



1
00:00:30,660 --> 00:00:27,270
this is shuttle launch control t-minus

2
00:00:34,010 --> 00:00:30,670
three hours and holding final inspection

3
00:00:35,760 --> 00:00:34,020
team is on the mobile launcher platform

4
00:00:39,600 --> 00:00:35,770
continuing their inspections of the

5
00:00:41,640 --> 00:00:39,610
vehicle the team has about eight members

6
00:00:45,390 --> 00:00:41,650
representing NASA and the contractors

7
00:00:48,869 --> 00:00:45,400
and Greg cat nick of the case of Kennedy

8
00:00:50,460 --> 00:00:48,879
Space Center is leading the team the

9
00:00:52,770 --> 00:00:50,470
team carries a variety of instruments

10
00:00:54,299 --> 00:00:52,780
one is a portable infrared scanner to

11
00:00:56,939 --> 00:00:54,309
measure temperatures on the cryogenic

12
00:00:59,130 --> 00:00:56,949
surfaces of the tank engines and orbiter

13
00:01:01,320 --> 00:00:59,140

they also measure temperatures of the

14

00:01:05,640 --> 00:01:01,330

solid rocket booster cases and segment

15

00:01:08,760 --> 00:01:05,650

joints this is shuttle launch control at

16

00:01:10,500 --> 00:01:08,770

t-minus 3 hours and holding we are

17

00:01:12,210 --> 00:01:10,510

standing by to get live coverage of the

18

00:01:13,980 --> 00:01:12,220

flight crew as they're sitting down to

19

00:01:15,300 --> 00:01:13,990

have their pre-flight meal at their crew

20

00:01:18,810 --> 00:01:15,310

quarters and the operations and

21

00:01:21,570 --> 00:01:18,820

check-out building the building is

22

00:01:24,330 --> 00:01:21,580

located at KSC's industrial area this is

23

00:01:26,820 --> 00:01:24,340

the location for the crew and here we

24

00:01:29,670 --> 00:01:26,830

have the crew sitting down at the

25

00:01:33,210 --> 00:01:29,680

traditional table the decorated cake

26
00:01:35,580 --> 00:01:33,220
bearing their STS 72 insignia we have

27
00:01:38,490 --> 00:01:35,590
mission specialists kawiti Wakata flying

28
00:01:41,670 --> 00:01:38,500
for the first time aboard the shuttle co

29
00:01:47,850 --> 00:01:41,680
h e is a astronaut from nasa born in

30
00:01:49,710 --> 00:01:47,860
japan and dr. daniel berry flying for

31
00:01:55,140 --> 00:01:49,720
the first time aboard the shuttle this

32
00:01:58,920 --> 00:01:55,150
morning very will be one of the EDA

33
00:02:01,140 --> 00:01:58,930
specialists and pilot Brent jet also

34
00:02:04,890 --> 00:02:01,150
flying aboard the shuttle the first time

35
00:02:06,960 --> 00:02:04,900
you'll be monitoring using the RMS for

36
00:02:09,900 --> 00:02:06,970
the flight crew while they're performing

37
00:02:12,059 --> 00:02:09,910
a bas here we have commander Brian Duffy

38
00:02:14,729 --> 00:02:12,069

flying for the third time aboard the

39

00:02:17,369 --> 00:02:14,739

shuttle today Duffy the most experienced

40

00:02:21,270 --> 00:02:17,379

in the shuttle for the whole crew

41

00:02:23,009 --> 00:02:21,280

mission specialists Leroy Chiao he's

42

00:02:25,350 --> 00:02:23,019

making his second flight today aboard

43

00:02:29,100 --> 00:02:25,360

the shuttle he will be involved in two

44

00:02:31,920 --> 00:02:29,110

of the spacewalks and serving as flight

45

00:02:33,890 --> 00:02:31,930

engineer Winston Scott flying for the

46

00:02:36,270 --> 00:02:33,900

first time aboard the shuttle today

47

00:02:37,170 --> 00:02:36,280

again the crews been awake since about

48

00:02:41,009 --> 00:02:37,180

7:00 p.m.

49

00:02:42,470 --> 00:02:41,019

and they're getting right on their

50

00:02:45,119 --> 00:02:42,480

schedule that they'll be following

51
00:02:51,390 --> 00:02:45,129
during the nine-day mission for mission

52
00:02:55,050 --> 00:02:51,400
STS 72 the solid rocket booster

53
00:02:56,759 --> 00:02:55,060
retrieval ships departed the hangar AF

54
00:02:59,940 --> 00:02:56,769
on the Cape Canaveral Air Station

55
00:03:03,059 --> 00:02:59,950
yesterday and they are on station out of

56
00:03:07,530 --> 00:03:03,069
the Atlantic Ocean about 140 miles due

57
00:03:09,119 --> 00:03:07,540
east of KSC they will be retrieving the

58
00:03:12,869 --> 00:03:09,129
solid rocket boosters

59
00:03:16,649 --> 00:03:12,879
following their splashdown into the

60
00:03:19,640 --> 00:03:16,659
ocean and they will be towed back to the

61
00:03:23,610 --> 00:03:19,650
hangar for refurbishment this is the

62
00:03:27,059 --> 00:03:23,620
booster casings are disassembled and

63
00:03:29,610 --> 00:03:27,069

refurbished at the Thiokol manufacturing

64

00:03:34,170 --> 00:03:29,620

plant in Utah and also here at KSC at

65

00:03:43,480 --> 00:03:34,180

the USVI facility here at the complex 39

66

00:03:50,290 --> 00:03:47,470

no problems in our countdown countdown

67

00:03:53,980 --> 00:03:50,300

is proceeding on schedule and for the

68

00:03:55,450 --> 00:03:53,990

timeline t-minus two hours 57 minutes

69

00:04:09,520 --> 00:03:55,460

and Counting this is shuttle launch

70

00:04:15,589 --> 00:04:12,020

here we have the astronauts for a

71

00:04:17,569 --> 00:04:15,599

mission STS 72 coming out of their crew

72

00:04:19,400 --> 00:04:17,579

quarters at the operations and check-out

73

00:04:20,659 --> 00:04:19,410

building they'll be getting into an

74

00:04:29,090 --> 00:04:20,669

elevator where with a ride down to the

75

00:04:30,860 --> 00:04:29,100

first floor crew is six again has been

76

00:04:31,790 --> 00:04:30,870

training for the better part of the year

77

00:04:34,520 --> 00:04:31,800

there

78

00:04:37,820 --> 00:04:34,530

spent most of their time training for

79

00:04:44,420 --> 00:04:37,830

this particular flight from my employees

80

00:04:46,310 --> 00:04:44,430

wishing them well astronaut Bob Cabana

81

00:04:48,050 --> 00:04:46,320

is in the blue flight suit he'll be

82

00:04:50,270 --> 00:04:48,060

flying weather reconnaissance in the KSC

83

00:04:52,670 --> 00:04:50,280

area and making report back to the

84

00:04:57,110 --> 00:04:52,680

management down on the ground

85

00:05:00,020 --> 00:04:57,120

got a big crowd of press including quite

86

00:05:02,180 --> 00:05:00,030

a large crowd of Japanese news media who

87

00:05:05,450 --> 00:05:02,190

made the trip over to see who eats ela

88

00:05:08,870 --> 00:05:05,460

cotta as he prepares for his first

89

00:05:11,270 --> 00:05:08,880

flight crews getting ready for their

90

00:05:14,000 --> 00:05:11,280

nine-day mission to retrieve two

91

00:05:17,180 --> 00:05:14,010

satellites and conduct two spacewalks

92

00:05:29,869 --> 00:05:17,190

and conduct a variety of experiments on

93

00:05:51,490 --> 00:05:31,939

we have the team led by commander Brian

94

00:05:58,460 --> 00:05:53,629

external tank is now being pressurized

95

00:05:59,930 --> 00:05:58,470

for flight the gaseous oxygen vent hood

96

00:06:03,080 --> 00:05:59,940

at the very top of the tank will be

97

00:06:33,980 --> 00:06:03,090

moved away retracted back to the launch

98

00:06:39,650 --> 00:06:36,620

therefore OTC close and lock your visors

99

00:06:43,879 --> 00:06:39,660

initiate Oh - whoa have a smooth ride

100

00:06:45,439 --> 00:06:43,889

and a safe planting all right thanks OTC

101
00:06:54,129 --> 00:06:45,449
and let's get any pics after a great

102
00:06:57,770 --> 00:06:56,270
six-member crew is about to embark on

103
00:07:00,499 --> 00:06:57,780
the first day of the planned nine-day

104
00:07:02,390 --> 00:07:00,509
flight crew will treat the Japanese

105
00:07:04,999 --> 00:07:02,400
space flower unit deploy and retrieved

106
00:07:08,270 --> 00:07:05,009
NASA's oast free flyer satellite and

107
00:07:12,290 --> 00:07:08,280
conduct to six-hour spacewalks all

108
00:07:15,950 --> 00:07:12,300
systems aboard endeavour Argo t-minus 90

109
00:07:18,170 --> 00:07:15,960
seconds endeavour will be launched on an

110
00:07:20,060 --> 00:07:18,180
easterly trajectory on an orbit inclined

111
00:07:26,540 --> 00:07:20,070
twenty-eight point forty five degrees to

112
00:07:28,790 --> 00:07:26,550
the equator endeavours launch marks the

113
00:07:40,409 --> 00:07:28,800

74th shuttle launch in the history of

114

00:07:46,839 --> 00:07:45,219

t-minus one minute at the t-minus 30 one

115

00:07:48,370 --> 00:07:46,849

second point endeavours onboard

116

00:08:09,749 --> 00:07:48,380

computers will have control of vehicle

117

00:08:17,679 --> 00:08:15,760

you like in the next few seconds

118

00:08:19,749 --> 00:08:17,689

thousands of gallons of water will be

119

00:08:21,309 --> 00:08:19,759

dumped onto the launch platform to help

120

00:08:22,929 --> 00:08:21,319

suppress the sound and shock of the

121

00:08:27,990 --> 00:08:22,939

seven million pounds of thrust produced

122

00:08:34,389 --> 00:08:28,000

by the shuttle t-minus 15 seconds

123

00:08:40,529 --> 00:08:34,399

12 11 10 9 8 we have a go for engine

124

00:09:01,660 --> 00:08:59,170

booster ignition and liftoff roll

125

00:09:04,800 --> 00:09:01,670

maneuver is complete aboard the orbiter

126
00:09:04,810 --> 00:09:10,100
twenty eight and a half to two hundred

127
00:09:26,280 --> 00:09:13,530
firing unit for rendezvous Doncaster on

128
00:09:28,320 --> 00:09:26,290
Saturday morning endeavours engines now

129
00:09:30,060 --> 00:09:28,330
throttling as the orbiter prepares to

130
00:09:43,699 --> 00:09:30,070
pass through the area of maximum dynamic

131
00:09:52,600 --> 00:09:46,229
three main engines now throttling back

132
00:09:52,610 --> 00:09:58,799
endeavour Houston go at throttle up

133
00:10:07,900 --> 00:10:01,150
endeavours three liquid-fueled engines

134
00:10:09,400 --> 00:10:07,910
are now back at full throttle the

135
00:10:11,410 --> 00:10:09,410
orbiter is now downrange from the

136
00:10:14,319 --> 00:10:11,420
Kennedy Space Center of tens nautical

137
00:10:17,470 --> 00:10:14,329
miles in orbit are traveling 2,600 feet

138
00:10:19,869 --> 00:10:17,480

per second or about 1700 miles per hour

139

00:10:23,769 --> 00:10:19,879

the altitude is passing through ninety

140

00:10:26,679 --> 00:10:23,779

thousand feet the three hydraulic

141

00:10:28,569 --> 00:10:26,689

systems are in excellent shape as are

142

00:10:34,289 --> 00:10:28,579

the fuel cells and main engines are

143

00:10:38,079 --> 00:10:36,249

approaching two minutes into the flight

144

00:10:57,390 --> 00:10:38,089

standing by for burnout and separation

145

00:11:10,400 --> 00:11:00,810

SRB separation is confirmed time two

146

00:11:15,300 --> 00:11:12,900

performance thus far in the launch

147

00:11:16,920 --> 00:11:15,310

phases then as expected endeavour is now

148

00:11:19,350 --> 00:11:16,930

at an altitude of two hundred and ten

149

00:11:22,290 --> 00:11:19,360

thousand feet downrange from the launch

150

00:11:25,470 --> 00:11:22,300

site 45 nautical miles now traveling

151
00:12:06,129 --> 00:11:25,480
5000 feet per second or about 3400 miles

152
00:12:12,069 --> 00:12:09,499
breaking okay we're there a 77 each

153
00:12:16,069 --> 00:12:12,079
other be 17 I'm going to say five down

154
00:13:22,660 --> 00:12:16,079
okay actually it's not dropping at all

155
00:13:30,759 --> 00:13:27,130
tangent to sixty slant slant rain rate

156
00:13:51,880 --> 00:13:30,769
is point six there's just a true this

157
00:13:51,890 --> 00:14:00,110
- 5-0

158
00:14:00,120 --> 00:14:12,000
three inches

159
00:14:12,010 --> 00:15:11,090
two inches

160
00:15:11,100 --> 00:19:21,580
which is gotta do something

161
00:19:33,980 --> 00:19:30,110
and ever the Delta did launch thanks

162
00:19:49,980 --> 00:19:33,990
erection guess we're just coming by LA

163
00:21:27,380 --> 00:19:53,710

never no need to reply Batum answer only

164

00:21:27,390 --> 00:22:11,760

clockwise yup I never studied

165

00:22:47,510 --> 00:22:14,320

clockwise your period maneuver has

166

00:22:47,520 --> 00:23:31,960

counterclockwise spirit maneuver started

167

00:25:14,930 --> 00:23:34,960

and counterclockwise a period maneuver

168

00:26:10,470 --> 00:25:17,369

and I never run bore the mid-deck thank

169

00:26:15,909 --> 00:26:12,700

endeavour Houston in one minute till a

170

00:26:17,710 --> 00:26:15,919

tigress hand over and I have the SFU

171

00:26:45,750 --> 00:26:17,720

thermal bailout attitude when you're

172

00:26:55,140 --> 00:26:50,230

go ahead with the competitive target for

173

00:27:04,269 --> 00:26:55,150

body vector 5 pitch one for yaw zero

174

00:27:08,200 --> 00:27:04,279

Omicron two seven zero target for body

175

00:27:11,049 --> 00:27:08,210

vector 5 pitch 0 1 for y r0 Omicron two

176

00:27:21,419 --> 00:27:11,059

seven zero good copy and I've got an

177

00:27:27,330 --> 00:27:24,250

never Houston free V Leroy we see you

178

00:27:34,630 --> 00:27:27,340

coming thirty Seconds to the CEO roomful

179

00:27:37,360 --> 00:27:34,640

okay come out with them and never get

180

00:27:39,340 --> 00:27:37,370

you back at 2 0 0 9 10 minutes of ratty

181

00:27:59,200 --> 00:27:39,350

calm off the tail when we come back for

182

00:28:02,320 --> 00:27:59,210

our reward okay am i doing good one

183

00:28:05,350 --> 00:28:02,330

little endeavour one minute to the Z we

184

00:28:10,000 --> 00:28:05,360

get your back at 2 0 0 9 10 minutes of

185

00:28:14,139 --> 00:28:10,010

tail when we come back on the west I'll

186

00:28:29,940 --> 00:28:14,149

do that first and clear and second a

187

00:28:40,630 --> 00:28:39,130

you're tasting pretty good good I'm

188

00:28:42,580 --> 00:28:40,640

going to come up top now this is where

189

00:28:45,070 --> 00:28:42,590

we may have to go stand like tell you

190

00:28:49,740 --> 00:28:45,080

outside planets you can just move beyond

191

00:28:59,440 --> 00:28:56,640

okay next look a little bit salty fish

192

00:29:01,720 --> 00:28:59,450

well Leroy your next step after just a

193

00:29:03,610 --> 00:29:01,730

just about shadow now is a paper that

194

00:29:05,530 --> 00:29:03,620

the interaction you did that attach to

195

00:29:08,140 --> 00:29:05,540

desiccate effective before they get to

196

00:29:12,430 --> 00:29:08,150

hit there are locks we put don't want to

197

00:29:19,840 --> 00:29:12,440

just comment Arista can you tell me will

198

00:29:20,920 --> 00:29:19,850

repulsing over right now hey Leroy what

199

00:29:23,470 --> 00:29:20,930

do you want me to do with the arm

200

00:29:25,890 --> 00:29:23,480

okay go I did it I'm done with the arm

201
00:29:28,360 --> 00:29:25,900
you can go back to you can go to the

202
00:29:29,950 --> 00:29:28,370
other background for audition for

203
00:29:35,860 --> 00:29:29,960
example that's correct that's where we

204
00:29:44,310 --> 00:29:40,960
never Houston for Daniel Australia well

205
00:29:53,260 --> 00:29:44,320
thanks Tom it's for an incredible sight

206
00:29:58,900 --> 00:29:56,320
remember the the pain is inverted is

207
00:30:04,210 --> 00:29:58,910
your point of view right

208
00:30:05,890 --> 00:30:04,220
and uh then I made it up so did okay I'm

209
00:30:08,800 --> 00:30:05,900
just seeing the role being like Ernie

210
00:30:10,660 --> 00:30:08,810
Rizzo that looks good don't worry okay

211
00:30:12,340 --> 00:30:10,670
that's supposed to be okay about three

212
00:30:17,890 --> 00:30:12,350
more inches you'll be dead center 3/4

213
00:30:19,690 --> 00:30:17,900

inches forward another inch you're dead

214

00:30:24,400 --> 00:30:19,700

center you come straight in into vector

215

00:30:28,120 --> 00:30:24,410

mode I did talk about oh hey your ball

216

00:30:30,100 --> 00:30:28,130

four inches so I can put it in from here

217

00:30:32,320 --> 00:30:30,110

if you want to roll it around okay

218

00:30:34,000 --> 00:30:32,330

dann wird the rolls exactly where it's

219

00:30:35,610 --> 00:30:34,010

supposed to be I'm going to go when you

220

00:30:41,080 --> 00:30:35,620

give me a go I'm going to go for capture

221

00:30:44,920 --> 00:30:41,090

but I'm showing the arm and the cameras

222

00:30:49,530 --> 00:30:44,930

right where it's supposed to be I'm

223

00:30:54,070 --> 00:30:49,540

showing the it's the punch of the

224

00:30:58,360 --> 00:30:54,080

end-effector they go into the equal a to

225

00:31:00,880 --> 00:30:58,370

the arm outside pieces the three Jesus

226

00:31:10,380 --> 00:31:00,890

each at 120 degrees each other and I'm

227

00:31:26,460 --> 00:31:15,510

but Dad say that it okay we have a great

228

00:31:31,529 --> 00:31:29,289

and never Brent PDR I was looking at

229

00:31:33,779 --> 00:31:31,539

this just one moment

230

00:31:35,890 --> 00:31:33,789

hey we're standing by

231

00:31:37,810 --> 00:31:35,900

okay let me know when we're go for

232

00:31:42,220 --> 00:31:37,820

capture your girl for capture

233

00:31:44,710 --> 00:31:42,230

I saw a good capture I saw the snares

234

00:31:46,210 --> 00:31:44,720

brewed nicely okay like I could capture

235

00:31:48,640 --> 00:31:46,220

Dan let me know when you go for it your

236

00:31:51,669 --> 00:31:48,650

girl from Ridgid becomes rigid I'm

237

00:31:54,190 --> 00:31:51,679

waiting I see a rigid izing we've got

238

00:31:57,190 --> 00:31:54,200

rigid brake pad that's a good job guys

239

00:31:59,560 --> 00:31:57,200

okay now all right good come straight

240

00:32:01,390 --> 00:31:59,570

toward me a little bit and by Dan I'm

241

00:32:01,750 --> 00:32:01,400

waiting for the rigid topic okay I'm

242

00:32:05,529 --> 00:32:01,760

sorry

243

00:32:06,310 --> 00:32:05,539

and I'm okay we said you could tell me

244

00:32:11,620 --> 00:32:06,320

again

245

00:32:13,299 --> 00:32:11,630

oh we're to hook the other two arm which

246

00:32:16,779 --> 00:32:13,309

into the intersection with each other -

247

00:32:18,909 --> 00:32:16,789

okay then you go like this with the set

248

00:32:20,919 --> 00:32:18,919

to VI yellow NW detector

249

00:32:23,230 --> 00:32:20,929

okay they then move it down toward you

250

00:32:25,180 --> 00:32:23,240

okay I said by just one second but after

251
00:32:27,580 --> 00:32:25,190
that it was because of the reconfigure

252
00:32:30,779 --> 00:32:27,590
has to move Leroy said er from where it

253
00:32:33,010 --> 00:32:30,789
was to the other songs from stand much

254
00:32:38,409 --> 00:32:33,020
all right we need to remember to rotate

255
00:32:40,480 --> 00:32:38,419
it back for storage okay looking good

256
00:32:41,260 --> 00:32:40,490
both feet are on your right foot is

257
00:32:44,409 --> 00:32:41,270
almost there

258
00:32:47,380 --> 00:32:44,419
right foot chillin in the loop use your

259
00:32:49,659 --> 00:32:47,390
skill to move Daigo you left in right

260
00:32:51,909 --> 00:32:49,669
you're right isn't quite in there there

261
00:32:53,799 --> 00:32:51,919
you write to them sort of sunrise look

262
00:32:55,870 --> 00:32:53,809
at that but you know what Leroy your

263
00:32:58,180 --> 00:32:55,880

right is above the you know how that

264

00:32:59,710 --> 00:32:58,190

angle is okay which I can have that now

265

00:33:02,190 --> 00:32:59,720

you're in properly in your right and

266

00:33:05,710 --> 00:33:02,200

your left have been beautiful state

267

00:33:07,870 --> 00:33:05,720

Kaitlyn good fit here Leroy terrifying

268

00:33:09,700 --> 00:33:07,880

him at you a temporarily attached

269

00:33:12,310 --> 00:33:09,710

Leroy slide well state gelatin run run

270

00:33:13,690 --> 00:33:12,320

negative which that I'm gonna do that

271

00:33:16,890 --> 00:33:13,700

after i hook him up so i don't have to

272

00:33:22,130 --> 00:33:16,900

go back and forth twice okay

273

00:33:28,650 --> 00:33:27,480

I'll work super okay accessing operate

274

00:33:33,120 --> 00:33:28,660

the TFR they dress

275

00:33:40,140 --> 00:33:33,130

pitch controls richard own heading over

276

00:33:47,090 --> 00:33:40,150

to the are you okay then okay pitch

277

00:33:51,540 --> 00:33:47,100

control by those windows from where

278

00:33:52,710 --> 00:33:51,550

we're watching okay with some good

279

00:33:54,990 --> 00:33:52,720

control response

280

00:33:59,270 --> 00:33:55,000

okay leo you want to access somewhere

281

00:34:04,940 --> 00:33:59,280

the PFR they're just two hits pit though

282

00:34:13,320 --> 00:34:10,889

- school action ok access cooperated

283

00:34:26,510 --> 00:34:13,330

your control to position the PFL of just

284

00:34:29,159 --> 00:34:26,520

around the atf for station station there

285

00:34:31,680 --> 00:34:29,169

the handles are little low they're fine

286

00:34:35,040 --> 00:34:31,690

for me but someone tall taller would

287

00:34:36,480 --> 00:34:35,050

might be a bit of a stretch I've had

288

00:34:40,110 --> 00:34:36,490

that problem in where up so we'll see

289

00:35:09,560 --> 00:34:40,120

what happens believe I guess that's must

290

00:35:15,350 --> 00:35:12,060

hi Dan look at the look at the earth

291

00:35:18,780 --> 00:35:15,360

there Jim watch the thermal cube

292

00:35:35,900 --> 00:35:18,790

underneath it Louisa take a look over

293

00:35:45,540 --> 00:35:41,580

pick me back in play hey I came up

294

00:35:58,320 --> 00:35:45,550

really easy I got it I got it

295

00:36:00,470 --> 00:35:58,330

okay I got it endeavour Houston on

296

00:36:09,140 --> 00:36:00,480

air-to-ground two for the flight deck

297

00:36:13,260 --> 00:36:11,430

endeavour Houston on the west and I've

298

00:36:24,990 --> 00:36:13,270

got some fast actions for the flight

299

00:36:28,860 --> 00:36:25,000

deck and what y'all can see that from

300

00:36:31,290 --> 00:36:28,870

the window but a flight deck we'd like

301

00:36:38,700 --> 00:36:31,300

the supply water dump using fast on five

302

00:36:40,980 --> 00:36:38,710

dash Niner using fess be okay damn thank

303

00:36:44,250 --> 00:36:40,990

you going keep going you're almost at it

304

00:36:46,890 --> 00:36:44,260

you're at the latch okay flash hey you

305

00:36:50,310 --> 00:36:46,900

can see how badly the cables are bound

306

00:37:27,560 --> 00:36:50,320

cables are bound up you take a picture

307

00:38:05,070 --> 00:37:37,500

party copy okay if you're happy do a

308

00:38:09,710 --> 00:38:05,080

couple other axes for you there okay

309

00:38:13,710 --> 00:38:12,270

endeavour Houston no action on the PDR

310

00:38:56,670 --> 00:38:13,720

I've slipped that's due to the ingress

311

00:39:00,820 --> 00:38:59,500

Kelly right so you've got the PDF there

312

00:39:35,410 --> 00:39:00,830

you can install the P tap on the

313

00:39:37,600 --> 00:39:35,420

starboard base or last couple minutes

314

00:39:39,280 --> 00:39:37,610

and then they'll be done and listen it

315

00:39:41,980 --> 00:39:39,290

install and remove an avionics power

316

00:39:43,930 --> 00:39:41,990

line from that ta line plan okay if that

317

00:39:47,530 --> 00:39:43,940

will be able to have to be out the birth

318

00:39:57,780 --> 00:39:47,540

then distribution to be a pupa and you

319

00:40:03,030 --> 00:40:00,280

endeavour Houston with two minutes from

320

00:40:06,490 --> 00:40:03,040

the zo e will get you back in

321

00:40:07,930 --> 00:40:06,500

approximately seven minutes for the

322

00:40:09,670 --> 00:40:07,940

flight deck you're go for the SM

323

00:40:13,270 --> 00:40:09,680

checkpoint at the end of fourteen seven

324

00:40:15,190 --> 00:40:13,280

cabin repress and for ivy and Evie the

325

00:40:18,580 --> 00:40:15,200

plan right now is for leroy to proceed

326

00:40:20,500 --> 00:40:18,590

as planned on the timeline for ev3 we're

327

00:40:22,870 --> 00:40:20,510

gonna give you some easy tasks following

328

00:40:28,440 --> 00:40:22,880

your utility box so you both meet up at

329

00:40:31,690 --> 00:40:28,450

p WP setup that's the plan for now copy

330

00:40:33,700 --> 00:40:31,700

okay we copy that time and we'll just

331

00:40:37,900 --> 00:40:33,710

stand by to hear which test you want

332

00:40:40,060 --> 00:40:37,910

them to do okay perform the following

333

00:40:41,560 --> 00:40:40,070

for the test plate first steps are going

334

00:40:44,320 --> 00:40:41,570

to be a quick grab which is three times

335

00:40:58,580 --> 00:40:44,330

both answers face three throws okay in

336

00:41:06,540 --> 00:41:04,220

two and three

337

00:41:13,740 --> 00:41:06,550

hey lay back two or three times the

338

00:41:29,470 --> 00:41:13,750

whole way back no hands max go through

339

00:41:37,190 --> 00:41:35,210

and three there were a minute and a half

340

00:41:39,170 --> 00:41:37,200

to attenders hand over the first seven

341

00:42:12,010 --> 00:41:39,180

minutes on East will be in blockage you

342

00:42:12,020 --> 00:42:16,480

endeavor we can take the cameras again

343

00:42:43,839 --> 00:42:21,920

okay so you're all yours thank you well

344

00:42:48,829 --> 00:42:45,920

okay I've got it

345

00:42:51,940 --> 00:42:48,839

okay I'm going to let go okay and you

346

00:42:57,349 --> 00:42:55,069

Agrippa the orientation or what let it

347

00:42:58,999 --> 00:42:57,359

go there like this to fire this way it

348

00:43:01,160 --> 00:42:59,009

goes in 180 from once you get that

349

00:43:04,479 --> 00:43:01,170

statement spacing your chest goes into

350

00:43:18,470 --> 00:43:04,489

that Pope sticking into the wall

351
00:43:19,009 --> 00:43:18,480
okay that's complete coming in family a

352
00:43:21,829 --> 00:43:19,019
lot

353
00:43:28,479 --> 00:43:21,839
okay what's your eager to you on you can

354
00:43:37,069 --> 00:43:28,489
open it the waters too often run it off

355
00:44:08,150 --> 00:43:37,079
food agree with you Lee water well okay

356
00:44:16,230 --> 00:44:13,079
the corporate closed ok you are go for

357
00:44:29,960 --> 00:44:16,240
clothes locking the outer houses saving

358
00:44:35,900 --> 00:44:33,260
that's complete thanks that's an

359
00:44:37,339 --> 00:44:35,910
intermittent leak and it's understood we

360
00:44:39,500 --> 00:44:37,349
might have to do that again during the

361
00:44:42,740 --> 00:44:39,510
flight also we're coming up on a

362
00:44:45,079 --> 00:44:42,750
handover with tigress in two minutes

363
00:45:06,690 --> 00:44:45,089

it's an extended hand over and we'll get

364

00:45:10,109 --> 00:45:08,490

endeavour Houston the flight director

365

00:45:23,680 --> 00:45:10,119

wants to know who Buzz Lightyear is down

366

00:45:47,289 --> 00:45:34,420

I'll get it you want me to swap out

367

00:52:01,360 --> 00:45:47,299

Brian whenever you're ready to my heart

368

00:52:14,490 --> 00:52:06,160

well anyways inside Houston Roger Brian

369

00:52:14,500 --> 00:52:23,990

here down and locked

370

00:52:29,240 --> 00:52:27,740

commander Brian Duffy now pulling those

371

00:52:34,400 --> 00:52:29,250

of the orbiter up in a pre-flare

372

00:52:36,920 --> 00:52:34,410

maneuver altitude 700 feet pilot Brent

373

00:52:46,500 --> 00:52:36,930

Jett preparing to put the landing gear

374

00:52:46,510 --> 00:52:57,000

and landing gear is down and locked

375

00:52:57,010 --> 00:53:07,910

main gear touchdown

376

00:53:14,269 --> 00:53:12,229

my nose gear touchdown endeavour rolling

377

00:53:16,579 --> 00:53:14,279

out on runway one-five at the Kennedy

378

00:53:19,009 --> 00:53:16,589

Space Center completing endeavours tenth

379

00:53:22,460 --> 00:53:19,019

mission in space the 74th mission in the

380

00:54:01,840 --> 00:53:22,470

shuttle program completing 142 orbits of

381

00:54:09,710 --> 00:54:06,470

what opposite Roger endeavours copy will

382

00:54:13,120 --> 00:54:09,720

stop welcome back guys stopped you did a