

Refurbishing NASA's Space Launch System **SLS** RS-25 ENGINES FOR FIRST FLIGHT

1 External Nozzle Inspection



Similar to when a pilot walks around an airplane before flight, Aerojet Rocketdyne experts examine the engine externally for signs of damage

2 Initial Engine Drying

The initial engine drying process focuses on areas susceptible to corrosion

3 Set Up Work Platforms

Provide ergonomic-friendly access for technicians to work on the engines

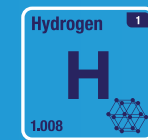
4 External Inspection of Major Components

Searching for signs of damage

5 Final Engine Drying

The final engine drying process focuses on the remaining areas of the engine

6 Nozzle Tube Leak Checks



The nozzle is continuously cooled using liquid hydrogen (LH2); therefore leak checks on all 1,080 coolant tubes are conducted to ensure there is not excessive LH2 loss that could degrade engine performance

7 Internal Inspection of Critical Components



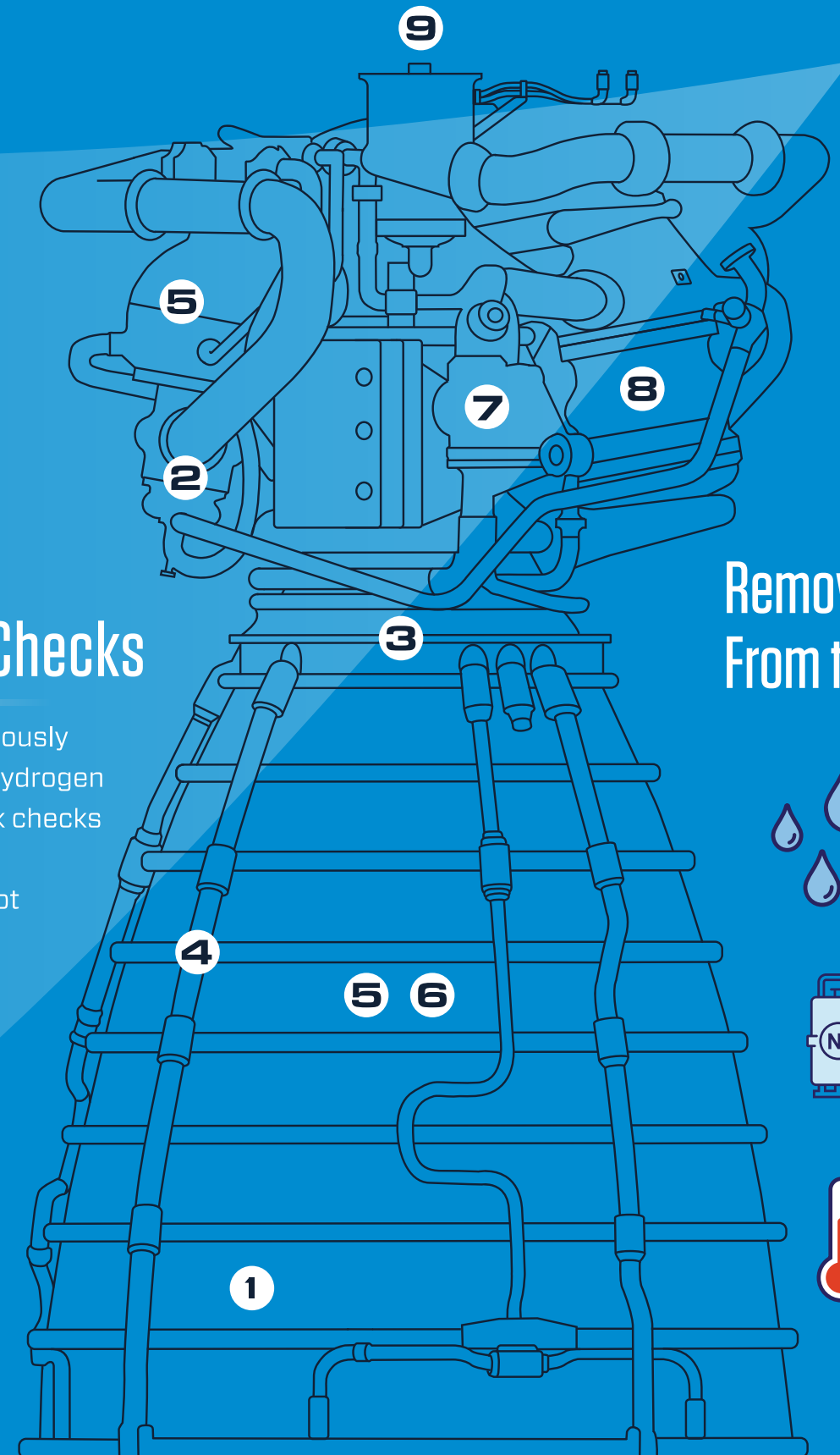
A boroscope is used to see if any critical engine components have experienced abnormal wear and tear

8 Perform Disturbed Joint Leak Checks

Any joints that were taken apart, or disturbed, as part of the refurbishment process are checked for leaks

9 Closeout and Final Inspection

Remove platforms and prepare for arrival at Kennedy Space Center



Removing Moisture From the Engines



Water is formed when the engine combusts liquid hydrogen and liquid oxygen



Heated nitrogen gas is used to efficiently dry the internal passages of the engine



Dew point checks are used to verify engine dryness

Ia0033 21

NASA's Space Launch System (SLS) powered by Aerojet Rocketdyne

AEROJET
ROCKETDYNE

ROCKET.COM