

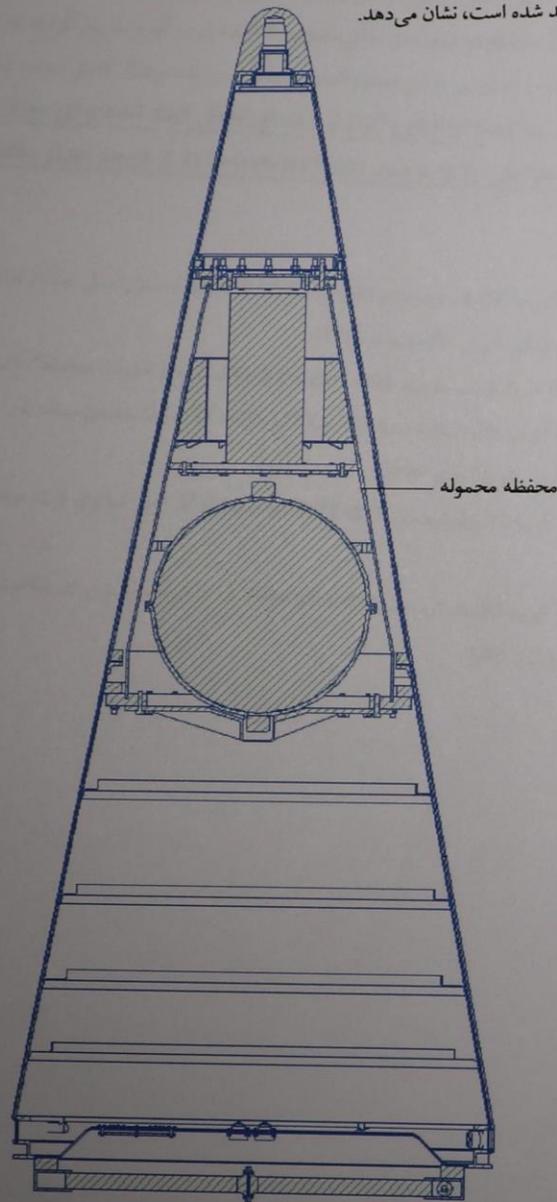


**From Iran's Nuclear Archive, a significant portion of which was seized
by Israel in Tehran in January 2018:**

Schematics of Warhead in a Shahab-3 Re-entry Vehicle

May 17, 2019

شکل ۱۴ شماتیکی از سر جنگی موشک شهاب-۳ را پس از نصب مخروط اول که مجهز به محموله جدید شده است، نشان می‌دهد.



شکل ۱۴- شماتیکی از سر جنگی موشک شهاب-۳ با محموله جدید

Figure 1. A schematic of a Shahab 3 re-entry vehicle with a “load” inside. The texts in the figure label have been only roughly translated. The top caption is “14 schematic figure shows the Shahab-3 warhead after installing the first cone which is equipped with the new load.” The middle caption points to an inner structure which is labelled the “protector of the load.” The bottom caption reads “14-schematic image from Shahab-3 warhead with new load.”

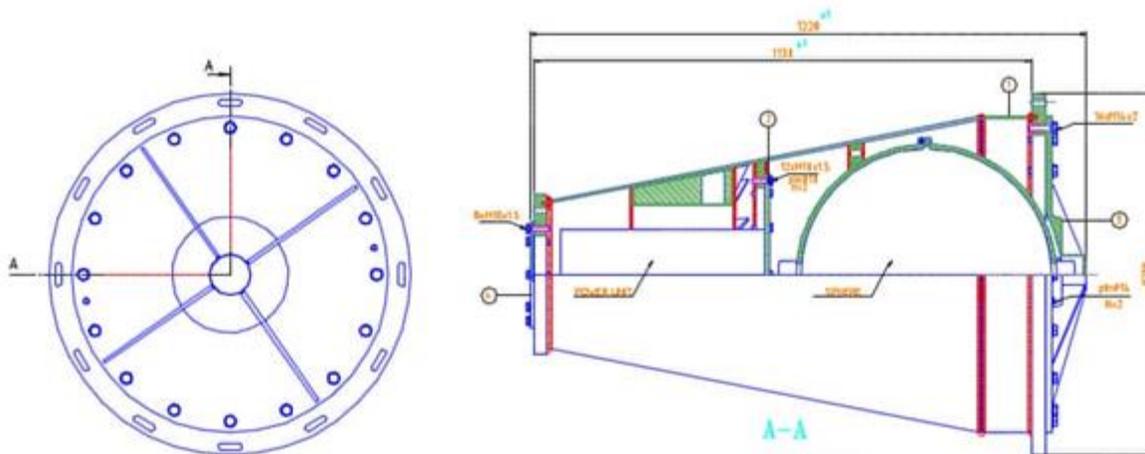


Figure 2. Two cross section diagrams of what appears to be the “protector of the load” in Figure 1. This chamber holds the payload, which is labeled a “sphere” in English. As in other Nuclear Archive documents, the writers avoided using the word “nuclear,” but the sphere is likely a nuclear explosive device. The number at the top of the figure on the right appears to be 1220, although the last digit is hard to make out. Using that number and assuming its unit is millimeters, the inner diameter of the sphere is approximately 560 millimeters. This compares closely to a value of 550 millimeters derived in an Institute report on the outer diameter of the shock wave generator, which does not include the outer casing of the nuclear weapon (click [here](#) to see this report). Both values are less than the estimated diameter of about 600 millimeters available inside the payload chamber of a Shahab-3. Other equipment in the schematic, better seen in Figure 1, likely includes fusing, arming, and firing mechanisms. The relevant captions in English are difficult to read in Figure 2, but one in the diagram on the right may say “power left.” The remaining labels on the right in this diagram are illegible but appear to be additional numbers and dimensions. Work on integrating a spherical nuclear payload into the Shahab-3 re-entry vehicle is often referred to as included in “Project 111.”¹ It may also be part of the Warhead project under “Project 110” (click [here](#) for a Project 110 organizational chart (translated) from the Archive.)

¹ The International Atomic Energy Agency (IAEA) calls Project 111 that for “studying how to integrate the new payload into the chamber of the Shahab-3 missile re-entry vehicle.” See: IAEA Director General, *Implementation of the NPT Safeguards Agreement and relevant provisions of Security Council resolutions in the Islamic Republic of Iran*, GOV/2011/65, November 8, 2011, p. 9, <https://www.iaea.org/sites/default/files/gov2011-65.pdf>