



U.S. SPACEWALK 80 ANIMATION

1
00:00:08,710 --> 00:00:04,630
[Music]

2
00:00:09,910 --> 00:00:08,720
ev1 with red stripes and ev2 with white

3
00:00:12,170 --> 00:00:09,920
stripes

4
00:00:13,430 --> 00:00:12,180
egress the crew lock with tool bags

5
00:00:17,590 --> 00:00:13,440
[Music]

6
00:00:19,750 --> 00:00:17,600
ev2 goes to the forward face of station

7
00:00:22,710 --> 00:00:19,760
then port to a crew equipment

8
00:00:26,390 --> 00:00:22,720
translation aid cart

9
00:00:27,910 --> 00:00:26,400
ev2 stows the tool bag

10
00:00:30,230 --> 00:00:27,920
while ev1

11
00:00:34,470 --> 00:00:30,240
follows the same path

12
00:00:41,990 --> 00:00:38,150
ev1 retrieves a portable foot restraint

13
00:00:45,510 --> 00:00:42,000

and installs it in the robotic arm

14

00:00:47,990 --> 00:00:45,520

after ev1 ingresses the foot restraint

15

00:00:49,029 --> 00:00:48,000

the robotic arm operator flies the crew

16

00:00:52,229 --> 00:00:49,039

member

17

00:00:56,830 --> 00:00:52,239

to the most inboard port radiator beam

18

00:01:01,990 --> 00:01:00,790

meanwhile ev2 follows the nader handrail

19

00:01:05,590 --> 00:01:02,000

path

20

00:01:11,270 --> 00:01:05,600

and picks up a previously deployed cable

21

00:01:17,030 --> 00:01:15,190

ev2 deploys the ethernet cable along the

22

00:01:19,350 --> 00:01:17,040

handrails

23

00:01:22,310 --> 00:01:19,360

then translates zenith to the camera

24

00:01:24,789 --> 00:01:22,320

port 8 work site

25

00:01:27,350 --> 00:01:24,799

the end of the cable is pre-positioned

26

00:01:29,180 --> 00:01:27,360

at the camera stanchion base

27

00:01:35,590 --> 00:01:29,190

for later in the eva

28

00:01:39,109 --> 00:01:35,600

[Music]

29

00:01:42,469 --> 00:01:39,119

ev2 retraces the path back to the crew

30

00:01:45,910 --> 00:01:42,479

equipment translation aid cart

31

00:01:48,310 --> 00:01:45,920

drops off the now empty real bag

32

00:01:53,429 --> 00:01:48,320

and takes a different bag to the u.s

33

00:01:59,030 --> 00:01:56,870

ev2 takes a cable adapter

34

00:02:01,429 --> 00:01:59,040

from the tool bag

35

00:02:04,310 --> 00:02:01,439

and translates to the starboard end cone

36

00:02:09,350 --> 00:02:04,320

of the european space agency's

37

00:02:14,949 --> 00:02:12,070

ev2 installs the jumper which passes

38

00:02:19,110 --> 00:02:14,959

power and data from columbus to the

39

00:02:22,949 --> 00:02:19,120

bartolomeo external platform

40

00:02:25,350 --> 00:02:22,959

ev2 goes to the bartelomeo platform

41

00:02:27,670 --> 00:02:25,360

and closes several cable clamps on the

42

00:02:29,670 --> 00:02:27,680

zenith side

43

00:02:32,150 --> 00:02:29,680

this allows future robotic arm

44

00:02:34,229 --> 00:02:32,160

operations to install payloads on the

45

00:02:35,830 --> 00:02:34,239

platform

46

00:02:38,790 --> 00:02:35,840

ev2

47

00:02:40,869 --> 00:02:38,800

returns to the crewlock bag on the u.s

48

00:02:43,430 --> 00:02:40,879

laboratory module

49

00:02:46,949 --> 00:02:43,440

and continues forward in port

50

00:02:48,830 --> 00:02:46,959

to the japanese space agency's

51
00:02:51,670 --> 00:02:48,840
kivo

52
00:02:53,350 --> 00:02:51,680
module a section of the thermal blanket

53
00:02:56,150 --> 00:02:53,360
has flipped open

54
00:02:58,390 --> 00:02:56,160
and ev2 will close the flap

55
00:03:00,149 --> 00:02:58,400
and secure it to handrails with a wire

56
00:03:03,910 --> 00:03:00,159
tie

57
00:03:05,670 --> 00:03:03,920
v2 returns to the bag on the us

58
00:03:11,190 --> 00:03:05,680
laboratory module

59
00:03:15,030 --> 00:03:11,200
[Music]

60
00:03:18,070 --> 00:03:15,040
ev1 installs two ammonia line jumpers

61
00:03:19,990 --> 00:03:18,080
which were removed on an earlier eva

62
00:03:22,309 --> 00:03:20,000
because of a small leak

63
00:03:23,990 --> 00:03:22,319

jumpers were refurbished leak checked

64

00:03:26,710 --> 00:03:24,000

and re-flown

65

00:03:30,070 --> 00:03:26,720

after mating the jumper's fluid quick

66

00:03:31,350 --> 00:03:30,080

disconnects ev1 will mate two electrical

67

00:03:35,670 --> 00:03:31,360

connectors

68

00:03:41,910 --> 00:03:38,390

after completing the jumper task

69

00:03:47,509 --> 00:03:41,920

the robotic arm operator flies ev1

70

00:03:53,030 --> 00:03:49,270

ev2

71

00:03:56,229 --> 00:03:53,040

meets ev1 at the camera port worksite

72

00:03:57,670 --> 00:03:56,239

after retrieving the new wireless access

73

00:04:00,390 --> 00:03:57,680

port capable

74

00:04:02,710 --> 00:04:00,400

external high definition camera

75

00:04:04,630 --> 00:04:02,720

from the crew lock

76

00:04:06,949 --> 00:04:04,640

the two crew members

77

00:04:09,190 --> 00:04:06,959

exchange tool bags

78

00:04:11,190 --> 00:04:09,200

after which ev2

79

00:04:13,750 --> 00:04:11,200

takes ev1

80

00:04:17,830 --> 00:04:13,760

tool bag back to the crew equipment

81

00:04:20,069 --> 00:04:17,840

translation aid cart and stows it ev2

82

00:04:23,350 --> 00:04:20,079

retrieves a different tool bag and

83

00:04:26,469 --> 00:04:23,360

translates to the port 4 integrated

84

00:04:29,350 --> 00:04:26,479

electronics assembly worksite

85

00:04:31,830 --> 00:04:29,360

several bolts on the four alpha side

86

00:04:33,110 --> 00:04:31,840

will be released and re-torqued at a

87

00:04:35,189 --> 00:04:33,120

lower setting

88

00:04:37,189 --> 00:04:35,199

this will make any future robotics

89

00:04:40,870 --> 00:04:37,199

replacement operations of those

90

00:04:44,550 --> 00:04:40,880

equipment boxes easier to perform

91

00:04:47,790 --> 00:04:44,560

then ev2 rejoins ev1

92

00:04:50,469 --> 00:04:47,800

at camera port 8.

93

00:04:53,590 --> 00:04:50,479

[Music]

94

00:04:57,670 --> 00:04:53,600

while ev2 was re-torquing the 4 alpha

95

00:05:00,150 --> 00:04:57,680

bolts ev1 replaced the existing external

96

00:05:03,990 --> 00:05:00,160

high definition camera with one that

97

00:05:07,029 --> 00:05:04,000

provides improved two-way high data rate

98

00:05:09,810 --> 00:05:07,039

communications between external payloads

99

00:05:11,909 --> 00:05:09,820

and earth

100

00:05:14,710 --> 00:05:11,919

[Music]

101
00:05:17,189 --> 00:05:14,720
to ensure the new wireless access port

102
00:05:19,990 --> 00:05:17,199
cable does not interfere with the new

103
00:05:22,710 --> 00:05:20,000
camera group's ability to pin and tilt

104
00:05:25,909 --> 00:05:22,720
the crew installs a strap to hold the

105
00:05:29,990 --> 00:05:27,350
ev2

106
00:05:33,110 --> 00:05:30,000
mates the wireless cable

107
00:05:36,060 --> 00:05:33,120
to the ethernet cable routed earlier in

108
00:05:43,110 --> 00:05:36,070
the eva

109
00:05:46,310 --> 00:05:43,120
[Music]

110
00:05:49,110 --> 00:05:46,320
after the camera changeout is complete

111
00:05:53,350 --> 00:05:49,120
ev1 is flown to the nader side of

112
00:05:54,580 --> 00:05:53,360
station to the port radiator grapple bar

113
00:05:57,909 --> 00:05:54,590

work site

114

00:06:01,909 --> 00:05:57,919

[Music]

115

00:06:04,870 --> 00:06:01,919

ev1 installs two t-handle tools which

116

00:06:06,469 --> 00:06:04,880

will allow the radiator grapple bar

117

00:06:08,350 --> 00:06:06,479

to be used

118

00:06:14,230 --> 00:06:08,360

in future evas

119

00:06:16,629 --> 00:06:14,240

[Music]

120

00:06:18,390 --> 00:06:16,639

ev1 is then returned

121

00:06:20,629 --> 00:06:18,400

to the forward face

122

00:06:23,029 --> 00:06:20,639

of the space station

123

00:06:25,909 --> 00:06:23,039

egresses the robotic arm

124

00:06:28,550 --> 00:06:25,919

and returns the foot restraint

125

00:06:31,909 --> 00:06:28,560

to the port cart

126
00:06:33,510 --> 00:06:31,919
while ev1 performs the t-handle tool

127
00:06:37,510 --> 00:06:33,520
installation

128
00:06:39,110 --> 00:06:37,520
ev2 translates to a panel on the f side

129
00:06:42,230 --> 00:06:39,120
of the truss

130
00:06:44,230 --> 00:06:42,240
ev2 moves an electrical connector from a

131
00:06:47,749 --> 00:06:44,240
non-functional connector

132
00:06:49,510 --> 00:06:47,759
to a cable which can provide power

133
00:06:51,189 --> 00:06:49,520
ev2

134
00:06:53,110 --> 00:06:51,199
then picks up

135
00:06:55,750 --> 00:06:53,120
tool bags

136
00:07:07,670 --> 00:06:55,760
and returns them back to the airlock

137
00:07:12,780 --> 00:07:11,350
after ev2 retrieves another hardware bag

138
00:07:14,790 --> 00:07:12,790

from the crew lock

139

00:07:17,029 --> 00:07:14,800

[Music]

140

00:07:18,950 --> 00:07:17,039

they translate slightly starboard on the

141

00:07:21,189 --> 00:07:18,960

forward face

142

00:07:23,020 --> 00:07:21,199

and manipulate three electrical

143

00:07:26,550 --> 00:07:23,030

connectors

144

00:07:28,390 --> 00:07:26,560

[Music]

145

00:07:29,670 --> 00:07:28,400

once that is complete

146

00:07:32,710 --> 00:07:29,680

ev2

147

00:07:34,490 --> 00:07:32,720

routes a power cable along the starboard

148

00:07:42,710 --> 00:07:34,500

nader handrail path

149

00:07:48,790 --> 00:07:46,390

ev1 picks up the remaining tool bags and

150

00:07:51,189 --> 00:07:48,800

depending on timing

151
00:07:53,510 --> 00:07:51,199
returns to the crew lock

152
00:07:56,790 --> 00:07:53,520
or assist ev2

153
00:07:58,629 --> 00:07:56,800
in routing the cable zenith to the pump

154
00:08:01,909 --> 00:07:58,639
module

155
00:08:05,189 --> 00:08:01,919
this completes the plan tasks for the

156
00:08:07,050 --> 00:08:05,199
radiator beam valve module jumper

157
00:08:08,950 --> 00:08:07,060
install eva

158
00:08:11,670 --> 00:08:08,960
[Music]

159
00:08:13,420 --> 00:08:11,680
true return to the crew lock