D1

JOINT SERVICES

RECOGNITION

Journal



Vol. 22 OCTOBER 1967 No. 10

LESSON INSTRUCTIONS

Identity Training is a matter of "doing", not of gathering information. Submit to the instructions given below in every lesson and the ability to identify will become automatic.

1. Read the text associated with the lesson.
2. Prepare a list of target numbers so as to be able to tackle the targets in any order.
3. Identify the target pictures by comparing them with the key views: start with the easy ones so as to gain experience: also use targets already identified to solve the more difficult ones.
4. When certain of the identity of a target write down its name *IMMEDIATELY* against the appropriate number on your list. THIS IS IMPORTANT.
5. Lessons should not be hurried or given a time limit. So far as beginners are concerned, it is more important to identify accurately than quickly.
6. Do not attempt conscious memorising of details, shapes, or names. The procedure will take care of that. Do not attempt to do it without the key too soon, wait until it is self-evident.

Conduite des leçons

1. Lire le texte correspondant à la leçon.
2. Préparer une liste de numéros de cible, de façon à pouvoir prendre les cibles dans n'importe quel ordre.
3. Identifier les photos de la cible en les comparant avec les vues-clé: commencer par les plus faciles de manière à gagner de l'expérience: se servir aussi de cibles déjà identifiées pour trouver les plus difficiles.
4. Quand vous serez certain de l'identité d'une cible, notez son nom immédiatement en face du numéro correspondant sur votre liste. CECI EST IMPORTANT.
5. Les leçons ne devront pas être précipitées ou d'une durée limitée à l'avance. En ce qui concerne les débutants, il est plus important d'identifier avec précision que rapidement.
6. Ne pas s'efforcer d'apprendre par cœur les détails, les formes ou les noms.

Gebrauchsanweisung für die Typenlehre

Um den größten Nutzen aus den Übungsbildern, die in diesem Heft veröffentlicht werden, zu ziehen, sollte wie folgt verfahren werden.

1. Den zur Lehre gehörigen Text lesen.
2. Eine numerierte Typenliste vorbereiten, in der angesprochene Typen in eine gewisse Ordnung gebracht werden können.
3. Typen ansprechen durch Vergleich mit den Hauptansichten (von oben, von unten, von vorne, von hinten und von der Seite). Anfangen mit den einfachen Bildern, um Erfahrung zu bekommen. Die angesprochenen Typen zur Ansprache der schwierigeren benutzen.
4. Wichtig: Sobald ein bestimmtes Flugzeugbild mit Sicherheit richtig angesprochen ist, sofort die Typenbezeichnung in die entsprechende Stelle der Liste eintragen.
5. Bei der Übung nicht beeilen oder eine zeitliche Begrenzung festlegen. Für Anfänger ist es wichtiger, richtig anzusprechen als schnell.
6. Nicht mit Einzelheiten, Umrissen, Namen aufhalten.

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JOINT SERVICES

RECOGNITION JOURNAL

The *Joint Services Recognition Journal* is a monthly publication produced by the Directorate of Flying Training (R.A.F.), Ministry of Defence, and prepared in collaboration with the Admiralty Board, the Army Department and the Ministry of Technology. Applications for copies can only be accepted from the Services or other official bodies, and must be submitted through the normal official publications supply channels—**not** to the Editorial Office or direct to the Ministry of Defence.

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- AND WHY

The ability to identify is a skill which, like golf, is learnt by "doing" rather than by gathering knowledge. It is true that some people must know the intelligence significance of what they identify, but that is not our business and besides, technical intelligence and identity training are very different things. That distinction is not always clear in the minds of many recognition instructors and leads to a mixture in training which obstructs the acquisition of identification skill.

The need of the vast majority of trainees is the simple one of having to identify something in order to open fire on it—or to hold fire. It is our business to get this skill taught by simple, direct and quick means. To involve intelligence information adds an unnecessary burden.

That is not to say that some knowledge of the subject one learns to identify is never wanted or never desirable. It was made clear in Dr. Allan's article in the August edition that many of those who were engaged in the trials knew almost nothing of aircraft when they started and knew very little more at the end of the course; yet they could identify the aircraft they had been taught. Moreover they had acquired an interest and a thirst to know more about them. That sort of interest is all to the good and will always follow from correct training.

The *Joint Services Recognition Journal* contains lessons which train by "doing"; and how they should be done is writ large on the opposite page. Adherence to that procedure sets in motion the identifying mechanism inherent in everyone. Identifying is a natural skill in us all and is acquired in everyday life without having to force the memory. So it should be in any form of military identification training.

Another obstruction to learning is the popularity of the *Journal*. But don't get us wrong. Its appearance belies the fact that it is a piece of paper machinery of high training potential put together at no small cost in time and money and by the ingenuity and industry of a great many people. It is worth more than to be accorded a place on a book shelf or in a cupboard and to be "looked up" for reference. It can do much more than attract. It can provide experience. Not by tiresome wearying work, but by methods which stimulate and create awareness, not only of the subject matter it contains but of the vast latent ability of everyone to *learn* to identify. Try it, and find out for yourself.

A sizeable recognition training problem arises from the time honoured Service custom of making the expert into an instructor. Though this may seem logical enough in some things, in recognition training it can be disastrous. Read again what Dr. Allan has to say about it in her article: Speaking of World War II she writes: "*Expert 'spotters' existed—people who had been enthusiasts about aeroplanes . . . and who possessed a high level of skill in aircraft differentiation. But there were not nearly enough of them . . . unfortunately the experts had no notion about how they acquired their skill in the first place, it was something that had grown . . . how to transmit that skill was something of a problem.*" Transmission of that skill should not be a problem today—if lesson instructions are obeyed.

CODE NAMES FOR AIRCRAFT

by Leading Observer M. C. Richards, Royal Observer Corps Post 4/A4

THE use of code names in lieu of actual names for reporting aircraft may be necessary for two reasons: to give a tag to a definite type whose correct identity cannot be ascertained and to provide a colloquial name where there are language difficulties in translation, transliteration or pronunciation.

A need for a code system first arose in 1916 when the Germans introduced a new range of Halberstadt, Albatros and Pfalz aircraft to the Western front that defied classification by Allied intelligence. Pilots were encouraged to append sketches to their combat reports and from these Intelligence compiled diagrams labelling types as "A", "B", "C", etc, and subsequent sightings were reported by the appropriate letter. By 1918, when German aircraft had become more standardised, the system lapsed. The Germans did not have a comparable system and for a time reported all pusher aircraft such as FE2bs and DH2s as "Vickers", confusing them with the Vickers Gunbus.

During the Second World War, German aircraft nomenclature was fairly straightforward and direct reporting could be used. Their system was basically that of a number for each type, irrespective of manufacture, which a prefix denoted, such as Me109, Me110, He111 and He112 for Messerschmitt and Heinkel types. For intelligence purposes it was necessary to give an identity to new prototypes detected to collate reports on their development. The system used was a simple numerical series with the name of the establishment were it was first located, e.g., the Arado Ar234 jet bomber first appeared in Allied records as the RECHLIN 66 (Rechlin was a German aircraft test airfield and "66" its estimated wing span).

That this system was not adopted for general reporting is a tribute to Allied intelligence in general and RAF photographic reconnaissance in particular, in that the aircraft were detected and their true identity established before they arrived in service.



The "Duckbilled" Bear—a turboprop bomber of the Russian Air Force designed by Tupolev as the TU 95.

It was different with the Japanese. Attempts early in 1942 to identify individual Japanese types was based on the Japanese system of designation by the last two digits of the years the type entered service. This was further complicated by our year of 1940 corresponding to the year 2600 by the Japanese calendar. Thus, the Japanese Navy fighter that entered service that year became the 00, abbreviated in this case to just 0. This was colloquially called Zero by the Allies, a name by which it will be remembered by many.

Several different types might enter service in the same year and thereby have the same number, so that the number had to be further qualified by the manufacturers' names; but Kawanishi, Mitsubishi, Nakajima, Yukosuka, etc., used in conjunction with the year digits, did not roll easily off the tongue. There was also a system, rather like the German, used by the Japanese Navy and a system of official Japanese type symbols, e.g., the Mitsubishi 96 fighter (i.e., introduced in 2596—our 1936) was A5M4 in Japanese Naval nomenclature, but such letter/figure combinations were difficult to memorise and could not always be obtained for new types. Such were the complications, that reporting lacked precision and there was a tendency to call all Jap fighters Zeros and all twin-engined aeroplanes Mitsubishis. This was the situation when the South-West Pacific Area Commander, General McArthur, handed the problem to his Director of Intelligence.

Early in 1942 Captain (later Colonel) Frank McCoy had arrived in Australia as Intelligence Officer of the 38th Bombardment Group, USAAC. In June that year he was appointed head of the Material Section of the Directorate of Intelligence, Allied Air Forces, South-West Pacific Area. To his department was given the task of identifying and reporting on Japanese aircraft types and shortly after receiving this assignment, McCoy presented a code name system.

Working with two aides, Sergeant F. Williams and Corporal J. Grattan, 75 code names were initially allocated. McCoy hailed from Tennessee and this was reflected in his choice, with names such as Rufe, Zeke, Nate and Jake. They were simple names, easy to remember.

McCoy had yet to sell his idea to the authorities. The popular story is that his opportunity arose from the inclusion of the name "Hap" for a clipped-wing version of the Zero fighter, in a despatch to Washington. This was the nick-name of the Air Corps Commander, General Arnold. McCoy was "carpeted" by General McArthur's Chief of Staff, but it brought about recognition and acceptance of his system. "Hap" was, in fact, dropped as a suitable code-name since it could be confused phonetically with "Jap". In December 1942, the United States Forces started using the system and the British followed suit in a few months.

McCoy's simple formula for coding was that fighters including fighter and reconnaissance floatplanes, should have male names, and all other aircraft female names, with the proviso that those allocated for transport should all start with the letter "T".

Some initial confusion was experienced; due to faulty intelligence some names were allotted to non-existent types and some areas allotted conflicting names of their own. This position was later clarified by checking with sources in Washington, London and Delhi before allotting names for which the Technical Air Intelligence Centre, NAS Anacostia, became the central authority.

There were two exceptions to the pattern of allocation. These concerned the Nakajima Ki-44 fighter which was called Tojo in the Chinese and Burmese areas and the Kawasaki Ki-61 dubbed Tony because it was thought to be an Italian fighter in Japanese service. Both these names were officially retained.

Anticipating German aircraft in the Pacific area, operating from Japanese bases, code names were allotted as follows: *Irene* Junkers Ju87, *Terry* Heinkel He112, *Mike* Messerschmitt Me109, *Trudy* Focke Wulf Fw200, *Trixie* Junkers Ju52/3m, *Janice* Junkers Ju88, *Doc* Messerschmitt Me110 and *Bess* Heinkel He111. Most of these types were known to have been purchased for evaluation by the Japanese. The Focke Wulf Fw190 was potentially the most promising and the code name *Fred* was allotted before an example had arrived in Japan by a blockade runner.

A new range of names was allocated later in the war as the Allies closed in on the Japanese mainland, with tree names for trainers and bird names for gliders.

In the early postwar years the Iron Curtain of the Communist Bloc effectively screened any information about new Russian aircraft, seen fleetingly in Soviet skies, and a precise name could not be given to these new types. Later, when new shapes were revealed, as at the Tushino Air Display, their official designations were rarely divulged.

For reporting purposes, a tag had to be given and in the early "fifties" a type number was introduced. A number was allocated to an aircraft type, roughly in order of detection, and was restricted to types not fully identified; other aircraft were given the normal Russian designation. This was a compromise between an intelligence system and a reporting system and it proved unsatisfactory.

In 1954 the ABC Tripartite Powers—America, Britain and Canada—evolved the ideal reporting system which has become generally adopted in NATO countries.

The formula for this NATO system is simply that Bombers, Fighters, Helicopters, and Miscellaneous types each have a name starting with the initial letter significant of their role, i.e., B, F, H and M respectively.

Propeller-driven aircraft have names of one syllable and jet-propelled aircraft have two-syllable words. Variations to the basic type are qualified by suffixes A, B, C, etc. The system has been extended to cover missiles which are given names beginning with K.

RUSSIAN AIRCRAFT NAMING SYSTEM

FIGHTERS

Propeller-driven

FANG (La-11)
FIN (La-7)
FRANK (Yak-9)
FRED (F-63A)
FRITZ (La-9)

Jet

FACEPLATE
FAGOT (MiG-15)
FANTAIL (La-17)
FARGO (MiG-9)
FARMER (MiG-19)
FEATHER (Yak-17)
FIDDLER
FIREBAR (Yak-28)
FISHBED (MiG-21)
FISHPOT
FITTER (Su-7M)
FLASHLIGHT (Yak-25)
FLIPPER
FLORA (Yak-23)
FRESCO (MiG-17)

BOMBERS

Propeller-driven

BANK (B-25D) *
BARGE
BARK (Il-2)
BAT (Tu-2)
BEAR (Tu-95)
BEAST (Il-10)
BOB (Il-4)
BOOT
BOX (A-20A) *
BUCK (Pe-2)
BULL (Tu-4)

Jet

BACKFIN
BADGER (Tu-16)
BEAGLE (Il-28)
BISON
BLINDER
BLOWLAMP
BOUNDER
BOSUN (Tu-14)
BRAWNY
BREWER

CARGO/ TRANSPORTS

Propeller-driven

CAB (Li-2)
CAMP
CART (Tu-70)
CAT (An-10)
CLAM
CLEAT (Tu-114)
CLOD (An-14)
COACH (Il-12)
COCK (An-22)
COKE (An-24)
COLT (An-2)
COOT (Il-18)
CUB (An-12)
CORK (Yak-16)
CRATE (Il-14)
CREEK (Yak-12)
CRIB (Yak-6)
CROW (Yak-14)

Jet

CAMEL (Tu-104)
CLASSIC (Il-62)
CODLING (Yak-40)
COOKER (Tu-110)
COOKPOT (Tu-124)
CRUSTY (Tu-134)

HELICOPTERS

HARE (Mi-1)
HARKE (Mi-10)
HARP
HAT (Ka-10)
HEN (Ka-15)
HIP (Mi-8)
HOG (Ka-18)
HOODLUM (Ka-26)
HOOK (Mi-6)
HOOP (Ka-22)
HOPLITE (Mi-2)
HORSE (Yak-24)
HOUND (Mi-4)

MISCELLANEOUS

Propeller-driven

MADGE (Be-6)
MAIL
MARK (Yak-7)
MAX (Yak-18)
MINK (Ut-2)
MOOSE (Yak-11)
MOLE
MOP (GST)
MOTE (MBR)
MUG (MDR-6)
MULE (Po-2)

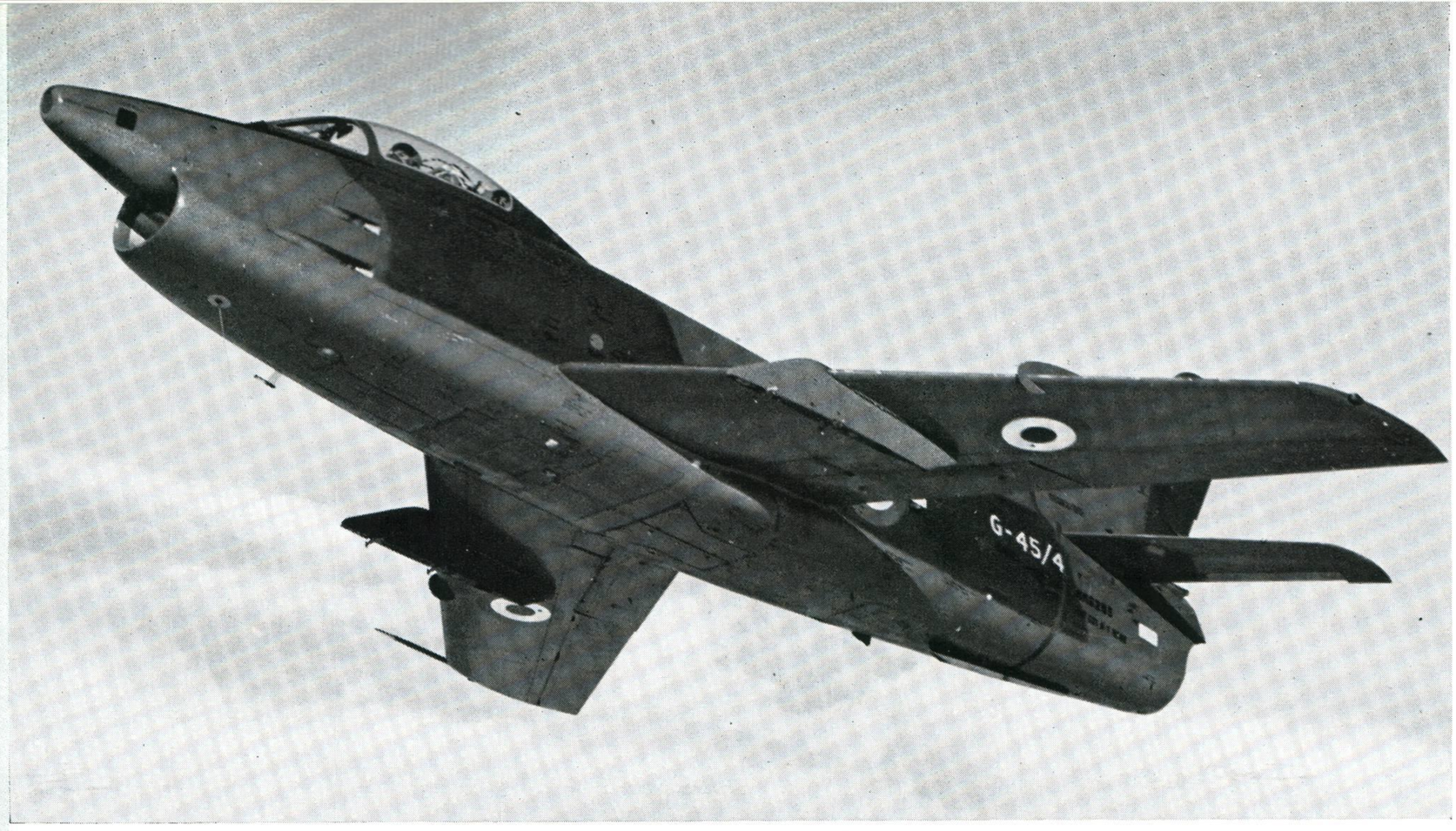
Jet

MAESTRO
MAGNET (Yak-17UTI)
MAGNUM (Yak-30)
MALLOW (M-10)
MANDRAKE
MANGROVE
MANTIS (Yak-32)
MASCOT (Il-28UTI)
MAYA (L-29) †
MIDGET (MiG-15UTI)
MONGOL

** American designation of aircraft supplied during the war under Lend/Lease arrangements.* † *Czech designation.*

FIAT G91R/1

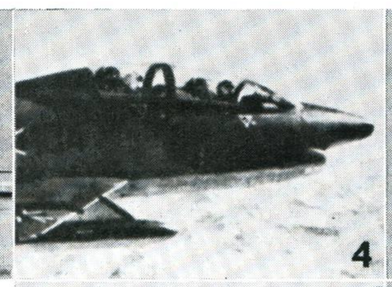








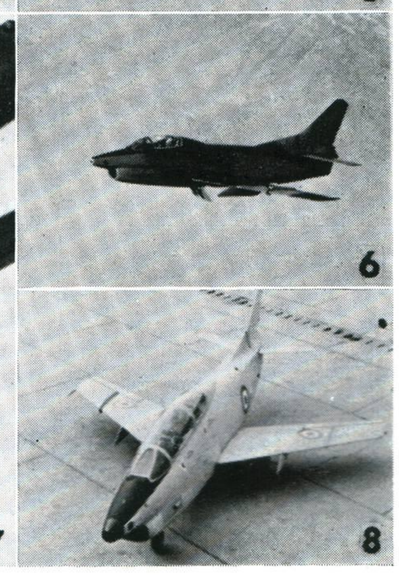


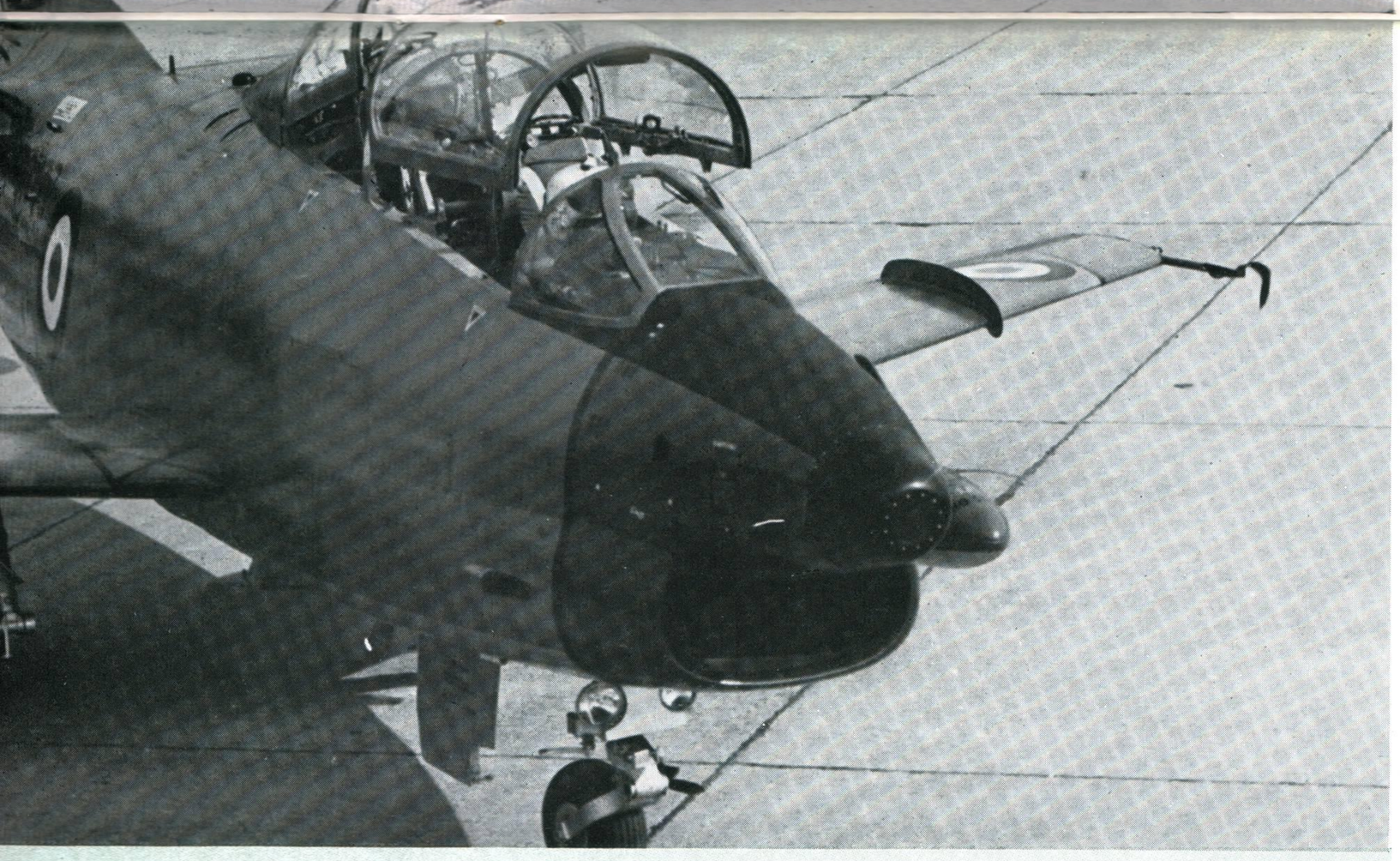




















FIAT G.91

The two basic versions of this lightweight fighter from Italy which are currently in service are the G.91R single-seat reconnaissance fighter and the tandem two-seat G.91T combat trainer/tactical fighter. The external differences are illustrated in the key photographs and silhouettes. Both types are used by the Italian and Federal German Air Forces (the G.91R having also been built in West Germany under licence) and they have also been supplied to Portugal. Underwing pylon loads vary according to sub-type; the G.91R/6, for example, is able to carry Nord AS.20 or AS.30 missiles, and also drop tanks or additional weapons mounted on supplementary points; *Luftwaffe* G.91R/3's and '4's have four wing pylons, carrying 500 lb. on each inner and 250 lb. on each outer one.

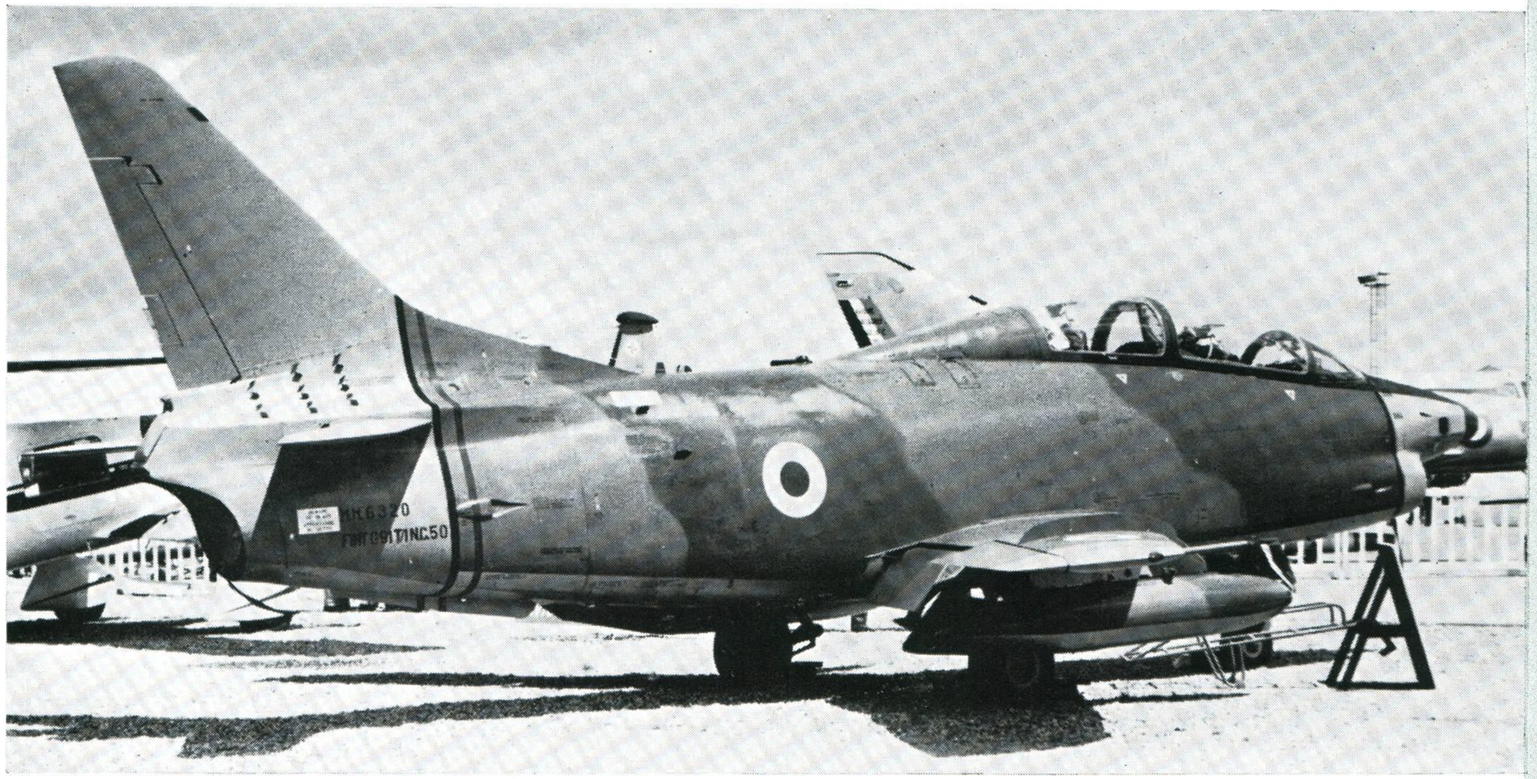
FIAT G91T/1



Span 28 feet

continued overleaf

FIAT G91 continued



FIAT G91R/1

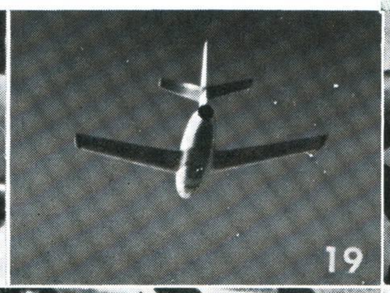




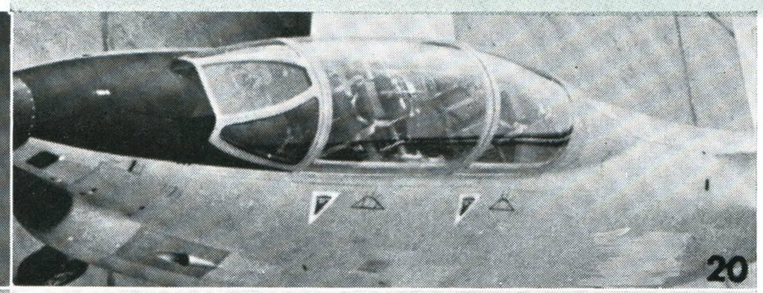
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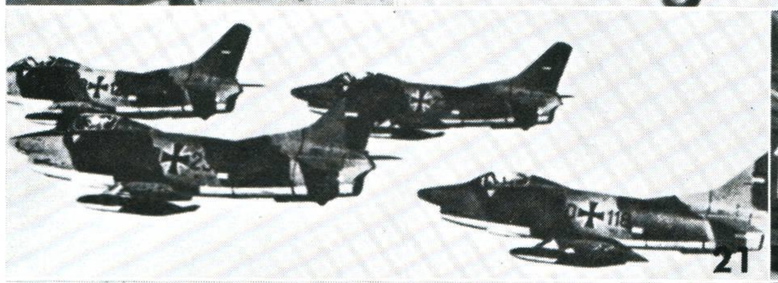
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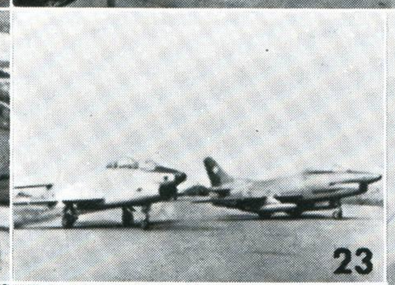
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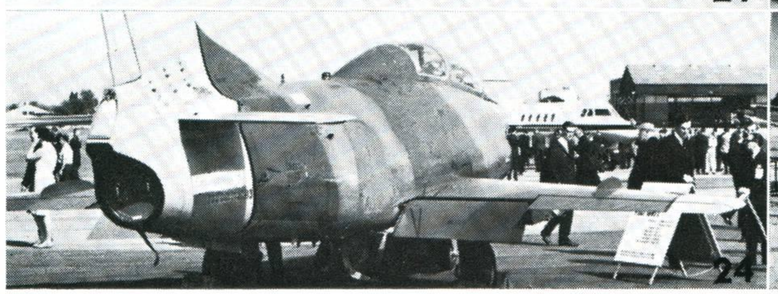
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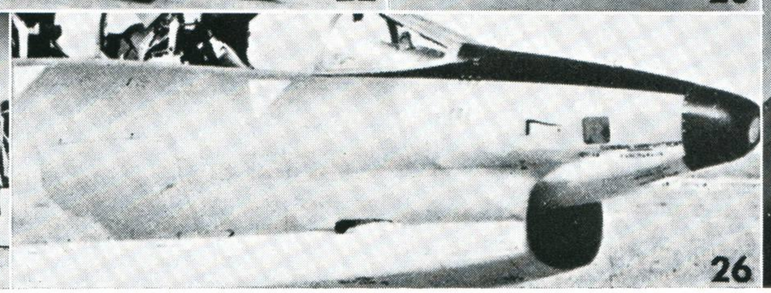
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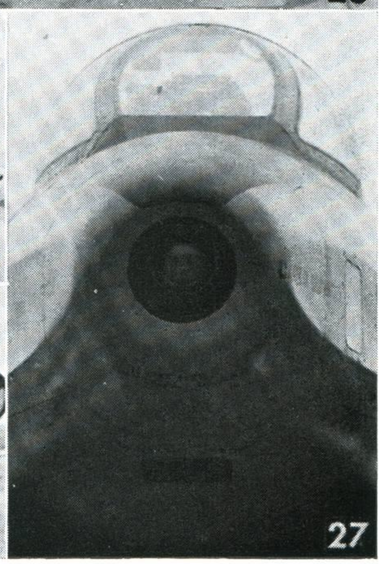
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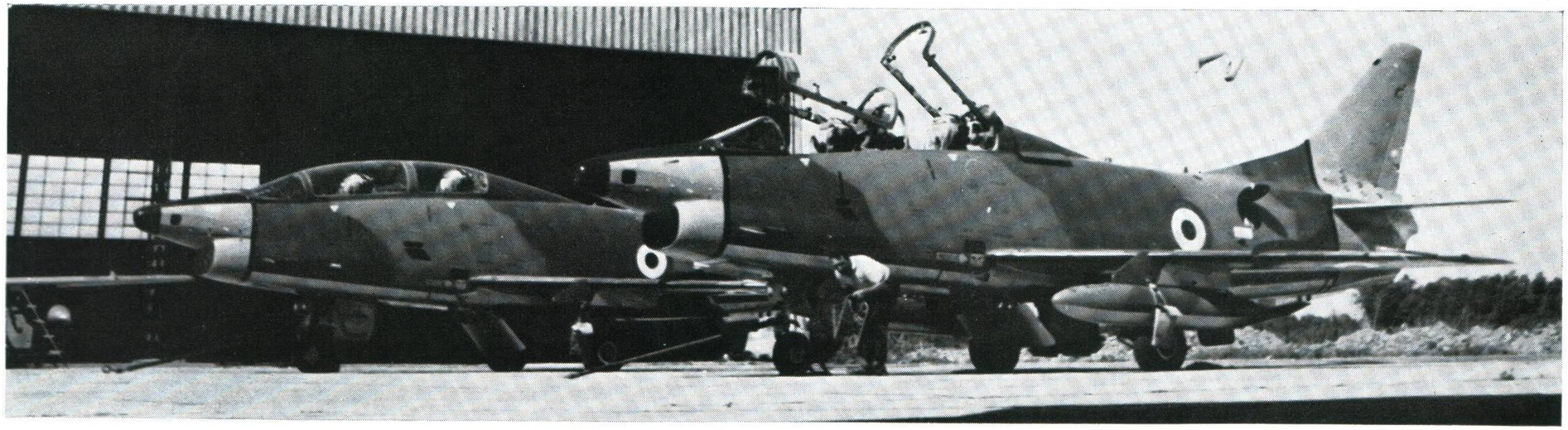


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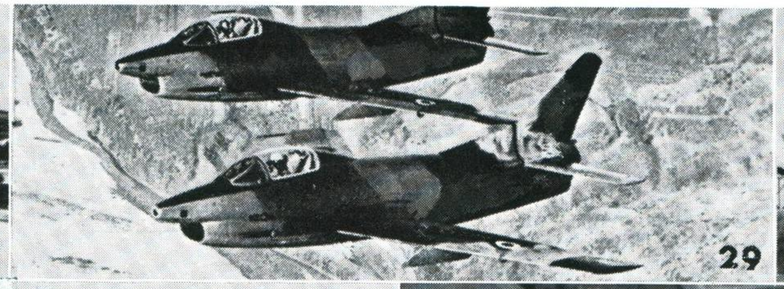
It is not vital that you recognise the particular version of G.91, but try to do so wherever possible, to ensure that this Fiat fighter becomes familiar in spite of variations to nose and canopy. Use instructions on page 254 and watch out for jokers. Solutions on back cover.

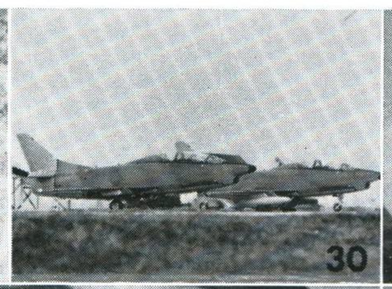


FIAT G91R/1

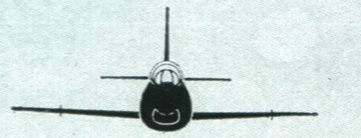


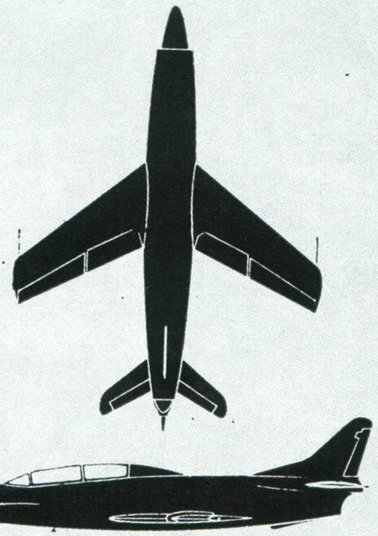
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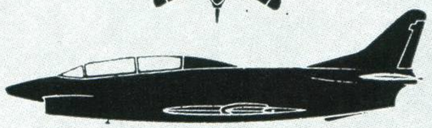

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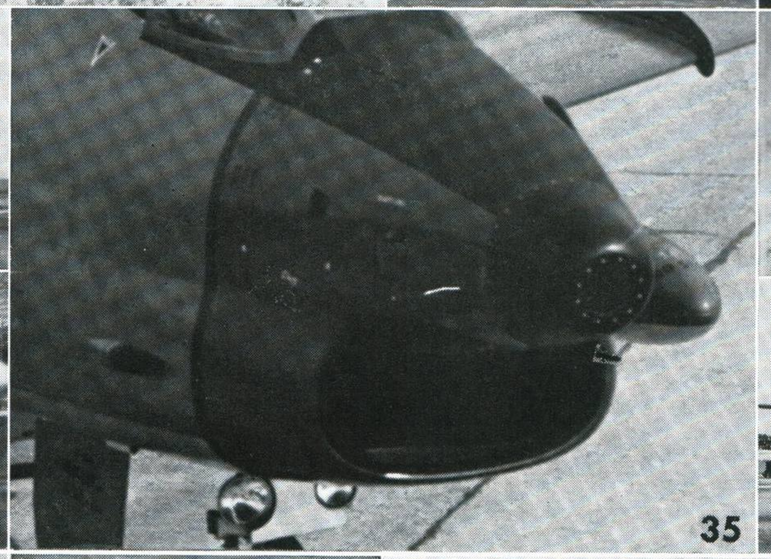


FIAT G91T/1

Span 28 feet


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35


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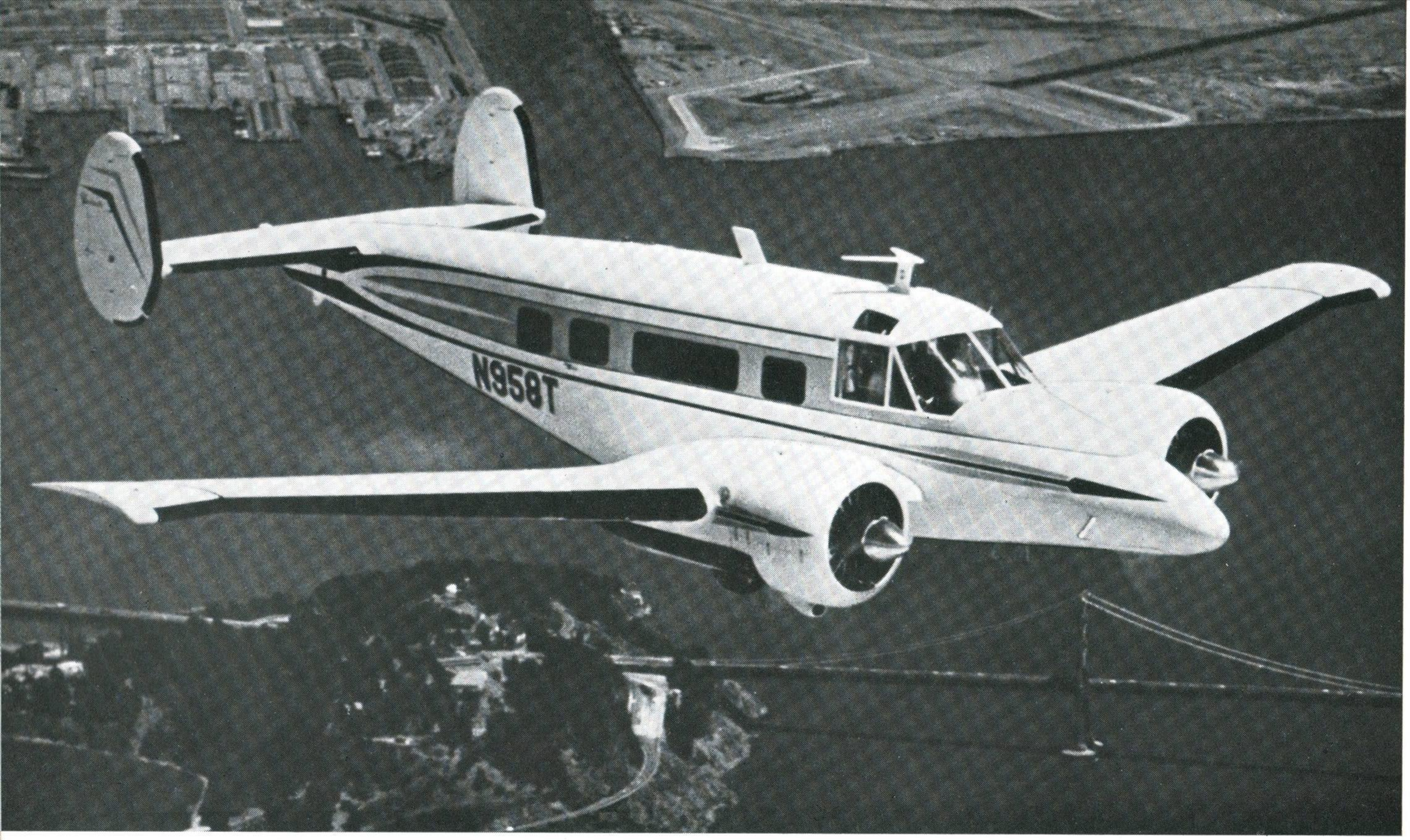

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October 1967



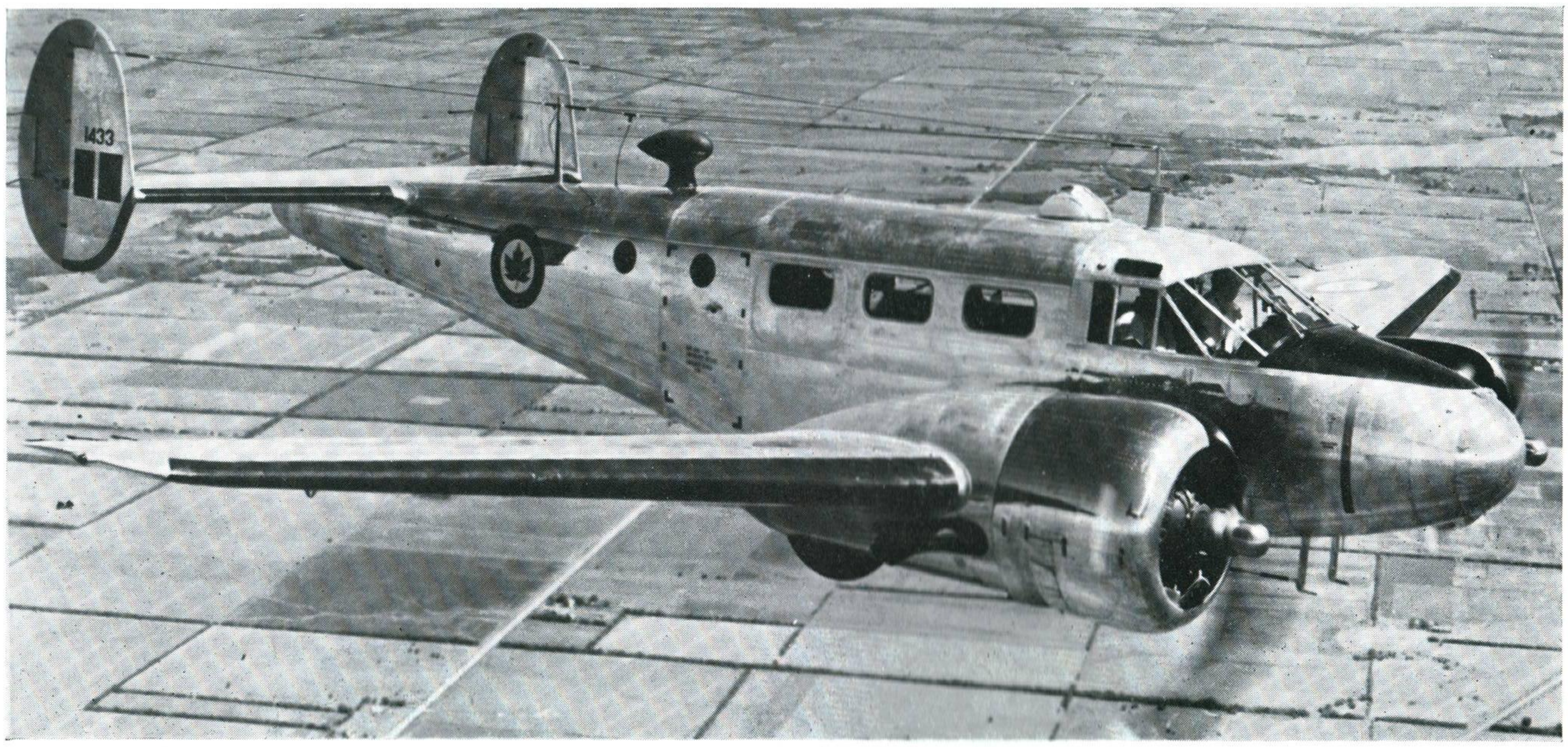
BEECHCRAFT SUPER 18

BEECHCRAFT 18

It is claimed that the Beechcraft Model 18 has been in continuous production longer than any other aircraft type; the first Model 18 flew in 1937 and the Super H18 is still in production.

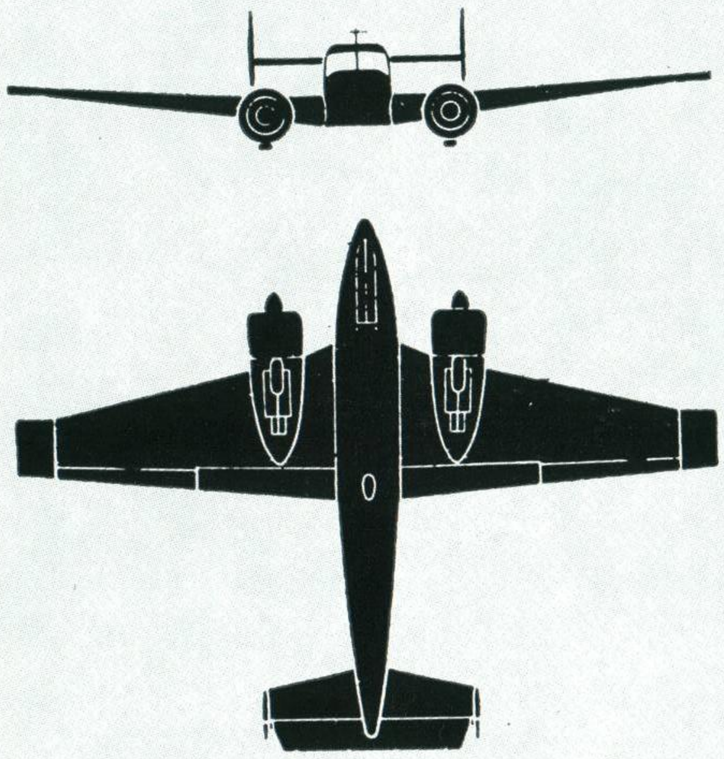
Over 9,000 commercial, military and private models have been built and it is still in U.S. Air Force and Navy service as the C-45. During the war over 400 were supplied to the British Services under Lend/Lease arrangements. It was officially named Expediter and served both the Royal Navy and the Royal Air Force, chiefly in overseas theatres.

In recent years this model has been refined to modern, executive class aircraft standards. Cabin window arrangement and nose shapes have changed and a nose landing wheel has been introduced; also the wing shape has changed at the tips, but in spite of successive development there is a Beechcraft 18 characteristic common to the old type (as shown below) and the new type (as shown above). To know the basic Beechcraft 18 and Super 18, use the instructions on page 254 and apply them to this lesson. Since the name Expediter lapsed when it was withdrawn from British service, Beechcraft 18 is its recommended reporting name.

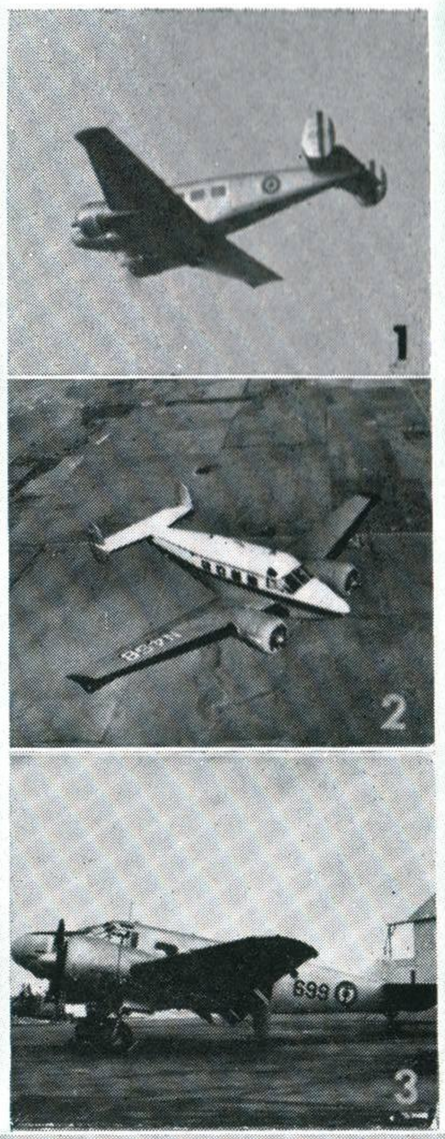


BEECHCRAFT 18

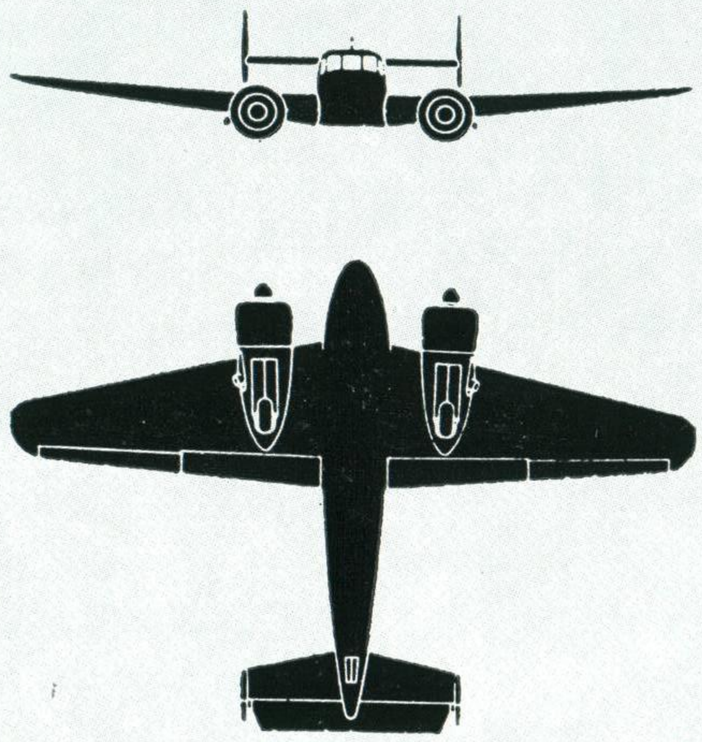
BEECHCRAFT SUPER 18



Span 50 feet



BEECHCRAFT 18



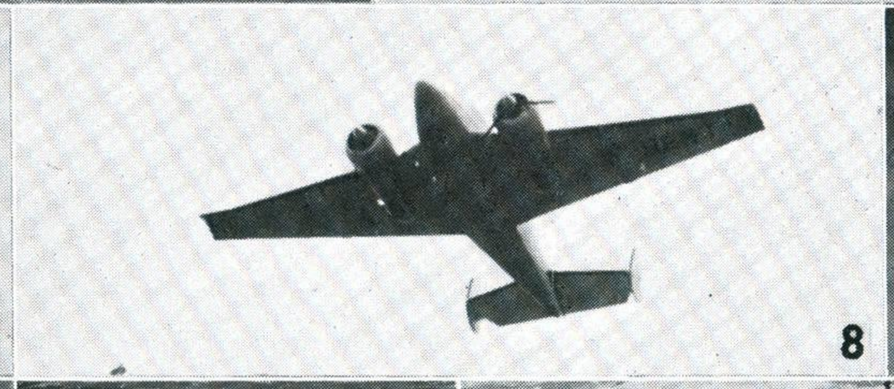
Span 48 feet

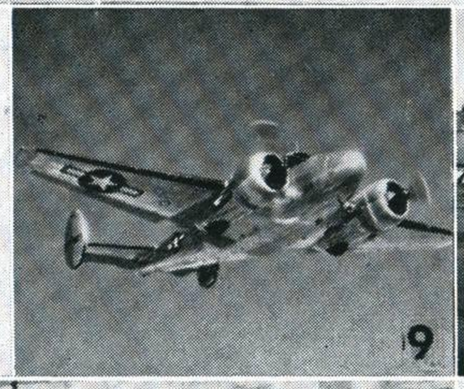






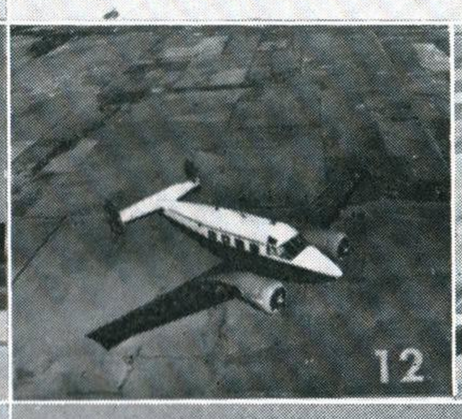












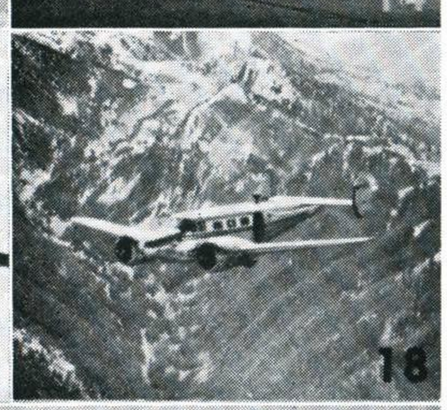


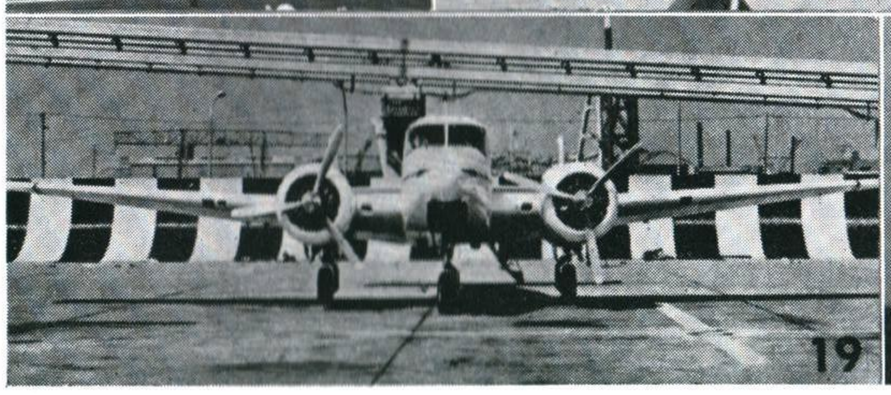


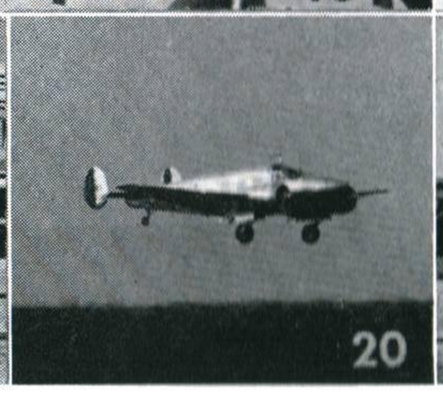












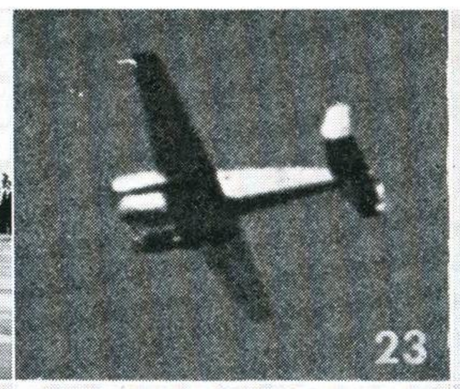


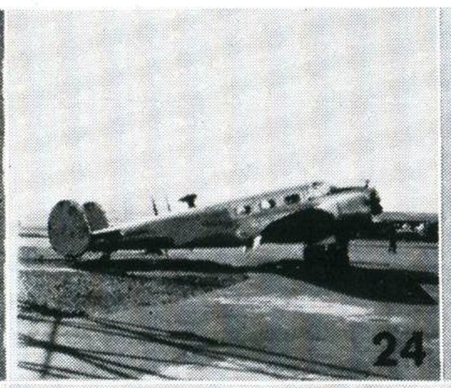
continued overleaf



BEECHCRAFT 18 continued

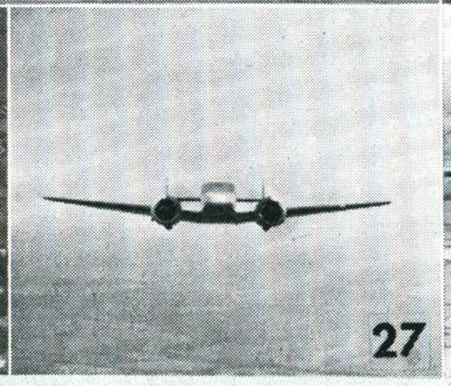

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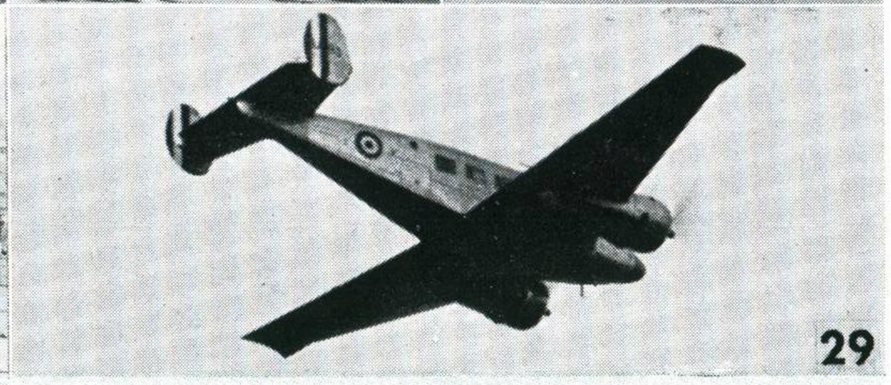

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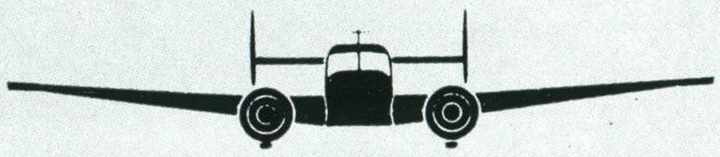

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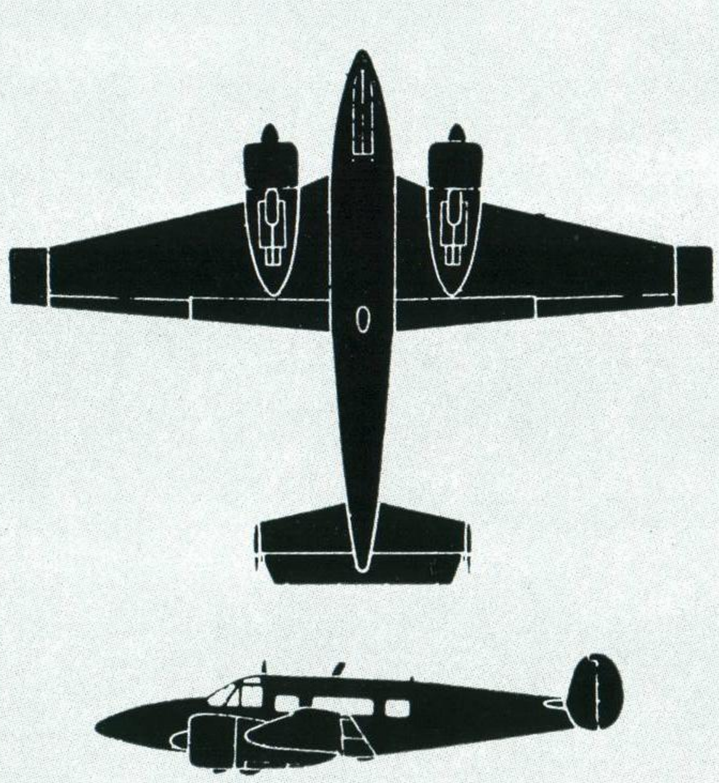

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BEECHCRAFT SUPER 18



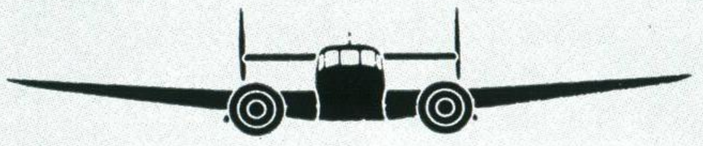


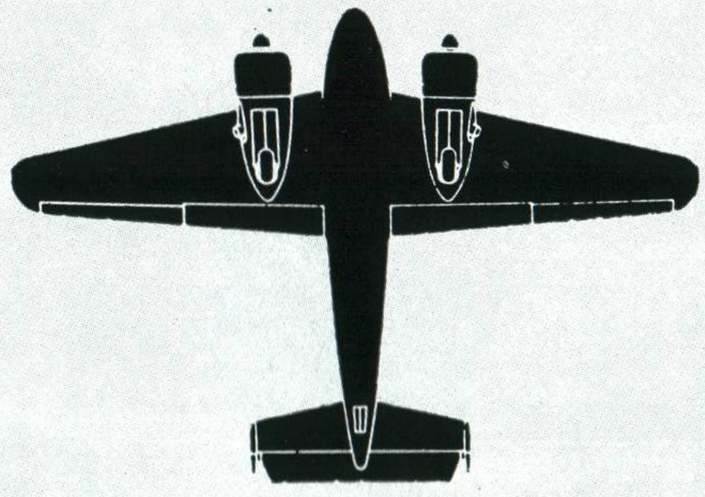

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BEECHCRAFT 18

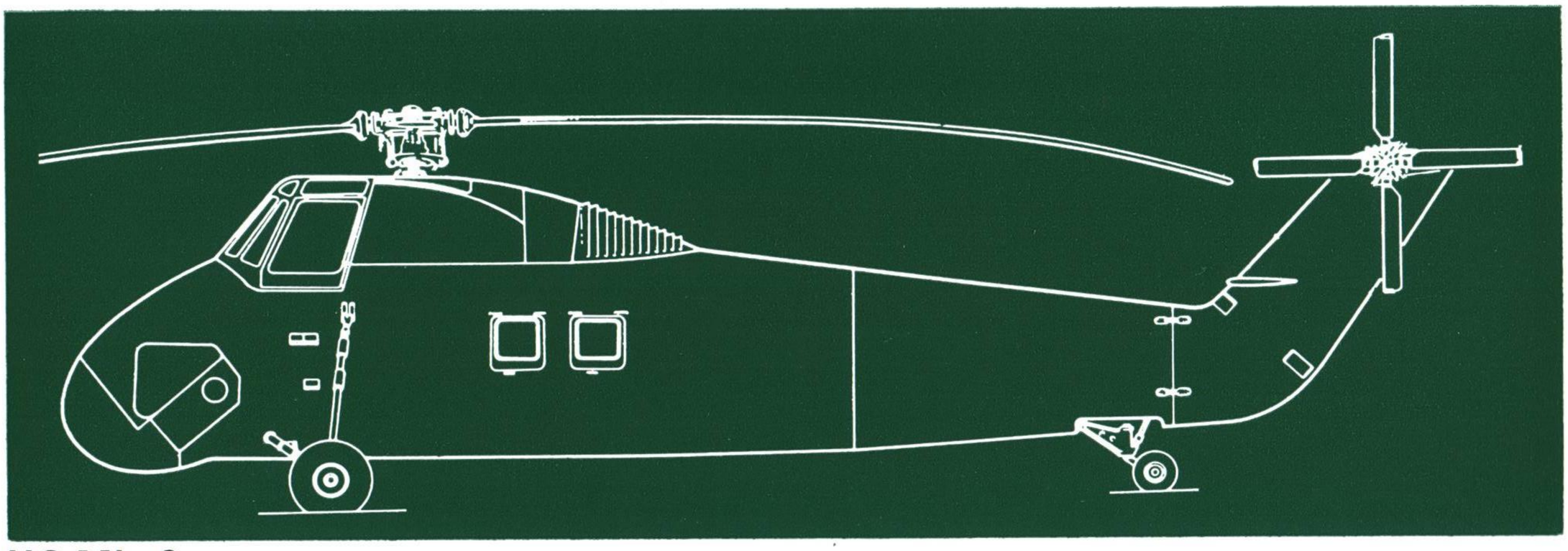




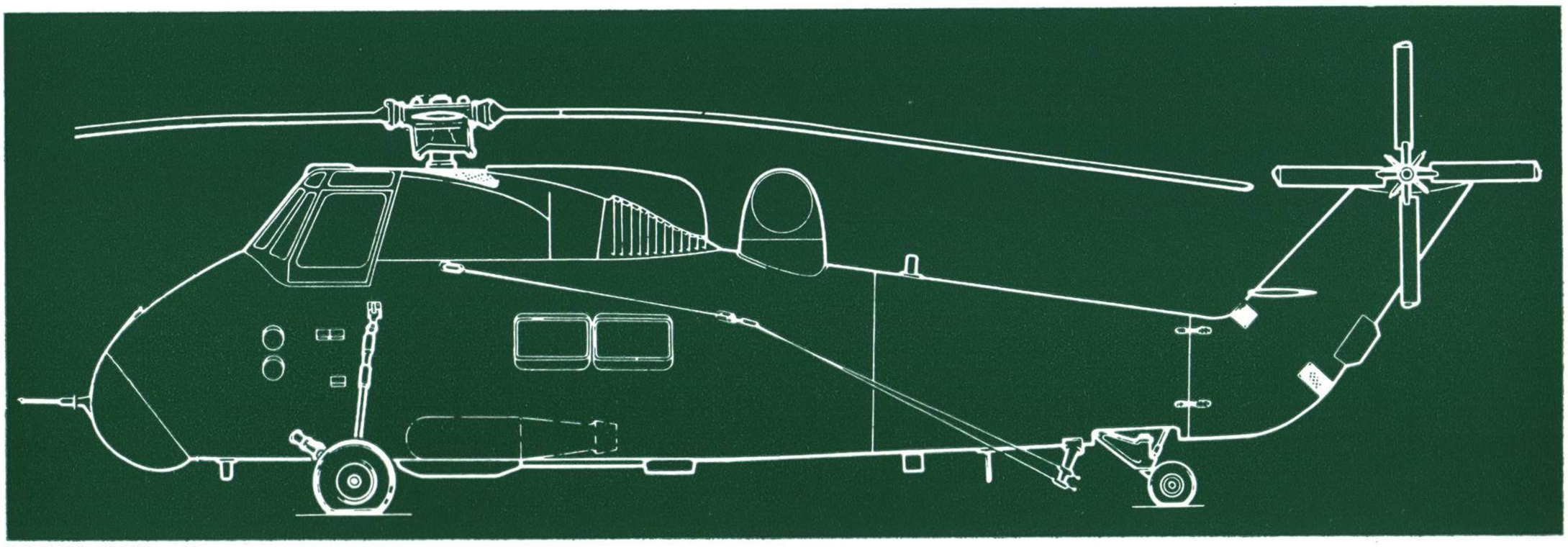


WESSEX

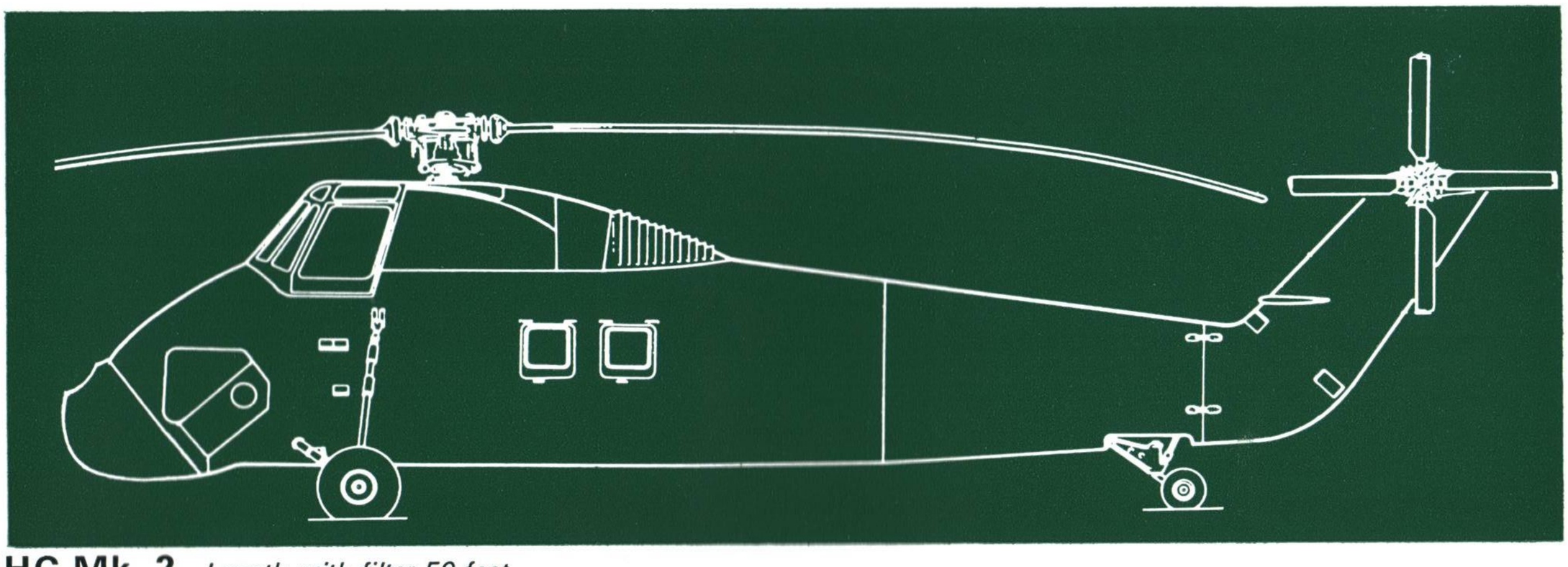
The R.A.F. version of the widely-used Sikorsky S-58 is the Wessex H.C.2, a tactical support aircraft. Similar to the Wessex H.C.2 is the Royal Navy's HU.5 general purpose and commando helicopter. As mentioned in the *Journal* for March 1967, nose filters have been introduced on Wessex models in overseas service and these filters are likely to be seen on Marks 2 and 5 including the civil Mk. 60. The shape of the nose filter is shown in the drawing at the bottom of this page. However, for training purposes, concentrate on learning the basic shape of the Wessex and ignore this non-standard feature. Export versions of the Wessex have been supplied to the Royal Australian Navy, the air forces of Ghana and Iraq, and also to Brunei.



HC Mk. 2



HAS Mk. 3



HC Mk. 2 *Length with filter 50 feet*

















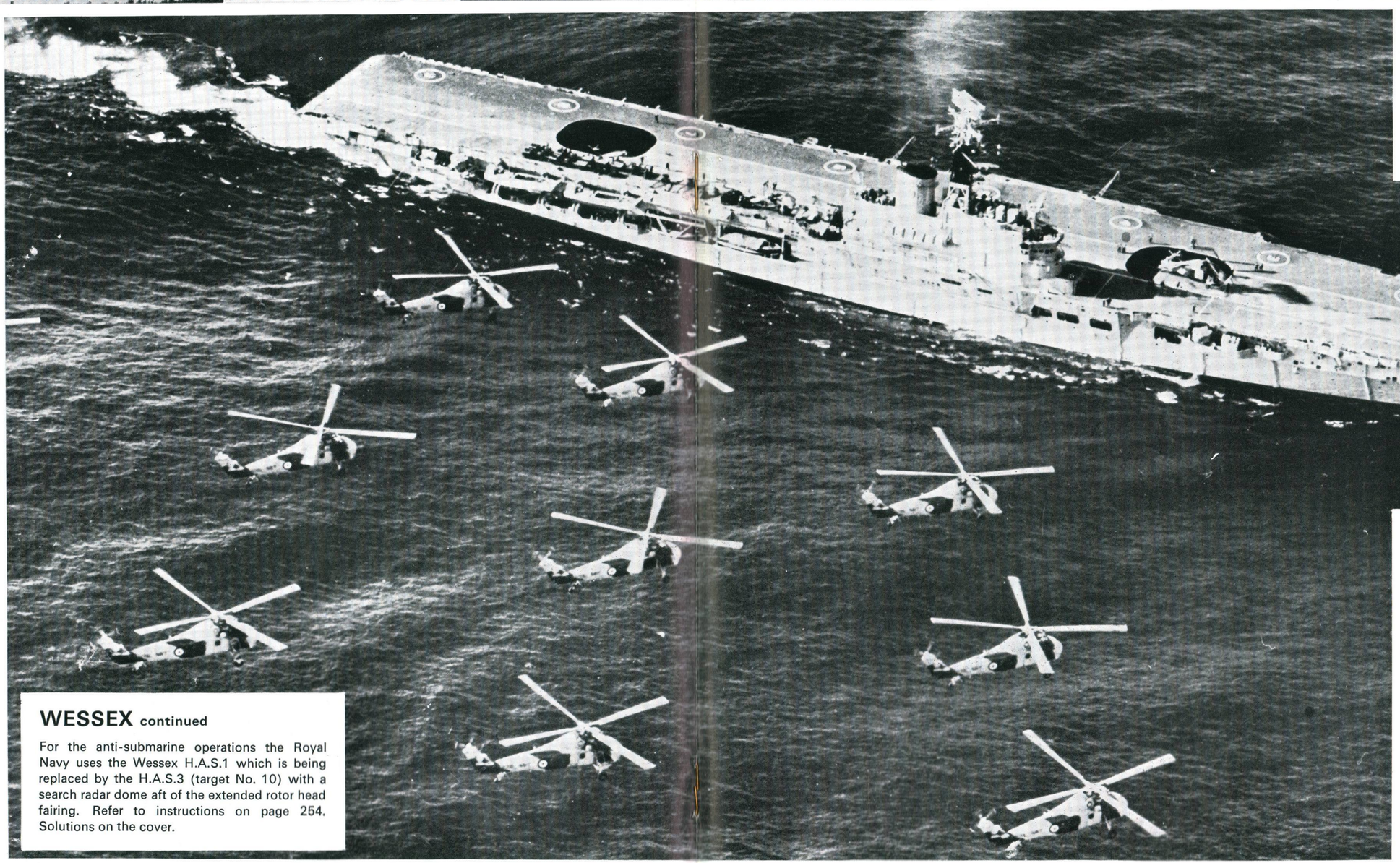












WESSEX continued

For the anti-submarine operations the Royal Navy uses the Wessex H.A.S.1 which is being replaced by the H.A.S.3 (target No. 10) with a search radar dome aft of the extended rotor head fairing. Refer to instructions on page 254. Solutions on the cover.















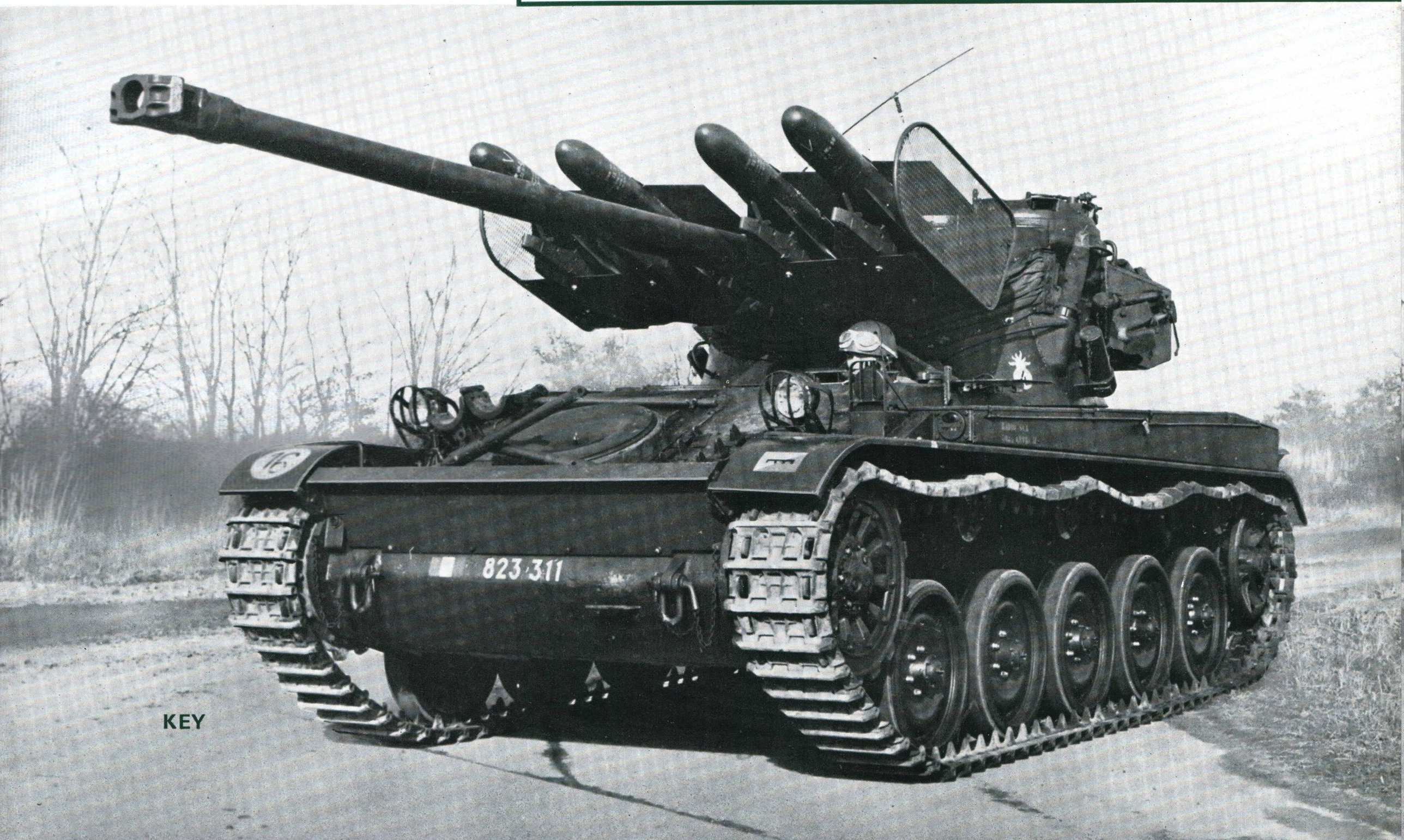








AMX-13 with SS 11 Missiles

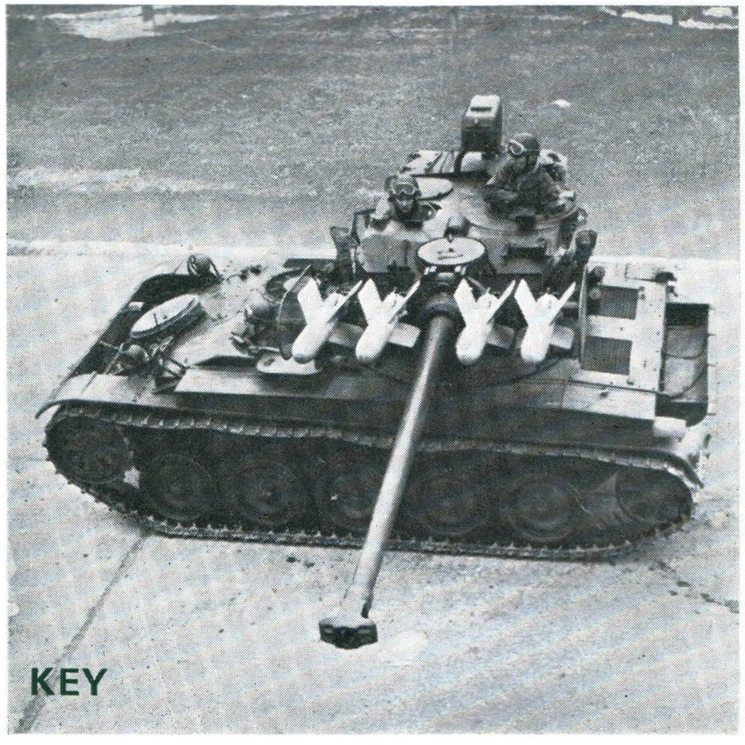


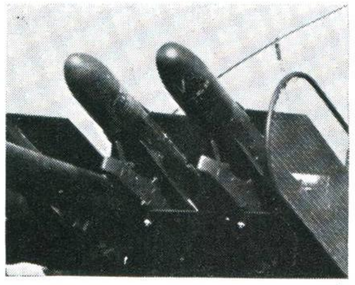
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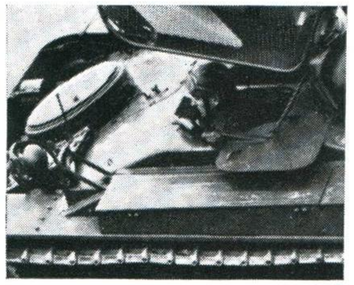
The A.M.X.13 is one of the most widely used tanks today. Not only is it used on a large scale by the French Army but it is also in service with the armed forces of fourteen other countries: Algeria, Austria, Cambodia, Dominican Republic, Egypt, India, Indonesia, Israel, Lebanon, Morocco, Netherlands, Peru, Switzerland and Venezuela.

The large-scale use of the A.M.X.13 has been accompanied by the developments of variants.

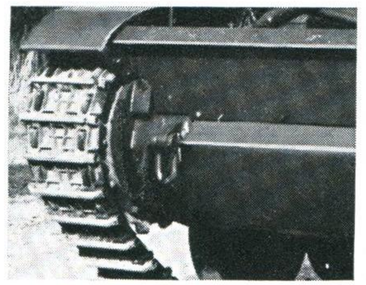




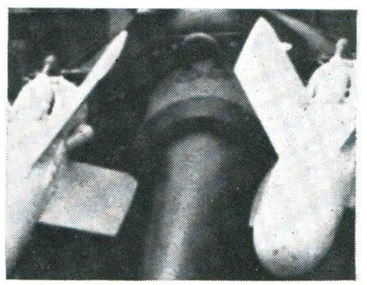
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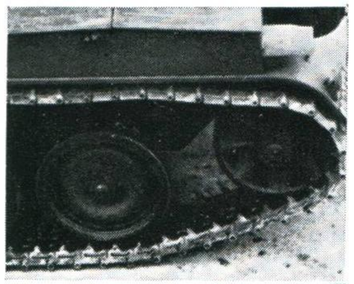
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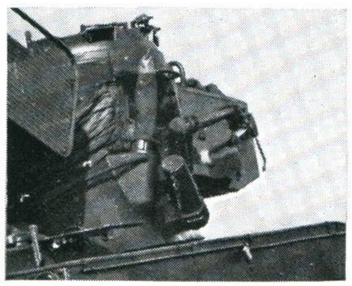
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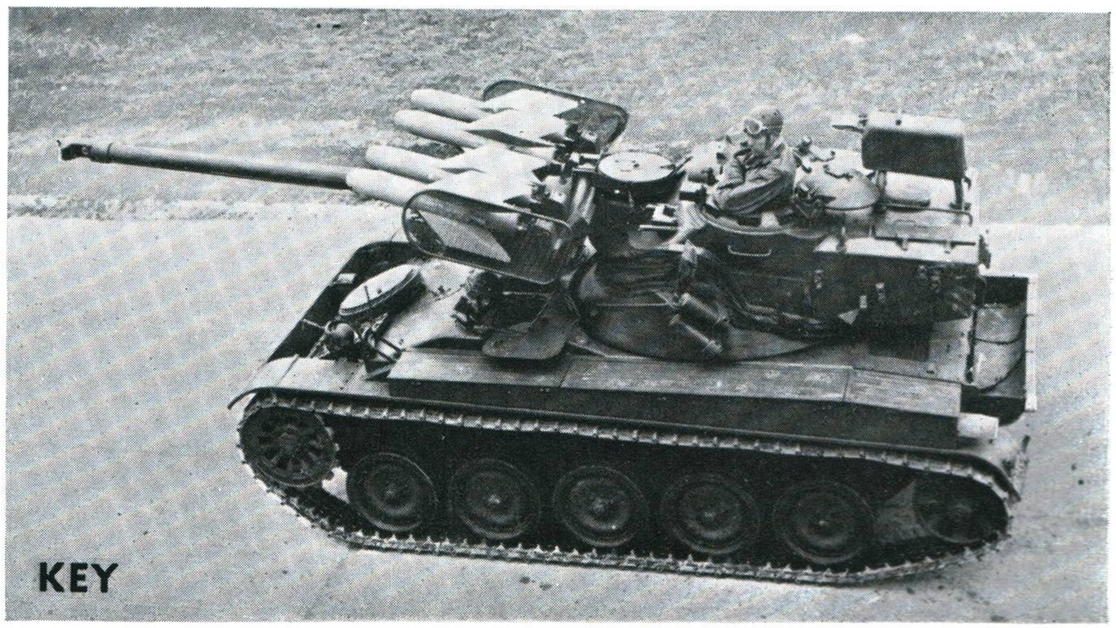
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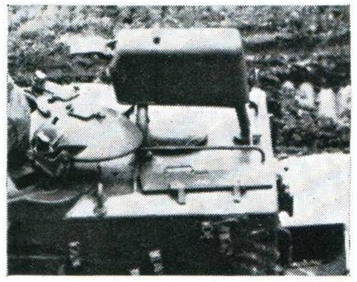


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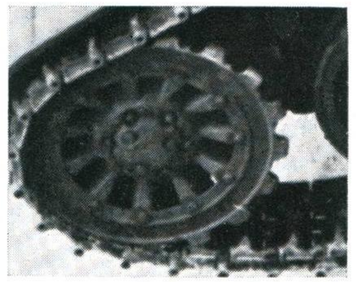


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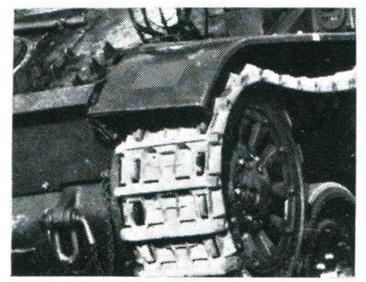




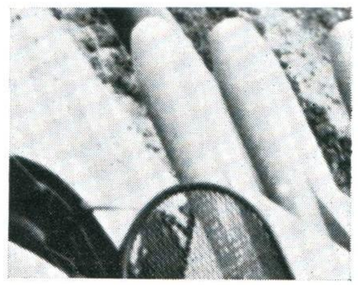
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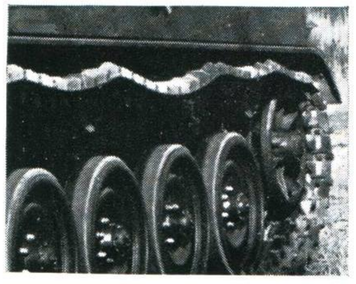
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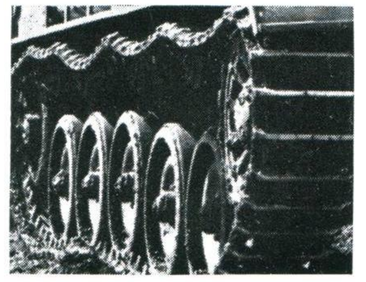
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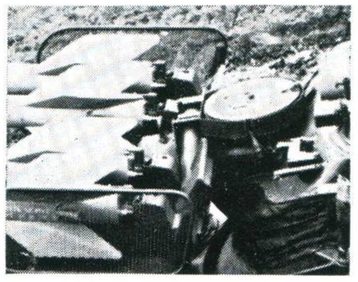
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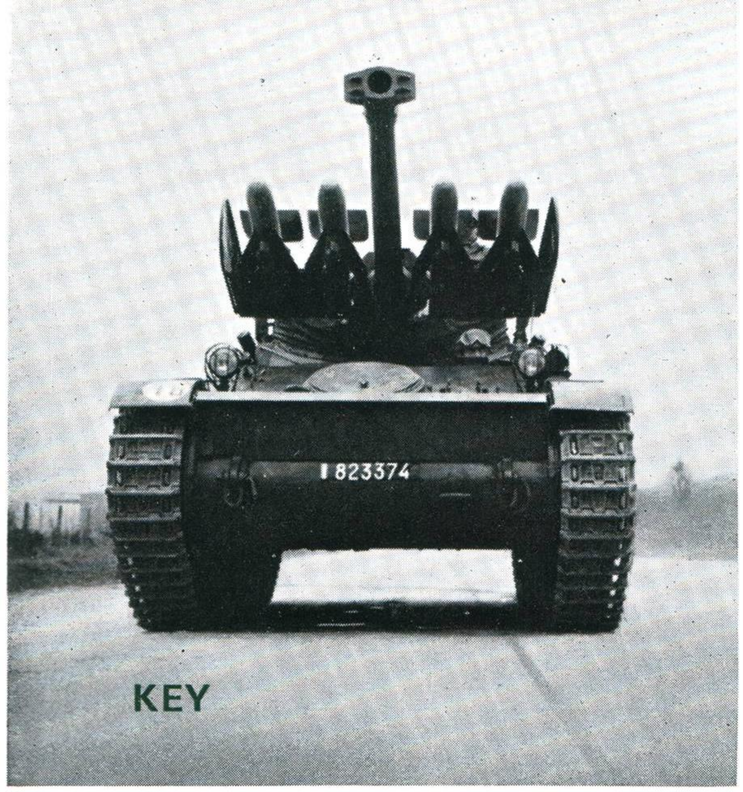


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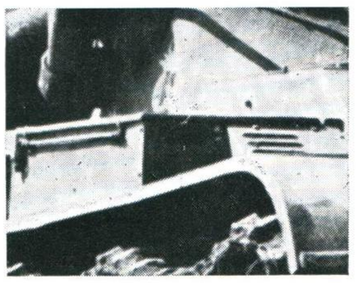
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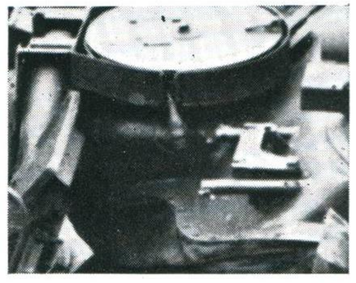


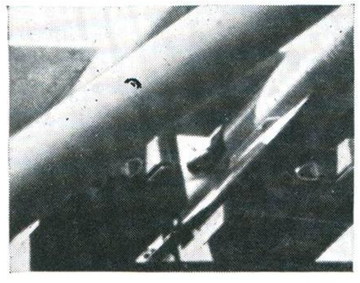
One of them is the version used in the Netherlands which is almost indistinguishable from the standard model but which, in fact, has a 105-mm. gun instead of the usual 75-mm. gun. The latest version has yet another type of main armament, but its 90-mm. smooth-bore gun is readily distinguishable because of the cylindrical thermal shield around the barrel.

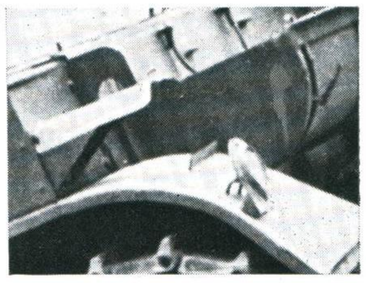
However, the most common variant of the A.M.X.13 is the 75-mm. gun model modified to carry four SS.11 missiles, which is the subject of this lesson. As can be seen in the key views, the missiles are mounted externally, at the front of the

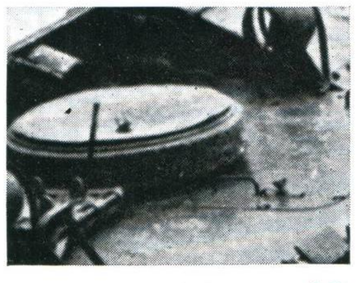
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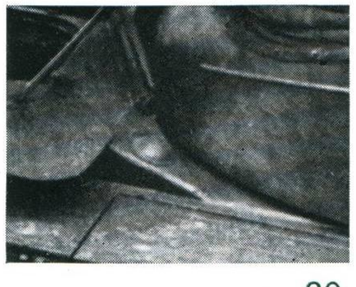

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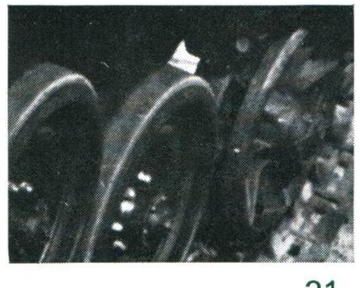

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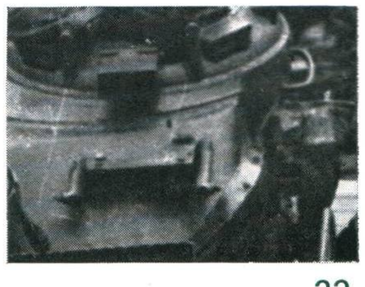

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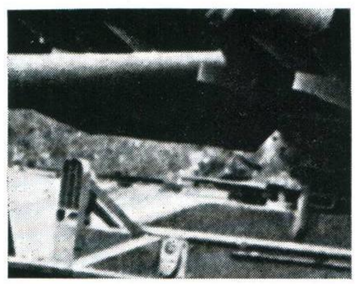

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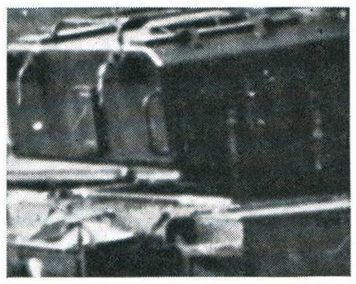

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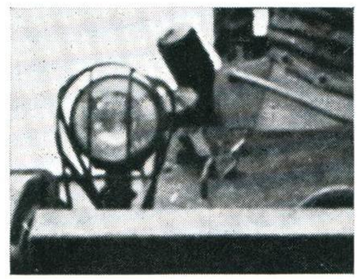

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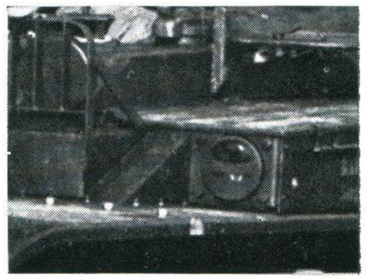

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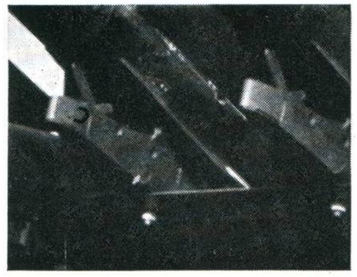

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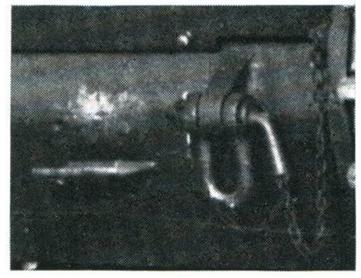

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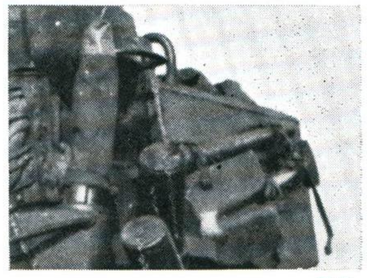

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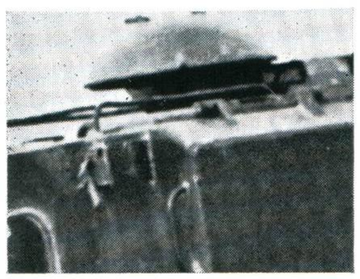

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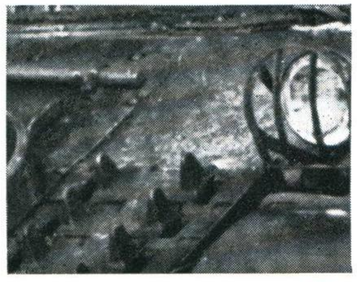

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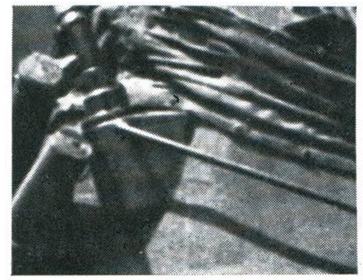

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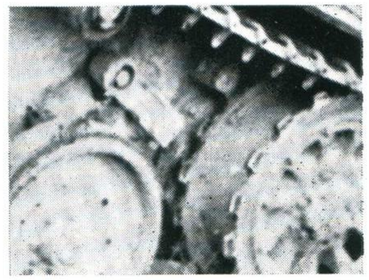

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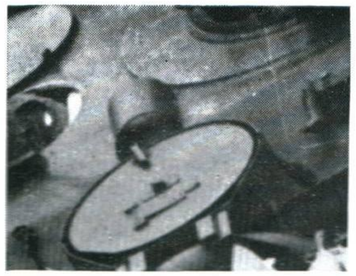

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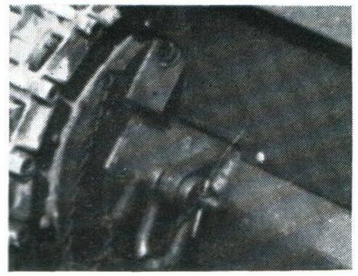

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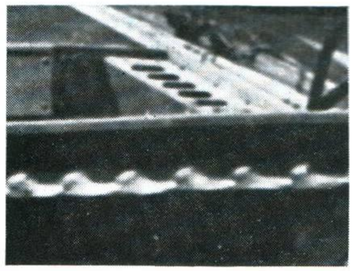

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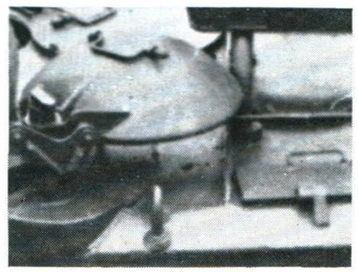
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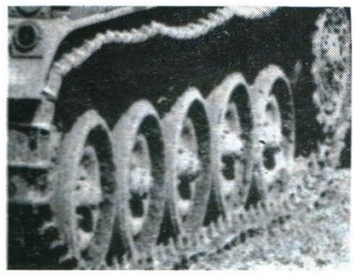
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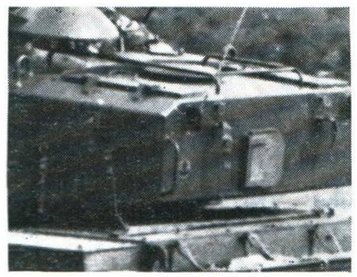
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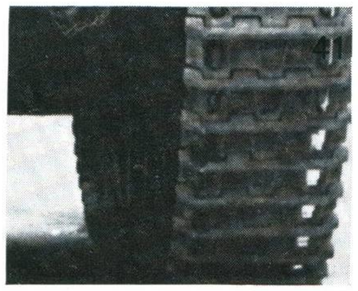
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AMX-13
with SS 11 Missiles

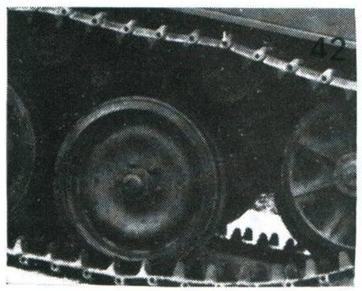




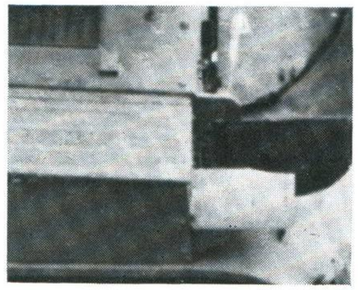
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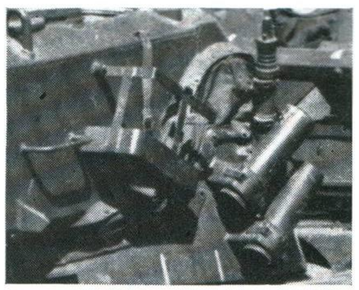
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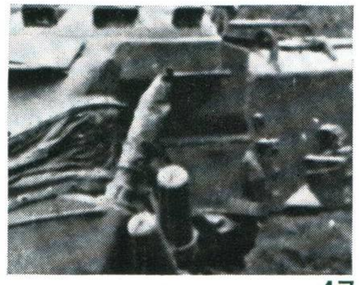
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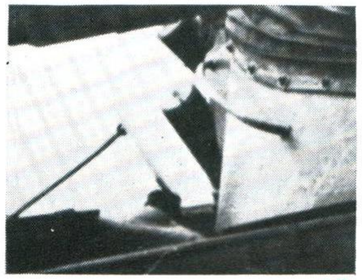
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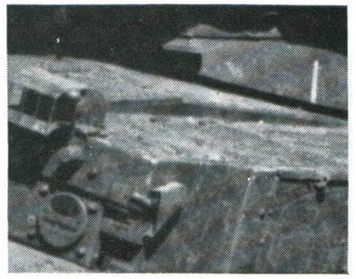
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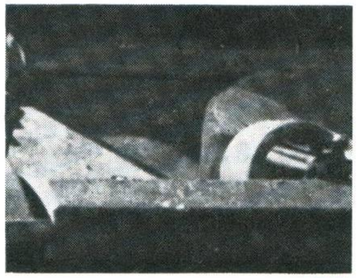
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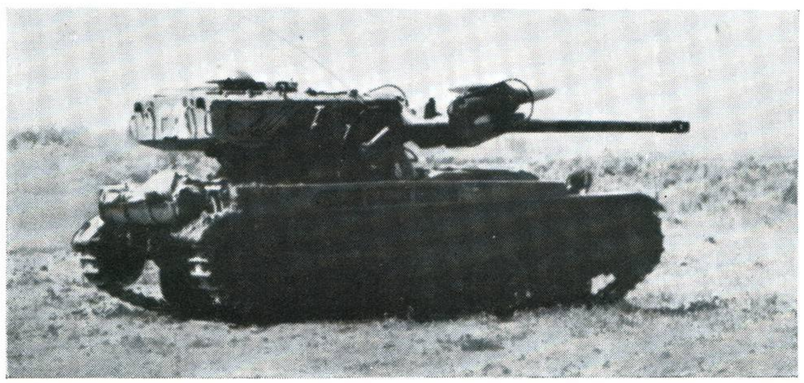
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October 1967

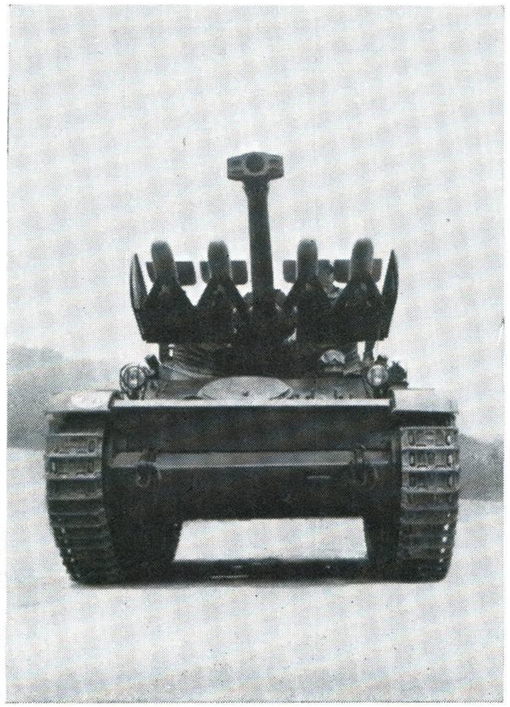


turret, and make it easy to recognise the missile carrying model from the other versions of the A.M.X.13.

Each French tank regiment has a squadron of these missile-armed tanks to three squadrons of standard A.M.X.13 or battle tanks, to increase their ability to destroy enemy tanks at long range.



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AMX-13 with SS 11 Missiles



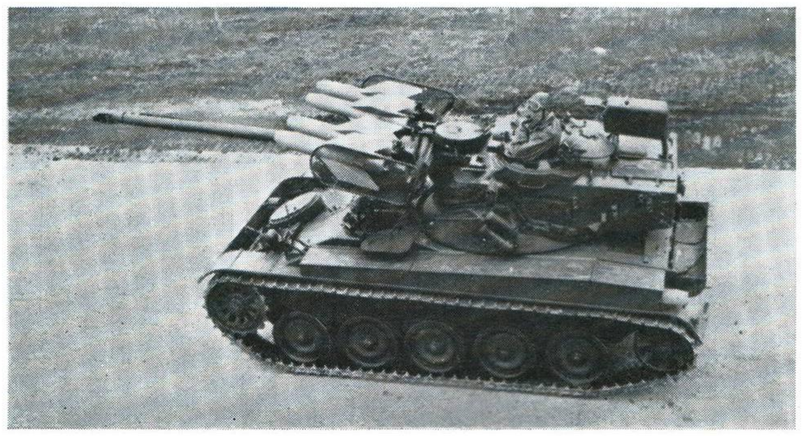
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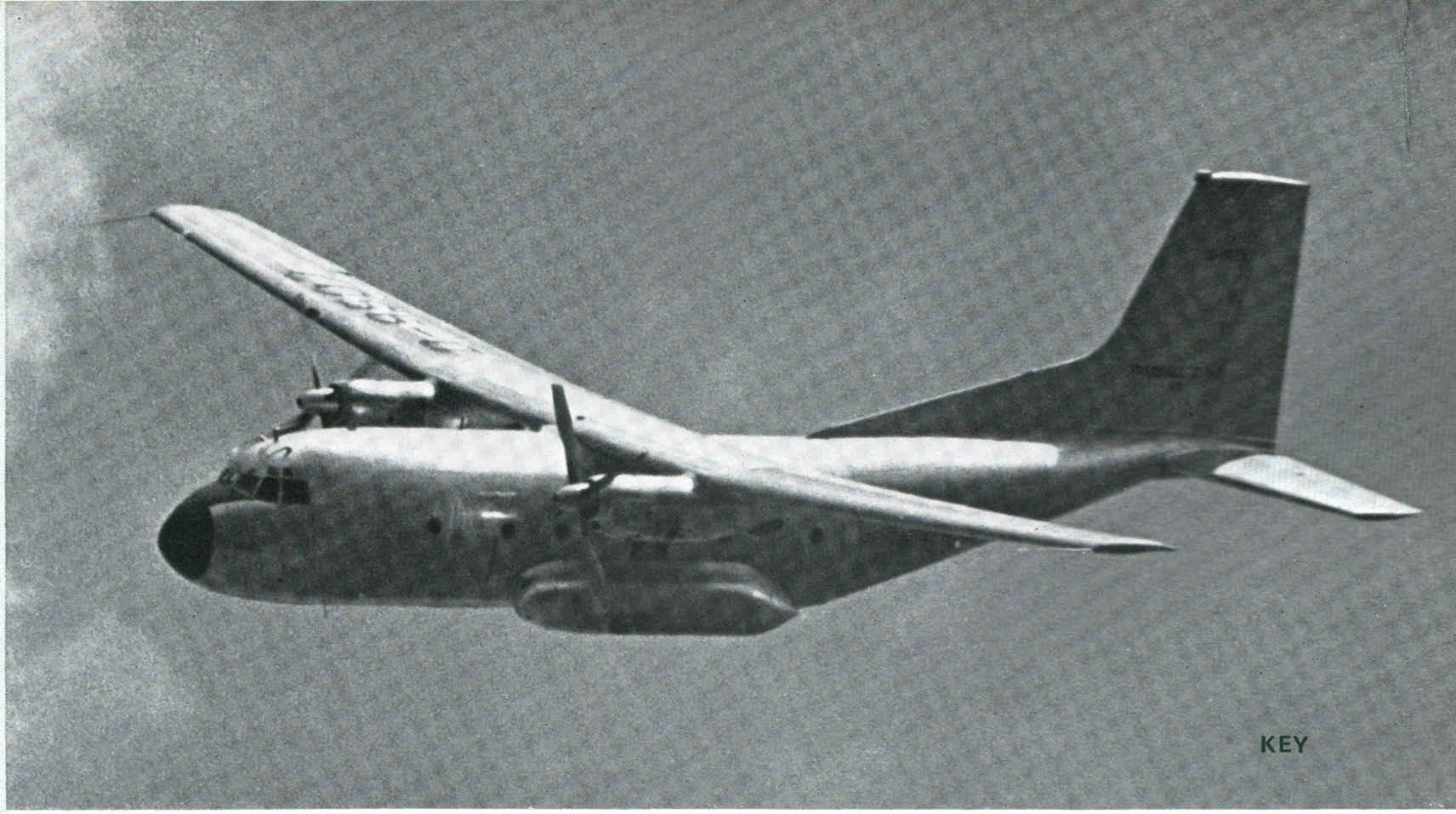


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TRANSALL C.160

This military transport is being produced jointly by France and Germany and its name Transall is derived, appropriately, from *Trans*porte and *All*ianz. The two countries have shared the design and production of the airframe while the Tyne engines are being built jointly by a four-nation consortium.

Designed as a replacement for the Noratlas, the Transall has a crew of four and can accommodate such loads as 81 paratroops, 62 casualty stretchers, two heavy vehicles or any desired freight up to a maximum short-range payload of 35,280 lb.



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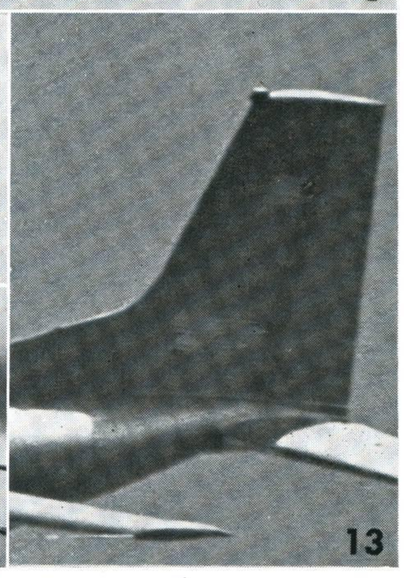

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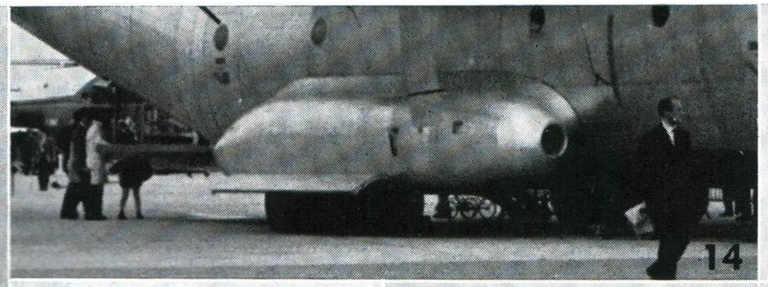

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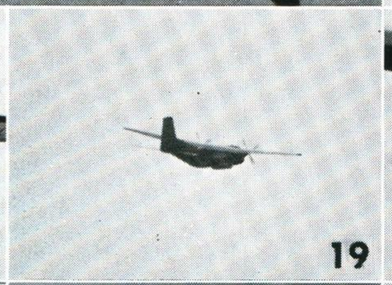

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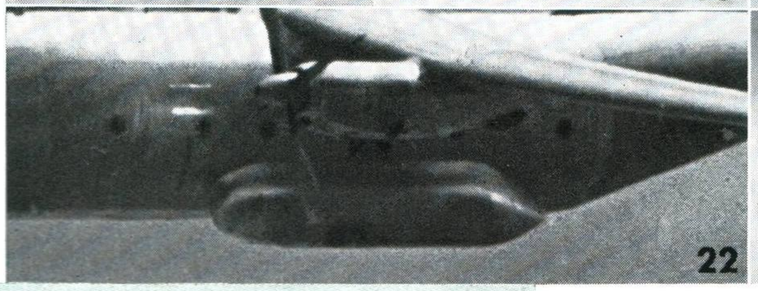

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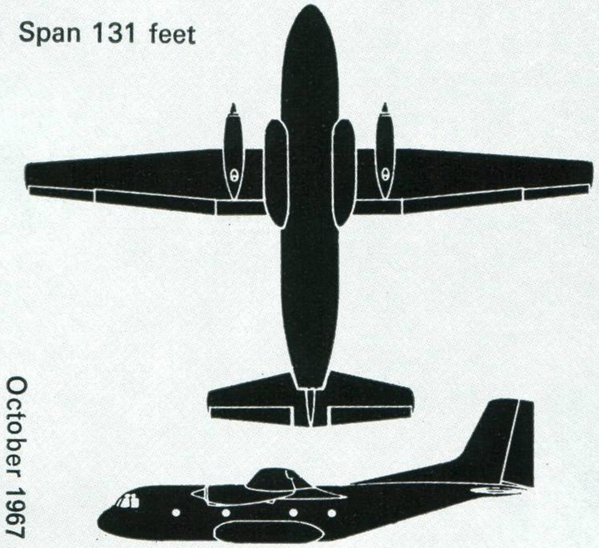

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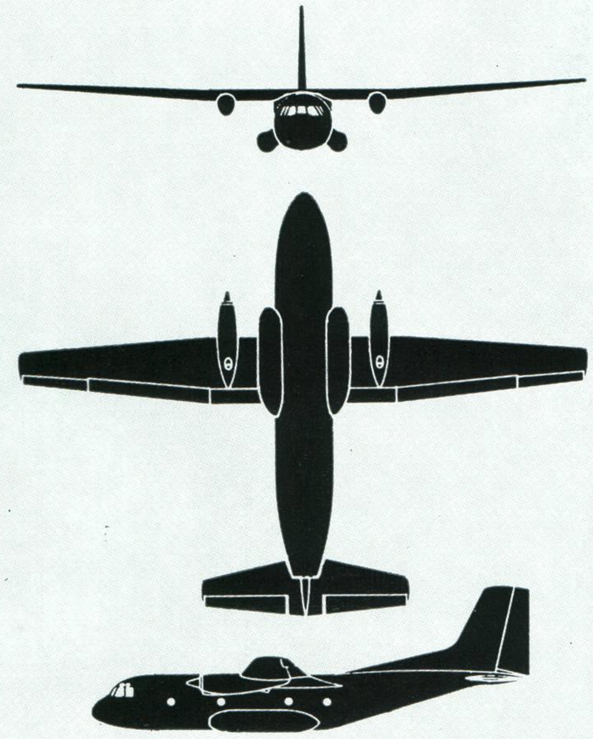


Span 131 feet





continued overleaf





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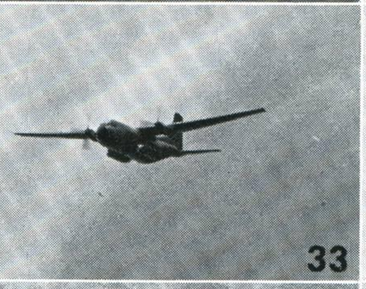
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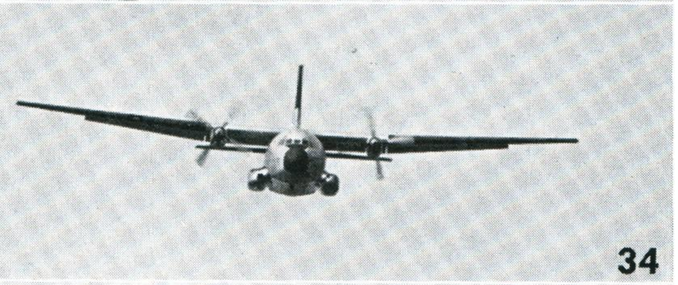
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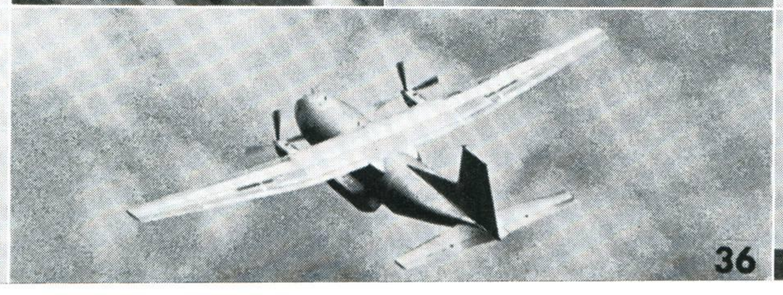
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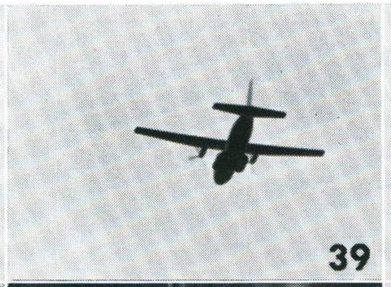


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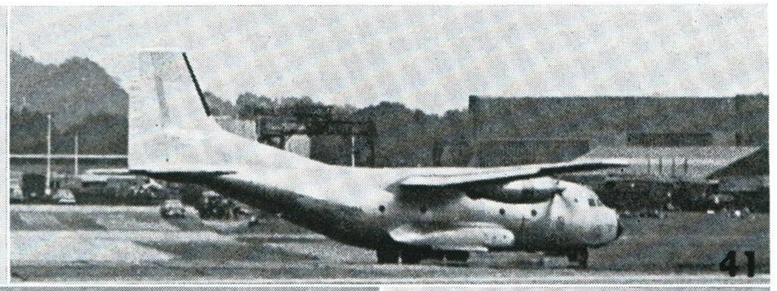


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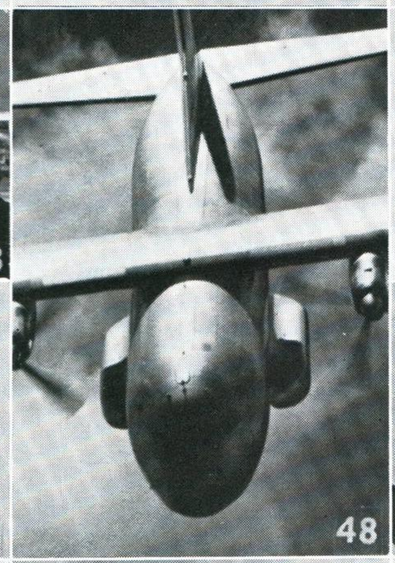

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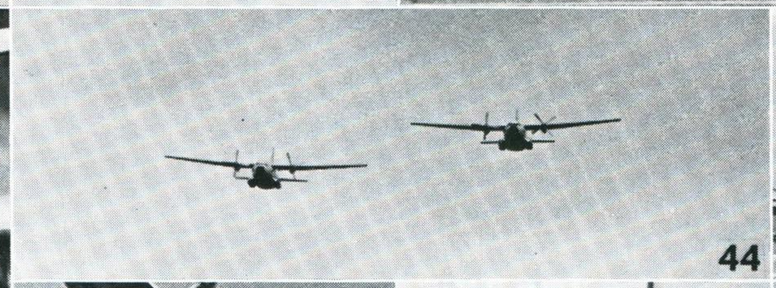

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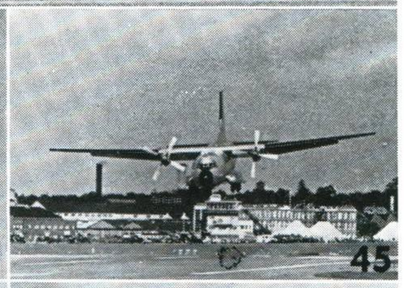

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The Transall is in quantity production for the *Armée de l'Air* and the *Luftwaffe*, and a small number are to be supplied to South Africa.

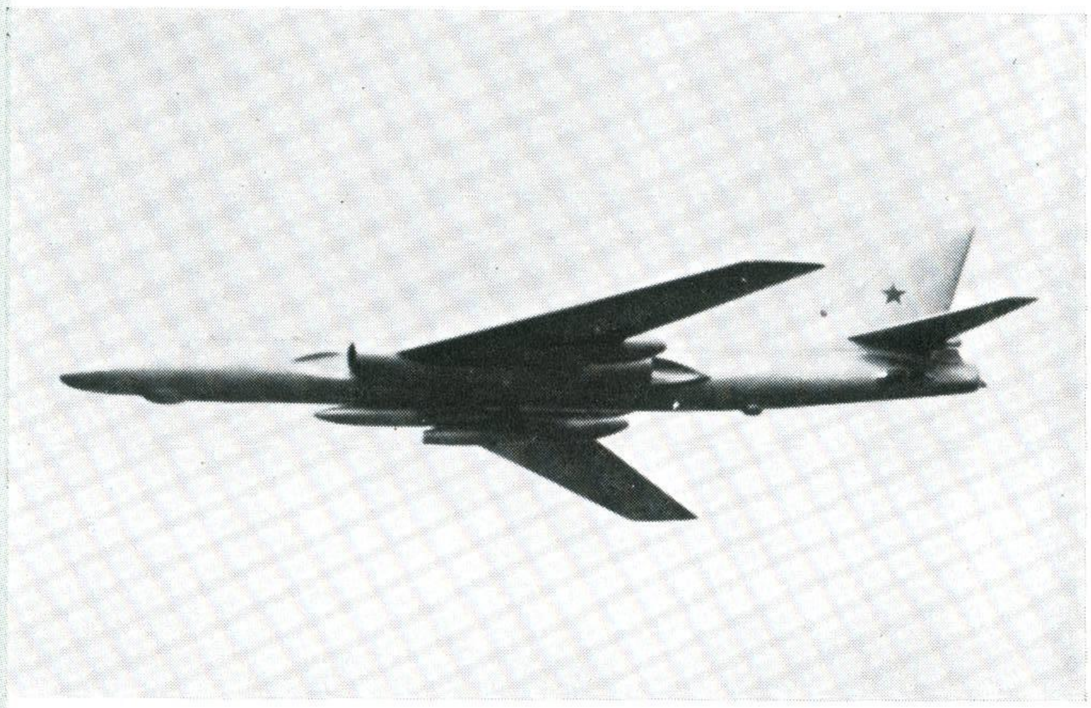
The Transall closely resembles the Nord 262 and, from some angles, it can appear similar in shape to those four-engined transports, the Belfast, Cargomaster and Hercules, and Russia's Cat and Cub, so work carefully to the lesson instructions on page 254 to learn to identify this important Franco-German "twin".

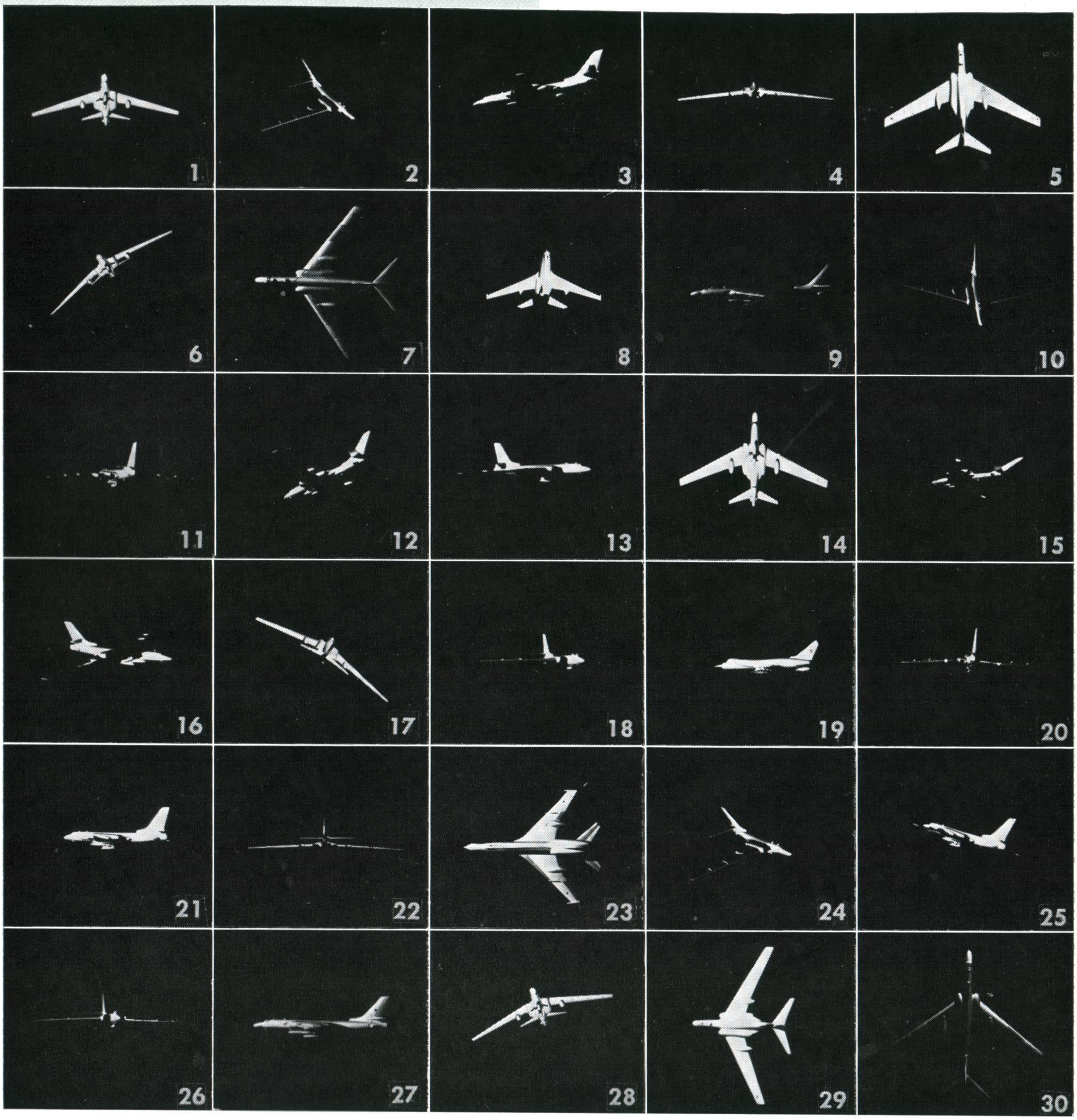
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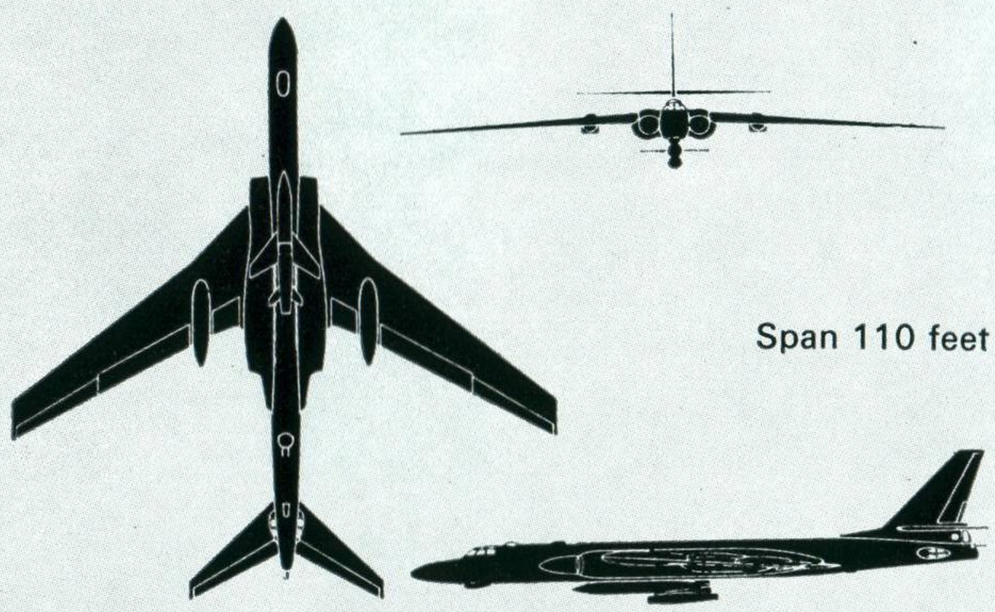


BADGER TU-16

Versions of Badger (Tu-16) are still in Russian service, the latest version being Badger-C which has an extensively modified nose and a Kipper stand-off missile slung beneath its fuselage (see key views). Earlier versions have been supplied to the U.A.R. and Indonesia, and one of these, Badger-B, carries two Kennel anti-shipping missiles on under-wing pylons. Use instructions on page 254 and report targets as Badgers, or otherwise if jokers. Solutions on back cover.



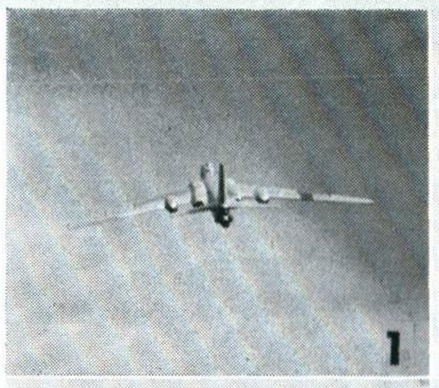


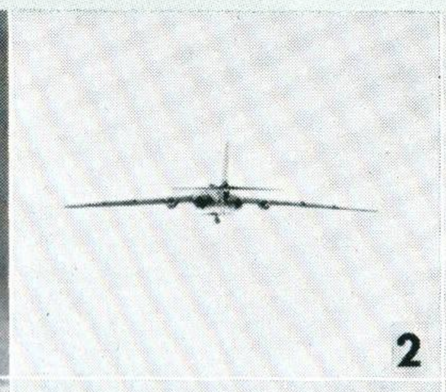


Span 110 feet

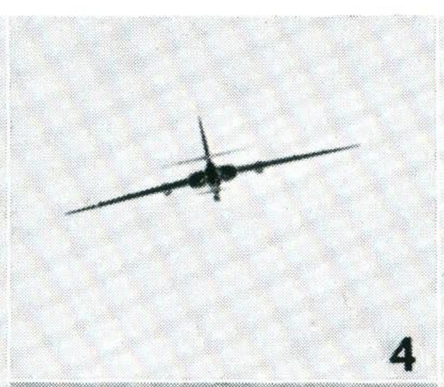
BADGER Tu-16

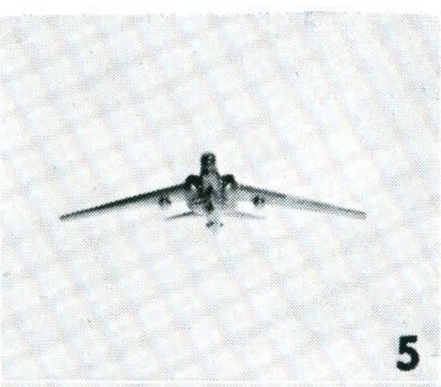


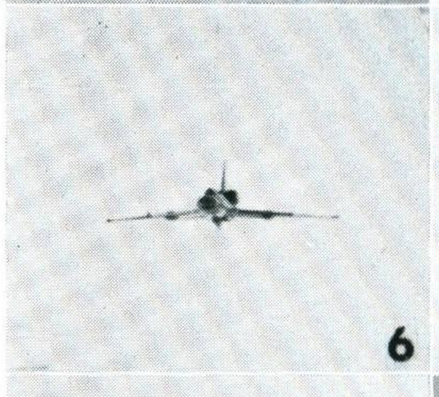

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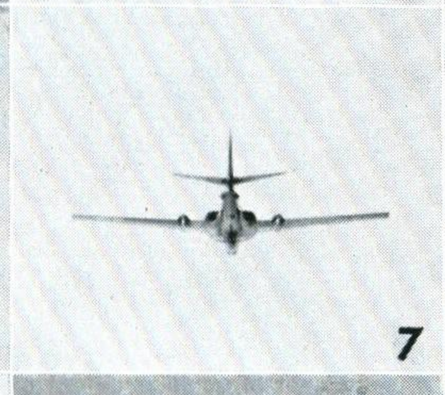

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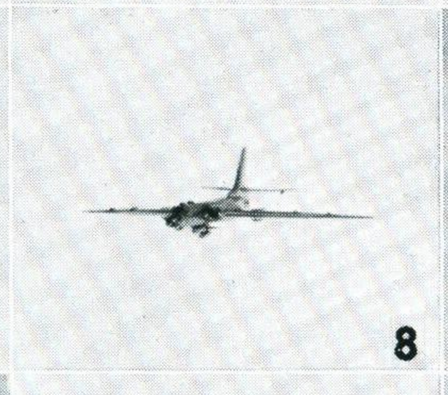

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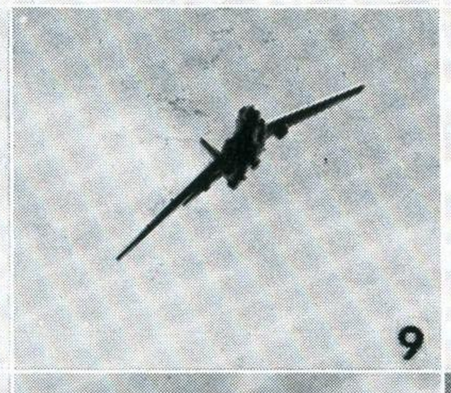

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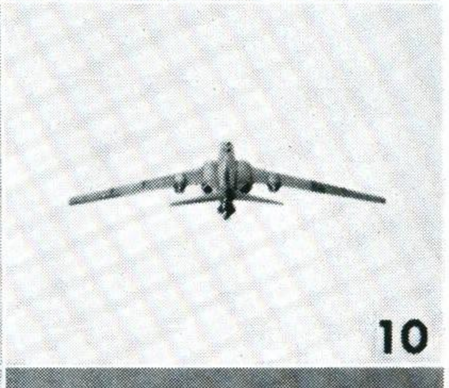

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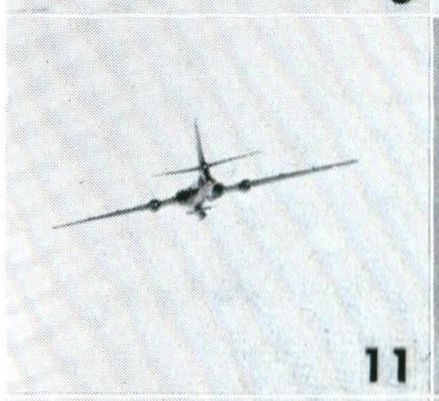

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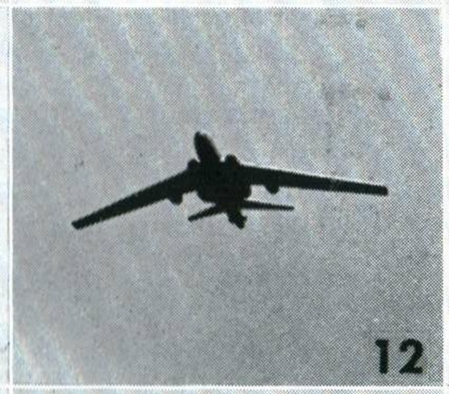

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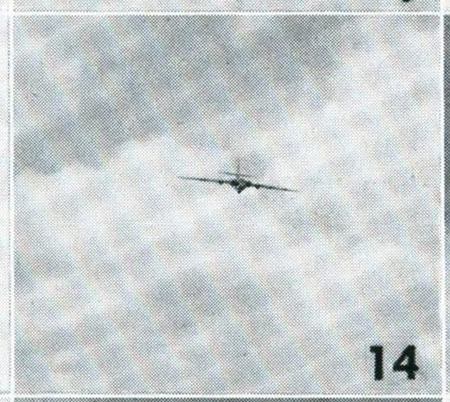

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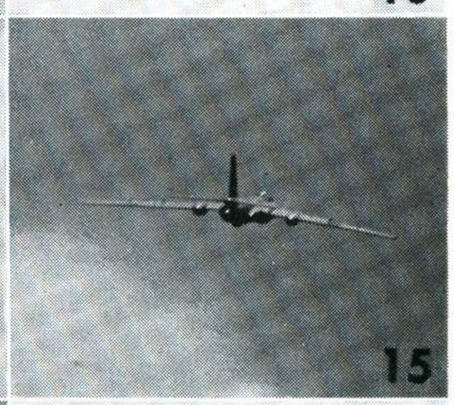

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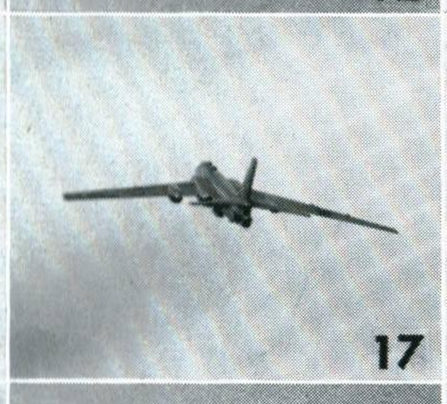

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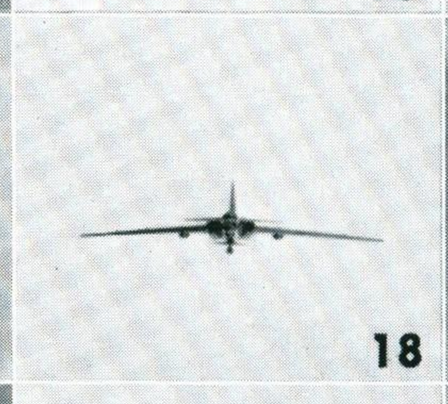

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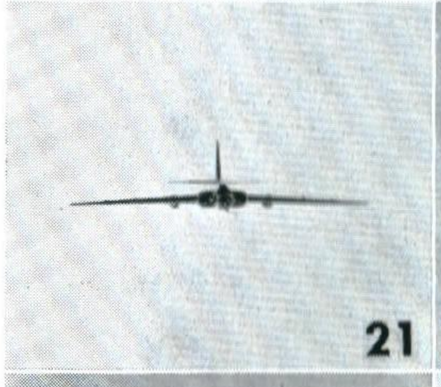

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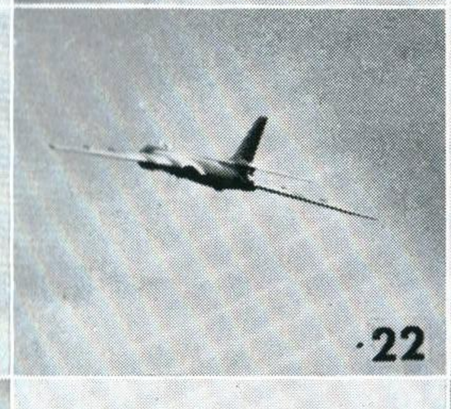

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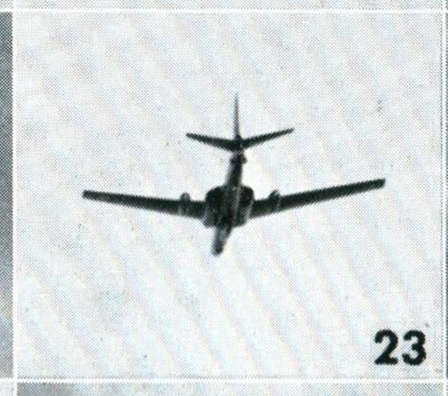

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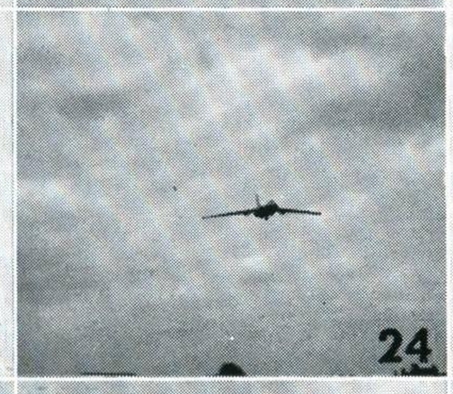

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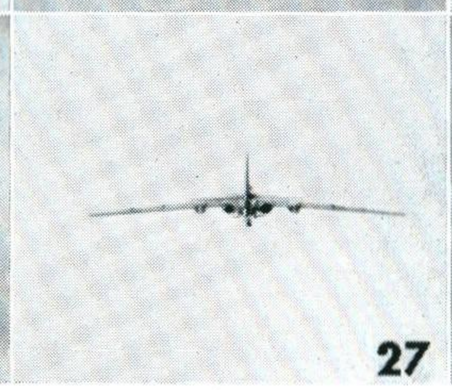

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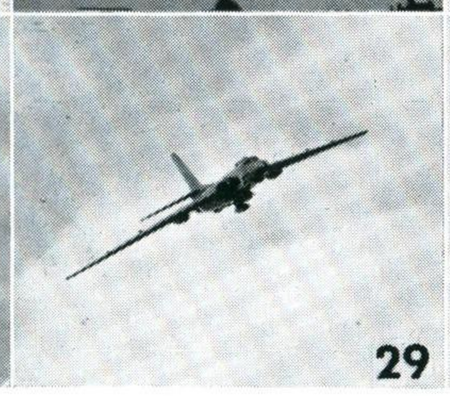

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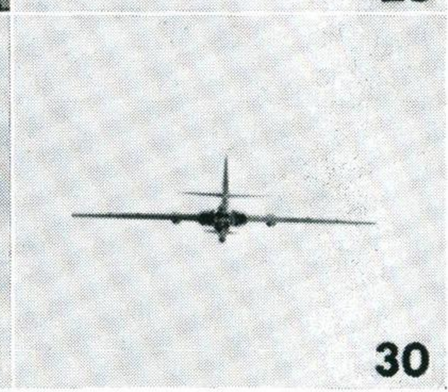

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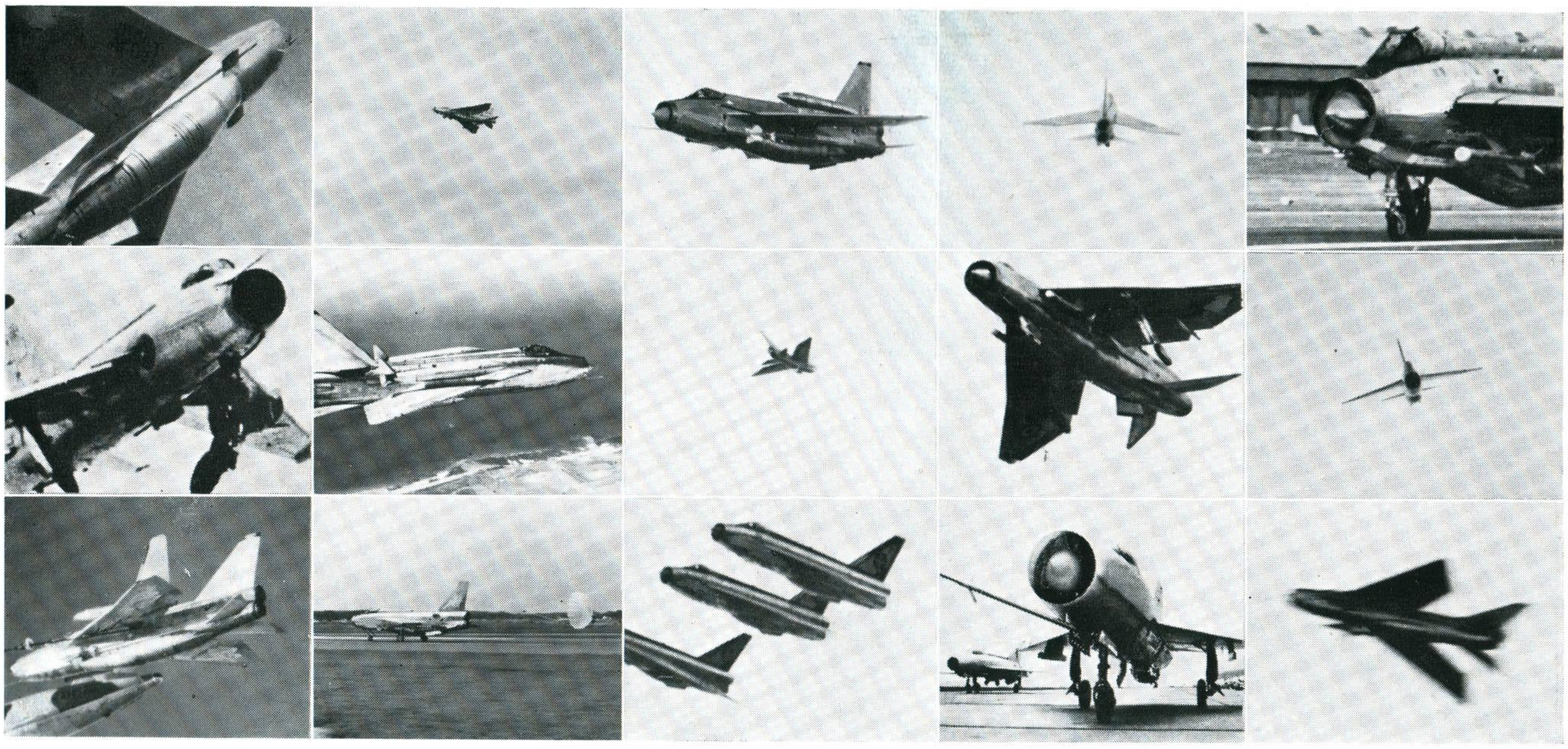

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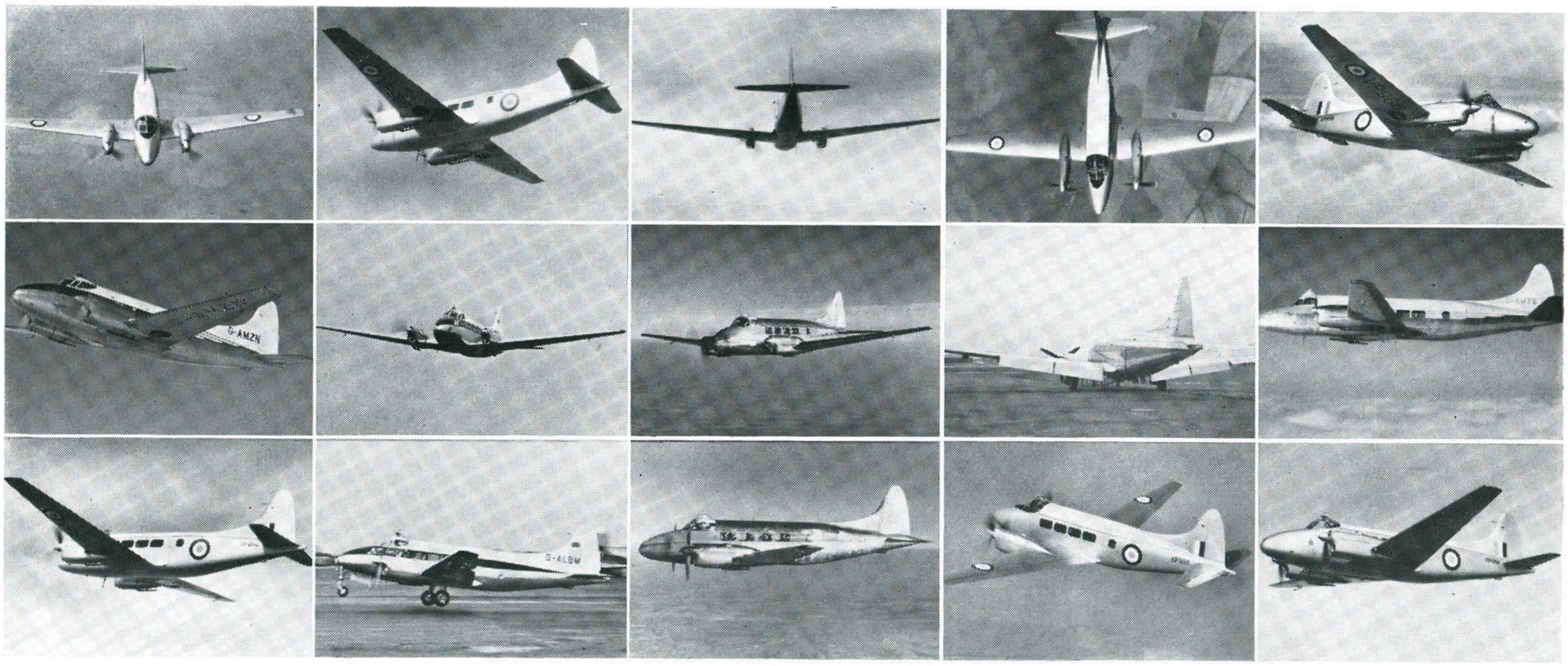

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TEST PAPERS

LIGHTNING ?



DOVE ?



SOLUTIONS TO TESTS AND EXERCISES

Page 258

FIAT G91

All targets are of **Fiat G.91** except as follows: No. 9 **Super Sabre**, No. 19 **Mystère IVA**, and No. 34 **Sabre**.

Page 262

BEECHCRAFT

All targets are **Beechcraft** except No. 6 which is **NC 701 (Siebel S 1204A)** and No. 23 **NC 702 Martinet (Siebel S 1204D)**.

Page 265

WESSEX

All targets are of **Wessex** except Nos. 13 and 21 which are **Whirlwinds.**

Page 268

AMX-13

All targets are of **AMX-13.**

Page 274

TRANSALL

All targets are **Transall**, except Nos. 18 **Nord 262**, 28 **Hercules**, 43 **Belfast**, 51 **Super Broussard** and 54 **Hercules**.

Page 278

BADGER

All targets are Badger except:

Highlights	*End On*
No. 8 **Blinder**	No. 6 **Blinder**
No. 19 **Fiddler**	No. 19 **Camel**
No. 23 **Blinder**	

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TEST PAPERS

LIGHTNING: Jokers are second line 1st picture and third line 4th picture.
DOVE: Joker is second line 5th picture.

Cover Photo: This is the Super Sixty Series of four-engine DC-8 jetliners on view at Douglas Aircraft Company's establishment, Long Beach, California. The Super Sixty Series of long-range transports are the newest of the Douglas family of large transports. The biggest member of the family is DC-8 Super 63 (right), designed to carry up to 251 passengers on intercontinental flights. DC-8 Super 62 (centre) is the ultra-long range version, and DC-8 Super 61 (left) was designed for transcontinental service. Super 63 combines the extended fuselage of Super 61 with the greater wing span and aerodynamic improvements of Super 62. Fuselages of both the Super 61 and Super 63 are 187 feet in length, 37 feet longer than the standard DC-8. Both the Super 62, which is 157 feet long, and the Super 63 have wing spans of 148 feet, 6 feet greater than that of either the Super 61 or standard DC-8. They will be seen in service in some numbers all over the world.

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