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1
00:00:00,000 --> 00:00:04,354
MUSIC.

2
00:00:04,554 --> 00:00:05,819
So what we have right here is the

3
00:00:06,019 --> 00:00:07,187
Launch Vehicle Stage Adapter which

4
00:00:07,387 --> 00:00:09,347
is the initial adapter above the

5
00:00:09,547 --> 00:00:11,523
launch vehicle and that also holds

6
00:00:11,723 --> 00:00:14,556
the upper stage that is nestled

7
00:00:14,756 --> 00:00:16,056
inside of there so when we get in

8
00:00:16,256 --> 00:00:17,994
to orbit it will separate and come

9
00:00:18,194 --> 00:00:19,794
out of the Launch Vehicle Stage

10
00:00:19,994 --> 00:00:21,675
Adapter and again put the Orion

11
00:00:21,875 --> 00:00:23,083
Crew Capsule on its orbit.

12
00:00:23,283 --> 00:00:24,479
Now we're very proud of that

13
00:00:24,679 --> 00:00:25,987

adapter along with the Orion

14
00:00:26,187 --> 00:00:27,939
Stage Adapter…we built both of

15
00:00:28,139 --> 00:00:29,283
those adapters here at Marshall

16
00:00:29,483 --> 00:00:30,500
Space Flight Center using some

17
00:00:30,700 --> 00:00:32,532
friction stir welding capability

18
00:00:32,732 --> 00:00:35,435
that we have. So the panels were

19
00:00:35,635 --> 00:00:37,052
made out in California. They are

20
00:00:37,252 --> 00:00:38,523
a lightweight aluminum alloy.

21
00:00:38,723 --> 00:00:40,179
And then they’re shipped here to

22
00:00:40,379 --> 00:00:41,035
Marshall Space Flight Center.

23
00:00:41,235 --> 00:00:43,035
Then we weld eight panels on the

24
00:00:43,235 --> 00:00:44,579
aft cone, eight panels on the

25
00:00:44,779 --> 00:00:45,842
forward cone and then we weld

26
00:00:46,042 --> 00:00:47,707
the two cones together. And then

27
00:00:47,907 --> 00:00:49,795
we go through an analysis phase.

28
00:00:49,995 --> 00:00:51,420
But then we want to make sure

29
00:00:51,620 --> 00:00:52,908
that analysis is accurate so

30
00:00:53,108 --> 00:00:53,955
that’s why we perform these

31
00:00:54,155 --> 00:00:56,051
structural test articles, so we

32
00:00:56,251 --> 00:00:58,354
can actually apply loads, greater

33
00:00:58,554 --> 00:01:00,027
than what we expect to see during

34
00:01:00,227 --> 00:01:01,787
the mission, to prove that we have

35
00:01:01,987 --> 00:01:03,475
sufficient margin to assure mission

36
00:01:03,675 --> 00:01:04,963
success. We have been doing

37
00:01:05,163 --> 00:01:06,195
instrumentation for about three months

38
00:01:06,395 --> 00:01:08,348

on this Launch Vehicle Stage Adapter

39
00:01:08,548 --> 00:01:10,162
and now we are getting ready to lift

40
00:01:10,362 --> 00:01:12,547
it and put it on the KMAG and transport

41
00:01:12,747 --> 00:01:14,555
it to the test stand. So once we get it

42
00:01:14,755 --> 00:01:16,690
to the test area we will have to de-mate

43
00:01:16,890 --> 00:01:19,233
it from the KMAGS and then we will begin

44
00:01:19,433 --> 00:01:22,074
the process of attaching the 300 ton

45
00:01:22,274 --> 00:01:24,154
mobile crane and lifting it and putting

46
00:01:24,354 --> 00:01:27,346
it into 4699 test stack. And then we

47
00:01:27,546 --> 00:01:29,274
will apply all the loads that are required

48
00:01:29,474 --> 00:01:31,539
of us and collect all the data. Then we

49
00:01:31,739 --> 00:01:33,787
will turn all that data over to the stress

50
00:01:33,987 --> 00:01:37,747
analysts, which is NASA, Teledyne Brown

51
00:01:37,947 --> 00:01:40,082
Engineering, United Launch Alliance with

52
00:01:40,282 --> 00:01:41,522
Boeing. So there’s actually several test

53
00:01:41,722 --> 00:01:46,739
requesters for this test that are responsible

54
00:01:46,939 --> 00:01:48,739
for different pieces of the test stack, that