1
00:00:00,580 --> 00:00:05,690
Music

2
00:00:05,690 --> 00:00:09,300
When one of NASA's railroad locomotives needed a newer set of wheels,

3
00:00:09,300 --> 00:00:14,740
a one-of-a-kind facility built for the Space Shuttle Program made the upgrade possible.

4
00:00:14,740 --> 00:00:19,220
Kennedy Space Center's Rotation, Processing and Surge Facility, or RPSF,

5
00:00:19,220 --> 00:00:26,280
was built in 1984 to handle the shuttle's massive solid rocket motor segments, which came in by rail.

6
00:00:26,280 --> 00:00:29,690
Kevin Panik/RPSF Operations Manager: "That's essentially how it worked for 30 years.

7
00:00:29,690 --> 00:00:39,270
This facility has never lifted or done anything other than shuttle segments and shuttle parts."

8
00:00:39,270 --> 00:00:43,690
The NASA Railroad team refurbished locomotive No. 3 years ago,

9
00:00:43,690 --> 00:00:47,530
and it handles much of the post-shuttle train work around Kennedy.

10
00:00:47,530 --> 00:00:52,530
But locomotive No. 2 had newer wheel and axle assemblies, called trucks.

11
00:00:52,530 --> 00:00:57,270
Railroad officials decided it would be best to swap trucks between those two locomotives.

12
00:00:57,270 --> 00:01:01,450
John Thiers/NASA Railroad Manager: "We want to use the best equipment and the most environmentally

13
00:01:01,450 --> 00:01:08,570

friendly equipment that we can on the locomotives that we're going to be actually using."

14
00:01:08,570 --> 00:01:13,750
Each of NASA's three locomotives weigh more than 79 tons, not counting the trucks,

15
00:01:13,750 --> 00:01:16,460
which add another 44 tons.

16
00:01:16,460 --> 00:01:19,250
With pristine rails running straight through the high bay,

17
00:01:19,250 --> 00:01:24,840
and two heavy-lift cranes overhead, the RPSF was perfect for the railroad's needs.

18
00:01:24,840 --> 00:01:29,510
The agency's Ground Systems Development and Operations Program approved the plan and

19
00:01:29,510 --> 00:01:32,420
cleared the facility for the job.

20
00:01:32,420 --> 00:01:38,090
Locomotive No. 1 positioned the other two directly beneath the 400-ton overhead cranes

21
00:01:38,090 --> 00:01:44,020
inside the RPSF high bay, then retreated to a position just outside the door.

22
00:01:44,020 --> 00:01:47,820
The trucks of locomotives 2 and 3 were locked into place.

23
00:01:47,820 --> 00:01:51,800
The closely choreographed lift operation took place the following day,

24
00:01:51,800 --> 00:01:58,180
with the bodies of locomotives 2 and 3 lifted one at a time and placed on opposite trucks.

25
00:01:58,180 --> 00:02:03,000
As Kennedy Space Center moves into the future, the spaceport is broadening

26
00:02:03,000 --> 00:02:07,610
its focus to accommodate NASA rockets, such as the upcoming Space Launch System,

27
00:02:07,610 --> 00:02:10,440
as well as commercial launch vehicles.