

H-II Launch Vehicle



The H-II (H2) rocket was a Japanese satellite launch system, which flew seven times between 1994 and 1999, with five successes. It was developed by NASDA in order to give Japan a capability to launch larger satellites in the 1990s. It was the first two-stage liquid-fuelled rocket Japan made using only technologies developed domestically. It was superseded by the H-IIA rocket following reliability and cost issues.

Prior to H-II, NASDA had to use components licensed by the United States in its rockets. In particular, crucial technologies of H-I and its predecessors were from the Delta rockets. Although the H-I did have some domestically produced components, such as LE-5 engine on the second stage and inertial guidance system, the most crucial part, the first stage engine, was a licence-built version of the Thor-ELT of the US. By developing the LE-7 liquid-fuel engine and the solid booster rockets for the first stage, all stages of H-II had become "domestically developed".

The H-II was developed under the following policies, according to a NASDA press release:

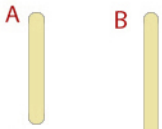
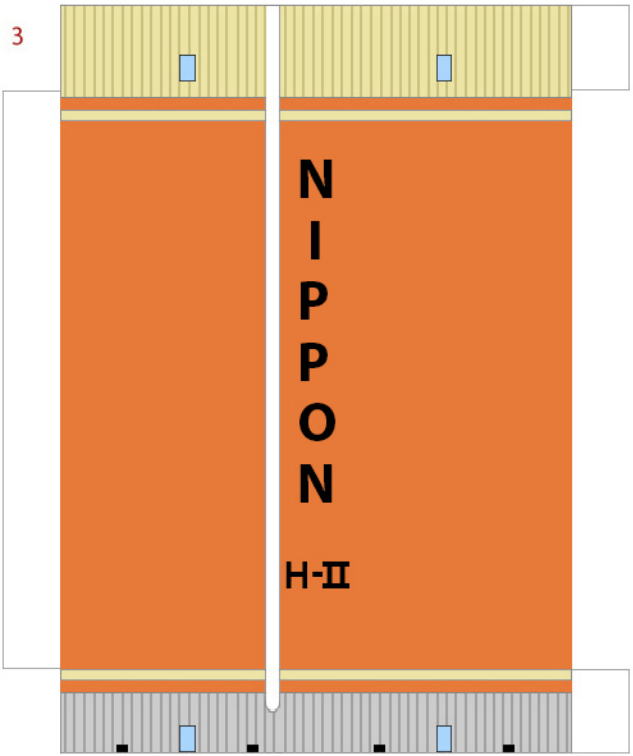
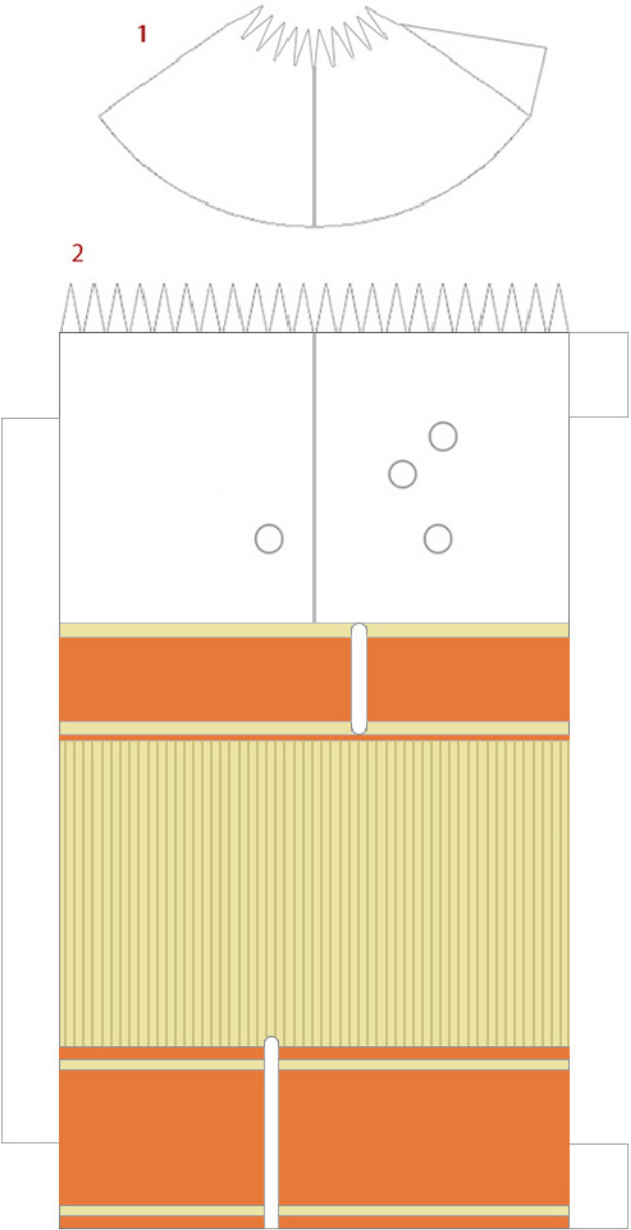
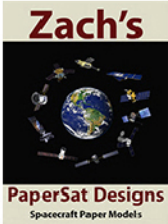
1. Develop the launch vehicle with Japanese space technology.
2. Reduce both development period and costs by utilizing developed technologies as much as possible.
3. Develop a vehicle which can be launched from the existing Tanegashima Space Center.
4. Use design criteria which allows sufficient performance for both the main systems and subsystems. Ensure that development will be carried out properly, and safety is taken into account.

The launch capability of an H-II launch vehicle can be enhanced by adding the Castor 2 AXL solid strap-on booster (SSB) to its basic configuration.

In 1994, NASDA succeeded in launching the first H-II rocket, and succeeded in five launches by 1997. However, each launch cost 19 billion yen (US\$190 million), too expensive compared to international competitors like Ariane. (This is in part due to the Plaza Accord's changes to the exchange rate, which was 240 yen to a dollar when the project planning started in 1982, but had changed to 100 yen a dollar by 1994.) Development of the next-generation H-IIA rockets started in order to minimize launch costs.

The successive failure of flight 5 in 1998 and flight 8 in the following year brought an end to the H-II series. To investigate the cause of the failure and to direct resources into the H-IIA, NASDA cancelled flight 7 (which was to be launched after F8 due to changes in schedule), and terminated the H-II series.

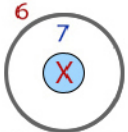
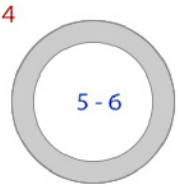
H-II Launch Vehicle



Glue to cardstock



Glue to cardstock



Cut out the blue circle



Color back Black

H-II Launch Vehicle

