1
00:00:08,340 --> 00:00:15,010
A powerful new hydrogen-fueled American rocket
was fired in a recent ground test by Blue

2
00:00:15,010 --> 00:00:21,320
Origin. Mounted on a test stand at the company's
West Texas facility, the engine performed

3
00:00:21,320 --> 00:00:28,320
a full simulated suborbital mission profile,
igniting, throttling and restarting on command.

4
00:00:29,160 --> 00:00:36,160
Controller: Four, three, two, one, ignition.

5
00:00:36,949 --> 00:00:39,550
(Engine fire)

6
00:00:39,550 --> 00:00:44,579
The engine fired at full power for over two
minutes to simulate the launch phase, then

7
00:00:44,579 --> 00:00:50,059
paused for about four minutes, mimicking a
coast through space before it re-ignited for

8
00:00:50,059 --> 00:00:56,239
a brief final burn. The last phase of the
test covered the work the engine could perform

9
00:00:56,239 --> 00:01:01,420
in landing the booster back softly on Earth.

10
00:01:01,420 --> 00:01:08,170
The BE-3 reusable engine generates 110,000
pounds of thrust by burning a mixture of liquid

11
00:01:08,170 --> 00:01:15,170
oxygen and liquid hydrogen, the same propellants

used by the space shuttle's main engines.

12
00:01:15,340 --> 00:01:20,810
Blue Origin's Orbital Launch Vehicle will
use the BE-3 engine and eventually could be

13
00:01:20,810 --> 00:01:24,679
used to launch the company's Space Vehicle
into orbit.

14
00:01:25,119 --> 00:01:30,090
The Mission Duty Cycle test is the latest
step in maturing the BE-3 engine and comes

15
00:01:30,090 --> 00:01:34,970
less than a year after the engine's thrust
chamber was successfully tested at NASA's

16
00:01:34,970 --> 00:01:38,300
Stennis Space Center in Mississippi.

17
00:01:38,300 --> 00:01:43,030
Developing a new rocket engine is one of the
most difficult aspects of space launch because

18
00:01:43,030 --> 00:01:48,349
of the dynamics involved with creating a very
powerful machine that can safely operate over

19
00:01:48,349 --> 00:01:55,349
a wide range of temperatures. To achieve its
power, the BE-3 engine operates from minus -423

20
00:01:56,140 --> 00:02:01,899
degrees fahrenheit, the temperature of liquid
hydrogen, to more than 6,000 degrees during

21
00:02:01,899 --> 00:02:04,739
firing.

22
00:02:04,739 --> 00:02:10,630
Blue Origin is an American company working
with NASA's Commercial Crew Program to test