

HOUTHI BALLISTIC MISSILE MANUFACTURING

MIDDLE EAST FIELD DISPATCH
OCTOBER 2026



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BACKGROUND

Conflict Armament Research (CAR) has determined that the Houthis are attempting to produce advanced medium-range ballistic missiles. The discovery points to a major leap in the group's domestic production ambitions and has major regional security implications at a time when Houthi forces are intensifying their deep strike campaign against critical infrastructure in Saudi Arabia.

It also provides evidence that the Houthis—who are under a targeted United Nations Security Council arms embargo¹—are expanding their supply chains beyond Iran-linked networks, with several purpose-built missile components found alongside shipping documents that listed a Chinese supplier.

CAR's identification of custom-made missile components—as well as raw materials, tools, and testing equipment—in recent shipments intended for the Houthis shows that the group is now seeking to manufacture at least part of the Khaibarshekan-series of ballistic missiles, which have a range of more than 1,000 km.

Only a few countries in the world have the capacity to manufacture missiles of comparable ranges domestically.

CAR's previous investigations in Yemen demonstrated that the Houthis were re-assembling advanced missiles that had been shipped by Iran-linked supply networks to the group in labelled, serialised packages, while evidence of its local production capabilities was limited to less sophisticated systems, like the Badr-series rockets (CAR, 2024; 2026).

THE DISCOVERY THAT THE HOUTHIS ARE NOW SEEKING TO MANUFACTURE AT LEAST PART OF THE KHAIBARSHEKAN-SERIES OF BALLISTIC MISSILES POINTS TO A MAJOR LEAP IN THE GROUP'S DOMESTIC PRODUCTION AMBITIONS AND HAS MAJOR REGIONAL SECURITY IMPLICATIONS

THE ADEN SEIZURES

In July 2026, authorities in Yemen documented the contents of four shipping containers that they had interdicted en route to the Houthi-controlled port of Hodeidah. Shipping documentation shows that these containers had first arrived in the

Aden Free Zone (shown in Figure 1) in June and October 2025 aboard two different vessels, both of which were transporting shipments from China with Hodeidah as the intended destination (Ali-Khan and Marks, 2026).

Figure 1
The Aden Free Zone, July 2026



The containers featured several machined metal parts that appear to be components of the airframe and a solid-propellant rocket motor of a Khaibarshekan-series missile (see Figure 2). In addition, the cargo also contained phenolic resin (Figure 3), a material widely used in creating ablative heat shields, which protect ballistic missiles from the intense heat associated with

atmospheric flight at high-supersonic speeds. In 2026, CAR field investigators in the Middle East documented part of a Khaibarshekan-2 reentry vehicle and rear section that featured this ablative material. A US-made adhesion tester included in the cargo may have been intended for testing related to the application of ablative material.

Figure 2

Machined metal parts (1—7) identified in the materials seized and held in Aden, reconstructed to show their probable role and location in a Khaibarshekan-series missile.

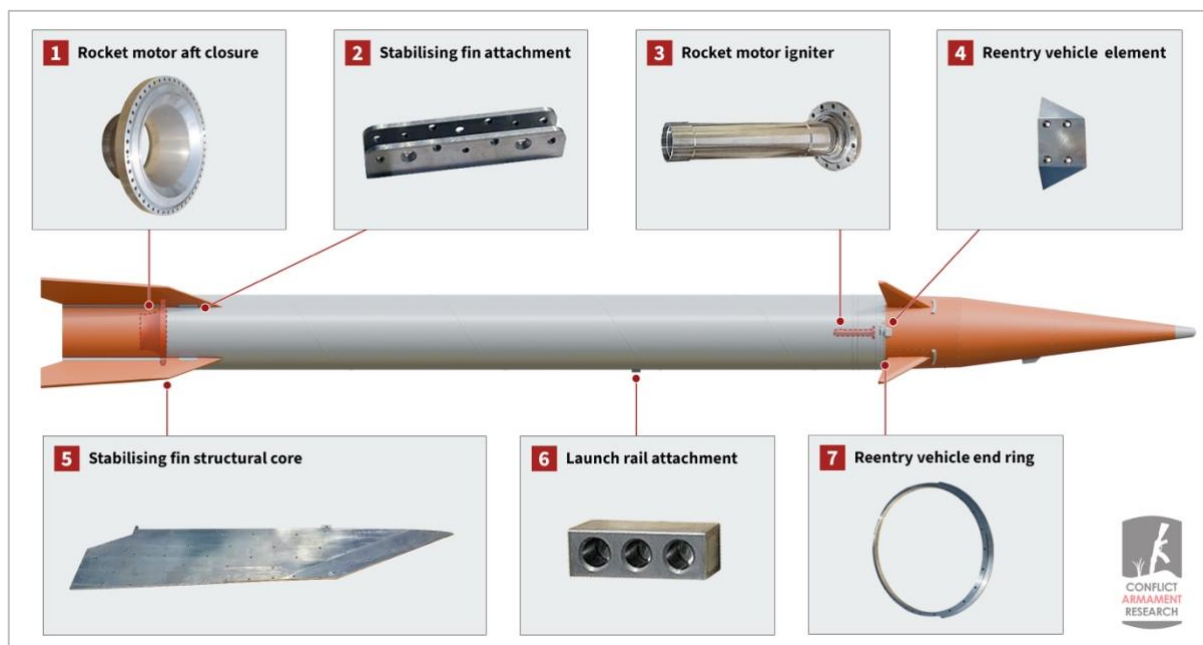
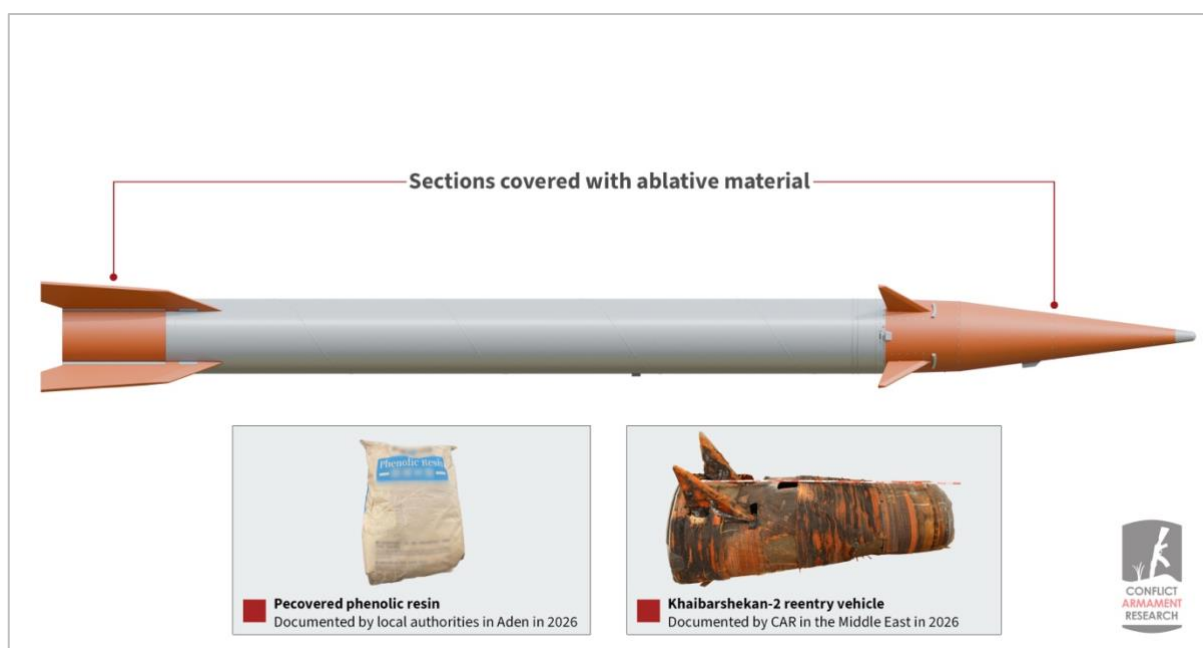


Figure 3

Phenolic resin (bottom-left) identified in the material recovered in Aden, possibly intended for use in developing ablative heat shields, as shown in the 3D model of a Khaibarshekan-series missile (top) and documented on a reentry vehicle by CAR in 2026 (bottom-right).



The inspected cargo also included a variety of machinery, tools, and testing equipment such as a computer numerical control (CNC) machine, an industrial stamping press, a vacuum pump, a hydraulic power unit, a portable X-ray system, and a thermal imager.

While all these items also serve non-military purposes, their co-location with missile components suggests that they were intended to support missile manufacturing, including quality control and the non-destructive testing of subsystem components.

KHAIBARSHEKAN-SERIES MISSILES

The Khaibarshekan-1 solid-propellant ballistic missile has a reported range of 1,450 km and was first unveiled by Iran in 2022 (Rezaei, 2022). A second variant, the Khaibarshekan -2—with a claimed range of 1,800 km—was introduced in 2023 (Tasnim News, 2024). The same year, Iran also unveiled a further development of the Khaibarshekan under the designation

Fattah-1, incorporating a small second-stage motor.² The Houthis appear to operate all three iterations of the Khaibarshekan series—using the local designations ‘Hatim’ and ‘Palestine’ for the Khaibarshekan-2 and ‘Palestine-2’ for the Fattah-1 derivative (see Figure 4). They have used all three types in the ongoing Middle East conflict.

Figure 4

A still from promotional footage shared on the Aparat video sharing platform (Source: Houthi Military Media)



Missiles in this series are equipped with precision guidance and appear to be optimised for affordable high-volume production. All three include features that reportedly help to overcome missile defences, such as an endo-atmospheric manoeuvring capability (Nikru News Agency, 2022); the Fattah-1 also has an exo-atmospheric manoeuvring capability (Khabar Online, 2022). While the exact extent of these capabilities remains unknown, the broader claim of manoeuvrability appears consistent with US observations of Iranian missile strikes in 2026 (Paletta, 2026).

In addition, Iran has previously released specifications of the Khaibarshekan-1 indicating that the missile has an ability to follow a depressed trajectory which can decrease flight time and shortening the amount of warning available to missile defence systems (AmirIGM, 2024). The transfer of Khaibarshekan technology thus benefits both Iran and the Houthis—with the former capacitating a partner at a strategically significant time and the latter receiving technology that advances a pattern of increasingly more sophisticated systems.

The cargo hold of the Al Zahra-1, Yemen, November 2024



‘MADE-TO-ORDER’ PARTS

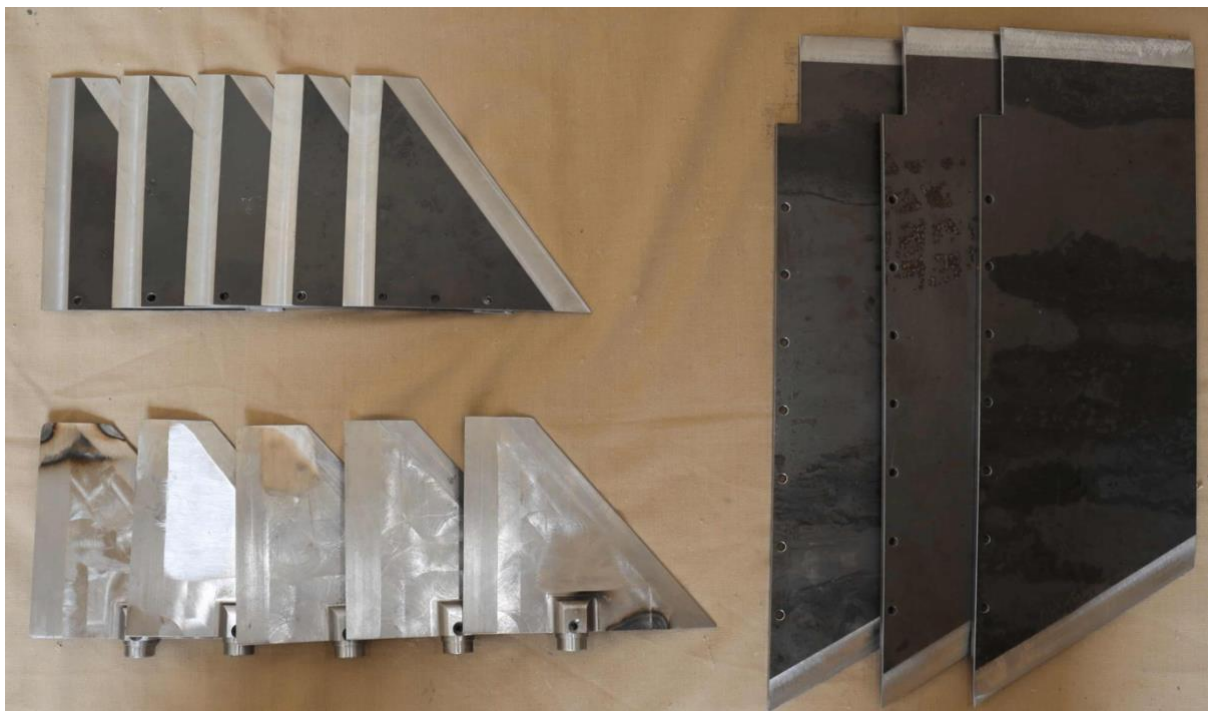
The machined metal parts appear to have been custom-made by a Chinese company. Shipping documentation shared with CAR identifies a Chinese precision-metal producer that advertises itself as a specialist manufacturer of custom aerospace parts. CAR has not traced these components with the manufacturer and is not able to verify the information contained in the document independently. According to Yemeni authorities, these parts were deliberately split across multiple containers to make

their detection more difficult (Ali-Khan and Marks, 2026).

CAR field investigators previously documented similarly machined metal components as part of the Al Zahra 1 cargo in November 2024 (CAR, 2024; see Figure 5). CAR identified these as housings for the guidance section, aerodynamic control surfaces, and stabiliser fins of a 270 mm Badr-series artillery rocket (see Figure 6).

Figure 5

Machined metal parts for a Badr-series rocket, documented by CAR field investigators in Yemen in November 2024

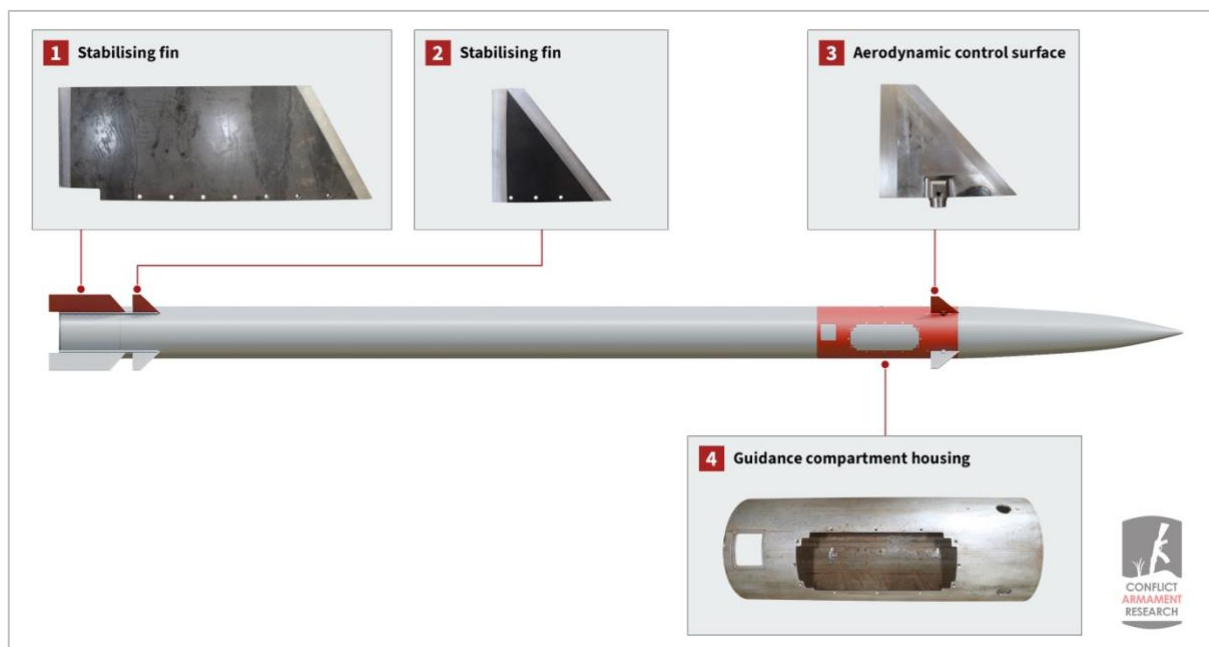


As with the recent Aden seizures, Badr-series components found in the Al Zahra 1 cargo were co-located with other components supplied directly from China-based companies, although CAR did not identify the manufacturer in this earlier case.

The Houthis have long been understood to be at least part-producing these weapons in Yemen, with United Nations experts reporting in 2019 that early Badr-type weapons were of poor quality (UNSC, 2019).

Figure 6

A model of the Badr-series rocket, showing the location and role of CAR-documented machined metal components (1—4).



CAR's assessment that the Houthis are pursuing more ambitious missile production inside Yemen aligns with other evidence of the group's apparent efforts to conduct independent research and development, including a recent Anthropic threat report identifying misuse of its large language model Claude. In September 2026, the company

issued a security report that described a North Yemen-based threat actor using Claude code to support the development of a multistage ballistic missile with a range goal exceeding 2,000 km, as well as a separate missile project that included a variant equipped with a hypersonic glide vehicle (Camelot, 2026).

LONG-RANGE AMBITIONS

The material documented within the four Aden shipping containers shows that the Houthis are now acquiring more specialised parts for the construction of missiles, apparently independent of Iran-linked supply networks. The structural components identified for both the Badr and Khaibarshekan series are highly specific to individual systems and would require the supply of detailed design information. This outsourced production approach could enable the Houthis to conduct larger volume manufacturing inside Yemen and do so without such a heavy dependence on Iran-linked supply networks.

The documented material also reflects the scale of Houthi ambitions for local manufacturing. While CAR previously reported on the Houthis' capacity to manufacture simpler weapon systems locally—including one-way attack uncrewed attack vehicles and artillery rockets—their recent move into the production of advanced medium-range ballistic missiles is notable. The precise extent of this capability remains unclear, but the documented components suggest that, in terms of longer-range ballistic missiles, the Houthis have moved beyond simply reassembling Iranian systems. At a minimum, the evidence points to local airframe and motor assembly, the application of

ablative materials, and broader overall system integration and testing.

**THE HOUTHIS ARE NOW
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At the time of writing, the security situation in Yemen remains extremely volatile, since the Houthis' sudden move to seize control of strategic islands around the Bab al-Mandab strait in September 2026. Last week's missile attacks against civilian airports in Saudi Arabia (Nereim and Ward, 2026) shows that the Houthis are expanding their deep-strike campaign against infrastructure in neighbouring countries and the wider region. In that context, sustained field monitoring of seized shipments and recovered munitions will shed critical light on the Houthi's ever-increasing ambitions for local missile production.

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ENDNOTES

¹ The Houthis were listed 'pursuant to paragraph 5 of resolution 2624 (2022) as subject to the measures imposed by paragraph 14 of resolution 2216 (2015) (targeted arms embargo).' UNSC (United Nations Security Council). n.d. 'The Houthis.' <https://main.un.org/securitycouncil/en/content/houthis-0>.

² The Houthis published footage of the Fattah-1 derivative, designated by the group as the 'Palestine-2' on the Aparat video sharing platform, available at <[apat.com/v/k776nm0](https://www.aparat.com/v/k776nm0)>.

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