

# Did you know...



information you can use

**STINGRAY®**  
Parts Washers

## Proper Drive Belt Alignment

Belt drive misalignment is one of the most common causes of premature belt failure when using your STINGRAY® Parts Washer.

Depending on the severity, misalignment reduces belt performance by increasing wear and fatigue. A belt can be worn out within a matter of hours or days if the belt drive has been aligned incorrectly. Basically, any degree of misalignment



angular or parallel will decrease the normal service life of a belt drive.

**Angular misalignment:** results in accelerated belt/sheave wear and tear and potential stability problems. Uneven belt and cord loading and unequal load sharing with multiple belt drives result in and lead to premature failures. Angular misalignment has a severe effect on performance of synchronous belt drives. Symptoms such as tracking forces, high noise levels and potential tensile failure due to uneven cord loading are possible.



**Parallel misalignment:** also results in belt/sheave wear and accelerated potential stability problems. Parallel alignment affects V-belts more as they run in fixed grooves and cannot free float between flanges.



### Alignment with straight edge or string



Fig. 1

**Measuring Misalignment:** Disconnect power before doing any belt maintenance. The best tool for measuring alignment is a laser alignment device. If one is not available, a straight edge or string will also work. See figure 1. A straight edge or string is used to project the orientation of one pulley with respect to the other. Pulleys should first be inspected to be sure they run true. Bent flanges could result in erroneous measurements. The total allowable misalignment recommended for V-belts is generally  $\frac{1}{2}$  degree, which equals approximately 1/10-in. offset per foot.

**Measuring Belt Tension:** Use a V-belt tension checker following the manufacturer's instructions. Periodically check tension of the belts. Ideal tension is the lowest tension at which a belt will not slip under peak load conditions. Check tension frequently during the first 24 hours of belt replacement. Over-tensioning shortens belt and bearing life. Keep belts free of foreign material which may cause belts to slip. Never apply belt dressing as this will damage the belt and cause premature failure.