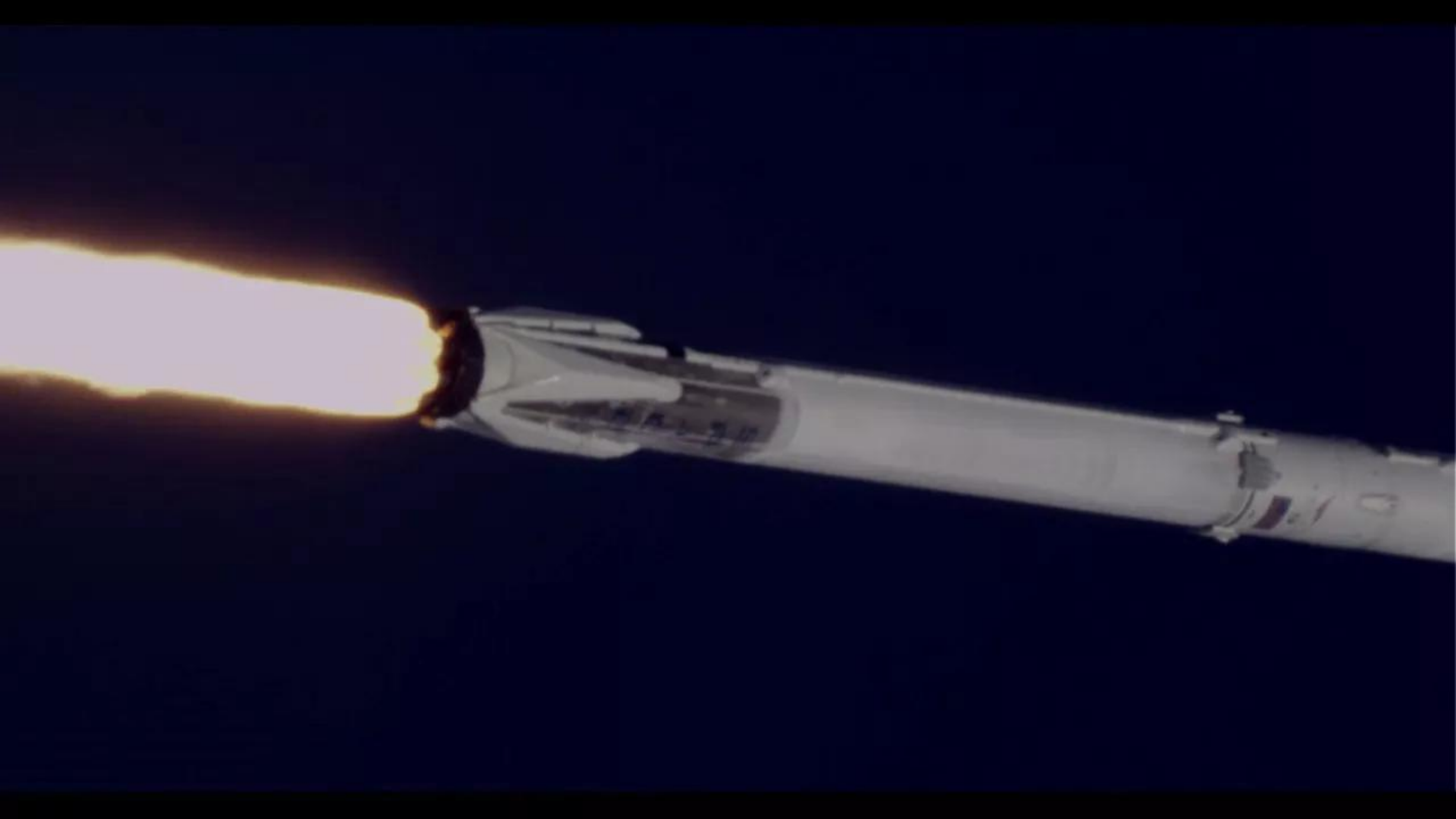

1
00:00:00,700 --> 00:00:12,269
NASA Launch Commentator Josh Finch: T-minus
10, 9, 8, 7, 6, 5, 4, 3, 2, 1 ... and liftoff

2
00:00:12,269 --> 00:00:18,350
of the Falcon 9 rocket and Dragon spacecraft,
filled with science and supplies for humanity's

3
00:00:18,350 --> 00:00:21,880
research outpost in low-Earth orbit, the International
Space Station.

4
00:00:21,880 --> 00:00:25,270
NASA Launch Commentator Mike Curie: SpaceX
ascent commentary will be provided by several

5
00:00:25,270 --> 00:00:26,270
people.

6
00:00:26,270 --> 00:00:30,430
The propulsion engineer calls out propulsion
events, the avionics engineer calls out avionics

7
00:00:30,430 --> 00:00:35,660
health and Dragon separation, the range coordinator
calls out Air Force satellite control network

8
00:00:35,660 --> 00:00:40,880
acquisition and loss of signal, and the ground
station specialist calls out the SpaceX antenna

9
00:00:40,880 --> 00:00:42,580
acquisition and loss of signal.

10
00:00:42,580 --> 00:00:48,060
Finch: And one minute, five seconds after
liftoff, Falcon 9 reaches transonic speed.

11
00:00:48,060 --> 00:00:53,050

The vehicle will pass through an area of maximum
dynamic pressure known as Max Q at one minute,

12
00:00:53,050 --> 00:00:55,170
18 seconds after liftoff.

13
00:00:55,170 --> 00:00:59,710
This is the point where mechanical stress
on the rocket reaches its peak because of

14
00:00:59,710 --> 00:01:03,220
the rocket's velocity and air resistance created
by Earth's atmosphere.

15
00:01:03,220 --> 00:01:07,979
Curie: Around two minutes, 24 seconds into
the flight, the nine Merlin engines will sequentially

16
00:01:07,979 --> 00:01:12,130
shut down and you'll hear the call, "MECO,"
which is main engine cutoff.

17
00:01:12,130 --> 00:01:17,479
The first stage will perform a boost-back
burn about 15 seconds later, heading back

18
00:01:17,479 --> 00:01:21,459
to nearby Cape Canaveral Air Force Station
Landing Zone 1.

19
00:01:21,459 --> 00:01:25,399
We'll show you the landing on NASA TV about
eight minutes after launch, accompanied by

20
00:01:25,399 --> 00:01:32,630
the sonic boom just before landing.

21
00:01:32,630 --> 00:01:57,009
Propulsion engineer: Engine chiller started.