



Report of the State Comptroller of Israel | May 2024

The Defense System

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# **Quality Assurance Inspections for Items Procured for the IDF**





# Quality Assurance Inspections for Items Procured for the IDF

## Background

The Department of Procurement and Production (DOPP) (MANHAR) in the Ministry of Defense is in charge, among other things, for the domestic procurement of products, systems, and maintenance services for the IDF. Engineering bodies in the IDF determine which items procured by the DOPP require inspections as part of quality assurance processes. These inspections are conducted by the IDF'S testing bodies according to the instructions of the engineering bodies or by suppliers whom the IDF's quality assurance bodies have authorized to perform self-inspections on their products and supply the product without inspections of the IDF testing bodies (self-inspection authorization). After the inspections, the testing bodies determine whether the items meet the engineering bodies' requirements and whether the IDF can incorporate them into its inventory and use them. This report deals with the inspections conducted by the Tests and Quality Assurance Unit (TQA Unit) in the Ground Forces Technological Brigade (GFTB) and the inspections conducted by authorized bodies in the Technological Group of the Air and Space Arm (Air Force)<sup>1</sup>.

The TQA Unit conducts First Series Inspections, which are inspections for items manufactured in the initial series intended to approve the serial production of items using the same materials and process. In addition, TQA performs Serial Inspections, which include inspections of all items or a sample inspection of several items from the manufactured series intended for delivery.

<sup>1</sup> Inspections for items purchased in Israel in NIS. This report does not cover inspections for items purchased using the security assistance funds provided by the United States government to the Israeli government (foreign military financing). In addition, this report does not cover other testing bodies in the IDF, such as those in the Navy.



**Key Figures**

**about  
NIS 12  
billion**

scope of procurement carried out by DOPP in Israel in 2022

**27%  
(NIS 1.1  
billion)**

the items (defined as not requiring inspection) procurement rate (amount) for the Air Force in 2020–2022 which were not tested within self-inspection authorization or under the inspection of the Liaison and Logistics Unit (LLU)

**7%**

the supplier's rate with self-inspection authorization in the TQA unit in 2020–2022, compared to 59% in the Air Force

**42%–50%**

the failure rate in areas where it is higher than average (35%) in first series inspections: designated equipment, electrical and fire control, and "Northern Vehicles"<sup>2</sup>

**60%**

the failure rate in TQA unit inspections at the Rehabilitation and Maintenance Center (RBC) in 2022 (476 failures out of 788 inspections)

**35%**

the failure rate in TQA unit first series inspections in 2020–2022 (868 failures out of 2,490 inspections)

**15%**

the failure rate in TQA unit serial inspections in 2020–2022 (3,027 failures out of 20,740 inspections)


**29%**

the suppliers' rate in the Air Force in 2023 without renewal of self-inspection authorization for over four years (19 out of 65 suppliers)

<sup>2</sup> Special equipment – cranes, hoists, lifting systems; Northern Vehicles – vehicle items tested by suppliers in the north of Israel.




## Audit Actions


 From August 2022 to July 2023, the State Comptroller's Office audited the quality assurance inspections for items procured for the IDF and the supplier evaluation information system within the DOPP (MANHAR). The audit focused on the: Work processes related to quality assurance inspections performed by the TQA unit and by the Air Force Technological Group, including their supervision of suppliers certified for self-inspection authorization; differences between the Air Force's Technological Group and the TQA unit regarding work processes about quality assurance inspections; and establishment of a supplier evaluation information system in the DOPP. The audit was carried out at the Ministry of Defense: in the DOPP; and the IDF: In the Air Force – the Air Force's Quality Assurance Branch Air Maintenance Unit, and in the Liaison and Logistics Unit in the Technological Group; in the Ground Forces – the TQA unit in the Technology and Logistics Division (TLD). Additional examinations were conducted in the Ministry of Defense's Engineering and Construction Department.

The subcommittee of the Knesset State Audit Committee decided not to submit specific data from this audit report to the Knesset nor publish them, to safeguard the security of the state under Section 17 of the State Comptroller Law, 1958 [consolidated version].

## Key Findings







 **The Failure Rate in the TQA Unit's Quality Inspections and Updating the Engineering Bodies** – in 2020–2022, the TQA unit conducted 2,490 first series inspections, with suppliers failing in 868 inspections (35%), in addition, the unit conducted 20,740 serial acceptance inspections, with suppliers failing in 3,027 inspections (15%). The audit found that the TQA unit is not required to update the engineering bodies of the Ground Forces (who defined the required inspection characteristics), the demanding bodies<sup>3</sup>, or the DOPP regarding inspection failures. Consequently, all the bodies above do not analyze the occurrence of failures in first series inspections and in serial acceptance inspections, including the failure causes.

 **The TQA Unit Monitoring and Documentation of Recurrent Inspections** – in 2020–2022, 80.4% of suppliers that supplied items in this period of time for at least two years, failed in first series inspections, and 72.3% of suppliers failed in serial acceptance inspections. However, the TQA unit does not record whether first series inspections or

<sup>3</sup> Entities within the IDF authorized to submit procurement requests to the Ministry of Defense.



serial acceptance inspections are recurrent, does not charge suppliers for recurrent inspections, and does not define a minimum timeframe between inspections. Although repeat inspections put a strain on the TQA unit's resources and may cause supply delays; although the lack of documentation on repeat tests prevents the TQA unit from conducting control and investigation to reduce the number of repeat inspections; and although failure to charge suppliers for repeat inspections suppresses their motivation to improve their quality control mechanisms during production and increases TQA's inspection costs. Moreover, when a supplier fails an inspection, he rapidly turns to TQA to set up a reinspection without allocating sufficient time to rectify the identified defects.

-  **Results of the Inspections at the Rehabilitation and Maintenance Center (RBC)** – RBC failed in 60% of the inspections (476 out of 788) conducted by the TQA unit extension at RBC. The audit found that the TQA unit is not required to update RBC's commanding officer, the engineering bodies in the Ground Forces, or the demanding bodies regarding various aspects of RBC's inspection failures. The failure to update these bodies precludes investigation and extraction of lessons to reduce RBC's inspection failures. In addition, though the information system of the TQA unit extension at RBC records the repeat inspections performed on items, TQA unit does not analyze the data from repeat inspections to raise the issues causing the failures, to the attention of RBC personnel and to the engineering bodies.
-  **Setting Service Norms in the Air Force** – the Air Force Technological Group has not set in its instructions norms regarding the timeframes for conducting supplier inspections. Furthermore, LLU does not record the dates of suppliers' inspection requests and consequently does not measure the time elapsed from the requested date to the inspection date, thus potentially affecting the quality of service.
-  **Frequency of Renewal Inspections for Self-Inspection Authorization Conducted by the Quality Assurance Branch in the Air Force** – the Quality Assurance Branch's 2023 work plan did not include certification renewal inspections for 19 suppliers who have not undergone inspections in the past four years, but rather only for eight of them. Thus, 11 out of 19 suppliers (58%) will not undergo renewal inspections in 2023, deviating from the timeframe stipulated in the Air Force Technological Group's instruction regarding self-inspection certification.
-  **Absence of Supplier Evaluation Information System at the DOPP** – contrary to the Ministry of Defense directive from June 2019, the DOPP has not established a supplier evaluation information system for documenting supplier performance and ensuring ongoing monitoring. Although 75% of the data required for operating the supplier evaluation information system is derived from DOPP systems, the DOPP does not regularly use them for supplier evaluation purposes. Furthermore, the audit found that the characterization for establishing a supplier evaluation system in the DOPP did not include an end-user satisfaction metrics. Therefore, when selecting a supplier, the DOPP



does not generate insights into supplier quality and does not prefer suppliers based on past performance. Supplier evaluation is critical given the extensive procurement volume managed by the DOPP – NIS 12 billion in 2022.

**👎 End-User Evaluation Regarding Suppliers in the Supplier Evaluation Information System of the Engineering and Construction Department in the Ministry of Defense (ECD)** – in 2017, the ECD established an information system for evaluating suppliers in the construction sector (applying mainly to contractors and planners). ECD measures suppliers according to the following criteria: (a) Adherence to schedule – 40%; (b) Quality of work – 30%; (c) Timely submission of documents (such as work schedule and work logs) – 10%; (d) Submission of invoices without reservations, including relevant accompanying documents – 10%; (e) Overall assessment by a supervisor – 10%; (f) Deductions in the overall score due to safety incidents – up to 20% reduction. However, the audit found that ECD's supplier evaluation information system does not include metrics regarding the end-user (initiator and recipient of the construction project) whose needs the infrastructure is supposed to meet. As a result, supplier evaluation is lacking because it does not include variables to measure the end-user's satisfaction level when the project is delivered for use and during the defined usage period (e.g., the inspection period).

**👎 Transfer of Quality Assurance Inspection Data from IDF to DOPP** – despite DOPP's requests, the IDF does not provide it with data regarding acceptance inspection results conducted by IDF inspection units or decisions on whether to approve, renew, or revoke a supplier's self-inspection authorization, based on quality inspections conducted by IDF bodies for suppliers. The absence of this feedback prevents the DOPP from deriving insights regarding the quality level of suppliers and hampers its ability to improve work processes and supplier layout.









**TQA Unit Monitoring on Suppliers with Self-Inspection Authorization** – in 2020–2022, the TQA unit implemented its work plans for quality assurance audits<sup>4</sup> at an average rate of 97% and its work plans for validation tests<sup>5</sup> at an average rate of 93%.

4 Quality assurance inspection is a review of production processes, conducted on an annual basis.

5 Verification tests are tests to assess product compliance with engineering requirements, conducted twice a year.



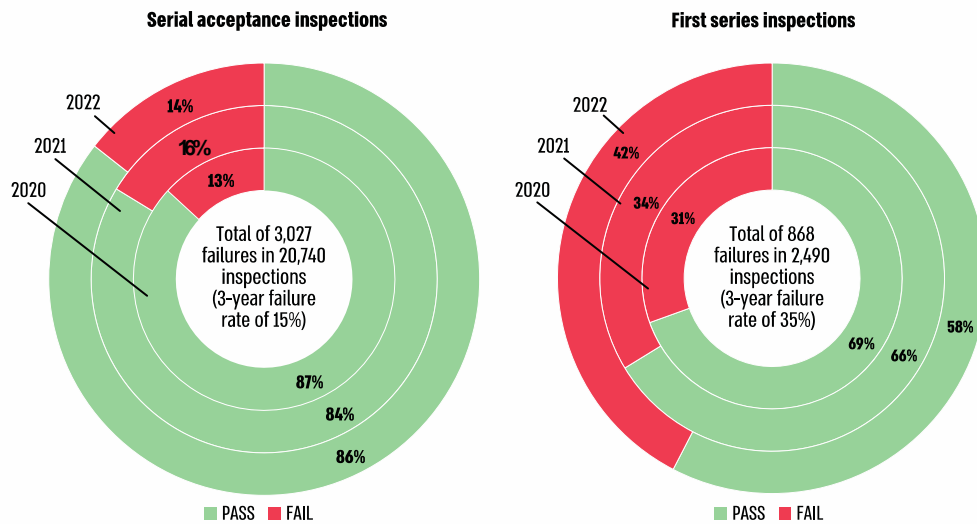
## Key Recommendations

-  It is recommended that the Ground Forces Technological Brigade (GFTB) establish procedures so the TQA unit updates the engineering bodies in the Ground Forces (who define the required inspection characteristics), the relevant demanding bodies, and the DOPP regarding failed inspections and suppliers. Thus, enabling these bodies to analyze and characterize the reasons for failure and work with the suppliers, if needed, for example to improve their process quality control. The results of the inspections can be used by the DOPP to evaluate supplier performance as part of procurement supervision and to optimize the array of suppliers and engagements.
-  It is recommended that the TQA unit document repeat inspections, monitor the rate of repeat inspections among suppliers, and, in collaboration with the DOPP and the Ministry of Defense's Finance Department, consider developing a mechanism to charge suppliers for repeat inspections, and thus incentivize them to improve their quality control processes.
-  It is recommended that the Quality Assurance Branch in the Air Force Technological Group set service norms for suppliers and that the Liaison and Logistics Unit (LLU) record and monitor the dates requests for quality inspection and the inspections' dates to enable control over service times.
-  It is recommended that the Quality Assurance Branch in the Air Force continue the planning of re-certification inspections for self-inspection authorization as required by the Air Force Technological Group's instructions and reduce gaps in this area so that by the end of 2024, no suppliers will remain without a re-certification inspection for over four years. In addition, it is recommended that the Air Force Technological Group examine the alignment between the resources of the manpower invested in self-inspection authorization processes and the requirements for implementing the multi-year plan on this matter.
-  It is recommended that the DOPP establish a supplier evaluation information system while reevaluating the criteria for assessment and score calculation for suppliers as defined in the 2015 technical specification document on the supplier evaluation information system in the DOPP. This includes examining the implications of not including the results of inspections by IDF inspection bodies and the IDF's activity regarding supplier certification for self-inspection authorization as part of the evaluation components. Furthermore, it is recommended that the DOPP consider establishing criteria for end-user evaluation. In addition, it is recommended that the Engineering and Construction Department (ECD) consider incorporating an end-user satisfaction component into its supplier evaluation information system to evaluate projects, not just from the construction field's perspective.
-  It is recommended that the DOPP include data held by the IDF in the supplier evaluation information system and that the Director General of the Ministry of Defense and the Deputy Chief of Staff instruct the DOPP and IDF bodies to implement a joint mechanism for the



systematic and ongoing transfer of data from IDF inspection bodies to the DOPP regarding acceptance inspections and self-inspection authorization processes they conduct for suppliers.

### Pass and Failure Rates in First Series Inspections and Serial Acceptance Inspections Conducted by the TQA Unit in 2020–2022



According to TQA unit data, processed by the State Comptroller's Office.



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## Summary

Quality assurance of items in the IDF encompasses an assemblage of processes in the various branches to ensure that items supplied to the IDF meet its requirements. These processes are implemented, among other means, through the specification of technical requirements for items by engineering bodies and through inspections conducted by IDF inspection bodies and suppliers authorized for self-inspection to detect discrepancies. It should be noted that the IDF can accept only items requiring examination and that have successfully passed inspections. A supplier evaluation information system in the DOPP is needed to encourage suppliers to meet high service standards and select suppliers based on past performance.

The audit found that contrary to the Ministry of Defense directive from June 2019, the DOPP has not set a supplier evaluation information system, and the IDF does not transfer data to the DOPP regarding the results of its quality assurance processes. Furthermore, differences exist between the Air Force Technological Group and the TQA unit regarding the work processes required for quality assurance of procured items.

It is recommended that the DOPP establish a supplier evaluation information system and incorporate IDF data into it; that the Director General of the Ministry of Defense and the Deputy Chief of Staff instruct the DOPP and IDF bodies to implement a joint mechanism for systematic and continuous transfer of data from IDF inspection bodies to the DOPP. In addition, it is recommended that the Deputy Chief of Staff instruct the branches to assess the relative advantages of work processes in each branch regarding quality assurance for procured items.