

2001 Ford FOCUS

Submodel: ZTS | Engine Type: L4 | Liters: 2.0

Fuel Delivery: FI | Fuel: GAS

SECTION 303-01A: Engine ??? 2.0L Zetec-E (Zetec)
IN-VEHICLE REPAIR

2001 Focus Workshop Manual
Procedure revision date: 12/14/2000

Timing Belt

Special Tool(s)



Plate, Camshaft Alignment
303-465 (T94P-6256-CH)



Timing Peg, Crankshaft TDC
303-574 (T97-P6000-A)



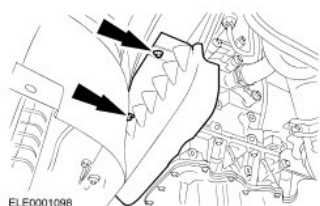
Remover, Camshaft Pulley
303-098 (T74P-6256-B)

Material

Never Seeze WSD-M13P8-A1
Cable ties
Silicone grease for spark plug connector seal A960-M1C171-AA

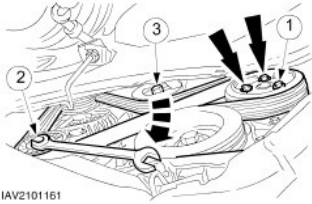
Removal

1. General Instructions.
 - The positions of the engine mounting and the engine roll restrictor are described looking from the transmission towards the engine.
 - If necessary, use Special Tool 412-108 to remove coolant and ventilation hoses.
 - Owing to special model variants, some steps do not apply to all vehicles. These are clearly marked in the text.
 - If necessary, cut the cable tie and install new on installation.
2. **CAUTION: Disconnect the battery negative cable.**
Raise and support the vehicle. For additional information, refer to Section 100-02.
3. Detach the drive belt cover.



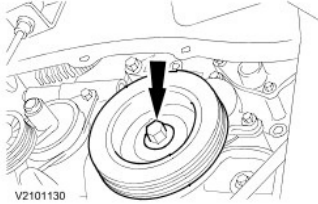
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4. **NOTE:** Mark the drive belt running direction.
Remove the drive belt.
 1. Loosen the bolts on the coolant pump pulley.
 2. Slacken the drive belt by turning clockwise and remove it.
 - Detach the coolant pump belt pulley.
 4. Detach the multi-groove belt idler pulley.



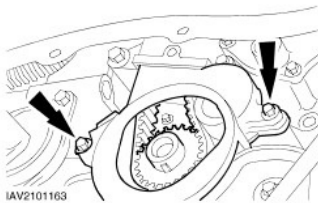
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5. Detach the crankshaft pulley/vibration damper.



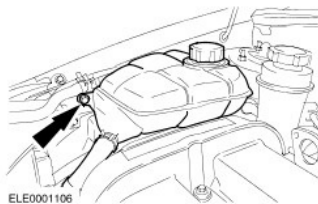
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6. **CAUTION:** The removal of the lower part of the engine front cover is necessary to avoid damage to the timing belt.
Detach the lower timing belt cover.



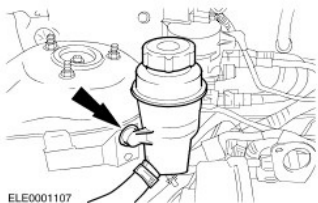
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7. Lower the vehicle.
8. Detach the coolant expansion tank and lay it to one side.



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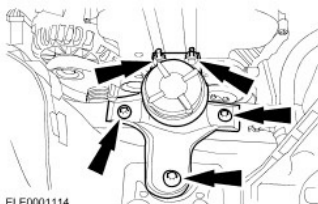
9. Remove the PAS reservoir and lay it to one side.



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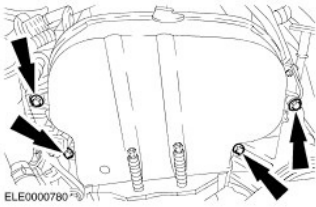
10. **CAUTION:** Insert the wooden block between the oil pan and the jack.
Position the jack with the wooden block under the oil pan and raise so that the front engine mounting is free from load.

11. **NOTE:** Mark the position of the engine mounting.
Remove the front engine mounting.

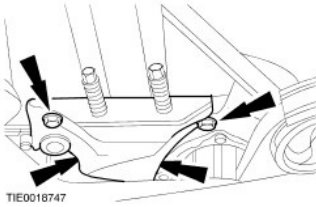


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12. Detach the timing belt upper cover.
 - Leave the timing belt cover in its installed position.



13. Detach the timing belt center cover/front engine mounting bracket.
- Remove the timing belt upper cover.

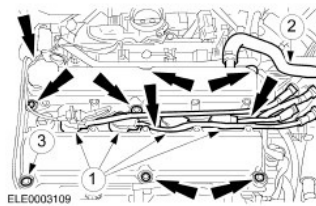


14. **CAUTION: Do not pull the cable when removing the spark plug connectors. If necessary, remove the ignition cables from the ignition coil to avoid kinking the cables. Turn the spark plug connectors slightly before removing to loosen the seal.**
CAUTION: Pull off the spark plug connectors in line with the spark plugs.

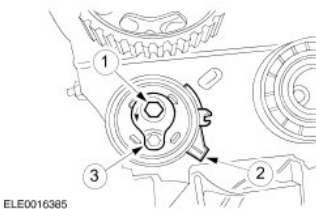
NOTE: Loosening sequence: from the outside to the inside, working diagonally.

Remove the cylinder head cover.

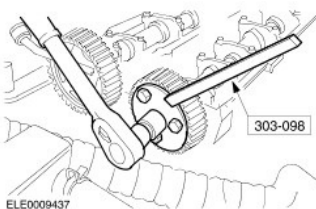
1. Pull off the spark plug connectors.
2. Detach the PCV hose.
3. Remove ten bolts.



15. Remove the spark plugs.
16. Turn the engine to TDC on cylinder number 1.
17. Detension the timing belt.
1. Unscrew the bolt four turns.
 2. Position the tensioner so the locating tab is at approximately the 4 o'clock position.
 3. Line up the hex key slot in the tensioner adjusting washer with the pointer that is located behind the pulley.

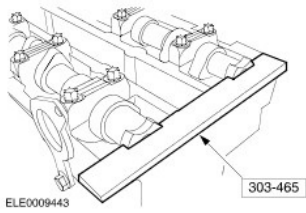


18. Remove the timing belt.
19. Slacken the camshaft timing pulleys.
- Prevent from turning using the special tool.

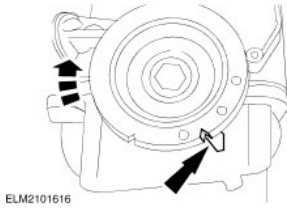


Installation

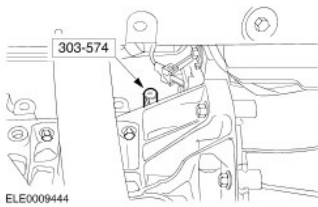
1. **NOTE:** Do not tighten the bolts. The camshaft timing pulleys must be able to turn freely on the camshafts.
Turn the camshafts to ignition position on cylinder number 1 and insert the special tool into the camshafts.



2. **NOTE:** Rotate the crankshaft clockwise.
Rotate the crankshaft to TDC on cylinder number 1.



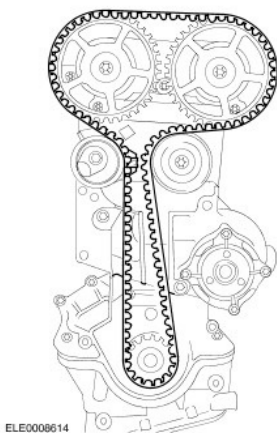
3. **NOTE:** Cylinders No. 1 and No. 4 are at TDC when the Woodruff key points straight up.
Remove the blanking plug, completely screw in the special tool and auto-align the crankshaft to TDC.



4. **CAUTION:** Do not kink the timing belt (do not bend the timing belt less than a diameter of 35 mm).
CAUTION: Do not rotate the crankshaft, check that it is still resting against the timing pin.

NOTE: The lug of the belt tensioner must not be hooked into the sheet metal cover during timing belt installation.
Position a new timing belt in place.

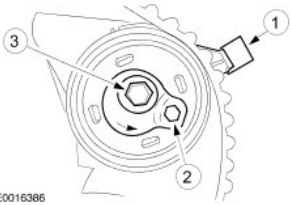
- Starting from the crankshaft timing belt pulley and working counterclockwise, position the timing belt in place while keeping it under tension.



5. **CAUTION:** Incorrect timing belt tension will cause incorrect valve timing.

Pre tension the timing belt.

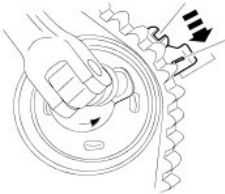
1. Rotate the tensioner locating tab counterclockwise and insert the locating tab into the slot in the rear timing cover.
2. Position the hex key slot in the tensioner adjusting washer to the 4 o'clock position.
3. Tighten the attaching bolt enough to seat the tensioner firmly against the rear timing cover, but still allow the tensioner adjusting washer to be rotated using a 6mm hex key.



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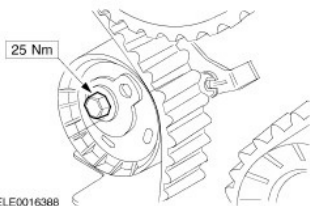
6. **CAUTION: Tension the timing belt, working counterclockwise.**

Using the hex key, rotate the adjusting washer counterclockwise until the notch in the pointer is centered over the index line on the locating tab (the pointer will move clockwise during adjustment).



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7. While holding the adjusting washer in position, tighten the bolt.

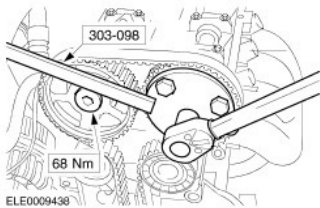


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8. **CAUTION: Do not tighten the camshaft timing pulley bolts against Special Tool 303-465; use Special Tool 303-098 to prevent movement.**

NOTE: The crankshaft must remain at TDC on cylinder number 1.

Tighten the bolts of the camshaft timing pulleys.



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9. Unscrew and remove Special Tool 303-574.

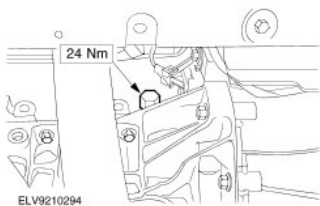
10. Remove Special Tool 303-465 from the camshafts.

11. **NOTE:** Turn the crankshaft two revolutions in the normal direction of rotation.

Check the valve timing by inserting the special tool. Correct it if necessary.

- Screw in Special Tool 303-574 and make sure that the crankshaft is touching it.
- Insert Special Tool 303-465 into the camshafts; if necessary loosen the timing pulleys and correct the camshaft alignment.
- Detach the special tools.

12. Screw in and tighten the blanking plug.



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13. **CAUTION: Use a blunt object (a plastic cable tie) to apply the silicone grease, to avoid damaging the spark plug connectors.**

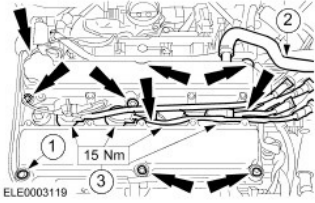
CAUTION: Push on the spark plug connectors, keeping them in line with the spark plugs.

NOTE: Coat the inside of the spark plug connectors with silicone grease to a depth of 5-10 mm.

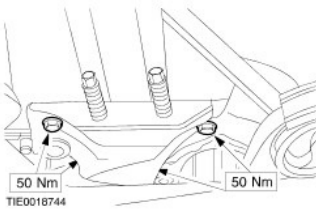
Install the cylinder head cover and spark plugs.

1. Tighten the bolts in two stages.

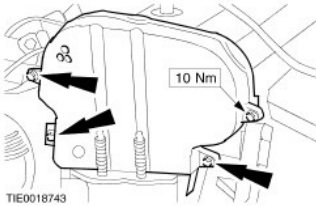
- Stage 1: 2 Nm
 - Stage 2: 7 Nm
4. Attach the PCV hose.
 5. Coat the spark plug thread with Never Seeze, screw in the spark plugs and push in the spark plug connector until it engages.



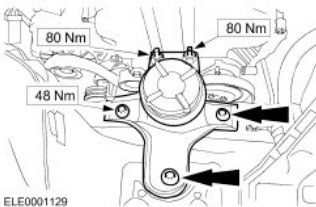
14. **NOTE:** Put the upper timing belt cover together with the center timing belt cover in place. Attach the timing belt center cover/front engine mounting bracket.



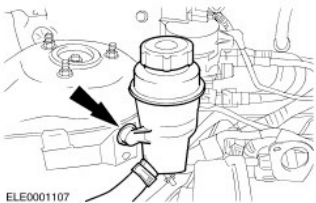
15. **NOTE:** Check the seating of the timing belt upper cover gasket and correct it if necessary. Attach the timing belt upper cover.



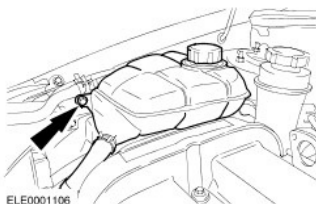
16. Install the front engine mounting.



17. Connect the PAS reservoir.



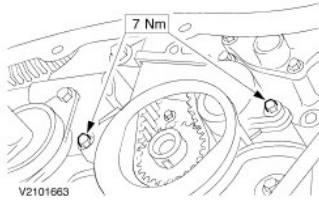
18. Install the coolant expansion tank.



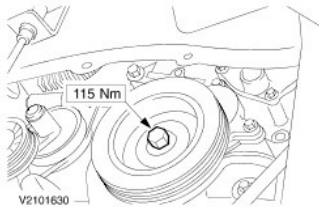
19. Pull the jack out towards the front of the vehicle.

20. Raise and support the vehicle. For additional information, refer to Section 100-02.

21. Attach the lower timing belt cover.



22. Attach the crankshaft pulley/vibration damper.



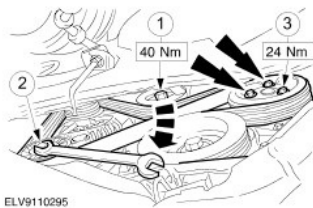
23. **NOTE:** Direction of travel on a used drive belt.
Install the drive belt.

1. Attach the multi-groove belt idler pulley.

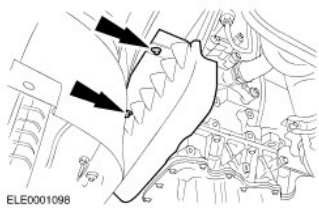
- **NOTE:** Screw in the bolts only until it starts to take up, do not tighten them.
Attach the coolant pump pulley.

3. Install the drive belt by turning clockwise and tension it.

4. Tighten the bolts on the coolant pump pulley.



24. Attach the drive belt cover.



25. Lower the vehicle.

26. **NOTE:** When the battery has been disconnected and reconnected, some abnormal drive symptoms may occur while the vehicle relearns its adaptive strategy. The vehicle may need to be driven 16 km (10 miles) or more to relearn the strategy.

Standard finishing operations:

- Connect the battery negative cable.
 - Check fluid levels and correct if necessary.
 - Check the routing of vacuum hoses and cables and secure them with cable ties.
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