



WORLD NEWS

Hawker/Northrop Agreement

Hawker Siddeley Aviation announced on Tuesday that they had come to an agreement with the Northrop Corporation to "collaborate in the V/STOL strike aircraft field." The American company is to "acquire from Hawker Siddeley technical know-how and design information on the P.1127 and related aircraft."

There has been considerable US interest in the development of the P.1127 and Hawker have for some 18 months been discussing the project with American companies. Northrop were chosen because of their orientation towards strike aircraft, and the agreement would render the P.1127, or types derived from it, eligible for an eventual US military order. Northrop will in effect have US manufacturing rights and would co-operate in exploiting other opportunities.

The agreement does not affect Hawker's other affiliations in Europe in connection with the P.1154 or other NMBR-3 types for NATO. Neither does it cover the present Bristol Siddeley engines for the P.1127 or P.1154. Unofficially, it is said that there is a distinct possibility that the P.1154 will have two Rolls-Royce deflected-thrust Speys with plenum-chamber burning.

No OR.351?

During the past two years the Air Ministry Operational Requirement 351 has been viewed by the British aircraft industry as one of the biggest potential sources of new business. It calls for a large STOL transport, capable of taking nearly every type of British military equipment to relatively inaccessible overseas locations. Late in this decade such an aircraft could replace both the Hastings and Beverley.

The three chief contestants have been BAC, with the BAC.208 and BAC.222; Hawker Siddeley, with the Whitworth Gloster 681; and Short Bros & Harland, with the SC.5/21 Belfast. All these types were mentioned in this journal's review of the British industry on August 30, 1962.

Last week the *Daily Express* reported that the programme had been shelved, but the Air Ministry state that it is in fact "still under consideration." According to the newspaper, ten more Belfasts would be purchased, to bring down the unit price.

There is a strong possibility that the RAF may eventually receive a much smaller V/STOL transport, probably developed in collaboration with Europe or the USA. The NATO BMR-4 competition has provided much of the groundwork for co-operation in this sphere.

Finnish Defence Purchases

The Finnish General Staff announced on January 9:—

"After negotiations on the purchase of equipment for the defence forces with the

12,000m old marks (about £13m) allocated to the Defence Ministry from the commodity credit available to Finland, contracts have been signed in Moscow. . . .

"Deliveries will consist of: One squadron of Mig-21 fighter aircraft equipped with air-to-air missiles, two frigates of the *Riga* class, long-range field artillery, ships' engines for fast patrol boats to be built in domestic dockyards, and some amphibious armoured equipment. The equipment purchased is well suited for our conditions and most of it will be delivered during 1963.

"At the same time negotiations have been conducted in Britain for the purchase of Vigilant-type anti-tank guided missiles. Negotiations about this purchase have also been concluded." This last contract is referred to on page 97.

Vulcan "Penetration": US Denials

Recent penetration of United States air defences in mock attacks by Vulcan B.2s of RAF Bomber Command, according to a report in the London *Daily Express* on Monday of last week (this page, January 10), has subsequently been strenuously denied by US authorities.

The Defense Department said that "an exhaustive check" had shown that British aircraft last took part in a strategic Air Command exercise over the United States in the autumn of 1960 [*sic*]; while in a second statement by the department the Assistant Secretary of Defense for Public Affairs, Mr Arthur Sylvester, said of RAF participation in the October 1961 defence exercise: "I can say that, while the results of such exercises do remain classified, there was no penetration by Vulcans of the radar and fighter plane net in that exercise."

Mr Eugene Zuckert, Secretary of the US Air Force, described the report as being "completely without foundation," while a NORAD spokesman at Colorado Springs said it was "just a lot of nonsense." The RCAF concurred in a statement at NORAD HQ in which the C-in-C, Gen Gerhart, said that the last time the RAF were involved in exercises with NORAD was during "Skyshield II" in October 1961; the RAF did not participate in "Skyshield III," held in September 1962. "RAF aircraft have been in North America since 1961 but in conjunction with the Strategic Air Command, at which time their whereabouts were known. A British United Press report, giving this statement, said that Air Marshal Slemmon, NORAD Deputy Commander, had "cross-checked this information with Air Marshal Cross, C-in-C RAF Bomber Command, who confirms there is no basis to this report."

The Air Ministry, as noted on this page last week, said after the *Daily Express* story had appeared that references to an exercise "a couple of months ago" were wrong. A spokesman said: "The last occasion on

which we took part in an exercise of this kind was in 'Skyshield II.'"

In an editorial, quoted by Reuter, the *Chicago Tribune* criticized what it called "the ambiguity" surrounding reports that RAF aircraft had penetrated American defences, and it added: "We do not know whether the Royal Air Force leaked the story in order to show up the Kennedy administration because of its decision to scrap the Skybolt air-to-ground missile."

Oswald Short's 80th Birthday

Mr H. O. Short, HON FRACS, FZS, FRAS—Oswald Short, last of the three Short brothers, first manufacturers of aircraft in the world—was celebrating his 80th birthday yesterday.

Born on January 16, 1883, Oswald Short started a small company with his brother Eustace at Battersea in 1898 for the manufacture of man-carrying balloons. Subsequently (in 1908) they decided to build heavier-than-air machines, and persuaded their elder brother Horace to join them. The Short No 1 biplane was not a success, but No 2, piloted by Mr J. T. C. Moore-Brabazon (now Lord Brabazon) won a £1,000 prize for the first circular mile flight by an all-British aircraft.

The brothers' name is now perpetuated in Short Brothers & Harland Ltd, which was formed in 1936 and of which Mr Oswald Short is honorary life president.

Westland Winter Missions

Westland Aircraft test pilots have been playing a sterling part in what the company have described as "Exercise Snowdrop"—emergency operations in the snowbound West Country. The chief test pilot, W. H. ("Slim") Sear, helped Southern Electricity Board officials to clear a fault in the Weymouth area which they could not have reached without the aid of a helicopter and during one of these journeys picked up two New Zealand women who had been isolated at a farm in Dorset and had to reach Tilbury to board the boat for their homeward journey. Another Westland pilot, Derrick Colvin, also assisted SEB engineers near Tavistock and took food supplies to Princetown.

SC.1 Instrument Landing Trials

The second Short SC.1, XG 905, has been undergoing extensive modification at Belfast, partly to bring it up to the modification standard of the first aircraft, which has been flying at RAE Bedford, but mainly to fit it for an important series of VTOL instrument landing trials. Main elements are the Mk 3C pitch and roll stabilizer equipment and a lift compensator regulating vertical motion by controlling lift-engine power.

A number of difficult problems have to