



GatesFacts™ Technical Information Library  
Gates Compass™ Power Transmission CD-ROM version 1.2

The Gates Rubber Company  
Denver, Colorado USA



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## TENSION AND SYNCHRONOUS BELT WEAR

When installing synchronous belts a bit of over tensioning is preferred to being under tensioned.

An over tensioned belt will exhibit severe and premature fabric wear in the land area. There will also be tooth wear on both sides of the tooth--more severe on the power flank of the tooth. This is a result of the belts misfit in attempting to exit the driveN and enter the driveR.

When under tensioned the belt tooth wear develops an obvious "hook" pattern since the belt tooth is not seating fully into the groove. This is seen on the power flank. The trailing tooth flank may see some limited wear at the driveR sprocket. This under tensioned condition is always more of a concern on speed up drives since there are fewer teeth engaged on the driveN sprocket to carry the load.