FROM PAGE 1

OPTIONS ON STRIKE FORCE

Mr Fraser, Minister for Defence, continued: "Having now dealt with a number of important subsidiary factors, I now return to my third main objective, which was to establish the specific options open to the Australian Government.

"Cost figures shown in these options are broad brush only, and were obtained from the USAF in good faith as a basis for negotiating. They are adequate for comparative purposes, but will require further negotiation and refinement before they can be taken as absolute. However, they have provided an adequate basis for the Government to take certain broad conclusions.

OPTION 1:

CANCEL F-111C PURCHASE WITHIN THREE MONTHS AND DO NOT REPLACE IT WITH ANOTHER STRIKE AIRCRAFT

"I would like to restate and emphasise that it is the Government's view, strongly supported by the Chiefs of Staff Committee, that an air strike force is an essential element of a balanced defence force for Australia. Without a strike force, we could not carry out effective counter air operations against aircraft on the ground, air bases and supporting installations.

"Counter air operations are a critical element in any air defence capability. An air strike force has deterrent value. The UK deterrent force will have gone from South-East Asia. The last decade demonstrated the rapidity with which threats can change. The lead-time involved in reintroducing an aircraft, assuming one is available, into actual operational readiness could be several years from the decision date.

"If we chose to cancel now, we could expect, under the terms of the Agreed Minute, to be paid for our aircraft and spares something between $US130m and $US150m. We would cut our risk of loss. But our 24 aircraft sold to the US and representing a financial loss might later be proved capable of our full performance requirement and we would have no strike aircraft.

"The Government has decided against this course of action for two specific reasons.

"We need the strike bomber capability in the Australian Force Structure. Without it our policies will lack credibility. Secondly, if the F-111 is ultimately proved, the RAAF continue to say that it best meets Australian requirements.

OPTION 2:

CANCEL F-111C PURCHASE WITHIN THREE MONTHS UNDER BUY-BACK AND REPLACE IT WITH PHANTOM F4E AIRCRAFT PLUS RECONNAISSANCE AND TANKER AIRCRAFT

"The Government does not believe that the possibility of the F-111 failing to achieve our flight envelope is so remote that we should adopt this course at this time.

"If such a decision was taken, we would be saying that the likely delay in getting the F-111C, that is a minimum delay of about three years and possibly more, is unacceptable; that the chances of the F-111 coming good are remote and that we must have a different strike aircraft. This course would enable us to get an effective strike bomber capability into the RAAF inventory in about a year. We would however again face the possibility, as in Option 1, that F-111 aircraft might later be proved capable of flying to our full performance requirement, while we had acquired at a higher price an inferior aircraft to the F-111C.

"Financially we could under this option, expect to get back between $US130m and $US150m. However, the total cost of a force of 40 F4Es, 8 RF4Es and 8 tankers, which the RAAF estimate to be a force broadly equivalent to the F-111C force, would be to the order of $US414m. To this would have to be added the loss on the F-111. It is clear that for this option we would have to pay substantially more than to stay on our present course, even though some part of the tanker cost could be attributed to the later need to replace Hercules transports.

OPTION 3:

CANCEL F-111C PURCHASE WITHIN THREE MONTHS UNDER BUY-BACK AND WAIT TO PURCHASE THE F-111F

"The F-111F is the latest of the family with delivery planned for 1972-73. A firm US order has been placed for 58 and there is a probability of a further 40, but the additional order is subject to certain financial restrictions.

"The F-111F design has significant improvements and modifications over the F-111C and performance is assumed as likely to be better. It will be produced under better quality control.

"The F-111F will probably have the new design Wing Carry Through Box installed at manufacture. The two major problems with the F-111C remain as problems for the F-111F and these are:

a. The F-111F uses D6ac steel and the uncertainty remains, and
b. the ability to meet the operational requirements of the RAAF could not be proven until static fatigue and flight tests are carried out over the next two years.

"The total cost of this option including six reconnaissance conversions would be $404m which must be added to the loss on the F-111Cs.

"The Government does not regard this as a tenable course for two reasons:

a. The cost.
b. The substantial doubts about the ultimate structural integrity of the F-111C aircraft also overshadows the F-111F. In addition, because of the small numbers likely to be produced, we would have difficulty in getting reassurance concerning attrition and reconnaissance aircraft.

OPTION 4:

STORAGE OF F-111Cs AND AWAITING IRAN

"We could put the F-111Cs into long term storage and await the results of the investigations into the D6ac steel and the results of the static, fatigue and proof testing which alone will indicate whether our aircraft will reach 100 per cent of our required flight envelope.

"The advantages of leaving our aircraft in the US until after they had been through the IRAN Programme are in the Government's view overwhelming.

"In the first place we cannot for many engineering reasons connected with the use of D6ac steel accept the aircraft until the proof testing and the NDI testing have been completed. The earliest that there may be better understanding of these problems is in September this year. It is likely to be later.

"More significant, however, is the fact that it is not until December, 1971, at the earliest, that we would be able to make a decision concerning the likely ability of our aircraft to reach 100 per cent of our required performance. I have again indicated it could be much later.

"If we made a decision to accept the aircraft before we knew that they would reach 100 per cent of the flight envelope, we would have sold the pass on a major advance achieved by the mission, namely acceptance by the US of minimum performance for the Australian aircraft, giving us a right to cancel the aircraft under a buy-back arrangement if it does not reach that performance. This right must be preserved. It can only be preserved if we refuse to accept the aircraft until we know that it will reach Australian strategic requirements.

"There is this other subsidiary factor. If we did make a decision to accept the aircraft later this year presuming that the D6ac steel problems had been overcome we would still be taking the aircraft in the faith that they would reach their full performance envelope. We would get delivery of them in the latter part of 1971, but because they would not have been through the IRAN programme, they would not be able to fly to their full flight envelope. They would not be fully operational. It would be necessary, therefore, to begin returning them to the United States in late 1972 for the IRAN programme which includes the fitting of new parts and modifications to enable them to achieve fully operational status.

"The Government believes it would be quite unsatisfactory and unacceptable to have new aircraft in Australia for such a short time and have to return them to the US for a major modification programme; especially so, since for that short time the aircraft would not be fully operational.

"The approach of storing our F-111C and awaiting IRAN as outlined in this option has the potential of providing the cheapest solution to our problems. Also this approach has the potential of providing the Royal Australian Air Force with the opportunity to acquire aircraft which they firmly believe will still be the best one for our particular role.

"It is, however, a course that involves very considerable delay and as a result of this, it is one that leads to other problems which the Government has had to examine.

"In talking of delay we need to have in mind that all the dates which have been mentioned concerning the possible time of decision and concerning the IRAN programme and ultimate delivery are subject to slippage.

"But at the best it would look like getting F-111C aircraft fully operational some time in 1974. And we at the same time need to have in mind the possibility that the aircraft may still fail. We would be unlikely to be able to make that judgment before late 1971.

"The Government is clearly concerned about this delay, but if we are ultimately to take delivery of the F-111C aircraft, in view of all the facts, there is no alternative but to accept it. **And thus it has made the decision to leave our aircraft in the US until all the technical and scientific problems have been overcome and until we know that our aircraft will reach their full flight envelope.**

"I reiterate that this decision has been made possible because of two of the advances achieved by the Mission:

1. the agreed performance envelope which gives us the option of cancelling if the aircraft do not meet that envelope; and
2. because the buy-back arrangements apply not only to present cancellation but to cancellation at a later date if our performance is not reached.

OPTION 5:

STORAGE AND AWAITING IRAN AND ACQUIRING AN INTERIM AIRCRAFT

"Because of the delay, however, I felt it necessary to probe the US on the possibility of leasing an interim aircraft. The US has offered us up to 24 new F4E aircraft to fill the gap. While the Government is disposed to accept this offer, its decision will depend very largely on the time during which the Phantom F4E could be in operation in Australia and be effective as a strike force. On the basis of information given us by the USAF we could take delivery of the F4E aircraft towards the latter part of this year and they would become operational between March and July, 1971.

"The Government has therefore asked the RAAF as a matter of urgency to send an expert evaluation team to the US to examine the offer of an interim force of F4Es in greater detail, and I am pleased to report that the team, headed by the Deputy Chief of the Air Staff, AVM C. Read left on Sunday, May 10. The RAAF evaluation team will concentrate on matters of substance associated with the interim force of 18-24 F4Es. Their task would include a careful examination and refinement by negotiation of all costs; the likely date of delivery and the time when they will become operational; detailed arrangements for air crew and ground staff training including initial and continuation in-flight refuelling and the availability of spare parts and special equipment on loan from the USAF.

"I mentioned the time scale in which we might be able to get an interim force into operation. I would like to draw the House's attention to the other end of the time scale, when the Phantom force might be phased out and replaced by the F-111C and this will be a matter also for further investigattion by the Royal Australian Air Force.

"Providing the F-111 programme goes well, we should be able to make a judgment by the end of next year at the earliest whether or not the aircraft will ultimately be suitable to us. Since we believe it is desirable that some USAF aircraft go through the IRAN programme before ours, we could envisage our entering the IRAN programme in January, 1973, at the earliest. We would get delivery of the last aircraft late in 1973 and they would become operational in 1974. There would be a phase-in period in which some Phantoms would be operating while the F-111C force was building up. If this time scale prevailed Phantoms would be operating up to about July, 1973, which would be for over two years at the minimum. Of course, if the F-111C aircraft failed to meet our performance criteria, we would need to keep the Phantoms and convert them into the permanent force.

"The USAF estimates that the cost of leasing 24 F4Es for two years would be a total of $US39m. This is the preliminary estimate provided to us by the USAF. It is one of the significant matters to be examined in detail by the RAAF evaluation team.

"In summary, therefore, before making a firm and final decision on the suitability of Phantom, we want the RAAF evaluation team to examine in greater detail and advise us on all the matters above which I have roughly outlined on the basis of USAF advice to us. I will also be pursuing with the US arrangements which might be necessary if more permanent tanker supoprt is required. We would also need to be convinced that the Phantom force could be rapidly expanded to the full requirement of 48 aircraft if the F-111Cs fail.

PHANTOM F4E AS AN INTERIM AIRCRAFT

"It should be noted that the Phantom F4E is the aircraft recommended by the RAAF as an interim force and it is also the aircraft recommended by the RAAF if the F-111C ultimately fails to reach our performance criteria. However, the RAAF would much prefer the F-111C if that aircraft is ultimately proved, because of its much greater range, its independence of tanker support and its ability to drop its weapon load accurately in daylight, in night, or in cloud.

"The Phantom can drop its weapon load with comparable accuracy if it can see the target, but its blind performance is markedly inferior to that of the F-111. In addition, of course, its range is much less than that of the F-111. And if we were restricted to the use of airfields in Australia, tanker support would be essential. The aircraft, however, would be capable of deployment to and operation from airfields in Singapore and Malaysia and with the availability of those airfields, would have a most useful range.

"While I make no great point of it, I should indicate that the US has undertaken to provide tanker support for training purposes and in other circumstances if appropriate. The US Department of Defence has also assured us that in the acquisition of additional quantities of F4E aircraft and tankers should these be required.

"In short, much greater range without tanker support and a superior blind bombing capability, originally led the RAAF to select the F-111 over the F4C. It should not be overlooked however that while there are many points in favour of the F-111C compared to the F4E the latter aircraft is a proven machine and much valuable experience has been established in its favour.

RAAF WILL GET F-111C

THE RAAF will get its 24 F-111C aircraft as soon as fatigue tests on the wing box of the aircraft which begin in October, are successful.

The announcement was made in Federal Parliament on September 23 by the Prime Minister, Mr Gorton.

Full text of Mr Gorton's statement is:

This House will know that the Government recently sent a high level mission to the United States of America to discuss matters concerning the F-111 aircraft. That mission has now submitted its report to the Government and the Government has considered it. However, before detailing the matters discussed and the conclusions reached there is one matter which I believe should be made clear.

Because of the great publicity which has been given to any accident in which any F-111 aircraft has been involved there has grown up a feeling that the aircraft is itself unsafe. The record shows that this belief is simply not true. The United States Air Force fleet of F-111 aircraft have now been flying for a total of more than 40,000 hours, including more than 25,000 hours in the operational command, and it now has an accident record better for example than the Super Sabre or the Phantom and better than any other F century series of aircraft. On the record the aircraft is not unsafe and this should be known.

The matters discused by the mission related to the aircraft's range, its weapons load, the assurance of a continuing supply of spare parts during its service life and the fatigue performance of the wing carry-through box. Our military advisers are completely satisfied that the range and weapons load of the aircraft will meet the requirements of the Air Force, as set down when the decision to order the aircraft was made. It will do the job the Air Force wanted an aircraft to do. Our military advisers are also completely satisfied that there will continue to be a full availability of spares, readily available, during the full period of service of this aircraft with the Royal Australian Air Force.

Furthermore, our advice is that the F-111, both in practice and during operations, has demonstrated a capacity to deliver a bomb load in any weather conditions with unprecedented accuracy, whether the target can be seen or not. For this purpose it is the best aircraft in the world, and our military advisers after evaluating other possible aircraft types tell us that there is not in being or in prospect any aircraft that would approach the already demonstrated performance of the F-111 as a strike aircraft of the kind the RAAF requires.

The Government believes that the RAAF must have an ulra-modern bomber strike aircraft to replace the Canberras which are now the RAAF's only strike force.

But there remains the problem of the fatigue performance of the wing carry-through box. This has been a matter of concern to us because it indicates that we would not get the length of service from the aircraft which we require, or anything approaching it; and our concern has been shared by the United States Air Force, although the United States already has over 120 F-111 aircraft operating with the present wing box.

As a result of this concern two matters are in progress. Firstly, the wing box which gave an insufficiently long life under test has been modified as a result of information gained and is to begin a new series of fatigue tests next month. Secondly, more far reaching activity has been

Continued on Page 2

Posted . .

● **Gp Capt R. J. McKimm, who has taken over the post of Task Force Air Commander in Vietnam from Gp Capt J. I. Adams who has completed his tour of duty. Gp Capt McKimm was CO of No 37 Sqn.**

At a colourful parade (pictured above), the Governor-General, Sir Paul Hasluck, presented the Sovereign's Standard to No 10 Sqn at RAAF Base Townsville, Qld, on September 15.

The Standard was awarded to the squadron by the Queen for specially outstanding operations, and for having completed 25 years service in the RAAF.

Presenting the Standard, the Governor-General said: "The Standard bears the names of places and events which testify to the past record of heroism and devotion when former members of the squadron, by their deeds, set the high standard which you are striving to keep today. You share a great tradition. It is in your power to hand on an even greater record to those who come after you. In the name of Her Majesty, I thank the squadron for what it has done in her service, and express good wishes to all of you and your loved ones for the future."

Members of No 10 Sqn who served with it when the squadron was formed originally 30 years ago, attended the parade. They included the first commanding officer, Wg Cdr (now Air Cdre, retired) L. V. Lachal, of Melbourne, Victoria.

The RAAF Central Band provided the music for the Standard parade, as squadron Neptunes flew over in salute.

The Governor-General presented the Standard to Flt Lt S. T. Jones (pictured above). The Standard Warrant Officer was W Off M. Paterson, and Escorts were Sgts I. R. Longa and I. Wootton.

Battle honours recorded on the Standard are: Atlantic, 1939-45; Biscay 1940-45; Mediterranean, 1940-43; Biscay Ports, 1940-45; Bismarck, English Channel and North Sea, 1939-45 and Normandy, 1944.

● **See Page 4**

From Page 1

FATIGUE TESTS

undertaken to overcome the fatigue problems identified as limiting the service life of the aircraft. Action has been comprehensive and has included the participation of groups of technical experts from universities, industry and government, all participating in detailed reviews of the test results and the proposed actions to resolve those technical problems. These groups, Mr Speaker, have been assisted by Australian structural experts.

As a result of these investigations a new design of the wing carry-through box is under way and it is intended that this new design will be fitted to F-111 aircraft by 1972. But, of course, the new design box, which our mission has advised us it confidently expects to be successful, has not yet been proved in practice. The question posed now is whether we should accept our F-111s with the modified wing box which is due to begin testing next month. If we do it is expected that this box will give our F-111s a longer life than the present wing box but not the length of service life we require. Modifications seen to be required would be made to the wing boxes already fitted to our aircraft without additional cost to the RAAF.

WING BOX

The Government has decided that, provided the modified wing box to be tested next month lives up to expectations, we should accept the aircraft. This, however, is conditional on an agreement which has been reached that whatever is needed to finally overcome the wing box problem will be incorporated in our aircraft at the appropriate time and at no increase to the ceiling price under the formula applicable to the purchase of our aircraft. That is to say that unless the modified wing box we now propose to accept meets the endurance requirements for which it is designed, the United States Air Force will replace it with the new design box to be available in 1972 — again with no increase to the ceiling price under the formula applicable to the purchase of the aircraft.

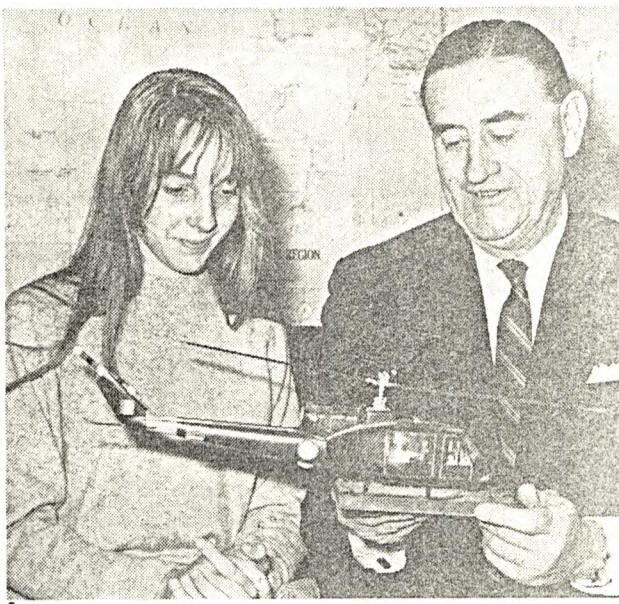
A further safeguard is the agreement that should one or more of the wing boxes we now propose to accept become unserviceable due to a design deficiency before the new design wing box is ready for fitting then the United States will replace those boxes at no cost to us — and as often as may be necessary until the new wing box is available for fitting.

As a result of these agreements we have therefore decided to accept delivery of our F-111s as soon as the fatigue tests to begin next month have proved successful. We believe that in so doing we will be greatly strengthening the defence capacity of Australia and that the remaining problems of the aircraft which is not one of safety but of service life will have been overcome by the arrangements to fit new or to fit replacement boxes until the new boxes are ready.

CEILING PRICE

I believe I should, in this statement, remind the honourable members that the arrangements made with the United States Air Force for these aircraft were that the ceiling price was to be $US5.95m plus escalation of labour costs and materials after 1965, plus modifications requested by the RAAF and improvement modifications proposed by the USAF and accepted by the RAAF. The combined effect of this item will approximate $US1.5m per aircraft. I would also add that the USAF has decided to go to an RF-111A version for the reconnaissance aircraft and that this decision now makes it possible for the RAAF to proceed to a reconnaissance version of the F-111C, as originally contemplated, which will be common with the reconnaissance aircraft in the USAF inventory. Before, however, the Government makes a decision on this matter we would require far more information as to costs.

Sir, I hope the House and the country will agree that our Air Force needs a strike bomber most effective in operations. I hope they will accept the advice of our military experts that the F-111 is far and away the best such bomber available, and I believe they will agree that our acceptance of the bomber subject to the conditions I have set out will be a powerful addition to our capacity to defend ourselves in time of need.



It was a big day for Jennifer McCardle, aged 13, Altona, Vic, when she visited the Chief of the Air St (Air Mshl Sir Alister Murdoch) at Russell Offices.

Jennifer, who attends Altona High School and hopes to be a school teacher, followed up her meeting with Sir Alister by visiting the RAAF Base at Fairbairn. She is the daughter of the late Sgt Hugh McCardle who served in the RAAF.

Jennifer was visiting Canberra as a guest of t RAAF Women's Assoc tion and while in Canber stayed at the home of Col Frank McCardle, t Assistant Air Attache f the United States. They a not related, but enjoy trying to trace their fa bears back to Scotland a Northern Ireland.

Forty Years Service Ends

An RAAF Air Vice-Marshal with more than years service retired on September 17, his 57th birth

He is AVM Charles Douglas Candy, CB, CBE, Air Member for Personnel, Department of Air.

Born at St Kilda, Victoria, AVM Candy entered the Royal Military College, Duntroon, in February, 1929, and after completing two years of study, transferred to the RAAF and graduated as a pilot.

In World War II he served in both the European theatre of operations where he commanded No 206 Sqn of the Royal Air Force and in the Pacific war, where senior appointments included Senior Air Staff Officer of No 10 Operational Group and RAAF Command, the formation which controlled the major part of RAAF operations in the south-west Pacific area.

He was appointed AOC, Support Command, in Melbourne in May 1962 and Air Member for Personnel in August, 1966.

In a farewell message AVM Candy said:

"On the eve of my retirement at the conclusion of over 40 years service with the Royal Australian Air Force, I wish to convey to all members of the service my warmest appreciation of the strong sup loyalty and co-operation I received from you all thro out these years.

"Your magnificent resp to strong challenges has a source of great encou ment and stimulation.

"The RAAF has an env record of knowing that i never faltered on any tas which it has been comm Seemingly insurmountable stacles have been conquer the service has continue make illustrious progres believe the fundamental re for this lies in the fact tha have found and are fost a correctly balanced rela ship between personnel a levels and I have no doub this will be maintaine future years.

"Please accept my wa congratulations upon the level of your achievements sincerest appreciation for excellence of your service my best wishes for your tinuing happiness and su in the future.

Salute

The Soviet Union contributes further to its difficulties by seeking constant inspiration in Western weapons or ideas, not all of which are worth copying. One example is the Soviet version of the highly controversial F-111. "The best thing that ever came out of the F-111 program," a US Air Force official told Cockburn, "is that the damnfool Russians went out and copied it."

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spares claimed

F111 stars in new financial scandal

SPECIAL WRITER in WASHINGTON

THE General Accounting Office in Washington has charged the US Air Force with wasting millions of dollars in purchases of spare parts for new planes — notably the F111, the "New York Times" reports.

Drawing primarily on an inquiry into purchases for the F111 attack plane, the report, made public by Representative Leslie Aspin (Democrat, Wisconsin) says:

- It cost the USAF $56-million in markup to buy F111 parts through the prime contractor, the General Dynamics Corporation, instead of from sub-contractors making the parts. A "significant" portion of this amount could have been saved by direct purchase, the GAO contends.
- A total of $116 million in spare parts was bought before they might be needed, of which $9.6 million worth "already have been declared excess."
- Many spare parts common to more than one F111 model were bought a second time, even though flight experience with the initial model "indicated little or no usage for many of these parts."

The GAO, the auditing arm of Congress, indicated that its indictment was directed at Air Force policy as it applied to all its new planes. It said it had singled out the F111 to illustrate how the policy worked because purchase of F111 spares had been well along when the agency's review was begun.

Europe's MRCA — a swing-wing with F111 overtones? — Page 41.

Criticism of extra costs for F111 spares will also include the items required by the Royal Australian Air Force for its fleet of 24 F111Cs, now being refurbished for Australian service.

An RAAF spokesman said yesterday the RAAF places its orders with the United States Air Force and payment is made directly to the US Treasury.

The spokesman said the flow of spares at the moment "was minimal" but was expected to increase next year when the Australian F111Cs begin flight training and eventually go into operational service.

F111 stars in new financial scandal

• *From page 1*

The Air Force was quoted as concurring in several GAO recommendations for overhauling the policy and minimising future waste in purchase of spares.

But the Air Force also was shown to have taken pains to "note that the F111 is not a typical program by which to judge the entire . . . process."

It mentioned the F111's "major design deficiencies," citing as "most atypical" the failure of a structure holding the two swing-wings.

This failure caused long delays in deployment while rigorous tests were made of all F111's.

Since the GAO works for Congress, public dissemination of its reports usually is left to a committee or an individual congressman.

In issuing the report, Aspin, a freshman congressman whose Army career included three years in the Pentagon's Office of Systems Analysis termed the Air Force performance a "disgrace."

"The Pentagon has apparently learned little, if anything, about improving the management of major weapons systems," he declared.

Among the recommendations made by the GAO were proposals that:

- Officials buying spares be provided documents with "realistic" dates for delivery of new planes.
- Flight experience and use of spares be used to evaluate if further purchase of spares was needed.
- An evaluation be made to see if purchases should be made directly from subcontractors.

The Air Force concurred in general with all of these recommendations.

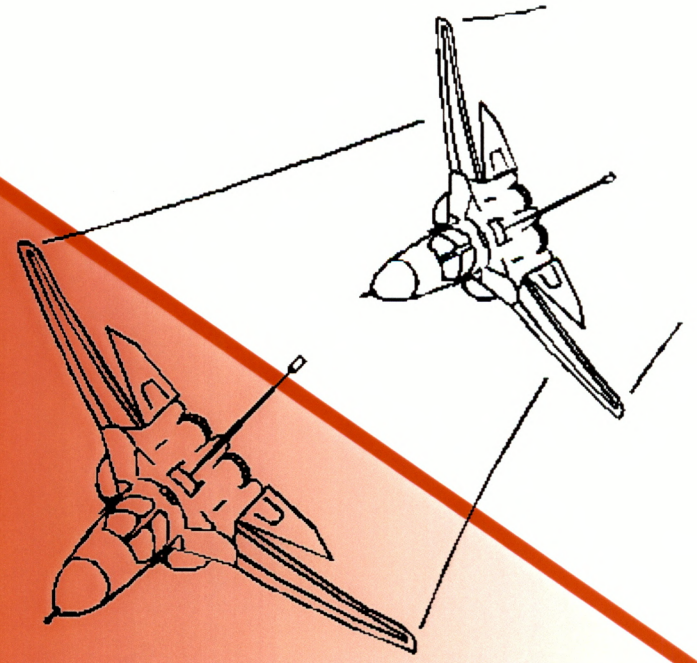
A charge the GAO made repeatedly was that, while the "Air Force system provides for the acquisition of additional parts when usage is underestimated, it does not provide for curtailing procurement when usage is overestimated."

Citing the F111 program, the report said: "We believe. . . that, had the Air Force considered usage data available on the F111A (the initial model), millions of dollars worth of procurement on the FB111 and the F111D could have been safely delayed or eliminated.

"Many of these spares are becoming excess and some day may be scrapped because of lack of usage."

The Air Force was quoted as replying that its system now provides for both "increasing and decreasing procurement factors based on actual usage."

The report said nothing about what effect the inflation of recent years might have on the cost of spare parts or of what savings, if any, might have been accomplished by premature purchase of spares in view of later price rises due to inflation.



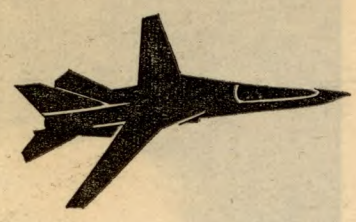
1972

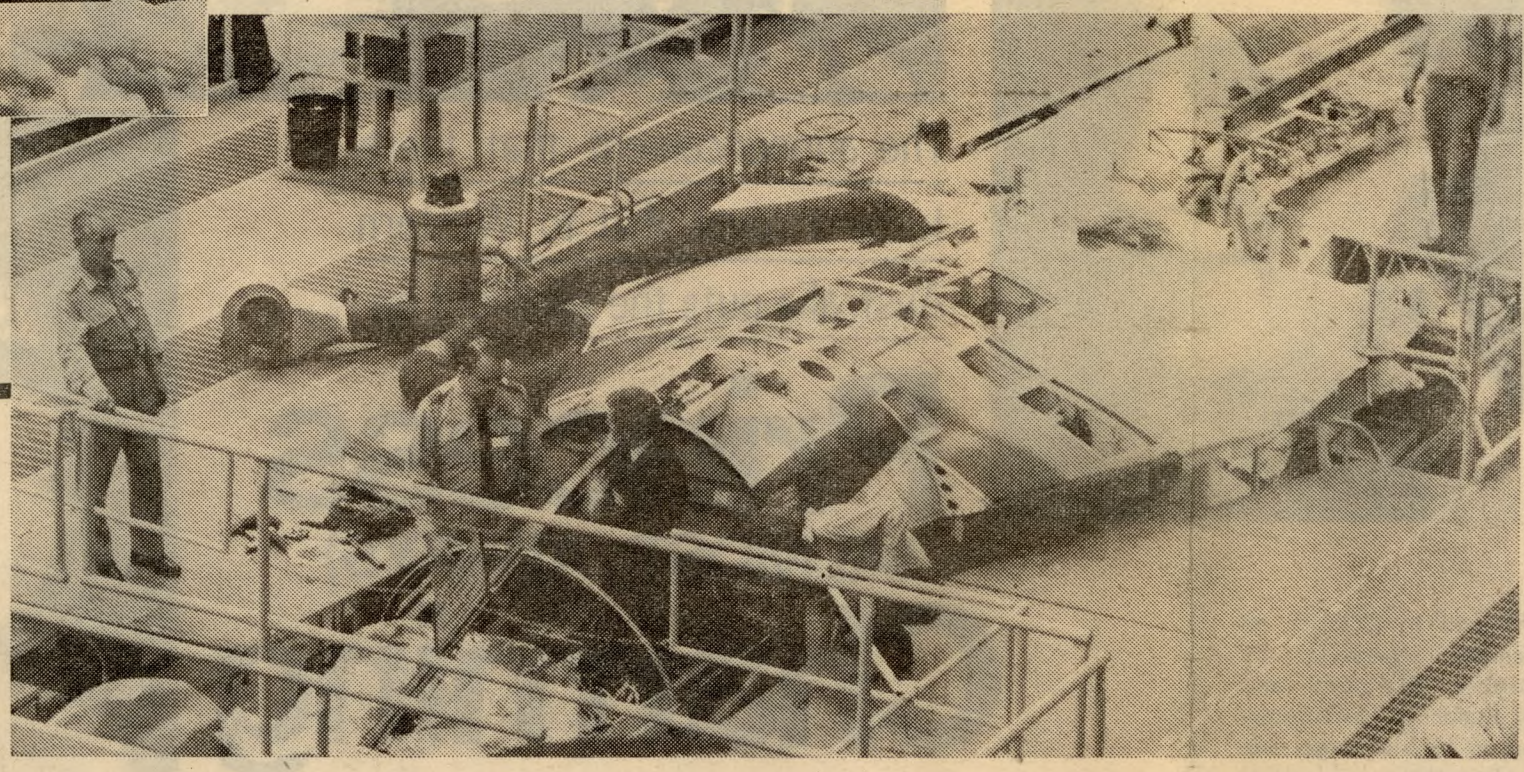
NEWS PAPER CUTTINGS AND
ARTICLES OF INTEREST for
the year 1972

AN SRLMSQN PERSPECTIVE

A RAAF swing-wing F-111C in flight in the United States.

AT FORT WORTH, TEXAS, KEITH DUNSTAN VISITS THE HOME OF THE MOST COMPLETELY TESTED PLANE IN HISTORY...





RIGHT: Keith Dunstan and Group-Capt. Milton Cottee stand in the cockpit of an unfinished F-111C in the General Dynamics factory. Left is Warrant-Officer Harry Ward, RAAF.

A strange and tortured beast

IT WAS a peculiar sensation to meet an F-111C decorated with the RAAF roundel and red kangaroo — to be able to pat it on the side and to note that such a beast really existed.

Beautiful in the air perhaps, but on the ground with its long, unbalanced ant-eater nose, frail wings and utterly absurd go-kart undercarriage, it did look a strange creature. And somehow it wasn't as large as one expected.

It was an odd sensation, too, to stand in the cockpit and ponder the thought that just for a second a man was in command of a vehicle, the most advanced of its kind, worth somewhere around $7 million.

It was a beautifully organised, comfortable cockpit. The pilot can operate this aeroplane in his shirtsleeves — he doesn't even wear a parachute, for should he have to bail out the whole cabin module ejects so that he and the navigator ride down to earth in armchair, pressurised comfort.

As an aeroplane enthusiast I would dearly have loved to have flown it away.

The story of the F-111, the aeroplane which has been called "Little Orphan Annie," "The Flying Opera House," "the most controversial weapon since gunpowder," goes right back to 1963 when Athol Townley, then Australia's Defence Minsiter, came to the U.S. to buy.

The final order for 24 F-111C aeroplanes was not irrevocably sealed until December 1971. It is amusing to come here and witness the marvellous patience of General Dynamics officials, the extraordinary knowledge they have of the Australian political scene, and just how many significant events seem to have taken place in election years.

After a week or two in the U.S. one gets used to things being over-large, but I was hardly prepared for the sight of the vast General Dynamics factory. It is over 6½ million square feet. Only one building anywhere spreads itself more under a single roof and that is the Pentagon in Washington.

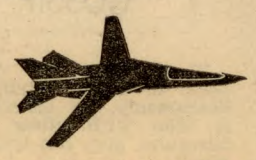
This factory is 9-10ths of a mile long and when inside you can't see from one end to the other. It is so large it has its own internal roads and vehicles.

Inside there is a parking lot with rows of motor driven four-seater scooters and this is the way you get around the factory.

At the plant the RAAF has its own office staffed by 12 Air Force engineers and experts. Here I met Group-Capt. Milton Cottee, RAAF air attache down from Washington.

Group - Capt. Cottee, like every RAAF man I ever met, is all for the F-111C. He talks of it with the devotion of a used car salesman. "It is a lovely thing to fly, so easy. A pilot feels at home in it after one trip. It is easier to handle that a Wirraway.

"Do you know, it comes in at 120 knots, slower than a jet airliner and it doesn't need a drag chute?"



He explained that the real strength of the F-111 was its long range coupled with the finest system of avionics devised. There was the terrain following radar system, which at Mach 1 plus could take the aircraft in at night, rain or fog, at little more than tree top height right under enemy radar.

"The system does everything for you" he said. "You fly hands off the controls."

One could hardly believe that anyone could develop such a simple faith in a black box. Imagine flying through the night at say 200 feet, at 800 mph., with the aeroplane of its own accord working out its own Big Dipper ride up and down over tall trees, mountains, buildings.

The Group-Captain admitted the first time out this was utterly unnerving, but after several trips when the pilot discovered it did work, he developed complete faith.

Anyway there was a dual system, one checking on the other, and if both broke down the aeroplane automatically went into a 3G climb.

In the cockpit he showed me how to change the angle of the wings, the ingenious system which brings about a Jekyll and Hyde change; an aeroplane which one moment handles with the docility of a flight trainer then moves to a platform capable of 1650 mph.

"There it is," he said "that handle by the pilot's left hand. Press the little red button and slide it across. The whole process takes about 15 seconds and the aircraft is perfectly steady throughout."

My General Dynamics guide was Mr Wallace Martin, better known as Wally, a wartime Liberator pilot. He had a chart prepared which showed dramatically that in its first 150,000 flying hours the F-111 had by far the safest flying record of any supersonic aircraft ever developed.

Then he had another superlative — the F-111 was the most completely tested aeroplane in the history of aviation.

One couldn't fail to believe him. He took me in his motor scooter across the factory to witness the perfect torturing of a F-III. There was a metal fatigue test to put the F-111 through the agony of 10 lifetimes.

The aircraft was embedded in an awful scaffolding as big as a six-storey building. Inside it put down its thumb screw, torture rack feelers to almost every portion of the F-111's skin, pummelling it backwards and forwards, hour after hour.

That had been going on for a year and it would go on for another year, testing the type to the point of destruction.

Then there was the wing test. We got back in the scooter and went outside to a special double hangar. This was a wing loading test, he said, and every F-111 made, including the Australian F-111Cs, had to go through it.

We looked inside this sealed hangar and an unfortunate F-111 was in position, hydraulic jacks all around the wings.

Wally explained that by using liquid nitrogen the temperature in the hangar would be reduced to 60 below zero and the aircraft itself to 40 below.

Then with the hydraulic jacks they would apply G strains far in excess of anything that would be experienced in flight. I watched startled. The wings get forced upwards 44 in., the equivalent of 7.3 times the force of gravity, then 7.3 in. the other way — 2.4 negative G.

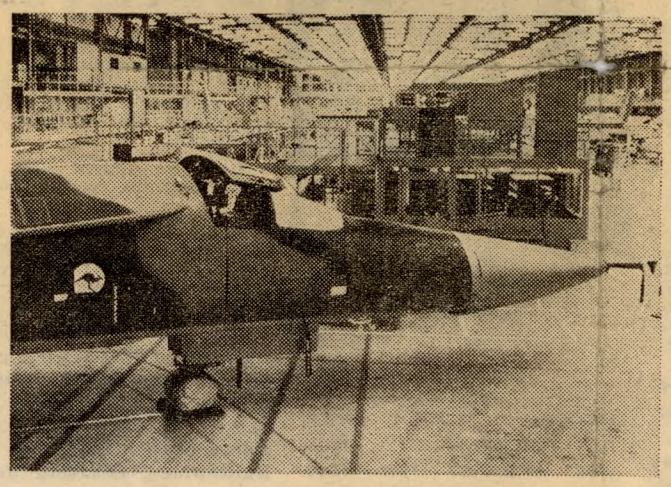
The super cold was another thing, a device for magnifying the strain. Obviously if a F-111 could survive such a test it could survive anything.

The cost is difficult to estimate but it could be around $7.4 million per unit, not taking into account long-term back-up in spares, training and ground support. Wally Martin says it is a mighty good deal. Similar aircraft are costing the USAAF around $10.5 million.

[Last month the Defence Minister, Mr Fairbairn, said in Parliament that Australia was buying its F-111Cs at a fixed price of $5.95 million each, which was cheaper than the U.S. forces paid. However, the total price of Australia's 24 F-111Cs, plus equipment and spares, is now estimated at $U.S.3.44 million].

I saw the first two Australian F-111cs dismembered on the floor of the factory receiving this treatment. The first six will fly off to Australia in June next year and the other 18 will follow progressively until all 24 will be assembled at Amberley, Queensland by November 1973.

All 24 Australian F-111Cs are now receiving a new carry-through box — the hinge on which the wings are mounted — plus 240 improvements and modifications, which Group-Captain Cottee says will make them a better aeroplane than the 372 F-111s of various types now in service with the U.S. Air Force.



A RAAF F-111C awaits modifications at the General Dynamics factory at Fort Worth, Texas.

The F-111 is coming— in a year

By PETER FINN, who has just returned from Fort Worth, Texas

AUSTRALIA'S 24 F-111C supersonic bombers are now in Texas in pieces like dismembered birds waiting to be put together again.

The fuselages of the multi - million dollar RAAF jets are in an advanced state of storage in a hangar at Carswell Air Force Base about five miles from the General Dynamics plant at Fort Worth.

Plastic covers some of the essential outside areas of the fuselages as it has done for nearly 18 months.

The wings of the F-111Cs are in the Fort Worth factory undergoing extensive modifications and testing, and the ultra-sophisticated avionics or the black boxes as they are often called are stored separately nearby in a constant temperature hangar.

But the exile of the controversial RAAF F-111C is almost over.

On April 3 the first F-111C fuselage will be matched up with the new wing-carry-through box — the integral part that allows the jet's wings to pivot for subsonic and supersonic flight.

When it is finally reassembled the first F-111C will be tested to eight lives or 32,000 hours — two more lives or 8000 hours more than the RAAF has specified.

The first F-111C should be ready for delivery to the RAAF in March next year and the first six jets should take-off on their ferry flight to the RAAF's base at Amberley in Queensland in May next year.

By late November or early December (1973) the 24 jets should be safely on their perches at Amberley — six years later than originally intended, but nevertheless there.

If 11 months seems to be a long time to put an F-111C together again, it must be understood that the 24 jets are virtually being rebuilt.

A total of 240 modifications have been made to the RAAF jets and when each is finally re-assembled with these modifications individual aircraft structural tests have to be carried out.

Original

These modifications require an extensive teardown of the original aircraft before it is reassembled, though the major modification has been on the wing-carry-through box made of D6AC steel.

Six of these new boxes have so far been built for the RAAF's F-111Cs.

Each box is now 500 lb. heavier, but the object to reduce the stress level of the box has been achieved — by up to 30 and 40 per cent in some sections.

The wings of the F-111 have now been tested to close to 10 lives or 40,000 hours. General Dynamics officials at Fort Worth say that by the time the RAAF gets its 24 F-111Cs next year, each aircraft will have a service life of 40,000 hours — 16,000 hours more than the current RAAF requirement.

This extremely long service life for the F-111C means that the jet could be in service with the RAAF for more than 30 years — a fact that should counter some criticism of the total cost of more than $310 million for the jets.

At Fort Worth, the program director of the F-111C, Mr A. E. ("Doc") Witchell, said: "We are very happy with the tests. They have met fairly the full spectrum and beyond of the stringent USAF requirements.

"Australia will be getting a better aircraft. It is a big advancement over the F-111C the RAAF would have got in 1967-68.

"The target date to re-build the F-111Cs and get the first one ready for delivery in March next year is the fastest we can meet."

Mr Witchell also revealed that the USAF, the prime contractor for the RAAF's 24 jets, ordered that modifications be made to the wings of the RAAF's jets late last year — before the Federal Government finally decided to accept the jets on December 16.

This was done to keep the wing modification line moving at Fort Worth, because, even if Australia had rejected the 24 F-111s, the USAF knew that it would have to put them into service itself.

In reality, this move will mean that RAAF jets will come into service faster than Australia had hoped for.

And the USAF is picking up the bill on many of the modifications to the F-111Cs, particularly modifications that come under the classification of deficiency.

The total cost of these modifications since 1968 is more than $U.S.35 million.

The modifications to the F-111Cs will not alter the top speed (1650 mph) or range of the twin-engine jet.

Since the Federal Government decided to accept the 24 jets, the RAAF has not been idle in getting ready for the aircraft.

Already 11 top technical personnel are in training in Colorado, and on Friday two RAAF instructor crews and an RAAF test pilot left for the USAF base at Nellis, in Nevada, to train on American F-111A jets.

The RAAF's F-111C project manager in Washington, Group Captain M. Cottee, says: "There is still some question whether the RAAF will train all 24 crews at Nellis. At present we believe we will.

"The intention is that the crews will come over and train in the U.S. at appropriate dates on USAF F-111 aircraft, and as our F-111Cs become available, convert to them before ferrying the aircraft back to Australia.

The plastic-covered fuselages of the RAAF's 24 F-IIICs stored in a hangar at the Carswell Air Force Base five miles from the General Dynamics plant at Fort Worth, Texas.

Technical

"Apart from a so-called elite corps of about a dozen technical people being trained in the U.S., another 90 will be trained in Australia at Amberley.

"The first ferry flight should be made in May next year with six jets flying from the U.S. to Hawaii, Pago Pago and Amberley.

"The other ferry flights will be spaced out so that by early December next year the 24 jets should be in service at Amberley.

"We have had a big win in keeping the ceiling price of the basic F-111C to $U.S.5.95 million per aircraft.

"Still the final cost of the 24 jets could vary up or down. Much still depends on the cost of the modifications, testing, crew training and spares."

Current planning by the RAAF is to return one squadron of 12 Phantom F-4E leased jets to the U.S. in October and keep the other 12 Phantoms until close to the delivery of the first F-111Cs next May.

A total of 562 F-111 aircraft, including the RAAF's 24 jets, are or have been built by General Dynamics. So far 404 F-111s have been accepted by the USAF and 412 have flown after completing tests.

F111's coming

The first party of RAAF pilots and navigators to go to the United States for training on the F-111C aircraft will fly six of the aircraft to Australia on 1st June.

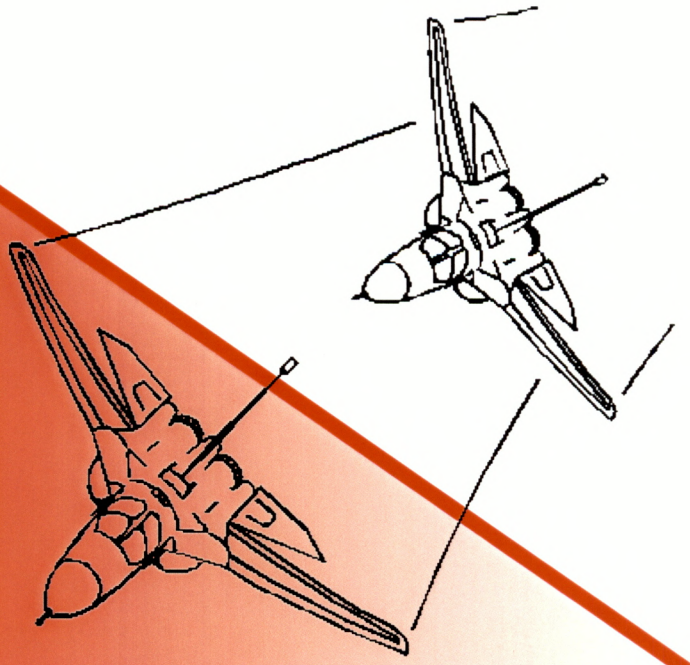
The Officer Commanding the RAAF's No. 82 (Strike) Wing at Amberley, Qld., Group Captain J. W. Newham, will be in charge of the 12-man team who will fly the aircraft to Amberley RAAF Base in Queensland.

Gp Capt Newham and his party went to the US for training in January, followed in March by a second contingent. A third group goes to Nellis AFB next month.

On completion of their training courses, the two later contingents will also ferry the remaining eighteen F-111C aircraft to Australia.

RAAF pilots and navigators who will fly the six F-111C aircraft to Australia at the end of May are:

Group Captain J. W. Newham, of Cowra, NSW; Wing Commander R. G. Funnell, of Brisbane, Qld.; Wing Commander T. C. Owen, of Amberley, Qld.; Squadron Leader W. J. Emery, of Wonthaggi, Vic.; Squadron Leader N. McPollock, of Brisbane, Qld.; Squadron Leader I. M. Westmore, of Melbourne, Vic.; Flight Lieutenant J. A. Bushell, of Lismore, NSW; Flight Lieutenant R. D. Hardcastle, of Brisbane, Qld.; Squadron Leader W. F. Walters, of Mareeba, Qld.; Flying Officer P. J. McDonald, of Kurri Kurri, NSW; Flight Lieutenant P. W. Crowder, of Brisbane, Qld.; and Flight Lieutenant R. T. Sivyer, of Rockhampton, Qld.



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