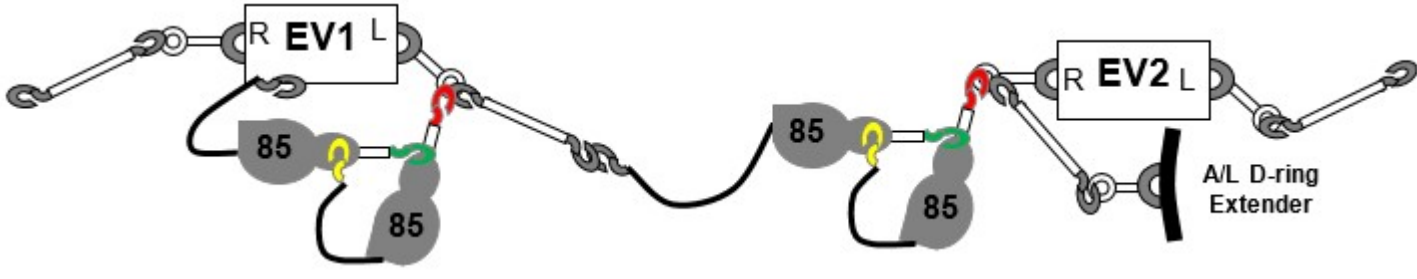


## STS-134 EVA 1 - Summary Timeline

	EV1 (DREW)	EV3 (TAZ)	
00:00	EGRESS/SETUP (00:45)	EGRESS/SETUP (00:45)	00:00
00:30			00:30
01:00	MISSE 7 RETRIEVE (01:00)	MISSE 7 RETRIEVE (01:00)	01:00
01:30			01:30
02:00	MISSE 8 INSTALL (00:40)	S3 CETA LIGHT INSTALL (00:25)	02:00
02:30	P3/P4 NH3 JUMPER INSTALL (00:35)	STBD SARJ COVER 7 INSTALL (00:25)	02:30
03:00		P3/P4 NH3 JUMPER INSTALL (00:25)	03:00
03:30	P5/P6 NH3 JUMPER INSTALL / N2 VENT (00:35)	P3/P4 NH3 JUMPER TEMP STOW (00:35)	03:30
04:00	EWC ANTENNA INSTALL (02:20)	EWC ANTENNA INSTALL (02:45)	04:00
04:30			04:30
05:00			05:00
05:30			05:30
06:00	VTEB CLEANUP (00:25)		06:00
06:30	CLEANUP / INGRESS (00:30)	CLEANUP / INGRESS (00:30)	06:30
07:00			07:00

## STS-134 EVA 1 - EGRESS/SETUP (00:45)

IV/SSRMS	EV1 (Drew)	EV3 (Taz)
		
<ol style="list-style-type: none"> <li>Record PET start time ____:____ (Pwr to Batt)</li> <li>Start WVS Recorders</li> </ol>	<p><u>INITIAL CONFIGURATION (00:05)</u></p> <ol style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>✓ All gates closed &amp; hooks locked</li> <li>aq ✓ R Waist Tether to EV3 Blank hook</li> <li>bq ✓ Red hook on L D-ring ext</li> <li>cq ✓ Yellow hook on Green ERCM</li> <li>dq ✓ Green hook on Red ERCM</li> <li>eq ✓ Blank hook on MWS</li> </ul> </li> </ol>	<p><u>INITIAL CONFIGURATION (00:05)</u></p> <ol style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>✓ All gates closed &amp; hooks locked</li> <li>fq ✓ All gates closed &amp; hooks locked</li> <li>gq ✓ R Waist Tether to A/L D-ring ext</li> <li>hq ✓ Red hook on L D-ring ext</li> <li>iq ✓ Yellow hook on Green ERCM</li> <li>jq ✓ Green hook on Red ERCM</li> <li>kq ✓ Blank hook to EV1 R Waist Tether</li> </ul> </li> </ol>
<ol style="list-style-type: none"> <li>Start Hatch thermal cover clock PET (30 min) ____:____</li> </ol>	<ol style="list-style-type: none"> <li>this is a crewA and crewB step for demonstration of Maestro only</li> <li><u>EGRESS/SETUP (00:25) (00:00)</u></li> <li>Open hatch thermal cover</li> <li>Egress A/L</li> </ol>	
	<ol style="list-style-type: none"> <li>Receive EWC ORU bag from EV3, stow on BRT w/RET</li> </ol>	<ol style="list-style-type: none"> <li>Transfer EWC ORU Bag to EV1 <ul style="list-style-type: none"> <li>lq Position CETA ORU bag near hatch</li> </ul> </li> <li>This is a step</li> </ol>
<ol style="list-style-type: none"> <li>Post crew egress, WVS Software: <ol style="list-style-type: none"> <li>select page - RF camera.</li> <li>Sel 'Advanced Controls'</li> <li>S-Band Level (two) - Max</li> </ol> </li> </ol>		<ol style="list-style-type: none"> <li>Perform buddy checks <ul style="list-style-type: none"> <li>mq MWS tabs up</li> <li>nq BRT tab up</li> <li>oq tether configs</li> </ul> </li> <li>Verify SAFER config <ul style="list-style-type: none"> <li>pq ✓ L handle down (MAN ISOL Vlv - Open)</li> <li>qq ✓ R handle down (HCM - Closed)</li> </ul> </li> <li>✓ WVS - Green LED</li> </ol>

## STS-134 EVA 1 - EGRESS/SETUP (00:45)

IV/SSRMS	EV1 (Drew)	EV3 (Taz)
	16. Perform buddy checks rq MWS tabs up sq BRT tab up tq tether configs 17. Verify SAFER config uq ✓ L handle down (MAN ISOL Vlv - Open) vq ✓ R handle down (HCM - Closed) 18. ✓ WVS - Green LED	19. Perform buddy checks wq MWS tabs up xq BRT tab up yq tether configs 20. Verify SAFER config zq ✓ L handle down (MAN ISOL Vlv - Open) aaq ✓ R handle down (HCM - Closed) 21. ✓ WVS - Green LED
	22. Translate to S0 Port Struts 23. Attach EV1 <b>**BLANK**</b> hook to port-outboard strut bbq ✓ Gat closed, hook locked, reels unlocked, release RET 24. Attach EV3 <b>**BLANK**</b> hook to port-inboard strut ccq ✓ Gate closed, hook locked 25. Release EV1 R Waist Tether from EV3 <b>**BLANK**</b> hook	26. Retrieve CETA ORU bag, stow on BRT with RET
	27. Give <b>**EV3 GO**</b> to release Waist Tether	28. On <b>**EV1 GO**</b> , EV3 release right Waist Tether from Airlock internal D-Ring
	29. Translate forward along Lab. 30. Stow EWC ORU bag on Lab HR 0260, 0259 with hinge ISS aft 31. Translate to S1 Face 1, zenith - MISSE 7 Retrieve	32. Close hatch thermal cover 33. Perform translation adaptation 34. Translate to S1 Face 1, nadir - MISSE 7 Retrieve
35. Stop Hatch Thermal Cover clock PET (30 min) ____:____		

## STS-134 EVA 1 - MISSE 7 RETRIEVE (01:00)

IV/SSRMS	EV1 (Drew)	EV3 (Taz)
1. Verify inhibits in place <ul style="list-style-type: none"> <li>a. ✓ Stbd SARJ locked</li> <li>b. ✓ MISSE/ELC-2 inhibits</li> </ul>		
	<b>WARNING</b>	<b>WARNING</b>
	2. Do not touch the hinged side while closing the MISSE PECs (Pinch Point)	7. Do not touch the hinged side while closing the MISSE PECs (Pinch Point)
	<b>CAUTION</b>	<b>CAUTION</b>
	3. Beware sharp stuff! 4. Also beware gooey things. 5. Avoid inadvertent contact with the deployed MISSE PECs, which have shatterable materials, and the silver avionics boxes atop the ExPA 6. There isn't a second caution in this block, but I wanted to add one here to show that there could be (also for "warning" and "note" blocks).	8. Avoid inadvertent contact with the deployed MISSE PECs, which have shatterable materials, and the silver avionics boxes atop the ExPA 9. There isn't a second caution in this block, but I wanted to add one here to show that there could be (also for "warning" and "note" blocks).
	10. Translate to S1 Face 2, zenith route aq Fairlead on S0 HR 3467 (bay 1) 11. Attach <b>"GREEN"</b> hook on S1 HR 3208 (bay 17) bq ✓ Gate closed, hook locked, reels unlocked, release RET 12. Translate zenith to ELC-2 cq Fairlead on S3 HR 3052 (face 1) 13. Photograph deployed PECs <ul style="list-style-type: none"> <li>a. PEC 7B (✓ Ram/Fwd side, ✓ Aft side)</li> <li>b. PEC 7A (✓ Zenith side, ✓ Nadir side)</li> <li>c. ✓✓ Overall View (2 angles)</li> </ul>	14. Translate to S1 Face 6, nadir route 15. Attach <b>"GREEN"</b> hook on S1 HR 3217 or Xo 5790 (bay 17) dq Gate closed, hook locked, reels unlocked, release RET 16. Translate outbd to bay 19 17. Stow CETA ORU bag on S3 HRs 3046, 3038 18. Translate zenith to ELC2
		19. If EV1 complete with photos of PEC 7B, close PEC 7B eq All 4 PIP pins are re-installed 20. Disconnect connector from PEC 7B fq RET, remove cap from dummy connector J7B gq Demate connector from PEC hq Mate connector to dummy connector J7B (✓ no FOD, pins) iq Install cap onto PEC 7B

# STS-134 EVA 1 - MISSE 7 RETRIEVE (01:00)

IV/SSRMS	EV1 (Drew)	EV3 (Taz)
	21. Close PEC 7A jq ✓ All 4 PIP pins are re-installed	22. Disconnect connector from PEC 7A kq RET, remove cap from dummy connector J7A lq Demate connector from PEC mq Mate connector to dummy connector J7A (✓ no FOD, pins) nq Install cap onto PEC 7A
		23. Release PEC 7B (2 PIP pins), stow on BRT w/RET (nadir HR) oq Reinstall Socket PIP pins (2) 24. Release PEC 7A (release 2 PIP pins), stow on BRT w/RET (RAM HR) pq Reinstall Socket PIP pins (2)
	CAUTION	CAUTION
	25. When translating around fwd edge of Node 2 and PMA2, avoid contact with Shuttle	26. When translating around fwd edge of Node 2 and PMA2, avoid contact with Shuttle
	27. Retrieve <b>GREEN</b> hook from S1 HR 3208 qq Gate closed, hook locked, reels unlocked, release RET 28. Translate to Node 2, along port/zenith <u>STOW MISSE 7A IN PLB (00:10)</u> 29. Attach <b>GREEN</b> hook on Node 2 HR 0344 rq Gate closed, hook locked, reels unlocked, release RET 30. Translate to Orbiter, port, bay 4 31. Remove SWC latch PIP pins (2) 32. Release latch (2) from stow position 33. Stow PEC 7A in carrier (HRs out, Probe up) 34. Lock fwd latch in landing config sq Install PIP pin 35. Retrieve RET 36. Lock aft latch in landing config tq Install PIP pin	37. Retrieve <b>GREEN</b> hook from S1 HR 3217 or Xo 5790 uq Gate closed, hook locked, reels unlocked, release RET 38. Translate to Node 2, stbd/zenith route vq Fairlead on Lab HR 0247 with wrist Adj wq Fairlead on Node 2 HR 0314 xq Face toward Col and Node 2 <b>WARNING</b> 39. Stay <del>xx</del> 2 ft from exposed EFGF connector when OBSS berthed, powered, and EFGF not grappled <u>STOW MISSE 7B IN PLB (00:15)</u> 40. Translate to Orbiter, stbd, bay 4 41. Remove SWC latch PIP pins (2) 42. Release latch (2) from stow position 43. Stow PEC 7B in carrier (HRs out, Probe up) 44. Lock aft latch in landing config yq Install PIP pin 45. Retrieve RET 46. Lock fwd latch in landing config zq Install PIP pin

**STS-134 EVA 1 - MISSE 7 RETRIEVE (01:00)**

IV/SSRMS	EV1 (Drew)	EV3 (Taz)
	47. Glove and Gauntlet check 48. Translate aft to Bay 9 - MISSE 8 Retrieve	49. **Glove and Gauntlet check** 50. ""Translate aft to S3 Face 1 - S3 CETA Light Install""

**STS-134 EVA 1 - MISSE 8 Install (00:40)**

IV/SSRMS	EV1 (Drew)
1. TBD	2. TBD

**STS-134 EVA 1 - S3 CETA Light Install (00:25)**

IV/SSRMS	EV3 (Taz)
1. TBD	2. TBD



**STS-134 EVA 1 - Stbd SARJ Cover 7 Install (00:25)**

IV/SSRMS	EV3 (Taz)
1. TBD	2. TBD

**STS-134 EVA 1 - P3/P4 NH3 Jumper Install (00:35 / 00:25)**

IV/SSRMS	EV1 (Drew)
1. TBD	2. TBD

**STS-134 EVA 1 - P5/P6 NH3 Jumper Install / N2 Vent (00:35)**

IV/SSRMS		EV1 (Drew)	
1.	TBD	2.	TBD

**STS-134 EVA 1 - P3/P4 NH3 Jumper Temp Stow (00:35)**

IV/SSRMS	EV3 (Taz)
1. TBD	2. TBD

**STS-134 EVA 1 - EWC Antenna Install (02:20 / 02:45)**

IV/SSRMS	EV1 (Drew)	EV3 (Taz)
1. TBD	2. TBD	3. TBD

**STS-134 EVA 1 - VTEB Cleanup (00:25)**

IV/SSRMS		EV1 (Drew)	
1.	TBD	2.	TBD

IV/SSRMS		EV1 (Drew)		EV3 (Taz)	
1.	TBD	2.	TBD	3.	TBD