

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

TECHNICAL BULLETIN	
	June 2000 TB 1802
Mfg: GM Model: ACHIEVA Liter: 2.4L VIN: T Year: 96-02	

Revised Timing Chain, Sprockets, Tensioner Installation On
1998-2000 GM 2.4L VIN T Engines

The AERA Technical Committee offers the following information regarding a revised timing chain, sprockets and tensioner installation on 1998-2000 GM 2.4L VIN T engines.

To properly install the timing components on this engine, GM offers the following procedures. Failure to follow these procedures could result in engine damage.

1. Install the camshaft sprockets, noting the sprockets are interchangeable from side to side.
2. Clean bolts off with a wire brush.
3. Clean threaded hole in end of camshaft with a nylon bristle brush.
4. Coat the camshaft bolts with adhesive/sealant, GM Part #1234593 or equivalent.
5. Install the camshaft sprocket bolts and washers while holding the sprockets with Tool #J39579. Tighten bolts to 52 ft/lbs

Important: Make sure that the camshaft sprocket alignment pins are in the cylinder block and the timing chain housing, prior to installing the timing chain housing. The pins ensure proper chain housing and front cover location for correct front oil seal to crankshaft alignment.

6. Install the J36008-A tool through the holes in the camshaft sprockets and into the holes in the timing chain housing. This will position the camshaft for correct timing.
7. If the camshafts are out of position and must be rotated more than 1/8" turn in order to install the alignment dowel pins, the crankshaft must be turned 90° clockwise off of TDC to give the valves adequate space to open. Once the ams are in position and the dowels are installed, rotate the crankshaft counter

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		Mfg: GM
	June 2000	Model: ACHIEVA
	TB 1802	Liter: 2.4L
		V I N: T
		Year: 96-02

- clockwise back to TDC.
8. Install the timing chain over the exhaust camshaft sprocket around the coolant pump sprocket and around the crankshaft sprocket.
 9. Remove the alignment dowel pin from the intake camshaft. Use tool J39579 in order to rotate the intake camshaft sprocket counter clockwise enough to allow the timing chain to slide over the intake camshaft sprocket.
 10. Release the J39579 tool. The length of the chain between the two camshaft sprockets will tighten.
 11. If timed properly, the intake camshaft alignment dowel pin will slide in easily. If the dowel pin does not fully index, the camshafts are not timed correctly and the procedure must be repeated.
 12. Leave the alignment dowel pins installed.
 13. The keyway on the crankshaft and the mark on the cylinder block should be aligned with the slack removed from the chain between the intake cam sprocket and the crankshaft sprocket. If the marks do not align, move the chain either one tooth forward or backward and remove the slack and recheck the marks.
 14. Reset the timing chain tensioner assembly. Insert the tensioner plunger assembly into the tensioner housing. With the plunger fully extended, turn the complete assembly upside down on bench. With the plunger face against the bench, press firmly on the bottom of the tensioner housing. Compress until the plunger is flush in the tensioner.
 15. Check the plunger to make sure that the plunger is out of the cylinder at the correct dimension. The correct dimension for the plunger to be out of the cylinder is .070" maximum.
 16. Loosely install the tensioner assembly and bolts to the timing chain housing.
 17. Install the timing chain tensioner shoe on the stud.
 18. Apply hand pressure to the timing chain tensioner shoe until the locking tab seats in the groove in the stud.
 19. NOTE Do not over tighten the bolts or component failure may result. Tighten the timing chain tensioner bolts to 89 in/lbs.
 20. Release the timing chain tensioner plunger. Failure to do so will result in engine damage upon start up. Use a flat blade screwdriver, cotter pin remover or similar tool. Press firmly against the face of the timing chain tensioner plunger. If the plunger will not depress, the plunger is not properly reset and the procedure for resetting the tensioner should be repeated. Depress the tensioner plunger until the plunger is bottomed out in the bore the timing chain tensioner. Release the tensioner plunger. The plunger should press firmly against the back of the timing chain tensioner shoe.
 21. Remove tool J36008-A from the camshaft sprockets.
 22. Rotate the crankshaft clockwise two full rotations. Align the crankshaft

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		Mfg: GM
	June 2000 TB 1802	Model: ACHIEVA
		Liter: 2.4L
		V I N: T
		Year: 96-02

keyway with the mark on the cylinder block and reinstall the alignment dowel pins. The alignment dowel pins will slide in easily when the engine is timed correctly.

23. Install the timing chain guides.

Beginning with the 1998 model year Vin T, the timing chain and sprockets are different from the chain and sprockets found on earlier versions of this engine. Engine damage may result if the wrong timing chain and sprockets are used for 1998 and newer engines.

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

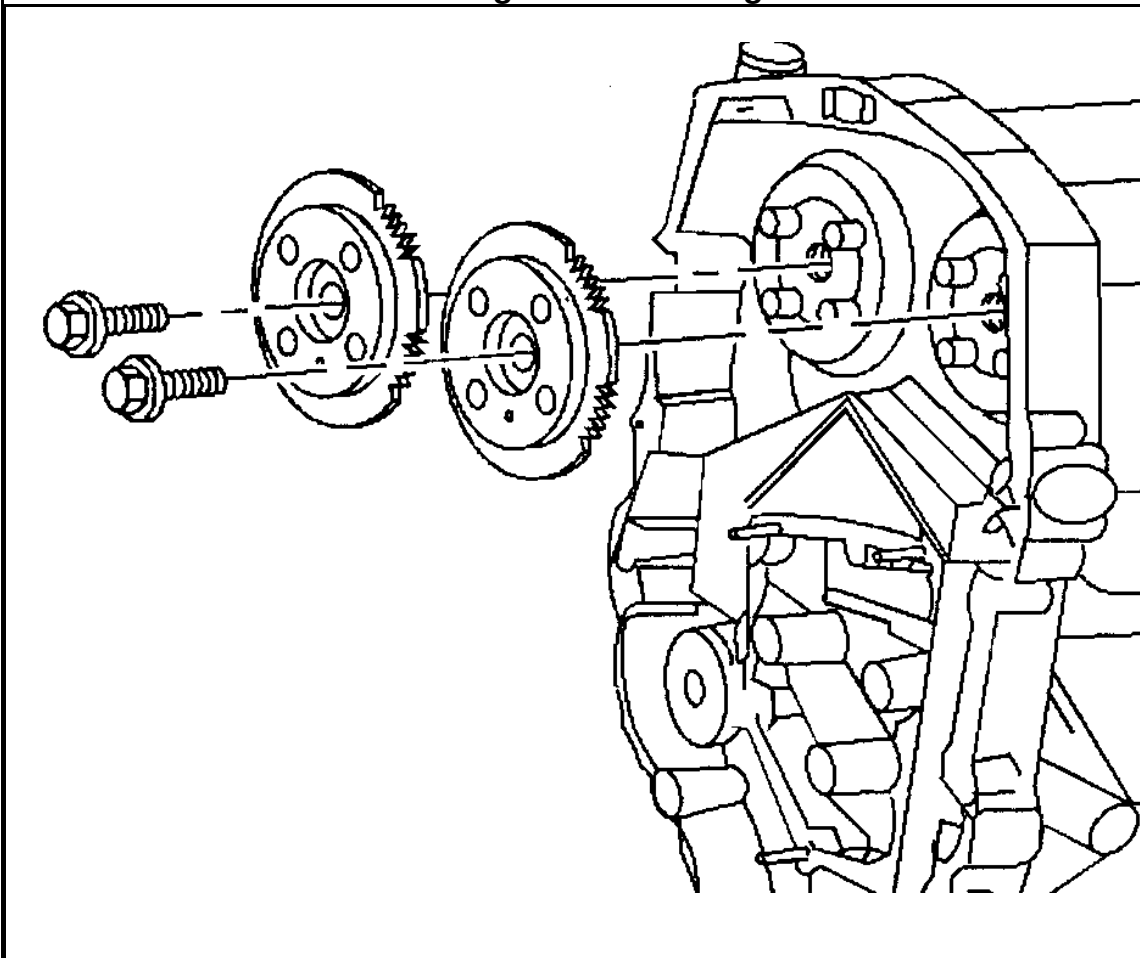


June 2000

TB 1802

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

Bulletin Diagram: TB1802 Figure 1



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

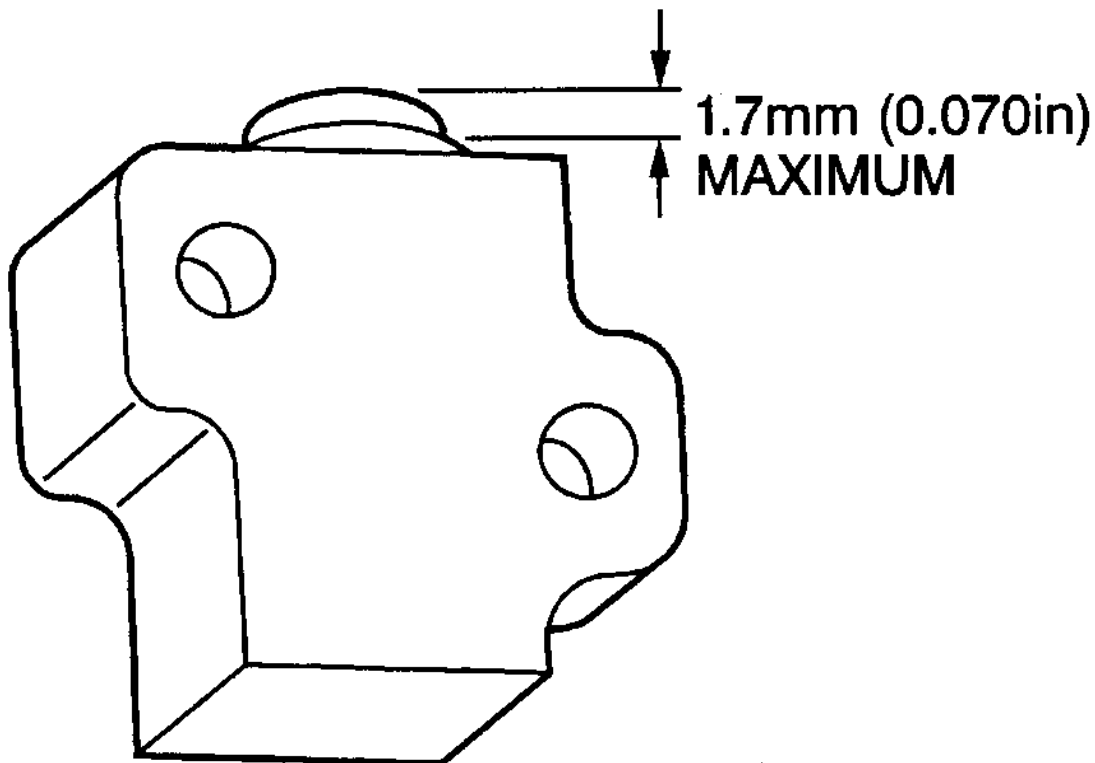


June 2000

TB 1802

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

Bulletin Diagram: TB1802 Figure 2



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

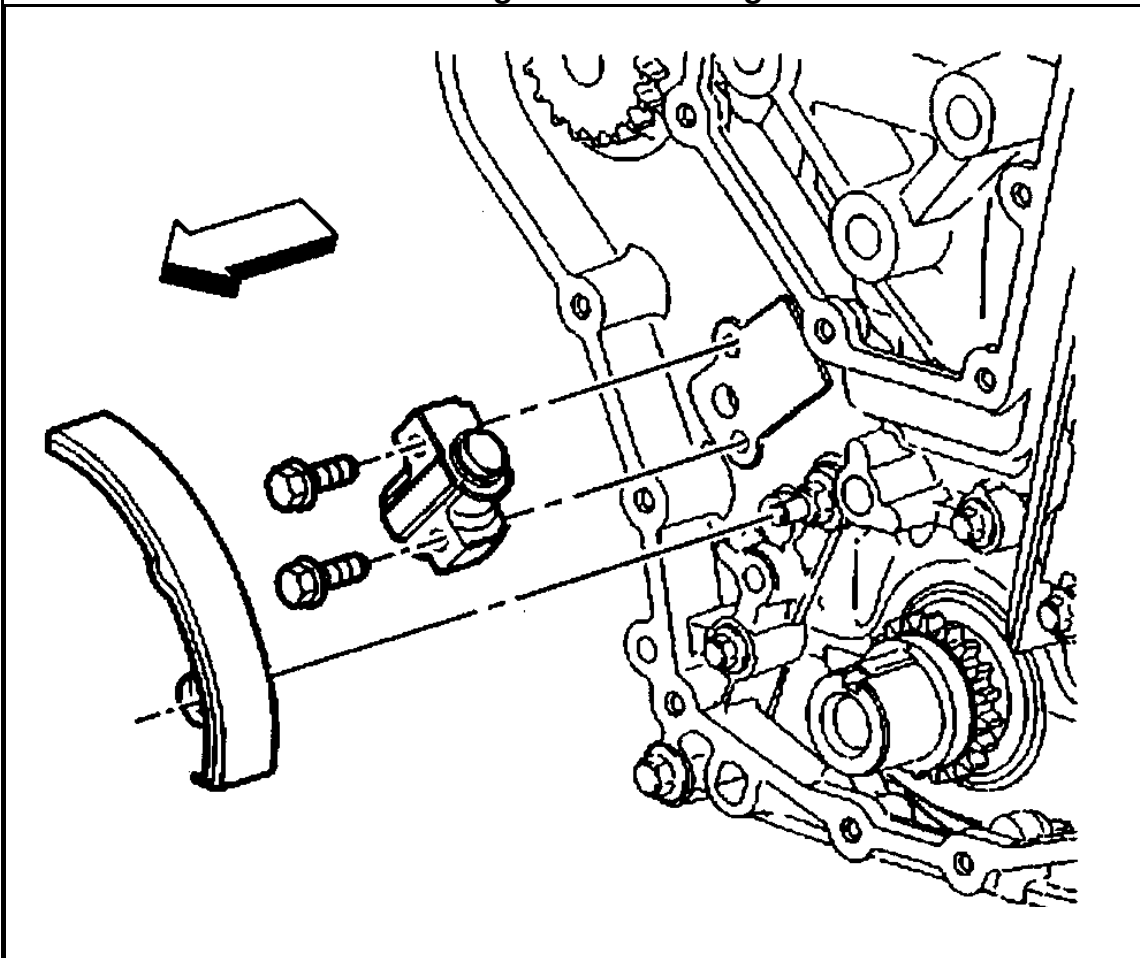


June 2000

TB 1802

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

Bulletin Diagram: TB1802 Figure 3



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

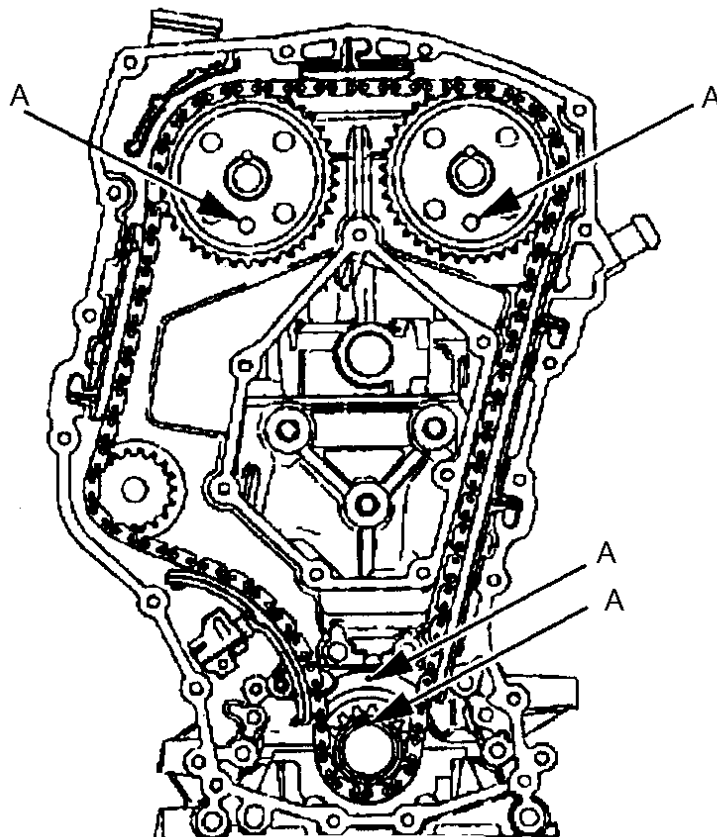


June 2000

TB 1802

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

Bulletin Diagram: TB1802 Figure 4



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: