1
00:00:04,230 --> 00:00:02,950
and you're joining me uh here at the

2
00:00:05,749 --> 00:00:04,240
public affairs console in mission

3
00:00:09,110 --> 00:00:05,759
control houston i'm joined right now by

4
00:00:10,629 --> 00:00:09,120
alex canalecos one of our eva

5
00:00:11,910 --> 00:00:10,639
flight controllers and also the crew

6
00:00:13,030 --> 00:00:11,920
instructors he's here to tell us a

7
00:00:15,030 --> 00:00:13,040
little bit about

8
00:00:16,550 --> 00:00:15,040
more a little more about the major

9
00:00:18,550 --> 00:00:16,560
activity taking place on board the

10
00:00:20,470 --> 00:00:18,560
station karen nyberg and mike hopkins

11
00:00:22,310 --> 00:00:20,480
working on one of the station spacesuits

12
00:00:24,550 --> 00:00:22,320
that was involved in a spacewalk back in

13
00:00:26,630 --> 00:00:24,560

july so first off alex thanks for

14
00:00:28,630 --> 00:00:26,640
joining me here give me a little bit a

15
00:00:29,830 --> 00:00:28,640
little bit of history real quick why why

16
00:00:31,589 --> 00:00:29,840
are we doing some maintenance on this

17
00:00:33,830 --> 00:00:31,599
spacesuit today well like you mentioned

18
00:00:35,830 --> 00:00:33,840
this summer dan about the spacewalk

19
00:00:38,069 --> 00:00:35,840
number 23 that we had

20
00:00:40,150 --> 00:00:38,079
during that spacewalk luca experienced

21
00:00:41,910 --> 00:00:40,160
some water in the helmet and what we

22
00:00:44,389 --> 00:00:41,920
discovered is that it was some water

23
00:00:47,190 --> 00:00:44,399
that was leaking from the internal life

24
00:00:49,830 --> 00:00:47,200
support system of the space suit into

25
00:00:52,470 --> 00:00:49,840
the crew member's helmet and so

26
00:00:54,229 --> 00:00:52,480
we got the crew member in safely and

27
00:00:55,990 --> 00:00:54,239
after that ever since that time we've

28
00:00:58,630 --> 00:00:56,000
been working on our spacesuit trying to

29
00:00:59,990 --> 00:00:58,640
figure out what caused this leak and so

30
00:01:02,310 --> 00:01:00,000
today what we're doing is we are

31
00:01:05,030 --> 00:01:02,320
performing a fan pump and water

32
00:01:07,670 --> 00:01:05,040
separator rnr which is a removal and

33
00:01:10,230 --> 00:01:07,680
replace so what's what what is the fan

34
00:01:12,469 --> 00:01:10,240
pump separator what what action does it

35
00:01:14,789 --> 00:01:12,479
perform inside the spacesuit so we have

36
00:01:16,950 --> 00:01:14,799
a motor inside the suit that drives our

37
00:01:18,789 --> 00:01:16,960
fan pump and water separator and

38
00:01:20,710 --> 00:01:18,799

basically what the fan pump and water

39
00:01:23,590 --> 00:01:20,720
separator do is the fan is basically

40
00:01:25,910 --> 00:01:23,600
circulating your o2 and your your water

41
00:01:28,149 --> 00:01:25,920
separator is separating moisture that's

42
00:01:30,230 --> 00:01:28,159
in your ventilation loop as well as gas

43
00:01:32,469 --> 00:01:30,240
that has gotten trapped into the water

44
00:01:35,109 --> 00:01:32,479
loop or cooling loop and it's separating

45
00:01:37,590 --> 00:01:35,119
the the water and the gas

46
00:01:38,390 --> 00:01:37,600
enabling the the lines to be either you

47
00:01:42,069 --> 00:01:38,400
know

48
00:01:44,469 --> 00:01:42,079
degassed and so um returning

49
00:01:47,270 --> 00:01:44,479
non-moisture air back to the crew member

50
00:01:49,270 --> 00:01:47,280
or o2 and then of course the the pump is

51
00:01:51,270 --> 00:01:49,280
what's pumping our coolant fluid and

52
00:01:53,030 --> 00:01:51,280
right now this is just one of what we

53
00:01:54,870 --> 00:01:53,040
think might be one of the prime suspects

54
00:01:57,350 --> 00:01:54,880
that's that's correct so our engineering

55
00:01:59,910 --> 00:01:57,360
teams have identified several different

56
00:02:01,830 --> 00:01:59,920
components of the suit designing a big

57
00:02:03,350 --> 00:02:01,840
fault tree and this is just one of the

58
00:02:05,350 --> 00:02:03,360
components that we think could have

59
00:02:07,109 --> 00:02:05,360
contributed to the leak in the suit

60
00:02:09,270 --> 00:02:07,119
specifically the water separator is what

61
00:02:12,150 --> 00:02:09,280
we're concentrating our efforts today

62
00:02:14,390 --> 00:02:12,160
but the water separator the fan and the

63
00:02:16,309 --> 00:02:14,400

pump are kind of coupled into one unit

64
00:02:17,670 --> 00:02:16,319
okay and what exactly are are the two

65
00:02:19,030 --> 00:02:17,680
astronauts because this is taking up a

66
00:02:20,869 --> 00:02:19,040
lot of their day-to-day what exactly are

67
00:02:23,190 --> 00:02:20,879
they having to do to you know get this

68
00:02:25,990 --> 00:02:23,200
out of the suit right so um the space

69
00:02:27,190 --> 00:02:26,000
suit uh is is designed so that there's

70
00:02:29,270 --> 00:02:27,200
many different components and the

71
00:02:31,509 --> 00:02:29,280
components can be removed and replaced

72
00:02:33,350 --> 00:02:31,519
however this this specific component uh

73
00:02:35,670 --> 00:02:33,360
was not one that was necessarily trained

74
00:02:37,589 --> 00:02:35,680
um on the ground this the

75
00:02:39,750 --> 00:02:37,599
astronauts get several

76
00:02:41,910 --> 00:02:39,760
high intensive maintenance training for

77
00:02:43,670 --> 00:02:41,920
for kind of generic training so that

78
00:02:45,270 --> 00:02:43,680
they know how to use all the tools on

79
00:02:47,589 --> 00:02:45,280
the space station but they never

80
00:02:48,710 --> 00:02:47,599
specifically trained on this unit so we

81
00:02:50,949 --> 00:02:48,720
knew that it was going to take them a

82
00:02:53,430 --> 00:02:50,959
little longer to get them familiar with

83
00:02:55,190 --> 00:02:53,440
the actual fan pump water separator so

84
00:02:56,630 --> 00:02:55,200
that's why it's taking a little longer

85
00:02:58,390 --> 00:02:56,640
but there's several very small

86
00:02:59,830 --> 00:02:58,400
components and when we're working with

87
00:03:00,949 --> 00:02:59,840
our spacesuits we want to make sure that

88
00:03:03,030 --> 00:03:00,959

we're very

89
00:03:05,190 --> 00:03:03,040
careful not to introduce any

90
00:03:06,470 --> 00:03:05,200
small components or

91
00:03:08,550 --> 00:03:06,480
pieces of

92
00:03:10,229 --> 00:03:08,560
debris into our suit because that could

93
00:03:12,309 --> 00:03:10,239
be a hazardous

94
00:03:14,550 --> 00:03:12,319
situation if that got into any of our

95
00:03:15,750 --> 00:03:14,560
loops okay well the two astronauts again

96
00:03:17,910 --> 00:03:15,760
spending a couple hours being very

97
00:03:20,390 --> 00:03:17,920
meticulous with this just one of the

98
00:03:22,470 --> 00:03:20,400
prime suspects right now in that july

99
00:03:24,949 --> 00:03:22,480
16th spacewalk having the water coming

100
00:03:27,030 --> 00:03:24,959
to lucas helmet so we'll continue to get

101
00:03:28,869 --> 00:03:27,040
some more looks at that footage today

102
00:03:30,149 --> 00:03:28,879
alex thanks for coming on real quick and

103
00:03:32,309 --> 00:03:30,159
telling us what they're doing really

104
00:03:34,710 --> 00:03:32,319
appreciate any insight that we're able