1
00:00:08,450 --> 00:00:18,380
member

2
00:00:23,069 --> 00:00:20,760
I'm Laurie man and I'm bill hubscher

3
00:00:24,839 --> 00:00:23,079
welcome to focus on Marshall on today's

4
00:00:27,269 --> 00:00:24,849
program we're going to show you how this

5
00:00:29,070 --> 00:00:27,279
long tube helps us see deeper into space

6
00:00:30,720 --> 00:00:29,080
first let's stay a little closer to home

7
00:00:32,280 --> 00:00:30,730
and head over to the east text area

8
00:00:35,009 --> 00:00:32,290
where they're preparing for some testing

9
00:00:37,200 --> 00:00:35,019
to return us to the moon we're here in

10
00:00:38,490 --> 00:00:37,210
the East test area at SL 103 where

11
00:00:40,049 --> 00:00:38,500
they're preparing for some crew launch

12
00:00:41,729 --> 00:00:40,059
vehicle testing I'm here with that

13
00:00:43,410 --> 00:00:41,739

Johnson one of the test engineers out

14
00:00:45,660 --> 00:00:43,420
here tell me about the capabilities that

15
00:00:47,850 --> 00:00:45,670
we have here the test sales in general

16
00:00:51,029 --> 00:00:47,860
are set up for customers that have test

17
00:00:53,459 --> 00:00:51,039
articles that have limited thrust and

18
00:00:55,830 --> 00:00:53,469
require minimal quantities of

19
00:00:57,840 --> 00:00:55,840
propellants and in a lot of cases the

20
00:00:59,369 --> 00:00:57,850
test cells can actually be more

21
00:01:01,200 --> 00:00:59,379
affordable to our customers because

22
00:01:02,910 --> 00:01:01,210
they're easier to modify and prepare for

23
00:01:04,889 --> 00:01:02,920
tests rather than some of the larger

24
00:01:06,870 --> 00:01:04,899
facilities that we have how is this

25
00:01:08,730 --> 00:01:06,880
facility unique well in this case in

26
00:01:10,529 --> 00:01:08,740
sesa 103 what we've done is we've set up

27
00:01:12,600 --> 00:01:10,539
a test fixture specifically for this

28
00:01:14,999 --> 00:01:12,610
augmented spark igniter test project and

29
00:01:18,510 --> 00:01:15,009
it is a gaseous hydrogen gaseous oxygen

30
00:01:19,850 --> 00:01:18,520
system specifically for that testing and

31
00:01:22,859 --> 00:01:19,860
this is in preparation for the upcoming

32
00:01:23,820 --> 00:01:22,869
j-2x engine development program all

33
00:01:25,770 --> 00:01:23,830
right let's take a look at some of the

34
00:01:29,160 --> 00:01:25,780
hardware here we have a vacuum chamber

35
00:01:31,350 --> 00:01:29,170
tell me about that this is the test

36
00:01:34,020 --> 00:01:31,360
article here here this is a SME igniter

37
00:01:36,089 --> 00:01:34,030
and it's attached to a three foot vacuum

38
00:01:39,900 --> 00:01:36,099

chamber and what we're doing now is

39
00:01:42,419 --> 00:01:39,910
where we're running igniters tests and

40
00:01:44,820 --> 00:01:42,429
we're varying the altitude conditions

41
00:01:47,609 --> 00:01:44,830
using a vacuum chamber to vary the back

42
00:01:49,919 --> 00:01:47,619
pressure on the igniter and we're also

43
00:01:53,609 --> 00:01:49,929
varying the mixture ratio of the igniter

44
00:01:55,740 --> 00:01:53,619
to investigate the sensitivity of the

45
00:01:59,550 --> 00:01:55,750
igniter itself to altitude and mixture

46
00:02:01,529 --> 00:01:59,560
ratio how will this be used in the crew

47
00:02:03,570 --> 00:02:01,539
launch vehicle program well this is a

48
00:02:05,609 --> 00:02:03,580
precursor this testing is precursor for

49
00:02:06,779 --> 00:02:05,619
the j2 program right now we're going to

50
00:02:08,699 --> 00:02:06,789
we're getting up on the learning curve

51
00:02:10,680 --> 00:02:08,709
to understand to get the facility setup

52
00:02:12,360 --> 00:02:10,690
to get it operating correctly to

53
00:02:16,080 --> 00:02:12,370
understand some of these sensitivities

54
00:02:18,479 --> 00:02:16,090
that I've described earlier and we're

55
00:02:21,150 --> 00:02:18,489
preparing for the j2 hardware to arrive

56
00:02:23,430 --> 00:02:21,160
okay answer those of us who don't know

57
00:02:25,170 --> 00:02:23,440
tell me what an ignitor test is well in

58
00:02:27,960 --> 00:02:25,180
this case what we're doing is ssme

59
00:02:29,820 --> 00:02:27,970
igniter is we're varying the chamber

60
00:02:31,860 --> 00:02:29,830
pressure to simulate altitude conditions

61
00:02:33,930 --> 00:02:31,870
and we can also vary the mixture ratio

62
00:02:35,820 --> 00:02:33,940
to the igniter to investigate the

63
00:02:38,310 --> 00:02:35,830

sensitivity of the igniter to those

64
00:02:40,170 --> 00:02:38,320
conditions and that's important because

65
00:02:43,620 --> 00:02:40,180
with the j2 engine development program

66
00:02:46,050 --> 00:02:43,630
the igniter will have to be developed

67
00:02:47,520 --> 00:02:46,060
and tested and evaluated to ensure that

68
00:02:50,460 --> 00:02:47,530
it will line under the conditions

69
00:02:51,720 --> 00:02:50,470
required for flight so a lot of testing

70
00:02:54,300 --> 00:02:51,730
going on you're going to be pretty busy