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1
00:00:00,000 --> 00:00:02,164
The avionics ring allows us to place the

2
00:00:02,199 --> 00:00:03,940
avionics like they would be in the real

3
00:00:03,975 --> 00:00:06,588
vehicle, so we have an engine section,

4
00:00:06,623 --> 00:00:08,468
we have all the shelves like the engine

5
00:00:08,503 --> 00:00:10,940
section, we have the cables routed like

6
00:00:10,975 --> 00:00:13,501
they would be on the real vehicle, we

7
00:00:13,536 --> 00:00:15,997
have the intertank section with cables

8
00:00:16,032 --> 00:00:18,300
routed in there and the shelves in place.\h

9
00:00:18,335 --> 00:00:22,003
We have 26 avionics boxes installed.

10
00:00:22,038 --> 00:00:24,736
These are boxes that are just like what

11
00:00:24,771 --> 00:00:27,033
will go on the rocket but they are not the

12
00:00:27,068 --> 00:00:29,713
actual flight boxes. These will never fly

13
00:00:29,748 --> 00:00:31,593

on the actual rocket. We connect them

14
00:00:31,628 --> 00:00:33,241
into the system because it’s the first

15
00:00:33,276 --> 00:00:34,921
time they’ve ever been integrated with

16
00:00:34,956 --> 00:00:36,569
other flight boxes so we can see and

17
00:00:36,604 --> 00:00:39,801
determine how they will actually.

18
00:00:39,836 --> 00:00:42,689
We can add winds, we can add rain,

19
00:00:42,724 --> 00:00:46,312
we can add all kinds of different things.

20
00:00:46,347 --> 00:00:48,065
We’ve got hundreds of models that

21
00:00:48,100 --> 00:00:51,272
we can introduce different environments

22
00:00:51,307 --> 00:00:54,241
basically and the models will tell us

23
00:00:54,276 --> 00:00:55,583
how something’s going to work.

24
00:00:55,618 --> 00:00:57,465
We can actually go in and tell one of

25
00:00:57,500 --> 00:00:59,113
the flight computers to shut down and

26
00:00:59,148 --> 00:01:00,608
we can see how rocket’s going to run

27
00:01:00,643 --> 00:01:02,041
or fly with the other two.

28
00:01:02,076 --> 00:01:04,553
As we design this we felt like we needed

29
00:01:04,588 --> 00:01:06,633
the access to the flight computers which

30
00:01:06,668 --> 00:01:08,841
are in the forward skirt that is a common

31
00:01:08,876 --> 00:01:11,712
area we needed to work on so we

32
00:01:11,747 --> 00:01:14,992
inverted our vehicle. Forward skirt is on

33
00:01:15,027 --> 00:01:17,399
the bottom of our vehicle, inner tank is

34
00:01:17,434 --> 00:01:18,728
in the middle and the engine compartment

35
00:01:18,763 --> 00:01:20,256
is all up on the upper section of it.

36
00:01:20,291 --> 00:01:22,344
So our rocket is flying upside down.

37
00:01:22,379 --> 00:01:24,336
The electronics don’t really care the only

38
00:01:24,371 --> 00:01:26,951

difference is how we route the systems

39
00:01:26,986 --> 00:01:28,104
tunnel cables.

40
00:01:28,139 --> 00:01:30,288
It’s nice that it is organized, everyone

41
00:01:30,323 --> 00:01:32,368
knows what they’re doing really and

42
00:01:32,403 --> 00:01:34,808
there’s like a structure. So one guy

43
00:01:34,843 --> 00:01:37,120
does this type of test, we have another

44
00:01:37,155 --> 00:01:39,505
guy does this type of test and it works

45
00:01:39,540 --> 00:01:40,977
out really well. Everyone works good

46
00:01:41,012 --> 00:01:42,200
with each other.

47
00:01:42,235 --> 00:01:44,815
It’s pretty huge, pretty huge. I mean the

48
00:01:44,850 --> 00:01:46,656
amount of force and mass that you are

49
00:01:46,691 --> 00:01:48,856
lifting, it’s pretty exciting for a

50
00:01:48,891 --> 00:01:51,192
mechanical engineer.To know that we are

51
00:01:51,227 --> 00:01:53,039
actually building a rocket that could

52
00:01:53,074 --> 00:01:55,216
in fact make it to Mars is exciting.

53
00:01:55,251 --> 00:01:56,585
It’s something that has never

54
00:01:56,620 --> 00:01:59,472
been before and I’m really proud to be

55
00:01:59,507 --> 00:02:01,783
working on a project for that.

56
00:02:01,818 --> 00:02:04,208
I love it! It’s like a dream come true

57
00:02:04,243 --> 00:02:06,055
because when I was a little kid I grew up

58
00:02:06,090 --> 00:02:08,552
in central Florida right near Kennedy

59
00:02:08,587 --> 00:02:10,112
Space Center so we would see every

60
00:02:10,147 --> 00:02:11,920
rocket launch, every shuttle launch and

61
00:02:11,955 --> 00:02:15,385
I always wanted to be one of the people

62
00:02:15,420 --> 00:02:17,321
helps build the rocket or whatever and

63
00:02:17,356 --> 00:02:19,991

here I am and it’s like the best feeling ever.

64
00:02:20,026 --> 00:02:22,296
I am a mechanical engineer and I grew

65
00:02:22,331 --> 00:02:25,096
up building Legos my entire life, even little