

## Boeing to Begin Testing of Experimental Rocket Engine

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With an eye toward revolutionary new rocket engine systems, engineers from The Rocketdyne Propulsion & Power business unit of the Integrated Defense Systems of The Boeing Company [NYSE:BA] have begun final preparations for testing a futuristic engine at the Stennis Space Center (SSC) in Mississippi. The engine, dubbed the Integrated Powerhead Demonstration, or IPD, combines the very latest in rocket engine propulsion technologies. Following system checkout, an ambitious "hot-fire" testing program will begin in earnest in this January.

The IPD has been developed and built over the last ten years through the combined efforts of Rocketdyne and GenCorp's Aerojet, and under the direction of the Air Force Research Laboratory (AFRL) and NASA's Marshall Space Flight Center (MSFC). Its technologies are directed at achieving the goals of the Integrated High Payoff Rocket Propulsion Technology, or IHPRPT, program.

"Our intent is to validate new propulsion technologies that can be used in a new generation of rocket engines," said Don McAlister, Boeing IPD program manager. "The IPD itself will not be flown, but its components and systems could find their way into future rocket engines. These technologies may be especially valuable for the Vision for Space Exploration."

Added Rocketdyne vice president & general manager Byron Wood, "IPD is a critical program that fully demonstrates how NASA, the Air Force and industry can work together. That's something that will be very important as this country's leadership in space continues."

Capable of generating about 250,000 pounds of thrust, the IPD ranks as a booster-class engine and is the first full-flow, staged-combustion engine produced in the U.S. It has been designed as a re-usable engine system, and features hydrostatic bearings - already being implemented in the Boeing/Mitsubishi Heavy Industries MB-XX engine -- as well as exotic new materials.

Rocketdyne provides the turbopumps, thrust chamber assembly and system components, and serves as the lead system integrator, while Aerojet is responsible for all preburner and nozzle work. Program management is handled by AFRL, with support from MSFC.

A unit of The Boeing Company, Boeing Integrated Defense Systems is one of the world's largest space and defense businesses. Headquartered in St. Louis, Boeing Integrated Defense Systems is a \$27 billion business. It provides network-centric system solutions to its global military, government, and commercial customers. It is a leading provider of intelligence, surveillance and reconnaissance systems; the world's largest military aircraft manufacturer; the world's largest satellite manufacturer and a leading provider of space-based communications; the primary systems integrator for U.S. missile defense and Department of Homeland Security; NASA's largest contractor; and a global leader in launch services.

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