



1
00:00:02,610 --> 00:00:07,510

I have been flying for a dozen years now starting with the U-2's and the US Air Force and

2
00:00:07,510 --> 00:00:11,620

then came over to NASA to fly the ER-2.

3
00:00:11,620 --> 00:00:16,789

We fly the ER-2 and the U-2 for that matter so high that we are above Armstrong's line

4
00:00:16,789 --> 00:00:22,200

which is roughly sixty-four thousand feet, but if for some reason we lost that pressurization,

5
00:00:22,200 --> 00:00:26,990

lets say the canopy blew off, and we were exposed to the atmosphere at that altitude,

6
00:00:26,990 --> 00:00:30,450

our blood would start to boil, our bodily fluids would all start to boil, the saliva

7
00:00:30,450 --> 00:00:36,550

in our mouths would start to sizzle and boil off and we would not last very long if that

8
00:00:36,550 --> 00:00:37,560

happened.

9
00:00:37,560 --> 00:00:41,890

And what the pressure suit is there for, is to catch our bodies at roughly thirty-five

10
00:00:41,890 --> 00:00:48,140

thousand feet so if we lose all of the pressure in the aircraft, the suit would actually expand

11
00:00:48,140 --> 00:00:53,410

like a balloon and become almost ridged and
we would be inside it at the equivalent of

12

00:00:53,410 --> 00:00:54,880

thirty-five thousand feet altitude.

13

00:00:54,880 --> 00:00:59,580

It is pretty stiff, I mean just the act of
reaching down to grab the flight controls,

14

00:00:59,580 --> 00:01:05,030

or to move the throttle takes a lot of effort
cause there's a lot of force against the

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00:01:05,030 --> 00:01:06,150

suit.

16

00:01:06,150 --> 00:01:07,950

There is a lot of maintenance into it.

17

00:01:07,950 --> 00:01:10,570

It's a life support equipment.

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00:01:10,570 --> 00:01:11,570

Everything is preflighted.

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00:01:11,570 --> 00:01:12,570

We check the oxygen.

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00:01:12,570 --> 00:01:13,890

We check the pressure.

21

00:01:13,890 --> 00:01:15,360

We check the regulator.

22

00:01:15,360 --> 00:01:17,360

We check the leak rate in the suit.

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00:01:17,360 --> 00:01:22,270

Then after we put the pilot in the suit, we go through the same procedures and check all

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00:01:22,270 --> 00:01:24,050

of those parameters again.

25

00:01:24,050 --> 00:01:27,040

The philosophy is everything else can fail, this can't.

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00:01:27,040 --> 00:01:36,080

The suit is made to give us just enough mobility in the cockpit to come back down from altitude

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00:01:36,080 --> 00:01:41,400

to more normal pressures and a safer zone to come back and land.

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00:01:41,400 --> 00:01:42,510

I have been fortunate.

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00:01:42,510 --> 00:01:44,490

I have not had a loss in cabin pressure.

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00:01:44,490 --> 00:01:47,240

I have friends that have and the suit saved their lives.

31

00:01:47,240 --> 00:01:51,820

The techs that day that suited them up saved their lives.

32

00:01:51,820 --> 00:01:54,250

I think everybody has a little bit of claustrophobia.

33

00:01:54,250 --> 00:02:00,000

It is usually when it is hot outside and I have just climbed in the aircraft and I am

34
00:02:00,000 --> 00:02:04,570
out-breathing the capability of the little
portable oxygen units we have.

35
00:02:04,570 --> 00:02:07,760
And I find myself feeling like I'm suffocating.

36
00:02:07,760 --> 00:02:12,959
I have about 10 seconds every year where if
I wanna scream and get the helmet off and

37
00:02:12,959 --> 00:02:15,140
the suit off as quickly as I can.

38
00:02:15,140 --> 00:02:18,810
But I know how to power through that.

39
00:02:18,810 --> 00:02:25,700
We can drink in flight, and we all take water
and I take food.

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00:02:25,700 --> 00:02:27,470
Not everyone takes food up, but I do.

41
00:02:27,470 --> 00:02:30,200
I take a lot of food with me.

42
00:02:30,200 --> 00:02:36,290
We connect the food to a food tube or to a
water bottle, put the tube through the hole

43
00:02:36,290 --> 00:02:38,820
and that points right at our mouth inside
the helmet.

44
00:02:38,820 --> 00:02:43,790
Keep in mind, when we are flying, this helmet
is closed up like that and remains closed

45
00:02:43,790 --> 00:02:49,870
so we can't open it up to eat a chocolate
bar or whatever so everything pretty much

46
00:02:49,870 --> 00:02:52,630
has to be pureed or liquid.

47
00:02:52,630 --> 00:02:58,880
Getting used to flying in a space suit with
the helmet on took months.

48
00:02:58,880 --> 00:03:02,280
Dexterity of boxing gloves and a helmet where
you can't scratch your face, you are sweating,

49
00:03:02,280 --> 00:03:04,590
it is hot.

50
00:03:04,590 --> 00:03:05,820
I can't move at all in the cockpit.

51
00:03:05,820 --> 00:03:08,989
I have no room to move very much at all.

52
00:03:08,989 --> 00:03:13,739
My knees are hitting the instrument panel,
my helmet is hitting the canopy, my arms are

53
00:03:13,739 --> 00:03:15,780
hitting the sides of the cockpit.

54
00:03:15,780 --> 00:03:21,760
I love flying this plane!

55
00:03:21,760 --> 00:03:23,240
Sometimes I inflate the suit and just sit
there.