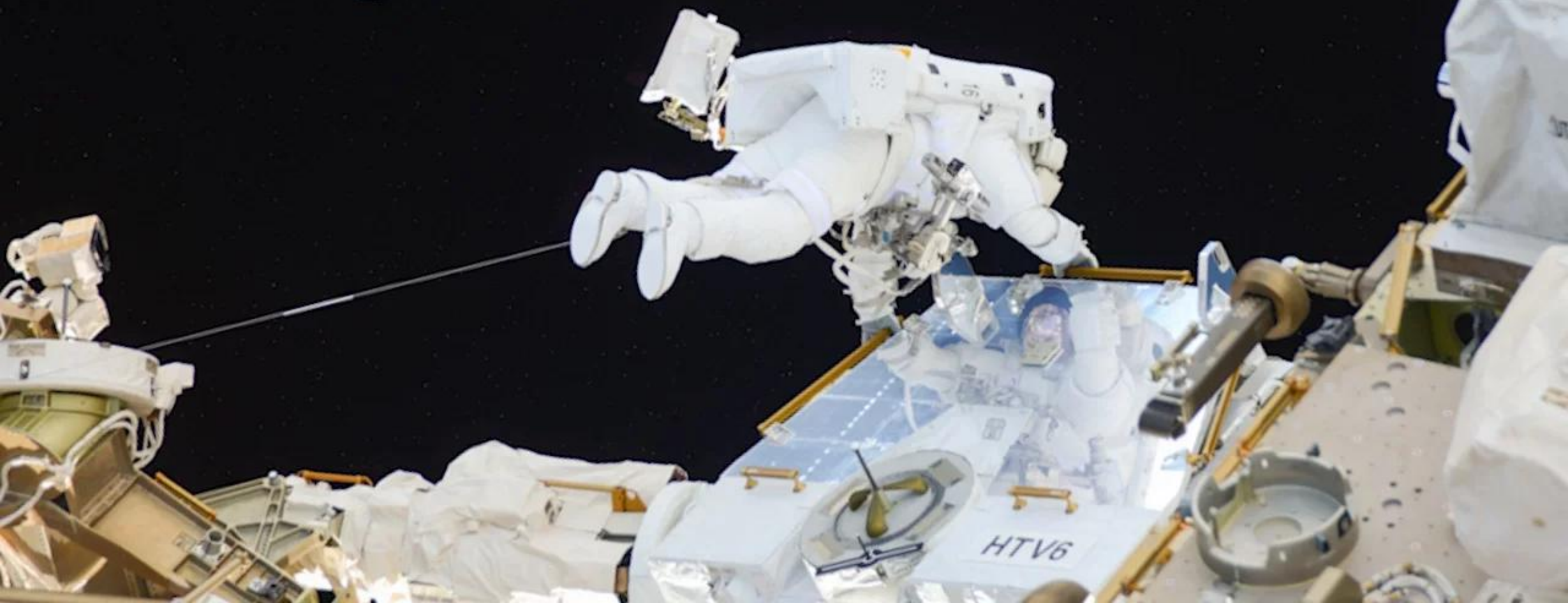


# *US Spacewalk #40*



1  
00:00:04,789 --> 00:00:02,869  
for eva 40 as was mentioned shane is

2  
00:00:06,150 --> 00:00:04,799  
going to be ev1 and tomorrow's going to

3  
00:00:07,590 --> 00:00:06,160  
be ev2

4  
00:00:09,669 --> 00:00:07,600  
they are going to be swapping roles

5  
00:00:12,470 --> 00:00:09,679  
coming out the door so to give tomas

6  
00:00:14,150 --> 00:00:12,480  
some experience of opening up that hatch

7  
00:00:15,910 --> 00:00:14,160  
it's and the crew members are going to

8  
00:00:17,910 --> 00:00:15,920  
be separated throughout the entire eva

9  
00:00:19,189 --> 00:00:17,920  
so first we'll go through what shane is

10  
00:00:21,109 --> 00:00:19,199  
going to be doing

11  
00:00:23,429 --> 00:00:21,119  
his first task he's going to be heading

12  
00:00:25,269 --> 00:00:23,439  
over to to s0 where he's going to be

13  
00:00:26,470 --> 00:00:25,279

changing out that computer processor

14

00:00:28,230 --> 00:00:26,480

that

15

00:00:29,429 --> 00:00:28,240

emily was mentioning so there's

16

00:00:30,870 --> 00:00:29,439

currently not anything wrong with that

17

00:00:32,150 --> 00:00:30,880

processor we are just going to be

18

00:00:35,270 --> 00:00:32,160

upgrading it

19

00:00:37,750 --> 00:00:35,280

and making it more enhanced

20

00:00:39,910 --> 00:00:37,760

so you see here he's going to be

21

00:00:42,389 --> 00:00:39,920

changing out that box

22

00:00:44,310 --> 00:00:42,399

and installing the new one

23

00:00:45,750 --> 00:00:44,320

technical terms for that we call it the

24

00:00:47,270 --> 00:00:45,760

the epic

25

00:00:49,750 --> 00:00:47,280

mdm

26

00:00:51,830 --> 00:00:49,760

and so once he installs that box into

27

00:00:53,430 --> 00:00:51,840

the slot he does have some a cable to

28

00:00:55,350 --> 00:00:53,440

connect up to that that's going to give

29

00:00:57,430 --> 00:00:55,360

it that that ethernet connection which

30

00:00:59,270 --> 00:00:57,440

is that enhanced capability

31

00:01:02,389 --> 00:00:59,280

once he's complete with that he heads on

32

00:01:04,950 --> 00:01:02,399

over to pma3 where he is going to be

33

00:01:07,590 --> 00:01:04,960

disconnecting certain umbilicals to

34

00:01:11,109 --> 00:01:07,600

allow that vehicle or that module to be

35

00:01:12,950 --> 00:01:11,119

relocated in between eva 40 and 41.

36

00:01:15,190 --> 00:01:12,960

so there are four different

37

00:01:17,190 --> 00:01:15,200

disconnects that he needs to do

38

00:01:18,390 --> 00:01:17,200

once it's disconnected he's going to go

39

00:01:20,310 --> 00:01:18,400

ahead and

40

00:01:22,789 --> 00:01:20,320

make sure that they're out of the way

41

00:01:24,710 --> 00:01:22,799

and tie those down for this segment to

42

00:01:26,390 --> 00:01:24,720

be relocated

43

00:01:28,630 --> 00:01:26,400

after that he's going to head on out to

44

00:01:30,870 --> 00:01:28,640

the the japanese module

45

00:01:32,710 --> 00:01:30,880

where he has the two cameras that he's

46

00:01:34,149 --> 00:01:32,720

going to be changing out as emily

47

00:01:36,069 --> 00:01:34,159

mentioned the cameras do have some

48

00:01:37,510 --> 00:01:36,079

lights burned down on them and in order

49

00:01:38,870 --> 00:01:37,520

to change those you need to just change

50

00:01:41,510 --> 00:01:38,880

out the box and change out the light

51  
00:01:43,830 --> 00:01:41,520  
bulb inside so the first one is on the

52  
00:01:46,550 --> 00:01:43,840  
the japanese robotic arm so he's going

53  
00:01:47,990 --> 00:01:46,560  
to change that one out first

54  
00:01:49,429 --> 00:01:48,000  
and then you'll see him

55  
00:01:51,910 --> 00:01:49,439  
he's going to translate on the nader

56  
00:01:53,910 --> 00:01:51,920  
side of this palette to head on over to

57  
00:01:55,270 --> 00:01:53,920  
the the work site of the other camera

58  
00:01:57,830 --> 00:01:55,280  
which is going to be on the forward side

59  
00:01:58,870 --> 00:01:57,840  
of this palette and and change out that

60  
00:02:00,469 --> 00:01:58,880  
one

61  
00:02:02,149 --> 00:02:00,479  
it's great he's got a big bag where he

62  
00:02:04,149 --> 00:02:02,159  
can put both of those cameras in so we

63  
00:02:06,069 --> 00:02:04,159

we save a lot of time by not needing to

64

00:02:08,550 --> 00:02:06,079

go back and forth to the airlock to get

65

00:02:10,949 --> 00:02:08,560

each particular camera so once he's

66

00:02:13,350 --> 00:02:10,959

complete with with this camera r r that

67

00:02:15,670 --> 00:02:13,360

is the that's all of his planned tasks

68

00:02:17,670 --> 00:02:15,680

that he has for the eva we hope to do

69

00:02:20,070 --> 00:02:17,680

have some time for some get-aheads but

70

00:02:21,589 --> 00:02:20,080

we'll assess that the day of

71

00:02:22,869 --> 00:02:21,599

then moving on to what tamar's going to

72

00:02:25,190 --> 00:02:22,879

be doing

73

00:02:27,670 --> 00:02:25,200

first he heads on out to esp2 where he's

74

00:02:29,589 --> 00:02:27,680

going to be grabbing a foot restraint

75

00:02:31,589 --> 00:02:29,599

and also he's going to be grabbing an

76

00:02:33,830 --> 00:02:31,599

extender for that foot restraint both of

77

00:02:35,990 --> 00:02:33,840

the tasks that he's doing do require a

78

00:02:37,509 --> 00:02:36,000

little bit more reach

79

00:02:38,390 --> 00:02:37,519

in that foot restraint so he's going to

80

00:02:41,670 --> 00:02:38,400

take

81

00:02:43,350 --> 00:02:41,680

both of those pieces over to p1 where he

82

00:02:45,910 --> 00:02:43,360

is going to be

83

00:02:47,030 --> 00:02:45,920

inspecting the ammonia leaks that emily

84

00:02:47,910 --> 00:02:47,040

had mentioned

85

00:02:50,630 --> 00:02:47,920

so

86

00:02:52,949 --> 00:02:50,640

there if this is an rbvm a radiator

87

00:02:54,070 --> 00:02:52,959

valve beam module um

88

00:02:56,150 --> 00:02:54,080

and

89

00:02:58,229 --> 00:02:56,160

it's in the flow path of the ammonia of

90

00:03:00,070 --> 00:02:58,239

the cooling system and so he's just

91

00:03:01,910 --> 00:03:00,080

going to be checking that hardware out

92

00:03:03,910 --> 00:03:01,920

seeing if there's if there's any

93

00:03:05,750 --> 00:03:03,920

indication of leaks this is a close-up

94

00:03:08,070 --> 00:03:05,760

of that hardware so using me checking

95

00:03:10,309 --> 00:03:08,080

these flex hoses we also have fluid

96

00:03:11,750 --> 00:03:10,319

quick disconnects as well as rigid

97

00:03:13,830 --> 00:03:11,760

systems lines

98

00:03:15,110 --> 00:03:13,840

all that again we'll just need the human

99

00:03:17,030 --> 00:03:15,120

eyes on it to see if there's any

100

00:03:19,509 --> 00:03:17,040

indication of a leak and it would be the

101  
00:03:21,990 --> 00:03:19,519  
ammonia coming out of there

102  
00:03:24,789 --> 00:03:22,000  
once he's complete with that inspection

103  
00:03:27,110 --> 00:03:24,799  
he heads on out to s0 where he's going

104  
00:03:31,270 --> 00:03:27,120  
to be lubricating the

105  
00:03:33,430 --> 00:03:31,280  
robotic manipulator the spdm

106  
00:03:35,589 --> 00:03:33,440  
it's a spdm lee

107  
00:03:37,670 --> 00:03:35,599  
we have lubricated other parts of the

108  
00:03:39,750 --> 00:03:37,680  
the space station robotic arm on

109  
00:03:41,750 --> 00:03:39,760  
previous evas and

110  
00:03:44,149 --> 00:03:41,760  
this robotic manipulator has been

111  
00:03:45,430 --> 00:03:44,159  
showing similar signs of degradation so

112  
00:03:47,750 --> 00:03:45,440  
what we're going to do

113  
00:03:50,070 --> 00:03:47,760

is we have a specialized tool for it

114

00:03:51,750 --> 00:03:50,080

it's called the blt

115

00:03:54,070 --> 00:03:51,760

not a bacon lettuce and tomato it's a

116

00:03:55,509 --> 00:03:54,080

ball screw lubrication tool

117

00:03:57,509 --> 00:03:55,519

so what you do is you you're going to be

118

00:03:59,429 --> 00:03:57,519

applying grease to this cradle so you're

119

00:04:01,270 --> 00:03:59,439

going to be inserting it into the cavity

120

00:04:03,110 --> 00:04:01,280

here there's a there's a ball screw that

121

00:04:05,589 --> 00:04:03,120

we need to get the grease on and then

122

00:04:07,509 --> 00:04:05,599

each of these four latches also have a

123

00:04:09,589 --> 00:04:07,519

similar ball screw that you need this

124

00:04:10,789 --> 00:04:09,599

tool to insert to to access those ball

125

00:04:12,869 --> 00:04:10,799

screws

126

00:04:15,589 --> 00:04:12,879

the last part of the lubrication there's

127

00:04:17,270 --> 00:04:15,599

some tracks on each of the latches here

128

00:04:17,990 --> 00:04:17,280

that also need to get grease applied to

129

00:04:19,830 --> 00:04:18,000

them

130

00:04:21,349 --> 00:04:19,840

that we're just going to be using a

131

00:04:23,110 --> 00:04:21,359

standard grease gun which kind of looks

132

00:04:24,790 --> 00:04:23,120

more like a caulking gun

133

00:04:26,710 --> 00:04:24,800

off the shelf caulking gun that's got

134

00:04:27,749 --> 00:04:26,720

grease in it this is just showing the

135

00:04:31,350 --> 00:04:27,759

grease

136

00:04:33,350 --> 00:04:31,360

being applied to the cradle of this tool

137

00:04:34,950 --> 00:04:33,360

this is going inside one of the latches

138

00:04:37,510 --> 00:04:34,960

this is what that ball screw looks like

139

00:04:39,110 --> 00:04:37,520

inside the latch with the grease applied

140

00:04:41,189 --> 00:04:39,120

to it

141

00:04:42,469 --> 00:04:41,199

and so once once he's complete with that

142

00:04:45,189 --> 00:04:42,479

the lubrication

143

00:04:47,110 --> 00:04:45,199

um he's done with his planned task and

144

00:04:49,350 --> 00:04:47,120

both crew members would be heading back

145

00:04:51,670 --> 00:04:49,360

to the airlock again if we've got time

146

00:04:53,030 --> 00:04:51,680

um for other activities we've got some

147

00:04:57,590 --> 00:04:53,040

time at the end of the eva we'll assess

148

00:05:00,210 --> 00:04:57,600

that day of for any get-ahead activities