



1  
00:00:00,800 --> 00:00:09,840

[ Music ]

2  
00:00:11,170 --> 00:00:15,140

>> The purpose of this test is to test the 'Hershey Bar' test article.

3  
00:00:15,140 --> 00:00:19,540

As we load the wing, it's going to bend and twist, and so we're going to look at what

4  
00:00:19,540 --> 00:00:23,760

happens to the test article under load, bend it down, bend it up, and then do a torsion

5  
00:00:23,760 --> 00:00:25,680

load.

6  
00:00:27,109 --> 00:00:31,190

Today we're testing a composite structure, which we refer to as the 'Hershey Bar' test

7  
00:00:31,190 --> 00:00:32,250

article.

8  
00:00:32,250 --> 00:00:37,510

This test article is a representative test article of the larger Passive Aero-elastic

9  
00:00:37,510 --> 00:00:39,780

Tailored wing, which we're going to be testing next summer.

10  
00:00:39,780 --> 00:00:42,390

Okay, go ahead and add ten pounds.

11  
00:00:42,390 --> 00:00:46,340

What's unique about this composite structure is that it has tow-steer composite laminates

12

00:00:46,340 --> 00:00:47,960

on the upper and lower surface.

13

00:00:47,960 --> 00:00:52,680

This type of construction allows the wing  
to be passively aero-elastically tailored

14

00:00:52,680 --> 00:00:54,500

for aerodynamic loads.

15

00:00:54,500 --> 00:00:57,820

Add ten pounds.

16

00:01:06,800 --> 00:01:16,760

[ Music ]

17

00:01:16,760 --> 00:01:21,920

>> The purpose of this test is to investigate  
the bend-twist coupling of this particular

18

00:01:21,930 --> 00:01:23,310

composite structure.

19

00:01:23,310 --> 00:01:27,789

The overall goal of the project is to make  
more flexible wings with improved structural

20

00:01:27,789 --> 00:01:30,029

and aero-dynamic performance.