

JOINT



SERVICES

RECOGNITION

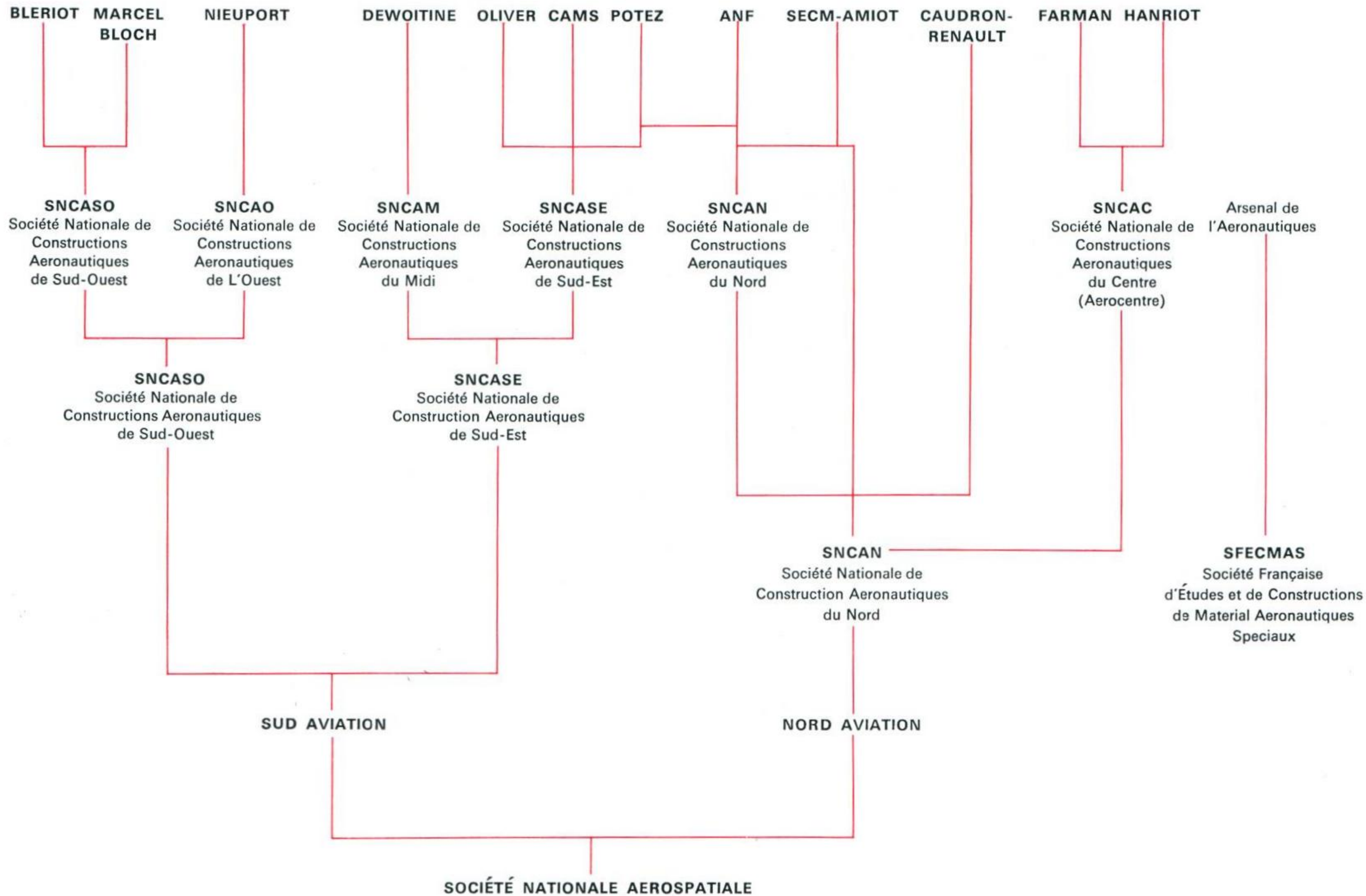
Journal



Vol. 25 JANUARY 1970 No. 1

January 1970

2



FRENCH AIRCRAFT
INDUSTRY FIRMS
1905-1936

1936 REGIONAL
NATIONALISATION

1941
CONCENTRATION

POST-WAR
REORGANISATION

1957-58
REORGANISATION
AND MERGERS

1970 MERGER

TABLE OF ANTECEDENTS OF SOCIÉTÉ NATIONALE AEROSPATIALE FORMED 1st JANUARY 1970

N.B. Although the Marcel Bloch Company were taken over under nationalisation in 1936 Marcel Bloch, having changed his German-sounding patronym for Dassault, commenced independent manufacture postwar.

Similarly Henry Potez made a come-back in 1953, and Louis Breguet, one of the original pioneers, kept going postwar in spite of the prewar nationalisation of some of his factories.



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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THE NEW FRENCH AERONAUTICAL COMBINE

As in Britain, so in France, there has been a move over the years for a concentration of the aircraft industry into large groups. From January 1st this year two of France's largest groupings, Sud and Nord, merge into a single large group, with aeroplane, helicopter, rocket, space and missile divisions, to be known as the Société Nationale Aérospatiale. This will leave Breguet, Potez and Dassault as the only major French aircraft constructors outside the new organisation.

In nineteen factories, the new combine will continue production and development of a number of aircraft types—the Caravelle of which just on 200 have been exported, the Alouette II and III of which total production tops 2,000 with well over a thousand in export orders, the Nord 262 continuing to leave the works at the rate of two a month and the Transall C-160 with well over a hundred still to be built. The light jet two-seat trainer Super Magister is still being produced after fifteen years in production.

The question that may now be asked is—how will this affect reporting names where a manufacturer's name is concerned, as in the Nord 262? It may be remembered that with the last regrouping of our own Hawker Siddeley Aviation the design prefix HS was retrospectively applied and the DH 125 became the HS125, and under a new marketing agreement between Beechcraft and Hawker Siddeley this has now become the BH125. But judging from the past in French aviation the old names may well be retained. Although the French industry was nationalised in 1936 into regional units, the aircraft were still known by their pre-nationalisation manufacturers names when war came in 1939—Potez, Hanriot, etc. since, then as now, it takes years from design stage to service.

Until a new nomenclature is announced and generally accepted, the *Journal* will continue to use the existing reporting names. Fortunately most former Sud aircraft have been given names unrelated to their manufacturing organisation

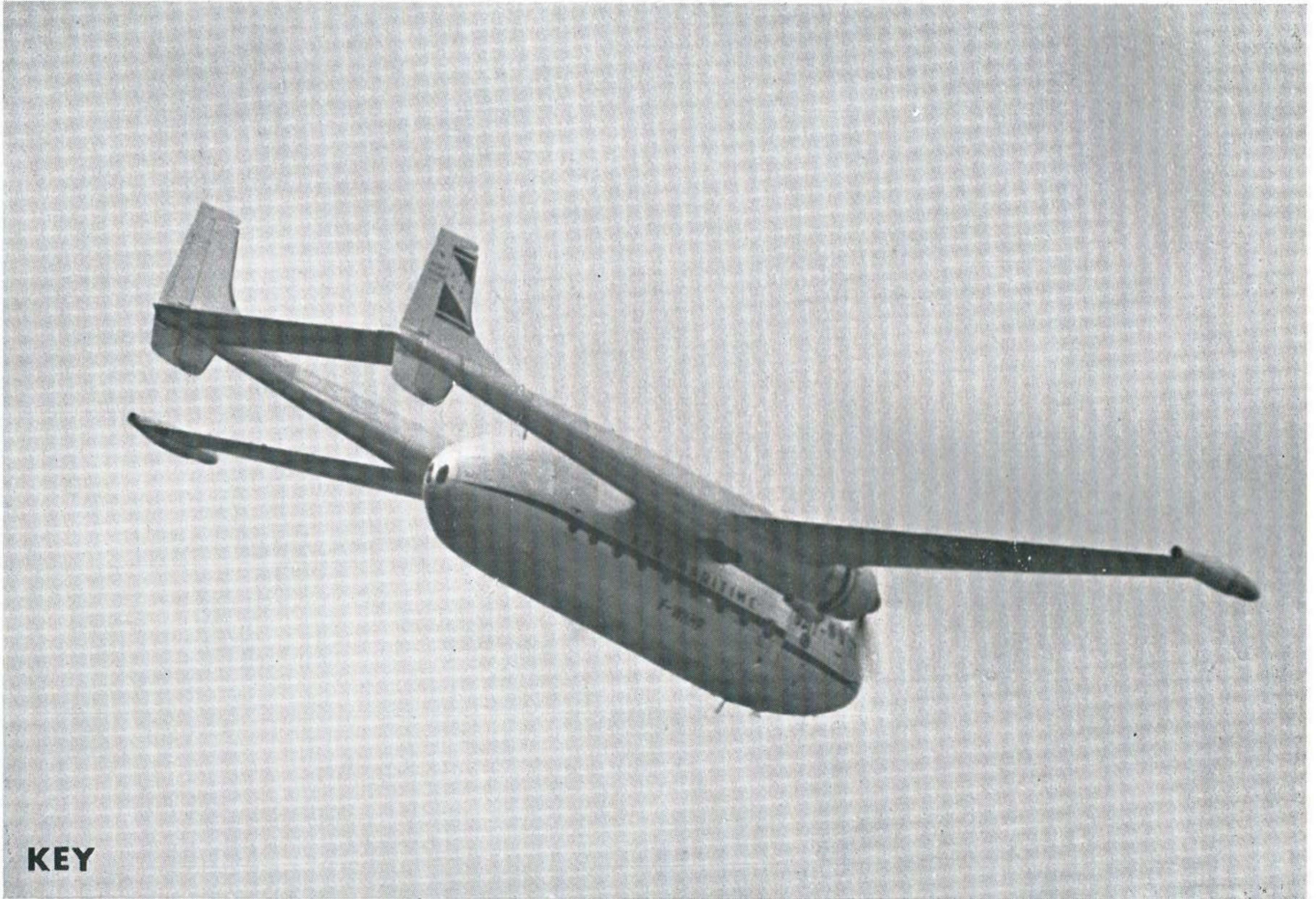
and the Sud SA330 and Sud SA341 received their respective names of Puma and Gazelle in time to avoid any confusion.

Nord and Sud were already joining in a measure of design co-operation as the designation of the prototype light twin-jet executive aircraft implies—the SN600 (SN for Sud-Nord). Other projects underway are the SA300 large capacity medium range airbus and the Nord 500 single-seat VTOL of which two prototypes are being built. The prefixes to these designations could now well be subject to change, but as these aircraft are not in production, there is little problem. In any case, the name Corvette has been mooted for the SN600.

Such mergers emphasise the desirability of giving aircraft popular names. Names have always been preferred to numbers since names, in general, are easier to remember and it is necessary to use numbers in conjunction with the manufacturer's name or indicative initials which increases the number of syllables in verbal reporting. The difficulties that can arise from mergers—and they are not infrequent—endorses the preference for names. As remarked, the Alouettes II and III exist in their thousands—what if they had remained the Sud-Est SE3130 and Sud-Est SE3160? Come to that, what if the Spitfire had remained the Supermarine Type 310?

Nord 262





N2502

NORATLAS

Standard equipment in the French, Federal German, Portuguese and Israeli Air Forces, the Nord Noratlas medium-range twin piston-engined transport is also used by civil airlines. The military Noratlas has a crew of five and can carry 45 fully equipped troops, alternatively 36 paratroops or 18 stretcher cases plus medical attendants.

Well over 400 have been built in France and under licence in Germany. Some have provision for the fitting of wingtip turbojets and two models had Pratt & Whitney engines in place of the standard licence-built

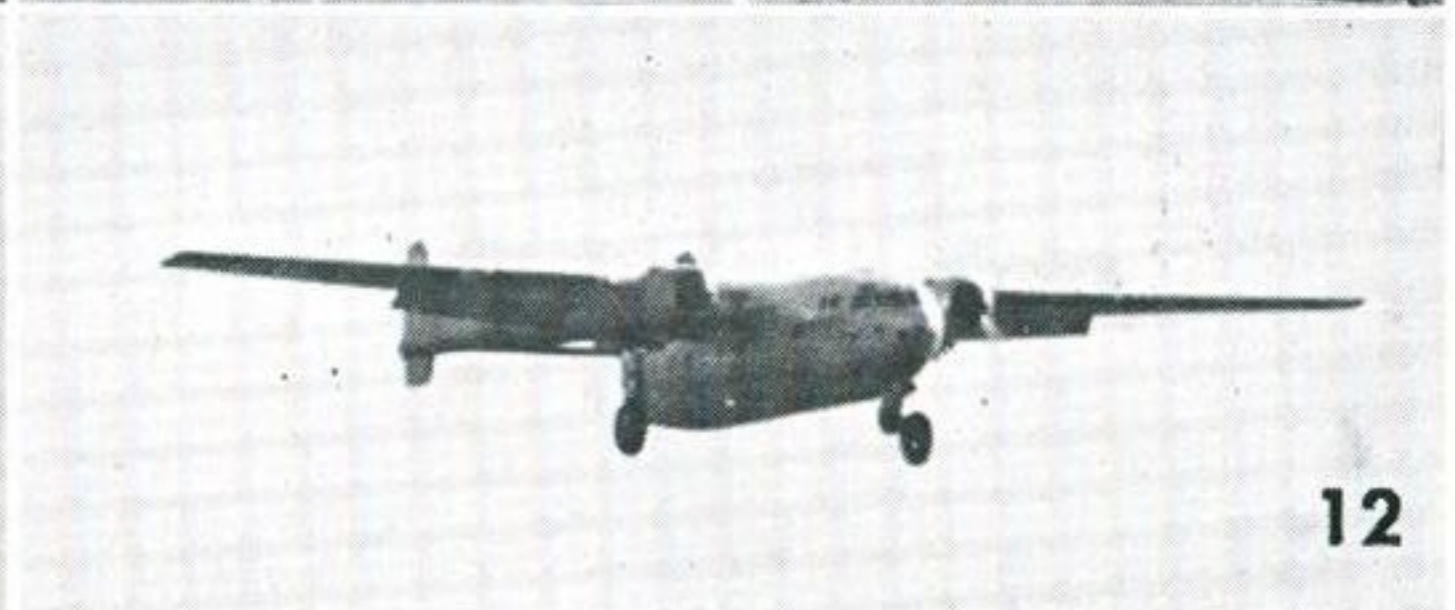
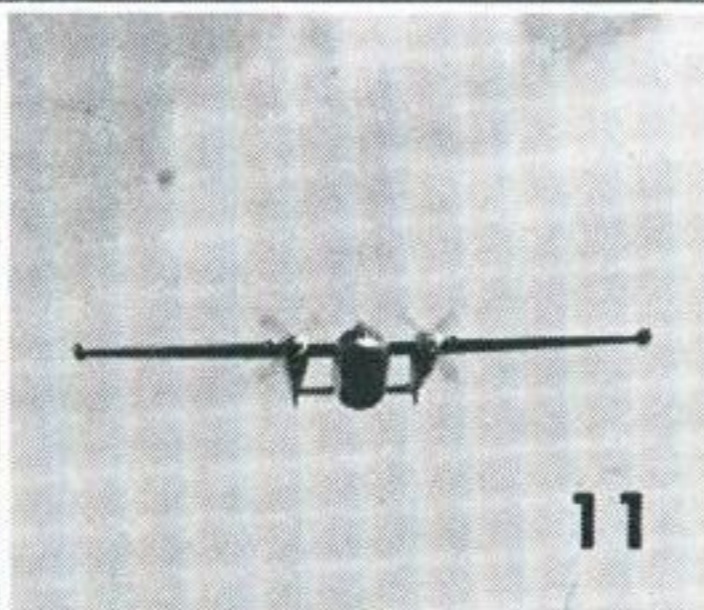
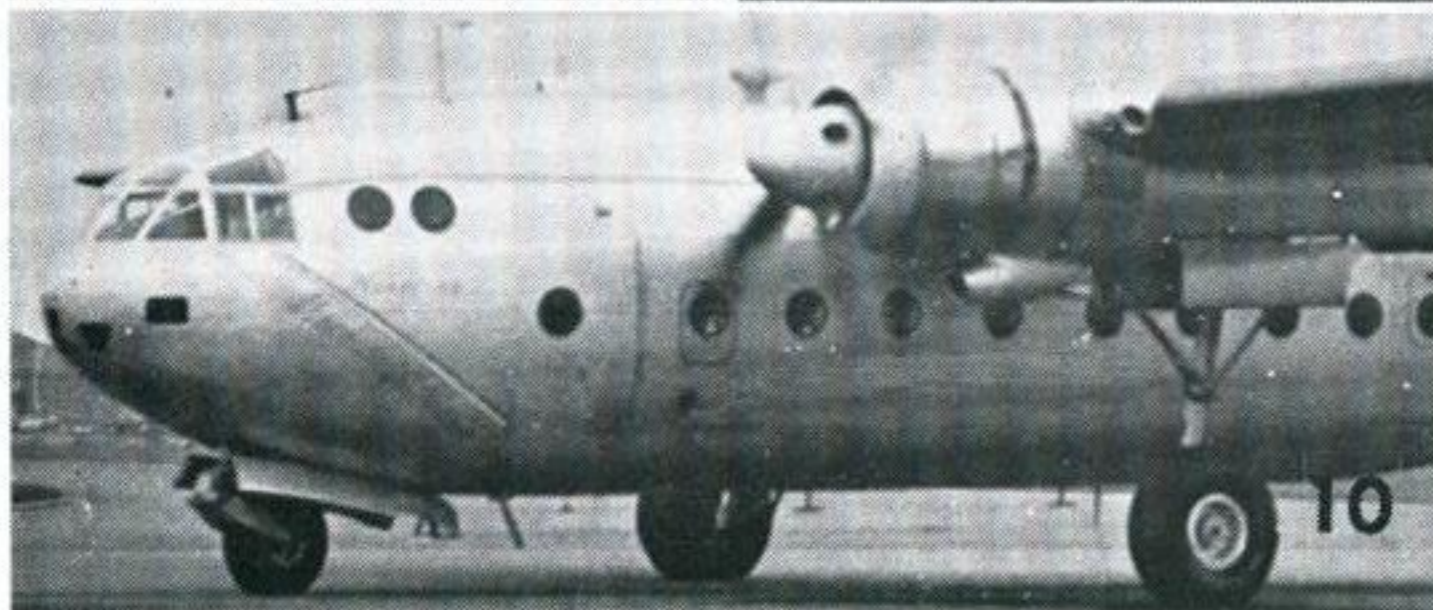
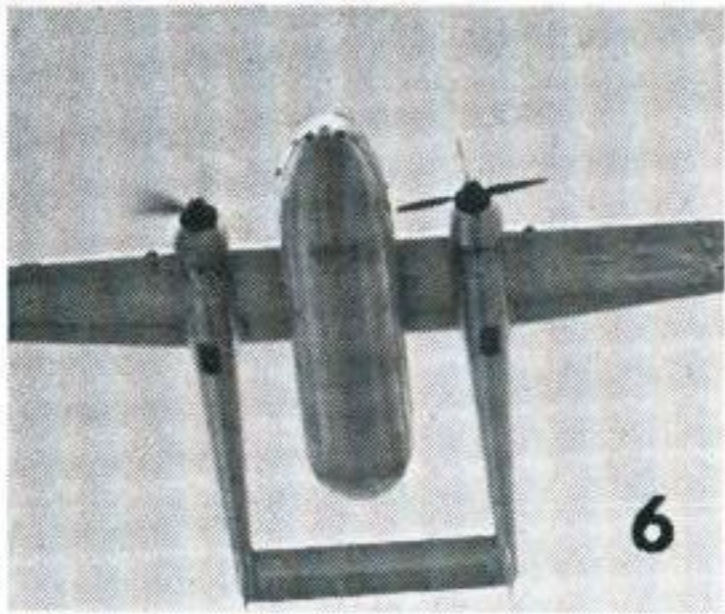
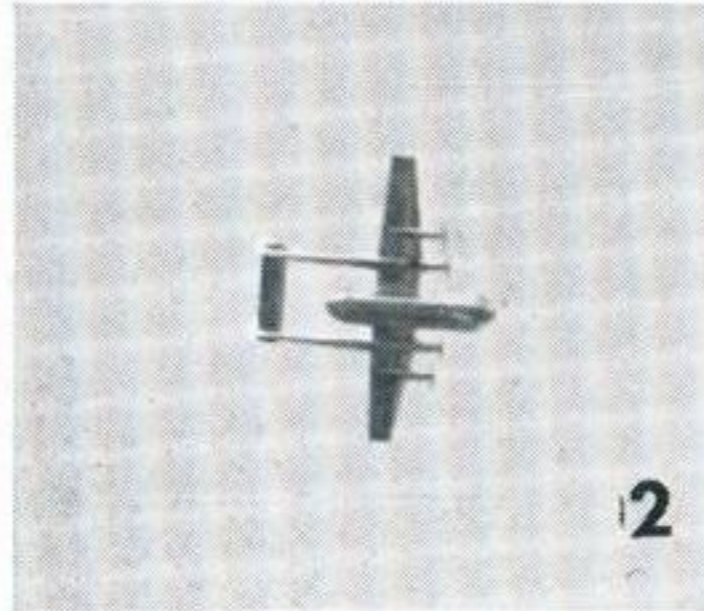
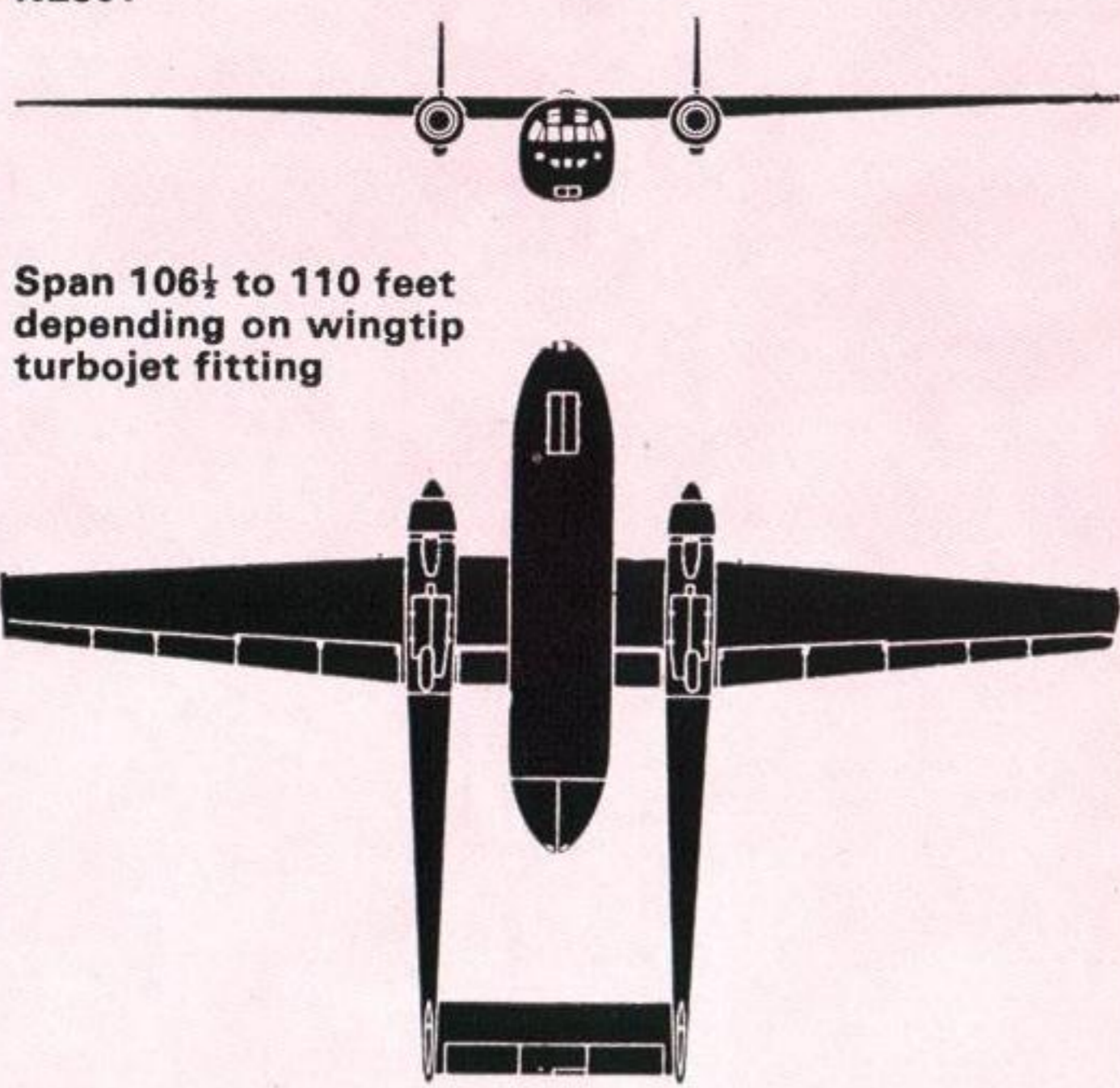
Bristol Hercules. Variations on the basic design thereby occur on the wingtips which is immediately apparent, and to engine cowlings which can differ in detail.

The key views, silhouette and photos show the variations. The model numbers have been given for information and a complete list of Noratlas models can be found on page 17. These are for the benefit of those intimately concerned with the aircraft and are not necessary for those training to identify the Noratlas who should refer overleaf for their instructions.

N2501 A

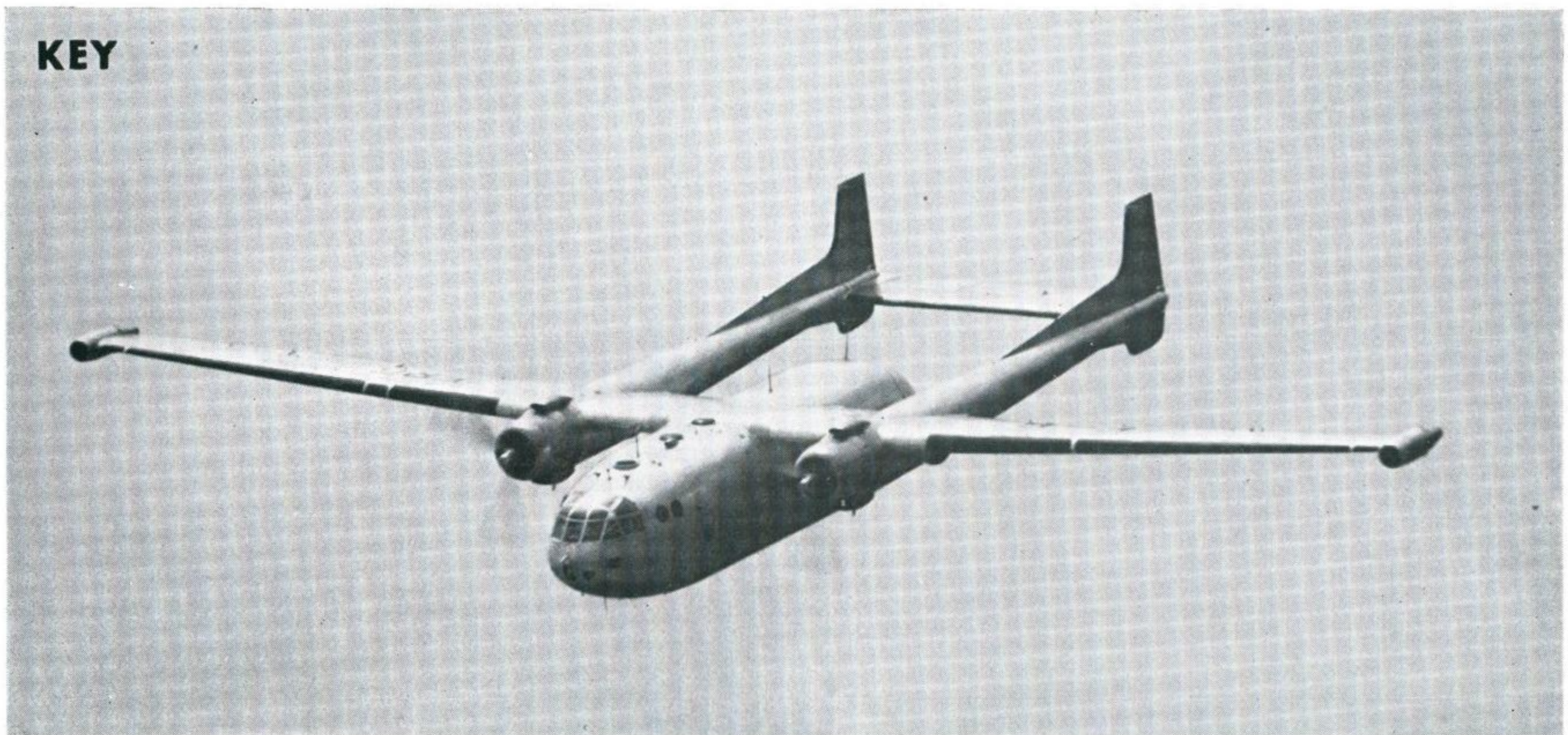


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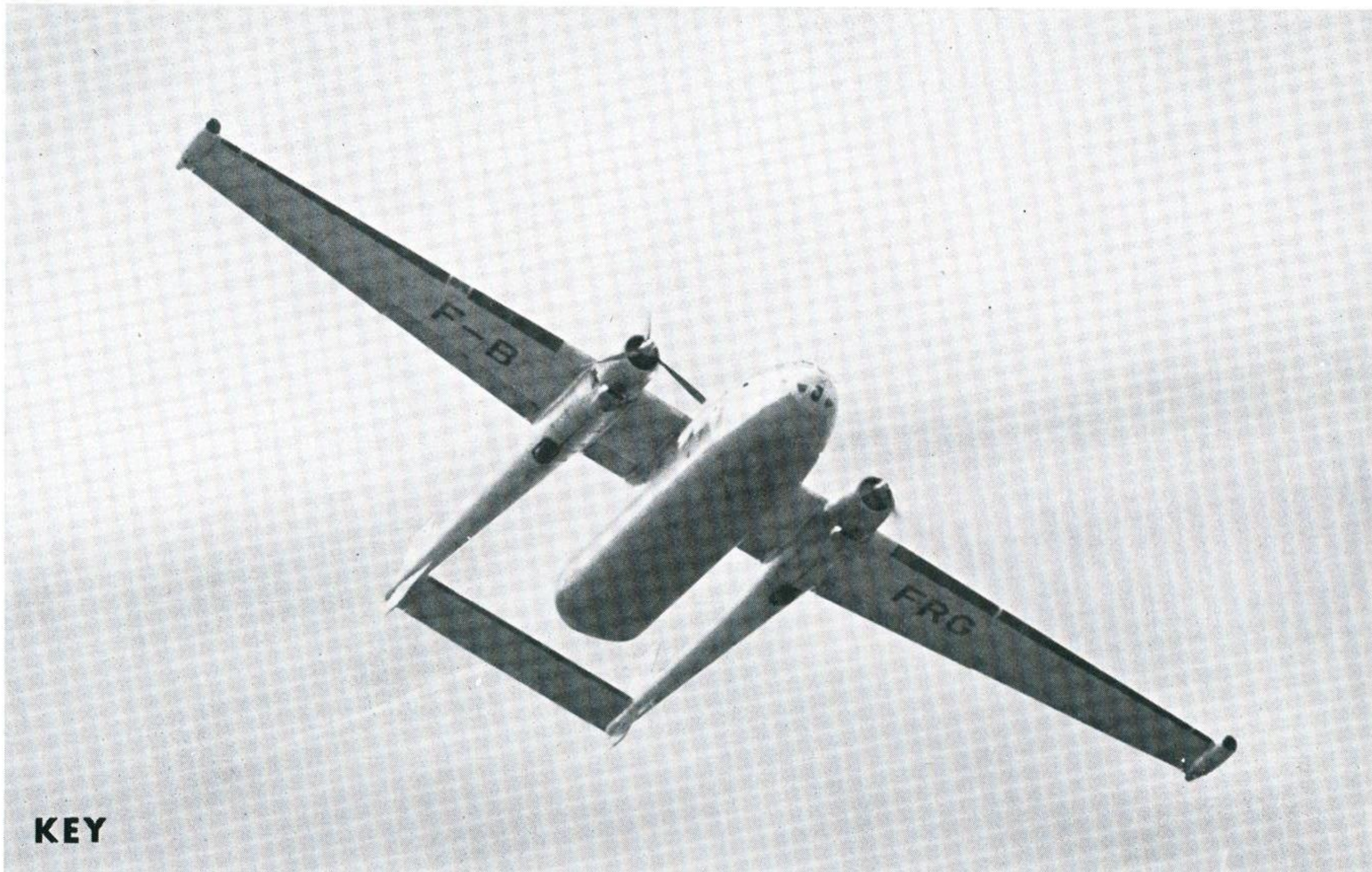


N2508

KEY



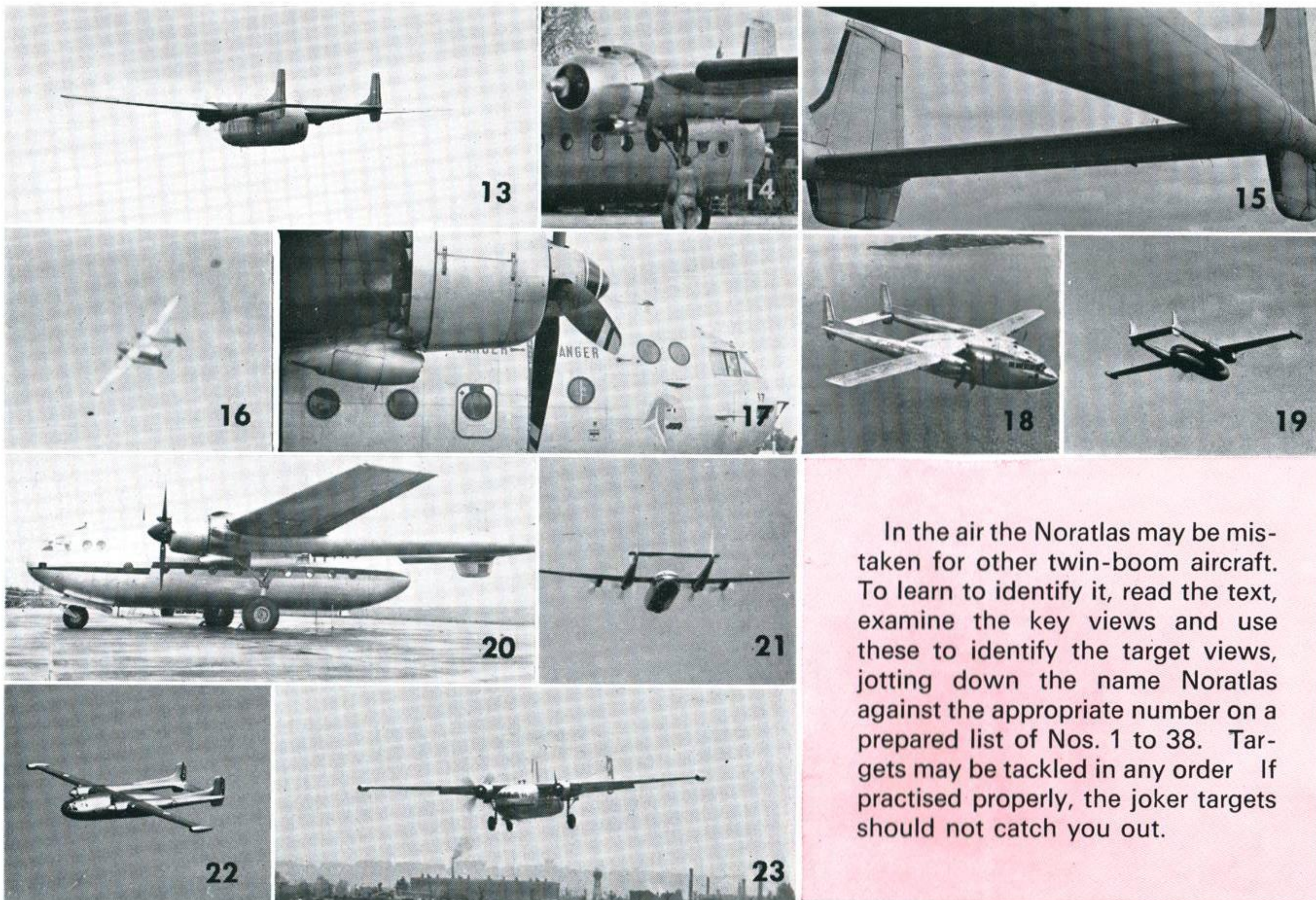
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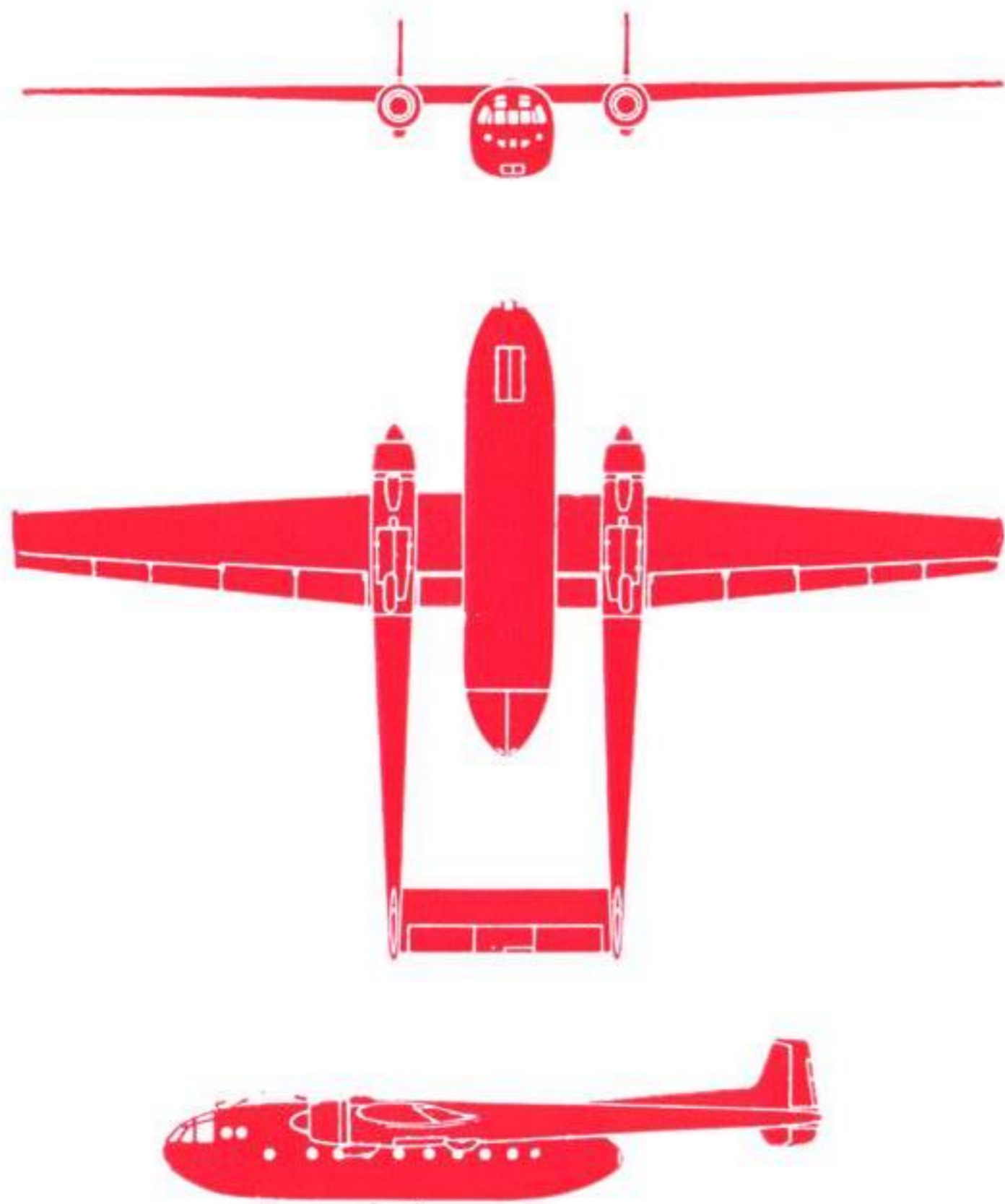
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NORATLAS *continued*

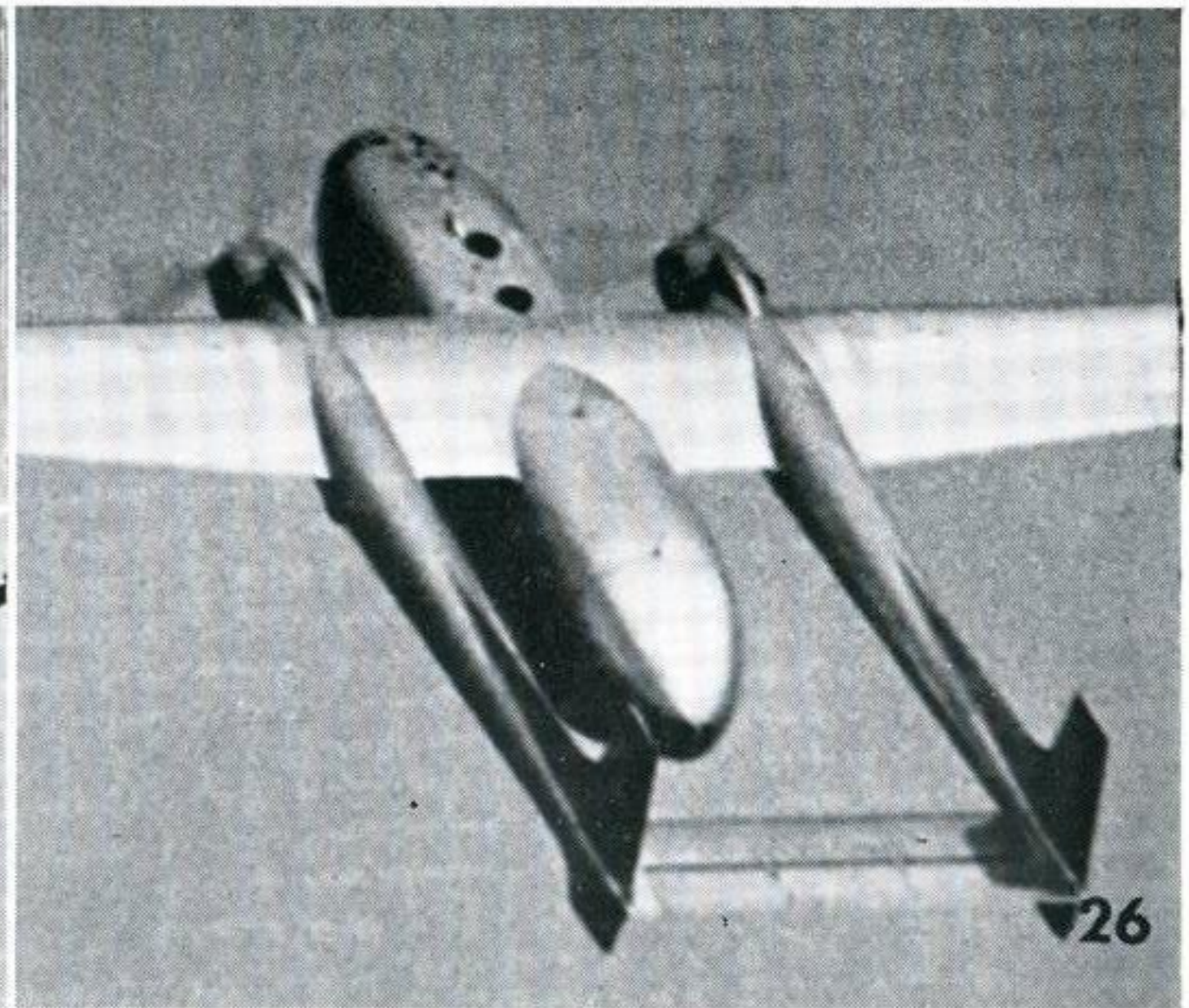
N2508



In the air the Noratlas may be mistaken for other twin-boom aircraft. To learn to identify it, read the text, examine the key views and use these to identify the target views, jotting down the name Noratlas against the appropriate number on a prepared list of Nos. 1 to 38. Targets may be tackled in any order. If practised properly, the joker targets should not catch you out.



24



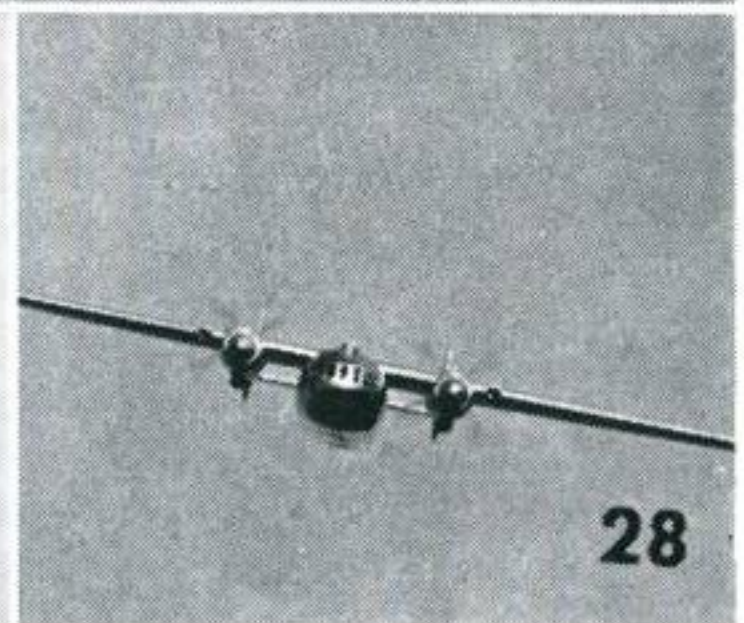
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25



27



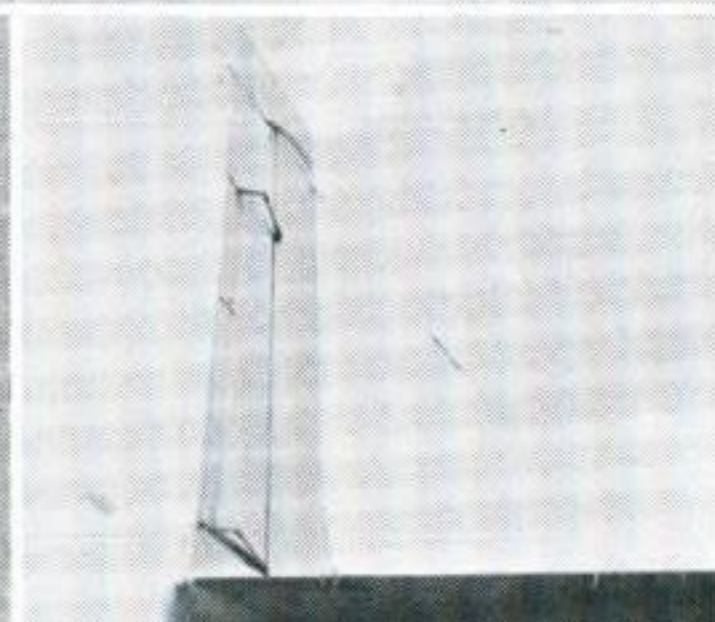
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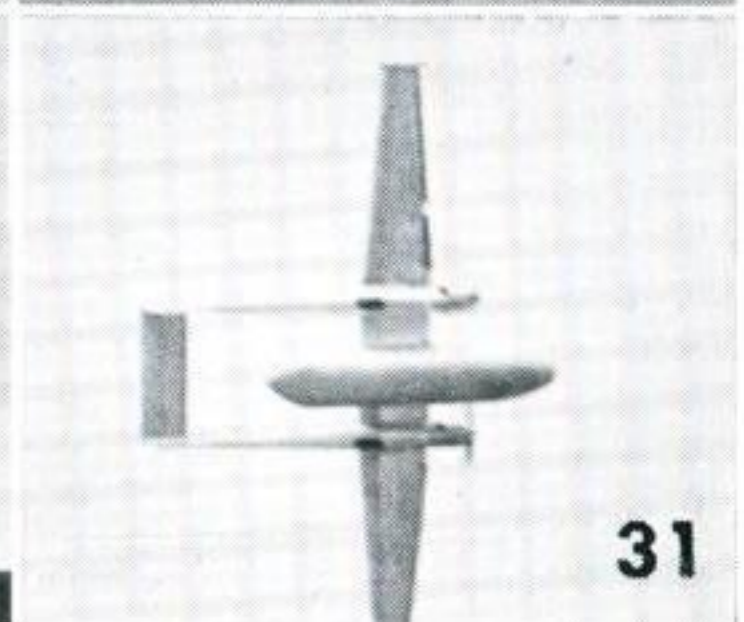
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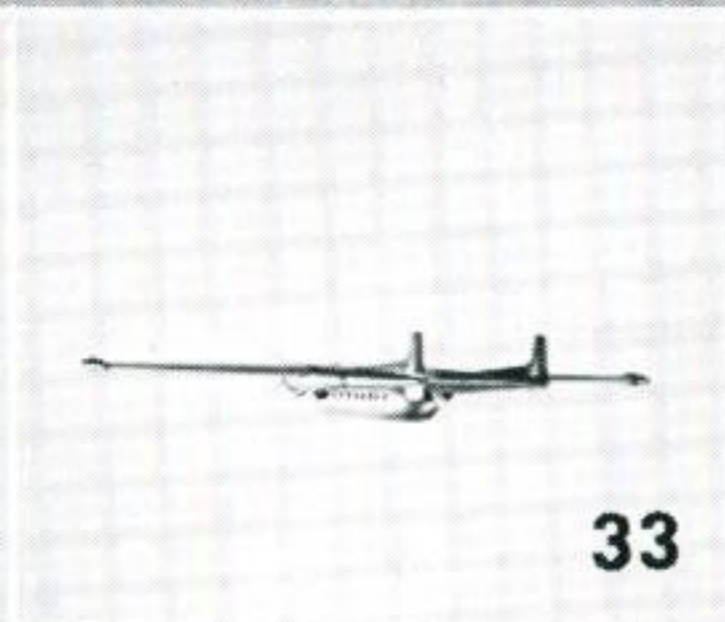
30



31



32



33



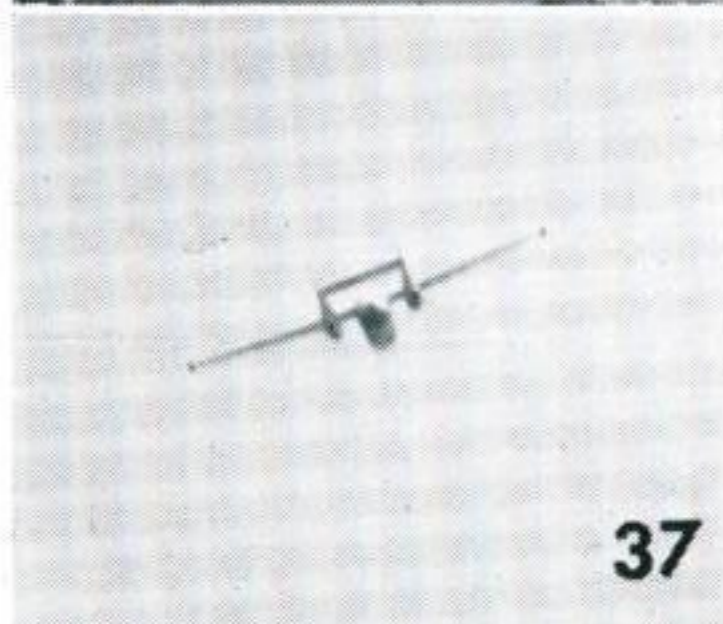
34



35



36



37



38

N2501





CODLING (Yak-40)

Smallest of the tri-jet airliners the Yak-40 (NATO name Codling) first flew in 1966 and has been in production since 1967. Used by Aeroflot, the Soviet State Airline, it has been replacing the earlier Li-2 Cabs—the Russian built Dakota.

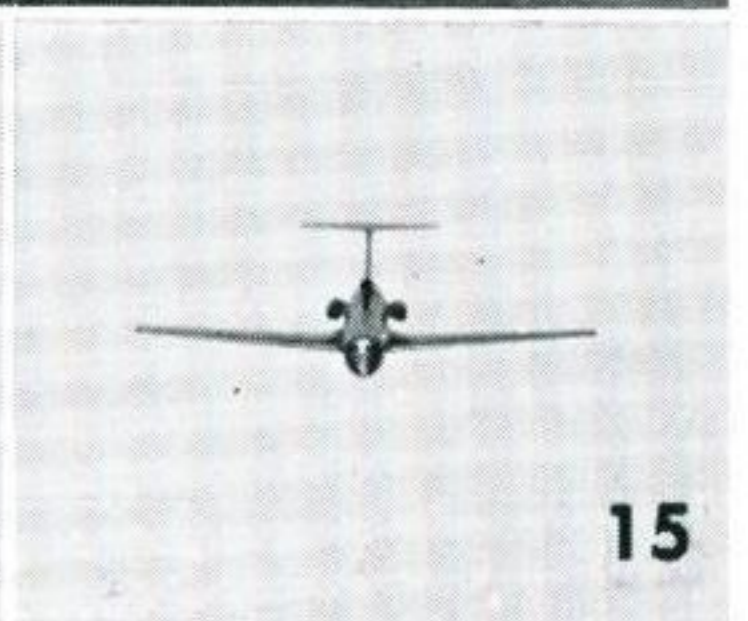
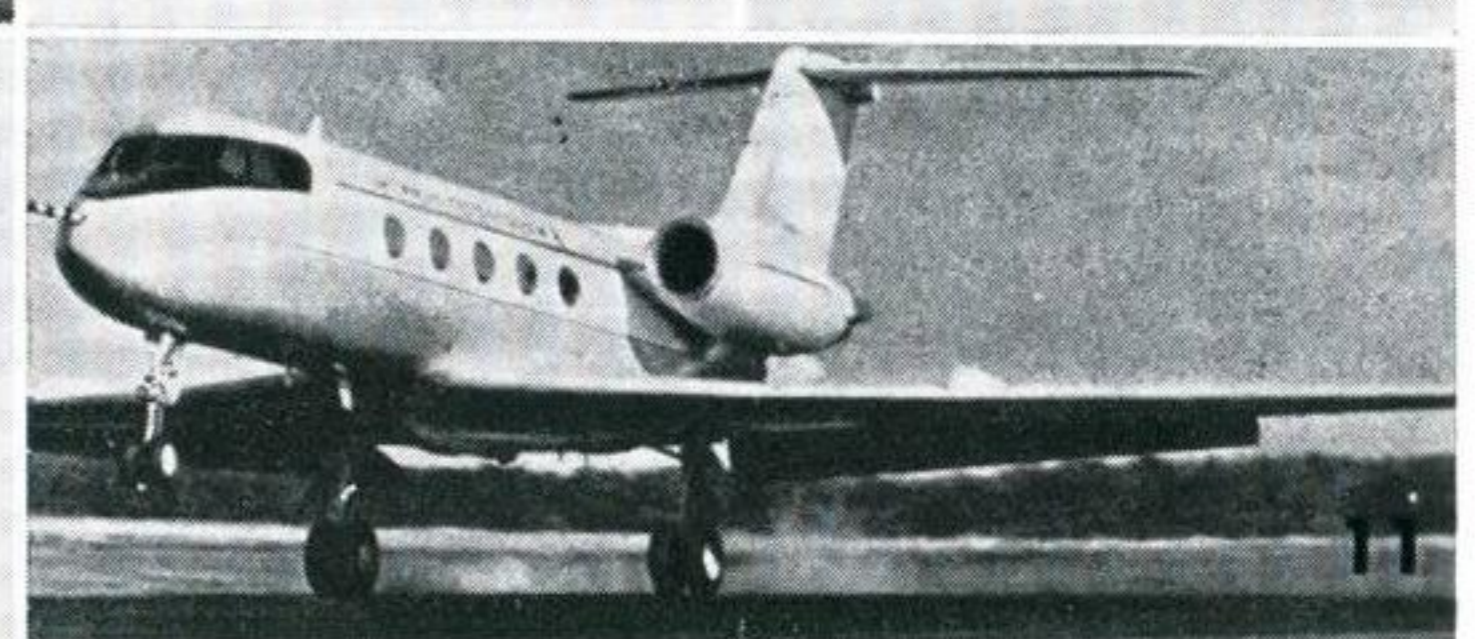
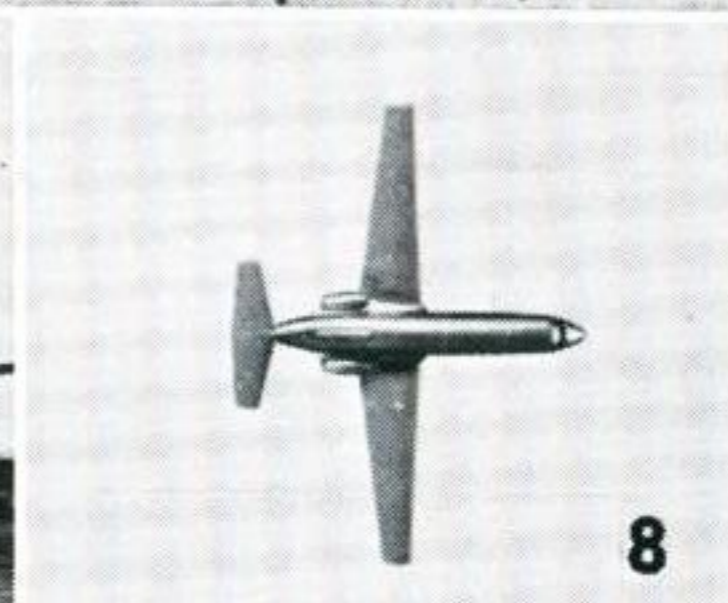
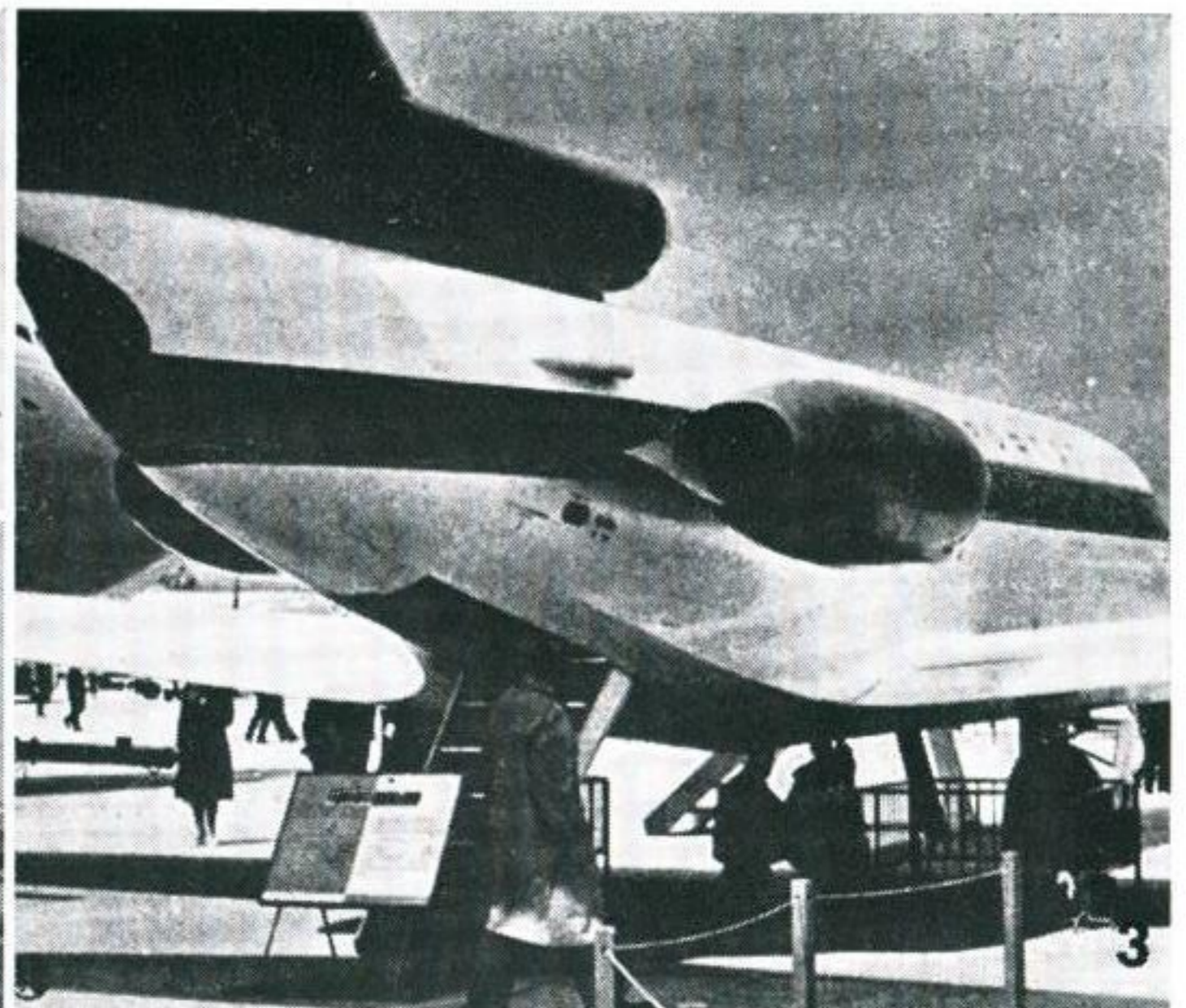
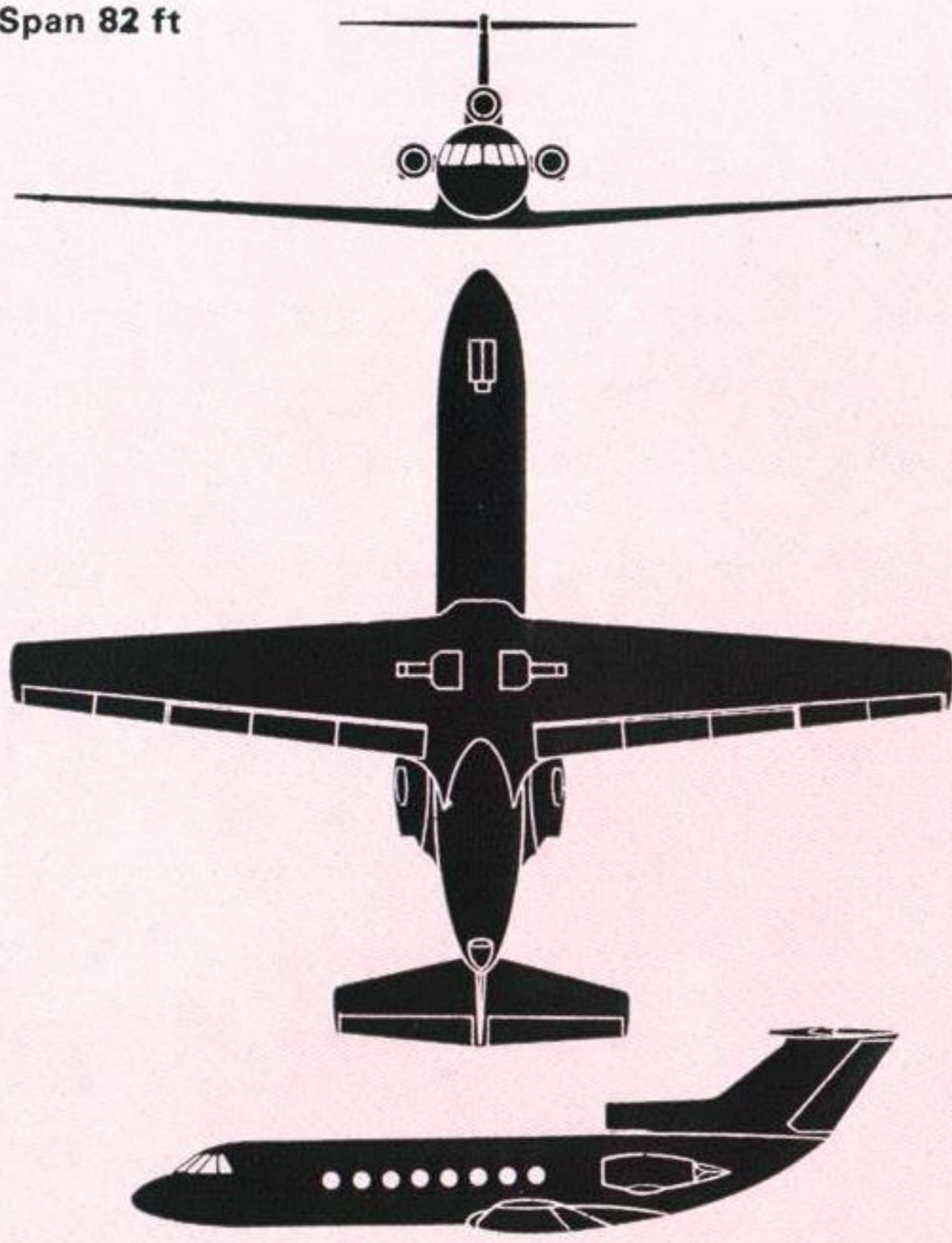
Designed to operate from grass airfields, this short haul transport can take up to 31 passengers. Its maximum speed is around 450 mph and it can cruise

at about 350 mph.

Since size is not always apparent at a distance and in the air, Codling could be confused with larger aircraft of similar basic configuration, e.g. Trident and Boeing 727, or from certain angles with twin rear jet aircraft. To familiarise yourself with the Codling's particular characteristics, study this lesson in conjunction with instructions overleaf.



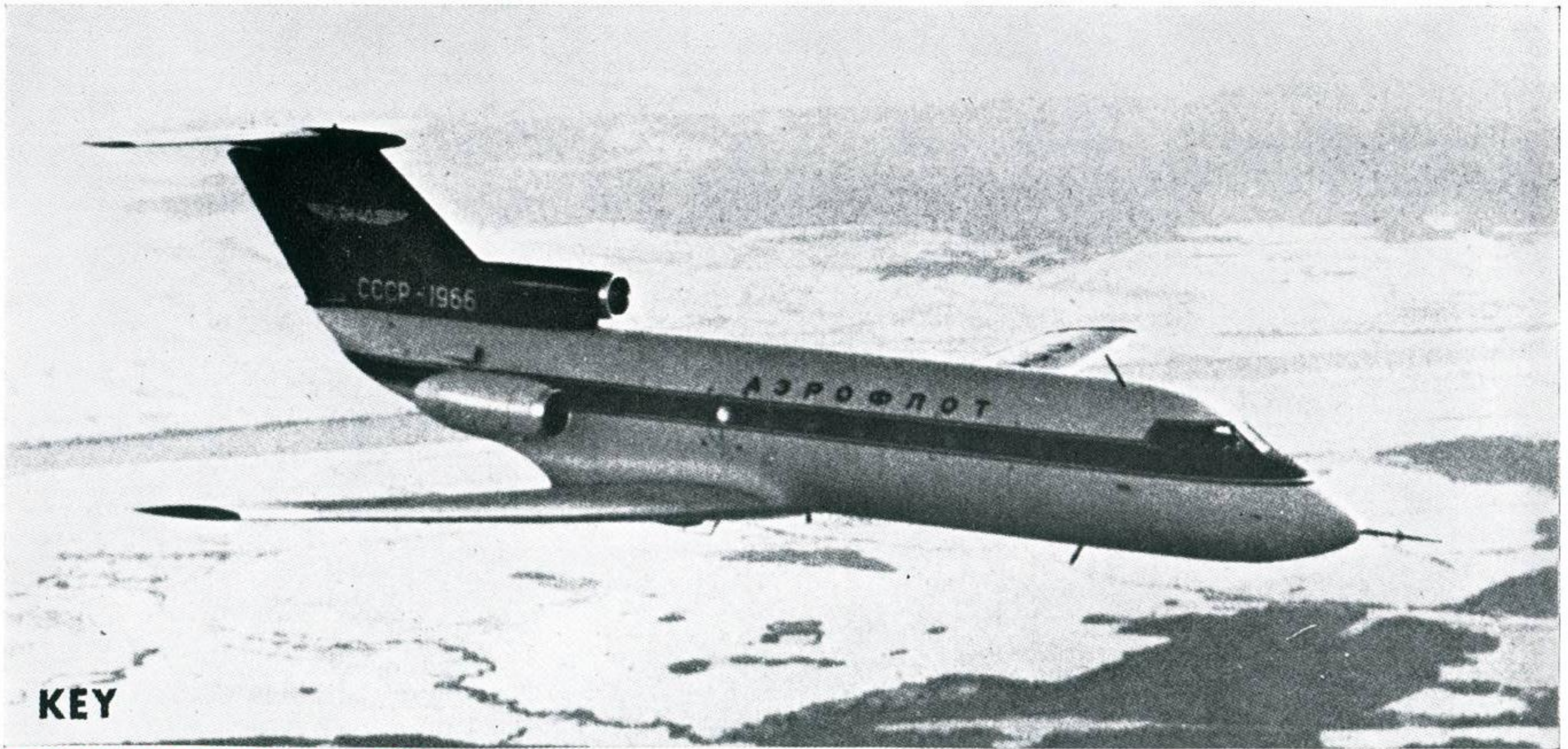
Span 82 ft



KEY

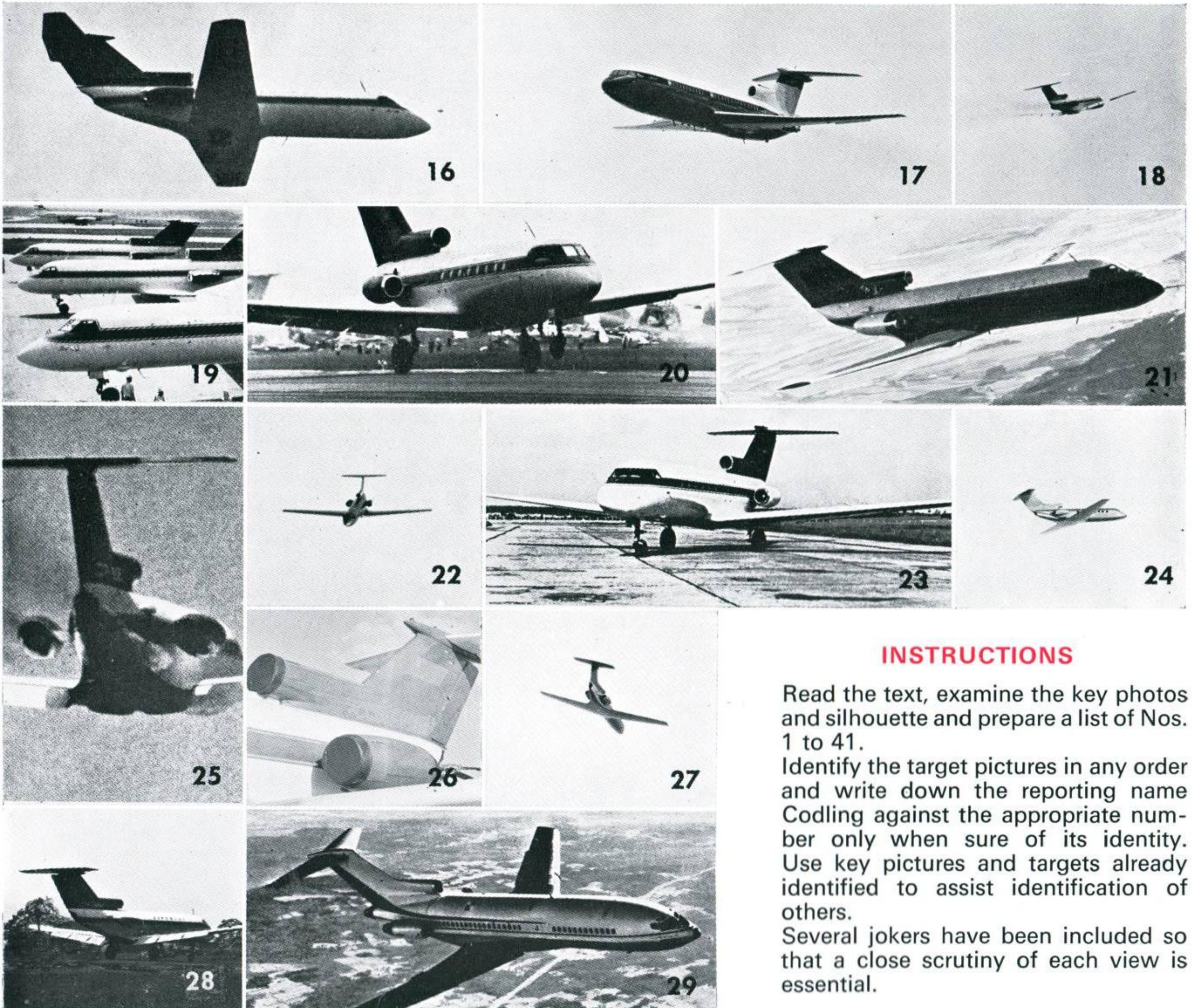


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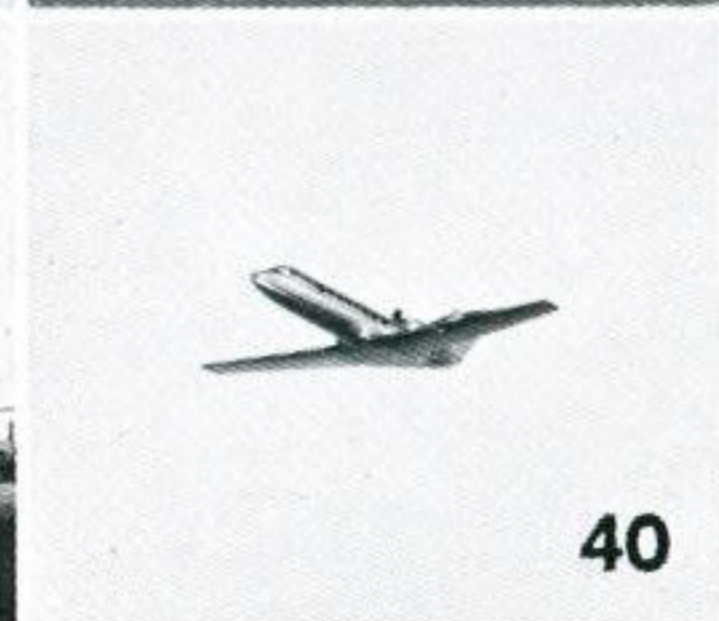
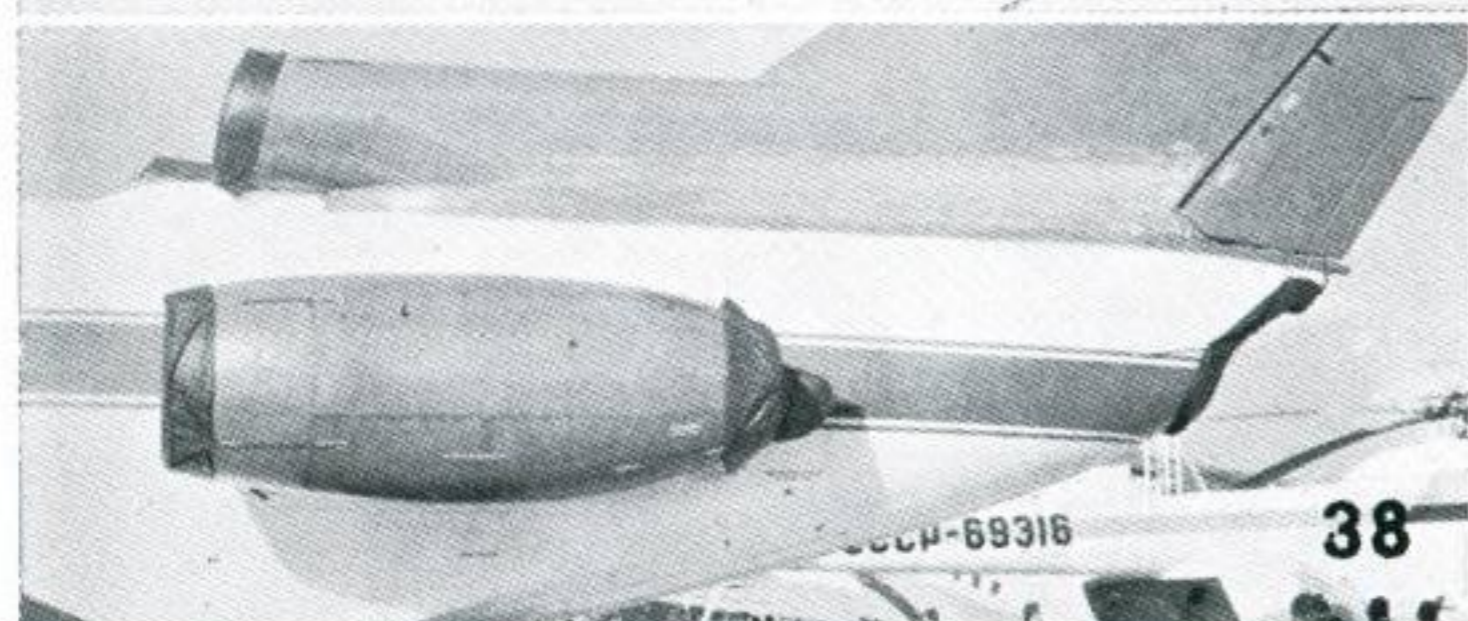
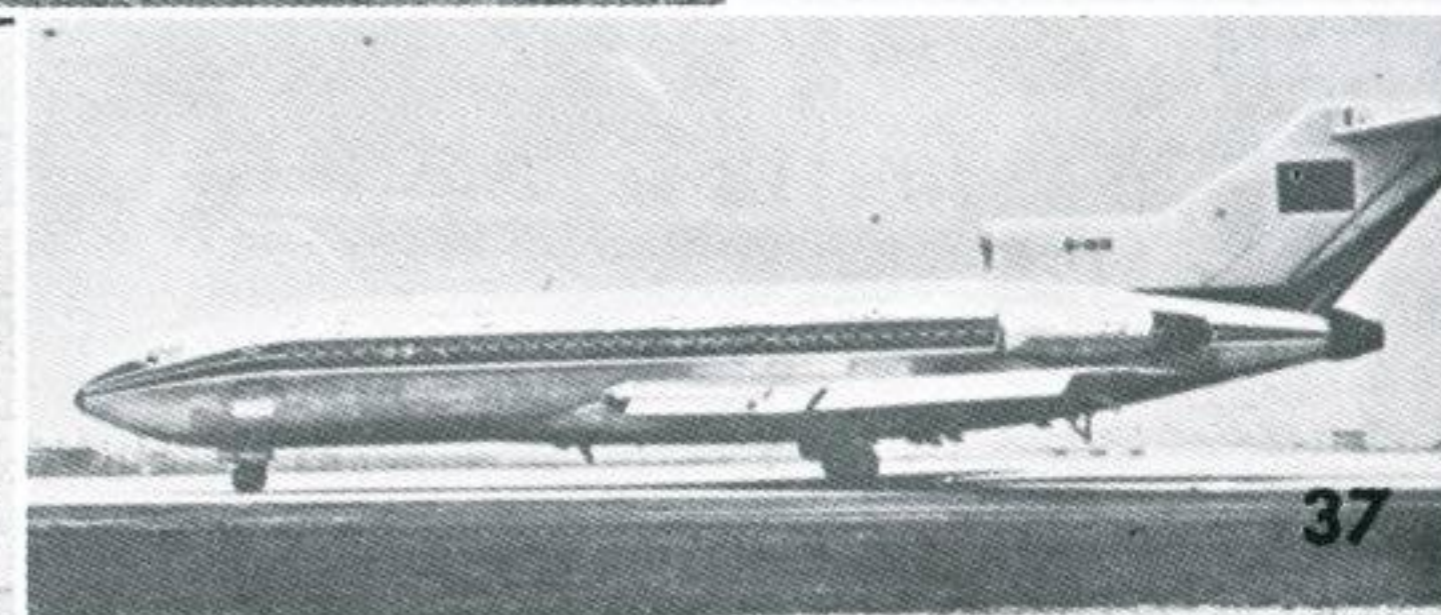
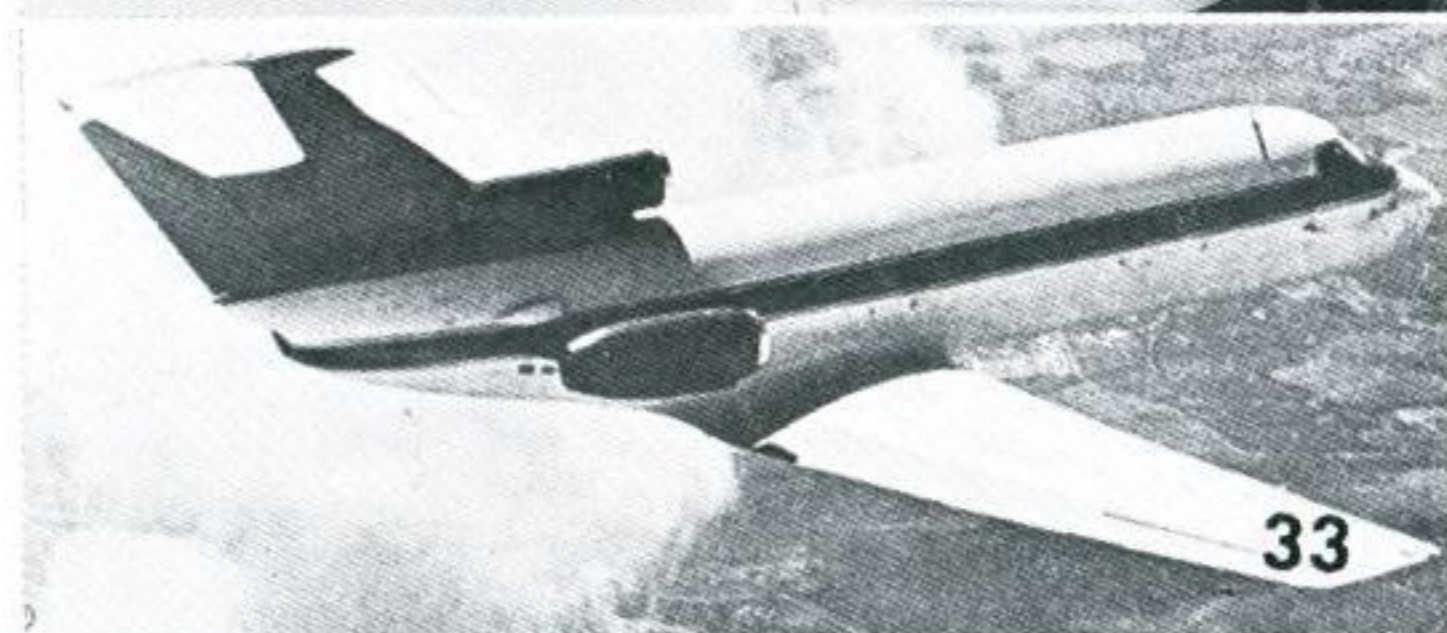
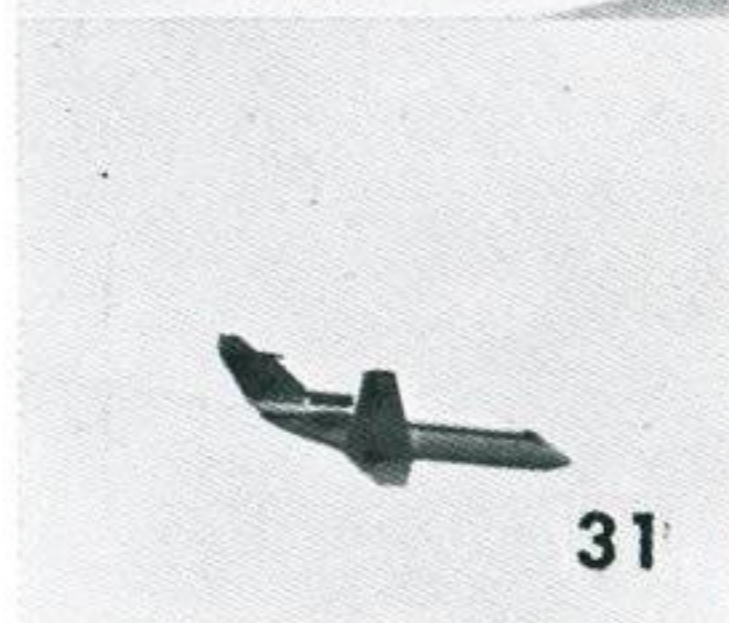
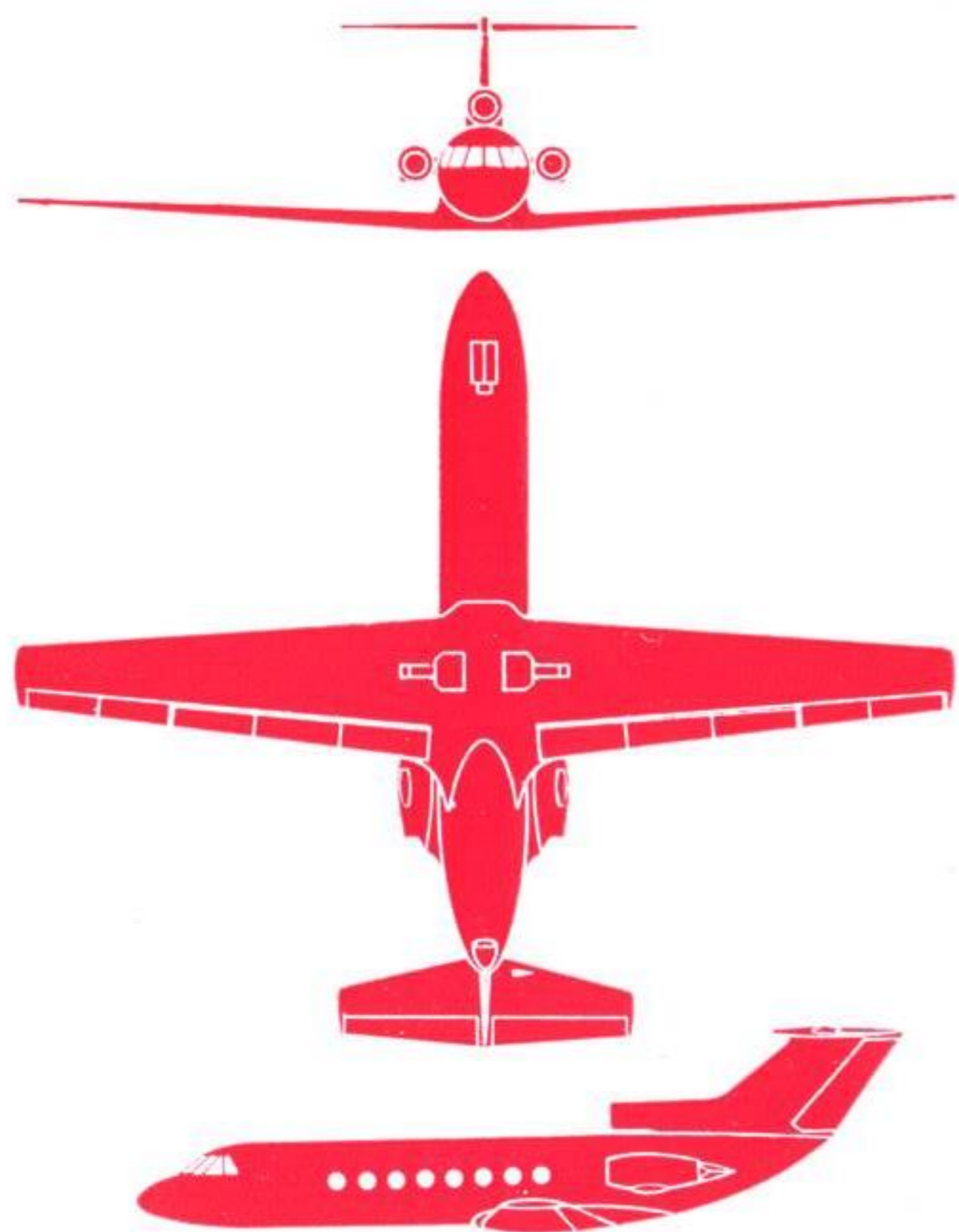
KEY

CODLING (Yak-40) *continued*



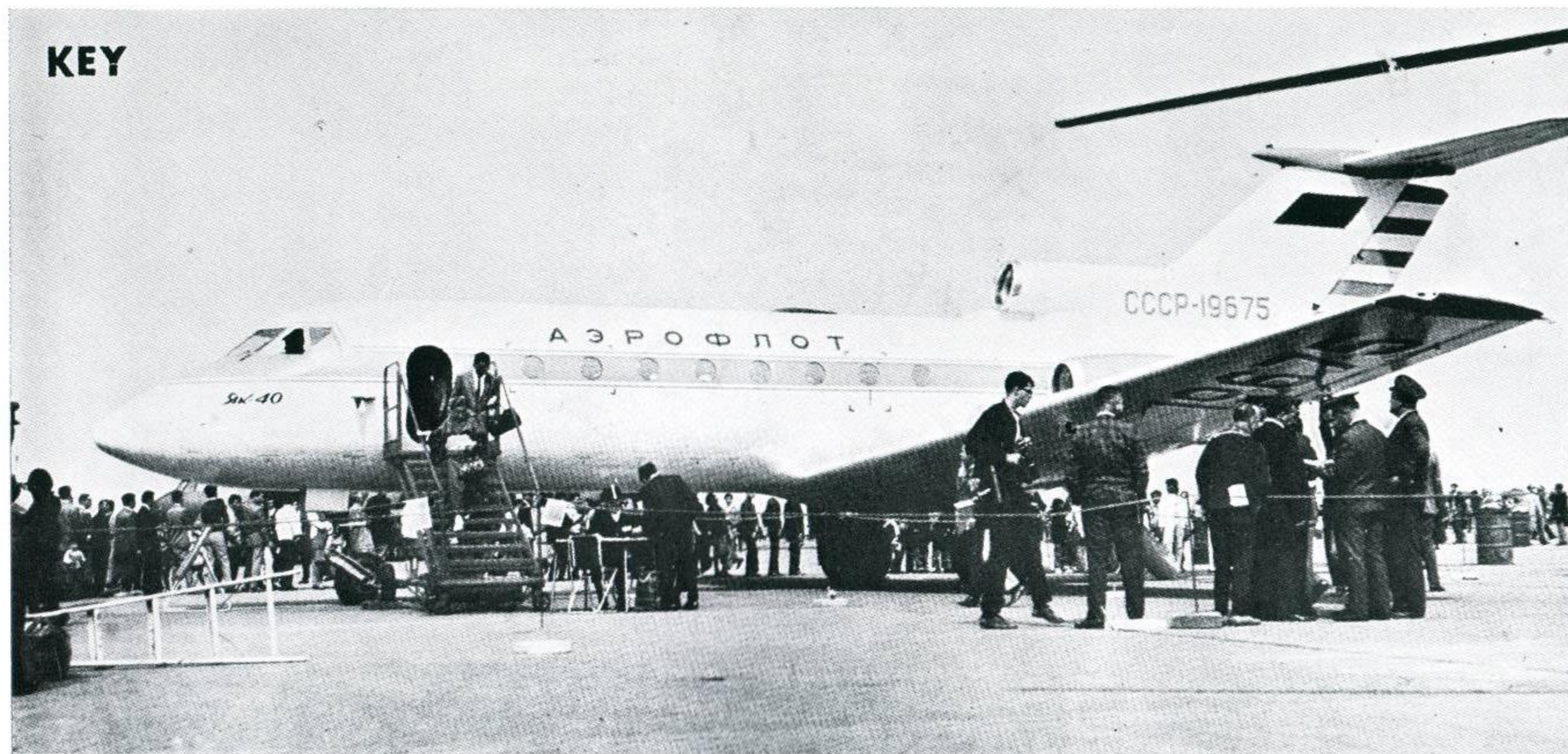
INSTRUCTIONS

Read the text, examine the key photos and silhouette and prepare a list of Nos. 1 to 41. Identify the target pictures in any order and write down the reporting name Codling against the appropriate number only when sure of its identity. Use key pictures and targets already identified to assist identification of others. Several jokers have been included so that a close scrutiny of each view is essential.



Solutions on the cover

KEY



AIR ARMS OF THE WORLD No 1

One of our partners in 2nd Allied Tactical Air Force, the RNethAF has a first line of Starfighter squadrons, two on interceptor and two on fighter bombing duties with F-104Gs and one tactical reconnaissance squadron with RF-104Gs (basic F-104G with internally mounted cameras). There are also two squadrons of F-84F Thunderstreak fighter bombers which are to be replaced by NF-5As being built by Canadair. Similarly the Lockheed RT-33 trainers currently used will be replaced by NF-5B trainers (NF-5 is the designation for the Canadian-built Northrop F-5s for the Netherlands). On second line duties, a few Hunters are still in use.

Nine Troopships and three Friendships constitute the transport force. The Troopships have large cargo and parachuting doors on each side and since indistinguishable at a distance from the basic type, Friendship is the acceptable reporting name. Three army liaison squadrons fly Beavers and Piper Super Cubs, and a force of some 75 Alouette III helicopters.

N.B. Some photographs of aerobatic shots have been turned to give the best presentation for identification purposes.

The Royal Netherlands Air Force

Captions to these numbered pictures are given on the back cover to facilitate the use of this feature as a test. Aircraft of the Royal Netherlands Naval Air Service will be the subject of a separate and later feature.



2



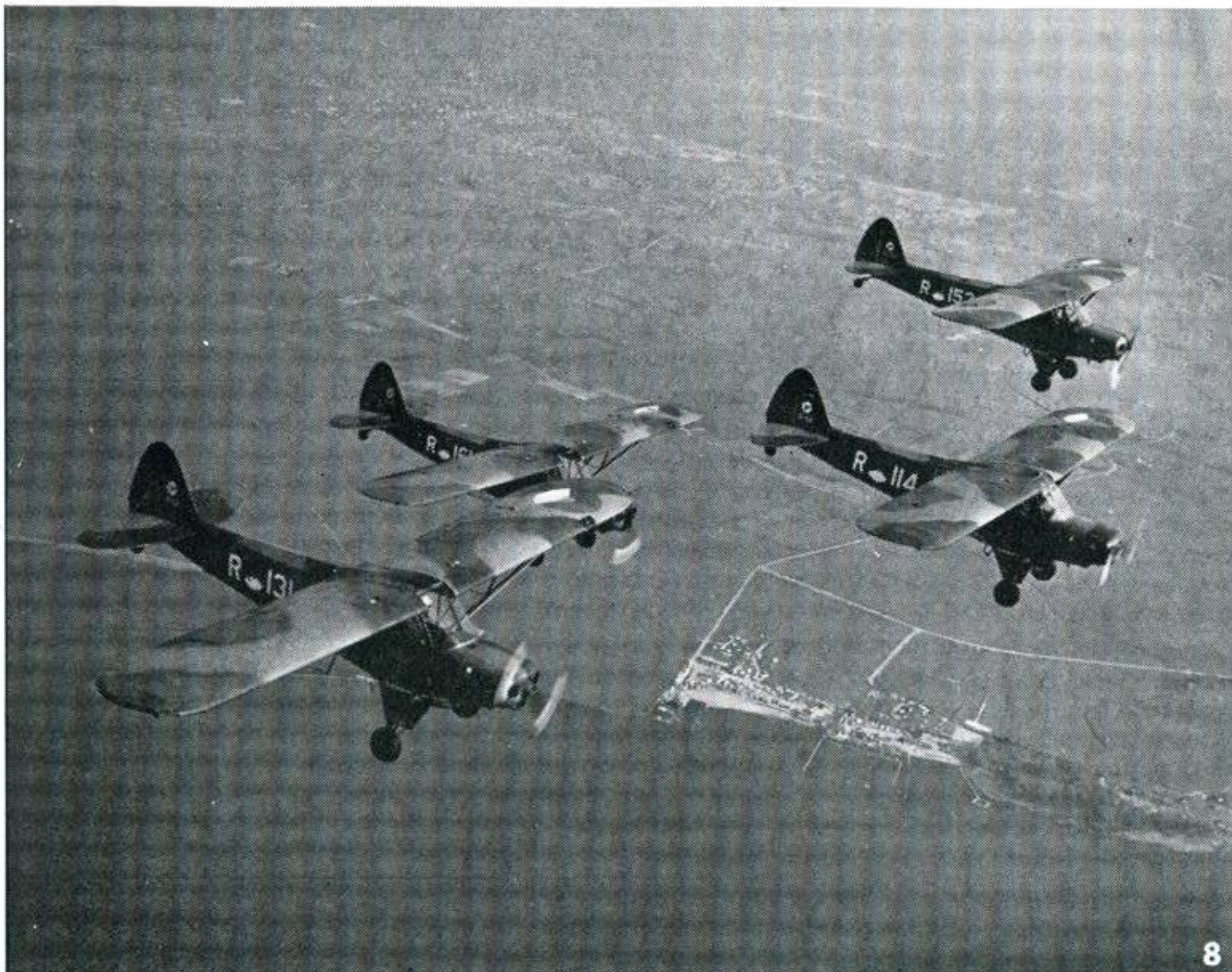
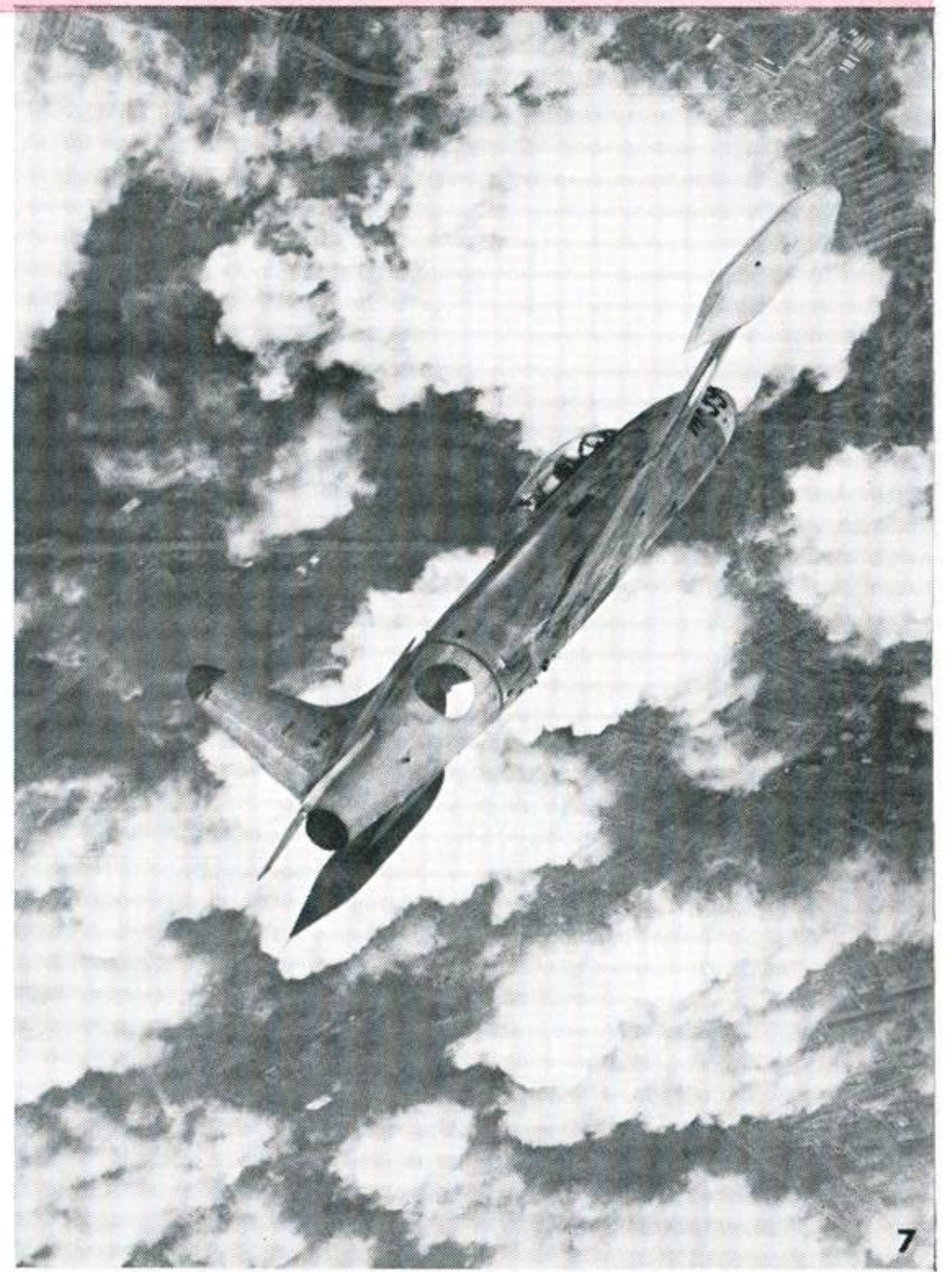
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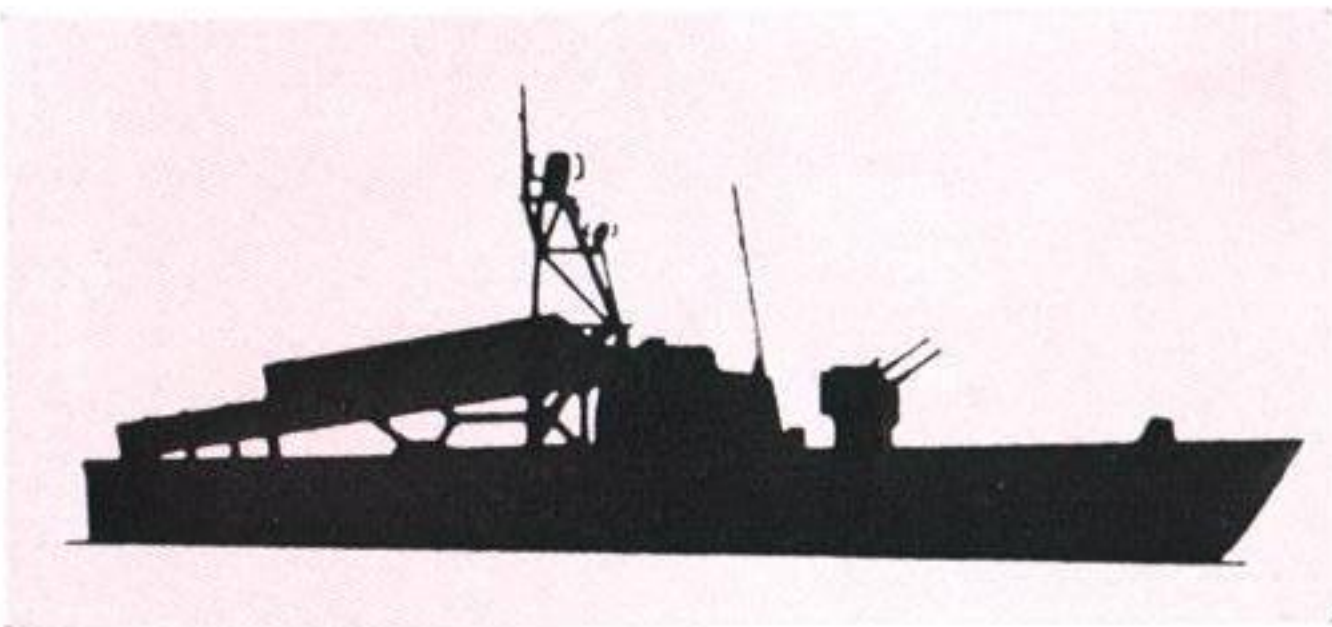
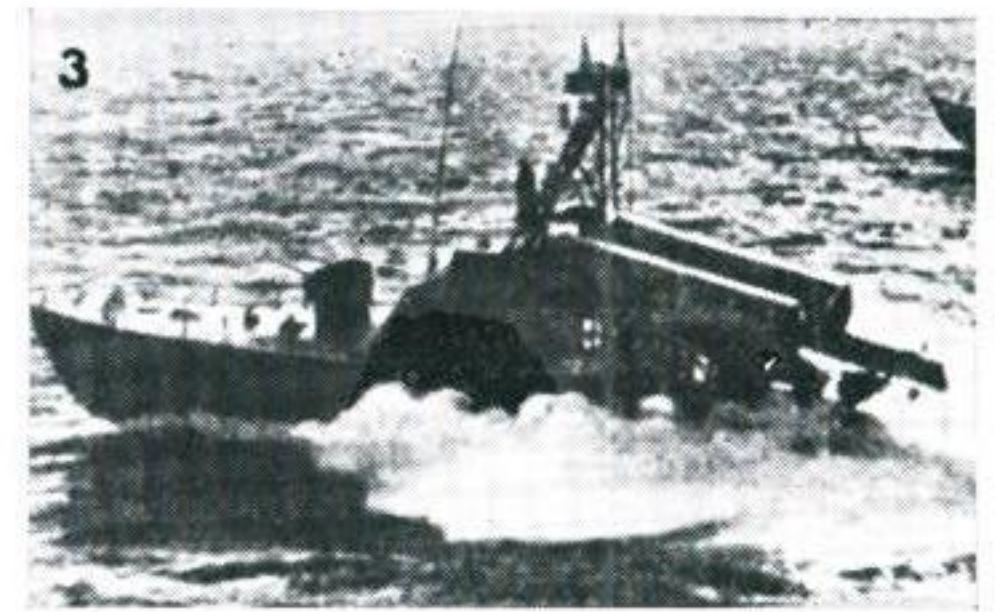
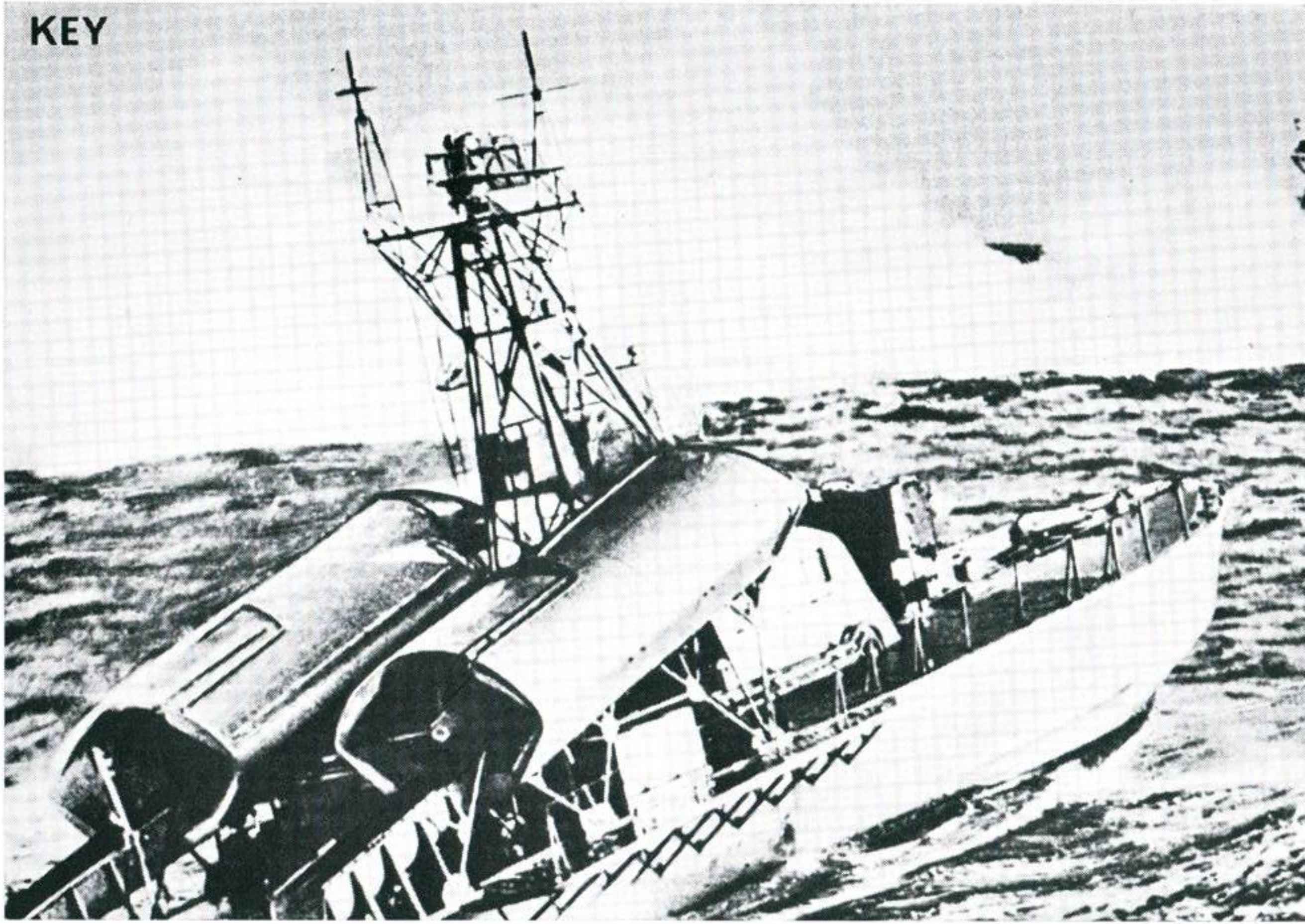
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KEY



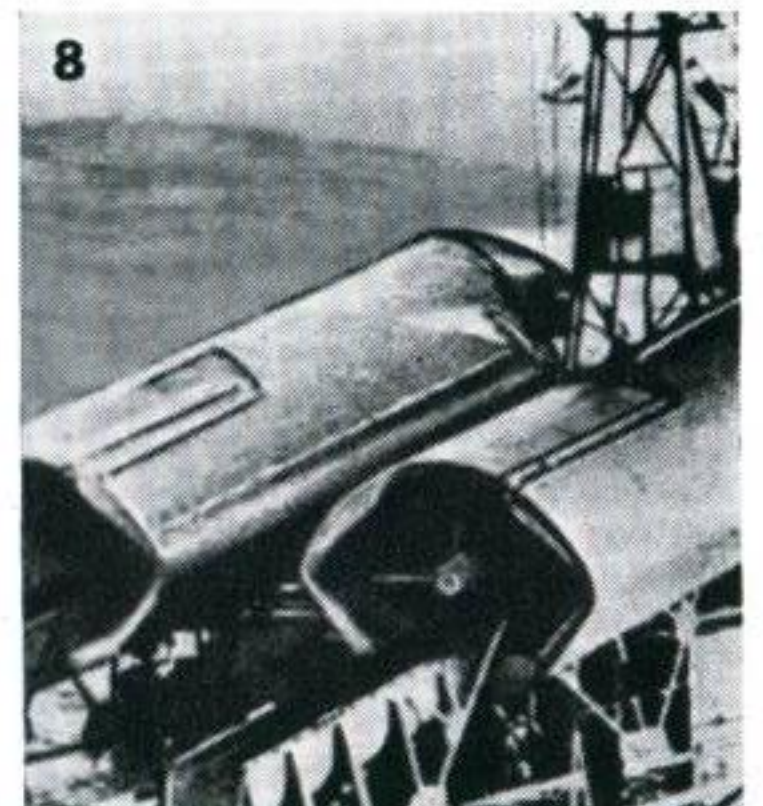
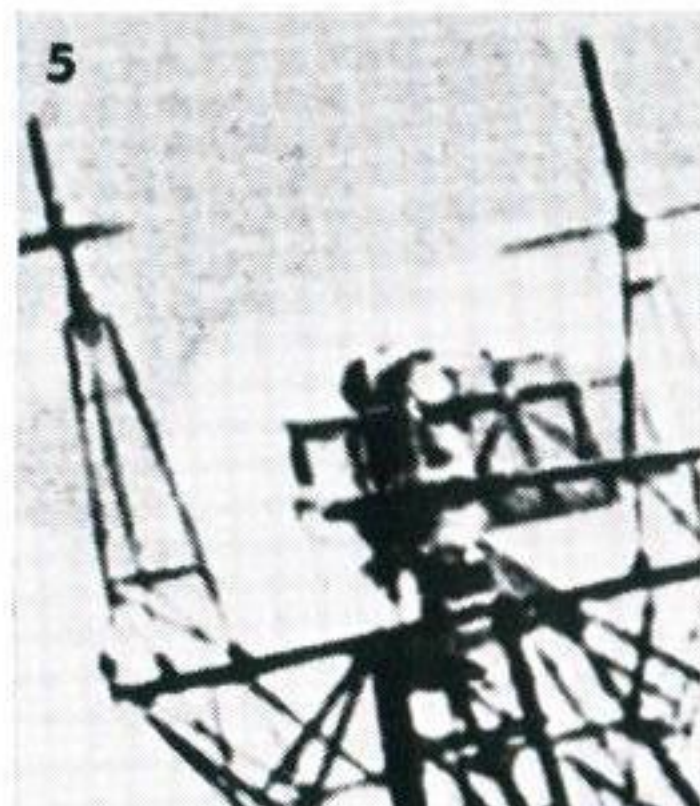
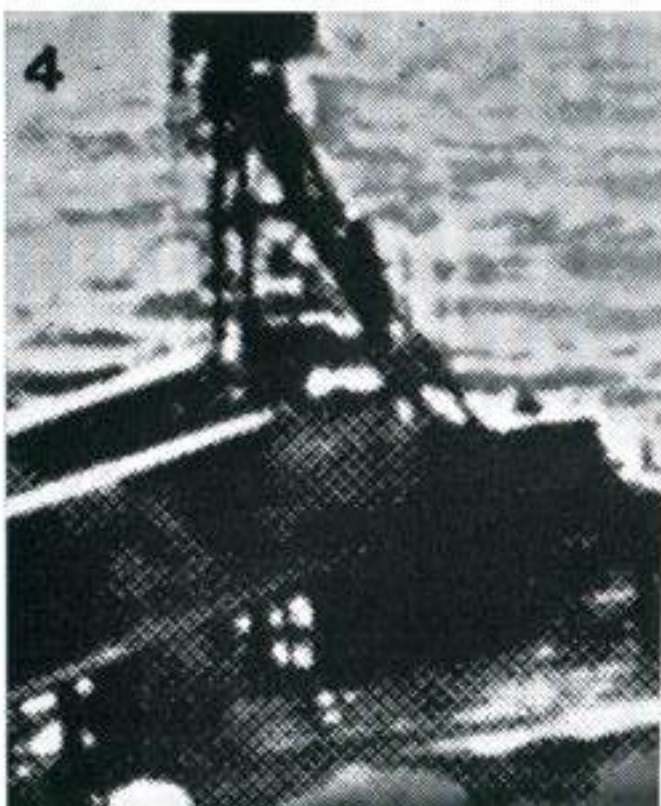
KOMAR CLASS MISSILE PATROL BOATS — USSR

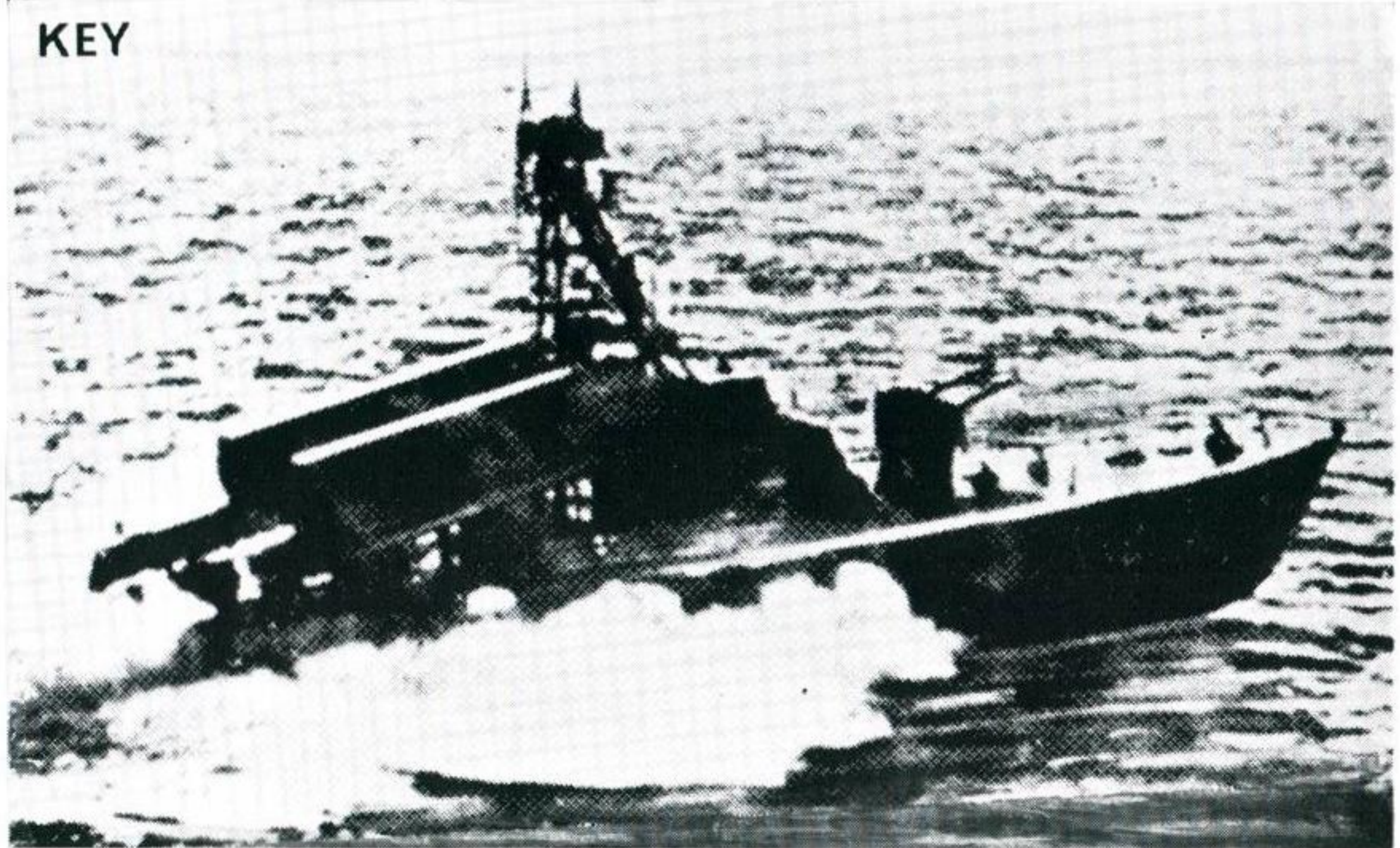
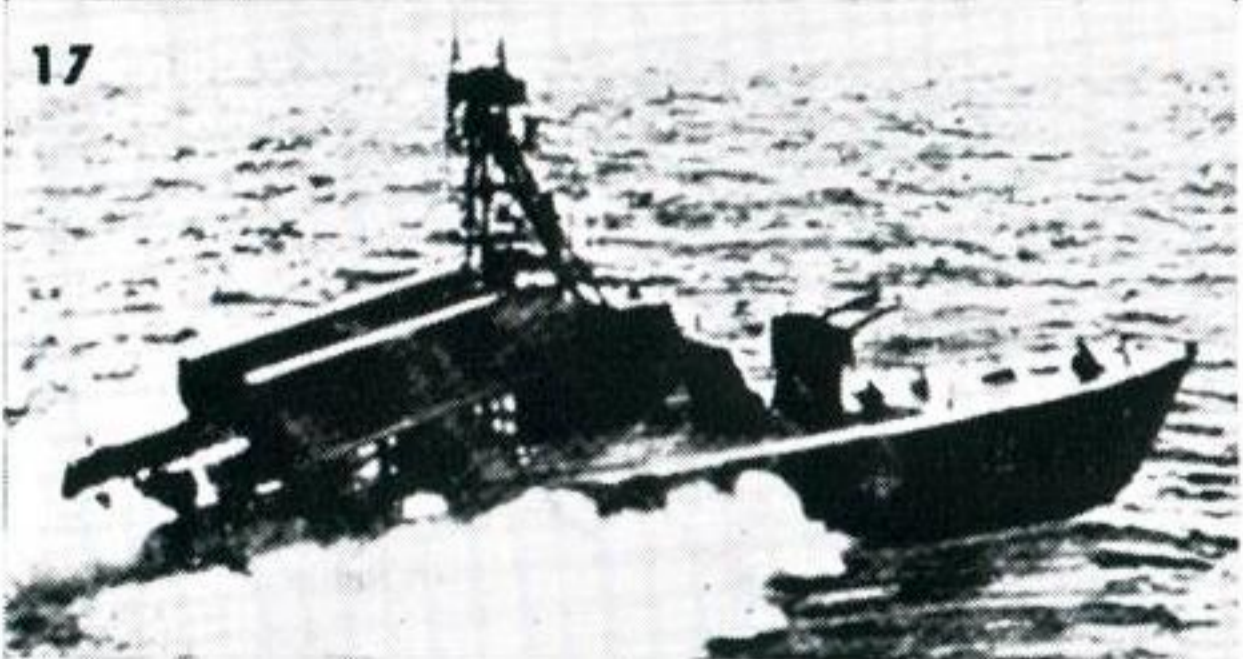
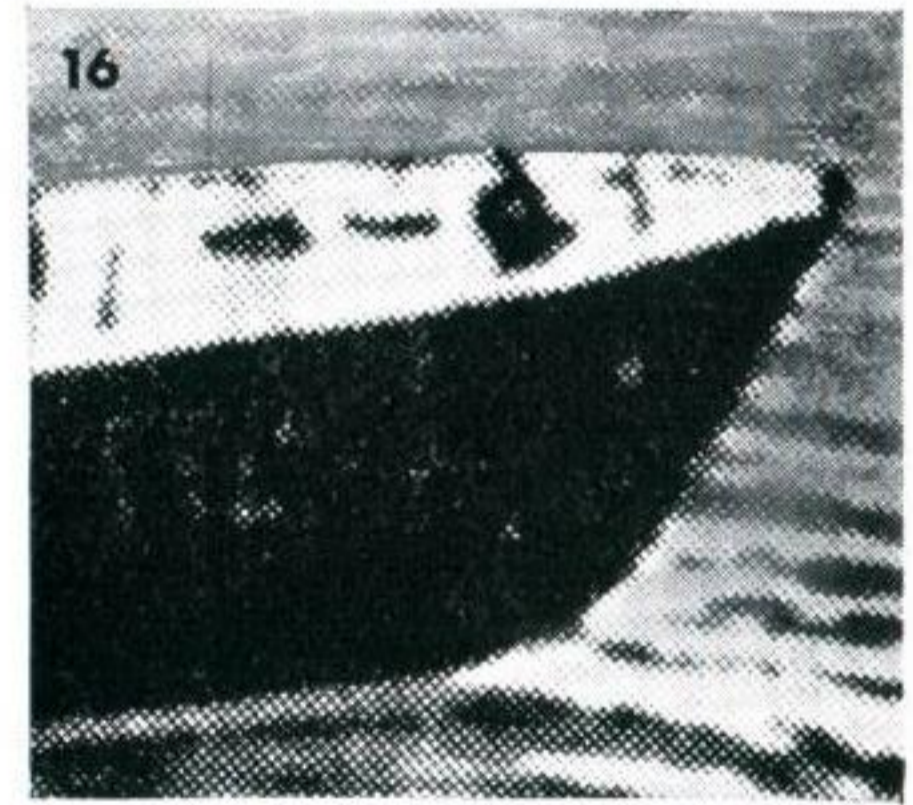
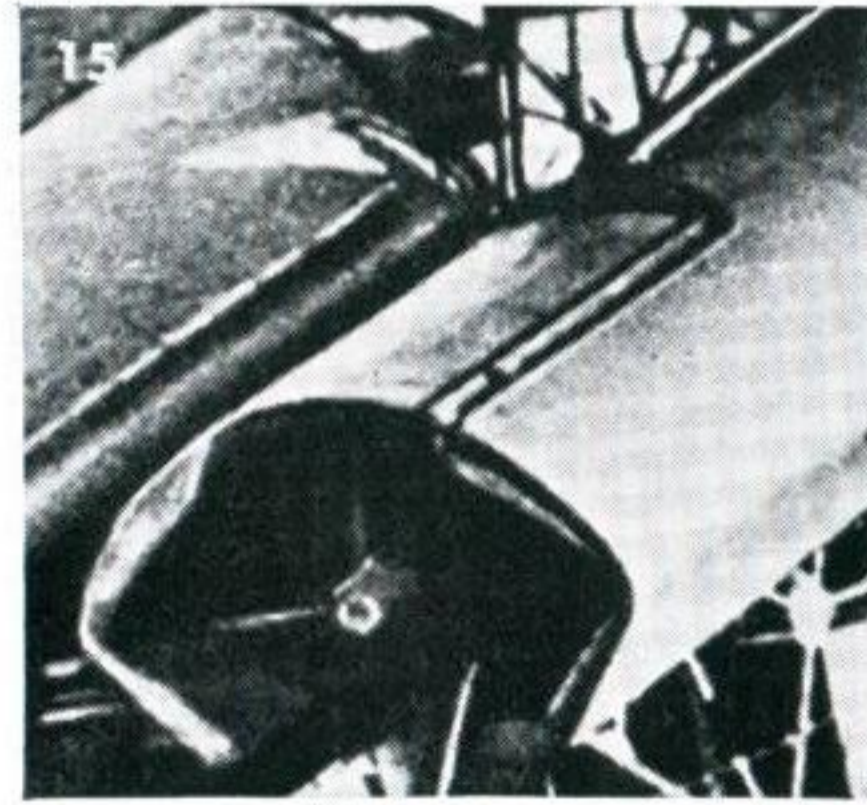
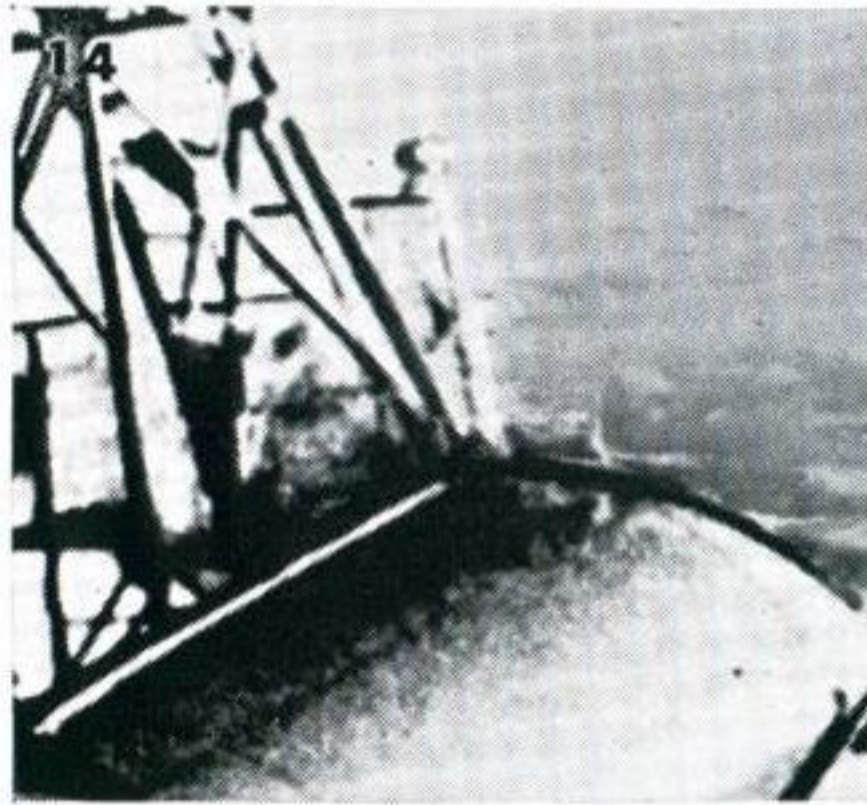
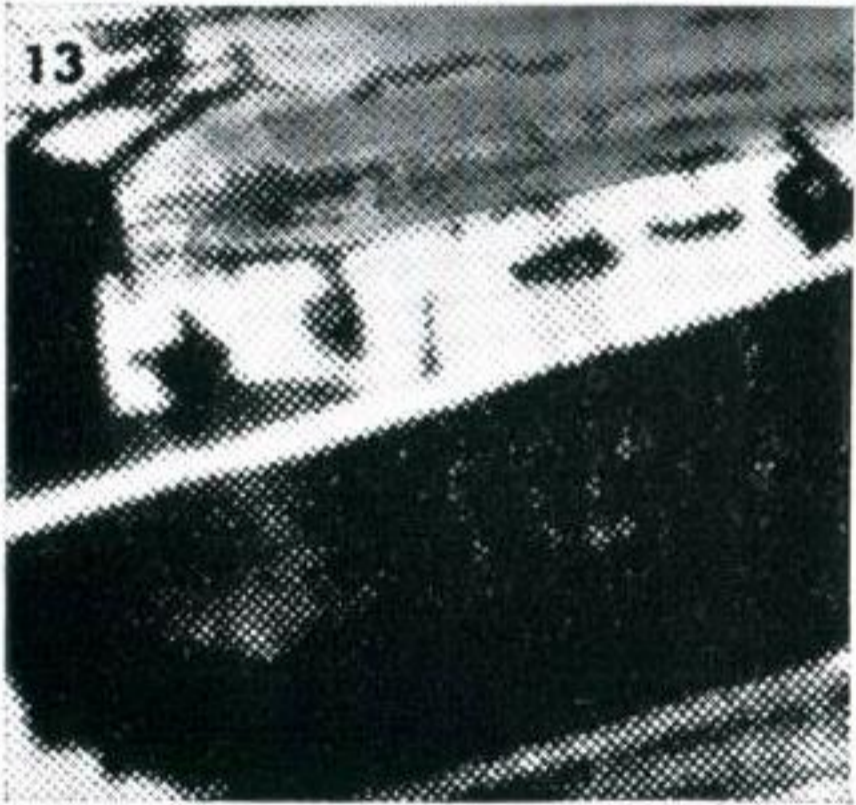
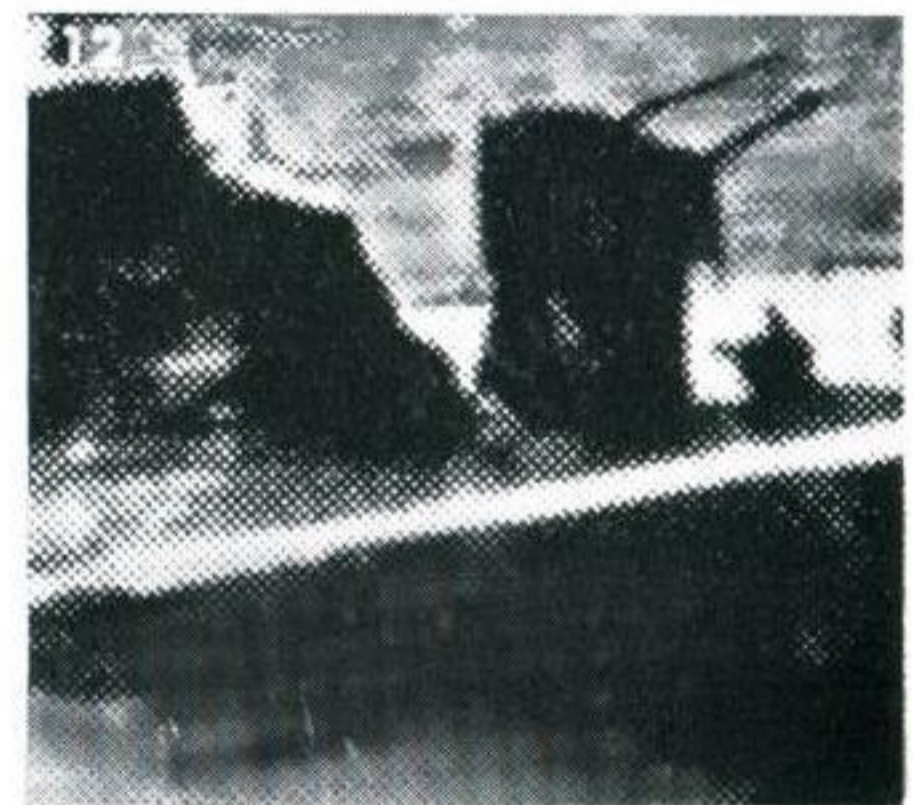
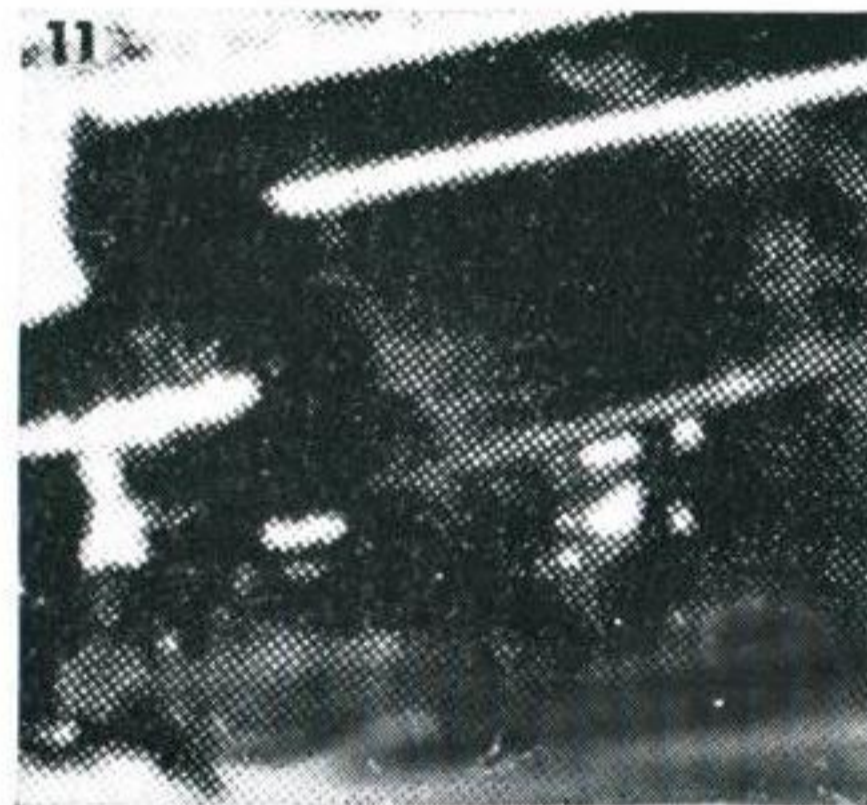
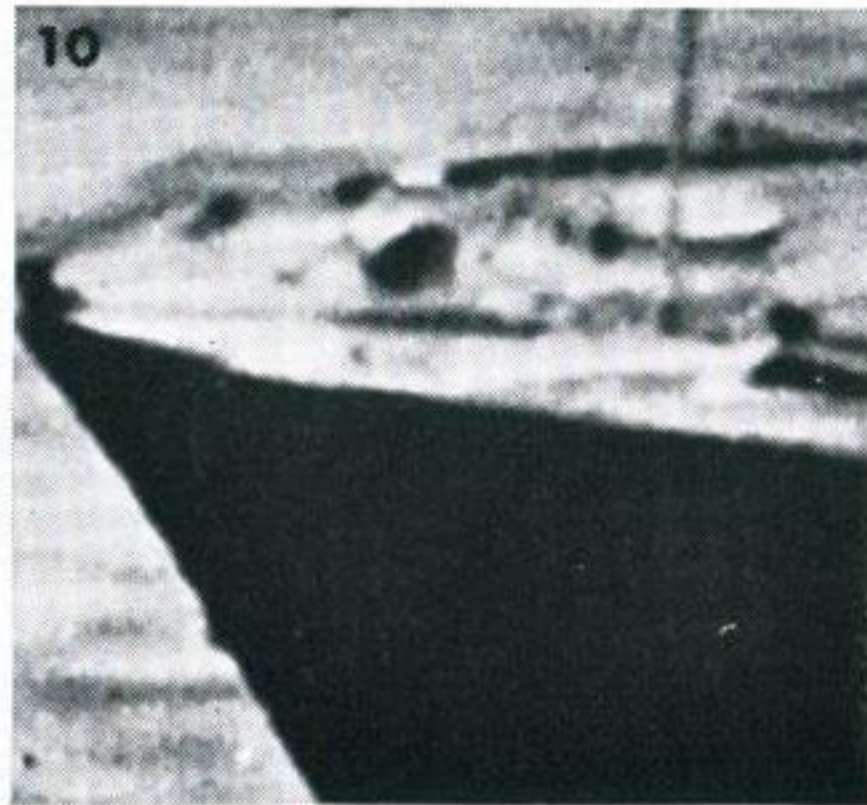
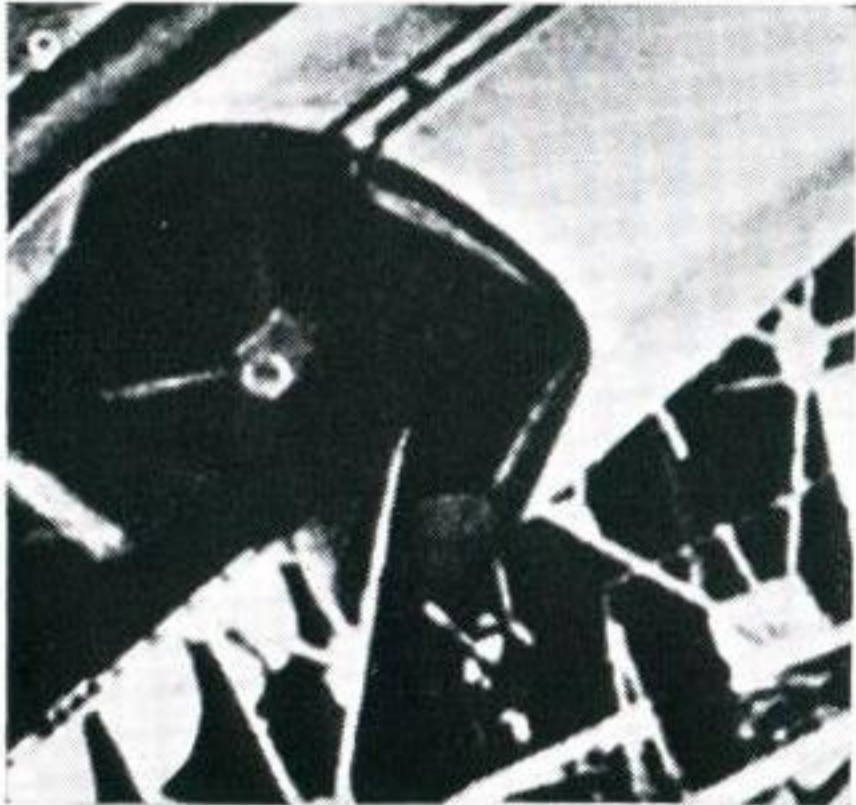
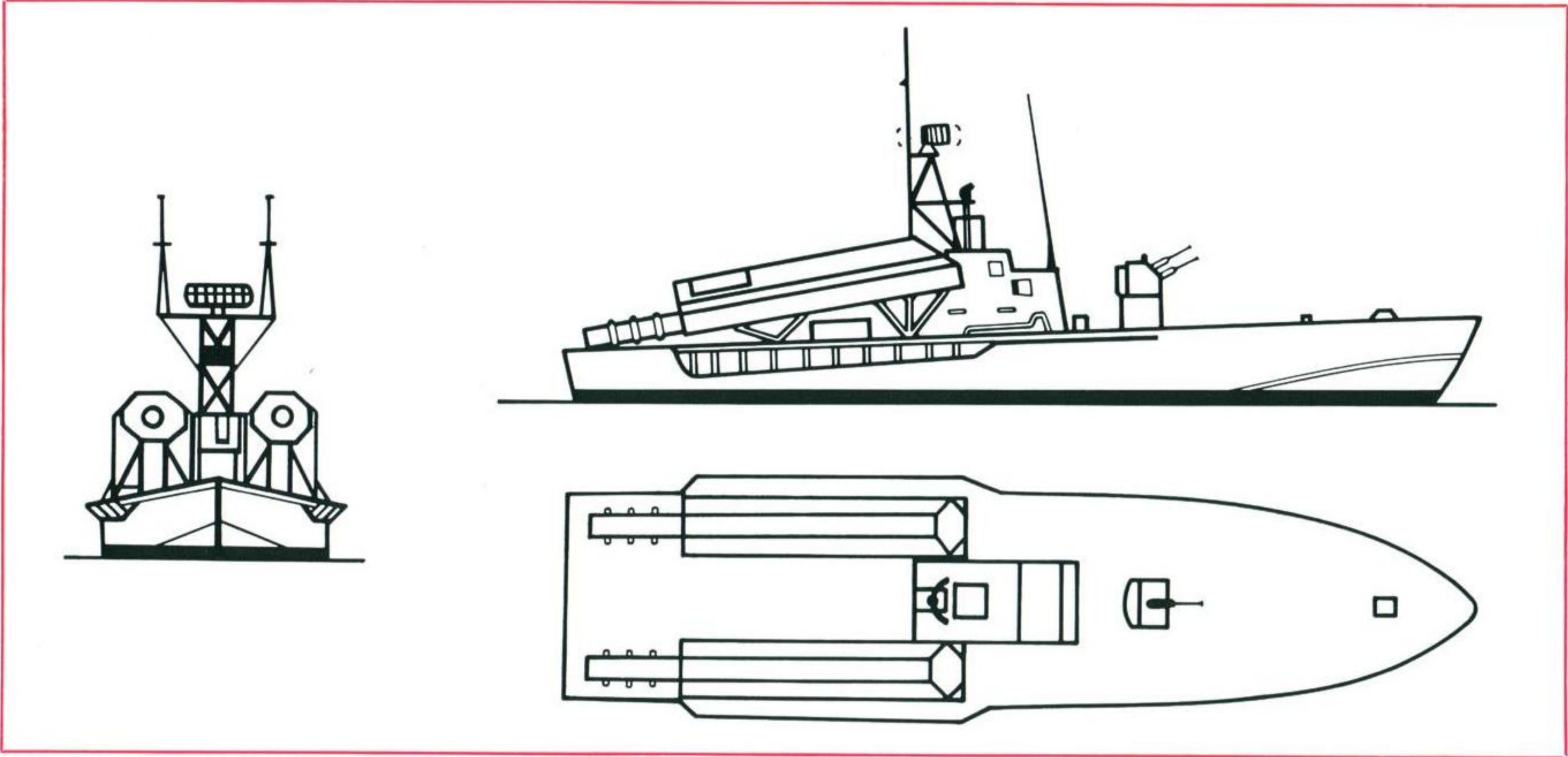
There are believed to be at least fifty of these formidable craft in service with the Russian Navy. Others are serving with the Navies of satellite countries equipped with Soviet weapons. It was a vessel of this type that sank the Israeli destroyer in the 1967 Egyptian-Israeli conflict.

The Komar Class is derived from the P6 Class of motor torpedo boats, of which an example is illustrated on the back cover. Komars were introduced between 1960 and 1961 and carry in place of the after twin A.A. guns two guided missile surface-to-surface launchers. Full displacement is 100 tons: length is about 88 feet overall and speed 40 knots.

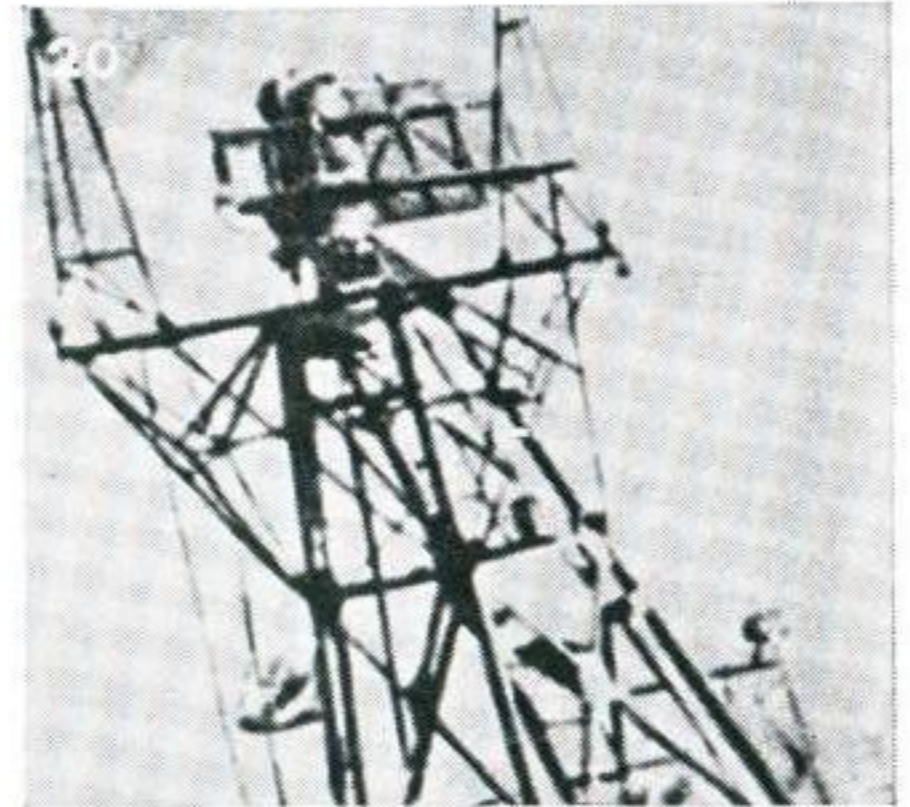
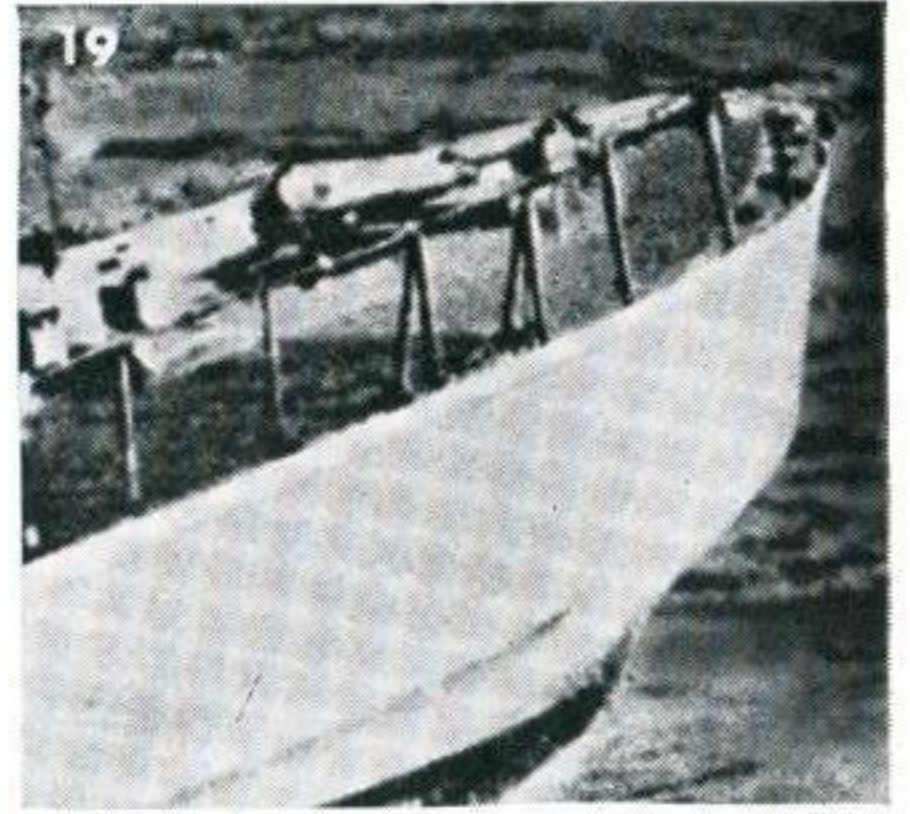
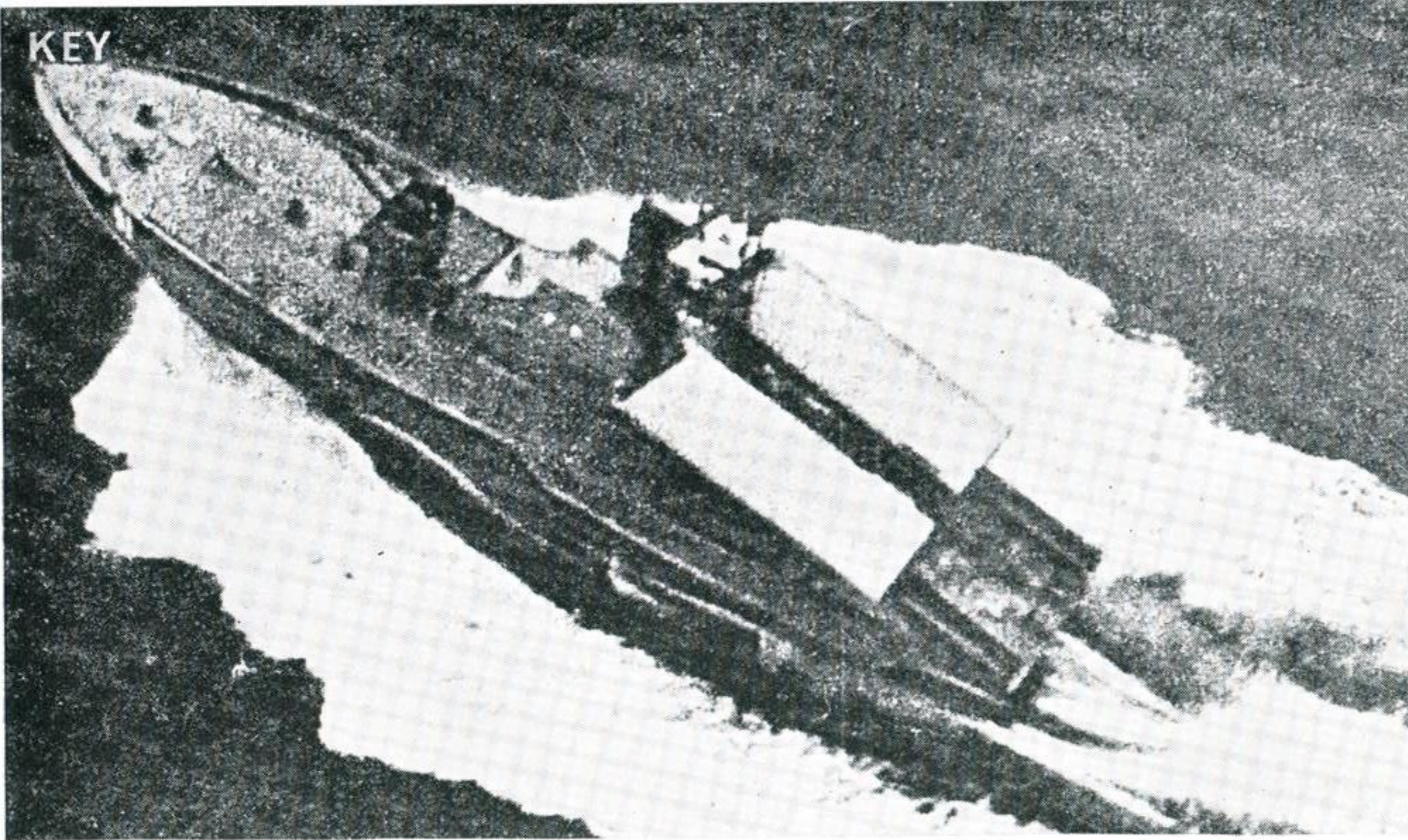
The launcher covers may suggest that Komars are easily distinguished, but the Osa Class have similar launchers, although two a side, and other vessels may carry them.

Identify the target views by reference to the key views and write down the name Komar each time against the appropriate number of a prepared list of Nos. 1 to 30.

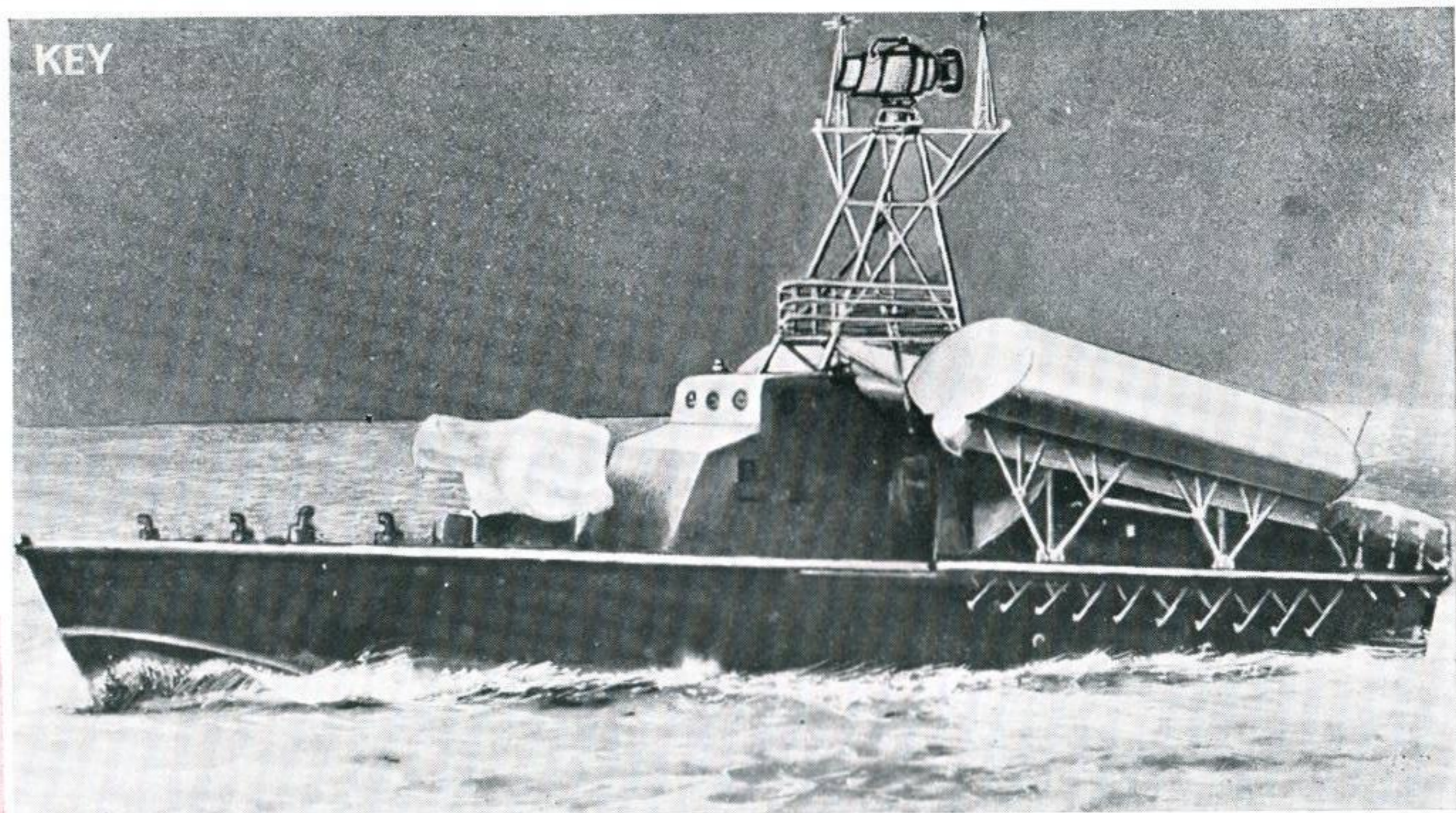
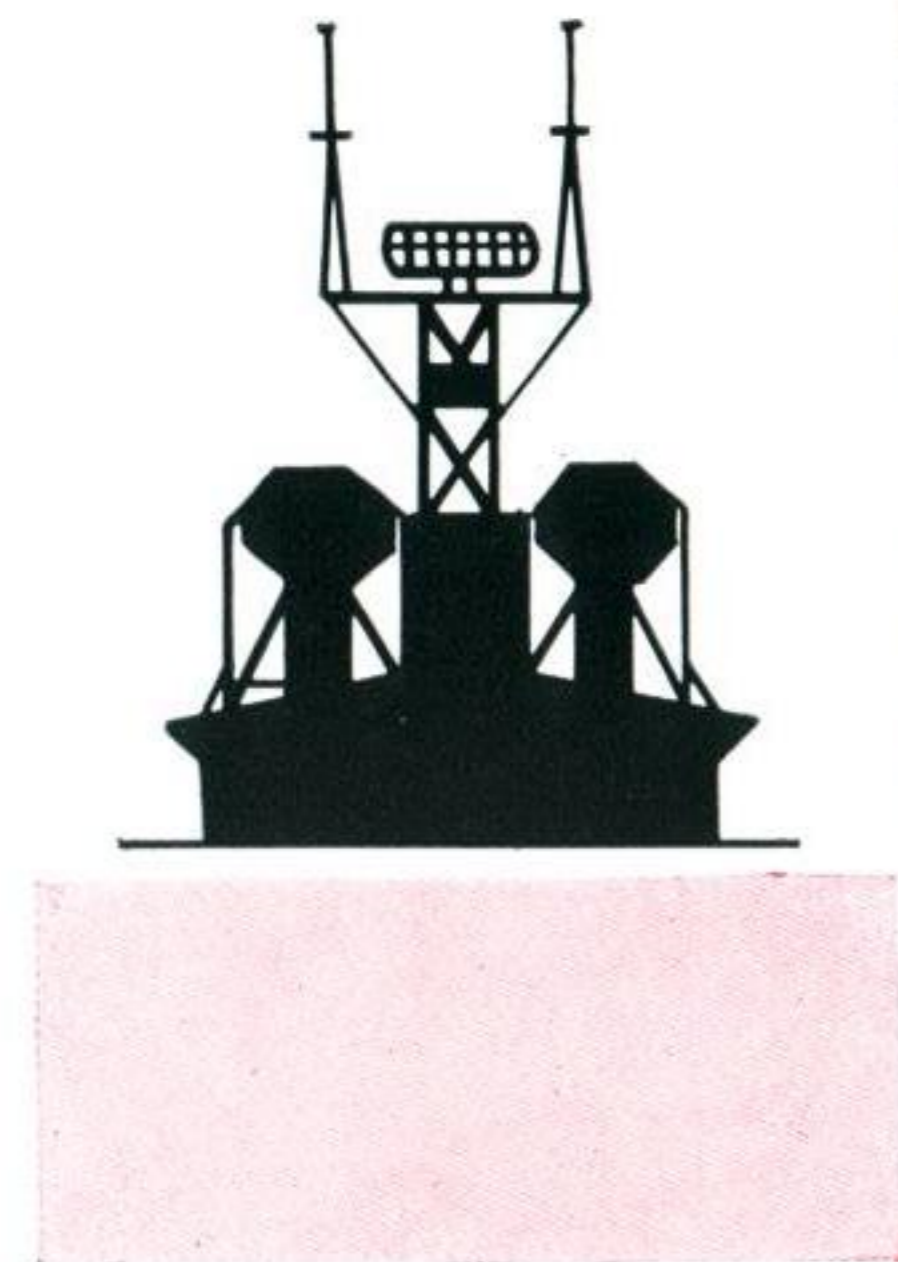
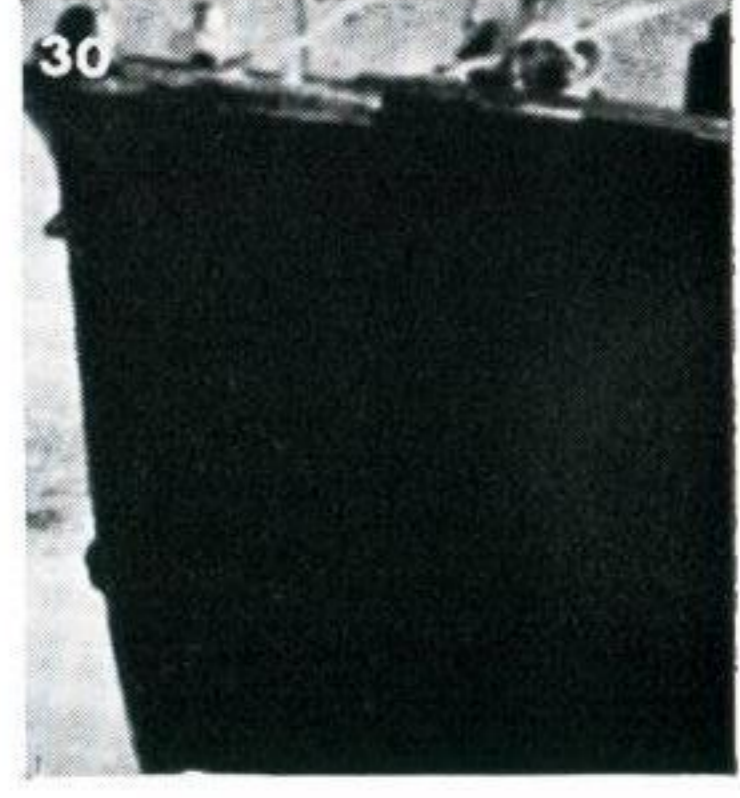
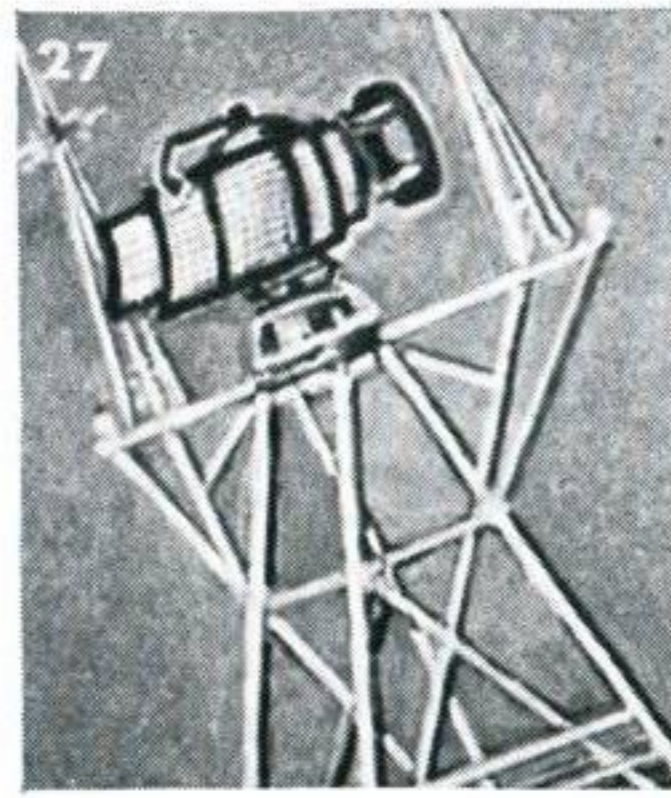
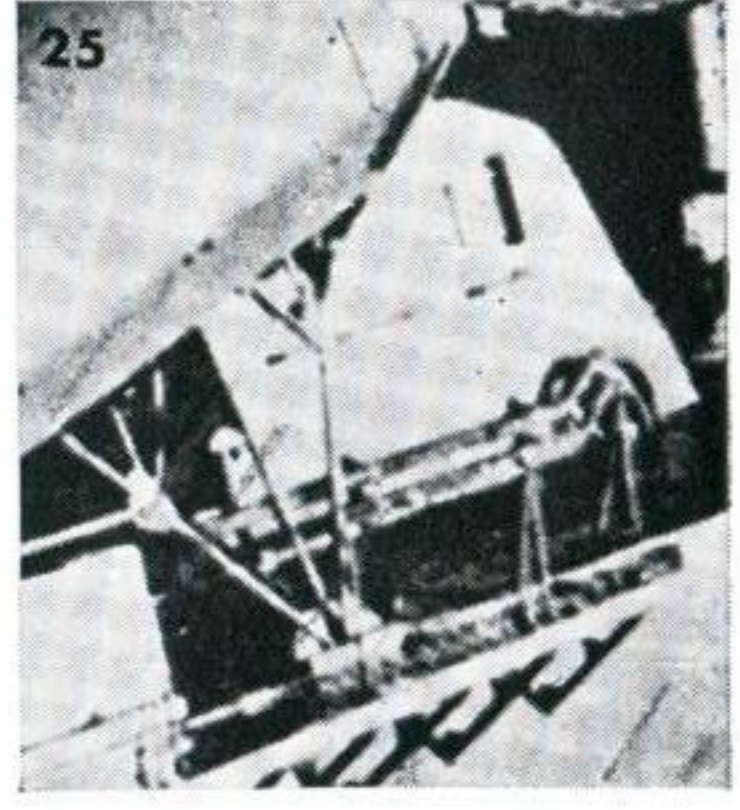
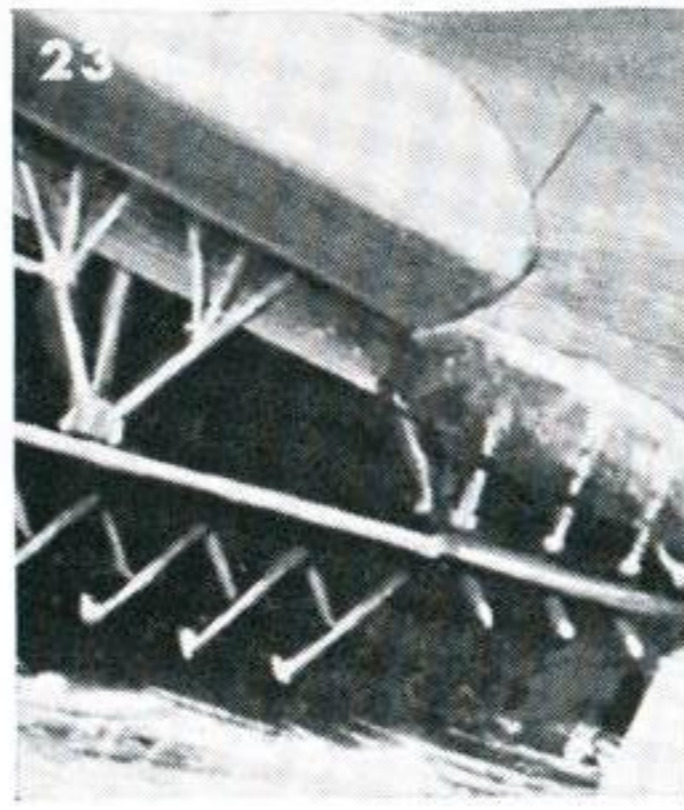
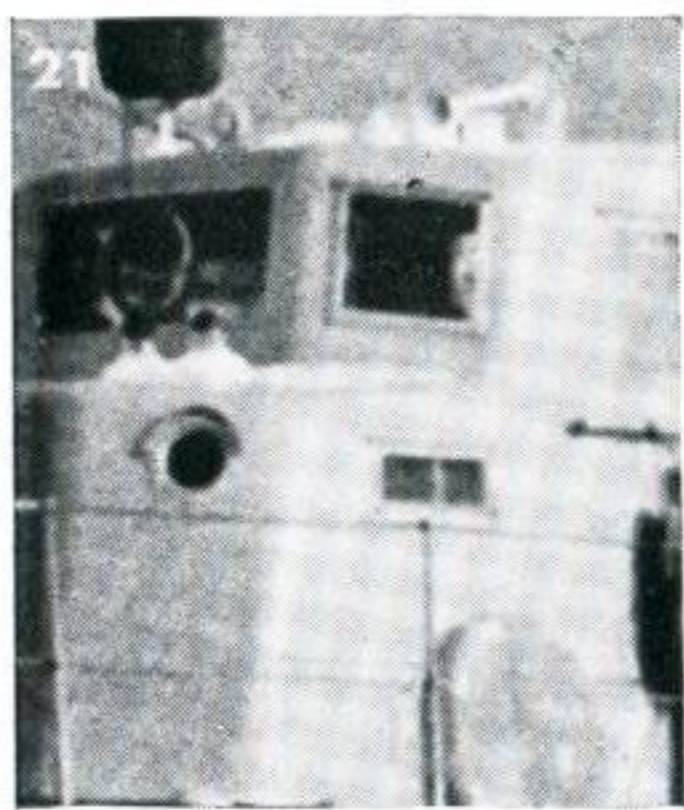




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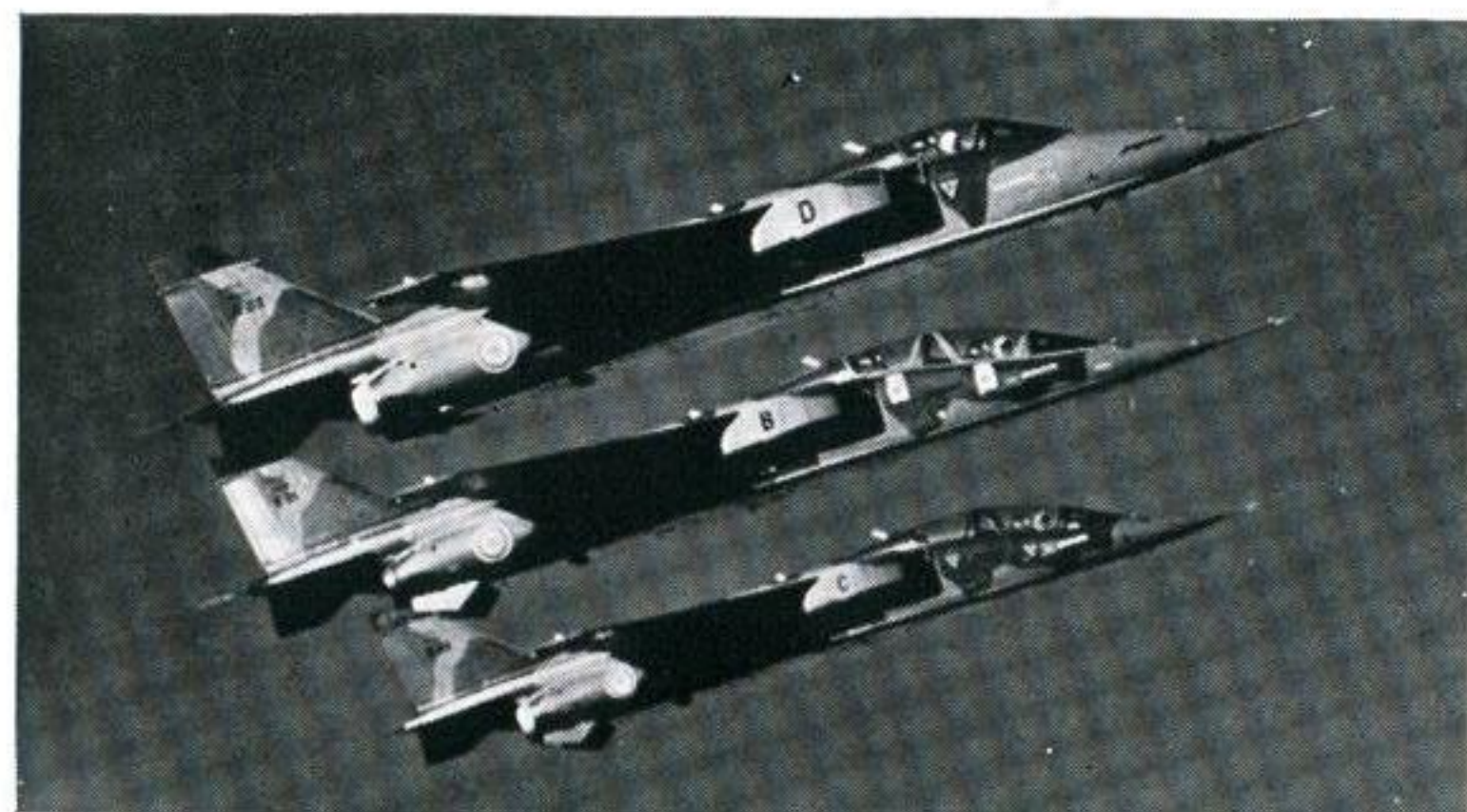
KOMAR CLASS *continued*



MONTHLY MEMORANDUM



JAGUAR JOTTINGS



Shown, above, top to bottom, Jaguars A03 (D), E01 (B) and E02 (C) and top right, S06 with a Canberra B2 used as chase aircraft for S06's flight testing.

The first Jaguars will be eight prototypes of the various versions being built to meet British and French needs. They are designated by their serial numbers in the French fashion—01 to 08, with a prefix letter indicative—in French if not in British—of the role. These are

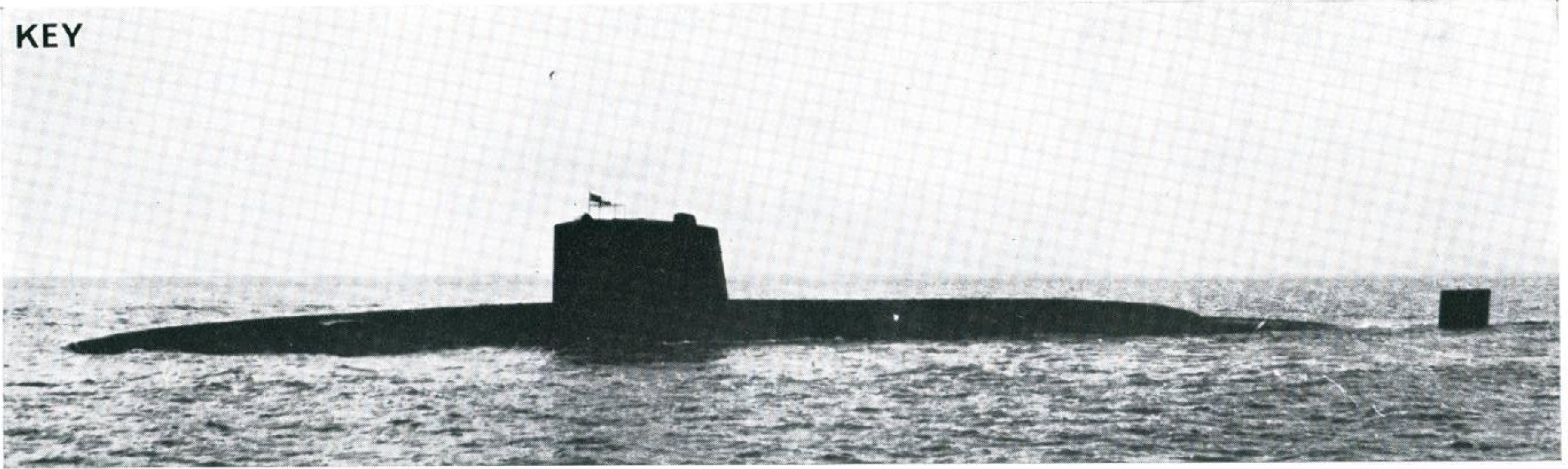
- E01** Two-seat combat trainer for the French Air Force
- E02** Two-seat combat trainer for the French Air Force
- A03** Single-seat tactical support aircraft for French Air Force
- A04** Single-seat tactical support aircraft for the French Air Force
- M05** Carrier-based tactical support aircraft for French Navy
- S06** Single-seat tactical support aircraft for the RAF, fifth prototype to fly and first British-assembled version.
- S07** Single-seat tactical support aircraft for the RAF
- B08** Two-seat combat trainer for the RAF

NORATLAS NOTATION

The Nord designations allotted to the variants of the Noratlas, subject of an identification lesson in this issue, are as follows:

Type	Engines showing models with Marbore wingtip jets	Remarks
N2500	2×SNECMA 14R	Prototype transport F-WFKL. Three-blade propellers
N2501	2×SNECMA Hercules 739	Pre-production F-WFRG & F-WFUN. Four-blade propellers
N2501	2×SNECMA Hercules 739	Production 186 built of which 161 were for Federal German Republic. Others for French Air Force.
N2501	2×SNECMA Hercules 739	Production for Israeli Air Force
N2501A	2×Bristol Hercules 758/9	Civil transport for UAT
N2501E	2×SNECMA Hercules 739 +2×Marbore II	N2501 No. 40 with wing tip jets
N2502	2×SNECMA Hercules 758/9 +2 Marbore IIE	Two ex-N2501 for Air Algerie
N2502A	2×SNECMA Hercules 758/9 +2 Marbore IIE	F-BGZF ex-N2502 for UAT
N2502B	2×SNECMA Hercules 758/9	Two built plus one ex-N2502
N2502C	2×SNECMA Hercules 758/9	No detail
N2503	2×P & W R-2800-CB17	N2501 No. 01 F-WFRG re-engined. Became N2508
N2504	2×SNECMA Hercules 739 +2×Marbore II	Marine navigational trainer. French Navy
N2505	2×SNECMA Hercules 739	Anti-submarine version project
N2506	2×SNECMA Hercules 739 +2×Marbore II	Assault transport project
N2507	2×SNECMA Hercules 739 +2×Marbore II	ASR version project
N2508	2×P & W R-2800-CB17	Two only. F-WFRG & F-WJDZ to Germany
N2509	2×	Project only
N2510	2×	Anti-submarine project
N2520	2×	Project for development of N2501
N2600	2×Rolls-Royce Dart 506	Development project of basic Noratlas design.

KEY



RESOLUTION CLASS

Nuclear Powered Ballistic Missile Submarines

To embody the earlier lessons on individual submarines of the class, this lesson is based on the class in general. All four ships have now been commissioned—*Resolution* (S22), *Repulse* (S23), *Renown* (S26) and *Revenge* (S27).

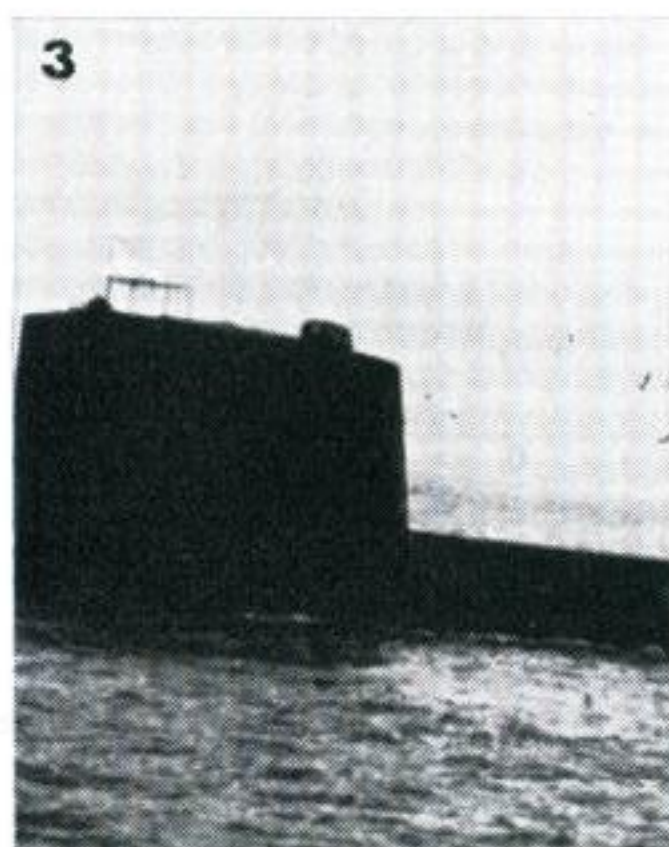
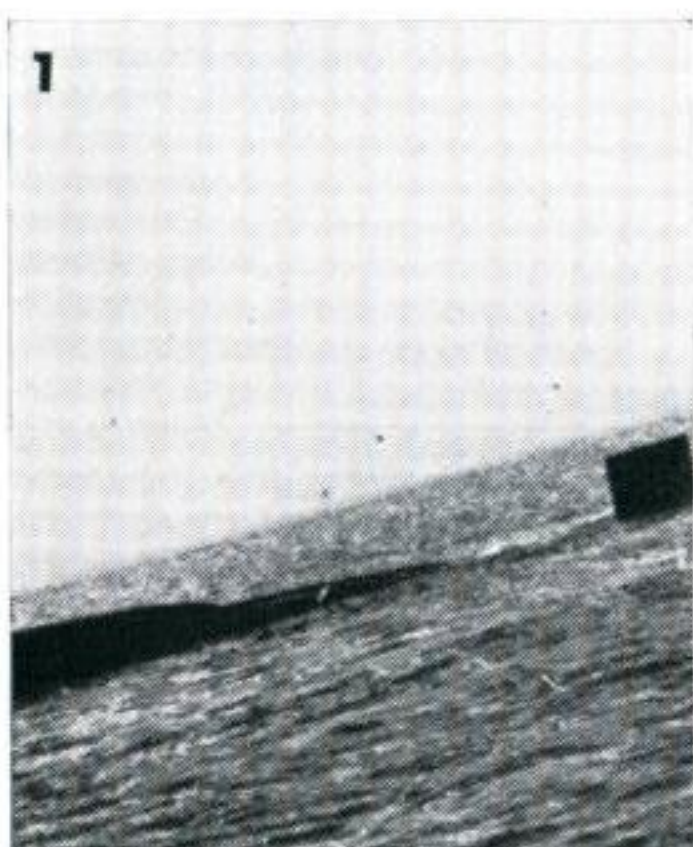
These craft are the largest submarines ever built for the Royal Navy, with a 8400 tons submerged displacement and an overall length of 425 feet.

They are armed with 16 Polaris A3 missiles, capable of being delivered with extreme accuracy at 2500 miles, and also fitted with six 21-inch torpedo tubes and the

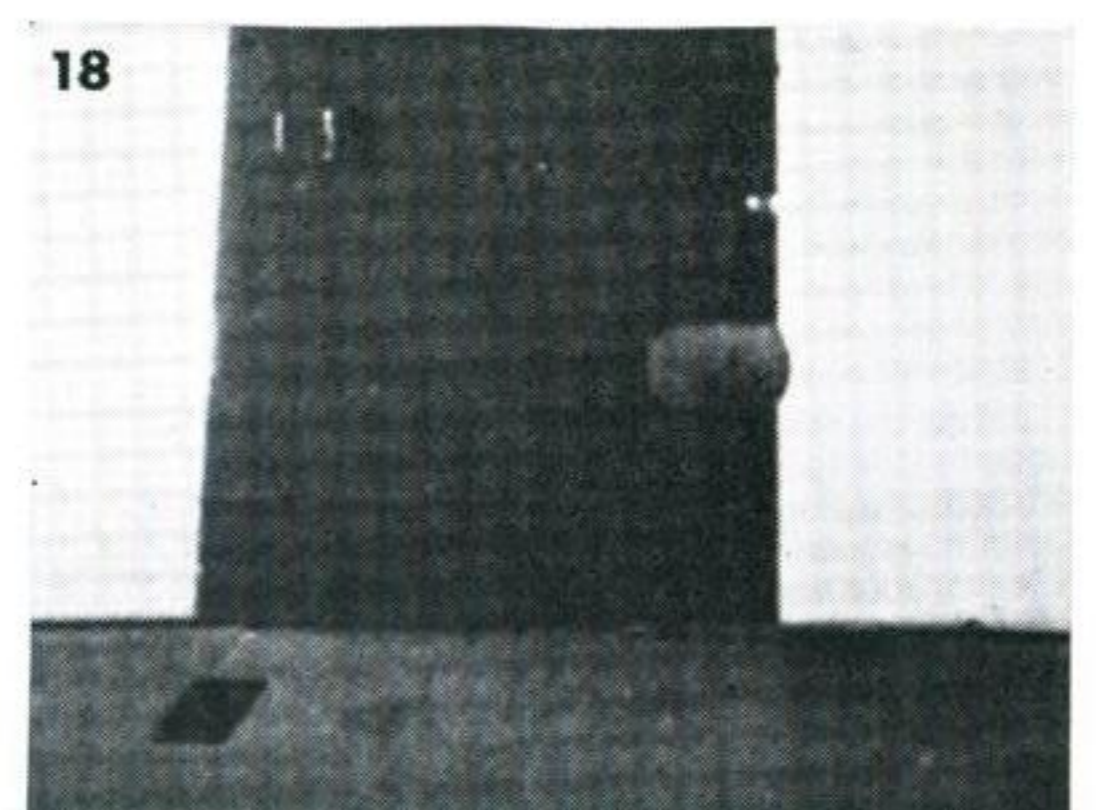
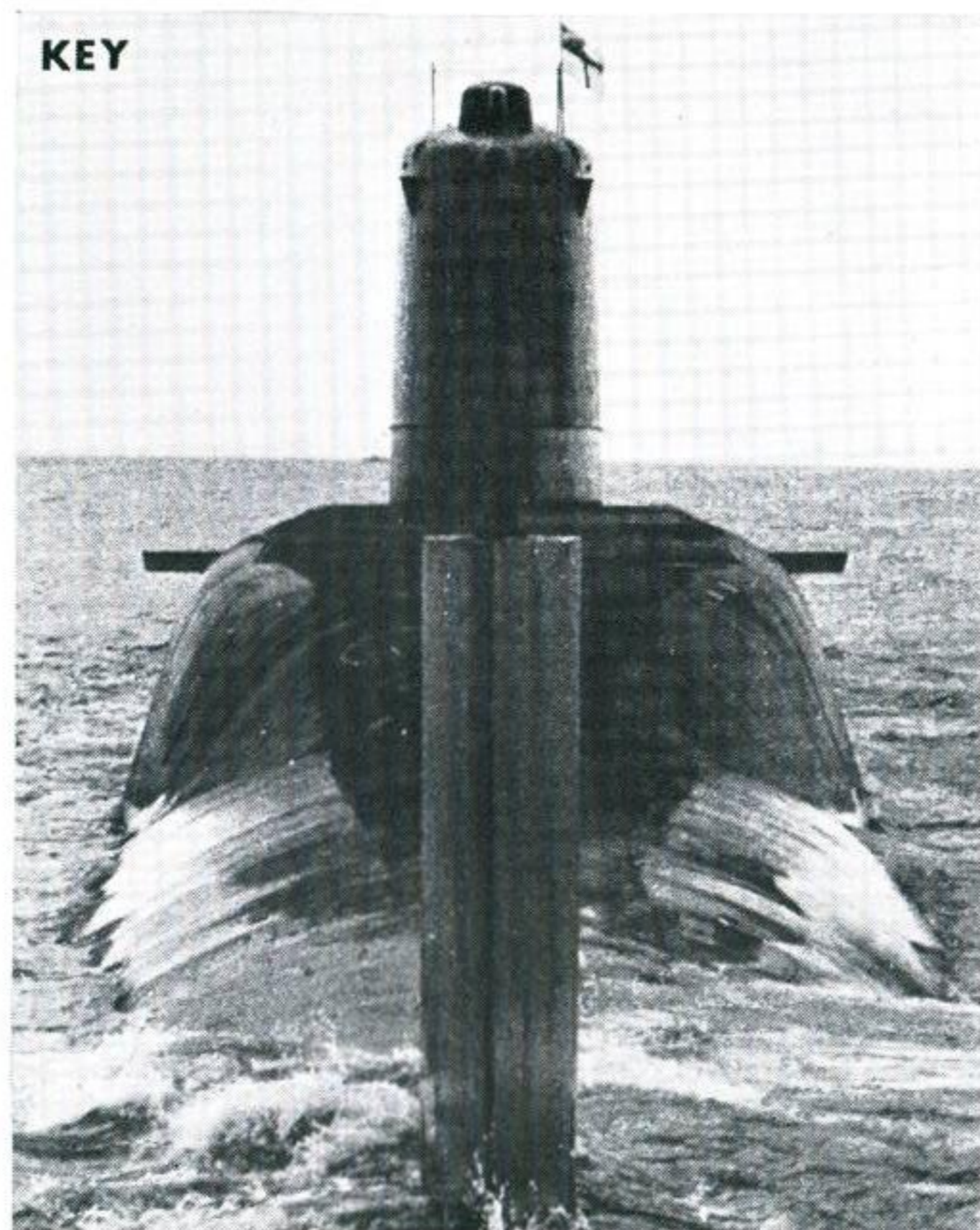
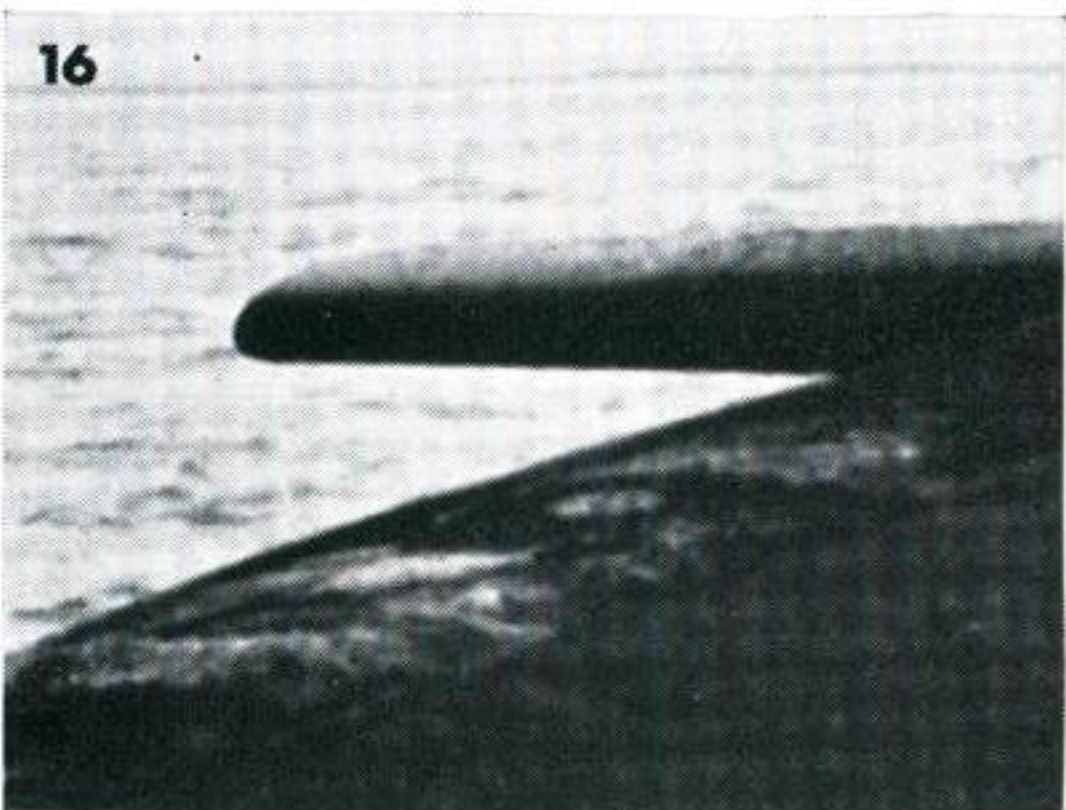
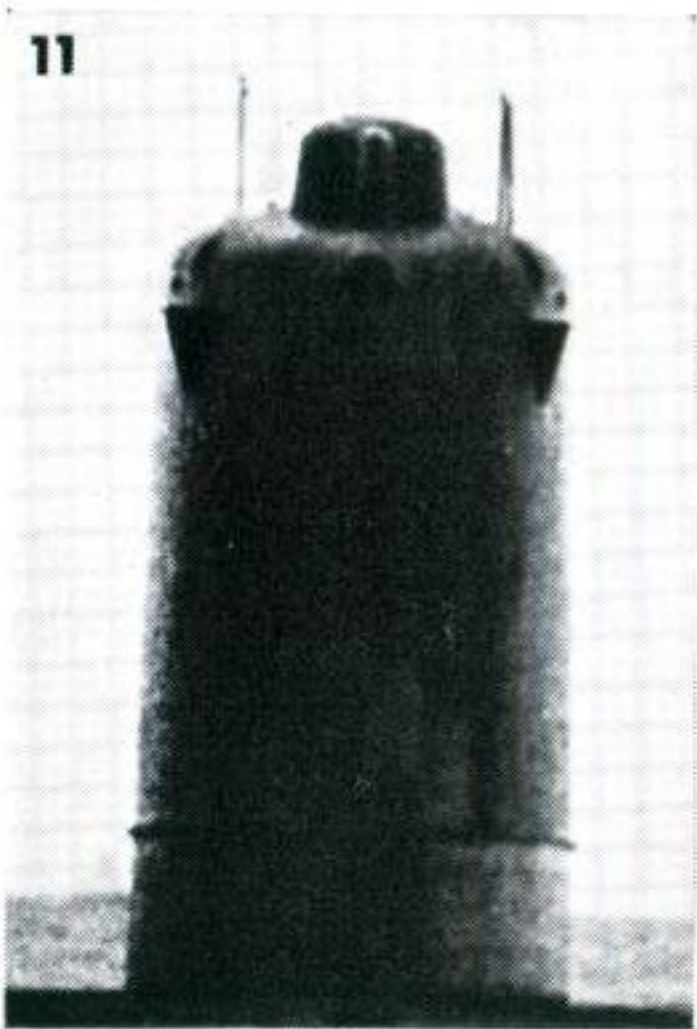
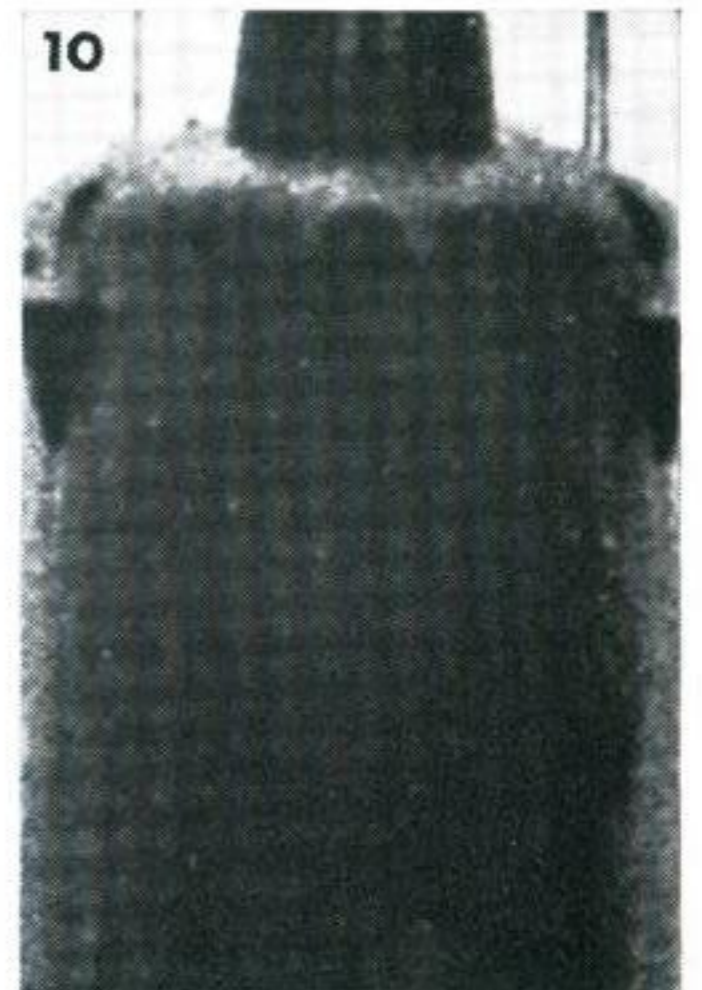
most modern underwater detection and navigation equipment.

In appearance the craft appear to be "down by the bows" when travelling on the surface. Speed is said to be 20 knots on the surface and 25 knots submerged.

Identify these 25 targets as Resolution Class or otherwise (and a few are otherwise) by attention to the key views presented. To make sure the Resolution Class shape is retained by your memory, write down the word *Resolution* against the appropriate numbers in any order on a prepared list of numbers 1 to 25. Solutions are on the back cover.



KEY



continued overleaf

RESOLUTION CLASS *continued*

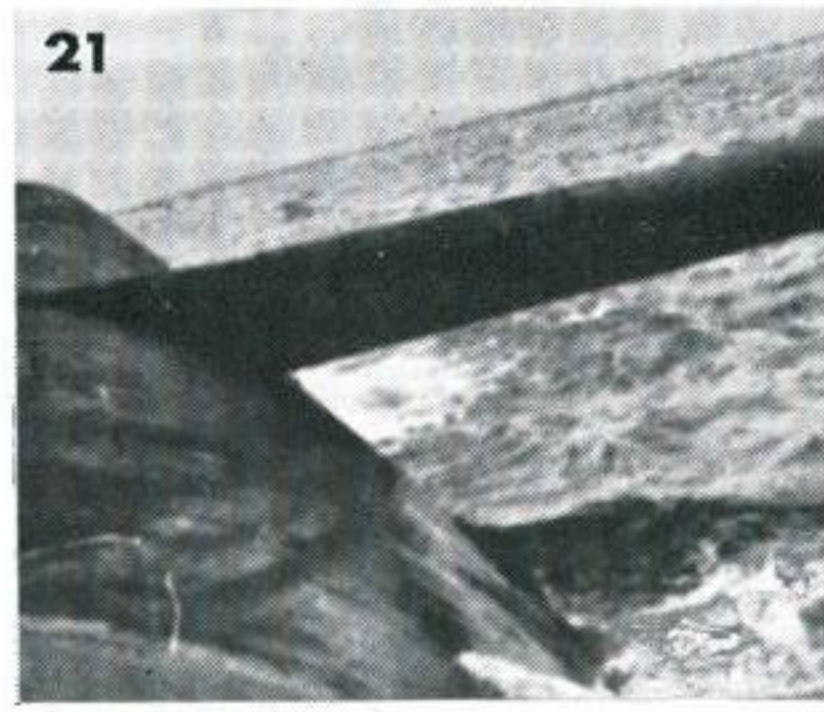
KEY



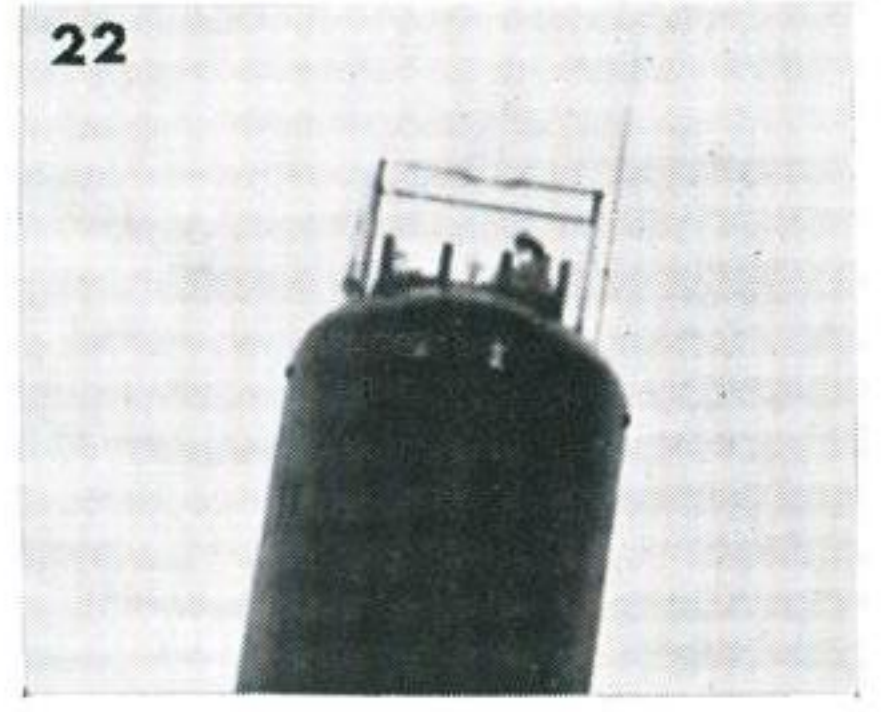
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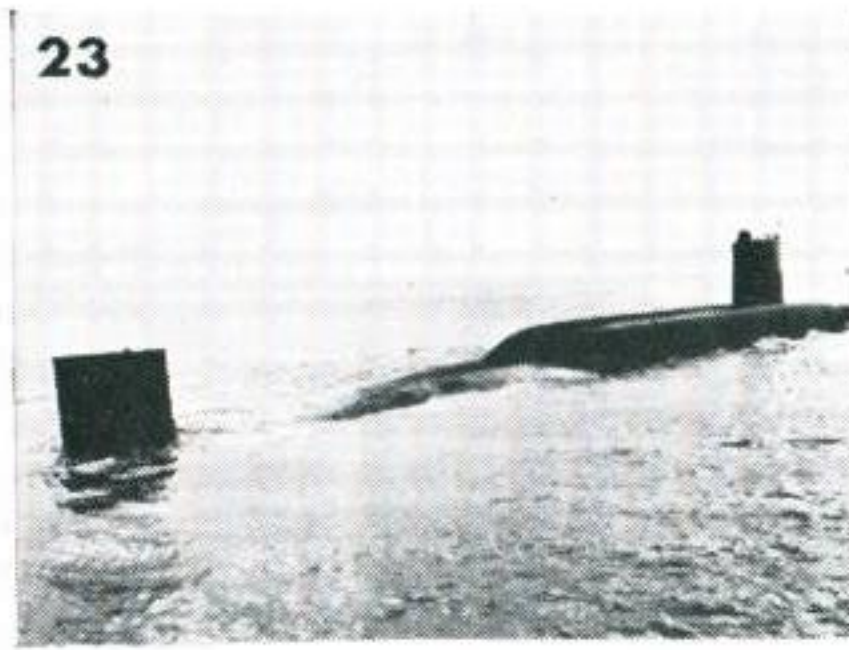
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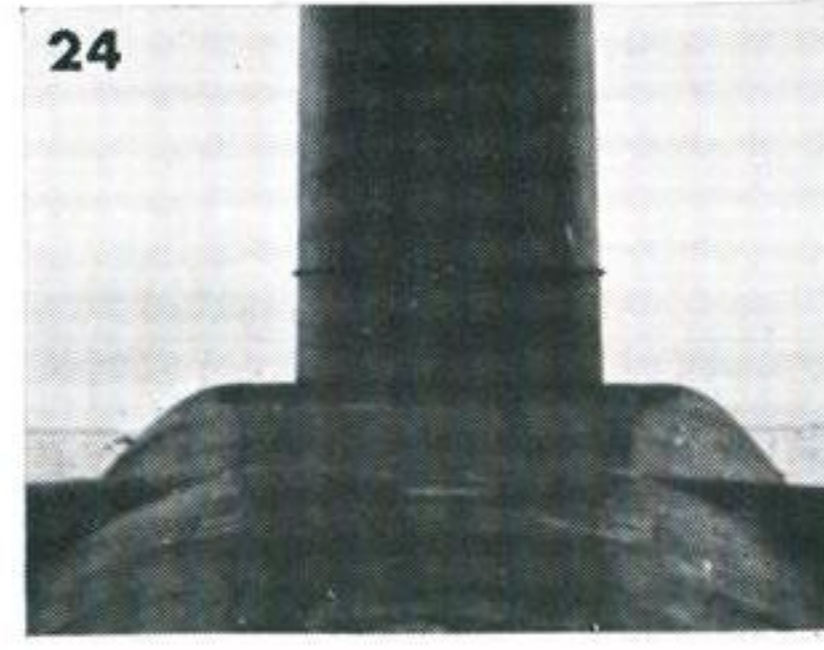
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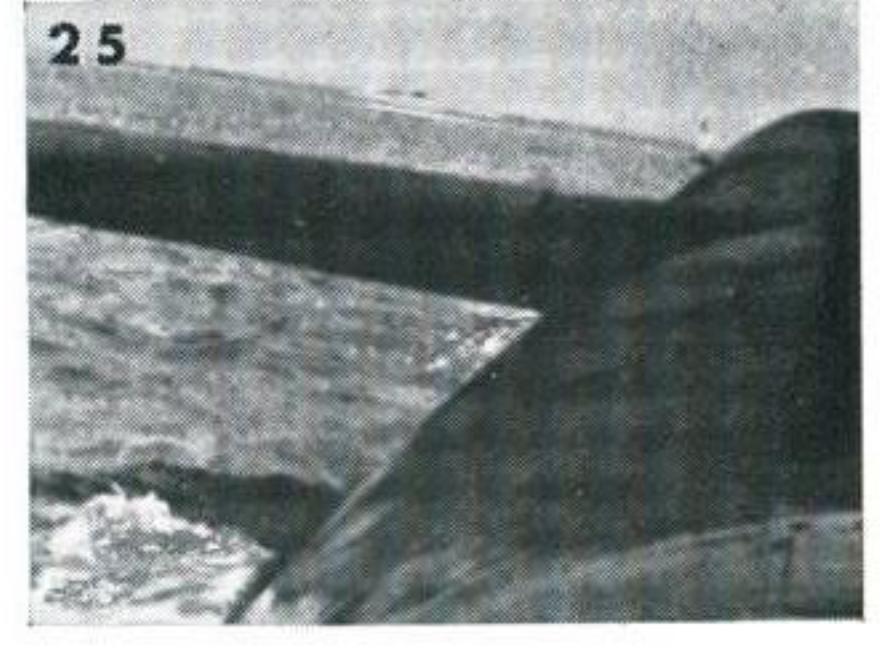
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24



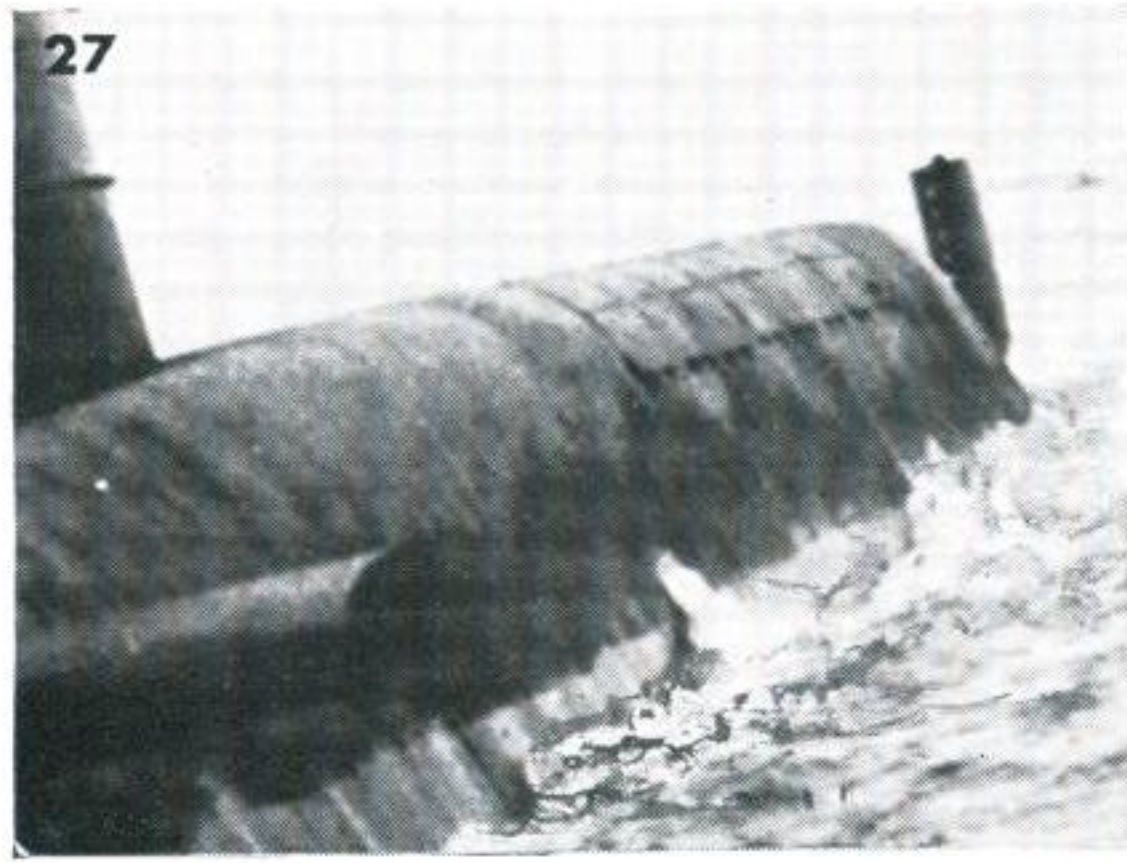
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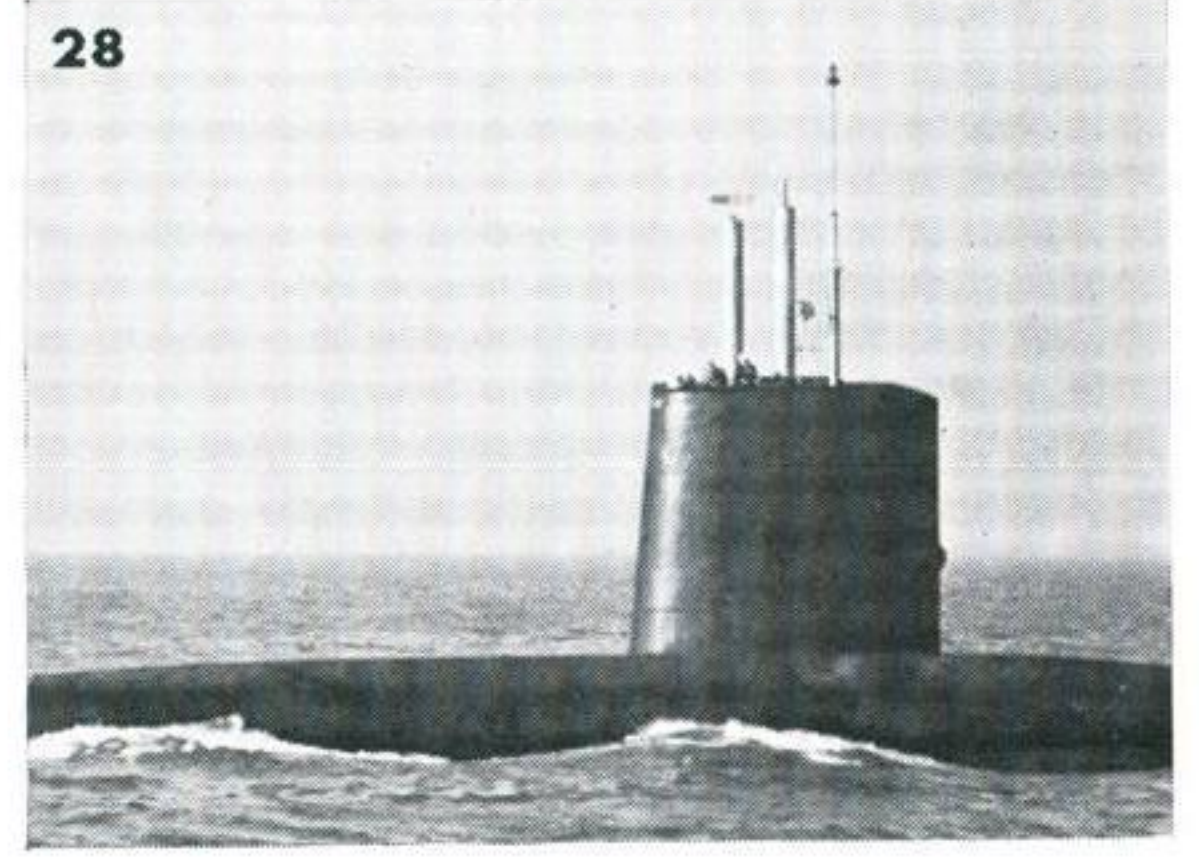
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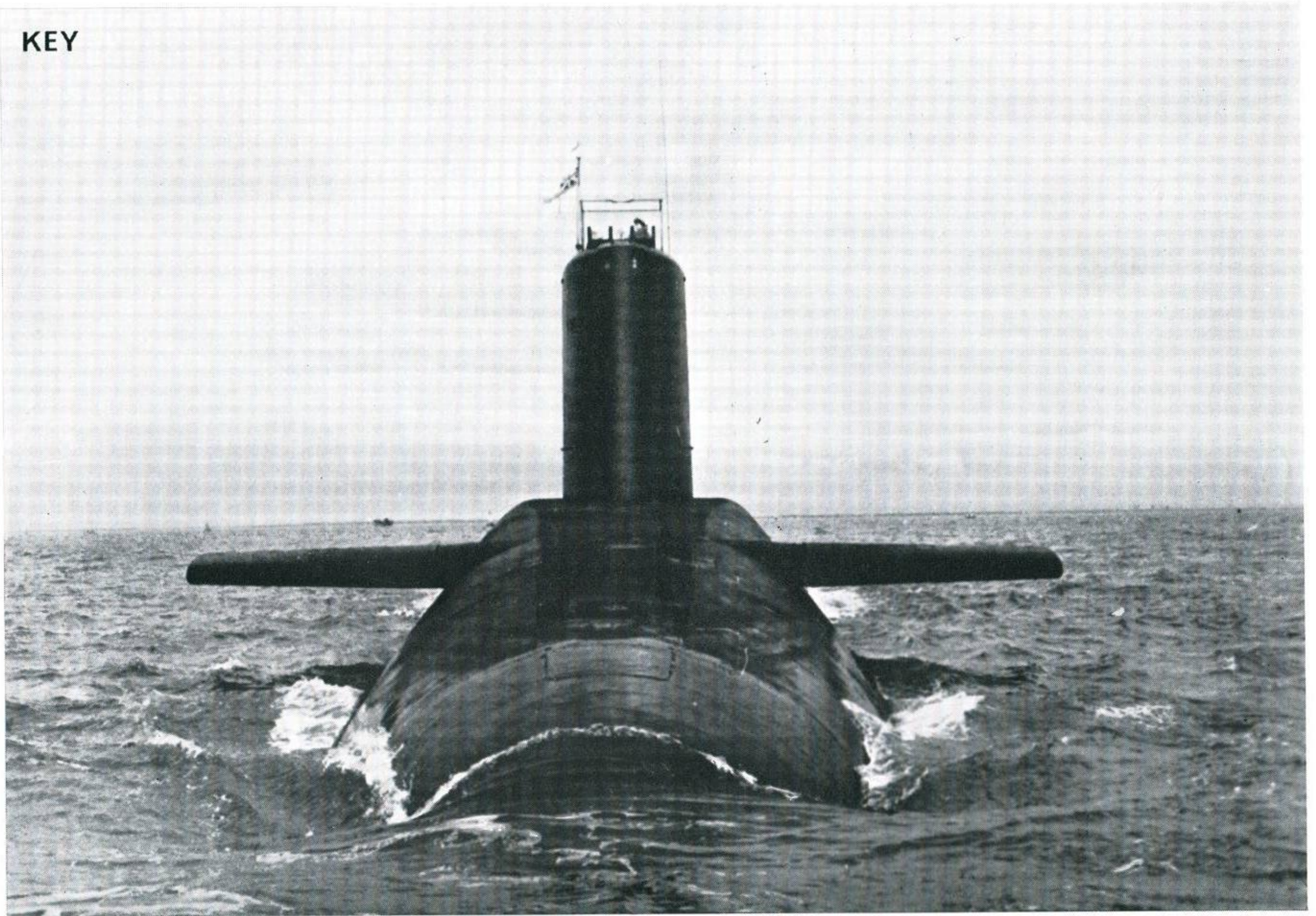
27



28



KEY



HMS CHARYBDIS Leander Class



GETTING SHIPSHAPE

HMS *Charybdis*, the 21st of the Leander Class general purpose frigates was commissioned last year. Her armament consists of 4.5-in. guns in a twin mounting directed by a fully automatic radar fire control and gun direction system, a Sea-cat ship-to-air launcher and director and an anti-submarine mortar. Her Wasp HAS1 helicopter can be seen on the helicopter landing deck aft. The Leander Class was the subject of an identification lesson in the March 1967 issue.



HMS UNDAUNTED U Class Anti-Submarine Frigate

A wartime destroyer, HMS *Undaunted*, now one of the few remaining U Class Anti-Submarine Frigates, was fitted with a helicopter platform aft, and more recently

with increased accommodation. The profile views show *Undaunted* as she was in 1957, and as she is now, and a close up view of the new arrangement.

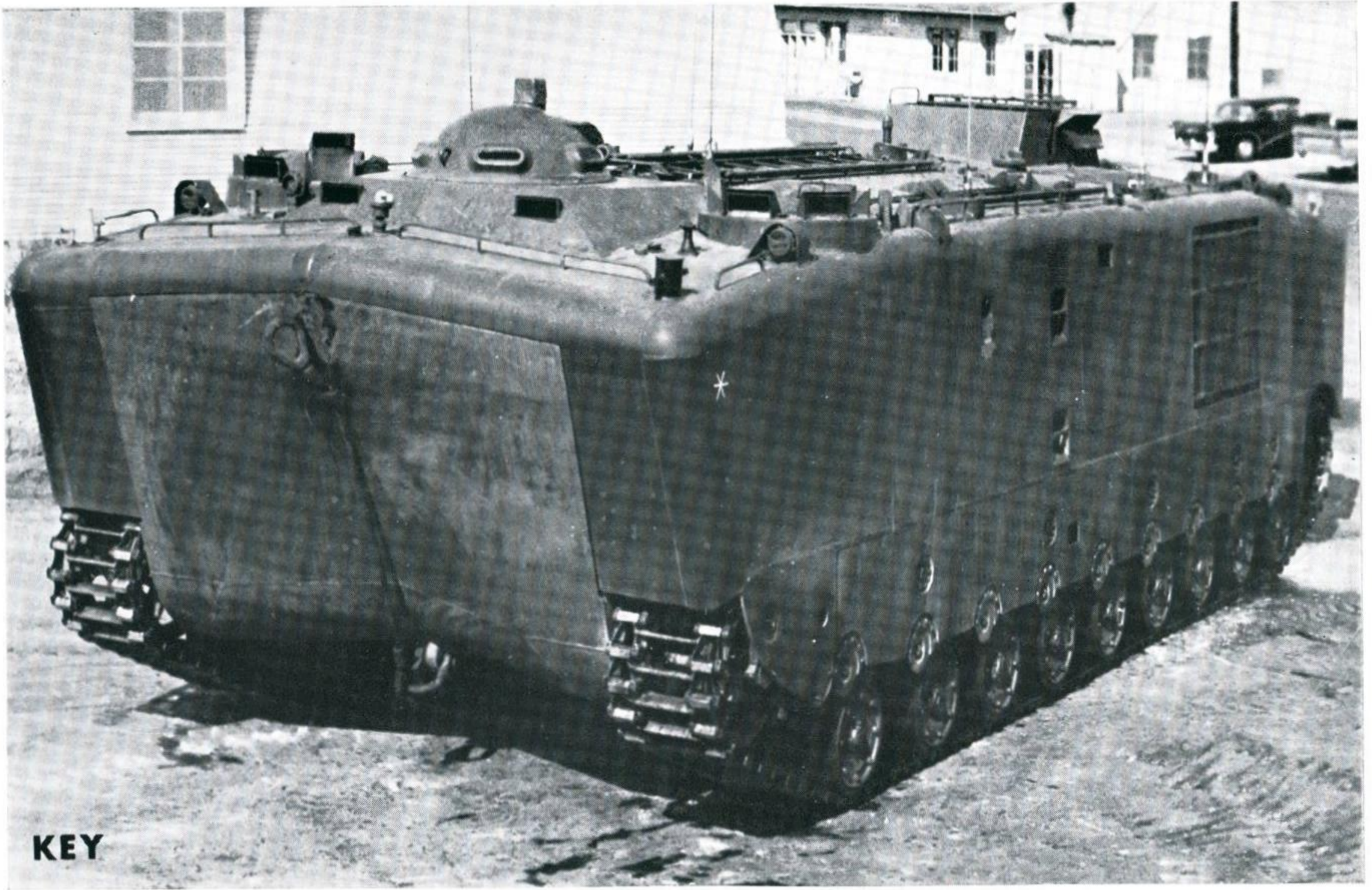


As she was

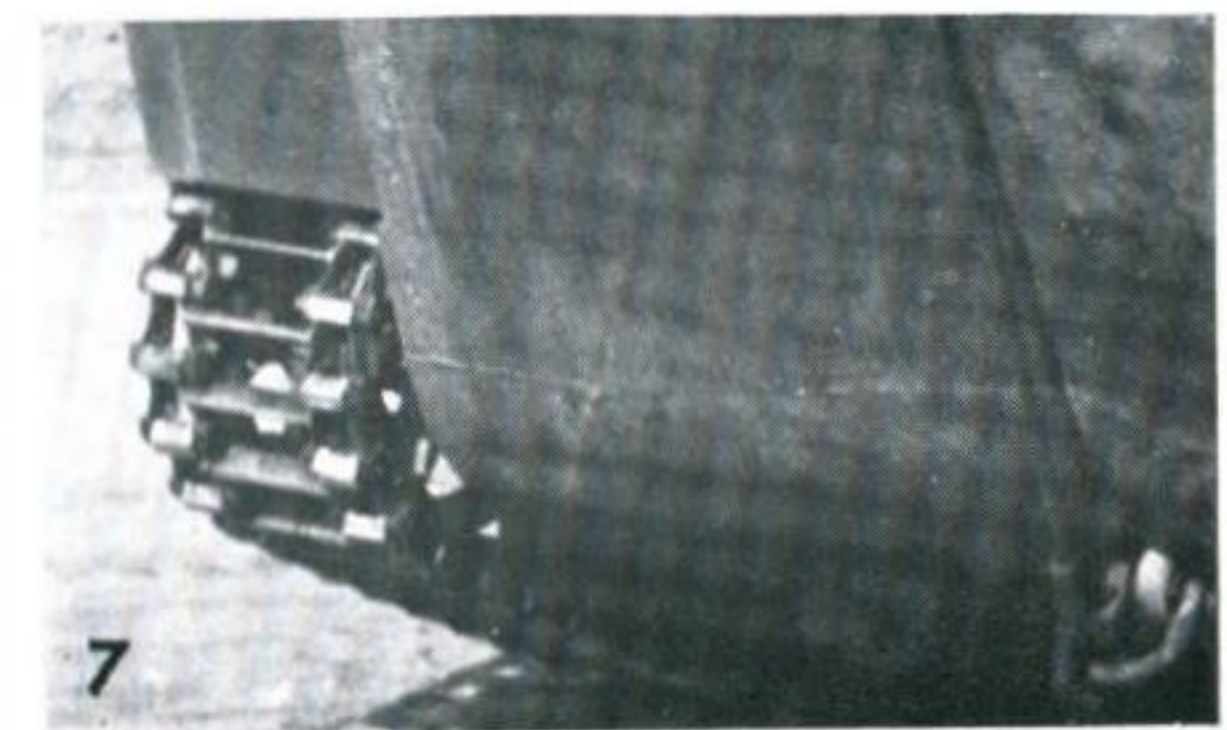
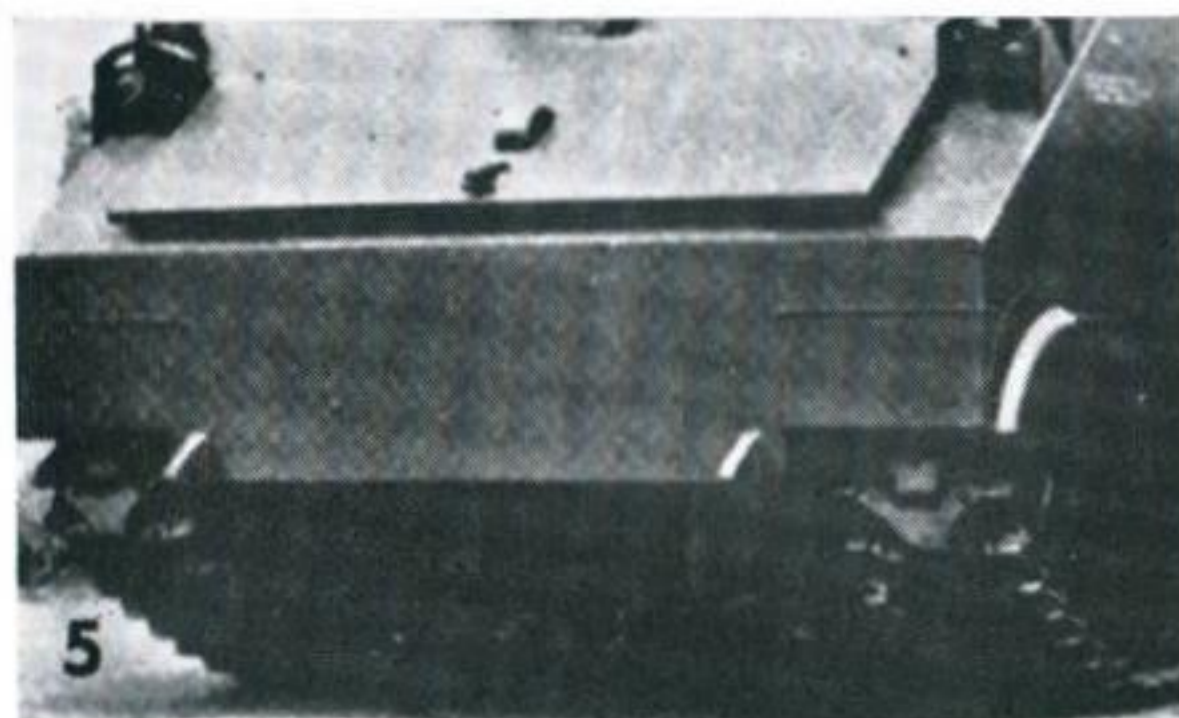
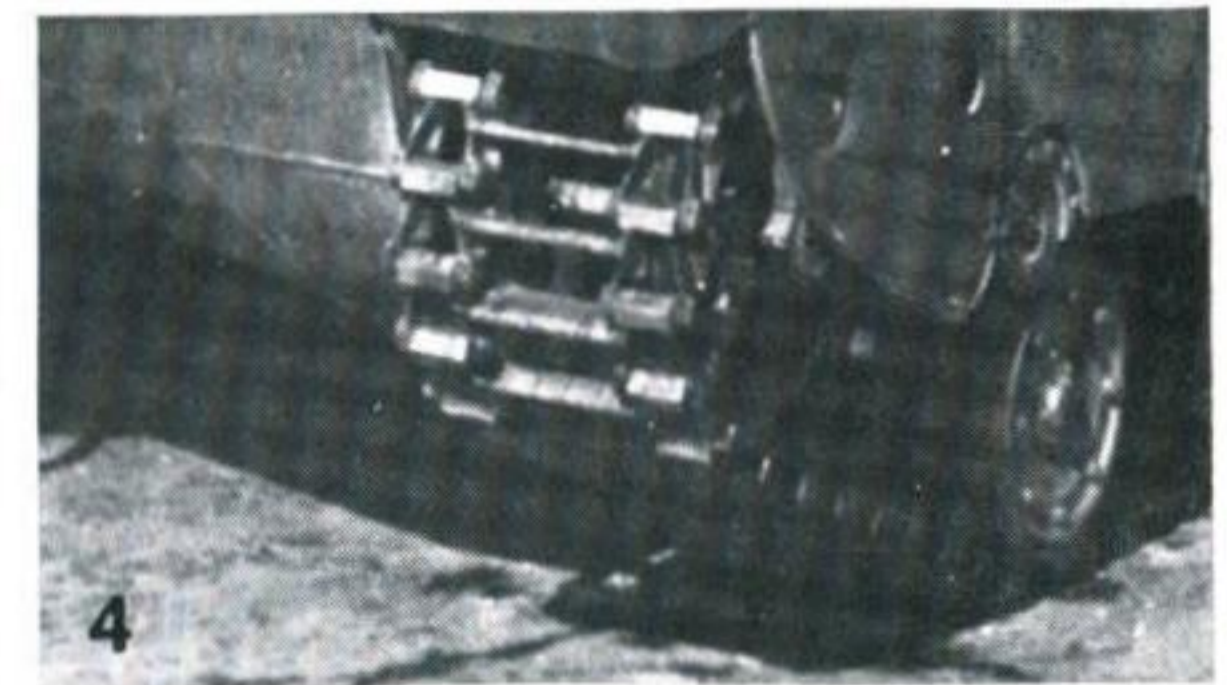
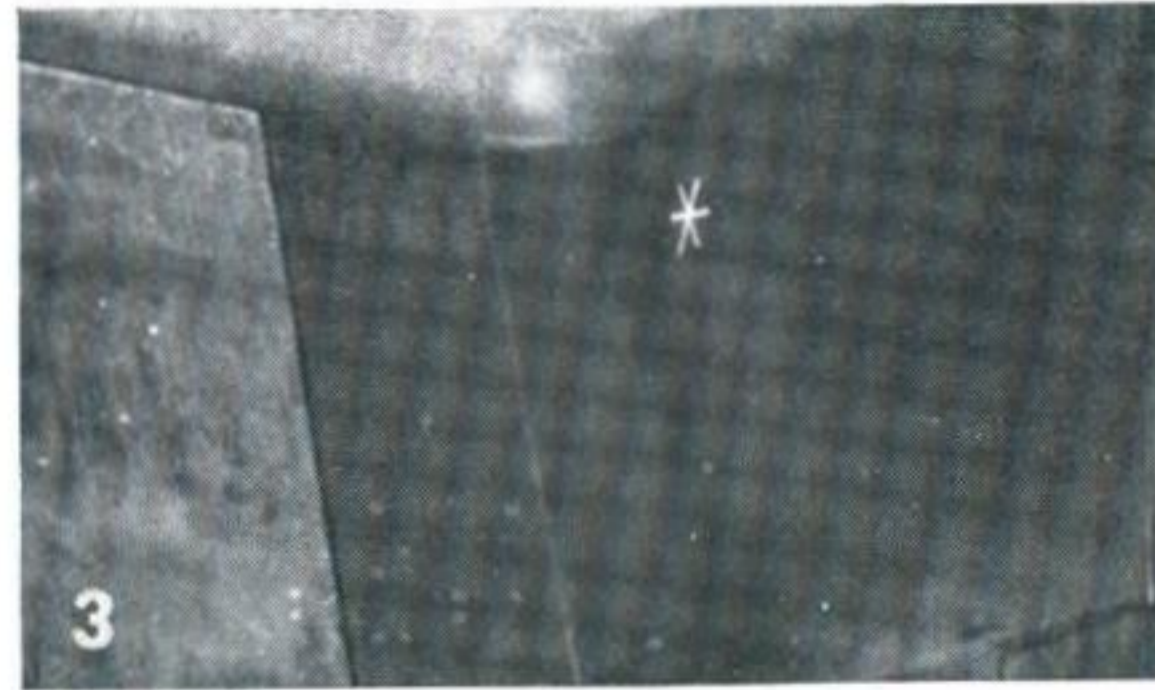
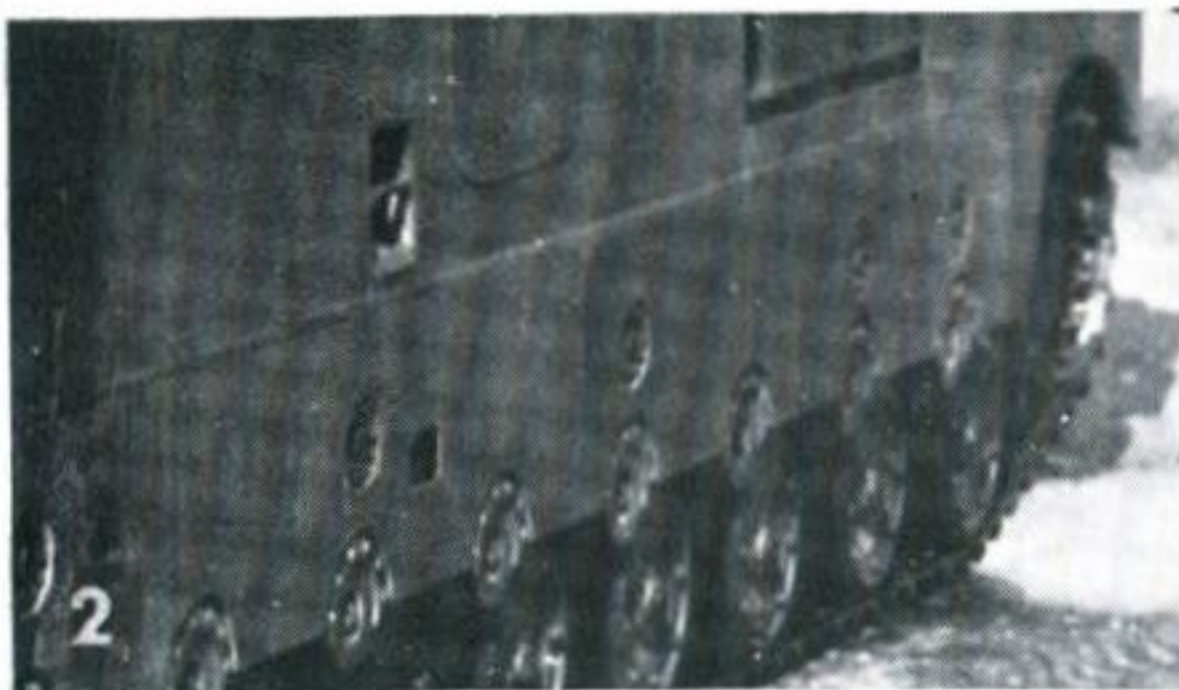


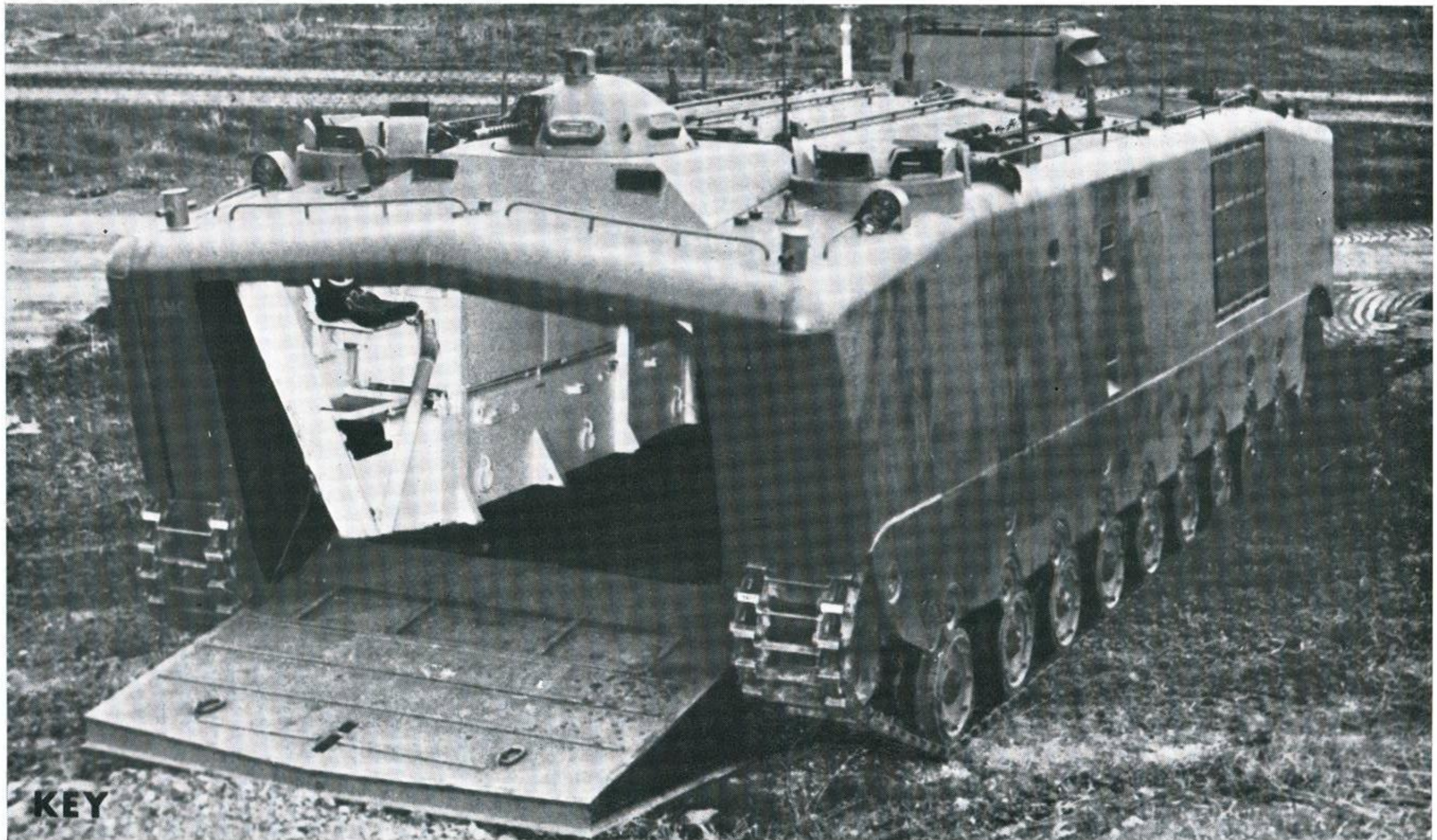
As she is





LVTP5 US Marine Corps Amphibian





KEY

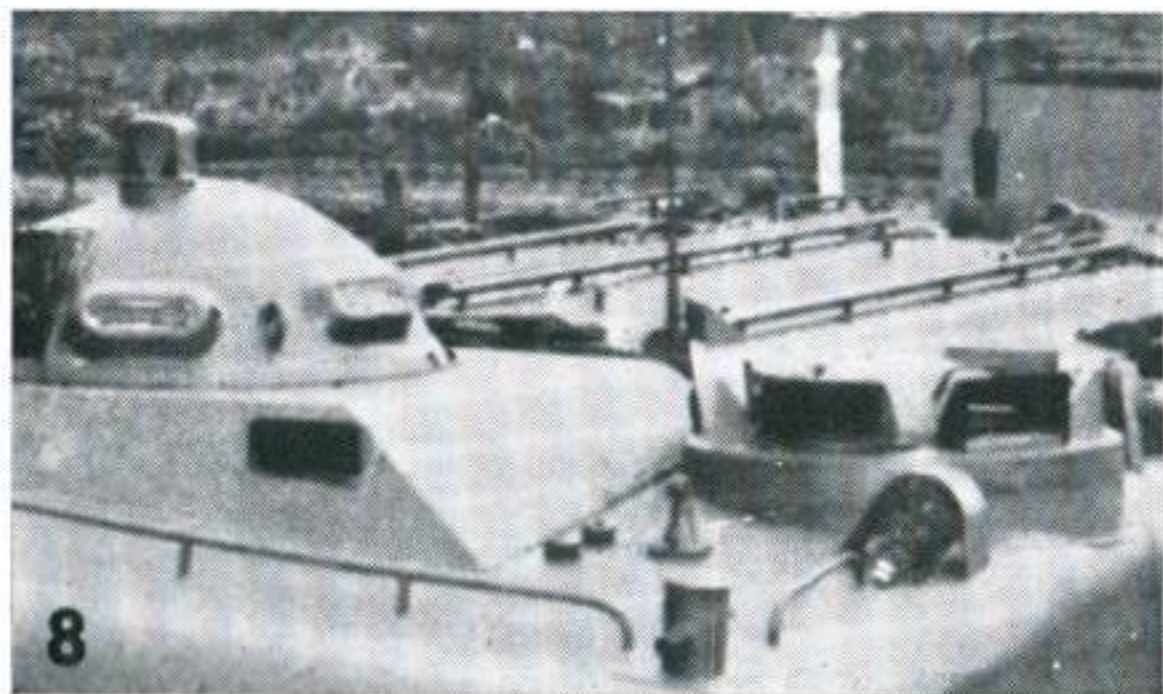
The LVTP5, or Landing Vehicle, Tracked, Personnel, 5, is an amphibian built especially for the US Marine Corps. Its role is that of an amphibious armoured personnel or cargo carrier in landing operations from the open seas in which the Marine Corps has specialised for many years. The LVTP5 is, in fact, the latest service model of a long line of LVTs, going back to the Roebling Alligator of 1940.

Because it is intended for landing on hostile shores even from fairly rough waters, the LVTP5 is relatively large and its margin of buoyancy is very much greater than that of amphibious armoured personnel carriers designed only for the crossing of rivers and other inland water obstacles. However, like the majority of the latter, it propels itself in water, as well as on land, by means of its tracks.

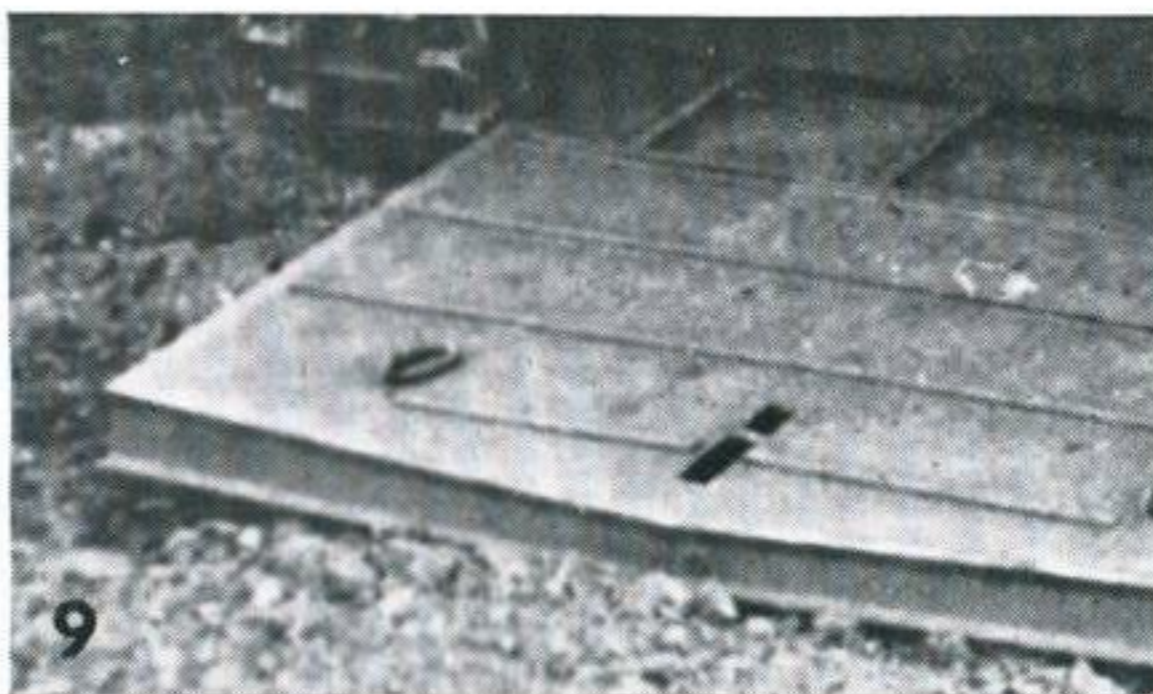
In other respects the LVTP5 is very similar to the LVTH6, subject of a lesson in the December 1969 issue of the *Journal*. The only major external difference, in fact, is that the LVTH6 has a turret with a 105-mm howitzer whereas the LVTP5 only has a machine-gun cupola. Otherwise it has the same slab-sided hull with an inverted-V ramp in its bows for embarking or disembarking the 34 Marine infantrymen normally carried in addition to its crew of 3. When operating in water it can be laden to a total weight of 37 tons but when operating on land it can carry an additional load of almost 3 tons.

The LVTP5 was first produced some 16 years ago and although no replacement is yet in production, a new LVTPX12 is undergoing trials.

Instructions for this lesson are on page 27.



8



9



10



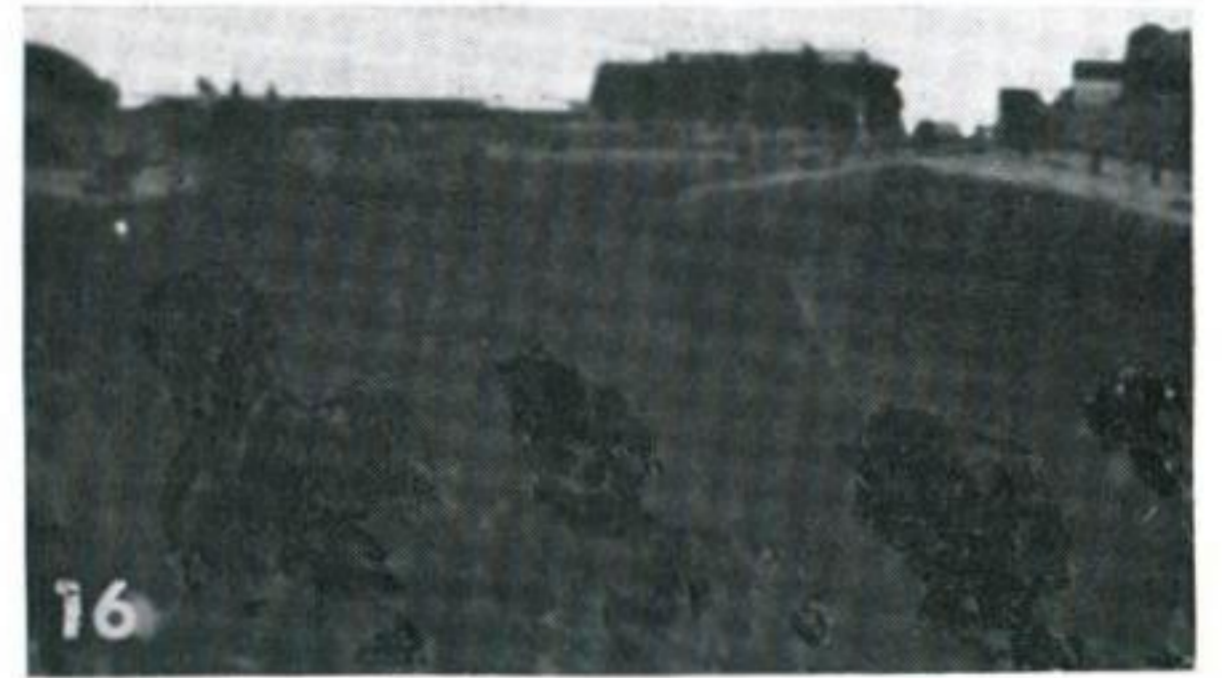
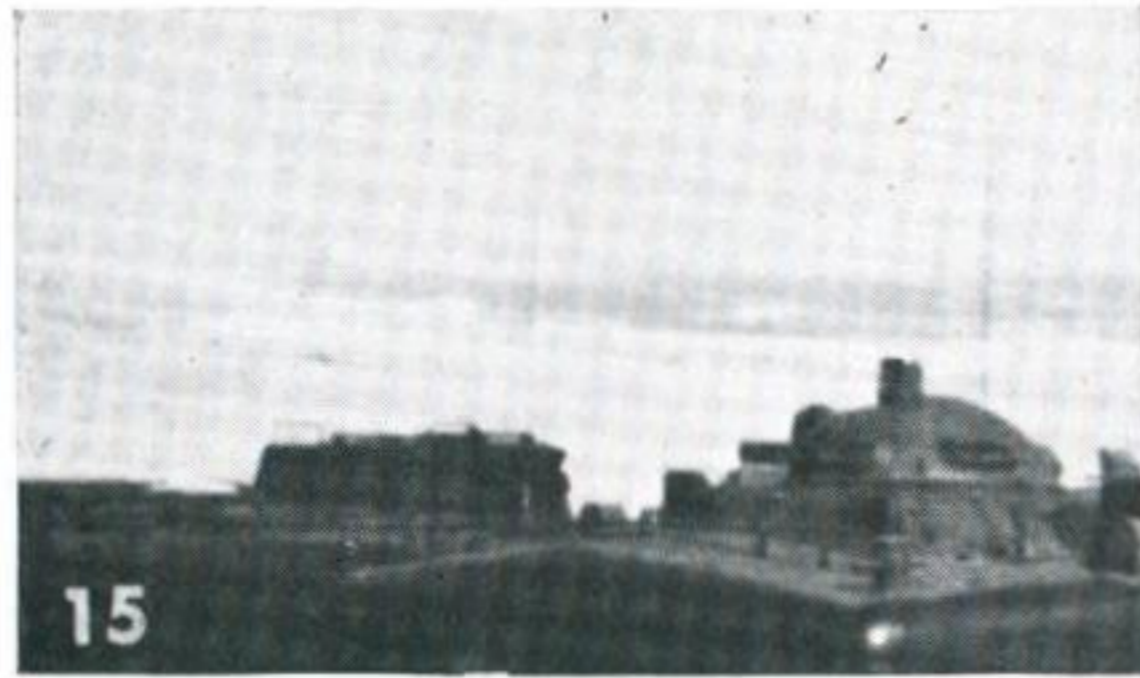
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13

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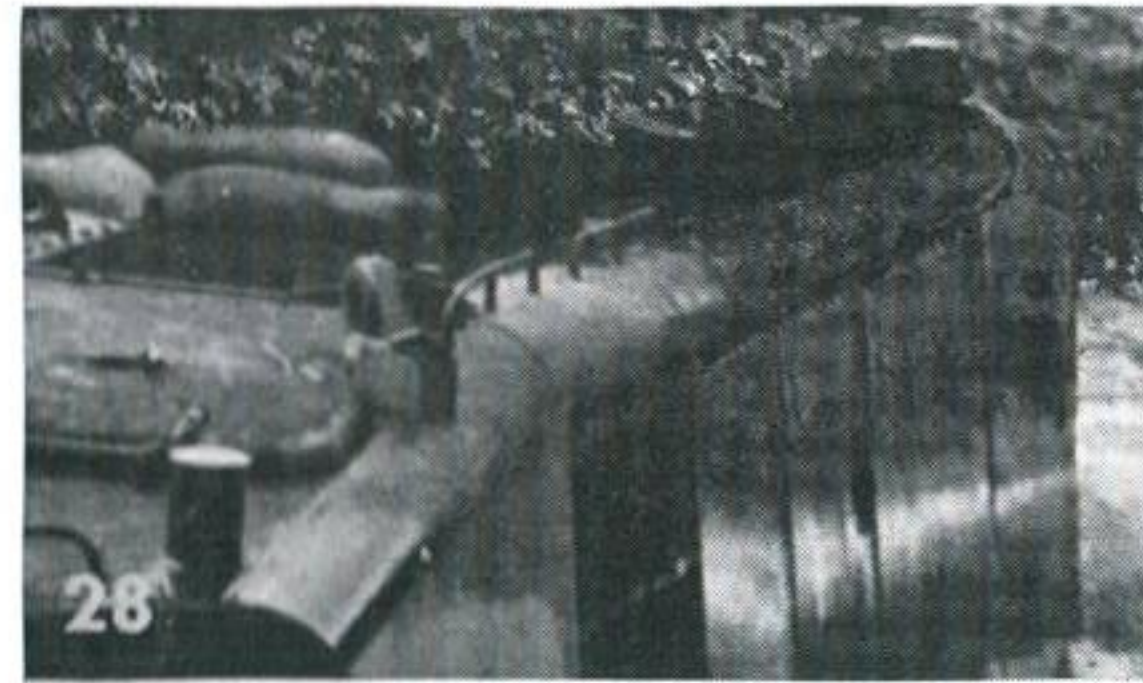
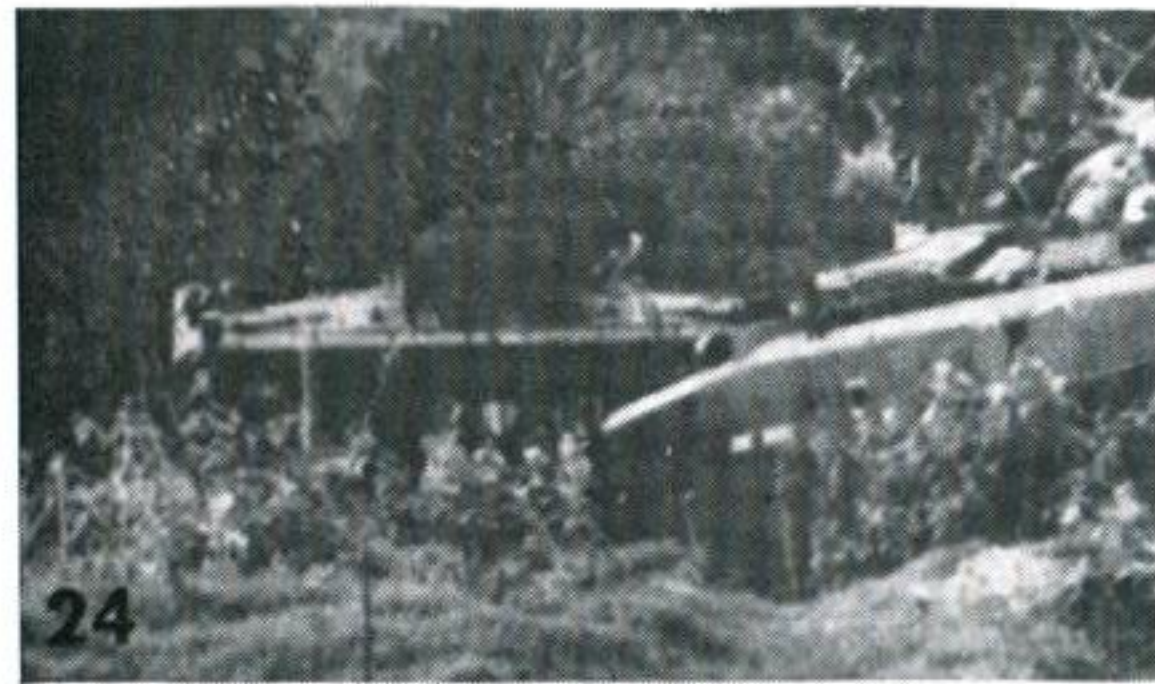
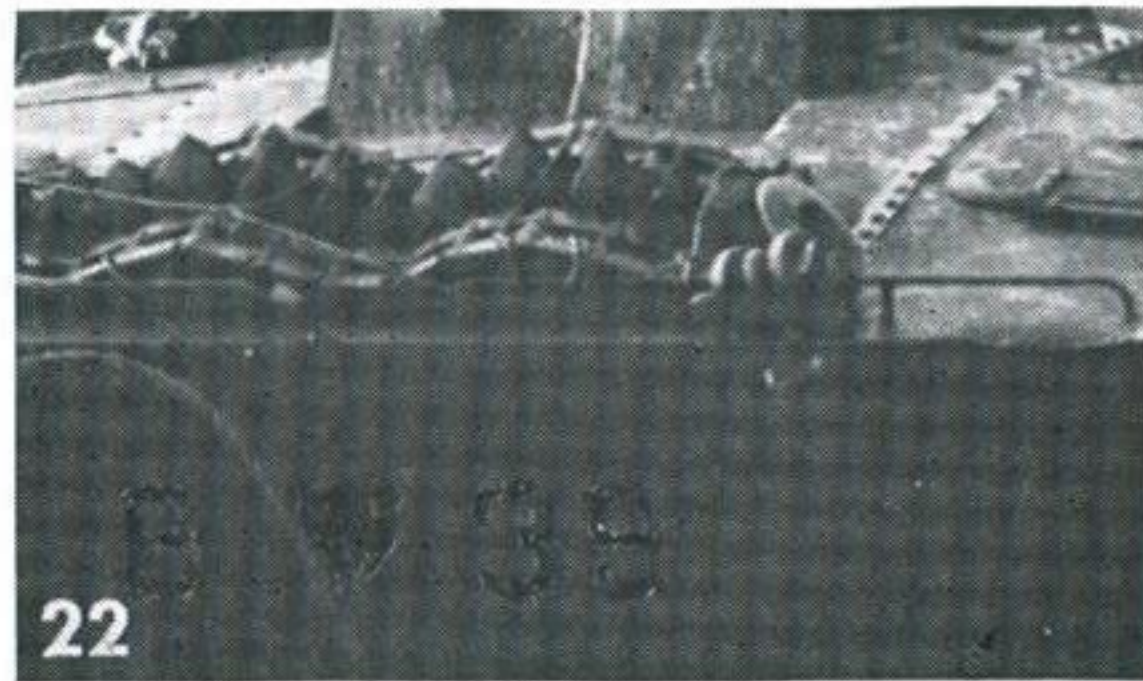
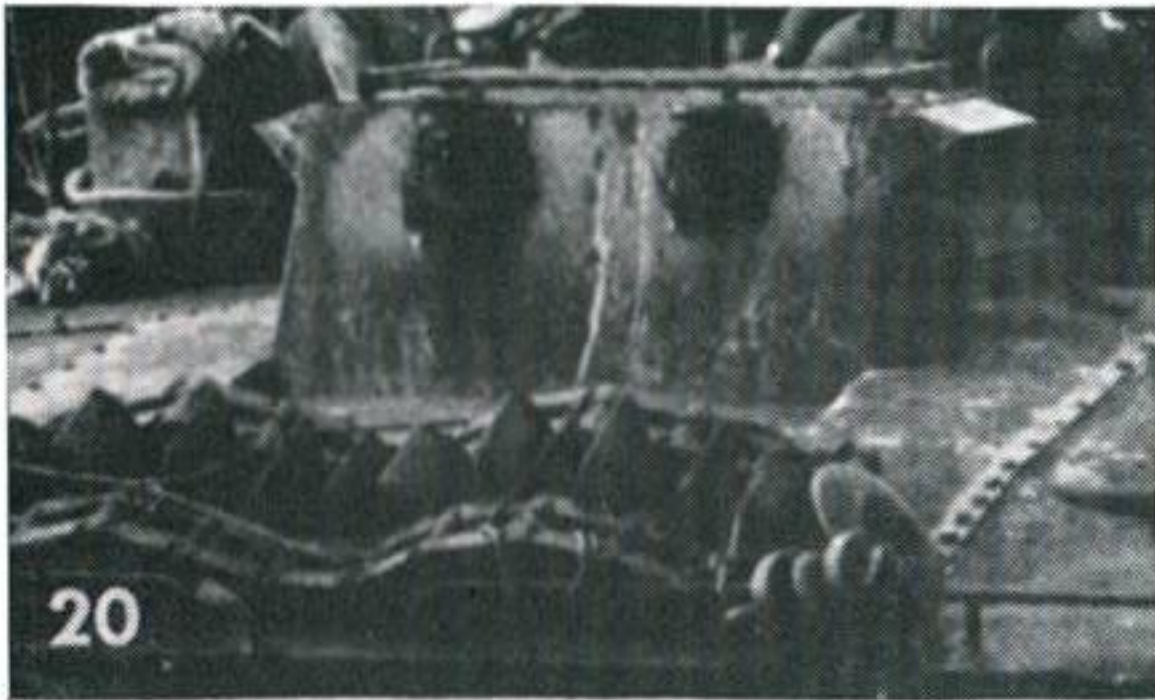
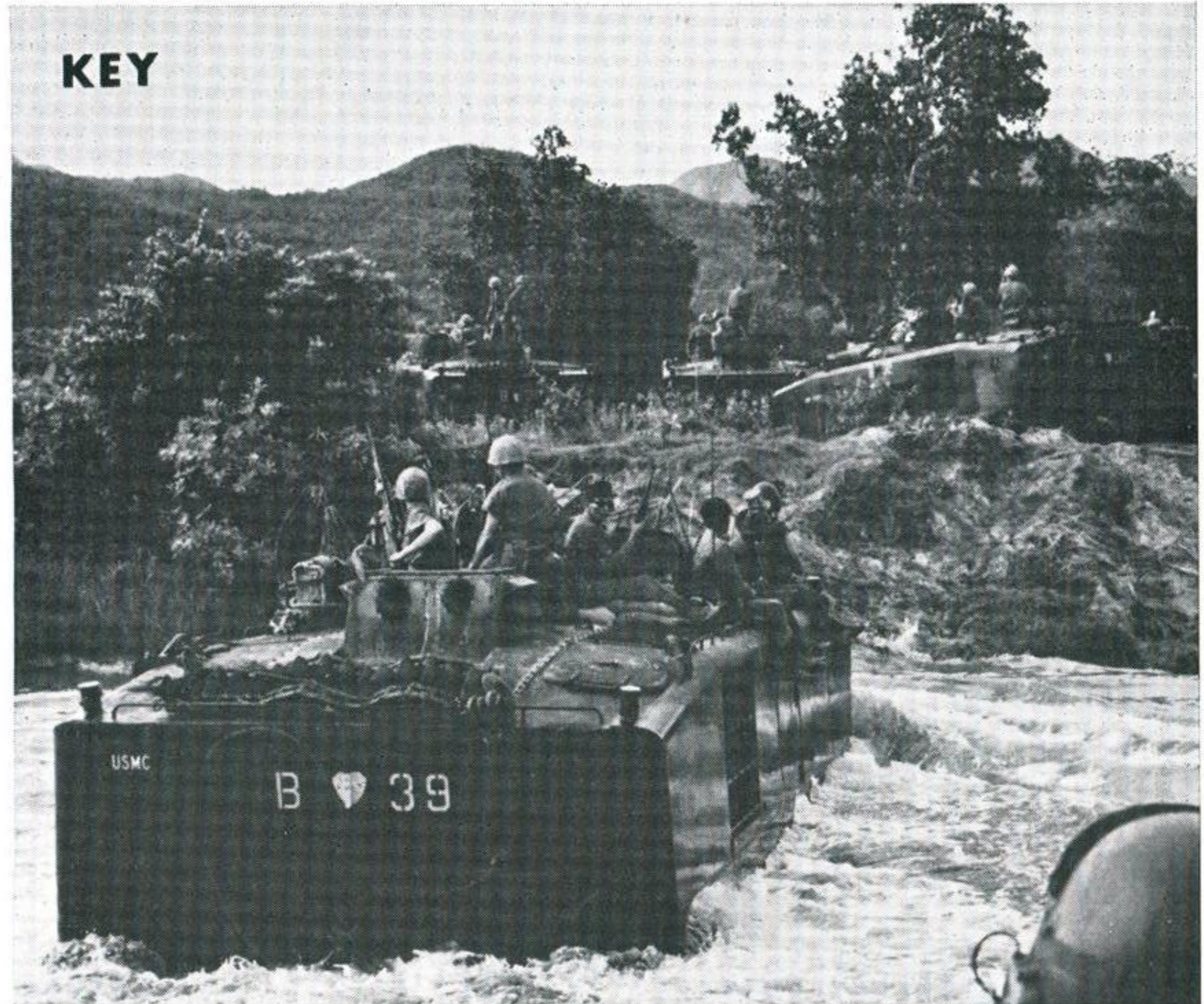
KEY





LVTP5

US Marine Corps Amphibian

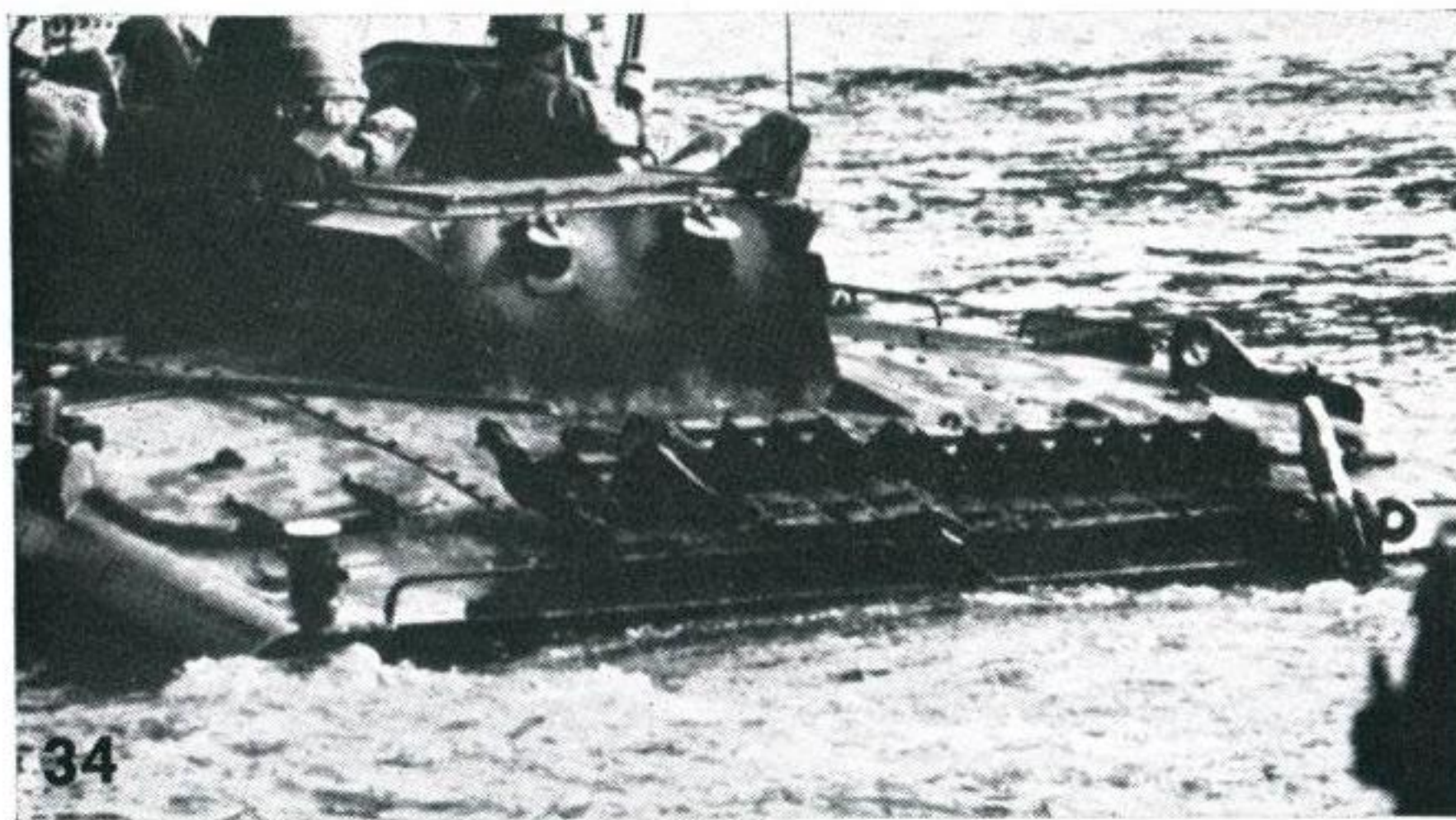


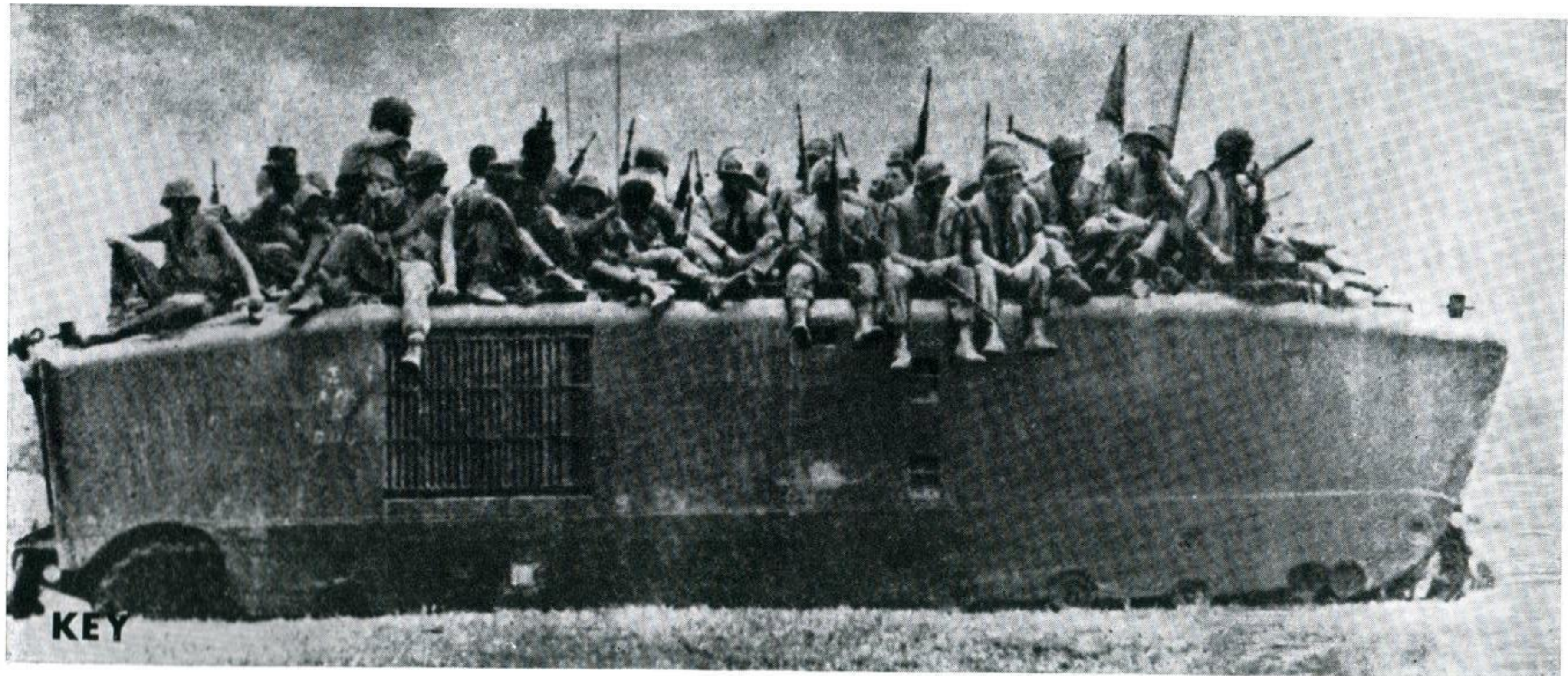
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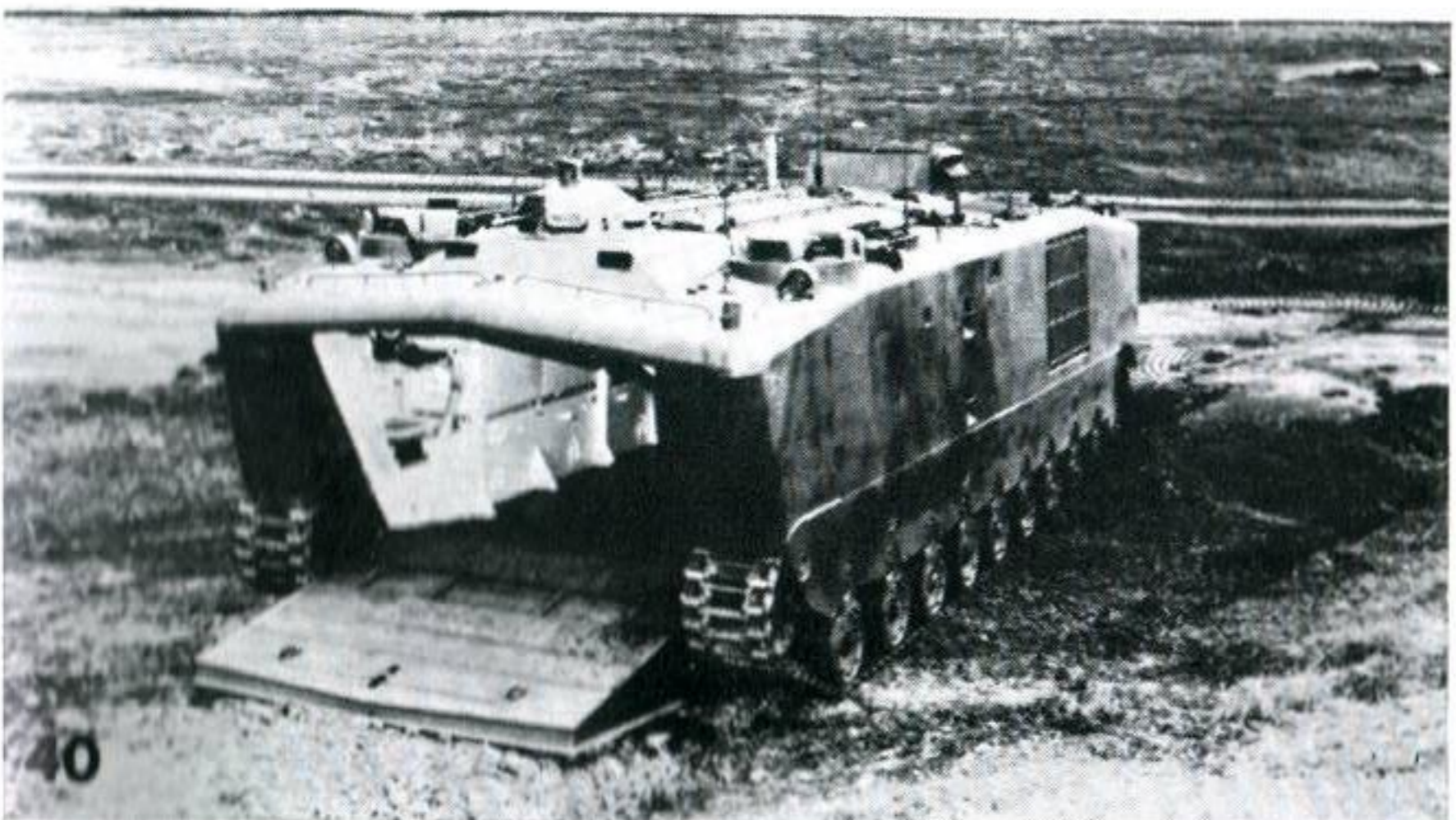
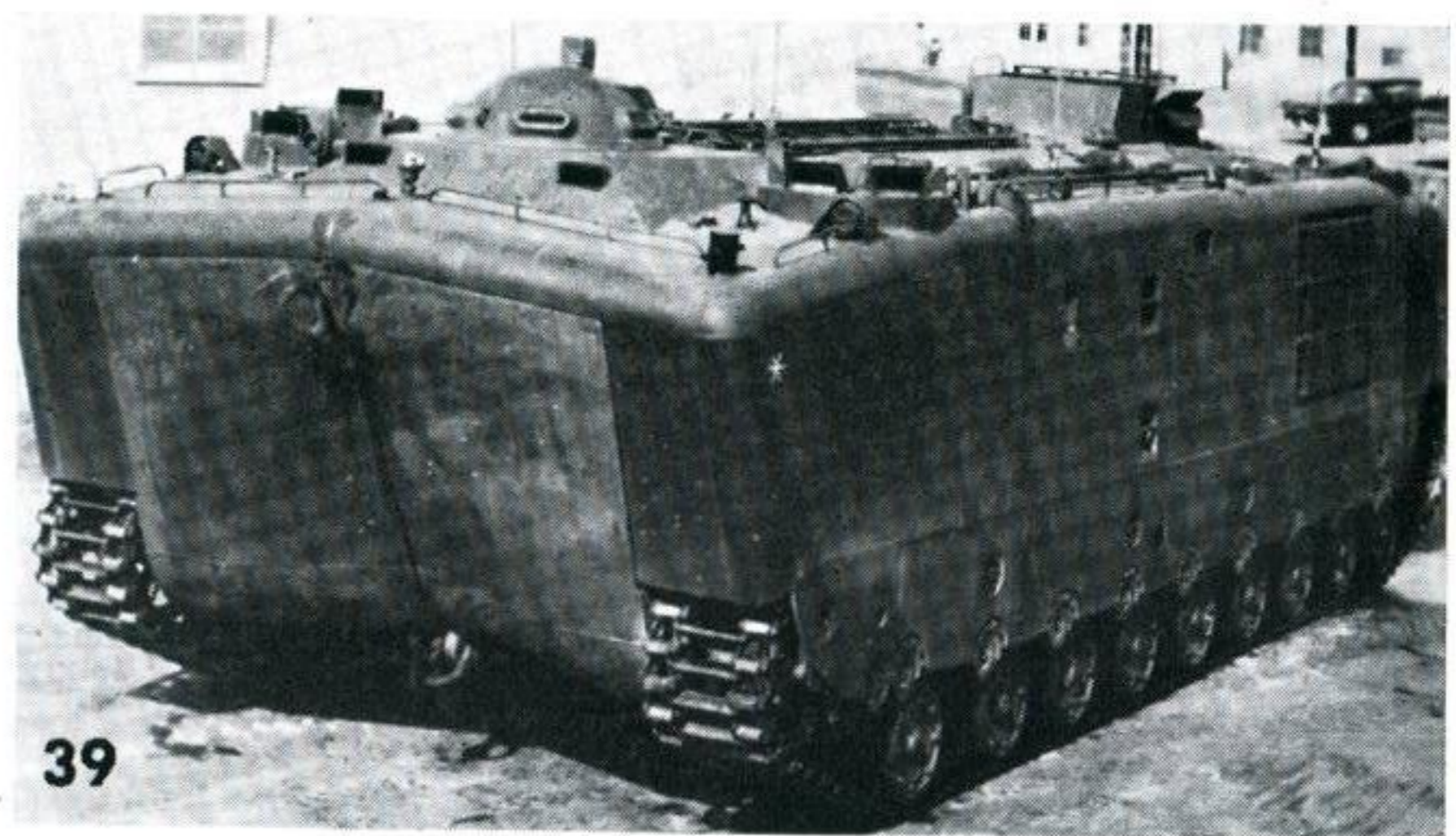
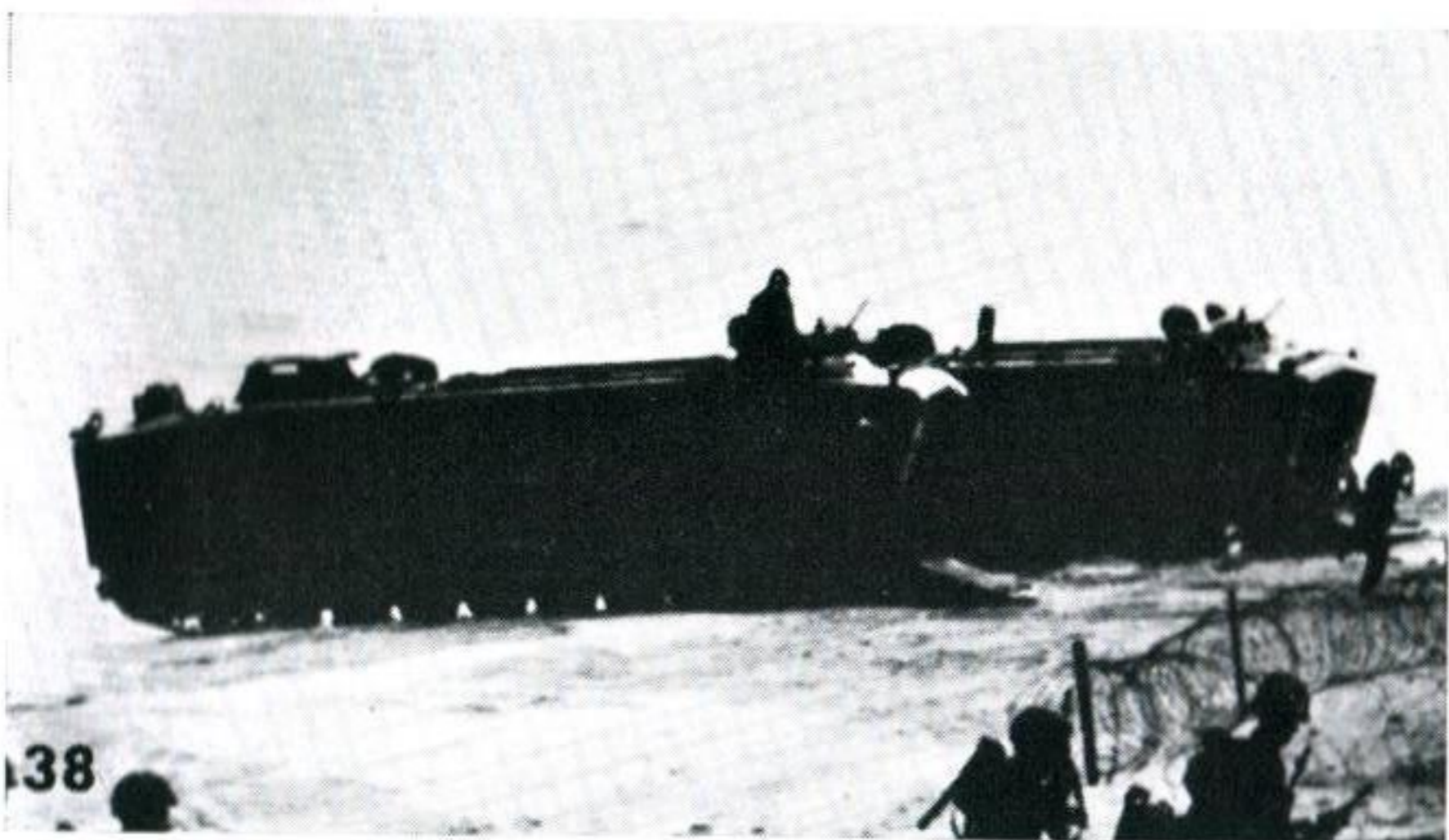


LVTP5 US Marine Corps Amphibian





Identify the target views by reference to the key views and write down LVTP5 against numbers in a prepared list of Nos. 1 to 42 as each one is positively identified. These may be tackled in any order using targets already positively identified as an aid. You are warned that there are jokers included.



SOLUTIONS TO EXERCISES AND TESTS



Cover Picture: A BAC167 Strikemaster, one of 16 ordered by Singapore for the Island's Air Defence Command. Also from BAC the Command has ordered Bloodhound ground-to-air missiles.

Page 8

CODLING

All targets are of **Codlings** except No. 2 (**Careless**), No. 11 (**Gulfstream II**), No. 17 (**Trident**) and Nos. 29 and 37 (**Boeing 727**).

Page 12

THE ROYAL NETHERLANDS AIR FORCE

- 1 Friendship
- 2 and 3 F-104G Starfighters
- 4 and 5 F-84F Thunderstreaks
- 6 Hunter F6s
- 7 Lockheed RT-33
- 8 Piper Super Cubs (N.B. Piper included in reporting name to avoid confusion with Soviet Cub)
- 9 Beaver
- 10 and 11 Alouette IIIs

Page 14

KOMAR CLASS MISSILE PATROL BOATS

All targets are of **Komars** except Nos. 21 and 30.

Page 18

RESOLUTION CLASS NUCLEAR POWERED BALLISTIC MISSILE SUBMARINES

All targets are of **Resolution Class** submarines except Nos. 18 and 28 which are of **Valiant Class**.

Page 4

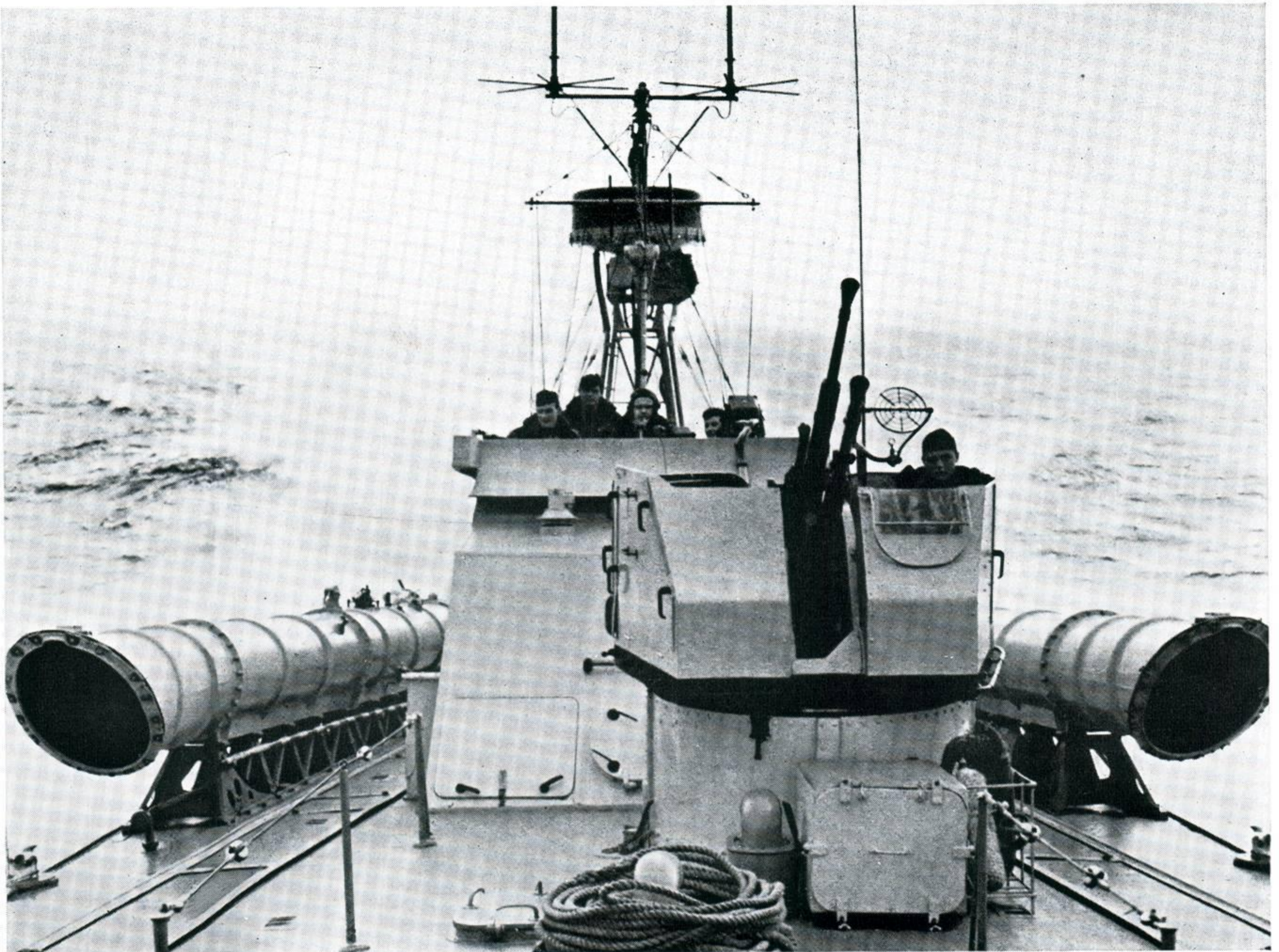
NORATLAS

All targets are of **Noratlas** except Nos. 2, 9 and 21 which are **Argosies** and Nos. 18 and 29 which are of **Boxcars** (C-119).

Page 22

LVTP5 US MARINE AMPHIBIAN

All targets are of **LVTP5s** except Nos. 5, 10, 18, 30, 35 and 41 which are **US M-59 APCs**.



View of the superstructure of a P6 Class motor torpedo boat before adaptation to Komar Class missile boat. Numbers of P6 boats still exist in their original form as shown.