



TYPE OF FAILURE												<div>Troubleshooting Timing Belt Systems</div> <div> Key: Primary Cause Possible Cause ? Could Cause But Not Likely </div> <div>POSSIBLE CAUSE OF FAILURE</div>	<div>   </div> <div> Acorn Industrial Services Ltd are the UK's leading distributor for Protorque. For further assistance please contact us on email: enquiries@acorn-ind.co.uk or telephone: <div>Tel: 0800 8766 441</div> </div> <div>CORRECTIVE ACTION</div>
Excessive Edge Wear	Excessive Tooth Wear	Uneven Tooth Wear	Apparent Belt Stretch	Cracks in Backing	Tooth Shear	Tensile Failure	Excessive Drive Noise	Tooth Skipping (Ratcheting)	Belt Tracking	Excessive Pulley Wear	Excessive Drive Vibration		
●	?	○					?				?	Belt Hitting Obstruction	Remove obstruction or use idler to reroute belt
	○				●	●						Excessive Load	Redesign drive
	?					○	○			?	?	Belt Overtensioned	Use tensioning gauge to set proper tension
	●	○	?				○	●			?	Belt Undertensioned	Use tensioning gauge to set proper tension
	○	○									?	Rough or Damaged Pulley	Replace timing pulley
	●	●			○	●			●	?		Misalignment	Align shafts and pulleys
	○	○			?			?				Worn Pulley	Replace timing pulley
	?	?			?			?	?	?	?	Pulley Out of Tolerance	Replace timing pulley - Never attempt to re-machine
										●		Soft Pulley Material	Use harder pulley material
	○	?			?	○		○	○	●	○	Debris in Pulley or Drive	Shield drive
	?		●					○				Centre Distance Changed	Check lock down bolts on motors and shafts
	?		●				?	○	○		●	Weak Drive Structure	Reinforce drive structure
				●	?							Excessive Low Temperature	Moderate temperature especially at startup
			?	●	?						?	Excessive High Temperature	Moderate temperature, shield drive
			○	○	?	?		?		?		Exposure to Oil, Solvents, Chemicals	Shield drive, eliminate chemicals
			?	●		○						Pulley Diameter Sub Minimum	Redesign drive to increase pulley diameters
				○								Back Side Idler	Redesign to reduce wrap on backside idler
					●	○		○				Shock Loading	Eliminate shock loading or redesign drive to handle it
	?	?			○							Less than 6 Teeth in Mesh	Increase wrap on pulley
						?					○	Excessive Pulley Runout	Replace timing pulley
						●				?		Damage Due to Handling	Replace product, don't crimp belt or drop pulley
											○	Vibrating Bearings/Mountings	Replace bearing or reinforce mountings
									○			Centre Distance Greater than 8x Small Pulley Diameter	Alignment is critical
							○				●	Pulley Not Properly Balanced	Check pulley balance
	○				○		○					Belt/Pulley Incompatible	Check for proper belt