

PU Timing Belt Troubleshooting

DAMAGE	CAUSE	REMEDIAL ACTIONS
Abnormal noise	- Pulley mounting offset - Poor tooth-mesh engagement - Belt wider than pulley flange - Excessive belt tension - Overload - Over-wide belt causes high-speed	- Correct pulley misalignment - Replace pulley - Revise design - Adjust initial tension - Revise design - Revise design
Belt tooth jumping	- Overload & equipment vibration - Machine jam-induced overload - Too few engaged teeth - Insufficient initial tension - Pulley diameter too small - Ignored start-stop inertia	- Optimise belt tooth profile / size - Avoid unexpected machine overload - Add idler to increase meshing teeth - Set proper initial tension - Revise design - Revise design
Belt breakage	- Overload - Foreign particles between belt & pulley - Tension member corrosion - Belt rubbing against pulley flange - Insufficient teeth on clamp plate - Over-tightened clamp-plate screws	- Change belt size / model - Add protective guard - Use aramid / stainless-steel cords - Realign pulley, replace flanges - Use multi-tooth clamp plate - Use torque wrench or limit spacer
Belt side-face abrasion	- Improper pulley position - Defective flange shape - Rough flange surface	- Fix pulley mounting offset - Replace pulley flange - Fit suitable flange
Belt tooth wear	- Foreign particles in mesh - Overload - Excessive tension - Tooth jumping from low initial tension	- Install protective housing - Revise design (increase belt size) - Reset initial tension - Apply sufficient initial tension
Belt tooth-root wear	- Poor pulley tooth profile - Excessive installation tension	- Use high-quality pulley - Adjust belt initial tension
Belt back-surface abrasion	- Unwanted contact with machine frame	- Remove interfering contact
Belt back-side cracking	- Extremely low operating temperature - Pulley diameter below minimum spec	- Raise temperature or select special belt - Follow minimum pulley-diameter requirement
Partial tension-member rupture	- Foreign particles at meshing zone - Incorrect assembly - Belt distorted in storage - One-sided fatigue from misalignment	- Fit protective shield - Maintain belt-pulley alignment - Avoid deformation during handling - Ensure accurate installation alignment
Abnormal back-coating wear	- Corrosive working environment	- Modify back-coating or improve environment
Pulley tooth wear	- Foreign particles in mesh - Transmission overload - Excessive belt tension - Soft pulley material	- Add protective cover - Revise mechanical design - Calibrate initial tension - Change pulley material or apply surface treatment