

### 03.107 ECLSS Emergency O2 Bottle Swapout (03. ECLSS)

#### OBJECTIVE:

To replace the Emergency O2 bottle on the Oxygen Generation System.

#### EQUIPMENT:

Emergency O2 bottle (will be gathered during the procedure)

Sticky notes

Pen

Flashlight

Shop vacuum

PPE safety glasses

PPE Kobalt work gloves

PPE static wrist tether

#### NOTE

The Environmental Control and Life Support System (ECLSS) provides oxygen generation to the module for crew survival. In the event of an Oxygen Generation System failure, liquid O2 bottles are onboard and can be used on an emergency basis. If the liquid O2 bottle in the emergency system has been emptied, the bottle must be replaced.

- L1D
1. DEACTIVATE EMERGENCY O2 GENERATION SYSTEM (IF ACTIVATED)
    - 1.1 Don PPE gloves.
    - 1.2 Don PPE safety glasses.
    - 1.3 Don static wrist tether and attach to any unpainted metallic surface.



**Figure 1:** Emergency O2 Generation System

- 1.4 Flip power switch of Emergency O2 Generation System to “OFF” (see Figure 1).

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1.4.1 Confirm Emergency O2 Generation System is off by verifying red light is no longer illuminated.

1.4.2 Check Emergency O2 Generation System is off by verifying no audible fan sound.

1.5 Open Emergency O2 Generation System by unlocking both tabs on right side.

L1D

#### 2. REMOVE EMPTY O2 BOTTLE

2.1 Inspect Emergency O2 Generation System with flashlight for debris and clean as necessary with shop vacuum.



**Figure 2:** Emergency O2 System Inside

#### NOTE

Emergency O2 bottle is tightly secured within assembly. Removal will require higher than expected force. Use a twisting motion to reduce static friction.

2.2 Remove O2 bottle from Emergency O2 Generation System (see Figure 2).

2.3 Notify MCC of used O2 bottle S/N. Label “used” with sticky note.

2.4 Detach static wrist tether from metallic surface.

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2.5 Stow used O2 bottle in ALC L01.

L1D 3. RETRIEVE FULL O2 BOTTLE

3.1 Remove full O2 bottle from below Emergency O2 Generation System.

3.2 Inspect full O2 bottle with flashlight for damage.

L1D 4. INSERT FULL O2 BOTTLE

4.1 Attach static wrist tether to any unpainted surface.

4.2 Notify MCC of full O2 bottle S/N for Emergency O2 Generation System.

4.3 Insert full O2 bottle into Emergency O2 Generation System.

L1D 5. ACTIVATE EMERGENCY O2 SYSTEM

5.1 Close Emergency O2 Generation System by locking both tabs on right side.

5.2 Flip power switch of Emergency O2 Generation System to "ON" (see Figure 1).

5.2.1 Confirm Emergency O2 Generation System is on with red blinking light activation (see Figure 1).

5.2.2 Confirm Emergency O2 Generation System is on with audible fan activation.

5.3 Doff PPE gloves, safety glasses, and static wrist tether.

5.4 Stow all tools.