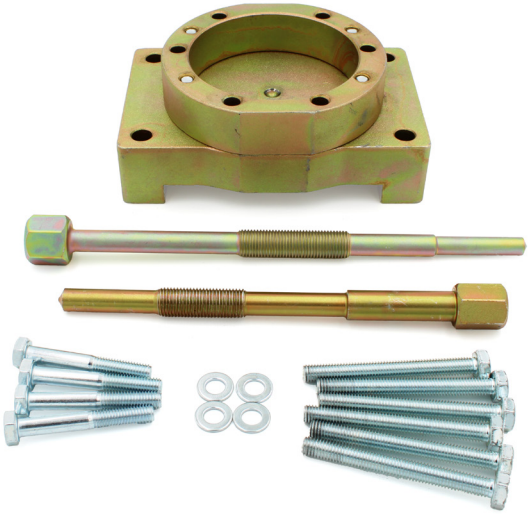
# PDRIVE MASTER CLUTCH SERVICE KIT - EZCSK7

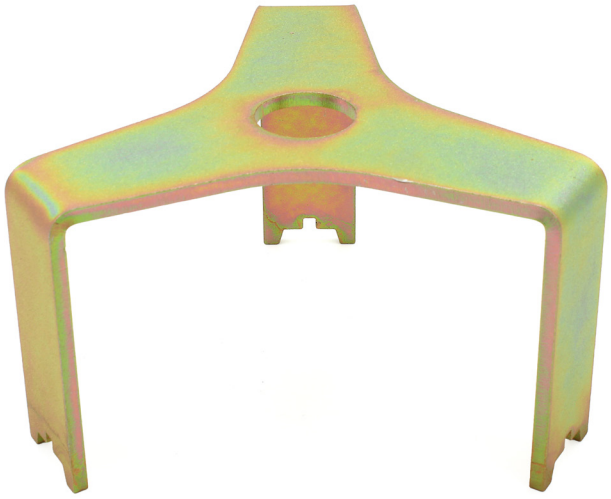
**Included in this kit:**

1 - Primary Clutch Puller PCP-15 (529000064)
1 - Clutch Splitter Tool EZCST2 (529036546 & 529036350)
1 - Clutch Locking Tool EZCALT3 (529036559)
1 - Clutch Compression Tool pDrive CCT830 (529036545 & 529036542)
1 - Weight Change Tool PDWCT1 (529036378)
1 - pDrive Tool PD1 (529036372)
1 - Clutch Compression Tool CCT840 (529036548)
1 - Bolt to remove/install belt

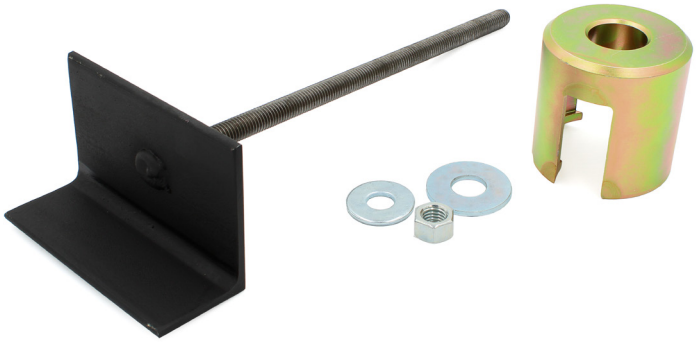
**EZCST2 & PCP-15 - Clutch Splitter and Puller**



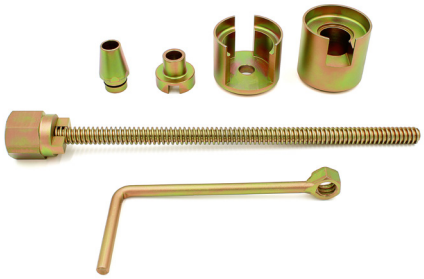
**PDWCT1 - Weight Change Tool**



**CCT830 - pDrive Clutch Compression Tool**



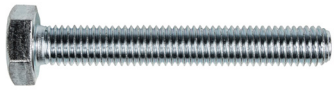
**CCT840 - Clutch Compression Tool**



**EZCALT3 - Clutch Locking Tool**

**PD1 - pDrive Tool**

**BOLT**



# PDRIVE CLUTCH SPLITTER TOOL - EZCST2

- Once the primary clutch is removed off of the machine, this tool allows you to easily separate or split the inner and outer sheaves so you can service or tune the clutch
- Will work on the QRS-X style primary clutch and the pDrive primary clutches
- Replaces OE Can Am part numbers 529036546 and 529036350

**Follow these steps to remove the primary clutch from the machine:**

1. Remove the key from the ignition. Jack up the rear of the machine so the tires are just barely off the ground. Remove the driver side lower rear shock bolt. Loosen the hose clamp on the vent tube going to the top of the clutch cover.

2. **QRS secondary clutches** - Remove the clutch cover bolts and remove cover. Thread the Driven Pulley Adapter (Can Am part number 708200720 usually in your glove box from the factory, this is the belt changing tool) into the center of the secondary clutch. Thread the tool in tight by hand and then back it off about one turn. Now thread the Driven Pulley Extractor (Can Am part number 529000088 usually in your tool kit) which is the long, threaded bolt. As you tighten the bolt it should open the secondary clutch and allow you to remove the belt. Note or mark the direction of the belt so if you reuse it you can install it the same direction. Remove the belt and the adapter. These belt removal tools are available through EPI if you need them.

3. **DDS secondary clutches** – Remove the clutch cover bolts and remove cover. Use the EPI belt removal bolt and thread the bolt into one of the holes towards the center of the secondary clutch. As you tighten the bolt it should open the secondary clutch and allow you to remove the belt. Note or mark the direction of the belt so if you reuse it you can install it the same direction. Remove the belt and the bolt.

4. Use the clutch holding tool (not included) to keep both clutches from rotating, Fig 1. Put the machine in neutral so you can rotate the clutches. Slide the tool over the primary clutch first, you might have to rotate the clutch one way or the other, then slide the tool over the secondary clutch until it fits flat on the clutches. Be sure to keep track of each bolt and washer and how they come off so you can reinstall them the proper way. Remove the secondary clutch bolt (17mm) and the primary clutch bolt (24mm), leave the clutches on the machine for now. Thread the clutch puller (PCP-15) into the primary clutch and tighten puller until the clutch pops off of the crankshaft. **DO NOT USE AN IMPACT.** You will need to hold the clutch holding tool onto the clutches to keep the primary from rotating. Once you get the primary clutch off, set it on a clean and dry surface. Slide the secondary clutch off the machine and set on a clean surface.

5. To install the clutches back onto the machine just reverse the process other then it's usually easiest to install the tool on the primary clutch first and then the secondary clutch.

**Fig 1**

**Splitting the QRS-X Primary Clutches:**

1. Place the primary clutch on a flat, stable surface and mark the edges of the 3 assembly pieces as shown in figure 2. This is important so you can reassemble the clutch in the proper orientation.

2. Place the EPI EZCST2 plate on top of the clutch, as shown in figure 2, with the cup of the tool facing up. Thread the 4 included bolts with washers through the tool and into 4 of the threaded holes of the clutch. See figure 2. You only need to snug these 4 bolts down.
3. Grease the threads of the smaller diameter clutch puller (PCP-19, included in the EZCST2 kit). Also, add a dab of grease onto the end of the puller. Thread the puller into the crank side of the clutch until it touches the EZCST2 plate. See figure 3.

4. Secure the EZCST plate in a bench vice, being careful the vice jaws only make contact with the EZCST plate and not the clutch housing. If your using an impact you don't have to clamp the tool in a vice.

5. Using a large breaker bar (or impact) and 21mm socket, tighten the puller until the two halves of the clutch split apart. They may "pop" loudly when they separate. If they don't separate easily, tighten the puller and tap the end of it with a hammer, the jolt should help release the clutch halves.

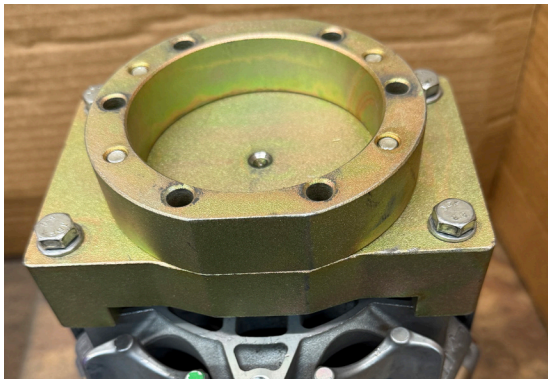


**Fig 2**

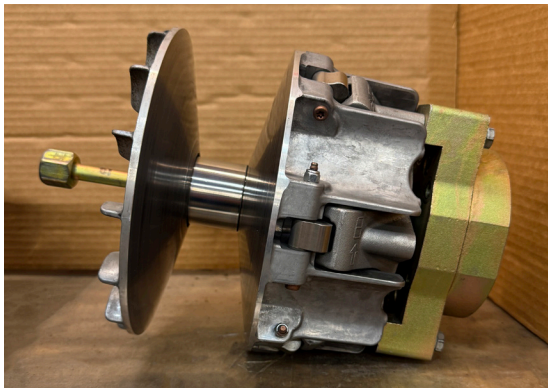


**Fig 3**

**Splitting pDrive primary clutches:**

1. Use a marker to mark the primary clutch sheaves so you can assemble them the same way they came apart. Blow out the clutches with air to help remove extra dirt and belt dust.

2. Remove the six bolts in the center of the clutch. Place the EPI splitter tool (Fig 4) with the cup side facing down and onto the clutch. Align the bolt holes and evenly tighten the six bolts through the tool and into the clutch. The bolts don't have to be torqued down just hand tighten all of them equally.

3. Put a small dab of grease on the tip of the puller and on the threads then hand thread the supplied puller (PCP-19) through the back side of the clutch and tighten until the clutch cover pops loose. Fig 5

4. Remove the puller, the six bolts and the tool. The cover plate should come off the clutch. Now you can work on removing the spring, weights, or service the clutch.

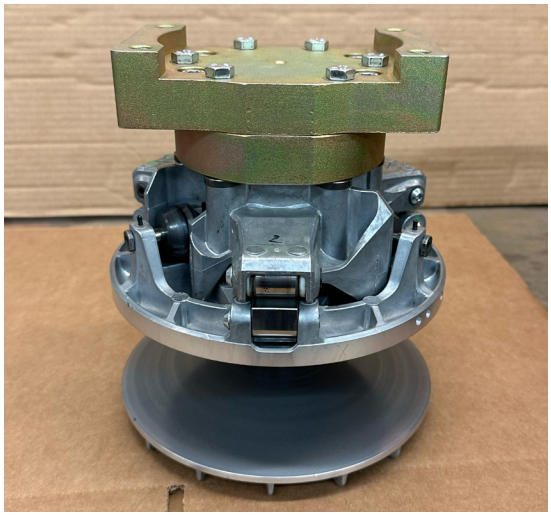


**Fig 4**

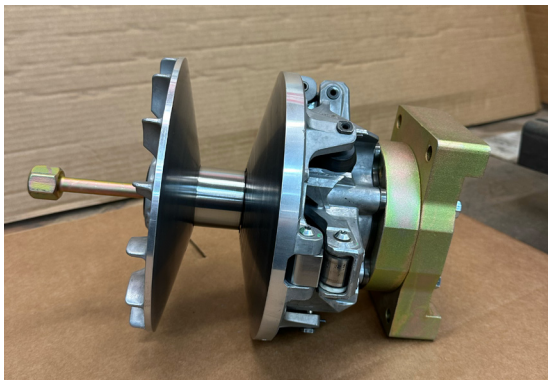


**Fig 5**

# CLUTCH COMPRESSION TOOL - CCT840

- Allows one person to safely remove/install the secondary spring from the secondary clutch. Once spring is removed you can service and split the secondary clutch.
- The spring cups and cone will also work with OE Can Am service tools.
- Replaces Can Am OE # 529036548
- EPI offers a full line of clutch tools, visit www.epiperformance.com for exact tool fitment and more information.

**Removing the primary spring**

1. Use a marker to mark four different spots in line with each other to ensure you get everything aligned properly when assembling the clutches. Mark a line on the side of the metal spring cup and a line towards the center of the clutch that align with each other. Also, make a mark on the outside edge of both clutch sheaves.
2. Tighten the clutch compression tool in a vise, and then carefully slide the clutch onto the threaded shaft.
3. Place the cup with two slots cut into it onto the spring cup, with the larger opening facing you and the open end of the snap ring at the larger opening (See figure 1).
4. Thread the nut down until you can fully see the snap ring. Use a snap ring tool or two smaller flat-tip screwdrivers to carefully pry the snap ring open, and push the snap ring up and off the shaft. We found it easiest to use a flat-tip screwdriver and push up on the back of the snap ring through the smaller hole, which should help push the snap ring up and off.
5. Slowly loosen the spring tension by unthreading the tool. Remove the spring cup and the spring.

**Figure 1**

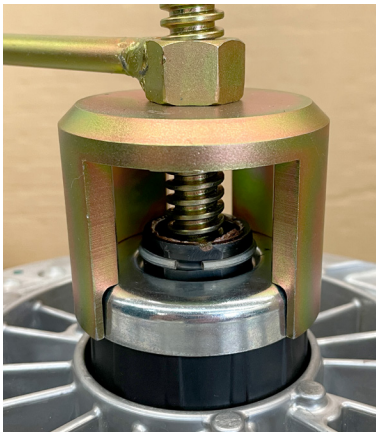
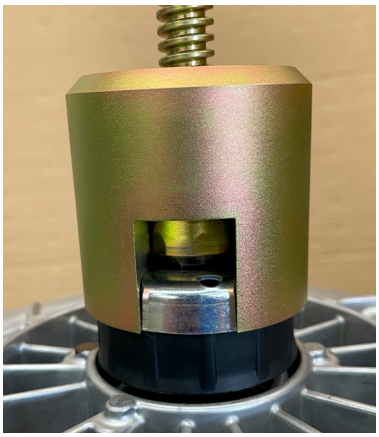


**Figure 2**

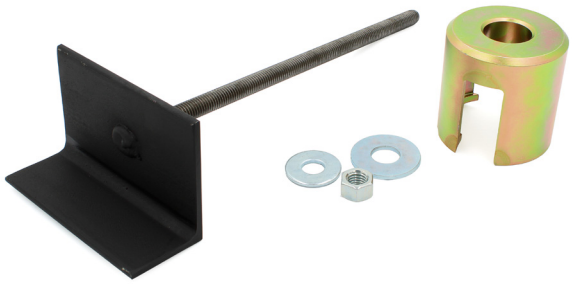
**Installing the primary spring**

1. Notice the flat spots on the shaft of the secondary clutch. Slide the cone from the compression tool so it fits into the shaft of the clutch and rotate it so the flat spots line up with each other (see figure 2).
2. Place the spring into the clutch. Place the spring cup on top of the spring and then place the snap ring on top of the spring cup.
3. Slide the metal cup with one opening onto the tool with the opening facing you (see figure 3).
4. Align all your alignment marks and slowly tighten the tool down, compressing the spring into the clutch until you hear the snap ring snap into place. A lot of times you will hear one click, but the snap ring isn't fully seated, so keep tightening until it stops. If for some reason you don't hear a click or the tool won't go down far enough, that usually means you don't have the flat spots aligned properly or you have a damaged snap ring.
5. Once the snap ring is seated, remove the clutch from the compression tool.

**Figure 3**



# pDrive CLUTCH COMPRESSION TOOL - CCT830



- Allows one person to safely compress the primary clutch to remove/install the primary spring and to service the primary clutch.
- The spring cup will also work with OE Can Am, Ski Doo, and Lynx pDrive service tools.
- You will need to split the clutches before you are able to use this tool to remove the clutch springs. EPI offers all the tools need to service your clutches.
- You can also use this EPI tool along with our weight change tool, EPI part number PDWCT1, to be able to change weights, rollers, and pins without having to split the clutches.

**Removing the primary spring**

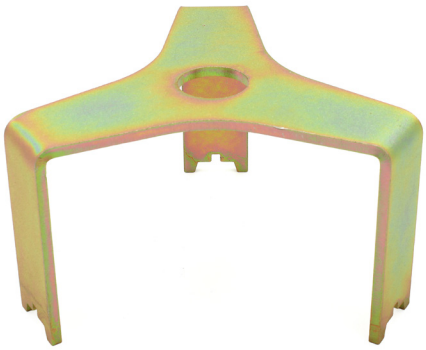
Put the clutch compression tool in vise then slide the clutch onto the tool so the spring cup is facing up. Slide the cup onto the tool, add the large and small washers, and thread the nut down on the tool so there is slight pressure on the spring cup. Make sure the cup is centered and the large cut out in the cup is facing you. Slowly compress the cup down until you can remove the snap ring. We found a small screw driver and a little pick works good to spread the snap ring open enough and then push up and the snap ring should pop out. Slowly thread the nut up on the compression tool to remove the spring. Blow out all parts of the clutch and spray brake cleaner on a clean rag and wipe down the clutch part except for the clutch bushings.

With the spring removed you can now service/clean the clutch, change the rollers and weights.

**Installing the primary spring**

Place the clutch on the compression tool. Install the primary spring and then place the spring cup and snap ring on the spring. Slide the cup from the tool onto the spring cup, making sure that its centered and the large opening is facing you. Add the large and small washers and then slowly tighten down the nut until the spring cup is down far enough to install the snap ring. You can normally install the snap ring by hand by just pushing it down into the groove for the snap ring, make sure the snap ring is in the groove all the way around. Slowly back loosen the nut and remove the clutch from the tool.

# pDrive WEIGHT CHANGE TOOL - PDWCT1



- Can be used with EPI Clutch Compression Tools - CCT510,CCT820 and CCT830 or OE Can Am/Ski Doo tools to open the clutch far enough to change weights, rollers, and pins without disassembling the pDrive primary clutch.
- Allows you to blow out, clean and inspect the clutch.
- Used on Can Am ATV/UTV, Ski Doo Snowmobiles, and Lynx Snowmobiles with pDrive primary clutches
- Replaces Can AM OE part number 529036378 Drive Pulley Opening Tool.

**If you are using with EPI Tools CCT510, CCT820, or CCT830**

1. Place the EPI tool in a vice. Carefully slide the clutch onto the threaded rod. Place the weight change tool on top of the clutch making sure the tool fits onto the clutch properly. See picture. Add the large washer, small washer, and nut. Slowly tighten the nut until the clutch is opened far enough for you to clean, inspect, or service the clutch.
2. Slowly remove the nut and washers. Remove the tool and then the clutch.

**If you are using the OE Can Am, Ski Doo or Lynx tool**

On most snowmobile and some ATV/UTV models you can use this tool without removing the clutch from the machine. You will have to either remove the primary clutch bolt or remove the clutch off of the machine. Thread the shaft into the clutch by hand until it bottoms out. Slide the EPI tool onto the threaded shaft and then slowly tighten down until the clutch is open far enough to service the clutch. Once you done working on the clutch slowly remove the nut and washer. Remove the EPI tool and remove the threaded shaft from the clutch.

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# WEIGHT PIN TOOL - PD1

**Changing the weights**

Remove the torx head weight pin bolt. Thread the pin tool into the roller and use a hammer to carefully tap on the tool to push the pin out of the clutch. Once the pin is out unthread the tool. Remove the weight. To install the new weight; place the weight in the clutch, you might have to raise the tip upand into the hole in the center of the clutch to get it to sit in the clutch properly. Slide the roller through the weight, thread the roller tool into the pin and lightly tap the roller into the clutch. Tigthen then bolt to 44in/lbs. Repeat the process for all the weights.

**Changing the roller pins**

Use the same process as you would to change the weights.