
EXPLOSIVES
1.1D

1
00:00:04,160 --> 00:00:02,090
well let's look at some video now and

2
00:00:06,800 --> 00:00:04,170
Bruce if you could tell us some of what

3
00:00:10,669 --> 00:00:06,810
we're seeing here is what we did to get

4
00:00:14,390 --> 00:00:10,679
ready to fly tonight ok this is the

5
00:00:18,920 --> 00:00:14,400
Delta 2 1st stage it's manufactured in

6
00:00:22,640 --> 00:00:18,930
Decatur and shipped to building 836 at

7
00:00:24,279 --> 00:00:22,650
Vandenberg Air Force Base and right now

8
00:00:29,089 --> 00:00:24,289
they're going to lift it off the

9
00:00:33,590 --> 00:00:29,099
transport truck and then they'll back in

10
00:00:35,080 --> 00:00:33,600
this transport director and they'll go

11
00:00:38,569 --> 00:00:35,090
ahead and move it over to the horizontal

12
00:00:40,310 --> 00:00:38,579
processing facility and over there

13
00:00:45,680 --> 00:00:40,320

they'll do receive an inspection and

14
00:00:47,569 --> 00:00:45,690
they'll install some ordinance and do

15
00:00:49,459 --> 00:00:47,579
some additional preparation before they

16
00:00:52,310 --> 00:00:49,469
move it to the launch pad so we're back

17
00:00:54,080 --> 00:00:52,320
at eight thirty six again and this looks

18
00:00:58,660 --> 00:00:54,090
to be the second stage of the Delta to

19
00:01:02,209 --> 00:00:58,670
launch vehicle and they'll go ahead and

20
00:01:04,609 --> 00:01:02,219
take this out of the vehicle and again

21
00:01:07,670 --> 00:01:04,619
put it on a one of those yellow

22
00:01:10,330 --> 00:01:07,680
transporters and prepare it for its move

23
00:01:14,359 --> 00:01:10,340
out to the launch pad this is also

24
00:01:16,070 --> 00:01:14,369
manufactured in Decatur and this looks

25
00:01:19,969 --> 00:01:16,080
like we're already on to the payload

26
00:01:21,560 --> 00:01:19,979
fairing this is one half and the metal

27
00:01:24,350 --> 00:01:21,570
structure you see there around the

28
00:01:28,670 --> 00:01:24,360
fairing is what we call strong back it's

29
00:01:31,429 --> 00:01:28,680
just a handling fixer and this is the

30
00:01:34,550 --> 00:01:31,439
first of the fairing happs going up the

31
00:01:36,260 --> 00:01:34,560
side of the launch tower you can see

32
00:01:41,300 --> 00:01:36,270
that the fairings are in a protective

33
00:01:43,639 --> 00:01:41,310
bagging so we actually leave the clean

34
00:01:46,160 --> 00:01:43,649
facility with three bags on the payload

35
00:01:49,010 --> 00:01:46,170
fairing this is an item we have to keep

36
00:01:51,170 --> 00:01:49,020
extremely clean and then just before we

37
00:01:53,810 --> 00:01:51,180
hoist it up the tower we remove one of

38
00:01:57,679 --> 00:01:53,820

those bags and then here you can see it

39
00:02:00,280 --> 00:01:57,689
coming into the white room and once this

40
00:02:03,620 --> 00:02:00,290
white room is clean and stabilized

41
00:02:06,679 --> 00:02:03,630
they'll remove one more bag and it'll

42
00:02:08,570 --> 00:02:06,689
stay over here stowed until it's time to

43
00:02:11,680 --> 00:02:08,580
install the payload fairing around the

44
00:02:17,020 --> 00:02:15,370
so this here is the first stage this is

45
00:02:23,680 --> 00:02:17,030
time it's headed out to the launch pad

46
00:02:26,740 --> 00:02:23,690
and see what you see here is the top of

47
00:02:30,160 --> 00:02:26,750
the first stage fuel tank this stage

48
00:02:32,380 --> 00:02:30,170
uses rp1 and liquid oxygen so you have

49
00:02:35,170 --> 00:02:32,390
an RP one tank on top and liquid oxygen

50
00:02:36,700 --> 00:02:35,180
tank on the bottom and there's a good

51
00:02:41,320 --> 00:02:36,710
shot at the pratt & whitney rocketdyne

52
00:02:43,540 --> 00:02:41,330
are as 27a engine so this will be

53
00:02:50,470 --> 00:02:43,550
hoisted up into the mobile service tower

54
00:02:53,860 --> 00:02:50,480
and this uh this stage is about eight

55
00:02:56,950 --> 00:02:53,870
feet in diameter and now what we see

56
00:03:01,870 --> 00:02:56,960
here is the first stage being lowered

57
00:03:05,440 --> 00:03:01,880
down on to the launch mountain and this

58
00:03:08,680 --> 00:03:05,450
is the interstage here the interstage is

59
00:03:10,690 --> 00:03:08,690
really just a hollow cylinder and this

60
00:03:14,200 --> 00:03:10,700
will be hoisted up on top of the first

61
00:03:16,750 --> 00:03:14,210
stage and the open cylinder allows room

62
00:03:22,030 --> 00:03:16,760
for the second stage engine nozzle to

63
00:03:25,449 --> 00:03:22,040

fit inside of it so now we have one of

64
00:03:29,650 --> 00:03:25,459
the solid motors these are manufactured

65
00:03:33,400 --> 00:03:29,660
by alliant techsystems and the NPP

66
00:03:37,380 --> 00:03:33,410
rocket uses nine of these strapon solids

67
00:03:41,320 --> 00:03:37,390
and each solid adds an additional

68
00:03:45,740 --> 00:03:41,330
110,000 pounds of thrust to our NP p

69
00:03:48,620 --> 00:03:45,750
delta tube launch vehicle so

70
00:03:51,760 --> 00:03:48,630
these solids are 40 inch solids these

71
00:03:55,670 --> 00:03:51,770
are the standard graphite epoxy monitors

72
00:03:59,510 --> 00:03:55,680
as opposed to the larger Delta too heavy

73
00:04:03,080 --> 00:03:59,520
solids and there are about 40 feet tall

74
00:04:05,870 --> 00:04:03,090
and they'll go ahead and made them over

75
00:04:10,790 --> 00:04:05,880
a period of three to four days all nine

76
00:04:14,090 --> 00:04:10,800
salads so this is the Delta to second

77
00:04:15,530 --> 00:04:14,100
stage out at the launch pad now what you

78
00:04:20,090 --> 00:04:15,540
see there's the top of the guidance

79
00:04:23,860 --> 00:04:20,100
section it houses the the launch vehicle

80
00:04:29,390 --> 00:04:23,870
avionics and it's good shot there the

81
00:04:33,350 --> 00:04:29,400
Aerojet AJ ten engine this engine is

82
00:04:36,380 --> 00:04:33,360
hypergolic engine uses air zeen 50 and

83
00:04:39,220 --> 00:04:36,390
nitrogen tetroxide and here you see it

84
00:04:42,050 --> 00:04:39,230
being lowered down into the interstage

85
00:04:45,740 --> 00:04:42,060
and this is our spacecraft being

86
00:04:51,260 --> 00:04:45,750
transported to the pad this was on the

87
00:04:53,570 --> 00:04:51,270
morning of october 13 and we had been

88
00:04:55,880 --> 00:04:53,580

fighting some wind issues this week so

89
00:04:58,670 --> 00:04:55,890
we transported very early that morning

90
00:05:00,140 --> 00:04:58,680
but we had to wait down at the bottom of

91
00:05:05,150 --> 00:05:00,150
the tower in order for the winds to

92
00:05:09,530 --> 00:05:05,160
subside to an acceptable level so what

93
00:05:12,830 --> 00:05:09,540
you see now is the spacecraft inside the

94
00:05:16,159 --> 00:05:12,840
transport canister being lowered down on

95
00:05:18,469 --> 00:05:16,169
to the delta T second stage and here's a

96
00:05:21,920 --> 00:05:18,479
beautiful shot of the NPP space ground

97
00:05:24,890 --> 00:05:21,930
and what we're doing now is we're going

98
00:05:28,100 --> 00:05:24,900
to move this protective fairing and

99
00:05:31,310 --> 00:05:28,110
encapsulate the space crab and this

100
00:05:34,760 --> 00:05:31,320
fairing will remain on and we're in this

101
00:05:36,320 --> 00:05:34,770
configuration now until about five

102
00:05:40,520 --> 00:05:36,330
minutes into the launch when its

103
00:05:44,450 --> 00:05:40,530
jettisoned and I think that's pretty

104
00:05:46,510 --> 00:05:44,460
much it Bruce what would be you think

105
00:05:49,580 --> 00:05:46,520
will be the highlight for you in the

106
00:05:52,520 --> 00:05:49,590
launch tonight what will you be watching

107
00:05:55,159 --> 00:05:52,530
for that I think will probably be what

108
00:05:57,350 --> 00:05:55,169
you'd say is is the crescendo for you

109
00:05:58,839 --> 00:05:57,360
and all of the activity to get ready to

110
00:06:01,399 --> 00:05:58,849
fly tonight

111
00:06:04,429 --> 00:06:01,409
well there's so much that goes into it

112
00:06:06,769 --> 00:06:04,439
from all the different teams you know

113
00:06:08,749 --> 00:06:06,779

spacecraft has been working to prepare

114
00:06:11,919 --> 00:06:08,759
these instruments in the spacecraft for

115
00:06:14,929 --> 00:06:11,929
so long and the United Launch Alliance

116
00:06:17,959 --> 00:06:14,939
folks have worked so hard to get this

117
00:06:19,879 --> 00:06:17,969
rocket letty ready and the launch

118
00:06:22,399 --> 00:06:19,889
services program has pulled the two

119
00:06:24,619 --> 00:06:22,409
together here and you know we're one

120
00:06:27,079 --> 00:06:24,629
team and I don't think anybody's going

121
00:06:30,379 --> 00:06:27,089
to be happy until we see that spacecraft

122
00:06:31,459 --> 00:06:30,389
safely on orbit and operating and we

123
00:06:34,719 --> 00:06:31,469
should know the health of that

124
00:06:38,299 --> 00:06:34,729
spacecraft about 90 minutes after launch

125
00:06:41,179 --> 00:06:38,309
Ruth thank you very much and now best of

126
00:06:44,299 --> 00:06:41,189
luck of course Bruce read the mission

127
00:06:47,779 --> 00:06:44,309
manager for NPP for our NASA's launch

128
00:06:50,899 --> 00:06:47,789
services program at Kennedy at t minus