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Turkey's Request To Buy F-16s Reminds Us That F-4 Phantoms Aren't Ghosts Yet

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On the sidelines of the G-20 meeting in Rome earlier this month, Turkish President Recep Tayyip Erdoğan and President Joe Biden discussed strained U.S.-Turkey tensions and whether the latter might be allowed to buy F-16s. That Turkey's capable but rapidly obsolescing air force needs them is belied by the fact that it *still* flies F-4E Phantoms and *will* fly them until at least 2030.

The news that the Turkish Air Force (TAF) will be flying Phantoms 56 years after acquiring its first F-4s in 1974 came early last week when Turkish Defense Minister, Hulusi Akar, revealed the service extension in response to questions from lawmakers during a Parliament appearance on the Turkish Defense Ministry's 2022 budget proposal.

Turkey is not alone in operating the venerable F-4. South Korea, Greece and Iran still fly the Vietnam-era fighter. With the possible exception of Iran, all plan (or planned) to retire their Phantoms in the next few years.

The Turkish Air Force had such designs until Erdoğan forged ahead with the purchase of Russian S-400 missile defense systems in 2019 despite firm American opposition. Turkey declared the S-400 acquisition a necessity due to "intensive attacks" from Kurdish forces on Turkey's border.

The Pentagon's concern that as an F-35 partner-nation and buyer, Turkey's operations would directly inform the S-400's ability to track the fifth-generation stealth fighter was made manifest by the U.S. decision to expel it from the program and deny it F-35s. The Phantom reprieve can be directly traced to that decision.

In Rome, Erdoğan lobbied Biden to permit Turkey to purchase a supply of Lockheed Martin LMT -0.3%-built upgrade kits, as well as new-build F-16Vs. (Turkey sent a letter of request for

the purchase of 40 F-16s and 80 modernization kits to the State Department in early October.) Turkey's president suggested the $1.4 billion his country has sunk into the F-35 would cover the deal.

Turkey's status as a NATO member and geo-strategically important (if recalcitrant) ally might sway President Biden to comply but stiff bipartisan congressional opposition to the Erdoğan government indicates a deal may not happen any time soon, if ever.

That leaves the Turkish Air Force with few options. Turkey has been working on its own TF-X indigenous stealth fighter which would nominally debut in the 2030s. But design progress on the TF-X has lagged far behind schedule and contention over technology transfer requirements has also slowed an effort to attract foreign partners for the program.

Buying Russian equipment is an alternative that Defense Minister Akar has expressly mentioned meaning Ankara may opt for Su-35s or even the fifth generation Su-57. But as a recent Cato Institute paper pointed out, the Turkish Defence Ministry recently assessed the Russian aircraft as technically inferior to western fighters and excessively costly thanks to the TAF's need to adapt from American equipment to the Russian systems.

So Turkey is likely to persevere with its existing fleet of F-16s, F-5s and F-4s. Lest you think that its Phantoms are hangar queens, consider that they participated in NATO's Toxic Trip-2021 Exercise earlier this month. The TAF currently has about 30 active F-4Es, all of them upgraded to "Terminator 2020"-spec.

Approximately 54 of the 200 Phantoms the TAF received over the years were upgraded to the Terminator 2020 configuration in the early 2000s. The modernization would extend the F-4's service life and increase its capabilities based on Israel's Phantom 2000 program (Kurnass) which integrated avionics systems developed for Israel's failed Lavi Indigenous Fighter Program.

Elbit served as the prime integrator and Lahav handled airframe modifications. The improvements would, as the name implied, keep the TAF Phantoms relevant until about 2020 when the F-35 was expected to debut in Turkish service.

Terminator 2020 F-4s received a Kairser wide angle HUD and ELTA's 2032 look-down, shoot-down fire control radar. A locally manufactured AN/ALQ-178 passive Self Protection Suite was integrated as well as HOTAS (Hands On Throttle And Stick) flight controls, ELTA's EL/L-8222 Electronic Counter Measures pod and a new MIL-STD-1553B on-board networking bus, enabling GPS/INS precision targeting/navigation.

The structural upgrade was expected to add 6,000 hours additional life to the 5,000 hours expected of the F-4E airframe. That fatigue-life will have to be managed and possibly augmented

again to stretch the Phantoms out to 2030 and beyond. The re-wiring, new hydraulic and pneumatic systems associated with the Terminator 2020 upgrade reportedly helped shed 1,653 lbs of weight from each aircraft, marginally reducing airframe stress.

New multi-function displays for the pilot and weapons systems operator helped manage the Terminator's strike capabilities, leveraging precision munitions including AGM-65G Maverick air-to-ground missiles, GBU-10/12 Paveway smart bombs, and Israeli AGM-142 Popeye anti-surface missiles. Israeli Python-3/4 air-to-air missiles were added as well.

The TAF operates its Terminator 2020s (perhaps they should be renamed Terminator 2030s) largely in the strike role as demonstrated by its use of Popeyes to hit Kurdish strongholds in Northern Iraq in December 2007 during "Operation Sun". They remain a regionally effective tool and NATO asset though of less value in tactically sophisticated combat environments like Syria where even the U.S. operates largely with stealth aircraft.

But necessity means they'll continue to fly-on out to 70 years after the F-4 first entered service in the U.S. In 2021, it's remarkable and surprising to many to be reminded that the F-4 Phantom is not a ghost.