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# The Sky is the Limit: Turkish Air Force Modernization

by

Lieutenant Colonel Ed Shaw, USAF

## INTRODUCTION

The Turkish Air Forces Command (TAFC) has entered a new era of force capability and readiness. They possess some of the world's most sophisticated weaponry and the training and experience to effectively employ it. Contingency planning, tactics, and training to support self-directed, NATO, multinational, joint, or single service operations is accorded a high priority by the Turkish Air Force or TUAf. Consequently, force modernization decisions are closely aligned with current and future mission requirements. Once hardware is delivered, TUAf training is carried out based on the principle, "Train the personnel in the way they will fight."

## FOUNDATION FOR CHANGE

### *Infrastructure*

TUAf modernization began with an emphasis on improving infrastructure and acquiring an organic capability to reduce operations and support costs of future weapon systems. Labor intensive supply distribution and maintenance tracking procedures have been replaced by highly efficient computer based management systems. Three major supply and maintenance centers were equipped with an impressive array of factory equipment and technical data necessary to perform programmed depot maintenance/overhaul functions for the F-4E, T-37, T-38, F-5, and C-130 aircraft, as well as a variety of aircraft engines. Five Precision Measurement Equipment Labs (PMEL) were established and each one has received recognition by the USAF Aerospace Guidance Metrology Center (AGMC) as an AGMC Honor Roll Center.

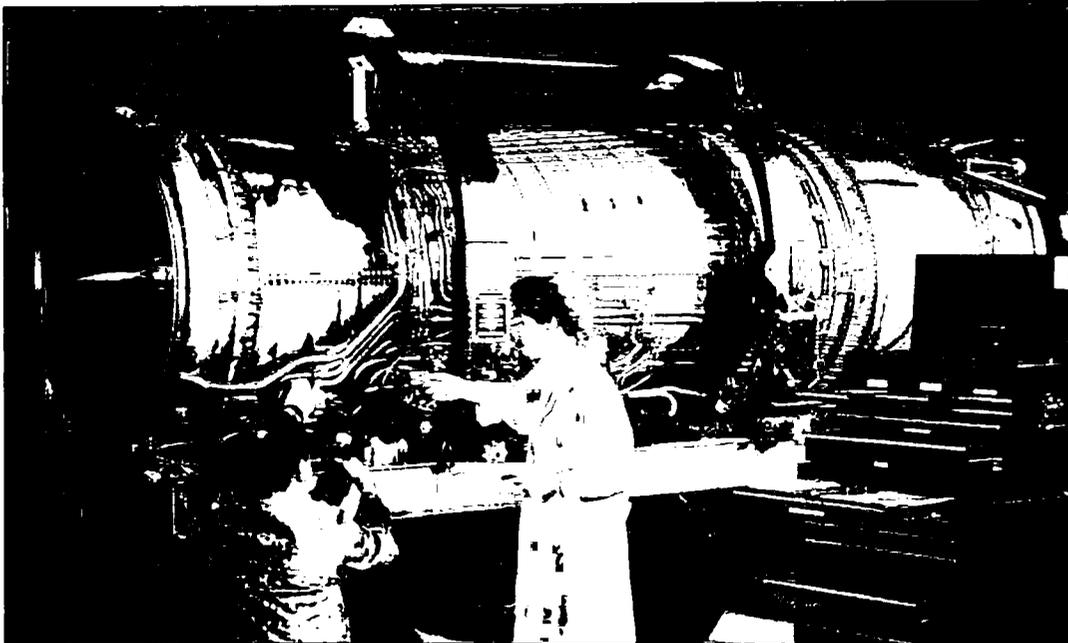


Computer-based calibration equipment for Turkish F-16 program.

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## *F-16 Co-Production*

Visionary planning on the part of the Government of Turkey and private enterprise resulted in the creation of two highly significant aerospace manufacturing entities located in the heart of Turkey. The first, TUSAS Aircraft Industries (TAI) is a Turkish-American joint stock company established in 1984 to supply F-16 C/D (Block 40/50) aircraft both to the TUAF under the Peace Onyx I and II programs and to the Egyptian Air Force under Peace Vector IV. The second enterprise TUSAS Engine Industries (TEI), is a Turkish-American joint stock company established in 1985 to manufacture engine components and assemble F-110-GE-100 engines for the TAI F-16 production line.



F-110-GE-100 Engine for F-16 Aircraft.

## **THE MODERN ERA**

### *Organizational Structure*

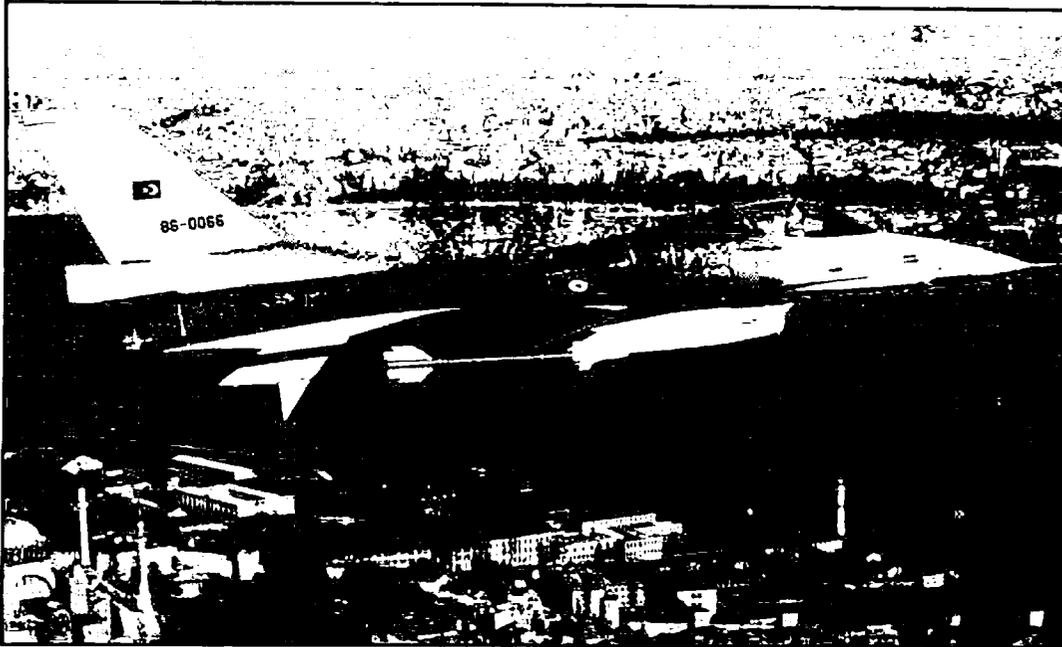
TAFC consists of four major commands operating along functional lines: the Air Training Command, Air Logistics Command, and two Tactical Air Force Commands. In general, TUAF units are maintained in a high state of operational readiness, an achievement due largely to the emphasis the TUAF leadership has placed on fully integrated air operations, training, and sustainability. Aggressive force modernization or “rubber on the ramp” has not been pursued at the expense of operational readiness.

### *Capabilities*

The F-16 multi-role fighter is the core of Turkey’s offensive counterair (OCA), defensive counterair (DCA), and suppression of enemy air defenses (SEAD) capability. Not surprisingly, the Peace Onyx co-production program is accorded the highest priority for resource allocation. A well developed program management network exists within the TUAF, specifically for the F-16 program. Highly efficient, innovative, and technically astute management of Peace Onyx programs has set the standard for subsequent acquisition of major weapon systems. As of December 1994,

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160 Peace Onyx I F-16 Block 30/40 aircraft have been delivered and 80 Peace Onyx II F-16 Block 50 aircraft will be delivered beginning in mid-1996.



Turkish Air Force F-16 Fighting Falcon.

The TUAf has taken several steps to ensure the F-16 is well equipped to accomplish the OCA, DCA, and SEAD missions for which it was designed. Near term delivery of the U.S. Advance Medium Range Air-to-Air Missile (AMRAAM) combined with a growing inventory of AIM-9MS, will give TUAf F-16s a sophisticated all aspect, beyond visual range, air-to-air arsenal. Additionally, future delivery of High Speed Anti-Radiation Missiles (HARM) will provide a formidable air-to-surface capability for SEAD missions. The TUAf has acquired a number of systems to improve combat interdiction and close air support capability. Most notably, the TUAf purchased Low Altitude Navigation Targeting Infra-Red Night (LANTIRN) Pods which give TUAf F-16 pilots the ability to deliver precision guided munitions during day or night operations.

The TUAf's array of world class fighter aircraft, munitions, and other combat support systems provide them flexibility to meet both peacetime and wartime national defense and NATO commitments. Current participation in Operations Deny Flight and Provide Comfort is evidence of the TUAf's evolving mission flexibility and diversity.

## **FUTURE DIRECTIONS**

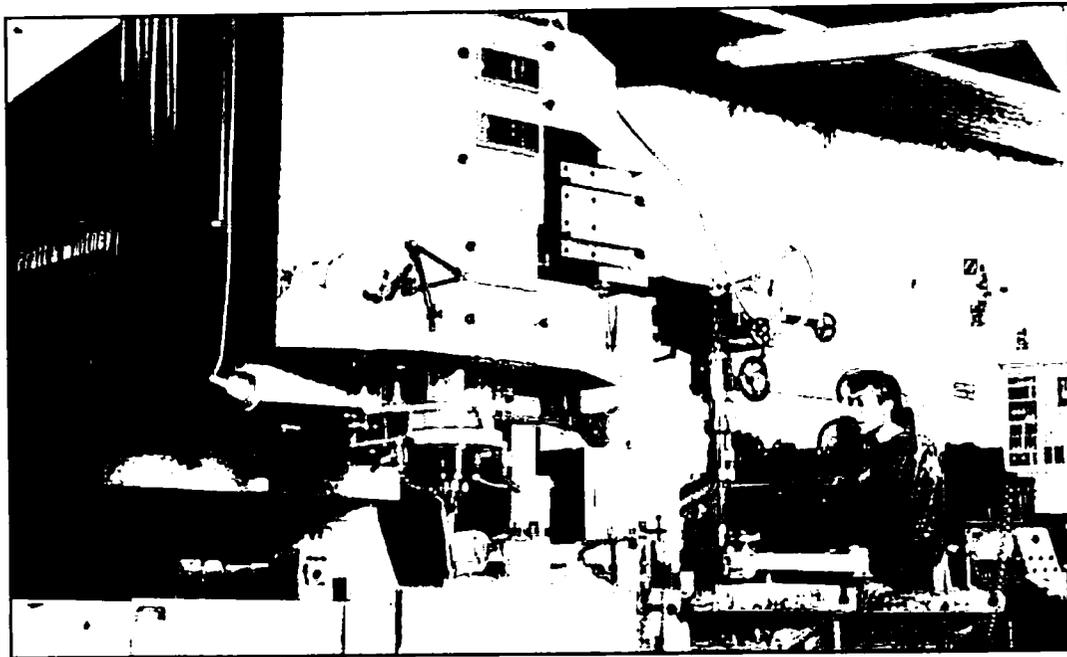
In order to meet our objectives and accomplish our mission, the TUAf should always be on alert, searching for new horizons and trying to eliminate deficiencies. For this purpose, modernization plans are continuously being developed and kept current.

- Excerpt from "TUAf Command Briefing," August 1994.

Responding to the challenges of maintaining and expanding the potency of their Air Force, TUAf's senior leaders continue to prioritize force requirements in light of undeniable fiscal constraints. Operational requirements that will shape future TUAf system acquisitions include:

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aerial refueling, improvement of electronic warfare capability, modern aircraft procurement and production (F16, CN-235, SF260), modernization of air defense and C3 systems, airborne early warning and control, increased airlift, modifying F4s, and establishing F-16 depot capability.



State-of-the-art C&C milling machine used in Turkish F-16 program.

## CONCLUSION

The Turkish Air Force of the 21st Century will be stronger and more capable in every area. Not only will future TUAf modernization efforts result in greater force capability, they will expand Turkey's manufacturing and technological base, increase TUAf interoperability within NATO, and broaden Turkey's participation in multi-national peacekeeping operations. As with any military force in transition, the years ahead will offer numerous challenges. Fortunately, the TAFC leadership is adept at navigating the political and fiscal obstacles which threaten to stifle sustained growth in force capability.

## ABOUT THE AUTHOR

Lieutenant Colonel Ed Shaw is Chief, Security Assistance Programs, Air Force Directorate, ODC Turkey. He is an acquisition logistician from the Air Force Materiel Command, serving in his second security assistance assignment. He was previously assigned to the OMC, Cairo, Egypt.