

Installation Instructions for CENTRI-FORCE™ Clutch with BRUTE IV EXTREME™ Belt Drive

IMPORTANT SAFETY PRECAUTIONS

WARNING: DO NOT START THE MOTORCYCLE UNLESS THE TRANSMISSION IS IN NEUTRAL OR THE CLUTCH LEVER IS HELD IN, OR SERIOUS INJURY MAY OCCUR. WHILE STOPPED, PUT THE TRANSMISSION IN NEUTRAL OR HOLD THE CLUTCH LEVER IN. FAILURE TO FOLLOW THESE PRACTICES MAY CAUSE SERIOUS INJURY OR SERIOUS DAMAGE TO THE MOTORCYCLE.

Installation of the Centri-Force™ on the Brute IV Extreme™ is easy. First remove the billet outer guard. Next take off the polished stainless steel belt guide from the clutch basket by removing the six (6) 8-32 countersunk bolts. Disassemble the pressure plate, diaphragm spring and spring retainer from the basket by first removing the four (4) shouldered nuts and two (2) lock tabs.

(You will not be re-using the pressure plate, diaphragm spring, spring retainer, four (4) shouldered nuts, two (2) lock tabs or polished stainless steel belt guide)

Remove the entire clutch pack from the Brute IV Extreme™ clutch basket which contains the following:

- 1 .120" steel drive plate
- 1 .100" steel drive plate
- 3 .080" steel drive plate
- 3 .059 steel drive plate
- 7 Kevlar fiber friction plates

(You will not be re-using the .120" steel, the .100" steel and (1) one .080" steel)

Included in the Centri-Force™ kit are (4) four .059" steel drive plates, (2) two Kevlar friction plates and (6) six 8-32 x 1/2" socket head cap screws (SHCS). Install a .080" steel drive plate first, then a friction plate, alternating between steel and friction (no two frictions or drive plates together) and end with a friction plate. Then secure the Centri-Force™ to the clutch basket with the (6) six 8-32 x 1/2" SHCS.

The new clutch pack for the Centri-Force™ will contain the following:

- 2 .080" steel drive plate
- 7 .059" steel drive plate
- 9 Kevlar fiber friction plates

(Clutch pack height will be approx. 1.575")

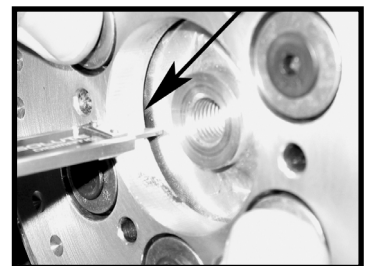
Now adjust as per following instructions:

ADJUSTMENT FOR CABLE ACTUATED CLUTCH

After all the clutch fibers, steel drive plates and Centri-Force™ pressure plate are installed, you must make sure that you have at least .060 - .070" of clearance. This clearance can be measured by using the extension 'depth' end of a dial caliper. Insert the extension into the well in the center of the Centri-Force™ pressure plate so the end is contacting the surface of the pressure plate. Press down on the six external pressure plate springs so that the pressure plate is forced away from the housing and against the clutch pack, then measure the gap between the surface of the pressure plate and the inside surface of the housing. (See Figure 1.) If this measurement is not correct, you may need to purchase extra steels to get to the proper specification.

If you want your motorcycle to idle faster, and you find that the Centri-Force™ pressure plate is engaging to soon, you will need to get more clearance between the pressure plate and the housing, if you have a slower idle and you need the clutch to engage quicker you will need less clearance between the pressure plate and the housing.

Figure 1



You can also get the clutch to engage later by adding spring washers to each of the six spring posts, or get the clutch to engage sooner by removing a spring washer from each of the six spring posts.

Take all the adjustment out of the clutch cable so that the clutch lever is up against the handlebar grip. Turn the center clutch adjusting screw in until you see the clutch lever just start to move away from the handlebar grip, then lock down the clutch adjustment screw jam-nut tightly. The clutch is now adjusted and ready for operation.

ADJUSTMENT FOR HYDRAULIC ACTUATED CLUTCH

After all the clutch fibers, steel drive plates and Centri-Force™ pressure plate are installed, you must make sure that you have at least .060 - .070" of clearance. This clearance can be measured by using the extension 'depth' end of a dial caliper. Insert the extension into the well in the center of the Centri-Force™ pressure plate so the end is contacting the surface of the pressure plate. Press down on the six external pressure plate springs so that the pressure plate is forced away from the housing and against the clutch pack, then measure the gap between the surface of the pressure plate and the inside surface of the housing. (See Figure 3.). If this measurement is not correct, you may need to purchase extra steels to get to the proper specification.

If you want your motorcycle to idle faster, and you find that the Centri-Force™ pressure plate is engaging to soon, you will need to get more clearance between the pressure plate and the housing, if you have a slower idle and you need the clutch to engage quicker you will need less clearance between the pressure plate and the housing.

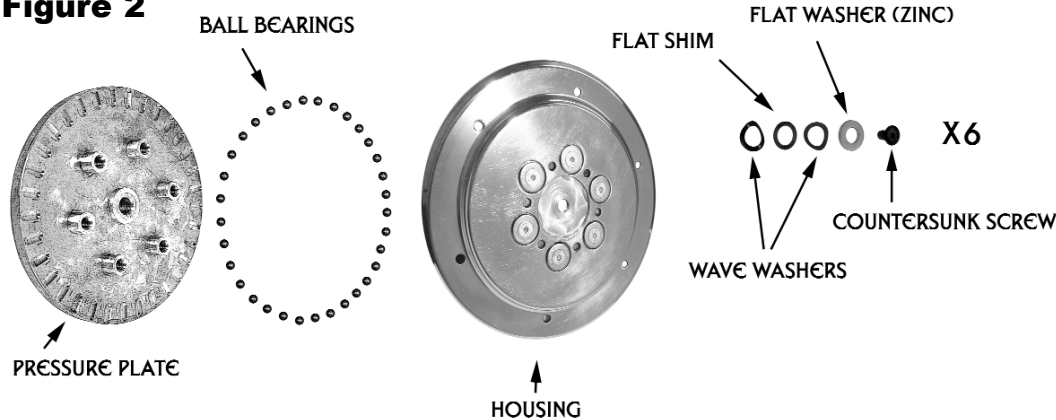
You can also get the clutch to engage later by adding spring washers to each of the six spring posts, or get the clutch to engage sooner by removing a spring washer from each of the six spring posts.

To bleed the clutch hydraulic actuator unit, turn the center adjustment screw until it bottoms out the slave cylinder piston, then turn out the center adjustment screw 2 to 2 ½ turns only. This will prevent the slave cylinder piston from popping out of the bore.

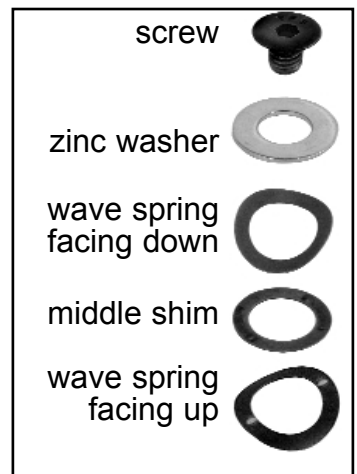
DISASSEMBLY & ASSEMBLY

Remove the six bolts from the Centri-Force™ pressure plate housing. Under each countersunk bolt are a large zinc plated flat washer, 2 spring washers and 1 shim . Carefully remove Centri-Force™ housing from the pressure plate to expose the 30 ball bearings. Assemble in reverse; DO NOT use thread lock on the 6 bolts. Prior to completing assembly, the housing and the pressure plate must be indexed. On the back side of the pressure plate there is a small thru hole. On the back side of the housing there is a small dimple. Line the dimple on the housing with the thru hole on the pressure plate and then complete assembly. (See Figure 2).

Figure 2



ASSEMBLY ORDER



OPERATION

CAUTION:

Always put the motorcycle in **NEUTRAL** before starting the motorcycle, and when coming to a complete stop. Although it is possible to start the bike when in gear and to idle in gear without utilizing the clutch lever, it is dangerous and could result in injury to person or damage to motorcycle. Always pull in the clutch lever when coming to a stop and when at a stand still. To shift the motorcycle during operation, simply unload the Centri-Force™ actuated clutch by coming completely off the throttle, complete the shift, then throttle back up. The Centri-Force™ pressure plate allows you to accelerate slowly or hard without effort and clutch pull is dramatically reduced or eliminated, making it the perfect solution for riders who find it difficult to pull in their clutch lever.