

PTO Driveline Installations

Improper driveline installations can cause many PTO problems. U-joints wear out quickly when this occurs; PTO's, pump seals and bearings fail prematurely. In addition the noise and vibration cause driver fatigue.

Lack of Lubrication is the usual cause of U-joint failure followed by improper installation and or application. Lubrication problems can be prevented by following a 50 hours of operation relube cycle when vehicles encounter high angles, high speeds, high temperatures, high torque, or environmental conditions such as dust, salt spray and extreme cold. PTO driveline installation failure is primarily caused by misalignment of the input PTO and the output pump elements of a U-joint or drive shaft.

The shafts of the driving and driven units should be parallel; the yokes of the drive shaft assembly should be in line, in the same plane. A list of U-joint problems that will cause failure include one or more of the following:

- Too much torque or HP requirements
- Lack of lubrication or dirty grease
- 4-joints not in phase
- 4-joints not parallel
- Driveline not allowed to slip
- Driveline out of balance

The above conditions are all signs that the U-joints are out of phase; the result could be shorter life cycles, driveline noises, high vibration levels and bearing failure.

Correct driveshaft angle and proper phasing of the U-joints are important in maintaining long life and quiet running shafts. In phase, the slip yoke lugs/ears and the tube yoke lugs/ears are in line. The driveline should have an alignment arrow stamped on the yoke and the tube shaft to assure correct phasing when assembling the components. If your driveline has no alignment marks, they should be added before you disassemble the shaft to assure proper reassembly.

