. Remove the valve.



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**Fig. 641: Removing Valve**  
Courtesy of FORD MOTOR CO.

11. Remove the valve stem seal.

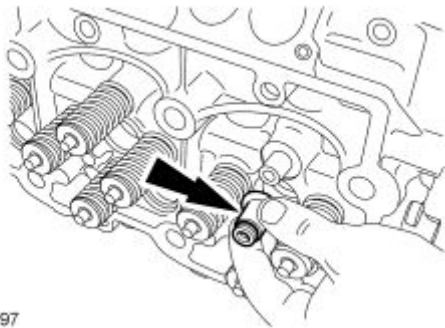


**Fig. 642: Removing Valve Stem Seal**  
Courtesy of FORD MOTOR CO.

12. Clean and inspect the valves, valve guides and seats. If they are serviceable, resurface to specification.

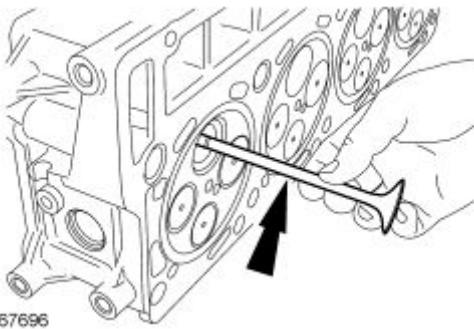
**Assembly**

1. Install the valve stem seal.



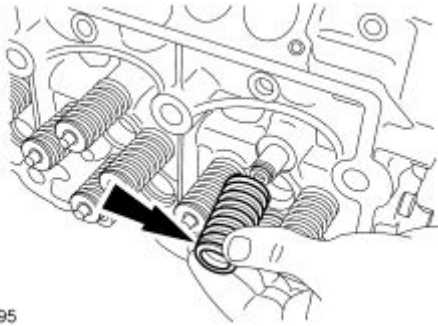
**Fig. 643: Installing Valve Stem Seal**  
Courtesy of FORD MOTOR CO.

2. Install the valve.



**Fig. 644: Installing Valve**  
Courtesy of FORD MOTOR CO.

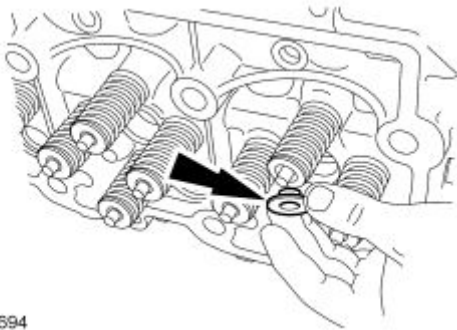
3. Install the valve spring.



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**Fig. 645: Installing Valve Spring**  
Courtesy of FORD MOTOR CO.

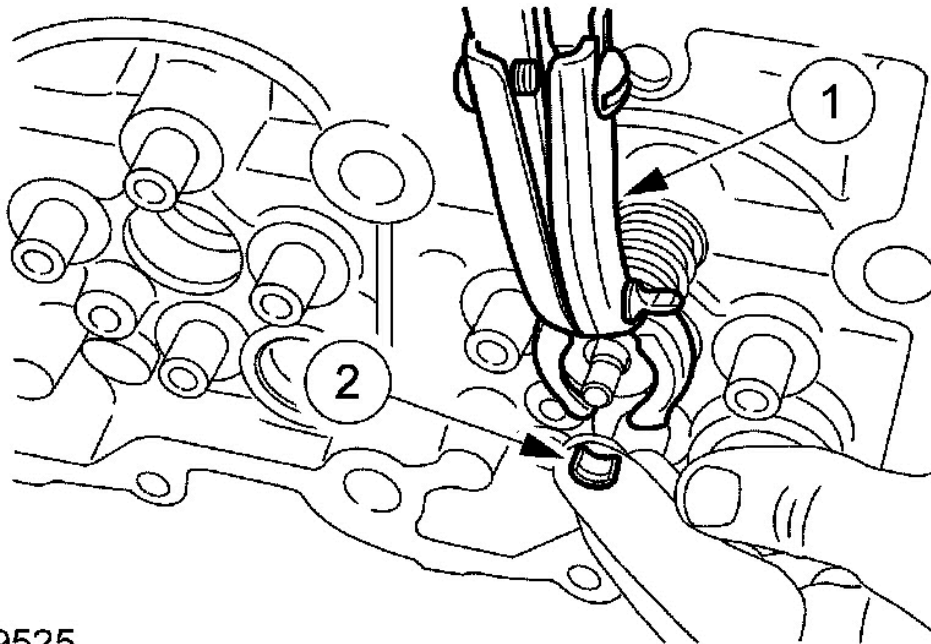
4. Install the valve spring rotator.



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**Fig. 646: Installing Valve Spring Rotator**  
Courtesy of FORD MOTOR CO.

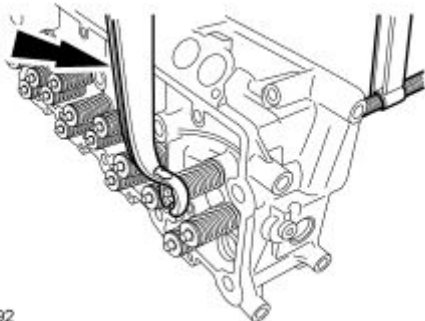
5. Install the valve spring retainer keys.
  1. Install the valve spring compressor.
  2. Install the valve spring retainer keys.



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**Fig. 647: Installing Valve Spring Retainer Keys**  
Courtesy of FORD MOTOR CO.

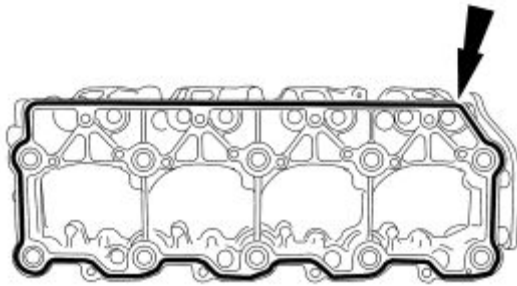
6. Remove the valve spring compressor.



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**Fig. 648: Removing Valve Spring Compressor**  
Courtesy of FORD MOTOR CO.

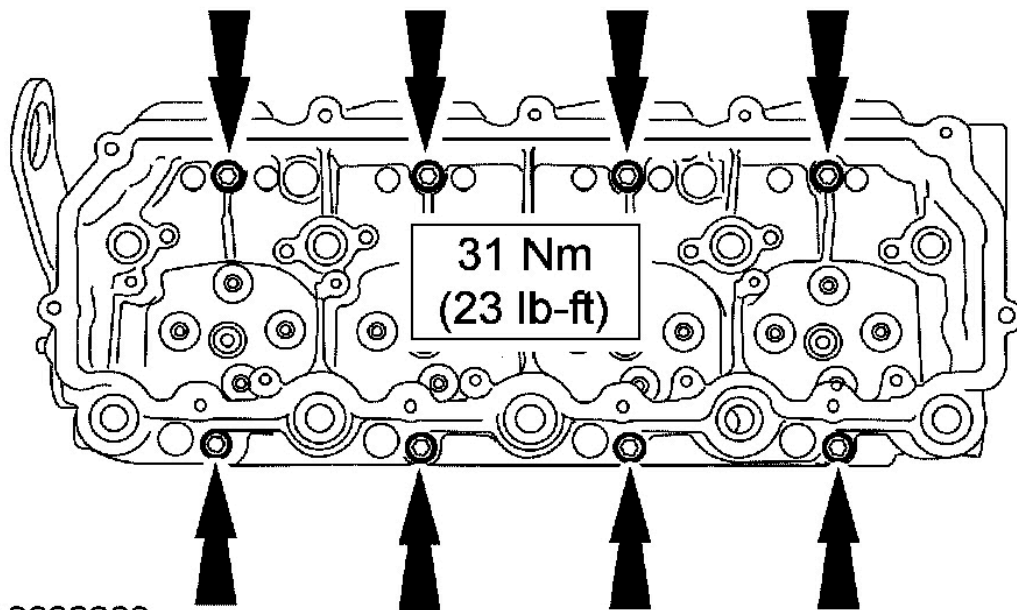
7. Install the press-in-place gasket.
  - Install new dowels in the cylinder head and install the gasket.



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**Fig. 649: Identifying Press-In-Place Gasket**  
Courtesy of FORD MOTOR CO.

8. Install the rocker arm carrier on the cylinder head and install the bolts.



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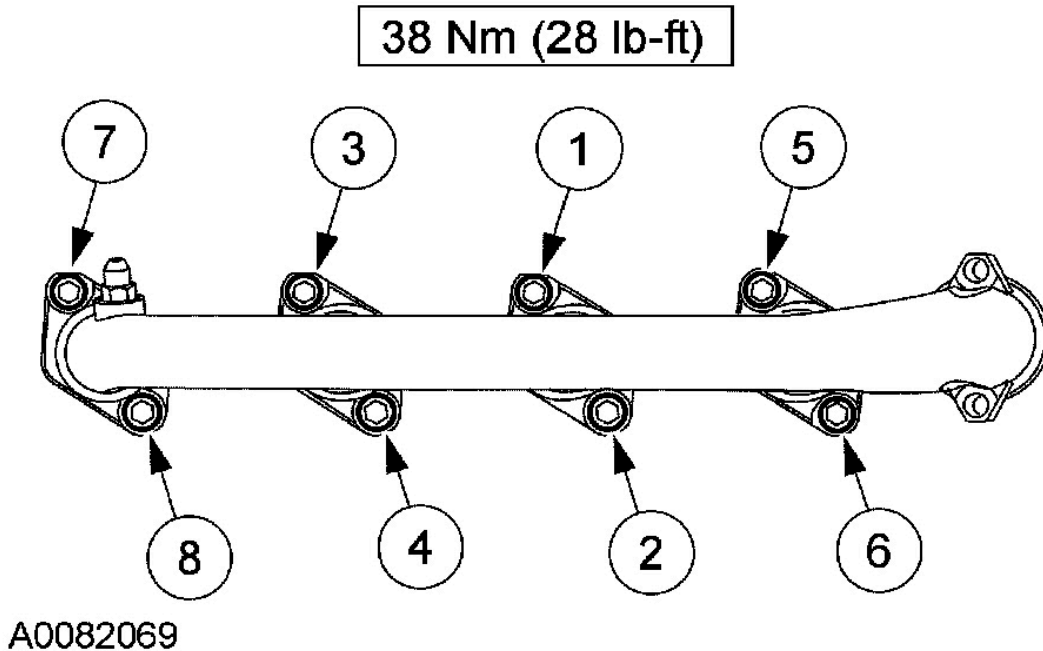
**Fig. 650: Installing Rocker Arm Carrier And Bolts With Torque Specifications**  
Courtesy of FORD MOTOR CO.

**NOTE:** When installing the exhaust manifolds, only use prevailing torque hex flange bolts with an interference fit.

**NOTE:** Start installing the bolts with the second bolt from the rear on the top. The hole diameter is smaller, therefore allowing alignment of the retaining bolts.



**NOTE:** Apply anti-seize lubricant to the bolt threads prior to installing the bolts.



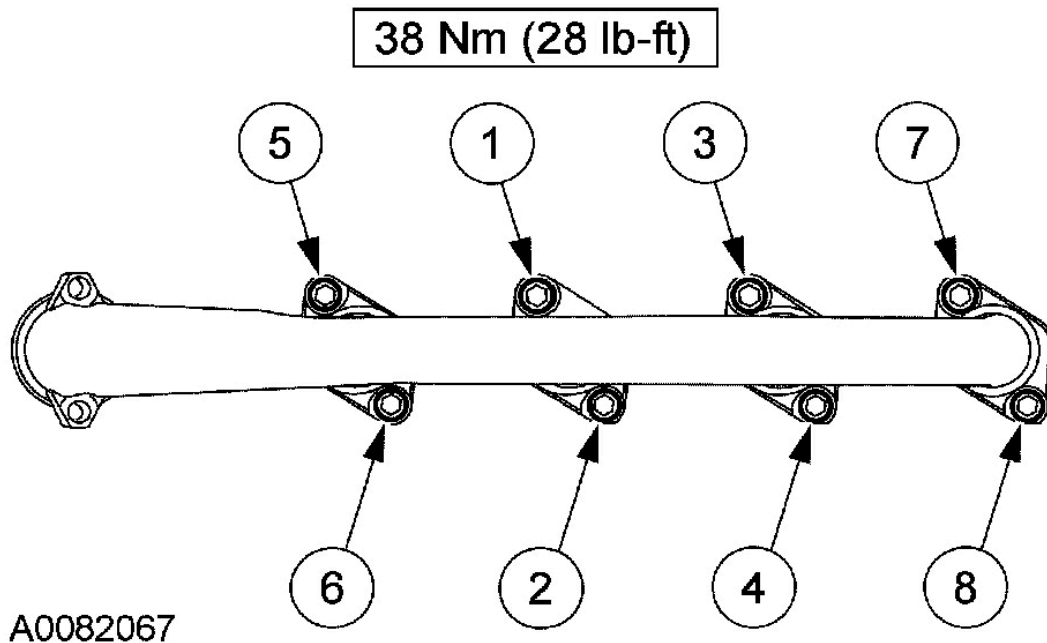
**Fig. 651: Identifying LH Exhaust Manifold Bolt Tightening Sequence With Torque Specification**  
Courtesy of FORD MOTOR CO.

9. Install the LH manifold and bolts. Tighten in the sequence shown.

**NOTE:** When installing the exhaust manifolds, only use prevailing torque hex flange bolts with an interference fit.

**NOTE:** Start installing the bolts with the second bolt from the rear on the top. The hole diameter is smaller, therefore allowing alignment of the retaining bolts.

**NOTE:** Apply anti-seize lubricant to the bolt threads prior to installing the bolts.



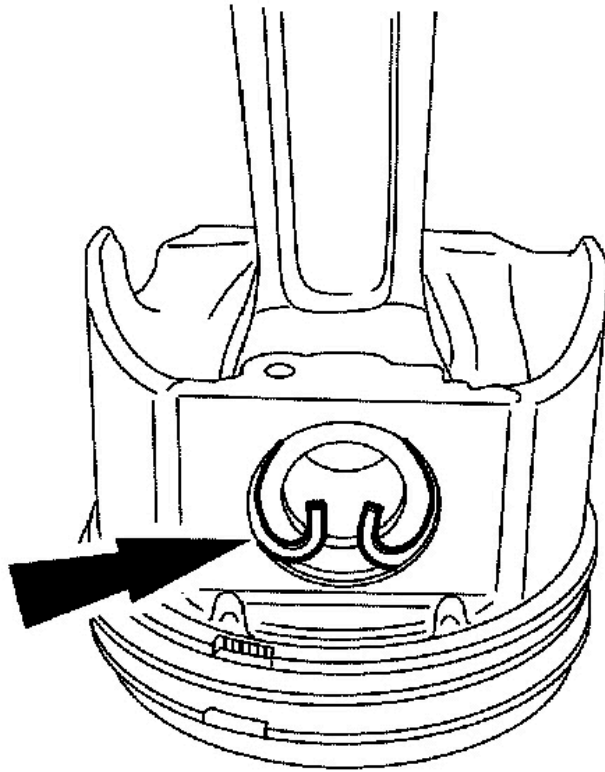
**Fig. 652: Identifying RH Exhaust Manifold Bolt Tightening Sequence With Torque Specification**  
Courtesy of FORD MOTOR CO.

10. Install the RH manifold and bolts. Tighten in the sequence shown.
11. Install the lifting bracket on the cylinder head.

## PISTON

### Disassembly and Assembly

**NOTE:** Mark the connecting rod and piston to make sure correct orientation on reassembly.

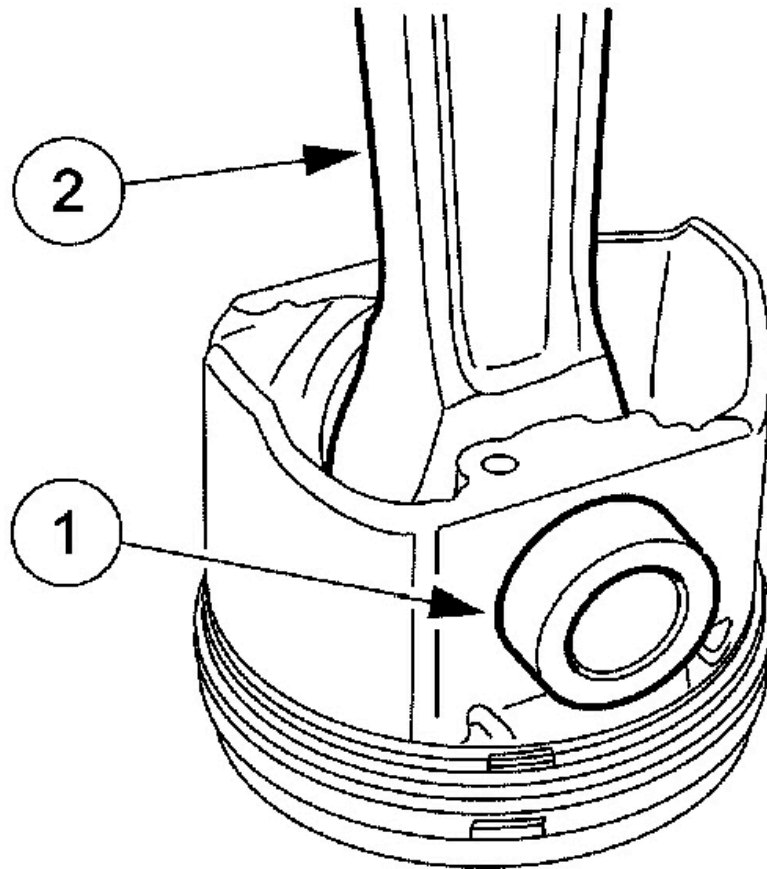


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**Fig. 653: Removing Piston Pin Retainers**  
Courtesy of FORD MOTOR CO.

1. Remove the piston pin retainers.

**NOTE:** The piston pins are a floating type piston pin and should not require a press to remove or install them.



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**Fig. 654: Removing Connecting Rod**  
Courtesy of FORD MOTOR CO.

2. Remove the connecting rod.
  1. Remove the piston pin.
  2. Remove the connecting rod.
3. To assemble, reverse the disassembly procedure.