



AIR POWER

Tom Cooper lifts the veil, at least partially, of secrecy and mystery surrounding the Syrian Arab Air Force and its declining capability.

RESEARCHING AND analysing the Syrian Arab Air Force (SyAAF) has never been easy. In the past, the 'Silent Service', as the SyAAF is known within its own ranks, went about its work behind a thick veil of secrecy, and reliable information was extremely

difficult to obtain. Since the outbreak of the Syrian Civil War in 2011, however, the situation is diametrically opposite – nowadays information and photographs are available in abundance via first-hand sources (much information for this article was provided on condition of anonymity) and social media, and the SyAAF's operations can be followed in near-real time.

The SyAAF's activity over the last six years has often been highly unorthodox and thus difficult to explain within the confines of a magazine article. Accusations of corruption, nepotism, sectarianism and blatant criminalisation have blighted the SyAAF since the late 1970s and their debilitating effects were clearly exposed during the Lebanon War of 1982.

Origins

The SyAAF was established in 1946 with help from France – which trained the first group of Syrian (and Lebanese) pilots and ground personnel – and the United States, which donated an initial ten T-6 Texans and two Piper Cubs. While a few more pilots were subsequently trained in Iraq, further development was significantly boosted when the SyAAF's first commander – Colonel Abdel Wahad al-Hakim – hired eight foreign instructor pilots, including six Croats and two Germans, all of them highly experienced World War Two aces.

With around 30 pilots and slightly more than 50 ground personnel, the SyAAF took part in what the Arabs call the



Above: After years of intensive combat operations, the SyAAF has let safety standards drop below acceptable levels. Bombs and fully loaded rocket pods are regularly stacked in heaps outside aircraft shelters. BA



IN DECLINE

Palestine War and the Israelis their Independence War, of 1948-49, with some success, but little overall effect.

Through the 1950s, the SyAAF was bolstered through purchases of Italian-built Fiat fighters and advanced trainers, and British basic trainers and jet fighters, including Meteors. While most of its pilots and technical personnel had latterly received instruction in the UK, increasingly larger groups began training in Egypt, then in Eastern Europe – particularly in Czechoslovakia and Poland.

In 1955, Syria placed its first of two orders for a total of 45 MiG-15bis interceptors and MiG-15UTI conversion trainers, thus entering a period of military co-operation with the Soviet

Above: Operated by three squadrons, about a dozen examples of the Su-22M-3/M-4K family remained the backbone of the SyAAF's fighter-bomber fleet until the April 7 cruise missile strike on Shayrat. via RS
Below: A close look at two FAB-like bombs, crudely manufactured for the SyAAF by the ammunition factories located in as-Safira. via RS

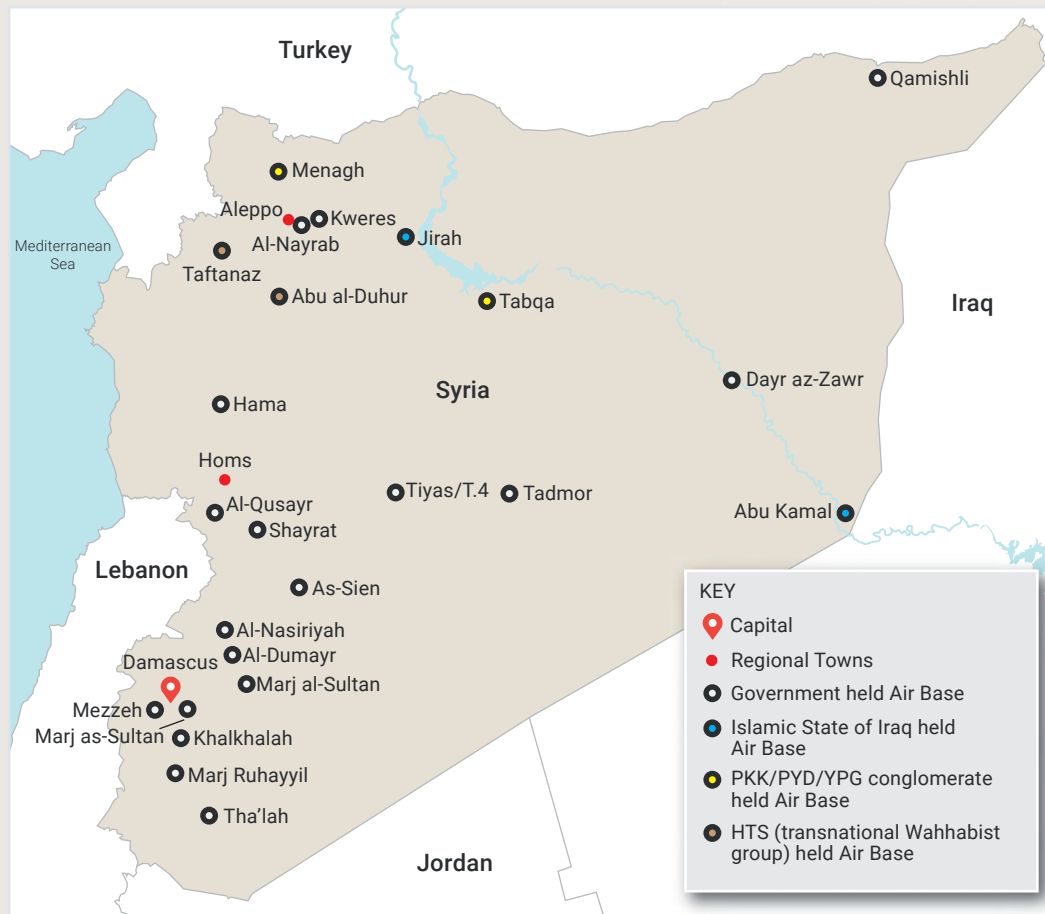


Union that lasted for much of the following 30 years. Even then, major political differences between Damascus and Moscow created a situation where, by the late 1960s and early 1970s, the SyAAF might have been described as Czechoslovak- but by no means Soviet-influenced.

In 1958 Egypt and Syria entered into a political union known as the United Arab Republic. The SyAAF was disbanded and for the next three years was fully integrated into the Egyptian Air Force. The Egyptians took away almost all Syria's aircraft and de-facto all its ground equipment, leaving Damascus with no choice but to establish an entirely new air force once the country declared its independence from Egypt following a military coup.

An approximation of the establishment of the modern-day SyAAF can therefore be traced to the period 1962-73. It was characterised by the personal domination of Hafez al-Assad, a former Meteor pilot who took command of the air force before becoming minister of defence (he was also the father of current leader, Bashar al-Assad). Assad turned Dmeyr air base into his private fortress and transformed the SyAAF into what was effectively his private army, tasked with ensuring his survival and that of the regime he established in the country in 1970. During this period, the Air Force Intelligence Directorate became the most powerful and notorious intelligence and security service in Syria, a position it has retained ever since.

Despite being a staunch anti-



communist, Assad entered closer co-operation with the USSR in April 1973, when he needed additional arms in the build-up to the October 1973 war against Israel. Even then, Soviet instructors working in the country were strictly segregated from Syrian personnel and closely monitored by Air Force Intelligence.

The Syrians attacked Israel on October 6, 1973, fighting on until

the ceasefire on May 1, 1974. Their aim had been to recover the Israeli-occupied Golan Heights, but instead the war cost the SyAAF dearly in terms of aircraft and personnel. These losses, combined with the dominance of members of the minority Alawite sect over all other ethnic and religious groups, which had begun in the 1960s, and another period of tense relations with Moscow, resulted in the

service's gradual degeneration and de-professionalisation during the 1970s.

Similar Alawite dominance elsewhere in the state apparatus resulted in widespread unrest and an insurgency in the late 1970s. This culminated in a coup attempt from within the air force and the assassination of the SyAAF commander-in-chief in 1981, as well as the brutal crushing of the uprising in



Above: In 2008, Syria acquired 28 second-hand MiG-23MLDs and five MiG-23UBs from Belarus. After six years of war, only a handful remain in operational condition. BA

Right: One of two MiG-23MFs that are still regularly flown by 675 Squadron from Hama air base, seen bombed-up with FAB-like general-purpose incendiary bombs. BA



Hama, in western-central Syria, a year later, in which loyalist forces massacred as many as 30,000 civilians. The principal coup leaders were soon arrested and quickly 'disappeared', while dozens of Sunni officers suspected of disloyalty were concentrated into 'punishment units'; the Hafez al-Assad regime intentionally spent them in combat during the Lebanon War of 1982.

Syria's defeat by vastly superior Israeli forces finally persuaded the Soviets to deliver around 40 MiG-23ML and 20 MiG-25PDS jets, plus almost 100 Su-22M-3 and Su-22M-4K warplanes over the next four years. However, Syria's differences with Moscow continued to grow, Damascus complaining ever more bitterly about the poor quality of Soviet arms.

Furthermore, the Syrian economy proved unable to support the military build-up and in 1988 Moscow halted deliveries of all arms when Syria could no longer service its debt of about US\$17bn. The SyAAF thus received only 24 out of 48 MiG-29s and only 20 of 24 Su-24MKs ordered in 1986. These were the last brand new combat aircraft to enter Syrian service.

Grounded

Cut off from its primary source of equipment and spares, and denied state funding, the SyAAF was grounded for much of the next 20 years. Lack of money resulted in widespread shortages of spares and fuel, and there was no regular maintenance.

Pilots typically struggled



Above: The Hama-based 675 Squadron still has two MiG-23MLs flying. This example (2779) was photographed in late 2015. BA

to clock 25 hours' flying time annually. Unable to support their families on their meagre salaries, ever more officers took civilian jobs.

Hundreds served in the air force during the morning and then drove taxis during the afternoon and evening, or worked as tourist guides or car mechanics. Others in the air force, especially Alawites, who were closer to the Assad regime (the Assad regime represents one of six major Alawite clans), became involved in criminal activity,

including smuggling.

Several Russian attempts to sell Syria Su-27s, MiG-29s and/or MiG-31s during the 2000s all proved fruitless. In 2006, President Vladimir Putin wrote off 50% of the Syrian debt to Moscow and even this failed to incite major arms orders from Damascus. On the contrary, after he came to power in 2000

Bashar al-Assad's regime merely allocated funding to buy spares necessary for basic maintenance and upgrades.

In 2008, Syria – with financial support from Iran – bought 33 second-hand MiG-23s and several shipments of spares from Belarus. SyAAF technicians used these and parts cannibalised ◀



SyAAF air order of battle, April 2017*

Squadron	Types
C-in-C: Major General Ahmed Baloul	
22nd Air Division (HQ Shayrat), Major General Malek Hassan	
Kweres	
Air Force College (CO Major General Monzer Zamam)	
Air Institute (Brigadier General Kamal Dayoub)	
?? Squadron	3-4 L-39ZA/ZO (unit periodically has a detachment at Nayrab IAP)
Dayr az-Zawr	
24th Fighter-Bomber Brigade	
8 Squadron	2-3 MiG-21MF/bis/UM
Hama	
14th Fighter-Bomber Brigade (CO Brigadier-General Ali ad-Darbouli)	
675 Squadron	4 MiG-23MF, MiG-23MLD (23-18) and MiG-23MLD (23-22)
679 Squadron	2-3 MiG-21bis/UM
63rd Helicopter Brigade (CO Brigadier-General Badie Ma'ala)	
618 Squadron	2-3 Mi-14, Ka-25/28
253/255 Squadron	3-4 Mi-8/17
Shayrat	
50th Fighter-Bomber Brigade (CO Brigadier-General Ibrahim Mahla)	
675 Squadron	0 MiG-23MLD (23-18; unit status unclear; no flights since April 7, 2017)
677 Squadron	2 Su-22M-4K (unit status unclear; possibly re-deployed to Kweres)
685 Squadron	2 Su-22M-4K (unit status unclear)
?? Squadron	L-39ZA/ZO (unit status unclear; probably re-deployed to Kweres)
T.4/Tiyas	
70th Fighter-Bomber Brigade (CO Brigadier-General Mohammed Mansour)	
819 Squadron	6-8 Su-24M2/MK2
827 Squadron	2-3 Su-22M-2/3/4K
976 Squadron	4-5 SA342 Gazelle
?? Squadron	6-8 L-39ZA/ZO
?? Squadron	2 MiG-25PDS, 1 MiG-25RB (none flown since 2014)
20th Air Division (HQ Dmeyr), CO Major-General Bassam Haider	
Nassiriyah	
20th Fighter-Bomber Brigade	
695 Squadron	2-3 MiG-23BN
As-Seen	
17th Fighter-Bomber Brigade (CO Brigadier-General Mohammed Dibbo)	
697 Squadron	12-14 MiG-29 (no activity observed since late 2016)
698 Squadron	2-3 MiG-23BN
Dmeyr	
30th Helicopter Brigade (CO Brigadier-General Tawfik Khaddour)	
766 Squadron	3-4 Mi-25
?? Brigade	
?? Squadron	1-2 MiG-23BN
67 Squadron	1-2 MiG-23MLD (23-22)
?? Squadron	0 Su-22M-2/3K (unit likely moved to Shayrat in 2015)
945 or 946 Squadron	MiG-21bis/UM (inactive)
Almazza	
59th Helicopter Brigade (CO Brigadier-General Hassan Ghamnam)	
532 Squadron	4-5 Mi-8/17
765 Squadron	4-5 Mi-25
86th Helicopter Brigade (CO Brigadier-General Mohammed Ibrahim)	
976 Squadron	2-3 SA342 Gazelle
977 Squadron	2-3 SA342 Gazelle
Damascus IAP	
29th Transport Brigade (CO Brigadier-General Muhe'eb Eskaif)	
522 Squadron	Il-76MD, Yak-40, Falcon 20E, Falcon 900, Mi-8
Marj Ruhayyl/Bley	
64th Brigade (CO Brigadier-General Ali Safi)	
?? unit	?? equipment
Khelkheh	
73rd Fighter-Bomber Brigade (CO Brigadier-General Mohammed Hazima)	
54 Squadron	3-4 MiG-23MLD/MiG-23UM

* Unless otherwise specified, numbers of aircraft based on daily operational averages for each unit in question.

Fewer than 14 Su-24MK2s are operated by 819 Squadron. While low on numbers, the Su-24 represents the most reliable fighter-bomber in service. LD via YM



from available aircraft to produce two-dozen 'new' aircraft. Training activity also increased, pilots receiving up to 40 hours per year, although low flying was strictly prohibited after a spate of fatal incidents. But the development of new tactics, or related discussions between pilots and officers, and even conversations over the reasons for fatal accidents, were all forbidden and punishable (usually with open-ended jail sentences).

Indeed, even as the foreign media was abuzz with reports of Syrian orders for various MiGs, in

2008 the Assad regime contracted Plant 150 in Kaliningrad, Russia to overhaul 36 Mi-25 helicopter gunships. The work proceeded slowly, owing to Damascus's frequent failures to pay for it.

The Works', the primary SyAAF overhaul facility at Nayrab (Aleppo International Airport), overhauled and returned to service fewer than 20 MiG-23s, while only 24 refurbished Mi-25s had been returned to Syria before unrest spread through the country in March 2011. The Works simultaneously managed to overhaul and upgrade at least 12 MiG-29s to a standard similar

Right: In early 2014, the SyAAF ran its pre-war stocks of bombs dry. Around the same time, it began arming fighter-bombers with B-8M pods for 80mm S-8 unguided rockets. Su-22M-3 serial 3002 is shown equipped with four such pods. via Pit Weinert





As of late April 2017, the Hama-based 679 Squadron had just two MiG-21bis operational on average. However, these typically flew up to four combat sorties per day. BA

to the MiG-29SM, however, making them compatible with R-77 (AA-12 *Adder*) air-to-air and Kh-29 (AS-14 *Kedge*) air-to-ground missiles.

Civil war

In June 2011, Mi-8/17 and Mi-25 crews were first among the SyAAF to participate in the Syrian Civil War when they were ordered to attack defecting army units in Idlib Governorate. The remainder of the personnel, especially the Sunni officers, were placed under de-facto house arrest for

12 months. In May 2012, the Ba'ath Party headquarters in Damascus ordered the entire SyAAF into action, including the 'grounded' officers. From the beginning, written orders called upon squadron commanders to bomb civilians in insurgent-controlled areas [the author has claimed to have seen originals of at least two such orders, issued by the Ba'ath Party HQ to the commanding officer of a MiG-21 unit]. Every officer was obliged to confirm receipt of the orders and his intention to obey them, with his signature. By June the

practice had 'expanded' to all fighter and helicopter pilots.

Although the majority of SyAAF flying personnel were now Alawite, with very few Christians, Druze and Sunnis remaining, the orders met with strong dissent. Commanders who refused to obey disappeared; only a handful ever reappeared, usually after a week or two in prison, where torture was not uncommon.

Orders for attacks on civilians, and mistreatment of officers, led to a surge in defections by Sunnis, and even by Alawites. This prompted the regime's agents to kidnap the families of defectors; around 12 cases are known where children were tortured until pilots reported to the regime. Hundreds of officers therefore served on, preferring to find excuses not to fly while they worked to deliver their families into the relative safety of refugee camps in Turkey or Jordan, before defecting themselves.

The homes of officers who fled with their families were always torched by regime agents and the SyAAF bombed the houses of several pilots previously awarded the prestigious Hero of the Syrian Arab Republic Medal, because they were within insurgent-held territory.

Ultimately, desertions, and a spate of almost 50 combat losses between July 2012 and April 2013, cost the SyAAF at least half its manpower. Entire units were disestablished, including Hama-based 680 'Tiger' Squadron, a MiG-21 operator that lost the majority of its officers and pilots to the insurgency.

By the end of 2012, only the staunchest Assad supporters remained. The SyAAF became known as the 'Assadist air force', not only among the defectors, but also within its own ranks. The exceptions to the rule were the instructors and students at bases cut off from the outside world by insurgents and then the advance of so-called Islamic State (IS – colloquially known as Daesh in Syria and Iraq).

Iranian support

After 20 years of neglect, sectarianism, favouritism and endemic corruption, the Ba'ath Party – which is responsible for its own militia, or 'Ba'ath Brigades' – ordered the air force into action on behalf of the regime. Assad, and thus the SyAAF, was saved by Iranian military and financial interventions, launched in late 2012.

The SyAAF abandoned what might be regarded as normal operational behaviour. The Ba'ath Party came to term the SyAAF's primary objective of launching up to 230 daily fixed-wing and helicopter sorties through most of autumn 2012 and spring 2013, as the "punishment and destruction of US/Israel-supported al-Qaeda terrorists". Loyalist officers described it as "burning Sunnis", effectively exterminating civilians in insurgent-controlled parts of the country. The campaign was designed to deny emerging civilian authorities the ability to organise and run everyday life.

With few pilots having serious flying and tactics training, and discussion of tactics strictly



forbidden, some loyalists undertook to clandestinely learn how to operate their aircraft using standard tactics manuals. Some began using cell phones and Google Earth for navigation, but while a handful of pilots flew relatively often and have become proficient enough to select targets in densely built-up cities, most of the SyAAF fliers still release their weapons in the general direction of the target.

Tactics and formation flying remain non-existent and combat sorties are flown by individual aircraft. They follow the most direct course between base and target, under strict ground control, and usually attack from altitudes above 4,900ft (1,500m). Air Force Intelligence continues to suppress reporting unfavourable to the regime and anything considered detrimental to the SyAAF's reputation. The primary example of this is the total absence of any information on the causes of specific combat losses.

Reactivation

During autumn 2013, a significant increase in SyAAF training was

observed for the first time in decades. In October, as many as 50 training-related flights were monitored daily by the author's sources, many of them by MiG-21UM and MiG-23UB trainers. In part, the improved training regime was instigated at the insistence of Iranian 'advisors' deployed to support the Assad regime, while at the same time Iranian funds helped increase the supply of spares from Belarus. The training was necessary preparation for three major Islamic Revolutionary Guards Corps - Qods Force (IRGC-QF) offensives from Iran later in the year, into the Qusayr, Homs and Aleppo areas.

A group of SyAAF pilots seconded to the Yemen Air Force also returned, bringing with them valuable experience. They, and other personnel, suggested that B-8M pods and 80mm (3.15in) S-8 unguided rockets replace the older UB-16-57 and UB-32-57 and less powerful S-5 rocket, and began deploying MiG-29 interceptors on close air support duties.

Meanwhile, the old radio-command guided Kh-23 (AS-7 *Kerry*) air-to-ground missile was re-introduced on the MiG-23MF and MiG-23ML/MLD. Combined

with improved work by the Syrian intelligence services, which since 2012 have been under IRGC-QF control, the Kh-23 enabled the SyAAF to begin targeting insurgent HQs with precision-guided munitions.

A number of their air strikes in the Aleppo and Idlib governorates during late 2013 and early 2014 demolished a large part of the insurgent command structure and caused the disintegration of several units. The IRGC-QF was thus able to lift the siege of Aleppo, the largest Syrian city.

The IRGC-QF's successful offensive on Aleppo benefitted the SyAAF greatly. The Works again became available thanks to the recapture of Aleppo IAP, and through 2014 and 2015 it hurriedly overhauled almost 40 L-39 Albatros training jets and 40 Su-22 fighter-bombers, greatly increasing the number of available airframes at a time when the air force was barely capable of launching 50 sorties a day due to attrition and exhaustion.

Furthermore, the IRGC-QF's offensive on Aleppo recovered the so-called 'Defence Laboratories' in the as-Safira area. Here, the Iranians rapidly rebuilt several munitions factories



and helped the Syrians launch domestic production of bombs based on the Soviet/Russian FAB-100M-54 and FAB-250M-54 designs; these were of crucial importance, since pre-war SyAAF stocks were almost depleted.

Russian return

Despite Iranian assistance, a combination of war weariness and sheer fanaticism resulted in Syria's flying personnel becoming reckless. In 2014, Turkish Air Force F-16Cs shot down a MiG-23BN and a Mi-17 after they violated Turkish airspace. In September of that year an Israeli PAC-2 Patriot SAM destroyed a Su-24MK2



Syria originally acquired almost 60 Mi-25 helicopter gunships. Today, two squadrons still operate about a dozen examples. This photograph shows Mi-25 2802, which was destroyed at Abu ad-Duhor in spring 2013. Syrian MoD



Above: While MiG-25s were withdrawn in 2008, a few MiG-25RBs were returned to service in 2012. The two MiG-25PDS visible inside the shelters here were overhauled in 2014 and tested for air-to-ground roles, but not flown since. YM

over the Israeli-occupied Golan Heights, the *Fencer's* crew having forgotten to engage their electronic countermeasures suite.

Several aircraft were also lost in accidents or to small arms fire, and pilots with three or four safe ejections behind them became common. By mid-2015, the SyAAF was barely operational when Assad's ground forces, already weakened by massive desertions and severe losses in three years of war, and largely reorganised into a hodgepodge of sectarian militias by the IRGC-QF, suffered one of their worst defeats ever, in Idlib Governorate. The insurgent advance even threatened Latakia, the heartland of the Alawite loyalists.

The resulting crisis and the IRGC-QF's inability to reverse the course of the Syrian Civil War led Moscow to launch a military intervention. The Russian government stresses the legitimacy of the Assad regime and insisted on bolstering what remained of the regular Syrian military; by contrast, the IRGC-QF had been co-operating with local warlords and their militias.

The SyAAF and Air Force Intelligence were among the major beneficiaries of Russian support. Deliveries of spare parts and more effective weapons raised readiness levels and aircraft availability within the SyAAF's fighter-bomber fleet. By early 2016, the air force was back to flying 60 or more sorties every day, increasing to 70 plus by the end of the year.

Albatros strikes

Furthermore, a number of instructors and pilot cadets were freed when the Air Force Academy base at Kweres in northern Syria was relieved from

an IS siege in November 2015. Within weeks, reports emerged of these pilots undergoing intensive training on the L-39, including night flying – nocturnal operations had previously been reserved for a handful of highly experienced helicopter and MiG-23 pilots.

In November 2015 L-39s began operating by night. Last spring, Syrian Su-24MK2 bombers flying from Tiyas and Shayrat in central Syria began night operations, too, with reports of "machine gun-armed jets" regularly operating by night from Kweres, with Hama and Nayrab following soon after. The latter jets were L-39s.

The SyAAF purchased 55 L-39ZO advanced trainers and 44 L-39ZA light attack aircraft from Czechoslovakia during the 1970s and 1980s. Both variants have four underwing pylons for bombs weighing up to 250kg (551lb) and UB-16-57 pods for 57mm (2.24in) unguided rockets; the L-39ZA

also has a 23mm, twin-barrelled cannon under its fuselage.

Around 50 L-39s remained in service in 2011, with two units of the Air Force Academy, or 77th Training Brigade, plus the Jet Flight School at Kweres and the Advanced Flight School at Ksheesh. The fleet subsequently suffered extensive losses. Two aircraft were destroyed on the ground at Kweres in September 2012, and seven were confirmed shot down over northwestern Syria by April 2013, when 14 were also captured intact by insurgents as they overran Ksheesh. Six more were written off for various reasons at Dayr az-Zawr in eastern Syria.

By April of last year The Works had returned around 12 L-39s to service, modified to carry two B-8M rocket pods and with their cockpits adapted for night-vision goggles (NVG) use. Together with about 15 re-trained

pilots, they were assigned to a new unit under Col Yousef al-Hassan. It worked up at Tiyas, then deployed to Kweres last June, beginning nocturnal air strikes against traffic along the Castello Road, which at that time was the last supply line for insurgents inside East Aleppo.

On September 19 last year, the unit's aircraft played a crucial role in the destruction of a UN and Syrian Arab Red Crescent aid convoy in Urum al-Kubra, west of Aleppo City. Two air attacks were also launched against Turkish forces deployed west of al-Bab (a town around 19 miles (30km) north of Aleppo), in the early hours of November 24, killing several Turkish army soldiers.

The unit continues undertaking an average of approximately 12 sorties every night over Idlib and Aleppo Governorates, and remains as one of the SyAAF's most effective combat assets.

The remnants

The remainder of the SyAAF fleet now largely comprises overhauled, but well-used machines, many of them flown on the most basic instruments. It is likely that very few would be declared operationally ready by any other professional military flying service.

Following intensive activity in 2014 and 2015, very little has been heard of Syria's MiG-29s, but reports suggest one squadron remains active on the type. Its pilots occasionally provide top cover for Russian and Syrian fighter-bombers flying close to the Turkish border and



Above: Dayr az-Zawr-based 8 Squadron is the last SyAAF unit to fly the MiG-21MF, with a pair still in service. As one might expect, these are in rather poor condition and their appearance shows they are regularly patched up. YA



Above: Syrian insurgents and transient jihadists have captured hundreds of armoured vehicles from the forces fighting for the Assad regime. This has, at times, led to Mi-25s hitting back with 9M17 Falanga (AT-2 'Swatter') anti-tank missiles. Syrian MoD

armistice lines to Israel, which are found on the Golan Heights. Reported delivery of ten Su-24Ms from surplus Russian Air Force (VKS) stocks in May 2016, and again from January this year, remain unconfirmed. They seem unlikely because the Russians are not keen to supply Syria with aircraft capable of delivering nuclear weapons, since they could be passed to Iran, while removing the so-called 'A-wiring', the equipment necessary for dropping nuclear weapons, is an expensive process. Furthermore, the SyAAF Su-24MK2 fleet rarely operates more than six to eight combat sorties in a day, indicating the survivors of the fleet delivered in 1987-88, and overhauled and upgraded at the 558th Aircraft Repair Plant in 2010-12, remain its backbone. The crews of these powerful attack aircraft have proven themselves capable of retargeting on the basis of emerging intelligence after the aircraft has taken off, something the VKS struggles to achieve. They, not the Russians, have successfully bombed major insurgent headquarters since December 2015, usually with FAB-250M-62 or FAB-500M-62 general-purpose bombs.


Prior to the US strike on Shayrat (see *Middle East News* in this issue), the SyAAF also included around 30 Su-22M-3, Su-22M-4K and Su-22UM-3K jets with three squadrons; this number is now down to around ten aircraft, just five or six of which are operational. The fleet was well stocked with reasonably advanced weapons, including parachute-retarded FAB-500ShN general-purpose and ODAB-500ShL thermobaric bombs, OFZAB-500 incendiary bombs and 240mm S-24 unguided rockets. They fly only in daylight and before the raid on Shayrat



Right: Around 20 upgraded MiG-29s saw extensive combat service in 2014-15 armed with B-8M pods for unguided rockets, as seen here. YM

completed between ten and 35 sorties per day depending on weather conditions. The SyAAF's MiG-21MF/bis and MiG-23BN fleets are nearly extinct, only a handful each of MiG-21s remaining active at Hama and Dayr az-Zawr. While the MiG-23BN is officially in active service with two units, they barely manage six daily sorties between them. Since the strike on Shayrat, only the MiG-23MFs and MiG-23MLs at Hama remain airworthy. They fly around

five to eight sorties a day. The five to eight MiG-23MF/MLD aircraft serving 675 Squadron were wiped out by the US cruise missile attack on Shayrat. The once huge Mi-8/17 fleet has been badly depleted and fewer than 30 airframes remain intact, of which just around 12 are operational at any time across two squadrons. Similarly, the transport fleet, which was never particularly strong, is limited to a few VIP bizjets and two Il-76s. On the contrary, Syria's

two Mi-25 units are very active. Today's SyAAF is a shadow of its former self. It remains capable of playing a role on the civil war battlefields primarily thanks to its attacks on the civilian population in insurgent-held areas and on the insurgents' complete lack of advanced anti-aircraft defences – the US and its allies have successfully blocked supplies of man-portable air defence systems (MANPADs) to any of the native insurgent groups. By contrast, the transnational IS jihadists regularly use MANPADs to down SyAAF aircraft, claiming around one aircraft every two or so months, although at least as many losses are caused by mechanical failure. Syrian aircrew now mostly comprise fanatical Assad loyalists, convinced they are fighting a crusade against "a CIA/Mossad/al-Qaeda conspiracy". This, combined with the poor condition of most of the SyAAF's equipment, means it is incapable of even protecting airspace still officially controlled by the Assad regime – which covers less than 30% of the country. Its fate in a conflict against any neighbouring air force, and particularly against a Western air arm or alliance, would undoubtedly look bleak. 



Above: The SyAAF's L-39 fleet suffered a series of losses in 2012-13, and for a while nearly disappeared from the battlefield. However, it made a major comeback in late 2015 as a light striker for nocturnal operations. via Pit Weinert

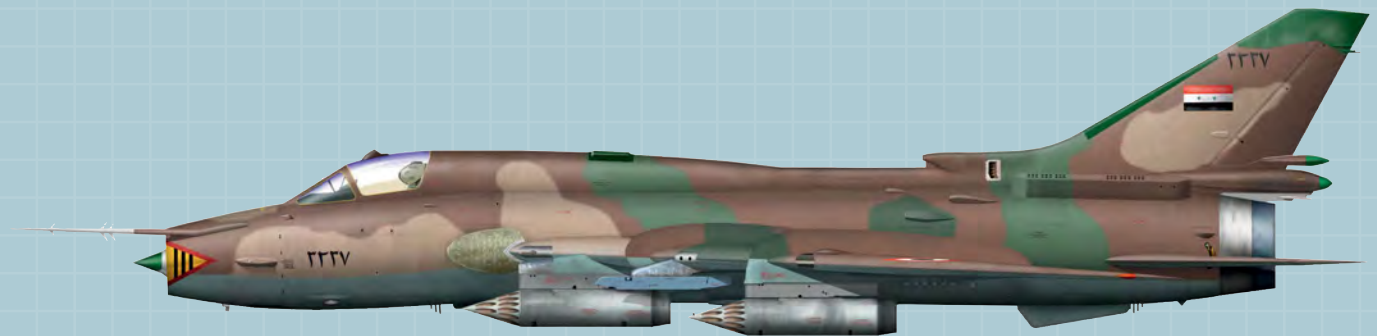
Syrian Arab Air Force fast jet types



Above: This MiG-23MF, serial 2657, was one of a handful operated by Hama-based 675 Squadron as of late 2015. The inset shows the insignia of The Works at Nayrab: this is regularly applied on combat aircraft and helicopters overhauled by that facility. Artworks by Tom Cooper



Above: In 2013-14, MiG-29s upgraded to SM standard flew a number of combat missions with Kh-29 (AS-14 'Kedge') guided missiles to deliver precision strikes on insurgent headquarters and bridges. This small fleet is now compatible with Izdeliye 190 (R-77) medium-range air-to-air missiles.



Above: This Su-22M-4K of Shayrat-based 685 Squadron (serial 3237) is shown in the colours applied immediately after its overhaul in 2015, and armed with B-8M rocket pods. It is one of three examples that survived the US strike on April 7, 2017.



Above: Syria originally ordered 24 Su-24MKs, but only 20 of these were delivered. At least one additional example was acquired from Libya in the 1990s, and the fleet received a major overhaul and upgrade to Su-24MK2 standard in Russia, in 2011. However, not all aircraft were returned. At least two never reached Russia and remain stored.