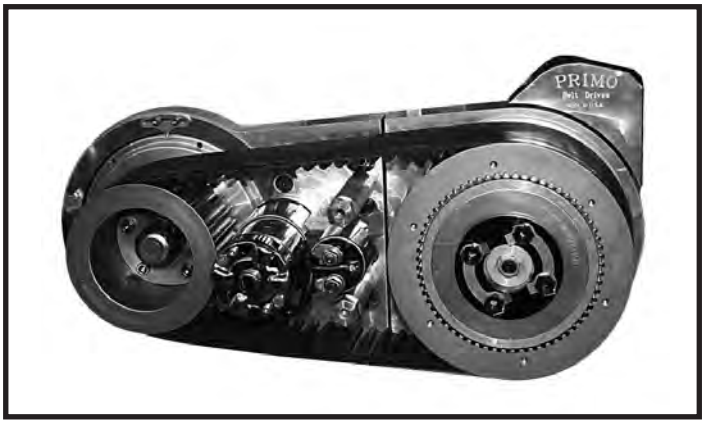
RIVERA PRIMO

Direct Drive™

INSTALLATION INSTRUCTIONS

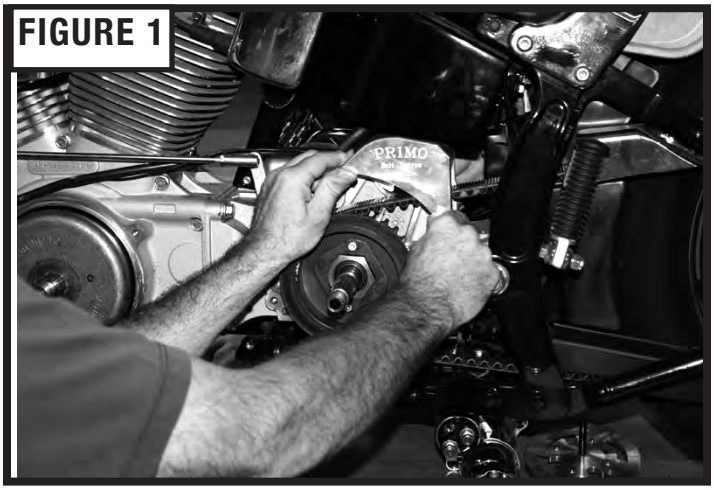


WITHOUT GUARD (display only)

DIRECT DRIVE™ W/ 3D FLAME GUARD (2016-0052)

Disconnect and remove battery from oil tank.

FIGURE 1



Remove starter motor. (Removal of oil tank may be necessary on some models to remove starter motor).

Remove inner & outer primary case and primary drive components.

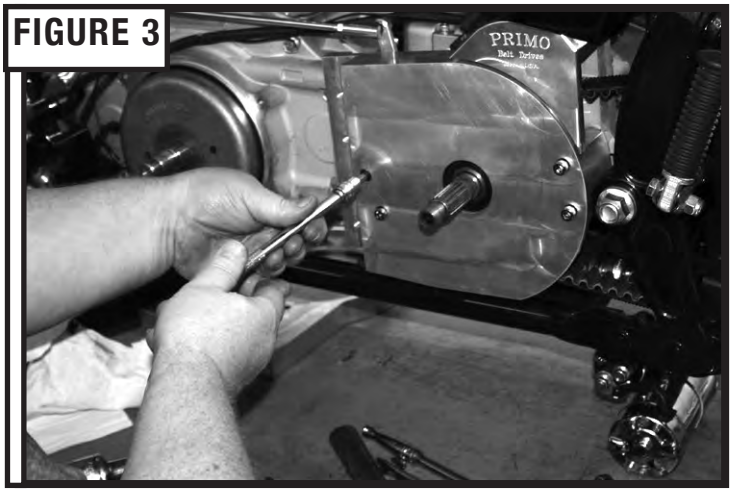
Install transmission flange cover (with Primo logo) first, using supplied 5/16-18 X 1" bolts. (SEE FIGURE 1)

FIGURE 2 Bottom of oil tank

Install relay with mounting flange pointed toward front of bike, by drilling two 1/4" holes in the battery tray of oil tank using template on page 6.
Secure relay with 1/4-20 x 3/4" flat socket head cap bolts and KEP nuts provided. (SEE FIGURE 2)

Attach positive battery cable to large post in back of relay (left side of bike) and 14 gauge wire to small post that is marked 'solenoid'. Take wire from OE starter and attach to small post that reads 'solenoid' or 'S'.

FIGURE 3



Re-install oil tank. Attach positive battery cable to large post on front of relay. Route starter cable and solenoid wire over top of transmission toward motor.

Install rear motor plate to transmission with 4 each 5/16-18 x 2 1/2" shcs bolts provided. Leave bolts slightly loose at this time. (SEE FIGURE 3)

FIGURE 4

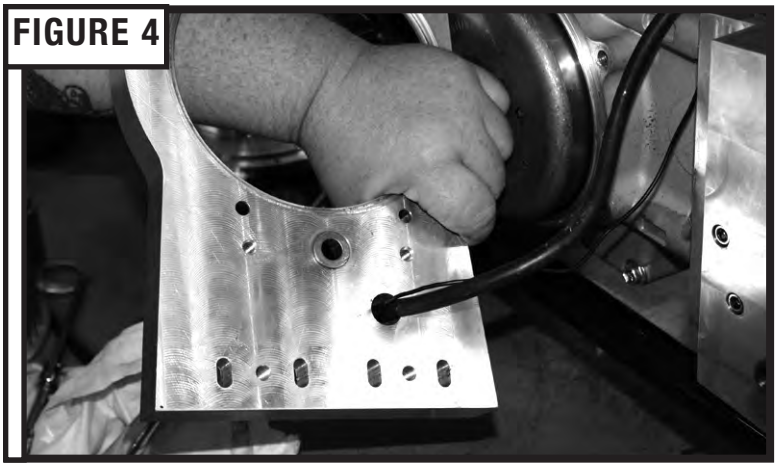
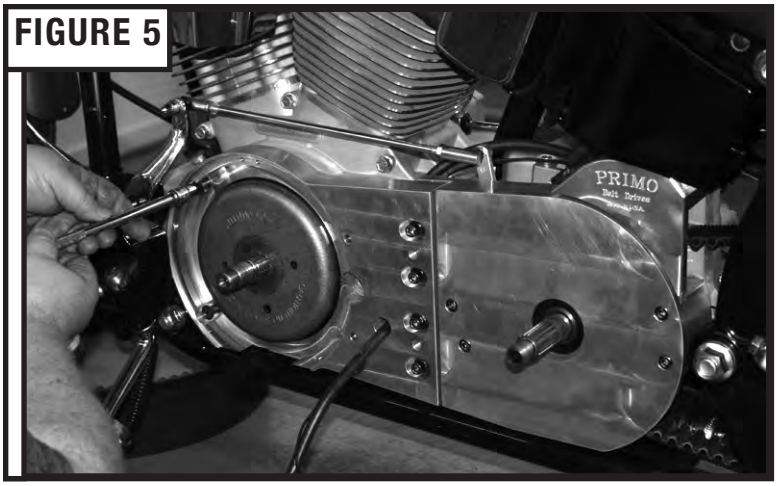


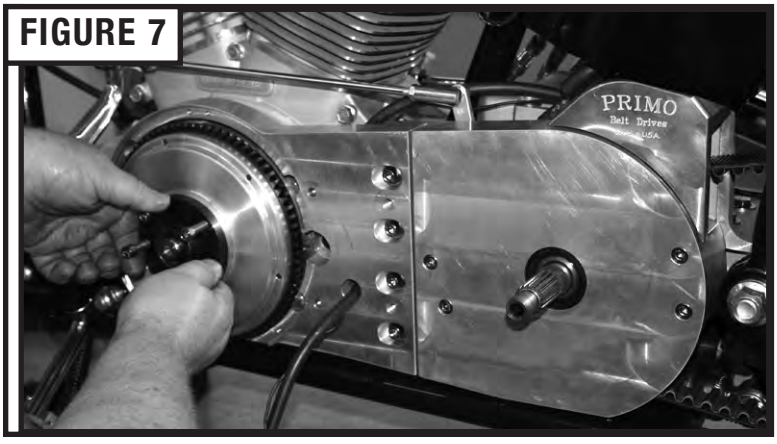
FIGURE 5



Route battery cables and solenoid wire through rear of front motorplate via chamfered hole in motorplate.Attach front motor plate to rear motorplate finger tight with 4 each 5/16-18 x 1 3/8" bolts and flat washers supplied with a small amount of blue thread locker. Fasten front motorplate to motor case with 4 each 5/16-18 x 1" flathead countersunk bolts supplied finger tight using blue thread locker. Make sure the front motor plate is fully seated against the rear motorplate and the motor case. Now tighten all bolts on front and rear motor plate to applicable torque values. (5/16" shcs = 415 inch pounds, 5/16" flathead shcs = 190 inch pounds. (SEE FIGURES 4 & 5)

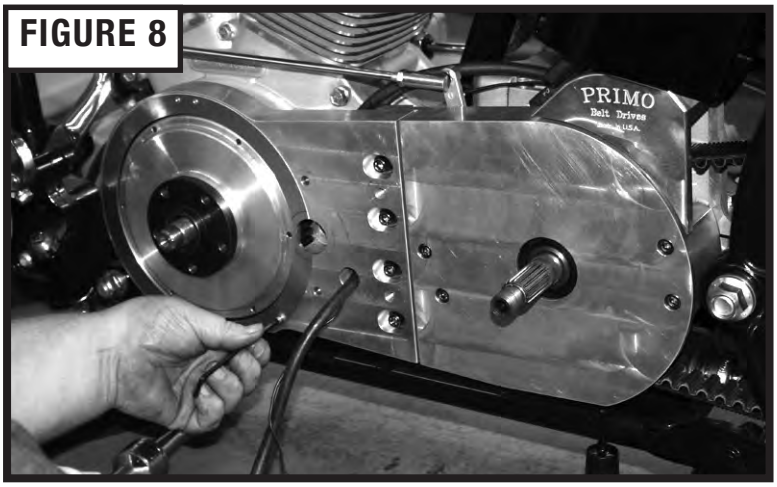
FIGURE 6

FIGURE 7



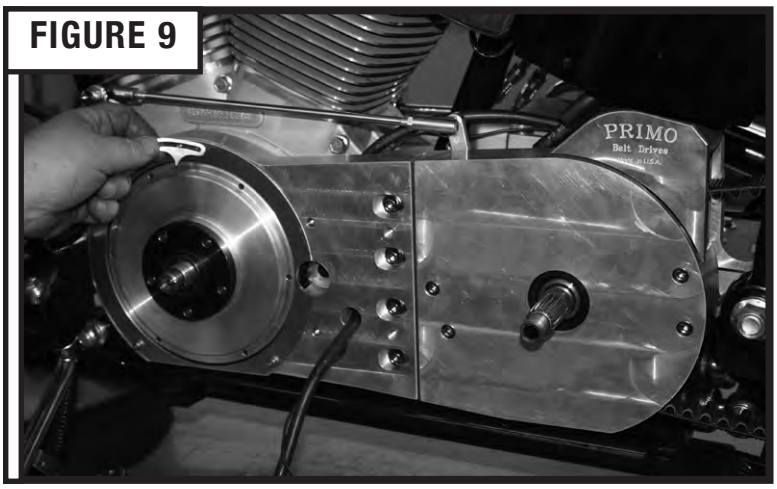
Ring gear will already be attached to ring gear carrier from mfg. Front pulley insert is mounted loose in ring gear carrier with bolts loosely threaded in insert. Install ring gear carrier assembly with front pulley insert by holding the bolts and sliding over sprocket shaft. Now remove 5 bolts from carrier. (SEE FIGURES 6 & 7)

FIGURE 8



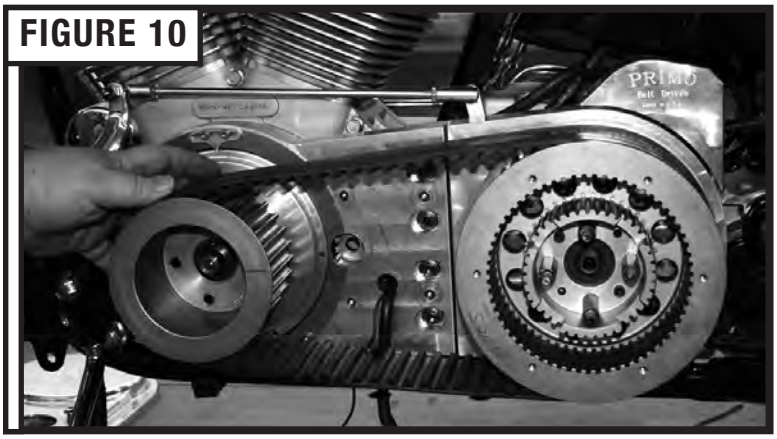
Install ring gear cover with (4) 8- 32 x 1/2" bolts supplied. Use one drop of blue thread locker per bolt. (SEE FIGURE 8)

FIGURE 9



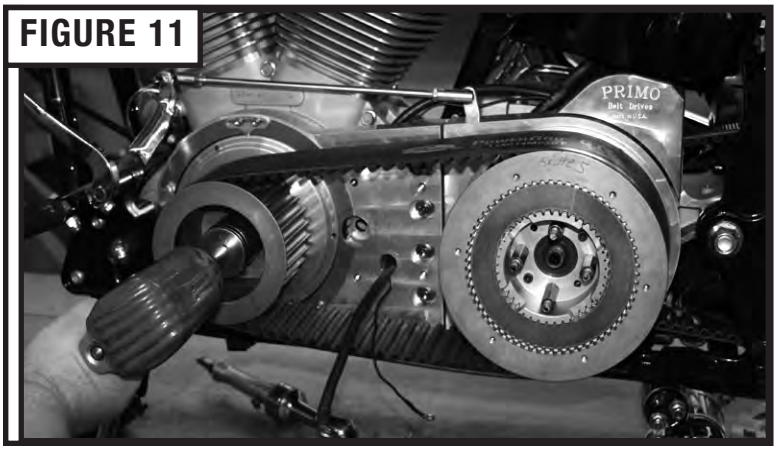
At this point you may install the included degree pointer onto ring gear cover with two 8-32 x 1/2" inch bolts and washers and one drop of blue thread locker per bolt. (SEE FIGURE 9)

FIGURE 10



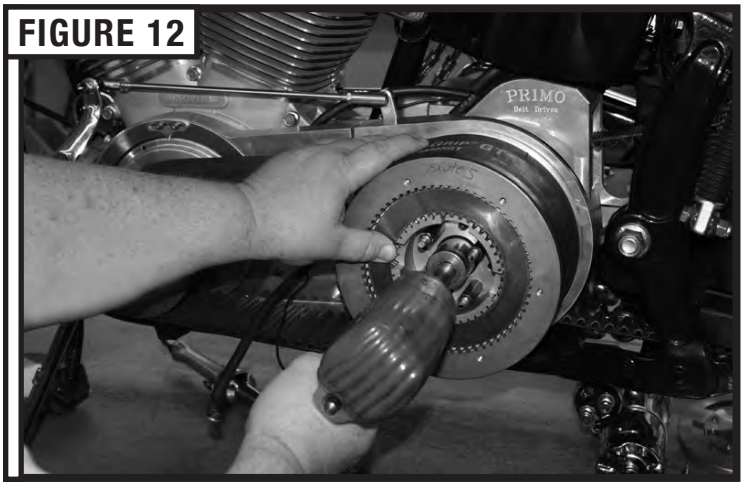
Install front and rear pulley with belt. Make sure that the battery cable and solenoid wire are exiting inside the belt between front & rear pulleys. Align front pulley bolt holes with front pulley insert bolt holes. Seat front and rear pulleys fully on shafts. (SEE FIGURE 10)

FIGURE 11



Use one 5/16-18 x 1 1/4" bolt to attach front pulley to insert. Rotate pulleys slightly to align the front pulley holes with the insert holes. Now install all five 5/16-18 x 1 1/4" bolt. Use blue thread locker on each bolt of front pulley and tighten to correct torque specs.

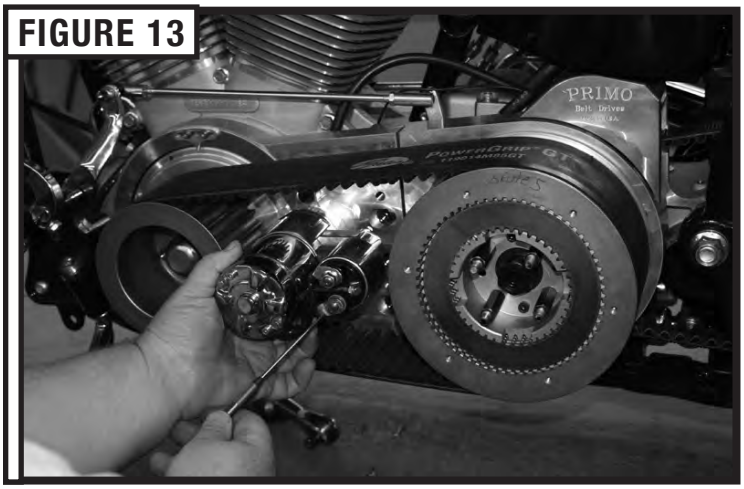
FIGURE 12



Put a few drops of blue thread locker in motor sprocket shaft nut. Install nut on sprocket shaft and torque to 150-165 ft lbs. (SEE FIGURE 11)

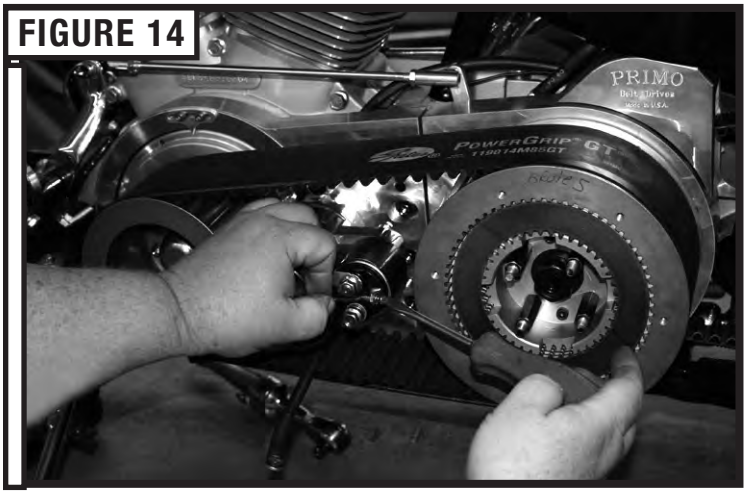
Put two drops of blue thread locker on left hand thread transmission main shaft
nut. Install nut on transmission main shaft and torque 80 to 90 ft lbs.
(SEE FIGURE 12)

FIGURE 13



Put small amount of anti-seize on motor plate starter shaft bushing prior to installing starter. Using two supplied 5/16-18 x 1" flathead countersunk bolts with 1 drop of blue thread locker, install special Direct Drive™ starter between front & rear pulley with solenoid pointed toward rear pulley. (SEE FIGURE 13)

FIGURE 14



Routing wire between solenoid and starter body, cut to length and attach 14 gauge solenoid wire to small blade type terminal on solenoid. Pull any slack wire to the rear of the motor plate. (SEE FIGURE 13)

Attach starter relay cable to lower large stud on solenoid. Pull any slack cable to the rear of the motor plate. (SEE FIGURE 14)

FIGURE 15

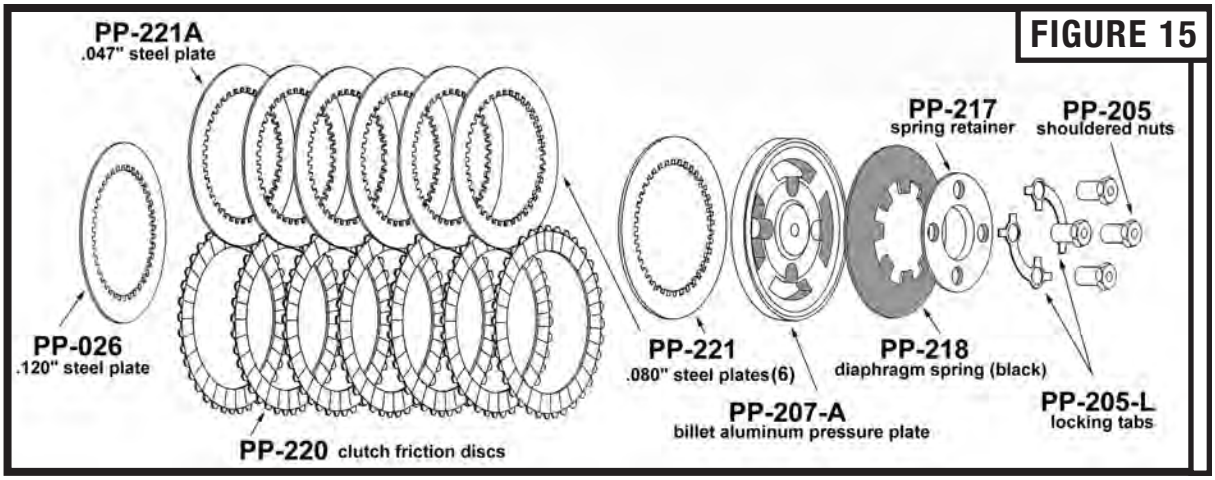
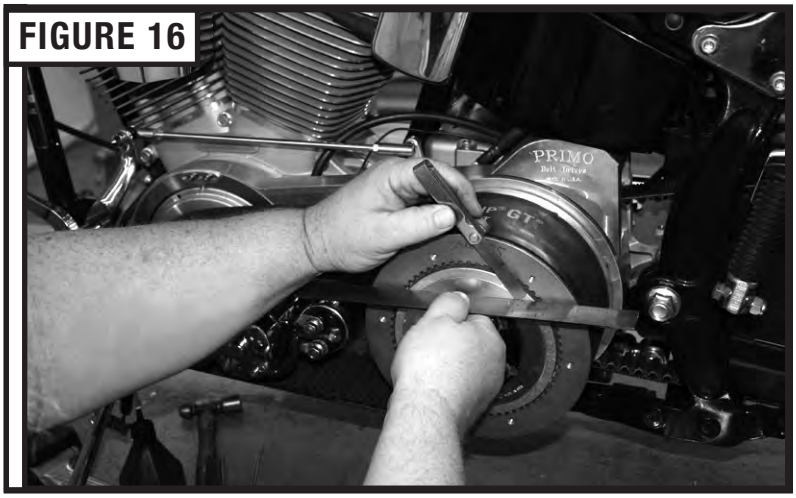


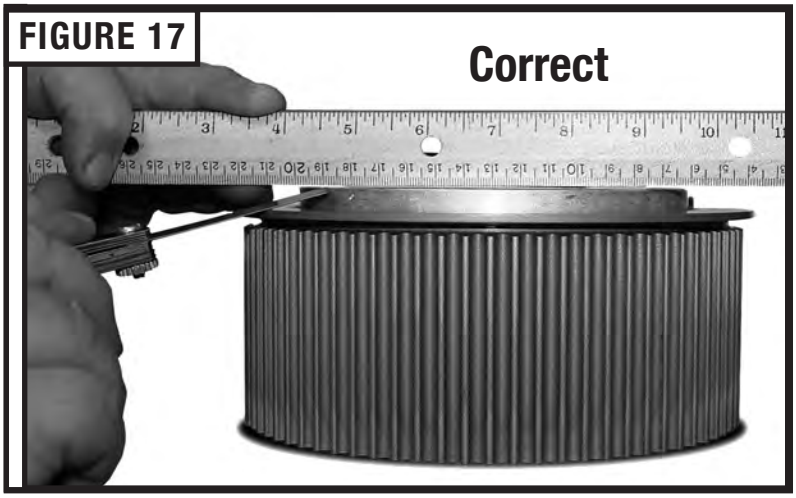
FIGURE 16



Install clutch plates, pressure plate, diaphragm spring, spring retainer, and lock tabs with 4 shoulder nuts (use a generous amount of anti seize on stud threads prior to installing shoulder nuts). Turn nuts down until they bottom. (SEE FIGURE 15)

Check diaphragm spring for correct geometry. (SEE FIGURE 16)

FIGURE 17



When the Spring is correclty adjusted, daylight will show at either edge, because the spring is within .010”-.020” of being flat. (SEE FIGURE 17)

FIGURE 18

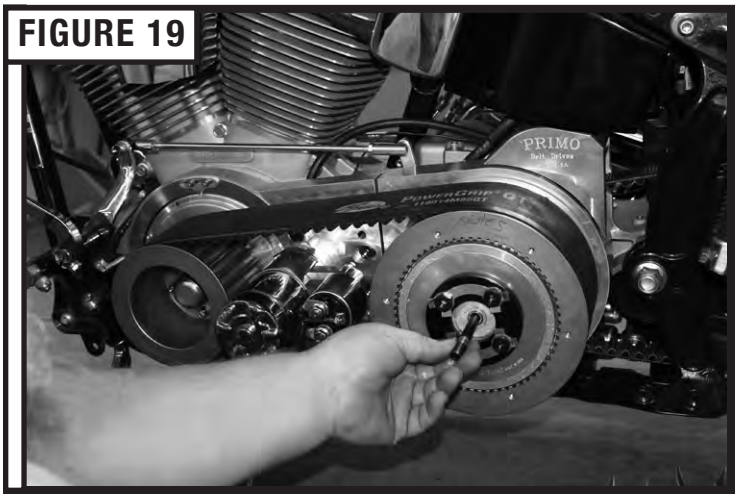
If a diaphragm spring is compressed too far it will need adjustment. Correct adjustment will require that special adjustment washers be added. (SEE FIGURE 18 & 18A)

FIGURE 18A

Install center adjuster screw.

(SEE FIGURE 19)

FIGURE 19



Adjust clutch by backing off cable first all the way, then turn in adjuster screw until contacting push rod. Back off 1/4 turn, install jam nut and tighten. (Hold lever against grip to feel when adj.screw contacts pushrod, the lever will start to move).
(SEE FIGURES 20 & 21)

FIGURE 20

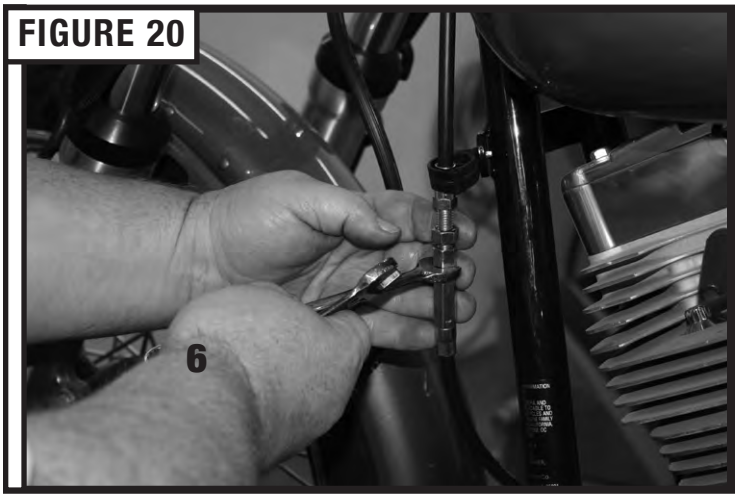
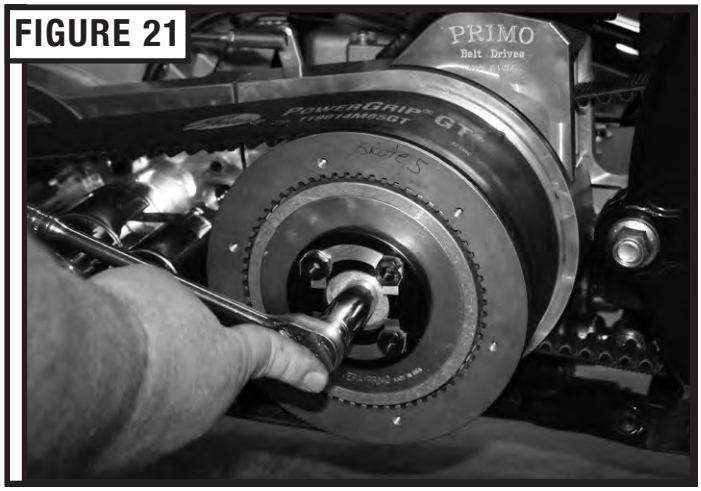
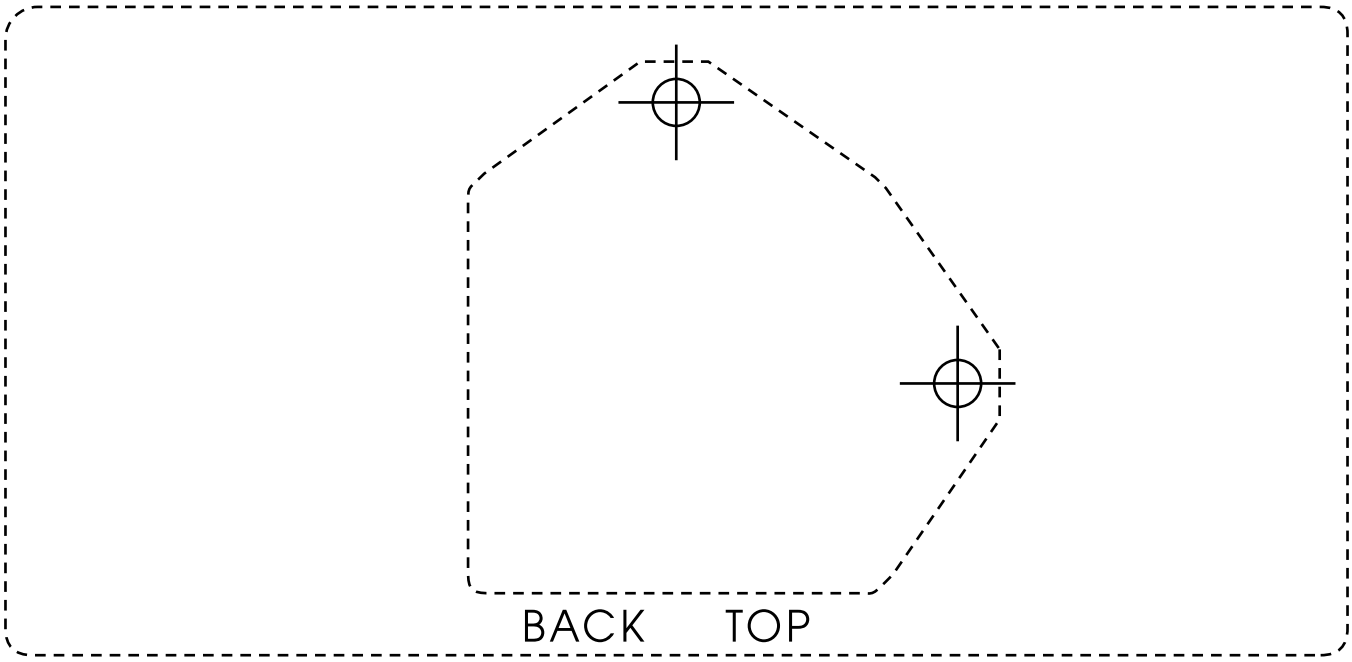


FIGURE 21





Drill 2ea. 1/4 holes in cross hairs. Using a 82de counter sink or a 31/64 drill bit, Sink the top of 1/4 holes so that the flat head cap bolts are flush.

FIGURE 22

FIGURE 23

Adjust clutch cable to approximately 1/8” free play from cable ferrule to clutch perch with a black cable and approximately 0” free play with braided cable. (SEE FIGURE 22)

Install 2 standoffs with pre-installed studs (stud end into motor plate) and tighten. Use red thread locker on studs. (Studs must always be installed into stand-offs prior to threading into motor plate). (SEE FIGURE 23 & 24)

Using two 3/8-16 x 3/8” chrome button socket head bolts, install outer belt guard to stand-offs by sliding starter end cover over starter and aligning holes in stand-offs. Tie wrap both cable and solenoid wire together and pull excess under oil tank. (SEE FIGURE 25)

FIGURE 24

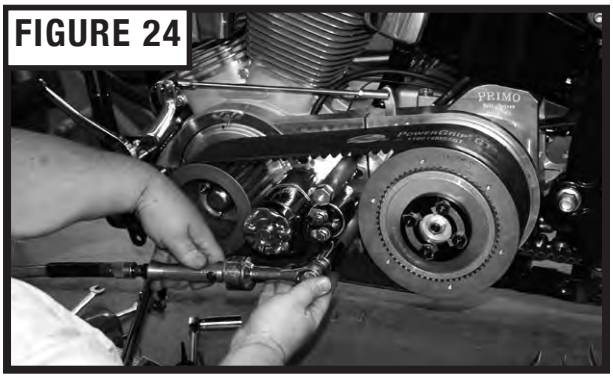


FIGURE 25

Warranty

Rivera Primo Inc.'s sole obligation and the customer's sole remedy is limited to replacement of products free of charge in the event products fail to perform as warranted for one year from date of purchase.
Rivera Primo Inc. makes no other warranty of any kind whatsoever, and SPECIFICALLY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES OF ANY KIND OR NATURE WHATSOEVER, DIRECTLY OR INDIRECTLY, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, AS TO THE SUITABILITY, PRODUCTIVITY, DURABILITY, FITNESS FOR A PARTICULAR PURPOSE OR USE, MERCHANTABILITY, CONDITION, OR ANY OTHER MATTER WITH RESPECT TO RIVERA ENGINEERING, INC. PRODUCTS.
In no event shall Rivera Primo Inc. be liable for claims for any other damages, whether direct, incidental, foreseeable, consequential, or special (including but not limited to loss of use, revenue or profit), whether based upon warranty, contract, tort (including negligence) or strict liability arising in connection with the sale or the failure of Rivera Engineering, Inc. products to perform in accordance with the stated specifications.
Proper safety guards as included in this kit MUST be installed at all times during operation of said product.

RIVERA PRIMO
562-907-2600