

JUL 05 1989

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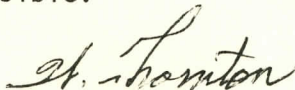
TO: VP4/Charles Mendell  
FROM: SD/W. E. Thornton  
SUBJECT: STS Treadmills

The treadmill used on the last two flights and scheduled for the next was run through all speed ranges at three grade levels with the electronic speed indicator on June 23. Other than reduced maximum speeds it was nominal and it was cleared to fly. This reduced speed indicates either a shift in governor operating point or excessive drag (=excessive wear). After the flight, this unit should be examined and serviced by the builder.

The builder was finally authorized to inspect/repair two units. He feels that part of the unexpected wear was caused by lack of a surface lubricant on the bogey tracks. This again emphasizes a point that has been repeatedly raised, on this, or any other sophisticated equipment. Such gear cannot be blindly handed over to another group for support/maintenance no matter how skilled they are.

Again, it is my strong recommendation that (1) a procedure for ~~A~~ A. service/cleaning and B. preflight performance test be written, and (2) the builder and I meet and demonstrate the procedures to those responsible. I have repeatedly offered to do this with the builders aid. Also, a standard procedure should be used in training such that crewmen understand usage and elementary precautions, e.g., no one should expect to run on these units with socks and not expect to jam the treadmill. It has been known for years that some form of shoe is necessary. There are other precautions as well.

Again I will be willing to establish procedures and aid in any other way possible.



William E. Thornton, M.D.

cc:  
VP/C. McCullough  
Boeing, W. England

SD:WThornton:nlf:6/30/89:32785