1
00:00:00,000 --> 00:00:22,520
(Music)

2
00:00:22,540 --> 00:00:24,330
Narrator: Dr. Wayne Johnson is a rotorcraft

3
00:00:24,350 --> 00:00:26,920
pioneer and visionary.

4
00:00:26,940 --> 00:00:29,930
His legacy of rotorcraft research at NASA Ames

5
00:00:29,950 --> 00:00:32,220
continues to be of fundamental importance to the

6
00:00:32,240 --> 00:00:34,340
U.S. Army and to the international

7
00:00:34,360 --> 00:00:36,840
rotorcraft community.

8
00:00:36,860 --> 00:00:38,940
He was a key figure with the U.S. Army

9
00:00:38,960 --> 00:00:41,640
Aeromechanics Laboratory at Ames and with the

10
00:00:41,660 --> 00:00:43,960
Ames Aeromechanics Branch.

11
00:00:43,980 --> 00:00:46,690
During his tenure, Ames became a world leader in

12
00:00:46,710 --> 00:00:49,220
rotary wing technology.

13
00:00:49,240 --> 00:00:51,890

Over four decades his contributions spanned

14
00:00:51,910 --> 00:00:54,890
aeromechanical theory, computational codes,

15
00:00:54,910 --> 00:00:58,680
design tools, and wind tunnel and flight-testing.

16
00:00:58,700 --> 00:01:01,220
He wrote a series of detailed computer codes, most

17
00:01:01,240 --> 00:01:04,110
notably CAMRAD-Two, used for comprehensive

18
00:01:04,130 --> 00:01:08,110
analysis and N-D-A-R-C, which is used worldwide as

19
00:01:08,130 --> 00:01:11,350
the primary design tool for rotorcraft.

20
00:01:11,370 --> 00:01:14,370
He effectively devised a new area of research as a

21
00:01:14,390 --> 00:01:17,380
result of coupling computational fluid dynamics of

22
00:01:17,400 --> 00:01:21,880
rotors with their aeroelastic structural dynamics.

23
00:01:21,900 --> 00:01:24,480
One of Dr. Johnson's key contributions to tilt-rotor

24
00:01:24,500 --> 00:01:26,320
aircraft was the design of a

25
00:01:26,340 --> 00:01:29,980
wing-pylon-rotor system to avoid whirl flutter.

26
00:01:30,000 --> 00:01:32,240
This helped NASA Ames to validate the tilt rotor

27
00:01:32,260 --> 00:01:34,490
concept and enabled the success of

28
00:01:34,510 --> 00:01:37,100
the V-22 Osprey.

29
00:01:37,120 --> 00:01:39,280
Dr. Johnson received many awards from the

30
00:01:39,300 --> 00:01:41,290
U.S. Army, NASA, and aerospace

31
00:01:41,310 --> 00:01:43,230
professional societies.

32
00:01:43,250 --> 00:01:45,080
His theoretical work on the development of a

33
00:01:45,100 --> 00:01:47,780
comprehensive analysis for rotorcraft earned him

34
00:01:47,800 --> 00:01:52,070
the prestigious Ames H. Julian Allen Award.

35
00:01:52,090 --> 00:01:53,890
He is a Fellow of the American Institute of

36
00:01:53,910 --> 00:01:57,390
Aeronautics and Astronautics and won its 1986

37
00:01:57,410 --> 00:02:00,050
Pendray Aerospace Literature Award for his

38
00:02:00,070 --> 00:02:02,200

comprehensive and classic textbook

39
00:02:02,220 --> 00:02:04,360
"Helicopter Theory".

40
00:02:04,380 --> 00:02:07,070
To this day it remains widely used in industry and

41
00:02:07,090 --> 00:02:09,530
academia.

42
00:02:09,550 --> 00:02:12,170
He is a Fellow of the American Helicopter Society,

43
00:02:12,190 --> 00:02:15,560
which awarded him its highest honor, the 2010

44
00:02:15,580 --> 00:02:19,440
Alexander A. Nikolsky Honorary Lectureship for his

45
00:02:19,460 --> 00:02:22,880
distinguished career in vertical flight research.

46
00:02:22,900 --> 00:02:25,180
He infused the power of physics-based and

47
00:02:25,200 --> 00:02:27,880
comprehensive analysis to the design of rotorcraft

48
00:02:27,900 --> 00:02:30,960
like no other in his field.

49
00:02:30,980 --> 00:02:33,760
No individual in the world has made a greater impact

50
00:02:33,780 --> 00:02:37,700
on rotary wing technology than Dr. Wayne Johnson.

51
00:02:37,720 --> 00:02:39,710
He truly exemplifies what it means

52
00:02:39,730 --> 00:02:41,650
to be an Ames Fellow.

53
00:02:41,670 --> 00:02:45,480
(Music)