



Rolls-Royce

Rolls-Royce LiftSystem®

Delivering game-changing vertical lift technology



Rolls-Royce LiftSystem®



World first Short Take Off & Vertical Landing (STOVL) capability in a supersonic aircraft

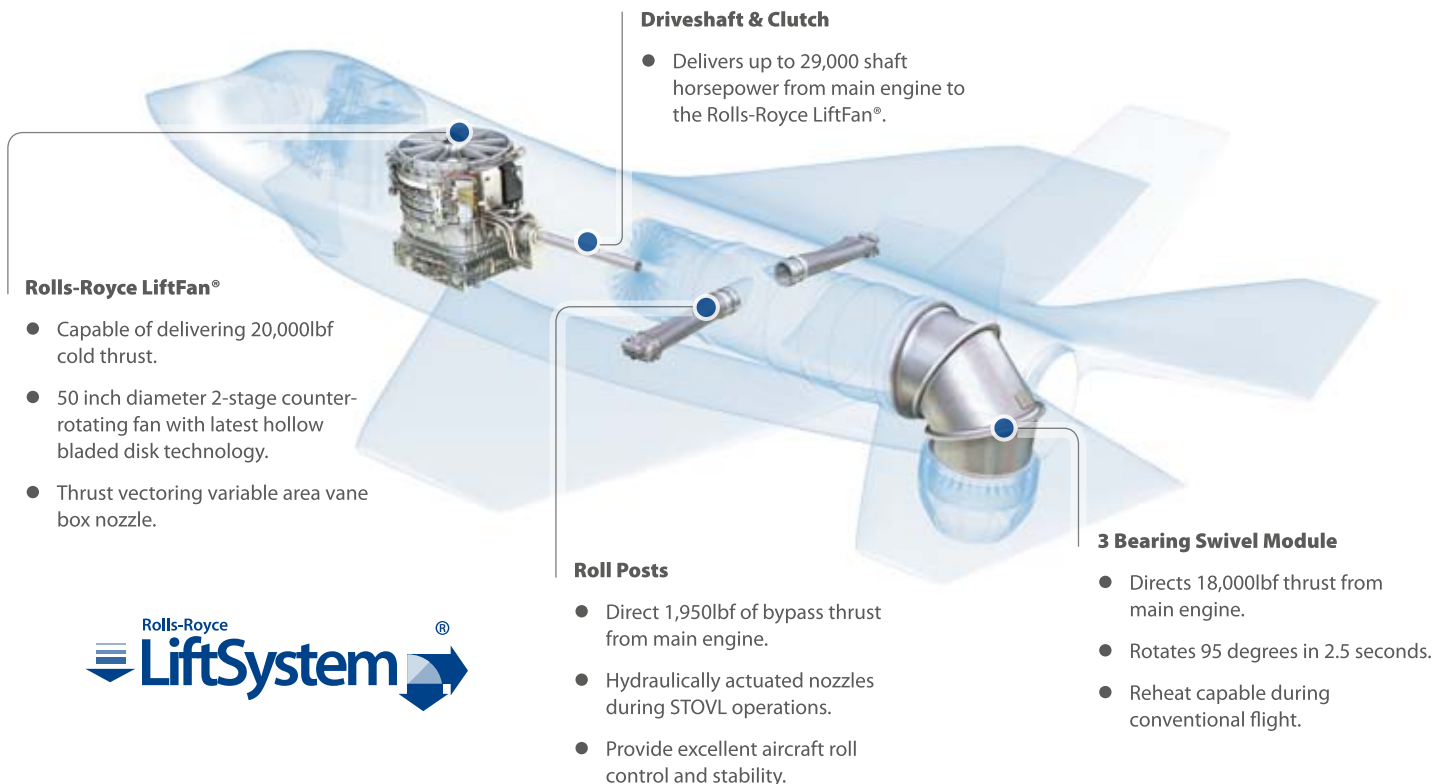
Building on Rolls-Royce's vast experience of STOVL power in the famous Harrier aircraft, the Rolls-Royce LiftSystem® delivers the world's first STOVL capability for a supersonic aircraft in the Lockheed Martin F-35B Lightning II.

STOVL capability with low ownership costs

The Rolls-Royce LiftSystem enables STOVL flight capability with a simple, cost effective design that draws on power from the aircraft main engine and provides excellent reliability while minimising ownership costs to the operator.

Unrivalled performance

The Rolls-Royce LiftSystem uses the latest in digital control and fan system technology to deliver responsive, precise and powerful STOVL capability with minimal impact on total airframe weight.



The Rolls-Royce LiftSystem is a means of providing vertical lift and control and comprises the Rolls-Royce LiftFan®, Driveshaft, Three Bearing Swivel Module (3BSM) and Roll Posts

Since the introduction of the Pegasus engine for the Harrier in 1969, Rolls-Royce has maintained unrivalled Short Take Off and Vertical Landing (STOVL) expertise. Today, Rolls-Royce continues to extend its STOVL capability with the Rolls-Royce LiftSystem which enables unsurpassed capabilities for the Lockheed Martin F-35B Lightning II.

The latest technology incorporated into the Rolls-Royce LiftSystem provides an extremely robust, reliable and easily maintained STOVL solution that minimises through life operational costs.

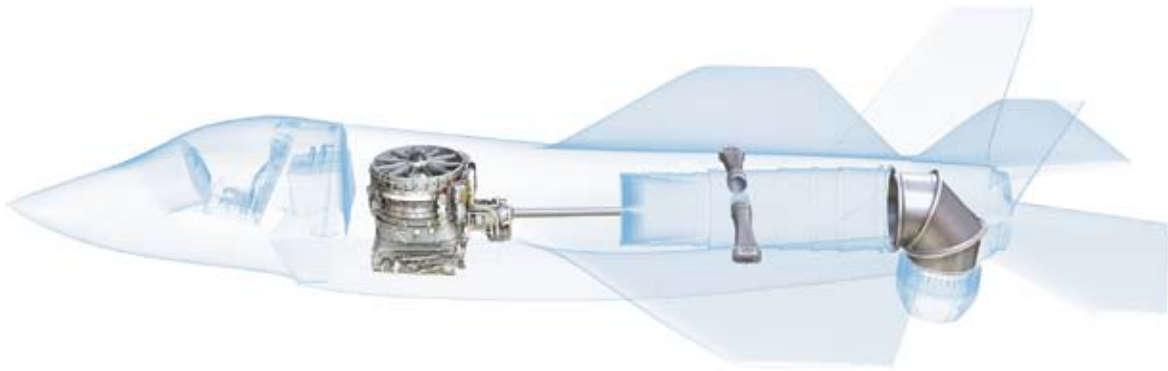
MissionCare™, a comprehensive support service designed to ensure that your power system is available to deliver your mission whenever and wherever it is required, can be offered with all of our products.

Providing STOVL power for F-35B Lightning II



Engine Specification

LiftFan	20,000lbf (89kN) cold thrust 2 stage counter rotating fan Utilises world leading hollow blisk technology
3 Bearing Swivel Module	Directs 18,000lbf (80kN) thrust from main engine Rotates 95 degrees in 2.5 seconds Reheat capable during conventional flight
Roll Posts	Direct 1,950lbf (8.7kN) bypass thrust from main engine Hydraulically actuated nozzles during STOVL operations Provide aircraft roll control and lateral stability
Applications	Lockheed Martin F-35B Lightning II



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