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Anthony Fokker in front of one of his products. (via Rob Mulder)

The success story of the well-known Dutch aircraft designer Anthony Gerard Fokker started well before the First World War. Before the war his so-called 'Eindecker'monoplanes were ordered by the Luftstreitkräfte (the Imperial German Army Air Service). When the First World War commenced, the German government took control of the factory, where Anthony Fokker remained as director. Fokker was also told that if he wanted to continue to deliver aircraft, he had to give up his Dutch citizenship and apply for a German one. He did this and during the war, his aircraft production reached high numbers exporting also to Germany’s ally, Austria-Hungary. His aircraft were feared by the Allied pilots and especially the Dr.1 and D.VII were among the best fighters of the war. The latter aircraft was specifically mentioned in the Treaty of Versailles. The Germans had to hand over all Fokker D.VII fighters of the war. The decision was confirmed by the Allies and Anthony Fokker was given a permit for the period 18 December 1918 until 17 March 1919 to travel to Rotterdam. Meanwhile he sent an official application to the Kriegsministerium to cancel his German citizenship of 1915. 

Anthony Fokker wanted to keep his German factory and use it for the production and export of aircraft. He saw great potential in the Netherlands, where the Luchtvaart-Abteilung (LVA – Dutch Army Air Corps), the Marine Luchtwart Dienst (Dutch Naval Air Corps) and the Luchtvaart-Afdeeling (LVa – Dutch Army Air Corps), the Marine Luchtvaart Dienst (Dutch Naval Air Corps) and the Luchtvaart-Afdeeling (LVa – Dutch Army Air Corps) saw great potential in the Netherlands, where the Luchtvaart Dienst (Dutch Army Air Corps) and the Marine Luchtvaart Dienst (Dutch Naval Air Corps) and the Luchtvaart-Afdeeling (LVa – Dutch Army Air Corps) were interested what came into Germany rather than what went out, despite the rule that export had to be approved as well. Since the Supreme Allied Economic Council was not functioning fully at the beginning of 1919, the transportation did not seem to be a big problem. 

Anthony Fokker had brought millions of Marks to his motorised sailing ship 'Hana' and gave the order to Captain August to take this money from Travemünde to the Netherlands. In addition, Anthony Fokker and his future wife, Tetta von Morgen, were to travel to the Netherlands to get married there. They travelled also with a suitcase with one million Dutch guilders to the Netherlands, but took the train. All arrived safely.

Once in the Netherlands, he signed a contract with Henri Wijnman of Industriële Maatschappij Trompenburg (Trompenburg Industrial Company) for the delivery via this company of 98 Fokker D.VII fighters and 118 C.I reconnaissance aircraft to the Dutch Air Services. With the contract sealed, it was now possible to send the aircraft from Schwerin officially to the Netherlands, where Trompenburg was the receiver of the ship. On 18 March 1919, the first train arrived in the Netherlands followed by several more. In the end, 220 aircraft were shipped to the Netherlands: 120 D.VIIs, 60 C.IIs, eight D.VII, about 400 engines and a number of prototypes. The aircraft were delivered to the LVa, but due to budget cuts the order was reduced. Nevertheless, Anthony Fokker had made a good profit on the deal.

The Kriegsministerium informed Anthony Fokker that it would cancel his German citizenship, but Dutch law, however, states that once you have lost your Dutch citizenship, it cannot simply be reversed. A frustrated Anthony Fokker now used his family connections, and asked his uncle Eduard (a former member of Parliament) to take up the matter with the Prime Minister Charles Ruis de Beer- enbruck. It is believed that H. R. H. Prince Hendrik was involved as well. On the day of his marriage, Theo Heemskerk, the Minister of Justice, informed Anthony Fokker that he would get his Dutch citizenship back. The government was aware that he could become an important entrepreneur in the Netherlands.

In order to make some money, he wanted to start a flying school from the beaches near Den Haag (The Hague), but the police were not too happy. Instead, he started ‘Fokker Luchttourisme’ (Fokker Air Tourism) and offered joyrides with his pilot Willem van der Drift. Anthony Fokker (far right) was given a laurel wreath after his flying display on the opening day of the ELTA. The lady beside him is Fokker’s charming wife Tetta von Morgen. On the left of the couple the Minister A. König and General Snijder, chairman of the ELTA committee. (Thijs Potsma)
how pleased he was with the aircraft: “We are particularly pleased with the ratio between the top speed and the landing speed. For the first time in a large ship, this ratio is better than three to one, the F-32 flying at 157 miles per hour (253km/h) top speed and landing at 47 miles per hour (75.6km/h).” It is important to correct Anthony Fokker, as the Board of Directors of the FACoA had ‘only’ given the green light to build nine aircraft to begin with.

On 20 September, factory inspector Oscar L. Wallace send in the application for an experimental licence and the day after, the Fokker F-32 124M flew to Central Airport at Camden (New Jersey) for registration. Gilbert G. Budwig, Chief of the Inspection Section of the Department of Commerce, Aeronautics Branch, forwarded the application for identification mark on 21 September. In the application, chief engineer of FACoA, Alfred A. Gassner quoted the aircraft was the Fokker ‘F-XII’. The aircraft had been manufactured in August 1929 and on 30 August, the registration 124M was applied to the unlicensed aircraft. The stated purpose for which the aircraft would be used was for demonstration. On 4 September, the Notary Public confirmed the paper officially. The identification mark of just a number and the letter M were only issued for those aircraft not eligible for any class of licence and for aircraft for which the owners specifically requested identification only. The aircraft had to remain within one State and were only to be flown by licensed pilots when carrying persons or property for hire or payment.

By the end of September, the twin rudder and vertical stabilisers were changed. A third fin was added to improve directional stability. This fin was a bit smaller than the original two fins. Shortly afterwards, the application for an experimental aircraft licence was issued (application number A11363). From 24 September, the aircraft carried the registration X124M, and was now registered as the Fokker F-32. The experimental aircraft licences X or NX were issued for experimental purposes and for demonstration only. Paying passengers were not allowed to be carried. Only licensed pilot had to fly these aircraft. On the same day, the ‘Record, Transfer and Reassignment Form’ by the Department of Commerce, Aeronautics Branch was issued, that had to be kept in a safe bank vault or some other secure place.

New demonstration flights were made out of Teterboro, and Anthony Fokker announced that it by then had received orders in excess of $1,000,000. Jim King, inspector from launch customer Western Air Express, was enthusiastic about the luxurious interior, but also had a point of criticism: “Our biggest problem is to cut the noise, as when you increase the horsepower, the noise increases considerably.” Around the same time, a second type United Air Lines logo was painted on the rear of the fuselage. The aircraft photographed at Washington-Bolling airfield. Between 24 and 26 September 1929, it carried 1,000 passengers during joyrides. The mechanic near the rear engine is Norwegian Chris Braathen. (via Theo Wesselink)
aluminium, but the major portion of the fuselage was Fokker red with a gold stripe edged in black. The windows were edged in black on gold frames. The tail surfaces were aluminium, except for the lower part of the centre rudder, which was in Fokker red with gold and black striping.

On 23 January, FACoA wanted to transfer the Fokker F-32, 130M, from Teterboro Airfield to Newark (New Jersey) to make its first public flight before it was said to fly to the west coast with a party of guests on Sunday, 26 January. It was to make a test flight under the name of 'Transcontinental Tour of Aerial Radio Experiment'. The Police Commissioner Grover C. Whalen, his aviation secretary Arthur N. Chamberlin and other members of his staff wanted to test its two-way radio equipment, which the Police wanted to install in the new police aircraft. The test was also to be broadcast over the Columbia Network through WABC. Herbert Hoover Jr. was to supervise the tests. Two days before the flight would take place, Cpt Eddie Rickenbacker had to announce that the flight had been cancelled.

The Fokker F-32 would then start 'The Flying House Party' by carrying a group of specially invited guests from New York to Los Angeles with stops at several cities. The take-off was to take place on 26 January and arrival on 1 February in Los Angeles. Stops would be made in Detroit (Sunday), Chicago (Monday), St. Louis (Tuesday), Kansas City (Wednesday), Denver (Thursday) and Los Angeles on Saturday. The field superintendent for Western Air Express in Oakland told to local newspapers that the aircraft would fly from Los Angeles to Oakland on a WAE demonstration flight, but neither flight was made.

By Fokker F-32 around the world?

In 1925, Harry A. Husted from Cleveland was broke, but that year he invented a hard rubber steering wheel for automobiles, which was mass-produced and millions were sold to the automobile industry. He amassed millions of dollars and in 1929, he was president of his rubber wheel company at Akron, Ohio. As was the custom in those days, aviation attracted also his attention and he founded six companions, who were willing to invest in his plan to make a flight around the world during 1930. In August 1929, the German-built and -operated, passenger-carrying rigid airship LZ 129 Graf Zeppelin made an around-the-world flight in 21 days, 5 hours and 31 minutes covering 33,234km (20,650miles). The flight began and ended at Lakehurst Naval Air Station in New Jersey (USA). Inspired by this record-breaking flight, Harry A. Husted started to develop the plan to break the record by using the largest available aircraft in the world, the Fokker F-32. He expected to need somewhere between $500,000 and $750,000, of which $147,000 would be spent on the Fokker F-32, but exclusive special equipment would bring the total purchase price up to a staggering $250,000. The empty weight of the aircraft was expected to be 12,570lbs. (5,702kg) and with special equipment and passengers 31,088lbs. (14,101kg). The delivery was scheduled for 1 May 1930.

After the first flight of the Fokker F-32 on 9 September 1929, Harry A. Husted was even more convinced that the F-32 was the most suitable aircraft. On 20 November, he published his initial plan for a flight across the Pacific Ocean from San Francisco to Hong Kong, taking with him a crew of eight men. Before the flight would take place, a trial flight from New York to San Francisco would be made in January 1930. When the prototype of the Fokker F-32 crashed a week later, the plans were delayed and modified. The second aircraft completed, the c/n 1202, registered 130M, was prepared for a flight from the east to the west coast of the USA on 15 January 1930. The object of the flight was to check performance. The captain on board was to be James T. King, pilot of Western Air Express, and the co-pilot James Doyle of San Francisco. A navigator would complete the crew, but who would be decided later. Although the plan was to fly from New York to San Francisco on 15 January, the newspaper incorrectly wrote that they would continue the next day to make the jump across the Pacific Ocean, refueling in the air above Honolulu (Hawaii, USA) and continuing to Hong Kong. The flight from New York to San Francisco was not made either, unfortunately for Harry A. Husted. The aircraft had not yet made its first flight.

On 24 January 1930, Husted told the press that he had ordered a Fokker F-32, and that the factory was arranging changes to the aircraft. He expected the take-off from the west coast to be on 15 June for Hawaii for refueling (in the air!), before they started on the non-stop flight across the Pacific Ocean to China, their first stop. The flight would continue across China and the Soviet Union to Moscow. From there they expected to fly across Europe to Paris and cross the Atlantic Ocean from Ireland to New York and the back to the west coast. He said: “Newer developments in multi-engined aircraft, in the manufacture of fuel and oil, and in refueling will make ocean hops in heavier-than-air craft regular ventures in the future.”

Harry A. Husted wanted to place a motion picture camera in the nose of the aircraft, half tone and colored, and every inch of the way he hoped to keep it clicking. He would give these films to the Bureau of Education in Wash-
and this was a bit lower than the other aircraft. Nevertheless, the ‘airplane licence’ issued showed the regular empty weight of 15,278lbs. (6,930kg) and a gross weight of 24,250lbs. (11,000kg). The aircraft had dual controls in the cockpit with two steering wheels. It was registered to Fokker Aircraft Corporation of America as NC335N and its commercial licence was valid until 1 July 1931.

“And the ship flies beautifully”

In 1928, Charles Edward Kingsford Smith and his crew made the first trans-Pacific flight from the United States of America to Australia. Later, he made the first non-stop crossing of the Australian mainland, the first flight between Australia and New Zealand, and the first eastward Pacific crossing from Australia to the United States. Finally, he made a flight from Australia to London in 10.5 days. All these flights were made by the Fokker F.VIIIb-3m, named Southern Cross. His aircraft was overhauled at the N.V. Nederlandse Vliegtuigenfabriek at Amsterdam-Schiphol. In June 1930, the aircraft was ready, and Kingsford Smith made a successful east-west crossing of the Atlantic Ocean from Ireland to Newfoundland in 31.5 hours. He was welcomed as a hero at New York, and of course, Anthony Fokker was proud of the achievement in one of his aircraft. On 26 June, the Fokker F-32, NC335N, flew from Teterboro to Roosevelt Field and back to welcome the Southern Cross after the Atlantic flight. On 30 June, Charles Kingsford Smith and his ocean fliers were transported in the Fokker F-32, NC335N from New York to Washington D.C. to meet President Herbert Hoover. They originally planned to fly to the capital in the Fokker FVIIIb-3m, Southern Cross, the three-engined aircraft in which they had crossed both the Atlantic and Pacific and almost ringed the world, but it was decided shortly before departure to leave the aircraft at Hasbrouck Heights, in the hands of the mechanics grooming it for the flight to Oakland, California, which was to begin on 2 July. Anthony Fokker, placed his Fokker F-32, NC335N, at Kingsford Smith’s disposal.

In the morning of 30 June at 0850, the silver and crimson coloured Fokker F-32, piloted by Major Victor Bertrandias and with Bernt Balchen in the co-pilot seat, left Hasbrouck Heights and flew non-stop to Bolling Field. In the cockpit was also pilot William N. DeWald. Kingsford Smith was allowed to sit in the co-pilot seat and try to fly the giant aircraft as well. Kingsford-Smith, his co-pilot Evert van Dijk, his navigator J. Patrick Saul, and radio operator John Stannage, were given a rousing reception at Bolling Field by motor car when a traffic policeman stopped them. They explained and were released. Upon arrival in Washington, they were greeted by Sir Ronald Lindsay, the English ambassador, William J. B. Macaulay, the minister of the Irish Free State, Philip Botha, the commercial secretary at the Union of South Africa legation, and Jan Herman van Roijen, the minister of the Netherlands in the USA, as well as U.S. Army and Navy officials. They were taken to the English embassy where they could refresh themselves before being received in the Blue Room at the White House by President Herbert Hoover at 1230. After a 15-minutes talk, they had lunch, where also Eddie Rickenbacker, Anthony Fokker, and Bernt Balchen joined as guest. The stay in Washington was ended with a visit to the Senate before the guests returned to Hasbrouck Heights. In the aftermath, Kingsford Smith wrote a letter to Anthony Fokker, which was published in an advertisement in the Aero Digest, dated August 1930. It said: ‘When President Hoover was good enough to invite us to the White House we flew down in your latest Fokker, the F-32. And the ship flies beautifully. You have always built planes that flew magnificently. I fought against some of them during the war ... and I knew them well! All of the record flights I have since made were in Fokker planes; so well justified by the safety and durability of the Southern Cross.’

Spurred by the success of the Trans-Atlantic flight of the Southern Cross, Evert van Dijk said his next aerial venture would be a west-to-east Atlantic flight to Amsterdam, the capital of the Netherlands. The plan called for the use of the giant Fokker F-32, and Evert van Dijk would be accompanied by Captain J. Patrick Saul, as navigator, and John Stannage, as radio operator. The second aerial venture he planned was an around-the-world flight. Unfortunately, neither of these plans were realised.

Little is known about the operation of the aircraft after it had been registered, but between 8 and 10 July it made a visit of the crew of the ‘Southern Cross’ to President Herbert Hoover. Kingsford-Smith was given the possibility to fly the aircraft as well. The crew was given a rousing reception at Bolling Field.
KLM has been one of the largest airline companies during the period prior to the Second World War. The Dutch airline has contributed a lot to the development of airlines in Europe and the opening up of the air routes from Europe to the Far East. After the First World War, Deutsche Luft-Reederei opened on 5 February 1919 an air service between Berlin, Leipzig and Weimar. This was seen as the Luft-Reederei opened on 5 February 1919 an air service to the Far East. After the First World War, Deutsche Luft-Reederei opened on 5 February 1919 an air service between Berlin, Leipzig and Weimar. This was seen as the start of a large air exhibition. On 1 August 1919, the new airline took place and on the agenda was the possible formation of a Dutch airline. The Advisory Commission informed on 21 June that it was decided to form an airline with a capital of hfl. 500,000 (hfl.=Dutch Guilders). The name of the company was to be Nederlandsche Koninklijke Luchtvaart Maatschappij (Dutch and Colonial Airline Ltd.).

In the beginning of 1919, British business men had talks with the Dutch Government about the opening of an air route to The Netherlands, but many noticed that the country was not yet air-minded. The two Flight Lieutenants, Albert Plesman and Mari Louis Johan Hofstee from the Luchtaafdienstelf (LVA), the Dutch military air corps, wanted to do something about it, and suggested to organize a large air exhibition. On 1 August 1919, the ELTA (Eerste Luchtvaart Tentoonstelling Amsterdam) opened its doors, and in the 42 days the audience saw two products from the Dutch factory Trompenburg: the Spad XV/5 and many others. From the Netherlands the audience saw two products from the Dutch factory Trompenburg: the Spyker V.2 and the prototype of the Spyker V.3. The Dutch Marine Luchtvaartdienst – MLD (naval air corps) displayed a Friedrichshafen FF 49C, while the Luchtvaartafdeeling had parked the Vreeburg A.2M bomber on its stand in the main hall. This was the first twin-engined aircraft designed and built in the Netherlands. In addition, young designer Joop Carley showed his single-engined low-winged Carley S.1. Former Allied enemy Anthony Fokker had formed a new Dutch aircraft factory N.V. Nederlandsche Vliegtuigenfabriek (NVV – Dutch Aircraft Factory Ltd.), and attended, much to the dismay of the Allied countries.

The start of KLM Royal Dutch Airlines

In mid-1918, the KNVV, the airline taking the initiative to form a Commission voor Luchtvaartverkeer (a commission for ‘aviation traffic’) that produced a report pleading for airmail services. A private company supported by the State should operate these. After the Armistice of 11 November 1918, the economic optimism grew in the Netherlands as well. The commission members were granted permission to lease for the United Kingdom to check out the British plans for an airmail service between England and India. The Netherlands could perhaps establish a branch line from Amsterdam Schiphol to The Hague and not at Amsterdam Schiphol.

In September 1919, Albert Plesman was informed that he was to become the director of the company. On 7 October 1919, a party met at the notary’s office of meester Stoop to confirm the formation of the ‘NV Koninklijke Luchtvaart Maatschappij’ (KLM – nowadays generally known by the English expression KLM Royal Dutch Airlines). Exceptionally, the prefix Koninklijk (Royal) was already awarded by H. R. H. Queen Wilhelmina in September 1919. The seat of the company would be at The Hague. It was not until 30 June 1920 that the shareholders of KLM approved the Articles of Association. Among the stock holders belonged the Nederlandsche Handels Maatschappij (Dutch Trading Co.), the Administratiekantoor Unitas (Administration Office Unitas), the Batavia Petroleum Maatschappij (the Batavia Petroleum Co., the predecessor of Shell), de Wm. H. Müller & Co., the bank Lippmann Rosenthal & Co., the Rotterdamse Bankvereniging (Rotterdam’s Bank Association), the Twentsche Bank (Bank of the County of Twente), and the Nederlandsch-Indische Handelsbank (Netherlands Indies Trade Bank).

After the formation of the company, KLM needed an airfield and aircraft to fly with. The field Maaldrift near Wassenaar (near The Hague) was chosen and a hangar built. The British pilots, however, found this airfield not safe at all, and in May 1920, Albert Plesman requested to use Schiphol instead of Maaldrift. The Government gave permission. KLM would nevertheless keep its head office in The Hague and not at Amsterdam Schiphol.
The aircraft had an absolute service ceiling of 5,300m (17,388ft), a service ceiling of 4,000m (13,123ft), and an absolute ceiling at maximum weight on three engines of 3,000m (9,842ft). Its range with full fuel at cruising speed was 1,350km (838 miles), but the range on 62.5% power and at the service ceiling increased with full tanks to 1,550km. The fuel tanks had a capacity of 850 litres per fuel tank and four of these were installed. Octane was 87. The four oil tanks each contained 60 litres of oil.

The undercarriage and tailwheel could not be retracted. The vertical oleo-pneumatic shock absorber struts from the company Rubery Owen Messier Ltd. ran from the front wing spar to the axles, which were attached to the fuselage by ‘V’ struts. The front tyres were delivered by Dunlop and had a size of 22x26. The air brakes were also constructed by Dunlop. The engine starters were electric and there was a radio and direction finder of the type NSF VR11 of the Nederlandsche Seintoestellen Fabriek (Dutch Signalling Apparatus Factory).

The 24-metre (78ft) long fuselage contained the cockpit, the galley, and four compartments for 32 passengers on leather seats in red colour, or 16 in beds. The walls in the passenger cabin were stretched with blue Rexine. This was an artificial leathercloth fabric produced in the United Kingdom by Rexine Ltd. of Hyde, near Manchester, England. The ceiling was stretched with yellow fabric with the KLM initials weaved in. The centre aisle was laid with red linoleum. The lighting on the ceiling was made in light metal with synthetic nacrolaque, the lighting on the wall was of a simpler design. On the front and rear spar, running through the cabin, the company attached a metal plate with the motive of an Arend (eagle). A clock and an altitude meter were installed on the spar as well. On the wall was also a board, where the name plates of the crew were attached.

The cabin had sixteen double seats, which could be transformed into beds, constructed in hydronium, stretched with Rexine red coloured fabric with KLM initials. At the seats nearest to the wall were rotatable head supports. The cushions could be taken out and the mattresses were covered on one side with Rexine and the other side stitched in the KLM initials. Under the armrests were installed containers for small articles. The pillows were placed in special bags for storage.

Between the seats were eight folding tables in light metal with wooden trays. Thirty-two rings were installed to secure drinking glasses, and a further eight higher up for the upper beds.

Eight roller blinds of silk were attached to rolling poles. There were eight curtains for the lower beds and six for the upper beds, carried out in so-called ‘fantasy’-fabric. The seats were equipped with a folding armrest and attached to the wall. At the entrance of the fuselage two handies were installed. Once on board, the passengers could wipe their feet on a red mat.

On the walls, the company installed small “No Smoking” signs and 16 number plates for when the aircraft was operated for joyrides. In addition, plates were attached on the door of the toilet. A sign with the text ‘No entrance for passengers’ was attached to the cockpit door. Between the different cabin, curtains in ‘fantasy’-fabric were hung up. A similar curtain hung in front of the cloakroom and the cockpit door. The total cost of the interior amounted to hfl.

The fuselage was of elliptical shape, and built of welded steel-tubes as patented for the Fokker FXX. The nose section was ply-covered and the rest had fabric covering. In the nose were two holes for the supply of fresh air, which could be regulated in each of the four compartments. The nose contained also the radio direction-finder (hence the ply- and fabric covering), and the air bottles for the brake system. The passenger compartment was heated by hot air from the engines, which entered the cabin from under the tables. Above the seats were nets for small hand luggage.

In the cockpit, the first pilot sat forward in the middle (100% view) with the second pilot a little behind him on the starboard side (60% view). To provide the best possible view these seats were on a raised platform. The radio operator sat facing aft beside and below the pilot behind him, that was a compartment for the flight engineer and chart table, followed by the steward’s compartment and an electric kitchen. Over the front of the cabin was a sleeping compartment for two of the crew. There was an entrance to the cockpit in the port side of the fuselage. The main cabin was divided into four eight-seat sound-proofed compartments. All of the main cabins were two lavatories and a coat cupboard, as well as the entrance door on the port side for the passengers. To begin with, the aircraft carried its own stair for the passengers to get in and out of the aircraft.

The idea of the special layout in the cockpit (first pilot upfront and second pilot behind him) was an idea Anthony Fokker had for many years. Since the Fokker F.III (pilot sitting upfront beside the engine) he had thought about this concept, and could finally implement it in the F.XXXVI and F.XXII. The mock-up first showed a crew sitting side-by-side, but that was changed after a discussion with KLM and AB Aerotransport. Several senior pilots of KLM had agreed to the new layout as well. Later when the aircraft had been taken into service, problems occurred. Some of the pilots said that they despite the great view, having nobody beside you, made them feel ‘lonely’. They rather preferred that than having the second pilot sitting behind them. The KLM pilot Leendert ‘Boontje’ Sillevis mentioned that he was not pleased with the fact that he was sitting so close to the front window. He said that for him it was sitting through the monsoon rain, the rain drops would look so big. The weather was playing a lesser role, as blind flying was getting more advanced, so a good view was not
On 14 July, the aircraft made its first flight to an airport outside Amsterdam-Schiphol. That day, Emil Meinecke flew the aircraft to the military airfield of Soesterberg. It took only 17 minutes to get there. The reason for the flight was the national 20th Anniversary celebration of the Luchtvaartafdeeling. It has to be said that the actual date for this was in 1933, but due to the economic depression, the government and military authorities did not want to spend money on an air display at that time. A year later, the economy had improved and on 14 July, the ‘Luchtdag’ (Aviation Day) was organized. Some 50,000 spectators came to Soesterberg airfield to join in the celebrations. Among the celebrities present was Albert Plesman, Ir. Albert Gilles von Baumhauer, Anthony Fokker, Frits Koolhoven and Dick Asjes. The Fokker F.XXXVI attracted a lot of interest, and Anthony Fokker showed the Prime Minister Hendrik Colijn, together with his ministerial colleagues Laurentius Nicolaas Deckers (Defence Minister) and Jacob Adriaan de Wilde (Interior Minister), the F.XXXVI, PH-AJA. Impressive was the nearly 1.80-meter-high tyre of the aircraft (5ft. 10 in.). After lunch, the air display started and the audience was informed by Flight Captain Fredrik Raland about the different aircraft in the air. After two Fokker fighters had landed, Flight Cpt Raland could tell that the mighty Fokker F.XXXVI was to take off for a joyride. Emil Meinecke warmed up the four engines, taxied to the runway and after a short run, it graciously took off from the ground: “it was a fantastic sight to see the giant Fokker-aircraft in the air. The colossus swings around the heathland a few times while nine new, small fighters stand ready already shaking for the display”, a journalist wrote. After the display, the Fokker F.XXXVI returned in 52 minutes back to Schiphol.

On 15 July, during a test flight with personnel from the RSL, the Fokker F.XXXVI visited Rotterdam-Waalhaven for the first time, as Dr. Ir. Henk van der Maas had a meeting there. After the meeting the F.XXXVI returned to Schiphol, and on the way new tests were performed with regard to the stability of the aircraft. On board were nine men: Emil Anthony Fokker (to the right) explains the details of the Fokker F.XXXVI to Prime Minister Hendrik Colijn (beside Fokker) and Defence Minister Nicolaas Deckers (to the left). (via Dirk C. Top)
The Olympic Games in Berlin from 1-16 August 1936 contributed to high activity on the London-Amsterdam-Berlin service. The Fokker FXXXVI, PH-AJA Arend was therefore regularly called upon to cover the high demand of passengers. KLM was modernizing its fleet and wanted to sell as many as possible obsolete Fokker-aircraft. The first new Douglas DC-3 (PH-AII Ibis) entered service in September 1936, while the last three of a total of eighteen DC-2s entered service in 1936. At the end of the year, KLM had reduced its fleet from 51 to 33 aircraft, but worked with much more efficient aircraft. This made it possible for the airline to extend its network in all directions and make it possible to reach more cities in one day. The sold aircraft included seven Fokker FXIIIs, four Fokker EIVIIs, two Fokker FVIb-3ms, one Koolhoven FK-40, one Fokker F IX, two Fokker FVIIIs, one Fokker FXVII and one Fokker FXX. Twelve were taken over by a British airline, one by a Belgian and four by a French airline. Two aircraft remained in the Netherlands.

It is interesting to have a closer look at the sales of the aircraft to Great Britain and France. The French airline Air Tropique purchased four Fokkers: FXII, PH-AJG Adelaar, PH-AII Ijsberg and PH-AIF Pilkaun, and the FXV, PH-AIZ Zilvermeew. The Dutch were told that the aircraft would operate on the Dakar-Goa air service. KLM was not aware of the fact that Air Tropique was a fake company, and that the aircraft would end up in Spain, where, in July 1936, the Spanish Civil War had broken out. To begin with, KLM sold the aircraft to Alfred Pilain of the French airline Société Française des Transports Aériens (SFTA), which was not formally involved in the transportation of troops. As from August 1936, volunteers from the Soviet Union started to arrive in Spain. They wanted to fight on the Republican side against the National rebels. The next month, the Spanish airline pilot Pedro Tonda Bueno received orders from Cpt Mellado to pick up the Soviet volunteers in France. According to Rondas biography (‘La Vida y Yo’) he made these flights in a large four-engined Fokker, which Lines Aéreas Pontales Españolas (LAPE, the Spanish national airline at the time) did not operate too much due to the high costs. KLM also sold four Fokker F.XXIIs to the British airline Crilly Airways Ltd., which planned to start up a service London-Bordeaux-Madrid-Lisbon and made a trial flight on 1 February 1936. The company was denied Spanish traffic rights and the airline sold the four aircraft to British Airways Ltd, which managed in the end to sell the aircraft to a Polish arms dealer, who tried to fly the four aircraft to Spain. Only the Fokker FXII, G-ADZH with pilot Adam Szarek managed to reach Spain. This is not the book to tell about the exploits of the Fokkers during the Spanish Civil War, but at the start, the Dutch government considered to charter the Fokker FXXVII, PH-AJA Arend to evacuate Dutch citizens from Madrid back to the Netherlands. The crew would be headed by Evert van Dijk and co-pilot Verhoef. The route to follow was Amsterdam-Paris-Biarritz-Madrid. The Spanish government was requested officially to allow the aircraft to come to Madrid. There is some mystery about this request, but the aircraft never flew to Madrid.

Instead it looks like the Fokker FXXXVI, PH-AJA Arend was involved in the transportation of troops. As from August 1936, volunteers from the Soviet Union started to arrive in Spain. They wanted to fight on the Republican side against the National rebels. The next month, the Spanish airline pilot Pedro Tonda Bueno received orders from Cpt Mellado to pick up the Soviet volunteers in France. According to Rondas biography (‘La Vida y Yo’) he made these flights in a large four-engined Fokker, which Lines Aéreas Pontales Españolas (LAPE, the Spanish national airline at the time) did not operate too much due to the high costs. Since the PH-AJA Arend had been taken out of regular air services, it must have been this aircraft Tonda referred to. He said, they had 50 volunteers on board, where there was space for 32, but they sat in chairs and on the floor. Most did not have any equipment with them. Tonda continued in his book that the tail of the aircraft was painted in the colours of the Republicans (purple-yellow-red). LAPE must have chartered the aircraft from KLM. About 168 Russians must in that way have been transported from France to Spain, which would indicate at least four flights between the end of September and the middle of October. He also told about the heavy snowfall while flying over the Massif Central in France. In addition, his passengers needed to be quiet and not to speak in order not to be recognized. Since the aircraft was too big and visible, it was decided to stop any further flights. The Soviet Union had also found other ways to transfer its volunteers to Spain.

Fewer incidents - good service

More and more the Fokker FXXXVI participated in air shows, charter flight and joyrides. It was always a treat to come to Schiphol and take a joyride in the giant eagle. The aircraft also played a role in the celebration around the jubilee of Anthony Fokker. In 1936, Fokker could celebrate the fact that he had been a pilot for 25 years. From his early start in 1911 flying the aircraft ‘Spin’ (Spider) and right up to the giant Fokker FXXXVI, he had shown that aviation had come far. In May 1936, the personnel of the N.V. Nederlandse Vliegtuigenfabriek offered Anthony Fokker a nice dinner at the Carlton Hotel in Amsterdam. In the restaurant, a model of the ‘Spin’ was a silent witness to the jubilee. Fokker had decided to start the ‘A. H. G. Fokker Fonds’, a trust with the object to train as fast and as many as possible pilots for the national defence of the country; support Dutch aviation pioneers and their widows and children; stimulate the development of Dutch aviation in general through, among others, scholarships; and finally support or take the initiative to increase the growth of Dutch aviation. The festivities continued on 6 June.

The aircraft now flew without any major technical problems, at least compared with earlier years. On 30 May, the PH-AJA Arend was flying from Amsterdam to Brussels-Charleroi, when after the take-off at Brussels-Evere the starboard tyre exploded. Since they were in the air, the captain informed the passengers and reassured them that the landing would be no problem. They had decided to con-
ones to keep contact with the tower. The spectators on the terrace on Schiphol were well aware of the progress and could tell when each aircraft flew above a certain city. In the air, the situation was more chaotic. The Jan van Gent lost the group completely and flew above the clouds, the others flew too fast. When the Fokkers reported to be above Haarlem, the formation was nearly complete again. The Douglas Ibis and Kook together with the German Ju 52/3m, arrived via Aalsmeer, while the Jan van Gent returned like a lonely bird. The Fokkers and remaining Douglasses arrived one by one and after reporting the tower their arrival, the aircraft taxied to the crowded tarmac, where the ground crew with orange and blue flags directed the aircraft to their parking position. Nevertheless, the Dutch had seen their national pride in the air again.

In June 1937, the pilots flying the Fokker FXXVI, PH-AJA Arend, complained about the quality of the control. The director of the Luchtvaardienst requested the Nationaal Luchtvaart Laboratorium to investigate the complaints and on 25 and 29 June, the NLL joined on a flight between Schiphol to London-Croydon and from Rotterdam-Waalhaven to Schiphol. The weather condition was favourable and the inspectors got a good impression of the problem. The conclusion of the inspection was that the control had turned its nose toward Schiphol again and Captain Pieter Both landed the aircraft gently back on the ground. During the jamboree, it would also be possible to take a joyride in the PH-AJA Arend and see the jamboree from above.

During the 5th World Scout Jamboree (31 July-9 August, 1937) at Vogelenzang near Haarlem, the PH-AJA Arend was called upon by the Public Relation Department of the Organization Committee to make a flight to Vogelenzang and see the terrain from the air. On 29 July, a few days before the opening of the jamboree, the press chief C. R. Th. Baron von Kraijenhoff invited some journalists for a flight. They arrived at Schiphol, where they could see the engines of the PH-AJA Arend already running. A few minutes later, Captain Pieter Both taxied away and took off over the heads of the workers, who were building a new runway. Within a few minutes they had arrived near Vogelenzang and could see people working down below. The PH-AJA Arend made a left turn so the people on the other side could see the terrain as well. The camps of the different nations could be studied from the air as well as the stadium. But before they knew of it, the PH-AJA Arend had turned its nose toward Schiphol again and Captain Pieter Both landed the aircraft. The participants flew too fast. When the Fokkers reported to be above Haarlem, they were flying too fast. When the Fokkers and remaining Douglasses arrived one by one and after reporting the tower their arrival, the aircraft taxied to the crowded tarmac, where the ground crew with orange and blue flags directed the aircraft to their parking position. Nevertheless, the Dutch had seen their national pride in the air again.

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During the Dutch Circuit Flight (Dutch Circuit Flight) on 28 July 1937, the Fokker FXXVI, PH-AJA Arend, was in the air again. The participating aircraft started from Ypenburg near The Hague and reached, due to bad weather and low clouds, different airports like Eindhoven, Gilze-Rijen, Rotterdam and Haamstede. Twenty-six aircraft continued from Eindhoven to Teuge, where they, at 1400, were joined by the mighty ‘eagle’ of the KLM. The guests on board the Fokker were transported to Apeldoorn for lunch, while the PH-AJA Arend made numerous joyrides with excited passengers. Present were also some Koolhoven aircraft, which also made joyrides, and in the end not many

The coronation of George VI and his wife Elizabeth as king and queen of the United Kingdom and the Dominions of the British Commonwealth took place at Westminster Abbey, London, on 12 May 1937. The Fokker FXXVI, PH-AJA Arend made special flights with newspaper in connection with the coronation. (via Amsterdam City Archive)

Football for a good cause

On 4 September 1937, the Algemeene Nederlandsche Politiebond (the Dutch Police Association) celebrated its 50-year jubilee. By initiative of the Voetbal Vereening Doetinchem (Football Club Doetinchem), the football team of the Metropolitan Police and New Scotland Yard from London were invited to take part in their Jubilee celebrations and play two football matches. On Saturday, the 4th they played in the Olympic Stadium in Amsterdam a match against a Dutch police team (6-2 to the Dutch team) and the day after, a match at Doetinchem against the local team supplemented by six famous Dutch football players. This match ended 6-3 for the Dutch team. The photograph shows the British team prior to their departure for Amsterdam on Friday 3 September. They returned on the flight to London on Monday. (via Metropolitan Police Authority/Mary Evans)
Second World War. The co-operation agreement between KLM Royal Dutch Airlines and AB Aerotransport stipulated that similar flying equipment would be used to minimize the competition between the two airlines. In the beginning of the co-operation, AB Aerotransport operated the Junkers F.24. Since its formation in March 1924, AB Aerotransport had been a good client of Junkers Flugzeugwerk AG, not surprisingly, as the German company was one of the largest stock holders of the Swedish airline. At the end of the 1920s the connection with the German aircraft factory was disbanded, and after that, AB Aerotransport was free to purchase the aircraft it needed. These engines, Junkers products would still dominate the fleet until well after the Second World War. The co-operation agreement between KLM Royal Dutch Airlines and AB Aerotransport stipulated that similar flying equipment would be used to minimize the competition between the two airlines. In the beginning of the co-operation, AB Aerotransport operated the Junkers G 24, but on 30 September 1931 it decided to order a Fokker F.XII at NVNV. At the same time the board expressed the wish to purchase a second aircraft for the service, that would be kept as a spare aircraft. In February 1932, the Swedish airline took over its first product from the Dutch factory, the Fokker EXII, SE-ACL Värmland (S303) and the three-engined aircraft was put into service on the Scandinavian Air Express: Malmö-Copenhagen-(Hamburg)-Amsterdam. In addition, AB Aerotransport had, on 17 September 1931, obtained the right for representing the NVNV as general agent for Sweden for the duration of two years. This was extended in 1933 by another two years. On 28 December 1932, the NVNV made contact with AB Aerotransport for the sale of the Fokker F.XXI, a new three-engined airliner. It was the first Fokker design to use an elliptical-section fuselage instead of the traditional square fuselage, and the first Fokker aircraft with retractable landing gear. On 29 March 1933, Karl Lignell and Karl Henrik Larsson travelled to the office of the NVNV at Rokin 04 in the centre of Amsterdam for a meeting about the possible order of a Fokker aircraft. The meeting was set up to inform the NVNV about the requirements of a new aircraft.

Karl Lignell and Karl Henrik Larsson told chief designer Marius Beeling, and his colleagues Heinrich Hentzen and Karl Lignell and Karl Henrik Larsson travelled to Amsterdam to discuss the offers and were informed about a new design under development, the FXXII, diverted from the FXXVI. Upon return, the technical staff discussed this design with the management and believed it to be of more interest than the Fokker F.XXI or F.XXIV. Furthermore, KLM had shown interest in the type as well. As a result, AB Aerotransport requested an official offer for this aircraft on 24 April. On 18 May, the NVNV was willing to reduce the price by 6% to hfl. 154.348. The NVNV ended the official offer by saying “that a tremendous concession has been made by our company” and hoped to receive a positive answer. The four-page supplement to the offer specified the details of the aircraft.

Around mid-April, the AB Aerotransport engineers Karl Lignell and Karl Henrik Larsson travelled to Amsterdam to discuss the offers and were informed about a new design under development, the FXXII, diverted from the FXXVI. Upon return, the technical staff discussed this design with the management and believed it to be of more interest than the Fokker F.XXI or F.XXIV. Furthermore, KLM had shown interest in the type as well. As a result, AB Aerotransport requested an official offer for this aircraft on 24 April. On a board meeting at the NVNV of 23 May 1933, it was mentioned that both AB Aerotransport and KLM were interested to operate the Fokker F.XXVII on the Scandinavian Air Express, but that KLM was willing to alter the order of two F.XXIII-a (four-engined version of the F.XXII) into an order for two F.XXIs. AB was still also looking into an offer for a 20-seat, four-engined aircraft. On 18 May, just five days before a board meeting at the NVNV, the company handed to AB Aerotransport the first offer for a Fokker F.XXIII powered by Pratt & Whitney Wasp T-1D1-engines. These engines were to be delivered by AB Aerotransport. The aircraft would have a regular two-crew cockpit, where the pilots sat beside each other. The offer of hfl. 164.200 included the installation of the engines, but not the furnishing of the passenger cabin nor installation of the lavatory. It also included a Dutch Certification of Airworthiness. The price could be reduced by 2,200 guilders if two aircraft were ordered at the same time. Delivery was scheduled for early 1934, but could only be guaranteed if the contract was signed by 15 June 1933.

The offer was discussed by AB Aerotransport, but not accepted. Already a day later, Friedrich Seekatz (manager at the NVNV) informed the Swedish airline that the NVNV was willing to reduce the price by 6% to hfl. 154.348. The NVNV ended the official offer by saying “that a tremendous concession has been made by our company” and hoped to receive a positive answer. The four-page supplement to the offer specified the details of the aircraft.

On 22 May, the NVNV stated that the sale of the Fokker F.XXXIII was very important for the Dutch company, and that it wanted to send Friedrich Seekatz to Paris to meet Carl Florman, the general manager of AB Aerotransport.
on 4 and 5 October to the NVNV and had a meeting with Henk Barto. They had seen the FXXXVI and compared it with their FXXII and small modifications were to be implemented in the Swedish aircraft. In addition, the NVNV listed a number of points for improvement. It had gained experience with the FXXXVI, which had flown since June 1934, and two modifications were to be implemented in the FXXII: one to avoid reflections in the roof of the front window, and the second modification was the result of flight and wind tunnel tests that had shown that the guidance of the exhaust pipes had to be changed and now ran through the middle of the engine and upwards. This change also required a modification of the NACA-cowlings; this work would be speeded up. In addition to the four NACA cowlings for the aircraft, the fifth for the reserve engine, which had been ordered by AB Aerotransport, was also produced at the same time.

On the positive side, Mr. Smit-Kleine informed Karl Henrikk Larsson that as AB Aerotransport did not want to modify the roof (as KLM wanted, and which was a considerable modification), the Swedish aircraft would be made ready before the KLM aircraft. The undercarriage mounted on the KLM aircraft would be demounted and transferred to the AB Aerotransport aircraft. The earlier mentioned modifications on the NACA cowlings would take some four weeks and, if no further delays, it was expected that the SE-ABA Lappland would get to Schiphol by 1 November. Of course, this date could not be held.

Finally, first flight and delivery!

Despite earlier expectations, the Fokker FXXII was not completed until the end of November. On 1 December, the fuselage and the wings were transported to the barges for transport. After the aircraft had been put together at Schiphol, the SE-ABA Lappland was weighed on 15 December, by personnel from the RSL. The empty weight was set at 8,724 kg (19,233 lbs.). After the aircraft was assembled, the RSL and the NVNV started the preparations for the first flight. On 24 December 1934 (Christmas Eve), the first flight of a Fokker F.XXII took place. Just before 0900, the aircraft for AB Aerotransport was rolled out of the Fokker hangar and onto the tarmac. After warming up the engines, the NVNV test pilots Emil Meinecke, Ir. Wim van Neijenhoff (NVNV) and mechanic P. G. Jansen (NVNV) took off from the runway of Amsterdam-Schiphol. (via Thijs Pastma)
KLM’s Fokker F.XXII

The order for the F.XXII came in the wake of the order of the F.XXVI. The F.XXII was the last four-engine pre-war Fokker transport aircraft and was basically a scaled-down F.XXXVI. The original plan was to convert the Fokker F.XVIII into the F.XVIIIa with four engines instead of three, all mounted inside the wing. The conversion of this aircraft was regarded by Albert Plesman as too expensive, and thus the F.XXXVI was discussed. The Swedish airline AB Aerotransport was interested in a four-engined aircraft as well, but found the F.XXXVI too big. The NVNV made contact with KLM to discuss a smaller aircraft, and the Dutch airline thought this might be a good concept. Albert Plesman also thought that the development costs would not be that high, when more airlines ordered the type. Anthony Fokker was not too keen about the large F.XXXVI and rather wanted to build a smaller version first, before starting on the giant F.XXXVI. His idea was to construct a F.XXXVI with retractable landing gear (later offered as the F.XXXVII).

In June 1933, AB Aerotransport and the NVNV agreed to a contract (not signed until September, see chapter ‘ABA’s Fokker F.XXII’) and the technical specifications were forwarded to KLM for the Dutch airline to use in its negotiations with the NVNV. The two airlines wanted to have similar aircraft. That would also make it easier for the NVNV to construct the F.XXII. Still, the NVNV was not too eager to work on two expensive projects for which no order had been received yet. Albert Plesman became angry because of the delay, and threatened to cancel the order for the Fokker F.XX. From the NVNV’s point of view it was of course difficult to work on three large projects at the same time: the F.XX, the F.XXII and the F.XXVI. The costs were enormous.

On 10 May 1933, Albert Plesman presented to his board of directors three versions of the Fokker F.XXII: One for the service to the Netherlands East Indies with a range of 1,400km; one for the European network with a range of 650km; and one for a direct service Amsterdam-Malmö, where the aircraft was to have a range of 1,100km. All were to be powered by four 500hp Pratt & Whitney Wasp T1D1 engines. In November 1933, Albert Plesman requested permission from his board to order one Douglas DC-2, one Fokker F.XXVI and one Fokker F.XXII for the Netherlands East Indies service. In that way the three aircraft could be compared with each other. It was difficult to order foreign aircraft for KLM, because the contract with the government stipulated that KLM should fly with aircraft built in the Netherlands. There were two exceptions to the rule, and that was when the Dutch product did not meet the requirements, or the Dutch product was too expensive compared with the foreign product. For a Dutch aircraft manufacturer to make a similar aircraft as the DC-2, would take at least 1½ to 2 years. Douglas could deliver in September 1934, while the Dutch manufacturer could not deliver until earliest June 1935. The board agreed to the request and an order was placed with both Douglas and the NVNV. Later the request for the ‘Malmö’-version of the F.XXII was dropped and only a Netherlands East Indies and a European version were requested. The ‘Malmö’ version was a long-range aircraft for the European services, especially for a direct line, KLM planned to open: directly from Amsterdam to Malmö in Sweden. This version was dropped in favour of three nearly similar Fokker F.XXIIs.

The Swedish airline AB Aerotransport forwarded to KLM its design ‘Bauprogramm’ (construction programme), dated 28 June 1933, specifying the Fokker F.XXII. This program had been discussed by KLM and AB Aerotransport and was eventually used by the Technical Department of KLM as a basis for the contract for the two Fokker F.XXIIs of KLM, which was ready on 16 September 1933. On 29 June, KLM placed the order, although the technical contract was not signed until in November.

Technical description of the Fokker F.XXII

The Fokker F.XXII was a four-engine commercial cantilever high-wing monoplane, the wing being directly attached to the fuselage. The wing was of typical Fokker wooden construction. Its power plant consisted of four 500hp Pratt & Whitney Wasp T1D1 air-cooled engines, fitted with tractor...
airline, because he could not present an Aryan certificate, he and his wife had to leave Germany and settled in The Netherlands, where KLM had use for pilots. He was the first foreigner employed by KLM since Iwan Smirnoff, and his appointment nearly led to the announcement of a strike by KLM pilots, who could not understand, why a Dutch pilot was not appointed. However, the pilots did not strike.

Silberstein and his wife lived in one house, part of a small group of houses, at the edge of Schiphol airport, specially built for KLM personnel. Lucx was not with the FXXIIIs of KLM. On 29 June, when the PH-AJQ Roerdomp with Captain Jan Duimelaar at the controls, taxied to the runway for a flight from Waalhaven to Schiphol, the left tyre burst and as a result, the tyre flew off the rim, the aircraft made a turn and sagged to the side of the burst tyre. As a result, the nose of the aircraft hit a building and was damaged. This accident was due to the small diameter of the rim of the wheel, and as a result of which the rim, as it were, drilled into the ground and remained stuck. The damage was quite severe. The next day, Ir. J. van der Heijden (Luchtvaartdienst) came to Waalhaven and immediately withdrew the Certificate of Airworthiness until further notice. Under his supervision, the nose was completely repaired, while the small tyres were replaced with the larger type as used on the PH-AJP Papegaai and PH-AJQ Kwikstaart. While the PH-AJR Roerdomp was in the workshop, it was decided to give the aircraft a major overhaul. All engines were checked (30 hours inspection), the bolts on the exhaust pipes were renewed, the oil cooler dismounted and checked and new petrol filter installed. The handles in the cockpit for the carburettor for the cabin heating were moved to make place for the new hand pumps for the fuel supply. After the crash of the PH-AJQ Kwikstaart (see further on), four new Romeo hand pumps were installed and the cabling mounted. The NACA cowlings were further improved. The propellers on the starboard side were removed, inspected and reinstalled. Of course, the major repair was the replacement of a completely new aircraft nose, produced by the NVNV. Beside the nose, new steel tubes were also mounted and a part of the floor replaced. The pyramid construction for the cabin ventilation in the nose was renewed. The radio equipment was taken out and checked.

During the repairs and overhaul, the undercarriage had new wheels, the same type as under the PH-AJP Papegaai and the PH-AJQ Kwikstaart. The mounting of new wheels meant that the aircraft came up higher, and thus the stair to the rear door had to be extended. The Dutch firm Bosman had made a new type of fridge, and this was installed as well. In addition, a lot of smaller modifications were made, but the long stay in the hangar meant that the aircraft came up higher, and thus the stair to the rear door had to be extended. The Dutch firm Bosman had made a new type of fridge, and this was installed as well. In addition, a lot of smaller modifications were made, but the long stay in the hangar meant that the aircraft was not ready until 14 August. On 12 August, Jan Duimelaar was asked to make a test flight with the PH-AJR Roerdomp from Waalhaven to Schiphol, and see if all was in order. After a flight of 45 minutes, he arrived at Schiphol and could sign the statement that all was in perfect order.

Mr. P. B. Behage of the KLM Technical Service, requested the Luchtvaartdienst to re-issue the Certificate of Airworthiness for the aircraft. On 17 August, the certificate was sent to KLM and the aircraft was ready for service again.

On the Scandinavian Air Express, the Fokker FXXVI, PH-AJA Arend with Koene Dirk Parmentier visited Copenhagen and Malmö again on 6 July. On 14 July, it was the first time for a long time, a KLM aircraft did not arrive at Copenhagen and Malmö. That day, one of the FXXIIIs crashed near Schiphol. That same evening the Fokker FVIII, PH-AEI, flew three passengers on an extra flight from Amsterdam to Hamburg and Copenhagen.

The loss of PH-AJQ Kwikstaart

On 13 July, after a regular flight to London, the PH-AJQ Kwikstaart returned at Schiphol and parked on the tarmac. That day, just before departure from London-Croydon a fault in the spark plug on the left outside engine delayed the departure, but this was quickly attended to by the flight engineer. During the evening the ground personnel worked on the regular overhaul of the aircraft and prepared it for next day’s flight to Hamburg, Copenhagen and its final destination in Sweden: Malmö. The summer had been hectic, but until now there had been very few problems with the PH-AJQ Kwikstaart. The next day, 14 July, the morning temperature rose fast and had already reached 22 degrees Celsius (71.6 degrees Fahrenheit) by the time the aircraft was prepared for take-off. There was a light breeze from the northeast. That morning, fifteen passengers had booked a seat on the flight. Two of these passengers, the British citizens W. E. Newman and H. C. Hodson had come by Fokker FXXXVI, PH-AJA Arend from London that morning and managed to get early on board the PH-AJQ Kwikstaart together with the crew. The two British citizens both worked for the company Masonite Ltd. They found themselves a seat at the front of the passenger cabin. Today’s flight was under command of KLM Captain Heinrich Silberstein, who had the day before flown on a regular flight to Knocke in Belgium and returned early that Sunday morning to Schiphol. He transferred to the PH-AJQ Kwikstaart, an aircraft he had 34 flying-hours on. The remaining crew consisted of radio operator G. E. Nieboer; and two flight engineers by the name of G. Brom and L. J. van Dijk. Steward on the flight was J. Haberer; Silberstein (he was the only pilot in the cockpit, a twin crew cockpit was not yet mandatory) was informed by the steward that the passenger cabin was ready for departure. The captain started up the four engines and ran them idle, while the pre-flight checks were made. In the seat of the radio operator sat Blom, also an experienced flight engineer. Flight engineer L. J. van Dijk was added to the crew for training purposes and stood un-
that the PH-AJR 8 August 1939, the Dutch newspaper published the news. The Fokker F.XXII, PH-AJR in the United Kingdom. The first aircraft to be sold to the company was painted on the fuselage and the Dutch registration cancelled, and the aircraft overhauled at Schiphol un- 

All three remaining Fokker four-engine aircraft ended up in the United Kingdom. The first aircraft to be sold to the UK was the Fokker F.XXII, PH-AJR. On 6 April 1935, the Dutch newspaper published the news that the aircraft was sold to British-American Air Service Ltd. This company was formed on 6 April 1935 to run charter flights from London-Hendon Aerodrome. Its ‘American’ connection was nothing more than that one of the founders was an American citizen. The company started off by purchasing several single- and multi-engine aircraft from the de Havilland Company. It went bankrupt in January 1937 but re-emerged under the same name in April 1937 with Mrs. Lilian Gibbs as the new owner. The company was engaged in charter, advertisement and demon- 

In August 1935, Scottish Aviation had been established at Prestwick by Lord George Douglas, 14th Duke of Hamilton and Flt Lt David Fowler McIntyre. The Duke’s personal ac-

British-American Air Service Ltd. had now no possibility to earn money with the Fokker FXXII, G-AFXR. On 14 November 1939, the registration was cancelled pending the sales of the aircraft to Scottish Aviation Ltd. at Prestwick. This company had just before the Second World War purchased the other two four-engine Fokkers: the FXXXVI, PH-AJA Arend (5348) and the FXXII, PH-AJP Papegaai (5357). The deal between BAAS and Scottish Aviation went through, and on 29 November, the registration G-AFXR was reapplied, but now to Scottish Aviation Ltd. It was to be oper- 

Night Air Transport Ltd. wants Fokker Fours

The Fokker F.XXXII, PH-AJR ‘Roerdomp’ was sold to British-

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great fun. There was no organised sport or PT, and with the exception of Morse code I found the syllabus relatively easy.

"I took my first flight in the Fokker (coded G-AFZR) on November 17, an air experience flight of an hour-and-a-half with Flight Sergeant Patekhorpe. I flew again with Patekhorpe and with two different flight lieutenants, Vetch and Kane (Peter Cane was later a Captain with BOAC and with his experience on Comets became special duties pilot assigned to the VC10), throughout the course of the next six weeks on a series of exercises and other navigational exercises. I also flew with another, Flight Lieutenant Thomas who post-war went to work for Airwork at Blackbushe. A brief record of each flight had to be recorded in ink in my observer’s flying logbook that was to become my constant companion in the months and years ahead.

My trips in the three Fokkers (along with G-AFZR were G-AFZP and G-AFGR) were interspersed with cross-country flights in the station’s Avro Ansons. We were allowed home for Christmas and by February 16 and the completion of the first stage of my training I had recorded just short of fifty flying hours in total, and had been rated ‘above average’ by the chief instructor.

"The group was then split into two, one half heading north to Evanton, and the rest of us being sent to a ‘proper’ RAF unit after 50 flying hours on both Ansons and Fokkers. He continued on the No. 8 Bombing and Gunnery School (B&GS) and had on its inventory a mixed bag of aircraft including an old Westland Wallace."

One of the other pupils, who has flown on the Fokker EXXXVI was Sgt Pilot William Close. He enlisted in the RAF Volunteer Reserve in the second half of 1939 and in October that year was posted at Prestwick at No. 1 AONS. The Fokker F.XXIIIs and F.XXVIs were modified into a flying classroom as well. It entered service with No. 1 AONS, again due to the fire, but one source survived into a flying classroom as well. It entered service with No. 1 AONS, again due to the fire, but one source survived.

The logbook of Flt Lt H. C. S. Vetch. He had started flying for No. 12 EFTS in December 1938, flew for the No. 1 AONS, and would be transferred to No. 11 EFTS in February 1941.

Unfortunately, no Operation Record Books exists of this school, again due to the fire, but one source survived and that is the logbook of the Flt Lt H. C. S. Vetch. He had started flying for No. 12 EFTS in December 1938, flew for the No. 1 AONS, and would be transferred to No. 11 EFTS in February 1941.

The logbook of Flt Lt H. C. S. Vetch

The first entry of a Fokker-flight in Vetch’s logbook dates from 23 September 1939, when he was second pilot under F/O Jennens. They made a 40-minute instruction flight in the Fokker FXXI, G-AFZP, followed by a new flight three days later in the same aircraft, but this time with Flt Lt Noel Capper as first pilot. This flight was a training flight for Flt Lt Vetch and lasted for three hours and 20 minutes.

Vetch’s first registered flight in the Fokker FXXVI, G-AFZP, was as second pilot, again under F/O Jennens, on 12 October 1939. That day, they flew 33 pupils at the same time on a forty-minutes air observer training flight. The next day, three more flights were made with resp. 24, 26 and 29 pupils. First pilot was Flt Lt Dobson. On 18 October, Vetch was second pilot on the Fokker FXXVI, G-AFGR, and made map-reading and air navigation flights. At the end of October, he had flown 20 hours as First and 8 hours and 20 minutes as Second Pilot on the Fokker FXXVI. He continued flying the aircraft throughout November and all the time right up until 22 December, when he was sent on leave. He was in the air every day and logged numerous flying hours, sometimes nearly six flying hours per day. When he went on leave he had flown 90 hours and 50 minutes on the Fokker FXXVI, G-AFGR. During these two months, he only flew one ferry flight with the Avro Anson, N9717, from Prestwick to RAF Grangemouth in Falkirk.

Over the New Year he returned to Prestwick, and on 2 January 1940 started flying the Fokker FXXVI. On 18 January he was transferred to the Fokker FXXXVI, G-AFGR, and also started on 22 January flying the G-EXLX, G-AFGR. On 23 January he was told that he qualified as First Pilot and that he could fly both the Fokker FXXXVII and FXXII on night flights. A proud moment for Flight Lieutenant Vetch.

In February, he flew a mix of both types, but mainly the Fokker FXXVI as he was now one of the most experienced pilots on the type. He logged the following flying hours:

- February: 58:00;
- March: 28:00;
- April: 53:00; and
- May: 54:10.

On 20 May, Flt Lt Vetch and P/O Patekhorpe performed an air observer’s training flight with the Fokker FXXXVI, G-AFZP, and little did they know that these 3 hours and 30 minutes would be their last minutes in this aircraft. The day after, on May 21, the unfortunate end of the Fokker FXXXVI, G-AFZP, had to be registered. Flt Lt Vetch and P/O Patekhorpe taxi’d from the tarmac to the start of the run-up. On board were also crew members LAC R. A. Anderson and LAC Richard Harry Freeman. They had 26 trainees going on air observer training. The civilian navigation course were Mr. House and Mr. Cornock, and the civilian wireless operator was Sergeant H. Macare. At 0950, when he turned on the runway and started his take-off, he was unaware of obstacles on the runway. He tried to take-off with the aircraft, but soon realised that he could not clear the obstacles and locked the throttles and applied the brakes. The aircraft overran the boundary of the airport, and upon impact, an engine fire broke out damaging the aircraft beyond repair. Sergeant Richard Freeman was slightly injured, but the crew and tutors and pupils managed to get out in time, and the fire was put out fast. It was, however, not possible to rebuild the aircraft due to the lack of spare parts. It had to be written off. Flt Lt Vetch did not enter the flight in his logbook, as he never took off. The RAF had reserved on 30 November 1939, the serial HM161 for this aircraft, but never applied it. As all other Fokkers in RAF service, it had always flown under its civil registration. After five years of operation, the Fokker FXXXVI was no more. Its civil marks were not cancelled until 5 November 1945 though. Now, only two ‘Fokker Fours’ remained in service.
port outside engine #9549, had air screw #T26308; port inside engine #9288, had air screw #8356 CPL; starboard inside engine #8722, had air screw #T26350; starboard outside engine #9296, had air screw #T26312. The engines had run since their manufacture F.0, 2,028 hrs. 51 min., F.1, 1,614 hrs. 51 min., S.1, 1,629 hrs. and 51 min. and S.O. 15 hrs. and 16 min. All four new air screws had just run 11 hours and 26 minutes and were also purchased from RAF sources. The inspection report mentioned that the aircraft since the manufacture in the Netherlands had flown 3,385 hours and 31 minutes. And since the last major repair; 8 hours and 56 minutes.

It was not until 18 October 1946, that the Fokker FXXII, G-AFZP made two trial flights out of Prestwick. This did not go that easy. It was on the second attempt that the aircraft managed to take off, but in the end, the aircraft took to the air again.

The pilot J. J. Dobson made a forty-five minutes test flight on 6 November 1946 with an all-up weight for the test of 28,600 lbs. (12,973lb) and climbed in 8 minutes to 5,000 feet (1,524m). The test was carried out to prove the new engine installation. He concluded that "all of which were normal and free of snags". Before a test flight, the aircraft had been weighed and a weight schedule prepared. On 20 December, the Certificate of Airworthiness was reissued under No. B845 (A299). It had at the time of certification flown 3,385 hours and 31 minutes.

It was made ready for use on the service they started to operate between Prestwick and Belfast, a service operated on behalf of British European Airways (BEA). On 11 December, it was announced in the newspapers that BEA, on 16 December 1946, would move its operations to Nutt's Corner Airport (Belfast) and that it would be the place of departure and arrival of all aircraft. On that day, the Belfast-Prestwick service would be restored, using the 22-seater Fokker FXXII, G-AFZP on charter to BEA. On the

fabric, surmounted by a ninety-nine-foot wooden wing and supported on a fixed (tail wheel) undercarriage, was fitted with seats for twenty-two passengers in facing pairs. Long rectangular windows afforded an excellent view. Carrying, in orange letters the Scottish Airlines name below the windows and the registration, G-AFZP; the company's rampant lion logo on the fin and the irreverently nicknamed 'three pissy cats' either side of the nose, she was a magnificent sight. But, for my money, her claim to fame arose from her engines. Anyone who has heard a North American Harvard trainer with its high-revving Pratt and Whitney Wasp engine emitting a banshee-ear of-piercing intensity will remember the sound. "ZIP" had four of these engines in close proximity to the fuselage, each exhausting through a pair of short vertical smoke stacks. With minimal internal sound-proofing, the noise was indescribable. Up front, the flight deck was a long narrow affair. The Captain sat in the nose, facing a huge circular control wheel. The first officer sat behind him to starboard, with a somewhat smaller wheel. The flight engineer was behind him, with a slightly smaller wheel which was used to operate the flaps. Engine starting was hilarious. On the command 'Go!' the engineer waggled the wobble pump, I waggled the mixture-lever and the Captain waggled the throttle. Or maybe it was the other way around. At any rate, I distinctly remember all three of us either going up and down or back and forwards and forwards. Ground handling in a high wind was tricky. But she was a grand old lady and the last of her line. Incidentally, we had a facing pair of seats from 'ZP in the original Prestwick Spot-Club. The seats were beautifully made from red leather and each seat had the KLM logo pressed into the leather. I actually know where they are now but some vandal has cut them out the KLM logos."

In October 1948, the aircraft was offered for sale in the aviation magazine 'Flight' and had by then a flying time of 3,472 hours (just flown 86 hrs. and 29 min. since moment of certification). It was inevitable that following the acquisition of a fleet of Douglas C-47 Dakotas, and Scottish Aviation's heavy airline commitments in the early post-war years that the Fokker FXXII had to fade out of the picture. It was described as being a 'Hangar Queen'.

Nevertheless, the company had a sentimental attachment to the aircraft, and they kept her stored until July 1952. They offered the Fokker FXXII, G-AFZP to the NV Nederlandsche Vliegtuigfabriek (Fokker) and the Netherlands Aeronautical Museum under formation, neither of whom to 'their' regret could accept it on account of storage difficulties at that time. Hence, the registration was cancelled in July 1952 and the next year, the aircraft had to be removed from the hangar due to lack of space. With pain in his heart, the aircraft was broken up and burnt at Prestwick. Her markings were cancelled on 5 February 1959 and as reason ‘w.i. u.’ (withdrawn from use).

"The aviation magazine 'Flight' of 25 December 1953, had under the heading 'Trophy Tells a Story' a final note about the Scottish Fokker FXXII: "An industrial salvage trophy presented to the South Ayrshire Local Savings Committee by Mr. D. F. McIntyre, managing director of Scottish Aviation, Ltd., bears this inscription: 'The base is made of a piece of spruce wood from the main spar of a Fokker F22 aircraft G-AFZP. The aircraft was one of three purchased by Scottish Aviation and flown by them from Holland on the eve of the outbreak of war in 1939 to save them falling into the hands of the Germans. All three aircraft were then extensively used as flying classrooms for the mass training of navigators at Prestwick, where, during 1939-41, more than fifty per cent of the R.A.F. intake of navigators received their training."

A couple of seats from the Fokker FXXII ended up in the Clubroom of The Renfrew Observers Group Club (i.e. the local Renfrew Spotters Club). They had a double and a single seat from the Fokker FXXII in the clubhouse from 1953 and were there at least until 1965. The seats then went into storage with the single seat ending up in Gordon Macadie's garage. The double seat disappeared out of sight. In 2016 the single seat was sold and is still around.

But, the last of 'The Fokker Fours' was no more.

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Page 299: A misty morning in the decor for the Fokker FXXII, G-AFZP 'The Highlander'. Note the different livery (tail stripes and name of the airline) compared with the photograph on page 295. (via Douglas Rough)

Left: With a beautiful winter sky (around March 1947), the Fokker FXXII, G-AFZP of Scottish Airlines waits for a new flight. In the background a Supermarine Walrus and a Douglas DC-3. (via Aviodrome)
Four-engined Projects

There is comprehensive information about the projects from the NV Nederlandsche Vliegtuigenfabriek, Fokker. Details are available of more than 200 different military and civil projects. Many of these remained in the Fokker archive, and were never presented to a customer. Several civil projects were offered to KLM and evaluated, but in the end rejected. This could be anything from single-, twin-, three-, four- or five-engined designs. In this chapter the four-engined (and one five-engined) projects will be presented, which already make up an impressive list of designs. Sometimes KLM had requested a new model, but most were initiatives from NVNV factory. The last ordered (1933) and delivered Fokker (1935) before the Second World War was the Fokker FXXII PH-AJR Roerdam. The last remaining years of the 1930s, a lot of time was put into discussions about different projects for feederliners, taxi and training aircraft and intercontinental transport aircraft, with or without pressurized cabin. Meanwhile, the technical team in KLM had been in the USA looking at similar aircraft of metal construction. The biggest problem for the NVNV was the transition from wooden wings with steel tube plywood covered fuselage to complete all-metal aircraft. This was going too slow. Even new projects at the end of the decade still included a wooden wing with an all-metal fuselage, or even a combined wooden fuselage with fabric cover or with metal nose and tail. At the end of the 1930s and under pressure from the Dutch government, KLM ordered four twin-engined Fokker F.24 airliners, as replacement for the Douglas DC-2 and DC-3. War prevented their construction and delivery.

In this review, the four-engined projects will be presented together with some details when available. Initially, while in Germany, Fokker started to use the letter “V” for its projects, where the letter stood for “Versuchs-maschine” (test aircraft). At the end of the First World War, Fokker started with project V.44, the first aircraft in the F-series, later to be known as the Fokker V.1 (Verkehrs-flugzeug – ‘Transport Aircraft’) or F.I. The designer of this aircraft was the genius Reinhold Platz, who had worked for Fokker since 1912, when he started as a welder. He became head designer at the Fokker factory in Schwerin in 1916, and was responsible for the design of the famous Fokker DVII. After the war, he moved with Fokker to Amsterdam, where a Dutch factory was established at Amsterdam-Noord in the former ELTA exhibition halls. From the Fokker V.45, Fokker developed the F.II, that was the first single-engined, high-wing cantilever monoplane airliner designed by Fokker. Adolf Prage made the first flight with the Fokker F.III in October 1919 at Schwerin in Germany, but the aircraft was flown by Fokker’s friend Bernard van der Waal to the Netherlands in March 1920. It formed the basis for many of the future F-series aircraft, with the exception of the F-6, which was an American fighter design. The only number missing in the F-series is the FXIII, which can be traced back to the end of the 1920s: a twin-engined passenger aircraft on floats. Fokker engineer Marius Beeling recalled about this project that it had been initiated by KLM and Fokker together. The aircraft was based on the torpedo bomber/maritime reconnaissance floatplane, the T.JV, which had the wing of the Fokker VIII and FXII. The passenger cabin had seating for ten, and the aircraft had a range of 650km. It was to be powered by 480hp Jupiter engines. The aircraft was intended for operation with the KNILM (Royal Netherlands East Indies Air Lines) on the scheduled line from Batavia to Singapore and Belawan. It was never built.

Fokker FXVI (1931)
The first four-engined aircraft the NVNV designed was the Fokker FVIIb-4m, a four-engined version of the successful three-engined FVIIb-3m. This design was to have four 130hp Armstrong Siddeley Mongoose engines hanging under its wing and offered seating for eight passengers. For the time being, many of the Fokker-designs were three-engined aircraft, and in March 1931 the Fokker FXV was designed. It was also considered as a new aircraft for the Netherlands East Indies-route. Out of this model, the first four-engined project of Fokker in Europe was born: the FXVI, possibly requested by KLM. Besides this design, the NVNV offered also the Fokker FXIX, FXXI and the finally selected FXVIII. Five were built of this three-engined Fokker and exclusively operated on the route to the Netherlands East Indies. The FXVI was a four-engined design, developed from the three-engined FXVa and FXVb and powered by four Pratt & Whitney Hornet R engines of 575hp each. There is only one drawing remaining of the Fokker FXVI, and it shows the aircraft with twelve regular seats for European operation. The wing came from the three-engined Fokker FXV. The advantage between three- and four-engined aircraft was just not big enough and thus KLM kept opting for three-engined aircraft.

Fokker FXIX (1931)
The NVNV continued with three-engined aircraft like the Fokker XVIII and the FXX, of which the first served with KLM until 1935 on the Netherlands East Indies route. The aircraft in between these was the FXIX. This was basically a scaled-down Fokker F-32 from the USA equipped with four 440hp Pratt & Whitney Wasp C engines placed in tandem, but this time with a Townend ring around each engine. As the Fokker F-32, the front engine had a two-bladed propeller and the rear engine a three-bladed propeller. The resemblance with the Fokker F-32 was remarkable. This version could carry a maximum of 16 passengers on the European routes and ten on the Netherlands East Indies route. Six of the ten seats were regular, while the remaining four could be converted into beds.
The Fokker F.56 (Ontwerp 127, 1935)

This was a four-engined, cantilever, semi-high wing monoplane. Equipped for day flying, it carried 56 passengers and a crew of 5-6 over a distance of 1,000km (621 miles). When equipped for night flying the F.56 had 28 sleeping berths and four dressing rooms each with two lavatory basins. Under these conditions, the aircraft had a range of 1,600km (994 miles). The special feature of this aircraft was that the fuselage had two floors. The seating arrangement on the upper floor was similar to that in a low-wing aircraft, whilst the seats on the lower floor were arranged like those in a high-winged aircraft. The wing was a one-piece cantilever wing made up of two box spars, plywood ribs and Bakelite plywood covering. The space between the spars in the centre section of the wing was utilised for a luggage hold. The fuselage was constructed with welded chrome-molybdenum steel tubes and covered with metal cowlings, plywood and fabric. The cockpit had dual controls and the wireless operator’s room was to the rear of the cockpit, whilst the seats on the lower floor were arranged like those in a high-winged aircraft. The wing was a one-piece cantilever wing made up of two box spars, plywood ribs and Bakelite plywood covering. The space between the spars in the centre section of the wing was utilised for a luggage hold. The fuselage was constructed with welded chrome-molybdenum steel tubes and covered with metal cowlings, plywood and fabric. The cockpit had dual controls and the wireless operator’s room was to the rear of the cockpit, whilst the seats on the lower floor were arranged like those in a high-winged aircraft. The wing was a one-piece cantilever wing made up of two box spars, plywood ribs and Bakelite plywood covering. The space between the spars in the centre section of the wing was utilised for a luggage hold. The fuselage was constructed with welded chrome-molybdenum steel tubes and covered with metal cowlings, plywood and fabric. The cockpit had dual controls and the wireless operator’s room was to the rear of the cockpit, whilst the seats on the lower floor were arranged like those in a high-winged aircraft.