

14.4.8 Sample Collection Bag Fell Off the Portable Life Support System Tool Carrier

During lunar surface operations, the Commander's sample collection bag came loose from the portable life support system tool carrier several times and fell off once.

The sample collection bag essentially consists of a Teflon bag on a metal frame (fig. 14-62). The bag opening is covered by a Teflon lid on a hinged metal frame. Attached to the metal frame on one side of the bag, about 2 inches below the lid, is a 3/8-inch-wide stainless steel strap with offsets to accommodate the two hooks on the tool carrier. About 1 inch from the bottom of the same side is a 1-inch-wide Teflon band, sewn to the bag, with an offset loop approximately 1 inch by 5 inches to accommodate the Velcro strap from the bottom of the tool carrier. The Velcro strap, when tightened down, keeps the bag from floating or bouncing off the hooks. During the lunar roving vehicle operations, the Velcro strap sometimes loosened because of the entrapped lunar dust so that the bag could come off.

For Apollo 17, the sample container bag hooks that are attached to the portable life support system tool carrier have been redesigned to prevent the bag from floating or bouncing off the portable life support system. The new hook design consists of a flat spring and a stop so that the same force is required to install and remove the bag.

This anomaly is closed.

14.4.9 Lunar Surface Far Ultraviolet Camera Azimuth Adjustment Became More Difficult

Rotating the camera assembly for each azimuth setting was more difficult than expected, and became progressively difficult during the lunar stay.

To adjust the azimuth to the proper dial reading, the camera is rotated on a 12.5-inch diameter ball-bearing ring (fig. 14-63). The bearing is not sealed; however, the crew did not observe any lunar dust on the bearing.

The azimuth ring bearing was packed with a waxy, low-outgassing grease which stiffens appreciably at temperature below 50° F. This grease is normally used as a sealant rather than a lubricant. The camera was intentionally kept in the shade to protect the film from high temperatures. As a result, the grease stiffened. The manual azimuth adjustment operation was not included in cold chamber tests with other operations of the camera.

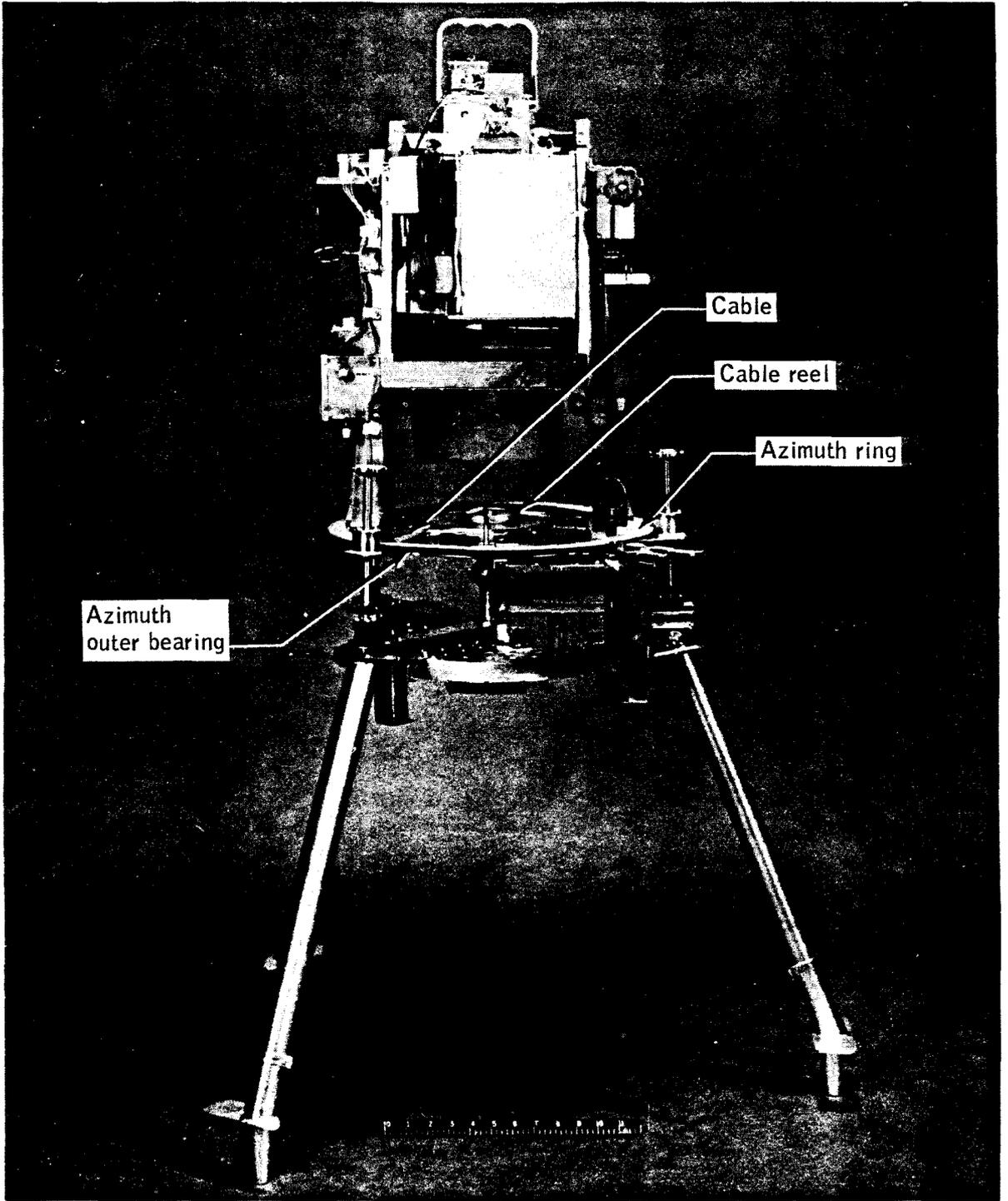


Figure 14-63.- Far ultraviolet camera.

The difficulty was caused by the use of the wrong type of grease in the azimuth ring bearing.

The experiment is not scheduled for another flight, and no further action is required.

This anomaly is closed.

14.4.10 Velcro Patch Came Off Both Padded Sample Bags

When the crew wrapped the Velcro strap around each of the padded sample bags to further secure them, the Velcro attachment patches came off the bags and the straps were ineffective.

A 20-inch-long wrap-around Velcro pile strap is provided to hold the bag closed in addition to the usual tab closure (fig. 14-64). One end of the strap is bonded with a fluorel adhesive to an etched Teflon patch which

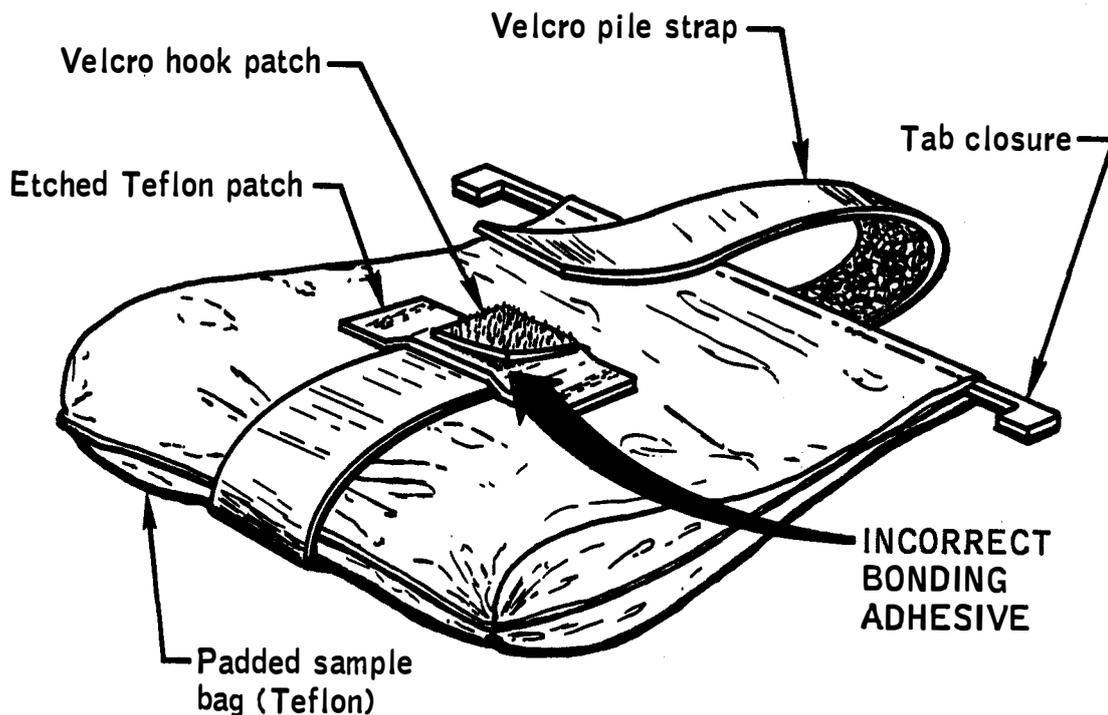


Figure 14-64.- Padded sample bag.