



1  
00:00:08,629 --> 00:00:06,070  
all right welcome to our flight day nine

2  
00:00:11,430 --> 00:00:08,639  
highlights uh here's roberto on the mid

3  
00:00:13,270 --> 00:00:11,440  
deck uh this was a busy day of uh a lot

4  
00:00:15,910 --> 00:00:13,280  
of work on board the station

5  
00:00:16,870 --> 00:00:15,920  
and uh here's mark getting some exercise

6  
00:00:18,870 --> 00:00:16,880  
in

7  
00:00:20,870 --> 00:00:18,880  
yeah on the flight deck when uh the

8  
00:00:22,630 --> 00:00:20,880  
spacewalkers are getting ready for uh

9  
00:00:25,349 --> 00:00:22,640  
eva the next day

10  
00:00:28,150 --> 00:00:25,359  
um mark and roberto and i spend a lot of

11  
00:00:31,349 --> 00:00:28,160  
time this is box talking uh for example

12  
00:00:34,069 --> 00:00:31,359  
filling cwc there you see a water bag

13  
00:00:38,069 --> 00:00:34,079

it's about 100 pound water bag now and

14

00:00:40,869 --> 00:00:38,079

it's timed uh to be uh the fill to be

15

00:00:42,950 --> 00:00:40,879

terminated at a particular time so i'm

16

00:00:46,470 --> 00:00:42,960

squeezing out some video just before the

17

00:00:48,869 --> 00:00:46,480

uh the end of the film

18

00:00:50,950 --> 00:00:48,879

we're uh here you are in uh from node

19

00:00:52,549 --> 00:00:50,960

two we're going into the pmm it's a

20

00:00:53,430 --> 00:00:52,559

logistics module

21

00:00:55,110 --> 00:00:53,440

and

22

00:00:57,430 --> 00:00:55,120

uh this is really conveniently located

23

00:00:59,029 --> 00:00:57,440

for us for uh eva preparation there's

24

00:01:01,110 --> 00:00:59,039

mike and drew

25

00:01:03,110 --> 00:01:01,120

um we're preparing here i was in there

26

00:01:04,869 --> 00:01:03,120

with them earlier this morning this is

27

00:01:06,630 --> 00:01:04,879

greg paz

28

00:01:07,910 --> 00:01:06,640

uh we're setting up breathing e3 which

29

00:01:09,830 --> 00:01:07,920

is tomorrow

30

00:01:12,149 --> 00:01:09,840

and uh there's a lot of work to prepare

31

00:01:13,429 --> 00:01:12,159

for an evh day the suits have to be

32

00:01:14,950 --> 00:01:13,439

reconfigured

33

00:01:16,950 --> 00:01:14,960

and prepared

34

00:01:18,870 --> 00:01:16,960

and then we have a lot of tools to set

35

00:01:22,149 --> 00:01:18,880

up and then all the specific things for

36

00:01:23,590 --> 00:01:22,159

the eva this particular spacewalk

37

00:01:26,469 --> 00:01:23,600

something that they're handling right

38

00:01:28,789 --> 00:01:26,479

now is setting up um it's an attachment

39

00:01:31,350 --> 00:01:28,799

mechanism for the station robotic arm

40

00:01:33,670 --> 00:01:31,360

and uh to be able to to basically walk

41

00:01:34,630 --> 00:01:33,680

off to the russian side of this uh space

42

00:01:36,870 --> 00:01:34,640

station

43

00:01:38,149 --> 00:01:36,880

uh our robotic arm can move from one

44

00:01:41,030 --> 00:01:38,159

place to another

45

00:01:41,749 --> 00:01:41,040

uh and over end and uh this will allow us

46

00:01:43,590 --> 00:01:41,759

to

47

00:01:45,670 --> 00:01:43,600

use our robotic arm for tasks on the

48

00:01:47,190 --> 00:01:45,680

russian side of the space station so

49

00:01:49,030 --> 00:01:47,200

that's one of the major tasks the other

50

00:01:51,510 --> 00:01:49,040

thing we're doing is setting up some

51  
00:01:54,069 --> 00:01:51,520  
wiring to give some extra redundancy and

52  
00:01:56,310 --> 00:01:54,079  
power to the russian side we send power

53  
00:01:58,950 --> 00:01:56,320  
in that direction from our solar rays

54  
00:02:00,230 --> 00:01:58,960  
and uh some rewiring will make that uh

55  
00:02:02,069 --> 00:02:00,240  
more redundant

56  
00:02:04,230 --> 00:02:02,079  
um and uh box was in there too this

57  
00:02:06,230 --> 00:02:04,240  
morning

58  
00:02:09,029 --> 00:02:06,240  
yeah roberto and i spent a lot of time

59  
00:02:11,430 --> 00:02:09,039  
uh milling around among those bags in

60  
00:02:13,910 --> 00:02:11,440  
the pmm kind of on a reverse easter egg

61  
00:02:15,510 --> 00:02:13,920  
hunt uh we had a big basket of eggs and

62  
00:02:18,070 --> 00:02:15,520  
we were delivering eggs to the different

63  
00:02:19,589 --> 00:02:18,080

spots and i zoomed in on the end cone

64

00:02:22,309 --> 00:02:19,599

there where we were trying to find a

65

00:02:24,390 --> 00:02:22,319

real troublesome bag today there's some

66

00:02:25,910 --> 00:02:24,400

two or three dozen bags in the back of

67

00:02:28,070 --> 00:02:25,920

the pmm

68

00:02:29,750 --> 00:02:28,080

and we're able to find it and then we

69

00:02:31,110 --> 00:02:29,760

went across to the other side where we

70

00:02:32,869 --> 00:02:31,120

found taz

71

00:02:34,949 --> 00:02:32,879

busy at work you know he spent six

72

00:02:36,869 --> 00:02:34,959

months on the space station and now he's

73

00:02:40,390 --> 00:02:36,879

using some of his expertise to help the

74

00:02:42,390 --> 00:02:40,400

guys up here uh while we're visiting

75

00:02:44,150 --> 00:02:42,400

yeah this was a lot of fun uh he's

76  
00:02:46,550 --> 00:02:44,160  
getting a chance to do some maintenance

77  
00:02:48,869 --> 00:02:46,560  
get behind the racks i did a lot of this

78  
00:02:51,910 --> 00:02:48,879  
uh my last expedition

79  
00:02:53,910 --> 00:02:51,920  
and this particular rack is the ogs

80  
00:02:55,670 --> 00:02:53,920  
oxygen generation system actually this

81  
00:02:58,390 --> 00:02:55,680  
is the kind of thing you would use on on

82  
00:02:59,830 --> 00:02:58,400  
mars uh to the back of the rack as you

83  
00:03:00,790 --> 00:02:59,840  
can see it's very complicated in there

84  
00:03:02,309 --> 00:03:00,800  
we uh

85  
00:03:04,550 --> 00:03:02,319  
um here it's giving us back some

86  
00:03:06,790 --> 00:03:04,560  
additional oxygen uh we otherwise would

87  
00:03:09,190 --> 00:03:06,800  
be wasting

88  
00:03:11,270 --> 00:03:09,200

now you can just see the mid deck uh

89

00:03:12,710 --> 00:03:11,280

there uh the activity going around i

90

00:03:15,110 --> 00:03:12,720

think they've been on the bike now for

91

00:03:16,710 --> 00:03:15,120

almost 30 minutes you can see he's

92

00:03:19,430 --> 00:03:16,720

starting to get tired

93

00:03:27,030 --> 00:03:23,430

instructions even when he's exercising

94

00:03:30,229 --> 00:03:27,040

completing our uh video of the mid deck

95

00:03:33,190 --> 00:03:30,239

operations we see mark over here

96

00:03:35,589 --> 00:03:33,200

checking the flight plan on a laptop

97

00:03:37,190 --> 00:03:35,599

and there goes the cwc

98

00:03:39,430 --> 00:03:37,200

the last thing that has to happen is

99

00:03:41,509 --> 00:03:39,440

this thing has to be transferred to the

100

00:03:43,509 --> 00:03:41,519

iss

101  
00:03:45,589 --> 00:03:43,519  
see this is technical water with the

102  
00:03:46,789 --> 00:03:45,599  
green tag

103  
00:03:50,070 --> 00:03:46,799  
and

104  
00:03:51,350 --> 00:03:50,080  
off we go to the space station

105  
00:03:53,270 --> 00:03:51,360  
it's kind of hard to maneuver it with

106  
00:03:55,030 --> 00:03:53,280  
one hand but there goes the life of a

107  
00:04:00,789 --> 00:03:55,040  
cwc

108  
00:04:07,910 --> 00:04:04,630  
and off we go it's kind of a heavy bag

109  
00:04:09,589 --> 00:04:07,920  
the arrival of the cwc into the gem

110  
00:04:11,750 --> 00:04:09,599  
beautiful laboratory oh check out the

111  
00:04:13,750 --> 00:04:11,760  
keyboard i found the other day

112  
00:04:15,190 --> 00:04:13,760  
which is a different story

113  
00:04:17,189 --> 00:04:15,200

we actually had a band going the other

114

00:04:19,990 --> 00:04:17,199

night before katie left but here's where

115

00:04:22,790 --> 00:04:20,000

the cwc's are and no not down there

116

00:04:25,749 --> 00:04:22,800

you're actually going up here

117

00:04:28,070 --> 00:04:25,759

so thanks drew for the help with the cwc

118

00:04:29,749 --> 00:04:28,080

it's kind of heavy man i'm gonna pass oh

119

00:04:35,510 --> 00:04:29,759

what's that check out this keyboard i

120

00:04:40,870 --> 00:04:38,950

you haven't played it yet come on

121

00:04:42,710 --> 00:04:40,880

it works though

122

00:04:45,749 --> 00:04:42,720

i've got a couple of good songs that i

123

00:04:47,909 --> 00:04:45,759

uh remembered from before um

124

00:04:49,430 --> 00:04:47,919

let's see if i can remember ready but

125

00:04:52,550 --> 00:04:49,440

real quickly what happened the other

126  
00:04:55,430 --> 00:04:54,950  
how's that

127  
00:04:58,870 --> 00:04:55,440  
that's ah

128  
00:05:05,270 --> 00:05:00,629  
come on i'm in max q

129  
00:05:05,280 --> 00:05:11,350  
all right turn off that thing

130  
00:05:16,469 --> 00:05:13,830  
okay so the other night uh i think we

131  
00:05:18,710 --> 00:05:16,479  
filmed it uh we had a little concert and

132  
00:05:21,670 --> 00:05:18,720  
uh box was playing keys katie played the

133  
00:05:23,510 --> 00:05:21,680  
flute and i played guitar and we played

134  
00:05:24,629 --> 00:05:23,520  
broad eyed girl

135  
00:05:26,950 --> 00:05:24,639  
and i didn't remember a lot of the

136  
00:05:28,950 --> 00:05:26,960  
chords yeah and and even though i've

137  
00:05:30,870 --> 00:05:28,960  
sung it for the last 10 years with the

138  
00:05:32,950 --> 00:05:30,880

band i forgot the second verse but only

139

00:05:34,870 --> 00:05:32,960

part of it so you know i guess uh that's

140

00:05:36,310 --> 00:05:34,880

what happens in space you know

141

00:05:37,510 --> 00:05:36,320

actually it happens to me on earth too

142

00:05:40,870 --> 00:05:37,520

but

143

00:05:43,029 --> 00:05:40,880

everybody everybody enjoyed it made a

144

00:05:44,870 --> 00:05:43,039

little concert for folks yeah but i

145

00:05:48,070 --> 00:05:44,880

would i was at a loss for where to put

146

00:05:50,150 --> 00:05:48,080

the keyboard and uh so i had it laying

147

00:05:50,950 --> 00:05:50,160

on the deck there on that flat

148

00:05:53,189 --> 00:05:50,960

uh

149

00:05:53,990 --> 00:05:53,199

bag and the lap in the lead bag over

150

00:05:56,629 --> 00:05:54,000

there

151

00:05:58,150 --> 00:05:56,639

um but uh it was in the way

152

00:05:59,990 --> 00:05:58,160

and so then i realized hey you can put

153

00:06:01,830 --> 00:06:00,000

it on the wall you know and it actually

154

00:06:04,309 --> 00:06:01,840

worked better with those diagonal uh

155

00:06:06,070 --> 00:06:04,319

bungee cords right side down upside

156

00:06:08,790 --> 00:06:06,080

right side up upside down whatever you

157

00:06:10,150 --> 00:06:08,800

want hey fox tell us about this

158

00:06:12,790 --> 00:06:10,160

oh yeah i've been telling them about the

159

00:06:15,990 --> 00:06:12,800

cwc you know this is the final resting

160

00:06:17,909 --> 00:06:16,000

place place of cwc number six it's full

161

00:06:20,390 --> 00:06:17,919

of water it's full of water man it's got

162

00:06:21,110 --> 00:06:20,400

like 150 pounds of water in it let me

163

00:06:22,550 --> 00:06:21,120

see

164

00:06:26,390 --> 00:06:22,560

i can i can that's about what i can