



Poor Quality of Chinese Military Hardware and Equipment



Collected picture

Since the 2010s, China has advanced rapidly in developing modern military platforms. However, ongoing issues with quality, reliability, and sustainment persist within the PLA and among international customers. These problems are evident in critical components like sensors, propulsion/engines, mission computers, and advanced high-tech systems (e.g., laser/DE, unmanned systems). Even PLA media and doctrinal publications acknowledge equipment quality and lifecycle management as significant concerns, indicating an internal recognition of these persistent problems, despite continuous public displays of new systems and efforts to highlight the PLA's successes. Although China's military is rapidly expanding, with more warships than the U.S. Navy and a potential lead in combat aircraft over the U.S. Air Force, the quality of its stealth aircraft, warships, submarines, and aircraft carriers still trails the U.S. military.

The reputation of Chinese arms, often perceived as "good enough," has suffered due to several prominent export failures. These include issues with Pakistan's F-22P frigates, groundings and technical problems experienced by JF-17 customers, and recently reported operational difficulties with the Chinese SkyShield laser system in desert environments. Such incidents have been extensively covered in regional reports and the defence press.

Root causes are multiple and interacting: China suffers from chronic corruption, as evident by President Xi's relentless purges targeting the PLA. Additionally, the uneven industrial base (gaps in precision components and advanced materials), maintenance/logistics shortfalls, procurement misconduct, and rush-to-show capabilities for political/propaganda are the reasons behind the falling quality of Chinese defence equipment. Analysts warn these factors could slow or complicate PLA modernisation.

China is the fourth largest defence exporter behind the U.S., Russia and France. But despite being one of the largest and modern military powers, its defence exports have not gained access to any significant market. Between 2020 and 2024, China accounted for only 5.9% of global arms exports, well behind America's 43%. In addition, there's little geographical diversity; Almost two-thirds of China's weapons exports went to Pakistan. But this does not provide China with credibility on the quality and sustainment of the products.

Reports from regional defence press and investigative pieces document repeated sensor and radar defects (IR17 imaging sensors; SR60 radars) and engine/propulsion problems on early Chinese-built F-22P frigates delivered to Pakistan. Problems ranged from degraded radar performance under high-power transmission to engine overheating and crankshaft/lubrication issues that affected operational availability. These issues were raised publicly by Pakistani naval sources and defence analysts.

The Chinese firm admitted that defective Gimbal Assembly motors were the cause of the fault, and these motors had not yet been repaired or replaced, jeopardising the ship's berthing operations. This situation has compelled the Pakistani Navy to operate the four frigates with compromised operational capabilities due to faulty critical components and inadequate service from Chinese manufacturers. As a result, some key mission objectives for which these expensive ships were acquired have been jeopardised.

Multiple third-party reports like regional outlets covering Myanmar, Nigeria and other JF-17 customers documented groundings and structural/mission-computer malfunctions (weapon-mission management computer anomalies; vibration/airframe issues) after export deliveries. These led some customers to ground fleets, declaring them unfit for operations, rendering the valuable investment a wastage. J-17's poor accuracy and low weapon-carrying capacity caused Nigeria to purchase the Italian M 346-FA fighter jets. While JF-17 remains commercially successful, reliability concerns have been repeatedly flagged in export customers' press.

Recent reports from defense blogs and mainstream outlets covered Saudi operational experience with China's SkyShield laser counter-drone system, highlighting significant performance degradation in harsh desert conditions and raising doubts about the system's reliability and maturity. These reports were operational/field based rather than manufacturer test claims and therefore, more reliable.

The SkyShield system was acquired to meet Saudi Arabia's specific geopolitical requirements. It was anticipated to offer a cost-effective solution by integrating electronic warfare capabilities with directed-energy weapons. However, its failure in the real-world conditions, casted deeper doubts on the credibility of the controlled testing and the quality of the product.

Furthermore, a numerous export customers and analysts have publicly complained about frequent malfunctions, poor spare-parts availability and weak after-sales support, which together undermine confidence in Chinese arms sales and have slowed some export trajectories. These complaints gain further traction when PLA media, itself, empahsises the need to treat equipment quality as life-or-death for soldiers and to strengthen weapons' whole-life management, implicitly acknowledging prior shortcomings in testing.

The following can be seen as the reasons for this failure:

1. Uneven industrial base & component choke points: the advanced subsystems (high-end sensors, mission computers, precision bearings, materials) remain dependent on foreign suppliers or immature domestic substitutes, elevating defect risk.
2. Rushed fielding & political timelines: the political pressure to display new systems (exhibitions, parades, prestige exports) can shorten testing/qualification cycles and push immature systems into service. PLA media pushbacks on quality suggest awareness of this tension.
3. Sustainment & logistics culture: the historical PLA weaknesses in maintenance and lifecycle logistics mean high MTTR (mean time to repair) and lower platform availability for complex systems unless logistics reforms are fully implemented.
4. Corruption/procurement distortions: investigative reporting and the Pentagon's analysis have tied anti-corruption purges and procurement mismanagement to disruption in defence projects and delivery timelines; corruption can also degrade quality if inspections are circumvented.
5. Export after-sales & tech transfer limits: the frequent complaints from customers, not only about defects but poor spare-parts pipelines, limited training, and shallow tech transfer packages have exacerbated the problems and amplified the perception of poor quality.

The narrative of Chinese poor quality defence products and the system where redressal is weak and slow, recently, China managed to create a favourable atmosphere for its defence industry, In matters of defence investment, trust is valuable, due to the expensive nature of procurement of advanced products; therefore, narratives become more important than sales. Pakistan did the same for China during the May '25 India-Pakistan crisis. Pakistan falsely asserted that Chinese-made J-10C planes shot down five Indian jets, including three Rafales, a MIG-29 and a Su-30. The false narrative led the investors to compare Rafale, made by France's Dassault Aviation SA, with Chinese manufacturers, driving up the latter's stock prices. However, the absence of high-quality products, despite a glorified testimony for Chinese products, customers world-wide are seeking alternatives.

China has rapidly fielded modern platforms, but the modernisation trajectory is not uniform: a set of measurable, repeatable quality and reliability problems, documented both in export customers' experience and in PLA internal commentary, persist in sensors, propulsion, mission systems and some cutting-edge fields. Beijing recognises these weaknesses and is investing heavily to fix them, but structural industrial bottlenecks, sustainment culture, and procurement governance mean improvements will be uneven and gradual. For external analysts and military planners, it is therefore essential to look beyond raw platform numbers and assess the PLA's true combat capability through the lens of sustainment, fault rates, and operational availability. Until China demonstrates consistent reliability across its weapons systems, its defence exports will remain limited in reach, its military reputation questioned, and its strategic power projection constrained by the quality of its own hardware.