

PRIMO BELT DRIVE™

The "First Name" in belt drives since 1973!

installation instructions for the **Primo Brute Classic & Primo Brute II Classic** BELT DRIVE KITS

8 mm (no idler)



Brute II Classic
11mm Belt

Brute Classic
8mm Belt



11 mm (with idler)

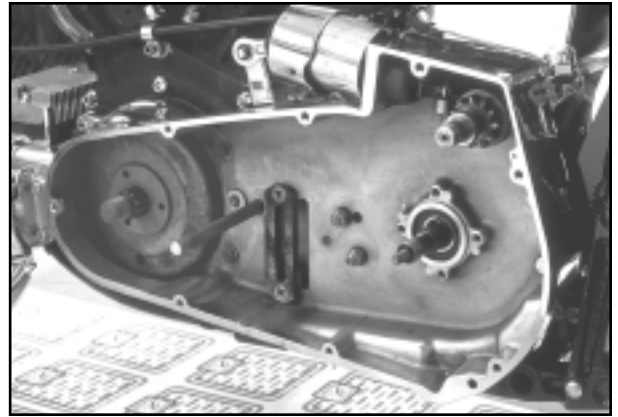
Thank you for buying a Primo Belt Drive! The new Brute Classic or Brute II Classic belt drive system is intended for use with pre-Evo Big-Twin motorcycles (1936-to-1984) using a 4-speed transmission. These 1 1/2" belt systems will install inside all pre-Evolution OEM aluminum or tin primary cover assemblies maintaining the stock external appearance. The Brute II Classic utilizes a belt idler for tensioning, the Brute Classic does not. Included in the kit is Rivera Engineering's diaphragm spring operated "Pro Clutch" suitable for stock, street performance or competition applications. All Alto clutch plates as utilized in Primo Belt Drives, and Rivera Pro-Clutch kits come with a Lifetime (limited) Warranty.

ATTENTION INSTALLER...

Prior to starting the following installation procedure make sure the motorcycle is secured properly, and that the battery is disconnected to prevent accidental start-up. Also please read and familiarize yourself with the instructions. Use only the correct tools for a safe, long-lasting installation.

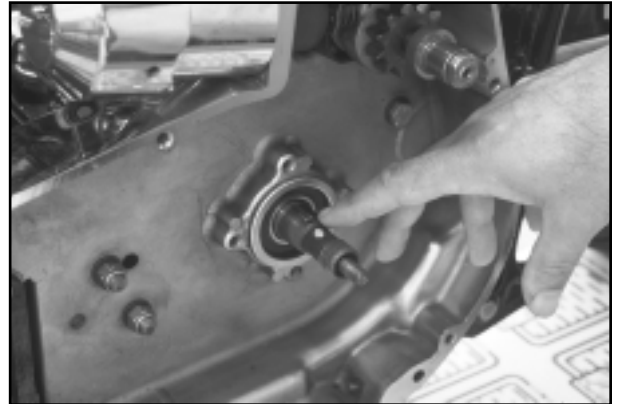
1

Remove all OEM drive train components and thoroughly clean the inner primary. Inspect the inner primary for cracks or other damage. The serrated plate must remain in place if you are installing the 11 mm **Brute II Classic** (as shown). It may be removed if you are installing the **8mm Brute Classic**.



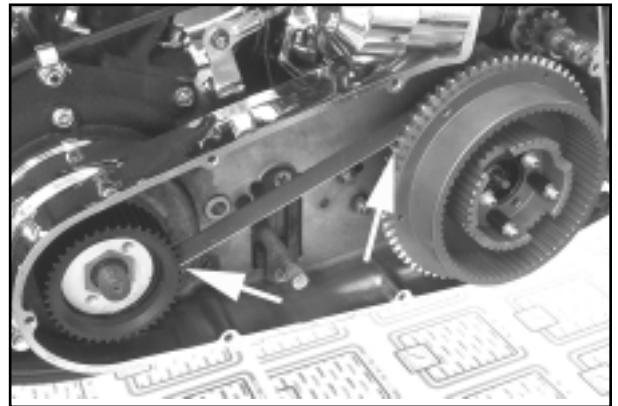
2

Install the KEY in the KEYWAY ensuring that it is correctly seated and oriented so that the clutch hub will slide into place on the transmission main shaft. If you cannot seat the key correctly, check for burrs on the key or keyway, deburr as needed and reinstall.



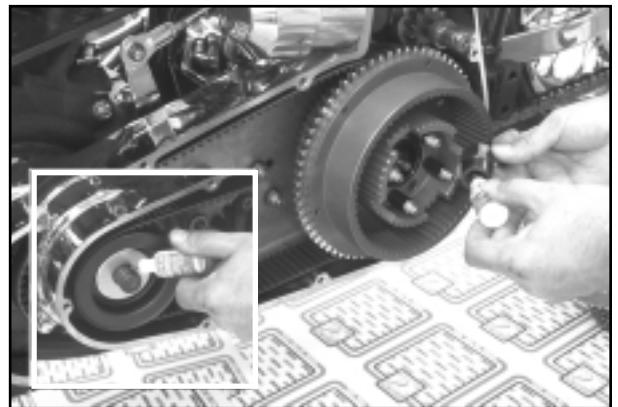
3

Install the clutch hub / rear basket assembly on the main shaft, and the front pulley on the motor shaft. Hand tighten the nut on the main shaft. Hold a straight edge firmly against the inner surface of the ring gear as shown. The outer edge of the front pulley must line up with the inner surface of the ring gear as shown before proceeding. Spacers can be inserted or removed behind the front pulley to achieve correct pulley alignment.



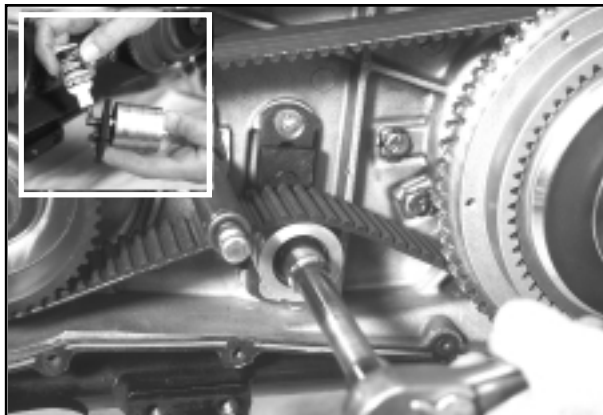
4

After correct pulley alignment is established, install the belt on the pulleys, slide the pulleys into place taking care that the KEY is correctly seated in the KEY WAY (rear pulley-hub assembly). Place a dab of Rivera's thread lock (blue) on the threads of the clutch hub nut prior to permanently installing the nut. Tighten the clutch hub nut using a high-quality torque wrench & the factory torque specifications for your particular motorcycle. Repeat the procedure for the motor shaft nut.



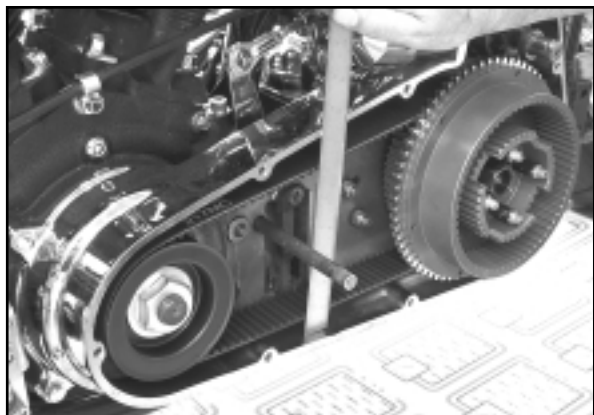
5

For 11mm belt drive installations (**Brute II Classic**) free play should be adjusted via the idler to 3/4" - to - 1" with a cold drive train (not operated for 24 hours). The idler plate mates with the OEM serrated plate. Use **Rivera Red** thread lock on the idler bolt threads & adjust the idler to give the aforementioned belt play, and tighten in position. Do not operate the motorcycle with a belt that is too tight, you may damage drive train components. Aluminum pulleys expand under the influence of heat. Check your belt tension with the drive train at normal operating temperature (15-20 minute riding at 55 MPH. The belt should be snug but not "bowstring" tight.



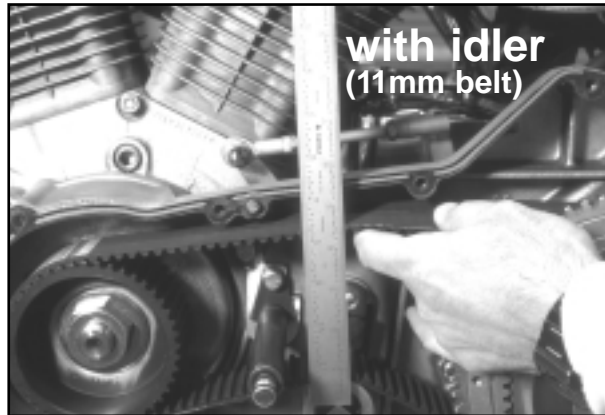
Again, belt free-play should be approximately 3/4" - to- 1" with a cold drive train (not operated for 24 hours). Check belt up & down play as pictured. If you cannot achieve adequate belt play, call **Primo Belt Drives** for advice.

5A



**without idler
(8mm belt)**

5B



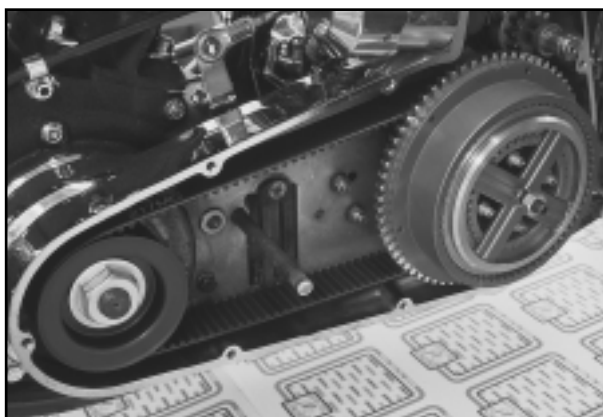
Install the clutch pack exactly the way it was removed from the basket. Steel plate first, then fiber, alternating until all the plates are installed. Put a dab of high-quality anti-seize on the clutch hub studs as pictured.

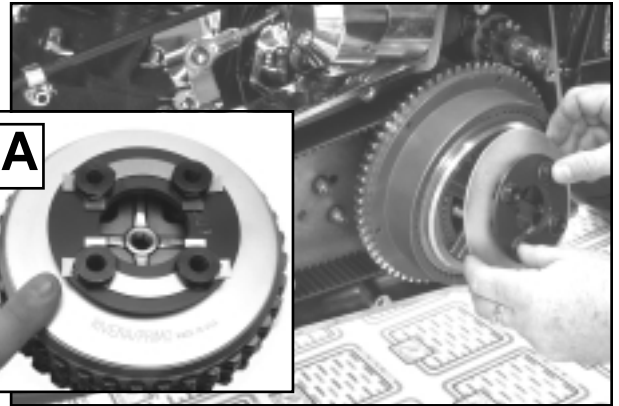
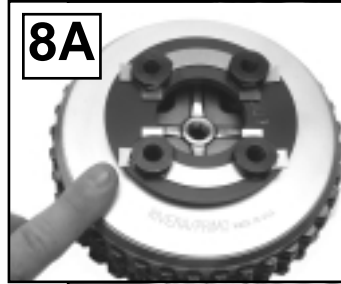
6



7

Install the pressure plate as shown with the adjuster screw backed out most of its thread length.

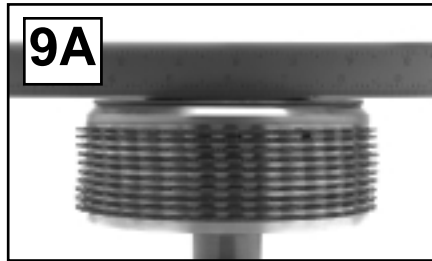


8**8A**

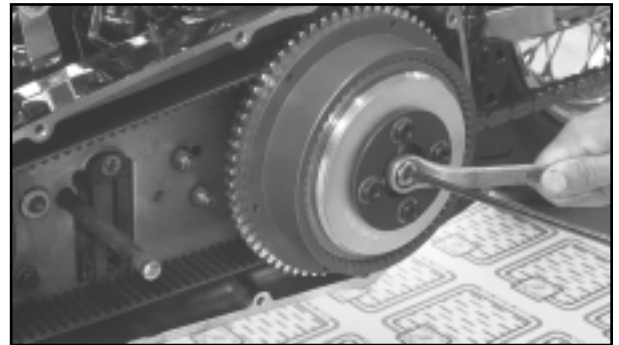
Install the diaphragm spring & spring retainer & locking tabs making sure that the beveled side of the spring retainer is inward. Dab some anti-sieze on the shouldered nuts. Tighten the nuts until they bottom, **DO NOT OVER TIGHTEN**. Do not install the shoulder-nuts without first putting some anti-seize on the threads of the clutch hub studs. Bend a lock tab over each nut to keep the the nuts from loosening.

9

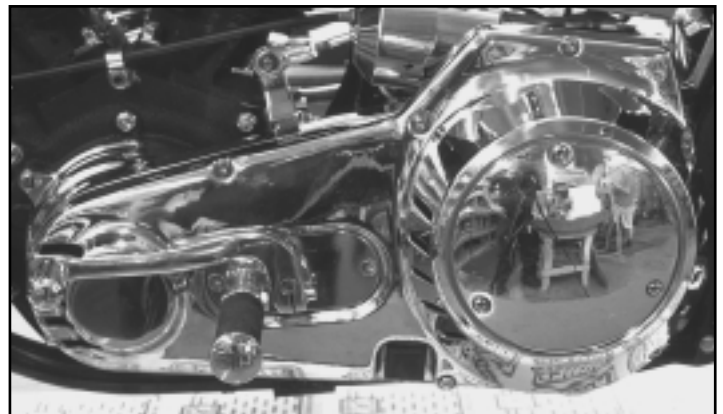
Using a straight edge, check the diaphragm spring for flatness. When installed correctly the spring will be compressed to within .010" - .020" of being flat.

**9A****10**

Adjust the clutch leaving approximately 3/16" play at the clutch lever. Three different clutch springs are available; a black spring (equal to stock), a silver spring, (additional pressure on the clutch pack, still easy on the hand), and the gold spring (maximum spring pressure, heavy handed).

**11**

Reinstall the outer primary cover. Primo recommends that the primary case be vented for cooler belt operation. Either install a vented derby cover or drill two holes in the front of the inner primary, and leave the drain plug out to allow air to circulate.



PRIMO BELT DRIVES

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