

2002 Ford Focus LX

2002 ENGINE Engine, 2.0L SPI - Focus

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SPECIFICATIONS

GENERAL SPECIFICATIONS

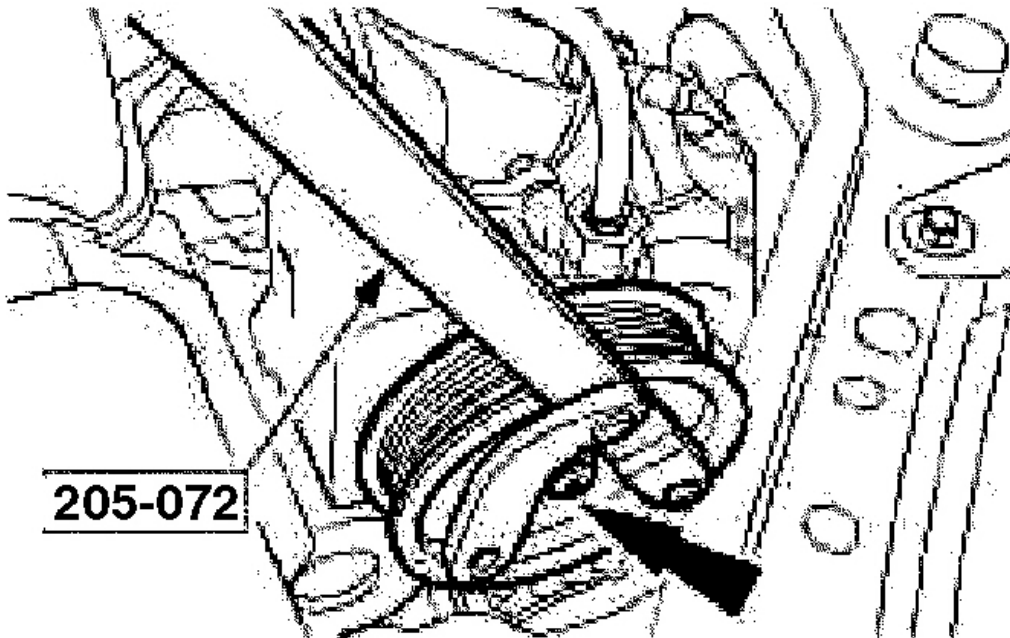
ENGINE - 2.0L SPI GENERAL SPECIFICATIONS

Item	Specification
Displacement	2.0 Liters (121 CD)
Number of cylinders	4
Bore and stroke	84.8 mm x 88 mm
Firing order	1-3-4-2
Oil pressure (hot 2000 RPM) - kPa	240 kPa -450 kPa
Drive belt tension	178 N - 311 N
Compression ratio	9.35:±/0.25
Coolant capacity	5.0 - 5.8 Liters

CYLINDER HEAD AND VALVE TRAIN

ENGINE - 2.0L SPI CYLINDER HEAD AND VALVE TRAIN SPECIFICATION

Item	Specification (mm)
Valve guide inner diameter (I.D)	8.063-8.094
Intake and exhaust	8.063-8.094
Valve seats width - intake and exhaust	1.75-2.32
Angle	45 degrees
Runout (total indicated runout [T.I.R.])	0.064 MAX
Bore diameter (insert counterbore diameter) intake	39.940 MIN.
	39.965 MAX.
Bore diameter (insert counterbore diameter) exhaust	34.940 MIN.
	39.965 MAX.
Gaskets surface flatness	0.04/26 0.08/156
	0.15 Total
Head face surface finish	0.2/2.5 0.8
Valve stem to guide clearance intake	0.020-0.069
Valve stem to guide clearance exhaust	0.049-0.095



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Fig. 226: Removing Power Steering Pump Pulley
Courtesy of FORD MOTOR CO.

25. Remove the power steering pump pulley.
26. Remove the power steering pump and position it to one side.

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EGR manifold tube to exhaust manifold	6	-	53
Flexible exhaust pipe	47	35	-
Exhaust manifold nuts	27	20	-
Catalytic converter to exhaust manifold bolts	40	30	-
Oil control plug, iB5 transmission	35	26	-
Thermostat housing	13	10	-
Starter motor to transaxle	35	26	-
Lower transaxle flange bolts	47	35	-
Upper transaxle flange bolts	47	35	-
Left-hand transaxle flange bolts	47	35	-
Engine roll restrictor to transaxle	48	35	-
Engine roll restrictor to subframe	48	35	-
Rear engine mounting to body	48	35	-
Rear engine mounting (nut on transmission mounting bracket)	133	98	-
Front engine mounting to engine	80	59	-
Front engine mounting to body	48	35	
Wheel nuts	128	94	-
Suspension strut to body	48	35	-
Lower suspension arm ball joint to spindle carrier	47	35	-
Power steering pump	23	17	
Power steering pump pulley	47	35	-
Cylinder head bolts (refer to the PROCEDURE in this section)	-		-
Timing belt tensioner	25	18	-
Spark plugs	15	11	-
Oil level indicator tube	10	-	89
Valve cover bolts	9	-	80
Ignition coil (EI) bracket to cylinder head	10	-	89
Rocker arms	25	18	-
Camshaft thrust plate bolts	10	89	
Camshaft pulley bolt	105	77	-
Camshaft position sensor (CMP)	25	18	-
Oil pressure switch	13	10	-
Oil pump	13	10	-

ENGINE

REFER to ENGINE SYSTEM-GENERAL INFORMATION article .

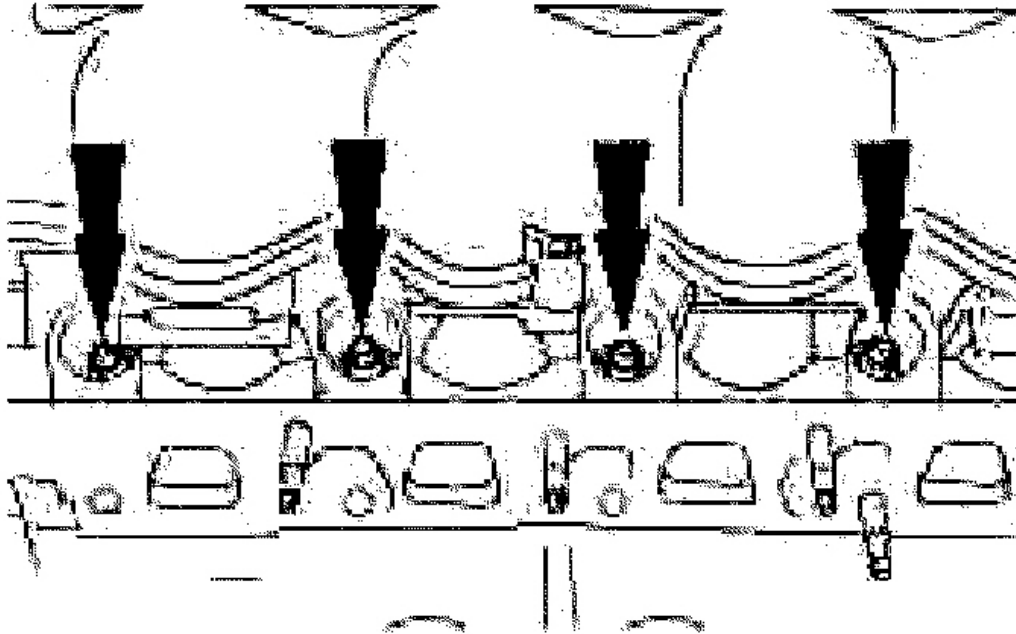
IN-VEHICLE REPAIR**INTAKE MANIFOLD****Special Tool(s)**

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Fig. 5: Identifying Special Tool
Courtesy of FORD MOTOR CO.

Removal

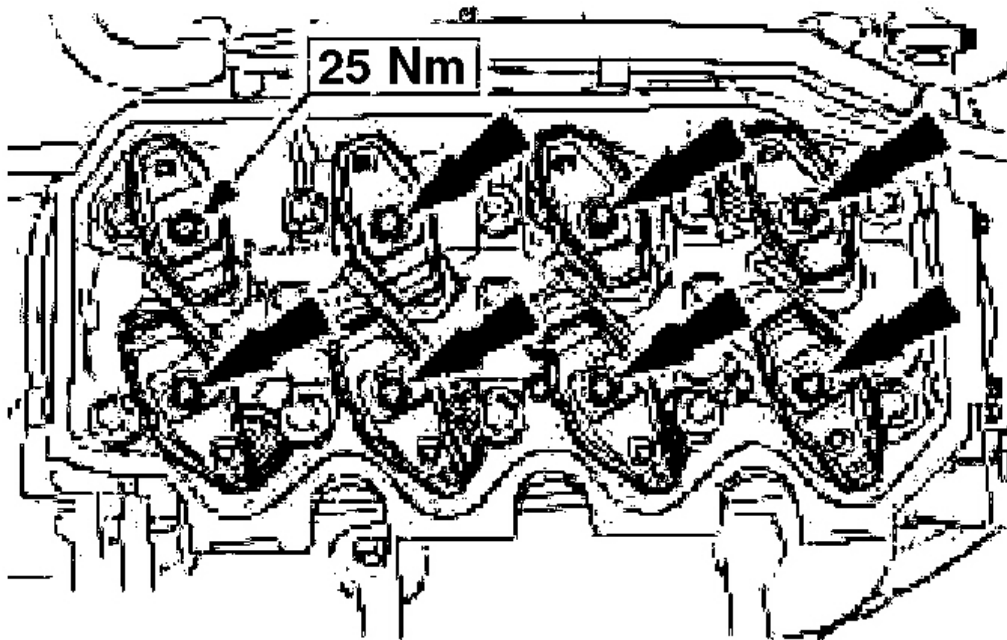
1. Release the fuel pressure. For additional information, refer to **FUEL SYSTEM PRESSURE RELEASE** .
2. Disconnect the battery ground cable.
3. Raise and support the vehicle.
4. Detach the intake manifold bracket.
 - Loosen the nuts and remove the bolts.



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Fig. 49: Removing Spark Plugs
Courtesy of FORD MOTOR CO.

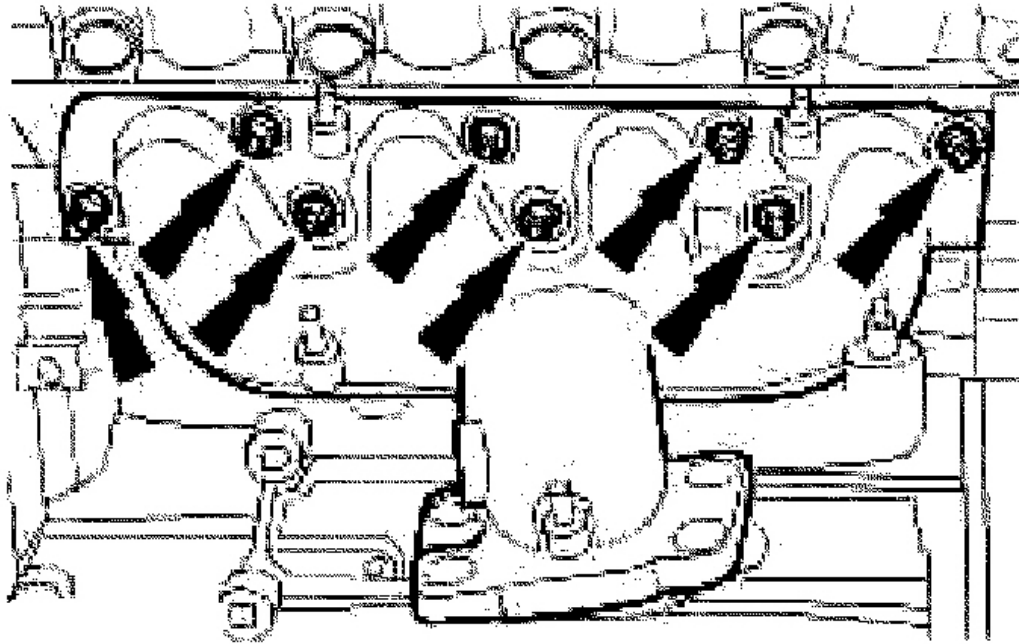
3. Remove the spark plugs.
4. Remove the valve cover.



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Fig. 85: Installing Rocker Arms
Courtesy of FORD MOTOR CO.

12. Install the rocker arms.
13. Install the valve cover.

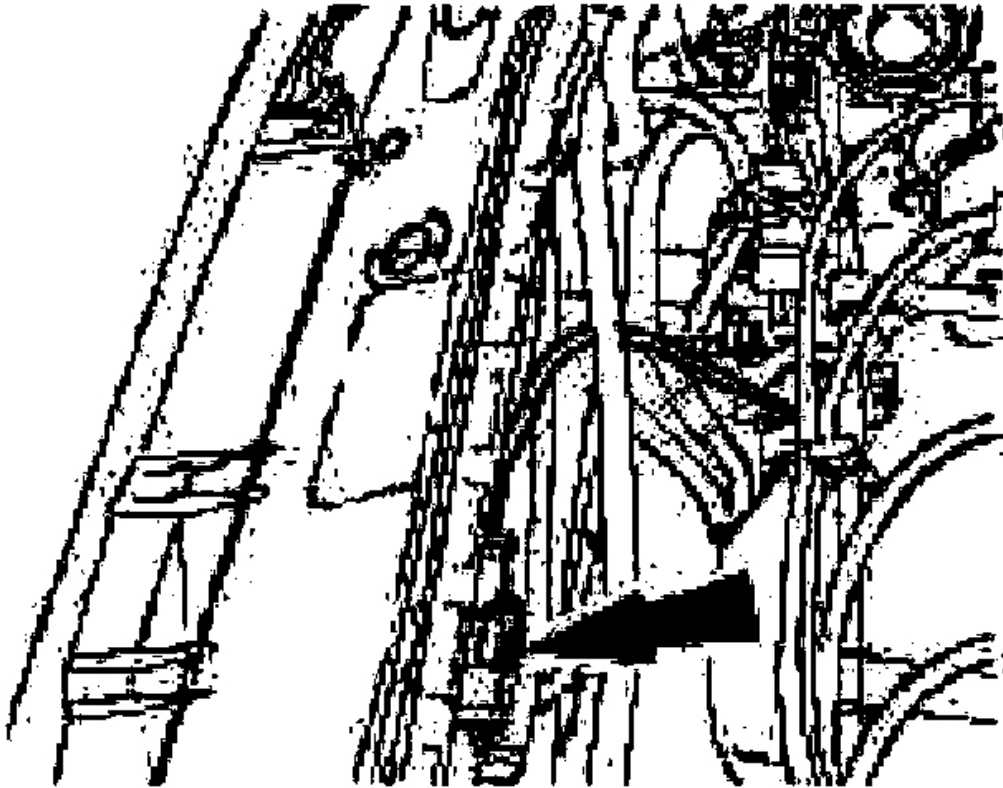


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Fig. 124: Removing Exhaust Manifold And Gasket
Courtesy of FORD MOTOR CO.

Installation

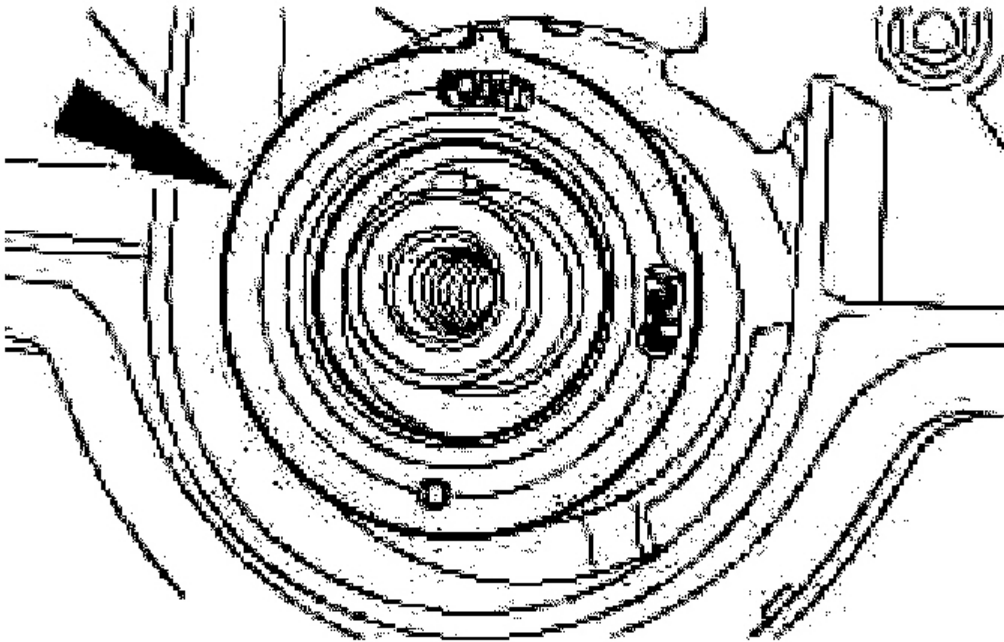
CAUTION: Do not use abrasive grinding discs to remove manual scrapers. Do not scratch or gouge aluminum sealing surface.



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Fig. 168: Connecting HO2S Electrical Connector
Courtesy of FORD MOTOR CO.

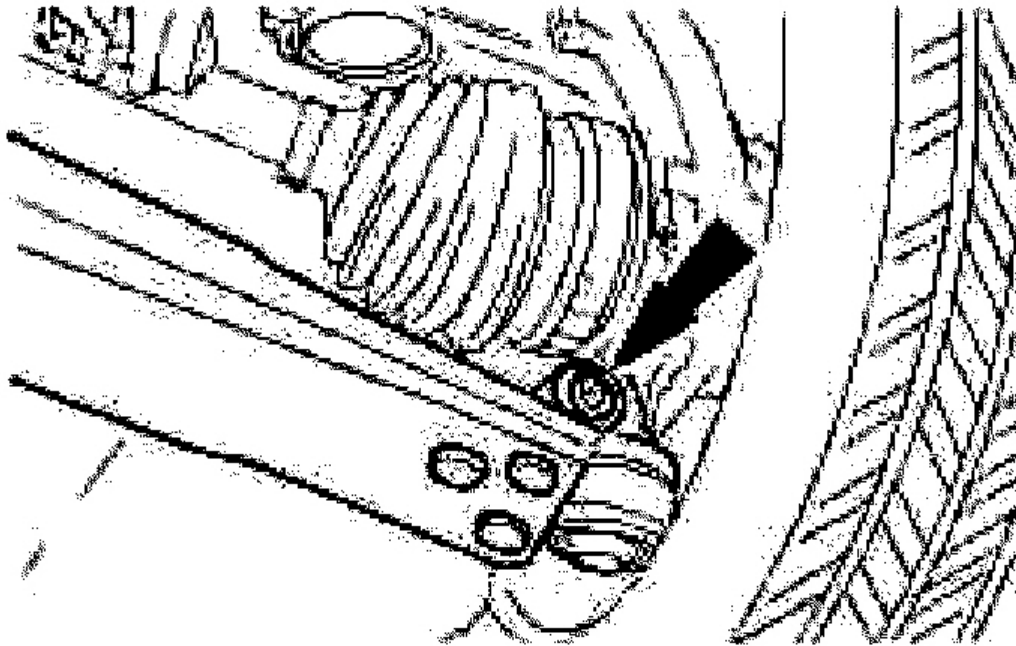
22. Connect both PCM connectors.



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Fig. 196: Installing Crankshaft Timing Belt Pulley
Courtesy of FORD MOTOR CO.

7. Position the jack.
8. Remove the special tools.

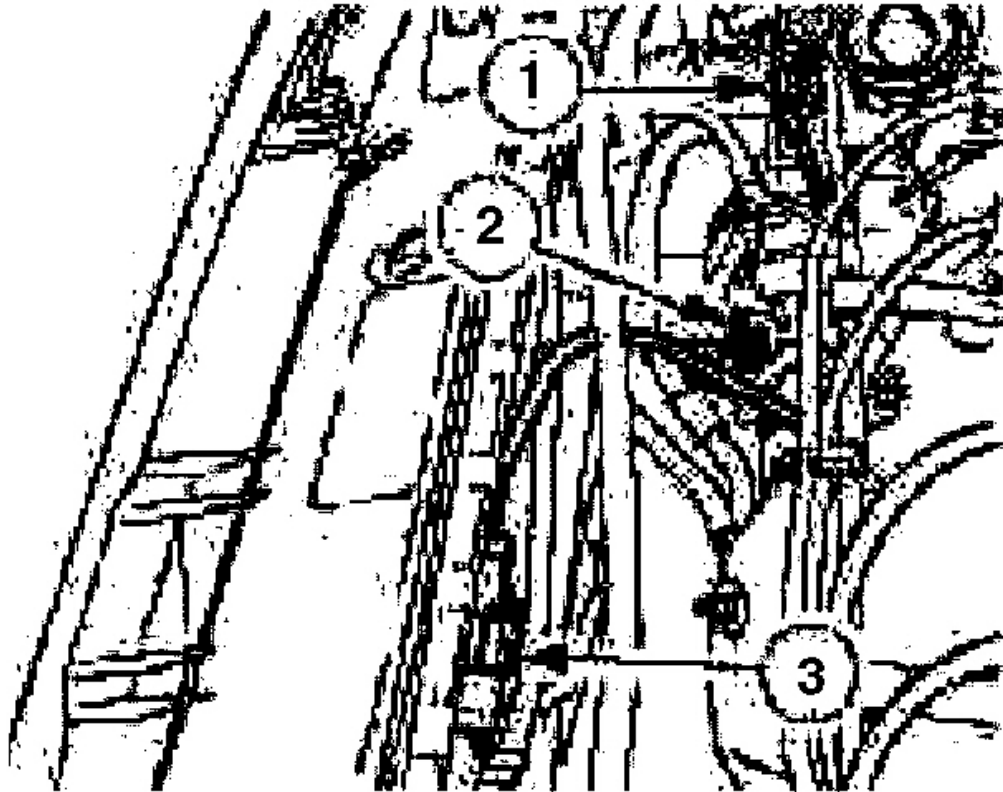


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Fig. 236: Removing Suspension Arms
Courtesy of FORD MOTOR CO.

CAUTION: The inner joint must not be bent at more than 18 degrees;
the outer joint must not be bent at more than 45 degrees.

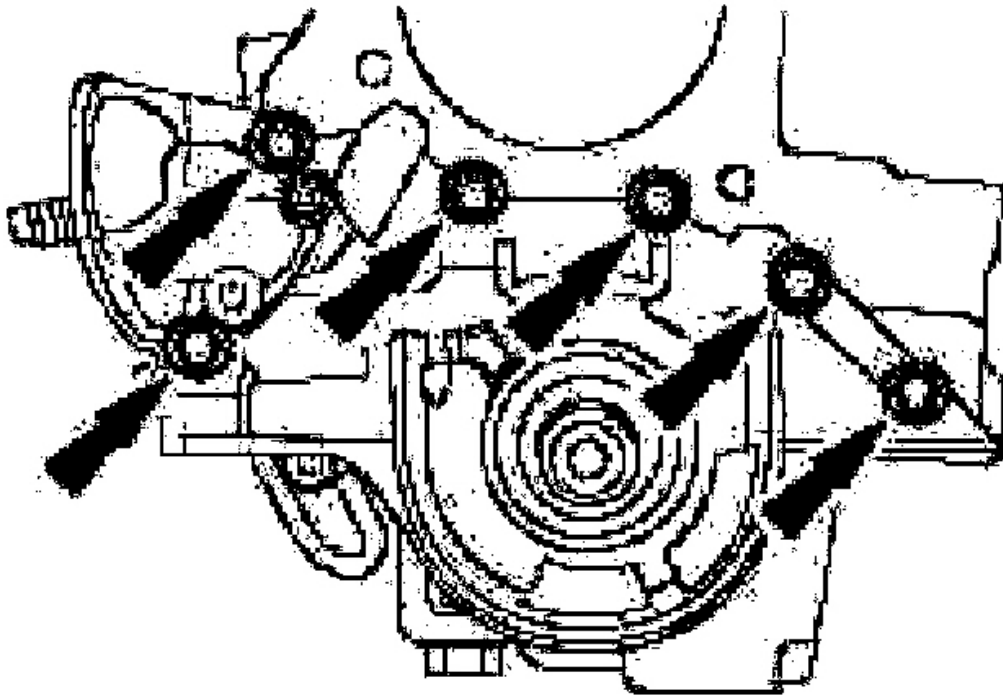
37. Remove the right-hand front drive halfshaft from the intermediate shaft.
 - Remove the clamping strap.
 - Pull the front drive halfshaft from the intermediate shaft and tie it up with cable ties.



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Fig. 257: Disconnecting Electrical Connectors
Courtesy of FORD MOTOR CO.

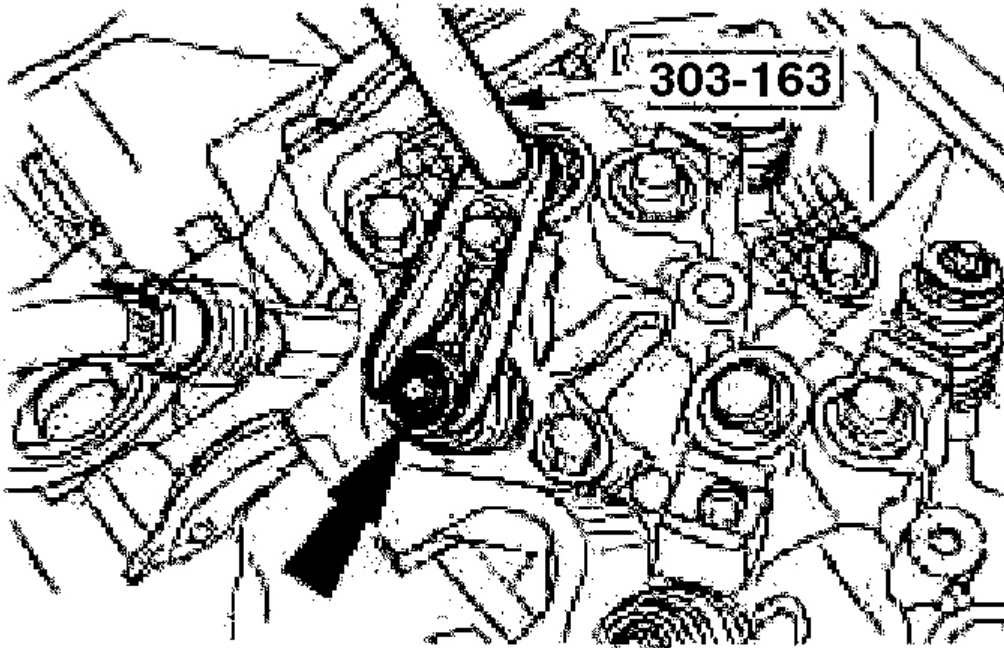
13. Disconnect both powertrain control module (PCM) connectors.



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Fig. 334: Removing Oil Pump
Courtesy of FORD MOTOR CO.

42. Remove and discard the oil pump seal.

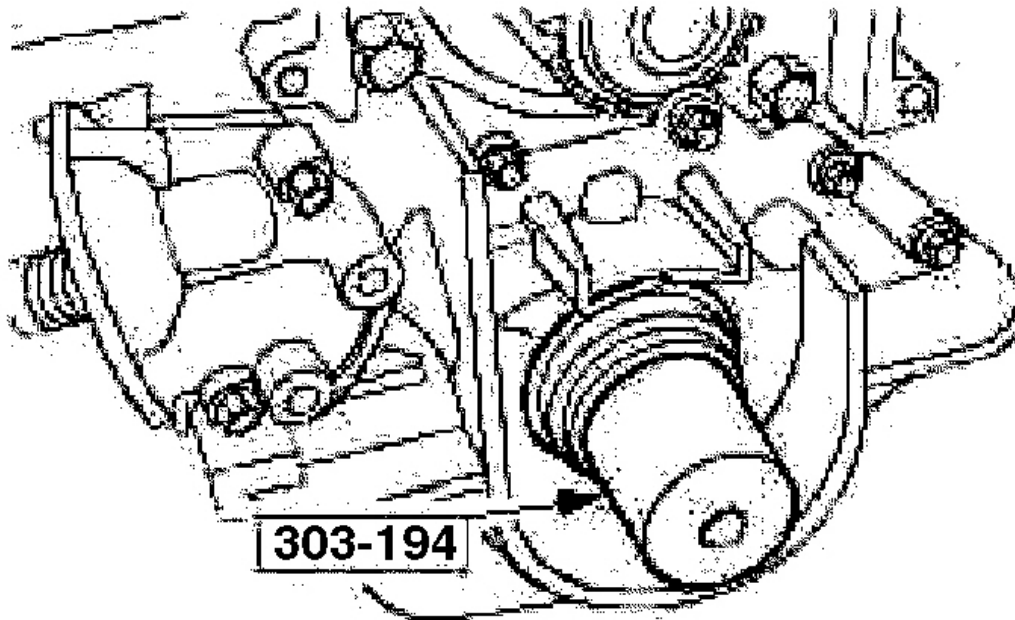


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Fig. 362: Installing Valve Spring Retainer
Courtesy of FORD MOTOR CO.

NOTE: Lubricate the camshaft lobes and bearing surfaces with a suitable engine assembly lubricant.

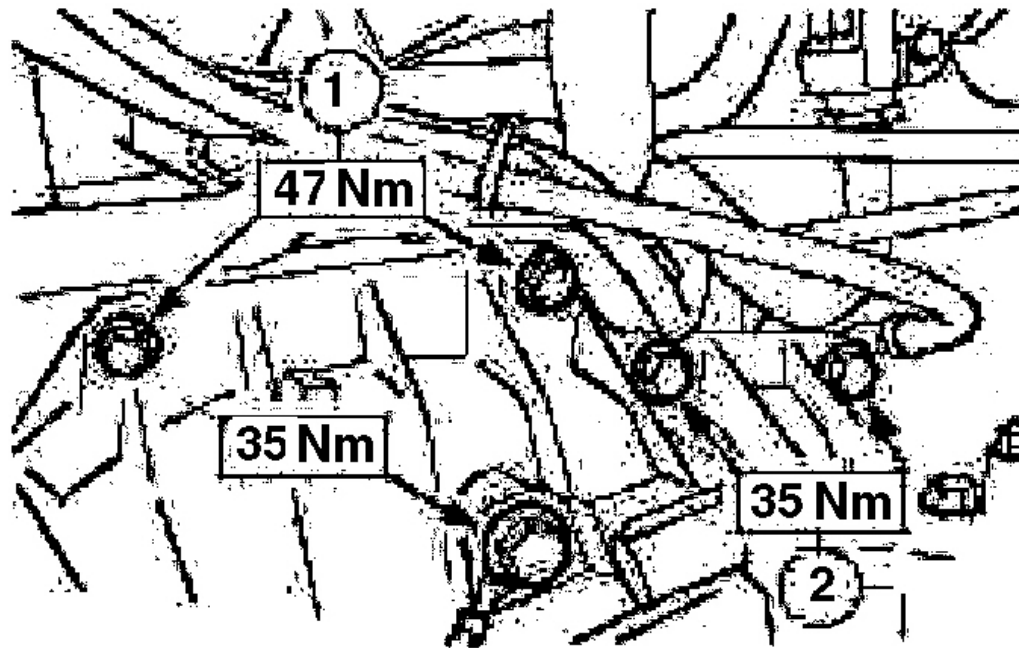
NOTE: Inspect for the presence of a clogged oil gallery. Verify that the camshaft contains the camshaft oil flow control rod and the rear end has a cup plug installed prior to the installation of the camshaft.



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Fig. 395: Installing New Oil Pump Seal
Courtesy of FORD MOTOR CO.

10. Install the oil baffle.



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Fig. 441: Installing Transaxle Upper Flange Bolts And Starter Motor Bolts
Courtesy of FORD MOTOR CO.

NOTE: Install the bolts and nuts finger tight.