



Installation Instructions

CRANE CAMS TIMESAVER ADJUSTABLE PUSHRODS

Part Number 4-0030

For more information, see www.cranecams.com

CAUTION: READ INSTRUCTIONS CAREFULLY BEFORE STARTING INSTALLATION.

This package contains a set of four equal length adjustable pushrods that will now allow you to accurately adjust your valve train. These pushrods are designed to replace the factory non-adjustable pushrods in your "Big Twin" Evolution® engine when equipped with hydraulic tappets or solid tappets. The O.D. of the Timesaver Pushrods is substantially larger to eliminate pushrod flex at high RPM's and to accommodate the extra long adjuster.*

***NOTE:** Due to the increased O.D. on the Timesaver Pushrods, there may be an interference problem with some aftermarket pushrod covers.

Installation of your new Crane Cams Timesaver pushrods does not require the removal of the rocker arms or the cylinder head cover. However, removing the factory pushrods may require it, depending on the method used.

1. Remove the pushrods according to the manufacture's appropriate service manual. This procedure requires the removal of the cylinder head cover and the rocker arms.
2. Physically cut the pushrods into two pieces with a bolt cutter. Do not use any tool other than a bolt cutter and you must cover the tappet blocks to prevent contamination.

We recommend that you read these instructions completely before you start the installation. A copy of the appropriate service manual will help you to perform the work properly.

INSTALLING YOUR NEW PUSHRODS

STEP 1

With a cold engine and the motorcycle firmly on a stand with the rear tire elevated, remove the original pushrods by following one of the procedures outlined above. Be careful not to contaminate the tappets or oil.

STEP 2

Adjust the Crane Cams Timesaver pushrods so they are in their shortest position, by turning the adjustable end into the pushrod so that there is no thread visible.

STEP 3

Rotate the engine until both front cylinder tappets are in their lowest position (top of compression stroke, see manual).

STEP 4

Install the front exhaust pushrod, adjuster end down, through the pushrod tube and o-rings. Insert the pushrod

with tube into the rocker arm pushrod seat. Make sure that the pushrod end is directly in the pushrod seat and not beside it. Swing the lower (adjuster) end over the lifter block.

ADJUSTMENT PROCEDURE-HYDRAULIC TYPE

STEP 1

Lengthen the pushrod by turning the adjustable end out. Lengthen the pushrod until all the slack is taken out, but the lifter is not depressed or preloaded. This point is called "Zero Lash". Mark the pushrod for a reference and hold the lower adjuster end. Lengthen the pushrod 3 turns more. The end result is 3 turns of lifter preload past "Zero Lash".

STEP 2

Tighten the lock nut against the bottom portion of the pushrod. (Do not over tighten!)

STEP 3

Repeat the procedure for the front cylinder intake pushrod. Let the lifters bleed down at least 10 minutes before rotating the engine so as not to bend a valve or pushrod. The pushrods should rotate by hand with minimal resistance.

STEP 4

Repeat the procedure for the rear cylinder intake and exhaust pushrods with the lifters in their lowest position.

ADJUSTABLE PROCEDURE-SOLID TAPPETS (Using a Crane Mechanical Cam)

STEP 1

Starting with the front cylinder pushrods, lengthen the pushrod by turning the adjustable end out until all the slack is taken up, but the pushrod can still be rotated. The pushrod should have a slight drag while rotating.

STEP 2

Tighten the lock nut against the bottom portion of the pushrod. (Do not over tighten!) Check again to make sure that there is a slight drag while rotating the pushrod, but there is no up and down movement.

STEP 3

Repeat the procedure for the rear cylinder pushrods with the lifters in their lowest position.

Following directions in your service manual, reassemble the pushrod cover tubes.

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