1
00:00:02,440 --> 00:00:06,560
NARRATOR: A privately built spacecraft has never docked with a space station before,

2
00:00:06,560 --> 00:00:12,370
but that's expected to change soon as Space Exploration Technologies nears the launch of its

3
00:00:12,370 --> 00:00:15,240
second demonstration mission for NASA.

4
00:00:15,240 --> 00:00:21,410
Better known as SpaceX, the company's Dragon capsule already set records in 2010 when it

5
00:00:21,410 --> 00:00:25,970
lifted off, orbited twice and came back to Earth safely.

6
00:00:25,970 --> 00:00:31,510
That achievement is expected to be topped by this test flight which will challenge the spacecraft

7
00:00:31,510 --> 00:00:37,120
and bring NASA's plans for commercial resupply of the International Space Station a step closer

8
00:00:37,120 --> 00:00:38,950
to fruition.

9
00:00:38,950 --> 00:00:44,360
Elon Musk: I think it's just important to appreciate that this is pretty tricky.

10
00:00:44,360 --> 00:00:50,670
The space station is zooming around the earth every 90 minutes and its going 17,000 mph,

11
00:00:50,670 --> 00:00:54,720
and so you've got to launch up there and you have to rendezvous and be tracking the space

12
00:00:54,720 --> 00:00:58,030
station to within inches really.

13
00:00:58,030 --> 00:01:03,600

NARRATOR: Dragon will not carry any people, but will be loaded with 1,200 pounds of cargo.

14
00:01:03,600 --> 00:01:08,660
However, the spacecraft was designed with astronauts in mind so future spacecraft are

15
00:01:08,660 --> 00:01:14,570
expected to take people into low Earth orbit. For now, cargo is the objective.

16
00:01:14,570 --> 00:01:18,320
Mike Suffredini: This is the beginning of a long-term effort to have the commercial vehicles

17
00:01:18,320 --> 00:01:22,770
supply the ISS which is a critical need for the program.

18
00:01:22,770 --> 00:01:27,070
NARRATOR: Dragon will fly into space on the strength of a Falcon 9 rocket,

19
00:01:27,070 --> 00:01:29,280
also built by SpaceX.

20
00:01:29,280 --> 00:01:35,890
Like the Dragon, the Falcon 9 is a relatively new design that has passed its previous flight tests.

21
00:01:35,890 --> 00:01:44,700
Once in orbit, two solar arrays will unfold from the side of Dragon's trunk and the spacecraft will head toward th

22
00:01:44,700 --> 00:01:49,860
A host of tests of Dragon's navigation system will be conducted before it's allowed to take the

23
00:01:49,860 --> 00:01:54,180
milestone step of attaching to the orbiting laboratory.

24
00:01:54,180 --> 00:02:00,520
If Dragon passes the tests, it will fire its thrusters and maneuver slowly, pausing close enough to

25
00:02:00,520 --> 00:02:06,940
the station so that astronauts can grab it with a robotic arm and connect it to a station port.

26
00:02:06,940 --> 00:02:12,800
Astronauts then will remove the cargo before the spacecraft returns to Earth by parachute.