

NATIONAL RADIO ASTRONOMY OBSERVATORY
CHARLOTTESVILLE, VIRGINIA 22903

10/05/84

TO: MODEL 22 USERS
FROM: HARRY DILL
SUBJECT: REWORK BEING PERFORMED BY CTI

CTI has determined their inspection process for reworking the Model 22 refrigerators. It will involve three major areas, the pilot step on the cylinder plate, the alignment of the cylinder to its mounting plate, and the proper tolerancing of the shaft and bushings.

The pilot length dimension had too large a tolerance on it. This could cause cocking of the cylinder assembly due to uneven tightening of the mounting bolts. This dimension will be checked on the returned models. The proper installation torque for the four mounting bolts that hold the refrigerator head to the cylinder assembly is 64 inlbs. It is important that they be tightened evenly so as not to cause warpage of the cylinder.

It appears that CTI was able to cause a cut cylinder to warp from its circular cross section by uneven tightening.

The alignment of the cylinder with relation to its mounting plate is also critical and their tolerance again is being tightened. They are going to try and hold the center line of the cylinder within .005 of the mounting plate axis at the free end of the cylinder. There exist in industry better toleranced industrial grade rod than CTI own specification, so they are going to switch to that. The bearing tolerances have been changed, and new bearings should arrive in four weeks. This will add a two to three weeks delay to our refrigerators being returned. They should arrive sometime during the second or third week of November. The bearings will still be of the carbon bushing construction, but will have a tighter tolerance.

The above are notes from a phone conversation with Leon Audette, 10-5-84. Leon said he will send a summary of the above changes which I will circulate when received. To date they have received four units of our original ten. We will then send two more shipments of two units each upon the return of the four.