

JOINT



SERVICES

# RECOGNITION

*Journal*



Vol. 24 DECEMBER 1969 No. 12

# TEST PAPERS

HS125/DOMINIE?

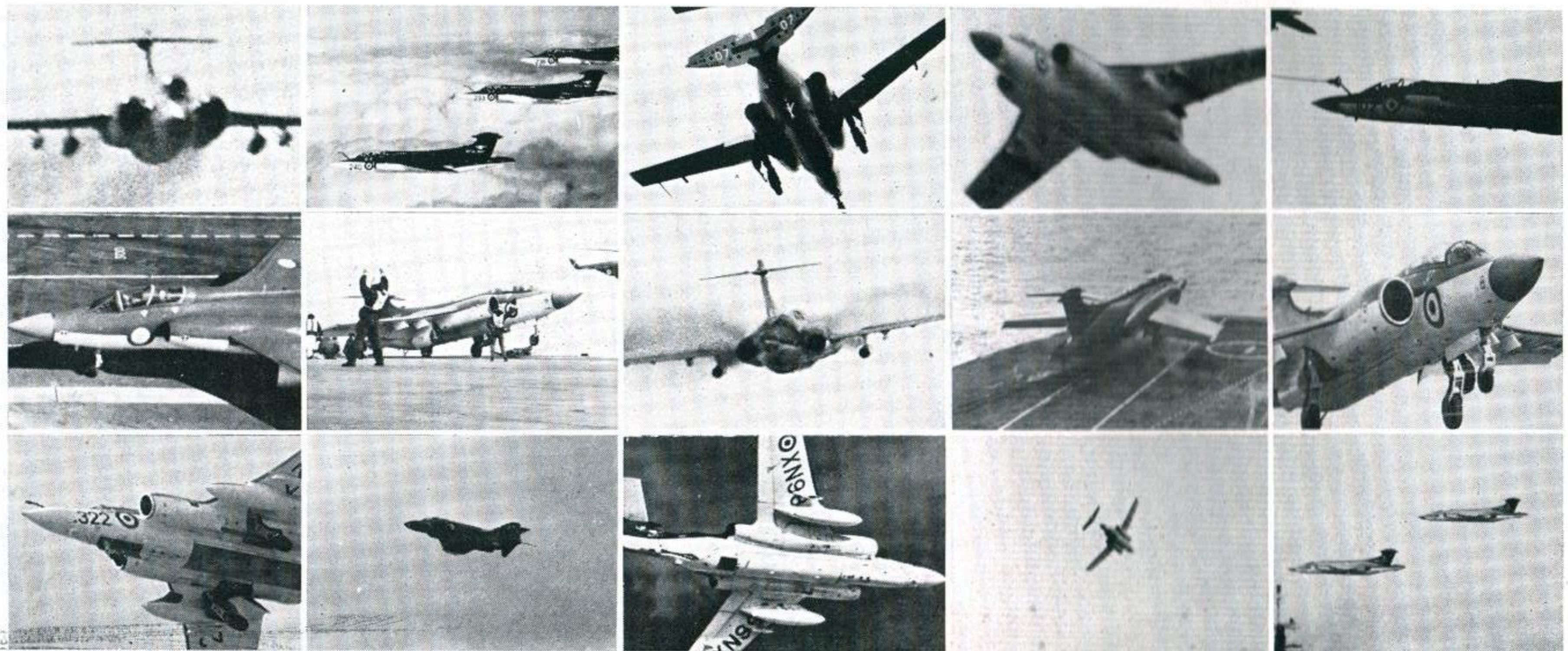
Can you identify these aircraft? Solutions on page 334



CRUSTY?



BUCCANEER?





JOINT SERVICES

RECOGNITION JOURNAL

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

The Journal is produced solely for official use and must not be sold to members of the public. Contributions and correspondence should be addressed to the Editor, *Joint Services Recognition Journal*, Ministry of Defence, Room 409, Old War Office Building, Whitehall, London, S.W.1.

Feature	Page
Wessex Helicopters of No. 845 Squadron Fly Past HMS <i>Bulwark</i> (cover) ... ..	309
Test Papers: HS125/Dominie, Crusty, Buccaneer	310
The Sud/Westland Helicopters — Nomenclature	311
Test Papers: RFA Resurgent, Resolution Class	312
* Vautour ... ..	313
Chop Test (Aircraft) ... ..	316
MEXE — Military Engineering Experimental Establishment ... ..	318
* Étendard IV ... ..	320
* Fawn Class — Coastal Survey Ships ... ..	324
* LVTH6 — US Marine Corps Amphibian ... ..	328
Battle of Britain Flight ... ..	334
Solutions to Exercises and Tests ... ..	334
Index to Vol. 24 ... ..	335
Getting Ship Shape — HMS <i>Chichester</i> ... ..	336

\* Identification Lessons

## THE SUD/WESTLAND HELICOPTERS

### Nomenclature

The SA330 and SA341 helicopters being produced jointly by Sud Aviation and Westland Helicopters Ltd. for the French and British Services will be named *Puma* and *Gazelle* respectively.

Mark numbers to be allocated are still being discussed with the French, but role prefix letters have been allocated as follows:

**SA330**

**Puma HC**—when used in RAF transport role

**SA341**

**Gazelle AH**—for use with the Army and Royal Marines

**Gazelle HT**—for use with the Royal Navy

**Gazelle HT**—for use with the RAF as a trainer

**Gazelle HCC**—for use with the RAF on communications

The Puma has been developed in France by Sud Aviation and production is being undertaken jointly by Sud and Westland for the airframes, and Rolls-Royce and Turbomeca for Turmo IIC4 gas turbines. Deliveries to the French Army started in April and those for the RAF are expected this year. They will supplement the Wessex in Air Support Command and provide a valuable increase in the tactical transport capability of No. 38 Group. Pumas can carry 5,500 lb as underslung cargo and typical cabin loads are 16 fully equipped troops or 6 stretchers and 4 attendants.

The Gazelle is currently being developed under Sud Aviation in collaboration with Westland Helicopters and its Astazou IIIN turbine is under development by Turbomeca. It will be produced jointly by French and British industry in two main versions principally for reconnaissance and communica-

tion duties, but with variants as shown above by the role letters.

A name for the WG13 has not yet been chosen. It is still being developed under Westland design leadership, with Sud Aviation participation, and will be powered by twin BS360-07 gas turbines under development by Rolls-Royce. It is due to be in service by the mid-seventies and two main operational variants are proposed; utility for the British Army and Royal Marines and a naval version for both the Royal Navy and the French Navy. It is also planned to use it for RAF advanced helicopter training.

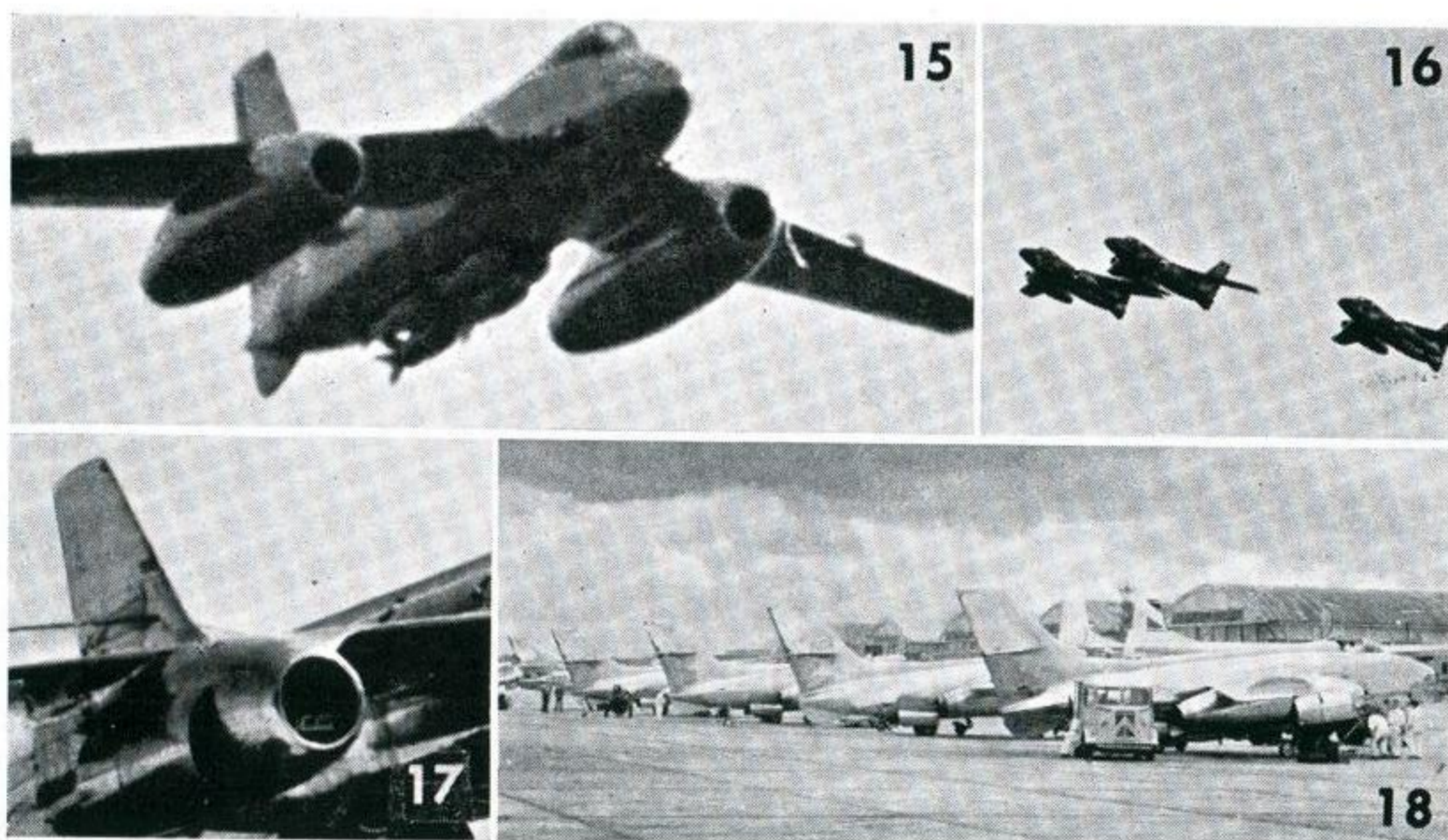
*Artist's impression of the WG13*



**VAUTOUR** *continued*

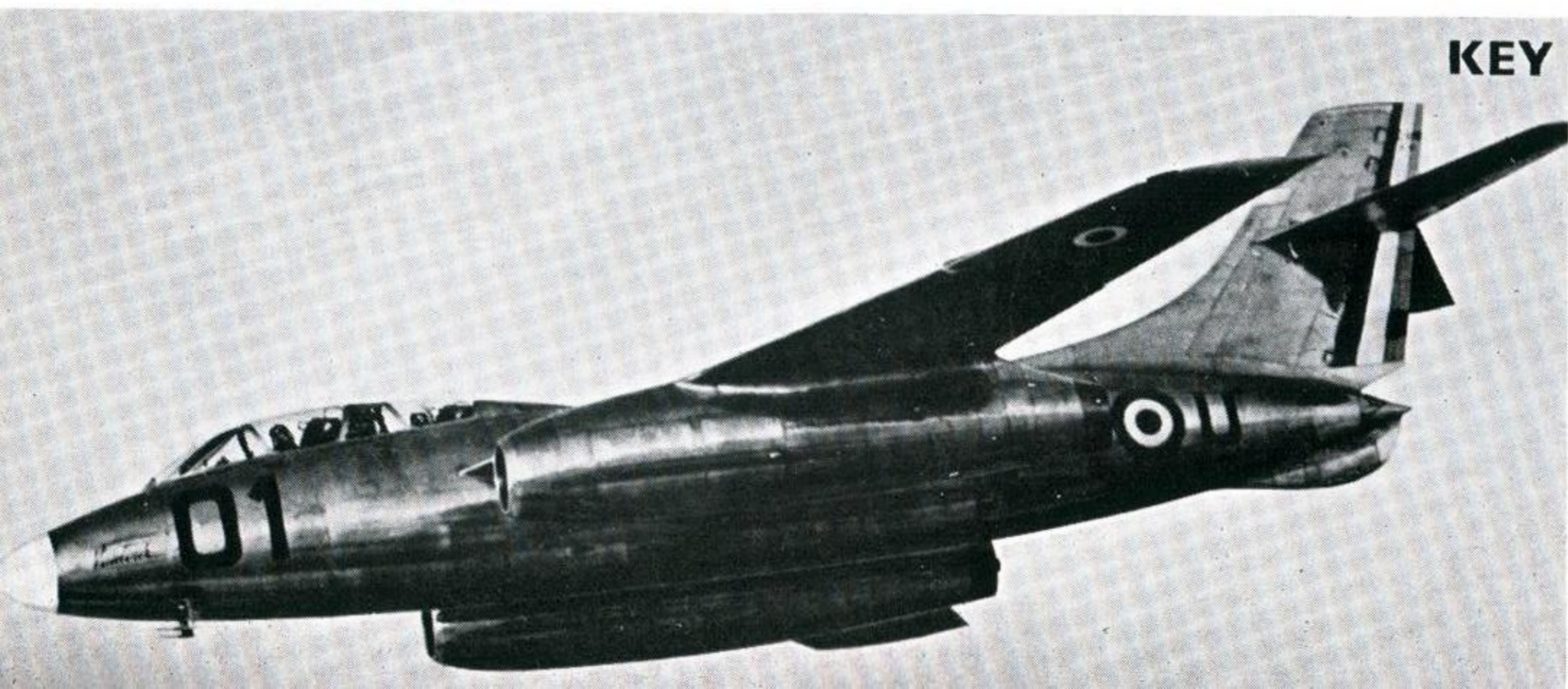


**VAUTOUR IIB**



The Vautour is supersonic in a dive and can carry internal and external armament, typical underwing loads comprising four bombs of up to 1,000 lb each or—in the case of the IIN—four Matra R.511 air-to-air missiles. Work to the lesson instructions on page 312. Solutions on page 334.

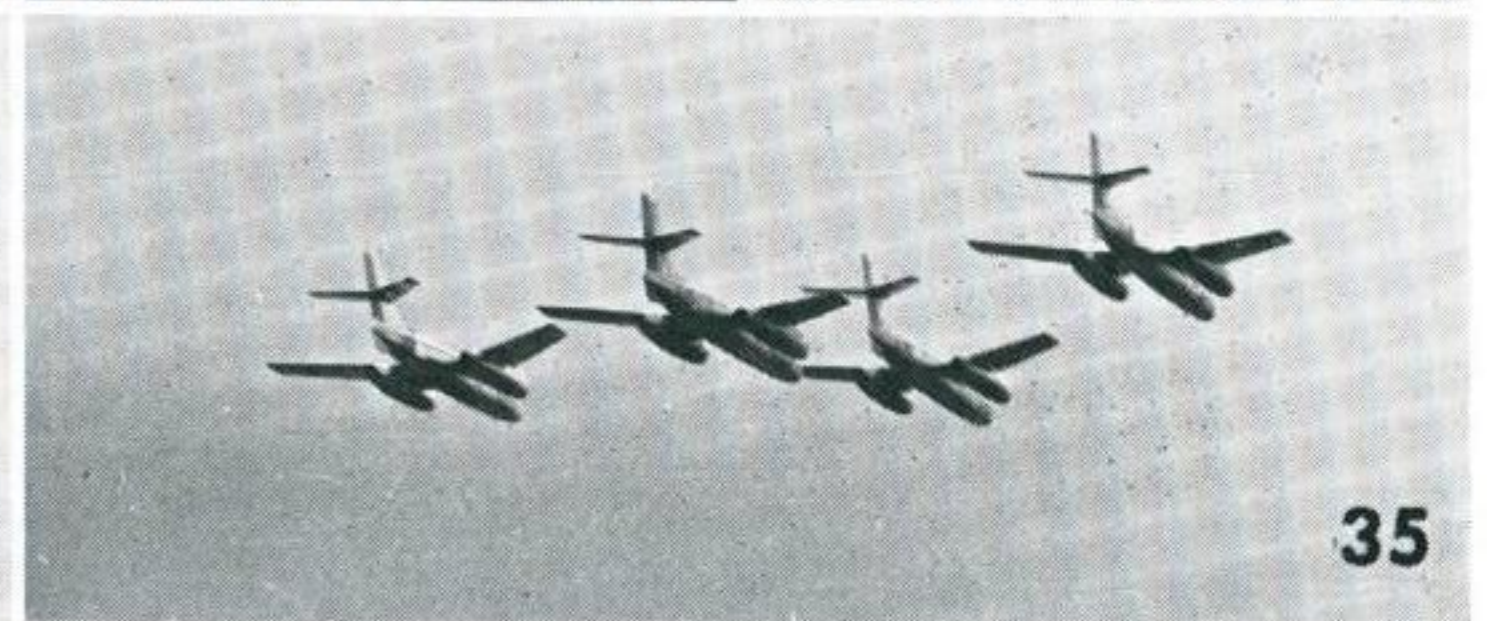
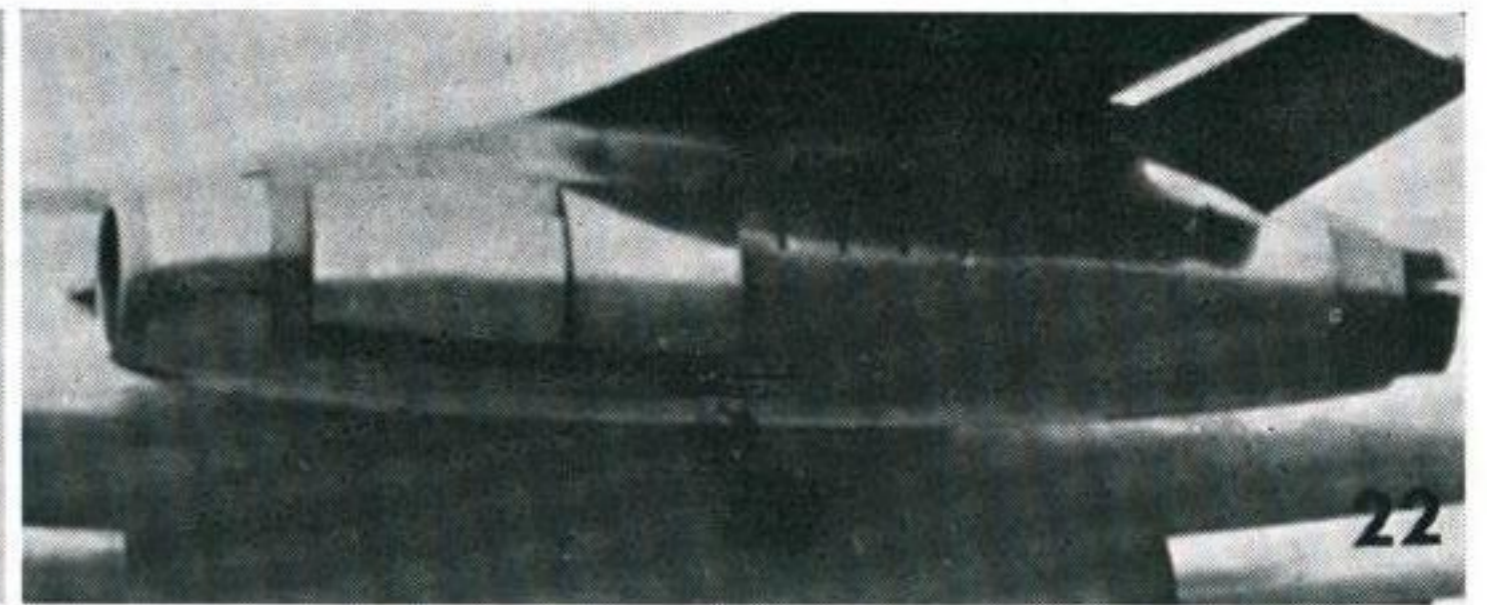
**VAUTOUR IIN**



**VAUTOUR IIN and IIB**



Span 49½ feet

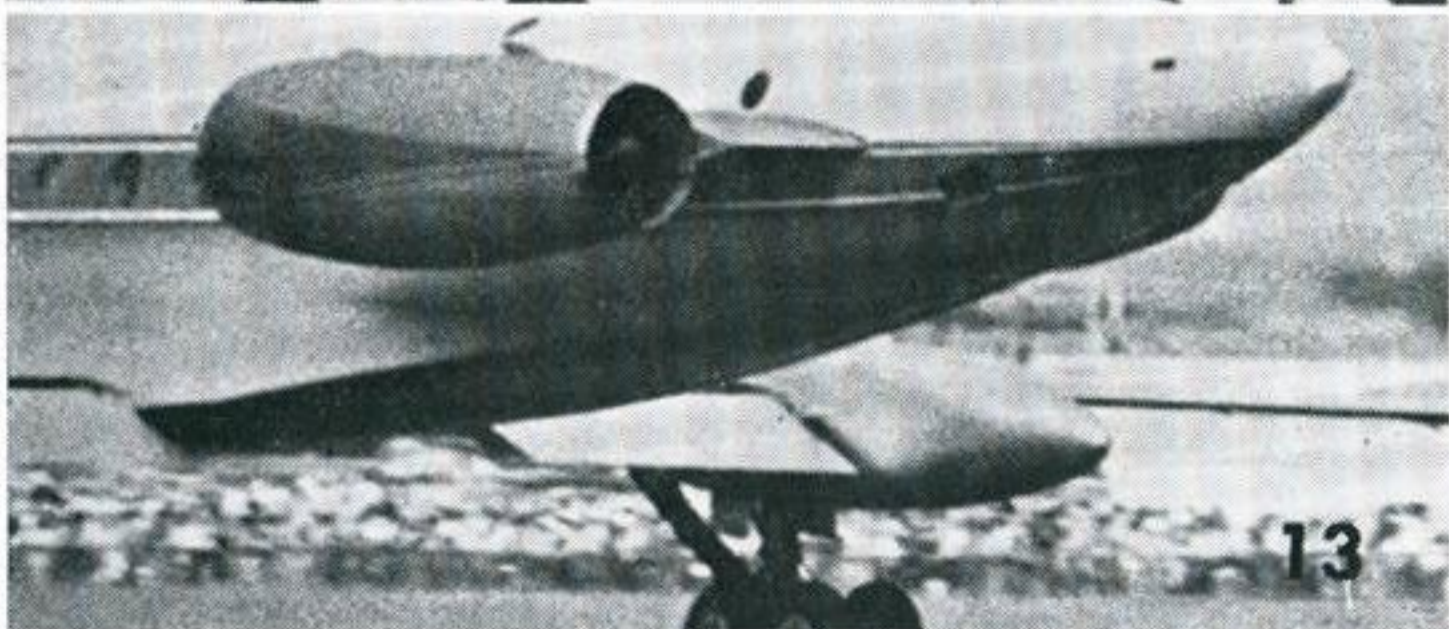
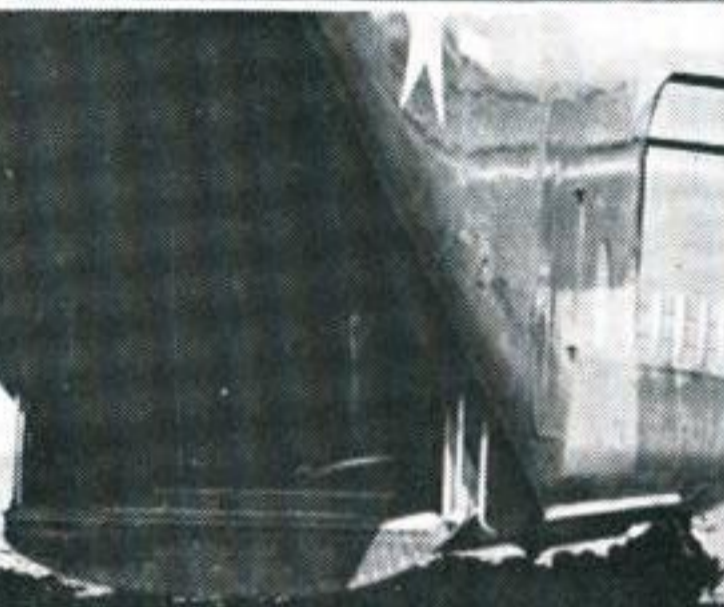
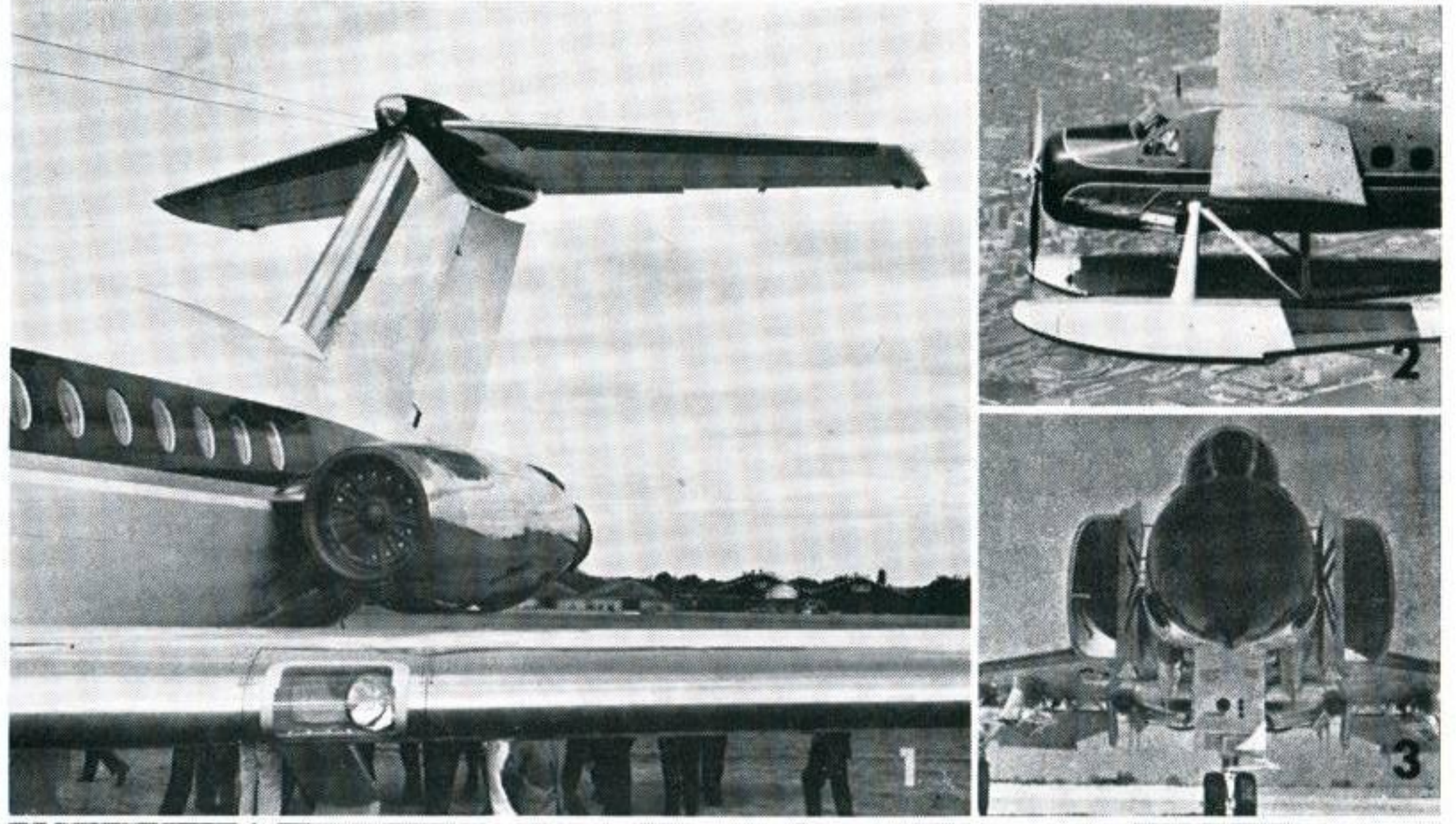


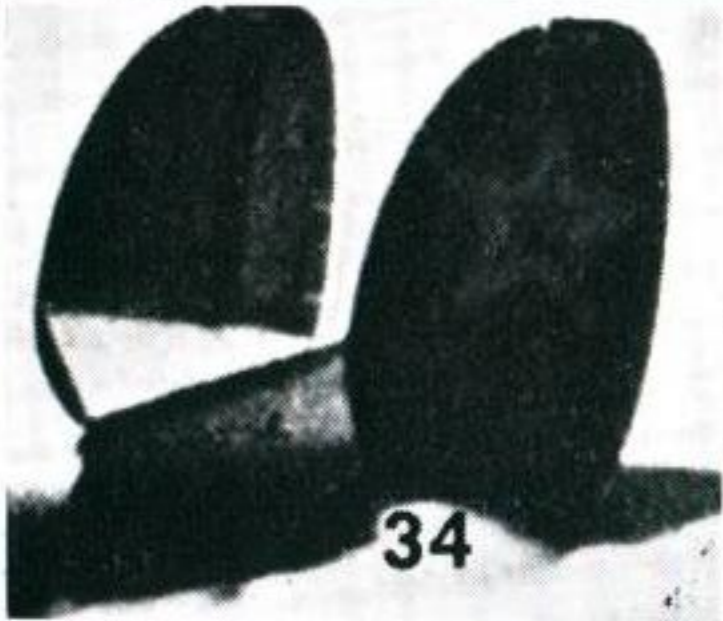
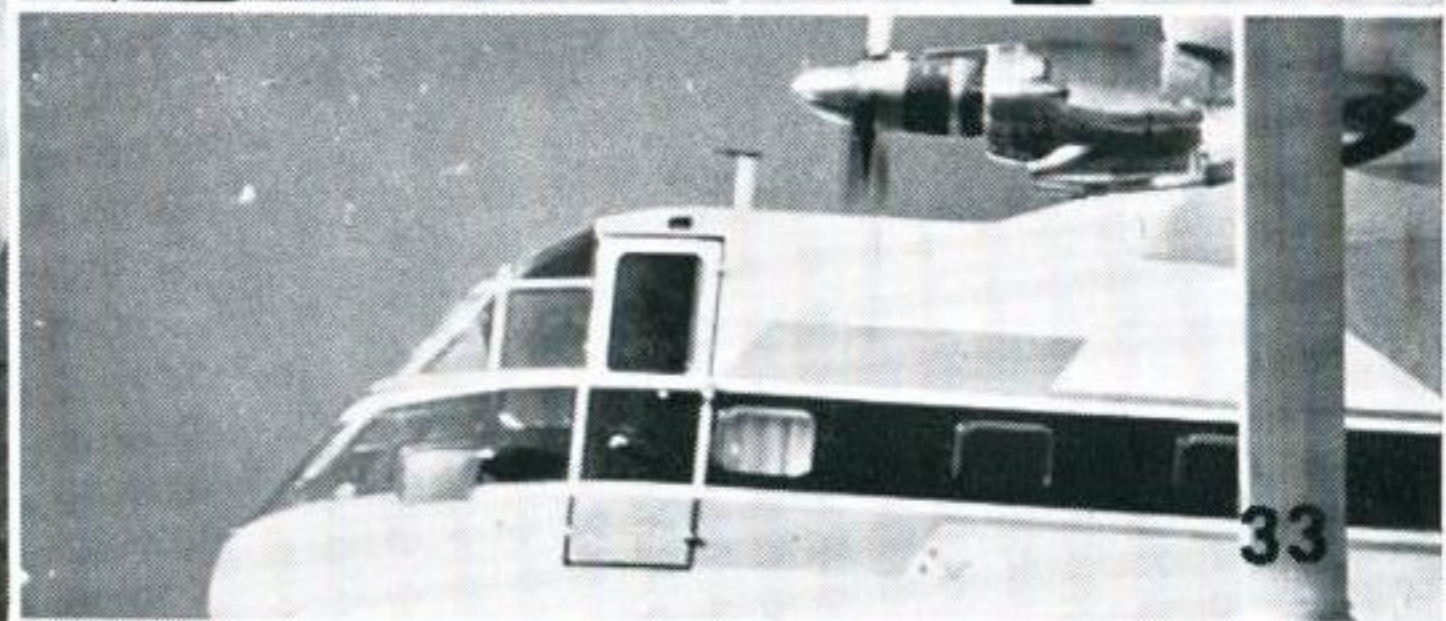
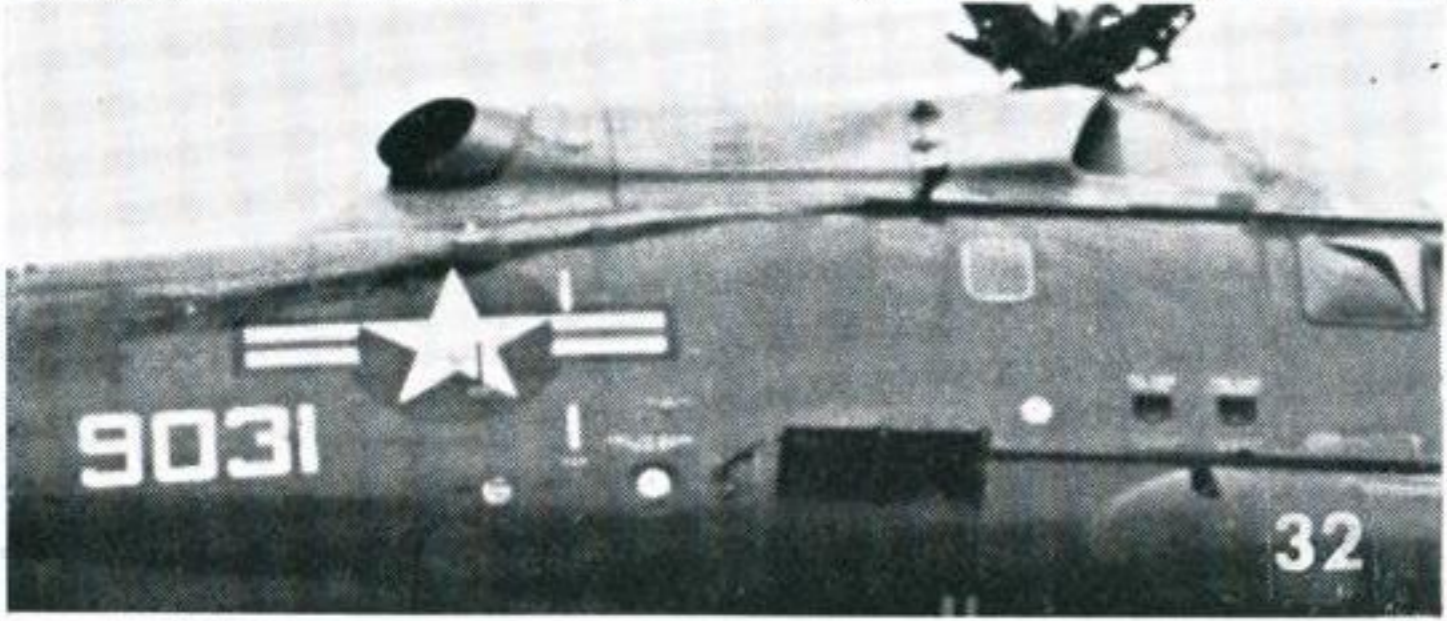
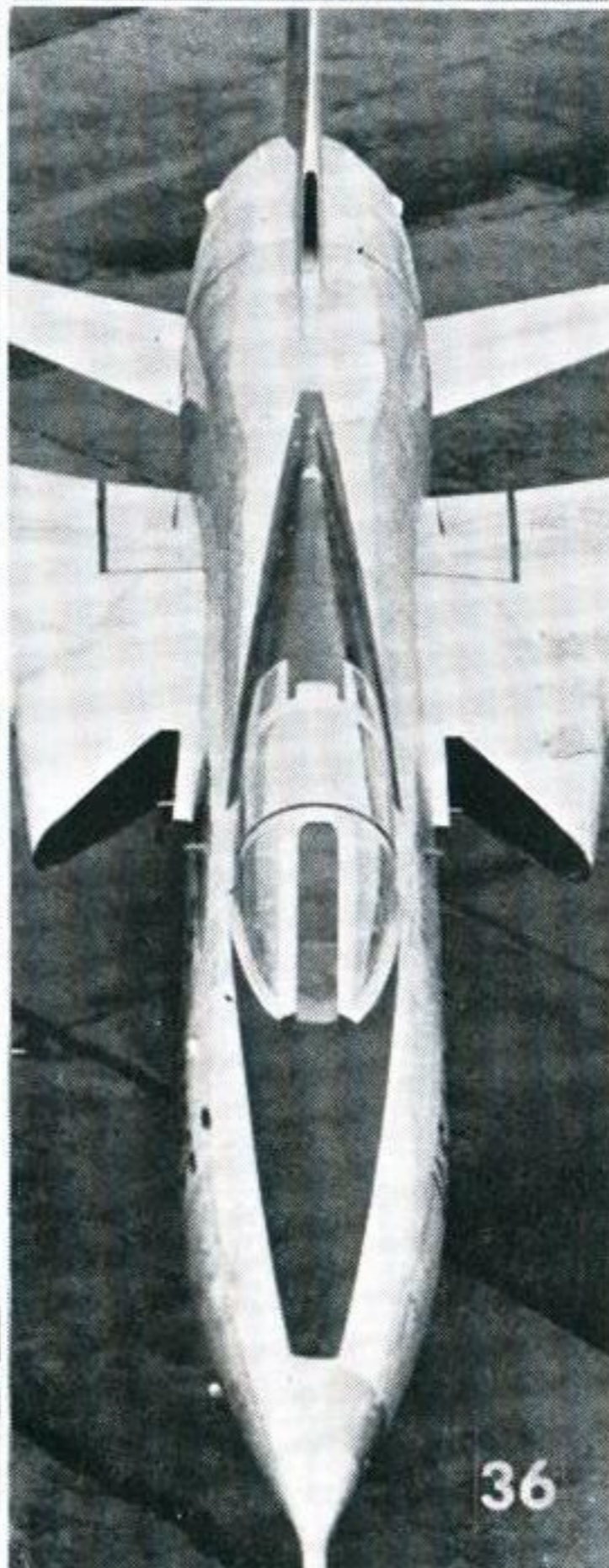
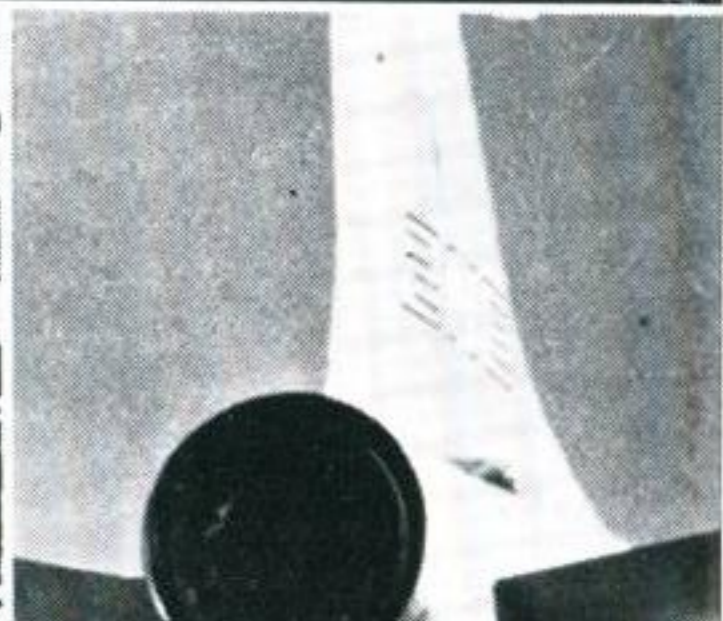
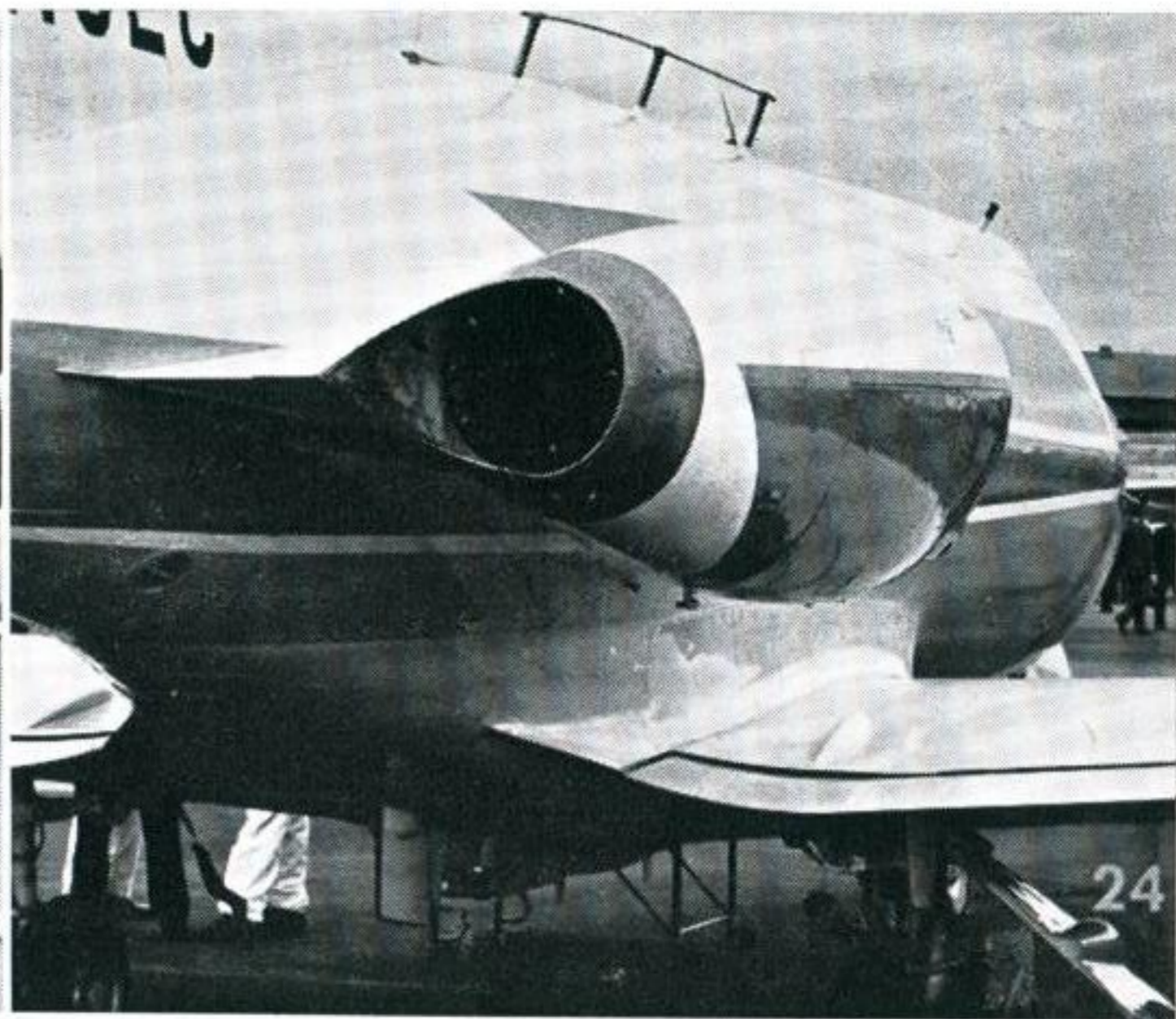
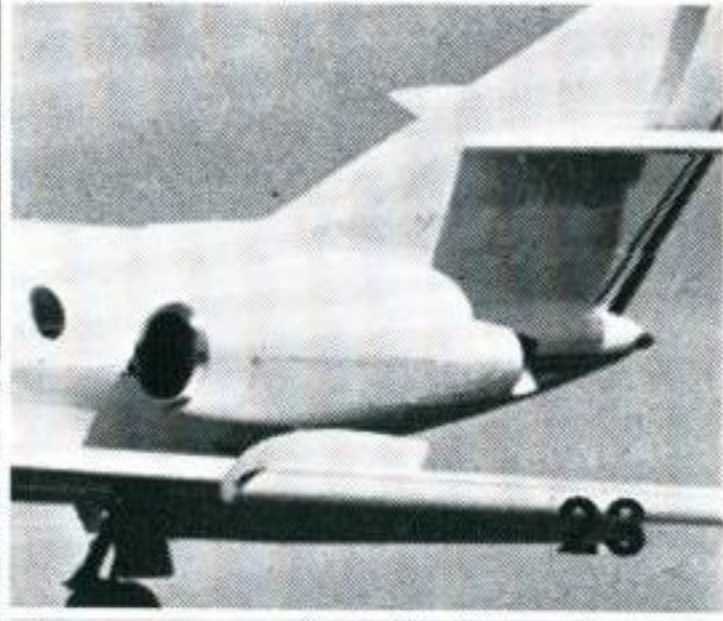
**VAUTOUR IIN  
KEY**



# CHOP TEST

Forty-two views showing the major characteristics of various aircraft that have been featured in the *Journal* over the past few years. Write down the aircraft type names and check your answers with the solution on page 334.





# **MEXE**

**MILITARY  
ENGINEERING  
EXPERIMENTAL  
ESTABLISHMENT**



The dual roles of the Class 16 Bridge (Airportable)—as a floating bridge ferry or providing a 50-foot clear span. The picture above shows part of MEXE's waterfront at Christchurch.

A modern link with past RAF armament. A self-engaging land anchor, projected from a Stalwart by two ex-RAF 2-inch rockets, during tests to find a practical means for amphibious vehicles to emerge from water obstacles. The method shown is scheduled for fitting to combat engineer tractors.



This is the 50th anniversary year of MEXE, the Military Engineering Experimental Establishment at Christchurch, Hampshire, where current activities of the 16 military and almost 800 civilian staff include many projects of Joint Service interest.

The Establishment has its origins in 1919 as the Experimental Bridging Company, Royal Engineers, when it was commanded by that distinguished Sapper officer, Major (later Lieutenant-General Sir Gifford) LeQ. Martel. The site at Christchurch was then chosen as one providing the tidal river conditions essential for the development of bridging and obstacle crossing equipment, using barracks originally built in 1792 of which the original guardroom is still preserved. In 1925 the Company became the Experimental Bridging Establishment and in 1946 assumed its present title. Up to that time the highlight of its achievement was the development of the Bailey Bridge, designed by Sir Donald Bailey.

Postwar, as its present title indicates, the Establishment's tasks have become more varied, and while maintaining its eminent position in the field of military bridging, it has become well known in other fields. These include fuel and water supply systems, electrical and mechanical equipments, earthmoving and mechanical handling equipment.

Experience in developing landing surfaces, when necessary, for Army aircraft, and the recent transfer of responsibility to the Army for airfield construction, have brought several aspects of the Establishment's work to be of direct RAF concern. The airportability requirements for military equipment has made even the types of transport aircraft chosen a matter of dual Service concern, and the deployment of the Harrier involves several integrated problems. These pictures show some current facets of MEXE's experimental and development work that is of importance to both the Army and the RAF.



Hercules on a PSA1 runway, which is intended to provide a load bearing surface over soft ground. This is made up of 9 foot panels of interlocking light alloy extrusions laid in a brickwork pattern.

A standard helicopter membrane pad, overlaid with an airfield mat of PSA1, to provide a small protective surfacing for Harrier operations. The primary purpose of the surfacing is to prevent ingestion of soil by the aircraft engines. On firm soil or turf surfaces, the helicopter membrane underlay would not be essential. Mats and membranes used in this configuration have been accepted for use with Harriers.



One of the two prototype ultra-light helicopter membranes which has successfully undergone trials at the Joint Helicopter Development Unit, and is being tested in NW Europe.



**ÉTENDARD IV-M**

## ÉTENDARD IV

First production model of the Dassault Étendard was the IV-M, a navalised version of the NATO-specification Étendard IV low-level land-based strike fighter which existed only in prototype form. The French Navy ordered the IV-M for service on its new carriers, the *Clemenceau* and *Foch*, and the prototype flew in May 1958. Sixty production versions have now been delivered and also in service is the Étendard IV-P, of which 20 were delivered as dual-purpose tactical

reconnaissance/tankers, with nose and ventral camera positions, flight refuelling nose-probe and "buddy-pack" hose-reel unit.

Various understores may be carried including bombs, rockets, Sidewinder air-to-air missiles or Nord AS30 air-to-surface missiles, and auxiliary fuel tanks.

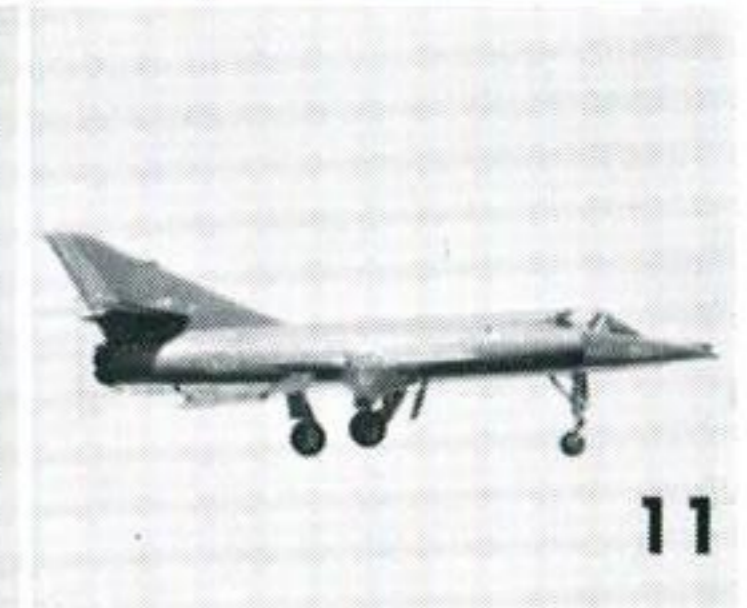
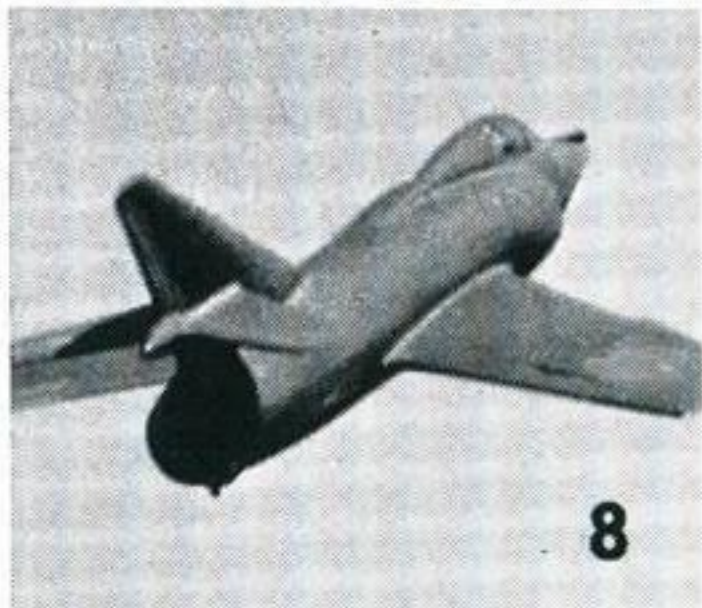
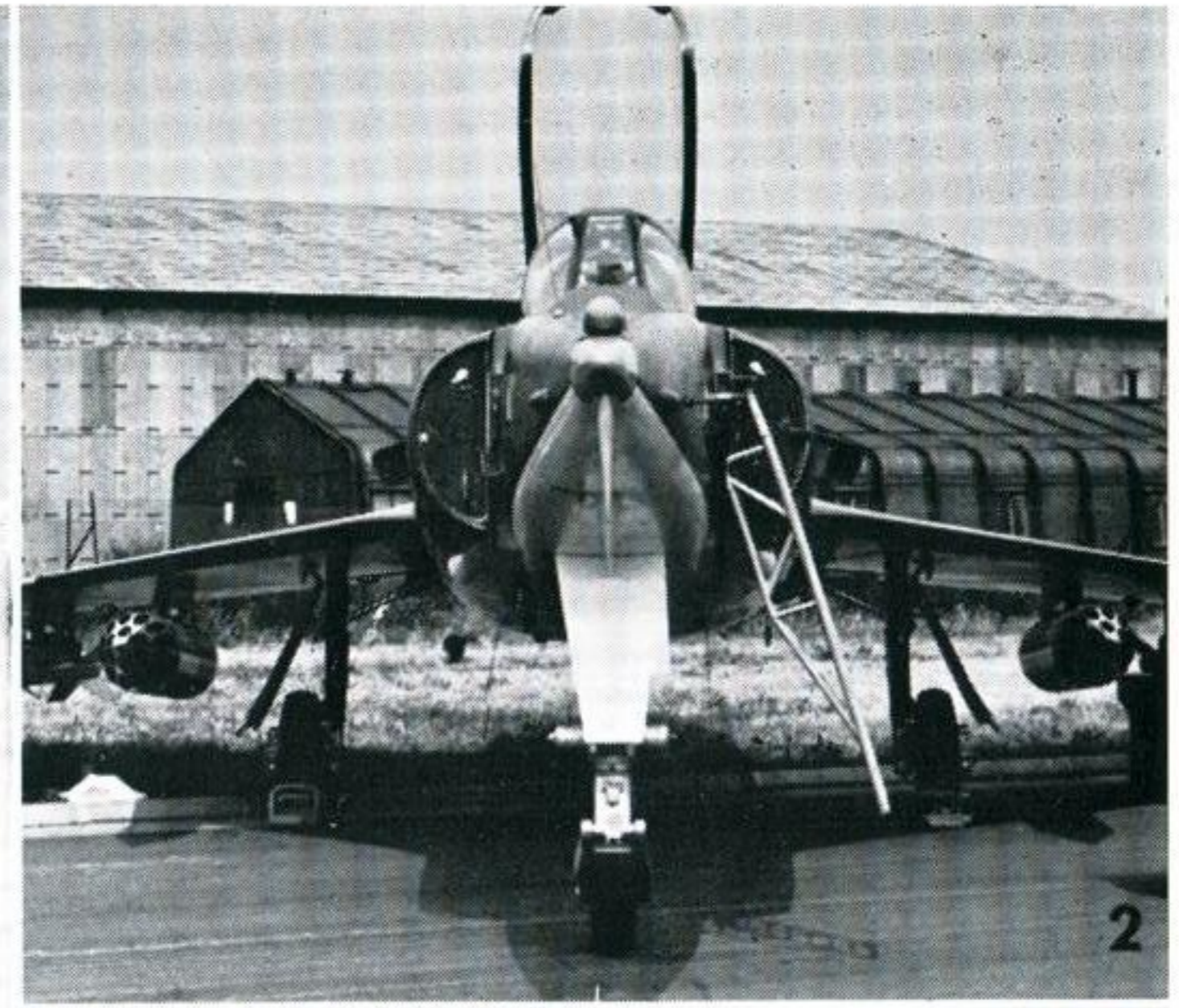
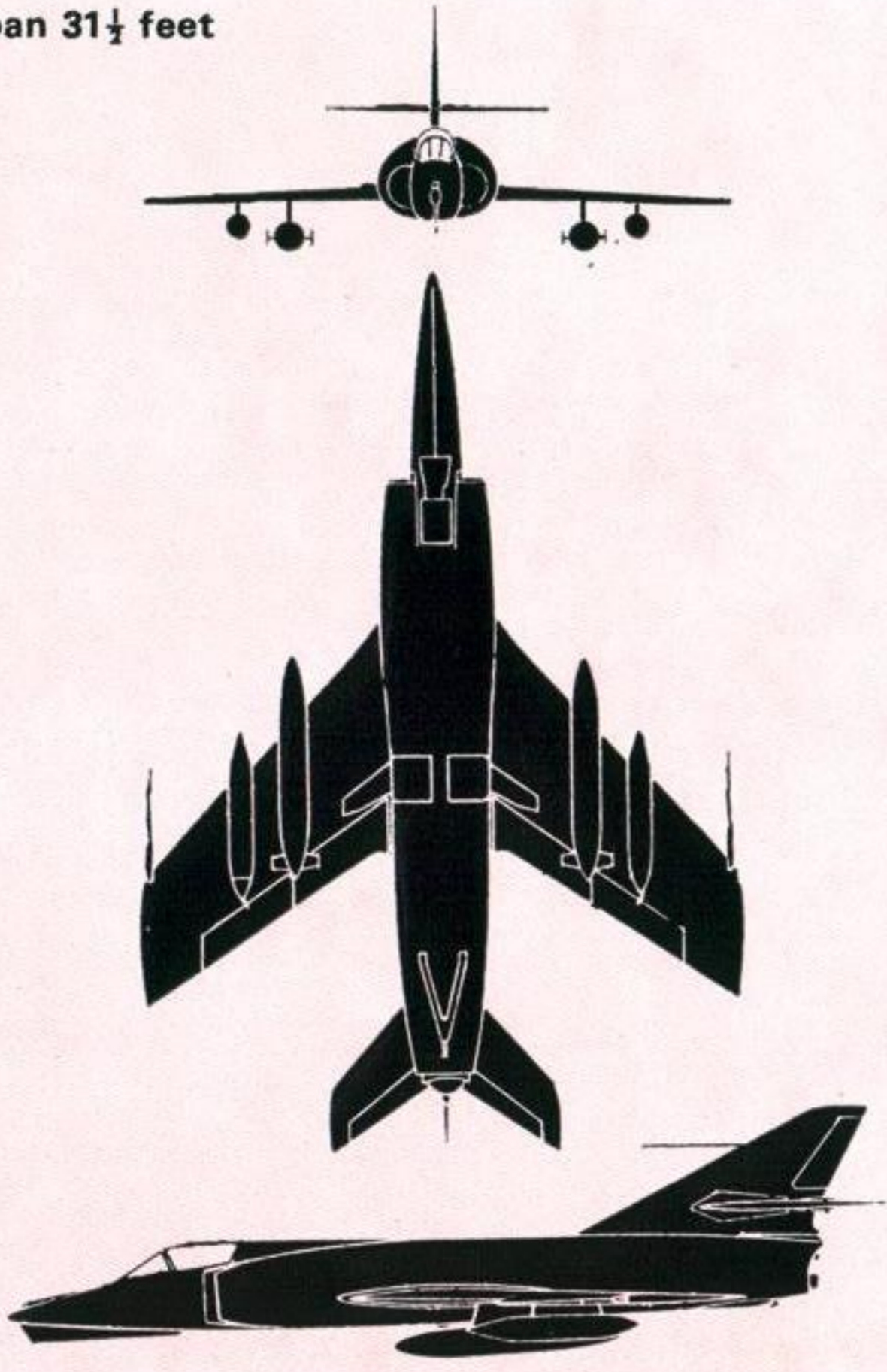
*Lesson instructions are on page 312*

*Solutions on page 334*



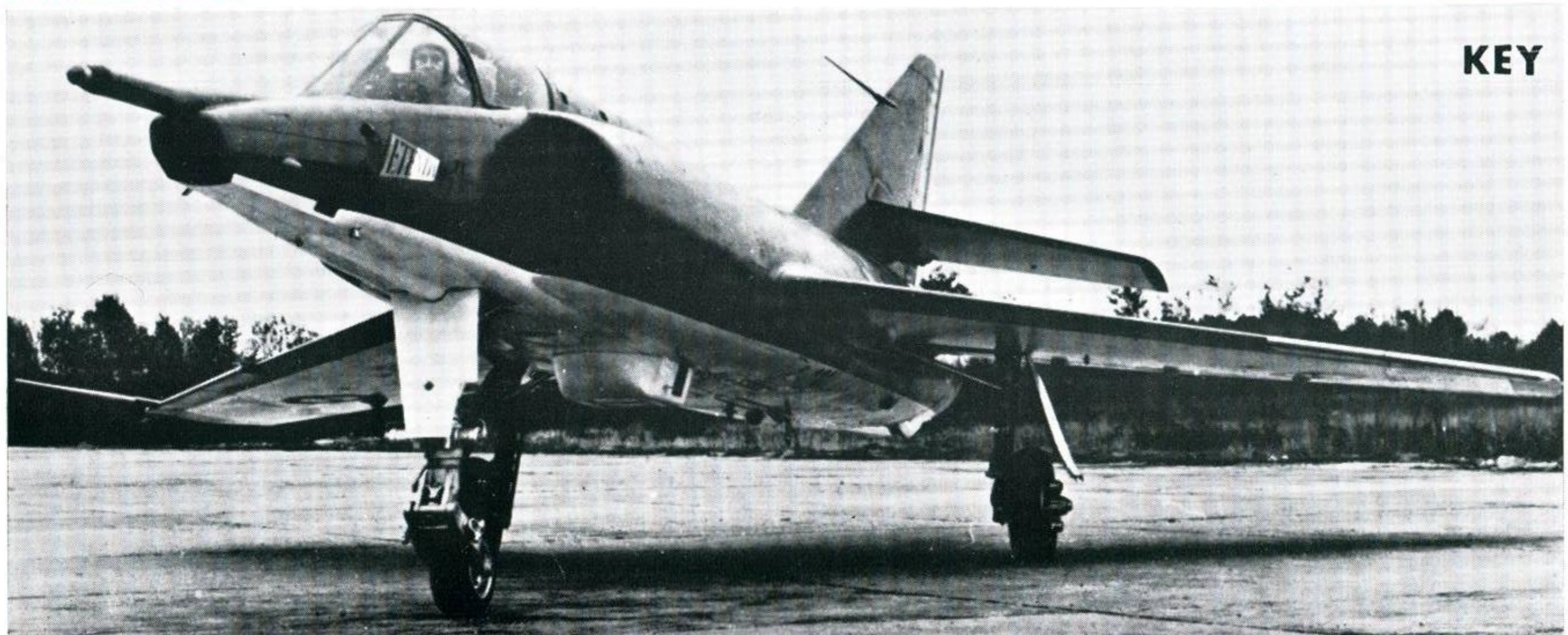
**ÉTENDARD IV-M**

Span 31½ feet



*continued overleaf*

**ÉTENDARD IV-P**



**KEY**

**ÉTENDARD IV** *continued*



**ÉTENDARD IV-M**



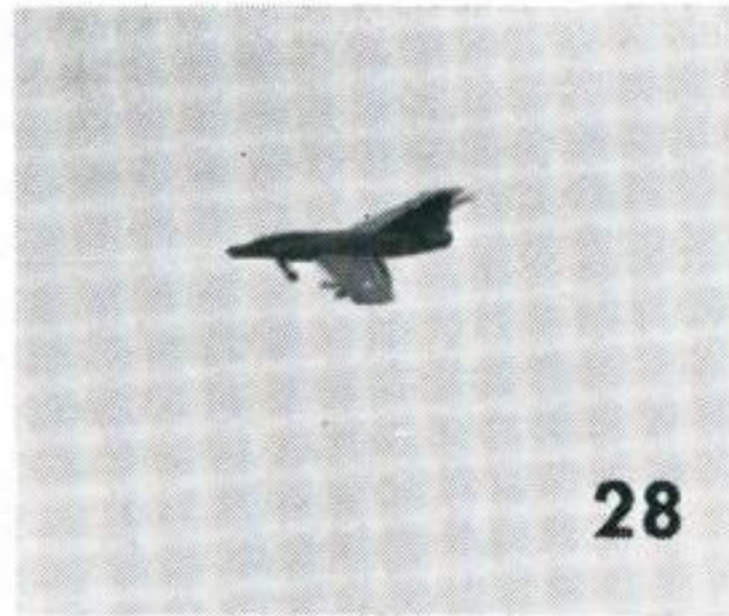
The Étendard could be mistaken for such types as the Super Mirage F1 and Jaguar unless learned properly. Work to the lesson instructions on page 312 and report all targets as Étendard—or otherwise as jokers.

Étendard is pronounced as AY-TONN-DAH. It means Banner or Standard.

N.B. A variable feature is a detachable chin fin.

*Solutions on page 334*

Span 31½ feet



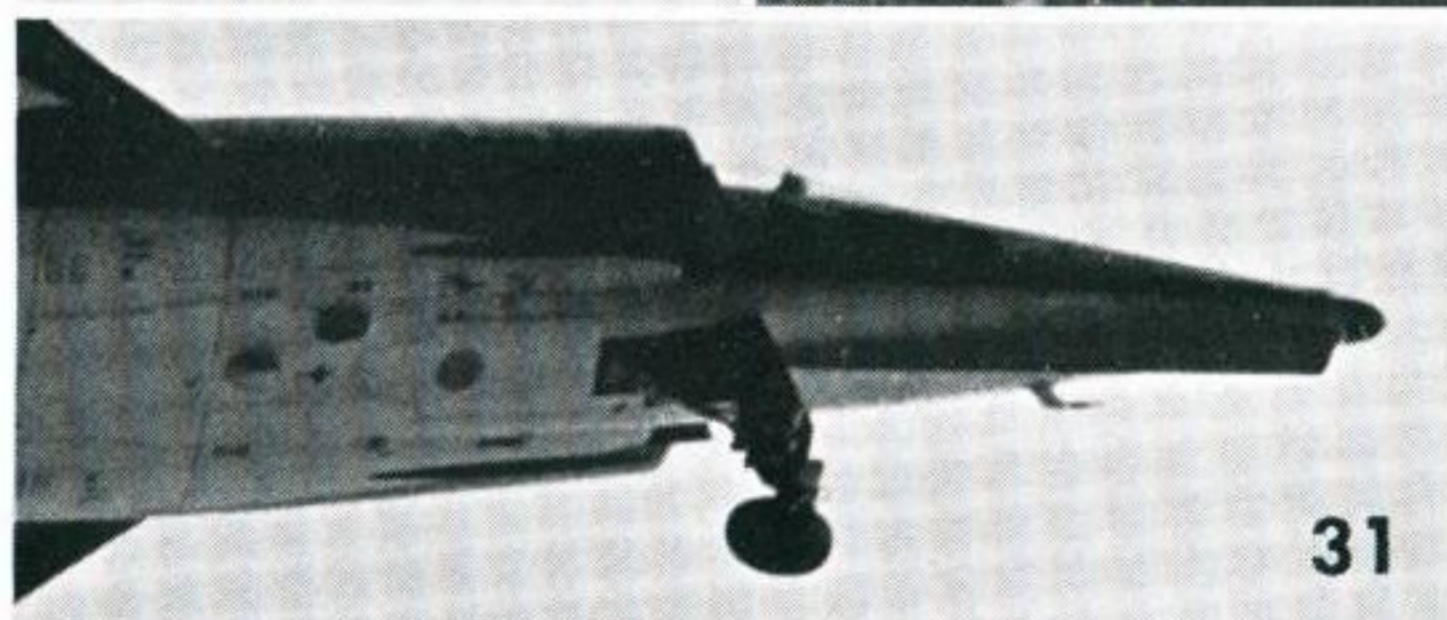
28



29



30



31



32



35



33



34



36



37



38

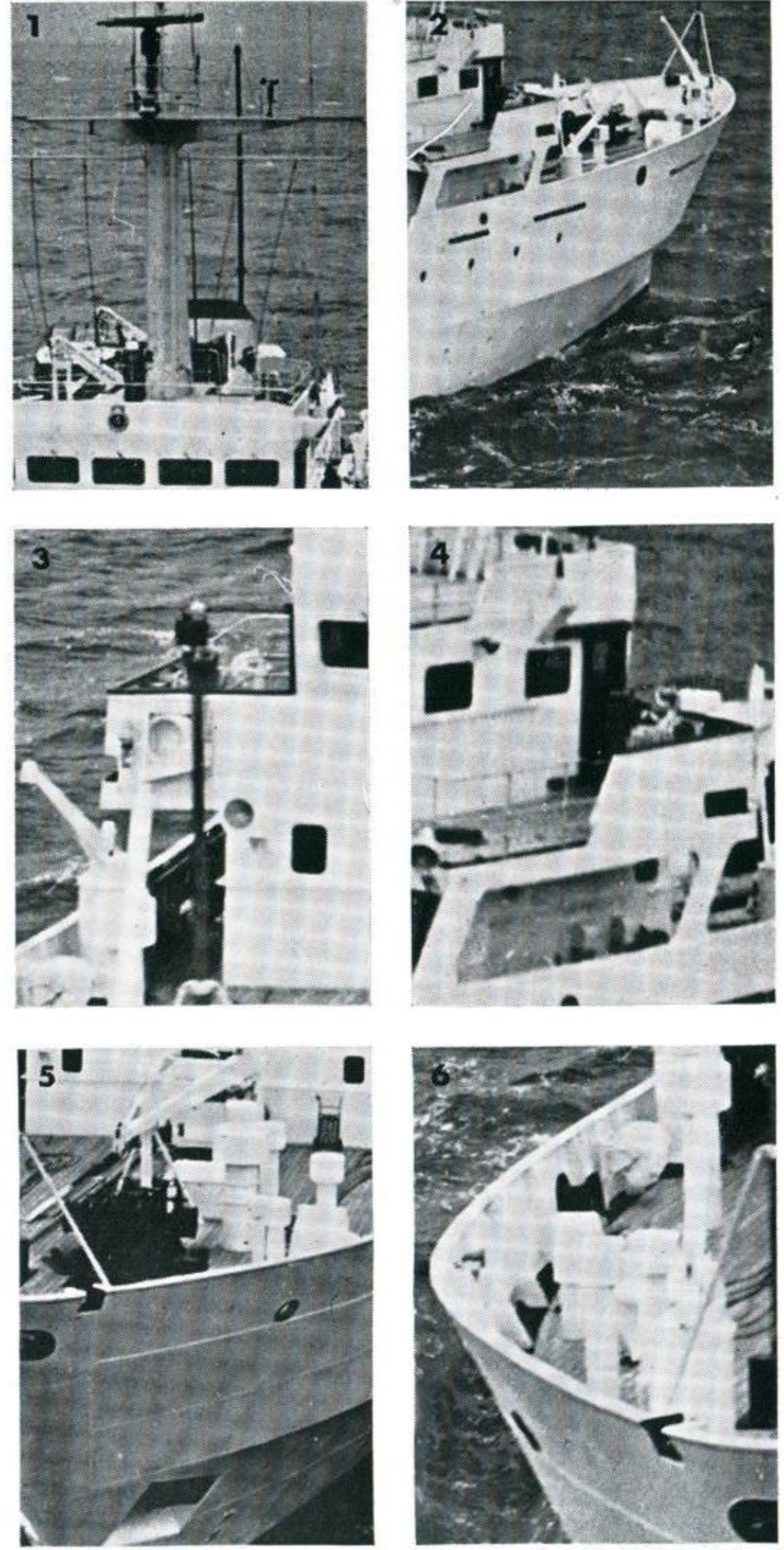


39

### ÉTENDARD IV-M

### KEY





## FAWN CLASS COASTAL SURVEY SHIPS

This is a new class designed for hydrographic work in shallow waters. Equipped for service in any part of the world the vessels have standards of living accommodation which might be described as maximum.

The standard displacement of the vessels is about 800 tons; their length overall is 189 feet and draft, 12 feet. They have twin screws, diesel driven with a service speed of 15 knots.

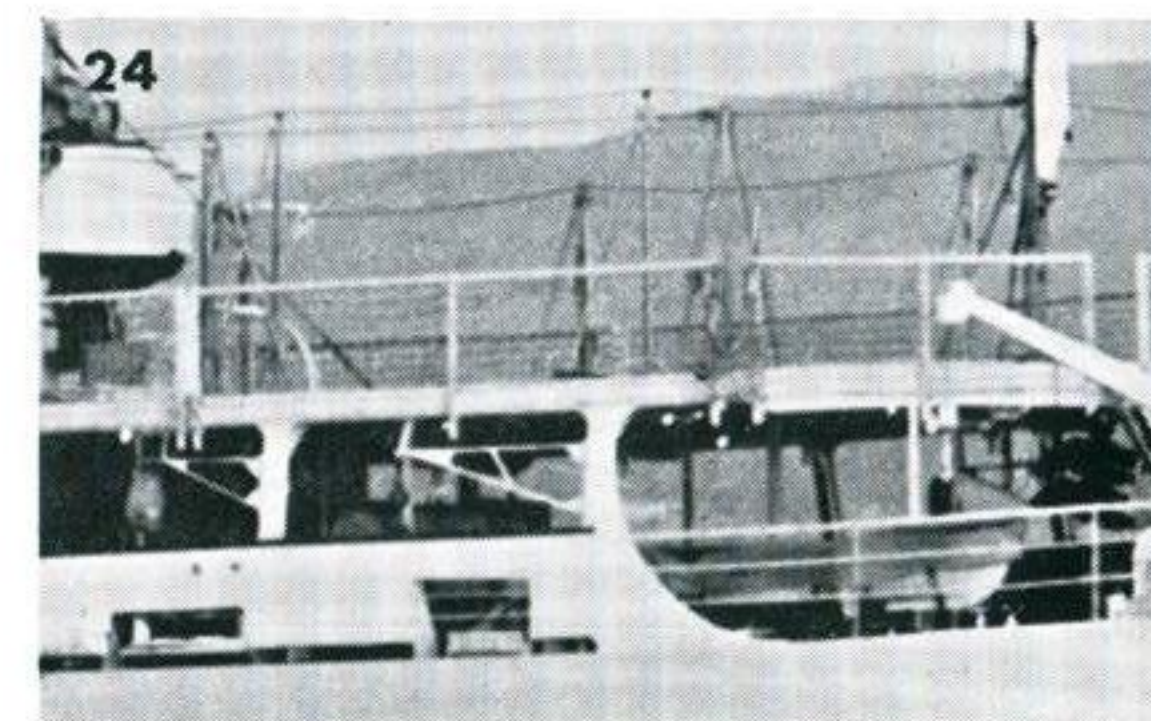
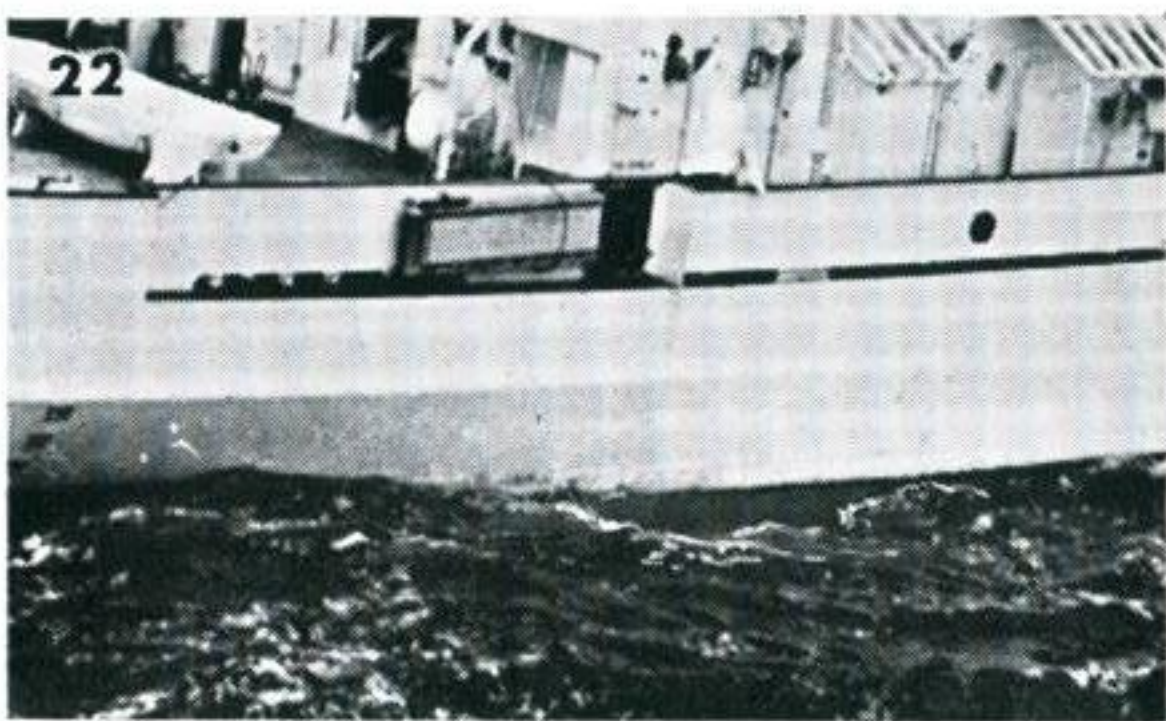
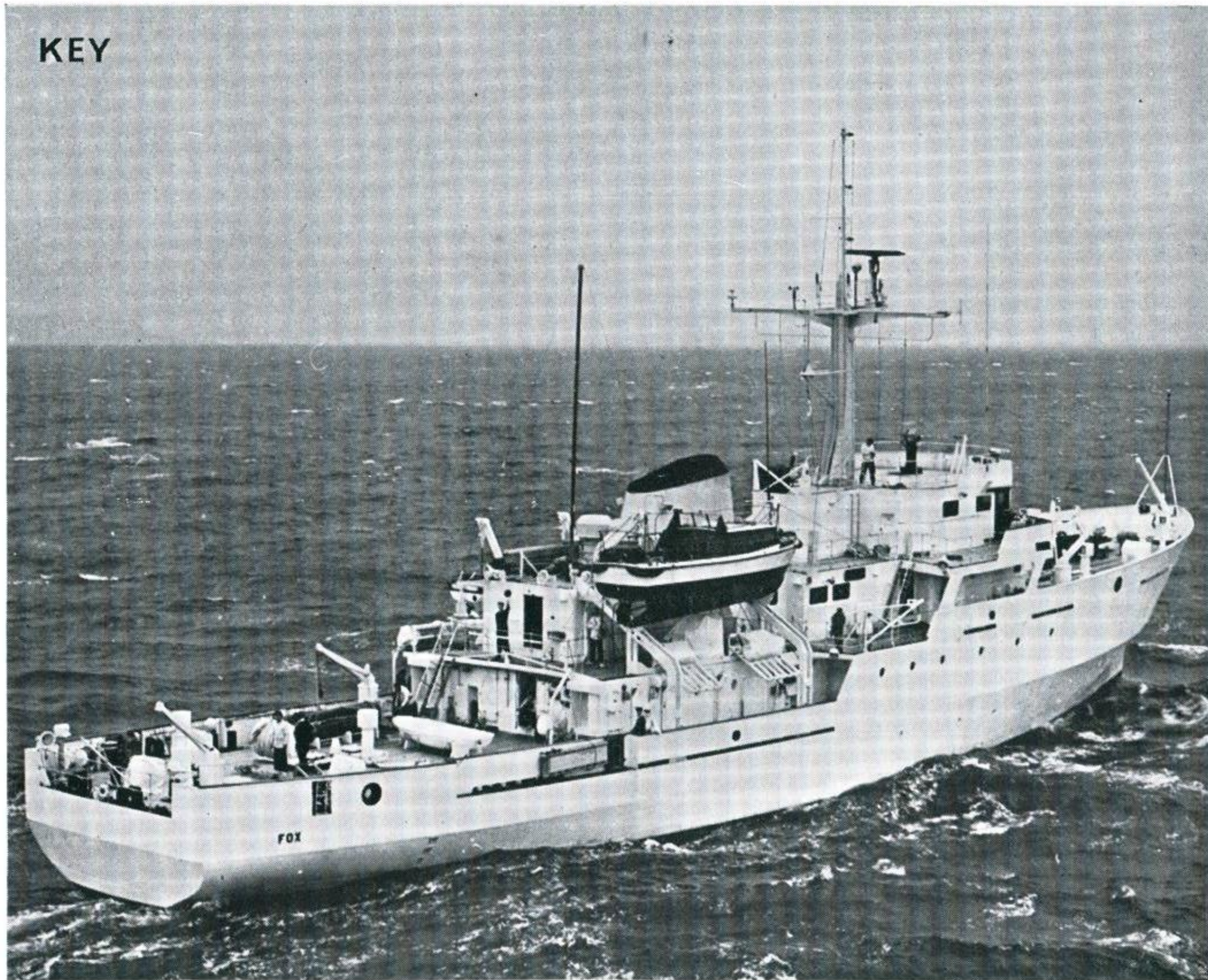
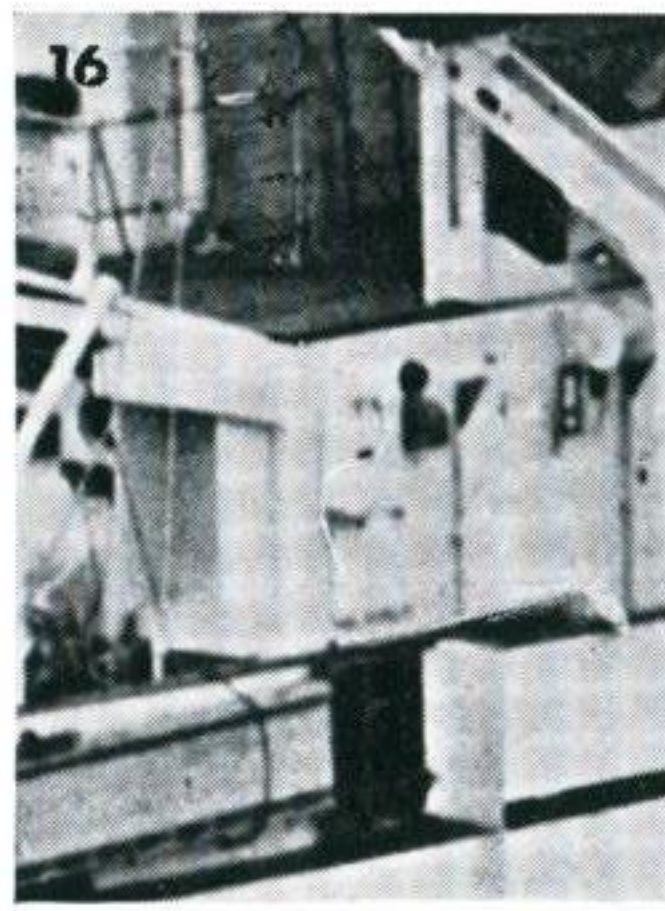
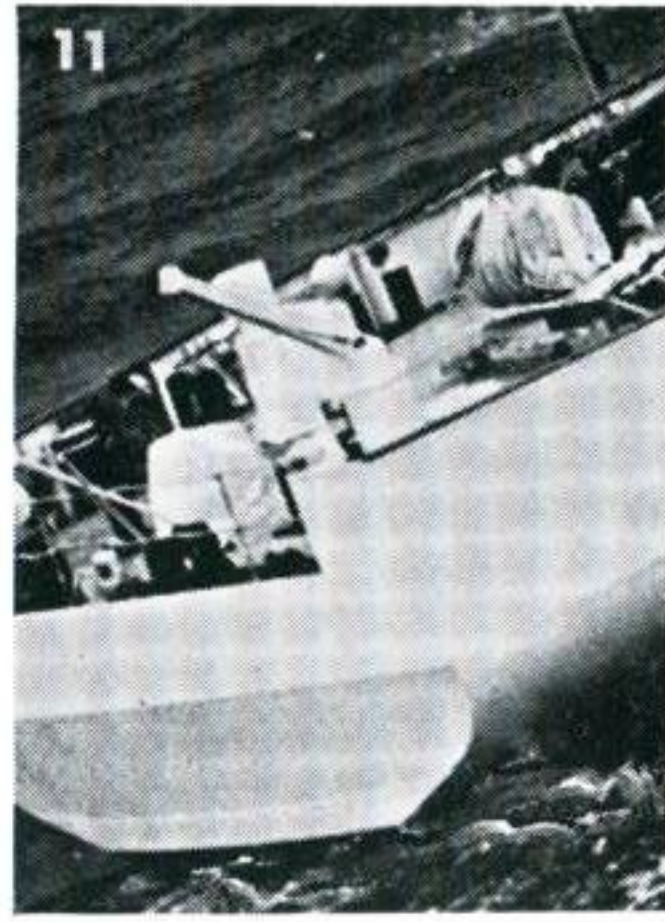
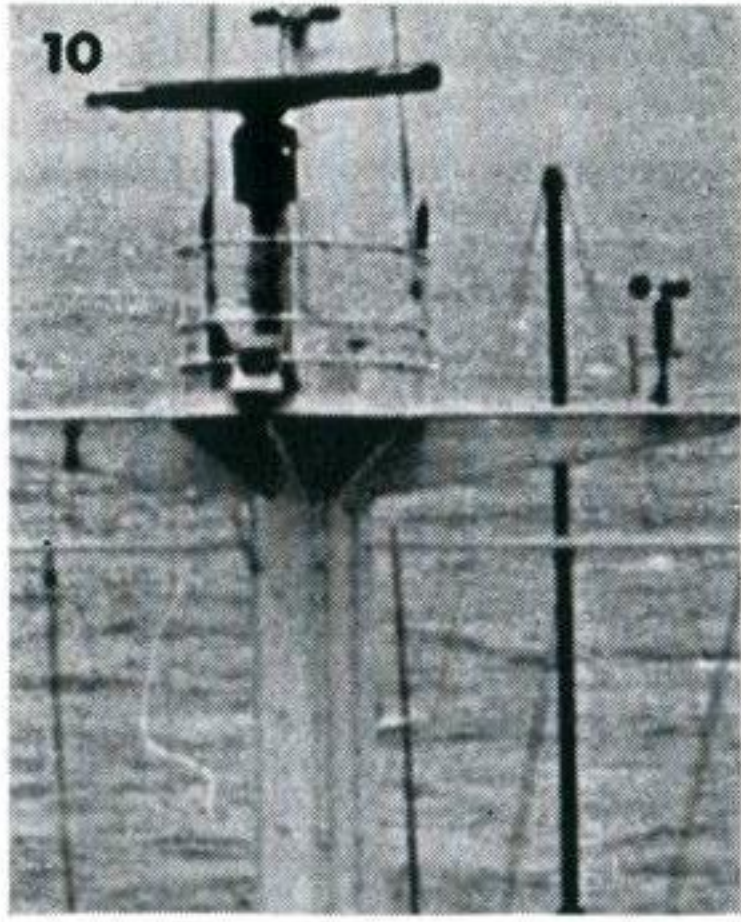
*Fox*, shown in some of the key views, the thirteenth ship in the Royal Navy to bear this name, was com-

missioned in 1968. Her sister ships are *Fawn*, *Beagle* and *Bulldog*.

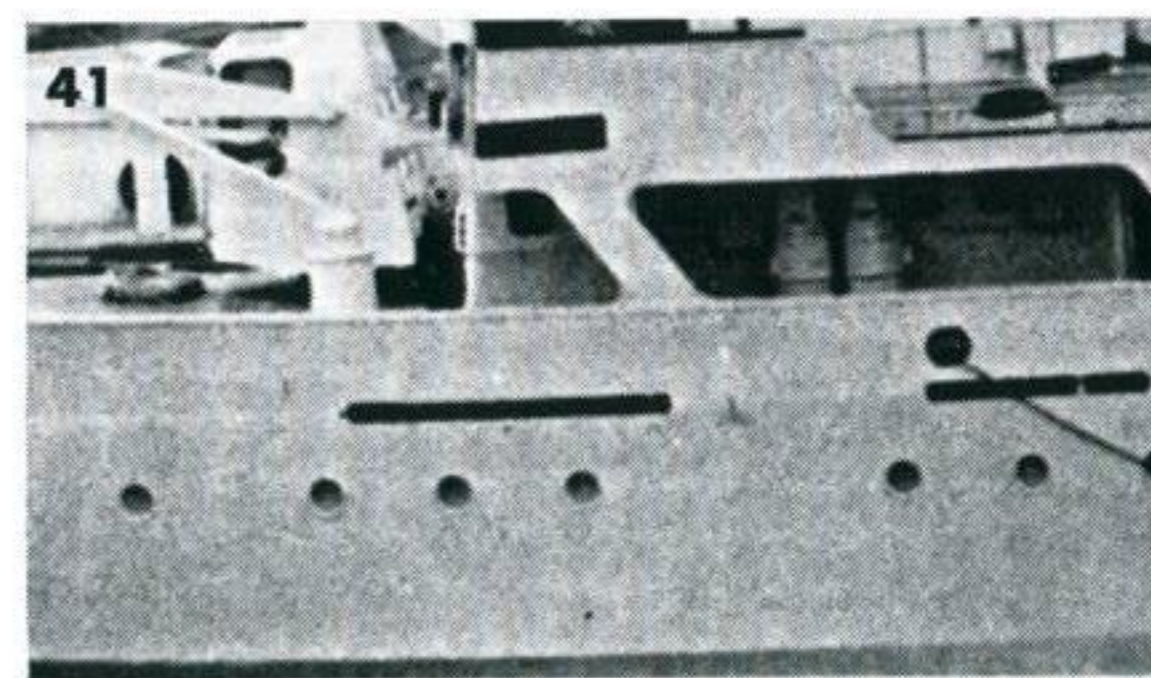
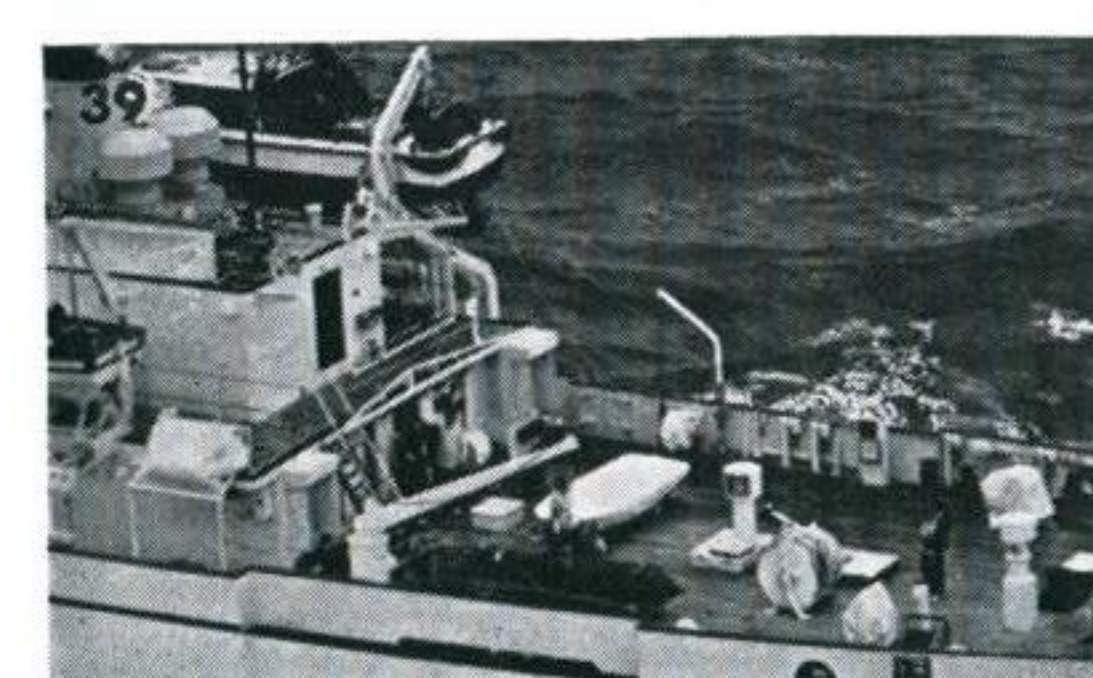
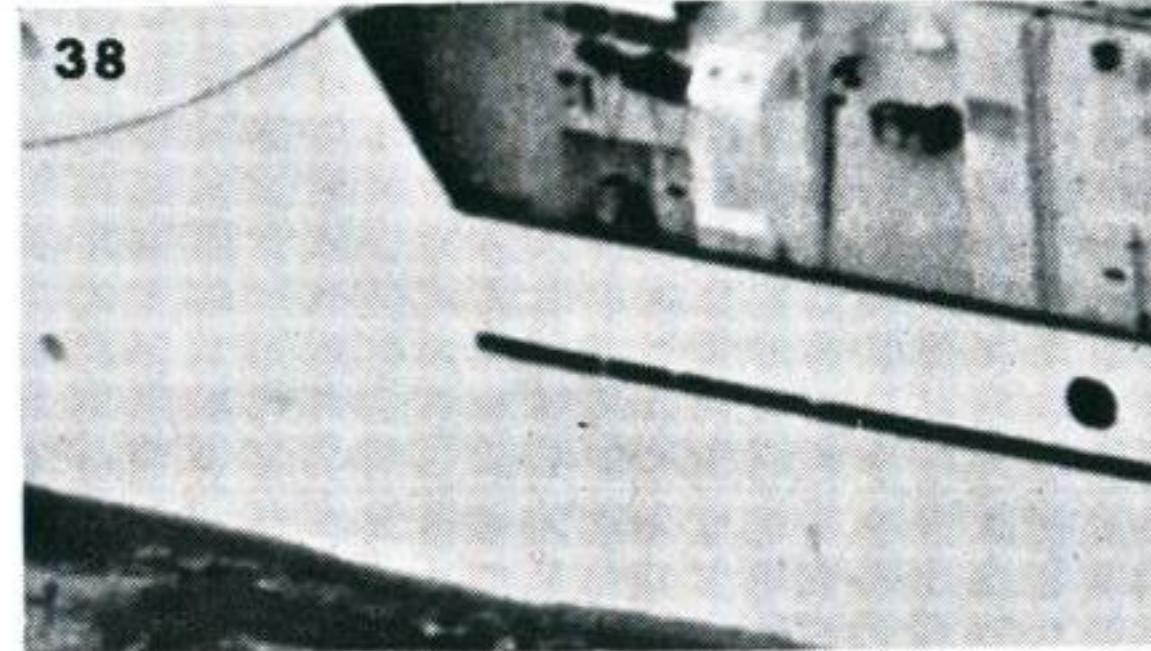
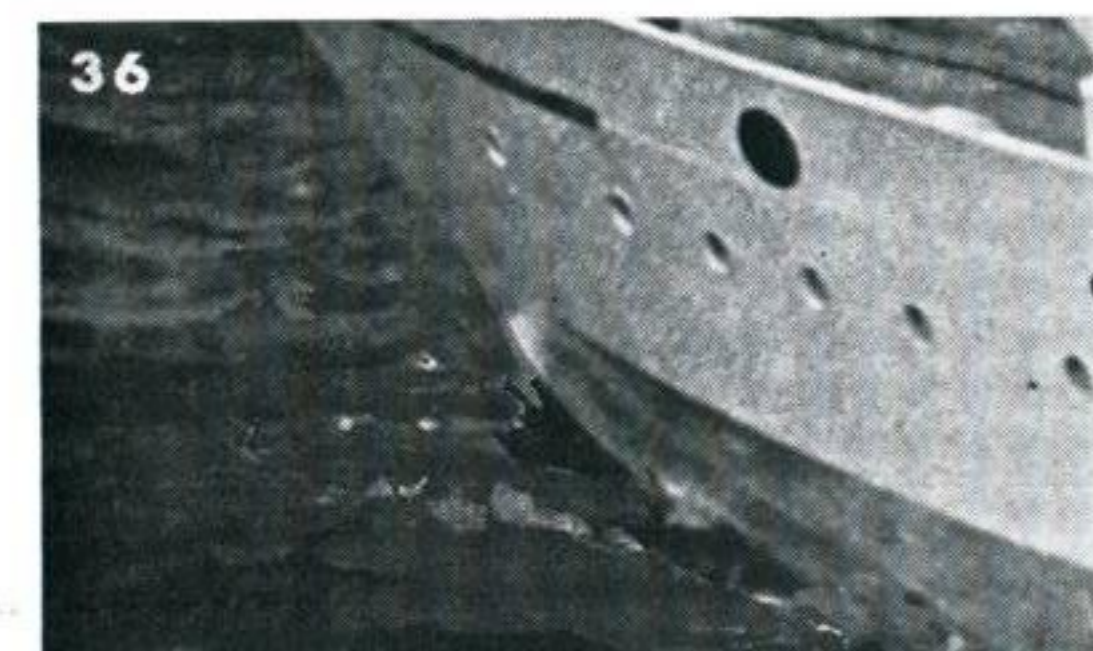
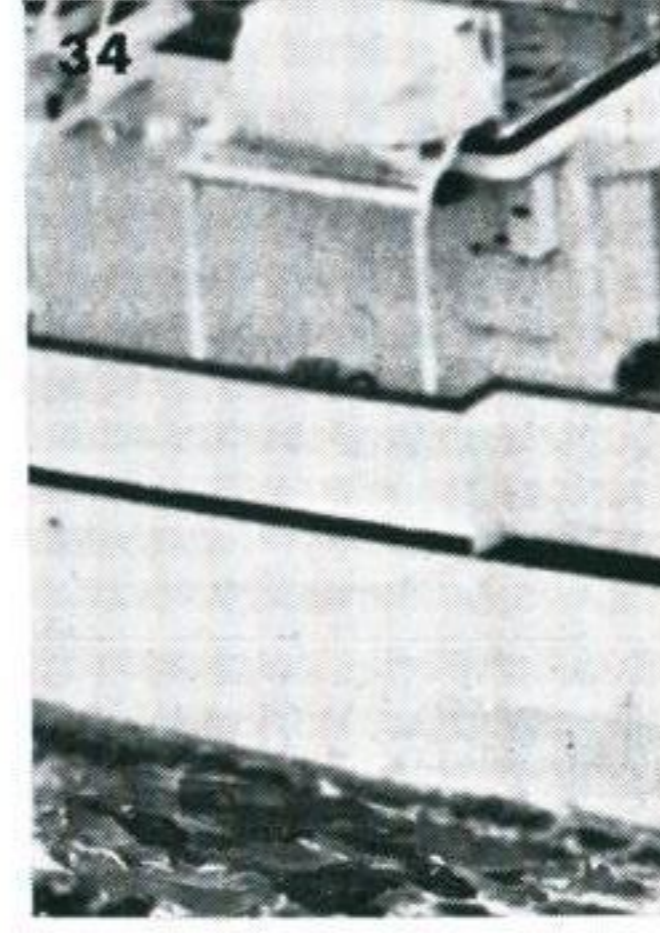
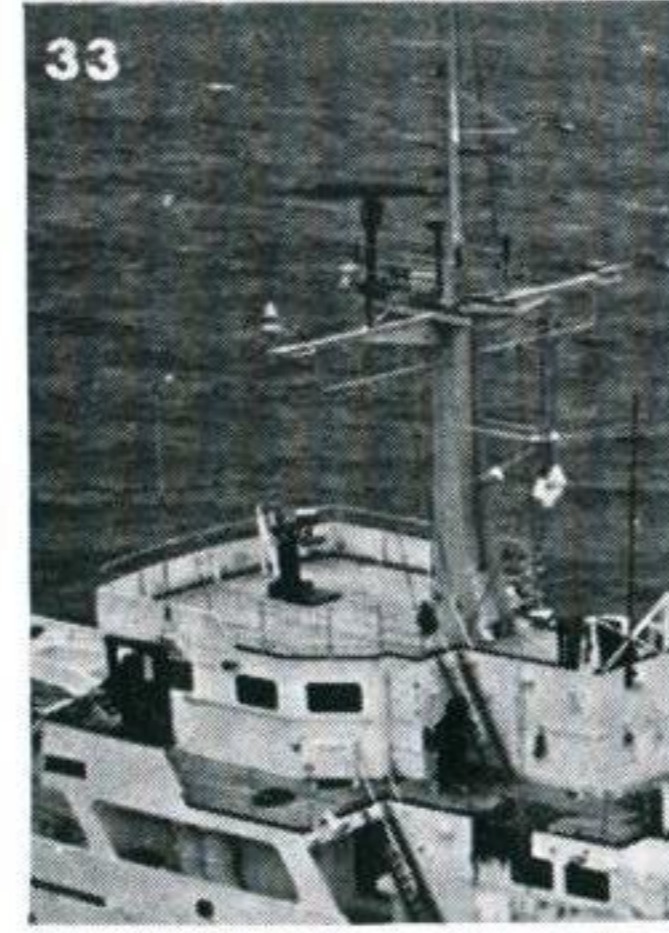
The ships bear a superficial resemblance to the larger "H" class survey ships but are generally more "squat", and a distinguishing feature is the superstructure which terminates almost directly abaft the funnel, whereas in the larger vessels it extends for a considerable distance. The foremast is also taller and much closer to the funnel in the "H" class.

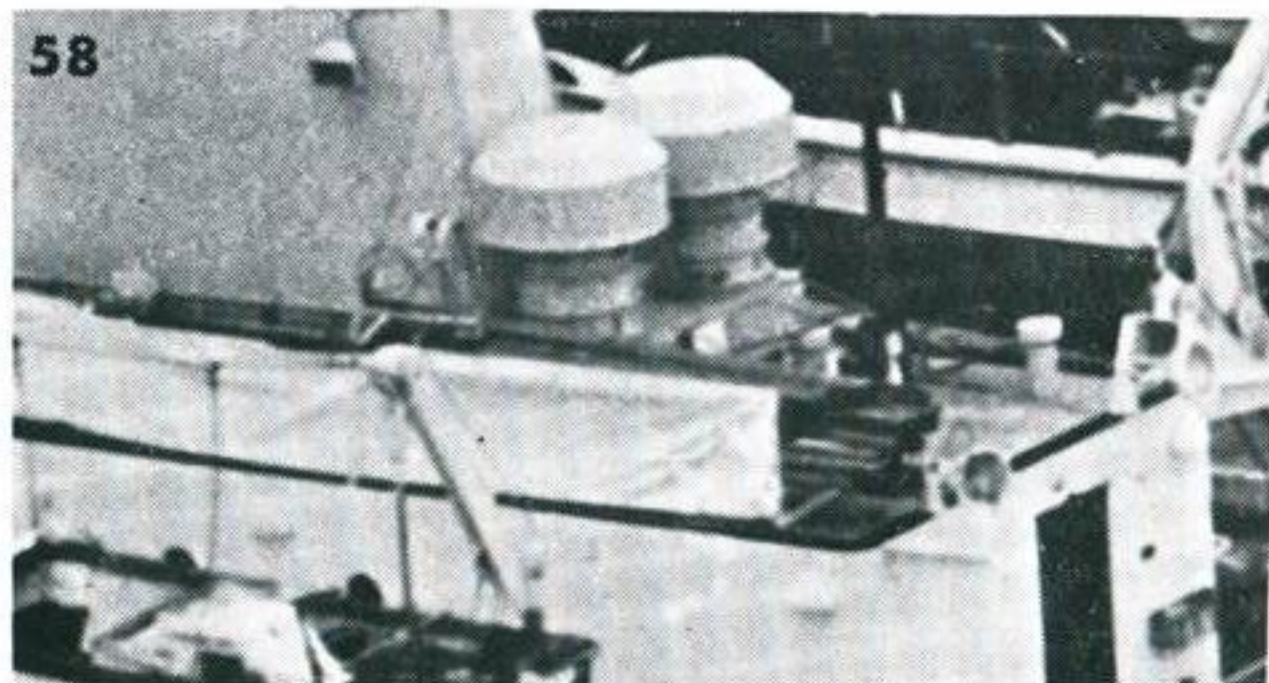
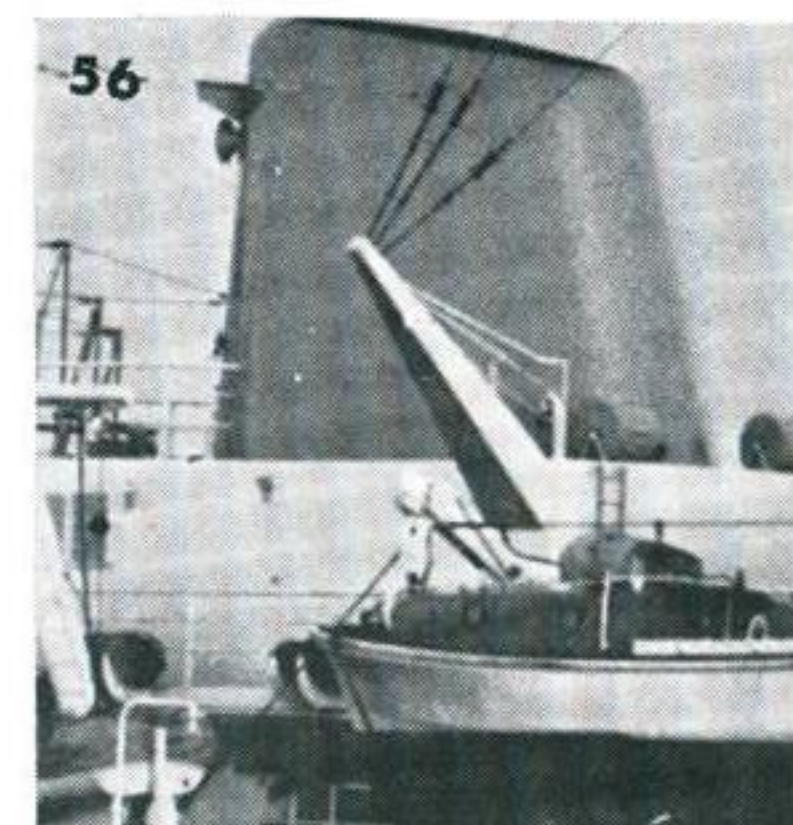
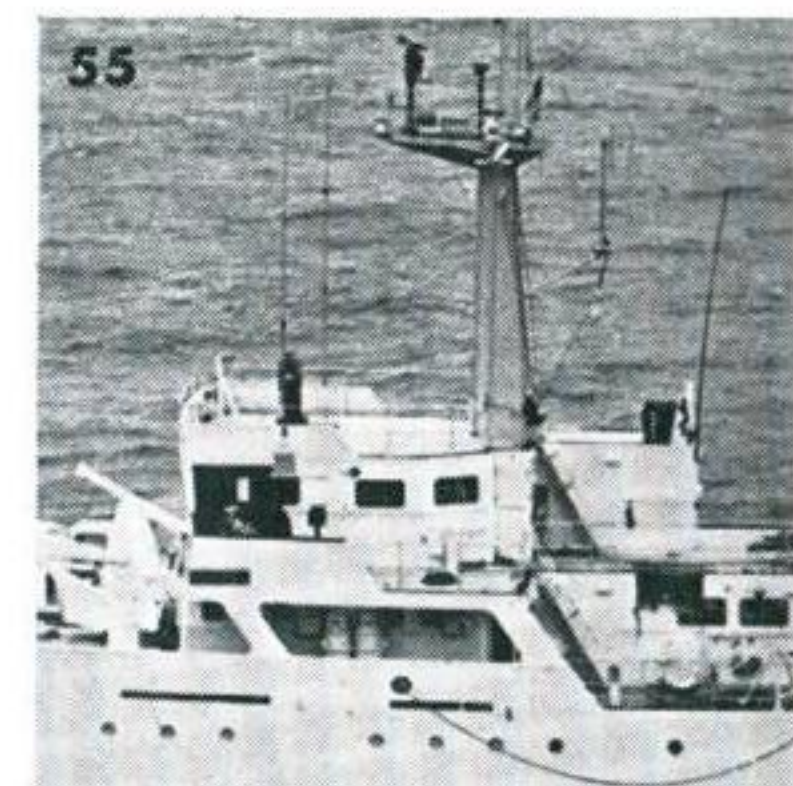
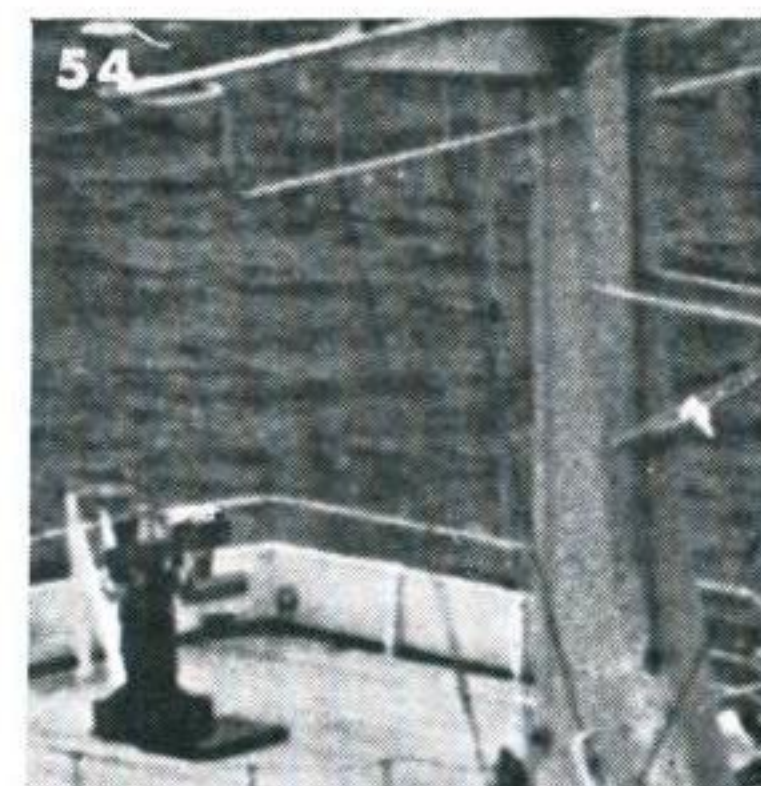
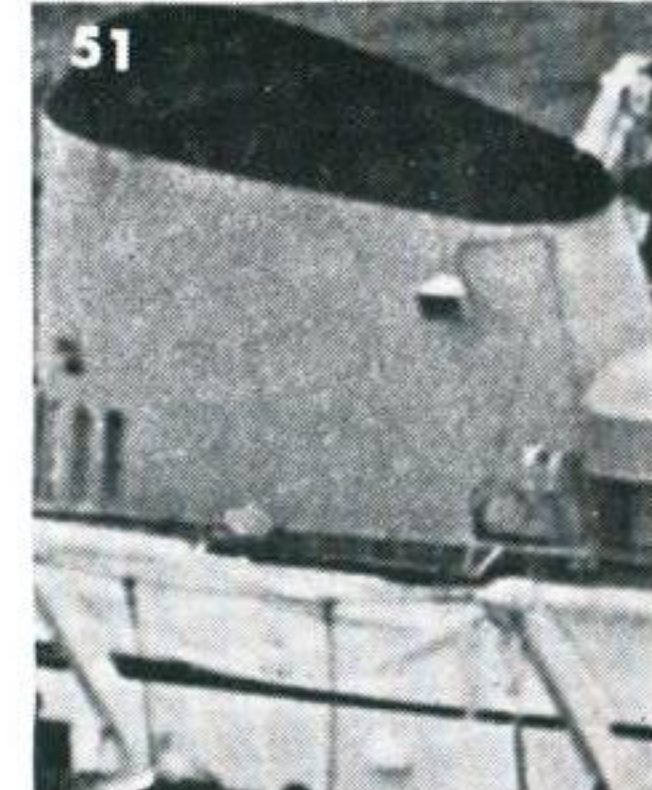
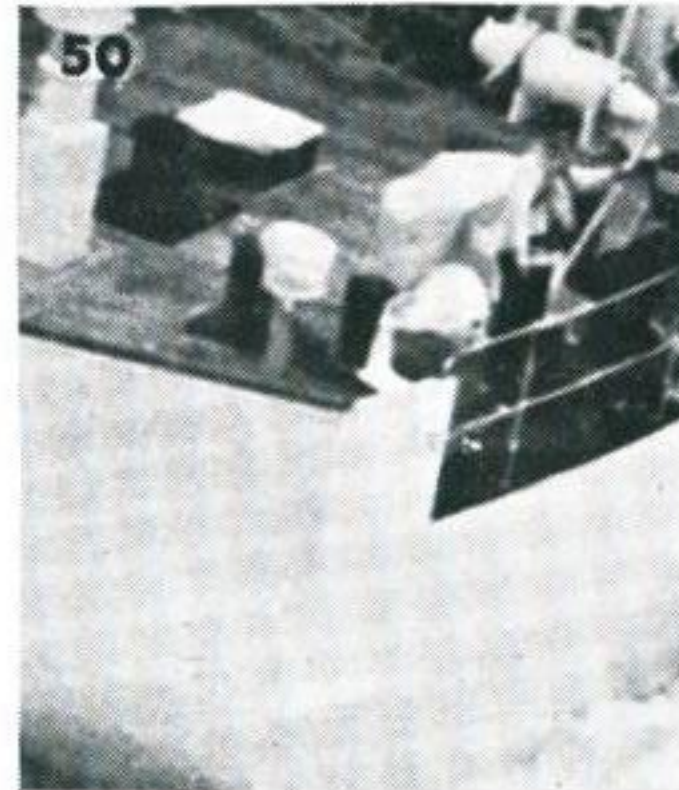
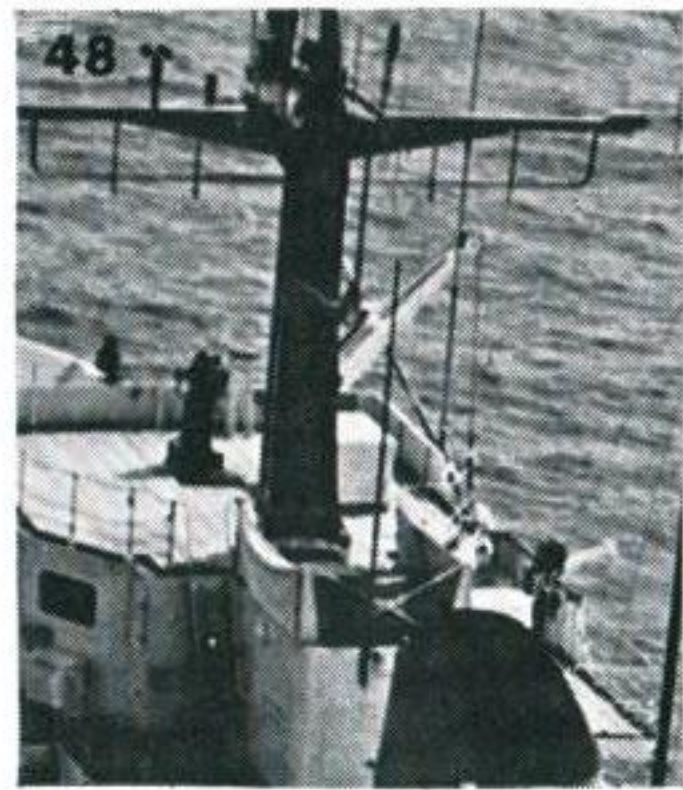
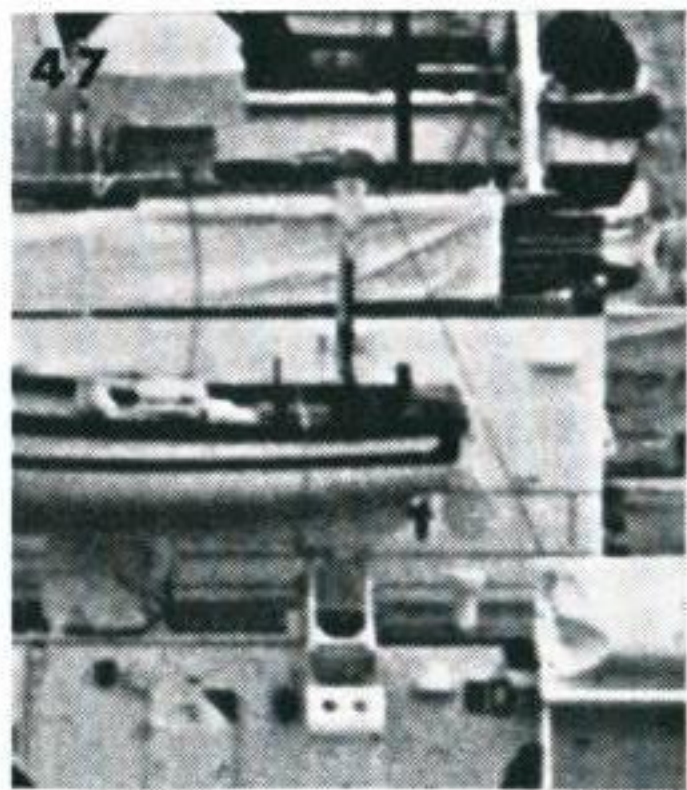
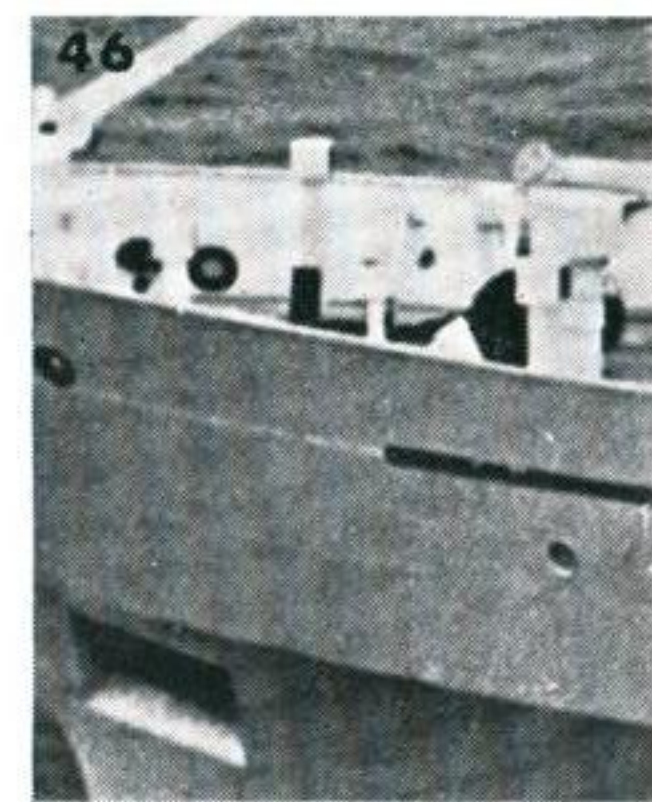
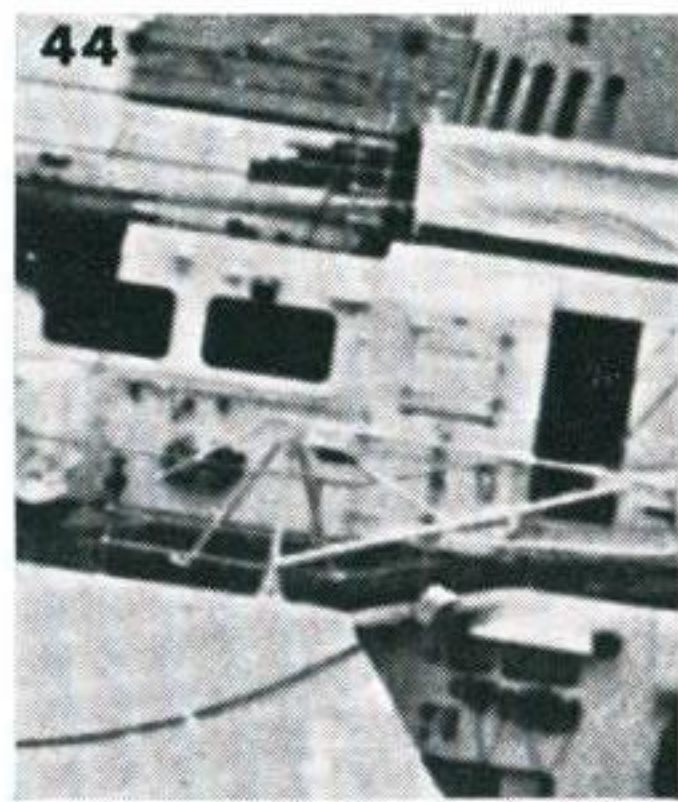
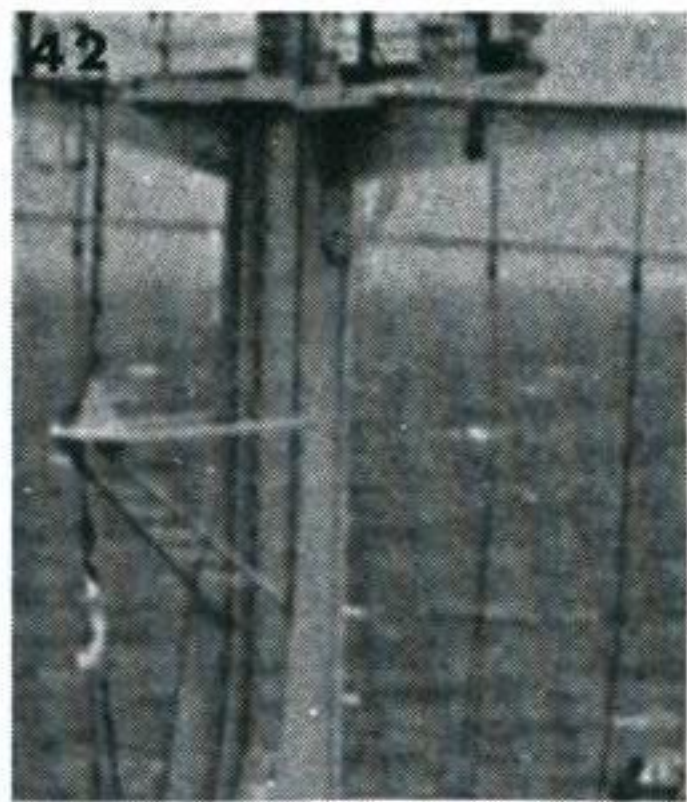
*Solutions on page 334*  
*Lesson instructions are on page 312*





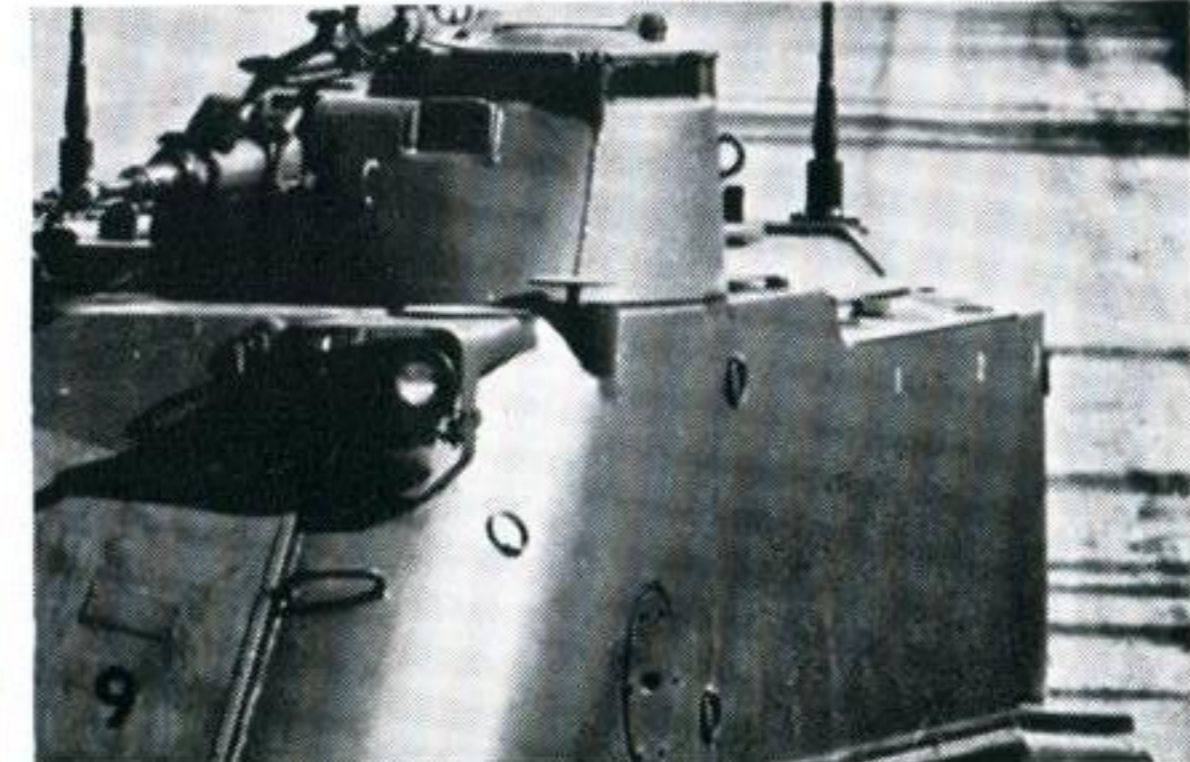
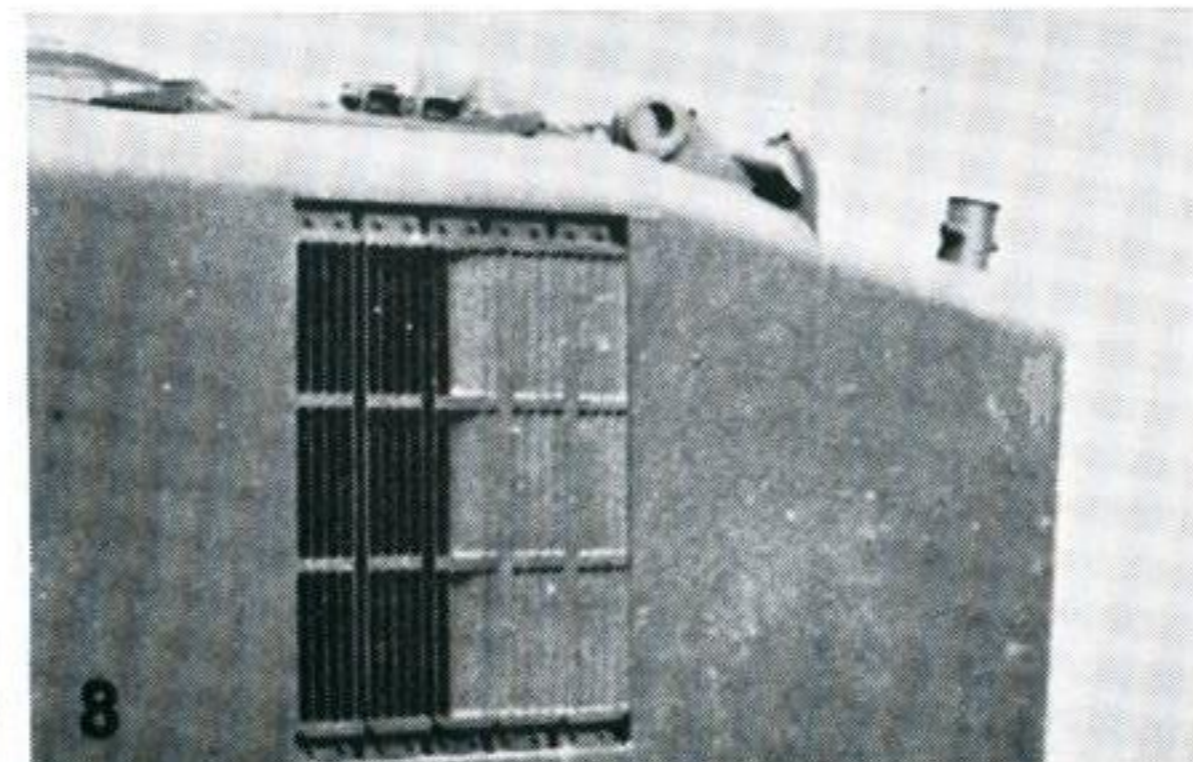
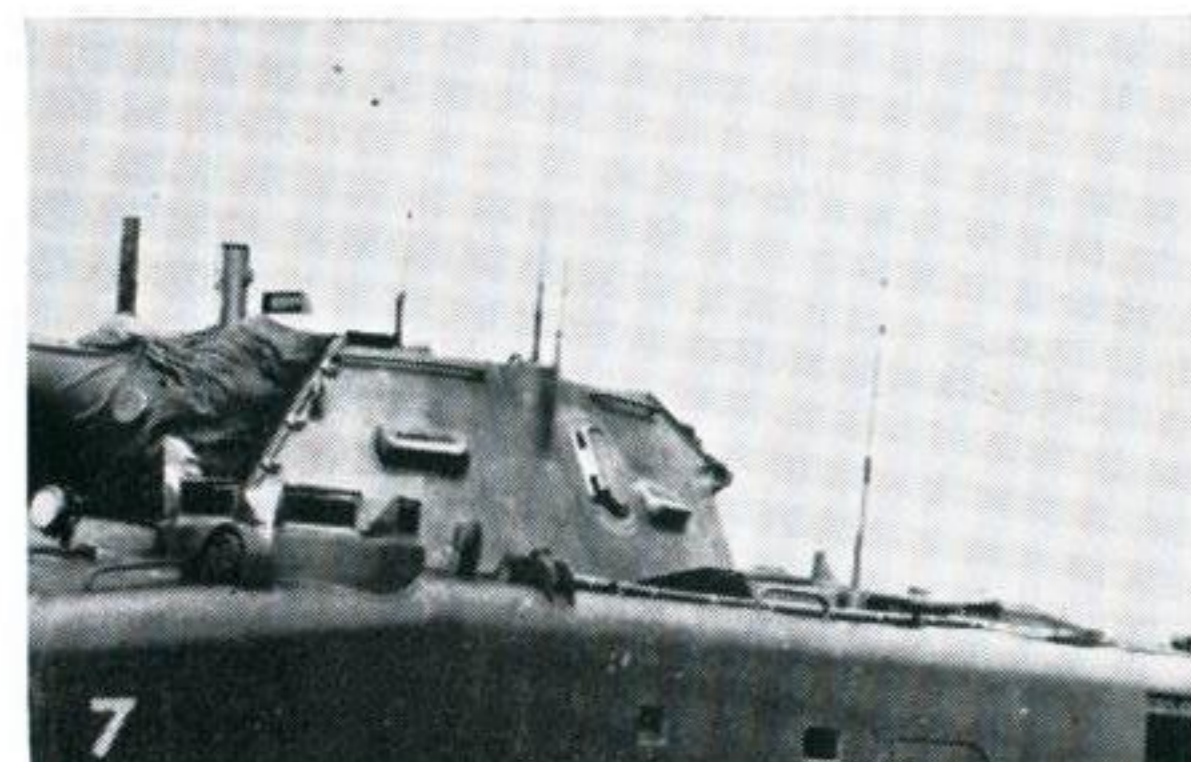
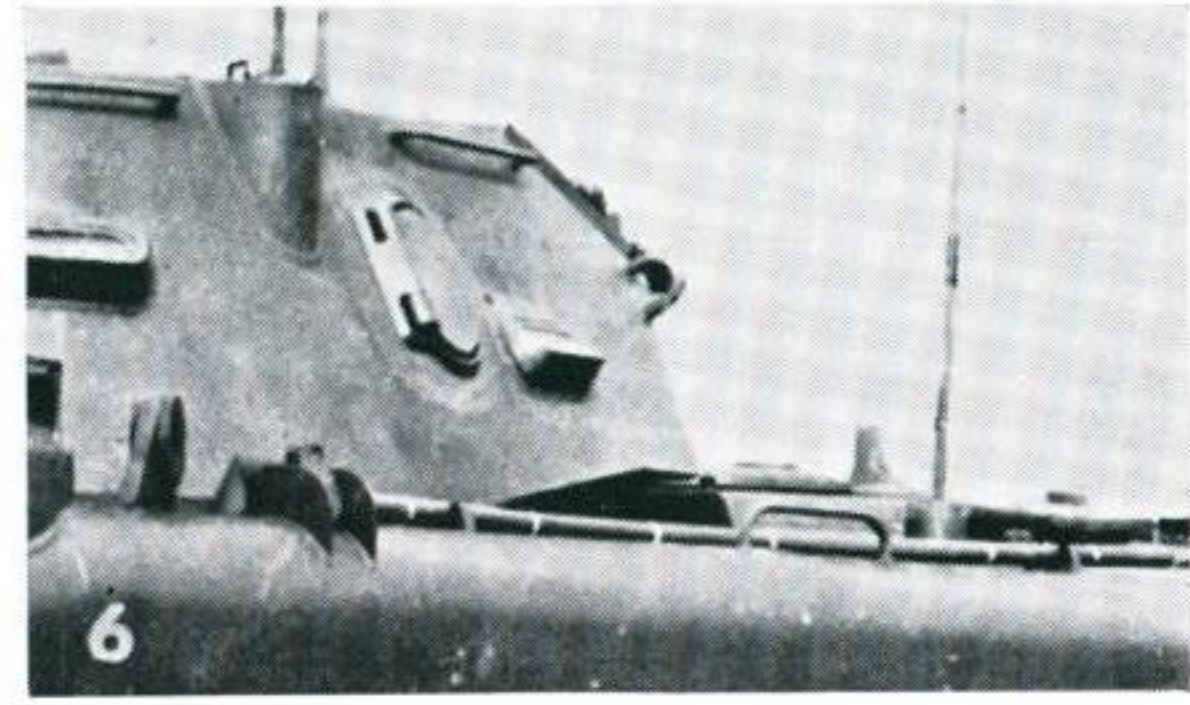
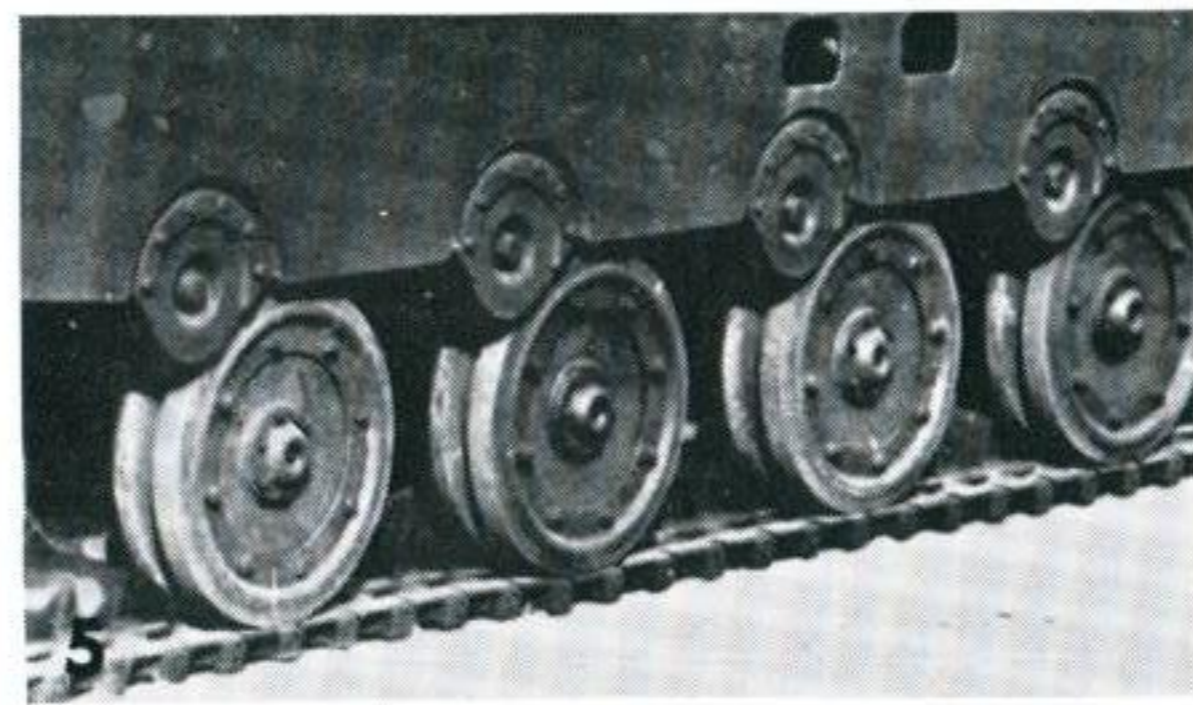
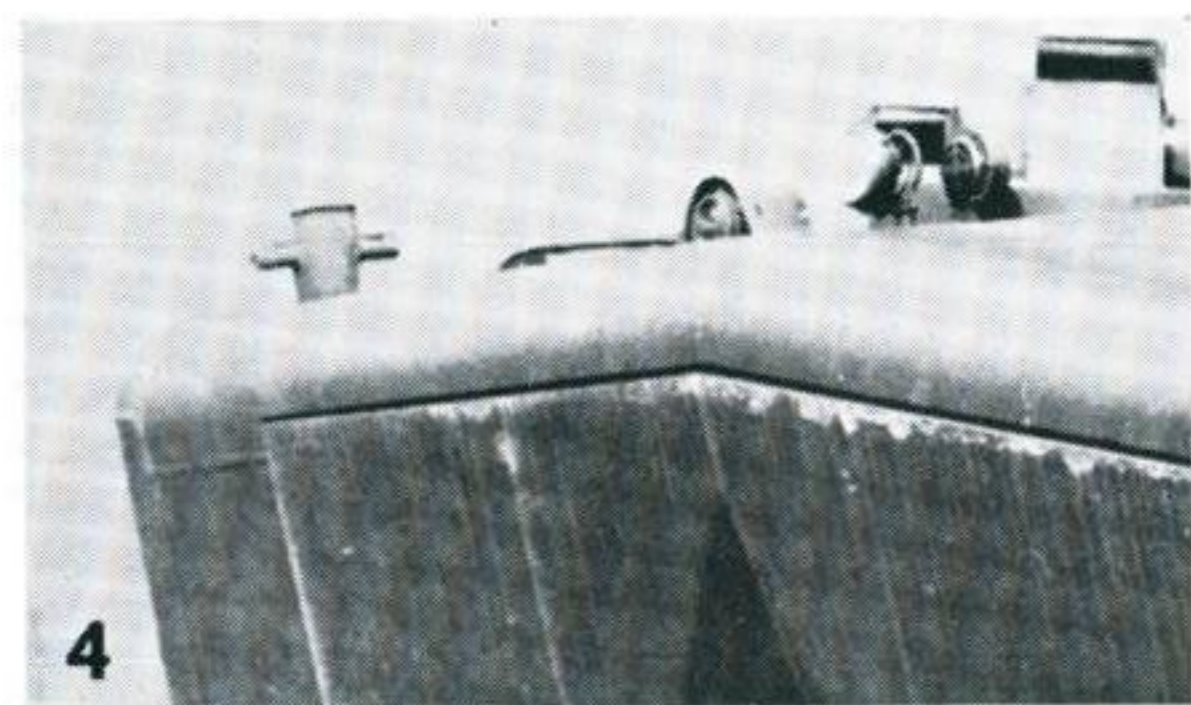
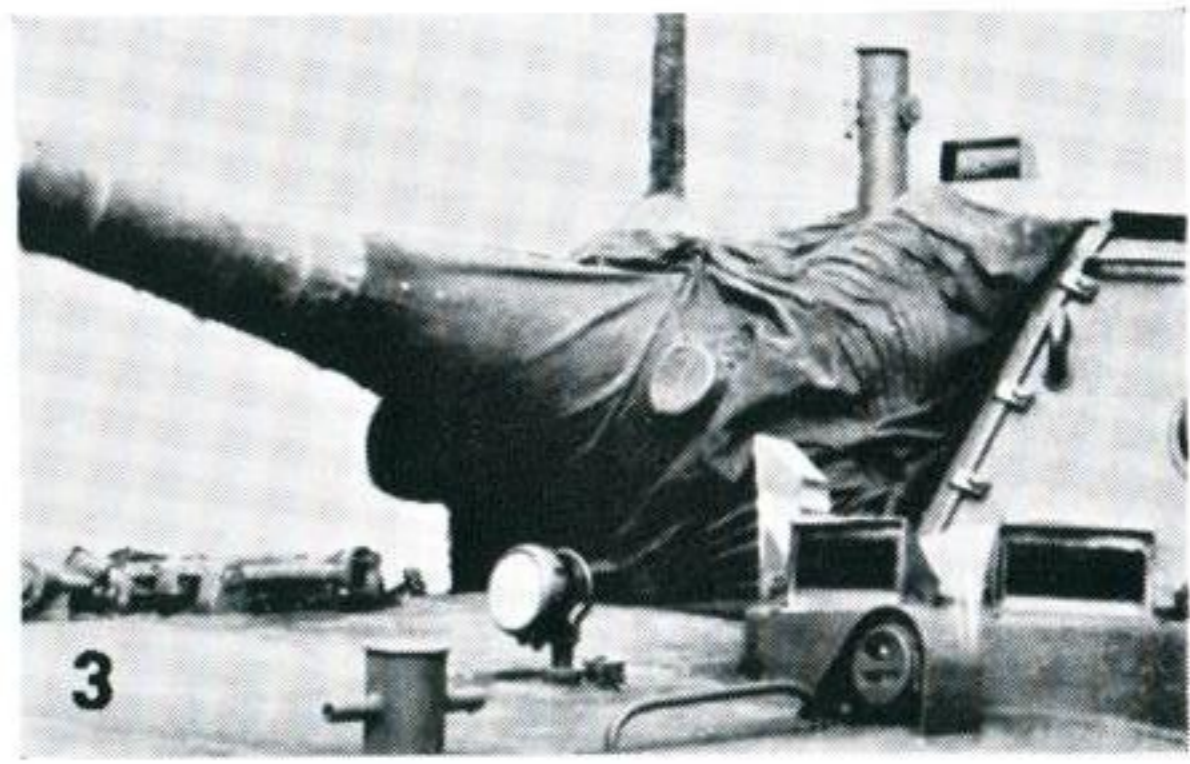
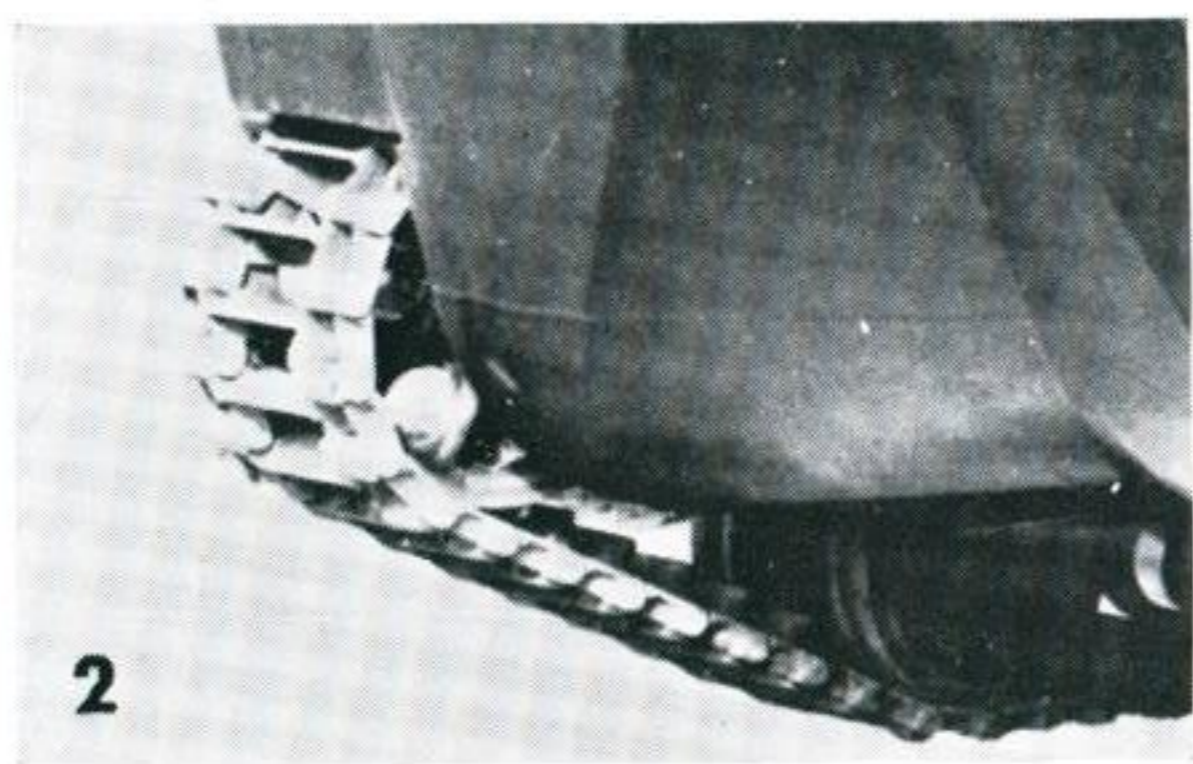
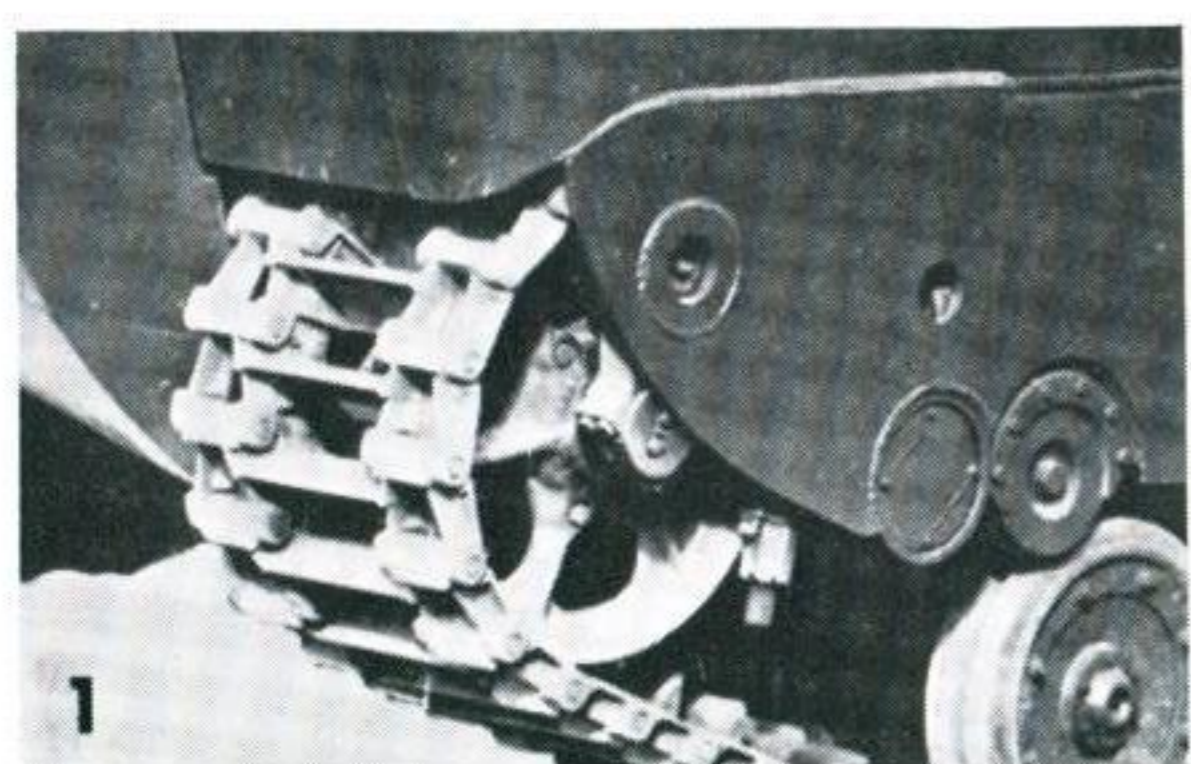
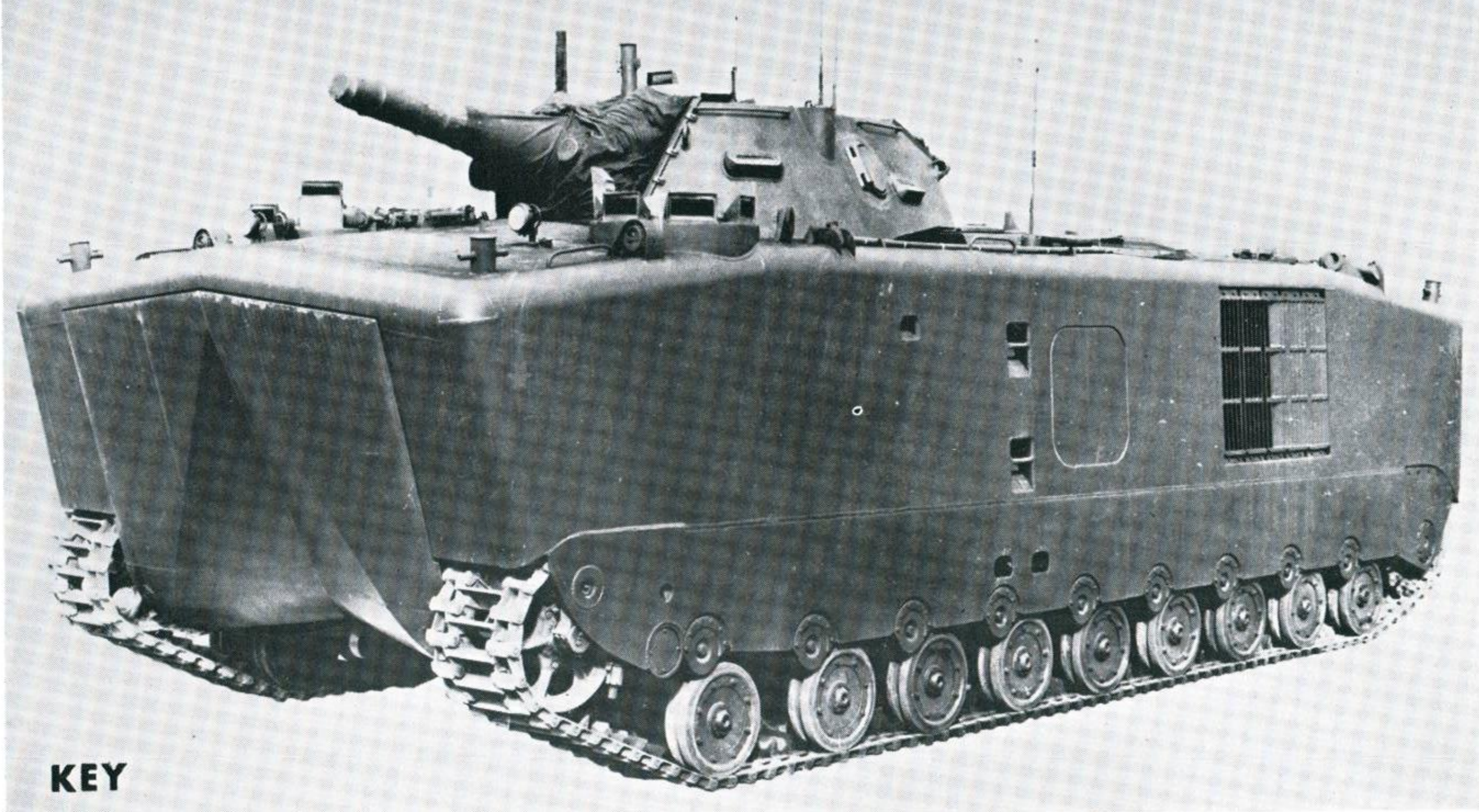
*continued overleaf*

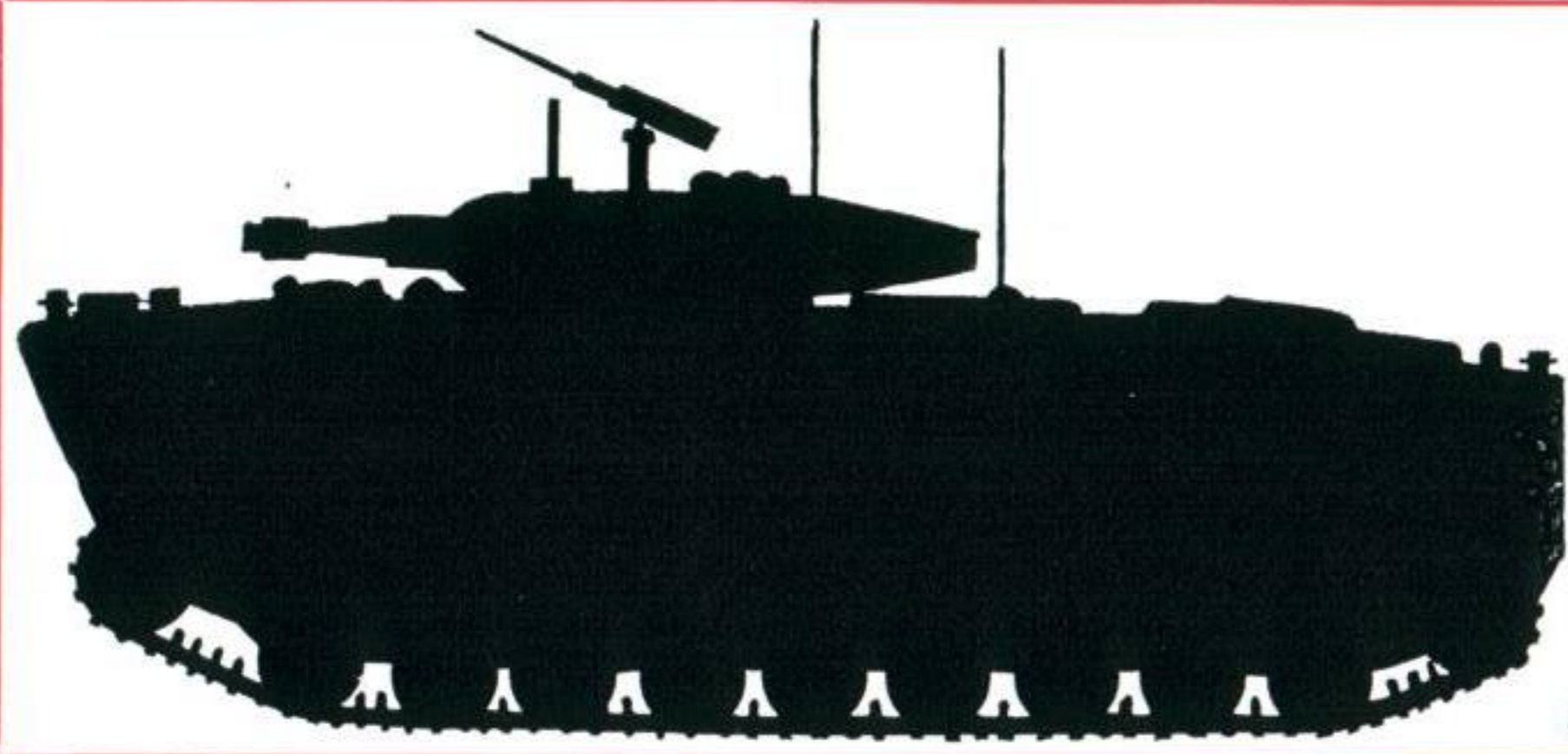




# LVTH6

## US Marine Corps Amphibian





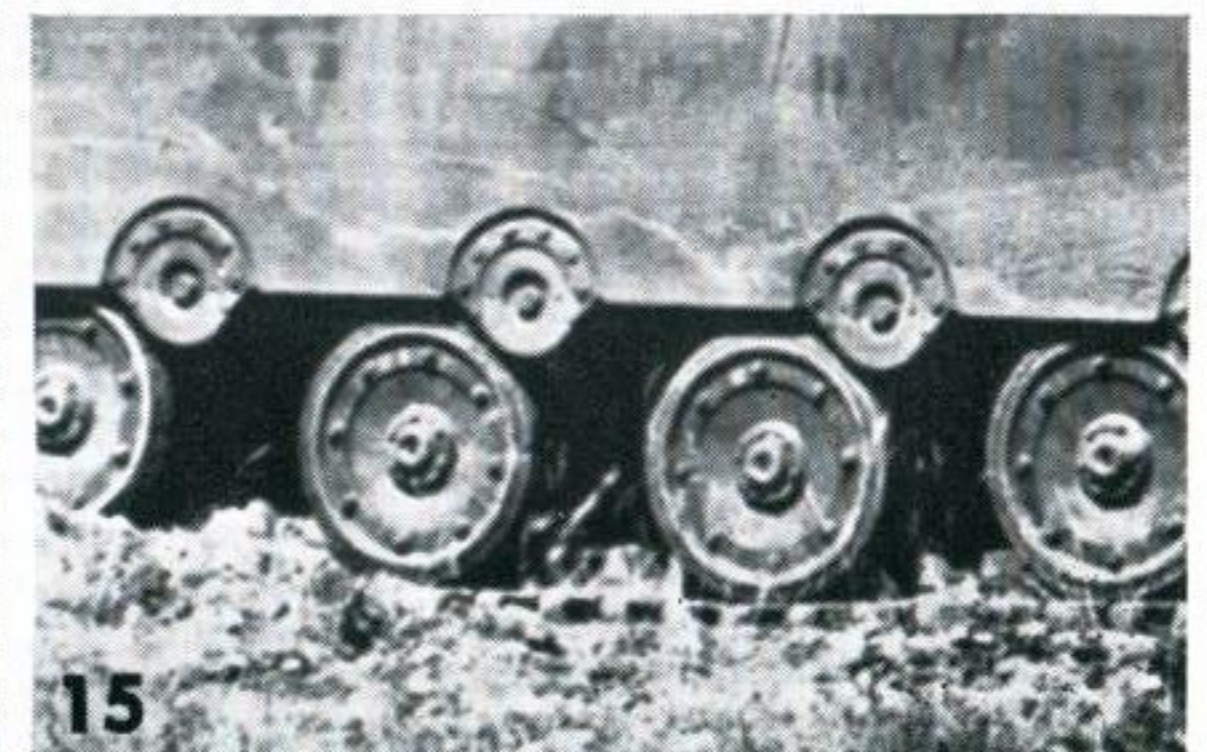
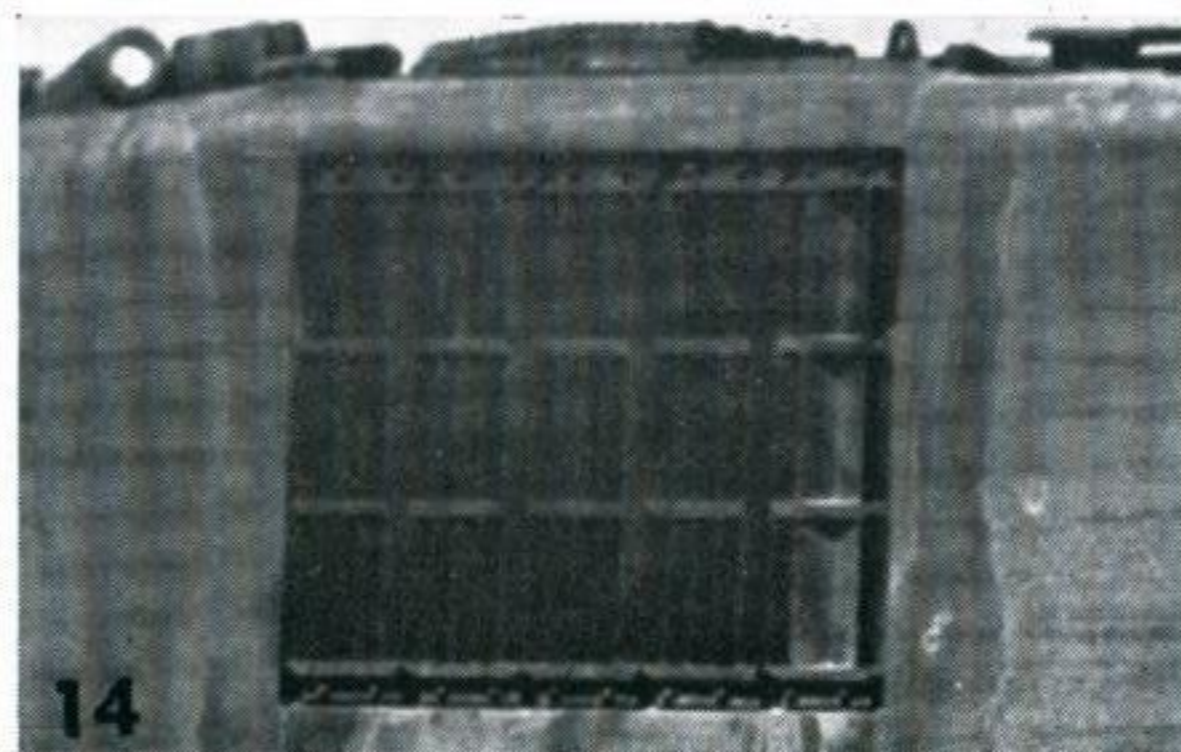
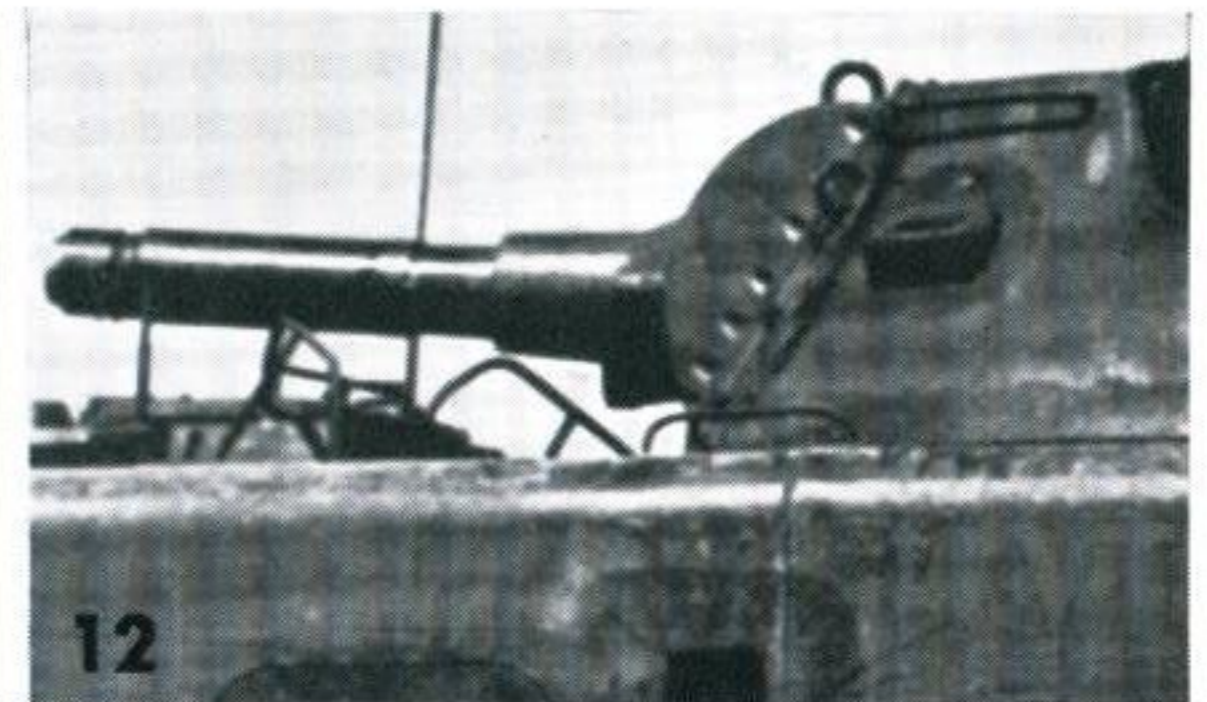
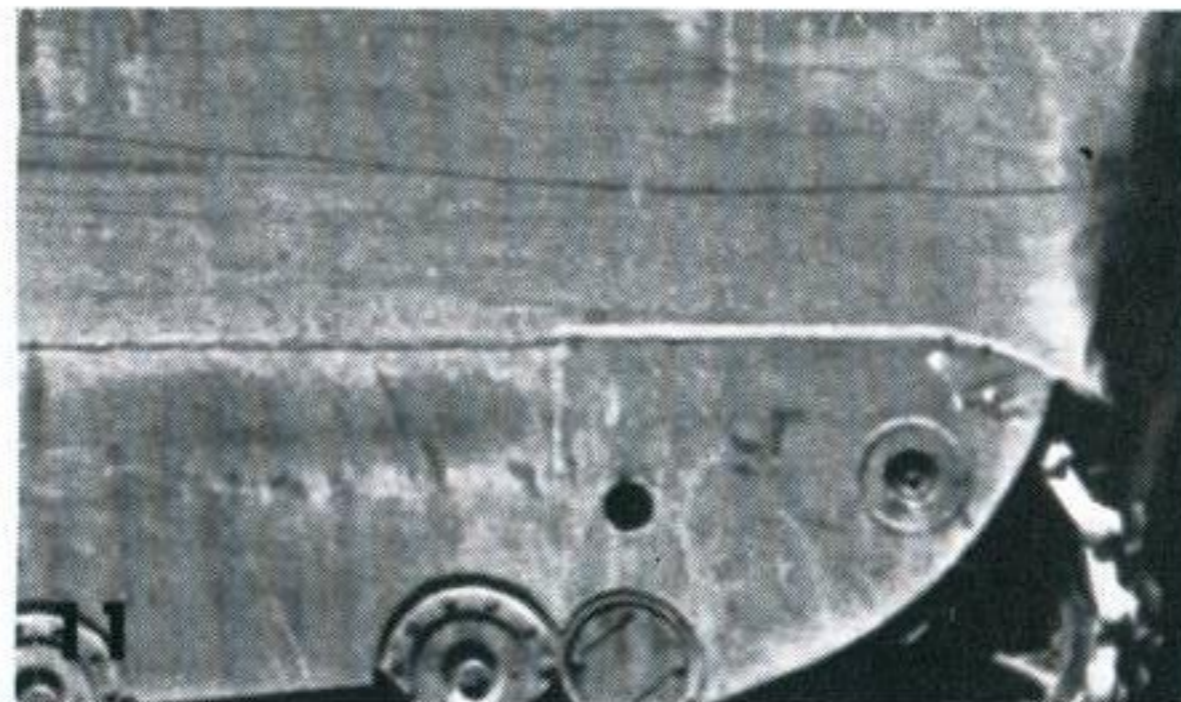
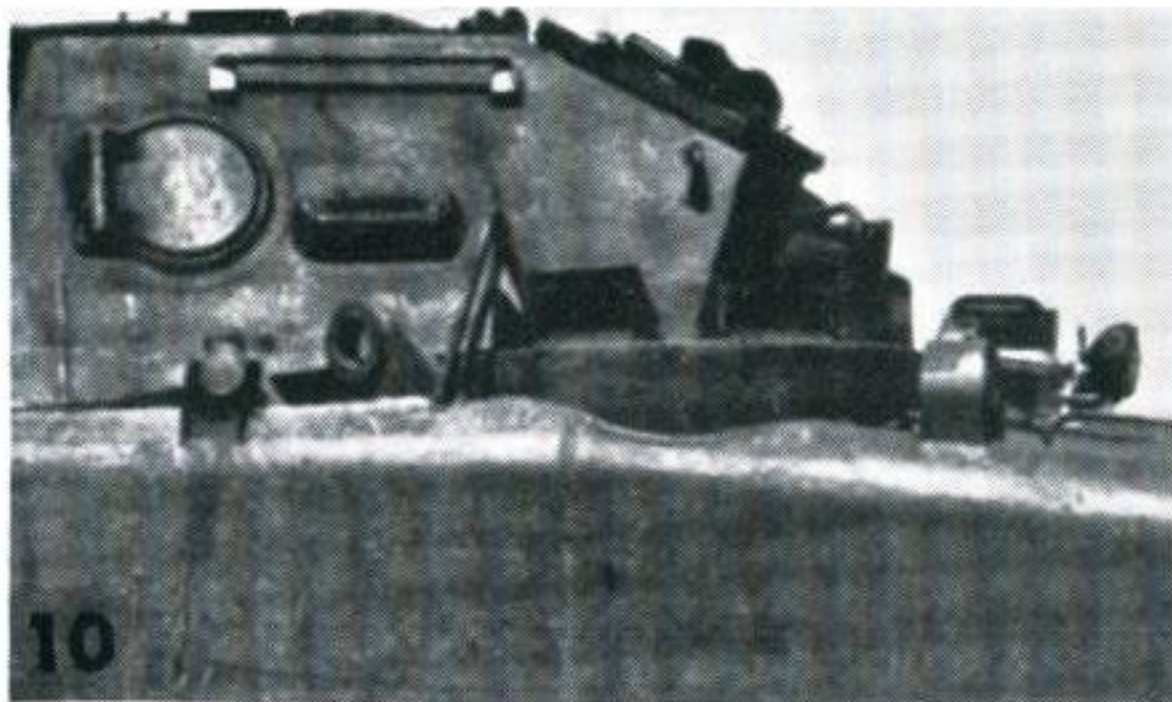
*Lesson instructions are on page 312 Solutions on page 334*

The LVTH6 is a current model of the long line of amphibious armoured vehicles developed for and used by the US Marine Corps. The first three letters of its designation stand for "Landing Vehicle, Tracked" and the "H" stands for "Howitzer" with which it is armed and which, together with the final digit, distinguishes it from its companion, turretless LVTP5.

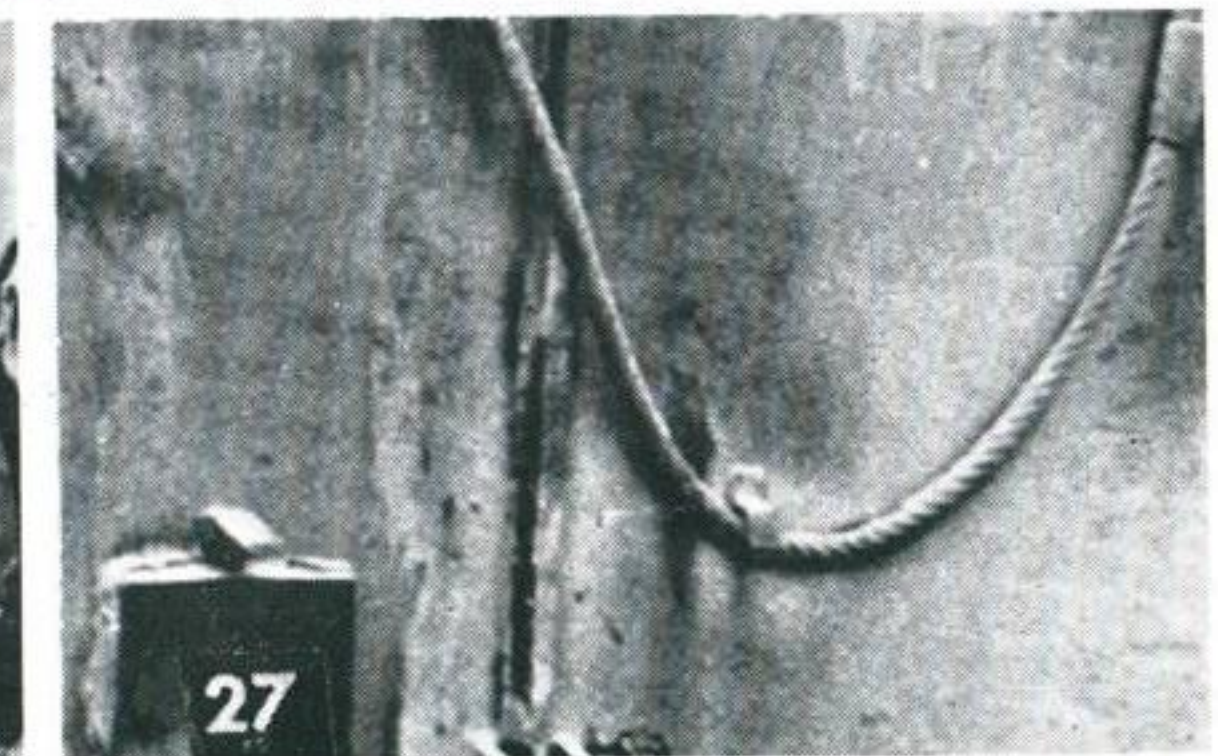
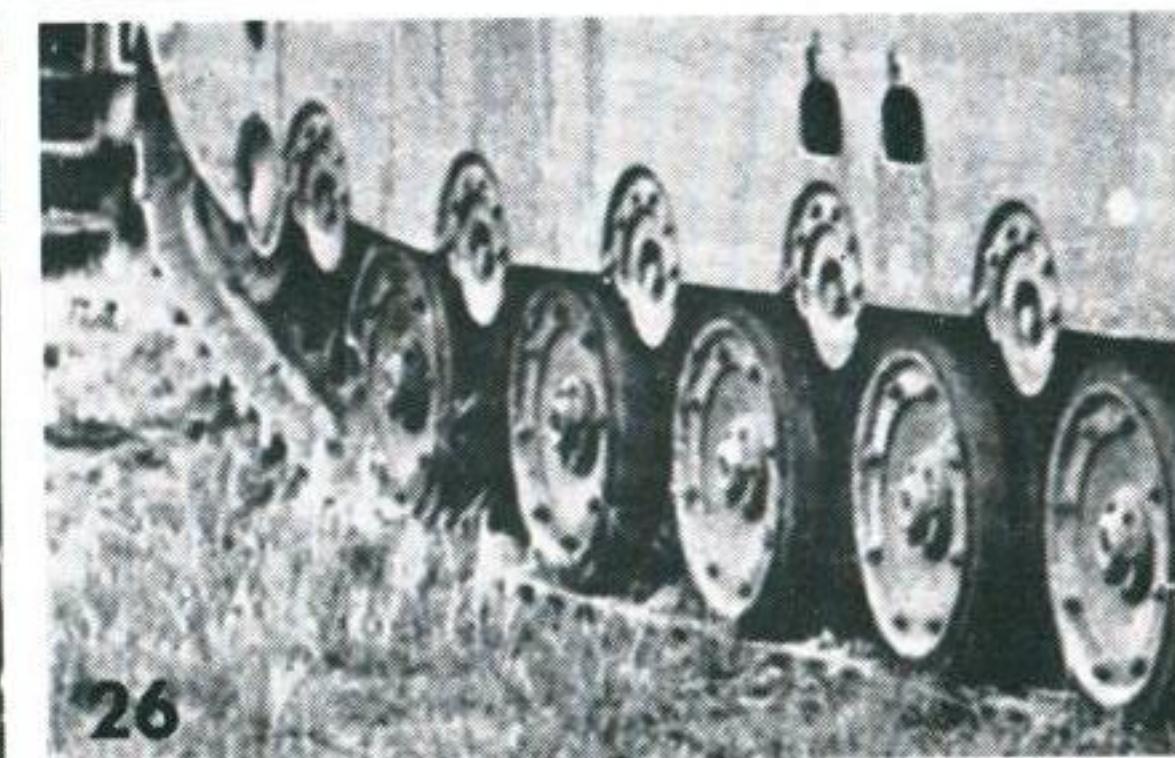
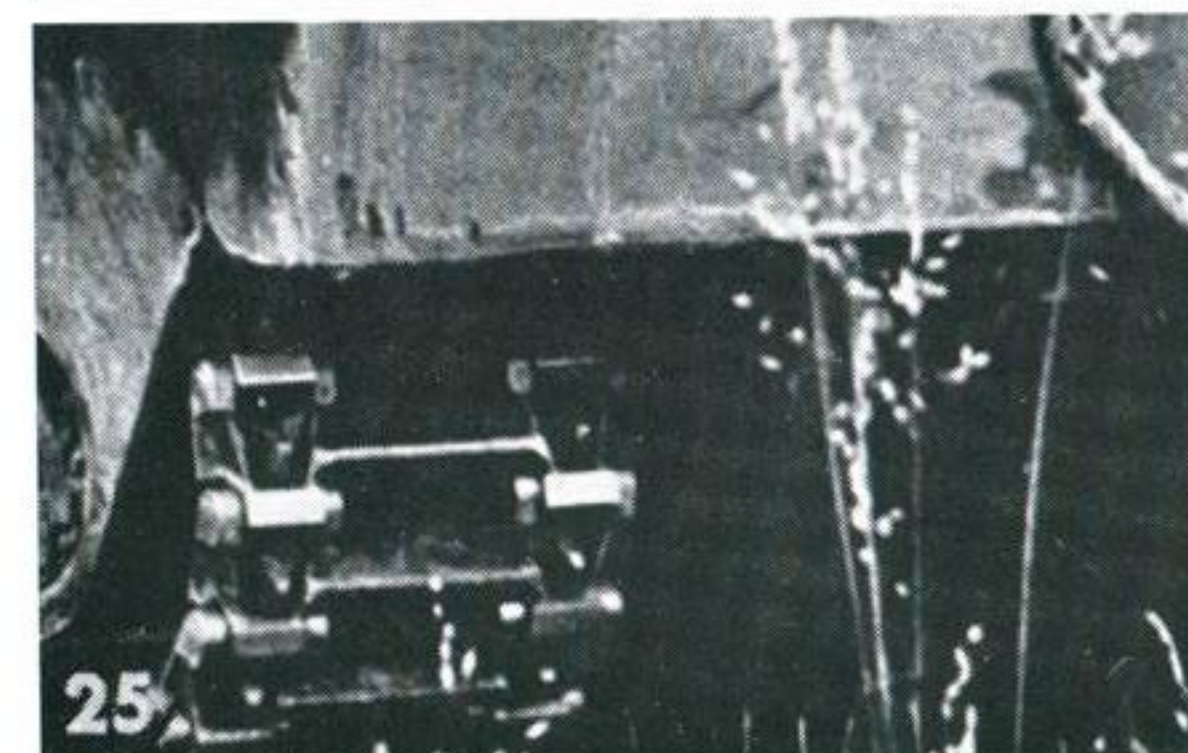
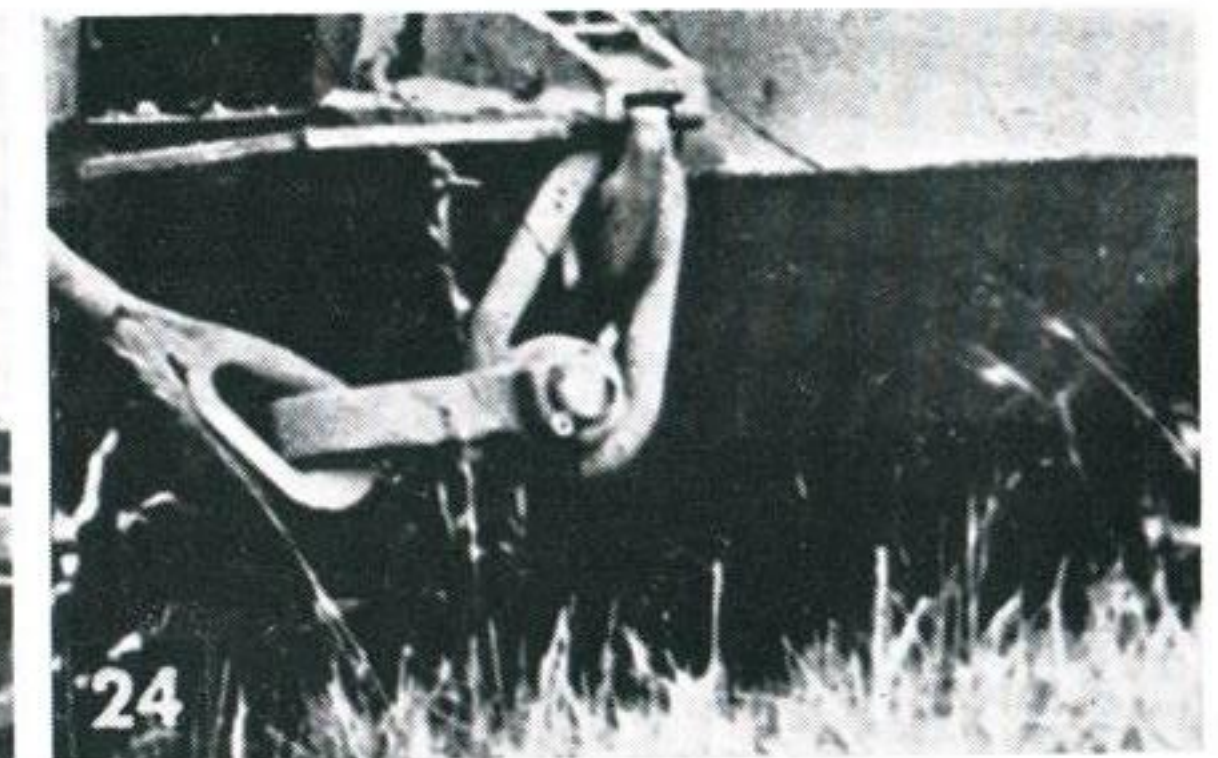
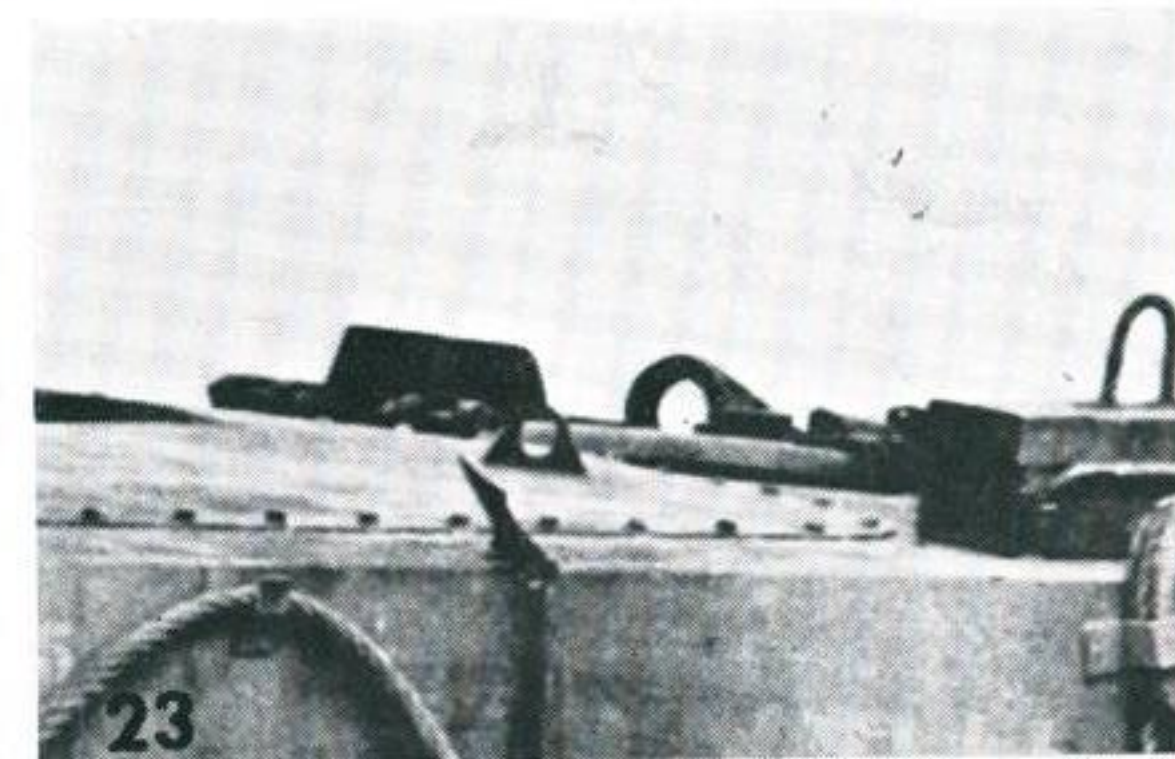
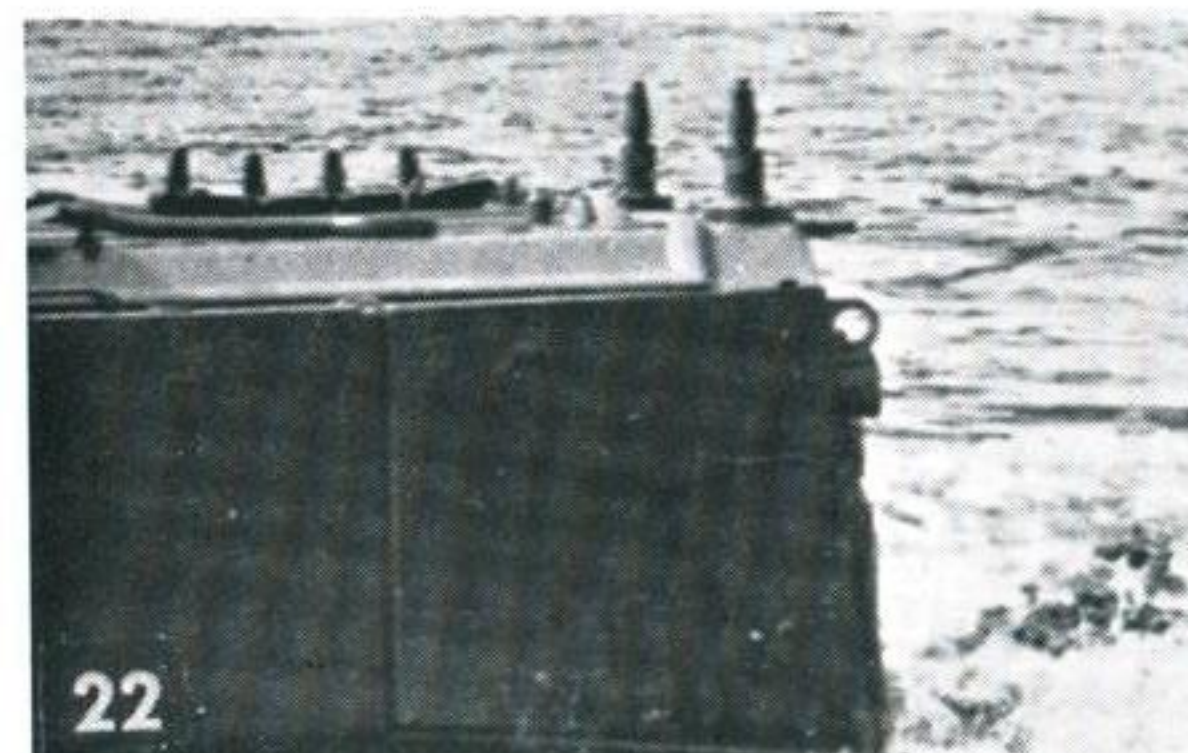
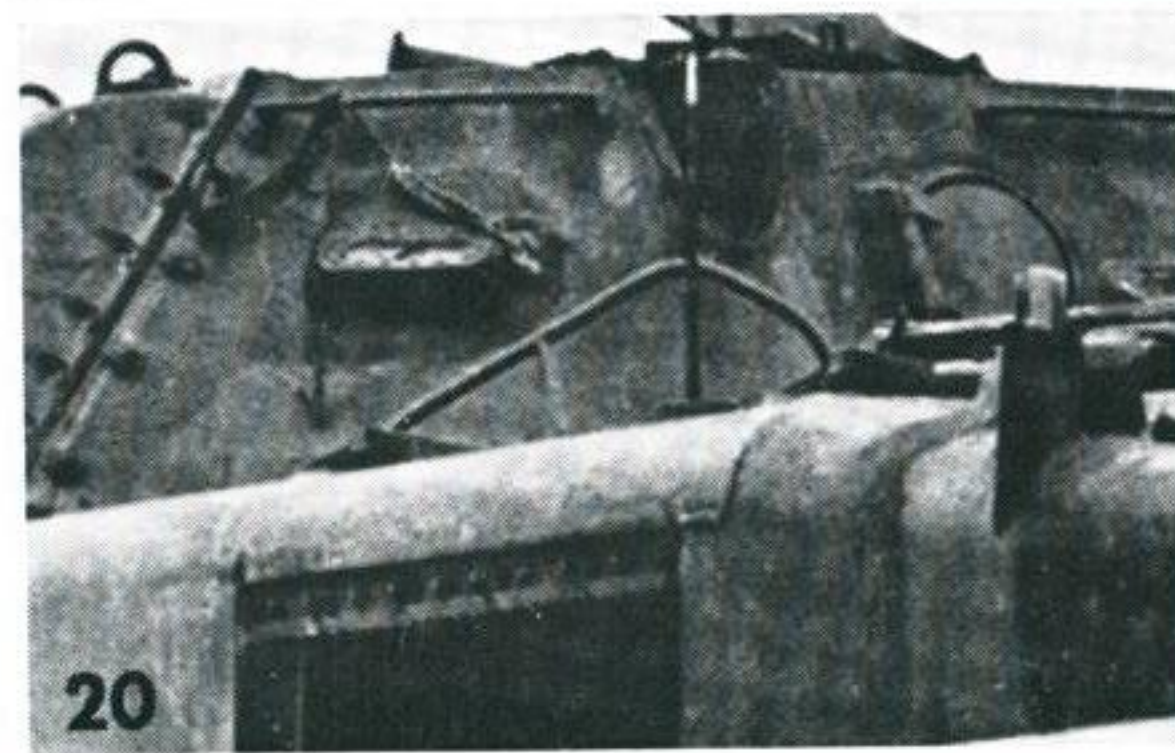
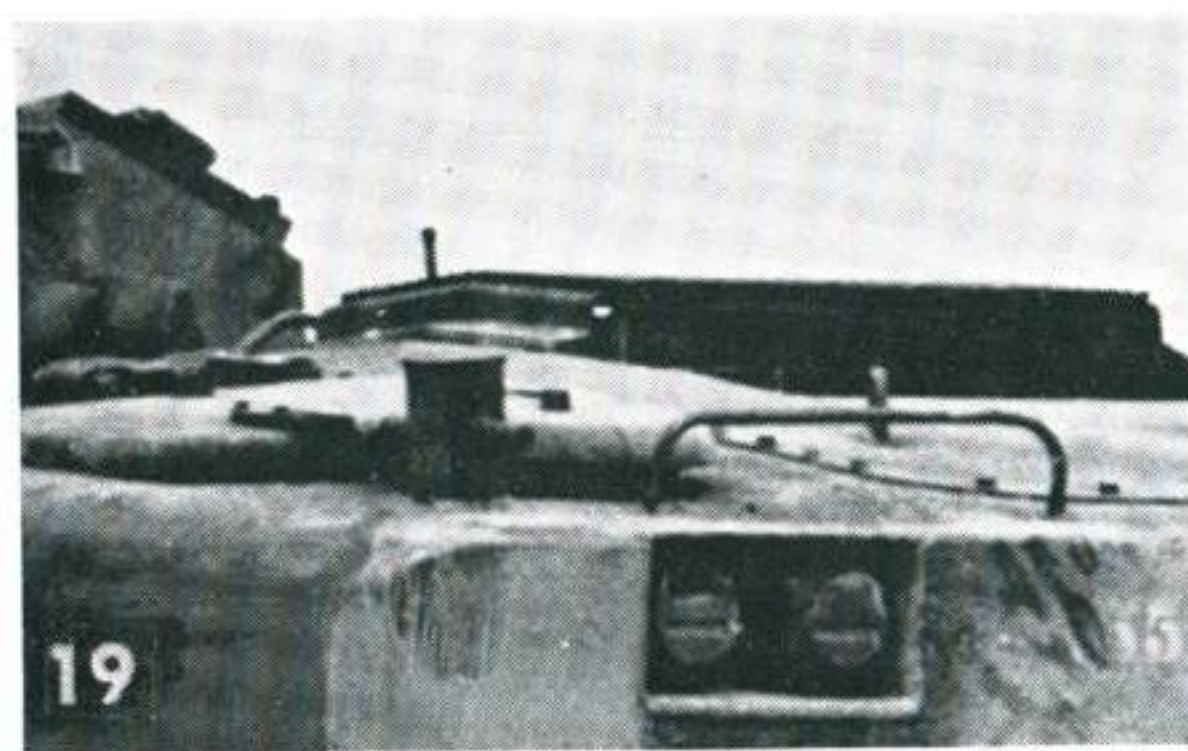
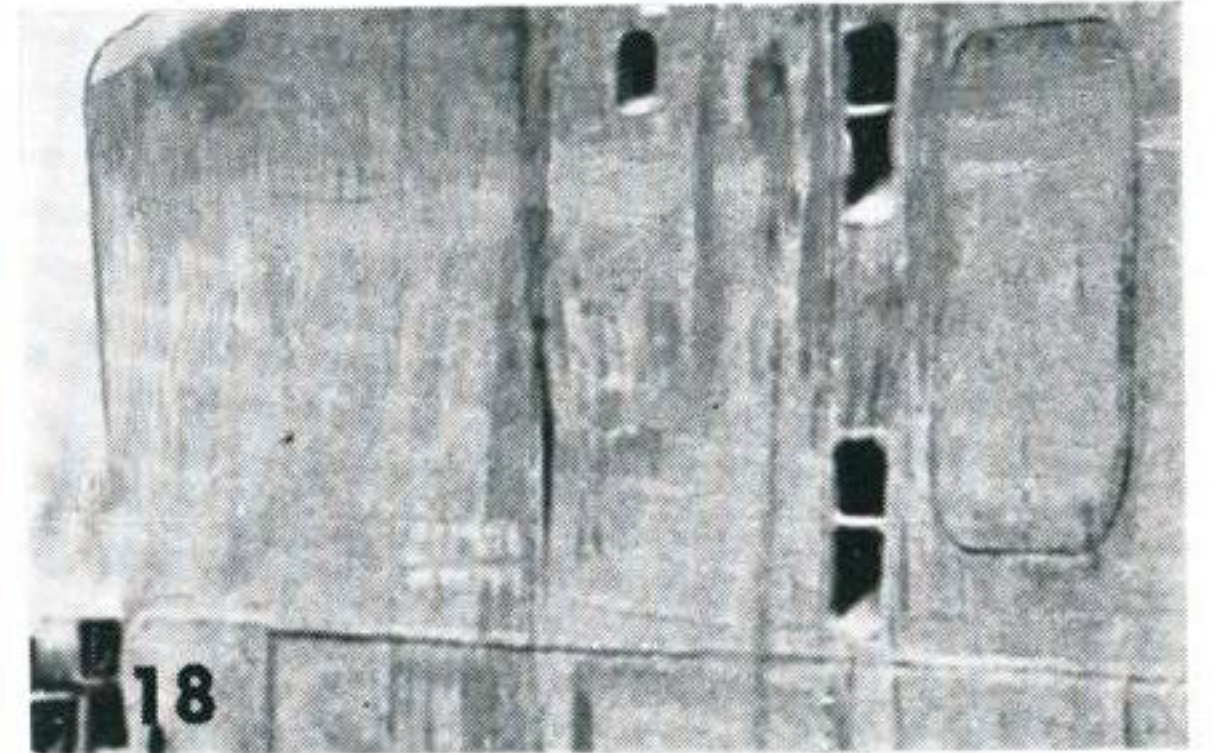
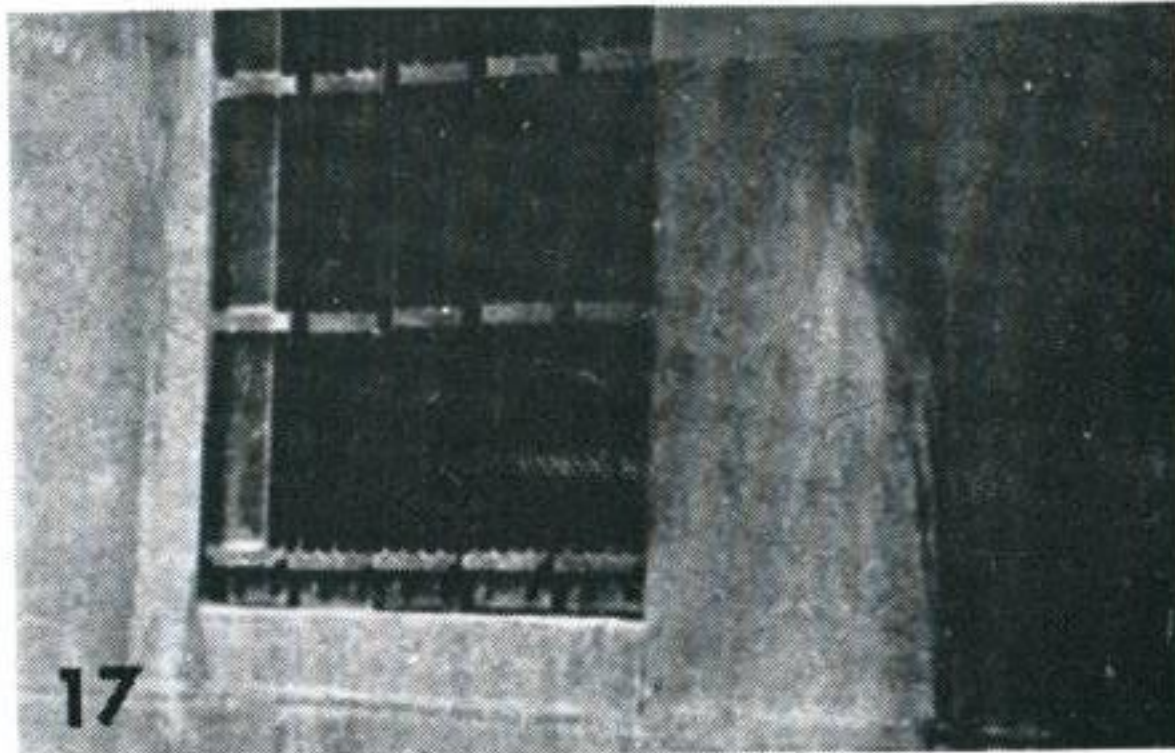
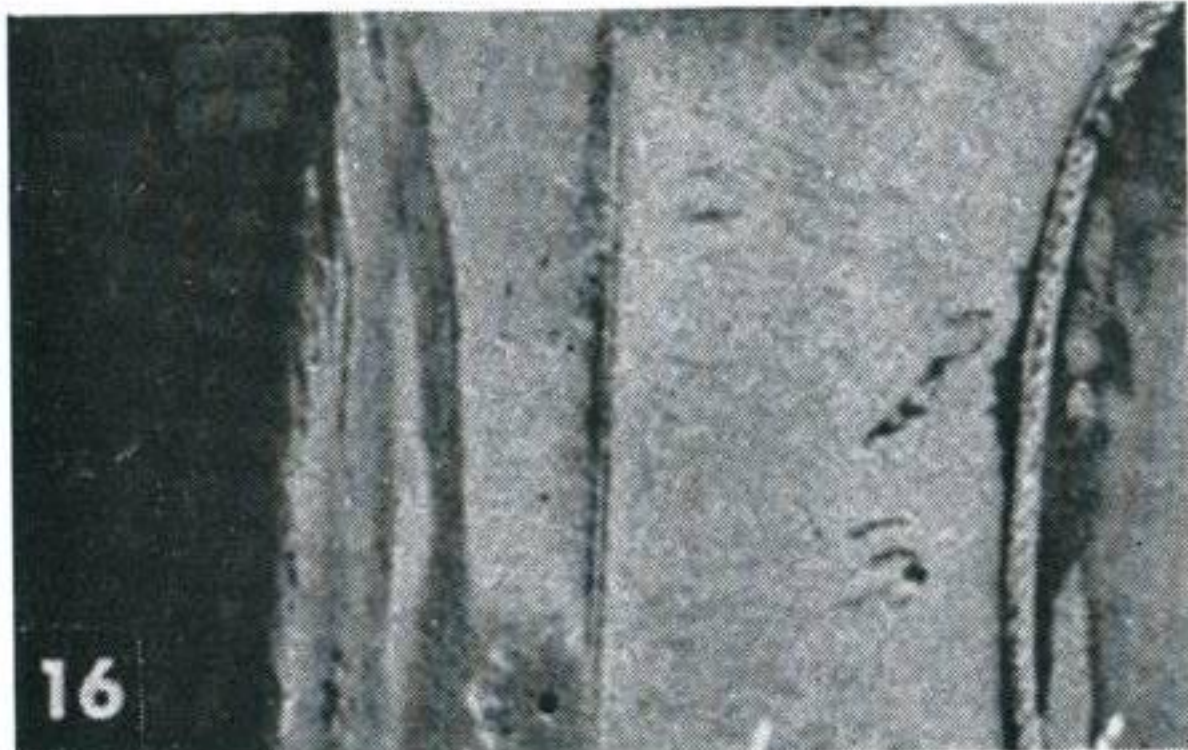
As its designation implies, the LVTH6 is intended for close fire support of landing operations carried out from the open seas against hostile shores. It has, therefore,

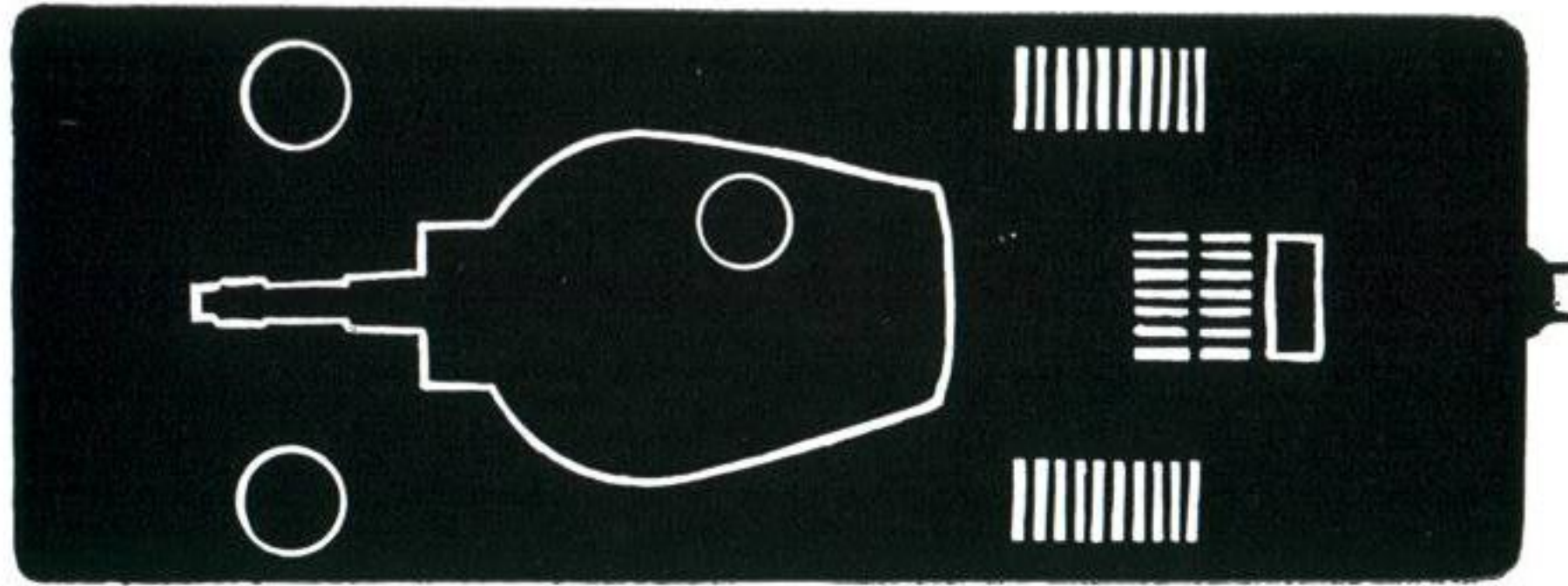
been designed to have swimming capabilities greatly superior to those of other armoured vehicles which are also amphibious but only in the limited sense of being able to swim across calm inland waters. In fact, the LVTH6 can operate in relatively rough seas and it can even negotiate Pacific surf which would easily swamp other less highly developed amphibious vehicles.

Because it needs a good margin of buoyancy in relation to its laden weight of 38 tons, the LVTH6 is large. It is actually one of the largest tracked armoured



continued





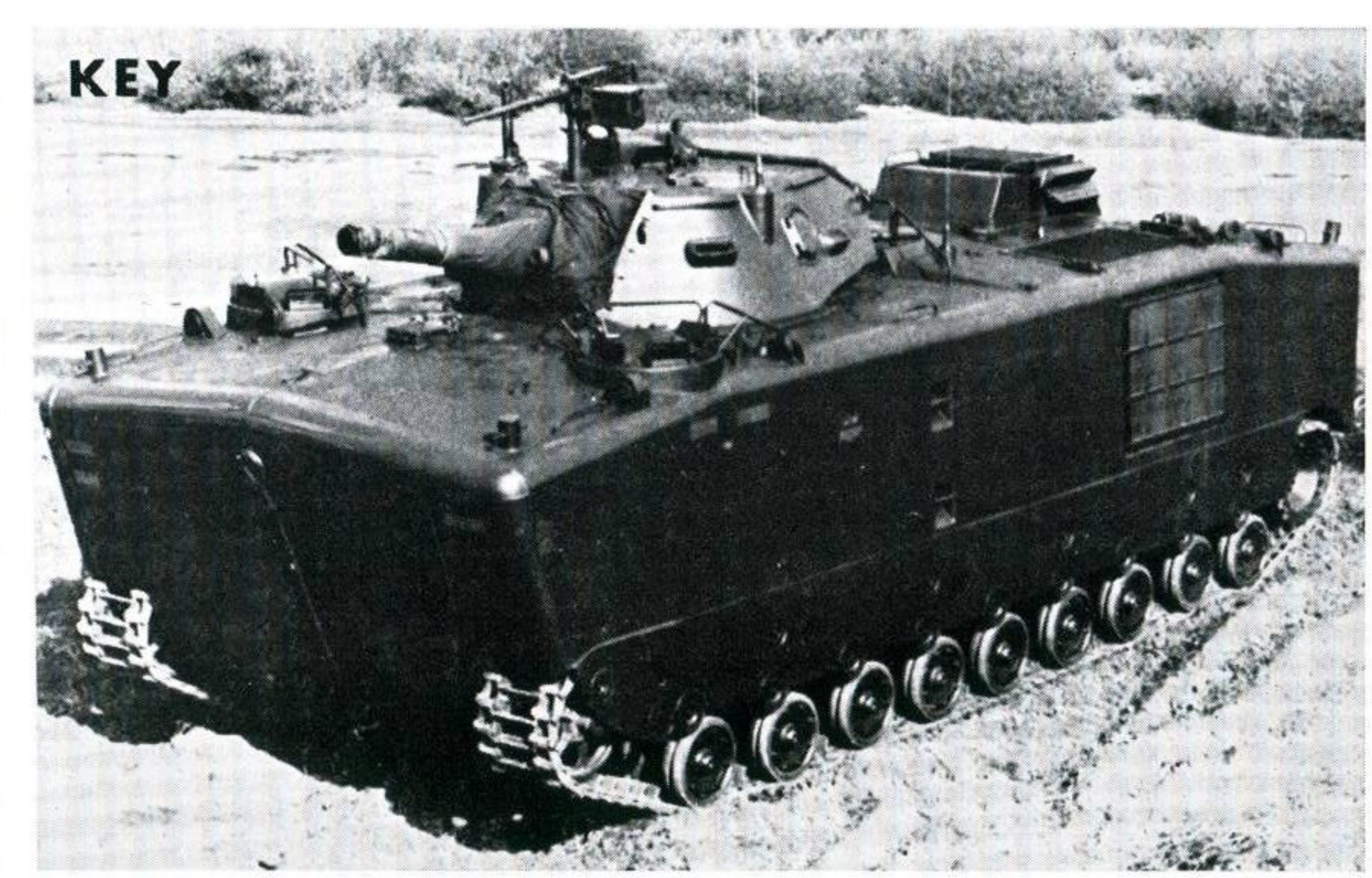
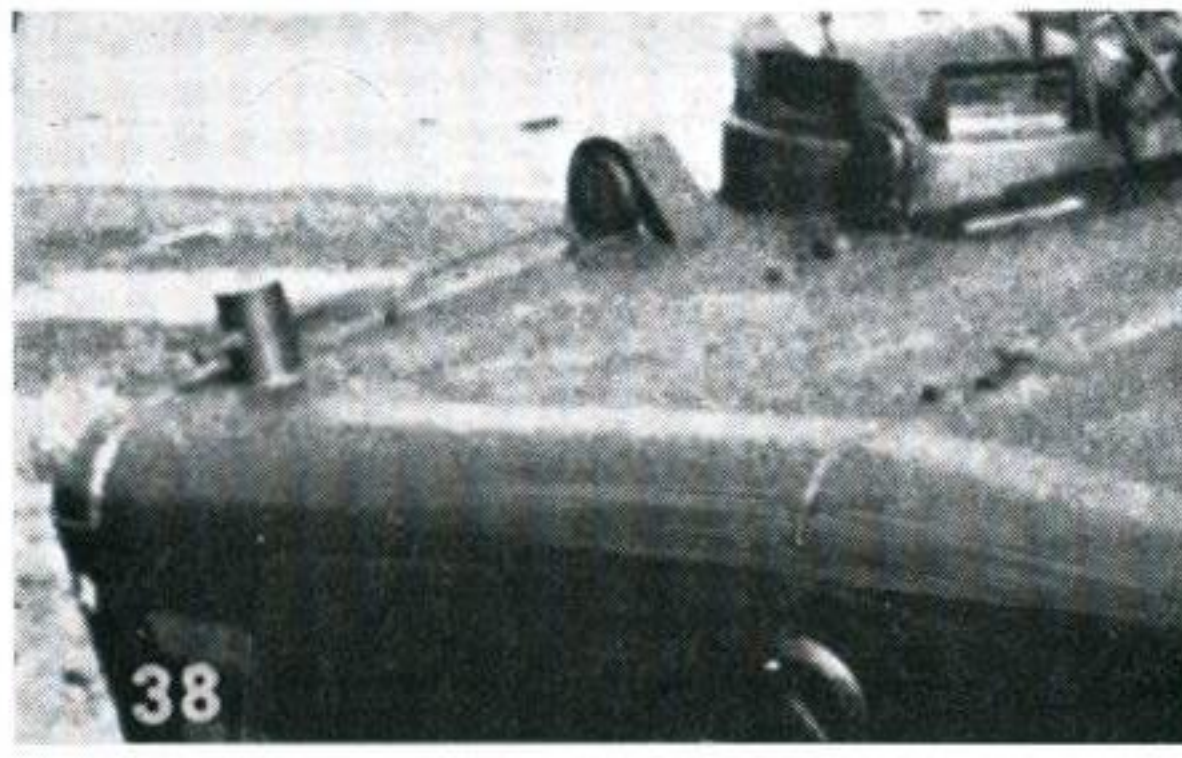
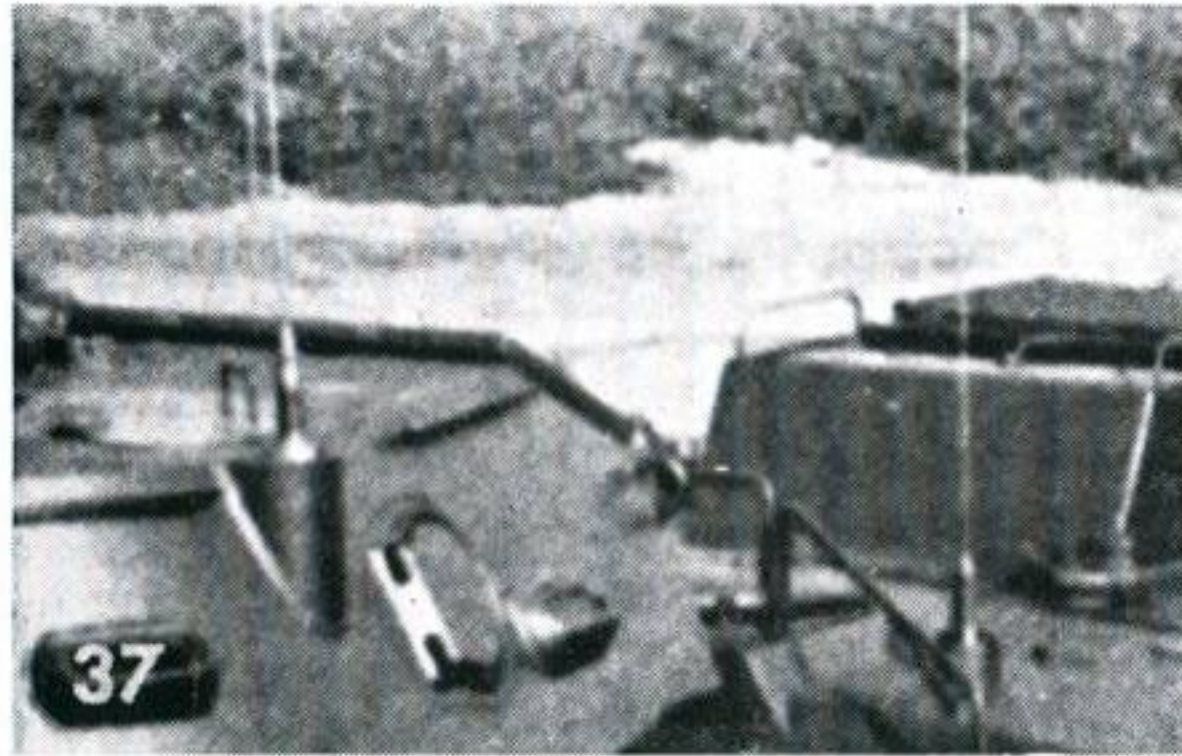
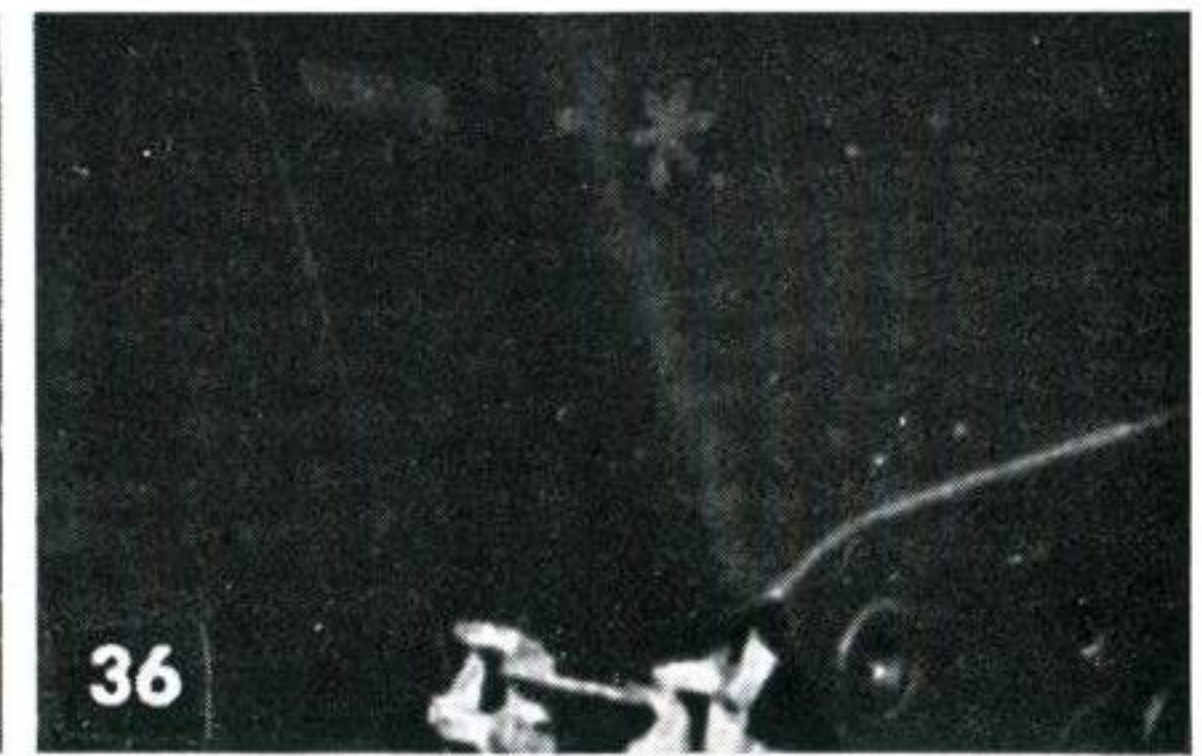
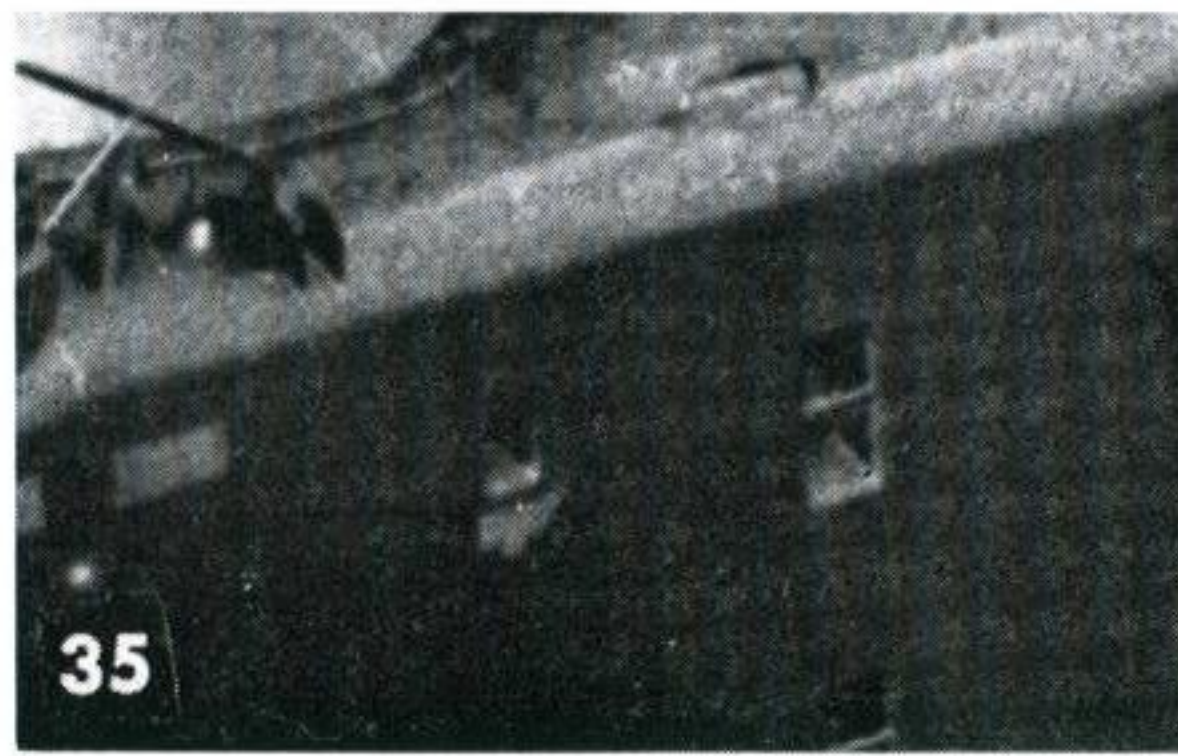
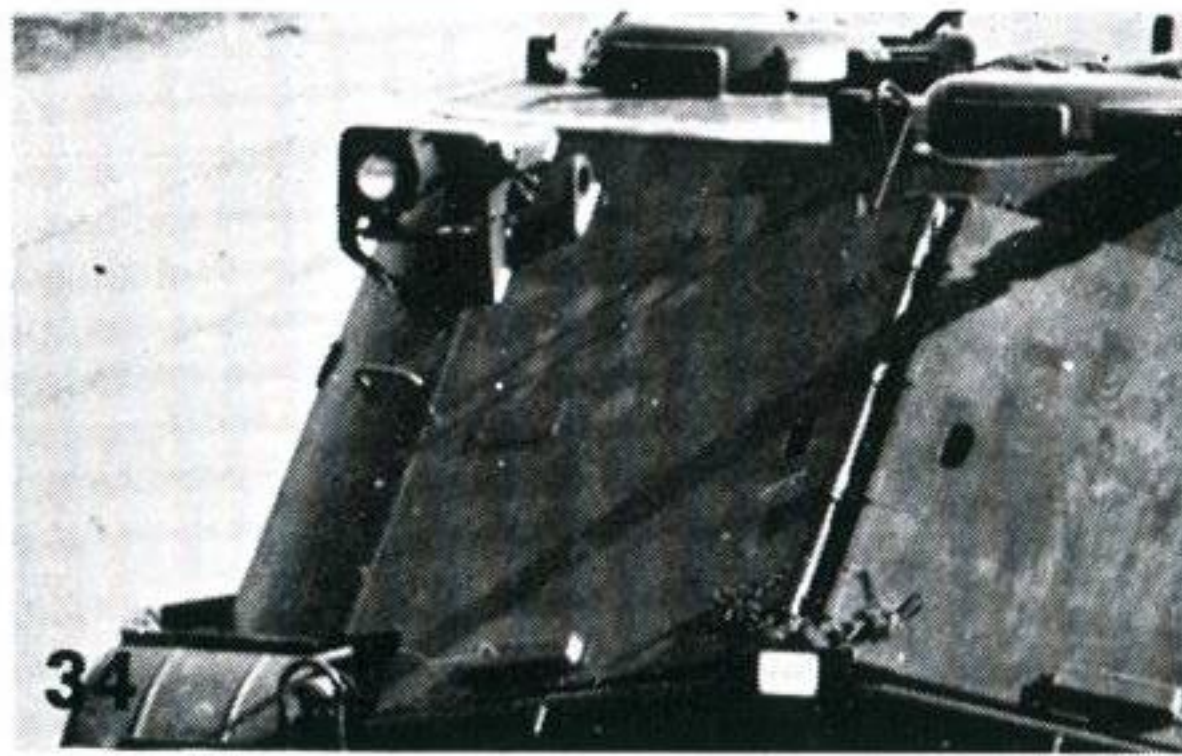
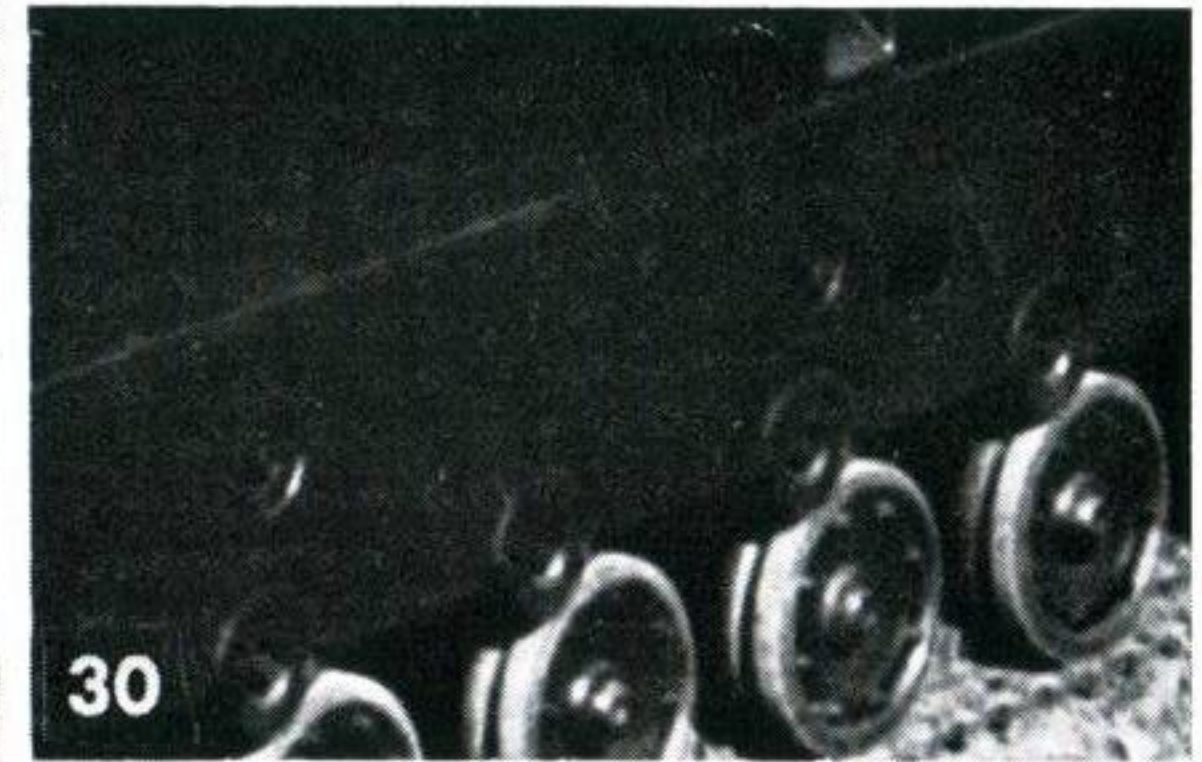
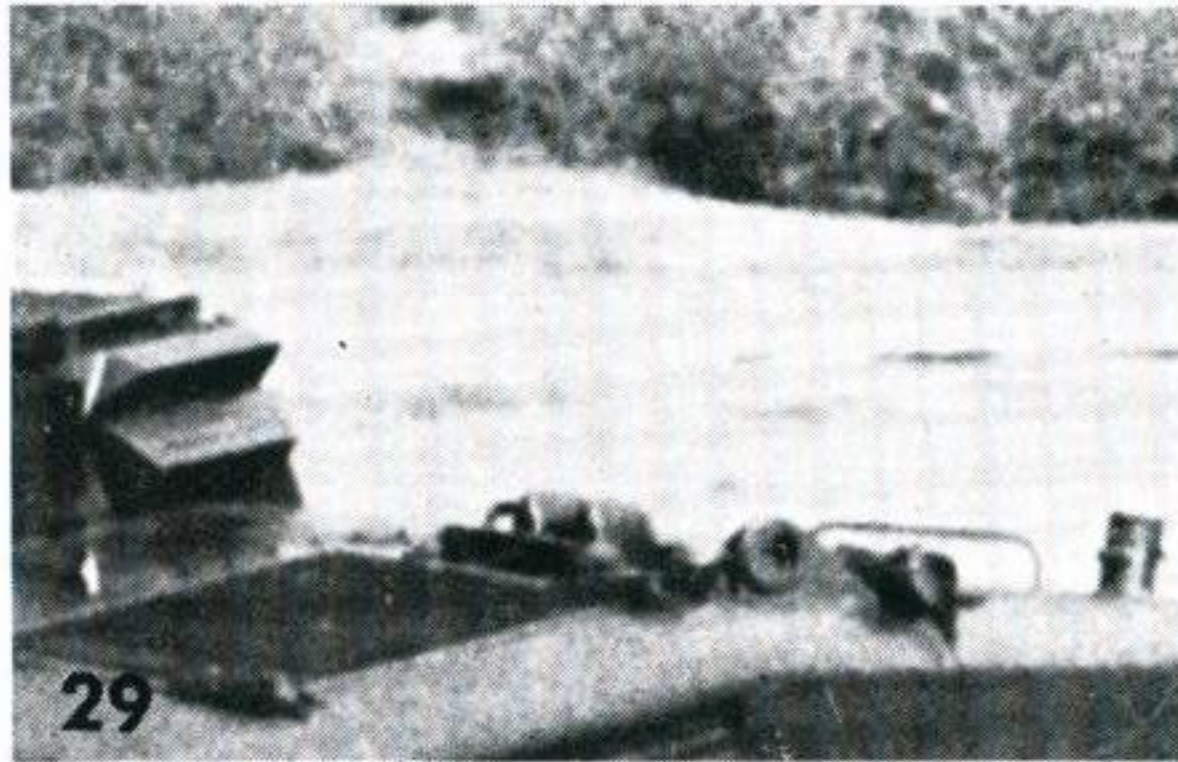
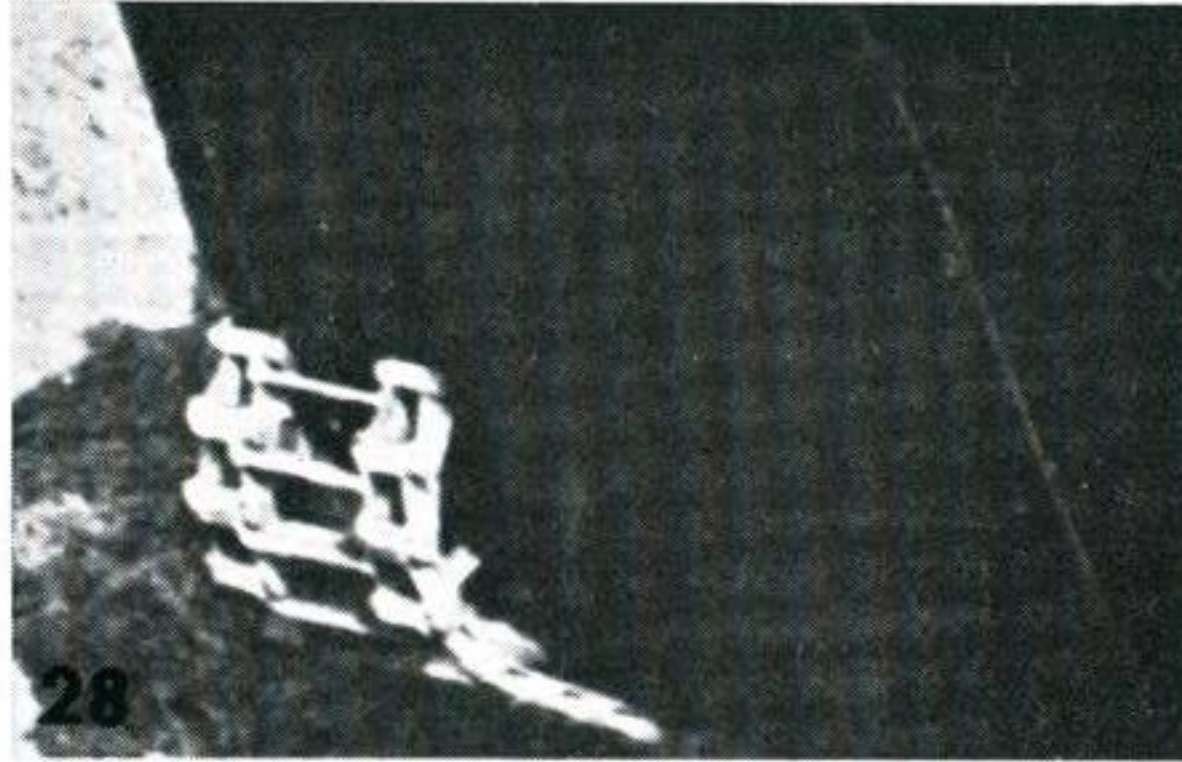
vehicles in use. Moreover, it has a characteristic slab-sided hull with an inverted-V ramp for loading and unloading in its bow, in contrast to the earlier LVTs which, if they had a ramp at all, had it at the rear of the hull.

Like the earlier LVTs, the LVTH6 propels itself in water as well as on land by means of its tracks. The top, return run of the track is hidden by skirting which forms an extension of the hull side plates and comes down almost to the tops of the road wheels. There are nine of these per side, which is more than most tracked armoured vehicles have.

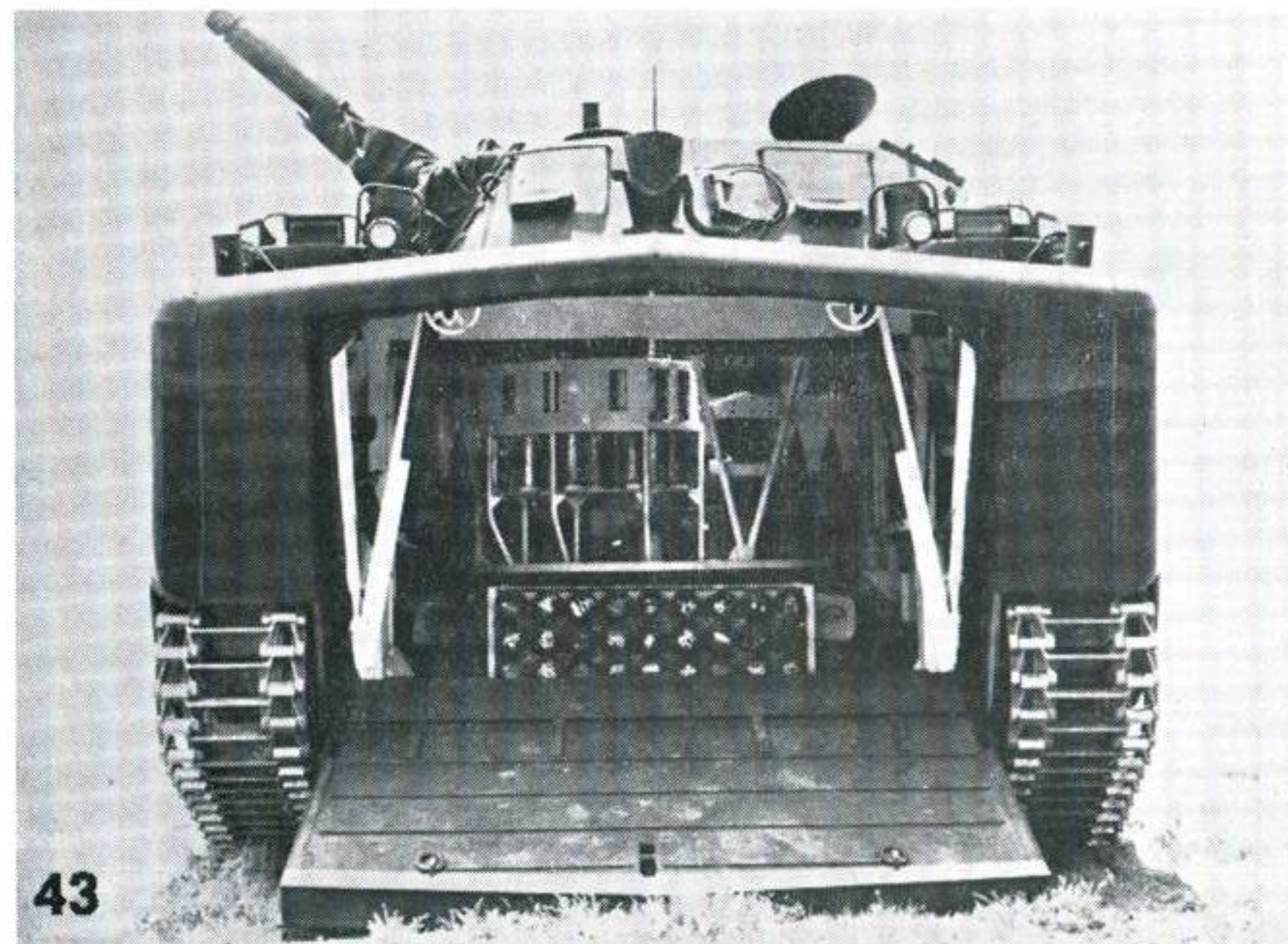
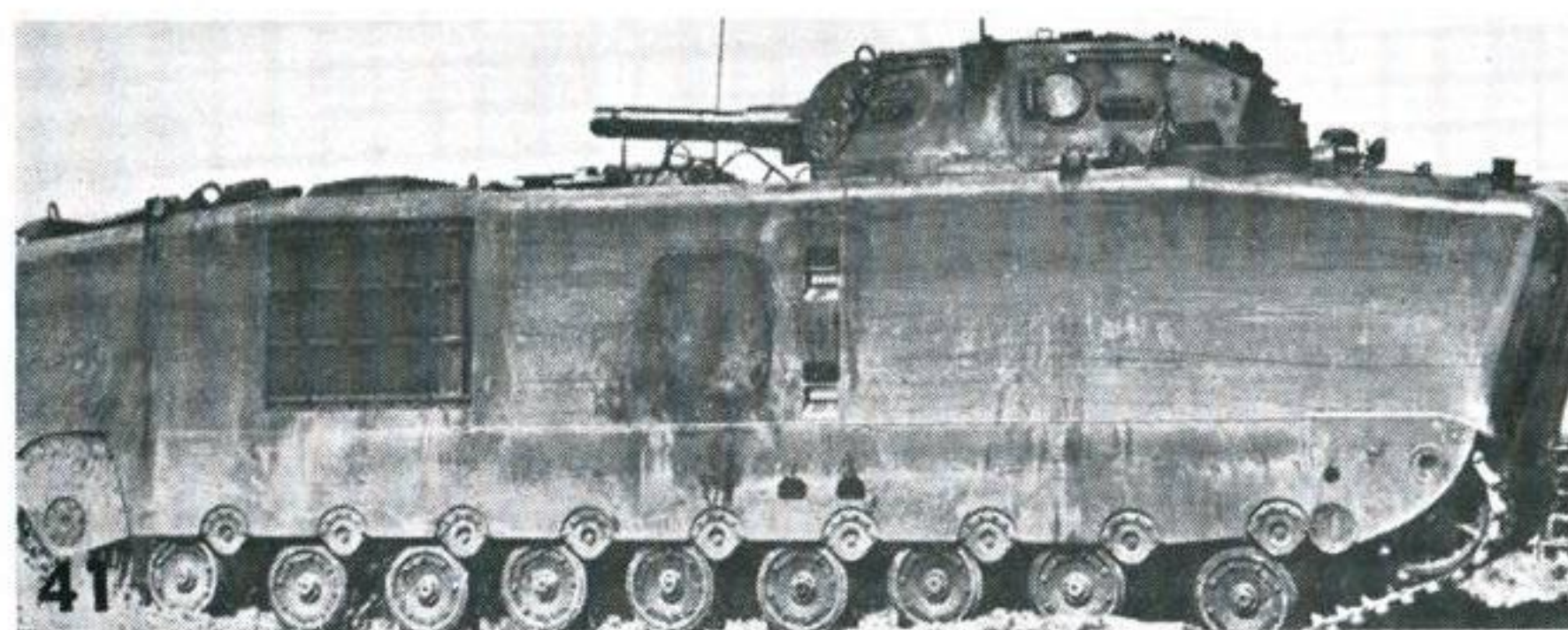
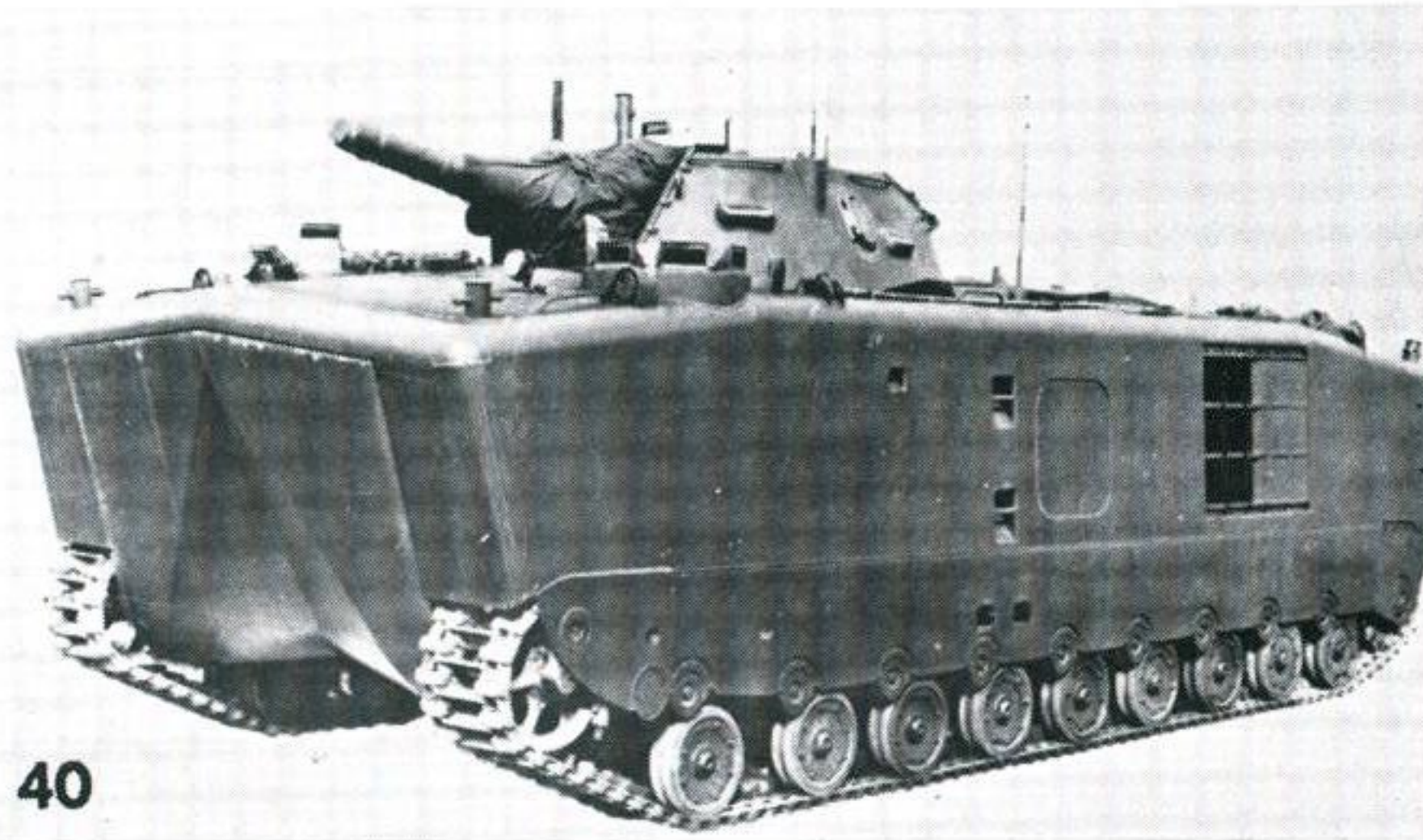
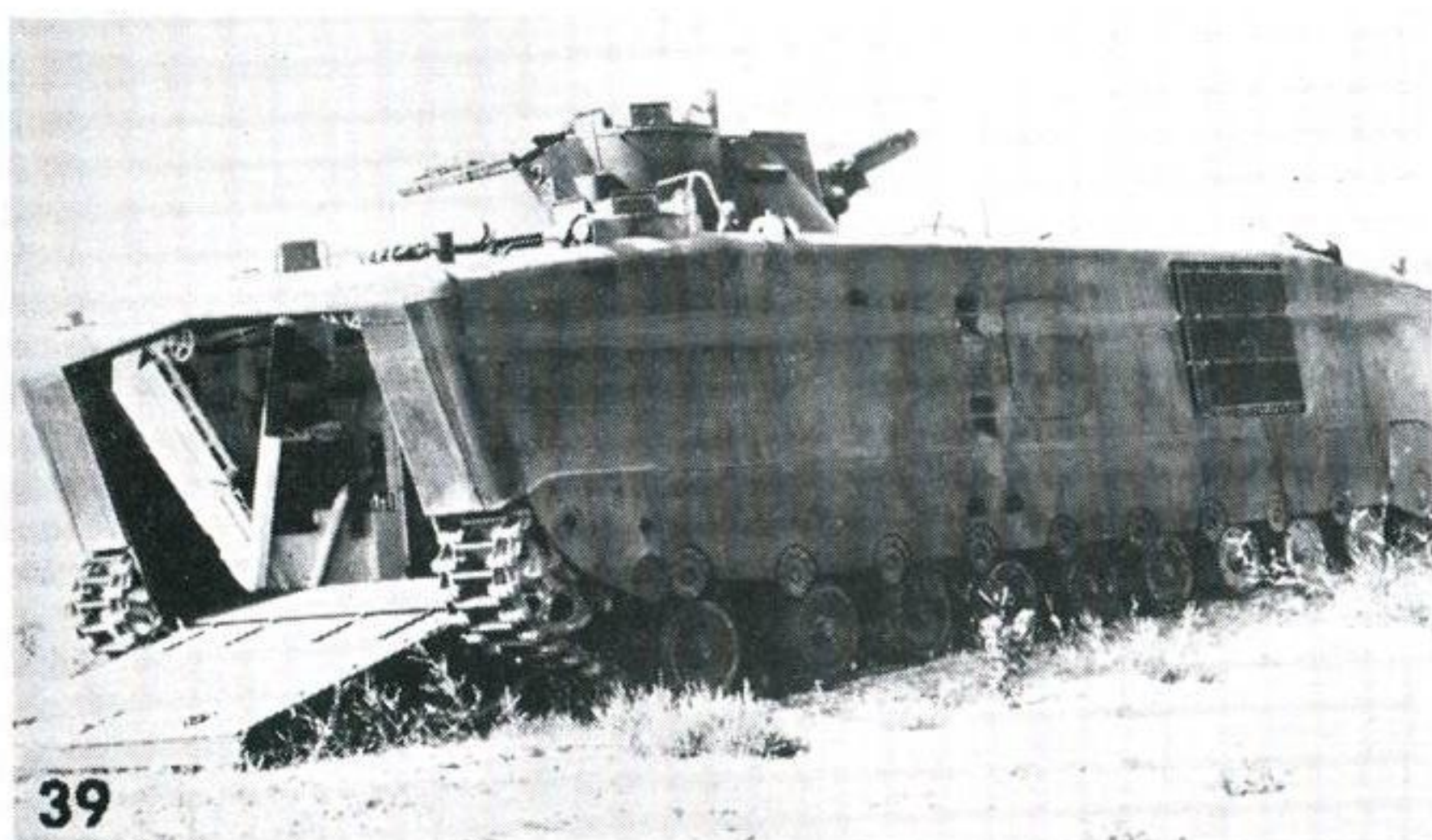
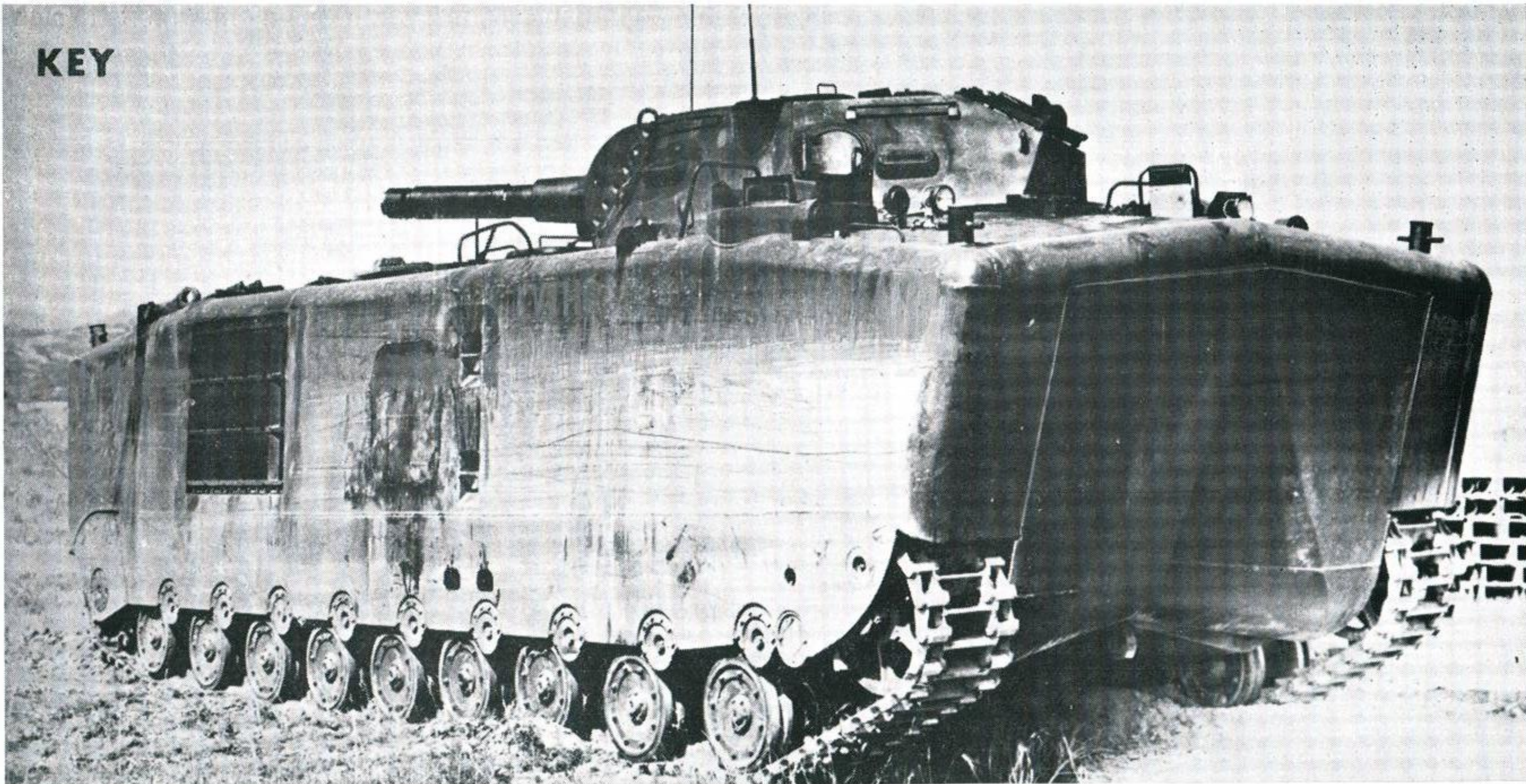
The short-barrelled howitzer which forms the main armament of the LVTH is of 105-mm. calibre and is

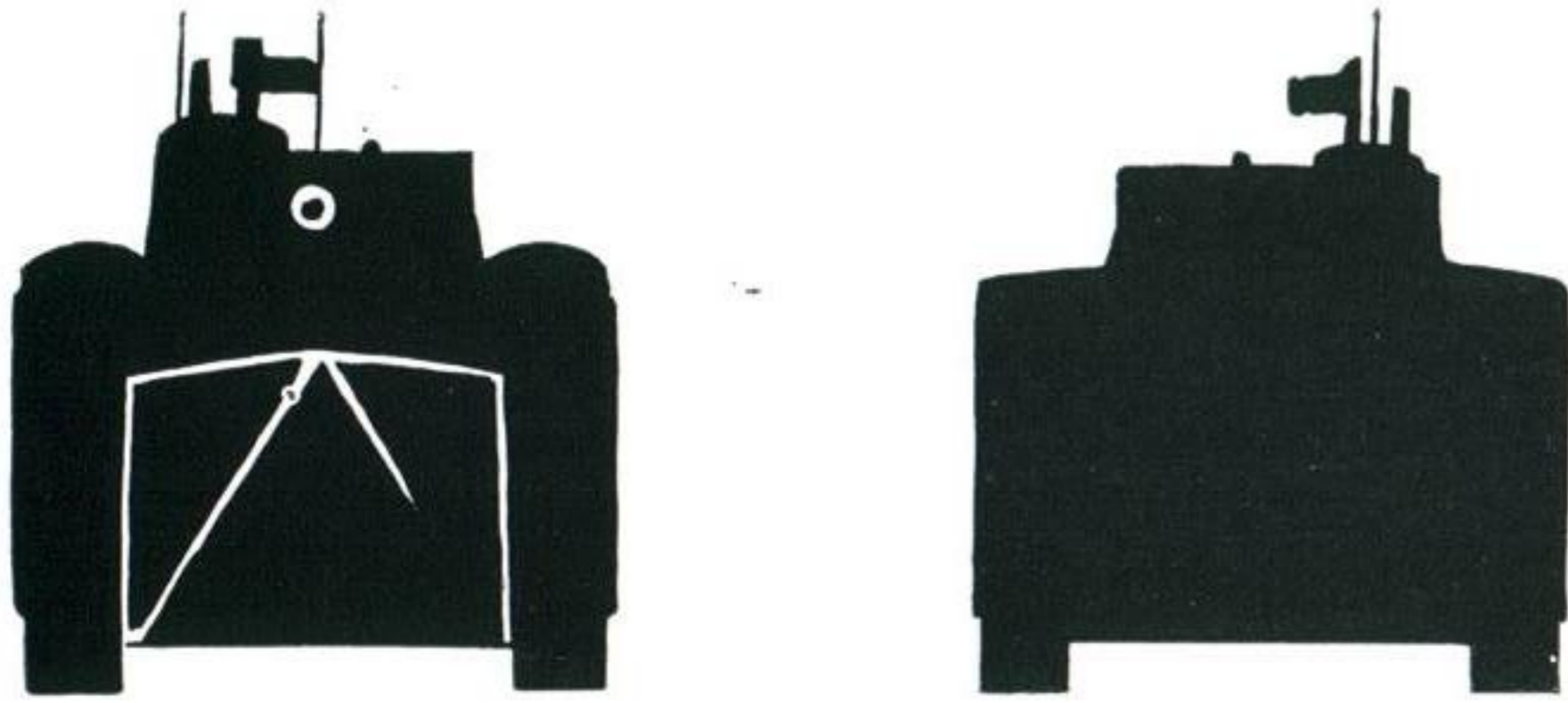
*continued overleaf*

## LVTH6 US Marine Corps Amphibian



KEY

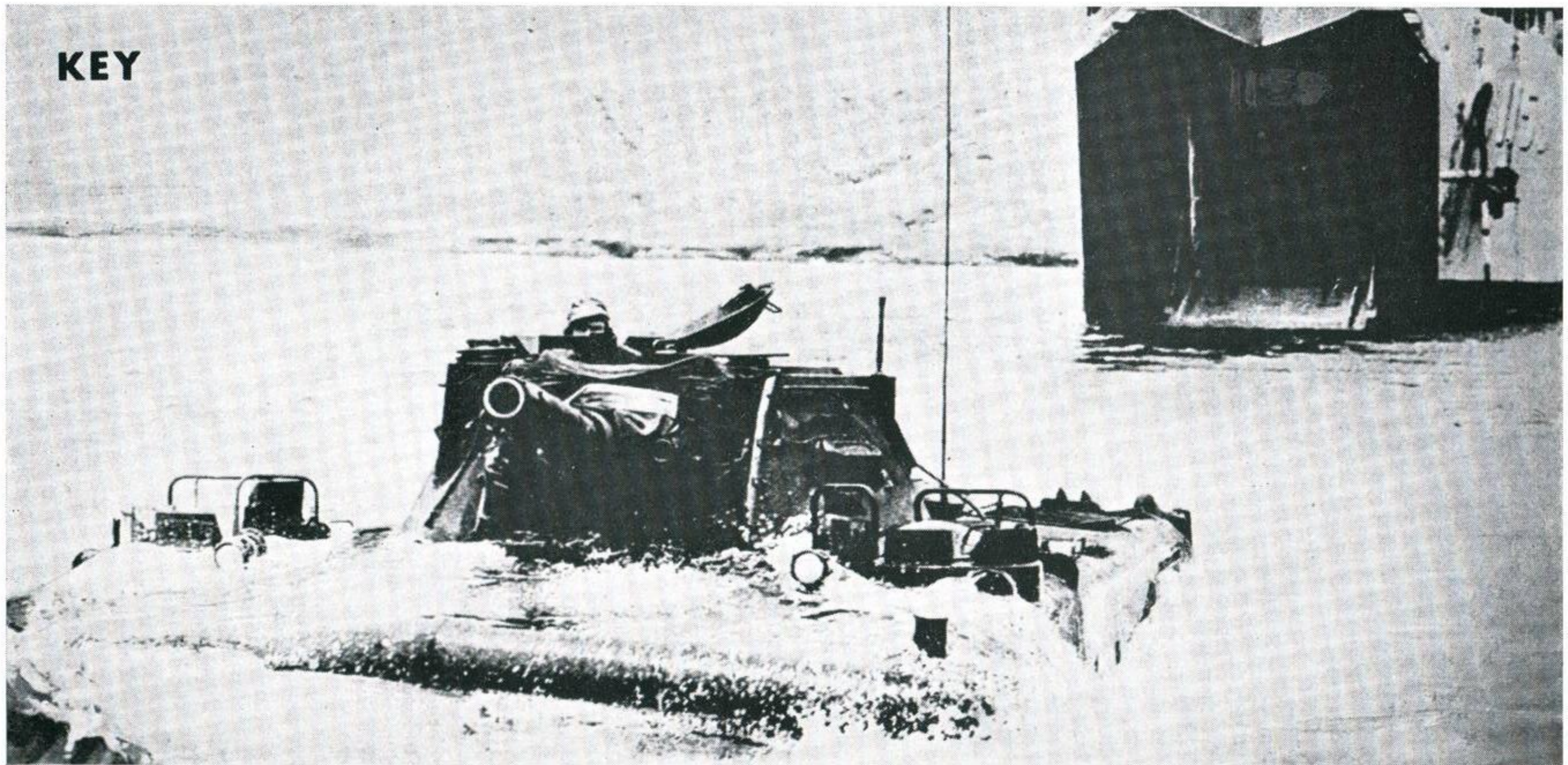




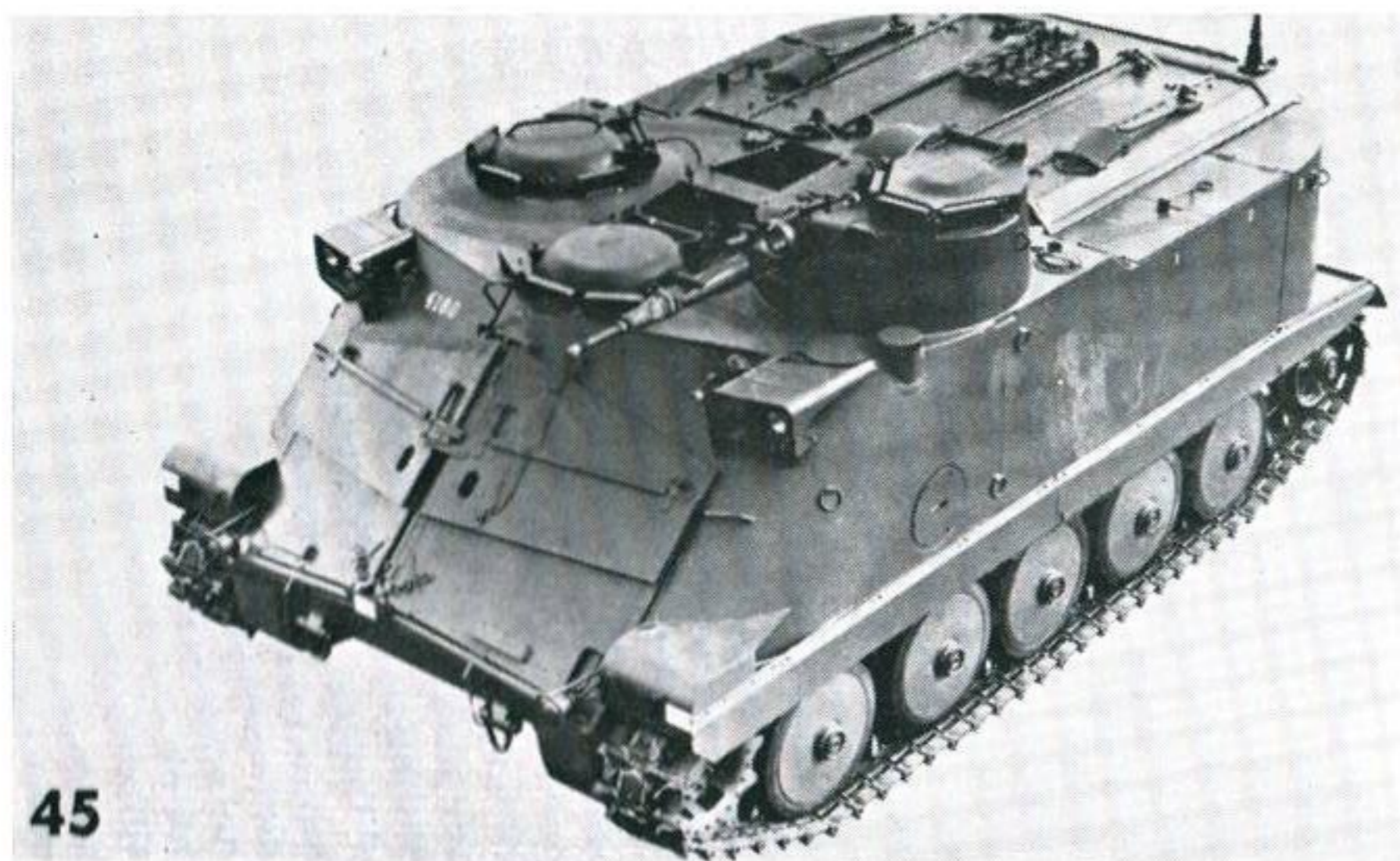
## LVTH6 US Marine Corps Amphibian

mounted in a squat turret. The amount of room available within the hull makes it possible to stow a relatively large number of rounds for the howitzer as well as accommodating a crew of six and various stores.

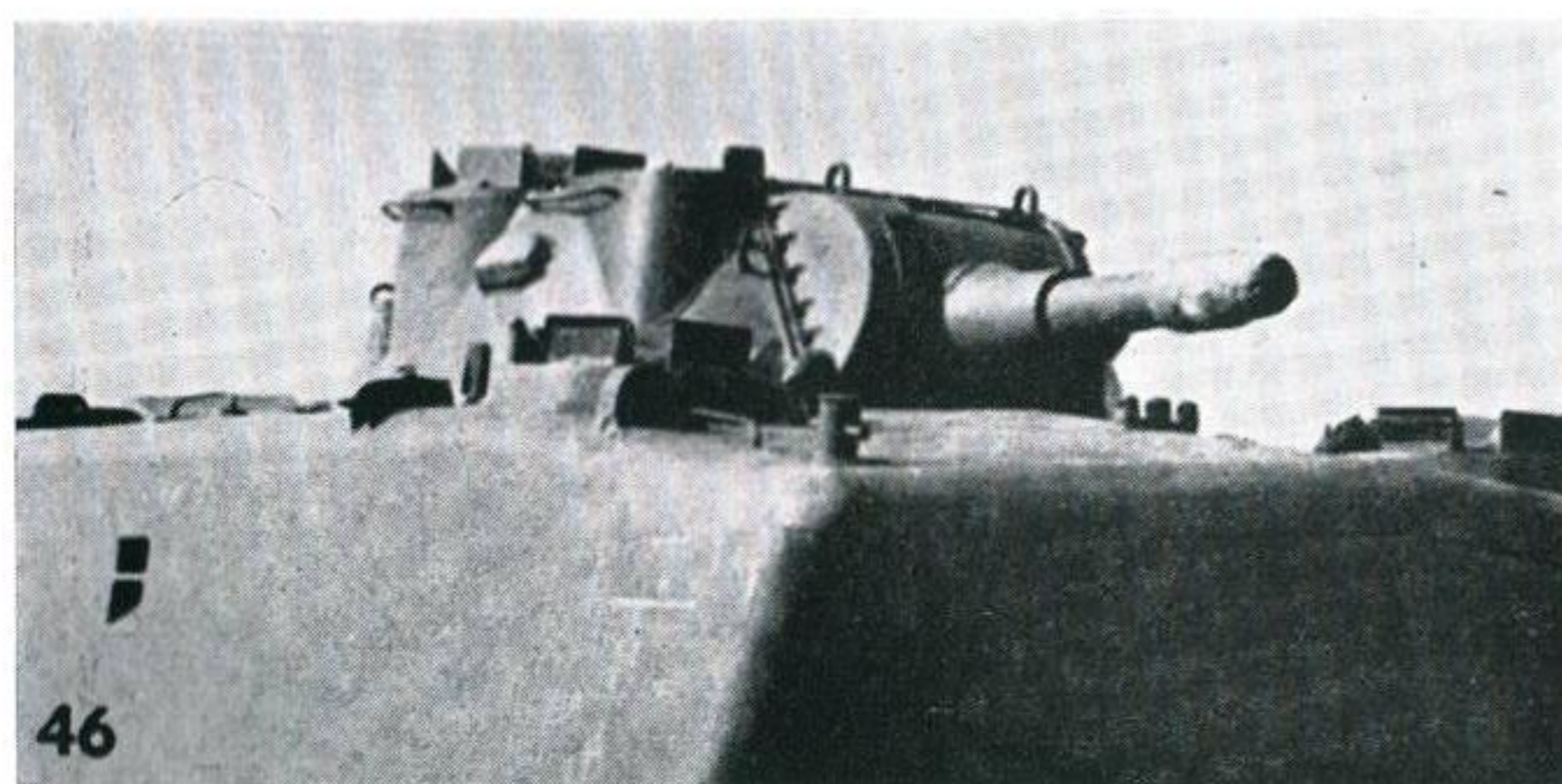
In addition to the original LVTH6, which was introduced into service in the mid-fifties, there is also the modified LVTH6A1 which can be readily recognised by a small "doghouse" superstructure over the engine compartment at the rear of the hull. The engine itself is a Continental LV-1790 water-cooled V-12 engine which develops 810 b.h.p. and gives the LVTH6 a maximum speed of 30 m.p.h. on hard, level ground and 6-8 m.p.h. in water.



KEY



45



46



47

## SOLUTIONS TO EXERCISES AND TESTS

Page 310

### TEST PAPERS

**H125/Dominie:** Jokers are first line 1st (Fellowship) and 5th (BAC One-Eleven) pictures, second line 4th picture (Fellowship) and third line 2nd picture (Fan-Jet Falcon).

**Crusty:** Jokers are second line 4th picture (Gulfstream II) and third line 1st (BAC One-Eleven) and 3rd (Careless) pictures.

**Buccaneer:** Joker is third line 2nd picture (Phantom).

Page 312

**RFA Resurgent:** Jokers are the second line 1st picture (Victory Type "Kiunski") and third line 3rd picture (Cargo Liner "City of Bath").

**Resolution Class:** Jokers are second line 1st picture and third line 4th picture.

Page 313

### Vautour

All targets are **Vautour** except Nos. 14 (Flashlight) and 29 (Sabre) which are jokers.

Page 316

### CHOP TEST

1 BAC One-Eleven	15 Gnat	29 Mallow
2 Otter	16 Crusader	30 Safir
3 Phantom	17 Super Frelon	31 Crusader
4 Islander	18 Atlantic	32 Seasprite
5 Turbo-Porter	19 Thunderchief	33 Skyvan
6 Fishbed	20 Friendship	34 Madge
7 Atlantic	21 Skyhawk	35 Basset
8 Harke	22 Chinook	36 Thunderchief
9 Caribou	23 Fan Jet Falcon	37 Classic
10 Tutor	24 Dominie	38 Mirage IV
11 Cmelak	25 Dove	39 Vulcan
12 Coke	26 Cub	40 Aero Commander
13 Crusty	27 Hip	41 Iroquois
14 Sikorsky S-61	28 Crate	42 Delta Dagger

Page 320

### ÉTENDARD

All targets are **Étendard** except Nos. 10 (Jaguar), 15 (Mystère IV), 27 (Mirage F1) and 38 (Mirage III) which are jokers.

Page 324

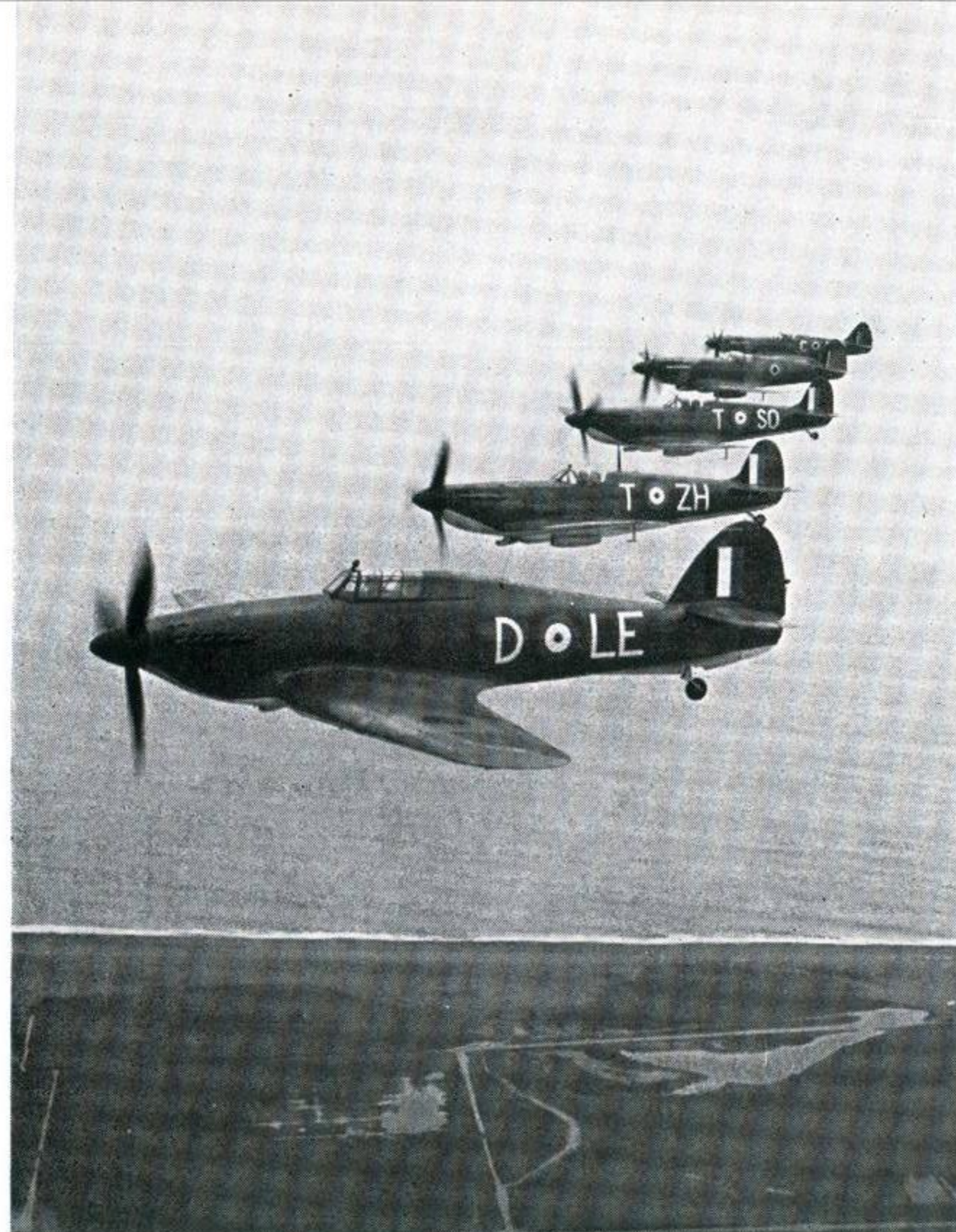
### FAWN CLASS COASTAL SURVEY SHIPS

All targets are **HMS Fox** except Nos. 24, 27 and 56 which are jokers (Hecla Class Survey Ships).

Page 328

### LVTH 6

All targets are **LVTH 6** except Nos. 9, 13, 22, 34, 42 and 45 which are jokers (Swedish APC Pbv 302).



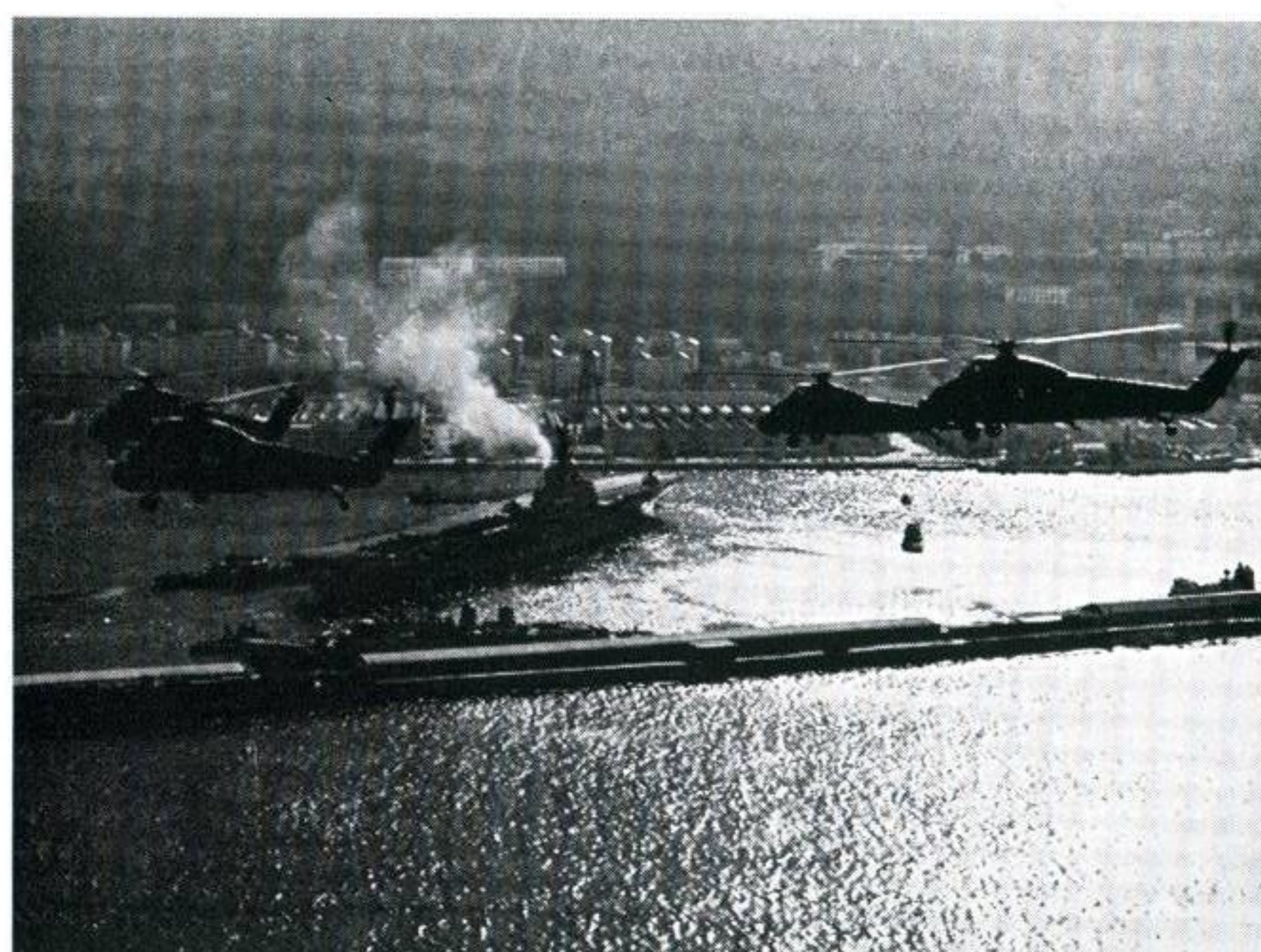
**BACK TO DUTY** at Coltishall with the Battle of Britain Flight are the Spitfires and Hurricane that participated in the filming of the film *Battle of Britain*, supplemented by an additional Spitfire and one of the aircraft that played a part in the Battle. These aircraft were variously marked for film purposes, some of these being as detailed, front to rear:

**LF363**, the only Hurricane of the Flight and one of the only three flyable Hurricanes for the filming, became something of a star among the others which included two others taxiable and a number of plastic replicas. At one time LF363 was marked H3422 "H" on one side and H3420 "F" on the other.

**P7350**, the newcomer to the Flight and the oldest flyable Spitfire, was once Colerne's proud trophy. Earmarked for the RAF Museum as a static exhibit it was made airworthy for the film and flew for the first time in 19 years. At one time during the taking it bore the pseudo serial N3321 with the code "CD.M".

**AB910**, a Mk. V originally, was presented to the Flight by BAC.

**PS853** and **PM631**, Mk. XIXs which, being Griffon-engined versions of the Spitfire, were used in background flying shots only. Appropriately they wear now roundels of the 1942-47 period, while the three others bear roundels of the period prior to this.



**Cover Photo:** Wessex helicopters of No. 845 Squadron fly past HMS *Bulwark* after landing 41 Commando on Gibraltar during Exercise "Rock Climb" earlier this year.

**Target No. 7** of the Galeb lesson in the May 1969 edition has been queried as it was not notified as a joker. It is in fact a **Jastreb** single-seat strike version of the Galeb.

# INDEX TO VOLUME 24

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

Pages	Month	Pages	Month	Pages	Month	Pages	Month
1-28	JANUARY	85-112	APRIL	169-196	JULY	253-280	OCTOBER
29-56	FEBRUARY	113-140	MAY	197-224	AUGUST	281-308	NOVEMBER
57-84	MARCH	141-168	JUNE	225-252	SEPTEMBER	309-336	DECEMBER

## AIRCRAFT

**A**louette II, *Illus.* 34, 35, 36, 121, 282, *Silh.* 35, 36  
 Alouette III, *Illus.* 10, 11, 121, *Silh.* 11  
 Andover, *Illus.* 244, 245, 246, 247, *Silh.* 245, 247  
 Auster, *Illus.* 308

**B**AC 111, *Illus.* 183, 184, 185, 186, 187, *Silh.* 185, 187  
 Basset/B206, *Illus.* 6, 7, 8, 9, 282, *Silh.* 7, 9  
 Beaver, *Illus.* 308  
 Beech 18, *Illus.* 144  
 Belfast, *Illus.* 114, 144  
 Boeing 727, *Illus.* 234, 235, 236, 237, *Silh.* 235, 237  
 Boeing 737, *Illus.* 90, *Silh.* 90  
 Bonanza E33C, *Illus.* 140  
 Bronco, *Illus.* 60  
 Broussard, *Illus.* 308  
 Buccaneer, *Silh.* 126, 127, 128, 129, 169, 310, *Silh.* 129

**C**anberra, *Illus.* 169  
 Careless, *Illus.* 284, 285, 286, *Silh.* 285, 286  
 Chipmunk, *Illus.* 308  
 Classic, *Illus.* 260, 261, 262, 263, *Silh.* 261, 263  
 Cleat, *Illus.* 178, 179, 180, 181, *Silh.* 179, 181  
 Clod, *Illus.* 132, 133, *Silh.* 132  
 Corsair, *Illus.* 28  
 Crusty, *Illus.* 192, 193, 194, 195, 309, *Silh.* 193, 195  
 Cub, *Illus.* 92, 93, 94, 95, *Silh.* 93, 95

**D**C-9, *Illus.* 29, 58  
 Djinn, *Illus.* 130, 131, *Silh.* 131  
 Dominie, *Illus.* 150, 151, 152, 153, 309, *Silh.* 151, 153

**E**tendard, *Illus.* 320, 321, 322, 323, *Silh.* 321, 323

**F**-5, *Illus.* 5  
 Farmer, *Illus.* 256, 257, 258, 259, *Silh.* 257, 259  
 Fellowship, *Illus.* 1, 22, 23, 24, 233, *Silh.* 23, 24

**G**alaxy, *Illus.* 82  
 Galeb, *Illus.* 118, 119, 120, 282, *Silh.* 119, 120  
 Gazelle (SA340), *Illus.* 30  
 Gnat, *Illus.* 144  
 Gulfstream I, *Illus.* 292, 293, 294, *Silh.* 293, 294  
 Gulfstream II, *Illus.* 295, *Silh.* 295

**H**arke, *Illus.* 46, 47, 48, 49, 116, *Silh.* 46, 48  
 Harrier, *Illus.* 238, 239, 240, 241, 242, 243, 319, *Silh.* 241, 243  
 Hercules, *Illus.* 115, 319  
 HH-53, *Illus.* 83  
 Hook, *Illus.* 68, 69, 70, 71, *Silh.* 69, 71  
 HS125, *Illus.* 150, 151, 152, 153, 309, *Silh.* 151, 153

HueyCobra, *Illus.* 83  
 Hurricane, *Illus.* 334

**I**ntruder, *Illus.* 5, 113  
 Iroquois, *Illus.* 308

**J**aguar, *Illus.* 107  
 Jastreb, *Illus.* 334  
 JetRanger, *Illus.* 226  
 Jetstream, *Illus.* 107

**K**ing Air, *Illus.* 83

**M**agister, *Illus.* 296, 297, 298, 299, *Silh.* 297, 299  
 Mail, *Illus.* 276, 277, 278, *Silh.* 277  
 Mirage III, *Illus.* 272, 273, 274, 275, *Silh.* 273, 275  
 Mohawk, *Illus.* 188, 189, 190, 191, *Silh.* 189, 191  
 Musketeer Sport, *Illus.* 140  
 Mystère IVA, *Illus.* 288, 289, 290, 291, *Silh.* 289, 291

**P**hantom, *Illus.* 253  
 Puma (SA330) *Illus.* 30, 37, 121  
 Pup 150, *Illus.* 141

**Q**ueen Air, *Illus.* 308

**S**-65, see Sea Stallion  
 SA330, see Puma  
 SA340, see Gazelle  
 Sea King, *Illus.* 30, 264, 265, *Silh.* 265  
 Sea Stallion, *Illus.* 40, 41, *Silh.* 265  
 Sea Vixen, *Illus.* 57  
 Seminole, *Illus.* 308  
 Shackleton, *Illus.* 18, 19, 20, 21, 107, *Silh.* 19, 21  
 Skyvan, *Illus.* 172, 174, *Silh.* 173  
 Spitfire, *Illus.* 334  
 Super Frelon, *Illus.* 121

**T**alon, *Illus.* 96, 97, 98, 99, *Silh.* 97, 99  
 TH-55A, *Illus.* 308  
 Thunderchief, *Illus.* 233  
 Trident, *Illus.* 85, 248, 249, 250, 251, *Silh.* 249, 251  
 Tu-154, see Careless

**V**autour, *Illus.* 313, 314, 315, *Silh.* 313, 315  
 Vigilante, *Illus.* 64, 65, 66, 67, 252, *Silh.* 65, 67  
 Vulcan, *Illus.* 154, 155, 156, 157, 158, 159, *Silh.* 157, 159

**W**essex, *Illus.* 31, 57, 309  
 WG13, *Illus.* 31, 311

**Y**S-11, *Illus.* 60

## SHIPS

### Warships and RFAs

Arethusa HMS, *Illus.* 196  
 Brave Class, *Illus.* 72, 73, 74, 75  
 Britannia Royal Yacht, *Illus.* 281  
 Bulwark HMS, *Illus.* 309  
 Chichester HMS, *Illus.* 336  
 Eastbourne HMS, *Illus.* 169  
 Engadine RFA, *Illus.* 4  
 Fawn Class Coastal Survey Ships, *Illus.* 324  
 Fearless HMS, *Illus.* 168

Hampshire HMS, *Illus.* 196  
 Juno HMS, *Illus.* 196  
 Kashin USSR, *Illus.* 4  
 Kynda, USSR, *Illus.* 33  
 Moskva USSR, *Illus.* 86  
 Narwhal HMS, *Illus.* 196  
 Ness Class, *Illus.* 108, 109, 110, 111, 116, *Silh.* 108  
 Oberon Class, *Illus.* 32  
 Osa Class, *Illus.* 87, 88, 89, *Silh.* 87, 89  
 Renown HMS, *Illus.* 225  
 Repulse HMS, *Illus.* 212, 228, 229, 230, 231, 232, *Silh.* 228

Resource RFA, *Illus.* 122, 123, 124, 125, *Silh.* 124  
 Resurgent RFA, *Illus.* 146, 147, 148, 149, 312  
 Rothesay HMS, *Illus.* 160, 161, 162, 163  
 Tidespring RFA, *Illus.* 42, 43, 44, 45  
 Ton Class, *Illus.* 266, 267, 268, 269, 270, 271, *Silh.* 266, 268, 269, 271  
 Torquay HMS, *Illus.* 143, 169

Tribal Class Frigates, *Illus.* 300, 301, 302, 303  
 Wave Class RFA, *Illus.* 304, 305, 306, 307

### Merchant Ships

C.1 Type Standard Cargo Ships, *Illus.* 25, 26, 27, *Silh.* 25, 26  
 Queen Elizabeth 2, *Illus.* 38, 39, *Silh.* 38  
 Victory Type, *Illus.* 4

## AFVs

AMX13, *Illus.* 50, 51, 52, 53, 54, 55, 106, *Silh.* 50  
 APC 1967 model, *Illus.* 217, 218, 219, 279, *Silh.* 217, 218  
 ASU-57, *Illus.* 198  
 ASU-85, *Illus.* 214, 215, 216, *Silh.* 214, 216  
 BTR-40, *Illus.* 198, 279  
 BTR-40PB, *Illus.* 212, 213, 279  
 BTR-50P, *Illus.* 198

BTR-60P, *Illus.* 209, 210, 211, *Silh.* 209, 210  
 BTR-152, *Illus.* 198  
 Centurion Ark, *Illus.* 56  
 Centurion Bridgelayar, *Illus.* 56  
 Ferret Scout Car, *Illus.* 32  
 Jagdpanzer Kanone, *Illus.* 61, 62, 63  
 Jagdpanzer Rakete, *Illus.* 175, 176, 177, *Silh.* 175, 177  
 LVTH6, *Illus.* 328, 329, 330, 331, 332, 333, *Silh.* 330, 331, 333

Lynx, *Illus.* 134, 135, 136, 137, 138, 139, 145, *Silh.* 134  
 Panhard AML, *Illus.* 12, 13, 14, 15, 16, 17, *Silh.* 14  
 Panhard Armoured Car, *Illus.* 106, 117  
 Pbv302, *Illus.* 164, 165, 166, 167, *Silh.* 165, 166  
 PT-76, *Illus.* 203, 204, 205, *Silh.* 203  
 P261, *Illus.* 32  
 SPz12-3 (HS30), *Illus.* 76, 77, 78, 79, 80, 81, 106, *Silh.* 76, 79

Stalwart, *Illus.* 319  
 T-10, *Illus.* 198  
 T-54, *Illus.* 206, 207, 208, *Silh.* 206, 208  
 T-62, *Illus.* 197, 200, 201, 202, *Silh.* 200, 202  
 XM706, *Illus.* 100, 101, 102, 103, 104, 105, 117, *Silh.* 104  
 ZSU-23-4, *Illus.* 220, 221, 222, 223, 279, *Silh.* 221, 223

*continued overleaf*

## ARTICLES AND LESSONS

### Articles, Notices, etc.

Are Comparisons Really Odious? 170  
 Army Air Day, 283  
 Back to duty at Coltishall, 334  
 Book Review—*Taschenbuch der Panzer*  
 1969, 223  
 How not to get the best out of the *Journal*,  
 112  
 RAF Candlesticks for The Queen, 59  
 Recognition and Identification, 3  
 Retirement of Mr. C. E. Sargeant MBE,  
 255  
 Russian AFV Lessons prior to 1969, 224  
 The *Journal*—and you, 227  
 The Sud/Westland Helicopters, 311  
 US Designations/Popular Names Check  
 List, 82

### Lessons—Aircraft

Alouette II, 34, 35, 36  
 Alouette III, 10, 11  
 Andover C1, 244, 245, 246, 247  
 BAC111, 182, 183, 184, 185, 186, 187

Basset/B206; 6, 7, 8, 9  
 Boeing 727; 234, 235, 236, 237  
 Buccaneer, 126, 127, 128, 129  
 Careless, 284, 285, 286  
 Classic, 260, 261, 262, 263  
 Cleat, 178, 179, 180, 181  
 Clod, 132, 133  
 Crusty, 192, 193, 194, 195  
 Cub, 92, 93, 94, 95  
 Djinn, 130, 131  
 Dominic, 150, 151, 152, 153  
 Étendard, 320, 321, 322, 323  
 Farmer, 256, 257, 258, 259  
 Fellowship, 22, 23, 24  
 Galeb, 118, 119, 120  
 Gulfstream I; 292, 293, 294  
 Harke, 46, 47, 48, 49  
 Harrier, 238, 239, 240, 241, 242, 243  
 Hook, 68, 69, 70, 71  
 HS125; 150, 151, 152, 153  
 Magister, 296, 297, 298, 299  
 Mail, 276, 277, 278  
 Mirage III, 272, 273, 274, 275  
 Mohawk, 188, 189, 190, 191  
 Mystère IVA, 288, 289, 290, 291  
 S-65; 40, 41

Sea King, 264, 265  
 Shackleton, 18, 19, 20, 21  
 Skyvan, 172, 173, 174  
 Talon, 96, 97, 98, 99  
 Trident, 248, 249, 250, 251  
 Tu-154, see Careless  
 Vautour, 313, 314, 315  
 Vigilante, 64, 65, 66, 67  
 Vulcan, 154, 155, 156, 157, 158, 159

### Lessons—Warships and RFAs

Brave Class, 72, 73, 74, 75  
 Fawn Class, 324, 325, 326, 327  
 Ness Class, 108, 109, 110, 111  
 Osa Class, 87, 88, 89  
 Resolution Class, 228, 229, 230, 231, 232  
 Resource, RFA, 122, 123, 124, 125  
 Resurgent, RFA, 146, 147, 148, 149  
 Rothesay HMS, 160, 161, 162, 163  
 Tide Class, 42, 43, 44, 45  
 Ton Class, 266, 267, 268, 269, 270, 271  
 Tribal Class, 300, 301, 302, 303  
 Wave Class, 304, 305, 306, 307

### Lessons—Merchant Ships

C.1 Type Standard Cargo Ships, 25, 26,  
 27  
 Queen Elizabeth 2, 38, 39

### Lessons—AFVs

AMX13, 50, 51, 52, 53, 54, 55  
 APC 1967 model, 217, 218, 219  
 ASU-85, 214, 215, 216  
 BTR-40PB, 212, 213  
 BTR-60P, 209, 210, 211  
 Jagdpanzer Kanone, 61, 62, 63  
 Jagdpanzer Rakete, 175, 176, 177  
 LVTH6, 328, 329, 330, 331, 332, 333  
 Lynx, 134, 135, 136, 137, 138, 139, 145  
 Panhard AML, 12, 13, 14, 15, 16, 17  
 Pbv302, 164, 165, 166, 167  
 PT-76, 203, 204, 205  
 SPz12-3 (HS30), 76, 77, 78, 79, 80, 81  
 T-54, 206, 207, 208  
 T-62, 200, 201, 202  
 XM706, 100, 101, 102, 103, 104, 105  
 ZSU-23-4, 220, 221, 222, 223

## TEST PAPERS

### General Tests

Chop Test, 316  
 Test of Time No. 4, 2  
 Testing Time, 84, 142, 280

### Type Test Papers

Alouette II, 282  
 AMX13, 106  
 APC 1967, 279

Bassett, 282  
 Beech 18, 144  
 Belfast, 144  
 Bronco, 60  
 BTR-40PB, 279  
 Buccaneer, 310  
 Corsair, 28  
 Crusty, 310  
 Dominic, 310  
 Engadine RFA, 4  
 F-5, 5  
 Fearless HMS, 168

Fellowship, 233  
 Ferret Scout Car, 32  
 Galeb, 282  
 Gnat, 144  
 Harke, 116  
 Intruder, 5  
 Jaguar, 107  
 Jetstream, 107  
 Kashin USSR, 4  
 Kynda USSR, 33  
 Lynx, 145  
 Ness RFA, 116

Oberon Class, 32  
 Panhard Armoured Car, 106, 117  
 PZ61, 32  
 Shackleton, 107  
 SPz12-3 (HS30), 106  
 Thunderchief, 233  
 Tidespring RFA, 116  
 Victory Type Standard Ship, 4  
 Vigilante, 252  
 XM706, 117  
 YS-11, 60  
 ZSU-23-4, 279

**GETTING SHIPSHAPE** HMS *Chichester*, the Salisbury Class aircraft direction frigate, has been fitted with new radar displays on fore and main masts. Pictures show HMS *Chichester* as she is now and, inset, as she was in 1958, when completed.

