
GFMI AEROSPACE & DEFENSE
X-56

1
00:00:00,540 --> 00:00:06,940
[Music]

2
00:00:40,399 --> 00:00:46,870
>>Today we are going to be gathering the FOSS
data, the photogrammetry, the flight accels,

3
00:00:46,870 --> 00:00:52,789
and also the ground vibration accels, all
in one test run. And we have eight tests that

4
00:00:52,789 --> 00:00:57,640
we hope to do, four different configurations:
we want to do control surface off, control

5
00:00:57,640 --> 00:01:03,259
surface on, and then two different force levels,
and we want to repeat all of those tests.

6
00:01:03,259 --> 00:01:07,600
Five, four, three, two, one, start.

7
00:01:07,600 --> 00:01:09,040
>>Photogrammetry
is recording.

8
00:01:09,960 --> 00:01:10,640
>>Go.

9
00:01:10,680 --> 00:01:12,000
>>Impact.

10
00:01:12,000 --> 00:01:13,080
[Wing vibrating]

11
00:01:13,080 --> 00:01:20,200
>>This is the X-56A Flex Wing set number three Strongback GVT, or Ground Vibration Test, doing a

12

00:01:20,220 --> 00:01:26,490
combination of shaker and impact hammer testing. The purpose of this test is to characterize both the left

13
00:01:26,490 --> 00:01:31,830
and the right flex wings, and we're gathering
data in regards to frequency, damping, mode

14
00:01:31,830 --> 00:01:34,430
shapes, and other structural dynamic properties.

15
00:01:34,430 --> 00:01:35,870
>>Shaker stopped.

16
00:01:36,040 --> 00:01:42,040
>>It's important that we do these kinds of tests, especially with this being the flexible wing. This is not

17
00:01:42,060 --> 00:01:46,959
your traditional aircraft rigid wing, so the structural
characteristics and properties will be vastly

18
00:01:46,959 --> 00:01:51,719
different. In three, two, one, impact.

19
00:01:51,719 --> 00:01:53,319
[Hammer strike]

20
00:01:53,319 --> 00:01:56,119
>>This test will actually help in our analytical

21
00:01:56,119 --> 00:02:00,479
predictions in comparing with the experimental
data. So one of our next tests will be the

22
00:02:00,479 --> 00:02:05,159
full vehicle aircraft test, and that's when
we combine the center body fuselage with both

23
00:02:05,159 --> 00:02:10,250
the left and right flex wings. Once we characterize

both the full vehicle as well as these individual