



Is There An Easy Way To Troubleshoot V-Belt Problems?

Absolutely!

Common v-belt drive problems can be diagnosed rather quickly and generally fall into one of the following categories:

- Improper installation / tension
- Improper maintenance
- Drive contaminants /drive environment
- Inferior drive selection/design



Improper Installation / Tension

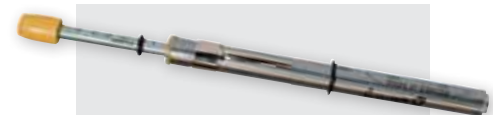
The most common v-belt drive problems relating to installation are proper drive alignment and sufficient tension.

Problems related to alignment will include:

- Rapid sidewall wear on belt (*often uneven wear on one side*)
- Vibration
- Uneven wear on sheave groove walls

Problems related to insufficient tension will include:

- Rapid sidewall wear on belt (*often even wear on both sides*)
- Belt turns or jumps off of the sheave
- Belt slips and squeals
- Belt appears glazed and hardened due to spin burn



Always use a Browning Tension Checker to ensure proper tension (Part #1302546)

Common Reasons for Drives Being Undertensioned

Belts were installed with no physical measurement of tension.

Belts were not retensioned after belts seated themselves into sheave groove (typically 24 hrs. after installation).

Original belts were cut off and replacements were pryed or rolled on to the sheaves assuming tension was adequate.



Improper Maintenance

The most commonly overlooked maintenance procedures causing drive performance issues include.

- Worn or damaged sheaves (*Worn sheaves allow the belt to ride lower in the groove. As a result, the belt experiences increased stress at the cord line, slips, and often fails prematurely. In addition, drive efficiency loss can be significant. Sheaves with 1/32" or greater wear need replaced*).
- Ensuring sheave alignment (*symptoms stated previously*)
- Ensuring sufficient tension (*symptoms stated previously*)
- Prying belts on sheaves should be avoided (*Prying belts on the sheaves can rupture the load carrying cords leading to premature failure*)

Drive Contaminants

To maximize drive life, always look for and correct the following:

- Excessive oil or grease on the drive (*Clean and install guarding*)
- Abrasive environmental conditions (*Clean and install guarding*)
- Belt Dressing (*Belt dressing treats a symptom not the disease. Belt squealing is caused by insufficient tension and / or worn sheaves*)

Inferior Design

To maximize drive life, always look for and correct the following:

A drive that has sufficient installation and maintenance performed regularly and still fails to adequately perform may be under-designed or the quality of the drive components may be a factor. A quick verification of adequate drive components can be accomplished by using our on-line product selection software called EDGE. This software quickly selects the most optimal drive and even gives you appropriate tension requirements for the belt. If you would like personal support, feel free to call us for prompt design assistance.



There are many other reasons for drive performance problems and our Belt Drive & Bearing Pocket Reference Guide (Form#8932 MCC10005) is full of troubleshooting information



Future article ideas or questions can be submitted to Don.Sullivan@Emerson.com

If you have a need for additional information or technical assistance, please contact our Application Engineering Department at 1-800-626-2093 Mon-Fri 7:30a.m. - 5:30p.m. EST.



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