

## How to Diagnose V-Belt Failure



### Snub Break

**Cause**

Cover wear indicates slip. Clean break reveals sudden snap.

**Prevention**

Maintain proper tension on the drive.



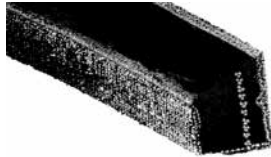
### Distorted Belt

**Cause**

Breakdown of adhesion or broken cords.

**Prevention**

Do not pry belts on drives. Check sheaves for recommended diameters.



### Abrasion

**Cause**

Foreign material and rust in sheaves wore away sidewalls, letting belt drop to bottom of groove.

**Prevention**

Dust guards help protect against abrasion. Tension must be maintained in dusty atmospheres.



### Oil Deterioration

**Cause**

Oil-softened rubber.

**Prevention**

Splash guards will protect drives against oil. Although Classical belts are oil resisting, excessive oil can cause some deterioration.



### Cover Fabric Rupture

**Cause**

Cover fabric ruptured when belt was pried over sheave during installation.

**Prevention**

Proper installation of belts by moving motor so belts do not have to be pried into the grooves.



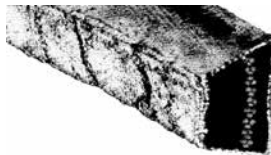
### Slip Burn

**Cause**

Belt too loose. Belt didn't move, friction against sheave burned rubber. When belt finally grabbed, it snapped.

**Prevention**

Maintain proper tension on the drive.



### Base Cracking

**Cause**

Sever back-bend idlers. Improper storage. Excessive ambient operating temperature.

**Prevention**

Check storage conditions. If back-bend idler cannot be avoided, install idler for larger diameter. Avoid ambient temperature over 140°.



### Ply Separation

**Cause**

Split along pitch line indicating belt ran over too small a sheave.

**Prevention**

Redesign drive using sheaves of proper size.



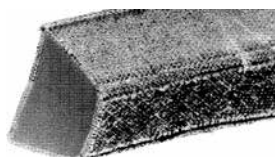
### Ruptured

**Cause**

Ruptured cords in the plies.

**Prevention**

Check for rocks or tools falling into sheave grooves. Check tension. Belts loose enough to twist in groove can rupture cords.



### Worn Belt Sides

**Cause**

Misalignment. Grit or dirt. Normal wear.

**Prevention**

Align sheaves. Replace belts as required.

V-Belt	Belt Section	Minimum Sheave Pitch Diameter
Classical	A	3"
	B	5.4"
	C	9"
	D	13"
	E	21"
Classical Cogged	AX	2.2"
	BX	4"
	CX	6.8"
Narrow	3V	2.6"
	5V	7.1"
	8V	12.5"
Narrow Cogged	3VX	2.2"
	5VX	4.4"

**Safety** should be your number one concern.

\* Always turn equipment OFF before installing a belt.

\* Every v-belt should have a proper belt guard.

\* Before installation, check safe speed limits for sheaves.

\* Before installation, lock out the disconnect switch, control valve or the like.

\* Wear gloves when inspecting sheaves to prevent injury from burrs.