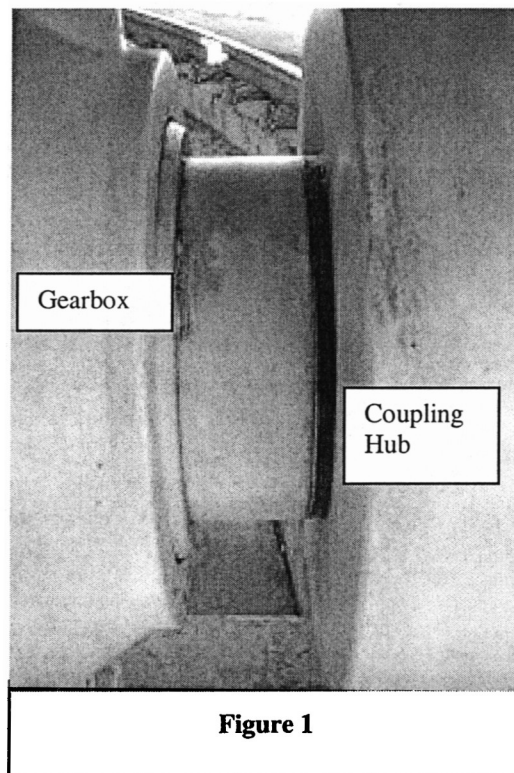


**VLBA Antenna Memo #28**  
**Los Alamos Drive #2 Wheel Replacement**  
Jim Ruff  
12/19/00

The outside Az 2 drive bearing failed and was replaced in October, 2000. On December 8<sup>th</sup>, the LA Site Techs noticed the wheel and axle had moved and that the axle appeared to be broken. A team was sent on December 11<sup>th</sup> to replace the assembly with one of the new (Ringfeder) design.

Upon inspection, it was found that the entire axle had pulled away from the gearbox approximately ¼ inch. (Figure 1).



The rigid coupling hub was installed on the gearbox improperly by RSi. It appears as though the hub siezed to the shaft about 1 inch short of its correct position during the shrink fit operation. There were numerous hammer marks where they apparently tried to beat it into place. The resulting short shrink fit made it easier for the hub to pull out from the shaft.

The wheel showed severe skidding damage, with gouges up to about 1/32 inch deep on the OD. When the wheel was disassembled at the VLA, it was found that the axle had broken in fatigue approximately 2 inches in from the outside edge of the wheel. (Figure 2).

