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April

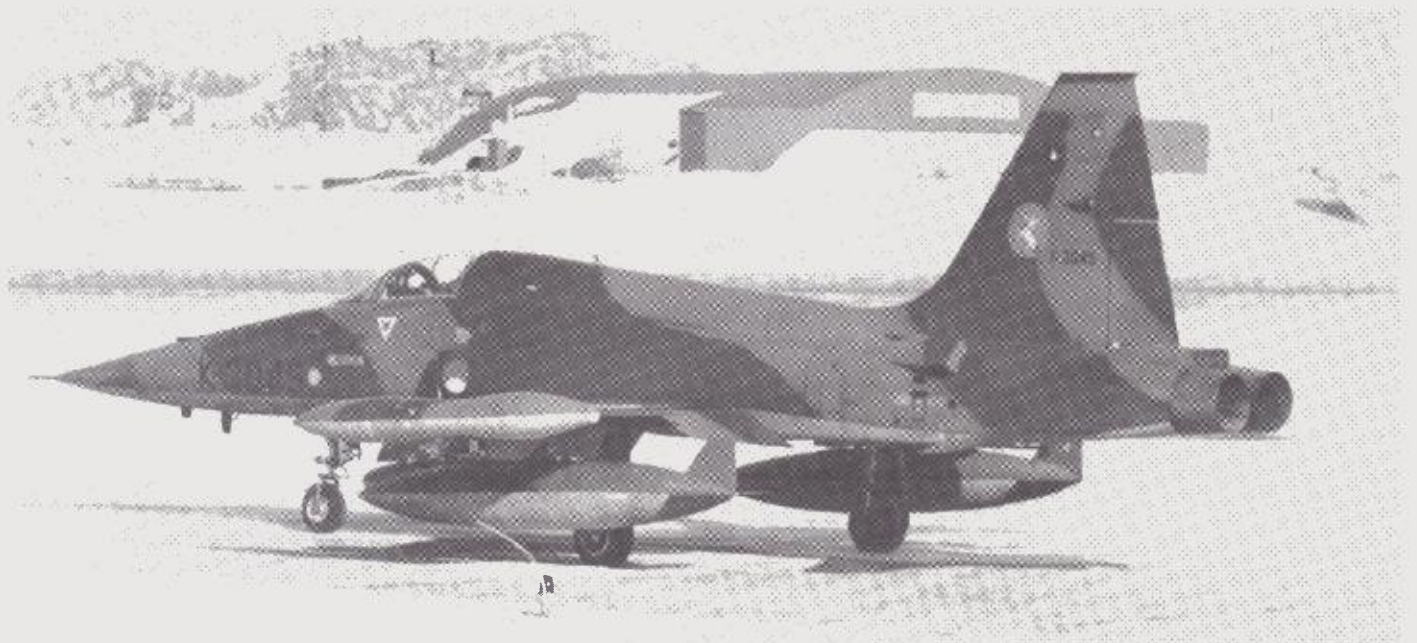
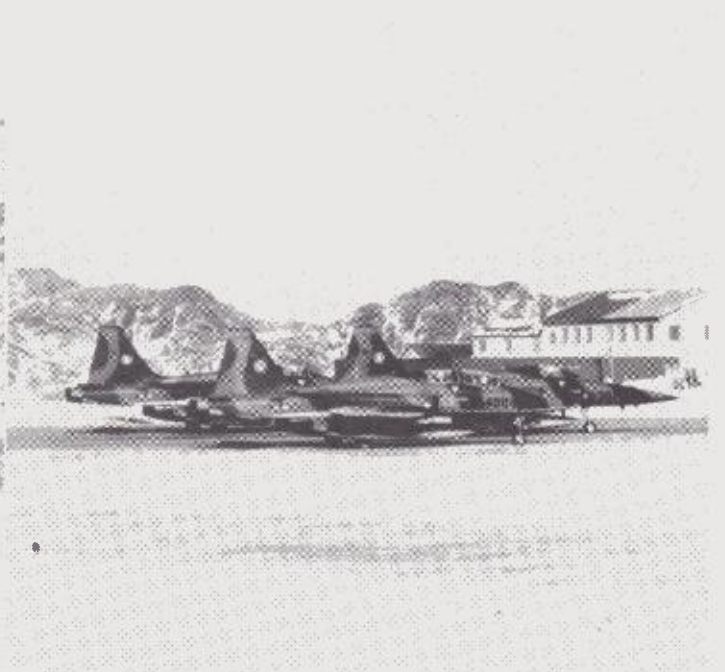


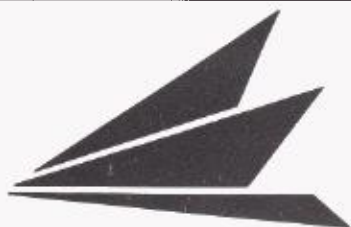
aviation



magazine

EXERCISE IN NORWAY





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APRIL 1979

VOLUME 9

British commercial television company Granada made a series of programmes on specific European items. One of these: The Big Deal - Sale of the Century. Both the programme and the subsequent reactions were highly interesting and clearly showed how easily opinions can be changed by giving information in a wrong way.

For an outsider watching the programme, the sale of 384 F-16s to Norway, Denmark, Belgium and Holland, must have become a rather mysterious event. Insufficient as a weapon system, compensation orders lower as promised, severe engine troubles, political influences all over.

The producers of the programme surely can't be blamed not to have studied the subject thoroughly. Several people were interviewed all strongly involved in the F-16 project. Two reasons, however, gave the programme a different look: o No doubt the programme was made to take a critical look on the sale and so all 'problems' in the project were dealt with extensively. Without giving the positive sides a television-viewer might start to think the whole F-16 project is rotten.

o The F-16 project is still in full swing. Getting reliable and especially objective information is still very hard as much interest is at stake (think of sales in Canada & Australia).

In my opinion two items in the programme deserve some additional attention:
ENGINE.

The F-16 is provided with a Pratt & Whitney F-100 engine of which the F-15 Eagle has two. The F-15 has serious engine problems and the same goes for the F-14 Tomcat which is engined by two Pratt & Whitney TF-30s.

Both aircraft suffer many flame-outs but due to the fact that they have two engines, the amount of accidents is still very low. Compared to aircraft like the F-4 Phantom and F-100 Super Sabre, they are doing extremely well.

However, the USAF has extracted alot of money for General Electric to speed up the development of their GE F-101X engine which could replace all Pratt & Whitney engines and giving additional thrust as well.

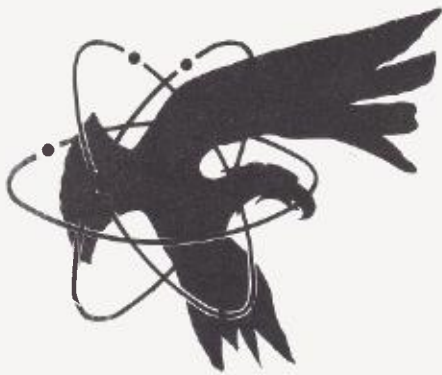
WEAPON SYSTEM.

In the programme General Voght, ex-USAFE commander, strongly disapproved of the F-16 purchase by European countries. The lack of all-weather capabilities were Gen.Voght's strongest objections and subsequently declared the F-16 an insufficient weapon system.

The discussion on what the exact meaning of all-weather capability would take to long for this already extensive editorial. But does the F-16 have to have extensive all-weather capability? Of course, preferable: yes! However, the expenses accompanying the necessary equipment of such aircraft are so high it would result in a decreasing of the amount of aircraft to be ordered.

The all-weather capabilities of the F-16 are indeed limited and compared to the F-15 and Tornado insufficient. But the F-16 is a compact multi-role fighter whereas the F-15 and Tornado are huge and specialized fighters. The 'shortage' of the F-16 will surely be met by equipping the aircraft with the so-called smart bombs. These bombs can be released and are able to find its own way to the target.

Jac van Tuyn



MILITARY NEWS

■■■■■ OPEN DAY AT TWENTHE POSTPONED ■■■■■

Originally planned for 16 June, open day at Twenthe would have done unrepairable damage to the crops on the field. The Dutch air force decided to postpone the event. The new date is 15 September.

Holland

● Pilot training for the Dutch air force is undergoing considerable changes or better said: will undergo.

Within the air force there's a heavy shortage of pilots. Future pilots on training in Canada that dropped out, couldn't be replaced by new pupils as the Canadian air force claimed these vacancies. Furthermore the Klu, for some time, followed a policy to create a great transit of pilots. Both reasons created Klu's present problem.

At the moment three groups are out to get their wings. Two groups in Canada and one in the States. All three groups will return at about the same time and with the few instructors available with 313Sqn at Twenthe, responsible for completion of the pilot training course, a change was inevitable. All just graduated pilots returning to Holland will be divided over the squadrons instead of going to 313Sqn. On detachment at Twenthe, 313Sqn will provide type conversion & familiarization. Gunnery practice will be given by an instructor at the squadron the pilot has been appointed to. This will result in a considerable shortening of the TOCC (Theatre Operational Conversion Course) with 313Sqn.

● Late March, Leeuwarden closed for runway repairs. Not the main runway but the smaller crossing runway is now under repair. This runway will be used for F-16 operations in the future and should reduce the noise-level over the village of Jelsum. Visitors will keep using the old runway. The work will last till late April and in the meantime six F-104Gs are based at Soesterberg (on alert) and 20 others are at Volkel.

● In February 8, F-104G D-8311 of 306Sqn, was badly damaged while landing at Volkel. Its right wheel collapsed. The aircraft will be repaired at Ypenburg.

● Movements at Valkenburg included:

Jan. 9: 158924/LA-5 P-3C Orion USNavy VP-5Sqn
19: WB534 Devon C.2/2 RAF 207Sqn
Mar. 5: XW788 HS.125 CC.1 RAF 32Sqn
No.227 PA-31 Navajo Aeronavale
12: XV250 Nimrod MR.1 RAF
WB533 Devon C.2/2 RAF 207Sqn
20: 11-03 Jetstar Luftwaffe FBSS
26: 160611/LM-8 P-3C Orion USNavy VP-44Sqn
28: 72-18 and 72-54 UH-1D Heer
XX508 HS.125 CC.2 RAF 32Sqn
AJ/86 Nord 262D FAF
29: XS789 HS.748 CC.2 RAF Queens Flight

● This year's squadron-exchanges with Klu units promise to bring some very rare aircraft to Holland. First of all there are the two T-38 Talons of the Portuguese air force. 315Sqn at Twenthe will fell the honour of this exchange early August.

316Sqn at Gilze-Rijen is in the progress of studying the possibilities of an exchange with another Portuguese unit. Any further details still lack as this exchange is expected to take place in autumn this year.

Earlier Gilze-Rijen will host a deployment of Eagles from the States. The deployment should take place in September and both 49TFW and 1TFW have already been mentioned.

F-104G D-8342 as target-tug - the dart was inscribed: Schietdoel Vlb. Leeuwarden. (P. Elzinga)





314 SQN IN NORWAY

Wednesday March 14, two flights of three NF-5s (K-4009, 3044, 3045, 3036, 3058 and 3069) of 314Sqn left Gilze Rijen airbase to participate in one of the traditional Norwegian winter exercises. Close behind but lacking the speed were F.27 Friendships for troops and equipment. The flights were bound for Bodø in the northern part of Norway, but due to the F-16 Cold Weather Trials, they had to make a RON (Remain Over Night) at Rygge Flystation near Oslo. The three F-16s luckily left Bodø airfield (and the building 314sqn would use during the detachment) the next day so the flight was continued in the northerly direction.

Everything in Norway is extreme, either cold, visibility, wind or prices but 314sqn had all the luck of the world during their stay because the weather was and stayed beautiful. After a few days familiarisation in the area with fjords and mountains everywhere, the pilots knew their way around again and the low passes at Bodø became lower and lower. At Sunday 18th, the exercise war started in the north around the area of the Evenes Civil airfield with participating marine forces from the United States; the United Kingdom, the Netherlands and Norway.

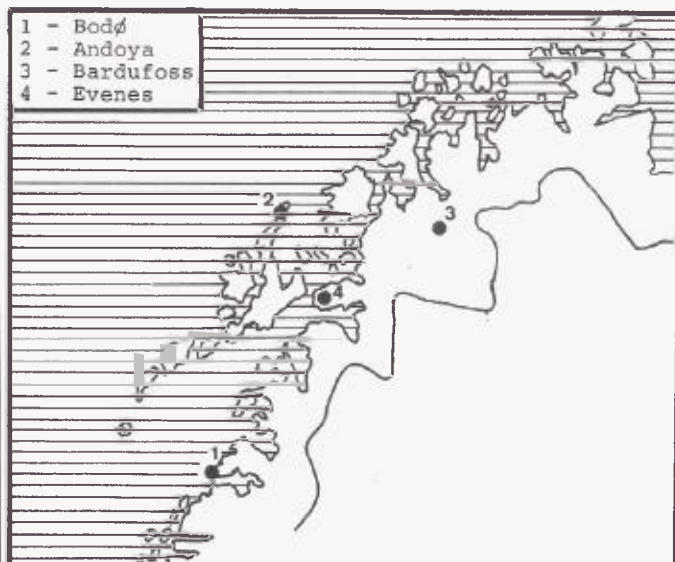
The main idea was to get a maritime landing going with defending forces trying to kick them in the fjord again. Next to all the navy (& marines) which took part mainly as attackers, the Norwegian army was defending, with a little help from their friends. Airborne friends (and sometimes enemies) during this exercise were aircraft from:

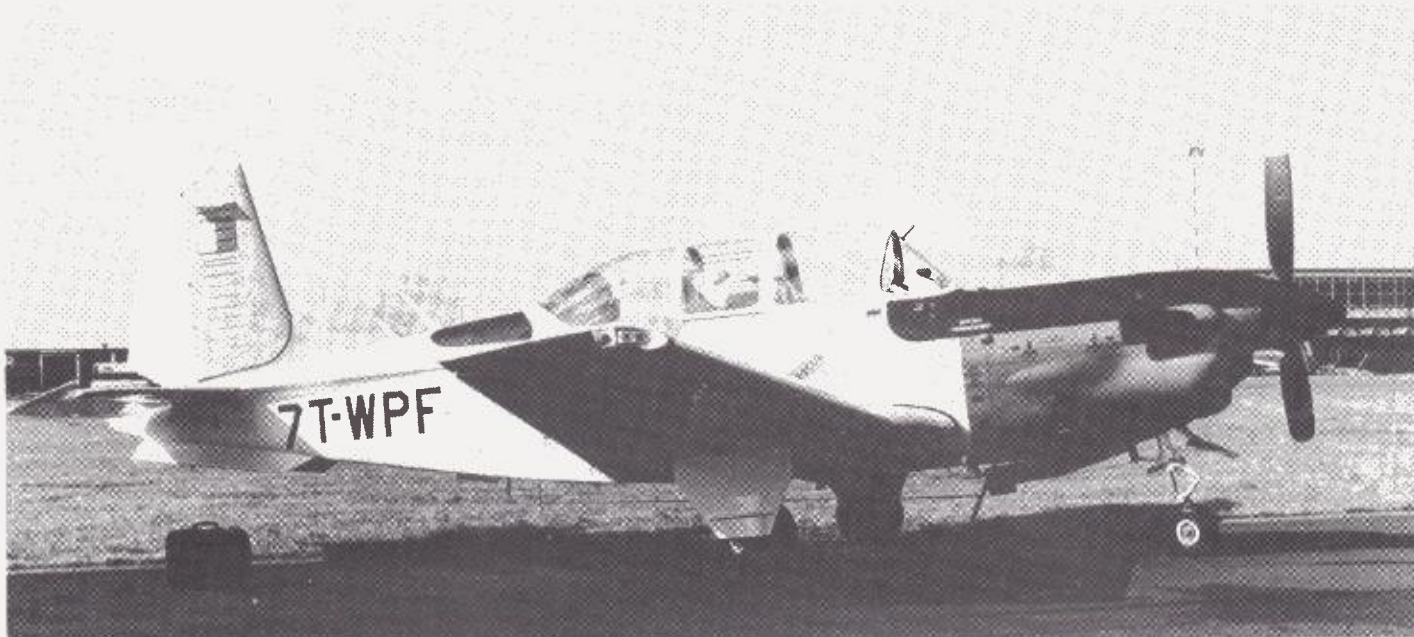
334Sqn	CF-104	Bodø	Norwegian Air Force
331Sqn	F-104G	Bodø	Norwegian Air Force
339Sqn	UH-1B	Field Deployed	Norwegian Air Force
717Sqn	RF-5A	Bardufoss	Norwegian Air Force
338Sqn	F-5	Andoya	Norwegian Air Force
314Sqn	NF-5	Bodø	Netherl. Air Force
1Sqn	Harrier	Bardufoss	Royal Air Force
814Sqn	SeaKing	HMS Hermes	Royal Navy
846Sqn	Wessex	HMS Hermes	Royal Navy

Due to the extremely good weather and the very high serviceability of 314sqn NF-5's, a large amount of exercise 'war' missions were flown against the attacking forces, mainly successful. Of course the squadron has a lot of experience in these operations, being part of ACE Mobile Forces since 1958 and since then flying regularly in Northern Norway.

So to us it was no miracle when we heard we had won the war again and the invading forces found destroyed. We just packed up again and left Norway within a day, smoothly. There will be more exercises this year. 314sqn will be there.

Martin Leeuwis, 314Sqn





Three Beech B.34C Turbomontors passed through Shannon airport, Eire, on delivery to Algerian Air Force on 29 March: 7T-WPD/GP-1, 7T-WPE/GP-2 and 7T-WPF/GP-3. (D.O'Mahony)

Belgium

● On May 19, Brasschaat (near Antwerpen) will be open to the public. Normally this annual event is organized by the local air club in co-operation with the Belgian army. This year it will be the other way around. Since 1 January the School for Light Aviation is a separated division within the army and 25 years ago the division changed from air force to army. A double reason for a good open day and mention has already been made about participation of many foreign army aviation units.

● From 3 till 12 April, 31 Smaldeel/10 Wing at Kleine Brogel had a squadron-exchange with 335 Sqn of the Greek AF. Six Greek F-104s visited Kleine Brogel: F-104G 12601, 22305, 22310, 33638 and TF-104G FG-5909 and FG-3044. Both duads still carried their dayglow tiptanks indicating their origin: Luftwaffe 27-80 and 27-14 resp.

TOP: Greek AF TF-104G FG-3044 on exchange at Kleine Brogel. (J.Schoofs). MIDDLE & BOTTOM: Alpha Jet AT-01 at Brustum.



Canada

● On March 28, the Canadian air force accepted the first of two de Havilland DASH 7. A second one will be delivered in July. The two DASH 7s will replace the CC.109 Cosmopolitan which has been used in Europe since 1960 for short range passengers and freight transport.

France

● Noted at Bordeaux on 24 & 26 February were Mirage F.1CH 139, 140, 144, 146 and 147 of Morocco AF and CM-170Rs 509, 510 & 511 of Guatemala AF.

● Mirage 2000's big brother - Super Mirage 4000 made its first flight from Istres on March 9. Test pilot Jean-Marie Sogat flew the aircraft on a one-hour mission reaching 36,000ft and went supersonic.

The Super Mirage 4000 is a private venture of Dassault although recently the French government announced to invest some money in the research on the Snecma M53 engine of which two are installed in the Mirage 4000.

Dassault intends to market the aircraft as a competitor of the F-15 Eagle.

International

● Long going talks about the 'two way street' are now showing some results. For years the European aircraft industry has been complaining not to get a chance of setting up projects for own defence requirements. All important orders went to the US while only the small ones remained in Europe. Talks on governmental level proved a great willingness to change this situation. Only the American industry objected strongly as it was afraid, hard obtained technology would be given away where nothing could be gained.

Objections seem to have diminished and in three programmes European and American aircraft companies are partners:

- Enhanced Tactical Fighter (ETF)
Panavia and Grumman are adjusting the Tornado so it can meet the ETF requirement which asks for a tactical air-to-ground aircraft for the USAF in the mid-1980s.
- VTX
Dornier and Northrop are adjusting the Alpha Jet to enter the competition for an US Navy basic jet trainer.
- TKF-90
MBB closely co-operates with McDonnell-Douglas in their development of their project for a replacement of Luftwaffe Phantoms.



Vampire T.55 J-1080 at Emmen. The red fuselage with black stripes indicate the aircraft's involvement in anti-aircraft exercises. (S.Kunz)



Remains of the Jaguar that crashed on 26 March near Südlohn, Germany. (G.Lammers)

United Kingdom

● At Dunsfold Flight Test Center, Hawk T.1 XX265 was handed over to the RAF as the 100th Hawk to be delivered. On the same day, March 27, the aircraft was delivered to the Tactical Weapons Unit at RAF Brawdy.

On the same occasion RAF's Director of Flying Training predicted a possible further order for the Hawk.

102 Hawks have almost logged 23,000 flying hours without an accident.

Production numbers have been allocated as follows:

001-007	XX154-XX161	124-125	XX295-XX296
008	ZA101/G-HAWK	126	Indonesian AF
009-052	XX162-XX205	127	XX297
053-106	XX217-XX281	128	1005 KenyanAF
107	1001 KenyanAF	129	XX298
108-116	XX282-XX290	130	1006 KenyanAF
117	1002 KenyanAF	131-132	XX299-XX300
118-119	XX291-XX292	133	HW301 Finn.AF
120	1003 KenyanAF	134-135	XX301-XX302
121-122	XX293-XX294	136	1007 KenyanAF
123	1004 KenyanAF	137-139	XX303-XX305

● Go-ahead has been given for the conversion of nine VC-10 airliners to air-to-air refuelling tankers for the RAF. All nine will operate in a newly formed squadron and supplement the two Victor K.2 tanker squadrons presently based at RAF Marham. Primarily they will only support air defence operations.

Conversion will be undertaken at BAe Filton where all nine VC-10s have been stored for already a year.

● March 26, a Jaguar T.2 of 17Sqn, crashed near Südlohn, W.Germany. Squadron-code is most likely to have been BY and this would make the aircraft involved XX147.

United States of America

● Using call-sign 'AHEAP', ten new A-10A Thunderbolt IIs were delivered to 81TFW on 30 March: WR77-241, 77-254, 77-256, 77-257, 77-258, 77-259, WR77-261, 77-262, 77-263 and 77-264. Also arriving on March 30 was U-2R 10338 at RAF Mildenhall.

- Movements at Frankfurt/Rhein-Main included:
- Mar. 2: 18021 U-21A USArmy 56th Aviation Company
- 4: 70521 C-130A AFRES
- 6: 51-00 (-) and 51-09 (LTG-61) C-160D WGAF
- 60197 C-141A 62MAW (50243 on 10.03)
- 136775 C-1A Trader USNavy NAS Sigonella
- 7: 21856 C-130E Georgia ANG
- 9: 50268 C-141A 60MAW (50228 on 11.03)
- XS793 Andover CC.2 RAF Queens Flight
- 10: 37823 and 37858 C-130E 314TAW
- 11: 50-84 Transall C-160D Luftwaffe LTG-61
- 12: 91527 C-130B AFRES 433TAW
- 17003 OV-1D Mohawk USArmy 122MIC
- 61-ZT/F154 Transall C-160F FAF
- 20: 90011 C-5A Galaxy 60MAW
- 21: 61-ZZ/F160 Transall C-160F FAF
- 22: 96827 HC-130N 67ARRS
- 70510 C-130A AFRES 927TAG

● Noted at Spangdahlem on 23 February:

SP63-452, 63-512, 63-596, 63-638, 64-879 F-4C 52TFW

SP66-664, 66-667, 66-738, 66-754, 66-714, 66-737

66-797, 66-798, 66-804 F-4D 52TFW

SP74-047, 74-050 F-4E 52TFW

TJ66-542, 66-610 F-4D 401TFW

18036, 18059 and 18072 U-21A USArmy

In the second week of April the first two F-4G 'Wild Weasel' Phantoms were delivered to 52TFW. A second delivery of three F-4Gs arrived in the third week.

A-10A Thunderbolt WR77-245 still in two-tone grey c/s at Woodbridge on 07.04. (B.Bailey-Hickman)





Although one aircraft remains in service, the Italian Air Force has officially withdrawn the Fairchild C-119 Packet, their work-horse for 25 years and the back-bone of AMI's transport-fleet. The withdrawal took place on 24 January when C-119G 46-95/MM52-6030 of 2nd Gruppo made a short flight with some invited guests aboard. The withdrawal from use was taken somewhat too literally. On return at Pisa the left main-gear strut didn't block, resulting in an unfortunate landing which ended in a foam-bath.

On this occasion not only the Packet disappeared in Italy, but disappeared completely out of Europe. Earlier Norwegian and Belgian air forces exchanged their Packets for Hercules. With AMI this exchange took place in two phases. In 1972, 50th Gruppo received the C-130H Hercules while 98th Gruppo recently got its first of 46 G.222s.

46th Aerobrigata initially existed of 2nd and 98th Gruppi and took delivery of its first Packets in 1953, this being the G-version built by Fairchild. These were subsequently coded 46-2 up to 46-43. Primary mission was freight & troop transport but the Packet also proved to be an excellent aircraft for paratrooping.

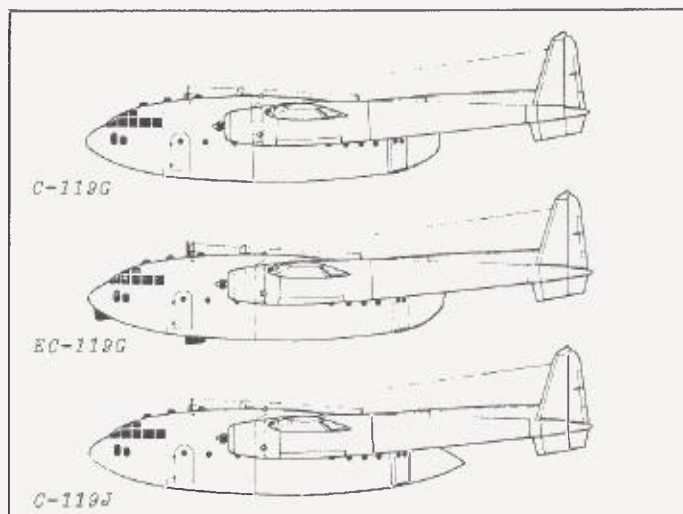
During mass evacuation and provision flights in the Congo in the sixties, thousands of flying hours were logged with AMI's Packets. Three aircraft were lost here, and with two others, which had already been lost, the machines were replaced by five ex-Indian AF C-119Gs coded 46-44 up to 46-48. Additionally 21 ex-USCoast Guard Packets were received, forcing to create an additional squadron: 50th Gruppo. These ex-USCG Packets were all J-models

differing from the earlier model in having a pointed rear fuselage which can hinge upwards. On delivery one of the aircraft (51-8046) made an emergency landing and was never taken into operational service. For all those years it remained at Pisa in USAF markings and was used for spare parts.

In the last few years a few examples were converted to EC-119Gs & Js by installation of additional electronic equipment. External this version differs in having two bubbles under the fuselage. 71 Gruppo G.E. (Guerra Elettronica/Electronic Warfare) was the operator and presently only 46-35 is in use but will be withdrawn in September.

Another version was the VIP version. Three machines were converted for this purpose but brought back to standard with the arrival of e.g. DC-9s.





The ex-Indian AF a/c replaced those which had been lost:

46-3 MM52-6005 10863 w/o at Pisa in 1963
 46-10 MM52-6014 10911 w/o Tangayika Lake 17.11.61
 46-11 MM52-6036 11075 w/o Marina di Pisa 20.04.64
 46-15 MM52-6011 10869 w/o Luluaburg on 15.02.61
 46-22 MM52-6037 11076 w/o Congo on 02.02.61
 C-119J 51-8046 was severely damaged while landing at Pisa on delivery and wfu at Pisa (serial 0-18046)

PAGE 8:

TOP: C-119G 46-93/MM52-6029 arriving at Campoformido on 06.12.78 to become a gate-guard. (EISG)

MIDDLE: The unfortunate landing of C-119G 46-95 on 24 January. (R.Farina)

BELOW: One of the many C-119s stored at Pisa (F.Smith)

PAGE 9 (both Aviation Photos International)

TOP: C-119G 46-96 coming in at Pisa

BELOW: C-119J 46-51 at Luxemburg airport



With the delivery of the 21 additional Packets the code system was changed as follows:

2nd Gruppo 46-20 up to 46-39
 50th Gruppo 46-50 up to 46-69
 98th Gruppo 46-80 up to 46-99

Remarkable is that after overhaul the Packets kept their original squadron-code. This is very unusual for AMI and the registration list of the C-119 is for Italian notions rather simple:

C-119Gs with 2nd Gruppo.

46-20	MM52-6008	10866	wfu - at Pisa
46-21	MM52-6019	10949	wfu - at Pisa
46-22	MM52-6004	10862	ex 46-12; wfu - at Pisa
46-23	MM52-6010	10868	wfu - at Pisa
46-24	MM52-6009	10867	ex 46-14; wfu - at Pisa
46-25	MM52-6040	11079	wfu - at Pisa
46-26	MM51-17365	10777	ex 46-9; wfu - at Pisa
46-27	MM51-17367	10779	ex 46-4; wfu - at Pisa
46-28	MM52-6041	11080	wfu - at Pisa
46-29	MM52-6012	10909	wfu - at Pisa
46-30	MM52-6031	11032	ECM conv.; wfu-Vergiate
46-31	MM52-6002	10827	ex 46-5; wfu - at Pisa
46-32	MM52-6042	11081	wfu - at Pisa
46-33	MM52-6001	10826	ex 46-13; wfu - at Pisa
46-34	MM52-6003	10828	ex 46-8; wfu - at Pisa
46-35	MM53-8146	249	ex 46-45; ex IndianAF; ECM conversion
46-36	MM52-6025	10996	wfu - at Pisa
46-37	MM52-6013	10910	ex 46-16; wfu - at Pisa
46-38	MM53-3200	11213	ex 46-48; ex IndianAF; gate guard at Pisa
46-39	MM52-6017	10947	ex 46-18, 46-35 & 46-85

C-119Js with 50th Gruppo

46-50	MM51-8121	124	to Museum in Turin
46-51	MM51-8125	128	wfu - at Pisa
46-52	MM51-8128	131	wfu - at Pisa
46-53	MM51-8130	133	wfu - at Pisa
46-54	MM51-8140	143	wfu - at Pisa
46-55	MM51-8144	147	VIP conversion; wfu-at Vergiate
46-56	MM51-8152	155	wfu - at Pisa
46-57	MM51-8154	157	w/o Cisterna 26.06.69
46-58	MM51-8156	159	wfu - at Vergiate
46-59	MM52-5849	11108	wfu - at Vergiate
46-60	MM52-5851	11010	wfu - at Vergiate
46-61	MM52-5866	11025	wfu - at Pisa
46-62	MM51-8158	161	VIP conv.; wfu-Vergiate
46-63	MM52-5884	11051	ECM conv.; wfu-Vergiate
46-64	MM52-5896	11063	wfu - at Pisa
46-65	MM52-5897	11064	wfu - at Pisa
46-66	MM52-5947	11135	wfu - at Pisa
46-67	MM53-8098	201	wfu - at Pisa
46-68	MM53-8103	206	VIP conv.; wfu-at Pisa
46-69	MM51-8133	116	ex 46-49; wfu - at Pisa

C-119Gs with 98th Gruppo.

46-80	MM51-17366	10778	ex 46-2; wfu - at Pisa
46-81	MM52-6016	10946	ex 46-31; wfu - at Pisa
46-82	MM52-6006	10864	ex 46-7; wfu - at Pisa
46-83	MM52-6049	11117	ex 46-33; wfu - at Pisa
46-84	MM52-6020	10950	ex 46-34; gate-guard at Rivolto
46-85	MM52-6053	11121	ex 46-35; wfu - at Pisa
46-86	MM52-6018	10948	ex 46-24; w/o Rivolto on 24.04.70
46-87	MM52-6007	10865	ex 46-37; wfu - at Pisa
46-88	MM52-6054	11122	ex 46-38; wfu - at Pisa
46-89	MM52-6056	11144	ex 46-39; wfu - at Pisa
46-90	MM52-6057	11145	ex 46-40; wfu - at Pisa
46-91	MM52-6024	10995	ex 46-41; wfu - at Pisa
46-92	MM52-6048	11116	ex 46-42; wfu - at Pisa
46-93	MM52-6029	11030	ex 46-43; gate-guard at Campoformido
46-94	MM53-7845	11266	ex 46-44; ex Indian AF; wfu - at Pisa
46-95	MM52-6030	11031	ex 46-27; wfu - at Pisa
46-96	MM53-3219	11235	ex 46-46; ex Indian AF; wfu - at Pisa
46-97	MM53-7828	11245	ex 46-47; ex Indian AF; wfu - at Pisa
46-98	MM52-6000	10780	ex 46-6; 46-27 & 46-68 wfu - at Pisa
46-99	MM52-6015	10912	ex 46-19; wfu - at Pisa

With special thanks to C.Carretta, F.Farina, EISG, N.A.Wiltens and B.Ullings/API



Seen at Woodbridge on 07.04. were two ex-81TFW F-4D Phantoms already applied with TJ-code: TJ65-0716 named 'Night Fever' (on nosewheel door) and TJ66-0261 named 'Mz.Breeze'. (B.Bailey-Hickman)

• Movements at Ramstein included:

Mar. 5: 50237(62MAW), 38082(62MAW), 60188(62MAW), 70009(63MAW) and 50252(60MAW) all C-141As
70482 C-130A AFRES/934TAG
BD-03, BD-09 and BD-12 Mirage 5BD BAF
58-61 (JB-34) & 58-97 (AG-51) DO-28D WGAF
27-03 (WS-10) & 27-87 (JB-34) TF-104G WGAF
01551, 01553 and 01554 F-5E 527TFTAS
UH68-014 F-111E 20TFW C-7 F-27M RNethAF
CS-03 HS.748 BAF CF-02 Merlin BAF
35-26 RF-4E WGAF AG-52
13: HR68-412, 68-438, 68-495, 68-538, 69-260
HR74-626, 74-044, 74-662, 74-045, 74-663
HR74-620, 74-628, 74-055 all F-4E 50TFW
BT76-009, 76-010, 76-012, 76-027, 76-081
and 76-128 F-15A/B 36TFW
01553, 01554 and 01559 F-5E 527TFTAS
FX-64 and FX-82 F-104G BAF 10Wing
BA-20 and BA-30 Mirage 5BA BAF 2Sqn/2Wing
32-88 and 32-79 G-91R Luftwaffe LEKG-41
27-22 (JB-34) & 27-24 (JB-31) TF-104G WGAF
37-09, 37-94 and 38-50 F-4F Phantom JB-35
23126, 22950, 22262 C-12A USAR Hq.USAREUR
20-15 and 20-23 TF-104G AMI 20Gruppo
37-61 and 37-67 F-4F Phantom WGAF JG-71
58-31 DO-28D JB-31 10-KY/17544 T-33A
UH68-065 F-111E 20TFW 23573 KC-135A
14626 OV-10A 601TCW 22944 C-12A 56AvCo
20: 80217, 00445 and 00456 C-5A 436MAW
50232(62MAW), 59401(437MAW), 60175(437MAW)
60195(437MAW) all C-141As
31-13, 31-57, 32-76, 33-18 G-91R LEKG-41
35-53 and 35-64 RF-4E Luftwaffe AKG-52
50-86 Transall C-160D Luftwaffe LTG-61
135 F-5B and 0580 F-5A RNOAF 332Sqn (the
latter with sqn-markings: black axe)
22564, 22944 and 23127 C-12A USArmy
7597 and 7616 Alouette II Heer
18540 and 16856 CH-47C Chinook USArmy
SP64-741 F-4C 52TFW ZR68-602 RF-4C 26TRW
HR74-620 F-4E 50TFW BT75-058 F-15A 36TFW
LN73-712 F-111F 48TFW FT-13 T-33A BAF
21: 30-51, 31-75, 32-87, 32-88 F-91R LEKG-41
K-4011 NF-5B RNethAF 316Sqn
CR77-074 F-15A Eagle 32TFS
30: TJ66-560 and 66-649 F-4D 401TFW (the
latter was still uncoded)
FT-17 and FT-30 T-33A BAF
58-81 DO-28D Luftwaffe LEKG-41
CR77-158 F-15B 32TFS

Open Day

May 6: 'Portes Ouvertes' at Reims (France)
19: 'Open Day' at Sembach (W.Germany)
20: 'Portes Ouvertes' at Colmar (France)
20: 'Portes Ouvertes' at Villacoublay (France)
20: 'Portes Ouvertes' at Chambery (France)
24: 'Open Deur' at Saffraanberg (Belgium)
24: 'Portes Ouvertes' at Nancy-Ochey (France)
25&26: 'Air Fete 79' at RAF Mildenhall (UK)
27: 'Portes Ouvertes' at Chateaudun (France)
Jun. 3: 'Open Day' at Spangdahlem (Germany)
9: 'Naval Air Day' at RNAY Fleetlands (UK)
9-16: 'Paris Air Show' at Le Bourget (France)
10: 'Portes Ouvertes' at Limoges (France)
10: 'Portes Ouvertes' at Varennes-sur-Allier
16: 'Open Day' at RAF Waddington (UK)
16: 'Open Day' at Twenthe (Holland)
17: 'Portes Ouvertes' at Metz (France)
17: 'Portes Ouvertes' at Rocamadour (France)
17: 'Portes Ouvertes' at Istres (France)
18-25: 'NATO Tiger Meet' at Cambrai (France)
22: 'Open Deur' at Kleine Brogel (Belgium)
22&23: 'Vliegmeeting' at Florennes (Belgium)
23&24: 'Int. Air Tattoo' at Greenham Common (UK)
24: 'Portes Ouvertes' at Evreux (France)
July 1: 'Open Day' at Bitburg (Germany)
1: 'Open Day' at Aviano (Italy)
1: 'Portes Ouvertes' at Luxeuil (France)
8: 'Portes Ouvertes' at Solenzara (Corsica)
21: 'Portes Ouvertes' at Mont-de-Marsan (Fr.)
21: 'Open Day' at RAF Coningsby (UK)
21: 'Naval Air Day' at Lee-on-Solent (UK)
21&22: 'Naval Air Days' at RNAS Portland (UK)
25: 'Naval Air Day' at RNAS Culdrose (UK)
27&28: 'Army Air Days' at Middle Wallop (UK)
28: 'Open Day' at RAF Binbrook (UK)
29: 'Open Day' at Hahn (Germany)
Aug. 3&4: 'Int. Air Days' at RNAS Yeovilton (UK)
5: 'Flugtag 79' at Ramstein (Germany)
15: 'Open Day' at RAF St. Mawgan (UK)
24&25: 'Flugmeisterschaften' at Dübendorf (Switz)
31: 'Open Deur' at Goetsenhoven (Belgium)
Sept. 1-3: 'Open Days' at Zweibrücken (Germany)
9: 'Portes Ouvertes' at Tours (France)
9: 'Portes Ouvertes' at Cognac (France)
12: 'Open Deur' at Florennes (Belgium)
16: 'Portes Ouvertes' at Cazaux (France)
23: 'Portes Ouvertes' at Bordeaux (France)
Oct. 5: 'Open Deur' at Bierset (Belgium)
7: 'Open Day' at Torrejon (Spain)

Note 1: All open days marked with an asterisk (x) have not yet officially been confirmed.

Note 2: From previous years, many cases are known of people wanting to attend an air show that had been postponed or cancelled. So, please keep in mind: ALWAYS CHECK BEFORE GOING.

Note 3: Deleted from last month's list is Bentwaters Open Day. Official USAF writing didn't mention this open day. Upper Heyford open day for 15 September was cancelled due to construction work at the base. Alconbury open day for 18 August is not open to the public.

West Germany

• The last pre-production Tornado made its first flight on March 26. MBB's Tornado Project Pilot Armin Krathann flew the aircraft, P-16, on a 75 minutes flight from MBB's Flight Test Centre at Manching. This aircraft has a production standard front fuselage and after some initial flight testing it will be transferred to ES-61 for weapon trials.



EUROPE'S ANTI-ARMOUR HELICOPTERS

Military aerospace can be divided in three categories: intercepting, ground support and close ground support. In a general way of speaking an F-15 Eagle can be classified as an interceptor, an F-16 as a ground support a/c and an A-10 Thunderbolt as a close ground support a/c.

Now one can't blame Flash not paying attention to the introduction of these three new generation aircraft.

But you do have a right to blame us on being neglectable about the role of the helicopter in the latest tactics. For years the helicopter has been used for transport and scouting. The war in Vietnam initiated the development of the attack helicopter and now the attack helicopter is getting its way to Europe.

Entering service in Europe, the name attack helicopter raised some resistance. Officially this kind of helicopter can't be classified as attack as NATO is a purely defensive alliance. Other names as battlefield helicopters or defence helicopter also effects the chopper providing transport and scouting. Anti-armour helicopters is a name which can be given to the conventional helicopter, equipped with rocket/missiles. But the classic attack helicopter as AH-1 and AH-64 also have guns and are thus not limited to fight against tanks.

Originally the armoured helicopters were conventional chopper equipped with guns and rocket pods. Development in the Vietnam war soon led to the introduction of a complete new model especially designed for its mission: the Bell AH-1G Huey Cobra.

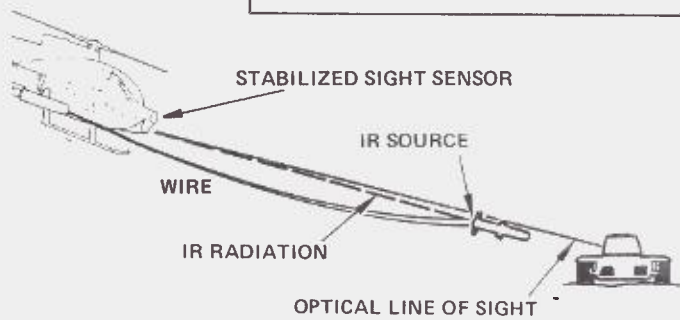
New technology provoked the demand for a follow-on attack helicopter. Both Sikorsky and Hughes entered a competition and Hughes' AH-64 finally turned out the winner. First delivery of the AH-64 will not be earlier as June 1983.

To fill up this gap all existing AH-1Gs have been converted to AH-1Q and are in the progress for conversion to AH-1S. At the time, AH-64 enters service, the US Army is expected to have 986 AH-1S in its inventory. Between June 1983 and November 1989 an estimated number of 536 AH-64s will be delivered.

Many of these attack helicopters are destined for Europe and W. Germany in particular. Why? Because the attack helicopter provides the army troops an enormous mobility. This mobility is essential in the latest tactics of NATO. Expressing the opinion that should a war break out, it would only last a few days. The enemy can decide where to launch an attack and can therefore concentrate its forces on one point. The defender has to respond by sending reinforcements to meet this threat. With tanks this could take days and on arrival the war might have been determined. Helicopters, however, can be on the spot within hours.

PROCEDURE

- Gunner acquires and tracks target with stabilized sight
- Pilot momentarily aligns aircraft with line-of-sight
- Gunner fires missile which automatically guides along gunner's line-of-sight to target
- Pilot free to maneuver aircraft after launch



TOW MISSION PROFILE



Four European army aviation divisions have decided to take the armed helicopter into their inventory. ALAT (French Army) will receive the first of 120 SA.321M Gazelles later this year. Esercito (Italian army) awaits the delivery of the A-129 Mangusta, Heer (W.Germany army) will receive their first of 212 BO 105P/PAH.1s in September. Army Air Corps (British army) is taking delivery of 150 Lynx-AH.1s.

o France already operates 70 Alouette IIIs armed with SS.11 missiles but these will be supplemented with the SA.321Ms with the first unit to be operational in 1980. With six HOT (High-Subsonic, Optically-guided, Tube-launched) the Gazelle has a two-hours flight endurance. The ALAT, however, preferred to carry four missiles creating a two and a half flight endurance.

o Italy tested two A.109s with TOW (Tube-launched Optical-tracked and Wire guided) missiles but no A.109 will enter service as an armed helicopter. A few years will be waited till the A.129 Mangusta is available. Three prototypes of this helicopter have been ordered and will be completed between spring 1981 and late 1982.

o Germany will completely re-organize their army aviation division with the introduction of the armed helicopter. Three regiments of 56 PAH-1s will be detached to an army corps. Each regiment consists of two 28 a/c squadrons which in their turn are divided into seven a/c flights. Each 'schwarme' contains six HOT armed helicopters and one unmanned acting as scout and Commander. Whereas PAH-1 is just an armed version of the BO 105, developments has been started on a classic attack - helicopter: PAH-2. M.B.B. and Aerospatial have in principal agreed to co-operate in the PAH-2/HAC project which will be a night-capable attack helicopter.

o British Lynx helicopters are utility helicopters which can rapidly be converted for the anti-tank role by installing six TOW missiles.

Only the US Army presently operates a classic attack helicopter in Europe. Four countries have armed helicopters. Germany and Italy are developing their own classic attack helicopter. Belgium, Holland, Denmark and Norway are still considering the best solution.

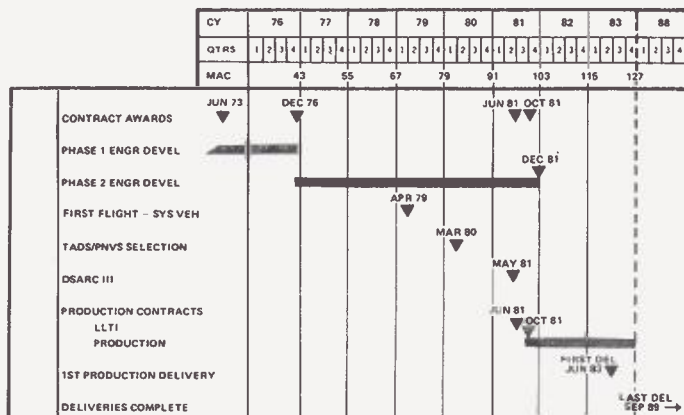




Army Aviation aug/sept 1977 - a helicopter user



AAH PHASE II SCHEDULE



We know that to become rich and famous all you have to do is invent a workable helicopter camouflage system, but so far no one has gotten close. But, the really troublesome thing is that the aircraft we have to work with are inadequate and they are also growing too soon old.

Yes, Dear Sirs or Ms., I know the Cobra, the Huey and the Kiowa are good - but good isn't enough when we will have to fight outnumbered and win!! Let's take the Cobra. The AH-1G was just fine, but if you want to shoot a tank just forget it. It would be about as effective to sprinkle your canteen on the Threat's tank engine and wait for it to rust. The AH-1Q was better but with a load of bullets you couldn't put more than a jigger of gas in the thing.

The AH-1S will help a whole lot, but if it were carried in the Sears catalogue they still wouldn't call it 'our best'. No, Sir and M'am - what we really need at Fort Hood in the 6th Cav. as the ultimate user is this:

- Something agile and maneuverable to slide out of one attack position and on to the next one faster.

- Something that has a real night vision gizmo built-in so we don't have to worry about squashing the cavs naves in the bottom of the TA-50 bag.

- Something that operates 'no sweat' in weather we now consider scary.

- Something, please, for a change with two engines so my insurance company will be moved to lower their rates.

- Something that will shoot that nice new Hellfire missiles so we can hide better and further away.

- Something with, say a 30 millimeter gun, so we can knock off those smaller targets - a commander's jeep for instance - that we must now let escape because a TOW costs too much for a small target. I could go on and on (by now maybe you think I have) about why we need a new family of helicopters, why those we have are growing too soon old, and why we should have had them last week, but my typing finger grows tired.

Please run the following advertisement in your magazine:

WANTED: advanced attack helicopter. Will trade AH-1S w/high miles. Excel cond plus cash. Call AV737-3010 24hrs.



Part 2

ABOUT THE 'ELLINIKI AEROPORIA'

An exploratory article on the weal and woe of the Hellenic Air Force, compiled by Frank Klaassen.

INTRODUCTION

The Greek air force is, as usual in most southern countries, wrapped in a veil of secrecy. Lack of official cooperation implied that the information presented in this article does not give the complete picture and additional remarks would thus be welcomed.

In the previous issue the history and organization of the H.A.F. was dealt with; this episode contains information on its equipment, plus some preliminary words.

In 1952 Greece became a key-member of the North Atlantic Treaty Organization and together with Italy and Turkey it got in charge of the defence of Europe's southern flank. Yet, after the fall of the colonels-regime in 1974, Athens, using the notorious Turkish invasion on Cyprus as a hang-up, decided to withdraw her troops from the alliance. In fact Greece had never been very keen on being in one organization with the neighbouring Turkey, the relation with which may be characterized as at daggers drawn.

You should know that the Turks had Greece occupied for some four hundred years, bleeding the country white and hindering it in its development. The Turkish regime lasted till 1827, when the Greeks finally managed to throw off their yoke. And although this all happened more than 1½ century ago the Greek aversion towards Turkey never died. The Greek are somehow still convinced that Turkey will declare war on them sooner or later; as a matter of fact the Greek armed forces have never been located the way NATO would like them to see, in the northern part of the country facing Albania Yugoslavia and Bulgaria, but more oriented towards the east, direction Turkey....

The relation with Turkey has normalized somewhat of late, although 'hot-issues' such as the matter of the boundaries between the two countries in the Aegean Sea, still exist. Athens presently realizes that the decision to break the ties with NATO might have been somewhat precipitated. Turkey recently made a strong appeal to its fellow NATO members for economic aid and this request is presently being studied; there is in fact an article in the NATO regulations dealing with this matter. Of course Greece could use such an injection as well, but unfortunately it is no longer a member and what is worse, opponent Turkey now has so to say the veto-right against her renewed membership.

Very slowly Athens is trying to obtain a new foothold within the alliance; on a small scale the armed forces are participating in NATO exercises and foreign military aircraft are allowed to operate from Greek territory again. NATO, on its turn, would very much like to see Greece back to strengthen the weakened southern flank. And the Turkish request for economic help might appear to be a very good trump-card to make the Turkish resistance disappear.

AIRCRAFT OF THE HELLENIC AIR FORCE

Both for reasons of space and ignorance this section isn't very extensive. In general, none of the 'older' types will be discussed and for the rest you will have to do with key-information: a brief comment followed by a list of serials, without the usual write-offs, previous identities and the like. Let's start with that good old.....

Republic F-84F Thunderstreak

Greece received her first Thunderstreaks in 1957, brandnew machines and delivered under the MDA Program. These were later augmented by a number of surplus ex-USAF aircraft, but real reinforcement arrived in the middle and late sixties when the Luftwaffe did away with her Thunderstreaks. The last batch arrived in the early seventies when a number of aircraft was received from redundant Dutch stocks. Officially the Thunderstreak is no longer in service with the Hellenic air force, but recent (1978) sightings made mention of operational aircraft at Larissa!

Serials include:

11812/W	26727/W	26866	28951
26361	26729	26870	36545/K
26425	26730/W	26871	36592/K
26439	26732	26876	36611/K
26467	26736/W	26879	36663/K
26537	26738/W	26887	36676/K
26540	26743/W	26890	36686/K
36541	26744/W	26891	36687/K
26542/W	26761/W	26896	36688/K
26550/W	26763/W	26900	36689/K
26558/W	26766/W	26901	36692/K
26565/W	26768	26904	36706/K
26581	26773/W	26908	36712/K
26585	26789/W	26911	36741/K
26611/W	26791/W	26914	36745/K
26621/W	26797/W	26915	36756/K
26621/W	26808/W	26926	36794/K
26622/W	26809/W	26928	36797/K
26623/W	26811/W	26939	36798/K
26659/W	26824/W	26941	36866/K



26661/W	26825/W	26948	36881/W
26665/W	26827	26951	36887
26675/W	26828	26959	36917/W
26676/W	26836/W	27052/W	37042/W
26679/W	26837	27061	37050/W
26680/W	26840	27078/W	37160/W
26681/W	26842	27086/W	37175
26688/W	26848	27089/W	37182/W
26689/W	26850	27091/W	37200/W
26690/W	26851	27101/W	37201
26698/W	26852/W	27104/W	37203
26703/W	26854	27107/W	37216/W
26705/W	26857	27114/W	37220
26710/W	26859	28789	37229
26721	26860	28805	(W=ex WGAF)
26722/W	26864	28827	(K=ex Klu)

Douglas C-47 Dakota

The first Dakota that entered Greek air force service were 30 C-47-DL Skytrains, former civil a/c repurchased by the US for MDAP and subsequently supplied to Greece; these aircraft were serialised 49-2612 to 49-2641 and some of them are still in service. Somewhat later another batch of ex-USAF aircraft were delivered, accompanied by a number of former RAF aircraft. The fourth wave consisted of ex-civil aircraft; these have adopted their c/ns as identity.

Presently some 25 aircraft remain in operational service with nos. 355 and 356 squadrons at Elefsis. The below list gives more serials: it is based on observations done over the last five years and thus includes a number of aircraft now withdrawn from use.

ex RAF	MDAP	ex USAF	ex civil
KK156	92613	316406	16348
KK181	92617	348666	12304
KN384	92618	349532	12351
KN389	92622	349086	12373
KN475	92623	349111	12677
KN527	92625		13012
KN542	92630		23325
KN575	92631		123327
KN672	92633		1927
KN675	92634		
KN782	92637		
KP255	92638		
	92641		

North American F-86D Sabre

In the late fifties both nos 335 and 336 Mira received a number of F-86Ds to supplant their Thunderjets; the Sabres were on their turn phased out in 1964 in favour of the Starfighter. A few examples may still be seen parked at Elefsis. Serials included: 16151, 16238, 18362, 18376 and 18404.

North American F-86E(M) Sabre

The RHAf received a total of 104 Canadair Sabres to add an interceptor component to its combat strength, delivery starting in 1955. These were operated by the 337, 341 and 343 Mira of the 111th Combat Wing at Nea Anhialos. During subsequent years Sabre strength was gradually reduced to normal attrition, and by 1965, 341 and 343 Mira had re-equipped with the Northrop F-5.

The third squadron used the Sabre for several more years because delivery of further F-5s by the US was halted due to political reason; later it also exchanged its Sabres for F-5s.

At Thessaloniki some seven Sabres are used as decoy.

19104	19287
19136	19347 decoy at Thess.
19168 decoy at Thess.	19337
19163	19382
19198 decoy at Thess.	19448
19237 decoy at Thess.	

Lockheed C-130H Hercules

Twelve C-130s were delivered in 1977 to modernize the inventory of the Elefsis-based 355 and 356 squadrons. The aircraft arrived in three waves, consisting of four aircraft each; the last four were delivered in June 1977.

741	c/n 4622	
742	c/n 4632	
743	c/n 4665	
744	c/n 4672	
745	c/n 4716	s/n 75-0542
746	c/n 4720	s/n 75-0543
747	c/n 4723	s/n 75-0544
748	c/n 4724	s/n 75-0545
749	c/n 4727	s/n 75-0546
750	c/n 4729	s/n 75-0547
751	c/n 4732	s/n 75-0548
752	c/n 4734	s/n 75-0549





Republic RF-84F Thunderflash

In 1957 Greece received a batch of Thunderflashes to equip one squadron with. The aircraft were supplied by the United States under the MDA Program and gathered in the newly formed 348 Mira at Larissa; subsequently these were augmented by a number of ex-Dutch and German aircraft. Surprisingly enough the Thunderflash is still in service with the Hellenic air force, but the recent delivery of a number of RF-4E Phantoms is likely to make an end to their operational life of over twenty years in the near future.

11846	27468/c	28740/c
11847/c	27470/c	28742/c
11848	28717/c	37468/c
111252/c	28728/c	37584
111253/c (ex Klu)	28730/c	37588/c
111259	28732/c	37589/c
111272/c	28736/c	37655/c(ex WGAF)
117001 (ex Klu)	28738/c	37683/c(ex WGAF)
117011 (ex WGAF)	28739/c	(c=current)



LTV A-7H Corsair II

The first A-7H for the Hellenic air force was handed over to Greek officials at Dallas on 5 August 1975; accepting the initial Corsair was Lt.Gen. Pericles Economou, chief of staff Hellenic AF. Eighteen of the A-7H models were scheduled for delivery to Greece by the end of 1975, with the remainder being supplied during 1976 & early 1977. The first class of HAF pilots and maintenance personnel completed its A-7 training at USNavy's Cecil Field, Florida so that the Corsairs could be phased into operational status in a minimum amount of time.

In all Greece ordered 60 aircraft, which were to replace the Thunderstreaks of 345 squadron at Larissa and 338 and 340 squadrons at Chania.

For training purposes six two-seat TA-7Hs have been ordered, delivery of which should be starting in April 1980.

LTV/Greek production numbers were H-1 to H-60, with BuAer numbers 159662 to 159667 & 159913 to 159966.

Convair F-102A Delta Dagger

By the end of 1969 twenty F-102A and two (later augmented by another three) TF-102A Delta Daggers were delivered from USAF stocks. All were assigned to 342nd squadron, which had been a Thunderstreak unit at Larissa till then. The change from fighter-bomber to interceptor missions implied a change of location and the unit subsequently moved to Tanagra. In 1976, after a relatively short period of service



PAGE 14: T-33A 29876 at Furstenfeldbrück in October 1974 (A.Booy).

PAGE 15: F-84F 26879 at Larissa in July 1972; F-86Ds 18362 and 16151 at Elefsis in July 1972; C-47 92825 at Luxemburg airport (A.Booy).

PAGE 16: 159928 A-7H on delivery at Hahn on 03.06.76; OH-58A 70-8268 at Larissa in July 1972; RF-84Fs 28740, 27470, 27468 and 28739 visiting Rimini on 21.07.71 (F.Smith); F-84Fs 37175 and 26914 on exchange at Villafranca on 22.02.72 (F.Smith); Mirage F.1CG 106 at Mont de Marsan on 19.07.78 (S.Rutten).

PAGE 17: F-104Gs 33643 and 47781 at Bitburg on 30.06.74 (J.vd.Oever/Take-Off/APCCS); RF-84F 28730 at Larissa in July 1972.



the Delta Daggers were phased out in favour of the Dassault Mirage F.1CG. A number is kept in use as decoy aircraft at Tanagra (T), while the remainder was seen in store at Elefsis (E) last year.

F-102A:	0-61024/T	0-61056/T	TF-102A:
0-60981/E	0-61025/E	0-61059/E	0-54035/E
0-60988	0-61031/E	0-61079/E	0-62326/E
0-61001/T	0-61034/T	0-61106	0-62327/E
0-61007/E	0-61039/T	0-61125/E	0-62334
0-61011	0-61040/T	0-61232/E	0-62335/E
0-61016	0-61052/E	0-61233	

Lockheed T-33A

The original deliveries, both original and ex-USAF aircraft, were 'topped-up' in 1955 by a large number of T-Birds from redundant RCAF stocks. In 1972 more aircraft arrived from Holland, Germany and the United States air force and in 1975 another ex-WGAF batch was delivered. Until recently the 360th squadron had a number of T-33s in use for advanced flying training but this task has now been taken over by the Buckeye. Some 50 aircraft remain in service, scattered over the various wings and bases of the Hellenic air force.

00430/R	21037/R	29575/U	36131
00434/U	21053/R	29583/U	41542/K
00435/U	21061/R	29708/U	41574
14064/R	21131/R	29736/U	41583/K
14065/R	21219/R	29846	41614/K
14091/R	21269/R	29866	53028
14093/R	21324/R	29900/K	54931/K
14146/R	21355/R	29913/K	58594/W
14232/U	21365/R	29876	58642/W
16577/K	21367/R	29925	58680/W
16713/R	21368/R	29962/W	58687/W
16714/R	21382/R	34947	61755
16771/U	21397/R	35029	63663
16876	21415/R	35155	80516
17514/W	21419/R	35488	80594/W
17521/U	21469/R	35490/U	80642/W
17560/U	21472/R	35492/U	80680/W
17585/U	21494/R	35493	80687/W
18629	21496/R	35629/W	(R=ex RCAF)
18929/U	21501/R	35786	(U=ex USAF)
19039	21519/R	35845	(K= ex Klu)
19254/K	21528/R	35889	(W=ex WGAF)
19265/	21575/R	36000	
117450/U	21596/R	36006	
117556/K	29561	36129	

Lockheed F-104G Starfighter

The Starfighter entered service in 1964, when a batch of 36 singles and two duals was delivered to the two air defence squadrons; these units, 335 Mira at Araxos & 336 at Tanagra had been operating the F-86D Sabre until then. More Starfighters were delivered from US stocks a few years later (five F-104s and 2 TFs) and in 1972 an additional batch of nine single-seaters and two duals were taken over from the Spanish air force.

The Araxos-based 336 Mira started receiving Mirage F.1Cs in 1976 and moved to Tanagra when conversion was completed. No.335 Mira subsequently moved from Tanagra to Araxos, incorporating the ex-336 Starfighters in its inventory.

The two-seaters are, together with the F-5Bs, gathered in an Operational Conversion Unit that was formed in 1978.

Known serials:

F-104G:

2(1)2261	2(1)2321	(3)12721
22302	22322	12722
22303	(3)12601	12723
22304	12609	12725
22305	12624	12726
22306	12704 -	12734/S
22307	w/o 7.65	3(1)3638/S
22308	12705	33639/S
22309	12706	33643/S
22310	12708	4(1)7780
22311	12709	47781
22312	12711	47782
22314	12712	47787
22315	12715/S	(S=ex Span.AF)
22317/S	12717/S	
22318	12719/S	
22320	12720/S	
TF-104G:		
(3)13025	(2)12273	(2)12278/S
(2)12267	12274	
12272	12275	

Bell 47G

In all Greece received nineteen aircraft, ten of which remain in service with the Elefsis-based 357 squadron. The construction-numbers of the original delivered are 6692 to 6697, 6631, 6633 (all Bell 47G-3B2), 7892 to 7901, 7928, 7929 and 7973 (all Bell 47G-5).



On 2nd Thought



In reaction on the special 'Remotely Piloted Vehicles' in FLASH Nr.99, Andre Wilderdijk compiled the below article and also supplied the photos.

March 1973, Sperry Flight Systems received the first contract from the USAF to develop drones from MASDC stored F-102As.

The choice fell on Sperry because of their specialization in unmanned drone targets. Since, around 1950, Sperry has been involved in RPVs (Remotely Piloted Vehicles) when it started on 3 F-80s, soon followed by QT-33s, QB-17s, QB-47s, QF-104s. Sperry also took care of equipment for the US Navy QT-33s used at Point Mugu and China Lake. Instruments were supplied for the USN QF-86H, now only left at China Lake, N.W.C. Since a couple of years the firm also works on QT-38As.

The USAF asked for the unmanned PQM-102As to meet the demand for a more realistic representation of enemy aircraft. Targets like the BQM-34A and B-Firebees are only 1/3 the actual size of normal fighters, thus hard to hit.

Apart from the PQMs, some QF-102s were ordered. This QF is a normal manned version of the PQM and it is used for crew training and system check-out. Sperry also converted one TF-102A, 62317 (named 'La Tina'). It is a one-of-a-kind conversion expressly for training in pilot-proficiency for the QF-102 test flights as well as ferrying. The conversion to PQM-102As has been stopped and since a few months delivery of the PQM-102B started. This B-model contract runs through November 1981, at the rate of 4 per month. The B-model only differs from the A in having the remote control electronics in the nose instead of in the cockpit. Electronics are also simplified and improved.

Each F-102 passing through Sperry is given a 3-digit number: QF models starting with 5, PQM-102As with 6 & PQM-102Bs with 7. The only TF-102 carries no number. The PQMs have red wing tips and tail for visibility. The QFs have their normal grey color-scheme and 'La Tina' is all grey, in a darker tone as the QF. Most original USAF painting at the moment has 61400. It is shiny white, with a red stripe on fuselage, tail and wings. No serial or data-block can be found on it.



During take-off, the aircraft is 'piloted' by two operators on a trailer: the 'MCS' (Mobile Control Station). This station along the runway flies the drone to the range where the FCS (Fixed Control Station) takes over. After the exercise the FCS flies the aircraft to the landing pattern, where controls are handed over to the GCS and it is then controlled for a normal runway landing. A normal mission lasts about 45 minutes. If during the flight the ground stations lose contact, the target will self-destruct after about 6 minutes. This explosive-destruct can also be commanded manually from the ground. During the flight, the drone sends information to the ground station, which is recorded for post-flight evaluation. Near the cockpit one forward and one after-ward-looking scoring-camera is mounted.

Pave-Deuces can be found at Holloman AFB, N. Mexico & Tyndall AFB, Florida. Besides the USAF, the US Army also practises on 'killing the Deuce' at White Sands Missile Range, close to Holloman AFB.

Known conversions, Sperry-numbers and eventual crash/destroy dates are as follows:

QF-102A:

61443 - 501
61081

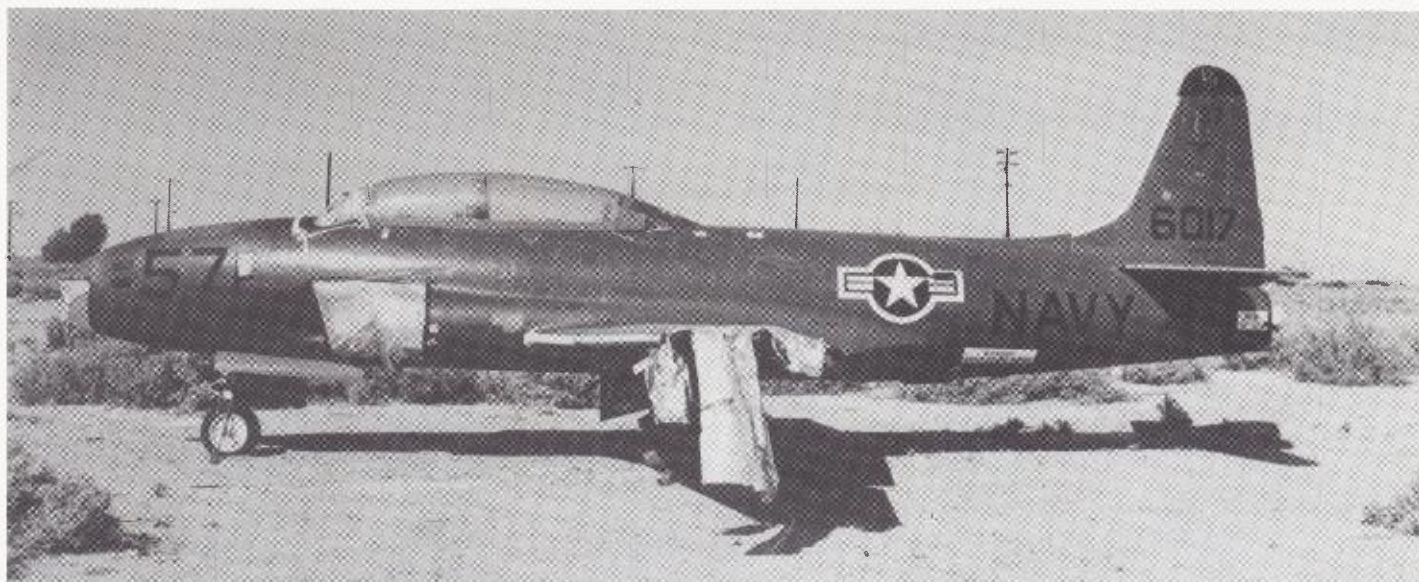
PQM-102A:

61475 - 601	crashed Holloman 1975	61434 - 627
61347 - 602		61496 - 628
61400 - 603		shot down
70870 - 604	shot down White Sands 12-74	White Sands
61419 - 605	shot down White Sands 7-76	8-76
61418 - 606	shot down White Sands 12-74	70856 - 629
61487 - 607	shot down White Sands 1-75	61474 - 630
61401 - 608		61329 - 631
61330 - 609	shot down White Sands 8-75	61398 - 632
61480 - 610		70869 - 633
61489 - 611		70781 - 634
70894 - 612		61384 - 635
70883 - 613	shot down White Sands 2-76	70770 - 636
61512 - 614	shot down White Sands 5-76	70813 - 640
70771 - 615		70807 - 643
61349 - 616		61426 - 644
70855 - 617		41385 - 650
61509 - 618	shot down White Sands 6-76	41407 - 652
61460 - 619		61208 - 654
61466 - 620		61061 - 656
61360 - 621		70832 - 660
70800 - 622		53447 - 662
70776 - 623		70829 - 663
61323 - 624		70847 - 665
61336 - 625		61048 - 666
61325 - 626		61055 - 667

PQM-102B:

61256 - 700

And further: 70849, 70786, 61340, 70792, 70823
61255, 61057, 61380, 70830, 61331, 61046, 41399
53427, 41406, 70825, 70832, 70854.



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Frank Smith, Vialle Della Pace 164, 36100 Vicenza Italy.

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WANTED: Close-up views (photos, slides or even pieces of magazines) of the emblems of RNoAF's Skv.335, 717 and 718. As I need them to make drawings it would be necessary for me to know the actual colours. I will pay for them if necessary. Gonzalo Avila Cruz, Av.Dr.F.Rubio y Gali, 177 5^B, Madrid-20, Spain.

WANTED: Correspondents to exchange Kodachrome slides and b/w negs of military aircraft only. Especially in Japan, Canada, Australia and Finland. Write to: E.I.S.G., c/o Via Aquileia 14 33010 Colugna (Udina), Italy.

FLASH BOOK SERVICE

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Belgian Military Aviation	DFL.13,50
Spanish & Portuguese Mil. Aviation	DFL.13,50
British Civil A/c Register	DFL.15,95
Airshows 1978	DFL. 9.25

The 2nd edition of French Military Aviation is not yet out but if you are interested, a copy can be delivered within days after the book is published.

NEW - Observer's book of A/c 1979 DFL. 8,50

The editorial staff wishes to thank all those, who in one way or another, cooperated in this issue:

B.Berkemeijer	J.Dubbeldam	B.Ullings/API
A.Booy	R.Farina	G.Weinmann
B.Bot	M.Leeuwis	A.Wilderdijk
R.Breur	D.O'Mahony	R.Woort
S.Courtney-Warren	G.K.Mast	EISG
E.Döll	J.Schoofs	





FOKKER-VFW

T.A.T. is replacing its Nord 262s and Fokker F27 Friendships by Fairchild. Three F.27s were sold to P.I.A. being c/ns 10230, 10296 and 10327. The Fairchild's were bought due to the fact that they are able to carry more passengers.

The Spanish Maritimes: D2-01 f/f 23-11-78 as PH-EXA, regd PH-FTK for crewtraining in Spain from 12 December till 19 January. Delivered on 6 April.

D2-02 f/f 20-12-78 as PH-EXD, delivered on 28 February (so not D2-01 !)

D2-03 will be used for a while by Fokker, a.o. for demonstrations to Malaysia and the Philippines.

c/n 10595 seems to be a Maritime too, and it is to be used by Fokker as Demonstrator.

Fokker F.28-1000 PK-GVP of Garuda (11094) was forced to land at Denpasar, Bali on 6 March. After the passengers left the plane, it took off and crashed into Mount Bromo, killing the crew.

Four F.27s of the Philippine Air Force should have arrived at Ypenburg, reading this. As the ones earlier delivered, they will be completely overhauled there, and return afterwards.

F.27 FRIENDSHIP

10131	100	VH-CAT/DoT, delivery to Air Anglia 20/1
10148	100	10148/PhilippineAF. f/f after overhaul 11-12-78, redelivered on 19 January.
10212	100	5Y-AAC, at Woensdrecht as 5H-MRH seen, for Air Tanzania.
10223	200	5N-AAZ/Nigeria Aws. Forced landing at Kaduna Airport on 23 January 1979, w/o?
10241	100	5X-AAP, at Woensdrecht seen as 5H-MRO, for Air Tanzania.
10257	200	this aircraft should go to Niki Lauda, for its new airline 'Lauda Air'.
10298	100	LN-SUF/Air Executive Norway. Belly landing at Oslo-Farnebu on 31-01-79.
10310	100	10310/PhilippineAF, redelivered 23 Jan.
10456	500	ZK-NFC/Air New Zealand, crashed on approach into the Auckland Harbor on 17 February. Aircraft written off.
10575	4255	10576 6256
10577	4257	TU-VAD, for Ivory Coast Air Force
10578	4258M	PH-EXL, for Bolivian A.F., TAM-90
10579	6259	PH-EXF, for Air Ivoire as TU-VIH
10580	4260M	PH-EXM, for Bolivian Air Force
10581	2263MPA	10582 4265M
10583	4265M	10584 4266M Bolivian AF
10585	2263MPA	D2-02 10586 6267 Ivory Coast
10587	2263MPA	D2-03, Spanish Gov't Demonstrator
10588	6268	PH-EXC, for Bolivian AF?
10589	6269RF	PH-EXD, for Air Tanzania as 5H-MRM
10590	4265M	PH-EX., for Senegal A.F. as 6W-STE
10591	4265M	PH-EX., for Senegal A.F. as 6W-STF

KLM ORDERS A. 310

Being Holland's biggest single order for aircraft on the civil market, K.L.M. ordered ten A.310s with Airbus Industries. At the same time an option on another ten was placed.

Deliveries of the 210-seater will start in 1983 when the first four will arrive. The other six are due to be delivered in the two following years. With the arrival of the A.310, some Douglas DC-8 and DC-9s, currently flying on K.L.M. routes in Europe and to Africa, will be phased out.

The A.310s will be powered by two General Electric CF6-80As. The prototype of this engine should be ready at the end of this year. The engine has been designed out of the CF6-50 'High Bypass' turbofan engine and it is especially designed for aircraft with some 200 passengers.

Attractable features of the '80A will be its power (21,000 kg), its low noise, low weight and low fuel consumption compared with other engines.

According to statistics, airtraffic in Europe will grow with about seven percent a year until at least 1990. Thus making the K.L.M. to choose between aircraft of about the size of A.310 and Boeing 767. One of the points of choosing the first is its cargo layout. The A.310 is capable of carrying six standard LD3 baggage containers (also in use on K.L.M.'s Jumbo Jets and DC-10s) and three standard cargo pallets in the underfloor compartments.

For Airbus Industrie this order brings the total at 90 A.310s (half firm & half options). Financing by the way will come partly from reserves built up by K.L.M. and through long term loans in cooperation with Airbus Industries and General Electric.

Special thanks to Ian Wilson, Jaap Dijkstra, Henk Ruiken, Herman Dekker, the R.L.D., Fokker-VFW and Airnieuws Rotterdam for their help. CvdH

PHOTO COMMENT : Based at Salzburg, Austria is this Aero Commander 500A OE-FPZ. On the aircraft can be read where it is used for.

PK-MVL Viscount in the blue and yellow scheme of Merpati, taken at Jakarta-Kemayoran 22 October 1978. Aviation Photos Int.B.Ullings

An oldie but goodie, taken in the U.K. by D. Murgatroyd. The Caravelle is registered OY-SAH of Sterling Airways.

DUTCH NEWS

● The two Mc Donnell-Douglas DC-9-32s which are on firm order for the K.L.M. are construction-numbers 48132 and 48133. These will be the 999th and 1000th DC-9 deliveries !!!

● In March, for the first time the total number of engine-powered (civil) aircraft exceed 600. Two of the aircraft accounting for this, have not yet been delivered yet but will introduce two, new, types in the Dutch inventory. Swearingen Metro PH-NLZ and Robin 2160 PH-BLO. Although delivery of the latter was planned around the 12th of April, problems at the factory has caused for some delay but at the time of reading it should have arrived. The Metro is due for delivery end April.

● Business Air Service is said to have ordered a second Mystere. Whether the aircraft will be second-hand or brandnew isn't known yet.

● A third Douglas DC-10-30 of Martinair has been leased to another airliner. U.T.A. is currently using one of the DC-10s for freight flights from Paris to West Africa. The only DC-10 left for Martinair Holland's own use is PH-MBG.

● On 4 January, F-BVQD arrived at Hilversum for S.B.O.V. This Harvard should replace the crashed PH-KMA. However, modifications which are necessary for registering the oldtimer in Holland, were found too expensive. Therefore the aircraft was returned to its French owner.

● Skylight BV has made a bid on five Piper Super Cubs currently based/stored at Madagascar. If the offer is accepted, they should be delivered by air to Holland or directly to England where the crafts would be resold after overhaul which seems to be necessary for all five aircraft. Registrations of the Super Cubs are: F-OALA, F-OBCG, 5R-MDD, 5R-MEC and 5R-MHG.

● A.S.H. sold some 115 aircraft in 1978. the 100th sold Cessna was delivered as PH-IOO. Rumours, however, say this was, in fact done to mark the 100th issue of your magazine Flash.

● More news from Air Service Holland and some corrections to previous informations:

PH-AXP T.210M (62673) delivered to Teuge as N6065B on 18-10-78, left the same day for Germany and the registration D-EGOM has been corrected as D-EGOW.

PH-AXQ F.152 f/f 14-12-78, del to Teuge 8-2-79. allocated D-ELCF but cancelled just before painted on. The aircraft was stored till delivery on 29-3-79 as D-EHFN to Dortmund.

PH-AXS F.152, del. to Teuge 8-2-79, and left for Sepe 2-3-79. It returned due to bad weather and finally left the next day. Now registered PH-VSO.

PH-AXW should read FR.182RG (USA- built R.182RG) delivered to Teuge 1-3-79 together with PH-AXX.

The latter's c/n was 0023 and not the 0024 as originally planned and is a FR.182RG too.

PH-LTM T.210M, del 24-7-78 Teuge, rereg D-EGSD and 23-8-78 to West Germany. Forced landing at Munster-Osnabruck 4-2-79. Dismantled 13-2-79 and on 20-2-79 by road to Teuge to be repaired.

NATIONALE LUCHTVAART SCHOOL



Already for six months now, the N.L.S. is situated at Beek Airport, in the south of Holland. At the moment the school houses a small, temporary building but the intension is to built a definite accomodation from where it can be fully operational which is now rather difficult.

Reason for the move from Zestienhoven to Beek was the trafficgrowth at the first airfield, making it impossible to do their work satisfactory: educating pilots.

The N.L.S. is completely owned by Schreiner since 1968, and their current fleet consists of seven aircraft and two linktrainer. The future pilot starts its training course on the PA-28 Warrior II, and on the linktrainer (built by Piper at a cost of 400,000 guilders). The latter's purpose is to familiarize the pilot with the aircraft's instruments, and to learn flying from one beacon to the other c.q. blindflying. The Warrior II, of course, is for the real flying.

On these types, the pilot is enabled to get the B-3 certificate, for which they also practise on the Piper Navajo and a 'two-engined' linktrainer,

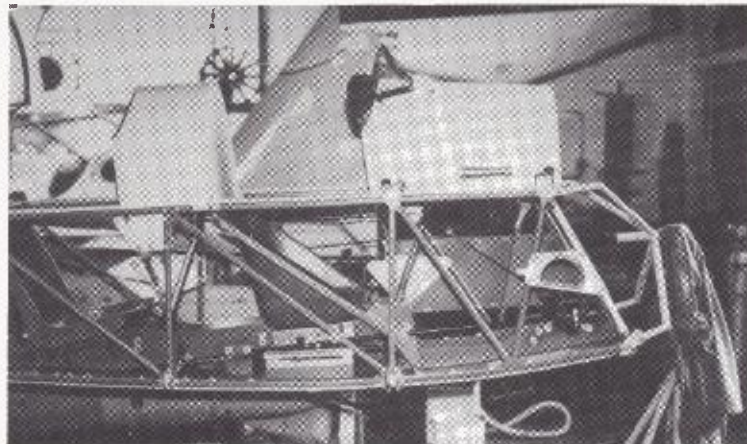
thus giving some experiences on bigger & multi engined aircraft.

Leaving this stage of training, they also leave Beek. They continue at Schiphol with Fokker-VFW, where they are to fly on the Friendship and sometimes the Fellowship, depending on the pilot's destination. Going to Fokker may sound a bit strange to laymen, but most pilot are sent by Fokker-VFW.

Some airliners, when ordering aircraft of this factory, decided that a training via Fokker should give better results then training the pilots themselves. Thus giving a mixture of Nigerians, Ivorians (Ivory Coast), Dutchmen and at the time of writing one man from Upper Volta, at Beek airport.

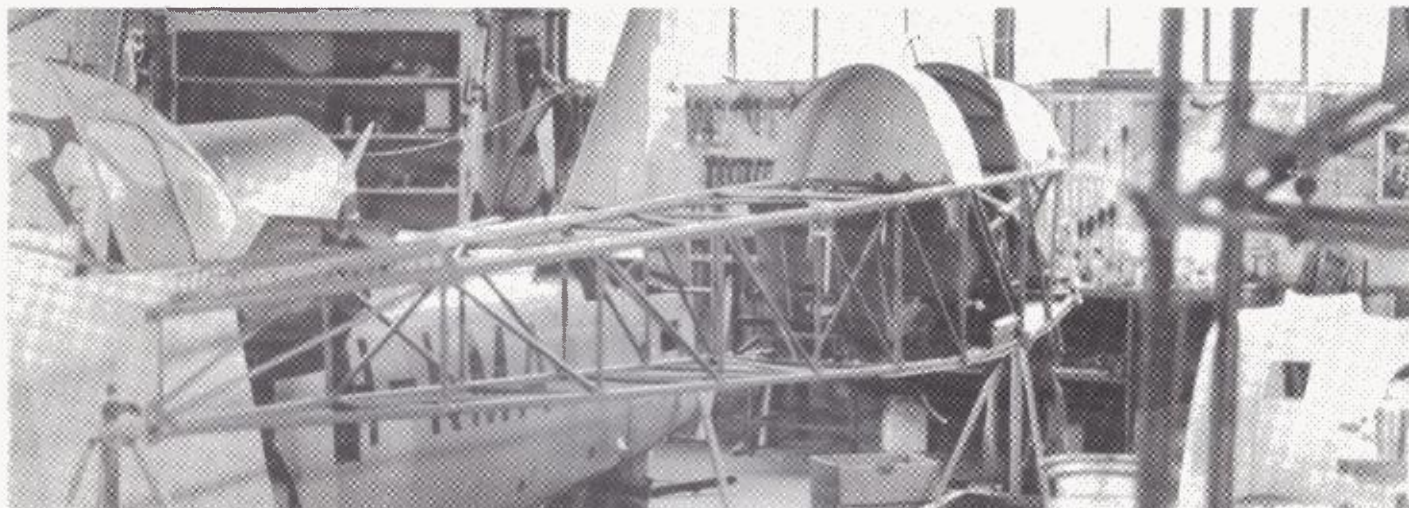
Although we only discussed the flying training itself, you surely must not forget the theoretical part of the schooling. As a future Nigerian Airways Fellowship pilot said: 'To fly is easy, but beware of the theoretical part!'. The latter gives us the reason why pilots ought to have a thorough grounding.





The S.B.O.V. is currently hard working on their Tiger Moth D-EDEM. Especially the cockpit is being beautifully restored as you can see on the picture left.

The photo beneath not only shows the T. Moth but also the wracks of Harvard 'KMA and Safir 'UEG on the left, and the rest of the Tiger Moth which once layed at Rot terdam, on the right side .



DUTCH REGISTER MARCH 1979

reg.	RLDno	Type	c/n	Owner	Remarks
PH-ATW	2817	Reims Cessna F.172N	1802	Air Service Holland BV	ex PH-AYB,ntu (new)
PH-BLO	2814	Robin 2160	171	Limburgs Luchtrecclamebedrijf	ex (new)
PH-BNV	2402	Reims Cessna F.172G	0240	W.Daams	to G-.... (out)
PH-CAT	2435	Reims Cessna 182P	0040/64129	J.Visser	to H.J.M.M. van Doorne
PH-CHF	2811	Fokker F.28-4000	11140	Koninklijke Luchtvaart Mij NV	ex PH-EXN (new)
PH-CHI	2821	Fokker F.28-4000	11141	Koninklijke Luchtvaart Mij NV	ex PH-EXP (new)
PH-CIA	2350	Reims Cessna F.172M	1396	St. Vliegschool Zestienhoven	to Air Service Holland
PH-DPL	2803	Reims Cessna F.172N	1775	Air Service Holland BV	to Delta Phot.Luchtfoto
PH-HVS	2055	Reims Cessna F.172M	0992	St.Vliegmaterieel Lelystad	to Netherlands E.A.S. BV
PH-KAG	2816	Reims Cessna F.150L	0922	P.A.H.Heuvelmans	ex OO-WIJ (new)
PH-NLZ	2823	Swearingen SA.226TC	TC-277	Stichting Nationaal Iucht- en Ruimtevaartlaboratorium	ex (new)
PH-NPT	2684	Reims Cessna F.172N	1641	Air Service Holland BV	to N.P.Teulings
PH-PVW	2826	Piper PA-18-135	18-3535	Luchtvaartbedrijf De Kempen	ex 54-2335, R-107 (new)
PH-SRW	2824	Robin DR.400/140B	1398	St.Vliegmaterieel Rotterdam	ex (new)
PH-VSO	2812	Reims Cessna F.152-II	1556	St.Vliegmaterieel Hoeven	ex PH-AXS (II) (new)
PH-WWG	2809	Piper PA-32RT-300	32R-7885217	Netherlands E.A.S. BV	ex N22161 (new)
PH-640	2822	ASW.19B	19237	L.M.E van den Heuvel	
PH-642	2825	PIK-20D	20642	R.A.Breunissen	
PH-643	2818	Mosquito B	146	D.J.A.Teulings	
PH-648	2813	ASW.20	20125	J.J. van Steinfoorn	
PH-650	2810	LS 3-a	3234	C.H. Munning Schmidt sr.	
PH-652	2815	LS 3-a	3167	H.Everhardt e.a.	
PH-653	2820	PIK-20D	20656	R.J. van der Linden	
PH-654	2819	LS 3-a	3140	M.Onderwater en T.Ebing	



