

NASA delays spacewalks to fix ISS cooling pump

August 5 2010



NASA image shows the International Space Station in 2009. NASA on Thursday pushed back by one day the first of two spacewalks to fix a pump module on the International Space Station's (ISS) cooling system that dramatically failed last week.

NASA on Thursday pushed back by one day the first of [two spacewalks to fix a pump module](#) on the International Space Station's (ISS) cooling system that dramatically failed last week.

The first spacewalk will get under way at 1055 GMT on Saturday, a week to the day that an [ammonia](#) pump on the ISS failed, setting off alarms in space and at Mission Control on Earth.

A second sortie has been planned for Wednesday to complete the job of swapping out the pump with one of four spares on board the ISS, NASA

said.

The one-day delay was called to give flight controllers, engineers and spacewalk and robotics experts who have been doing a dry run of the spacewalk at NASA's Neutral Buoyancy Laboratory (NBL) in Texas an additional day to finish working out all the details of the spacewalks, NASA said.

The timing and procedures worked out by the team at the NBL are expected to be transmitted later Thursday to ISS crew members Doug Wheelock and Tracy Caldwell Dyson, who will do the spacewalks.

During Saturday's excursion, Wheelock and Dyson will remove the defective pump unit from the ISS's starboard truss and maneuver a 780-pound (355 kilograms) spare unit around 30 feet (10 meters) from the opposite side of the truss for insertion into the gap left by the failed module.

In the second excursion on Wednesday, the crew is expected to complete connecting fluid ammonia lines to the replacement pump.

The spacewalks are challenging because the astronauts will be handling ammonia lines at full operating pressure, which makes the lines stiff during reconnection and mating.

NASA has programmed several "off-ramps" into the spacewalks to allow time for crewmembers to be decontaminated if they come into contact with ammonia.

The cooling pump failed on Saturday. Usually, NASA allows around two weeks to prepare for a [spacewalk](#) but Mission Control pushed ahead with preparations for this repair job to avoid the ISS crew finding themselves in a scenario where the second of only two cooling pumps failed.

That scenario was highly unlikely and would not put the ISS crew in any immediate danger, but [NASA](#) preferred avoiding it by replacing the broken pump as quickly as possible, Mike Suffredini, manager of the ISS program, told reporters earlier this week.

(c) 2010 AFP

Citation: NASA delays spacewalks to fix ISS cooling pump (2010, August 5) retrieved 2 May 2024 from <https://phys.org/news/2010-08-nasa-spacewalks-iss-cooling.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.