

NATIONAL RADIO ASTRONOMY OBSERVATORY  
Charlottesville, Virginia

February 7, 1985

MEMORANDUM:

VLBA Electronics Memo No. 37

TO: VLBA  
FROM: H. Dill  
SUBJECT: Return of Reworked Model 22 Units

A meeting at Greenbank was arranged January 28th between CTI, NRAO and Howard Brown. Four of our original ten units were returned from CTI's production group after evaluation and correction of some earlier production problems. The purpose of the meeting was to inspect some units and open up communication between the various parties.

Present at the meeting were:

Leon Audette	CTI	Quality Control
Jim Harrington	CTI	Production Engineering
Howard Brown		Consultant to NRAO
Mike Balister	NRAO	
Dick Thompson	NRAO	
Fred Crews	NRAO	
Roger Norrod	NRAO	
Troy Henderson	NRAO	
Dave Williams	NRAO	

The units that were returned to CTI were tested before and after their rework. The following is a summary of what CTI found with the returned units.

1. Units undercharged (40 lbs/sq in).
2. Intake and exhaust valves leaked.
3. Timing off 3-4 degrees.
4. To fine a surface finish on the first stage (the first stage has a slightly rougher finish than the second stage to seat the seal).
5. First stage displacer screws not tight enough.
6. Second stage seal required polishing.
7. Drive rod with sharp corners on end.
8. Displacer flows were out of spec.
9. Yoke rod and drive rod assembled backwards (a "B" marked on the block should face the displacers).

