



1
00:00:07,510 --> 00:00:05,749
good morning welcome to the mission

2
00:00:09,270 --> 00:00:07,520
welcome to mission control houston i'm

3
00:00:11,990 --> 00:00:09,280
nasa schneiderlin and we're bringing you

4
00:00:13,669 --> 00:00:12,000
live coverage today of the 247th

5
00:00:15,829 --> 00:00:13,679
spacewalk in support of international

6
00:00:20,950 --> 00:00:15,839
space station assembly maintenance and

7
00:00:24,950 --> 00:00:22,870
today nasa astronauts

8
00:00:26,550 --> 00:00:24,960
kayla baron rajachary will conduct a

9
00:00:29,029 --> 00:00:26,560
spacewalk at the international space

10
00:00:31,429 --> 00:00:29,039
station to assemble and install brackets

11
00:00:32,870 --> 00:00:31,439
and truss kits for upcoming solar array

12
00:00:35,190 --> 00:00:32,880
upgrades

13
00:00:36,470 --> 00:00:35,200

the new iss rollout solar arrays or

14

00:00:38,229 --> 00:00:36,480

irosas

15

00:00:40,150 --> 00:00:38,239

will increase the space station's total

16

00:00:42,069 --> 00:00:40,160

available power

17

00:00:43,430 --> 00:00:42,079

so far two of six iroses have been

18

00:03:29,830 --> 00:00:43,440

deployed on the station with four

19

00:03:34,149 --> 00:03:32,869

you're looking live into the quest

20

00:03:36,550 --> 00:03:34,159

airlock of the international space

21

00:03:38,390 --> 00:03:36,560

station where nasa astronaut kayla baron

22

00:03:39,589 --> 00:03:38,400

is suited up in the suit with the red

23

00:03:41,430 --> 00:03:39,599

stripe

24

00:03:43,270 --> 00:03:41,440

and roshachary

25

00:03:45,110 --> 00:03:43,280

in the suit with no stripes

26

00:03:53,750 --> 00:03:45,120

complete with the exercise great work

27

00:04:01,429 --> 00:03:55,910

you just heard a call from capcom woody

28

00:04:01,439 --> 00:04:08,229

copy your go for step four

29

00:04:12,390 --> 00:04:09,910

you just heard a call

30

00:04:15,270 --> 00:04:12,400

from capcom woody holberg

31

00:04:18,150 --> 00:04:15,280

about the crew and pre-breathing

32

00:04:21,670 --> 00:04:18,160

this is where the crew

33

00:04:24,629 --> 00:04:21,680

will breathe 100 oxygen

34

00:04:27,430 --> 00:04:24,639

purging nitrogen from their bodies

35

00:04:32,230 --> 00:04:27,440

portion now the crew is doing suit light

36

00:04:35,749 --> 00:04:33,909

these movements help acclimate the body

37

00:04:38,230 --> 00:04:35,759

to lower pressure of the suit and help

38

00:04:40,629 --> 00:04:38,240

astronauts purge the excess excess

39

00:04:42,310 --> 00:04:40,639

nitrogen from their bloodstreams

40

00:04:44,469 --> 00:04:42,320

slowly to avoid getting the bends or

41

00:04:47,030 --> 00:04:44,479

decompression thickness at nominal

42

00:04:49,510 --> 00:04:47,040

pressure the suit is pressurized at 4.3

43

00:04:51,830 --> 00:04:49,520

pounds per square inch or psi

44

00:04:54,150 --> 00:04:51,840

for a little context the psi here on

45

00:04:57,590 --> 00:04:54,160

earth is about 14.7

46

00:04:59,670 --> 00:04:57,600

so that in 4.3 psi the suit is like what

47

00:05:37,909 --> 00:04:59,680

you would experience at an elevation of

48

00:05:44,870 --> 00:05:40,469

houston we are in step

49

00:05:49,670 --> 00:05:48,070

are waiting for step seven

50

00:05:51,749 --> 00:05:49,680

here like houston we copy we're going to

51
00:05:55,189 --> 00:05:51,759
take a look at the heka data expect

52
00:05:57,110 --> 00:05:55,199
about 10 minutes before step 7 meanwhile

53
00:06:02,150 --> 00:05:57,120
if not already complete you have a go

54
00:06:02,160 --> 00:06:14,550
working step 8 to 13.

55
00:06:19,670 --> 00:06:16,950
and as astronaut tom marshburn is the

56
00:06:38,309 --> 00:06:19,680
crew seat up suit up lead backed by isa

57
00:06:44,469 --> 00:06:40,710
nasa astronaut kayla baron is designated

58
00:06:46,790 --> 00:06:44,479
as ev1 or extravehicular crew member one

59
00:06:48,390 --> 00:06:46,800
wearing the suit with the red stripes on

60
00:06:51,029 --> 00:06:48,400
the right of your screen

61
00:07:10,790 --> 00:06:51,039
and rash acharya is ev2 wearing the suit

62
00:07:14,469 --> 00:07:12,629
at the beginning of today's

63
00:07:17,670 --> 00:07:14,479

spacewalk that you will be working on

64

00:07:19,589 --> 00:07:17,680

the starboard truss or s4 at the 3m mass

65

00:07:22,710 --> 00:07:19,599

canister on the 3a power channel

66

00:07:24,070 --> 00:07:22,720

installing the modification kit

67

00:07:26,230 --> 00:07:24,080

they will then translate to the

68

00:07:29,029 --> 00:07:26,240

starboard truss s6 to tie back

69

00:07:31,670 --> 00:07:29,039

multi-layer insulation on spare battery

70

00:07:34,309 --> 00:07:31,680

charge discharge units to support

71

00:10:40,630 --> 00:07:34,319

robotic replacement and relocation on a

72

00:10:45,750 --> 00:10:44,069

station on one for the airlock woody we

73

00:10:48,230 --> 00:10:45,760

would like already to report the serial

74

00:10:55,990 --> 00:10:48,240

numbers for the metox canisters just to

75

00:11:00,870 --> 00:10:57,829

houston copies and we see in the video

76

00:11:03,910 --> 00:11:00,880

canisters 33 and 34. those are good

77

00:11:03,920 --> 00:11:08,630

good numbers

78

00:11:08,640 --> 00:11:23,430

and we copy 1033 for kayla ev1

79

00:11:26,630 --> 00:11:25,110

if you're just joining us you're looking

80

00:11:28,550 --> 00:11:26,640

live into the quest airlock of the

81

00:11:30,790 --> 00:11:28,560

international space station where nasa

82

00:11:32,230 --> 00:11:30,800

astronaut kayla baron is suited up with

83

00:11:34,389 --> 00:11:32,240

the red stripe

84

00:11:37,910 --> 00:11:34,399

and rosh achary in spacesuit with no

85

00:11:40,150 --> 00:11:37,920

stripes preparing for today's spacewalk

86

00:11:41,190 --> 00:11:40,160

today's spacewalk will be the 247th

87

00:11:43,030 --> 00:11:41,200

spacewalk in support of the

88

00:11:47,750 --> 00:11:43,040

international space station assembly

89

00:11:51,509 --> 00:11:49,350

this spacewalk will be the second of

90

00:11:53,190 --> 00:11:51,519

baron's career and the first for charity

91

00:11:55,590 --> 00:11:53,200

on their first mission to the

92

00:12:11,590 --> 00:11:55,600

international space station

93

00:12:15,269 --> 00:12:13,829

nasa spacex crew 3 astronauts are in

94

00:12:17,110 --> 00:12:15,279

orbit following their launch to the

95

00:12:19,110 --> 00:12:17,120

national space station on the third

96

00:12:21,030 --> 00:12:19,120

commercial crew rotation mission aboard

97

00:12:22,150 --> 00:12:21,040

the microgravity laboratory the

98

00:12:25,110 --> 00:12:22,160

international

99

00:12:28,150 --> 00:12:25,120

crew of astronauts lifted off at 9 03 pm

100

00:12:31,269 --> 00:12:28,160

eastern time wednesday from lunch

101
00:14:13,829 --> 00:12:31,279
on from launch pad complex 39a at nasa's

102
00:14:17,509 --> 00:14:16,069
the doer sitted suited up and going

103
00:14:19,750 --> 00:14:17,519
through procedures before they head out

104
00:14:22,069 --> 00:14:19,760
of the hatch later this morning also in

105
00:14:24,310 --> 00:14:22,079
the airlock assisting is issa astronaut

106
00:14:30,389 --> 00:14:24,320
matthias maurer and that's astronaut tom

107
00:14:34,629 --> 00:14:32,389
airlock houston on two for hecka

108
00:14:37,110 --> 00:14:34,639
checkout

109
00:14:39,670 --> 00:14:37,120
during today's spacewalk baron and jari

110
00:14:41,590 --> 00:14:39,680
will focus on the installation of a 3a

111
00:14:44,150 --> 00:14:41,600
modification kit and tie back

112
00:14:45,269 --> 00:14:44,160
multi-layer insulation on spare battery

113
00:14:48,629 --> 00:14:45,279

charge

114

00:14:54,310 --> 00:14:48,639

replacement or

115

00:14:54,320 --> 00:14:58,230

station

116

00:15:02,069 --> 00:14:59,990

here like houston we had a successful

117

00:15:04,470 --> 00:15:02,079

heka activation and checkout to your go

118

00:15:05,670 --> 00:15:04,480

to perform step seven and then your

119

00:15:08,470 --> 00:15:05,680

further go

120

00:15:12,710 --> 00:15:08,480

to perform the medox replacement as

121

00:19:45,830 --> 00:15:14,629

so we will perform step seven and then

122

00:19:50,150 --> 00:19:47,590

houston no response required we see one

123

00:19:51,909 --> 00:19:50,160

zero three four for raja and we saw one

124

00:23:20,070 --> 00:19:51,919

zero three three for kayla those are

125

00:23:23,750 --> 00:23:21,590

if you're just joining us welcome to

126

00:23:25,190 --> 00:23:23,760

mission control houston

127

00:23:27,990 --> 00:23:25,200

we're bringing you live coverage today

128

00:23:29,350 --> 00:23:28,000

of the 247th spacewalk in support of ins

129

00:23:32,470 --> 00:23:29,360

of the international space station

130

00:23:34,870 --> 00:23:32,480

assembly maintenance and upgrades

131

00:23:36,950 --> 00:23:34,880

we have an animation to show you what

132

00:23:39,590 --> 00:23:36,960

nasa astronauts kayla baron and rosh

133

00:23:41,909 --> 00:23:39,600

achary will be conducting

134

00:23:55,669 --> 00:23:41,919

and monitor will be installing

135

00:24:00,149 --> 00:23:58,070

u.s spacewalk number 79 will begin at

136

00:24:02,230 --> 00:24:00,159

the quest airlock u.s astronaut kayla

137

00:24:04,310 --> 00:24:02,240

barron navy one denoted by the red

138

00:24:06,870 --> 00:24:04,320

stripes will egress first and receive a

139

00:24:09,190 --> 00:24:06,880

very large irosa mod kit strut bag u.s

140

00:24:10,950 --> 00:24:09,200

astronaut raj atari and the plain white

141

00:24:13,830 --> 00:24:10,960

suit will egress second with the kulak

142

00:24:17,350 --> 00:24:13,840

bag after quick buddy checks ev1 will

143

00:24:19,510 --> 00:24:17,360

head up to phase one and out to the s4

144

00:24:22,070 --> 00:24:19,520

integrated equipment assembly pausing

145

00:24:24,630 --> 00:24:22,080

momentarily to drop her fairlead green

146

00:24:26,630 --> 00:24:24,640

hook just inboard of the solar alpha

147

00:24:29,830 --> 00:24:26,640

rotary joint and then continue her

148

00:24:31,750 --> 00:24:29,840

translation out to the s4 3-alpha

149

00:24:34,630 --> 00:24:31,760

integrated equipment assembly where she

150

00:24:36,710 --> 00:24:34,640

will stow the large arosa mod kit strut

151

00:24:39,029 --> 00:24:36,720

bag and prep for the building of the

152

00:24:42,870 --> 00:24:39,039

upper triangle of the mod kit meanwhile

153

00:24:44,630 --> 00:24:42,880

ev2 will follow ev1 up to phase 1. ev2

154

00:24:46,310 --> 00:24:44,640

will stop at the starboard ceta cart

155

00:24:48,470 --> 00:24:46,320

where he will temp stow a crew lock bag

156

00:24:50,390 --> 00:24:48,480

of tools and retrieve a foot restraint

157

00:24:52,630 --> 00:24:50,400

and a worksite interface extender known

158

00:24:55,190 --> 00:24:52,640

as a whiffex and then translate outboard

159

00:24:57,190 --> 00:24:55,200

pausing momentarily to drop his fairly

160

00:24:59,830 --> 00:24:57,200

green hook just inboard of the solar

161

00:25:02,870 --> 00:24:59,840

alpha rotary joint continuing outboard

162

00:25:05,269 --> 00:25:02,880

eb2 will cross over to the radiator side

163

00:25:07,990 --> 00:25:05,279

of the iea and stow the foot restraint

164

00:25:11,110 --> 00:25:08,000

and the worksite interface extender into

165

00:25:12,870 --> 00:25:11,120

the worksite interface number 26. ev2

166

00:25:15,510 --> 00:25:12,880

will then set up the foot restraint for

167

00:25:16,950 --> 00:25:15,520

optimum arosa mod kit upper triangle

168

00:25:19,590 --> 00:25:16,960

installation

169

00:25:22,149 --> 00:25:19,600

and then translate over to join ev1 to

170

00:25:24,870 --> 00:25:22,159

begin assembling the upper triangle

171

00:25:26,710 --> 00:25:24,880

ev1 and ev2 will work together to build

172

00:25:28,950 --> 00:25:26,720

the upper triangle the crew will build

173

00:25:30,789 --> 00:25:28,960

the triangular segment loosely and they

174

00:25:32,390 --> 00:25:30,799

will tighten up the structure by driving

175

00:25:34,870 --> 00:25:32,400

the bolts to torque

176
00:25:36,789 --> 00:25:34,880
ev2 will then translate over to and

177
00:25:38,870 --> 00:25:36,799
ingress the foot restraint ev1 will

178
00:25:41,430 --> 00:25:38,880
reposition for the handoff and ev1 will

179
00:25:42,149 --> 00:25:41,440
hand off the upper triangle to ev2 even

180
00:25:44,470 --> 00:25:42,159
too

181
00:25:46,870 --> 00:25:44,480
laid back and work to soft dock the

182
00:25:49,669 --> 00:25:46,880
segment onto the beta gimbal assembly

183
00:25:52,470 --> 00:25:49,679
and then drive four bolts ev1 will temp

184
00:25:53,909 --> 00:25:52,480
stow her pgt with a short socket on a

185
00:25:56,390 --> 00:25:53,919
local handrail

186
00:25:59,269 --> 00:25:56,400
while ev2 will egress the pump restraint

187
00:26:01,510 --> 00:25:59,279
and bias it to the left-hand side ev1

188
00:26:04,470 --> 00:26:01,520

will go over to the back and retrieve

189

00:26:07,750 --> 00:26:04,480

the left mid strut and work to pass this

190

00:26:10,710 --> 00:26:07,760

off to ev2 or a body restraint

191

00:26:12,070 --> 00:26:10,720

tetherstone ev2 will then re-ingress the

192

00:26:14,710 --> 00:26:12,080

foot restraint

193

00:26:17,430 --> 00:26:14,720

while ev1 retrieves the long eight foot

194

00:26:20,870 --> 00:26:17,440

lower strut from the bag and hands it to

195

00:26:23,510 --> 00:26:20,880

ev2 while av2 holds the long lower strut

196

00:26:26,549 --> 00:26:23,520

ev1 will reposition to the solar array

197

00:26:29,029 --> 00:26:26,559

blanket box for saab for the install of

198

00:26:31,269 --> 00:26:29,039

the left lower strut as a team the crew

199

00:26:33,590 --> 00:26:31,279

will move the strut into position and

200

00:26:36,789 --> 00:26:33,600

ev1 will begin at driving this bolt by

201
00:26:39,029 --> 00:26:36,799
hand four turns ev2 will then work to

202
00:26:42,390 --> 00:26:39,039
align and drive his bolt on the mounting

203
00:26:45,350 --> 00:26:42,400
bracket side two turns and then ev1 will

204
00:26:47,269 --> 00:26:45,360
work to complete the torque on this bolt

205
00:26:49,510 --> 00:26:47,279
by driving with the pistol grip tool to

206
00:26:51,510 --> 00:26:49,520
a high torque and then following with an

207
00:26:54,149 --> 00:26:51,520
even higher torque on the torque wrench

208
00:26:56,630 --> 00:26:54,159
once the bolt is deemed good ev2 will be

209
00:26:58,549 --> 00:26:56,640
given a go to drive his bolts to torque

210
00:27:00,950 --> 00:26:58,559
using the pistol grip tool and this

211
00:27:03,190 --> 00:27:00,960
completes our minimum config ev1 will

212
00:27:05,029 --> 00:27:03,200
reposition to the beta gimbal assembly

213
00:27:07,590 --> 00:27:05,039

and ev2 will hand off the telescoping

214

00:27:09,909 --> 00:27:07,600

mid strut for install ev1 will work to

215

00:27:12,310 --> 00:27:09,919

soft dock the side pad onto the bga

216

00:27:15,110 --> 00:27:12,320

while ev2 holds his clevis bolt side in

217

00:27:17,510 --> 00:27:15,120

place av1 will start her floor bolt two

218

00:27:20,230 --> 00:27:17,520

turns with the pistol grip tool and then

219

00:27:22,549 --> 00:27:20,240

ev2 will drive his clevis bolt to torque

220

00:27:24,549 --> 00:27:22,559

on the mounting bracket ev-1 will then

221

00:27:25,990 --> 00:27:24,559

complete her 4 bolts with her pistol

222

00:27:28,549 --> 00:27:26,000

grip tool

223

00:27:30,789 --> 00:27:28,559

and then ev2 will drive his bolt to

224

00:27:33,510 --> 00:27:30,799

torque

225

00:27:35,750 --> 00:27:33,520

ev2 will then egress and reposition the

226

00:27:38,310 --> 00:27:35,760

foot restraint to bias it to the right

227

00:27:40,470 --> 00:27:38,320

hand side the mod kit the crew will then

228

00:27:42,789 --> 00:27:40,480

repeat the handoff sequence first and

229

00:27:45,669 --> 00:27:42,799

mid strut for body restraints tether

230

00:27:48,070 --> 00:27:45,679

stow foot restraints ingress followed by

231

00:27:50,470 --> 00:27:48,080

handoff of the very long lower right

232

00:27:52,549 --> 00:27:50,480

strut tv1 will then reposition to the

233

00:27:55,430 --> 00:27:52,559

right hand side of the three alpha beta

234

00:27:57,990 --> 00:27:55,440

gimbal assembly and an analogous install

235

00:28:00,549 --> 00:27:58,000

and strategy will unfold ev-1 will

236

00:28:02,710 --> 00:28:00,559

position at the right saab bearing for

237

00:28:03,750 --> 00:28:02,720

lower strut install and drive the lower

238

00:28:06,789 --> 00:28:03,760

strut

239

00:28:08,870 --> 00:28:06,799
to torque ev1 will drive his clevis

240

00:28:11,430 --> 00:28:08,880
bolts to the mounting bracket

241

00:28:12,630 --> 00:28:11,440
ev-1 will then reposition at the bga and

242

00:28:14,549 --> 00:28:12,640
they will hand off the wright's

243

00:28:16,389 --> 00:28:14,559
telescoping bid struts following the

244

00:28:18,470 --> 00:28:16,399
same install strategy

245

00:28:20,630 --> 00:28:18,480
once complete tv-1 will translate onto

246

00:28:22,630 --> 00:28:20,640
the mid-strut and drive two collar bolts

247

00:28:24,310 --> 00:28:22,640
to torque to lock out the telescoping

248

00:28:26,310 --> 00:28:24,320
mechanism and rigidize the right-hand

249

00:28:29,590 --> 00:28:26,320
side ev2 will then egress the foot

250

00:28:31,430 --> 00:28:29,600
restraint and begin to clean up

251
00:28:34,149 --> 00:28:31,440
once the multi-layer installation our

252
00:28:36,470 --> 00:28:34,159
mli is fully closed and wire tied down

253
00:28:39,909 --> 00:28:36,480
ev1 will reposition to repeat the collar

254
00:28:42,149 --> 00:28:39,919
bolt and mli ops on the left-hand side

255
00:28:44,310 --> 00:28:42,159
ev2 will then translate around the

256
00:28:46,310 --> 00:28:44,320
integrated equipment assembly and stow

257
00:28:48,070 --> 00:28:46,320
the jewels back in the bag you'll then

258
00:28:50,549 --> 00:28:48,080
fold it into third for ready for

259
00:28:52,870 --> 00:28:50,559
translation and later in the eva ev2

260
00:28:54,710 --> 00:28:52,880
will then translate back around the iea

261
00:28:56,310 --> 00:28:54,720
to the foot restraint and work to stow

262
00:28:58,549 --> 00:28:56,320
the foot restraint in the worksite

263
00:29:01,110 --> 00:28:58,559

interface extender on his body restraint

264

00:29:04,070 --> 00:29:01,120

tether ev1 the meanwhile will translate

265

00:29:05,830 --> 00:29:04,080

over to the non-radiator side of the iea

266

00:29:07,350 --> 00:29:05,840

to take some still imagery of the

267

00:29:10,470 --> 00:29:07,360

completed mod kit

268

00:29:12,389 --> 00:29:10,480

ev1 will then translate out to s6 to our

269

00:29:14,549 --> 00:29:12,399

battery charge discharge unit she will

270

00:29:17,269 --> 00:29:14,559

begin installing some wire ties on a

271

00:29:19,669 --> 00:29:17,279

handrail and prep for restraining the

272

00:29:22,230 --> 00:29:19,679

mli or multi-layer insulation that

273

00:29:24,230 --> 00:29:22,240

covers the battery charge discharge unit

274

00:29:26,389 --> 00:29:24,240

meanwhile ev2 will translate out to the

275

00:29:28,310 --> 00:29:26,399

starboard of cart to stow the foot

276

00:29:30,549 --> 00:29:28,320

restraint and work site interface

277

00:29:32,470 --> 00:29:30,559

extender low profile on the starboard

278

00:29:34,710 --> 00:29:32,480

cedar cart ev2 will then retrieve the

279

00:29:37,909 --> 00:29:34,720

crewlock bag onto his body restraint

280

00:29:41,510 --> 00:29:37,919

tether and head back out to s6 to join

281

00:29:43,830 --> 00:29:41,520

ev1 both crew will work together to open

282

00:29:46,470 --> 00:29:43,840

the multi-layer insulation covering the

283

00:29:49,110 --> 00:29:46,480

battery charge discharge units this will

284

00:29:51,350 --> 00:29:49,120

allow for robotic access when needed in

285

00:29:53,750 --> 00:29:51,360

the future they'll perform some on-orbit

286

00:29:56,389 --> 00:29:53,760

origami port it to the shape of a

287

00:29:58,470 --> 00:29:56,399

triangle and restrain it out with a wire

288

00:30:01,830 --> 00:29:58,480

tie to a local handrail the crew will

289

00:30:03,990 --> 00:30:01,840

then work to break torque first on h1

290

00:30:06,950 --> 00:30:04,000

followed by h2 and then restrain the

291

00:30:09,750 --> 00:30:06,960

other mli back to open and expose the

292

00:30:11,750 --> 00:30:09,760

second battery charge discharge unit

293

00:30:14,630 --> 00:30:11,760

and then work to break torque

294

00:30:17,830 --> 00:30:14,640

and reinstall to a known lower torque on

295

00:30:19,830 --> 00:30:17,840

the second battery charge discharge unit

296

00:30:22,950 --> 00:30:19,840

both crew then we'll clean up and

297

00:30:25,669 --> 00:30:22,960

retrieve the crew lock bag to the

298

00:30:27,350 --> 00:30:25,679

brt or body restraint tether and begin

299

00:30:30,310 --> 00:30:27,360

to head inboard

300

00:30:31,669 --> 00:30:30,320

the completion of the eva eb2 will lead

301

00:30:34,070 --> 00:30:31,679

the way in

302

00:30:36,950 --> 00:30:34,080

since he led with second outboard

303

00:30:39,990 --> 00:30:36,960

translate across the iea retrieve his

304

00:30:41,430 --> 00:30:40,000

fairlead green hook translate under the

305

00:30:43,110 --> 00:30:41,440

m t

306

00:30:44,789 --> 00:30:43,120

and at the c to handrail bridge

307

00:30:47,430 --> 00:30:44,799

translate nader

308

00:30:51,430 --> 00:30:47,440

down to our airlock eb-1 in the

309

00:30:53,269 --> 00:30:51,440

meanwhile will translate to the s4 iea

310

00:30:57,190 --> 00:30:53,279

retrieve the folded up

311

00:30:59,190 --> 00:30:57,200

mod kit bag grab her fairlead green hook

312

00:31:00,950 --> 00:30:59,200

translate past the cedar cart hitting

313

00:31:03,590 --> 00:31:00,960

those brake pedals

314

00:31:07,190 --> 00:31:03,600

down the ceta handrail bridge and to the

315

00:31:57,269 --> 00:31:07,200

airlock including a very successful u.s

316

00:32:03,110 --> 00:31:58,789

you're getting a live look inside the

317

00:32:07,590 --> 00:32:04,950

you're getting a live look

318

00:32:11,029 --> 00:32:07,600

in the airlock where baron and chary are

319

00:32:14,070 --> 00:32:11,039

still preparing to go out later today

320

00:32:17,029 --> 00:32:14,080

for and then

321

00:32:19,430 --> 00:32:17,039

for a space walk to complete maintenance

322

00:32:21,190 --> 00:32:19,440

for a 3a

323

00:32:28,149 --> 00:32:21,200

modification kit

324

00:32:33,110 --> 00:32:29,990

the duo will be working at the starboard

325

00:32:35,909 --> 00:32:33,120

truss s4 for the 3a power channel

326

00:32:38,950 --> 00:32:35,919

installing a modification kit

327

00:32:50,070 --> 00:32:38,960

where an irosa or iss rollout solar

328

00:32:55,110 --> 00:32:52,070

nasa astronaut kayla baron is designated

329

00:32:59,909 --> 00:32:57,990

wearing the suit with the red stripe

330

00:33:02,149 --> 00:32:59,919

to the right of your screen

331

00:33:06,470 --> 00:33:02,159

rash acharya's ev2 wearing the suit with

332

00:33:11,430 --> 00:33:08,149

you're currently being helped by nasa

333

00:33:53,269 --> 00:33:11,440

astronaut tom marshburn as suit up lead

334

00:33:57,909 --> 00:33:55,350

the crew is now getting their safers

335

00:34:00,789 --> 00:33:57,919

installed the safer or simplified aid

336

00:34:03,269 --> 00:34:00,799

for eva rescue is essentially a jet pack

337

00:34:07,430 --> 00:34:03,279

that will that will allow astronauts

338

00:34:09,190 --> 00:34:07,440

who wear them to perform

339

00:34:10,710 --> 00:34:09,200

the safer is worn as a precautionary

340

00:34:12,869 --> 00:34:10,720

measure in the unlikely event that an

341

00:34:14,950 --> 00:34:12,879

astronaut were to become untethered from

342

00:34:16,550 --> 00:34:14,960

the space station the safer would allow

343

00:34:21,669 --> 00:34:16,560

the crew member to safely propel

344

00:34:25,190 --> 00:34:23,270

once the savers are successfully

345

00:34:27,109 --> 00:34:25,200

installed on astronauts they will be

346

00:34:28,790 --> 00:34:27,119

moved through the equipment lock portion

347

00:34:30,950 --> 00:34:28,800

of the airlock you see on the top of

348

00:34:32,629 --> 00:34:30,960

your screen now onto the crew lock

349

00:34:34,389 --> 00:34:32,639

session section

350

00:34:35,909 --> 00:34:34,399

the hatch will then be closed behind

351

00:34:38,470 --> 00:34:35,919

them and the final preparations will

352

00:34:41,430 --> 00:34:38,480

begin to depressurize the crew lock

353

00:34:43,270 --> 00:34:41,440

all the way down to vacuum

354

00:34:44,869 --> 00:34:43,280

they'll then complete suit checks and

355

00:34:47,349 --> 00:34:44,879

communication checks with the flight

356

00:36:24,710 --> 00:34:47,359

controls team here in houston before

357

00:36:28,950 --> 00:36:26,710

the spacesuits you see the duo wearing

358

00:36:31,589 --> 00:36:28,960

are the emu's or extra vehicular

359

00:36:33,270 --> 00:36:31,599

mobility units which are essentially a

360

00:36:35,589 --> 00:36:33,280

mini life support system providing

361

00:36:37,030 --> 00:36:35,599

environmental protection mobility and

362

00:37:02,550 --> 00:36:37,040

communications for the crew members

363

00:37:06,550 --> 00:37:04,150

later today in coverage we'll have a

364

00:37:08,390 --> 00:37:06,560

special guest with us laura kearney

365

00:37:10,710 --> 00:37:08,400

laura is the program manager for the

366

00:37:13,670 --> 00:37:10,720

newly created extra vehicular activity

367

00:37:15,510 --> 00:37:13,680

and human surface mobility program

368

00:37:18,630 --> 00:37:15,520

laura will tell us a little bit about

369

00:39:26,310 --> 00:37:18,640

the future of spacesuits and how they'll

370

00:39:30,069 --> 00:39:28,150

you're currently seeing matthias mauer

371

00:39:32,710 --> 00:39:30,079

and tom marshburn

372

00:39:34,630 --> 00:39:32,720

working together to install the safer on

373

00:39:38,150 --> 00:39:34,640

the back of

374

00:39:41,030 --> 00:39:38,160

kayla baron's spacesuit

375

00:39:42,870 --> 00:39:41,040

once installed

376

00:39:44,310 --> 00:39:42,880

baron will be moved

377

00:39:45,829 --> 00:39:44,320

through the equipment lock portion of

378

00:39:47,430 --> 00:39:45,839

the air lock you see

379

00:39:50,550 --> 00:39:47,440

and into the

380

00:39:54,310 --> 00:39:52,870

after her we'll see the same happen for

381

00:39:57,750 --> 00:39:54,320

chary

382

00:40:00,069 --> 00:39:57,760

and when both are successfully into the

383

00:40:01,829 --> 00:40:00,079

crew lock section the hatch will be then

384

00:40:03,829 --> 00:40:01,839

closed behind them and the final

385

00:40:07,270 --> 00:40:03,839

preparations will begin to depressurize

386

00:40:09,030 --> 00:40:07,280

the crew lock all the way down to vacuum

387

00:40:10,390 --> 00:40:09,040

they'll then complete suit checks and

388

00:40:12,390 --> 00:40:10,400

communication checks with the flight

389

00:47:06,950 --> 00:40:12,400

control team here in houston before

390

00:47:11,430 --> 00:47:08,870

we are currently seeing

391

00:47:13,270 --> 00:47:11,440

rashachary being fitted with his safer

392

00:48:00,710 --> 00:47:13,280

and he will be next to move into the

393

00:48:05,589 --> 00:48:02,309

you just saw

394

00:48:07,510 --> 00:48:05,599

as nasa astronaut mark vande fly by

395

00:48:10,150 --> 00:48:07,520

he has another important thing happening

396

00:48:13,030 --> 00:48:10,160

today on the international space station

397

00:48:16,549 --> 00:48:13,040

as he's breaking records

398

00:48:19,030 --> 00:48:16,559

when the clock strikes 12 24 eastern

399

00:48:20,710 --> 00:48:19,040

time today march 15th

400

00:48:22,230 --> 00:48:20,720

mark vanderheide will claim the title of

401
00:48:24,790 --> 00:48:22,240
the u.s astronaut with the single

402
00:48:27,510 --> 00:48:24,800
longest space flight in history

403
00:48:29,670 --> 00:48:27,520
at a mission elapsed time of 340 days 8

404
00:48:31,430 --> 00:48:29,680
hours and 42 minutes bend high will

405
00:48:34,390 --> 00:48:31,440
surpass the duration logged by nasa

406
00:53:23,430 --> 00:48:34,400
astronaut scott kelly back on march 2nd

407
00:53:27,109 --> 00:53:25,750
you currently are seeing

408
00:53:29,270 --> 00:53:27,119
is astronaut

409
00:53:30,549 --> 00:53:29,280
european space agency astronaut matthias

410
00:53:32,870 --> 00:53:30,559
maurer and

411
00:53:34,710 --> 00:53:32,880
nasa astronaut tom marshburn helping

412
00:53:36,549 --> 00:53:34,720
rash acharya through

413
00:54:13,510 --> 00:53:36,559

to the crew

414

00:54:17,910 --> 00:54:15,430

so far nasa astronauts kayla baron and

415

00:54:59,670 --> 00:54:17,920

raj ajari have completed pre-breathing

416

00:55:03,829 --> 00:55:02,309

the spacewalk today marks 247th in

417

00:55:06,309 --> 00:55:03,839

support of international space station

418

00:55:08,230 --> 00:55:06,319

assembly maintenance and upgrades this

419

00:55:09,990 --> 00:55:08,240

will be kayla baron's second and roger

420

00:55:11,990 --> 00:55:10,000

charlie's first

421

00:55:14,870 --> 00:55:12,000

baron is

422

00:55:16,710 --> 00:55:14,880

ev1 or extra vehicular crew member one

423

00:55:22,150 --> 00:55:16,720

and she is wearing the suit with the red

424

00:55:27,750 --> 00:55:24,630

chari as ev2 will wear the suit with no

425

00:55:30,309 --> 00:55:27,760

stripes and has helmet cam number 16.

426

00:57:58,549 --> 00:55:30,319

we'll see those

427

00:58:14,710 --> 00:58:01,030

airlock houston

428

00:58:19,190 --> 00:58:16,870

yes it looks like we may have bumped to

429

00:58:25,190 --> 00:58:19,200

ev2's heka can you go ahead and turn it

430

00:58:31,349 --> 00:58:27,349

line 54 says

431

00:58:41,510 --> 00:58:31,359

emu tv power check green led is one

432

00:58:41,520 --> 00:59:03,829

copy checking

433

00:59:10,390 --> 00:59:06,870

and matthias back with you on one uh for

434

00:59:12,630 --> 00:59:10,400

step 54 that's the emu tv power not the

435

00:59:18,630 --> 00:59:12,640

heka so if you can go ahead and power on

436

00:59:21,030 --> 00:59:18,640

the emu tv and power off off the heka

437

00:59:23,030 --> 00:59:21,040

and we also found this

438

00:59:25,349 --> 00:59:23,040

and we just did this tom confirms the

439

00:59:27,109 --> 00:59:25,359

hacker is off on both and the emu tv is

440

01:01:39,910 --> 00:59:27,119

on on both

441

01:01:44,789 --> 01:01:43,510

we're currently in a loss of signal

442

01:01:46,789 --> 01:01:44,799

between

443

01:01:48,230 --> 01:01:46,799

satellites you've seen a live view of

444

01:01:51,109 --> 01:01:48,240

the international space station flight

445

01:02:34,390 --> 01:01:53,109

where the orbit 2 team is being led by

446

01:02:38,309 --> 01:02:36,390

the orbit two team again being led by

447

01:02:41,349 --> 01:02:38,319

flight director mike lammers

448

01:02:44,150 --> 01:02:41,359

next to him is alex kenolenkos who's the

449

01:02:47,589 --> 01:02:44,160

capcom this morning and next to him will

450

01:02:49,670 --> 01:02:47,599

be victor glover that's the astronaut

451
01:02:51,670 --> 01:02:49,680
be ground iv today

452
01:03:00,710 --> 01:02:51,680
sandy moore is the lead spacewalk

453
01:03:05,510 --> 01:03:02,789
once depressurization

454
01:03:09,349 --> 01:03:05,520
will switch from hearing alex to hearing

455
01:03:11,109 --> 01:03:09,359
victor glover communicate to the crew

456
01:03:44,630 --> 01:03:11,119
it appears now that the hatch is now

457
01:03:49,349 --> 01:03:46,950
and as you see here

458
01:03:50,630 --> 01:03:49,359
tom marshburn and matthias maurer are

459
01:03:52,230 --> 01:03:50,640
closing the hatch between the quest

460
01:03:54,710 --> 01:03:52,240
airlock and the crew lock where baron

461
01:04:20,390 --> 01:03:54,720
and charlie will be isolated as the

462
01:04:24,789 --> 01:04:22,230
once the crew gets the go from the team

463
01:04:33,029 --> 01:04:24,799

in houston depressurization of the crew

464

01:04:42,069 --> 01:04:35,750

station on one for the airlock steps 72

465

01:04:46,710 --> 01:04:43,270

copy

466

01:04:48,069 --> 01:04:46,720

we'll put step 74 through 76 in work and

467

01:04:53,270 --> 01:04:48,079

we'll let you know when the evie crew

468

01:04:58,309 --> 01:04:54,390

oh you're mike

469

01:04:58,319 --> 01:05:19,510

good

470

01:05:19,520 --> 01:05:26,309

okay

471

01:05:37,670 --> 01:05:28,630

station houston the eevee crew are hot

472

01:05:41,349 --> 01:05:40,069

and we hear you both eb1 and ev2 loud

473

01:05:43,829 --> 01:05:41,359

and clear

474

01:06:00,309 --> 01:05:43,839

and houston is both ev crew members copy

475

01:06:00,319 --> 01:06:07,670

i heard

476

01:06:14,309 --> 01:06:09,190

good morning to you both it's a great

477

01:06:14,319 --> 01:06:18,789

good morning

478

01:06:18,799 --> 01:06:29,510

it's around clear ready to go

479

01:06:34,630 --> 01:06:30,870

russia check that the switch for the

480

01:06:34,640 --> 01:06:37,829

the top

481

01:06:41,109 --> 01:06:38,870

because

482

01:06:43,670 --> 01:06:41,119

led is oh and on

483

01:06:46,630 --> 01:06:43,680

enable is on

484

01:06:50,950 --> 01:06:46,640

we're on the crewlock press q card

485

01:06:50,960 --> 01:07:07,430

just use them or work for your code

486

01:07:11,589 --> 01:07:09,430

station houston you have a go for

487

01:07:18,230 --> 01:07:11,599

depress and step 80 will see you on the

488

01:07:24,309 --> 01:07:19,990

happy we're going step 80 we're now on

489

01:07:39,270 --> 01:07:26,309

welcome to uia switch the defense pump

490

01:07:41,910 --> 01:07:40,789

there's 10 seconds

491

01:07:44,069 --> 01:07:41,920

you can take the depressed pump

492

01:07:48,549 --> 01:07:44,079

isolation valve to open and expect an

493

01:07:48,559 --> 01:07:51,750

to open

494

01:07:56,390 --> 01:07:54,069

okay you can both expect an alert soon

495

01:07:58,630 --> 01:07:56,400

when the crew lock gets to six why don't

496

01:08:00,470 --> 01:07:58,640

you receive p gauge that stays less than

497

01:08:01,750 --> 01:08:00,480

five decimal five let us know if it's

498

01:08:17,700 --> 01:08:01,760

not

499

01:09:15,599 --> 01:08:47,240

[Music]

500

01:09:19,430 --> 01:09:17,829

[Applause]

501
01:09:23,700 --> 01:09:19,440
the loud sound of the suit actually

502
01:10:08,950 --> 01:09:26,700
[Applause]

503
01:10:08,960 --> 01:10:12,900
so

504
01:10:12,910 --> 01:10:36,060
[Music]

505
01:10:36,070 --> 01:10:55,700
[Applause]

506
01:10:55,710 --> 01:11:39,189
[Music]

507
01:11:42,470 --> 01:11:40,950
flight controllers here in mission

508
01:11:44,870 --> 01:11:42,480
control houston

509
01:11:53,990 --> 01:11:44,880
did a go no go for depressurization to

510
01:11:57,830 --> 01:11:55,750
the depressurization of the airlock will

511
01:11:59,430 --> 01:11:57,840
be done in two-stage process in a

512
01:12:01,189 --> 01:11:59,440
two-stage process

513
01:12:03,350 --> 01:12:01,199

first they'll take the crew lock down to

514

01:12:05,669 --> 01:12:03,360

five pounds per square inch of pressure

515

01:12:08,149 --> 01:12:05,679

at which point pressurization will be

516

01:12:10,630 --> 01:12:08,159

paused to do a systems check following

517

01:12:12,709 --> 01:12:10,640

this depressurization will resume and

518

01:12:14,550 --> 01:12:12,719

continue all the way down to vacuum

519

01:12:17,030 --> 01:12:14,560

once vacuum is reached the two

520

01:12:19,590 --> 01:12:17,040

spacewalkers will complete suit and com

521

01:12:21,590 --> 01:12:19,600

checks before placing their spacesuit on

522

01:12:29,590 --> 01:12:21,600

internal battery power officially

523

01:12:34,709 --> 01:12:32,550

a u.s spacewalk starts

524

01:12:36,310 --> 01:12:34,719

a u.s spacewalk start and end time is

525

01:12:38,310 --> 01:12:36,320

measured from the time the crew places

526

01:12:40,390 --> 01:12:38,320

their spacesuit on internal battery

527

01:12:42,870 --> 01:12:40,400

power all the way up until the time

528

01:12:44,390 --> 01:12:42,880

repressurization occurs and they're back

529

01:12:45,350 --> 01:12:44,400

inside the crew lock

530

01:13:23,590 --> 01:12:45,360

following completion of their

531

01:15:34,550 --> 01:13:55,830

um

532

01:15:34,560 --> 01:15:49,510

huh

533

01:15:49,520 --> 01:16:16,550

happy

534

01:16:21,430 --> 01:16:19,110

maureen marshburn in the equipment

535

01:16:23,030 --> 01:16:21,440

section of the airlock continuing to

536

01:16:25,510 --> 01:16:23,040

moderate depressurization on the quest

537

01:16:26,950 --> 01:16:25,520

airlock where nasa astronaut kayla baron

538

01:16:30,149 --> 01:16:26,960

and

539

01:16:31,430 --> 01:16:30,159

ash astronaut rosh achary are suited up

540

01:16:47,350 --> 01:16:31,440

and undergoing preparations to

541

01:16:47,360 --> 01:17:25,189

uh

542

01:17:30,470 --> 01:17:27,110

crew is currently

543

01:17:32,630 --> 01:17:30,480

currently at 5.5 psi inside the crew

544

01:17:35,350 --> 01:17:32,640

lock again they will pulse around 5

545

01:18:01,830 --> 01:17:35,360

pounds per square inch

546

01:18:01,840 --> 01:18:12,790

hmm

547

01:18:16,870 --> 01:18:14,630

all right we see the crew lock pressure

548

01:18:19,430 --> 01:18:16,880

at two five nine raja take the depress

549

01:18:22,229 --> 01:18:19,440

pump isolation valve to close and expect

550

01:18:24,149 --> 01:18:22,239

an alert turn okay it's closed

551

01:18:25,910 --> 01:18:24,159

all the dcms for both of you

552

01:18:27,510 --> 01:18:25,920

on the display switch toggle status

553

01:18:38,790 --> 01:18:27,520

until leak check question mark is

554

01:18:38,800 --> 01:18:45,910

one

555

01:18:45,920 --> 01:19:42,470

instructions

556

01:19:42,480 --> 01:19:49,830

[Music]

557

01:20:03,510 --> 01:19:51,830

two good leak checks standing by for o2

558

01:20:11,830 --> 01:20:05,669

houston copies good league checks i'm an

559

01:20:11,840 --> 01:20:28,229

happy kayla you're in evan

560

01:20:32,229 --> 01:20:29,270

as well

561

01:20:34,149 --> 01:20:32,239

coffee one and two both in eva roger

562

01:20:54,950 --> 01:20:34,159

take the depress pump manual isolation

563

01:21:02,950 --> 01:20:57,270

and after our call on good league checks

564

01:21:02,960 --> 01:21:09,510

the valve is open

565

01:21:12,830 --> 01:21:11,430

and after a call on good leak checks and

566

01:21:14,470 --> 01:21:12,840

good com checks

567

01:21:27,189 --> 01:21:14,480

the

568

01:21:27,199 --> 01:23:23,430

your next step will be at 2 psi

569

01:23:26,629 --> 01:23:24,950

if you're just joining us this is

570

01:23:29,270 --> 01:23:26,639

mission control houston

571

01:23:30,550 --> 01:23:29,280

and we have a live you're looking live

572

01:23:32,709 --> 01:23:30,560

at the

573

01:23:34,950 --> 01:23:32,719

the equipment lock section of the quest

574

01:23:38,310 --> 01:23:34,960

airlock

575

01:23:40,310 --> 01:23:38,320

where we begin depressurization for

576

01:23:43,590 --> 01:23:40,320

caleb baron that's astronaut caleb aaron

577

01:23:48,070 --> 01:23:46,390

in order to begin the 247th spacewalk on

578

01:23:49,189 --> 01:23:48,080

space station assembly maintenance and

579

01:23:50,870 --> 01:23:49,199

upgrades

580

01:23:53,669 --> 01:23:50,880

you're currently looking at

581

01:23:56,550 --> 01:23:53,679

matthias mauer of esa or european space

582

01:23:58,550 --> 01:23:56,560

agency and tom marshburn of nasa in the

583

01:24:00,229 --> 01:23:58,560

equipment section continuing to monitor

584

01:24:01,350 --> 01:24:00,239

the depressurization of the quest

585

01:24:03,830 --> 01:24:01,360

airlock

586

01:24:05,830 --> 01:24:03,840

where nasa astronaut kayla baron

587

01:24:08,709 --> 01:24:05,840

and rashachari

588

01:24:11,590 --> 01:24:08,719

will suit are suited up and undergoing

589

01:24:13,830 --> 01:24:11,600

final preparations before they head out

590

01:25:36,550 --> 01:24:13,840

of the station's hatch today for today's

591

01:25:41,990 --> 01:25:40,550

roger we see we are just below 103. raja

592

01:25:43,430 --> 01:25:42,000

you can take

593

01:25:46,870 --> 01:25:43,440

the depressed pump manual isolation

594

01:25:48,550 --> 01:25:46,880

bounce closed so you do this closed

595

01:25:52,070 --> 01:25:48,560

switch on the uia the depressed pump

596

01:25:54,790 --> 01:25:53,430

your depressed pumps on the array values

597

01:25:57,590 --> 01:25:54,800

off

598

01:25:59,030 --> 01:25:57,600

report your initial tether configuration

599

01:26:00,870 --> 01:25:59,040

for egress

600

01:26:10,149 --> 01:26:00,880

i said if you can move a little to your

601
01:26:13,750 --> 01:26:12,149
and then if you want to if you've got

602
01:26:15,910 --> 01:26:13,760
good visibility to start you can go

603
01:26:17,030 --> 01:26:15,920
first otherwise i can start online i'm

604
01:26:18,790 --> 01:26:17,040
going to start

605
01:26:21,830 --> 01:26:18,800
putting my hands on the airlock d-ring

606
01:26:23,990 --> 01:26:21,840
extender i've got my

607
01:26:25,189 --> 01:26:24,000
heather hook gate clothes lock black on

608
01:26:26,550 --> 01:26:25,199
black on that

609
01:26:28,470 --> 01:26:26,560
one to our

610
01:26:30,790 --> 01:26:28,480
small screw hook which is gate closed

611
01:26:33,270 --> 01:26:30,800
lock black on block on my left

612
01:26:37,050 --> 01:26:33,280
leg center of my body

613
01:26:41,030 --> 01:26:38,950

[Music]

614

01:26:43,430 --> 01:26:41,040

i'm looking at my right hearing extender

615

01:26:45,590 --> 01:26:43,440

i've another small hook attached to my

616

01:26:47,669 --> 01:26:45,600

right earring extender stay closed

617

01:26:49,510 --> 01:26:47,679

slider lock just block on black

618

01:26:51,590 --> 01:26:49,520

i've got my red hook attached to my

619

01:26:54,629 --> 01:26:51,600

right hearing extender

620

01:26:57,030 --> 01:26:54,639

it closed slider locked black on black

621

01:26:59,270 --> 01:26:57,040

my red reel is unlocked

622

01:27:02,830 --> 01:26:59,280

my yellow hook is attached to my green

623

01:27:06,870 --> 01:27:02,840

rail state closed spider lock clock on

624

01:27:09,830 --> 01:27:06,880

black my green reel is unlocked

625

01:27:12,070 --> 01:27:09,840

my green hook is attached to my

626

01:27:29,030 --> 01:27:12,080

red wheel and it is unlocked and my

627

01:27:37,750 --> 01:27:32,310

i've got my eyes on my right waist ring

628

01:27:41,830 --> 01:27:40,149

a red and white striped screw hook gate

629

01:27:44,950 --> 01:27:41,840

closed lock black on black

630

01:27:49,830 --> 01:27:48,550

a red reel which is unlocked

631

01:27:51,189 --> 01:27:49,840

that's what's happening that red rule is

632

01:27:53,030 --> 01:27:51,199

the green

633

01:27:54,950 --> 01:27:53,040

hook which is

634

01:27:56,950 --> 01:27:54,960

unlocked the yellow hooks from the red

635

01:27:58,950 --> 01:27:56,960

wheel is attached to the green rail

636

01:28:01,510 --> 01:27:58,960

rider last black on black

637

01:28:03,669 --> 01:28:01,520

then off the green reel

638

01:28:05,590 --> 01:28:03,679

i see my anchor hooks which is marked

639

01:28:06,950 --> 01:28:05,600

with light db2 gate close lock black and

640

01:28:08,870 --> 01:28:06,960

black attached

641

01:28:09,750 --> 01:28:08,880

door anchor hook they close black

642

01:28:11,750 --> 01:28:09,760

unblock

643

01:28:26,149 --> 01:28:11,760

and one correction attached to my weight

644

01:28:35,590 --> 01:28:27,910

we see a good initial tender config if

645

01:28:39,350 --> 01:28:37,110

do i have the room table to shift to my

646

01:28:41,189 --> 01:28:39,360

body left or is i can obtain you

647

01:28:42,870 --> 01:28:41,199

um for now

648

01:28:44,149 --> 01:28:42,880

i'll probably need you

649

01:28:46,149 --> 01:28:44,159

let's check where you are now when i

650

01:28:49,110 --> 01:28:46,159

need to get to the hatch okay

651
01:28:50,629 --> 01:28:49,120
okay an airlock houston on one

652
01:28:53,110 --> 01:28:50,639
for ev2

653
01:28:57,590 --> 01:28:53,120
we need uh we need both of your uh your

654
01:28:57,600 --> 01:29:01,110
and

655
01:29:07,350 --> 01:29:02,629
both of your small hooks from your waist

656
01:29:11,510 --> 01:29:08,830
very

657
01:29:13,750 --> 01:29:11,520
sorry all right g-rank spender i have

658
01:29:15,350 --> 01:29:13,760
two small hooks one is

659
01:29:16,950 --> 01:29:15,360
with their gate pros black black rack

660
01:29:19,030 --> 01:29:16,960
one runs to my mini workstation that's

661
01:29:21,189 --> 01:29:19,040
my waist together the other one is the

662
01:29:22,629 --> 01:29:21,199
uh red and white strike one that's the

663
01:29:25,750 --> 01:29:22,639

fallout gate closed last black and black

664

01:29:29,350 --> 01:29:27,270

thanks for that and then also the small

665

01:29:35,510 --> 01:29:29,360

hook on the there is a waist tether on

666

01:29:39,910 --> 01:29:38,629

i gave you that earlier but uh sorry

667

01:29:42,310 --> 01:29:39,920

yeah

668

01:29:43,430 --> 01:29:42,320

classy ring extender

669

01:29:45,910 --> 01:29:43,440

i have

670

01:29:47,270 --> 01:29:45,920

running to a large hook gate closed

671

01:29:50,790 --> 01:29:47,280

locked black and black and the other end

672

01:29:53,110 --> 01:29:50,800

of that runs to my left e-ring extender

673

01:29:56,229 --> 01:29:54,070

and

674

01:30:00,149 --> 01:29:56,239

i'm noticing we're kind of got these

675

01:30:03,030 --> 01:30:00,159

intertwined do you see that raja

676

01:30:10,470 --> 01:30:05,990

might be okay is this your waistband i

677

01:30:14,950 --> 01:30:13,189

is it okay if i fix that uh yeah i can't

678

01:30:16,229 --> 01:30:14,960

see it from here but okay

679

01:30:18,790 --> 01:30:16,239

what i'm going to do is i'm going to

680

01:30:20,870 --> 01:30:18,800

unlock your waste tether small hook from

681

01:30:28,310 --> 01:30:20,880

your left hearing center

682

01:30:31,510 --> 01:30:29,910

okay your left

683

01:30:33,030 --> 01:30:31,520

or small puck is attached to your left

684

01:30:34,870 --> 01:30:33,040

earring extender

685

01:30:37,030 --> 01:30:34,880

a closed slider lock block on black and

686

01:30:38,629 --> 01:30:37,040

we're not twisting up anymore thank you

687

01:30:40,470 --> 01:30:38,639

thanks

688

01:30:41,270 --> 01:30:40,480

back and forth i can still see the large

689

01:30:42,390 --> 01:30:41,280

hook

690

01:30:43,350 --> 01:30:42,400

we'll attach the airlock to the ring

691

01:30:44,550 --> 01:30:43,360

extender

692

01:30:46,070 --> 01:30:44,560

oh that's where i can pull all the way

693

01:30:49,910 --> 01:30:46,080

here and i can see that small hook okay

694

01:30:54,470 --> 01:30:51,990

okay roger and kayla uh one more from

695

01:30:56,149 --> 01:30:54,480

houston uh so we believe that there is a

696

01:30:58,629 --> 01:30:56,159

spare waste tether in the airlock as

697

01:31:00,070 --> 01:30:58,639

well on that airlock d-ring center and

698

01:31:02,870 --> 01:31:00,080

that's the small hook that we're looking

699

01:31:06,310 --> 01:31:02,880

for

700

01:31:09,030 --> 01:31:06,320

it is and it's back to itself on the

701
01:31:10,709 --> 01:31:09,040
elastir extender

702
01:31:12,310 --> 01:31:10,719
yeah so fold on the the spare waste

703
01:31:14,229 --> 01:31:12,320
temperature that's on the airlock d-ring

704
01:31:17,430 --> 01:31:14,239
spender both the small and the large

705
01:31:19,350 --> 01:31:17,440
hook are both attached to the uh

706
01:31:20,790 --> 01:31:19,360
energy back on itself intentionally and

707
01:31:23,110 --> 01:31:20,800
both are gay clothes hot back on blue

708
01:31:24,629 --> 01:31:23,120
black with a small hook the large hook

709
01:31:28,940 --> 01:31:24,639
is uh

710
01:31:32,629 --> 01:31:30,229
[Music]

711
01:31:44,310 --> 01:31:32,639
copy thank you and the green reel is on

712
01:31:47,430 --> 01:31:46,149
and houston from the airlock if you

713
01:32:19,590 --> 01:31:47,440

agree

714

01:32:27,110 --> 01:32:21,430

okay airlock houston you may continue

715

01:32:29,750 --> 01:32:28,149

yeah we're just waiting for the pressure

716

01:32:53,030 --> 01:32:29,760

to come down and we'll press on thank

717

01:35:07,350 --> 01:32:55,189

the crew just reported being down to one

718

01:35:10,950 --> 01:35:08,950

roger when it's time to open the hatch

719

01:35:12,390 --> 01:35:10,960

i'm going to need to come

720

01:35:14,870 --> 01:35:12,400

neater

721

01:35:17,910 --> 01:35:14,880

and i'm going to need your feet to go

722

01:35:19,910 --> 01:35:17,920

uh forward and or inboard

723

01:36:26,790 --> 01:35:19,920

so i can get down over the lever okay i

724

01:36:31,590 --> 01:36:29,830

matthias maurer and tom marshburn he is

725

01:36:34,070 --> 01:36:31,600

mower of the european space agency and

726

01:36:35,830 --> 01:36:34,080

tom marshburn of nasa and the equipment

727

01:36:37,910 --> 01:36:35,840

section continuing to monitor

728

01:36:39,830 --> 01:36:37,920

depressurization on the quest airlock

729

01:36:42,709 --> 01:36:39,840

where nasa astronauts kayla barron and

730

01:36:44,629 --> 01:36:42,719

rosh achary are suited up and undergoing

731

01:36:45,990 --> 01:36:44,639

preparations to venture outside the

732

01:36:56,790 --> 01:36:46,000

space station

733

01:37:02,470 --> 01:36:59,350

the 0.6 on the

734

01:37:02,480 --> 01:37:56,950

copy we see 31.6 looking for 26.

735

01:38:02,390 --> 01:38:00,709

once that vacuum will look for a call

736

01:38:05,030 --> 01:38:02,400

that will say that they've switched to

737

01:38:06,870 --> 01:38:05,040

internal battery power this call will be

738

01:38:47,750 --> 01:38:06,880

the official start of the spacewalk this

739

01:38:47,760 --> 01:38:57,669

zero decimal five on the hatch gauge

740

01:39:27,750 --> 01:39:00,550

copy we cd27 looking for 26.

741

01:39:32,390 --> 01:39:29,350

the sensation from the airlock we see

742

01:39:35,109 --> 01:39:32,400

ourselves at 26 and kayla's reporting

743

01:39:35,990 --> 01:39:35,119

uh reported reported 0.5 about a minute

744

01:39:37,350 --> 01:39:36,000

ago

745

01:39:41,590 --> 01:39:37,360

i just want to double check with you

746

01:39:43,270 --> 01:39:41,600

we're good for eva hatch open

747

01:39:49,109 --> 01:39:43,280

and airlock you have a go for eb hatch

748

01:39:49,119 --> 01:40:17,990

you go to open the hatch and sew it

749

01:40:22,070 --> 01:40:19,830

do you think you can roll onto your side

750

01:40:30,629 --> 01:40:22,080

a little bit which way um so that you're

751
01:40:30,639 --> 01:40:34,950
yep

752
01:40:39,430 --> 01:40:37,189
and the hatch is open

753
01:40:47,830 --> 01:40:39,440
patch keep engaged

754
01:40:52,870 --> 01:40:49,990
houston station emergency empath is

755
01:40:56,310 --> 01:40:52,880
closed kayla raja godspeed and have fun

756
01:40:58,629 --> 01:40:56,320
and over to you houston

757
01:41:02,070 --> 01:40:58,639
toppy thank you tom matias mark nice

758
01:41:07,270 --> 01:41:02,080
work goodness at this point kayla raja

759
01:41:07,280 --> 01:41:10,790
good morning

760
01:41:13,189 --> 01:41:11,910
all right we're picking up with the post

761
01:41:16,070 --> 01:41:13,199
depress

762
01:41:18,470 --> 01:41:16,080
on your dcms

763
01:41:25,830 --> 01:41:18,480

switch power to bat and stagger switch

764

01:41:25,840 --> 01:41:32,390

anyone

765

01:41:32,400 --> 01:41:36,870

copy and switch display to pro

766

01:41:41,189 --> 01:41:39,430

copy ev1 and eb2 in bat now you can

767

01:41:49,750 --> 01:41:41,199

switch display to pro to verify a

768

01:41:56,149 --> 01:41:52,790

all right good news raja on the uia

769

01:42:05,430 --> 01:41:56,159

switch power ev1 and ev2 two switches to

770

01:42:14,550 --> 01:42:07,350

and check power 1

771

01:42:14,560 --> 01:42:19,350

all four leds are off

772

01:42:25,189 --> 01:42:23,189

okay ev1 ev2 you can demate the scu from

773

01:42:49,189 --> 01:42:25,199

the dcm

774

01:42:49,199 --> 01:43:08,390

yesterday

775

01:43:13,669 --> 01:43:11,189

is

776

01:43:18,950 --> 01:43:13,679

copy eevvee to confirm you're both ready

777

01:43:25,030 --> 01:43:20,470

ready

778

01:43:28,470 --> 01:43:25,040

okay roger check the depressed pump man

779

01:43:31,109 --> 01:43:28,480

and at 7 12 a.m central time 8 12 a.m

780

01:43:32,790 --> 01:43:31,119

eastern the 247th spacewalk in support

781

01:43:34,870 --> 01:43:32,800

of station assembly and maintenance and

782

01:43:36,950 --> 01:43:34,880

upgrades has begun

783

01:43:38,229 --> 01:43:36,960

bear and charity now will work to open

784

01:43:40,229 --> 01:43:38,239

the thermal cover and make their way

785

01:43:56,470 --> 01:43:40,239

outside the space station hatch to begin

786

01:43:56,480 --> 01:44:07,669

yes

787

01:44:11,510 --> 01:44:09,830

the ground iv is nasa astronaut victor

788

01:44:13,590 --> 01:44:11,520

glover you saw him on your screen

789

01:44:15,430 --> 01:44:13,600

previously you're going to hear his

790

01:44:17,270 --> 01:44:15,440

voice as he speaks to the crew about the

791

01:44:19,030 --> 01:44:17,280

international space station he'll be

792

01:44:20,790 --> 01:44:19,040

filtering information from the teams

793

01:44:22,550 --> 01:44:20,800

here in mission control

794

01:44:24,310 --> 01:44:22,560

up to the space walkers today

795

01:44:43,669 --> 01:44:24,320

eb2 max hot

796

01:44:43,679 --> 01:44:50,550

ev1 ev2 you can switch water on om

797

01:44:56,470 --> 01:44:53,510

one water is on o.m

798

01:44:56,480 --> 01:45:07,109

check your dcm blank and bite light off

799

01:45:28,390 --> 01:45:10,229

copy now you can set your tcv as desired

800

01:45:28,400 --> 01:45:53,910

run five

801
01:45:53,920 --> 01:46:01,750
and copy ev1 tcv to 5.

802
01:46:01,760 --> 01:46:05,270
also

803
01:46:08,950 --> 01:46:06,229
okay

804
01:46:31,669 --> 01:46:08,960
please report suit pressure gauge

805
01:46:31,679 --> 01:46:37,189
and ev1e2 report suit pressure gauge

806
01:46:41,270 --> 01:46:40,390
v1 4.2

807
01:46:43,910 --> 01:46:41,280
two

808
01:46:47,030 --> 01:46:43,920
four point four

809
01:46:48,390 --> 01:46:47,040
tabby 4.2 4.4

810
01:46:51,750 --> 01:46:48,400
okay set your

811
01:46:53,990 --> 01:46:51,760
visors as required it is currently night

812
01:46:55,510 --> 01:46:54,000
your 10 minutes from sunrise and about

813
01:46:59,830 --> 01:46:55,520

to pass off the west coast of the united

814

01:47:03,590 --> 01:47:01,590

up for now

815

01:47:16,950 --> 01:47:03,600

badgers up my legs are on

816

01:47:28,470 --> 01:47:18,229

all right kayla

817

01:47:34,229 --> 01:47:29,990

and i've got some detail steps if you'd

818

01:47:34,239 --> 01:47:37,910

ready to open the thermal cover

819

01:47:40,790 --> 01:47:39,350

hey firm you have a go to open the

820

01:47:43,590 --> 01:47:40,800

thermal cover and i've got some detail

821

01:47:45,990 --> 01:47:43,600

steps if you need them

822

01:47:48,950 --> 01:47:46,000

i got it but um roger could you either

823

01:47:51,189 --> 01:47:48,960

rotate onto your right side or

824

01:47:53,030 --> 01:47:51,199

your feet are kind of blocking my access

825

01:48:00,790 --> 01:47:53,040

i need them

826

01:48:06,050 --> 01:48:03,510

i am releasing the

827

01:48:10,709 --> 01:48:06,060

thermal cover adjustable

828

01:48:10,719 --> 01:48:19,990

hold it first

829

01:48:23,669 --> 01:48:21,830

happy and just a reminder when you

830

01:48:25,830 --> 01:48:23,679

attach the hook to the stowage tether

831

01:48:26,790 --> 01:48:25,840

point we'd like you to cinch that strap

832

01:48:28,470 --> 01:48:26,800

snug

833

01:48:40,310 --> 01:48:28,480

until you have six sharpie lines visible

834

01:48:40,320 --> 01:48:48,790

six lines thank you

835

01:48:52,870 --> 01:48:50,790

looks great when you're ready you can

836

01:48:54,950 --> 01:48:52,880

egress the airlock we recommend you

837

01:48:57,270 --> 01:48:54,960

position forward on the circular

838

01:49:03,590 --> 01:48:57,280

handrail

839

01:49:12,709 --> 01:49:04,870

and we now have confirmation that

840

01:49:22,470 --> 01:49:14,550

baron and chary working to egress the

841

01:49:25,990 --> 01:49:23,990

and you can now see on the top of your

842

01:49:27,350 --> 01:49:26,000

screen baron is now out of the space

843

01:49:29,750 --> 01:49:27,360

station

844

01:49:31,669 --> 01:49:29,760

baron is ev1

845

01:49:34,629 --> 01:49:31,679

and i'm working on

846

01:49:36,870 --> 01:49:34,639

my anchor hook it's attached to the

847

01:49:39,350 --> 01:49:36,880

forward airlock d-rings

848

01:49:41,669 --> 01:49:39,360

a closed cylinder lock black on black i

849

01:49:43,350 --> 01:49:41,679

have a good space each other pass

850

01:49:46,149 --> 01:49:43,360

and i'm going to work on

851

01:49:50,950 --> 01:49:46,159

raja's anchor hook

852

01:49:54,470 --> 01:49:52,550

just working on repositioning

853

01:49:56,950 --> 01:49:54,480

i got snagged i think i'm

854

01:50:02,870 --> 01:49:56,960

the way out

855

01:50:06,790 --> 01:50:04,870

your anchor hook is attached to the

856

01:50:08,629 --> 01:50:06,800

airlock app steering

857

01:50:10,550 --> 01:50:08,639

state closed fighter locks black on

858

01:50:13,109 --> 01:50:10,560

black when ready you have to go to

859

01:50:15,270 --> 01:50:13,119

release your waste feather

860

01:50:17,030 --> 01:50:15,280

happy i've got to go to each other let

861

01:50:19,109 --> 01:50:17,040

me fix the fbe here first and i'll work

862

01:50:21,430 --> 01:50:19,119

on that

863

01:50:32,149 --> 01:50:21,440

okay copy that and caleb please turn on

864

01:50:36,310 --> 01:50:34,229

thank you

865

01:50:38,950 --> 01:50:36,320

and when you two are ready raja i hear

866

01:50:40,470 --> 01:50:38,960

you that you're working with the scu

867

01:50:45,109 --> 01:50:40,480

then you and kayla can coordinate

868

01:50:49,350 --> 01:50:47,589

and i'm disconnecting my left waist

869

01:50:59,510 --> 01:50:49,360

cutter from the

870

01:51:03,030 --> 01:51:00,790

okay yes and you're going to transfer

871

01:51:04,550 --> 01:51:03,040

the strut bag out to kayla and kayla

872

01:51:06,390 --> 01:51:04,560

when you receive the strut bag you're

873

01:51:08,149 --> 01:51:06,400

going to store it on your brt with the

874

01:51:11,990 --> 01:51:08,159

tape side of the handrail toward your

875

01:51:15,910 --> 01:51:14,149

and roger i got visibility under the

876

01:51:36,470 --> 01:51:15,920

airlock fast ready to help guide it

877

01:51:41,030 --> 01:51:39,030

baron is ev1

878

01:51:55,220 --> 01:51:41,040

see if i can get the handrails towards

879

01:51:55,230 --> 01:51:59,350

[Applause]

880

01:52:12,240 --> 01:52:01,589

it gets caught up on the hatch somewhere

881

01:52:12,250 --> 01:52:16,550

[Music]

882

01:52:16,560 --> 01:52:21,270

see the end coming down toward me

883

01:52:21,280 --> 01:52:26,310

it looks like the

884

01:52:31,750 --> 01:52:27,750

and now you're caught a little bit on

885

01:52:33,430 --> 01:52:31,760

the knob of the uh hatchflopper

886

01:52:37,189 --> 01:52:33,440

i think the softs gets handled but it's

887

01:52:40,790 --> 01:52:38,870

like you pull it forward folds

888

01:52:44,310 --> 01:52:40,800

by under the air lock and then buffer it

889

01:52:47,270 --> 01:52:44,320

down yeah you could try pointing

890

01:52:48,950 --> 01:52:47,280

the outboard end of the bag towards

891

01:52:50,629 --> 01:52:48,960

the ass to kind of take advantage of

892

01:52:52,470 --> 01:52:50,639

that diagonal

893

01:53:07,030 --> 01:52:52,480

might help you get around about a hatch

894

01:53:14,310 --> 01:53:08,709

i could come back in a little bit if

895

01:53:18,709 --> 01:53:15,910

i need to get the other end towards me

896

01:53:20,950 --> 01:53:18,719

up higher it's disgusting that i have

897

01:53:33,510 --> 01:53:20,960

matching mechanisms of the inboard hatch

898

01:53:39,270 --> 01:53:35,510

i'm gonna try reaching my hand up to see

899

01:53:52,229 --> 01:53:42,229

yeah if you can push the whole thing up

900

01:53:56,790 --> 01:53:54,229

baron and chary are working together to

901
01:53:58,390 --> 01:53:56,800
get a strut bag

902
01:54:06,950 --> 01:53:58,400
so chary can

903
01:54:06,960 --> 01:54:09,350
more hatch

904
01:54:13,270 --> 01:54:11,030
there we go okay

905
01:54:16,310 --> 01:54:13,280
i'm free enough right there we go

906
01:54:19,830 --> 01:54:17,589
okay i'm gonna get a little bit out of

907
01:54:25,830 --> 01:54:19,840
the way here

908
01:54:31,750 --> 01:54:26,950
the right way but i can hold it in

909
01:54:35,910 --> 01:54:33,189
um let's

910
01:54:38,229 --> 01:54:35,920
come out a little bit more ready to get

911
01:54:40,470 --> 01:54:38,239
a hand on it here

912
01:54:42,229 --> 01:54:40,480
okay let's pause here

913
01:54:48,070 --> 01:54:42,239

and i'd like to rotate it so i can see

914

01:54:52,470 --> 01:54:50,470

okay i see the handrail

915

01:54:56,709 --> 01:54:52,480

now roger i'm going to put my brt right

916

01:54:58,709 --> 01:54:57,830

i'm not going to try to catch the one

917

01:55:00,390 --> 01:54:58,719

that comes back because i don't have

918

01:55:01,990 --> 01:55:00,400

eyes on it but once it comes back and

919

01:55:03,669 --> 01:55:02,000

i'll try to get it on the uh

920

01:55:04,790 --> 01:55:03,679

there you want to be right center okay

921

01:55:06,470 --> 01:55:04,800

and um

922

01:55:08,629 --> 01:55:06,480

it rotated out of the way while i was

923

01:55:10,070 --> 01:55:08,639

grabbing my rhett so i can spin it

924

01:55:11,270 --> 01:55:10,080

either way

925

01:55:13,030 --> 01:55:11,280

control it up here just tell me which

926
01:55:15,510 --> 01:55:13,040
way to rotate it um i can see the

927
01:55:21,750 --> 01:55:15,520
handrail but i need you to push

928
01:55:21,760 --> 01:55:29,669
[Music]

929
01:55:29,679 --> 01:55:36,790
yeah that's good

930
01:55:40,870 --> 01:55:39,350
all right i've got my vrt red on it

931
01:55:42,550 --> 01:55:40,880
um

932
01:55:44,229 --> 01:55:42,560
two options rather if you can reach the

933
01:55:46,149 --> 01:55:44,239
root you can remove it now otherwise

934
01:55:48,229 --> 01:55:46,159
let's bring it out another foot or so

935
01:55:49,750 --> 01:55:48,239
and i'll take it off

936
01:55:51,350 --> 01:55:49,760
i can't do this on the other side of the

937
01:56:01,669 --> 01:55:51,360
bag for me i can bring it out more

938
01:56:05,589 --> 01:56:03,189

all right airlock that's removed and

939

01:56:06,790 --> 01:56:05,599

coming back

940

01:56:09,350 --> 01:56:06,800

all right i thought i'd come back to

941

01:56:11,910 --> 01:56:09,360

retraction okay roger now i'm gonna um

942

01:56:13,589 --> 01:56:11,920

reposition myself a little bit but i've

943

01:56:17,270 --> 01:56:13,599

got the bag

944

01:56:24,229 --> 01:56:19,270

and i'm gonna work on getting it on my

945

01:56:24,239 --> 01:56:36,550

still sort of in the hatch

946

01:56:46,310 --> 01:56:38,470

okay i've got it on my vrt so i'm going

947

01:56:46,320 --> 01:57:16,550

hmm

948

01:57:20,470 --> 01:57:18,390

teamwork makes the dream work nice job

949

01:57:22,310 --> 01:57:20,480

working together you two to get eb3 out

950

01:57:25,030 --> 01:57:22,320

of the hatch there

951
01:57:25,910 --> 01:57:25,040
and uh roger i heard you grab her

952
01:57:27,189 --> 01:57:25,920
yeah

953
01:57:28,870 --> 01:57:27,199
i heard that you grabbed your waist

954
01:57:30,149 --> 01:57:28,880
tether off that d-ring extender so the

955
01:57:32,310 --> 01:57:30,159
next thing you're going to do is wait

956
01:57:34,080 --> 01:57:32,320
for kayla to give you a go to egress and

957
01:57:35,830 --> 01:57:34,090
then retrieve crew lock bag one

958
01:57:37,109 --> 01:57:35,840
[Applause]

959
01:57:38,870 --> 01:57:37,119
and i've got your last bag one already

960
01:57:39,990 --> 01:57:38,880
on my brt rat and i'm working i'm still

961
01:57:41,589 --> 01:57:40,000
in the uh

962
01:57:43,830 --> 01:57:41,599
i'll end of the large swallow snow down

963
01:57:45,430 --> 01:57:43,840

to the throat bearing standard

964

01:57:47,830 --> 01:57:45,440

while you're still on session i'll see

965

01:57:49,510 --> 01:57:47,840

if i can get the setback right down to

966

01:57:51,589 --> 01:57:49,520

this

967

01:57:52,550 --> 01:57:51,599

i'm gonna change the orientation on my

968

01:57:54,390 --> 01:57:52,560

brt

969

01:57:55,830 --> 01:57:54,400

in the jaws just because

970

01:57:56,280 --> 01:57:55,840

it doesn't quite want to stay where i

971

01:57:57,669 --> 01:57:56,290

want it

972

01:58:00,229 --> 01:57:57,679

[Applause]

973

01:58:00,239 --> 01:58:15,710

work on getting it off to my side

974

01:58:20,390 --> 01:58:18,550

[Applause]

975

01:58:23,109 --> 01:58:20,400

good dad

976

01:58:24,629 --> 01:58:23,119

okay and i have a small breath

977

01:58:26,310 --> 01:58:24,639

uh that was holding the step back that's

978

01:58:27,669 --> 01:58:26,320

also attached to the air velocity ring

979

01:58:31,030 --> 01:58:27,679

center

980

01:58:33,589 --> 01:58:31,040

so when we come back okay

981

01:58:35,750 --> 01:58:33,599

and raja on your way out

982

01:58:37,270 --> 01:58:35,760

there's a depressed repressed cue card

983

01:58:39,030 --> 01:58:37,280

that's kind of

984

01:58:40,790 --> 01:58:39,040

thrown behind the hatch

985

01:58:45,589 --> 01:58:40,800

you have to turn around

986

01:58:51,510 --> 01:58:48,950

sorry um yeah around to come out to your

987

01:58:53,189 --> 01:58:51,520

waist i think i see it yeah if you could

988

01:58:55,300 --> 01:58:53,199

see that back in probably shouldn't have

989

01:58:59,270 --> 01:58:55,310

even had it out

990

01:59:03,189 --> 01:59:00,870

it's not we can get at the end of the

991

01:59:07,390 --> 01:59:03,199

eva but

992

01:59:11,510 --> 01:59:09,750

[Applause]

993

01:59:14,790 --> 01:59:11,520

and the sun's coming out roger if you

994

01:59:23,270 --> 01:59:16,310

i'm going to increase my cooling a

995

01:59:26,870 --> 01:59:25,270

okay that refresh card is back behind

996

01:59:29,030 --> 01:59:26,880

the hatch

997

01:59:31,030 --> 01:59:29,040

thank you sir

998

02:00:02,470 --> 01:59:31,040

any of you want ev2 or 15 seconds to a

999

02:00:06,629 --> 02:00:04,470

and we're currently in a brief handover

1000

02:00:08,149 --> 02:00:06,639

between satellites

1001
02:00:09,669 --> 02:00:08,159
which you're currently seeing in a

1002
02:00:24,629 --> 02:00:09,679
national space station flight control

1003
02:00:24,639 --> 02:00:28,550
should be

1004
02:00:31,430 --> 02:00:30,229
and i'm trying to get my tool in where i

1005
02:00:59,310 --> 02:00:31,440
want it

1006
02:00:59,320 --> 02:01:04,390
[Applause]

1007
02:01:04,400 --> 02:01:17,430
is now out of the hatch

1008
02:01:22,950 --> 02:01:19,910
baron ev1 or extravehicular crew member

1009
02:01:28,470 --> 02:01:24,390
he's wearing the suit with the red

1010
02:01:32,629 --> 02:01:31,109
chari ev2

1011
02:01:33,750 --> 02:01:32,639
and he's wearing the suit with no

1012
02:01:35,189 --> 02:01:33,760
stripes

1013
02:01:36,870 --> 02:01:35,199

another way to keep track of the crew

1014

02:01:37,990 --> 02:01:36,880

members today will be by their helmet

1015

02:01:40,709 --> 02:01:38,000

cams

1016

02:01:49,120 --> 02:01:40,719

baron has helmet cam number 22 and chart

1017

02:01:49,130 --> 02:02:09,510

[Music]

1018

02:02:12,950 --> 02:02:10,629

let me know when you feel like you're

1019

02:02:14,870 --> 02:02:12,960

ready for buddy checks raja let us know

1020

02:02:16,629 --> 02:02:14,880

if you're back with us yep i'm with you

1021

02:02:18,390 --> 02:02:16,639

and uh once roger when you're done with

1022

02:02:22,950 --> 02:02:18,400

a bag and you have a free finger you can

1023

02:02:28,229 --> 02:02:24,950

thermal cover is closed copy thermal

1024

02:02:30,390 --> 02:02:28,239

cover closed thank you and uh let's see

1025

02:02:34,070 --> 02:02:30,400

can you verify the stiffener d-ring

1026

02:02:37,669 --> 02:02:35,910

it is not

1027

02:02:39,270 --> 02:02:37,679

okay and you've got that long wire tie

1028

02:02:41,430 --> 02:02:39,280

there if you need to use that free end

1029

02:02:43,189 --> 02:02:41,440

of the hook around the soft goods handle

1030

02:02:44,709 --> 02:02:43,199

and uh just let us know and if you guys

1031

02:02:46,229 --> 02:02:44,719

remember where you tucked that cue card

1032

02:02:47,750 --> 02:02:46,239

uh we'll take that so we can remind you

1033

02:02:50,390 --> 02:02:47,760

on the way back in to make sure it's

1034

02:02:53,910 --> 02:02:52,709

um it's just behind the thermal cover at

1035

02:02:56,070 --> 02:02:53,920

the moment

1036

02:02:58,149 --> 02:02:56,080

it's tethered it's just kind of in the

1037

02:02:59,350 --> 02:02:58,159

way of the hatch actuating i just need

1038

02:03:04,070 --> 02:02:59,360

to tuck it in

1039

02:03:08,229 --> 02:03:05,589

all right i'm ready for pleasure

1040

02:03:10,070 --> 02:03:08,239

all right roger i see

1041

02:03:12,950 --> 02:03:10,080

a green

1042

02:03:15,990 --> 02:03:12,960

echolite i don't see your wds light

1043

02:03:16,000 --> 02:03:23,109

so use the white button on your emu tv

1044

02:03:23,119 --> 02:03:28,390

we've gone out before

1045

02:03:32,870 --> 02:03:30,070

see it's on now

1046

02:03:35,589 --> 02:03:32,880

your helmet lights are on

1047

02:03:37,750 --> 02:03:35,599

you've got three tabs up too many merch

1048

02:03:40,550 --> 02:03:37,760

workstation one brt

1049

02:03:43,030 --> 02:03:40,560

both of your safer handles are down

1050

02:03:45,109 --> 02:03:43,040

and you've got the crew lock bag on your

1051

02:03:46,629 --> 02:03:45,119

brt that looks really

1052

02:03:47,750 --> 02:03:46,639

like a good position

1053

02:03:49,030 --> 02:03:47,760

and

1054

02:03:50,550 --> 02:03:49,040

i think you've got good eyes on your

1055

02:03:52,229 --> 02:03:50,560

safety tether looks like you're in a

1056

02:03:55,750 --> 02:03:52,239

good config there

1057

02:03:58,709 --> 02:03:55,760

and my baseline health check half is dry

1058

02:04:00,310 --> 02:03:58,719

happy and for you i see one cue uv

1059

02:04:02,229 --> 02:04:00,320

lights on heca mpb you're both your

1060

02:04:03,910 --> 02:04:02,239

electron just one of each if you want

1061

02:04:05,030 --> 02:04:03,920

the plus for later

1062

02:04:05,350 --> 02:04:05,040

uh

1063

02:04:06,470 --> 02:04:05,360

one

1064

02:04:08,629 --> 02:04:06,480

[Music]

1065

02:04:10,629 --> 02:04:08,639

you yaw your body

1066

02:04:16,069 --> 02:04:10,639

that's good okay three times up

1067

02:04:19,510 --> 02:04:17,510

safer handles down

1068

02:04:20,870 --> 02:04:19,520

and the start bag looks good it's a

1069

02:04:21,830 --> 02:04:20,880

little tilted towards your head but i

1070

02:04:24,229 --> 02:04:21,840

think that's

1071

02:04:25,350 --> 02:04:24,239

prime um i've been watering at your feet

1072

02:04:26,870 --> 02:04:25,360

but uh

1073

02:04:28,550 --> 02:04:26,880

it looks like a good single position

1074

02:04:30,229 --> 02:04:28,560

tucked in close to behind your arm yeah

1075

02:04:31,830 --> 02:04:30,239

i see it in your reflection i think i'm

1076

02:04:32,790 --> 02:04:31,840

okay with how that is yeah i think

1077

02:04:34,149 --> 02:04:32,800

that's probably better if that's a

1078

02:04:50,950 --> 02:04:34,159

little tighter and dry your hips doesn't

1079

02:04:55,510 --> 02:04:53,750

and we're good okay copy that uh nice

1080

02:04:57,109 --> 02:04:55,520

job you two and kayla that's a big bag

1081

02:04:59,109 --> 02:04:57,119

with a long moment arm so uh you know

1082

02:05:00,790 --> 02:04:59,119

it's only gonna stay put uh for so long

1083

02:05:02,149 --> 02:05:00,800

so don't fight too hard trying to keep

1084

02:05:04,470 --> 02:05:02,159

that where it is

1085

02:05:06,870 --> 02:05:04,480

and if you two are ready to translate

1086

02:05:08,950 --> 02:05:06,880

you kayla are going to the s3 s4

1087

02:05:10,310 --> 02:05:08,960

interface inboard of the sarge and you

1088

02:05:12,149 --> 02:05:10,320

will be leading

1089

02:05:17,030 --> 02:05:12,159

raja you will follow translating to the

1090

02:05:22,229 --> 02:05:19,750

diamond up the tool boxes

1091

02:05:28,709 --> 02:05:22,239

and kayla we'd like you to fairlead at

1092

02:05:38,629 --> 02:05:30,470

just going to take it nice and slow with

1093

02:05:43,430 --> 02:05:41,110

yeah that's right kayla slow and steady

1094

02:05:45,270 --> 02:05:43,440

[Music]

1095

02:05:46,950 --> 02:05:45,280

perfect and i've got a couple cautions

1096

02:05:48,629 --> 02:05:46,960

i'll read to you all

1097

02:05:50,950 --> 02:05:48,639

avoid contact with the radiators and

1098

02:05:52,470 --> 02:05:50,960

flex hoses

1099

02:05:55,030 --> 02:05:52,480

it'll probably be obvious and

1100

02:05:57,109 --> 02:05:55,040

self-correcting but translate slowly

1101

02:05:58,870 --> 02:05:57,119

especially with the strut bag on the brt

1102

02:06:03,589 --> 02:05:58,880

and avoid inadvertent contact with the

1103

02:06:06,390 --> 02:06:04,629

yes

1104

02:06:09,589 --> 02:06:06,400

i've got that fairly done and i'm having

1105

02:06:15,030 --> 02:06:09,599

a nap to put in my adjustable fairleas

1106

02:06:16,390 --> 02:06:15,040

copy and that'll be at s0 handrail 3410

1107

02:06:17,990 --> 02:06:16,400

for ev1

1108

02:06:23,270 --> 02:06:18,000

and ev2 you're going to do an adjustable

1109

02:06:27,030 --> 02:06:25,589

all right three four one zero i'll stop

1110

02:06:48,550 --> 02:06:27,040

here to get that

1111

02:06:52,470 --> 02:06:50,629

i've got my adjustable fairlead on three

1112

02:06:53,589 --> 02:06:52,480

four one zero

1113

02:06:55,270 --> 02:06:53,599

either you have a dough to start

1114

02:06:57,189 --> 02:06:55,280

translating up and i'm trying to keep an

1115

02:06:59,030 --> 02:06:57,199

eye on you they come by the tool boxes

1116

02:07:24,629 --> 02:06:59,040

and then i'll continue okay come off the

1117

02:07:28,709 --> 02:07:27,430

stay out of your way okay

1118

02:07:30,550 --> 02:07:28,719

i'll hold to the base of the super bowl

1119

02:07:34,950 --> 02:07:30,560

so you get the trap okay i'm at the

1120

02:07:43,109 --> 02:07:36,629

i'm going to start slowly heading our

1121

02:07:46,950 --> 02:07:44,629

that's correct kayla you're heading to

1122

02:07:48,149 --> 02:07:46,960

the s3 s4 interface

1123

02:07:49,990 --> 02:07:48,159

and you've got we've got a green hook

1124

02:07:51,910 --> 02:07:50,000

location just in board of the stars when

1125

02:07:59,310 --> 02:07:51,920

you get there your mile marker five two

1126

02:08:05,030 --> 02:08:01,589

m3409 which is where i put down my

1127

02:08:05,040 --> 02:08:21,560

thank you raja

1128

02:08:21,570 --> 02:08:36,390

[Applause]

1129

02:08:41,270 --> 02:08:38,310

baron and chary are currently

1130

02:08:43,589 --> 02:08:41,280

translating to the starboard truss s4

1131

02:08:46,950 --> 02:08:43,599

work site where they will install a

1132

02:08:48,870 --> 02:08:46,960

solar array mod for the modification kit

1133

02:08:51,510 --> 02:08:48,880

the starboard feeder cart or correction

1134

02:08:53,080 --> 02:08:51,520

port feet apart

1135

02:08:55,430 --> 02:08:53,090

and rotating underneath it

1136

02:08:57,270 --> 02:08:55,440

[Applause]

1137

02:09:11,430 --> 02:08:57,280

nice job you're looking good that strut

1138

02:09:15,510 --> 02:09:12,870

thanks raja

1139

02:09:24,470 --> 02:09:15,520

and you're heading to the starboard city

1140

02:09:28,550 --> 02:09:26,550

and i'm starting under the mt i got good

1141

02:09:30,390 --> 02:09:28,560

visibility on the bag

1142

02:09:54,560 --> 02:09:30,400

and it's clear

1143

02:09:54,570 --> 02:10:05,589

[Applause]

1144

02:10:05,599 --> 02:10:13,510

want to see the handrail starting to go

1145

02:10:13,520 --> 02:10:18,020

about the over seat occurs

1146

02:10:18,030 --> 02:10:43,830

[Music]

1147

02:10:49,830 --> 02:10:45,990

we're currently seeing live views from

1148

02:10:51,109 --> 02:10:49,840

helmet cam 16 which is ev2 raja chari's

1149

02:10:59,350 --> 02:10:51,119

cam

1150

02:11:25,990 --> 02:11:01,109

i'm back from the cedar rail passes

1151
02:11:29,510 --> 02:11:27,830
and i'm approaching the spot where i'm

1152
02:11:31,430 --> 02:11:29,520
going to have nader for

1153
02:11:33,990 --> 02:11:31,440
green hook

1154
02:11:35,750 --> 02:11:34,000
copy that yet just inboard of the sarge

1155
02:11:39,589 --> 02:11:35,760
you're looking for

1156
02:11:42,069 --> 02:11:39,599
uh s3 handrail three zero six zero and

1157
02:11:44,550 --> 02:11:42,079
yours will be the more nader uh of the

1158
02:11:48,270 --> 02:11:44,560
uh two vertical handrails there on the

1159
02:11:56,629 --> 02:11:50,229
rc3060

1160
02:11:59,510 --> 02:11:58,229
and i think i'm caught up on something

1161
02:12:00,870 --> 02:11:59,520
so just going to take a look at my

1162
02:12:01,850 --> 02:12:00,880
feather

1163
02:12:05,669 --> 02:12:01,860

i got it clear

1164

02:12:05,679 --> 02:12:31,990

under the uh

1165

02:12:32,000 --> 02:12:58,550

um

1166

02:12:58,560 --> 02:13:04,310

all right my green hook is on three zero

1167

02:13:07,750 --> 02:13:06,069

all right nice job and now you're going

1168

02:13:11,189 --> 02:13:07,760

to translate to

1169

02:13:12,790 --> 02:13:11,199

the three alpha iea non-radiator side so

1170

02:13:27,910 --> 02:13:12,800

please check your gauntlets in place

1171

02:13:53,189 --> 02:13:29,750

sounds good you're heading out to the

1172

02:13:56,149 --> 02:13:54,709

just let us know what square grid you

1173

02:14:09,040 --> 02:13:56,159

drop the

1174

02:14:09,050 --> 02:14:40,149

[Music]

1175

02:14:44,629 --> 02:14:42,149

all right i made this eye here and i'm

1176

02:14:47,750 --> 02:14:44,639

heading further out board

1177

02:14:51,109 --> 02:14:47,760

hey firm station forward and outboard

1178

02:14:55,830 --> 02:14:51,119

and you're looking for handrails 2207 or

1179

02:15:02,550 --> 02:14:55,840

2206 and then we'll stow the strut bag

1180

02:15:08,629 --> 02:15:06,149

i like the cool effects on great c

1181

02:15:11,270 --> 02:15:08,639

thanks roger grid charlie now you can

1182

02:15:13,750 --> 02:15:11,280

retrieve the wifix and apfr with the

1183

02:15:16,790 --> 02:15:13,760

ingressade um with one

1184

02:15:30,149 --> 02:15:17,830

and you're going to stow those on your

1185

02:15:33,910 --> 02:15:32,310

and kayla it looks like you're close to

1186

02:15:36,069 --> 02:15:33,920

your position so when you find those

1187

02:15:38,709 --> 02:15:36,079

handrails the way you want to orient the

1188

02:15:40,709 --> 02:15:38,719

bag the strut bag handrail goes toward

1189

02:15:42,470 --> 02:15:40,719

the radiator or if you can just see the

1190

02:15:44,709 --> 02:15:42,480

way the lid opens you want the lid to

1191

02:16:11,189 --> 02:15:44,719

open toward the center of the iea or

1192

02:16:15,990 --> 02:16:13,510

you just heard baron confirm

1193

02:16:18,550 --> 02:16:16,000

the strut bag being stowed at the iea or

1194

02:16:20,870 --> 02:16:18,560

the integrated electronics assembly okay

1195

02:16:22,790 --> 02:16:20,880

i believe also that means that the tape

1196

02:16:27,669 --> 02:16:22,800

on the handrail will point toward the

1197

02:16:32,720 --> 02:16:29,189

working on the

1198

02:16:36,230 --> 02:16:32,730

necessary rotation now

1199

02:16:39,429 --> 02:16:37,910

got it in a good orientation so i'll

1200

02:16:40,950 --> 02:16:39,439

work on getting it

1201

02:16:43,830 --> 02:16:40,960

cleared

1202

02:16:56,230 --> 02:16:43,840

yeah that looks good and i think 2207

1203

02:16:58,950 --> 02:16:57,589

i thought if you've got t-rex at the

1204

02:17:00,389 --> 02:16:58,960

apfr

1205

02:17:03,190 --> 02:17:00,399

which is uh

1206

02:17:05,429 --> 02:17:03,200

blocked on the with x and the reflex is

1207

02:17:09,429 --> 02:17:05,439

by brt with the case

1208

02:17:13,110 --> 02:17:10,950

okay copy that roger and now you're

1209

02:17:15,589 --> 02:17:13,120

going to translate

1210

02:17:18,070 --> 02:17:15,599

to the starboard sarge

1211

02:17:19,190 --> 02:17:18,080

and you're going to also uh near kayla's

1212

02:17:20,629 --> 02:17:19,200

green hook you're going to drop your

1213

02:17:38,709 --> 02:17:20,639

green hook just scene at the purse on

1214

02:17:41,920 --> 02:17:40,070

and we currently see

1215

02:17:48,469 --> 02:17:41,930

russia

1216

02:17:48,479 --> 02:17:55,470

on one corner

1217

02:17:55,480 --> 02:17:59,270

[Applause]

1218

02:18:03,030 --> 02:18:02,150

we currently have views as rajacharya

1219

02:18:05,270 --> 02:18:03,040

moves

1220

02:18:08,150 --> 02:18:05,280

translates back to the work site after

1221

02:18:23,270 --> 02:18:08,160

retrieving apfr or the articulating

1222

02:18:51,270 --> 02:18:24,870

off half of yours is planned that looks

1223

02:18:54,870 --> 02:18:53,589

and roger i see you're approaching the

1224

02:18:57,750 --> 02:18:54,880

sarge there

1225

02:18:59,990 --> 02:18:57,760

just uh zenith of zina's uh assuming you

1226

02:19:02,150 --> 02:19:00,000

have uh kayla's and uh green hook you're

1227

02:19:03,830 --> 02:19:02,160

looking for three zero six one three

1228

02:19:07,349 --> 02:19:03,840

zero six one

1229

02:19:07,359 --> 02:19:48,710

who works

1230

02:19:53,110 --> 02:19:50,790

i've got two corners down and what i'm

1231

02:19:55,110 --> 02:19:53,120

going to do is open the lid and then

1232

02:19:58,469 --> 02:19:55,120

probably tie back with one of the lid

1233

02:20:02,469 --> 02:20:00,630

hey copy nice work kayla if you also

1234

02:20:23,590 --> 02:20:02,479

could uh when you have a free hand

1235

02:20:27,270 --> 02:20:25,190

happy thank you for the heck of light

1236

02:20:28,710 --> 02:20:27,280

and roger just confirm your gauntlets

1237

02:20:30,230 --> 02:20:28,720

are in place after your green hook

1238

02:20:32,070 --> 02:20:30,240

you're going to translate to the three

1239

02:20:35,070 --> 02:20:32,080

alpha iea as well

1240

02:20:38,150 --> 02:20:35,080

on the radiator side station

1241

02:21:00,870 --> 02:20:38,160

after elements are down

1242

02:21:00,880 --> 02:21:20,389

oh

1243

02:21:23,590 --> 02:21:22,070

all right we've got a great camera view

1244

02:21:25,510 --> 02:21:23,600

of both of you and raja you're just

1245

02:21:27,910 --> 02:21:25,520

going to head over

1246

02:21:58,790 --> 02:21:27,920

over the nader business side of the iea

1247

02:22:05,349 --> 02:22:03,030

um i think i'll maybe tighten actually

1248

02:22:07,110 --> 02:22:05,359

the uh outboard strap real quick

1249

02:22:09,750 --> 02:22:07,120

and then

1250

02:22:11,349 --> 02:22:09,760

the mounting bracket has very kindly

1251

02:22:13,590 --> 02:22:11,359

presented itself

1252

02:22:15,429 --> 02:22:13,600

yeah it's ready to get to work huh okay

1253

02:22:17,270 --> 02:22:15,439

nice job with the bag and also i have a

1254

02:22:19,590 --> 02:22:17,280

reminder here that you can turn on and

1255

02:22:22,790 --> 02:22:19,600

stow the gopro and just let us know

1256

02:22:24,550 --> 02:22:22,800

where you place it

1257

02:22:26,950 --> 02:22:24,560

it's on and i'm just going to leave it

1258

02:22:32,230 --> 02:22:26,960

tethered to the bag

1259

02:22:36,150 --> 02:22:33,830

i think i'm going to take a second to

1260

02:22:44,950 --> 02:22:36,160

put down my brt

1261

02:22:44,960 --> 02:22:54,710

get that mounting bracket back over here

1262

02:22:59,190 --> 02:22:56,550

okay and i've got my eyes on list26

1263

02:23:00,710 --> 02:22:59,200

which is my destination a firm yes and

1264

02:23:02,790 --> 02:23:00,720

when you get to with 26 you want to

1265

02:23:04,710 --> 02:23:02,800

install the wiffex

1266

02:23:06,070 --> 02:23:04,720

and you will clock it to six i'll remind

1267

02:23:07,110 --> 02:23:06,080

you again when you get there and give

1268

02:23:10,389 --> 02:23:07,120

you the rest of the settings when you're

1269

02:23:13,750 --> 02:23:12,230

like i've got the mounting bracket and

1270

02:23:15,510 --> 02:23:13,760

i'm gonna start going through the upper

1271

02:23:18,070 --> 02:23:15,520

right strut

1272

02:23:20,469 --> 02:23:18,080

okay so before you start on that uh we

1273

02:23:22,230 --> 02:23:20,479

would like a glove half and gauntlet

1274

02:23:23,020 --> 02:23:22,240

check and then we'll get into the upper

1275

02:23:24,630 --> 02:23:23,030

triangle

1276

02:23:26,150 --> 02:23:24,640

[Music]

1277

02:23:28,070 --> 02:23:26,160

okay that's gonna work i'll check my

1278

02:23:29,510 --> 02:23:28,080

gloves now

1279

02:23:32,070 --> 02:23:29,520

if you're just joining us we're bringing

1280

02:23:33,910 --> 02:23:32,080

you live coverage today of the 247th

1281

02:23:35,910 --> 02:23:33,920

spacewalk in support of international

1282

02:23:39,030 --> 02:23:35,920

space station assembly maintenance and

1283

02:23:41,190 --> 02:23:39,040

upgrades nasa astronauts kayla baron and

1284

02:23:44,230 --> 02:23:41,200

raja chari

1285

02:23:46,230 --> 02:23:44,240

have begun a spacewalk to assemble and

1286

02:23:49,830 --> 02:23:46,240

install brackets and strut kits for

1287

02:23:51,349 --> 02:23:49,840

upcoming solar array upgrades

1288

02:23:53,190 --> 02:23:51,359

all right so yes we are going to start

1289

02:23:55,429 --> 02:23:53,200

on the upper triangle build and you said

1290

02:24:00,630 --> 02:23:55,439

you have the mounting bracket

1291

02:24:05,190 --> 02:24:01,990

yep it's going to be the right upper

1292

02:24:07,590 --> 02:24:05,200

strut from bagged straps one and two

1293

02:24:10,870 --> 02:24:07,600

those are in the upper left corner uh as

1294

02:24:17,190 --> 02:24:13,910

the duo exited the air lock this morning

1295

02:24:20,550 --> 02:24:17,200

starting the eva at 7 12 a.m central

1296

02:24:23,190 --> 02:24:20,560

time 8 12 a.m eastern time and now have

1297

02:24:39,270 --> 02:24:23,200

translated to the starboard truss to the

1298

02:24:42,630 --> 02:24:41,510

mary and charlie are now

1299

02:24:46,230 --> 02:24:42,640

taking

1300

02:24:49,910 --> 02:24:46,240

struts and brackets out of their

1301

02:24:59,270 --> 02:24:49,920

stowage space and will begin

1302

02:25:02,790 --> 02:25:00,469

the main focus will be on the

1303

02:25:05,349 --> 02:25:02,800

installation of a 3a modification kit

1304

02:25:08,550 --> 02:25:05,359

but then they will then go to

1305

02:25:10,389 --> 02:25:08,560

the six the s6 truss to tie back

1306

02:25:12,870 --> 02:25:10,399

multi-layer insulation

1307

02:25:15,910 --> 02:25:12,880

for spare bar battery charge discharge

1308

02:25:20,389 --> 02:25:18,469

popped out and workout five for their fx

1309

02:25:21,910 --> 02:25:20,399

extension

1310

02:25:23,349 --> 02:25:21,920

copy six golf five those are your

1311

02:25:27,030 --> 02:25:23,359

settings and thanks for the uh full

1312

02:25:35,190 --> 02:25:28,950

this is the fourth set of brackets first

1313

02:25:39,830 --> 02:25:37,190

a modification kit is the support

1314

02:25:41,990 --> 02:25:39,840

structure needed for future irosa or iss

1315

02:25:43,910 --> 02:25:42,000

rollout solar array upgrades bracket

1316

02:25:46,309 --> 02:25:43,920

right side and that's the one to

1317

02:25:47,830 --> 02:25:46,319

remember you have that uh strut tab that

1318

02:25:49,590 --> 02:25:47,840

needs to go under the mounting bracket

1319

02:26:13,349 --> 02:25:49,600

guide the pieces should be flush

1320

02:26:18,070 --> 02:26:15,910

you'll hear some acronyms today you i'm

1321

02:26:20,309 --> 02:26:18,080

sure you've heard brt

1322

02:26:21,910 --> 02:26:20,319

before i do the golf live uh i can think

1323

02:26:26,870 --> 02:26:21,920

of maybe i'll set up the apfr settings

1324

02:26:36,550 --> 02:26:30,230

okay copy that uh settings 12

1325

02:26:41,910 --> 02:26:37,750

i got

1326

02:26:44,630 --> 02:26:41,920

m13 and 14 hand started

1327

02:26:46,150 --> 02:26:44,640

okay copy m13 and 14.

1328

02:26:49,110 --> 02:26:46,160

we're looking for four turns and i've

1329

02:26:51,429 --> 02:26:49,120

got pgt settings that actually

1330

02:26:53,270 --> 02:26:51,439

you've already hand started them so

1331

02:26:55,349 --> 02:26:53,280

next you're going to

1332

02:26:57,830 --> 02:26:55,359

retrieve

1333

02:26:59,830 --> 02:26:57,840

the left upper strut from the bag and

1334

02:27:32,550 --> 02:26:59,840

that's the one on the right side straps

1335

02:27:38,230 --> 02:27:34,630

you'll hear acronyms today just like

1336

02:27:41,750 --> 02:27:38,240

spoken previously rajatari mentioned his

1337

02:27:43,750 --> 02:27:41,760

apfr or articulating portable foot

1338

02:27:46,630 --> 02:27:43,760

restraint that will help him during the

1339

02:27:48,230 --> 02:27:46,640

assembly today the crew is at

1340

02:27:50,469 --> 02:27:48,240

the proper

1341

02:28:31,750 --> 02:27:50,479

work site and are starting the 3a upper

1342

02:28:36,790 --> 02:28:34,150

and uh raja and kayla i've got a warning

1343

02:28:38,710 --> 02:28:36,800

for you here just about the

1344

02:28:41,270 --> 02:28:38,720

strut builds the misaligned or fractured

1345

02:29:24,550 --> 02:28:41,280

pit pin spring may present a sharp edge

1346

02:29:28,870 --> 02:29:26,630

okay kayla and you're going to install

1347

02:29:30,790 --> 02:29:28,880

the left upper strut l2 to the center

1348

02:29:32,230 --> 02:29:30,800

pad l2

1349

02:29:41,990 --> 02:29:32,240

and then i've got pgt settings when

1350

02:29:51,750 --> 02:29:43,429

okay copy just let us know how many

1351

02:29:56,389 --> 02:29:53,750

the apfros 12

1352

02:29:57,910 --> 02:29:56,399

tango tango fox 12.

1353

02:29:59,349 --> 02:29:57,920

i have not done the webex extension yet

1354

02:30:01,030 --> 02:29:59,359

i'm going to get my vrt right off there

1355

02:30:02,710 --> 02:30:01,040

first i'm trying with my facebook page

1356

02:30:04,710 --> 02:30:02,720

and i'll work on the list

1357

02:30:14,469 --> 02:30:04,720

okay copy that and for the apfr please

1358

02:30:19,830 --> 02:30:15,750

okay

1359

02:30:25,990 --> 02:30:23,110

copy one turn m17

1360

02:30:29,750 --> 02:30:26,000

pgt settings are bravo one

1361

02:30:29,760 --> 02:30:44,230

okay

1362

02:30:49,030 --> 02:30:45,990

you'll hear the duo today talk about

1363

02:30:55,270 --> 02:30:49,040

their pgt or their pistol grip tool

1364

02:30:55,280 --> 02:31:07,090

things today

1365

02:31:07,100 --> 02:31:10,469

[Applause]

1366

02:31:14,469 --> 02:31:12,469

that is a good read you are going to

1367

02:31:16,870 --> 02:31:14,479

drive m17

1368

02:31:19,190 --> 02:31:16,880

to torque for a total of seven to nine

1369

02:31:39,030 --> 02:31:19,200

turns so we're looking for

1370

02:31:42,950 --> 02:31:41,510

via kayla's baron's

1371

02:31:46,309 --> 02:31:42,960

helmet cam

1372

02:31:48,070 --> 02:31:46,319

i have 10 additional turns

1373

02:31:49,190 --> 02:31:48,080

half line flush

1374

02:31:53,270 --> 02:31:49,200

in light

1375

02:31:55,990 --> 02:31:53,280

one one decimal nine for chords

1376
02:31:58,230 --> 02:31:56,000
copy 11 09 on the tour 10 additional for

1377
02:32:00,469 --> 02:31:58,240
11 total turns and the black line is

1378
02:32:02,870 --> 02:32:00,479
flush

1379
02:32:05,270 --> 02:32:02,880
that is a good bolt to m17

1380
02:32:07,670 --> 02:32:05,280
okay now i know we just

1381
02:32:09,429 --> 02:32:07,680
drove the bolt on the left upper strut

1382
02:32:12,469 --> 02:32:09,439
but once your pgt is put away you can

1383
02:32:19,270 --> 02:32:12,479
release the red from the right strip the

1384
02:32:22,790 --> 02:32:20,630
things

1385
02:32:24,810 --> 02:32:22,800
and kayla you can see my feet that i

1386
02:32:34,550 --> 02:32:24,820
think

1387
02:32:38,230 --> 02:32:36,710
oh there you go that's clear

1388
02:32:50,070 --> 02:32:38,240

just let it retract it should tighten

1389

02:32:53,429 --> 02:32:52,309

removing the rep from the upper right

1390

02:32:55,670 --> 02:32:53,439

strut

1391

02:32:57,750 --> 02:32:55,680

that is a good read back

1392

02:33:38,230 --> 02:32:57,760

and once that is off you can install the

1393

02:33:38,240 --> 02:33:44,870

it's installed working on moi

1394

02:33:51,110 --> 02:33:49,110

all right x and apfr are installed

1395

02:33:52,150 --> 02:33:51,120

since five and

1396

02:33:53,510 --> 02:33:52,160

you know

1397

02:33:54,710 --> 02:33:53,520

uh

1398

02:33:56,550 --> 02:33:54,720

where you're at taylor in terms of

1399

02:33:59,030 --> 02:33:56,560

coming over there to help you

1400

02:34:01,510 --> 02:33:59,040

actually uh nice job on the apfr and

1401
02:34:03,349 --> 02:34:01,520
with x raja we need you to pause just uh

1402
02:34:06,070 --> 02:34:03,359
give your medics a second so just stand

1403
02:34:09,590 --> 02:34:06,080
by and pause eb2 and ev1 will you repeat

1404
02:34:19,030 --> 02:34:13,670
um pins in place i'm alive in place

1405
02:34:20,469 --> 02:34:19,040
and i will move on to m1516

1406
02:34:23,670 --> 02:34:20,479
okay now we're going to assemble the

1407
02:34:25,110 --> 02:34:23,680
left upper strut to the mounting bracket

1408
02:34:26,710 --> 02:34:25,120
and so

1409
02:34:27,990 --> 02:34:26,720
we want to install the left upper strut

1410
02:34:30,150 --> 02:34:28,000
l8

1411
02:34:32,550 --> 02:34:30,160
to the mounting bracket left side and

1412
02:35:22,950 --> 02:34:32,560
again make sure that same slide tab is

1413
02:35:26,870 --> 02:35:25,190

we are currently in between

1414

02:35:35,190 --> 02:35:26,880

satellites but we should have signaled

1415

02:35:42,950 --> 02:35:37,429

and kayla i have pgt settings for you

1416

02:35:48,389 --> 02:35:46,389

i've got four turns by hand on m15

1417

02:35:49,990 --> 02:35:48,399

and i'm going to see if i can get m16

1418

02:35:51,750 --> 02:35:50,000

and engage one turn and then i'll go for

1419

02:35:54,389 --> 02:35:51,760

my piece

1420

02:36:02,790 --> 02:35:54,399

copy four turns by hand on m15

1421

02:36:08,389 --> 02:36:05,990

okay i've got one turned by hand on m16

1422

02:36:09,750 --> 02:36:08,399

i'm just going to reposition the

1423

02:36:11,429 --> 02:36:09,760

triangle a little bit and then i'll grab

1424

02:36:14,630 --> 02:36:11,439

my pc

1425

02:36:25,270 --> 02:36:14,640

copy one turn by hand on m16 standing by

1426

02:36:30,550 --> 02:36:27,510

ready for settings

1427

02:36:36,950 --> 02:36:30,560

hey your pgt settings are bravo 3 clock

1428

02:36:42,309 --> 02:36:39,910

and we're going to drive m16 first

1429

02:36:44,870 --> 02:36:42,319

three clockwise two sets

1430

02:36:57,510 --> 02:36:44,880

and starting with m16 you're going to

1431

02:37:24,550 --> 02:37:02,230

m16 should be about 25 total turns so

1432

02:37:24,560 --> 02:37:38,630

and raja how's your hat doing

1433

02:37:38,640 --> 02:37:42,389

all right i

1434

02:37:49,830 --> 02:37:46,990

i got a red light low torch

1435

02:37:53,190 --> 02:37:49,840

21.24 fern

1436

02:37:55,910 --> 02:37:53,200

and that matched my count of 22 turns

1437

02:37:57,429 --> 02:37:55,920

i think i should try it again

1438

02:38:01,030 --> 02:37:57,439

okay stand by

1439

02:38:04,230 --> 02:38:01,040

copy red light low torque and yes with

1440

02:38:05,590 --> 02:38:04,240

bravo three clock two you have a go to

1441

02:38:07,910 --> 02:38:05,600

hit it again

1442

02:38:12,950 --> 02:38:07,920

and copy 22 more turns for a total of

1443

02:38:18,389 --> 02:38:15,590

i hit it again green light

1444

02:38:20,469 --> 02:38:18,399

one eight decimal two for torque

1445

02:38:23,750 --> 02:38:20,479

and i got maybe an eighth of a turn out

1446

02:38:27,910 --> 02:38:25,990

copy green light uh 18 decimal two on

1447

02:38:29,830 --> 02:38:27,920

the torque and an eighth of a turn for

1448

02:38:36,150 --> 02:38:29,840

23 and an eighth and how's the black

1449

02:38:40,469 --> 02:38:38,870

copy black line is flush you can move on

1450

02:38:42,630 --> 02:38:40,479

to m15

1451
02:39:02,309 --> 02:38:42,640
looking for about 21 more turns drive

1452
02:39:06,870 --> 02:39:04,389
currently seeing views of caleb barron

1453
02:39:08,550 --> 02:39:06,880
using that pistol grip tool

1454
02:39:10,630 --> 02:39:08,560
they'll be using it throughout today's

1455
02:39:12,790 --> 02:39:10,640
spacewalk and that is essentially a

1456
02:39:15,990 --> 02:39:12,800
space drill that is used to help secure

1457
02:39:17,830 --> 02:39:16,000
and release bolts during the spacewalk

1458
02:39:25,270 --> 02:39:17,840
and then we can move over to help kayla

1459
02:39:25,280 --> 02:39:27,630
closed

1460
02:39:27,640 --> 02:39:37,190
captioning not

1461
02:39:40,309 --> 02:39:39,030
and run it's available close though

1462
02:39:45,670 --> 02:39:40,319
actually yeah

1463
02:39:49,190 --> 02:39:47,349

i'll stay here i can start going to the

1464

02:39:51,110 --> 02:39:49,200

fbfr if you want yeah you can stay there

1465

02:39:53,110 --> 02:39:51,120

and start working on ingress and apfr

1466

02:39:54,550 --> 02:39:53,120

and kayla you

1467

02:39:56,550 --> 02:39:54,560

stand by

1468

02:39:59,429 --> 02:39:56,560

you can go hit it again

1469

02:40:08,950 --> 02:39:59,439

red light low torque and that was

1470

02:40:14,150 --> 02:40:12,070

okay now i got a green light

1471

02:40:15,429 --> 02:40:14,160

one eight decimal three on the torque

1472

02:40:21,590 --> 02:40:15,439

and that was

1473

02:40:26,150 --> 02:40:24,469

and can we get the initial uh turn count

1474

02:40:29,349 --> 02:40:26,160

and the black line

1475

02:40:34,150 --> 02:40:32,230

yeah i am started at four turns

1476

02:40:35,429 --> 02:40:34,160

and then we got two zero additional

1477

02:40:37,269 --> 02:40:35,439

turns

1478

02:40:39,590 --> 02:40:37,279

for a total of 24.

1479

02:40:41,830 --> 02:40:39,600

copy 20 additional for a total of 24

1480

02:40:45,190 --> 02:40:41,840

green light black line flush

1481

02:40:51,110 --> 02:40:47,990

okay kayla you can release your ret from

1482

02:41:09,990 --> 02:40:52,550

you can release the right from the left

1483

02:41:12,630 --> 02:41:11,510

all right you can install the mounting

1484

02:41:14,950 --> 02:41:12,640

bracket

1485

02:41:16,790 --> 02:41:14,960

get back to m13

1486

02:41:18,630 --> 02:41:16,800

uh that you you can install the mounting

1487

02:41:21,269 --> 02:41:18,640

bracket mli go ahead

1488

02:41:28,050 --> 02:41:21,279

mounting bracket mli

1489

02:41:28,060 --> 02:41:44,630

[Applause]

1490

02:41:49,269 --> 02:41:47,190

now one hour into today's spacewalk

1491

02:41:53,030 --> 02:41:49,279

recapping some of the milestones the

1492

02:41:55,110 --> 02:41:53,040

spacewalk began at 7 12 a.m central time

1493

02:41:56,790 --> 02:41:55,120

8 12 eastern

1494

02:41:59,190 --> 02:41:56,800

when suits were switched on to internal

1495

02:42:01,750 --> 02:41:59,200

power baron and chary have now arrived

1496

02:42:26,309 --> 02:42:01,760

at their workstation and have begun the

1497

02:42:29,349 --> 02:42:28,230

okay but i think i'm doing the api but

1498

02:42:30,230 --> 02:42:29,359

there's something behind my left leg

1499

02:42:31,690 --> 02:42:30,240

though

1500

02:42:33,590 --> 02:42:31,700

give you a chance

1501
02:42:35,830 --> 02:42:33,600
[Applause]

1502
02:42:36,710 --> 02:42:35,840
uh your space controller is between your

1503
02:42:39,190 --> 02:42:36,720
legs

1504
02:42:40,630 --> 02:42:39,200
that's what it is okay

1505
02:42:42,389 --> 02:42:40,640
be a factor for up here when i come back

1506
02:42:46,060 --> 02:42:42,399
so i can fix it

1507
02:42:49,750 --> 02:42:47,830
[Applause]

1508
02:42:51,900 --> 02:42:49,760
all right i've got the mli on the left

1509
02:42:53,990 --> 02:42:51,910
side

1510
02:42:55,269 --> 02:42:54,000
[Music]

1511
02:42:56,790 --> 02:42:55,279
that now we're going to go and torque

1512
02:42:59,670 --> 02:42:56,800
the right upper strut to the mounting

1513
02:43:30,230 --> 02:42:59,680

bracket and i've got some pgt settings

1514

02:43:34,389 --> 02:43:32,070

all right you're looking for bravo three

1515

02:43:37,269 --> 02:43:34,399

clock two

1516

02:44:28,790 --> 02:43:37,279

and you're going to drive m 13 and 14 to

1517

02:44:35,269 --> 02:44:32,230

all right green light 1 8 decimal four

1518

02:44:37,030 --> 02:44:35,279

black line is flush

1519

02:44:39,510 --> 02:44:37,040

and that was

1520

02:44:41,349 --> 02:44:39,520

two one turn

1521

02:44:53,990 --> 02:44:41,359

additional

1522

02:44:56,630 --> 02:44:54,000

green light black line flush you have a

1523

02:44:58,710 --> 02:44:56,640

gopher 14.

1524

02:45:00,710 --> 02:44:58,720

and raja while you're up there

1525

02:45:05,269 --> 02:45:00,720

no sudden moves on the mass canister or

1526
02:45:07,510 --> 02:45:05,279
the mod kit uh move slowly on the bga

1527
02:45:09,269 --> 02:45:07,520
and maximum lateral loads are not a

1528
02:45:10,870 --> 02:45:09,279
whole lot so be gentle up there avoid

1529
02:45:12,630 --> 02:45:10,880
cyclic loading

1530
02:45:15,110 --> 02:45:12,640
and do not impart forces into the mod

1531
02:45:16,469 --> 02:45:15,120
kit struts when not fully installed i'll

1532
02:45:17,750 --> 02:45:16,479
give you guys a call when it's fully

1533
02:45:19,269 --> 02:45:17,760
installed

1534
02:45:35,030 --> 02:45:19,279
and battery and adapter plate cables in

1535
02:45:38,630 --> 02:45:36,710
black line flush

1536
02:45:42,790 --> 02:45:38,640
one eight decimal four

1537
02:45:46,710 --> 02:45:44,710
and i believe i copy two zero additional

1538
02:45:53,830 --> 02:45:46,720

turns for 24 total green light and a

1539

02:45:59,670 --> 02:45:56,630

hey that's a good m13 and 14. please

1540

02:46:19,590 --> 02:45:59,680

verify after you put your pgt away

1541

02:46:25,510 --> 02:46:22,309

look good and the mli on the mounting

1542

02:46:38,790 --> 02:46:25,520

bracket side is doesn't work

1543

02:46:42,950 --> 02:46:41,349

yeah just the center pad mli and pit pin

1544

02:46:45,030 --> 02:46:42,960

and then you're going to move the long

1545

02:46:50,630 --> 02:46:45,040

pgt so once you've

1546

02:46:54,150 --> 02:46:52,150

center

1547

02:47:00,150 --> 02:46:54,160

look good and understand need to grab

1548

02:47:02,389 --> 02:47:01,510

okay kayla actually you have a

1549

02:47:04,309 --> 02:47:02,399

girlfriend

1550

02:47:11,190 --> 02:47:04,319

you're making that call whether

1551
02:47:14,309 --> 02:47:12,950
i was going to say you you can do that

1552
02:47:15,990 --> 02:47:14,319
in the light now if you want to or you

1553
02:47:18,070 --> 02:47:16,000
can just leave it to

1554
02:47:19,429 --> 02:47:18,080
for raja to do

1555
02:47:21,349 --> 02:47:19,439
so your choice and then we're going to

1556
02:47:24,550 --> 02:47:21,359
move the long pgt the one with the seven

1557
02:47:26,790 --> 02:47:24,560
sixteenths sixteen twelve roger

1558
02:47:28,710 --> 02:47:26,800
yeah concur

1559
02:47:31,510 --> 02:47:28,720
i do that i'll leave it for raja because

1560
02:47:34,150 --> 02:47:31,520
it should be a little bit easier for him

1561
02:47:35,670 --> 02:47:34,160
and i'm working on the piece now okay

1562
02:47:37,990 --> 02:47:35,680
yep you're going to move the long pgt

1563
02:47:40,389 --> 02:47:38,000

from the strut bag to the right upper

1564

02:47:41,590 --> 02:47:40,399

strut handrail stanchion nearest the

1565

02:47:43,429 --> 02:47:41,600

center pad

1566

02:47:50,150 --> 02:47:43,439

and there is a red and adjustable in the

1567

02:47:56,309 --> 02:47:51,349

all right roger don't worry we're

1568

02:47:59,910 --> 02:47:58,389

one thing i did not like uh i've got the

1569

02:48:01,510 --> 02:47:59,920

ingress aid pulled back but i can't

1570

02:48:04,630 --> 02:48:01,520

actually push it down because i can't

1571

02:48:06,150 --> 02:48:04,640

reach the knob or unlock it to get it go

1572

02:48:07,910 --> 02:48:06,160

down

1573

02:48:09,590 --> 02:48:07,920

okay copy that uh if you do want to

1574

02:48:11,190 --> 02:48:09,600

compress it even just a couple inches

1575

02:48:13,830 --> 02:48:11,200

sometimes you can as you twist it back

1576

02:48:15,510 --> 02:48:13,840

though copy pull back try twisting the

1577

02:48:17,349 --> 02:48:15,520

handle a little bit kind of yaw it as

1578

02:48:47,990 --> 02:48:17,359

you push down that might collapse at an

1579

02:48:51,510 --> 02:48:49,910

okay copy that kayla and raj it's just a

1580

02:48:52,950 --> 02:48:51,520

reminder that uh ingress aide we're

1581

02:48:54,790 --> 02:48:52,960

talking it because we've seen it uh

1582

02:48:57,429 --> 02:48:54,800

knocked that uh brt

1583

02:49:00,150 --> 02:48:57,439

tab loose and and uh

1584

02:49:02,230 --> 02:49:00,160

rt so just be aware of that

1585

02:49:04,309 --> 02:49:02,240

all right so we're going to set up to

1586

02:49:06,150 --> 02:49:04,319

hand off the upper triangle

1587

02:49:08,469 --> 02:49:06,160

so that we can install to the mass

1588

02:49:13,030 --> 02:49:08,479

canister

1589

02:49:17,510 --> 02:49:14,550

so now kayla we're going to transfer the

1590

02:49:19,110 --> 02:49:17,520

upper triangle with the pgt to ev2 and

1591

02:49:26,950 --> 02:49:19,120

you can leave them on the bag it's a

1592

02:49:31,670 --> 02:49:28,710

so let me know when you got visibility

1593

02:49:33,429 --> 02:49:31,680

on the train you part of it

1594

02:49:36,630 --> 02:49:33,439

yet i'm going to work on rotating it

1595

02:49:36,640 --> 02:49:41,830

let me give you the right side first

1596

02:49:47,269 --> 02:49:43,910

just over one hour and seven minutes

1597

02:49:49,190 --> 02:49:47,279

into today's spacewalk

1598

02:49:52,150 --> 02:49:49,200

baron and chari are currently focusing

1599

02:49:54,550 --> 02:49:52,160

on the build out of the 3a bracket for

1600

02:49:56,389 --> 02:49:54,560

the solar ray modification kit

1601
02:49:57,830 --> 02:49:56,399
the new solar arrays which are set to be

1602
02:49:59,429 --> 02:49:57,840
delivered to the space station on

1603
02:50:00,389 --> 02:49:59,439
upcoming commercial resupply service

1604
02:50:02,070 --> 02:50:00,399
missions

1605
02:50:04,950 --> 02:50:02,080
are a larger version of the rollout

1606
02:50:06,790 --> 02:50:04,960
solar arrays or rosa technology and will

1607
02:50:10,070 --> 02:50:06,800
ultimately increase the station's total

1608
02:50:12,870 --> 02:50:10,080
available power from 160 kilowatts up to

1609
02:50:14,710 --> 02:50:12,880
215 kilowatts

1610
02:50:15,830 --> 02:50:14,720
we do have a special guest with us today

1611
02:50:17,670 --> 02:50:15,840
on the line

1612
02:50:20,870 --> 02:50:17,680
jeremiah mcnet

1613
02:50:23,269 --> 02:50:20,880

is a photovoltaic technology lead hi

1614

02:50:24,710 --> 02:50:23,279

jeremiah canister with the high school

1615

02:50:26,710 --> 02:50:24,720

pointing up

1616

02:50:28,150 --> 02:50:26,720

and so remember how this uh mechanism

1617

02:50:30,389 --> 02:50:28,160

works you're going to engage the left

1618

02:50:32,309 --> 02:50:30,399

side first thank you for having me up

1619

02:50:34,150 --> 02:50:32,319

and down to engage it if it doesn't

1620

02:50:35,590 --> 02:50:34,160

slide all the way in it's up and down a

1621

02:50:37,269 --> 02:50:35,600

little bit until they engaged and then

1622

02:50:43,030 --> 02:50:37,279

you're going to pivot it

1623

02:50:53,830 --> 02:50:45,830

jeremiah can you please explain to us

1624

02:50:58,790 --> 02:50:56,389

research center where we do a lot of uh

1625

02:51:01,510 --> 02:50:58,800

research and development efforts for new

1626
02:51:04,230 --> 02:51:01,520
photovoltaic devices uh through arrays

1627
02:51:06,950 --> 02:51:04,240
actually and my role the tech lead is to

1628
02:51:08,389 --> 02:51:06,960
oversee all the projects that we have

1629
02:51:11,190 --> 02:51:08,399
that we're working on

1630
02:51:13,510 --> 02:51:11,200
look for new ideas and new concepts

1631
02:51:14,550 --> 02:51:13,520
to start to pursue in the future

1632
02:51:17,190 --> 02:51:14,560
and then

1633
02:51:19,590 --> 02:51:17,200
support flight missions such as

1634
02:51:22,389 --> 02:51:19,600
what's happening with the irosa arrays

1635
02:51:23,830 --> 02:51:22,399
and with gateway and artemis to

1636
02:51:25,590 --> 02:51:23,840
photovoltaic systems on the lunar

1637
02:51:27,750 --> 02:51:25,600
surface

1638
02:51:30,710 --> 02:51:27,760

that is amazing and you did miss mention

1639

02:51:32,550 --> 02:51:30,720

just now the hyrosis solar arrays

1640

02:51:34,790 --> 02:51:32,560

why are they important technology for us

1641

02:51:37,590 --> 02:51:34,800

right now

1642

02:51:39,590 --> 02:51:37,600

rosa and the irosa arrays are super

1643

02:51:41,110 --> 02:51:39,600

important as you said at the beginning

1644

02:51:42,630 --> 02:51:41,120

they're going to add more power to the

1645

02:51:45,110 --> 02:51:42,640

space station

1646

02:51:48,309 --> 02:51:45,120

the rosa arrays were

1647

02:51:50,950 --> 02:51:48,319

developed over the past 10 years or so

1648

02:51:53,590 --> 02:51:50,960

and we've seen in the past couple years

1649

02:51:56,389 --> 02:51:53,600

a demonstration on space station and

1650

02:51:59,429 --> 02:51:56,399

they were just used on the dart mission

1651
02:52:01,429 --> 02:51:59,439
and the benefits of rosa is that you can

1652
02:52:02,950 --> 02:52:01,439
store a lot more solar array in a much

1653
02:52:04,630 --> 02:52:02,960
smaller package

1654
02:52:07,349 --> 02:52:04,640
so the arrays that

1655
02:52:09,670 --> 02:52:07,359
are being deployed with irosa

1656
02:52:12,630 --> 02:52:09,680
are about 20 kilowatts each

1657
02:52:14,630 --> 02:52:12,640
and they're stowed in one very small

1658
02:52:16,630 --> 02:52:14,640
compact rolled tube

1659
02:52:18,950 --> 02:52:16,640
that can then be put into different

1660
02:52:21,269 --> 02:52:18,960
commercial resupply vehicles so a much

1661
02:52:22,469 --> 02:52:21,279
easier way to get a lot of power up into

1662
02:52:24,790 --> 02:52:22,479
space

1663
02:52:26,630 --> 02:52:24,800

we're going to continue that when we use

1664

02:52:29,670 --> 02:52:26,640

them on gateway on the power and

1665

02:52:34,550 --> 02:52:29,680

propulsion element and um

1666

02:52:39,990 --> 02:52:37,190

okay copy roger good job on getting that

1667

02:52:44,230 --> 02:52:40,000

soft dock i've got some pgt settings for

1668

02:52:48,630 --> 02:52:46,870

that's awesome jeremiah and i know you

1669

02:52:50,630 --> 02:52:48,640

mentioned the gateway can you explain a

1670

02:52:52,469 --> 02:52:50,640

little bit about gateway and how the

1671

02:52:54,870 --> 02:52:52,479

technology that you guys are looking at

1672

02:52:56,950 --> 02:52:54,880

now will help for future exploration and

1673

02:52:59,190 --> 02:52:56,960

deep space

1674

02:53:00,309 --> 02:52:59,200

certainly um so first uh talk a little

1675

02:53:03,269 --> 02:53:00,319

bit about

1676

02:53:05,910 --> 02:53:03,279

rose that i rosa to gateway okay

1677

02:53:08,389 --> 02:53:05,920

the irosa arrays are around uh 20

1678

02:53:09,750 --> 02:53:08,399

kilowatt um each

1679

02:53:11,190 --> 02:53:09,760

the arrays that are going to be on

1680

02:53:14,389 --> 02:53:11,200

gateway on the power and propulsion

1681

02:53:17,269 --> 02:53:14,399

element are 30 kilowatts each so a

1682

02:53:18,469 --> 02:53:17,279

little bit larger about um 50 larger in

1683

02:53:19,830 --> 02:53:18,479

size

1684

02:53:21,110 --> 02:53:19,840

and what's really unique and what's

1685

02:53:22,550 --> 02:53:21,120

different between what's happening on

1686

02:53:24,469 --> 02:53:22,560

space station and what's going to happen

1687

02:53:26,070 --> 02:53:24,479

on gateway is that

1688

02:53:29,349 --> 02:53:26,080

when the power and propulsion element of

1689

02:53:31,429 --> 02:53:29,359

gateway is launched those uh arrays will

1690

02:53:34,150 --> 02:53:31,439

open autonomously they'll open on their

1691

02:53:36,790 --> 02:53:34,160

own um currently what people are seeing

1692

02:53:38,469 --> 02:53:36,800

right now on space station is an adapter

1693

02:53:40,870 --> 02:53:38,479

bracket is being installed an

1694

02:53:43,190 --> 02:53:40,880

installation bracket and then later on

1695

02:53:45,429 --> 02:53:43,200

when those irosa arrays make it up to

1696

02:53:48,309 --> 02:53:45,439

space station they will be deployed with

1697

02:53:50,230 --> 02:53:48,319

support of the astronauts

1698

02:53:52,790 --> 02:53:50,240

for gateway they'll be deployed on their

1699

02:53:54,790 --> 02:53:52,800

own and will provide power throughout

1700

02:53:56,389 --> 02:53:54,800

that mission

1701

02:53:57,670 --> 02:53:56,399

the power and propulsion element is just

1702

02:54:00,870 --> 02:53:57,680

one of the different components of

1703

02:54:03,190 --> 02:54:00,880

gateway there's also going to be

1704

02:54:05,590 --> 02:54:03,200

other modules that will attach to it and

1705

02:54:08,070 --> 02:54:05,600

while that's orbiting the moon it's

1706

02:54:10,230 --> 02:54:08,080

going to be a great stopping point and a

1707

02:54:12,309 --> 02:54:10,240

stepping off point for astronauts to go

1708

02:54:14,389 --> 02:54:12,319

to the lunar surface to continue to do

1709

02:54:17,030 --> 02:54:14,399

research on the moon and then also

1710

02:54:19,349 --> 02:54:17,040

eventually be able to be used to let us

1711

02:54:24,630 --> 02:54:19,359

go further out to go to mars and to

1712

02:54:28,469 --> 02:54:26,389

and that's amazing thank you jeremiah

1713

02:54:31,269 --> 02:54:28,479

for your time this morning that's

1714

02:54:33,190 --> 02:54:31,279

jeremiah mcnet the photovoltaic

1715

02:54:35,429 --> 02:54:33,200

technology lead

1716

02:54:37,910 --> 02:54:35,439

going over some of the great work that

1717

02:54:38,790 --> 02:54:37,920

these modification and irosa array solar

1718

02:54:40,630 --> 02:54:38,800

array

1719

02:54:43,110 --> 02:54:40,640

rays will help do on the international

1720

02:54:44,469 --> 02:54:43,120

space station in our future with the

1721

02:54:47,190 --> 02:54:44,479

gateway

1722

02:54:47,200 --> 02:54:49,190

through jeremiah

1723

02:54:55,190 --> 02:54:50,710

and

1724

02:54:58,070 --> 02:54:55,200

on all four bolts

1725

02:54:58,950 --> 02:54:58,080

now we can drive m5 through eight to

1726
02:55:05,830 --> 02:54:58,960
torque

1727
02:55:05,840 --> 02:55:28,550
of your talk it's three additional terms

1728
02:55:33,349 --> 02:55:30,630
in an update the crew is complete with

1729
02:55:34,790 --> 02:55:33,359
the 3 8 upper bracket build task and are

1730
02:55:36,790 --> 02:55:34,800
beginning the installation of the center

1731
02:55:37,750 --> 02:55:36,800
pad to the mass canister you guys are

1732
02:55:39,830 --> 02:55:37,760
already getting some interesting

1733
02:56:06,630 --> 02:55:39,840
lighting conditions up there

1734
02:56:10,790 --> 02:56:08,150
am5

1735
02:56:13,750 --> 02:56:10,800
4.7 additional turns good green lights

1736
02:56:15,910 --> 02:56:13,760
and 3.1

1737
02:56:44,230 --> 02:56:15,920
copy with that 4.7 additional turns

1738
02:56:50,389 --> 02:56:45,030

like

1739

02:57:12,950 --> 02:56:53,590

copy 5.3 additional turns for 7.3 total

1740

02:57:40,870 --> 02:57:17,670

am 6 5.3 turns 15 light 3.8

1741

02:57:48,870 --> 02:57:45,429

and m7 5.1 turns green light 3.7

1742

02:57:50,630 --> 02:57:48,880

copy 5.1 additional for 7.1 total on m7

1743

02:57:54,790 --> 02:57:50,640

with a green light

1744

02:57:59,269 --> 02:57:56,630

okay raja now you're going to transfer

1745

02:58:14,230 --> 02:57:59,279

the long pgt with the red and adjustable

1746

02:58:22,070 --> 02:58:15,990

and kayla you're going to stow that on

1747

02:58:31,510 --> 02:58:23,429

once you get control of it i'll take the

1748

02:58:35,349 --> 02:58:34,150

it's off your head

1749

02:58:37,349 --> 02:58:35,359

trying to put the socks down in front of

1750

02:58:56,870 --> 02:58:37,359

you

1751
02:59:07,910 --> 02:58:58,830
hey i've got a mini workstation right on

1752
02:59:07,920 --> 02:59:12,389
let's have them back

1753
02:59:21,990 --> 02:59:14,280
swap at the bgp

1754
02:59:26,150 --> 02:59:22,300
[Music]

1755
02:59:30,389 --> 02:59:28,230
and that's going on your swing arm and

1756
02:59:32,550 --> 02:59:30,399
raja you're

1757
02:59:33,750 --> 02:59:32,560
going to release the mounting bracket

1758
02:59:46,950 --> 02:59:33,760
right

1759
02:59:46,960 --> 02:59:53,190
working on my swing arm here

1760
03:00:00,710 --> 02:59:54,469
bouncing bracket right to the back of

1761
03:00:05,429 --> 03:00:02,710
all right raja and we're a minute 45

1762
03:00:07,190 --> 03:00:05,439
seconds to hand over if you can verify

1763
03:00:08,710 --> 03:00:07,200

the grounding pit pins there should be

1764

03:00:10,790 --> 03:00:08,720

two are installed into the grounding

1765

03:00:12,870 --> 03:00:10,800

block and the mli for the left and right

1766

03:00:14,870 --> 03:00:12,880

upper strut is closed and i believe we

1767

03:00:19,269 --> 03:00:14,880

left that left upper strut mli for you

1768

03:00:22,550 --> 03:00:20,790

i'm working on that right now both

1769

03:01:00,309 --> 03:00:22,560

routing systems are installed and i'm

1770

03:01:05,030 --> 03:01:02,469

an mli is closed i think i'm good to get

1771

03:01:07,590 --> 03:01:05,040

out of the api is that

1772

03:01:14,389 --> 03:01:07,600

uh correct just a second yes uh verify

1773

03:01:18,150 --> 03:01:16,150

down towards my waist

1774

03:01:19,910 --> 03:01:18,160

copy and then once you're both able

1775

03:01:21,750 --> 03:01:19,920

we'll take glove happen gauntlet checks

1776

03:01:24,950 --> 03:01:21,760

from you and then you can egress the

1777

03:01:48,150 --> 03:01:24,960

apfr and adjust 25 seconds to a hanover

1778

03:02:21,110 --> 03:01:50,469

when i do this apfr egress ko i may need

1779

03:02:26,309 --> 03:02:22,870

and ev1 ev2

1780

03:02:30,630 --> 03:02:28,070

i got gloves

1781

03:02:33,750 --> 03:02:30,640

being a b-sling with the exception of

1782

03:02:35,030 --> 03:02:33,760

there's some new smudging it looks like

1783

03:02:37,670 --> 03:02:35,040

um

1784

03:02:39,190 --> 03:02:37,680

maybe some of the labels on this dress

1785

03:02:41,110 --> 03:02:39,200

are kind of

1786

03:02:42,469 --> 03:02:41,120

coming off onto my gloves so i can see

1787

03:02:45,269 --> 03:02:42,479

some

1788

03:02:46,469 --> 03:02:45,279

mirror image letters on my fingers

1789

03:02:48,950 --> 03:02:46,479

um but

1790

03:02:50,070 --> 03:02:48,960

everything else looks good my half is

1791

03:02:52,550 --> 03:02:50,080

dry

1792

03:02:55,429 --> 03:02:52,560

and my gauntlets are down

1793

03:02:57,030 --> 03:02:55,439

copy dry hat good gauntlets and for easy

1794

03:03:01,670 --> 03:02:57,040

ones gloves you've got some smudging you

1795

03:03:06,630 --> 03:03:04,550

it's coffee and for evc you've got a bad

1796

03:03:10,309 --> 03:03:06,640

hat going on down and

1797

03:03:14,230 --> 03:03:10,319

some smudges on my right pinky

1798

03:03:16,230 --> 03:03:14,240

ring finger and index finger and left

1799

03:03:18,950 --> 03:03:16,240

ring finger just from uh

1800

03:03:21,190 --> 03:03:18,960

like smudge marks

1801
03:03:22,870 --> 03:03:21,200
copy dry hat good gauntlets and smudges

1802
03:03:24,870 --> 03:03:22,880
on the right pinky

1803
03:03:29,830 --> 03:03:24,880
index and ring finger and left ring

1804
03:03:34,670 --> 03:03:33,429
with that i'm going to interest the atf

1805
03:03:35,910 --> 03:03:34,680
you have to go to egress

1806
03:03:39,830 --> 03:03:35,920
[Applause]

1807
03:03:41,429 --> 03:03:39,840
and i've got eyes on your grinder

1808
03:03:44,630 --> 03:03:41,439
be mindful of your safety feathers

1809
03:03:47,990 --> 03:03:44,640
between your legs so you may want to

1810
03:03:51,110 --> 03:03:49,510
yeah that's right yeah we can see it in

1811
03:03:52,710 --> 03:03:51,120
the camera view too and so you may want

1812
03:03:55,349 --> 03:03:52,720
to point your feet back toward your

1813
03:03:57,030 --> 03:03:55,359

fairlead on the corner of the iea

1814

03:04:16,550 --> 03:03:57,040

and try to work it back between your

1815

03:04:30,070 --> 03:04:19,269

move your heel outward

1816

03:04:35,349 --> 03:04:33,190

now one hour and 22 minutes into today's

1817

03:04:37,429 --> 03:04:35,359

space walk recapping some of the

1818

03:04:38,790 --> 03:04:37,439

milestones today

1819

03:04:40,469 --> 03:04:38,800

i didn't know if you

1820

03:04:43,670 --> 03:04:40,479

i think anomaly you would have wanted to

1821

03:04:46,389 --> 03:04:43,680

tether off your right side

1822

03:04:49,830 --> 03:04:46,399

so far today the crew has

1823

03:04:51,830 --> 03:04:49,840

gotten to their work site completed a 3a

1824

03:04:53,030 --> 03:04:51,840

upper bracket build out

1825

03:04:54,790 --> 03:04:53,040

and

1826
03:04:57,030 --> 03:04:54,800
now has begun the installation of the

1827
03:05:30,830 --> 03:04:57,040
center pad to the mask canister they're

1828
03:05:30,840 --> 03:05:38,870
right that should be good now

1829
03:05:50,040 --> 03:05:40,950
we're going to go into a 12 papa papa

1830
03:05:50,050 --> 03:05:53,750
[Applause]

1831
03:06:01,349 --> 03:05:55,670
and confirm raja you said that adjusting

1832
03:06:03,910 --> 03:06:02,469
happy

1833
03:06:06,230 --> 03:06:03,920
and then hey before you get back in the

1834
03:06:09,190 --> 03:06:06,240
apfr if you want to run a fairly down to

1835
03:06:10,790 --> 03:06:09,200
that uh outboard aft corner of the iea

1836
03:06:12,950 --> 03:06:10,800
that's off to your right that may also

1837
03:06:14,790 --> 03:06:12,960
help keep your tethering

1838
03:06:17,190 --> 03:06:14,800

yeah let me do that while i'm down there

1839

03:06:18,630 --> 03:06:17,200

doing the spfr for the elbow

1840

03:06:20,469 --> 03:06:18,640

perfect right there

1841

03:06:22,389 --> 03:06:20,479

and then last one and i'll remind you

1842

03:06:25,030 --> 03:06:22,399

before you get back in if you want to

1843

03:06:26,710 --> 03:06:25,040

loosen the friction on the ingress aid a

1844

03:06:38,550 --> 03:06:26,720

little bit that might help you tuck it

1845

03:06:42,309 --> 03:06:40,150

and copy kale i heard you say you're

1846

03:06:44,389 --> 03:06:42,319

grabbing that left mid strut straps 12

1847

03:06:48,870 --> 03:06:44,399

and 13

1848

03:06:52,309 --> 03:06:51,269

got it ready to go

1849

03:06:53,510 --> 03:06:52,319

copy

1850

03:06:55,670 --> 03:06:53,520

and so just something for you guys to

1851
03:06:57,910 --> 03:06:55,680
think over each ingress

1852
03:07:00,550 --> 03:06:57,920
and then you can pass it or you can pass

1853
03:07:01,910 --> 03:07:00,560
it to him in any ingress the apfr

1854
03:07:05,269 --> 03:07:01,920
over to you guys you are going to do a

1855
03:07:07,670 --> 03:07:05,279
red swap on that one to uh raja's

1856
03:07:16,790 --> 03:07:07,680
brt

1857
03:07:16,800 --> 03:09:08,070
you said ingress before the handoff

1858
03:09:12,550 --> 03:09:10,230
currently in an orbital night time we

1859
03:09:18,230 --> 03:09:12,560
see chari and baron

1860
03:09:29,510 --> 03:09:19,910
fully ins

1861
03:09:34,550 --> 03:09:32,630
excuse me we see baron and chary

1862
03:09:59,349 --> 03:09:34,560
as they installed the 3a center pad to

1863
03:10:02,790 --> 03:10:00,710

the crew

1864

03:10:04,229 --> 03:10:02,800

has completed the center pad install and

1865

03:10:11,349 --> 03:10:04,239

they are now moving on to the

1866

03:10:11,359 --> 03:10:15,750

i do struts

1867

03:10:15,760 --> 03:10:39,429

we copy

1868

03:10:42,550 --> 03:10:40,870

yeah i see you loosening the friction on

1869

03:10:43,990 --> 03:10:42,560

the ingress aid yeah just enough so that

1870

03:10:53,190 --> 03:10:44,000

you can push it down and it'll stay

1871

03:10:56,950 --> 03:10:55,030

all right we've got the twelve

1872

03:11:02,150 --> 03:10:56,960

puffer popper hotel twelve the little

1873

03:11:14,389 --> 03:11:04,630

copy those are good settings and confirm

1874

03:11:18,389 --> 03:11:16,710

you may want to give your waist tether a

1875

03:11:20,790 --> 03:11:18,399

tug just to get it

1876

03:11:22,550 --> 03:11:20,800

a little higher you're real there you go

1877

03:11:25,110 --> 03:11:22,560

i wanted to get caught behind you again

1878

03:11:30,550 --> 03:11:27,510

i popped off this hand rails behind my

1879

03:11:35,590 --> 03:11:30,560

legs though it's crossing your body and

1880

03:11:39,269 --> 03:11:37,349

there now go you should see it now

1881

03:11:55,910 --> 03:11:39,279

coming around

1882

03:12:00,870 --> 03:11:57,990

uh time to pause here uh i can go ahead

1883

03:12:04,550 --> 03:12:00,880

put an adjustable down with us

1884

03:12:54,950 --> 03:12:04,560

if you like it i love it

1885

03:12:54,960 --> 03:13:01,670

worth the time

1886

03:13:05,190 --> 03:13:03,429

yep take your time roger and then if you

1887

03:13:05,910 --> 03:13:05,200

couldn't let us know the handrail that

1888

03:13:15,970 --> 03:13:05,920

you

1889

03:13:15,980 --> 03:13:23,349

[Music]

1890

03:13:23,359 --> 03:13:33,910

say again roger

1891

03:13:36,229 --> 03:13:35,110

yeah it was the original one you're

1892

03:13:37,750 --> 03:13:36,239

going to set it just like put an

1893

03:13:44,150 --> 03:13:37,760

adjustable band through

1894

03:13:56,630 --> 03:13:46,389

copy yep and adjustable on two two four

1895

03:13:56,640 --> 03:14:18,630

okay

1896

03:14:18,640 --> 03:14:53,990

watch that roll

1897

03:14:54,000 --> 03:15:01,510

yeah there you go

1898

03:15:09,269 --> 03:15:03,910

around here

1899

03:15:12,790 --> 03:15:10,870

might be pushing the yacht pedal right

1900

03:15:14,550 --> 03:15:12,800

now

1901

03:15:15,830 --> 03:15:14,560

there it looks square down

1902

03:15:18,550 --> 03:15:15,840

okay

1903

03:15:18,560 --> 03:15:25,990

watch that yeah

1904

03:15:26,000 --> 03:15:41,349

that's what jeff made this uh

1905

03:15:41,359 --> 03:15:52,389

come on

1906

03:15:56,469 --> 03:15:54,150

yeah roger if you got to leave it uh

1907

03:15:59,910 --> 03:15:56,479

rigid uh that's fine we'll just keep an

1908

03:16:05,510 --> 03:16:01,830

well definitely hard time bending over

1909

03:16:08,630 --> 03:16:07,349

want to

1910

03:16:19,030 --> 03:16:08,640

damn this is just going to have to bend

1911

03:16:24,070 --> 03:16:21,349

and just a reminder raja not to use the

1912

03:16:27,110 --> 03:16:24,080

mod kit for the apfr ingress or egress

1913

03:16:30,870 --> 03:16:28,550

well understood

1914

03:16:37,990 --> 03:16:30,880

that's why it's taking me

1915

03:17:42,790 --> 03:16:40,309

let me tighten a little bit more here

1916

03:17:45,410 --> 03:17:45,030

i think i made on the right

1917

03:17:47,269 --> 03:17:45,420

uh

1918

03:17:52,710 --> 03:17:47,279

[Music]

1919

03:17:52,720 --> 03:17:56,150

might

1920

03:18:10,870 --> 03:17:58,229

maybe if it feels good i'm kind of a

1921

03:18:10,880 --> 03:18:15,269

and left his ends

1922

03:18:15,279 --> 03:18:23,349

don't put your right brakes not plugging

1923

03:18:23,359 --> 03:18:27,349

i don't think your left is in either

1924

03:18:30,950 --> 03:18:29,349

i think you have your your chosen too

1925

03:18:32,229 --> 03:18:30,960

deep okay

1926

03:19:01,190 --> 03:18:32,239

you need to back the one you're going to

1927

03:19:05,429 --> 03:19:03,750

maybe try uh legend one toe and then

1928

03:19:17,510 --> 03:19:05,439

working the other heel

1929

03:19:20,790 --> 03:19:19,110

and a little if you're working your left

1930

03:19:32,469 --> 03:19:20,800

you might be in a little too deep but

1931

03:19:36,389 --> 03:19:34,150

you working your left side right now i'm

1932

03:19:39,110 --> 03:19:36,399

trying yeah you're in too deep so i

1933

03:19:43,030 --> 03:19:39,120

would start again with your heel

1934

03:19:43,040 --> 03:19:48,630

okay now there you go now rotate inboard

1935

03:19:48,640 --> 03:19:52,550

until it drops down

1936

03:19:58,550 --> 03:19:56,469

almost there rip it further inboard

1937

03:20:10,790 --> 03:19:58,560

and you might need to back your toe out

1938

03:20:10,800 --> 03:20:20,550

almost like i told out where to do this

1939

03:20:20,560 --> 03:20:34,790

there you go

1940

03:20:34,800 --> 03:20:40,389

i don't think anything's blocking you

1941

03:20:44,710 --> 03:20:42,790

i think you're toasting too deep yeah

1942

03:20:47,349 --> 03:20:44,720

you're still going in too deep

1943

03:20:48,870 --> 03:20:47,359

um so you need to keep your heel

1944

03:20:53,190 --> 03:20:48,880

back rotate

1945

03:20:57,190 --> 03:20:54,710

income

1946

03:20:59,110 --> 03:20:57,200

forward

1947

03:21:01,429 --> 03:20:59,120

and hey raja one other thing that helps

1948

03:21:02,950 --> 03:21:01,439

to keep your feet flat to the boot plate

1949

03:21:05,190 --> 03:21:02,960

it's tempting to lean forward and look

1950

03:21:06,630 --> 03:21:05,200

at your toes but actually squat down a

1951

03:21:16,790 --> 03:21:06,640

little bit put some bend in your knees

1952

03:21:16,800 --> 03:21:19,750

on my right side

1953

03:21:22,790 --> 03:21:21,349

i don't have great visibility on it

1954

03:21:24,950 --> 03:21:22,800

because of where your safety feather

1955

03:21:36,389 --> 03:21:24,960

reel is but i might be able to check

1956

03:21:36,399 --> 03:21:43,190

bad things

1957

03:22:03,830 --> 03:21:44,950

right i think i'm in too deep

1958

03:22:08,309 --> 03:22:06,150

if you want you could kick your reel out

1959

03:22:11,269 --> 03:22:08,319

to the right with your foot

1960

03:22:12,950 --> 03:22:11,279

i don't think it's in your way

1961

03:22:13,830 --> 03:22:12,960

just take each other's between your legs

1962

03:22:15,830 --> 03:22:13,840

again

1963

03:22:17,830 --> 03:22:15,840

you'd have to sweep your foot your right

1964

03:22:21,269 --> 03:22:17,840

toe inboard

1965

03:22:23,349 --> 03:22:21,279

and behind it

1966

03:22:24,950 --> 03:22:23,359

and you've got to cross more toward your

1967

03:22:27,190 --> 03:22:24,960

left if you want to

1968

03:22:32,630 --> 03:22:27,200

after it or maybe pull on your lease

1969

03:22:32,640 --> 03:22:47,429

that's

1970

03:22:50,710 --> 03:22:49,269

you're almost there

1971

03:22:52,469 --> 03:22:50,720

if you're just joining us welcome to

1972

03:22:53,750 --> 03:22:52,479

mission control houston

1973

03:22:56,070 --> 03:22:53,760

we're bringing you live coverage today

1974

03:22:57,670 --> 03:22:56,080

of the 247th spacewalk in support of the

1975

03:22:59,510 --> 03:22:57,680

international space station assembly

1976

03:23:01,590 --> 03:22:59,520

maintenance and upgrades

1977

03:23:04,229 --> 03:23:01,600

nasa astronauts kayla barron and raj

1978

03:23:06,710 --> 03:23:04,239

achary have ventured outside the space

1979

03:23:08,870 --> 03:23:06,720

station to assemble and install brackets

1980

03:23:10,870 --> 03:23:08,880

and strut kits for upcoming solar array

1981

03:23:12,309 --> 03:23:10,880

upgrades

1982

03:23:14,070 --> 03:23:12,319

so i've got pressure on the top of my

1983

03:23:15,429 --> 03:23:14,080

feet i think i'm mistaken for the top of

1984

03:23:17,510 --> 03:23:15,439

the suit

1985

03:23:22,710 --> 03:23:17,520

places with the psi but anyways

1986

03:23:31,910 --> 03:23:25,830

nice work roger all right

1987

03:23:31,920 --> 03:23:36,070

get a little higher

1988

03:23:40,950 --> 03:23:39,510

this is going to be my vrt right on it

1989

03:23:47,269 --> 03:23:40,960

hey firm you're going to red swap and

1990

03:23:52,790 --> 03:23:49,670

to recap some of the milestones

1991

03:23:55,269 --> 03:23:52,800

at 7 12 a.m central time 8 12 a.m

1992

03:23:57,670 --> 03:23:55,279

eastern time nasa astronaut kayla baron

1993

03:23:59,670 --> 03:23:57,680

and raj atari turned their suits onto

1994

03:24:01,429 --> 03:23:59,680

battery power marking the official start

1995

03:24:02,710 --> 03:24:01,439

of today's spacewalk

1996

03:24:05,269 --> 03:24:02,720

they are currently working on the

1997

03:24:06,710 --> 03:24:05,279

starboard four truss at the 3a power

1998

03:24:08,790 --> 03:24:06,720

channel

1999

03:24:11,269 --> 03:24:08,800

so far they have successfully installed

2000

03:24:13,429 --> 03:24:11,279

the upper brackets and center pad to the

2001
03:24:14,550 --> 03:24:13,439
mass canister they are currently working

2002
03:24:19,670 --> 03:24:14,560
on the left

2003
03:24:22,950 --> 03:24:20,870
all right okay looks like you're back to

2004
03:24:26,469 --> 03:24:22,960
the bag grabbing the left lower strut

2005
03:24:45,510 --> 03:24:26,479
straps five and six

2006
03:24:49,349 --> 03:24:47,269
ready for the mower

2007
03:24:51,990 --> 03:24:49,359
and raja once you've got that uh mid

2008
03:24:53,429 --> 03:24:52,000
strut on your brt and out of the way uh

2009
03:24:57,349 --> 03:24:53,439
tuck and if you can collapse that

2010
03:24:59,590 --> 03:24:58,469
copy

2011
03:25:02,710 --> 03:24:59,600
now you're going to retrieve the left

2012
03:25:03,670 --> 03:25:02,720
lower strut and pass that to

2013
03:25:08,389 --> 03:25:03,680

roger

2014

03:25:13,110 --> 03:25:11,030

and you're going to run to the handrail

2015

03:25:15,190 --> 03:25:13,120

nearest the clevis end of the left lower

2016

03:25:16,550 --> 03:25:15,200

strut

2017

03:25:17,910 --> 03:25:16,560

yep i've got that it's the same

2018

03:25:19,510 --> 03:25:17,920

stanchion that has the wire tie in it

2019

03:25:23,750 --> 03:25:19,520

and i've got control of it

2020

03:25:30,150 --> 03:25:23,760

on it i'm going to release the bag right

2021

03:25:37,910 --> 03:25:32,150

does this set

2022

03:25:41,990 --> 03:25:39,910

okay kayla you can translate to the saab

2023

03:25:54,870 --> 03:25:42,000

launch bracket at the base of the mass

2024

03:26:00,070 --> 03:25:57,670

hey we're five minutes to sunrise

2025

03:26:01,750 --> 03:26:00,080

and then raja if you can verify the

2026

03:26:12,950 --> 03:26:01,760

grounding pit pin is removed from the

2027

03:26:16,150 --> 03:26:14,790

pin is actually in if you can see my

2028

03:26:17,190 --> 03:26:16,160

camera so you thought you want that out

2029

03:26:18,150 --> 03:26:17,200

correct

2030

03:26:21,030 --> 03:26:18,160

nothing you can put that into the

2031

03:26:21,040 --> 03:26:27,590

hey firm we like it removed

2032

03:26:27,600 --> 03:26:34,150

happy

2033

03:26:38,150 --> 03:26:35,830

okay caleb once you get

2034

03:26:39,590 --> 03:26:38,160

to that saab launch bracket you're going

2035

03:26:41,429 --> 03:26:39,600

to report the spherical bearing

2036

03:26:43,110 --> 03:26:41,439

alignment and remember that's a pitch

2037

03:26:46,309 --> 03:26:43,120

point keep your fingers clear of the

2038

03:26:49,910 --> 03:26:46,319

lower strut pad and vga interface when

2039

03:26:49,920 --> 03:26:55,030

it looks pretty straight for me

2040

03:26:58,870 --> 03:26:57,429

okay we copy that's good news

2041

03:27:02,309 --> 03:26:58,880

so now we're going to work together to

2042

03:27:06,070 --> 03:27:02,319

install the left lower strut m21

2043

03:27:12,830 --> 03:27:07,910

hey roger if you want to start working

2044

03:27:12,840 --> 03:27:18,229

georgia all right we need to go zenith

2045

03:27:21,510 --> 03:27:20,630

and if you could push your end a tiny

2046

03:27:24,229 --> 03:27:21,520

bit

2047

03:27:27,429 --> 03:27:24,239

towards the mass canister

2048

03:27:27,439 --> 03:27:30,870

a little more venus

2049

03:27:36,710 --> 03:27:34,229

uh okay maybe um

2050

03:27:38,389 --> 03:27:36,720

yeah that's good for now

2051
03:27:40,710 --> 03:27:38,399
okay kayla and you're gonna hand start

2052
03:27:43,030 --> 03:27:40,720
m21 four turns

2053
03:27:54,229 --> 03:27:43,040
and i've got pgt settings if you're

2054
03:28:00,229 --> 03:27:56,630
copy hand starting four turns on m21 and

2055
03:28:04,309 --> 03:28:02,710
it's already done four turns

2056
03:28:06,550 --> 03:28:04,319
and

2057
03:28:10,309 --> 03:28:06,560
do i start driving now or just rather do

2058
03:28:15,190 --> 03:28:10,319
his own runs yes uh copy four on m21 and

2059
03:28:20,790 --> 03:28:17,269
okay

2060
03:28:31,590 --> 03:28:23,590
a firm bravo one clockwise two and 2

2061
03:28:40,710 --> 03:28:34,389
and kayla you're going to pgt bravo 7

2062
03:28:40,720 --> 03:28:56,550
foreign

2063
03:29:01,910 --> 03:29:00,070

bravo one clockwise two for raja and

2064

03:29:03,590 --> 03:29:01,920

this is that bolt that has the multiple

2065

03:29:05,510 --> 03:29:03,600

diameters and so you gotta get the

2066

03:29:07,110 --> 03:29:05,520

thinner part the threads through and

2067

03:29:08,790 --> 03:29:07,120

then the larger part has to come through

2068

03:29:10,469 --> 03:29:08,800

so there's gonna you can kind of wiggle

2069

03:29:13,830 --> 03:29:10,479

and get the get that bolt all the way

2070

03:29:17,190 --> 03:29:13,840

through the different uh brackets there

2071

03:29:26,150 --> 03:29:17,200

and then you wanna put two turns on m22

2072

03:29:40,870 --> 03:29:28,150

then black line is flush against two

2073

03:29:45,990 --> 03:29:42,630

turned on m22

2074

03:29:48,630 --> 03:29:46,000

and kayla we're going over to you now uh

2075

03:29:51,190 --> 03:29:48,640

we're going to drive m21 to torque

2076
03:29:55,910 --> 03:29:51,200
and uh again it was bravo seven clock

2077
03:29:55,920 --> 03:30:19,429
clockwise two steps

2078
03:30:19,439 --> 03:30:33,990
okay

2079
03:30:37,110 --> 03:30:35,349
and

2080
03:30:39,590 --> 03:30:37,120
i got a low torque but it wasn't in a

2081
03:30:41,910 --> 03:30:39,600
great body position um at the end there

2082
03:30:42,830 --> 03:30:41,920
so i'd like to give it another go

2083
03:30:44,550 --> 03:30:42,840
if you

2084
03:30:47,429 --> 03:30:44,560
agree

2085
03:30:49,110 --> 03:30:47,439
count it nine turn

2086
03:30:51,510 --> 03:30:49,120
okay i think i heard nine turns with a

2087
03:30:58,309 --> 03:30:51,520
low torque and you have a go to hit it

2088
03:31:03,429 --> 03:31:00,870

and i got a green light

2089

03:31:04,469 --> 03:31:03,439

25 decimal four

2090

03:31:06,469 --> 03:31:04,479

um

2091

03:31:10,469 --> 03:31:06,479

and that was maybe

2092

03:31:14,070 --> 03:31:11,510

and i'm going to get in a better

2093

03:31:16,550 --> 03:31:14,080

position to tell you black line

2094

03:31:18,070 --> 03:31:16,560

copy half to one additional turn so i'm

2095

03:31:19,990 --> 03:31:18,080

showing uh

2096

03:31:20,790 --> 03:31:20,000

13 and a half sorry

2097

03:31:23,670 --> 03:31:20,800

uh

2098

03:31:26,150 --> 03:31:23,680

13.5 to 14 turns with a green light and

2099

03:31:28,070 --> 03:31:26,160

you're checking the black line now

2100

03:31:29,670 --> 03:31:28,080

actually we aren't in final torque yet

2101
03:31:31,590 --> 03:31:29,680
so the next thing you're going to do is

2102
03:31:33,670 --> 03:31:31,600
socket swap the two inch socket off of

2103
03:32:45,990 --> 03:31:33,680
your pgt to the torque wrench

2104
03:32:49,510 --> 03:32:48,070
thanks for the pull test

2105
03:32:50,950 --> 03:32:49,520
and a good socket swap and now you're

2106
03:32:51,990 --> 03:32:50,960
going to final torque with the torque

2107
03:32:55,030 --> 03:32:52,000
wrench

2108
03:32:57,030 --> 03:32:55,040
and it should be set to clockwise and 60

2109
03:33:14,950 --> 03:32:57,040
foot-pounds this is the untaped torque

2110
03:33:19,429 --> 03:33:17,429
and we're looking for about one turn and

2111
03:34:10,870 --> 03:33:19,439
we want the torque wrench to break over

2112
03:34:10,880 --> 03:34:14,229
stop

2113
03:34:14,239 --> 03:34:18,950

my line looks parallel and

2114

03:34:25,190 --> 03:34:21,110

plush um

2115

03:34:31,590 --> 03:34:28,389

metal still showing then maybe not

2116

03:34:33,429 --> 03:34:31,600

like i would say maybe a millimeter

2117

03:34:35,670 --> 03:34:33,439

okay the black line is a millimeter a

2118

03:34:39,750 --> 03:34:35,680

little over one additional turn

2119

03:34:40,870 --> 03:34:39,760

about a millimeter between the black

2120

03:34:45,030 --> 03:34:40,880

line

2121

03:34:45,040 --> 03:34:50,710

we're checking

2122

03:34:54,710 --> 03:34:52,870

okay kayla and if you could

2123

03:34:56,389 --> 03:34:54,720

check the gap between the strut boss and

2124

03:35:02,389 --> 03:34:56,399

the bearing surface and also give it a

2125

03:35:12,469 --> 03:35:05,990

it looks parallel with no gap

2126

03:35:18,630 --> 03:35:15,750

okay we call that a good m21

2127

03:35:19,910 --> 03:35:18,640

and you can socket swap the two inch

2128

03:35:21,269 --> 03:35:19,920

from the torque wrench back to your

2129

03:35:23,349 --> 03:35:21,279

short pgt

2130

03:35:25,510 --> 03:35:23,359

and raja i've got pgt settings for you

2131

03:35:27,429 --> 03:35:25,520

when you're ready

2132

03:35:28,630 --> 03:35:27,439

i think i've got final one clockwise two

2133

03:35:30,950 --> 03:35:28,640

and ready

2134

03:35:34,710 --> 03:35:30,960

for number turns and drops all right you

2135

03:35:59,269 --> 03:35:34,720

can drive m22 to torque

2136

03:36:08,630 --> 03:36:01,950

hey m22 i had

2137

03:36:08,640 --> 03:36:13,349

and black line uh

2138

03:36:18,229 --> 03:36:16,150

flush that's from the parallax here

2139

03:36:21,990 --> 03:36:18,239

with the mirror it's flush maybe a half

2140

03:36:23,750 --> 03:36:22,000

millimeter i can try hitting it again

2141

03:36:25,670 --> 03:36:23,760

okay six point nine for a total of eight

2142

03:36:27,190 --> 03:36:25,680

point nine turns green green light and

2143

03:36:29,990 --> 03:36:27,200

you're saying a half a millimeter

2144

03:36:31,590 --> 03:36:30,000

between the black line

2145

03:36:33,429 --> 03:36:31,600

yeah that's um

2146

03:36:34,710 --> 03:36:33,439

it looks like more from my angle but

2147

03:36:36,150 --> 03:36:34,720

when i put the mirror up here i'd say a

2148

03:36:38,229 --> 03:36:36,160

half millimeter

2149

03:36:39,670 --> 03:36:38,239

at max

2150

03:36:42,229 --> 03:36:39,680

i relax on it i'm trying to get it

2151
03:36:44,950 --> 03:36:42,239
straight on look at it that's a good m22

2152
03:36:49,429 --> 03:36:47,590
socket swap complete i did full test

2153
03:36:51,590 --> 03:36:49,439
copy thank you for that uh roger you can

2154
03:36:53,910 --> 03:36:51,600
see your pct and kayla please verify the

2155
03:36:56,469 --> 03:36:53,920
lower strut mli covering the lower strut

2156
03:36:56,479 --> 03:37:01,510
we're sure mli is covering the pad

2157
03:37:05,670 --> 03:37:03,830
i'm working the fit pin on this side

2158
03:37:07,030 --> 03:37:05,680
all right thank you and you can install

2159
03:37:09,910 --> 03:37:07,040
the grounding pit pin to the grounding

2160
03:37:12,710 --> 03:37:09,920
block and then install the mli

2161
03:37:14,550 --> 03:37:12,720
and kayla uh check your left and right

2162
03:37:17,190 --> 03:37:14,560
safer handles down and then you can

2163
03:37:25,030 --> 03:37:17,200

translate to the mass canister left pad

2164

03:37:25,040 --> 03:37:28,710

brackets

2165

03:37:35,670 --> 03:37:33,269

and mli is around the 722 pulse

2166

03:37:37,030 --> 03:37:35,680

okay sounds good and you can release the

2167

03:37:46,309 --> 03:37:37,040

red

2168

03:37:46,319 --> 03:38:03,349

all right

2169

03:38:07,830 --> 03:38:05,190

like i'll check my safer handles when i

2170

03:38:13,030 --> 03:38:07,840

get up to the side i can see your right

2171

03:38:13,040 --> 03:38:27,349

thanks roger copy kayla

2172

03:38:27,359 --> 03:38:30,710

every handle is down

2173

03:38:33,349 --> 03:38:31,990

thanks kayla left and right saver

2174

03:38:34,950 --> 03:38:33,359

handles down

2175

03:38:36,469 --> 03:38:34,960

and roger when you have a free hand you

2176

03:39:20,950 --> 03:38:36,479

can grab that left mid strip from your

2177

03:39:24,469 --> 03:39:22,550

you can release the middle grounding pit

2178

03:39:25,750 --> 03:39:24,479

pin from the lock position it's opposite

2179

03:39:27,510 --> 03:39:25,760

the handrail

2180

03:39:32,309 --> 03:39:27,520

and then you can extend the mid strut

2181

03:39:32,319 --> 03:39:48,830

grinder i've got my brt down

2182

03:39:52,469 --> 03:39:50,710

yeah

2183

03:39:53,990 --> 03:39:52,479

all right kayla and once you have that

2184

03:39:55,830 --> 03:39:54,000

side pad you're going to engage the

2185

03:39:58,469 --> 03:39:55,840

right side first remember it's a little

2186

03:39:59,990 --> 03:39:58,479

up and down to engage that clevis

2187

03:40:02,150 --> 03:40:00,000

and then you're going to pivot it out

2188

03:40:08,229 --> 03:40:02,160

board to the left to engage the soft

2189

03:40:12,950 --> 03:40:10,309

and again friendly neighborhood

2190

03:40:15,269 --> 03:40:12,960

fairchild fasteners here so use caution

2191

03:40:18,950 --> 03:40:15,279

and you can hand start bolts m1 through

2192

03:40:21,030 --> 03:40:18,960

m4 two turns

2193

03:40:22,070 --> 03:40:21,040

i'm gonna plan to use my pgt for these

2194

03:40:25,510 --> 03:40:22,080

ones

2195

03:40:28,870 --> 03:40:25,520

copy that pgt hits the long pgt for m1

2196

03:40:33,110 --> 03:40:31,110

and then raja over to youtube on the

2197

03:40:33,910 --> 03:40:33,120

sequence but uh can i get settings for

2198

03:40:36,870 --> 03:40:33,920

that

2199

03:40:38,469 --> 03:40:36,880

a firm alpha two clock two and i did we

2200

03:40:40,389 --> 03:40:38,479

just go with the side pad first and then

2201
03:40:42,870 --> 03:40:40,399
we'll come back to roger so alpha two

2202
03:40:44,870 --> 03:40:42,880
clock two for m1 through m4 two turns

2203
03:40:55,510 --> 03:40:44,880
each

2204
03:40:55,520 --> 03:41:05,830
here but i can move over there

2205
03:41:22,870 --> 03:41:07,429
m1

2206
03:41:22,880 --> 03:41:30,229
two on two

2207
03:41:40,070 --> 03:41:31,590
m3

2208
03:41:45,670 --> 03:41:41,830
hearing

2209
03:41:48,389 --> 03:41:45,680
copy two on all m1 through m4 and raja

2210
03:41:50,469 --> 03:41:48,399
if you can install the left mid strut l8

2211
03:41:52,870 --> 03:41:50,479
to the upper strut l8

2212
03:41:55,349 --> 03:41:52,880
if you need to pop a foot out uh

2213
03:41:56,950 --> 03:41:55,359

you can do so from the apfr

2214

03:41:59,110 --> 03:41:56,960

and then i've got pgt settings for you

2215

03:42:01,510 --> 03:41:59,120

when you're ready

2216

03:42:02,950 --> 03:42:01,520

okay uh

2217

03:42:04,150 --> 03:42:02,960

i think i've got it hand started

2218

03:42:06,550 --> 03:42:04,160

actually

2219

03:42:08,630 --> 03:42:06,560

at one term by hand

2220

03:42:10,870 --> 03:42:08,640

copy one turn bye

2221

03:42:12,550 --> 03:42:10,880

now two hours into today's spacewalk

2222

03:42:14,150 --> 03:42:12,560

recapping some of the milestones of

2223

03:42:15,670 --> 03:42:14,160

today

2224

03:42:17,510 --> 03:42:15,680

i got two turns by hand if that works

2225

03:42:19,590 --> 03:42:17,520

otherwise i can deal with the ptp

2226

03:42:23,110 --> 03:42:19,600

okay bravo one

2227

03:42:25,510 --> 03:42:23,120

at 7 12 a.m central time 8 12 a.m

2228

03:42:27,429 --> 03:42:25,520

eastern time baron and chary turn their

2229

03:42:30,150 --> 03:42:27,439

suits on battery power marking the

2230

03:42:33,429 --> 03:42:30,160

official start of today's spacewalk

2231

03:42:35,510 --> 03:42:33,439

and this is on m28 uh you say you got

2232

03:42:45,910 --> 03:42:35,520

two turns you're gonna drive m28 to

2233

03:42:48,630 --> 03:42:47,429

i was able to pop it through my fingers

2234

03:42:50,710 --> 03:42:48,640

and see the fastener come on the other

2235

03:42:57,269 --> 03:42:50,720

side i didn't want to

2236

03:43:02,710 --> 03:43:01,030

the crew then translated over to the 3a

2237

03:43:04,710 --> 03:43:02,720

work site

2238

03:43:07,349 --> 03:43:04,720

on the s4 truss

2239

03:43:09,990 --> 03:43:07,359

where they have now completed the 3a

2240

03:43:11,429 --> 03:43:10,000

upper bracket build 3a center pad to

2241

03:43:13,590 --> 03:43:11,439

mass canister

2242

03:43:15,670 --> 03:43:13,600

and they have just completed the left

2243

03:43:17,910 --> 03:43:15,680

lower strut install

2244

03:43:21,110 --> 03:43:17,920

the arosa mod kit is in a good minimum

2245

03:43:23,590 --> 03:43:21,120

configuration and the crew is continuing

2246

03:43:28,150 --> 03:43:23,600

to be on time on the current current

2247

03:43:28,160 --> 03:43:33,830

happy thank you

2248

03:43:42,229 --> 03:43:38,550

m28 i had 6.7 turns on the pgp

2249

03:43:44,309 --> 03:43:42,239

uh good green light 11.8

2250

03:43:48,710 --> 03:43:44,319

6.7

2251
03:43:53,189 --> 03:43:48,720
hand start for 8.7 total turns black

2252
03:43:58,550 --> 03:43:55,429
roger you can still your pgt

2253
03:44:02,150 --> 03:43:58,560
and kayla those same pgt settings will

2254
03:44:08,710 --> 03:44:02,160
use to torque m1 through m4

2255
03:44:13,349 --> 03:44:10,469
i'm going to put the pit right up here

2256
03:44:15,670 --> 03:44:13,359
alpha 2 clock 2 set

2257
03:44:18,070 --> 03:44:15,680
hoping you have a go to drive

2258
03:44:20,070 --> 03:44:18,080
copy m1 through four to torque

2259
03:44:29,189 --> 03:44:20,080
and roger you can install that grounding

2260
03:44:33,670 --> 03:44:31,030
one minute to hand over roger you can

2261
03:44:35,750 --> 03:44:33,680
get a nice long glove check we'll take a

2262
03:44:38,550 --> 03:44:35,760
happy gauntlet check on the other side

2263
03:44:41,910 --> 03:44:38,560

and kayla you can drive m1 through m4 to

2264

03:44:48,309 --> 03:44:41,920

torque at alpha 2 clock 2. one green

2265

03:44:48,319 --> 03:44:58,630

four turns green light m1

2266

03:44:58,640 --> 03:45:01,830

30 seconds to hand over

2267

03:45:06,710 --> 03:45:04,389

green light four turns

2268

03:45:08,309 --> 03:45:06,720

uh three decimal

2269

03:45:10,070 --> 03:45:08,319

seven on the torque

2270

03:46:05,030 --> 03:45:10,080

from two

2271

03:46:09,349 --> 03:46:08,229

little piece of metal side

2272

03:46:11,030 --> 03:46:09,359

right there

2273

03:46:15,030 --> 03:46:11,040

yeah we're back with you kayla and can

2274

03:46:20,389 --> 03:46:17,830

yeah so m3a and m4 are both driven to

2275

03:46:23,990 --> 03:46:20,399

torque with a green light

2276

03:46:25,910 --> 03:46:24,000
for five turns on m3 four on m4

2277

03:46:28,550 --> 03:46:25,920
and there's a

2278

03:46:30,150 --> 03:46:28,560
small piece of

2279

03:46:31,830 --> 03:46:30,160
metal fod

2280

03:46:33,750 --> 03:46:31,840
um it's like it kind of looks kind of

2281

03:46:34,630 --> 03:46:33,760
looks like a curved wire

2282

03:46:37,429 --> 03:46:34,640
um

2283

03:46:39,670 --> 03:46:37,439
like a not quite a half circle

2284

03:46:41,830 --> 03:46:39,680
um like maybe it's a piece of a spring

2285

03:46:44,950 --> 03:46:41,840
or a washer

2286

03:46:46,710 --> 03:46:44,960
and i first saw it near the side pad

2287

03:46:48,870 --> 03:46:46,720
m3

2288

03:47:01,670 --> 03:46:48,880

but i didn't see it separate i didn't

2289

03:47:11,990 --> 03:47:02,630

yeah

2290

03:47:15,110 --> 03:47:13,349

okay

2291

03:47:30,870 --> 03:47:15,120

can you guys verify that the pit pins

2292

03:47:34,229 --> 03:47:32,389

and kayla uh

2293

03:47:35,910 --> 03:47:34,239

being careful of any sharp edges there

2294

03:47:43,030 --> 03:47:35,920

if you could give a wiggle test on each

2295

03:47:46,550 --> 03:47:45,030

recess so it's a little bit hard to get

2296

03:47:48,950 --> 03:47:46,560

my fingers in there

2297

03:47:51,189 --> 03:47:48,960

but they do look flush

2298

03:47:53,189 --> 03:47:51,199

i didn't encounter any resistance while

2299

03:47:54,950 --> 03:47:53,199

the bolt was turning and i watched it

2300

03:47:56,710 --> 03:47:54,960

engage

2301
03:47:57,990 --> 03:47:56,720
and i got good

2302
03:47:59,510 --> 03:47:58,000
torque

2303
03:48:01,189 --> 03:47:59,520
in life

2304
03:48:03,110 --> 03:48:01,199
and i don't think they're wiggling they

2305
03:48:05,269 --> 03:48:03,120
all look good to me

2306
03:48:07,349 --> 03:48:05,279
okay copy thank you for that report and

2307
03:48:09,110 --> 03:48:07,359
i copied your m3 and four reports five

2308
03:48:10,630 --> 03:48:09,120
turns on three four on four with green

2309
03:48:12,950 --> 03:48:10,640
lights on both

2310
03:48:14,710 --> 03:48:12,960
uh and you set a small uh half

2311
03:48:16,150 --> 03:48:14,720
circle-ish piece of fod looks like a

2312
03:48:28,790 --> 03:48:16,160
curved wire or maybe a part of a spring

2313
03:48:33,349 --> 03:48:30,550

and kayla do you see where that piece of

2314

03:48:37,830 --> 03:48:36,309

it floated toward raja and then

2315

03:48:39,590 --> 03:48:37,840

yeah i tried to stop it with michael

2316

03:48:42,870 --> 03:48:39,600

ultimate

2317

03:48:43,830 --> 03:48:42,880

uh station forward

2318

03:48:49,830 --> 03:48:43,840

copy

2319

03:48:53,590 --> 03:48:51,830

all right that's a good m3 and m4 good

2320

03:48:55,990 --> 03:48:53,600

side pad install kayla you can steal

2321

03:48:57,830 --> 03:48:56,000

your pgt and if you can reach it you can

2322

03:49:01,429 --> 03:48:57,840

release ev2's right from the left mid

2323

03:49:05,349 --> 03:49:03,510

yep

2324

03:49:10,630 --> 03:49:05,359

that's released

2325

03:49:10,640 --> 03:49:16,710

okay copy

2326

03:49:20,389 --> 03:49:18,550

thanks for that roger and we'll take

2327

03:49:22,950 --> 03:49:20,399

that glove happen gauntlet check from

2328

03:49:25,110 --> 03:49:22,960

you and kayla you can verify the pit pin

2329

03:49:27,429 --> 03:49:25,120

and the mli are installed over the side

2330

03:49:31,590 --> 03:49:29,349

that's alright installed

2331

03:49:34,070 --> 03:49:31,600

my gauntlets are down i still have a dry

2332

03:49:40,790 --> 03:49:34,080

hat and the only other new smudge is on

2333

03:49:57,830 --> 03:49:43,189

copy left thumb smudge

2334

03:50:02,469 --> 03:50:00,870

uh that is true

2335

03:50:03,990 --> 03:50:02,479

and kayla

2336

03:50:06,870 --> 03:50:04,000

i think i'm headed to get the tour

2337

03:50:08,469 --> 03:50:06,880

crunch in pgt hey firm the short pct and

2338

03:50:10,710 --> 03:50:08,479

the torque wrench

2339

03:50:12,870 --> 03:50:10,720

from s4 handrail 2240 and the torque

2340

03:50:15,030 --> 03:50:12,880

wrench from the left lower strut

2341

03:50:20,790 --> 03:50:15,040

and you're going to bundle them together

2342

03:50:26,870 --> 03:50:23,429

and raja one other thing uh if you could

2343

03:50:48,630 --> 03:50:26,880

uh power on your wvs i think we saw it

2344

03:50:55,670 --> 03:50:50,389

hey i'll push the button it looks like

2345

03:51:04,309 --> 03:50:57,750

i still don't see a green light try one

2346

03:51:04,319 --> 03:51:10,070

happy good config thank you

2347

03:51:14,389 --> 03:51:11,590

all right kayla so yeah you're grabbing

2348

03:51:15,750 --> 03:51:14,399

that short pgt and that torque wrench

2349

03:51:17,830 --> 03:51:15,760

from the left lower strut you're going

2350

03:51:19,750 --> 03:51:17,840

to bundle them and then

2351
03:51:42,469 --> 03:51:19,760
attach them to the right lower strut

2352
03:51:48,229 --> 03:51:44,950
okay roger and i've got uh apfr settings

2353
03:52:31,480 --> 03:51:52,210
for charlie 12. we can just change

2354
03:52:31,490 --> 03:52:37,030
[Applause]

2355
03:52:37,040 --> 03:54:00,790
you know

2356
03:54:03,750 --> 03:54:02,229
the crew is now complete with the left

2357
03:54:12,870 --> 03:54:03,760
stretch and are moving on to the right

2358
03:54:17,189 --> 03:54:14,630
if you're just joining us we're two

2359
03:54:19,349 --> 03:54:17,199
hours and 12 minutes into the eba

2360
03:54:21,429 --> 03:54:19,359
where the crew has gone to the 3a

2361
03:54:24,550 --> 03:54:21,439
worksite and has built an upper bracket

2362
03:54:26,710 --> 03:54:24,560
build as well as

2363
03:54:28,309 --> 03:54:26,720

completed the center pass to mass

2364

03:54:30,309 --> 03:54:28,319

canister install

2365

03:54:32,630 --> 03:54:30,319

and we have now completed

2366

03:54:34,309 --> 03:54:32,640

the left struts and now on to the right

2367

03:54:47,910 --> 03:54:34,319

for the three

2368

03:54:52,550 --> 03:54:50,790

on your screen you see ev1 caleb barron

2369

03:54:55,030 --> 03:54:52,560

at the top of your screen

2370

03:54:58,229 --> 03:54:55,040

and you see raja chari in the

2371

03:55:00,389 --> 03:54:58,239

articulated foot restraint

2372

03:55:02,870 --> 03:55:00,399

his suit is designated with no stripes

2373

03:55:52,630 --> 03:55:02,880

while caleb aaron ev1 has the red

2374

03:55:56,070 --> 03:55:54,150

can you tell if i'm in kayla or am i in

2375

03:55:58,469 --> 03:55:56,080

too deep

2376

03:56:14,469 --> 03:55:58,479

i can't get my heels up so i think i am

2377

03:56:14,479 --> 03:56:51,030

yes

2378

03:56:55,750 --> 03:56:53,349

and the pgt

2379

03:56:57,429 --> 03:56:55,760

and torque wrench to the left lower

2380

03:57:00,630 --> 03:56:57,439

strut handrail

2381

03:57:02,070 --> 03:57:00,640

assist to the sub

2382

03:57:03,269 --> 03:57:02,080

and go ahead

2383

03:57:04,950 --> 03:57:03,279

perfect i was actually going to just

2384

03:57:07,670 --> 03:57:04,960

remind you where you wanted to put them

2385

03:57:09,670 --> 03:57:07,680

and then you can lock the pgt rep

2386

03:57:11,750 --> 03:57:09,680

and or use the strut wire tie to stow

2387

03:57:21,990 --> 03:57:11,760

the tools as needed and then we'll take

2388

03:57:25,510 --> 03:57:23,750

got the right lock then i've got the

2389

03:57:28,309 --> 03:57:25,520

torque wrench kind of under the wire

2390

03:57:34,229 --> 03:57:30,790

i got with the gap

2391

03:57:34,239 --> 03:57:38,389

and checking out my gloves now

2392

03:57:38,399 --> 03:57:53,990

do i have good garments

2393

03:57:56,870 --> 03:57:55,429

um

2394

03:57:58,870 --> 03:57:56,880

baseline

2395

03:58:01,830 --> 03:57:58,880

i don't remember if i saw this before

2396

03:58:08,150 --> 03:58:01,840

but there's a little bit of rtv where

2397

03:58:12,389 --> 03:58:10,630

hey copy what's that that's come up

2398

03:58:15,510 --> 03:58:12,399

do you say below your index finger or on

2399

03:58:20,309 --> 03:58:18,229

just below it in the transition between

2400

03:58:24,790 --> 03:58:20,319

like the pad rtv

2401
03:58:29,590 --> 03:58:26,710
okay right index finger we've got a good

2402
03:58:34,389 --> 03:58:29,600
video of that as well thank you we copy

2403
03:58:38,389 --> 03:58:36,229
and uh roger just because of your

2404
03:58:39,990 --> 03:58:38,399
orientation i can't tell for sure if

2405
03:58:47,680 --> 03:58:40,000
your heels are in

2406
03:58:47,690 --> 03:58:56,870
[Music]

2407
03:59:00,630 --> 03:58:58,630
you're going to retrieve the right mid

2408
03:59:02,790 --> 03:59:00,640
strut that's back straps nine and ten to

2409
03:59:03,990 --> 03:59:02,800
transfer to raja and he's obviously a

2410
03:59:06,469 --> 03:59:04,000
little farther away so you're gonna have

2411
03:59:09,110 --> 03:59:06,479
to work together to get that hand off

2412
03:59:11,269 --> 03:59:09,120
yeah

2413
03:59:12,550 --> 03:59:11,279

yep and you're gonna still

2414

03:59:13,910 --> 03:59:12,560

you're going to stow that midshirt on

2415

03:59:15,510 --> 03:59:13,920

your brt

2416

03:59:24,389 --> 03:59:15,520

doing a red swap to the stanchion

2417

03:59:27,510 --> 03:59:25,910

roger do you feel like you can lean a

2418

03:59:31,030 --> 03:59:27,520

little to your left

2419

03:59:34,150 --> 03:59:33,110

i may have to

2420

03:59:38,070 --> 03:59:34,160

see

2421

03:59:42,389 --> 03:59:40,870

and get to about that's kind of awesome

2422

03:59:44,070 --> 03:59:42,399

before you like i come that way and then

2423

03:59:45,910 --> 03:59:44,080

the momentum will usually come back to

2424

03:59:48,070 --> 03:59:45,920

the other direction without grab it onto

2425

03:59:49,990 --> 03:59:48,080

the mounting bracket i can't hold myself

2426
03:59:52,630 --> 03:59:50,000
all that direction

2427
03:59:57,269 --> 03:59:52,640
when i found this triangle here

2428
03:59:57,279 --> 04:00:01,030
i wish i was taller

2429
04:00:06,229 --> 04:00:02,870
actually taller taller may not help in

2430
04:00:10,710 --> 04:00:09,110
i've got fingers on it okay i've got uh

2431
04:00:12,389 --> 04:00:10,720
contrast i've got control let me get it

2432
04:00:14,469 --> 04:00:12,399
right on it and then i'll send it back

2433
04:00:15,510 --> 04:00:14,479
towards you to get the

2434
04:00:17,590 --> 04:00:15,520
right off

2435
04:00:25,830 --> 04:00:17,600
nice job and you want to rip to the

2436
04:00:30,229 --> 04:00:27,349
and that might be easier if you feel

2437
04:00:46,389 --> 04:00:30,239
like you can get it with your left hand

2438
04:00:49,750 --> 04:00:47,990

all right nice job now kayla you're

2439

04:00:51,189 --> 04:00:49,760

going to retrieve the right lower strut

2440

04:00:53,269 --> 04:00:51,199

to pass off to

2441

04:00:55,510 --> 04:00:53,279

roger when he's got a free hand

2442

04:01:01,030 --> 04:00:55,520

you're you're going to pass them the

2443

04:01:01,040 --> 04:01:04,229

um

2444

04:01:14,389 --> 04:01:06,389

and that's backstrap seven and eight

2445

04:01:14,399 --> 04:01:21,670

what are we doing relative to timeline

2446

04:01:25,189 --> 04:01:23,990

if you want ev2 you're about 15 minutes

2447

04:01:31,269 --> 04:01:25,199

ahead

2448

04:01:41,670 --> 04:01:33,590

all steady ready for the

2449

04:01:45,670 --> 04:01:43,349

and roger you're going to rhett to the

2450

04:01:48,550 --> 04:01:45,680

handrail stanton closest to the clevis

2451

04:01:51,110 --> 04:01:48,560

end of the right lower strut

2452

04:01:56,229 --> 04:01:51,120

can you tip it towards the back or

2453

04:01:56,239 --> 04:02:11,269

and then it's a little towards me i've

2454

04:02:11,279 --> 04:02:18,309

nearest the clevis end

2455

04:02:24,950 --> 04:02:20,150

uh once he does the red swap you're

2456

04:02:36,710 --> 04:02:26,469

i've got my right on it going back to

2457

04:02:40,790 --> 04:02:38,950

right side saab launch bracket

2458

04:02:43,030 --> 04:02:40,800

we recommend going out board of the mass

2459

04:02:45,189 --> 04:02:43,040

canister to the radiator side and please

2460

04:02:48,950 --> 04:02:45,199

fairly so that your tether stays off of

2461

04:02:48,960 --> 04:02:57,590

you can use s5 handrail two one zero two

2462

04:03:01,429 --> 04:02:58,400

[Music]

2463

04:03:03,830 --> 04:03:01,439

[Applause]

2464

04:03:05,189 --> 04:03:03,840

and roger just a reminder there's a pgt

2465

04:03:06,870 --> 04:03:05,199

and a torque wrench on the bottom of

2466

04:03:08,830 --> 04:03:06,880

this one so you've got some tools down

2467

04:03:10,790 --> 04:03:08,840

there as well that you're moving

2468

04:03:12,870 --> 04:03:10,800

perfect okay

2469

04:03:16,150 --> 04:03:12,880

i can see the spherical hole from here

2470

04:03:18,950 --> 04:03:17,830

thank you for that right side spherical

2471

04:03:31,830 --> 04:03:18,960

bearing

2472

04:03:35,830 --> 04:03:33,189

and then kayla you're headed over to the

2473

04:03:39,990 --> 04:03:35,840

right side uh saw bolton same warning

2474

04:03:43,110 --> 04:03:41,750

can you say again a handrail you want me

2475

04:03:45,590 --> 04:03:43,120

to fairly done

2476

04:03:49,830 --> 04:03:45,600

a recommendation is

2477

04:03:51,990 --> 04:03:49,840

s5 handrail 2102

2478

04:03:54,469 --> 04:03:52,000

but the important thing is just if you

2479

04:03:56,790 --> 04:03:54,479

keep your safety tether cable off of the

2480

04:04:04,550 --> 04:03:56,800

bga there's quite a few options to do

2481

04:04:09,670 --> 04:04:06,790

not fairly under the recommended hand

2482

04:04:11,910 --> 04:04:09,680

rail i'm not sure if it'll stay as i

2483

04:04:14,630 --> 04:04:11,920

translating but i'll keep an eye on it

2484

04:04:21,189 --> 04:04:14,640

and if it comes out i will uh

2485

04:04:21,199 --> 04:04:41,349

okay we copy

2486

04:04:41,359 --> 04:04:52,150

good words thanks

2487

04:04:56,309 --> 04:04:53,910

and raja if you can verify that the

2488

04:05:05,910 --> 04:04:56,319

grounding pit pin is removed from the

2489

04:05:05,920 --> 04:05:17,750

happy

2490

04:05:23,590 --> 04:05:20,229

currently two hours and 23 minutes into

2491

04:05:29,110 --> 04:05:26,389

we see kayla barron translating over to

2492

04:05:30,870 --> 04:05:29,120

the right side of the 3a mass canister

2493

04:05:38,950 --> 04:05:30,880

raja chari

2494

04:05:46,870 --> 04:05:40,469

all right i'm just going to adjust my

2495

04:05:52,630 --> 04:05:49,269

recapping some of the milestones today

2496

04:05:53,910 --> 04:05:52,640

at 7 12 a.m central time 8 12 a.m

2497

04:05:55,590 --> 04:05:53,920

eastern

2498

04:05:57,590 --> 04:05:55,600

nasa astronauts kayla baron and raj

2499

04:06:00,870 --> 04:05:57,600

achary turned their suits on battery

2500

04:06:02,469 --> 04:06:00,880

power making their way out of the hatch

2501
04:06:03,830 --> 04:06:02,479
to start today's

2502
04:06:06,389 --> 04:06:03,840
spacewalk

2503
04:06:09,590 --> 04:06:06,399
they are currently on the starboard four

2504
04:06:11,110 --> 04:06:09,600
truss at the 3a power channel

2505
04:06:13,510 --> 04:06:11,120
they have successfully installed the

2506
04:06:15,750 --> 04:06:13,520
upper bracket and center pad to the mast

2507
04:06:17,269 --> 04:06:15,760
canister as well as the installation of

2508
04:06:19,750 --> 04:06:17,279
the left struts

2509
04:06:22,550 --> 04:06:19,760
they are currently working again on the

2510
04:06:35,269 --> 04:06:22,560
right struts for install

2511
04:06:38,229 --> 04:06:36,309
sounds good yep then you're going to

2512
04:06:44,389 --> 04:06:38,239
work together to install the right lower

2513
04:06:52,510 --> 04:06:47,349

this install will be for future irosa or

2514

04:06:52,520 --> 04:06:55,670

[Music]

2515

04:07:14,469 --> 04:06:57,750

and we're going to start with four turns

2516

04:07:19,670 --> 04:07:18,389

copy four turns by hand on m19

2517

04:07:20,710 --> 04:07:19,680

all right so we're going to move over to

2518

04:07:23,349 --> 04:07:20,720

raja

2519

04:07:26,309 --> 04:07:23,359

and we're going to hand start the right

2520

04:07:27,910 --> 04:07:26,319

lower strut l6 to mounting bracket l6

2521

04:07:30,389 --> 04:07:27,920

that's both m20

2522

04:07:31,880 --> 04:07:30,399

and we'd like two turns i have pgt

2523

04:07:34,950 --> 04:07:31,890

settings if you need them charge

2524

04:07:36,389 --> 04:07:34,960

[Applause]

2525

04:07:38,309 --> 04:07:36,399

the keyboard

2526
04:07:39,990 --> 04:07:38,319
and you've got some sharpie marks there

2527
04:07:42,469 --> 04:07:40,000
to kind of show you where the

2528
04:07:44,389 --> 04:07:42,479
uh the bracket should align but it again

2529
04:07:46,870 --> 04:07:44,399
is one of those multiple diameter bolts

2530
04:07:51,670 --> 04:07:46,880
so you got to get uh that wider shaft

2531
04:07:53,830 --> 04:07:51,680
through multiple pieces of that bracket

2532
04:07:56,630 --> 04:07:53,840
and then two turns

2533
04:07:59,269 --> 04:07:56,640
copy two on m20

2534
04:08:00,630 --> 04:07:59,279
and kayla now we're going to

2535
04:08:04,710 --> 04:08:00,640
drive

2536
04:08:05,830 --> 04:08:04,720
m19 i've got ptt settings

2537
04:08:08,950 --> 04:08:05,840
ready

2538
04:08:10,550 --> 04:08:08,960

okay you're gonna do bravo seven clock

2539

04:08:14,149 --> 04:08:10,560

two

2540

04:08:15,750 --> 04:08:14,159

sets

2541

04:08:16,790 --> 04:08:15,760

okay we're going to

2542

04:08:19,990 --> 04:08:16,800

torque

2543

04:08:26,630 --> 04:08:21,590

expecting a minimum of 10 more

2544

04:08:39,349 --> 04:08:29,030

i'd adjust my body position here 150

2545

04:08:39,359 --> 04:09:13,189

good rebate bravo 7 clock 2.

2546

04:09:13,199 --> 04:09:22,149

i'm watching this trip

2547

04:09:25,830 --> 04:09:24,469

and i'm experiencing some

2548

04:09:27,830 --> 04:09:25,840

a little bit of running torch but it

2549

04:09:28,630 --> 04:09:27,840

might be the angle i'm holding the pgt

2550

04:09:33,269 --> 04:09:28,640

at

2551

04:09:37,990 --> 04:09:33,279

right on here

2552

04:09:44,790 --> 04:09:42,309

it was just close to the end there

2553

04:09:46,630 --> 04:09:44,800

and i believe i counted eight turns

2554

04:09:49,990 --> 04:09:46,640

there i screen light

2555

04:09:51,750 --> 04:09:50,000

25 decimal four on the torque

2556

04:09:53,510 --> 04:09:51,760

and actually the ppt is telling me it

2557

04:09:55,349 --> 04:09:53,520

was seven turns

2558

04:09:58,710 --> 04:09:55,359

okay copy

2559

04:10:00,550 --> 04:09:58,720

seven on the pgt green light

2560

04:10:03,750 --> 04:10:00,560

25.4

2561

04:10:05,750 --> 04:10:03,760

okay and now you are going to

2562

04:10:07,349 --> 04:10:05,760

swap the two-inch socket from the short

2563

04:10:08,710 --> 04:10:07,359

pgt to the torque wrench and we're going

2564

04:10:20,469 --> 04:10:08,720

to final torque with the torque wrench

2565

04:10:24,389 --> 04:10:22,710

all right i'm showing 11

2566

04:10:27,110 --> 04:10:24,399

turns total so we may

2567

04:10:29,110 --> 04:10:27,120

expect more turns on the torque wrench

2568

04:10:39,830 --> 04:10:29,120

but we're looking for again breaking it

2569

04:10:50,469 --> 04:10:42,149

okay copying maybe uh three three and a

2570

04:10:55,110 --> 04:10:53,510

if it's

2571

04:10:58,070 --> 04:10:55,120

okay thank you for that

2572

04:10:59,830 --> 04:10:58,080

and uh with the torque wrench clockwise

2573

04:11:01,910 --> 04:10:59,840

60 foot-pounds

2574

04:11:03,510 --> 04:11:01,920

uh we're going to final torque

2575

04:11:07,830 --> 04:11:03,520

give us the turns and looking for that

2576

04:11:11,030 --> 04:11:10,149

just so the pgt is not flying around i'm

2577

04:11:12,630 --> 04:11:11,040

going to

2578

04:11:13,990 --> 04:11:12,640

have an independent right now for the

2579

04:11:18,550 --> 04:11:14,000

torque wrench i'm going to remove the

2580

04:11:21,750 --> 04:11:20,469

okay copy you've reattached the pgt and

2581

04:12:23,990 --> 04:11:21,760

you're going to disconnect the torque

2582

04:12:27,349 --> 04:12:26,550

i'm working on this upper rounding dip

2583

04:12:28,950 --> 04:12:27,359

pin

2584

04:12:30,550 --> 04:12:28,960

while she's doing that this is a set of

2585

04:12:32,389 --> 04:12:30,560

odd angle so i'm still struggling trying

2586

04:12:33,269 --> 04:12:32,399

to get into the grounding lock

2587

04:12:35,030 --> 04:12:33,279

i don't know if you're normally getting

2588

04:12:36,710 --> 04:12:35,040

harder once you drop the bolt

2589

04:12:38,149 --> 04:12:36,720

copy yeah it looks like that

2590

04:12:47,269 --> 04:12:38,159

cable's got a little memory making it

2591

04:12:51,189 --> 04:12:48,950

and you can go in from the other side

2592

04:12:52,710 --> 04:12:51,199

that other hole uh as long as they both

2593

04:12:55,510 --> 04:12:52,720

are in the grounding block that's a good

2594

04:12:58,309 --> 04:12:57,030

yeah this one is sleeping towards me i'm

2595

04:12:59,750 --> 04:12:58,319

saving for the mid-stretch i think

2596

04:13:01,349 --> 04:12:59,760

that's even harder to get around the

2597

04:13:02,630 --> 04:13:01,359

corner

2598

04:13:07,349 --> 04:13:02,640

okay copy it looks like that when you

2599

04:13:12,309 --> 04:13:09,189

going the wrong way on the torque wrench

2600

04:13:16,149 --> 04:13:12,319

not doing myself any favors there and

2601
04:13:19,990 --> 04:13:16,159
double check that it was going clockwise

2602
04:13:23,349 --> 04:13:21,349
i did

2603
04:13:26,070 --> 04:13:23,359
32 throws

2604
04:13:30,950 --> 04:13:26,080
of the torque crunch and it was about an

2605
04:13:36,469 --> 04:13:34,349
okay so we copy about four turns

2606
04:13:38,790 --> 04:13:36,479
counterclockwise and now we've reset it

2607
04:15:18,950 --> 04:13:38,800
to clockwise so we're looking at maybe

2608
04:15:18,960 --> 04:16:38,389
uh

2609
04:16:41,670 --> 04:16:40,630
hey kayla hi back with you sorry about

2610
04:16:45,910 --> 04:16:41,680
that not giving you a heads about the

2611
04:16:45,920 --> 04:17:08,950
um

2612
04:17:14,790 --> 04:17:11,910
120 throws

2613
04:17:20,389 --> 04:17:14,800

and i think it was still about an eighth

2614

04:17:23,990 --> 04:17:22,229

okay so

2615

04:17:25,269 --> 04:17:24,000

what counted

2616

04:17:27,030 --> 04:17:25,279

yeah somebody down here is going to do

2617

04:17:29,030 --> 04:17:27,040

that math but copy 120 throws about an

2618

04:17:30,550 --> 04:17:29,040

eighth of a turn each one uh we're going

2619

04:17:32,149 --> 04:17:30,560

to talk that over

2620

04:17:37,590 --> 04:17:32,159

and you got two break overs on the

2621

04:17:41,110 --> 04:17:38,550

okay

2622

04:17:43,110 --> 04:17:41,120

uh take a breather and when you're ready

2623

04:17:50,229 --> 04:17:43,120

we'll take those lower strut checks the

2624

04:17:53,670 --> 04:17:52,389

line looks parallel and flush

2625

04:17:59,430 --> 04:17:53,680

no gap

2626

04:17:59,440 --> 04:18:06,389

[Applause]

2627

04:18:15,349 --> 04:18:08,630

i just heard wiggle test kayla confirm a

2628

04:18:20,710 --> 04:18:18,630

copy good wiggle test

2629

04:18:22,550 --> 04:18:20,720

that's a good m19 nice work there take

2630

04:18:24,229 --> 04:18:22,560

take a breather um

2631

04:18:25,510 --> 04:18:24,239

and you can leave the short pgt and the

2632

04:18:27,189 --> 04:18:25,520

torque wrench on the right lower strut

2633

04:18:29,429 --> 04:18:27,199

handrail

2634

04:18:31,349 --> 04:18:29,439

and when you're ready to verify that mli

2635

04:18:33,110 --> 04:18:31,359

covering the lower strut pad

2636

04:18:40,229 --> 04:18:33,120

roger i've got pgc settings for you when

2637

04:18:44,309 --> 04:18:42,149

got

2638

04:18:46,630 --> 04:18:44,319

number one clockwise two effects feel

2639

04:18:51,590 --> 04:18:49,189

that is a good read back you can drive

2640

04:19:26,710 --> 04:18:51,600

m20 to torque

2641

04:19:29,510 --> 04:19:27,910

uh

2642

04:19:31,030 --> 04:19:29,520

we'll take a glove happen gauntlet check

2643

04:19:32,630 --> 04:19:31,040

and then you do have a go to translate

2644

04:19:38,149 --> 04:19:32,640

to the mass canister right side pad

2645

04:19:44,469 --> 04:19:40,710

low torque light 7.8 with four turns you

2646

04:19:48,389 --> 04:19:46,790

four additional for six total and a low

2647

04:20:22,309 --> 04:19:48,399

torque light

2648

04:20:26,550 --> 04:20:24,550

and good gauntlets and we recommend you

2649

04:20:28,149 --> 04:20:26,560

go out board one hand

2650

04:20:30,070 --> 04:20:28,159

two one two three and then transfer to

2651

04:20:33,110 --> 04:20:30,080

the mass canister handrail

2652

04:20:36,070 --> 04:20:34,229

okay

2653

04:20:38,469 --> 04:20:36,080

another quarter turn uh get the green

2654

04:20:40,710 --> 04:20:38,479

light 11.8

2655

04:20:43,030 --> 04:20:40,720

backline is a

2656

04:20:45,269 --> 04:20:43,040

half millimeter from being flushed and

2657

04:20:47,349 --> 04:20:45,279

for total turns was probably closer to

2658

04:20:49,429 --> 04:20:47,359

two and a half if i did the initial hand

2659

04:20:52,790 --> 04:20:49,439

start in retrospect versus two

2660

04:20:54,469 --> 04:20:52,800

um if that helps with just anything

2661

04:20:55,670 --> 04:20:54,479

got copy initial hand start was closer

2662

04:20:57,750 --> 04:20:55,680

to two and a half you got four

2663

04:21:00,149 --> 04:20:57,760

additional and then you got one more

2664

04:21:01,590 --> 04:21:00,159

quarter turn so i'm showing uh

2665

04:21:03,830 --> 04:21:01,600

uh again somebody's going to do that

2666

04:21:05,110 --> 04:21:03,840

funny math is six and a half plus turns

2667

04:21:09,990 --> 04:21:05,120

with a good green light and the black

2668

04:21:22,630 --> 04:21:13,910

good m20 good m20 you can steal your pgt

2669

04:21:22,640 --> 04:21:43,910

ah

2670

04:21:50,389 --> 04:21:45,670

uh did you say the mli is in work in the

2671

04:21:55,429 --> 04:21:52,389

we'll take a

2672

04:22:16,710 --> 04:21:55,439

when you're done and then we'll start on

2673

04:22:19,910 --> 04:22:18,469

okay when the two of you are ready uh

2674

04:22:21,590 --> 04:22:19,920

roger you can grab the right mid strut

2675

04:22:23,510 --> 04:22:21,600

from your brt

2676

04:22:25,110 --> 04:22:23,520

release the pit pin from the locking

2677

04:22:31,269 --> 04:22:25,120

position and when kayla's ready you can

2678

04:22:31,279 --> 04:23:12,870

i'm ready

2679

04:23:16,149 --> 04:23:14,790

my

2680

04:23:17,830 --> 04:23:16,159

all right kayla and the same as the

2681

04:23:21,030 --> 04:23:17,840

other side you're going to engage the uh

2682

04:23:23,750 --> 04:23:21,040

the clutters on the inboard side

2683

04:23:25,189 --> 04:23:23,760

uh as toward the top of your head

2684

04:23:27,750 --> 04:23:25,199

you're going to have to go a little side

2685

04:23:29,349 --> 04:23:27,760

to side which is stationed up and down

2686

04:23:31,429 --> 04:23:29,359

to get those teeth engaged and then

2687

04:23:36,389 --> 04:23:31,439

you'll pivot it toward your feet

2688

04:23:36,399 --> 04:23:39,030

very nice

2689

04:23:43,189 --> 04:23:40,550

and when you're ready you can either

2690

04:23:49,750 --> 04:23:43,199

hand start or use the pgt the long pgt

2691

04:23:53,510 --> 04:23:51,670

i'll use the pgt

2692

04:24:07,590 --> 04:23:53,520

and i'm ready for setting

2693

04:24:07,600 --> 04:24:34,550

and 2 turns on m9 through 12.

2694

04:24:42,870 --> 04:24:36,550

okay copy that and did you get two turns

2695

04:24:42,880 --> 04:24:57,910

two on two

2696

04:24:57,920 --> 04:25:11,429

two turns on nine

2697

04:25:11,439 --> 04:25:26,870

212.

2698

04:25:32,950 --> 04:25:30,630

that's two on uh m9 through 12.

2699

04:25:37,269 --> 04:25:32,960

raja over to you we're going to install

2700

04:25:40,070 --> 04:25:37,279

the mid strut l7 to upper strut l7

2701
04:25:42,149 --> 04:25:40,080
maneuver in the apfr as required and

2702
04:25:45,670 --> 04:25:42,159
i've got pgt settings for you when

2703
04:25:51,830 --> 04:25:48,389
i'm looking at a m24 volt is that going

2704
04:25:54,790 --> 04:25:51,840
into 7 that is it m24

2705
04:25:56,710 --> 04:25:54,800
and you're gonna drive m24 to torque

2706
04:25:58,870 --> 04:25:56,720
with bravo one clock two i can hand

2707
04:26:18,550 --> 04:25:58,880
start if that works

2708
04:26:22,870 --> 04:26:20,309
two turns hand started bravo one clock

2709
04:26:34,950 --> 04:26:22,880
two good read back you can drive m24 to

2710
04:26:34,960 --> 04:26:56,630
okay

2711
04:27:00,790 --> 04:26:58,870
now two hours and 45 minutes into

2712
04:27:03,189 --> 04:27:00,800
today's spacewalk

2713
04:27:05,750 --> 04:27:03,199

rajacharya is currently

2714

04:27:07,429 --> 04:27:05,760

installing a midstruck to the upper

2715

04:27:09,429 --> 04:27:07,439

right strut

2716

04:27:26,230 --> 04:27:09,439

previously

2717

04:27:26,240 --> 04:27:34,950

[Applause]

2718

04:27:39,670 --> 04:27:37,269

copy you can hit it again 4.5 for a

2719

04:27:58,469 --> 04:27:39,680

total of 6.5 with a low torque

2720

04:28:04,630 --> 04:27:59,990

good green light maybe a quarter turn

2721

04:28:15,590 --> 04:28:06,550

good green light and i heard you earlier

2722

04:28:28,229 --> 04:28:17,990

all right it's a good m24 you can stow

2723

04:28:31,750 --> 04:28:29,910

i just said you broke up on your last

2724

04:28:32,870 --> 04:28:31,760

call so we might have missed something

2725

04:28:37,830 --> 04:28:32,880

you said

2726

04:28:37,840 --> 04:28:58,469

you can drive m 9 through 12 the torque

2727

04:29:13,269 --> 04:29:01,429

3.7 with a green light

2728

04:29:16,070 --> 04:29:14,710

and roger if you haven't already you can

2729

04:29:21,910 --> 04:29:16,080

install the pit pin to the grounding

2730

04:29:27,030 --> 04:29:24,630

five turns on m10 green light three

2731

04:29:39,110 --> 04:29:27,040

decimal six on the torque

2732

04:29:42,710 --> 04:29:41,110

and the mli is installed as well so that

2733

04:29:45,910 --> 04:29:42,720

i can reach

2734

04:29:48,950 --> 04:29:45,920

my over the motherboard green light 3.7

2735

04:29:55,429 --> 04:29:48,960

four turns on m12

2736

04:30:21,750 --> 04:29:58,790

and standby on the emma good spot for

2737

04:30:26,790 --> 04:30:24,710

about four and a half turns on m11

2738

04:30:28,469 --> 04:30:26,800

the decimal seven on the torch green

2739

04:30:38,950 --> 04:30:28,479

light

2740

04:30:42,710 --> 04:30:40,469

okay kayla

2741

04:30:45,269 --> 04:30:42,720

uh once you put your pgt away you can

2742

04:30:46,469 --> 04:30:45,279

release ev2 direct from the right mid

2743

04:30:48,389 --> 04:30:46,479

strut

2744

04:30:54,790 --> 04:30:48,399

and then verify that mli is covering the

2745

04:30:58,469 --> 04:30:56,950

covering the side pad clevis the pit

2746

04:31:01,269 --> 04:30:58,479

pins in place

2747

04:31:08,730 --> 04:31:01,279

and in work on raja's rib

2748

04:31:08,740 --> 04:31:30,070

[Applause]

2749

04:31:34,070 --> 04:31:31,670

all right so next thing we're going to

2750

04:31:36,309 --> 04:31:34,080

work on is the clamps and the mli and so

2751
04:31:39,110 --> 04:31:36,319
the right mid strut adjustment collar

2752
04:31:41,269 --> 04:31:39,120
uh all the uh struts have been good so

2753
04:31:43,110 --> 04:31:41,279
far and so kayla if your vrt to the mid

2754
04:31:45,110 --> 04:31:43,120
strut handrail minimize normal and

2755
04:31:47,670 --> 04:31:45,120
torsional loads into the mid strut

2756
04:31:49,590 --> 04:31:47,680
counter torque wrench loads please

2757
04:31:53,269 --> 04:31:49,600
and so you can translate to the right

2758
04:31:55,510 --> 04:31:53,279
mid strut collar bolts right here

2759
04:31:57,990 --> 04:31:55,520
and then verify the middle locking tip

2760
04:32:23,189 --> 04:31:58,000
pin can reach the receptacle but do not

2761
04:32:23,199 --> 04:32:32,710
it is tight but it can get better

2762
04:32:32,720 --> 04:32:37,910
okay

2763
04:32:42,790 --> 04:32:40,309

all right thanks kayla and so

2764

04:32:52,070 --> 04:32:42,800

i've got pgt settings and we're going to

2765

04:33:00,550 --> 04:32:54,870

we're looking for bravo 7 clocks 2 with

2766

04:33:00,560 --> 04:33:07,429

caleb baron

2767

04:33:11,269 --> 04:33:09,429

that's a good read back

2768

04:33:19,710 --> 04:33:11,279

and you're going to drive

2769

04:33:24,551 --> 04:33:22,629

[Applause]

2770

04:33:27,910 --> 04:33:24,561

nasa astronaut kayla baron currently

2771

04:33:29,109 --> 04:33:27,920

being seen on screen with a pt

2772

04:33:31,670 --> 04:33:29,119

designated with

2773

04:33:33,590 --> 04:33:31,680

designated eevee one with the red stripe

2774

04:33:36,070 --> 04:33:33,600

she has our pistol grip tool where she's

2775

04:33:43,460 --> 04:33:36,080

driving two bolts on the midstruck

2776

04:33:43,470 --> 04:33:52,551

[Applause]

2777

04:33:56,629 --> 04:33:54,390

and kayla just a reminder we do have

2778

04:34:17,040 --> 04:33:56,639

that shorter socket if that would help

2779

04:34:17,050 --> 04:34:35,349

[Applause]

2780

04:34:41,429 --> 04:34:37,109

copy five turns green light in which

2781

04:34:51,029 --> 04:34:43,750

that was the m25

2782

04:34:51,039 --> 04:35:07,109

926

2783

04:35:13,189 --> 04:35:09,910

all right that was four turns on the m26

2784

04:35:14,789 --> 04:35:13,199

with a green light 25 decimal four

2785

04:35:16,310 --> 04:35:14,799

but i'm still seeing

2786

04:35:19,990 --> 04:35:16,320

i don't know if this is still a check

2787

04:35:22,551 --> 04:35:20,000

but that tab is so wiggly and it didn't

2788

04:35:24,551 --> 04:35:22,561

look like it really closed up on the m26

2789

04:35:26,629 --> 04:35:24,561

side

2790

04:35:28,230 --> 04:35:26,639

copy uh not concerned about the tab but

2791

04:35:35,189 --> 04:35:28,240

we got four turns and a green light on

2792

04:35:38,709 --> 04:35:36,949

it looks symmetric with the other side

2793

04:35:40,390 --> 04:35:38,719

okay that might have been uh parallax

2794

04:35:43,029 --> 04:35:40,400

for me and i was just saying the gap

2795

04:35:44,551 --> 04:35:43,039

looks parallel

2796

04:35:45,830 --> 04:35:44,561

topi thanks for those words the gap is

2797

04:35:47,990 --> 04:35:45,840

parallel

2798

04:35:49,750 --> 04:35:48,000

okay we're going to continue and so uh

2799

04:35:51,750 --> 04:35:49,760

kayla we're going to have you ratchet

2800

04:35:53,910 --> 04:35:51,760

with the pgt

2801
04:35:55,269 --> 04:35:53,920
and we're going to set it to ratchet

2802
04:36:07,510 --> 04:35:55,279
clockwise

2803
04:36:13,830 --> 04:36:10,470
okay we're going to uh manually ratchet

2804
04:36:23,189 --> 04:36:13,840
to m25 and 26 to torque we're looking

2805
04:36:23,199 --> 04:36:27,590
figuring out my best body position here

2806
04:36:32,470 --> 04:36:30,629
it is and uh you holding the very top

2807
04:36:34,150 --> 04:36:32,480
over the display with one hand and the

2808
04:36:36,551 --> 04:36:34,160
bottom underneath the battery is one

2809
04:36:38,150 --> 04:36:36,561
great position and you can also counter

2810
04:36:40,789 --> 04:36:38,160
the torque doing that if you're able to

2811
04:36:58,310 --> 04:36:40,799
reach it that way we are a minute 45

2812
04:36:58,320 --> 04:37:05,109
hard to get

2813
04:37:16,551 --> 04:37:06,470

just a reminder we have that shorter

2814

04:37:16,561 --> 04:37:23,830

two good pops

2815

04:37:27,109 --> 04:37:25,670

the right struts have been installed the

2816

04:37:29,510 --> 04:37:27,119

crew has begun torquing down the

2817

04:37:31,029 --> 04:37:29,520

adjustment collar bolts and the crew is

2818

04:37:42,230 --> 04:37:31,039

currently

2819

04:37:42,240 --> 04:38:01,429

quite on the phone

2820

04:38:01,439 --> 04:38:12,070

and raja ike did you call

2821

04:38:24,150 --> 04:38:14,150

copy one pop and work 10 seconds to a

2822

04:38:24,160 --> 04:38:50,869

two pops 25-26

2823

04:38:50,879 --> 04:38:56,629

my

2824

04:39:04,830 --> 04:38:58,310

back with you and did you get any

2825

04:39:09,590 --> 04:39:07,750

um for this day really i i was throwing

2826
04:39:13,029 --> 04:39:09,600
the pgt

2827
04:39:15,349 --> 04:39:13,039
[Applause]

2828
04:39:19,510 --> 04:39:15,359
an eighth of a turn probably

2829
04:39:23,029 --> 04:39:21,750
okay so maybe a half a turn somewhere in

2830
04:39:28,709 --> 04:39:23,039
between a quarter and a half a turn and

2831
04:39:33,990 --> 04:39:30,709
okay we copy thank you you can reset

2832
04:39:37,510 --> 04:39:34,000
your pgt to motor verify mtl is still 30

2833
04:39:37,520 --> 04:39:44,390
uh actually

2834
04:39:49,510 --> 04:39:46,868
i go to install the piston

2835
04:39:51,350 --> 04:39:49,520
okay you yeah and your last call was a

2836
04:39:53,430 --> 04:39:51,360
quite choppy yes you can release the

2837
04:39:55,830 --> 04:39:53,440
folded mli and install the middle pit

2838
04:39:57,830 --> 04:39:55,840

pin in the final location route it under

2839

04:40:05,350 --> 04:39:57,840

the same side of the mli as the lanyard

2840

04:40:09,430 --> 04:40:07,990

and raja now that the right collar bolts

2841

04:40:20,390 --> 04:40:09,440

are driven to torque you can close the

2842

04:40:32,470 --> 04:40:21,830

all right we may have a problem with

2843

04:40:32,480 --> 04:40:40,550

push it back

2844

04:40:40,560 --> 04:40:57,350

and it should actuate pushing or pulling

2845

04:41:03,830 --> 04:40:59,830

has like pushed

2846

04:41:06,070 --> 04:41:03,840

too far like it's over extended so the

2847

04:41:08,868 --> 04:41:06,080

um i think that it should be

2848

04:41:10,310 --> 04:41:08,878

above the ball bearing like all of those

2849

04:41:13,590 --> 04:41:10,320

pieces

2850

04:41:17,270 --> 04:41:13,600

it's below the ball bearing right now

2851
04:41:21,030 --> 04:41:19,590
oh and it just came out yeah we we agree

2852
04:41:22,310 --> 04:41:21,040
with your assessment that it should be

2853
04:41:25,110 --> 04:41:22,320
above

2854
04:41:25,120 --> 04:41:34,470
this pin just came apart

2855
04:41:38,830 --> 04:41:36,628
it's got some of it but not all of it

2856
04:41:41,110 --> 04:41:38,840
the washer and the

2857
04:41:43,030 --> 04:41:41,120
rounding that piece is still there but

2858
04:41:44,230 --> 04:41:43,040
the end pieces like the ball bearings

2859
04:41:45,830 --> 04:41:44,240
that they came off

2860
04:41:47,750 --> 04:41:45,840
washer is free

2861
04:41:51,910 --> 04:41:47,760
you don't know that

2862
04:41:51,920 --> 04:41:58,470
we copy thanks for that description

2863
04:42:03,590 --> 04:42:01,030

let me tell you what i've got here

2864

04:42:06,390 --> 04:42:03,600

i lost the washer in the middle

2865

04:42:07,750 --> 04:42:06,400

i've got the lanyard

2866

04:42:09,750 --> 04:42:07,760

um

2867

04:42:11,670 --> 04:42:09,760

actually that washer might even know the

2868

04:42:13,270 --> 04:42:11,680

retaining washer at the end

2869

04:42:14,628 --> 04:42:13,280

the pieces i've got remaining but i've

2870

04:42:16,948 --> 04:42:14,638

got the spring

2871

04:42:18,628 --> 04:42:16,958

kind of a thick middle washer

2872

04:42:20,788 --> 04:42:18,638

and then the lanyard

2873

04:42:23,190 --> 04:42:20,798

back on above the pit pin

2874

04:42:25,110 --> 04:42:23,200

i think the washer we lost the washer

2875

04:42:27,270 --> 04:42:25,120

that was on the end

2876

04:42:30,070 --> 04:42:27,280

um

2877

04:42:32,310 --> 04:42:30,080

and that that has like popped over the

2878

04:42:33,990 --> 04:42:32,320

details and was jammed

2879

04:42:37,030 --> 04:42:34,000

and when i was trying to push it back on

2880

04:42:38,310 --> 04:42:37,040

it came apart

2881

04:42:39,590 --> 04:42:38,320

i think the electricity goes

2882

04:42:42,070 --> 04:42:39,600

electrically you'll still be good when

2883

04:42:43,510 --> 04:42:42,080

you install that function and then they

2884

04:42:45,030 --> 04:42:43,520

can't get it

2885

04:42:46,550 --> 04:42:45,040

okay let's confirm that the when you

2886

04:42:48,150 --> 04:42:46,560

install the pit pin the lanyard will

2887

04:42:49,910 --> 04:42:48,160

still be connected right so i think

2888

04:42:53,990 --> 04:42:49,920

we're missing a piece but it should

2889

04:42:58,310 --> 04:42:55,830

yeah so i installed it just because that

2890

04:43:00,550 --> 04:42:58,320

was the best way

2891

04:43:02,310 --> 04:43:00,560

or something like that

2892

04:43:04,470 --> 04:43:02,320

the best way to keep it from getting

2893

04:43:06,948 --> 04:43:04,480

lost washed

2894

04:43:13,030 --> 04:43:10,868

um what i see is

2895

04:43:14,470 --> 04:43:13,040

i have the receptacle

2896

04:43:16,070 --> 04:43:14,480

in the lanyard

2897

04:43:21,350 --> 04:43:16,080

then the

2898

04:43:29,670 --> 04:43:24,628

copy receptacle lanyard

2899

04:43:35,750 --> 04:43:31,190

i do yeah

2900

04:43:39,270 --> 04:43:36,788

yeah

2901

04:43:40,708 --> 04:43:39,280

uh can i have you have my view of it

2902

04:43:44,948 --> 04:43:40,718

yeah i'm wondering if you guys can see

2903

04:43:48,230 --> 04:43:46,628

yeah i do think it'll stay in i just

2904

04:43:51,350 --> 04:43:48,240

need to be careful not to pull on the

2905

04:43:54,550 --> 04:43:53,030

don't pull on the ring we can't see it

2906

04:43:55,830 --> 04:43:54,560

in your heka it does look like it's

2907

04:43:57,670 --> 04:43:55,840

installed and we've got a couple

2908

04:43:59,030 --> 04:43:57,680

questions just to see if it's going to

2909

04:44:26,948 --> 04:43:59,040

serve its function so we're talking it

2910

04:44:32,470 --> 04:44:28,948

that washer but

2911

04:44:36,150 --> 04:44:33,830

all right if you want ev2 or go to

2912

04:44:38,550 --> 04:44:36,160

continue uh the pin is installed we'll

2913

04:44:40,708 --> 04:44:38,560

leave it installed that's a good config

2914

04:44:42,708 --> 04:44:40,718

and so

2915

04:44:45,030 --> 04:44:42,718

you've released the folded mli install

2916

04:44:51,910 --> 04:44:45,040

the pin you can now close the mli around

2917

04:44:51,920 --> 04:45:04,948

can you reach that

2918

04:45:04,958 --> 04:45:23,430

there we go

2919

04:45:30,070 --> 04:45:24,788

see if there's no more slack on that

2920

04:45:30,080 --> 04:45:32,948

there we go all right

2921

04:45:35,750 --> 04:45:34,230

over there

2922

04:45:39,430 --> 04:45:35,760

damn on this side you can pull it back

2923

04:45:43,590 --> 04:45:41,830

now three hours and three minutes into

2924

04:45:46,948 --> 04:45:43,600

today's spacewalk recapping some of the

2925

04:45:53,190 --> 04:45:49,430

nasa astronauts kayla baron and raj

2926

04:45:58,470 --> 04:45:55,990

switch to battery power at 7 12 a.m

2927

04:46:02,390 --> 04:45:58,480

central time 8 12

2928

04:46:07,590 --> 04:46:04,550

they got over into their work site on

2929

04:46:10,070 --> 04:46:07,600

the starboard 4 truss at the 3a power

2930

04:46:12,708 --> 04:46:10,080

channel so far they have successfully

2931

04:46:15,750 --> 04:46:12,718

installed the upper brackets and center

2932

04:46:17,430 --> 04:46:15,760

pad to the mass cad and canister

2933

04:46:18,708 --> 04:46:17,440

as well as

2934

04:46:21,030 --> 04:46:18,718

installed

2935

04:46:23,430 --> 04:46:21,040

the left and right struts they are

2936

04:46:27,110 --> 04:46:23,440

currently

2937

04:46:28,868 --> 04:46:27,120

inserting clamps as well as cut

2938

04:46:38,930 --> 04:46:28,878

covering brackets with the multi-layer

2939

04:46:38,940 --> 04:46:43,830

[Music]

2940

04:46:47,830 --> 04:46:45,190

i think i have

2941

04:46:49,030 --> 04:46:47,840

enough that i can do this side around it

2942

04:46:50,150 --> 04:46:49,040

oh yeah you're right you do have to give

2943

04:46:52,310 --> 04:46:50,160

me one yeah because otherwise you'll be

2944

04:46:55,830 --> 04:46:52,320

short on the other side what i'm doing

2945

04:46:59,270 --> 04:46:57,830

yeah i'm with you and i hear you guys

2946

04:47:01,350 --> 04:46:59,280

talking about the wire ties so you're

2947

04:47:02,788 --> 04:47:01,360

going to install them on the telescoping

2948

04:47:05,750 --> 04:47:02,798

end one near the mid strut collar and

2949

04:47:09,670 --> 04:47:05,760

one near the clevis end

2950

04:47:13,270 --> 04:47:09,680

you just confirm it's a short wire size

2951

04:47:15,910 --> 04:47:13,280

a short wire tylenol both a firm

2952

04:47:17,510 --> 04:47:15,920

and i'm going to give her one off my vrt

2953

04:47:19,590 --> 04:47:17,520

i don't have the reach kind of like we

2954

04:47:21,670 --> 04:47:19,600

saw in the evap run to be able to get to

2955

04:47:22,628 --> 04:47:21,680

it i'll pass off one of my shorts here

2956

04:47:25,030 --> 04:47:22,638

kayla

2957

04:47:39,590 --> 04:47:25,040

copy that ev2 passing off a short wire

2958

04:47:39,600 --> 04:48:00,470

oh

2959

04:48:02,980 --> 04:48:02,070

all right i've got one installed with

2960

04:48:06,550 --> 04:48:02,990

three half twists

2961

04:48:13,590 --> 04:48:09,030

let me get a little closer to you roger

2962

04:48:13,600 --> 04:48:25,550

copy the caller side wire ties installed

2963

04:48:25,560 --> 04:48:30,628

[Music]

2964

04:48:35,670 --> 04:48:32,230

all right caleb working on the second

2965

04:48:38,550 --> 04:48:35,680

wire tie uh and raja you can egress the

2966

04:48:39,670 --> 04:48:38,560

apfr and retrieve the short pgt

2967

04:48:45,430 --> 04:48:39,680

and the torque wrench from the right

2968

04:48:45,440 --> 04:48:49,430

switch on the second wire time

2969

04:48:49,440 --> 04:48:53,670

copy second wire tie installed

2970

04:48:57,910 --> 04:48:55,110

all right so now we're going to work on

2971

04:48:59,750 --> 04:48:57,920

the left mid strut adjustment collar so

2972

04:49:18,150 --> 04:48:59,760

you can translate to the left mid strut

2973

04:49:18,160 --> 04:49:22,050

huh

2974

04:49:22,060 --> 04:49:40,470

[Applause]

2975

04:49:40,480 --> 04:49:51,590

um

2976

04:49:51,600 --> 04:50:04,550

yes

2977

04:50:04,560 --> 04:50:56,948

uh

2978

04:50:56,958 --> 04:51:29,030

a firm you can grab that off of a 2240

2979

04:51:32,390 --> 04:51:30,470

all right caleb very similar to the

2980

04:51:34,390 --> 04:51:32,400

other side we're going to once you're in

2981

04:51:36,310 --> 04:51:34,400

position verify that middle locking pip

2982

04:52:37,030 --> 04:51:36,320

pin can reach the receptacle but do not

2983

04:52:44,310 --> 04:52:39,750

uh again nuke is pretty tight hard to

2984

04:52:47,430 --> 04:52:46,470

okay so one thing to do

2985

04:53:58,788 --> 04:52:47,440

i

2986

04:53:59,990 --> 04:53:58,798

and torque wrench

2987

04:54:02,788 --> 04:54:00,000

to

2988

04:54:04,230 --> 04:54:02,798

the strut bag and verify that ev-1

2989

04:54:05,510 --> 04:54:04,240

sphere lead is still in place that it's

2990

04:54:14,868 --> 04:54:05,520

not in the way

2991

04:54:46,788 --> 04:54:17,670

i

2992

04:54:51,590 --> 04:54:49,110

and raja once you get there you can

2993

04:54:56,868 --> 04:54:51,600

re-pack the strut bag and if required

2994

04:55:00,788 --> 04:54:58,868

that was three turns but i got a red

2995

04:55:02,628 --> 04:55:00,798

light and low torque

2996

04:55:06,550 --> 04:55:02,638

and roger the gopro is still tethered to

2997

04:55:20,470 --> 04:55:09,030

copy three turns

2998

04:55:24,150 --> 04:55:22,150

it might

2999

04:55:26,230 --> 04:55:24,160

but it's still

3000

04:55:28,470 --> 04:55:26,240

it says low torque but i do have a green

3001

04:55:31,910 --> 04:55:28,480

light no red light

3002

04:55:33,830 --> 04:55:31,920

uh torque two two one decimal six

3003

04:55:37,590 --> 04:55:33,840

and just a little like

3004

04:55:42,310 --> 04:55:39,510

one additional turn

3005

04:55:45,430 --> 04:55:42,320

copy one additional for four total turns

3006

04:55:50,628 --> 04:55:47,590

was m29

3007

04:55:56,708 --> 04:55:50,638

happy on m29 we got a green light

3008

04:56:00,550 --> 04:55:58,788

there was a low torque message

3009

04:56:01,910 --> 04:56:00,560

but then it cleared and the green light

3010

04:56:04,070 --> 04:56:01,920

came on

3011

04:56:07,030 --> 04:56:04,080

and the actual torque is two one decimal

3012

04:56:18,150 --> 04:56:07,040

six programmed five decimal five

3013

04:56:23,430 --> 04:56:20,868

let me step back i can see her feather

3014

04:56:25,110 --> 04:56:23,440

on the other side of the

3015

04:56:25,990 --> 04:56:25,120

board part of the idea so i think we're

3016

04:56:27,910 --> 04:56:26,000

good

3017

04:56:29,350 --> 04:56:27,920

can't figure out what's in this car

3018

04:56:32,230 --> 04:56:29,360

as long as you think you can stay clear

3019

04:56:33,990 --> 04:56:32,240

raja you can uh stow the short pgt and

3020

04:56:36,070 --> 04:56:34,000

torque wrench in the strut bag and then

3021

04:56:38,628 --> 04:56:36,080

we will take an inventory of the strut

3022

04:56:46,550 --> 04:56:42,230

and i thought was six turns on m30 green

3023

04:56:52,390 --> 04:56:46,560

light torque is 25 decimal four

3024

04:56:57,990 --> 04:56:55,430

okay kayla we're going to ratchet again

3025

04:57:02,230 --> 04:56:58,000

ratchet clockwise

3026

04:57:03,990 --> 04:57:02,240

and verify mtl 30.5

3027

04:57:06,310 --> 04:57:04,000

reminder we have the two inch rigid

3028

04:57:16,628 --> 04:57:06,320

socket if desired and we're looking for

3029

04:57:16,638 --> 04:57:47,750

and any additional turns as well please

3030

04:57:53,350 --> 04:57:51,350

all right i'm just going to call out uh

3031

04:57:54,708 --> 04:57:53,360

go from inboard to outboard of the

3032

04:57:56,150 --> 04:57:54,718

stress bag and tell you what i've got

3033

04:57:57,910 --> 04:57:56,160

okay

3034

04:58:00,868 --> 04:57:57,920

that works we are ready for the

3035

04:58:02,490 --> 04:58:00,878

inventory m29

3036

04:58:04,230 --> 04:58:02,500

and two pops on 29.

3037

04:58:06,070 --> 04:58:04,240

[Music]

3038

04:58:07,430 --> 04:58:06,080

about the m29 that was about one

3039

04:58:09,910 --> 04:58:07,440

additional turn

3040

04:58:13,110 --> 04:58:09,920

went on to m30

3041

04:58:17,670 --> 04:58:14,788

all right uh happy

3042

04:58:19,830 --> 04:58:17,680

on one internal

3043

04:58:22,868 --> 04:58:19,840

bag i've got a small two small small

3044

04:58:26,230 --> 04:58:22,878

reps one small small rare going to a pgt

3045

04:58:27,910 --> 04:58:26,240

that pgt also has an aet on it

3046

04:58:30,310 --> 04:58:27,920

the other small small is going through

3047

04:58:32,708 --> 04:58:30,320

the torque wrench

3048

04:58:34,788 --> 04:58:32,718

and that is connected to the same aet as

3049

04:58:38,788 --> 04:58:34,798

the pgt

3050

04:58:44,230 --> 04:58:41,830

that number sorry

3051
04:58:45,350 --> 04:58:44,240
point hotel has a small small rent with

3052
04:58:50,230 --> 04:58:45,360
a hammer

3053
04:58:55,030 --> 04:58:52,948
internal d-ring number 11 has two small

3054
04:59:00,150 --> 04:58:55,040
small breaths on it one of them is a pit

3055
04:59:04,628 --> 04:59:03,110
the internal steering echo has two small

3056
04:59:05,990 --> 04:59:04,638
fall reps

3057
04:59:09,030 --> 04:59:06,000
internal

3058
04:59:15,990 --> 04:59:09,040
ring india has one small small red with

3059
04:59:16,000 --> 04:59:18,868
and then

3060
04:59:24,550 --> 04:59:23,030
internal steering juliettes have

3061
04:59:27,190 --> 04:59:24,560
two

3062
04:59:28,708 --> 04:59:27,200
three small small reps uh and one of

3063
04:59:30,868 --> 04:59:28,718

those small fallout has another small

3064

04:59:33,830 --> 04:59:30,878

fellow attached to it before total three

3065

04:59:40,628 --> 04:59:34,670

see everything

3066

04:59:40,638 --> 04:59:55,190

m30 any additional turns

3067

04:59:55,200 --> 04:59:58,550

kayla any additional turns

3068

05:00:02,628 --> 05:00:00,948

probably about one additional turn happy

3069

05:00:05,190 --> 05:00:02,638

one additional turn two pops on thirty

3070

05:00:07,030 --> 05:00:05,200

it's a good m29 a good m30 and raja

3071

05:00:09,910 --> 05:00:07,040

we're talking over this inventory thank

3072

05:00:14,310 --> 05:00:10,868

all right let me know when you're ready

3073

05:00:21,350 --> 05:00:16,628

i go for a pit panic

3074

05:00:21,360 --> 05:00:27,800

standby

3075

05:00:27,810 --> 05:00:32,150

[Music]

3076
05:00:35,910 --> 05:00:33,990
okay you can release the folded mli and

3077
05:00:38,070 --> 05:00:35,920
install the pit pin in the final

3078
05:00:40,070 --> 05:00:38,080
location routing under the same side as

3079
05:00:43,990 --> 05:00:40,080
the lanyard anchor

3080
05:00:46,830 --> 05:00:44,000
and now ev2 roger did you call

3081
05:00:47,990 --> 05:00:46,840
yeah just looking for a girl to start

3082
05:00:56,708 --> 05:00:48,000
uh the bag

3083
05:01:02,868 --> 05:01:00,310
okay roger hey uh question about the bag

3084
05:01:04,390 --> 05:01:02,878
verify that there are sockets on the

3085
05:01:08,230 --> 05:01:04,400
torque wrenches

3086
05:01:11,750 --> 05:01:09,990
there are sockets

3087
05:01:13,910 --> 05:01:11,760
on both torque wrenches there's not a

3088
05:01:19,830 --> 05:01:13,920

socket on the pgp

3089

05:01:24,470 --> 05:01:21,830

okay that with the gopro off that's a

3090

05:01:27,510 --> 05:01:24,480

good config and then you can uh start to

3091

05:01:31,670 --> 05:01:27,520

fold and cinch the bag

3092

05:01:33,510 --> 05:01:31,680

roger and kayla

3093

05:01:35,030 --> 05:01:33,520

you can close the mli around the collar

3094

05:01:45,430 --> 05:01:35,040

bolts in the mounting bracket and

3095

05:01:45,440 --> 05:01:51,750

if you want ev2 two minutes to sunrise

3096

05:01:51,760 --> 05:03:24,470

okay

3097

05:03:28,948 --> 05:03:26,788

two front corners the lid is not tacked

3098

05:04:18,550 --> 05:03:28,958

down so you'll have two bag adjustables

3099

05:04:23,750 --> 05:04:20,230

if you're just joining us we are three

3100

05:04:24,948 --> 05:04:23,760

hours and 22 minutes into the 247th

3101

05:04:26,628 --> 05:04:24,958

spacewalk in support of the

3102

05:04:28,550 --> 05:04:26,638

international space station assembly

3103

05:04:30,550 --> 05:04:28,560

maintenance and upgrades

3104

05:04:33,590 --> 05:04:30,560

that's astronauts kayla barron and rosh

3105

05:04:37,990 --> 05:04:36,150

started their spacewalk at 7 12 a.m

3106

05:04:42,390 --> 05:04:38,000

where they switched over to internal

3107

05:04:42,400 --> 05:04:53,190

and on the wires

3108

05:04:56,550 --> 05:04:55,750

they translated over to their work site

3109

05:04:58,390 --> 05:04:56,560

the

3110

05:05:05,270 --> 05:04:58,400

starboard truss

3111

05:05:14,070 --> 05:05:08,230

where they are completing a modification

3112

05:06:22,310 --> 05:05:16,150

copy one wire tire near the collar bolts

3113

05:06:26,788 --> 05:06:24,708

one observation i have for you

3114

05:06:29,190 --> 05:06:26,798

from this vantage point

3115

05:06:31,430 --> 05:06:29,200

is um i wasn't able to see this because

3116

05:06:33,430 --> 05:06:31,440

it was on the back side side of the

3117

05:06:35,830 --> 05:06:33,440

right mid strut

3118

05:06:38,868 --> 05:06:35,840

but now that i'm over here i can see

3119

05:06:41,590 --> 05:06:38,878

that the um

3120

05:06:43,590 --> 05:06:41,600

the upper collar bolt is not fully

3121

05:06:47,830 --> 05:06:43,600

covered by nli i'm not sure if you guys

3122

05:06:54,150 --> 05:06:52,070

copy on the right side upper collar bolt

3123

05:06:57,910 --> 05:06:54,160

right mid-shirt upper collar bolt is not

3124

05:07:04,628 --> 05:07:00,550

i'm double checking on the left side now

3125

05:07:21,590 --> 05:07:06,708

grab the copy thank you thanks for those

3126

05:07:25,350 --> 05:07:23,190

you want me to start heading back over

3127

05:07:37,270 --> 05:07:25,360

there to fix today

3128

05:07:40,708 --> 05:07:39,350

okay kayla yes we would like you to head

3129

05:07:42,550 --> 05:07:40,718

over once you're done with this one and

3130

05:07:44,390 --> 05:07:42,560

verify that these collar bolts are both

3131

05:07:46,628 --> 05:07:44,400

nicely tucked in you can go over to the

3132

05:08:27,110 --> 05:07:46,638

right side and cover those collar bolts

3133

05:08:27,120 --> 05:08:33,190

left mli and wire ties installed

3134

05:08:36,070 --> 05:08:34,628

and before you leave the left side if

3135

05:08:38,390 --> 05:08:36,080

you could verify that the mli is

3136

05:08:39,830 --> 05:08:38,400

covering the side pad clevis

3137

05:09:01,030 --> 05:08:39,840

and then you can head over to the right

3138

05:09:04,470 --> 05:09:02,948

all right nice job on that left side and

3139

05:09:06,708 --> 05:09:04,480

uh you have a go to

3140

05:09:21,670 --> 05:09:06,718

turn it over to the right and adjust it

3141

05:09:25,350 --> 05:09:23,350

and hey kayla we're gonna have you get

3142

05:09:26,708 --> 05:09:25,360

some photographs uh your preference if

3143

05:09:27,990 --> 05:09:26,718

you want to get some of those now before

3144

05:09:30,230 --> 05:09:28,000

you move just like you're already on the

3145

05:09:31,990 --> 05:09:30,240

way

3146

05:09:33,350 --> 05:09:32,000

okay yeah maybe

3147

05:09:49,670 --> 05:09:33,360

yep go ahead over to the right and we'll

3148

05:09:55,270 --> 05:09:51,670

currently having views from the heck or

3149

05:09:57,430 --> 05:09:55,280

the hd camera that is also attached to

3150

05:09:59,030 --> 05:09:57,440

nasa astronaut kayla baron's

3151

05:10:00,868 --> 05:09:59,040

helmet

3152

05:10:04,070 --> 05:10:00,878

she's translating over to the right

3153

05:11:30,830 --> 05:10:04,080

struts to close mli or the multi-layer

3154

05:11:34,470 --> 05:11:32,390

coverage

3155

05:11:35,510 --> 05:11:34,480

all right good mli on the right side

3156

05:11:37,990 --> 05:11:35,520

thank you

3157

05:11:39,190 --> 05:11:38,000

and over to you on position but uh next

3158

05:11:40,948 --> 05:11:39,200

we'd like you to

3159

05:11:46,070 --> 05:11:40,958

get some photographs of the mod kit

3160

05:11:46,080 --> 05:11:49,110

okay

3161

05:11:52,150 --> 05:11:50,788

and so the original plan was you know

3162

05:11:54,150 --> 05:11:52,160

you were going to translate kind of back

3163

05:11:55,910 --> 05:11:54,160

toward your safety tether

3164

05:11:57,910 --> 05:11:55,920

uh

3165

05:11:59,430 --> 05:11:57,920

anchor and and you could photograph the

3166

05:12:01,670 --> 05:11:59,440

mod kit from there so if you want to

3167

05:12:04,470 --> 05:12:01,680

just head back to the left side

3168

05:12:05,910 --> 05:12:04,480

and then get back close to

3169

05:12:07,590 --> 05:12:05,920

the strut back location and take the

3170

05:12:10,628 --> 05:12:07,600

photo from there but or over to you here

3171

05:12:17,430 --> 05:12:12,868

that plan sounds good to me x i'll head

3172

05:12:20,948 --> 05:12:19,910

happy nice job

3173

05:12:22,550 --> 05:12:20,958

uh

3174

05:12:24,070 --> 05:12:22,560

raj i see you're wrestling with that bag

3175

05:12:26,830 --> 05:12:24,080

and remember it has to just be packed it

3176

05:12:31,190 --> 05:12:29,510

pretty that's pretty it's the

3177

05:12:33,110 --> 05:12:31,200

modern business person's briefcase

3178

05:12:35,830 --> 05:12:33,120

you're ready to go for your tailor

3179

05:12:37,190 --> 05:12:35,840

i'm good i've got the handrail

3180

05:12:39,190 --> 05:12:37,200

kind of facing

3181

05:12:40,230 --> 05:12:39,200

up on the ia and there's one adjustable

3182

05:12:41,590 --> 05:12:40,240

tether

3183

05:12:43,990 --> 05:12:41,600

right let's hold it down that's on the

3184

05:12:45,350 --> 05:12:44,000

outward edge that you originally had so

3185

05:12:48,070 --> 05:12:45,360

you should be able to put your brt on

3186

05:12:49,910 --> 05:12:48,080

this and set up nothing could be worse

3187

05:12:52,788 --> 05:12:49,920

than the full strut bag so i think you

3188

05:12:53,910 --> 05:12:52,798

probably did a good job

3189

05:12:57,590 --> 05:12:53,920

definitely improvement over the full

3190

05:13:02,070 --> 05:12:59,750

nice job nice job and when you're done

3191

05:14:18,150 --> 05:13:02,080

with the wrestling the bag you can head

3192

05:14:50,628 --> 05:14:46,830

uh

3193

05:14:52,550 --> 05:14:50,638

apfr in the settings that needs to be

3194

05:14:55,110 --> 05:14:52,560

for when i get back to the cd card do

3195

05:14:55,120 --> 05:14:59,190

uh a firm i do

3196

05:15:03,110 --> 05:15:00,948

the duo has completed the installation

3197

05:15:05,750 --> 05:15:03,120

of the irosa mod kit they are now

3198

05:15:13,350 --> 05:15:05,760

finishing up the 3a mod kit cleanup and

3199

05:15:18,708 --> 05:15:15,510

i think i got good pictures machine gun

3200

05:15:20,628 --> 05:15:18,718

style and continuous high shutter so

3201

05:15:25,110 --> 05:15:20,638

as far as i know i've got pictures

3202

05:15:29,910 --> 05:15:27,430

all right nice job and since the strut

3203

05:15:31,430 --> 05:15:29,920

bag is already packed up we'll take a

3204

05:15:41,590 --> 05:15:31,440

glove half

3205

05:15:45,270 --> 05:15:43,590

actually i lied i called this through uh

3206

05:15:46,390 --> 05:15:45,280

apfr settings now get the whiffex when i

3207

05:15:47,430 --> 05:15:46,400

get closer because if i try to go to

3208

05:15:50,390 --> 05:15:47,440

alpha it'll

3209

05:15:52,070 --> 05:15:50,400

get towards the um object

3210

05:15:55,590 --> 05:15:52,080

fox fox alpha six i'll go ahead and set

3211

05:15:57,110 --> 05:15:55,600

that up now a firm 12 fox box alpha six

3212

05:15:58,628 --> 05:15:57,120

and then you can bundle that up and stow

3213

05:16:00,150 --> 05:15:58,638

it on your brt

3214

05:16:04,150 --> 05:16:00,160

and we'll take the same checks from you

3215

05:16:08,550 --> 05:16:06,310

make no changes to my gloves with the

3216

05:16:10,788 --> 05:16:08,560

exception i've got some new smudging on

3217

05:16:12,470 --> 05:16:10,798

my fingertips

3218

05:16:14,708 --> 05:16:12,480

the old smudging wore off and i've got

3219

05:16:17,590 --> 05:16:14,718

some fresh smudges

3220

05:16:21,670 --> 05:16:17,600

but otherwise they look good my hat is

3221

05:16:27,110 --> 05:16:24,708

copy dry hat thought was down

3222

05:16:29,030 --> 05:16:27,120

translating smudges you've lost some but

3223

05:16:31,190 --> 05:16:29,040

getting some new smudges on your

3224

05:16:33,750 --> 05:16:31,200

fingertips and how your safer hand is

3225

05:16:33,760 --> 05:16:46,628

oh

3226

05:16:49,910 --> 05:16:48,628

that was kayla baron giving a good glove

3227

05:16:52,070 --> 05:16:49,920

and hap check

3228

05:16:54,708 --> 05:16:52,080

inspecting her hands for scrapes and

3229

05:16:57,030 --> 05:16:54,718

stains as well as making sure that her

3230

05:16:58,628 --> 05:16:57,040

helmet and servant pad

3231

05:17:00,868 --> 05:16:58,638

is free of water

3232

05:17:02,948 --> 05:17:00,878

and kayla if you want

3233

05:17:06,070 --> 05:17:02,958

we'd like you to grab the ratchet wrench

3234

05:17:08,150 --> 05:17:06,080

from the tva bag that's the pouch on the

3235

05:17:09,910 --> 05:17:08,160

side of the strut bag and then that

3236

05:17:13,110 --> 05:17:09,920

gives you some flexibility out at the

3237

05:17:16,708 --> 05:17:14,628

some work oh sorry about that kayla i

3238

05:17:19,110 --> 05:17:16,718

use the pba magic sort of a way to

3239

05:17:25,990 --> 05:17:19,120

button it all closed

3240

05:17:29,750 --> 05:17:28,070

and kayla there is also a ratchet wrench

3241

05:17:31,670 --> 05:17:29,760

in the crew lock bag so if that's too

3242

05:17:38,550 --> 05:17:31,680

difficult we can just wait for the crew

3243

05:17:38,560 --> 05:17:53,270

you can get your legs

3244

05:17:59,270 --> 05:17:55,590

after finishing the 3a cleanup chari and

3245

05:18:04,070 --> 05:18:01,590

tie back multi-layer insulation on spare

3246

05:18:05,670 --> 05:18:04,080

battery charge discharge units to

3247

05:18:56,788 --> 05:18:05,680

support robotic replacement or

3248

05:19:00,788 --> 05:18:57,750

all right just having a hard time

3249

05:19:03,190 --> 05:19:00,798

getting the pictures off the to get the

3250

05:19:05,430 --> 05:19:03,200

apfr

3251

05:19:07,910 --> 05:19:05,440

think you need the tool grinder

3252

05:19:11,750 --> 05:19:07,920

i got before okay

3253

05:19:13,830 --> 05:19:11,760

i just have the tba bag open right now

3254

05:19:15,430 --> 05:19:13,840

okay copy that grinder and uh you know

3255

05:19:17,030 --> 05:19:15,440

it helps to not if you're if you don't

3256

05:19:18,550 --> 05:19:17,040

have any pitch load on it right you know

3257

05:19:19,670 --> 05:19:18,560

what i mean if you're trying to pitch it

3258

05:19:21,750 --> 05:19:19,680

while you're trying to push the pitch

3259

05:19:25,830 --> 05:19:21,760

knob that'll put some some side load on

3260

05:19:31,270 --> 05:19:27,270

i've got the ratchet on my mini

3261

05:19:33,430 --> 05:19:31,280

workstation the tva bag is closed

3262

05:19:35,750 --> 05:19:33,440

tap ev-1 ratchet on your workstation and

3263

05:19:38,230 --> 05:19:35,760

the tva bag closed

3264

05:19:41,670 --> 05:19:38,240

nice work okay we're setting up for

3265

05:19:43,350 --> 05:19:41,680

the bdcu excuse me

3266

05:19:45,510 --> 05:19:43,360

mli tie back

3267

05:19:50,868 --> 05:19:45,520

uh you guys are doing great about an

3268

05:19:50,878 --> 05:19:54,310

and so

3269

05:20:01,190 --> 05:19:58,070

for ev1 when you two are ready you can

3270

05:20:03,750 --> 05:20:01,200

translate to the s6 bcd

3271

05:20:17,670 --> 05:20:03,760

translating outboard on the non-radiator

3272

05:20:26,170 --> 05:20:19,350

and raja if you want to

3273

05:20:37,830 --> 05:20:33,750

[Applause]

3274

05:20:38,948 --> 05:20:37,840

you can pick that up bundle it up on

3275

05:20:41,110 --> 05:20:38,958

your

3276

05:20:42,070 --> 05:20:41,120

brt

3277

05:21:00,868 --> 05:20:42,080

and you're going to head to the

3278

05:21:00,878 --> 05:21:04,830

happy i'm looking for

3279

05:21:09,670 --> 05:21:07,430

2008. and hey kayla can you just verify

3280

05:21:12,470 --> 05:21:09,680

can you check again that the tba bag is

3281

05:21:12,480 --> 05:21:15,030

close

3282

05:21:27,670 --> 05:21:17,350

you guys see inventory otherwise i'm

3283

05:21:32,150 --> 05:21:28,948

okay roger you have to go to continue

3284

05:21:35,830 --> 05:21:34,150

i velcroed it and engaged the little

3285

05:21:38,150 --> 05:21:35,840

wire tie

3286

05:21:57,350 --> 05:21:38,160

closure hook

3287

05:22:03,590 --> 05:22:00,390

i'm gonna put back in my fair lead

3288

05:22:05,590 --> 05:22:03,600

um here near where it was before just to

3289

05:22:06,310 --> 05:22:05,600

make sure

3290

05:22:10,390 --> 05:22:06,320

i don't

3291

05:22:16,548 --> 05:22:12,868

okay copy sounds good we're 10 seconds

3292

05:22:20,150 --> 05:22:18,390

and roger before you head back in board

3293

05:22:21,750 --> 05:22:20,160

we'll take a glove half gauntlet and

3294

05:22:43,110 --> 05:22:21,760

safer handle check see you on the other

3295

05:22:46,310 --> 05:22:44,628

if you're just joining us you're looking

3296

05:22:49,110 --> 05:22:46,320

live at the international space station

3297

05:22:51,670 --> 05:22:49,120

flight control room where mike lammers

3298

05:22:54,948 --> 05:22:51,680

is the flight director

3299

05:22:57,030 --> 05:22:54,958

today you'll hear ground iv

3300

05:22:58,470 --> 05:22:57,040

victor glover nasa astronaut victor

3301
05:23:00,150 --> 05:22:58,480
glover

3302
05:23:02,310 --> 05:23:00,160
communicating with the crew as they

3303
05:23:04,150 --> 05:23:02,320
continue their spacewalk right now we

3304
05:23:07,350 --> 05:23:04,160
have nasa astronauts kayla baron and

3305
05:23:09,590 --> 05:23:07,360
rosh achary conducting a spacewalk

3306
05:23:12,628 --> 05:23:09,600
to assemble and install

3307
05:23:13,910 --> 05:23:12,638
a modification kit to the 3a power

3308
05:23:15,510 --> 05:23:13,920
channel

3309
05:23:17,510 --> 05:23:15,520
baron and chary have

3310
05:23:19,750 --> 05:23:17,520
successfully completed the modification

3311
05:23:23,830 --> 05:23:19,760
kit and they are actually translating

3312
05:23:47,350 --> 05:23:24,510
the

3313
05:23:51,510 --> 05:23:49,750

okay that's a good location kayla 2008

3314

05:23:53,270 --> 05:23:51,520

attach one long wire tied to the inboard

3315

05:23:55,270 --> 05:23:53,280

extension of

3316

05:23:56,868 --> 05:23:55,280

eight leaving one end a little longer

3317

05:24:00,310 --> 05:23:56,878

and roger did you get those checks for

3318

05:24:01,590 --> 05:24:00,320

us glove have gauntlets safer handles

3319

05:24:05,110 --> 05:24:01,600

have us dry

3320

05:24:15,350 --> 05:24:05,120

gloves no change maybe a little uh

3321

05:24:15,360 --> 05:24:22,230

thank you

3322

05:24:22,240 --> 05:24:38,390

down

3323

05:24:41,510 --> 05:24:40,548

once at the starboard six

3324

05:24:42,948 --> 05:24:41,520

truss

3325

05:24:45,110 --> 05:24:42,958

worksite

3326

05:24:47,430 --> 05:24:45,120

the duo will

3327

05:24:49,430 --> 05:24:47,440

tie back multi-layer insulation on spare

3328

05:24:51,590 --> 05:24:49,440

battery charge discharge units to

3329

05:25:02,868 --> 05:24:51,600

support robotic replacement or

3330

05:25:06,628 --> 05:25:04,948

copy copy good safer handles and you can

3331

05:25:07,670 --> 05:25:06,638

translate to the starboard seat cart

3332

05:25:09,270 --> 05:25:07,680

with one

3333

05:25:11,110 --> 05:25:09,280

you can leave your green hook in place

3334

05:25:12,948 --> 05:25:11,120

and you're going to stow the apf

3335

05:25:15,670 --> 05:25:12,958

they will break torque and reset bolts

3336

05:25:17,910 --> 05:25:15,680

on spare battery charge discharge units

3337

05:25:20,280 --> 05:25:17,920

to support future robotic replacement

3338

05:25:22,948 --> 05:25:20,290

relocations

3339

05:25:24,868 --> 05:25:22,958

[Music]

3340

05:26:08,470 --> 05:25:24,878

copy that we see we've got a great

3341

05:26:08,480 --> 05:26:17,670

working on the second wire

3342

05:26:21,190 --> 05:26:19,910

copy caleb

3343

05:26:22,708 --> 05:26:21,200

and yep this one just goes to the

3344

05:26:36,548 --> 05:26:22,718

outboard stanchion of the same handrail

3345

05:26:36,558 --> 05:27:07,270

uh

3346

05:27:11,190 --> 05:27:09,110

and kayla some cautions for you out

3347

05:27:13,190 --> 05:27:11,200

there ensure the sockets are fully

3348

05:27:15,030 --> 05:27:13,200

engaged before turning the bolts to

3349

05:27:17,190 --> 05:27:15,040

ensure the ana rotation device tanks are

3350

05:27:19,670 --> 05:27:17,200

fully disengaged

3351
05:27:22,868 --> 05:27:19,680
to prevent bolt damage do not exceed

3352
05:27:24,390 --> 05:27:22,878
one half turn when breaking torque

3353
05:27:26,470 --> 05:27:24,400
torque is broken when motion is felt on

3354
05:27:28,310 --> 05:27:26,480
the bolt and once torque is broken do

3355
05:27:33,910 --> 05:27:28,320
not translate on the micro square until

3356
05:27:38,708 --> 05:27:36,310
and raja for you just uh

3357
05:27:40,948 --> 05:27:38,718
as you're translating there on phase one

3358
05:27:42,150 --> 05:27:40,958
the tusk cable which is underneath the

3359
05:27:47,190 --> 05:27:42,160
nader

3360
05:27:49,270 --> 05:27:47,200
that white ribbon looking cable is the

3361
05:27:51,510 --> 05:27:49,280
test cable just be aware of that

3362
05:27:53,750 --> 05:27:51,520
especially with the brt and the whiffex

3363
05:27:56,310 --> 05:27:53,760

and aprf combo i think yes i think the

3364

05:28:18,548 --> 05:27:56,320

vr't's right now

3365

05:28:25,110 --> 05:28:20,310

okay i'm working my way over to release

3366

05:28:28,548 --> 05:28:27,030

all right kayla with the two good wire

3367

05:28:30,948 --> 05:28:28,558

ties installed you can translate to the

3368

05:28:35,590 --> 05:28:30,958

radiator side of the bcdu

3369

05:28:37,430 --> 05:28:35,600

via the inboard edge of the s6 iea

3370

05:28:40,230 --> 05:28:37,440

fairlead your tether at the handrail

3371

05:28:42,390 --> 05:28:40,240

2009 to keep them clear to keep your

3372

05:28:47,190 --> 05:28:42,400

tether clear of the eos antennas

3373

05:28:47,200 --> 05:29:00,788

the target is bcdu1 the outboard bcdu

3374

05:29:07,510 --> 05:29:05,590

okay uh at starbuck with one you can

3375

05:29:09,750 --> 05:29:07,520

install

3376

05:29:12,390 --> 05:29:09,760

the wiff x

3377

05:29:21,830 --> 05:29:12,400

clock 211 and i've got the rest of those

3378

05:29:21,840 --> 05:29:56,868

good read back roger

3379

05:30:00,708 --> 05:29:58,628

all right kayla

3380

05:30:02,150 --> 05:30:00,718

uh it looks like you're starting to open

3381

05:30:03,110 --> 05:30:02,160

that up the

3382

05:30:07,830 --> 05:30:03,120

uh

3383

05:30:13,110 --> 05:30:09,430

firm it's open

3384

05:30:15,190 --> 05:30:13,120

okay back over to 2008. a firm and bring

3385

05:30:16,788 --> 05:30:15,200

that little long

3386

05:30:26,070 --> 05:30:16,798

and you can release your fair lead on

3387

05:30:30,470 --> 05:30:28,470

and we believe that that mli is velcro

3388

05:30:31,990 --> 05:30:30,480

on uh the size that you released and

3389

05:30:34,868 --> 05:30:32,000

that the side that's attached that

3390

05:30:37,590 --> 05:30:34,878

you're folding it toward is like sewn on

3391

05:30:39,350 --> 05:30:37,600

uh so you should be able to uh

3392

05:30:41,110 --> 05:30:39,360

not worry about that having not coming

3393

05:30:42,470 --> 05:30:41,120

off

3394

05:30:44,070 --> 05:30:42,480

alright i see you're back to your wire

3395

05:30:46,390 --> 05:30:44,080

ties

3396

05:30:48,470 --> 05:30:46,400

and so we're going to fold the outboard

3397

05:30:49,670 --> 05:30:48,480

looped side under the lid to form a

3398

05:30:51,590 --> 05:30:49,680

triangle

3399

05:30:53,350 --> 05:30:51,600

that looped edge will stick out from

3400

05:30:56,070 --> 05:30:53,360

underneath the body of the lid with the

3401
05:31:03,510 --> 05:30:56,080
loops pointing inboard for that outboard

3402
05:31:06,548 --> 05:31:05,110
if you remember that picture or have it

3403
05:31:09,030 --> 05:31:06,558
in your cuff checklist make it look like

3404
05:31:10,150 --> 05:31:09,040
that picture

3405
05:31:11,910 --> 05:31:10,160
okay

3406
05:31:17,830 --> 05:31:11,920
all right i can i've got the with x at

3407
05:31:29,910 --> 05:31:20,788
and the apfr

3408
05:31:48,548 --> 05:31:32,548
check out the other side again

3409
05:31:51,270 --> 05:31:50,390
nice folding there nice origami skills

3410
05:31:54,230 --> 05:31:51,280
kayla

3411
05:32:00,230 --> 05:31:54,240
and you're verified that

3412
05:32:03,030 --> 05:32:01,590
and then you're going to attach that

3413
05:32:05,350 --> 05:32:03,040

outboard lid

3414

05:32:07,590 --> 05:32:05,360

you're going to use the

3415

05:32:08,868 --> 05:32:07,600

loop closest to the

3416

05:32:10,070 --> 05:32:08,878

lid

3417

05:32:11,350 --> 05:32:10,080

uh

3418

05:32:12,948 --> 05:32:11,360

the stanchion closest to the lid you're

3419

05:32:15,270 --> 05:32:12,958

going to connect the wire tie that's on

3420

05:32:20,310 --> 05:32:15,280

the inboard stanchion to the loop

3421

05:32:33,430 --> 05:32:22,070

and check your safety tether is clear

3422

05:32:38,708 --> 05:32:36,150

and roger those last two settings there

3423

05:32:42,948 --> 05:32:38,718

are alpha and six for the apr 12 fox

3424

05:33:00,470 --> 05:32:45,430

the alpha confirmer the 61 and the

3425

05:33:04,470 --> 05:33:03,190

hey copy that uh is a good config and

3426

05:33:09,590 --> 05:33:04,480

you can grab that crew lock back from

3427

05:33:14,470 --> 05:33:11,270

i got somebody secured with three

3428

05:33:16,788 --> 05:33:14,480

housewife copy very nice uh folding work

3429

05:33:18,548 --> 05:33:16,798

there very nice origami skills hey that

3430

05:33:20,150 --> 05:33:18,558

structure to your left there left of you

3431

05:33:21,350 --> 05:33:20,160

where your brt is anchored that you were

3432

05:33:23,190 --> 05:33:21,360

putting your hands on we just want to

3433

05:33:25,030 --> 05:33:23,200

let you know there's potentially some

3434

05:33:31,190 --> 05:33:25,040

sharp edges there so

3435

05:33:34,868 --> 05:33:33,110

all right check your safety tethers

3436

05:33:37,510 --> 05:33:34,878

clear thank you for the three twists and

3437

05:33:40,230 --> 05:33:37,520

now we're gonna work on the inboard the

3438

05:33:41,750 --> 05:33:40,240

cdu lid so you can open lid two

3439

05:33:43,670 --> 05:33:41,760

uh

3440

05:34:04,310 --> 05:33:43,680

going back to the

3441

05:34:09,990 --> 05:34:07,510

all right copy that

3442

05:34:13,830 --> 05:34:10,000

and once you're already you can

3443

05:34:15,590 --> 05:34:13,840

translate to s6 be cdu to join kayla

3444

05:34:18,708 --> 05:34:15,600

and you're going to go back to the

3445

05:34:24,390 --> 05:34:18,718

radiator side of the s4 iea and then

3446

05:34:24,400 --> 05:34:43,510

yes

3447

05:34:46,390 --> 05:34:45,190

make the

3448

05:34:47,830 --> 05:34:46,400

center

3449

05:34:48,948 --> 05:34:47,840

mli

3450

05:34:51,590 --> 05:34:48,958

loop

3451

05:34:53,670 --> 05:34:51,600

on the inboard edge

3452

05:34:56,390 --> 05:34:53,680

tore as i was pulling it to separate the

3453

05:34:58,150 --> 05:34:56,400

velcro but one end is still attached

3454

05:35:00,230 --> 05:34:58,160

and it's not the one we need to secure

3455

05:35:02,230 --> 05:35:00,240

it down so i think it's not a big deal

3456

05:35:06,310 --> 05:35:02,240

just letting you know

3457

05:35:10,708 --> 05:35:09,590

there is a loop that is sewn down on two

3458

05:35:12,788 --> 05:35:10,718

ends

3459

05:35:16,310 --> 05:35:12,798

and one end came free

3460

05:35:18,628 --> 05:35:16,320

while i was removing the velcro

3461

05:35:20,788 --> 05:35:18,638

okay copy no concern for today but

3462

05:35:22,230 --> 05:35:20,798

thanks for those words and it's not the

3463

05:35:23,270 --> 05:35:22,240

one you're using to attach it to the

3464

05:35:33,030 --> 05:35:23,280

watercolor

3465

05:35:35,430 --> 05:35:34,150

getting my tethers in my batteries and

3466

05:35:37,430 --> 05:35:35,440

stayed here since i stayed together

3467

05:35:38,948 --> 05:35:37,440

wrapped around the strawberry cart

3468

05:35:43,430 --> 05:35:38,958

let's start having your way take your

3469

05:36:00,948 --> 05:35:44,470

all right caitlin it looks like you're

3470

05:36:03,750 --> 05:36:02,070

all right then we're going to do the

3471

05:36:05,830 --> 05:36:03,760

same thing uh the opposite direction

3472

05:36:08,230 --> 05:36:05,840

fold the inboard loop side under the lid

3473

05:36:09,590 --> 05:36:08,240

to form a triangle

3474

05:36:11,350 --> 05:36:09,600

the looped edge will stick out from

3475

05:36:19,750 --> 05:36:11,360

underneath the body of the lid flap

3476

05:37:06,628 --> 05:36:21,670

and we expect it to lie on top of lid

3477

05:37:12,150 --> 05:37:08,948

now three hours and 55 minutes into

3478

05:37:13,110 --> 05:37:12,160

today's spacewalk as astronauts kayla

3479

05:37:15,750 --> 05:37:13,120

baron

3480

05:37:20,150 --> 05:37:15,760

ev1 with the red stripe

3481

05:37:22,548 --> 05:37:20,160

and rajachary the suit with no stripe

3482

05:37:24,628 --> 05:37:22,558

has completed a 3a modification kit and

3483

05:37:27,190 --> 05:37:24,638

now has begun the tie back multi-layer

3484

05:37:29,350 --> 05:37:27,200

installation on spare battery charge

3485

05:37:33,590 --> 05:37:29,360

discharge units to support robotic

3486

05:37:38,150 --> 05:37:35,750

nice origami skills again i see

3487

05:37:39,670 --> 05:37:38,160

attaching it to the wire tie and that

3488

05:37:45,030 --> 05:37:39,680

looks good and once you're done just

3489

05:37:48,230 --> 05:37:46,948

you say again the verification you're

3490

05:37:50,948 --> 05:37:48,240

looking for

3491

05:37:53,590 --> 05:37:50,958

the e-width antennas uh the two conical

3492

05:37:54,868 --> 05:37:53,600

devices uh inboard and outboard of the

3493

05:37:56,548 --> 05:37:54,878

folded entrance

3494

05:38:08,390 --> 05:37:56,558

i'm sorry the folded lids copy they're

3495

05:38:12,310 --> 05:38:09,910

okay and then if you could take a look

3496

05:38:15,670 --> 05:38:12,320

at the mli specifically the mli that's

3497

05:38:17,270 --> 05:38:15,680

around the b cdus and make sure that

3498

05:38:21,990 --> 05:38:17,280

that's not deformed that will have

3499

05:38:25,270 --> 05:38:23,750

i might be able to give you a better

3500

05:38:27,430 --> 05:38:25,280

call on that when i head over towards

3501

05:38:28,868 --> 05:38:27,440

the bolt

3502

05:38:32,390 --> 05:38:28,878

right now i'm still just kind of looking

3503

05:38:39,350 --> 05:38:32,400

at the edge where i folded

3504

05:38:42,868 --> 05:38:40,708

and we're also going to want some

3505

05:38:44,868 --> 05:38:42,878

photographs and then you can stow the

3506

05:38:47,030 --> 05:38:44,878

camera in the crew lock bag so over to

3507

05:38:48,390 --> 05:38:47,040

you when and where you take those photos

3508

05:38:50,470 --> 05:38:48,400

but then you can get rid of that camera

3509

05:38:52,868 --> 05:38:50,480

into the crew lock bag once raja it

3510

05:38:53,670 --> 05:38:52,878

makes it up to you

3511

05:39:17,910 --> 05:38:53,680

if

3512

05:39:22,628 --> 05:39:19,590

my fair lead out here is just to keep it

3513

05:39:24,868 --> 05:39:22,638

off the uh dj correct about a particular

3514

05:39:47,190 --> 05:39:24,878

a firm should keep it off the bga that's

3515

05:39:50,788 --> 05:39:49,140

i like the moi

3516

05:39:53,270 --> 05:39:50,798

[Music]

3517

05:39:55,830 --> 05:39:53,280

knot with deforms it's maybe a little

3518

05:39:57,590 --> 05:39:55,840

bit pulled towards the fold but it looks

3519

05:39:59,670 --> 05:39:57,600

really clear for

3520

05:40:05,830 --> 05:39:59,680

a robotic corridor

3521

05:40:05,840 --> 05:40:10,708

okay copy that good words thank you

3522

05:40:14,150 --> 05:40:12,470

all right and then uh

3523

05:40:17,030 --> 05:40:14,160

some more photographs we'd like to see

3524

05:40:18,708 --> 05:40:17,040

the final config of the mli and also if

3525

05:40:19,830 --> 05:40:18,718

you could get the ews antennas in the

3526

05:40:22,788 --> 05:40:19,840

field of view

3527

05:40:23,910 --> 05:40:22,798

and then option for you once raja makes

3528

05:40:52,548 --> 05:40:23,920

it out you can stow that camera in the

3529

05:41:01,350 --> 05:40:54,788

brian but

3530

05:41:01,360 --> 05:41:08,948

okay thank you

3531

05:41:14,390 --> 05:41:12,150

and from this angle light the folds are

3532

05:41:17,270 --> 05:41:14,400

blocking the antenna my view of the

3533

05:41:18,628 --> 05:41:17,280

antenna so i can't get this i might be

3534

05:41:24,070 --> 05:41:18,638

able to get better pictures when i go to

3535

05:41:24,080 --> 05:41:27,110

okay yeah we copy

3536

05:41:27,120 --> 05:41:34,948

i'm okay hang on to my camera for now

3537

05:41:34,958 --> 05:41:40,390

okay thanks caleb

3538

05:41:44,230 --> 05:41:42,548

ready for your words on uh short break

3539

05:41:45,590 --> 05:41:44,240

and reset

3540

05:41:50,788 --> 05:41:45,600

i'm gonna put the crew life back down

3541

05:41:55,830 --> 05:41:53,430

okay yeah so you can uh drop the crew

3542

05:41:57,830 --> 05:41:55,840

lock bag um in a position for you to

3543

05:41:59,190 --> 05:41:57,840

access h1 bolts

3544

05:42:01,110 --> 05:41:59,200

uh

3545

05:42:03,190 --> 05:42:01,120

and we have a recommended location but

3546

05:42:05,990 --> 05:42:03,200

uh something for you two to decide you

3547

05:42:08,628 --> 05:42:06,000

you can do a socket swap and put a 7 16

3548

05:42:10,548 --> 05:42:08,638

6 inch rigid socket onto your pgt rodger

3549

05:42:12,470 --> 05:42:10,558

or you can work together and hand off

3550

05:42:16,948 --> 05:42:12,480

the ratchet wrench either of those is

3551

05:42:21,750 --> 05:42:18,948

i'm right here raj i think it's easy to

3552

05:42:23,670 --> 05:42:21,760

hand it off this is your call though i

3553

05:42:25,510 --> 05:42:23,680

think that makes sense and i've got the

3554

05:42:27,430 --> 05:42:25,520

ratchet wrench in my hand if you want to

3555

05:42:29,350 --> 05:42:27,440

give me the first uh bolt we're driving

3556

05:42:31,190 --> 05:42:29,360

here

3557

05:42:32,708 --> 05:42:31,200

making torque on

3558

05:42:33,990 --> 05:42:32,718

i'm just dumping the crew lock bag but

3559

05:42:35,590 --> 05:42:34,000

we don't actually need it then if you've

3560

05:42:38,390 --> 05:42:35,600

already got the rafter correct

3561

05:42:42,310 --> 05:42:38,400

yep i've got a ratchet wrench and a long

3562

05:42:45,350 --> 05:42:42,320

pgt so okay let me drop this off of them

3563

05:42:53,590 --> 05:42:45,360

yep and uh handrail 2028 roger

3564

05:42:58,150 --> 05:42:55,750

raja what i'd suggest here is i can

3565

05:43:00,948 --> 05:42:58,160

break torque on bcd 1 with a ratchet

3566

05:43:02,868 --> 05:43:00,958

wrench and pass it to you and while i'm

3567

05:43:04,390 --> 05:43:02,878

resetting torque with my ptt you can

3568

05:43:07,270 --> 05:43:04,400

break to work on the next one and then

3569

05:43:09,910 --> 05:43:07,280

i'll hand you my pgc for you

3570

05:43:11,830 --> 05:43:09,920

let me get set up here

3571

05:43:14,868 --> 05:43:11,840

and we copy and we like that plan as

3572

05:43:18,470 --> 05:43:17,590

can i get a doe to break torque on vcd

3573

05:43:21,270 --> 05:43:18,480

one

3574

05:43:24,470 --> 05:43:21,280

okay on bcd u1 the outboard

3575

05:43:49,830 --> 05:43:24,480

h1 and h2 one quarter to one half turn

3576

05:43:52,948 --> 05:43:50,948

now with

3577

05:43:54,868 --> 05:43:52,958

the tie back on the multi-layer

3578

05:43:57,110 --> 05:43:54,878

insulation on the spare battery charge

3579

05:43:59,030 --> 05:43:57,120

discharge unit

3580

05:44:00,948 --> 05:43:59,040

kayla baron is now

3581

05:44:03,190 --> 05:44:00,958

breaking torque and resetting bolts on

3582

05:44:05,190 --> 05:44:03,200

spare battery charge discharge unit h1

3583

05:44:20,470 --> 05:44:05,200

to support robotic replacement or

3584

05:45:04,070 --> 05:44:55,510

h2

3585

05:45:05,830 --> 05:45:04,080

either hand off the uh the torque wrench

3586

05:45:09,190 --> 05:45:05,840

to sorry the ratchet rinse to roger or

3587

05:45:11,110 --> 05:45:09,200

you can sew it on your workstation

3588

05:45:12,628 --> 05:45:11,120

i'd recommend handing it off if you're

3589

05:45:14,708 --> 05:45:12,638

okay with that roger yep and you want me

3590

05:45:19,750 --> 05:45:14,718

to position it over here you want to try

3591

05:45:27,750 --> 05:45:21,190

if you want to put a red on it and take

3592

05:45:27,760 --> 05:45:32,868

local backlit take your time

3593

05:45:39,350 --> 05:45:35,750

and raja you're going to break torque on

3594

05:45:40,150 --> 05:45:39,360

b cdu 2 the inboard for you

3595

05:45:42,708 --> 05:45:40,160

and

3596

05:45:44,788 --> 05:45:42,718

kayla you're going to reset torque on

3597

05:45:46,390 --> 05:45:44,798

the one you just broke torque on and

3598

05:45:50,390 --> 05:45:46,400

i've got pgt settings when you're ready

3599

05:45:52,628 --> 05:45:50,400

and we're going to go h2 and then h1

3600

05:45:54,470 --> 05:45:52,638

okay

3601
05:45:56,230 --> 05:45:54,480
and so roger if you get to it you've got

3602
05:45:58,548 --> 05:45:56,240
time you can

3603
05:46:00,070 --> 05:45:58,558
you can break torque on h1 a quarter to

3604
05:46:02,868 --> 05:46:00,080
a half a turn

3605
05:46:06,548 --> 05:46:02,878
starting with h1 and kayla starting with

3606
05:46:09,830 --> 05:46:06,558
the two you just released h2 alpha six

3607
05:46:13,990 --> 05:46:11,990
copy that starting h2 alpha six

3608
05:46:16,708 --> 05:46:14,000
clockwise two

3609
05:46:18,150 --> 05:46:16,718
good read back on h2 the ratchet wrench

3610
05:46:37,190 --> 05:46:18,160
and he'll work on getting in position

3611
05:46:37,200 --> 05:46:48,230
uh

3612
05:46:48,240 --> 05:46:53,110
okay i have alpha six clockwise two sets

3613
05:46:53,120 --> 05:46:57,590

good rebecca will get in position

3614

05:46:57,600 --> 05:47:27,190

and uh h2 alpha 6 clock 2.

3615

05:47:33,030 --> 05:47:29,990

it and then i'll do this turn

3616

05:47:37,110 --> 05:47:35,030

all right i can argue with h1 or h2

3617

05:47:39,590 --> 05:47:37,120

first target frank told me you're

3618

05:47:41,430 --> 05:47:39,600

releasing you're starting with h1 one

3619

05:47:47,910 --> 05:47:41,440

quarter to one half turn breaking torque

3620

05:47:53,270 --> 05:47:51,350

i'm back in alpha six clockwise two and

3621

05:47:55,990 --> 05:47:53,280

i'll do h2

3622

05:47:59,590 --> 05:47:56,000

that's correct for kayla h2 here go to

3623

05:48:03,430 --> 05:48:02,150

there's one half turn on h1 on the

3624

05:48:04,310 --> 05:48:03,440

inboard

3625

05:48:06,628 --> 05:48:04,320

copy

3626

05:48:08,708 --> 05:48:06,638

inboard b cdu

3627

05:48:13,510 --> 05:48:08,718

one half turn on h1 you have a go to

3628

05:48:19,190 --> 05:48:16,628

like i've got a green light

3629

05:48:22,548 --> 05:48:19,200

uh torque is eight decimal five and that

3630

05:48:25,190 --> 05:48:22,558

was maybe a quarter of a turn

3631

05:48:27,590 --> 05:48:25,200

copy on h2 8.5 on the torque quarter

3632

05:48:45,430 --> 05:48:27,600

turn green light you have a go to move

3633

05:48:50,868 --> 05:48:47,750

you might be decimal four on the torque

3634

05:48:55,910 --> 05:48:50,878

about a quarter turn on each one

3635

05:49:08,948 --> 05:48:55,920

copy bcdu1 h1 quarter turn green light

3636

05:49:12,708 --> 05:49:10,310

and kayla we're going to use the same

3637

05:49:15,590 --> 05:49:12,718

pgt settings to reset torque on the

3638

05:49:16,788 --> 05:49:15,600

inboard bcdu2

3639

05:49:20,390 --> 05:49:16,798

so over to you

3640

05:49:22,150 --> 05:49:20,400

on the handoff for you doing that

3641

05:49:23,750 --> 05:49:22,160

yeah if my grinder is good with it i'll

3642

05:49:25,910 --> 05:49:23,760

just handle my pgp

3643

05:49:30,470 --> 05:49:25,920

over there

3644

05:49:36,070 --> 05:49:32,788

and uh h2 torque is broken sorry one

3645

05:49:39,430 --> 05:49:36,080

half turn thank you half turn on h2 yeah

3646

05:49:41,030 --> 05:49:39,440

okay pgt same settings you can stow the

3647

05:49:43,750 --> 05:49:41,040

ratchet wrench

3648

05:49:45,670 --> 05:49:43,760

uh on your crew in the crew lock bag or

3649

05:49:49,430 --> 05:49:45,680

on your mini workstation and get ready

3650

05:49:55,270 --> 05:49:52,670

[Music]

3651

05:49:58,390 --> 05:49:55,280

[Applause]

3652

05:50:02,548 --> 05:49:58,400

okay that works alpha six clock two and

3653

05:50:05,670 --> 05:50:02,558

we're gonna start with h2

3654

05:50:05,680 --> 05:50:09,750

alpha six clockwise two

3655

05:50:09,760 --> 05:50:14,230

good read

3656

05:50:19,270 --> 05:50:16,788

if you're just joining us we are

3657

05:50:22,390 --> 05:50:19,280

four hours and eight minutes into

3658

05:50:27,830 --> 05:50:22,400

today's spacewalk where nasa astronauts

3659

05:50:35,990 --> 05:50:30,470

breaking torque and resetting bolts on

3660

05:50:39,190 --> 05:50:37,190

3.1

3661

05:50:50,390 --> 05:50:39,200

h2

3662

05:51:01,830 --> 05:50:53,270

about an hour earlier the crew completed

3663

05:51:06,948 --> 05:51:03,830

that was a half a turn green light eight

3664

05:51:09,910 --> 05:51:06,958

point two fh one

3665

05:51:10,708 --> 05:51:09,920

h1 half a turn green light uh i show a

3666

05:51:12,230 --> 05:51:10,718

good

3667

05:51:13,670 --> 05:51:12,240

cdu2

3668

05:51:15,750 --> 05:51:13,680

now you can stow the ratchet in a crew

3669

05:51:17,590 --> 05:51:15,760

lock back

3670

05:51:19,750 --> 05:51:17,600

a modification kit is the support

3671

05:51:30,948 --> 05:51:19,760

structures needed for future irosa or

3672

05:51:58,548 --> 05:51:35,430

that's our extra tpa bag ratchet

3673

05:52:02,948 --> 05:52:01,270

i'm going to go back toward uh 2008 and

3674

05:52:05,350 --> 05:52:02,958

see if i can get good pictures of the

3675

05:52:06,708 --> 05:52:05,360

inboard

3676

05:52:09,510 --> 05:52:06,718

uh

3677

05:52:11,270 --> 05:52:09,520

enough for you

3678

05:52:13,430 --> 05:52:11,280

okay copy good plan get a picture of it

3679

05:52:17,510 --> 05:52:13,440

right here too if you want

3680

05:52:39,830 --> 05:52:19,270

won't you go this way anyway i'm not

3681

05:52:43,110 --> 05:52:41,190

all right at least if i'm just calling

3682

05:53:14,310 --> 05:52:43,120

so let you know

3683

05:53:14,320 --> 05:53:25,590

thank you

3684

05:53:30,830 --> 05:53:27,030

let's put my feet around can you see if

3685

05:53:35,910 --> 05:53:32,948

underneath all right now it's in front

3686

05:53:46,310 --> 05:53:35,920

of you now it's crossing over your

3687

05:53:51,030 --> 05:53:48,708

with time permitting being almost an

3688

05:53:53,190 --> 05:53:51,040

hour and a half ahead of schedule the

3689

05:53:55,590 --> 05:53:53,200

duo will complete some get ahead get

3690

05:53:57,350 --> 05:53:55,600

ahead tasks which include breaking

3691

05:53:59,590 --> 05:53:57,360

torque and resetting bolts on multiple

3692

05:54:02,470 --> 05:53:59,600

orbital replacement units stored on the

3693

05:54:07,910 --> 05:54:02,480

3a integrated electronics assembly on

3694

05:54:12,788 --> 05:54:10,708

and hey roger got good pictures for you

3695

05:54:14,708 --> 05:54:12,798

awesome thank you for those kayla and

3696

05:54:16,390 --> 05:54:14,718

roger over to you on uh where we're

3697

05:54:17,670 --> 05:54:16,400

going to put that ratchet wrench uh you

3698

05:54:18,868 --> 05:54:17,680

can hold it on your workstation for a

3699

05:54:20,868 --> 05:54:18,878

while until you get back to the strut

3700

05:54:22,788 --> 05:54:20,878

bag or you can uh stow it in the crew

3701

05:54:26,390 --> 05:54:22,798

lock bag

3702

05:54:28,310 --> 05:54:26,400

can find the place for it

3703

05:54:31,270 --> 05:54:28,320

that sounds good are we is the next

3704

05:54:34,948 --> 05:54:31,280

thing we're gonna break and talk with

3705

05:54:36,548 --> 05:54:34,958

okay so uh let's say when raja finishes

3706

05:54:38,628 --> 05:54:36,558

that i'll give you guys a big picture

3707

05:54:40,868 --> 05:54:38,638

and and get your uh

3708

05:54:56,230 --> 05:54:40,878

how you feel about it uh so give me one

3709

05:54:59,590 --> 05:54:57,830

and yes just to set the stage for you

3710

05:55:00,628 --> 05:54:59,600

guys you're about an hour and a half

3711

05:55:02,628 --> 05:55:00,638

ahead

3712

05:55:04,470 --> 05:55:02,638

doing great you're flying through these

3713

05:55:06,548 --> 05:55:04,480

most recent tasks

3714

05:55:07,830 --> 05:55:06,558

and so i'll uh tell you what we're

3715

05:55:08,788 --> 05:55:07,840

thinking and you let us know what you

3716

05:55:09,990 --> 05:55:08,798

think

3717

05:55:13,350 --> 05:55:10,000

roger give me a call when you're done

3718

05:55:16,070 --> 05:55:15,030

uh do you have an off hand if there are

3719

05:55:17,910 --> 05:55:16,080

already three wrecks in this bag

3720

05:55:19,670 --> 05:55:17,920

otherwise i'll hold it adjustable before

3721

05:55:21,750 --> 05:55:19,680

i pull everything out looking for it

3722

05:55:29,430 --> 05:55:21,760

let's use my other adjustable

3723

05:55:33,670 --> 05:55:31,670

yeah there may not be one in that bag

3724

05:55:35,430 --> 05:55:33,680

roger but you have quite a few or you

3725

05:56:04,150 --> 05:55:35,440

have an adjustable on you that you can

3726

05:56:04,160 --> 05:56:43,670

huh

3727

05:56:46,390 --> 05:56:45,030

it's realized kale since we remember

3728

05:56:47,670 --> 05:56:46,400

open the crew lock bag i never took the

3729

05:56:49,510 --> 05:56:47,680

gopro out when we got here though that's

3730

05:56:51,990 --> 05:56:49,520

okay no problem

3731

05:56:54,230 --> 05:56:52,000

nice to have

3732

05:57:15,270 --> 05:56:54,240

second ratchet wrench

3733

05:57:20,390 --> 05:57:17,270

i assume this true black lives matter

3734

05:57:25,350 --> 05:57:21,430

okay

3735

05:57:30,548 --> 05:57:27,510

uh a a firm that would that's correct

3736

05:57:32,708 --> 05:57:30,558

you guys uh and so uh you can uh start

3737

05:57:34,470 --> 05:57:32,718

working on that if you can spare some

3738

05:57:37,590 --> 05:57:34,480

some brain bites to listen to this the

3739

05:57:38,868 --> 05:57:37,600

big picture we're looking at

3740

05:57:42,310 --> 05:57:38,878

the bolt

3741

05:57:44,390 --> 05:57:42,320

three alpha iea

3742

05:57:47,830 --> 05:57:44,400

we'll move to that get ahead and then

3743

05:57:48,628 --> 05:57:47,840

we'll uh move to the one alpha bolts as

3744

05:57:50,390 --> 05:57:48,638

well

3745

05:57:52,310 --> 05:57:50,400

and then that's about an hour's worth of

3746

05:57:54,310 --> 05:57:52,320

tasks and that still leaves us about 20

3747

05:58:00,150 --> 05:57:54,320

minutes to do ams

3748

05:58:04,548 --> 05:58:02,230

we're feeling good about that plan and

3749

05:58:06,310 --> 05:58:04,558

maybe we could just check in after the

3750

05:58:07,670 --> 05:58:06,320

three alpha before making the call to go

3751

05:58:09,270 --> 05:58:07,680

to one alpha but raj and i are both

3752

05:58:10,868 --> 05:58:09,280

doing good

3753

05:58:12,948 --> 05:58:10,878

absolutely we'll check in with you and

3754

05:58:16,230 --> 05:58:12,958

don't be afraid to check in with us

3755

05:58:19,030 --> 05:58:16,240

okay so with that uh yes raja you can

3756

05:58:20,788 --> 05:58:19,040

retrieve the crew lock bag off of 2026

3757

05:58:22,628 --> 05:58:20,798

and put that on your brt

3758

05:58:36,150 --> 05:58:22,638

and then we'll take a glove have a

3759

05:58:40,868 --> 05:58:37,990

and then kayla we've got an audible for

3760

05:58:43,030 --> 05:58:40,878

you when you're ready

3761

05:58:45,590 --> 05:58:43,040

i'm ready for an audible

3762

05:58:48,548 --> 05:58:45,600

okay so we'd like you to tempstow the

3763

05:58:49,990 --> 05:58:48,558

strut bag out of the way of the s4 iea

3764

05:58:51,910 --> 05:58:50,000

oru's

3765

05:58:53,350 --> 05:58:51,920

as desired and we've got recommended

3766

05:58:56,150 --> 05:58:53,360

handrails once you get over there i can

3767

06:00:05,910 --> 05:58:58,548

yeah i'll head that way and take a look

3768

06:00:08,948 --> 06:00:07,990

and we have about 40 seconds to hand

3769

06:00:10,470 --> 06:00:08,958

over

3770

06:00:13,270 --> 06:00:10,480

ev1 when you have a free finger if you

3771

06:00:14,470 --> 06:00:13,280

could get your heka on and raj is same

3772

06:00:22,548 --> 06:00:14,480

to you

3773

06:00:29,110 --> 06:00:24,070

that in a minute here once i took down

3774

06:00:36,788 --> 06:00:30,948

and i got about a green light on my

3775

06:00:36,798 --> 06:00:41,430

yes please kayla power cycle

3776
06:00:44,830 --> 06:00:42,868
either my green lights are on they both

3777
06:01:19,910 --> 06:00:44,840
are on

3778
06:01:24,708 --> 06:01:22,070
i think we could probably just

3779
06:01:26,548 --> 06:01:24,718
dab it out of our way but

3780
06:01:30,708 --> 06:01:26,558
i'm happy to move it if you think that's

3781
06:01:34,790 --> 06:01:31,990
and kayla just caught the end of that

3782
06:01:37,590 --> 06:01:34,800
was that for the grounder for raja

3783
06:01:39,670 --> 06:01:37,600
[Music]

3784
06:01:42,150 --> 06:01:39,680
that was for you like i'm at the strut

3785
06:01:43,510 --> 06:01:42,160
bag

3786
06:01:44,628 --> 06:01:43,520
probably about it out of the way but

3787
06:01:47,750 --> 06:01:44,638
maybe i'll

3788
06:01:48,868 --> 06:01:47,760

what i'd suggest is moving the

3789

06:01:51,350 --> 06:01:48,878

bag to

3790

06:01:53,270 --> 06:01:51,360

two two three nine

3791

06:01:55,030 --> 06:01:53,280

which is the handrail underneath the

3792

06:01:56,628 --> 06:01:55,040

triangle

3793

06:02:00,708 --> 06:01:56,638

and then we should be able to kind of

3794

06:02:08,150 --> 06:02:02,230

okay we'll go with that two two three

3795

06:02:08,160 --> 06:02:12,548

all right i got the true lock

3796

06:02:15,750 --> 06:02:14,310

okay before that we'd like a glove

3797

06:02:20,230 --> 06:02:15,760

happen gauntlet check from you and then

3798

06:02:25,830 --> 06:02:23,110

copy my hat is dry

3799

06:02:27,670 --> 06:02:25,840

uh another smudge on my left middle

3800

06:02:30,230 --> 06:02:27,680

finger other than that

3801

06:02:31,290 --> 06:02:30,240

gloves look to be in good condition

3802

06:02:32,628 --> 06:02:31,300

and my gauntlets are down

3803

06:02:34,310 --> 06:02:32,638

[Applause]

3804

06:02:36,070 --> 06:02:34,320

if you left middle finger smudges

3805

06:02:37,750 --> 06:02:36,080

otherwise good conditions dry half and

3806

06:02:41,590 --> 06:02:37,760

gauntlets are in place and you can now

3807

06:02:44,310 --> 06:02:41,600

translate to s4 handrail 2206

3808

06:02:45,590 --> 06:02:44,320

that is inboard on the radiator side of

3809

06:02:46,948 --> 06:02:45,600

the ia

3810

06:02:49,430 --> 06:02:46,958

and then translate over to the

3811

06:02:51,110 --> 06:02:49,440

non-radiator side via the inboard

3812

06:02:53,190 --> 06:02:51,120

inboard edge of the ia

3813

06:02:58,628 --> 06:02:53,200

and then back out board toward the uh

3814

06:03:03,030 --> 06:03:00,788

thanks

3815

06:03:04,948 --> 06:03:03,040

bag with me

3816

06:03:07,430 --> 06:03:04,958

once you get to

3817

06:03:09,670 --> 06:03:07,440

the three alpha iea you can stow the

3818

06:03:10,628 --> 06:03:09,680

crew lock bag as desired

3819

06:03:13,910 --> 06:03:10,638

and

3820

06:03:16,310 --> 06:03:13,920

what we're moving to is the three alpha

3821

06:03:17,750 --> 06:03:16,320

bolt get ahead so you wanna have it in a

3822

06:03:20,548 --> 06:03:17,760

place where you can access it but it's

3823

06:03:24,948 --> 06:03:20,558

not in your way

3824

06:03:28,948 --> 06:03:26,788

we'll need the ratchet wrench from that

3825

06:03:32,868 --> 06:03:28,958

bag grinder

3826

06:03:45,430 --> 06:03:34,548

more inboard corner or just bring it all

3827

06:03:49,270 --> 06:03:47,270

and the inboard corner would be a better

3828

06:03:51,990 --> 06:03:49,280

spot for the end of the task if you feel

3829

06:03:54,230 --> 06:03:52,000

comfortable translating with the ratchet

3830

06:03:55,510 --> 06:03:54,240

outboard to the

3831

06:03:57,430 --> 06:03:55,520

so are you

3832

06:03:59,830 --> 06:03:57,440

yeah i don't mind it

3833

06:04:16,708 --> 06:03:59,840

always ready when we start to put away

3834

06:04:20,788 --> 06:04:18,708

now four hours and 22 minutes into

3835

06:04:22,548 --> 06:04:20,798

today's space walk the eb crew has

3836

06:04:25,110 --> 06:04:22,558

completed a tie back up the battery

3837

06:04:27,670 --> 06:04:25,120

charge discharge unit multi-layer

3838

06:04:29,910 --> 06:04:27,680

insulation and are approximately 90

3839

06:04:32,708 --> 06:04:29,920

minutes ahead of the timeline the crew

3840

06:04:34,150 --> 06:04:32,718

will begin breaking torque on the 3a

3841

06:04:38,628 --> 06:04:34,160

oru's

3842

06:04:43,030 --> 06:04:41,270

we will want the scoop for the middle

3843

06:04:44,548 --> 06:04:43,040

the middle one let me look at the map

3844

06:04:47,030 --> 06:04:44,558

here

3845

06:04:51,430 --> 06:04:47,040

oh you

3846

06:04:56,628 --> 06:04:53,510

we'll want to get into it

3847

06:04:59,430 --> 06:04:56,638

the middle one is the one that's reset

3848

06:05:01,670 --> 06:04:59,440

teresa so are you

3849

06:05:02,868 --> 06:05:01,680

um between the more proud ones right

3850

06:05:05,030 --> 06:05:02,878

here

3851
06:05:09,990 --> 06:05:05,040
yeah okay so i can put the crew back on

3852
06:05:14,628 --> 06:05:12,390
and caleb before you get going uh can we

3853
06:05:18,868 --> 06:05:14,638
have a glove hat and gauntlet check from

3854
06:05:18,878 --> 06:05:47,430
yeah we'll go

3855
06:05:51,670 --> 06:05:49,670
well the same as before with some

3856
06:05:52,948 --> 06:05:51,680
changes to my smudging some of it's

3857
06:05:56,150 --> 06:05:52,958
rubbed off

3858
06:05:57,830 --> 06:05:56,160
half is dry gauntlets are down

3859
06:05:59,750 --> 06:05:57,840
copy dry half the gauntlets and smudge

3860
06:06:02,390 --> 06:05:59,760
is continuing to translate

3861
06:06:05,510 --> 06:06:02,400
and uh okay all right big picture plan

3862
06:06:07,350 --> 06:06:05,520
is we're going to have uh ev2 lead

3863
06:06:09,910 --> 06:06:07,360

we're going to move over you to ru and

3864

06:06:13,110 --> 06:06:09,920

uh eb2 will break the torque on h1 and

3865

06:06:15,270 --> 06:06:13,120

then h2 and ev1 will follow resetting

3866

06:06:16,070 --> 06:06:15,280

torque on two then one

3867

06:06:19,110 --> 06:06:16,080

so

3868

06:06:21,030 --> 06:06:19,120

one to two and then two then one

3869

06:06:23,110 --> 06:06:21,040

and uh

3870

06:06:24,708 --> 06:06:23,120

all right so

3871

06:06:27,110 --> 06:06:24,718

we're gonna do the releases one quarter

3872

06:06:29,030 --> 06:06:27,120

to one half turn and then reinstall

3873

06:06:30,868 --> 06:06:29,040

uh

3874

06:06:33,350 --> 06:06:30,878

with the pgt

3875

06:06:36,390 --> 06:06:33,360

uh and then uh we're gonna start on the

3876

06:06:38,390 --> 06:06:36,400

three alpha two d cdu that's

3877

06:06:39,430 --> 06:06:38,400

the outboard

3878

06:06:41,910 --> 06:06:39,440

uh

3879

06:06:43,590 --> 06:06:41,920

dcu that was near the

3880

06:06:48,948 --> 06:06:43,600

forward outboard corner where you stowed

3881

06:06:57,270 --> 06:06:50,708

roger i'm looking at it and i'm looking

3882

06:07:01,830 --> 06:06:58,390

copy that

3883

06:07:06,070 --> 06:07:01,840

and so uh with the ratchet wrench we

3884

06:07:11,760 --> 06:07:07,830

on h1

3885

06:07:11,760 --> 06:07:11,770

on three alpha 2b cdu

3886

06:07:11,770 --> 06:07:16,230

[Applause]

3887

06:07:16,240 --> 06:07:28,470

for rather

3888

06:07:49,110 --> 06:07:31,270

yeah you're uh your knobs on top

3889

06:07:53,270 --> 06:07:51,270

you need to loosen your outboard knob to

3890

06:07:58,070 --> 06:07:53,280

get that joint to rotate

3891

06:07:58,080 --> 06:08:03,670

okay we'll see just flip it 180 around

3892

06:08:03,680 --> 06:08:13,030

[Music]

3893

06:08:17,830 --> 06:08:16,708

i think if you push down on the

3894

06:08:22,948 --> 06:08:17,840

point that's

3895

06:08:27,670 --> 06:08:24,470

have more leverage

3896

06:08:40,788 --> 06:08:29,270

pull it the rest of the way around to

3897

06:08:45,190 --> 06:08:43,670

don't rotate it anymore now like

3898

06:08:52,070 --> 06:08:45,200

pull that around to the front yeah there

3899

06:08:55,590 --> 06:08:54,230

um no do you

3900

06:08:56,788 --> 06:08:55,600

you ended up back where you started

3901
06:09:05,270 --> 06:08:56,798
actually

3902
06:09:05,280 --> 06:09:12,948
what you just did

3903
06:09:17,910 --> 06:09:14,788
so push it down until the top knob is

3904
06:09:24,310 --> 06:09:17,920
facing your feet and it is now

3905
06:09:27,670 --> 06:09:25,910
yeah don't rotate it anymore that

3906
06:09:29,110 --> 06:09:27,680
direction

3907
06:09:33,030 --> 06:09:29,120
in the ball stack

3908
06:09:40,230 --> 06:09:34,708
not for

3909
06:09:40,240 --> 06:09:49,830
yeah pull with your thumb

3910
06:09:49,840 --> 06:09:53,480
here

3911
06:09:53,490 --> 06:09:56,708
[Applause]

3912
06:09:56,718 --> 06:10:01,750
i flipped around again

3913
06:10:06,948 --> 06:10:04,470

are you uncomfortable leaving it on top

3914

06:10:08,628 --> 06:10:06,958

i just can't it's it's going to i can't

3915

06:10:10,948 --> 06:10:08,638

take my jaw okay

3916

06:10:17,110 --> 06:10:10,958

i'm going to come help you with it

3917

06:10:17,120 --> 06:10:26,628

if you guys remember breaking torch but

3918

06:10:40,470 --> 06:10:27,910

i think i can get my hand on the smell

3919

06:10:40,480 --> 06:10:47,990

uh

3920

06:10:52,868 --> 06:10:50,708

an orbital night time as the crew and

3921

06:11:13,030 --> 06:10:52,878

the international space station fly

3922

06:11:18,070 --> 06:11:15,990

with extra time decided to go forward

3923

06:11:19,750 --> 06:11:18,080

with a get ahead task

3924

06:11:21,590 --> 06:11:19,760

which includes breaking torque and

3925

06:11:23,590 --> 06:11:21,600

resetting bolts on multiple orbital

3926

06:11:25,830 --> 06:11:23,600

replacement units stored on the 3a

3927

06:11:31,510 --> 06:11:25,840

integrated electronics assembly on the

3928

06:11:34,230 --> 06:11:32,948

and so for this first one we're going to

3929

06:11:36,470 --> 06:11:34,240

break torque and then we're also going

3930

06:11:38,470 --> 06:11:36,480

to fully release h1

3931

06:11:40,548 --> 06:11:38,480

but starting with the ratchet wrench

3932

06:11:42,070 --> 06:11:40,558

we're going to break torque one quarter

3933

06:12:44,230 --> 06:11:42,080

to one half turn

3934

06:13:34,070 --> 06:12:45,830

sounds good

3935

06:13:39,270 --> 06:13:35,590

all right roger and you're going to the

3936

06:13:44,070 --> 06:13:39,280

3 alpha 2 b cdu that is the forward

3937

06:13:44,080 --> 06:13:51,830

h2 first

3938

06:13:56,470 --> 06:13:54,150

and a couple cautions for you too if the

3939

06:13:58,230 --> 06:13:56,480

scoop needed uh if the scoops needed do

3940

06:14:00,470 --> 06:13:58,240

not use h2

3941

06:14:01,670 --> 06:14:00,480

uh for

3942

06:14:02,830 --> 06:14:01,680

uh

3943

06:14:06,548 --> 06:14:02,840

batteries on

3944

06:14:10,150 --> 06:14:06,558

s4 and then avoid putting loads into the

3945

06:14:11,910 --> 06:14:10,160

pfcs h1 or h2

3946

06:14:17,270 --> 06:14:11,920

and we can talk you onto those when you

3947

06:14:17,280 --> 06:14:22,708

did h2 for a second

3948

06:14:22,718 --> 06:14:28,150

both

3949

06:14:28,160 --> 06:14:34,310

it's one

3950

06:14:43,510 --> 06:14:35,990

hey stand by stand by for me for a

3951

06:14:43,520 --> 06:14:59,190

i want me to take one of your knobs

3952

06:15:02,070 --> 06:15:00,708

okay now i was just uh we were just

3953

06:15:03,910 --> 06:15:02,080

verifying something when you guys are

3954

06:15:09,990 --> 06:15:03,920

done uh adjusting that brt then you have

3955

06:15:13,270 --> 06:15:11,350

excuse me excuse me i'm sorry no

3956

06:15:16,390 --> 06:15:13,280

negative it's on h1 you have a go to

3957

06:15:16,400 --> 06:15:19,910

okay h1

3958

06:15:25,350 --> 06:15:23,190

uh that rhett i think is locked

3959

06:15:27,270 --> 06:15:25,360

at the moment you're that's what

3960

06:15:28,470 --> 06:15:27,280

affected the ratchet

3961

06:15:32,070 --> 06:15:28,480

and what do you want me to do with your

3962

06:15:43,930 --> 06:15:32,080

vrt here i think it's the yaw joints so

3963

06:15:52,868 --> 06:15:44,430

[Music]

3964

06:15:52,878 --> 06:16:02,548

it's fully tight

3965

06:16:17,110 --> 06:16:04,230

okay i'll move out for it if you move

3966

06:16:21,750 --> 06:16:20,310

hey 15 seconds to a handover

3967

06:16:24,470 --> 06:16:21,760

and if you get to it you can do one

3968

06:16:29,270 --> 06:16:24,480

quarter to one half turn on h1 to break

3969

06:16:52,470 --> 06:16:31,110

that'll be one third of one half on each

3970

06:16:56,548 --> 06:16:54,390

if you're just joining us we are four

3971

06:16:59,110 --> 06:16:56,558

hours and 35 minutes into

3972

06:17:02,628 --> 06:16:59,120

today's space walk with nasa astronauts

3973

06:17:05,670 --> 06:17:02,638

kayla baron ev1 donning the red stripes

3974

06:17:07,830 --> 06:17:05,680

and rash acharya ev2 donning the suit

3975

06:17:10,708 --> 06:17:07,840

with no stripes

3976

06:17:12,548 --> 06:17:10,718

they are currently

3977

06:17:14,868 --> 06:17:12,558

they have successfully installed a 3a

3978

06:17:17,030 --> 06:17:14,878

modification kit and

3979

06:17:20,788 --> 06:17:17,040

tied back some multi-layer insulation on

3980

06:17:24,310 --> 06:17:20,798

spare battery charge discharge units

3981

06:17:26,150 --> 06:17:24,320

copy one half turn on each one

3982

06:17:27,990 --> 06:17:26,160

being ahead of schedule the two decided

3983

06:17:30,230 --> 06:17:28,000

to move forward on some get ahead task

3984

06:17:36,788 --> 06:17:30,240

for a future

3985

06:17:40,548 --> 06:17:38,310

they have began breaking torque and

3986

06:17:42,470 --> 06:17:40,558

resetting bolts on multiple orbital

3987

06:17:45,030 --> 06:17:42,480

replacement units stored on the 3a

3988

06:17:46,150 --> 06:17:45,040

integrated electronics assembly on the

3989

06:17:50,390 --> 06:17:46,160

six

3990

06:17:50,400 --> 06:17:54,470

and one half turn on h2

3991

06:17:54,480 --> 06:17:56,708

yeah

3992

06:18:15,830 --> 06:17:58,548

one after on h2

3993

06:18:19,750 --> 06:18:18,230

and then raja if you're just if you want

3994

06:18:21,670 --> 06:18:19,760

to just scoot over to the next ru it's

3995

06:18:22,868 --> 06:18:21,680

the three alpha one which is just one

3996

06:18:25,750 --> 06:18:22,878

inboard

3997

06:18:27,830 --> 06:18:25,760

uh that vcdu is next

3998

06:18:30,470 --> 06:18:27,840

and kayla for you i've got pgt settings

3999

06:18:33,670 --> 06:18:30,480

when you're ready

4000

06:18:33,680 --> 06:18:37,670

right here

4001

06:18:37,680 --> 06:18:40,788

i say again kill

4002

06:18:40,798 --> 06:18:57,030

i said i'll let you know in a minute

4003

06:18:59,910 --> 06:18:58,628

back uh

4004

06:19:02,468 --> 06:18:59,920

in front of me

4005

06:19:06,150 --> 06:19:04,150

i want to block your access either

4006

06:19:07,670 --> 06:19:06,160

though

4007

06:19:09,830 --> 06:19:07,680

you just push down here you're flat as i

4008

06:19:13,990 --> 06:19:09,840

can't do this

4009

06:19:19,110 --> 06:19:16,390

okay hey a reminder for both of you

4010

06:19:21,110 --> 06:19:19,120

copy yep ev1 and ev2 just a reminder you

4011

06:19:22,948 --> 06:19:21,120

cannot tether a

4012

06:19:24,468 --> 06:19:22,958

waste tether or mini workstation

4013

06:19:29,990 --> 06:19:24,478

effector to the box that you're working

4014

06:19:33,350 --> 06:19:32,070

move by the second i'm not working on it

4015

06:19:35,830 --> 06:19:33,360

you can actually stabilize your legs

4016

06:19:37,670 --> 06:19:35,840

through 2k lff i think i'm good

4017

06:19:39,788 --> 06:19:37,680

ready for settings

4018

06:19:49,510 --> 06:19:39,798

all right kayla bravo seven

4019

06:19:58,150 --> 06:19:53,110

all the seven counter southwest two

4020

06:20:08,628 --> 06:20:00,628

okay fully release h1

4021

06:20:12,548 --> 06:20:10,628

and raja on three alpha one you can

4022

06:20:15,270 --> 06:20:12,558

break torque on h1

4023

06:20:35,110 --> 06:20:15,280

one quarter to one half turn

4024

06:20:38,310 --> 06:20:36,548

and kayla we're expecting about four to

4025

06:20:41,590 --> 06:20:38,320

five turns to release that but we're

4026

06:20:43,910 --> 06:20:43,030

okay

4027

06:20:45,590 --> 06:20:43,920

and

4028

06:20:46,628 --> 06:20:45,600

i believe it's fully released i actually

4029

06:20:48,948 --> 06:20:46,638

did about

4030

06:20:50,868 --> 06:20:48,958

10 turns and the little um like

4031

06:20:53,670 --> 06:20:50,878

spring-loaded

4032

06:20:55,590 --> 06:20:53,680

block unlock thing is ratcheting of the

4033

06:20:56,948 --> 06:20:55,600

drive

4034

06:20:59,190 --> 06:20:56,958

copy i think that means it's fully

4035

06:21:02,310 --> 06:20:59,200

released

4036

06:21:04,708 --> 06:21:02,320

all right h1 on three alpha two and now

4037

06:21:07,030 --> 06:21:04,718

we're going to reinstall

4038

06:21:08,468 --> 06:21:07,040

uh h2

4039

06:21:10,948 --> 06:21:08,478

and i've got pgc settings for you kayla

4040

06:21:13,110 --> 06:21:10,958

when you're ready

4041

06:21:16,230 --> 06:21:13,120

ready

4042

06:21:23,430 --> 06:21:16,240

alpha six clockwise two alpha six clock

4043

06:21:26,868 --> 06:21:25,270

i'm going to see if i can stay on the

4044

06:21:29,750 --> 06:21:26,878

forward edge here

4045

06:21:35,190 --> 06:21:29,760

so that we can work simultaneously

4046

06:21:41,750 --> 06:21:37,350

got my professor

4047

06:21:41,760 --> 06:21:52,868

copy

4048

06:21:52,878 --> 06:22:16,788

alpha six clock two

4049

06:22:19,750 --> 06:22:18,548

okay and you're going to drive to torque

4050

06:22:24,948 --> 06:22:19,760

h2

4051

06:22:30,230 --> 06:22:28,390

and i'm lining up to get h1 of the next

4052

06:22:32,230 --> 06:22:30,240

uh leave it here the one inboard of our

4053

06:22:34,628 --> 06:22:32,240

trailer is working copy yep that's a

4054

06:22:37,110 --> 06:22:34,638

three alpha one the middle vcdv and you

4055

06:22:40,948 --> 06:22:37,120

can release brake torque on h1 one

4056

06:22:48,070 --> 06:22:44,070

i think i got a red light low torque

4057

06:23:16,708 --> 06:22:49,430

okay hey firm getting a good body

4058

06:23:22,150 --> 06:23:18,708

copy green light a half a turn what were

4059

06:23:33,190 --> 06:23:24,390

let's say half turn

4060

06:23:38,070 --> 06:23:34,070

okay

4061

06:23:40,310 --> 06:23:38,080

and stand by force please

4062

06:23:50,468 --> 06:23:40,320

can you check the pgd settings on that

4063

06:23:54,390 --> 06:23:52,628

and it's actually an alpha seven slide

4064

06:23:56,788 --> 06:23:54,400

it out and bumped when i was recalling

4065

06:23:56,798 --> 06:24:01,270

okay copy standby

4066

06:24:01,280 --> 06:24:05,270

h1 torque is broken

4067

06:24:05,280 --> 06:24:11,510

happy half a turn on three alpha one h-1

4068

06:24:23,030 --> 06:24:13,350

roger's coming back this direction if

4069

06:24:27,430 --> 06:24:26,070

okay kayla that h2 is good as is we're

4070

06:24:29,590 --> 06:24:27,440

going to continue

4071

06:24:32,628 --> 06:24:29,600

and roger copy that you broke torque on

4072

06:24:37,110 --> 06:24:32,638

h1 and h2 on the middle b

4073

06:24:37,120 --> 06:24:47,030

okay h2 in work topic

4074

06:24:50,070 --> 06:24:48,510

h2 is spoken

4075

06:24:53,830 --> 06:24:50,080

[Applause]

4076
06:24:55,910 --> 06:24:53,840
copy three alpha one h2 half a turn

4077
06:24:59,030 --> 06:24:55,920
and now we are going to

4078
06:25:02,548 --> 06:24:59,040
reinstall h2

4079
06:25:05,110 --> 06:25:02,558
on the middle b cdu

4080
06:25:09,270 --> 06:25:05,120
and kayla it will be alpha six clockwise

4081
06:25:23,350 --> 06:25:11,110
we'll head over there once grinder heads

4082
06:25:33,590 --> 06:25:25,030
i'm watching your tethers right

4083
06:25:38,070 --> 06:25:36,310
and roger your next target is the next

4084
06:25:39,990 --> 06:25:38,080
to the next or you in board that's a

4085
06:25:41,750 --> 06:25:40,000
ddcu

4086
06:25:44,548 --> 06:25:41,760
and the same thing you're gonna break

4087
06:25:46,310 --> 06:25:44,558
torque quarter one half on h1

4088
06:25:50,548 --> 06:25:46,320

you can wait until caleb's done over to

4089

06:25:54,468 --> 06:25:53,590

okay i've got alpha six clockwise two

4090

06:25:57,190 --> 06:25:54,478

sets

4091

06:25:59,430 --> 06:25:57,200

and i understand i'm resetting torque on

4092

06:26:01,110 --> 06:25:59,440

h2

4093

06:26:02,868 --> 06:26:01,120

that is a good read back good settings

4094

06:26:12,548 --> 06:26:02,878

alpha 6 clock 2

4095

06:26:14,708 --> 06:26:13,350

my

4096

06:26:17,430 --> 06:26:14,718

good

4097

06:26:21,030 --> 06:26:17,440

torque at eight decimal two

4098

06:26:22,628 --> 06:26:21,040

and that was about a quarter turn

4099

06:26:25,670 --> 06:26:22,638

quarter turn green light eight point two

4100

06:26:27,270 --> 06:26:25,680

on h2 of three alpha one

4101
06:26:28,948 --> 06:26:27,280
and now we're going to

4102
06:26:32,868 --> 06:26:28,958
torque h

4103
06:26:32,878 --> 06:26:51,270
towards h1

4104
06:26:51,280 --> 06:27:06,230
h

4105
06:27:14,788 --> 06:27:09,510
and roger say again please

4106
06:27:18,788 --> 06:27:17,590
okay copy it that's the three alpha ddcu

4107
06:27:23,030 --> 06:27:18,798
h1

4108
06:27:28,628 --> 06:27:26,150
and i'm at each one i'm still in alpha

4109
06:27:34,230 --> 06:27:28,638
six clockwise two

4110
06:27:34,240 --> 06:27:46,948
all right and your way

4111
06:27:50,948 --> 06:27:48,628
green light eight decimal two on the

4112
06:27:54,390 --> 06:27:50,958
torque

4113
06:27:59,110 --> 06:27:54,400

half turn green light a decimal two on

4114

06:28:00,948 --> 06:27:59,120

three alpha one h1 uh that's a good oru

4115

06:28:02,390 --> 06:28:00,958

now we're going to move to the ddcu and

4116

06:28:04,548 --> 06:28:02,400

brake torque

4117

06:28:08,460 --> 06:28:04,558

raja you have a go to release torque on

4118

06:28:15,670 --> 06:28:09,830

[Applause]

4119

06:28:15,680 --> 06:28:20,628

okay there's a turn on each one

4120

06:28:20,638 --> 06:28:44,230

happy one half turn on each one

4121

06:28:44,240 --> 06:28:53,670

bye

4122

06:28:53,680 --> 06:28:57,670

turn on h2

4123

06:29:03,990 --> 06:29:01,350

and roger say again for h2

4124

06:29:08,708 --> 06:29:04,000

broken torque capture

4125

06:29:08,718 --> 06:29:12,708

out of your way

4126
06:29:16,310 --> 06:29:15,110
okay kayla same settings alpha six clock

4127
06:29:21,830 --> 06:29:16,320
two

4128
06:29:24,310 --> 06:29:23,030
i think i probably need to work i'm

4129
06:29:25,590 --> 06:29:24,320
getting the scoop out then for the next

4130
06:29:28,390 --> 06:29:25,600
one for it

4131
06:29:31,350 --> 06:29:28,400
um there's one more in the corner i'm

4132
06:29:32,868 --> 06:29:31,360
not sure what order egg wants

4133
06:29:36,548 --> 06:29:32,878
so the next place we're going is three

4134
06:29:38,390 --> 06:29:36,558
alpha three that uh bcdu in the forward

4135
06:29:41,430 --> 06:29:38,400
inboard corner so yes continuing the

4136
06:29:46,948 --> 06:29:44,948
all right alphys clockwise 2 h2 on the

4137
06:30:01,110 --> 06:29:46,958
third oru

4138
06:30:07,830 --> 06:30:03,270

green light that was about a quarter of

4139

06:30:25,030 --> 06:30:11,830

a quarter turn 8.5 green light on h2

4140

06:30:31,990 --> 06:30:27,270

a quarter turn green light eight decimal

4141

06:30:35,350 --> 06:30:33,750

happy a quarter turn green light eight

4142

06:30:37,110 --> 06:30:35,360

decimal four on

4143

06:30:45,270 --> 06:30:37,120

the ddcu

4144

06:30:50,948 --> 06:30:47,430

all right we've got a good ddcu

4145

06:30:52,868 --> 06:30:50,958

moving on to the inboard vecdu

4146

06:30:54,310 --> 06:30:52,878

we can set up to break torque this is

4147

06:30:55,910 --> 06:30:54,320

another one where we're going to fully

4148

06:30:57,190 --> 06:30:55,920

release the h1

4149

06:30:59,030 --> 06:30:57,200

as well

4150

06:31:04,468 --> 06:30:59,040

we'll start with breaking torque one

4151
06:31:04,478 --> 06:31:18,868
okay

4152
06:31:22,468 --> 06:31:20,788
what are you thinking about this scoop

4153
06:31:25,270 --> 06:31:22,478
now that i'm looking here

4154
06:31:27,430 --> 06:31:25,280
there's these triangle-shaped

4155
06:31:28,948 --> 06:31:27,440
things to hold on to

4156
06:31:31,510 --> 06:31:28,958
you're you have a higher running torque

4157
06:31:33,350 --> 06:31:31,520
do you want me to get the scoop out

4158
06:31:35,670 --> 06:31:33,360
i only concerned if i braced too hard on

4159
06:31:37,750 --> 06:31:35,680
those triangle things because it's a

4160
06:31:39,510 --> 06:31:37,760
little sharp edge on the inside

4161
06:31:41,190 --> 06:31:39,520
and that they're okay to translate on

4162
06:31:42,390 --> 06:31:41,200
but if i was pushing against the middle

4163
06:31:44,310 --> 06:31:42,400

okay you want me to start getting the

4164

06:31:45,830 --> 06:31:44,320

scoop out for you um yeah if you don't

4165

06:31:50,628 --> 06:31:45,840

mind okay i'll do that while you're

4166

06:31:55,990 --> 06:31:52,708

okay copy that just a reminder if the

4167

06:32:02,548 --> 06:31:56,000

scoop is needed do not use the h2 on the

4168

06:32:02,558 --> 06:32:25,270

so use the h1 the non-dog house side

4169

06:32:31,110 --> 06:32:27,750

all right three alpha three h1 a quarter

4170

06:32:35,830 --> 06:32:33,430

and just to be clear the

4171

06:32:38,070 --> 06:32:35,840

only no go for the scoop is the one

4172

06:32:43,190 --> 06:32:38,080

marked with the red x on our

4173

06:32:43,200 --> 06:32:49,110

uh standby

4174

06:32:53,190 --> 06:32:51,350

and torque workout h2 i mean i can try

4175

06:32:54,390 --> 06:32:53,200

caleb what if you want to move on to

4176

06:32:55,590 --> 06:32:54,400

this one i'll go out there and if i

4177

06:32:56,708 --> 06:32:55,600

can't do it then we can get the scoop

4178

06:33:06,708 --> 06:32:56,718

out

4179

06:33:12,708 --> 06:33:08,390

and kayla that is correct for the

4180

06:33:16,070 --> 06:33:14,230

i'll try it without the scoop and see

4181

06:33:17,350 --> 06:33:16,080

how far i get and then

4182

06:33:19,190 --> 06:33:17,360

i can always come back and get it it's

4183

06:33:20,468 --> 06:33:19,200

no problem rodney i've got it right here

4184

06:33:23,350 --> 06:33:20,478

if you want it

4185

06:33:24,708 --> 06:33:23,360

let's get a shot without

4186

06:33:26,070 --> 06:33:24,718

okay

4187

06:33:28,548 --> 06:33:26,080

i guess just watch out for my safety

4188

06:33:33,670 --> 06:33:28,558

tether here as you go as i head in board

4189

06:33:33,680 --> 06:33:39,510

this bag closed again

4190

06:33:39,520 --> 06:33:44,468

and raja what's the status on h2

4191

06:33:47,110 --> 06:33:45,430

broken

4192

06:33:51,590 --> 06:33:47,120

hatcher

4193

06:33:56,788 --> 06:33:53,590

now that i'm here okay

4194

06:33:59,030 --> 06:33:56,798

yeah i think we won't be rescued

4195

06:34:01,270 --> 06:33:59,040

well or well well

4196

06:34:02,230 --> 06:34:01,280

local for this uh one that we're not the

4197

06:34:03,110 --> 06:34:02,240

ones we

4198

06:34:05,750 --> 06:34:03,120

uh

4199

06:34:11,510 --> 06:34:05,760

already adjust local to correct

4200

06:34:18,788 --> 06:34:13,190

hey firm the ones that we've re-torqued

4201

06:34:21,990 --> 06:34:20,468

um

4202

06:34:29,990 --> 06:34:22,000

work on getting that scoop out for you

4203

06:34:35,670 --> 06:34:32,230

if you're just joining us we're 4 4

4204

06:34:38,070 --> 06:34:35,680

hours and 52 minutes into today's eba or

4205

06:34:39,830 --> 06:34:38,080

spacewalk

4206

06:34:41,430 --> 06:34:39,840

nasa astronauts kayla baron and

4207

06:34:44,708 --> 06:34:41,440

rashachari

4208

06:34:47,990 --> 06:34:44,718

ventured outside the airlock at 7 12 a.m

4209

06:34:49,830 --> 06:34:48,000

central time 8 12 a.m eastern time where

4210

06:34:52,868 --> 06:34:49,840

they switched to battery power and

4211

06:34:55,510 --> 06:34:52,878

proceeded to the 3a power channel work

4212

06:34:59,270 --> 06:34:57,270

the duo

4213

06:35:01,270 --> 06:34:59,280

successfully installed the 3a

4214

06:35:02,788 --> 06:35:01,280
modification kit

4215

06:35:04,868 --> 06:35:02,798
and then proceeded to tie back

4216

06:35:06,708 --> 06:35:04,878
multi-layer insulation on spare battery

4217

06:35:08,230 --> 06:35:06,718
charge discharge units

4218

06:35:10,310 --> 06:35:08,240
to support robotic replacement or

4219

06:35:13,110 --> 06:35:10,320
relocations

4220

06:35:15,270 --> 06:35:13,120
with additional time the crew decided to

4221

06:35:16,788 --> 06:35:15,280
move forward with get ahead get a head

4222

06:35:18,948 --> 06:35:16,798
task

4223

06:35:20,788 --> 06:35:18,958
which includes where they are currently

4224

06:35:22,230 --> 06:35:20,798
breaking torque and resetting bolts on

4225

06:35:24,468 --> 06:35:22,240
multiple

4226
06:35:27,350 --> 06:35:24,478
orbital replacement units stored on the

4227
06:35:35,670 --> 06:35:27,360
3a integrated electronics assembly on

4228
06:35:39,270 --> 06:35:37,430
after this has been completed the crew

4229
06:35:41,990 --> 06:35:39,280
will assess their time

4230
06:35:45,590 --> 06:35:42,000
and they also will be looking to break

4231
06:35:47,910 --> 06:35:45,600
torque and reset bolts on an oru orbital

4232
06:35:50,468 --> 06:35:47,920
replacement unit stored on 1a

4233
06:36:13,110 --> 06:35:50,478
the 1a integrated assembly electronics

4234
06:36:13,120 --> 06:36:22,310
our space each others are deconstructed

4235
06:36:29,270 --> 06:36:25,190
and i think i'm ready for words on

4236
06:36:31,750 --> 06:36:29,280
bcdu 3 alpha three most inboard

4237
06:36:34,390 --> 06:36:31,760
all right on the inboard b cdu we're

4238
06:36:35,990 --> 06:36:34,400

going to fully release h1

4239

06:36:38,230 --> 06:36:36,000

and i've got pgt settings when you're

4240

06:36:40,070 --> 06:36:38,240

ready

4241

06:36:43,190 --> 06:36:40,080

i'm gonna put my visor down here real

4242

06:36:43,200 --> 06:36:48,468

copy that and the sun is coming up

4243

06:36:48,478 --> 06:36:51,110

and i'm ready

4244

06:37:06,628 --> 06:36:52,948

all right it's going to be bravo 7

4245

06:37:26,230 --> 06:37:08,468

and you're going to fully release three

4246

06:37:31,500 --> 06:37:28,230

and working up an advisor as well

4247

06:38:13,110 --> 06:37:31,510

hopefully not kicking you here

4248

06:38:19,110 --> 06:38:15,750

h1 first again

4249

06:38:23,750 --> 06:38:19,120

okay so you're moving to the dc su which

4250

06:38:27,350 --> 06:38:23,760

is uh just aft of the station after the

4251
06:38:29,190 --> 06:38:27,360
ddcu that you worked on

4252
06:38:31,270 --> 06:38:29,200
and i'm having trouble using your helmet

4253
06:38:32,708 --> 06:38:31,280
video telling where you are but

4254
06:38:34,390 --> 06:38:32,718
if you have a picture of it in your cuff

4255
06:38:35,830 --> 06:38:34,400
checklist

4256
06:38:37,590 --> 06:38:35,840
a firm it's the one that's the most

4257
06:38:39,110 --> 06:38:37,600
sensitive

4258
06:38:41,270 --> 06:38:39,120
yep it's the one that's the most in the

4259
06:38:43,110 --> 06:38:41,280
center dcsu

4260
06:38:47,510 --> 06:38:43,120
three alpha and you're gonna break

4261
06:38:47,520 --> 06:38:53,190
one quarter to one half turn

4262
06:39:00,310 --> 06:38:56,150
h1 is fully released on three alpha

4263
06:39:07,270 --> 06:39:02,070

h1 fully released three alpha three

4264

06:39:07,280 --> 06:39:13,110

and uh how many turns was it on h1 kayla

4265

06:39:17,190 --> 06:39:14,708

eight turns fully released three alpha

4266

06:39:19,990 --> 06:39:17,200

three h1 and then we are going to

4267

06:39:33,510 --> 06:39:20,000

reinstall h2 to torque

4268

06:39:37,670 --> 06:39:35,030

and i think i'm experiencing a little

4269

06:39:39,750 --> 06:39:37,680

bit of choppy calm

4270

06:39:40,548 --> 06:39:39,760

i said can you hear me i can hear you

4271

06:39:48,628 --> 06:39:40,558

okay

4272

06:40:03,750 --> 06:39:48,638

all right thank you

4273

06:40:07,270 --> 06:40:05,650

okay

4274

06:40:09,830 --> 06:40:07,280

[Music]

4275

06:40:15,510 --> 06:40:11,990

if you have currently between your legs

4276

06:40:17,350 --> 06:40:15,520

just be mindful when you move on

4277

06:40:19,750 --> 06:40:17,360

thank you

4278

06:40:21,110 --> 06:40:19,760

okay roger that scoop

4279

06:40:23,110 --> 06:40:21,120

the scoop that you have in your hand is

4280

06:40:26,150 --> 06:40:23,120

on the box that we're working on we need

4281

06:40:27,270 --> 06:40:26,160

it on an adjacent box and also i think i

4282

06:40:29,510 --> 06:40:27,280

saw a

4283

06:40:34,390 --> 06:40:29,520

hook or an end effector on that box as

4284

06:40:37,030 --> 06:40:35,910

if you couldn't catch most of what you

4285

06:40:38,310 --> 06:40:37,040

said but i assume you don't want the

4286

06:40:41,030 --> 06:40:38,320

scoop um

4287

06:40:43,510 --> 06:40:41,040

i'm working on a firm the scoop needs to

4288

06:40:45,350 --> 06:40:43,520

be on an adjacent oru and so does your

4289

06:40:51,350 --> 06:40:45,360

hook or your end effector whatever's

4290

06:40:55,830 --> 06:40:53,990

um i think he's saying you can't feather

4291

06:40:58,070 --> 06:40:55,840

to the box you're working on

4292

06:40:59,750 --> 06:40:58,080

and you can't put this cannot put the

4293

06:41:01,750 --> 06:40:59,760

scoop on it so you need to move it over

4294

06:41:04,070 --> 06:41:01,760

to an adjacent box okay i can do that

4295

06:41:05,830 --> 06:41:04,080

yeah i'm not tethered to it

4296

06:41:09,990 --> 06:41:05,840

i'll move it over

4297

06:41:13,670 --> 06:41:11,510

like i have you

4298

06:41:15,590 --> 06:41:13,680

clear now but you're intermittently

4299

06:41:18,390 --> 06:41:15,600

coming in pretty broken

4300

06:41:20,830 --> 06:41:18,400

both roger and i

4301
06:41:23,190 --> 06:41:20,840
ev2 com

4302
06:41:24,548 --> 06:41:23,200
check got you now i'm happy that i'm

4303
06:41:26,390 --> 06:41:24,558
moving the scoop i'm not tethered to

4304
06:41:28,070 --> 06:41:26,400
that box but that's not a problem but

4305
06:41:32,070 --> 06:41:28,080
watch your feet grind around right here

4306
06:41:32,080 --> 06:41:48,948
here for a second

4307
06:41:48,958 --> 06:41:53,270
your pgt settings alpha six clock two

4308
06:41:58,868 --> 06:41:56,390
six clockwise two specs

4309
06:42:00,948 --> 06:41:58,878
and you're going to drive h2

4310
06:42:13,510 --> 06:42:00,958
to torque that's the three alpha three b

4311
06:42:17,270 --> 06:42:15,190
you're kicking me grinder

4312
06:42:19,110 --> 06:42:17,280
okay

4313
06:42:22,788 --> 06:42:19,120

green light eight decimal six and that

4314

06:42:30,788 --> 06:42:25,190

a decimal six quarter turn and a green

4315

06:42:34,868 --> 06:42:32,628

i can get out of your way now if that

4316

06:42:36,788 --> 06:42:34,878

would help you

4317

06:42:38,868 --> 06:42:36,798

uh you want me to move and i don't think

4318

06:42:41,190 --> 06:42:38,878

you do that

4319

06:42:43,270 --> 06:42:41,200

i uh gonna wind up putting this scoop on

4320

06:42:44,830 --> 06:42:43,280

the one i have to do next which i know

4321

06:42:47,110 --> 06:42:44,840

i'll have to move it again

4322

06:42:51,830 --> 06:42:47,120

but the only option i'll switch it back

4323

06:42:57,190 --> 06:42:53,750

move on here in a second

4324

06:43:00,628 --> 06:42:58,948

yep or you could go to the one adjacent

4325

06:43:02,390 --> 06:43:00,638

to it there's the battery that's just

4326
06:43:04,230 --> 06:43:02,400
outboard of it i know it's a different

4327
06:43:25,270 --> 06:43:04,240
plane so it's a little bit of a further

4328
06:43:29,910 --> 06:43:26,830
i can actually my

4329
06:43:34,868 --> 06:43:29,920
legs back to sleep in first

4330
06:43:37,990 --> 06:43:36,310
am i

4331
06:43:39,670 --> 06:43:38,000
i try to get fully out of your way here

4332
06:43:46,090 --> 06:43:39,680
try to get h1 from where i'm at so you

4333
06:43:46,100 --> 06:43:54,948
[Music]

4334
06:43:58,868 --> 06:43:56,628
true lock magnet

4335
06:44:00,468 --> 06:43:58,878
uh the true lock battery is behind your

4336
06:45:00,390 --> 06:44:00,478
left heel

4337
06:45:05,350 --> 06:45:03,910
and roger can you say again about h1

4338
06:45:06,548 --> 06:45:05,360

i was just having a hard time getting

4339

06:45:18,830 --> 06:45:06,558

into

4340

06:45:18,840 --> 06:45:23,590

yep we go

4341

06:45:30,948 --> 06:45:26,390

okay h1's torch broken

4342

06:45:36,868 --> 06:45:34,628

copy quarter turn quarter turn on h1

4343

06:46:23,270 --> 06:45:36,878

and you have a go for a quarter

4344

06:46:26,948 --> 06:46:24,390

these little ones are definitely a

4345

06:46:29,110 --> 06:46:26,958

little more exciting

4346

06:46:30,628 --> 06:46:29,120

yeah it's a tough tough place to get

4347

06:46:33,110 --> 06:46:30,638

good body positioning especially to

4348

06:46:45,460 --> 06:46:33,120

break torque

4349

06:46:45,470 --> 06:46:53,830

[Applause]

4350

06:47:05,190 --> 06:46:56,868

maneuver is necessary

4351

06:47:05,200 --> 06:47:11,190

okay repeat i heard two half turns

4352

06:47:16,628 --> 06:47:14,468

quarter on h1 probably and a half on h2

4353

06:47:19,910 --> 06:47:16,638

uh okay copy that makes sense half turn

4354

06:47:23,430 --> 06:47:21,190

all right so now we're going to set up

4355

06:47:25,350 --> 06:47:23,440

to reinstall

4356

06:47:27,110 --> 06:47:25,360

h2 and h1

4357

06:47:28,628 --> 06:47:27,120

so kayla when you are in position i'm

4358

06:47:32,150 --> 06:47:28,638

ready

4359

06:47:35,030 --> 06:47:33,510

and raja

4360

06:47:36,468 --> 06:47:35,040

you just take your time getting to where

4361

06:47:41,670 --> 06:47:36,478

you want to go next and then i'll come

4362

06:47:51,270 --> 06:47:46,468

the roger the next oru is the pfcs

4363

06:47:55,350 --> 06:47:52,830

i'm just looking for a place to put the

4364

06:47:57,670 --> 06:47:55,360

scoop why don't you just release it to

4365

06:47:58,948 --> 06:47:57,680

the treelock bag of fingernail grinder

4366

06:48:00,948 --> 06:47:58,958

okay and

4367

06:48:25,830 --> 06:48:00,958

if i feel like i need it i'll reinstall

4368

06:48:29,190 --> 06:48:27,750

and uh just a reminder for you both you

4369

06:48:31,270 --> 06:48:29,200

probably haven't seen a pfcs in a while

4370

06:48:33,190 --> 06:48:31,280

so uh no loads into h1 and h2 please

4371

06:48:36,230 --> 06:48:33,200

when we get to that oru we're gonna work

4372

06:48:38,868 --> 06:48:36,240

with h3 and four only

4373

06:48:41,350 --> 06:48:38,878

so no loads into h182 on the pscs please

4374

06:48:42,548 --> 06:48:41,360

center uh at the most or are you going

4375

06:48:43,750 --> 06:48:42,558

to figure out my

4376

06:48:46,868 --> 06:48:43,760

i'm going to send this scoop back let's

4377

06:48:48,548 --> 06:48:46,878

figure out our safety center here first

4378

06:48:51,510 --> 06:48:48,558

copy that goodbye come around to the

4379

06:48:53,590 --> 06:48:51,520

right

4380

06:48:55,590 --> 06:48:53,600

yeah you're it's kind of pulled up

4381

06:48:57,270 --> 06:48:55,600

behind your vrt it's going to release

4382

06:48:58,868 --> 06:48:57,280

itself there you go

4383

06:49:00,948 --> 06:48:58,878

now it's off to your right all right so

4384

06:49:03,030 --> 06:49:00,958

let me get a local battle over here and

4385

06:49:04,948 --> 06:49:03,040

it's going between your legs now rogers

4386

06:49:14,310 --> 06:49:04,958

team might want to kick

4387

06:49:18,628 --> 06:49:16,230

okay so i'm gonna scoot back like you

4388

06:50:04,468 --> 06:49:18,638

said

4389

06:50:07,510 --> 06:50:06,390

that's correct yeah good read back thank

4390

06:50:12,948 --> 06:50:07,520

you

4391

06:50:14,150 --> 06:50:12,958

yellow handrails on the outside uh

4392

06:50:15,590 --> 06:50:14,160

they're just down a little bit towards

4393

06:50:17,750 --> 06:50:15,600

your feet

4394

06:50:20,948 --> 06:50:17,760

i want you to scoop it down here you see

4395

06:50:23,750 --> 06:50:22,070

roger that

4396

06:50:28,708 --> 06:50:23,760

and kayla let me know when you're ready

4397

06:50:33,670 --> 06:50:31,430

all right alpha six clock two

4398

06:50:46,310 --> 06:50:33,680

and you're going to torque h2 of the

4399

06:50:51,670 --> 06:50:48,708

h1 or h2

4400

06:50:53,030 --> 06:50:51,680

you are going to torque h2 starting with

4401
06:50:58,150 --> 06:50:53,040
h2

4402
06:50:58,160 --> 06:51:36,468
let you know when i'm there

4403
06:51:45,270 --> 06:51:40,468
if you're

4404
06:51:48,070 --> 06:51:45,280
we're five hours and ten minutes into

4405
06:51:49,270 --> 06:51:48,080
today's eva or space walk that's

4406
06:51:52,788 --> 06:51:49,280
astronauts

4407
06:51:55,110 --> 06:51:52,798
kayla baron and raja

4408
06:51:57,350 --> 06:51:55,120
have completed successfully a 3a

4409
06:51:59,430 --> 06:51:57,360
modification kit

4410
06:52:01,990 --> 06:51:59,440
and i've also done some tie backs for

4411
06:52:03,270 --> 06:52:02,000
some battery charge discharge units to

4412
06:52:05,190 --> 06:52:03,280
support robotic replacement and

4413
06:52:07,030 --> 06:52:05,200

relocation

4414

06:52:08,150 --> 06:52:07,040

being ahead of schedule the crew decided

4415

06:52:10,868 --> 06:52:08,160

to get

4416

06:52:12,548 --> 06:52:10,878

get started on some get ahead task

4417

06:52:15,030 --> 06:52:12,558

they are currently

4418

06:52:16,468 --> 06:52:15,040

three first correct

4419

06:52:18,830 --> 06:52:16,478

they are currently breaking and

4420

06:52:22,070 --> 06:52:18,840

resetting torque to

4421

06:52:22,948 --> 06:52:22,080

bolts on the oru

4422

06:52:26,310 --> 06:52:22,958

or

4423

06:52:26,320 --> 06:53:01,670

on the integrated electronics assembly

4424

06:53:05,030 --> 06:53:03,350

the crew is currently breaking torque

4425

06:53:07,510 --> 06:53:05,040

and resetting bolts on the multiple

4426
06:53:09,990 --> 06:53:07,520
orbital replacement units stored on the

4427
06:53:13,110 --> 06:53:10,000
3a integrated electronics assembly on

4428
06:53:16,548 --> 06:53:14,390
[Music]

4429
06:53:20,788 --> 06:53:16,558
attempted reset but i got a low torque

4430
06:53:20,798 --> 06:53:31,030
hey firm you have a go to hit it again

4431
06:53:37,990 --> 06:53:33,030
this is the first of multiple get aheads

4432
06:53:39,030 --> 06:53:38,000
for the duo if time permits

4433
06:53:43,110 --> 06:53:39,040
return

4434
06:53:49,350 --> 06:53:45,510
green light half a turn a decimal 2 on

4435
06:53:56,190 --> 06:53:51,030
alright and now we're going to move to

4436
06:53:56,200 --> 06:54:59,350
[Applause]

4437
06:55:04,788 --> 06:55:02,708
h3 one quarter turn

4438
06:55:10,788 --> 06:55:04,798

copy release torque on

4439

06:55:27,670 --> 06:55:12,628

h4

4440

06:55:30,628 --> 06:55:29,430

all right one more body position here

4441

06:55:32,868 --> 06:55:30,638

and if i

4442

06:55:37,750 --> 06:55:32,878

don't get it on i will uh go grab that

4443

06:55:42,468 --> 06:55:40,150

okay we copy caleb no rush you guys are

4444

06:55:44,548 --> 06:55:42,478

doing great

4445

06:56:01,030 --> 06:55:44,558

i've got a vrt down there you can use me

4446

06:56:01,040 --> 06:56:29,350

i can get it

4447

06:56:29,360 --> 06:56:34,788

it's hard

4448

06:56:38,390 --> 06:56:36,628

all right green light

4449

06:56:44,868 --> 06:56:38,400

about a half a turn eight the small

4450

06:56:49,190 --> 06:56:47,270

and raja i'm tempted on that one since

4451
06:56:51,830 --> 06:56:49,200
you have a vrt down to just hand you my

4452
06:56:55,190 --> 06:56:51,840
pgt to finish the last block that's that

4453
06:56:59,110 --> 06:56:56,868
right now

4454
06:57:02,310 --> 06:56:59,120
okay like i missed that call for h1 how

4455
06:57:07,830 --> 06:57:04,390
about a quarter turn

4456
06:57:10,868 --> 06:57:07,840
green light eight decimal three

4457
06:57:13,750 --> 06:57:10,878
working on h4 on the pspf copy green

4458
06:57:37,430 --> 06:57:13,760
light and uh on h1 on the three alpha

4459
06:57:37,440 --> 06:57:43,510
uh

4460
06:57:43,520 --> 06:58:45,430
all right

4461
06:59:04,468 --> 06:58:52,150
h4

4462
06:59:11,830 --> 06:59:04,478
and then kayla we're going to reset

4463
06:59:16,230 --> 06:59:13,990

okay copy that it's the same pgt

4464

06:59:20,628 --> 06:59:16,240

settings alpha six clock two

4465

06:59:36,220 --> 06:59:22,548

the alpha 6

4466

06:59:49,590 --> 06:59:37,510

[Applause]

4467

06:59:51,190 --> 06:59:49,600

uh so i had a basically a half turn good

4468

06:59:54,150 --> 06:59:51,200

green light but i didn't get the torque

4469

06:59:59,910 --> 06:59:56,310

i can do it again

4470

07:00:01,750 --> 06:59:59,920

actually back 8.1

4471

07:00:04,070 --> 07:00:01,760

copy 8.1

4472

07:00:07,110 --> 07:00:04,080

green lights and how many turns on each

4473

07:00:07,120 --> 07:00:10,708

i thought was about a half

4474

07:00:14,468 --> 07:00:12,628

copy a half or

4475

07:00:18,468 --> 07:00:14,478

good h4

4476

07:00:42,468 --> 07:00:18,478

and you have a go to torque h3

4477

07:00:46,948 --> 07:00:45,030

okay

4478

07:00:53,750 --> 07:00:46,958

h3

4479

07:00:55,830 --> 07:00:53,760

uh point

4480

07:00:56,708 --> 07:00:55,840

half a turn green light eight point

4481

07:00:58,548 --> 07:00:56,718

three

4482

07:01:24,468 --> 07:00:58,558

gives you phone back to you

4483

07:01:24,478 --> 07:01:35,590

there's

4484

07:01:40,150 --> 07:01:38,548

currently in a loss of signal

4485

07:01:41,830 --> 07:01:40,160

we should get views of the eva back

4486

07:01:43,270 --> 07:01:41,840

shortly you're currently seeing live

4487

07:01:45,830 --> 07:01:43,280

views of the national space station

4488

07:01:47,590 --> 07:01:45,840

flight control room

4489

07:01:50,708 --> 07:01:47,600

okay

4490

07:01:50,718 --> 07:02:05,110

you're currently

4491

07:02:11,030 --> 07:02:06,830

i think we have a flow on top of your

4492

07:02:12,548 --> 07:02:11,040

chart actually uh i'll take a glove app

4493

07:02:19,750 --> 07:02:12,558

and say for check from both of you and

4494

07:02:19,760 --> 07:02:32,788

let me get back onto the front here now

4495

07:02:37,190 --> 07:02:35,350

you're watching live coverage of the

4496

07:02:39,510 --> 07:02:37,200

247th

4497

07:02:41,350 --> 07:02:39,520

spacewalk

4498

07:02:43,030 --> 07:02:41,360

with the exception of changes and some

4499

07:02:48,230 --> 07:02:43,040

sludges

4500

07:02:48,240 --> 07:02:52,070

if i'm kicking the

4501

07:02:52,080 --> 07:03:05,030

copy checks for ev1

4502

07:03:08,868 --> 07:03:07,190

nasa astronaut kayla baron and raj

4503

07:03:12,310 --> 07:03:08,878

achari

4504

07:03:14,468 --> 07:03:12,320

ventured outside the airlock

4505

07:03:19,030 --> 07:03:14,478

and switched to battery power around 7

4506

07:03:24,070 --> 07:03:19,040

12 a.m central time 8 12 a.m

4507

07:03:28,390 --> 07:03:26,070

that is dry and my gauntlets are still

4508

07:03:34,868 --> 07:03:30,548

happy good glove half gauntlets and then

4509

07:03:39,510 --> 07:03:37,750

the duo ventured to the 3a

4510

07:03:41,910 --> 07:03:39,520

worksite where they successfully

4511

07:03:44,230 --> 07:03:41,920

completed a modification kit

4512

07:03:46,468 --> 07:03:44,240

for future irosa upgrades

4513

07:03:49,590 --> 07:03:46,478

or iss roll out

4514

07:03:51,430 --> 07:03:49,600

solar array upgrades

4515

07:03:52,788 --> 07:03:51,440

well your trash bag's blocking it a

4516

07:03:56,468 --> 07:03:52,798

little bit

4517

07:04:00,070 --> 07:03:58,150

it looks like it was

4518

07:04:01,510 --> 07:04:00,080

down at the bottom half but i didn't see

4519

07:04:02,310 --> 07:04:01,520

the top half that's the problem over

4520

07:04:09,510 --> 07:04:02,320

here

4521

07:04:14,708 --> 07:04:12,468

the duo completed tied back multi-layer

4522

07:04:17,030 --> 07:04:14,718

insulation on spare battery charge

4523

07:04:22,948 --> 07:04:17,040

discharge units support robotic

4524

07:04:27,430 --> 07:04:25,430

listen while you're doing that

4525

07:04:31,270 --> 07:04:27,440

with extra time to spare the duo decided

4526
07:04:34,628 --> 07:04:31,280
to move ahead with get ahead task

4527
07:04:36,708 --> 07:04:34,638
and are currently finishing up

4528
07:04:38,310 --> 07:04:36,718
breaking torque and resetting bolts on

4529
07:04:40,468 --> 07:04:38,320
multiple orbital replacement units

4530
07:04:58,230 --> 07:04:40,478
stored on the 3a integrated electronics

4531
07:04:58,240 --> 07:05:08,548
ready for your words when you're ready

4532
07:05:14,310 --> 07:05:12,548
okay uh roger we need you to check your

4533
07:05:16,708 --> 07:05:14,320
heka led

4534
07:05:27,350 --> 07:05:16,718
if it's off turn it on if it's on power

4535
07:05:32,230 --> 07:05:29,110
looks like it was off and it's now on

4536
07:05:34,708 --> 07:05:32,240
spain for our wgs is off again

4537
07:05:36,310 --> 07:05:34,718
we still actually that's what it's on

4538
07:05:40,788 --> 07:05:36,320

okay copy thank you for turning those

4539

07:05:43,110 --> 07:05:42,150

it looks like you've got a partially

4540

07:05:45,270 --> 07:05:43,120

open

4541

07:05:46,548 --> 07:05:45,280

doors on the true lock bag

4542

07:05:49,990 --> 07:05:46,558

you can get that tidied up and then

4543

07:05:50,000 --> 07:05:54,390

are we going

4544

07:05:58,310 --> 07:05:57,270

okay all right yep fair fair point so we

4545

07:06:00,230 --> 07:05:58,320

don't have enough time to make much

4546

07:06:01,590 --> 07:06:00,240

progress on the one alpha get heads so

4547

07:06:03,510 --> 07:06:01,600

we're going to do is take the time here

4548

07:06:05,510 --> 07:06:03,520

to get a nice good cleanup and then

4549

07:06:09,910 --> 07:06:05,520

we're going to translate

4550

07:06:12,468 --> 07:06:09,920

and get start work on the ams get ahead

4551

07:06:14,230 --> 07:06:12,478

that'll still leave us some time to uh

4552

07:06:16,390 --> 07:06:14,240

we've got to do a test inspection on the

4553

07:06:17,830 --> 07:06:16,400

way back to the airlock and potentially

4554

07:06:21,510 --> 07:06:17,840

we'll be able to get the airlock fit pin

4555

07:06:32,070 --> 07:06:21,520

inspection and or imagery on the way in

4556

07:07:01,110 --> 07:06:33,620

[Applause]

4557

07:07:01,120 --> 07:07:04,468

sounds like a handover maybe

4558

07:07:09,110 --> 07:07:06,708

i'm here with you

4559

07:07:10,788 --> 07:07:09,120

uh so okay uh caleb you want to make

4560

07:07:14,150 --> 07:07:10,798

sure

4561

07:07:16,788 --> 07:07:14,160

stowed and then you can translate to the

4562

07:07:18,788 --> 07:07:16,798

stretch bag

4563

07:07:20,548 --> 07:07:18,798

pgt is stove and i'm hiding

4564

07:07:22,548 --> 07:07:20,558

back

4565

07:07:24,628 --> 07:07:22,558

you're gonna pick that up stow it on

4566

07:07:27,910 --> 07:07:24,638

your brt

4567

07:07:29,590 --> 07:07:27,920

and then ev2 you're going to

4568

07:07:31,030 --> 07:07:29,600

stow the ratchet wrench and scoop if

4569

07:07:36,948 --> 07:07:31,040

it's still out in the crew lock bag and

4570

07:07:39,750 --> 07:07:37,990

are you ready for a cruise back

4571

07:07:41,670 --> 07:07:39,760

inventory

4572

07:07:43,510 --> 07:07:41,680

we were able to get it via the video so

4573

07:07:47,430 --> 07:07:43,520

we don't need the inventory lucky you

4574

07:07:52,390 --> 07:07:50,788

and ev2 uh once you have the

4575

07:07:55,830 --> 07:07:52,400

bag on your brt you're going to lead

4576
07:08:00,708 --> 07:07:58,468
and i saw

4577
07:08:03,270 --> 07:08:00,718
like a small white

4578
07:08:06,548 --> 07:08:03,280
pod i can't quite tell you what it was

4579
07:08:09,750 --> 07:08:06,558
fly off toward the solar array

4580
07:08:12,708 --> 07:08:09,760
it looks like it was maybe like

4581
07:08:14,150 --> 07:08:12,718
oscars of some kind actually

4582
07:08:15,910 --> 07:08:14,160
like a little piece of

4583
07:08:17,910 --> 07:08:15,920
fabric but it's moving around like a

4584
07:08:20,230 --> 07:08:17,920
decent mask

4585
07:08:21,990 --> 07:08:20,240
um but it down stop it and set it back

4586
07:08:24,868 --> 07:08:22,000
this way

4587
07:08:28,230 --> 07:08:24,878
towards the uh

4588
07:08:32,628 --> 07:08:29,670

i don't think it doesn't i don't

4589

07:08:34,548 --> 07:08:32,638
recognize it as part of anything

4590

07:08:37,510 --> 07:08:34,558
to do with me or my suit

4591

07:08:39,350 --> 07:08:37,520
but just report that

4592

07:08:40,548 --> 07:08:39,360
okay yeah copy for that

4593

07:08:41,830 --> 07:08:40,558
thank you for that description if we

4594

07:08:43,670 --> 07:08:41,840
copy

4595

07:09:14,310 --> 07:08:43,680
and

4596

07:09:17,110 --> 07:09:14,320
or space walk

4597

07:09:19,990 --> 07:09:17,120
the ground here in mission control

4598

07:09:22,310 --> 07:09:20,000
has decided the duo will not do the

4599

07:09:25,110 --> 07:09:22,320
breaking torque and resetting bolts on

4600

07:09:26,788 --> 07:09:25,120
the 1a integrated electronics assembly

4601
07:09:30,468 --> 07:09:26,798
but instead they will translate to the

4602
07:09:37,030 --> 07:09:30,478
alpha magnetic spectrometer spectrometer

4603
07:09:41,110 --> 07:09:38,948
still in get heads

4604
07:09:42,948 --> 07:09:41,120
the crew has about one hour left

4605
07:09:44,390 --> 07:09:42,958
scheduled in a six hour and thirty

4606
07:10:34,310 --> 07:09:44,400
minute

4607
07:10:39,910 --> 07:10:36,548
if you want to look roger pretty epic

4608
07:10:39,920 --> 07:10:47,990
pretty cool

4609
07:10:48,000 --> 07:10:52,390
i got my brt right to the crew lock bag

4610
07:10:52,400 --> 07:11:01,910
that's right

4611
07:11:01,920 --> 07:11:06,070
just right back on my vrt

4612
07:11:10,788 --> 07:11:08,948
copy kayla and copy roger and uh ev2 is

4613
07:11:40,788 --> 07:11:10,798

going to lead as you both translate back

4614

07:11:40,798 --> 07:11:44,628

everyone

4615

07:11:44,638 --> 07:12:13,590

okay

4616

07:12:18,468 --> 07:12:15,910

all right you two are headed in board

4617

07:12:22,468 --> 07:12:18,478

uh ev2 you're leading to the s1 s3

4618

07:12:24,070 --> 07:12:22,478

interface near mile marker 5730

4619

07:12:27,110 --> 07:12:24,080

and you can both leave your green hooks

4620

07:12:27,120 --> 07:12:35,910

we leave our drain hooks in place

4621

07:12:38,628 --> 07:12:37,030

let me know when you're back on the

4622

07:12:40,628 --> 07:12:38,638

cedar rail and then i'll come across

4623

07:12:43,190 --> 07:12:40,638

grindr yes yes i'm

4624

07:12:46,390 --> 07:12:43,200

stuck on something right now

4625

07:12:49,110 --> 07:12:46,400

oh your waste tether is hooked

4626
07:13:17,670 --> 07:12:49,120
it's almost clear

4627
07:13:22,788 --> 07:13:19,990
okay and once you're both back in board

4628
07:13:25,190 --> 07:13:22,798
of the sarge

4629
07:13:29,670 --> 07:13:25,200
you can find a place to temp stow your

4630
07:13:29,680 --> 07:13:47,190
and which uh mile market you're saying

4631
07:13:52,788 --> 07:13:49,350
uh a firm yep we're going to uh head

4632
07:13:54,070 --> 07:13:52,798
over toward ams from here

4633
07:13:56,468 --> 07:13:54,080
and so both of you find a place to

4634
07:14:00,070 --> 07:13:56,478
attempt those bags

4635
07:14:04,548 --> 07:14:02,230
kayla is going to translate to the s3

4636
07:14:06,868 --> 07:14:04,558
trust beam

4637
07:14:08,788 --> 07:14:06,878
now five hours and 32 minutes into

4638
07:14:10,070 --> 07:14:08,798

today's spacewalk recapping some of the

4639

07:14:13,190 --> 07:14:10,080

milestones

4640

07:14:16,310 --> 07:14:13,200

at 7 12 a.m central time 8 to 12 a.m

4641

07:14:18,468 --> 07:14:16,320

eastern time nasa astronauts kayla baron

4642

07:14:20,390 --> 07:14:18,478

and raj achary turned their suits on to

4643

07:14:22,070 --> 07:14:20,400

battery power marking the official start

4644

07:14:23,110 --> 07:14:22,080

of today's spacewalk

4645

07:14:26,310 --> 07:14:23,120

there

4646

07:14:27,750 --> 07:14:26,320

they then translated to the starboard

4647

07:14:29,590 --> 07:14:27,760

fortress

4648

07:14:30,868 --> 07:14:29,600

worksite where they successfully

4649

07:14:33,910 --> 07:14:30,878

installed

4650

07:14:39,830 --> 07:14:33,920

a 3a modification kit for future irosa

4651
07:14:39,840 --> 07:14:45,788
they then completed

4652
07:14:49,590 --> 07:14:47,510
multi-layer

4653
07:14:53,430 --> 07:14:49,600
insulation tie backs

4654
07:14:56,150 --> 07:14:53,440
and began to work on get ahead at the 3a

4655
07:14:58,868 --> 07:14:56,160
integrated assembly integrated

4656
07:15:02,230 --> 07:14:58,878
electronics assembly they completed this

4657
07:15:05,350 --> 07:15:02,240
task and now are heading translating to

4658
07:15:08,150 --> 07:15:05,360
the ams or alpha magnetic spectrometer

4659
07:15:11,030 --> 07:15:08,160
for patch panel access evaluations

4660
07:15:51,510 --> 07:15:11,040
near five three seven zero

4661
07:16:28,230 --> 07:15:57,110
yes

4662
07:16:36,788 --> 07:16:30,788
fluff this off our vrt but

4663
07:16:42,548 --> 07:16:40,468

copy the strut bag near 5310

4664

07:16:45,830 --> 07:16:42,558

and when you guys are ready kayla you

4665

07:16:48,830 --> 07:16:45,840

can leave translate to the s3 trust beam

4666

07:16:51,910 --> 07:16:48,840

location near s3 with

4667

07:16:56,948 --> 07:16:51,920

28. and you're getting set up to monitor

4668

07:17:00,788 --> 07:16:58,788

okay and a warning i'm going to have to

4669

07:17:02,948 --> 07:17:00,798

push those bags

4670

07:17:05,350 --> 07:17:02,958

or do you before i go zena just start

4671

07:17:06,628 --> 07:17:05,360

around get up there and then you can

4672

07:17:11,110 --> 07:17:06,638

push them back to get them out of your

4673

07:17:14,310 --> 07:17:12,070

okay

4674

07:17:16,070 --> 07:17:14,320

and uh warning entrapment hazard we're

4675

07:17:19,110 --> 07:17:16,080

going up toward a confined space under

4676
07:17:21,990 --> 07:17:19,120
the ford ams radiator so just be careful

4677
07:17:24,548 --> 07:17:22,000
and then also avoid contact with the acc

4678
07:17:26,788 --> 07:17:24,558
cable and tracker flat cables inside the

4679
07:17:27,990 --> 07:17:26,798
ams work site

4680
07:17:29,910 --> 07:17:28,000
and if you don't have a picture of that

4681
07:17:56,388 --> 07:17:29,920
in your cuff i can talk you on once we

4682
07:17:56,398 --> 07:18:13,270
like i'm caught on something here

4683
07:18:13,280 --> 07:18:16,788
your green hook's running down here

4684
07:18:21,430 --> 07:18:19,510
if you call them a bag

4685
07:18:22,628 --> 07:18:21,440
i don't see it stuck on anything

4686
07:18:24,468 --> 07:18:22,638
i'm really

4687
07:18:27,510 --> 07:18:24,478
hanging something for now

4688
07:18:32,548 --> 07:18:30,230

i don't you anything but

4689

07:18:33,830 --> 07:18:32,558

still pretty hard resistance as i try to

4690

07:18:49,030 --> 07:18:33,840

stream in the corner you come back

4691

07:19:00,948 --> 07:18:51,990

i think they got diet russia okay maybe

4692

07:19:04,948 --> 07:19:02,788

i think it might have been the uh elc

4693

07:19:07,830 --> 07:19:04,958

above my helmet yeah so right now like

4694

07:19:09,750 --> 07:19:07,840

this pocket of your pvp

4695

07:19:11,190 --> 07:19:09,760

you kind of go inside the lc2 so if you

4696

07:19:16,230 --> 07:19:11,200

keep going the direction you're going it

4697

07:19:21,830 --> 07:19:17,990

again the crew has completed braking

4698

07:19:23,990 --> 07:19:21,840

slash resetting torque on the 3a orbital

4699

07:19:26,230 --> 07:19:24,000

replacement units and is transitioning

4700

07:19:34,948 --> 07:19:26,240

to the ams or the alpha magnetic

4701
07:19:44,708 --> 07:19:37,030
further inboard

4702
07:19:49,350 --> 07:19:47,110
okay and then uh obtain a body position

4703
07:19:54,230 --> 07:19:49,360
for monitoring raj's clearances and then

4704
07:19:58,868 --> 07:19:57,190
do you have a go-to approach okay

4705
07:20:00,548 --> 07:19:58,878
i might need a little bit of a gta here

4706
07:20:02,230 --> 07:20:00,558
to figure out how to

4707
07:20:03,350 --> 07:20:02,240
take it up top

4708
07:20:04,708 --> 07:20:03,360
copy

4709
07:20:10,070 --> 07:20:04,718
and roger you're going to translate to

4710
07:20:13,590 --> 07:20:11,830
you might consider climbing up the ceta

4711
07:20:15,830 --> 07:20:13,600
cart

4712
07:20:18,548 --> 07:20:15,840
as an option uh there's a handrail here

4713
07:20:20,150 --> 07:20:18,558

okay but i'm on

4714

07:20:27,510 --> 07:20:20,160

there there's one when i get up here is

4715

07:20:30,310 --> 07:20:29,190

i guess we'll have to use that ivy so

4716

07:20:33,990 --> 07:20:30,320

yeah you're probably right but i can get

4717

07:20:34,000 --> 07:20:51,270

your time

4718

07:20:56,230 --> 07:20:52,548

i think i want to come towards you on

4719

07:20:56,240 --> 07:21:01,430

and then there's a small handrail

4720

07:21:01,440 --> 07:21:05,270

after you cross the next gap

4721

07:21:08,628 --> 07:21:06,310

and

4722

07:21:11,190 --> 07:21:08,638

try to slow your rate a little

4723

07:21:12,788 --> 07:21:11,200

and nice job for both of you

4724

07:21:14,868 --> 07:21:12,798

and we're going to hold before we

4725

07:21:16,468 --> 07:21:14,878

ingress the ams worksite so we're going

4726
07:21:20,788 --> 07:21:16,478
to hold

4727
07:21:24,788 --> 07:21:23,750
i rotate so i'm tracing port

4728
07:21:27,190 --> 07:21:24,798
position

4729
07:21:34,708 --> 07:21:27,200
uh yes

4730
07:21:38,310 --> 07:21:37,190
and there's another short handrail on

4731
07:21:40,310 --> 07:21:38,320
the

4732
07:21:41,750 --> 07:21:40,320
side of that same beam a little to your

4733
07:21:43,030 --> 07:21:41,760
right okay before i rotate let me get a

4734
07:21:46,150 --> 07:21:43,040
local balance i'm just realizing there's

4735
07:21:48,230 --> 07:21:46,160
nothing for me to stop the momentum yeah

4736
07:21:55,750 --> 07:21:48,240
vocal and your end effector might be

4737
07:21:59,790 --> 07:21:59,030
and watch

4738
07:22:00,948 --> 07:21:59,800

as you

4739

07:22:03,430 --> 07:22:00,958

[Applause]

4740

07:22:05,670 --> 07:22:03,440

if your feet kick up your push the back

4741

07:22:08,948 --> 07:22:05,680

of your plist and safer

4742

07:22:25,190 --> 07:22:08,958

to contact the bottom of the ms

4743

07:22:28,948 --> 07:22:27,350

i just wanted us to stand by i think all

4744

07:22:36,788 --> 07:22:28,958

right

4745

07:22:40,150 --> 07:22:38,868

yeah and just in general so when we uh

4746

07:22:41,670 --> 07:22:40,160

get in there and start looking around

4747

07:22:44,388 --> 07:22:41,680

we've got some time here to hold we're

4748

07:22:46,628 --> 07:22:44,398

coordinating exercise constraints uh but

4749

07:22:47,990 --> 07:22:46,638

just big picture before we get in there

4750

07:22:50,628 --> 07:22:48,000

main thing that i'm thinking about this

4751
07:22:52,388 --> 07:22:50,638
whole time is you not getting stuck so

4752
07:22:54,788 --> 07:22:52,398
as we move in we want to make sure that

4753
07:22:56,310 --> 07:22:54,798
we can get back out and there's quite a

4754
07:22:58,310 --> 07:22:56,320
few no touch things in there i think you

4755
07:23:01,350 --> 07:22:58,320
have a picture in your cuff all of it is

4756
07:23:02,468 --> 07:23:01,360
covered by white mli so it all looks the

4757
07:23:03,830 --> 07:23:02,478
same

4758
07:23:05,590 --> 07:23:03,840
and some of them are things we can

4759
07:23:08,070 --> 07:23:05,600
lightly touch and some are absolute no

4760
07:23:09,510 --> 07:23:08,080
touches and so let's just go real slow

4761
07:23:13,830 --> 07:23:09,520
and real steady

4762
07:23:17,270 --> 07:23:15,270
i mean i think in this position i can

4763
07:23:18,060 --> 07:23:17,280

see that ac cable

4764

07:23:19,830 --> 07:23:18,070

up there

4765

07:23:21,910 --> 07:23:19,840

[Applause]

4766

07:23:23,270 --> 07:23:21,920

um your helmet you need to go a little

4767

07:23:25,190 --> 07:23:23,280

later

4768

07:23:29,190 --> 07:23:25,200

bring on your helmet's in contact with

4769

07:23:32,788 --> 07:23:31,270

better yep

4770

07:23:34,708 --> 07:23:32,798

good and now if you want to roll onto

4771

07:23:36,788 --> 07:23:34,718

your side

4772

07:23:37,750 --> 07:23:36,798

and i don't know if you want to go grab

4773

07:23:39,270 --> 07:23:37,760

that

4774

07:23:40,868 --> 07:23:39,280

next handrail

4775

07:23:42,070 --> 07:23:40,878

or not because they think the panel

4776

07:23:44,548 --> 07:23:42,080

you're trying to get to is for their

4777

07:23:47,030 --> 07:23:44,558

inboard it is yeah i'm trying to

4778

07:23:47,990 --> 07:23:47,040

figure out how to turn

4779

07:24:04,230 --> 07:23:48,000

i'm

4780

07:24:07,750 --> 07:24:06,230

hey firm we're still waiting so keep

4781

07:24:09,990 --> 07:24:07,760

doing recce what you're doing is great

4782

07:24:12,868 --> 07:24:10,000

uh if you see it in my picture it's dead

4783

07:24:14,628 --> 07:24:12,878

center uh on that side near the flat uh

4784

07:24:17,270 --> 07:24:14,638

piece that's off to your to toward your

4785

07:24:23,110 --> 07:24:17,280

back but it is a very small narrow like

4786

07:24:27,830 --> 07:24:25,110

i see the patch i think where the area

4787

07:24:29,830 --> 07:24:27,840

will catch all should be

4788

07:24:31,750 --> 07:24:29,840

copies

4789

07:24:33,830 --> 07:24:31,760

all right

4790

07:24:36,548 --> 07:24:33,840

yeah we're standing by here just shortly

4791

07:24:39,030 --> 07:24:36,558

and we actually are now go so

4792

07:24:42,468 --> 07:24:39,040

we are able to continue

4793

07:24:45,030 --> 07:24:42,478

and so uh kayla over to you uh you can

4794

07:24:46,628 --> 07:24:45,040

gca raja into the work site and then

4795

07:24:55,350 --> 07:24:46,638

when you both are comfortable raja you

4796

07:25:00,230 --> 07:24:56,708

okay

4797

07:25:01,830 --> 07:25:00,240

i'll try to stay as late as i can

4798

07:25:04,548 --> 07:25:01,840

if you're just joining us we're five

4799

07:25:07,830 --> 07:25:04,558

hours and 43 minutes in today's

4800

07:25:09,190 --> 07:25:07,840

spacewalk where kayla baron and rasha

4801
07:25:11,430 --> 07:25:09,200
chari

4802
07:25:14,230 --> 07:25:11,440
successfully installed the 3a

4803
07:25:16,548 --> 07:25:14,240
modification kit and completed tie back

4804
07:25:19,670 --> 07:25:16,558
multi-layer insulation on spare battery

4805
07:25:23,270 --> 07:25:19,680
charge discharge units to support

4806
07:25:25,990 --> 07:25:23,280
robotic replacement or relocations

4807
07:25:27,590 --> 07:25:26,000
they had time left and proceeded with

4808
07:25:30,388 --> 07:25:27,600
get ahead task

4809
07:25:32,628 --> 07:25:30,398
they have also completed

4810
07:25:35,110 --> 07:25:32,638
breaking torque and resetting bolts on

4811
07:25:38,070 --> 07:25:35,120
spare battery charge

4812
07:25:39,430 --> 07:25:38,080
oh excuse me they have

4813
07:25:41,430 --> 07:25:39,440

also completed breaking torque and

4814

07:25:43,670 --> 07:25:41,440

resetting bolts on multiple orbital

4815

07:25:46,070 --> 07:25:43,680

replacement units stored on the 3a

4816

07:25:48,310 --> 07:25:46,080

integrated electronics assembly on the

4817

07:25:49,990 --> 07:25:48,320

s4 truss

4818

07:25:52,310 --> 07:25:50,000

they have just arrived to the alpha

4819

07:25:54,310 --> 07:25:52,320

magnetic spectrometer

4820

07:26:00,070 --> 07:25:54,320

worksite where they will do

4821

07:26:04,948 --> 07:26:01,030

is

4822

07:26:06,548 --> 07:26:04,958

i

4823

07:26:23,670 --> 07:26:06,558

come down at all

4824

07:26:29,270 --> 07:26:27,350

you can't really see your helmet anymore

4825

07:26:31,750 --> 07:26:29,280

but you're you got dead

4826
07:26:34,070 --> 07:26:31,760
clear your this is now barely touching

4827
07:26:36,708 --> 07:26:34,080
the mli to your right okay there's a

4828
07:26:39,350 --> 07:26:36,718
crate so that should be okay to touch

4829
07:26:41,110 --> 07:26:39,360
barely touch

4830
07:26:44,788 --> 07:26:41,120
yeah look can you guys see my wbs and

4831
07:26:44,798 --> 07:26:50,310
one or the other

4832
07:26:50,320 --> 07:26:56,230
that's your head

4833
07:27:00,868 --> 07:26:58,388
try scoot do i have room to shoot more

4834
07:27:04,310 --> 07:27:02,550
um or it isn't it

4835
07:27:12,350 --> 07:27:04,320
[Music]

4836
07:27:12,360 --> 07:27:15,670
[Applause]

4837
07:27:20,388 --> 07:27:17,910
like body down first

4838
07:27:21,510 --> 07:27:20,398

because yeah now we've got much better

4839

07:27:23,830 --> 07:27:21,520

clearance

4840

07:27:25,670 --> 07:27:23,840

ethernet further inboard

4841

07:27:28,788 --> 07:27:25,680

okay so i think i've got my hand my

4842

07:27:29,830 --> 07:27:28,798

right hand on that lower us ambreel they

4843

07:27:31,910 --> 07:27:29,840

talked about

4844

07:27:33,430 --> 07:27:31,920

in the dodge room hey firm that's a good

4845

07:27:37,190 --> 07:27:33,440

handrail it was a blind reach but that

4846

07:27:40,628 --> 07:27:38,948

and so then if i remember right then

4847

07:27:45,270 --> 07:27:40,638

right in front of me under this mli

4848

07:27:53,910 --> 07:27:48,150

hey firm that is the panel roger that's

4849

07:27:53,920 --> 07:27:57,430

i think uh from the work

4850

07:28:03,910 --> 07:28:00,310

biggest issues i can't i have no

4851
07:28:03,920 --> 07:28:08,388
and get down

4852
07:28:17,830 --> 07:28:09,830
hey roger do you think you have the

4853
07:28:22,628 --> 07:28:20,150
careful with that rotation

4854
07:28:26,070 --> 07:28:22,638
i can't rotate my head or body enough to

4855
07:28:28,230 --> 07:28:26,080
see them straight on but i can see the

4856
07:28:30,788 --> 07:28:28,240
cables running above

4857
07:28:32,628 --> 07:28:30,798
the patch panel mli like if i look up

4858
07:28:34,150 --> 07:28:32,638
towards where my heck of light is at and

4859
07:28:36,788 --> 07:28:34,160
the lights i can see it on the corner of

4860
07:28:40,548 --> 07:28:38,310
okay so it will be a pretty challenging

4861
07:28:43,270 --> 07:28:40,558
reach from here and it's also pretty

4862
07:28:44,948 --> 07:28:43,280
tough to see but you can see them

4863
07:28:46,548 --> 07:28:44,958

and like kayla says let's watch the

4864

07:28:47,910 --> 07:28:46,558

rotations but i'm gonna i'm gonna ask

4865

07:28:49,270 --> 07:28:47,920

you some questions i don't need you to

4866

07:28:51,510 --> 07:28:49,280

move around much and just give me an

4867

07:28:54,548 --> 07:28:51,520

assessment from where you are and kayla

4868

07:28:56,030 --> 07:28:54,558

you own clearances and and keep us safe

4869

07:28:59,110 --> 07:28:56,040

so the first question if you're ready

4870

07:29:01,270 --> 07:28:59,120

roger your right place is just barely

4871

07:29:03,400 --> 07:29:01,280

touching the mli so

4872

07:29:05,830 --> 07:29:03,410

don't do not rotate any further

4873

07:29:07,670 --> 07:29:05,840

[Applause]

4874

07:29:09,750 --> 07:29:07,680

i'll try to back okay i'll just stay

4875

07:29:11,030 --> 07:29:09,760

here until i answer the question okay

4876
07:29:13,110 --> 07:29:11,040
go ahead

4877
07:29:14,708 --> 07:29:13,120
perfect yep keep that coming kayla uh

4878
07:29:19,750 --> 07:29:14,718
first question roger can you reach the

4879
07:29:24,310 --> 07:29:22,468
uh i can

4880
07:29:26,708 --> 07:29:24,320
back out more yes

4881
07:29:28,708 --> 07:29:26,718
i can touch it but it's so close to my

4882
07:29:30,868 --> 07:29:28,718
helmet that i i can't expect inside my

4883
07:29:32,868 --> 07:29:30,878
work volume

4884
07:29:35,910 --> 07:29:32,878
if you want to back out you need to

4885
07:29:38,070 --> 07:29:35,920
rotate you need to yaw left so like face

4886
07:29:41,350 --> 07:29:38,080
the truss okay move a little bit and

4887
07:29:42,948 --> 07:29:41,360
then you can rotate back a little bit

4888
07:29:45,270 --> 07:29:42,958

there you go now you can rotate again

4889

07:29:48,230 --> 07:29:45,280

okay so

4890

07:29:50,548 --> 07:29:48,240

up there okay okay

4891

07:29:53,270 --> 07:29:50,558

all right so from this position

4892

07:29:56,070 --> 07:29:53,280

i can reach the flat part of the patch

4893

07:29:57,910 --> 07:29:56,080

panel and then there's like a bump out

4894

07:29:58,948 --> 07:29:57,920

i can get my hands

4895

07:30:00,388 --> 07:29:58,958

on the

4896

07:30:01,990 --> 07:30:00,398

outboard side

4897

07:30:03,750 --> 07:30:02,000

i can't actually i wouldn't be able to

4898

07:30:05,110 --> 07:30:03,760

do anything on the inboard side of it i

4899

07:30:06,628 --> 07:30:05,120

can touch it but i

4900

07:30:10,230 --> 07:30:06,638

don't have the reach to

4901
07:30:12,788 --> 07:30:11,350
wouldn't be able to do any meaningful

4902
07:30:13,830 --> 07:30:12,798
work on the inboard side and that looks

4903
07:30:16,788 --> 07:30:13,840
like is that your right hand that you're

4904
07:30:30,868 --> 07:30:18,230
that's my right hand when i reach i'm

4905
07:30:33,990 --> 07:30:32,628
when i got close enough to put my right

4906
07:30:35,830 --> 07:30:34,000
hand on that

4907
07:30:38,388 --> 07:30:35,840
lower u.s hand

4908
07:30:40,628 --> 07:30:38,398
that's too close to do anything with the

4909
07:30:41,670 --> 07:30:40,638
patch panel basically my helmet is right

4910
07:30:42,370 --> 07:30:41,680
up against

4911
07:30:44,490 --> 07:30:42,380
the hatch panel

4912
07:30:45,830 --> 07:30:44,500
[Applause]

4913
07:30:47,830 --> 07:30:45,840

[Music]

4914

07:30:49,830 --> 07:30:47,840

okay copy good words raja and then uh

4915

07:30:51,830 --> 07:30:49,840

recommendation from you what

4916

07:30:58,070 --> 07:30:51,840

stabilization would we need to be able

4917

07:30:58,080 --> 07:31:00,388

uh

4918

07:31:00,398 --> 07:31:05,910

monday i put the brt on the handrail

4919

07:31:10,310 --> 07:31:07,750

that's the handrail just inboard of with

4920

07:31:11,510 --> 07:31:10,320

nine nights

4921

07:31:13,830 --> 07:31:11,520

with nine

4922

07:31:16,230 --> 07:31:13,840

as a potential brt copy

4923

07:31:25,670 --> 07:31:16,240

and do you remember that uh apfr

4924

07:31:29,670 --> 07:31:27,590

uh your feet would be a little more

4925

07:31:31,430 --> 07:31:29,680

inboard you think you'd be able to get

4926
07:31:34,948 --> 07:31:31,440
into that position if you remember that

4927
07:31:38,150 --> 07:31:36,388
i'm trying to remind you right back in

4928
07:31:40,788 --> 07:31:38,160
that picture of our feet

4929
07:31:44,310 --> 07:31:40,798
are pointed in inboard and i'm sort of

4930
07:31:48,230 --> 07:31:45,990
back towards me

4931
07:31:55,990 --> 07:31:48,240
your back would be outboard your back

4932
07:31:56,000 --> 07:32:06,788
after your rotation

4933
07:32:09,430 --> 07:32:07,990
i'm not sure we're going to be able to

4934
07:32:12,150 --> 07:32:09,440
answer that well like since we don't

4935
07:32:15,910 --> 07:32:12,160
have the picture in front of us

4936
07:32:17,750 --> 07:32:15,920
okay yep uh totally understand that

4937
07:32:19,590 --> 07:32:17,760
yeah i'm trying to rip the diagram

4938
07:32:21,990 --> 07:32:19,600

you'll probably take a look after take a

4939

07:32:24,070 --> 07:32:22,000

good mental picture now and take a look

4940

07:32:25,750 --> 07:32:24,080

after the fact

4941

07:32:27,830 --> 07:32:25,760

you have a sense of where like where the

4942

07:32:37,910 --> 07:32:27,840

apfr base blue plate would be in

4943

07:32:43,350 --> 07:32:41,990

and raja say again please

4944

07:32:44,388 --> 07:32:43,360

just trying to figure out where like if

4945

07:32:45,670 --> 07:32:44,398

you could tell me where the food plate

4946

07:32:48,070 --> 07:32:45,680

would be in relation to my feet i might

4947

07:32:49,030 --> 07:32:48,080

be able to picture it better

4948

07:32:51,670 --> 07:32:49,040

for that

4949

07:32:51,680 --> 07:32:54,868

don't back out

4950

07:33:00,868 --> 07:32:57,830

uh separate separate uh

4951

07:33:02,868 --> 07:33:00,878

uh idea is uh that brt handrail that you

4952

07:33:04,788 --> 07:33:02,878

guys recommended do you think that the

4953

07:33:12,150 --> 07:33:04,798

brting to that handrail would allow you

4954

07:33:14,948 --> 07:33:13,510

i don't know if it could make the bend

4955

07:33:18,230 --> 07:33:14,958

with me facing forward i think you could

4956

07:33:19,750 --> 07:33:18,240

be archie to that handrail and face ass

4957

07:33:21,350 --> 07:33:19,760

then you'd still be stuck with really

4958

07:33:21,710 --> 07:33:21,360

only being like hannah get a right hand

4959

07:33:22,830 --> 07:33:21,720

up on

4960

07:33:26,310 --> 07:33:22,840

[Applause]

4961

07:33:28,708 --> 07:33:26,320

it happy brt but face aft

4962

07:33:33,750 --> 07:33:28,718

uh and you said maybe not if you brt and

4963

07:33:38,388 --> 07:33:35,590

i don't think the brg could make that

4964

07:33:40,708 --> 07:33:38,398

bend to be there and that you're facing

4965

07:33:43,110 --> 07:33:40,718

for there's one more

4966

07:33:44,948 --> 07:33:43,120

there's a handrail that is

4967

07:33:47,990 --> 07:33:44,958

ask facing

4968

07:33:49,670 --> 07:33:48,000

my local is at right now i don't know

4969

07:33:51,030 --> 07:33:49,680

i can try scooting in a little bit i

4970

07:33:53,110 --> 07:33:51,040

think if i

4971

07:33:54,628 --> 07:33:53,120

see if i can put my brg there and then

4972

07:33:58,310 --> 07:33:54,638

face port

4973

07:33:58,320 --> 07:34:04,070

but not outboard

4974

07:34:08,150 --> 07:34:06,868

from this position caleb can i rotate

4975

07:34:10,070 --> 07:34:08,160

right

4976

07:34:12,788 --> 07:34:10,080

um

4977

07:34:15,270 --> 07:34:12,798

maybe about

4978

07:34:25,030 --> 07:34:15,280

10 degrees

4979

07:34:28,548 --> 07:34:26,628

my left hand would be the other handrail

4980

07:34:30,868 --> 07:34:28,558

you could put a brc on

4981

07:34:30,878 --> 07:34:47,190

challenge i can see the

4982

07:34:52,070 --> 07:34:50,310

that that reach

4983

07:34:53,350 --> 07:34:52,080

copy and you said it's the handrail that

4984

07:34:55,910 --> 07:34:53,360

your left hand is on is where you're

4985

07:35:00,150 --> 07:34:57,830

and it's uh i can't see the number on it

4986

07:35:01,430 --> 07:35:00,160

does it put a tab facing

4987

07:35:03,350 --> 07:35:01,440

okay

4988

07:35:04,628 --> 07:35:03,360

i got a picture of him

4989

07:35:06,708 --> 07:35:04,638

holding that

4990

07:35:10,310 --> 07:35:06,718

kind of simulating a brt with his left

4991

07:35:17,270 --> 07:35:13,590

make sense come out or towards you um

4992

07:35:19,270 --> 07:35:17,280

maybe about a foot to get out roger

4993

07:35:21,750 --> 07:35:19,280

because of the bump out over here you're

4994

07:35:24,628 --> 07:35:21,760

gonna need to face the truss more okay

4995

07:35:26,548 --> 07:35:24,638

and then go a little bit neater

4996

07:35:28,548 --> 07:35:26,558

from this position i could brt i could

4997

07:35:31,110 --> 07:35:28,558

get those hands on it i just

4998

07:35:32,468 --> 07:35:31,120

uh it's right at the limit of reach

4999

07:35:34,310 --> 07:35:32,478

up

5000

07:35:36,468 --> 07:35:34,320

okay ev1 ev2

5001

07:35:37,830 --> 07:35:36,478

standby for me stand by

5002

07:35:39,270 --> 07:35:37,840

we're going to have you pause we're

5003

07:35:40,628 --> 07:35:39,280

going to come up with another plan of

5004

07:35:42,070 --> 07:35:40,638

attack here and have you assess

5005

07:36:13,830 --> 07:35:42,080

something else for us just stay where

5006

07:36:17,510 --> 07:36:15,590

and kayla just confirmed for me where

5007

07:36:19,270 --> 07:36:17,520

raja is now you're saying you don't

5008

07:36:23,030 --> 07:36:19,280

think he should rotate anymore no more

5009

07:36:26,788 --> 07:36:25,430

um

5010

07:36:29,190 --> 07:36:26,798

if he

5011

07:36:31,830 --> 07:36:29,200

went a little body left he could rotate

5012

07:36:34,628 --> 07:36:31,840

further facing forward

5013

07:36:36,548 --> 07:36:34,638

you pull your body

5014

07:36:38,468 --> 07:36:36,558

right yeah your knees running into the

5015

07:36:40,230 --> 07:36:38,478

structure

5016

07:36:43,030 --> 07:36:40,240

but he could probably rotate about 10

5017

07:36:43,040 --> 07:36:46,070

go in

5018

07:36:46,080 --> 07:36:52,070

stop

5019

07:36:59,110 --> 07:36:53,590

okay happy thank you

5020

07:37:02,230 --> 07:37:00,948

just fyi

5021

07:37:03,830 --> 07:37:02,240

it's not like i'm only getting calm in

5022

07:37:05,830 --> 07:37:03,840

my left ear so i'm not getting scared

5023

07:37:09,430 --> 07:37:05,840

about still hearing both of you

5024

07:37:15,590 --> 07:37:09,440

only one here patrick okay copy that uh

5025

07:37:20,868 --> 07:37:17,130

left here you're right here

5026
07:37:20,878 --> 07:37:29,350
and roger how's your hat at this time

5027
07:37:35,590 --> 07:37:32,388
okay copy dry hat which ear

5028
07:37:38,468 --> 07:37:37,030
the right gear i'm not hearing anything

5029
07:37:40,788 --> 07:37:38,478
i don't feel any moisture in the ear or

5030
07:37:43,030 --> 07:37:40,798
anything cut out about you

5031
07:37:44,708 --> 07:37:43,040
copy no calm in the right ear no calm in

5032
07:38:01,830 --> 07:37:44,718
the right ear

5033
07:38:01,840 --> 07:38:08,070
i'm

5034
07:38:13,510 --> 07:38:11,110
okay ev1 eb2 we are done with this task

5035
07:38:17,670 --> 07:38:13,520
work together please let's get back out

5036
07:38:19,270 --> 07:38:17,680
ev2 safely and once you both are clear

5037
07:38:21,590 --> 07:38:19,280
we'll take a glove

5038
07:38:25,510 --> 07:38:21,600

inspection and safer handle check for

5039

07:38:30,310 --> 07:38:29,030

if you could yaw left and face the trust

5040

07:38:33,430 --> 07:38:30,320

more

5041

07:38:35,990 --> 07:38:33,440

and you're gonna need

5042

07:38:37,510 --> 07:38:36,000

uh before you come further outboard

5043

07:38:39,350 --> 07:38:37,520

you need to go

5044

07:38:41,510 --> 07:38:39,360

at least a foot maybe a foot and a half

5045

07:38:44,230 --> 07:38:41,520

for their nader okay if you could grab

5046

07:38:56,070 --> 07:38:44,240

that left hand rail with your left hand

5047

07:38:56,080 --> 07:39:04,070

now you're good to continue outboard

5048

07:39:11,030 --> 07:39:06,150

your feet are near uh

5049

07:39:16,388 --> 07:39:12,788

and i can we get you those checks when

5050

07:39:16,398 --> 07:39:19,830

hey firm yeah that's fine

5051

07:39:23,990 --> 07:39:22,628

a lot of handrails up here for raja

5052

07:39:25,430 --> 07:39:24,000

would be better for him to just head

5053

07:39:27,110 --> 07:39:25,440

back down there

5054

07:39:29,670 --> 07:39:27,120

hey firm if you two want to transfer

5055

07:39:31,270 --> 07:39:29,680

back to your bag location and we'll take

5056

07:40:20,948 --> 07:39:31,280

the glove checks

5057

07:40:25,110 --> 07:40:22,830

i'm back on the

5058

07:40:44,548 --> 07:40:25,120

headrail and let's

5059

07:40:49,030 --> 07:40:47,430

is there a handrail near my hand uh if

5060

07:40:51,590 --> 07:40:49,040

you slide outward with your right hand

5061

07:40:51,600 --> 07:41:11,030

thank one

5062

07:41:11,040 --> 07:41:25,270

now

5063

07:41:29,350 --> 07:41:27,590

see you both on phase one nice job

5064

07:41:30,708 --> 07:41:29,360

uh over to you if you want to grab your

5065

07:41:32,150 --> 07:41:30,718

green hooks first we need to pick up

5066

07:41:33,190 --> 07:41:32,160

those green hooks and we need to pick up

5067

07:41:35,430 --> 07:41:33,200

the bags

5068

07:41:36,708 --> 07:41:35,440

so finish up your glove checks and then

5069

07:41:40,788 --> 07:41:36,718

let me know what you prefer to grab

5070

07:41:45,590 --> 07:41:43,750

we'll get the green hook first

5071

07:41:52,948 --> 07:41:45,600

and browse up to you if you want to work

5072

07:41:57,510 --> 07:41:55,110

now six hours into today's spacewalk

5073

07:42:00,070 --> 07:41:57,520

recapping the milestones for the day the

5074

07:42:05,590 --> 07:42:03,590

at 7 12 a.m central time nasa astronauts

5075

07:42:07,270 --> 07:42:05,600

kayla barron and rosh atari turned their

5076
07:42:09,670 --> 07:42:07,280
suits on the battery power marking the

5077
07:42:12,948 --> 07:42:09,680
official star of today's spacewalk they

5078
07:42:15,030 --> 07:42:12,958
successfully completed

5079
07:42:17,910 --> 07:42:15,040
a modification kit for the starboard

5080
07:42:19,990 --> 07:42:17,920
fortress at a 3a power channel

5081
07:42:20,788 --> 07:42:20,000
they also completed

5082
07:42:22,948 --> 07:42:20,798
some

5083
07:42:24,548 --> 07:42:22,958
they also completed tie back multi-layer

5084
07:42:26,310 --> 07:42:24,558
insulation on spare battery charge

5085
07:42:29,190 --> 07:42:26,320
discharge units to support robotic

5086
07:42:31,430 --> 07:42:29,200
replacement and relocation

5087
07:42:32,708 --> 07:42:31,440
with time sparing the crew also started

5088
07:42:35,190 --> 07:42:32,718

and completed

5089

07:42:36,948 --> 07:42:35,200

two different get ahead tasks one being

5090

07:42:38,788 --> 07:42:36,958

braking

5091

07:42:40,868 --> 07:42:38,798

breaking torque and resetting bolts on

5092

07:42:43,510 --> 07:42:40,878

multiple orbital replacement units

5093

07:42:46,548 --> 07:42:43,520

stored on the 3a integrated electronics

5094

07:42:49,030 --> 07:42:46,558

assembly on the s4 truss and they also

5095

07:42:51,750 --> 07:42:49,040

conducted an alpha magnetic spectrometer

5096

07:42:54,070 --> 07:42:51,760

patch panel access evaluation

5097

07:42:55,430 --> 07:42:54,080

the crew right now is translating back

5098

07:43:07,270 --> 07:42:55,440

to the airlock

5099

07:43:11,430 --> 07:43:09,350

raja you have a girl

5100

07:43:12,868 --> 07:43:11,440

i'm gonna be just leader of your

5101
07:43:15,110 --> 07:43:12,878
handrail

5102
07:43:16,628 --> 07:43:15,120
i don't have anywhere further to go

5103
07:43:18,548 --> 07:43:16,638
unfortunately

5104
07:43:20,310 --> 07:43:18,558
if i want to lay on your side and mimic

5105
07:43:36,868 --> 07:43:20,320
my body position

5106
07:43:43,030 --> 07:43:37,750
yeah

5107
07:43:43,040 --> 07:44:05,830
thing yep i'm gonna go down

5108
07:44:10,468 --> 07:44:08,948
two minutes to a handover

5109
07:44:13,110 --> 07:44:10,478
green hook's picked up let's start

5110
07:44:14,708 --> 07:44:13,120
heading back towards my crew lock bag

5111
07:44:16,628 --> 07:44:14,718
all right nice job roger and when you

5112
07:44:21,110 --> 07:44:16,638
get a chance we need a safer handle

5113
07:44:21,120 --> 07:44:25,190

obviously i okay i just looked around my

5114

07:44:25,200 --> 07:44:31,990

i'm not sure

5115

07:44:32,000 --> 07:44:35,590

got my green hook up

5116

07:44:40,230 --> 07:44:38,788

copy both green hooks retrieved

5117

07:44:44,708 --> 07:44:40,240

i'm trying to keep your ankle let's try

5118

07:44:48,868 --> 07:44:45,990

i'll get you my safer handle check when

5119

07:44:51,830 --> 07:44:48,878

i get back to the bag location

5120

07:44:53,270 --> 07:44:51,840

sounds good

5121

07:44:55,030 --> 07:44:53,280

audrey you let me know when i'm going to

5122

07:44:57,190 --> 07:44:55,040

come back up uh you should be good to

5123

07:44:58,948 --> 07:44:57,200

move on

5124

07:45:02,310 --> 07:44:58,958

i've got the strut bag here trying to

5125

07:45:23,410 --> 07:45:02,320

get it on your side

5126
07:45:23,420 --> 07:45:27,110
[Applause]

5127
07:45:31,990 --> 07:45:28,788
if you hold there for a little bit so i

5128
07:45:48,540 --> 07:45:32,000
can get my bag

5129
07:46:04,788 --> 07:45:50,948
[Applause]

5130
07:46:04,798 --> 07:46:08,548
and were those both for ev2

5131
07:46:08,558 --> 07:46:38,230
five

5132
07:46:38,240 --> 07:46:45,110
uh

5133
07:46:48,708 --> 07:46:47,110
ev1 ev2 i'm back with you my fault for

5134
07:47:01,510 --> 07:46:48,718
dragging you through that handover but

5135
07:47:06,230 --> 07:47:03,910
all right copy safer handles for ev2 and

5136
07:47:08,468 --> 07:47:06,240
then yes ev-1 is grabbing the strut bag

5137
07:47:10,948 --> 07:47:08,478
onto the brt ev2 is grabbing the crew

5138
07:47:12,230 --> 07:47:10,958

lock bag onto the brt

5139

07:47:30,310 --> 07:47:12,240

and i'll let you know where to go from

5140

07:47:33,990 --> 07:47:32,468

going back to your direction jayla um i

5141

07:47:50,230 --> 07:47:34,000

can't see you right now give me one

5142

07:47:53,350 --> 07:47:51,670

we're pretty close to each other but you

5143

07:48:01,670 --> 07:47:53,360

can probably come watch the foot if you

5144

07:48:01,680 --> 07:48:14,230

i can wait

5145

07:48:14,240 --> 07:48:43,350

victory lost back

5146

07:48:47,430 --> 07:48:44,868

okay copy that

5147

07:48:49,030 --> 07:48:47,440

once ev2 has the

5148

07:48:50,708 --> 07:48:49,040

true lock bag

5149

07:48:52,230 --> 07:48:50,718

you're going to

5150

07:48:55,510 --> 07:48:52,240

translate inboard

5151
07:48:56,628 --> 07:48:55,520
and the last person across ev1 depress

5152
07:48:59,270 --> 07:48:56,638
the brakes

5153
07:49:03,110 --> 07:48:59,280
after your inboard of the starboard and

5154
07:49:09,030 --> 07:49:05,510
and you're translating to mile marker

5155
07:49:10,868 --> 07:49:09,040
you're translating the mile marker 6600

5156
07:49:27,590 --> 07:49:10,878
and we're going to do a test cable

5157
07:49:27,600 --> 07:49:53,580
all right let's do that on my vrt

5158
07:49:57,030 --> 07:49:56,150
[Music]

5159
07:49:59,990 --> 07:49:57,040
yours

5160
07:50:00,000 --> 07:50:12,788
your mind is out under the sun

5161
07:50:12,798 --> 07:50:18,070
okay

5162
07:50:18,080 --> 07:50:47,910
looking for 6600

5163
07:50:51,110 --> 07:50:49,430

all right copy and make sure to hit

5164

07:50:53,590 --> 07:50:51,120

those breaks please on that starboard

5165

07:50:55,190 --> 07:50:53,600

seal cart once you're in board

5166

07:50:56,948 --> 07:50:55,200

and on the way

5167

07:50:59,190 --> 07:50:56,958

i'll give you the caution again avoid

5168

07:51:01,270 --> 07:50:59,200

touching the tusk cable

5169

07:51:03,910 --> 07:51:01,280

we believe we've seen a little bit of a

5170

07:51:06,230 --> 07:51:03,920

bend in the cable so we're having you go

5171

07:51:09,270 --> 07:51:06,240

over there to do an inspection on the

5172

07:51:10,948 --> 07:51:09,280

way in

5173

07:51:13,030 --> 07:51:10,958

i see the test cable on the other side

5174

07:51:16,070 --> 07:51:13,040

of the mc here

5175

07:51:17,430 --> 07:51:16,080

all right you keep watching your device

5176
07:51:19,910 --> 07:51:17,440
right back

5177
07:51:21,030 --> 07:51:19,920
they were a minute and a half to a

5178
07:51:23,350 --> 07:51:21,040
handover

5179
07:51:25,830 --> 07:51:23,360
and when you get to 6600

5180
07:51:27,990 --> 07:51:25,840
uh nader of bay 9

5181
07:51:30,868 --> 07:51:28,000
you're going to do a heck of a survey of

5182
07:51:32,948 --> 07:51:30,878
the test cable and test cable guide

5183
07:51:34,868 --> 07:51:32,958
which is right there nader of mile

5184
07:51:36,388 --> 07:51:34,878
marker 6600

5185
07:51:39,030 --> 07:51:36,398
we're currently in a brief handover

5186
07:51:40,548 --> 07:51:39,040
period but you're getting a live shot of

5187
07:51:42,388 --> 07:51:40,558
the international space station flight

5188
07:51:44,548 --> 07:51:42,398

control room

5189

07:51:47,270 --> 07:51:44,558

where you hear and as astronaut victor

5190

07:51:49,830 --> 07:51:47,280

glover talk to the crew as they

5191

07:51:51,350 --> 07:51:49,840

head towards

5192

07:51:53,590 --> 07:51:51,360

crew airlock

5193

07:51:55,350 --> 07:51:53,600

to end today's spacewalk

5194

07:52:09,190 --> 07:51:55,360

before they do so they will be taking

5195

07:52:12,948 --> 07:52:11,270

okay and be sure to press those brakes

5196

07:52:22,050 --> 07:52:12,958

twice on the

5197

07:52:22,060 --> 07:52:30,708

[Music]

5198

07:52:34,788 --> 07:52:32,708

a firm that's the area in question we

5199

07:52:37,030 --> 07:52:34,798

currently we currently don't have ku and

5200

07:52:41,190 --> 07:52:37,040

we're 10 seconds to hand over i'll catch

5201
07:52:41,200 --> 07:53:05,960
you want me to hold here

5202
07:53:05,970 --> 07:53:12,230
[Music]

5203
07:53:14,788 --> 07:53:13,910
just let me get to the feeder rail and

5204
07:53:30,948 --> 07:53:14,798
all

5205
07:53:32,230 --> 07:53:30,958
uh port cedar cart brake pedal depressed

5206
07:53:35,910 --> 07:53:32,240
twice

5207
07:53:38,230 --> 07:53:35,920
and turn it around i agree your

5208
07:53:47,030 --> 07:53:38,240
feather looks like it is unlocked or

5209
07:53:50,868 --> 07:53:49,190
maybe it got pulled too far and you need

5210
07:53:56,070 --> 07:53:50,878
to pull a little further to get out of

5211
07:53:58,948 --> 07:53:57,590
i don't want to go all the way though

5212
07:54:06,708 --> 07:53:58,958
right

5213
07:54:06,718 --> 07:54:10,628

there it goes

5214

07:54:14,468 --> 07:54:12,230

if you're just joining us this is live

5215

07:54:15,750 --> 07:54:14,478

coverage of the 247th

5216

07:54:18,150 --> 07:54:15,760

spacewalk

5217

07:54:20,388 --> 07:54:18,160

and we're just waiting for ku to lock up

5218

07:54:24,150 --> 07:54:20,398

and then once you've located the

5219

07:54:26,468 --> 07:54:24,160

the area of concern mile marker 6600 and

5220

07:54:28,468 --> 07:54:26,478

go nader and you'll see the tusk cable

5221

07:54:31,350 --> 07:54:28,478

going through guides the one that's

5222

07:54:34,708 --> 07:54:31,360

almost directly nader of mile mark nasa

5223

07:54:37,510 --> 07:54:34,718

astronaut kayla baron and rasha achary

5224

07:54:40,150 --> 07:54:37,520

have just completed the ems or

5225

07:54:43,430 --> 07:54:40,160

alpha magnet magnetic spectrometer patch

5226
07:54:46,150 --> 07:54:43,440
panel assessment and it's moving inward

5227
07:54:49,510 --> 07:54:46,160
the plan is to form a heka or hd camera

5228
07:54:51,510 --> 07:54:49,520
inspection of the ts tus cable

5229
07:54:52,788 --> 07:54:51,520
and cable guide on the way back to the

5230
07:54:54,708 --> 07:54:52,798
airlock

5231
07:54:55,830 --> 07:54:54,718
and the test cable looks

5232
07:55:09,350 --> 07:54:55,840
great

5233
07:55:13,990 --> 07:55:11,750
i can see it looking back towards kayla

5234
07:55:15,750 --> 07:55:14,000
i didn't see any bends or anything

5235
07:55:17,670 --> 07:55:15,760
that looks all the same i got a level of

5236
07:55:18,868 --> 07:55:17,680
reflection it still looks pretty

5237
07:55:21,430 --> 07:55:18,878
straight to me

5238
07:55:23,990 --> 07:55:21,440

okay

5239

07:55:26,310 --> 07:55:24,000

and if you uh find that uh cable guide

5240

07:55:31,830 --> 07:55:26,320

again that's just nader of 6600 maybe

5241

07:55:36,310 --> 07:55:34,548

um i'd have to go pretty far outward to

5242

07:55:38,788 --> 07:55:36,320

get to the next one on the other side of

5243

07:55:40,708 --> 07:55:38,798

the if you're the other side of the mt

5244

07:55:42,468 --> 07:55:40,718

the other side of the horseshoe car

5245

07:55:44,230 --> 07:55:42,478

they're about like six or seven feet of

5246

07:55:57,350 --> 07:55:44,240

pirate and i'm looking at one right

5247

07:55:57,360 --> 07:56:01,590

okay

5248

07:56:05,990 --> 07:56:03,670

to kayla i think you're near 6600 is

5249

07:56:08,628 --> 07:56:06,000

that correct

5250

07:56:11,350 --> 07:56:08,638

firm i'm at 6600.

5251
07:56:13,670 --> 07:56:11,360
there is a trust cable guide immediately

5252
07:56:15,430 --> 07:56:13,680
nader of 6600

5253
07:56:19,910 --> 07:56:15,440
and this has cable looks straight no

5254
07:56:19,920 --> 07:56:23,030
okay copy

5255
07:56:27,430 --> 07:56:24,548
i'm pretty sure i can see in my helmet

5256
07:56:30,310 --> 07:56:27,440
like the next one is under the

5257
07:56:32,468 --> 07:56:30,320
uh port edge of the fourth to the cart

5258
07:56:35,030 --> 07:56:32,478
is where the next guide is at

5259
07:56:38,468 --> 07:56:36,868
where can the area where kayla is is

5260
07:56:41,270 --> 07:56:38,478
what we're concerned about the one right

5261
07:56:43,270 --> 07:56:41,280
under 6600 and so kayla are you able to

5262
07:56:45,030 --> 07:56:43,280
see both inboard and outboard of that

5263
07:56:50,230 --> 07:56:45,040

guy just on both sides of the guide and

5264

07:56:52,868 --> 07:56:51,270

straight

5265

07:56:54,788 --> 07:56:52,878

and if you're able i know you still have

5266

07:56:57,750 --> 07:56:54,798

that strut bag on your brt if you're

5267

07:56:59,830 --> 07:56:57,760

able to go nader of it and look venus go

5268

07:57:01,830 --> 07:56:59,840

under it and look up

5269

07:57:05,190 --> 07:57:01,840

that's the perspective that we think

5270

07:57:09,830 --> 07:57:07,430

um the only problem with that ice is

5271

07:57:13,030 --> 07:57:09,840

i'll risk touching the test cable to do

5272

07:57:17,190 --> 07:57:15,750

you have to get at a pretty wide

5273

07:57:18,868 --> 07:57:17,200

wingspan

5274

07:57:20,708 --> 07:57:18,878

down there and get the orientation

5275

07:57:22,548 --> 07:57:20,718

you're asking for

5276

07:57:25,030 --> 07:57:22,558

but i'm looking at it and it's not

5277

07:57:26,868 --> 07:57:25,040

tanked yeah we can we can see it in your

5278

07:57:28,708 --> 07:57:26,878

helmet as well it's at the bottom of

5279

07:57:31,030 --> 07:57:28,718

your helmet view but we see it as well

5280

07:57:32,708 --> 07:57:31,040

and uh yeah it looks good again the

5281

07:57:34,548 --> 07:57:32,718

image that we have on the ground here is

5282

07:57:37,110 --> 07:57:34,558

from nader looking up

5283

07:57:38,868 --> 07:57:37,120

but if you think it looks straight

5284

07:57:40,230 --> 07:57:38,878

you're the eyes in the field and it is a

5285

07:57:42,230 --> 07:57:40,240

slight bend what we're seeing on the

5286

07:57:44,548 --> 07:57:42,240

ground is a slight bend and that cable

5287

07:57:47,910 --> 07:57:44,558

is so wide it's like a ribbon right it's

5288

07:57:49,910 --> 07:57:47,920

on the nadir edge of that ribbon so

5289

07:57:52,070 --> 07:57:49,920

are you maybe able to get your mirror

5290

07:57:54,230 --> 07:57:52,080

down there right under the guide just

5291

07:57:56,070 --> 07:57:54,240

outboard are you able to maybe see it in

5292

07:57:59,590 --> 07:57:56,080

your mirror

5293

07:58:01,750 --> 07:57:59,600

i can see it from here actually

5294

07:58:02,548 --> 07:58:01,760

maybe like two inches outboard of that

5295

07:58:03,670 --> 07:58:02,558

guy

5296

07:58:05,510 --> 07:58:03,680

there's like a

5297

07:58:10,220 --> 07:58:05,520

small

5298

07:58:10,230 --> 07:58:15,590

[Music]

5299

07:58:15,600 --> 07:58:20,548

russia

5300

07:58:27,590 --> 07:58:23,830

maybe what it is like is

5301

07:58:32,388 --> 07:58:30,628

so can you see it in my wvs right here

5302

07:58:34,468 --> 07:58:32,398

where i'm pointing

5303

07:58:36,468 --> 07:58:34,478

hey firm yes kayla we do see that and i

5304

07:58:40,150 --> 07:58:36,478

also see the little bit of a divot in

5305

07:58:44,548 --> 07:58:42,070

not a divot like a bend indoor changing

5306

07:58:44,558 --> 07:58:49,430

that coincides with this small

5307

07:58:53,030 --> 07:58:50,868

i don't um know the right word to

5308

07:58:56,230 --> 07:58:53,040

describe it that coincides with what

5309

07:59:01,030 --> 07:58:58,230

it doesn't look

5310

07:59:02,628 --> 07:59:01,040

like a big problem

5311

07:59:05,350 --> 07:59:02,638

okay all right we think we've got what

5312

07:59:11,030 --> 07:59:05,360

we need so if you guys are good we are

5313

07:59:13,510 --> 07:59:12,150

i'm ready

5314

07:59:17,190 --> 07:59:13,520

and you want pictures of the pit pin

5315

07:59:17,200 --> 07:59:21,990

yes a firm

5316

07:59:27,750 --> 07:59:23,830

and uh remember you each have fair leads

5317

07:59:29,590 --> 07:59:27,760

ev1 yours is on 3410 and ev2 users 3409

5318

07:59:34,230 --> 07:59:29,600

you can grab those adjustables

5319

07:59:37,510 --> 07:59:35,990

where are you right now roger i just

5320

07:59:40,070 --> 07:59:37,520

found them the cedar just started down

5321

07:59:43,190 --> 07:59:40,080

to this bird i'm just at my desk

5322

07:59:45,030 --> 07:59:43,200

the crew has just completed the heck

5323

07:59:46,708 --> 07:59:45,040

inspection of the tusk cable and the

5324

07:59:49,270 --> 07:59:46,718

cable guide on their way back and

5325

07:59:51,670 --> 07:59:49,280

they're now on their way back to the

5326
07:59:53,430 --> 07:59:51,680
airlock

5327
08:00:22,070 --> 07:59:53,440
okay

5328
08:00:26,548 --> 08:00:23,910
and i'm probably stating the obvious db1

5329
08:00:29,830 --> 08:00:26,558
and ev2 but ev2 is leading to the

5330
08:00:33,510 --> 08:00:31,430
i need your help real quick if you can

5331
08:00:35,030 --> 08:00:33,520
see my safety feather i think it's

5332
08:00:36,070 --> 08:00:35,040
caught on something a little bit neater

5333
08:00:41,670 --> 08:00:36,080
of me

5334
08:00:47,510 --> 08:00:44,468
see um corner of that box

5335
08:00:49,590 --> 08:00:47,520
not quite sure how to there you go thank

5336
08:00:55,270 --> 08:00:49,600
you yep clear

5337
08:00:59,270 --> 08:00:56,948
already have your adjustable operator

5338
08:01:04,708 --> 08:00:59,280

yes my adjustable is picked up okay

5339

08:01:19,670 --> 08:01:06,708

all right let me start working your way

5340

08:01:25,110 --> 08:01:22,468

and uh again a caution just be

5341

08:01:27,750 --> 08:01:25,120

mindful of that test cable

5342

08:01:28,788 --> 08:01:27,760

watch the test cable please

5343

08:01:30,788 --> 08:01:28,798

i mean

5344

08:01:32,150 --> 08:01:30,798

for some reason my

5345

08:01:35,270 --> 08:01:32,160

wheel

5346

08:01:38,310 --> 08:01:36,708

i can't just twice like you're actually

5347

08:01:39,990 --> 08:01:38,320

keeps

5348

08:01:41,990 --> 08:01:40,000

not wanting to retract so i've got a

5349

08:01:43,110 --> 08:01:42,000

school of cable down here so maybe hold

5350

08:01:44,788 --> 08:01:43,120

on for just a second before you come

5351

08:01:47,990 --> 08:01:44,798

down before they're killed

5352

08:01:51,670 --> 08:01:48,000

it's not retracting again

5353

08:01:53,670 --> 08:01:51,680

okay see it's unlocked copy that one of

5354

08:01:56,948 --> 08:01:53,680

one of ev2's reels is not taking up

5355

08:02:01,910 --> 08:01:59,590

it happened before the feversburg

5356

08:02:06,788 --> 08:02:01,920

pulled it up and it started to go

5357

08:02:13,270 --> 08:02:08,628

let me try to get down a little lower so

5358

08:02:13,280 --> 08:02:18,150

and roger

5359

08:02:25,590 --> 08:02:19,670

roger when you can if you can either

5360

08:02:28,310 --> 08:02:27,190

do you think he wanted me to come down

5361

08:02:30,150 --> 08:02:28,320

further

5362

08:02:31,750 --> 08:02:30,160

no no i think

5363

08:02:33,030 --> 08:02:31,760

forget to come down to see the sport i

5364

08:02:34,628 --> 08:02:33,040

would come all the way down towards the

5365

08:02:41,030 --> 08:02:34,638

doghouses

5366

08:02:41,040 --> 08:02:46,468

okay go ahead ike

5367

08:02:49,670 --> 08:02:47,830

okay roger if you have a chance we'd

5368

08:02:52,150 --> 08:02:49,680

like you to either show the uh reel the

5369

08:02:57,030 --> 08:02:52,160

big number on that reel to the camera uh

5370

08:03:01,750 --> 08:03:00,150

i'm trying to pull it all in

5371

08:03:04,230 --> 08:03:01,760

and one other thing you might do once

5372

08:03:05,750 --> 08:03:04,240

you've confirmed it's on

5373

08:03:07,270 --> 08:03:05,760

once you've confirmed it's unlocked pull

5374

08:03:14,830 --> 08:03:07,280

the cable out a little bit and see if

5375

08:03:24,230 --> 08:03:18,388

28 happy happy 28th

5376

08:03:27,990 --> 08:03:26,388

and we think pull some out pull some out

5377

08:03:33,670 --> 08:03:28,000

and then see if it retracts before you

5378

08:03:36,548 --> 08:03:34,468

i'm

5379

08:03:38,388 --> 08:03:36,558

just free floating down here taylor okay

5380

08:03:41,670 --> 08:03:38,398

i'm not

5381

08:03:42,830 --> 08:03:41,680

jammed i can tell it's

5382

08:03:45,030 --> 08:03:42,840

not taken up

5383

08:03:46,868 --> 08:03:45,040

anymore i think

5384

08:03:51,510 --> 08:03:46,878

he

5385

08:03:53,030 --> 08:03:51,520

no it just made a lot more

5386

08:03:54,628 --> 08:03:53,040

hey copy

5387

08:04:04,388 --> 08:03:54,638

okay we're opening up the crib sheet

5388

08:04:13,030 --> 08:04:06,548

okay we try to get on the act further

5389

08:04:16,708 --> 08:04:15,350

yep just stop for a second and stand by

5390

08:04:19,110 --> 08:04:16,718

for me we're going to get together and

5391

08:04:20,628 --> 08:04:19,120

work this crib sheet procedure and the

5392

08:04:23,030 --> 08:04:20,638

first thing is a caution do not attempt

5393

08:04:27,110 --> 08:04:23,040

to push or assist the cable back inside

5394

08:04:32,468 --> 08:04:28,788

can i just talk to roger real quick

5395

08:04:35,990 --> 08:04:34,310

i think it might help if i can come down

5396

08:04:37,590 --> 08:04:36,000

and get eyes on it and maybe actually

5397

08:04:40,468 --> 08:04:37,600

help him but i just need his clearance

5398

08:04:42,548 --> 08:04:40,478

that i'm okay to come down

5399

08:04:44,708 --> 08:04:42,558

you're clear to come down kayla

5400

08:04:46,230 --> 08:04:44,718

i'm trying to pull all this other clear

5401
08:04:47,750 --> 08:04:46,240
man

5402
08:04:49,670 --> 08:04:47,760
stay away if we're worried about me

5403
08:04:51,910 --> 08:04:49,680
getting caught up in it

5404
08:04:53,270 --> 08:04:51,920
and so for ev1 and ev2 the next thing

5405
08:04:54,868 --> 08:04:53,280
that we're going to do in this procedure

5406
08:04:56,388 --> 08:04:54,878
is to coil some of it up and that might

5407
08:04:58,150 --> 08:04:56,398
help clear the path for you to get down

5408
08:05:02,150 --> 08:04:58,160
there

5409
08:05:06,230 --> 08:05:03,990
i've got control of it over here so you

5410
08:05:07,590 --> 08:05:06,240
can come all the way down to the

5411
08:05:10,150 --> 08:05:07,600
part of the circular handrail you should

5412
08:05:13,030 --> 08:05:10,160
be clear yeah mine's not really there it

5413
08:05:13,040 --> 08:05:17,830

i'm coming down

5414

08:05:17,840 --> 08:05:20,830

all

5415

08:05:24,868 --> 08:05:23,110

right okay

5416

08:05:30,388 --> 08:05:24,878

so we've verified that the reel is

5417

08:05:38,708 --> 08:05:32,788

okay verify the tether reel and or cable

5418

08:05:44,070 --> 08:05:41,750

i don't see any thought in there

5419

08:05:45,190 --> 08:05:44,080

see if i can see the raisin cable on the

5420

08:05:48,388 --> 08:05:45,200

inside

5421

08:05:49,670 --> 08:05:48,398

i can i can see looking in there

5422

08:05:52,230 --> 08:05:49,680

there's one

5423

08:05:53,750 --> 08:05:52,240

cable that's like crosswise

5424

08:05:55,110 --> 08:05:53,760

normally they all go in a straight line

5425

08:05:57,270 --> 08:05:55,120

everything else is parallel and there's

5426

08:06:00,070 --> 08:05:57,280

one that's diagonally running

5427

08:06:02,868 --> 08:06:00,080

across them in the inside

5428

08:06:05,110 --> 08:06:02,878

copy good words thank you and uh you can

5429

08:06:09,510 --> 08:06:05,120

coil the safety tether in order to bring

5430

08:06:16,548 --> 08:06:11,270

you can wrap it around the real housing

5431

08:06:16,558 --> 08:06:24,948

copy

5432

08:06:24,958 --> 08:06:39,270

here

5433

08:06:43,590 --> 08:06:41,590

okay and raja as you wrap the cable just

5434

08:06:44,628 --> 08:06:43,600

be careful of any burrs watch your

5435

08:06:47,110 --> 08:06:44,638

gloves

5436

08:06:50,708 --> 08:06:47,120

and kayla uh confirm you retrieved your

5437

08:06:52,310 --> 08:06:50,718

adjustable fairlead from 3410

5438

08:06:54,230 --> 08:06:52,320

i did

5439

08:06:56,628 --> 08:06:54,240

thank you

5440

08:06:58,628 --> 08:06:56,638

crew has inspected the tusk cable and

5441

08:07:00,150 --> 08:06:58,638

are now headed back to the airlock they

5442

08:07:01,670 --> 08:07:00,160

are currently troubleshooting one of the

5443

08:07:10,868 --> 08:07:01,680

safety tethers which has failed to

5444

08:07:15,670 --> 08:07:12,388

i've got a coil

5445

08:07:17,190 --> 08:07:15,680

of what i do with that coil

5446

08:07:18,708 --> 08:07:17,200

open question

5447

08:07:20,548 --> 08:07:18,718

um you could tuck it behind your mini

5448

08:07:22,628 --> 08:07:20,558

workstation

5449

08:07:24,150 --> 08:07:22,638

or wrap an adjustable around it or if

5450

08:07:25,910 --> 08:07:24,160

you feel like you can get in i think

5451

08:07:27,190 --> 08:07:25,920

i'll do the adjustable maybe take it in

5452

08:07:28,708 --> 08:07:27,200

with you

5453

08:07:30,230 --> 08:07:28,718

i'm taking it in might be the best bet

5454

08:07:31,510 --> 08:07:30,240

it's just

5455

08:07:32,548 --> 08:07:31,520

i think if i brought some adjustable

5456

08:07:36,310 --> 08:07:32,558

around it i don't think it'll be tight

5457

08:07:39,590 --> 08:07:37,910

i think your best bet is probably

5458

08:07:41,350 --> 08:07:39,600

getting inside if i try to chuck that in

5459

08:07:43,670 --> 08:07:41,360

there i think it will grow up inside

5460

08:07:46,150 --> 08:07:43,680

there yeah

5461

08:07:49,350 --> 08:07:46,160

one challenge

5462

08:07:51,110 --> 08:07:49,360

is how we're going to get inside with

5463

08:07:52,708 --> 08:07:51,120

normally i would daisy chain does that

5464

08:07:54,788 --> 08:07:52,718

to each other

5465

08:07:56,030 --> 08:07:54,798

but maybe we'll we should both go to the

5466

08:08:00,150 --> 08:07:56,040

airlock screen

5467

08:08:04,708 --> 08:08:01,910

that way you can just

5468

08:08:06,388 --> 08:08:04,718

manage each other

5469

08:08:07,750 --> 08:08:06,398

that's probably a good idea i could

5470

08:08:11,430 --> 08:08:07,760

probably

5471

08:08:16,070 --> 08:08:11,440

hold your coil while you get inside and

5472

08:08:20,468 --> 08:08:17,750

and then i can hand you the

5473

08:08:24,468 --> 08:08:20,478

bundle back okay

5474

08:08:29,110 --> 08:08:26,548

are you okay with that ice

5475

08:08:30,548 --> 08:08:29,120

okay kayla we like we like that plan uh

5476

08:08:31,670 --> 08:08:30,558

i just really think about it if you want

5477

08:08:33,110 --> 08:08:31,680

to do something a little different you

5478

08:08:35,270 --> 08:08:33,120

know what the procedure was written to

5479

08:08:37,030 --> 08:08:35,280

will still work uh we'll just have to

5480

08:08:38,628 --> 08:08:37,040

manage that bundle but if you guys want

5481

08:08:39,670 --> 08:08:38,638

to both go to the airlock d-ring

5482

08:08:43,590 --> 08:08:39,680

extender

5483

08:08:46,868 --> 08:08:45,990

another concern with a bundle as i don't

5484

08:08:48,468 --> 08:08:46,878

think

5485

08:08:50,788 --> 08:08:48,478

it's not big enough that something would

5486

08:08:52,708 --> 08:08:50,798

restrain it so as soon as we let go of

5487

08:08:54,548 --> 08:08:52,718

it that's going to unfoil again yeah i

5488

08:08:56,230 --> 08:08:54,558

think um

5489

08:08:57,910 --> 08:08:56,240

in my opinion we should both go to the

5490

08:08:59,510 --> 08:08:57,920

airlocky ring extender because i think

5491

08:09:00,468 --> 08:08:59,520

it would be difficult to manage the

5492

08:09:02,788 --> 08:09:00,478

bundle

5493

08:09:13,110 --> 08:09:02,798

otherwise

5494

08:09:17,910 --> 08:09:14,788

roger i think it'd be best if once

5495

08:09:21,190 --> 08:09:19,910

you pick up your own anchor

5496

08:09:23,430 --> 08:09:21,200

put it inside

5497

08:09:24,948 --> 08:09:23,440

and take it in with you like put it on

5498

08:09:26,868 --> 08:09:24,958

your mini workstation and then i'll hand

5499

08:09:28,948 --> 08:09:26,878

you this bundle back

5500

08:09:31,190 --> 08:09:28,958

if you go inside and i'm getting close

5501

08:09:33,190 --> 08:09:31,200

locked black on black the airlock in

5502

08:09:35,190 --> 08:09:33,200

your ranks number okay

5503

08:09:41,830 --> 08:09:35,200

copy good safety good waste tether

5504

08:09:45,030 --> 08:09:43,190

i still have to get my crew lock back

5505

08:09:46,388 --> 08:09:45,040

but i can do that once i kind of push

5506

08:09:52,310 --> 08:09:46,398

this up into the air boxes to get it out

5507

08:10:25,830 --> 08:09:54,150

why don't you do that since i've got the

5508

08:10:29,830 --> 08:10:27,750

and if you're willing raja before you

5509

08:10:31,430 --> 08:10:29,840

drag the d-ring extender back in with

5510

08:10:33,830 --> 08:10:31,440

you maybe i'll give you my waste heather

5511

08:10:36,628 --> 08:10:33,840

large hook

5512

08:10:38,708 --> 08:10:36,638

to the airlock d-ring extender

5513

08:10:40,868 --> 08:10:38,718

hey just a reminder there's also a spare

5514

08:10:42,150 --> 08:10:40,878

waste tether on that d-ring extender in

5515

08:10:46,548 --> 08:10:42,160

the airlock as well if you need a little

5516

08:10:53,110 --> 08:10:48,070

point i can i can always give that to

5517

08:10:56,548 --> 08:10:54,948

yeah i would i think it's okay if you

5518

08:10:58,628 --> 08:10:56,558

want to just put my large hook on it

5519

08:11:00,070 --> 08:10:58,638

that i have in my hand okay

5520

08:11:19,030 --> 08:11:00,080

i'm going to get the crew back out of

5521

08:11:19,040 --> 08:11:28,070

get back to the reps

5522

08:11:28,080 --> 08:11:33,510

back down

5523

08:11:43,270 --> 08:11:35,590

let me get rid of my vr my brg stuff

5524

08:12:14,990 --> 08:11:44,868

let me do my hook and then i'll give you

5525

08:12:15,000 --> 08:12:19,510

[Music]

5526

08:12:19,520 --> 08:12:29,990

you're the what

5527

08:12:33,030 --> 08:12:31,190

and i

5528

08:12:34,788 --> 08:12:33,040

would like to confirm to you that my

5529

08:12:37,830 --> 08:12:34,798

right waist tether large hook is on the

5530

08:12:39,590 --> 08:12:37,840

airlock earring extender it is locked

5531

08:12:41,350 --> 08:12:39,600

i have a good load pass through my right

5532

08:12:42,948 --> 08:12:41,360

waist feather

5533

08:12:44,868 --> 08:12:42,958

copy with your right waist tether that

5534

08:13:02,948 --> 08:12:44,878

is a good config for both ev crew

5535

08:13:08,628 --> 08:13:04,150

out of the way but i can get the bundle

5536

08:13:08,638 --> 08:13:15,190

okay i can take the gun

5537

08:13:23,270 --> 08:13:17,190

as the astronauts enter the crew look

5538

08:13:27,590 --> 08:13:25,670

since i have a good uh load pass through

5539

08:13:31,190 --> 08:13:27,600

my waist tether i'm going to pick up my

5540

08:13:31,200 --> 08:13:44,628

we are go

5541

08:13:49,750 --> 08:13:46,388

as the astronauts enter the crew lock

5542

08:13:54,548 --> 08:13:51,270

with you on two we'll try to clear out

5543

08:13:54,558 --> 08:14:09,190

uh

5544

08:14:26,948 --> 08:14:12,070

okay we got all zeros on the cshcp zero

5545

08:14:30,070 --> 08:14:28,788

you're going to release my vrt if you

5546

08:14:32,230 --> 08:14:30,080

can

5547

08:14:33,990 --> 08:14:32,240

on the handrail mark me copy all zeros

5548

08:14:35,830 --> 08:14:34,000

on the csacp

5549

08:14:40,830 --> 08:14:35,840

reading of your viewers we're calling

5550

08:14:47,030 --> 08:14:44,948

fire happy false fire and uh

5551
08:14:48,150 --> 08:14:47,040
second reading was all zeroes as well

5552
08:14:49,270 --> 08:14:48,160
and

5553
08:14:50,868 --> 08:14:49,280
i take it that means there's no

5554
08:14:52,548 --> 08:14:50,878
corrections

5555
08:14:53,990 --> 08:14:52,558
i'm gonna try to slide up out of your

5556
08:14:54,948 --> 08:14:54,000
way here

5557
08:14:59,590 --> 08:14:54,958
for you

5558
08:15:06,388 --> 08:15:02,468
happy thanks i'm over the ui

5559
08:15:10,788 --> 08:15:08,070
and i should you want us to try to get

5560
08:15:13,030 --> 08:15:10,798
that piston imagery

5561
08:15:14,708 --> 08:15:13,040
negative negative on that continue your

5562
08:15:16,788 --> 08:15:14,718
ingress nice job working together to

5563
08:15:18,708 --> 08:15:16,798

manage that uh reel

5564

08:15:20,708 --> 08:15:18,718

and cable and just a heads up to you we

5565

08:15:21,910 --> 08:15:20,718

had a false fire in

5566

08:15:23,750 --> 08:15:21,920

cygnus

5567

08:15:26,948 --> 08:15:23,760

it did some reconfig and so at this time

5568

08:15:29,750 --> 08:15:26,958

you're not going to have o2 on the scu's

5569

08:15:31,590 --> 08:15:29,760

we are going to continue with ingress

5570

08:15:35,270 --> 08:15:31,600

nominally at this time we're working to

5571

08:15:41,670 --> 08:15:37,430

vehicle o2 we're working to get iso 2

5572

08:15:45,510 --> 08:15:43,830

i'm just going to try to put my

5573

08:15:48,708 --> 08:15:45,520

anywhere station end effector on the

5574

08:15:52,388 --> 08:15:50,150

and hey if you could when you both have

5575

08:16:03,590 --> 08:15:52,398

a spare finger get your hekass off please

5576
08:16:07,190 --> 08:16:05,350
as the astronauts enter the crew lock

5577
08:16:08,708 --> 08:16:07,200
portion of the quest airlock

5578
08:16:10,948 --> 08:16:08,718
ingress begins in the end of the

5579
08:16:13,270 --> 08:16:10,958
spacewalk for the day however the

5580
08:16:16,308 --> 08:16:13,280
spacewalk timer will continue to run

5581
08:16:20,708 --> 08:16:16,318
until repressurization begins just in

5582
08:16:24,388 --> 08:16:22,230
go ahead mark

5583
08:16:26,150 --> 08:16:24,398
okay

5584
08:16:30,548 --> 08:16:26,160
what would happen if this alarm

5585
08:16:34,788 --> 08:16:32,788
station under sector the o2 has been

5586
08:16:36,388 --> 08:16:34,798
re-enabled i think it was kind of

5587
08:16:37,860 --> 08:16:36,398
pulling me out

5588
08:16:39,830 --> 08:16:37,870

i'm in now

5589

08:16:41,430 --> 08:16:39,840

[Applause]

5590

08:16:44,628 --> 08:16:41,440

and

5591

08:16:56,708 --> 08:16:44,638

i'm going to rotate my feet back

5592

08:16:59,030 --> 08:16:58,070

running through

5593

08:17:01,430 --> 08:16:59,040

over your

5594

08:17:03,430 --> 08:17:01,440

left leg okay

5595

08:17:05,830 --> 08:17:03,440

ev crew are increasing the airlock with

5596

08:17:08,150 --> 08:17:05,840

a safety tether that failed to retract

5597

08:17:10,548 --> 08:17:08,160

in addition a fire alarm has

5598

08:17:13,190 --> 08:17:10,558

announced itself on board iss from the

5599

08:17:14,868 --> 08:17:13,200

cygnus vehicle the iss automated

5600

08:17:27,990 --> 08:17:14,878

response

5601
08:17:28,000 --> 08:17:32,230
is

5602
08:17:37,030 --> 08:17:34,788
the crew has taken csa cp readings and

5603
08:17:38,868 --> 08:17:37,040
indications that are this was a false

5604
08:17:41,110 --> 08:17:38,878
alarm the airlock

5605
08:17:43,110 --> 08:17:41,120
o2 valves have been closed as a part of

5606
08:17:46,308 --> 08:17:43,120
automated response which results in no

5607
08:17:58,150 --> 08:17:46,318
vehicle o2 via the scu's until those

5608
08:18:00,868 --> 08:17:58,930
like to

5609
08:18:02,628 --> 08:18:00,878
[Music]

5610
08:18:05,350 --> 08:18:02,638
maybe um are you just trying to roll

5611
08:18:08,230 --> 08:18:05,360
onto my stomach frozen okay

5612
08:18:10,388 --> 08:18:08,240
i'm not i'm gonna be running it into you

5613
08:18:12,388 --> 08:18:10,398

or something there's a little ways of

5614

08:18:13,910 --> 08:18:12,398

how to go between your legs

5615

08:18:16,070 --> 08:18:13,920

i'm trying to figure out how to undo it

5616

08:18:19,510 --> 08:18:16,080

um

5617

08:18:19,520 --> 08:18:24,830

on special ground two for unknown

5618

08:18:24,840 --> 08:18:33,110

concealed for any of you all right

5619

08:18:37,160 --> 08:18:35,110

if you hold still i think i can move

5620

08:18:52,628 --> 08:18:37,170

left

5621

08:18:52,638 --> 08:19:03,540

is

5622

08:19:03,550 --> 08:19:07,030

[Music]

5623

08:19:07,040 --> 08:19:12,948

is that um

5624

08:19:19,990 --> 08:19:15,190

did you see anything

5625

08:19:20,000 --> 08:19:35,270

my pgc one

5626
08:19:38,788 --> 08:19:37,190
basically the airlock b ring extenders

5627
08:19:40,308 --> 08:19:38,798
going behind

5628
08:19:41,830 --> 08:19:40,318
the left side

5629
08:19:44,070 --> 08:19:41,840
um

5630
08:19:45,990 --> 08:19:44,080
my left side feels very clear okay right

5631
08:19:48,388 --> 08:19:46,000
your right side you're right back

5632
08:19:54,628 --> 08:19:48,398
back here a little bit further anyway

5633
08:19:54,638 --> 08:19:58,388
you're retracing my steps here

5634
08:20:02,548 --> 08:20:00,388
that's better and now

5635
08:20:04,388 --> 08:20:02,558
you're less

5636
08:20:06,948 --> 08:20:04,398
it's basically it's your waist head i

5637
08:20:12,788 --> 08:20:06,958
think is wrap is coming around your brt

5638
08:20:20,070 --> 08:20:14,548

can you tell me how to rotate to get it

5639

08:20:23,670 --> 08:20:21,910

let's figure out if i could would it be

5640

08:20:25,030 --> 08:20:23,680

better if i just egressed and tried

5641

08:20:27,270 --> 08:20:25,040

again

5642

08:20:30,070 --> 08:20:27,280

uh it wouldn't hurt um the only thing is

5643

08:20:31,910 --> 08:20:30,080

the safety teller reel is all

5644

08:20:33,750 --> 08:20:31,920

working here uh what i'm considering

5645

08:20:35,830 --> 08:20:33,760

doing is

5646

08:20:39,590 --> 08:20:35,840

connecting

5647

08:20:41,990 --> 08:20:39,600

this extra uh airlock d-ring

5648

08:20:57,670 --> 08:20:42,000

waste header to you or handing it to you

5649

08:20:57,680 --> 08:21:00,948

okay

5650

08:21:04,150 --> 08:21:02,628

find it i'll

5651
08:21:12,468 --> 08:21:04,160
have it floating that way or it's on the

5652
08:21:15,270 --> 08:21:14,308
if you put that on anything that the

5653
08:21:16,628 --> 08:21:15,280
small

5654
08:21:18,868 --> 08:21:16,638
side is

5655
08:21:19,990 --> 08:21:18,878
black on black gate closed so if you

5656
08:21:22,388 --> 08:21:20,000
can't change that to something you'll

5657
08:21:24,230 --> 08:21:22,398
have a low pass our truck is did it

5658
08:21:25,910 --> 08:21:24,240
close and walk from the left steering

5659
08:21:26,948 --> 08:21:25,920
extender and now

5660
08:21:28,788 --> 08:21:26,958
this is the one that's causing your

5661
08:21:32,230 --> 08:21:28,798
pressure i'm going to take that off

5662
08:21:32,240 --> 08:21:40,308
pushing your legs around

5663
08:21:42,948 --> 08:21:41,830

okay that's just for you i think try

5664

08:21:49,350 --> 08:21:42,958

that

5665

08:21:49,360 --> 08:21:55,270

and i can move out of your way thank

5666

08:22:05,510 --> 08:21:58,070

i'll work you the strap for the

5667

08:22:13,590 --> 08:22:07,750

okay caleb i've got some steps for you

5668

08:22:16,070 --> 08:22:14,468

is

5669

08:22:18,868 --> 08:22:16,080

attached to the caleb herbal bath so

5670

08:22:19,990 --> 08:22:18,878

it's the stairway setters attached here

5671

08:22:23,350 --> 08:22:20,000

great

5672

08:22:24,948 --> 08:22:23,360

to maneuver and once you two are

5673

08:22:26,548 --> 08:22:24,958

situated let me know and i've got some

5674

08:22:28,230 --> 08:22:26,558

steps for closing that thermal cover all

5675

08:22:30,468 --> 08:22:28,240

the way

5676
08:22:32,150 --> 08:22:30,478
nice nice work we were we were following

5677
08:22:36,230 --> 08:22:32,160
you and if you needed the egress to to

5678
08:22:40,468 --> 08:22:38,468
i don't we were hesitant because of the

5679
08:22:42,708 --> 08:22:40,478
real that

5680
08:22:44,308 --> 08:22:42,718
i said so nope absolutely great

5681
08:22:45,750 --> 08:22:44,318
consideration but yeah we're following

5682
08:22:47,830 --> 08:22:45,760
along we like everything you're talking

5683
08:22:51,350 --> 08:22:47,840
about so when you two are comfortable

5684
08:22:54,440 --> 08:22:53,590
it is cover closed with six sharpie

5685
08:22:55,590 --> 08:22:54,450
lines this ball

5686
08:22:57,510 --> 08:22:55,600
[Applause]

5687
08:23:01,030 --> 08:22:57,520
copy and then if you verify the magnet

5688
08:23:06,948 --> 08:23:04,150

our net is engaged

5689

08:23:08,708 --> 08:23:06,958

with views from the helmet heka cam from

5690

08:23:11,030 --> 08:23:08,718

kayla baron showing that the thermal

5691

08:23:14,230 --> 08:23:11,040

hatch cover is now closed

5692

08:23:16,788 --> 08:23:14,240

with uh ingress so you ev1 and eb2 you

5693

08:23:18,628 --> 08:23:16,798

can remove the scu's from the stowage

5694

08:23:20,948 --> 08:23:18,638

pouches

5695

08:23:23,190 --> 08:23:20,958

and then remove the dcm covers velcro

5696

08:23:27,830 --> 08:23:23,200

them to the dcm and connect the scu to

5697

08:23:31,270 --> 08:23:29,750

and actually uh kayla i know you were

5698

08:23:52,788 --> 08:23:31,280

busy working there if you can turn your

5699

08:23:52,798 --> 08:23:59,270

is no longer on my helmet

5700

08:23:59,280 --> 08:24:02,308

okay

5701
08:24:05,910 --> 08:24:03,670
yeah we're still seeing a video it's

5702
08:24:08,070 --> 08:24:05,920
it's in there but we see it and we're

5703
08:24:09,430 --> 08:24:08,080
just be careful of the touch temperature

5704
08:24:11,110 --> 08:24:09,440
that's why we want to get it off so when

5705
08:24:18,388 --> 08:24:11,120
you do eventually find it just be

5706
08:24:21,910 --> 08:24:19,590
and it looks

5707
08:24:22,868 --> 08:24:21,920
it looks like it's in the overhead uh at

5708
08:24:25,590 --> 08:24:22,878
the uh

5709
08:24:27,510 --> 08:24:25,600
uh port starboard handrail pointing at

5710
08:24:29,030 --> 08:24:27,520
the hatch but uh don't worry about that

5711
08:24:31,190 --> 08:24:29,040
now so we'll get the ses out of the

5712
08:24:44,230 --> 08:24:31,200
pouch dcm covers open in velcro and then

5713
08:24:44,240 --> 08:25:11,350

wow

5714

08:25:11,360 --> 08:25:14,948

ev1 connected and locked

5715

08:25:14,958 --> 08:25:17,430

okay

5716

08:25:17,440 --> 08:25:22,150

kind of a chocolate mess back here

5717

08:25:27,510 --> 08:25:23,670

okay

5718

08:25:31,110 --> 08:25:27,520

we'll make sure that the uh

5719

08:25:33,270 --> 08:25:31,120

all right okay now we are going to

5720

08:25:36,468 --> 08:25:33,280

switch water off

5721

08:25:46,788 --> 08:25:36,478

expect a water is off message

5722

08:25:52,830 --> 08:25:48,150

all right a caution do not close the

5723

08:25:58,308 --> 08:25:55,830

minutes did you say about you want tvs

5724

08:26:08,628 --> 08:26:00,628

note that tcv setting of eight max cold

5725

08:26:12,070 --> 08:26:10,150

once the crew lock is completely

5726

08:26:13,750 --> 08:26:12,080

re-pressured the astronauts on the other

5727

08:26:15,670 --> 08:26:13,760

side of the quest airlock will bring our

5728

08:26:17,910 --> 08:26:15,680

spacewalkers from the crew lock portion

5729

08:26:20,150 --> 08:26:17,920

of the airlock to the equipment lock and

5730

08:26:43,510 --> 08:26:20,160

will help them doff their suits

5731

08:26:46,468 --> 08:26:45,270

are you doing positioning wise you need

5732

08:26:48,948 --> 08:26:46,478

to move or anything

5733

08:26:51,430 --> 08:26:48,958

um no i think for now i can reach the

5734

08:26:53,110 --> 08:26:51,440

hatch keep i might need to move as i'm

5735

08:27:15,990 --> 08:26:53,120

closing the hatch

5736

08:27:50,468 --> 08:27:17,510

okay we're just standing by for a timer

5737

08:27:55,590 --> 08:27:52,788

all right we've had our two minutes uh

5738

08:27:57,670 --> 08:27:55,600

from water off and so now kayla verified

5739

08:27:59,430 --> 08:27:57,680

the outer hatch is clear of hardware i

5740

08:28:01,350 --> 08:27:59,440

know you've got a lot going on in there

5741

08:28:10,788 --> 08:28:01,360

so just give it a good look over

5742

08:28:32,468 --> 08:28:13,350

okay verify the handle position per the

5743

08:28:40,830 --> 08:28:35,190

okay and then you can close and lock the

5744

08:28:45,750 --> 08:28:43,350

release from the hatch keith

5745

08:28:47,030 --> 08:28:45,760

i'll probably need to bring my feet

5746

08:28:49,800 --> 08:28:47,040

towards the

5747

08:29:06,150 --> 08:28:49,810

iv hatch roger

5748

08:29:06,160 --> 08:29:18,308

yes

5749

08:29:44,548 --> 08:29:20,220

my feet

5750

08:29:47,510 --> 08:29:46,308

way to grab that heck up

5751

08:29:50,788 --> 08:29:47,520

all right we are moving to the

5752

08:29:53,350 --> 08:29:50,798

pre-repress cue card

5753

08:29:59,270 --> 08:29:53,360

all right ev1 and ev2 on your dcm check

5754

08:29:59,280 --> 08:30:03,030

blocks my dcm

5755

08:30:11,910 --> 08:30:06,788

fcu is

5756

08:30:15,910 --> 08:30:13,510

and we gave you the two minutes water

5757

08:30:17,430 --> 08:30:15,920

switches off

5758

08:30:19,270 --> 08:30:17,440

give you one cup

5759

08:30:20,868 --> 08:30:19,280

give me two copy

5760

08:30:22,948 --> 08:30:20,878

all right

5761

08:30:26,788 --> 08:30:22,958

in the crew lock check evie hatch closed

5762

08:30:31,590 --> 08:30:29,350

patch is closed and

5763

08:30:35,270 --> 08:30:31,600

fashionable

5764

08:30:41,030 --> 08:30:35,280

happy raja on the uia check the oxygen

5765

08:30:47,510 --> 08:30:44,070

they're both open one two

5766

08:30:56,708 --> 08:30:47,520

okay roger check switch power ev1 and 2.

5767

08:31:00,830 --> 08:31:00,150

two power switches on and two leds

5768

08:31:02,628 --> 08:31:00,840

i

5769

08:31:05,750 --> 08:31:02,638

mean

5770

08:31:08,388 --> 08:31:05,760

confirm two leds on

5771

08:31:11,750 --> 08:31:08,398

correct two led drive okay check power

5772

08:31:14,948 --> 08:31:11,760

ev one and two volts equal to 18 to 19

5773

08:31:20,388 --> 08:31:16,628

one eighteen point eight dbq eighteen

5774

08:31:26,628 --> 08:31:23,430

good numbers all right on your dcms

5775

08:31:33,590 --> 08:31:26,638

switch power to scu and ev expect the

5776

08:31:41,190 --> 08:31:36,150

i'm in nfcu

5777

08:31:44,788 --> 08:31:43,350

happy ev-2 it has been an honor a

5778

08:31:50,468 --> 08:31:44,798

privilege working with you way to go

5779

08:31:54,548 --> 08:31:52,628

and during that handover just a few

5780

08:31:56,150 --> 08:31:54,558

words thanks for

5781

08:31:57,430 --> 08:31:56,160

an awesome

5782

08:31:59,190 --> 08:31:57,440

day today

5783

08:32:01,910 --> 08:31:59,200

looking through some off nominal stuff

5784

08:32:03,830 --> 08:32:01,920

the fight control team was uh really on

5785

08:32:05,990 --> 08:32:03,840

the spot working through those things so

5786

08:32:07,430 --> 08:32:06,000

we'd like to thank our flight director

5787

08:32:10,230 --> 08:32:07,440

mike lammers

5788

08:32:13,190 --> 08:32:10,240

andy moore our eva wrapped in the flight

5789

08:32:14,548 --> 08:32:13,200

control room our eva task lead emma

5790

08:32:18,628 --> 08:32:14,558

welch

5791

08:32:21,110 --> 08:32:18,638

eva test support adam moore emu

5792

08:32:23,990 --> 08:32:21,120

sims police russell

5793

08:32:26,708 --> 08:32:24,000

a systems airlock stephen bolano and a

5794

08:32:29,590 --> 08:32:26,718

rep from the eva office maria tolar

5795

08:32:32,150 --> 08:32:29,600

and i'd also like to mention that mark

5796

08:32:35,270 --> 08:32:32,160

vanda high now holds for record for

5797

08:32:37,910 --> 08:32:35,280

longest continuous american space flight

5798

08:32:39,990 --> 08:32:37,920

it's a team effort to go eva and it's a

5799

08:32:41,110 --> 08:32:40,000

team effort to have up here for that

5800

08:32:43,030 --> 08:32:41,120

year

5801
08:32:50,150 --> 08:32:43,040
i congratulate him and the rest of the

5802
08:32:54,868 --> 08:32:52,230
and from the airlock kayla thanks for

5803
08:32:57,590 --> 08:32:54,878
those great words and with that you can

5804
08:33:01,670 --> 08:32:57,600
take the o2 actuator to press for one

5805
08:33:05,430 --> 08:33:03,350
and that was some thoughtful words from

5806
08:33:07,750 --> 08:33:05,440
kayla baron reflecting on the hard way

5807
08:33:10,308 --> 08:33:07,760
work on the ground and those who support

5808
08:33:13,350 --> 08:33:10,318
and help make this spacewalk possible

5809
08:33:16,150 --> 08:33:13,360
she also congratulated mark vande high

5810
08:33:17,670 --> 08:33:16,160
for now being the longest u.s astronaut

5811
08:33:21,430 --> 08:33:17,680
in orbit

5812
08:33:24,708 --> 08:33:21,440
340 days today with 15 more to go

5813
08:33:49,110 --> 08:33:24,718

landing on march 30th with 355

5814

08:33:49,120 --> 08:34:14,150

keep still working

5815

08:34:21,510 --> 08:34:15,590

let me know if i can get out of your way

5816

08:34:21,520 --> 08:35:10,868

yes

5817

08:35:15,670 --> 08:35:12,308

that we're going to start equalizing

5818

08:35:17,830 --> 08:35:15,680

pressure with the iv hatch valve

5819

08:35:19,670 --> 08:35:17,840

you can expect an alert tone and at 4.0

5820

08:35:55,500 --> 08:35:19,680

you can expect an alert

5821

08:36:00,548 --> 08:35:57,990

[Applause]

5822

08:36:06,628 --> 08:36:00,558

maybe slow down a little bit

5823

08:36:06,638 --> 08:36:22,230

copy slowing down

5824

08:36:39,670 --> 08:36:25,070

yes

5825

08:36:43,830 --> 08:36:41,990

and with repressurization be having

5826
08:36:46,230 --> 08:36:43,840
begun our spacewalk clock for the day

5827
08:36:50,388 --> 08:36:46,240
will now end the spacewalk officially

5828
08:36:52,388 --> 08:36:50,398
ended at 206 p.m central time 306 pm

5829
08:36:56,430 --> 08:36:52,398
eastern the elapsed time for this

5830
08:36:58,948 --> 08:36:56,440
spacewalk was six hours and 54 minutes

5831
08:37:00,308 --> 08:36:58,958
[Music]

5832
08:37:06,628 --> 08:37:00,318
happy picking up the rate just a little

5833
08:37:06,638 --> 08:37:44,620
hmm

5834
08:38:42,548 --> 08:37:47,110
[Applause]

5835
08:39:10,868 --> 08:38:44,708
roger we're at the two minute timer now

5836
08:39:19,590 --> 08:39:12,388
here airlock houston on space to ground

5837
08:39:24,150 --> 08:39:22,230
i don't want for the airlock

5838
08:39:28,150 --> 08:39:24,160

yes there are just a couple things a

5839

08:39:29,590 --> 08:39:28,160

reminder that potentially ev1's uh heka

5840

08:39:32,388 --> 08:39:29,600

is going to be hot because we were

5841

08:39:34,150 --> 08:39:32,398

unable to turn it off so just be

5842

08:39:37,430 --> 08:39:34,160

watchful there

5843

08:39:39,590 --> 08:39:37,440

also a note that the spaghetti a mess of

5844

08:39:41,350 --> 08:39:39,600

the safety tether there so you might

5845

08:39:44,788 --> 08:39:41,360

it may spring out when you open the

5846

08:39:50,548 --> 08:39:44,798

hatch and lastly to have a hefty bag on

5847

08:39:54,388 --> 08:39:52,788

we go we have the hefty bag on standby

5848

08:39:57,190 --> 08:39:54,398

right next to us we'll watch for the

5849

08:40:37,190 --> 08:39:57,200

safety tether to spring out and we'll

5850

08:40:41,110 --> 08:40:38,708

in the equipment lock portion of the

5851
08:40:43,030 --> 08:40:41,120
airlock you see matthias mower

5852
08:40:45,030 --> 08:40:43,040
and tom marshburn

5853
08:40:46,868 --> 08:40:45,040
who will help our spacewalkers doff

5854
08:40:48,708 --> 08:40:46,878
their spacesuits once they bring them in

5855
08:40:59,190 --> 08:40:48,718
from the other side of the hatch after

5856
08:41:02,150 --> 08:41:00,628
we finished the two minute timer we're

5857
08:41:32,868 --> 08:41:02,160
waiting for the one minute leak check to

5858
08:41:39,350 --> 08:41:36,708
nice workout there rafa same to you

5859
08:41:41,670 --> 08:41:39,360
crushing it myself with all the

5860
08:41:42,708 --> 08:41:41,680
solutions at the end very nice yeah

5861
08:41:44,070 --> 08:41:42,718
always

5862
08:41:45,510 --> 08:41:44,080
gotta love working through a bunch of

5863
08:41:48,150 --> 08:41:45,520

challenges at the very end of the day

5864

08:41:48,160 --> 08:41:53,350

nice job

5865

08:41:59,030 --> 08:41:56,708

for one to two 257.5

5866

08:42:00,388 --> 08:41:59,040

unchanged after a minute we have no leak

5867

08:42:05,430 --> 08:42:00,398

check your

5868

08:42:08,150 --> 08:42:06,948

computers

5869

08:42:09,830 --> 08:42:08,160

off

5870

08:42:11,430 --> 08:42:09,840

check the ones that are contaminated

5871

08:42:13,350 --> 08:42:11,440

contamination let us know if you have

5872

08:42:15,030 --> 08:42:13,360

any

5873

08:42:20,388 --> 08:42:15,040

if you want i got some smudging

5874

08:42:25,030 --> 08:42:23,110

happy no contamination a warning here if

5875

08:42:27,110 --> 08:42:25,040

you have any help one symptoms that you

5876

08:42:28,868 --> 08:42:27,120

notice during a repress report them

5877

08:42:31,110 --> 08:42:28,878

that's cop2

5878

08:42:33,430 --> 08:42:31,120

and obviously if you've had any dcs just

5879

08:42:34,388 --> 08:42:33,440

leave your o2 actuator and press but if

5880

08:42:36,468 --> 08:42:34,398

not

5881

08:42:53,990 --> 08:42:36,478

take the o2 actuator for both of you to

5882

08:42:54,000 --> 08:42:59,270

do you want are you actuators and ivs

5883

08:43:04,070 --> 08:43:01,590

and ev2's it might be

5884

08:43:06,708 --> 08:43:04,080

happy both tonight we're in step 11 iv

5885

08:43:36,868 --> 08:43:06,718

equalization valve i'll start

5886

08:43:36,878 --> 08:43:52,628

all hmm

5887

08:43:55,110 --> 08:43:53,910

how you doing i can pick up the red if

5888

08:43:58,708 --> 08:43:55,120

you'd like

5889

08:44:12,440 --> 08:43:58,718

uh i could do a little bit faster

5890

08:44:12,450 --> 08:44:22,708

[Applause]

5891

08:44:27,350 --> 08:44:24,628

with the completion of today's spacewalk

5892

08:44:30,948 --> 08:44:27,360

we have some updated statistics today

5893

08:44:34,388 --> 08:44:30,958

the 247th spacewalk in support of iss

5894

08:44:37,910 --> 08:44:34,398

assembly maintenance and upgrades

5895

08:44:40,230 --> 08:44:37,920

the second spacewalk of 2022

5896

08:44:43,030 --> 08:44:40,240

it is the third spacewalk during

5897

08:44:45,110 --> 08:44:43,040

expedition 66.

5898

08:44:48,708 --> 08:44:45,120

it is the second spacewalk for kayla

5899

08:44:52,308 --> 08:44:48,718

baron ev1 which don the red suit

5900

08:44:54,628 --> 08:44:52,318

totaling 13 hours and 26 minutes

5901
08:44:56,628 --> 08:44:54,638
is the first spacewalk for rosh achari

5902
08:45:04,948 --> 08:44:56,638
ev2

5903
08:45:08,830 --> 08:45:07,430
total spacewalk time

5904
08:45:12,308 --> 08:45:08,840
over

5905
08:45:15,670 --> 08:45:12,318
1562 hours and 31 minutes which is the

5906
08:45:18,868 --> 08:45:15,680
equivalent of 65 days 1 hour and 31

5907
08:45:34,708 --> 08:45:21,990
expedition 66 with three spacewalks

5908
08:45:52,070 --> 08:45:36,880
so

5909
08:45:52,080 --> 08:46:21,670
hmm

5910
08:46:25,430 --> 08:46:23,430
and before we end our coverage we have

5911
08:46:28,788 --> 08:46:25,440
another special guest with us

5912
08:46:31,750 --> 08:46:30,070
lor

5913
08:46:33,990 --> 08:46:31,760

laura is the program manager for the

5914

08:46:39,430 --> 08:46:34,000

newly created extravehicular activity in

5915

08:46:39,440 --> 08:46:43,030

hi shaniqua how are you today

5916

08:46:47,670 --> 08:46:45,190

i'm doing great we are now at the end of

5917

08:46:50,388 --> 08:46:47,680

this eva and we still have the

5918

08:46:52,868 --> 08:46:50,398

spacewalkers repressing but as they come

5919

08:46:55,190 --> 08:46:52,878

through we'll see their suits

5920

08:46:57,350 --> 08:46:55,200

i want you to tell the folks watching

5921

08:47:00,788 --> 08:46:57,360

today what the difference we'll see with

5922

08:47:02,708 --> 08:47:00,798

this suit and future artemis suits

5923

08:47:05,190 --> 08:47:02,718

well we're really excited to be building

5924

08:47:08,468 --> 08:47:05,200

the next generation suit both for the

5925

08:47:11,590 --> 08:47:08,478

iss program and for artemis um you'll

5926

08:47:13,910 --> 08:47:11,600

see a lot of similarities but obviously

5927

08:47:16,708 --> 08:47:13,920

a lot of upgrades as well

5928

08:47:18,150 --> 08:47:16,718

right the current emu is quite old

5929

08:47:20,548 --> 08:47:18,160

originally

5930

08:47:22,868 --> 08:47:20,558

built to support the shuttle program and

5931

08:47:24,868 --> 08:47:22,878

has been you know upgraded for both

5932

08:47:26,628 --> 08:47:24,878

shuttle and space station over the

5933

08:47:28,468 --> 08:47:26,638

decades

5934

08:47:31,190 --> 08:47:28,478

but the artemis suit's going to bring

5935

08:47:33,590 --> 08:47:31,200

some really neat new advantages to us

5936

08:47:35,590 --> 08:47:33,600

particularly in the mobility the

5937

08:47:37,430 --> 08:47:35,600

mobility of the new suit is going to be

5938

08:47:39,110 --> 08:47:37,440

greatly increased

5939

08:47:40,868 --> 08:47:39,120

and we will not only be using that

5940

08:47:43,270 --> 08:47:40,878

additional mobility

5941

08:47:44,948 --> 08:47:43,280

for iss but particularly when we get to

5942

08:47:46,948 --> 08:47:44,958

the lunar surface

5943

08:47:49,110 --> 08:47:46,958

where we have a gravity field and we

5944

08:47:51,910 --> 08:47:49,120

really need that extra mobility so that

5945

08:47:53,030 --> 08:47:51,920

our astronauts get don't get too tired

5946

08:47:55,190 --> 08:47:53,040

um

5947

08:47:57,910 --> 08:47:55,200

you're going to see also the suits be

5948

08:48:00,948 --> 08:47:57,920

able to fit a much wider range of

5949

08:48:03,030 --> 08:48:00,958

astronaut sizes so we'll be able to

5950

08:48:06,150 --> 08:48:03,040

support very very small crew members all

5951

08:48:09,670 --> 08:48:06,160

the way up to very large crew members so

5952

08:48:12,070 --> 08:48:09,680

a wide range of anthropometric size

5953

08:48:13,910 --> 08:48:12,080

of course just technology has come a

5954

08:48:16,628 --> 08:48:13,920

long way since the

5955

08:48:19,190 --> 08:48:16,638

emu was first designed so we're going to

5956

08:48:22,708 --> 08:48:19,200

see a lot of neat new capabilities like

5957

08:48:26,388 --> 08:48:22,718

in heads-up displays and the helmet

5958

08:48:28,308 --> 08:48:26,398

a lot of dual redundancy and safety

5959

08:48:29,830 --> 08:48:28,318

systems within the life support system

5960

08:48:31,030 --> 08:48:29,840

itself

5961

08:48:33,270 --> 08:48:31,040

of course when we're on the lunar

5962

08:48:36,308 --> 08:48:33,280

surface we have to worry about dust so

5963

08:48:38,628 --> 08:48:36,318

we will be making sure we take care of

5964

08:48:39,830 --> 08:48:38,638

the dust and the special over garments

5965

08:48:42,388 --> 08:48:39,840

that we have

5966

08:48:47,190 --> 08:48:42,398

with the new suit for artemis those are

5967

08:48:51,750 --> 08:48:49,510

that's awesome to hear and i now see

5968

08:48:53,750 --> 08:48:51,760

that we are opening a hatch to get the

5969

08:48:55,030 --> 08:48:53,760

crew members inside the equipment side

5970

08:48:57,110 --> 08:48:55,040

of the airlock

5971

08:48:59,510 --> 08:48:57,120

as they do venture over and we do see

5972

08:49:01,110 --> 08:48:59,520

the emu that we currently have i know

5973

08:49:02,468 --> 08:49:01,120

you talked a little bit about the future

5974

08:49:04,788 --> 08:49:02,478

of spacewalks

5975

08:49:07,430 --> 08:49:04,798

will the future where will this future

5976

08:49:08,868 --> 08:49:07,440

spacewalks take place and what are the

5977

08:49:12,830 --> 08:49:08,878

goals

5978

08:49:16,230 --> 08:49:15,350

well as i mentioned the new suits are

5979

08:49:18,708 --> 08:49:16,240

going to be

5980

08:49:21,190 --> 08:49:18,718

used on both space station and on the

5981

08:49:22,868 --> 08:49:21,200

moon lunar surface and then some of

5982

08:49:25,270 --> 08:49:22,878

those technologies could even play

5983

08:49:27,350 --> 08:49:25,280

forward to mars eventually

5984

08:49:29,990 --> 08:49:27,360

but we are are looking to support the

5985

08:49:32,548 --> 08:49:30,000

artemis program with basically annual

5986

08:49:34,948 --> 08:49:32,558

flights uh to the lunar surface

5987

08:49:37,910 --> 08:49:34,958

our requirements right now are are

5988

08:49:40,628 --> 08:49:37,920

basically looking at about 24

5989

08:49:43,110 --> 08:49:40,638

hours of eba per week while the crew is

5990

08:49:46,788 --> 08:49:43,120

there on their annual visit

5991

08:49:49,910 --> 08:49:47,830

that is

5992

08:49:50,868 --> 08:49:49,920

amazing to hear and

5993

08:49:53,350 --> 08:49:50,878

i know

5994

08:49:56,788 --> 08:49:53,360

you are the new program manager for the

5995

08:50:00,388 --> 08:49:56,798

new program eva and hsm or the

5996

08:50:02,308 --> 08:50:00,398

human surface mobility program

5997

08:50:05,430 --> 08:50:02,318

what are the importance of this for the

5998

08:50:07,430 --> 08:50:05,440

ottoman artemis missions

5999

08:50:09,990 --> 08:50:07,440

yeah so our new program were very very

6000

08:50:12,230 --> 08:50:10,000

new we just were formed and established

6001
08:50:14,708 --> 08:50:12,240
here in january so the team is just

6002
08:50:16,308 --> 08:50:14,718
setting up but our we have a couple of

6003
08:50:21,590 --> 08:50:16,318
goals

6004
08:50:25,670 --> 08:50:21,600
have consistency and our eva capability

6005
08:50:27,750 --> 08:50:25,680
across iss and the artemis campaigns

6006
08:50:30,308 --> 08:50:27,760
but then for the artemis missions on the

6007
08:50:33,190 --> 08:50:30,318
lunar surface we're looking at a really

6008
08:50:35,830 --> 08:50:33,200
integrated set of mobility capabilities

6009
08:50:38,150 --> 08:50:35,840
so the astronauts ability to move away

6010
08:50:40,788 --> 08:50:38,160
from the lander while they're suited

6011
08:50:42,708 --> 08:50:40,798
either in a non-pressurized rover that

6012
08:50:43,910 --> 08:50:42,718
we call the lunar terrain vehicle or the

6013
08:50:46,388 --> 08:50:43,920

ltv

6014

08:50:48,788 --> 08:50:46,398

or a pressurized rover

6015

08:50:50,868 --> 08:50:48,798

so bringing those elements all together

6016

08:50:52,468 --> 08:50:50,878

under one program gives us a lot of

6017

08:50:54,948 --> 08:50:52,478

advantages

6018

08:50:56,548 --> 08:50:54,958

we get to develop those systems

6019

08:50:58,468 --> 08:50:56,558

synergistically making sure the

6020

08:50:59,190 --> 08:50:58,478

requirements

6021

08:51:04,948 --> 08:50:59,200

are

6022

08:51:07,350 --> 08:51:04,958

so that when we do get to the south pole

6023

08:51:10,150 --> 08:51:07,360

um we have a really well integrated

6024

08:51:12,388 --> 08:51:10,160

highly functioning system set of lunar

6025

08:51:16,468 --> 08:51:12,398

surface systems for the crews to be able

6026
08:51:20,468 --> 08:51:18,628
and that has some great goals and i know

6027
08:51:23,350 --> 08:51:20,478
we're heading towards artemis missions

6028
08:51:24,948 --> 08:51:23,360
here soon so is there anything else we

6029
08:51:27,110 --> 08:51:24,958
need to know about the future of

6030
08:51:29,750 --> 08:51:27,120
spacesuits

6031
08:51:32,628 --> 08:51:29,760
i just think it's a really exciting time

6032
08:51:35,590 --> 08:51:32,638
we are in the process right now of

6033
08:51:38,070 --> 08:51:35,600
evaluating proposals for our new suits

6034
08:51:40,548 --> 08:51:38,080
so we're looking forward to

6035
08:51:42,708 --> 08:51:40,558
awarding that contract here in the next

6036
08:51:45,190 --> 08:51:42,718
couple of months and

6037
08:51:47,350 --> 08:51:45,200
getting our new vendor or vendors on

6038
08:51:48,628 --> 08:51:47,360

board with us so we can start working

6039

08:51:51,350 --> 08:51:48,638

with them

6040

08:51:53,190 --> 08:51:51,360

we are hoping to have our new suit

6041

08:51:55,910 --> 08:51:53,200

transitioned on the space station

6042

08:51:58,388 --> 08:51:55,920

towards the end of 2025 and then of

6043

08:52:00,708 --> 08:51:58,398

course we're looking at the new suit on

6044

08:52:03,510 --> 08:52:00,718

the lunar surface for artemis

6045

08:52:05,350 --> 08:52:03,520

iii also in the 2025 time frame so it's

6046

08:52:06,548 --> 08:52:05,360

going to be a couple of really busy

6047

08:52:09,750 --> 08:52:06,558

years

6048

08:52:12,388 --> 08:52:09,760

for the eva community

6049

08:52:14,708 --> 08:52:12,398

and that is all we have time for today

6050

08:52:16,708 --> 08:52:14,718

but thank you laura for joining us again

6051
08:52:18,388 --> 08:52:16,718
laura kearney is the program manager for

6052
08:52:20,230 --> 08:52:18,398
the newly created extra vehicular

6053
08:52:22,548 --> 08:52:20,240
activity and human surface mobility

6054
08:52:24,788 --> 08:52:22,558
program thanks laura

6055
08:52:27,510 --> 08:52:24,798
thank you so much for having me

6056
08:52:59,350 --> 08:52:27,520
alrighty and we'll end our coverage here

6057
08:53:02,628 --> 08:53:01,270
station houston no response required the

6058
08:53:08,468 --> 08:53:02,638
crew is no longer hot might to the

6059
08:53:08,478 --> 08:53:47,990
copy thumbs up

6060
08:53:53,830 --> 08:53:50,948
after six hours and 54 minutes

6061
08:53:56,628 --> 08:53:53,840
today spacewalk ended let's look back at

6062
08:53:58,708 --> 08:53:56,638
some of the accomplishments on the 247th

6063
08:54:00,548 --> 08:53:58,718

spacewalk in support of station assembly

6064

08:54:03,110 --> 08:54:00,558

maintenance and upgrades

6065

08:54:05,990 --> 08:54:03,120

nasa astronaut kayla baron and raj

6066

08:54:09,190 --> 08:54:06,000

achary have successfully installed the

6067

08:54:11,590 --> 08:54:09,200

3a modification kit and completed all

6068

08:54:14,628 --> 08:54:11,600

tasks and some get ahead test that

6069

08:54:18,070 --> 08:54:16,308

twerking and

6070

08:54:29,190 --> 08:54:18,080

resetting

6071

08:54:44,868 --> 08:54:30,548

oh are you

6072

08:54:48,628 --> 08:54:46,868

the crew successfully installed the 3a

6073

08:54:51,110 --> 08:54:48,638

modification kit

6074

08:54:53,990 --> 08:54:51,120

to the 3a power channel for future iros

6075

08:54:55,190 --> 08:54:54,000

and iss or iss rollout solar array

6076
08:54:57,830 --> 08:54:55,200
upgrades

6077
08:54:59,750 --> 08:54:57,840
they also had time permitting completed

6078
08:55:02,868 --> 08:54:59,760
a couple get ahead task as well

6079
08:55:04,548 --> 08:55:02,878
including breaking and resetting

6080
08:55:06,868 --> 08:55:04,558
breaking torque and resetting bolts on

6081
08:55:08,948 --> 08:55:06,878
multiple orbital replacement units

6082
08:55:13,110 --> 08:55:08,958
stored on the 3a integrated electronics

6083
08:55:16,708 --> 08:55:14,948
the crew also completed an alpha

6084
08:55:19,030 --> 08:55:16,718
magnetic spectrometer

6085
08:55:23,270 --> 08:55:19,040
evaluation

6086
08:55:25,750 --> 08:55:23,280
and then move back inside to the

6087
08:55:34,788 --> 08:55:25,760
then move back inside to the air the air

6088
08:55:38,388 --> 08:55:37,270

with the completion of today's tests all

6089

08:55:42,070 --> 08:55:38,398

the success

6090

08:55:47,590 --> 08:55:44,948

today the 247th spacewalk in support of

6091

08:55:49,190 --> 08:55:47,600

isis assembly maintenance and upgrades

6092

08:55:52,708 --> 08:55:49,200

completed

6093

08:55:54,628 --> 08:55:52,718

second spacewalk of 2022

6094

08:55:57,590 --> 08:55:54,638

this was the third spacewalk during

6095

08:55:59,670 --> 08:55:57,600

expedition 66.

6096

08:56:02,308 --> 08:55:59,680

this was the second spacewalk for kayla

6097

08:56:05,830 --> 08:56:02,318

baron ev1

6098

08:56:07,670 --> 08:56:05,840

totaling 13 hours and 26 minutes

6099

08:56:10,308 --> 08:56:07,680

this was the first spacewalk for

6100

08:56:13,590 --> 08:56:10,318

rochachari ev2

6101
08:56:15,910 --> 08:56:13,600
totaling 6 hours and 54 minutes

6102
08:56:17,948 --> 08:56:15,920
and the total spacewalk time

6103
08:56:21,430 --> 08:56:17,958
over the iss has been

6104
08:56:24,628 --> 08:56:21,440
1562 hours and 31 minutes which is the

6105
08:56:26,308 --> 08:56:24,638
equivalent of 65 days one hour and 31

6106
08:56:28,948 --> 08:56:26,318
minutes

6107
08:56:29,910 --> 08:56:28,958
with three spacewalks exhibition 66

6108
08:56:49,190 --> 08:56:29,920
total

6109
08:56:54,948 --> 08:56:51,910
european space agency astronaut matthias

6110
08:56:57,830 --> 08:56:54,958
maurer and that's astronaut

6111
08:57:01,670 --> 08:56:57,840
tom marshburn are helping our two space

6112
08:57:03,670 --> 08:57:01,680
walkers kayla baron red stripe

6113
08:57:05,750 --> 08:57:03,680

and prasha chari

6114

08:57:08,468 --> 08:57:05,760

the suit with no stripes

6115

08:57:11,350 --> 08:57:08,478

doff their suits

6116

08:57:12,788 --> 08:57:11,360

currently we see them removing the safer

6117

09:01:54,868 --> 08:57:12,798

and the tools that are attached to the

6118

09:01:59,590 --> 09:01:57,270

station houston on one no response

6119

09:02:02,948 --> 09:01:59,600

required we see in the video

6120

09:02:05,350 --> 09:02:02,958

as you're working on ev1's erka

6121

09:02:07,830 --> 09:02:05,360

if you notice anything that was off

6122

09:02:09,670 --> 09:02:07,840

nominal if you can report on that

6123

09:02:12,628 --> 09:02:09,680

specifically we'd like inspection of the

6124

09:02:14,708 --> 09:02:12,638

velcro on the plist and any deltas or

6125

09:02:24,150 --> 09:02:14,718

any discrepancies you see on the helmet

6126

09:02:36,948 --> 09:02:26,788

and matthias we do not hear you on space

6127

09:02:41,030 --> 09:02:39,030

right here since i was talking on five

6128

09:02:44,708 --> 09:02:41,040

so um i took some photos the hamburglar

6129

09:02:46,708 --> 09:02:44,718

came off and when we pulled kayla in

6130

09:02:49,190 --> 09:02:46,718

um or maybe they were already off you

6131

09:02:51,990 --> 09:02:49,200

cannot really tell when the moment was

6132

09:02:53,350 --> 09:02:52,000

um but here now here now on on the other

6133

09:02:55,430 --> 09:02:53,360

uh definitely

6134

09:02:57,030 --> 09:02:55,440

the helmet light is completely loose and

6135

09:03:02,308 --> 09:02:57,040

i took photos so that you can analyze

6136

09:03:06,948 --> 09:03:04,628

okay copy that and also just let us know

6137

09:03:09,110 --> 09:03:06,958

if you see any degradation of the plus

6138

09:03:19,110 --> 09:03:09,120

velcro where that strap would have been

6139

09:07:35,190 --> 09:03:21,590

very crew looks fine

6140

09:07:41,588 --> 09:07:37,830

if you're just joining us this is the

6141

09:07:43,830 --> 09:07:41,598

end of the 247th space walk the crew is

6142

09:07:45,428 --> 09:07:43,840

back inside after complete having a

6143

09:07:46,388 --> 09:07:45,438

successful day

6144

09:07:51,030 --> 09:07:46,398

on

6145

09:07:53,990 --> 09:07:51,040

get ahead task

6146

09:07:55,588 --> 09:07:54,000

the crew along with their suit up lead

6147

09:07:58,150 --> 09:07:55,598

and assistant

6148

09:08:00,150 --> 09:07:58,160

nasa astronaut tom marshburn and esa

6149

09:08:03,510 --> 09:08:00,160

astronaut

6150

09:08:05,990 --> 09:08:03,520

matthias maurer are now helping the two

6151
09:08:08,150 --> 09:08:06,000
spacewalkers doff or take off their

6152
09:09:16,228 --> 09:08:08,160
spacesuits currently they are removing

6153
09:09:20,388 --> 09:09:18,150
tom marshburn just removed russia

6154
09:09:22,388 --> 09:09:20,398
charlie's helmet and matthias mower just

6155
09:11:37,510 --> 09:09:22,398
helped kayla baron remove her helmet as

6156
09:11:41,670 --> 09:11:38,868
and right in the middle your screen in

6157
09:11:42,790 --> 09:11:41,680
the blue shirt is nasa astronaut mark

6158
09:11:45,510 --> 09:11:42,800
vande high

6159
09:11:47,670 --> 09:11:45,520
he too had an important day today aboard

6160
09:11:49,748 --> 09:11:47,680
the international space station

6161
09:11:51,510 --> 09:11:49,758
he had a record-breaking day where he

6162
09:11:53,350 --> 09:11:51,520
now holds

6163
09:11:56,630 --> 09:11:53,360

the u.s single space flight record of

6164

09:12:01,190 --> 09:11:59,588

breaking the record from scott kelly

6165

09:12:03,908 --> 09:12:01,200

pandahi will

6166

09:12:07,112 --> 09:12:03,918

leave the space station on march 30th

6167

09:12:09,588 --> 09:12:07,122

having logged 355 days in space

6168

09:12:50,790 --> 09:12:09,598

saying a new us record

6169

09:12:56,068 --> 09:12:53,268

and with helmets off that will end our

6170

09:12:58,068 --> 09:12:56,078

coverage for today's eva

6171

09:13:01,510 --> 09:12:58,078

be sure to come back wednesday march

6172

09:13:03,748 --> 09:13:01,520

23rd where we will have us spacewalk 80.

6173

09:13:06,388 --> 09:13:03,758

we will start coverage at 7 30 a.m

6174

09:13:09,428 --> 09:13:06,398

eastern time in the 6 30 a.m central

6175

09:13:14,150 --> 09:13:12,068

they are expected to begin the spacewalk

6176

09:13:16,228 --> 09:13:14,160

around 8 50 a.m

6177

09:13:37,190 --> 09:13:16,238

and that is

6178

09:13:50,270 --> 09:13:39,030

and with that we'll end coverage here