

JOINT



SERVICES

RECOGNITION

Journal



Vol. 24 OCTOBER 1969 No. 10

LESSON INSTRUCTIONS

Identity Training is a matter of "doing", not of gathering information. Submit to the instructions given below, and in every edition of the *Journal*, and your ability to identify will develop automatically.

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 and so gain experience: spend no time on difficult ones. 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.** Do not use abbreviations: write down the name given in the title.
5. It is more important to identify accurately than quickly. Lessons should not be hurried or given a time limit.
6. Do not attempt conscious memorising of details, shapes, or names: the procedure will take care of that. Do not attempt the lesson without using the key: wait until your ability to do so 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 entragen.
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.



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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JOURNAL EDITOR RETIRES

Instigator of the Sargeant System

CHARLES E. SARGEANT, MBE, Editor of the *Joint Services Recognition Journal* and the *Royal Observer Corps Journal*, has retired after 24 years with the Air Ministry and the Ministry of Defence.

He joined the Air Ministry following service with the Royal Air Force during the Second World War as a Recognition Training instructor and later in Air Traffic Control. He became Editor of the *Inter-Services Aircraft Recognition Journal*, as the Journal was then named, and saw its growth into the two publications of today catering for joint services identity training on aircraft, ships and armoured fighting vehicles.

During this time he devised the SARGEANT SYSTEM of Recognition Training, to make identity training easier, more efficient—and enjoyable. Adopted for British Service use, his ideas for developing perceptual skills also met with considerable interest in other countries. He leaves now to devote his time to rather different aspects of this form of training.

He was awarded the MBE in 1965.

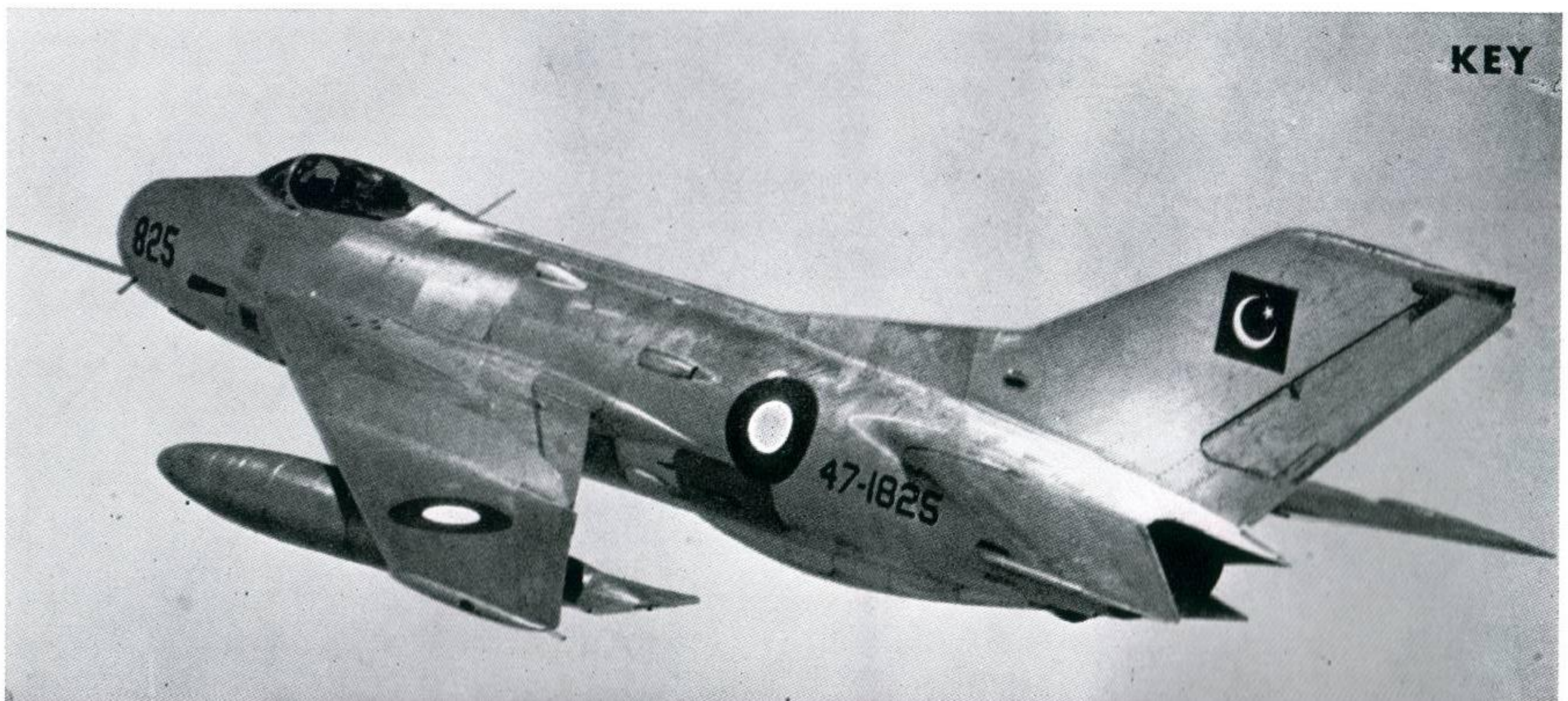


FARMER (MiG-19)

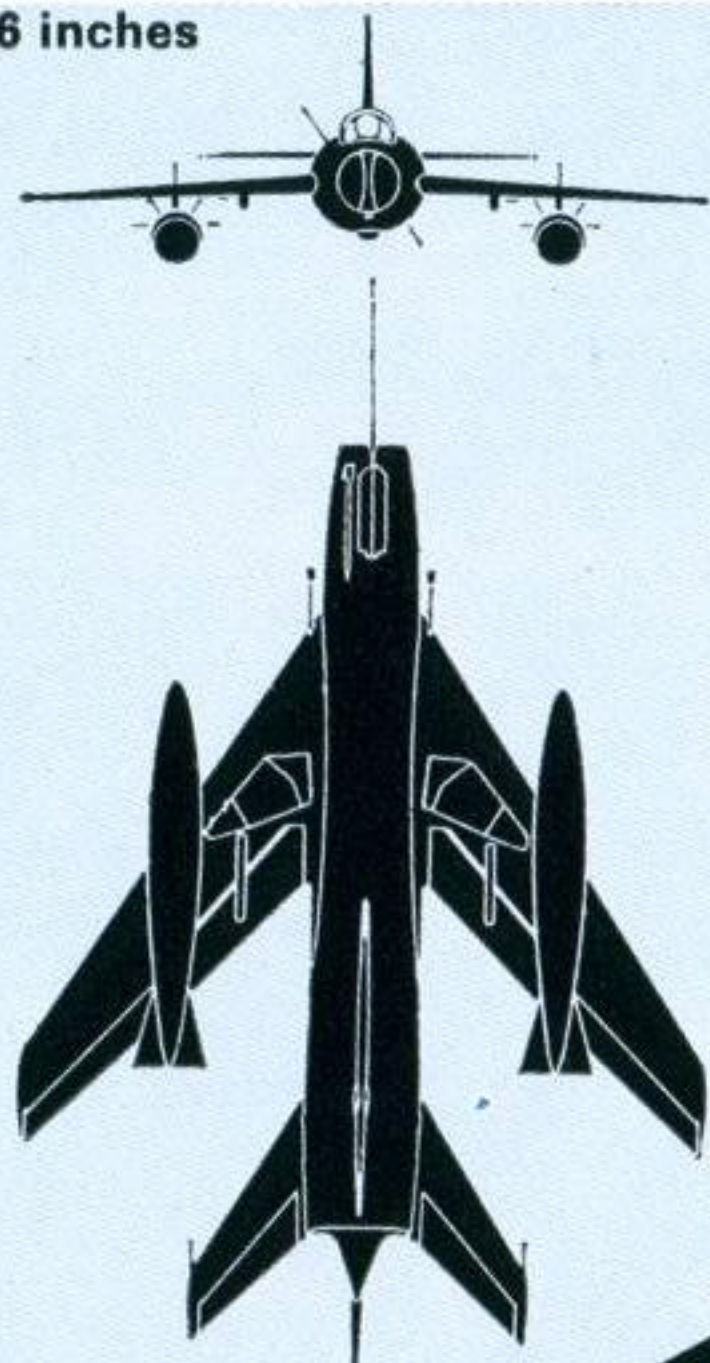
First Russian fighter capable of supersonic performance in level flight, the Mikoyan MiG-19 was developed from the MiG-17 (Fresco) and the initial version, Farmer-A, entered service early in 1955 with an armament of one 37-mm. cannon under the nose and two 23-mm. cannon in the wing roots, plus underwing rockets, missiles and drop tanks. Subsequent models were: Farmer-B, the first limited all-weather version with radar in a 'bullet' radome in the intake and in a lip over the intake; Farmer-C, fully developed day fighter model (and the most widely-used version), with an under-

fuselage air brake supplementing original air brakes on the sides of the rear fuselage; and Farmer-D, limited all-weather version of the C, with radar in nose bullet and lip fairing and only the wing root guns. Some Ds have been reported with four Alkali underwing missiles and no guns. This type is officially referred to as Farmer-E and some may have a modified cockpit enclosure.

As well as serving with the Soviet Air Force, Farmer is standard equipment with the Chinese Air Force and has also been supplied to several East European air forces and the Pakistan Air Force.



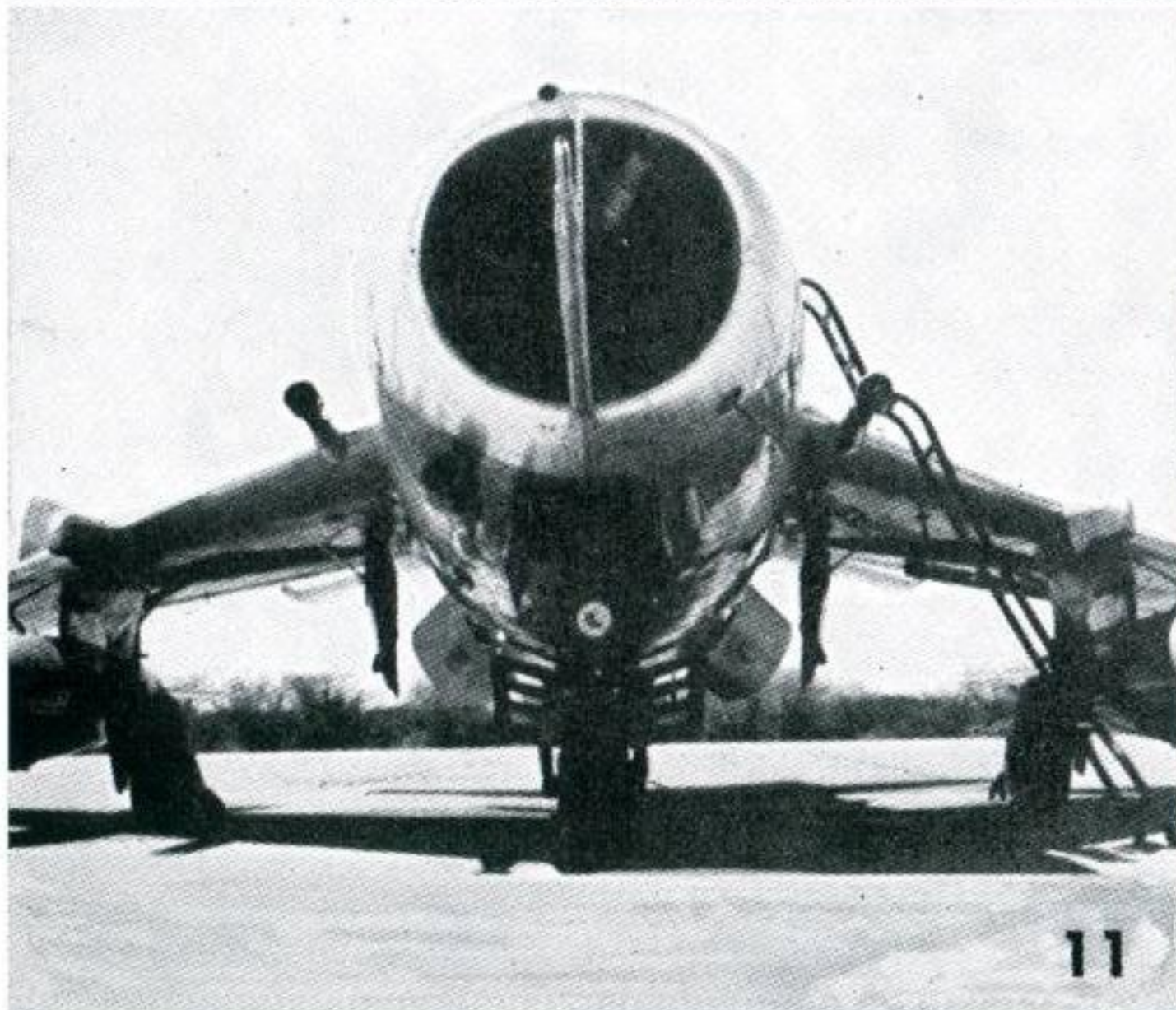
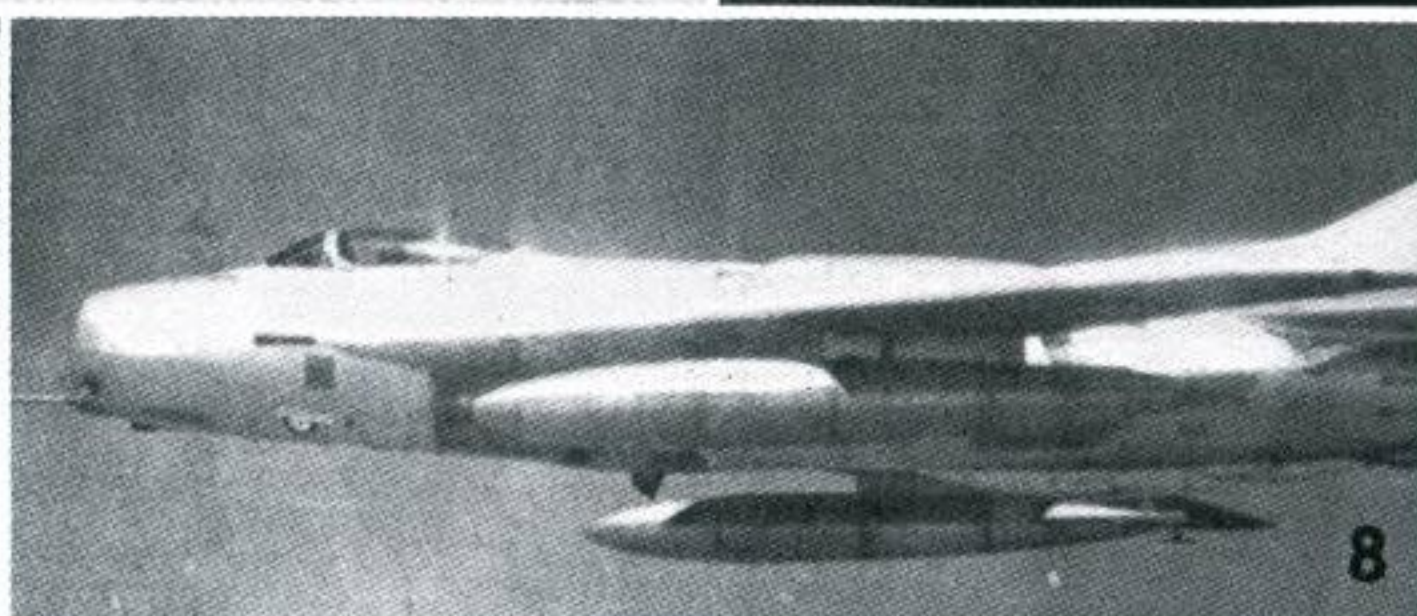
Span 29 feet 6 inches



Farmer C



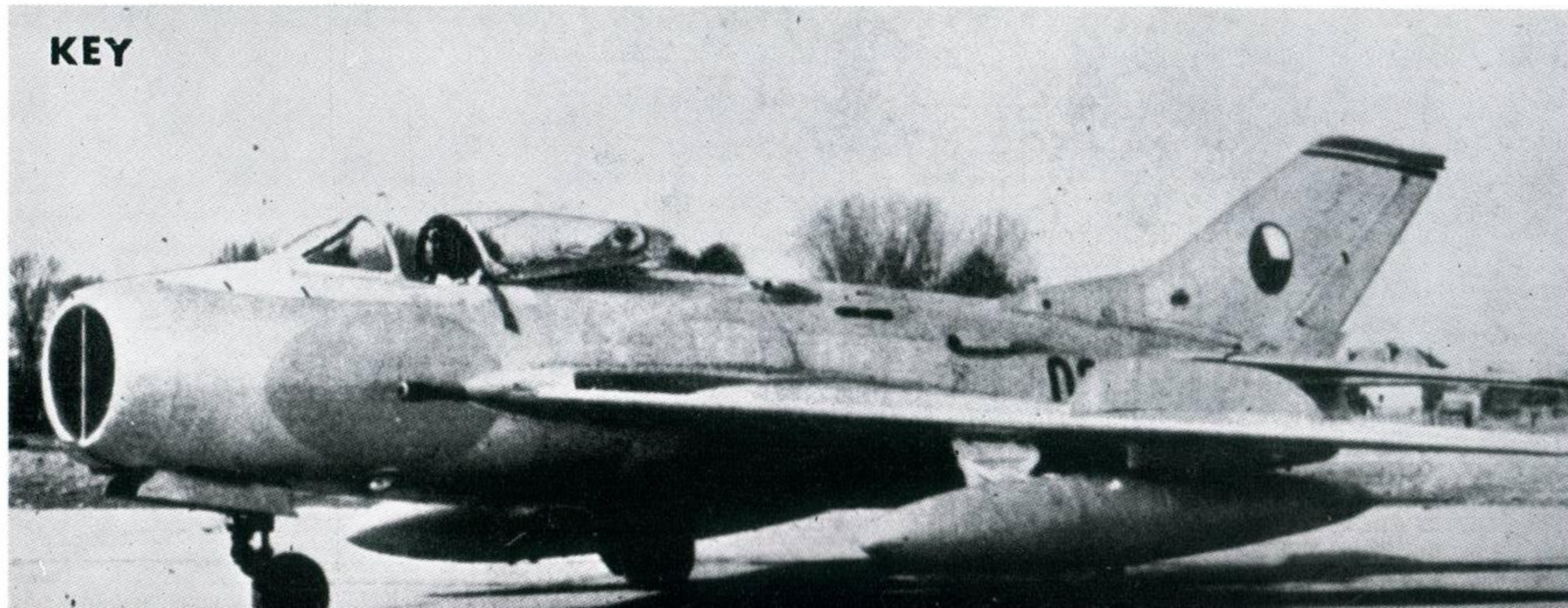
Farmer D

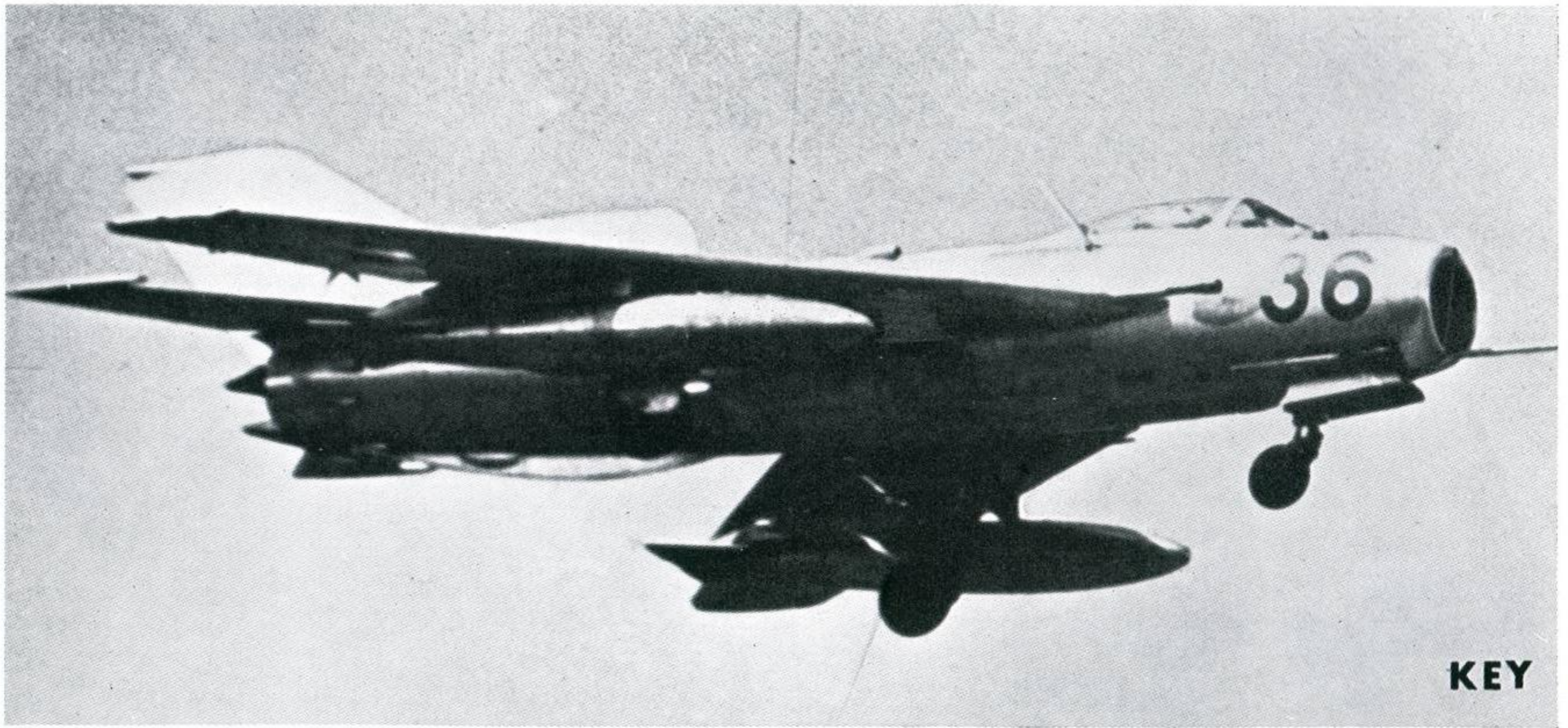


Lesson Instructions are on page 254 Solutions on the cover

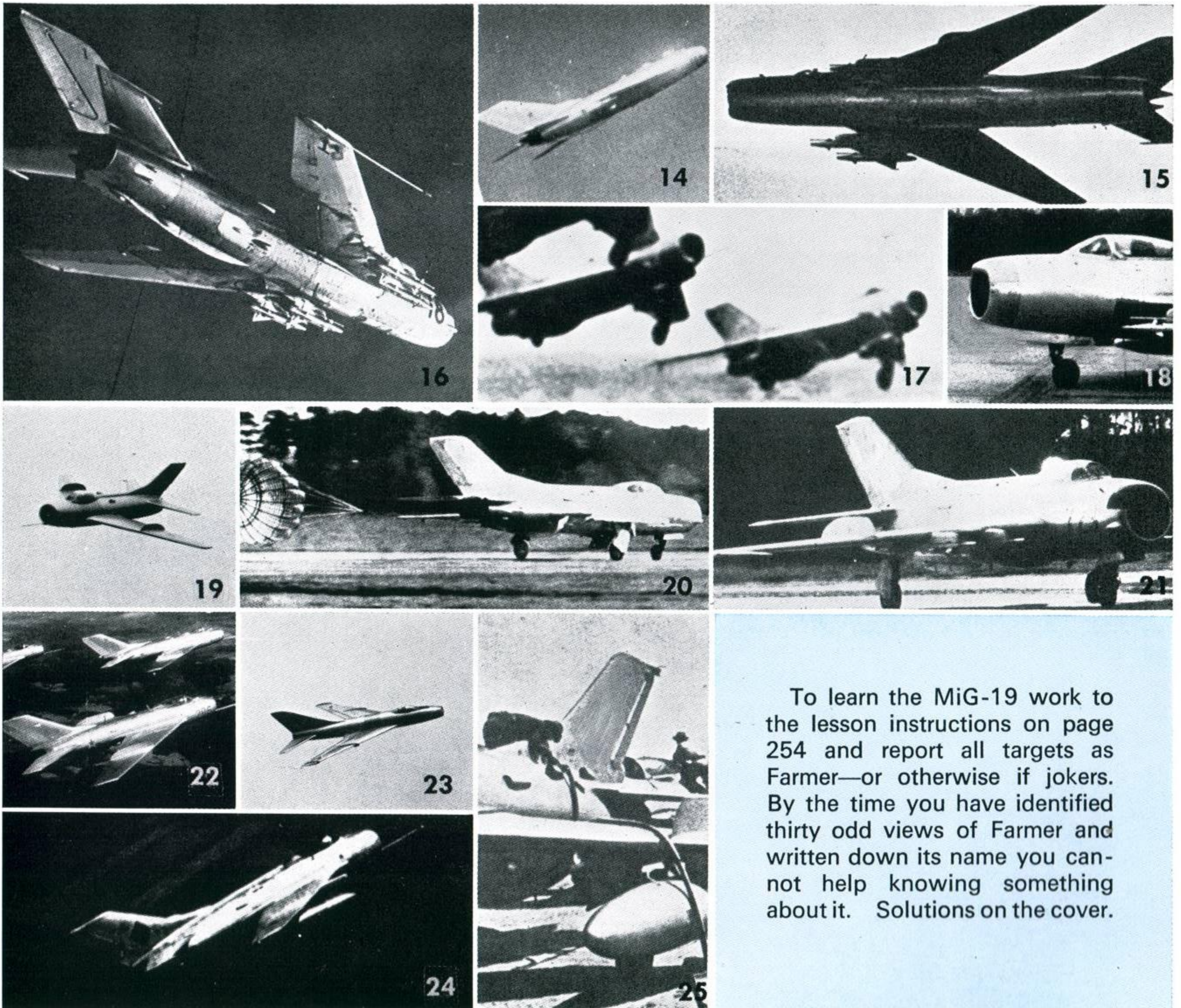
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KEY



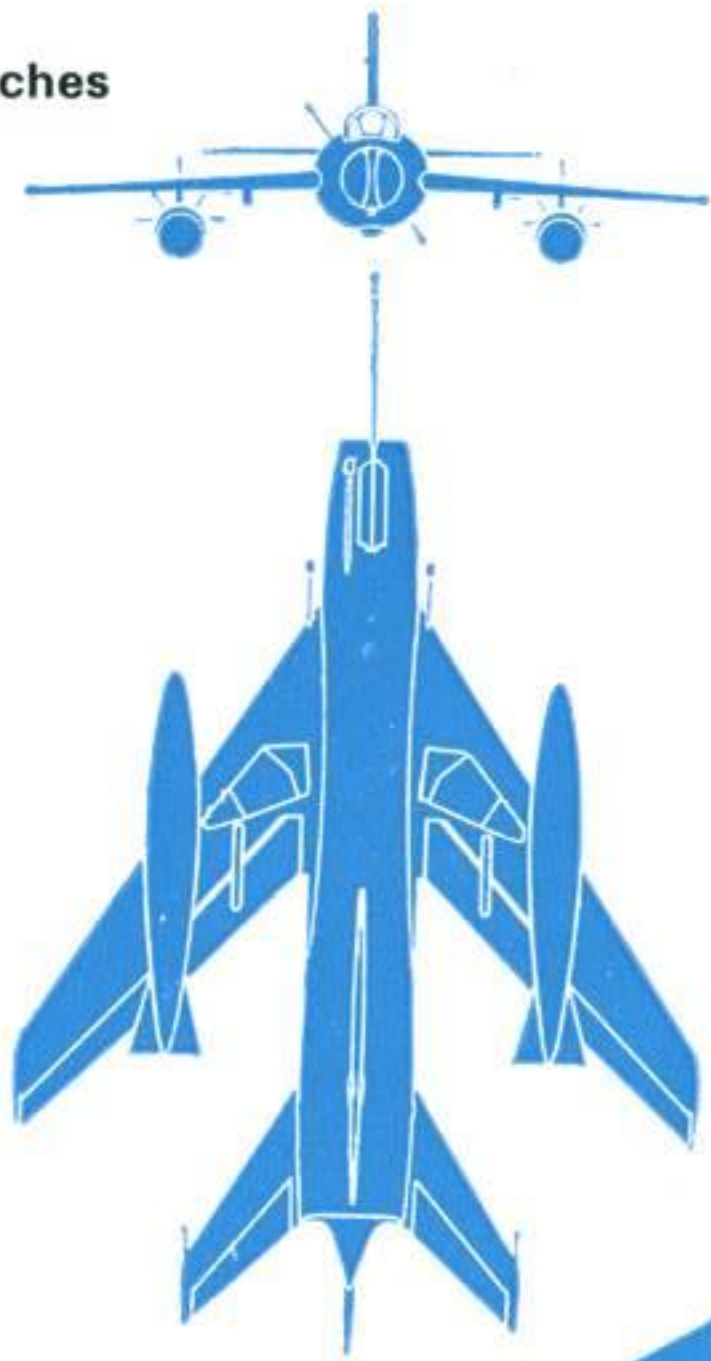


FARMER (MiG-19) *continued*



To learn the MiG-19 work to the lesson instructions on page 254 and report all targets as Farmer—or otherwise if jokers. By the time you have identified thirty odd views of Farmer and written down its name you cannot help knowing something about it. Solutions on the cover.

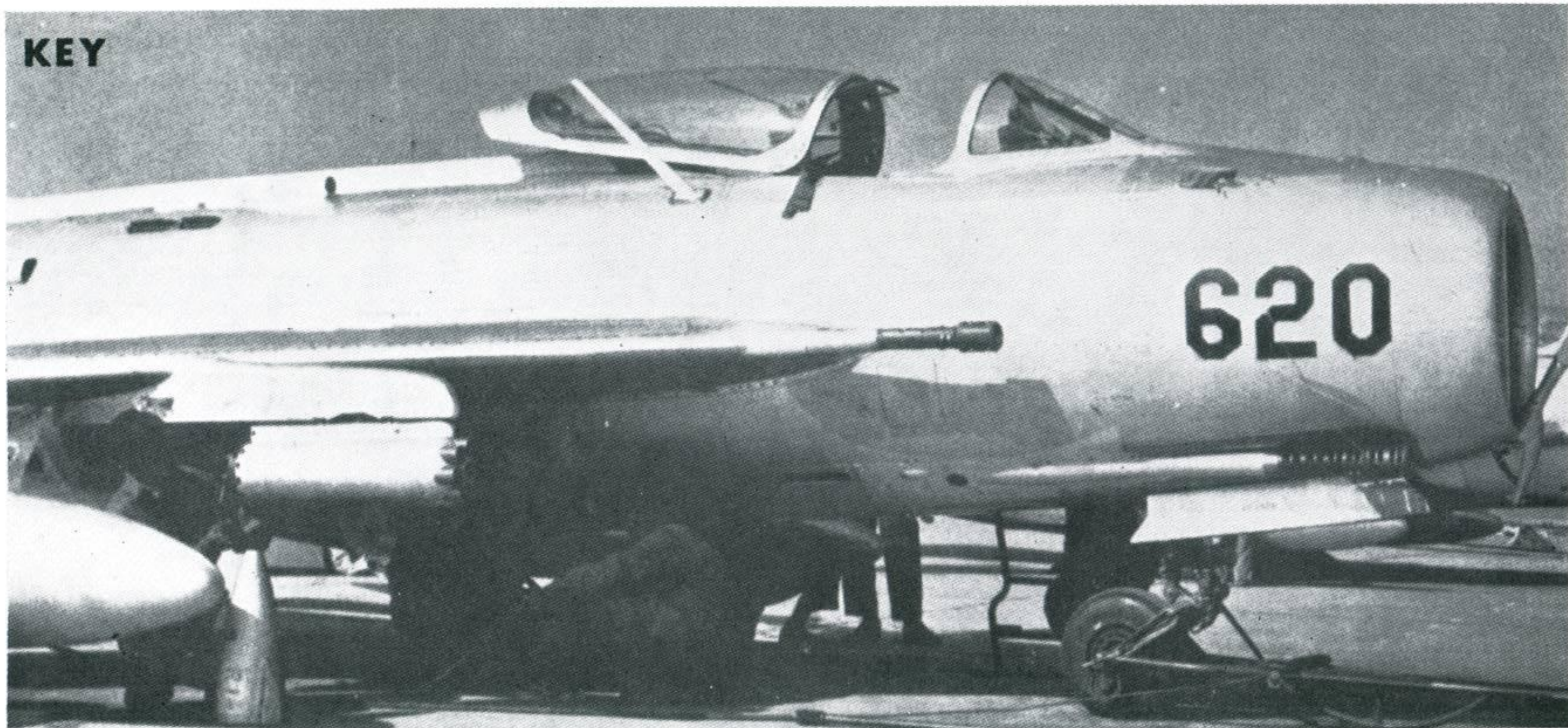
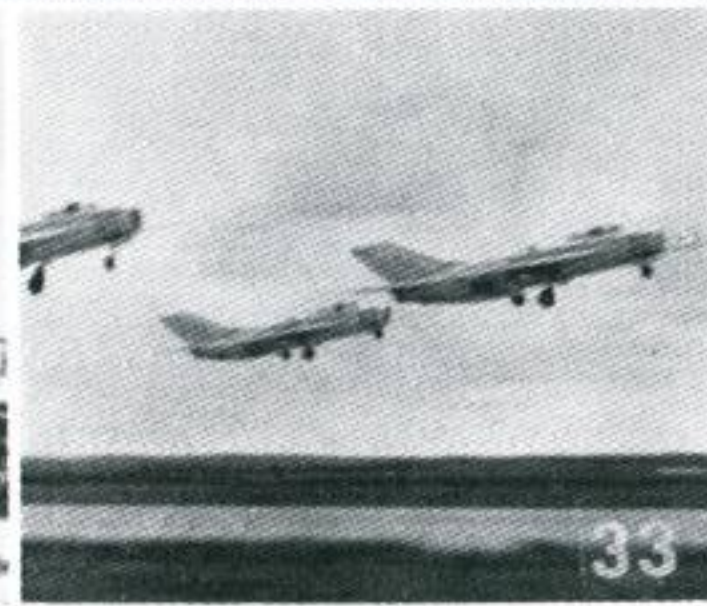
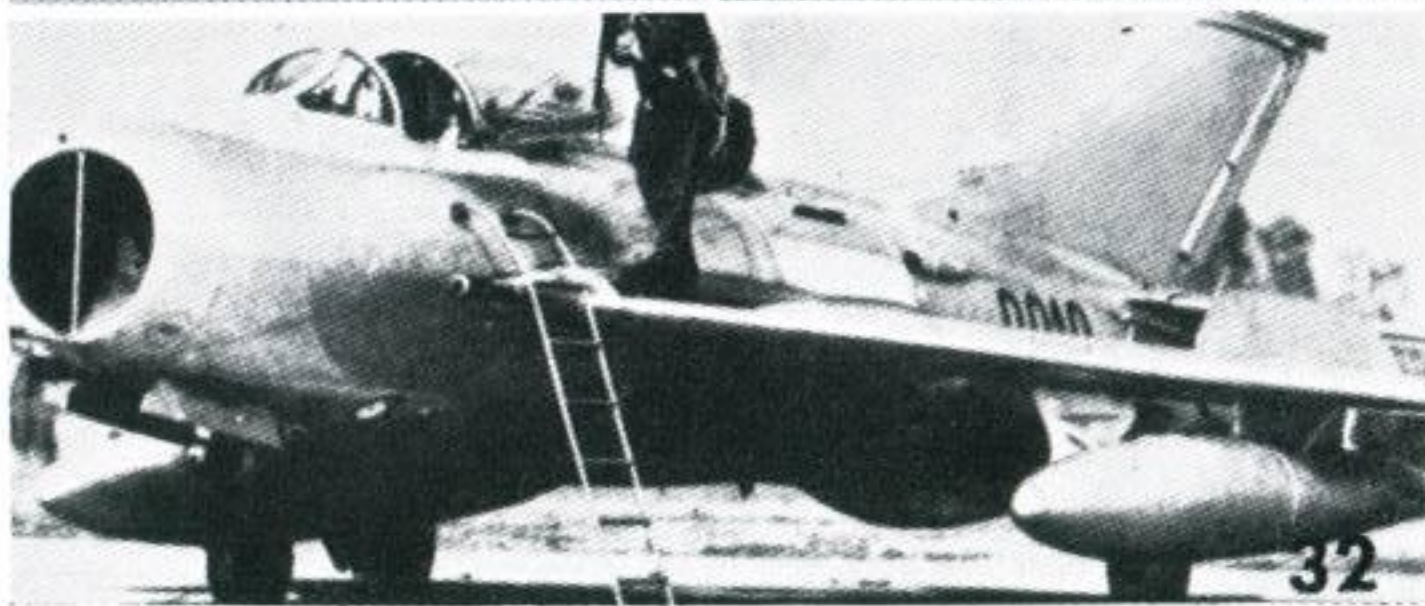
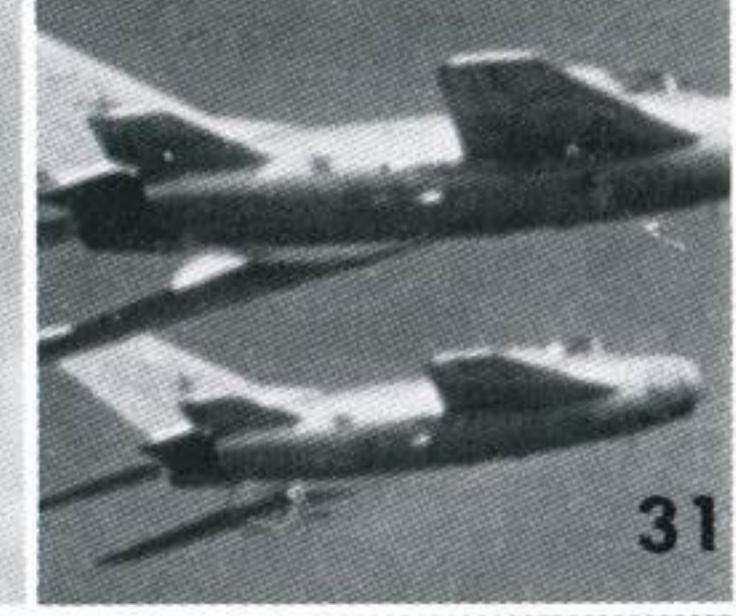
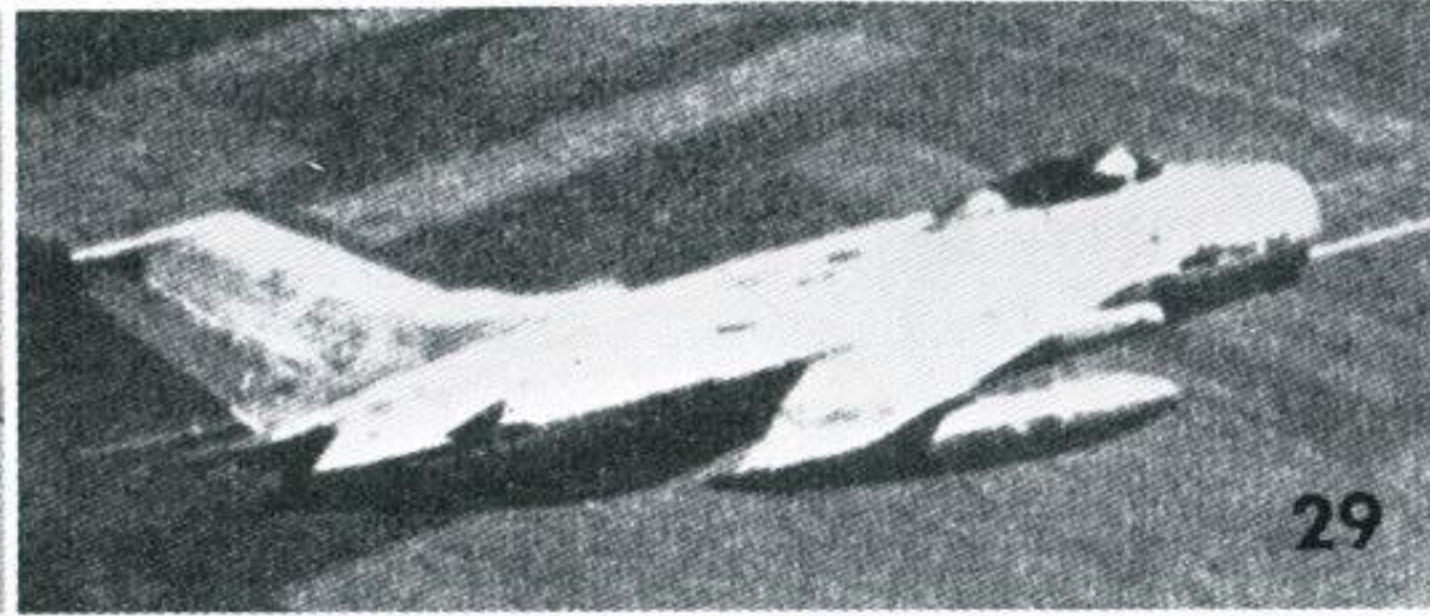
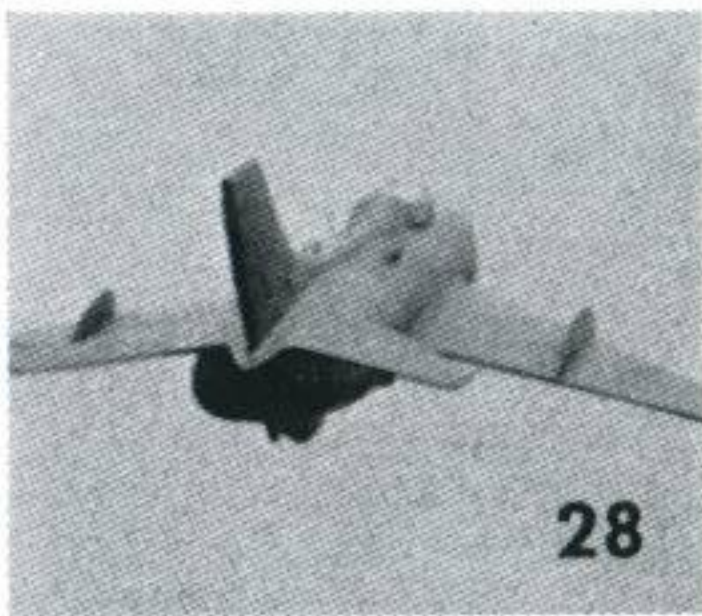
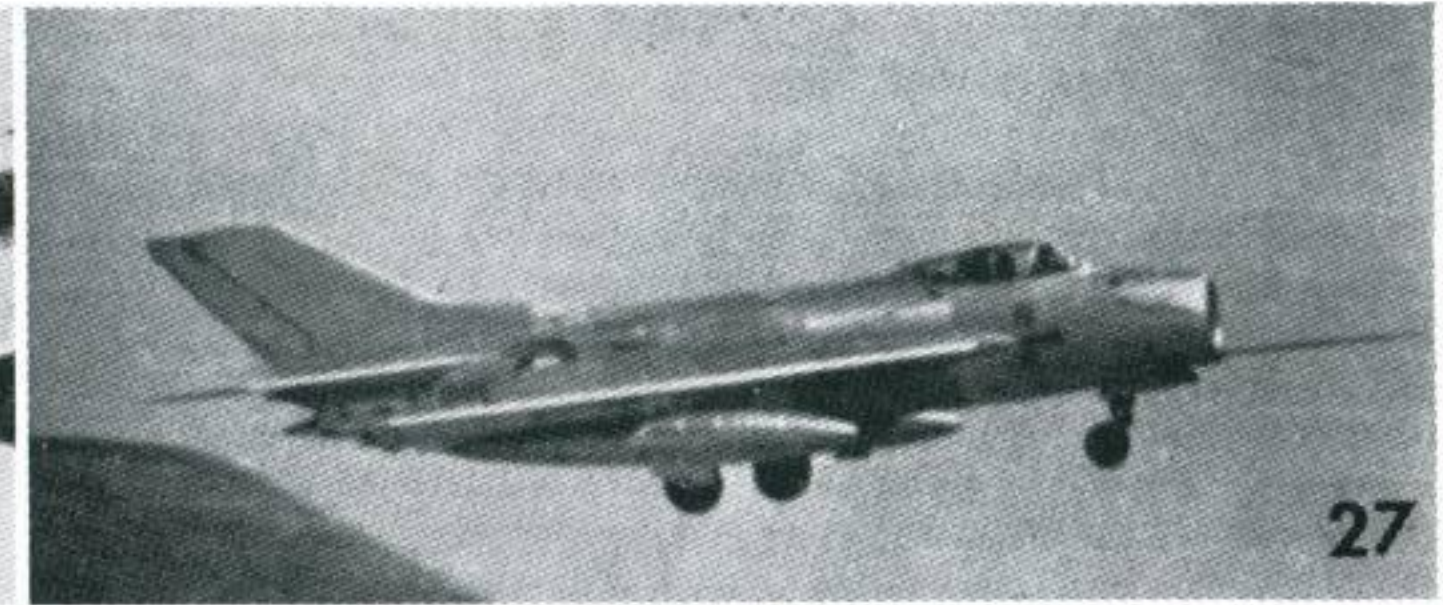
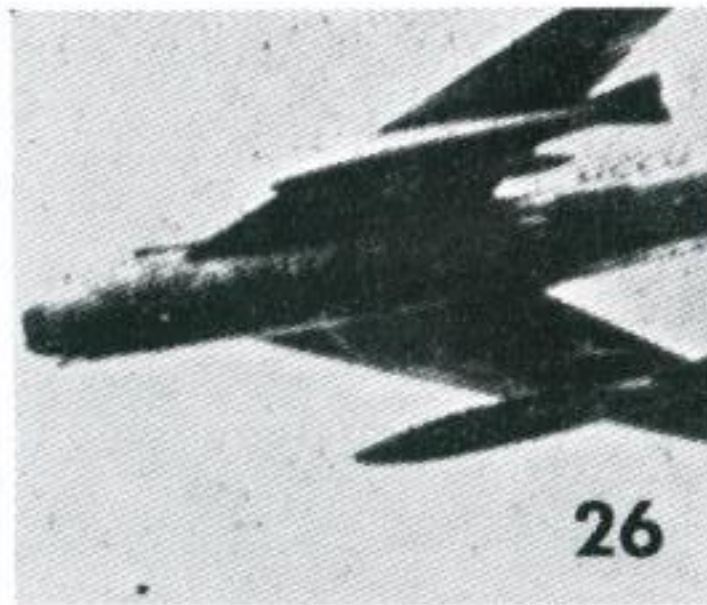
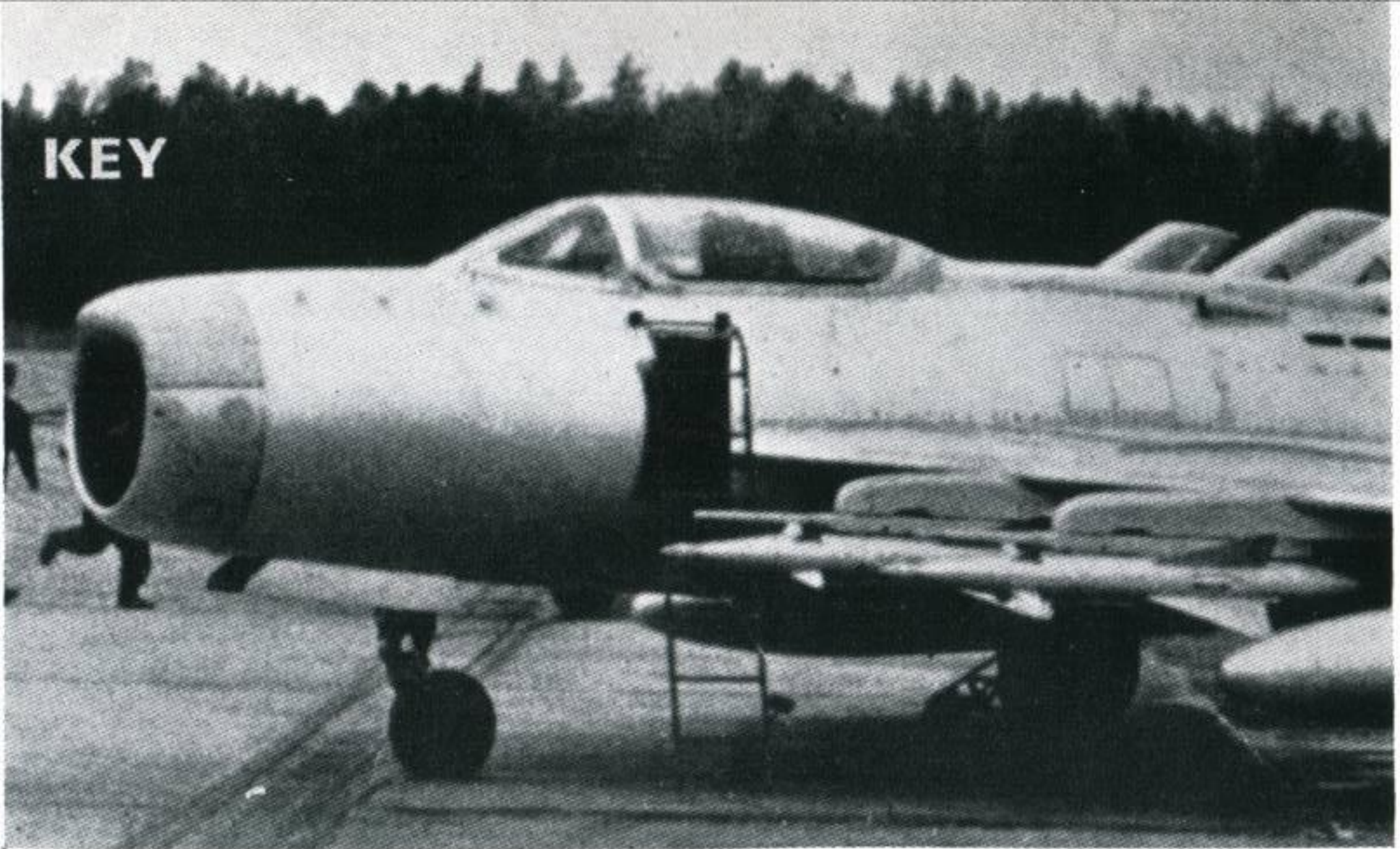
Span 29 feet 6 inches



MiG-19C



MiG-19D





CLASSIC

(Ilyushin Il-62)

Lesson instructions are on page 254

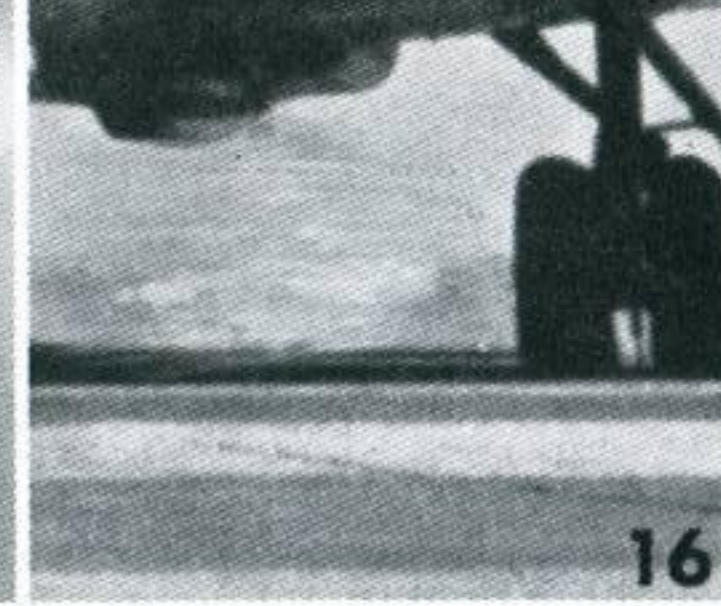
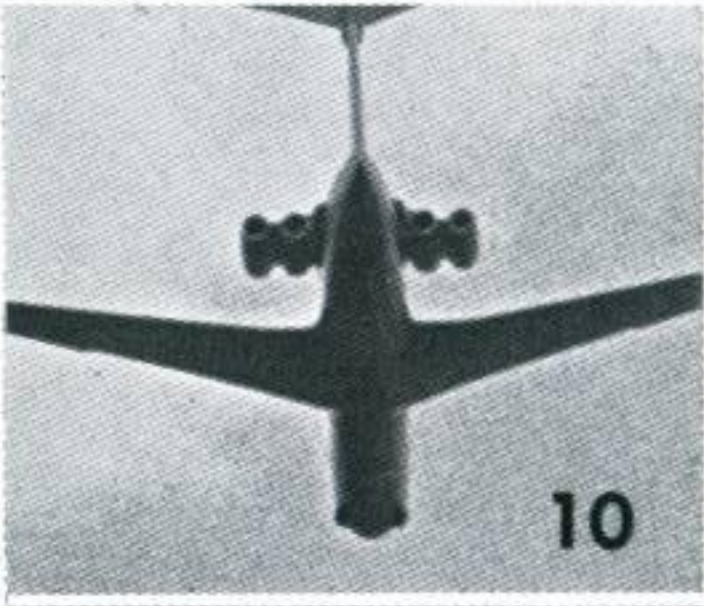
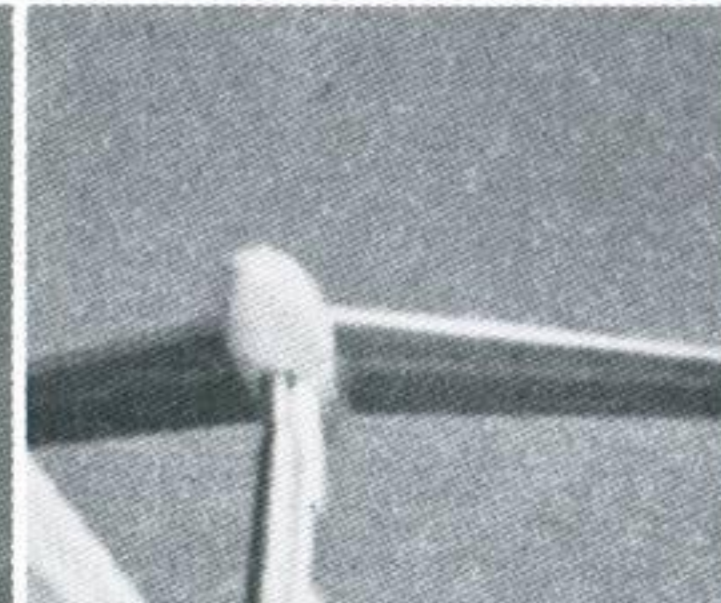
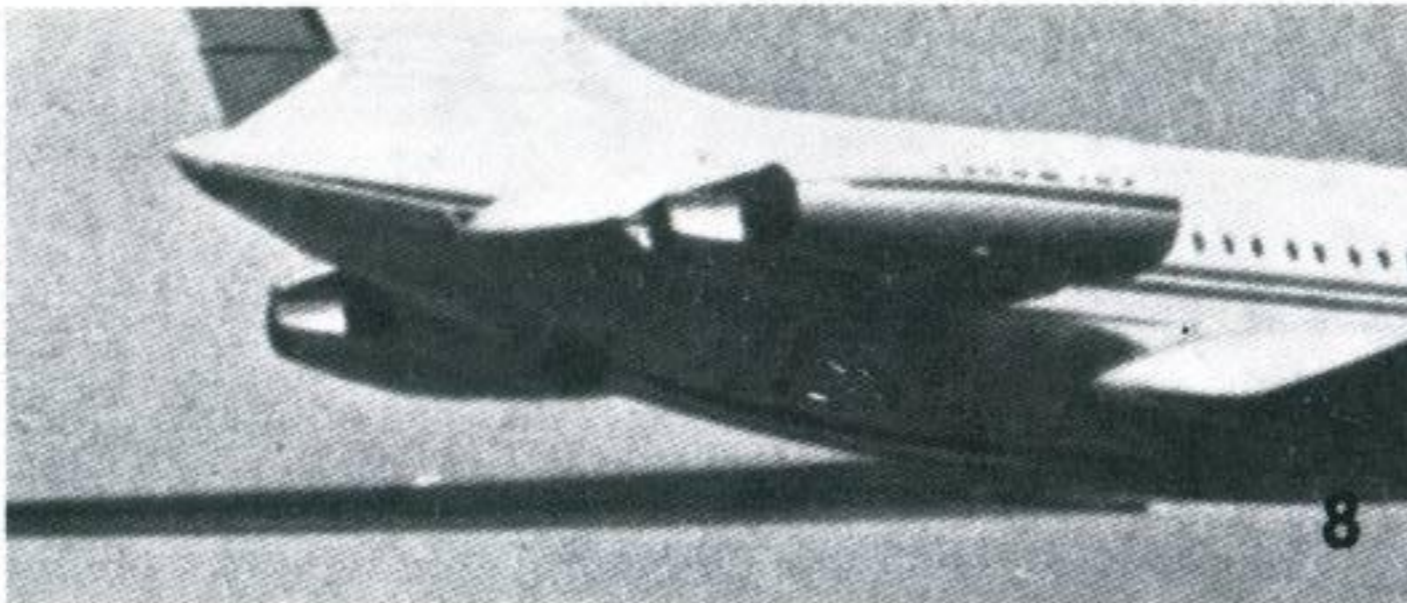
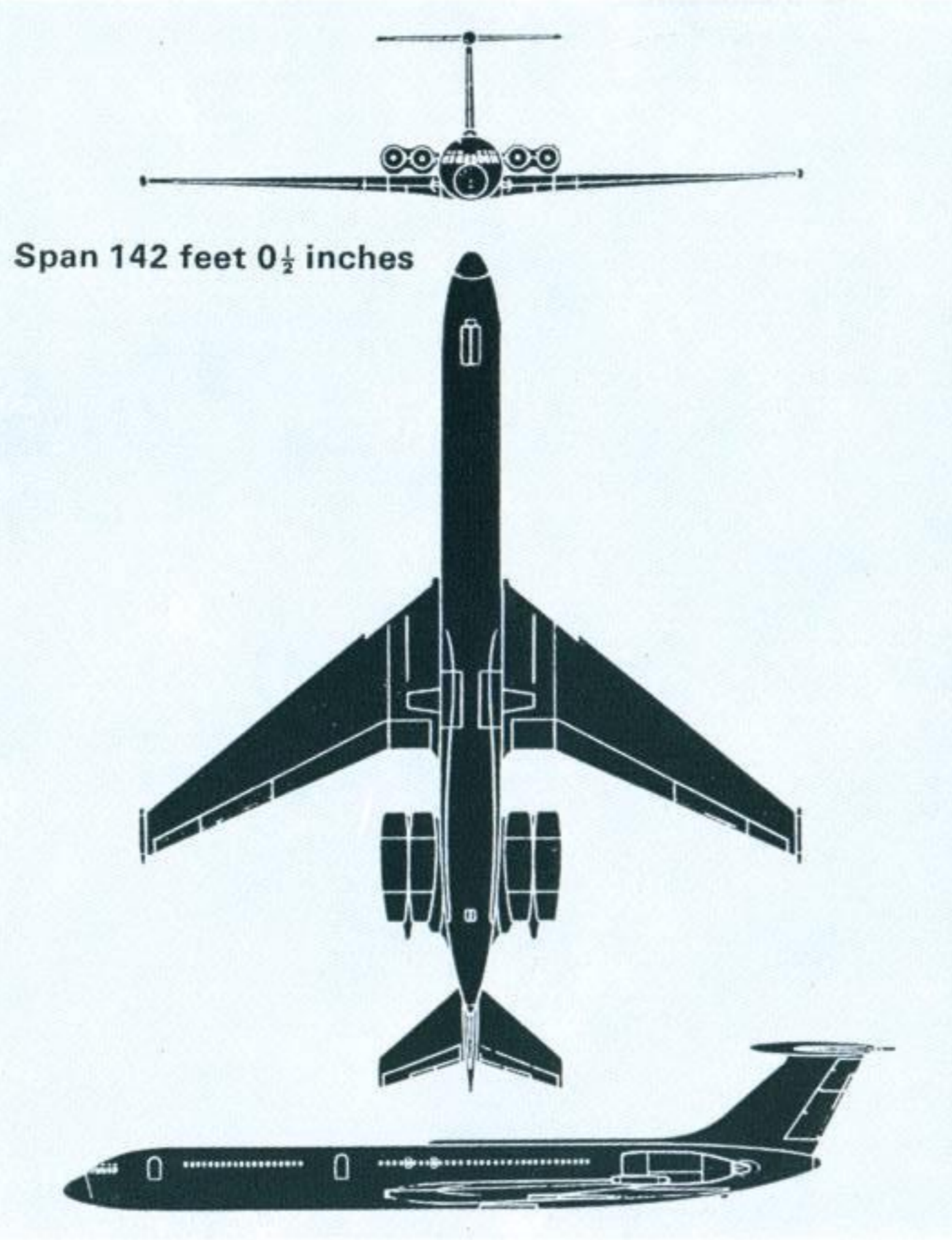
The Classic is Russia's answer to the VC-10. It is a four-turboprop long-range airliner capable of carrying up to 186 passengers and was designed to fly distances of about 4,800 miles with more than 150 passengers and reserve fuel. Classic first flew in January 1963.

Series production is under way and the type entered scheduled service with Aeroflot in 1967, replacing

Cleats and Camels on selected internal routes. In September 1967, the Classic took over from the Cleat on the Moscow-Montreal service and since then it has entered service on many other routes, including Moscow-New York and Moscow-Paris. One example has been leased by Air France, and one by CSA Czechoslovakian Airlines, which latter operate it on their Prague-London service.



CLASSIC (Prototype)



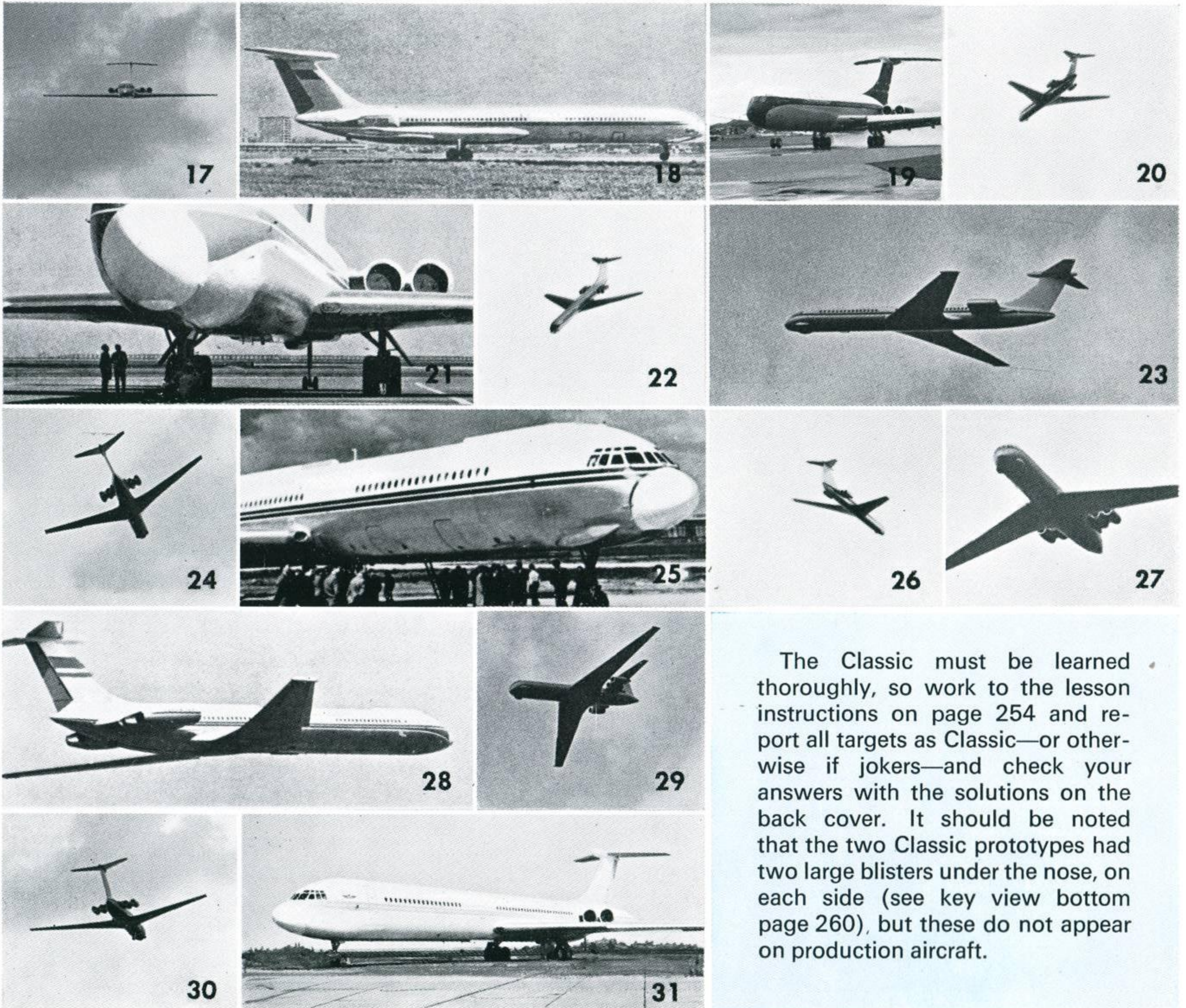
Solutions on the back cover



continued overleaf



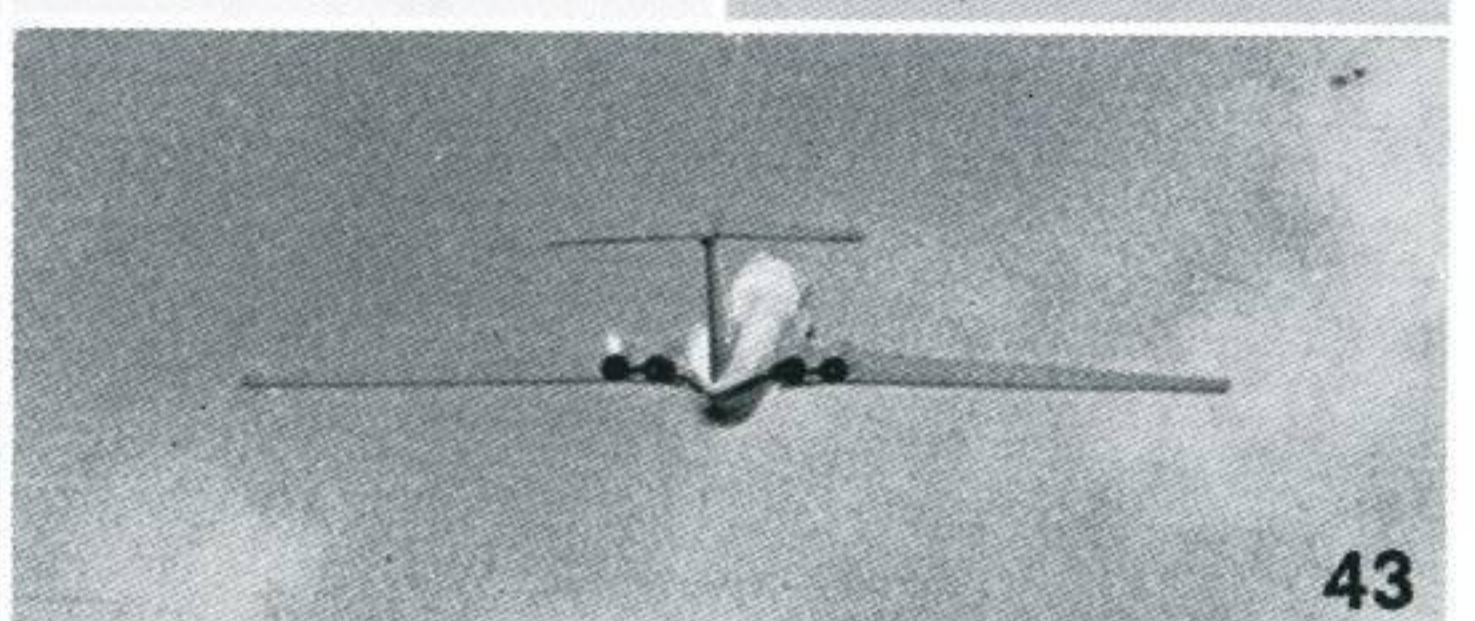
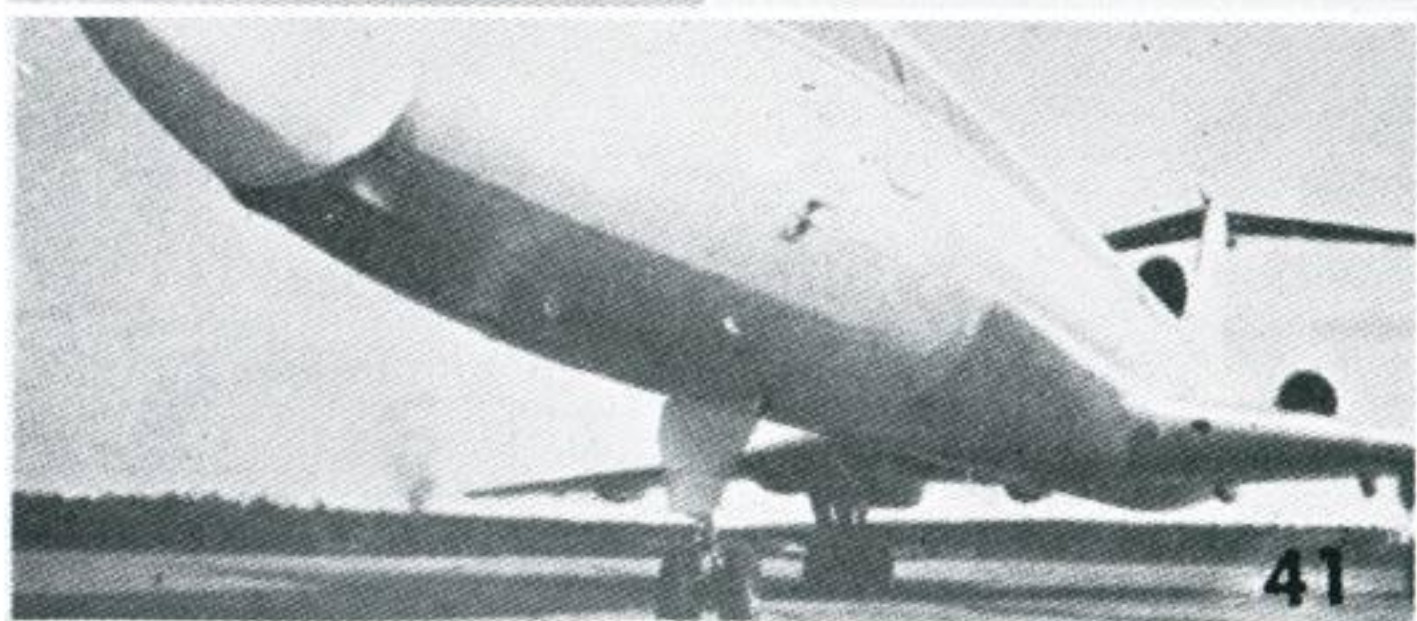
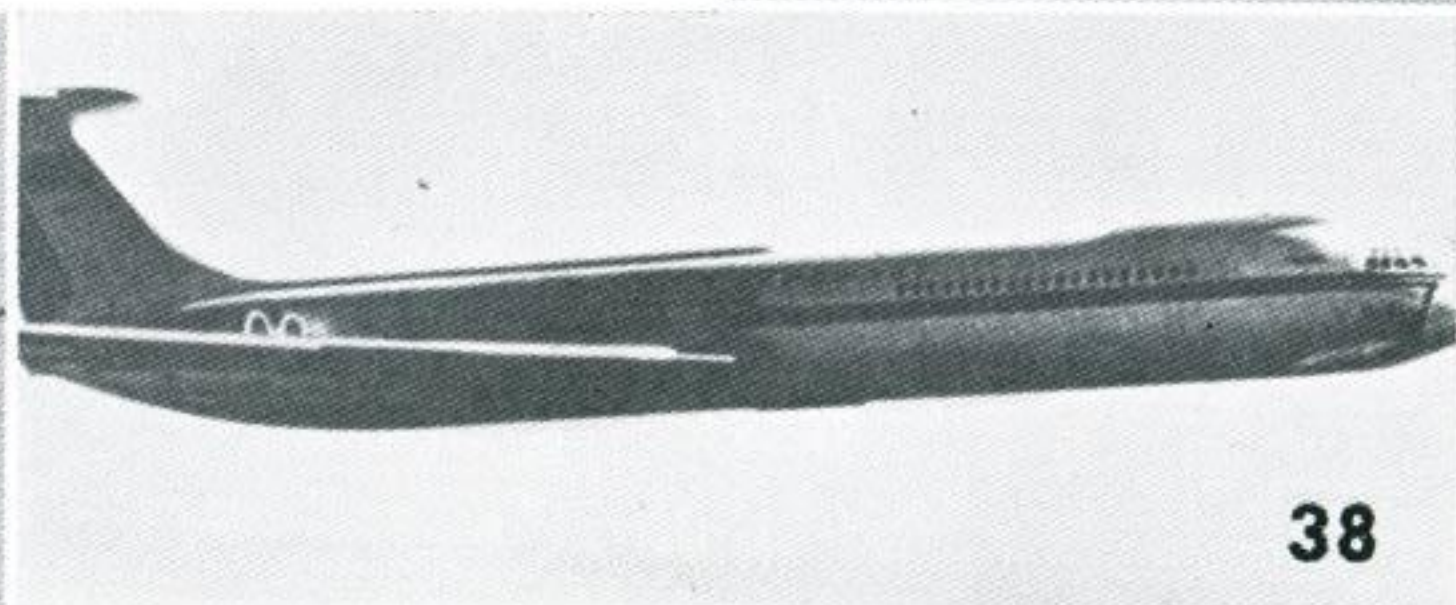
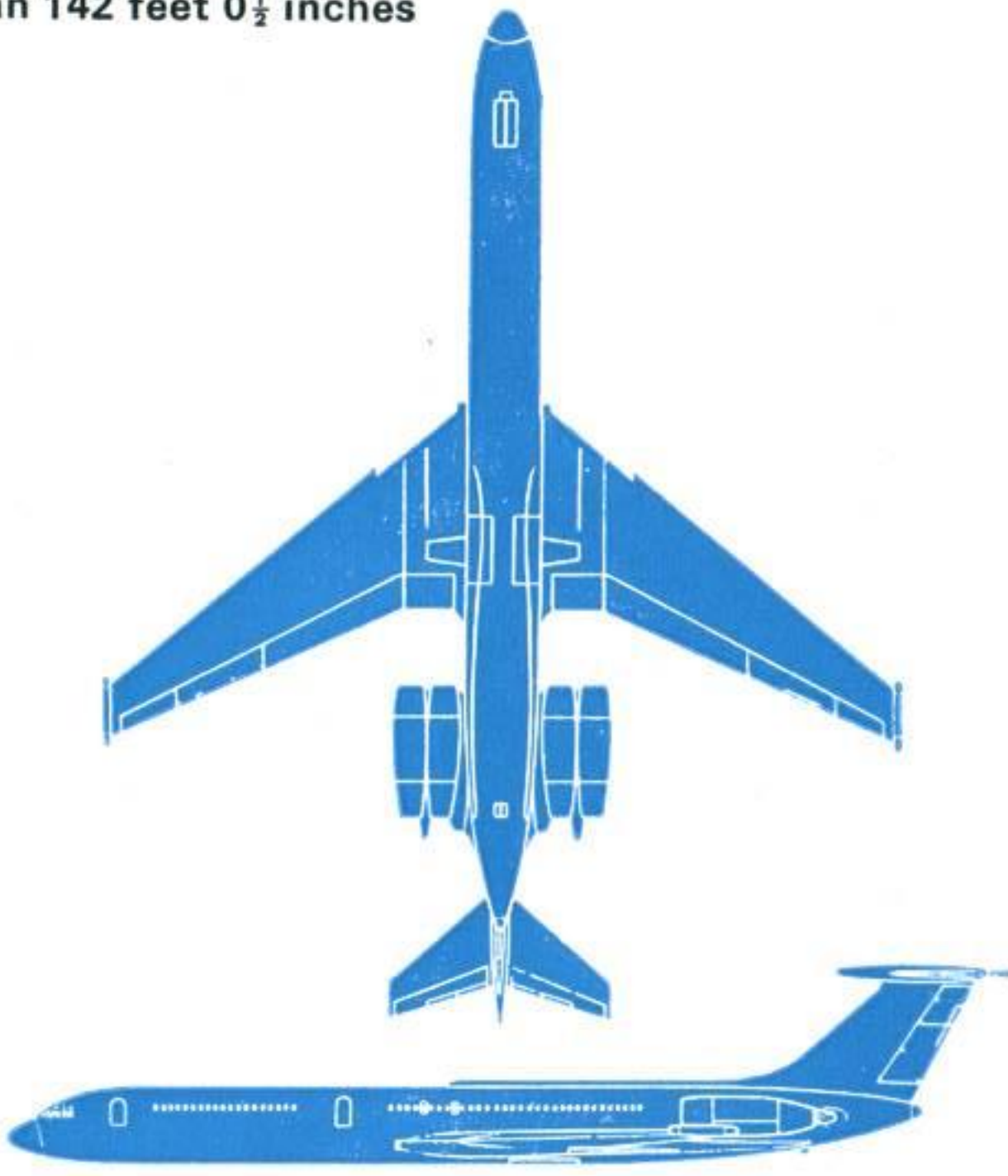
CLASSIC continued



The Classic must be learned thoroughly, so work to the lesson instructions on page 254 and report all targets as Classic—or otherwise if jokers—and check your answers with the solutions on the back cover. It should be noted that the two Classic prototypes had two large blisters under the nose, on each side (see key view bottom page 260), but these do not appear on production aircraft.



Span 142 feet 0½ inches



KEY



WESTLAND SEA KING

This is the Sikorsky SH-3D Sea King built under licence as the HAS. Mk. 1 for the Royal Navy, the SH-3D being in turn one of several versions of the basic—and widely used—S-62.

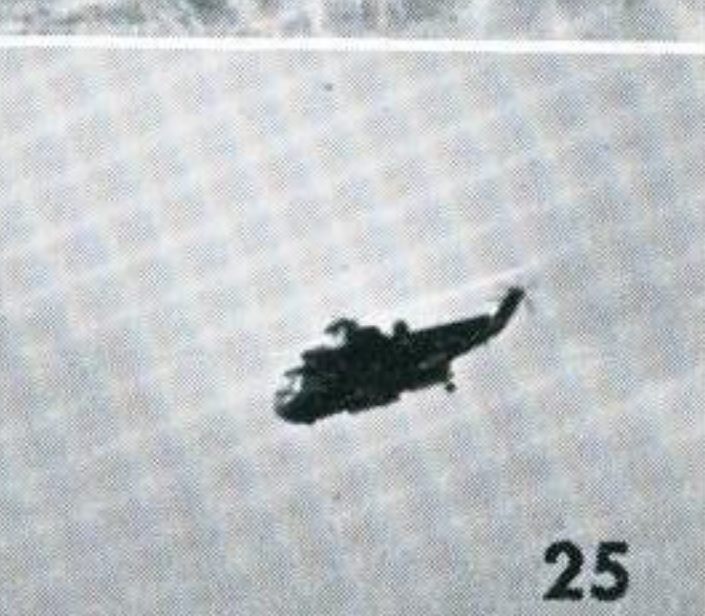
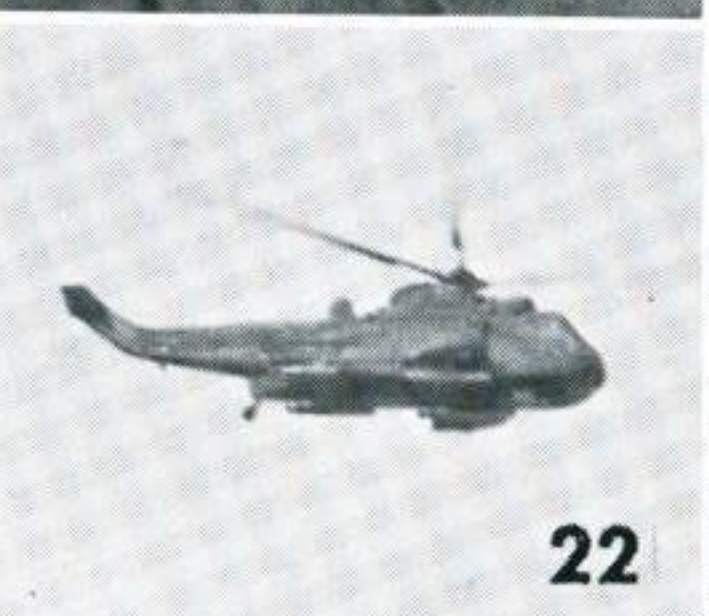
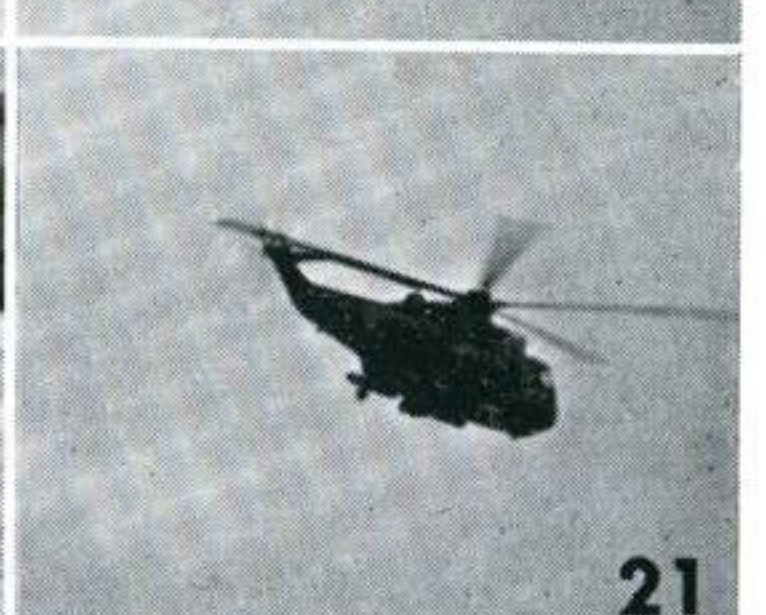
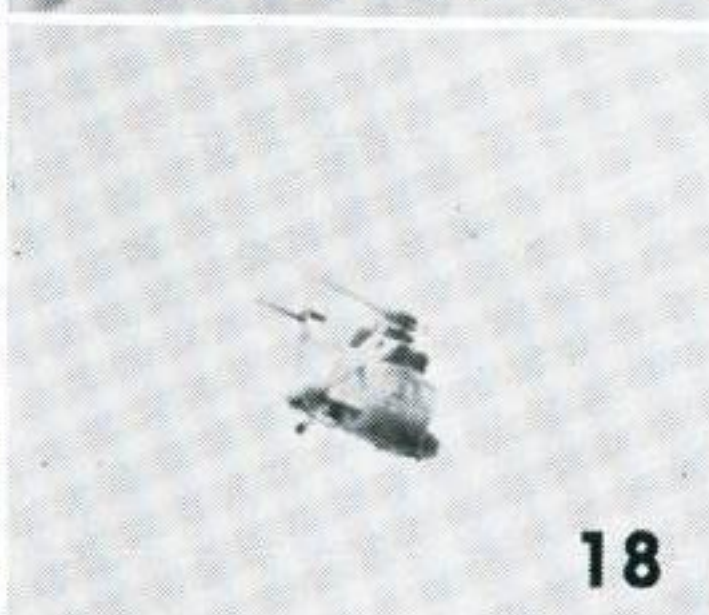
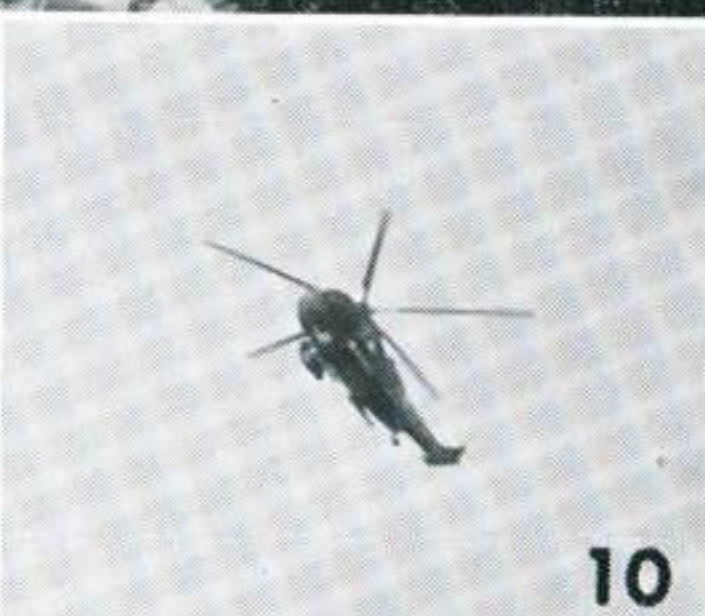
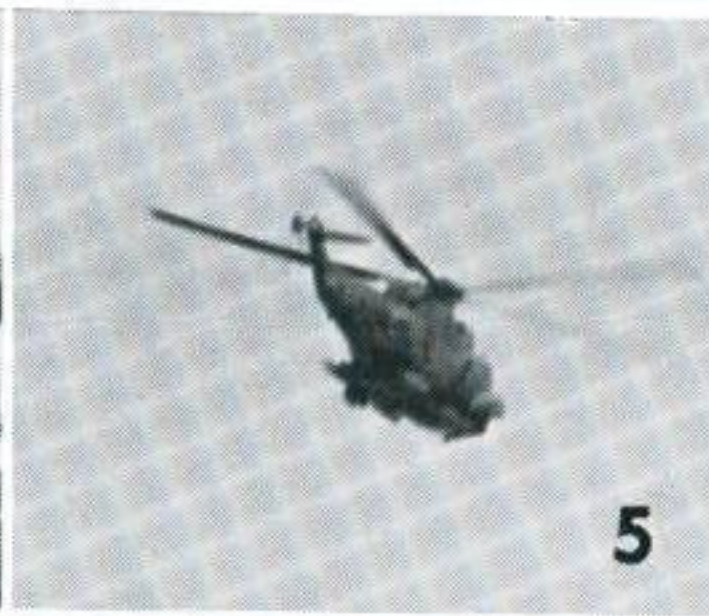
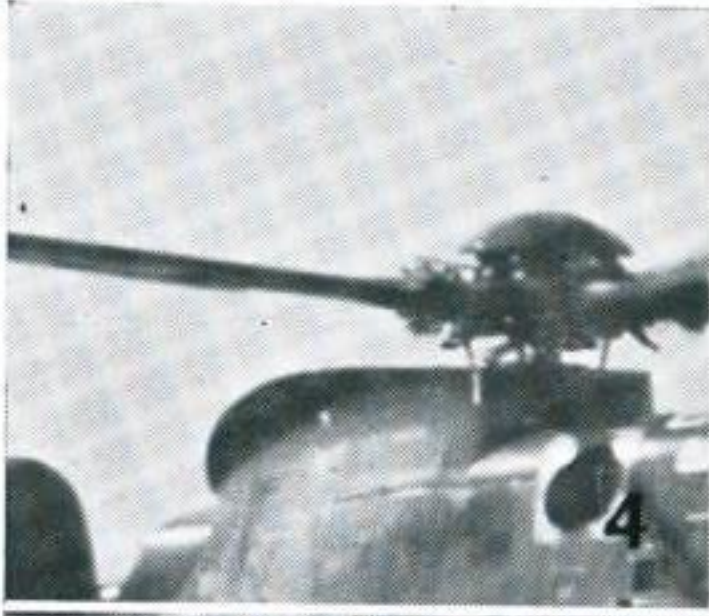
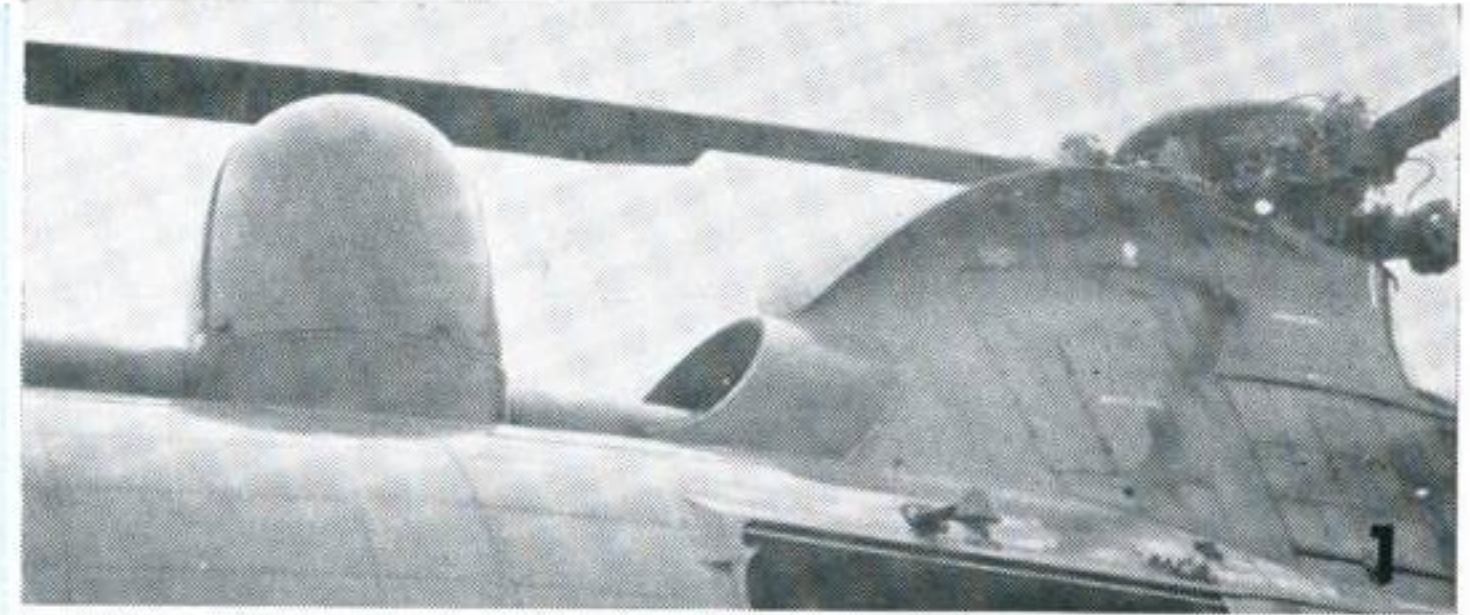
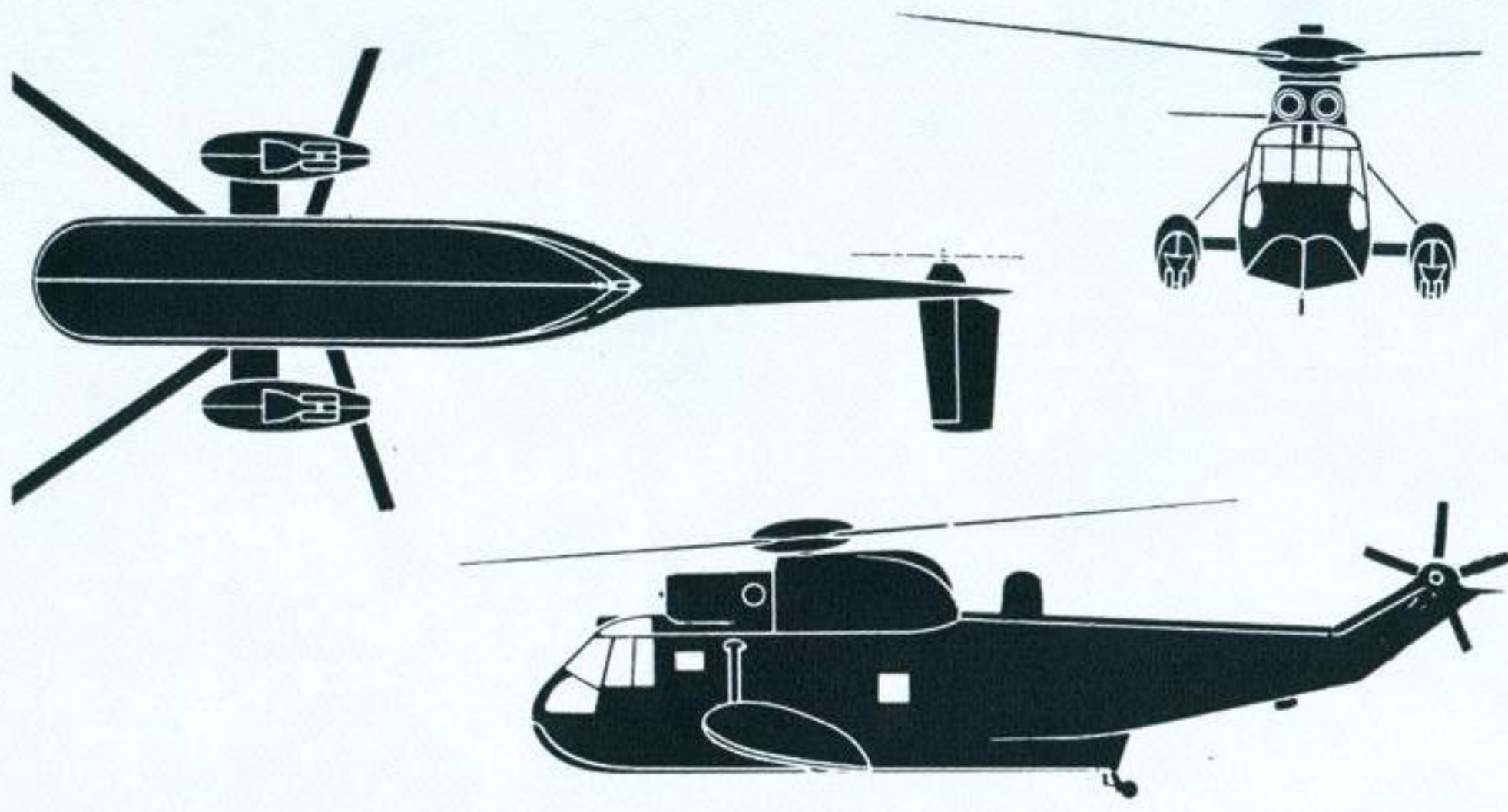
The Westland Sea King is an anti-submarine and general purpose helicopter and has Rolls-Royce Gnome turboshaft engines, an automatic flight control

system similar to that of the Wessex H.A.S.3, long-range sonar, a tactical display provided by AW391 search radar in a dorsal hump fairing and an associated doppler navigation system.

Work to the lesson instructions on page 254 and report all targets as Sea King—or otherwise if jokers—and check your answers with the solutions on the cover.



Fuselage length 54 feet 9 inches



"TON" CLASS COASTAL MINESWEEPERS

The first unit of this large class was completed early in 1953 and the last, in 1960. They are of wooden hull construction and are capable of sweeping or disposing of all known types of mines. Their displacement is 360 tons standard and they have a length of 153 feet overall. Service speed is about 13 knots.

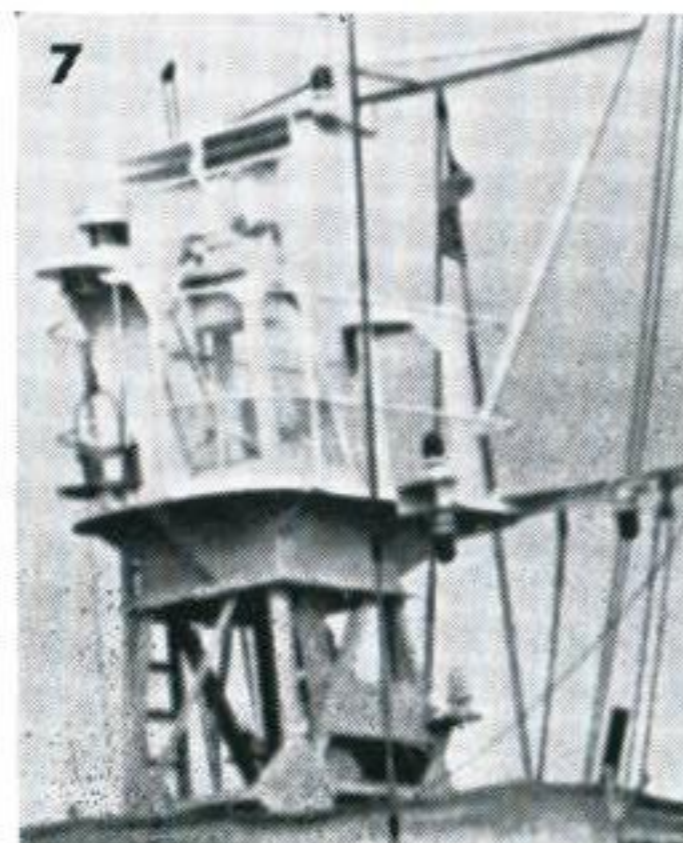
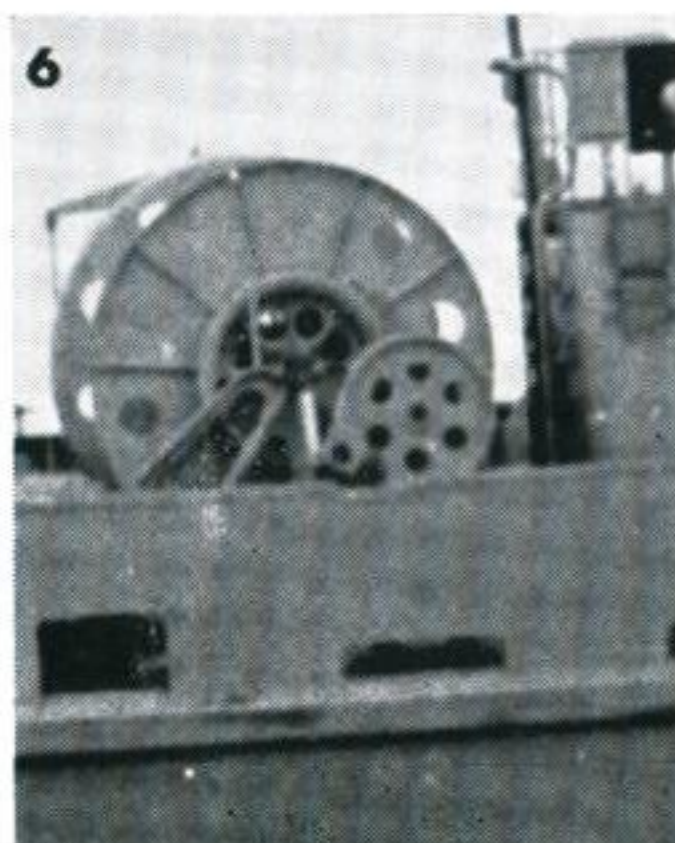
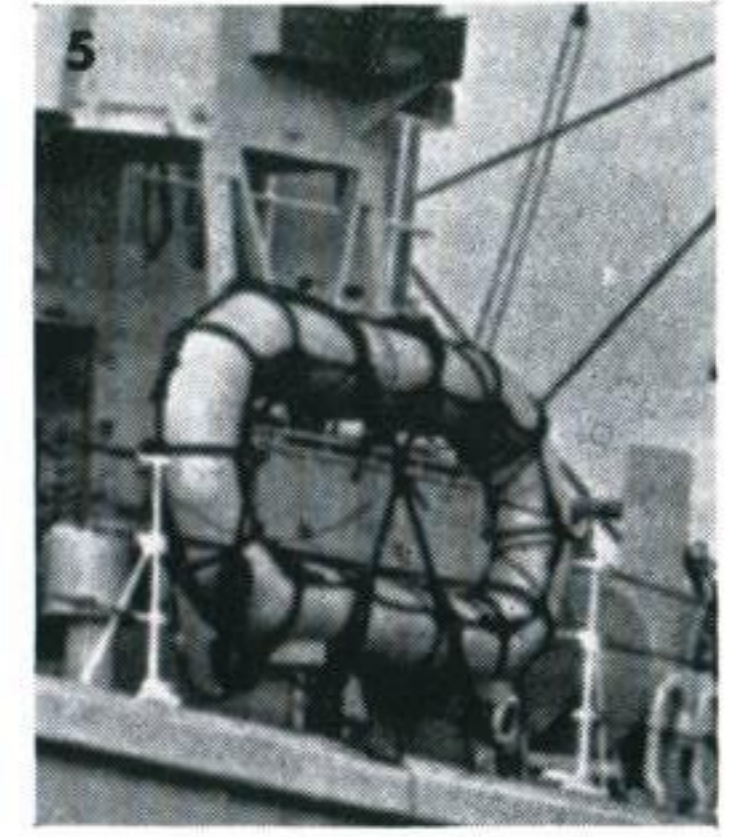
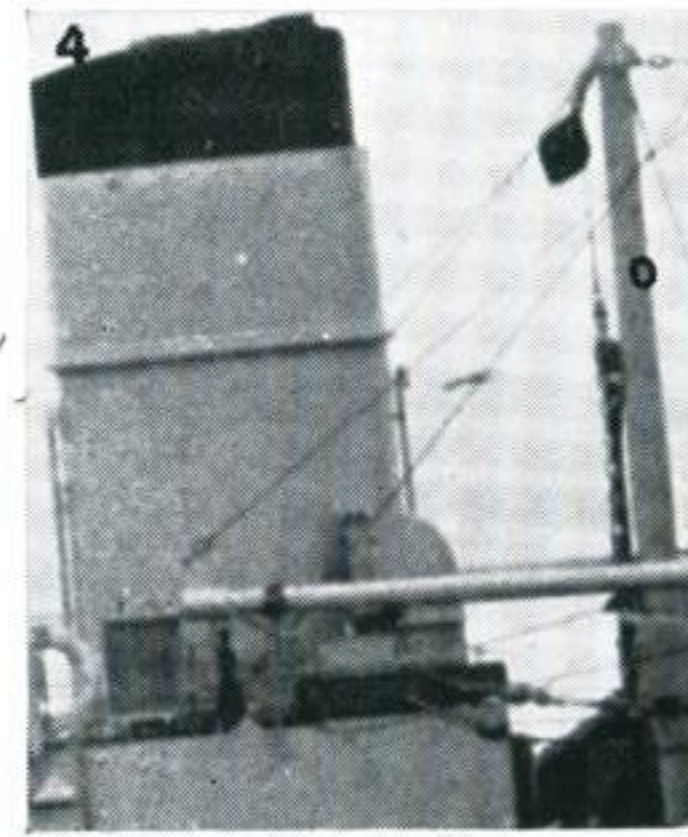
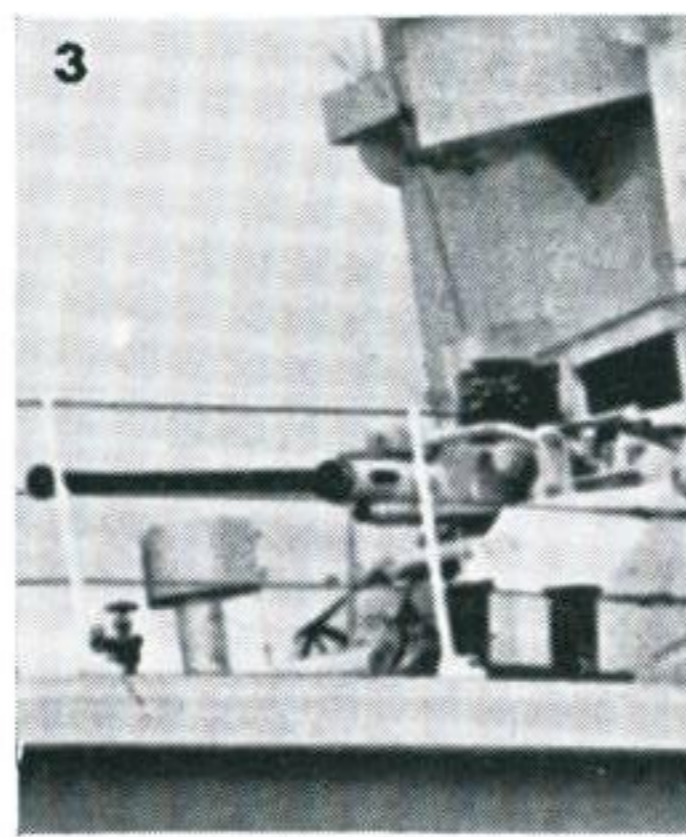
They are quite distinctive in appearance, with high freeboard and long forecastle with steep short sheer forward. Funnels vary slightly from ship to ship and

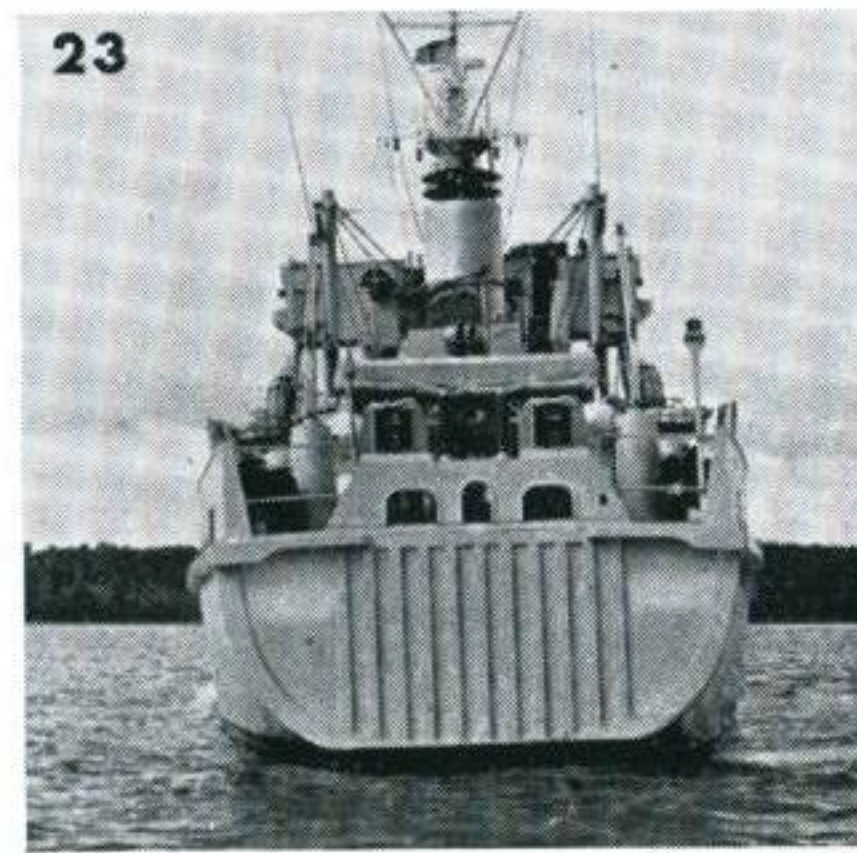
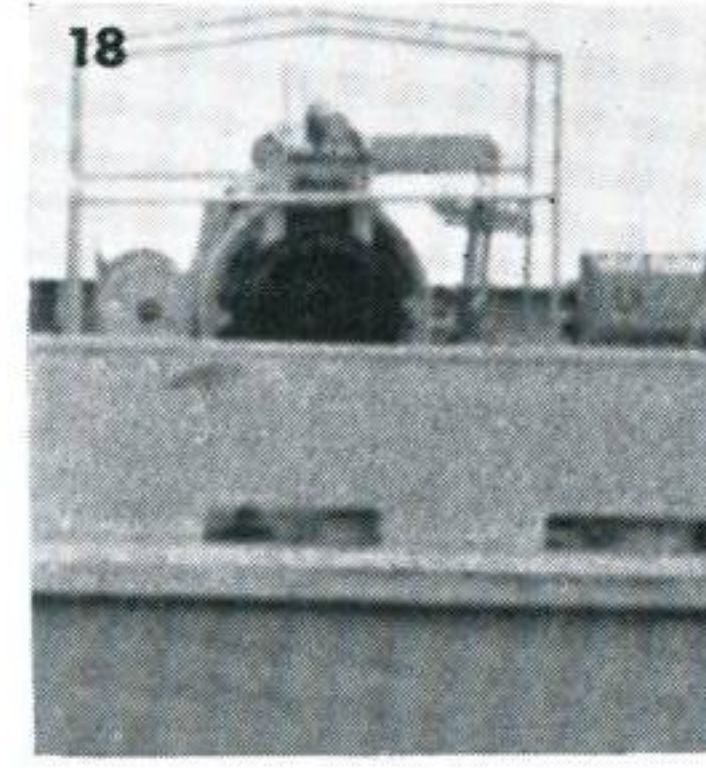
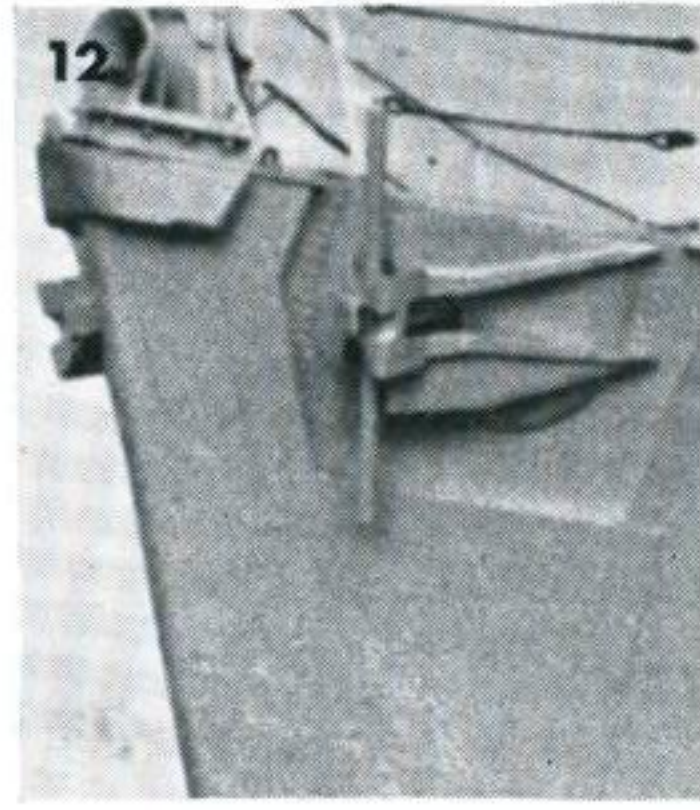
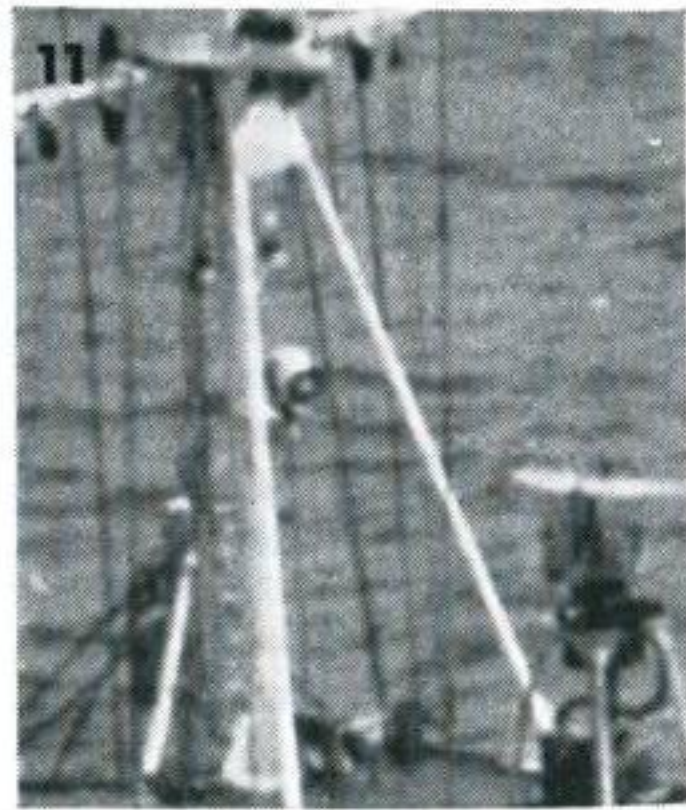
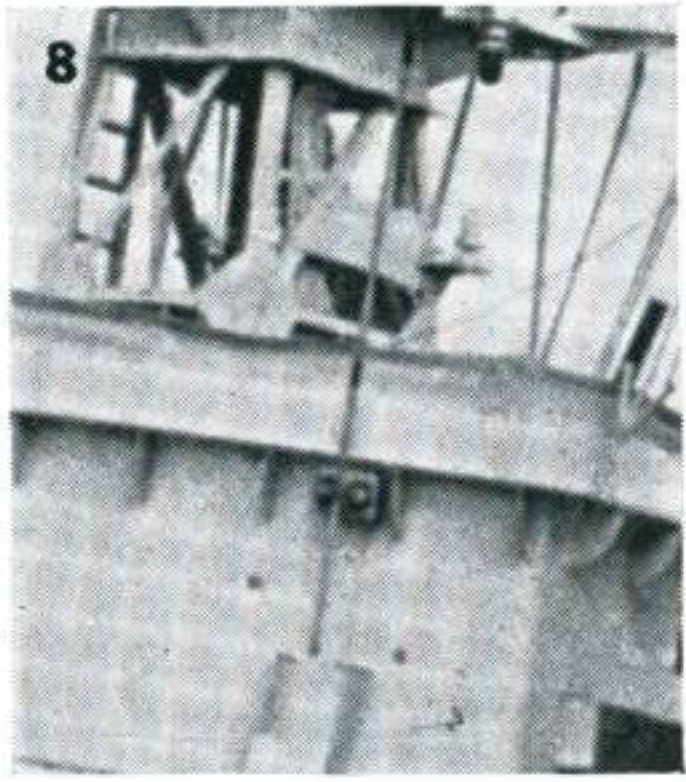
are approximately amidships. There are two principal types of bridge and foremast.

There are still about 75 ships in commission although some have been converted for purposes other than sweeping. Eleven are attached to Royal Naval Reserve Divisions and still others have been transferred to Commonwealth and other Navies.

Originally they all bore names of villages with the suffix "ton".

Lesson instructions are on page 254 Solutions on the cover





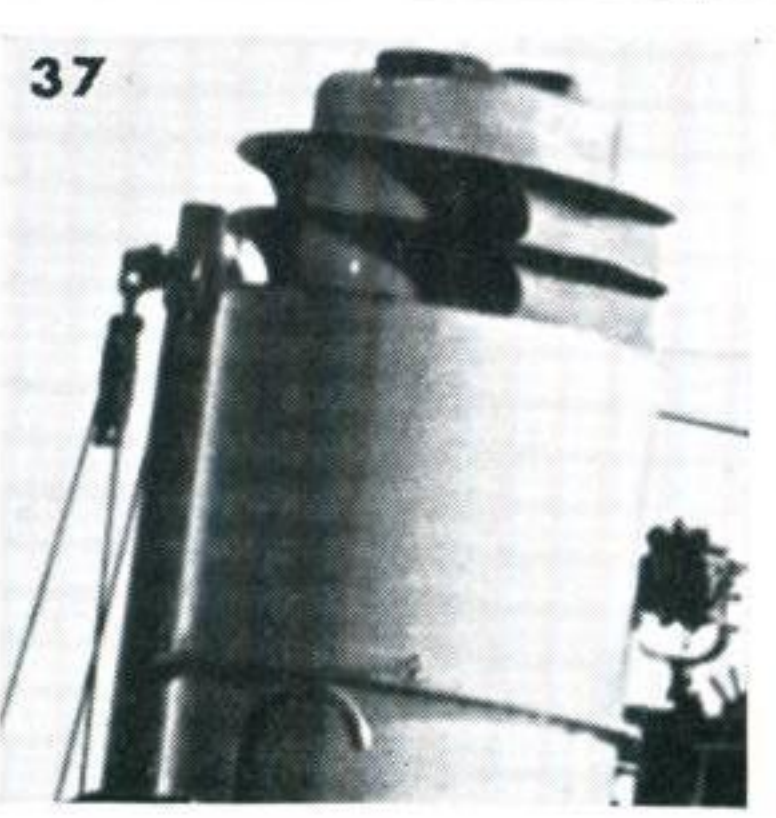
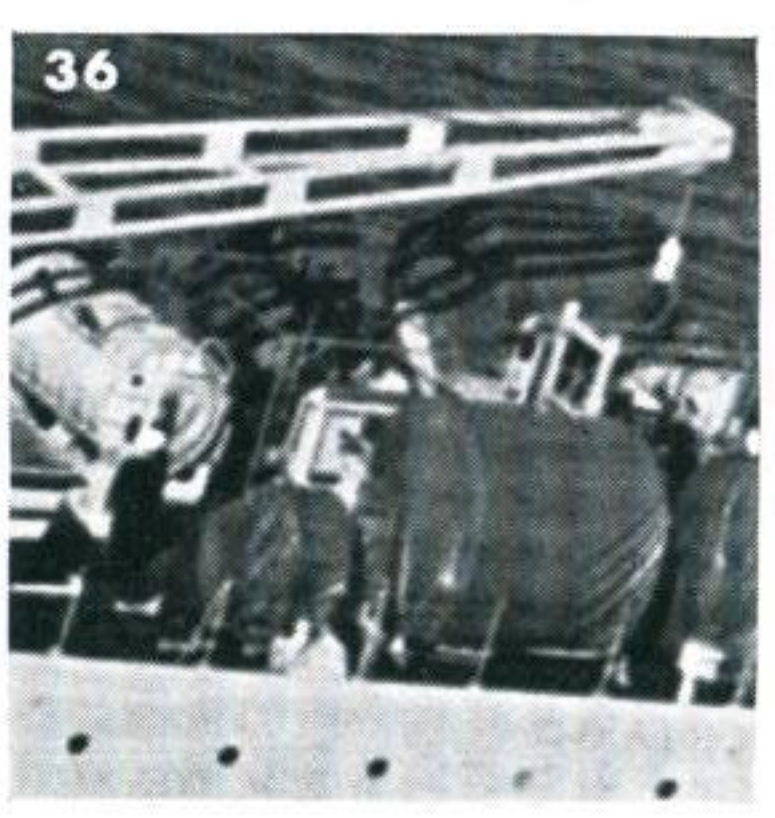
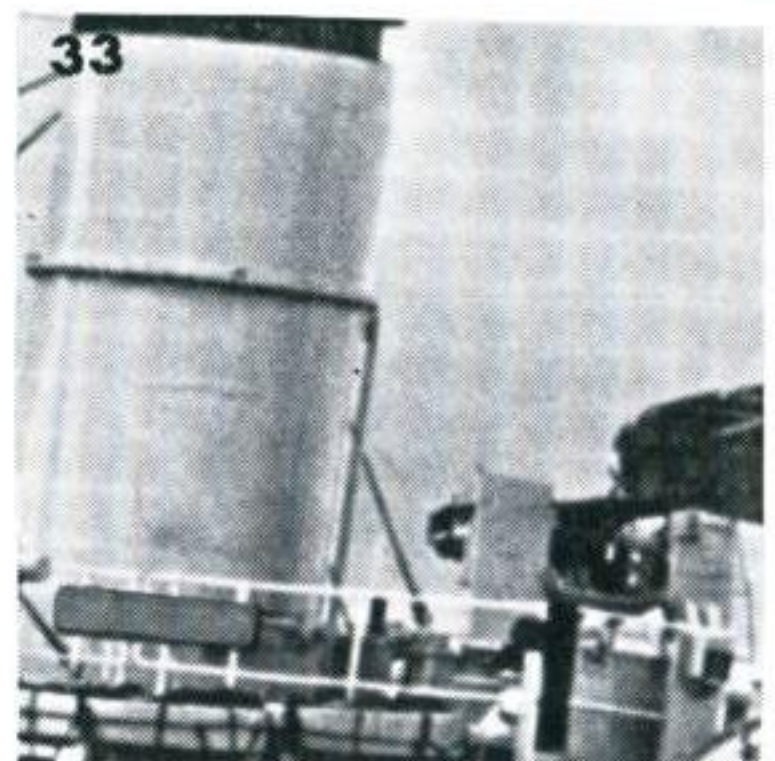
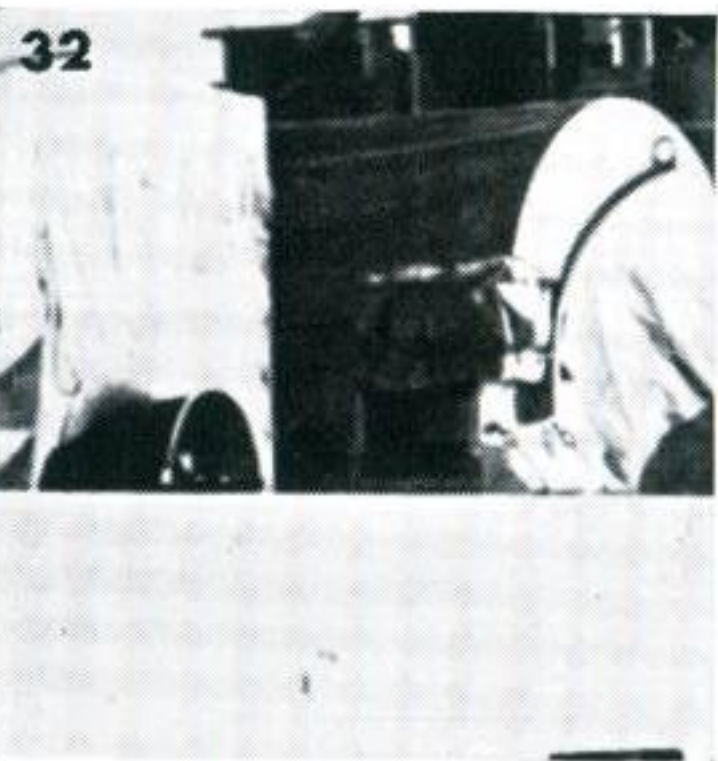
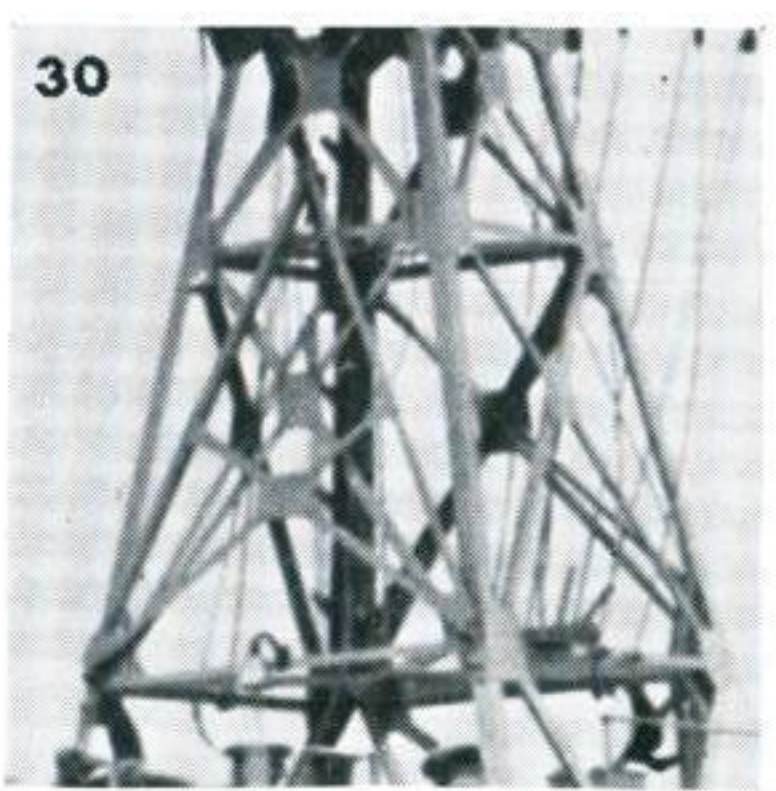
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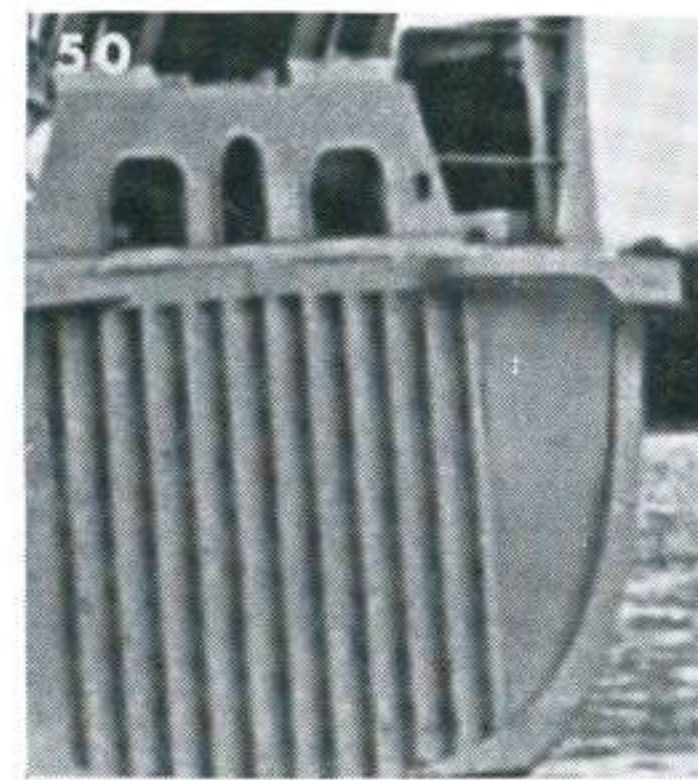
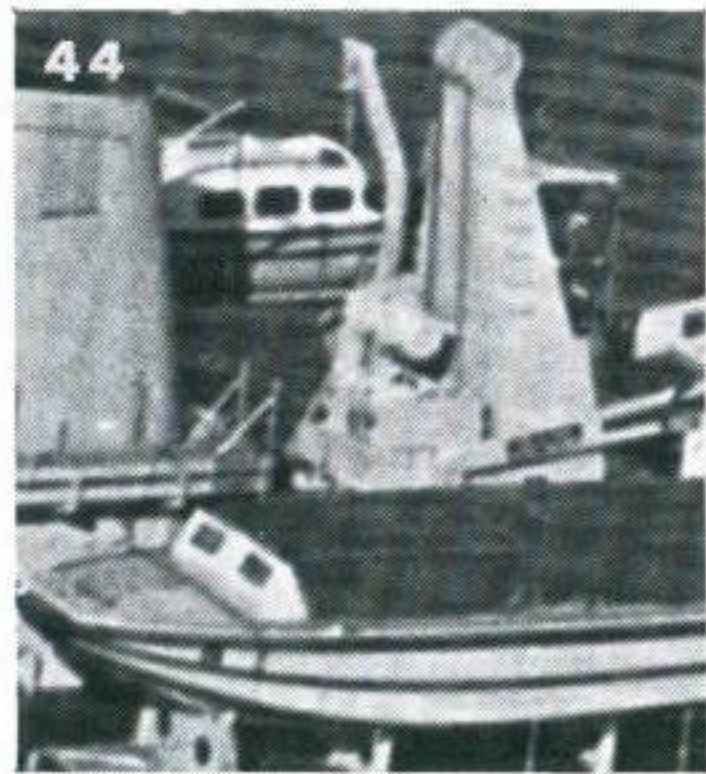
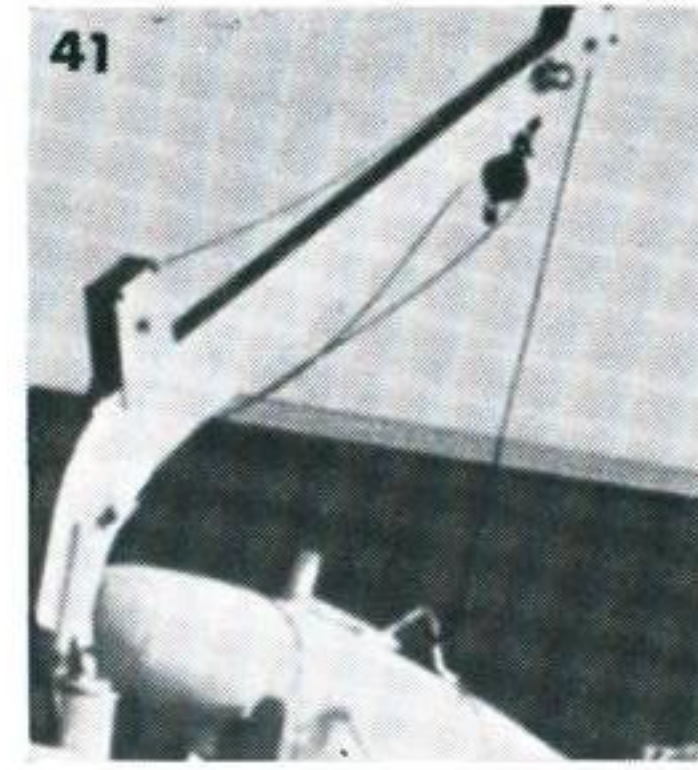
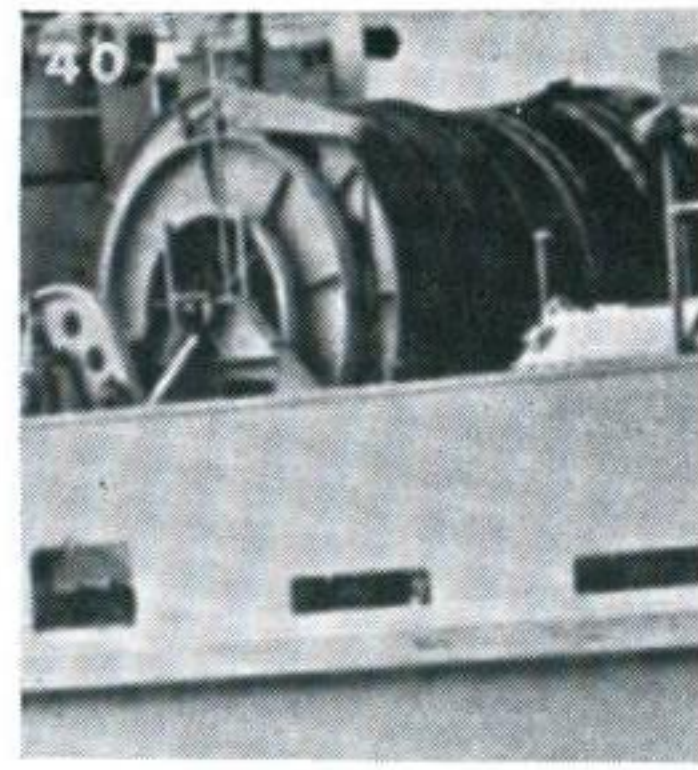


"TON" CLASS continued Lesson Instructions are on page 254



Solutions on the cover





KEY "TON" CLASS



continued overleaf

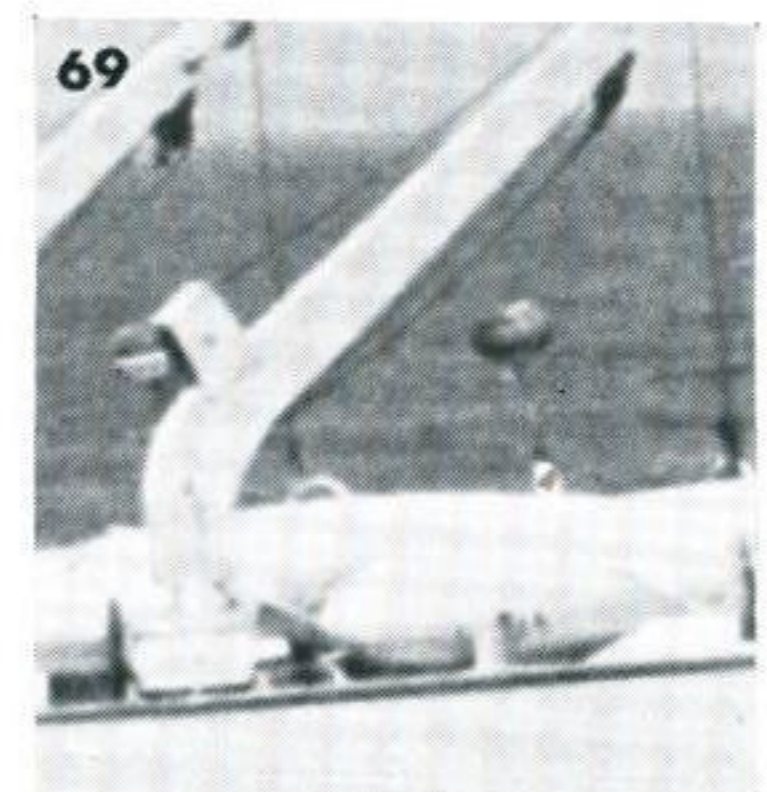
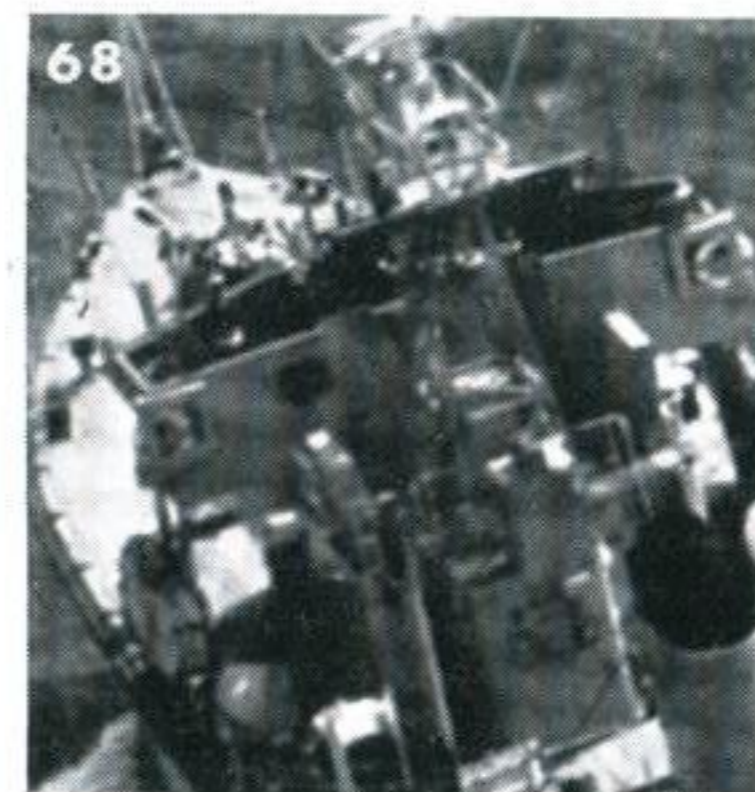
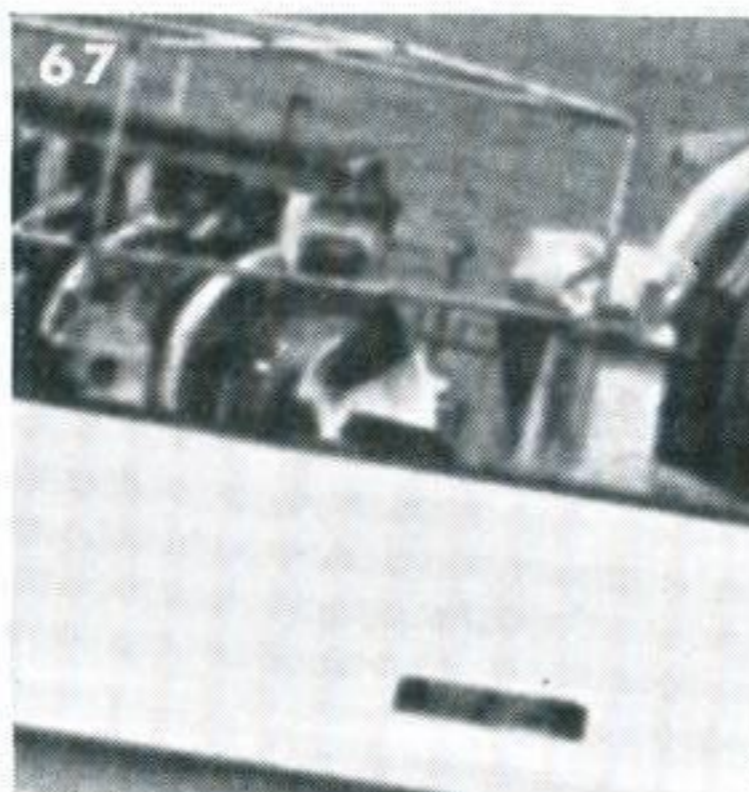
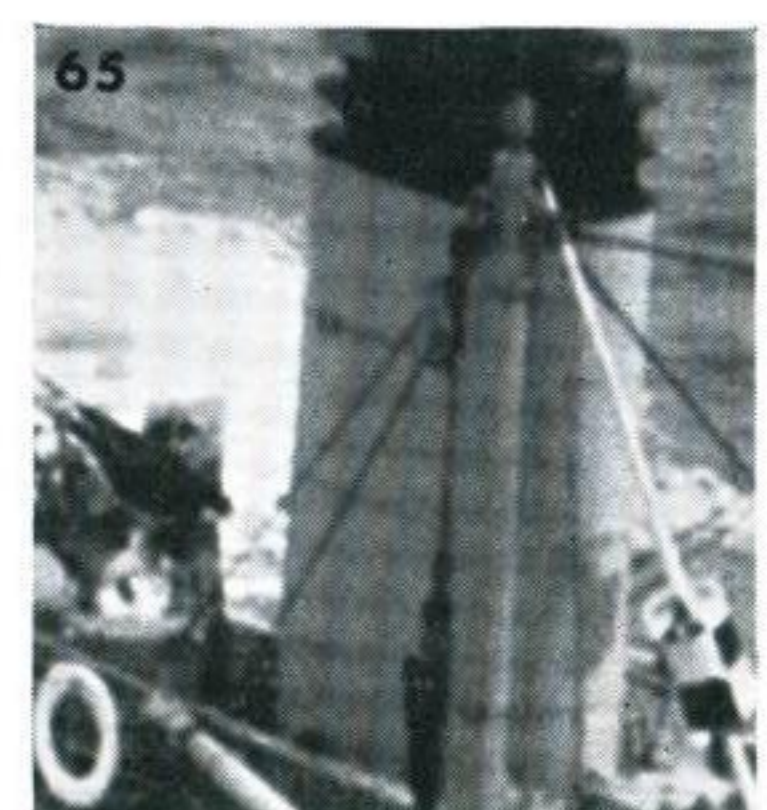
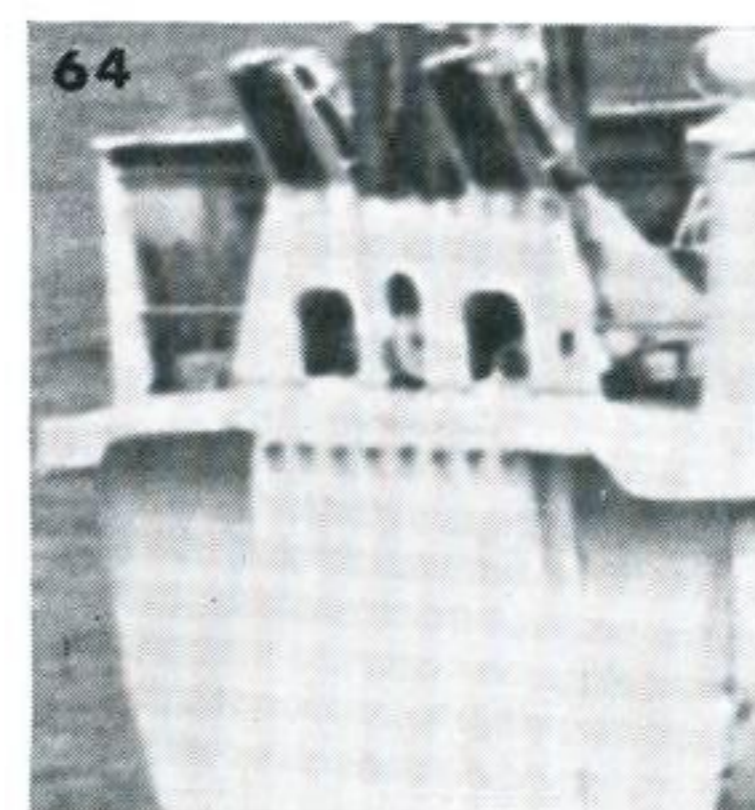
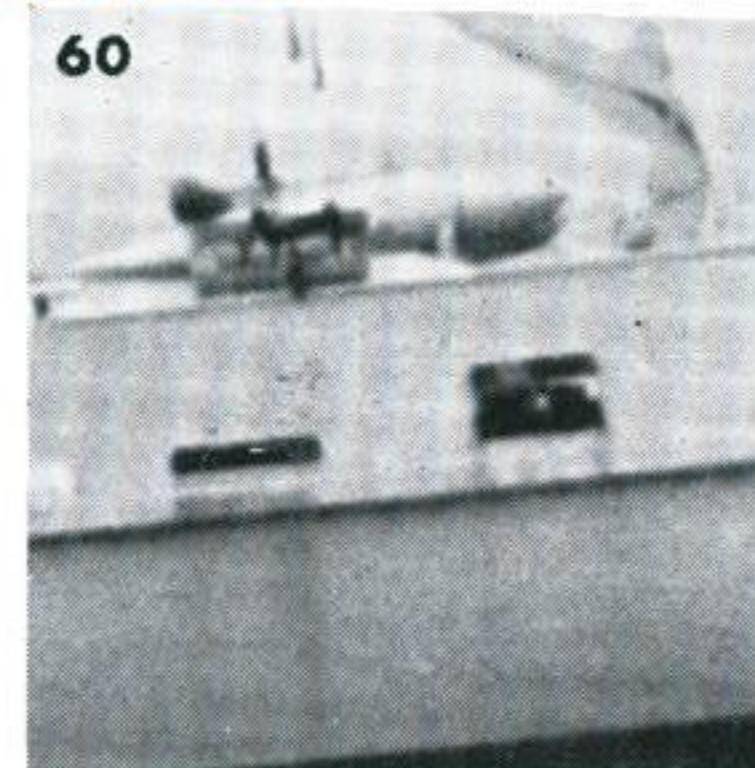
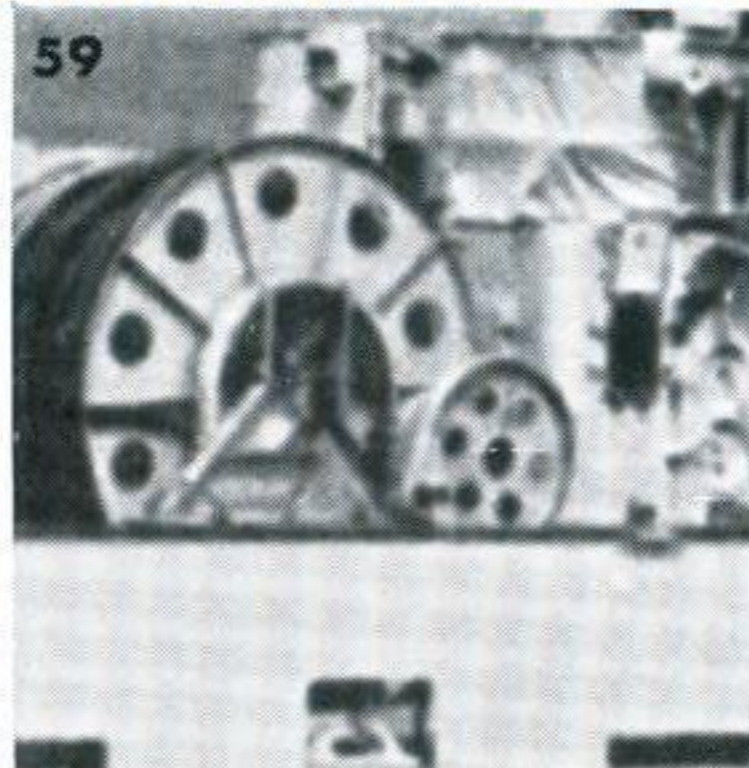
KEY

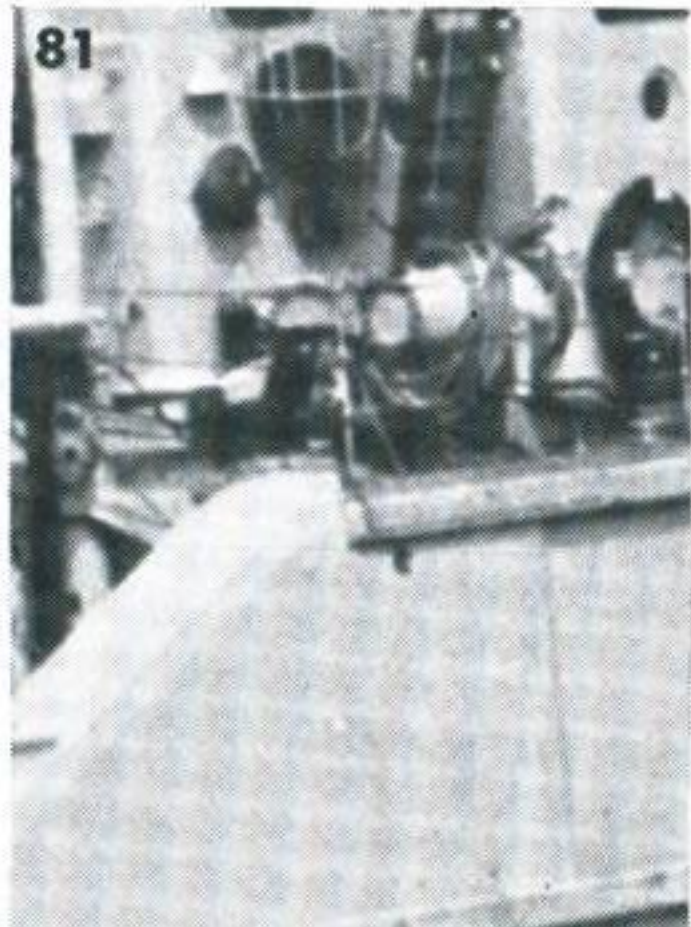
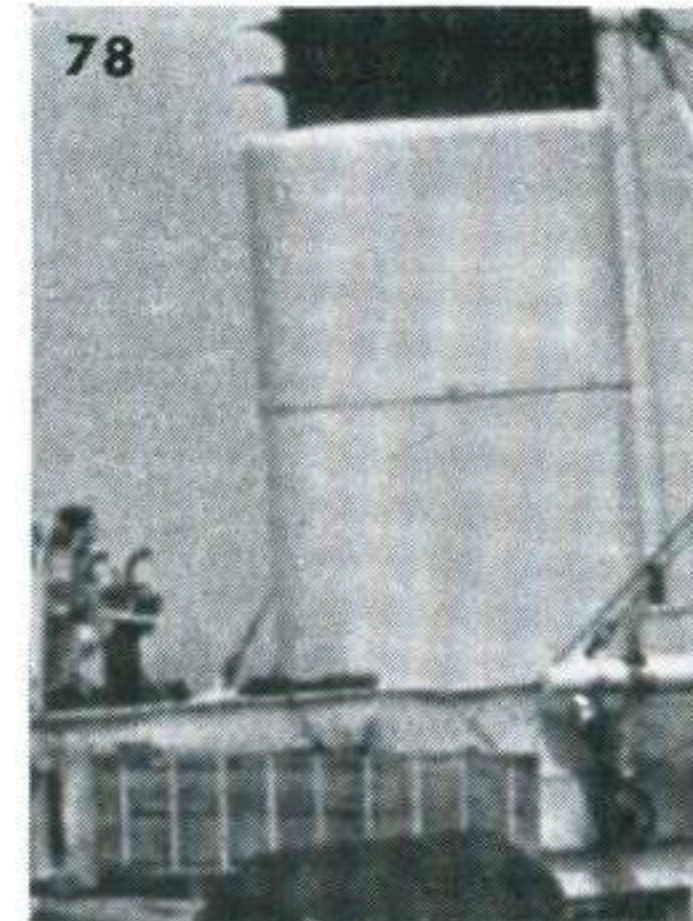
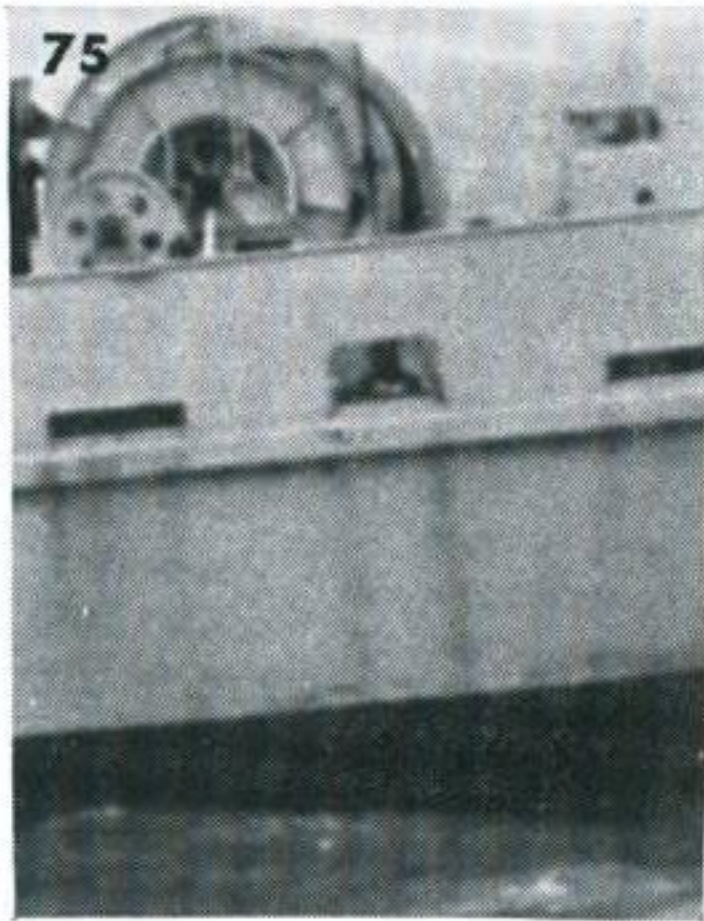
"TON" CLASS



"TON" CLASS continued

Lesson Instructions are on page 254







Australian-built Mirage IIIOs of the RAAF

Lesson instructions are on page 254

MIRAGE III

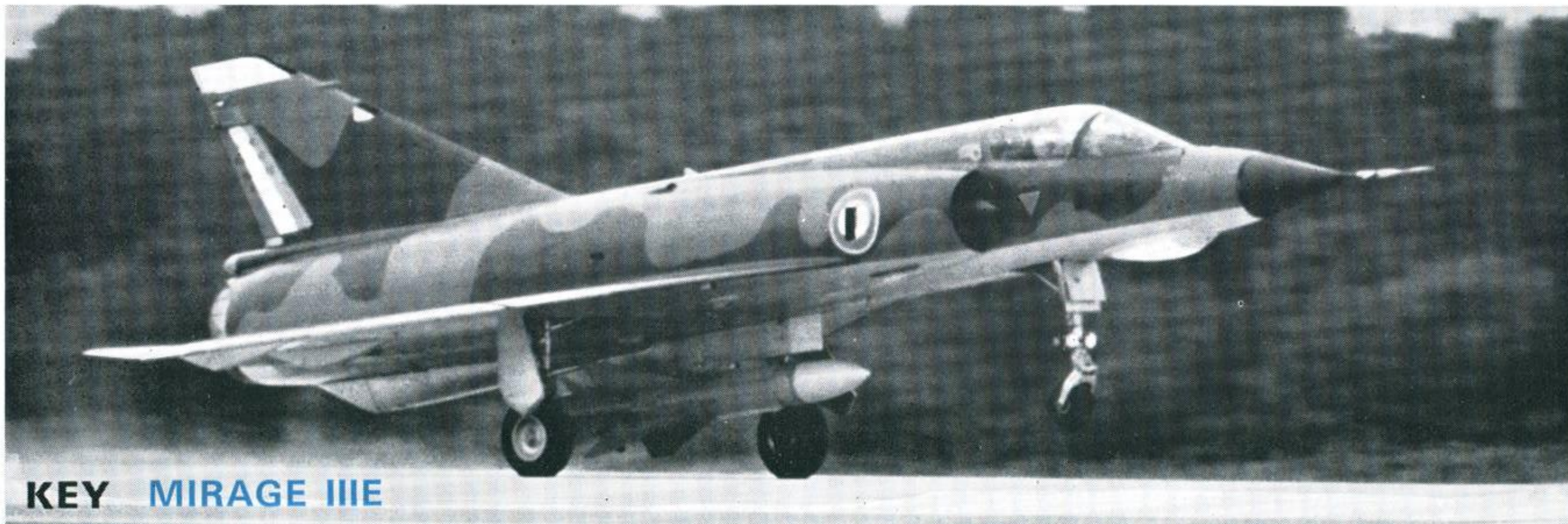
The Dassault Mirage III was designed as a Mach 2 all-weather fighter capable of operating from short unprepared airstrips, and the first prototype flew in November 1956. Current versions include the IIIB tandem two-seater trainer/strike fighter used by France, the Lebanon, Peru, South Africa and Switzerland; the IIC all-weather interceptor and day ground attack fighter for France, Switzerland, Israel, South Africa, Australia, The Lebanon, Pakistan and Peru; the IIIE

long range intruder version for France and several other countries already listed; and the IIIR reconnaissance version of the IIIE for the French Air Force.

A derivative of the Mirage IIIE is the Mirage V day fighter-bomber; this does in fact use the same airframe and engine and it, too, is being exported. A scaled-up version of the Mirage III is the Mirage IV, two-seat supersonic strategic bomber, in service with France's *Force de Frappe*.

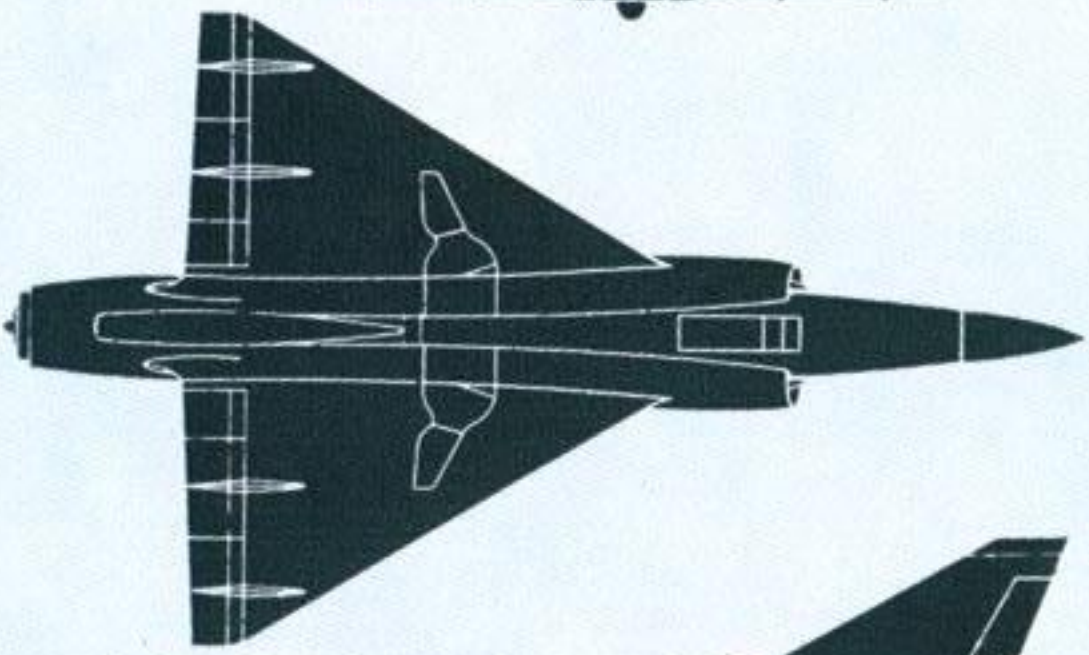
Note: Mirages IIIV, F1, F2 and G are not featured in this lesson

Solutions on the cover



KEY MIRAGE IIIE

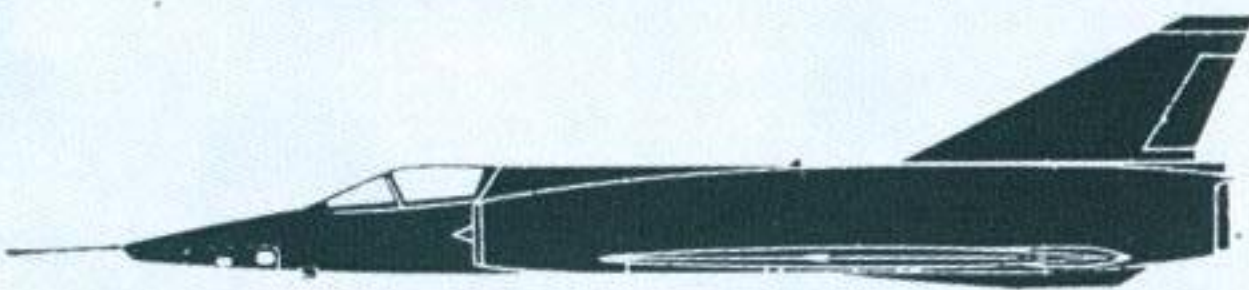
Span 27 feet



MIRAGE IIIC



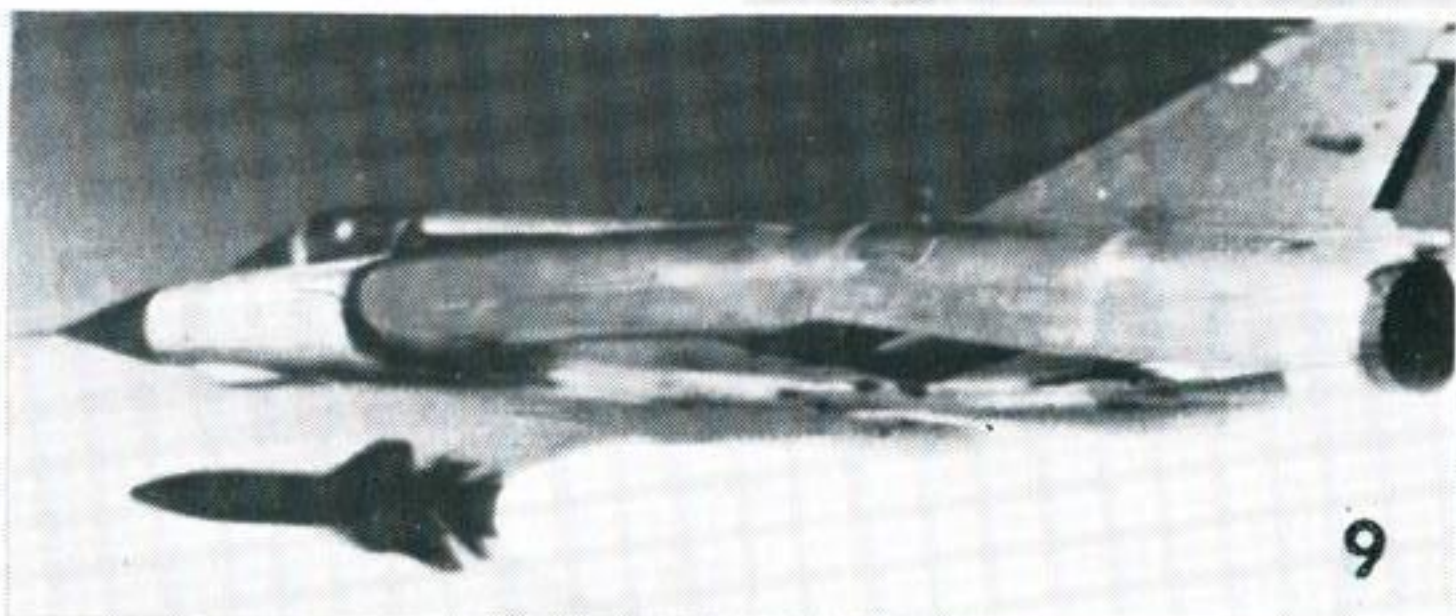
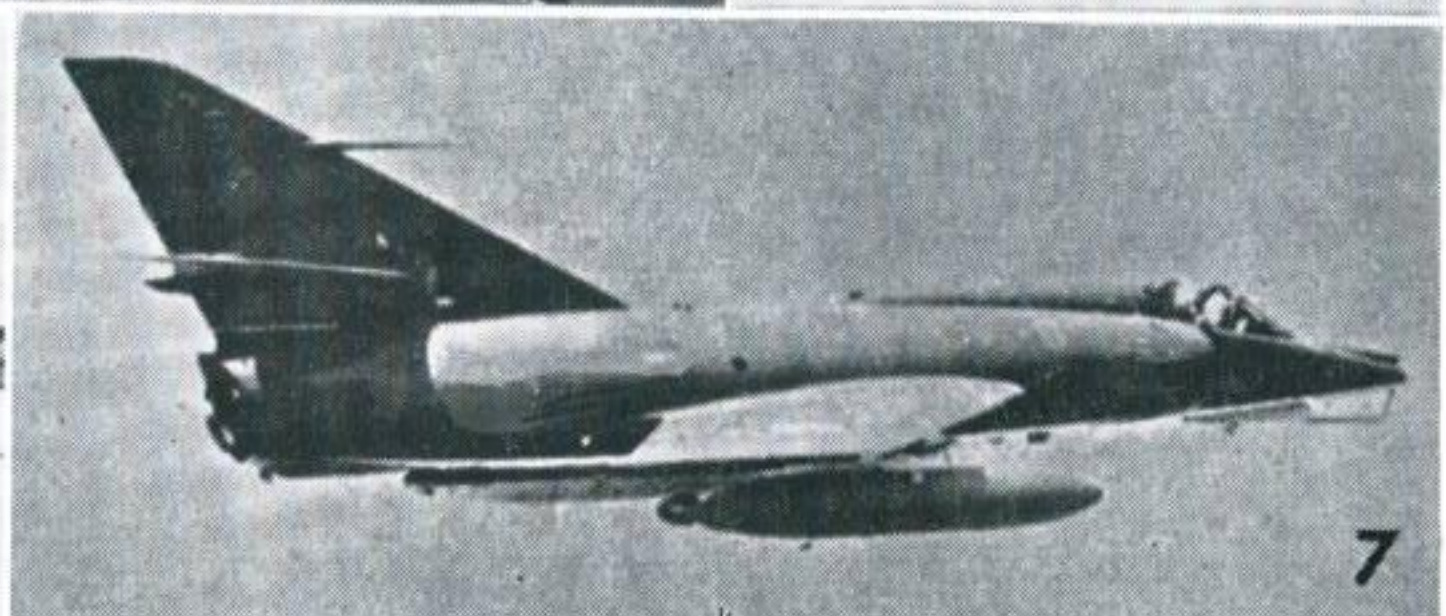
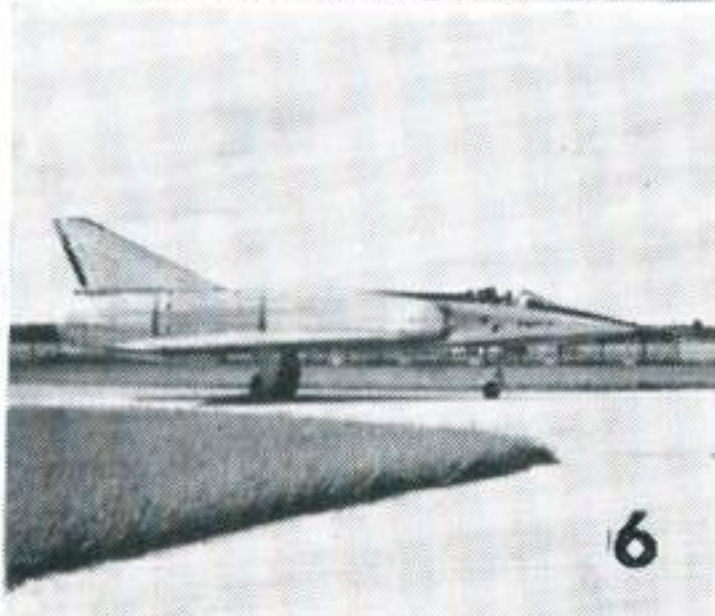
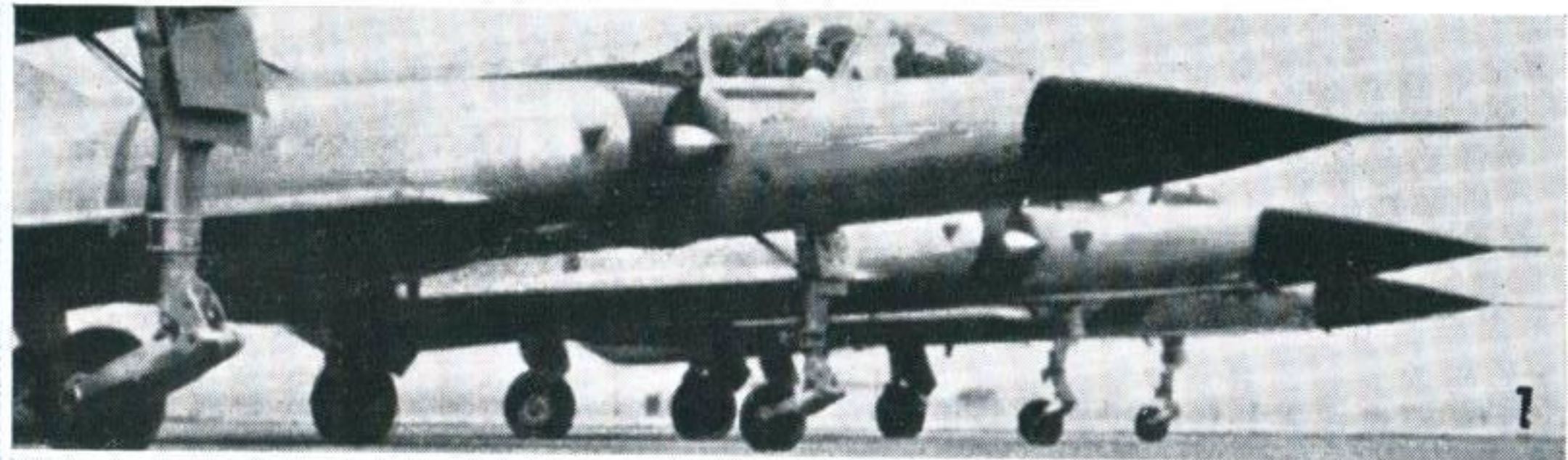
MIRAGE IIIR



MIRAGE IIIB



MIRAGE IIIE



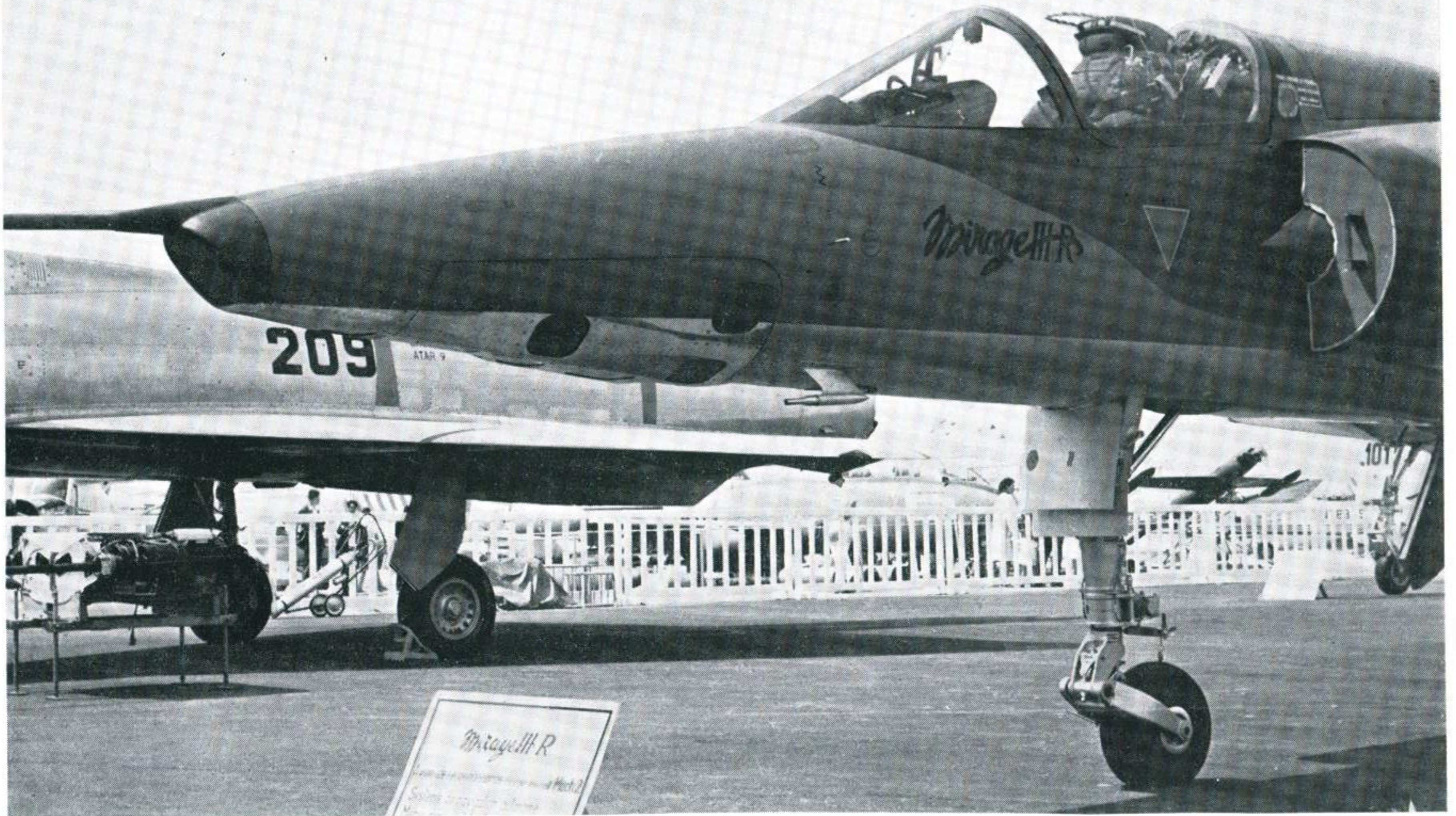
continued overleaf

KEY MIRAGE IIID Two-seat operational trainer of the RAAF

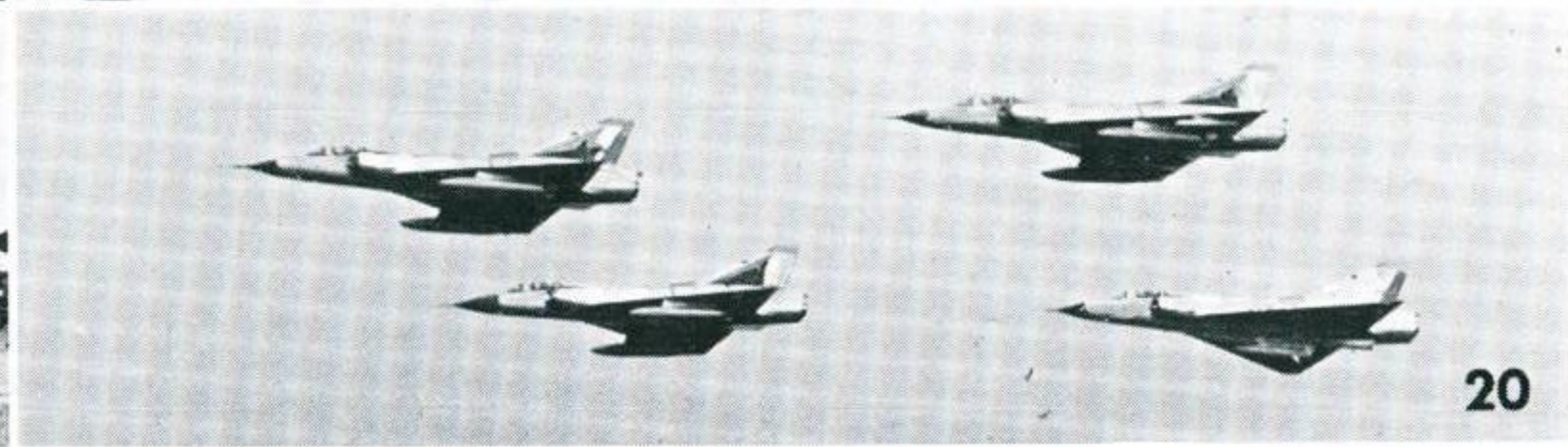
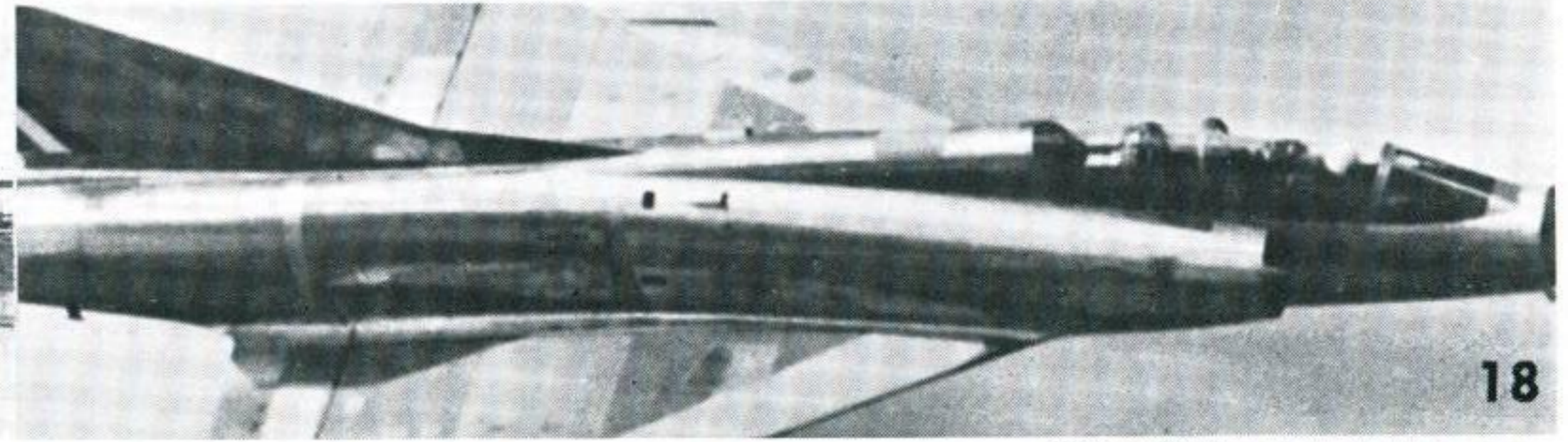


MIRAGE III R

KEY

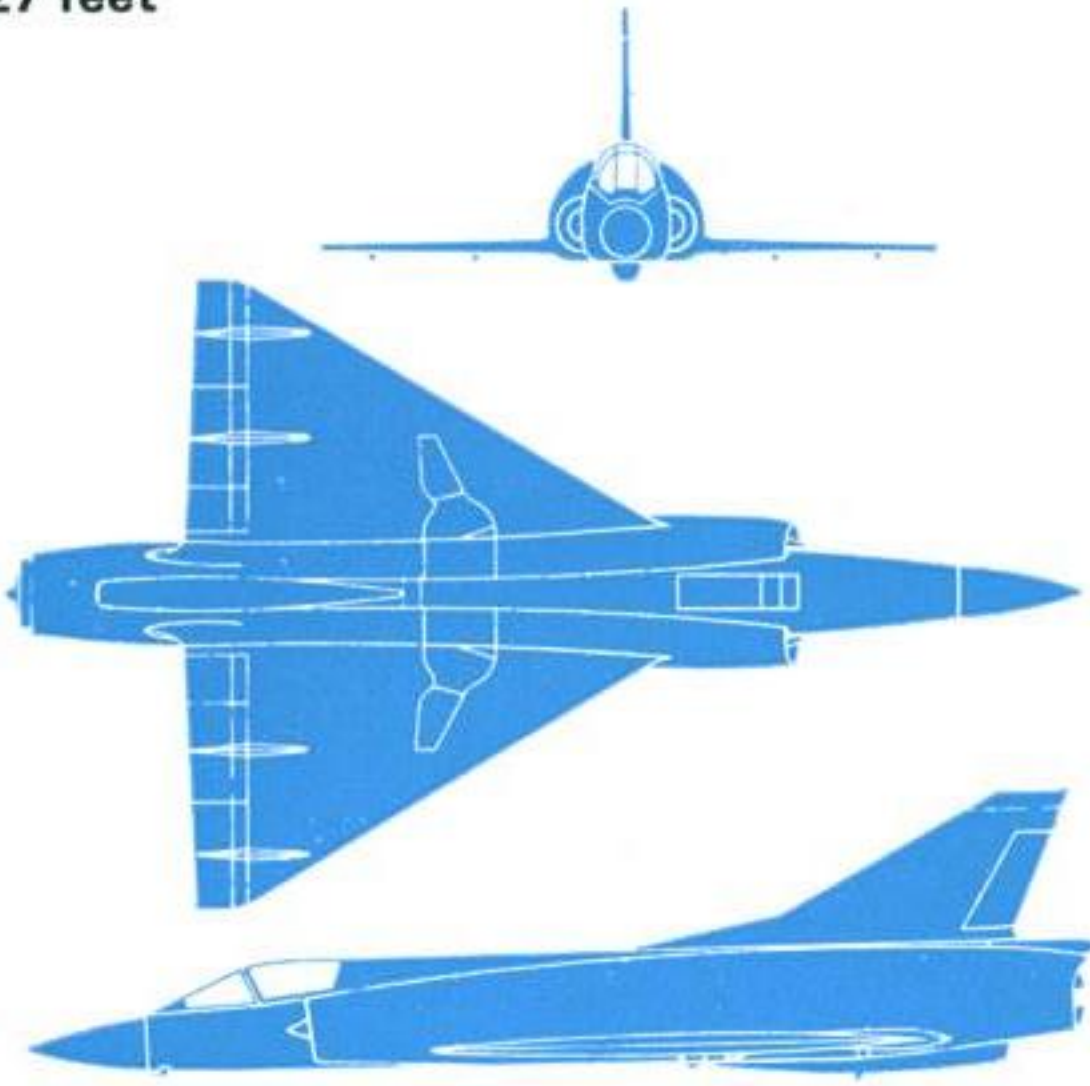


MIRAGE III continued

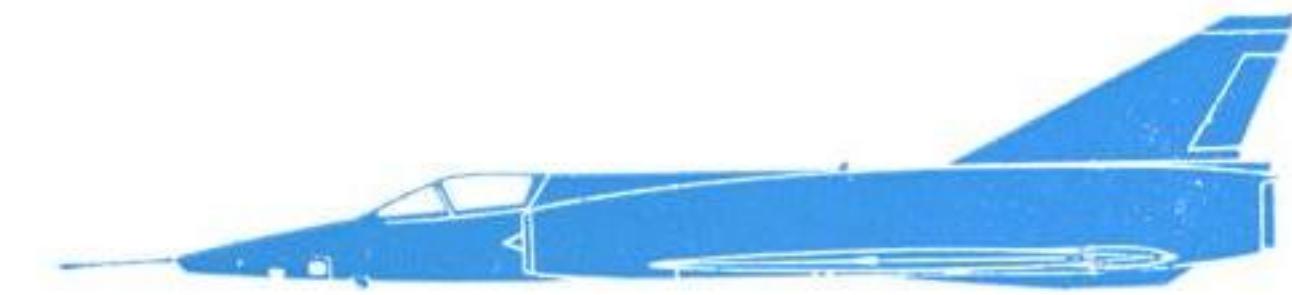


Some of the detail difference of the various Mirage IIIs are shown in the silhouettes, but for the purposes of this lesson concentrate mainly on the basic shape of the type, work to the instructions provided on page 254 and report all targets as Mirage III—or otherwise if jokers. Solutions on the cover.

Span 27 feet



MIRAGE IIIC



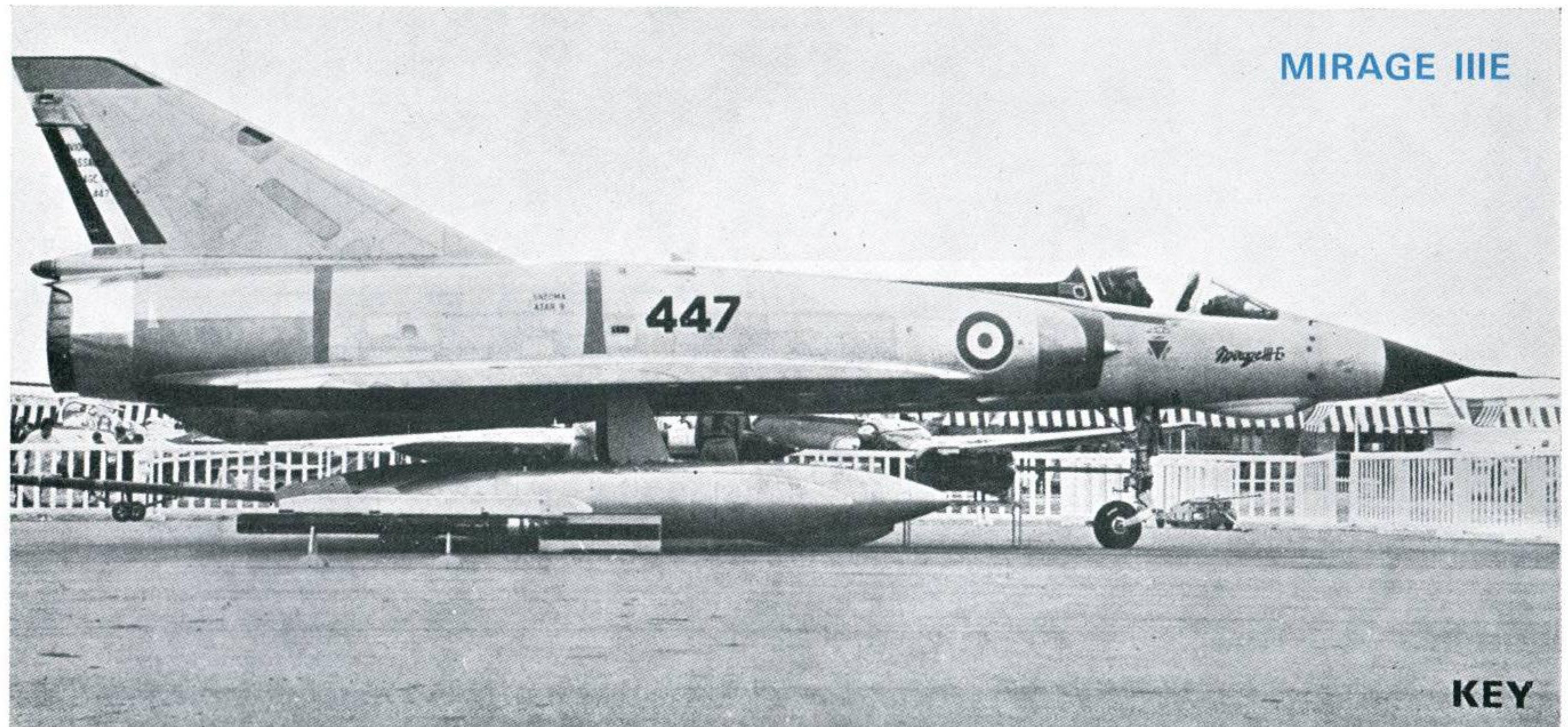
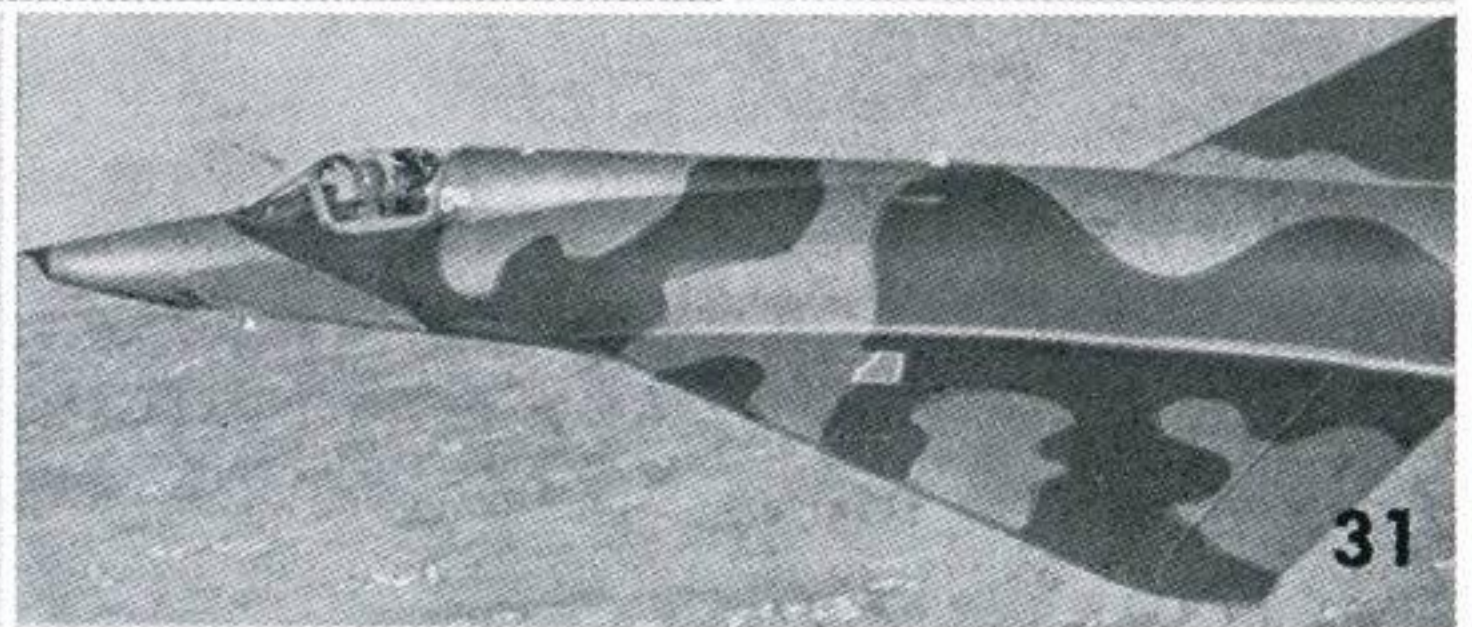
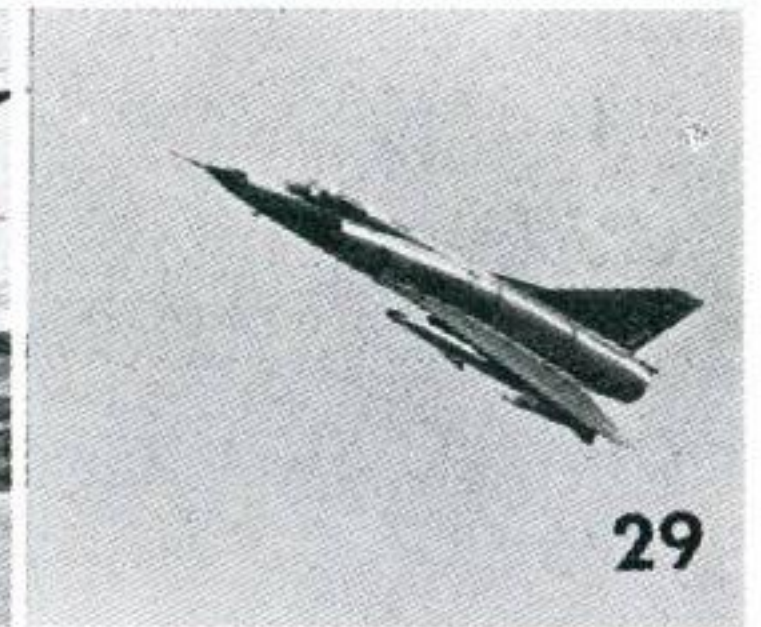
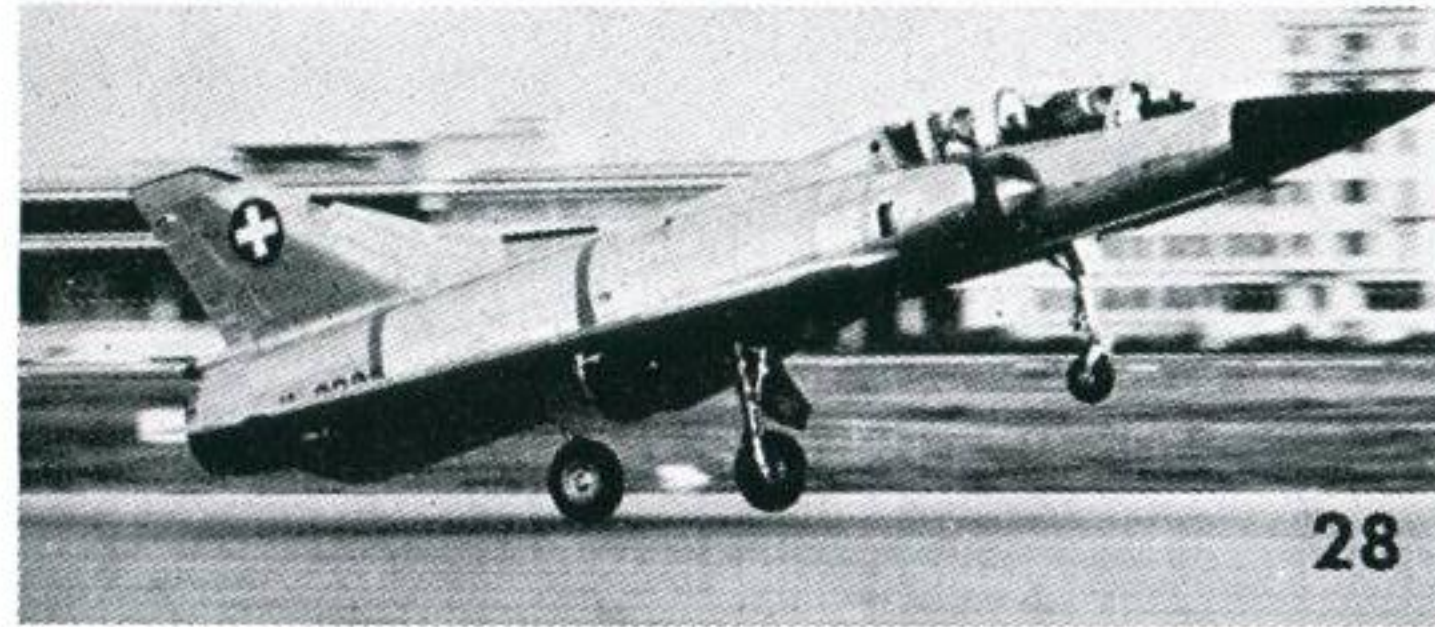
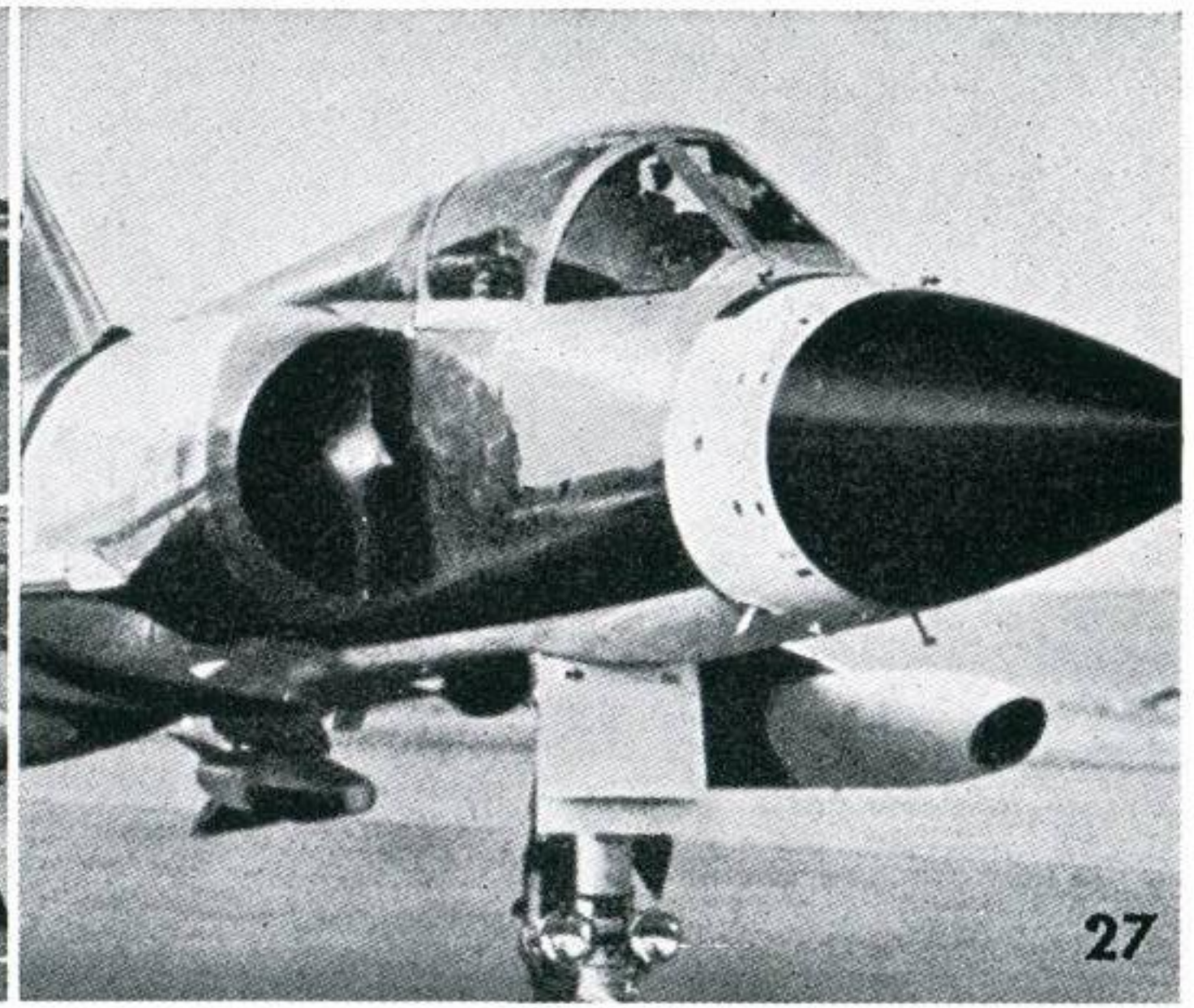
MIRAGE IIIR



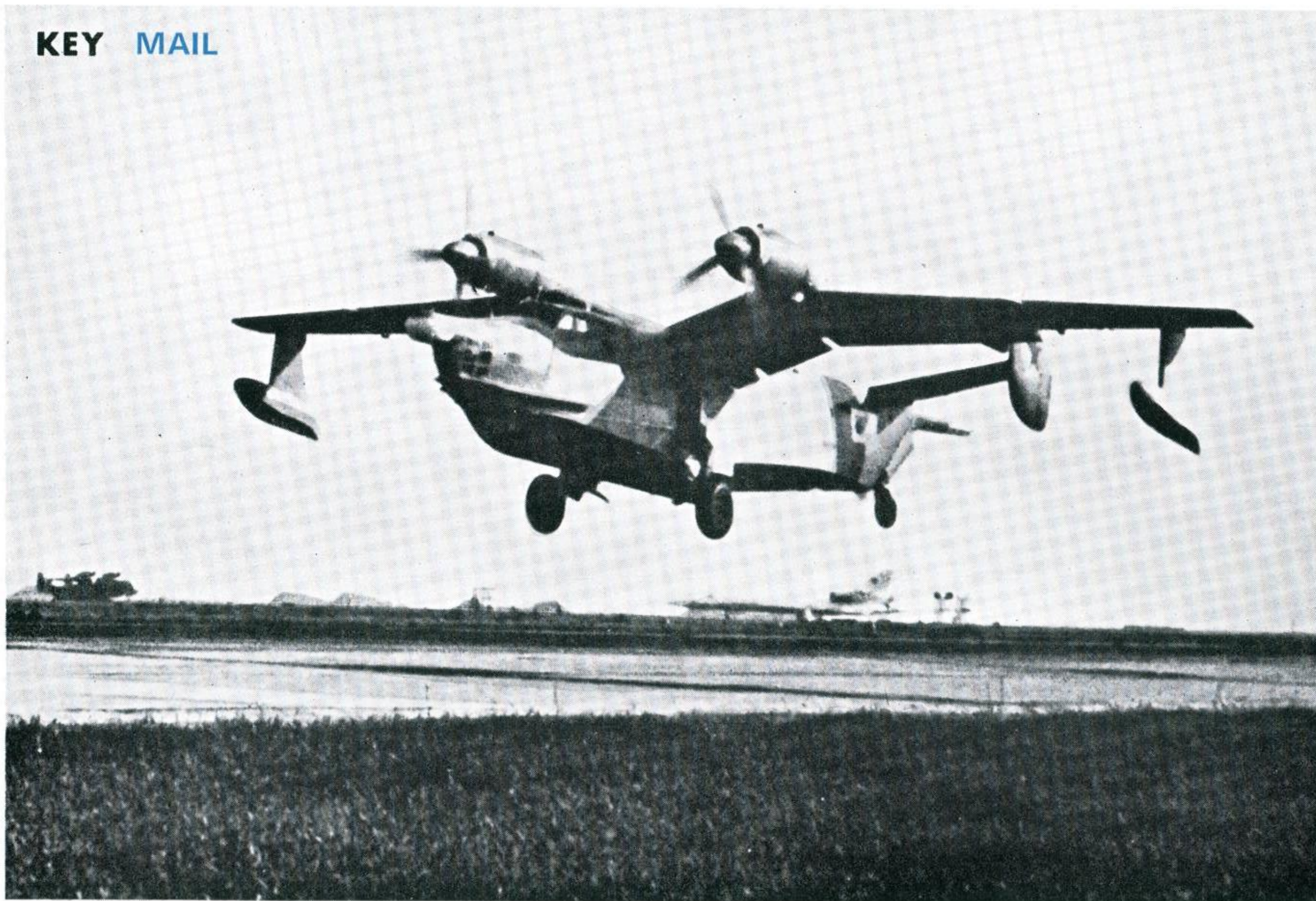
MIRAGE IIIB



MIRAGE IIIE



KEY MAIL



MAIL

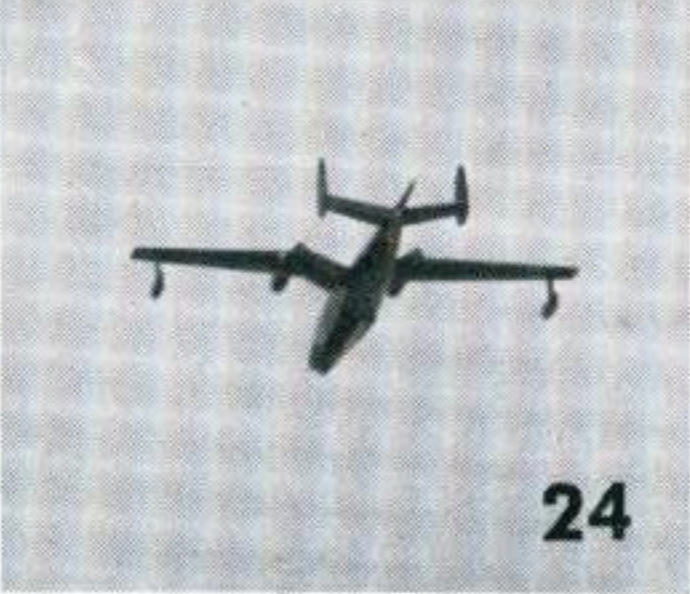
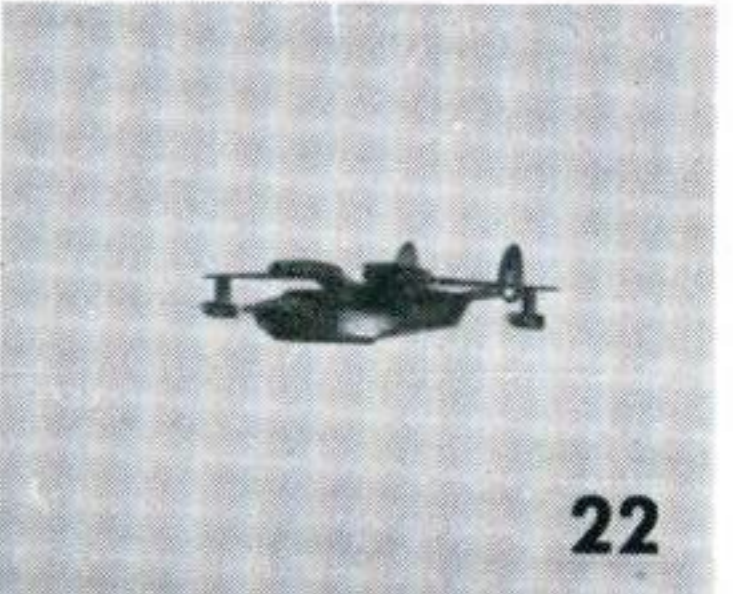
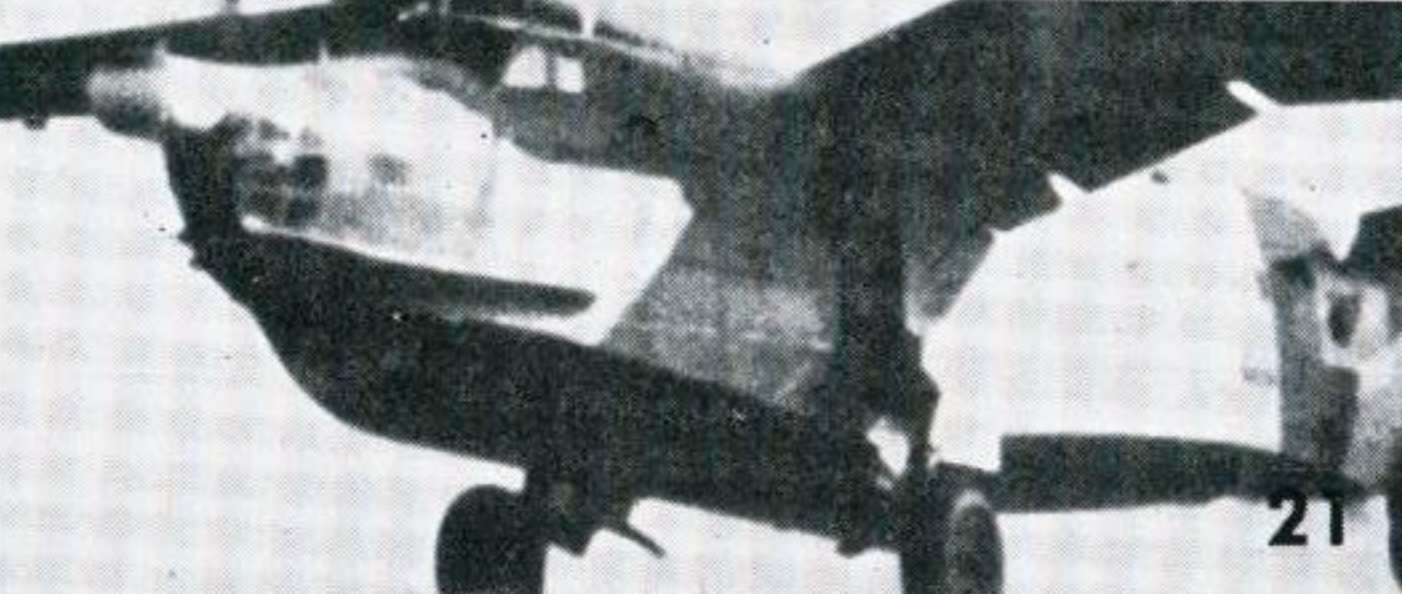
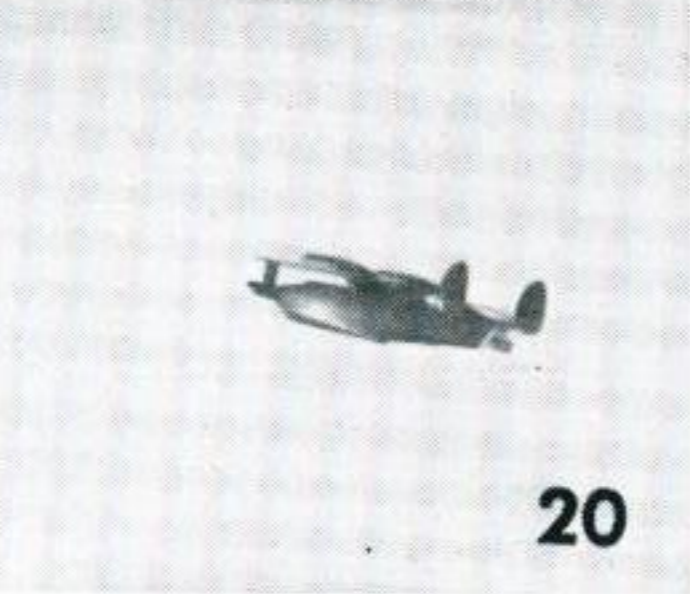
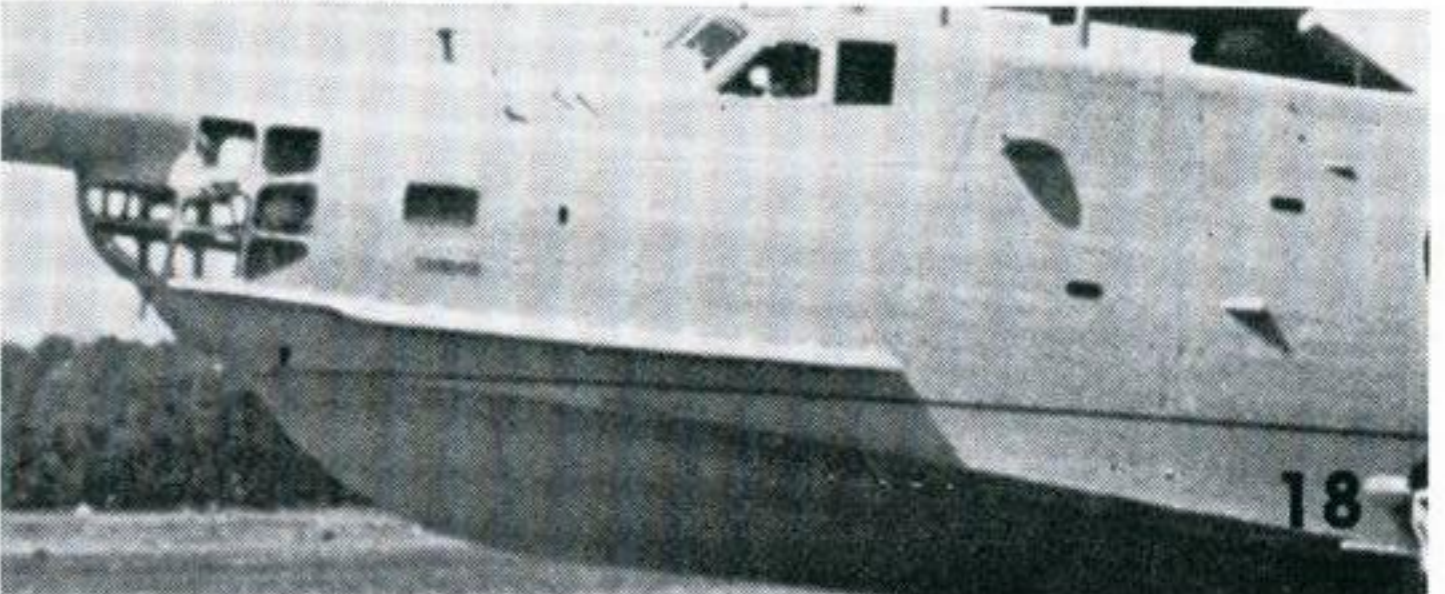
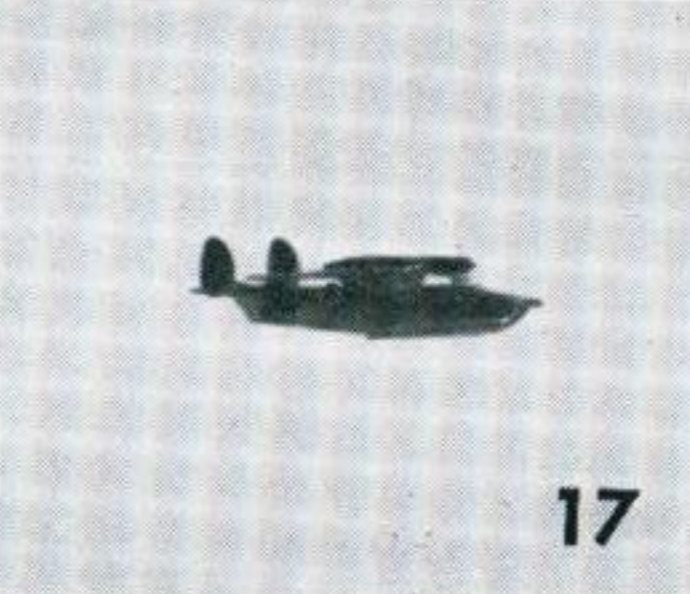
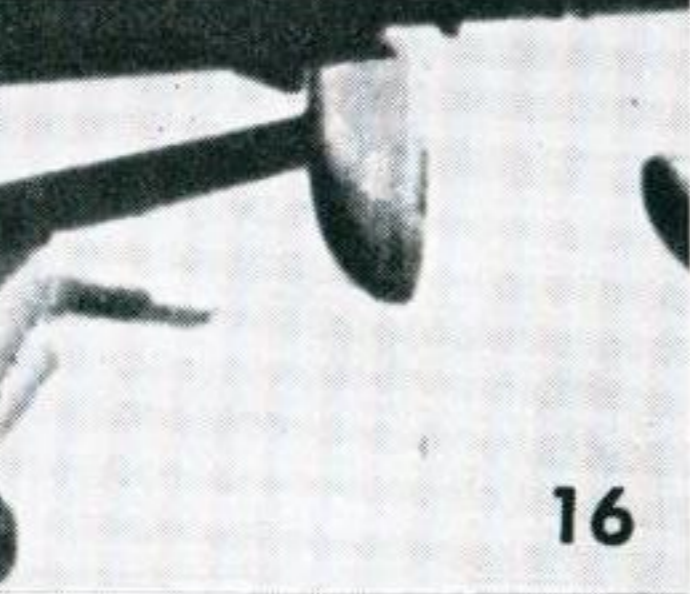
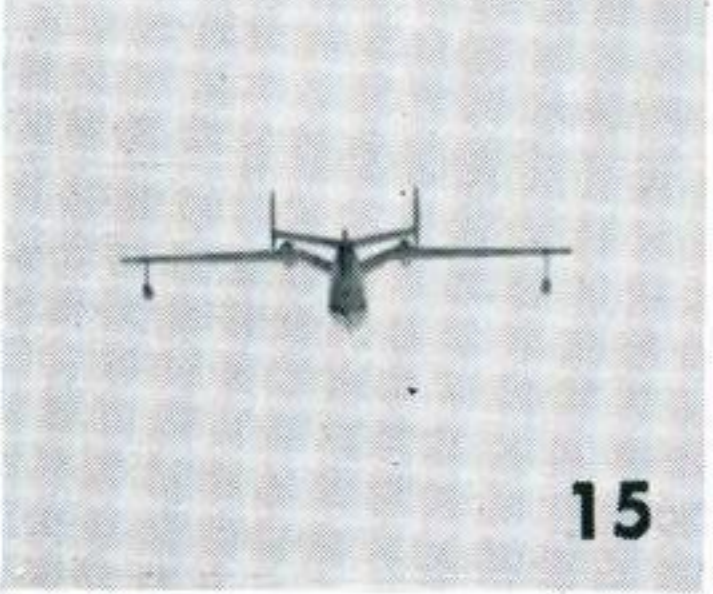
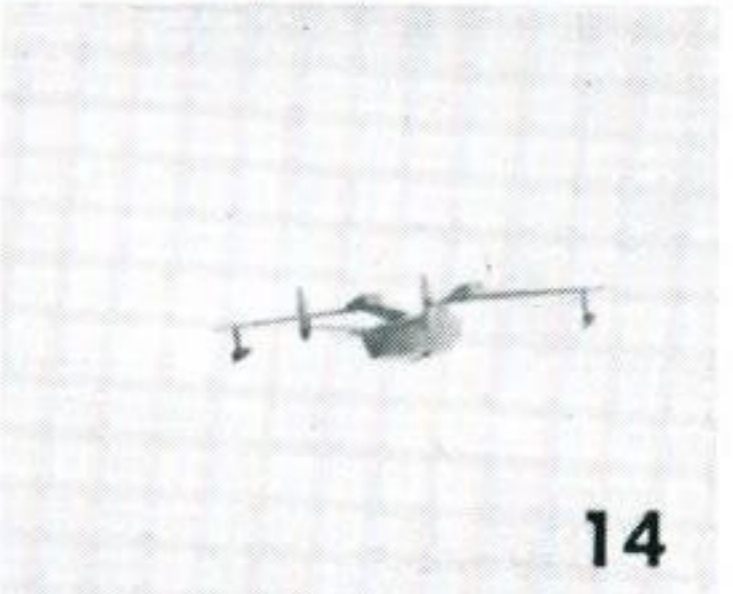
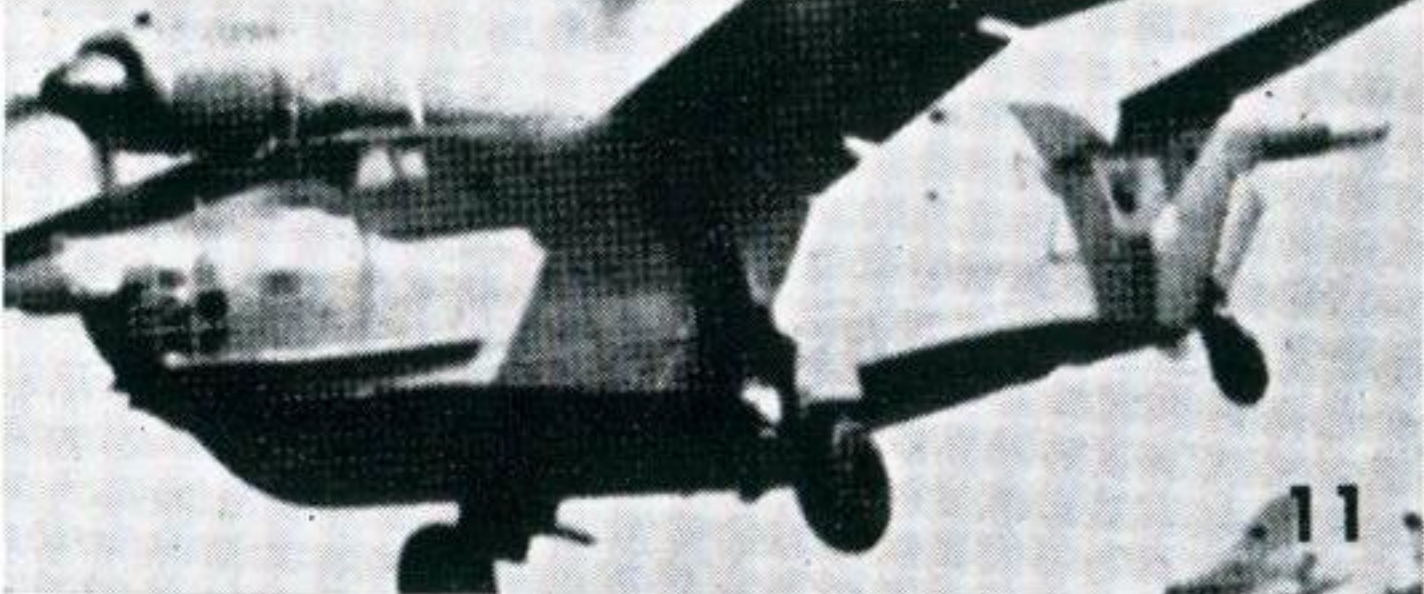
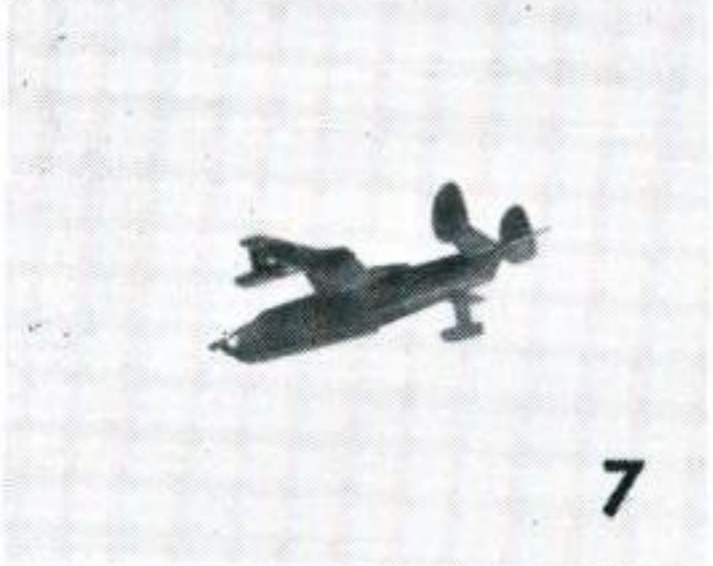
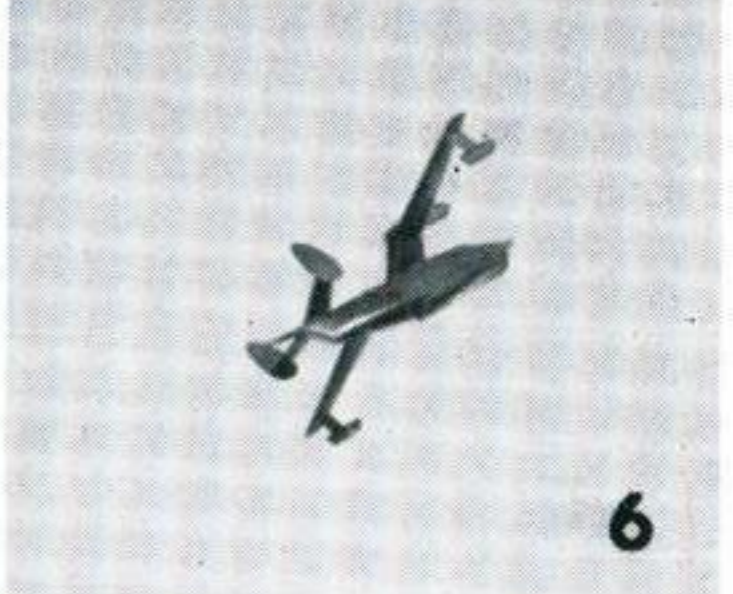
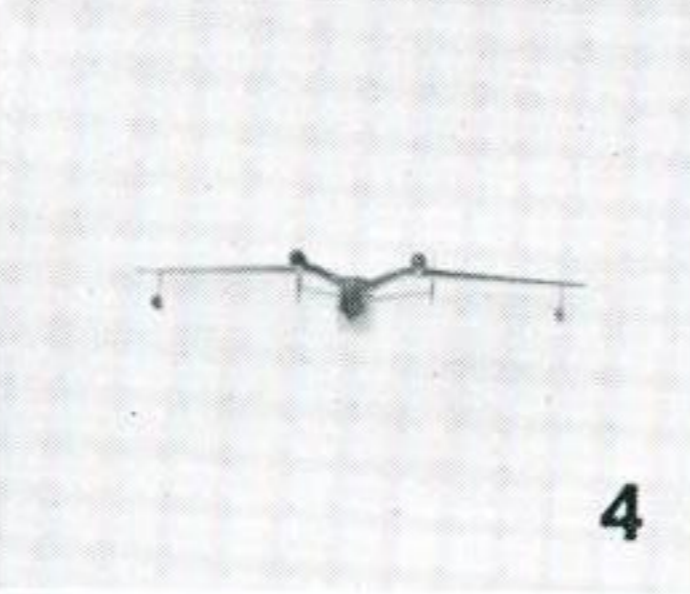
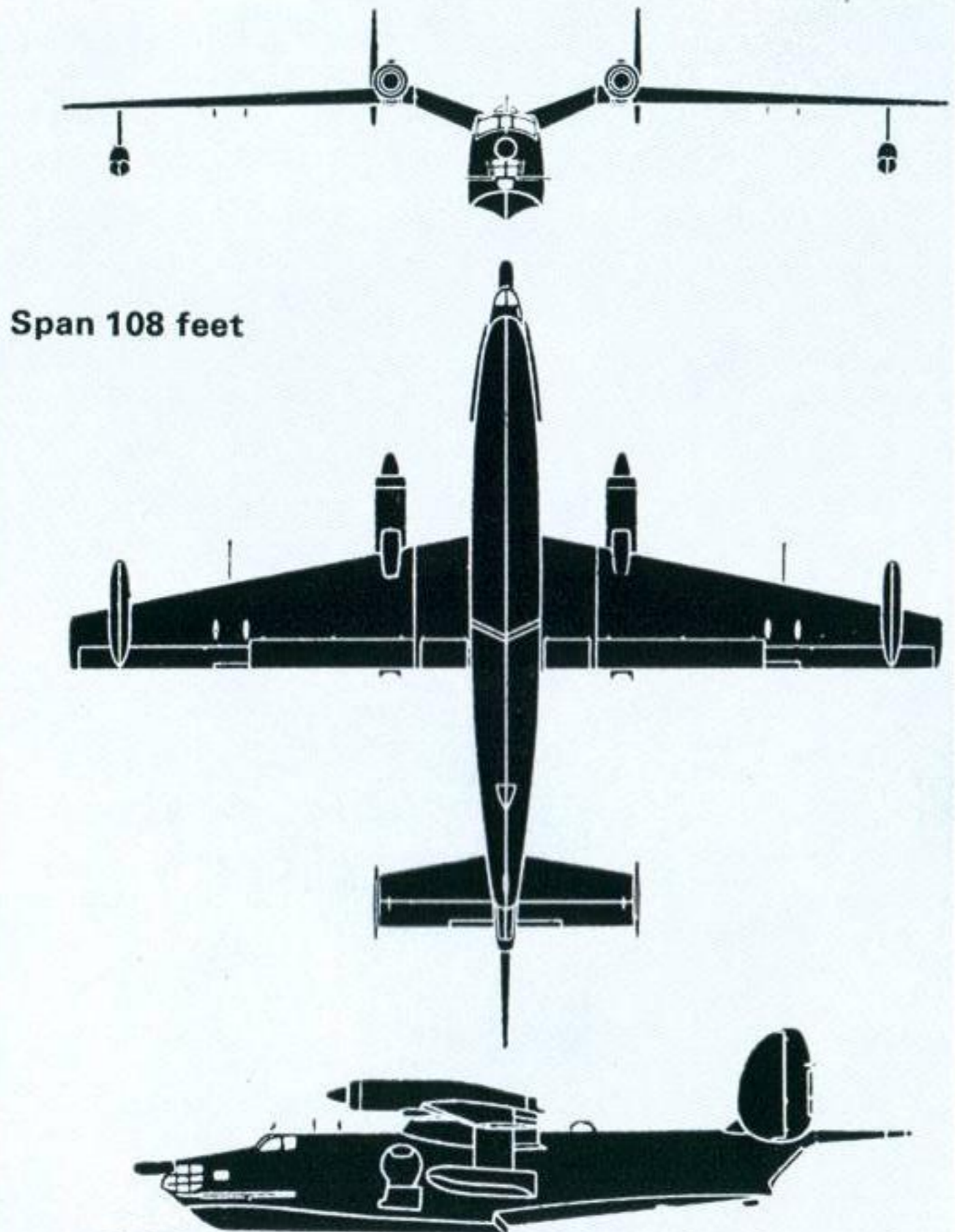
The Beriev Be-12 was first revealed publicly in 1961 when a single example took part in the Soviet Aviation Day fly-past in Moscow. It is a twin-turboprop maritime patrol and reconnaissance amphibian, it was designed as a successor to the piston-engined Be-6 (Madge) which it closely resembles. Mail is the

largest amphibian flying boat currently in service and among its more interesting features are nose radome and glazed nose observation position, and the pointed tail "sting".

The lesson instructions are on page 254. Check your answers with the solutions on the cover.

KEY MAIL



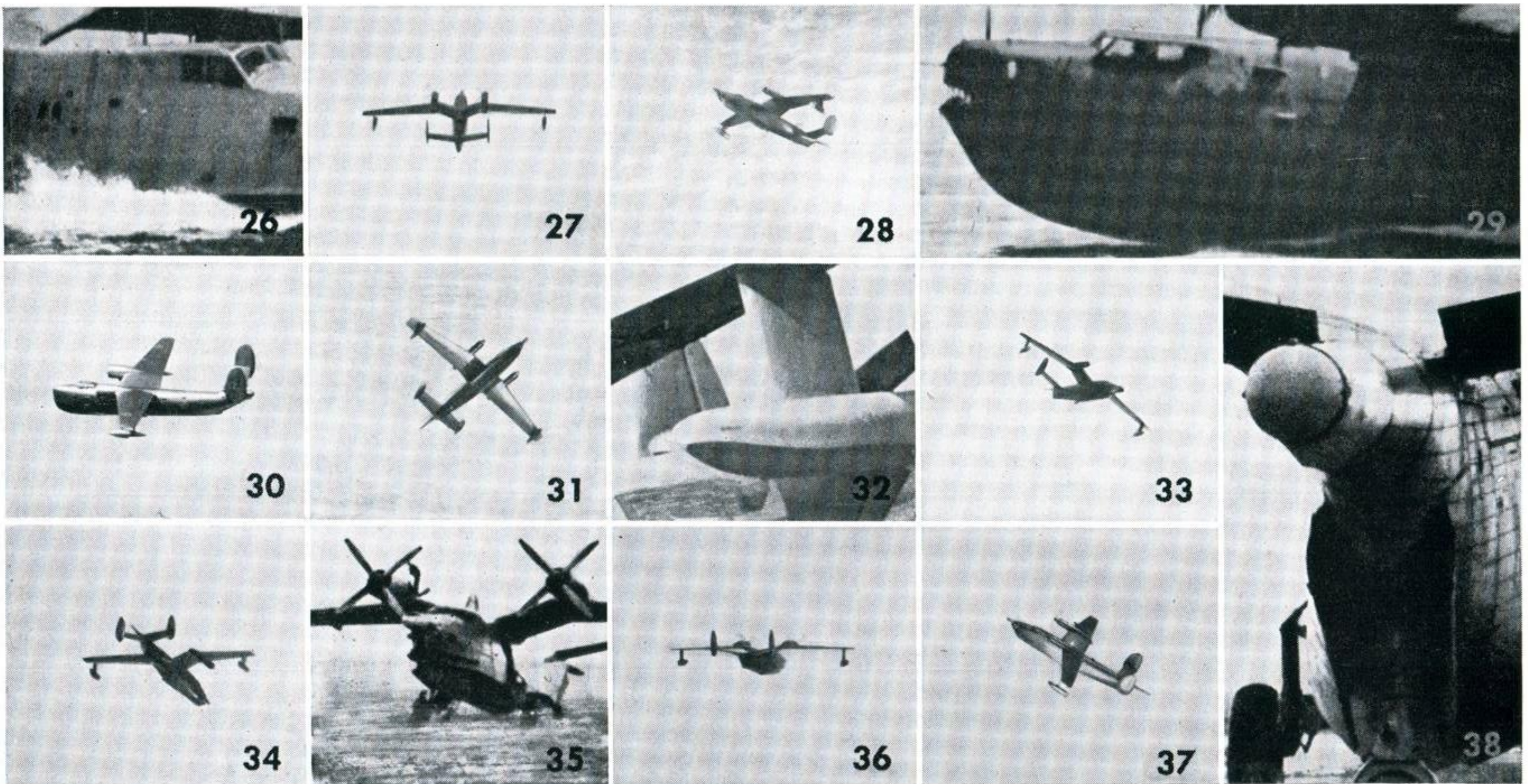


continued overleaf



MAIL continued

Lesson Instructions are on page 254 Solutions on the cover



TEST PAPERS

Something to show you how good you are
—or are not— at identifying these AFVs.

ZSU-23-4 SELF PROPELLED ANTI-AIRCRAFT GUN?

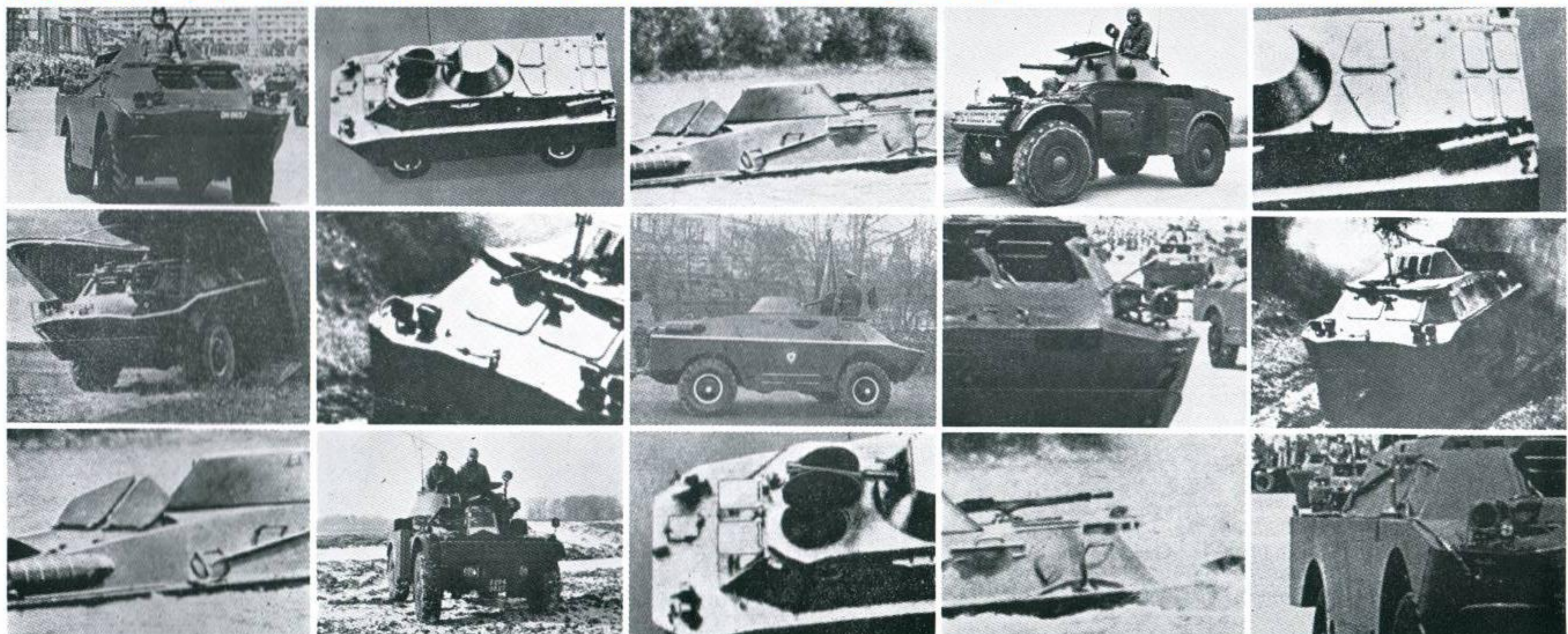


RUSSIAN ARMoured PERSONNEL CARRIER, 1967 MODEL?



RUSSIAN BTR-40PB AMPHIBIOUS RECONNAISSANCE CAR?

Solutions on the cover



SOLUTIONS TO TESTS AND EXERCISES



Cover Photo: A Phantom on "Touch and go" exercises aboard H.M.S. Eagle. These exercises are the preliminaries to fully arrested landings which take place later.

CORRECTIONS

May 1969 edition page 116: Amend **R.F.A. Tidespring** to read **R.F.A. Tide Class**.

May 1969 edition page 140: Amend solution to the above to read **R.F.A. Tide Class**.

July 1969 edition page 196: Amend No. 20, in solutions to **Crusty**, to read **20 (Camel)**.

Solutions to Testing Time (below):

16 Britannia	11 Classic	5 Cleat
15 Trident	10 Nimrod	4 Blinder
14 Orion	9 Fiddler	3 Starlifter
13 Camel	8 Badger	2 Bison
12 Cat	7 Sea Vixen	1 Belfast
	6 Bear	

FARMER

Page 256

All targets are of **Farmer** except Nos. 6, 23 and 30 which are jokers.

CLASSIC ILYUSHIN II-62

Page 260

All targets are **Classic** except Nos. 11, 12, 19, 40 and 41 which are jokers.

WESTLAND SEA KING

Page 264

All targets are **Sea King** except Nos. 11, 15, 16 and 24 which are jokers.

"TON" CLASS

Page 266

All targets are **Ton Class** except Nos. 17, 30, 36, 44 and 80 which are jokers.

MIRAGE III

Page 272

All targets are **Mirage III** except Nos. 7, 11, 24 and 30 which are jokers.

MAIL

Page 276

All targets are **Mail** except Nos. 2, 13, 19, 29 and 30 which are jokers.

TEST PAPERS

Page 279

ZSU-23-4 Self Propelled Anti-Aircraft Gun: Jokers are first line 4th picture and second line 2nd picture.

Russian Armoured Personnel Carrier, 1967 Model: Jokers are second line 1st and 3rd pictures.

Russian BTR-40PB Amphibious Reconnaissance Car: Jokers are first line 4th picture and third line 2nd picture.

TESTING TIME

solutions above

