
FUEL
FOR THE
FIRE

1
00:00:06,309 --> 00:00:04,150
houston you're looking at our delta h

2
00:00:09,270 --> 00:00:06,319
that's the primitive program alarm

3
00:00:10,950 --> 00:00:09,280
looking good to us over

4
00:00:17,990 --> 00:00:10,960
1202

5
00:00:19,990 --> 00:00:18,000
alarm clock control both auto definition

6
00:00:22,230 --> 00:00:20,000
command override off

7
00:00:23,189 --> 00:00:22,240
tranquility base here the eagle has

8
00:00:25,750 --> 00:00:23,199
landed

9
00:00:27,589 --> 00:00:25,760
roger twink tranquility we copy on the

10
00:00:29,429 --> 00:00:27,599
ground you got a bunch of guys about to

11
00:00:30,710 --> 00:00:29,439
turn blue we're breathing again thanks a

12
00:00:32,870 --> 00:00:30,720
lot

13
00:00:34,470 --> 00:00:32,880

hi i'm jonathan looser the core stage

14
00:00:36,310 --> 00:00:34,480
propulsion lead for the space launch

15
00:00:37,910 --> 00:00:36,320
system at marshall space flight center

16
00:00:39,510 --> 00:00:37,920
in huntsville alabama

17
00:00:41,510 --> 00:00:39,520
i studied mechanical engineering at the

18
00:00:43,430 --> 00:00:41,520
university of alabama in huntsville and

19
00:00:45,350 --> 00:00:43,440
while i was in school i became involved

20
00:00:46,630 --> 00:00:45,360
with the school's cooperative education

21
00:00:48,069 --> 00:00:46,640
program

22
00:00:49,190 --> 00:00:48,079
and started working at marshall space

23
00:00:50,630 --> 00:00:49,200
flight center while i was still in

24
00:00:52,069 --> 00:00:50,640
college and

25
00:00:53,750 --> 00:00:52,079
after two years in that program i

26
00:00:55,189 --> 00:00:53,760
graduated and was offered a full-time

27
00:00:56,229 --> 00:00:55,199
job at marshall and i've been here ever

28
00:00:57,910 --> 00:00:56,239
since

29
00:00:59,750 --> 00:00:57,920
nasa and texas instruments have teamed

30
00:01:02,389 --> 00:00:59,760
up to create a series of activities that

31
00:01:04,869 --> 00:01:02,399
integrate science technology engineering

32
00:01:06,469 --> 00:01:04,879
and mathematics in this first activity

33
00:01:08,390 --> 00:01:06,479
you will attempt to land the eagle at

34
00:01:10,230 --> 00:01:08,400
tranquility base on the moon without

35
00:01:12,149 --> 00:01:10,240
running out of fuel this was a real

36
00:01:14,469 --> 00:01:12,159
problem that astronauts neil armstrong

37
00:01:16,469 --> 00:01:14,479
and buzz aldrin know firsthand

38
00:01:18,149 --> 00:01:16,479

after that you will look at fuel tank

39
00:01:20,469 --> 00:01:18,159
shapes and how that affects the fueling

40
00:01:21,990 --> 00:01:20,479
process and finally you'll put together

41
00:01:24,710 --> 00:01:22,000
everything that you've learned and send

42
00:01:27,030 --> 00:01:24,720
sls out on its mission em-1 or

43
00:01:30,230 --> 00:01:27,040
exploration mission one all the way out

44
00:01:34,630 --> 00:01:32,870
four rs-25 rocket engines capable of

45
00:01:36,390 --> 00:01:34,640
producing over two million pounds of

46
00:01:38,069 --> 00:01:36,400
thrust will power the space launch

47
00:01:40,149 --> 00:01:38,079
system's core stage

48
00:01:42,389 --> 00:01:40,159
and it takes a lot of fuel to generate

49
00:01:44,630 --> 00:01:42,399
that much power and in this lesson we'll

50
00:01:46,310 --> 00:01:44,640
learn how we fill up the core state