

CASTOR® 30—A Multi-Use Motor



ATK Technicians prepare the CASTOR 30 that will be sent to NASA's Wallops Island Virginia, for the first Test Flight of Orbital's Commercial Taurus II rocket later this year.

The CASTOR® 30 motor is a low-cost, robust, state-of-the-art upper-stage motor developed to fill a need in the launch industry.

Purpose

ATK Launch Systems developed the CASTOR® 30 in response to a market need for a large-diameter, upper-stage motor. It has the flexibility to serve markets as diverse as space launch, Prompt Global Strike (PGS) and Operationally Responsive Space (ORS). This motor joins a heritage of ATK CASTOR motors with proven high reliability for more than 50 years. The CASTOR 30 motor is based on the CASTOR 120® motor, which has flown on the Taurus I, Athena I and Athena II launch vehicles. The inaugural flight of the new motor is scheduled for 2011 as the upper stage on the Taurus 2 medium-lift rocket with a mission to the International Space Station.

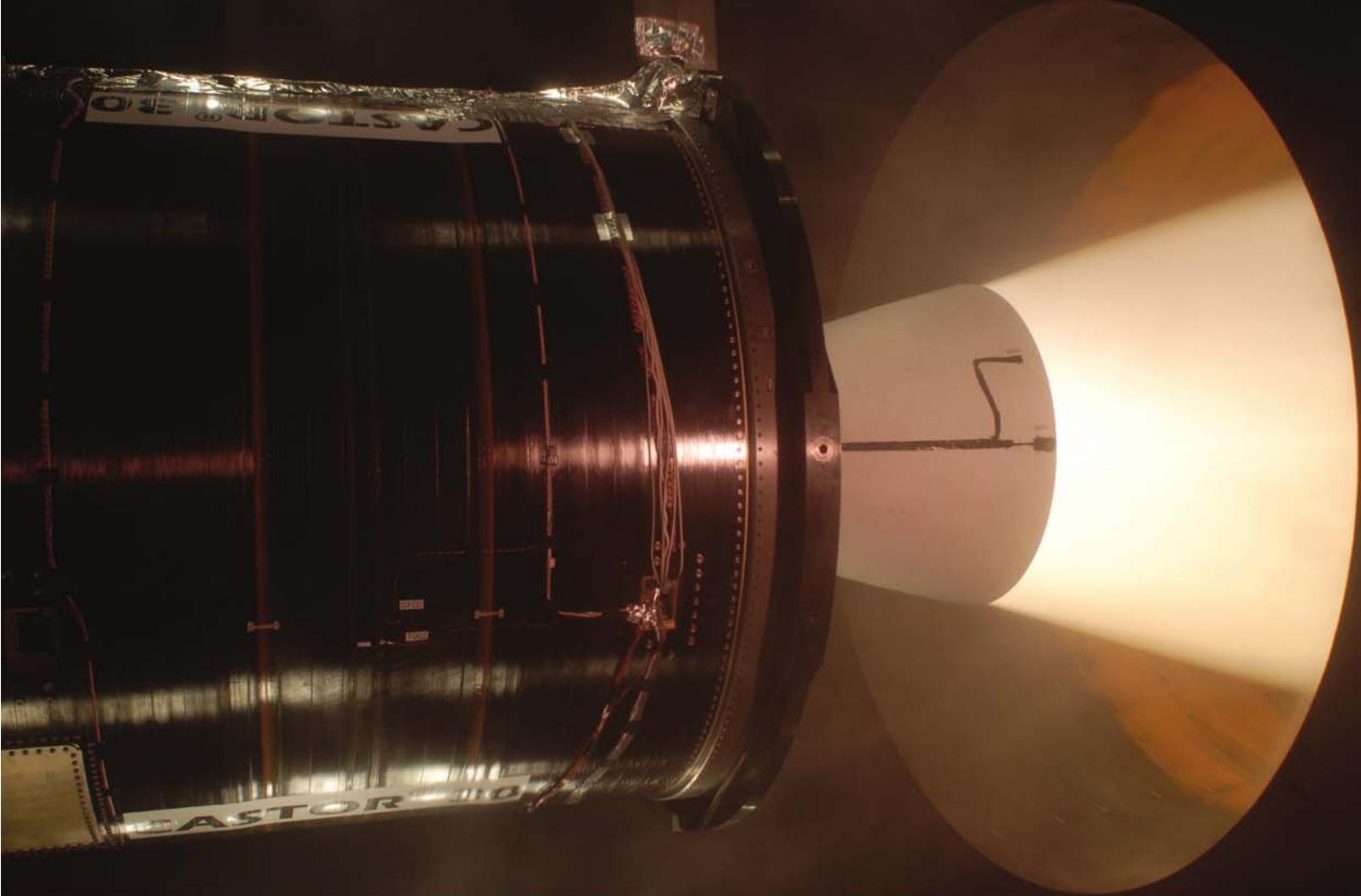
Features

The CASTOR 30 measures 138 inches in length, 92 inches in diameter and weighs 30,000 pounds. The motor is nominally designed as an upper stage that can function as a second or third stage as well, depending on the vehicle configuration. Its design uses all flight-proven technology and materials while capitalizing on ATK's extensive experience in solid motor development and manufacturing.

Applications

The versatile CASTOR 30 has multiple commercial and government applications including:

- Taurus 2 medium-lift, Commercial Orbital Transportation System (COTS) application
- Athena Launch Vehicles
- PGS and missile defense
- ORS



ATK successfully tested its CASTOR® 30 upper stage solid rocket motor December 10, 2009, at the U.S. Air Force's Arnold Engineering Development Center in Tennessee.

Background

ATK currently manufactures a complete line of first- and second-stage and strap-on CASTOR solid rocket motors. The CASTOR heritage was developed from four generations of first-stage ballistic missile boosters and the technology and experience at ATK. ATK's CASTOR I-IV family has a combined total of more than 1,900 flights and a demonstrated reliability of 99.95 percent. The CASTOR 30 solid rocket motor has been in development close to four years at ATK Aerospace Systems. The motor was successfully test fired at simulated altitude at the Air Force's Arnolds Engineering Center in Tennessee on December 10, 2009.

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