

Viking Vampires

Making a name for themselves on the airshow circuit this summer have been the beautiful Vampires of the Royal Norwegian Air Force Historical Squadron

words and photography: JAN JØRGENSEN

A NEW WARBIRD operator called the Flyvåpenets Historiske Skvadron (Air Force Historical Squadron) has recently been formed in Norway, and is making a big impression on the wider European scene. It currently operates a pair of de Havilland Vampires, but its ambitions are high, and it is hoped that other airworthy jets with connections to Norwegian military aviation history will be acquired.

The Flyvåpenets Historiske Skvadron is a private non-profit organisation manned by the owners of the two Vampires, Kenneth Oskar Aarkvisla and Per Gudmund Strømmen, and a group of volunteer aviation mechanics and other specialists who help keep the Vampires airworthy. Most of the technicians are either currently working in the Royal Norwegian Air Force or retired from it. Kenneth's wife, Mette Aarkvisla, takes care of administration and co-ordination of bookings for airshows. Although co-operation with the Luftforsvaret (Royal Norwegian Air Force) is very strong, it did not allow the Historical Squadron to use

the word Luftforsvaret in its name, so the old Flyvåpenet designation was employed instead.

The Vampires are a two-seat T55 and a single-seat FB6, both originally operated by the Swiss Air Force. Kenneth Aarkvisla explains: 'Today Per and I own the two Vampires together. I bought the T55 (c/n 990, ex-Swiss Air Force U-1230) from Don Wood of the Source Classic Jet Flight at Bournemouth in September 2005. At that time it was registered G-DHZZ and painted in RAF colours as WZ589. Don had a collection of three Vampire T55s, one Vampire FB6 and five Venoms, which he had bought at auctions in Switzerland.

I took the T55 to Norway in early 2007 and got it registered as LN-DHZ on 24 April 2007. Initially it was based at Torp airfield in the hangar of Dakota Norway. I got an agreement with the Luftforsvaret in 2008 which allowed me to move the Vampire to Rygge air base, and the Luftforsvaret started booking it for promotion and recruiting activities. During December 2009 Per Strømmen became co-owner of the T55, and in June 2011 Per and I bought the



**Norwegian Vampire pilots
Kenneth Aarkvisla (left)
and Per Strømmen.**



FB6 (c/n 705, ex-Swiss Air Force J-1196) from Christer Andskär of Team Vampire Sweden based at Norrköping. It was registered SE-DXS and painted in Swedish Air Force colours with the code F5-50. We quickly applied Norwegian Air Force markings, and later it will receive a Norwegian civil registration.'

Today the two Vampires are painted in Luftforsvaret colours with codes PX-M on the T55 and PX-K for the FB6. PX- was the squadron code used by 336 Skvadron, which was the Luftforsvaret's first pure jet fighter unit. The squadron formed at Gardermoen on 15 July 1949 and operated Vampires until receiving F-84G Thunderjets in March 1953.

In Luftforsvaret service the Vampire was operated by 336 and 337 Skvadrons and the Jettreningsving (Jet Training Wing) from 1949 to 1957. The service acquired a total of 20 Vampire F3s, 36 Vampire FB52s and six Vampire

Vampire FB6 SE-DXS of the Royal Norwegian Air Force Historical Squadron airborne near Bodø earlier this year.



T55s, using the type for air defence, ground attack and advanced training. Weaponry included four 20mm Hispano guns, two 500lb bombs and unguided rockets.

Kenneth and Per have been displaying the Vampires at several Norwegian airshows and various Luftforsvaret celebrations every year. Their routine includes some nice manoeuvres in close formation, and, if the modern-day fighters are available, a flyby together with a pair of Luftforsvaret F-16s. They have also displayed abroad, notably at the RAF Waddington International Air Show and the Duxford Air Show this year, along with a static appearance at RIAT. During visits to the UK they receive much-needed technical support from Oddmund Bjørnaali, who recently retired after 40 years of service with the Royal Norwegian Air Force as a technician and crew chief at Bodø on F-104s and F-16s. Oddmund will soon move to the UK

CARTOON TIME

The Historical Squadron's Vampire T55 coded PX-M has a Mickey Mouse cartoon applied on its forward fuselage. During the 1950s and 1960s it became a Luftforsvaret tradition to adorn some aircraft with cartoons named after their individual aircraft code letter. Other examples which existed at that time were Vampires PX-D sporting a Donald Duck emblem, PX-G with Goofy and PX-S with Sylvester the cat.



► NORWEGIAN VAMPIRES

Heritage Flight, Norwegian-style — Vampire FB6 and two F-16 Fighting Falcons.



“The Vampire wakes up and gets lively above 250kt”

KENNETH AARKVISLA

together with his British wife, and Kenneth hopes that further British bookings for the Vampires will follow in the future.

Both pilots have learned to fly the Vampire fairly recently, as explained by Kenneth Aarkvisla: ‘We were checked out on the Vampire by the legendary Swedish pilot Bertil Gerhardt, who sadly was killed in August 2010 in a crash-landing with Spitfire XVIII SM845 at Tynset in Norway. Vampire flying training was performed in Sweden on the T55 operated by Ljungbyheds Aeronautiska Selskab, and we also went through a technical course on the Vampire there. I was checked out in May 2007 and Per during the autumn of 2009. Bertil had originally learned to fly the Vampire with the Swedish Air Force flying school at Ljungbyhed back in the 1960s and he had maintained his status as both an instructor and examiner on the type.

‘So far I have logged approximately 120 flying hours on the Vampire, and Per around 70. Today Per and I are the only pilots flying our two Vampires, but we have started the training of Maj Martin ‘Tintin’ Tesli who is an F-16 pilot with 338 Skvadron at Ørland air base.’



Both Kenneth and Per are very experienced pilots. Kenneth Aarkvisla described his own flying career: ‘Today I am a captain on the Boeing 737 with SAS. I started flying gliders at the age of 15 and have logged some 800 hours on gliders. I joined the Royal Norwegian Air Force as an observation post pilot, flying the Cessna O-1 Bird Dog for some 1,500 flying hours. Taskings included artillery observation and forward air control. It gave me a lot of training in low flying at 50ft, and during exercises where many aircraft were involved we were not allowed to fly above 200ft. In winter we operated with skis on the Bird Dog and landed on frozen lakes or

out in the Norwegian wilderness. I have also flown the Twin Otter with Widerøe and the Fokker 50 with Busy Bee, before I converted to the Boeing 737 with Braathens in 1992. My total flying time is approximately 14,000 hours.’

Per Strømme, meanwhile, started out as a fighter pilot with the Royal Norwegian Air Force and logged some 2,500 flying hours on the F-5 and F-16, reaching the rank of major. He then became an airline pilot, flying types like the Fokker F28, Boeing 737 and 767, DC-9 and MD-80. His last posting was as a captain on the Airbus A340 with SAS. He is now retired, but continues to fly the Vampire. Per too has logged some 14,000 flying hours.

Hopefully the Flyvåpenets Historiske Skvadron will become a successful warbird organisation, able to secure the continued operation of the Vampire duo and, in future, introduce further aircraft to the Norwegian warbird scene. **A**

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● The Flyvåpenets Historiske Skvadron can be booked for airshows via www.warbirdairshow.no



The display pair of Vampire T55 and FB6 has been seen quite widely during the 2011 season, and the Historical Squadron hopes to build on this. Glenn Beasley



Kenneth Aarkvisla
flying the Vampire
T55 over Bodo.

Flying the Vampire

words: **KENNETH AARKVISLA**

THE FIRST THING you notice when climbing in to the Vampire is that it is a small aircraft with a quite cramped cockpit. Like in most other aircraft of that era, the interior is painted black, and, according to British tradition, most of the switches and handles are positioned seemingly at random around the cockpit. Often you have to look at a switch or handle to make sure you have got the right one, as for instance, when selecting the undercarriage and flaps. That said, the Vampire is quite easy and simple to fly, and well suited for aerobatics. It is stable in the air and you get a good feeling when flying the aircraft.

The Goblin engine is started by pushing the start-up button for a minimum two seconds. The electric starter then rotates the jet engine. After 15 seconds you open the high-pressure fuel cock and fuel starts flowing into the 16 combustion chambers. The fuel is ignited and the jet pipe temperature increases with the rpm, reaching idle at approximately 3,200rpm. When increasing rpm you have to be very careful, and pushing the throttle from idle to full power should take

at least 10 seconds, otherwise you will hear a rumbling sound from the engine and the jet pipe temperature can easily get too high. The maximum is 720°C.

When taxiing the Vampire you steer it using differential braking as it has no nosewheel steering. This is done by activating the braking handle on the stick and, at the same time, pushing the rudder pedals. When the rudder pedals are in the neutral position you are braking on both mainwheels. The rudder itself has no effect before the speed reaches 40kt.

During take-off the throttle is pushed slowly to full power, 10,750rpm. As the speed passes 85kt the stick is pushed back and the nose rotates, maintaining this attitude

until the mainwheels also lift off at about 100-105kt. With a full load of fuel including drop tanks the aircraft feels quite heavy and acceleration is slow. As soon as you are airborne, the wheels are braked and gear selected up. Flaps are retracted and the throttle reduced to climb power, 10,250rpm, usually giving a climb speed of 250kt. The Vampire wakes up and gets lively above 250kt.

250kt is also a comfortable cruising speed, and at about 9,000rpm this will give an economical fuel burn. In the course of a high-level long-range cruise at 20,000ft engine power is set to around 9,500rpm, resulting in a speed of 220-230kt IAS (Indicated Air Speed) or 300-320kt TAS (True Air Speed). For instance, a trip from Rygge to North Weald takes about 1hr 55min flying time, depending on winds. The longest flight I have done in the Vampire is 2hr 10min. Drop tanks increase the range considerably and provide a good safety margin. They can take 900 litres of fuel in total and are usually empty after approximately 40 minutes' flying time involving a long-distance cruise at altitude. At low level the Vampire has an endurance of about 1hr 15min on a full load of fuel including drop tanks and flying at 320kt IAS.

Flying the single-seater, forward visibility is much better than in the two-seater, as you don't have the large nose obscuring your view and you can look almost straight down in front of the aircraft. The single-seater is also a little lighter to fly, and especially during aerobatics you feel the difference. You can play more with it and it is a lot of fun to fly. But compared to the two-seater it has no cooling turbine for cockpit air conditioning, and it quickly becomes very hot in the cockpit of the single-seater. ▶

"The Vampire is quite easy to fly, and well suited for aerobatics"

KENNETH AARKVISLA

► NORWEGIAN VAMPIRES

The very clean lines of the Vampire FB6. The single-seater is slightly lighter to fly than the two-seater.



When I begin my display with an airborne start it feels good to enter with a low-level high-speed pass at 380-400kt, showing the Vampire's topside to the spectators. Then I pull up vertically to about 6,000ft and return. Flying displays in the Vampire you have to think about energy management all the time, as with all other classic jets. The normal power setting during aerobatics is between 9,700 and 10,000rpm. This leaves sufficient extra power in reserve as full power is 10,750rpm. During my aerobatic routine I usually keep the power quite constant with only very small corrections on the throttle.

Loops can be performed with a starting speed of 320kt and above. Pulling approximately 4g the speed will be 120-140kt over the top at an altitude of some 4,500ft. You can fly rolls from 250kt, and four-point rolls at 270-280kt. Above 300kt the Vampire gets a little heavy on the ailerons, as the aircraft has no hydraulic controls and only uses wire-controlled control surfaces. I try to keep the speed below 350kt for loops and

Cuban eights, and rolls preferably below 300kt. The Vampire has a relatively slow roll rate, but I think this just makes the aircraft look more graceful in the air. During pitch it is somewhat lighter on the elevators, and especially the single-seater is very easy to handle. If you have just flown the single-seater and jump into the two-seater, you realise that you have to use a lot more stick force when pulling round a loop, otherwise you will find yourself at very low speed over the top.

One of my favourite manoeuvres in the Vampire is a Derry turn, involving a 270° roll to one side followed by a turn in the other direction. Derry turns can be performed from level flight to a vertical climb. Personally I find the manoeuvre very spectacular if performed in a 45-70° climb. It is an excellent way of making a tight turn and returning towards the spectators, and is also very useful for building up energy. Then I usually make a 45° turn away from the display line, pull up to 30° nose-high with wings level,

wait until the speed reduces towards 200kt in the climb, roll 270° to the left, for example, and make a right turn back along the display line. de Havilland test pilot John Derry of course used this manoeuvre extensively when displaying the Vampire, so to me the Derry turn is a little bit nostalgic and a tribute to John Derry and de Havilland — surely a must during a Vampire display.

It is important to show the aircraft from different angles, not just flying back and forth in front of the crowdline. As already explained, Derry turns are well suited for that, and another way is to return with a half-Cuban eight on the 45° angle to the display line. 360° turns in front of show centre are also nice, and during loops you can make a 90° turn away from the display line at the top or bottom of the loop.

On approach for landing the speed should be close to 120kt, and with full flaps and gear down you must maintain a high power setting, usually some 7,000-8,000rpm. Here the



The Vampire has always been an excellent mount for formation flying, as is well demonstrated by the Norwegian pair.

John Dunnell

Vampire is quite sluggish on the ailerons and often you have to use full movements of the stick to correct for wind gusts and turbulence. Over the runway threshold the best speed is 105-110kt and power is reduced slowly to idle while the stick is pulled fully back to raise the nose while flaring for touchdown on the main wheels. The single-seater should have a 5-10kt lower approach speed than the two-seater due to its lighter weight and tendency to float too far in over the runway. You can land with speed brakes deployed if you like, and this will probably reduce your flare distance somewhat. The single-seater is also a little lighter on the elevators, as already mentioned, so you must be careful when pulling back on the stick to prevent a tail-strike. The nose can be kept high during roll-out until the elevators lose their effect, and as soon as the nosewheel touches the runway braking is performed by using the cycle brake handle on the stick. Thus ends another very enjoyable Vampire flight. **A**