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1
00:00:15,350 --> 00:00:12,629
we should be getting to that shortly

2
00:00:16,550 --> 00:00:15,360
this manual piloting test was

3
00:00:23,349 --> 00:00:16,560
slated to

4
00:00:29,429 --> 00:00:25,349
as we have been running ahead of

5
00:00:34,069 --> 00:00:31,910
with all of dragon's maneuvers

6
00:00:35,150 --> 00:00:34,079
we could be looking at a docking only

7
00:00:39,190 --> 00:00:35,160
about

8
00:00:41,750 --> 00:00:39,200
25 or 30 minutes from now

9
00:00:44,229 --> 00:00:41,760
so once they're done with this manual

10
00:00:46,229 --> 00:00:44,239
flight test they'll turn control back

11
00:00:48,389 --> 00:00:46,239
over to dragon's flight computers and

12
00:00:50,150 --> 00:00:48,399
they'll resume their approach which had

13
00:00:52,470 --> 00:00:50,160

actually already started automatically

14
00:00:53,750 --> 00:00:52,480
before the crew issued a hold command to

15
00:00:55,510 --> 00:00:53,760
the vehicle

16
00:00:57,350 --> 00:00:55,520
and then they'll press in to arrive at

17
00:00:59,670 --> 00:00:57,360
waypoint number two

18
00:01:01,750 --> 00:00:59,680
at which point the teams will do a final

19
00:01:03,590 --> 00:01:01,760
go no go for docking

20
00:01:05,670 --> 00:01:03,600
they'll depart that 20 meter hold point

21
00:01:07,910 --> 00:01:05,680
and it should be just about five minutes

22
00:01:10,870 --> 00:01:07,920
following that departure until we get

23
00:01:13,270 --> 00:01:10,880
contact and capture

24
00:01:15,350 --> 00:01:13,280
and the uh the crew right now are seated

25
00:01:18,230 --> 00:01:15,360
in dragon in uh in the pilot and

26
00:01:20,149 --> 00:01:18,240
commander's seat both of them are suited

27
00:01:21,190 --> 00:01:20,159
um for for

28
00:01:24,469 --> 00:01:21,200
what are

29
00:01:26,390 --> 00:01:24,479
relatively dynamic maneuvers

30
00:01:29,830 --> 00:01:26,400
and they'll uh continue to be suited

31
00:01:39,510 --> 00:01:29,840
until we we have confirmation of good

32
00:01:43,270 --> 00:01:41,190
so right now just interfacing with the

33
00:01:48,630 --> 00:01:43,280
touchscreen displays testing out manual

34
00:01:54,710 --> 00:01:50,469
hopefully secretly a little bit giddy to

35
00:01:59,510 --> 00:01:56,230
i mean before they had launched bob

36
00:02:01,429 --> 00:01:59,520
bankin had referred to this mission as

37
00:02:03,749 --> 00:02:01,439
every astronaut's dream

38
00:02:09,270 --> 00:02:03,759

getting to launch in a new spacecraft

39
00:02:12,949 --> 00:02:11,190
he and doug hurley with those test pilot

40
00:02:14,710 --> 00:02:12,959
backgrounds

41
00:02:16,390 --> 00:02:14,720
testing out a new spacecraft has to be

42
00:02:17,750 --> 00:02:16,400
as good as it gets

43
00:02:19,589 --> 00:02:17,760
but they're still stepping through this

44
00:02:21,270 --> 00:02:19,599
manual piloting

45
00:02:23,830 --> 00:02:21,280
we should have just a few more minutes

46
00:02:29,270 --> 00:02:23,840
until they're done

47
00:02:33,270 --> 00:02:30,949
and then they'll be able to turn command

48
00:02:35,589 --> 00:02:33,280
back over to dragon which will return

49
00:02:42,309 --> 00:02:35,599
itself to the docking axis and then

50
00:02:48,710 --> 00:02:45,910
yeah and as a look ahead so when when we

51
00:02:51,430 --> 00:02:48,720
do transition into that approach

52
00:02:53,990 --> 00:02:51,440
dragon will autonomously go towards

53
00:02:55,990 --> 00:02:54,000
waypoint 2 which is just 20 meters away

54
00:02:58,869 --> 00:02:56,000
from the forward

55
00:03:01,830 --> 00:02:58,879
international docking adapter on node 2.

56
00:03:04,229 --> 00:03:01,840
and it'll hold there that'll give the

57
00:03:06,790 --> 00:03:04,239
the ground team some time both in

58
00:03:09,190 --> 00:03:06,800
houston and at uh

59
00:03:10,390 --> 00:03:09,200
here in hawthorne to do a go no-go pole

60
00:03:11,750 --> 00:03:10,400
make sure the vehicle still looks

61
00:03:13,430 --> 00:03:11,760
healthy

62
00:03:16,550 --> 00:03:13,440
make sure that everyone on board the

63
00:03:29,990 --> 00:03:16,560

station space station and of course on

64
00:03:32,949 --> 00:03:31,190
sounds like they're done with their

65
00:03:34,550 --> 00:03:32,959
translations they're going to start

66
00:03:37,270 --> 00:03:34,560
moving it back

67
00:03:39,430 --> 00:03:37,280
to the docking axis

68
00:03:41,110 --> 00:03:39,440
put us right back on the center line and

69
00:05:10,860 --> 00:03:41,120
then we're going to resume

70
00:05:22,210 --> 00:05:19,430
[Music]

71
00:05:31,990 --> 00:05:22,220
so

72
00:05:34,230 --> 00:05:32,000
[Music]

73
00:05:39,350 --> 00:05:34,240
dragon spacex you have used two thirds

74
00:05:51,270 --> 00:05:42,050
i can copy two thirds of the budget

75
00:07:07,990 --> 00:06:01,270
[Music]

76
00:07:15,790 --> 00:07:09,550
so

77
00:07:15,800 --> 00:07:22,580
[Applause]

78
00:08:25,749 --> 00:07:30,890
[Music]

79
00:08:25,759 --> 00:08:33,350
we copy closure maneuver complete

80
00:08:40,709 --> 00:08:37,589
that will move on to 4 decimal 041

81
00:08:49,430 --> 00:08:40,719
section 4.

82
00:08:53,350 --> 00:08:51,269
all right so our manual flight test has

83
00:08:54,630 --> 00:08:53,360
been completed we're standing by for

84
00:08:58,310 --> 00:08:54,640
them to now

85
00:09:00,389 --> 00:08:58,320
resume approach one so to move in from

86
00:09:02,310 --> 00:09:00,399
that waypoint one uh we're already

87
00:09:04,630 --> 00:09:02,320
inside of the keepout sphere at this

88
00:09:06,630 --> 00:09:04,640

point dragons holding just 176 meters

89
00:09:08,070 --> 00:09:06,640
from the space station and pretty soon

90
00:09:09,750 --> 00:09:08,080
they're going to be approached thanks

91
00:09:12,710 --> 00:09:09,760
dragon that completes the manual

92
00:09:14,870 --> 00:09:12,720
piloting demonstration and i only had to

93
00:09:16,389 --> 00:09:14,880
twist doug's arm for two or three

94
00:09:21,190 --> 00:09:16,399
minutes to get him to allow me to

95
00:09:24,550 --> 00:09:22,790
we copy

96
00:09:27,670 --> 00:09:24,560
excellent thank you

97
00:09:29,430 --> 00:09:27,680
and with that we ask that you

98
00:09:32,389 --> 00:09:29,440
from the display used for manual

99
00:09:35,670 --> 00:09:32,399
piloting please go to audio settings and

100
00:09:36,630 --> 00:09:35,680
adjust a gain setting for seat one or

101
00:09:38,790 --> 00:09:36,640
four

102
00:09:41,190 --> 00:09:38,800
and in addition we would appreciate any

103
00:09:47,030 --> 00:09:41,200
handling qualities evaluation of the

104
00:09:51,990 --> 00:09:49,269
we've completed the gain setting

105
00:09:54,389 --> 00:09:52,000
adjustment for seat one and i'll turn it

106
00:10:00,310 --> 00:09:54,399
over to doug for the

107
00:10:05,350 --> 00:10:02,470
spacex dragon on the big loop for the

108
00:10:08,550 --> 00:10:05,360
handling qualities it uh flew just about

109
00:10:11,430 --> 00:10:08,560
like the sim so uh my congratulations to

110
00:10:14,230 --> 00:10:11,440
the folks in hawthorne

111
00:10:15,990 --> 00:10:14,240
that flew really well very crisp

112
00:10:18,230 --> 00:10:16,000
it was a little sloppier and wide just

113
00:10:20,870 --> 00:10:18,240

like we saw in them

114
00:10:23,590 --> 00:10:20,880
but all the other axes as well as

115
00:10:27,509 --> 00:10:23,600
closure and opening were all just as

116
00:10:27,519 --> 00:10:41,190
excellent to hear thank you

117
00:10:44,790 --> 00:10:42,389
that kind of

118
00:10:46,790 --> 00:10:44,800
kind of gives you a indication of sort

119
00:10:48,310 --> 00:10:46,800
of how the design process works you know

120
00:10:50,310 --> 00:10:48,320
bob and doug have had

121
00:10:52,470 --> 00:10:50,320
lots of opportunities to

122
00:10:53,750 --> 00:10:52,480
to test this out and sim it and give

123
00:10:55,670 --> 00:10:53,760
their feedback

124
00:10:58,150 --> 00:10:55,680
and pretty cool to hear that their sim

125
00:11:01,269 --> 00:10:58,160
experience was very similar to what they

126
00:11:03,509 --> 00:11:01,279
saw actually on orbit just uh you i

127
00:11:06,310 --> 00:11:03,519
think you said 170 meters away from the

128
00:11:08,630 --> 00:11:06,320
station right now yeah we're just 176

129
00:11:10,870 --> 00:11:08,640
and i i imagine as a spacecraft designer

130
00:11:13,030 --> 00:11:10,880
that's exactly what you want to hear

131
00:11:15,110 --> 00:11:13,040
is the way that i train you in it here

132
00:11:17,269 --> 00:11:15,120
on the ground is exactly how it

133
00:11:18,710 --> 00:11:17,279
performed once you're there for the real

134
00:11:20,710 --> 00:11:18,720
thing so

135
00:11:22,710 --> 00:11:20,720
the second manual piloting test in the

136
00:11:24,949 --> 00:11:22,720
books bob and doug putting dragon

137
00:11:26,949 --> 00:11:24,959
through its paces

138
00:11:28,790 --> 00:11:26,959

now we're time to put it all

139
00:11:30,230 --> 00:11:28,800
to where we get to our end point we're

140
00:11:32,949 --> 00:11:30,240
ready to get dragon dock to the

141
00:11:36,069 --> 00:11:32,959
international space station

142
00:11:38,790 --> 00:11:36,079
dragon spacex on big loop the ground

143
00:11:41,829 --> 00:11:38,800
will be resuming approach shortly we do

144
00:11:44,230 --> 00:11:41,839
plan to hold briefly at waypoint 2 so

145
00:11:45,590 --> 00:11:44,240
reminder that crew visors down is are

146
00:11:47,670 --> 00:11:45,600
not required

147
00:11:53,030 --> 00:11:47,680
until the ground is preparing to command

148
00:11:57,430 --> 00:11:55,829
next dragon recapping will hold at

149
00:11:59,190 --> 00:11:57,440
waypoint 2

150
00:12:05,590 --> 00:11:59,200
for a pause and then we'll get our

151
00:12:10,230 --> 00:12:08,389
and station hits houston on the big loop

152
00:12:12,550 --> 00:12:10,240
as you've heard endeavor is resuming its

153
00:12:15,190 --> 00:12:12,560
approach to waypoint two chris you can

154
00:12:16,870 --> 00:12:15,200
monitor now for step two that's step two

155
00:12:21,269 --> 00:12:16,880
and one decimal one zero four crew

156
00:12:21,279 --> 00:12:42,230
happy steps to work

157
00:12:48,389 --> 00:12:43,670
pretty cool view of the international

158
00:12:52,790 --> 00:12:51,110
this this would actually be overlaid or

159
00:12:54,470 --> 00:12:52,800
rather their controls would be overlaid

160
00:12:56,949 --> 00:12:54,480
on the displays

161
00:12:59,030 --> 00:12:56,959
on top of this view

162
00:13:01,190 --> 00:12:59,040
and we got a got to see some pretty cool

163
00:13:02,310 --> 00:13:01,200

views from behind actually there's a

164
00:13:04,550 --> 00:13:02,320
there's a view right there you can see

165
00:13:07,430 --> 00:13:04,560
the station on their displays

166
00:13:15,030 --> 00:13:07,440
visor's up doug in the left seat bob in

167
00:13:19,030 --> 00:13:17,110
yeah so this moment dragon

168
00:13:21,190 --> 00:13:19,040
is going to be resuming the approach as

169
00:13:23,509 --> 00:13:21,200
we heard them informing the crew they're

170
00:13:25,350 --> 00:13:23,519
going to have that one final hold when

171
00:13:27,590 --> 00:13:25,360
they're just 20 meters away that's going

172
00:13:30,470 --> 00:13:27,600
to be at waypoint 2. we're expecting it

173
00:13:31,670 --> 00:13:30,480
to be a brief hold while the teams all

174
00:13:35,269 --> 00:13:31,680
tag up

175
00:13:36,870 --> 00:13:35,279
and do a final go to move in for docking

176
00:13:39,509 --> 00:13:36,880
getting a great look at the space

177
00:13:42,230 --> 00:13:39,519
station itself the docking port is right

178
00:13:43,910 --> 00:13:42,240
in the center of our screen you can see

179
00:13:46,470 --> 00:13:43,920
another spacecraft currently docked to

180
00:13:49,189 --> 00:13:46,480
the space station the japanese htv

181
00:13:50,790 --> 00:13:49,199
spacecraft currently docked to the

182
00:13:52,790 --> 00:13:50,800
earth-facing port

183
00:13:55,030 --> 00:13:52,800
one of those common birthing mechanisms

184
00:13:56,389 --> 00:13:55,040
also on node two so dragon will be the

185
00:13:58,629 --> 00:13:56,399
second vehicle

186
00:14:11,430 --> 00:13:58,639
to be docked to the harmony module once

187
00:14:14,710 --> 00:14:13,750
and it's moving in right now again just

188
00:14:16,470 --> 00:14:14,720

to

189
00:14:18,310 --> 00:14:16,480
give you an idea of how quickly they're

190
00:14:20,790 --> 00:14:18,320
moving they're going at about three

191
00:14:22,470 --> 00:14:20,800
tenths of a meter per second right now

192
00:14:24,629 --> 00:14:22,480
and so if you're having any trouble with

193
00:14:27,189 --> 00:14:24,639
that docking simulator online remember

194
00:14:28,870 --> 00:14:27,199
to just slow things down a little bit

195
00:14:30,389 --> 00:14:28,880
and your chances will go up

196
00:14:34,470 --> 00:14:30,399
exponentially

197
00:14:37,189 --> 00:14:34,480
we just passed 140 meters away

198
00:14:39,189 --> 00:14:37,199
we'll get our live video com back with

199
00:14:41,350 --> 00:14:39,199
the space station momentarily as soon as

200
00:14:43,590 --> 00:14:41,360
we do we'll bring you back up there but

201
00:14:49,430 --> 00:14:43,600
for now bob and doug continuing to fly

202
00:14:52,550 --> 00:14:50,069
in

203
00:14:54,470 --> 00:14:52,560
step two review of steps three and

204
00:14:55,829 --> 00:14:54,480
four's complete

205
00:15:01,430 --> 00:14:55,839
cruise on the international space

206
00:15:05,269 --> 00:15:03,430
station houston big loop we copied the

207
00:15:06,949 --> 00:15:05,279
review of three and four complete

208
00:15:08,389 --> 00:15:06,959
international space station ready thank

209
00:15:11,189 --> 00:15:08,399
you

210
00:15:13,189 --> 00:15:11,199
expedition 63 commander chris cassidy

211
00:15:16,230 --> 00:15:13,199
giving the report station is ready for

212
00:15:19,750 --> 00:15:18,150
yeah you can see the uh the trajectory

213
00:15:22,629 --> 00:15:19,760

of the spacecraft there are small

214
00:15:25,269 --> 00:15:22,639
corrections that are happening so if the

215
00:15:27,030 --> 00:15:25,279
as we get closer and closer to station

216
00:15:29,430 --> 00:15:27,040
we're trying to stay within those two

217
00:15:32,150 --> 00:15:29,440
corridors

218
00:15:34,550 --> 00:15:32,160
which are shown coming out of the

219
00:15:36,470 --> 00:15:34,560
docking port that we're going towards

220
00:15:38,069 --> 00:15:36,480
that little dot i think was the the 20

221
00:15:39,590 --> 00:15:38,079
meter hold point so that's where we

222
00:15:41,910 --> 00:15:39,600
expect there to be

223
00:15:43,829 --> 00:15:41,920
the spacecraft holding right in front of

224
00:15:46,470 --> 00:15:43,839
the international docking adapter

225
00:15:48,470 --> 00:15:46,480
there'll be a go no-go poll the

226
00:15:51,269 --> 00:15:48,480
ground teams have worked hard over the

227
00:15:53,350 --> 00:15:51,279
past probably years to come up with a

228
00:15:54,949 --> 00:15:53,360
set of what we call flight rules

229
00:15:57,509 --> 00:15:54,959
so those are those are technical

230
00:15:59,030 --> 00:15:57,519
constraints items that we look for

231
00:16:01,030 --> 00:15:59,040
that if any of those criteria were

232
00:16:02,550 --> 00:16:01,040
violated then we have a rule that we've

233
00:16:04,150 --> 00:16:02,560
predetermined

234
00:16:05,110 --> 00:16:04,160
gives us guidance to say whether we

235
00:16:07,110 --> 00:16:05,120
could

236
00:16:10,629 --> 00:16:07,120
approach or not

237
00:16:12,629 --> 00:16:10,639
so far vehicle has been very healthy

238
00:16:14,629 --> 00:16:12,639

but uh technical ground teams will all

239
00:16:18,710 --> 00:16:14,639
do their due diligence to make sure that

240
00:16:22,470 --> 00:16:20,710
right at this moment that approach is

241
00:16:24,949 --> 00:16:22,480
continuing still moving in at about

242
00:16:27,590 --> 00:16:24,959
three tenths of a meter per second

243
00:16:30,550 --> 00:16:27,600
dragons coming up on just 100 meters

244
00:16:33,110 --> 00:16:30,560
away from the space station

245
00:16:35,030 --> 00:16:33,120
so the very top there is the the nose

246
00:16:37,350 --> 00:16:35,040
cone

247
00:16:39,189 --> 00:16:37,360
on the spacecraft where

248
00:16:40,470 --> 00:16:39,199
we've got a cool view left side of your

249
00:16:42,470 --> 00:16:40,480
screen is the international space

250
00:16:48,870 --> 00:16:42,480
station right side of your screen is

251
00:16:52,550 --> 00:16:51,509
we're inside 100 meters continuing to

252
00:16:54,629 --> 00:16:52,560
close

253
00:16:56,230 --> 00:16:54,639
and we're going to have a short hold at

254
00:16:57,749 --> 00:16:56,240
20 meters

255
00:16:59,189 --> 00:16:57,759
teams will just do a final check and

256
00:17:01,269 --> 00:16:59,199
then they'll give dragon the go we're

257
00:17:03,030 --> 00:17:01,279
expecting it to be pretty brief we

258
00:17:05,189 --> 00:17:03,040
should get to that hold point in just

259
00:17:06,870 --> 00:17:05,199
about four minutes moving at our current

260
00:17:08,949 --> 00:17:06,880
pace

261
00:17:14,870 --> 00:17:08,959
i think you can see a meatball in

262
00:17:19,189 --> 00:17:17,189
the uh the nasa logo of course the

263
00:17:20,630 --> 00:17:19,199

referred to as the meatball i think

264
00:17:22,470 --> 00:17:20,640
there was some spirited discussion about

265
00:17:24,949 --> 00:17:22,480
the meatball versus the worm during

266
00:17:29,590 --> 00:17:27,029
and uh those are you can see those logos

267
00:17:31,110 --> 00:17:29,600
they're they're that structure on the

268
00:17:33,190 --> 00:17:31,120
the fairing structure is actually what

269
00:17:35,430 --> 00:17:33,200
the super dracos are are housed in of

270
00:17:37,510 --> 00:17:35,440
course all those are deactivated now

271
00:17:39,590 --> 00:17:37,520
only used for launch escape during the

272
00:17:41,909 --> 00:17:39,600
ascent portion

273
00:17:43,110 --> 00:17:41,919
nose cone right at the the top of the

274
00:17:45,029 --> 00:17:43,120
vehicle

275
00:17:47,510 --> 00:17:45,039
and you can see sort of the sealing

276
00:17:51,830 --> 00:17:47,520
surface

277
00:17:56,310 --> 00:17:54,310
those four circular slots right

278
00:17:59,430 --> 00:17:56,320
underneath the nose cone within that red

279
00:18:01,990 --> 00:17:59,440
ring are the the ford bulkhead dracos

280
00:18:04,870 --> 00:18:02,000
that's what we were using while

281
00:18:09,350 --> 00:18:04,880
we were conducting all those burns

282
00:18:12,150 --> 00:18:10,630
right now we don't have we don't have a

283
00:18:14,950 --> 00:18:12,160
reason to use those we'll only be making

284
00:18:16,710 --> 00:18:14,960
small attitude corrections with the

285
00:18:17,909 --> 00:18:16,720
with the service section

286
00:18:19,510 --> 00:18:17,919
draco's

287
00:18:21,669 --> 00:18:19,520
you can see the service section actually

288
00:18:23,990 --> 00:18:21,679

pretty clearly here too

289
00:18:26,310 --> 00:18:24,000
the there's a black portion a white

290
00:18:29,110 --> 00:18:26,320
portion sort of separated by a fin the

291
00:18:31,270 --> 00:18:29,120
black portion is solar panels solar

292
00:18:33,430 --> 00:18:31,280
cells that'll charge dragon's batteries

293
00:18:35,110 --> 00:18:33,440
and the bottom side our

294
00:18:37,430 --> 00:18:35,120
white portion is actually a thermal

295
00:18:40,789 --> 00:18:37,440
radiator that's used to keep

296
00:18:42,710 --> 00:18:40,799
keep the spacecraft nice and cool

297
00:18:44,310 --> 00:18:42,720
of course the avionics and the cabin

298
00:18:46,630 --> 00:18:44,320
making sure that bob and doug are

299
00:18:48,230 --> 00:18:46,640
comfortable inside

300
00:18:49,190 --> 00:18:48,240
it looks like we're getting a shadow

301
00:18:51,909 --> 00:18:49,200
cast

302
00:18:53,990 --> 00:18:51,919
we are just 60 meters away continuing to

303
00:18:55,830 --> 00:18:54,000
close in just about 40 meters ago until

304
00:18:58,950 --> 00:18:55,840
we're at that whole point should get

305
00:19:01,270 --> 00:18:58,960
there in just over two minutes

306
00:19:03,510 --> 00:19:01,280
meanwhile teams in hawthorne and in

307
00:19:05,750 --> 00:19:03,520
houston doing their internal go no go

308
00:19:08,390 --> 00:19:05,760
for docking so you're gonna get all the

309
00:19:10,630 --> 00:19:08,400
teams pulled once everyone's go we'll be

310
00:19:13,590 --> 00:19:10,640
able to give dragon the final go-ahead

311
00:19:15,590 --> 00:19:13,600
for the vehicle to autonomously fly in

312
00:19:16,710 --> 00:19:15,600
and dock with the international space

313
00:19:18,630 --> 00:19:16,720

station

314
00:19:21,669 --> 00:19:18,640
should be coming up on waypoint 2

315
00:19:24,230 --> 00:19:21,679
arrival in just about 1 minute 45

316
00:19:26,230 --> 00:19:24,240
seconds at this point it'll be 20 meters

317
00:19:28,150 --> 00:19:26,240
away from that docking port

318
00:19:30,789 --> 00:19:28,160
the international docking adapter number

319
00:19:33,190 --> 00:19:30,799
two attached to pressurized mating

320
00:19:35,350 --> 00:19:33,200
adapter number two at the very forward

321
00:19:37,669 --> 00:19:35,360
end of the harmony module

322
00:19:39,669 --> 00:19:37,679
right there on the uh right around the

323
00:19:40,950 --> 00:19:39,679
the center you can see the ford hatch

324
00:19:42,789 --> 00:19:40,960
it's got a window in it you can see a

325
00:19:44,549 --> 00:19:42,799
couple of handles and there's some

326
00:19:45,750 --> 00:19:44,559
features that look sort of bronze ish

327
00:19:47,270 --> 00:19:45,760
those are the pedals that we were

328
00:19:50,950 --> 00:19:47,280
talking about earlier

329
00:19:52,630 --> 00:19:50,960
as part of the the soft capture system

330
00:19:54,630 --> 00:19:52,640
so pretty

331
00:19:55,909 --> 00:19:54,640
pretty wild too to see we're so close

332
00:19:58,390 --> 00:19:55,919
that we're getting shadows from the

333
00:20:01,270 --> 00:19:58,400
station on dragon

334
00:20:05,510 --> 00:20:03,350
and we're getting these views of

335
00:20:08,630 --> 00:20:05,520
dragon's approach from two cameras that

336
00:20:09,590 --> 00:20:08,640
are right next to that docking adapter

337
00:20:11,190 --> 00:20:09,600
and

338
00:20:13,510 --> 00:20:11,200

the movement's a little

339
00:20:16,310 --> 00:20:13,520
a little jarring at times

340
00:20:19,029 --> 00:20:16,320
these cameras are being commanded by a

341
00:20:21,350 --> 00:20:19,039
person at the cronus console in mission

342
00:20:23,350 --> 00:20:21,360
control houston and they send some uh

343
00:20:25,350 --> 00:20:23,360
some very basic function commands to the

344
00:20:27,750 --> 00:20:25,360
camera which it then executes

345
00:20:30,950 --> 00:20:27,760
automatically and so they're continuing

346
00:20:33,110 --> 00:20:30,960
to follow dragon in so we do thank them

347
00:20:35,270 --> 00:20:33,120
for their diligence to to give us these

348
00:20:38,230 --> 00:20:35,280
views of this historic moment as we are

349
00:20:42,470 --> 00:20:38,240
just less than 30 meters away

350
00:20:46,390 --> 00:20:45,110
right above the nasa meatball logo you

351
00:20:48,549 --> 00:20:46,400
can see two

352
00:20:54,149 --> 00:20:48,559
excuse me three of the the service

353
00:20:58,870 --> 00:20:56,230
that's right 12 and all so the four of

354
00:21:00,549 --> 00:20:58,880
those clusters spread around the vehicle

355
00:21:02,630 --> 00:21:00,559
used for a lot of the attitude control

356
00:21:04,950 --> 00:21:02,640
in any small translational maneuvers

357
00:21:07,350 --> 00:21:04,960
like we just watched bob and doug

358
00:21:09,510 --> 00:21:07,360
execute with their second manual flight

359
00:21:11,590 --> 00:21:09,520
test

360
00:21:12,950 --> 00:21:11,600
and actually oriented in a way too where

361
00:21:15,110 --> 00:21:12,960
if you were to lose some of those

362
00:21:17,510 --> 00:21:15,120
thrusters you still have redundancy and

363
00:21:18,950 --> 00:21:17,520

control in those axes that's that's part

364
00:21:21,990 --> 00:21:18,960
of the reason why they're sort of at the

365
00:21:26,149 --> 00:21:24,390
all right so we should be getting to

366
00:21:33,990 --> 00:21:26,159
waypoint two

367
00:21:34,000 --> 00:21:38,310
so it looks like we do have that hold

368
00:21:43,190 --> 00:21:41,190
dragon spacex on big loop the ground is

369
00:21:45,669 --> 00:21:43,200
go for approach two

370
00:21:47,510 --> 00:21:45,679
we will be enabling the

371
00:21:50,310 --> 00:21:47,520
resume shortly

372
00:21:52,230 --> 00:21:50,320
as a reminder ensure your visors are

373
00:21:53,590 --> 00:21:52,240
closed prior to dragon's departure from

374
00:21:56,149 --> 00:21:53,600
the waypoint

375
00:21:58,310 --> 00:21:56,159
and once dragon is inside the crew hands

376
00:22:00,630 --> 00:21:58,320
off point retreat and breakout are not

377
00:22:02,470 --> 00:22:00,640
permitted and for your awareness we have

378
00:22:08,950 --> 00:22:02,480
sunset in a little less than eight point

379
00:22:08,960 --> 00:22:21,909
i can cap these all on the big loop go

380
00:22:25,669 --> 00:22:24,149
so doug on

381
00:22:27,029 --> 00:22:25,679
the spacecraft confirming their go for

382
00:22:28,630 --> 00:22:27,039
docking

383
00:22:31,110 --> 00:22:28,640
they're going to put down their visors

384
00:22:32,950 --> 00:22:31,120
got some instructions there about the

385
00:22:34,230 --> 00:22:32,960
the crew hands-off point that we had

386
00:22:36,470 --> 00:22:34,240
talked about earlier that's a point

387
00:22:37,669 --> 00:22:36,480
where we don't want the the crew issuing

388
00:22:39,190 --> 00:22:37,679

any commands

389
00:22:40,630 --> 00:22:39,200
to the vehicle

390
00:22:42,950 --> 00:22:40,640
it's about

391
00:22:44,390 --> 00:22:42,960
just about two meters away from the

392
00:22:48,310 --> 00:22:44,400
docking adapter i believe the number is

393
00:22:53,270 --> 00:22:50,789
station houston on the big loop houston

394
00:22:55,430 --> 00:22:53,280
and station are now go for docking

395
00:22:57,350 --> 00:22:55,440
chris you can monitor for steps three

396
00:22:59,029 --> 00:22:57,360
and four three and four and one decimal

397
00:23:03,669 --> 00:22:59,039
one zero four crew dragon approach and

398
00:23:03,679 --> 00:23:08,070
i'll be steps three and four

399
00:23:11,990 --> 00:23:09,990
dragon on the big loop our visors are

400
00:23:26,390 --> 00:23:12,000
down

401
00:23:33,909 --> 00:23:26,400
the

402
00:23:33,919 --> 00:23:39,750
copy and bound

403
00:23:45,430 --> 00:23:42,070
and we're going to be racing that sunset

404
00:23:48,310 --> 00:23:45,440
the approach has resumed

405
00:23:50,789 --> 00:23:48,320
dragon closing in we're inside 20 meters

406
00:23:52,549 --> 00:23:50,799
and yeah that crew hands off point uh

407
00:23:55,430 --> 00:23:52,559
should come up

408
00:23:57,510 --> 00:23:55,440
in about three minutes or so

409
00:23:59,909 --> 00:23:57,520
right before we get that final docking

410
00:24:01,750 --> 00:23:59,919
it comes about 20 seconds prior or just

411
00:24:05,110 --> 00:24:01,760
about two meters away from the station

412
00:24:07,510 --> 00:24:05,120
still and that's just the crew not

413
00:24:08,710 --> 00:24:07,520

issuing any abort commands at that point

414
00:24:11,029 --> 00:24:08,720
it would be

415
00:24:20,870 --> 00:24:11,039
too late and so any aborts would be

416
00:24:26,310 --> 00:24:23,269
so we're closing in at less than a tenth

417
00:24:27,669 --> 00:24:26,320
of a meter per second at this point

418
00:24:29,990 --> 00:24:27,679
you can see the the surface section

419
00:24:32,950 --> 00:24:30,000
draco is just doing all these very small

420
00:24:34,870 --> 00:24:32,960
minor attitude corrections

421
00:24:36,070 --> 00:24:34,880
really the autonomous docking system at

422
00:24:37,830 --> 00:24:36,080
work

423
00:24:39,590 --> 00:24:37,840
making sure that the

424
00:24:42,710 --> 00:24:39,600
the vestibule and the soft capture

425
00:25:09,750 --> 00:24:42,720
system is lined up with ida2

426
00:25:13,590 --> 00:25:11,430
you can see much more clearly there the

427
00:25:14,710 --> 00:25:13,600
hinge mechanism for the nose cone those

428
00:25:17,750 --> 00:25:14,720
four

429
00:25:20,549 --> 00:25:17,760
black circles are the ford bulkhead

430
00:25:23,430 --> 00:25:20,559
dracos not to be used at this time

431
00:25:29,029 --> 00:25:23,440
and then of course the the petals of the

432
00:25:29,039 --> 00:25:34,630
wow

433
00:25:38,870 --> 00:25:36,549
dragon on the big loop we're inside 10

434
00:25:40,710 --> 00:25:38,880
meters we cannot make up the darkest

435
00:25:43,190 --> 00:25:40,720
stocking target but we do see the

436
00:25:45,750 --> 00:25:43,200
outline

437
00:25:47,590 --> 00:25:45,760
we copy and concur 10 meters

438
00:25:50,310 --> 00:25:47,600

right we're less than 10 meters away

439
00:25:52,310 --> 00:25:50,320
again we're closing at that rate

440
00:25:53,190 --> 00:25:52,320
of less than a tenth of a meter per

441
00:25:55,430 --> 00:25:53,200
second

442
00:25:57,750 --> 00:25:55,440
we should be just about one minute 45

443
00:26:00,789 --> 00:25:57,760
seconds away from docking

444
00:26:02,789 --> 00:26:00,799
there is a centerline camera

445
00:26:05,029 --> 00:26:02,799
right in that middle so that you can see

446
00:26:06,310 --> 00:26:05,039
where the ford hatch is and right in the

447
00:26:08,070 --> 00:26:06,320
middle of that there's a window and

448
00:26:09,590 --> 00:26:08,080
there's a centerline camera that is

449
00:26:13,909 --> 00:26:09,600
aligned with the center of the vehicle

450
00:26:18,630 --> 00:26:15,830
so that is is what the autonomous

451
00:26:22,149 --> 00:26:18,640
docking system is using to line up

452
00:26:25,110 --> 00:26:22,159
with sort of a cross hatch

453
00:26:27,350 --> 00:26:25,120
cross target on the the docking

454
00:26:31,269 --> 00:26:27,360
port

455
00:26:34,070 --> 00:26:31,279
on

456
00:26:36,310 --> 00:26:34,080
pma2 or the pressurized mating

457
00:26:41,510 --> 00:26:36,320
adapter

458
00:26:46,390 --> 00:26:44,230
again we're racing that sunset

459
00:26:48,310 --> 00:26:46,400
this dragon continues to close four

460
00:26:50,630 --> 00:26:48,320
meters to go

461
00:26:57,430 --> 00:26:50,640
those shadows of the of the space

462
00:27:01,590 --> 00:26:59,510
yeah you can actually see the centerline

463
00:27:04,470 --> 00:27:01,600

camera pretty clearly there um sort of

464
00:27:12,870 --> 00:27:04,480
with the contrast of the sun right now

465
00:27:12,880 --> 00:27:18,630
two meters

466
00:27:23,110 --> 00:27:20,630
we are inside the hands off point the

467
00:27:39,269 --> 00:27:23,120
chop the crew hands off point one meter

468
00:27:39,279 --> 00:27:43,590
soft capture complete

469
00:27:54,230 --> 00:27:45,669
soft capture confirmed standby for

470
00:27:59,430 --> 00:27:56,630
and we just heard it soft capture we

471
00:28:03,029 --> 00:27:59,440
have docking that coming

472
00:28:06,630 --> 00:28:03,039
at 7 16 a.m pacific time with the

473
00:28:08,710 --> 00:28:06,640
station and dragon flying 262 statute

474
00:28:12,389 --> 00:28:08,720
miles right over the border between

475
00:28:14,549 --> 00:28:12,399
northern china and mongolia

476
00:28:16,149 --> 00:28:14,559
you saw a little bit of motion there of

477
00:28:18,470 --> 00:28:16,159
dragon that was that relative motion

478
00:28:19,990 --> 00:28:18,480
that the soft capture system is damping

479
00:28:22,789 --> 00:28:20,000
out

480
00:28:24,549 --> 00:28:22,799
once that motion is is clear

481
00:28:27,350 --> 00:28:24,559
then

482
00:28:28,630 --> 00:28:27,360
the soft capture system will be retract

483
00:28:37,430 --> 00:28:28,640
retracted

484
00:28:42,950 --> 00:28:40,470
again if just now tuning in

485
00:28:47,190 --> 00:28:42,960
that soft capture that docking coming 7

486
00:28:48,549 --> 00:28:47,200
16 a.m pacific 10 16 a.m over on the

487
00:28:51,029 --> 00:28:48,559
east coast

488
00:28:54,389 --> 00:28:51,039

dragon and the international space

489
00:28:56,070 --> 00:28:54,399
station we're flying 262 statute miles

490
00:28:59,110 --> 00:28:56,080
right over the border between northern

491
00:29:00,710 --> 00:28:59,120
china and mongolia

492
00:29:03,590 --> 00:29:00,720
that soft capture ring now going to

493
00:29:11,990 --> 00:29:03,600
retract it's one more step on the way to

494
00:29:15,430 --> 00:29:13,590
yeah and so the the next step here is

495
00:29:18,549 --> 00:29:15,440
once once the soft capture ring is

496
00:29:21,269 --> 00:29:18,559
retracted there are 12 latches

497
00:29:23,269 --> 00:29:21,279
that we refer to as hard capture latches

498
00:29:25,510 --> 00:29:23,279
those are what will really create that

499
00:29:27,510 --> 00:29:25,520
pressure tight seal between the dragon

500
00:29:30,470 --> 00:29:27,520
spacecraft and the international space

501
00:29:35,750 --> 00:29:33,350
so once soft capture is complete and

502
00:29:38,549 --> 00:29:35,760
i believe we'll get that call from from

503
00:29:41,909 --> 00:29:38,559
our core here anna

504
00:29:43,510 --> 00:29:41,919
then we'll get we'll get confirmation of

505
00:29:46,149 --> 00:29:43,520
hard capture

506
00:29:48,470 --> 00:29:46,159
and the crew of course aboard have have

507
00:29:50,389 --> 00:29:48,480
this information on their displays

508
00:29:54,070 --> 00:29:50,399
so they'll also see indication of our

509
00:29:58,549 --> 00:29:55,669
and uh once those two steps are done

510
00:30:00,230 --> 00:29:58,559
then that's that's docking complete

511
00:30:02,389 --> 00:30:00,240
that's right we're we're expecting to

512
00:30:04,710 --> 00:30:02,399
hear some words from everybody

513
00:30:07,669 --> 00:30:04,720

a pretty monumental moment i mean for

514
00:30:10,149 --> 00:30:07,679
doug hurley he's returning to where he

515
00:30:12,230 --> 00:30:10,159
last docked almost nine years ago on the

516
00:30:14,310 --> 00:30:12,240
very last space shuttle mission

517
00:30:15,909 --> 00:30:14,320
uh now commanding the very first

518
00:30:17,669 --> 00:30:15,919
commercial spacecraft to deliver

519
00:30:19,350 --> 00:30:17,679
astronauts to the international space

520
00:30:21,029 --> 00:30:19,360
station

521
00:30:23,269 --> 00:30:21,039
that's that's got to be cool for them

522
00:30:25,669 --> 00:30:23,279
they've mentioned quite a few times that

523
00:30:27,510 --> 00:30:25,679
they're best friends uh

524
00:30:29,909 --> 00:30:27,520
our favorite dads in space as we've been

525
00:30:32,630 --> 00:30:29,919
calling them this is this has got to be

526
00:30:33,830 --> 00:30:32,640
really cool for them

527
00:30:45,029 --> 00:30:33,840
it's got to be really cool for their

528
00:30:48,230 --> 00:30:46,549
it looks like we have another quick

529
00:30:49,350 --> 00:30:48,240
handover we'll get that video back

530
00:30:52,310 --> 00:30:49,360
shortly

531
00:30:59,509 --> 00:30:52,320
we're about 75 complete already with

532
00:31:04,789 --> 00:31:03,190
once that retraction is completed

533
00:31:07,669 --> 00:31:04,799
we'll keep an eye out for the 12

534
00:31:09,590 --> 00:31:07,679
ready-to-hook indicators once those are

535
00:31:11,830 --> 00:31:09,600
ready those 12 hooks will begin to

536
00:31:13,430 --> 00:31:11,840
engage and that'll securely attach

537
00:31:15,509 --> 00:31:13,440
dragon to the international space

538
00:31:17,430 --> 00:31:15,519

station

539
00:31:19,750 --> 00:31:17,440
yeah so right now the vehicle confirming

540
00:31:20,630 --> 00:31:19,760
that the soft capture system

541
00:31:22,950 --> 00:31:20,640
has

542
00:31:25,669 --> 00:31:22,960
is deployed correctly and is fully

543
00:31:28,149 --> 00:31:25,679
retracted and then once the soft capture

544
00:31:29,509 --> 00:31:28,159
system is fully retracted that'll set up

545
00:31:33,029 --> 00:31:29,519
the vehicle to

546
00:31:34,630 --> 00:31:33,039
to put in the hard capture pins

547
00:31:37,110 --> 00:31:34,640
there's 12 of those around the docking

548
00:31:38,789 --> 00:31:37,120
ring and that's what creates that

549
00:31:40,389 --> 00:31:38,799
airtight seal

550
00:31:42,630 --> 00:31:40,399
between the dragon spacecraft and the

551
00:31:45,029 --> 00:31:42,640
international space station the the cat

552
00:31:46,710 --> 00:31:45,039
the volume between which we refer to as

553
00:31:48,070 --> 00:31:46,720
the vestibule is currently not

554
00:31:49,430 --> 00:31:48,080
pressurized

555
00:31:51,750 --> 00:31:49,440
of course it was just exposed to the

556
00:31:54,070 --> 00:31:51,760
vacuum of space until uh literally

557
00:31:55,350 --> 00:31:54,080
minutes ago about four minutes ago

558
00:31:59,110 --> 00:31:55,360
so

559
00:32:06,070 --> 00:32:01,669
ring that complete docking sequence is

560
00:32:10,630 --> 00:32:07,830
all right so we we see those ready to

561
00:32:13,190 --> 00:32:10,640
hook indicators are lighting up green so

562
00:32:15,830 --> 00:32:13,200
we should be just about to step into

563
00:32:18,230 --> 00:32:15,840

those 12 folks beginning to engage

564
00:32:20,070 --> 00:32:18,240
to get that secure mate between dragon

565
00:32:25,430 --> 00:32:20,080
and the international docking adapter on

566
00:32:28,789 --> 00:32:27,110
wow right now those two vehicles are

567
00:32:30,870 --> 00:32:28,799
flying together they are attached to

568
00:32:32,389 --> 00:32:30,880
each other

569
00:32:37,269 --> 00:32:32,399
it's

570
00:32:40,070 --> 00:32:37,279
lifted off we're actually at about 18

571
00:32:42,149 --> 00:32:40,080
hours 58 minutes and 42 seconds so we

572
00:32:44,070 --> 00:32:42,159
promised about a 19 19-hour ride up to

573
00:32:46,310 --> 00:32:44,080
station and we made it just a few

574
00:32:47,909 --> 00:32:46,320
minutes before that they were able to

575
00:32:49,830 --> 00:32:47,919
dock a few minutes ahead of schedule we

576
00:32:51,990 --> 00:32:49,840
were tracking them to still take about

577
00:32:53,509 --> 00:32:52,000
another 10 minutes but able to step

578
00:32:55,430 --> 00:32:53,519
through all of their burns about 16

579
00:32:57,990 --> 00:32:55,440
minutes ahead of schedule and get us

580
00:33:00,470 --> 00:32:58,000
where we are now if you missed it just a

581
00:33:04,470 --> 00:33:00,480
few moments ago that initial docking

582
00:33:06,310 --> 00:33:04,480
coming at 7 16 a.m pacific 10 16 a.m

583
00:33:10,070 --> 00:33:06,320
over on the east coast of the united

584
00:33:13,430 --> 00:33:10,080
states and they were 262 statute miles

585
00:33:16,710 --> 00:33:13,440
flying together over the northern border

586
00:33:17,909 --> 00:33:16,720
of china and mongolia

587
00:33:19,509 --> 00:33:17,919
so

588
00:33:22,070 --> 00:33:19,519

really exciting we're just waiting for

589
00:33:22,870 --> 00:33:22,080
this docking complete to be confirmed

590
00:33:25,029 --> 00:33:22,880
we're

591
00:33:26,389 --> 00:33:25,039
expecting to hear some words obviously

592
00:33:28,310 --> 00:33:26,399
from the crew on board and all the

593
00:33:31,029 --> 00:33:28,320
excited teams down here we're just

594
00:33:33,430 --> 00:33:31,039
waiting for this moment and then it's

595
00:33:34,789 --> 00:33:33,440
time to start getting dragon integrated

596
00:33:36,950 --> 00:33:34,799
into the station there will be an

597
00:33:39,350 --> 00:33:36,960
umbilical that will get mated and

598
00:33:41,990 --> 00:33:39,360
that'll allow dragon to flow data and

599
00:33:44,630 --> 00:33:42,000
power into the station systems and then

600
00:33:46,389 --> 00:33:44,640
it'll be over to the crew

601
00:33:47,430 --> 00:33:46,399
endeavor and station at houston on the

602
00:33:49,750 --> 00:33:47,440
big loop

603
00:33:54,389 --> 00:33:49,760
mcs is configured or proceeding with

604
00:33:58,789 --> 00:33:56,630
all right and they did a quick

605
00:34:01,110 --> 00:33:58,799
uh so the the motion control system

606
00:34:03,430 --> 00:34:01,120
onboard station now back under those

607
00:34:05,430 --> 00:34:03,440
control moment gyros so handed over from

608
00:34:07,350 --> 00:34:05,440
the russian thrusters and dragon now

609
00:34:09,349 --> 00:34:07,360
given the go to drive those hooks we

610
00:34:11,909 --> 00:34:09,359
have to do that changeover of attitude

611
00:34:14,869 --> 00:34:11,919
control before we drive those hooks as

612
00:34:16,629 --> 00:34:14,879
the russian thrusters a little bit

613
00:34:18,069 --> 00:34:16,639

more dynamic in their control of

614
00:34:19,990 --> 00:34:18,079
attitude and if you had a thruster

615
00:34:22,149 --> 00:34:20,000
firing while you were starting to drive

616
00:34:23,589 --> 00:34:22,159
those hooks that could miss a line so

617
00:34:25,589 --> 00:34:23,599
going over to the smoother control

618
00:34:27,030 --> 00:34:25,599
moment gyros on the u.s side now

619
00:34:29,190 --> 00:34:27,040
controlling the attitude onboard the

620
00:34:38,149 --> 00:34:29,200
station and those hooks those 12 hooks

621
00:34:41,829 --> 00:34:39,109
right now

622
00:34:45,349 --> 00:34:41,839
dragon and iss attached just flying off

623
00:34:50,710 --> 00:34:45,359
the east coast of uh of china

624
00:34:55,349 --> 00:34:53,510
attached to each other we uh we recently

625
00:34:57,589 --> 00:34:55,359
passed over to the

626
00:35:02,230 --> 00:34:57,599
orbital night so we're on the

627
00:35:07,430 --> 00:35:04,550
actually uh we're lucky enough to

628
00:35:10,710 --> 00:35:07,440
to see soft capture happen just as we

629
00:35:12,069 --> 00:35:10,720
were crossing over the terminator line

630
00:35:13,670 --> 00:35:12,079
and if you're wondering what you're

631
00:35:16,150 --> 00:35:13,680
looking at this is

632
00:35:18,870 --> 00:35:16,160
one of the cameras on the very outboard

633
00:35:20,630 --> 00:35:18,880
part of the japanese experiment module

634
00:35:23,829 --> 00:35:20,640
looking back

635
00:35:25,349 --> 00:35:23,839
in towards the very front part of node 2

636
00:35:26,790 --> 00:35:25,359
where dragon is currently docked we are

637
00:35:28,790 --> 00:35:26,800
in an orbital night time that's why

638
00:35:31,750 --> 00:35:28,800

everything is so dark but you're looking

639
00:35:34,150 --> 00:35:31,760
at dragon it's it is uh

640
00:35:36,069 --> 00:35:34,160
horizontal to the ground uh so the hatch

641
00:35:38,310 --> 00:35:36,079
part is right where that green light

642
00:35:40,550 --> 00:35:38,320
pretty much is you can see the nose cone

643
00:35:42,470 --> 00:35:40,560
still illuminated above it and it is

644
00:35:44,310 --> 00:35:42,480
currently attached to an international

645
00:35:47,990 --> 00:35:44,320
docking adapter on the international

646
00:35:53,430 --> 00:35:50,870
and inside that capsule are bob behnken

647
00:35:55,990 --> 00:35:53,440
and doug early

648
00:35:57,190 --> 00:35:56,000
first astronauts to fly on a

649
00:35:58,870 --> 00:35:57,200
private

650
00:36:00,950 --> 00:35:58,880
we developed vehicle up to the

651
00:36:02,790 --> 00:36:00,960
international space station but test

652
00:36:04,550 --> 00:36:02,800
pilots got got to do some fun tests

653
00:36:06,069 --> 00:36:04,560
today

654
00:36:08,550 --> 00:36:06,079
have a few more steps before they can

655
00:36:11,190 --> 00:36:08,560
actually get aboard an ingress to the

656
00:36:13,589 --> 00:36:11,200
international space station

657
00:36:15,109 --> 00:36:13,599
that's uh what we were heard over the uh

658
00:36:17,190 --> 00:36:15,119
the big loop

659
00:36:18,790 --> 00:36:17,200
that transition which allows us to then

660
00:36:20,069 --> 00:36:18,800
uh

661
00:36:23,430 --> 00:36:20,079
proceed with

662
00:36:27,829 --> 00:36:25,109
and we're seeing the first set of hooks

663
00:36:32,550 --> 00:36:27,839

so the first six out of the twelve

664
00:36:37,349 --> 00:36:34,150
again there are 12 of those along the

665
00:36:42,710 --> 00:36:40,470
and that helps us ensure that we have

666
00:36:44,790 --> 00:36:42,720
an airtight seal

667
00:36:47,109 --> 00:36:44,800
is vacuum around them right now so we

668
00:36:51,190 --> 00:36:47,119
want to make sure we're

669
00:36:55,750 --> 00:36:53,589
life support

670
00:37:06,150 --> 00:36:55,760
in the vehicle

671
00:37:09,990 --> 00:37:07,829
meanwhile inside the capsule bob and

672
00:37:13,670 --> 00:37:10,000
doug also standing by

673
00:37:15,430 --> 00:37:13,680
for this hard capture to complete

674
00:37:16,470 --> 00:37:15,440
and once we have that docking complete

675
00:37:17,829 --> 00:37:16,480
call

676
00:37:19,990 --> 00:37:17,839
they'll be able to start stepping

677
00:37:21,430 --> 00:37:20,000
through a number of procedures to get

678
00:37:23,030 --> 00:37:21,440
them ready to move into the

679
00:37:25,270 --> 00:37:23,040
international space station they'll get

680
00:37:26,470 --> 00:37:25,280
the the go ahead to doff or get out of

681
00:37:29,349 --> 00:37:26,480
their suits

682
00:37:31,109 --> 00:37:29,359
and then they'll have some activities on

683
00:37:33,910 --> 00:37:31,119
the dragon side

684
00:37:35,910 --> 00:37:33,920
to prepare for the hatch opening

685
00:37:37,829 --> 00:37:35,920
chris cassidy will mainly be working on

686
00:37:40,230 --> 00:37:37,839
the station side to pressurize the

687
00:37:42,470 --> 00:37:40,240
vestibule so as shiv has talked about

688
00:37:44,790 --> 00:37:42,480

the the space between the the dragon

689
00:37:46,870 --> 00:37:44,800
capsule and the space station was

690
00:37:49,190 --> 00:37:46,880
exposed to vacuum and even after this

691
00:37:51,750 --> 00:37:49,200
tight seal has occurred we'll still be

692
00:37:53,829 --> 00:37:51,760
at vacuum inside so we'll actually open

693
00:37:56,230 --> 00:37:53,839
up a valve to

694
00:37:58,310 --> 00:37:56,240
supply air from the station side into

695
00:38:00,310 --> 00:37:58,320
that space between the dragon and

696
00:38:02,630 --> 00:38:00,320
station hatchways and they'll get it up

697
00:38:04,710 --> 00:38:02,640
to the same ambient pressure that we'll

698
00:38:07,190 --> 00:38:04,720
have inside of dragon

699
00:38:09,430 --> 00:38:07,200
and on the station itself

700
00:38:10,950 --> 00:38:09,440
they'll wait for it to thermally balance

701
00:38:12,710 --> 00:38:10,960
out make sure we don't have any

702
00:38:14,470 --> 00:38:12,720
temperature swings as we're bringing it

703
00:38:16,790 --> 00:38:14,480
up from vacuum so

704
00:38:19,990 --> 00:38:16,800
probably from a very cold temperature up

705
00:38:20,950 --> 00:38:20,000
to about the about 72 degrees that they

706
00:38:22,550 --> 00:38:20,960
have

707
00:38:24,790 --> 00:38:22,560
in their cabin temperature onboard the

708
00:38:28,710 --> 00:38:24,800
station and then we'll get the hatches

709
00:38:41,109 --> 00:38:31,190
dragon spacex hard capture complete

710
00:38:45,349 --> 00:38:43,430
and now that hard capture is complete so

711
00:38:48,069 --> 00:38:45,359
that's confirmation of those

712
00:38:50,790 --> 00:38:48,079
12 latches to create that airtight seal

713
00:38:53,910 --> 00:38:50,800

now that's complete the umbilicals from

714
00:38:54,630 --> 00:38:53,920
the station side will uh will interface

715
00:38:56,390 --> 00:38:54,640
with

716
00:38:58,390 --> 00:38:56,400
the dragon vehicle umbilicals and

717
00:39:00,630 --> 00:38:58,400
that'll provide power

718
00:39:03,750 --> 00:39:00,640
and communications

719
00:39:05,030 --> 00:39:03,760
through space station directly to dragon

720
00:39:07,190 --> 00:39:05,040
pretty much the whole way up dragon's

721
00:39:10,390 --> 00:39:07,200
been using a combination of batteries

722
00:39:11,430 --> 00:39:10,400
and its solar cells pointed at the sun

723
00:39:32,790 --> 00:39:11,440
to make sure that it has enough

724
00:39:36,950 --> 00:39:34,710
and we're just standing by now for that

725
00:39:37,829 --> 00:39:36,960
umbilical to get mated and that's going

726
00:39:40,150 --> 00:39:37,839
to

727
00:39:42,150 --> 00:39:40,160
again it should be just saying start the

728
00:39:44,790 --> 00:39:42,160
power and data transfer between dragon

729
00:39:47,349 --> 00:39:44,800
and the space station they've been

730
00:39:49,829 --> 00:39:47,359
transmitting data through rf radio

731
00:39:51,430 --> 00:39:49,839
frequency on the way uphill

732
00:39:54,069 --> 00:39:51,440
and during the final approach this will

733
00:39:56,790 --> 00:39:54,079
give a hard mate basically a wired land

734
00:39:58,230 --> 00:39:56,800
connection between the dragon spacecraft

735
00:40:00,630 --> 00:39:58,240
and the international space station

736
00:40:02,870 --> 00:40:00,640
itself and then also being able to draw

737
00:40:05,349 --> 00:40:02,880
power from the station systems using

738
00:40:07,750 --> 00:40:05,359

those great big solar arrays that are

739
00:40:46,630 --> 00:40:07,760
used to generate all of the electricity

740
00:40:50,950 --> 00:40:48,790
and the soft capture system has been

741
00:40:52,630 --> 00:40:50,960
stowed we see the umbilical starting to

742
00:40:54,790 --> 00:40:52,640
deploy

743
00:40:56,950 --> 00:40:54,800
about 40 percent of the way so far going

744
00:40:58,230 --> 00:40:56,960
pretty quickly should just take a couple

745
00:40:59,750 --> 00:40:58,240
more seconds

746
00:41:01,510 --> 00:40:59,760
until we're all the way connected and

747
00:41:04,550 --> 00:41:01,520
then we should be getting that docking

748
00:41:08,630 --> 00:41:04,560
complete call out from the core here in

749
00:41:13,190 --> 00:41:08,640
mission control spacex and hawthorne

750
00:41:27,270 --> 00:41:15,750
dragon spacex docking sequence is

751
00:41:27,280 --> 00:41:32,710
next dragon recopy dock incomplete

752
00:41:37,270 --> 00:41:34,950
to say that it's been a

753
00:41:40,390 --> 00:41:37,280
real honor to be just a small part of

754
00:41:42,309 --> 00:41:40,400
this uh 90-year endeavor since the last

755
00:41:43,829 --> 00:41:42,319
time the united states spaceship has

756
00:41:45,670 --> 00:41:43,839
stopped with the international space

757
00:41:48,150 --> 00:41:45,680
station

758
00:41:52,470 --> 00:41:48,160
we have to congratulate the men and

759
00:41:54,470 --> 00:41:52,480
women of spacex at hawthorne mcgregor

760
00:41:56,630 --> 00:41:54,480
and at kennedy space center

761
00:41:59,190 --> 00:41:56,640
their incredible efforts over the last

762
00:42:01,270 --> 00:41:59,200
several years to make this possible

763
00:42:02,790 --> 00:42:01,280

cannot go

764
00:42:04,470 --> 00:42:02,800
overstated

765
00:42:06,710 --> 00:42:04,480
i'd also like to thank

766
00:42:09,270 --> 00:42:06,720
kathy leaders and her team of the

767
00:42:11,270 --> 00:42:09,280
commercial crew program of nasa

768
00:42:14,230 --> 00:42:11,280
an outstanding job

769
00:42:19,190 --> 00:42:17,030
last i'd like to thank the

770
00:42:21,910 --> 00:42:19,200
the men and women of the national

771
00:42:25,589 --> 00:42:21,920
aeronautics and space station

772
00:42:29,030 --> 00:42:25,599
this is an incredible time to be at nasa

773
00:42:31,589 --> 00:42:29,040
three new vehicles to be flown

774
00:42:34,150 --> 00:42:31,599
continuing mission in low earth orbit

775
00:42:43,220 --> 00:42:34,160
and then to the moon and mars

776
00:42:43,230 --> 00:42:46,710
[Music]

777
00:42:51,109 --> 00:42:49,030
dragon arriving

778
00:42:53,430 --> 00:42:51,119
crew of expedition 63 is honored to

779
00:42:54,470 --> 00:42:53,440
welcome dragon in the commercial crew

780
00:42:56,230 --> 00:42:54,480
program

781
00:42:58,390 --> 00:42:56,240
to welcome aboard the international

782
00:43:04,870 --> 00:42:58,400
space station bob and doug glad to have

783
00:43:04,880 --> 00:43:09,109
okay thank you chris thank you chris

784
00:43:12,470 --> 00:43:11,270
endeavor this is houston

785
00:43:14,790 --> 00:43:12,480
bob and doug welcome to the

786
00:43:16,630 --> 00:43:14,800
international space station after your

787
00:43:18,790 --> 00:43:16,640
spectacular rendezvous and docking of

788
00:43:20,470 --> 00:43:18,800

the first crew dragon vehicle

789
00:43:22,550 --> 00:43:20,480
for the first time since the retirement

790
00:43:25,109 --> 00:43:22,560
of the space shuttle you have completed

791
00:43:27,030 --> 00:43:25,119
a historic ride to the iss and have

792
00:43:28,470 --> 00:43:27,040
opened up a new chapter in human space

793
00:43:30,069 --> 00:43:28,480
exploration

794
00:43:32,069 --> 00:43:30,079
on behalf of the flight control teams

795
00:43:35,190 --> 00:43:32,079
here in houston and in hawthorne

796
00:43:37,109 --> 00:43:35,200
california and to our spacex colleagues

797
00:43:39,349 --> 00:43:37,119
bravo on a magnificent moment in space

798
00:43:41,030 --> 00:43:39,359
flight history and on the start of a new

799
00:43:43,829 --> 00:43:41,040
journey that has changed the face of

800
00:43:45,349 --> 00:43:43,839
space travel in this new area of space

801
00:43:46,950 --> 00:43:45,359
transportation

802
00:43:54,069 --> 00:43:46,960
bob and doug good luck and we look

803
00:43:54,079 --> 00:43:57,589
dragon spacex

804
00:44:02,390 --> 00:43:59,750
bob and doug we here at spacex are

805
00:44:04,870 --> 00:44:02,400
honored to have been part of ushering in

806
00:44:06,870 --> 00:44:04,880
this new era of human space flight

807
00:44:09,430 --> 00:44:06,880
on behalf of the spacex and nasa

808
00:44:11,190 --> 00:44:09,440
partnership congratulations on a

809
00:44:13,270 --> 00:44:11,200
phenomenal accomplishment

810
00:44:20,309 --> 00:44:13,280
and welcome to the international space

811
00:44:25,190 --> 00:44:22,790
well thank you anna we appreciate all

812
00:44:27,910 --> 00:44:25,200
the good works and uh everyone thanking

813
00:44:31,190 --> 00:44:27,920

us but it truly was a magnificent effort

814
00:44:34,230 --> 00:44:31,200
by the entire team the spacex team the

815
00:44:35,990 --> 00:44:34,240
nasa team and a team across america who

816
00:44:37,589 --> 00:44:36,000
was able to pull this off and bring

817
00:44:40,069 --> 00:44:37,599
human space flight

818
00:44:41,750 --> 00:44:40,079
again to our nation

819
00:44:56,710 --> 00:44:41,760
thanks for everything

820
00:45:00,470 --> 00:44:59,349
and dragon spacex

821
00:45:02,630 --> 00:45:00,480
with that

822
00:45:04,470 --> 00:45:02,640
ground will be enabling hardline power

823
00:45:06,710 --> 00:45:04,480
and calm connection shortly

824
00:45:09,670 --> 00:45:06,720
you are go to dolph your suits per

825
00:45:12,630 --> 00:45:09,680
procedure four decimal zero one two

826
00:45:15,510 --> 00:45:12,640
we will be configuring your video to go

827
00:45:17,349 --> 00:45:15,520
external shortly and we have one request

828
00:45:24,069 --> 00:45:17,359
for bob's suit doffing when you're ready

829
00:45:24,079 --> 00:45:28,950
we copy y'all go ahead for bob six

830
00:45:32,950 --> 00:45:31,430
during your approach suit leak check we

831
00:45:35,910 --> 00:45:32,960
noticed bob's

832
00:45:39,349 --> 00:45:35,920
suit pass with a lower psid

833
00:45:41,430 --> 00:45:39,359
than his previous vehicle and onc checks

834
00:45:43,910 --> 00:45:41,440
we still had plenty of margin to support

835
00:45:46,309 --> 00:45:43,920
you in a d-press but in order to rule

836
00:45:47,430 --> 00:45:46,319
out potential hardware issues when bob

837
00:45:50,150 --> 00:45:47,440
is doffing

838
00:45:52,950 --> 00:45:50,160

after he opens his structural zipper

839
00:45:55,510 --> 00:45:52,960
check all three bladder zipper heads to

840
00:45:57,829 --> 00:45:55,520
see if any are partially closed

841
00:46:00,230 --> 00:45:57,839
it is possible that if the head is

842
00:46:02,550 --> 00:46:00,240
backed off slightly that the white tooth

843
00:46:04,550 --> 00:46:02,560
is partially visible or a small gap can

844
00:46:06,630 --> 00:46:04,560
be seen between the end of the zipper

845
00:46:13,430 --> 00:46:06,640
head and the gasket end please report

846
00:46:17,430 --> 00:46:15,349
kathy bob will take a close look at his

847
00:46:19,109 --> 00:46:17,440
zippers when he drops and he'll get back

848
00:46:20,870 --> 00:46:19,119
in first so uh we'll let you know as

849
00:46:22,950 --> 00:46:20,880
soon as we see something or if we see

850
00:46:30,150 --> 00:46:22,960
something

851
00:46:35,430 --> 00:46:33,510
wow so now uh dragon has completed its

852
00:46:37,589 --> 00:46:35,440
docking sequence there's a number of

853
00:46:39,270 --> 00:46:37,599
checks um that that was an absolutely

854
00:46:41,190 --> 00:46:39,280
historic moment

855
00:46:43,430 --> 00:46:41,200
and in spite of that the ground team is

856
00:46:46,630 --> 00:46:43,440
getting right back to business

857
00:46:48,470 --> 00:46:46,640
talking about the the suit performance

858
00:46:51,990 --> 00:46:48,480
just let us know when the interior

859
00:46:54,630 --> 00:46:53,430
on dragon dragon i'll turn the cameras

860
00:46:57,589 --> 00:46:54,640
off first before we get them out of

861
00:46:59,030 --> 00:46:57,599
their suits absolutely

862
00:47:01,430 --> 00:46:59,040
so um

863
00:47:02,950 --> 00:47:01,440

spacecraft is now docked uh they've got

864
00:47:05,750 --> 00:47:02,960
several tasks that they're gonna need to

865
00:47:07,270 --> 00:47:05,760
be able to do um while we're waiting for

866
00:47:10,390 --> 00:47:07,280
those tasks to happen we're actually

867
00:47:12,390 --> 00:47:10,400
gonna take a short break but uh if in

868
00:47:13,829 --> 00:47:12,400
case you just missed it the dragon

869
00:47:16,790 --> 00:47:13,839
spacecraft is now docked to the

870
00:47:18,309 --> 00:47:16,800
international space station docked at 7

871
00:47:20,710 --> 00:47:18,319
16

872
00:47:21,990 --> 00:47:20,720
a.m local time

873
00:47:24,630 --> 00:47:22,000
bob and doug

874
00:47:26,630 --> 00:47:24,640
are are at the space station yeah

875
00:47:29,510 --> 00:47:26,640
they're there it was just under a

876
00:47:31,349 --> 00:47:29,520
19-hour journey from their launch to

877
00:47:33,030 --> 00:47:31,359
their docking so pretty much right on

878
00:47:34,630 --> 00:47:33,040
what we were expecting they got there a

879
00:47:35,910 --> 00:47:34,640
little bit early today which is nice as

880
00:47:37,030 --> 00:47:35,920
they were able to get through all those

881
00:47:39,030 --> 00:47:37,040
burns

882
00:47:40,309 --> 00:47:39,040
but i mean they're docked it's it's

883
00:47:42,630 --> 00:47:40,319
going to be a little while they have to

884
00:47:45,910 --> 00:47:42,640
do that vestibule pressurization and

885
00:47:47,030 --> 00:47:45,920
then they'll have to do some leak checks

886
00:47:48,069 --> 00:47:47,040
for

887
00:47:51,030 --> 00:47:48,079
bob

888
00:47:52,950 --> 00:47:51,040

i've got both the structural zippers on

889
00:47:55,910 --> 00:47:52,960
my gloves

890
00:47:58,309 --> 00:47:55,920
lowered and i do see

891
00:48:00,069 --> 00:47:58,319
white teeth visible on both sides it

892
00:48:01,670 --> 00:48:00,079
looks like a full white tooth i'll give

893
00:48:02,870 --> 00:48:01,680
you an update once i

894
00:48:05,270 --> 00:48:02,880
get to the

895
00:48:07,030 --> 00:48:05,280
leg zipper

896
00:48:09,030 --> 00:48:07,040
copy

897
00:48:10,870 --> 00:48:09,040
white teeth on both sides and will await

898
00:48:12,790 --> 00:48:10,880
your next status

899
00:48:14,150 --> 00:48:12,800
so the crew right now just going through

900
00:48:15,589 --> 00:48:14,160
some checks of their gloves they're

901
00:48:17,589 --> 00:48:15,599
about to get out of their suits that'll

902
00:48:20,230 --> 00:48:17,599
be the first step for the crew on board

903
00:48:21,750 --> 00:48:20,240
dragon for the crew on board station

904
00:48:23,270 --> 00:48:21,760
chris cassidy's going to start getting

905
00:48:24,630 --> 00:48:23,280
that vestibule pressurized and then

906
00:48:25,750 --> 00:48:24,640
they're going to do leak checks so

907
00:48:28,069 --> 00:48:25,760
they're going to be actually taking

908
00:48:30,870 --> 00:48:28,079
atmosphere from station putting it into

909
00:48:32,230 --> 00:48:30,880
that vestibule and then once we get all

910
00:48:34,390 --> 00:48:32,240
the leak checks done things are

911
00:48:35,990 --> 00:48:34,400
thermally stabilized it'll be time for

912
00:48:38,309 --> 00:48:36,000
hatch opening we'll be able to see bob

913
00:48:39,670 --> 00:48:38,319

and doug get into the space station for

914
00:48:41,910 --> 00:48:39,680
the first time

915
00:48:43,829 --> 00:48:41,920
uh from onboard the dragon spacecraft

916
00:48:46,069 --> 00:48:43,839
and again for doug hurley this is the

917
00:48:48,230 --> 00:48:46,079
exact port he was at almost nine years

918
00:48:49,990 --> 00:48:48,240
ago when he was on the very last space

919
00:48:51,910 --> 00:48:50,000
shuttle mission and now he's commanding

920
00:48:54,230 --> 00:48:51,920
the first commercial vehicle to dock

921
00:48:56,069 --> 00:48:54,240
with the international space station

922
00:48:57,670 --> 00:48:56,079
i think that's going to do it for us in

923
00:49:00,069 --> 00:48:57,680
hawthorne we're going to give you into

924
00:49:01,829 --> 00:49:00,079
the very capable hands of gary jordan to

925
00:49:03,750 --> 00:49:01,839
take you through the rest of the hatch

926
00:49:05,270 --> 00:49:03,760
opening we're going to be watching from

927
00:49:07,190 --> 00:49:05,280
here and following along we can't wait

928
00:49:09,349 --> 00:49:07,200
to see these crew members on board the

929
00:49:11,829 --> 00:49:09,359
international space station thank you

930
00:49:13,510 --> 00:49:11,839
for everybody who tuned in we hope you

931
00:49:15,510 --> 00:49:13,520
enjoyed the launch we hope you enjoyed

932
00:49:17,190 --> 00:49:15,520
enjoyed the ride uphill we really hope

933
00:49:19,190 --> 00:49:17,200
you were with us every single moment

934
00:49:20,950 --> 00:49:19,200
from suit up until now so you've been up

935
00:49:22,549 --> 00:49:20,960
for over 24 hours

936
00:49:24,710 --> 00:49:22,559
but it's been an incredible experience

937
00:49:26,870 --> 00:49:24,720
for us to see these guys get on board

938
00:49:29,109 --> 00:49:26,880

the international space station to watch

939
00:49:31,349 --> 00:49:29,119
dragon go through the paces to be lofted

940
00:49:33,510 --> 00:49:31,359
into orbit on falcon 9. something we've

941
00:49:35,349 --> 00:49:33,520
been waiting for for years seeing it

942
00:49:37,030 --> 00:49:35,359
come to fruition i'm still grappling

943
00:49:39,270 --> 00:49:37,040
with dragon spacex i'm driving the

944
00:49:42,150 --> 00:49:39,280
ground video it was an honor doing this

945
00:49:43,750 --> 00:49:42,160
with you today yeah absolutely dan um i

946
00:49:45,829 --> 00:49:43,760
you know the

947
00:49:48,710 --> 00:49:45,839
dragon copies thanks anna can't can't

948
00:49:49,510 --> 00:49:48,720
step on the crew that's that's

949
00:49:51,510 --> 00:49:49,520
um

950
00:49:52,870 --> 00:49:51,520
but you know it there are some really

951
00:49:54,790 --> 00:49:52,880
great words there from all the flight

952
00:49:57,109 --> 00:49:54,800
control teams about how this was a joint

953
00:49:59,430 --> 00:49:57,119
partnership between nasa and spacex i

954
00:50:01,270 --> 00:49:59,440
think everyone is over the moon here at

955
00:50:03,670 --> 00:50:01,280
spacex for for this

956
00:50:05,990 --> 00:50:03,680
bob and doug have got to be excited and

957
00:50:08,309 --> 00:50:06,000
and now back back to business to to get

958
00:50:10,549 --> 00:50:08,319
the vestibule ready to go and then get

959
00:50:12,470 --> 00:50:10,559
them on board the station so again thank

960
00:50:15,349 --> 00:50:12,480
you for following us please please

961
00:50:17,829 --> 00:50:15,359
continue to watch as gary takes over for

962
00:50:19,670 --> 00:50:17,839
the hatch opening portion and keep

963
00:50:21,910 --> 00:50:19,680

following our social media for for more

964
00:50:24,150 --> 00:50:21,920
updates on what's happening with hatch

965
00:50:27,270 --> 00:50:24,160
open

966
00:50:29,190 --> 00:50:27,280
over to you gary

967
00:50:31,030 --> 00:50:29,200
thank you shiva thank you dan what an

968
00:50:33,349 --> 00:50:31,040
incredible flight for bob and doug

969
00:50:35,670 --> 00:50:33,359
lifting off just yesterday and now in

970
00:50:38,309 --> 00:50:35,680
space attached to the international

971
00:50:41,430 --> 00:50:38,319
space station some kind words all over

972
00:50:44,470 --> 00:50:41,440
after docking at 9 16 a.m central and a

973
00:50:45,990 --> 00:50:44,480
hard mate just 11 minutes later we're

974
00:50:48,309 --> 00:50:46,000
still not done here we're going to take

975
00:50:50,390 --> 00:50:48,319
you through the pressurization sequence

976
00:50:52,390 --> 00:50:50,400
and eventually hatch opening of the

977
00:50:54,950 --> 00:50:52,400
international space station spacex

978
00:50:58,710 --> 00:50:54,960
dragon i'm dragging the ground

979
00:51:04,870 --> 00:51:00,630
and i hear you loud and clear on dragon

980
00:51:10,710 --> 00:51:07,190
loud and clear

981
00:51:13,430 --> 00:51:12,390
good calm checks we still have a lot of

982
00:51:15,030 --> 00:51:13,440
work to do here we're going to

983
00:51:16,549 --> 00:51:15,040
pressurize the vestibule and eventually

984
00:51:18,710 --> 00:51:16,559
get uh

985
00:51:21,109 --> 00:51:18,720
and spacex dragon with an update from

986
00:51:22,950 --> 00:51:21,119
bob it looks like a white tooth on the

987
00:51:24,870 --> 00:51:22,960
leg zipper as well

988
00:51:26,870 --> 00:51:24,880

we'll take a close look if we can see

989
00:51:27,829 --> 00:51:26,880
anything else that might have resulted

990
00:51:30,150 --> 00:51:27,839
in that

991
00:51:31,910 --> 00:51:30,160
lower leak check pressure

992
00:51:34,150 --> 00:51:31,920
poppy really appreciate the report thank

993
00:51:37,589 --> 00:51:35,990
teams behind me will be configuring the

994
00:51:40,390 --> 00:51:37,599
dragon and the international space

995
00:51:42,390 --> 00:51:40,400
station to welcome bob and doug aboard

996
00:51:44,230 --> 00:51:42,400
uh first of course the international

997
00:51:47,349 --> 00:51:44,240
space station attitude control control

998
00:51:48,790 --> 00:51:47,359
moment gyros really holding the dragon

999
00:51:50,309 --> 00:51:48,800
in place through the hard capture

1000
00:51:52,470 --> 00:51:50,319
sequence we'll start enabling those

1001
00:51:54,470 --> 00:51:52,480
thrusters and pressurizing the vestibule

1002
00:51:56,790 --> 00:51:54,480
it'll take about an hour until we're

1003
00:51:58,630 --> 00:51:56,800
able to get the hatch open the teams

1004
00:52:01,030 --> 00:51:58,640
here in mission control houston orbit 2

1005
00:52:13,910 --> 00:52:01,040
led by flight director zeb scoville will

1006
00:52:19,349 --> 00:52:15,750
aboard the international space station

1007
00:52:21,109 --> 00:52:19,359
commander chris cassidy standing by in

1008
00:52:22,309 --> 00:52:21,119
node two

1009
00:52:25,589 --> 00:52:22,319
right in front of that is the

1010
00:52:27,510 --> 00:52:25,599
pressurized mating adapter he recently

1011
00:52:30,150 --> 00:52:27,520
opened up the hatch to introduce some of

1012
00:52:31,510 --> 00:52:30,160
the station air and mix it uh get a nice

1013
00:52:34,069 --> 00:52:31,520

mix in there

1014
00:52:35,990 --> 00:52:34,079
avoiding some co2 pockets that hatch you

1015
00:52:38,150 --> 00:52:36,000
see just beyond chris cassidy there is

1016
00:52:39,750 --> 00:52:38,160
normally closed uh he was able to open

1017
00:52:41,910 --> 00:52:39,760
it a little bit earlier today mix some

1018
00:52:44,069 --> 00:52:41,920
of that cabin air and get rid of those

1019
00:52:45,030 --> 00:52:44,079
co2 pockets make sure it's all clean and

1020
00:52:47,190 --> 00:52:45,040
ready

1021
00:52:49,349 --> 00:52:47,200
for bob and doug he closed it shortly

1022
00:52:50,870 --> 00:52:49,359
after just to make sure no fod or

1023
00:52:54,150 --> 00:52:50,880
foreign objects anything were to float

1024
00:52:56,790 --> 00:52:54,160
in there that would uh inhibit any hatch

1025
00:52:58,549 --> 00:52:56,800
opening process today

1026
00:53:00,630 --> 00:52:58,559
one of the pro one of the

1027
00:53:02,710 --> 00:53:00,640
next milestones for chris cassidy will

1028
00:53:05,589 --> 00:53:02,720
be to open up that hatch he's got some

1029
00:53:07,829 --> 00:53:05,599
cameras you see placed uh within

1030
00:53:09,589 --> 00:53:07,839
that node we'll get some good views of

1031
00:54:02,549 --> 00:53:09,599
the hatch opening and welcoming bob and

1032
00:54:07,349 --> 00:54:05,109
a big moment in history today may

1033
00:54:09,190 --> 00:54:07,359
31st 2020

1034
00:54:11,109 --> 00:54:09,200
just on the other side of that hatch bob

1035
00:54:12,470 --> 00:54:11,119
benkin and doug hurley have successfully

1036
00:54:14,549 --> 00:54:12,480
arrived at the international space

1037
00:54:15,910 --> 00:54:14,559
station sill a couple of milestones to

1038
00:54:17,829 --> 00:54:15,920

get through before we can open up that

1039
00:54:20,230 --> 00:54:17,839
hatch it's going to take some time first

1040
00:54:23,030 --> 00:54:20,240
pressurizing the vestibule in between

1041
00:54:24,549 --> 00:54:23,040
the station and dragon

1042
00:54:26,309 --> 00:54:24,559
we'll bring that up to pressure it's

1043
00:54:28,950 --> 00:54:26,319
going to take some time for that uh

1044
00:54:30,309 --> 00:54:28,960
pressure to stabilize of course that the

1045
00:54:32,710 --> 00:54:30,319
temperature

1046
00:54:34,230 --> 00:54:32,720
within that vestibule causes a little

1047
00:54:36,950 --> 00:54:34,240
bit of swing so we'll just wait for that

1048
00:54:39,670 --> 00:54:36,960
to pressurize but or to stabilize before

1049
00:54:41,109 --> 00:54:39,680
opening up that hatch

1050
00:54:42,870 --> 00:54:41,119
here in mission control houston flight

1051
00:54:45,589 --> 00:54:42,880
director zeb scoville welcoming the

1052
00:54:48,069 --> 00:54:45,599
director of the nasa johnson space

1053
00:54:51,030 --> 00:54:48,079
center mark guyer

1054
00:54:53,910 --> 00:54:51,040
one of the few other uh vips here in the

1055
00:55:10,390 --> 00:54:53,920
room to welcome bob and doug once they

1056
00:55:13,910 --> 00:55:12,150
now again this uh

1057
00:55:16,390 --> 00:55:13,920
repressurization and hatch opening

1058
00:55:18,150 --> 00:55:16,400
process is going to take some time you

1059
00:55:19,990 --> 00:55:18,160
see now we're gonna have some

1060
00:55:21,589 --> 00:55:20,000
intermittent losses with the

1061
00:55:23,270 --> 00:55:21,599
communication from the international

1062
00:55:24,549 --> 00:55:23,280
space station

1063
00:55:26,470 --> 00:55:24,559

you're seeing now the international

1064
00:55:28,309 --> 00:55:26,480
space station flight control room led by

1065
00:55:29,910 --> 00:55:28,319
flight director zeb scoville just a

1066
00:55:31,670 --> 00:55:29,920
handover of some of those audio and

1067
00:55:32,549 --> 00:55:31,680
visual communications we'll be regaining

1068
00:55:34,390 --> 00:55:32,559
those

1069
00:55:36,710 --> 00:55:34,400
shortly might lose them intermittently

1070
00:55:39,349 --> 00:55:36,720
throughout the repressurization process

1071
00:55:41,270 --> 00:55:39,359
but the teams here will be monitoring uh

1072
00:55:43,109 --> 00:55:41,280
all of the procedures

1073
00:56:03,109 --> 00:55:43,119
again pressurizing that vestibule and

1074
00:56:07,510 --> 00:56:05,030
from right to left there seated you see

1075
00:56:10,150 --> 00:56:07,520
flight director zeb scoville who is he

1076
00:56:12,549 --> 00:56:10,160
who is leading the teams for both the

1077
00:56:14,470 --> 00:56:12,559
launch of bob and doug over at the cape

1078
00:56:16,390 --> 00:56:14,480
he was leading the teams here in mission

1079
00:56:18,230 --> 00:56:16,400
control houston you just saw

1080
00:56:21,190 --> 00:56:18,240
the johnson space center director mark

1081
00:56:24,630 --> 00:56:21,200
guyer walk off to the side seated next

1082
00:56:27,430 --> 00:56:24,640
to zeb scoville joshua kutrik he is one

1083
00:56:31,430 --> 00:56:27,440
of the members of the most recent class

1084
00:56:34,789 --> 00:56:31,440
of astronauts the class of 2017

1085
00:56:36,150 --> 00:56:34,799
canadian space agency astronaut uh

1086
00:56:37,670 --> 00:56:36,160
went through candidate training and

1087
00:57:20,470 --> 00:56:37,680
officially became

1088
00:57:25,589 --> 00:57:23,349

again a few milestones to get

1089
00:57:27,190 --> 00:57:25,599
through to that hatch opening first the

1090
00:57:29,349 --> 00:57:27,200
international space station attitude

1091
00:57:32,789 --> 00:57:29,359
control has been successfully switched

1092
00:57:34,549 --> 00:57:32,799
uh from control moment gyro only control

1093
00:57:36,549 --> 00:57:34,559
uh enabling some of the thrusters on the

1094
00:57:38,870 --> 00:57:36,559
international space station we also just

1095
00:57:40,630 --> 00:57:38,880
received the word that dragon is uh

1096
00:57:42,150 --> 00:57:40,640
successfully receiving power

1097
00:57:50,870 --> 00:57:42,160
iss power connection has been

1098
00:57:54,390 --> 00:57:52,470
and there you have it dragon is

1099
00:58:01,349 --> 00:57:54,400
successfully receiving power

1100
00:58:06,069 --> 00:58:03,349
and dragging copies on dragon to ground

1101
00:58:08,390 --> 00:58:06,079
that power has been established just let

1102
00:58:12,390 --> 00:58:08,400
us know when we should make a hard line

1103
00:58:12,400 --> 00:59:53,270
we will call thank you

1104
00:59:57,589 --> 00:59:55,109
for those of you just joining us you are

1105
00:59:59,030 --> 00:59:57,599
getting a live look at uh nasa astronaut

1106
01:00:00,549 --> 00:59:59,040
chris cassidy commander of the

1107
01:00:01,990 --> 01:00:00,559
international space station doing some

1108
01:00:03,990 --> 01:00:02,000
of the prep work

1109
01:00:06,470 --> 01:00:04,000
to open up the hatch and get ready

1110
01:00:07,990 --> 01:00:06,480
to welcome bob benkin and doug hurley

1111
01:00:10,150 --> 01:00:08,000
aboard the international space station

1112
01:00:11,589 --> 01:00:10,160
they launched successfully yesterday at

1113
01:00:15,750 --> 01:00:11,599

2 22

1114
01:00:18,150 --> 01:00:15,760
p.m central time 3 22 p.m eastern and uh

1115
01:00:22,390 --> 01:00:18,160
docked successfully with a contact and

1116
01:00:55,670 --> 01:00:22,400
capture just a little bit ago at 9 16

1117
01:01:00,069 --> 01:00:57,670
now some of the milestones uh to get

1118
01:01:02,390 --> 01:01:00,079
that hatch open have already taken place

1119
01:01:05,109 --> 01:01:02,400
first uh attitude control

1120
01:01:07,270 --> 01:01:05,119
uh for some of the docking sequence for

1121
01:01:09,910 --> 01:01:07,280
the initial contact and capture attitude

1122
01:01:12,230 --> 01:01:09,920
control was on russian thrusters

1123
01:01:14,470 --> 01:01:12,240
that was moved to control moment gyros

1124
01:01:15,910 --> 01:01:14,480
for a hard mate making sure that

1125
01:01:17,750 --> 01:01:15,920
everything lined up and we got those

1126
01:01:19,910 --> 01:01:17,760
ready to hook indicators green before

1127
01:01:21,750 --> 01:01:19,920
driving those hooks

1128
01:01:24,150 --> 01:01:21,760
the attitude control has since been

1129
01:01:26,470 --> 01:01:24,160
switched to enable some thrusters on the

1130
01:01:29,510 --> 01:01:26,480
international space station

1131
01:01:31,990 --> 01:01:29,520
we did get confirmation of good power

1132
01:01:35,349 --> 01:01:32,000
being delivered from iss

1133
01:01:37,589 --> 01:01:35,359
to the internet to the dragon

1134
01:01:38,950 --> 01:01:37,599
next will be to test some hard line

1135
01:01:40,390 --> 01:01:38,960
communication

1136
01:03:27,910 --> 01:01:40,400
between dragon and the international

1137
01:03:32,470 --> 01:03:30,710
dragon and station dragon and station

1138
01:03:34,309 --> 01:03:32,480

it's houston calling on the big loop

1139
01:03:36,470 --> 01:03:34,319
we're prepared and getting ready to

1140
01:03:37,589 --> 01:03:36,480
transition the column system to hardline

1141
01:03:39,109 --> 01:03:37,599
now which time we're going to do a

1142
01:03:41,349 --> 01:03:39,119
couple comm checks we just want to make

1143
01:03:43,750 --> 01:03:41,359
sure everybody's on board with that

1144
01:03:45,190 --> 01:03:43,760
and aware so dragon first maybe let me

1145
01:03:55,029 --> 01:03:45,200
know if you hear this and if you're go

1146
01:04:02,069 --> 01:03:57,349
yeah houston endeavor on the big loop we

1147
01:04:07,109 --> 01:04:05,349
using the station copying concurs

1148
01:04:08,870 --> 01:04:07,119
okay endeavor and station we have a loud

1149
01:04:11,349 --> 01:04:08,880
and clear on rf right now we are putting

1150
01:04:13,270 --> 01:04:11,359
it in work now so transition com system

1151
01:04:52,950 --> 01:04:13,280
to hardline and we'll call you back for

1152
01:04:57,349 --> 01:04:54,309
this is mission control houston the

1153
01:04:58,870 --> 01:04:57,359
voice you just heard was capcom joshua

1154
01:05:01,109 --> 01:04:58,880
kutrik from here in mission control

1155
01:05:02,630 --> 01:05:01,119
houston uh we're laying through the big

1156
01:05:04,470 --> 01:05:02,640
loop that's integrated communications

1157
01:05:05,829 --> 01:05:04,480
with dragon and the international space

1158
01:05:10,150 --> 01:05:05,839
station just taking us through those

1159
01:05:12,069 --> 01:05:10,160
procedures until we get to hatch opening

1160
01:05:13,750 --> 01:05:12,079
now there's an umbilical connection with

1161
01:05:15,430 --> 01:05:13,760
dragon connecting dragon to the

1162
01:05:17,990 --> 01:05:15,440
international space station we did get

1163
01:05:19,910 --> 01:05:18,000

good confirmation that power is flowing

1164
01:05:23,029 --> 01:05:19,920
uh from the international space station

1165
01:05:24,309 --> 01:05:23,039
to dragon

1166
01:05:27,670 --> 01:05:24,319
next we'll be proceeding with some of

1167
01:05:32,069 --> 01:05:30,710
the big loop established on the c2v2

1168
01:05:33,510 --> 01:05:32,079
common communications for visiting

1169
01:05:36,150 --> 01:05:33,520
vehicle through

1170
01:05:38,549 --> 01:05:36,160
some of the last legs of the rendezvous

1171
01:05:41,750 --> 01:05:38,559
and docking of dragon

1172
01:05:43,349 --> 01:05:41,760
to the international space station

1173
01:05:45,109 --> 01:05:43,359
we'll switch that over to hardline

1174
01:06:28,230 --> 01:05:45,119
communications testing that out here

1175
01:06:31,829 --> 01:06:29,990
we're going to get some good views of

1176
01:06:33,750 --> 01:06:31,839
station today you see chris cassidy

1177
01:06:36,069 --> 01:06:33,760
working inside no two just on the other

1178
01:06:38,549 --> 01:06:36,079
side is the hatch that hatch is

1179
01:06:40,230 --> 01:06:38,559
separating uh between the international

1180
01:06:43,190 --> 01:06:40,240
space station and the pressurized mating

1181
01:06:45,910 --> 01:06:43,200
attack uh uh adapter one more hatch to

1182
01:06:46,630 --> 01:06:45,920
go after that that hatch opens up

1183
01:06:49,430 --> 01:06:46,640
to

1184
01:06:51,349 --> 01:06:49,440
the dragon hatch with bob bankin and

1185
01:06:53,190 --> 01:06:51,359
doug hurley on the other side just

1186
01:06:54,789 --> 01:06:53,200
surrounding chris cassidy from this view

1187
01:06:56,549 --> 01:06:54,799
you can see a series of cameras we're

1188
01:06:58,870 --> 01:06:56,559

going to get some great views

1189
01:07:01,109 --> 01:06:58,880
from node 2 there on the left a couple

1190
01:07:07,990 --> 01:07:01,119
high definition cameras on the right a

1191
01:07:12,230 --> 01:07:10,069
part of an initiative to

1192
01:07:13,589 --> 01:07:12,240
engage viewers and provide views that

1193
01:07:15,589 --> 01:07:13,599
from the international space station

1194
01:07:18,630 --> 01:07:15,599
that have never been seen before we'll

1195
01:07:20,630 --> 01:07:18,640
get to see some of those 360 degree

1196
01:07:22,950 --> 01:07:20,640
views later after they're configured and

1197
01:07:24,630 --> 01:07:22,960
stitched on the ground now being

1198
01:08:13,430 --> 01:07:24,640
recorded during this historic moment

1199
01:08:17,590 --> 01:08:15,270
affirmative we are on the same page

1200
01:08:19,189 --> 01:08:17,600
those steps in the execution note are

1201
01:10:16,550 --> 01:08:19,199
all that's needed

1202
01:10:19,430 --> 01:10:17,830
you're getting a live look at chris

1203
01:10:22,229 --> 01:10:19,440
cassidy aboard the international space

1204
01:10:24,550 --> 01:10:22,239
station just in front of him is that 360

1205
01:10:26,070 --> 01:10:24,560
degree camera he's got cameras situated

1206
01:10:27,750 --> 01:10:26,080
all over no two pointing right towards

1207
01:10:30,390 --> 01:10:27,760
that hatch on the other side we'll be

1208
01:10:32,870 --> 01:10:30,400
welcoming bob banking and doug hurley

1209
01:10:34,950 --> 01:10:32,880
after pressurization of the vestibule

1210
01:10:46,070 --> 01:10:34,960
and we'll start beginning uh hatch

1211
01:10:46,080 --> 01:10:56,630
yeah we got the empire open chris

1212
01:11:00,950 --> 01:10:58,950
another handover of communication from

1213
01:11:02,630 --> 01:11:00,960

the tracking and data relay satellites

1214
01:11:04,470 --> 01:11:02,640
providing video and audio communication

1215
01:11:07,590 --> 01:11:04,480
from the international space station now

1216
01:11:10,390 --> 01:11:07,600
integrated uh with the dragon

1217
01:11:11,669 --> 01:11:10,400
uh dragon power

1218
01:11:14,550 --> 01:11:11,679
still looking towards some of those

1219
01:11:16,149 --> 01:11:14,560
hard-line communication checks

1220
01:11:17,910 --> 01:11:16,159
again we'll lose uh communication

1221
01:11:19,790 --> 01:11:17,920
intermittently as the international

1222
01:11:24,050 --> 01:11:19,800
space station flies

1223
01:11:24,060 --> 01:11:25,030
[Music]

1224
01:11:25,040 --> 01:12:23,110
forward stations

1225
01:12:26,709 --> 01:12:25,350
regaining some of that uh video from

1226
01:12:28,870 --> 01:12:26,719
international space station chris

1227
01:12:31,430 --> 01:12:28,880
cassidy given the go to open that node

1228
01:12:33,750 --> 01:12:31,440
to forward hatch again he opened it a

1229
01:12:36,709 --> 01:12:33,760
little bit earlier today

1230
01:12:38,550 --> 01:12:36,719
to allow some of the station air to mix

1231
01:12:43,990 --> 01:12:38,560
into the pressurized mating adapter

1232
01:12:47,110 --> 01:12:45,990
now again it's there's a few more

1233
01:12:50,149 --> 01:12:47,120
hatches

1234
01:12:51,590 --> 01:12:50,159
to open until we are able to welcome bob

1235
01:12:53,669 --> 01:12:51,600
and doug aboard the international space

1236
01:12:56,149 --> 01:12:53,679
station you're looking through the hatch

1237
01:12:58,310 --> 01:12:56,159
into the pressurized mating adapter

1238
01:13:00,550 --> 01:12:58,320

there's another hatch down there

1239
01:13:02,630 --> 01:13:00,560
through the pressurized mating adapter

1240
01:13:05,430 --> 01:13:02,640
that opens up to the international

1241
01:13:07,590 --> 01:13:05,440
docking adapter

1242
01:13:09,430 --> 01:13:07,600
hey josh the uh

1243
01:13:11,110 --> 01:13:09,440
no there was zero

1244
01:13:13,830 --> 01:13:11,120
uh

1245
01:13:20,870 --> 01:13:13,840
zero on dpdt and the no two forward

1246
01:13:26,070 --> 01:13:23,350
and chris we copy now to forward hatch

1247
01:13:28,470 --> 01:13:26,080
open now we concur your go for the next

1248
01:13:31,350 --> 01:13:28,480
yellow activity that's your 1515

1249
01:13:33,750 --> 01:13:31,360
activity it's step two in two decimal

1250
01:13:35,669 --> 01:13:33,760
one zero two crew dragon is arrival

1251
01:13:37,669 --> 01:13:35,679
through hatch opening basically you're

1252
01:13:41,189 --> 01:13:37,679
gonna cycle the eight pass equalization

1253
01:13:45,750 --> 01:13:43,510
and dragon spacex on dragon to ground if

1254
01:13:47,990 --> 01:13:45,760
desired reference procedure for decimal

1255
01:14:00,550 --> 01:13:48,000
four zero zero to monitor serial

1256
01:17:02,149 --> 01:14:01,830
and copies

1257
01:17:06,790 --> 01:17:04,149
dragon on dragon to ground

1258
01:17:08,630 --> 01:17:06,800
for 4.012

1259
01:17:11,830 --> 01:17:08,640
we've completed

1260
01:17:16,310 --> 01:17:11,840
uh up to section 5 and we've got a timer

1261
01:17:20,149 --> 01:17:18,709
completed through section five and your

1262
01:17:22,070 --> 01:17:20,159
suits are drying

1263
01:17:23,350 --> 01:17:22,080

and you have started a timer for one

1264
01:17:41,350 --> 01:17:23,360
hour with that do we have your

1265
01:17:48,070 --> 01:17:44,870
give you uh get you back on board

1266
01:17:50,390 --> 01:17:48,080
we copy we are go to come back on board

1267
01:17:52,950 --> 01:17:50,400
and with that you are go to perform

1268
01:17:55,030 --> 01:17:52,960
sections one through three of four

1269
01:17:57,910 --> 01:17:55,040
decimal 400

1270
01:18:00,070 --> 01:17:57,920
we do recommend deferring your step 2.1

1271
01:18:01,910 --> 01:18:00,080
for the waste system flush until closer

1272
01:18:04,630 --> 01:18:01,920
to hatch opening

1273
01:18:06,870 --> 01:18:04,640
in section 3 as you are performing your

1274
01:18:08,630 --> 01:18:06,880
inventory please collect all your food

1275
01:18:10,229 --> 01:18:08,640
and water bottle trash

1276
01:18:12,070 --> 01:18:10,239
and consolidate it

1277
01:18:15,510 --> 01:18:12,080
into the two trash bags within their

1278
01:18:17,110 --> 01:18:15,520
common bags in location 18.

1279
01:18:18,950 --> 01:18:17,120
you will transfer the plastic bags

1280
01:18:20,950 --> 01:18:18,960
containing this trash to iss for

1281
01:18:22,950 --> 01:18:20,960
disposal during a scheduled activity

1282
01:18:24,630 --> 01:18:22,960
after iss ingress

1283
01:18:26,950 --> 01:18:24,640
and do note that you are welcome to

1284
01:18:29,110 --> 01:18:26,960
defer this inventory until after you eat

1285
01:18:34,950 --> 01:18:29,120
your meal that is scheduled for right

1286
01:18:38,709 --> 01:18:36,870
okay anna

1287
01:18:41,030 --> 01:18:38,719
if you could give us five minutes before

1288
01:18:43,750 --> 01:18:41,040

you could come back on board we do have

1289
01:18:46,310 --> 01:18:43,760
some clothing config to complete

1290
01:18:50,229 --> 01:18:46,320
understand we've got to go for sections

1291
01:18:53,669 --> 01:18:50,239
one two and three of four dot 400

1292
01:18:59,270 --> 01:18:53,679
and we will consolidate our trash

1293
01:19:04,870 --> 01:19:02,070
and we'll defer the dock waste

1294
01:19:06,950 --> 01:19:04,880
configuration section to a 4.400 until

1295
01:19:10,070 --> 01:19:06,960
it gets closer to hatch opening station

1296
01:19:11,750 --> 01:19:10,080
we copy one five zero seven we copy and

1297
01:19:14,310 --> 01:19:11,760
we will wait for five minutes before

1298
01:19:15,510 --> 01:19:14,320
coming on board and we'll check with you

1299
01:19:16,709 --> 01:19:15,520
before we do so if we don't hear from

1300
01:19:22,950 --> 01:19:16,719
members

1301
01:19:22,960 --> 01:19:57,430
thanks anna

1302
01:20:01,110 --> 01:19:59,030
this is mission control houston you're

1303
01:20:03,030 --> 01:20:01,120
listening to cruz on board the

1304
01:20:05,350 --> 01:20:03,040
international space station and dragon

1305
01:20:06,709 --> 01:20:05,360
prepare for opening the hatch you're

1306
01:20:08,390 --> 01:20:06,719
seeing chris cassidy aboard the

1307
01:20:10,310 --> 01:20:08,400
international space station already open

1308
01:20:12,950 --> 01:20:10,320
the hatch to the pressurized mating

1309
01:20:14,870 --> 01:20:12,960
adapter just below that hatchway you see

1310
01:20:17,189 --> 01:20:14,880
at the center of the screen here on the

1311
01:20:19,830 --> 01:20:17,199
other side of the hatch is the hatchway

1312
01:20:21,189 --> 01:20:19,840
to the international docking adapter on

1313
01:20:26,310 --> 01:20:21,199

the other side of that

1314
01:20:31,590 --> 01:20:29,750
vestibule pressurization is underway

1315
01:20:33,110 --> 01:20:31,600
this will equalize the pressure between

1316
01:20:35,189 --> 01:20:33,120
dragon and the international space

1317
01:20:37,669 --> 01:20:35,199
station once it does come up to

1318
01:20:39,510 --> 01:20:37,679
pressurization it will take some time to

1319
01:20:41,510 --> 01:20:39,520
equalize that pressure

1320
01:20:45,830 --> 01:20:41,520
because of the temperature difference in

1321
01:20:48,310 --> 01:20:45,840
the vestibule just take some time to

1322
01:20:49,990 --> 01:20:48,320
endeavor it's houston calling you on

1323
01:22:34,229 --> 01:20:50,000
hardline now for a voice check how do

1324
01:22:38,709 --> 01:22:36,229
endeavor it's houston calling

1325
01:22:44,870 --> 01:22:38,719
space around two by a hard line now for

1326
01:22:51,030 --> 01:22:47,669
interesting questions

1327
01:22:54,229 --> 01:22:51,040
check out leaders counting one two one

1328
01:23:13,520 --> 01:22:54,239
one two two one two three one two four

1329
01:23:13,530 --> 01:23:18,149
[Music]

1330
01:23:22,310 --> 01:23:20,229
and station houston on two anatoly we

1331
01:23:24,550 --> 01:23:22,320
hear you loud and clear um we're gonna

1332
01:23:25,990 --> 01:23:24,560
swap a couple minor things here and try

1333
01:23:31,030 --> 01:23:26,000
dragon again we're just still trying to

1334
01:23:35,189 --> 01:23:33,030
time again

1335
01:23:38,149 --> 01:23:35,199
check how to read this counting one to

1336
01:23:48,870 --> 01:23:38,159
one one two two one two three one two

1337
01:23:53,030 --> 01:23:51,350
and station houston undo everybody uh

1338
01:23:54,390 --> 01:23:53,040

we'll just stand by for a few minutes

1339
01:24:04,229 --> 01:23:54,400
we're gonna try to raise dragon by

1340
01:24:07,669 --> 01:24:06,310
and endeavor it's houston calling on

1341
01:24:09,669 --> 01:24:07,679
dragon to ground one we're trying to

1342
01:24:12,310 --> 01:24:09,679
reach you by a hard line just not sure

1343
01:24:21,350 --> 01:24:12,320
if you may if you're receiving it or not

1344
01:24:24,390 --> 01:24:23,030
and houston from

1345
01:24:27,350 --> 01:24:24,400
endeavor

1346
01:24:28,870 --> 01:24:27,360
we're hearing quite a bit of echo on

1347
01:24:30,790 --> 01:24:28,880
the other loop that appears to be

1348
01:24:32,550 --> 01:24:30,800
connected it's

1349
01:24:34,790 --> 01:24:32,560
unintelligible

1350
01:24:38,470 --> 01:24:34,800
but we do have you loud and clear on the

1351
01:24:42,390 --> 01:24:40,470
and endeavor houston on dragon to ground

1352
01:24:44,550 --> 01:24:42,400
thanks for that very helpful

1353
01:24:46,149 --> 01:24:44,560
we'll take a look and we have you loud

1354
01:24:47,669 --> 01:24:46,159
and clear on dragging the ground as well

1355
01:24:49,189 --> 01:24:47,679
so we're gonna we're gonna continue to

1356
01:24:56,149 --> 01:24:49,199
work it and try to give you a call back

1357
01:24:56,159 --> 01:25:31,830
endeavor copy thanks

1358
01:25:35,910 --> 01:25:33,750
this is mission control houston working

1359
01:25:37,910 --> 01:25:35,920
through the steps to pressurize the

1360
01:25:40,870 --> 01:25:37,920
vestibule we did have confirmation that

1361
01:25:42,390 --> 01:25:40,880
vestibule pressurization was underway we

1362
01:25:45,110 --> 01:25:42,400
do have power flowing from the

1363
01:25:46,550 --> 01:25:45,120

international space station to dragon

1364
01:25:49,910 --> 01:25:46,560
after it docked

1365
01:25:51,990 --> 01:25:49,920
for a contact and capture at 9 16 a.m

1366
01:25:57,030 --> 01:25:52,000
central time 10 16

1367
01:26:02,310 --> 01:25:59,669
a few other uh milestones to reach we

1368
01:26:05,189 --> 01:26:02,320
need a good uh audio communication

1369
01:26:07,030 --> 01:26:05,199
hard-lined uh through the umbilical uh

1370
01:26:08,870 --> 01:26:07,040
where dragon is currently docked on the

1371
01:26:11,750 --> 01:26:08,880
other side of that hatch

1372
01:26:15,910 --> 01:26:11,760
providing now power just making sure

1373
01:26:18,229 --> 01:26:15,920
those hardline communications are intact

1374
01:26:20,470 --> 01:26:18,239
working through that as we count down

1375
01:27:14,390 --> 01:26:20,480
towards the milestones of opening that

1376
01:27:23,430 --> 01:27:18,229
spacex dragging on dragging the ground

1377
01:27:30,390 --> 01:27:27,990
yeah anna in section one of 4.400

1378
01:27:33,030 --> 01:27:30,400
the tablet state of charge

1379
01:27:38,470 --> 01:27:33,040
are 66 for

1380
01:27:42,390 --> 01:27:41,270
copies six six for doug three two for

1381
01:27:44,070 --> 01:27:42,400
bob

1382
01:27:51,910 --> 01:27:44,080
and do we have your permission to come

1383
01:27:56,550 --> 01:27:53,990
yeah go ahead and come on board we just

1384
01:27:58,830 --> 01:27:56,560
may have to take it down at some point

1385
01:28:06,070 --> 01:27:58,840
as you might imagine but uh come on

1386
01:28:09,830 --> 01:28:08,149
station houston on three for chris your

1387
01:28:17,270 --> 01:28:09,840
convenience but just an update on the

1388
01:28:17,280 --> 01:28:20,629

so go ahead

1389
01:28:24,149 --> 01:28:22,070
chris you've probably been able to tell

1390
01:28:26,070 --> 01:28:24,159
we've run into some minor issues trying

1391
01:28:27,669 --> 01:28:26,080
to get hardline established so we're

1392
01:28:29,510 --> 01:28:27,679
working that here and we're going to be

1393
01:28:30,709 --> 01:28:29,520
re-attempting the com checks as soon as

1394
01:28:32,229 --> 01:28:30,719
we think we're going i'll give you a

1395
01:28:34,229 --> 01:28:32,239
heads up on that

1396
01:28:36,629 --> 01:28:34,239
and then regarding stuff

1397
01:28:38,629 --> 01:28:36,639
just get ahead now i was going to pass

1398
01:28:39,990 --> 01:28:38,639
along to do the teardown

1399
01:28:41,750 --> 01:28:40,000
from steps three and four in the

1400
01:28:46,629 --> 01:28:41,760
approach monitoring but i just saw it go

1401
01:28:46,639 --> 01:28:50,390
uh

1402
01:28:54,830 --> 01:28:51,830
hold on just one second which one was

1403
01:28:58,470 --> 01:28:54,840
that maybe a fat finger the wrong

1404
01:29:01,669 --> 01:28:58,480
procedure yeah no it's uh it's it's

1405
01:29:03,910 --> 01:29:01,679
subtle so it's in the execution note for

1406
01:29:06,870 --> 01:29:03,920
dragon approach monitoring as we were

1407
01:29:08,629 --> 01:29:06,880
monitoring dragon earlier in the day and

1408
01:29:11,669 --> 01:29:08,639
down in the execution note or the tear

1409
01:29:12,950 --> 01:29:11,679
down steps

1410
01:29:15,110 --> 01:29:12,960
i'm here in the cupola right now i'll

1411
01:29:18,709 --> 01:29:15,120
take care of it it's not great but and

1412
01:29:23,030 --> 01:29:21,110
sounds good and i'm also hearing on that

1413
01:29:24,870 --> 01:29:23,040

that we have done on the ground steps

1414
01:29:26,390 --> 01:29:24,880
one through four so it's just five and

1415
01:29:33,430 --> 01:29:26,400
six left for you in that tear down

1416
01:29:33,440 --> 01:31:08,390
copy that

1417
01:31:11,189 --> 01:31:09,510
iii

1418
01:31:14,550 --> 01:31:11,199
steps five and six are completing the

1419
01:31:18,470 --> 01:31:16,870
copy chris thanks for that and uh just

1420
01:31:22,310 --> 01:31:18,480
about to hit the button and re-attempt

1421
01:31:22,320 --> 01:31:25,270
okay guppy

1422
01:31:30,070 --> 01:31:27,910
endeavor endeavor it's houston calling

1423
01:31:37,430 --> 01:31:30,080
by a hard line voice check how do you

1424
01:31:42,229 --> 01:31:38,470
there's only

1425
01:31:46,950 --> 01:31:44,709
and stationed standby endeavor this is a

1426
01:31:51,990 --> 01:31:46,960
call for endeavor via hardline voice

1427
01:31:55,910 --> 01:31:53,590
houston endeavor

1428
01:32:03,510 --> 01:31:55,920
completely unreadable with skipping

1429
01:32:07,430 --> 01:32:05,830
an endeavor it's houston on dragon to

1430
01:32:09,189 --> 01:32:07,440
ground we heard you require loud and

1431
01:32:15,830 --> 01:32:09,199
clear understand we're still broken

1432
01:32:27,430 --> 01:32:18,390
we got you josh that's exactly the case

1433
01:32:33,510 --> 01:32:29,669
i'm taking the same voice check how to

1434
01:33:03,830 --> 01:32:33,520
hit me counting one two one one two two

1435
01:33:08,550 --> 01:33:07,189
and station on two for anatoly anatoly

1436
01:33:09,590 --> 01:33:08,560
we're hearing you loud and clear in

1437
01:33:11,750 --> 01:33:09,600
houston

1438
01:33:14,470 --> 01:33:11,760

we seem to have an issue still with com2

1439
01:33:15,830 --> 01:33:14,480
dragons so we'll just have you stand by

1440
01:33:19,430 --> 01:33:15,840
we'll let you know when we're ready to

1441
01:36:41,109 --> 01:33:21,030
okay you've called me over mr brown's

1442
01:36:46,550 --> 01:36:44,550
spacex dragon on dragon to ground for a

1443
01:36:51,990 --> 01:36:46,560
timeline tag up

1444
01:36:57,270 --> 01:36:54,709
yeah anna we're uh managing the uh

1445
01:37:00,790 --> 01:36:57,280
collection of the used water bottles and

1446
01:37:02,310 --> 01:37:00,800
other items as well as our meal and just

1447
01:37:03,189 --> 01:37:02,320
looking to understand a little bit

1448
01:37:06,229 --> 01:37:03,199
better

1449
01:37:08,470 --> 01:37:06,239
how close we were to hatch opening or

1450
01:37:10,070 --> 01:37:08,480
another timeline milestone we're kind of

1451
01:37:13,590 --> 01:37:10,080
running to the end of the tablet here

1452
01:37:16,390 --> 01:37:13,600
with a meal five that started about uh

1453
01:37:18,629 --> 01:37:16,400
i don't know 25 minutes ago or so and so

1454
01:37:23,560 --> 01:37:18,639
i just wanted to understand how much

1455
01:37:26,629 --> 01:37:24,790
[Music]

1456
01:37:36,790 --> 01:37:26,639
in dragon spacex we estimate we are

1457
01:37:41,109 --> 01:37:39,430
copy that anna thanks for uh those words

1458
01:37:42,870 --> 01:37:41,119
it just helps us out manage getting

1459
01:37:45,750 --> 01:37:42,880
things done and uh looks like you guys

1460
01:37:51,270 --> 01:37:45,760
are on board uh welcome aboard i guess

1461
01:38:09,109 --> 01:37:53,109
indeed thank you so much we're excited

1462
01:38:25,669 --> 01:38:12,149
endeavor houston calling over hardline

1463
01:38:31,350 --> 01:38:29,350

houston or station from endeavor

1464
01:38:33,990 --> 01:38:31,360
i'm not sure the location of that last

1465
01:38:44,070 --> 01:38:34,000
call but still quite a bit of skipping

1466
01:38:47,750 --> 01:38:45,910
endeavor it's houston latin clear on

1467
01:38:49,189 --> 01:38:47,760
dragon to ground um

1468
01:38:50,709 --> 01:38:49,199
we heard your response so we're in the

1469
01:38:52,629 --> 01:38:50,719
same situation we're hearing you you're

1470
01:38:54,149 --> 01:38:52,639
not hearing us we have one more

1471
01:38:55,750 --> 01:38:54,159
troubleshooting item that we're going to

1472
01:38:57,669 --> 01:38:55,760
put in work now

1473
01:39:03,990 --> 01:38:57,679
so we'll give that a try and then maybe

1474
01:39:04,000 --> 01:41:45,350
endeavor copies thanks houston

1475
01:41:49,109 --> 01:41:47,510
endeavor endeavor houston calling by

1476
01:42:06,790 --> 01:41:49,119
hardline for a final voice check do you

1477
01:42:11,669 --> 01:42:09,510
houston dragon on the big loop that was

1478
01:42:41,590 --> 01:42:11,679
an improvement but it's still

1479
01:42:45,910 --> 01:42:43,830
and endeavor houston on dragon to ground

1480
01:42:48,149 --> 01:42:45,920
one we we're still hearing you 5x5

1481
01:42:49,910 --> 01:42:48,159
understand it was slightly improved and

1482
01:42:55,430 --> 01:42:49,920
were you able to read me at all or is it

1483
01:43:01,830 --> 01:42:58,629
yeah it was uh a slight improvement uh

1484
01:43:04,390 --> 01:43:01,840
but it's still unintelligible almost uh

1485
01:43:05,990 --> 01:43:04,400
every word there was maybe one word that

1486
01:43:09,510 --> 01:43:06,000
you could have sort of figured out but

1487
01:43:13,030 --> 01:43:11,669
okay thank you for the feedback uh first

1488
01:43:15,109 --> 01:43:13,040

time obviously and we think we're

1489
01:43:21,350 --> 01:43:15,119
running into some interference issues

1490
01:43:21,360 --> 01:52:31,109
we happy thanks

1491
01:52:34,149 --> 01:52:32,709
this is mission control houston if

1492
01:52:35,750 --> 01:52:34,159
you're tuning in to our coverage you're

1493
01:52:38,070 --> 01:52:35,760
getting a live look at the international

1494
01:52:39,830 --> 01:52:38,080
space station flight control room

1495
01:52:41,910 --> 01:52:39,840
hearing a lot of communications from the

1496
01:52:43,589 --> 01:52:41,920
international space station both

1497
01:52:44,709 --> 01:52:43,599
from the space station side over space

1498
01:52:46,229 --> 01:52:44,719
to ground

1499
01:52:49,830 --> 01:52:46,239
nasa astronaut chris cassidy

1500
01:52:54,390 --> 01:52:51,669
setting up for the hatch opening you can

1501
01:52:56,310 --> 01:52:54,400
see a series of cameras scattered around

1502
01:52:58,229 --> 01:52:56,320
ready to capture the best views of bob

1503
01:53:00,470 --> 01:52:58,239
and doug coming through that hatch we

1504
01:53:02,950 --> 01:53:00,480
did get confirmation just shortly

1505
01:53:05,350 --> 01:53:02,960
that we did have good

1506
01:53:07,430 --> 01:53:05,360
pressurization of the vestibule it'll be

1507
01:53:09,910 --> 01:53:07,440
about 10 minutes to perform a series of

1508
01:53:12,550 --> 01:53:09,920
leak checks again that pressure needs to

1509
01:53:14,390 --> 01:53:12,560
stabilize the thermal conditions

1510
01:53:15,990 --> 01:53:14,400
make it swing just a little bit so just

1511
01:53:18,149 --> 01:53:16,000
waiting for that to stabilize before

1512
01:53:23,350 --> 01:53:18,159
those leak checks are finalized

1513
01:53:27,750 --> 01:53:24,709

we do have

1514
01:53:31,830 --> 01:53:29,830
settled in the hardline connection

1515
01:53:34,229 --> 01:53:31,840
between international space station and

1516
01:53:37,430 --> 01:53:34,239
dragon you can see from the inside of

1517
01:53:38,709 --> 01:53:37,440
dragon now the crew doffed or took off

1518
01:53:40,149 --> 01:53:38,719
their suits

1519
01:53:41,910 --> 01:53:40,159
just getting a few things packed up

1520
01:53:45,030 --> 01:53:41,920
before they eventually open up the hatch

1521
01:55:00,950 --> 01:53:45,040
after that pressurization is equalized

1522
01:55:04,390 --> 01:55:02,950
endeavor it's houston calling for a

1523
01:55:07,430 --> 01:55:04,400
voice check over the big loop we've

1524
01:55:42,870 --> 01:55:07,440
retransitioned back to rf so back to

1525
01:55:42,880 --> 01:55:47,400
you've been dragging on them

1526
01:55:47,410 --> 01:55:55,109
[Music]

1527
01:55:58,950 --> 01:55:57,589
houston we transitioned back to rf

1528
01:56:00,629 --> 01:55:58,960
because we still had the interference

1529
01:56:07,109 --> 01:56:00,639
over hardline so we're back on rf now

1530
01:56:12,070 --> 01:56:10,709
we've got you loud and clear on rf

1531
01:56:50,310 --> 01:56:12,080
bottom clue as well we're just going to

1532
01:56:54,870 --> 01:56:52,229
here's a live look from inside the crew

1533
01:56:55,830 --> 01:56:54,880
dragon you're seeing bob bankin and doug

1534
01:56:57,669 --> 01:56:55,840
hurley

1535
01:57:01,030 --> 01:56:57,679
just preparing the inside of dragon they

1536
01:57:03,589 --> 01:57:01,040
have doffed or taken off their suits

1537
01:57:05,830 --> 01:57:03,599
the pressurization between space station

1538
01:57:07,189 --> 01:57:05,840

and dragon is complete

1539
01:57:08,790 --> 01:57:07,199
they just need to perform some leak

1540
01:57:10,870 --> 01:57:08,800
checks make sure that

1541
01:57:15,910 --> 01:57:10,880
pressure is stable before they actually

1542
01:57:18,550 --> 01:57:17,270
teams working together on the ground

1543
01:57:20,229 --> 01:57:18,560
international space station flight

1544
01:57:22,310 --> 01:57:20,239
control room and the flight control room

1545
01:57:23,589 --> 01:57:22,320
in hawthorne to get that big loop

1546
01:57:25,910 --> 01:57:23,599
communication

1547
01:57:28,149 --> 01:57:25,920
configured so everyone can hear each

1548
01:57:29,270 --> 01:57:28,159
other through this process figured out a

1549
02:04:13,910 --> 01:57:29,280
workaround

1550
02:04:16,870 --> 02:04:15,430
this is mission control houston if

1551
02:04:19,589 --> 02:04:16,880
you're just joining us you're getting a

1552
02:04:21,189 --> 02:04:19,599
look inside the crew dragon that was bob

1553
02:04:23,669 --> 02:04:21,199
banked seated

1554
02:04:26,390 --> 02:04:23,679
on the right side the pilot seat or the

1555
02:04:29,270 --> 02:04:26,400
joint operations mission commander seat

1556
02:04:31,990 --> 02:04:29,280
for uh demo two

1557
02:04:35,189 --> 02:04:32,000
he and uh doug hurley the commander of

1558
02:04:37,669 --> 02:04:35,199
the spacecraft just preparing the uh

1559
02:04:38,950 --> 02:04:37,679
inside putting away some trash they just

1560
02:04:42,229 --> 02:04:38,960
off their suits

1561
02:04:47,189 --> 02:04:45,109
uh for the pressure to equalize between

1562
02:04:49,910 --> 02:04:47,199
the international space station

1563
02:04:52,310 --> 02:04:49,920

and uh bob and doug just two hatches

1564
02:04:55,830 --> 02:04:52,320
really separating them from the inside

1565
02:04:59,510 --> 02:04:57,669
aboard international space station

1566
02:05:00,870 --> 02:04:59,520
commander chris cassidy has been

1567
02:05:02,069 --> 02:05:00,880
outfitting

1568
02:05:04,229 --> 02:05:02,079
node 2

1569
02:05:06,149 --> 02:05:04,239
it's the first node once you cross over

1570
02:05:08,629 --> 02:05:06,159
some of the hatchways there it is you

1571
02:05:10,470 --> 02:05:08,639
can see some of the cameras positioned

1572
02:05:13,030 --> 02:05:10,480
around to capture

1573
02:05:17,270 --> 02:05:13,040
uh the crew coming in to the

1574
02:05:29,270 --> 02:05:19,189
much of that work completed at this

1575
02:05:32,390 --> 02:05:30,550
really at this point just waiting for

1576
02:05:33,350 --> 02:05:32,400
good leak checks

1577
02:06:26,390 --> 02:05:33,360
between

1578
02:06:49,189 --> 02:06:28,550
station huntsville space to ground three

1579
02:06:49,199 --> 02:06:57,430
head on three

1580
02:07:01,109 --> 02:06:58,870
hey chris we're not seeing a good

1581
02:07:02,149 --> 02:07:01,119
connection between the ssc 25 and the

1582
02:07:03,830 --> 02:07:02,159
camera

1583
02:07:09,350 --> 02:07:03,840
uh we're coming up on a handover but

1584
02:07:15,430 --> 02:07:12,390
remote 25 copy

1585
02:07:18,069 --> 02:07:15,440
spacex dragon on dragon to ground for

1586
02:07:29,750 --> 02:07:18,079
inventory

1587
02:07:33,669 --> 02:07:31,990
okay anna we'll start with the location

1588
02:07:36,550 --> 02:07:33,679

nine

1589
02:07:43,910 --> 02:07:36,560
from bag 203

1590
02:07:51,750 --> 02:07:46,629
copy three bottles removed from bag two

1591
02:07:56,229 --> 02:07:54,790
good read back from location 10

1592
02:08:01,030 --> 02:07:56,239
we removed

1593
02:08:07,270 --> 02:08:01,040
both from each of bag 207

1594
02:08:11,589 --> 02:08:09,430
and dragon spacex you were pretty broken

1595
02:08:14,709 --> 02:08:11,599
on that call but i think i copied three

1596
02:08:23,910 --> 02:08:14,719
bottles from each bag two zero seven and

1597
02:08:35,109 --> 02:08:27,180
that is a good read back anna

1598
02:08:38,790 --> 02:08:36,390
for location

1599
02:08:43,189 --> 02:08:38,800
eleven

1600
02:08:46,870 --> 02:08:43,199
one dinner from bag three one seven

1601
02:08:51,430 --> 02:08:46,880
one breakfast from bag three one five

1602
02:08:53,350 --> 02:08:51,440
and one lunch from bag three one six uh

1603
02:08:56,870 --> 02:08:53,360
there are several

1604
02:08:59,990 --> 02:08:56,880
uh i copy one dinner from 317.

1605
02:09:02,629 --> 02:09:00,000
one breakfast from 315. and one lunch

1606
02:09:09,270 --> 02:09:05,589
they're all everything i that was taken

1607
02:09:13,350 --> 02:09:10,870
that's a good read back

1608
02:09:17,430 --> 02:09:13,360
and location 12

1609
02:09:21,109 --> 02:09:17,440
won dinner from bag three two one

1610
02:09:27,669 --> 02:09:21,119
one breakfast from bag three one nine

1611
02:09:33,510 --> 02:09:30,629
i copy one dinner from three two one

1612
02:09:35,109 --> 02:09:33,520
one breakfast from three one nine

1613
02:09:38,229 --> 02:09:35,119

one lunch from

1614
02:09:40,550 --> 02:09:38,239
three one zero and i am i correct to

1615
02:09:42,470 --> 02:09:40,560
conclude all of this includes your

1616
02:09:50,870 --> 02:09:42,480
consumption from the lunch that you just

1617
02:09:55,750 --> 02:09:53,510
that's uh correct anna we've uh finished

1618
02:09:57,510 --> 02:09:55,760
eating and the lunch we just completed

1619
02:10:00,470 --> 02:09:57,520
uh it's a good

1620
02:10:02,870 --> 02:10:00,480
uh complete list of

1621
02:10:05,750 --> 02:10:02,880
what i've read down to you so far

1622
02:10:07,270 --> 02:10:05,760
the only thing we have remaining is the

1623
02:10:08,550 --> 02:10:07,280
flush

1624
02:10:11,109 --> 02:10:08,560
of the

1625
02:10:13,350 --> 02:10:11,119
waste system here and we'll do that with

1626
02:10:15,510 --> 02:10:13,360
a water bottle and report when we do

1627
02:10:17,030 --> 02:10:15,520
that a little bit later

1628
02:10:24,629 --> 02:10:17,040
poppy that sounds like a perfect plan

1629
02:10:29,589 --> 02:10:26,870
okay with that that's the extent of our

1630
02:10:32,069 --> 02:10:29,599
inventory all else is per the packing

1631
02:10:34,870 --> 02:10:33,830
copy all else from

1632
02:10:49,270 --> 02:10:34,880
per the

1633
02:10:52,950 --> 02:10:50,870
this is mission control houston you've

1634
02:10:55,270 --> 02:10:52,960
seen chris cassidy international space

1635
02:10:57,030 --> 02:10:55,280
station commander do much of the setup

1636
02:10:59,270 --> 02:10:57,040
but he does have two crew members on

1637
02:11:05,589 --> 02:10:59,280
board both russian cosmonauts next to

1638
02:11:10,470 --> 02:11:08,390

a rookie space flyer that was uh

1639
02:11:12,950 --> 02:11:10,480
on the same soyuz spacecraft

1640
02:11:14,790 --> 02:11:12,960
that uh chris cassidy launched on from

1641
02:11:18,870 --> 02:11:14,800
the baikonur cosmodrome

1642
02:14:51,270 --> 02:11:21,030
also on board is uh russian cosmonaut

1643
02:14:56,950 --> 02:14:53,030
this is mission control houston we are

1644
02:14:59,669 --> 02:14:56,960
coming up on almost two hours since uh

1645
02:15:02,470 --> 02:14:59,679
the crew dragon made contact and was

1646
02:15:04,390 --> 02:15:02,480
captured by the uh at the international

1647
02:15:07,189 --> 02:15:04,400
space station's forward

1648
02:15:11,189 --> 02:15:07,199
uh international docking adapter

1649
02:15:14,709 --> 02:15:11,199
that happened at 9 16 a.m central 10 16

1650
02:15:17,270 --> 02:15:15,990
still working through some of those

1651
02:15:19,589 --> 02:15:17,280
milestones

1652
02:15:23,109 --> 02:15:19,599
equalizing the pressure between

1653
02:15:25,510 --> 02:15:23,119
dragon and international space station

1654
02:15:27,669 --> 02:15:25,520
verifying some of the communications

1655
02:15:30,069 --> 02:15:27,679
and of course you see uh bob benkin and

1656
02:15:31,990 --> 02:15:30,079
doug hurley inside continuing to prepare

1657
02:15:34,310 --> 02:15:32,000
the inside of their vessel

1658
02:17:04,150 --> 02:15:34,320
before they make their way inside

1659
02:17:09,750 --> 02:17:07,669
spacex dragon on dragon to ground uh do

1660
02:17:11,509 --> 02:17:09,760
you mind taking the cameras down for

1661
02:17:12,629 --> 02:17:11,519
just a few minutes here

1662
02:17:44,790 --> 02:17:12,639
we will put that in work and let you

1663
02:17:49,349 --> 02:17:47,110

this is mission control houston uh you

1664
02:17:51,589 --> 02:17:49,359
heard the call from bob bankin joint

1665
02:17:54,150 --> 02:17:51,599
operations mission commander of

1666
02:17:56,230 --> 02:17:54,160
uh the demo 2 mission taking down some

1667
02:17:58,790 --> 02:17:56,240
of those video fees we're still waiting

1668
02:18:01,030 --> 02:17:58,800
uh for some of those milestones to pass

1669
02:18:03,270 --> 02:18:01,040
before actually opening the hatch the

1670
02:18:05,349 --> 02:18:03,280
dragon crew continuing to

1671
02:18:07,429 --> 02:18:05,359
get themselves ready before opening the

1672
02:18:09,830 --> 02:18:07,439
hatch chris cassidy on the other side

1673
02:18:11,589 --> 02:18:09,840
just preparing uh some of the camera

1674
02:18:14,870 --> 02:18:11,599
views making sure everything's set there

1675
02:18:16,469 --> 02:18:14,880
done even a little bit ahead of time

1676
02:18:19,110 --> 02:18:16,479
we do have confirmation that there is a

1677
02:18:20,629 --> 02:18:19,120
good data connection path between

1678
02:18:22,469 --> 02:18:20,639
dragon and the international space

1679
02:18:28,150 --> 02:18:22,479
station some of those checks underway

1680
02:18:44,150 --> 02:18:31,270
coming up on two hours since docking at

1681
02:18:44,160 --> 02:18:51,990
the ssc has been rebooted any success

1682
02:18:55,589 --> 02:18:53,589
course we see a good connection between

1683
02:18:56,790 --> 02:18:55,599
the ssd and the camera and we're just

1684
02:18:58,389 --> 02:18:56,800
performing the calibration now we'll

1685
02:19:03,589 --> 02:18:58,399
start recording shortly thanks for your

1686
02:19:13,830 --> 02:19:05,750
dragon spacex we have gone exterior with

1687
02:19:13,840 --> 02:22:10,630
dragon copy thanks

1688
02:22:14,309 --> 02:22:13,030

this is mission control houston

1689
02:22:15,670 --> 02:22:14,319
again you're getting a look at the

1690
02:22:17,750 --> 02:22:15,680
inside of the international space

1691
02:22:23,110 --> 02:22:17,760
station that's uh nasa astronaut chris

1692
02:22:26,790 --> 02:22:25,429
continuing to get some of those cameras

1693
02:22:29,270 --> 02:22:26,800
configured

1694
02:22:32,389 --> 02:22:29,280
for hatch opening

1695
02:22:36,469 --> 02:22:32,399
many milestones already passed uh after

1696
02:22:44,230 --> 02:22:36,479
docking at 9 16 am central

1697
02:22:48,790 --> 02:22:46,389
at the time of docking uh

1698
02:22:50,950 --> 02:22:48,800
international space station was on

1699
02:22:53,670 --> 02:22:50,960
russian thrusters

1700
02:22:56,070 --> 02:22:53,680
at the after contact and capture was

1701
02:22:58,950 --> 02:22:56,080
moved over to control moment gyro

1702
02:23:01,429 --> 02:22:58,960
uh stabilization and attitude control

1703
02:23:07,510 --> 02:23:01,439
now back to its standard configuration

1704
02:23:11,270 --> 02:23:09,590
after an umbilical connecting dragon to

1705
02:23:13,590 --> 02:23:11,280
the international space station was

1706
02:23:15,670 --> 02:23:13,600
established we did get confirmation of

1707
02:23:17,990 --> 02:23:15,680
good power

1708
02:23:20,389 --> 02:23:18,000
flowing from the international space

1709
02:23:24,070 --> 02:23:20,399
station to dragon dragon now relying on

1710
02:23:30,630 --> 02:23:26,630
we dig a confirmation of

1711
02:23:32,150 --> 02:23:30,640
of good data transmission

1712
02:23:34,550 --> 02:23:32,160
and of course uh

1713
02:23:36,630 --> 02:23:34,560

the teams here on the ground both here

1714
02:23:37,670 --> 02:23:36,640
in houston and in hawthorne

1715
02:23:39,990 --> 02:23:37,680
troubleshooting some of the

1716
02:23:46,150 --> 02:23:40,000
communication to make sure that is ready

1717
02:23:50,309 --> 02:23:47,670
pressurization

1718
02:23:52,150 --> 02:23:50,319
between international space station

1719
02:23:54,950 --> 02:23:52,160
and dragon

1720
02:23:58,309 --> 02:23:54,960
brought up to the same pressure

1721
02:24:02,790 --> 02:23:58,319
14.7 the same we would find here on

1722
02:24:06,309 --> 02:24:04,790
leak checks are next to

1723
02:24:08,150 --> 02:24:06,319
confirm

1724
02:24:10,950 --> 02:24:08,160
the can the uh

1725
02:24:12,630 --> 02:24:10,960
pressure state is stabilized between the

1726
02:24:14,630 --> 02:24:12,640
two vehicles

1727
02:24:16,230 --> 02:24:14,640
you see the hatch uh just on the other

1728
02:24:18,070 --> 02:24:16,240
side of chris cassidy there that's the

1729
02:24:20,469 --> 02:24:18,080
hatch to the pressurized mating adapter

1730
02:24:22,710 --> 02:24:20,479
there's two more hatches uh once you go

1731
02:24:24,630 --> 02:24:22,720
down that hatch way

1732
02:24:26,870 --> 02:24:24,640
one is to the international docking

1733
02:27:41,830 --> 02:24:26,880
adapter and the other is the hatch of

1734
02:27:50,150 --> 02:27:45,510
spacex dragon with a couple of questions

1735
02:27:54,389 --> 02:27:51,590
hey anna um

1736
02:27:56,710 --> 02:27:54,399
we show about an hour and 11 minutes

1737
02:27:59,110 --> 02:27:56,720
since we started drying the suits just

1738
02:28:00,630 --> 02:27:59,120

to let you know that and then the other

1739
02:28:04,230 --> 02:28:00,640
thing is we

1740
02:28:06,710 --> 02:28:04,240
can put 4 decimal 400

1741
02:28:12,790 --> 02:28:06,720
section 2 in work if you think we have

1742
02:28:17,590 --> 02:28:14,309
we

1743
02:28:19,190 --> 02:28:17,600
copy you are go to

1744
02:28:20,790 --> 02:28:19,200
stop drying your suits and turn off that

1745
02:28:26,630 --> 02:28:20,800
suit fan at this time let me get you

1746
02:28:26,640 --> 02:28:34,389
uh we'll shut the suit fan off now

1747
02:28:39,510 --> 02:28:36,550
in dragon spacex we are about a half

1748
02:28:41,270 --> 02:28:39,520
hour prior to hatch open so you are go

1749
02:28:49,429 --> 02:28:41,280
to do that waste system flush if that

1750
02:28:53,429 --> 02:28:51,110
okay we may give it a few minutes if

1751
02:28:55,750 --> 02:28:53,439
it's going to be

1752
02:28:58,710 --> 02:28:55,760
30 minutes until hatch opening we may

1753
02:29:00,230 --> 02:28:58,720
want to use it just one more time uh so

1754
02:29:02,630 --> 02:29:00,240
yeah we may hold off for another 10

1755
02:29:04,070 --> 02:29:02,640
minutes or so but uh let us know if

1756
02:29:05,670 --> 02:29:04,080
anything changes otherwise we'll do it

1757
02:29:07,590 --> 02:29:05,680
then

1758
02:29:11,190 --> 02:29:07,600
totally reasonable sounds like a good

1759
02:29:15,270 --> 02:29:13,510
and dragon houston on dragon to ground

1760
02:29:17,110 --> 02:29:15,280
we're still working calm issues

1761
02:29:18,710 --> 02:29:17,120
we're gonna take down the big loop now

1762
02:29:19,990 --> 02:29:18,720
uh we'll maintain you on dragon to

1763
02:29:25,429 --> 02:29:20,000

ground we'll call you when we have hard

1764
02:29:25,439 --> 02:29:30,309
dragon copy houston thanks

1765
02:29:35,750 --> 02:29:33,349
go ahead chris or stalking the dragon

1766
02:29:37,190 --> 02:29:35,760
yeah no problem

1767
02:29:38,230 --> 02:29:37,200
hey i'm just looking ahead at that at

1768
02:29:41,830 --> 02:29:38,240
the

1769
02:29:44,070 --> 02:29:41,840
pao event and i know it says uh this

1770
02:29:45,750 --> 02:29:44,080
uh video

1771
02:29:47,830 --> 02:29:45,760
through the note note 2 and space of

1772
02:29:50,469 --> 02:29:47,840
ground 2 up and down

1773
02:29:52,790 --> 02:29:50,479
it would only take me about

1774
02:29:56,389 --> 02:29:52,800
one minute to change back over to the

1775
02:29:58,469 --> 02:29:56,399
encoder and go do uh calm the normal way

1776
02:30:00,309 --> 02:29:58,479
that we do pio events if if that's

1777
02:30:03,110 --> 02:30:00,319
something that's preferred

1778
02:30:04,950 --> 02:30:03,120
it really is super fast and i can get

1779
02:30:08,309 --> 02:30:04,960
you that way and that config real quick

1780
02:30:12,550 --> 02:30:09,349
later

1781
02:30:13,910 --> 02:30:12,560
copy chris yeah copy uh thanks for that

1782
02:30:17,190 --> 02:30:13,920
we'll offer it up and i'll let you know

1783
02:30:19,190 --> 02:30:17,200
if we have one want to go that way

1784
02:31:40,230 --> 02:30:19,200
obviously not urgent or important just

1785
02:31:45,429 --> 02:31:42,070
station houston three for chris comp

1786
02:31:45,439 --> 02:31:48,469
go ahead

1787
02:31:51,429 --> 02:31:50,469
we just wanted to clarify from your last

1788
02:31:53,670 --> 02:31:51,439

comments

1789
02:31:55,190 --> 02:31:53,680
we show it as being in the standard

1790
02:31:58,150 --> 02:31:55,200
config whereby you're going to be coming

1791
02:32:01,670 --> 02:31:58,160
down over the camcorder hd mic and we'll

1792
02:32:03,590 --> 02:32:01,680
be going up over uh space to ground two

1793
02:32:04,710 --> 02:32:03,600
and that's what we're intending did you

1794
02:32:06,230 --> 02:32:04,720
maybe just

1795
02:32:07,590 --> 02:32:06,240
we might have missed your intent and

1796
02:32:08,870 --> 02:32:07,600
your previous remarks is that what you

1797
02:32:12,150 --> 02:32:08,880
had in mind

1798
02:32:14,070 --> 02:32:12,160
oh i had uh like we do all other pao

1799
02:32:17,030 --> 02:32:14,080
events we talk um

1800
02:32:18,070 --> 02:32:17,040
we hold the handheld microphone that is

1801
02:32:19,510 --> 02:32:18,080
going

1802
02:32:21,510 --> 02:32:19,520
uh

1803
02:32:24,389 --> 02:32:21,520
through the clip-on mic transmitter to

1804
02:32:26,469 --> 02:32:24,399
the clip-on to the to the uh through the

1805
02:32:27,990 --> 02:32:26,479
camera and then the audio comes down

1806
02:32:28,950 --> 02:32:28,000
through the encoder

1807
02:32:33,670 --> 02:32:28,960
uh

1808
02:32:35,830 --> 02:32:33,680
events so i could go back to that config

1809
02:32:37,990 --> 02:32:35,840
if you need super fast or if you want to

1810
02:32:39,990 --> 02:32:38,000
do it this way where where we're talking

1811
02:32:41,670 --> 02:32:40,000
on space to ground to that's fine too i

1812
02:32:43,110 --> 02:32:41,680
don't care just throwing it out there

1813
02:32:54,389 --> 02:32:43,120

because it's different how we then we

1814
02:32:58,150 --> 02:32:56,070
semi

1815
02:33:00,550 --> 02:32:58,160
and just to be clear well with the

1816
02:33:02,630 --> 02:33:00,560
configuring now is the note 2 camera is

1817
02:33:03,910 --> 02:33:02,640
not connected to the encoder as you

1818
02:33:06,150 --> 02:33:03,920
probably know so

1819
02:33:08,309 --> 02:33:06,160
so all i would do is just plug the cable

1820
02:33:10,550 --> 02:33:08,319
back into the encoder and switch back

1821
02:33:24,070 --> 02:33:10,560
over to the nominal note 2

1822
02:33:28,630 --> 02:33:26,870
and chris that that is clear um

1823
02:33:31,590 --> 02:33:28,640
the camera needs to be plugged into the

1824
02:33:33,670 --> 02:33:31,600
encoder uh so what you're saying is what

1825
02:33:35,190 --> 02:33:33,680
we need we don't know where it where it

1826
02:33:37,590 --> 02:33:35,200
got swapped up but the camera should

1827
02:33:39,670 --> 02:33:37,600
definitely be plugged into the encoder

1828
02:33:46,469 --> 02:33:39,680
and audio is coming down via that

1829
02:33:51,990 --> 02:33:50,230
okay so yeah

1830
02:33:53,270 --> 02:33:52,000
we'll just use it on the i guess what i

1831
02:33:55,510 --> 02:33:53,280
was thinking is going back to one

1832
02:33:57,590 --> 02:33:55,520
without a battery and not be dependent

1833
02:34:01,030 --> 02:33:57,600
on the battery and going back over to

1834
02:34:03,030 --> 02:34:01,040
the nominal cable which includes power

1835
02:34:03,910 --> 02:34:03,040
uh

1836
02:34:05,670 --> 02:34:03,920
i just

1837
02:34:10,870 --> 02:34:05,680
get a little leery about what's relying

1838
02:34:15,349 --> 02:34:14,150

gabby we have uh photo tv online so

1839
02:35:12,389 --> 02:34:15,359
we're talking them on the phone right

1840
02:35:15,830 --> 02:35:14,469
station houston 3 for chris

1841
02:35:18,469 --> 02:35:15,840
microphone

1842
02:35:28,630 --> 02:35:18,479
and the free float camera both connected

1843
02:35:32,070 --> 02:35:30,309
camera and we'll use the handheld

1844
02:35:34,710 --> 02:35:32,080
microphone through the

1845
02:35:36,790 --> 02:35:34,720
atu to help you out no no problem i

1846
02:35:38,309 --> 02:35:36,800
think we're just we're uh i'm not

1847
02:35:40,550 --> 02:35:38,319
communicating

1848
02:35:42,630 --> 02:35:40,560
no pun intended but i think we're in a

1849
02:35:45,910 --> 02:35:42,640
good config now and we won't i won't

1850
02:35:47,110 --> 02:35:45,920
swap over to the uh to the nominal note

1851
02:35:59,590 --> 02:35:47,120
2

1852
02:35:59,600 --> 02:37:09,830
he connected a new king now mike

1853
02:37:14,070 --> 02:37:12,070
station houston through chris if you're

1854
02:37:20,150 --> 02:37:14,080
still there we think we're we still have

1855
02:37:24,870 --> 02:37:22,309
so i i see you look

1856
02:37:27,349 --> 02:37:24,880
yeah i see in the video now so we still

1857
02:37:29,429 --> 02:37:27,359
have pieo on the line uh sorry for the

1858
02:37:30,389 --> 02:37:29,439
confusion but um

1859
02:37:33,270 --> 02:37:30,399
i think

1860
02:37:36,710 --> 02:37:33,280
this much is clear this morning

1861
02:37:38,070 --> 02:37:36,720
um we've moved cameras uh that we

1862
02:37:40,309 --> 02:37:38,080
swapped the cameras that were connected

1863
02:37:42,870 --> 02:37:40,319

to the encoder what we want now we're

1864
02:37:44,710 --> 02:37:42,880
getting video from the free float camera

1865
02:37:47,429 --> 02:37:44,720
through the encoder so that's good we're

1866
02:37:48,790 --> 02:37:47,439
seeing it right now what we need just

1867
02:37:51,670 --> 02:37:48,800
relaying here

1868
02:37:54,309 --> 02:37:51,680
is your lapel mic that has to go through

1869
02:37:56,469 --> 02:37:54,319
that new free float camera

1870
02:37:58,550 --> 02:37:56,479
so that your mic runs

1871
02:38:00,309 --> 02:37:58,560
connects to the free fold camera and

1872
02:38:03,190 --> 02:38:00,319
then that audio comes down through the

1873
02:38:05,270 --> 02:38:03,200
encoder that makes sense

1874
02:38:07,429 --> 02:38:05,280
that's how that's a config it's in right

1875
02:38:09,429 --> 02:38:07,439
now and that's all perfect the uh the

1876
02:38:11,590 --> 02:38:09,439
only benefit i guess i i didn't

1877
02:38:14,309 --> 02:38:11,600
initially make it clear is

1878
02:38:15,990 --> 02:38:14,319
is if i switch back to the normal cable

1879
02:38:18,870 --> 02:38:16,000
in the normal camera

1880
02:38:22,150 --> 02:38:18,880
we're not dependent on a

1881
02:38:23,910 --> 02:38:22,160
battery power on the camera

1882
02:38:25,990 --> 02:38:23,920
i just i'm worried that throughout this

1883
02:38:27,110 --> 02:38:26,000
whole event we're gonna

1884
02:38:29,590 --> 02:38:27,120
all of a sudden the battery's going to

1885
02:38:32,389 --> 02:38:29,600
go out like go back to the normal spacex

1886
02:38:35,429 --> 02:38:32,399
dragon on dragon to ground now report

1887
02:38:37,590 --> 02:38:35,439
complete with four point zero one two

1888
02:38:39,830 --> 02:38:37,600

benefit to this repo camera eight with

1889
02:38:41,510 --> 02:38:39,840
four decimal zero one two all the way

1890
02:38:44,389 --> 02:38:41,520
into the dragon which i didn't don't

1891
02:38:47,830 --> 02:38:44,399
think we could do with the other cable

1892
02:38:49,590 --> 02:38:47,840
so what my my thought was after we do

1893
02:38:51,349 --> 02:38:49,600
all of the ingress stuff and we switch

1894
02:38:53,510 --> 02:38:51,359
gears to the pao ceremony when we're

1895
02:38:55,670 --> 02:38:53,520
standing right in front of the hatch

1896
02:38:57,429 --> 02:38:55,680
we could have

1897
02:38:59,030 --> 02:38:57,439
actual power to the camera but it's

1898
02:39:00,630 --> 02:38:59,040
really no big deal what i'll do is i'll

1899
02:39:01,670 --> 02:39:00,640
just i have got a couple batteries on

1900
02:39:03,190 --> 02:39:01,680
standby

1901
02:39:04,870 --> 02:39:03,200
and i'll just make sure there's a fresh

1902
02:39:09,190 --> 02:39:04,880
battery right before we start that pa

1903
02:39:15,190 --> 02:39:11,110
okay chris uh sorry it took so long but

1904
02:39:16,630 --> 02:39:15,200
i'm 100 with you and copy 100 on on the

1905
02:39:18,469 --> 02:39:16,640
battery concern the word we're getting

1906
02:39:20,550 --> 02:39:18,479
here is we would like to run it in the

1907
02:39:22,550 --> 02:39:20,560
config that it's in right now now we

1908
02:39:24,950 --> 02:39:22,560
copy all on the battery config great

1909
02:39:26,870 --> 02:39:24,960
idea to have a few spares nearby

1910
02:39:30,230 --> 02:39:26,880
but we think it's going to last

1911
02:39:30,240 --> 02:39:40,389
okay

1912
02:39:44,950 --> 02:39:43,030
and station houston on three for chris

1913
02:39:48,389 --> 02:39:44,960

uh with that out of the way you have a

1914
02:39:51,510 --> 02:39:48,399
go when able for your 16-15 activity

1915
02:39:54,389 --> 02:39:51,520
16-15 that's your goal for steps three

1916
02:39:55,830 --> 02:39:54,399
and four in two decimal 102 crew dragon

1917
02:39:57,030 --> 02:39:55,840
iss arrival

1918
02:40:15,510 --> 02:39:57,040
okay

1919
02:40:51,349 --> 02:40:18,309
endeavor houston calling on hardline for

1920
02:41:02,070 --> 02:40:53,349
endeavor houston calling via hardline

1921
02:41:07,429 --> 02:41:04,950
loud and clear how was

1922
02:41:13,670 --> 02:41:07,439
hey uh endeavor houston we have you loud

1923
02:41:21,269 --> 02:41:16,230
all congrats uh sounds like we got it at

1924
02:41:25,510 --> 02:41:23,349
affirmative concur we think we might

1925
02:41:26,790 --> 02:41:25,520
have found it interference between c2v2

1926
02:41:27,510 --> 02:41:26,800
and the hardline system but we're going

1927
02:41:30,150 --> 02:41:27,520
to

1928
02:41:34,070 --> 02:41:30,160
keep it here for now and proceed down

1929
02:41:34,080 --> 02:42:22,150
never happy

1930
02:42:27,910 --> 02:42:24,070
houston m3 hey can you back me up on

1931
02:42:27,920 --> 02:42:46,710
will do we're checking

1932
02:42:54,790 --> 02:42:49,830
station houston on to uh chris

1933
02:42:54,800 --> 02:44:02,550
happy

1934
02:44:05,910 --> 02:44:03,910
this is mission control houston you're

1935
02:44:08,230 --> 02:44:05,920
looking at the inside of the

1936
02:44:09,670 --> 02:44:08,240
international space station

1937
02:44:11,990 --> 02:44:09,680
what you were hearing before were just

1938
02:44:13,590 --> 02:44:12,000

some of the audio and video checks just

1939
02:44:14,870 --> 02:44:13,600
making sure that everything's synced up

1940
02:44:17,750 --> 02:44:14,880
so that we get the best views and the

1941
02:44:22,469 --> 02:44:17,760
best audio possible for when bob benkin

1942
02:44:25,590 --> 02:44:24,150
we're working towards the hatch opening

1943
02:44:27,030 --> 02:44:25,600
now you can see

1944
02:44:29,190 --> 02:44:27,040
chris cassidy down the pressurized

1945
02:44:31,190 --> 02:44:29,200
mating adapter that hatch

1946
02:44:33,030 --> 02:44:31,200
will open up to the international

1947
02:44:34,950 --> 02:44:33,040
docking adapter on the other side is the

1948
02:44:37,110 --> 02:44:34,960
dragon hatch

1949
02:44:40,150 --> 02:44:37,120
cassidy working through those procedures

1950
02:44:42,550 --> 02:44:40,160
after pressure equalization was complete

1951
02:44:45,670 --> 02:44:42,560
uh now expecting uh around the order of

1952
02:44:47,510 --> 02:44:45,680
10 to 15 minutes maybe until we finally

1953
02:44:49,269 --> 02:44:47,520
get that hatch open so we'll stand by

1954
02:44:50,710 --> 02:44:49,279
keep those views uh coming from the

1955
02:47:10,469 --> 02:44:50,720
inside of the international space

1956
02:47:13,990 --> 02:47:11,910
this is mission control houston you're

1957
02:47:15,590 --> 02:47:14,000
looking at the live view of the inside

1958
02:47:18,389 --> 02:47:15,600
of the international space station

1959
02:47:20,230 --> 02:47:18,399
flight control room a team here orbit 2

1960
02:47:22,309 --> 02:47:20,240
team led by flight director scoville is

1961
02:47:24,150 --> 02:47:22,319
working through the intricate process of

1962
02:47:26,309 --> 02:47:24,160
making sure everything is ready to hope

1963
02:47:27,990 --> 02:47:26,319

open the hatch and welcome bob bacon and

1964
02:47:32,550 --> 02:47:28,000
doug hurley aboard the international

1965
02:47:36,469 --> 02:47:34,469
it's been a journey so far to get to

1966
02:47:38,230 --> 02:47:36,479
this point more than two hours ago made

1967
02:47:40,150 --> 02:47:38,240
contact and capture with the

1968
02:47:42,710 --> 02:47:40,160
international space station was the

1969
02:47:44,870 --> 02:47:42,720
dragon vehicle the crew dragon vehicle

1970
02:47:48,950 --> 02:47:44,880
with uh bob benkin and doug hurley

1971
02:47:51,349 --> 02:47:48,960
aboard 9 16 am central 10 16 a.m eastern

1972
02:47:52,230 --> 02:47:51,359
they're gonna say voice check how to eat

1973
02:47:55,910 --> 02:47:52,240
me

1974
02:48:00,710 --> 02:47:55,920
calendar one two one three minutes

1975
02:48:03,429 --> 02:48:01,510
here

1976
02:48:08,950 --> 02:48:03,439
and then give you go to come back on

1977
02:48:12,469 --> 02:48:11,030
in dragon spacex you're pretty broken in

1978
02:48:14,309 --> 02:48:12,479
that previous call

1979
02:48:16,150 --> 02:48:14,319
here's some stations with the ground too

1980
02:48:17,910 --> 02:48:16,160
i don't hear jordan

1981
02:48:33,510 --> 02:48:17,920
i think you're being summoned by the

1982
02:48:44,710 --> 02:48:36,309
and dragon spacex i was told to proceed

1983
02:48:49,030 --> 02:48:46,630
yeah and i just uh wanted to double

1984
02:48:51,349 --> 02:48:49,040
check with you to uh make sure you had

1985
02:48:53,670 --> 02:48:51,359
uh copied our last and that we were

1986
02:48:55,510 --> 02:48:53,680
still good on that estimated timer that

1987
02:48:57,349 --> 02:48:55,520
you gave us for 30 minutes looks like

1988
02:49:00,550 --> 02:48:57,359

we've got about 10 minutes left

1989
02:49:02,060 --> 02:49:00,560
so we'd like to pick up in section 2 of

1990
02:49:04,950 --> 02:49:02,070
4.400.

1991
02:49:18,309 --> 02:49:04,960
[Applause]

1992
02:49:22,230 --> 02:49:19,990
this is mission control houston chris

1993
02:49:25,190 --> 02:49:22,240
cassidy opens the hatch to the

1994
02:49:28,230 --> 02:49:25,200
international docking adapter 11 37 am

1995
02:49:31,910 --> 02:49:28,240
central time station and dragon flying

1996
02:49:33,830 --> 02:49:31,920
uh together 267 statute miles over the

1997
02:49:36,309 --> 02:49:33,840
south pacific this is a view from the

1998
02:49:37,269 --> 02:49:36,319
camera at the forward end of dragon 20

1999
02:49:39,429 --> 02:49:37,279
minutes

2000
02:49:58,230 --> 02:49:39,439
until dragon hatch open in the apas

2001
02:50:03,110 --> 02:50:01,190
again 11 37 a.m central

2002
02:50:04,950 --> 02:50:03,120
the hatch

2003
02:50:06,630 --> 02:50:04,960
to the international docking adapter was

2004
02:50:07,750 --> 02:50:06,640
open you see chris cassidy there poking

2005
02:50:09,429 --> 02:50:07,760
his head in

2006
02:50:11,990 --> 02:50:09,439
that's the camera at the forward end of

2007
02:50:14,550 --> 02:50:12,000
the dragon now only one hatch separating

2008
02:50:15,910 --> 02:50:14,560
bob bank and doug hurley from chris

2009
02:50:17,990 --> 02:50:15,920
cassidy who you're seeing here from

2010
02:50:19,590 --> 02:50:18,000
those dragon views

2011
02:50:25,830 --> 02:50:19,600
expected time to open that hatch is

2012
02:50:30,230 --> 02:50:27,750
we'll report that time to you and expect

2013
02:50:35,429 --> 02:50:30,240

to do a welcome ceremony

2014
02:50:41,990 --> 02:50:37,510
1 15 p.m

2015
02:50:45,590 --> 02:50:43,750
that will welcome bob banking and doug

2016
02:50:47,750 --> 02:50:45,600
hurley aboard the international space

2017
02:50:49,190 --> 02:50:47,760
station as part of the expedition 63

2018
02:50:50,950 --> 02:50:49,200
crew

2019
02:50:52,630 --> 02:50:50,960
we'll get to hear some words from them

2020
02:50:54,790 --> 02:50:52,640
and have some vips here in mission

2021
02:50:57,349 --> 02:50:54,800
control houston to provide words to the

2022
02:50:58,710 --> 02:50:57,359
teams uh that oversaw the entire mission

2023
02:51:01,710 --> 02:50:58,720
and the crew aboard the international

2024
02:51:23,349 --> 02:51:04,230
station houston we copy the hot token no

2025
02:51:37,830 --> 02:51:25,349
dragon spacex on dragon to ground comm

2026
02:51:37,840 --> 02:51:45,110
a little choppy how me

2027
02:51:52,230 --> 02:51:48,070
you are loud and clear

2028
02:51:53,830 --> 02:51:52,240
we'll put section 2 of 4 decimal 400 in

2029
02:51:56,630 --> 02:51:53,840
work

2030
02:52:05,429 --> 02:51:56,640
we copy all thank you and please give

2031
02:52:11,429 --> 02:52:08,550
okay we'll call anatoli on the big loop

2032
02:52:14,550 --> 02:52:11,439
and i'd also like to report two

2033
02:52:20,150 --> 02:52:14,560
bottles of water consumed from location

2034
02:52:25,269 --> 02:52:23,429
location nine bag two zero four and to

2035
02:52:32,550 --> 02:52:25,279
confirm that was for the waste system

2036
02:52:32,560 --> 02:52:45,510
one for the waste system

2037
02:52:45,520 --> 02:52:50,550
chris cassidy for moving that um

2038
02:52:56,950 --> 02:52:53,269

removing that target from the uh a pass

2039
02:52:59,830 --> 02:52:56,960
hatch docking interface dragon comm

2040
02:53:26,870 --> 02:52:59,840
check on the big loop for anatoly from

2041
02:53:34,230 --> 02:53:30,469
dragon same voice check how do it be

2042
02:53:39,590 --> 02:53:34,240
counting one two one one two two one two

2043
02:53:43,670 --> 02:53:41,190
and a totally uh

2044
02:53:44,510 --> 02:53:43,680
endeavor has you loud and clear

2045
02:53:51,990 --> 02:53:44,520
how

2046
02:53:52,000 --> 02:54:04,710
good to hear your voice

2047
02:54:04,720 --> 02:54:14,309
i'm how

2048
02:54:14,319 --> 02:54:25,590
system

2049
02:54:44,150 --> 02:54:27,030
and all players from houston that

2050
02:54:47,110 --> 02:54:45,590
this is mission control houston those

2051
02:54:49,349 --> 02:54:47,120
comm checks within the international

2052
02:54:51,110 --> 02:54:49,359
space station between the dragon crew

2053
02:54:53,590 --> 02:54:51,120
chris cassidy and on the other side of

2054
02:54:55,510 --> 02:54:53,600
the uh international space station the

2055
02:54:58,070 --> 02:54:55,520
russian segment russian cosmonaut

2056
02:55:01,349 --> 02:54:58,080
anatoly ivanishin completing those voice

2057
02:55:05,910 --> 02:55:03,349
you can see cassidy uh continuing to

2058
02:55:07,030 --> 02:55:05,920
outfit the hatch just clearing the space

2059
02:55:08,870 --> 02:55:07,040
and uh

2060
02:55:14,830 --> 02:55:08,880
providing some padding and removing that

2061
02:55:18,469 --> 02:55:17,190
hatch dragon go ahead and drag in the

2062
02:55:20,710 --> 02:55:18,479
ground

2063
02:55:23,349 --> 02:55:20,720

so i copy that the waste system flushes

2064
02:55:25,750 --> 02:55:23,359
in work and two more bags were consumed

2065
02:55:26,870 --> 02:55:25,760
from location nine bag 204 and that

2066
02:55:28,469 --> 02:55:26,880
includes

2067
02:55:37,910 --> 02:55:28,479
the water used for the waste system

2068
02:55:43,030 --> 02:55:41,110
from bag 204 one of which bob is in the

2069
02:55:46,389 --> 02:55:43,040
process of consuming and the other will

2070
02:55:47,830 --> 02:55:46,399
be for the waist flush that is correct

2071
02:55:49,190 --> 02:55:47,840
perfect thanks for clarifying and

2072
02:55:54,389 --> 02:55:49,200
secondly do we have your permission to

2073
02:55:57,990 --> 02:55:56,150
negatives uh we're going to need about

2074
02:55:59,990 --> 02:55:58,000
two minutes we're just wrapping up pops

2075
02:56:02,230 --> 02:56:00,000
here right now

2076
02:56:08,550 --> 02:56:02,240
happy two more minutes we will await

2077
02:56:08,560 --> 02:56:14,550
thank you

2078
02:56:17,990 --> 02:56:16,630
still getting views from the infrared

2079
02:56:20,630 --> 02:56:18,000
camera that's located right at the

2080
02:56:22,150 --> 02:56:20,640
center of the dragon hatch looking at

2081
02:56:23,910 --> 02:56:22,160
chris cassidy international space

2082
02:56:25,510 --> 02:56:23,920
station commander outfitting that hatch

2083
02:56:27,429 --> 02:56:25,520
getting ready

2084
02:56:29,429 --> 02:56:27,439
for bob and doug to arrive you're

2085
02:56:31,349 --> 02:56:29,439
hearing communications over dragging the

2086
02:56:33,590 --> 02:56:31,359
ground that was about banking and doug

2087
02:56:36,389 --> 02:56:33,600
hurley on the other side of that hatch

2088
02:56:37,190 --> 02:56:36,399

inside the crew dragon vehicle finishing

2089
02:56:39,590 --> 02:56:37,200
up

2090
02:56:41,750 --> 02:56:39,600
their operations on the inside

2091
02:56:51,910 --> 02:56:41,760
for that hatch opening expected in about

2092
02:56:55,429 --> 02:56:54,150
again it's been a process to get to this

2093
02:56:58,150 --> 02:56:55,439
point uh

2094
02:56:59,190 --> 02:56:58,160
just about two and a half hours

2095
02:57:00,950 --> 02:56:59,200
ago

2096
02:57:01,990 --> 02:57:00,960
docking to the international space

2097
02:57:04,630 --> 02:57:02,000
station

2098
02:57:06,790 --> 02:57:04,640
was uh bob bankin and doug hurley

2099
02:57:09,670 --> 02:57:06,800
aboard the first

2100
02:57:10,710 --> 02:57:09,680
american commercial american vehicle to

2101
02:57:12,389 --> 02:57:10,720
dock

2102
02:57:19,750 --> 02:57:12,399
to the international space station with

2103
02:57:24,309 --> 02:57:21,510
again we're expecting about 10 to 15

2104
02:57:26,630 --> 02:57:24,319
minutes to open up that hatch

2105
02:57:27,910 --> 02:57:26,640
one more hatch separating bob benkin and

2106
02:57:30,070 --> 02:57:27,920
doug hurley from the inside of the

2107
02:57:31,670 --> 02:57:30,080
international space station still

2108
02:57:33,830 --> 02:57:31,680
looking at cassidy doing some of the

2109
02:57:36,389 --> 02:57:33,840
prep work for that hatch we'll get some

2110
02:57:38,389 --> 02:57:36,399
great views that cassidy set up

2111
02:57:43,990 --> 02:57:38,399
over the past few hours

2112
02:57:52,550 --> 02:57:48,710
be sure to stay tuned in at 12 15 p.m

2113
02:57:54,950 --> 02:57:52,560

central time 1 15 pm eastern we'll start

2114
02:57:57,190 --> 02:57:54,960
a welcome ceremony officially welcome

2115
02:57:58,710 --> 02:57:57,200
welcoming bob bengan and doug hurley

2116
02:58:28,070 --> 02:57:58,720
aboard the international space station

2117
02:58:41,750 --> 02:58:31,349
spacex dragon on dragon to ground

2118
02:58:45,830 --> 02:58:44,150
anna you're clear to come on board

2119
02:58:47,349 --> 02:58:45,840
poppy clear to come on board and thanks

2120
02:58:48,790 --> 02:58:47,359
for your patience with the com we are in

2121
02:58:50,950 --> 02:58:48,800
an orientation that's creating some

2122
02:58:56,070 --> 02:58:50,960
blockage to receive your comm on dragon

2123
02:59:04,150 --> 02:58:58,309
yeah we figured that was it uh no

2124
02:59:08,230 --> 02:59:06,230
chris cassidy giving a wave

2125
02:59:09,910 --> 02:59:08,240
eagerly await awaiting uh bob and doug

2126
02:59:12,870 --> 02:59:09,920
to come aboard just behind him you see

2127
02:59:15,990 --> 02:59:12,880
anatoly ivanishin and yvonne wagner

2128
02:59:18,230 --> 02:59:16,000
russian cosmonauts of uh expedition 63

2129
02:59:19,910 --> 02:59:18,240
standing by

2130
02:59:22,309 --> 02:59:19,920
we'll be able to come aboard dragon here

2131
02:59:25,590 --> 02:59:22,319
in a sec get some views from the crew

2132
02:59:29,670 --> 02:59:27,590
we're in a short handover of

2133
02:59:31,349 --> 02:59:29,680
those communications from the

2134
02:59:33,269 --> 02:59:31,359
international space station video and

2135
03:01:03,349 --> 02:59:33,279
audio should be regaining them

2136
03:01:06,630 --> 03:01:05,110
and a totally ignition and the

2137
03:01:08,950 --> 03:01:06,640
foreground there chris cassidy

2138
03:01:10,469 --> 03:01:08,960

continuing the prep work for opening up

2139
03:01:11,349 --> 03:01:10,479
the hatch there

2140
03:01:14,230 --> 03:01:11,359
again

2141
03:01:16,150 --> 03:01:14,240
uh the pressurized mating adapter hatch

2142
03:01:18,309 --> 03:01:16,160
you see there in the foreground is open

2143
03:01:21,030 --> 03:01:18,319
the a pass hatch to the international

2144
03:01:23,590 --> 03:01:21,040
docking adapter is open just one more

2145
03:02:06,389 --> 03:01:23,600
and that's the hatch of dragon the crew

2146
03:02:11,590 --> 03:02:09,429
station space to ground 2

2147
03:02:14,230 --> 03:02:11,600
station is ready for dragon hatch

2148
03:02:16,630 --> 03:02:14,240
equalization

2149
03:02:34,230 --> 03:02:16,640
station houston copies dragon call ready

2150
03:02:34,240 --> 03:02:40,150
houston dragon go ahead

2151
03:02:43,349 --> 03:02:41,990
and dragon houston uh just looking to

2152
03:02:51,750 --> 03:02:43,359
confirm that you're ready for hatch

2153
03:02:51,760 --> 03:03:06,950
we are ready as long as spacex is ready

2154
03:03:11,910 --> 03:03:10,070
okay uh station and endeavor standby for

2155
03:03:20,550 --> 03:03:11,920
equalization we're putting it in work

2156
03:05:32,389 --> 03:03:22,710
creation copies

2157
03:05:36,309 --> 03:05:34,389
this is mission control houston we're

2158
03:05:38,230 --> 03:05:36,319
continuing to equalize the pressure of

2159
03:05:39,830 --> 03:05:38,240
that last hatch

2160
03:05:41,670 --> 03:05:39,840
behind that hatch

2161
03:05:43,750 --> 03:05:41,680
is bob benkin and doug hurley aboard the

2162
03:05:45,429 --> 03:05:43,760
crew dragon spacecraft we are moments

2163
03:05:47,750 --> 03:05:45,439

away from opening the hatch and

2164
03:08:08,790 --> 03:05:47,760
welcoming welcoming them aboard the

2165
03:08:12,070 --> 03:08:10,070
this is mission control houston if

2166
03:08:14,389 --> 03:08:12,080
you're just tuning in we are standing by

2167
03:08:16,469 --> 03:08:14,399
for confirmation of the hatch opening

2168
03:08:54,790 --> 03:08:16,479
between the international space station

2169
03:08:54,800 --> 03:08:58,870
there's the hatch to the crew dragon

2170
03:09:22,550 --> 03:09:00,389
seeing doug hurley through the glass on

2171
03:09:22,560 --> 03:09:59,190
and there's bob banking

2172
03:10:03,510 --> 03:10:01,830
still equalizing that pressure between

2173
03:11:07,910 --> 03:10:03,520
crew dragon and international space

2174
03:11:13,269 --> 03:11:11,030
dragon spacex on big loop you are go for

2175
03:11:15,110 --> 03:11:13,279
hatch opening per the decal

2176
03:11:17,190 --> 03:11:15,120
followed by the remaining actions in

2177
03:11:28,070 --> 03:11:17,200
your procedure four decimal four zero

2178
03:11:32,070 --> 03:11:30,950
dragon copies go for hatch opening and

2179
03:13:19,030 --> 03:11:32,080
remaining

2180
03:13:27,190 --> 03:13:23,190
and with that the hatch is open 1202 pm

2181
03:13:29,349 --> 03:13:27,200
central time 102 pm eastern

2182
03:13:31,269 --> 03:13:29,359
bob bankin and doug hurley opened the

2183
03:13:33,910 --> 03:13:31,279
hatch to the international space station

2184
03:13:35,990 --> 03:13:33,920
after launching from american soil on a

2185
03:13:38,469 --> 03:13:36,000
u.s vehicle for the first time in nine

2186
03:15:03,830 --> 03:13:38,479
years the first time ever for a

2187
03:15:07,750 --> 03:15:06,070
if you're just tuning in the hatches are

2188
03:15:13,110 --> 03:15:07,760

open between dragon and the

2189
03:15:15,990 --> 03:15:14,550
international space station commander

2190
03:15:17,590 --> 03:15:16,000
chris cassidy

2191
03:15:20,229 --> 03:15:17,600
now talking with

2192
03:15:22,389 --> 03:15:20,239
doug hurley and bob banking aboard the

2193
03:15:25,269 --> 03:15:22,399
crew dragon spacecraft

2194
03:15:40,150 --> 03:15:25,279
that hatch open at 1202 pm central 102

2195
03:15:44,469 --> 03:15:42,469
spacex dragon on the big loop the hatch

2196
03:15:47,670 --> 03:15:44,479
is open in five decimal five four

2197
03:15:50,550 --> 03:15:47,680
decimal four zero zero how counting

2198
03:16:06,469 --> 03:15:50,560
hi coffee hatch is open great to hear

2199
03:16:11,429 --> 03:16:09,590
and spacex dragon in five decimal nine

2200
03:16:13,830 --> 03:16:11,439
we're going to exit out of four decimal

2201
03:16:16,389 --> 03:16:13,840
four zero zero and transition to two

2202
03:16:19,429 --> 03:16:16,399
decimal one zero two crew dragon iss

2203
03:16:21,830 --> 03:16:19,439
arrival through the hatch opening

2204
03:16:23,910 --> 03:16:21,840
i copy with that i understand you are

2205
03:16:25,510 --> 03:16:23,920
complete with four decimal four zero

2206
03:17:28,150 --> 03:16:25,520
zero and we'll follow along with you as

2207
03:17:28,160 --> 03:17:31,750
this is mission control houston

2208
03:17:36,070 --> 03:17:33,990
the crew of demo2 just performing a few

2209
03:17:38,469 --> 03:17:36,080
closeout duties the hatches are open

2210
03:17:41,510 --> 03:17:38,479
they were open 1202 p.m central time

2211
03:17:43,670 --> 03:17:41,520
we're moments away from the dragon crew

2212
03:17:44,469 --> 03:17:43,680
aboard demo2

2213
03:17:51,429 --> 03:17:44,479

to

2214
03:17:55,030 --> 03:17:53,110
it'll be the first time that americans

2215
03:17:56,389 --> 03:17:55,040
will enter the international space

2216
03:17:59,910 --> 03:17:56,399
station

2217
03:18:01,830 --> 03:17:59,920
on a rocket launched from u.s soil

2218
03:18:03,590 --> 03:18:01,840
built by an american company the first

2219
03:18:05,670 --> 03:18:03,600
time ever

2220
03:19:01,750 --> 03:18:05,680
americans will enter from a commercially

2221
03:19:05,670 --> 03:19:03,910
station houston on space around two for

2222
03:19:07,349 --> 03:19:05,680
chris uh when you're ava we're just

2223
03:19:45,990 --> 03:19:07,359
looking for a quick voice check on the

2224
03:19:46,000 --> 03:19:49,910
station space front two go ahead

2225
03:19:52,950 --> 03:19:51,349
chris we were hoping we could voice

2226
03:20:03,349 --> 03:19:52,960
check the mic just before starting the

2227
03:20:03,359 --> 03:20:25,670
okay copy that

2228
03:20:31,590 --> 03:20:28,790
dragon on the big loop and six point

2229
03:20:34,309 --> 03:20:31,600
step six point one of two decimal one

2230
03:20:37,310 --> 03:20:34,319
zero two imb duct installation is

2231
03:20:40,150 --> 03:20:37,320
complete go for imb tan activation

2232
03:20:42,469 --> 03:20:40,160
[Applause]

2233
03:21:21,670 --> 03:20:42,479
using copies go for imv fan activation

2234
03:21:42,389 --> 03:21:23,590
if you're just tuning in

2235
03:21:46,870 --> 03:21:44,469
station houston on two uh two things

2236
03:21:48,389 --> 03:21:46,880
chris we did hear you over the pao side

2237
03:21:50,790 --> 03:21:48,399
of things that was a good voice check we

2238
03:21:53,269 --> 03:21:50,800

might ask you for one more and then for

2239
03:21:55,429 --> 03:21:53,279
the dragon crew you also have a go for

2240
03:21:57,590 --> 03:21:55,439
six decimal three that's opening the

2241
03:22:02,150 --> 03:21:57,600
location two three and checking for

2242
03:22:02,160 --> 03:22:21,110
dragon copies six three and work

2243
03:22:24,550 --> 03:22:22,389
if you're just tuning in you're getting

2244
03:22:26,950 --> 03:22:24,560
a live look on the left of your screen

2245
03:22:28,630 --> 03:22:26,960
as i look inside the crew dragon on the

2246
03:22:30,550 --> 03:22:28,640
demo 2 mission on the right the

2247
03:22:31,750 --> 03:22:30,560
international space station

2248
03:22:34,469 --> 03:22:31,760
bob banking

2249
03:22:37,030 --> 03:22:34,479
on the big loop we are ready for

2250
03:22:40,070 --> 03:22:37,040
6.4

2251
03:22:40,080 --> 03:22:52,710
section 4 of the lyo instructions

2252
03:23:00,070 --> 03:22:54,790
and station we copy dragon crew you are

2253
03:23:00,080 --> 03:24:23,830
inward

2254
03:24:27,190 --> 03:24:25,830
this is mission control houston you're

2255
03:24:29,190 --> 03:24:27,200
getting a live look at the inside of the

2256
03:24:30,550 --> 03:24:29,200
international space station losing video

2257
03:24:32,389 --> 03:24:30,560
communication from the international

2258
03:24:34,469 --> 03:24:32,399
space station it will only be momentary

2259
03:24:36,229 --> 03:24:34,479
we'll have those views back to see bob

2260
03:24:39,750 --> 03:24:36,239
bankin and doug hurley enter the

2261
03:24:43,349 --> 03:24:41,510
when they do it'll be the first time

2262
03:25:24,550 --> 03:24:43,359
that humans will enter through this

2263
03:25:29,110 --> 03:25:27,269

dragon so we had to get uh and to load

2264
03:25:30,550 --> 03:25:29,120
the procedure from my ipad and hand it

2265
03:25:37,190 --> 03:25:30,560
into them so that's what took a little

2266
03:25:37,200 --> 03:26:02,469
we copy chris

2267
03:26:06,229 --> 03:26:04,070
station houston on two for chris when

2268
03:26:37,670 --> 03:26:06,239
convenient view requests an additional

2269
03:26:41,750 --> 03:26:39,990
and chris we're not hearing you in mcc

2270
03:27:11,910 --> 03:26:41,760
we are apparently getting it through the

2271
03:27:15,269 --> 03:27:13,990
crispier was working calm reconfig i'll

2272
03:27:23,990 --> 03:27:15,279
call you if we're ready for another

2273
03:27:28,550 --> 03:27:26,309
houston and spacex endeavour in six

2274
03:27:31,349 --> 03:27:28,560
decimal five lyle cartridge is sealed

2275
03:28:22,950 --> 03:27:31,359
and installed

2276
03:28:26,950 --> 03:28:24,950
station houston on two for chris we

2277
03:28:28,630 --> 03:28:26,960
wanted you to confirm that the mic is in

2278
03:28:30,150 --> 03:28:28,640
channel one it needs to be in channel

2279
03:28:59,670 --> 03:28:30,160
one a thought here is that it could have

2280
03:29:37,030 --> 03:29:01,269
chris we see you trying we're still not

2281
03:29:41,110 --> 03:29:39,190
and chris nothing in mcc we see you

2282
03:29:43,429 --> 03:29:41,120
trying uh the word here is that as long

2283
03:29:45,269 --> 03:29:43,439
as that is in channel one uh any

2284
03:29:46,710 --> 03:29:45,279
problems past that point are on our end

2285
03:29:54,630 --> 03:29:46,720
so we're looking into it we'll be right

2286
03:30:09,030 --> 03:29:56,309
station houston we're ready for another

2287
03:30:20,550 --> 03:30:10,389
station houston we have you loud and

2288
03:30:24,309 --> 03:30:21,830

spacex

2289
03:30:26,790 --> 03:30:24,319
dragon on the big loop in seven decimal

2290
03:30:26,800 --> 03:30:37,030
spacex here

2291
03:30:45,750 --> 03:30:40,070
okay anna in uh seven decimal one it

2292
03:30:55,670 --> 03:30:45,760
appears that the abv inner bravo is open

2293
03:30:59,990 --> 03:30:57,190
i copy that

2294
03:31:13,990 --> 03:31:00,000
avv inner bravo appears to be open as

2295
03:31:30,070 --> 03:31:16,229
yes we are good with that call and

2296
03:31:32,870 --> 03:31:31,269
this is mission control houston if

2297
03:31:35,349 --> 03:31:32,880
you're just tuning in hashes were open

2298
03:31:37,990 --> 03:31:35,359
at 1202 pm central time we are moments

2299
03:32:12,870 --> 03:31:38,000
away from bob bankin and doug hurley

2300
03:32:16,790 --> 03:32:14,389
again this is mission control houston

2301
03:32:21,030 --> 03:32:16,800
moments away from bob and doug entering

2302
03:32:24,790 --> 03:32:22,469
shortly after they enter that we will

2303
03:32:27,590 --> 03:32:24,800
conduct a welcome ceremony there will be

2304
03:32:29,990 --> 03:32:27,600
uh vips here in mission control houston

2305
03:32:31,750 --> 03:32:30,000
figure one looks like they're all closed

2306
03:32:32,870 --> 03:32:31,760
visually now

2307
03:32:35,349 --> 03:32:32,880
we are

2308
03:32:38,309 --> 03:32:35,359
in eight decimal three

2309
03:32:43,030 --> 03:32:38,319
for both spacex and houston

2310
03:32:45,910 --> 03:32:43,040
dragon arrival configuration is complete

2311
03:32:48,550 --> 03:32:45,920
spacex copies all valves appear closed

2312
03:32:52,070 --> 03:32:48,560
visually now and arrival configuration

2313
03:32:52,080 --> 03:32:56,389

houston copies

2314
03:32:59,590 --> 03:32:57,910
and without endeavor welcome to the

2315
03:33:06,870 --> 03:32:59,600
international space station please come

2316
03:33:42,630 --> 03:33:08,630
never copies with pleasure we'll be

2317
03:33:46,950 --> 03:33:44,950
we have bob bankin from spacex demo 2

2318
03:33:54,870 --> 03:33:46,960
mission entering the international space

2319
03:33:54,880 --> 03:34:00,240
followed by doug hurley

2320
03:34:00,250 --> 03:34:38,309
[Applause]

2321
03:34:43,269 --> 03:34:40,710
and station houston we see you and it's

2322
03:34:44,870 --> 03:34:43,279
a great looking photograph so thanks for

2323
03:34:46,550 --> 03:34:44,880
that's down by one we'll call you when

2324
03:34:50,469 --> 03:34:46,560
we're ready for the event the next few

2325
03:34:53,990 --> 03:34:52,550
got a whole bunch of very uh happy and

2326
03:35:14,309 --> 03:34:54,000
grateful people making their way into

2327
03:35:17,349 --> 03:35:15,750
demo two crew now aboard the

2328
03:35:24,870 --> 03:35:17,359
international space station they entered

2329
03:35:32,630 --> 03:35:27,269
the station at the time was 262 statute

2330
03:35:36,870 --> 03:35:33,910
crew all gathered in front of the

2331
03:35:38,469 --> 03:35:36,880
cameras at the node 2 forward end of the

2332
03:35:40,710 --> 03:35:38,479
international space station just behind

2333
03:35:43,590 --> 03:35:40,720
them is the hatchway to the crew dragon

2334
03:35:46,150 --> 03:35:43,600
on this demo 2 mission

2335
03:35:48,550 --> 03:35:46,160
we're standing by for a welcome ceremony

2336
03:36:45,269 --> 03:35:48,560
we'll have vips here in mission control

2337
03:36:56,630 --> 03:36:47,190
and station we're just about ready

2338
03:37:00,389 --> 03:36:58,469

all right station it's houston on space

2339
03:37:04,389 --> 03:37:00,399
to ground two confirm that you are ready

2340
03:37:09,030 --> 03:37:06,389
houston this station we are ready for

2341
03:37:12,870 --> 03:37:10,790
and sir administrator bradenstein

2342
03:37:14,790 --> 03:37:12,880
welcome to mcc please call station for a

2343
03:37:16,870 --> 03:37:14,800
voice check

2344
03:37:20,950 --> 03:37:16,880
station this is the nasa administrator

2345
03:37:25,990 --> 03:37:23,349
we hear you loud and clear sir welcome

2346
03:37:28,550 --> 03:37:26,000
to the space station

2347
03:37:30,870 --> 03:37:28,560
thank you chris it's good to see you and

2348
03:37:32,950 --> 03:37:30,880
welcome to bob and doug

2349
03:37:35,990 --> 03:37:32,960
i i will tell you the whole world saw

2350
03:37:38,150 --> 03:37:36,000
this mission and we are so so proud of

2351
03:37:52,790 --> 03:37:38,160
everything you have done for our country

2352
03:37:57,030 --> 03:37:55,030
we sure appreciate that sir it's uh

2353
03:37:58,870 --> 03:37:57,040
obviously been our honor to be just a

2354
03:38:01,429 --> 03:37:58,880
small part of this we have to give

2355
03:38:03,510 --> 03:38:01,439
credit to spacex the commercial crew

2356
03:38:05,910 --> 03:38:03,520
program and of course nasa

2357
03:38:09,190 --> 03:38:05,920
it's great to get the united states back

2358
03:38:11,190 --> 03:38:09,200
in the crude launch business and

2359
03:38:17,349 --> 03:38:11,200
we're just really glad to be on board

2360
03:38:21,830 --> 03:38:19,990
well we have some some vips with us here

2361
03:38:23,590 --> 03:38:21,840
and i'm sure they have some questions

2362
03:38:26,229 --> 03:38:23,600
that they'd like to ask you but i have

2363
03:38:28,309 --> 03:38:26,239

one of my own before i turn it over and

2364
03:38:30,469 --> 03:38:28,319
i just wanted to find out if you guys

2365
03:38:31,590 --> 03:38:30,479
got any sleep on your way up there the

2366
03:38:34,229 --> 03:38:31,600
last uh

2367
03:38:40,229 --> 03:38:34,239
i'd say i get 19 hours did you guys get

2368
03:38:43,910 --> 03:38:41,830
yeah i think a lot of folks in hawthorne

2369
03:38:46,950 --> 03:38:43,920
were asking the same question sir but uh

2370
03:38:49,990 --> 03:38:46,960
we did get probably a good seven hours

2371
03:38:52,469 --> 03:38:50,000
or so opportunity for sleep and uh i did

2372
03:38:53,590 --> 03:38:52,479
succeed at sleep and i dug did as well

2373
03:38:55,269 --> 03:38:53,600
so

2374
03:38:57,590 --> 03:38:55,279
the first night is always a little bit

2375
03:39:00,150 --> 03:38:57,600
of a challenge but the dragon was a

2376
03:39:02,469 --> 03:39:00,160
slick vehicle and uh we had good airflow

2377
03:39:05,429 --> 03:39:02,479
and so we had a excellent excellent

2378
03:39:09,510 --> 03:39:05,439
evening and uh just excited to be back

2379
03:39:15,110 --> 03:39:12,150
amazing well one of the people that uh

2380
03:39:17,750 --> 03:39:15,120
that is here with us today is um senator

2381
03:39:20,710 --> 03:39:17,760
ted cruz and of course he's a huge

2382
03:39:23,030 --> 03:39:20,720
advocate of america's space program

2383
03:39:25,990 --> 03:39:23,040
and he's been you know somebody who has

2384
03:39:27,429 --> 03:39:26,000
helped us so much as we transition from

2385
03:39:29,429 --> 03:39:27,439
one administration to the next

2386
03:39:32,070 --> 03:39:29,439
administration and the reason

2387
03:39:34,950 --> 03:39:32,080
missions like this can have success

2388
03:39:37,030 --> 03:39:34,960

is because of continuity of purpose

2389
03:39:39,830 --> 03:39:37,040
and senator ted cruz was a leader on a

2390
03:39:43,349 --> 03:39:39,840
bill called the american uh

2391
03:39:46,070 --> 03:39:43,359
the nasa transition authorization act

2392
03:39:47,830 --> 03:39:46,080
and um because of that we have had a lot

2393
03:39:50,070 --> 03:39:47,840
of political support and we're very

2394
03:39:55,189 --> 03:39:50,080
grateful for his leadership senator cruz

2395
03:39:59,590 --> 03:39:57,670
well congratulations gentlemen the eyes

2396
03:40:02,710 --> 03:39:59,600
of the world are upon you

2397
03:40:06,309 --> 03:40:02,720
and everyone is proud of you

2398
03:40:08,630 --> 03:40:06,319
all of the america is watching you

2399
03:40:10,469 --> 03:40:08,640
and today and yesterday represent big

2400
03:40:12,550 --> 03:40:10,479
big days

2401
03:40:15,510 --> 03:40:12,560
we're looking at a decade since we've

2402
03:40:18,550 --> 03:40:15,520
had american astronauts launched an

2403
03:40:20,469 --> 03:40:18,560
american ship from american soil

2404
03:40:22,229 --> 03:40:20,479
and i can tell you i sat with my wife

2405
03:40:25,269 --> 03:40:22,239
and kids in our living room watching on

2406
03:40:26,950 --> 03:40:25,279
tv yesterday and i suspect we did what

2407
03:40:28,630 --> 03:40:26,960
just about everyone watching did

2408
03:40:29,670 --> 03:40:28,640
including both of you we just held our

2409
03:40:30,830 --> 03:40:29,680
breath

2410
03:40:32,389 --> 03:40:30,840
as it took

2411
03:40:34,630 --> 03:40:32,399
off

2412
03:40:37,510 --> 03:40:34,640
and we're glad to see you've landed

2413
03:40:40,790 --> 03:40:37,520

safely we're glad to see you've docked

2414
03:40:49,910 --> 03:40:40,800
uh and so let me ask you that dragon is

2415
03:40:55,750 --> 03:40:53,429
it uh flew just like it was supposed to

2416
03:40:56,550 --> 03:40:55,760
it was a we had a couple opportunities

2417
03:41:06,870 --> 03:40:56,560
to

2418
03:41:09,510 --> 03:41:06,880
we docked and uh

2419
03:41:12,309 --> 03:41:09,520
my compliments to the folks back at

2420
03:41:15,590 --> 03:41:12,319
hawthorne and spacex for uh how well it

2421
03:41:16,950 --> 03:41:15,600
flew it is exactly like the simulator

2422
03:41:18,710 --> 03:41:16,960
and

2423
03:41:21,910 --> 03:41:18,720
we couldn't be happier about the

2424
03:41:31,269 --> 03:41:23,830
what do you guys hope to accomplish in

2425
03:41:34,550 --> 03:41:32,870
well while we're on board the space

2426
03:41:37,429 --> 03:41:34,560
station of course with the new

2427
03:41:39,189 --> 03:41:37,439
spacecraft we do hope to put her through

2428
03:41:41,429 --> 03:41:39,199
her paces and so

2429
03:41:44,070 --> 03:41:41,439
the good ship endeavor is going to get a

2430
03:41:46,870 --> 03:41:44,080
lot of a check out over the next week or

2431
03:41:50,229 --> 03:41:46,880
two here and hopefully we'll be able to

2432
03:41:52,710 --> 03:41:50,239
declare her operational and doug and i

2433
03:41:55,670 --> 03:41:52,720
will be able to take some burden off of

2434
03:41:58,309 --> 03:41:55,680
chris and his crewmates ivan and anatoly

2435
03:42:00,870 --> 03:41:58,319
so that uh we can keep the space station

2436
03:42:03,269 --> 03:42:00,880
operating at its uh peak possibilities

2437
03:42:05,910 --> 03:42:03,279
so we're looking forward to contributing

2438
03:42:08,070 --> 03:42:05,920

any way that we can and uh like i said

2439
03:42:11,429 --> 03:42:08,080
trying to keep space station as

2440
03:42:13,349 --> 03:42:11,439
productive as possible

2441
03:42:15,429 --> 03:42:13,359
as a country we're in the midst of a

2442
03:42:17,030 --> 03:42:15,439
tough week we're seeing protests we're

2443
03:42:18,229 --> 03:42:17,040
seeing a lot of anger we're seeing

2444
03:42:19,910 --> 03:42:18,239
violence

2445
03:42:22,870 --> 03:42:19,920
and i have to say this launch and

2446
03:42:24,790 --> 03:42:22,880
y'all's docking is is a powerful

2447
03:42:26,070 --> 03:42:24,800
inspiration of what we can do when we

2448
03:42:28,790 --> 03:42:26,080
come together

2449
03:42:31,910 --> 03:42:28,800
of the power of unity

2450
03:42:33,670 --> 03:42:31,920
uh the power of ingenuity

2451
03:42:36,150 --> 03:42:33,680
and and so i guess the last question i

2452
03:42:37,910 --> 03:42:36,160
would ask you is is

2453
03:42:39,429 --> 03:42:37,920
since you have the opportunity to

2454
03:42:41,510 --> 03:42:39,439
address in particular all the young

2455
03:42:43,670 --> 03:42:41,520
people in america

2456
03:42:50,630 --> 03:42:43,680
uh what would you tell them in terms of

2457
03:42:54,550 --> 03:42:52,870
you know that's a great question

2458
03:43:00,630 --> 03:42:54,560
nine years ago

2459
03:43:02,630 --> 03:43:00,640
docked with atlantis uh on sts-135 the

2460
03:43:04,830 --> 03:43:02,640
last flight of the space shuttle program

2461
03:43:08,870 --> 03:43:04,840
a 30-year program

2462
03:43:10,389 --> 03:43:08,880
and folks at spacex folks at nasa

2463
03:43:13,670 --> 03:43:10,399

the commercial crew program put their

2464
03:43:16,309 --> 03:43:13,680
heads together and worked diligently

2465
03:43:19,670 --> 03:43:16,319
year after year making sacrifices

2466
03:43:22,790 --> 03:43:19,680
working hard and then nine years later

2467
03:43:25,269 --> 03:43:22,800
american launch capability was restored

2468
03:43:26,229 --> 03:43:25,279
and this is just one

2469
03:43:28,469 --> 03:43:26,239
one

2470
03:43:30,070 --> 03:43:28,479
effort that we can

2471
03:43:32,389 --> 03:43:30,080
show for the ages

2472
03:43:34,469 --> 03:43:32,399
in this dark time that we've had over

2473
03:43:37,429 --> 03:43:34,479
the past several months

2474
03:43:40,550 --> 03:43:37,439
to kind of inspire especially the young

2475
03:43:43,990 --> 03:43:40,560
people in the united states to to reach

2476
03:43:47,030 --> 03:43:44,000
for these lofty goals and work hard and

2477
03:43:51,750 --> 03:43:47,040
look what you can accomplish

2478
03:43:55,910 --> 03:43:53,510
thank you senator cruz we have another

2479
03:43:57,830 --> 03:43:55,920
very special guest here that represents

2480
03:43:59,590 --> 03:43:57,840
the johnson space center

2481
03:44:01,349 --> 03:43:59,600
and of course it's my my good friend

2482
03:44:03,750 --> 03:44:01,359
from the house of representatives dr

2483
03:44:04,710 --> 03:44:03,760
brian babin and i want to be clear he

2484
03:44:07,030 --> 03:44:04,720
also

2485
03:44:09,189 --> 03:44:07,040
was a big part of the nasa transition

2486
03:44:11,429 --> 03:44:09,199
authorization act which gave us the

2487
03:44:13,110 --> 03:44:11,439
continuity of purpose to make this

2488
03:44:15,269 --> 03:44:13,120

happen today so

2489
03:44:18,790 --> 03:44:15,279
gentlemen here is dr brian babbin from

2490
03:44:22,870 --> 03:44:20,389
thank you

2491
03:44:24,950 --> 03:44:22,880
so great to be with you guys it

2492
03:44:28,550 --> 03:44:24,960
i was at the launch yesterday i just

2493
03:44:31,750 --> 03:44:28,560
want to say a a huge congratulations

2494
03:44:34,309 --> 03:44:31,760
and uh you know there was a thunderstorm

2495
03:44:36,150 --> 03:44:34,319
that blew in about 30 minutes or 45

2496
03:44:38,070 --> 03:44:36,160
minutes or so before

2497
03:44:39,830 --> 03:44:38,080
uh liftoff

2498
03:44:42,469 --> 03:44:39,840
and uh

2499
03:44:44,790 --> 03:44:42,479
it was uh in doubt there for a minute

2500
03:44:47,510 --> 03:44:44,800
but it was a just an enormous

2501
03:44:51,030 --> 03:44:47,520
achievement i just want to say thank you

2502
03:44:53,110 --> 03:44:51,040
for you guys i really appreciate

2503
03:44:54,950 --> 03:44:53,120
what you're doing for america

2504
03:44:56,630 --> 03:44:54,960
and uh the crew that's already been up

2505
03:44:58,389 --> 03:44:56,640
there chris and your

2506
03:45:01,189 --> 03:44:58,399
your two fellow russians

2507
03:45:03,269 --> 03:45:01,199
uh what uh to give you a great big thank

2508
03:45:05,429 --> 03:45:03,279
you as well i have a son who is a navy

2509
03:45:07,269 --> 03:45:05,439
seal and i want to thank you for your

2510
03:45:09,030 --> 03:45:07,279
service there too chris

2511
03:45:09,990 --> 03:45:09,040
and uh also

2512
03:45:15,670 --> 03:45:10,000
uh

2513
03:45:16,630 --> 03:45:15,680

what i i know you've said that that the

2514
03:45:20,229 --> 03:45:16,640
uh the

2515
03:45:22,870 --> 03:45:20,239
the craft the dragon handle uh very well

2516
03:45:26,150 --> 03:45:22,880
but i want to see how it compares

2517
03:45:27,990 --> 03:45:26,160
uh with uh with the space shuttle if one

2518
03:45:33,910 --> 03:45:28,000
of you would address that i would

2519
03:45:38,870 --> 03:45:35,830
well thank you sir it certainly has been

2520
03:45:40,309 --> 03:45:38,880
a long endeavor for for us and our our

2521
03:45:43,269 --> 03:45:40,319
name ship uh

2522
03:45:44,630 --> 03:45:43,279
namesake spacecraft we're proud to have

2523
03:45:47,349 --> 03:45:44,640
her on board the international space

2524
03:45:49,750 --> 03:45:47,359
station after all that the teams around

2525
03:45:51,990 --> 03:45:49,760
the country and across america have done

2526
03:45:54,150 --> 03:45:52,000
to get us here today

2527
03:45:55,189 --> 03:45:54,160
as far as a comparison with the space

2528
03:45:57,429 --> 03:45:55,199
shuttle

2529
03:45:59,429 --> 03:45:57,439
both doug and i took a few minutes while

2530
03:46:01,750 --> 03:45:59,439
we were accomplishing the approach and

2531
03:46:03,110 --> 03:46:01,760
docking to in our spare time talk a

2532
03:46:05,830 --> 03:46:03,120
little bit about it

2533
03:46:08,229 --> 03:46:05,840
we were surprised a little bit at how

2534
03:46:10,870 --> 03:46:08,239
smooth things were off the pad the space

2535
03:46:12,550 --> 03:46:10,880
shuttle is a pretty rough ride heading

2536
03:46:13,670 --> 03:46:12,560
into orbit with the solid rocket

2537
03:46:16,469 --> 03:46:13,680
boosters

2538
03:46:18,710 --> 03:46:16,479

and our expectation was as we continued

2539
03:46:20,150 --> 03:46:18,720
with the flight into second stage that

2540
03:46:21,910 --> 03:46:20,160
things would

2541
03:46:25,269 --> 03:46:21,920
basically get a lot smoother than the

2542
03:46:27,189 --> 03:46:25,279
space shuttle did but uh dragon was uh

2543
03:46:30,389 --> 03:46:27,199
huffing and puffing all the way into

2544
03:46:32,389 --> 03:46:30,399
orbit and we were definitely

2545
03:46:35,189 --> 03:46:32,399
driving or riding a dragon all the way

2546
03:46:36,790 --> 03:46:35,199
up and so uh it was not quite the same

2547
03:46:39,510 --> 03:46:36,800
ride the smooth ride as the space

2548
03:46:43,110 --> 03:46:39,520
shuttle was uh up to mikko a little bit

2549
03:46:44,389 --> 03:46:43,120
less g's but a little bit more uh alive

2550
03:46:47,030 --> 03:46:44,399
is probably the best way i would

2551
03:46:47,830 --> 03:46:47,040
describe it anything else doug

2552
03:46:48,830 --> 03:46:47,840
no

2553
03:46:57,189 --> 03:46:48,840
sounds

2554
03:47:02,150 --> 03:46:59,590
sorry i have to apologize for actually

2555
03:47:04,950 --> 03:47:02,160
using the term miko it's a little bit

2556
03:47:07,670 --> 03:47:04,960
confusing between the space shuttle and

2557
03:47:10,550 --> 03:47:07,680
the dragon vehicle so it's a main engine

2558
03:47:12,229 --> 03:47:10,560
cutoff is what miko stands for those

2559
03:47:14,150 --> 03:47:12,239
happened at different times in flight

2560
03:47:16,150 --> 03:47:14,160
for the two vehicles for the space

2561
03:47:19,269 --> 03:47:16,160
shuttle that was when you were all the

2562
03:47:21,269 --> 03:47:19,279
way in orbit for dragon that was just a

2563
03:47:22,710 --> 03:47:21,279

little bit after two minutes

2564
03:47:24,870 --> 03:47:22,720
and then we had the single engine cut

2565
03:47:27,349 --> 03:47:24,880
off for second stage when we achieved

2566
03:47:29,590 --> 03:47:27,359
orbit so that time under the single

2567
03:47:31,910 --> 03:47:29,600
engine under dragon

2568
03:47:34,229 --> 03:47:31,920
with one engine was more of an

2569
03:47:36,070 --> 03:47:34,239
experience than the the shuttle was for

2570
03:47:37,590 --> 03:47:36,080
that six and a half minutes or so that

2571
03:47:41,590 --> 03:47:37,600
we were under that

2572
03:47:45,830 --> 03:47:44,229
well i would just like to say uh

2573
03:47:48,229 --> 03:47:45,840
in fact doug did you have something you

2574
03:47:50,870 --> 03:47:48,239
wanted to add there

2575
03:47:51,990 --> 03:47:50,880
i met your mother and father yesterday

2576
03:47:54,309 --> 03:47:52,000
doug and

2577
03:48:00,630 --> 03:47:54,319
great great folks they're very very

2578
03:48:04,229 --> 03:48:02,950
yeah that's that's pretty cool uh

2579
03:48:06,950 --> 03:48:04,239
hopefully they

2580
03:48:08,229 --> 03:48:06,960
enjoyed the uh launch i know uh for

2581
03:48:10,550 --> 03:48:08,239
parents

2582
03:48:12,870 --> 03:48:10,560
uh it can probably be pretty

2583
03:48:16,309 --> 03:48:12,880
nerve-wracking for them to experience a

2584
03:48:18,389 --> 03:48:16,319
launch this was their uh third so

2585
03:48:20,550 --> 03:48:18,399
i'm glad uh everything went okay and

2586
03:48:23,030 --> 03:48:20,560
hopefully it was a good show we haven't

2587
03:48:25,189 --> 03:48:23,040
obviously heard or seen any video yet

2588
03:48:28,309 --> 03:48:25,199

but we're looking forward to seeing uh

2589
03:48:30,469 --> 03:48:28,319
seeing the launch replayed sometime

2590
03:48:33,189 --> 03:48:30,479
i can assure you that it was a great

2591
03:48:35,830 --> 03:48:33,199
show uh it was one of the one of the uh

2592
03:48:37,510 --> 03:48:35,840
treats of my lifetime i would have to

2593
03:48:39,830 --> 03:48:37,520
say and many many other folks that were

2594
03:48:40,790 --> 03:48:39,840
sitting there looking all across the

2595
03:48:43,910 --> 03:48:40,800
country

2596
03:48:46,150 --> 03:48:43,920
uh and even the world and i can tell you

2597
03:48:47,269 --> 03:48:46,160
as senator cruz said we've gone through

2598
03:48:49,429 --> 03:48:47,279
some really

2599
03:48:50,550 --> 03:48:49,439
really rough times over the last few

2600
03:48:53,830 --> 03:48:50,560
days

2601
03:48:56,070 --> 03:48:53,840
and to have uh that successful launch

2602
03:48:59,590 --> 03:48:56,080
uh you know the public-private

2603
03:49:02,229 --> 03:48:59,600
partnership between nasa and spacex

2604
03:49:05,189 --> 03:49:02,239
and you guys being so well-trained

2605
03:49:07,670 --> 03:49:05,199
uh and having it go off without a hitch

2606
03:49:10,389 --> 03:49:07,680
was a tremendous blessing for our

2607
03:49:12,550 --> 03:49:10,399
country and i can't tell you how many uh

2608
03:49:13,830 --> 03:49:12,560
emails and communications i've gotten

2609
03:49:14,790 --> 03:49:13,840
from people that

2610
03:49:19,189 --> 03:49:14,800
uh

2611
03:49:20,550 --> 03:49:19,199
what's been going on transpiring around

2612
03:49:22,150 --> 03:49:20,560
the country to have

2613
03:49:24,950 --> 03:49:22,160

the great news

2614
03:49:27,110 --> 03:49:24,960
uh and the wonderful uh liftoff and

2615
03:49:29,110 --> 03:49:27,120
everything going without a hitch so i

2616
03:49:31,349 --> 03:49:29,120
just want to say god bless both of you

2617
03:49:33,990 --> 03:49:31,359
thank you so very much bless the rest of

2618
03:49:35,429 --> 03:49:34,000
you folks up there as well we thank our

2619
03:49:38,469 --> 03:49:35,439
russian partners

2620
03:49:40,870 --> 03:49:38,479
and uh thank you chris uh

2621
03:49:43,349 --> 03:49:40,880
we are y'all are all in our prayers and

2622
03:49:45,510 --> 03:49:43,359
uh we're looking forward to uh

2623
03:49:48,550 --> 03:49:45,520
seeing you you successfully complete

2624
03:49:54,710 --> 03:49:48,560
your mission and uh back on safely on

2625
03:49:59,510 --> 03:49:57,269
thank you very much

2626
03:50:03,030 --> 03:49:59,520
yeah and just so you guys are aware uh

2627
03:50:07,189 --> 03:50:03,040
the show was in fact spectacular

2628
03:50:08,469 --> 03:50:07,199
the ratings on nasa tv beat everyone

2629
03:50:10,469 --> 03:50:08,479
else

2630
03:50:12,469 --> 03:50:10,479
not just some of them

2631
03:50:17,990 --> 03:50:12,479
it beat all of them

2632
03:50:22,229 --> 03:50:20,389
just so everybody is aware the whole

2633
03:50:24,710 --> 03:50:22,239
world saw this um

2634
03:50:27,110 --> 03:50:24,720
it trended number one on twitter it was

2635
03:50:29,510 --> 03:50:27,120
uh the the number one thing talked about

2636
03:50:32,309 --> 03:50:29,520
on social media in general

2637
03:50:34,710 --> 03:50:32,319
this was this was an amazing moment

2638
03:50:36,630 --> 03:50:34,720

and it represents a transition in how we

2639
03:50:39,590 --> 03:50:36,640
do space flight from the united states

2640
03:50:41,110 --> 03:50:39,600
of america nasa is not going to purchase

2641
03:50:43,750 --> 03:50:41,120
own and operate

2642
03:50:45,269 --> 03:50:43,760
rockets and capsules the way we used to

2643
03:50:48,870 --> 03:50:45,279
we're going to partner with commercial

2644
03:50:50,790 --> 03:50:48,880
industry for access to low earth orbit

2645
03:50:54,229 --> 03:50:50,800
and those partnerships are going to

2646
03:50:56,229 --> 03:50:54,239
enable our providers to get customers

2647
03:50:58,229 --> 03:50:56,239
that are not nasa and drive down our

2648
03:51:00,870 --> 03:50:58,239
costs and we're going to have numerous

2649
03:51:03,189 --> 03:51:00,880
providers that are competing on cost and

2650
03:51:05,590 --> 03:51:03,199
innovation and safety and we're going to

2651
03:51:08,070 --> 03:51:05,600
have more access to low earth orbit than

2652
03:51:10,710 --> 03:51:08,080
ever before and this business model now

2653
03:51:12,790 --> 03:51:10,720
that it's been proven on on

2654
03:51:15,189 --> 03:51:12,800
commercial resupply of the international

2655
03:51:17,429 --> 03:51:15,199
space station now commercial crew to the

2656
03:51:18,870 --> 03:51:17,439
international space station this model

2657
03:51:20,950 --> 03:51:18,880
is going to apply and i know senator

2658
03:51:22,469 --> 03:51:20,960
cruz has this near and dear to him when

2659
03:51:25,269 --> 03:51:22,479
we go to the moon

2660
03:51:26,950 --> 03:51:25,279
it's going to be done

2661
03:51:29,269 --> 03:51:26,960
because of the great people here at the

2662
03:51:30,870 --> 03:51:29,279
johnson space center and so many other

2663
03:51:32,870 --> 03:51:30,880

centers across the united states of

2664
03:51:34,710 --> 03:51:32,880
america but when we go to the moon we're

2665
03:51:36,870 --> 03:51:34,720
going to land on the surface of the moon

2666
03:51:38,870 --> 03:51:36,880
with commercial landers

2667
03:51:41,110 --> 03:51:38,880
and of course we're very proud of

2668
03:51:42,790 --> 03:51:41,120
the commercial lunar payload services

2669
03:51:45,030 --> 03:51:42,800
program being managed right here out of

2670
03:51:46,710 --> 03:51:45,040
the johnson space center as well so that

2671
03:51:48,790 --> 03:51:46,720
we can take small payloads to the

2672
03:51:50,229 --> 03:51:48,800
surface of the moon and all of this is

2673
03:51:51,830 --> 03:51:50,239
leading up to

2674
03:51:53,110 --> 03:51:51,840
an amazing day

2675
03:51:55,750 --> 03:51:53,120
where we have

2676
03:51:57,349 --> 03:51:55,760
humans living and working for long

2677
03:51:59,429 --> 03:51:57,359
periods of time on the surface of the

2678
03:52:01,269 --> 03:51:59,439
moon but doing it with a purpose

2679
03:52:02,790 --> 03:52:01,279
and that purpose of course is to go to

2680
03:52:05,990 --> 03:52:02,800
mars

2681
03:52:07,670 --> 03:52:06,000
humanity is going to explore more and be

2682
03:52:09,110 --> 03:52:07,680
able to go further than ever before

2683
03:52:10,870 --> 03:52:09,120
because of the public-private

2684
03:52:13,030 --> 03:52:10,880
partnerships

2685
03:52:15,189 --> 03:52:13,040
we all know that if the government is

2686
03:52:16,950 --> 03:52:15,199
creating the demand and the government

2687
03:52:19,750 --> 03:52:16,960
is creating the supply we will always be

2688
03:52:22,070 --> 03:52:19,760

limited but when we have partners that

2689
03:52:23,429 --> 03:52:22,080
are interested in exploring commercially

2690
03:52:26,469 --> 03:52:23,439
and and doing the things that are

2691
03:52:28,469 --> 03:52:26,479
necessary um you know to to get capital

2692
03:52:30,070 --> 03:52:28,479
investment um then we're all going to

2693
03:52:32,630 --> 03:52:30,080
end up better so i want to just say the

2694
03:52:34,389 --> 03:52:32,640
whole world saw this this is a new era

2695
03:52:36,150 --> 03:52:34,399
in human space flight and we are so

2696
03:52:38,309 --> 03:52:36,160
grateful for the service of not just our

2697
03:52:40,469 --> 03:52:38,319
two astronauts that embarked on this

2698
03:52:42,710 --> 03:52:40,479
mission but the hundred thousand plus

2699
03:52:43,750 --> 03:52:42,720
people that participate in it in this

2700
03:52:45,429 --> 03:52:43,760
mission

2701
03:52:48,469 --> 03:52:45,439
everything from the suppliers to the

2702
03:52:51,670 --> 03:52:48,479
main contractors um to the nasa team the

2703
03:52:53,990 --> 03:52:51,680
spacex team uh what an amazing day um

2704
03:52:55,670 --> 03:52:54,000
for for our country and in fact for the

2705
03:52:58,469 --> 03:52:55,680
world i'm going to turn it over for a

2706
03:53:06,070 --> 03:52:58,479
second to my deputy jim morhard

2707
03:53:09,189 --> 03:53:07,429
gentlemen

2708
03:53:11,269 --> 03:53:09,199
congratulations

2709
03:53:12,389 --> 03:53:11,279
you know jim's mentioned going to the

2710
03:53:14,630 --> 03:53:12,399
moon

2711
03:53:16,870 --> 03:53:14,640
and yesterday and today

2712
03:53:19,990 --> 03:53:16,880
one you've inspired the artemis

2713
03:53:21,990 --> 03:53:20,000

generation which is our next generation

2714
03:53:23,590 --> 03:53:22,000
and that's what this is about it's

2715
03:53:25,590 --> 03:53:23,600
really bringing

2716
03:53:28,309 --> 03:53:25,600
the children that we've got and our

2717
03:53:31,349 --> 03:53:28,319
grandchildren forward so they'll be the

2718
03:53:33,590 --> 03:53:31,359
ones that are going into deep space

2719
03:53:35,110 --> 03:53:33,600
this is the dawn of a new era and we

2720
03:53:41,910 --> 03:53:35,120
just thank you for being at the

2721
03:53:48,229 --> 03:53:45,349
uh it was absolutely our pleasure uh but

2722
03:53:51,189 --> 03:53:48,239
it's just a huge team effort across the

2723
03:53:53,269 --> 03:53:51,199
board from spacex to nasa that made this

2724
03:53:58,790 --> 03:53:53,279
all happen we were just the lucky guys

2725
03:54:05,269 --> 03:54:01,670
i have a question for chris cassidy

2726
03:54:07,349 --> 03:54:05,279
you know our crew here uh decided to to

2727
03:54:09,189 --> 03:54:07,359
to be about three days late

2728
03:54:11,030 --> 03:54:09,199
um you gotta work them overtime i

2729
03:54:13,110 --> 03:54:11,040
presume now to get them caught up on all

2730
03:54:19,110 --> 03:54:13,120
the activities that they missed out on

2731
03:54:23,030 --> 03:54:21,269
well the day they missed out on was a

2732
03:54:25,349 --> 03:54:23,040
good one for them to skip it was

2733
03:54:27,110 --> 03:54:25,359
saturday house cleaning and uh and i but

2734
03:54:28,630 --> 03:54:27,120
i took care of it for him we'll catch up

2735
03:54:31,349 --> 03:54:28,640
next next weekend

2736
03:54:33,030 --> 03:54:31,359
uh but in all seriousness we've got a

2737
03:54:34,870 --> 03:54:33,040
few things to take care of tonight make

2738
03:54:37,189 --> 03:54:34,880

sure we're all safe and we know the plan

2739
03:54:39,110 --> 03:54:37,199
in case something bad happens uh and

2740
03:54:40,630 --> 03:54:39,120
then we're looking forward to some

2741
03:54:41,750 --> 03:54:40,640
operational stuff later in the month

2742
03:54:44,630 --> 03:54:41,760
maybe we'll get outside and do some

2743
03:54:47,110 --> 03:54:44,640
space walks uh and our efforts in the in

2744
03:54:48,950 --> 03:54:47,120
these coming weeks will will be in that

2745
03:54:51,030 --> 03:54:48,960
effort so we're we're all super excited

2746
03:54:52,950 --> 03:54:51,040
to have two more crewmates to the

2747
03:54:55,349 --> 03:54:52,960
expedition 63

2748
03:55:00,229 --> 03:54:57,910
awesome and of course uh here in houston

2749
03:55:00,950 --> 03:55:00,239
this is the home of the astronaut office

2750
03:55:03,510 --> 03:55:00,960
and

2751
03:55:05,030 --> 03:55:03,520
the johnson space center is led by mark

2752
03:55:08,950 --> 03:55:05,040
guyer and i'm going to turn it over to

2753
03:55:12,070 --> 03:55:10,790
thank you jim hey it's great to see all

2754
03:55:14,389 --> 03:55:12,080
of you there good to see you bob and

2755
03:55:16,550 --> 03:55:14,399
doug i know we we talked a few days ago

2756
03:55:18,150 --> 03:55:16,560
you look a little taller

2757
03:55:20,229 --> 03:55:18,160
than i remember you

2758
03:55:23,750 --> 03:55:20,239
and uh but i also want to thank hellis i

2759
03:55:25,349 --> 03:55:23,760
want to thank anatoly and iman uh and of

2760
03:55:26,469 --> 03:55:25,359
course chris for what you guys have been

2761
03:55:28,389 --> 03:55:26,479
doing

2762
03:55:29,830 --> 03:55:28,399
since you all arrived and i know there's

2763
03:55:31,750 --> 03:55:29,840

been a ton to do and you've been really

2764
03:55:35,189 --> 03:55:31,760
busy and i appreciate that

2765
03:55:36,710 --> 03:55:35,199
so i also like this visual of

2766
03:55:39,189 --> 03:55:36,720
our international partnership we have

2767
03:55:43,030 --> 03:55:39,199
had a tremendous partnership with ross

2768
03:55:46,150 --> 03:55:43,040
cosmos and we will continue to do so

2769
03:55:48,150 --> 03:55:46,160
and uh but i do it is nice to see crew

2770
03:55:50,550 --> 03:55:48,160
arrive from this side of the space

2771
03:55:52,870 --> 03:55:50,560
station so that was pretty cool

2772
03:55:54,630 --> 03:55:52,880
after nine years uh i did have one

2773
03:55:56,870 --> 03:55:54,640
question for chris though what might you

2774
03:56:04,630 --> 03:55:56,880
do to ensure that bob and doug stay

2775
03:56:09,349 --> 03:56:07,189
well we'll slow down the rate of which

2776
03:56:11,990 --> 03:56:09,359
i'm eating food and maybe we can stretch

2777
03:56:13,269 --> 03:56:12,000
out our our consumables a little bit but

2778
03:56:14,630 --> 03:56:13,279
uh

2779
03:56:16,550 --> 03:56:14,640
that's a great question we'll have to

2780
03:56:19,189 --> 03:56:16,560
come up with some conniving scheme here

2781
03:56:20,950 --> 03:56:19,199
in the next few days

2782
03:56:23,110 --> 03:56:20,960
all right thank you thanks guys look

2783
03:56:25,269 --> 03:56:23,120
forward to greeting the three of you

2784
03:56:30,870 --> 03:56:25,279
eventually back in ellington after your

2785
03:56:35,269 --> 03:56:32,790
and of course mark guyer has an amazing

2786
03:56:39,670 --> 03:56:35,279
deputy vanessa weiss if you'd like to

2787
03:56:42,550 --> 03:56:40,950
thank you jim

2788
03:56:44,150 --> 03:56:42,560

hi guys

2789
03:56:45,670 --> 03:56:44,160
you look really good

2790
03:56:49,030 --> 03:56:45,680
i just want to say on behalf of

2791
03:56:51,429 --> 03:56:49,040
everybody here we just want to thank you

2792
03:56:54,150 --> 03:56:51,439
it was an amazing launch and

2793
03:56:56,150 --> 03:56:54,160
we we love seeing the docking you guys

2794
03:56:57,670 --> 03:56:56,160
all look really good uh just thank you

2795
03:57:00,070 --> 03:56:57,680
for all that you're doing and we can't

2796
03:57:01,910 --> 03:57:00,080
wait for you to um to return but not too

2797
03:57:04,070 --> 03:57:01,920
soon station wants you to get a lot of

2798
03:57:09,510 --> 03:57:04,080
work done so looking forward to all of

2799
03:57:09,520 --> 03:57:13,189
thank you vanessa we appreciate that

2800
03:57:17,510 --> 03:57:15,110
all right we also have with with us

2801
03:57:20,150 --> 03:57:17,520
steve jerzik who is the associate

2802
03:57:21,990 --> 03:57:20,160
administrator for the agency for people

2803
03:57:24,469 --> 03:57:22,000
who don't know what that is that of

2804
03:57:26,870 --> 03:57:24,479
course is the chief operating officer of

2805
03:57:29,110 --> 03:57:26,880
the agency but he also ran the flight

2806
03:57:32,229 --> 03:57:29,120
readiness review for this mission he did

2807
03:57:34,150 --> 03:57:32,239
a really an amazing job

2808
03:57:35,830 --> 03:57:34,160
and and i can't say enough about his

2809
03:57:37,429 --> 03:57:35,840
leadership at the agency steve if you'd

2810
03:57:41,750 --> 03:57:37,439
like to say a few words ask a few

2811
03:57:47,030 --> 03:57:43,910
hey guys it is just great to see you all

2812
03:57:50,469 --> 03:57:47,040
on the station i can't tell you how um i

2813
03:57:52,710 --> 03:57:50,479

was i my adrenaline shut down

2814
03:57:54,950 --> 03:57:52,720
uh when you guys opened the hatch i mean

2815
03:57:56,389 --> 03:57:54,960
i just been on edge ever since ever

2816
03:57:58,469 --> 03:57:56,399
since yesterday and the weather cleared

2817
03:58:00,790 --> 03:57:58,479
i can't tell you how great it's been

2818
03:58:03,030 --> 03:58:00,800
to see you on station um it has been a

2819
03:58:05,189 --> 03:58:03,040
team effort um i felt like the last two

2820
03:58:07,429 --> 03:58:05,199
years i've kind of been part of the team

2821
03:58:08,950 --> 03:58:07,439
uh working through issues you know and

2822
03:58:11,429 --> 03:58:08,960
it's been a heck of a year and a half

2823
03:58:13,510 --> 03:58:11,439
with uh you know demo one

2824
03:58:15,349 --> 03:58:13,520
and uh and then flight of war tests and

2825
03:58:16,469 --> 03:58:15,359
working through issues like parachutes

2826
03:58:20,790 --> 03:58:16,479
and

2827
03:58:23,110 --> 03:58:20,800
be more proud of the team for for

2828
03:58:25,269 --> 03:58:23,120
getting to this point um it's amazing

2829
03:58:27,349 --> 03:58:25,279
and uh and you obviously been part of

2830
03:58:30,870 --> 03:58:27,359
that i really appreciate you all showing

2831
03:58:32,229 --> 03:58:30,880
up in washington dc at our reviews and

2832
03:58:33,910 --> 03:58:32,239
because the last thing we do with those

2833
03:58:36,070 --> 03:58:33,920
rules is look at you all because you

2834
03:58:37,670 --> 03:58:36,080
guys are the risk takers and

2835
03:58:39,030 --> 03:58:37,680
make sure you're okay with where we are

2836
03:58:40,309 --> 03:58:39,040
and where we're headed so i really

2837
03:58:41,830 --> 03:58:40,319
really appreciate that i really

2838
03:58:44,389 --> 03:58:41,840

appreciate your active participation in

2839
03:58:45,830 --> 03:58:44,399
that and i could not be more like i said

2840
03:58:47,830 --> 03:58:45,840
more proud of the team and uh

2841
03:58:56,150 --> 03:58:47,840
congratulations and it is awesome to see

2842
03:58:59,910 --> 03:58:58,150
well thank you sir we're just uh proud

2843
03:59:00,710 --> 03:58:59,920
to be a part of the team that got to

2844
03:59:02,870 --> 03:59:00,720
bring

2845
03:59:04,950 --> 03:59:02,880
a space flight back to the florida coast

2846
03:59:06,389 --> 03:59:04,960
i appreciated the comment earlier that

2847
03:59:08,150 --> 03:59:06,399
it was nice to

2848
03:59:09,830 --> 03:59:08,160
see a vehicle come to the forward

2849
03:59:11,670 --> 03:59:09,840
portion of the space station but i'll

2850
03:59:13,269 --> 03:59:11,680
tell you what that's the only way doug

2851
03:59:15,590 --> 03:59:13,279
and i know how to do it

2852
03:59:17,990 --> 03:59:15,600
so uh thanks the team for uh providing

2853
03:59:21,189 --> 03:59:18,000
it to happen our way we we appreciate

2854
03:59:25,189 --> 03:59:23,030
well bob and doug um

2855
03:59:28,309 --> 03:59:25,199
just so just so you're aware i'm get

2856
03:59:29,670 --> 03:59:28,319
being given the the rap signal doug

2857
03:59:34,870 --> 03:59:29,680
doug did you have something to say

2858
03:59:39,670 --> 03:59:36,790
oh no sir uh

2859
03:59:41,670 --> 03:59:39,680
we're just uh happy to be here and

2860
03:59:43,830 --> 03:59:41,680
chris is going to put us to work and

2861
03:59:46,710 --> 03:59:43,840
hopefully we will fit in and not mess

2862
03:59:48,229 --> 03:59:46,720
too many things up

2863
03:59:49,910 --> 03:59:48,239

i have no doubt that you guys are going

2864
03:59:52,070 --> 03:59:49,920
to do amazing work

2865
03:59:54,150 --> 03:59:52,080
i just want you to know

2866
03:59:55,670 --> 03:59:54,160
that the president came to the launch

2867
03:59:57,990 --> 03:59:55,680
and the vice president came to the

2868
04:00:00,469 --> 03:59:58,000
launch about half the cabinet was at the

2869
04:00:02,950 --> 04:00:00,479
launch we had members of congress and

2870
04:00:06,229 --> 04:00:02,960
members of the senate from both sides of

2871
04:00:09,429 --> 04:00:06,239
the aisle um and this was uh an amazing

2872
04:00:12,309 --> 04:00:09,439
moment of of unity for the nation it was

2873
04:00:14,870 --> 04:00:12,319
an amazing moment for the whole world uh

2874
04:00:17,030 --> 04:00:14,880
to look up uh in the midst of the

2875
04:00:18,229 --> 04:00:17,040
coronavirus pandemic and some other

2876
04:00:20,229 --> 04:00:18,239
challenges

2877
04:00:21,830 --> 04:00:20,239
we were able to have this very very

2878
04:00:24,550 --> 04:00:21,840
special moment

2879
04:00:25,830 --> 04:00:24,560
where we could all look at the future

2880
04:00:27,750 --> 04:00:25,840
and say that things are going to be

2881
04:00:29,030 --> 04:00:27,760
brighter tomorrow than they are today

2882
04:00:31,189 --> 04:00:29,040
and you

2883
04:00:33,429 --> 04:00:31,199
and the nasa team and the spacex team

2884
04:00:34,469 --> 04:00:33,439
gave us that opportunity and for that we

2885
04:00:35,670 --> 04:00:34,479
are so

2886
04:00:37,590 --> 04:00:35,680
so grateful

2887
04:00:39,189 --> 04:00:37,600
i would also be remiss as the nasa

2888
04:00:41,429 --> 04:00:39,199

administrator if i didn't promote what

2889
04:00:43,590 --> 04:00:41,439
comes next and of course this is the

2890
04:00:45,830 --> 04:00:43,600
beginning we are now launching to low

2891
04:00:48,070 --> 04:00:45,840
earth orbit again but we will soon be

2892
04:00:49,910 --> 04:00:48,080
going to the moon we will be going to

2893
04:00:52,469 --> 04:00:49,920
the moon sustainably with commercial

2894
04:00:54,469 --> 04:00:52,479
partners and international partners

2895
04:00:56,309 --> 04:00:54,479
we're going to use the resources of the

2896
04:00:58,070 --> 04:00:56,319
moon to learn how to live and work for

2897
04:00:59,429 --> 04:00:58,080
long periods of time

2898
04:01:00,710 --> 04:00:59,439
ultimately we're going to take all of

2899
04:01:03,030 --> 04:01:00,720
that knowledge and we're going to go to

2900
04:01:04,950 --> 04:01:03,040
mars and of course this time when we go

2901
04:01:07,590 --> 04:01:04,960
to the moon we go with a very diverse

2902
04:01:10,070 --> 04:01:07,600
highly qualified astronaut corps that

2903
04:01:13,590 --> 04:01:10,080
includes women which is why we call the

2904
04:01:16,469 --> 04:01:13,600
program artemis named after the twin

2905
04:01:19,510 --> 04:01:16,479
sister of apollo and she in greek

2906
04:01:22,309 --> 04:01:19,520
mythology was the goddess of the moon

2907
04:01:24,790 --> 04:01:22,319
this is the beginning there is so so so

2908
04:01:26,550 --> 04:01:24,800
much more to come and i'm glad that our

2909
04:01:28,469 --> 04:01:26,560
representatives of the johnson space

2910
04:01:31,269 --> 04:01:28,479
center are here because we're going to

2911
04:01:33,189 --> 04:01:31,279
be asking them to fund this project

2912
04:01:36,550 --> 04:01:33,199
and uh and what an amazing day that you

2913
04:01:38,790 --> 04:01:36,560

guys have given us so uh thank you thank

2914
04:01:41,510 --> 04:01:38,800
you thank you from not just me and the

2915
04:01:43,510 --> 04:01:41,520
people here but from the united states

2916
04:01:46,389 --> 04:01:43,520
of america and people all around the

2917
04:01:47,910 --> 04:01:46,399
world um i'm more popular on twitter

2918
04:01:55,590 --> 04:01:47,920
than i've ever been and it's because of

2919
04:01:58,830 --> 04:01:57,910
to the crew on the internet

2920
04:02:01,110 --> 04:01:58,840
thank you very

2921
04:02:02,550 --> 04:02:01,120
much hey chris we ask that you just hold

2922
04:02:04,389 --> 04:02:02,560
your position for a few minutes there's

2923
04:02:06,469 --> 04:02:04,399
a of course a number of photos we'd like

2924
04:02:08,150 --> 04:02:06,479
to take and then a quick note uh for

2925
04:02:10,550 --> 04:02:08,160
those down here in the room to senator

2926
04:02:13,750 --> 04:02:10,560
cruz congressman bobbin administrator

2927
04:02:15,189 --> 04:02:13,760
bradenstein director guyer and all of

2928
04:02:16,950 --> 04:02:15,199
our distinguished visitors thank you for

2929
04:02:18,870 --> 04:02:16,960
your participation in today's historic

2930
04:03:33,990 --> 04:02:18,880
event and thank you for the leadership

2931
04:03:39,269 --> 04:03:36,790
station this is houston acr

2932
04:03:41,910 --> 04:03:39,279
thank you that concludes our event as we

2933
04:03:43,910 --> 04:03:41,920
count down to 20 continuous years of

2934
04:04:44,710 --> 04:03:43,920
humans living and working on the

2935
04:04:48,710 --> 04:04:46,309
that concludes our coverage of the

2936
04:04:50,950 --> 04:04:48,720
spacex demo 2 mission in conjunction

2937
04:04:53,189 --> 04:04:50,960
with nasa on behalf of all the teams

2938
04:04:55,030 --> 04:04:53,199

that participated in this mission from

2939
04:04:57,510 --> 04:04:55,040
hawthorne to houston

2940
04:04:59,429 --> 04:04:57,520
to mission control

2941
04:05:09,880 --> 04:04:59,439
to the kennedy space center

2942
04:11:28,870 --> 04:06:48,870
[Music]

2943
04:12:29,910 --> 04:11:30,710
so

2944
04:12:29,920 --> 04:12:33,210
foreign

2945
04:12:33,220 --> 04:14:01,030
[Music]

2946
04:14:01,040 --> 04:14:05,180
so

2947
04:14:05,190 --> 04:14:24,070
[Music]

2948
04:14:24,080 --> 04:14:28,970
me

2949
04:15:37,510 --> 04:14:54,630
[Music]

2950
04:16:08,840 --> 04:15:40,010
so

2951
04:18:07,910 --> 04:16:27,970
[Music]

2952
04:18:35,890 --> 04:18:10,130
so

2953
04:22:25,269 --> 04:18:43,870
[Music]

2954
04:22:25,279 --> 04:22:31,630
do