



INSTALLATION AND TUNING GUIDE

KWI FUSION XR SECONDARY CLUTCH FOR POLARIS RZR PRO R

PART NUMBER(s): *FUSION XR*

TOOLS NEEDED

- 1/2" Drive Impact Gun
- 15mm - 1/2" Drive Impact Socket
- Torque Wrench (60Ft/Lbs)
- 8mm Allen socket
- 10mm wrench and socket
- Anti seize or moly grease
- long 3/8 extension or round bar to hold clutch while torquing
- BLUE LOCKTITE

The following is required for secondary disassembly only

- KWI Helix twist tool
- KWI Threaded rod



ESTIMATED INSTALL TIME

20 MINUTES

We are not responsible for any damage caused during installation. Follow these steps carefully to prevent damaging your clutch.

IMPORTANT NOTES- PLEASE READ

- 1. Your clutch is a balanced assembly when you receive it. All parts are individually balanced. The balancing is done with the balance screws on the back of the sheave. There MAY or MAY NOT be screws installed. DO NOT REMOVE THE BALANCE SCREWS FOR ANY REASON.**
- 2. DO NOT install the factory windage plate on the back of the secondary.**

Installation Steps:

1. Remove Belt Cover:

- Use a 10mm wrench and socket to remove the screws securing the top of the belt box cover. Undo the quick turn fasteners on the bottom side of the cover. Lift the cover off and set it aside.

2. Remove Secondary Clutch and CVT Belt:

- Use a 15mm socket to safely remove the Secondary clutch bolt, washer, shim washers (your clutch may or may not have one or more shim washers installed, please retain these for installation) secondary clutch outer half, CVT belt and secondary inner half from the gearbox shaft.

3. Prepare gearbox shaft:

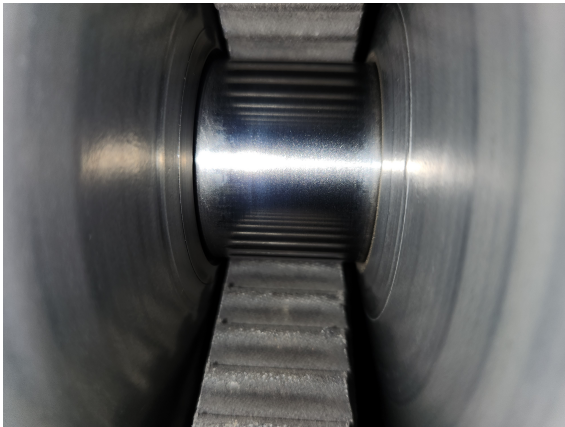
- Lubricate gearbox shaft and splines with a light coat of moly grease or anti seize. This is to ensure the clutch floats smoothly.

4. Install Secondary clutch, CVT Belt:

- Slide your new FUSION XR secondary clutch on the shaft making sure splines engage and its fully seated.
- Install your KWI KWIK LOC billet spacer and secure with BLUE LOCKTITE on the supplied 10mm socket head cap screw retaining bolt. Torque Clutch Retaining Bolt to: 55 ft-lbs (75 Nm). Make sure the clutch slides freely in and out on the shaft.
- Slide your KWI KWIK LOC belt tool into the slot with the rollers facing the Groovix and lift the handle to open the secondary clutch.
- Install a NEW drive belt and remove the KWIK LOC belt tool.
- Rotate the secondary several times by hand to tension belt.

5. Check and adjust Belt Shimming:

- **This procedure verifies belt shimming if necessary so the car shifts smoothly forward, neutral and reverse. The goal is to make sure the secondary clutch does not spin at idle.
- Start car and rev it just until the belt starts to rotate a bit. Shut the car off. Using a camera phone look at the primary bearing between the belt and see if it is centered. See photos below.



Belt is only riding on the bearing and not touching either sheave. Its not necessary to be perfectly centered- just cant touch either sheave or the secondary may spin quickly causing hard shifting F-N-R

6. Secondary disassembly and assembly:

- Use a compression tool such as the KWI Threaded Rod thru the secondary clutch Inner sheave and helix assy to hold the spring pressure.
- Remove the 3 helix bolts.
- Use the KWI Helix Twist Tool to hold the twisted helix of the rollers and then carefully unscrew the compression tool to slowly relax the spring pressure.
- Reassemble the secondary clutch by twisting helix past the rollers and compress using the compression tool. Install the Helix bolts with blue Loc-Tite and torque to 40 ft-lbs.

The spring twist chart is to the right- if you need to adjust the secondary heres the deal

- The goal is to run with between 35 and 60 degrees of twist.
- The more the degrees of twist the higher the RPM will go and the quicker the clutch will backshift BUT the belt temp will go up and the belt stress will be MUCH higher.

KWI CLUTCHING FUSION SECONDARY HELIX TWIST		
KWI CLUTCHING GROOVIX		
BLACK/GREEN AND DK BLUE/PK SEC SPRG		
Hole (CCW)	Degrees	
1	60	
2	5	
3	35	

Final Steps:

12. Modify and Re-Install clutch cover:

- Using snips cut the 3 arms holding the secondary clutch air inlet spider web, remove the web and discard. If this is not removed it will hit the KWI KWIK LOC billet spacer.
- Put the clutch cover back on with oem screws and cam locks.
- Reinstal air ducting, firewall and seats.

13. Test Drive:

- Drive the vehicle and check for proper operation and full throttle RPM

PRO R FUSION XR SECONDARY SETUP CHART

Crankshaft horsepower (CHP) /Wheel horsepower (WHP)	Secondary spring / Helix	Belt Recommendation	Full throttle RPM at 55mph
180CHP-440CHP	DR3 GROOVIX- KWI DARK BLUE/PINK secondary spring Hole #3	FUSION 53R4829 BELT OR 3211226 POLARIS BELT = USE FOR High speed gearing GATES 48R4867 BELT = USE FOR 5% Gear Reduction GATESI 50G4966 CRAWLER BELT = USE FOR 15% Gear Reduction (Belt is designed for low speed rock crawling only! DO NOT RUN AT FULL THROTTLE!)	8350 RPM +/- 100 RPM or as specified by tuner
450CHP - 900CHP			8600 RPM +/- 100 RPM or as specified by tuner

PARTS INCLUDED

	PART DESCRIPTION	QTY	OEM PART #	OUR PART #
	FUSION XR SECONDARY CLUTCH	1	—	
	KWIK LOC BELT CHANGE TOOL	1	—	-
	KWIK LOC BILLET SPACER	1	—	-
	M10 CLUTCH RETAINING BOLT	1	—	-
	SHIM (MAY OR MAY NOT BE USED)	1	—	-
			—	-
			—	-
			—	-

LIABILITY STATEMENT

As defined by the Magnuson-Moss warranty Act. Do not install any performance parts or services unless you have the technical ability to properly set-up the entire machine to compensate for the installation of those parts. The necessary work and expertise needed to install different product varies. Instructions, where provided, are given to assist in installation only; they are not a substitute for mechanical experience in setting up racing vehicles. References to performance gains, reliability, ease of installation, etc. are based on our and outside customer's experiences. This is not a guarantee of similar performance in every installation. While we sell proven products, in the end it's up to the individual to make the most of the product. Kris Werth Inc. d.b.a. KWI Clutching or its associated corporations are not responsible for any personal or property damages caused by this product. Kris Werth Inc. d.b.a. KWI Clutching or its associated corporations assumes no responsibility for damage or injury of any kind because of misuse, improper installation or improper application of any parts in anyway, by any person. Contact your local dealer to schedule installation of this kit if you are not a qualified ATV or UTV mechanic. USE OF PRODUCTS. BUYER SHALL USE, AND REQUIRE ITS EMPLOYEES, CONTRACTORS, AND AGENTS TO USE, ALL AVAILABLE SAFETY PRECAUTIONS, IN ADDITION TO ANY SPECIFICALLY SET FORTH IN ANY MANUALS, MATERIAL SAFETY DATA SHEETS, TECHNICAL DATA SHEETS, INSTRUCTION SHEETS, IF ANY, FURNISHED BY SELLER (OR AVAILABLE FROM RAW MATERIAL SUPPLIERS) RELATING TO SELLER'S PRODUCTS. IF BUYER DOES NOT RECEIVE ANY REQUIRED MATERIAL SAFETY DATA SHEETS FOR ANY PRODUCT FROM SELLER, BUYER WILL REQUEST THEM FROM SELLER. IF BUYER FAILS TO STRICTLY OBSERVE EACH AND EVERY ONE OF THE OBLIGATIONS SET FORTH IN THIS SECTION 22 OR IF BUYER'S USE OF ANY OF SELLER'S PRODUCTS IS IN VIOLATION OF ANY STANDARD OR RULE OF THE AMERICAN NATIONAL STANDARDS INSTITUTE OR OCCUPATIONAL HEALTH AND SAFETY ACT, OR OTHER APPLICABLE WORKPLACE LAW, REGULATION, OR STANDARD, BUYER WILL INDEMNIFY, DEFEND, AND HOLD HARMLESS SELLER AND SELLER AND ITS EMPLOYEES, OFFICERS, DIRECTORS, AGENTS, AFFILIATES, SUCCESSORS AND ASSIGNS FROM AND AGAINST ANY AND ALL CLAIMS, DEMANDS, DAMAGES, ACTIONS, AND CAUSES OF ACTION, AS WELL AS ANY AND ALL LIABILITY, LOSS, OR EXPENSE OF ANY KIND, INCLUDING REASONABLE ATTORNEYS' FEES ARISING FROM, CONNECTED WITH OR IN ANY WAY PERTAINING TO ANY SUCH FAILURE BY BUYER. NOTIFICATION. BUYER SHALL NOTIFY SELLER PROMPTLY, AND IN ANY EVENT WITHIN 30 DAYS, AFTER ANY ACCIDENT OR FAILURE INVOLVING SELLER'S PRODUCTS THAT RESULTS IN PERSONAL INJURY OR DAMAGE TO PROPERTY AND SHALL COOPERATE FULLY WITH SELLER IN INVESTIGATING AND DETERMINING CAUSES OF SUCH ACCIDENT OR FAILURE. ATTORNEYS' FEES AND COSTS. BUYER WILL PAY SELLER'S REASONABLE ATTORNEYS' FEES AND OTHER COSTS AND EXPENSES FOR ANY LEGAL OR EQUITABLE ACTION UNDERTAKEN BY SELLER TO ENFORCE THESE TERMS OR THE PROVISIONS OF ANY SUPPLY AGREEMENT.