



ROLLER CAM INSTALLATION

PLEASE NOTE: The **PRIMARY** use for the thrust washer is for use with billet roller cams on an undamaged block. Procedures for repairing damaged blocks are a recommendation only, and may not be the best procedure for your particular situation.

INSTALLATION WITH AN UNDAMAGED BLOCK

1. For **BILLET** Camshafts use a deburring tool or similar tool to chamfer the inner diameter of the thrust washer so that it fits flush against the back of the thrust of the cam.
2. Install Cam with thrust washer, in the engine. Install the timing gears.
3. With calipers, measure the distance between the cam sprocket face and the face of the block. Then measure the distance between the crank sprocket face and the face of the block. Note the difference.
4. Remove camshaft from engine.
5. Machine the backside of the cam thrust or the backside of the crank sprocket so that the difference between the cam and crank sprockets is zero (+/- .015").

INSTALLATION TO REPAIR A BLOCK DAMAGED BY THE CAM THRUST

Read all steps prior to performing any machine work

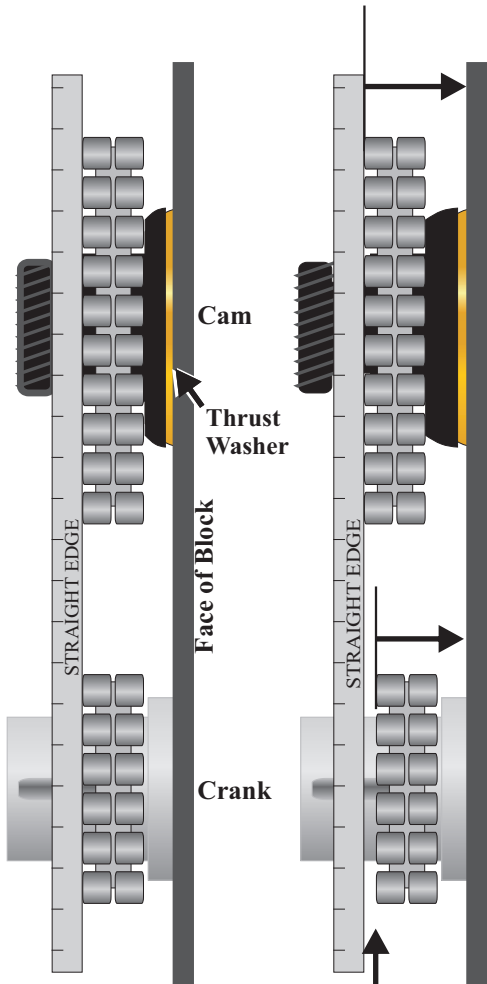
1. Determine the deepest damage on the face of the block. If damage is in excess of .040" the TA Thrust washer will not be sufficient.
2. Machine face of block to the size of the Thrust washer. Keeping the depth as shallow as possible. For **BILLET** Camshafts use a deburring tool or similar tool to chamfer the inner diameter of the thrust washer so that it fits flush against the back of the thrust of the cam. On **CAST** camshafts it will be necessary to fill the Chamfer behind the Cam Thrust with J-B Weld or similar.
3. Follow steps 2 thru 4 above for **UNDAMAGED BLOCKS** to determine alignment of timing gears.
4. Thrust washer is .040", subtract amount removed from face of block, add or subtract any amount necessary to ensure proper alignment of timing gears then Machine the thrust of the cam to the depth of the sum of the prior calculations and to the inner diameter of the thrust washer.

Examples

Thrust Washer	.040"	Thrust Washer	.040"
Machined Depth of Block	-.015"	Machined Depth of Block	-.015"
<u>CAM Gear Protrudes further than crank gear</u>	+ .005"	<u>CRANK Gear Protrudes further than cam gear</u>	-.005"
Total to be machined from thrust of cam	.025"	Total to be machined from thrust of cam	.020"

IF YOU HAVE ANY QUESTIONS CALL TA PERFORMANCE

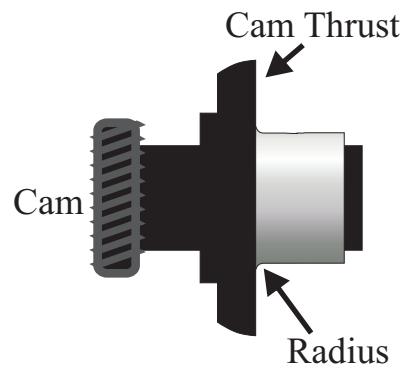
(480) 922-6807



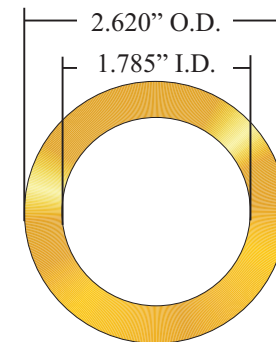
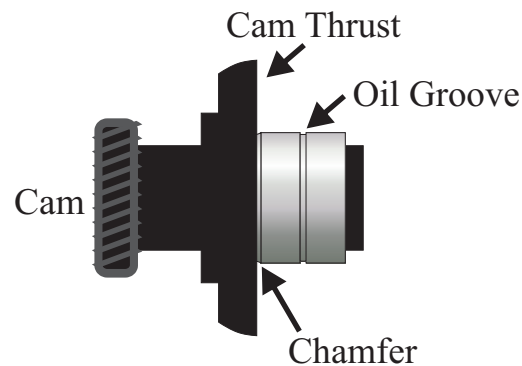
**Optimum
Installation**

+/- .015" Max.

Billet Camshafts

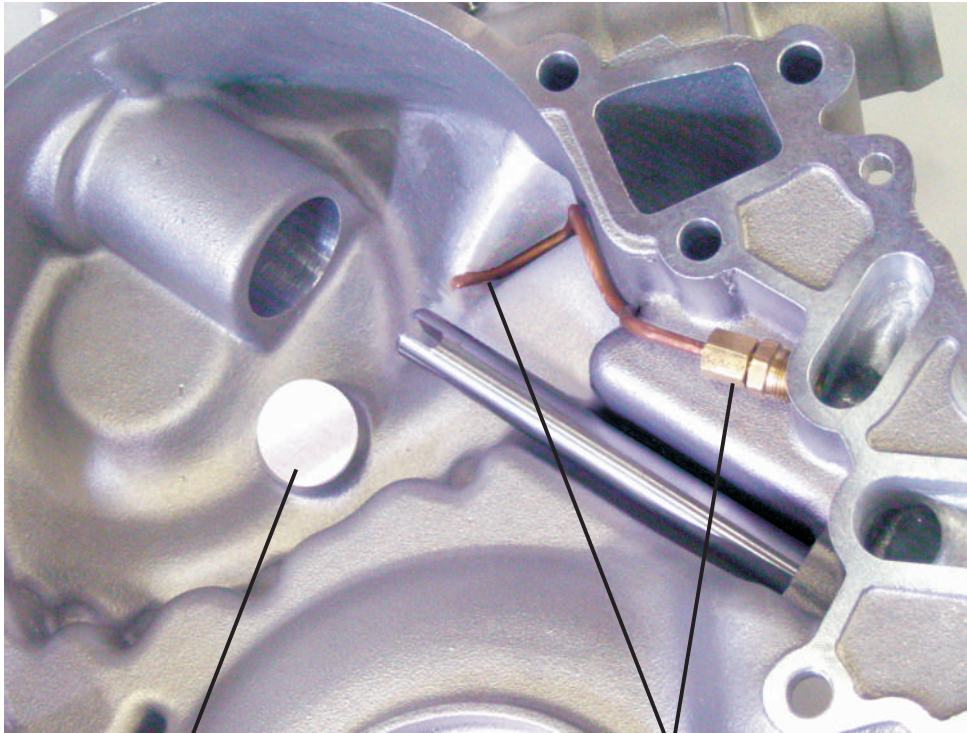


Cast Camshafts



Thrust Washer
p/n TA ROL 100

TA 1533A



Cam Stop Boss

Distributor Drive Gear Oiler

CAM BUMPERS

Roller Cams will require a Cam Bumper

PRE-MADE Torrington Bearing Cam Bumper P/N TA Rol 150: Install into face of cam and set clearance to the back of the timing cover between .002" and .008" with a maximum of .015".

CUSTOM MADE: A brass or steel bolt with the head machined smooth is installed into the backside of the timing cover and the clearance is set between .002" and .008" with a maximum of .015".



P/N TA Rol 150 shown

TA 1531B or TA 1533A timing cover for 400-430-455 Buicks incorporates a cam stop on the backside of the timing cover. Machine this boss as needed to obtain proper end clearance for the cam. See picture to the left.

Roller cams do not incorporate a an oiling provision for the distributor drive gear. We recommend incorporating a drive gear oiler as shown in the picture above. We also recommend the use of a Bronze distributor gear. Please ask a TA Technician if you have any questions.