HPV & LPV - 27

When you have the Roller secondary apart, apply your favourite "Brake Kleen Solvent" to get the rollers moving freely.

Axle wear - Remove the rollers from the axles, checking for abnormal wear on the axles "shiny spots that don't look symmetrical compared to each other"

Roller damage - Have a look at the roller surface for cracks and see if the rollers have been rubbing against the clutch wall casing.

HPV-27 (High Performance Vehicle - 27)

Must have this belt deflection cam.
May or may not have this shield

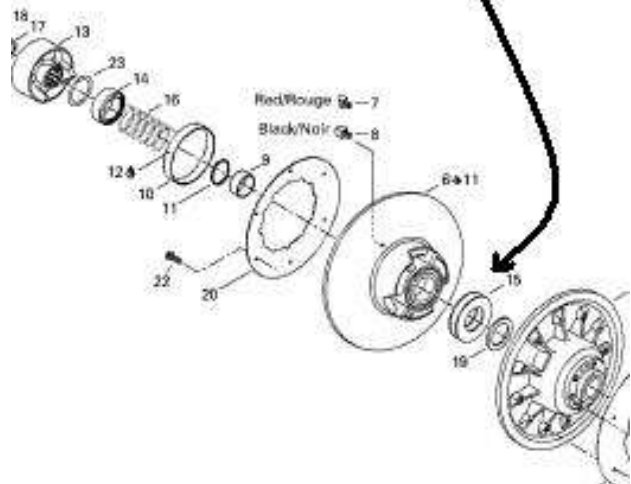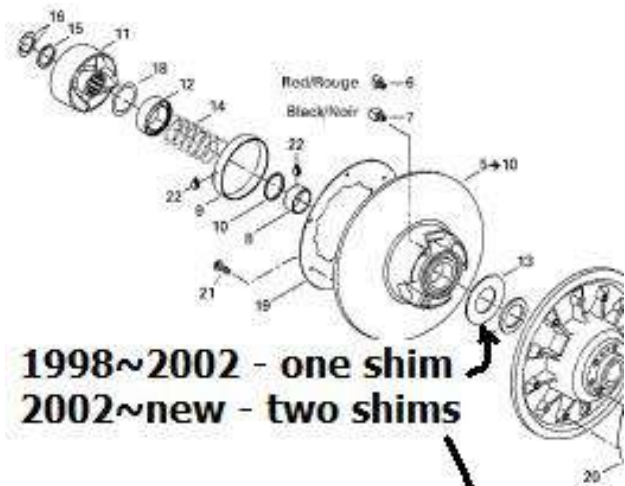**History: LPV 27 and HPV 27 - 1998~2002 vs. 2003~Present day**

LPV = Low performance vehicle. HPV = High performance vehicle

The LPV 27 and HPV 27 secondary clutches are referred to as the Rotax Electronic Reverse, nicknamed (RER). This nickname is a result of the clutch design which utilizes both a forward and reverse helix angle being introduced on sleds equipped with the RER system. These secondary clutches both LPV @ HPV are used on sleds that don't have the RER system and also landed on certain particular models back as far as 1998.

The 1998~2002 had a drive belt width of 1-3/8 inches. The 2003~Present day models are 1-1/2 inches.

To get a 2003~newer LPV / HPV to work on an older model (1998~2002)to replace the original formula secondary clutch, all one has to do is open the #27 secondary up and remove 1 of 2 shims that are inside of it. With the one shim left installed, the 2003~newer secondary will now be set for the 2002~older model sled using 1-3/8 belt width.

NOTE:The 2002~older model must have the spline secondary jackshaft, cannot have keyway jackshaft

1998~2002 - one shim
2002~new - two shims

Red/Rouge ⚙—6
Black/Noir ⚙—7
5→10

Red/Rouge ⚙—7
Black/Noir ⚙—8
6→11

Bushing measurement

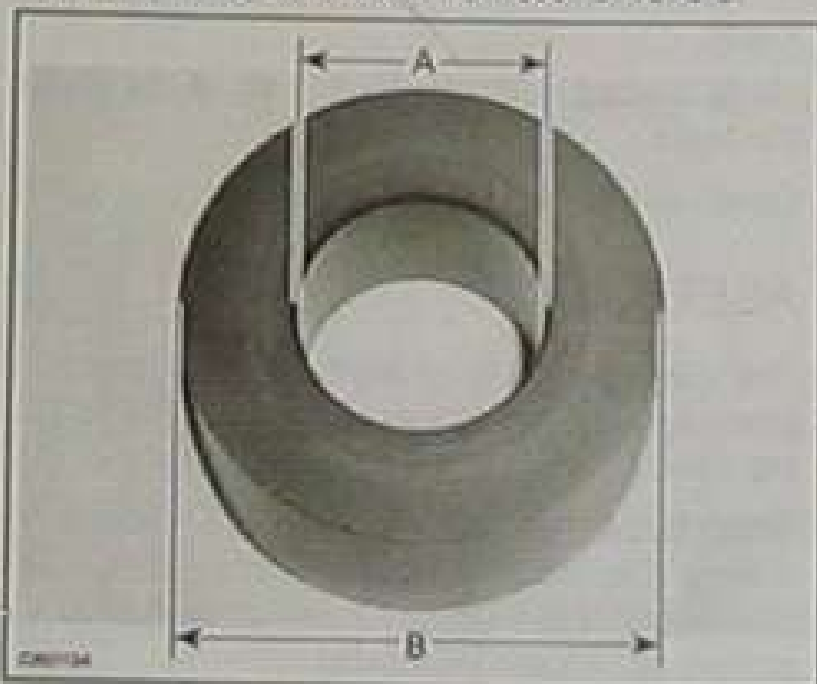These measurements are for the button and roller secondary. You can also check with a caliper in 3 places.

BUSHING	SERVICE LIMIT
Small bushing	38.30 mm (1.508 in)
Large bushing	108.2 mm (4.260 in)

Replace the bushing if the measurement is out of specification. Refer to BUSHING REPLACEMENT at the end of this section.
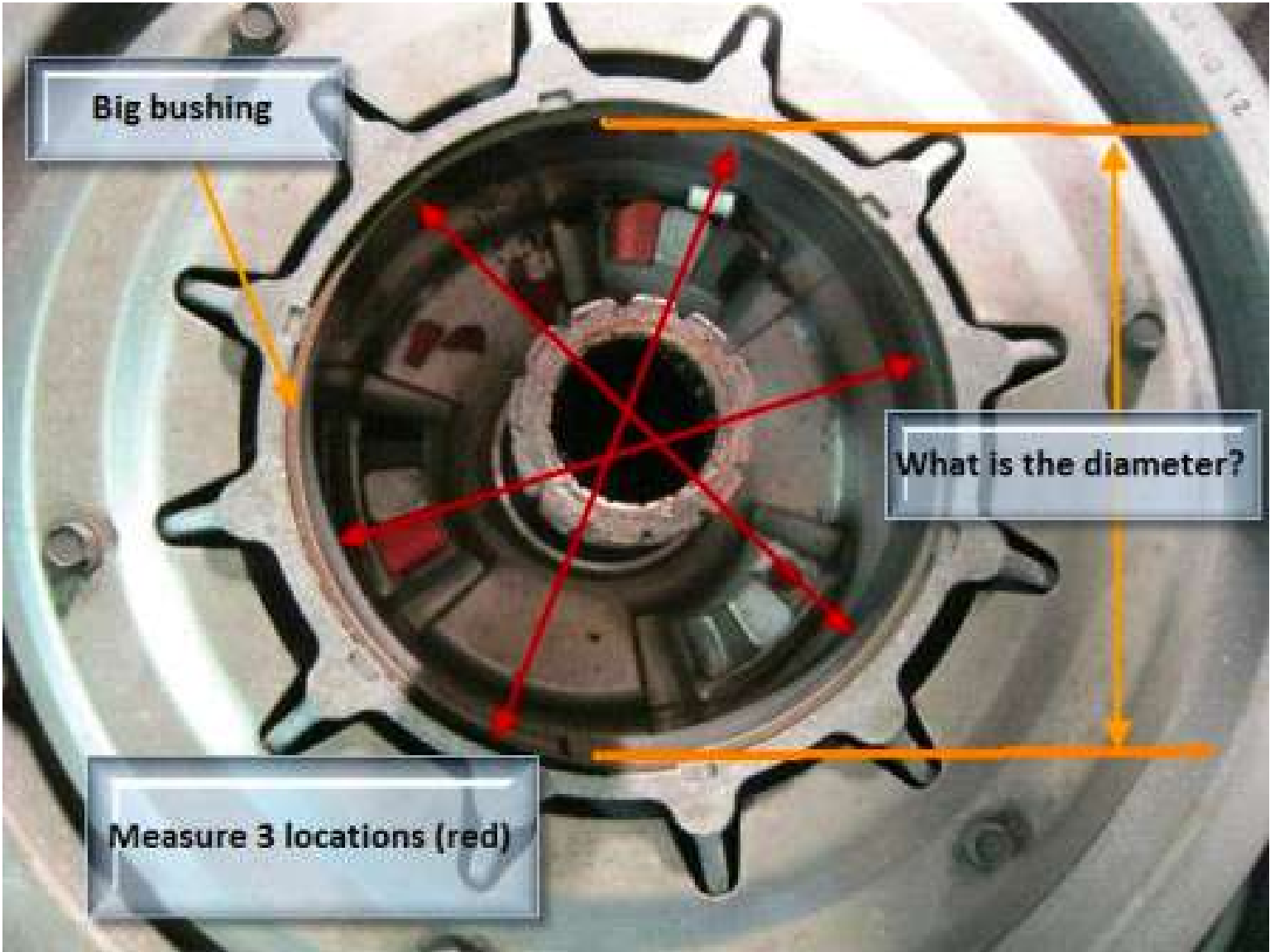
Rollers

Check the rollers no. 7 for flat spots, cracks or other visible damages.

Measure inner and outer diameter of rollers.

A Inner diameter
B Outer diameter

Big bushing

What is the diameter?

Measure 3 locations (red)