JOINT SERVICES

RECOGNITION *Journal*



Vol. 20 DECEMBER 1965 No. 12

HOUND MI-4

Hound is Russia's workhorse helicopter in civil and military use. There are several different versions which account for under-fuselage appendages including an underslung gondola for a navigator, but the fuselage of all Hounds have a characteristic shape that will not be confused with any other helicopter, provided you exercise yourself with these Hounds.

Hounds have been exported in quantity and are used by the Indian Air Force.

Rotor Diameter: 69 feet **Length: 55 feet**


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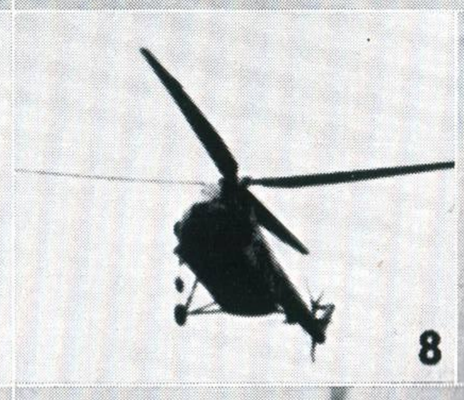

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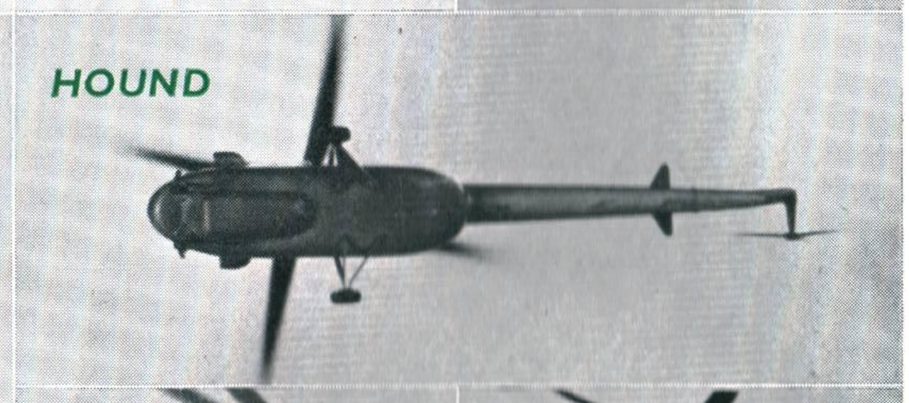

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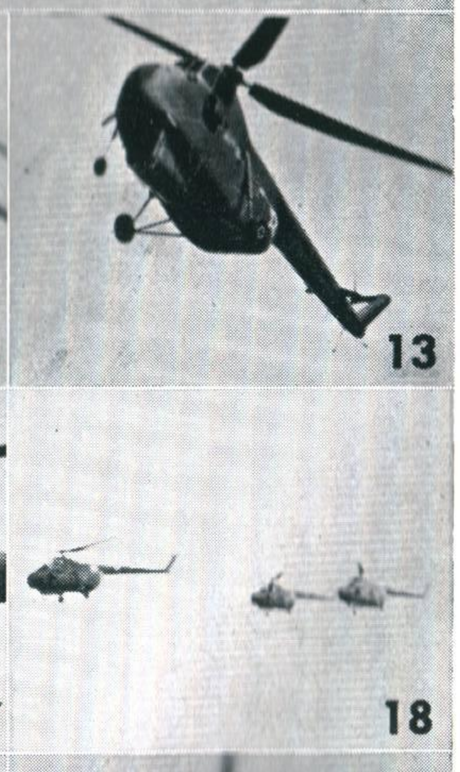

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Solutions on page 334.

DECEMBER 1965 Vol. 20 No. 12

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 Aviation (Air Technical Publications). 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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* *Identification Lessons*

SEEING SOVIET AIRCRAFT FOR YOURSELF

RUSSIAN aircraft were rarely seen outside the Soviet Union's own sphere of influence until a few years ago; now, with a big Soviet export drive of civil aircraft and a ready sale of their older types of military aircraft to selected countries, Russian aircraft types can now be seen worldwide.

Aeroflot, the national airline of Russia, covering a vast internal network of lines and controlling some 3,000 aircraft, also operates external services into London and Paris among other Western European capitals and to India and Indonesia. On the main external routes the Tu-104 Camel, subject of a repeated lesson in this edition, is used. At the same time a limited non-stop Moscow–Havana service spans the Atlantic using Tu-114 Cleats, also presented in this edition. Ceskoslovenske Aerolinie—CSA for short—operates Camels on routes to Rangoon, Cairo via Athens and Indonesia; other of their routes extend north-westward to Scandinavia and southward to Accra.

LOT, Malev, TABSO and Tarum, the state airlines of Poland, Hungary, Bulgaria and Rumania respectively, all extend services to Western European capitals with Il-18 Coots as their main fleet aircraft, replacing their earlier Il-14 Crates which are still widely used.

Interflug of East Germany is supplementing its Il-14 Crates and Il-18 Coots with An-24 Cokes to serve its various commitments, including a service to Egypt; among its smaller aircraft is a large fleet of An-2 Colts and Brigadyrs.

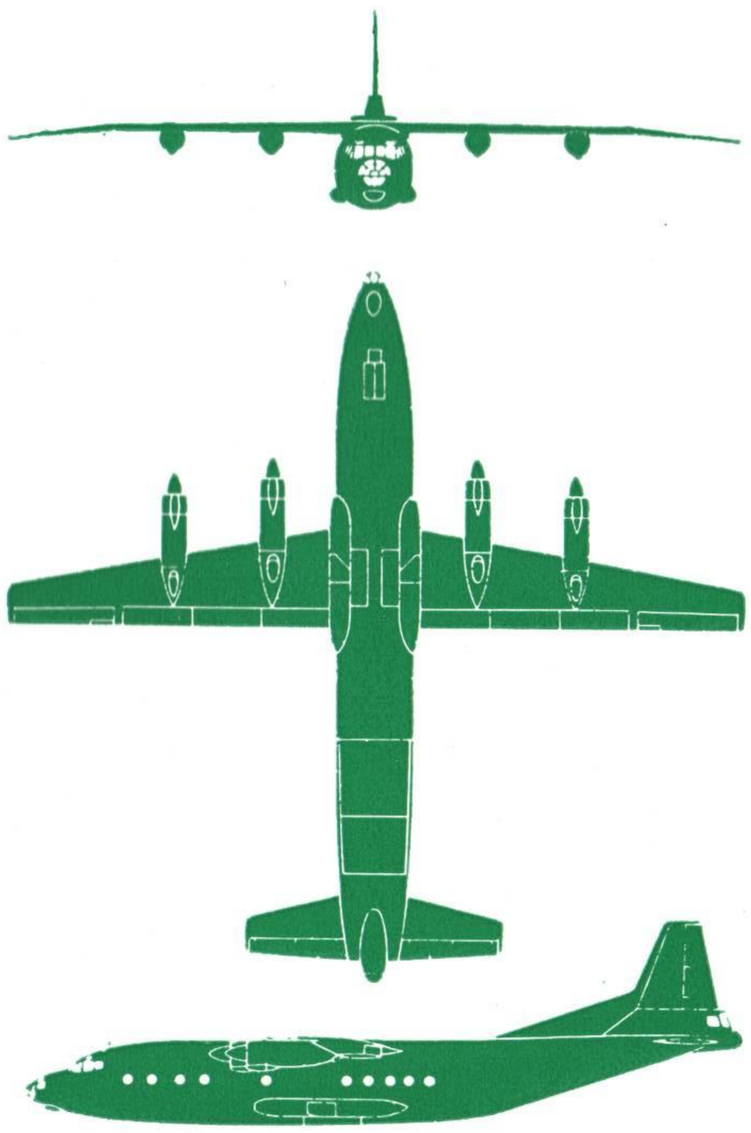
Not only Communist Bloc countries operate Russian types. Ghana Airways has four Il-18 Coots replacing its earlier An-12 Cubs. Air Algerie also has Coots and Air Mali Coots, Colts and Aero 45s, while Lebanese Overseas Airways and Misr of Egypt are favouring Cokes. In the American continent, Cubana has Crates and Cubs, and Transimport, also of Cuba, is negotiating for eight An-24 Cokes.

According to the Russian exporting agency Aviaexport, 1,500 commercial aircraft have been exported to some forty countries; this figure includes over 500 Hound helicopters.

Military aircraft are less likely to be seen outside their own countries than civil aircraft, although clearance for overflying is frequently arranged and Russian military types have visited this country. At the same time, a number of the lighter executive and sporting type of aircraft produced behind the Iron Curtain, such as the Morava and Trener Master are privately owned worldwide, including owners who base their aircraft in this country. CSA's Tu-124 Cookpot registered OK-TEA, was the first of this scaled-down Camel type to visit Britain when, on May 14th last, it touched down at London Airport. During 1966 it is expected that the Tu-134 Crusty will visit here and perhaps even the Il-62 Classic. The giant An-22 Cock has already come as close as Paris.



Span 125 feet



CUB

The An-12 Cub is the military version of the An-10 Cat, but numbers have been adapted for civil use. It differs from the Cat by an upswept tail to facilitate a rear fuselage loading ramp for vehicles and equipment, and by a rear turret position. Unlike most versions of the Cat, the Cubs do not have auxiliary fins on the extremities of the tailplane.

Apart from service in the U.S.S.R., Cubs have been reported in military service in India, Indonesia and Iraq.

Let the lesson instructions on page 322 be your guide in learning to identfy the Cub and test the effect by checking with our solution on page 334.



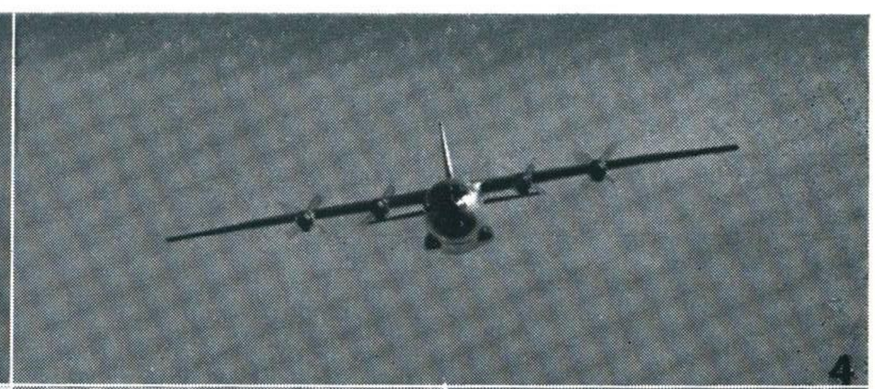
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Photograph by courtesy of Flight International.


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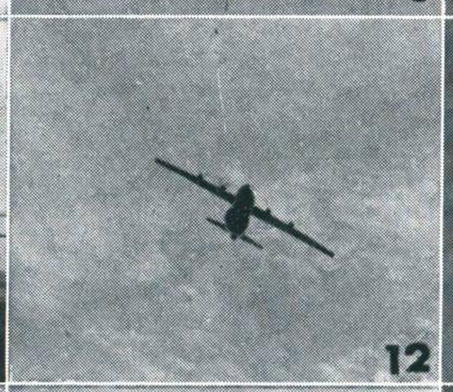

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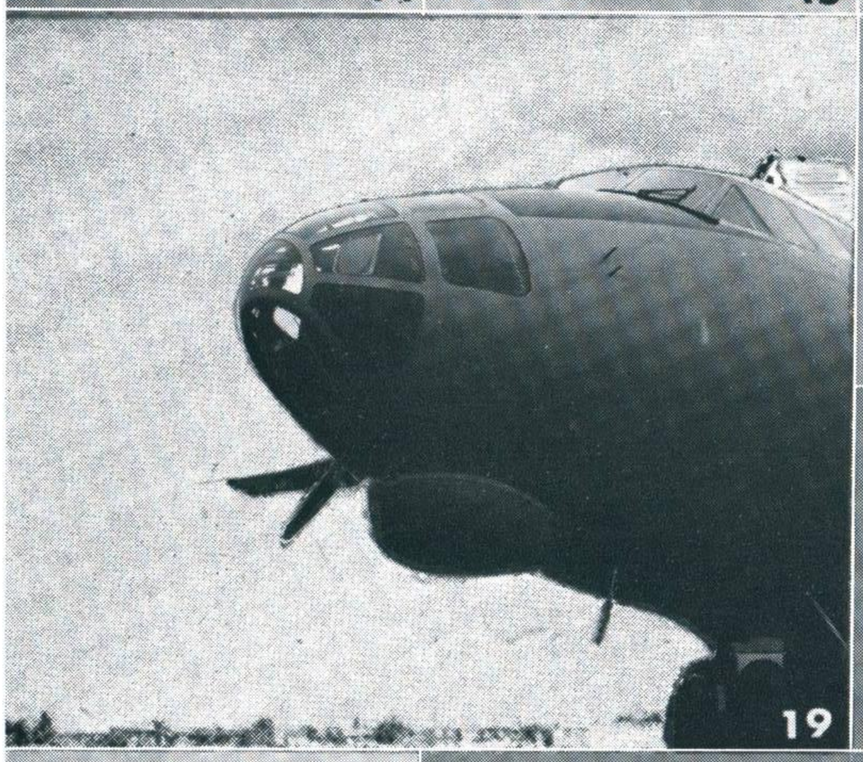

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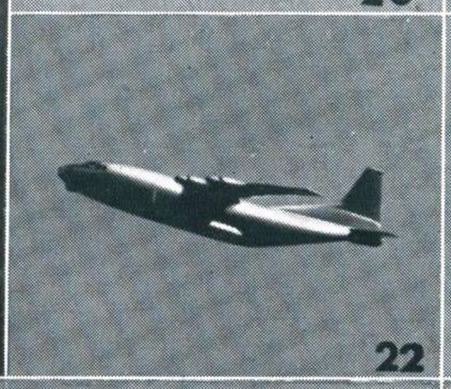

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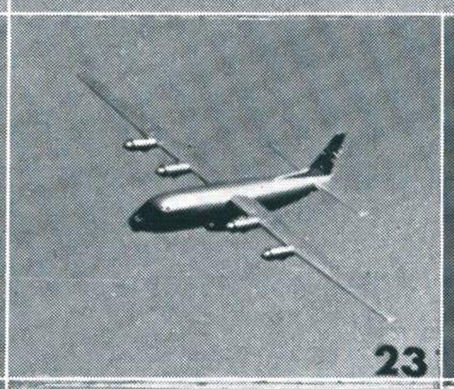

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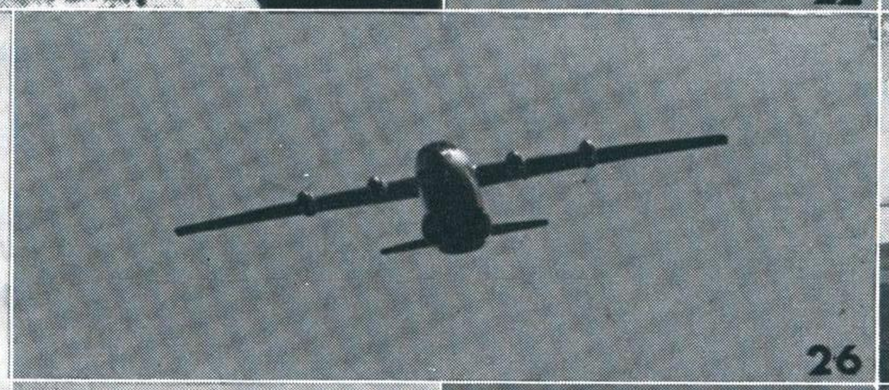

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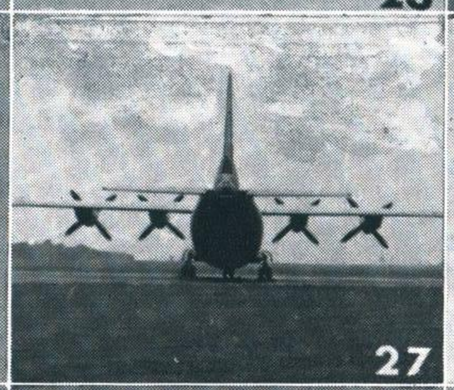

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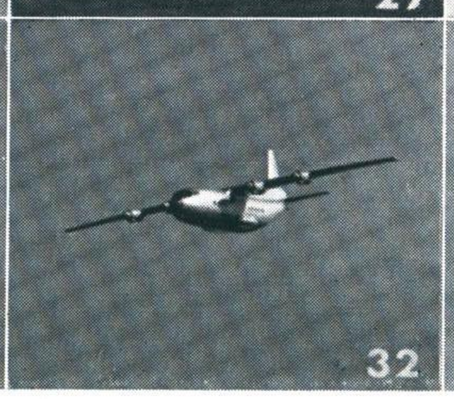

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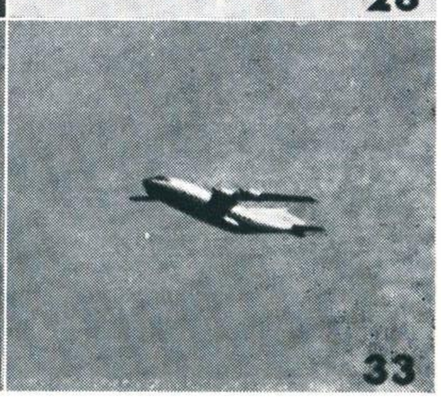

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Span 113 feet

CAMEL

This Soviet airliner has been produced in several versions since the prototype, shown in the key view below, first flew in 1955. The initial Tu-104s with accommodation for 50 passengers were followed by Tu-104As with revised seating for 70 passengers without any overall dimensional changes. However, for the latest 100-seat version, the Tu-104B, the fuselage has been lengthened by four feet.

A smaller version of the Tu-104 Camel, the Tu-124 Cookpot, is in use, mainly on Soviet internal air routes.

For Camel identification work to the instructions on page 322. Solutions on page 334.








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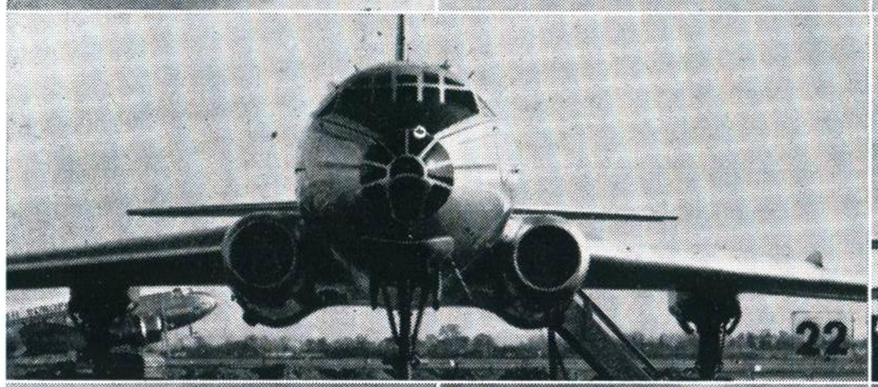

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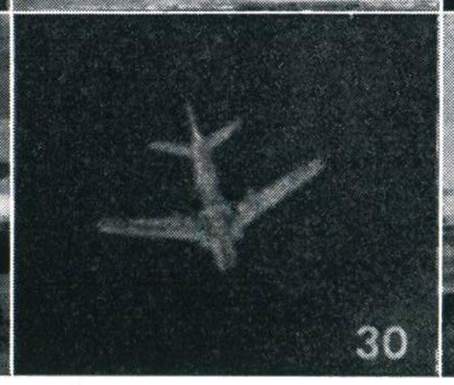

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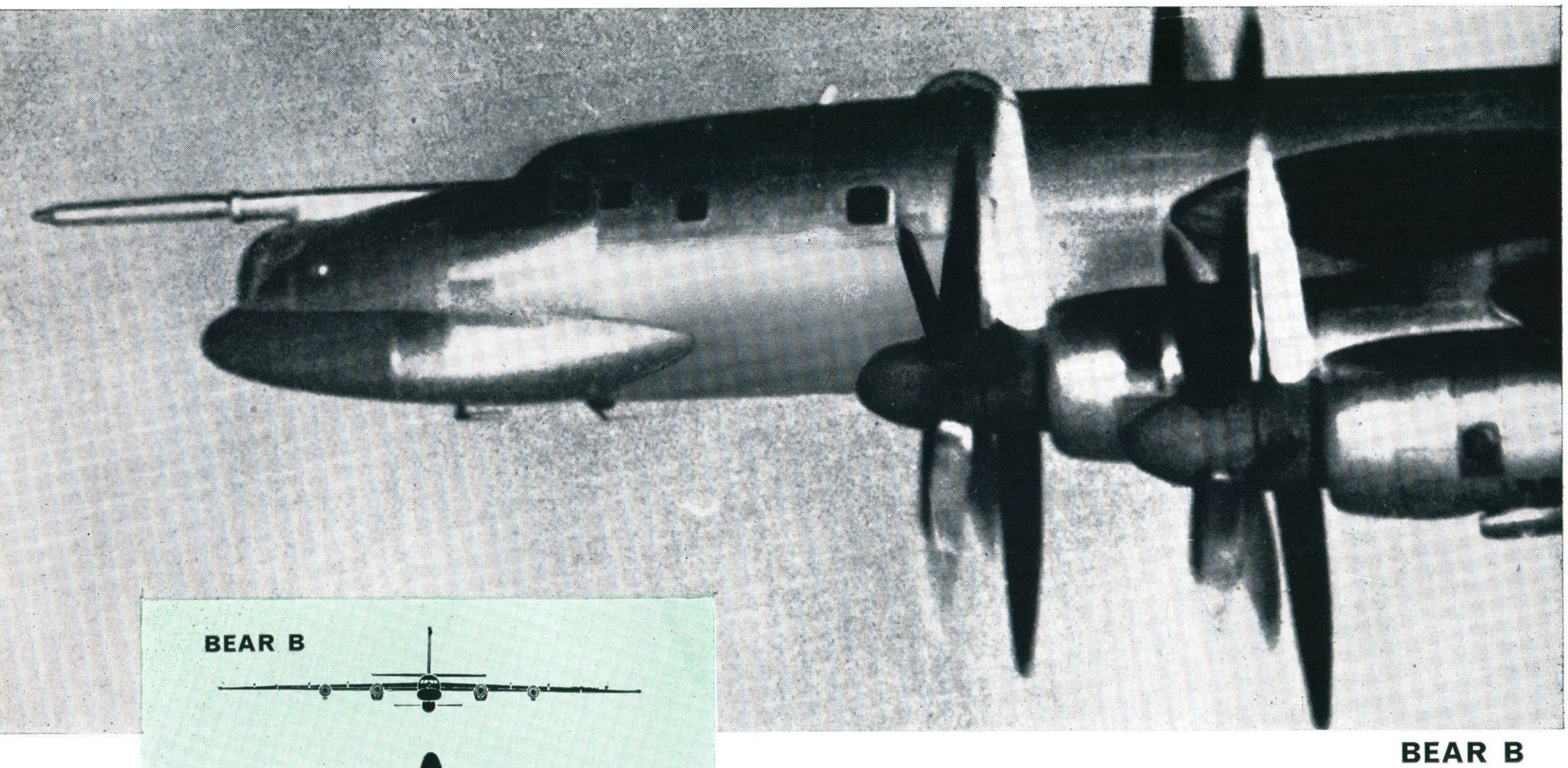

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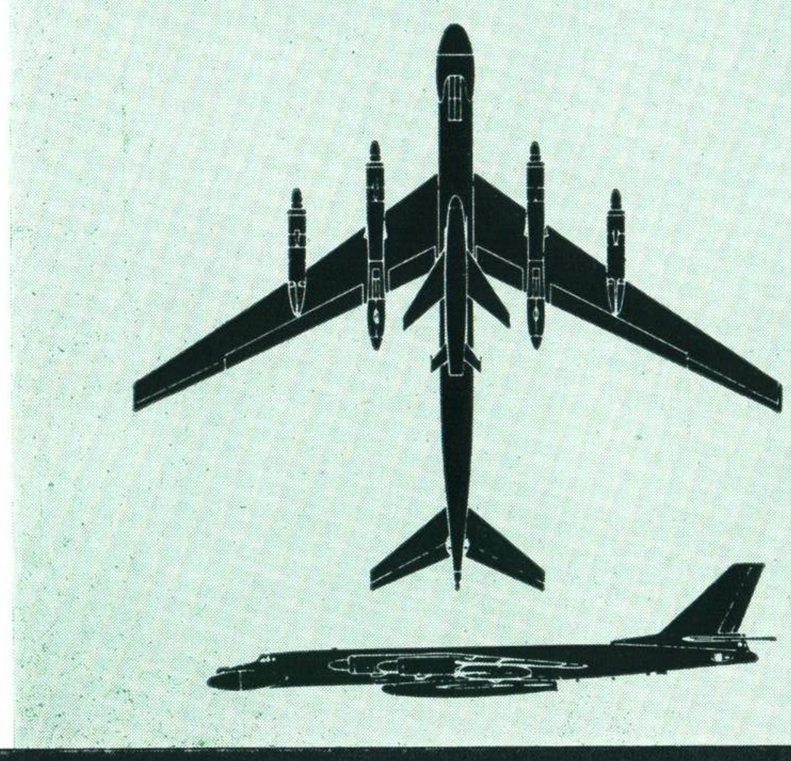

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BEAR B



BEAR

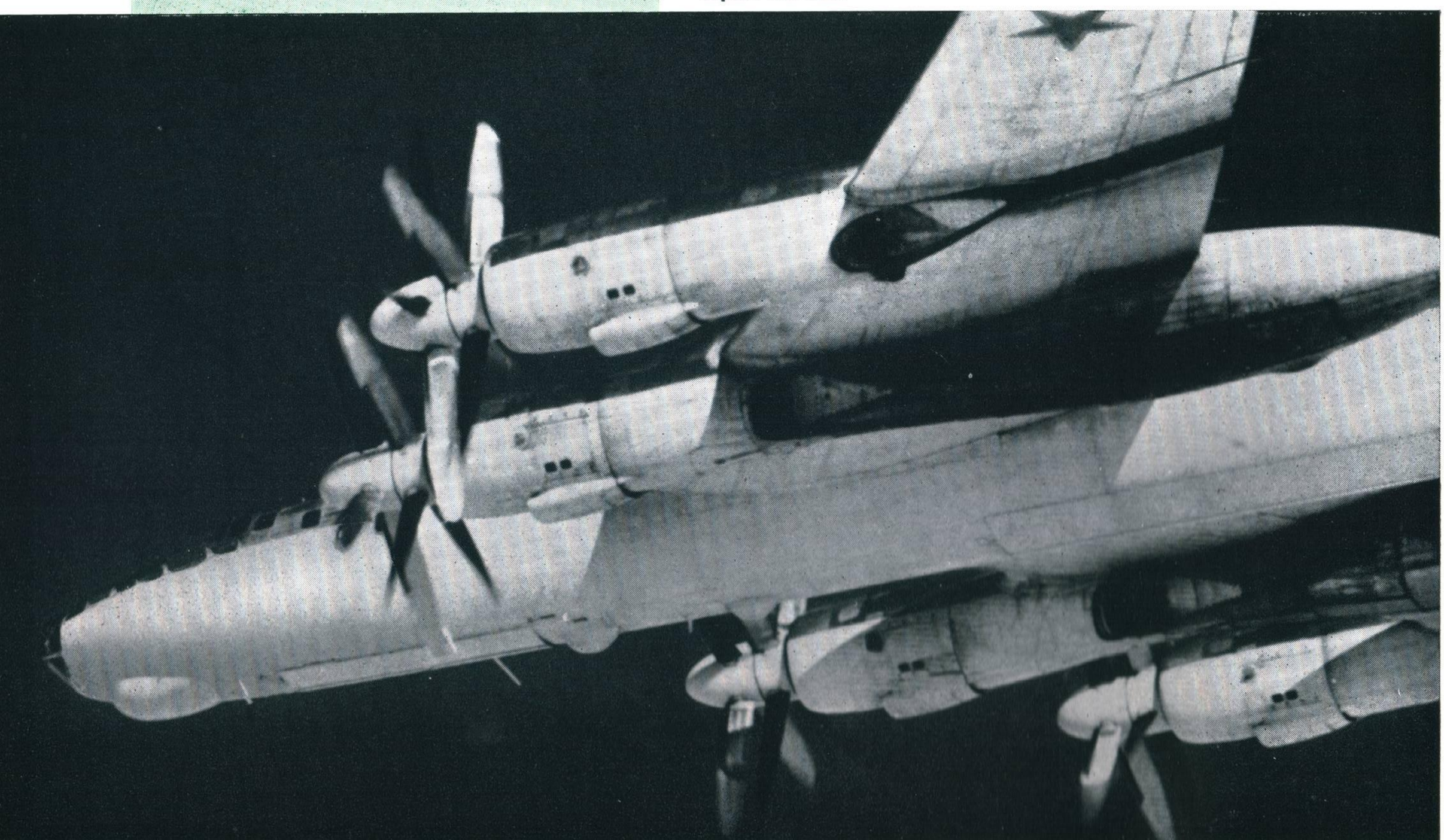
The Russian Tu-95 is produced in two main versions, named Bear A as shown below and Bear B as depicted above.

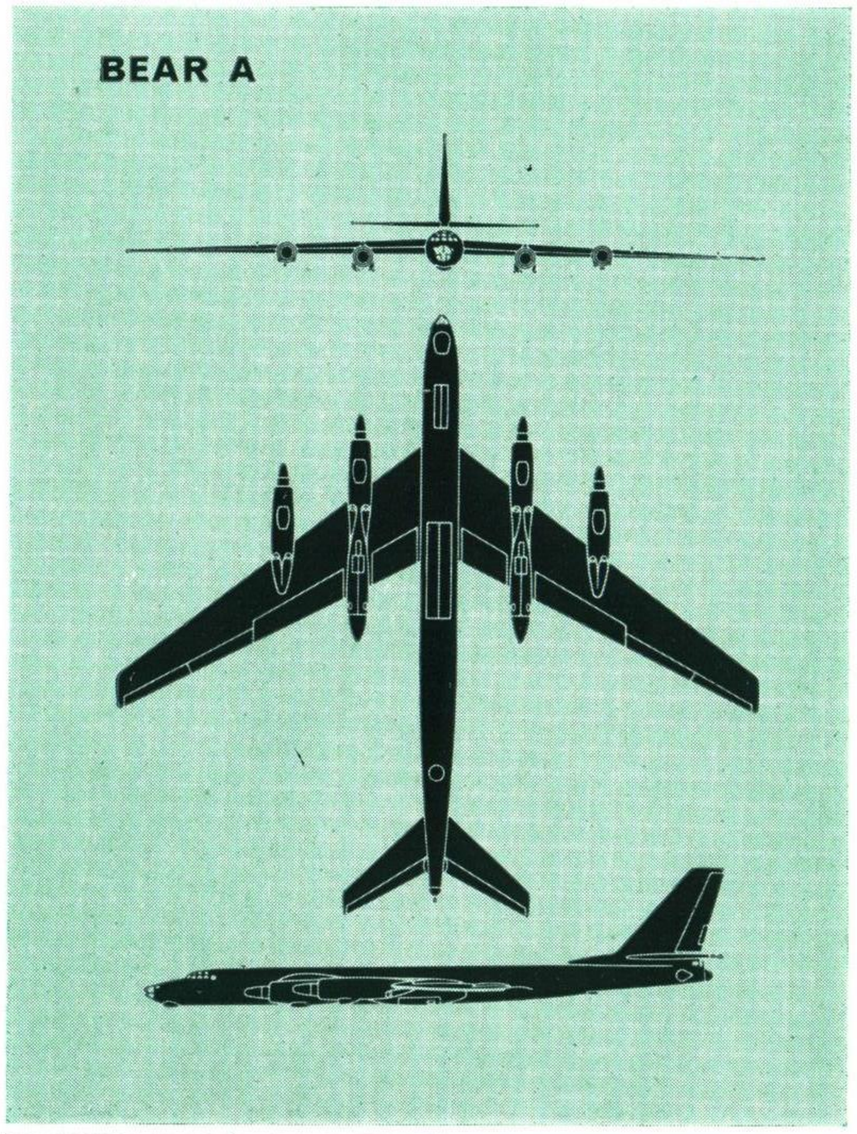
The Bear B can carry an air-to-ground missile, known by the Tripartite name of Kangaroo, as shown in the adjacent silhouette, although the large re-fuelling probe shown in the key view above is not necessarily a standard fitting.

From this key information you are required to classify the target views as Bears A or B, but also watch for jokers. Solutions on page 334.

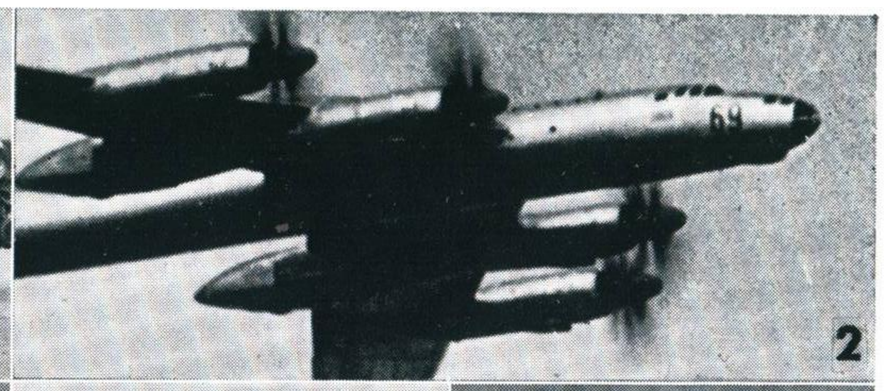
Span 165 feet

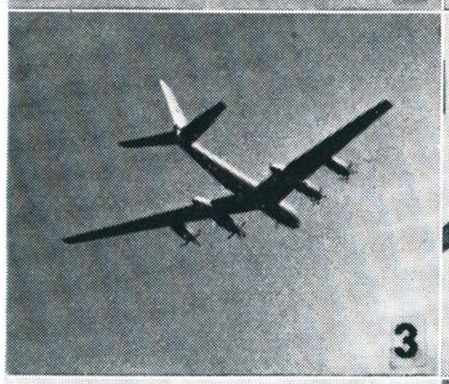
BEAR A

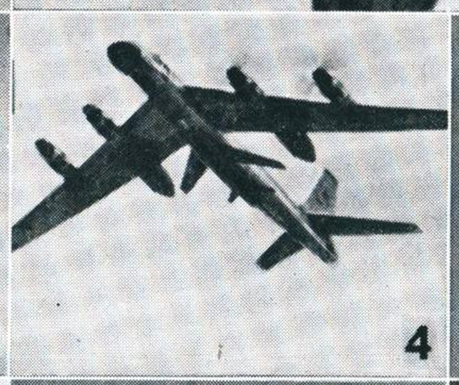




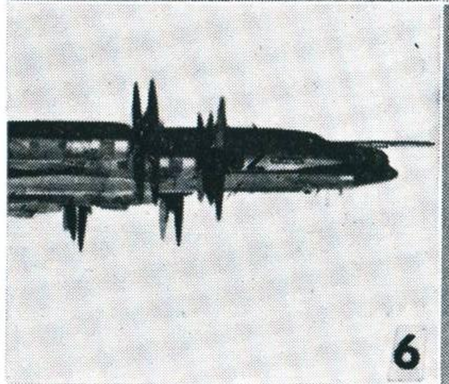

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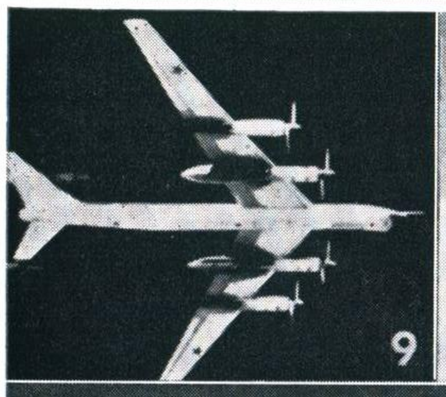

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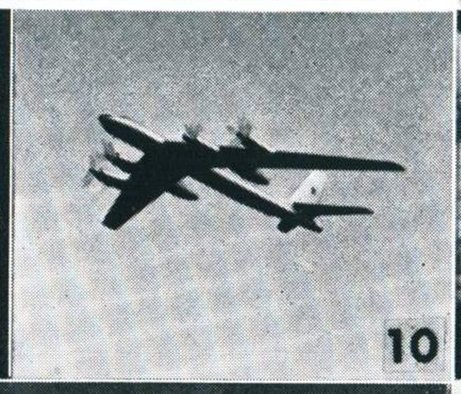

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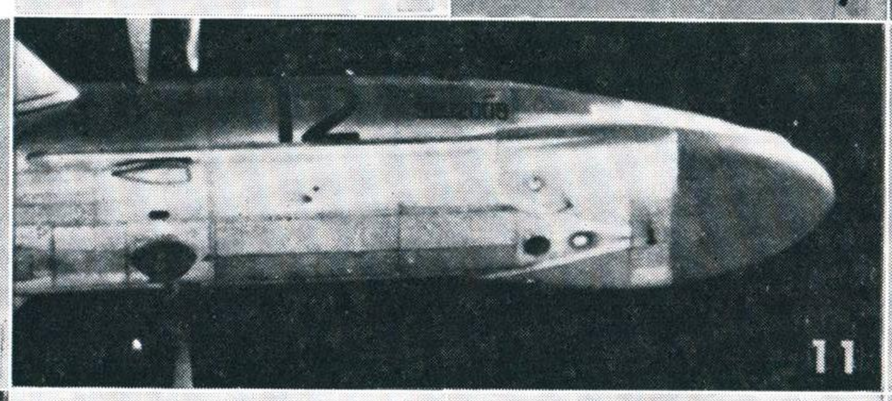

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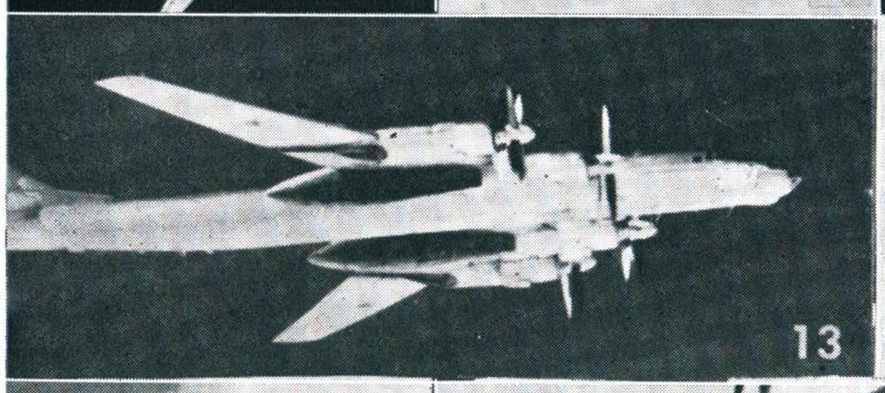

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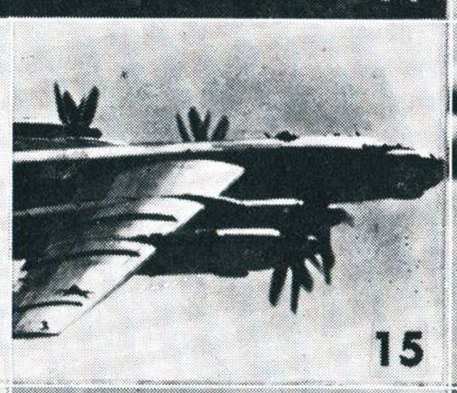

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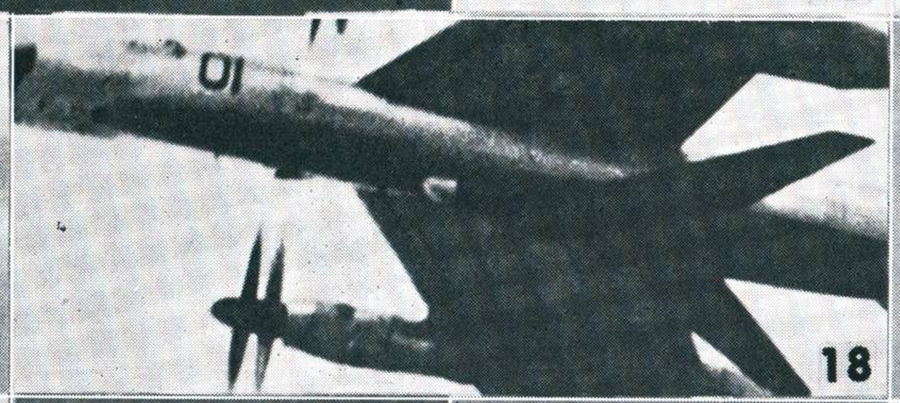

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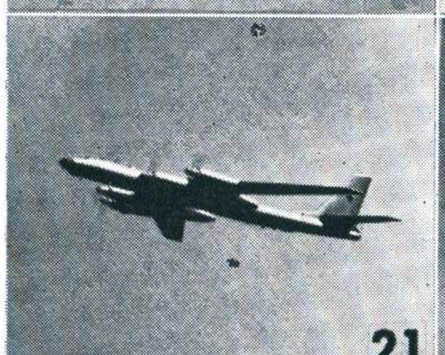

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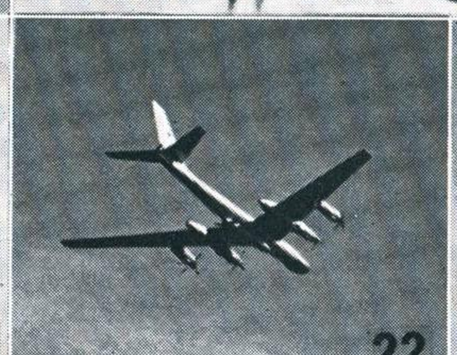

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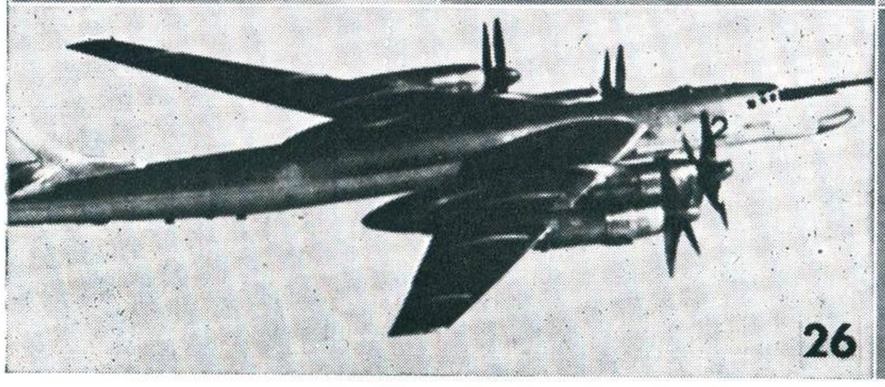

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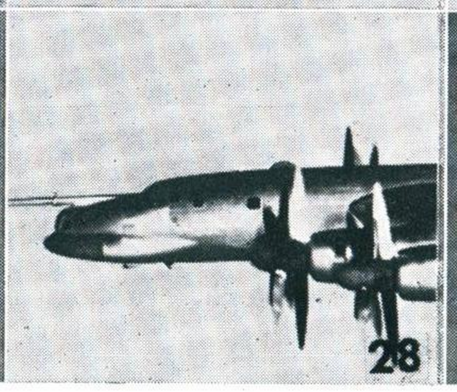

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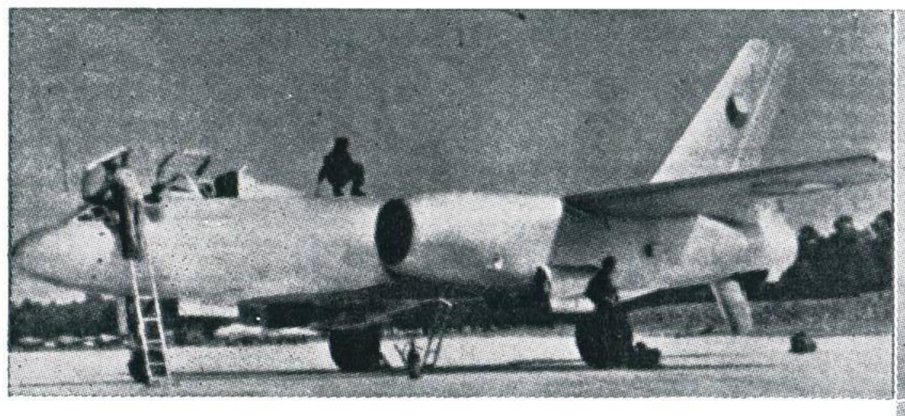


BEAGLE

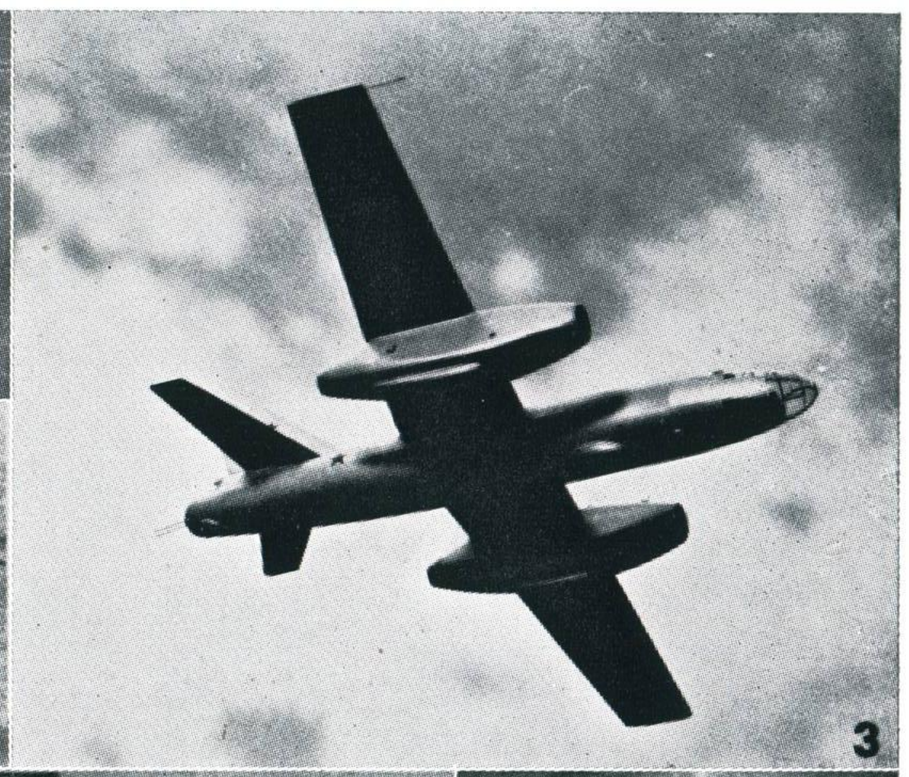
First of the Russian jet bombers to go into large-scale production, some fifteen years ago, the Beagle is still in Soviet service and has been supplied to Afghanistan, China, Czechoslovakia, Egypt, Finland, Hungary, Indonesia, Poland and Rumania.

Classified as a four-seat, light attack, turbojet bomber, it is known in the Soviet Air Force as the Il-28, and an unarmed, internally modified version for mail-carrying is used by the state airline, Aeroflot, as the Il-20. Both however, have Beagle as their NATO name. In 1960, a few Il-28s were converted for meteorological work.

Read the lesson instructions on page 322 and use detailed views of nose and tail in the key views above and below to work your way through the targets. As a start we give you No. 3 target as a Beagle and provide a head-on key view overleaf.



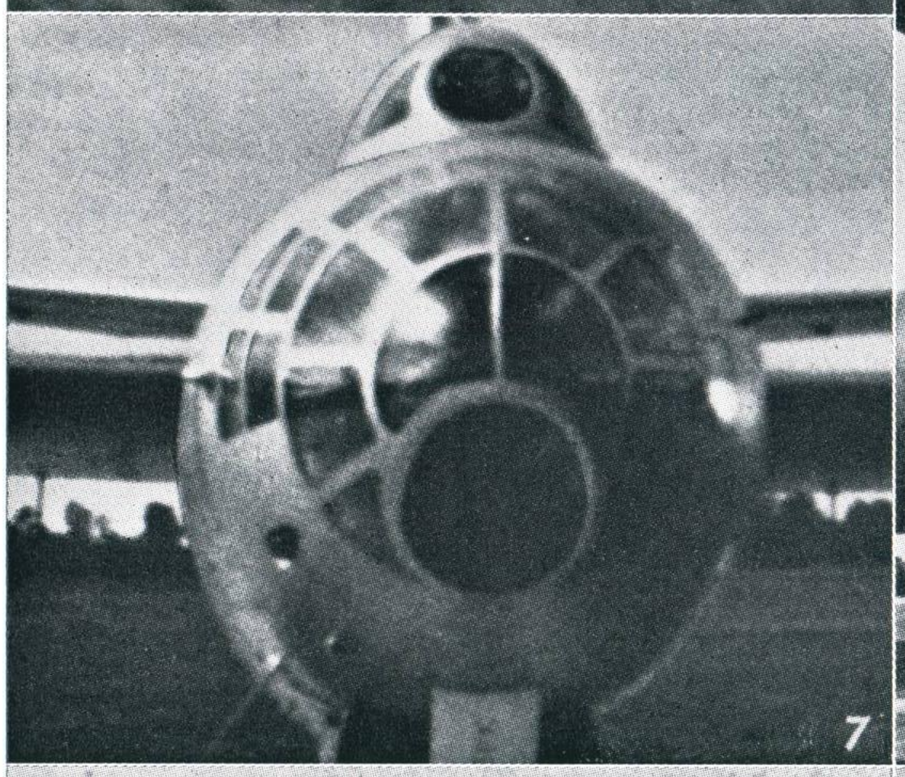




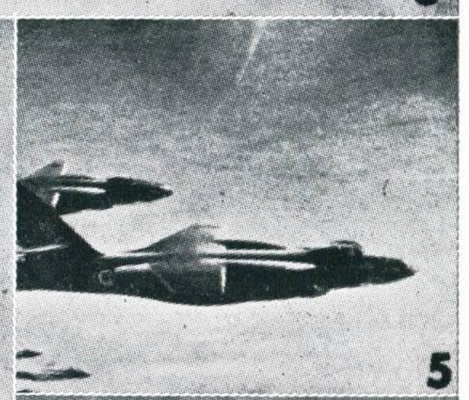
MASCOT A training version of the Beagle, the Il-28U, is named Mascot by NATO. This features an additional cockpit, used in conversion training, placed in front of the original cockpit position. Other differences are a covered-in nose and the absence of a radome underneath.



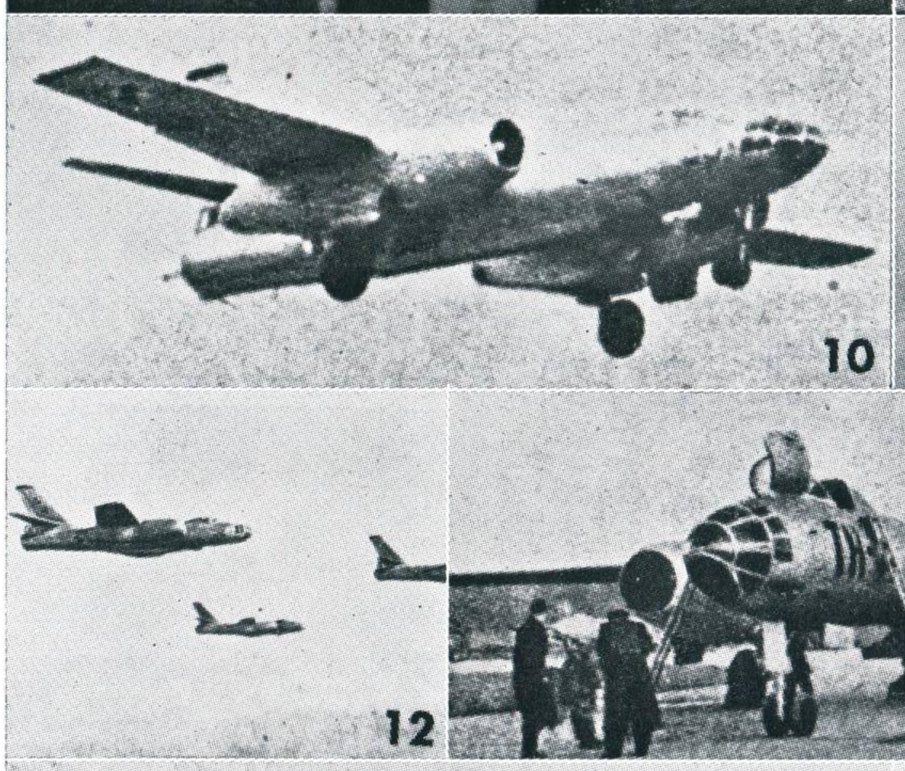


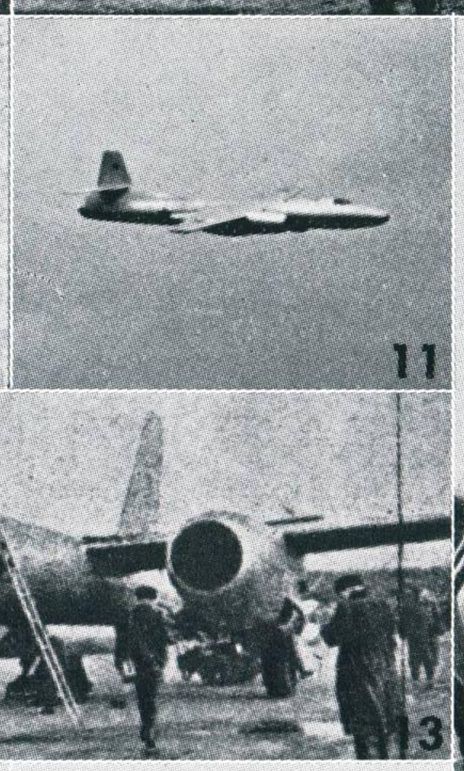


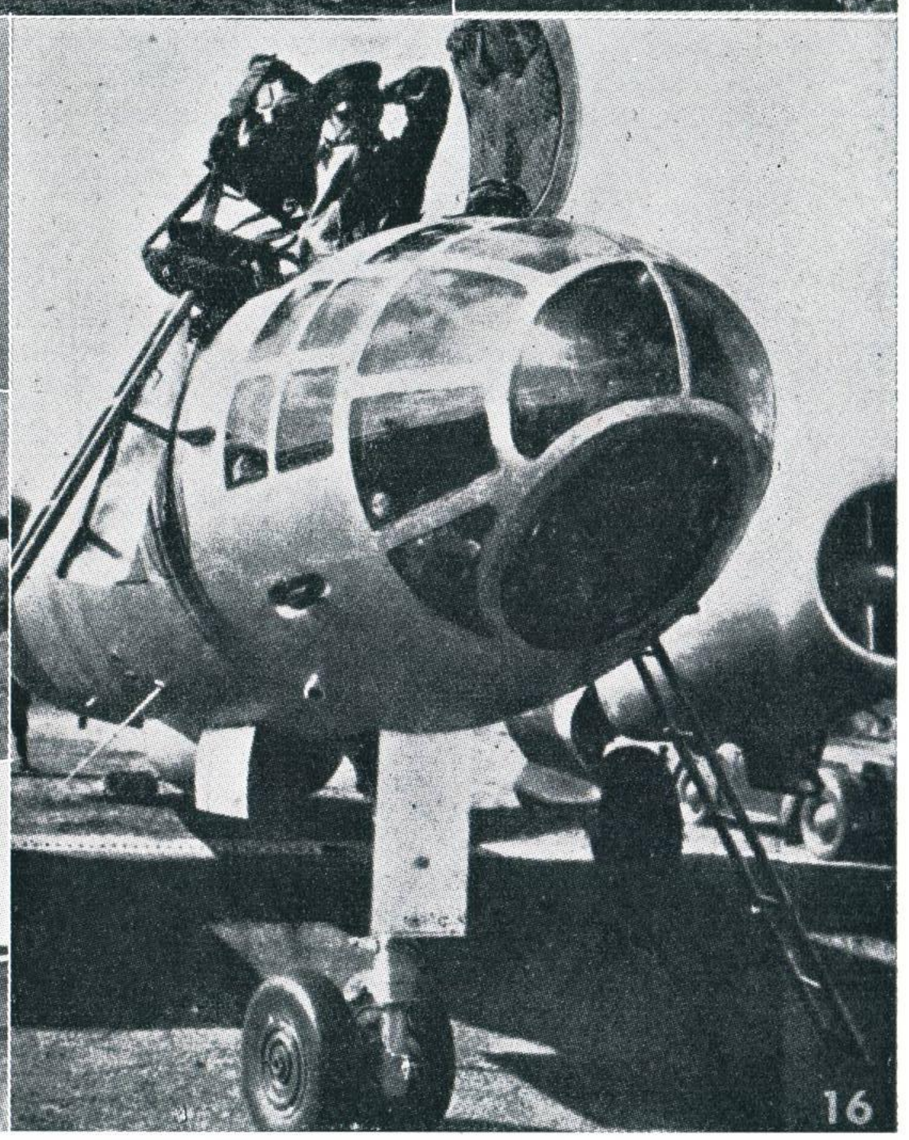


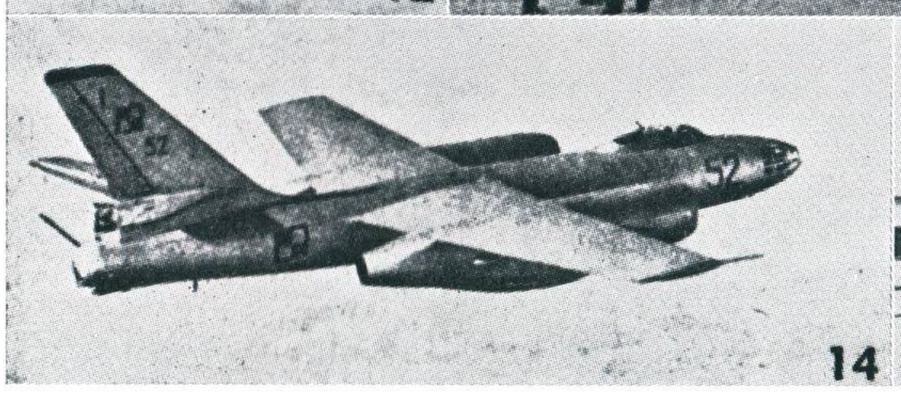


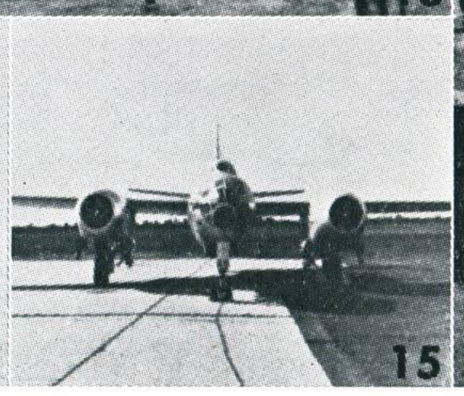


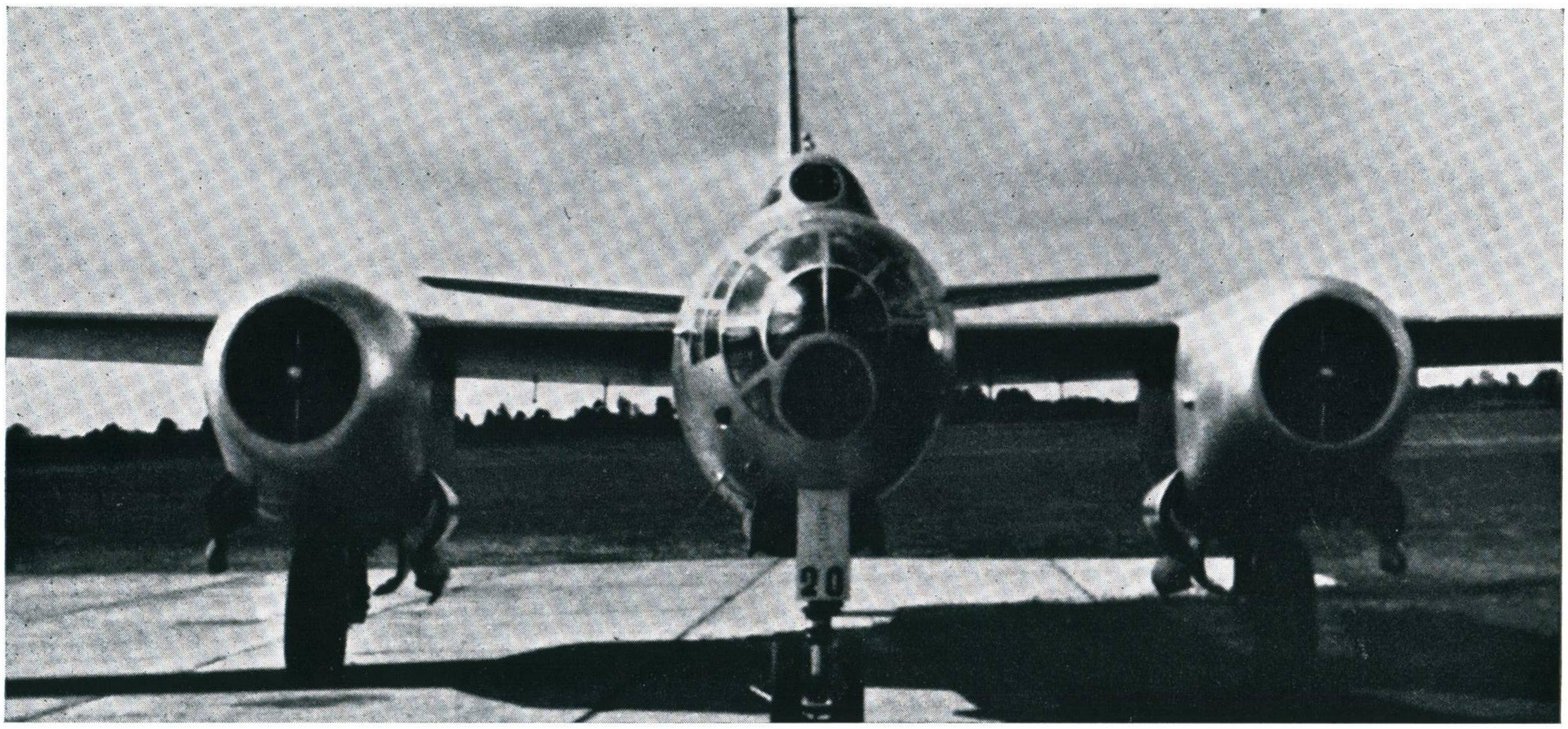








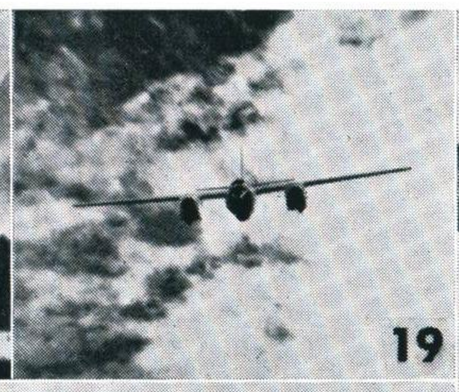


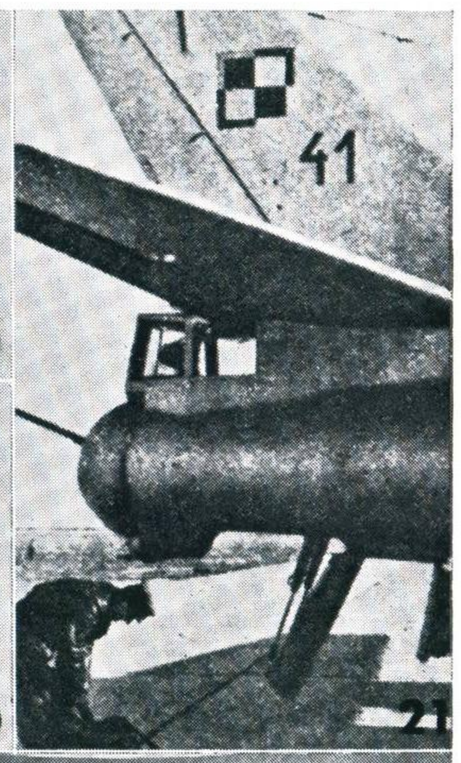


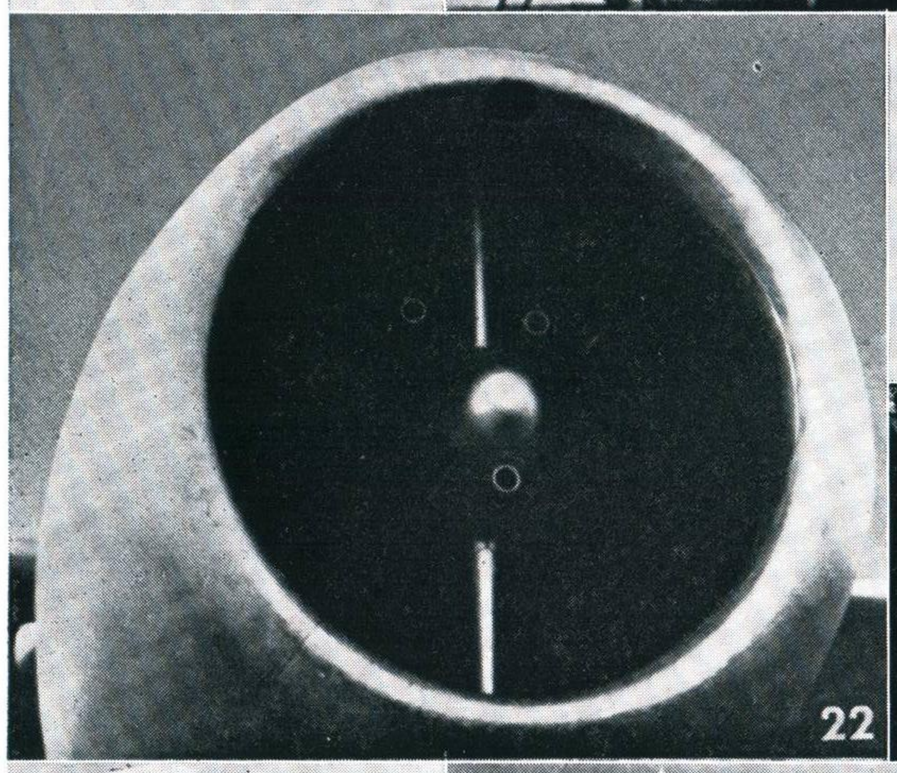
Key view above, targets continued from previous page.



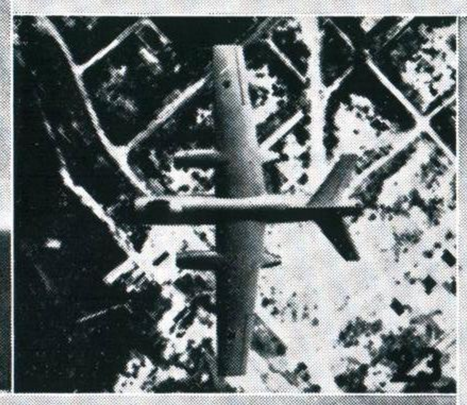




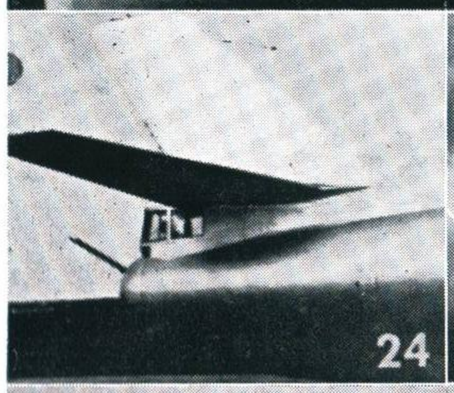


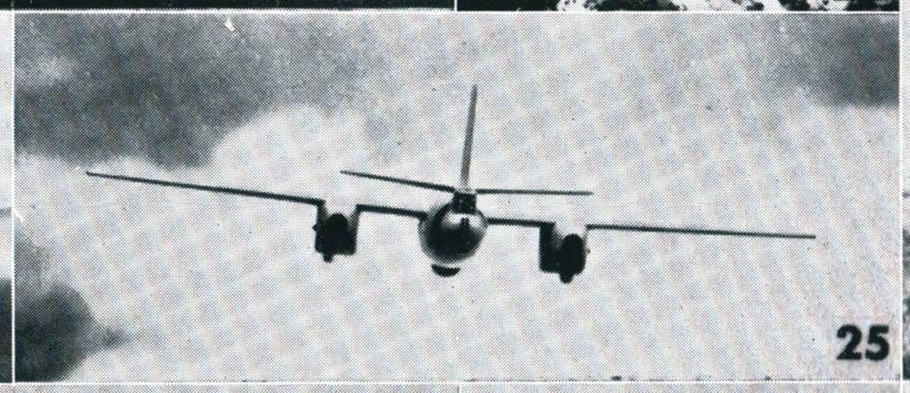








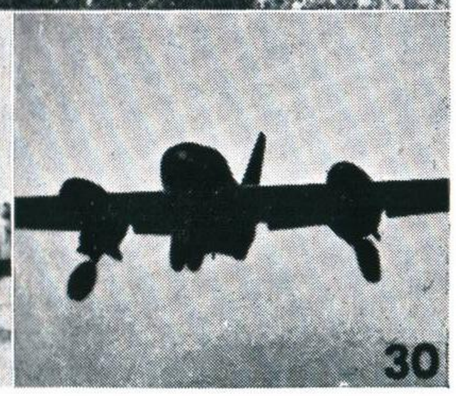












CLEAT

The World's largest airliner, with accommodation for up to 220 passengers, is the Tu-114 CLEAT which is known in Aeroflot service as the Rossiya (Russia).

Based on the BEAR bomber, it uses the same type of wing, tail unit, landing gear and engines of its military counterpart.

This is a refresher to earlier lessons on the CLEAT. Read the lesson instructions on page 322 and follow them out.



Span 170 feet



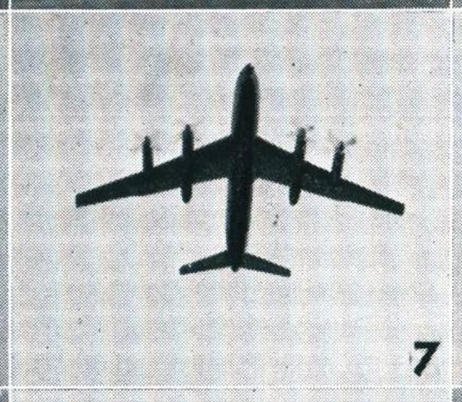












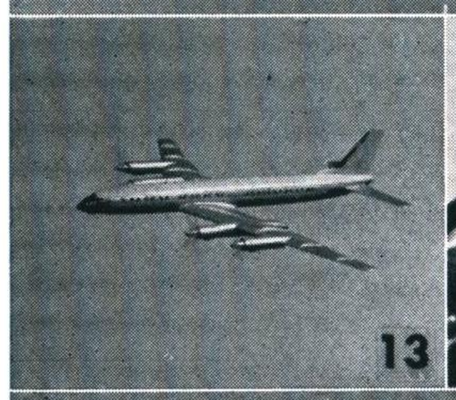


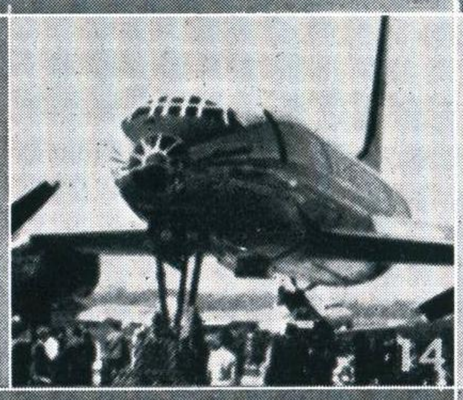


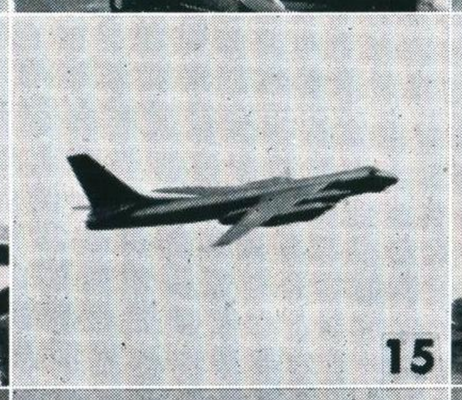




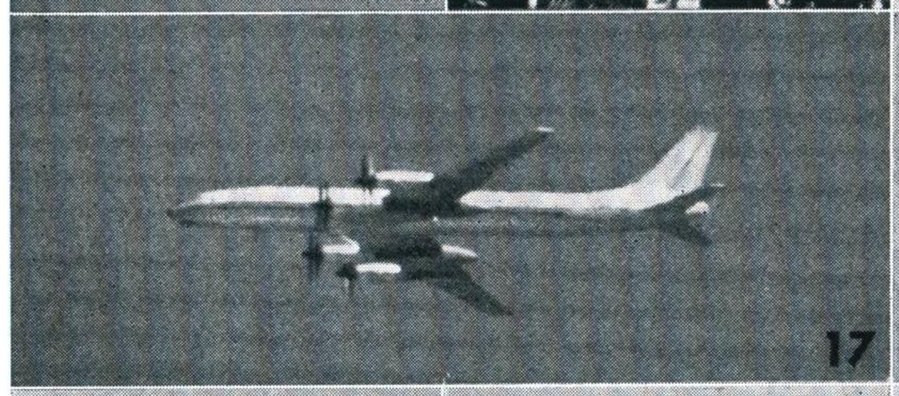


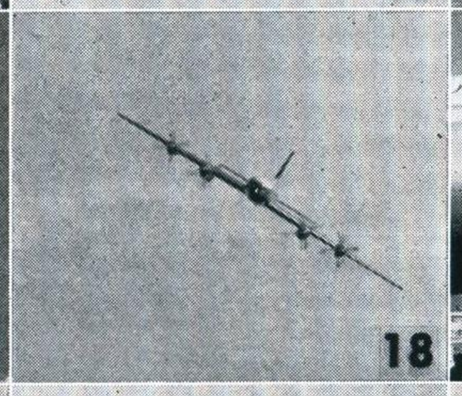








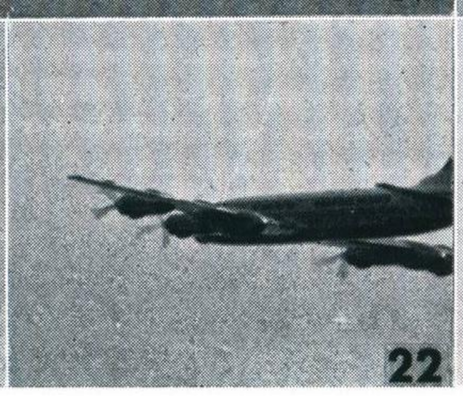


















BLINDER

Frank Wootton drew this impressive picture of Blinder specially for the Journal to give readers an idea of the character of this formidable Russian supersonic bomber.

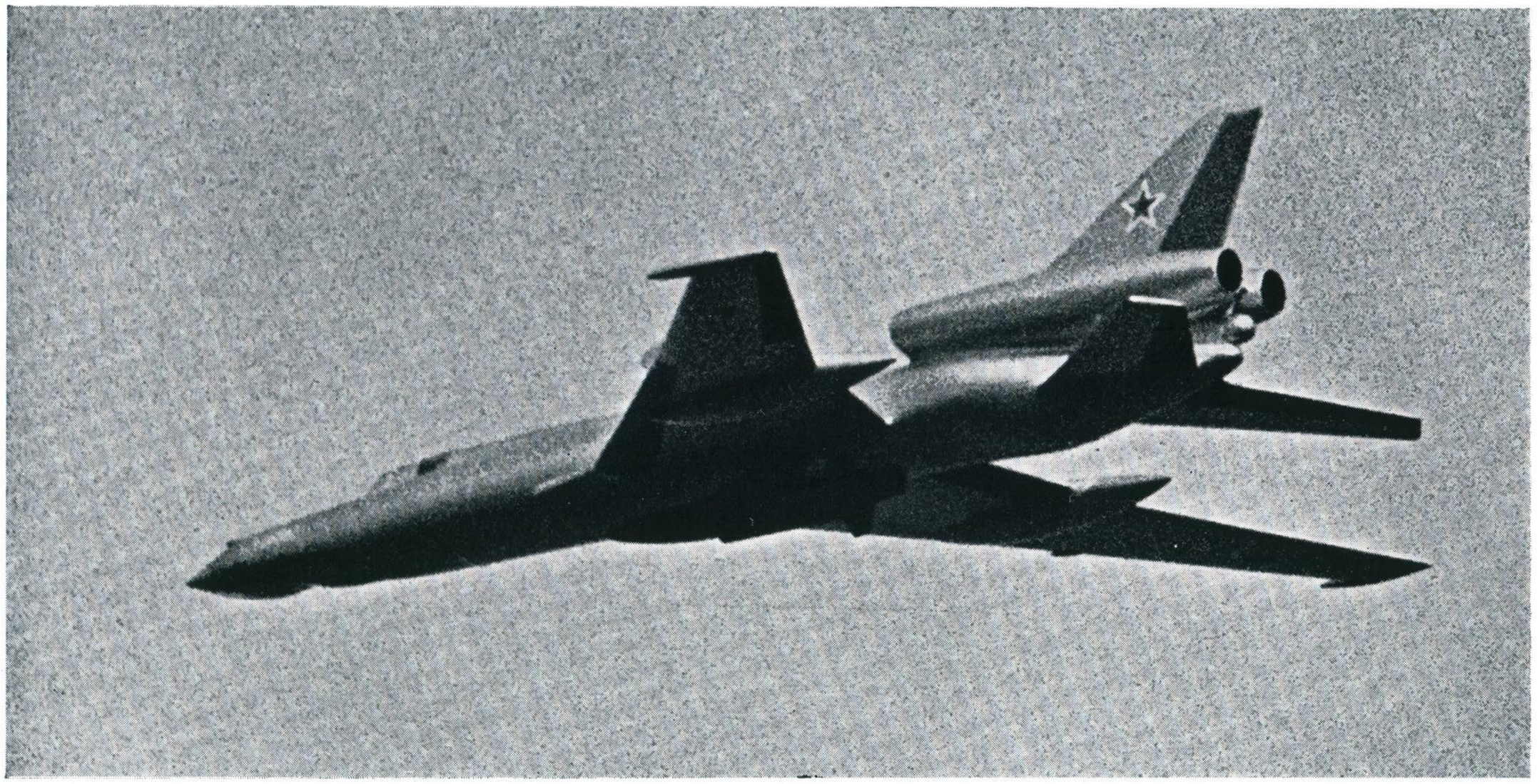


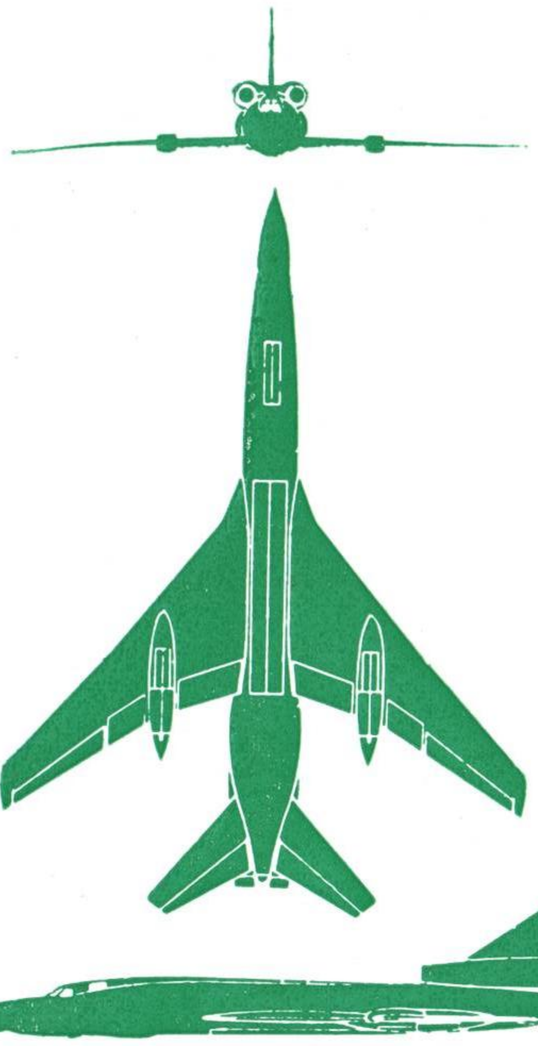
Lesson Instructions

To obtain the maximum benefit from the training devices published in this *Journal*, the following procedure should be adopted.

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.





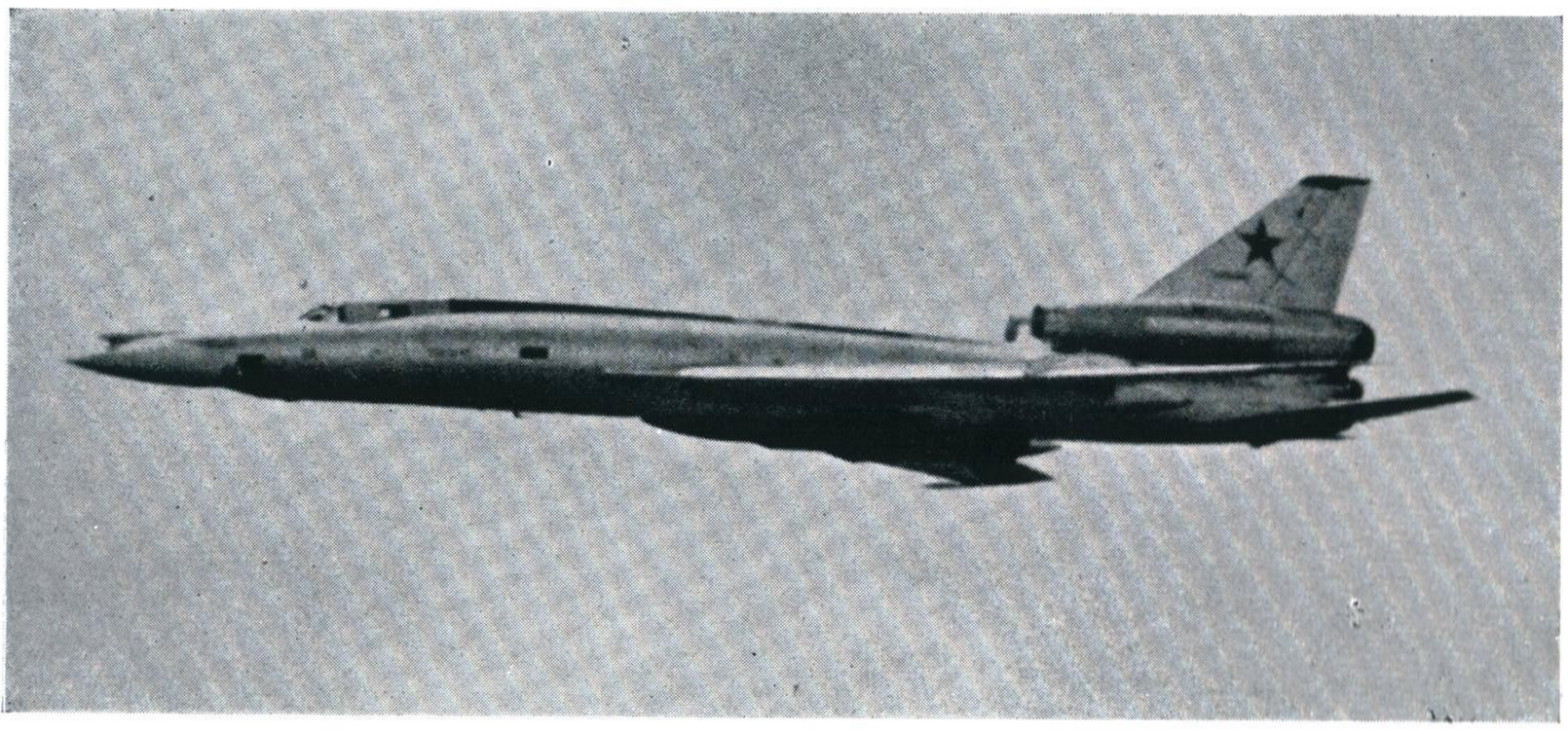


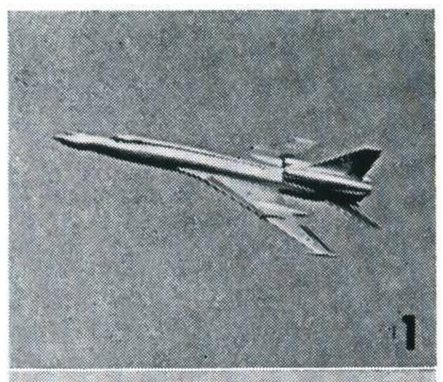
BLINDER

A first glimpse of 10 of these aircraft at the 1961 Tushino Air Display dispelled any suggestion that the Blinder, a new Soviet bomber, was only at the prototype stage.

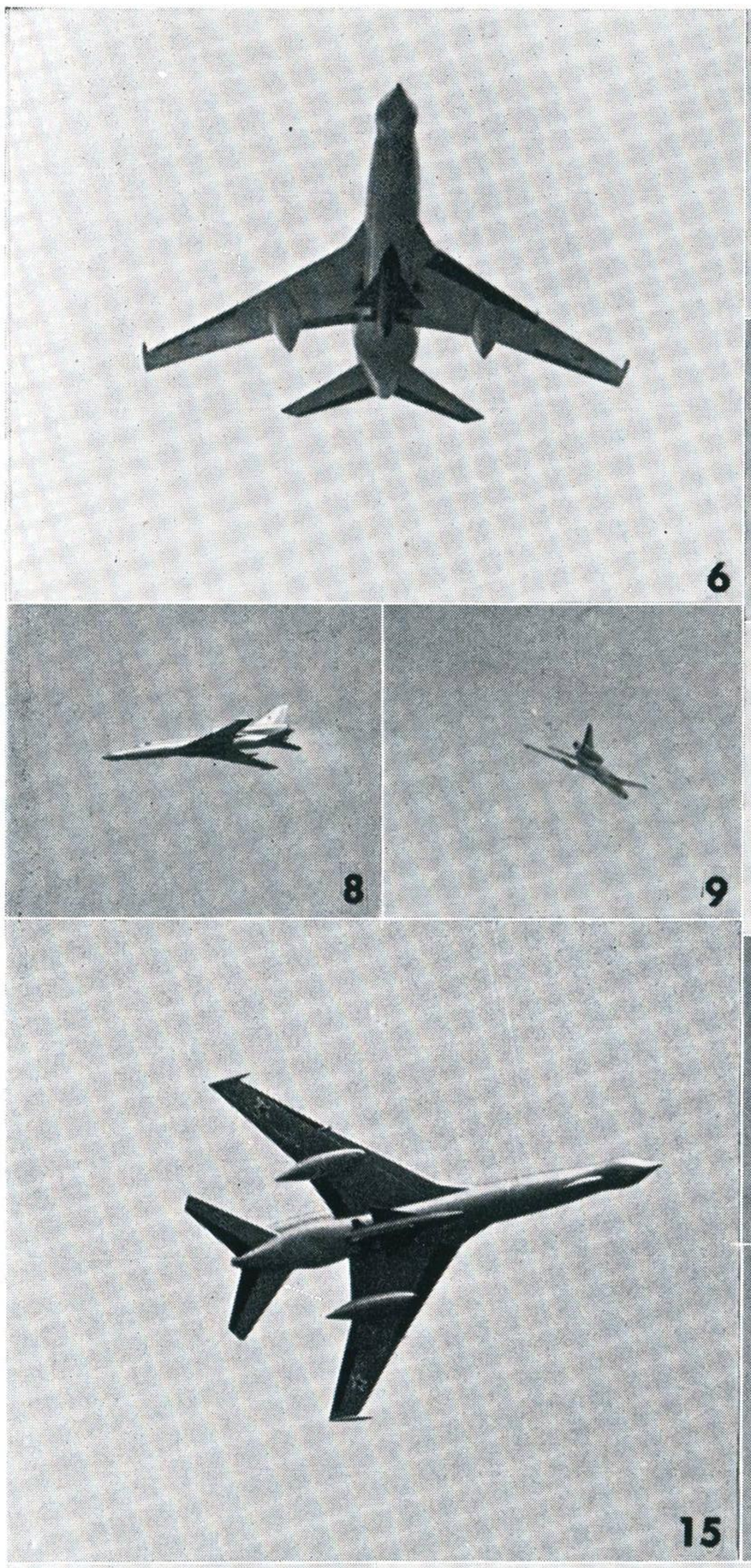
Blinder is in the same class as the B-58 Hustler, but its large rear-mounted, twin-jet engines, swept wings and long nose give it a distinguished appearance in formal views. However, Blinder's characteristics are not immediately apparent in all the thirty views displayed here and one, at least, is not of Blinder at all. The key to positive identification will be found in instructions on page 322.

Variations with Blinders, so far observed, concern a presumed stand-off bomb carried underneath, partly recessed into the fuselage (see Target 11).

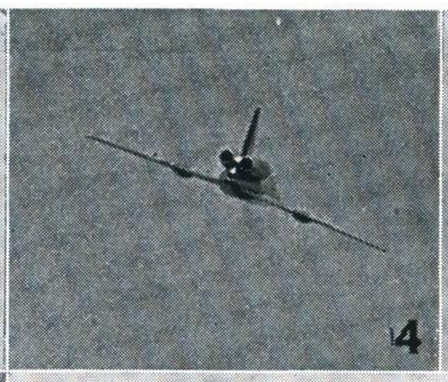


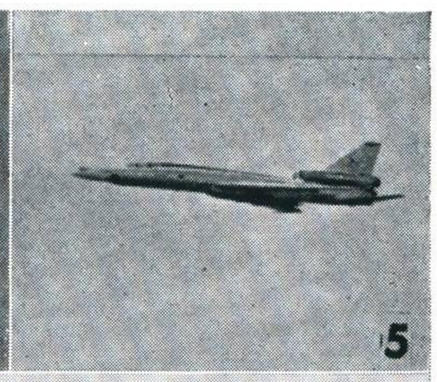


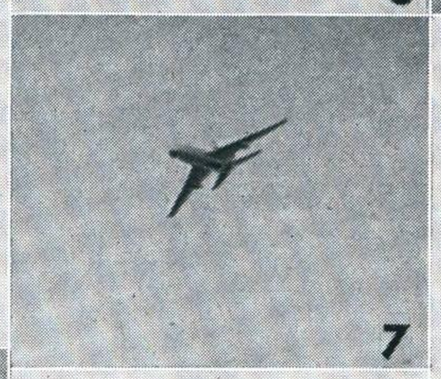



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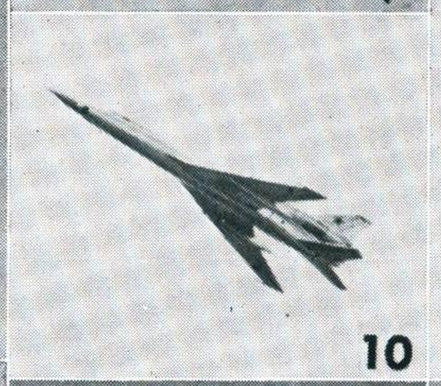

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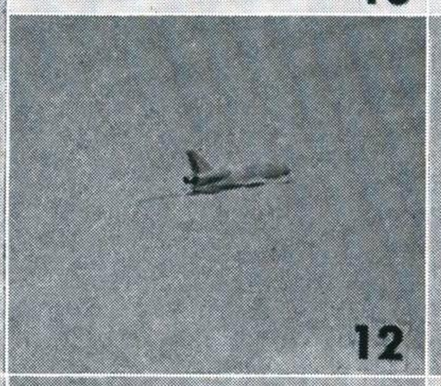

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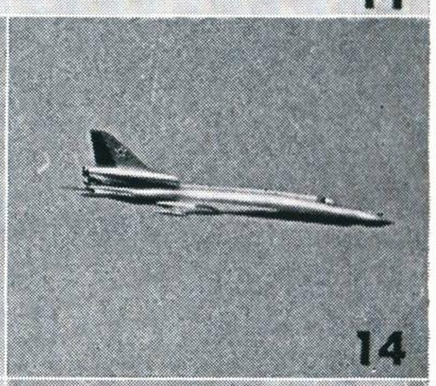
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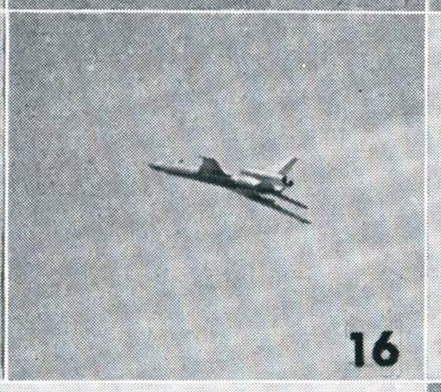

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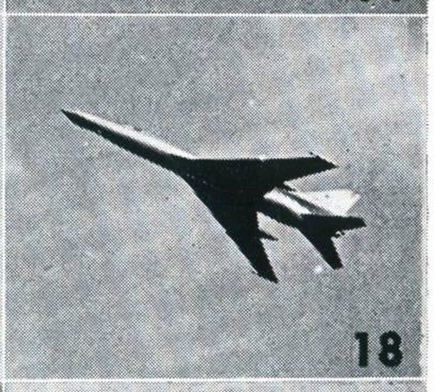

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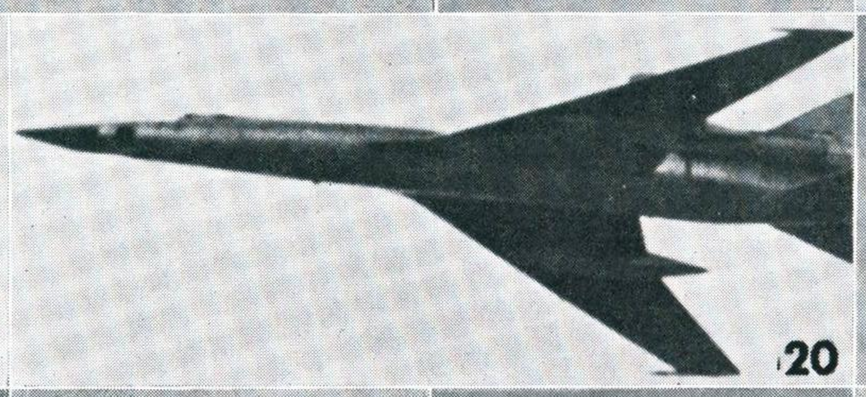

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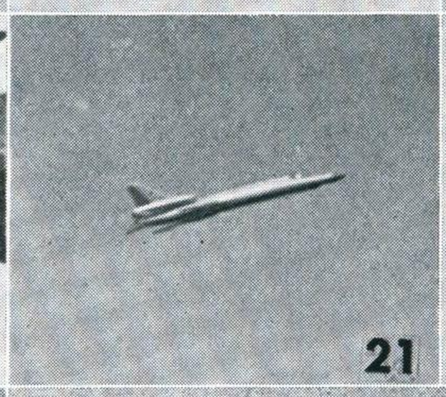

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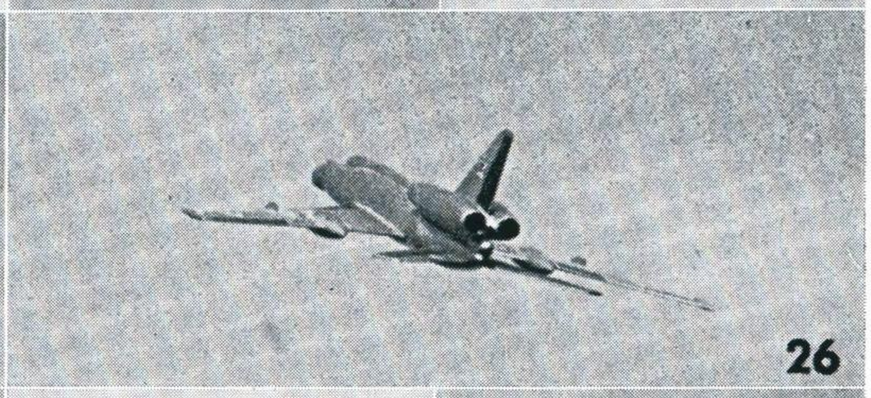

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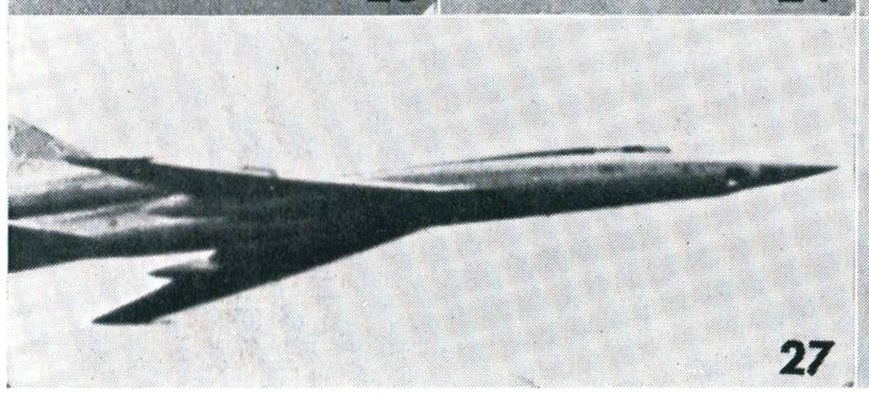

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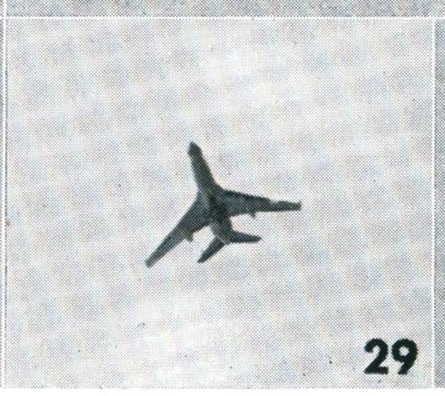

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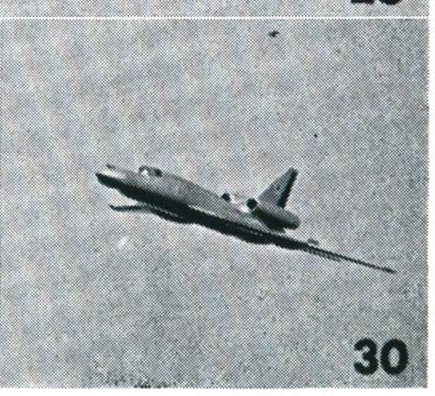

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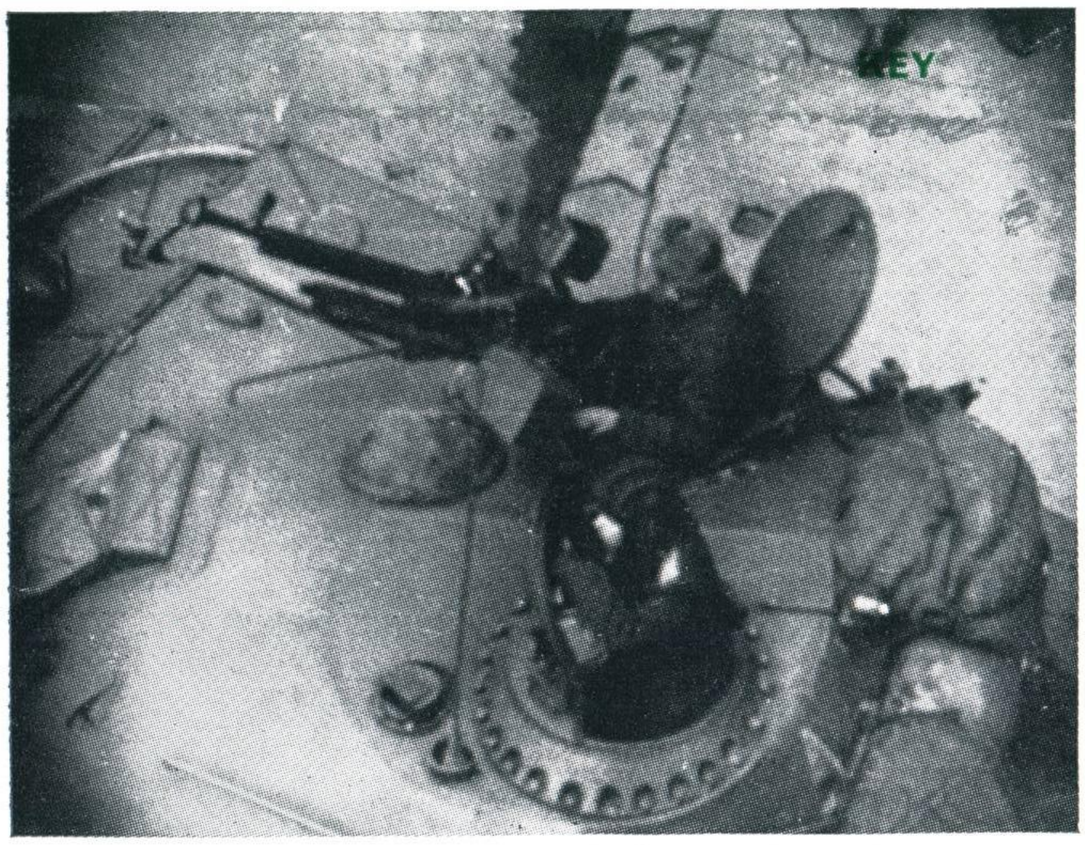

30

T-54

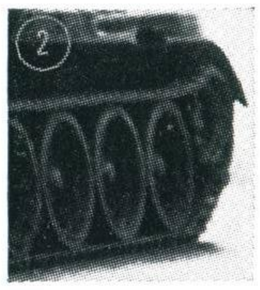
Soviet Medium Tank

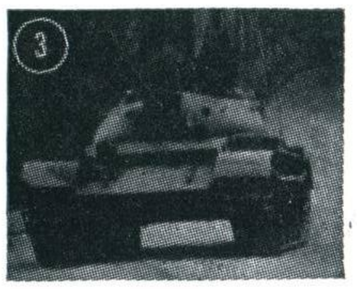
Read the lesson instructions on page 322 then compare targets 6, 7, 8 & 9 with the overhead key view. When and if you are convinced they are T-54s, write T-54 on your list against each of these numbers. This should give you a good start and enable you to link other targets to those views and identify them. Note incidentally the gap in the wheel arrangement where this is visible and use that as an aid to identifying. But don't be too clever; watch for jokers throughout. There are 42 targets altogether; when you have identified all the T-54s amongst them you will know something about this tank—and be able to identify it. Solutions are on page 334.







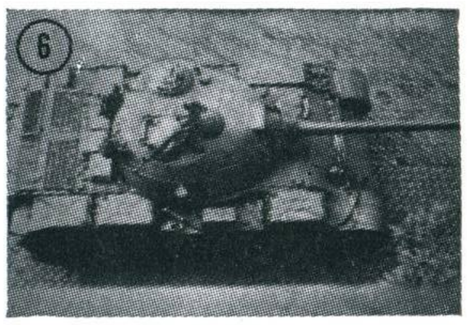


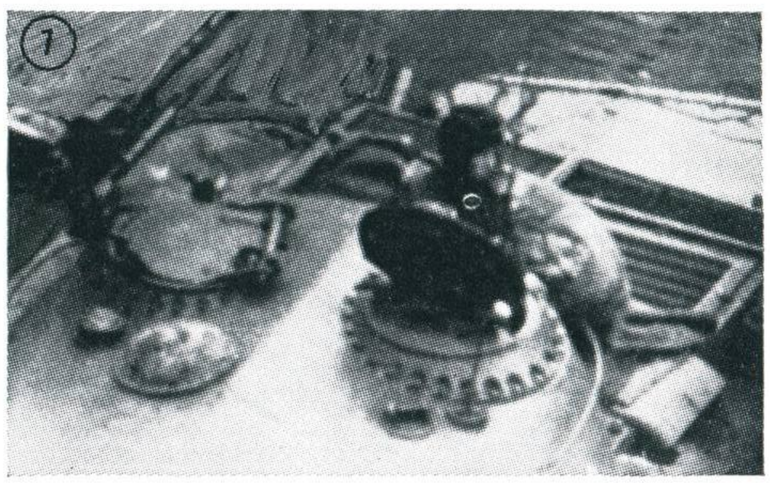


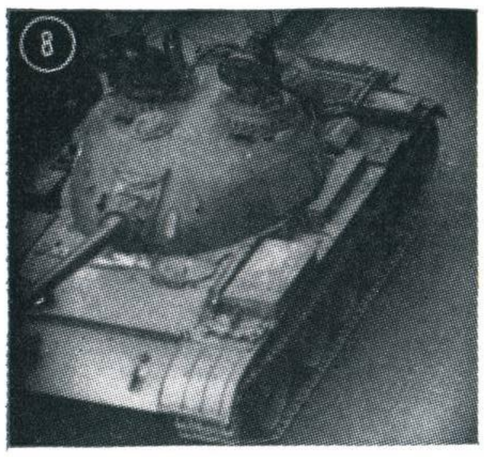


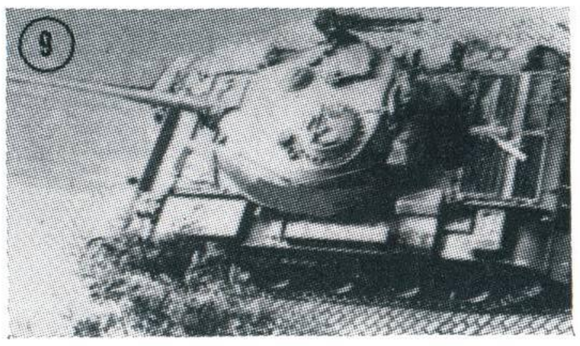


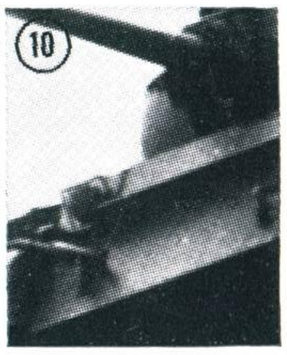


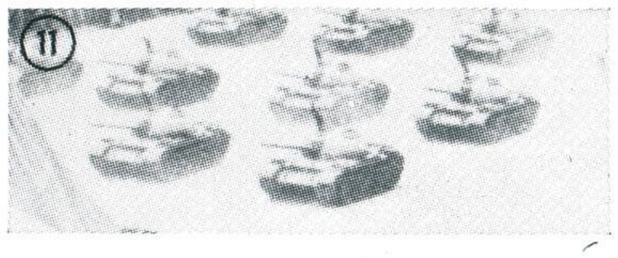


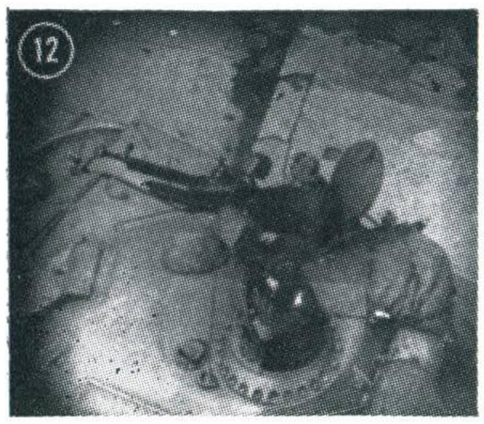




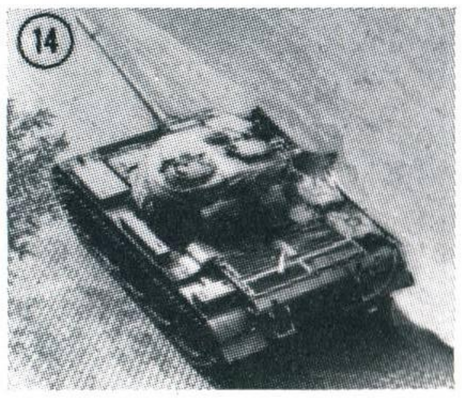


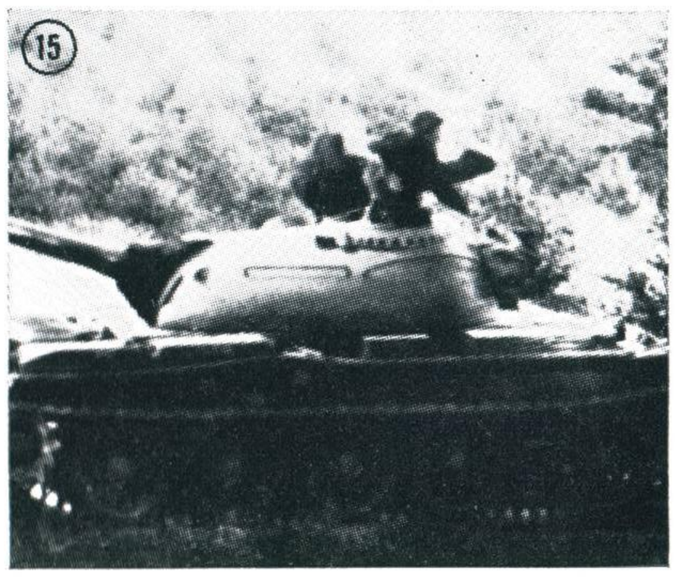








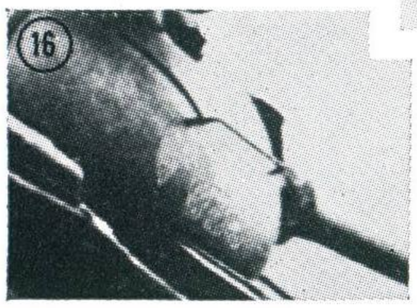


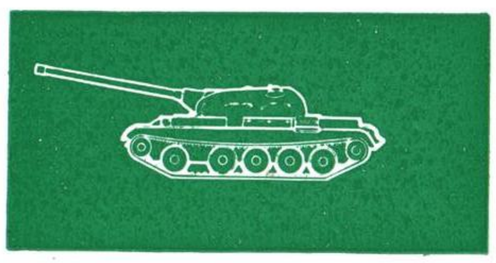




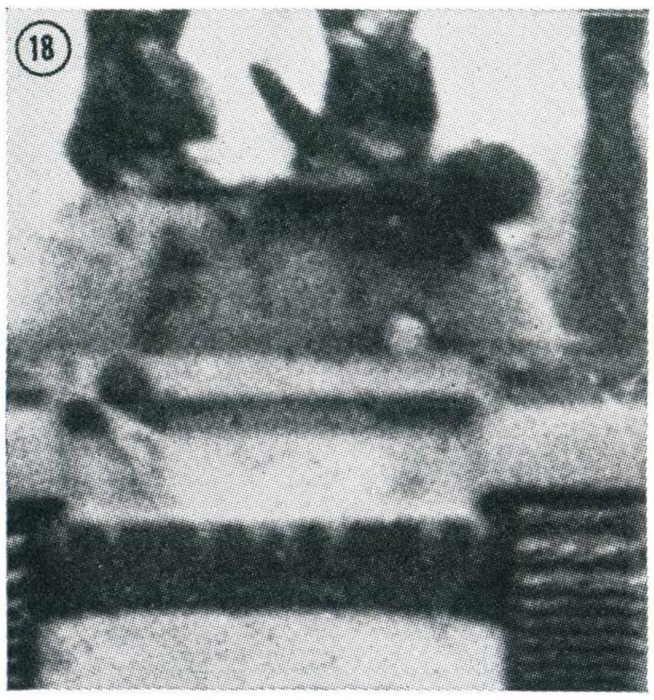

KEY


KEY


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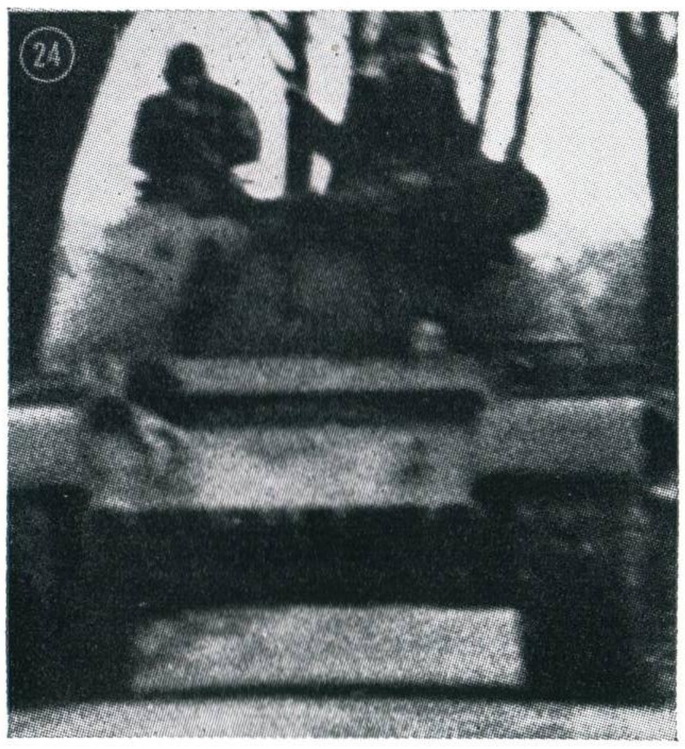

19

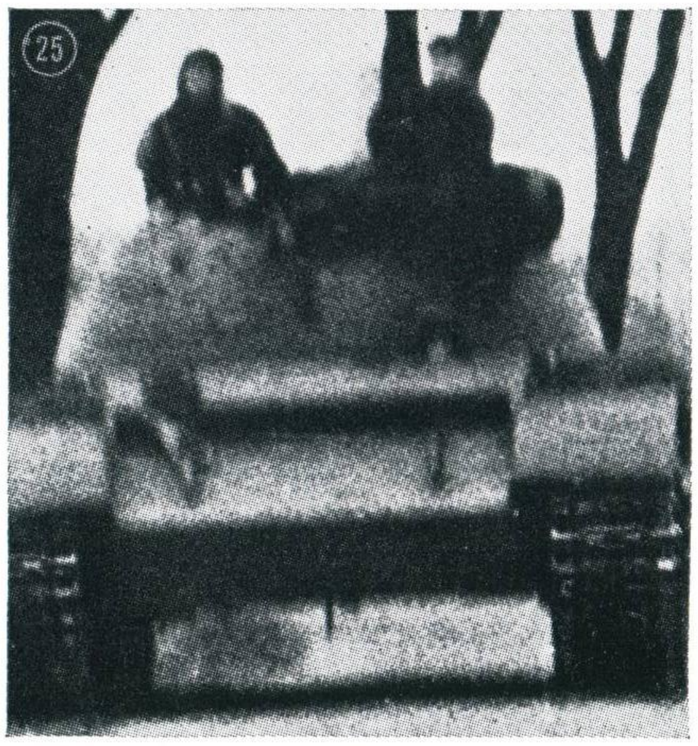

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KEY







The T-54 is the standard medium tank of the Soviet Army and it is also in service with the forces of the Soviet satellites and a number of other countries, particularly in the Middle East. Its outstanding features are a clean, turtle-shaped turret and the track assembly, which has no return rollers and differs from that of other Soviet medium tanks, except the T-44, in having a gap between the first and second road wheels. Except for the early vehicles of this type, the gun barrel is fitted with a fume extractor.





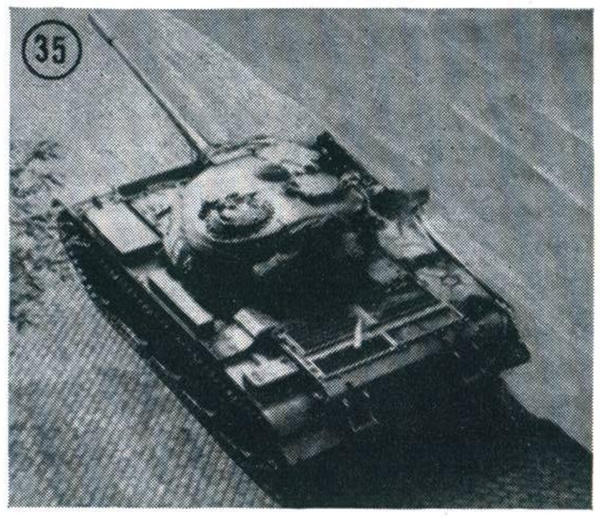


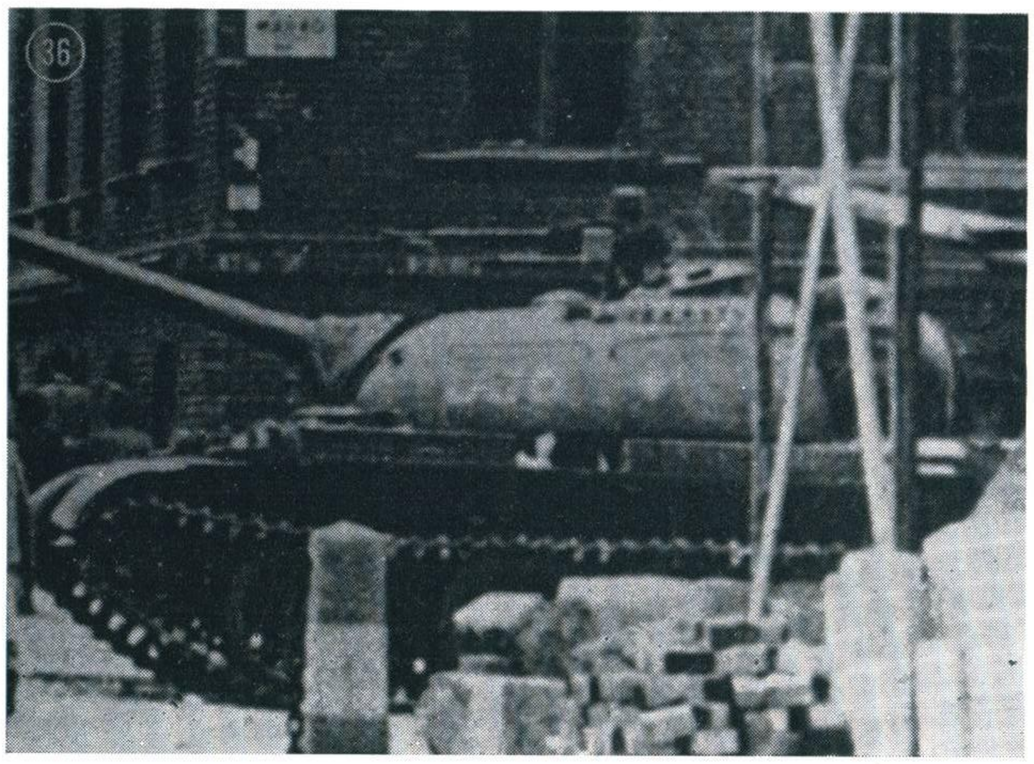




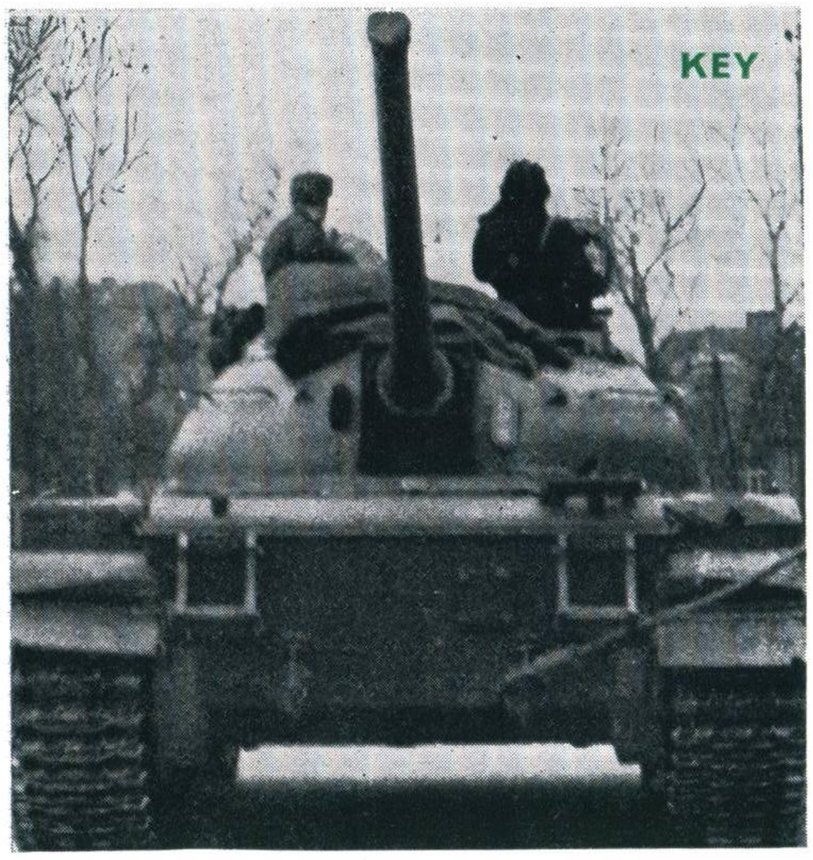




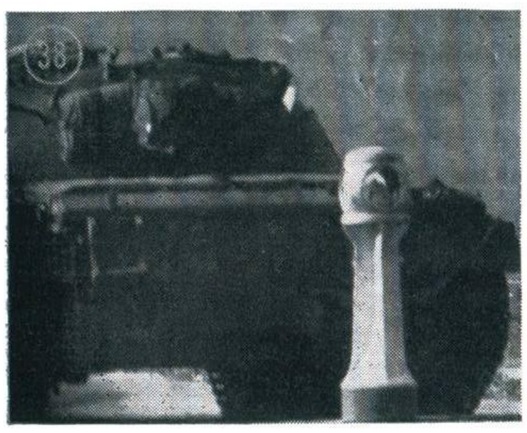






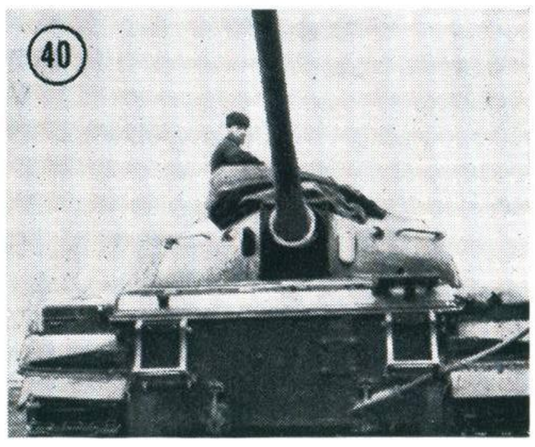








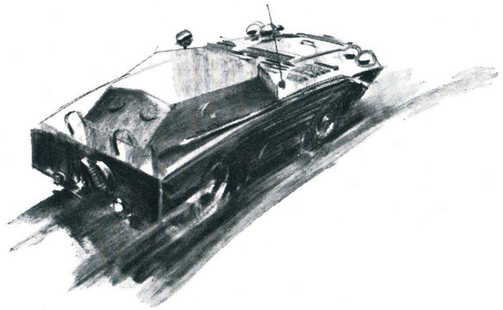
Crew: Four
Height: 7 ft. 10½ ins.
Weight: 36 metric tons
Hull Length: 29 ft. 10 ins.
Width: 10 ft. 9 ins.









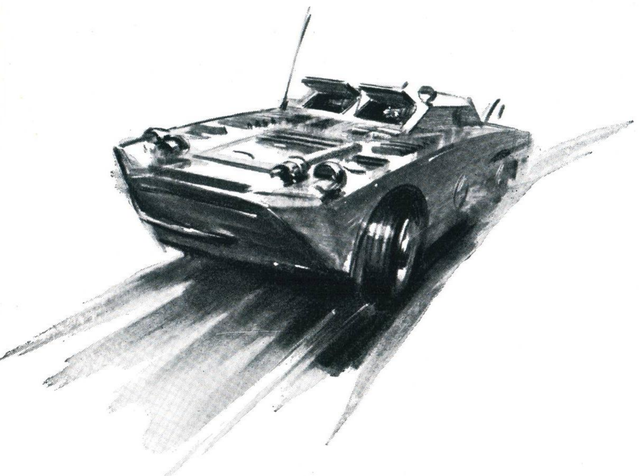


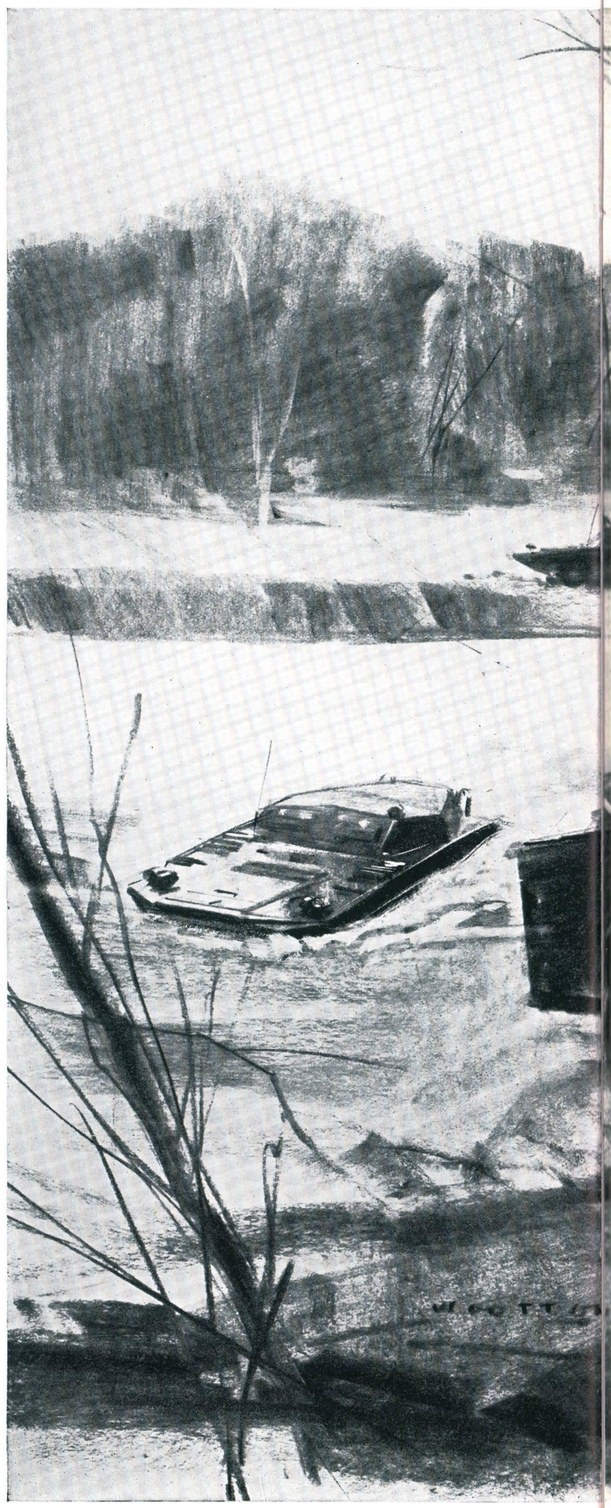
Soviet BRDM Amphibious Armoured Car

The BRDM amphibious armoured car is one of four wheeled armoured vehicles used in numbers by the Soviet Army and the third in order of appearance. The two earlier ones are the 6×6 BTR-152 armoured personnel carrier and the 4×4 BTR-40 armoured scout car, while the fourth is the more recent BTR-60 8×8 amphibious armoured personnel carrier. The BRDM itself is essentially a reconnaissance vehicle intended for mounted reconnaissance or, even more, for carrying half-a-dozen men for scouting on foot.

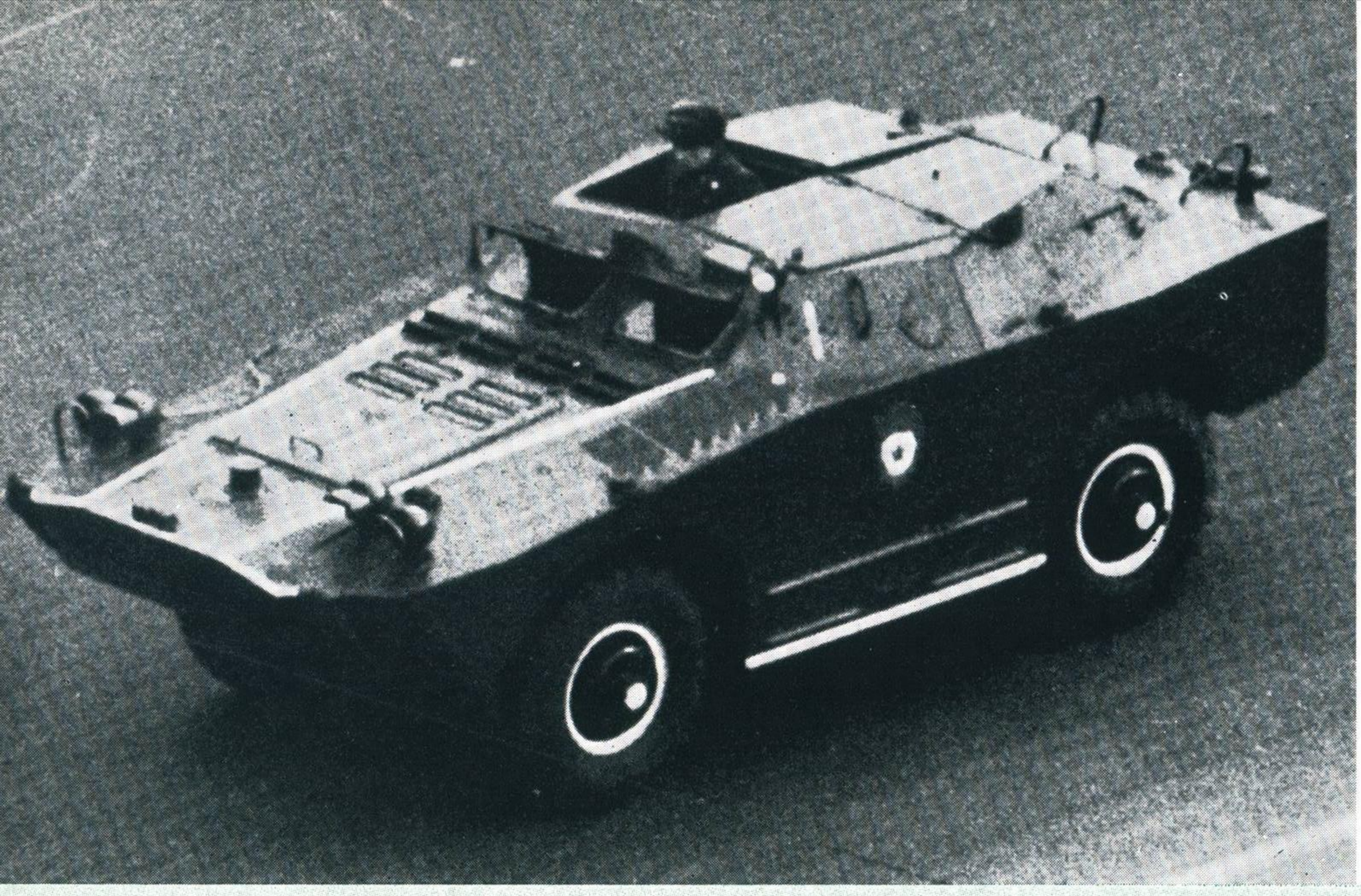
In its role and outward appearance the BRDM resembles somewhat the BTR-40. It is, however, much more suitable for reconnaissance because of its ability to swim across rivers and other water obstacles. It is also fairly easy to distinguish from the BTR-40, in spite of having basically the same four wheeled layout with the engine at the front. In particular, it has a very characteristic upturned nose which, together with the low rear superstructure, makes its silhouette look like that of an old boot.

continued overleaf . . .







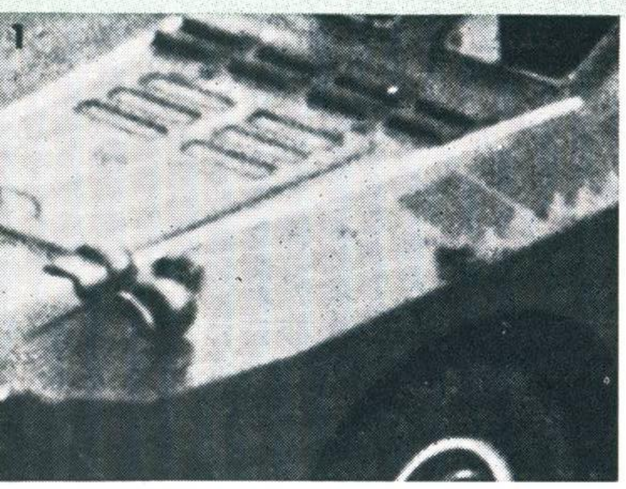


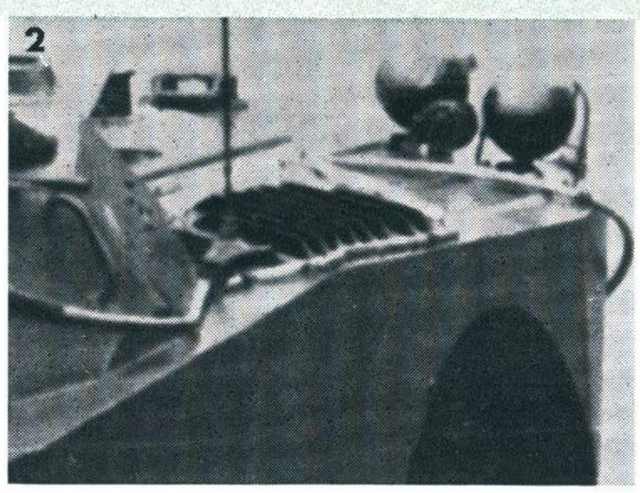
The shape of the nose and the considerable bulk of the BRDM are dictated by the requirement that it should swim. To this end it also has a water jet propulsion unit, the outlet from which, when on land, is covered by a large hinged circular cover.

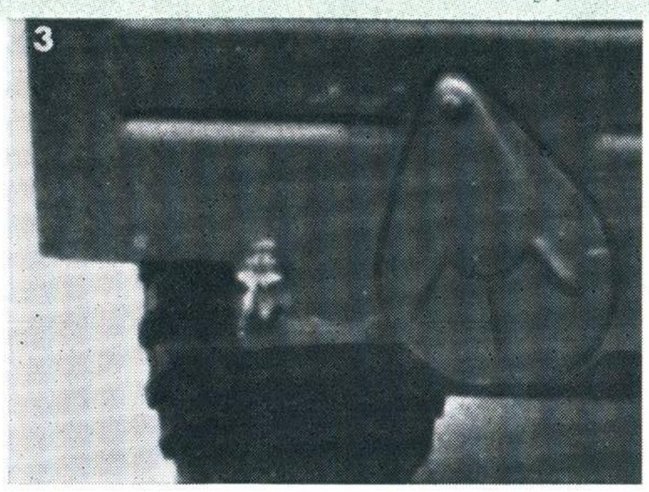
The top of the superstructure can also be completely covered by two hinged plates but there may be a heavy machine gun mounted above it or, on some of the latest versions, anti-tank guided missiles.

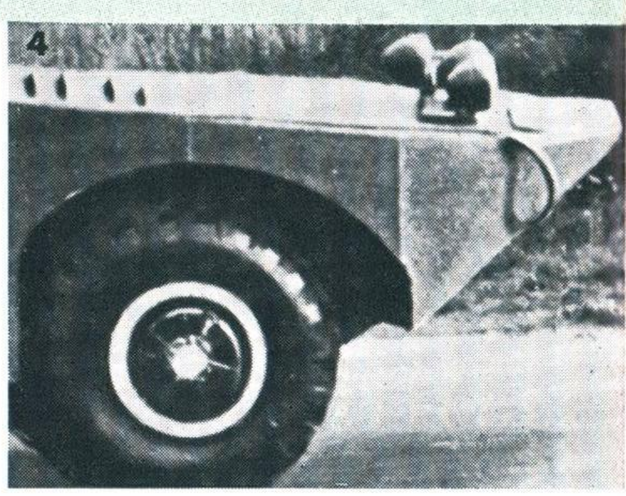
Lesson instructions page 322.
Solutions on page 334.

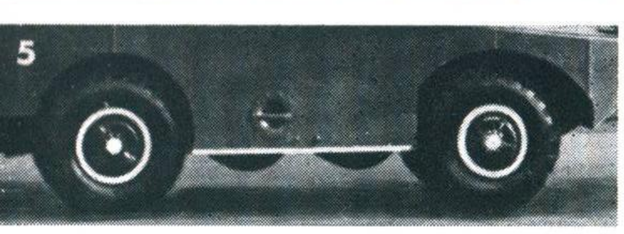
Soviet BRDM Amphibious Armoured Car *continued*

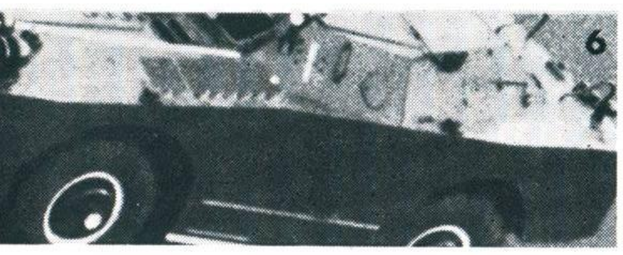

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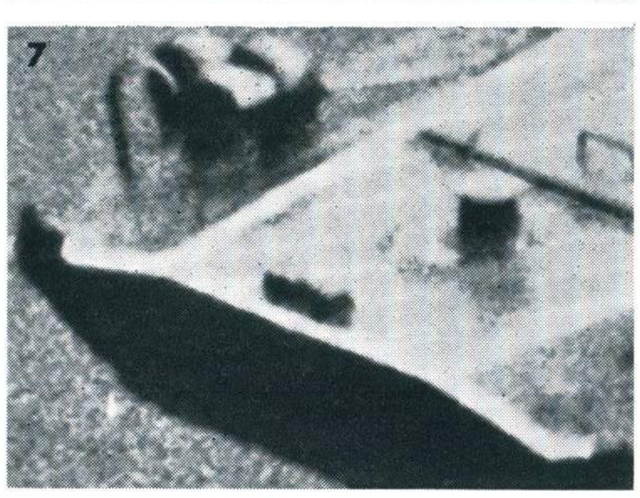

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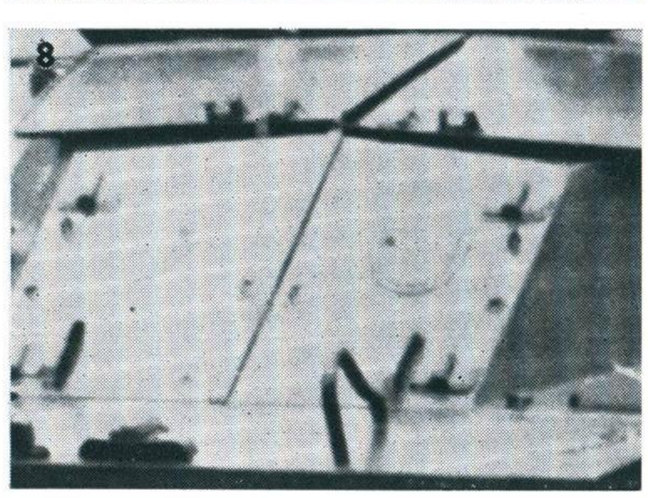

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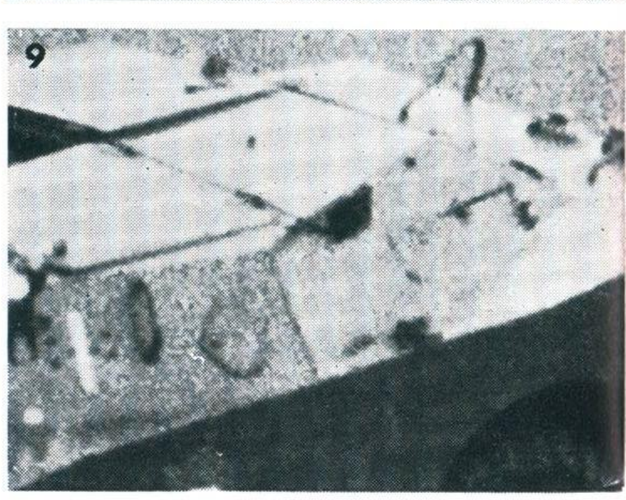

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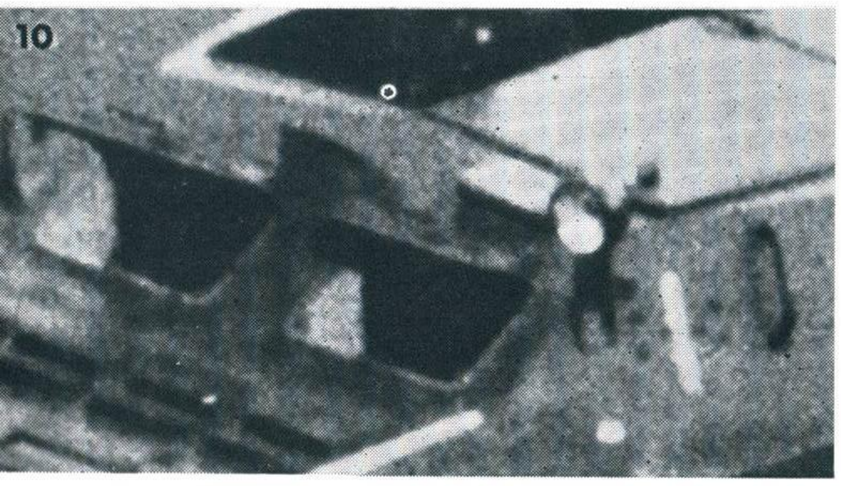

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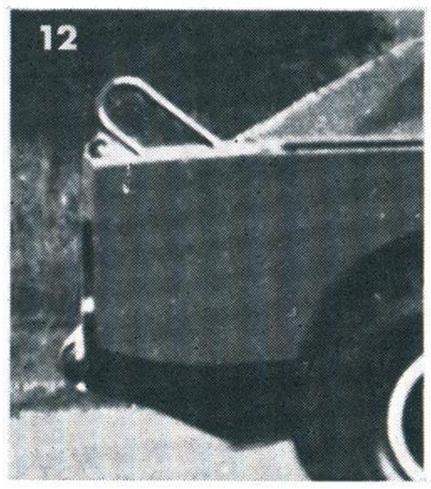

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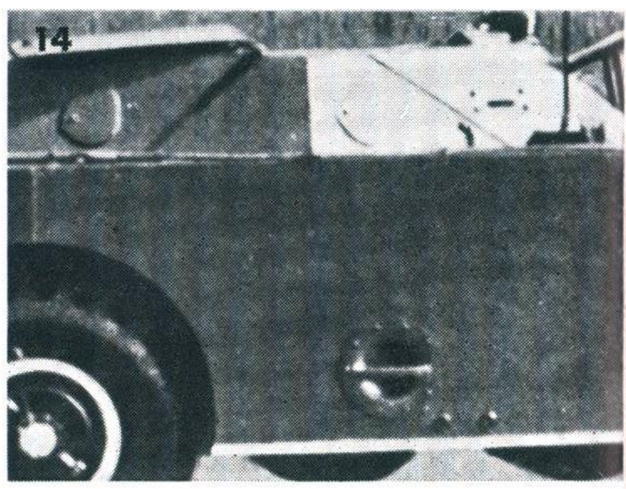

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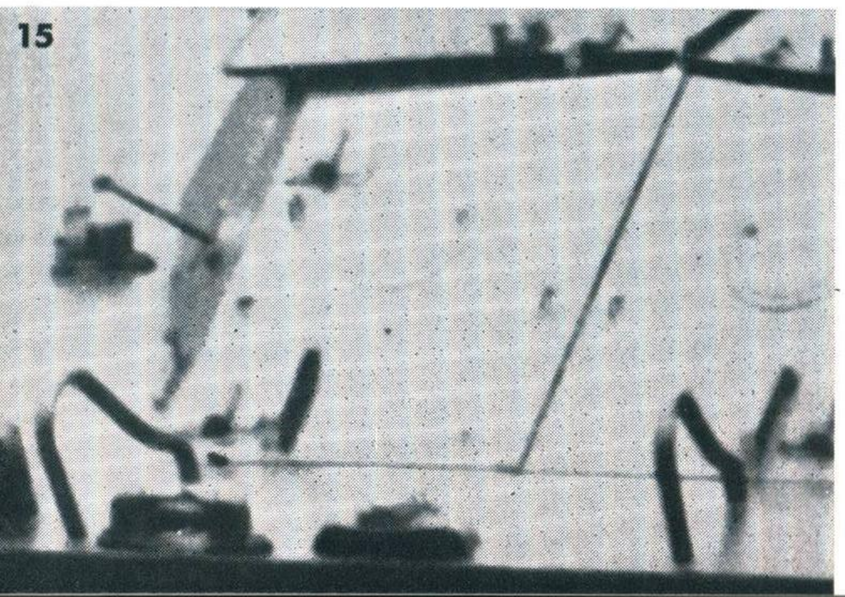

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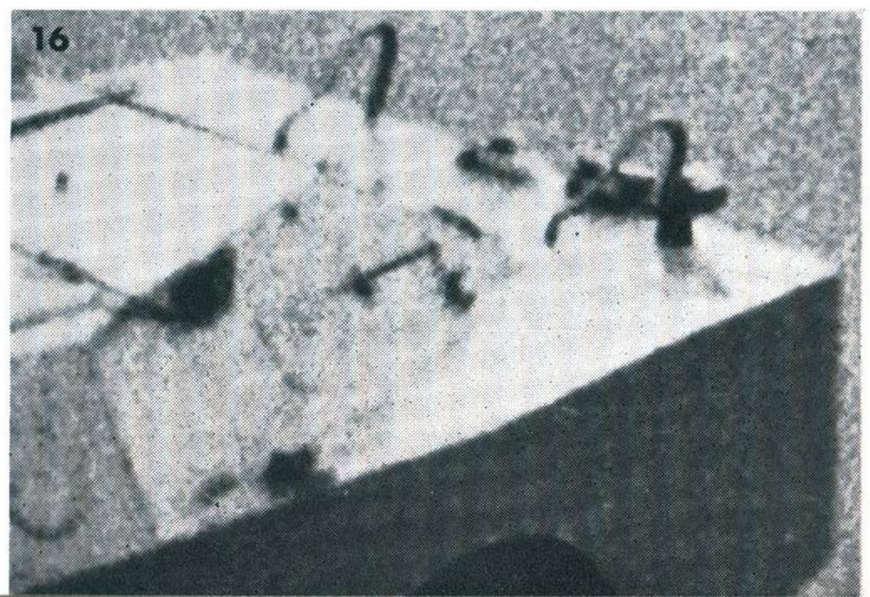

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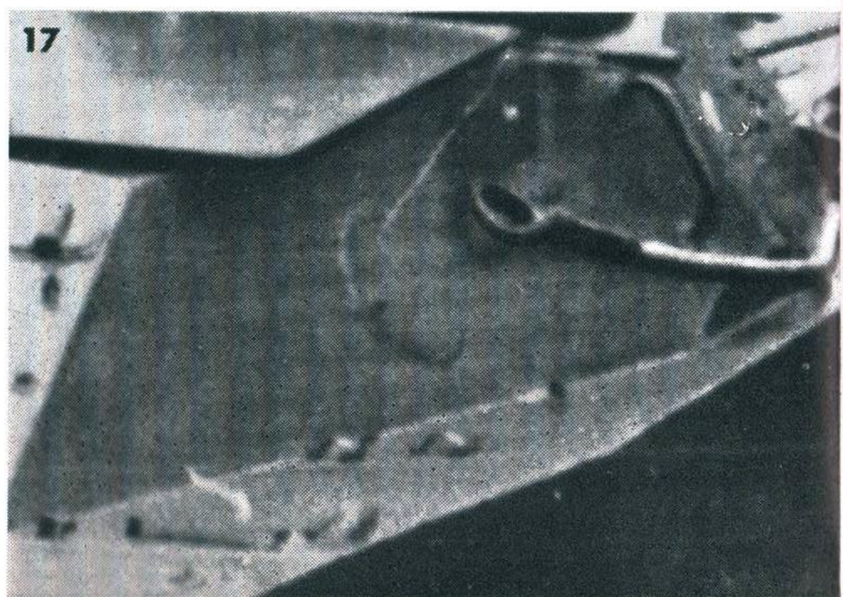

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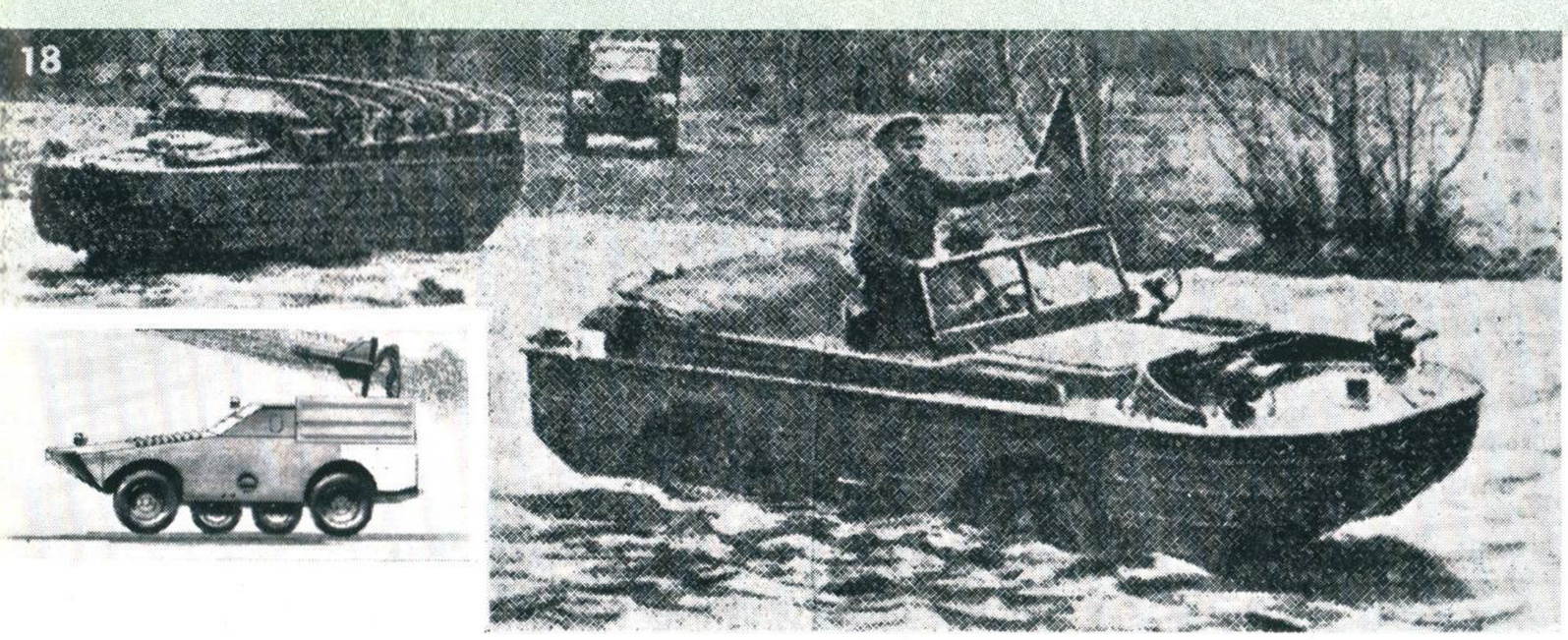

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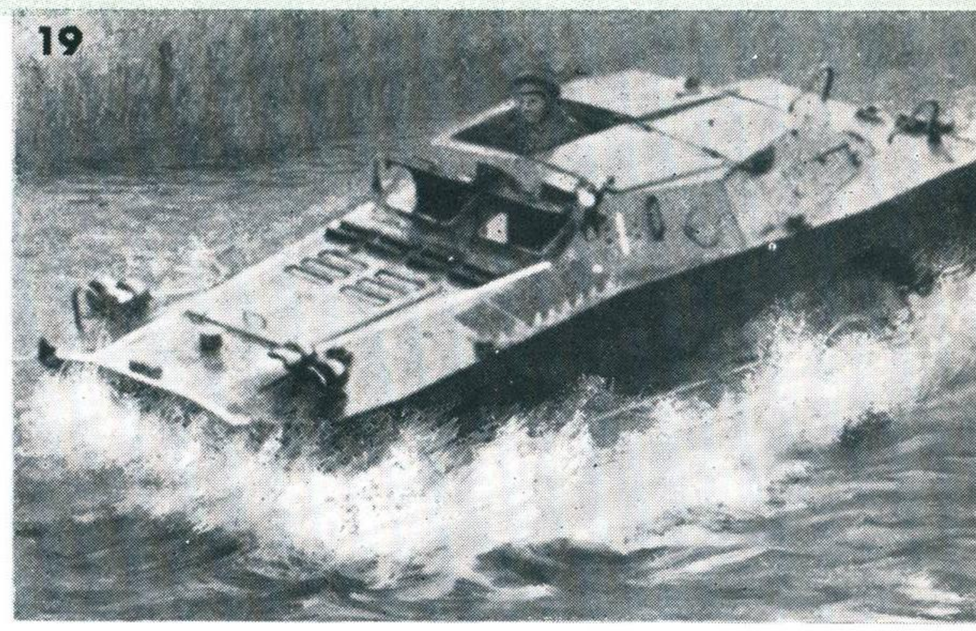

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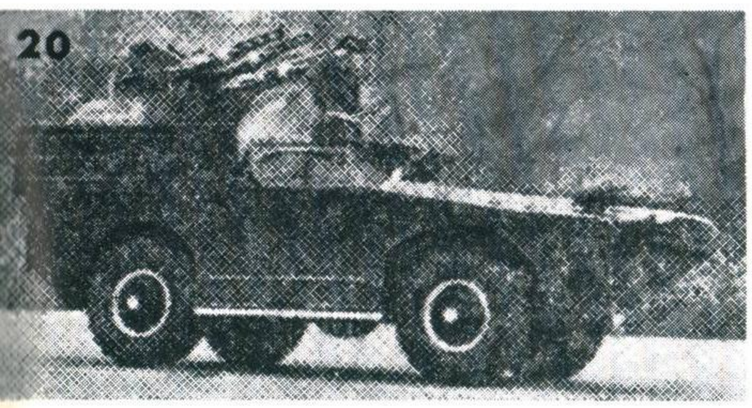
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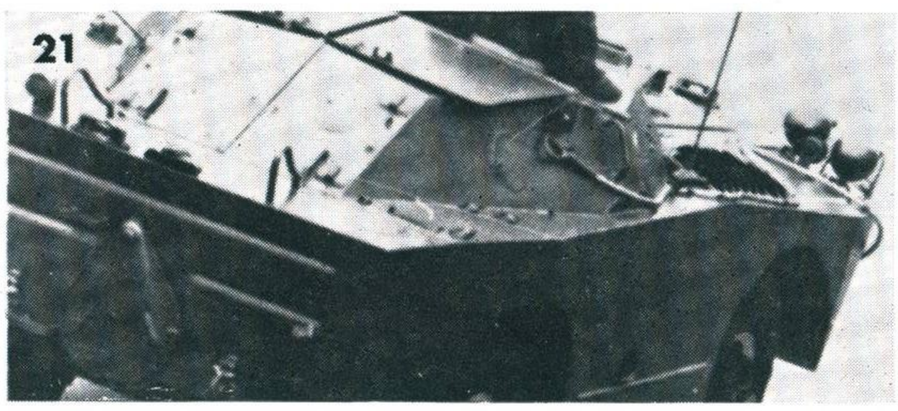
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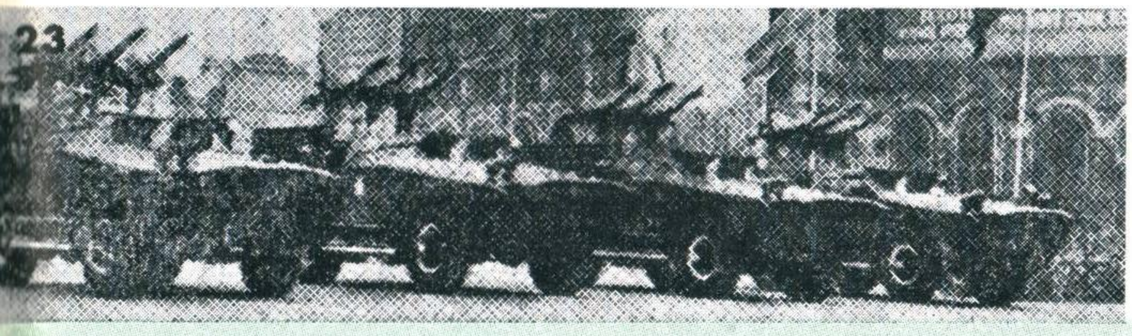
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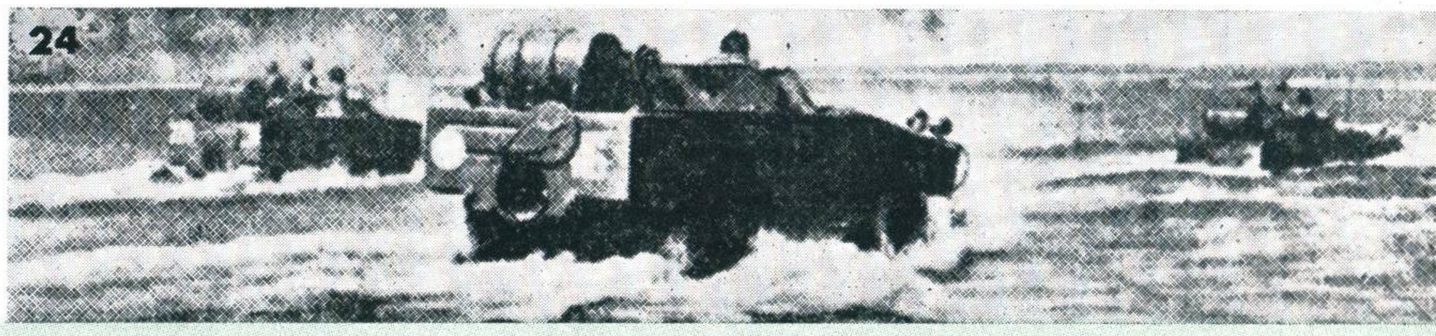
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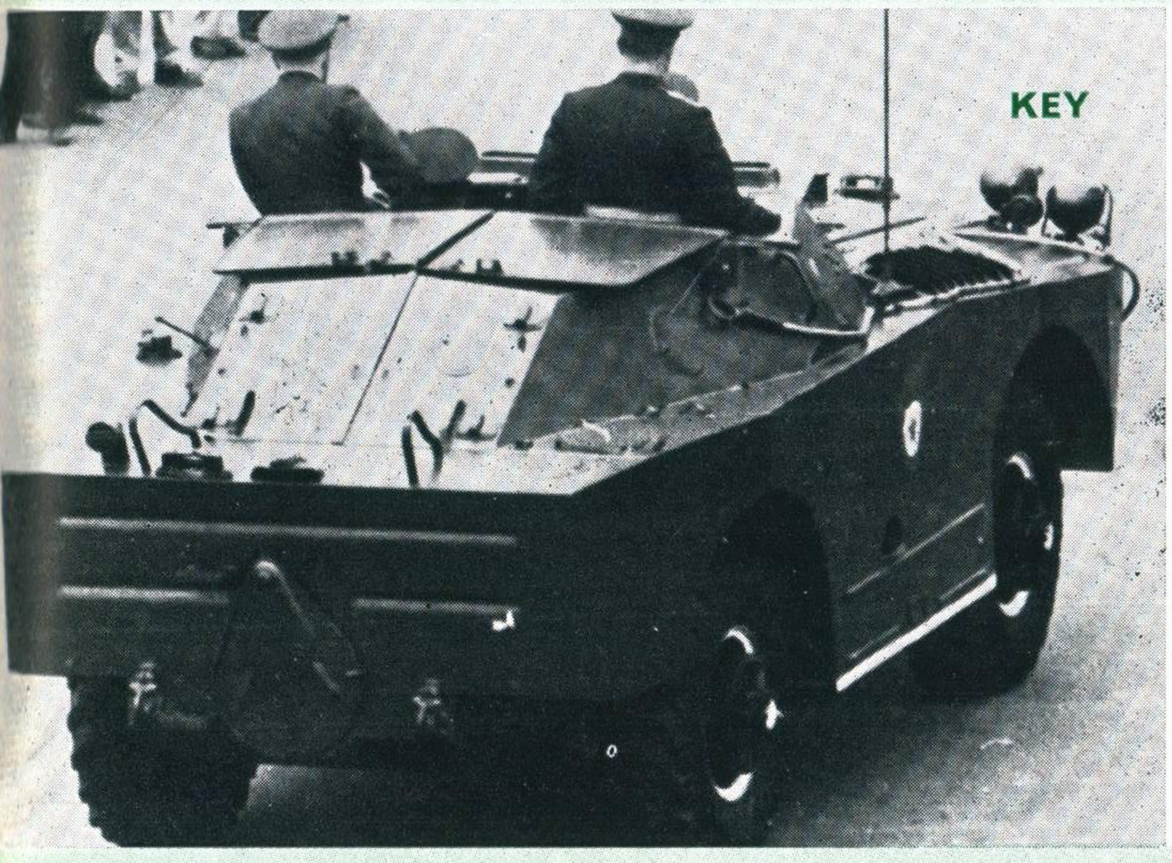


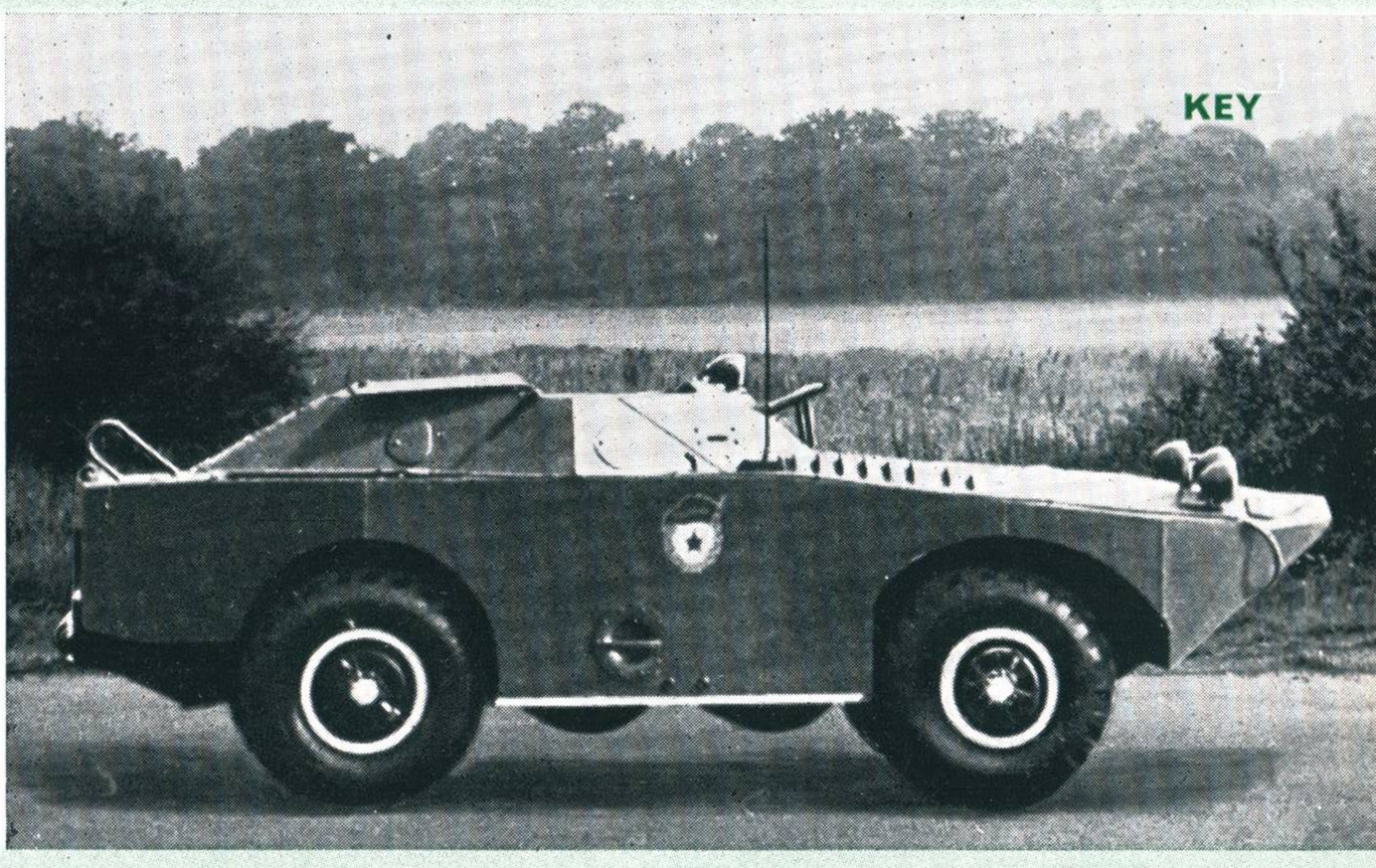
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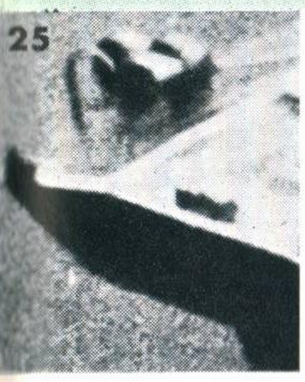
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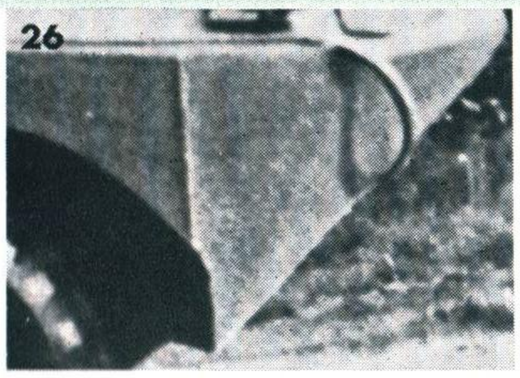




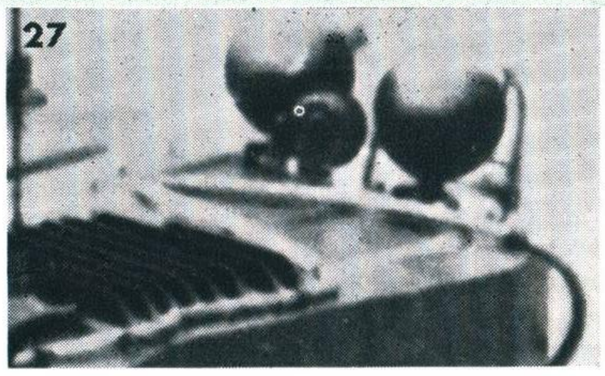
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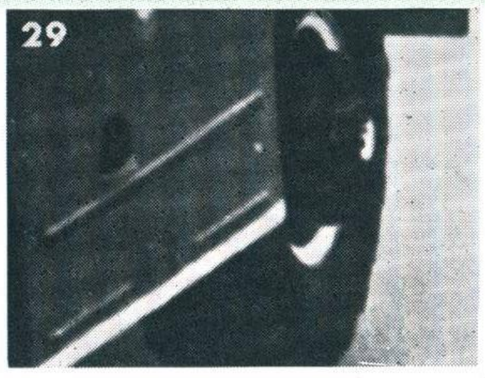
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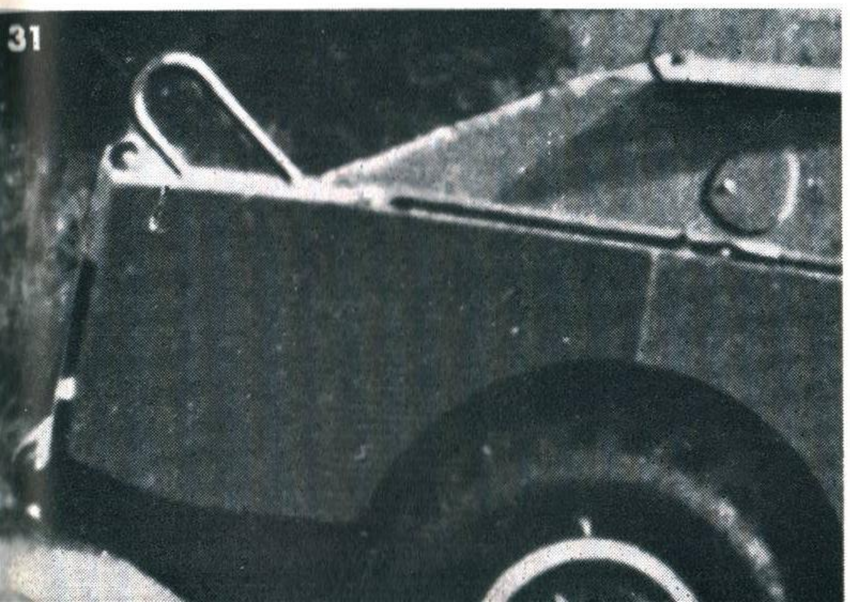
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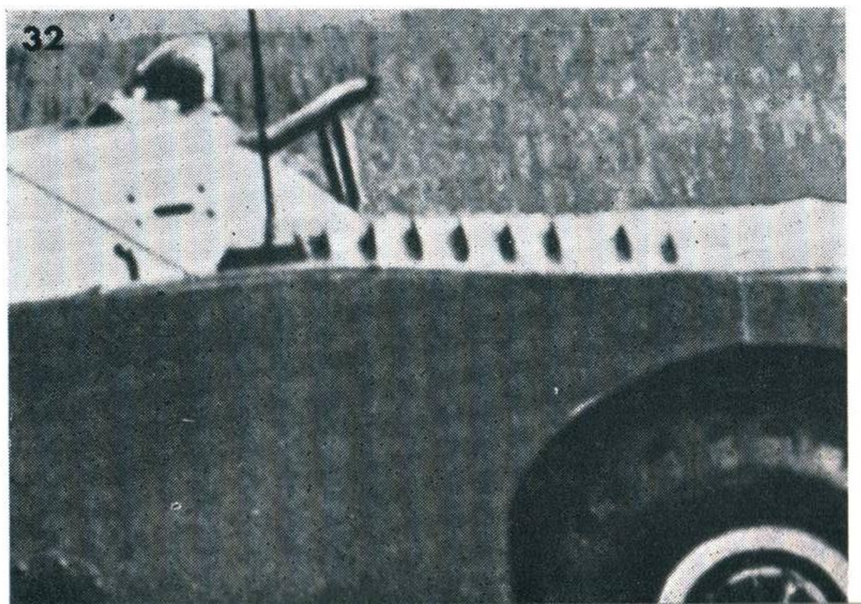
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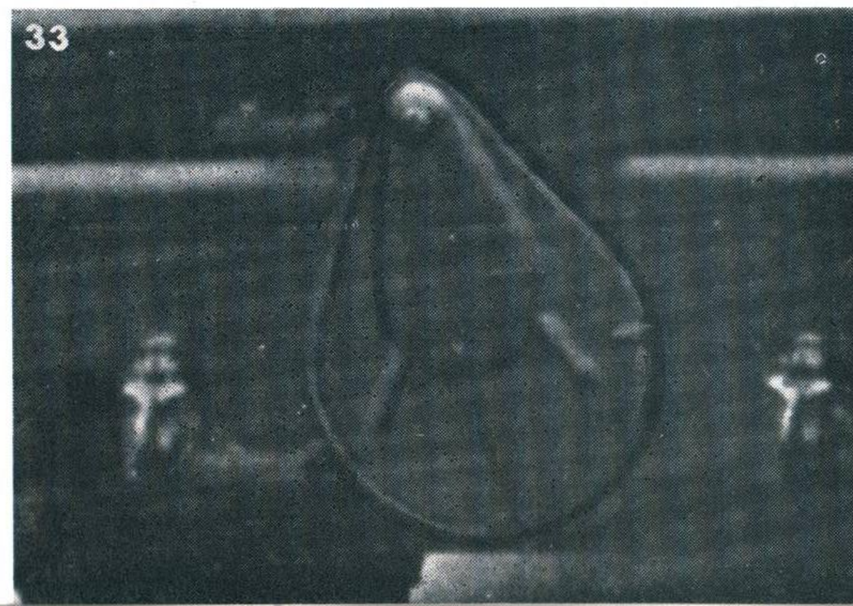
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Cover Photo: Cock, the giant Antonov An-22 transport to which entry is made through the vast wheel wells.

SOLUTIONS TO TESTS AND EXERCISES IN THIS EDITION

Page 310 **HOUND**

All targets are of **Hounds** except Nos. 14 and 23 which are **Whirlwinds.**

Page 312 **CUB**

All targets are of **Cubs** except for No. 15 which is a **C-133 Cargomaster** and No. 23 which is a **Cat.**

Page 314 **CAMEL**

All targets are of **Camels** except No. 23 which is a **Cookpot.**

Page 316 **BEAR A & B**

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2 Bear A	12 Bear B	22 Bear B
3 Bear A	13 Bear A	23 Bear A
4 Bear B	14 Bear A	24 Bear B
5 Bear A	15 Bear A	25 Bear A
6 Bear B	16 Bear A	26 Bear B
7 Bear B	17 Bear A	27 Bear B
8 Bear A	18 Bear B	28 Bear B
9 Bear B	19 Cleat	29 Bear A or B
10 Bear A	20 Bear A	

Page 318 **BEAGLE**

All targets are of **Beagles** except Nos. 11 and 28 which are **Bosuns.**

Page 321 **CLEAT**

All targets are of the **Cleat** except No. 15 which is a **Bear.**

Page 322 **BLINDER**

All targets are of **Blinders** except No. 19 which is a **Fiddler.**

Page 326 **T-54**

All targets are **T-54s** except No. 13 which is a **P.T.76** and No. 21 which is an **M-48.**

Page 330 **SOVIET BRDM AMPHIBIOUS ARMOURED CAR**

All targets are of the Soviet **BRDM Amphibious Armoured Car** except No. 18 which are **unarmoured amphibious trucks** and No. 28 which is a **Ferret.**

Back numbers of the Joint Services Recognition Journal

Most of the aircraft, ship and armoured fighting vehicle lessons in the *Journal* over the past seven years are still current for identity training purposes.

Stocks from January 1958, with the exception of April 1962 and January 1963, are held and may be demanded through the normal channels from A.P.F.S., Kidbrooke.

An index to lessons for each year is contained in each December issue and a consolidated list of all current lessons appeared in the July 1965 edition.

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The following key will facilitate the tracing of references in the Index:

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29–56	**FEBRUARY**	**113–140**	**MAY**	**197–224**	**AUGUST**	**281–308**	**NOVEMBER**
57–84	**MARCH**	**141–168**	**JUNE**	**225–252**	**SEPTEMBER**	**309–336**	**DECEMBER**

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