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What Are The Most Common V-Belt Drive **Installation Problems** And **How Do I Avoid Them?**

7 There are generally **seven** installation habits that technicians should incorporate into maintenance programs to ensure proper installation and maximize service life.

Habit One - Prying or forcing v-belts onto sheaves can, and usually does, break some of the load-carrying tensile cords. When this happens, the belt may either break or turn over in the groove, usually within the first few minutes of operation. This method of installation may be evidenced by a rupture or split in the wrapped cover of the belt, caused by the prying tool or sheave edge. Broken cords are easily identifiable on raw-edge v-belts because it is usually the edge cords that break first. Never pry a belt onto a sheave.

Habit two - Belts rubbing against the belt guard or other obstruction will be evidenced by cut or worn fabric on the back or upper edge of the v-belt. Often just replacing missing bolts in guard brackets will remedy this situation. Always check for guard clearance.

Habit three - Misaligned sheaves can cause rapid wear of the v-belt sidewalls, considerably shortening service life of both belts and sheaves. Misalignment can also cause separation of the tie-band on banded belts, or apparent mismatching of individual belts. V-belt misalignment should be within $\frac{1}{2}^\circ$ on notched v-belts and $\pm 2^\circ$ on wrapped v-belts. Always check for horizontal, vertical and parallel sheave alignment.

Habit four - Worn or damaged sheaves are an even greater cause of rapid v-belt wear, slippage and vibration. Badly worn sheaves can cause over-tensioning of the drive to prevent slippage, indirectly causing over-heated bearings and shaft damage. When only some of the grooves are worn more than others, the effect is that the belts appear to be mismatched. It also causes "differential driving" where only some of the belts are carrying the entire load of the drive. Sheaves require replacement when $\frac{1}{32}$ " or greater of wear is present. Use of a Browning groove gauge will help identify worn sheave conditions.



Browning Groove Gauge
Part #2695179

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Habit Five - Insufficient belt tension is the leading cause of v-belt slippage and premature belt failure. This is often evidenced by “spin burn” or “glazing of belt”. The easiest and most practical way for technicians to judge proper belt tension is by use of a Browning belt tension checker.



Browning Tension Checker
Part #1302546

Habit Six - Excessive tension on v-belts can be even more detrimental than too little tension, affecting not only the belts, but also bearings and shafts. **Again, the best rule is to use a Browning belt tension checker.**

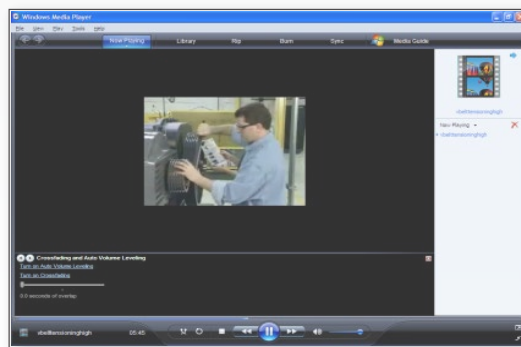
Habit seven - Improper sheave and bushing installation can result in sheave wobble as well as causing sheave hubs to crack. It is important to never lubricate the tapered surfaces before installing. The lubrication will permit recommended torque wrench values to increase the actual force on the bushing and hub. This usually results in cracking of the hub at the bolt hole or keyway. **When installing bushings always follow manufacturers instructions.**



Special Safety Note: Always practice strict lock out / tag out procedures and manufacturer recommendations when servicing mechanical equipment.



Special Note: A full installation and v-belt tensioning video is available on the web at www.RegalPTS.com under the Product Literature Tab (Media Type – Videos)



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Future article ideas or questions can be
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