



1
00:00:09,320 --> 00:00:07,909
hi I'm Ben Toma the mechanical lead here

2
00:00:11,870 --> 00:00:09,330
for the assembly test and launch

3
00:00:14,240 --> 00:00:11,880
operations of curiosity the next Mars

4
00:00:15,829 --> 00:00:14,250
rover so just recently we installed the

5
00:00:17,990 --> 00:00:15,839
robotic arm that was a major milestone

6
00:00:19,609 --> 00:00:18,000
for the project not only for the

7
00:00:21,830 --> 00:00:19,619
engineers that worked on this arm for

8
00:00:23,300 --> 00:00:21,840
years designing assembling it and

9
00:00:24,109 --> 00:00:23,310
finally delivering it but for the

10
00:00:26,750 --> 00:00:24,119
project as a whole

11
00:00:28,609 --> 00:00:26,760
having the arm on the rover is a huge

12
00:00:30,500 --> 00:00:28,619
accomplishment now we'll be able to

13
00:00:32,720 --> 00:00:30,510

begin the testing of that arm while it's

14

00:00:35,000 --> 00:00:32,730

on curiosity it's a very complicated

15

00:00:37,220 --> 00:00:35,010

very tricky maneuver to actually put the

16

00:00:38,900 --> 00:00:37,230

arm on the rover we use a crane from

17

00:00:41,660 --> 00:00:38,910

above because this arm is so heavy

18

00:00:43,190 --> 00:00:41,670

we need to delicately bring it over and

19

00:00:44,660 --> 00:00:43,200

actually secure it to the front of the

20

00:00:46,369 --> 00:00:44,670

rover we're gonna go through a series of

21

00:00:48,650 --> 00:00:46,379

electrical and functional tests where

22

00:00:50,660 --> 00:00:48,660

the arm will actually be exercised it'll

23

00:00:53,720 --> 00:00:50,670

move around we'll start to learn how to

24

00:00:55,850 --> 00:00:53,730

use the arm with curiosity the arm is

25

00:00:57,889 --> 00:00:55,860

really one of the fundamental parts of

26

00:00:59,360 --> 00:00:57,899

our ability to gather the science at the

27

00:01:02,420 --> 00:00:59,370

end of the arm there's several different

28

00:01:04,759 --> 00:01:02,430

instruments there's a camera there's a

29

00:01:06,830 --> 00:01:04,769

spectrometer and there's a drill that

30

00:01:09,380 --> 00:01:06,840

will deliver samples up to the other

31

00:01:11,149 --> 00:01:09,390

instruments on the rover so without the

32

00:01:12,350 --> 00:01:11,159

arm we wouldn't be able to do a good

33

00:01:14,570 --> 00:01:12,360

portion of the science that we're

34

00:01:16,010 --> 00:01:14,580

actually going to Mars for there's still

35

00:01:17,810 --> 00:01:16,020

a lot of activities that we have ahead

36

00:01:19,460 --> 00:01:17,820

of us a lot of testing while we're

37

00:01:21,620 --> 00:01:19,470

working on the rover down here in this

38

00:01:23,749 --> 00:01:21,630

facility we have the cruise stage which

39

00:01:26,120 --> 00:01:23,759

is the device that actually takes the

40

00:01:27,469 --> 00:01:26,130

entire spacecraft to Mars that's

41

00:01:30,940 --> 00:01:27,479

currently going through a thermal vacuum

42

00:01:33,710 --> 00:01:30,950

test up in our 25-foot space simulator

43

00:01:35,749 --> 00:01:33,720

this is a big morale boost over the last

44

00:01:37,609 --> 00:01:35,759

couple of months we've finally seen some

45

00:01:39,469 --> 00:01:37,619

of the major pieces of hardware get put

46

00:01:41,300 --> 00:01:39,479

on this Rover going back for the last

47

00:01:43,609 --> 00:01:41,310

couple of years we focused a lot of our

48

00:01:45,710 --> 00:01:43,619

attention on the inside of the rover all

49

00:01:48,440 --> 00:01:45,720

the electronics the telecommunications

50

00:01:50,030 --> 00:01:48,450

the thermal control system just in the

51
00:01:52,190 --> 00:01:50,040
last couple of months as you've seen

52
00:01:54,139 --> 00:01:52,200
we've installed the mobility system the

53
00:01:55,819 --> 00:01:54,149
remote sensing mask which sits up on top

54
00:01:58,039 --> 00:01:55,829
of the rover with its cameras and now

55
00:01:59,780 --> 00:01:58,049
filing the arm the rover finally

56
00:02:01,670 --> 00:01:59,790
starting to look like it doesn't all

57
00:02:03,139 --> 00:02:01,680
these beautiful animations we've seen so

58
00:02:04,730 --> 00:02:03,149
the team is very excited that these

59
00:02:07,010 --> 00:02:04,740
major accomplishments in our ability to

60
00:02:08,240 --> 00:02:07,020
move forward with testing I'm Ben Toma

61
00:02:09,889 --> 00:02:08,250
and this has been your building