

International Space Station Oxygen Generating Unit Fixed

September 18 2004

Almost two weeks of troubleshooting is paying off for the two Expedition 9 crewmembers. **Today they restarted the International Space Station's primary oxygen generating unit.**

Work with the Elektron, a device that recycles wastewater into oxygen, was one of several maintenance activities completed by Commander Gennady Padalka and <u>NASA</u> Station Science Officer Mike Fincke this week.

With guidance from Russian ground controllers, Padalka replaced the Elektron's liquid unit today with one he had refurbished last week using spare components. The Elektron is operating without a gas analyzer that was removed during troubleshooting. The absence of the gas analyzer does not affect the Elektron's ability to generate oxygen, although it may mean the crew will be required to closely monitor the unit's operations. Ground controllers requested the Elektron be turned off before the crew goes to sleep tonight to allow data gathered during its operations to be evaluated.

The crew flushed and cleaned several of the Elektron's lines earlier in the week, as well as cleaning a mounting plate and removing the gas analyzer.

While the Elektron was off, the Station atmosphere was repressurized Wednesday using oxygen from the Progress supply spacecraft docked to the orbiting laboratory. The Station has a supply of oxygen available in



its own tanks, the Progress tanks and oxygen-generating candles that could be used for many months if necessary. The Elektron first began experiencing intermittent problems Sept. 8.

Meanwhile, Fincke replaced a flex hose used to vent an area between panes of the window in the U.S. Destiny Lab. After depressurizing the window's inner panes, he replaced the hose and installed a protective cover. The previous hose had been damaged and allowed air to leak into the area.

Fincke also used a camcorder to survey all external U.S. hardware visible from the Station windows. The video was down linked for engineers to assess the hardware's condition.

This week, the crewmembers began preparations for their trip home next month. They tested the UHF and VHF communication systems of the Soyuz spacecraft that will carry them back to Earth. The communication checks were done with NASA ground stations at the White Sands Test Facility, N.M.; NASA's Dryden Flight Research Center, Calif.; and NASA's Wallops Flight Facility, Va. This will allow NASA sites to supplement primary Russian ground communications facilities.

Science activities for the crew this week included work with the Advanced Diagnostic Ultrasound in Microgravity experiment. Assisted by experts on the ground, they conducted body scans with the equipment to practice the procedures. They also continued providing information for the Interactions investigation, a computer-based survey that helps investigators study the interpersonal relations between crewmembers and ground control teams during long spaceflights.

Source: NASA



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