



1
00:00:04,470 --> 00:00:02,149
my name is tom williams i'm a systems

2
00:00:07,670 --> 00:00:04,480
engineer working on the tdrs program

3
00:00:08,870 --> 00:00:07,680
since 1975. i was working at goddard

4
00:00:11,669 --> 00:00:08,880
here doing

5
00:00:14,629 --> 00:00:11,679
research in electric propulsion back in

6
00:00:17,189 --> 00:00:14,639
in the late 60s and in

7
00:00:19,189 --> 00:00:17,199
1975 they called me the teachers

8
00:00:19,910 --> 00:00:19,199
projected and asked if i would take on

9
00:00:22,150 --> 00:00:19,920
the

10
00:00:24,070 --> 00:00:22,160
engineering job as a propulsion engineer

11
00:00:26,070 --> 00:00:24,080
for that program that was just getting

12
00:00:28,550 --> 00:00:26,080
started well the launch of the first

13
00:00:30,790 --> 00:00:28,560

tdrs we had an anomaly with the launch

14

00:00:34,310 --> 00:00:30,800

vehicle and normally they're supposed to

15

00:00:36,950 --> 00:00:34,320

drop us off and we immediately go into

16

00:00:38,950 --> 00:00:36,960

configuring the spacecraft and deploying

17

00:00:42,150 --> 00:00:38,960

all the appendages and instead we were

18

00:00:43,990 --> 00:00:42,160

spinning end over end at 30 rpm and we

19

00:00:45,830 --> 00:00:44,000

weren't in the right orbit so what

20

00:00:48,150 --> 00:00:45,840

happened then we tried to figure out

21

00:00:50,150 --> 00:00:48,160

what we could do about it and eventually

22

00:00:52,549 --> 00:00:50,160

figured out a way we could actually get

23

00:00:54,389 --> 00:00:52,559

in the correct orbit with the small

24

00:00:56,630 --> 00:00:54,399

thrusters that we had on board we did a

25

00:00:58,150 --> 00:00:56,640

burn every every day and it took us 30

26
00:01:00,790 --> 00:00:58,160
days and we eventually got there and

27
00:01:02,950 --> 00:01:00,800
that spacecraft lasted 27 years i think

28
00:01:04,469 --> 00:01:02,960
the biggest thing about tdrs and i don't

29
00:01:06,630 --> 00:01:04,479
know why this is true and it's it's

30
00:01:09,270 --> 00:01:06,640
probably true to other programs too but

31
00:01:11,510 --> 00:01:09,280
it really did turn into like a family we

32
00:01:14,310 --> 00:01:11,520
had a lot of picnics for the families

33
00:01:16,230 --> 00:01:14,320
parties or working relationship in those

34
00:01:18,789 --> 00:01:16,240
days you could argue face to face with

35
00:01:20,469 --> 00:01:18,799
people and then go have lunch it was uh

36
00:01:22,310 --> 00:01:20,479
i think kind of unique for a big program

37
00:01:25,220 --> 00:01:22,320
like that it was a very close