

JOINT



SERVICES

# RECOGNITION

*Journal*



Vol. 24 NOVEMBER 1969 No. 11

# TEST PAPERS *Can you identify these aircraft?*

*Solutions on the cover*

## ALOUETTE II?



## GALEB?



## BASSET?





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
Royal Yacht <i>Britannia</i> ... ..	<i>Front cover</i>
Test Papers: Alouette II, Galeb and Basset ...	282
Army Air Day ... ..	283
* Careless (Tu-154) ... ..	284
Test Paper: Rothesay Class ... ..	287
Lesson Instructions ... ..	287
* Mystère IVA ... ..	288
* Gulfstream I ... ..	292
Gulfstream II ... ..	295
* Magister ... ..	296
* Tribal Class Frigates ... ..	300
* Wave Class Oilers of RFA ... ..	304
Solutions to Tests and Exercises ... ..	<i>Back cover</i>

\* *Identification Lessons*

## ARMY AIR DAY

The role of Army Aviation was demonstrated to the public on the Army's Air Day at Middle Wallop last June. Army Aviation's task is to help ground units and formations to carry out their normal tactical roles more effectively, by local reconnaissance, directing artillery fire, assisting command and control by air movement of commanders, staff or small specialist parties, and minor forms of logistic support including casualty evacuation. As well as demonstrating these roles to the public the Army put on a series of displays in "air fair" style. An historical pageant ranging from a cavalry scout on horseback to the latest armed helicopter was part of the big show, and ended with a tableau showing the vital part played by REME in Army Aviation.

Display teams participating included the Army's own Blue Eagles helicopter formation team flying Sioux AH1s, the French Army's famous aerobatic team of three Nord 3202s, and free fall parachuting by ladies of the British Parachute Association and NCOs of the SAS and Parachute Regiment.

The finale was a mock battle depicting an airborne assault on an enemy stronghold. The scene opened with a helicopter-supported troop of armoured cars being held up by fire. Paratroops then jumped in to prepare a landing site and RAF Wessex helicopters flew in troops and 105-mm howitzers. A Scout firing an anti-tank missile simulated the knockout of an enemy tank and finally ground troops moved in to consolidate.

The Army Aviation Centre at Middle Wallop, the first true home of British Army Aviation, is appropriately placed on Salisbury Plain where so much of the pioneering of British

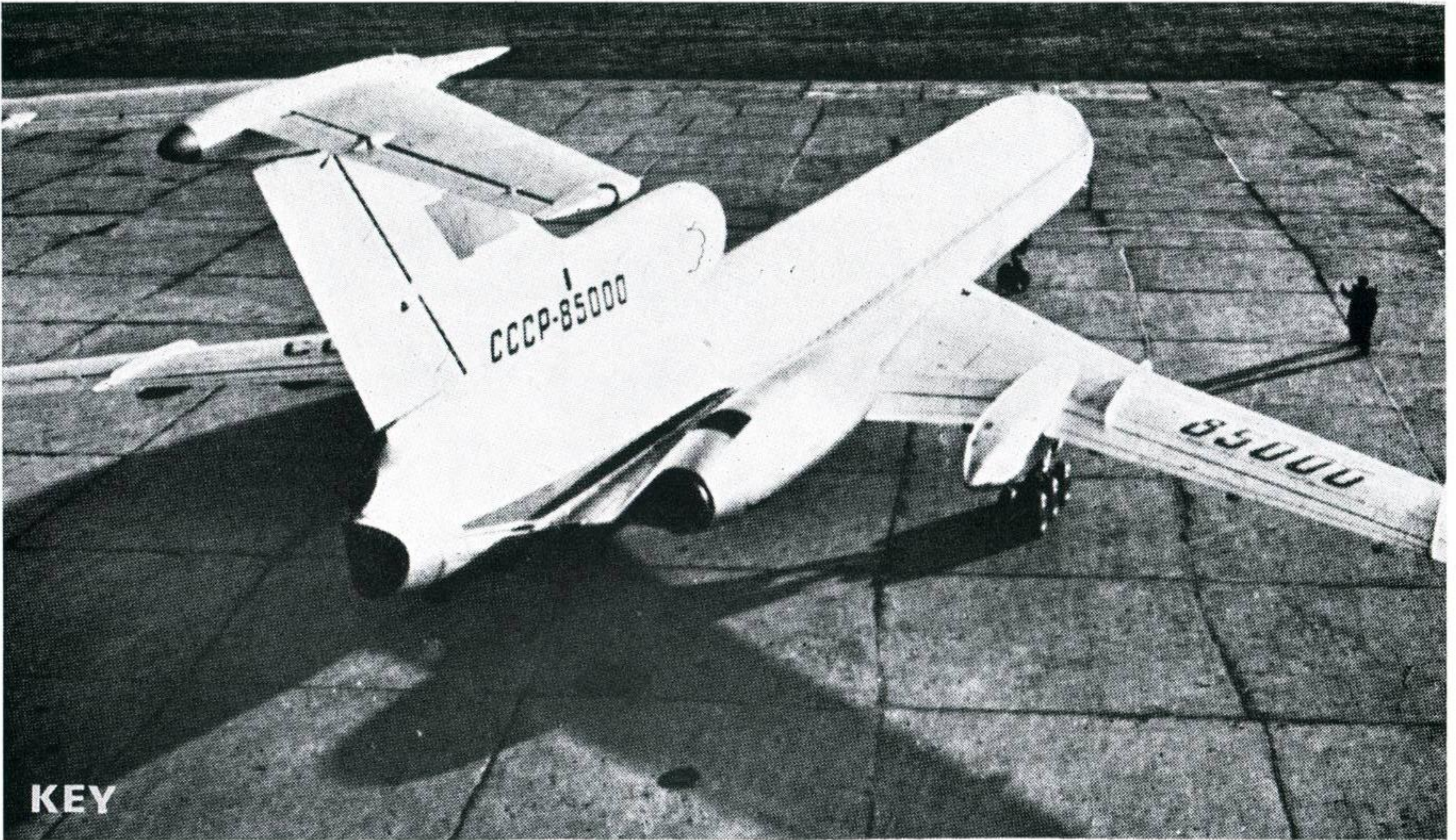
Army flying was done. Middle Wallop, even as an RAF station, was long associated with Army Flying, being the home of the Light Aircraft School for nearly ten years, and before that, in 1942 being used by the 67 Tactical Reconnaissance Group of the 9th Air Force USAAC.

The Centre consists of Headquarters Army Aviation, the School of Army Aviation, and 70 Aircraft Workshops. Headquarters Army Aviation is the focal point for Army Aviation worldwide and is responsible for the maintenance of flying standards and for the technical supervision and direction of aircraft servicing wherever there are Army Air Corps units. The School of Army Aviation is responsible for the training of all Army pilots, REME servicing personnel and non-technical ground staff. No. 70 Aircraft Workshops provide second line and third line servicing facilities for the Centre and UK.

Under HQ Army Aviation there is Development and Trials Squadron. Their responsibility is the correlation and dissemination of tactical doctrine to all AAC units and for the guidance of all arms in the use of army aircraft on the battlefield. The Squadron also carries out evaluation trials of new aircraft and ancillary equipment.

The aircraft to be found at the Centre are Chipmunks, Auster AOP Mk. 9s and Beavers on the fixed wing side and Hillers, Sioux and Scouts on the rotary wing side. Army Aviation is now being re-organised on a new squadron basis.

(See pictures on back cover.)



**KEY**

**CARELESS** The Russian Tupolev Tu-154, Careless, is the largest of the currently produced tri-jet airliners; it is intended primarily as a medium/long-range aircraft on domestic routes; it will probably replace some of the older aircraft in the Aeroflot fleet.

The standard production version is 157 feet long with a wing span of 123 feet and is designed to carry 158 passengers at a typical cruising speed of 559 m.p.h. Variants so far announced include an all freight version and "stretched" passenger models.

It was first announced outside Russia in 1966 and its first flight was made in 1967.

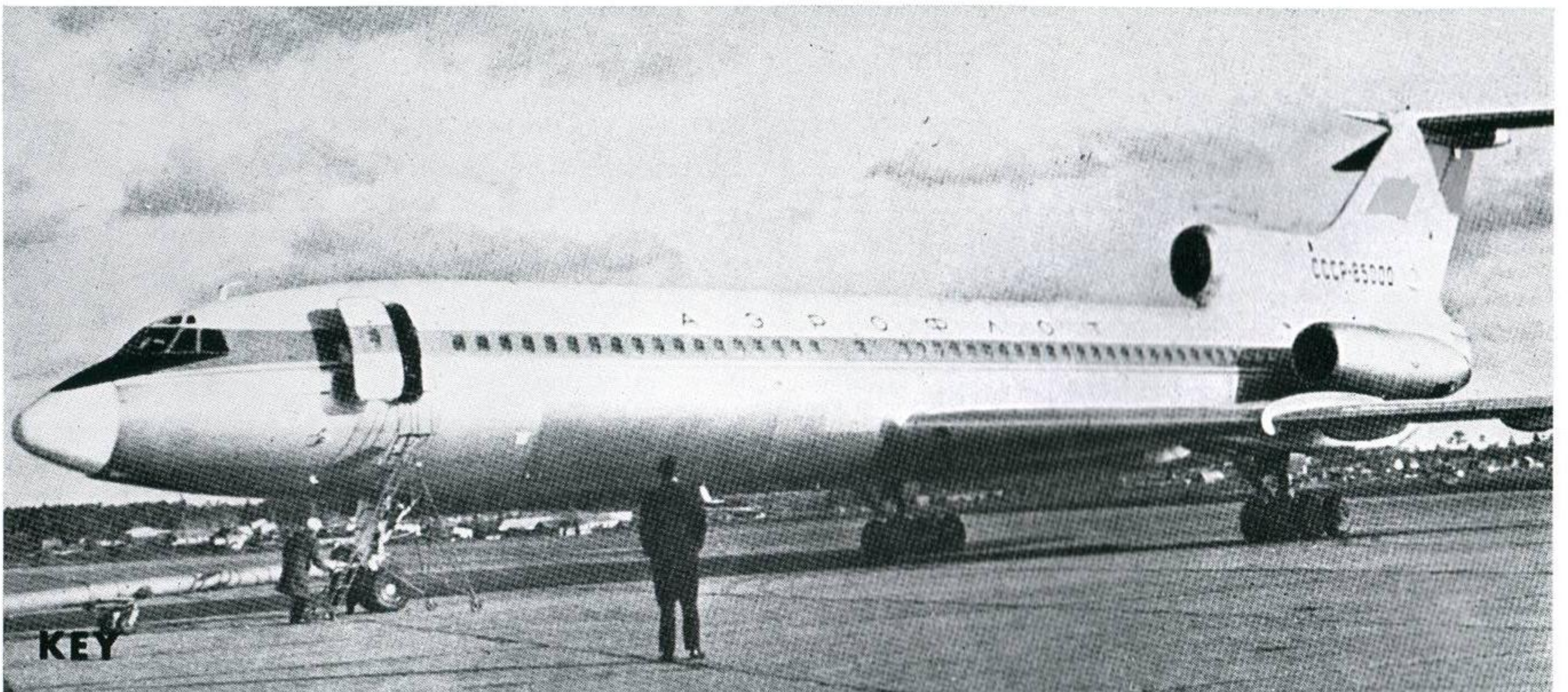
The Careless is said to be similar to the British Trident and the American Boeing 727. However, by learning each separately, in this case by confining your training to the Tu-154, you will find its configuration will stand clear of the others.

*Lesson instructions are on page 287*



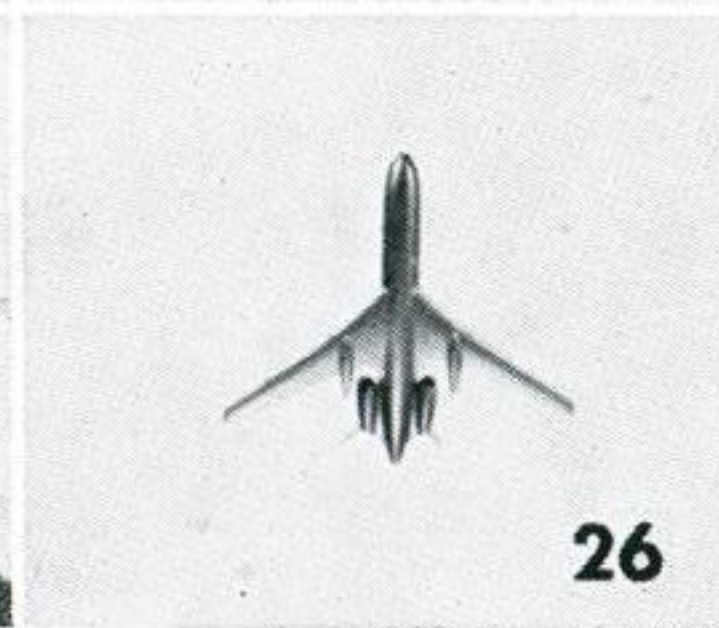
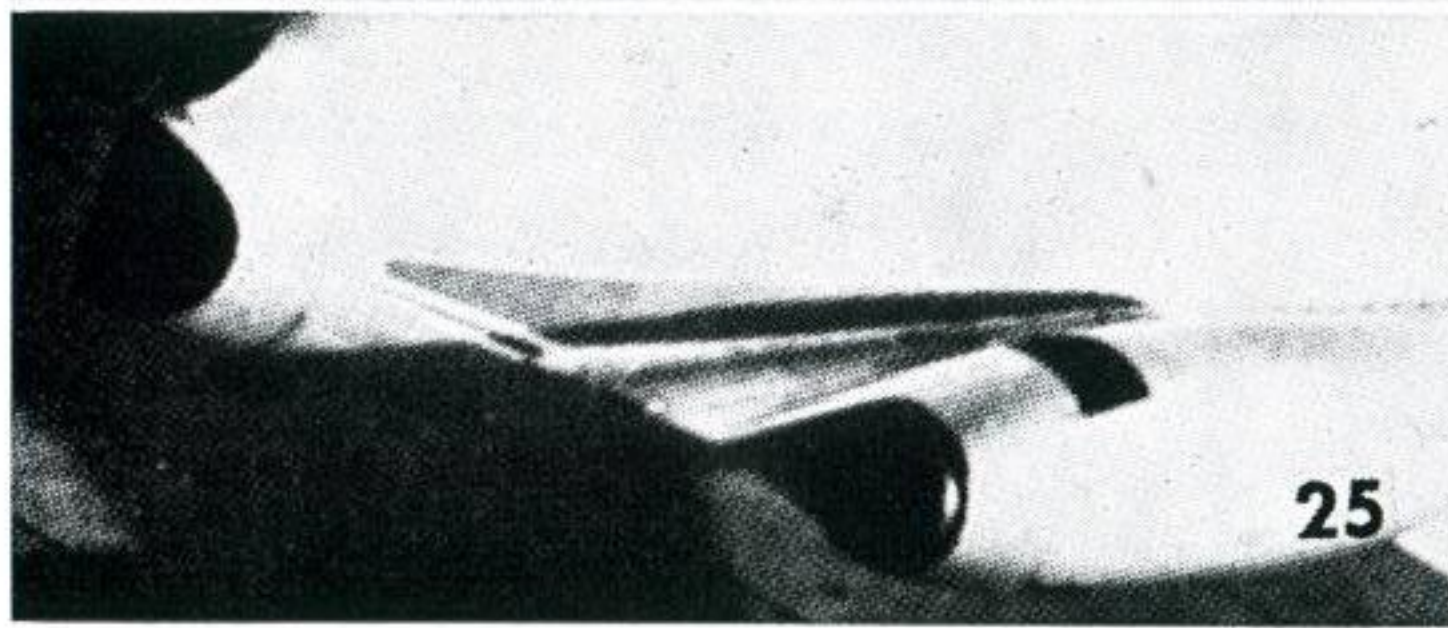
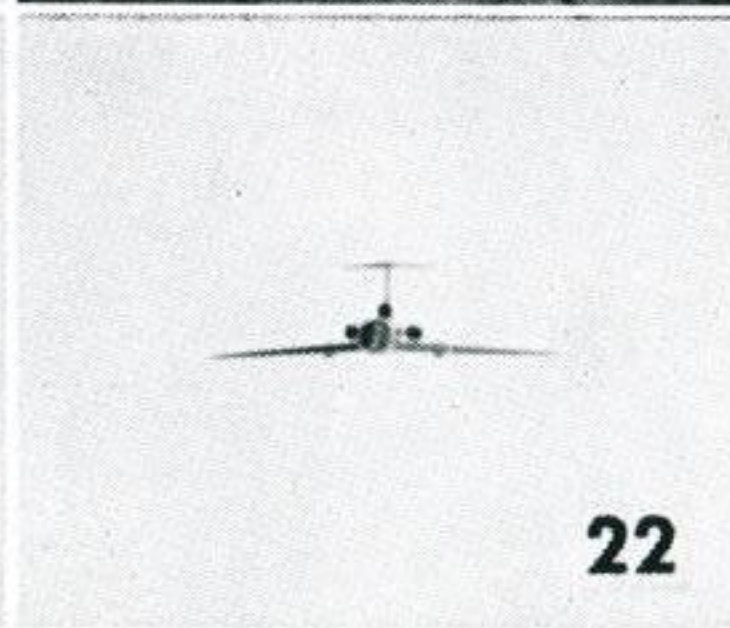
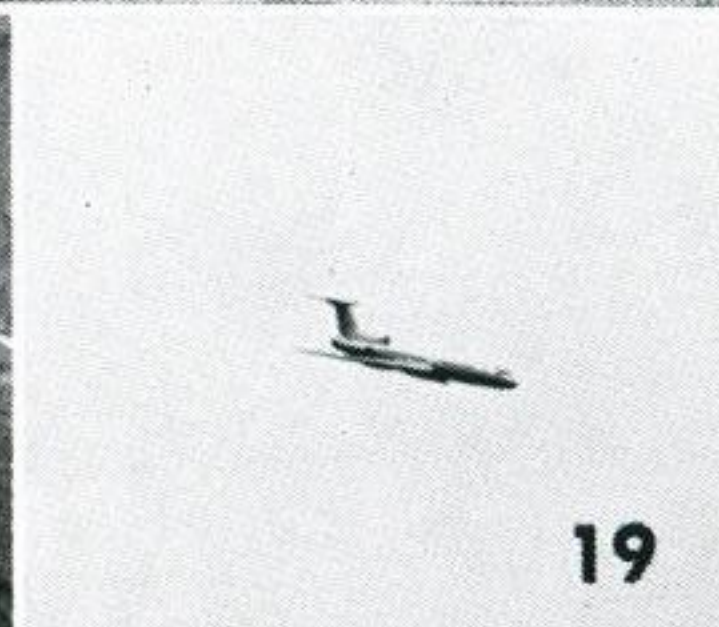
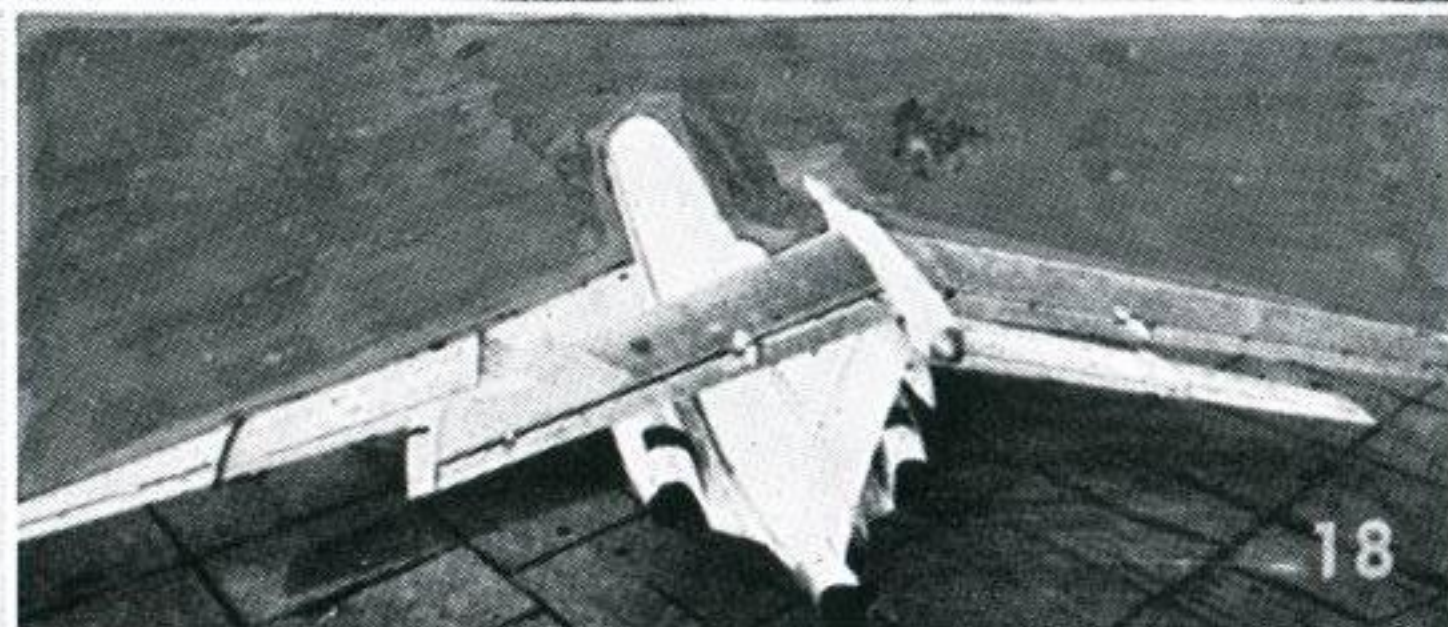
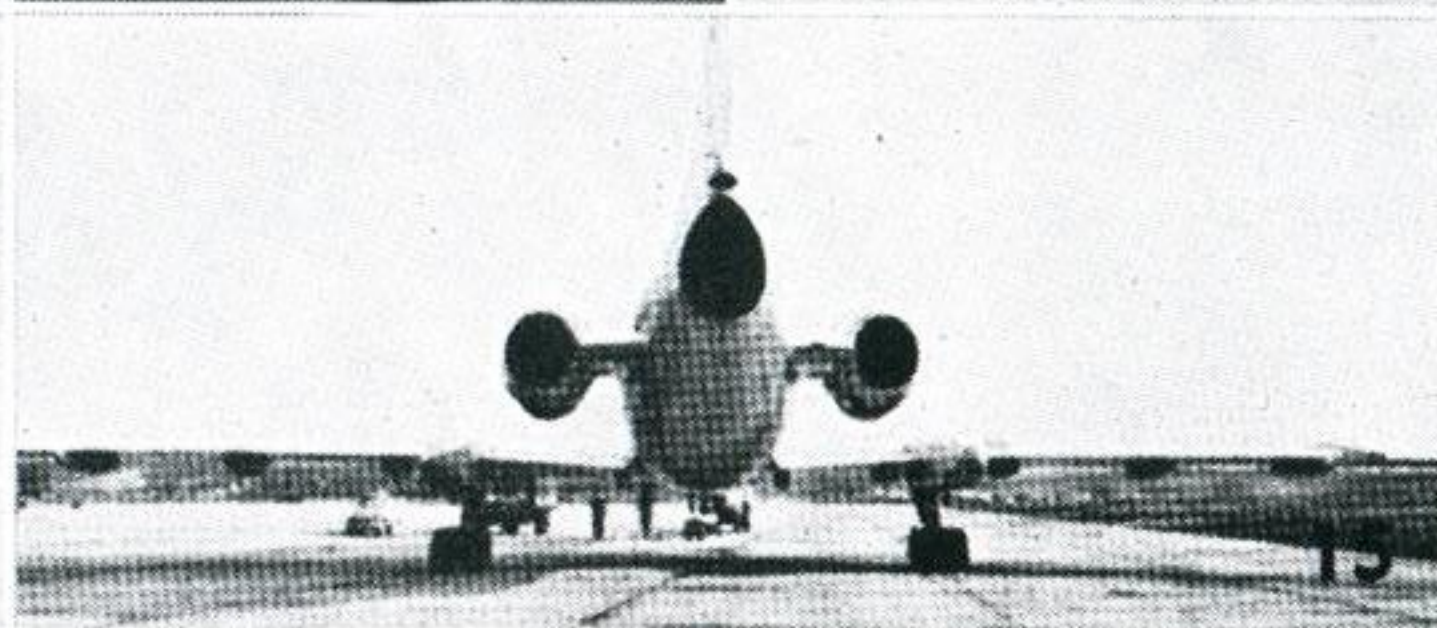
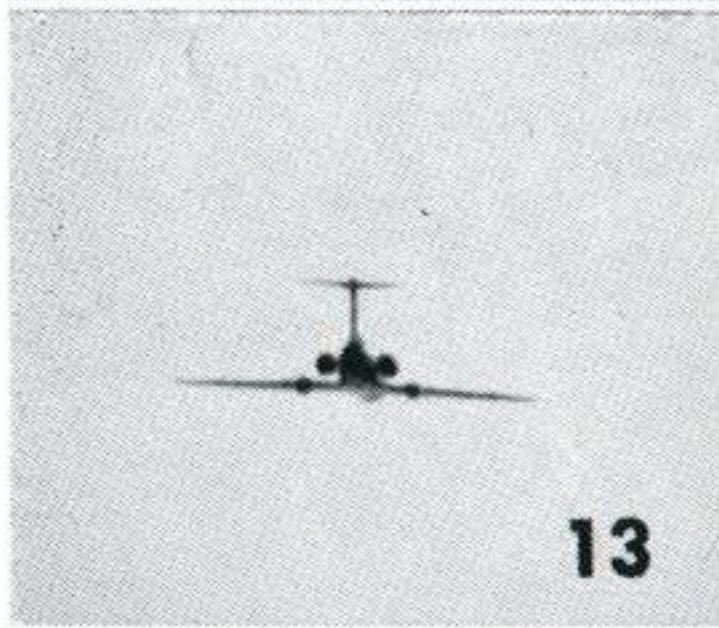
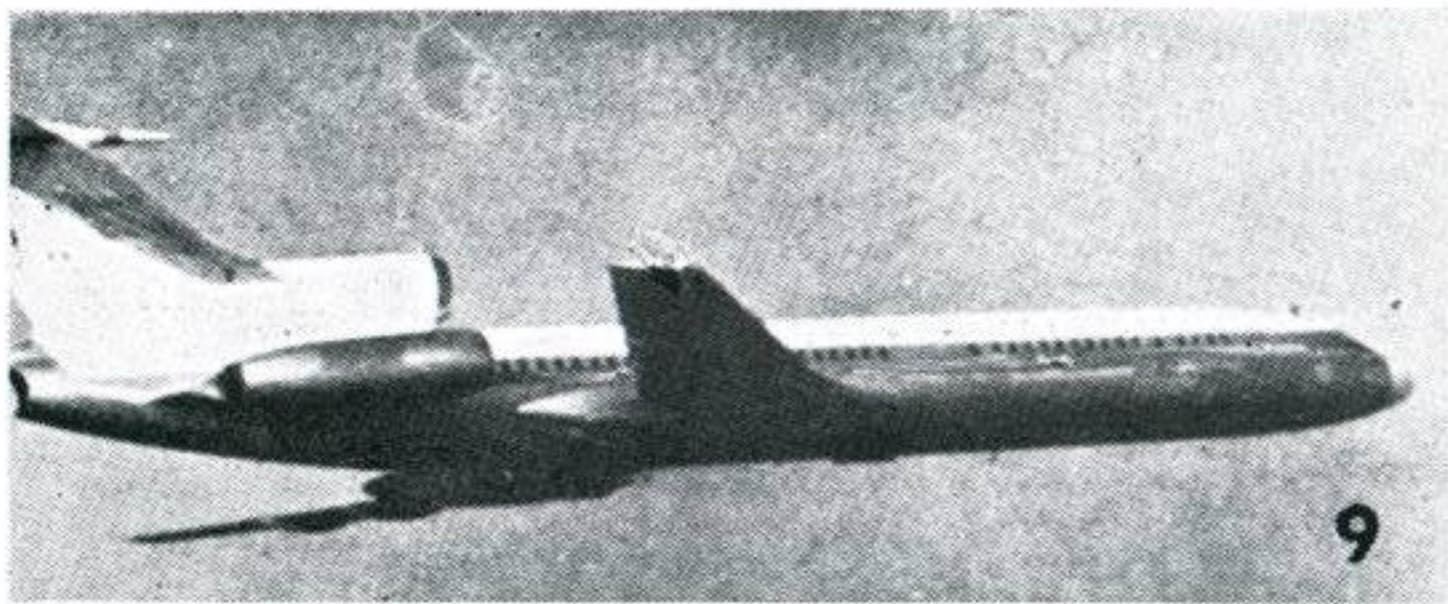
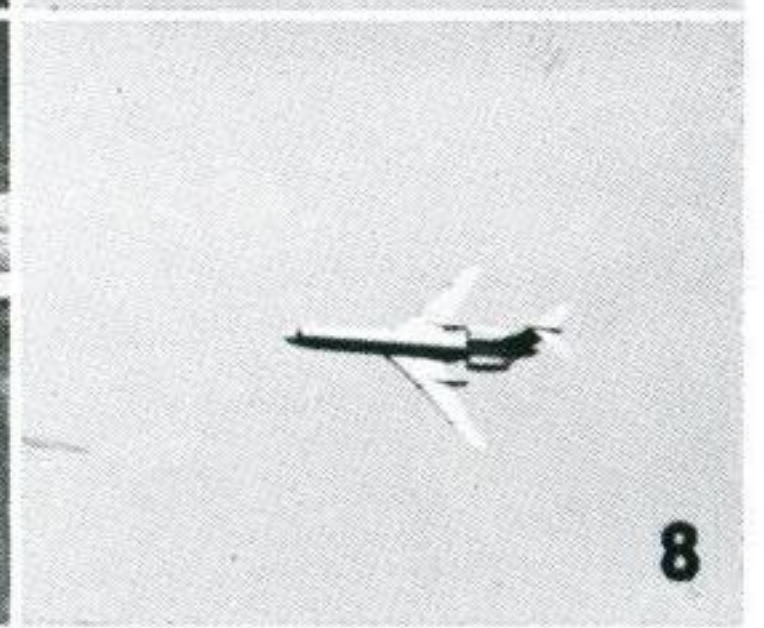
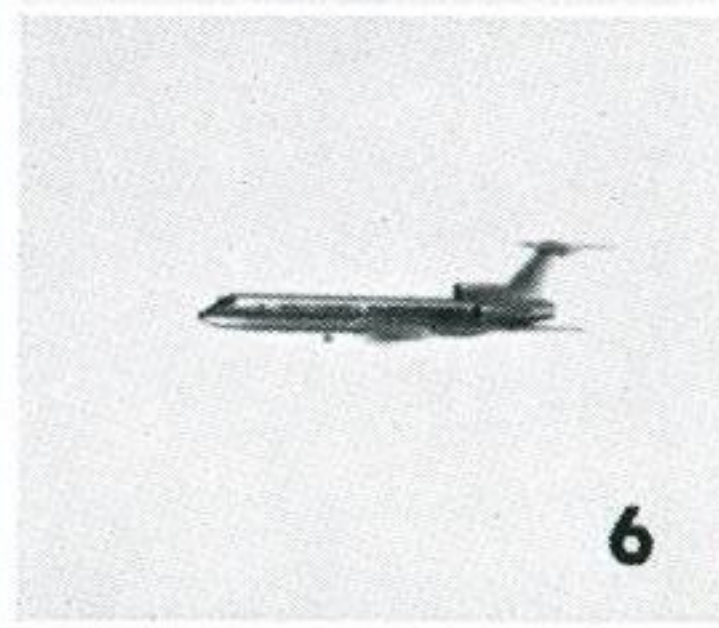
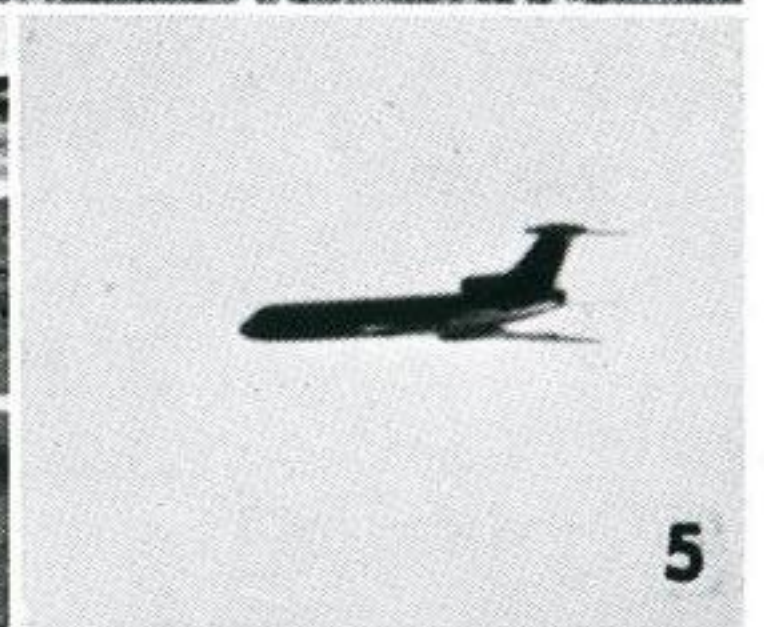
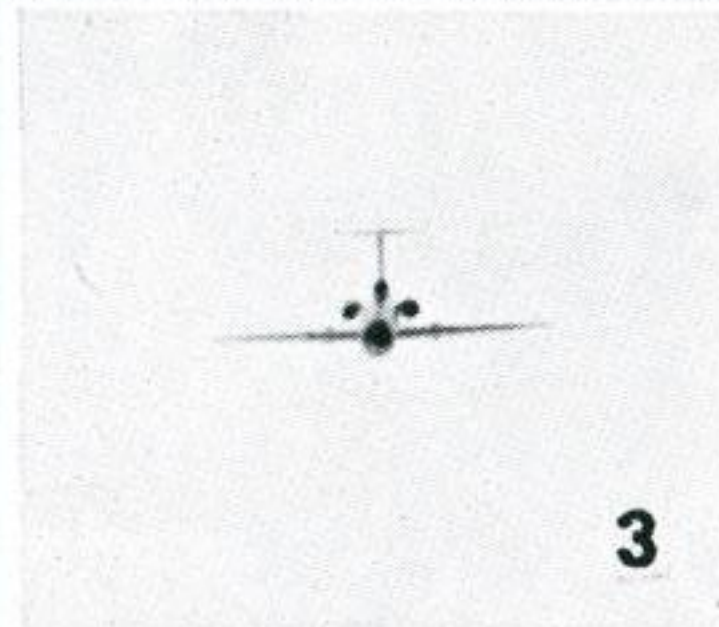
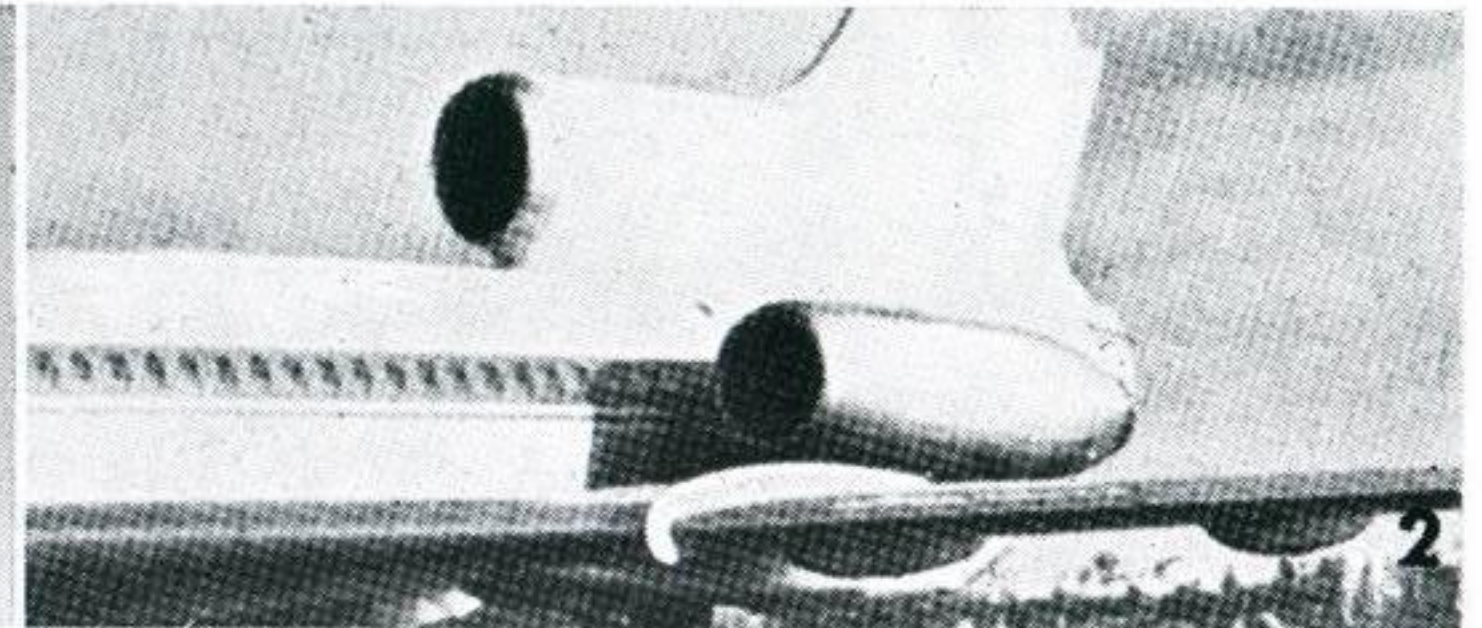
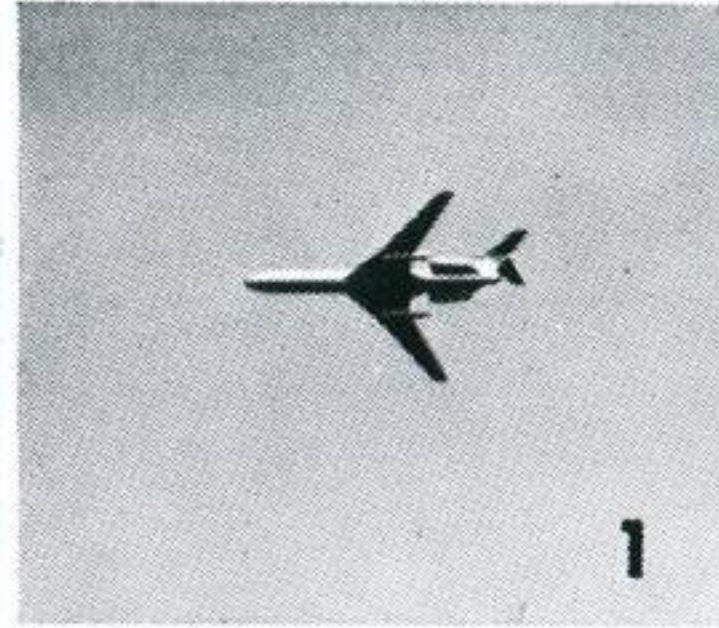
**KEY**

*Solutions on the cover*



**KEY**

Span 123 feet



continued overleaf



**KEY**

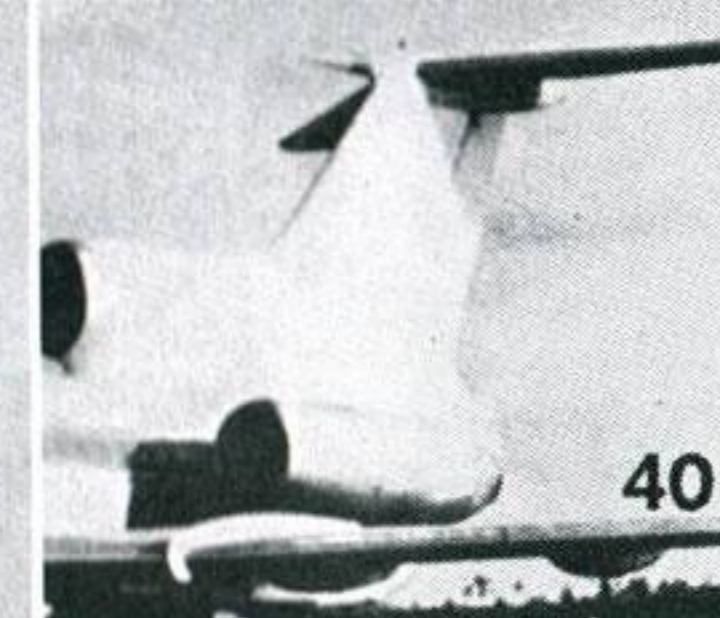
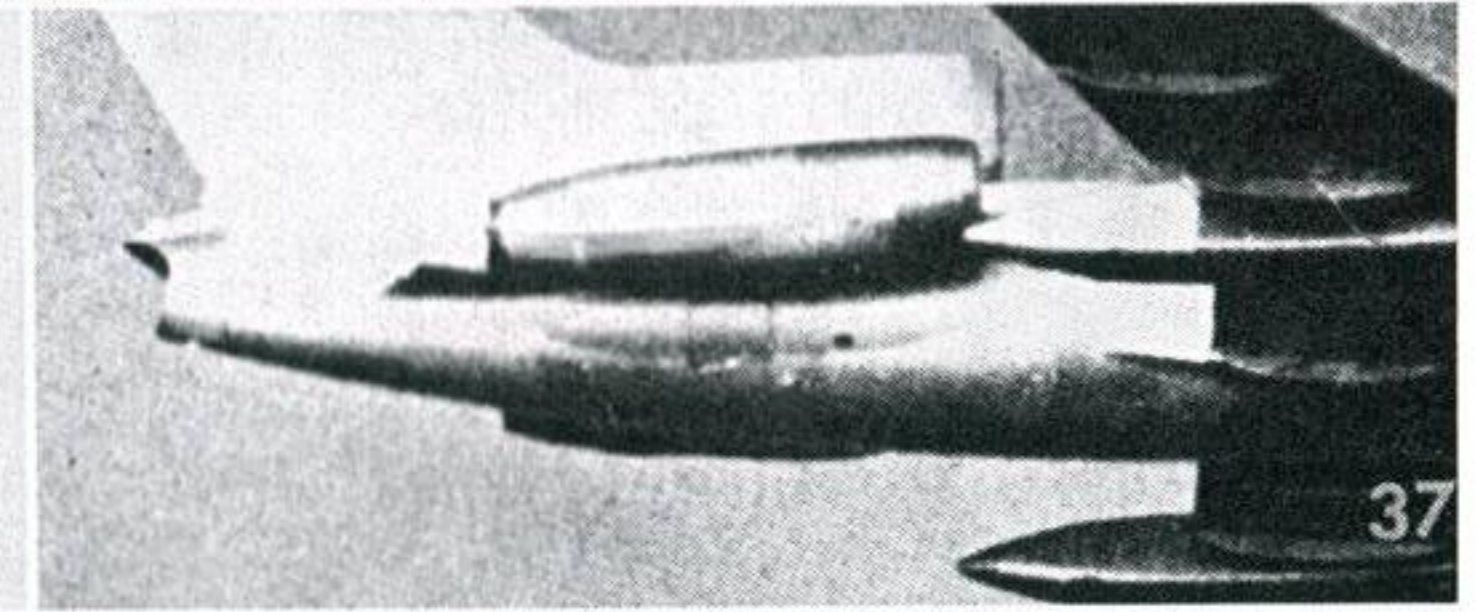
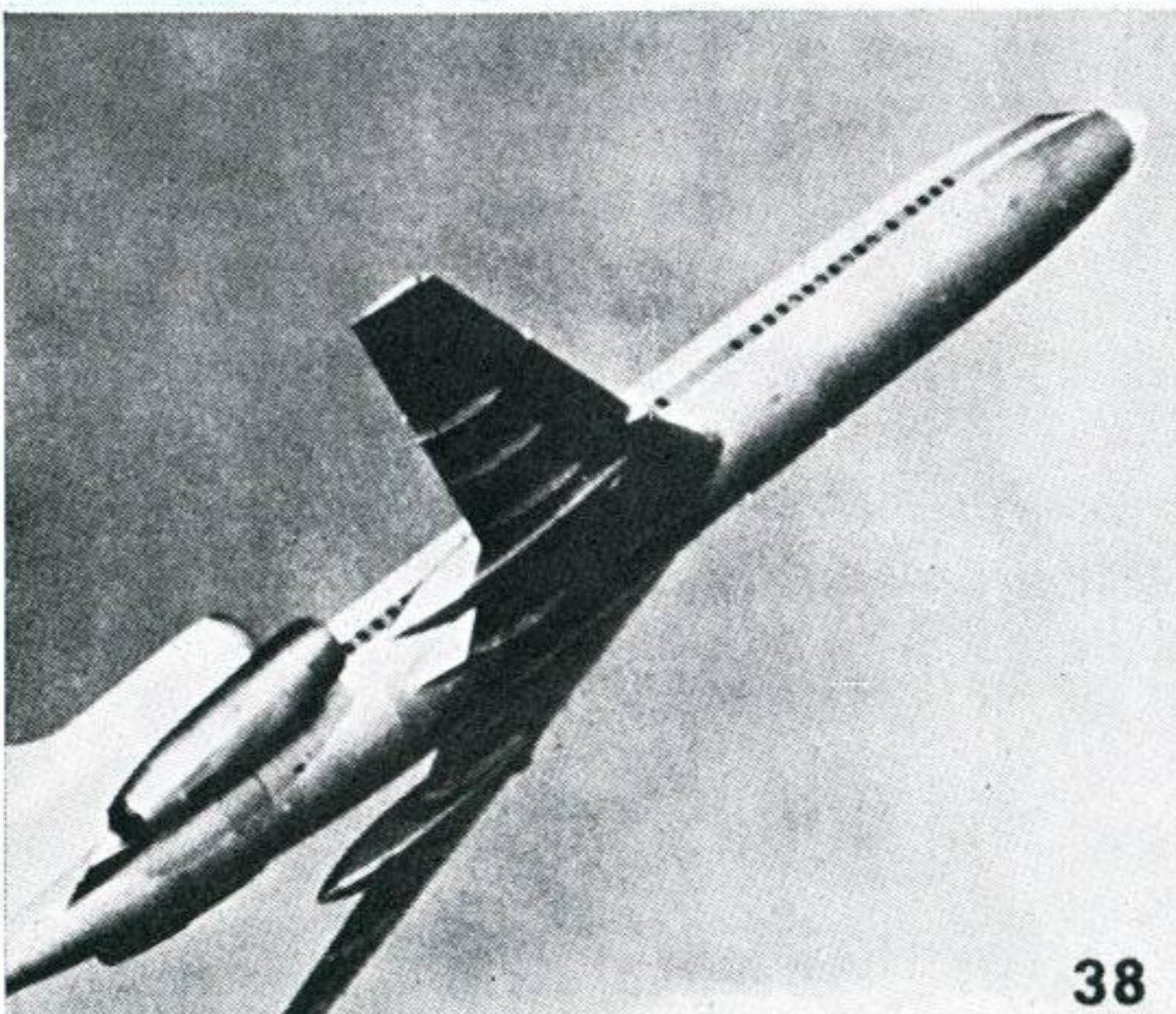
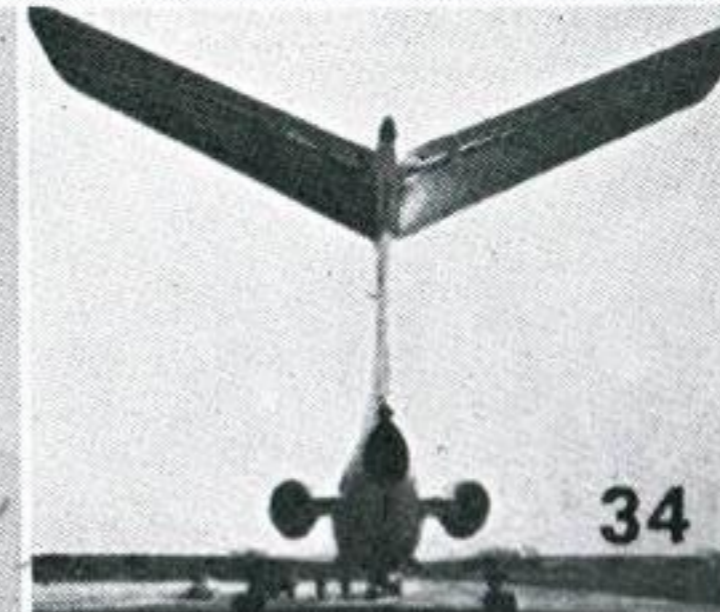
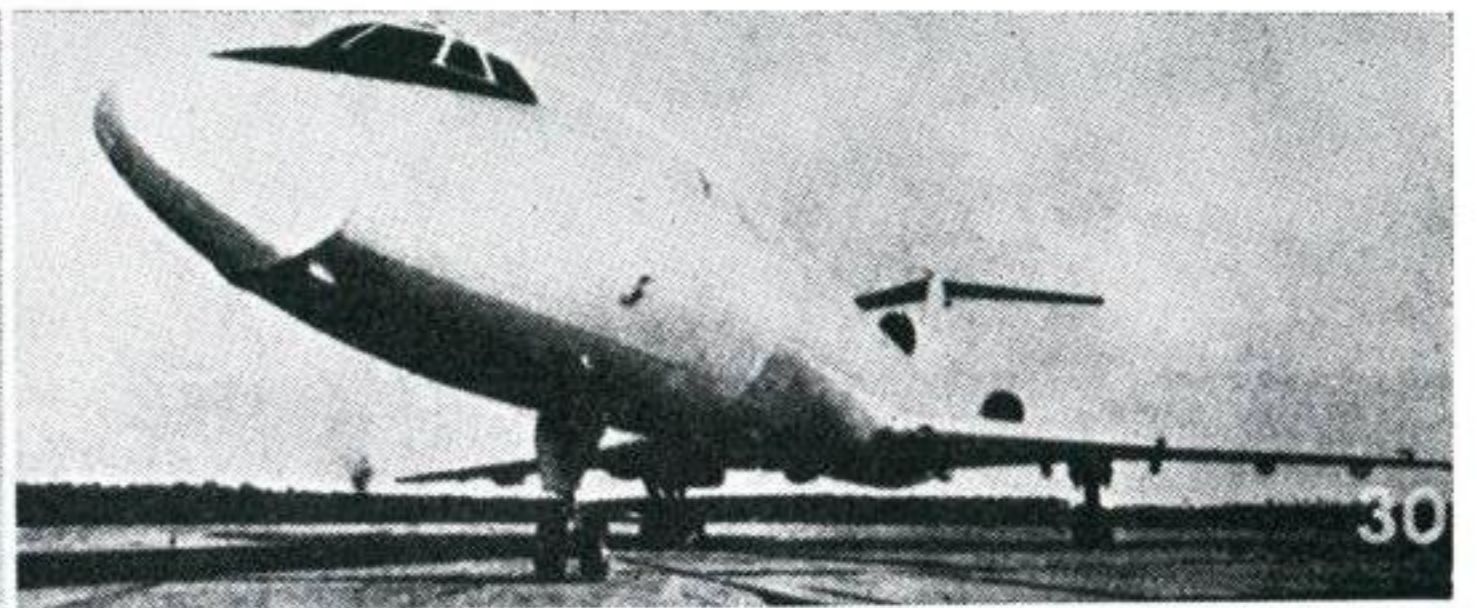
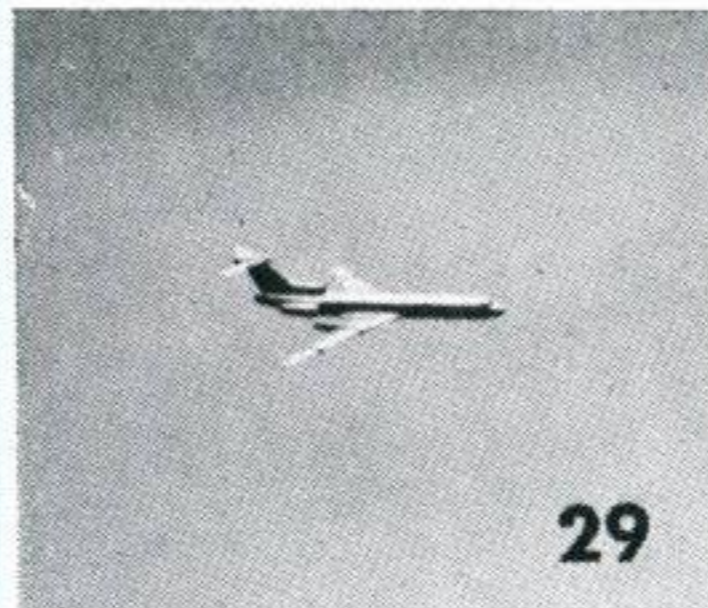
Span 123 feet



**CARELESS** *continued*

*Lesson instructions are on facing page*

*Solutions on the cover*



## ROTHESAY CLASS?



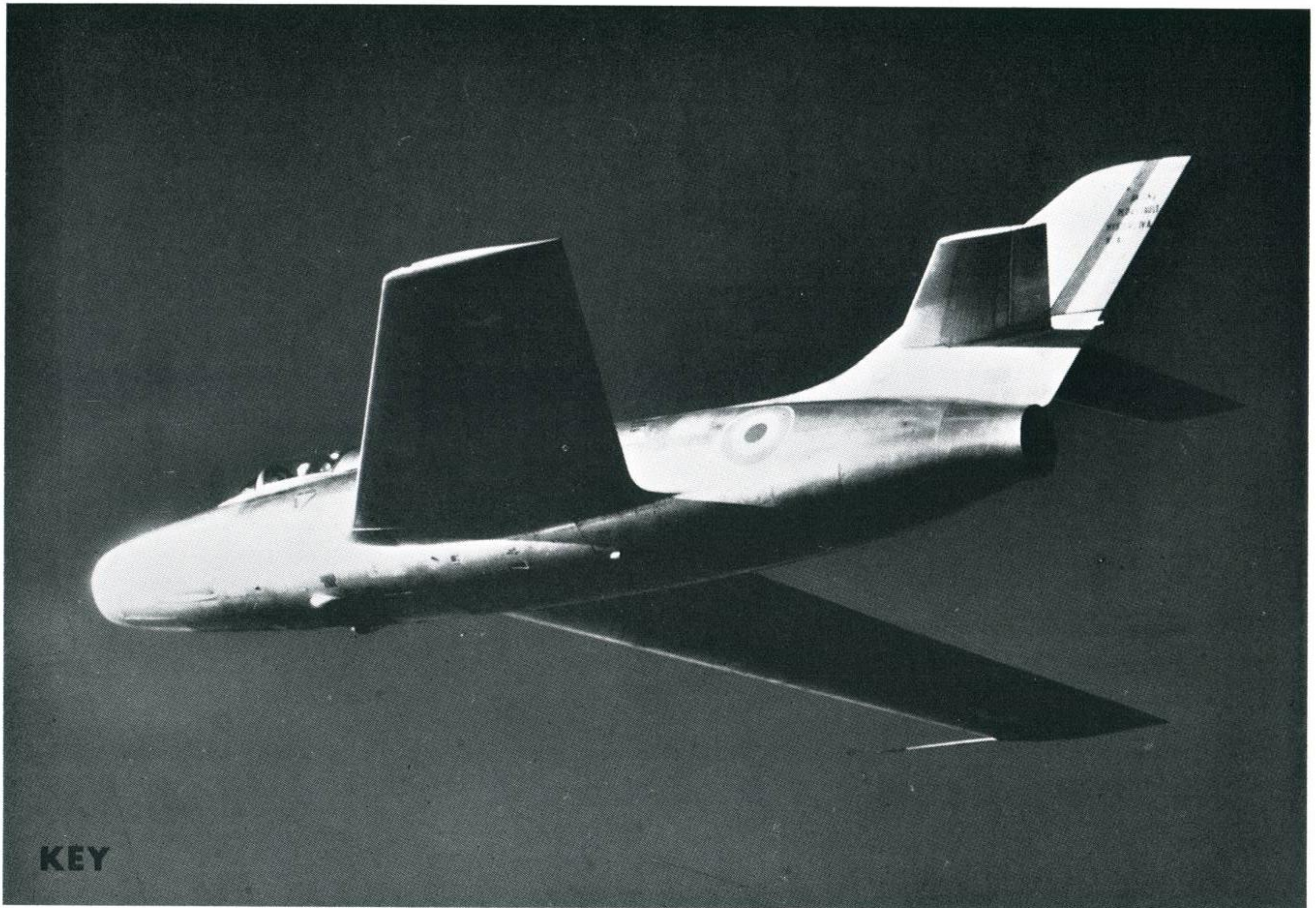
## LESSON INSTRUCTIONS

Identity training is a matter of "doing", rather than of gathering information. Submit to the instructions given below in every edition of the *Journal* and your ability to identify will become automatic.

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

## CONDUITE DES LEÇONS

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



## MYSTÈRE IVA

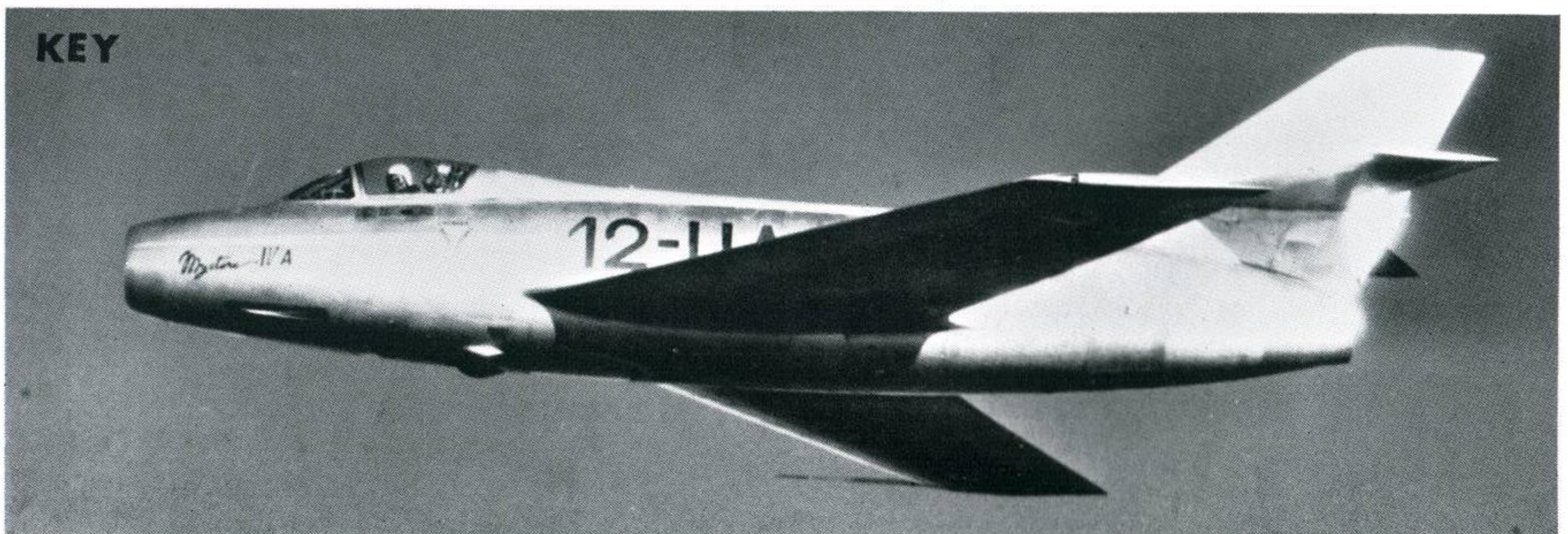
*Lesson instructions are on page 287*

Still in service in India and Israel, the Dassault Mystère IVA single-seat fighter bomber first flew in 1952 and by the time production ceased in 1958 a total of 421 had been built. The type saw action during the Israeli invasion of the Sinai peninsula in October 1956, and again in June 1967; it was also used extensively by

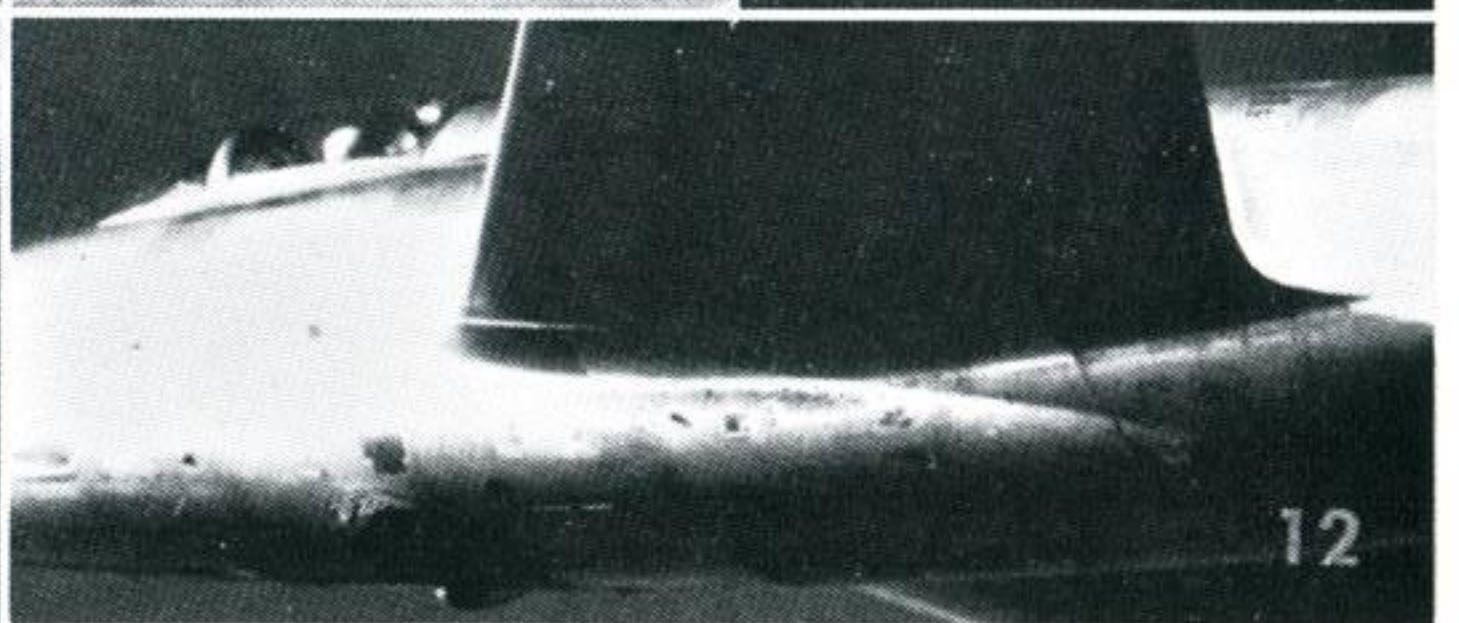
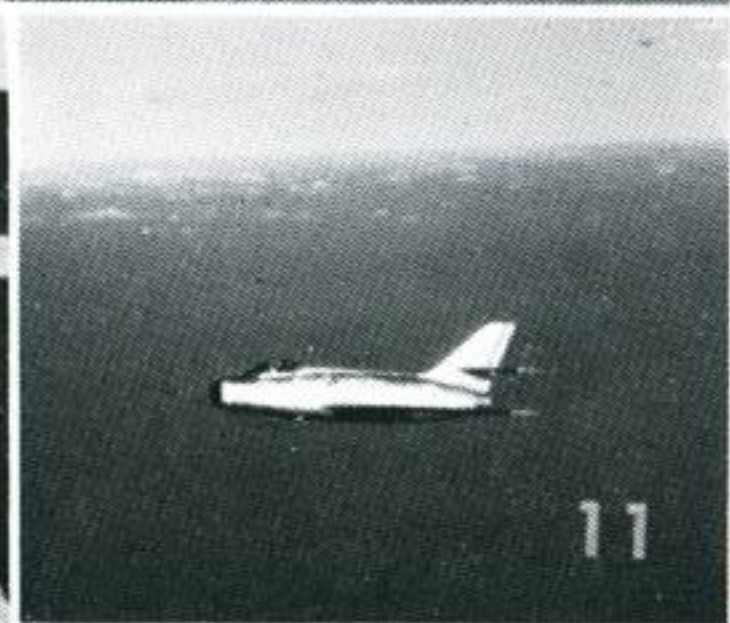
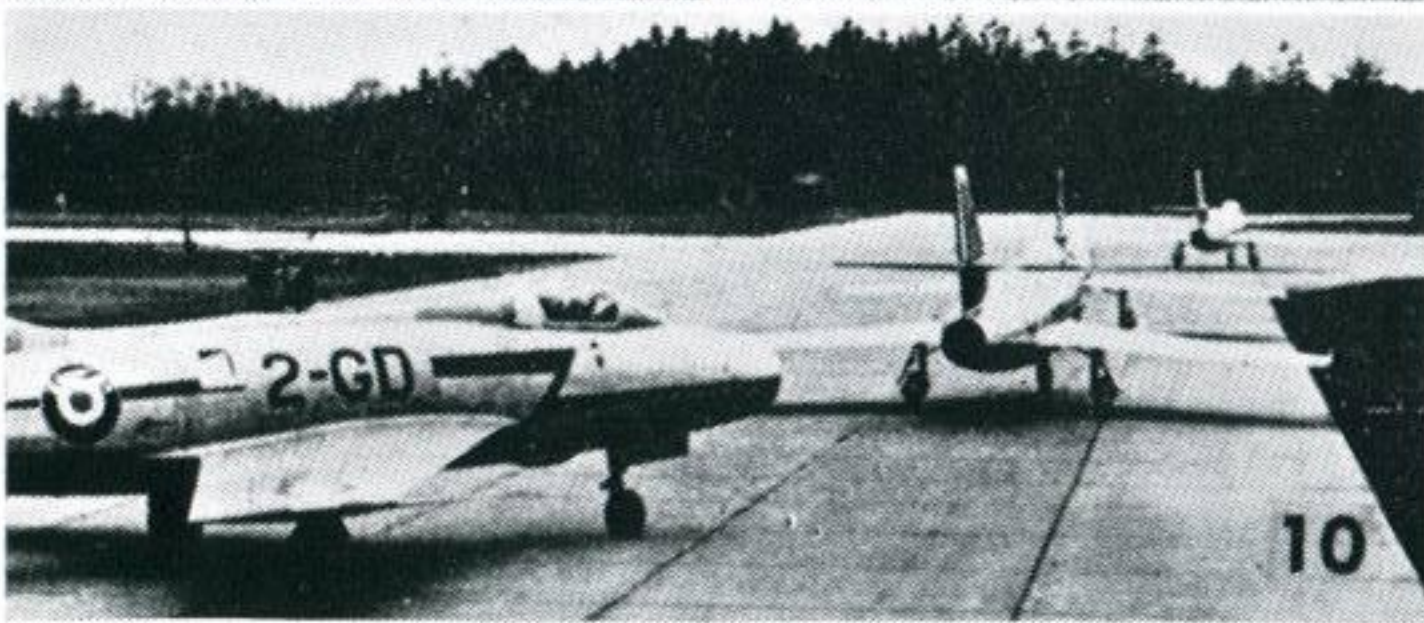
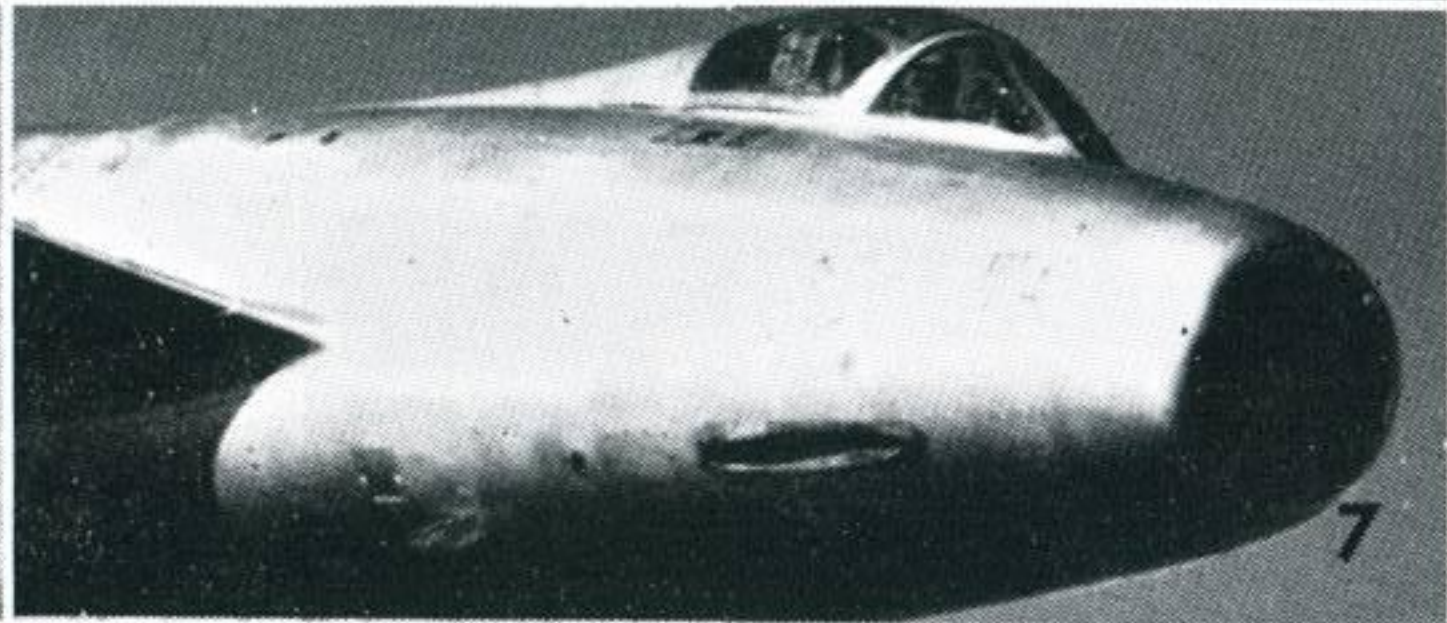
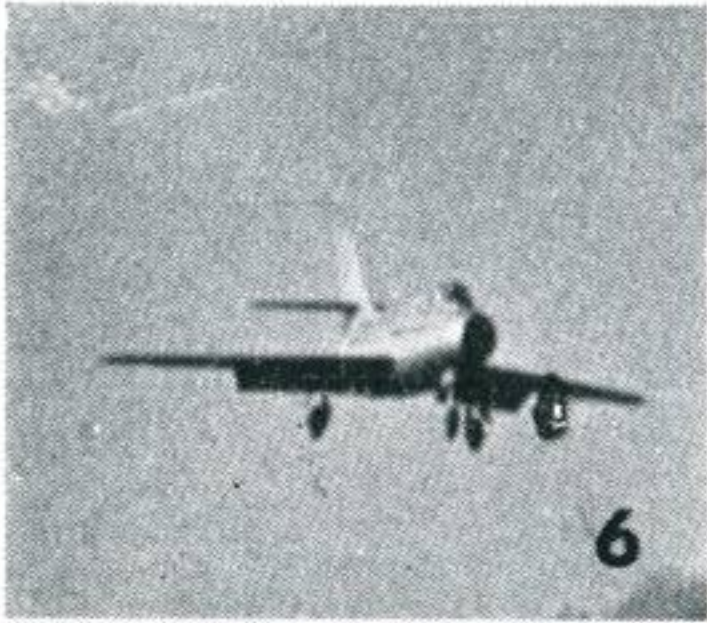
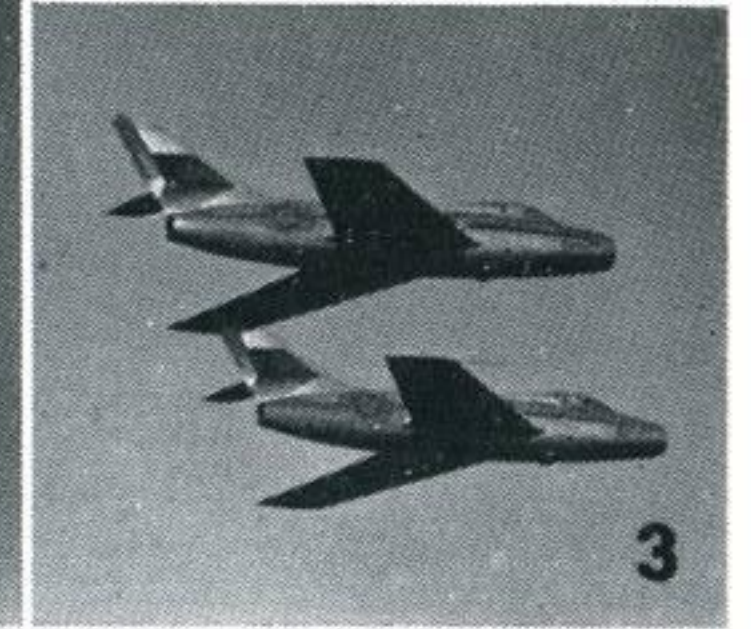
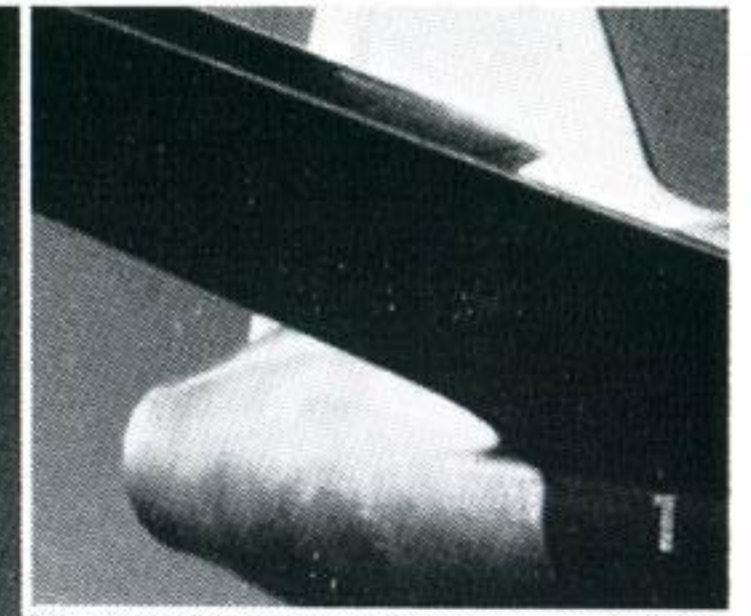
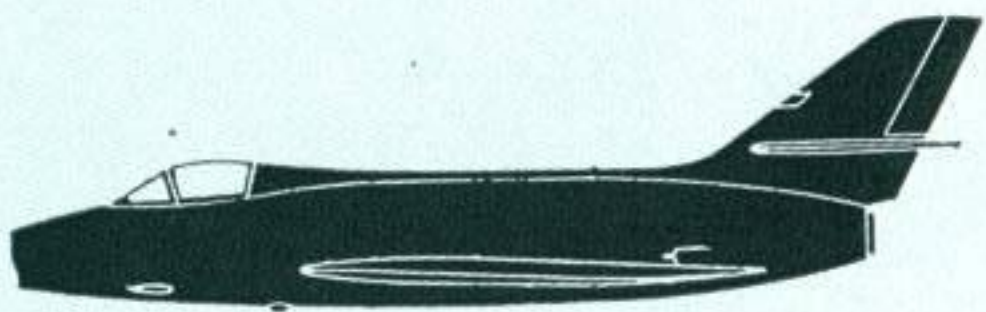
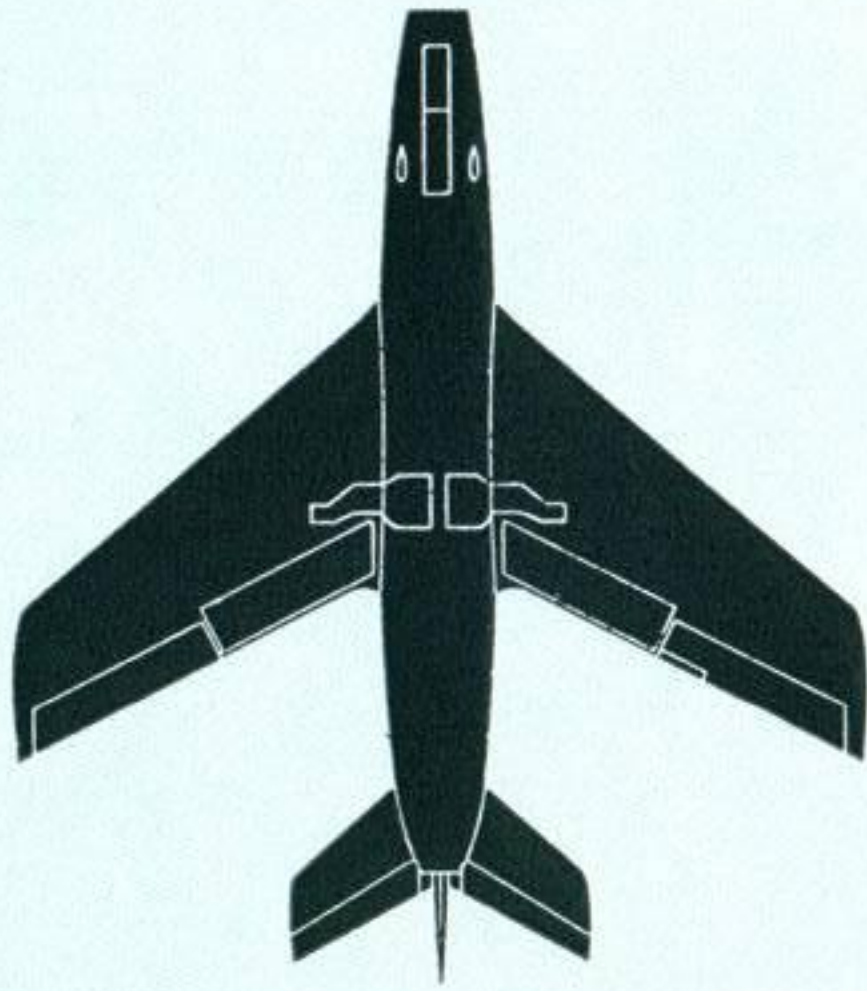
the Indian Air Force in the close-support role during the India-Pakistan conflict in September 1967.

Armament comprises two 30-mm. cannon plus underwing stores, and its ranging radar antenna is housed in a small cone mounted in the nose intake duct.

*Solutions on the cover*



Span 36 feet 6 inches



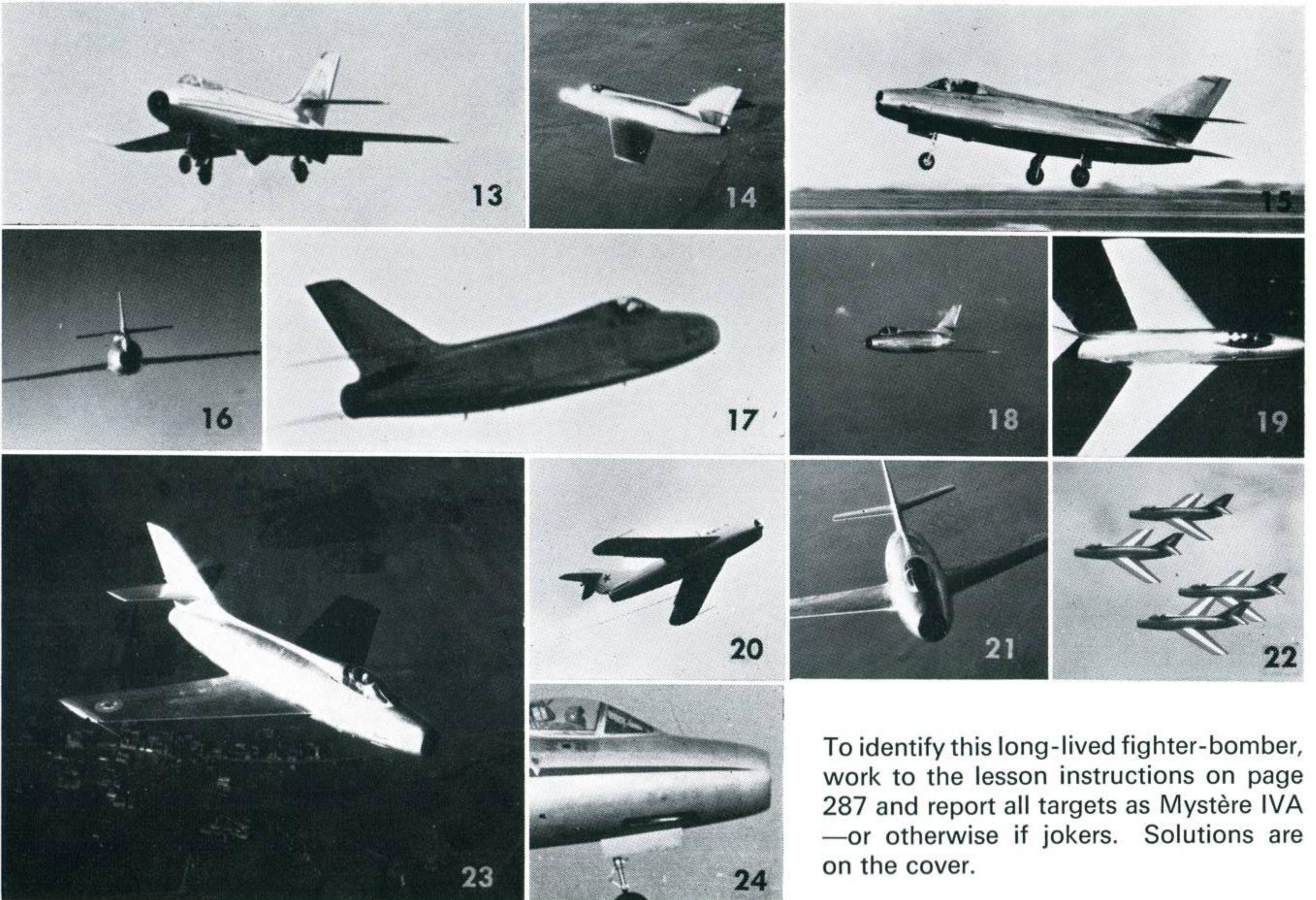
KEY

continued overleaf



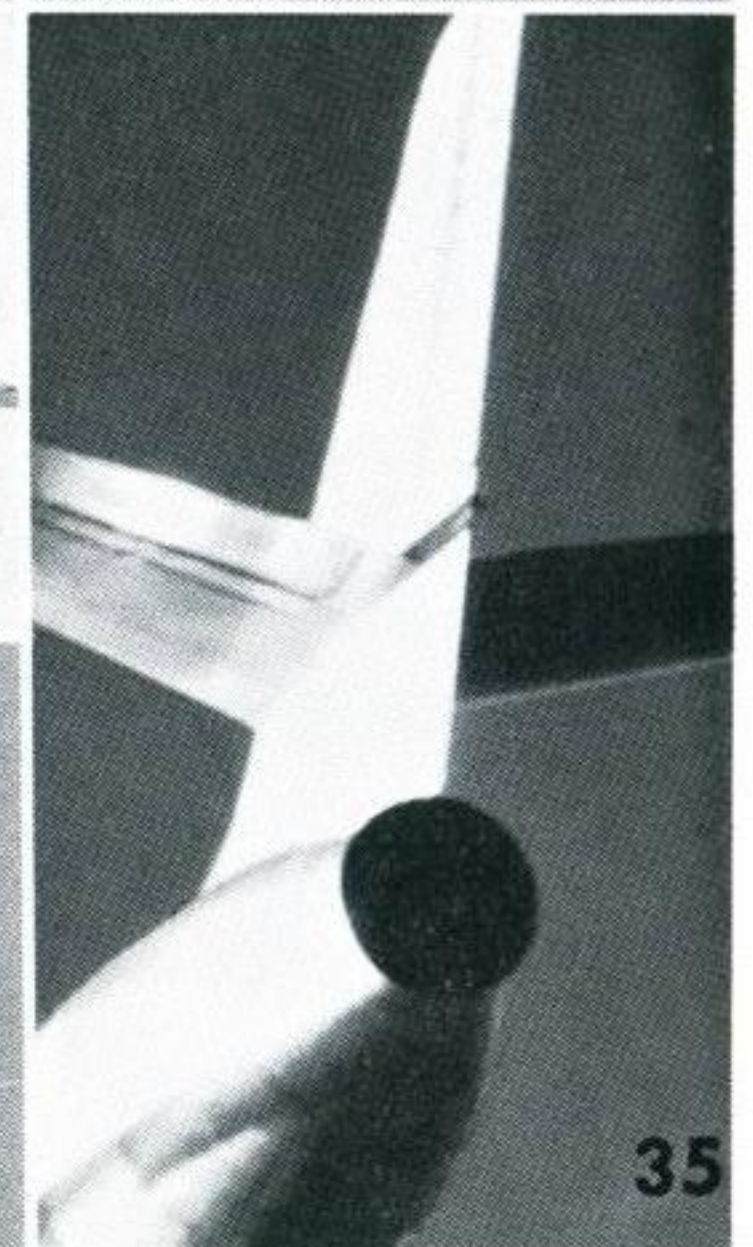
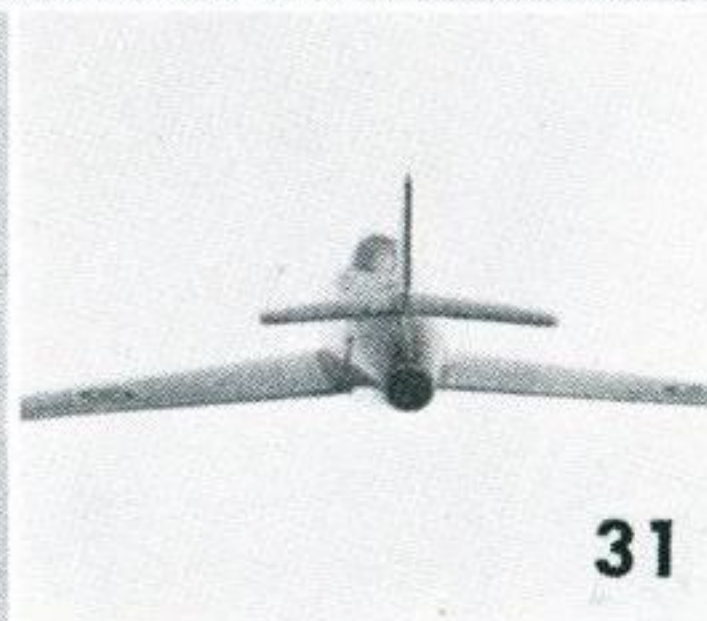
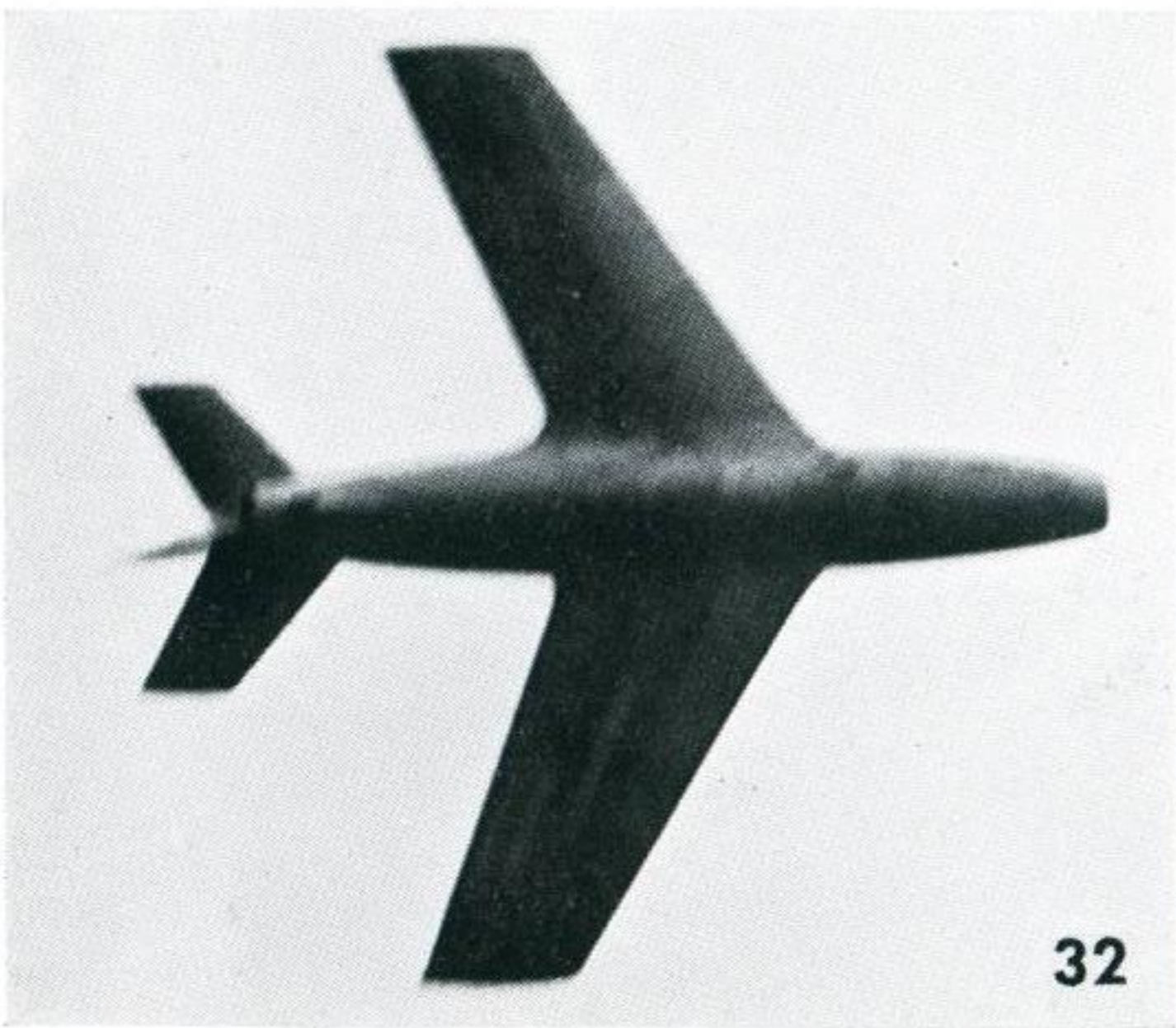
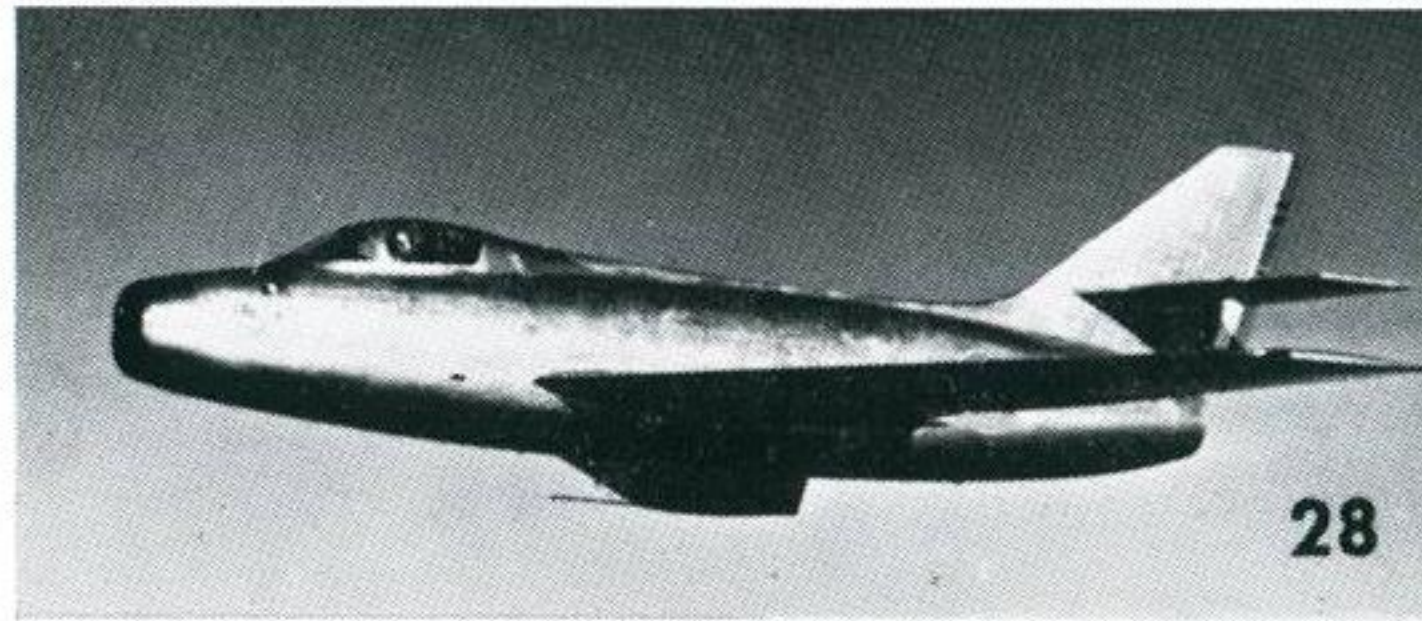
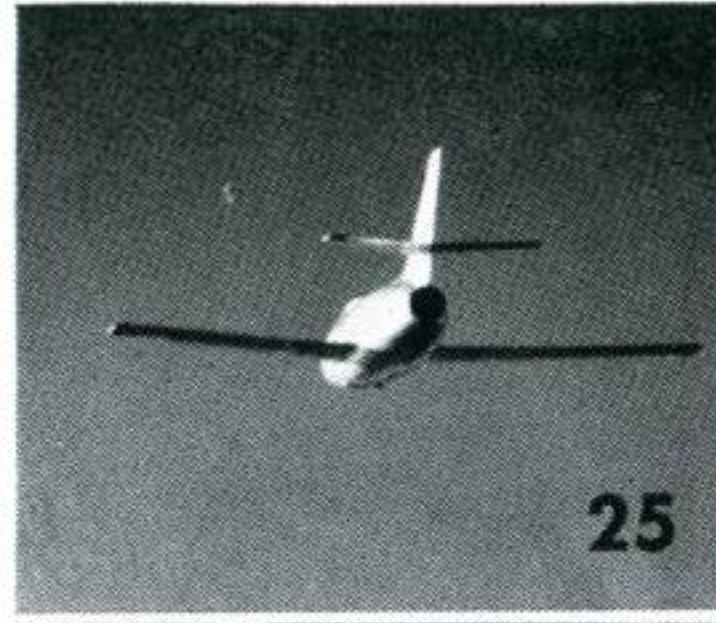
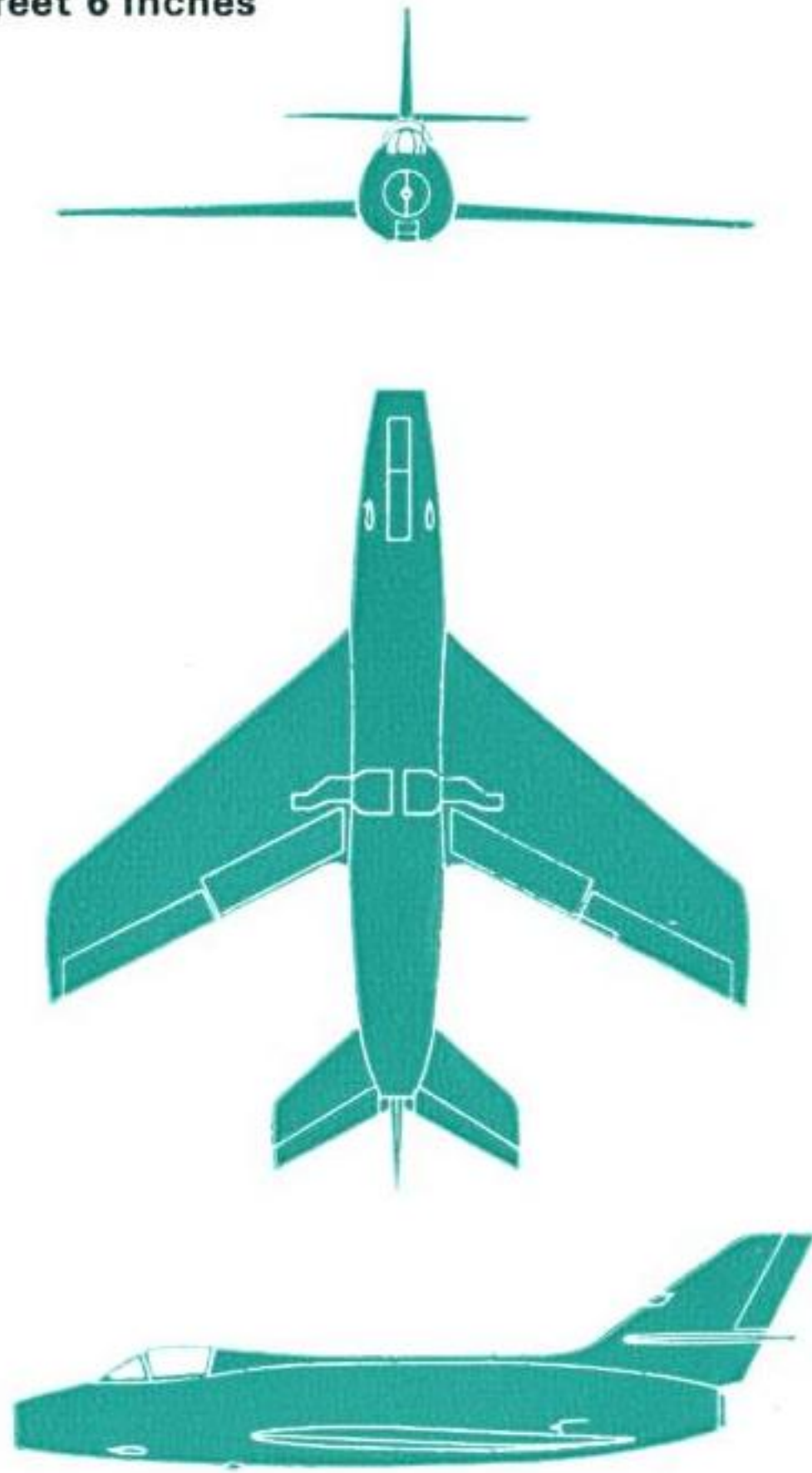
**KEY**

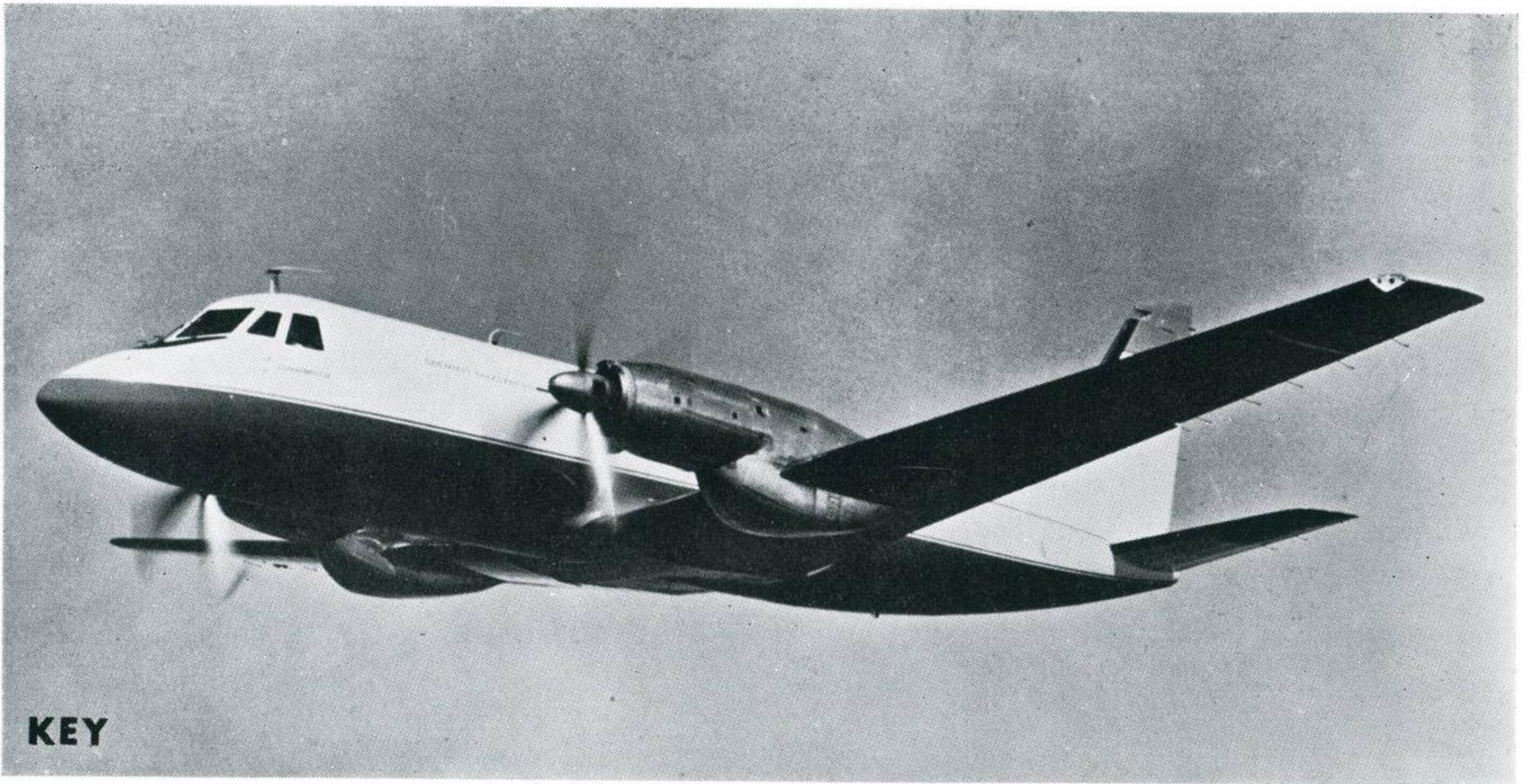
**MYSTÈRE IVA** *continued*



To identify this long-lived fighter-bomber, work to the lesson instructions on page 287 and report all targets as Mystère IVA —or otherwise if jokers. Solutions are on the cover.

Span 36 feet 6 inches





## GULFSTREAM I

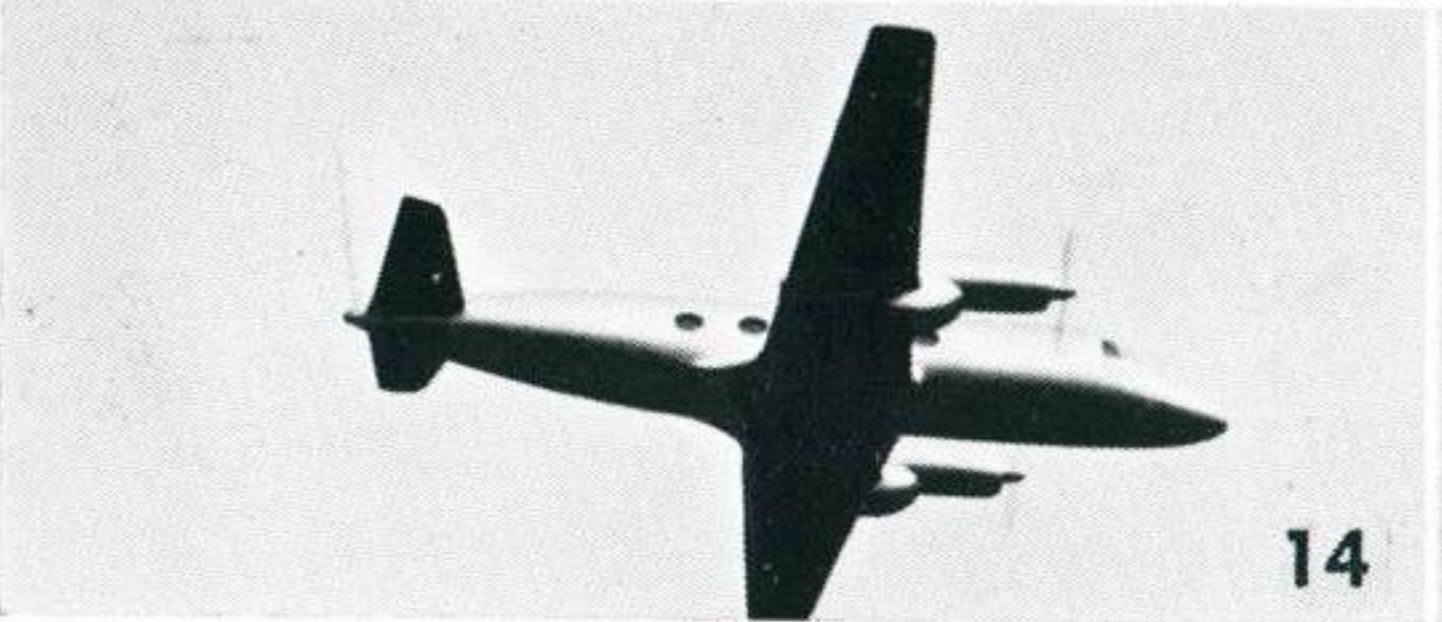
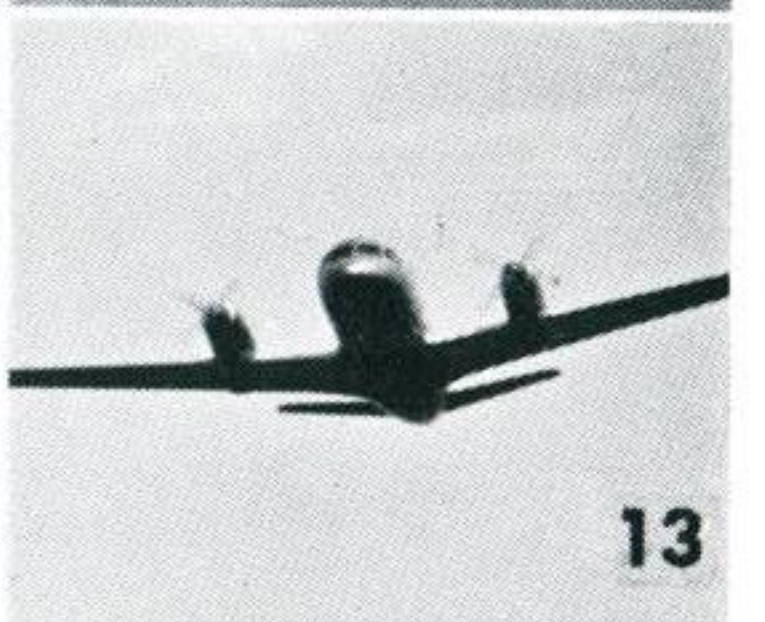
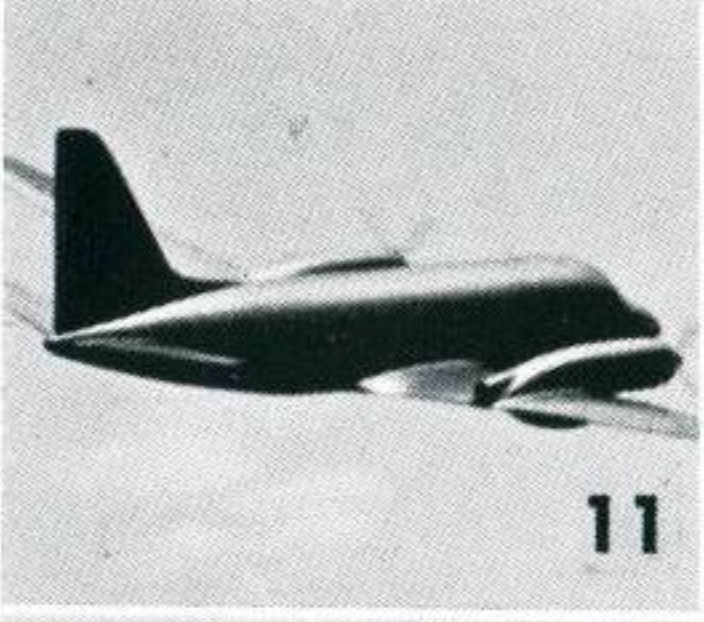
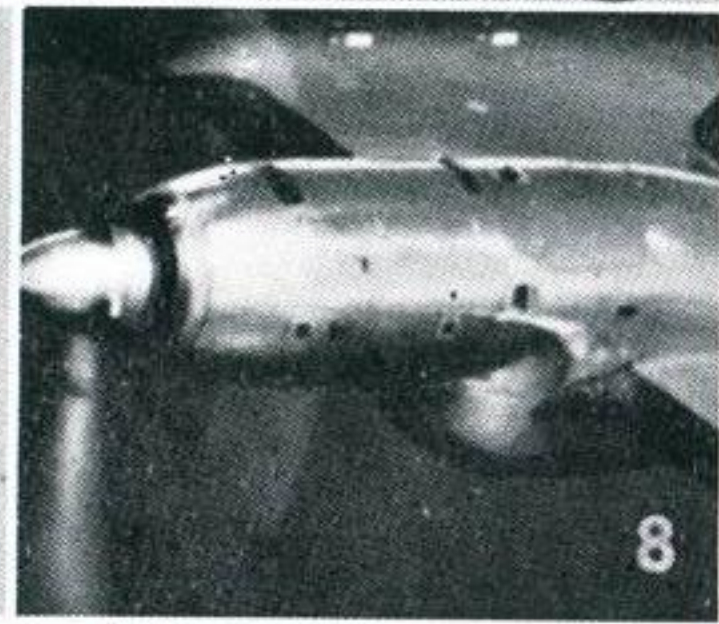
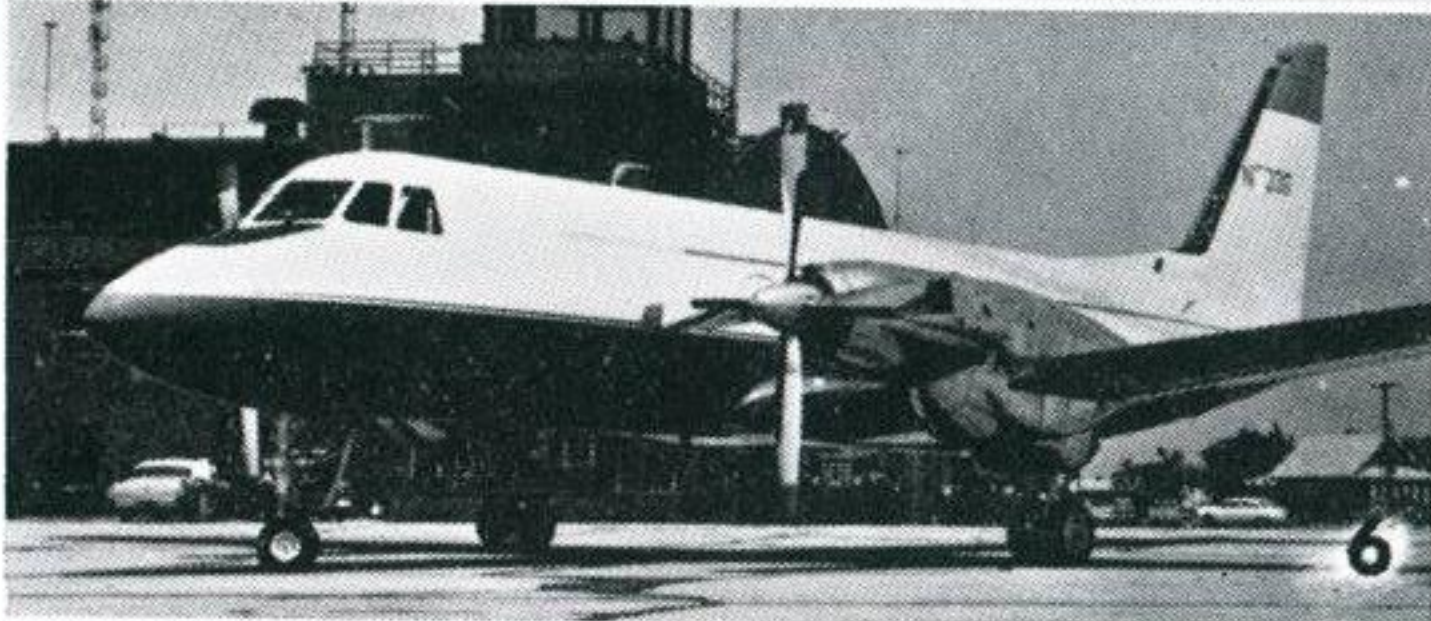
First of the larger, long-range business aircraft to take advantage of turboprop power, the Grumman Gulfstream I carries 10–14 passengers plus a crew of two and its two Rolls-Royce Dart engines give it a cruising speed of 288 m.p.h. at 25,000 feet.

The first flight was made in August 1958 and the 200th and last Gulfstream I left the production line in February 1969. This aircraft can easily be confused

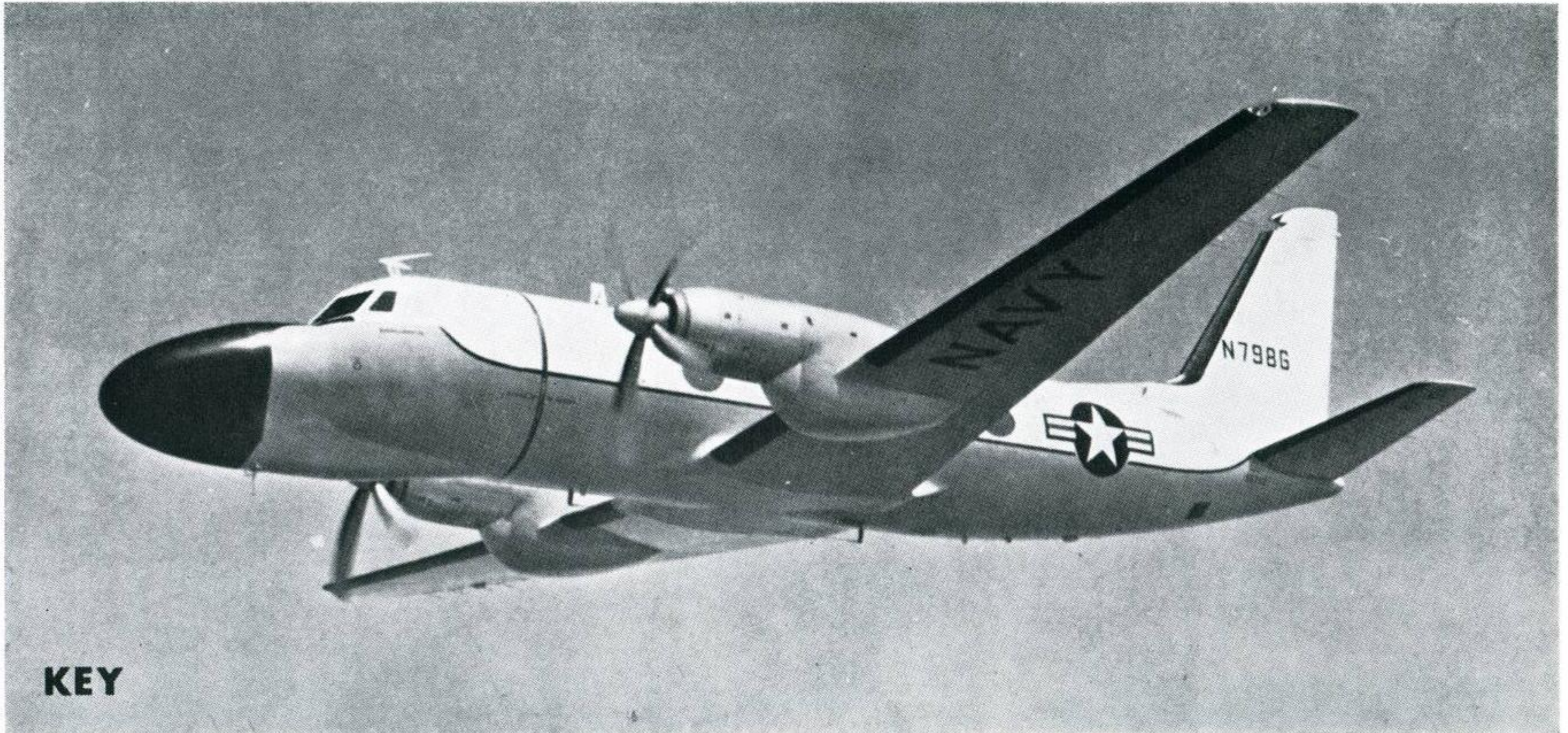
with the Hawker Siddeley 748 and NAMCO YS-11 of similar configuration. Work to the lesson instructions on page 287 and note that some Gulfstreams can be seen with a lengthened, "droop snoot" nose (see key view and silhouette on page 294). These are in US Navy service as the Grumman TC-4C for avionics training and two, fitted for VIP transport, are used by the US Coast Guard with the designation VC-4A. All versions should be reported as Gulfstreams.



Span 78 feet 6 inches



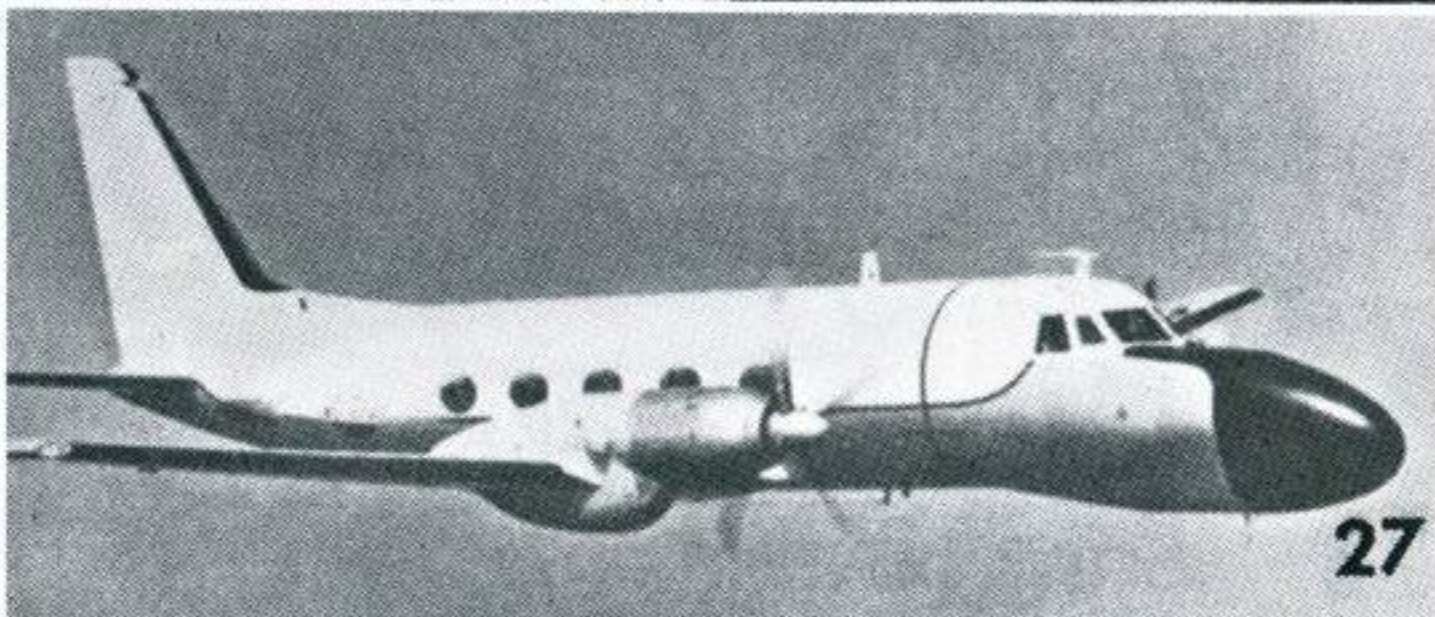
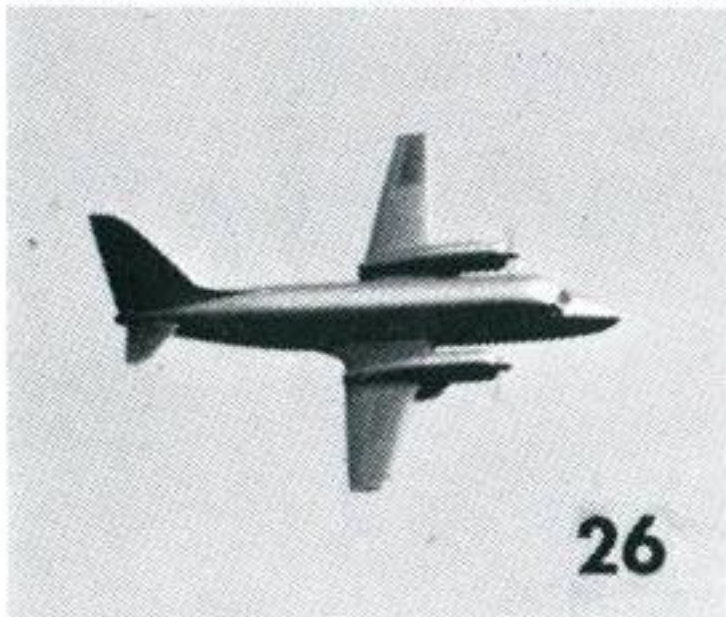
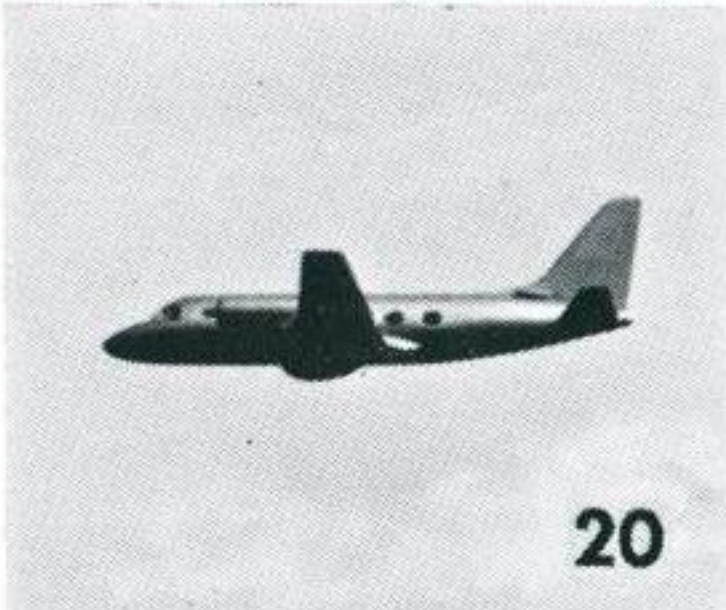
continued overleaf



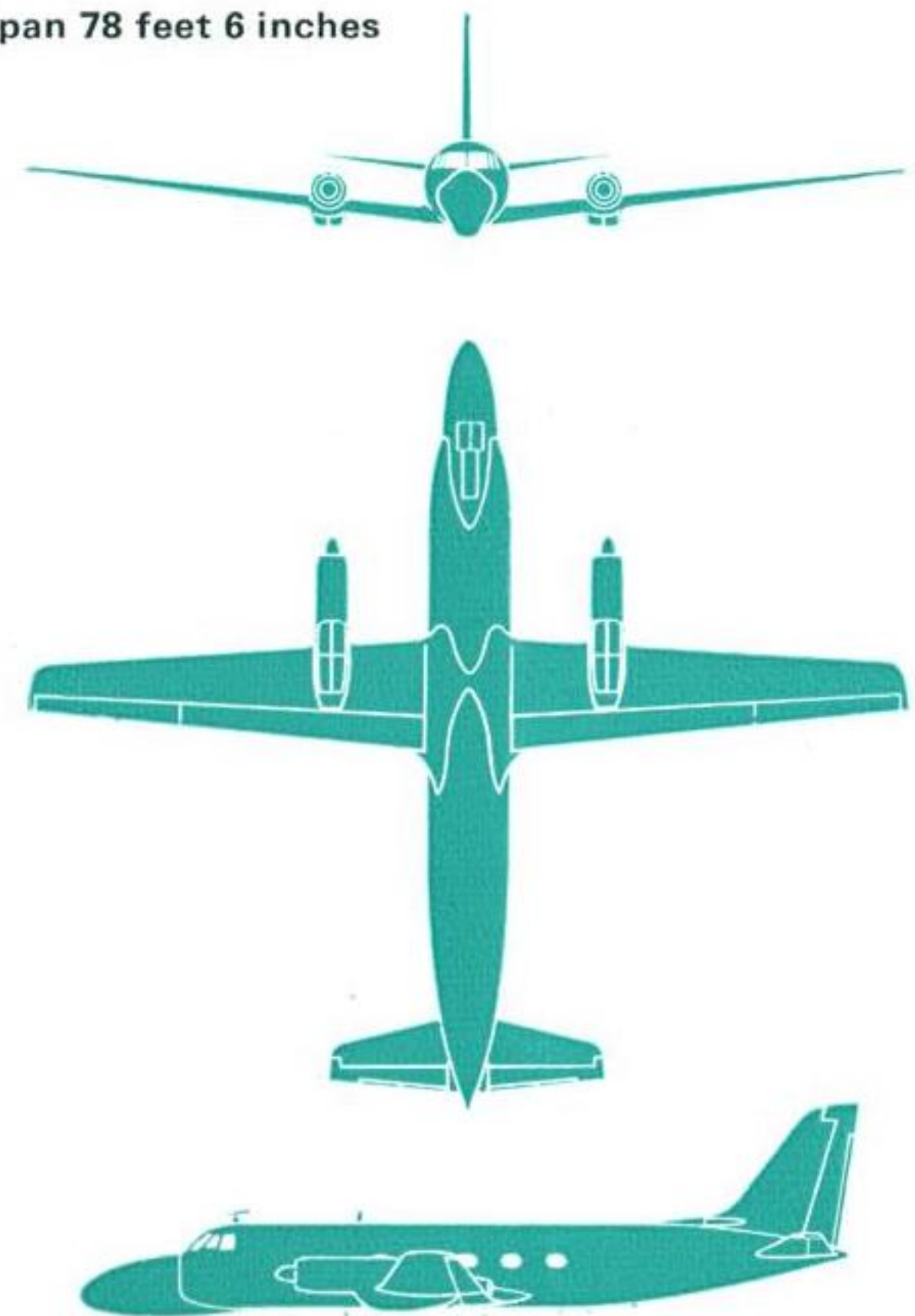
**GULFSTREAM I** *continued*

*Solutions on the cover*

TC-4C (above) is a US Navy version with extended radome nose and used for training A-6A Intruder crews.



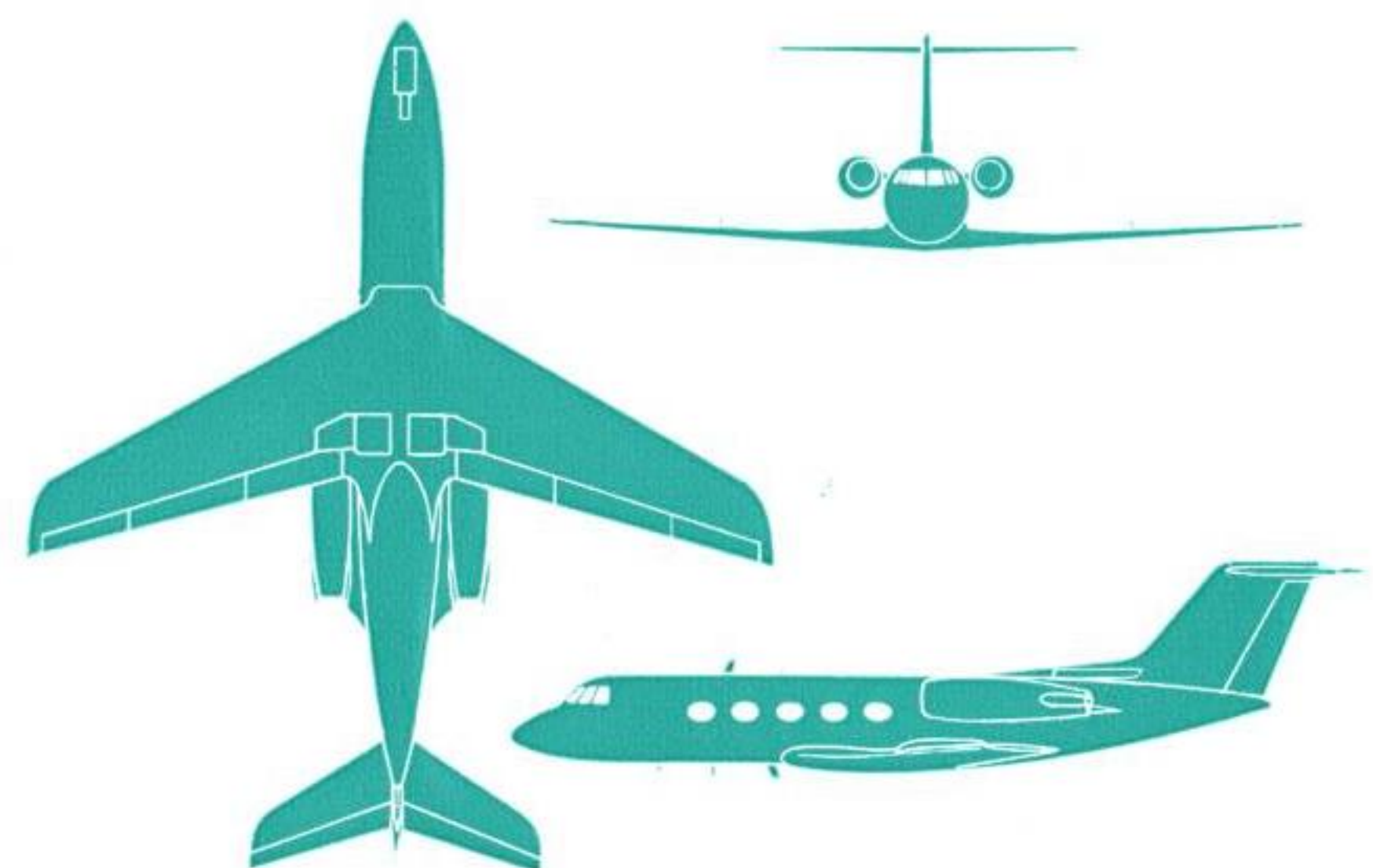
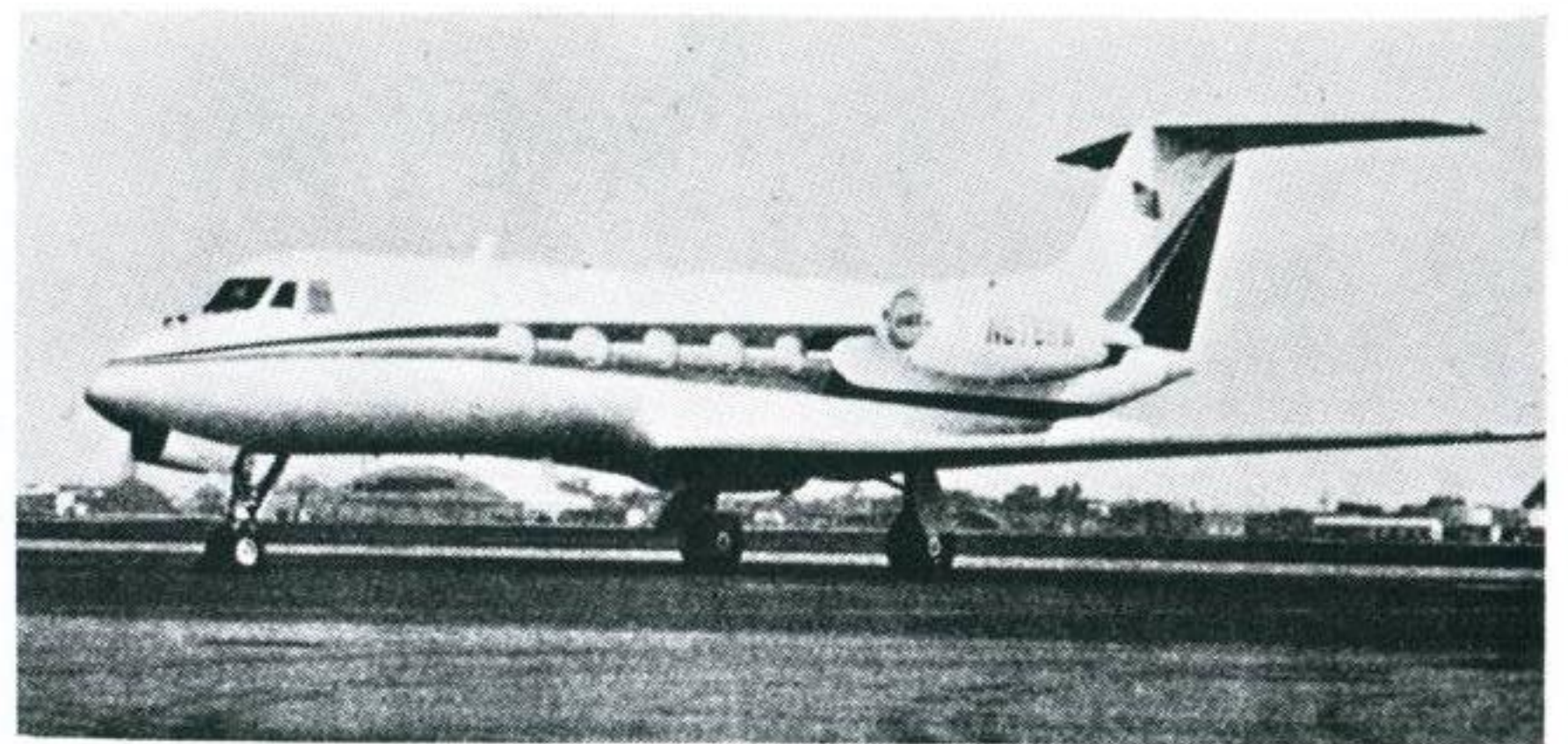
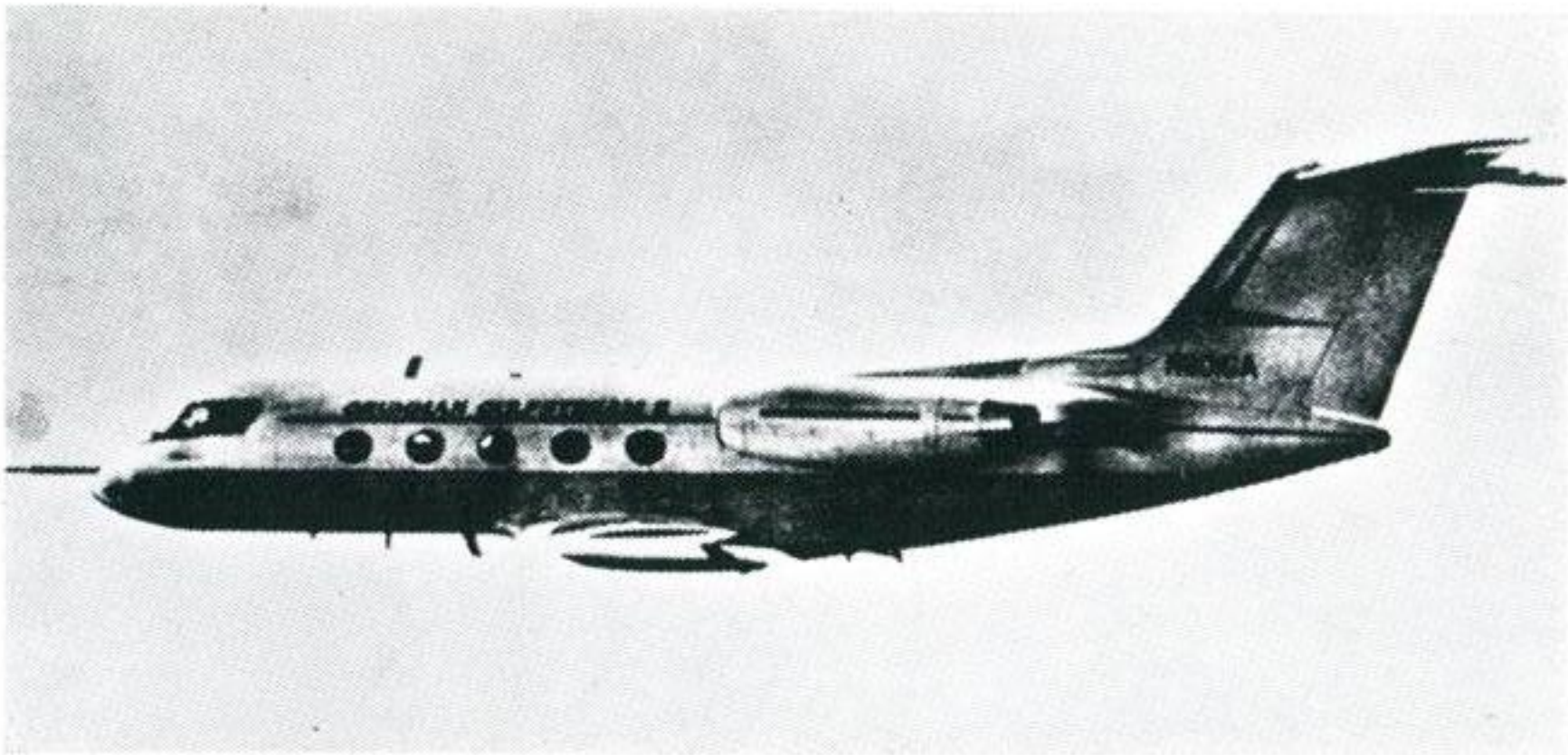
Span 78 feet 6 inches



# GULFSTREAM II

A wholly new design, the Grumman Gulfstream II, is an executive twin jet of almost identical inside dimensions to the Gulfstream I but with transcontinental range and higher speeds. The prototype flew in October 1966 and by the beginning of 1969 approximately 40 production models had been delivered.

Span 68 feet 10 inches, power plant two Rolls-Royce Spey-25 turbofans, accommodation crew of three and up to 30 passengers, range with max payload 2,740 miles.



Span 68 feet 10 inches



## MAGISTER

*Lesson instructions are on page 287*

First flown in July 1954, the Magister was designed by the French firm of Fouga, part of the Potez group, which continued production until the Magister was taken over by Sud Aviation in 1967. A tandem two-seat jet trainer with distinctive "butterfly" tail, the Magister has been sold to many other countries and has been built under licence in West Germany, Finland and Israel. The standard CM170 Magister can carry two machine guns plus underwing racks for bombs,

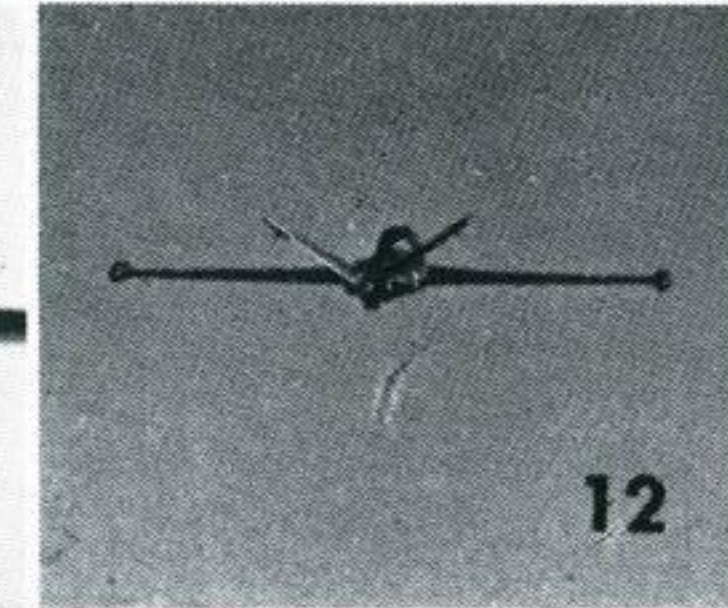
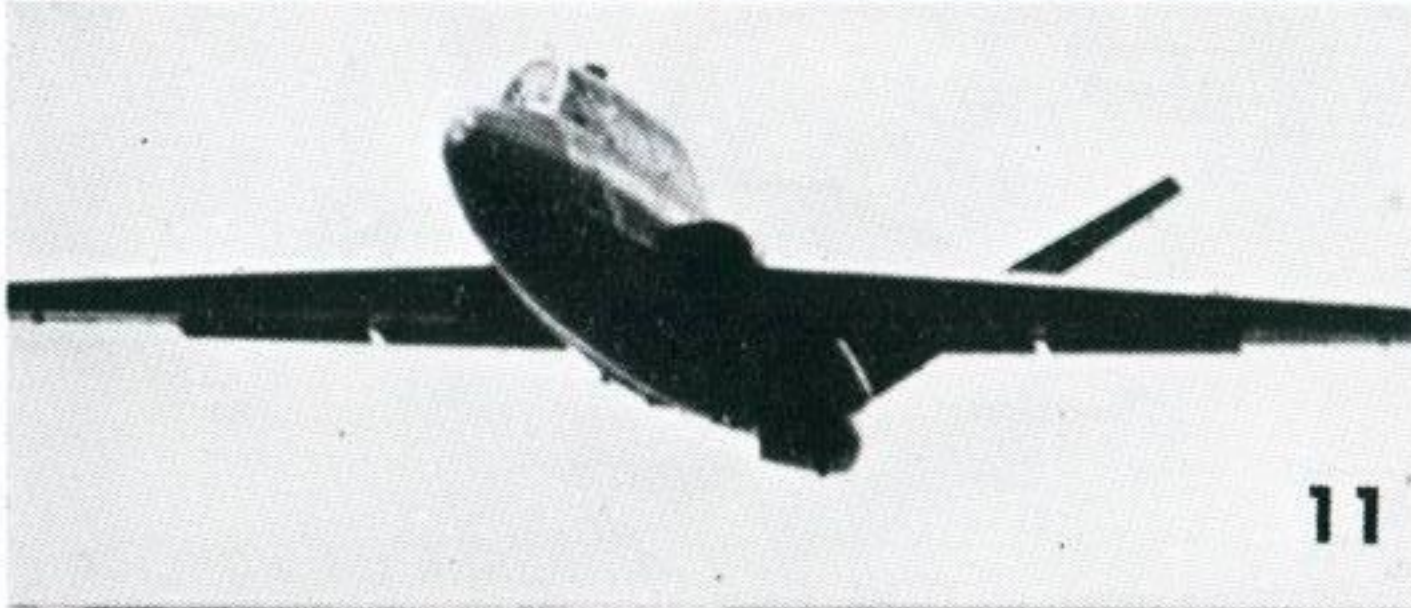
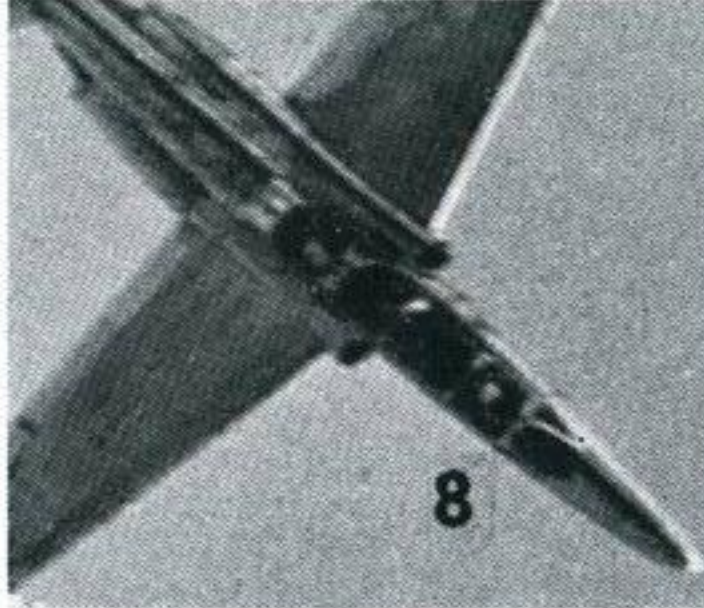
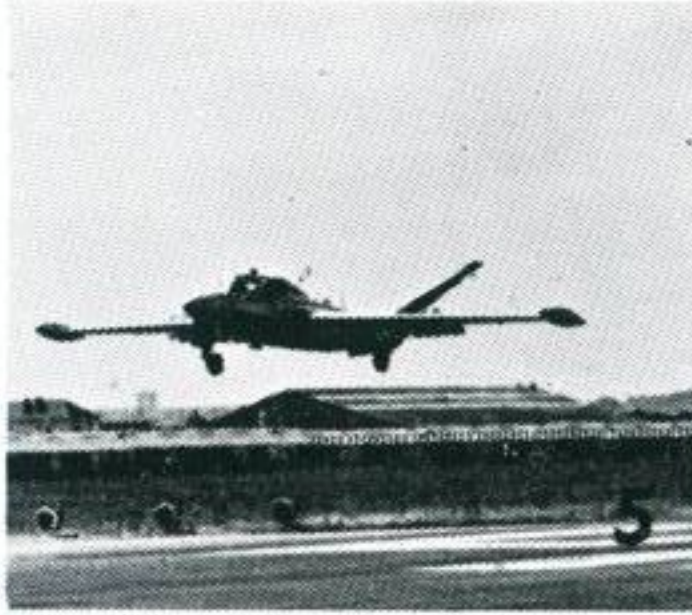
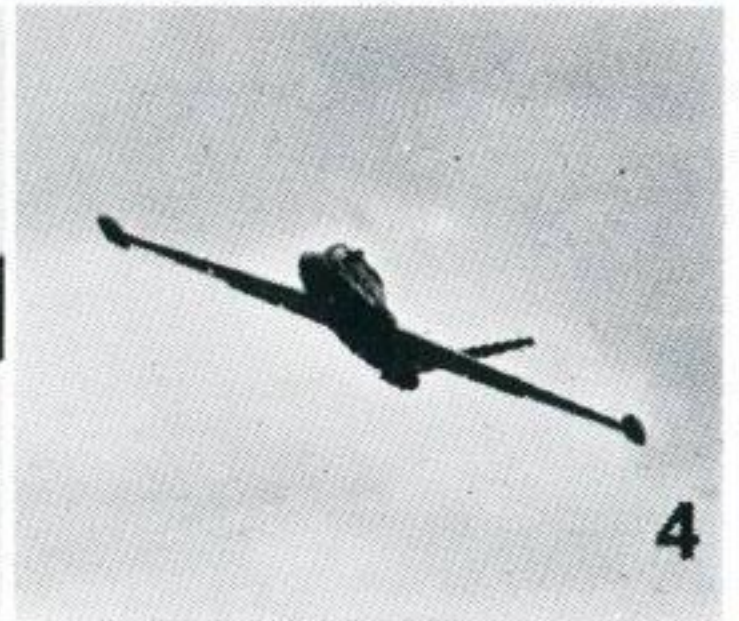
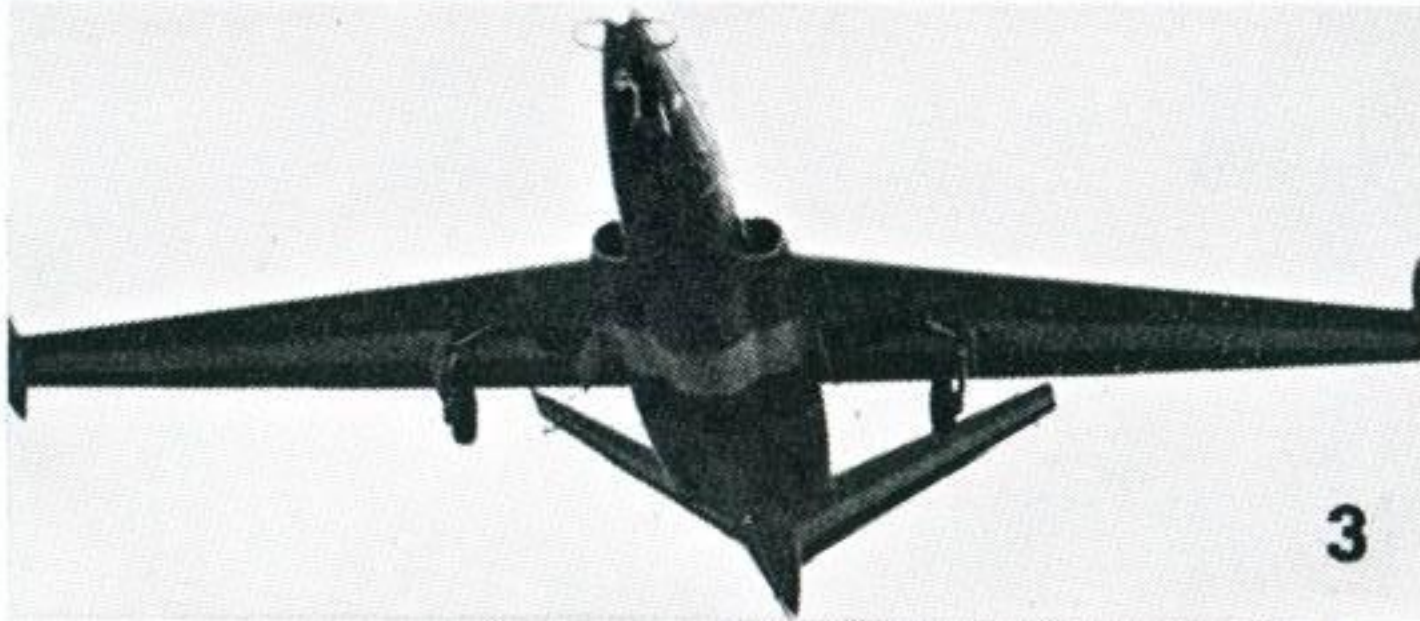
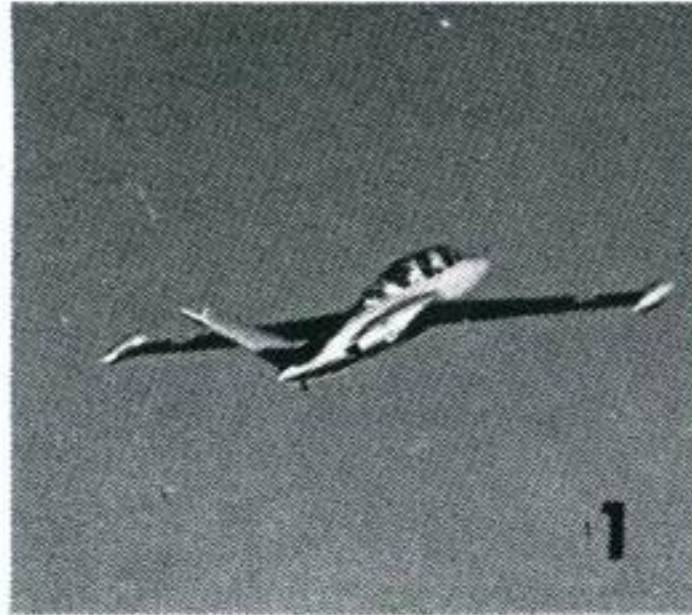
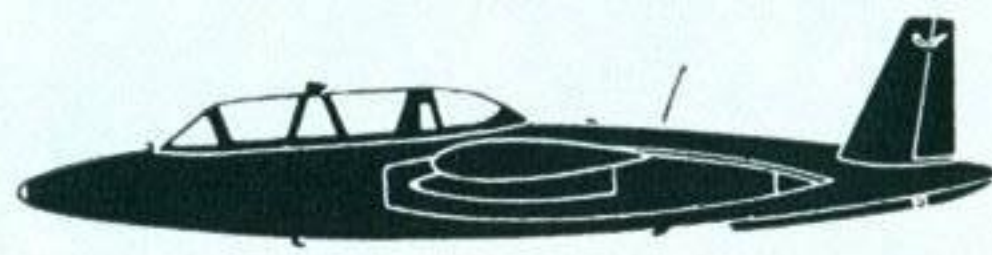
rockets or guided missiles. The Super Magister has more powerful engines, and the other variant, the CM175 Zephyr, is equipped for carrier operation.

The reporting name Magister is acceptable for the Zephyr which has the same configuration. (Although a few of the ex-RAF wartime trainer Magisters are still flying under private ownership, these aircraft are known by their civil name Miles Hawk Trainer III.)

*Solutions on the cover*



Span 39 feet 10 inches

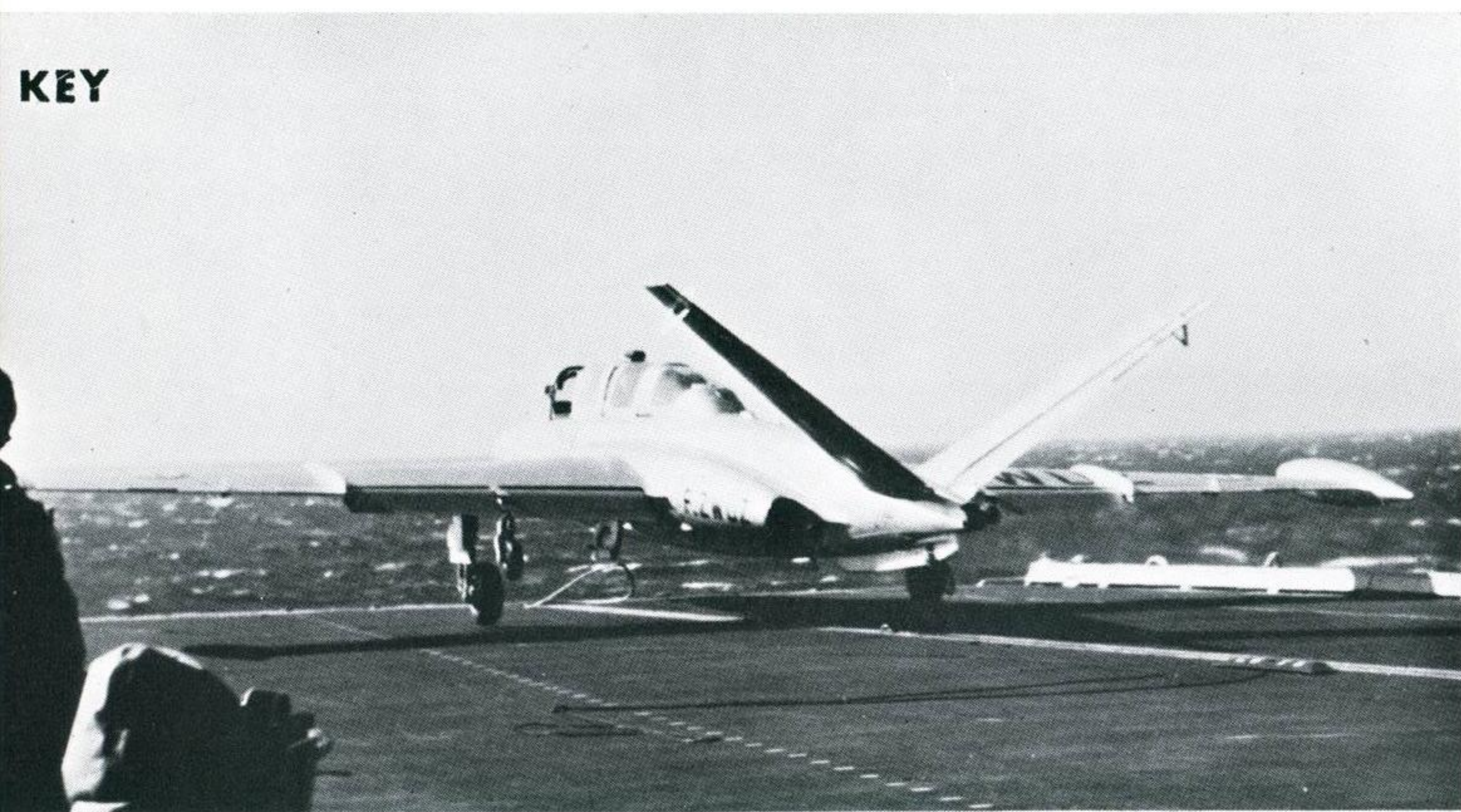


KEY

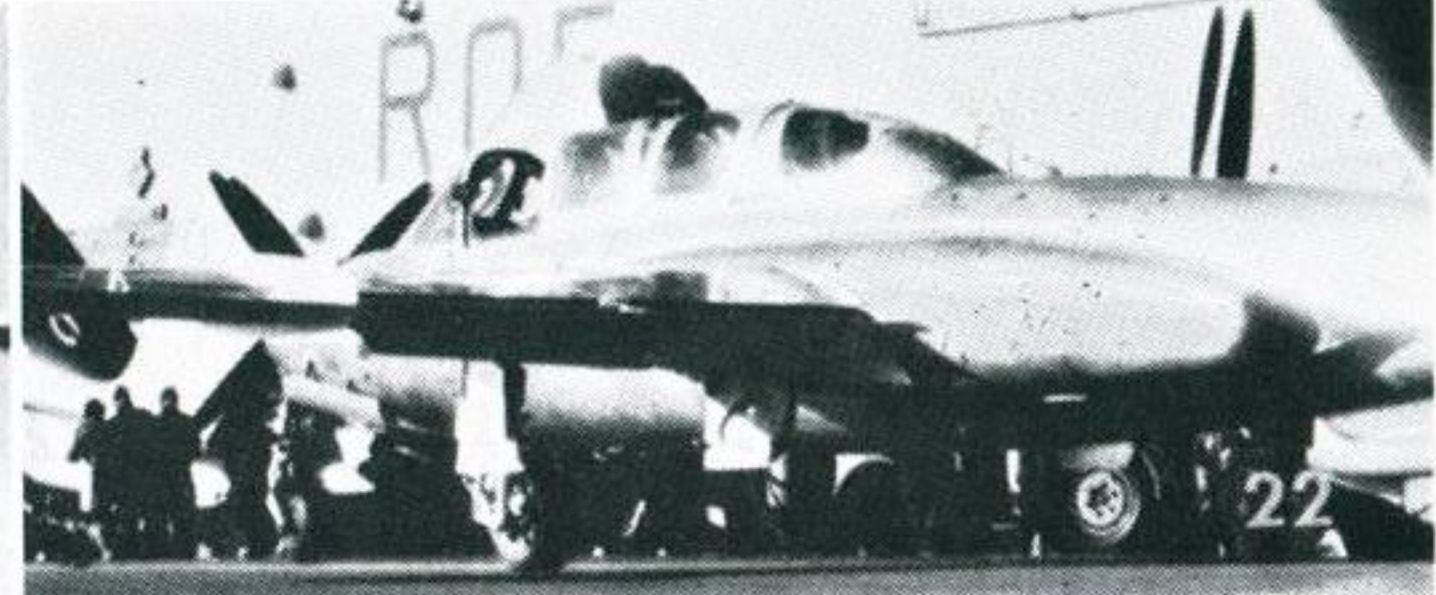


continued overleaf

**KEY**

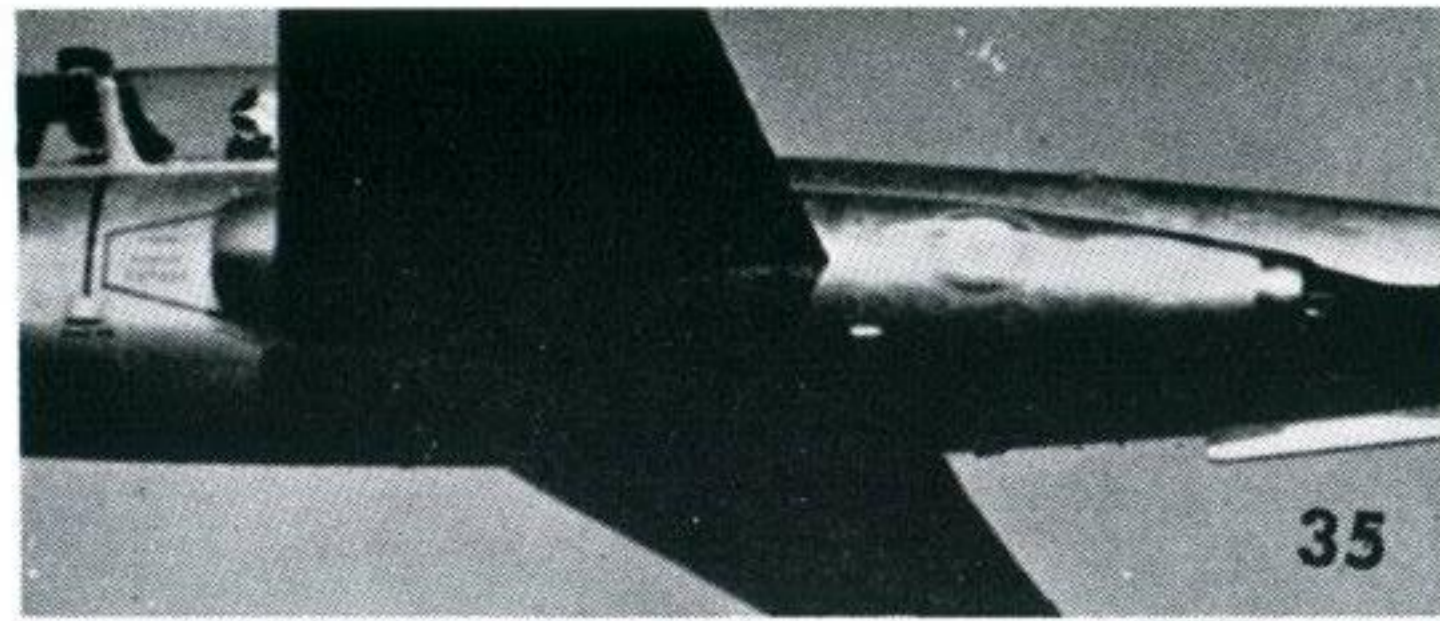


**MAGISTER** *continued*

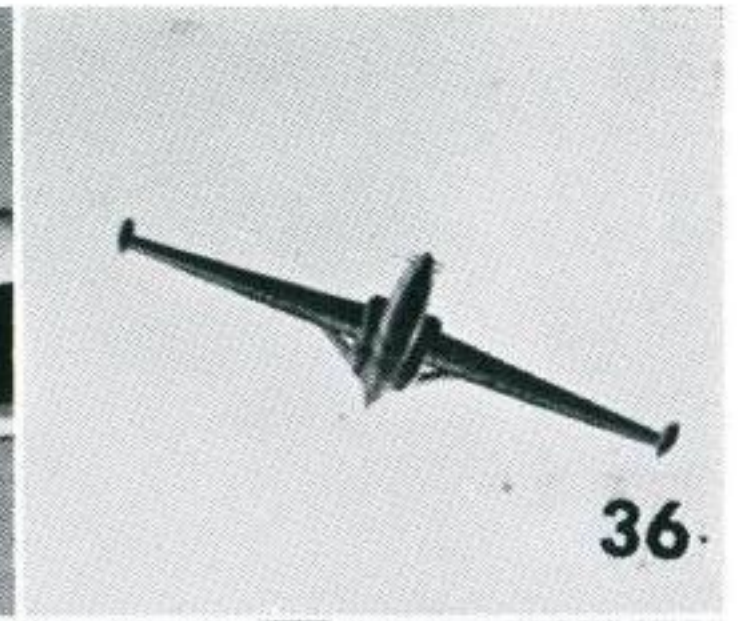


Although the butterfly tail is a useful recognition feature of the Magister it should on no account be relied upon solely as a clue. And because of the otherwise general similarity of such other trainer/light attack aircraft as the Galeb and Paris the Magister must be learned properly in accordance with the lesson instructions on page 287.

Span 39 feet 10 inches



35



36



37



38



39



40



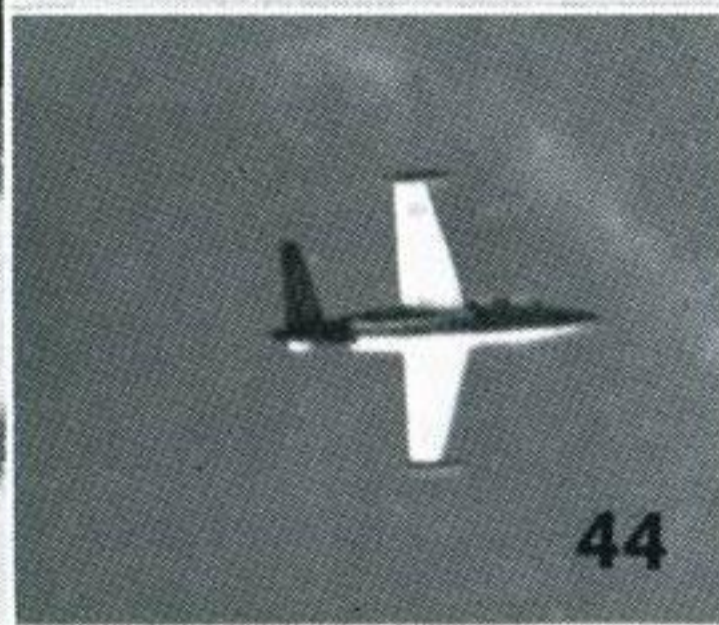
43



41



42



44



45

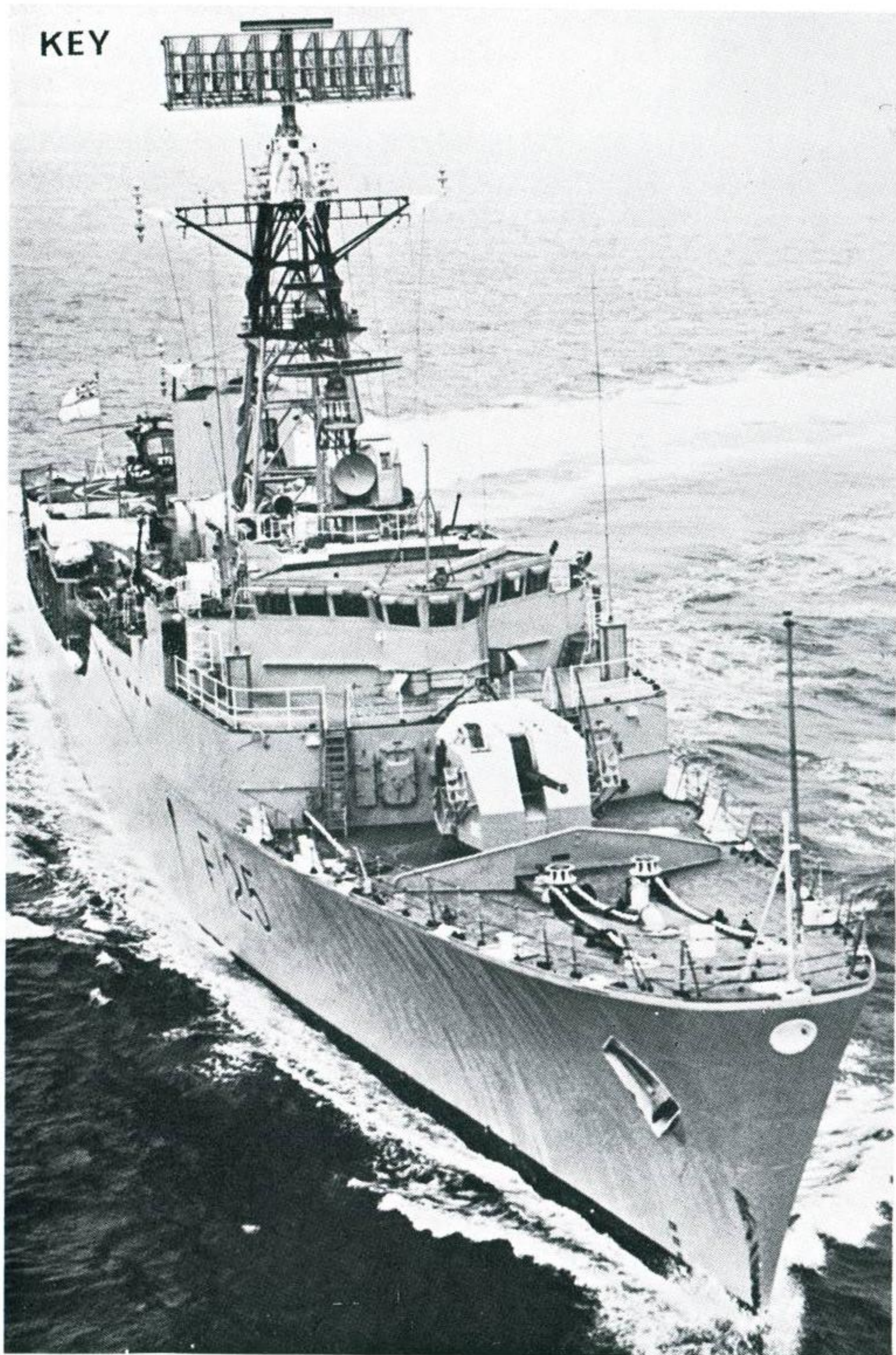


46

*Solutions on the cover*



**KEY**



## RN TRIBAL CLASS General Purpose Frigate

The seven vessels of this class were completed between 1961 and 1964. They were designed as an economic measure to produce a ship capable of fulfilling most of the frigate roles in any part of the world rather than to produce a highly sophisticated specialist type. These demands seem to have been well met and the ships have exceptional living accommodation, all air conditioned.

Another innovation was the fitting of combined steam and gas turbines which enables them to reach full power from cold in a matter of minutes. Displacement is 2,700 tons full load, overall length is 360 feet (109.7 metres) and top speed is 28 knots.

Armament consists (with variations) of two 4.5-in. dual purpose guns, two anti-aircraft guns and one Limbo depth charge mortar.

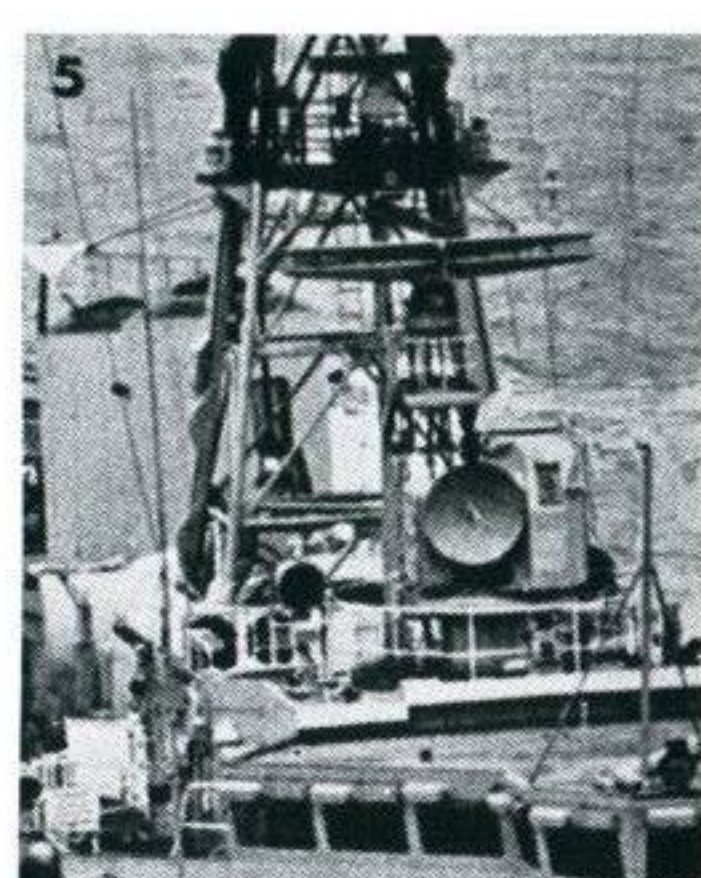
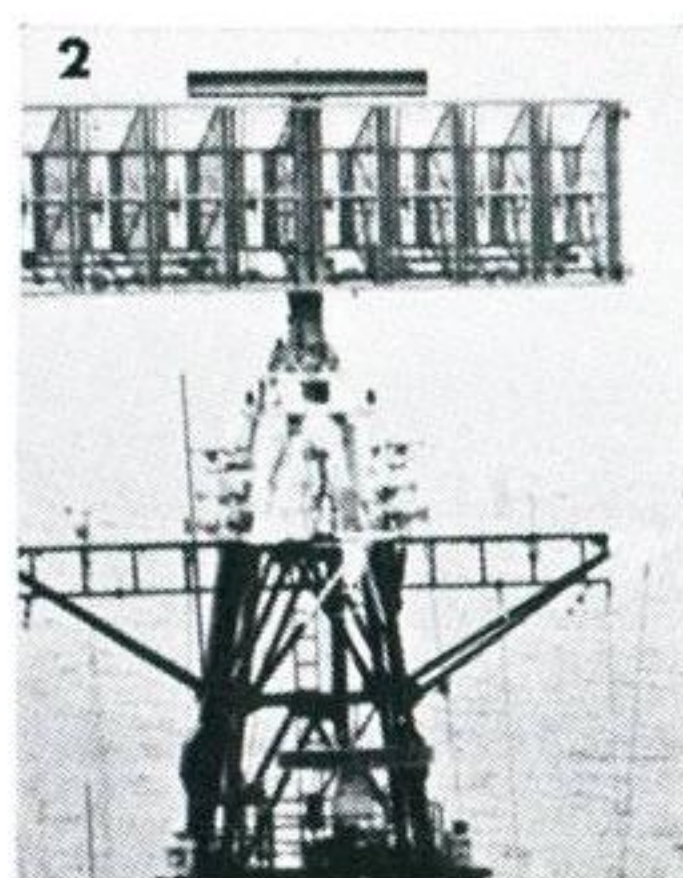
ZULU has a Seacat missile launcher and other vessels in the class may be similarly equipped.

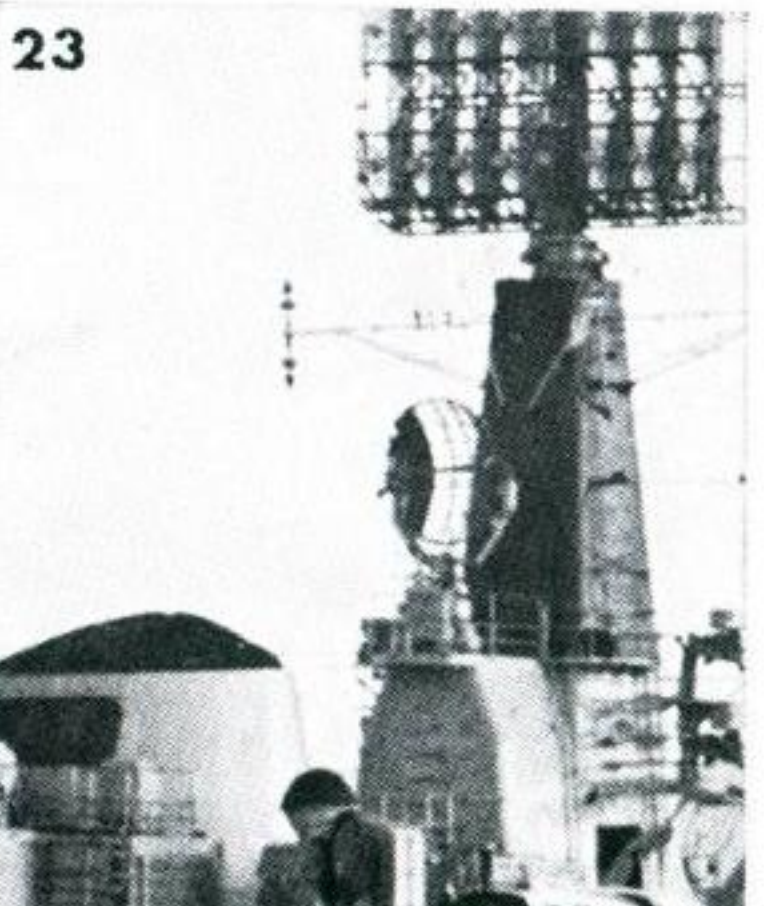
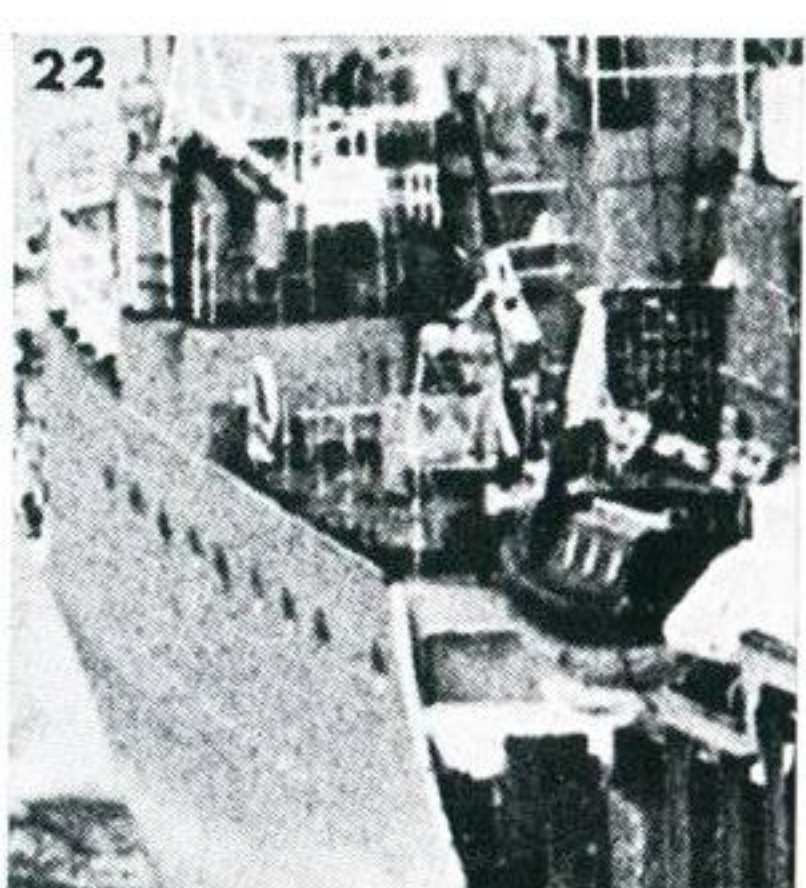
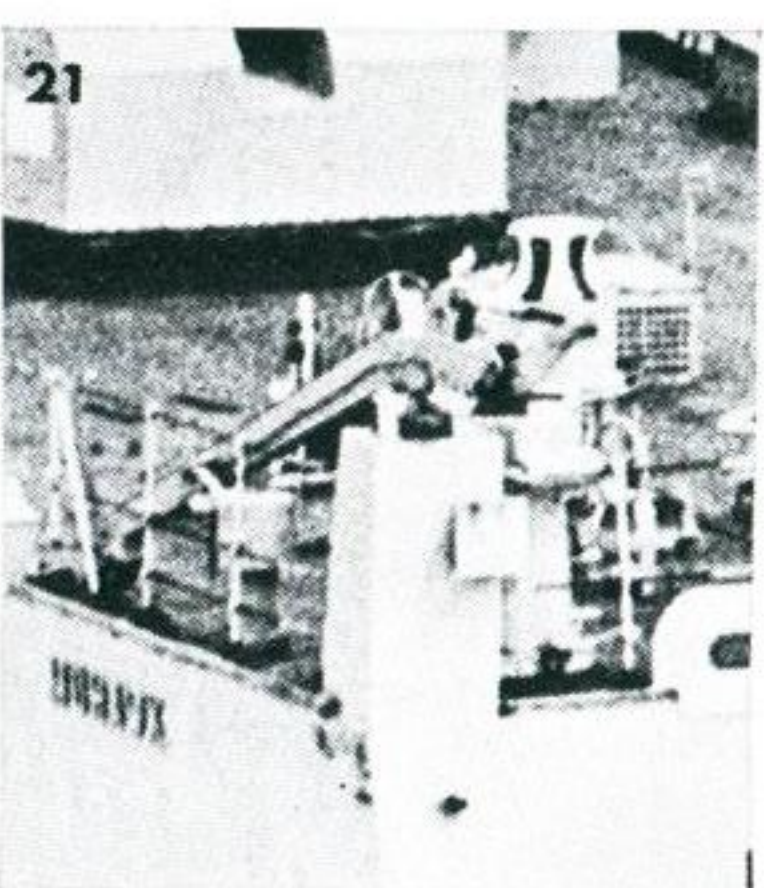
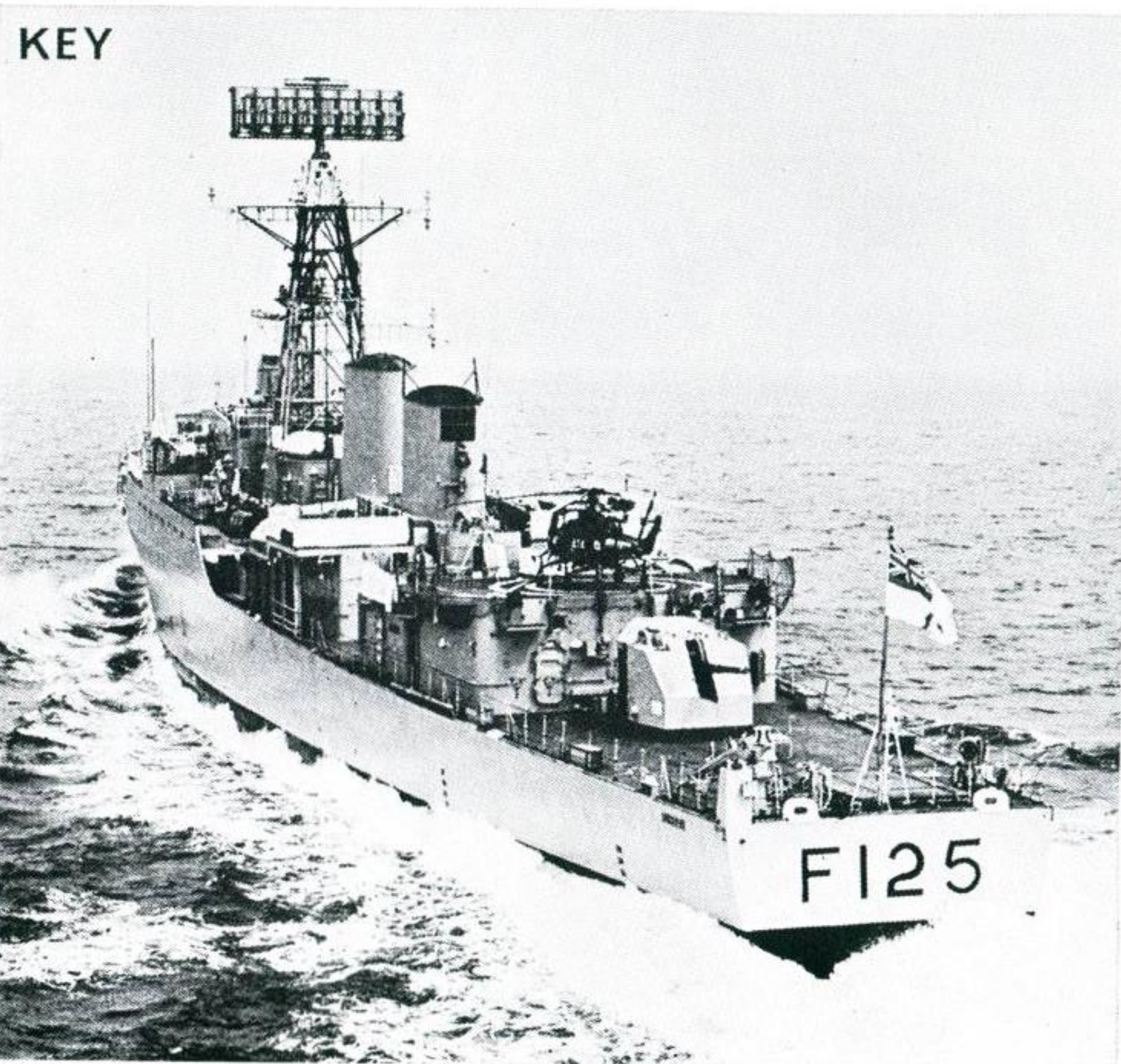
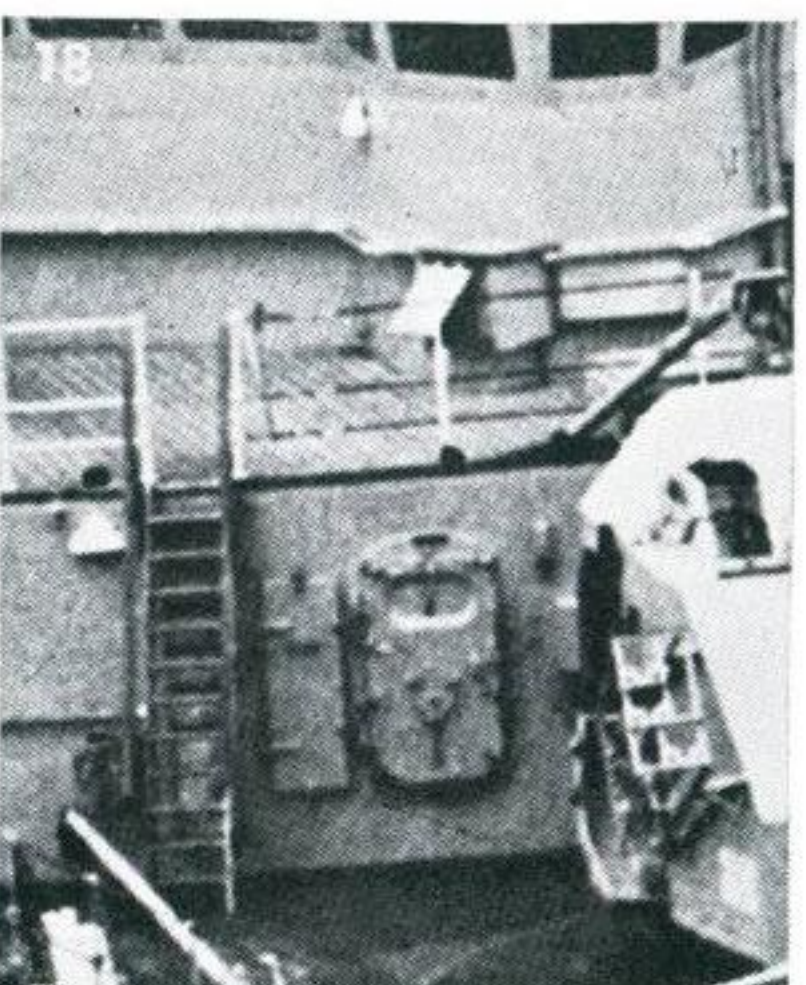
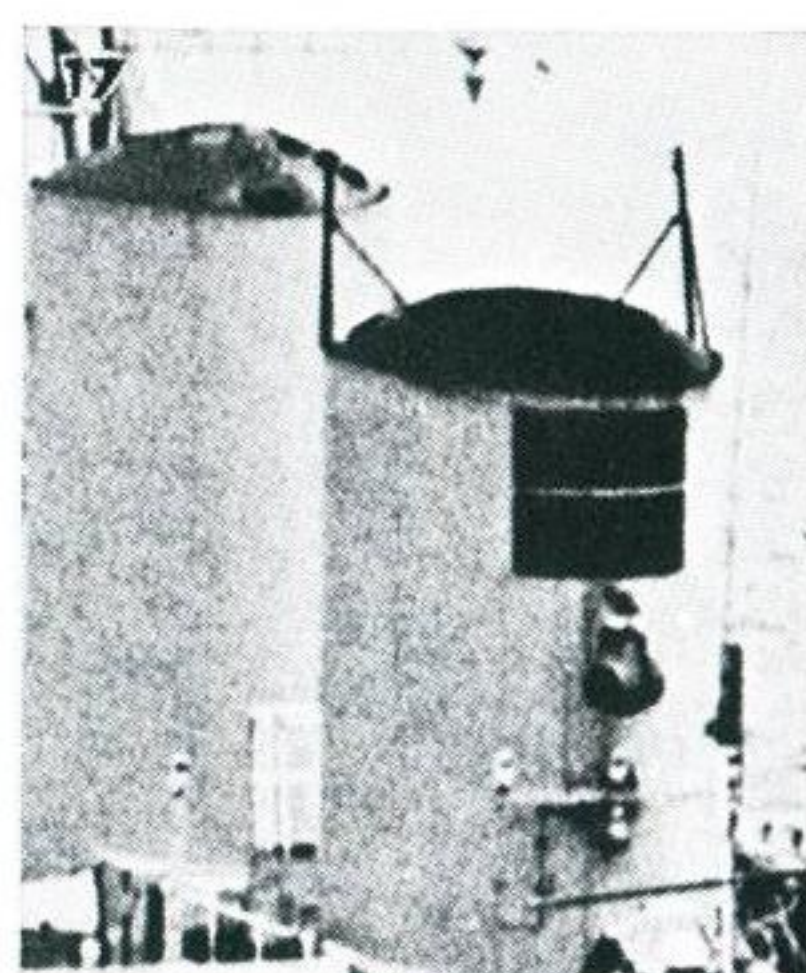
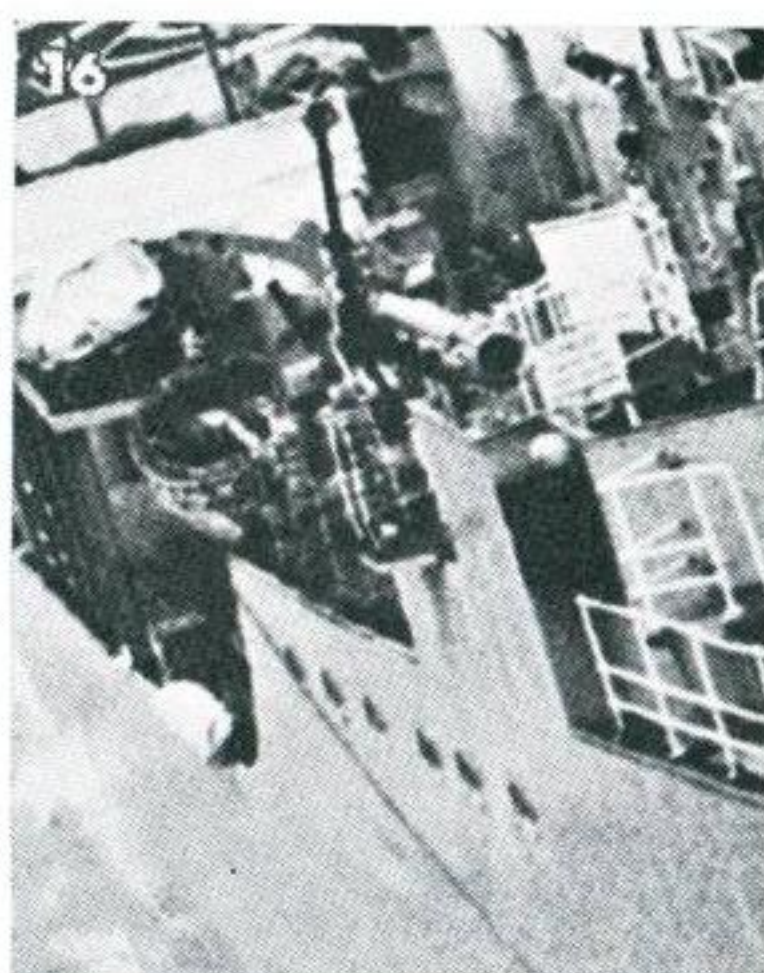
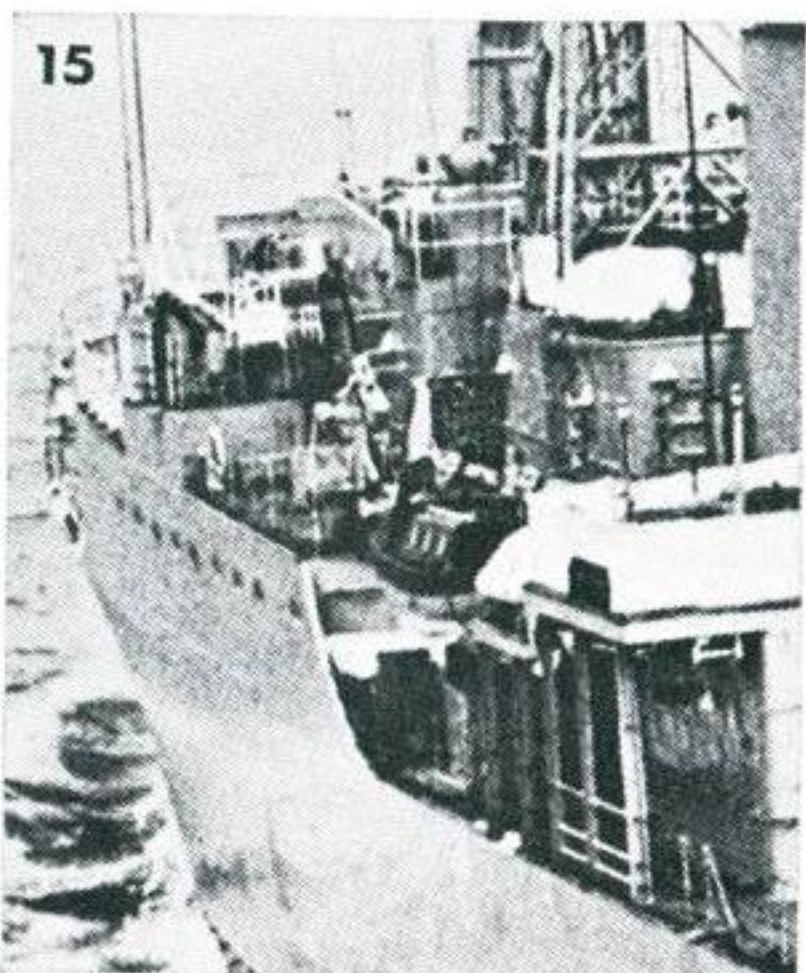
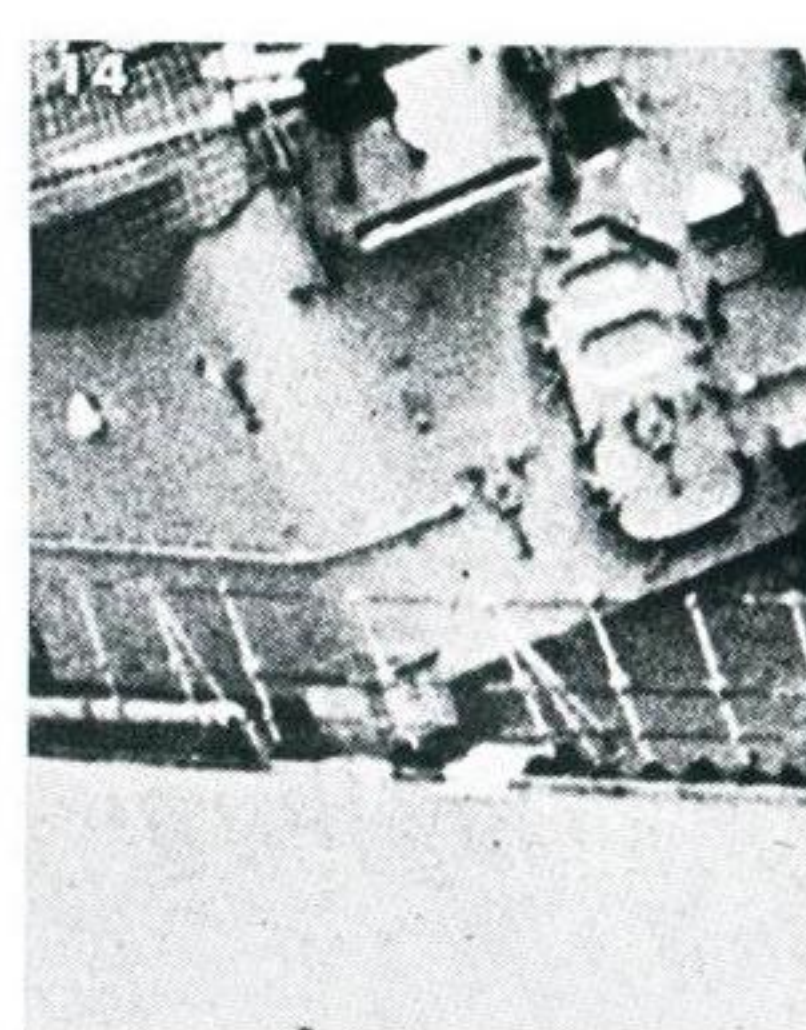
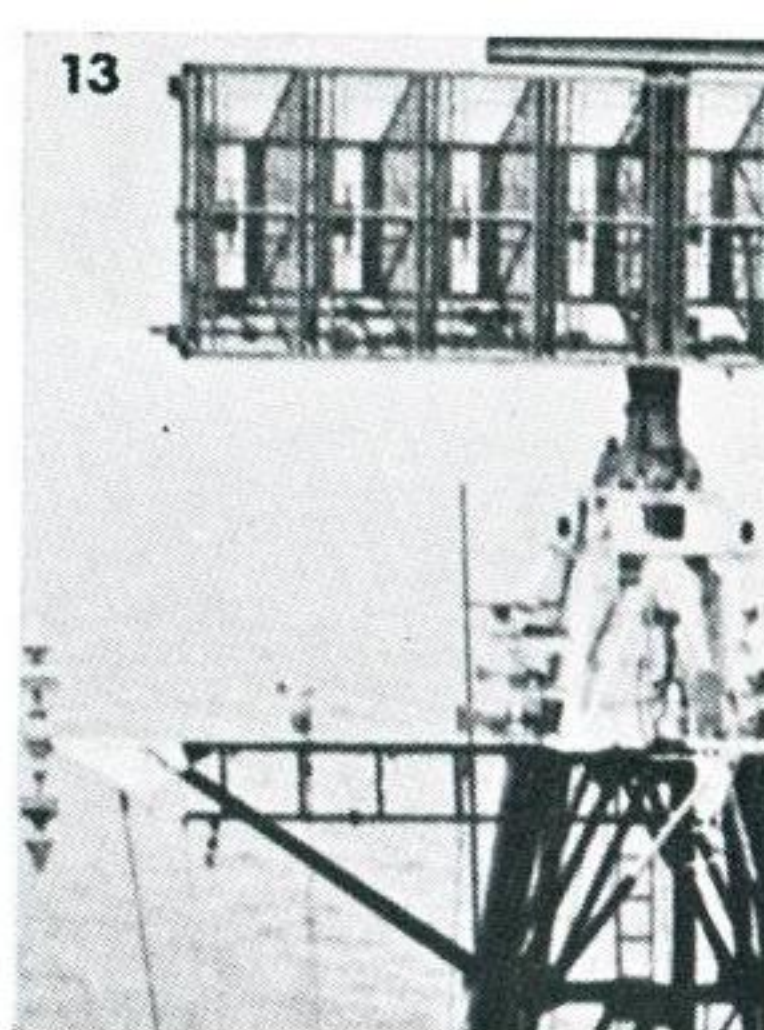
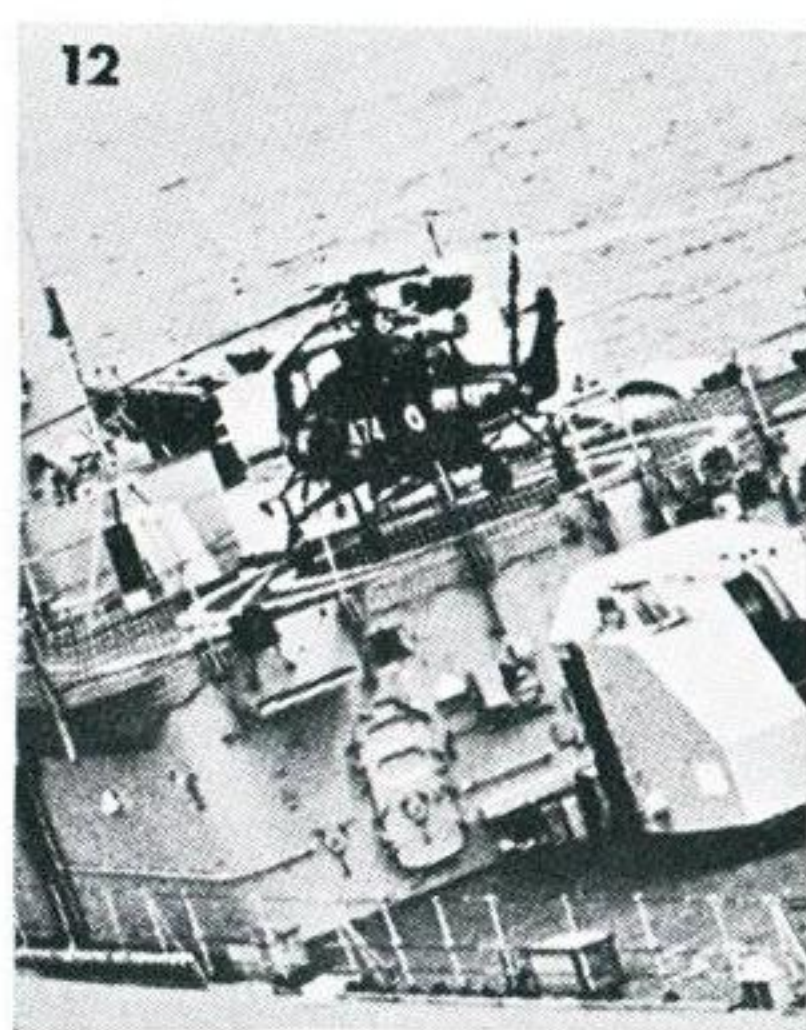
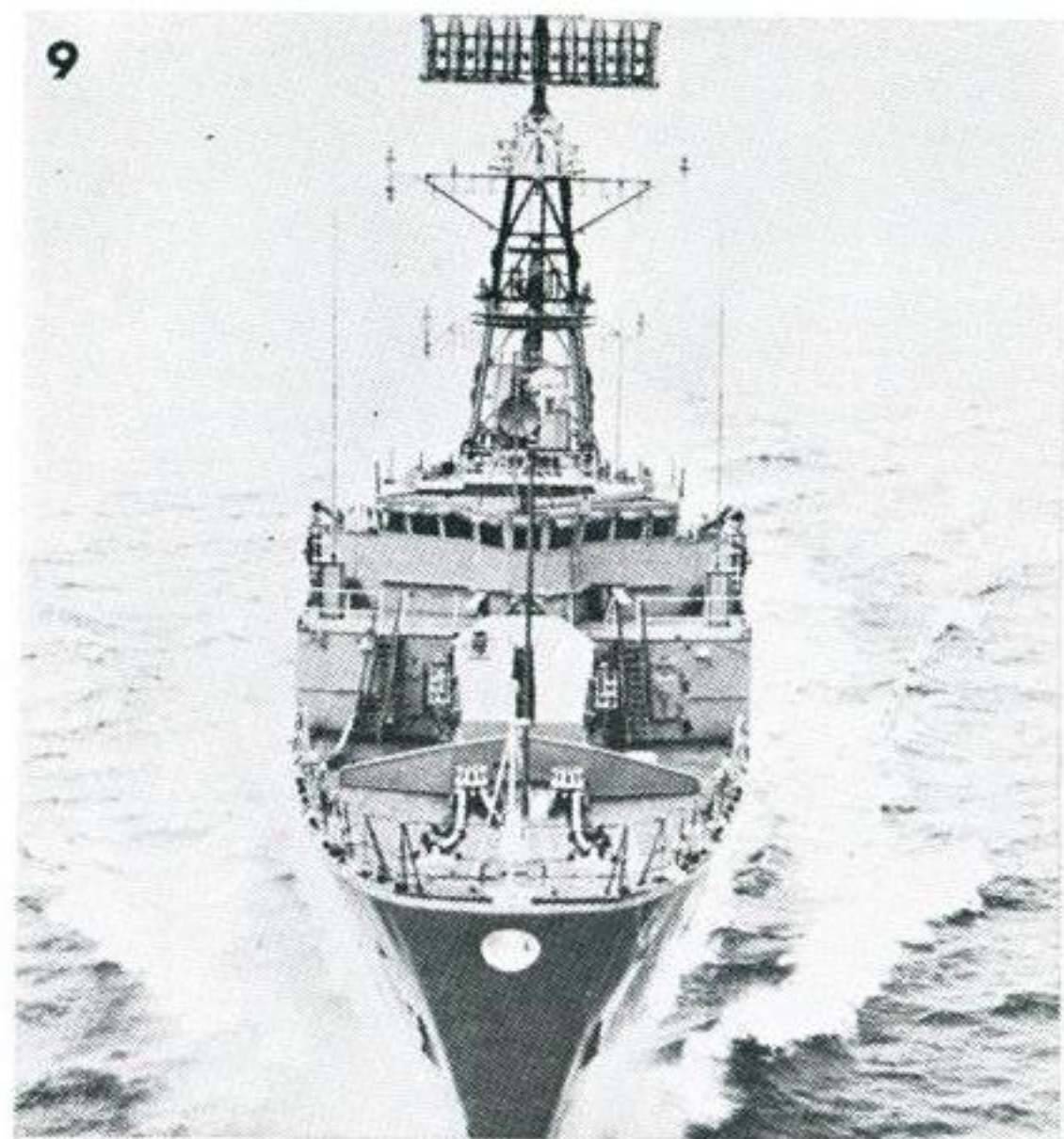
In appearance, the second funnel makes the class quite distinctive but being slightly shorter than the forward funnel rather mars the otherwise good looks.

The names perpetuate the ships of the three earlier Tribal classes of destroyers.

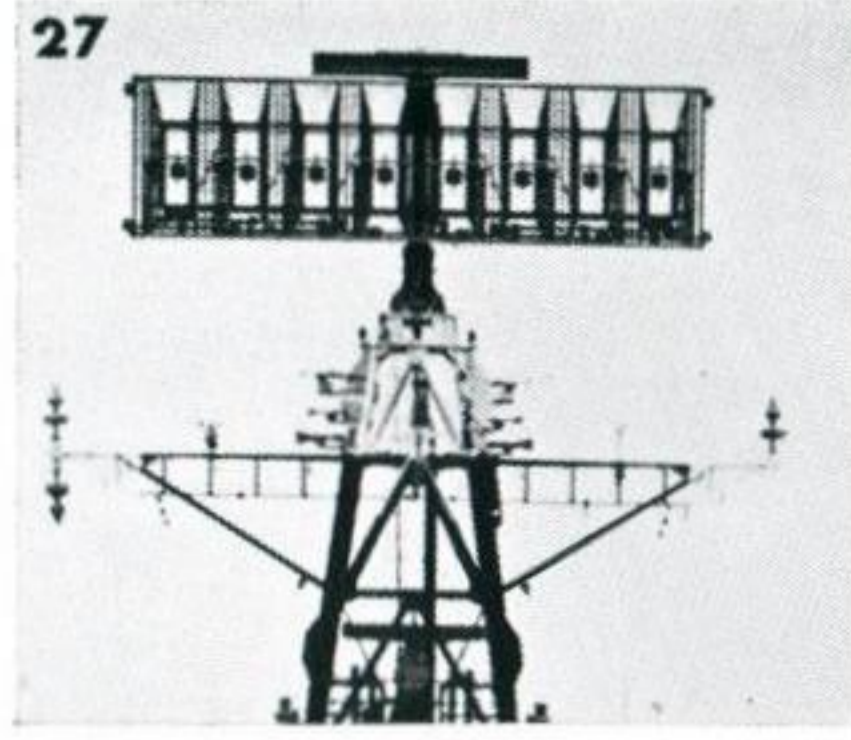
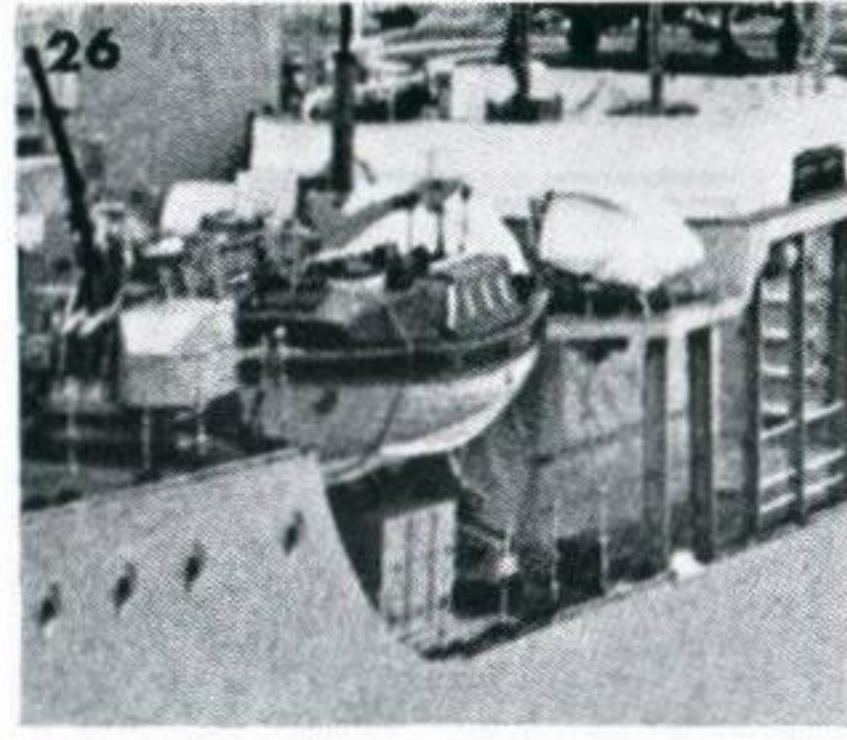
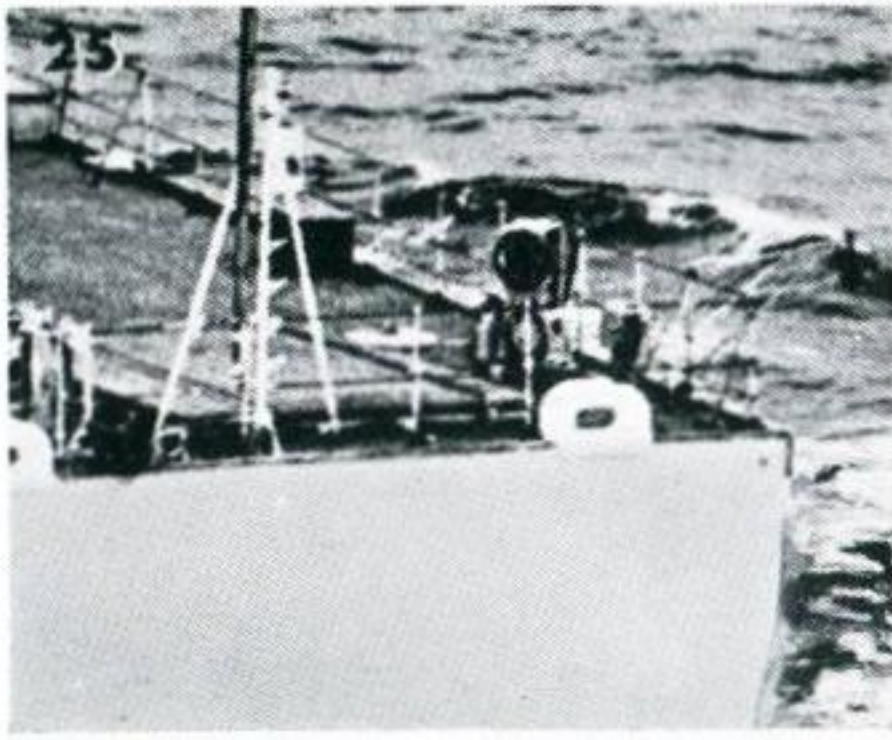
*Lesson instructions are on page 287*

*Solutions on the cover*

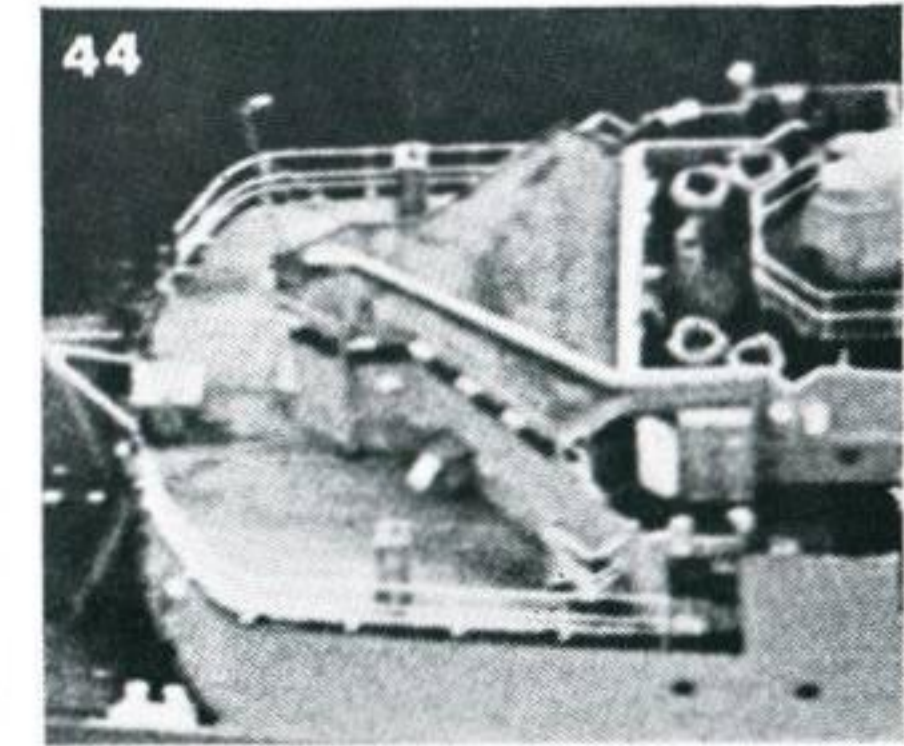
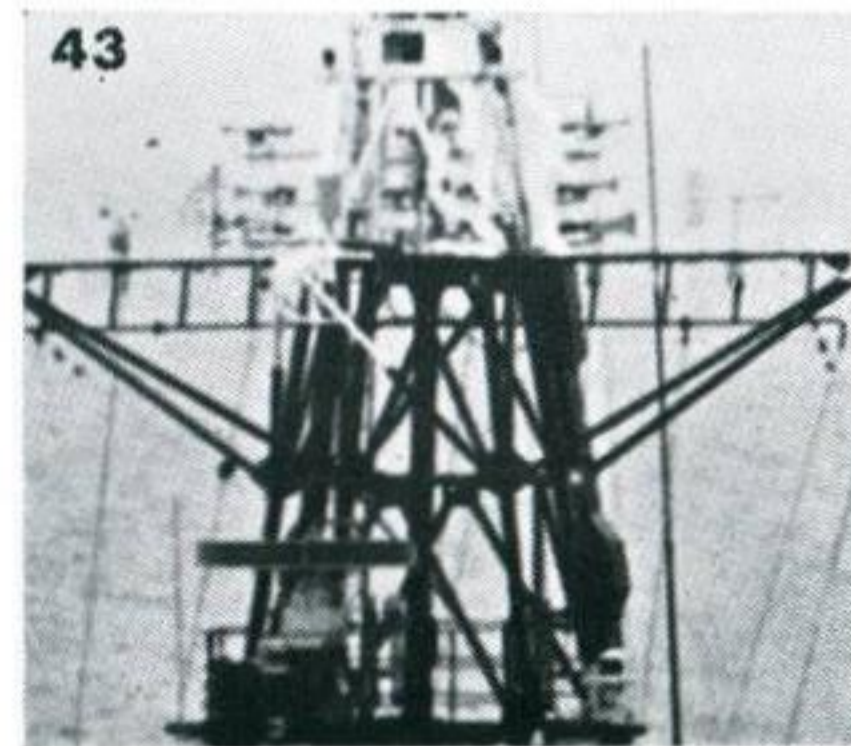
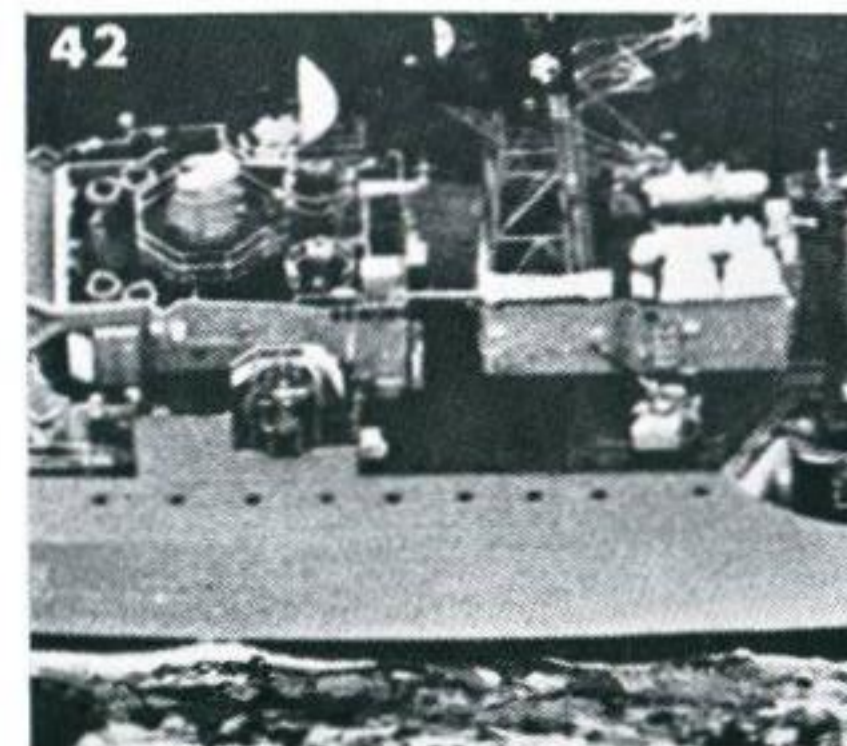
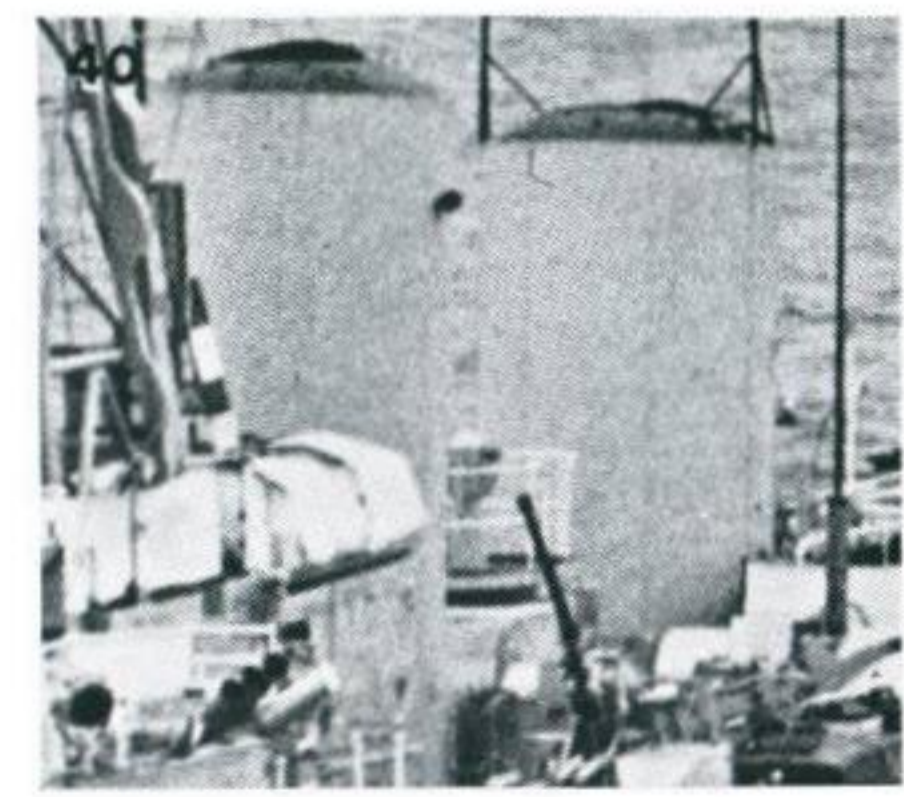
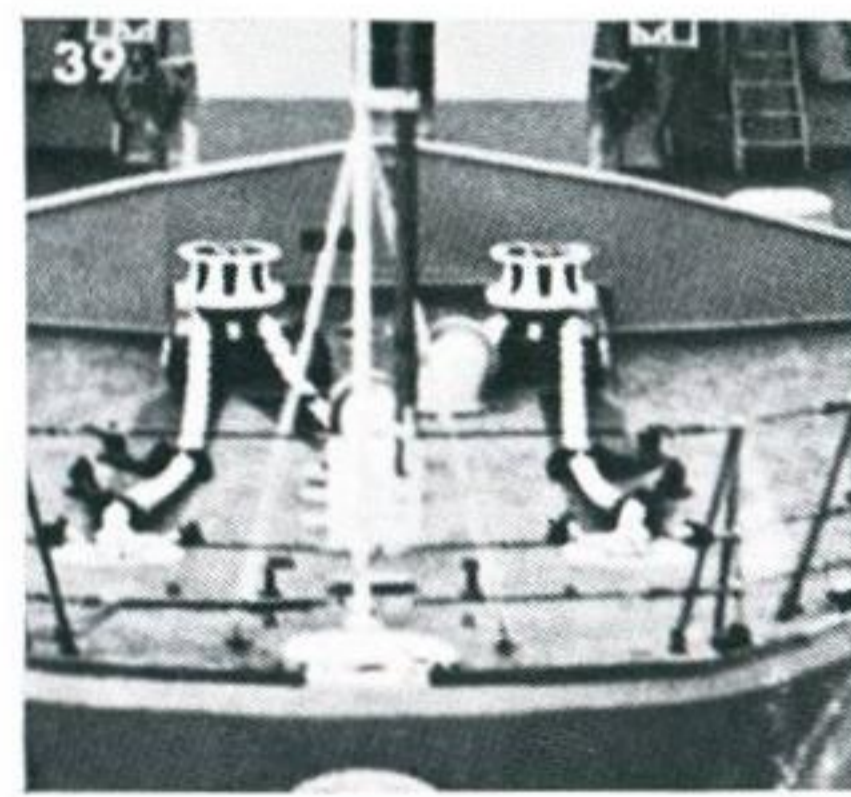
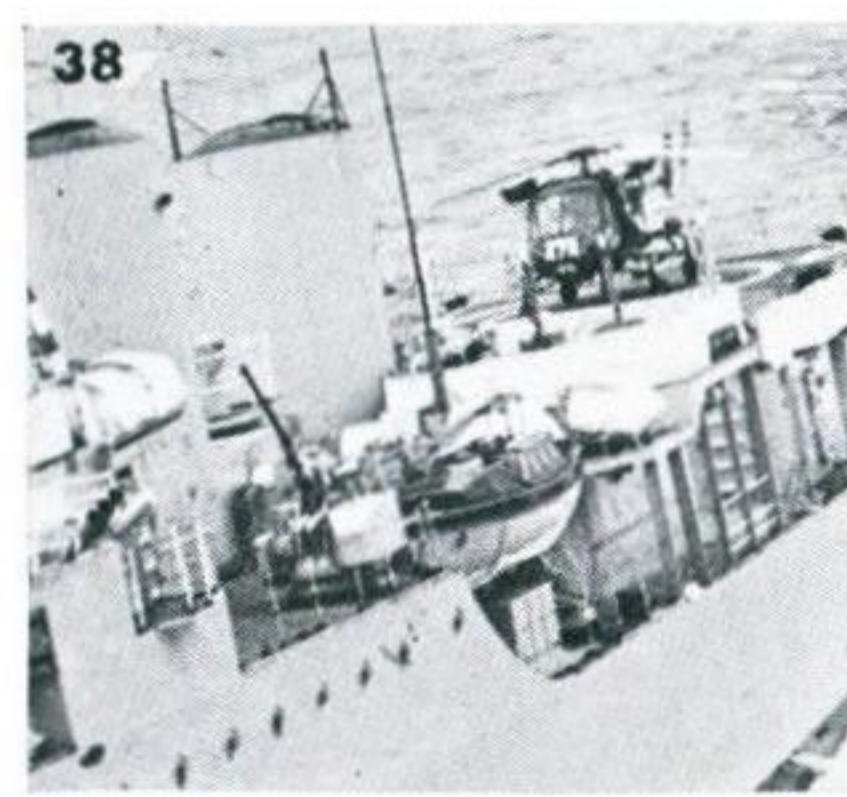
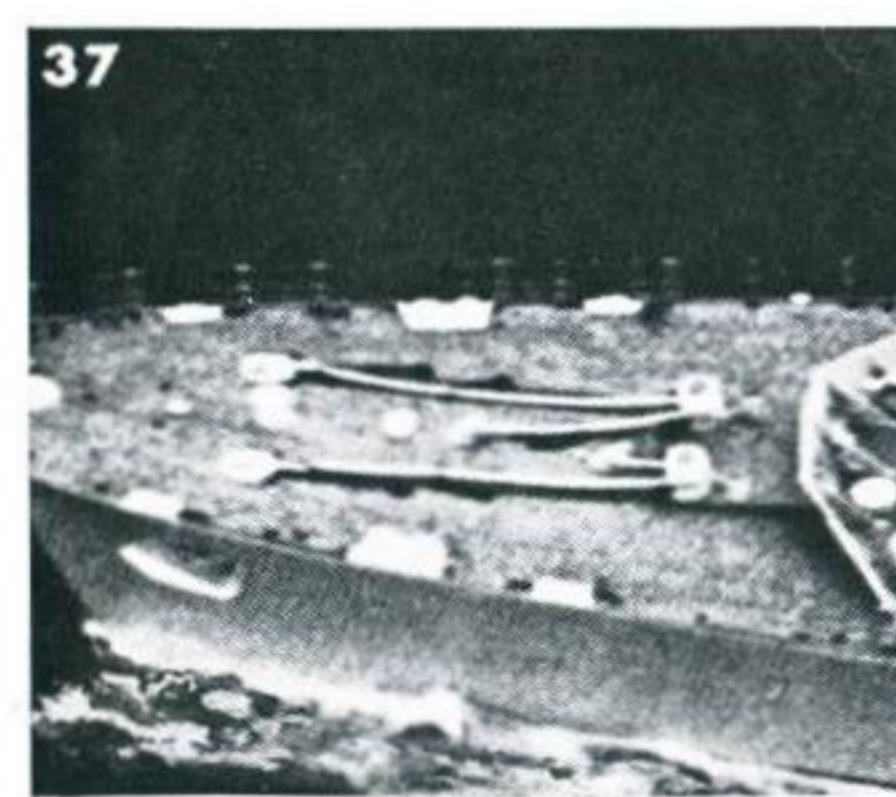
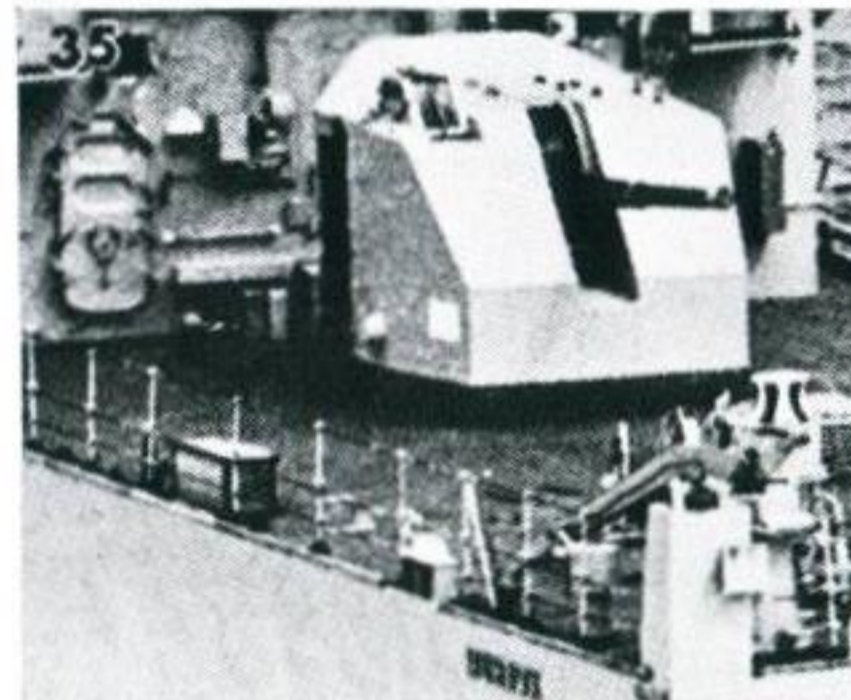
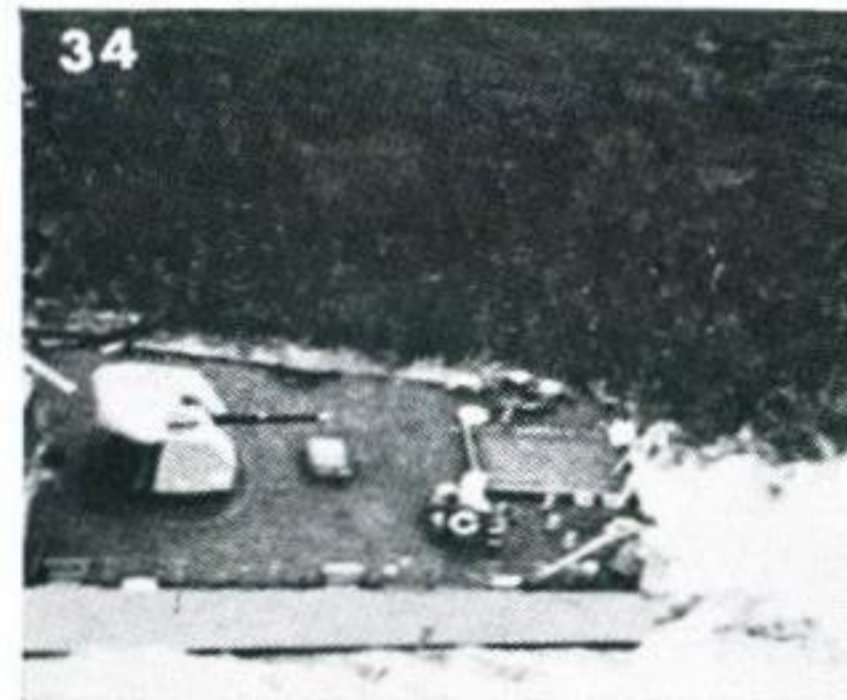
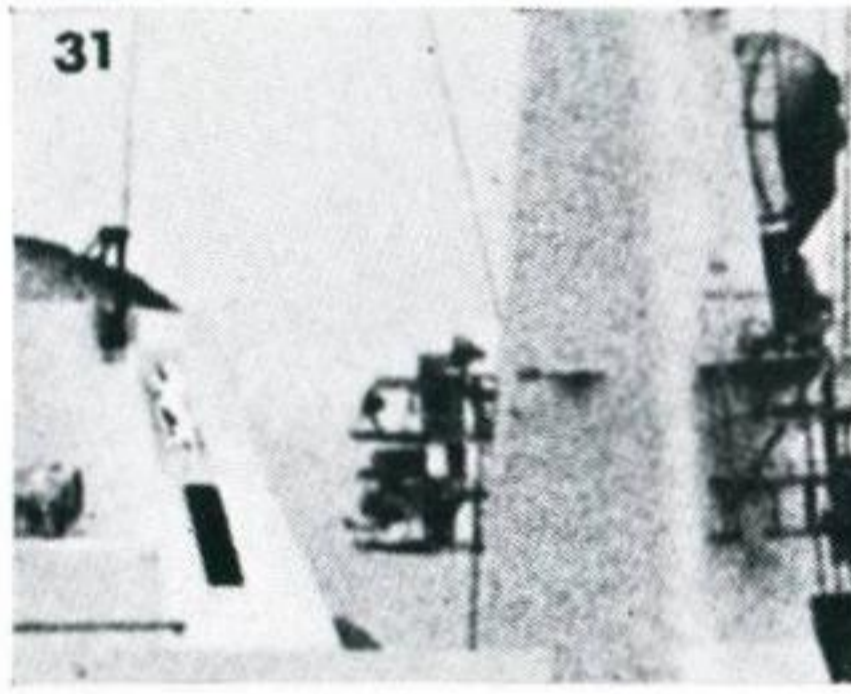
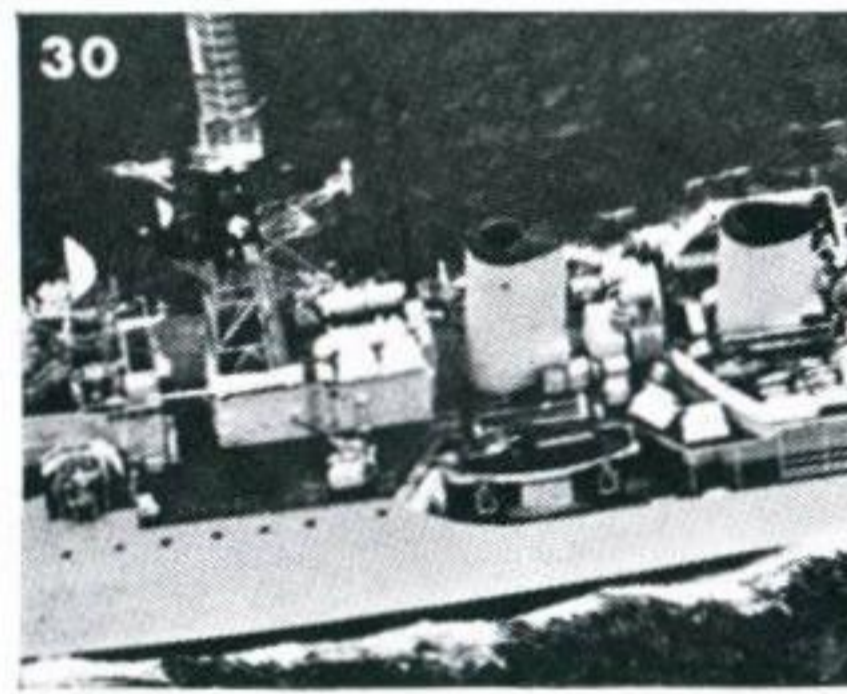
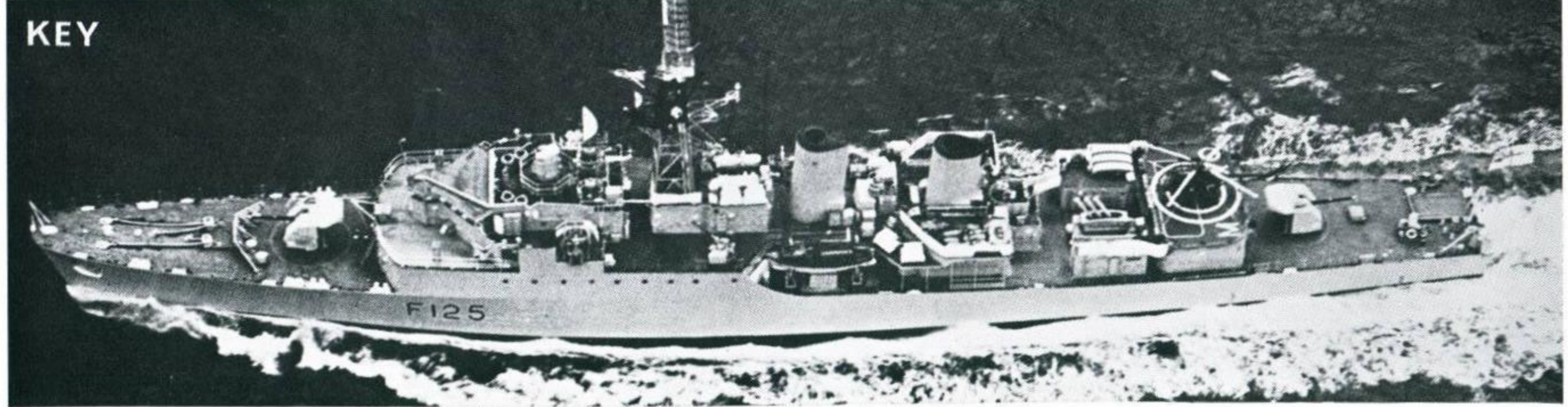




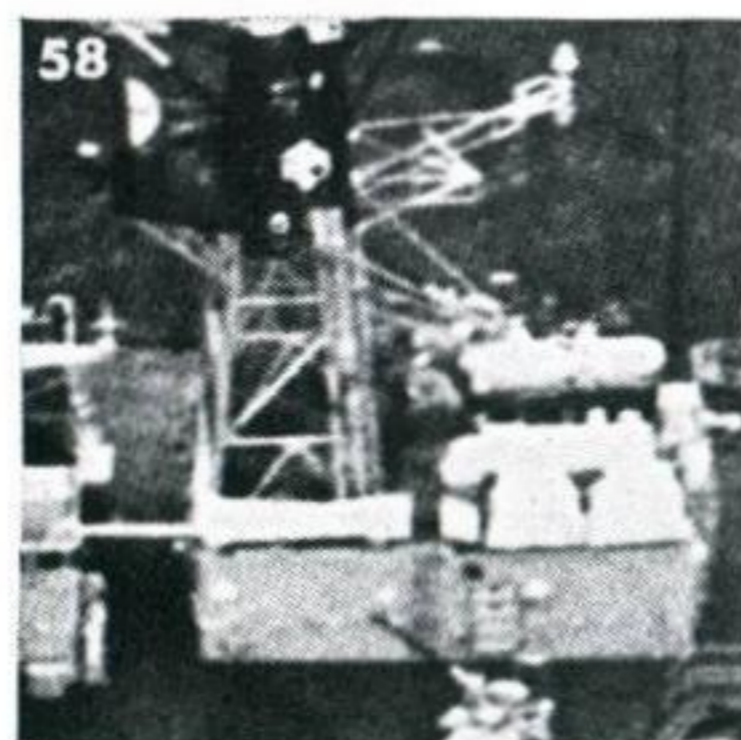
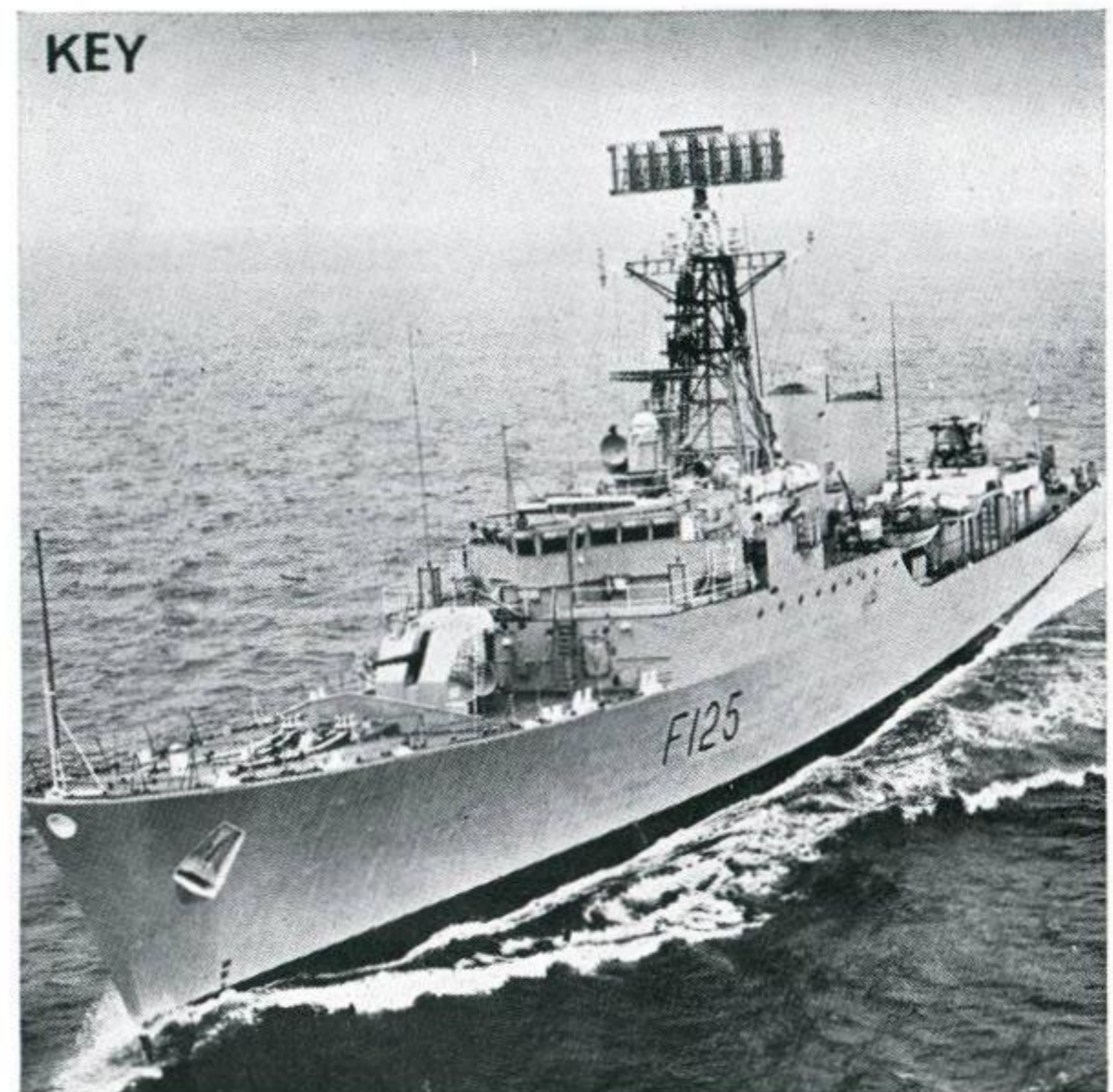
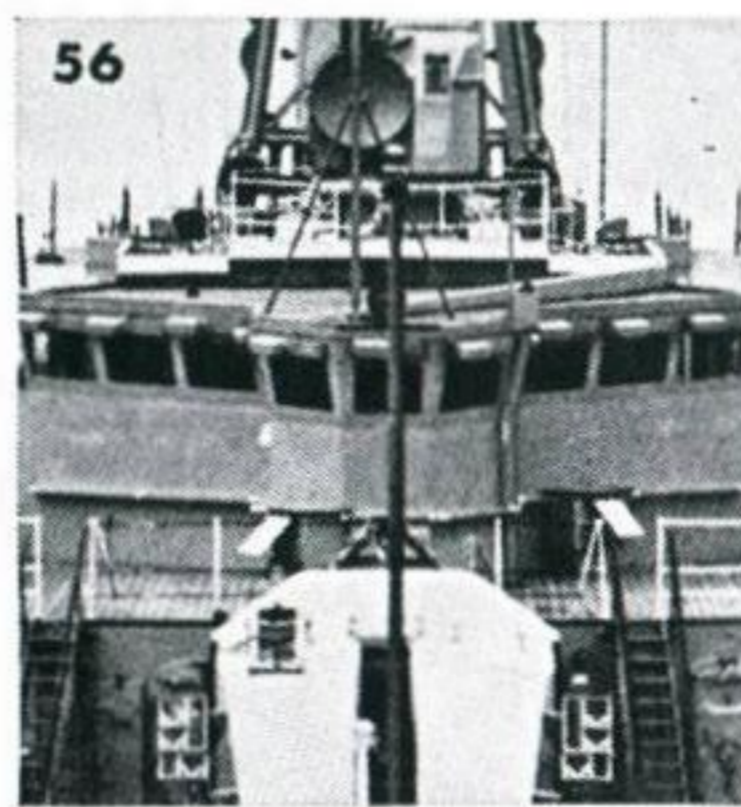
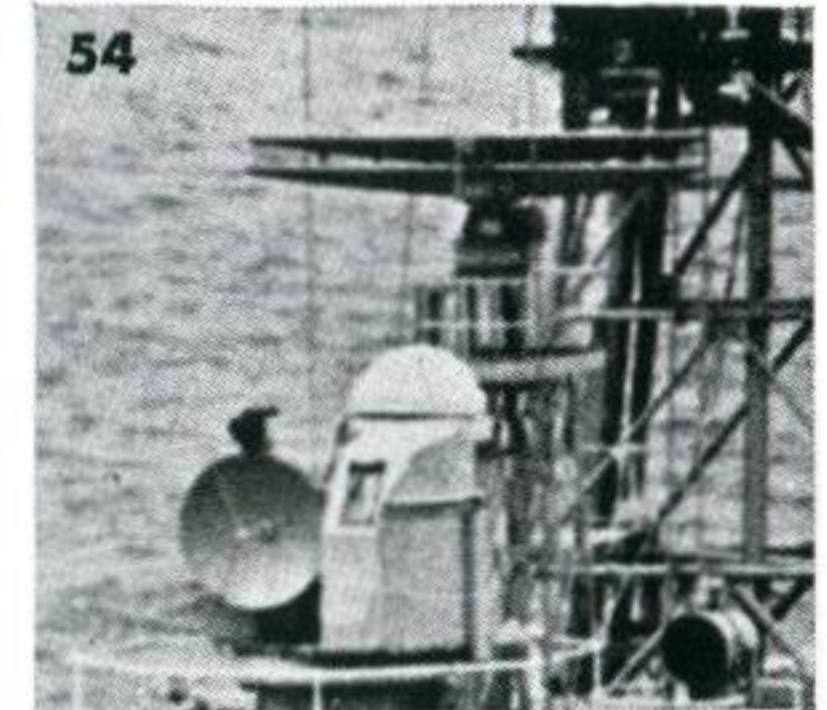
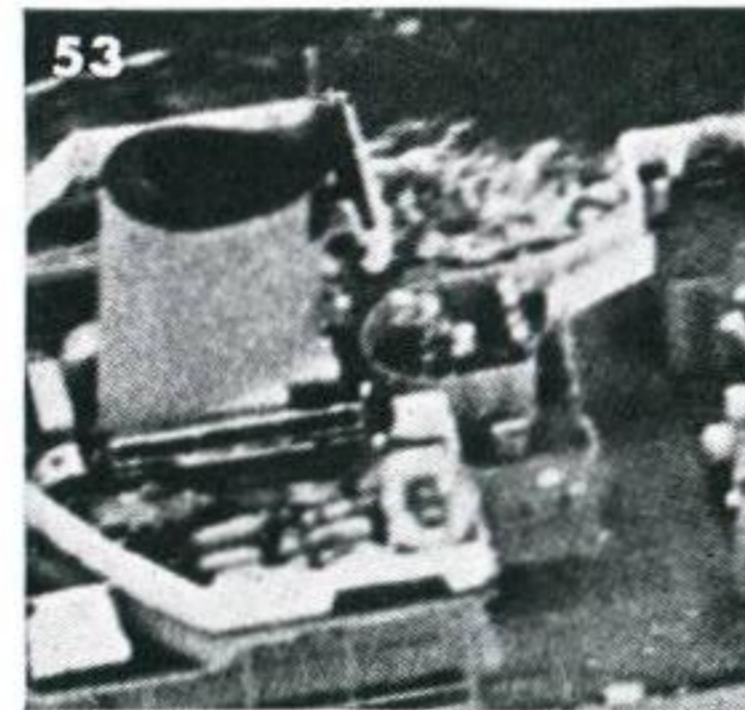
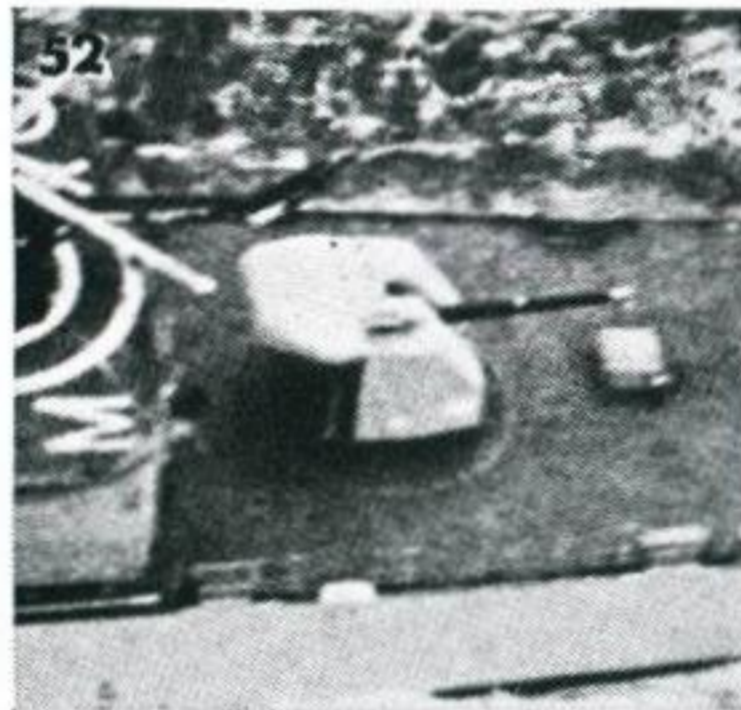
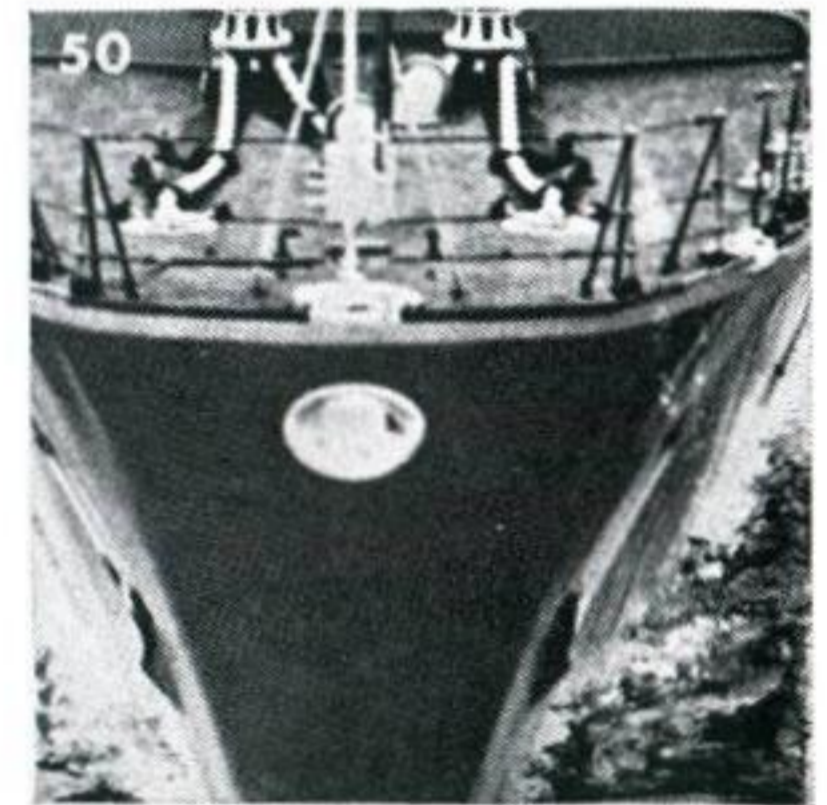
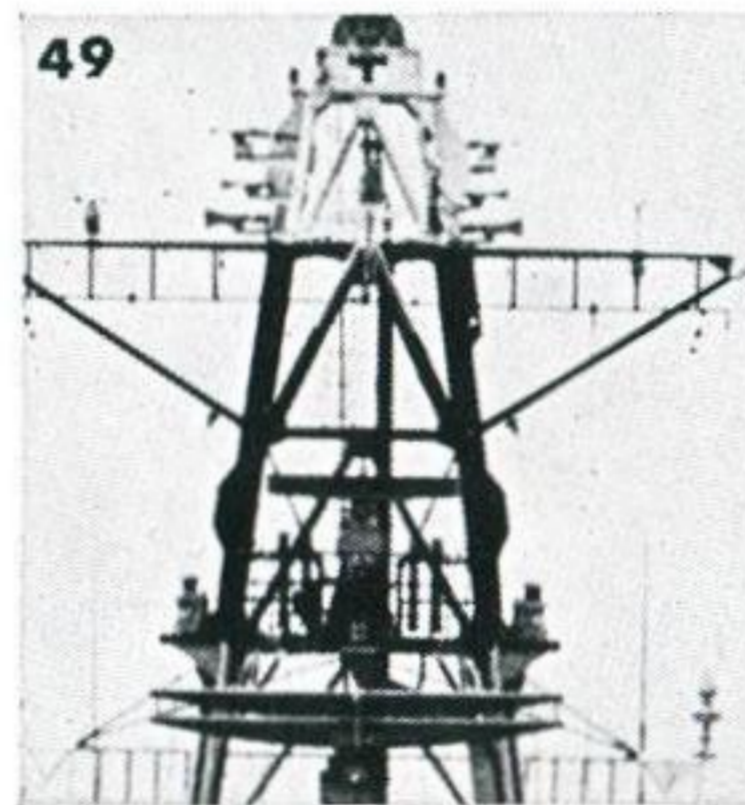
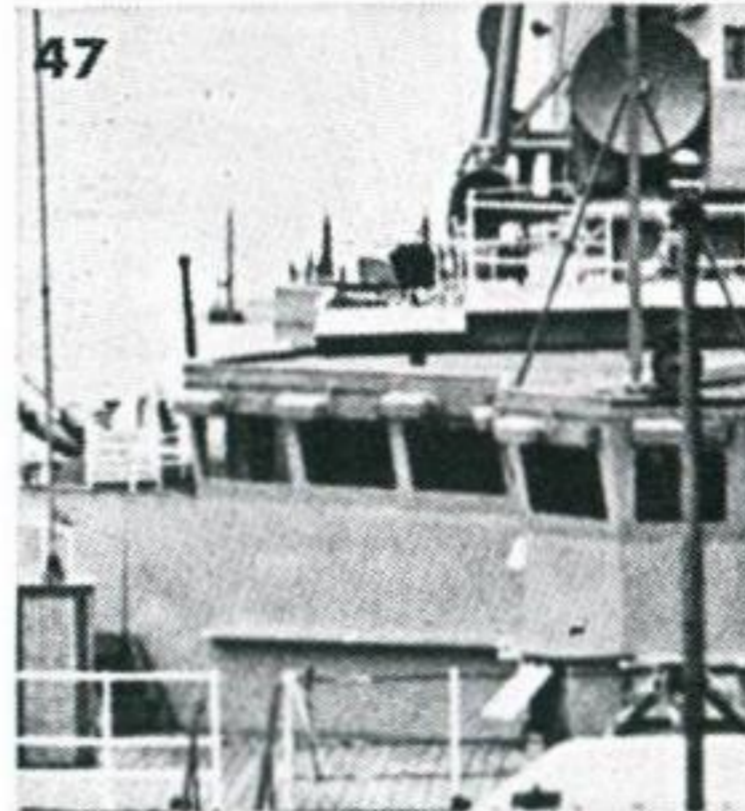
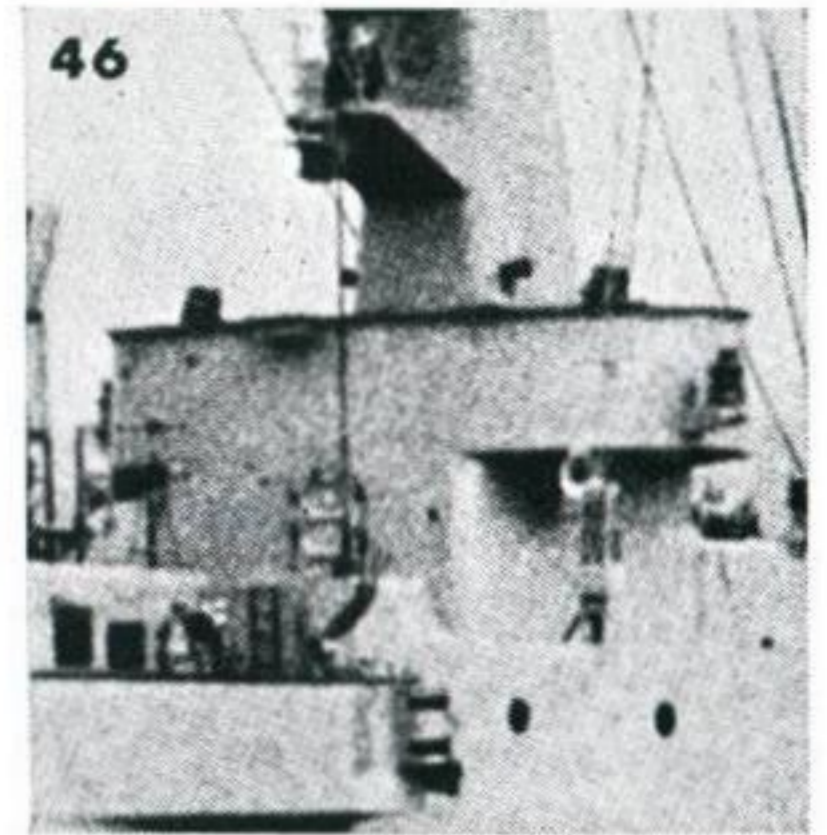
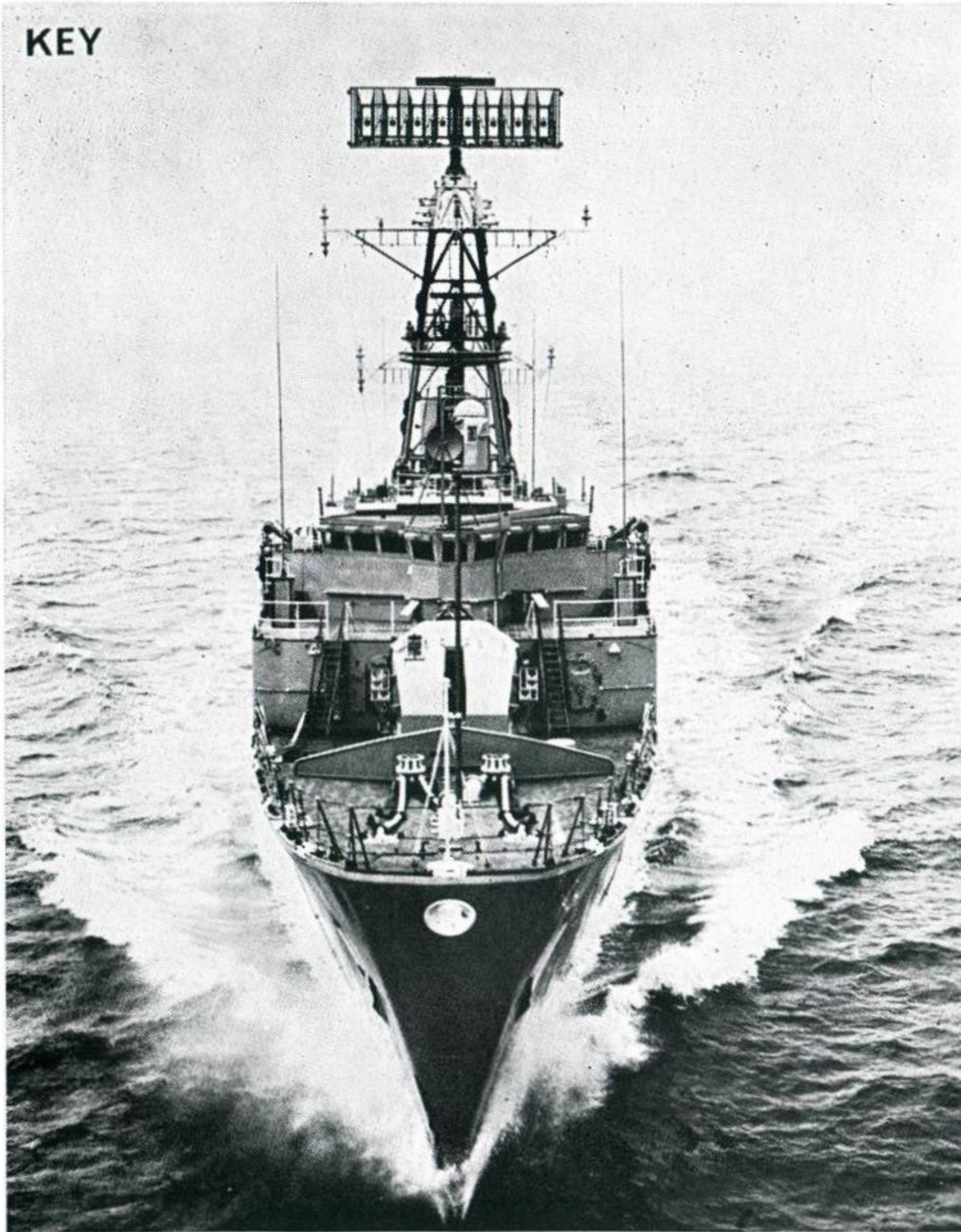
*continued overleaf*



**TRIBAL class**



KEY



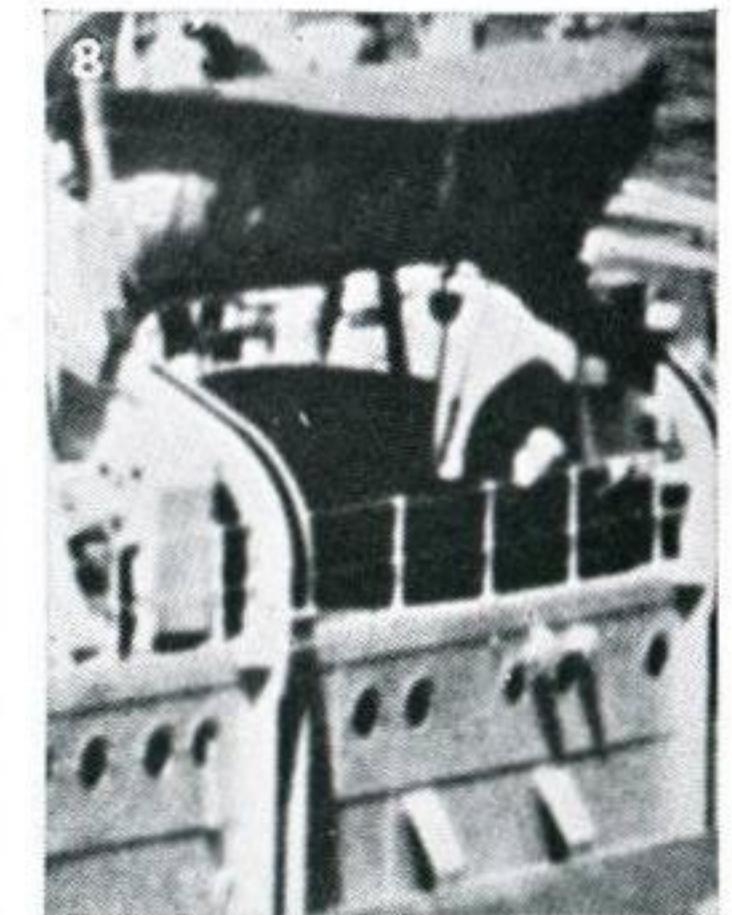
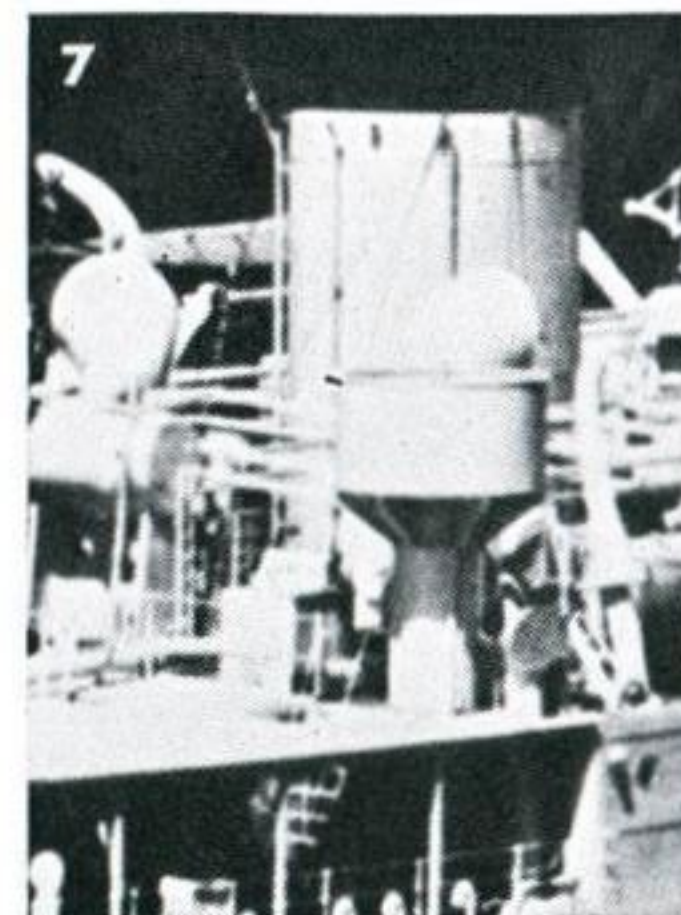
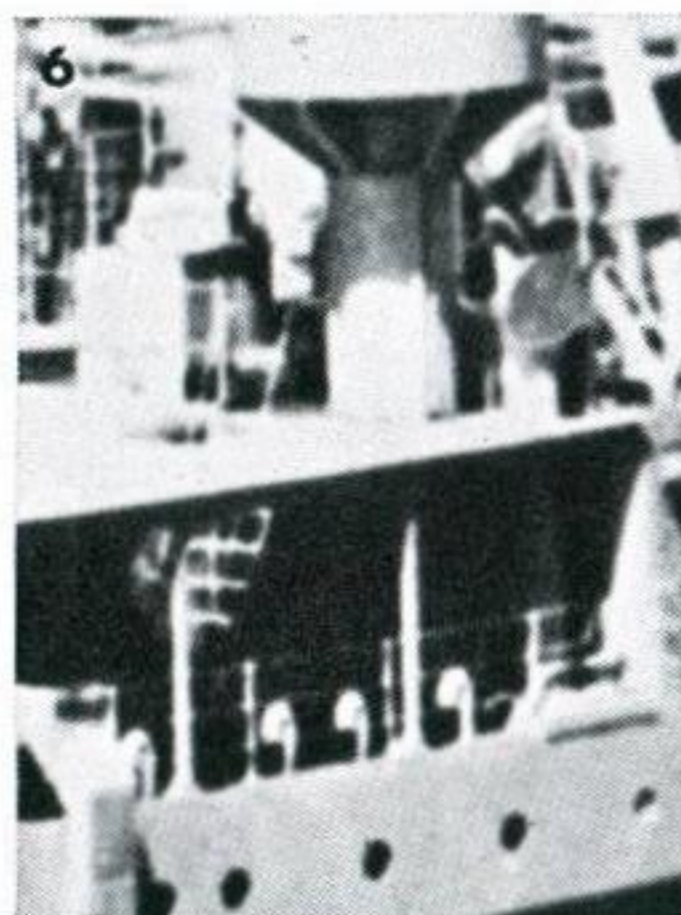
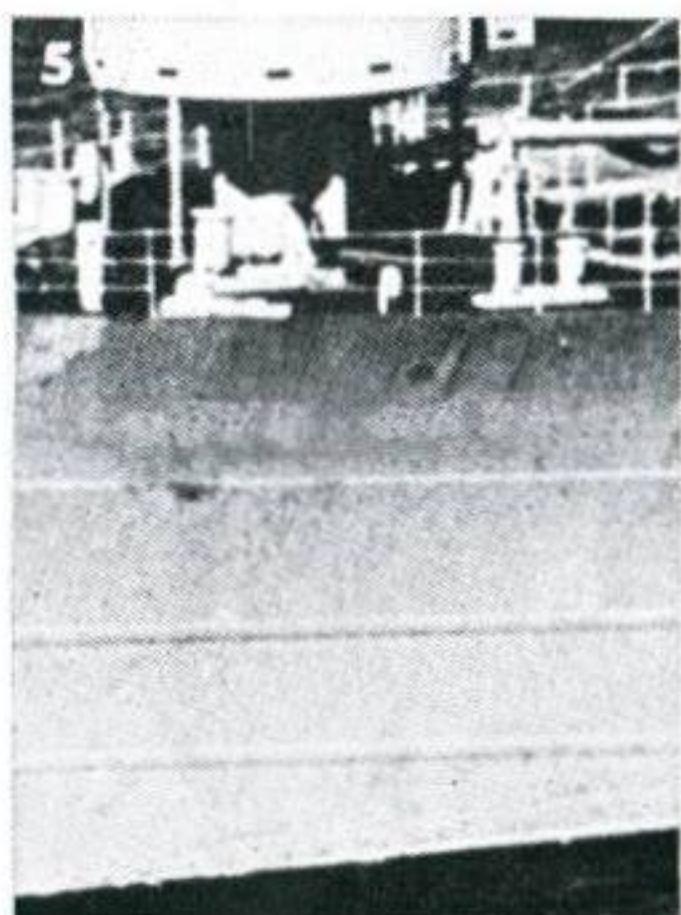
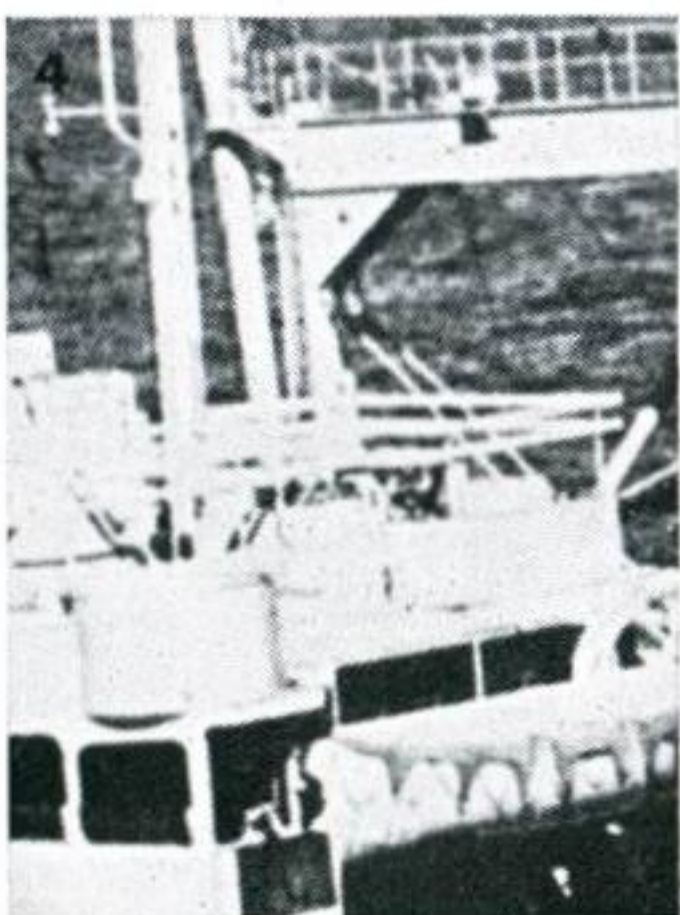
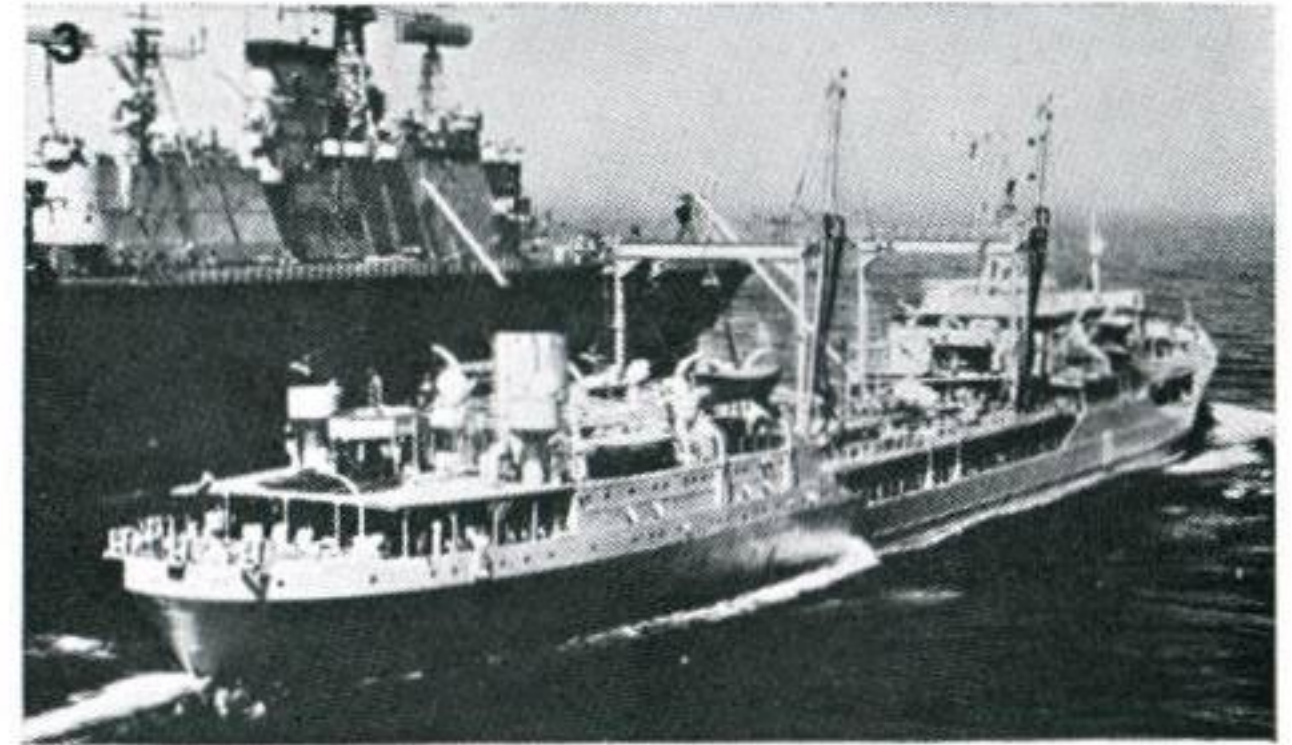
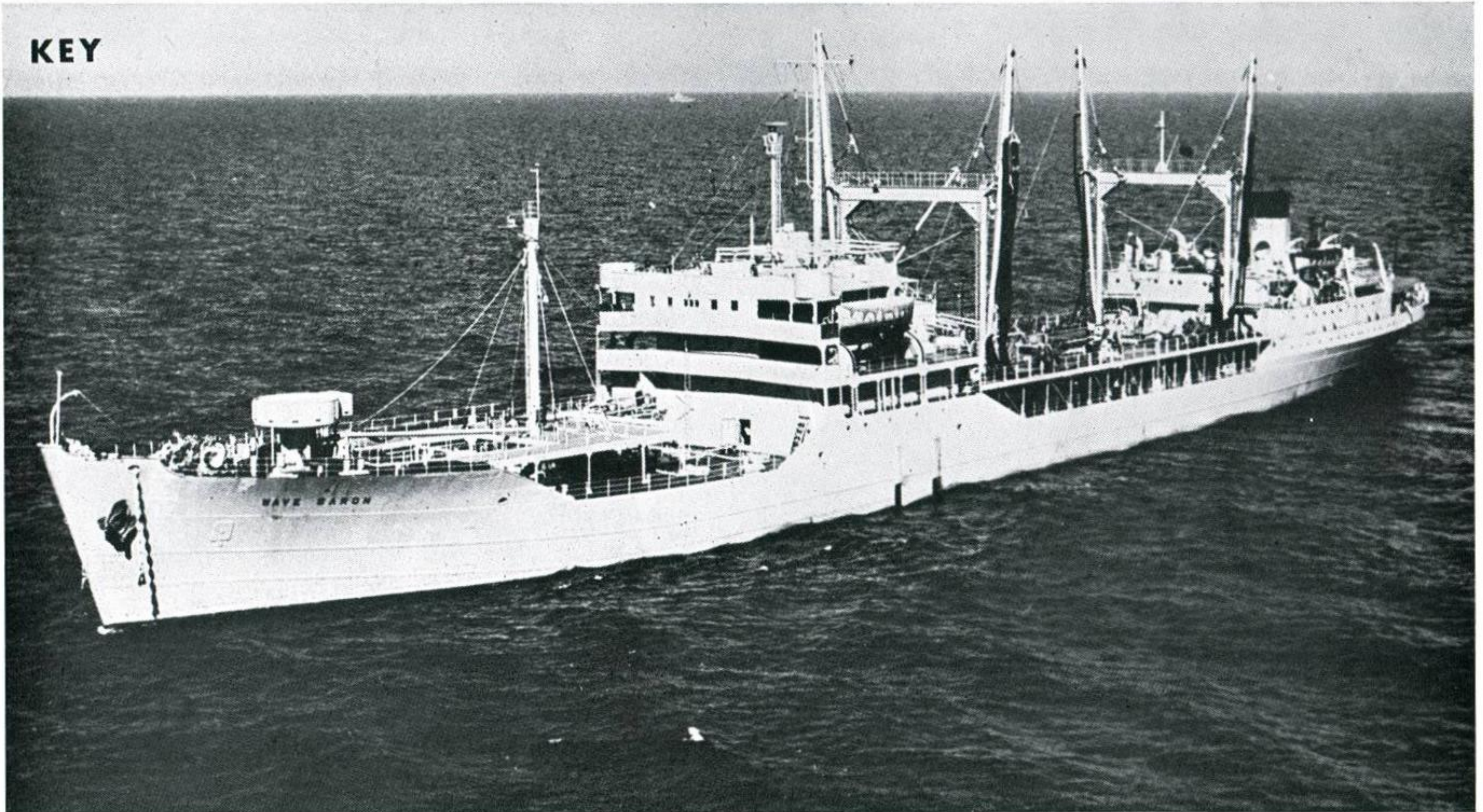
# WAVE CLASS OILERS OF THE ROYAL FLEET AUXILIARY

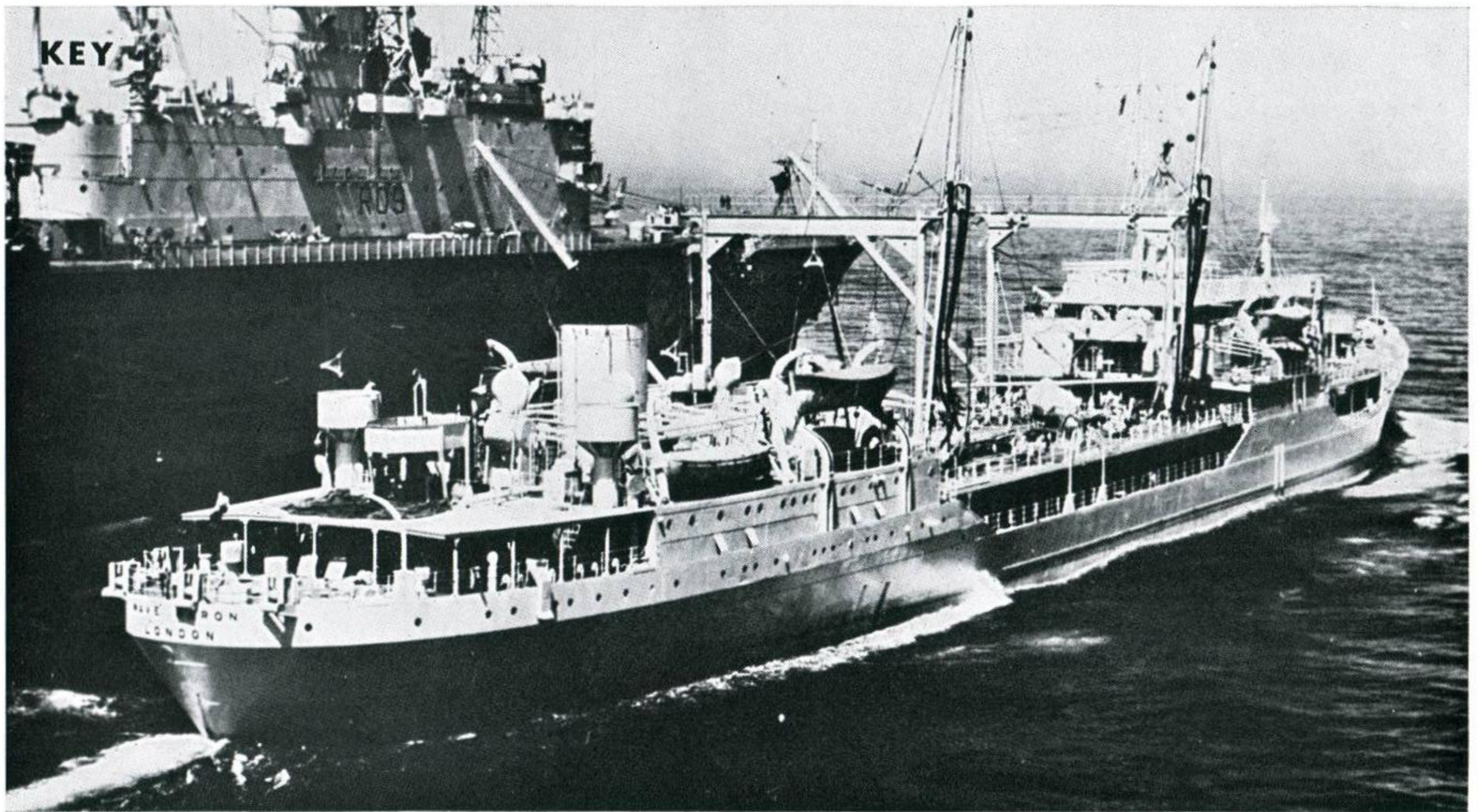
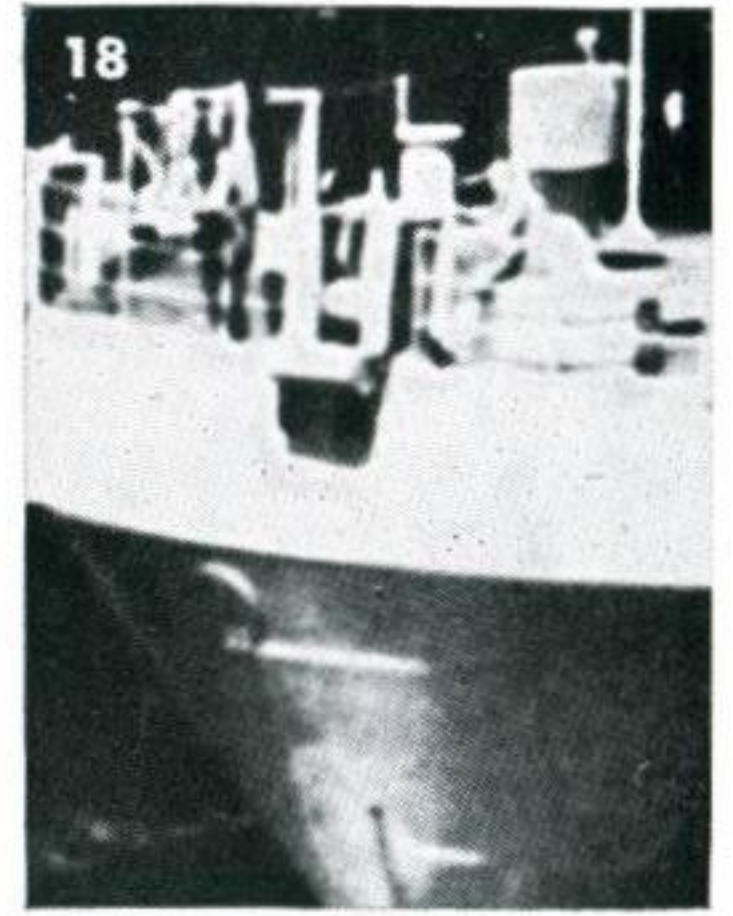
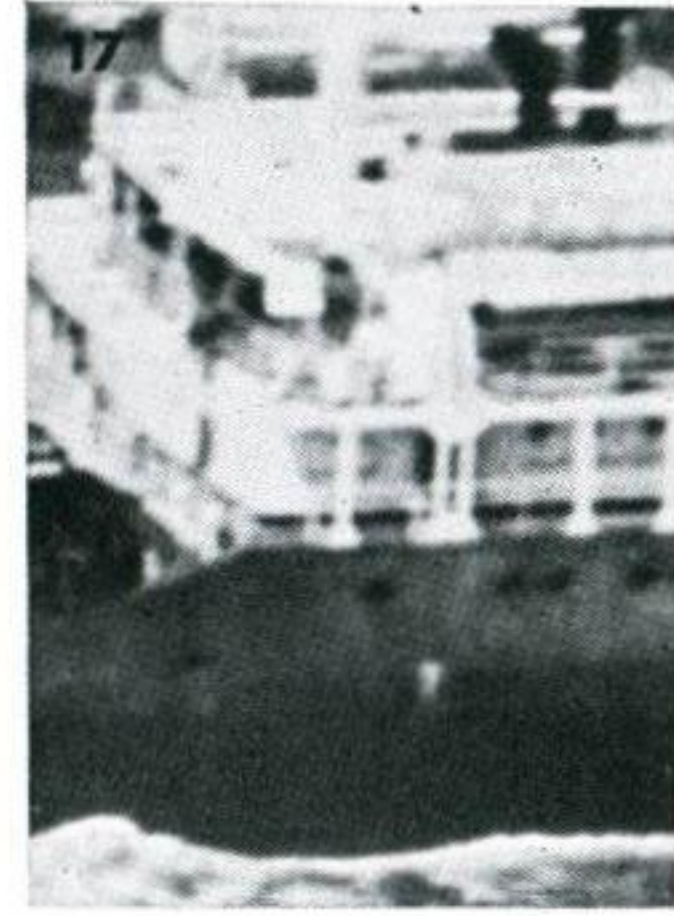
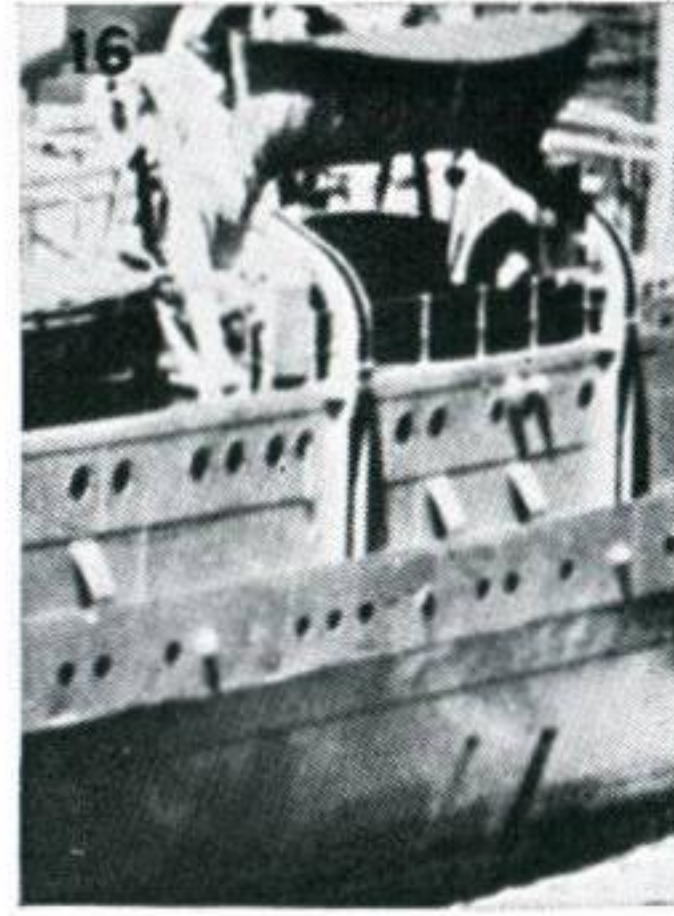
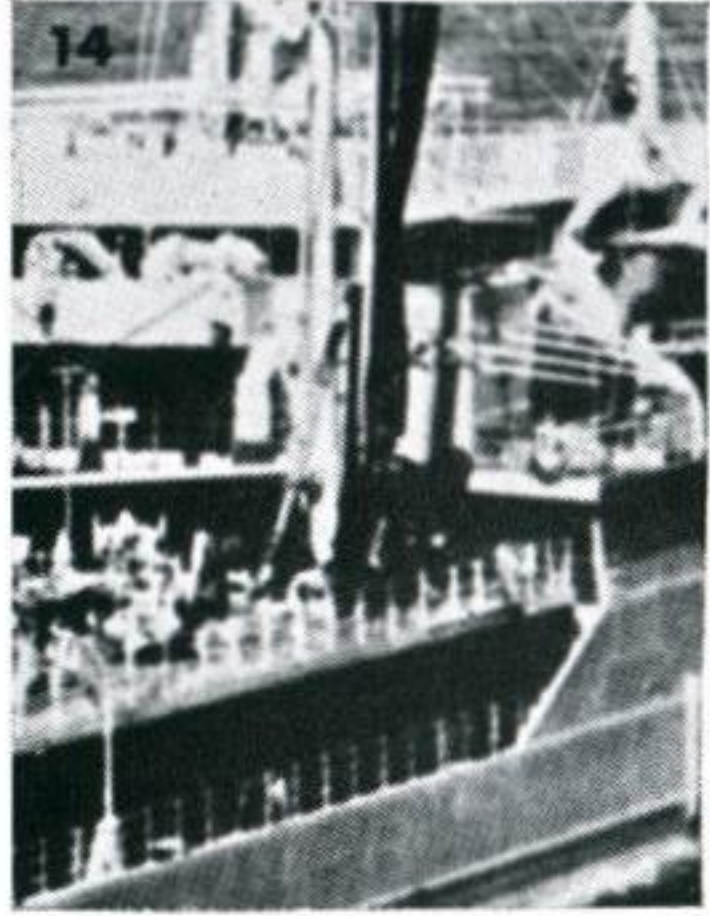
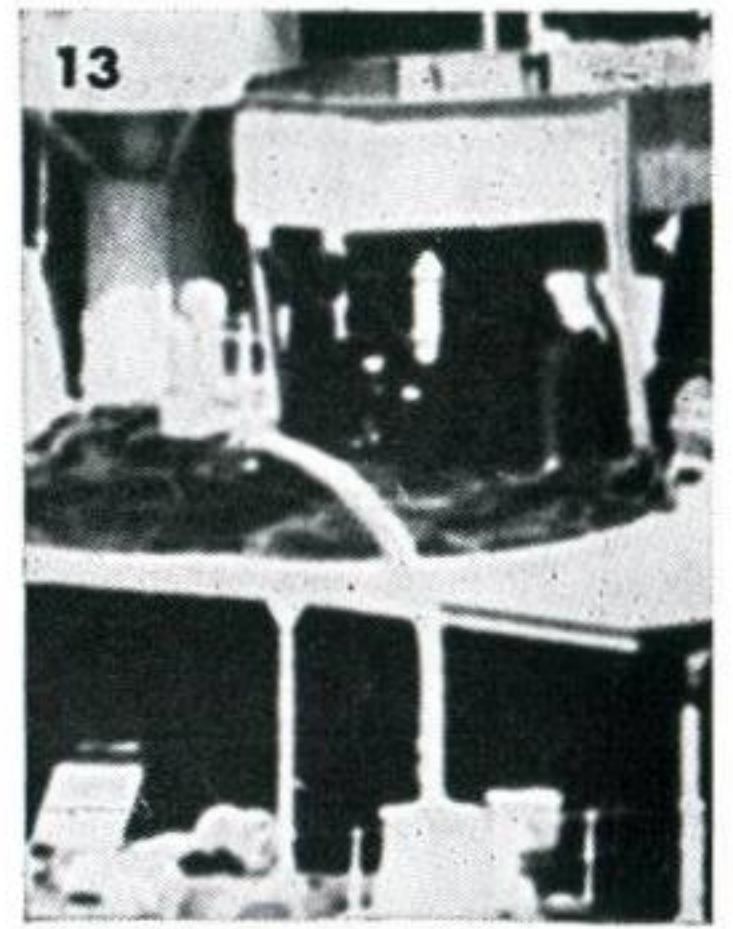
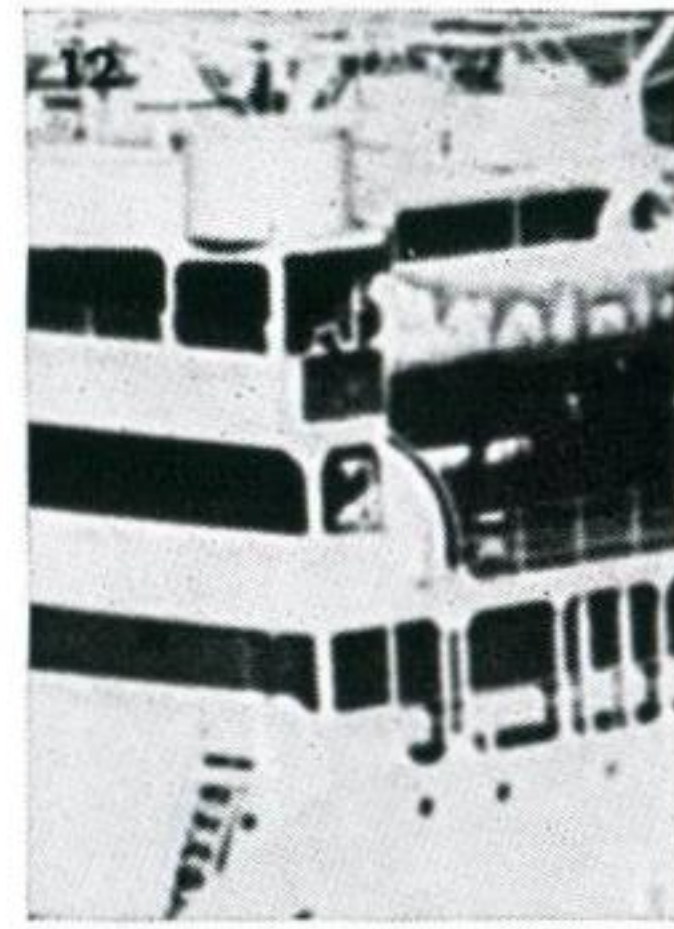
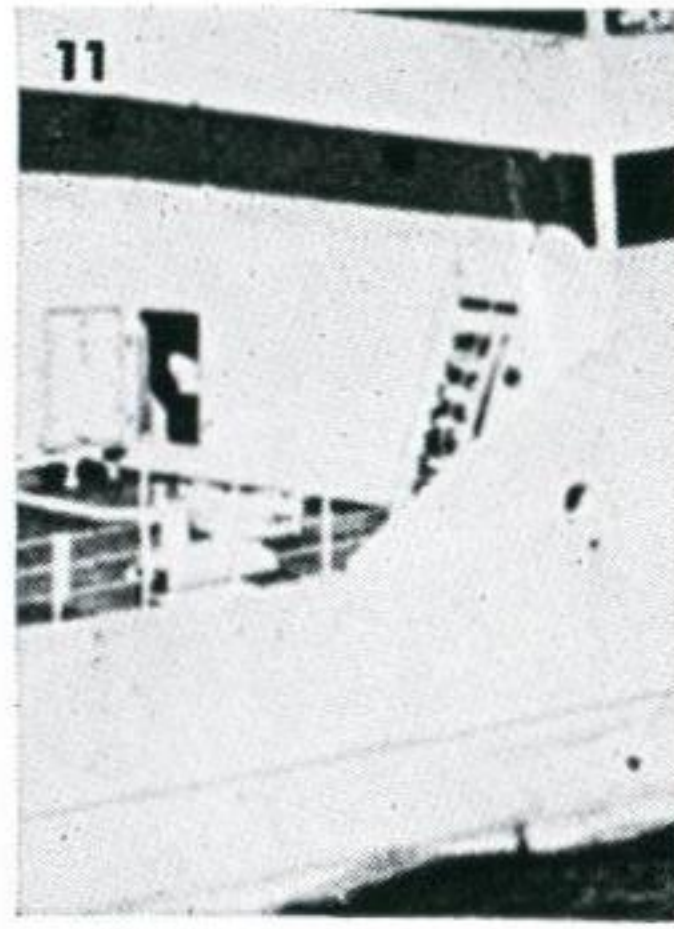
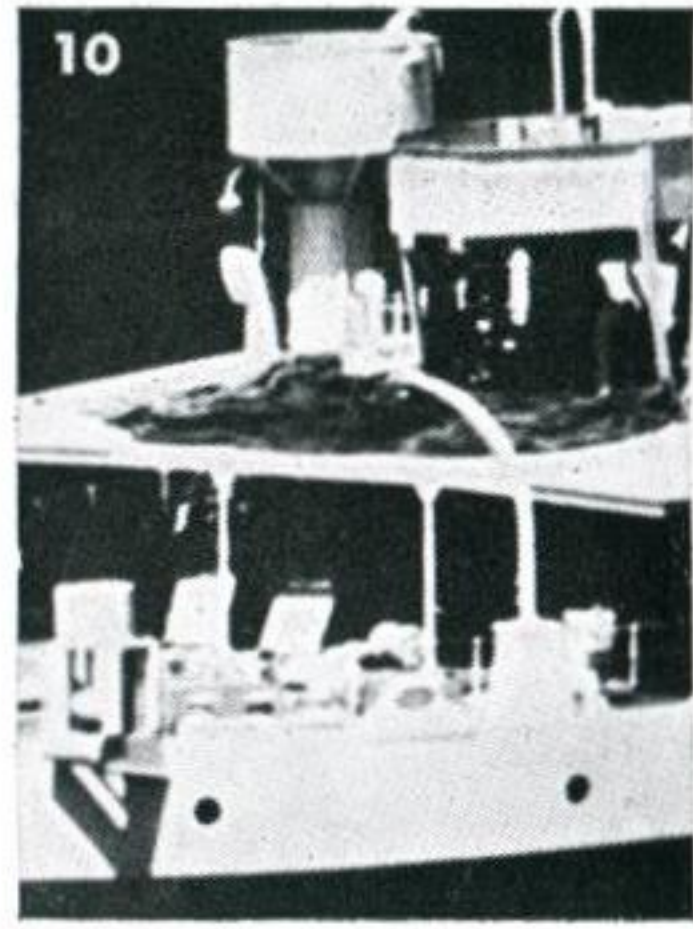
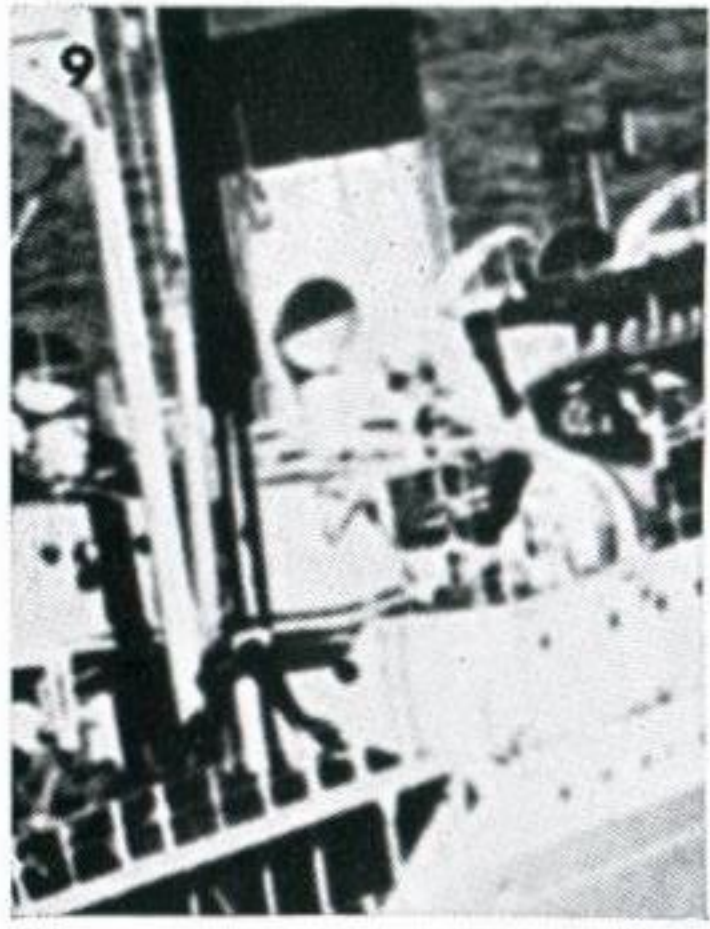
There are six ships in this class although two are in reserve and may be shortly disposed of. Building was completed between 1944 and 1946; they are the oldest oilers in the fleet although *Wave Baron* and *Wave Prince* were modernised between 1961-62.

Their gross tonnage ranges from about 8,200 to 8,500; deadweight, about 11,900, and displacement from 4,550 tons light to 16,500 full load. Overall

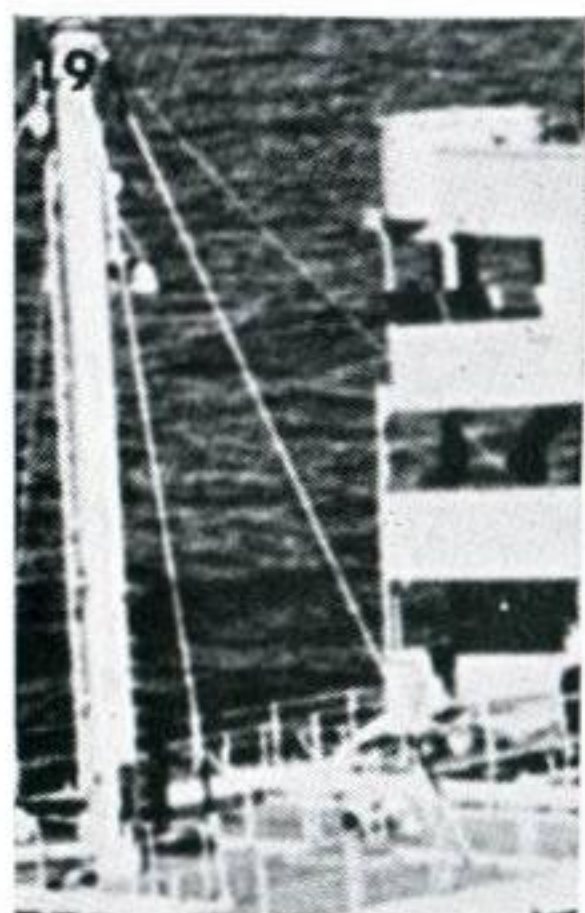
length is 492 feet, and geared turbines give a service speed of 15 knots.

The ships vary slightly in appearance but each has a rather small funnel, placed about mid-way on the after superstructure, a short centre-line mast or tall king-post in the forward well and two pairs of oiling-at-sea derricks in the after well, the first pair being very close to the back of the mid-castle and second pair right up against the poop.

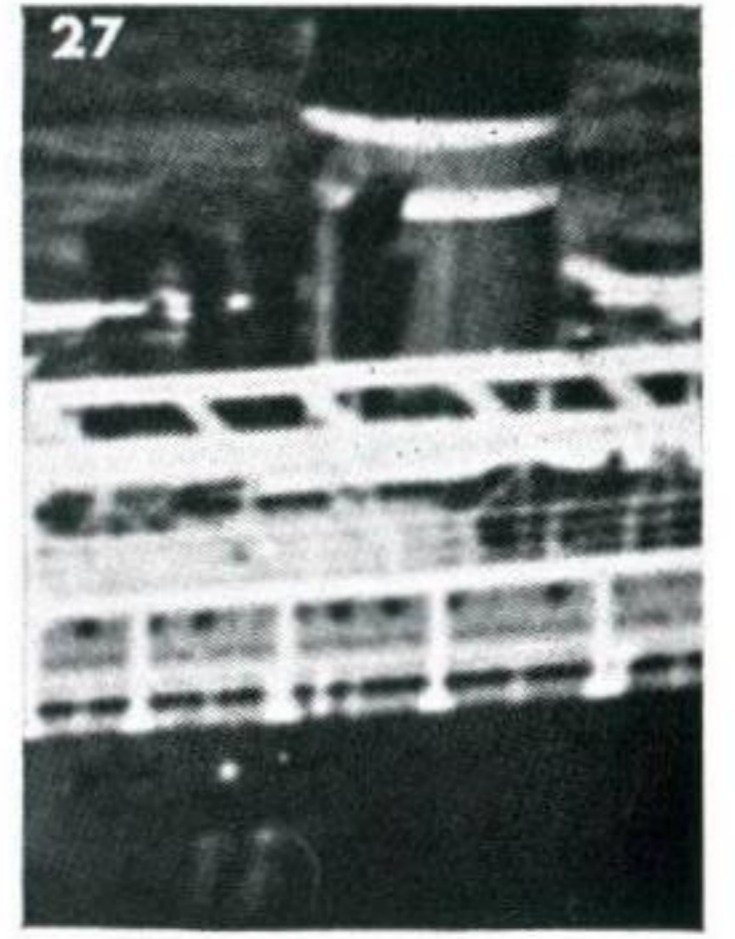
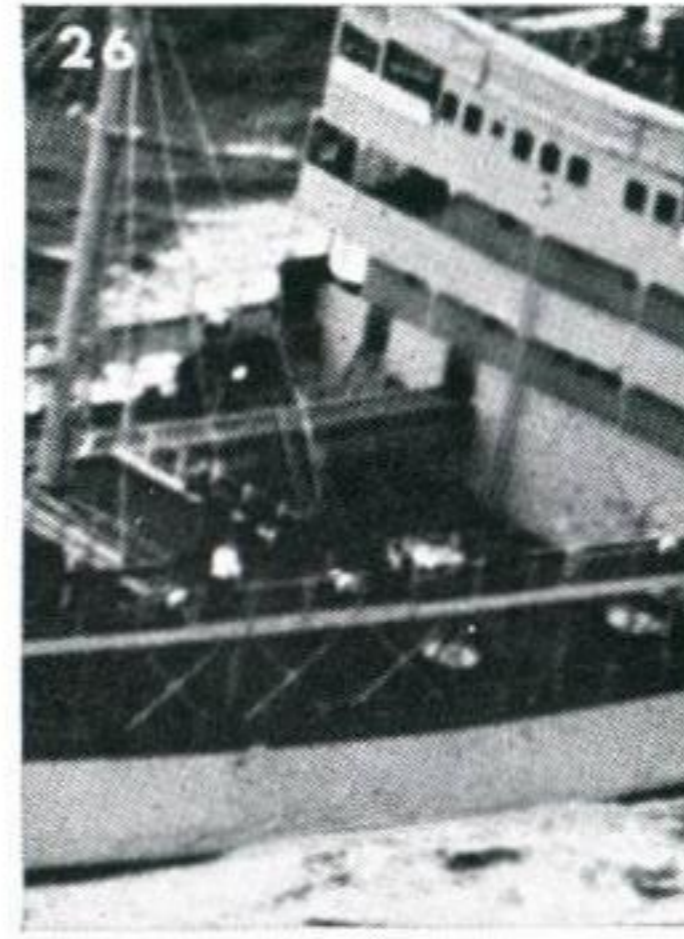
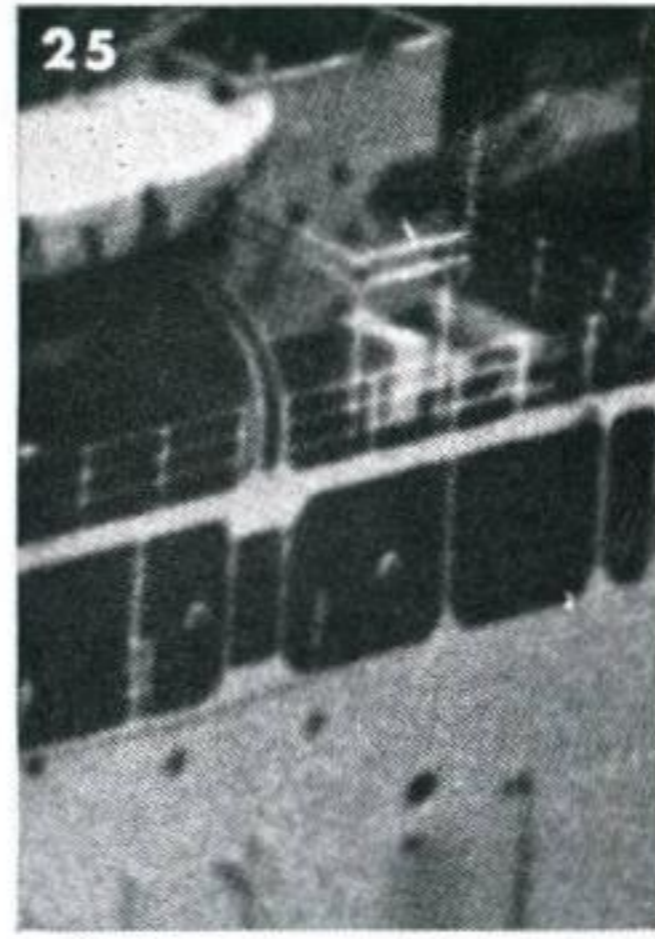
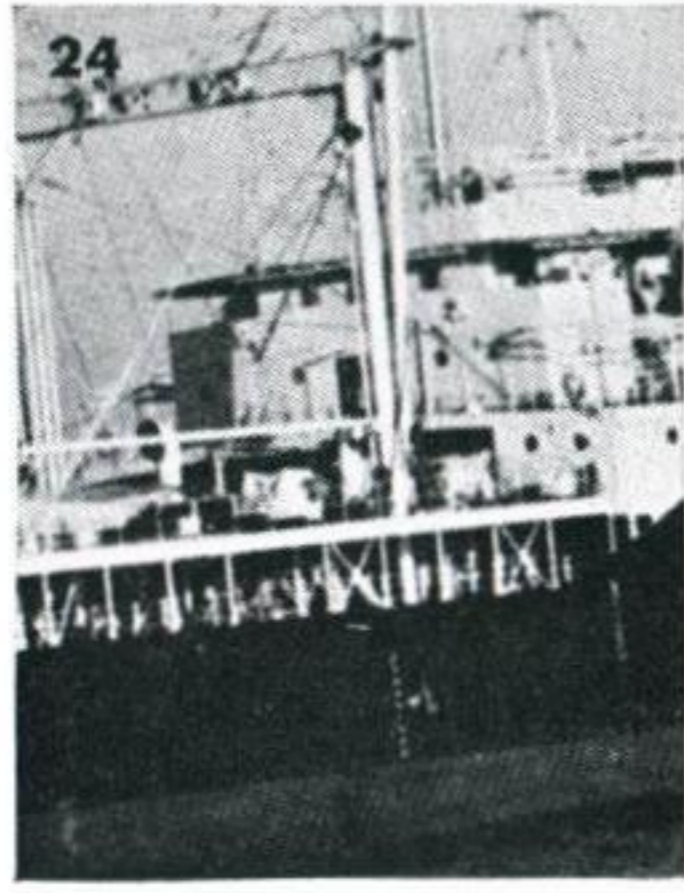




*Lesson instructions are on page 287 Solutions on the cover*



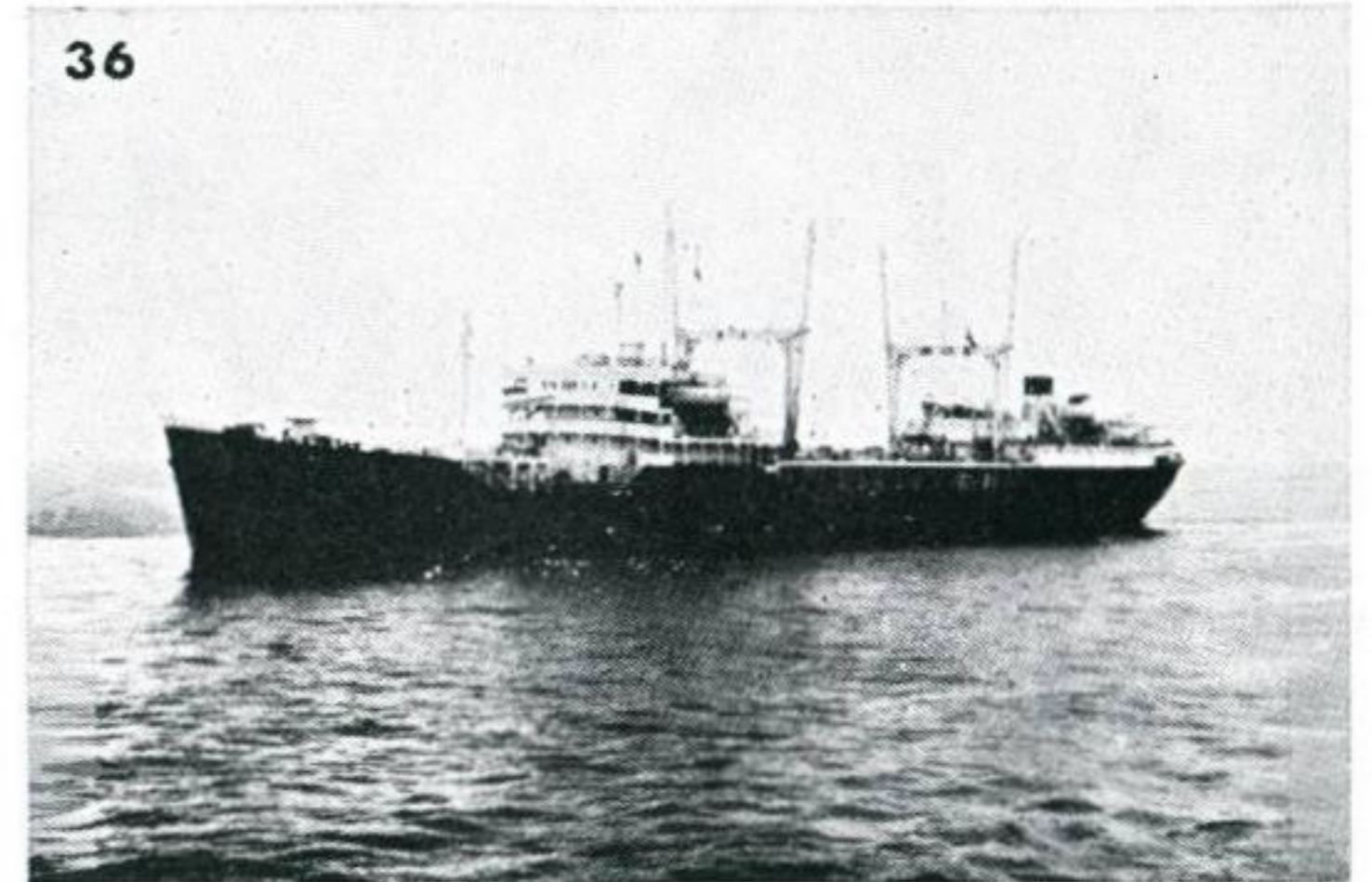
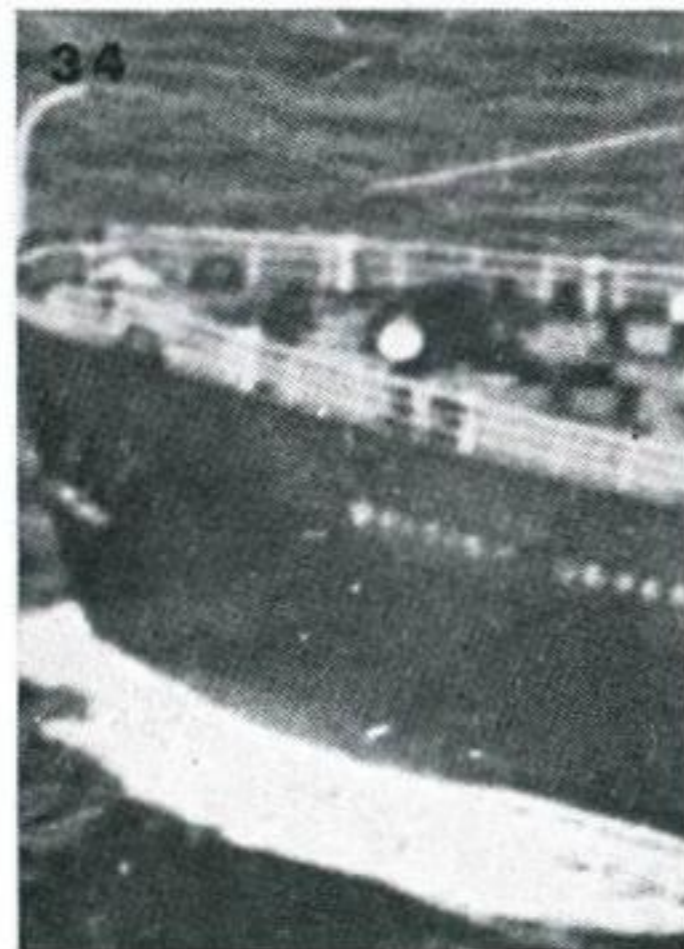
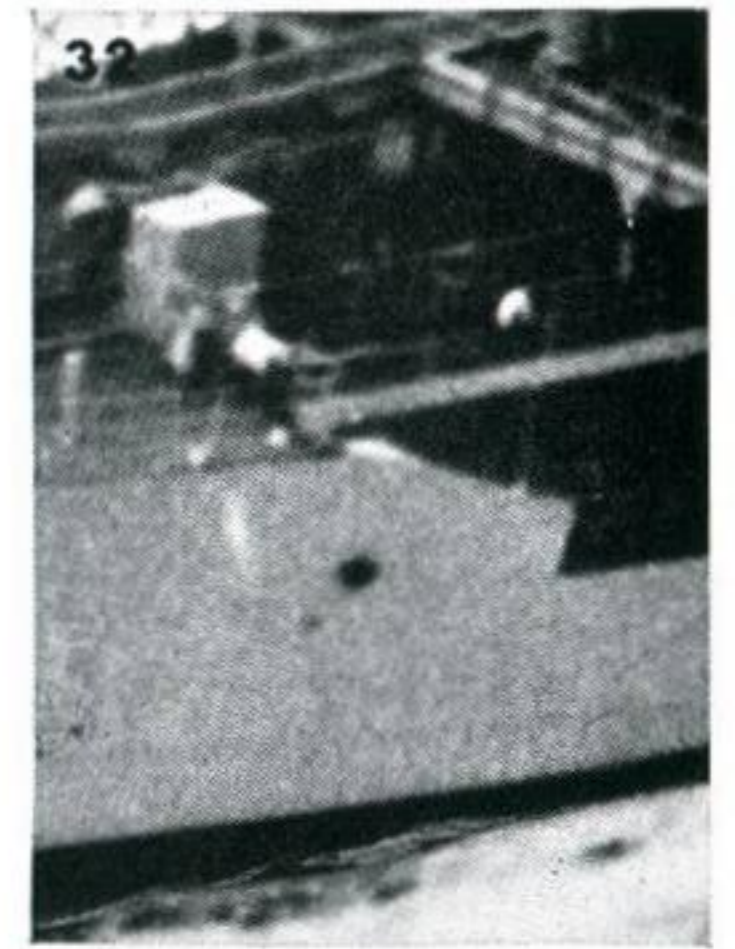
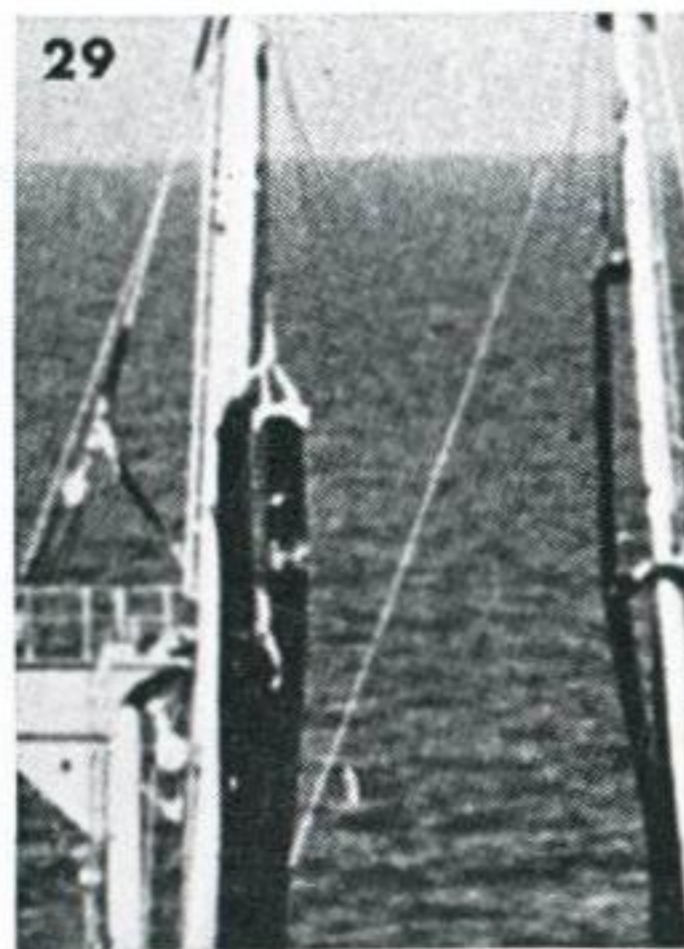
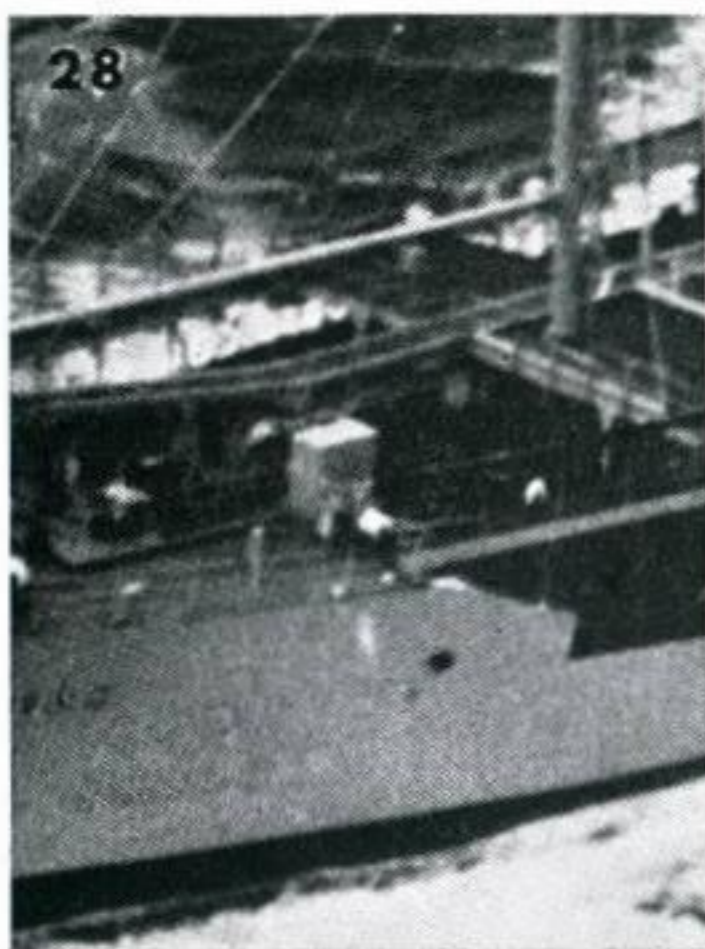
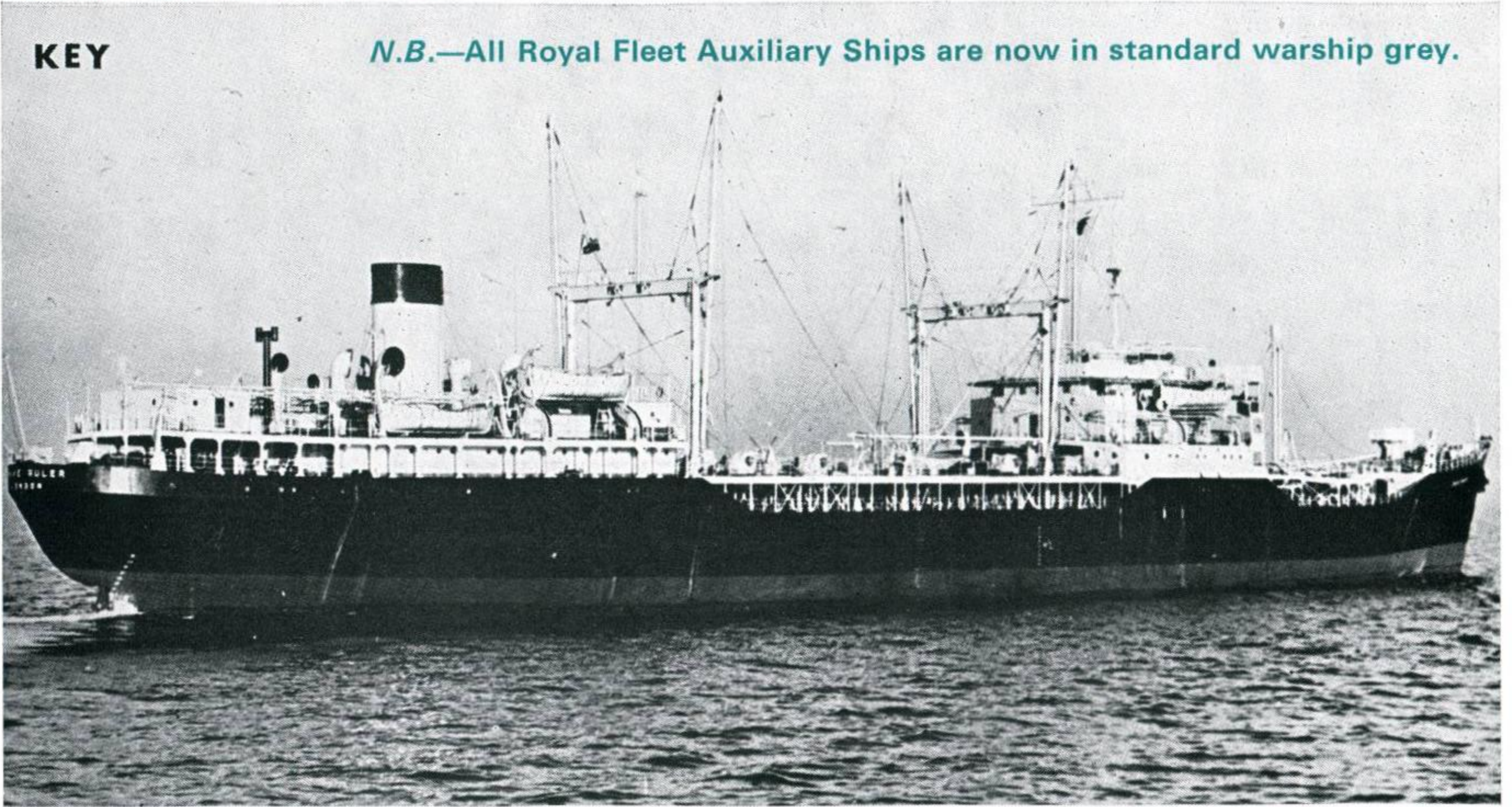
*continued overleaf*

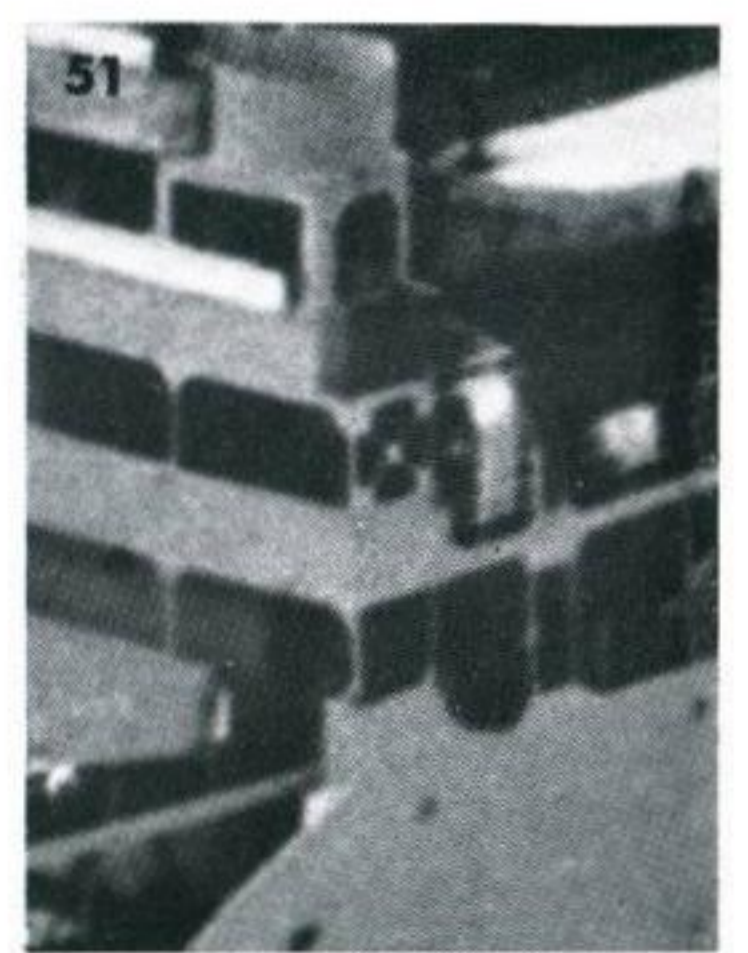
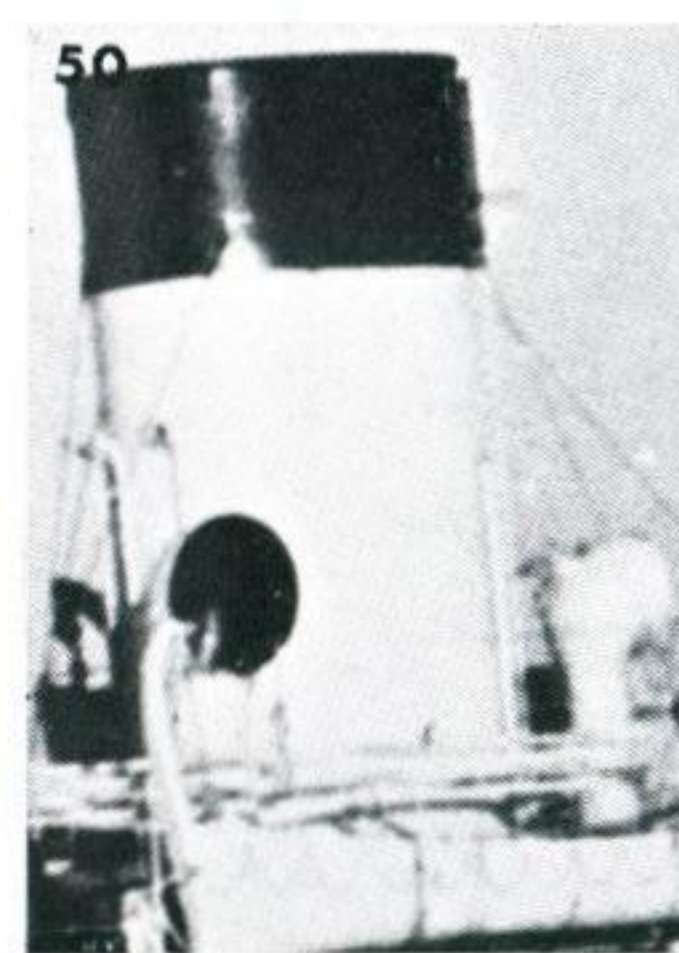
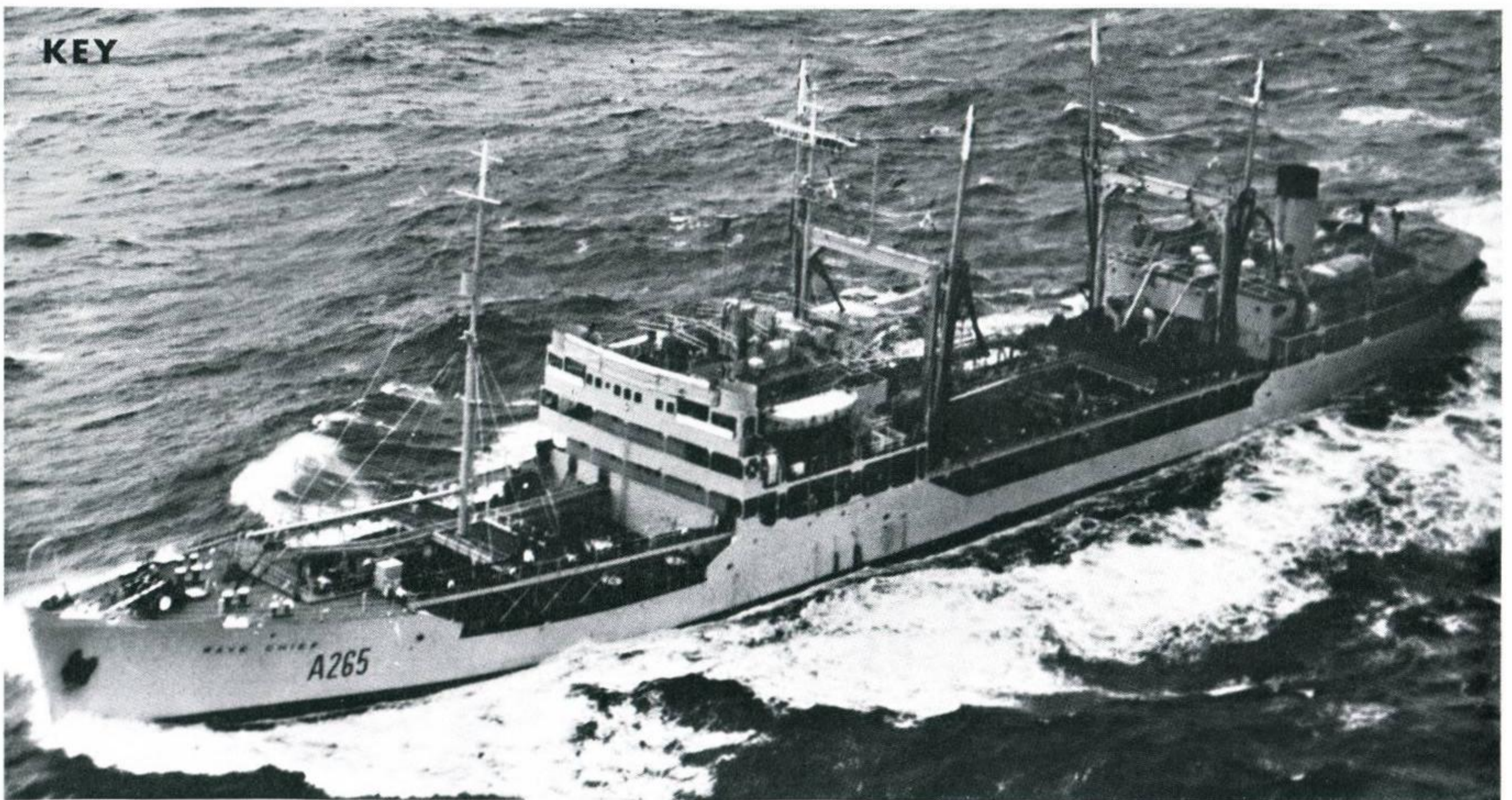
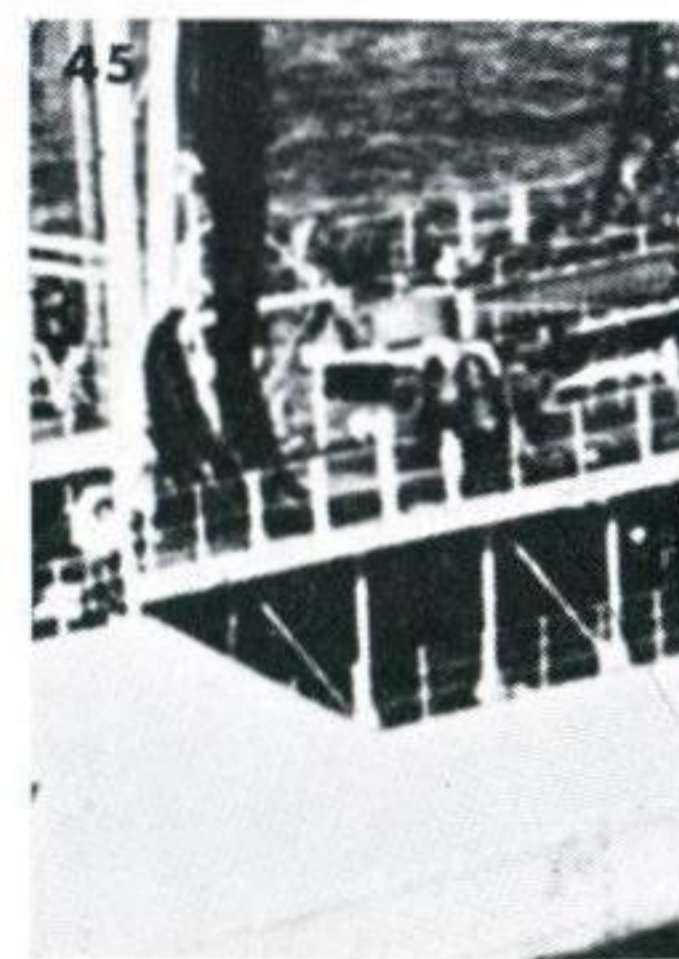
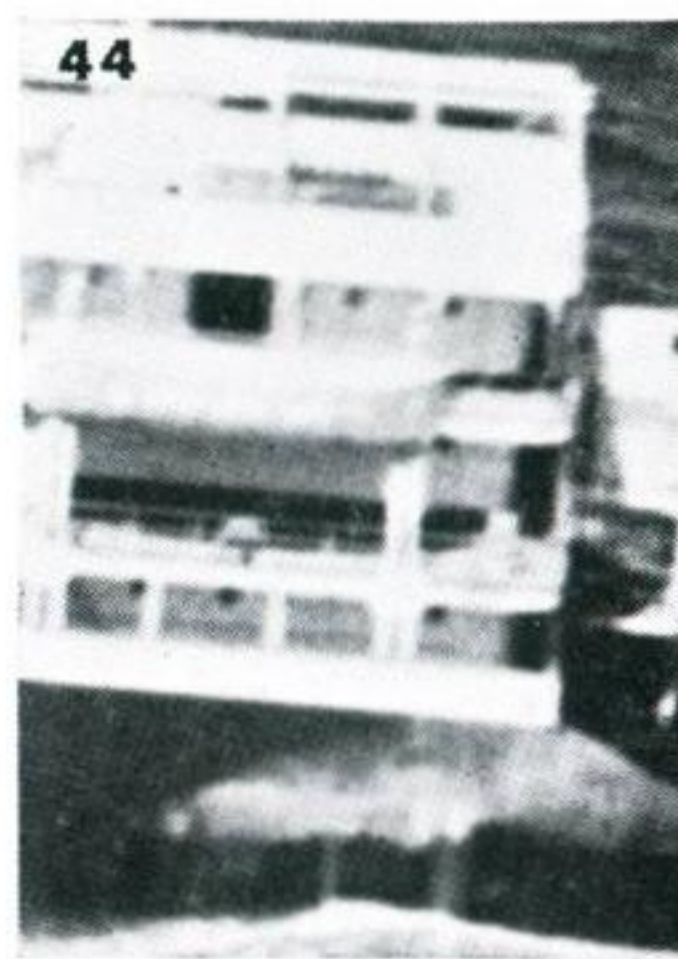
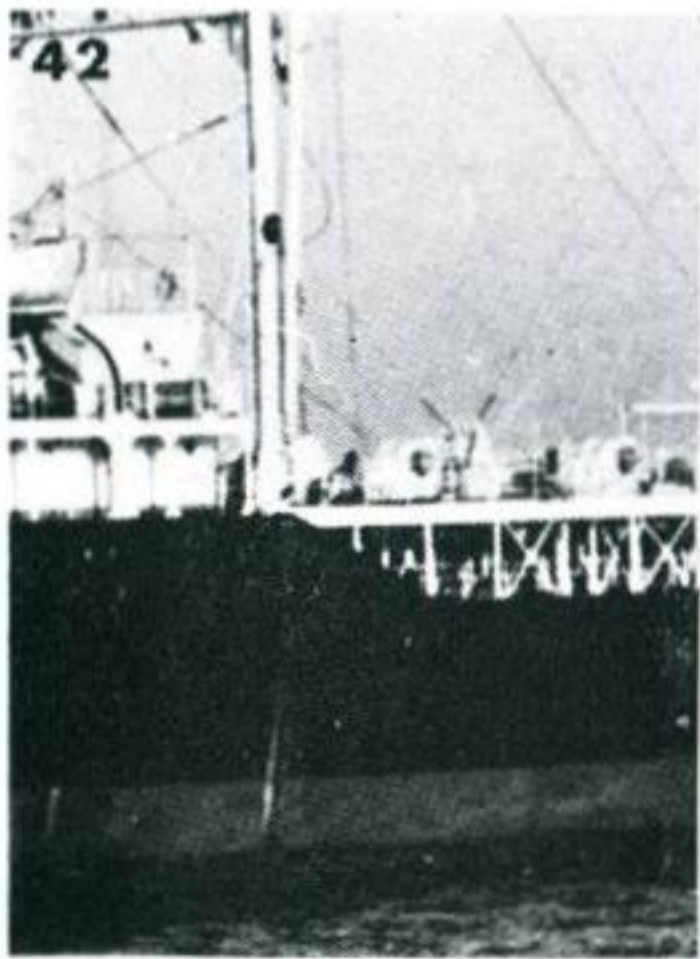
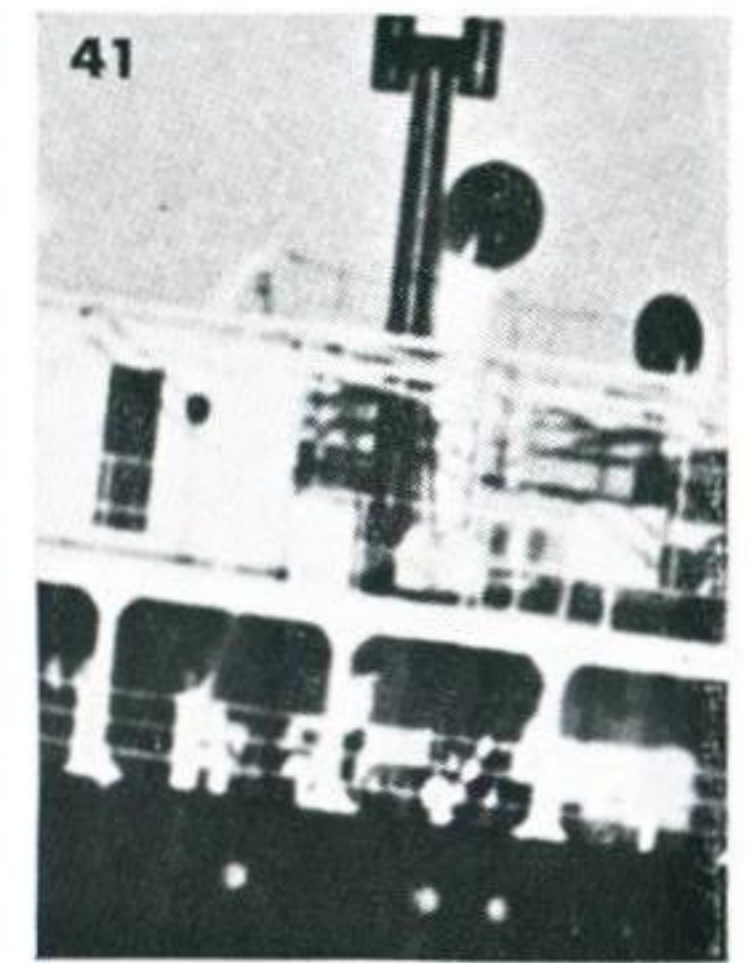
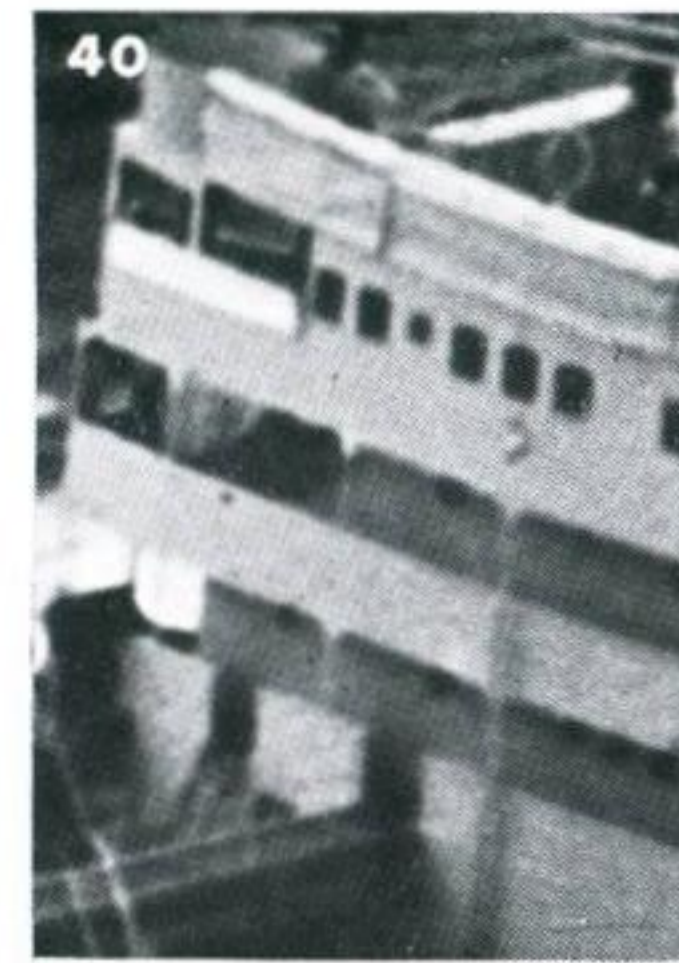
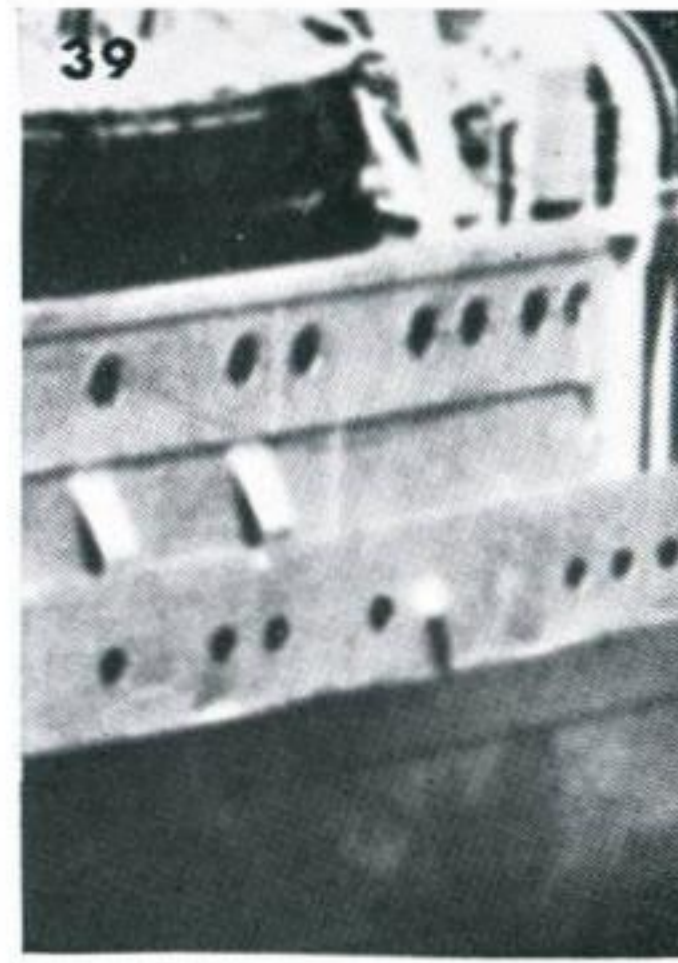


**WAVE CLASS** *continued*

**KEY**

*N.B.—All Royal Fleet Auxiliary Ships are now in standard warship grey.*





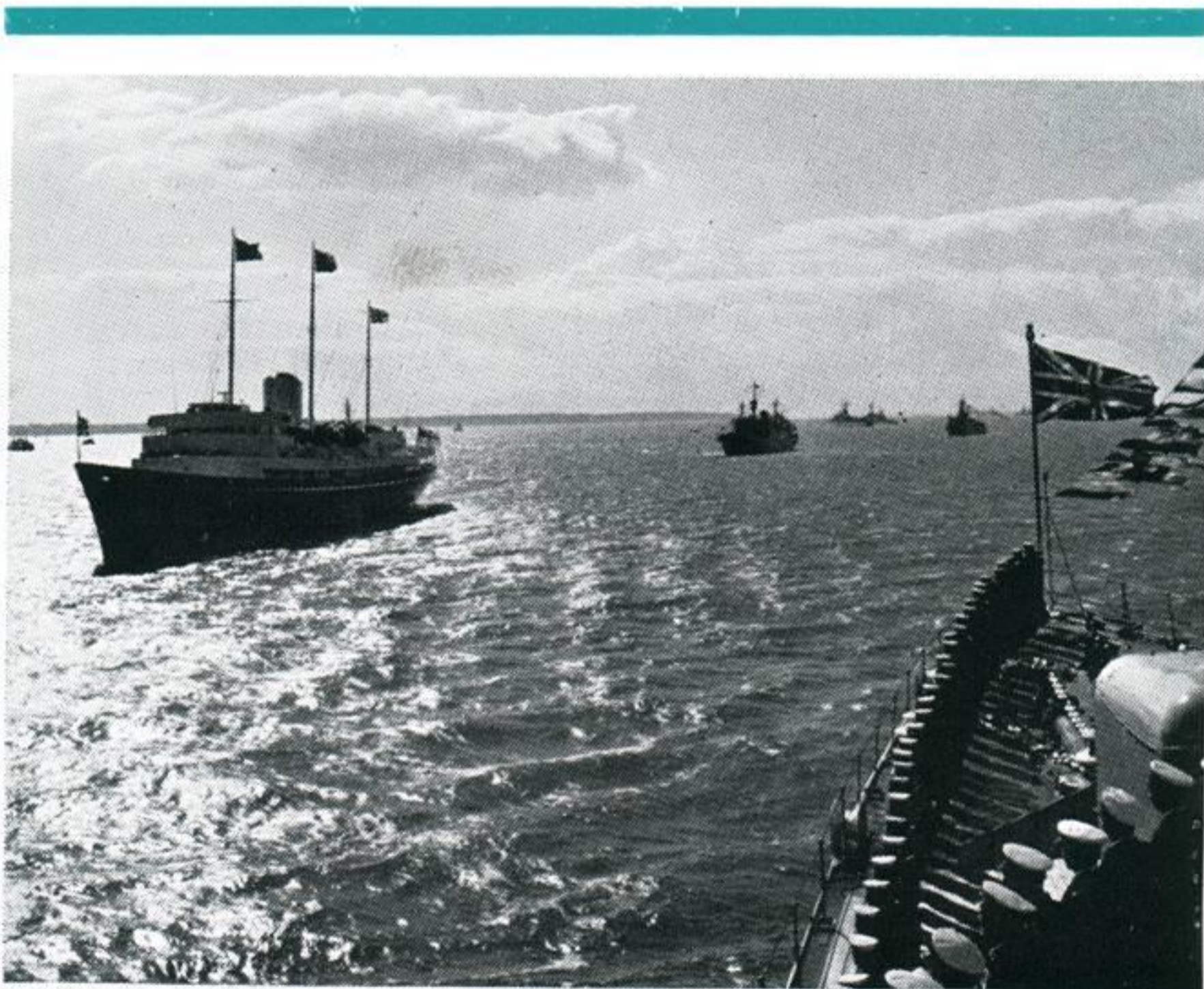


## ARMY AIR DAY

See page 283

Above: The Colonel Commandant of the Army Air Corps, Lieutenant-General Sir John Mogg, KCB, CBE, DSO, taking the salute of the fixed wing element of the flypast, led by a Chipmunk flanked by Austers, followed by Chipmunks and Beavers, and (left) Sioux AH1s of the Blue Eagles which performed during the display.

Top to Bottom: A U-8F Seminole (military version of the Beechcraft Queen Air) bearing the SHAPE crest, a Dornier-built Bell UH-1D Iroquois of the German Federal Army, a Max Holste Broussard of the French Army and a Hughes Model 300 helicopter which as the TH-55A is a standard US Army training helicopter—all visitors for the Army Air Day.



Cover Photo: A total of sixty-three warships from twelve NATO Countries took part in the Spithead Review on Friday May 16 as part of the celebrations of the 20th Anniversary of the North Atlantic Treaty Organisation. The Fleets were reviewed by HM The Queen in the Royal Yacht *Britannia* which is shown here steaming through the lines of ships.

## SOLUTIONS TO TESTS AND EXERCISES

Page 284

### CARELESS

All targets are **Careless** except Nos. 4, 10, 23 and 33 which are jokers.

Page 282

### TEST PAPERS

ALOUETTE: Joker is first line 3rd picture.

GALEB: Jokers are second line 5th picture and third line 4th picture.

BASSET: Jokers are first line 2nd picture and second line 4th picture.

Page 287 HMS ROTHESAY CLASS: Jokers are first line 2nd picture second line 5th picture.

Page 288

### MYSTÈRE IVA

All targets are **Mystère IVA** except Nos. 8, 20, 26 and 30 which are jokers and No. 17 a **Mystère IVB** which did not go into production.

Page 292

### GULFSTREAM I

All targets are **Gulfstream I** except Nos. 9 and 17 which are jokers.

Page 296

### MAGISTER

All targets are **Magister** except Nos. 17, 30 and 42 which are jokers.

Page 300

### R.N. TRIBAL CLASS General Purpose Frigate

All targets are **RN Tribal Class General Purpose Frigate** except Nos. 23, 31 and 46 which are jokers.

Page 304

### WAVE CLASS OILERS OF THE ROYAL FLEET AUXILIARY

All targets are **Wave Class** except Nos. 17, 27, 34 and 44 which are jokers.