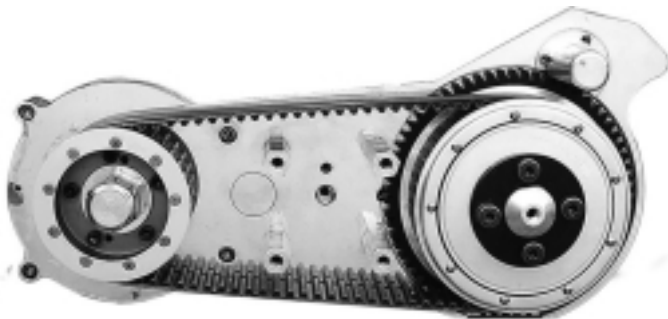




Quality and Performance Since 1973

## SLIMLINE BELT DRIVE

1990-2006 1<sup>3</sup>/<sub>4</sub> Wide 11mm Belt Open Electric Start  
Fits 1990-2006 Evo & Twin Cam Softail<sup>fi</sup>



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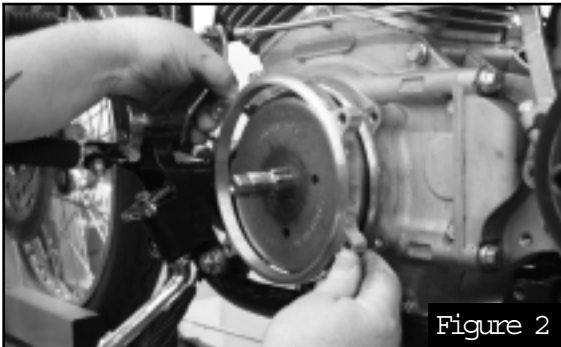


Note: Disconnect & remove battery from motorcycle before commencing to work on it.

Step 1

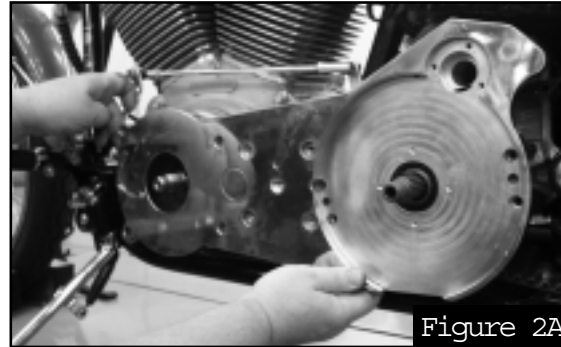
Remove chain drive primary & chain housings per O.E. manual.

Remove grease & dirt from engine, transmission & frame. Remove bearing race from main shaft using JIMS<sup>®</sup> main shaft bearing race tool #34902-84. (See figure 1)



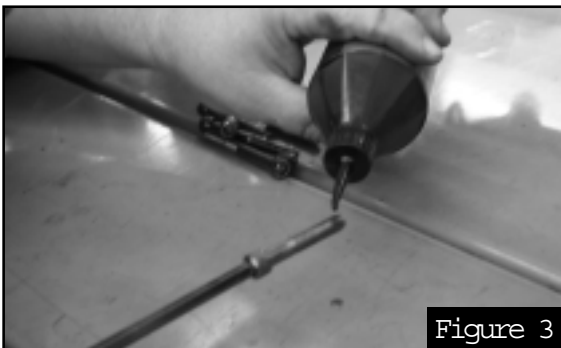
Step 2

Install engine spacer. (See Figure 2)



Step 3

Install motor plate. (See figure 2A)



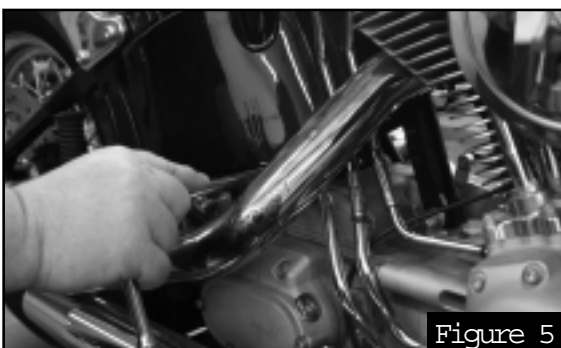
Step 4

Install 4 each 5/16-18 x 1.500 socket head cap screws into motor plate (engine) using 1 to 2 drops of blue threadlocker per screw. (See figure 3&4)



Step 5

Tighten all 8 socket head cap screws evenly until motorplate is seated onto the engine and transmission. Now torque the 8 socket head cap screws to 28-32 ft. lbs.



Step 6

Reinstall starter reusing the 2 each 5/16-18 x 2.000 socket head cap screws that were in the starter when removed from O.E. chain housings. (See figure 5)

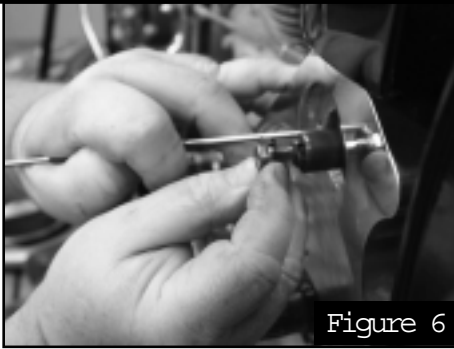


Figure 6

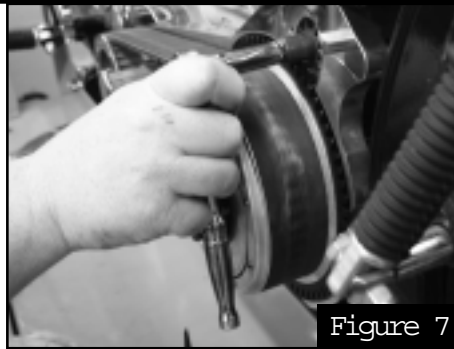


Figure 7

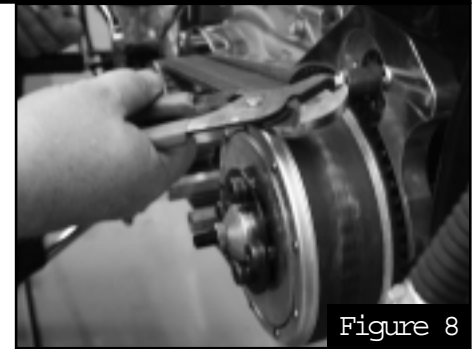
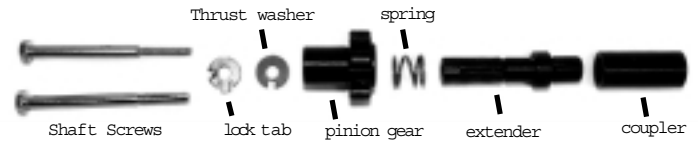


Figure 8

### Step 7

(1st) install starter shaft coupler (2nd) Extension shaft  
 (3rd) Spring (4th) Pinion gear (5th) Thrust washer  
 (6th) Locking tab (7th) Starter shaft screw.



NOTE: 1990-93 1/4-20 x 3.250 hex head screw / 1994-06 10-32 x 3.250 hex head screw. Align lock tab with slot in extension shaft and tighten to 100 in. lbs. Fold the lock tab against a flat side of hex head screw.

### Step 8

Remove 4 each 1/2 x 1 shouldered screws from rear pulley and remove spring retainer and diaphragm spring and aluminum pressure plate. You can leave the clutch pack in the pulley. Install rear pulley onto main shaft and tighten main shaft nut (left hand threads).

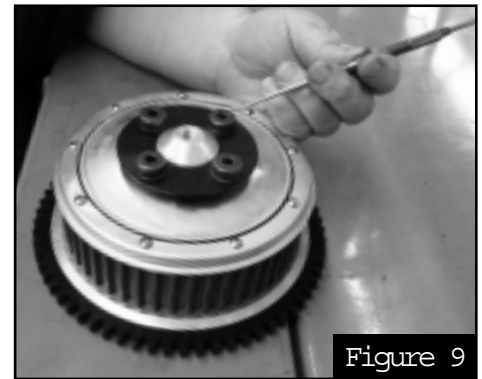


Figure 9

### Step 9

Install rear pulley with clutch hub nut WITHOUT THE BELT!

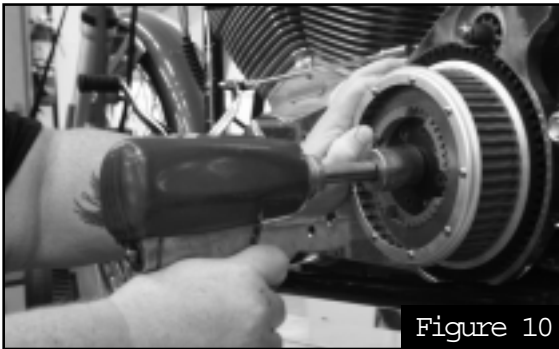


Figure 10

### Step 10

Install front pulley with washer and nut then tighten.

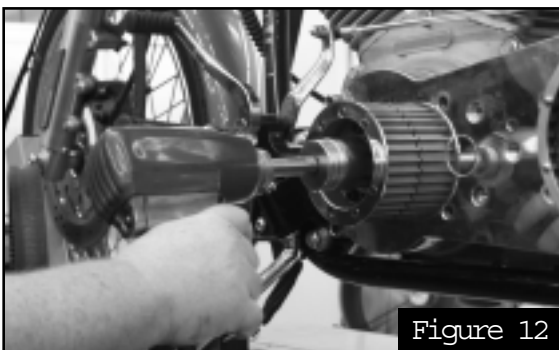


Figure 12

### Step 11

Using a straight edge check alignment of the front and rear pulleys. Hold one end of straight edge against the flat on belt guide next to ring gear. Now check the straight edge to the front pulley. If the two pulleys are not in alignment you



Figure 11

can use the shim kit part number PX-1. There are 5 shims per kit:  
 .020 / .030 / .050 / .075 &  
 .100 to align the front pulley to the rear pulley.



Figure 13

Step 12

Remove both pulleys after alignment is done and install primary belt. Use 3 drops of blue threadlocker on both engine nut & clutch hub nut then torque the engine nut to 150-165 ft. lbs. and the clutch hub nut to 70-80 Ft. lbs.

(See figure 14)

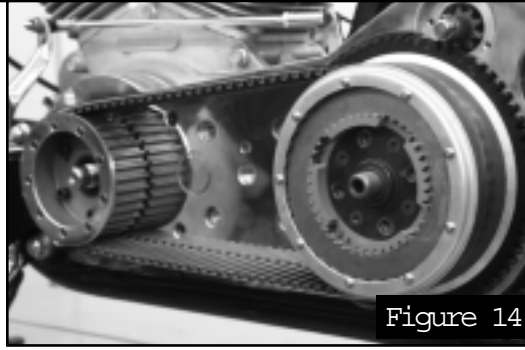
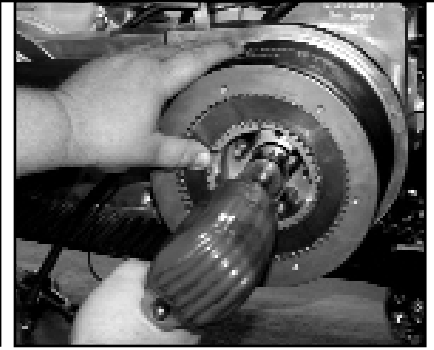


Figure 14



Step 13 Install starter support housing using (3 each) 10-24 x .500 socket head cap screws. Use 1 drop of blue threadlocker and tighten. (See figure 15)

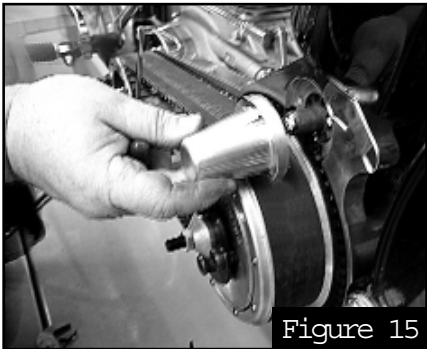


Figure 15

Step 14

Install aluminum pressure plate followed by the diaphragm spring/spring retainer & (4 each) shouldered screws with 1 drop of blue threadlocker and torque to 40 ft. lbs. (See figure 16)

Adjust clutch per Pro-Clutch instructions. (See page 5)

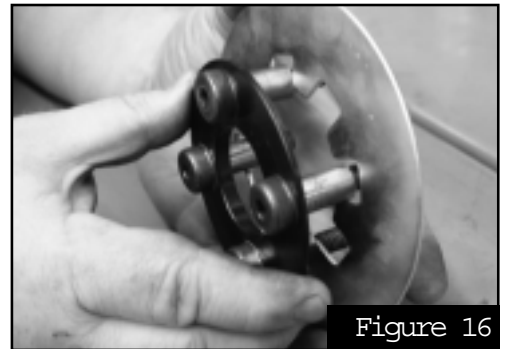


Figure 16

Step 15

Install (4 each) stand-offs using 1 to 2 drops of blue threadlocker & torque to 40 ft. lbs. (See figure 17 & 18)

Install outer belt cover and aluminum outer support with 4 (each) 3/8-16 x 1.000 socket low head cap screws

using 1 to 2 drops of blue threadlocker and torque to 40 ft. lbs. (See figures 19A, 19B, 19C) .

Re-install the battery & reconnect cables. Make one final check of all work that has been done.

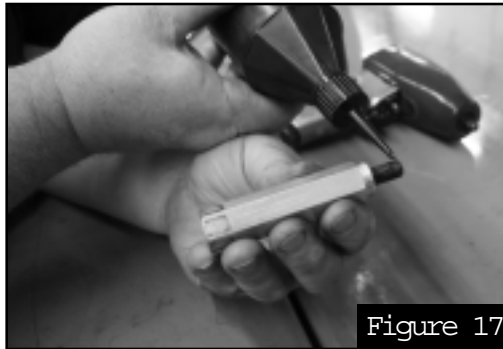


Figure 17

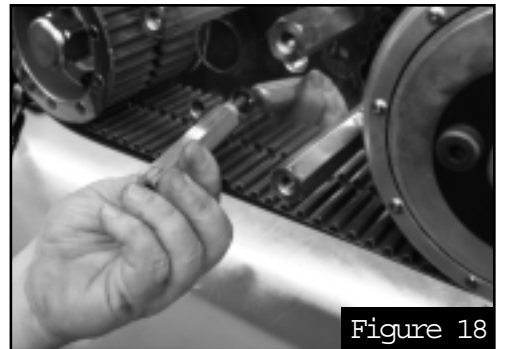


Figure 18



Figure 19A

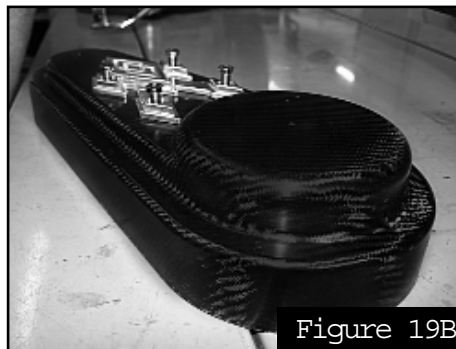


Figure 19B

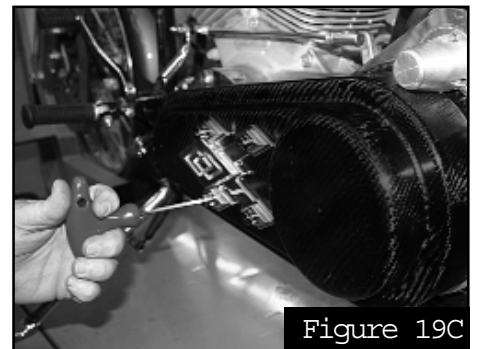


Figure 19C

NOW YOU ARE READY TO ENJOY YOUR NEW GENUINE SLIMLINE BELT DRIVE

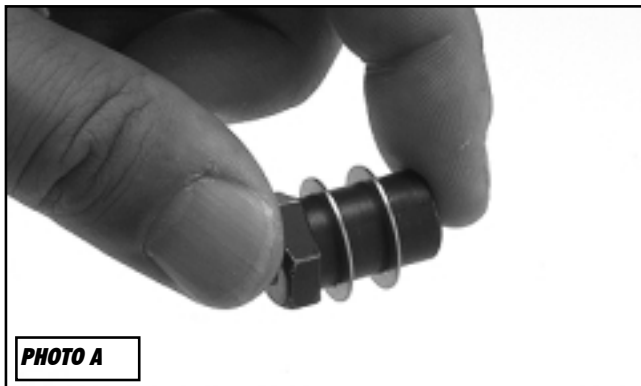
# **PRO-CLUTCH™ ADJUSTMENT**

**AS DELIVERED, THE PRO-CLUTCH™ CLUTCH PACK REQUIRES NO ADJUSTMENT, THE CLUTCH PACK HAVING BEEN SET AT THE FACTORY. AFTER THE PRO-CLUTCH™ HAS ACCUMULATED SIGNIFICANT MILEAGE IT MAY REQUIRE SOME ADJUSTMENT DUE TO NORMAL WEAR. USE THE PROCEDURES OUTLINED BELOW IF & WHEN ADJUSTMENT IS REQUIRED.**

**FOR BEST ALL AROUND PERFORMANCE THE DIAPHRAGM SPRING SHOULD BE COMPRESSED TO WITHIN .010" OF BEING FLAT WHEN THE SHOULDERED SPRING RETAINER NUTS HAVE BEEN PROPERLY TIGHTENED (BOTTOMED) ! THIS PROVIDES BEST LEVER ACTION AT THE HANDLEBAR AS WELL AS NORMAL SPRING PRESSURE TO THE CLUTCH PACK. SLIGHTLY MORE CLUTCH PRESSURE CAN BE GAINED WITH THE DIAPHRAGM SPRING WITH .030" OF SPRING HEIGHT (OUTWARD BOW), BUT THIS INCREASES SLIGHTLY THE HAND EFFORT NEEDED FOR THE CLUTCH. THIS SPRING CONFIGURATION CAN BE OBTAINED BY PLACING A SMALL DIAMETER WASHER ON EACH OF THE CLUTCH HUB STUDS, AS SHOWN IN "PHOTO B".**

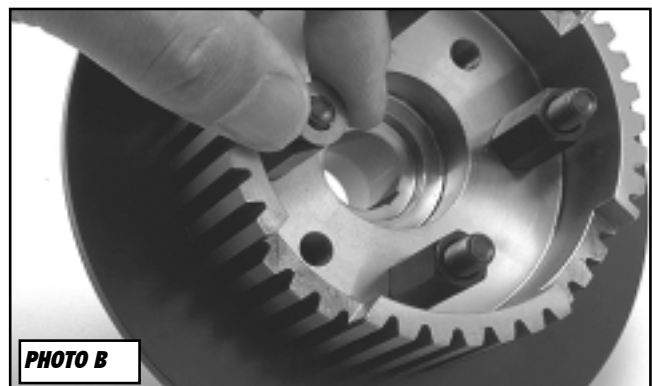
**THREE CLUTCH SPRING LENGTHS ARE AVAILABLE: A STOCK EQUIVALENT SPRING (BLACK IN COLOR), A MEDIUM SPRING FOR STREET PERFORMANCE APPLICATIONS (SILVER IN COLOR) & A COMPETITION SPRING (GOLD IN COLOR) RECOMMENDED FOR DRAG RACE ONLY APPLICATIONS**

If the diaphragm spring adjustment requires additional small amount of spring compression, this can be accomplished by using one or more of the special .020" washers on each of the shouldered nuts. (photo A)



**PHOTO A**

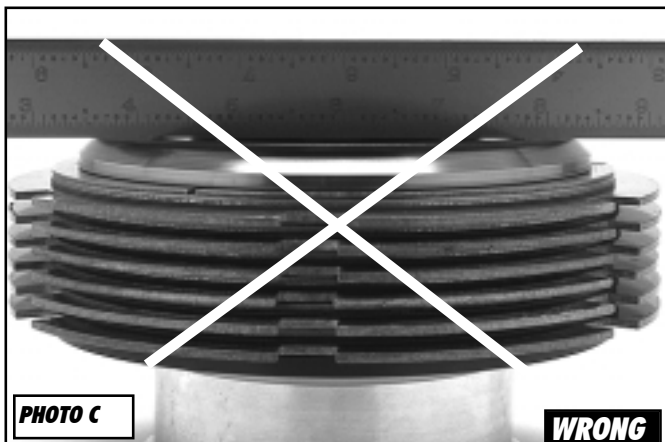
If the diaphragm spring adjustment requires less spring compression, this can be accomplished by using one or more of the .030" washers on the clutch hub studs nuts as pictured, reducing spring compression



**PHOTO B**

**The diaphragm spring will be compressed to within .010"-to-.020" of flat when correctly installed & adjusted**

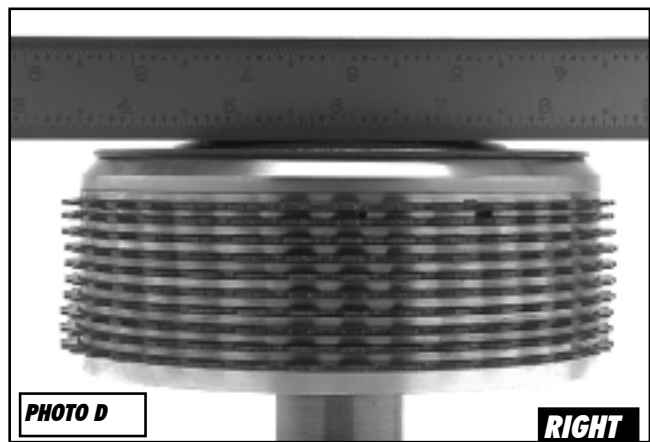
Photo C shows a diaphragm spring that is compressed too far, & needs adjustment. Correct adjustment will require that special adjustment washers be added to the clutch hub studs as shown in photo B.



**PHOTO C**

**WRONG**

This is a diaphragm spring correctly adjusted. Daylight is showing at either edge, because the spring is within .010" of being flat! (slightly bowed outward) as seen in photo D.



**PHOTO D**

**RIGHT**

## **CLUTCH CABLE ADJUSTMENT**

- 1. TURN THE CENTER CLUTCH ADJUSTING SCREW OUT AWAY FROM CONTACTING THE MAINSHAFT PUSHROD.**
- 2. LOOSEN THE CLUTCH CABLE ADJUSTER AND BACK OUT THE CABLE ADJUSTMENT UNTIL THE CLUTCH LEVER IS RESTING AGAINST THE HANDLEBAR GRIP.**
- 3. TURN THE CENTER ADJUSTING SCREW IN UNTIL THE CLUTCH HANDLEBAR LEVER STARTS TO MOVE AWAY FROM THE HANDLEBAR GRIP.**
- 4. NOW BACK-OFF THE ADJUSTING SCREW 1/4 OF A TURN AND RE-TIGHTEN THE ADJUSTING SCREW LOCK NUT.**
- 5. ADJUST THE CLUTCH CABLE TO APPROXIMATELY 1/8" FREE PLAY FROM THE CABLE FERRULE TO THE CLUTCH PERCH IF USING A BLACK VINYL CABLE. IF USING A BRAIDED CABLE YOU WILL HAVE VERY LITTLE FREE PLAY, IF ANY, AT ALL.**