

SPACE TRANSPORTATION SOLUTIONS AND INNOVATIONS (D2)
Launch Vehicles in Service or in Development (1)

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RELIABILITY OF H-IIA AND H-IIB LAUNCH VEHICLE

Abstract

Total sixteen H-IIA launch vehicles (H-IIA) have been launched after its maiden flight in August 29, 2001. After the flight of Flight Number 6 in November 29 2003, which is the only unsuccessful flight of H-IIA, 10 H-IIA have been successfully launched. Then the success rate reached at about 93%.

On the other hand, Japan Aerospace Exploration Agency (JAXA) and Mitsubishi Heavy industries, Ltd. (MHI) developed H-IIB launch vehicle (H-IIB), in order to launch H-II Transfer Vehicle (HTV) to the International Space Station, and to satisfy various customer needs of heavy launch. H-IIB Test Flight lifted off at 2:01:46 a.m. on September 11, 2009 (Japan Standard Time, JST) from the Tanegashima Space Center, without any delay a second as its planned launch time. The launch vehicle flew smoothly, and, at about 15 minutes and 10 seconds after liftoff, the vehicle successfully inserted the HTV into the planned orbit.

MHI will continue to operate H-IIA and H-IIB, to support launch needs. With the background of H-IIA and H-IIB program, this paper will present followings.

1. Past H-IIA and H-IIB flight results

In this section, H-IIA and H-IIB flight history and technical assessment result of past H-IIA flight as well as H-IIB maiden flight will be presented.

2. The activity for improving reliability

MHI conducts independent quality evaluation activity other than usual quality assurance system. In this activity, veteran engineers are assigned as evaluator, and they perform independent thorough quality evaluation from engineering requirement to inspection record. In this section, overview of MHI's redundant quality assurance system is presented.