

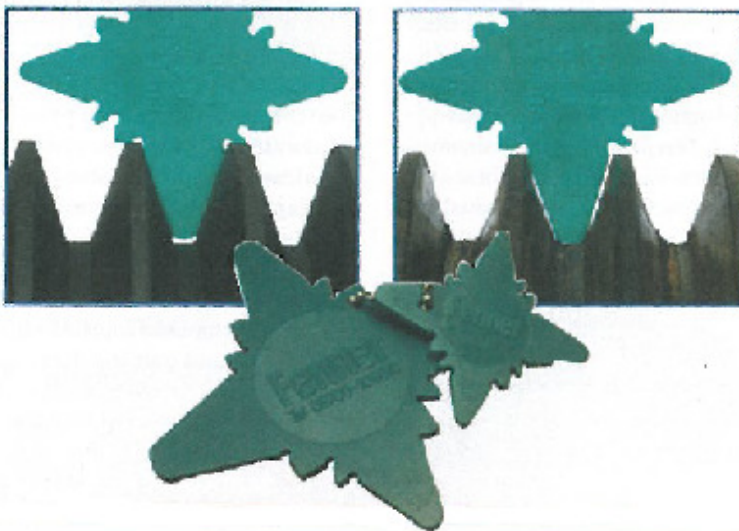


Detailed Services Limited
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BELTS AND PULLEY ASSEMBLY'S:

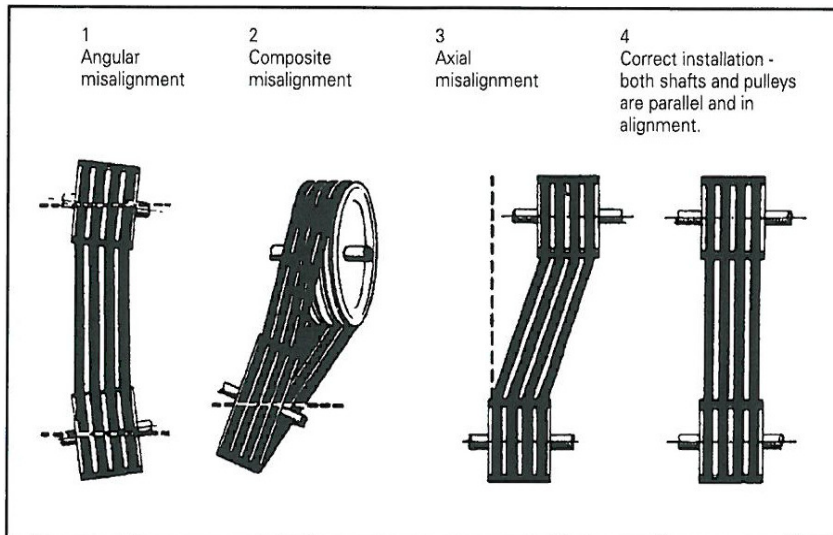
- The most common cause of ineffectiveness in belt drives are creep, hysteresis, friction energy loss, pulley misalignment, pulley groove wear and incorrect tensioning.
- **Creep:** this describes the change in length between the tight and slack sides of the belts as its surface moves across a pulley. This is a condition that occurs as torque tension in the belt changes when the drive is set in motion.
- **Hysteresis and frictional energy loss:** these can be described together, since measurements of both these factors are calculated where energy has been converted into heat.
- **Pulley misalignment and pulley groove wear:** this is self-explanatory but pulley groove wear is not always fully understood. The main cause of this is **incorrect belt tensioning**, which then allows friction belt drives to slip, which thereafter results in the belts curing process to make the belt harder and then wears the V groove form out of shape and normally forming a U shape. Even if the belts are then replaced for new belts they are still going to run in this now formed U shape and therefore reducing the lifespan of the new belts and also may cause belt noises.

As a result of the above potential problems, a series of solutions have been devised to provide longer-lasting, efficient and resilient performance in typical applications.

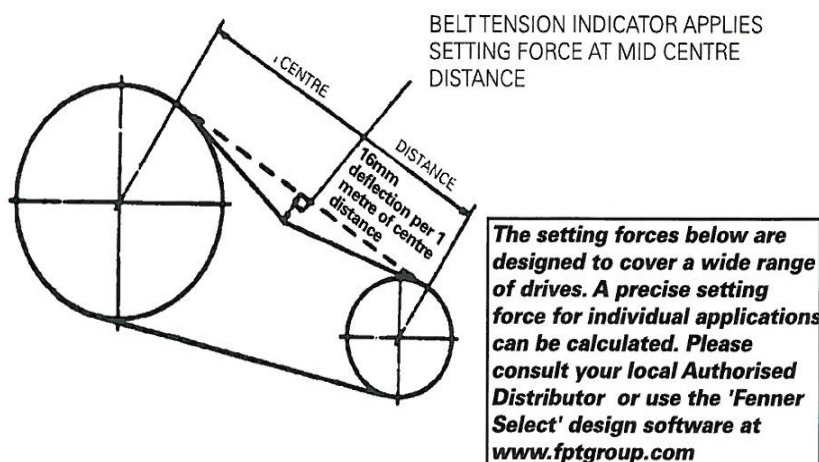


This is a picture of the pulley go/no go gauges that we have provided, as you can see these give you an immediate indication if your pulleys need to be replaced before new belts are fitted.

Aside from installation and replacement solutions, your engineers can also make changes to their maintenance regime that will make a marked improvement to drive efficiencies and the extended lifetime of the belts and pulleys. For example: incorrect tensioning can be avoided via the use of a belt tensioning gauge, while pulley groove gauges and drive laser alignment can assure accurate pulley alignment. This will obviously improve performance and energy saving, at the same time as minimising downtime maintenance and repair costs.



As you can see from the diagram it is detrimental to the belts that the alignment is correct. If the alignment is not correct the pulleys and belts will suffer from excessive wear.



Also the tensioning of the belts is a major factor in the lifetime of the pulleys and belts. Incorrect tensioning can easily cause the belts to slip which then makes them brittle due to heat, which then wears out the pulleys.



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