

RS-25 INCREDIBLE FACTS

Space launch system (SLS) human-rated heavy-lift rocket engine

- > The Boeing 747-400 is powered by four large turbofan jet engines. Likewise, the Space Launch System (SLS) core stage is powered by four RS-25 engines. The thrust provided by the SLS RS-25 engines could keep eight 747s aloft.
- > The RS-25 is so powerful that if it were generating electricity instead of propelling rockets into space, it could power 846,591 miles of residential street lights. That's a street long enough to go to the moon and back, then circle the Earth 15 times.
- > The RS-25 is so powerful that if it were generating electricity instead of propelling rockets into space, it could provide twice the power needed to move all 10 existing Nimitz-class aircraft carriers at 30 knots.
- > The RS-25 uses liquid hydrogen and liquid oxygen to produce thrust. The RS-25 generates about 20% more thrust at sea level than comparable kerosene engines using the same amount of fuel. The RS-25 exhaust is clean, superheated water vapor.
- > Each turbine blade powering the RS-25's high-pressure fuel turbopump produces more than a Corvette ZR1's 638 horsepower and its airfoil is the size of a quarter.
- > Four RS-25 engines push the SLS rocket 73 times faster than an Indianapolis 500 race car.
- > In the RS-25, coolant travels through the main combustion chamber in two milliseconds, increasing its temperature by 400-degrees Fahrenheit.
- > Pressure within the RS-25 is equivalent to an ocean depth of three miles — about the same distance where Titanic lies below the surface of the Atlantic Ocean.

RS-25 Incredible Facts

© 2024 L3Harris Technologies, Inc. | 07/2024 | L26294

NON-EXPORT CONTROLLED: THIS DOCUMENT CONSISTS OF INFORMATION THAT IS NOT DEFINED AS



1025 W. NASA Boulevard
Melbourne, FL 32919

L3Harris.com