
-CAUTION-

1
00:00:09,750 --> 00:00:07,349
preparing the orion crew module for its

2
00:00:11,669 --> 00:00:09,760
first flight test in december actually

3
00:00:13,910 --> 00:00:11,679
began a few years ago

4
00:00:15,509 --> 00:00:13,920
the crew module for orion's flight test

5
00:00:19,109 --> 00:00:15,519
arrived at kennedy space center in

6
00:00:21,189 --> 00:00:19,119
florida in june 2012 and was transported

7
00:00:22,950 --> 00:00:21,199
to the neil armstrong operations and

8
00:00:25,269 --> 00:00:22,960
checkout building high bay for

9
00:00:26,630 --> 00:00:25,279
manufacturing processing and pre-flight

10
00:00:28,950 --> 00:00:26,640
testing

11
00:00:31,189 --> 00:00:28,960
during the next two years orion prime

12
00:00:33,350 --> 00:00:31,199
contractor lockheed martin and nasa

13
00:00:35,750 --> 00:00:33,360

engineers and technicians built up the

14
00:00:37,910 --> 00:00:35,760
crew module from a green shell to a

15
00:00:39,830 --> 00:00:37,920
fully functional spacecraft

16
00:00:42,869 --> 00:00:39,840
many tests were performed to prepare

17
00:00:44,950 --> 00:00:42,879
orion for its flight test

18
00:00:47,190 --> 00:00:44,960
orion service module arrived at kennedy

19
00:00:49,350 --> 00:00:47,200
space center and also was transported to

20
00:00:51,350 --> 00:00:49,360
the operations and checkout building for

21
00:00:53,110 --> 00:00:51,360
build up and processing

22
00:00:54,709 --> 00:00:53,120
the module was completed with the

23
00:00:56,790 --> 00:00:54,719
installation of the fairings that are

24
00:00:59,830 --> 00:00:56,800
protected in the early stages of launch

25
00:01:02,069 --> 00:00:59,840
ascent orion's heat shield containing

26
00:01:03,510 --> 00:01:02,079
more than 200 instrumentation sensors

27
00:01:05,429 --> 00:01:03,520
when installed

28
00:01:07,750 --> 00:01:05,439
heat shield will protect orion during

29
00:01:10,630 --> 00:01:07,760
its re-entry into earth's atmosphere and

30
00:01:12,469 --> 00:01:10,640
splash down in the pacific ocean

31
00:01:14,710 --> 00:01:12,479
moving one step closer to the flight

32
00:01:17,510 --> 00:01:14,720
test the orion crew module was stacked

33
00:01:19,270 --> 00:01:17,520
atop the service module in june

34
00:01:21,670 --> 00:01:19,280
tile panels were installed around the

35
00:01:24,469 --> 00:01:21,680
spacecraft and then both modules were

36
00:01:27,109 --> 00:01:24,479
put through their final system tests

37
00:01:28,870 --> 00:01:27,119
on september 11th the orion stack was

38
00:01:30,710 --> 00:01:28,880

transported from the operations and

39
00:01:32,950 --> 00:01:30,720
checkout building to the payload

40
00:01:35,350 --> 00:01:32,960
hazardous servicing facility

41
00:01:37,990 --> 00:01:35,360
inside this facility the spacecraft was

42
00:01:39,910 --> 00:01:38,000
fueled with ammonia hydrazine and high

43
00:01:41,670 --> 00:01:39,920
pressure helium ahead of its december

44
00:01:43,590 --> 00:01:41,680
flight test

45
00:01:45,590 --> 00:01:43,600
the four major components for orion's

46
00:01:47,749 --> 00:01:45,600
launch abort system including the launch

47
00:01:50,310 --> 00:01:47,759
abort motor and the attitude control

48
00:01:52,149 --> 00:01:50,320
motor arrived at kennedy last year and

49
00:01:54,710 --> 00:01:52,159
were transported to the launch abort

50
00:01:56,950 --> 00:01:54,720
system facility for processing testing

51
00:01:59,350 --> 00:01:56,960
and integration

52
00:02:01,749 --> 00:01:59,360
in late september orion was moved from

53
00:02:04,389 --> 00:02:01,759
the payload hazardous servicing facility

54
00:02:06,389 --> 00:02:04,399
to the launch abort system facility

55
00:02:09,270 --> 00:02:06,399
inside the highway the launch abort

56
00:02:11,110 --> 00:02:09,280
system was lowered and attached to orion

57
00:02:13,350 --> 00:02:11,120
the system is designed to protect

58
00:02:15,589 --> 00:02:13,360
astronauts if a problem arises during

59
00:02:17,510 --> 00:02:15,599
watch by pulling the spacecraft away

60
00:02:19,510 --> 00:02:17,520
from the falling rocket

61
00:02:22,070 --> 00:02:19,520
orion waited inside the launch abort

62
00:02:24,390 --> 00:02:22,080
system facility until the united launch

63
00:02:27,190 --> 00:02:24,400

alliance delta iv heavy rocket was ready

64
00:02:30,070 --> 00:02:27,200
for integration with the spacecraft

65
00:02:32,630 --> 00:02:30,080
earlier this year the delta iv core and

66
00:02:35,589 --> 00:02:32,640
starboard boosters arrived by barge in

67
00:02:37,670 --> 00:02:35,599
march and were offloaded and transported

68
00:02:40,229 --> 00:02:37,680
to the horizontal integration facility

69
00:02:42,869 --> 00:02:40,239
near space launch complex 37 at cape

70
00:02:45,110 --> 00:02:42,879
canaveral air force station in florida

71
00:02:47,270 --> 00:02:45,120
the port booster and second stage

72
00:02:49,430 --> 00:02:47,280
followed in early may

73
00:02:51,910 --> 00:02:49,440
the delta iv central core booster was

74
00:02:54,470 --> 00:02:51,920
mated to the port and starboard boosters

75
00:02:56,869 --> 00:02:54,480
then the delta iv second stage was made

76
00:02:59,030 --> 00:02:56,879
to the rocket's central core booster

77
00:03:00,790 --> 00:02:59,040
the delta iv rocket for orion's flight

78
00:03:03,509 --> 00:03:00,800
test rolled out of the horizontal

79
00:03:06,309 --> 00:03:03,519
integration facility on september 30 and

80
00:03:09,030 --> 00:03:06,319
made the trek to the launch pad

81
00:03:11,910 --> 00:03:09,040
in the early morning on october 1st the

82
00:03:13,589 --> 00:03:11,920
nearly 180 foot tall launch vehicle was

83
00:03:15,750 --> 00:03:13,599
carefully lifted into the vertical

84
00:03:18,630 --> 00:03:15,760
position and then raised into the mobile

85
00:03:20,869 --> 00:03:18,640
service tower on the pad

86
00:03:22,630 --> 00:03:20,879
in early november the orion stack was

87
00:03:25,350 --> 00:03:22,640
transported to the launch pad and

88
00:03:27,750 --> 00:03:25,360

integrated to the rocket

89
00:03:29,110 --> 00:03:27,760
tests were performed to verify readiness

90
00:03:32,070 --> 00:03:29,120
for launch

91
00:03:35,030 --> 00:03:32,080
after more than two years of work orion