
KEEP CLEAR
ULA

1
00:00:08,240 --> 00:00:04,100
[Music intro]

2
00:00:08,260 --> 00:00:12,390
[Silvia Stoyanova/Goddard TV] Launching a spacecraft successfully takes time and it involves

3
00:00:12,410 --> 00:00:16,390
hundreds of people. A lot of work has been going on at Cape Canaveral,

4
00:00:16,410 --> 00:00:20,440
FL in preparation for launch of the GOES-P weather

5
00:00:20,460 --> 00:00:24,620
satellite. From receiving the satellite from El Segundo,

6
00:00:24,640 --> 00:00:28,660
CA and assembling the launch vehicle to finally hoisting

7
00:00:28,680 --> 00:00:32,710
the spacecraft on the rocket, the team works 24/7 to

8
00:00:32,730 --> 00:00:36,720
test and prepare the mission for launch. So join us as engineers

9
00:00:36,740 --> 00:00:40,750
and key mission players take us on a tour of some of the critical facilities

10
00:00:40,770 --> 00:00:44,810
in preparation for launch, which is only a few days away.

11
00:00:44,830 --> 00:00:48,880
Sound of launch countdown. [Si Song, ULA] We are standing out

12
00:00:48,900 --> 00:00:52,920
outside of the DOC, which is Delta Operations Center, which has our engineers and

13
00:00:52,940 --> 00:00:56,970

management team sitting at the consoles during launch countdown

14
00:00:56,990 --> 00:01:01,010
and this is where we launch the rocket from. So let’s go and take a look.

15
00:01:09,260 --> 00:01:05,210
[Dramatic music]

16
00:01:09,280 --> 00:01:13,310
Hello, my name is Si Song. I am with the spacecraft integration

17
00:01:13,330 --> 00:01:17,390
group here at the Cape. We are standing in the Launch Control Center for Delta

18
00:01:17,410 --> 00:01:21,430
IV. We are getting ready to launch the GOES-P satellite, which is a weather

19
00:01:21,450 --> 00:01:25,620
satellite. These gentleman are busy getting ready for launch, and

20
00:01:25,640 --> 00:01:29,640
during launch countdown day, we pressurize the launch vehicle and we prep for launch.

21
00:01:29,660 --> 00:01:33,670
[Dramatic music]

22
00:01:33,690 --> 00:01:37,730
We are standing underneath the second stage of our next mission, which is

23
00:01:37,750 --> 00:01:41,790
There is one exactly like this out of the pad for GOES-P

24
00:01:41,810 --> 00:01:45,830
mission. Second stage provides additional propulsion to put the spacecraft

25
00:01:45,850 --> 00:01:50,020
out to the location that we are interested in. [Silvia Stoyanova/Goddard TV] This facility

26
00:01:50,040 --> 00:01:54,090
here is called the Horizontal Integration Facility or HIF.

27
00:01:54,110 --> 00:01:58,100
This is where they actually assemble the rocket and Si is going to show us the

28
00:01:58,120 --> 00:02:02,130
different elements of the rocket. Actually, right there you can see

29
00:02:02,150 --> 00:02:06,400
the launch pad and as you can see it’s close to the HIF so when they

30
00:02:06,420 --> 00:02:10,480
assemble the rocket, they transport it over to the launch pad, then they

31
00:02:13,260 --> 00:02:13,230
mount the spacecraft on top of it in preparation for launch so let’s go

32
00:02:13,280 --> 00:02:17,450
so let’s go and take a look inside.

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00:02:17,470 --> 00:02:21,480
[Si Song/ULA] This inner stage that has the empty spot that you see;

34
00:02:21,500 --> 00:02:25,500
that actually holds the second stage that we just looked at in the

35
00:02:25,520 --> 00:02:29,500
DOC. The grey structure that you see out on the end of the launch vehicle

36
00:02:29,520 --> 00:02:33,530
is called the LMU; Launch Mount Unit. LMU

37
00:02:33,550 --> 00:02:37,560
holds the vehicle on the base and that’s how we use it to

38
00:02:37,580 --> 00:02:41,560

erect it out at the launch pad. And you can see the working end of the

39
00:02:41,580 --> 00:02:45,570
rocket , which is RS-68 engine. This is going to produce the

40
00:02:45,590 --> 00:02:49,630
thrust to lift the launch vehicle into space and then

41
00:02:49,650 --> 00:02:53,660
separate to the second stage and then separate the spacecraft once it goes out to the

42
00:02:53,680 --> 00:02:57,740
orbit.

43
00:02:57,760 --> 00:03:01,740
[Silvia Stoyanova/Goddard TV] Our final stop is at the Mission Director's Center here at Hanger

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00:03:01,760 --> 00:03:05,760
AE. We are going to talk to some engineers and the NASA Launch Manager

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00:03:05,780 --> 00:03:09,770
to get a feel of what happens here on the day of launch.

46
00:03:09,790 --> 00:03:13,960
[Tracy Evans, Mission Support Manager] This facility back here is where our power hitters sit.

47
00:03:13,980 --> 00:03:17,960
These are the power users; the engineers that look at the health

48
00:03:17,980 --> 00:03:22,000
of the vehicle; the health of the spacecraft. [Timothy Clinger] Well launch can slip

49
00:03:22,020 --> 00:03:26,040
for several reasons. The main reason would be a

50
00:03:26,060 --> 00:03:30,080
mechanical or electrical anomaly of the vehicle. We have

51
00:03:30,100 --> 00:03:34,110
slips due to weather. If any of the vehicle engineering

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00:03:34,130 --> 00:03:38,120
disciplines were not ready to go for a launch, then we would certainly

53
00:03:38,140 --> 00:03:42,130
not be in a posture to launch the vehicle at that time...[Andre Dress] Ok, copy...

54
00:03:42,150 --> 00:03:46,180
[Andre Dress/NASA Launch Manager] GOM, this is NLM, Goddard Internal

55
00:03:46,200 --> 00:03:50,210
[Kathleen McIntyre] This is GOM, go ahead. [Andre] Yes, we just confirmed with the SLDD

56
00:03:50,230 --> 00:03:54,390
that tanking has started. [Kathleen] Copy that, thank you NLM.

57
00:03:54,410 --> 00:03:58,420
[Andre Dress] Hey, welcome to the Mission Director’s Center.

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00:03:58,440 --> 00:04:02,620
In this facility is where the management teams will reside

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00:04:02,640 --> 00:04:06,720
and make decisions about the launch. On the screens upfront, we actually

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00:04:06,740 --> 00:04:10,760
are monitoring the launch vehicle activities.On these consoles here what you see,

61
00:04:10,780 --> 00:04:14,790
communicate with different areas either in Suitland

62
00:04:14,810 --> 00:04:18,840
or the Delta Operation Center or at the Astrotech facility.

63
00:04:18,860 --> 00:04:22,890

(Andre to Kathleen): Hundreds of people are really

64
00:04:22,910 --> 00:04:26,920
involved in this process. Every one of them has to say go, right?

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00:04:26,940 --> 00:04:30,950
[Kathleen] Absolutely, absolutely. [Andre] At this point we are good to go, right?

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00:04:30,970 --> 00:04:35,040
We are good to go, right! [Silvia Stoyanova] I hope you enjoyed this tour and let’s wish

67
00:04:35,060 --> 00:04:39,210
GOES-P a successful launch! Reporting from Cape Canaveral

68
00:04:39,230 --> 00:04:43,250
Air Force Station, I am Silvia Stoyanova with NASA Goddard TV.

69
00:04:51,320 --> 00:04:47,290
Music outro.

70
00:04:51,340 --> 00:04:55,330
Music Outro.

71
00:05:03,670 --> 00:04:59,480
No sound.