1. Inspect the carrier for cracks or spline wear.

2. When replacing the batwing and round washers, the round washer should be sandwiched between the helical pinion gear and the batwing washer. The bronze batwing washer should be positioned such that the diagonal recessed oil groove is facing the round washer, and the solid back is facing the reaction carrier.

3. Each helical pinion gear should have 20 pinion needle roller bearings surrounding the bore. A convenient method of holding these bearings in place during assembly is by using a shortened pin and Trans-Jel™.

4. When inserting the pinion pin, make sure that the opening to the axial blind hole is facing the top of the carrier, as indicated. This will allow the oil deflector to direct lube down the pin hole and toward the pinion needle rollers.

5. Stake the pinion pins in place such that the ends do not protrude past the recessed pockets in the reaction carrier. The pins should be staked on both ends.

**NOTE:** When rebuilding individual gear assemblies, the best fix is obtained using only Sonnax gears, pinion pins and rollers.