

FORD:

2010 Mustang, Explorer Sport Trac, Explorer

MERCURY:

2010 Mountaineer

This article supersedes TSB **10-5-4** to update the Part List, Service Procedure and Service Labor Time Standards.

ISSUE

Some 2010 Explorer, Mountaineer Explorer Sport Trac vehicles equipped with 4.0L engine and 2010 Mustang vehicles equipped with a 4.0L engine and manual transmission only may exhibit some or all of the following symptoms: Engine rattle noise, malfunction indicator lamp (MIL) on with diagnostic trouble code P0340, misfire codes, lacks power, runs rough or no start condition. This affects vehicles with engine build dates from 5/28/2009 to 6/30/2009.

ACTION

Follow the Service Procedure steps to correct the condition.

SERVICE PROCEDURE

1. Check the engine build date. Refer to Workshop Manual (WSM), Section 303-01A, for how to read engine build date. Date is in DD/MM/YY format.
 - a. If the engine is not within the build date range for this procedure, do not continue with this procedure. Follow normal WSM diagnostics.
 - b. If the engine build date is within the date range 5/28/2009-6/30/2009, proceed to one of the following procedures based on symptoms:

Symptom A

Vehicle exhibits engine rattle, worse in drive, between idle and 1100 RPM. No DTCs stored in powertrain control module (PCM).

Symptom B

Vehicle has DTC P0340 stored in the PCM with any of the following symptoms: misfire codes stored in the PCM, lacks power, and/or runs rough.

Symptom C

Engine cranks but does not start, DTC P0340 stored in PCM.

Symptom A:

1. Using a stethoscope, check for rattle-type noise near the front of the engine block cradle. (Figure 1)

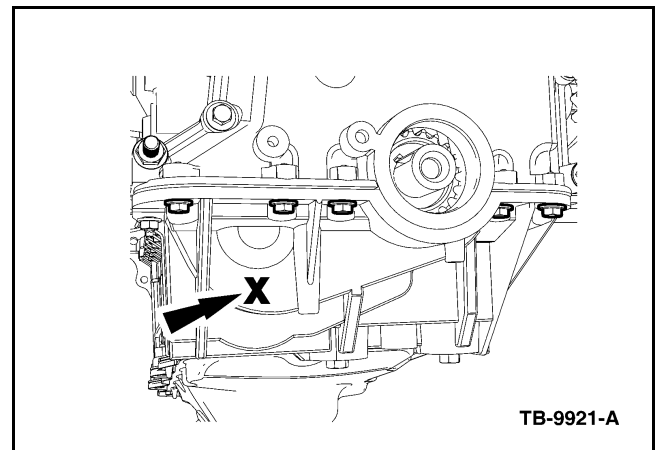


Figure 1 - Article 10-18-11

- a. If rattle-type noise is not present in this area, do not continue with this procedure. Follow normal WSM diagnostics for noise.
 - b. If rattle-type noise is present near the front of the engine block cradle, proceed to Step 2.
2. Remove cylinder block cradle. Refer to WSM, Section 303-01A.

NOTE: The information in Technical Service Bulletins is intended for use by trained, professional technicians with the knowledge, tools, and equipment to do the job properly and safely. It informs these technicians of conditions that may occur on some vehicles, or provides information that could assist in proper vehicle service. The procedures should not be performed by "do-it-yourselfers". Do not assume that a condition described affects your car or truck. Contact a Ford, Lincoln, or Mercury dealership to determine whether the Bulletin applies to your vehicle. Warranty Policy and Extended Service Plan documentation determine Warranty and/or Extended Service Plan coverage unless stated otherwise in the TSB article. The information in this Technical Service Bulletin (TSB) was current at the time of printing. Ford Motor Company reserves the right to supersede this information with updates. The most recent information is available through Ford Motor Company's on-line technical resources.

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3. Replace the balance shaft sprocket. Use Kit A - Timing Gear Set Balance Shaft. While servicing the balance shaft sprocket, determine if the balance shaft assembly spins freely.
 - a. No - Balance shaft assembly does not spin freely, proceed to balance shaft replacement procedure.
 - b. Yes - Balance shaft assembly spins freely, proceed to Step 4.
4. Clean and reinstall cylinder block cradle, Refer to WSM, Section 303-01A.
5. Replace engine oil and oil filter.

Symptom B:

1. Remove all camshaft roller followers. Refer to WSM, Section 303-01A.
2. Remove all spark plugs.
3. Perform a cylinder leakage test on all cylinders. Refer to WSM, Section 303-00.
 - a. If leakage exceeds 20% on any cylinder, replace the engine assembly. Refer to WSM, Section 303-01A.
 - b. If leakage is 20% or less on all cylinders, proceed to Step 4.
4. Remove cylinder block cradle. Refer to WSM, Section 303-01A.
5. Replace balance shaft sprocket and balance shaft drive chain.
 - a. While servicing the balance shaft sprocket, determine if the balance shaft assembly spins freely.
 - (1) No - Balance shaft assembly does not spin freely, proceed to balance shaft replacement procedure.
 - (2) Yes - Balance shaft assembly spins freely, proceed to Step 6.
6. Inspect front timing components (chains, sprockets, guides, tensioners) for damage.
 - a. If damage is found, remove front engine cover and replace any damaged components. Replace front jackshaft bolt. Refer to WSM, Section 303-01A.
 - b. If no damage is found, proceed to Step 7.
7. Clean and reinstall cylinder block cradle. Refer to WSM, Section 303-01A.
8. Reinstall spark plugs.
9. Reinstall camshaft roller followers. Refer to WSM, Section 303-01A.
10. Replace engine oil and oil filter.

Symptom C

1. Using a scan tool, monitor RPM signal during engine crank.
 - a. If RPM signal is present and code P0340 is stored in the PCM, proceed to Step 2.
 - b. If RPM signal is not present, do not continue with this procedure. Follow normal WSM diagnostics.
2. Using IDS, follow the prompts in the scan tool and perform a relative compression test.
 - a. If relative compression test fails, replace long block assembly.
 - b. If relative compression test passes, do not continue with this article. Follow normal WSM diagnostics.

Balance Shaft Replacement

1. Remove the two (2) balance shaft tensioner bolts and the tensioner.

NOTE

DO NOT REMOVE THE BALANCE SHAFT SPROCKET BOLT.

2. Remove the two (2) balance shaft bolts and remove the balance shaft assembly.
3. Rotate the crankshaft until the number one (1) piston is at top dead center.
4. Install the new balance shaft assembly.
 - a. The replacement balance shaft will have an alignment locking device installed and will already be aligned for installation. If the alignment locking device is not present refer to WSM, Section 303-01 for alignment instructions.
5. Install the two (2) balance shaft assembly bolts. Tighten to 21 lb-ft (29 N•m).
6. Install the balance shaft drive chain.

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7. Install the balance shaft tensioner and chain guide. Install the two (2) bolts and tighten to 21 lb-ft (29 N•m).

PART NUMBER	PART NAME
1L2Z-6020-AA	Front Cover Gasket
5H2Z-6700-AA	Front Crank Seal
4L2Z-6710-AA	Oil Pan Lower Gasket
F77Z-6710-AA	Cradle-to-Block Gasket
8L2Z-6A311-A	Balance Shaft Asy
F77Z-6268-BC	Balance Shaft Chain
1L2Z-6L266-AA	Balance Chain Tensioner
F77Z-6K297-BC	Guide - Balance Chain
2L2Z-6306-AA	Sprocket - Primary Drive
F77Z-6268-AB	Primary Chain
2U3Z-6D256-CA	Kit - Primary Timing
W712688-S430	Damper Bolt
5L2Z-9461-AA	Intake Gasket Kit
1L2Z-6584-AA	Cam Cover Gaskets
9L2Z-6006-CA	Long Block Asy (Explorer/ Mountaineer/Sport Trac w/o oil cooler)
9L2Z-6006-B	Long Block Asy (Explorer/ Mountaineer/Sport Trac with oil cooler)
6R3Z-6006-BA	Long Block Asy (Mustang with manual transmission)
AU7Z-6B263-A	Kit A - Timing Gear Set Balance Shaft

WARRANTY STATUS: Eligible Under Provisions Of New Vehicle Limited Warranty Coverage And Emissions Warranty Coverage
IMPORTANT: Warranty coverage limits/policies are not altered by a TSB. Warranty coverage limits are determined by the identified causal part.

OPERATION	DESCRIPTION	TIME
101811A	2010 Mustang 4.0L SOHC: Includes Time To Perform The Repair In Symptom A: (Do Not Use With Any Other Labor Operations)	3.9 Hrs.
101811A	2010 Explorer, Explorer Sport Trac, Mountaineer, 4.0L SOHC 4X2: Includes Time To Perform The Repair In Symptom A: (Do Not Use With Any Other Labor Operations)	2.6 Hrs.

101811A	2010 Explorer, Explorer Sport Trac, Mountaineer, 4.0L SOHC 4X4: Includes Time To Perform The Repair In Symptom A: (Do Not Use With Any Other Labor Operations)	3.1 Hrs.
101811B	2010 Explorer, Explorer Sport Trac, Mountaineer, 4.0L SOHC 4X4: Includes Time To Perform The Repair In Symptom B: When The Cylinder Leak Down Test Is Within Specification (Do Not Use With Any Other Labor Operations)	9.2 Hrs.
101811B	2010 Explorer, Explorer Sport Trac, Mountaineer, 4.0L SOHC 4X2: Includes Time To Perform The Repair In Symptom B: When The Cylinder Leak Down Test Is Within Specification (Do Not Use With Any Other Labor Operations)	8.6 Hrs.
101811B	2010 Mustang 4.0L SOHC: Includes Time To Perform The Repair In Symptom B: When The Cylinder Leak Down Test Is Within Specification (Do Not Use With Any Other Labor Operations)	10.7 Hrs.
101811C	2010 Mustang 4.0L SOHC: Includes Time To Perform The Repair In Symptom B: When The Cylinder Leak Down Test Is Not Within Specification (Do Not Use With Any Other Labor Operations)	10.2 Hrs.
101811C	2010 Explorer, Explorer Sport Trac, Mountaineer, 4.0L SOHC 4X4: Includes Time To Perform The Repair In Symptom B: When The Cylinder Leak Down Test Is NOT Within Specification (Do Not Use With Any Other Labor Operations)	12.1 Hrs.

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101811C 2010 Explorer, Explorer Sport Trac, Mountaineer, 4.0L SOHC 4X2: Includes Time To Perform The Repair In Symptom B: When The Cylinder Leak Down Test Is Not Within Specification (Do Not Use With Any Other Labor Operations) 11.9 Hrs.

101811D 2010 Explorer, Explorer Sport Trac, Mountaineer, 4.0L SOHC 4X4: Includes Time To Perform The Repair In Symptom C: (Do Not Use With Any Other Labor Operations) 10.8 Hrs.

101811D 2010 Explorer, Explorer Sport Trac, Mountaineer, 4.0L SOHC 4X2: Includes Time To Perform The Repair In Symptom C: (Do Not Use With Any Other Labor Operations) 10.4 Hrs.

101811D 2010 Mustang 4.0L SOHC: Includes Time To Perform The Repair In Symptom C: (Do Not Use With Any Other Labor Operations) 8.9 Hrs.

DEALER CODING

BASIC PART NO.
6A311

CONDITION
CODE
D4