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C3 SYNCRODRIVE - POLARIS 2013+ PRO RMK QUICKDRIVE UPGRADE

TOOLS NEEDED FOR SYNCRODRIVE INSTALL:

- # 40 Torx Drive
- Torque Wrench
- 5mm Allen Drive
- 17 &13mm Socket and wrench
- Blue and Red Loctite

INSTALLATION:

1. Remove exhaust muffler

Note : This Syncrodrive kit will work with a factory exhaust system. Aftermarket exhaust may need to be modified.

2. Remove stock gears and belt. See fig 1.

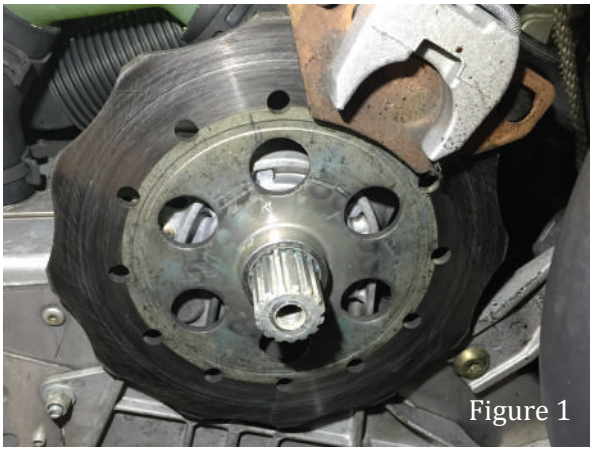
Figure 1

3. Cut and install supplied inch tape decal. See fig 2.

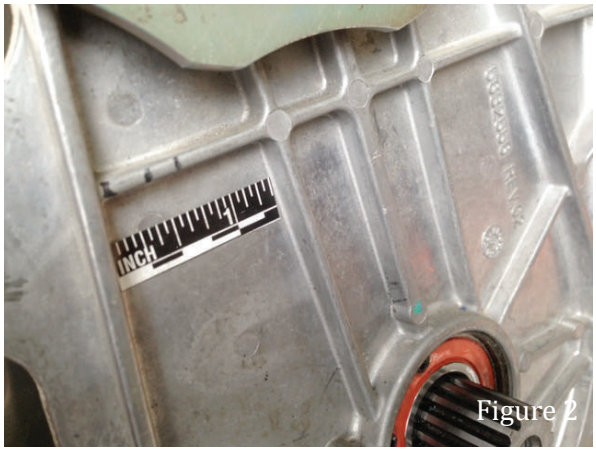

Figure 2

4. Install .075" stainless steel washer on bottom shaft. See fig 3.

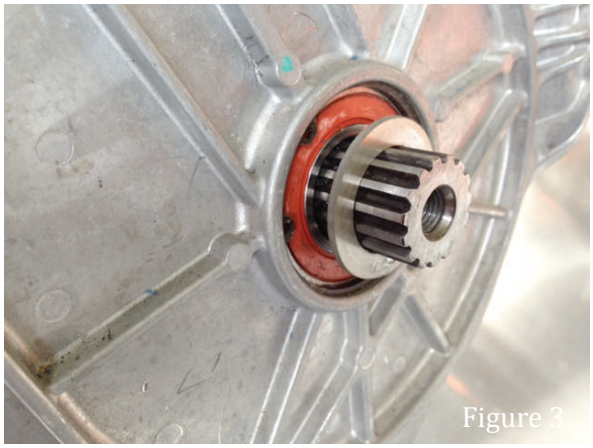
Figure 3

5. Install bottom gear with the cone towards bearing. No bolt yet.See fig 4.

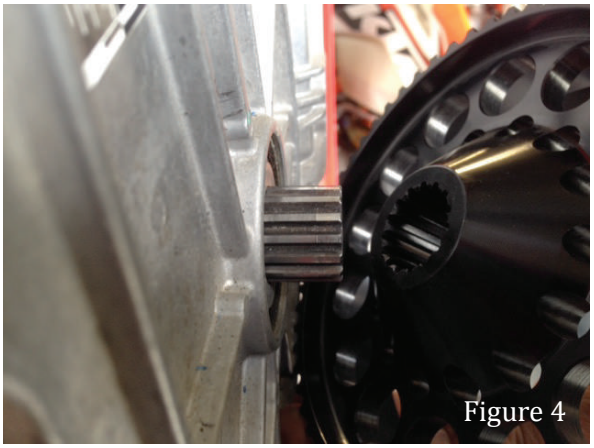
Figure 4

6. Install top gear.
   a) 23 tooth gear. Install inner guide, gear, outer guide, factory washer and bolt with red Loctite and torque to 45 ft. lbs. Holding your brake will make this easier. See fig 5 and fig 6.

Figure 5

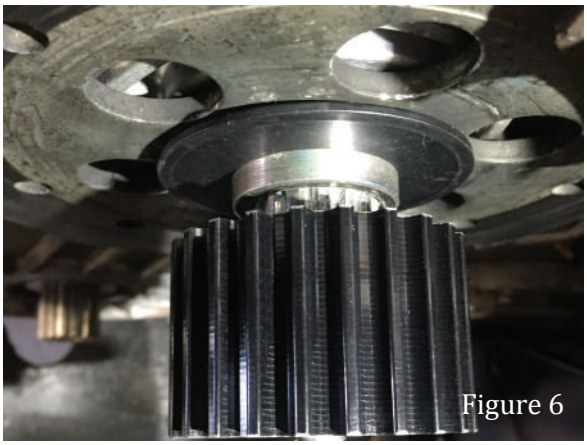
Figure 6

6. Install top gear.
   b) Hub Style 24+ gear. Install hub, gear, supplied Bellville washer, factory Polaris upper gear bolt with red Loctite then torque to 45 ft. lbs. Holding your brake will make this easier. Install top gear outer flange plate with 8x bolt and washers use blue Loctite and torque to 9 ft. lbs. See fig 7

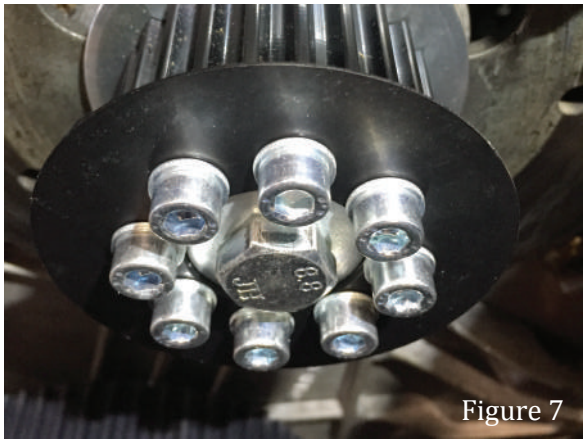
Figure 7

7. Remove 3 bolts with #40 Torx, the 2 longer bolts to be reused in tensioner installation and the forward upper bolt uses a nut on the back side, this nut is also reused. See fig 8

Note:The lower bolt can be hard to take out because it gets glued from the factory so be careful taking out and if it won't come out heat the bolt to soften the glue.

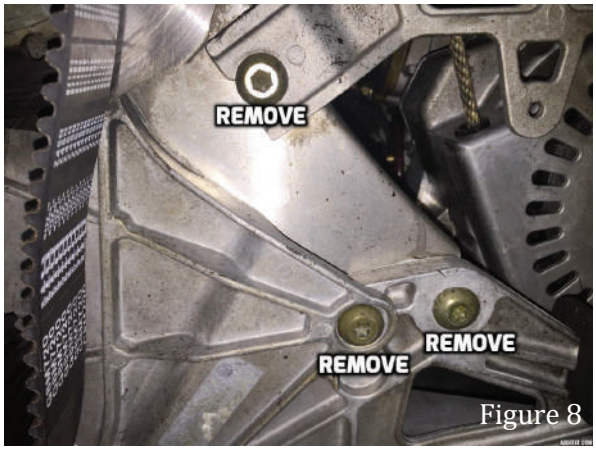

Figure 8

8. Position belt over the top and bottom gears. See fig 9.

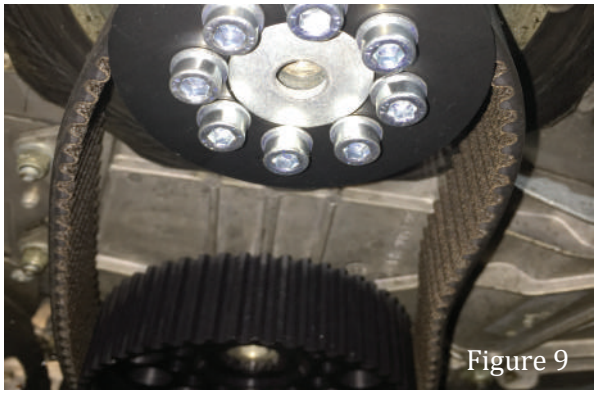
Figure 9

9. Install tensioner assembly using the 2 long factory bolts in the 2 upper most tensioner locations and the supplied bolt in the lower tensioner location use blue Loctite. Torque all 3 bolts to 20 ft-lb. See fig 10.

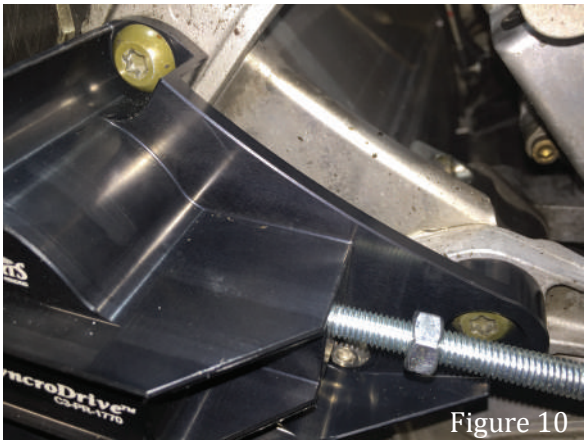
Figure 10

10. Snug up the belt by adjusting the tensioner bolt finger tight. See fig 11


Figure 11

11. Install the factory lower gear bolt with factory washer use red Loctite and torque to 45 ft. lbs. See fig 12.

Important: to be sure belt cogs are allseated into the gear cogs –lift track off the ground and manually rotate the track thus rotating the belt 1 full revolution. Re snug the belt if necessary.

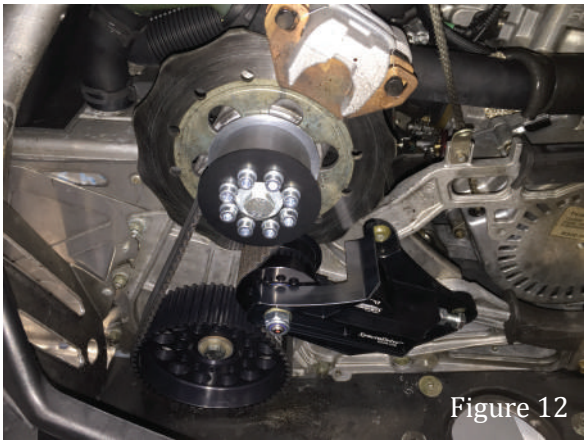
Figure 12

12. Tension the belt by turning adjuster bolt with fingers, pushing on the idler wheel with other hand will help. See fig 13.

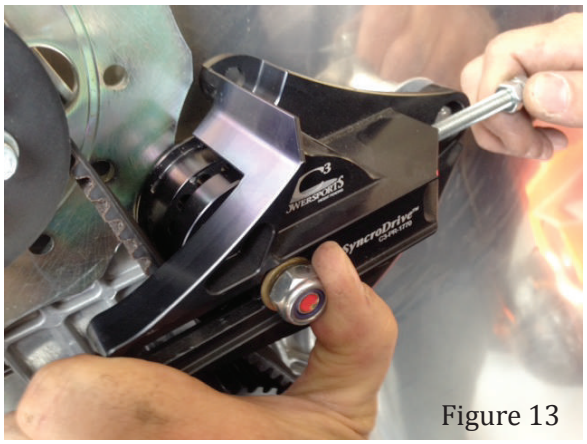
Figure 13

• For GATES BELTS you want about 3/8" initial deflection on the side opposite the tensioner wheel (AKA Tension side) this is set at room temperature. See fig 14.

• For MITSUBOSHI BELTS (MBL) you want about 1/4" initial deflection on the side opposite the tensioner wheel (AKA Tension side) this is set at room temperature. See fig 14.

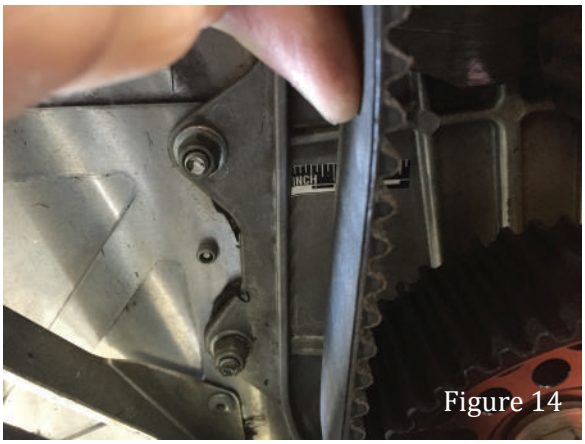

Figure 14

13. Lift the track off the ground and make sure the brake does not drag and the drive system rotates freely.

14. Run the sled while lifted for 5 minutes to make sure everything is running true. Check tension again and adjust if necessary.

15. Tighten tensioner wheel bolt to 30ft lbs then back off adjuster bolt 1/8 turn and tighten lock nut on adjuster bolt.

Belt Tension:

Belt tension is very important a loose belt will break and an over tightened belt will cause premature bearing wear over time. Check the belt tension again the first time you ride once the belt is warm and many times throughout the day after fast trail or a long pull to make sure the correct hot tension is set and re-adjust if necessary. The belt will be warm after a few miles of trail riding so check early and often the first ride. The gears and case expand when warm and the belt gets tighter with tension should be:
GATES BELTS 1/4 – 5/16" of deflection mid span on the tension side of the belt when warm.
MITSUBOSHI BELTS (MBL) 3/16 –1/4 of deflection mid span on the tension side of the belt when warm.
MBL belts will always seem tighter even at the same tension. Once you have the correct tension you should never have to adjust the tension again so take the time to do this correct once and check tension every ride to make sure everything is still OK.

Belt will produce some dust during break in and this is normal. It will disappear in 2-5 rides.

Maintenance Tips

• Check the jack and drive shaft bolts for tightness, re-torque and Loctite after first and fifth ride and every 1000 km (600 Miles) after that.
• Check the top and bottom shaft bolts after first ride and then every 5 rides.
• Bearings should be checked annually. Check the belt tension once a ride at max temperature and always look for signs of abnormal wear or damage.
• Check belt for premature wear (a sign of misalignment or other problems), the belt on a properly set up SyncroDrive system will often last more than 10,000km.

Riding Tips

Always allow the belt to warm up before full power applications (the colder it is the more time the belt needs and the slower you should start). A mile of slowly increasing speed is good for this. 2-3 miles of high speed trail riding will heat gears to a good temperature for tensioning. Once a ride when you feel your riding will have produced a max belt temperature (i.e. a long hard pull) stop and check your belt tension. Continue to do this till you feel comfortable that you have the correct belt tension.
• *This is a high performance aftermarket product and by installing it the user assumes all risk. C3 Powersports Performance Parts are sold "as is" unless otherwise noted.*