



\*015-20143\*

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# SLP Spring Compression Tool

For Ski-Doo TRA Drive & RER Driven,  
2012-15 Arctic Cat Secondary &  
2016-19 Arctic Cat BOSS Secondary  
Part # 20-143

## Kit Contents:

- |                                  |                                   |
|----------------------------------|-----------------------------------|
| 1 - Spring Compression Tool Base | 1 - Instructions (#015-20143)     |
| 1 - Large Wing Nut               | 1 - SLP Decal (#60-60)            |
| 1 - Helix Press Guide            | 1 - Drive Spring Cover Compressor |

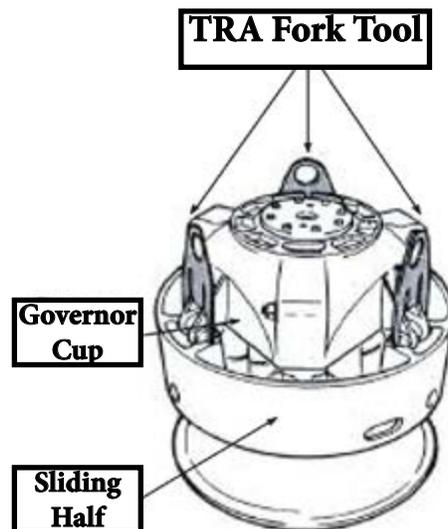
## Instructions - Ski-Doo

*This Spring Compression Tool should be bolted to a bench or clamped in a vise for secure operation.*

### Ski-Doo TRA Drive Clutch Disassembly:

1. Turn wing nut counterclockwise to remove it from center stud. Slide helix press guide and drive spring cover compressor off of the center stud.
2. Slip sliding half of drive clutch (without governor cup\*, See Illustration #1) over the center stud and slide down to the bottom of the tool base. Slide drive spring cover compressor down over center stud and center it over the drive spring cover. Slip helix press guide over center stud so that “U” shape is down (See Illustration #2), and slide down until it rests on the drive spring cover compressor. Tighten wing nut by spinning clockwise until it presses snugly against the helix press guide.
3. Remove the three allen screws holding the drive spring cover.
4. Release spring tension by turning the wing nut counterclockwise.

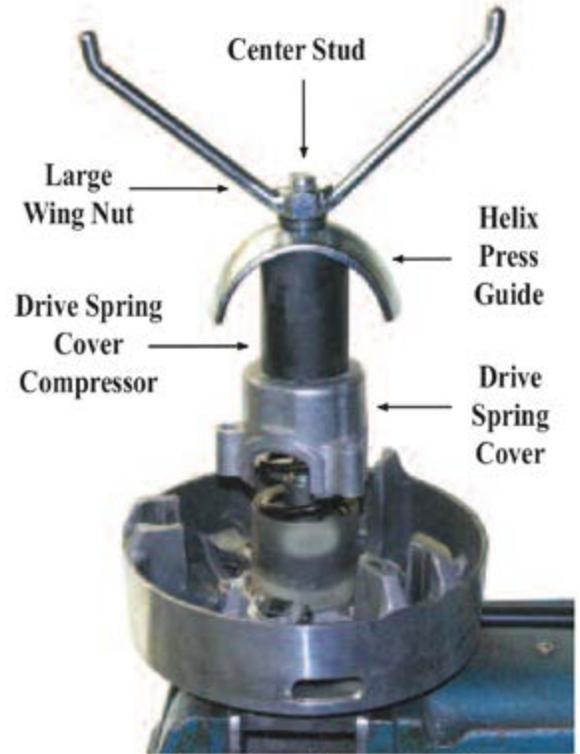
**\*Note: For easy removal of the governor cup, use TRA Fork Tool #20-156 (See Illustration #1).**



**Illustration #1**

## Ski-Doo TRA Drive Clutch Re-assembly:

1. Turn wing nut counterclockwise to remove it from center stud. Slide helix press guide and drive spring cover compressor off of the center stud.
2. Slip the sliding half of the drive clutch over the center stud and slide down to the bottom of the tool base. Slide drive spring and drive spring cover over and down center stud. Slide drive spring cover compressor down over center stud and center it over the drive spring cover. Slip helix press guide over center stud so that "U" shape is down (See Illustration #2), and slide down until it rests on the drive spring cover compressor. Tighten wing nut by spinning clockwise until it presses snugly against the helix press guide. Continue spinning wing nut clockwise until spring is compressed, and drive spring cover mates properly with the sliding half of the drive clutch.



**Illustration #2**

3. Align factory balance marks in sliding half of drive clutch and drive spring cover. Align the three allen screw holes in the drive spring cover with the corresponding holes in the sliding half of the drive clutch.
4. Install three allen screws in drive spring cover and torque to manufacturer's specification.
5. Remove wing nut, helix press guide, drive spring cover compressor, and the sliding half of the drive clutch by turning the wing nut counterclockwise.

## Ski-Doo RER Driven Clutch Disassembly:

1. Turn wing nut counterclockwise to remove it from center stud. Slide helix press guide and drive spring cover compressor off of center stud.
  2. Slip RER driven clutch (with helix pointed upward) over center stud and slide down to the bottom of the tool base. Slip helix press guide over center stud so that "U" shape is down (See Illustration #3), and slide down until it rests centered on the helix with alignment tanges to the inside of the flange. Tighten wing nut by spinning clockwise until it compresses the helix enough to release the two half-moon lock-rings for removal.
  3. Remove the two half moon lock rings.
  4. Release the spring tension by turning the wing nut counterclockwise.
- CAUTION:** If a longer spring than OEM is used there may still be spring tension against the wing nut at the end of the center stud threads. Use care to hold the tension while removing the wing nut to prevent it from being propelled off of the center stud and possibly causing bodily harm.

## Ski-Doo RER Driven Clutch Re-assembly:

1. Turn wing nut counterclockwise to remove it from center stud. Slide helix press guide and drive spring cover compressor off of center stud.

2. Slip RER driven clutch (with helix pointed upward) over center stud and slide down to the bottom of the tool base. Install spring with tange on end of spring down and firmly fitted into bottom hole. Place plastic spring cover over top of spring and plastic washer on top of spring cover. Set helix over center stud and slide down, locating in desired position on clutch shaft. Slip helix press guide over center stud so that "U" shape is down (See Illustration #3), and slide down until it rests centered on the helix with alignment tanges to the inside of the flange.

3. Begin applying pressure with the wing nut in a clockwise rotation. Caution: Be sure to carefully align the splines between the helix and the clutch shaft to avoid binding during the compression step. Failure to align the splines properly will cause shaft and/or helix damage. At the same time be sure that the cam tower points are offset from the button towers or rollers, which otherwise would stop the movement of the helix during the compression process. Failure to properly position towers or rollers could cause damage to them.

4. Compress the spring and helix enough to install the two half-moon lock rings into the shaft groove. Begin to release pressure. Make sure that the lock rings seat securely into the recess washer.

5. Release the spring tension by turning the wing nut counterclockwise. Once all pressure is released, remove the wing nut and helix press guide. Remove clutch assembly from tool base.



**Illustration #3**

## Instructions - Arctic Cat

*This Spring Compression Tool should be bolted to a bench or clamped in a vise for secure operation.*

### 2012-15 Arctic Cat Driven Clutch Disassembly:

1. Turn wing nut counterclockwise to remove it from center stud. Slide helix press guide and drive spring cover compressor off of the center stud.

2. Slip the driven clutch with the helix facing down over the center stud and slide down to the bottom of the tool base. Slide drive spring cover compressor down over center stud. Slip helix press guide over center stud so that "U" shape is down (See Illustration #4), and slide down until it rests on the drive spring cover compressor. Center it between the four torx head screw holes (See Illustration #5). Tighten wing nut by spinning clockwise until it presses snugly against the helix press guide.

3. Mark the helix, movable sheave and stationary sheave for proper orientation before disassembly.

4. Remove the four #40 torx head screws holding the helix to the movable sheave.

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5. Release spring tension by turning the wing nut counterclockwise.

### 2012-15 Arctic Cat Driven Clutch Re-assembly:

1. Turn wing nut counterclockwise to remove it from center stud. Slide helix press guide and drive spring cover compressor off of the center stud.

2. Slip the helix, spring, stationary sheave and moveable sheave over the center stud and slide down to the bottom of the tool base.

3. Align marks made in helix, movable sheave and stationary sheave for proper orientation.

4. Slide drive spring cover compressor down over center stud. Slip helix press guide over center stud so that "U" shape is down (See Illustration #4), and slide down until it rests on the drive spring cover compressor. Center it between the four torx head screw holes (See Illustration #5). Tighten wing nut by spinning clockwise until it presses snugly against the helix press guide. Continue spinning wing nut clockwise until spring is compressed, and helix mates properly with the movable sheave of the driven clutch.

**Helpful hint:** Loosening the two 8mm screws holding the plastic sliders will help with aligning the four #40 torx head screw holes in the movable sheave to the helix.

5. Install the four #40 torx head screws in through movable sheave and into helix. Torque to manufacturer's specification. Tighten and torque 8mm screws to manufacturer's specification.

6. Remove wing nut, helix press guide, drive spring cover compressor, and the driven clutch by turning the wing nut counterclockwise.



Illustration #4

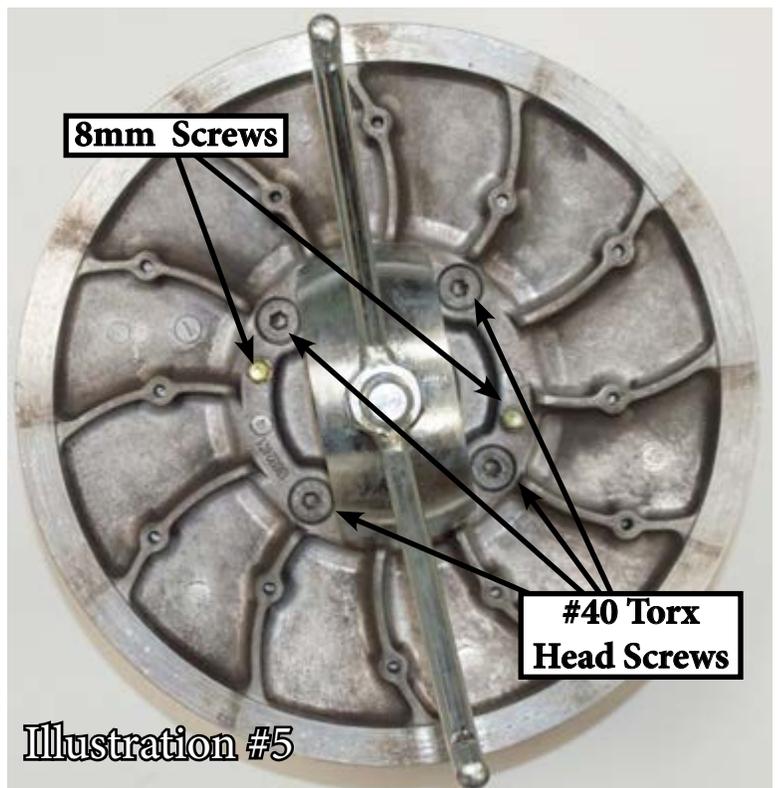


Illustration #5

## 2016 Arctic Cat BOSS Driven Clutch Disassembly:

1. Turn wing nut counterclockwise to remove it from center stud. Slide helix press guide and drive spring cover compressor off of the center stud.
2. Slip the movable sheave of the BOSS driven clutch with the helix facing up over the center stud and slide down to the bottom of the tool base. Slide drive spring cover compressor down over center stud. Slip helix press guide over center stud so that "U" shape is down (See Illustration #6), and slide down until it rests on the drive spring cover compressor. Tighten wing nut by spinning clockwise until it presses snugly against the helix press guide.
3. Remove the four torx head screws holding the helix to the movable sheave.
4. Release spring tension by turning the wing nut counterclockwise.



## 2016 Arctic Cat BOSS Driven Clutch Re-assembly:

1. Turn wing nut counterclockwise to remove it from center stud. Slide helix press guide and drive spring cover compressor off of the center stud.
2. Slip the movable sheave, spring, spider and helix over the center stud and slide down to the bottom of the tool base.
3. Slide drive spring cover compressor down over center stud. Slip helix press guide over center stud so that "U" shape is down (See Illustration #6), and slide down until it rests on the drive spring cover compressor. Align slots in helix to align with towers on the movable sheave. Tighten wing nut by spinning clockwise until it presses snugly against the helix press guide. Continue spinning wing nut clockwise until spring is compressed, and helix mates properly with the movable sheave of the driven clutch.
5. Install the four torx head screws through the helix into the movable sheave. Torque to manufacturer's specification.
6. Remove wing nut, helix press guide, drive spring cover compressor, and the driven clutch by turning the wing nut counterclockwise.