2021+ Can Am Commander 1000 models , 0-4000' elevation

- **Stock and Oversized tires, adjustable kit**

Description: **Better belt grip and improved performance.** The 2021 Can Am Commander comes from the factory with what we feel is a somewhat de-tuned CVT clutch calibration. This kit uses a totally new calibration of CVT components for both clutches to work together to improve belt grip and overall performance. With the kit installed the vehicle will get into a better RPM zone and do so more quickly. This results in harder acceleration, better efficiency, and improved "back shifting of the belt" when the vehicle senses load from soft terrain or hills, etc. Back shifting the belt quickly when load increases is a key to better efficiency and grip. The kit offers a nice balance of quicker rev but maintains a nice midrange cruising RPM. The flyweight lever arms in our kit are a totally different profile, distribution of mass and design, and thus the "total grams" are irrelevant when comparing to stock or others. This whole package is designed to work together for a noticeable improvement. A smooth more positive engagement of the belt. Improved throttle response and acceleration compared to stock clutches. The kit is adjustable for different tires and situations. The instructions tell you how to set up accordingly.

Larger or heavier tires in particular hurt performance everywhere. Rotating weight and the added gearing from larger tires hurt acceleration and top speed. This kit improves bottom end and belt performance without loss of top speed, in fact acceleration is quicker to get to top speed. A better clutch calibration for controlling "rate of shift of the belt" for these tire sizes.

We change all 6 flyweights. 3 of them are adjustable with more built-in tip mass, 3 are same profile but fixed weight. The adjustable ones are installed "every second one." The other 3 are fixed weights that go in the alternate slots. We feel it is important to use all 6 flyweights in this application. This clutch uses a type of plastic composite slider blocks for the flyweight surface to slide/operate on. Many other similar clutches use steel rollers. These sliders are a replaceable wear surface. Using all six spreads the load for best durability. Only three need to be adjustable and this kit set up is the best tested results.

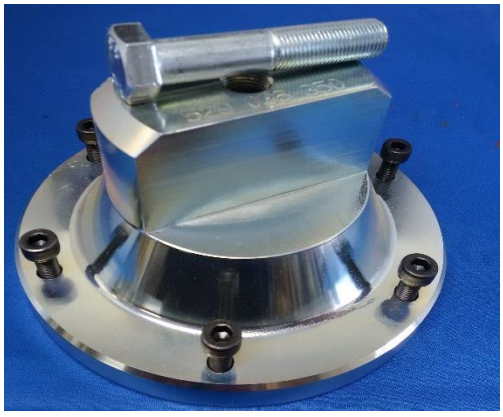
Components:

1) Dalton **Tan/Blue** primary clutch spring (DPPS-TN/BL)
1) **set of 3** custom adjustable flyweights with hardware* (Part# CMD2)
1) **set of 3** custom fixed weight flyweights (Part# CMD1)
1) **pkg of 13** pcs custom black composite **thrust washers**
1) Billet Helix for secondary - custom proprietary ramp curve (Part# CAX 6)
1) includes **Instruction manual and "CVT clutching overview"**

* Flyweight hardware includes: 3) ¼ UNF x 1/4" (.8g) black set screws
3) ¼ UNF x 3/8" (1.5g) black set screw
3) ¼ UNF x 1/4" (2.6g) gold button head screws

Tools / Products required:

1. Can Am clutch **holding tool** (to keep clutch from turning)
2. **Clutch puller Can Am part# 529 000 072 (or Dalton part number DCP-R) to remove primary from the vehicle.**
3. **** Governor Cup Puller Can Am part# 529 036 350 – "critical tool" to separate the primary on this model (pictured)**
4. **Can Am Clutch holder (hold clutch from turning when torque install)**
5. **#708200720 Driven pulley extractor/adapter (to spread the secondary for belt removal)**
6. **Pulley spring compressor tool Can Am part # 529 036 012 to compress the secondary change to** helix and spring
7. **Blue Loctite 243**



WARNING !

<u>This is a dealer installation</u>. There are references to the factory service manual. The <u>proper</u> tools are essential. Failure to use the proper tools, or the use of other presses and pulling tools/devices will most likely result in broken or non-usable clutch. This job should only be done by qualified service personnel.

** Governor Cup Puller BRP part# 529 036 350 is shown Pg.1 and is critical to separate the primary clutch. (BRP tools/part numbers change, and there may be aftermarket options available)

<u>Installation Instructions</u> (Dealer Installation)

<u>IMPORTANT:</u> Always remove the key from the ignition when working around clutches.

This is a dealer installation. There are procedures listed in the Can Am service manuals for drive clutch service. There are BRP holding tools and special tools required for these clutches as well. The following is only a basic guideline, always consult your dealer service manual for more detailed description.

READ AND UNDERSTAND THIS ENTIRE DOCUMENT BEFORE INSTALLING!

Figure 1- spread secondary(rear) pulley

1)Remove cover bolts and plastic cover to expose CVT clutch

2)Using the clutch **<u>driven pulley adapter</u>** (shown)**,** spread the secondary to make slack to remove the belt.
Using the spreader, remove the belt.

<u>NOTE DIRECTION OF BELT</u> (arrow) when you remove it. *Make sure belt remains clean & free of any oils / grease, a non-residue cleaner like brake cleaner maybe used to clean clutch surfaces, etc.*

3) Remove the secondary pulley (rear clutch) by removing the center bolt.

4) **<u>Change the helix and secondary spring</u> using the Pulley Spring Compressor Tool (part# 529036012)**
First, remove the stock helix using the compressor tool.

Install the compressor tool through the clutch to contain the parts.

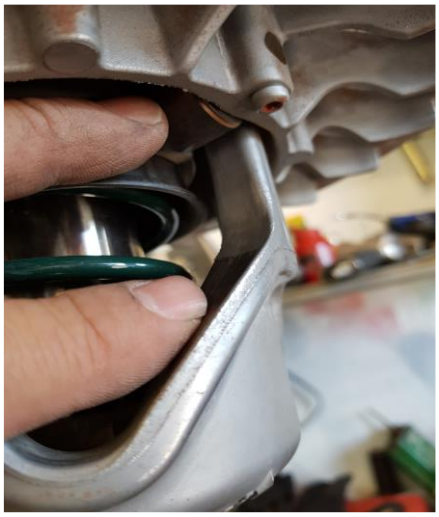
Mark the clutch and take note of both halves and the helix (mark)…and position of the roller in the helix for re-assembly.
Sometimes it helps to heat the bolts slightly to release the thread locker before removing.
When you assemble the new helix and spring, the helix and pulleys must be aligned. **It is VERY important to have the "roller" of the clutch in the proper slot of the helix and the torsion spring set correctly.**

When removing, mark the stock helix and take note of where the mark is in relation to the spring holes for later reference on the new one.

Do not remove the helix bolts without the compressor tool in place to hold the unit together. With the compressor tool in place, remove the helix bolts and slowly release the compressor to allow the pressure to come off the helix and spring assembly. **Pay attention BEFORE you take it apart**. Make some reference marks**.**

-Also take note of the hole position of the TANG on the end of the spring where it goes through the helix. Some models have multiple holes. Watch closely **how much the helix rotates** as it is released from spring **torsion**.

It is important to note the position of the roller/helix ramp relationship as you release the helix when you take it all apart. Hold the parts and watch carefully as you take it apart.



The helix will need to be twisted the proper direction to get the roller in the correct position. The spring tang will be installed in the same **#4 position on the helix.** The helix and spring must be turned to that same position when you re-install the helix

Remember that the helix will need to be pre-loaded, that means twisted the proper direction so that the roller is on the proper ramp **and pre-loaded**.
Just because you are in the correct hole in the helix does NOT mean that you pre loaded the twist properly.

The new helix must be installed using the compressor tool.
It is very important to make sure the shaft is through the helix bushing before compressing the tool all the way. With the compressor tool installed, it is best to partially compress by hand first and **make certain that the shaft is started through the helix bushing** before using the tool to compress all the way.

Apply BLUE LOCTITE #243 to the threads of the **3 helix bolts** and torque to specification (**45 ft lbs** +/-4) while the compressor tool is still holding the assembly together all the way.

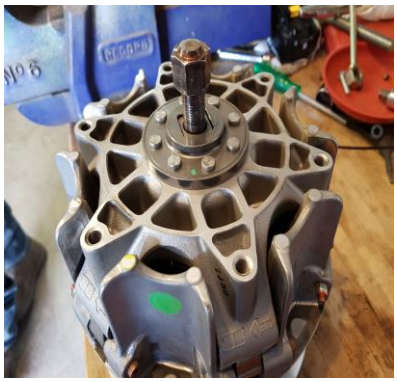
5) You can now install the secondary clutch back onto the machine. Be sure that the secondary clutch assembly is seated all the way in properly on the shaft of the transmission. Sometimes it requires **moving it around** and **putting the trans in gear to get it to drop all the way on to the shaft**.
6) The clutch center bolt must always be torqued to the manufacturers torque procedure. The torque must be done while using the proper holding fixture to properly hold the clutch and torque the bolt. Torque secondary clutch center bolt to (**52 ft/lbs +/-4**).

Removing the primary clutch from the vehicle.
Using the holding tool to hold the clutches from turning, remove the center bolt from the primary clutch. Take note of washers on the bolt and keep the washer/bolt assembly all together and set aside.

1) Install the primary **clutch puller**. Screw the clutch puller through the clutch and it will press against the crankshaft to remove the primary clutch assembly. Have someone help hold the **holding fixture** in place so the clutch will not turn and tighten puller to remove the primary clutch. (try to ensure that if you rotate the primary clutch to always only rotate forweard)
2) **Separating the primary**

Different Can Am models have procedures in the factory service manuals and it should be consulted individually for each model. For this type, leave the puller protruding from top of sheave shaft to a maximum protrusion of 2.5" and use the **Governor Cup Puller BRP** part# 529 036 350 to press apart the two halves of the primary clutch.

The puller is left protruding to work with the Governor cup puller to separate the primary clutch so that you can change primary springs or flyweights. This is a required tool. Do not proceed without the proper tool. The following diagram shows the tool pictured along with the primary clutch and puller still assembled.

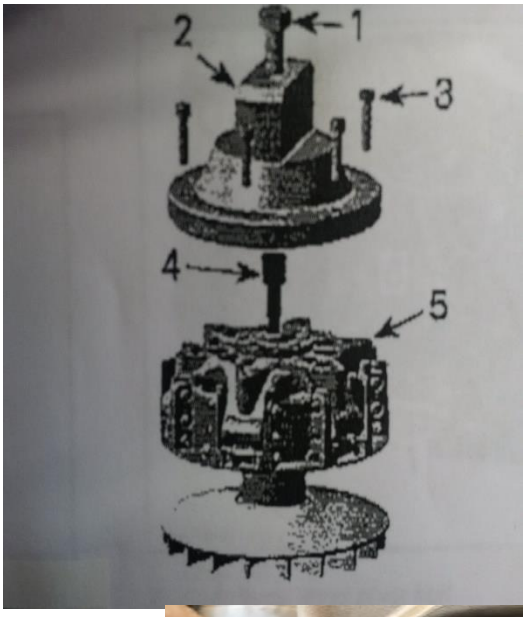


- Part#4 pictured is the puller head extended 2.5" (it goes up into the tool)--- Part#2 is the governor cup puller

- Part#3 is the M8 x 35 puller screws that mount the tool to the clutch

- Part#1 is the screw part of the tool that is turned against the head of the puller to separate the clutch.

You tighten the puller tool retaining screws to 15 ft lbs. (part#3)



Be sure to follow the procedures in the service manual.

Remove the governor cup puller tool from the drive clutch

Make sure the **governor and sliding sheave are marked for index**.

3) Carefully lift the governor assembly from the moveable sheave. Be careful not to lose or damage the sliders on the sides of each arm. The slider pucks often fall out and there are special O-rings under them. It is critical that the **O-rings** get placed back in the groove correctly to re-assemble later. If not it will be too tight when sliding the assembly back together.

temporarily fold the flyweight lever arms out to be of the way for removal of the primary spring.
Mark the spring retainer cup and the clutch sheave surface with a marker for re-alignment later.

4) **Change primary spring.** Using the threaded compressor tool, close the tool down onto the spring retainer cap to contain the spring while the screws are removed. Do not over tighten the tool onto the retainer.
After removing the bolts, use the compressor tool to let pressure off the primary spring retainer cap. Install the supplied new primary spring**.**

Using the compression tool, carefully compress the new spring. Be careful when it gets close to seated that the rim edge is in proper position to seat correctly. It should go into place easily. Use blue removeable thread locker on the threads of the bolts for the spring retainer cap. Torque primary spring screws to (**89 inch/lbs**) or 10 N.m

** ***Primary spring*** *– The primary spring is a part of this kit that does have a option. The* ***Tan/Blue primary spring that is supplied*** *with the kit is by far the most popular option, however, there is a "optional" primary spring that is lower RPM engagement. The supplied Tan with Blue stripe is just slightly higher engagement RPM (only approx 100 RPM) than the stock , but offers a smooth , more positive engagement of the belt on take-off. This spring is most popular with all test riders and offers the best performance.*

There is a OPTIONAL Mint Green/Silver spring (part number DPPS-MGS). This is a optional part that engages similar to stock engagement RPM.

The primary spring is a RIDER PREFERENCE thing…it is not what "someone else may prefer". You decide yourself what YOU would prefer. The supplied Tan/Blue is still very smooth and offers a higher level of performance, but there are some like lower engagement RPM to remain like stock and the difference is not huge. Both primary springs are more pressure when fully compressed than the stock spring. The stock primary spring is not suitable for this kit.

5) **Change out the flyweights.** In this case, we will be removing and replacing **all 6 of the flyweights** with Dalton flyweights provided. Pictured are the **3 adjustable** (shown folded out only to show position), and the 3 solid weights folded in to show the configuration of where they go. The flyweights must be installed in this configuration: **3 adjustables (CMD2)** in the position **"every second one" or 120 degrees apart**, and the 3 Dalton fixed solid weights **(CMD1) in the other alternating slots.** Fold them **all back in** for assembly.

6) The threaded hole for tip weight, when used, is ¼" fine thread, and it has a stop. Even short set screws will come to a stop when tightened.

After setting up the provided flyweights **properly for your application (* See Pg.7 "flyweight set – up" for recommended application),** install the new flyweights into the clutch and secure the pins / nuts the same way as they were removed.

Be certain to put the proper thrust washers supplied with the Dalton flyweights in this kit (they **ARE different** from the stock ones). **Place one each side** of flyweight before putting the pin through the weight.

It is **important** that the **O-rings** get put in place properly so that the governor assembly will slide down into the slots correctly. **If the O- rings are not in the groove it will damage the O-rings** and the clutch will not slide correctly. It is normal to be slightly stiff sliding, but if it is tight the O-rings may not be in place correctly.

Note the sliding spider assembly (shown upside down below for reference). There are **7 sided composite slider wear pads** that the flyweights run on. Some other clutches have steel rollers, but this one uses sliders like shown. We try to rotate them so that there is an equally worn slider surface (all 6 facing same direction) facing down to the flyweight surface when you slide it together.

Also NOTE: note the square hole in the center of the spider assembly. The square hole matches the square shaft when you slide the spider assembly onto the shaft of the primary. Keep it aligned as you put it all back together. Hold the assembly together until you get it installed on the engine crankshaft.

Keep all the sliding pucks and O-rings together while you slide the spider down, a helper is handy.

Install the primary clutch assembly. The clutch assembly should be carefully held together as a unit and placed on the engine crankshaft. This clutch attaches to the engine via a set of matching tapers. Be certain the **tapers are clean and dry** (only use quick drying, non-residue cleaner like **brake cleaner**, never lube or oil).

Thread in the primary center bolt. Snug it by hand then use the **holding fixture** to hold the clutch from turning while doing torque. **Torque primary** clutch to **89 ft/lbs (+/- 6 lbs)**

Before installing belt make sure all sheave surfaces are clean and dry using non residue cleaner (Brake Cleaner or Acetone) on a clean rag first then wipe.

**Install belt. Examine belt for inspection or replacement: (flat spots on edge of belt caused from from burning on take off or holding brake etc)

Note direction arrow on the belt.

**** The Factory Can Am belt was used for all testing of this vehicle. the components in this kit are calibrated to this belt compound. Some aftermarket belts are not as durable and can sometimes run at different RPM.**

Note: *In this Kit, you will* ***always use*** *the* ***6 flyweights provided*** *in the earlier described* ***3 + 3 configuration.*** *See page#5 (always use the supplied proper thrust washers on each side of the flyweights*).Use the* ***Tan/Blue Primary spring*** *(or optional -see notes Pg.5)*

27"Tires- Use all flyweights in the configuration provided pg. 5. Use the **3/8" (1.5g) Black set screw in each of the 3 adjustable flyweights.** Use the **primary spring** provided. Use the **Stock secondary spring** in the **#4 position** of the **helix provided**. If often in sand dune applications do all the same except use the ¼" set screw in each adjustable. For slightly higher elevations (approx. 4000') do all the same except run the weights empty (no set screws).

28-29"Tires – **Use all flyweights in the configuration provided on pg. 5.** Use the **¼" (.8g) black set screw** in the tip of each of the adjustable flyweights. **Use the primary spring provided**. Use the **stock secondary spring** in **hole #4** in the **helix provided.** For sand dune type riding or slightly higher elevations (approx. 4000') do the same except run the adjustable flyweights empty.

All 29.5 -32" AT Type/Mixed use and Trail with some mud use type tires

Non XMR models Use all **flyweights in the configuration provided on pg. 5**. Leave the tip screw **holes empty (no set screws)**. Use the **primary spring** provided. The **stock secondary spring** gets installed in the **position #4 on the helix provided.** The flyweights were designed more specifically for this most popular tire size/set up. The proper weight distribution and extra mass is built into the tip area of the flyweight with nothing added (no set screws) for this tire zone.

XMR models (XMR has lower gearing) Use all **flyweights in the configuration provided on pg. 5.** Add a **1/4" (.8g) black set screw** to each of the adjustable flyweights. Use the **primary spring** provided. The stock secondary spring gets installed in the **position #4 on the helix provided.**

33-34" Tires (for use when NO portals or gear reduction is used*)**

Note: Often, people know that with tires in this size range that without gear reduction you are getting outside of the acceptable envelope of the starting ratio provided from the diameter of the clutches. We have tested (and use) larger tires like this, and it is much better than stock clutching with these tires. The following is a guideline for those who choose to use these tires without any gear reduction. Using low-range a lot is important in this application 33-34" tires:

Non XMR models. (33, 34") Use all **flyweights in the configuration provided on pg. 5** with the **3/8" (1.5g) long black set screw** installed in each of the adjustable flyweights. Use the **primary spring** provided. Use Green /White optional secondary spring **/** ** in the **position #4** of the **helix** provided.

XMR version. (XMR has lower gearing in low and high) For XMR w/33" use regular kit set like 29.5-32" above, use/add this spring for **34".** Use all **flyweights in the configuration provided on pg. 5,** with the **Gold (2.6g) button head screw in each of the adjustable flyweights.** Use the chosen **primary spring** provided. Use **Green/White optional secondary spring**** in the **position #4** of the **Helix** provided.

NOTE: The Factory **Can Am belt has been used** for all testing and set-ups above. Often different aftermarket belts are different types of compounds and run ad different RPM and characteristics.

** Always use the supplied proper thrust washers, they are different than stock.*
*** The* ***Optional Green white secondary spring*** *is part number* ***DPSS-G/W-T*** *It is only to be used where specified, more parts are not always better, in fact using a heavier than necessary secondary spring when not required has a very negative effect for speed and efficiency. See details on website.*
*******We have not tested portals or gear reduction****. Persons who have gear reduction may have to test, often models that have added aftermarket gear reduction either do not need clutch calibration or they get set similar to stock tire type settings in clutch kits.*

Read the following pages before operation.

It is a huge benefit to the vehicle operator to understand the CVT system on this vehicle, both for the function of the belt and tuning components, and the limitations and proper use of the drive system. The Owner/Operator, as well as the dealer installing the kit should read it all.

General Overview and CVT basics

Clutching, belts, and potential problems.

This vehicle has excellent hp in stock form. This vehicle has plenty of power, along with tall final drive gearing making it capable of reaching high top speeds in high range. Because of this combination, the potential is here to aggressively overheat belts, particularly when operating at LOW SPEEDS in HIGH RANGE. Any time this vehicle is operated at low speeds it should be in LOW range.

Some operators, who may be simply uninformed, may state things like.... "It has all kinds of power and I should be able to leave it in high!" Although that may sound logical, it is simply not so. This is not a hydrostatic or oil pressure automatic, it is not even a wet clutch type of CVT. **It is, like some other brands, a system that engages the belt each time the vehicle is required to move**. With this type of system, it is important to understand the way the system functions, so you can maximize FUN and avoid belt problems.

The important thing to know here is that in LOW range the belt travels farther up the clutch at a given speed. For example, if you are riding at 10 mph in HIGH, the belt may still be very low in the primary clutch (close to the hub). If you switch to LOW range and travel the same mph, the belt rides up at a higher point on the primary clutch, offering MUCH more belt grip and substantially lower belt temperature. **When going slow, use low**. This simple fact, if not understood, can aggravate the belt wear, and temperature dramatically.

Another mistake that is sometimes done is to hold the brake and rev up the engine past engagement. This will only burn a flat spot on the drive belt and make it un-useable and should not be done on this type of system.

When straying from normal tire sizes and trail operation to other surfaces like mud and sand, it can become increasingly important to have proper clutch calibration to help compensate for the changes. Clutch calibration does one main thing...it changes the "rate of shift of the belt". The way to help eliminate unnecessary slippage and (thus heat) is to have the belt in the correct ratio on the pulleys for the loads present. We can manipulate that shift pattern with clutch tuning components.

You cannot make tires that are too big smaller, or the sand dunes flatter or more firm with less rolling resistance. However, by calibrating clutches we can help to compensate and make these situations easier on the drive belt and improve vehicle performance.

Clutch tuning

If you have the interest, take a moment to read a bit of basic clutch tuning theory. Following is a basic overview to help you understand if you are unfamiliar with CVT function.

Changing CVT tuning components is done for many different reasons, but the thing that you are doing is ultimately **changing the rate of upshift and back shift of the belt** in the pulley system. The factory sends the machine with a calibration that they feel is a good "all around" set up. Sometimes we agree, and sometimes disagree, but it also has to consider fuel economy and emissions during its testing. Many owners of ATV's and UTV's have a desire to re-calibrate the clutch system more specifically to their needs based on their own usage, and situation. Common reasons are racing, oversized tires, altitude, mud running, or towing. For instance, if you are a fan of mud and big tires, it is obvious that the taller final drive ratio from installing the tires changes things. With larger tires and more rotating weight, the last thing you would want would be to upshift too quickly and kill the rpm too rapidly, so you want that initial upshift to be slower. If you install tires much larger than the acceptable envelope that the manufacturer recommends, you can easily burn belts, the CVT tuning components can't change the actual gear ratio resulting, but by re-calibrating the CVT drive system, you can often change the shift pattern to help get better results for your application. It will hold its correct RPM better by properly shifting on its own to the proper belt ratio as it comes under load (back shifting). based on what you set it up to do. If you were to install larger tires, and your machine was still upshifting quickly (like you can get away with, with small stock tires) it would lower the rpm to a point **lower than the peak hp rpm** and performance would suffer. The belt would also not be in the proper ratio for the loads present with the bigger tires resulting in more slippage and heat and thus causing delamination and failure of the drive belt.

It is also very **important to remember** that CVT tuning parts only control the rpm during the **"clutching phase"** The clutch phase is when the **belt** is going from low ratio to high ratio on the clutch pulleys. On ATV's / UTV's the "**clutch**

phase" is over in a distance of approximately 500 ft on a full throttle run. Once the belt is to the top of the primary clutch, it is to the top, and clutch components no longer control the RPM after that point. After that "fully shifted" point the engine will often start to overrev, but it is because the belt can shift no farther to control the rpm.

Operating RPM - CVT tuning is often focused on operation rpm, but remember it is rpm during the "clutching phase" that is affected by clutch tuning components.
21+ Can Am Commanders have a wide useable power band. Best peak tested operating zone RPM for general use is **7000-7600 during the clutching phase.** Typically getting to 7100 to 7400 during the **first 50 mph** on a test run in high range is common for good performance. There can be some variance and some modifications make the vehicle "happy" at higher or lower rpms, but on a STOCK engine at lower elevations this is the best tested rpm zone for all around use. Remember that when on a long road run the clutch phase is over in a short distance, and that your rpm may be higher after the belt is fully shifted but on long runs that rpm may not necessarily be a result of clutch components.

The Components

It is NOT that lower, or higher rpm is better. Ideally, you want the clutch calibrated to shift the belt at the correct rate to hold the rpm at the rpm that the engine makes best HP. For instance, if an engine makes peak hp at 7400, then having it calibrated to run at 8400 is probably worse than if set up to run at 7000, as many crankshaft engine dynos will easily prove. Some people get wrapped up in thinking "more rpm is always better". Proper peak HP rpm zone is the target. Different components all may overlap but here is a basic guideline to help understand.

Flyweights- Flyweights are the principal control of **engine rpm during the Clutching Phase part of a test run**.

The proper amount of flyweight mass (and shape/design) is determined by both the **other CVT tuning components being used,** the **given situation** or intended use of the vehicle, and ultimately the **field tested results for best efficiency for the situation** at hand.

HEAVIER flyweights upshift FASTER, and thus **lower** the operating RPM.
LIGHTER flyweights upshift the pulleys SLOWER, thus allowing **higher** RPM during the clutching phase.

Primary Springs- Primary springs have pressure characteristics and uses. Primary spring is a principal control of "engagement rpm" (the RPM required to close the clutch and grab the belt) but also has other effects on clutching. It does have effect on the shift RPM (the RPM going down the track during the clutch phase part of the test run). The springs are usually compared by using their pressure load rating

The **primary spring in this kit** is **Tan/Blue**, and there can be ordered a optional **Mint Green/Silver**. Both of these springs have more pressure when fully compressed than the stock spring. Ther Tan Blue is most preferred, however there is nothing wrong with the lower (sooner) engaging Mint Green/Silver one.

Secondary Springs- Secondary clutch springs are a component that has some overlapping features. Its principal function is torque feedback sensing, For this kit, the stock secondary was deemed BEST for most applications. There are a couple exceptions of Very large / competition Mud tires. Using a secondary spring heavier than necessary for a particular application can be a huge negative for clutch efficiency. There is a optional heavier secondary spring listed in the Set Up guide Pg.7 for certain applications of this kit.

Helix- The helix is one of the components for control of "rate of shift of the belt" in the secondary clutch. A helix can have different ramp angles or curves. The helix is a component that works in conjunction with the springs used and the rest of the tuning components in both clutches.

See Notes on last page for Optional Parts and FAQ

Frequently asked Questions:

Question: ***Which primary spring should I use?***

The normal and principal set up is to yes, use the Tan/Blue.
This is more of a "Rider preference" than anything. Yes, there is a slightly sportier feel and the throttle response is a better when using the Tan/Blue. However, there are some that prefer sooner engagement of the belt. The optional Mint Green/Silver spring engages at a RPM similar to stock clutching when used in this kit, and some like that.

It is not something that anyone else can advise you on really, because everyone is different, …as mentioned, rider preference. Most prefer to use Tan/Blue, and it is not any type of "drastic difference". It is Subtle. It is still smooth and a more positive engagement of the belt. It is nice to have the option, this kit gives you that.

Question: Could I use the stock primary spring?
No, the stock primary spring has a different pressure when fully compressed and is not compatible with this kit.

Question: What if I want even lower rpm engagement of the belt than stock?
Many may not realize the implications on this type of CVT system. This system does not have a wet clutch, it has to grab the belt each time and the primary spring has more function that only the "engagement rpm. It is the opposing force to the flyweights. It is involved in returning the flyweights to low ratio when back shifting is required. Some aspects like this are critical to proper performance when the vehicle senses load from soft terrain and hills, etc. We would not suggest engaging lower RPM than stock clutching did on this vehicle. So no, you should not try to manipulate the clutching to engage any lower.

Optional parts:

The optional **Green/White Secondary spring. Part number (DPSS-G/W-T)**

Question: ***should I use the optional Green/White secondary spring?...I always used a different secondary spring on some other ATV models, and someone told me they always do.***

Not unless specified in the description of your application in the set-up guide (page7) .

The ***Optional Green white secondary spring*** *is only to be used where specified, and when set up with the flyweights in the proper configuration. More parts are not always better, in fact using a heavier than necessary secondary spring when not required, or when the rest of the clutching is not set up correctly for it has a very negative effect for speed and efficiency.*

Thank you for choosing Dalton Industries!