

Stuck bolt on space station stymies spacewalkers

Irene Klotz, Reuters

(Reuters) - NASA on Thursday halted attempts to replace a power distributor on the International Space Station after spacewalking astronauts were repeatedly stymied by a jammed bolt, officials said.

NASA astronaut Sunita Williams and Japan's Akihiko Hoshide, both station flight engineers, had planned to spend 6.5 hours outside the orbital outpost to work on its power system and install electrical cables for a new Russian module expected to arrive next year.

The astronauts ran into problems after removing the station's balky 220-pound (100-kg) power-switching unit, one of four used in a system that distributes electrical power generated by the station's solar array wings. The old unit could supply power to the station, but could not be commanded.

"We uncovered this problem some months ago and had been living with it ever since," station program manager Mike Suffredini told reporters during a press conference on Thursday. "We waited to conduct the (spacewalk) until we were ready and had every thing in place."

But problems surfaced as soon as Hoshide tried to remove the old unit. Once it was finally wrested free of its housing, Williams reported finding metal shavings on one of its bolts and around the housing.

As a precaution, astronauts used a canister of nitrogen gas to blow away shavings in the housing before attempting to install the new unit, but problems mounted.

Repeated attempts to attach the new device failed when a bolt jammed, preventing astronauts from hooking it up into the station's power grid.

"We're kind of at a loss of what else we can try," astronaut Jack Fischer at NASA's Mission Control Center in Houston told the crew after more than an hour of troubleshooting. "If you guys have any thoughts or ideas or brilliant schemes on what we can do, let us know."

Hoshide suggested using a tool that provides more force on bolts, but NASA engineers were reluctant to try anything that could make the situation worse.

As the spacewalk slipped past seven hours, flight controllers told the astronauts to tether the unit in place, clean up their tools and head back into the station's airlock.

"We're going to figure it out another day," Fischer said.

The loss of one power distributor cuts the amount of electricity available for station

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operations and science experiments by 25 percent, though managers said they expect to be able to minimize impacts by carefully juggling schedules.

"We have to do a balancing act," said NASA flight director Ed Van Cise.

Managers said another attempt to install the power distributor could come as early as next week if engineers can figure out what to do to fix the stuck bolt.

The eight-hour, 17-minute spacewalk, NASA's first since the final space shuttle mission in July 2011, turned out to be one of the longest in the agency's history.

Thursday's outing followed a six-hour Russian spacewalk on August 20 by cosmonauts Gennady Padalka and Yuri Malenchenko to relocate a crane, launch a small science satellite and install micrometeoroid shields on the station's Zvezda command module.

The station, a \$100-billion project of 15 countries, is an orbiting laboratory used for medical and basic science experiments, microgravity research and technology development.

Williams was able to finish most of the work to install electrical lines for the new Russian laboratory. But the astronauts were unable to get to a third task replacing a camera on the station's robot arm.

(Editing by Eric Walsh)

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