

| FORM REF | FORM REF | NAME, SIC AND BRANCHING OFF IDENTIFICATION | IDENTITY | FAILURE MODE AND CAUSE | FAILURE EFFECT OR THE OPER | RATIONALE FOR ACCEPTANCE |
|-------------|-------------|--|----------|--|--------------------------------------|--|
| | | | | | | |
| 5.7.2a | | BAG ASSEMBLY POLAR NUMBER 01 | Z/N | <p><u>Failure Mode:</u> leakage at heat tested seam or at welded flange heat seal</p> <p><u>Cause:</u> Design load exceeded Material failure Heat seal failure</p> | Drain leakage into EMU or habitat | <ol style="list-style-type: none"> 1) Design Bag materials and the heat seal method of joining were tested to provide the strength, flexibility, and durability to obtain leak proof team. 2) Test <ol style="list-style-type: none"> a) Acceptance Each bag assembly is pressure proof tested at 30 psig and leak tested at 2 psig during DUCB PIR. Manufacturing/inspection history, including a burst test of one lot sample is reviewed. b) Certification The DUCB was certified by analysis based on review of drawing (POLAR 8006)-01. c) Turnaround Good DUCB's are disposed of. Unused DUCB's undergo PIR visual inspection and leak test at 2 psig prior to reuse. 3) Inspection <ol style="list-style-type: none"> a) Manufacturing In-process inspection includes ATP's to verify heat seal machine settings conform to I.O. and seam thickness is within tolerance. b) Turnaround Unused DUCB's undergo visual inspection at PIR. 4) Failure History A failure occurred on SES 41-C, Ref. CIAN No. MC-H-0087. Corrective action consisted of: - Scrapped entire lot from which failed unit was part. - Burst test one unit from each lot. - Added 10 psig proof test to PIR and 2 psig leak test to PIR. 5) Operational Use <ol style="list-style-type: none"> a) Effects of Failure Termination of EIR (abort) may be necessary. b) Crew Action Determine nature of problem; continue (VA or return to habitat) c) Crew Training Orientation includes discussion of possible failure, effect on PIS, possible need to abort. d) Mission Constraints None e) Inflight Checklist None |

B-2.7