ECLSS

NODE 1 PRESS

BACKUP C/W ALARM

(F7)

S210 ISS C&W WARN

S210 NODE 1 CAB PRES

If N1 Press < 13.9 or > 15.0 psia (1)

PCS:###
Node 1 Press Low

If N1 Press < 13.9 or > 15.2 psia

Nominal Config:
Pre-Ingress
IMV vlvs
- Fwd Port - Op
- Fwd Stbd - Op
- All Radials - Cl
- Aft Port - Cl
- Aft Stbd - Cl

MPEVs
- Fwd - Cl, cap installed
- Radials - Cl, caps installed
- Aft - Cl, cap installed

IMV flanges
- Fwds - flange saver w/orifice
- Radials - capped
- Afts - capped

Post-Engress
IMV vlvs
- Fwd Port - Cl
- Fwd Stbd - Cl
- All Radials - Cl
- Aft Port - Cl
- Aft Stbd - Cl

MPEVs
- Fwd - Cl, cap installed
- Radials - Cl, caps installed
- Aft - Cl, cap installed

IMV flanges
- Fwds - capped
- Radials - capped
- Aft Stbd - duct installed
- Aft Port - flange saver w/ orifice

Open Cmd - Ena
Close Cmd - Ena

1 Node Cabin Press >15.0? — Yes → 12 / No ↓

2 Press Low — Node and orbiter share common pressure volume? — Yes → 3 / No ↓

3 Check Orbiter Cabin Press
- SM 66
- Determine which condition

Orbiter Press > N1 Press → **4** Node 1 pressure XDCR failed.

Orbiter Press = N1 Press → **5** Suspect cabin leak conditions → **7**
- Go to O2/(N2) FLOW HIGH/CAB P LOW/dP/dT (ORB PKT, ECLS)

6 Act N1 Cab Fan

(EPCS)
Node 1: EPS: RPCM N14B A
RPCM N14B A
- sel RPCM Detail
- √All RPCs (eighteen) Position - Op

Node 1: EPS: RPCM N14B B
RPCM N14B B
- sel RPCM Detail
- √All RPCs (eighteen) Position - Op

Node1: EPS: RPCM N14B C
RPCM N14B C
- sel RPCM Detail
- √All RPCs (eighteen) Position - Op

NODE 1: ECLSS: Cab Fan
'Nod1 Cab Fan'
'RPCM N14B B R PC 17'
- sel MRPC Commands
- **cmd** Close **Execute**
- √Position - Cl

'Nod1 Cab Fan'
- sel Fan Commands
- **cmd** On **Execute**
- √Stat - On
- √Lim Stat - Ena

- Wait 10 seconds and record fan Δ P
  ΔP INDICATED = _____mmHg
  Then,
- sel Fan Commands
- **cmd** Off **Execute**
- √Stat - Off

→ 8

(1) Node 1 Cabin Pressure FFDIR is not enabled for 2A

NODE 1 PRESS

BACKUP C/W ALARM

(F7)

S210 ISS C&W WARN

S210 NODE 1 CAB PRES

If Node 1 press < 13.9 or > 15.0

PCS:###
Node 1 Press High

If Node 1 press < 13.9 or > 15.20

6

8

- Determine approximated Node 1 Pressure
  N1 $Press_{APPROX}$ =
  $(14.7/535)*T_{N1}*(\Delta P_{INDICATED}/\Delta P_{14.7})$
  = _____ psia
  where:
  14.7 = reference prelaunch test pressure
  535 = reference prelaunch test temperature
  T_{N1} = assumed R/T Node 1 temperature - °R
- √**MCC**, if not avail, assume 520 °R = 60 °F
  $\Delta P_{14.7}$ = reference prelaunch test$\Delta P_{14.7}$ - mmHg-delta

N1 $Press_{APPROX}$ ≅ N1 Press(SM 66)?

Yes → **9** Node 1 cabin leak → **11**
- √**MCC**

No → **10** N1 Press XDCR shift or failed.

1

12 Press High

Node 1 and orbiter share common presure?

Yes → **13** Check Shuttle Cabin Pressure

SM 66

Is Orbiter Press ≅ Node 1 Press?

Yes → **14** Configure ISS for temporary Egress.
- Remove two (2) PPRV caps, tmpry stow
- Close ODS hatch per decal
- Go to Cabin Press ↑↓ (MAL, ECLS, 6.2b)

No → **15** Node 1 Press XDCR failed.

No → **16** Pre-Ingress?

Yes → **17** Equalize With orbiter (2)

External Airlock
- ODS EQ VLV → Op

Open ODS hatch per decal.

ODS Vestibule
- APAS MPEV → Op
- Wait until SPEC 66 Eq dP/dt ~0.0
- APAS MPEV → Cl

External Airlock
- Close ODS Hatch per decal.
- √ODS EQ VLV - Cl

No → **18** Pressure transient

(2) Over-Press condition of N1 requires equalization of N1 with Shuttle and possible depress to maintain pressure below Node 1 MDP of 15.2 psia (785.84 mmHg).