



1  
00:00:10,629 --> 00:00:07,990  
during orion's flight test the

2  
00:00:13,270 --> 00:00:10,639  
spacecraft will travel 3 600 miles into

3  
00:00:15,829 --> 00:00:13,280  
space return to earth at speeds of up to

4  
00:00:17,750 --> 00:00:15,839  
20 000 miles per hour and endure

5  
00:00:19,990 --> 00:00:17,760  
temperatures near 4000 degrees

6  
00:00:21,750 --> 00:00:20,000  
fahrenheit before splashing down in the

7  
00:00:23,910 --> 00:00:21,760  
pacific ocean

8  
00:00:26,230 --> 00:00:23,920  
for the team task with recovering a riot

9  
00:00:27,750 --> 00:00:26,240  
after splashdown this is when the work

10  
00:00:29,750 --> 00:00:27,760  
will begin

11  
00:00:31,429 --> 00:00:29,760  
nasa's ground systems development and

12  
00:00:34,150 --> 00:00:31,439  
operations program

13  
00:00:36,069 --> 00:00:34,160

orion prime contractor lockheed martin

14

00:00:38,470 --> 00:00:36,079

and the u.s navy have worked hard to

15

00:00:40,549 --> 00:00:38,480

prepare practicing recovery operations

16

00:00:42,549 --> 00:00:40,559

during the past year to establish

17

00:00:45,110 --> 00:00:42,559

techniques they will use to recover

18

00:00:46,869 --> 00:00:45,120

orion the parachutes and the forward bay

19

00:00:48,790 --> 00:00:46,879

cover from the water

20

00:00:51,029 --> 00:00:48,800

we're working with the navy to figure

21

00:00:52,150 --> 00:00:51,039

out a way to use these weldex ships that

22

00:00:54,549 --> 00:00:52,160

they have

23

00:00:55,990 --> 00:00:54,559

to get the capsule back in the well deck

24

00:00:58,389 --> 00:00:56,000

and allow the crew to get out basically

25

00:01:01,510 --> 00:00:58,399

on dry land in a sense and so all this

26  
00:01:03,590 --> 00:01:01,520  
testing is about how to make that work

27  
00:01:06,230 --> 00:01:03,600  
before orion launches on its flight test

28  
00:01:08,070 --> 00:01:06,240  
from the east coast the recovery team on

29  
00:01:10,789 --> 00:01:08,080  
the west coast will embark aboard the

30  
00:01:13,109 --> 00:01:10,799  
u.s navy's amphibious ship the uss

31  
00:01:15,270 --> 00:01:13,119  
anchorage and head out to sea

32  
00:01:17,270 --> 00:01:15,280  
all the necessary hardware and equipment

33  
00:01:18,070 --> 00:01:17,280  
will be carried below in the ship's well

34  
00:01:20,390 --> 00:01:18,080  
deck

35  
00:01:22,870 --> 00:01:20,400  
it also is where orion will be secured

36  
00:01:24,630 --> 00:01:22,880  
after the team recovers it

37  
00:01:26,710 --> 00:01:24,640  
while the team waits for orion to take

38  
00:01:28,789 --> 00:01:26,720

flight they will launch weather balloons

39

00:01:30,789 --> 00:01:28,799

from the deck of the ship and monitor

40

00:01:32,390 --> 00:01:30,799

sea conditions

41

00:01:34,630 --> 00:01:32,400

meanwhile about an hour before

42

00:01:37,109 --> 00:01:34,640

splashtown the helicopters will take off

43

00:01:39,270 --> 00:01:37,119

for the ship's deck and fly out to help

44

00:01:40,469 --> 00:01:39,280

locate orion as it makes its descent

45

00:01:42,469 --> 00:01:40,479

toward the ocean

46

00:01:44,389 --> 00:01:42,479

the helicopters also will help the team

47

00:01:47,350 --> 00:01:44,399

track orion's protective forward bay

48

00:01:49,429 --> 00:01:47,360

cover and parachutes for the recovery

49

00:01:51,429 --> 00:01:49,439

teams in rigid hull inflatable boats

50

00:01:53,350 --> 00:01:51,439

will find and secure the hardware with

51  
00:01:54,789 --> 00:01:53,360  
floats until they're able to safely

52  
00:01:57,350 --> 00:01:54,799  
recover it

53  
00:01:59,190 --> 00:01:57,360  
minutes after orion splashes down the

54  
00:02:01,749 --> 00:01:59,200  
crew module uprighting system will

55  
00:02:03,510 --> 00:02:01,759  
inflate to help stabilize the spacecraft

56  
00:02:05,590 --> 00:02:03,520  
in case it doesn't land heat shield

57  
00:02:08,070 --> 00:02:05,600  
first into the water

58  
00:02:10,550 --> 00:02:08,080  
u.s navy divers in zodiac boats will

59  
00:02:13,030 --> 00:02:10,560  
check for any hazards around orion

60  
00:02:15,030 --> 00:02:13,040  
then they'll attach a sea anchor load

61  
00:02:17,510 --> 00:02:15,040  
distributing horse collar and tether

62  
00:02:19,350 --> 00:02:17,520  
lines to the crew module and work to

63  
00:02:21,430 --> 00:02:19,360

guide it to the ship's well deck so it's

64

00:02:22,949 --> 00:02:21,440

our way of recovering the orion crew

65

00:02:24,470 --> 00:02:22,959

module and we do it in a way that we

66

00:02:26,630 --> 00:02:24,480

protect the heat shield so that we can

67

00:02:28,390 --> 00:02:26,640

get as much good information

68

00:02:30,470 --> 00:02:28,400

as we can so for the engineering

69

00:02:32,150 --> 00:02:30,480

analysis that we'll do moving forward

70

00:02:34,150 --> 00:02:32,160

the spacecraft will be set down on

71

00:02:36,229 --> 00:02:34,160

rubber shock absorbers secured to the

72

00:02:38,390 --> 00:02:36,239

deck and the ship will head toward calm

73

00:02:40,630 --> 00:02:38,400

waters the crew module will then be put

74

00:02:41,990 --> 00:02:40,640

into its recovery cradle and readied for

75

00:02:43,509 --> 00:02:42,000

offloading

76

00:02:46,229 --> 00:02:43,519

the ship will then begin the journey

77

00:02:48,309 --> 00:02:46,239

back to naval base san diego the team

78

00:02:50,790 --> 00:02:48,319

also is prepared to use an alternative

79

00:02:53,509 --> 00:02:50,800

method of recovery in case orion can't

80

00:02:55,750 --> 00:02:53,519

be recovered using the ship's well deck

81

00:02:58,229 --> 00:02:55,760

at sea a sling will be placed around

82

00:03:01,509 --> 00:02:58,239

orion and the stationary crane on the

83

00:03:03,509 --> 00:03:01,519

usns salvor a salvage ship will be used

84

00:03:06,390 --> 00:03:03,519

to lift the crew module up and onto the

85

00:03:08,790 --> 00:03:06,400

deck will be secured it will remain

86

00:03:11,110 --> 00:03:08,800

there for its trip back to port

87

00:03:14,070 --> 00:03:11,120

in case of very turbulent sea conditions

88

00:03:15,990 --> 00:03:14,080

the usns salvor could tow orion along

89

00:03:17,589 --> 00:03:16,000

until commercies are reached and it can

90

00:03:19,750 --> 00:03:17,599

be recovered

91

00:03:22,309 --> 00:03:19,760

when orion splashes down in the pacific

92

00:03:24,390 --> 00:03:22,319

ocean the u.s navy ship and recovery