1
00:00:08,870 --> 00:00:06,309
[Music]

2
00:00:10,070 --> 00:00:08,880
hi I'm Vince whitfill with a NASA

3
00:00:13,220 --> 00:00:10,080
scientific and technical information

4
00:00:14,990 --> 00:00:13,230
program today we're at NASA Langley

5
00:00:17,359 --> 00:00:15,000
Research Center where some of NASA's

6
00:00:19,790 --> 00:00:17,369
best are working to advance and develop

7
00:00:21,830 --> 00:00:19,800
new technologies to improve our everyday

8
00:00:25,040 --> 00:00:21,840
lives and even benefit all of

9
00:00:26,660 --> 00:00:25,050
humankind's did you know NASA has been

10
00:00:29,630 --> 00:00:26,670
contributing to the advancement of the

11
00:00:31,310 --> 00:00:29,640
aviation industry for decades some of

12
00:00:33,680 --> 00:00:31,320
these environments include damage

13
00:00:36,620 --> 00:00:33,690

tolerant fan casings glass cockpits

14
00:00:38,569 --> 00:00:36,630
icing detection and even grood runways

15
00:00:40,490 --> 00:00:38,579
which have improved aircraft tire

16
00:00:43,549 --> 00:00:40,500
friction performance in wet conditions

17
00:00:45,170 --> 00:00:43,559
by as much as 300 percent a green

18
00:00:47,450 --> 00:00:45,180
related technology that was developed

19
00:00:49,700 --> 00:00:47,460
and tested here at NASA Langley is Apple

20
00:00:52,670 --> 00:00:49,710
Trudy's rod stitched efficient unitized

21
00:00:54,439 --> 00:00:52,680
structure or Perseus the stitches in

22
00:00:56,180 --> 00:00:54,449
Perseus structures are used to join

23
00:00:58,189 --> 00:00:56,190
lightweight composite material layers

24
00:01:00,279 --> 00:00:58,199
together to help in the development of

25
00:01:02,420 --> 00:01:00,289
lighter damaged tolerant aircraft

26
00:01:04,160 --> 00:01:02,430
traditionally aircraft components are

27
00:01:06,590 --> 00:01:04,170
held together using rivets and bolts

28
00:01:08,359 --> 00:01:06,600
this requires that holes be drilled into

29
00:01:09,950 --> 00:01:08,369
components which increases the

30
00:01:12,609 --> 00:01:09,960
likelihood that cracks can develop and

31
00:01:14,570 --> 00:01:12,619
pose other safety concerns over time

32
00:01:16,249 --> 00:01:14,580
Perseus would allow aircraft to be

33
00:01:18,469 --> 00:01:16,259
constructed without these fasteners

34
00:01:21,109 --> 00:01:18,479
which would assist in a lighter and

35
00:01:22,820 --> 00:01:21,119
stronger final product this reduced

36
00:01:25,130 --> 00:01:22,830
weight structure could help allow jet

37
00:01:28,249 --> 00:01:25,140
engines to burn less fuel therefore

38
00:01:29,990 --> 00:01:28,259

making it safer and greener to fly for

39
00:01:32,569 --> 00:01:30,000
more detailed information about NASA's

40
00:01:34,670 --> 00:01:32,579
Perseus composite design you can find

41
00:01:36,679 --> 00:01:34,680
the conference paper titled development

42
00:01:39,050 --> 00:01:36,689
of the Perseus multi Bey pressure box

43
00:01:42,980 --> 00:01:39,060
for a hybrid wing body vehicle on the

44
00:01:44,810 --> 00:01:42,990
nasa technical report server or mtrs the

45
00:01:46,999 --> 00:01:44,820
NT RS is one of the world's largest

46
00:01:49,130 --> 00:01:47,009
repositories of aerospace STI and

47
00:01:51,460 --> 00:01:49,140
features records dating from the NACA

48
00:01:54,230 --> 00:01:51,470
era to today's cutting edge research

49
00:02:04,050 --> 00:01:54,240
that's all for today thanks for watching