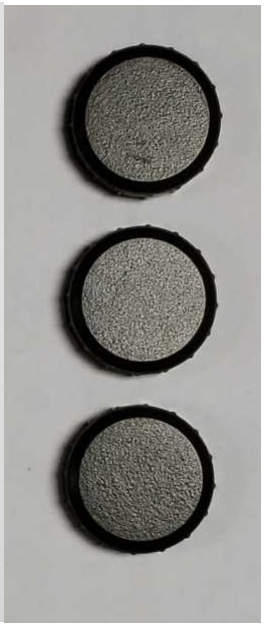
Can AM X3 clutch service kit instructions.

******WARNING- proper tools are essential. Failure to use the proper tool, or the use of other presses for pulling tools/devices will most likely result in a broken or non-useable clutch. This job should only be done by qualified service personnel with the proper tools for the job. Make sure to consult your dealer service manual, and also that clutches have been properly inspected for fatigue, cracks, wear. UTV clutches are assembled under spring pressure. DO NOT attempt to disassemble clutches if you are not qualified, as serious personal injury could result. KWI will not be responsible for injury or damage as a result of improper practices or assembly/disassembly by untrained personnel.**

We have Instructional videos at https://www.kwiclutching.com/videos

1. Kit Contents
    a. 3 Slider Shoes
    b. 12 KWI damper orings
    c. 2 Primary bearing thrust washers
    d. 1 tube special bearing grease



2. Access the clutches by removing the outer clutch cover and remove the belt.

You DO NOT need to remove the primary clutch from the vehicle or crankshaft to disassemble the clutch and service it.

3. Put index marks on all the primary and secondary sheaves, primary governor cup and Helix so you can reassemble them in proper orientation. (If you are using a KWI clutch kit the helix arrow WILL NOT line up with the sheave arrows- this is normal)
4. **Primary Clutch-** Use the attached BRP service manual excerpt directions as a reference for all clutch disassembly and reassembly.
5. Remove the primary clutch bolt and washer.

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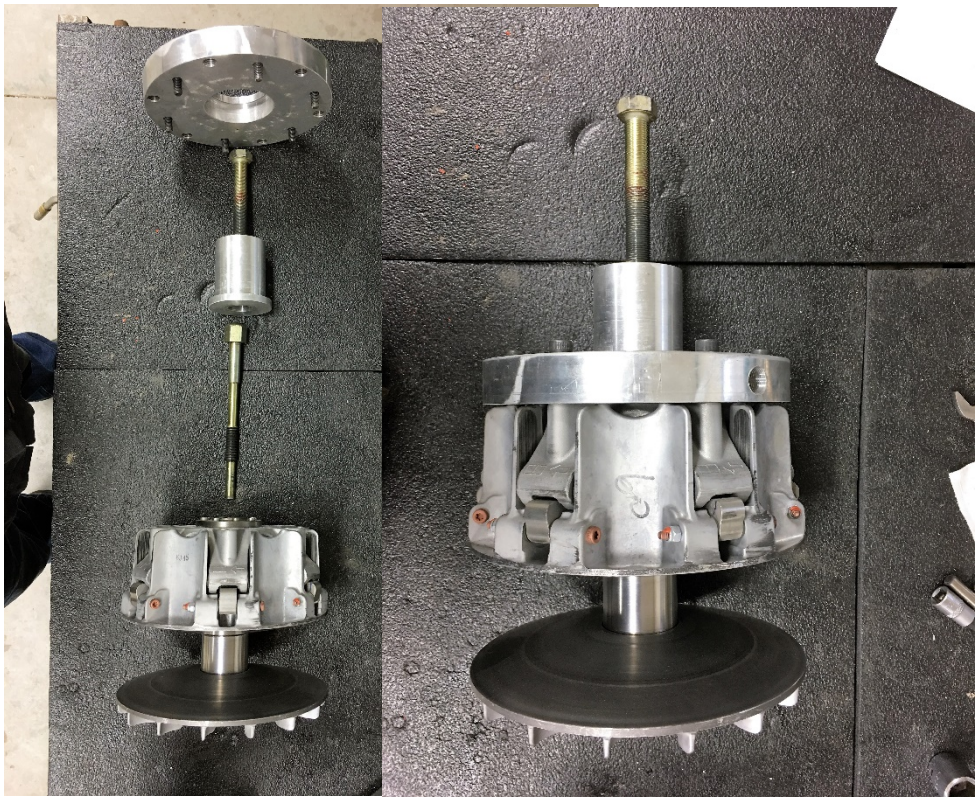
6. Install the puller bolt and governor cup puller then pop the governor cup loose from the taper with an impact gun. Remove the governor cup puller and puller bolt. (This requires the KWI clutch tool kit assembled as pictured in photo 1 below or the BRP governor cup puller)



7. Remove clutch moveable sheave assembly from fixed shaft per included BRP instructions.
8. Follow the directions on cleaning and greasing on the next page. Replace thrust washers and slider shoes if worn.
    a. SLIDER SHOE WEAR AROUND THE EDGES OF THE 3 LOOSE SHOES (the 3 slider shoes that fall out when you disassemble the clutch are the ones we are concerned with) WILL PREMATURELY WEAR OUT YOUR GOVERNOR CUP IF THE SLIDER SHOES ARE NOT REPLACED AT THE FIRST SIGNS OF WEAR. IF THE RIDGES ARE WORN OFF THE SIDES OF THE SLIDER SHOES THEN REPLACE THEM.
    b. The primary bearing thrust washer that will most likely be bad is the one which sits on the fixed sheave (motor side) of the primary bearing. Youll see it worn out from spinning on the machined lip in the fixed sheave bore.

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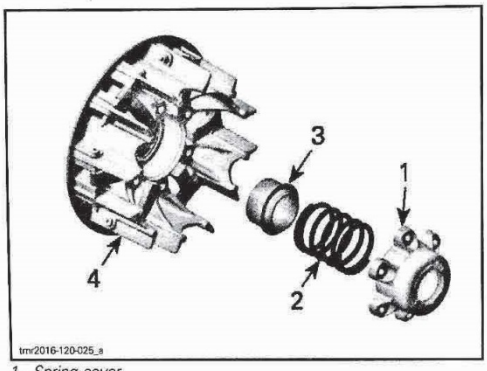
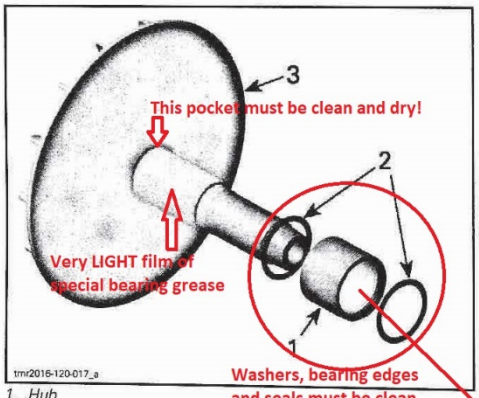


1. Spring cover
2. Spring
3. Spring seat
4. Sliding sheave

Fixed Sheave

Remove the following components from the fixed sheave.



1. Hub
2. Thrust washers
3. Fixed sheave

Washers, bearing edges and seals must be clean and dry!

Cleaning the Drive Pulley

Clean pulley faces and shaft with fine steel wool and dry cloth.

Using a paper towel with cleaning solvent, clean:
- Crankshaft tapered end
- Crankshaft threads
- Taper on the fixed sheave
- Threads of drive pulley screw.

DRIVE PULLEY CLEANING	
Service product	PULLEY FLANGE CLEANER (P/N 413 711 809)

NOTICE Avoid contact between cleaner and crankshaft seal because damage may occur.

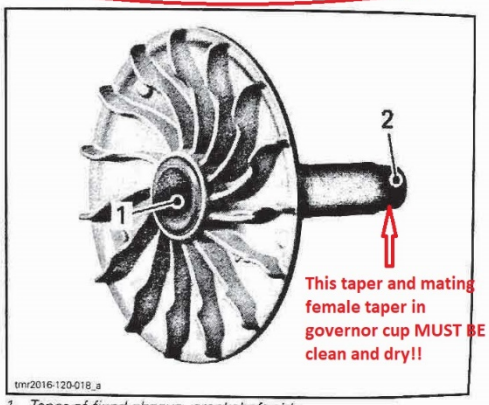
Remove all hardened oil deposits that have baked on crankshaft and pulley tapered surfaces with coarse or medium steel wool and/or sand paper no. 600.

NOTICE Do not use any other type of abrasive.

Reclean mounting surfaces with paper towel and PULLEY FLANGE CLEANER (P/N 413 711 809).

Wipe off the mounting surfaces with a clean, dry paper towel.

NOTICE Mounting surfaces must be free of any oil, cleaner or towel residue.



1. Taper of fixed sheave, crankshaft side
2. Tapered end of fixed sheave shaft

Only use petrol base cleaner when cleaning bushings of sliding sheave.

NOTICE Do not use acetone to clean bushing.

MEDIUM application of special grease- do not pack full!

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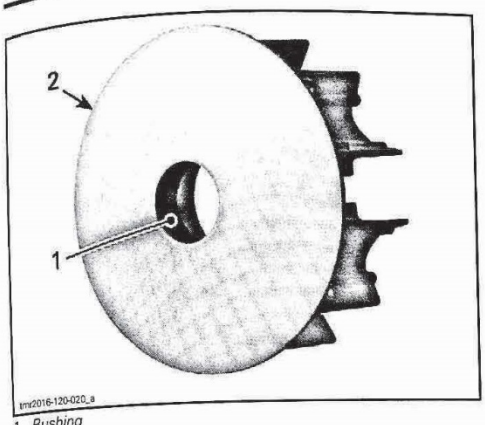
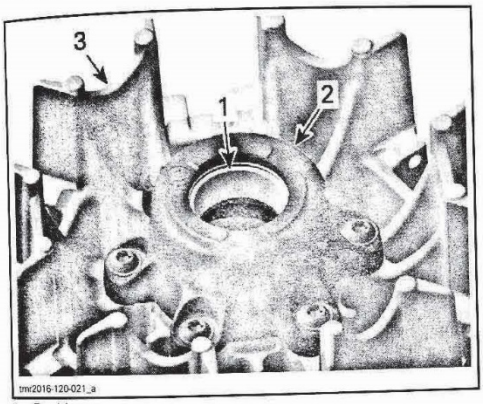


1. Bushing
2. Sliding sheave



1. Bushing
2. Spring cover
3. Sliding sheave

Inspecting the Drive Pulley

Bushings

For bushing inspection, refer to *SLIDING SHEAVE AND SPRING COVER* in this subsection.

Governor Cup

Check governor cup for cracks or other visible damage. Replace if necessary.

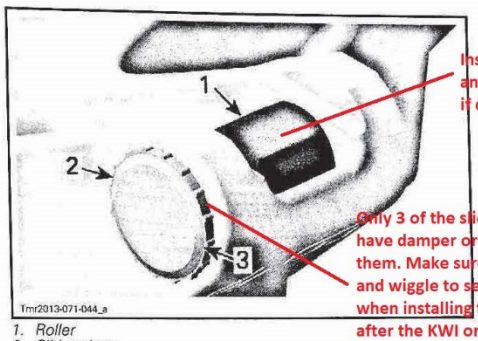
Roller and Slider Shoe

Check if rollers move freely.

NOTICE **Whenever replacing rollers and slider shoes, always replace all rollers and slider shoes at the same time.**

Check slider shoes for visible wear. If chamfer is not present anymore, replace **ALL** slider shoes.

NOTE: If necessary, use a screwdriver to remove slider shoes.

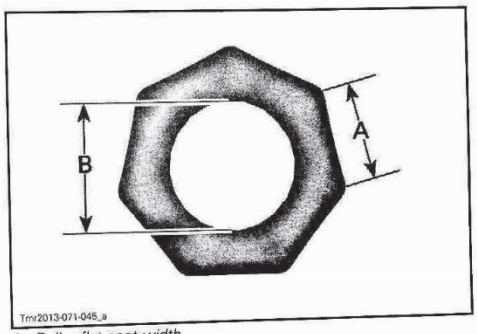


1. Roller
2. Slider shoe
3. Chamfer

Inspect for wear and cracks- replace if damaged.

Only 3 of the slider shoes have damper orings behind them. Make sure to press and wiggle to seat orings when installing the shoes after the KWI orings are installed.

Check roller outer width and inner diameter, replace if it is out of specification.



A. Roller flat spot width
B. Roller inner diameter

ROLLER FLAT SPOT WIDTH	
Service limit	8.50 mm (.335 in)

ROLLER INNER DIAMETER	
New	8.025 mm to 8.175 mm (.3159 in to .3219 in)
Service limit	9.000 mm (.3543 in)

Centrifugal Lever Pivot Bolt

Measure diameter of centrifugal lever pivot bolt, replace if it is out of specification.

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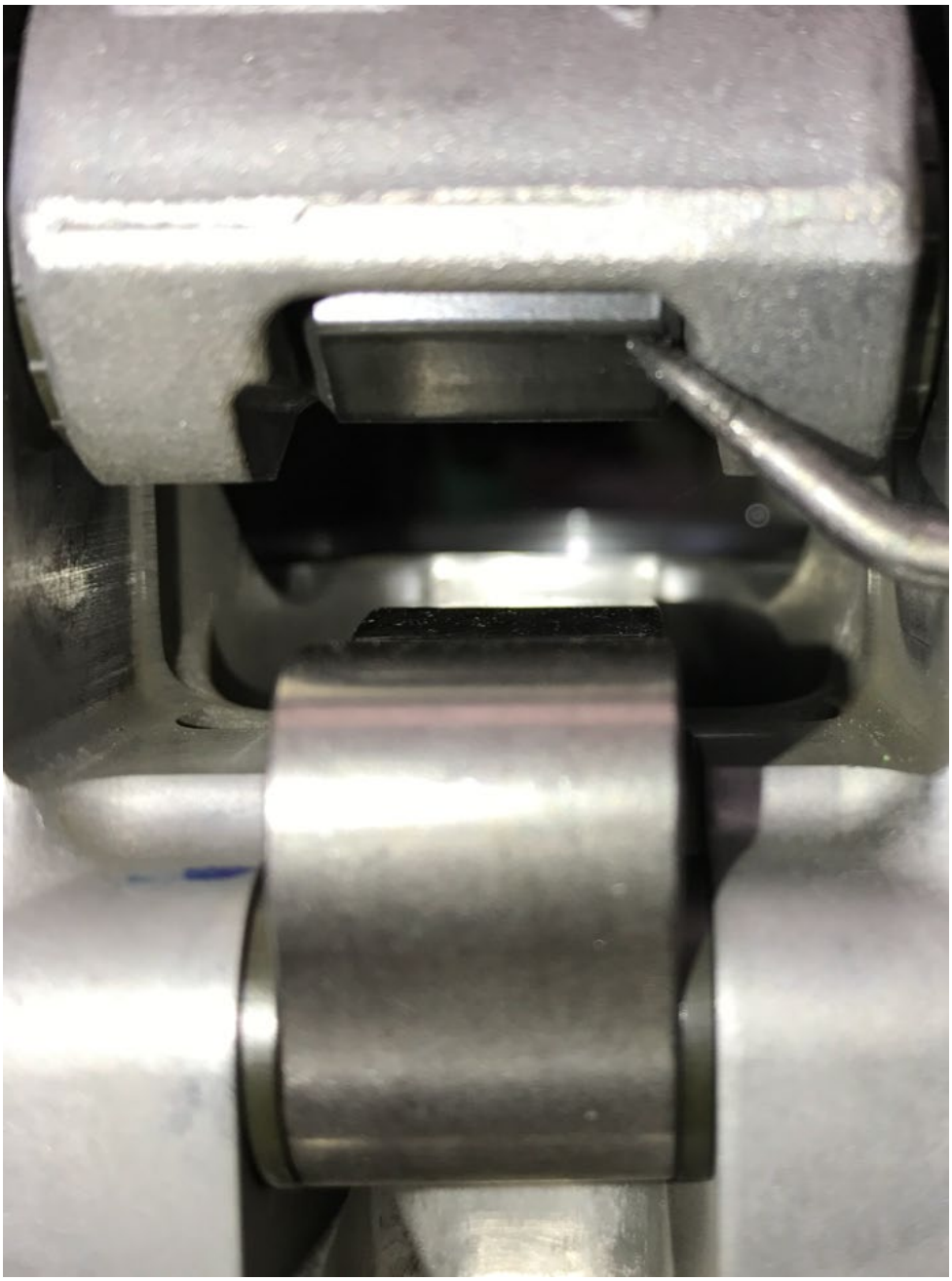
9. Reassemble clutch in accordance with attached BRP manual.

<u>* MAKE SURE TO PROPERLY POSITION THE THRUST ROLLERS ON THE WEIGHTS DURING REASSEMBLY PER THE PHOTOS BELOW!!**** POSITION THE CORNER OF THE HEX JUST BELOW THE CUTOUT EDGE.</u>***



10. **Secondary clutch**- **THERE IS USUALLY NO NEED TO DISASEMBLE AND SERVICE THE SECONDARY CLUTCH UNLESS YOU ARE TRYING TO REMOVE BROKEN BELT MATERIAL OR REPAIR A DAMAGED COMPONENT.

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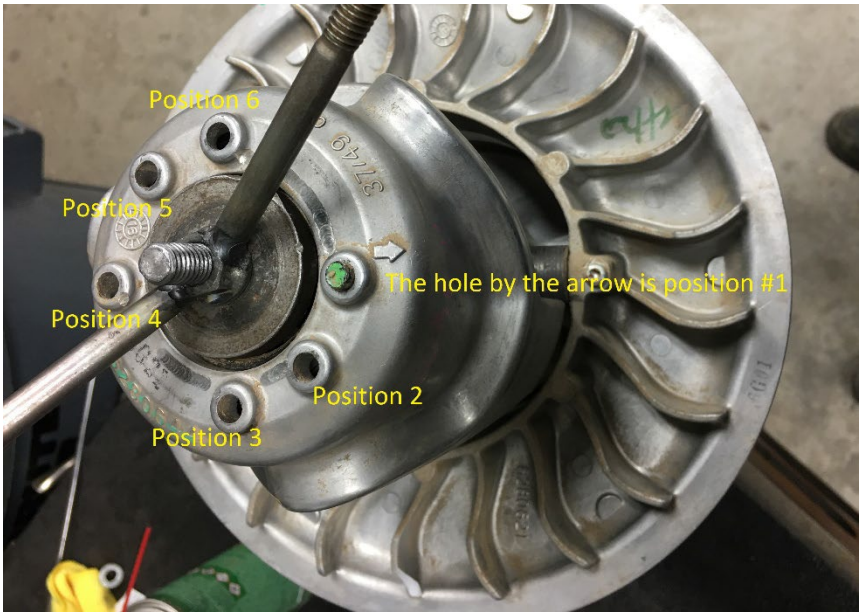
11. Use the attached BRP service manual excerpt directions as a reference for all clutch disassembly. The helix is assembled under spring pressure and an appropriate compressor must be used to disassemble and reassemble the clutch.
12. When reassembling your secondary clutch you will need to install the spring tang in the appropriate hole on the helix as referenced in the KWI tuning chart. See photo below. Some factory helix are not drilled. ***<u>If the holes are not drilled in the helix just drill them out with an appropriate drill bit.</u>***



1. You will need to twist the helix ***<u>clockwise</u>*** while holding the sheave with the rollers enough to engage the rollers at the approximate degree angle specified in the chart. The photo above shows the spring in position 1 in an unwrapped (untwisted) state. The spring MUST be twisted as your installing or the clutches will not work properly. As an example- In the photo above, you'll notice that you will need to twist the helix approximately 115 degrees ***<u>clockwise</u>*** to be able to engage the rollers with spring pressure as directed in the chart for a position 1 install. If you engage the helix on the rollers in the resting position without twisting or twist the helix counter clockwise , your clutching will not work properly and RPM's will be extremely low..
2. Below is a photo which shows the helix being twisted for installation. This photo illustrates the helix is wrapped about half way to where it will be installed. We will continue twisting then once the legs are past the rollers we will compress the spring with the threaded rod until the rollers fully engage the helix legs. Do not let helix legs scrape or touch the rollers during compressing as damage will occur.

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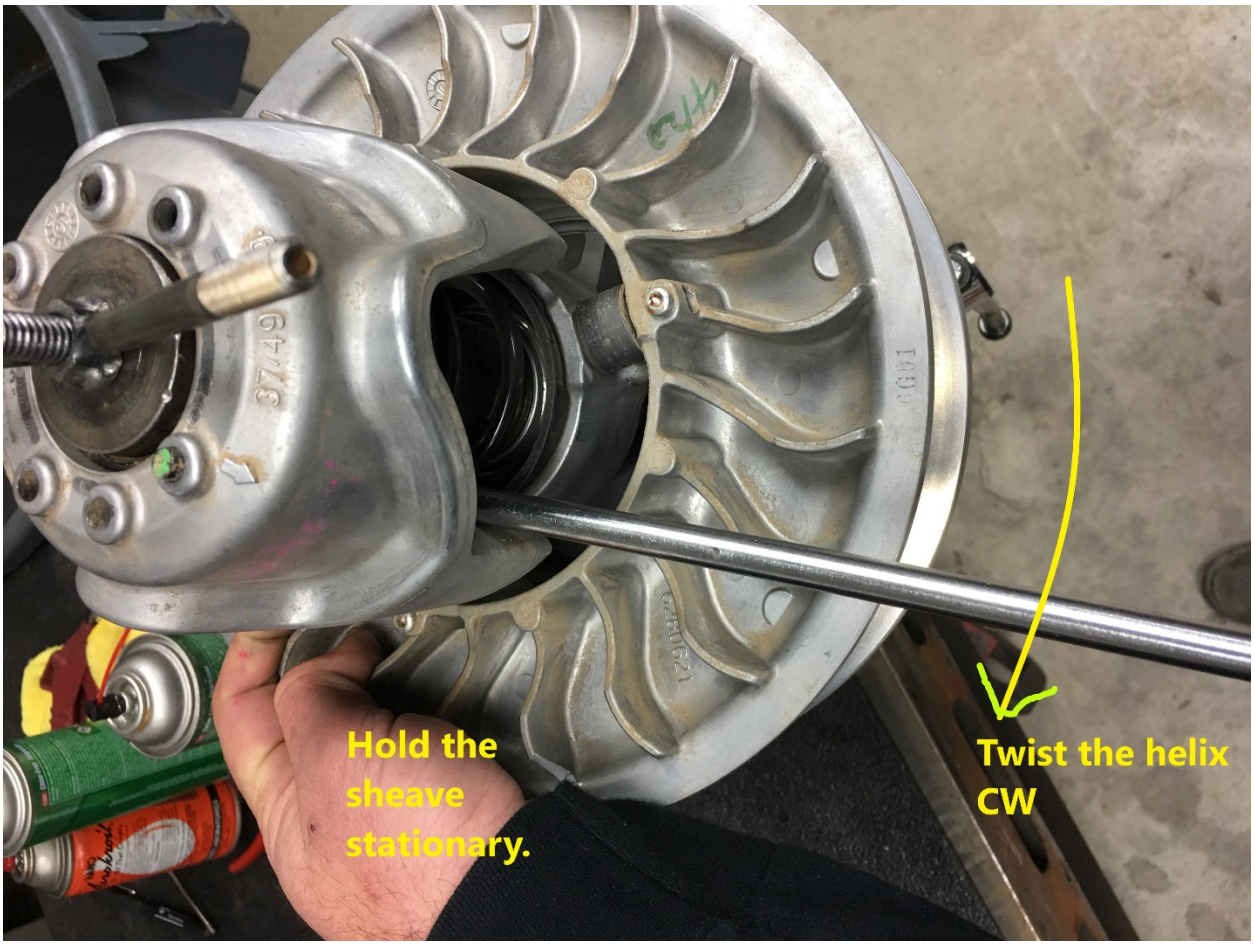

3. Install and torque Helix bolts per the BRP manual. Take a good look at where the bottom machined face of the helix legs (the part with the bolt hole in it) seat against the moveable sheave- this is a close tolerance fit and they must sit perfectly flat against the sheave during torqueing or damage will occur.
4. Clean and reinstall the clutches per the BRP manual and/or the KWI float mod instructions as applicable.
5. Install your belt and clutch cover/cooling ducts.

OEM BRP BELT SHOULD BE USED FOR BEST PERFORMANCE ***IN ALL CIRCUMSTANCES- WE WILL NOT GUARANTEE RESULTS WITH ANY OTHER BELT. (We have tested several other belts and the 2018 OEM BRP belt performs the best with our kits)

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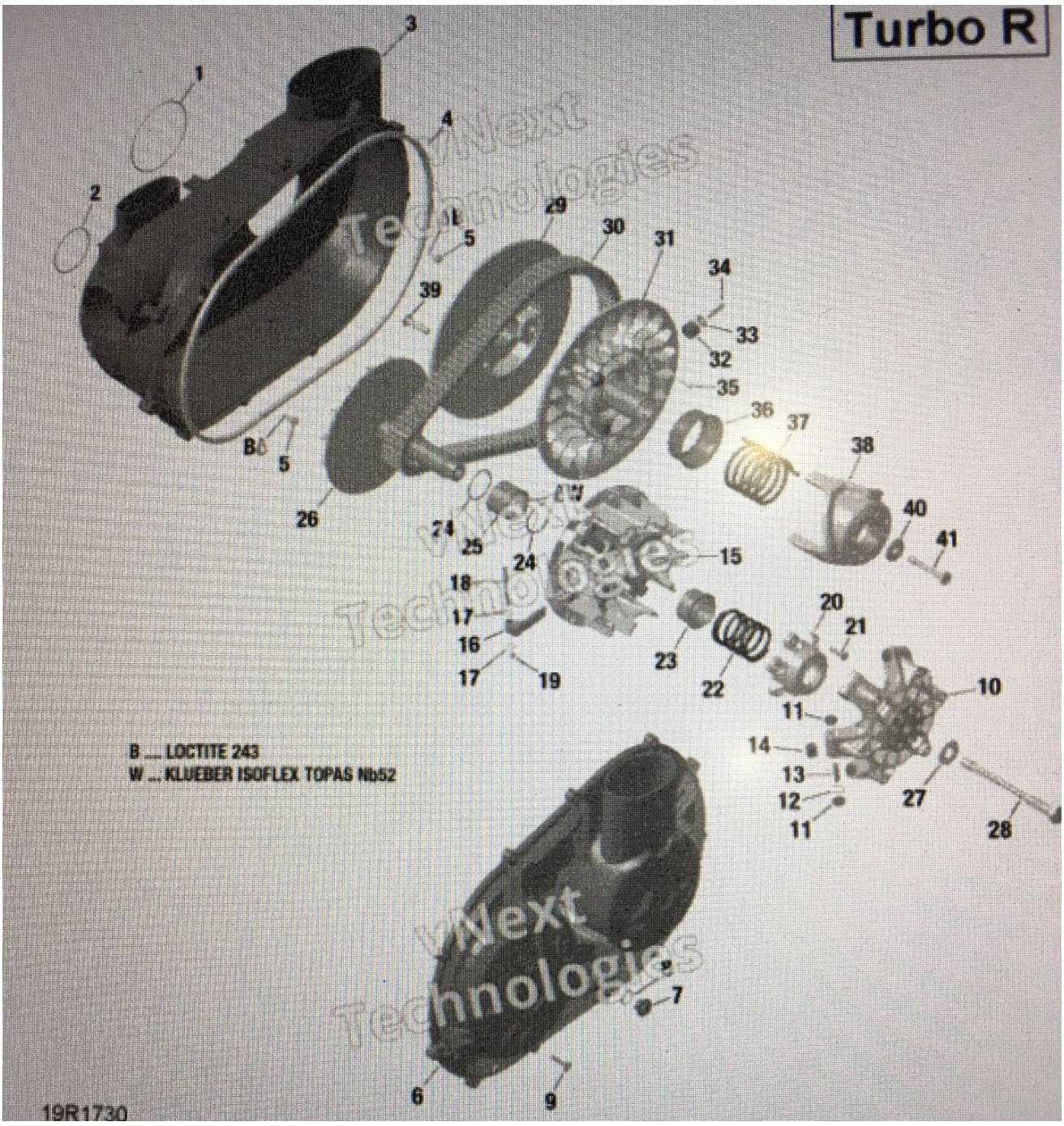

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