1
00:00:00,060 --> 00:00:03,840
We're taking off from the Kennedy Space
Center, our multi-user spaceport.

2
00:00:03,860 --> 00:00:08,520
I'm Yves Lamothe and we're cruising on the Crawler Transporter 2.

3
00:00:13,860 --> 00:00:18,900
With us today is John Giles the Crawler Transporter
Project Manager, here to tell us a little

4
00:00:18,900 --> 00:00:24,330
bit more about the crawler. What exactly
is the Crawler Transporter used for? We will

5
00:00:24,330 --> 00:00:29,550
take the launch vehicles out to the pad
and the ML and whatever anybody asks us to.

6
00:00:29,550 --> 00:00:33,840
And we've been doing it for over 50 years.
Everything that's launched from Pad 39A or B

7
00:00:33,840 --> 00:00:38,790
rode out there on one of our two
crawlers. So the crawler transporter is

8
00:00:38,790 --> 00:00:44,370
massive and you said it goes at a top
speed of two miles an hour. Is it because

9
00:00:44,370 --> 00:00:48,140
of how heavy it is? How much does the
crawl transport weigh? So the crawler

10
00:00:48,140 --> 00:00:54,020
itself weighs about 6.6 million pounds,
which is actually kind of small compared to,

11

00:00:54,030 --> 00:01:00,340
we carry things that are 10, 12, 14
million pounds. So what we'll do is we'll

12
00:01:00,359 --> 00:01:03,899
travel underneath something. We'll go
underneath it, we'll pick it up like the

13
00:01:03,899 --> 00:01:08,100
ML for instance with the launch vehicle
on board, and we'll jack it up. We'll take

14
00:01:08,100 --> 00:01:12,060
it out, we'll drop down to our cruising
level and then we'll go out to the pad

15
00:01:12,060 --> 00:01:15,930
on top of a specifically prepared
crawlerway which consists of about a

16
00:01:15,930 --> 00:01:21,869
foot of rocks and then below the rocks
are about four feet of hydraulically

17
00:01:21,869 --> 00:01:26,189
compressed limestone and then below that
as many feet of sand that's been

18
00:01:26,189 --> 00:01:30,299
compressed to support all of our weight.
Another question is how do you see in

19
00:01:30,299 --> 00:01:35,009
front or behind you with how big the crawler transporter is? So we will actually have

20
00:01:35,009 --> 00:01:39,980
a team of about 20 personnel that go
with us the whole way out there, that'll

21
00:01:39,980 --> 00:01:44,840

either be on board or walking alongside,
and everyone will be on radios and in

22
00:01:44,850 --> 00:01:48,800
contact with each other and the driver
will frequently say, hey somebody on the

23
00:01:48,810 --> 00:01:51,479
other side of the crawler tell me how
close I'm getting to this. So we have

24
00:01:51,479 --> 00:01:57,210
eyes all over it. So one of the things
that I've noticed is the pad, it goes

25
00:01:57,210 --> 00:02:01,740
up a hill so to speak. So how does the
crawler transporter handle bringing the

26
00:02:01,740 --> 00:02:05,670
rocket up there without it tipping over?
So the crawler has its own unique

27
00:02:05,670 --> 00:02:09,459
leveling system
on it and once it determines that we're

28
00:02:09,459 --> 00:02:13,990
out of level we have a what we call a
gel system which stands for jacking

29
00:02:13,990 --> 00:02:18,400
equalization and leveling and it's
basically a hydraulic system that once

30
00:02:18,400 --> 00:02:23,200
it's told by the manometer system to
level us, will actually make adjustments

31
00:02:23,200 --> 00:02:27,430

and keep us at whatever level we want to be. So the incline going up to the pad is

32
00:02:27,430 --> 00:02:31,480
about five degrees, so as we go up to it the crawler will actually articulate

33
00:02:31,480 --> 00:02:37,120
five degrees so it keeps the ML on the launch vehicle on top. So here we are in

34
00:02:37,120 --> 00:02:40,810
the engine room, what takes the crawler transporter for the point A to point B.

35
00:02:40,810 --> 00:02:46,330
This is a very large engine seems quite complex. What are the specs on it? So this

36
00:02:46,330 --> 00:02:50,880
is an original engine that came out of a locomotive back in the 1960s that's why

37
00:02:50,880 --> 00:02:54,840
you see Alco here, American Locomotive Company. Same engine that would have

38
00:02:54,850 --> 00:03:02,100
rolled a locomotive down the tracks back then. It's V16 turbocharged, two thousand

39
00:03:02,110 --> 00:03:06,580
seven hundred and fifty horsepower. So with an engine this size, how many

40
00:03:06,580 --> 00:03:10,959
gallons of gas does it take to operate it? It takes a lot of gallons. We run on

41
00:03:10,959 --> 00:03:15,790

diesel not gas. We carry our own onboard
gas with us. We have two separate tanks

42
00:03:15,790 --> 00:03:21,430
and they carry a total of 5,000 gallons
of diesel fuel. 5,000 gallons, now how many

43
00:03:21,430 --> 00:03:25,810
miles per gallon does the crawler transporter get? I'd like to say we get lots of miles

44
00:03:25,810 --> 00:03:32,380
per gallon but it's really only 32 feet
per gallon. What exactly is this room

45
00:03:32,380 --> 00:03:36,489
used for? So we're standing in the
control room and this is where the

46
00:03:36,489 --> 00:03:40,900
engineers will sit while we're rolling
and we'll have three to four engineers

47
00:03:40,900 --> 00:03:44,230
in here and they'll all be monitoring
these different screens and on these

48
00:03:44,230 --> 00:03:49,299
screens the engineers will see things
like hydraulic pressures and the

49
00:03:49,300 --> 00:03:55,209
leveling system and steering and engine
output and just everything we would need

50
00:03:55,209 --> 00:03:59,920
to control the crawler from in here. So
this is the crawler transporter driver's

51
00:03:59,920 --> 00:04:04,000
cabin. Now is there any specialized

training required to be able to drive

52
00:04:04,000 --> 00:04:07,390
the crawler transporter? There is a lot
of specialized training and it probably

53
00:04:07,390 --> 00:04:09,620
takes at least a year to a year and a
half upon

54
00:04:09,630 --> 00:04:14,310
job training and driving the crawler
to be able to be certified. Now if you

55
00:04:14,310 --> 00:04:17,220
don't tell anyone, will you let me take
it for a ride?

56
00:04:17,220 --> 00:04:20,160
I'll let you sit in the chair but I
don't know if I'll be able to talk

57
00:04:20,160 --> 00:04:24,540
anybody into letting you take it for a
ride though. So maybe after a year of training?

58
00:04:24,540 --> 00:04:27,040
We'll start you in the next training class.

59
00:04:27,040 --> 00:04:30,000
Well John, thank you so much for
coming out and sharing some information

60
00:04:30,000 --> 00:04:34,320
with us about the Crawler Transporter.
Once again, I'm Yves Lamonthe from the