

Enginetech Inc
Tech Assistance 800-410-3664 ext. 340 or 237

TECHNICAL BULLETIN	
	December 1997 TB 1403
Mfg:	GM
Model:	ACHIEVA
Liter:	2.4L
V I N:	T
Year:	96-02

Balance Shaft Timing On
1995-2002 GM 2.3 & 2.4L DOHC Engines

The AERA Technical Committee offers the following information on balance shaft installation on 1995-2002 GM 2.3 & 2.4L DOHC engines. These engines have a removable balance shaft assembly that bolts on to the bottom of the engine. The assembly is driven by a single chain attached to the rear of the crankshaft.

Timing the balance shaft involves positioning the number one cylinder 90° BTDC (before top dead center). Position the balance shafts so that the flats are parallel and toward the oil pan. Then, install the holding tool, J41088, as shown in Figure 1.

There are five bolts used to secure this assembly to the block, which require a small amount of LoctiteR 242 or equivalent on the bolt threads before installation. Those bolts should be tightened in sequence, using a torque turn method as shown in Figure 2.

The rear of this assembly has a chain and sprocket attached to it with a LEFT hand thread bolt. This bolt must be replaced anytime it is removed and should be torqued to 30 ft. lbs. plus an additional 45° turn when installed.

The chain tensioner is adjusted with a .040" (1.016 mm) brass shim between it and the chain. Apply light hand pressure (3 pounds force) to the tensioner and tighten the mounting bolts to 115 in. lbs.

The AERA Technical Committee

Portions of materials contained herein have been reprinted with permission of General Motors Corporation, Service Operations. This information is provided from the best available sources. However, AERA does not assume responsibility for data accuracy or consequences of its application. Members and others are not authorized to reproduce or distribute this material in any form, or issue it to their branches, divisions, or subsidiaries, etc. at a different location, without written permission.
© Copyright AERA 2006



Reference:	
-------------------	--

TECHNICAL BULLETIN

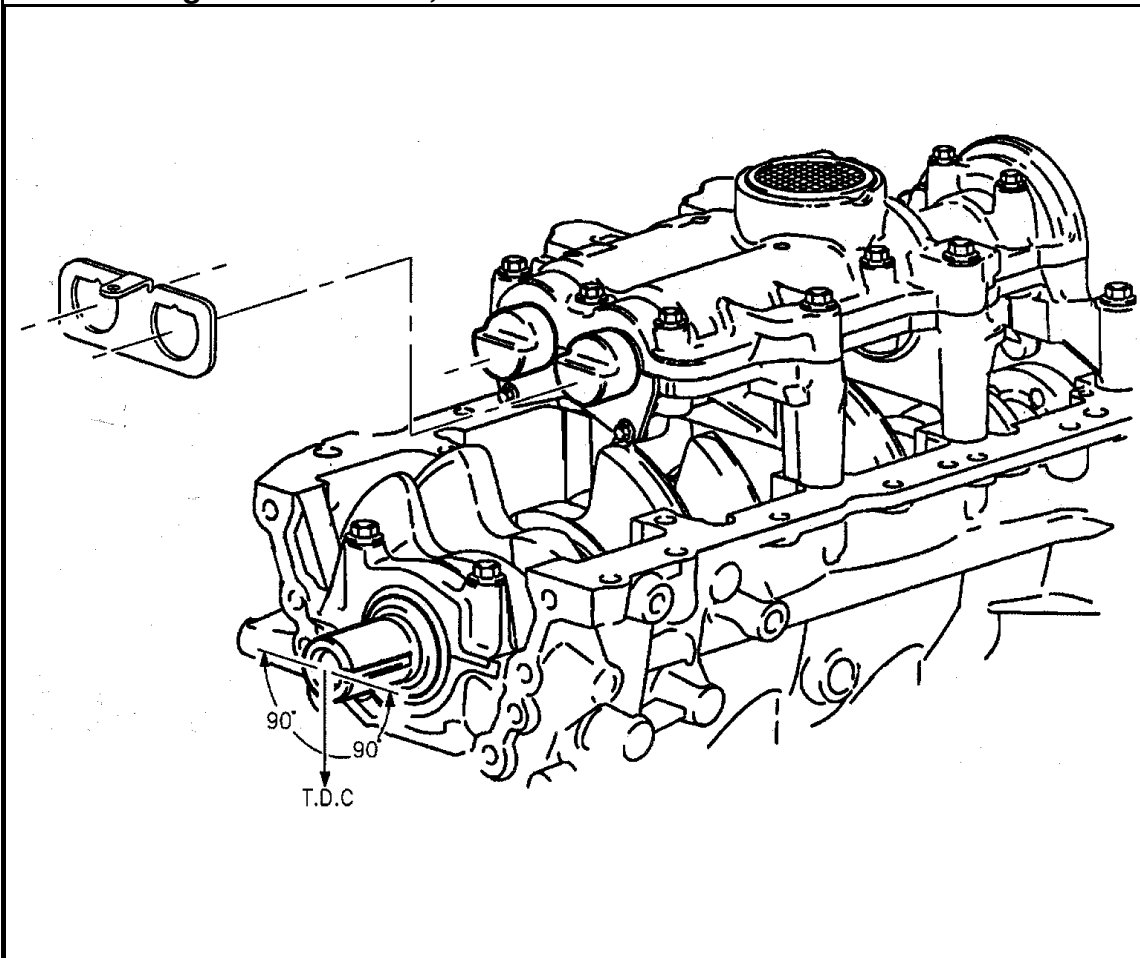


December 1997

TB 1403

Mfg: GM
Model: ACHIEVA
Liter: 2.4L
VIN: T
Year: 96-02

Bulletin Diagram: FIGURE 1, BALANCE SHAFT TIMING - CYLINDER BLOCK



Portions of materials contained herein have been reprinted with permission of General Motors Corporation, Service Operations. This information is provided from the best available sources. However, AERA does not assume responsibility for data accuracy or consequences of its application. Members and others are not authorized to reproduce or distribute this material in any form, or issue it to their branches, divisions, or subsidiaries, etc. at a different location, without written permission.

© Copyright AERA 2006



Reference:

TECHNICAL BULLETIN

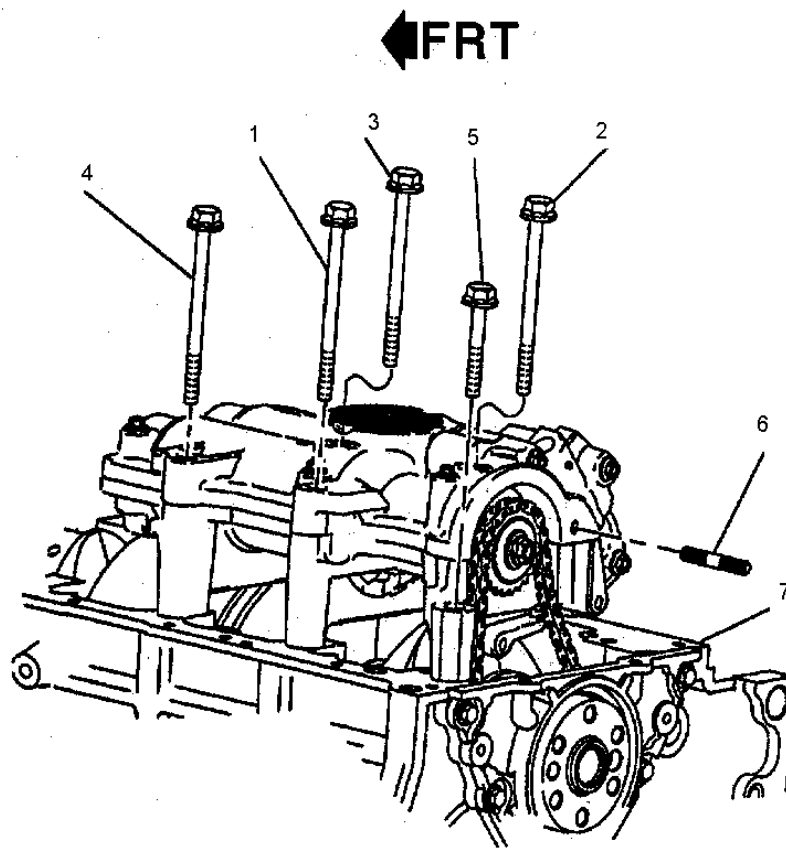


December 1997

TB 1403

Mfg: GM
Model: ACHIEVA
Liter: 2.4L
VIN: T
Year: 96-02

Bulletin Diagram: FIGURE 2, BALANCE SHAFT BOLT SEQUENCE - CYLINDER BLOCK



Portions of materials contained herein have been reprinted with permission of General Motors Corporation, Service Operations. This information is provided from the best available sources. However, AERA does not assume responsibility for data accuracy or consequences of its application. Members and others are not authorized to reproduce or distribute this material in any form, or issue it to their branches, divisions, or subsidiaries, etc. at a different location, without written permission.

© Copyright AERA 2006



Reference:

TECHNICAL BULLETIN

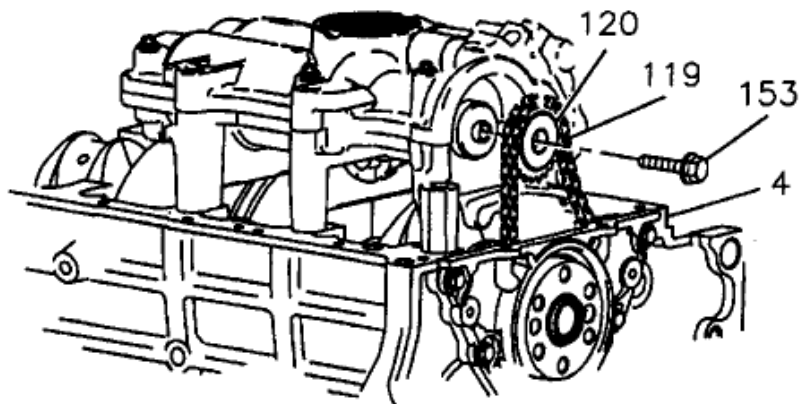


December 1997

TB 1403

Mfg: GM
Model: ACHIEVA
Liter: 2.4L
VIN: T
Year: 96-02

Bulletin Diagram: FIGURE 3. BALANCE SHAFT ASSEMBLY FRONT - ENGINE ASSEMBLY



- 4 CYLINDER BLOCK
- 119 CHAIN, BALANCE SHAFT DRIVE
- 120 SPROCKET, BALANCE SHAFT DRIVEN
- 153 BOLT, 40 N•m (30 LBS. FT.) + 45°

NOTE: BOLT HAS LEFT HAND THREADS

Figure 5

Portions of materials contained herein have been reprinted with permission of General Motors Corporation, Service Operations. This information is provided from the best available sources. However, AERA does not assume responsibility for data accuracy or consequences of its application. Members and others are not authorized to reproduce or distribute this material in any form, or issue it to their branches, divisions, or subsidiaries, etc. at a different location, without written permission.

© Copyright AERA 2006



Reference: