



1
00:00:00,000 --> 00:00:02,000

The shape of modern airliners has changed.

2
00:00:02,001 --> 00:00:05,001

While they may appear less streamlined,

3
00:00:05,002 --> 00:00:07,002

the shape is actually more aerodynamically effective.

4
00:00:07,003 --> 00:00:10,003

Look around the airport and you will see that

5
00:00:10,004 --> 00:00:13,004

many newer aircraft have dimples or recessed areas.

6
00:00:13,005 --> 00:00:15,005

Other have puffy areas.

7
00:00:15,006 --> 00:00:19,006

This reshaping of the fuselage results from applying

8
00:00:19,007 --> 00:00:21,007

what is known as the "Area Rule"

9
00:00:21,008 --> 00:00:22,008

and it is a NASA creation that is

10
00:00:22,009 --> 00:00:25,009

revolutionizing the look of today's air fleet.

11
00:00:25,010 --> 00:00:27,010

NASA engineers worked with the theory

12
00:00:27,011 --> 00:00:29,011

that the intersection of these points,

13
00:00:29,012 --> 00:00:31,012

wing to fuselage and others,

14

00:00:31,013 --> 00:00:33,013
were sources of increased drag,

15

00:00:33,014 --> 00:00:35,014
the force that slows down the airplane

16

00:00:35,015 --> 00:00:38,015
and/or increases fuel consumption.

17

00:00:38,016 --> 00:00:40,016
By reducing the cross section of the fuselage

18

00:00:40,017 --> 00:00:42,017
at the point of intersection,

19

00:00:42,018 --> 00:00:44,018
by narrowing the fuselage at this point,

20

00:00:45,019 --> 00:00:46,019
or increasing it everywhere but the intersections,

21

00:00:46,020 --> 00:00:48,020
we can reduce drag.

22

00:00:48,021 --> 00:00:51,021
Reducing drag equals greater speed or efficiency.

23

00:00:51,022 --> 00:00:53,022
The theory proved true.

24

00:00:53,023 --> 00:00:55,023
The results were dramatically positive

25

00:00:55,024 --> 00:00:58,024
and the proof may be as close as the next gate.

