ULTRASHIFT V2 X3 SETUP CHART

The chart below is a guideline with very close start points with 30-33" tires riding at Sea Level elevation. (choose the Crankshaft horsepower/Wheel horsepower that best matches your X3) (Identical cars may have HP differences of up to 10 HP due to engine manufacturing tolerances so clutch kit calibration adjustments are necessary in most cases)

For High Altitudes- subtract 15% from the Published HP range of your tune to get actual effective HP. **Example - 200 CHP (at sea level) x .85 = 170CHP (use the 161CHP line in the chart below as your baseline setting)**

FOR SAND DUNES OR LARGE TIRES (35"+)- subtract 8% from the Published HP range of your tune to get actual effective HP. **Example - 200 CHP x .92 = 184CHP (use the 181CHP line in the chart below as your baseline setting)**

FOR TIRES 28" AND SMALLER- Add 8% from the Published HP range of your tune to get actual effective HP. **Example - 200 CHP x .1.08 = 216CHP (use the 220CHP line in the chart below as your baseline setting)**

FOR LUNCH CONTROL - Install the Lauch Control primary spring (Sold Separately) as it is a high engagement spring and will raise engagement RPMS for your Launch Control/2 Sep. Add 2 magnets to each arm in hole #1 or #2 to the suggested settings in the chart below compensate shift RPM for additional spring pressure.

ADJUSTING RPM - Cam arms have 3 magnet holes - Magnets MUST be distributed so that the clutch is balanced. Make sure ALL arms have identical magnet placement to maintain clutch balance. Do not overfill magnet slots **(FLUSH IS FULL)**! RPMS are checked at 100% throttle between 20 and 70 MPH. Adding magnets to the arms lowers RPM's. Removing magnets from the arms raises RPM's. Magnets in hole #1 control RPM's below 30MPH. Magnets in hole #2 control RPM's between 30 and 50 MPH. Magnets in hole #3 control RPM's above 60MPH

IMPORTANT***The calibrations and weight configurations for the UltraShift V2 are dramatically different than the previous versions, most stock HP cars will use ONLY 2 WEIGHTS and 3 or more weights are not necessary unless you have increased HP levels- this is normal and correct- PLESE REFER TO THE NEW V2 TUNING CHART BELOW*****

Crankshaft horsepower (CHP) /Wheel horsepower (WHP)	# of Cam Arms	# of Magnets IN HEEL OF EACH CAM ARM	# of Magnets IN MID OF EACH CAM ARM	# of Magnets IN TIP OF EACH CAM ARM	Primary spring	Secondary spring / Helix / hole	Belt Recommendation	Full throttle RPM at 55mph
152CHP/130WHP	2	0	1	1	**7045112 IS STANDARD 1750 RPM LOW ENGAGEMENT SPRING** KWI MAROON IS 200 RPM HGHER ENGAGE/SHIFT KWI SILVER PURPLE IS 2900 RPM HIGH ENGAGE SPRING KWI SILVER IS 3600 RPM HIGH ENGAGEMENT SPRING (HIGH ENGAGEMENT SPRINGS RAISE SHIFT RPM AND NEED ADDITIONAL MAGNETS INSTALLED IN THE CAM ARMS TO COMPENSATE FOR THE INREASE IN SPRING PRESSURE)	**OEM TURBO RR HELIX-** OEM TURBO RR Black/Green secondary spring in hole #3 (60 degrees wrap) **KWI DR3 GROOVIX -** OEM TURBO RR Black/Green secondary spring in hole #3 (60 degrees wrap)	CANAM X3 USES A LONGER BELT THAT IS COMMERCIALLY AVAILABLE FROM MANY MANUFACTURERS- SEE RECOMMENDATIONS BELOW GATES – 49R4313 - FIRST CHOICE AND MOST DURABLE BELT BY FAR, THE ONLY CHOICE FOR AGGRESSIVE RIDING AND RACING, EASILY WITHSTANDS 260 DEGREE BELT TEMPS. ULTIMAX - USX804 – THIS IS THE GOTO BELT FOR DRAG RACING WITH YOUR ULTRASHIFT! DAYCO – XTX5041 – A GOOD ALTERNATIVE IF THE ABOVE ARE NOT AVAILABLE	7950 RPM +/- 100 RPM (ALL OEM TURBOS)
175CHP/165WHP	2	0	2	2				
195CHP/175WHP	2	3	2	2		**OEM TURBO RR HELIX-** OEM TURBO RR Black/Green secondary spring in hole #4 (30 degrees wrap) **FOR KWI DR3 GROOVIX-** OEM TURBO RR Black/Green secondary spring in hole #2 (35 degrees wrap)		
215CHP/185WHP	2	3	3	3				
225CHP/195WHP	3	0	0	0				
255CHP/225WHP	3	0	0	1				
290CHP/250WHP	3	0	1	1				
330CHP/275WHP	3	4	4	4				8250 RPM +/- 100 RPM (AFTERMARKET TURBO)
360CHP/310WHP	4	0	0	0	**KWI MAROON IS STANDARD 1750 RPM LOW ENGAGEMENT SPRING** KWI SILVER PURPLE IS 2700 RPM HIGH ENGAGEMENT SPRING KWI SILVER IS 3400 RPM HIGH ENGAGEMENT SPRING (HIGH ENGAGEMENT SPRINGS RAISE SHIFT RPM AND NEED ADDITIONAL MAGNETS INSTALLED IN THE CAM ARMS TO COMPENSATE FOR THE INREASE IN SPRING PRESSURE)	**WITH DR3 GROOVIX-** KWI Dark Blue Pink secondary spring in hole #2 (35 degrees wrap)		
400CHP/350WHP	4	1	1	1				
500CHP/450WHP	4	3	3	3				8750 RPM +/- 100 RPM (AFTERMARKET TURBO)
600CHP/550WHP	6	2	2	2				

TROUBLESHOOTING

BEFORE YOU MAKE ANY CLUTCHING ADJUSTMENTS OR CONTACT KWI FOR SUPPORT VERIFY THE FOLLOWING!!!

*** Clutching only reacts to the availabe HP or drivetrain loads, most often low power is the cause of poor performance or low RPM and the issue is not the clutching itself. KWI's clutch calibrations have been verified to produce correct RPM on thousands of vehicles so if you install per your published HP on the chart and the RPM is not correct **you must suspect poor engine performance as the issue first.**

*** **#1 CAUSE OF LOW RPM** IS POOR ENGINE PERFORMANCE - **troubleshoot for power loss, incorrect wastegate actuator crack pressure, boost leaks, poor fuel or that your not using the "eco or valet key"** before making additional clutching adjustments. This is the first thing we will ask you when you call us so make sure youve verified these are correct. (Refer to the KWI videos under the support section on our website or YouTube for additional help)