

KWI AO clutch kit for 2021+ Can AM Defender 1000R

AO Defender Kit Contents- 3 AO cam arms, magnets, 1 Black/Green secondary spring

INSTRUCTIONS

1. Disassemble your secondary clutch and install the KWI billet helix and secondary spring as required as required per chart below. Remove every other stock primary clutch cam arms. Refer to the KWI vid on our website or YouTube for additional help.
2. There are 2 holes in the AO cam arms to place magnets- **you can place magnets in either hole** but magnets MUST be distributed so that the clutch is balanced. Make sure arms have identical magnet configurations and are placed in every other position to maintain clutch balance. (counting clockwise there are 6 total cam arms- positions #1, #3 and #5 should be stock cam arms and positions #2, #4 and #6 should be KWI AO cam arms) Do not overfill magnet slots (**FLUSH IS FULL!**)
3. You will use your stock primary clutch spring so there is no need to disassemble the clutch to access the spring.

Model / Tune / Tire Size	# of Magnets per weight	Primary spring	Secondary spring / Helix / hole	Full throttle RPM at 5
1000R / Stock / 28"	4 Thick	Stock blue/yellow	KWI Black/Green secondary spring with KWI DR Billet helix in hole #4	7000 RPM +/- 100
1000R / Stock / 30"	2 Thick		KWI Black/Green secondary spring with KWI DR Billet helix in hole #4	
1000R / Stock / 35"	0 thick		KWI Black/Green secondary spring with KWI DR Billet helix in hole #4	
1000R / 93 Octane Tune / 28"	4 Thick		KWI Black/Green secondary spring with KWI DR Billet helix in hole #1	
1000R / 93 Octane Tune / 30"	2 Thick		KWI Black/Green secondary spring with KWI DR Billet helix in hole #1	
1000R / 93 Octane Tune / 35"	0 Thick		KWI Black/Green secondary spring with KWI DR Billet helix in hole #1	

TROUBLESHOOTING

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

- *** Clutching only reacts to the available HP or drivetrain loads, most often low power is the cause of poor clutching performance and the issue is not the clutching itself. The AO 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, old or poor fuel quality or that your not using the "normal key" or that your in "ECO MODE"** with limits power to 60% before making additional clutching adjustments. This is the first thing we will ask you when you call us so make sure you've verified these are correct. (Refer to the KWI videos under support section on our website or YouTube for additional help)

IF ENGINE PERFORMANCE IS VERIFIED TO BE PROPER BY ALL THE STEPS ABOVE ADJUST CLUTCHING PER BELOW.

- *** **My full throttle RPM at 55mph is not correct- To raise RPMS** remove magnets from AO cam arms, **to lower RPMS** add magnets to AO cam arms. 2 thick magnets will change Full Throttle RPM approx 100 RPM. 4 thin magnets will change Full Throttle RPM approx 30 RPM. **Make sure you assembled your secondary clutch properly, very low RPMS are an indication of the helix not being wrapped properly.**

**** How do different belts affect RPM**

- BRP 417300551 Belt** - excellent shift characteristics and RPM shift curves same as the BRP 652 belt but is not as strong
- BRP 422280652 Belt** - excellent shift characteristics and RPM shift curves same as the WBB383 belt but is not as strong
- Gboost WBB652RS Race Series Belt**- Excellent shift characteristics, lower slip than the WBB383, unbeatable RPM shift curves that are better than the WBB383 belt but is 3 times as strong ONLY choice for endurance racing.
- Gboost WBB383 Belt**- Very good shift characteristics and RPM shift curves same as the BRP 652 belt but is 3 times as strong and less \$. Good choice for endurance racing.
- Gboost DBSD383EX Bad Ass Belt**- Grippy to stop belt slip in high HP cars but causes RPM to be 300 lower due to friction and will need lighter weights to compensate.
- Gboost MMPO383 Mud Monster Belt**- Extremely Grippy to stop low speed belt slip in Mud and Rock Crawlers but causes RPM to be lower due to friction and will need lighter weights to compensate. Due to increased friction this belt is not recommended for constant speeds over 35 MPH.

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 equipment 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. KWI Clutching or its associated corporations are not responsible for any personal or property damages caused by this product. 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