STS-134 / ULF6

FD 11 Execute Package

MSG	Page(s)	Title
112B	1 - 15	FD11 Flight Plan Revision
113A	16 - 17	FD11 Mission Summary
114	---	FD11 PAO Event Summary
115	---	FD11 Joint Crew News Conference
116	18 - 19	STS-134/ULF6 FD11 EVA DELTAS
117	20 -21	FD11 Transfer Message
118	22	FD11 Crew Choice Downlink Opportunities
119	23 - 29	STS 134/ULF6 EVA4 TIMELINE UPDATES
120	30 - 32	ULF6 FD11 STOWAGE NOTES

Approved by FAO:
Mike Scheib

Last Updated: May 25 2011 11:58 PM GMT
JEDI *(**J**oint **E**xecute package **D**evelopment and **I**ntegration), v3.0*

Aggressive JSC Duck

"Get off my lawn"

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MSG INDEX

MSG NO.	TITLE
112	FD11 Flight Plan Revision
113	FD11 Mission Summary
114	FD11 PAO Event Summary
115	FD11 Joint Crew News Conference
116	STS-134/ULF6 FD11 EVA Deltas
117	FD11 Transfer Message
118	FD11 Crew Choice Downlink Opportunities
119	STS-134/ULF6 EVA4 Timeline Updates
120	ULF6 FD11 Stowage Notes

1. Post Sleep Cryo Config

For today's post-sleep cryo config, O2 tanks 2, 3, & 4, and H2 tanks 2 & 5 will be active.

R1 O2,H2 MANF VLV TK2 (two) - OP (tb-OP)
O2 TK3 HTRS A,B (two) - AUTO

A11 CRYO TK4 HTRS O2 A,B (two) - AUTO

A15 CRYO TK5 HTR O2 A - OFF

2. Pre-Sleep Cryo Config

√MCC for deltas prior to configuring for pre-sleep.

For tonight's pre-sleep cryo config, manifold 2 will be closed with O2 and H2 tanks 2 & 5 active.

A15 CRYO TK5 HTR O2 A - AUTO

A11 CRYO TK4 HTRS O2 A,B (two) - OFF

R1 O2 TK3 HTRS A,B (two) - OFF
O2,H2 MANF VLV TK2 (two) - CL (tb-CL)

3. KFX Reboot

Perform the following for the morning KFX reboot: (1) Remove all thumb drives and PCMCIA cards. (2) Shutdown KFX laptop. (3) Remove both ultrabay adapters and reseat them. (4) Power on KFX laptop.

4. <u>MSG 030 Water Ops Cue Card Pen & Ink</u>

The TBD location under the "Transfer To:" column for CWC Fills 9 and subs will be your discretion between the COL1O2 rack front and the COL1O3 rack front. Use only one of the two locations if possible, and inform MCC of the chosen location.

5. <u>WCS/WHC Usage Adjustment</u>

Rates going into the Waste Tank have been higher than predicted, and an adjustment in WCS usage is required. Starting today, all 6 shuttle crew members should use WHC. This will also help out ISS by making more available for UPA processing. Occasional WCS usage is acceptable as long as the majority of usage occurs on WHC. MCC will notify you when crew members can resume using WCS full-time.

6. <u>RFTA R&R Conflict</u>

At ~MET 009/19:40 (GMT 146/08:30), Ron has an activity to perform an R&R of the RFTA in the UPA, which is located below and just outside of the WHC Kabin. While the Kabin will remain installed, you should be aware that the rack front will be taken off the NOD3D4 rack and Ron will be working in the area. This activity is expected to last for 45 minutes. Sorry for the inconvenience.

7. **<u>FD 11 EVA Deltas</u>**

Drew, Spanky, Taz - You guys did awesome on EVA3! Only one more to go! We have a few updates for your activities today which are captured in MSG 28-0043 (134-116) STS-134/ULF6 FD11 EVA DELTAS. The program has decided to stay with the nominal EVA Plan. We will have you configure the 1553 Cable Task and A/L Tool Box Tool Stow Crewlock Bag in the A/L as possible get-ahead tasks. MSG 28-0048 (134-119) STS 134/ULF6 EVA4 TIMELINE UPDATES has changeout pages for the EVA checklist. The messages are preliminary. You can expect final messages uplinked prior to Tool Confg.

The team has been looking at the PDGF discrepancy from EVA 3. We may ask you to perform additional inspection, we'll have those words for you later today.

Taz - Per your request, we scheduled you for a few minutes to downlink the glove photos from EVA 3.

8. <u>Stowage</u>

For Roberto: Please confirm that you stowed the 3 M Bags in ATV on the adapter plates.

9. Replace pages 2-36, 2-38, 2-40 and 3-114 thru 3-123.

REPLANNED

GMT 05/25/11 (145) 13 14 15 16 17 18 19 20 21 22 23 05/26

MET Day 009 009/00 01 02 03 04 05 06 07 08 09 10 11 12

STS 134	FD10					FD11
CDR MARK	POST EVA	PMC A/G	PRE SLEEP	POST EVA / TAGUP	PRE SLEEP	SLEEP	POST SLEEP
PLT BOX	BRIEF / WCS*	PRE SLEEP	OMS^	PRE SLEEP	SLEEP	LOG	POST SLEEP
MS1 SPANKY	POST EVA	PRE SLEEP	POST EVA / TAGUP	PRE SLEEP	SLEEP	ASPRN	POST SLEEP
MS2 ROBERTO	PRE SLEEP / MDK#	PRE SLEEP			SLEEP	LOG	POST SLEEP
MS3 DREW	POST EVA	PRE SLEEP	POST EVA / TAGUP	PRE SLEEP	SLEEP	ASPRN	POST SLEEP
MS4 TAZ	PRE SLEEP	BSA INIT	POST EVA / TAGUP	PRE SLEEP	SLEEP	LOG	POST SLEEP

NO EXERCISE

DAY/NIGHT

ORBIT 143 144 145 146 147 148 149 150

TDRS W E Z

ISS TDRS AVAIL

ORB ATT BIAS -XLV -ZVV

NOTES
*COMPACT ^ACCUM REPRESS
#STATUS CHECK

REPLANNED

GMT 05/26/11 (146) — 01 12, 02 13, 03 14, 04 15, 05 16, 06 17, 07 18, 08 19, 09 20, 10 21, 11 22, 12 23, 010/00

MET Day 009

STS 134

FD11

CDR MARK	POST SLEEP	IMU	PAO EVENT	N2-I	XFER	UPDAT	MDDK XFER	N2-T	CWC #9	INIT	EXERCISE	CWC #9	TERM	MEAL	CREW CONF	CWC XFER	XFR BRF	PREP	XFER	BRIEF	EVA PROC RVW	PRESLP
PLT BOX	POST SLEEP	STBD WING SRVY						PORT WING SURVEY						MEAL	CREW CONF			EXERCISE			EVA PROC RVW	♣
MS1 SPANKY	POST SLEEP	STBD WING SRVY					EXERCISE	EMU SWAP	REBA*	BATT	INSTL	E_LK PREP		MEAL	CREW CONF	EVA TOOL CONFIG					EVA PROC RVW	⊕
MS2 ROBERTO	POST SLEEP	MDDK#	POST SLEEP		CWC #8	INIT	EXERCISE	CWC #8	TERM	CWC XFER	NOSE CAP SRVY	PORT WING SURVEY		MEAL	CREW CONF			LDRI DOWNLINK		EVA PROC RVW	MDDK#	
MS3 DREW	POST SLEEP	MCIU*	STBD WING SRVY					NOSE CAP SRVY	EMU SWAP	REBA*	BATT	INSTL	E_LK PREP	MEAL	CREW CONF	EVA TOOL CONFIG					EVA PROC RVW	EXERCISE
MS4 TAZ	POST SLEEP	OGA	ACCESS &	LK CK 1	EVA D/L	IR CAMR	D/L	H2O RCHRG	BSA TERM	EXERCISE	NOSE CAP SRVY	PORT WING SURVEY	OGA LK CK 2	MEAL	CREW CONF	EVA TOOL CONFIG					EVA PROC RVW	♦

NO EXERCISE — NO T2 EXERCISE [A]

DAY/NIGHT

ORBIT: 151, 152, 153, 154, 155, 156, 157, 158

TDRS: W, E, Z

ISS TDRS AVAIL

ORB ATT: BIAS -XLV -ZVV

NOTES:
#STATUS CHECK
*FILTER CK
[A] NO T2 EXERCISE [T2 ALIGNMENT GUIDES INSTALLED]
*INSTALL
♣PRE SLEEP
#STATUS CHECK ⊕PRE SLEEP
♦PRE SLEEP

REPLANNED

GMT 05/26/11 (146) 13 14 15 16 17 18 19 20 21 22 23 05/27

MET Day 010 010/00 01 02 03 04 05 06 07 08 09 10 11 12

STS 134	FD11														FD12	
	CDR MARK	PRESLP	PMC A/G	PRE SLEEP	MASK PB/TOOL CONFIG	PRE SLEEP	SLEEP								POST SLEEP	
	PLT BOX	PRE SLEEP	OMS^	PRE SLEEP			SLEEP							LOG	POST SLEEP	
	MS1 SPANKY	PRE SLEEP			MASK PB/TOOL CONFIG	PRE SLEEP	SLEEP								POST SLEEP	HYGIENE / BREAK / P/B
	MS2 ROBERTO	PRE SLEEP					SLEEP							LOG	POST SLEEP	
	MS3 DREW	EXERCISE	PRE SLEEP				SLEEP								POST SLEEP	
	MS4 TAZ	PRE SLEEP			MASK PB/TOOL CONFIG	10.2 DPRS / PRE SLEEP	ISS Airlock Campout at 10.2 PSI / SLEEP								POST SLEEP	HYGIENE / BREAK / P/B

NO EXERCISE		
DAY/NIGHT		
ORBIT		158 159 160 161 162 163 164 165 166
TDRS	W	
	E	
	Z	
ISS	TDRS AVAIL	
	ORB ATT	BIAS -XLV -ZVV
NOTES		^ACCUM REPRESS

5

STS-134/ULF6 FD11

GMT Date 05/25 (145) | W | T D R S E | Z | D/N | O R B | MET Day 009 | ATT

21:00 22:00 23:00 00:00

08:00 09:00 10:00 11:00 12:00

148 149 150

BIAS-XLV-ZVV

CDR MARK	PLT BOX	MS1 SPANKY	NOTES
SLEEP	SLEEP	SLEEP	

FD11 EZ ACTIVITIES:
- √OCAC Filter
- √MDDK Duct Screen
- TEPC Status Check:
  - Verify display is backlit
- HARD REBOOT: STS-2(WINDECOM), STS-8(KFX) & STS-4(RPOP)
  - Ref. MSG 112 Item 3 for KFX PGSC

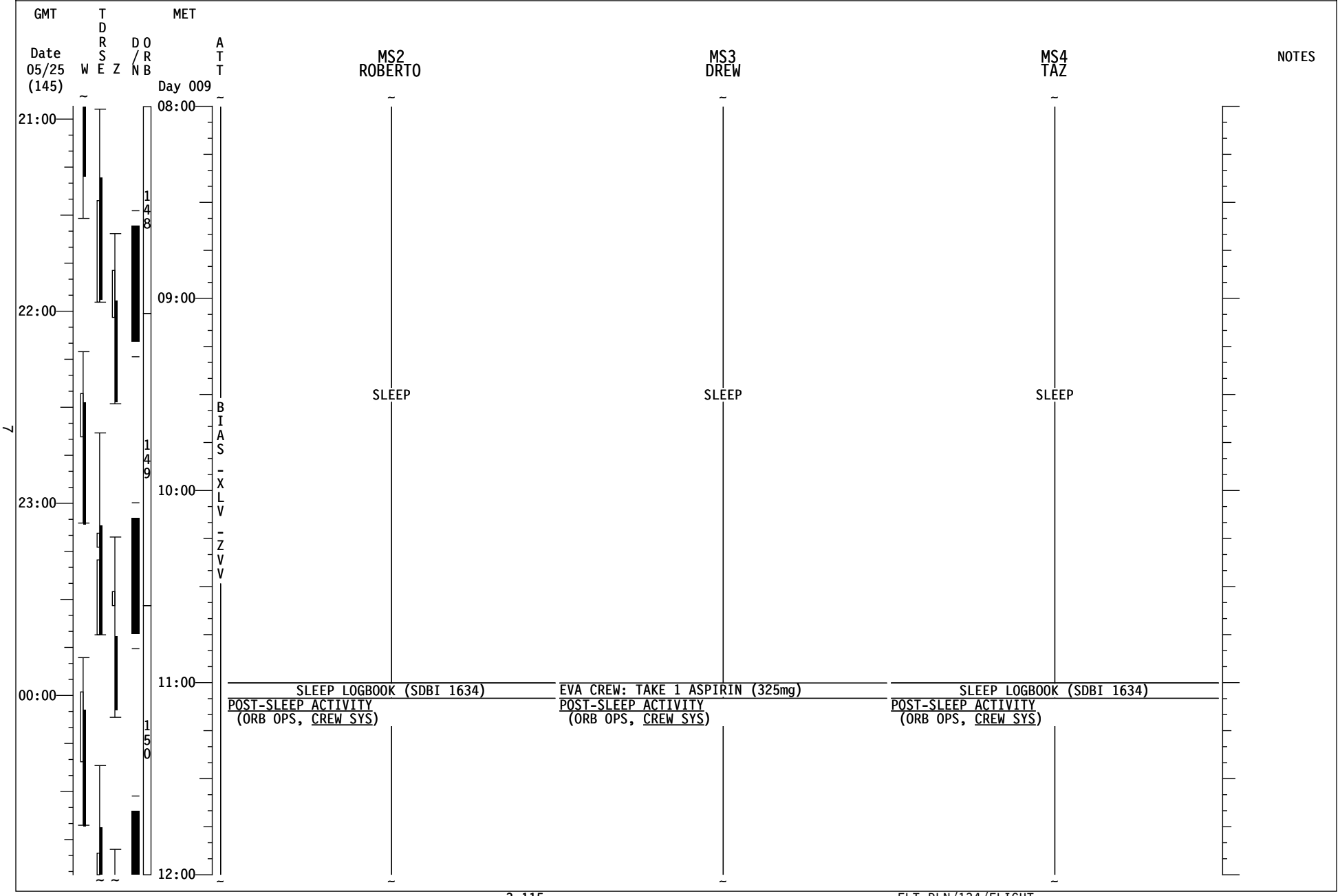
POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

SLEEP LOGBOOK (SDBI 1634)
POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

EVA CREW: TAKE 1 ASPIRIN (325mg)
POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

6

STS-134/ULF6 FD11



STS-134/ULF6 FD11

GMT Date 05/26 (146) | TDRS W E Z | DON/OFF ORB | MET Day 009 | ATT | CDR MARK | PLT BOX | MS1 SPANKY | NOTES

01:00 02:00 03:00 04:00

12:00 13:00 14:00 15:00 16:00

151 152 153

BIAS-XLV-ZVV

CDR MARK

POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

IMU STAR OF OPPORTUNITY ALIGN (ORB OPS,GNC)

PUBLIC AFFAIRS EVENT
ISS S & KU AVAIL: 14:06-14:40
JPM: Mark
Ref. MSG 114

N2 REPRESS INIT A

A N2 REPRESS USING PAYLOAD N2 VLVS
(ORB OPS, ECLS) Steps 1, 3-7
MCC will TMBU SM Limits

DAILY TRANSFER LIST UPDATE
Ref. Transfer List & MSG 117

TRANSFER OPS
Ref. Transfer List & MSG 117

PLT BOX

POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

OBSS DOCKED LDRI RCC SURVEY - STBD
(PDRS, LATE INSPECTION)
R1: Box, R2: Drew, R3: Spanky

MS1 SPANKY

POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

OBSS DOCKED LDRI RCC SURVEY - STBD
(PDRS, LATE INSPECTION)
R1: Box, R2: Drew, R3: Spanky

NOTES

NO T2 EXERCISE [T2 ALIGNMENT GUIDES INSTALLED]

STS-134/ULF6 FD11

GMT Date 05/26 (146) | W | TDRS E | TDRS Z | D/N | ORB | MET Day 009 | ATT | MS2 ROBERTO | MS3 DREW | MS4 TAZ | NOTES

01:00 02:00 03:00 04:00

ORB: 151 152 153

ATT: BIAS-XLV-ZVV

12:00 13:00 14:00 15:00 16:00

MS2 ROBERTO

POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

CGBA STATUS CHK; GLACIER STATUS CHK (CC)

POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

SHUTTLE/ISS H2O CONTAINER FILL (HC)
(ORB OPS, ECLS) Perform CWC FILL #8
Ref. MSG 030

EXERCISE

MS3 DREW

POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

L17 Check MCIU filter screen

OBSS DOCKED LDRI RCC SURVEY - STBD
(PDRS, LATE INSPECTION)
R1: Box, R2: Drew, R3: Spanky

MS4 TAZ

POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

OGS RECRIC LOOP CONTINUOUS REMEDIATION INSTALLATION
Ref. MSG 052
Steps 4.1, 4.2 and 7 for leak check

1. Downlink EVA Glove Photos
2. PTV: 3.725 D2XS EVA CAMERA TURNAROUND-CAMERA ONLY Step 1, For 2 EVA Cameras

EVA 3 IR CAMERA FOR VADER IMAGERY
Ref. MSG 095, Steps 3-4

ISS EVA SYSTEMS: 1.506 EMU WATER RECHARGE
Steps 2-43
Ref. STS-134 CONSUMABLES TRACKING (CC)
Prime PWR: 1007
Backup PWR: 1027
CWC: 1059

EVA SYSTEMS: 1.605 BSA BATTERY RECHARGE
TERMINATE
Steps 15-17, 20-22

EXERCISE

NOTES

NO T2 EXERCISE [T2 ALIGNMENT GUIDES INSTALLED]

STS-134/ULF6 FD11

GMT Date 05/26 (146) | W | T D R S E | Z | D/N | O R B | MET Day 009 | ATT

CDR MARK | PLT BOX | MS1 SPANKY | NOTES

05:00 06:00 07:00 08:00

16:00 17:00 18:00 19:00 20:00

ORB: 153 154 155 156

ATT: BIAS-XLV-ZVV

CDR MARK

TRANSFER OPS
Ref. Transfer List & MSG 117

B N2 REPRESS USING PAYLOAD N2 VLVS
(ORB OPS, ECLS) Steps 8-13
MCC will TMBU SM Limits

N2 REPRESS TERM B
SHUTTLE/ISS H2O CONTAINER FILL (HC)
(ORB OPS, ECLS) Perform CWC FILL #9
Ref. MSG 030

EXERCISE

SHUTTLE/ISS H2O CONTAINER FILL (HC)
(ORB OPS, ECLS)
Perform FILL TERMINATION

MEAL

PLT BOX

OBSS DOCKED LDRI RCC SURVEY - STBD
(PDRS, LATE INSPECTION)
R1: Box, R2: Drew, R3: Spanky

OBSS DOCKED LDRI RCC SURVEY - PORT
(PDRS, LATE INSPECTION)
R1: Taz, R2: Roberto, R3: Box

C INSTALLATION, Verify REBA 1012 REBA jumper cables are mated.
Ref. STS-134 CONSUMABLES TRACKING (CC)

MEAL

MS1 SPANKY

OBSS DOCKED LDRI RCC SURVEY - STBD
(PDRS, LATE INSPECTION)
R1: Box, R2: Drew, R3: Spanky

EXERCISE

EMU SWAP FOR EVA 4
(EVA, AIRLOCK CONFIG)
Ref. STS-134 CONSUMABLES TRACKING CC

ISS EVA SYSTEMS: 1.307 REBA INSTALLATION/REMOVAL C

ISS EVA SYSTEMS: 1.515 EMU METOX/LIOH/BATTERY REPLACEMENT
Ref: STS-134 CONSUMABLES TRACKING CC

ISS EVA SYSTEMS: 1.305 EQUIPMENT LOCK PREP

MEAL

NOTES

NO T2 EXERCISE [T2 ALIGNMENT GUIDES INSTALLED]

STS-134/ULF6 FD11

GMT Date 05/26 (146) | W | T D R S E | Z | D/N | O R B | MET Day 009 | A T T

05:00 06:00 07:00 08:00

153 154 155 156

16:00 17:00 18:00 19:00 20:00

BIAS_XLV_ZVV

MS2 ROBERTO	MS3 DREW	MS4 TAZ	NOTES
EXERCISE	OBSS DOCKED LDRI RCC SURVEY - STBD (PDRS, LATE INSPECTION) R1: Box, R2: Drew, R3: Spanky	EXERCISE	NO T2 EXERCISE [T2 ALIGNMENT GUIDES INSTALLED]
SHUTTLE/ISS H2O CONTAINER FILL (HC) (ORB OPS, ECLS) Perform FILL TERMINATION			
Transfer CWC to ISS			
OBSS DOCKED LDRI RCC SURVEY - NOSE CAP (PDRS, LATE INSPECTION) R1: Drew, R2: Taz, R3: Roberto	OBSS DOCKED LDRI RCC SURVEY - NOSE CAP (PDRS, LATE INSPECTION) R1: Drew, R2: Taz, R3: Roberto	OBSS DOCKED LDRI RCC SURVEY - NOSE CAP (PDRS, LATE INSPECTION) R1: Drew, R2: Taz, R3: Roberto	
OBSS DOCKED LDRI RCC SURVEY - PORT (PDRS, LATE INSPECTION) R1: Taz, R2: Roberto, R3: Box	EMU SWAP FOR EVA 4 (EVA, AIRLOCK CONFIG) Ref. STS-134 CONSUMABLES TRACKING CC	OBSS DOCKED LDRI RCC SURVEY - PORT (PDRS, LATE INSPECTION) R1: Taz, R2: Roberto, R3: Box	
	ISS EVA SYSTEMS: 1.307 REBA INSTALLATION/REMOVAL [C]		
	ISS EVA SYSTEMS: 1.515 EMU METOX/LIOH/BATTERY REPLACEMENT Ref: STS-134 CONSUMABLES TRACKING CC		
	ISS EVA SYSTEMS: 1.305 EQUIPMENT LOCK PREP		
	[C] INSTALLATION, Verify REBA 1012 REBA jumper cables are mated. Ref. STS-134 CONSUMABLES TRACKING (CC)		
		OGS RECIRC LOOP CONTINOUS REMEDIATION INSTALLATION Ref. MSG 052 [D]	
MEAL	MEAL	MEAL	

[D] 1. Perform Step 8
2. Close OGS right and left front rack doors.
3. Perform Step 9.8

STS-134/ULF6 FD11

GMT Date 05/26 (146) | W | TDRS E | Z | D/N | ORB | MET Day 009 | ATT

09:00 10:00 11:00 12:00

ORB: 156 157 158

ATT: BIAS-XLV-ZVV

20:00 21:00 22:00 23:00 00:00

CDR MARK	PLT BOX	MS1 SPANKY	NOTES
MEAL	MEAL	MEAL	
CREW CONFERENCE ISS S & KU AVAIL 20:47-21:18 21:19-22:00 Node 2: All Crew Ref. MSG 115	CREW CONFERENCE ISS S & KU AVAIL 20:47-21:18 21:19-22:00 Node 2: All Crew Ref. MSG 115	CREW CONFERENCE ISS S & KU AVAIL 20:47-21:18 21:19-22:00 Node 2: All Crew Ref. MSG 115	
Transfer CWC to ISS		EVA 4 TOOL CONFIGURATION (EVA, TIMELINES) Ref. CONSUMABLES TRACKING CUE CARD Ref. MSG 116 and MSG 119	
TRANSFER BRIEF PREP Coordinate with transfer counterparts			
TRANSFER BRIEF Call down status to MCC via A/G 2			
	EXERCISE		
EVA 4 PROCEDURE REVIEW Ref. EVA 4 BRIEFING CARD (EVA, TIMELINES) Ref. MSG 116 and MSG 119	EVA 4 PROCEDURE REVIEW Ref. EVA 4 BRIEFING CARD (EVA, TIMELINES) Ref. MSG 116 and MSG 119	EVA 4 PROCEDURE REVIEW Ref. EVA 4 BRIEFING CARD (EVA, TIMELINES) Ref. MSG 116 and MSG 119	
PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	

12

STS-134/ULF6 FD11

GMT Date 05/26 (146) | W | TDRS E | Z | D/N | ORB | MET Day 009 | ATT

MS2 ROBERTO | MS3 DREW | MS4 TAZ | NOTES

09:00 | 10:00 | 11:00 | 12:00

20:00 | 21:00 | 22:00 | 23:00 | 00:00

156 | 157 | 158

BIAS-XLV-ZVV

MS2 ROBERTO

MEAL

CREW CONFERENCE
ISS S & KU AVAIL 20:47-21:18
21:19-22:00
Node 2: All Crew
Ref. MSG 115

DIGITAL VIA VTR
(CUE CARD, DIGITAL PLAYBACK)
LDRI SURVEYS
KU TDRW (22:29-23:02)

EVA 4 PROCEDURE REVIEW
Ref. EVA 4 BRIEFING CARD
(EVA, TIMELINES)
Ref. MSG 116 and MSG 119

CGBA STATUS CHK; GLACIER STATUS CHK (CC)

MS3 DREW

MEAL

CREW CONFERENCE
ISS S & KU AVAIL 20:47-21:18
21:19-22:00
Node 2: All Crew
Ref. MSG 115

EVA 4 TOOL CONFIGURATION
(EVA, TIMELINES)
Ref. CONSUMABLES TRACKING CUE CARD
Ref. MSG 116 and MSG 119

EVA 4 PROCEDURE REVIEW
Ref. EVA 4 BRIEFING CARD
(EVA, TIMELINES)
Ref. MSG 116 and MSG 119

EXERCISE

MS4 TAZ

MEAL

CREW CONFERENCE
ISS S & KU AVAIL 20:47-21:18
21:19-22:00
Node 2: All Crew
Ref. MSG 115

EVA 4 TOOL CONFIGURATION
(EVA, TIMELINES)
Ref. CONSUMABLES TRACKING CUE CARD
Ref. MSG 116 and MSG 119

EVA 4 PROCEDURE REVIEW
Ref. EVA 4 BRIEFING CARD
(EVA, TIMELINES)
Ref. MSG 116 and MSG 119

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

REPLANNED

STS-134/ULF6 FD11

GMT Date 05/26 (146) | W | T D R S E | Z | D/N | O R B | MET Day 010 | ATT

13:00 14:00 15:00 16:00

158 159 160 161

00:00 01:00 02:00 03:00 04:00

BIAS-XLV-ZVV

CDR MARK	PLT BOX	MS1 SPANKY	NOTES
PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	
L9 PS AUD A/G 1,2 (two) - OFF PRIVATE MEDICAL CONFERENCE Private Conference via A/G 2			
PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)		E C3 OMS ENG LEFT - ARM/PRESS (Wait 5 Seconds) - OFF	UPLINK β21+Mask Box 40,41,46
	LEFT OMS ACCUM PRESS E PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)		
ISS EVA SYSTEMS: 1.206 10.2 PSIA CAMPOUT MASK PREBREATHE MCC-H performs steps 1, 19		ISS EVA SYSTEMS: 1.206 10.2 PSIA CAMPOUT MASK PREBREATHE MCC-H performs steps 1, 19	
PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)			
		PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	
CREW WAKE AT 10/11:00			
SLEEP	SLEEP	SLEEP	

STS-134/ULF6 FD11

GMT Date 05/26 (146) | W | TDRS E | TDRS Z | D/N | ORB | MET Day 010 | ATT | MS2 ROBERTO | MS3 DREW | MS4 TAZ | NOTES

13:00 14:00 15:00 16:00

ORB: 158 159 160 161

00:00 01:00 02:00 03:00 04:00

ATT: BIAS-XLV-ZVV

MS2 ROBERTO

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

SLEEP

MS3 DREW

EXERCISE

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

SLEEP

MS4 TAZ

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

ISS EVA SYSTEMS: 1.206 10.2 PSIA CAMPOUT
MASK PREBREATHE
MCC-H performs steps 1, 19

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

SLEEP

CREW WAKE AT 10/11:00

MSG 113A - FD11 MISSION SUMMARY

Good Morning Endeavour!!!!

Congratulations on the outstanding EVA yesterday!

Have a great late inspection day!

YOUR CURRENT ORBIT IS: 187 X 182 NM

NOTAMS -

EDW -	EDW 22L/04R IN USE. EDT 22R/04L EMERGENCY DAY USE ONLY.
EDW -	LAKEBED RWYS RED.
NOR -	LAKEBED RWYS GREEN.
FMH -	UNDERRUNS/OVERRUNS NOT AVAILABLE.
EDF -	RWY 06/24 CLSD.
ILM -	RWY 06/24 CLSD.
HNL -	RWY 08R/26L CLSD.
NTU -	RWY 05R/23L CLSD.
FFA -	NOT USABLE. IN CARETAKER STATUS.
LAJ -	RWY WIDTH REDUCED TO 154' - EAST SIDE OF RWY CLSD.
BEN -	NOT USABLE. NOT SUPPORTED.
IKF -	NOT USABLE. NO AGREEMENT.

<u>NEXT 2 PLS OPPORTUNITIES:</u>

KSC15	ORB 155 – 9/19:03	FEW020	7	140/6P10
NOR17	ORB172 - 10/20:58	SKC	7	300/6P9

<u>OMS TANK FAIL CAPABILITY:</u>

NO

<u>LEAKING OMS PRPLT BURN:</u>

L or R OMS LEAK: ALWAYS BURN RETROGRADE

<u>OMS QUANTITIES(%)</u>

L OMS	OX = 33.23	R OMS	OX = 34.28
	FU = 33.24		FU = 33.95

FOR CURRENT QTYS, SUBTRACT INCN’T COUNTER

END OF PAGE 1 OF 2, MSG 113A

MSG 113A - FD11 MISSION SUMMARY

DELTA V AVAILABLE:

OMS	346 FPS
ARCS (TOTAL ABOVE QTY1)	46 FPS
TOTAL IN THE AFT	392 FPS
ARCS (TOTAL ABOVE QTY2)	79 FPS
FRCS (ABOVE QTY 1)	32 FPS
AFT QTY 1	82 %
AFT QTY 2	44 %

SYSTEM	FAILURE	IMPACT	WORK AROUND
APU 2	APU 2 GBX P and GG BED T failed OSL, and the GG Bed heater A failed off for 4 1/2 min, then regained functionality	Loss of APU 2 GG/Fuel Pump heater A should the failure reoccur	The S86 GG/FU PMP 2 and S86 APU GBX P 2 alarms are inhibited. APU heater Gas Gen/Fuel Pump 2B is selected

END OF PAGE 2 OF 2, MSG 113A

FD11 - EVA Deltas

Since msg 28-0048 (134-119) STS 134/ULF6 EVA4 TIMELINE UPDATES is the preliminary version, you may want to hold off on performing steps 4 and 5 of this note (incorporation of changeout pages into your flight book) until you receive the final version of the page changeouts later today.

Consumable Tracking Cue Card updates:

1) Update Consumables Tracking cue card and Shuttle EVA C/L page FS CC 10-15:
   For EVA 4:
   a. FN EHIP (HL) Batts (s/n) 1022 instead of 1029.
   b. FN LiOH s/n 2004
   c. CF LiOH s/n 2017
   For PWR Usage
   d. After 1007, add PWR 1027 (stowed A/L1D0 Behind Closeout)

EMU SWAP for EVA 4

2) This procedure is in the Shuttle EVA C/L page FS 2-12. You can install the Helmet Light and ERCA the same way as Drew did for EMU Swap for EVA2 - separately, but without undoing the camera cables.

EVA 4 Tool Config:

3) Drew, Spanky, Taz - the VSC soft MLI (with straps) has stiffeners in the sides to help it maintain its shape. When you stow the cover in the Done mesh bag, please do not roll or bend it so that the stiffeners are not damaged.
4) The 1553 Data Cable Task is now a get ahead on EVA 4. Please refer to msg 28-0048 (134-119) STS 134/ULF6 EVA4 TIMELINE UPDATES for an updated tool config:
   a. Replace FS 7-172 and 7-173 with pages FS 7-172 and 7-173 from msg 119

EVA 4 Procedure Review:

5) Please refer to msg 28-0048 (134-119) STS 134/ULF6 EVA4 TIMELINE UPDATES for updated procedures to include the 1553 Data Cable as a get ahead task. Please make the following page change-outs:
   a. Replace FS 7-175 and 7-176 with pages FS 7-175 through 7-176a from msg 119
   b. After FS 7-227, add pages FS 7-227a and 7-227b from msg 119. Please note that these pages are different from the 1553 DATA CABLE Get Ahead pages for EVA 3.

Please make the folllowing Pen and Inks to EVA 4 (EVA, TIMELINES):

6) Page FS 7-194 (Under IV Column, (Internal) under Scissors,
   ADD :
   RET (sm-sm)
   Prybar

7) Spanky, Drew - please add a reminder on page 7-196, EV2 step 1 - stay 2' away of the port TRRJ during your translation to ELC3 for SPDM EDF Release
8) Spanky, Drew - we found an error on page FS 7-198. Please delete "R" in EV2 step 4.
9) Drew, Spanky, Taz - to recap our latest procedure review, the SPDM EDF release order is critical: remove A3, A2 and then A4. Only the A3 hole is rated for pry rod loads, so we cannot use the pry rod in the A2 or A4 hole. If A3 cannot be released, then we are no-go for the rest of the task, and if we cannot release A2, we are no-go to release A4. Please make the following pen & inks to FS 16-24:

C. Once 5 turns achieved, EDF will not release from lug/clevis (A3 EDF only)	1. Use hook to lightly tap bolt head and reattempt 2. If no joy, twist outer washer (lanyard washer) back and forth while pulling outward and reattempt 3. If no joy, release EDF two more turns at **PGT [B5 (22.0), CCW2,30.5]** and reattempt 4. If no joy, use equipment hook to attempt to pry around bolt head/under retaining washer to release ~~5. If no joy, release A2 or A4 EDF and use pryrod from that location, reattempt A3 EDF release~~ 6. If no joy, use prybar (from ~~Staging~~ ORU Bag) between the washers to pry EDF out 7. If A3 cannot be released, do not complete the rest of SPDM EDF Release
D. EDF fail to release after pry rod (A2 and A4 EDFs)	1. Verify location of pry rod, no more than up to black line on pry rod showing 2. Reattempt with impulse loads 2.5 If no joy, use prybar (from ORU Bag) between the washers to pry EDF out while using pryrod in A3 location 3. If no joy, retrieve APFR: ☐ For A4 EDF, use ELC3 WIF 3 [9,FF,A,12] ☐ For A2 EDF, use ELC3 WIF 4 [3,VV,A,1] <u>NOTE</u> While one EV crew is in the APFR, he must maintain a hand-hold on approved ELC3 structure while free float EV crew is translating. Limit pry rod impulses to 5, then wait 60 sec to let loads dissipate 4. If A2 cannot be released, do not release A4

MSG 117 (28-0044) - FD11 TRANSFER MESSAGE

Good morning Mark & Roberto!

Welcome back to Transfer! Mark has a few hours scheduled today, you have a break tomorrow, then more transfer time will be scheduled on FD13 and FD14. We will assess how much time is needed on FD13 based on your FD11 calldown. FD14 time will be required for cleaning up all the items that are constrained to happen on that day. Today you can work on the unconstrained items, but if you don't complete them all, you will have time on FD13 to finish those up.

The Transfer List Excel file, FD11_Transfer_List_STS134.xls, is located on the KFX machine in **C:\OCA-up\transfer** (and available via the **PGSC homepage**).

For ISS, the Transfer List Excel file, FD11_Transfer_List_STS134.xls, is located in **K:\OCA-up\transfer**.

Transfer Notes

- We believe Cady and Paolo may have left some crew preference items for you to return. Can you please let us know if they requested you to return anything and let us know the approximate size? We will do our best to accommodate.
- Can you confirm whether or not Cady gave you or told you about the Microbial Sample for return? She took this sample on FD5 and accidently threw it away. She had told us she would retrieve it from the trash and give it to you, but we haven't heard back.

FD11 Choreography

- **Ron: Return Item 710 & 711** (CSA-CPs)
- Unconstrained Items:
    - Swaps: 15/738 (worklights)
    - Return: 406, 406.1, 734, 738, 901 - 910

Change Pages

Please incorporate changes as follows:

In the Transfer List **RESUPPLY** tab
Replace pages 3, & 5
In the Transfer List **RETURN** tab
Replace pages 1, 4, & 10

Pen & Ink

- Message 106 came up in the FD10 Execute Package. It contains a Descent Locker Layout that is now more up to date than the Descent layout you have in your Transfer Book. There are two pen and inks to that drawing: In MF71C, "Item 90**5** - CSAS" should read "Item 90**1** - CSAS" and in Bag H, "**712** - CWC-I" should read "**613** - CWC-I"

Change Details

Resupply Item 13: Changed Flight Day
Resupply Item 27.1: Changed Timeline activity callout
Return Item 401.1: Added operator and timeline details
Return Item 709: Changed Timeline callout
Return Item 910: New Item

MSG 118 - FD11 CREW CHOICE DOWNLINK OPPORTUNITIES

Please allow 1-2 min to lock up on K-Band. Check with MCC before starting playback.

Post-Sleep Morning of FD11

TDRS	AOS	LOS	Delta (min)	Notes
W-171	9/11:09	9/11:24	15	
E-TDS	9/11:54	9/12:12	18	
W-171	9/12:39	9/13:11	32	
E-TDS	9/13:20	9/13:50	30	

Pre-Sleep Evening of FD11

TDRS	AOS	LOS	Delta (min)	Notes
W-171	10/00:07	10/00:22	15	Time overlaps with PMC
E-TDS	10/00:44	10/00:54	10	
W-171	10/01:44	10/01:51	7	
E-TDS	10/02:21	10/02:32	11	

END OF PAGE 1 OF 1, MSG 118

EVA 4 TOOL CONFIG

ISS Configuration:

MT @ WS5 CETA Port/Stbd
SSRMS on MBS PDGF 2
SPDM on Lab
PSARJ @ 285°

EV2 STP: S0 port, inbd Strut → A/L aft D-ring
EV3 STP: S0 port, outbd Strut → A/L Curved HR, fwd Stanchion

NOTE: Prior to use, inspect the following hardware:
- ❑ RET cords for fraying
- ❑ Inspect Load Alleviating Straps and D-ring Extenders; ref 2.230.100 CREW TETHER INSPECTIONS (SODF: ISS EVA TASKS):
  1. MMOD/general damage
  2. Discoloration
  3. Tack Stitching
  4. Red Band
- ❑ ISS Trash Bag: Bristle deformation/damage, after having stowed tools in trash bag
  √Empty √Zipper Closed
- ❑ BRT joint screws not loose
- ❑ Swing arm stiffness

Tether Counts: (Green RETs)
RETs (sm-sm) = 14/16 RETs (PIP Pin) = 2/5
RETs (Lg-sm) = 4/8 Adj Equip Tethers = 9/10
Adj Equip Tethers (Lg-sm) = 2/2

23

EV2

- ☐☐ MWS
  - ☐☐ BRT (L)
    - ☐☐ RET (sm-sm)
    - ☐■ Wire Ties (2 short – smushed ends)
  - ☐☐ T-Bar
    - ☐☐ RET (sm-sm) (L)
    - ☐☐ RET w/PIP Pin (R)
    - ☐☐ Adj Equip Tether (R)
    - ☐☐ Adj Equip Tether (L)
    - ☐☐ Wire Tie (2)
    - ☐☐ Small ISS Trash Bag (L, inbd)
  - ☐☐ Swing Arm (R)
    - ☐☐ RET (sm-sm)
      - ☐☐ PGT s/n _____
        - ☐☐ PGT Battery s/n _____
        - ☐☐ 7/16 (wobble) Socket-6 ext
- ☐☐ D-ring Extender (2, R & L D-ring)
  - ☐☐ Waist Tether (R on D-ring Ext)
  - ☐☐ Waist Tether (L on D-ring Ext)
  - ■☐ ST Pack (85-ft+ 85-ft to R D-ring Ext) **SHUTTLE**

EV3

- ☐☐ MWS
  - ☐☐ BRT (L)
    - ☐☐ RET (sm-sm)
    - ☐■ Wire Tie (1 short, 1 long)
  - ☐☐ T-Bar
    - ☐☐ RET w/PIP Pin (R)
      - ☐■ WIF Adapter
    - ☐☐ RET (sm-sm) (L) (hold WIF Adapter to bunny ear)
    - ☐☐ Adj Equip Tether (L to TB)
    - ☐☐ Adj Equip Tether (L to TB)
    - ☐☐ Wire Tie (2)
    - ☐☐ Small ISS Trash Bag (R, inbd)
  - ☐☐ Swing Arm (R)
    - ☐☐ **EVA Camera w/bracket** (int RET – morning of)
- ☐☐ D-ring Extender (2, R & L D-ring)
  - ☐☐ Waist Tether (1, R on D-ring Ext)
  - ☐☐ Waist Tether (1, L on D-ring Ext)
  - ■☐ ST Pack (85-ft + 85-ft to L D-ring Ext) **SHUTTLE**

A/L

- ☐☐ RET (Lg-sm) (to bag aft soft tether pt)
  - ☐☐ **OBSS Medium ORU Bag** (aft/port corner of A/L)

External:
- ☐☐ Adj Equip Tether (aft tether pt)
- ☐☐ Adj Equip Tether (aft tether pt)
- ☐☐ Torque Wrench Bag (see fig 2)
  - ☐☐ Long Wire Tie (around bag tether pts and HR)
  - ☐☐ Short Wire Tie (around bag tether pts)
  - ☐☐ Adj Equip Tether (b/Pry Rod and HR stanchion)
    - ☐☐ Pry Rod

Internal:
- ☐☐ RET (sm-sm) (RF to T-handle b/Bolts 5 & 6)
  - ☐■ PAA
- ☐☐ RET (sm-sm) (LB)
  - ☐☐ Scissors (keep on top of bag)
- ☐☐ RET (sm-sm)
  - ☐☐ Prybar
- ☐☐ RET (sm-sm) (RB to L HR stanchion)
  - ☐☐ **OBSS Crewlock Bag** (divider snapped up)
    - ☐☐ Adj Equip Tether (ext – R D-ring)

Side 1 of divider:
- ☐☐ Wire tie caddy (5 short, 4 long) (int RET)
- ☐☐ Hubble Connector Tool (90 deg) **SHUTTLE** (int RET)
- ☐☐ Round Scoop (int RET)
  - ☐☐ PUMAA (Rd Scp straight out, opposite bolt)
    - ☐☐ RET (sm-sm) (both hooks on PUMAA)

Side 2 of divider:
- ☐■ J601/J602 Grounding Connectors (int RET) (on PIP pin tether loops) (see fig 1)
  - ☐☐ Adj Equip Tether (around Grounding Connectors and back onto own D-ring)
- ■☐ WIF Adapter (int RET)

☐ RET (Lg-sm) (for OBSS Crewlock Bag)

FS 7-172

EVA 4 TOOL CONFIG (Cont)

A/L (Cont)

- ☐☐ RET (Lg-Sm)
  - ☐☐ **NODE3 Cable Bag** (2 Integral Tethers)
    - External:
      - ☐☐ Adj Equip Tethers (Lg-sm)
      - ☐☐ Adj Equip Tethers (Lg-sm)
      - ☐☐ 72" Gap Spanner fully extended (RB, RF soft tether pts with tether inside bag)
    - Internal:
      - ☐☐ RET (sm-sm) (RB to Cable)
        - ☐☐ 1553 Cable
      - ☐☐ Fish Stringer (RB – other hook outside of bag)
        - ~~☐☐ Hook 1: Dust cap P18 – size 25~~
        - ~~☐☐ Hook 2: Dust cap P19 – size 25~~
        - ~~☐☐ Hook 3: FO video cable cap~~
        - ☐☐ Node 3 Terminator MLI
        - ☐☐ Node 3 Terminator MLI
        - ☐☐ Node 3 Terminator Cap
        - ☐☐ Node 3 Terminator Cap
        - ☐☐ 1553 P1 cap
        - ☐☐ 1553 P2 cap

- ☐☐ RET (Lg-sm) (near Staging Bag)
  - ☐☐ **Tool Stow C/L bag**
    - ☐☐ Adj Equip Tether (external)
    - ☐☐ Fish Stringer
      - ☐☐ Hook 1: RET (sm-sm)
        - ☐☐ Pin Straightener Assy
        - ☐☐ Large Cutters (GP)
      - ☐☐ Hook 2: RET (sm-sm)
        - ☐☐ Short MMOD T-handle
      - ☐☐ Hook 3: RET (sm-sm)
        - ☐☐ Short MMOD T-handle
      - ☐☐ Hook 4: RET (sm-sm)
        - ☐☐ Probe
      - ☐☐ Hook 5: RET (sm-sm)
        - ☐☐ Vise Grips
      - ☐☐ Hook 6: RET (sm-sm)
        - ☐☐ 1" QD Cap Removal Tool

- ☐☐ **Staging Bag**
  - ☐☐ Fish Stringer Tether
    - ☐☐ Wire Tie Caddy (hook 1) (5 short, 4 long)
    - ☐☐ Velcro/Tape Caddy (hook 2)
    - ☐☐ PGT (hook 3) s/n _____
      - ☐☐ PGT Battery s/n _____
    - ☐☐ 7/16 (wobble) Socket-6 ext
    - ☐☐ Ratchet Wrench (hook 5)
      - ☐☐ 7/16 (rigid) Socket-2 ext
    - ☐☐ Long Duration Tie-Down Tethers (2) (hook 6)
    - ☐☐ **Spare WIF Adapter** (hook 7)
    - ☐☐ Spare Safety Tether Pack (85-ft + 85-ft) (to strap
  - ☐☐ Fish Stringer Tether
    - ☐☐ Connector Cleaner Tool Kit (hook 2)
    - ☐☐ ~~Pry Bar~~ (hook 4)
    - ☐☐ Needle Nose Pliers (hook 6)
    - ☐☐ MWS Key Strap Assy (on wire tie, to strap)
    - ☐☐ **EVA Camera w/bracket** (hook 7– morning of)

- ☐☐ **IV Bag**
  - ☐☐ Towels (2)
  - ☐☐ Contamination Detection Kit
  - ☐☐ GP Caddy (2)
    - ☐☐ Adjustable Thermal Mittens (2)
  - ☐☐ Socket Caddy (hatch cont) w/RET (sm-sm) (Black)
    - ☐☐ 1/2 Socket-8 ext
    - ☐☐ 7/16 (wobble) Socket-6 ext (spare)
  - ☐☐ DCM Plug (SAFER Hardmount) (2)
  - ☐☐ RET (sm-sm, Black) (2)

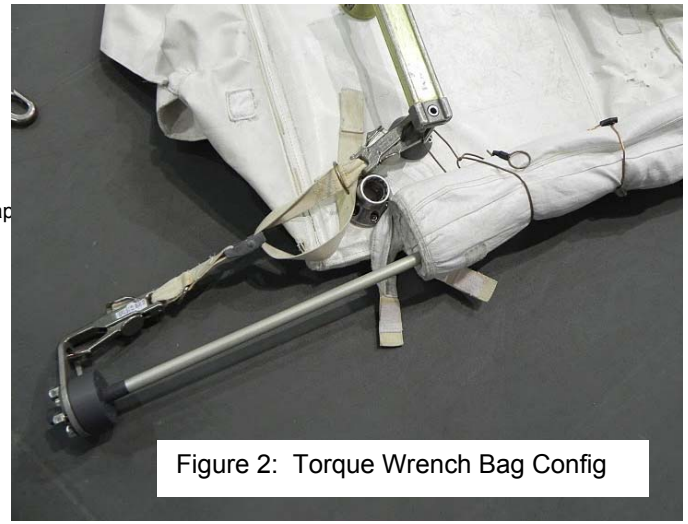


Figure 2: Torque Wrench Bag Config

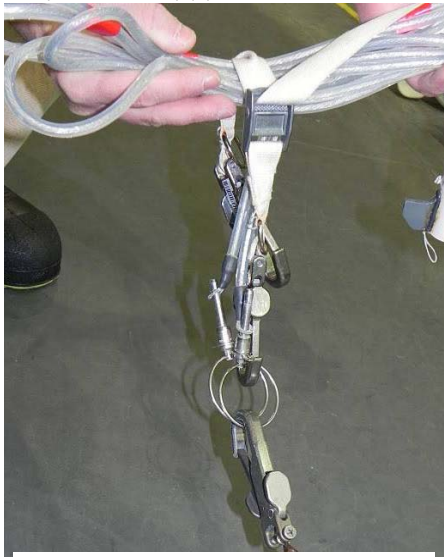
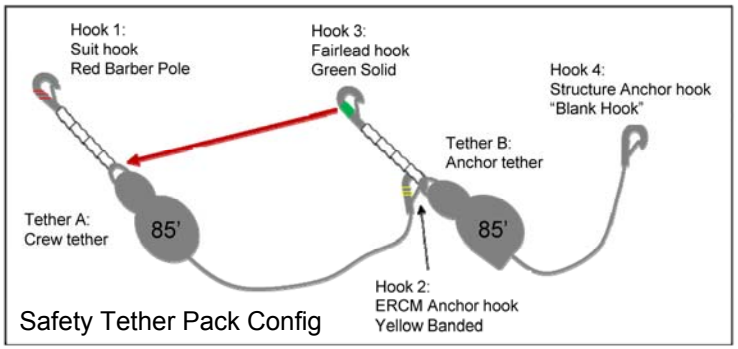


Figure 1: OBSS Grounding



Safety Tether Pack Config

FS 7-173

EVA 4 INHIBIT PAD

Orbiter

ALL EVAs

TCS *(Not required, switch guard installed on EVA1)*
IV L12 1. √TCS POWER – OFF

KU-Band Antenna *(INCO: Prior to Egress)*
MCC-H 1. √KU-BAND Mask – active
2. √KU-BAND EVA Protect Box – active

RCS *(GNC/PROP: Prior to Egress)*
If EV crew < 27 ft from FRCS
IV 1. √DAP: VERN, FREE, LO Z
O14,15,16 2. √RJDF F1, F2, F3, F4 MANF DRIVER (four) – OFF
LOGIC (four) – OFF
MCC-H 3. √Above RCS config
IV 4. √RCS F – ITEM 1 EXEC (*)
√JET DES F1U – ITEM 17 (*)
F3U – ITEM 19 (*)
F2U – ITEM 21 (*)

Ground

ALL EVAs

Ground Radar *(TOPO: Prior to Egress)*
MCC-H 1. √TOPO console, ground radar restrictions in place for EVA

USOS (1)

ALL EVAs

PCU *(PHALCON: Prior to Egress)*

NOTE
PCUs may require up to a 1-hr warmup period before they are operational

MCC-H 1. √PCUs (two) operational in discharge mode and one of the following:
a. CCS PCU EVA hazard control FDIR enabled
b. Only allowed arrays unshunted and oriented < 105º from velocity vector
If one or both PCUs failed
2. Only allowed arrays unshunted and oriented < 105º from velocity vector

CUCU *(Crew: Prior to Egress)*
IV – (LAB1O4)
1. √cb POWER A, B [two] – OPEN
2. √cb LINK 1,2 [two] – OPEN

And one of the following inhibit pairs:
POIC 3a. Express Rack 2 Locker 6 – Power Removed
3b. Express Rack 6 Locker 7 – Power Removed
OR
IV 4a. Express Rack 2 Locker 6 – OFF
4b. Express Rack 6 Locker 7 – OFF

MISSE 8 *(POD: Prior to Egress)*
POIC Prior to EV Hatch Open
1. ELC-2 ExPA-2 Discrete Channel 6 – Disabled

EVA 4 INHIBIT PAD (Cont)

LOCATION DEPENDENT INHIBITS

Lab Window *(Not expected)*
IV If EV crew less than 10 ft from window or in window FOV, close window shutter

Cupola Windows *(Not expected)*
IV If EV crew less than 10 ft from window, coordinate shutter opening/closing with EV crew and minimize time shutter is open

S-Band (SASA) Antennas *(CATO: Prior to Egress – OBSS Stow)*
MCC-H If EV crew < 3.8 ft from S1 SASA
1. P1 SASA – Active
2. S1 SASA – Powered down and unavailable to FDIR

Mobile Transporter *(ROBO: Prior to Egress)*
MCC-H If EV crew < 1.5 meters from MT
1. √MT latched

Port SARJ *(PHALCON: During Egress – PDGF Retrieve)*
MCC-H If EV crew working within 2 ft, outboard of SARJ or reqd per loads FR
1. √DLA (1) – LOCKED at 285°
2. All motor setpoints set to zero
3. All motors deselected

TRRJ *(THOR: Prior to Egress – OBSS Stow)*
MCC-H If EV crew working within 2 ft of S1 TRRJ rotation envelope
1. √DLA 1(2) – LOCKED within 65° to 90°
2. √DLA 2(1) – ENGAGED

FPMU *(PHALCON: Prior to Egress – PDGF Retrieve, SPDM EDF Release)*
MCC-H If EV crew on Port truss (P1-P6) or working within 5 ft of Floating Potential Measurement Unit
1. RPCM P11A_B RPC 13 Open/Close Cmd Inhibit

SSPTS (*PHALCON: Prior to Task – EFGF Stow in TSA Inhibits 1, 2 and 3 from ~4:00-5:15)*
MCC-H If EV crew working within 2 ft of SSPTS cables
1. RPCM LA2A3B D RPC 1 – Open, Close Cmd Inhibit
2. RPCM Z14B A RPC 2 – Open, Close Cmd Inhibit
3. RPCM Z13B A RPC 2 – Open, Close Cmd Inhibit

TASK DEPENDENT INHIBITS

BGA 4A *(PHALCON: Prior to Egress – PDGF Retrieve)*
MCC-H If EV crew working within rotation plane of BGA
1. Lock BGA 4A between 50°-180° (160° preferred) with motor turned off

MISSE 8 *(POD: Prior to Egress – SPDM EDF Release)*
POIC If EV crew working zenith of plane of MISSE 8
1. MISSE-8 PASCAL solar cells – Zero voltage bias
2. ELC-2 ExPA-2 Discrete Channel 1 – Disabled
3. ELC-2 ExPA-2 28V Operational Power – Disabled

Node 3 J1 FGB and J2 FGB 1553 (*ROBO: Once SSRMS at Stage Park position and prior to 1553 Get ahead*)
MCC-H If any RWS active, cmd 'Active Assert Backup'

FGB PDGF Power (PHALCON*: Prior to 1553 or PDGF Get ahead)*
MCC-H
1. √RACU-6 – OFF
2. √RACU-5 – OFF

JEM (1)

ALL EVAs

ICS-EF Antenna
SSIPC
1. ICS MOD – OFF
2. ICS UPC – OFF
3. ICS HPA – OFF
4. HPA ON and UPC ON commands are cleared (not present) in the ICS stored command queue

COL (1)

ALL EVAs

HAM Radio *(Crew: Prior to Egress)*
IV 1. HAM Radio – Deactivate

EVA 4 INHIBIT PAD (Cont)

RSOS (1)

ALL EVAs

SM Antennas *(RIO: Prior to Egress)*

IV	1. ARISS (Ham Radio) – Deactivate
MCC-M	2. GTS – Deactivate
	3. Napor (РСПИ) – Deactivate

EVAs ON PMA1 OR RSOS (LOCATION DEPENDENT)

RSOS and RSOS Visiting Vehicle Antennas (Includes FGB, SM, DC-1, MRM-1, MRM-2, Progress)

MCC-M	1. √KURS P [КУРС P] – Deactivated
	2. √KURS A [КУРС A] – Deactivated

ADDITIONAL ANTENNA INHIBITS FOR EVAs ON RSOS (LOCATION DEPENDENT)

FGB Antennas

MCC-M	1. √TORU [ТОРУ]	– Deactivated
	2. √TV System [ТВС]	– Deactivated
	3. Radiotelemetry [БР-9ЦУ-8]	– Deactivate
	4. √TV System [КЛ-108А]	– Deactivated
	5. √CNPMS [СИТНП]	– Deactivated
	6. √KOMPARUS [КИС]	– Deactivated

27

EVA 4 - 1553 DATA CABLE INSTALL GET AHEAD (01:10)

IV/SSRMS	EV2 (Spanky)	EV3 (Taz)
	WARNING Avoid inadvertent contact with grapple fixture target, target pin, connector doors, and PDGF curvic coupling (teeth) Avoid contact with FGB sun sensors (possible sharp edges)	
	CAUTION Avoid inadvertent contact with zenith PMA1 MDM and above 22” of EVA crane	
1. √RSOS inhibit in place 2. Start Hatch Thermal Cover clock PET (30 min) ___:___ 3. Stop Hatch Thermal Cover clock PET (30 min) ___:___	1553 DATA CABLE INSTALL (01:10) 1. Translate to A/L 2. Temp stow OBSS ORU bag at A/L 3. Open hatch thermal cover 4. Retrieve Node 3 cable bag; stow on BRT w/RET 5. Close hatch thermal cover 6. Translate to FGB 7. Attach **GREEN** hook to PMA1 HR 0013 ❑ √Gate closed, hook locked, reels unlocked, release RET 8. Retrieve 1553 cable and fish stringer from Node 3 Cable bag ❑ RET to connector bail or cable 9. Untwist taped wire tie to release Node 3 end 10. Attach taped wire tie (FGB end) to PMA1 HR 0011 11. Translate nadir/port to Node 3 connector panel (along Node 1 HR 0118), reel out 1553 cable as reqd 12. Temp stow fish stringer 13. Remove Node 3 terminator MLI (2); stow on fish stringer ❑ J1 FGB ❑ J2 FGB	1553 DATA CABLE INSTALL (01:10) 1. Retrieve OBSS C/L bag; stow on BRT w/RET 2. Translate to A/L 3. Temp stow OBSS C/L bag at A/L 4. Translate to FGB 5. Attach **GREEN** hook to NODE1 HR 0119 ❑ √Gate closed, hook locked, reels unlocked, release RET 6. Translate to PAMA/PDGF between foot 2 and 3 7. Release wire tie from PDGF for the 1553 cables 8. Route PDGF harness cables toward PMA1 HR 0011 ❑ Verify ST routed over the cables
4. √1553 Cable Inhibit in place	14. On IV GO: Remove Node 3 terminator caps (2) from aft avionics panel; stow on fish stringer ❑ Terminator cap ←|→ Node 3 J1 FGB ❑ Terminator cap ←|→ Node 3 J2 FGB	9. Remove caps (4); verify caps are securely wire tied to cables 10. Mate 1553 cable connectors to PDGF harness and lock connector: ❑ √Good pins; no FOD

FS 7-227a

EVA 4 - 1553 DATA CABLE INSTALL GET AHEAD (01:10)

IV/SSRMS	EV2 (Spanky)	EV3 (Taz)
	15. Remove cap from 1553 P1 cable; stow on fish stringer 16. Mate 1553 cable P1 to Node 3 J1 FGB ❑ √Good pins & EMI band; no FOD ❑ 1553 cable P1 →|← J1 FGB (Node 3) 17. Remove cap from 1553 P2 cable; stow on fish stringer 18. Mate 1553 cable P2 to Node 3 J2 FGB ❑ √Good pins & EMI band; no FOD ❑ 1553 cable P2 →|← J2 FGB (Node 3) 19. Retrieve fish stringer	❑ PDGF harness 1800-X54 →|← J54 (Bus A) ❑ PDGF harness 1800-X53 →|← J53 (Bus B) NOTE Russian connectors reminder: – Verify lock is in Open position – Align arrows on connector shells – Push connectors together – Rotate connectors ~1/4 turn – Verify arrow on plug points to white mark on socket – Slide lock closed
5. Give **MCC-H GO** to check both data channels	20. Wire tie 1553 cable and any slack to Node 1 HR 0118 (low profile wire tie) and PMA1 HR 0006 21. Translate to Node 3 bag; stow fish stringer in Node 3 bag	11. Secure FPP booties around 1553/PDGF harness connections; adjust wire ties as reqd 12. Wire tie any slack to PMA1 HR 0011 using integrated PDGF harness wire tie
6. Perform EV Final Tool Inventory (Refer to Tool Config FS 7-172)	22. Retrieve Node 3 cable bag; stow on BRT w/RET 23. Glove Check 24. Perform MWS Tool Inventory (Translate to A/L)	13. Glove Check 14. Perform MWS Tool Inventory (Translate to S0 Port Struts)

FS 7-227b

ULF6 FD11 Stowage Notes

BSA-RCHRG-TERM (MS4) - 146/04:26						
#	Location	Item Name	P/N	S/N	B/C	Notes
Type: Standard						
1	**A/L1F1** Battery Stowage Assembly	EHIP Battery Pack	SEG39130223-304	1022 1025	- -	
2		REBA BSA CBLS	SEG33112214-301	1006	00008706J	
Type: Restow						
3	**A/L1O1** M-02 Bag: EVA PREP AND OPS, S/N 1038, B/C 003019J	EHIP Battery Pack	SEG39130223-304	1025	- -	Not required for EVA 4.
4	**NOD1_Deployed** Mesh Bag: EVA 4 Systems	EHIP Battery Pack	SEG39130223-304	1022		
5		REBA	SEG33112213-302	1009	REBA1009J	If not charged in-suit
6	**A/L1O1** M-02 Bag: EVA PREP AND OPS, S/N 1038, B/C 003019J	REBA	SEG33112213-302	1007	REBA1007J	Not required for EVA 4.
7	**A/L1O1** Ziplock: BSA REBA Cable	REBA BSA CBLS	SEG33112214-301	1006	00008706J	M-02 Bag s/n 1038

BATT-INSTL (MS1/MS3) - 146/07:21						
#	Location	Item Name	P/N	S/N	B/C	Notes
Type: Standard						
1	**NOD1_Deployed** Mesh Bag: EVA 4 Systems	EMU Li-Ion Battery	SV1014881-00-00	3006 3007	00133627J 00133628J	
2		LiOH Cartridge Canister [Qty: 2]	MC621-0008-0409/SV755510-4	Any		Report S/N to MCC-H
3	**EMU 3018** Fwd EDDA	EMU Li-Ion Battery	SV1014881-00-00	3005	00133626J	
4		LiOH Cartridge Canister	MC621-0008-0409/SV755510-4	2031		Used EVA #3
5	**EMU 3005** Aft EDDA	LiOH Cartridge Canister	MC621-0008-0409/SV755510-4	2024		Used EVA #1
Type: Restow						
6	**EMU 3018** Fwd EDDA	EMU Li-Ion Battery	SV1014881-00-00	3006	00133627J	
7		LiOH Cartridge Canister	MC621-0008-0409/SV755510-4	2004		Report S/N to MCC-H

BATT-INSTL (MS1/MS3) - 146/07:21						
#	Location	Item Name	P/N	S/N	B/C	Notes
8	**EMU 3005** Aft EDDA	EMU Li-Ion Battery	SV1014881-00-00	3007	00133628J	
9		LiOH Cartridge Canister	MC621-0008-0409/SV755510-4	2017		Report S/N to MCC-H
10	**NOD1_Deployed** Mesh Bag: SYSTEMS TRANSFER	LiOH Cartridge Canister [Qty: 2]	MC621-0008-0409/SV755510-4	2024 2031		Two used LiOH canisters
11	**A/L1O1** 0.5 CTB, S/N 1205, B/C 010386J	EMU Li-Ion Battery	SV1014881-00-00	3005	00133626J	