

FLYER

113

February



aviation



magazine

PICTORIAL S-3A VIKINGS AT NAS CECIL FIELD



Divided over NAS Cecil Field and NAS North Island are 187 Lockheed S-3A Vikings (nicknamed: Hoovers) in service with 13 U.S. Navy squadrons. NAS Cecil Field is the shore base for all S-3A Vikings assigned to aircraft-carriers operating in Atlantic Ocean and Mediterranean:

VS-22/AC Checkmates	USS Saratoga
VS-24/AJ Duty Cats	USS Nimitz
VS-28/AE Hukkers	USS America
VS-30/AR Sea Tigers	USS Forrestal
VS-31/AG Top Cats	USS Eisenhower
VS-32/AB Norsemen	USS Kennedy

The S-3A Viking is used in the Anti Submarine Warfare rôle and has aboard an Univac digital computer. This computer is the heart of the aircraft's avionics as it combines at high speed all data gathered by various systems necessary to track submarines, including the MADboom which can be extended. (See photo) All photos: B.Ullings/Aviation Photos International.





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EDITORIAL

EUROFIGHTER

Although five countries in Europe have the industries to produce a fighter aircraft for the 1990s, only three are real candidates: Germany, France & Britain. Sweden is not likely to be able to raise funds to cover the research & development costs for this very expensive fighter aircraft. The costs involving the Viggen raised a lot of criticism and the general public is not likely to agree on an even more expensive project. Perhaps Swedish's aircraft industry SAAB joins in an international company, but Sweden being a non-NATO country is a great disadvantage. Italy's Aeritalia is not expected either to enter the Eurofighter project as leading partner. Budgets for the AMI are kept to a minimum and doesn't mention anything beyond the introduction of 100 Tornados and a requirement for an AMX light-attack fighter. F-104S Starfighters are prepared to service until well into the 1990s.

Germany, France and Britain have already taken the initiatives for this Eurofighter. Aircraft industries as MBB, BAe Dornier and Dassault are known to have close contacts concerning this subject. However, 'Euro' traditionally stands for a lot of trouble. Whoever thinks it is possible to analyse this matter on this page, doesn't possess much knowledge on international co-operation in Europe. Besides at this stage it would be impossible to draw any conclusions. Therefore, I won't mention all aspects but just a few which are essential in the next few months.

The parties that are involved and their interests:

- **ARMEE DE L'AIR:** A fighter aircraft to replace the Mirage F.1s and Jaguars in the early 1990s. Operating alongside the Mirage 2000, this fighter will mainly be used in the ground support rôle.
- **FRENCH AIRCRAFT INDUSTRY:** A new project to follow-on the Mirage F1 production which implies the aircraft must have promising export prospects.
- **LUFTWAFFE:** A fighter aircraft to replace the Phantom in the late 1980s. Alongside the Alpha Jet and Tornado, the fighter will mainly be used in the air defence rôle.
- **GERMAN AIRCRAFT INDUSTRY:** A project which continues the expanding influence of this industry on the European military aviation scene.
- **ROYAL AIR FORCE:** Although no longer actual, the RAF required a V/STOL aircraft with extended air defence capabilities (AST.403). This 'all-in-one' policy has already been abandoned.
- **BRITISH AIRCRAFT INDUSTRY:** Keeping up with the advanced fighter technology and try to maintain the leading position as a producer of fighter V/STOL aircraft.
- **U.S. AIRCRAFT INDUSTRY:** Try not to lose even more grip on the European market and introduce high technology products.

Whereas the requirements are concerned, Britain and Germany are almost similar. On the other hand whereas the industries are concerned, France and Germany are closely together. Existing international companies are no answer to the problem. Panavia has a partner in Italy which is no good for national orders that go with it. Sepecat combines Britain and France which national air forces require a different kind of aircraft.

So far only the problem about co-operation of European aircraft industries, not mentioning problems as NATO standardization, aircraft design, aircraft avionics, European-US co-operation, costs. At the moment these aspects are still too vague to be discussed but surely the FLASH report on Hannover and Farnborough will include the latest news on the Eurofighter.

Jac van Tuyn



MILITARY NEWS

HOLLAND

● Participating in a Dutch army exercise in West Germany, an Alouette III crashed and burned out completely. Three occupants were killed and a fourth one seriously injured. The Alouette had taken off near Bramsche and headed south when it crashed in a forest near Lienen. At the time, no reason could be given for to have caused the accident but the fog must have been a considerable element in the accident.

● On March 5th, 314sqn from Eindhoven will deploy to Bodø, Norway to participate in exercise Anorak Express. From 14 till 19 March, approx. 18,000 soldiers from Canada, Italy, Norway, Holland, U.K. and West Germany will be involved in this exercise.

● For a fourth time, 32nd Tactical Fighter Squadron at Soesterberg received the 'Air Force Outstanding Unit Award'. In the period 1 July 1978 - 30 June 1979, 32TFS was considered to have contributed to NATO with exceptional service and performing all commitments. Also the smooth conversion from F-4Es to F-15s was emphasized and the unit's stand-by readiness during this period.

BELGIUM

● The Belgian air force F-16s at Beauvechain had completed 1,000 flying hours by December 19. Not included were the test-flights from Gosselies or the evaluation flights in the USA. In December the world-wide F-16 flying programme had accomplished 10,000 flying hours.

● On August 23, 1979 T-33A T-Bird FT-01 made the last flight of this type with the Belgische Luchtmacht. Inscribed 'Adios T-Bird', FT-01 is one of the 14 aircraft to be returned to the USA. Early November FT-01, 02, 06, 07, 10, 11 & 29 were flown to Prestwick, Scotland. Late November FT-13, 14, 15, 16 FT-17, 22 & 36 were flown to Sculthorpe, U.K. All will eventually go to Florida, U.S.A.

● The Belgische Luchtmacht recently announced for sale a Sikorsky S-58 and 10 CM-170R Magisters. Stored at Koksijde and awaiting a new owner are:

S-58 OT-ZKF/B-6 (3,744 flying hours)		
CM-170R MT-2 (28.11.78)	MT-16 (02.03.79)	
MT-5 (20.09.79)	MT-18 (02.01.78)	
MT-11 (01.09.77)	MT-21 (02.07.79)	
MT-12 (27.06.78)	MT-27 (26.01.79)	
MT-15 (26.10.77)	MT-32 (20.08.79)	

{ } - dates when aircraft were stored at Koksijde.

● A remarkable announcement was made by Chief of Staff Air Force Lt.Gen.de Smet by stating that the financial situation of the Belgian air force was very poor. Without considerable changes the air force would not be able to make a single flight during the last four months of 1980. The pilots have already been restricted to fly only 150 hours a year, while 250 flying hours is the standard NATO commitment.

PORTUGAL

● In return for the facilities at the Azores, the U.S. are negotiating with Portugal about military aid. Included is an acquirement of up to 30 fighter aircraft to cover Atlantic sea routes around Portuguese territory. Considered have been the F-5E Tigers but also modified A-7A Corsairs presently stored at Davis Monthan.

Ex-Belgian air force Pembroke N51961/RM-8 at Fort Lauderdale, Florida in October 1979. (B.Nilings/API)





A new aspect for C-141B 'Stretched' Starlifters is a possibility for air-to-air refuelling. (Lockheed)

UNITED KINGDOM

• The Rhodesian Airlift was a joint Anglo-American military operation of 2 C-54 Galaxies, 10 C-141A Starlifters, 8 VC-10s and 13 C-130K Hercules. The USAF contingent covered helicopters and heavy equipment while the RAF transported mainly personnel and light cargo.

Just before Christmas 1979, a peace-force of 850 men was to be installed to monitor the Rhodesian guerilla to withdraw and surrender. Amongst the equipment for this force were 12 helicopters, including RAF Pumas and AAC Gazelles and Scouts. The entire airlift lasted one week, 2 days to position requested equipment and five days to carry out the airlift. USAF routed Cairo-Mombassa-Salisbury, while the RAF routed Cyprus-Nairobi-Salisbury.

The RAF Transport Wing kept at least one Hercules on detachment in Zimbabwe/Rhodesia.

• After fifteen years of discussions whether or not to order Chinook helicopters for the RAF, the first one was handed over at the Boeing Vertol Company, Ridley, Philadelphia on January 31.

The first of 33 CH-47s will be delivered to RAF Odiham in September. A first squadron should enter service in mid-1982, followed by a small training unit and No.18sqn based in West Germany.

RAF Chinook HC.1 is generally similar to the Canadian CH-147 and will complement the smaller Wessex and Puma helicopters to fill support rôle with the British Army in Europe. Duties will include the cargo of ammunition, mines, up to 44 troops and equipment. The helicopter has a range of 250 miles and is powered by Lycoming T55-L-11E engines.

• Participating in Red Flag 80-2 at Nellis AFB, Nevada, an RAF Buccaneer crashed in the Nevada desert. Both crew-members of 15 sqn were killed. The Buccaneer was part of an RAF detachment of 12 Jaguars and 9 Buccaneers.

On a four-ship strike mission while practising low-level flying, the aircraft crashed 100 miles from the air base. Following the accident all RAF Buccaneers were grounded, pending an individual examination for metal fatigue.

UNITED STATES OF AMERICA

• Presently C-141B Starlifter 60176 is undergoing trials with the Military Airlift Command since its delivery to the USAF early December.

According to plan, the entire C-141 fleet of 271 aircraft will undergo a similar conversion and being extended by 280 inches with two plugs in the fuselage.

FROM A FACILE PEN.....

AVIATION AGENDA 1980 (part 3)

Open Deuren Dag	Saffraanberg	5 May
Tact. Air Meet	Ramstein, Germany	
		19 June - 3 July
Open House	Alconbury, UK	16 August
Air Pete 80	Mildenhall, UK	23 & 24 August
Open Deuren Dag	Goetsenhoven, Belgium	31 August

EAGLE DELIVERIES

At the end of 1979, McDonnell-Douglas had delivered 476 F-15 Eagles to the USAF, plus 25 to Israel. This year the first of 8 F-15s will be delivered to Japan, where licensed production of an additional 92 Eagles has begun. Production has also begun on the first of 60 F-15s for Saudi Arabia with first delivery scheduled for 1981.

SPAIN ABOUT TO DECIDE

A requirement for approx. 144 aircraft by the Ejercito del Aire is to equip two wings. A decision on which fighter suites the requirement is expected to be taken soon. Officials already evaluated the General Dynamics F-16, the Northrop YF-17, the Mirage 2000 and at the moment representatives are flying the two-seat version of the F/A-18.

SEA VIXENS TO BE SHOT DOWN

Several Hawker Siddeley Sea Vixens, spread all over the U.K. as monuments and instructional airframes, are being collected at Tarrant Rushton. Flight Refuelling Ltd provide the aircraft with their Universal Drone Pack (UDP). Placed on the existing seat rail in the cockpit this package takes over the controls and turns it into a Remotely Piloted Vehicle. Designated Sea Vixen D.3 this type is expected to replace the Meteor D.16 in the rôle as a drone aircraft.

ANOTHER U-2 MYSTERY

Never officially acknowledged were the rumours in the Turkish press about an U-2 that was to have crashed in the Black Sea recently. American officials denied any U-2 operations from Turkey.



B-52D 60659 was one of the three 'Beasties' that visited Upper Heyford in May 1979. Here illustrated just prior arrival at Upper Heyford, using call sign 'Eerie 55'. (B.Bailey-Hickman)

The first C-141B to arrive in Europe is expected by late March. On this occasion FLASH will devote the April issue on the subject 'Extended Air Transport Facilities For NATO Forces'.

• While the world is talking about possible steps to protest against the Soviet invasion in Afghanistan, the U.S. have increased their forces in this area considerably.

Three U.S. aircraft-carriers have joined in the Indian Ocean, USS Nimitz, USS Midway and USS Kitty Hawk.

But also the Soviets have concentrated an extensive fleet in the same area. As a result four B-52Hs detached to Guam for ocean surveillances. Operating from Guam with aerial tankers flying from Diego Garcia, the B-52Hs keep an eye on the Soviet fleet activities.

The increased international tensions caused some incidents. E.g. two Soviet KA-25 Hormone helicopters which overflew the USS Forrestal at an altitude of 400 ft. while navy fighters were in the landing pattern. One helicopter took photographs while the other tried to jam the Forrestal's radar system. The incident took place in the Mediterranean.

• By 1982, a KC-135A will have been modified to a KC-135RE. This new version is an update version which enables the current air-to-air refuelling fleet of Strategic Air Command to remain in service till 2000.

New systems to be installed are electronic, hydraulic and flight control systems. All aircraft will also be re-engined. Boeing recently received an order to prepare the installation of the new CFM-56 engines on all approx. 700 KC-135s.

• B-52D 60659 of 96BW that has been sat at RAF Mildenhall since early January, is there as a result of an accident with a tanker. Somehow the two aircraft came together, and the B-52 sustained damage to one wing completely wrecking the flaps and making it a very dangerous 'Beastie' to fly. It made an emergency landing at Mildenhall and has been there ever since.

It has been found that the USAF are unable to repair the aircraft at Mildenhall, so it will be patched-up to make it flyable, and will then fly directly from Mildenhall to Boeings for repair.

A large number of the base personnel at Mildenhall were outside to witness its arrival, among them the boss of the MAC Terminal - he was delighted to see 60659 and renewed old friendship - it was the same machine he used to fly in Vietnam!

• Late January, the Carter administration presented the Defence Budget for Fiscal Year 1981 to the Congress. The Budget emphasize readiness and research, increasing resp. 6 % & 13%, compared to the Fiscal Year 1980 budget.

Totally the budget requests \$158,200 million, divided over Army (\$38,902), Navy (\$49,579) and Air Force (\$45,582).

To the Air Force, the increase of the Operations and Maintenance budget was inevitable. As Gen. Pauly CinC USAFE, puts it: "We find ourselves in the paradoxical position of having made large necessary investments in equipment and facilities and now not being able to capitalize on those investments due to the lack of adequate O&M funds". As a direct consequent of Iran, the development of a new transport aircraft has been requested. Changes in the mission requirement made the AMST aircraft (YC-14 & YC-15) being replaced by the CX transport aircraft.

The Navy has a tough job in defending the F/A-18 Hornet while the Marine Corps cannot convince the Defence Department of their need for the AV-8B. Heavily criticized on performances and increasing expenses, has led to proposals by members of the Defence Dept. to reconsider the procurement of 1,366 F/A-18 Hornets. Fiscal Year 1981 budget has not earmarked money for the AV-8B, except for the production of four aircraft for tests and evaluations.

Army's Big Five weapon programmes, include the development of the AH-64 Advanced Attack Helicopter and the UH-60B Black Hawk utility helicopter. The budget contains money for the modification of the CH-47 Chinooks and modification of eight Beech RC-12 Guardrail airborne/ground intelligence system.

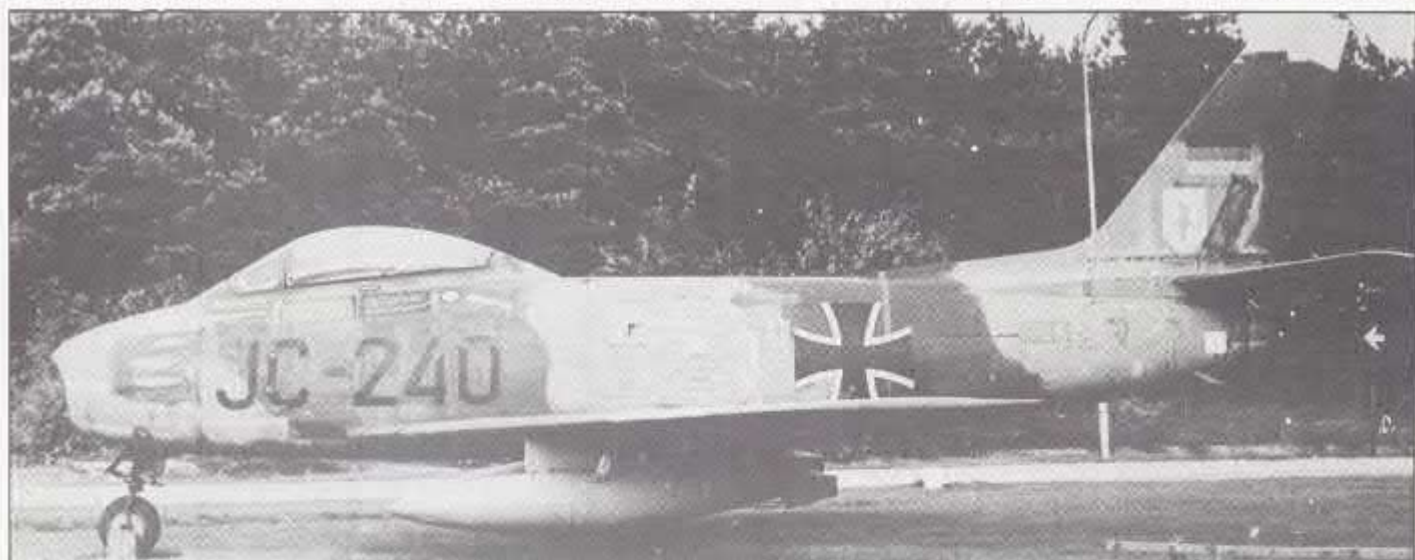
UNITED STATES DEFENCE BUDGET REQUEST - FISCAL 1981:

Air Force:		General Dynamics	180
		McDonnell/Douglas F-15 Eagle	30
		Fairchild A-10A Thunderbolt	60
		Boeing E-3A Sentry/AWACS	2
		McDonnell/Douglas KC-10A Extender	6
		Lockheed TR-1	4
Army		Sikorsky UH-60A Black Hawk	80
		Bell AH-1S Cobra/TOW	64
Navy & Marines		McDonnell/Douglas F/A-18 Hornet	48
		Grumman F-14A Tomcat	24
		Grumman E-2C Hawkeye	6
		Sikorsky CH-53E Sea Stallion	14

WEST GERMANY

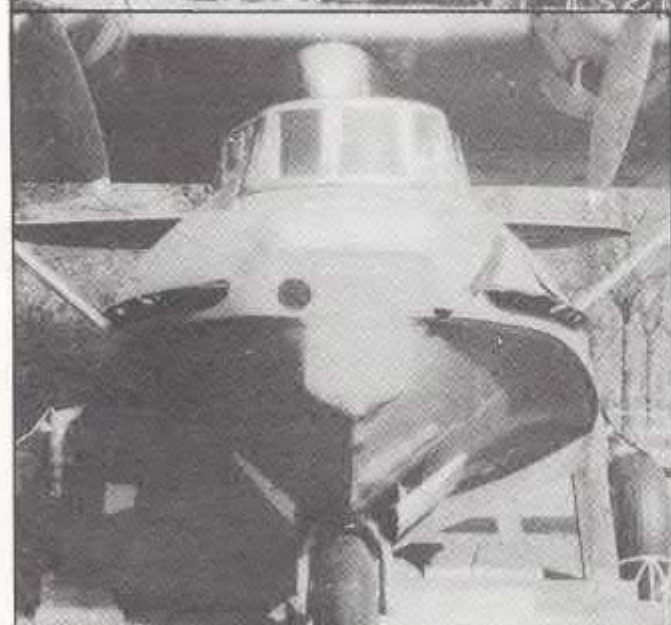
• On detachment at Decimomannu, a Luftwaffe F-104G of JABOG-34 was reported missing on February 5. While on a live-firing mission over the air weapon range, radio-contact was lost with Major Werner Hettrich at 19,20hrs. Search missions by German soldiers and Italian helicopters had no success. All Luftwaffe fighter pilots are annually detached to 'Deci' for at least 14 days to exercise in live-firing. □

MILITARY AIRCRAFT ON DISPLAY IN HOLLAND



MILITARY AIRCRAFT ON DISPLAY IN 1979

I-323	Meteor	gate-guard at Leeuwarden AB (original registration I-320)
M-54	T-33A	on display with KMA, Breda
JC-240	Sabre mk.6	gate-guard in German army camp, Budel
H-15	Spitfire	on display in front of Officer Mess, Eindhoven AB
TB-1	Thunderjet	gate-guard at Eindhoven AB
P-231	Thunderstreak	gate-guard at Eindhoven AB
P-191	Thunderstreak	gate-guard at Gilze-Rijen AB
16-212	Catalina	on display in recreation center 'Bosbad', Hoeven
150	Tracker	on display in recreation center 'Bosbad', Hoeven (original registration 190)
P-205	Thunderstreak	gate-guard with LIMOS depot Nijmegen
B-176	Harvard	on display in Dutch army camp Nijmegen
N-226	Hunter	gate-guard with Air Traffic Control Center,
N-138	Hunter	gate-guard with Klu Training School
N-129	Hunter	gate-guard at Soesterberg AB
I-187	Meteor	in front of War monument at Soesterberg AB
Q-283	Sabre	gate-guard at Twenthe AB
L-18	Machtrainer	gate guard at Ypenburg AB
2-6	Mitchell	on display with National War Museum, Overloon
PL965	Spitfire	on display with National War Museum, Overloon



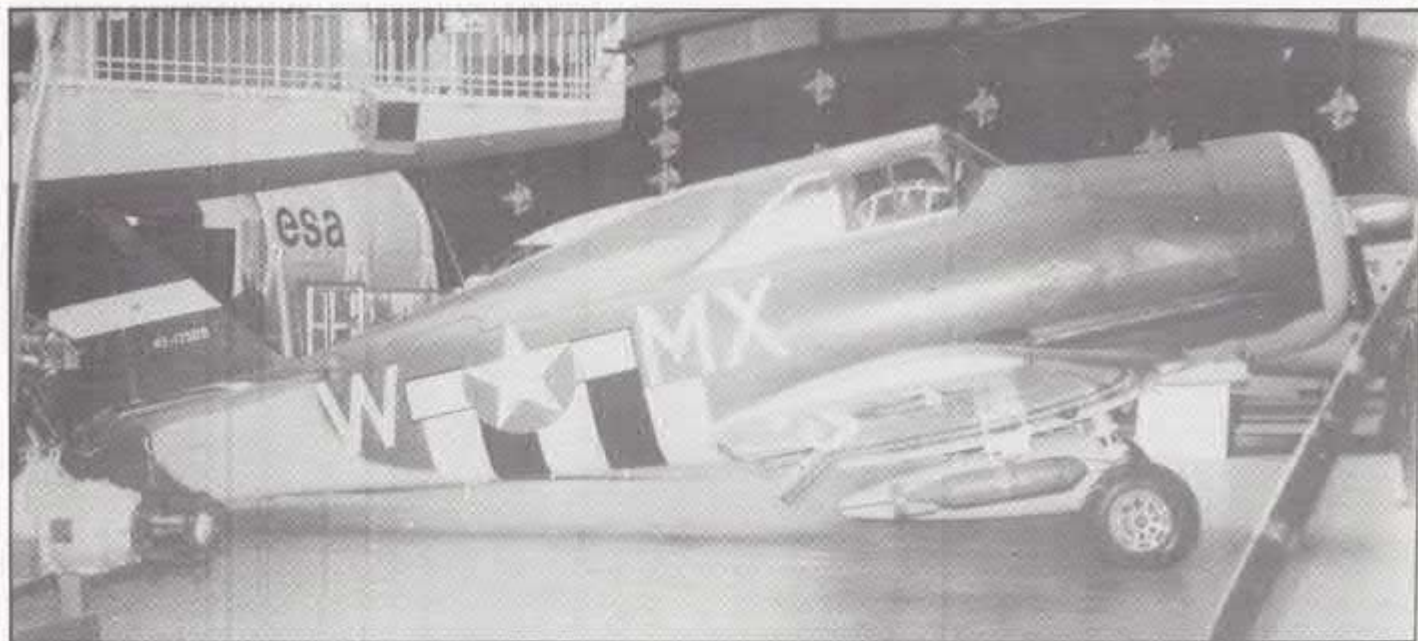
LUCHTMACHTMUSEUM - Soesterberg

Next month the air force museum at Soesterberg air base will move to a new location just outside the air base. Limited exposition capacity made the staff to decide to look for a new accommodation. A military depot on the otherside of Soesterberg village, provided adequate facilities as exhibition halls.

All items of the exhibition have been crated and from March till May, the crates will be transported. If everything goes according plan, the new museum will be opened to the public around May 1. Four new aircraft will be added being a Harvard, a Hunter, a S.11 and a converted Harvard used for the films 'A Bridge Too Far' & 'Soldaat van Oranje'.

Plans call for a permanent exhibition throughout the year. Whether this includes weekends is still being discussed. The new museum is located in Kamp van Zeist which is situated on the southside of Soesterberg village.





AVIODOME - Schiphol

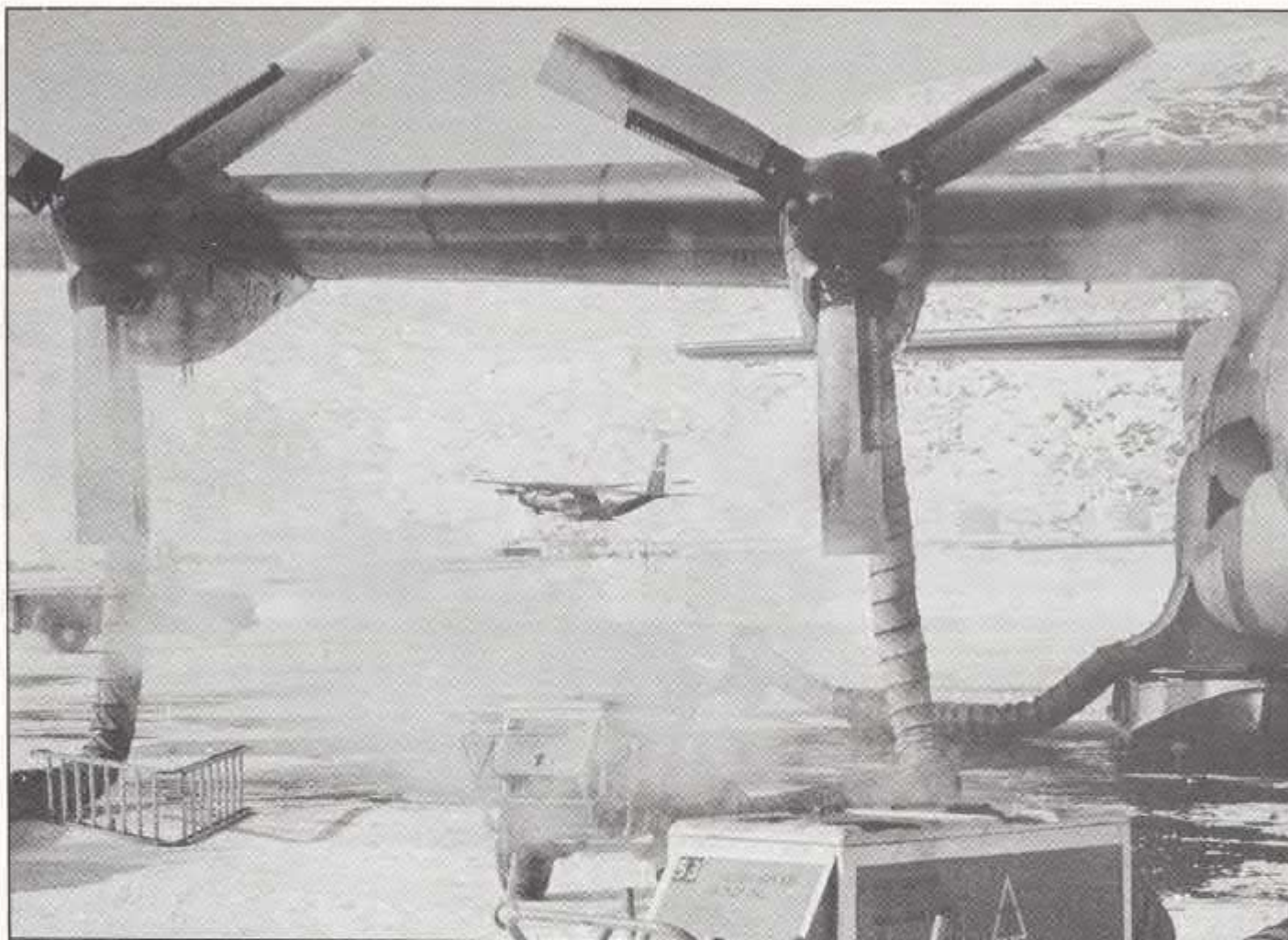
The only other Dutch aviation museum containing military aircraft is Aviodome at Schiphol. This museum preserves the aircraft with historical meaning to the Dutch aviation. A replica of a Fokker Spin to a Tracker of the Marine Luchtvaartdienst mark the evolution of aviation in Holland.

New on display will be a Spitfire. After seven years of restoration work Spitfire LF.mk.IXC (ex MJ271, H-8, W-8, TA-26 & H-53) has finally received anew destination in this museum. After decoy duties at Volkel it went to the War Museum in Delfzijl. Refurbished at the Anthony Fokker School it did not return to its previous location but was acquired by the Aviodome.

Outside the exhibition hall is C-47 Dakota PH-PBA (ex RLD) and Tracker 159 (ex MLD).

In August last year, the Aviodome received an ex-Danish air force Hunter E-410/G-9-438. The aircraft is being prepared for exhibition but it will not be included in the expo for 1980.





Sondrestrom, Greenland. Herman Nelson heaters are used to keep C-130D engines from becoming 'cold soaked' and rubber seals from becoming brittle and leaking fuel, oil and hydraulic fluid. A C-130D takes off in the background. (12TAS/USAF)

ON A LINE DEW EAST

THE LOCKHEED C-130D SKI-HERK AND ITS MISSION OVER THE ICECAP

Well known and well loved aerial workhorse - LOCKHEED C-130 HERCULES. In the following pages, Barry Bailey-Hickman deals with the history of just one very special variant of the 30 or so in use with 40 nations.

Why he choose to write about the C-130D variant: 'Very little has been commercially written to explain the operations performed by this small task force'.

***** DISTANT EARLY WARNING LINE *****

MISSION

Detect unidentified objects flying over the northern Polar regions and relay the warning to the North American Air Defence Command (NORAD) Combat Operations Center in Colorado Springs, the 22nd NORAD Region Headquarters at North Bay, and other regions.

SYSTEM

Over 50 radar sites, positioned above and roughly parallel to the Arctic Circle, form the DEW Line and covers a distance of approx. 5,000 miles. DEW Line alerts the higher headquarters to manned bomber and cruise-missile attack early enough to launch retaliatory forces.

A requirement for a ski-equipped heavy-lifter dates back to 1956, when the USAF approached Lockheed with a proposal to modify a C-130 for use on skis or wheels. The USAF required this aircraft to replace the C-47s then in use in the building and supply of its Distant Early Warning (DEW) Line of radar sites, stretching right across the Northern American continent, Greenland and ending in Iceland. Everything to be used at some of these sites, including building materials would have to be moved in by air, and at that time the largest ski-equipped aircraft in use were two P2V-2N Neptunes, owned by the U.S. Navy.

SKI-HERK CONVERSION



Lockheed soon got to work, designing what would be the largest skis for use on an aircraft. The 'fit' would be suitable for retrofitting, and allow the aircraft to operate from paved surfaces using wheeled undercarriage, or from snow and ice using skis. The main skis measure 20.5 feet (6.25m) x 5.5 feet (1.68m), and the nose ski 10.3 feet (3.12m) x 5.5 feet (1.68m). Each ski is fully retractable, fitting closely to the aircraft contours, reducing cruising speed by about 4% and range by 8 - 9%. The weight of the installation itself is approxi-

mately 5,600lb (2,540 gk) reducing maximum payload of the aircraft to 30,600 lb (13,880 kg). Apart from the ski installation itself, the aircraft also required a 10 US gallon Hydraulic Fluid Reservoir to provide for ski operation.

A prototype installation was ready and fitted to C-130A 55-0021 in time for first flight on 12th January 1957. Extensive trials of this, the first C-130D, were carried out under project SLIDE (Snow, Land and Ice Development Exercise), firstly at Lake Bemidji in Minnesota, and later at Thule AFB (Greenland), where the important ability to make three engine take-offs from snow and ice in short distances, was particularly demonstrated. Jet-Assisted Take-Off (JATO) in the form of 8 x 1,000 lb static thrust RS.1000 rocket units of 15 second burning duration, is used to 'help' the D-model to leave the ground when operating from snow and ice, although this modification may be fitted to any C-130, when a very short take-off run is required. To set-off the reduced range caused by the ski-fit, the D-model was fitted with 2x 450 US gallon external tanks outboard of the engine nacelles, and could also carry 2 x 500 or 11x 3,600 US gallon tank(s) in the cargo bay for long range ferry flights.

Operating weights well in excess of any earlier skiplane were found possible. A take-off weight of 92,976 lb achieved in April 1957, on a surface comprising 24 inches thick ice, topped by 12 inches of snow, was acclaimed as a world skiplane record. Even more remarkable was the mere 985 feet take-off run.

So successful were the trials with '0021' that the USAF ordered Lockheed to modify 12 of their C-130As to 'D' standards. The U.S. Navy who had a commitment to maintain a series of scientific research bases in the Antarctic, including one at the South Pole (Amundsen-Scott base) itself, were attracted by the success of the 'D' trials. Pending acquisition of their own 'skiships', seven C-130Ds were dispatched to the Antarctic in operation 'Ice Flow', a support mission for the Navy's Deep Freeze '60 operation, and flew 400 tons of supplies in 58 sorties to the Pole and Byrd Stations (on Marie Byrd Land, Antarctica), almost halving the allotted 22 days for the work to be completed. The Navy needed no more convincing that what they required were ski-equipped Herks, and by Deep Freeze '61 were operating their own ski-'130s, originally designated C-130BL and later LC-130F.

The original 'roman nosed' C-130As were fitted with AP842 radar, but later the distinctive radome came into being as a result of the APN 59 radar, which

was as big an improvement over the AP842, as that was, over nothing. With APN59 and a set of 'distance-to-go' markers, a good navigator can give a pilot almost as good a precision approach as a Ground Controlled Approach (GCA). In places like the frozen wastes of the Arctic where navigators aids are either non-existent or just primitive, the APN59 has been a life saver.

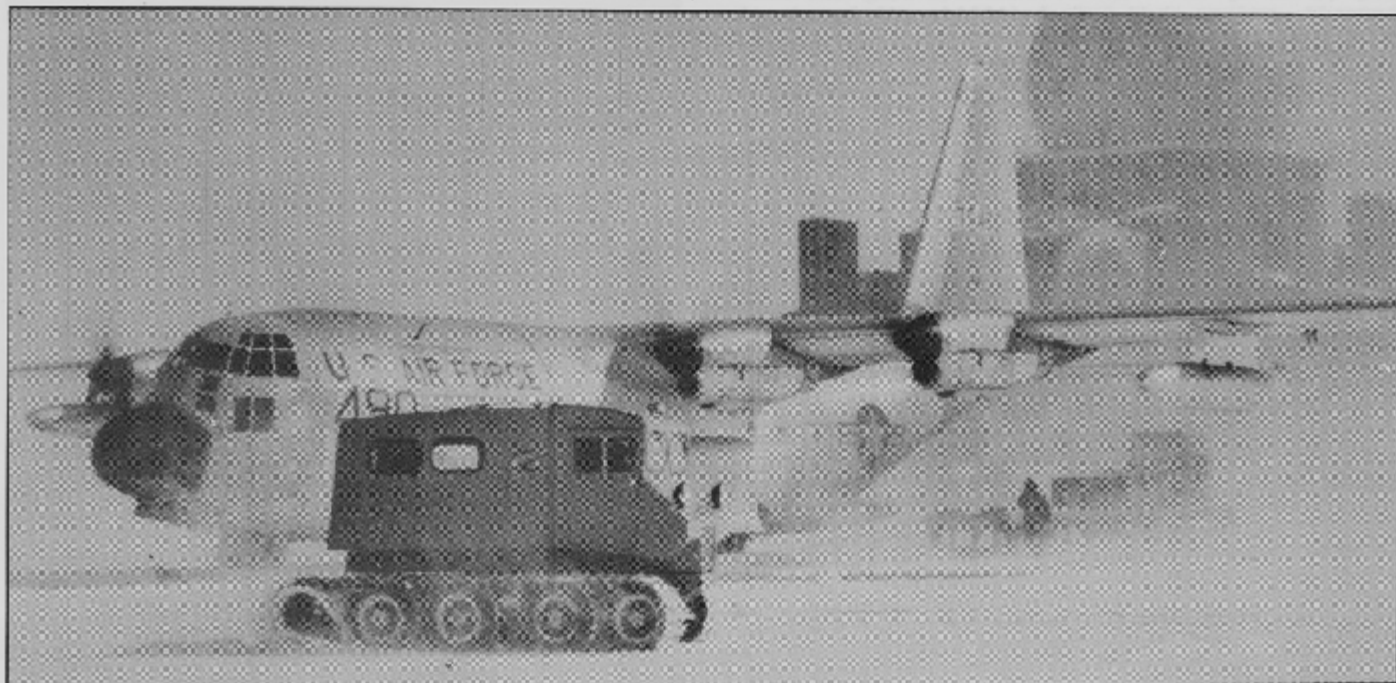
The show was on the road, and the C-130D entered service with the 61st Troop Carrier Squadron (TCS) of the 314th Troop Carrier Wing (TCW) at Stewart AFB, Tennessee. On 08.02.61 the 17th TCS was formally organised at Dyess AFB, Texas, as part of the 64th TCW, to operate the C-130D. On 15.06.64 the 17TCS moved to Elmendorf AFB, Alaska, and later became part of the 21st Composite Wing (CW). This move from Tactical Airlift Command to Alaskan Air Command, was the result of AAC needing the extra airlift capacity and range of the C-130 over their old equipment of ski-equipped C-123 Providers. The 17TCS was re-designated the 17th Tactical Airlift Squadron (TAS) on 08.09.67. The 'Ds' were moved yet again, when their mission was taken over by the Air National Guard. The 139th TAS of the 109th Tactical Airlift Group (TAG) New York ANG was selected, and the transfer was made on 01.07.75. The C-130Ds that are still in service are still operated by the 139TAS NYANG.

DEW-LINE SUPPORT



We must go back a few years to find the reasons why the USAF required a ski-equipped Herk. In 1952 a detailed study was made by America's foremost scientists into the vulnerability of the U.S. and Canada to air attack. Their findings at the Summer Study Group at Massachusetts Institute of Technology, recommended that 'A Distant Early Warning (DEW) Line to be built across the Arctic border as rapidly as possible'. The US government took the recommendation very seriously, authorising the building of experimental sites in 1953. These experimental sites proved the feasibility of the project, and in December 1954 the project was given the go-ahead. Speed was seen as the all important factor, and a completion date was set for July 31st, 1957. This provided only two short Arctic summers totalling about six months, in which to work under passable conditions.

70490 off-loading cargo at one of the icecap radar-sites. This photograph was taken while the aircraft belonged to 81TCS. Noted large '490' on the aircraft's nose section. (USAF)



C-130D Ski-Herk

The bulk of the work would have to be completed in the long dark cold Arctic winters. In its prime, the DEW Line was to consist of more than 50 radar and communications stations, stretching in a line, some 3,000 miles from the North-West coast of Alaska to Iceland, though today it is somewhat smaller in size as satellites take over some of its rôle, and some of the sites are closed down. The entire line was to be built north of the Arctic Circle, and by the time it was finished some 460,000 tons of materials had been moved by air, land and sea, from the US and Canada to build it. The whole job was finished on time.

Now that the DEW Line was built, it had to be serviced. For most of the year at the majority of the sites only aircraft could gain access. Much of the work was done by the gold old 'Gooney Bird' helped by other miscellaneous types, but there was no heavy lift aircraft available on skis, so as mentioned earlier the C-130D was produced to fit this rôle. Now that the Line was in operation, it had to be supplied and built upon, so for a number of years the 'Ds' were kept busy. As this requirement decreased the first six aircraft had their skis removed (during 1962/3) to become 'Wheel Birds' once again, and were re-designated C-130D-6 (somebody told me that the -6 is because six aircraft were involved!?!).

SCIENTIFIC RESEARCH MISSION



As early as 1959 the C-130D was used in the support of scientific research teams out on the icecap. The Hercules could perform in one two-hours flight, what before would have taken two weeks of gruelling work to achieve; the positioning of scientists and equipment on remote parts of the icecap. The main organization carrying out icecap experiments was the Cold Regions Research and Engineering Laboratory (CRREL), who were supported by the Hercules in 1960, 1963, 1969, 1971, 1972 and 1973. In 1964, support was provided for a French glaciological project and a private research foundation project to study the growth and flow of the Greenland Icecap. In 1971, the Greenland Ice Sheet Programme (GISP) was begun, to drill ice core samples in order to determine past climate changes. It involved CRREL as well as scientists from America and Europe. Core samples of ice formed from snow which fell at the time of Christ were airlifted out by the 'Firebirds' C-130Ds. Support of activities at Camp Century were also carried out by the 17th TAS/TCS. The camp was constructed under the ice in 1960 as a year round



C-130D 70488 at MASDC in September 1978. (P. Sgt. D. Kuykendal, via J.M. Bowdler)



17th Tactical Airlift Squadron

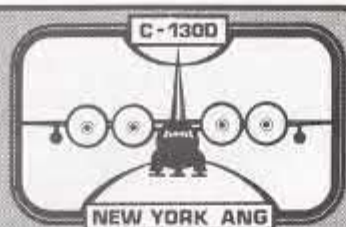
For eleven years (1964-1975) the C-130D was operated by the 'Firebirds', the 17th TCS/TAS based at Elmendorf AFB, Alaska.

Although based at the western end of the Line, the Firebirds also operated their Detachment 1 (2 a/c) at Sondrestrom AFB, Greenland, right at the eastern end of the Line. Their operations at the Alaskan end consisted of flying supplies and equipment to AAC's remote sites and stations, and participating in joint training exercises with Army Forces based in Alaska. Every Tuesday morning a C-130D departed Elmendorf for the long flight across Arctic Basin to Sondrestrom, where it relieved another C-130D. The flight could use two routes, one via Thule AFB, north of Sondrestrom, and the other via Yellowknife in Canada's Northwest Territory. If the winds were favourable, the refuelling stops were avoided, and the flight made direct.

The flights were also used to provide polar navigational training for the navigators. The routes flown, required an extensive use of grid and celestial navigation since navigational aids were few and far between. In places, the magnetic compass was useless since part of the route was as close as 50 miles to the Magnetic North. One of the phenomena encountered, was reverse radar returns during winter. The land would not show on the radar scope, while bodies of water would. Strange!

C-130D 70494 en route over a frozen landscape. Note skis raised flush with fuselage. (USAF)





TRANSFER TO NEW YORK ANG

In 1973 a decision was taken to see if the ski-bird mission could be operated more easily and cheaply by a commercial carrier. Greenlandair won the contract for a one year trial period, and subcontracted this to Bradley Air Services who were to operate and maintain a ski-wheel equipped DHC Twin Otter. A C-130D was always on 18 hours standby at Alpendorf should difficulties be experienced in Greenland, or an outsized load require airlifting.

The Twin Otter trials were successfully concluded in March 1975, however, H.Q. USAF directed that the six C-130As, six C-130D-6s and five C-130Ds operated by 17TAS, be exchanged for 10 newer C-130Ds. This move was aimed at increasing the squadron's capability for supporting AAC's remote site resupply requirements, to which the majority of its hours were devoted. The squadron relied on the C-130A and D-6s for this mission, since the C-130D could not land on the gravel strips found at the majority of these sites, because of possible damage to the underside of their skis from flying stones.

Because of the proven concept of using the Twin Otter for routine supply of the two icecap sites, the C-130D was no longer needed on a day-to-day basis as it had been in the past. Consequently H.Q. USAF decided that the mission could be flown on a part-time basis, and directed that the C-130D ice-cap mission be transferred to the Air National Guard. The 139TAS/109TAS based at Schenectady County Airport, New York was selected. On 1st July 1975, Det. 1 of the 21st CW was de-activated, and the mission transferred to the New York Air National Guard (NYANG), and by the end of the month all eleven C-130Ds were on strength.

While visiting Greenham Common last year for the International Air Tattoo, FLASH talked to Major Tom Noel of the NYANG, who had brought a C-130D to the Hercules Meet. Parts of this interview have been included in the article under caption 'Icecap mission' which takes a closer look at the only active on-going mission of an Air National Guard unit.

scientific research centre. It was powered by a nuclear reactor in order to avoid the need for diesel fuel. The chief project of the station was to drill a hole through the icecap to the land surface 4,900 feet below. This was accomplished and Camp Century was closed in 1966. In 1969 17TAS airlifted a group of scientists to Camp Century to check the borehole and confirm earlier findings, but after two weeks occupation, the camp was again closed and left to the elements.

RESCUE OPERATIONS



In addition to the tasks outlined already, the C-130D greatly added to the SAR capability while operating on the white wastes of Greenland. The crew of a crashed aircraft in World War II would have had to wait several days for rescuers to reach them on the surface, or have relied on the calculated risk of being rescued by an aircraft not designed to land on snow. Today of course the C-130D has this capability, and can land anywhere on the icecap so long as the surface is smooth. A typical rescue was carried out in August 1967, when a British owned, twin-engined light aircraft was reported overdue.

Using the last known radar plot, a C-130D operating from one of the DYE sites was able to instigate a search, and fortunately the crashed aircraft was found after only 30 minutes. An open snow landing was made, and two of the three men on board were picked up alive and returned to Sondrestrom.

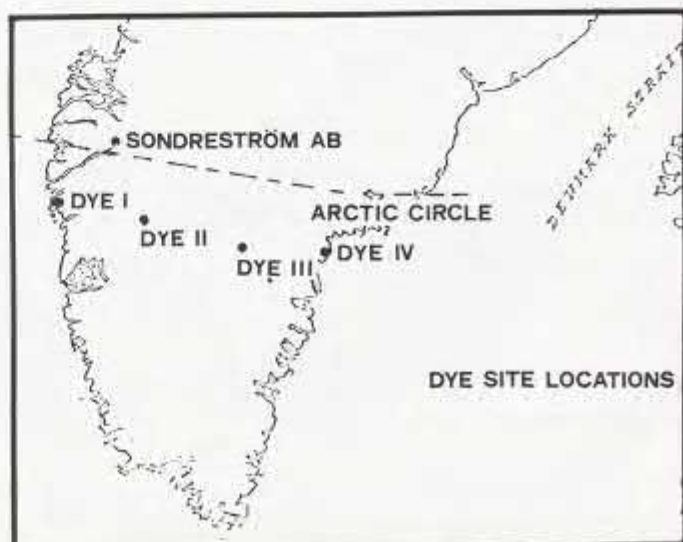
ICECAP MISSION



In Greenland there are four radar sites all named after the major radar site which controls them, at Cape Dyer in Canada. These are known as 'DYE 1, 2, 3 & 4'. Of these four sites DYE 2 & 3 are on the icecap, while the others are on the opposite coasts of Greenland. DYE 1 on the west coast is supported solely by boat, while 2 & 3 on the icecap, and 4 on the East coast are supported by air. Of course it would be too easy to refer to these sites by their real names, so nicknames have been coined for them, in true military fashion. DYE 1 is known as Red River, DYE 2 as Sea Bass, DYE 3 as Sob Story while DYE 4 is known as Big Gun.

Now that the C-130D is only required for outsized loads, the DEW Line mission consists of re-supplying stocks of diesel fuel during the spring of each

C-130D makes a practice JATO from Sondrestrom. In the background is the sheer cliff 'Black Ridge'. (USAF)



C-130D Ski-Herk

year. Enough fuel has to be moved to DYE 2 & 3 each spring, to run everything for the following year. The diesel fuel arrives at Camp Lloyd, a port facility near Sondrestrom, during the summer months preceding the spring airlift. Here it is stored over winter, where it is 'cold soaked'. This storage allows the temperature of the fuel to drop to a point where, when it is transhipped to the radar sites and put into their storage tanks, it will not be warm enough to cause surrounding snow and ice to melt - a most important factor, since should this happen, the storage tanks would be left hanging in a pool of water!

Initially, diesel fuel was airlifted in collapsible rubber bladders mounted on cargo pallets. On reaching the radar site, these were off-loaded from the aircraft, taken to the storage area, emptied, and taken back to the aircraft. A very time consuming and wasteful exercise. During the 1967 refuelling seasons, these rubber bladders were replaced by a cluster of four KC-97 internal tanks, strapped to the cargo-bed of the Hercules. This allows the fuel to be transferred by gravity, direct from aircraft to tank, in one movement.

Apart from the springtime fuel airlift, and any heavy equipment which requires delivery to the sites, the 109TAG also supports on an irregular basis, several of the DEW Line sites in the North West Territory of Canada. The rest of the time is taken by flying approximately 4 training missions per day, with 2 or 3 airlift missions each weekend, hauling cargo all over the United States and a far afield as Hawaii and the Azores.

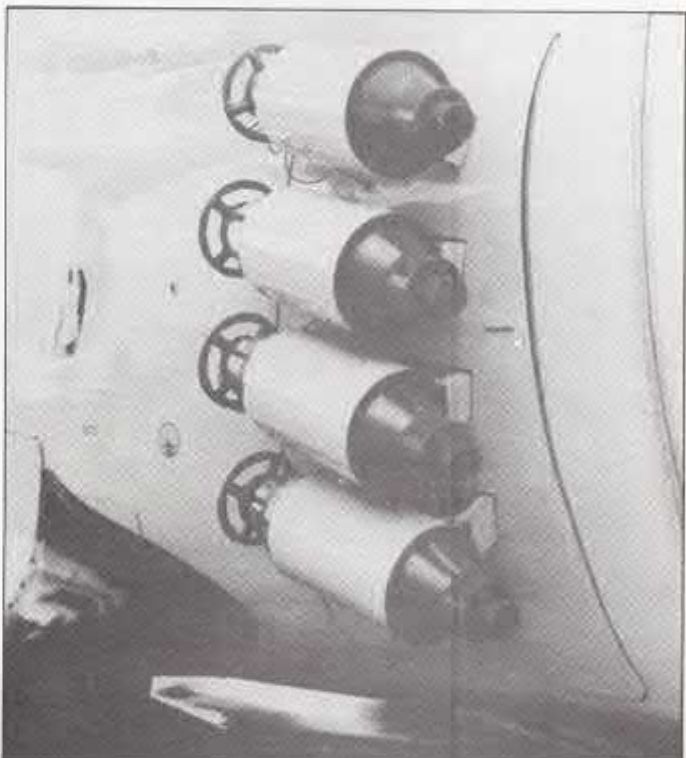
Specialist techniques have to be employed when operating a Skibird in such difficult circumstances, therefore on-going training is most important. Most problems are caused by bad weather. On the icecap, it can change from perfect to impossible in minutes. This sometimes means a crew sitting out a storm lasting several hours. Wind direction can change completely in seconds, so that on take-off, a headwind component may turn into a cross-wind making a take-off impossible. The other major difficulty is Special Disorientation - or 'Whiteout' - when ground and sky lend into a white mass with no horizon and giving no visual references for the pilot to use. This condition is likened to flying inside a 'ping-pong-ball'.

The skis, although coated with Teflon, can cause their own unique problems. On a warm day, say 25 - 30°F, while standing in one place off-loading cargo, the snow may be a little wet, and can freeze to the bottom of the skis. On trying to move, the aircraft will not go anywhere, in fact full power can be applied but the aircraft remains frozen to the surface. To break free, a technique called 'kneeling' is used, where the skis are retracted leaving the aircraft standing on its wheeled undercarriage, the skis are put down again, and that breaks the aircraft loose from the snow.

It must be stressed that when operating into the DYE sites, there are absolutely no 'navaids' available. All there is to help in finding the place to land, are a row of bamboo poles coated in radar reflecting material, placed at intervals along each side of the skiway. With that, and the help of the navigators radar scope these aircraft operate in minimum visual conditions of 300 feet cloud base with one mile horizontal visibility - a very narrow margin for error.

The mission in support of the icecap stations looks like lasting for at least a further 8 - 10 years, until satellites can completely take over the Early Warning rôle. There are no new aircraft planned, even though the C-130D is about 22 years old, they still have very low airframe hours (the one that visited Greenham Common had only 8,000 hours on the clock) and so with a little care, they will probably see out the mission to the end.

Recent news from the General Electric Company, shows that a new advanced semiconductor radar (System GE592) is being developed in conjunction with the US Air Force Systems Command. This is part of the 'seek-iglo' programme, part of which involves the re-equipment of part if not all of the remaining DEW Line sites. It looks like the 'D' and 109TAG will be in business for a long time to come. □





LAC	USAF S/N	ACCEPTED USAF	DELIVERY TO 61TCS	CONVERTED TO C-130D	DELIVERY to 61TCS	DE-CONVERTED TO C-130D-6	DELIVERY TO NYANG	CURRENT
3048	55-0021	Prototype C-130D operated by AFCS. Modified to DC-130D with normal radome. Sold to USN as 158228. Fitted with 4 bladed props 1978. Current as 'UF/28' VC-38qn.						
3180	57-0473	Field modification from C-130A with skis attached (non-retractable) to landing gear. 17TAS 'MT' 155TAS/137TAW Tennessee ANG as C-130A '76, '77.						
3181	56-0474	'MA' B15TAS/315AD based at Tachikawa, Japan. Field modification from C-130A with skis attached (non-retractable) to landing gear. 17TAS, 'MS' 96TAS/44TAW AFRES '71, '73; 96TAS '76, '77.						
3191	57-0484	15.08.58	----	at LAC	02.02.59	1962/1963	18.07.75	New York ANG
3192	57-0485	19.08.58	19.08.58	29.12.58	22.04.59	1962/1963	19.06.75	MASDC mid '76
3193	57-0486	15.08.58	15.08.58	18.12.58	23.04.59	1962/1963	07.07.75	New York ANG
3194	57-0487	28.08.58	29.08.58	22.10.58	27.02.59	1962/1963	31.07.75	New York ANG
		In 1968 while with 17TAS named 'Hustlin Husky'.						
3195	57-0488	04.09.58	15.09.58	??	17.03.59	1962/1963	14.07.75	MASDC mid '66
3196	57-0489	12.09.58	----	at LAC	05.02.59	1962/1963	30.06.75	New York ANG
3197	57-0490	23.09.58	10.10.58	??	19.03.59	---	21.07.75	New York ANG
3198	57-0491	30.09.58	06.10.58	??	02.04.59	---	20.06.75	New York ANG
3199	57-0492	30.09.58	07.10.58	03.01.59	24.04.59	---	02.06.75	New York ANG
3200	57-0493	08.10.58	----	at LAC	02.04.59	---	06.06.75	New York ANG
3201	57-0494	11.10.58	----	at LAC	20.04.59	---	21.06.75	New York ANG
3202	57-0495	24.10.58	----	at LAC	27.04.59	---		

While with 61TCS on operation Ice Flow named 'Frozen Assets'.

While with 17TAS/21CW named 'The Harker'.

Crashed 05.07.72 at DYE 3 06:55 local time with 6,258.7hrs on the airframe. '495 was considered beyond economical repair and useable component were salvaged at the crash site. The wreckage was totally obliterated by the following year's snow fall.



HH-3F PELICAN'S MERCY MISSION

INTRODUCTION OF HH-3F PELICANS FOR SEARCH AND RESCUE OPERATIONS WITH THE AMI

Although not represented at the foundation conference of the International Civil Aviation Organization (ICAO) in 1944, Italy joined this organization a few years later and subsequently committed itself to the foundation articles, including Nr.25 which involves SAR operations. Obviously the geographical position of Italy requires an extensive organization to cover the vast areas of sea surrounding the country. Originally intended for civil aviation under control of local authorities, the SAR operations were soon being flown by military aircraft. AMI's 15° Stormo became responsible to take care of the logistic support of the SAR fleet. This summer, when the delivery of 20 HH-3F Pelicans has been completed, 15° Stormo will have a new structure. The delivery of this new helicopter gives a better coverage in the SAR rôle, compared to the operations with the HU-16B Albatross.

PELICANS WITHIN 15°STORMO



Replacing the obsolete HU-16B Albatross by the Agusta/Sikorsky HH-3F Pelican, 15° Stormo is taking delivery of an aircraft necessary to perform SAR missions according today's standards. Although all Pelicans have not yet been delivered, the Albatrosses were officially withdrawn in July last year. A few remaining examples of this amphibious aircraft are presently preserved at Ciampino awaiting to be broken up or a new service in a museum. Another victim of re-organization are the AB.47Js awaiting a new operator and presently stored in the hangars at Ciampino.

Logistically 15° Stormo is now only responsible for two types of aircraft: HH-3F Pelicans and AB.204s.

Under command of the 2° Stormo Aeronautica, 15° Stormo has its headquarters at Ciampino and is divided in two gruppi. 84 Gruppo operated the HU-16B Albatross till July 1979 and is now converting to the Pelican at Ciampino. The unit was scheduled to move to Brindisi with 4 Pelicans where it replaced a detachment of AB.204s. Remaining at Ciampino is 85 Gruppo also

15 STORMO S A R



ICAO FOUNDATION CONFERENCE 1944, CHICAGO, U.S.A.

ARTICLE 25: All committed countries will take responsibility to provide aid to aircraft in distress. Within the countries territory or over surrounding seas, Search and Rescue operations are acts up to duty to help the occupants as much as possible.



with Pelicans. Additionally 15^o Stormo maintains 3 detachments with AB.204s at Lunate (recently moved to Cameri), Amendola (coming from Brindisi) Decimomannu. The latter detachment also has an AB.212 in use. It is operated by NATO in support of the British, German, Italian and U.S. air forces using Decimomannu's Air Weapons Training Installation. The AB.212 has the very unusual registration AWTI-1/MM81072 and will be supplemented with another one very soon.

On completion of the HH-3F deliveries, the new structure will have four gruppi & six detachments: HH-3F Pelicans:

- 85 Gruppo at Ciampino (4 - 5 aircraft)
- 84 Gruppo at Brindisi (4 - 5 aircraft)
- ?? Gruppo at Rimini (4 - 5 aircraft)
- ?? Gruppo at Trapani (4 - 5 aircraft)

AB.204s:

- Detachment at Cameri
- Detachment at Villafranca

PHOTO COMMENT:

PAGE 16: August 7, 1979: HH-3F 15-03 on alert station: 'Boeing 720 missing'. Alert had just been withdrawn as the airliner had safely landed in Greece having a malfunction in its communication system.

PAGE 17: HU-16B Albatross 15-4/MM50-177 finally retired. Although in flying condition, the machine had restricted operation capabilities due to lack of spare parts and age.

PAGE 18: AB.204 15-18 being overhauled.

***** 15 STORMO OPERATIONS 1948 - 1978 *****

TOTAL FLYING HOURS	140,046
OPERATIONAL FLYING HOURS	26,893
OPERATIONAL MISSIONS	8,966
RESCUED PERSONS	3,328

- Detachment at Istrana
- Detachment at Grosetto
- Detachment at Amendola
- Detachment at Decimomannu (add. 2 AB.212s)

Twenty HH-3F Pelicans will be on stand-by for emergency calls at four locations. The Pelicans will be primarily used for maritime operations while the smaller AB.204s perform their operations over land and in the mountains.

If the financial situation permits, a replacement for the Agusta/Bell 204 will be announced later this year. Candidates for this SAR requirement are the Agusta A.109 and licence-built Bell 212. With Reparto Sperimentale di Volo at Pratica di Mare an A.109 has been tested on the aircraft's abilities in the SAR rôle, although the precise specifications for a replacement of the AB.204 has not yet been determined.

SEARCH AND RESCUE MISSION



Alongside the standard military structure, the SAR operations are controlled by a separate organization and are directly responsible to the Ministry of Home Affairs in Rome. Based at Ciampino is the Rescue Co-ordination Centre (R.C.C.) which receives all emergency calls as they come in via the air force, army, navy, police and the central Air Traffic Control at Rome airport.

RCC selects the SAR request and accordingly passes it on to one of the two Regional Operation Centers (R.O.C.) which are based in the north at Monte Verde and in the south at Martina Franca. The latter two centers determine from which airfield and with which aircraft the operation will take place.



HH-3F Pelican

The original mission to rescue aircraft and occupants has expanded drastically since the introduction of article 25 of the ICAO:

- Search and Rescue of persons which are involved in accidents on land or at sea.
 - Search and Rescue of persons in areas which have difficult access like mountains.
 - Transport of persons who wouldn't arrive in a hospital in time for treatment in a conventional way.
 - Assistance during riots and calamities.
 - Rescue operations after international disasters.
- The sea surrounding the islands of Sicily, Sardinia, and Corsica as well as the northern part of the Mediterranean are covered with a very active air space with Spanish, Italian and French aircraft. For SAR operations, Italy signed a Tri-National Treaty with these two countries which enables to use each others SAR facilities at all times. Similar plans are being worked out with Yugoslavia to cover the Adriatic Sea. Although USNavy's 6th Fleet operates an independent SAR fleet, both organizations also share each other's facilities. It is obvious that everybody in distress can call up on the services of the SAR fleet, hence the Alpinist organizations and the Red Cross are 'big clients'.

SIKORSKY HH-3F PELICAN



Originally this amphibious helicopter, in the SH-3 Sea King series, was designed to meet the U.S. Coast Guard requirements. On the excellent results of the HH-3E in Vietnam, the USCG ordered 40 helicopters of this type. Stripped of armour plates, selfsealing tanks and added advanced electronic equipment, are the major differences in the HH-3F. Aboard the Pelican all necessary radio equipment has been installed to have contact at all frequencies. The avionics include a computer which can control the aircraft and flies fixed search-patterns. The helicopter flies for hours without the crew to touch the controls. A selection of programmed search patterns in the Pelican have been illustrated in a separate panel.

The crew of 4 members can, depending on the mission, carry 26 passengers or 15 casualties and 2 attenders.

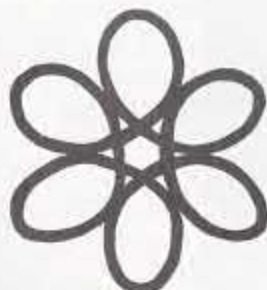
To pick up many persons from sea, the helicopter can land on the water which is possible up to wind force 5. In cases of worse weather or smaller amount of persons to be rescued, a winch is used. A hook operator, positioned in the doorway, can lower the winch and simultaneously control the helicopter to get the hook on the correct spot. The pilot only observes the operations.

The twenty Pelicans are licence-built by Agusta, and have been allocated MM80974/80993 c/n 6201/6220. Authorization SMA NS/30, 23 oct. 1979. □

PROGRAMMED SEARCH PATTERNS



SEARCH PATTERN OVER
ROUGH SEA



SEARCH PATTERN WHEN
LAST POSITION IS KNOWN



SEARCH PATTERN IF ONLY
A CERTAIN AREA IS KNOWN



SEARCH PATTERN WHEN
TRACK IS KNOWN



SEARCH PATTERN IN MOUN-
TAIN AREA

++ JUNE 1979: A SUCCESSFUL RESCUE OPERATION ++

On a yacht of a German couple, an explosion occurred off the coast of Ostia, near Rome. At the time of the accident, the yacht was approx. 10 miles out.

A fire broke out and caught around very fast preventing the couple to emit an SOS by radio. While starting the engine of the lifeboat, the engine caught fire as well and the couple was forced to jump in the water.

The explosion had been noticed by a private aircraft and the pilot reported the accident immediately to the Air Traffic Control of Ciampino, Rome. A patrolling Pelican on a training mission intercepted the radio-message and location of the yacht. It requested permission to start the rescue operation.

The German couple arrived at the airport of Rome only 27 minutes after the explosion had occurred.



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F-104 Starfighter
F-14 Tomcat
F-111 All DFL.10,85



F-15 Eagle
B-52 Stratofortress
F-100 Super Sabre
F-4 Phantom II
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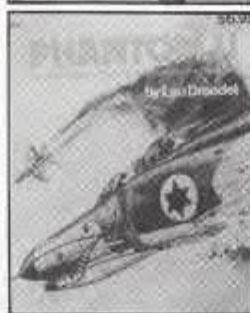
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AGRICULTURAL AVIATION IN HOLLAND

The winter period is nearly over. All agricultural aircraft have underwent a major overhaul to sustain intensive flying activities during the summer. Three types of aircraft used for crop-spraying in Holland:

Grumman AgCat	PH-TPR	at Zierikzee
Hughes H.269C	PH-WEN	at Oostwold
Piper Super Cub	PH-TOP	at Oostwold



DUTCH CIVIL AVIATION

• ROTTERDAM AIRLINES

In November 1977, Rotterdam Airlines seemed to have received an approval by the Council of State to operate a number of routes from Rotterdam/Zestienhoven to abroad.

Two years later a new approval was received, after the first one had been cancelled as a result of an appeal by the municipal of Rotterdam. This new approval allowed Rotterdam Airlines to start operations in April 1981, divided in 70% scheduled operations and 30% charter and other operations.

But last month the approval was again cancelled, following a number of complaints by surrounding municipals of Rotterdam airport. Again the Council of State will have to investigate whether or not these complaints are justified.

All in all, Rotterdam Airlines will have to wait at least another few months to initiate operations which it could have started already two years ago.

• MARTINAIR

On order with Cessna, is a Citation II for Martinair. This Citation II, of which type only one is in service in Holland with Heerma bv, will just like its predecessor, be used for charter operations. It is expected to be delivered in May and will cost Martinair DFL 2 million. Costs are completely financed out of own resources.

Unique in Martinair's charter operations is the coverage of air transport for clients but also the ground handling, additional transport and accommodation in behalf of the clients.

• AIRSTRIP MIDDEN ZEELAND

On the airstrip Midden Zeeland, the construction work of two new hangars is about to start. Both hangars are meant to house 'K.A. van Beeks Luchtvaartbedrijf', which will move to Midden Zeeland. Presently the crop-spraying service operates four Piper PA.25 Pawnees and a Piper PA.18 Super Cub. One hangar will be used for maintenance and repairs and the other for parking.

• LEF b.v.

A Cessna 404 owned by LEF bv used for charter operations, crashed recently. On January 29, Cessna



***** AIRSTRIP MELISSANT CLOSED DOWN *****

Zierikzee, Oostwold, Numansdorp and Melissant are four airstrips in Holland owing their existence to the grace of agriculture. Each airstrip houses a service with up to eight aircraft specialized for crop-spraying.

The service at Melissant is 'K.A. van Beeks Luchtvaartbedrijf', which proceeded from the activities of the late Mr. K.A. v. Beek. Already in 1929, Mr. v. Beek owned a Pander DB (PH-ADL) which signifies the fact that Melissant airstrip, situated on the isle of Overflakkee, Zeeland, has been in use for over 50 years acting as home-base for a number of private and agricultural aircraft.

However, this little airstrip will not exist much longer as on March 28, the runway will be ploughed up and turned into farmland. The farmhouse and surrounding land have changed of owner and the works manager of K.A. van Beeks Luchtvaartbedrijf, Mr. van der Baan, had no intentions to maintain the farmhouse in order to keep the airstrip. As a result the farm was sold and the aircraft service will move to airstrip Midden Zeeland.

To many readers airstrip Melissant will be totally unknown, but to the editors of FLASH, this airstrip was not only an important element in the history of agricultural aviation in Holland, but a dearly beloved piece of romantic up to its last days.

Piper PA.25 Pawnee PH-VBO of v. Beeks Luchtvaartbedrijf at Melissant.



Dutch news

PH-JAL left Nantes, France for Rotterdam. Just after take off the pilot was forced to make an emergency landing but as a result the two-years-old aircraft had to be written off. Nobody was seriously injured and the accident is reportedly to have been caused by having taken jet-fuel at Nantes.

BELOW: Cessna 404 PH-JAL of LEF by crashed after take-off from Nantes, France, on January 29.
MIDDLE: Piper Super Cub OO-KFC in a back-garden just outside Seppe airstrip, eagerly awaiting the moment to fly again.
BOTTOM: Cessna F.172H PH-JWS parked in the same back-garden, also awaiting to receive its wings and to fly again.



• HOLLAND AERO LEASING b.v.

November last year, a new Dutch aircraft charter company started operations - Holland Aero Leasing (HAL). Operating from Rotterdam/Zestienhoven, HAL executed up to 15 charter flights in 1979 only. Aircraft used were the company's own Piper Cheyenne (PH-CAM), but also jet aircraft were leased from companies abroad. Of course, if business keeps up as in 1979, the fleet will be extended.

• DUTCH TOP 5

In FLASH Nr.112/January 1980 (page 22), a list has been published concerning Holland's oldest flying aircraft. Research by a reader, revealed that the construction date given by RLD for Tiger Moth PH-CSL, is probably incorrect. Considering the construction-number and RAF serial, it is more likely the aircraft was built in 1942, instead of 1934. This means that PH-CSL would have to share its first place with Harvard PH-NKD.

By the way, the Super Cubs are of course Piper Cubs.

• NLR

On January 22, a unique aircraft left Holland for the U.K. Aircraft in concern was PH-NLH, a Hawker Hunter owned by the NLR. The Hunter is one of the only two fighter aircraft ever to have been registered in the Dutch Civil Register. Fokker S.14 Machtrainer was only used shortly as a company test aircraft, but the Hunter served with NLR for 15 years in a wide variety of test programmes. PH-NLH left for Staravia at Exeter, U.K. and will be offered for sale. Next month FLASH will take a closer look at the state of service of this aircraft.

• SBOV

The Stichting Behoud Oude Vliegtuigen recently completed one of its projects. Following six months of major overhaul, Piper Cub PH-UCH made its first flight on January 12, 1980.

This implies the organization will have more time to devote to the restoration of Tiger Moth D-EDEM. The intentions are to get this Tiger Moth airworthy before the summer starts. On completion of this project, work can begin on a long-standing restoration: Piper Cub PH-UCS.

• AIRSTRIP SEPPE

Just outside Seppe, two aircraft have been parked: Piper Super Cub OO-KFC and Cessna F.172H PH-JWS. Both have been stored with their wings removed (see photos).

The Super Cub is expected to become airworthy again soon and the Cessna is said to have found a new owner. The reason for the aircraft to be parked outside the airfield was said to be due to lack of space!

DUTCH REGISTER JANUARY 1980



Reg.	Type	C/n	Remarks
PH-ADK 2956	Cessna T.210M	210-62433	Air Service Holland bv
PH-ADM 2922	Cessna TR.182	R182-00794	Air Service Holland bv
PH-AFC 1332	Morane Saulnier M.S.885	369	Lion Toys bv
PH-AFE 2878	Morane Saulnier Rallye 180TS	3239	Aviation Francaise bv
PH-AFH 2910	Morane Saulnier Rallye 180TS	3175	Aviation Francaise bv
PH-AFI 2948	Morane Saulnier Rallye 110ST	3289	Aviation Francaise bv
PH-ALD 2964	Cessna 310R	310-0580	Aero Limburg bv
PH-ALP 1636	Reims Cessna F.150K	0531	Aero Limburg bv
PH-ASE 748	Jodel DR.1050	142	M.Quartel e.a.
PH-BRA 2963	Cessna 177RG	177RG1295	J.Mastenbroek
PH-CAT 2435	Cessna 182P	182-64129	H.J.M.M. van Doorne
PH-FCR 2940	Fokker F.27-600 Friendship	10177	Fokker-VFW bv
PH-FTI 2755	Fokker F.27-600 Friendship	10576	Fokker-VFW bv
PH-FTT 2958	Fokker F.27-400 Troopship	10561	Fokker-VFW bv
PH-FTT 2958	Fokker F.27-400 Troopship	10561	Fokker-VFW bv
PH-GDA 2423	Reims Cessna F.150L	1088	Air Service Holland bv
PH-HAI 2305	Reims Cessna FR.172E	0022	Armita Nederland bv
PH-HGO 2965	Reims Cessna F.152	1701	Air Service Holland bv
PH-HMK 2898	Reims Cessna F.172N	1836	Air Service Holland bv
PH-JBC 2023	Reims Cessna F.172M	0960	Bovellucht bv
PH-JET 2662	Reims Cessna FR.172K	0624	J.M.Simons
PH-JET 2662	Reims Cessna FR.172K	0624	Air Service Holland bv
PH-JJM 2937	Reims Cessna F.152	1673	Air Service Holland bv
PH-JRA 2559	Reims Cessna F.172N	1592	St. Vliegmaterieel Schiphol
PH-JRA 2559	Reims Cessna F.172N	1592	Air Service Holland bv
PH-LAC 682	Cessna 172	46748	Air Limburg bv
PH-LEC 2756	Piper PA-28-181 Archer II	28-7990036	Netherlands European A.S.bv
PH-MBO 2235	Fuji FA.200-160	FA200-259	Martinair V.V. Lelystad bv
PH-MYL 2437	Cessna 182P	182-64100	Milair
PH-NAC 1805	Cessna 150C	150-59976	J.W. van der Vlies
PH-NLH 1126	Hunter Mk.7		Stichting NLR Laboratorium
PH-NOD 2262	Reims Cessna F.150M	1165	Luchtvaartbedr. 'De Kempen'
PH-NPT 2684	Reims Cessna F.172N	1641	N.P.Teulings
PH-PLO 2361	Reims Cessna F.172M	1370	Pro Air Group bv
PH-RIN 2644	Reims Cessna F.150M	1365	Luchtvaartbedr. 'De Kempen'
PH-RUD 2263	Reims Cessna F.150M	1163	Luchtvaartbedr. 'De Kempen'
PH-TWC 2966	Reims Cessna F.152	1675	Air Service Holland bv
PH-TWN 2284	Reims Cessna F.172M	1217	Geosens bv
PH-VSK 2362	Reims Cessna F.150M	1252	Air Service Holland bv
PH-VSN 2968	Reims Cessna F.152	1714	St.Vliegmaterieel Hoeven
PH-VSP 2970	Reims Cessna F.172N	1951	St.Vliegmaterieel Hoeven
PH-VUL 1915	American AA-1A	AA1A-0318	P.M.C. de Wit

NO GLIDER MUTATIONS





Being almost next to Cape Canaveral and the Kennedy Space Center, Patrick AFB is frequented by a variety of NASA aircraft.

T-38A Talon N916NA as shown on this photograph, is used by the NASA astronauts to keep up to date with flying techniques as well as for liaison purposes.

Beech H.18S N6NA photographed in the NASA hangar at Patrick AFB is used for staff communication duties.

Also in the NASA hangar on October 9, 1979, was G.159 Gulfstream I N4NA.

These photographs also show the new NASA logo as now applied on the majority of aircraft in the inventory. All photos: B. Ullings/Aviation Photos International.

NASA AIRCRAFT AT PATRICK AFB

