

2224 targeteer

From <http://forum.nasaspaceflight.com/index.php?topic=16584.msg624830#msg624830>

What fell off this list?

What's the list of "Big 14" International Space Station EVA Tasks?

(Excerpt from Increment Definition and Requirements Document)

ISS critical maintenance tasks as follows. This list is not in order of priority. The criteria for tasks being added to this list are that the failure of the function provided by the ORU causes a situation placing the ISS in a configuration that is zero tolerant, or effectively zero fault tolerant, to survival.

1. Maintain ISS Primary Electrical Power System (EPS) Survivability
 - a. External (EXT) Multiplexer/Demultiplexer (MDM) Remove and Replace (R&R)
 - b. Battery Charge/Discharge Unit (BCDU) Backout
 - c. Main Bus Switching Unit (MBSU) R&R
 - d. Sequential Shunt Unit (SSU) R&R
 - e. Direct Current Switching Unit (DCSU) R&R
 - f. R&R of DC to DC Converter Units (DDCUs) 1A, 1B, 2A, 2B, 3A, 3B, 4A, 4B, S01A, S02B
 - g. Solar Array Wing (SAW) Manual Positioning
 - h. Pump Flow Control Subassembly (PFCS) R&R
 - i. Photovoltaic Controller Unit (PVCU) MDM R&R
 - j. R&R of External Remote Power Control Modules (RPCMs) S01A_C, S02B_C, S01A_A, S11A_D, S02B_A, and P12B_D
2. Maintain ISS Thermal Control System (TCS) Survivability
 - a. Interface Heat Exchanger (IFHX) R&R
 - b. External Thermal Control System (ETCS) Pump Module (PM) R&R
 - c. Flex Hose Rotary Coupler (FHRC) R&R
 - d. Ammonia (NH3) Leak Isolation and Recovery

The DDCUs listed provide power to the ORUs on this list. The RPCMs listed provide power to the EXT MDMs and ETCS PMs). The loss of these Secondary Power System (SPS) ORUs would be equivalent to the loss of function of the downstream ORUs themselves. Thus these SPS ORUs are critical to ISS survivability. All other ORUs on this list either receive power from ORUs already on this list (e.g. PVCU MDM receives power from DCSU) or does not require power (e.g. FHRC or NH3 Leak Isolation and Recovery).

For additional information on these systems, visit:

http://www.nasa.gov/pdf/167129main_Systems.pdf

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Space Pete 2229

Looking at the ISS ORUs, two PFCSs are located on the P6 Truss Long Spacer (LS), which luckily is right near the EVA worksite. Both of these PFCSs were launched with the P6 Truss on STS-97 in Nov. 2000. Another PFCS is located on ESP-1, which was launched on STS-102 in Mar. 2001.