1
00:00:00,000 --> 00:00:03,635
What we are doing today is we're

2
00:00:03,670 --> 00:00:06,332
actually making our first

3
00:00:06,367 --> 00:00:08,563
self-reacting friction stir weld

4
00:00:08,598 --> 00:00:11,627
of the ring to the body of the

5
00:00:11,662 --> 00:00:14,924
adapter. We're building at

6
00:00:14,959 --> 00:00:16,611
Marshall the actual piece of

7
00:00:16,646 --> 00:00:18,563
hardware that adapts the Delta IV

8
00:00:18,598 --> 00:00:21,587
rocket to the MPCV spacecraft.

9
00:00:21,622 --> 00:00:23,707
This is an important milestone

10
00:00:23,742 --> 00:00:25,812
because this is the first time

11
00:00:25,847 --> 00:00:27,099
we'll be doing a full

12
00:00:27,134 --> 00:00:28,828
circumferential weld on our

13
00:00:28,863 --> 00:00:30,684

multi-purpose crew vehicle

14
00:00:30,719 --> 00:00:33,283
spacecraft adapter 'pathfinder'

15
00:00:33,318 --> 00:00:35,963
hardware. The Pathfinder is being

16
00:00:35,998 --> 00:00:38,027
used to develop the processes and

17
00:00:38,062 --> 00:00:39,396
the techniques that we're going

18
00:00:39,431 --> 00:00:40,347
to use on the actual flight

19
00:00:40,382 --> 00:00:41,507
hardware that will fly on the

20
00:00:41,542 --> 00:00:43,692
EFT-1 test flight. You don't want

21
00:00:43,727 --> 00:00:45,228
to go into building flight

22
00:00:45,263 --> 00:00:47,267
hardware with any questions, so

23
00:00:47,302 --> 00:00:48,467
that's what you do in development.

24
00:00:48,502 --> 00:00:49,915
You're actually answering questions

25
00:00:49,950 --> 00:00:51,859
and providing risk mitigation for

26
00:00:51,894 --> 00:00:53,308
when you actually do get into

27
00:00:53,343 --> 00:00:54,603
production or building the flight

28
00:00:54,638 --> 00:00:56,067
hardware. We've made the vertical

29
00:00:56,102 --> 00:00:59,691
welds on a different tool and those

30
00:00:59,726 --> 00:01:01,123
turned out very well. However, a

31
00:01:01,158 --> 00:01:02,491
circumferential weld is a little

32
00:01:02,526 --> 00:01:03,771
more difficult. For one thing, it

33
00:01:03,806 --> 00:01:05,539
goes the entire circumference, so

34
00:01:05,574 --> 00:01:07,452
it's much longer. Once you start,

35
00:01:07,487 --> 00:01:08,948
you need to complete the whole weld.

36
00:01:08,983 --> 00:01:10,811
We want to make sure, with our

37
00:01:10,846 --> 00:01:12,715
pathfinder, that we've got the

38
00:01:12,750 --> 00:01:15,154

processes in place to do this

39
00:01:15,189 --> 00:01:17,099
successfully on the flight hardware.

40
00:01:17,134 --> 00:01:19,339
We do not compete with private

41
00:01:19,374 --> 00:01:21,211
industry in terms of building

42
00:01:21,246 --> 00:01:23,075
hardware. That's production. The

43
00:01:23,110 --> 00:01:24,355
government doesn't do production,

44
00:01:24,390 --> 00:01:26,299
but we do do the development. If

45
00:01:26,334 --> 00:01:27,835
you build the expertise, you have

46
00:01:27,870 --> 00:01:29,154
the expertise in terms of the

47
00:01:29,189 --> 00:01:30,483
welding engineers, the materials

48
00:01:30,518 --> 00:01:32,435
engineers, the mechanical engineers,

49
00:01:32,470 --> 00:01:35,499
the welders, the technicians and

50
00:01:35,534 --> 00:01:37,275
the hardware people, you build

51
00:01:37,310 --> 00:01:39,355
that type of expertise and you

52
00:01:39,390 --> 00:01:41,068
can actually manage your programs

53
00:01:41,103 --> 00:01:42,403
better because you have the