



1  
00:00:00,000 --> 00:00:07,183



2  
00:00:07,183 --> 00:00:11,550  
You are currently located inside  
the Vertical Assembly Center

3  
00:00:11,550 --> 00:00:14,583  
at NASA's Michoud  
Assembly Facility.

4  
00:00:14,583 --> 00:00:17,383  
You are suspended beside  
the robotic weld tool that

5  
00:00:17,383 --> 00:00:19,750  
manufactured all the major  
structures that will make

6  
00:00:19,750 --> 00:00:23,150  
up the core stage for  
Exploration Mission-1,

7  
00:00:23,150 --> 00:00:25,383  
the first flight of the  
Space Launch System

8  
00:00:25,383 --> 00:00:27,183  
and Orion spacecraft.

9  
00:00:27,183 --> 00:00:29,983



10  
00:00:29,983 --> 00:00:33,283  
This is the Space Launch  
System Intertank structural

11  
00:00:33,283 --> 00:00:34,550  
test article.

12

00:00:34,550 --> 00:00:37,817

The Intertank has been loaded on a space transporter

13

00:00:37,817 --> 00:00:41,050

designed to move the large pieces of the core stage.

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00:00:41,050 --> 00:00:46,050

The Intertank fits between the LH2 tank and the LOX tank

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00:00:46,050 --> 00:00:49,183

and is the only piece of the core stage that is made by

16

00:00:49,183 --> 00:00:52,183

pieces together rather than welding.

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00:00:52,183 --> 00:00:53,583



18

00:00:53,583 --> 00:00:56,717

To make big rockets you need a big space.

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00:00:56,717 --> 00:01:01,183

The Michoud rocket factory could hold 31 football fields.

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00:01:01,183 --> 00:01:04,450

Seen here are a few of the robotic weld tools

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00:01:04,450 --> 00:01:08,617

in the facility used to make domes and barrels for SLS.

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00:01:08,617 --> 00:01:12,983

Domes for the second flight  
for SLS have been built

23

00:01:12,983 --> 00:01:15,850

These domes form the  
ends of the large tanks

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00:01:15,850 --> 00:01:19,417

that hold more than 700,000  
gallons of propellant

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00:01:19,417 --> 00:01:22,483

for the four RS-25  
engines.

26

00:01:22,483 --> 00:01:24,683

■■■■■

27

00:01:24,683 --> 00:01:28,883

Here the Intertank flight  
hardware is being outfitted with

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00:01:28,883 --> 00:01:31,783

thousands of avionics, wires  
and cables which

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00:01:31,783 --> 00:01:33,417

are the brains of the rocket.

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00:01:33,417 --> 00:01:36,383

If you look behind you  
can see the tank that will

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00:01:36,383 --> 00:01:38,017

hold the liquid oxygen.

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00:01:38,017 --> 00:01:41,417

These two pieces of hardware

will be joined with the

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00:01:41,417 --> 00:01:43,717

forward skirt to form  
the top half

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00:01:43,717 --> 00:01:46,983

of the 212-foot-long  
core stage.

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00:01:46,983 --> 00:01:48,717

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00:01:48,717 --> 00:01:51,317

NASA's barge Pegasus  
comes in handy

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00:01:51,317 --> 00:01:54,283

when moving all the large hardware  
for testing and flight.

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00:01:54,283 --> 00:01:58,283

The barge was lengthened  
and strengthened to be able

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00:01:58,283 --> 00:02:00,917

to move the SLS core  
stage, the largest

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00:02:00,917 --> 00:02:03,917

rocket stage NASA has ever built.

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00:02:03,917 --> 00:02:08,050

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42

00:02:08,050 --> 00:02:10,417

From the control room  
at the front of the barge

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00:02:10,417 --> 00:02:12,717

the crew can look ahead  
and still keep an

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00:02:12,717 --> 00:02:15,250

eye on the hardware  
through the door behind you.

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00:02:15,250 --> 00:02:29,583

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00:02:29,583 --> 00:02:33,017

The Intertank was loaded  
onto Pegasus and

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00:02:33,017 --> 00:02:35,083

is now at Marshall  
Space Flight Center in

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00:02:35,083 --> 00:02:38,450

Huntsville Alabama where it is  
undergoing tests to ensure

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00:02:38,450 --> 00:02:40,550

it can survive the  
harsh environments