CRAWLER TRANSPORTER MODIFICATIONS
VEHICLE ASSEMBLY BUILDING

1
00:00:20,150 --> 00:00:17,670
it was a busy third quarter for nasa's

2
00:00:22,550 --> 00:00:20,160
exploration systems division

3
00:00:24,870 --> 00:00:22,560
the first liquid hydrogen tank barrel

4
00:00:27,269 --> 00:00:24,880
segment for the core stage of america's

5
00:00:29,750 --> 00:00:27,279
new deep space launch vehicle was

6
00:00:32,229 --> 00:00:29,760
recently completed at the vertical weld

7
00:00:34,549 --> 00:00:32,239
center at nasa's machu assembly facility

8
00:00:36,709 --> 00:00:34,559
in new orleans

9
00:00:39,110 --> 00:00:36,719
the segment is considered a confidence

10
00:00:41,030 --> 00:00:39,120
barrel segment because it validates that

11
00:00:42,709 --> 00:00:41,040
the vertical weld center is working the

12
00:00:45,750 --> 00:00:42,719
way it should

13
00:00:47,830 --> 00:00:45,760

when all segments are complete the 212

14
00:00:49,990 --> 00:00:47,840
foot course stage will be assembled in

15
00:00:53,430 --> 00:00:50,000
the vertical assembly center now under

16
00:00:59,750 --> 00:00:56,470
in august a 31 inch scale model of the

17
00:01:02,950 --> 00:00:59,760
sls core stage b2 test stand was

18
00:01:05,910 --> 00:01:02,960
successfully tested in a wind tunnel

19
00:01:07,670 --> 00:01:05,920
the actual b-2 test stand located at

20
00:01:10,469 --> 00:01:07,680
nasa's stennis space center in

21
00:01:12,469 --> 00:01:10,479
mississippi was originally built to test

22
00:01:14,390 --> 00:01:12,479
saturn rocket stages

23
00:01:17,590 --> 00:01:14,400
the stand is being renovated to enable

24
00:01:20,469 --> 00:01:17,600
testing of the sls core stage

25
00:01:22,789 --> 00:01:20,479
the core stage with four rs-25 rocket

26
00:01:24,710 --> 00:01:22,799
engines will be installed on the b2

27
00:01:27,910 --> 00:01:24,720
stand for propellant fill and drain

28
00:01:33,350 --> 00:01:27,920
testing and two hot fire tests in late

29
00:01:39,190 --> 00:01:36,469
in august the largest 3d printed rocket

30
00:01:41,990 --> 00:01:39,200
engine component ever built by nasa an

31
00:01:45,030 --> 00:01:42,000
injector was tested during an engine

32
00:01:47,990 --> 00:01:45,040
firing that generated a record 20 000

33
00:01:50,310 --> 00:01:48,000
pounds of thrust

34
00:01:52,870 --> 00:01:50,320
3d printed parts have the potential to

35
00:01:54,789 --> 00:01:52,880
drastically reduce the time and cost of

36
00:01:58,230 --> 00:01:54,799
producing future flight engine

37
00:02:02,630 --> 00:02:00,630
in september the orion stage adapter

38
00:02:04,950 --> 00:02:02,640

diaphragm arrived at the marshall space

39
00:02:07,510 --> 00:02:04,960
flight center to undergo pressurized

40
00:02:10,389 --> 00:02:07,520
testing before being integrated with the

41
00:02:13,190 --> 00:02:10,399
spacecraft's stage adapter certifying it

42
00:02:15,350 --> 00:02:13,200
for flight conditions

43
00:02:17,910 --> 00:02:15,360
the component is an integral part of the

44
00:02:20,550 --> 00:02:17,920
stage adapter that will connect orion to

45
00:02:26,309 --> 00:02:20,560
a delta iv heavy rocket for nasa's

46
00:02:31,110 --> 00:02:28,869
the diaphragm a lightweight composite

47
00:02:33,110 --> 00:02:31,120
structure serves as a barrier between

48
00:02:35,670 --> 00:02:33,120
the upper stage of the launch vehicle

49
00:02:37,830 --> 00:02:35,680
and the spacecraft preventing hydrogen

50
00:02:46,550 --> 00:02:37,840
gas buildup from the rocket beneath the

51
00:02:51,110 --> 00:02:48,790
at the kennedy space center in florida

52
00:02:54,309 --> 00:02:51,120
one of the launch pads at launch complex

53
00:02:57,430 --> 00:02:54,319
39 is undergoing extensive upgrades to

54
00:02:59,589 --> 00:02:57,440
support the agency's 21st century space

55
00:03:02,149 --> 00:02:59,599
launch objectives

56
00:03:05,030 --> 00:03:02,159
a new universal flame deflector entrench

57
00:03:07,190 --> 00:03:05,040
will be completed in early 2015

58
00:03:10,309 --> 00:03:07,200
and will support the new space launch

59
00:03:14,149 --> 00:03:10,319
system rocket and possibly a variety of

60
00:03:19,990 --> 00:03:16,630
for more than a year nasa's crawler

61
00:03:22,869 --> 00:03:20,000
transporter ct2 has been undergoing a

62
00:03:23,990 --> 00:03:22,879
major tune-up in ksc's vehicle assembly

63
00:03:25,910 --> 00:03:24,000

building

64
00:03:27,750 --> 00:03:25,920
the crawler modifications are designed

65
00:03:30,789 --> 00:03:27,760
to enable the vehicle to transport

66
00:03:32,390 --> 00:03:30,799
heavier launch vehicles including sls to

67
00:03:34,390 --> 00:03:32,400
the pad

68
00:03:36,789 --> 00:03:34,400
once the roller bearing work on half the

69
00:03:38,869 --> 00:03:36,799
crawler is completed it will be prepared

70
00:03:42,070 --> 00:03:38,879
for a test roll out scheduled for

71
00:03:43,550 --> 00:03:42,080
january 2014

72
00:03:46,149 --> 00:03:43,560
after traveling

73
00:03:48,789 --> 00:03:46,159
3600 miles above the earth during the

74
00:03:50,949 --> 00:03:48,799
exploration flight test 1 mission in

75
00:03:53,350 --> 00:03:50,959
september 2014

76
00:03:55,429 --> 00:03:53,360
orion will splash down on the pacific

77
00:03:58,550 --> 00:03:55,439
ocean where it will be recovered with

78
00:04:01,589 --> 00:03:58,560
the help of the united states navy

79
00:04:04,309 --> 00:04:01,599
in august with the navy's uss arlington

80
00:04:06,630 --> 00:04:04,319
stationed against its pier in virginia

81
00:04:08,550 --> 00:04:06,640
divers in small boats led the test

82
00:04:10,229 --> 00:04:08,560
capsule to the flooded well deck of the

83
00:04:11,910 --> 00:04:10,239
ship

84
00:04:14,869 --> 00:04:11,920
with the capsule in position over the

85
00:04:17,749 --> 00:04:14,879
recovery cradle the water drained until

86
00:04:19,830 --> 00:04:17,759
the capsule settled

87
00:04:22,950 --> 00:04:19,840
navy divers prepared for the recovery

88
00:04:25,670 --> 00:04:22,960

test in norfolk by training in the 6.2

89
00:04:27,909 --> 00:04:25,680
million gallon pool at nasa's neutral

90
00:04:36,790 --> 00:04:27,919
buoyancy lab near the johnson space

91
00:04:42,870 --> 00:04:39,749
in july the orion team successfully

92
00:04:46,230 --> 00:04:42,880
conducted the parachute test vehicle ptv

93
00:04:47,749 --> 00:04:46,240
5 airdrop test at the u.s army's yuma

94
00:04:49,670 --> 00:04:47,759
proving ground

95
00:04:51,110 --> 00:04:49,680
seventeen parachutes were deployed

96
00:04:53,590 --> 00:04:51,120
during this test

97
00:04:57,510 --> 00:04:53,600
nine were test technique related and

98
00:04:59,590 --> 00:04:57,520
eight were the orion system parachutes

99
00:05:01,990 --> 00:04:59,600
at the operations in checkout building

100
00:05:04,550 --> 00:05:02,000
high bay at the kennedy space center the

101
00:05:06,950 --> 00:05:04,560
orion team completed hundreds of welds

102
00:05:09,430 --> 00:05:06,960
and installations for the spacecraft's

103
00:05:12,469 --> 00:05:09,440
propulsion life support and

104
00:05:14,870 --> 00:05:12,479
environmental control systems

105
00:05:17,110 --> 00:05:14,880
at the johnson space center in houston

106
00:05:20,070 --> 00:05:17,120
nasa administrator charles bolden

107
00:05:22,310 --> 00:05:20,080
welcomed eight new astronaut candidates

108
00:05:24,390 --> 00:05:22,320
this group will be among those who may

109
00:05:28,710 --> 00:05:24,400
carry out the first ever human missions

110
00:05:31,670 --> 00:05:28,720
to an asteroid and onto mars

111
00:05:33,350 --> 00:05:31,680
in october recorded orion telemetry was

112
00:05:35,510 --> 00:05:33,360
successfully transmitted between the

113
00:05:37,510 --> 00:05:35,520

mission control center in houston and

114
00:05:39,350 --> 00:05:37,520
the white sands communication facility

115
00:05:41,029 --> 00:05:39,360
in new mexico

116
00:05:44,390 --> 00:05:41,039
white sands will be used during the

117
00:05:47,749 --> 00:05:44,400
eft-1 flight to receive and re-transmit

118
00:05:50,629 --> 00:05:47,759
the orion spacecraft telemetry

119
00:05:53,029 --> 00:05:50,639
in late september nasa astronauts rick

120
00:05:55,830 --> 00:05:53,039
linehan and mike foreman tried out a

121
00:05:58,710 --> 00:05:55,840
prototype display and control system

122
00:06:01,189 --> 00:05:58,720
inside an orion spacecraft mockup at

123
00:06:03,110 --> 00:06:01,199
johnson space center during an orion

124
00:06:05,670 --> 00:06:03,120
ascent simulation

125
00:06:08,150 --> 00:06:05,680
over the course of two weeks ten crews

126
00:06:10,710 --> 00:06:08,160
of two astronauts each performed launch

127
00:06:13,110 --> 00:06:10,720
and abort simulations inside the orion