



Prime Minister

The Germans are showing signs of waning as the crunch with the French approaches. You might try to stiffen Kohl and Craxi when you see them in Milan

CDP 12/6.

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PRIME MINISTER

AT
18/6

EUROPEAN FIGHTER AIRCRAFT

During the last two days, there have been three further meetings of Defence Ministers concerned in the European Fighter Aircraft project: I should report the outcome.

2. Although it had been hoped that the industries of the five nations would work together to produce a single set of options for Ministers to address, in the event this did not prove possible and we had before us 16 alternative permutations on the basic mass empty (BME), wing area, and engine thrust of the aircraft. On these issues, the Germans, the Italians and ourselves sought an aircraft designed to a 9.75 tonne limit, with an engine thrust of 91.7 kilonewtons, in order to meet the European Staff Target. The French took the line that an aircraft with an engine of this capability was incompatible with the weight limit and that the aircraft should be designed to a 9.5 tonne limit, with the remaining 250 kg set aside as a specific contingency, with an engine thrust of 84 kilonewtons. The Spanish position was somewhere in the middle.



3. On the organisation to manage the project and its location, again the Germans, ourselves and the Italians stressed that we sought an equal partnership and that the location of the headquarters and the allocation of top posts within the organisation should be looked at as a package. I made clear our first preference for the headquarters to be in London. The French put in a bid that a "joint design office" responsible for the integration of the project should be located in Paris and that the Technical Director of the project should also be French. They offered that Britain could head one of the industrial consortia. I emphasised that these proposals would amount to French domination of the project and were not acceptable.

4. On work shares, there was some movement towards agreement that shares during development should be 24.5% for the United Kingdom, France and Germany, 16.5% for Italy and 10% for Spain. France put in a bid for a bigger work share to take account of their stated requirement for additional aircraft for the French Navy, but did not rule out that this could be addressed at the stage of setting work shares for production. This argument would apply equally to production work shares on the engine which would take account of our requirement for additional engines for the re-engining of the air defence variant of the Tornado.

5. There was no time for a discussion of the interim engine, on which we have the support of the Italians only for adopting the



RB199.

6. This sets out in headline form the formal position which emerged during the plenary sessions. There was also a good deal of private exploration of positions. At the outset, Dr Woerner emphasised the importance he attached to reaching an early decision and his unwillingness to compromise on the characteristics of the aircraft if this meant that the requirement would not be satisfied. He appeared to have the agreement of his Government to proceeding, if the French were unwilling to move, on a three or four nation basis. Equally, as time went on, he showed himself most reluctant to bring about or to participate in a decisive break at this stage because of the political consequences for the wider Franco-German relationship. Senatore Spadolini, while also committed to an aircraft of the characteristics which we seek, was also reluctant for there to be a breakdown before the Milan summit is out of the way.

7. To meet German concerns that all opportunities for agreement should be explored, I convened a final meeting today restricted to Ministers only. This produced an agreement that one last attempt should be made to find a common five nation solution, but, to meet British and German concerns for the matter to be resolved, a deadline has been set of 15th July. By that date industry is to finalise the feasibility study for one aircraft with a BME of 9.5 tonnes, plus an allowance for 140kg of equipment, plus a contingency of 110kg: this "compromise" on



weight was devised by the Germans to go some way towards French concerns but is acceptable to us. Industry are to look at three options for engine thrust: 91.7 (our preferred solution), 90 (which the Germans and Italians would now accept), and 84 (the French formal position, although informally they went at one stage as high as 87 kilonewtons). A form of words has been agreed which implies that, if there is no common solution by 15th July, those nations able to agree on a common project will go ahead. We have pencilled in the possibility of a final Ministerial meeting on 22nd July in Bonn, although there is German reluctance to preside over a meeting which could represent the break-up of the project.

8. Realistically it seems unlikely, on all the past form, that the French will move towards an aircraft of sufficient size and engine thrust to satisfy the military requirement: a five nation solution acceptable both to Britain and to France therefore is difficult to see. Of alternative combinations, the firmly stated military and industrial requirements of the Germans and the Italians would point towards agreement on a three nation project (UK, Germany, Italy) which meets our requirement. But I have to say that the political concerns about such a course which have been exhibited by Dr Woerner in the last two days are very real and we cannot rule out the possibility of the French moving sufficiently to offer a politically tempting alternative. The position then remains finely balanced. I think it will be necessary for colleagues to consider our final position when the



industrial report is to hand and before any possible meeting with my European counterparts.

9. I am copying this minute to the Foreign and Commonwealth Secretary, the Chancellor of the Exchequer, the Secretary of State for Trade and Industry and Sir Robert Armstrong. In view of its contents I should be grateful if it could be given a restricted distribution within Departments.

A handwritten signature in blue ink, appearing to be "M. J. A." or similar.

Ministry of Defence

18th June 1985



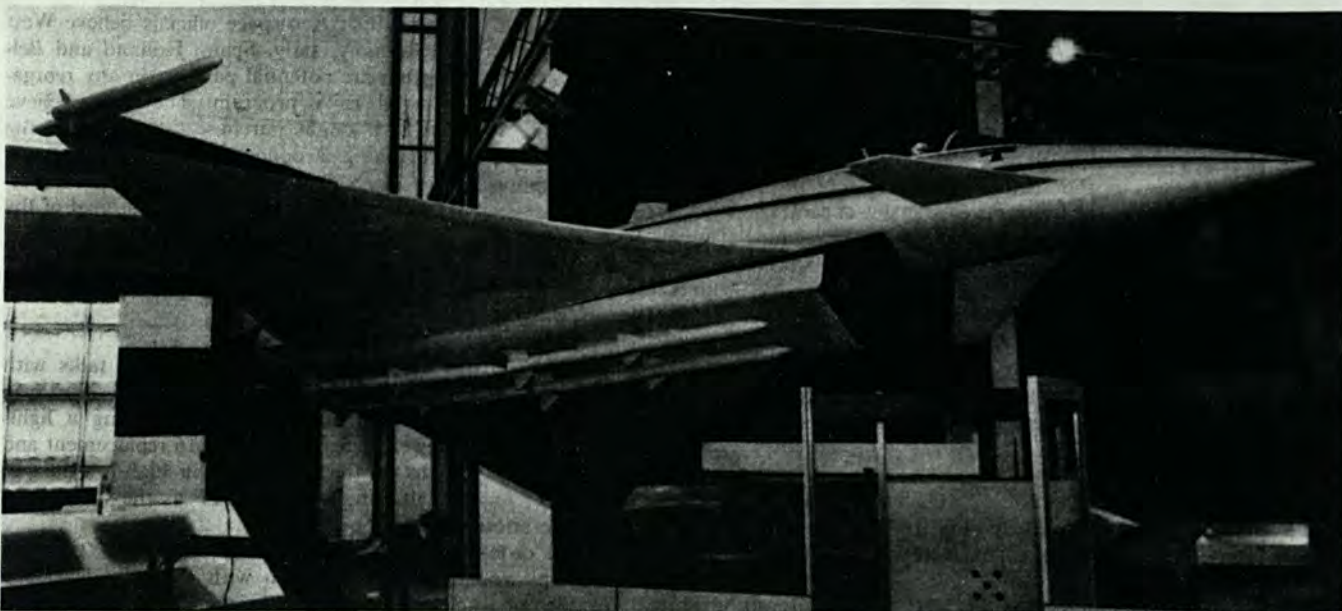
10 DOWNING STREET

Given to the PM by
Robert Adley MP.

Please put in
EFA file.

CDP
13/6.

Industry Vies for New Groupings As European Fighter Project Dims



West German JF-90 fighter design, developed jointly by Messerschmitt-Boelkow-Blohm and Dornier, teamed to form West Germany's entry into the European Fighter Aircraft (EFA) program, is being displayed by the two companies at the Paris air show. The model

represents the German concept of what the European Fighter Aircraft could look like. German industry is not proposing to build a technology demonstrator, as Britain and France are doing, but is developing some technology demonstration systems and equipment.

Paris—West European and U.S. manufacturers were vying for position in tentative industrial groupings for future fighter aircraft developments at the Paris air show last week as concern increased that the five-nation European Fighter Aircraft (EFA) consortium would not survive.

Failure of the defense ministers of the five nations—Britain, France, West Germany, Italy and Spain—to reach agreement on the structure of the EFA program and the parameters to be embodied in the aircraft at their most recent meeting in Rome last month led many manufacturers to begin actively looking at possible new cooperative programs, including transatlantic development (AW&ST May 27, p. 27).

The defense ministers of the five nations meet again June 17-18 in London, and agreement on the EFA program still is possible. However, European industrial organizations were unanimous in stating that a number of decisions are needed by then to permit work to continue. And if the final program decisions are not reached by the end of the third quarter, the chances of the EFA being ready by the projected in-service date of 1995 will begin to fade.

Activities concerning development of a new fighter aircraft for Europe include:

- British Defense Ministry team traveling in the U.S. to survey possibilities of joint development of new aircraft. British

Aerospace Corp. has discussed with McDonnell Douglas and Northrop the possibility of cooperative development programs.

- West German aerospace companies Messerschmitt-Boelkow-Blohm and Dornier discussing joint projects with U.S. manufacturers.

- Dutch aerospace industry looking at a possible collaborative arrangement with U.S. industry to provide a General Dynamics F-16 replacement for the Netherlands air force in the mid- to late-1990s.

British Aerospace also has activated a separate all-British fighter development program, the P-120.

However, both British and other European aerospace industry officials said that

Paris Air Show Coverage

Coverage of the 36th Paris air show in this week's issue was provided by an AVIATION WEEK & SPACE TECHNOLOGY team headed by editor-in-chief William H. Gregory.

The team included Donald E. Fink, managing editor-technical; Jeffrey M. Lenorovitz, Paris bureau chief; David A. Brown, London bureau chief; Michael Feazel, Brussels bureau chief; Robert R. Ropelewski, senior editor military, and Jay C. Lowndes, engineering editor.

Photography is by Robin Adshead, Bryan Thomson and Lenorovitz.

they believed an all-European grouping—possibly without France—was the most likely route to be followed, with a so-called "transatlantic solution" somewhat less likely.

"If the present EFA program collapses," one West German industry official said, "we have the possibility of seeing either another European consortium—with either Britain or France missing—or a transatlantic cooperation. If it is the latter, then Europe is going to want to see a new attitude on the part of the U.S."

He noted that with few exceptions, West Germany does not believe that past cooperative programs have provided Europe what had been promised.

The West German requirement for a new aircraft is seen as being similar to the U.S. requirement, with both geared to operating on the North Atlantic Treaty Organization central front.

In 1979, West Germany laid down a number of options for acquiring a new fighter—all of which are still in force. These include:

- An aircraft developed cooperatively within Europe.
- An aircraft developed by a U.S.-German cooperative program.
- Purchase of an existing aircraft developed outside of West Germany.
- Purchase of an existing aircraft, but with substantial modifications.
- A national integration program, in

Pilot's Glove Will Measure Control Stick Forces

Paris—Modified military pilot's flight glove has been developed in Australia to provide accurate measurements of control stick forces for flight-test purposes.

The standard-issue Royal Australian Air Force flight glove is fitted with pressure-sensitive pads used to measure stick force pressures for display on a wrist-mounted digital readout unit.

One pad is attached to the glove's palm, and the other is across the middle joints of the second and third fingers. The pads contain sacs of silicon oil, and they are connected via pressure transducers to the wrist electronic display unit.

Australian industry officials said the modified glove—on display at the country's exhibit at the Paris air show here—provides more accurate flight test data than spring balance devices and pilots' subjective estimates of control column forces.

Design of the glove was performed for the Royal Australian Air Force's Aircraft Research and Development Unit by engineers at the Advanced Engineering Laboratory, Defense Science and Technology Organization at Salisbury, South Australia.

The glove was designed for high-performance aircraft such as the Dassault-Breguet Mirage and General Dynamics F-111 which have center control sticks. The glove could be adapted to side-stick aircraft such as the McDonnell Douglas F/A-18 and General Dynamics F-16 by relocating the digital readout display to the pilot's leg.

Officials said a similar pressure system could be incorporated in flight boots to gauge rudder-pedal forces.

which German industry would develop a new airframe around existing engine and avionics packages.

Some U.S. manufacturers see the last of these possibilities as one that would benefit German and U.S. industry, with the Germans developing a new airframe around existing U.S. engines and avionics packages.

At least two U.S. manufacturers are looking at this possibility as one means of satisfying West German requirements while providing an aircraft with equal contribution from each partner.

Northrop has been developing its ND-102 proposal in partnership with Dornier and there is a belief within both companies that if the EFA project does not succeed, the ND-102 will be a strong contender to replace McDonnell Douglas F-4s in the West German inventory.

ND-102 Development

No significant changes have been made in the ND-102 design for the past six months and officials of both companies believe that it has been developed to the point where it could meet not only West German requirements, but also those of other European nations.

The aircraft is being offered with the General Electric F404 engine with a "mini-burner" rather than a full afterburner system. While other engines could be used, the F404 is preferred at this time.

The avionics suite for the ND-102 has been lifted largely from existing U.S. aircraft. West Germany's one key requirement is that the aircraft be capable of carrying the advanced medium-range air-to-air missile (AMRAAM).

Program planning has been done to allow at least one other European nation to fit easily into the production program,

with Germany building all of the aircraft it orders and coproducing those ordered by any third nation. Northrop would build aircraft exported outside of the NATO group of nations. Planners see about an equal number of potential sales inside and outside of NATO.

Northrop has talked about the program informally with Italy and, recently, with the British Defense Ministry.

McDonnell Douglas also sees the possibility of a transatlantic development program involving one or more European nations. "It will take a lot of political will to make the EFA program succeed," one company official noted, "and while we can't argue with that, we have to ask how efficient a five-member consortium will be and why it is necessary to spend research and development money on something that's already been invented. There's an economic incentive to get the U.S. involved."

McDonnell Douglas has been working with Messerschmitt-Boelkow-Blohm under a memorandum of understanding since 1977. The two companies worked on the JF-90 design which is being exhibited by MBB and Dornier jointly at the air show.

While a multimember, transatlantic development organization is possible, several U.S. companies said that it could not contain too many members. "If the pie is cut too small, we won't want part of it," one official said.

However, he added, there could be around 500 aircraft sold outside the NATO area, in addition to those sold to member nations, which would make it worthwhile for U.S. companies to collaborate on such a program.

But he cautioned that an aircraft developed by such a group might not be available until the late 1990s or even the early

2000s and said that West Germany had a need for a new aircraft by the mid-1990s. "The West German F-4s are getting old and are diminishing in numbers and have to be replaced by the mid-1990s," one official said.

British Aerospace officials believe West Germany, Italy, Spain, Holland and Belgium are potential partners in any reorganized EFA program. They also believe USAF might purchase the aircraft if the planning is done properly.

"U.S. industry is afraid to commit itself right now because the first goal of the major manufacturers must be to win the forthcoming Advanced Tactical Fighter [ATF] competition," an official said.

High-Low Mix

British Aerospace has held talks with McDonnell Douglas and with Northrop on the possibility of developing a light-weight fighter as an F-16 replacement and to be the low half of a high-low mix of aircraft, with the ATF as the "high" aircraft.

"The U.S. could, in effect, go to a NATO solution with a jointly developed aircraft to replace the F-16. The fact that it was developed with U.S. participation should increase its appeal to nations now operating the F-16," the official said.

The F-16 operator that most interests planners of a multinational fighter is Holland, which will need between 150 and 250 new aircraft late in the 1990s and the early years of the next century.

The Dutch have had extensive dealings with a number of U.S. companies—including Northrop and General Dynamics—and are interested in either a jointly developed European aircraft or one developed in cooperation with the U.S., provided the resulting aircraft meets Dutch air force needs.

Italian industrial officials are more optimistic than other European participants in the EFA program, but they admit that for the program to succeed, France will have to reduce its demands.

If France should drop out of the EFA program, Dr. Giandomenico Cantele, director of Aeritalia's combat aircraft division, suggested that Holland might be available to replace the French.

General Dynamics is awaiting a final decision on the EFA program before making any overt moves, but the company has been encouraged by interest shown by the British Defense Ministry on the possibility of transatlantic cooperation.

"The British are beginning to realize that this sort of program can be extremely valuable to them," a company official said. He noted that the Royal Air Force will pay less for its jointly developed Advanced Harriers (Harrier GR. 5s) than it did for the earlier, less capable, British Aerospace Harrier GR. 3—the British designation for the AV-8A. □

27 June 1985

FUTURE MILITARY AIRCRAFT

EMPLOYMENT AND PEACE DEPEND ON IT

Copied from F E Roe
7th June, 1985 to:-
Mr R H Evans
Mr D Ethell
Mr F G Willox

Mr R Atkins ✓

The Defence Ministers of five European countries (France - West Germany - Great Britain - Italy and Spain) met in Rome on 16th May 1985 to discuss the European Fighter Aircraft. They are to meet again on the 17th June in London.

At a time when France is to take a decision on the future combat aircraft to equip its armed forces, the political will of the Government, demonstrated by its active participation in these talks, goes against our national interests at the economic, technology and political levels and particularly regarding our national independence and the principles of our independent defence policies.

A EUROPEAN PROJECT THAT THREATENS EMPLOYMENT

A French programme exists. *SQUALL*
In fact, the ACX (RAFALE = gust of wind) should make its maiden flight in June 1986. This prototype is designed and made entirely in France. Its engine - the M88 - exists at SNECMA as do its undercarriage the THOMSON radar, the Avionics and the weapons system.

To allow a European aircraft to compromise this Franco-French design and production would constitute unjustified financial waste and a technical waste of the first order. This would involve the loss of thousands of jobs and eventually the lowering of our industry.

On the other hand, the programme realised by DASSAULT for the airframe, SNECMA for the engine and THOMSON for the electronics will comfort the network of sub-contractors used by these large companies.

In addition, it would put us into the position of a valid go-between with numerous non-aligned countries who would not wish to become involve with either of the two major powers.

Conversely, if the European project sees the light of day, it will cost many jobs. We estimate that 10 000 jobs would be threatened, including from 3 to 4 000 at DASSAULT. The long term consequences would be serious for France's role as an exporter.

MAINTAIN OUR INDUSTRIAL INDEPENDENCE

On the civil side, international cooperation is one of the means for allowing several parties to meet the Airlines' requirements for aircraft even though the forms and contents of this cooperation are not above criticism -.

On the military side, the first thing is to meet the defence requirement proper to each country. The industrial independence of a manufacturing country such as France is a determining factor in escaping the veto of other powers.

Under these conditions, we must be extremely resolute in preserving our technological capabilities : we currently enjoy full autonomy in aircraft manufacture and we are capable of producing the French project entirely within France.

A EUROPEAN MILITARY AIRCRAFT WILL ALSO BE VERY EXPENSIVE

The entire profession, and particularly "AIR ET COSMOS", recognises this. The European Fighter Aircraft will be much more expensive for France and will not, obviously, meet specifically the requirements of our own forces since each of the five Air Forces have different requirements. Apart from the waste involved in abandoning ACX when it is almost finished, and which the French would obviously have to pay for themselves it would be necessary, as in the past, to throw ourselves into a complicated, long and costly process (sheperded by the five Air Staffs!). Experience with the Tornado illustrates perfectly our case. Produced by three countries (Italy, Great Britain, West Germany) it costs almost 400% of its initial price and is a technical failure - none have been exported.

PRESERVE OUR INDUSTRY

It is clear that it is not only the armament industry that is threatened but the whole of the aviation and avionics industry. We have to make major criticisms of the forms and contents of civil collaboration. The success of the AIRBUS-Industrie collaboration results simultaneously in a certain specialisation of industry and a degradation of work sharing with consequences on employment in France. Everybody in industry should be extremely vigilant on matters affecting their sphere of activity.

Similarly, it is clear that the European project requires us to take a political stance which affects not only a single aircraft but the whole of our national defence. For example, France's commitment to the "Star Wars" project is heavy with threats to our industries (and to our very lives). We can now see, here and there, in Companies working for National Defence, that some work has been progressively put to sleep, thus corroborating our analysis.

WE DEMAND THAT WORK CONTINUES ON THE FRENCH COMBAT AIRCRAFT

We cannot accept a political scenerio that has serious consequences for the employment of highly qualified people, threatening irreversible damage to our technological progress and our position as an exporter, dangerous for our national independence and the very conception of our defence system, and constituting an unjustifiable financial and economic waste.

We should ensure that the French Combat Aircraft "RAFALE" (ACX) is made and we should stop its cancellation in favour of an extensive, dangerous European project without a future.

This is why the Federation of Metal Workers C.G.T. and all of the unions in the Aeronautical and Avionic Industries demand :

- that the future defence aircraft be manufactured entirely from products currently under construction by the various French Companies.

This, together with other civil aeronautical and space products, will ensure industrial development and social progress.

For the C.G.T. :

The European Fighter Aircraft would endanger
the future of every industry,
the employment of salaried staff.

IT WOULD BE a step towards making France an integral part of the politics of military blocks :

IT WOULD BE a danger for independence and peace.

THIS IS WHAT, WITH YOU, WE SHALL
RE-AFFIRM TO THE HEAD OF STATE,
TO COMPANY MANagements,
TO THE SOCIETY OF AEROSPACE COMPANIES.

DEFENCE : FFA
Procurement