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Technical Service Bulletin

GROUP	NUMBER
ENGINE	14-EM-003
DATE	MODEL(S)
JUNE, 2014	MULTIPLE MODELS

SUBJECT: OIL PUMP MODULE TIMING MARK CONFIRMATION

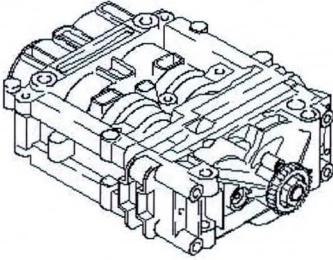

Description: This bulletin provides information regarding the proper indexing of the timing marks of the Oil Pump Module during in-vehicle installation on vehicles equipped with Theta 4-cylinder engines. If the Oil Pump Module timing marks are improperly indexed, abnormal engine vibration may result.

Follow the additional service information outlined in this bulletin whenever a new or existing Oil Pump/Balance Shaft Module (BSM) is being installed.

Applicable Vehicles:

- 2006-2010 MY Sonata (NF) equipped with 2.4L engine
- 2011-2014 MY Sonata (YF) equipped with 2.0T or 2.4L engines
- 2015-later MY Sonata (LF) equipped with 2.0T or 2.4L engines
- 2010-2012 MY Santa Fe (CM) equipped with 2.4L engine
- 2013-later MY Santa Fe Sport (AN) equipped with 2.0T or 2.4L engines
- 2010-later MY Tucson (LM) equipped with 2.4L engine

Parts Information:

Oil Pump with BSM	Oil Pump without BSM	Remarks
<p>Balance Shaft (Module) Assembly</p> 	<p>Oil Pump Assembly</p> <p>* Chain Driven * Non-BSM type</p> 	<ul style="list-style-type: none"> • Refer to TSB 10-EM-003 for "ENGINE OIL PUMP REPLACEMENT GUIDELINES DURING ENGINE REPLACEMENT" (if applicable). • All parts and service references provided in this bulletin are subject to change. • Always check the latest parts catalog for the applicable part number.

Service Information:

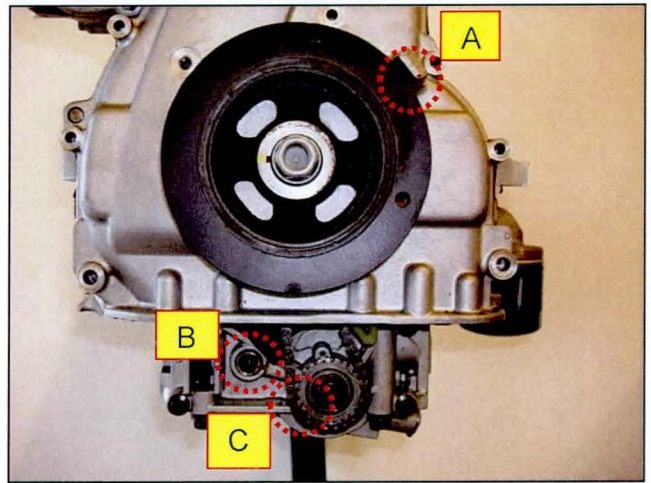
NOTICE

For complete service procedure, refer to the applicable Shop Manual section:
Engine Mechanical System >> Lubrication System >> Repair Procedures >> BMS (Balance Shaft Module) Chain System

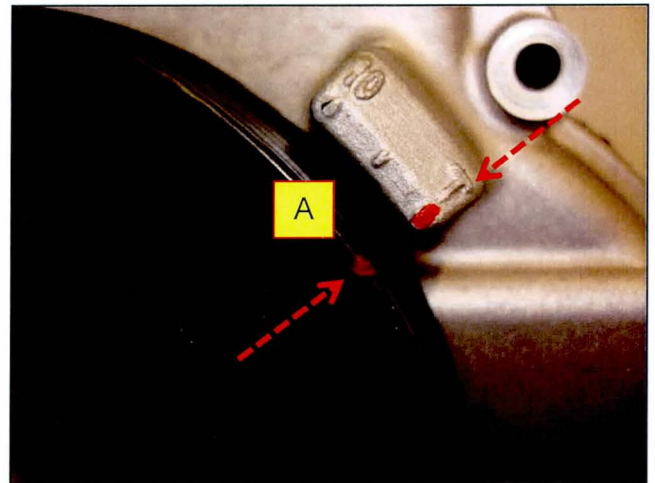
1. Prior to installing the lower oil pan, confirm the proper indexing of the Oil Pump Module timing marks.
Locate the timing marks for (A) crankshaft pulley and timing chain cover, (B) counter balance driven shaft and housing, (C) oil pump driven sprocket and housing.

NOTICE

RED marks in the photos are for visualization purposes only. Marking colors on the actual engine may vary.



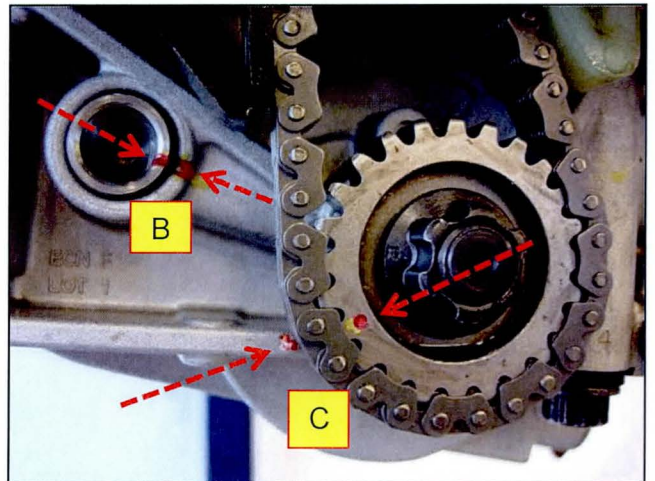
2. Rotate the (A) crankshaft pulley until the notched mark on the pulley lines up with the 0° TDC sight mark "T" on the timing chain cover.



3. Confirm that the (B) counter balance driven shaft and housing marks are lined up when the (C) oil pump driven sprocket and housing marks are lined up.

If the (C) oil pump driven sprocket and housing marks are not lined up, then repeat Step 2 above by rotating the crankshaft pulley one complete turn clockwise.

Step 2 may need to be repeated up to 3 times until the marks for both (B) and (C) line up.

**NOTICE**

- The counter balance driven shaft (B) turns twice the crankshaft speed.
- The oil pump driven sprocket (C) returns to the same indexed position after 4 complete clockwise rotations of the crankshaft pulley (A).
- Reinstall the oil pump chain to the driven sprocket if all marks are not aligning properly.