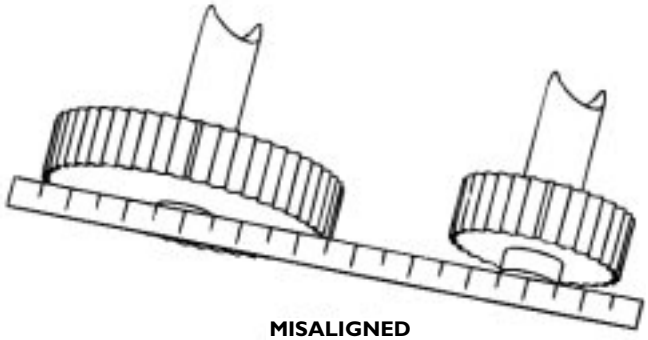
DRIVE ALIGNMENT

Synchronous belts are very sensitive to misalignment. Tension carrying members are generally twisted, multiple strands of fiberglass cord. Fiberglass has a high tensile strength and resistance to elongation, resulting in a very stable belt product. Any misalignment will lead to inconsistent belt wear, uneven load distribution, and premature tensile failure. In general, synchronous drives should not be used where misalignment is a problem. Misalignment should be limited to 1/3 degree or 1/16 inch per foot of center distance.

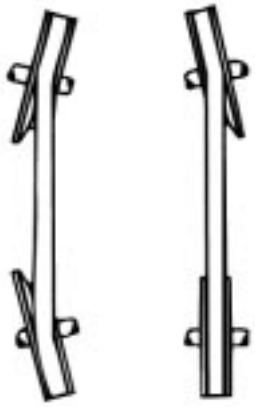
Misalignment can be defined in one of two ways. First, if two sprockets are not located equally on shafts, sprockets are then misaligned, as in Figure A. Second, shafts may not be parallel, resulting in misalignment, as in Figure B.

FIGURE A



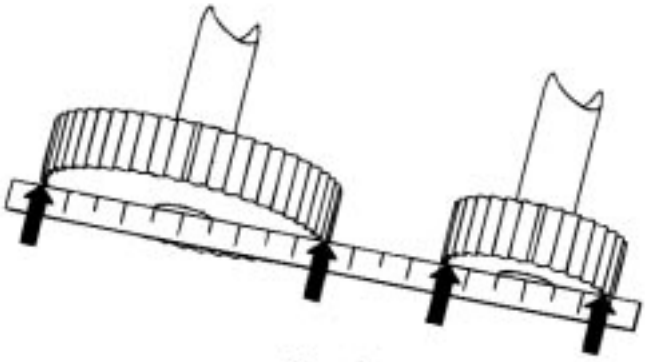
MISALIGNED

FIGURE B



Any degree of misalignment will reduce belt life and cause edge wear. Therefore, a straightedge should be used to check proper alignment verifying that sprockets and shafts are parallel, as in Figure C.

FIGURE C



ALIGNED

Correct Alignment
A straightedge should touch the sprocket at the four points indicated. Both front and back alignments should be checked.

Misalignment, at times, may cause tracking problems. Although some tracking is normal and will not affect belt performance, it may be caused by poorly aligned sprockets. Flanges may control a tracking problem. Considering a two-sprocket drive, belt contact on a single flange is acceptable. Belt contact with the opposite flanges of two sprockets should be avoided.

Misalignment can also be attributed to the improper installation of a bushing or loose drive framework. Refer to sprocket manufacture guidelines for proper bushing installation. Secure motor and framework to eliminate vibration on center-to-center fluctuations.