

07

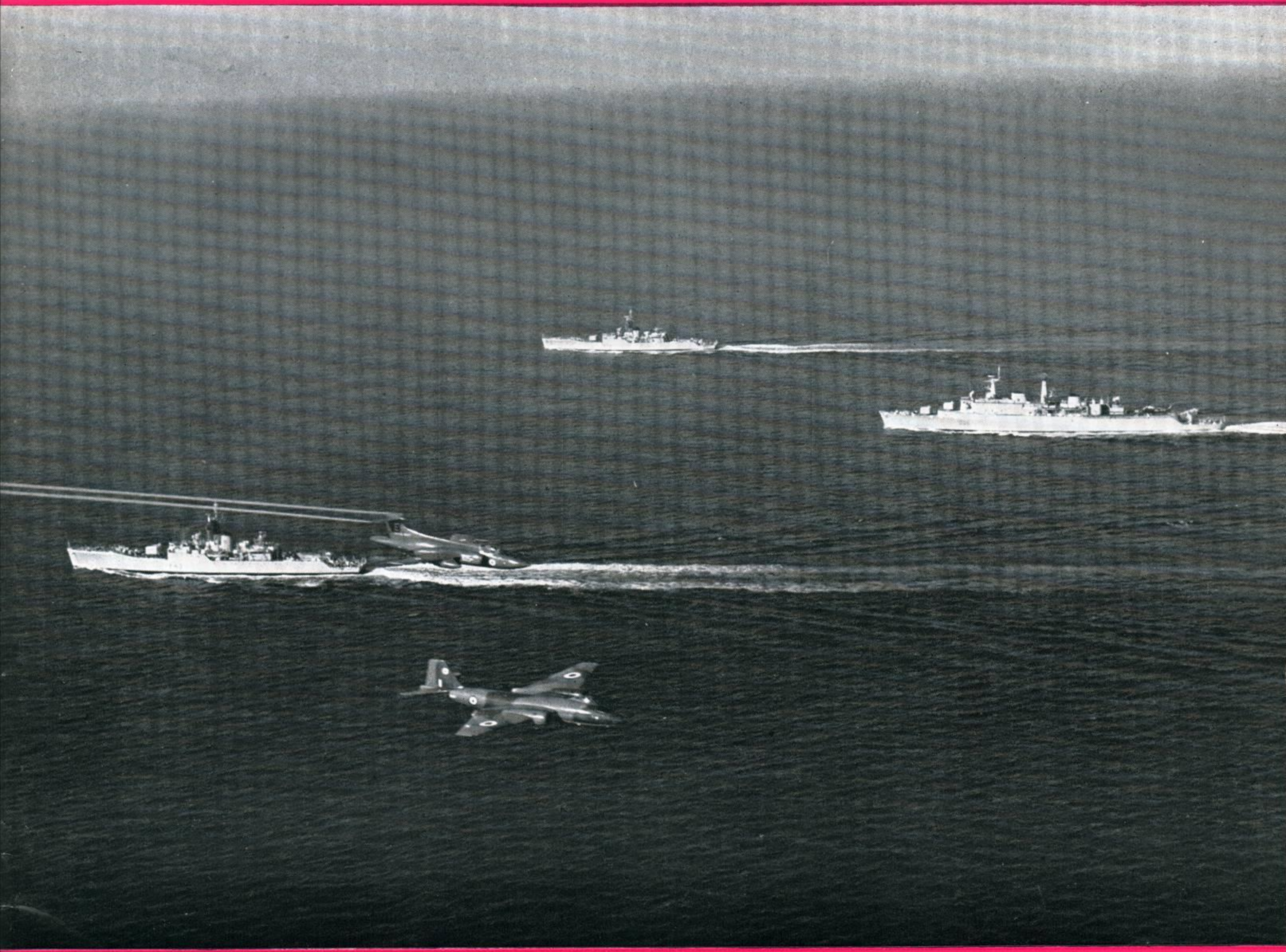


JOINT

SERVICES

RECOGNITION

Journal



Vol. 24 JULY 1969 No. 7

Are Comparisons Really Odious?

In identity training they certainly are—with one exception—to which we shall refer later. Of course, by odious we do not mean *odious*: we mean bad practice. That statement may cause a number of eyebrows to lift, but let us hasten to explain before any damage is done to anyone's facial adornments.

Most Servicemen are charged with a responsibility to identify a variety of "ironmongery" such as aircraft, warships, merchant ships and armoured fighting vehicles, to mention just four subjects. We have to do this for reasons which are always well worth repeating i.e. so that we do not kill our friends and so the enemy does not escape. Also, because, when engaged in warlike exercises, we want to know who is about in the sky, on the land or on the sea, otherwise all can be chaos and the value of the exercise diminished.

The recognition training task is, at first sight, a pretty heavy one, but tackled in the right way, is not nearly so difficult as may be imagined. Let us say, that you have to learn to identify fifty types of aircraft. It is obvious that the shorter the training time the better.

It was natural and traditional until recent times that where aircraft looked alike—and, let's face it, at the outset of identity training they all do—that similar types of aircraft should be brought together for a study of their differences.

This however, involved the conscious memorising of much structural detail of several types and of remembering which was which. An undeniably difficult task. Learning by heart is always a hard, uphill slog.

The training system established in the *Journal* requires no such effort. The procedure, if followed, not only thoroughly familiarises one with the individual aircraft but also forces one to identify. A well-made trainer will not take the beginner longer than twenty minutes. A great number of target views are covered in that time. Moreover, succeeding lessons, by attuning one to the nature of aircraft and the

training method, usually take less time than the earlier one.

But to return to our theme. If identity training is concentrated on one aircraft (or ship or tank) at a time each aircraft that seemed at first sight to closely resemble other aircraft will stand clear in the mind and the supposed training difficulty of its being so like others disappears. This is true of ships, tanks and aircraft recognition training—and incidentally of all other kinds. Provided training is done on each individual object to the exclusion of all others the finest nuances of structural shape becomes imprinted in the mind. It is true that in certain circumstances of light and atmosphere no identification is possible, in others confusion is possible. But in circumstances where an aircraft is identifiable, the correctly trained man will identify it.

So the point is, comparisons of aircraft types as a means of training are a waste of time—so avoid it. We do not say that after some training, when each type is set in the "eye" of the trainee it cannot often be interesting and even helpful to make comparisons, but not at the outset of training—nor as a means of training.

The Exception

Now for the vital kind of comparison. Our trainers are made up of two elements: (a) key photographs and (b) a number of unknown targets. (a) is used to identify (b) (see full trainer instructions opposite and in every *Journal*). This is *identification* in *slow* time, but it leads on to swift and automatic identifying. In that case comparisons are vital, but we are comparing views of the same objects not different objects.

Incidentally, it is not widely realised that one can learn to identify without knowing very much about the technical details. So there is no need either, from the point of view of becoming skilled at identifying aircraft, to feel you need to mug up technical data about them any more than you ever need to do so to know your favourite Aunt or Uncle.



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
Canberra and Buccaneer over Warships (<i>cover</i>)...	169
Are Comparisons Really Odious? (<i>editorial</i>) ...	170
Lesson Instructions	171
* Skyvan	172
* Jagdpanzer, Rakete	175
* Cleat	178
* BAC 111	182
* Mohawk	188
* Crusty	192
Solutions to Tests and Exercises	196
Western Fleet Ships in South America	196
* <i>Identification Lessons</i>	

LESSON INSTRUCTIONS

The ability to identify is a skill and therefore a matter of "doing". Submit to the instructions given in every edition of this *Journal* and that ability 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 the lesson without the key too soon, wait until your ability to do so is self-evident.

Gebrauchsanweisung für die Typenlehre

Um den größten Nutzen aus den Übungsbildern, die in diesem Heft veröffentlicht werden, zu ziehen, sollte wie folgt verfahren werden.

1. Den zur Lehre gehörigen Text lesen.
2. Eine numerierte Typenliste vorbereiten, in der angesprochene Typen in eine gewisse Ordnung gebracht werden können.
3. Typen ansprechen durch Vergleich mit den Hauptansichten (von oben, von unten, von vorne, von hinten und von der Seite). Anfangen mit den einfachen Bildern, um Erfahrung zu bekommen. Die angesprochenen Typen zur Ansprache der schwierigeren benutzen.
4. Wichtig: Sobald ein bestimmtes Flugzeugbild mit Sicherheit richtig angesprochen ist, sofort die Typenbezeichnung in die entsprechende Stelle der Liste eintragen.
5. Bei der Übung nicht beeilen oder eine zeitliche Begrenzung festlegen. Für Anfänger ist es wichtiger, richtig anzusprechen als schnell.
6. Nicht mit Einzelheiten, Umrissen, Namen aufhalten.

KEY



SKYVAN

Short's chunky, strictly functional Skyvan—"the van that flies" as it has been dubbed—is a twin-turboprop utility transport which, in its Series 3 form (American Garrett AirResearch TPE.331-201 engines) has a payload of up to two tons of freight or up to 18 passengers in a hold 6 feet 6 inches square by 16 feet long.

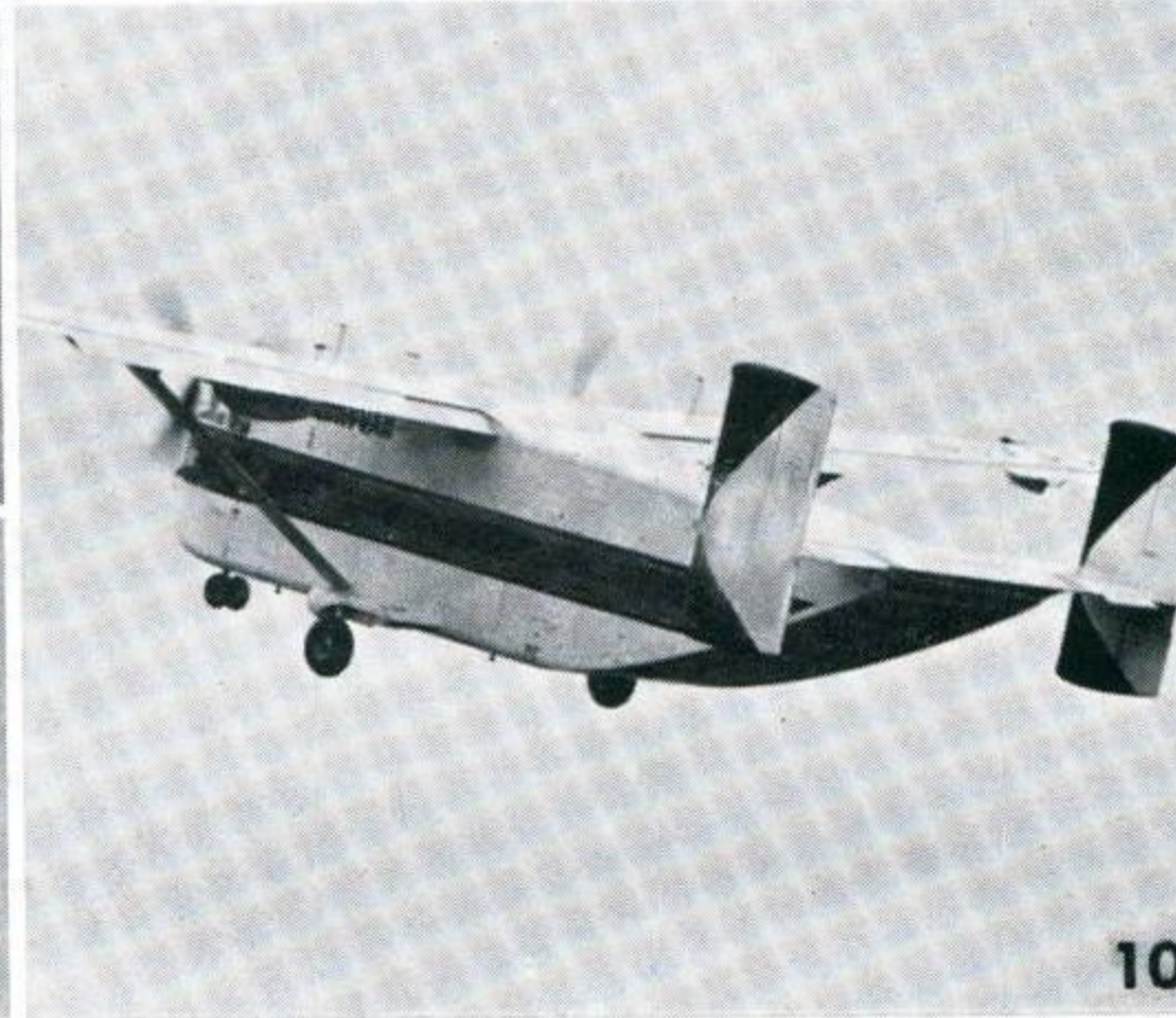
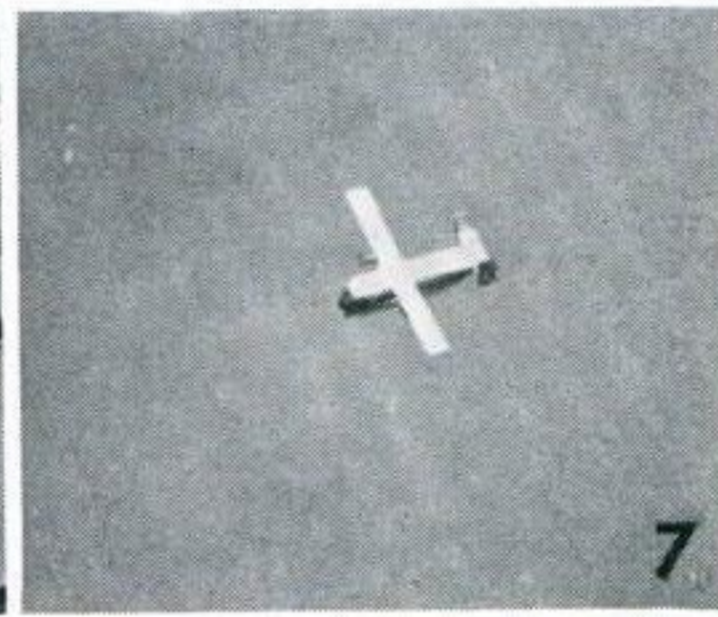
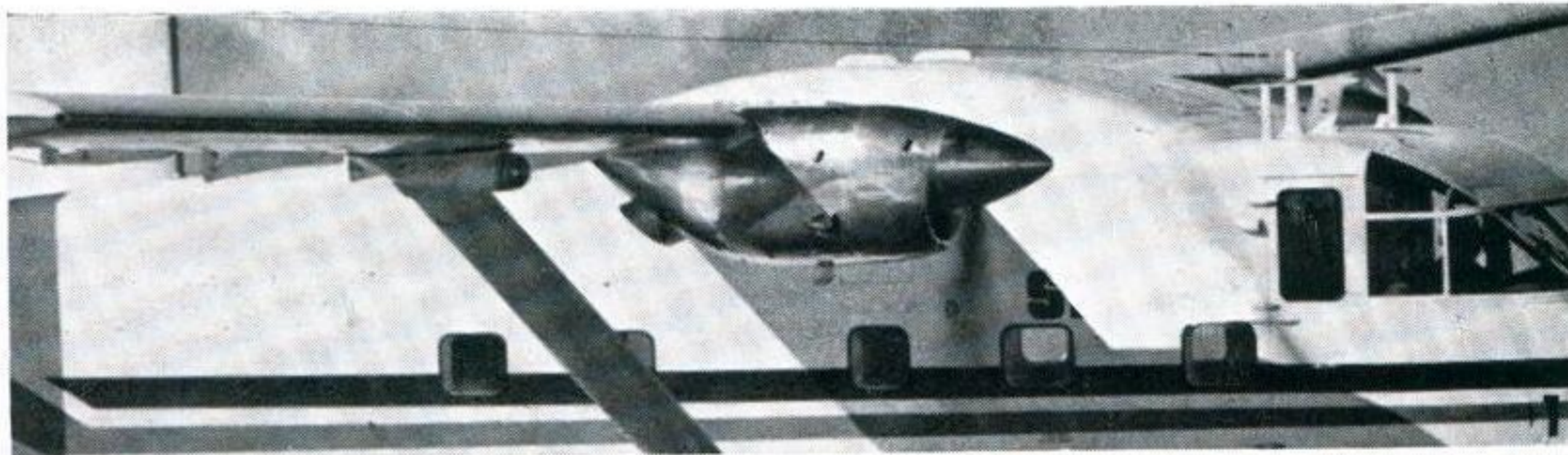
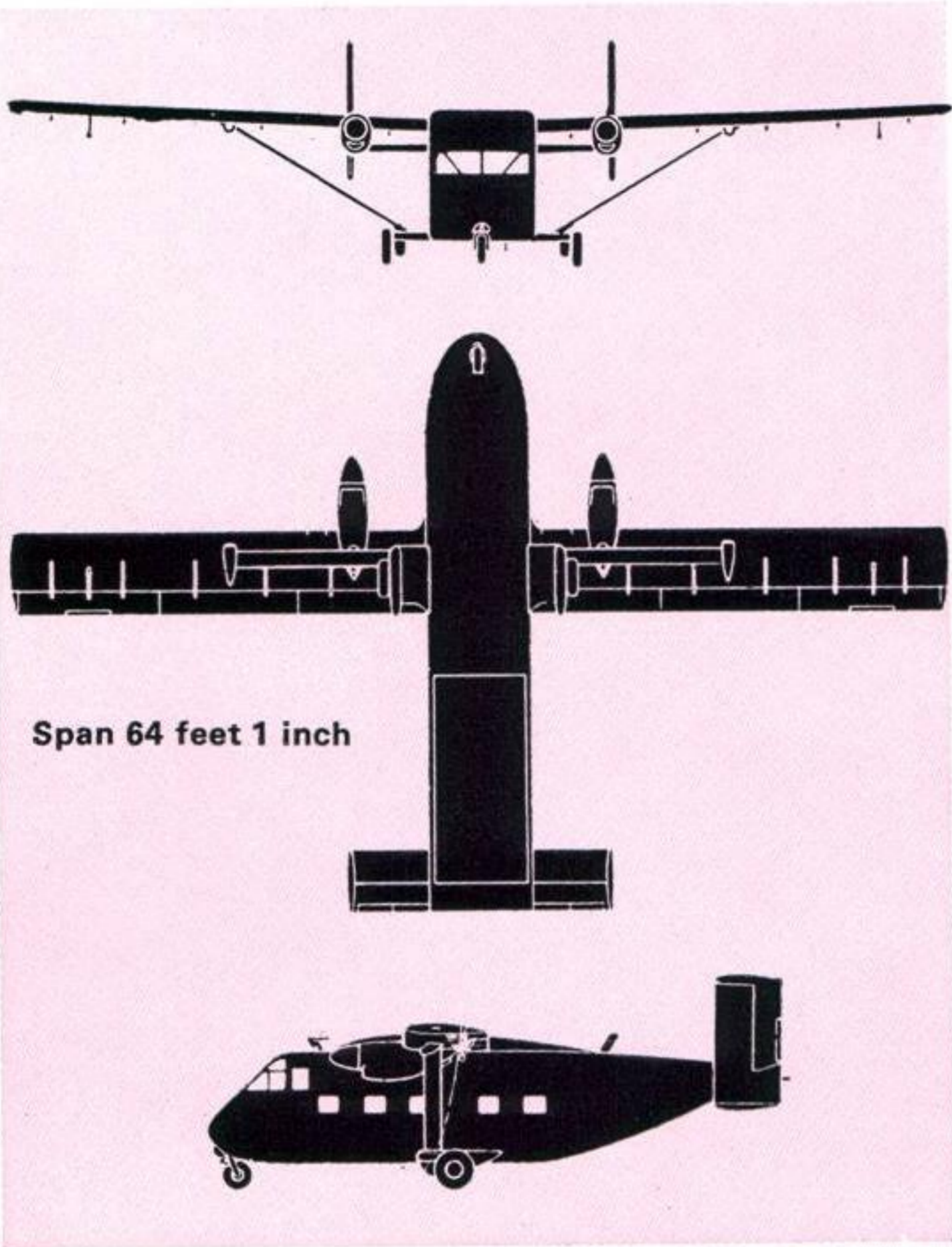
The aircraft's simple box-shaped fuselage—a key recognition feature—has a full-width rear-loading

door. The floor is fitted with combined freight/seat lashing points and conversion to and from all-passenger transport can be made in a few minutes. So far sixty-seven Skyvans have been ordered—all apparently for civil use and including fifty by a major U.S. aircraft distributor.

Work to the instructions on page 171 and check your answers with the solutions given on the back cover.

KEY





continued overleaf

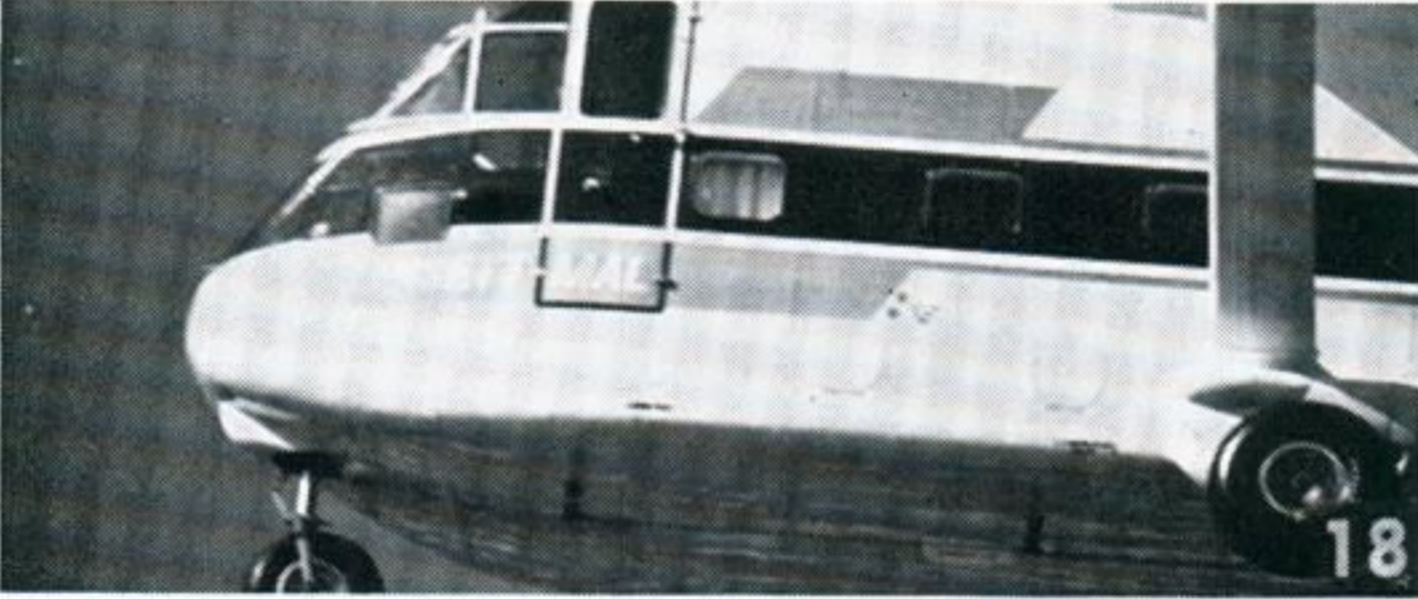
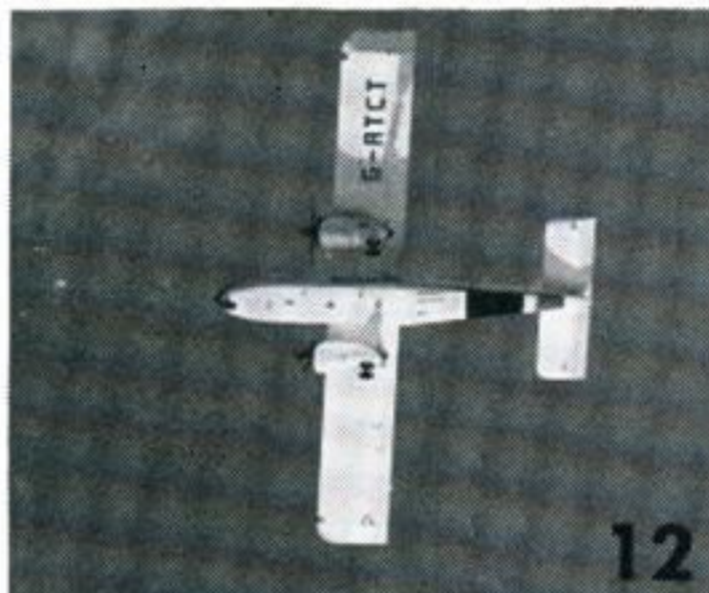
KEY

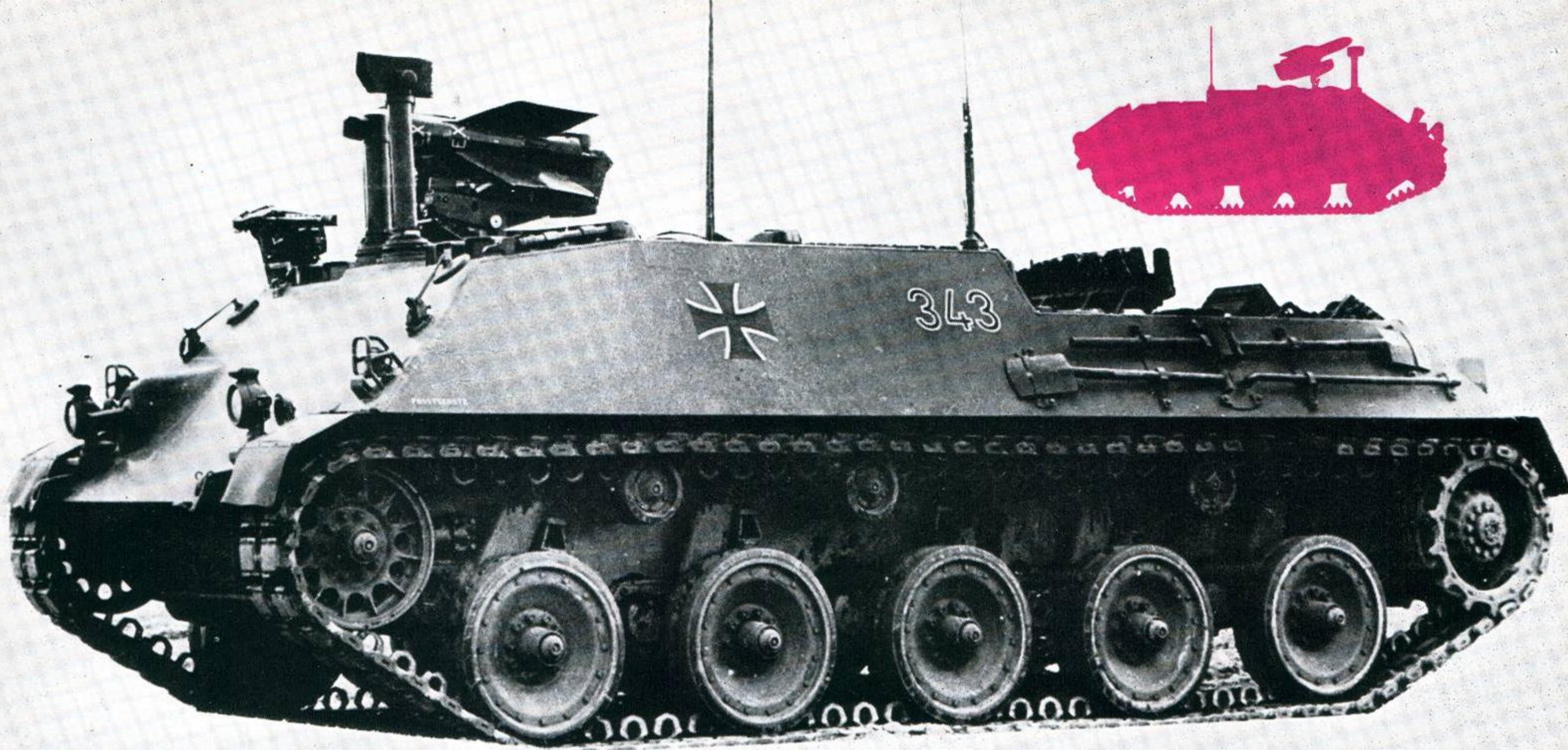




SKYVAN *continued*

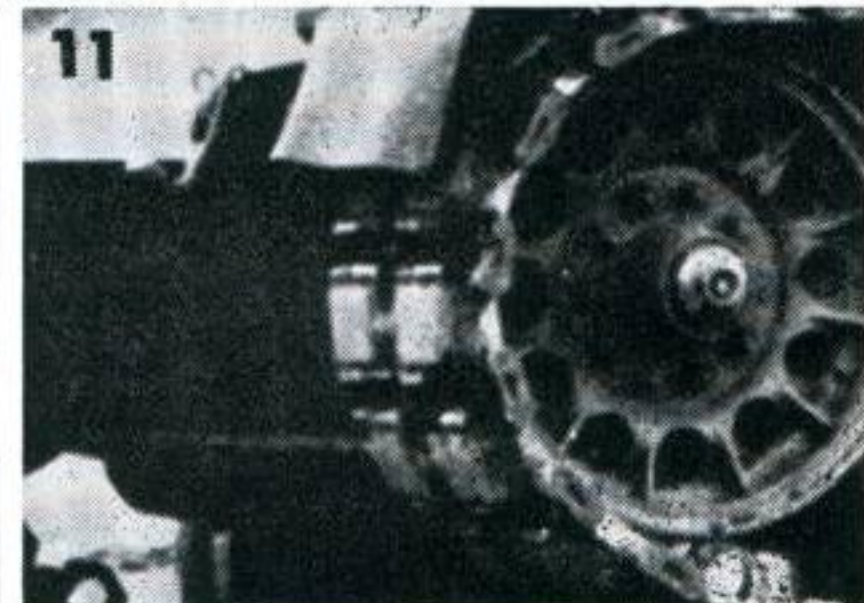
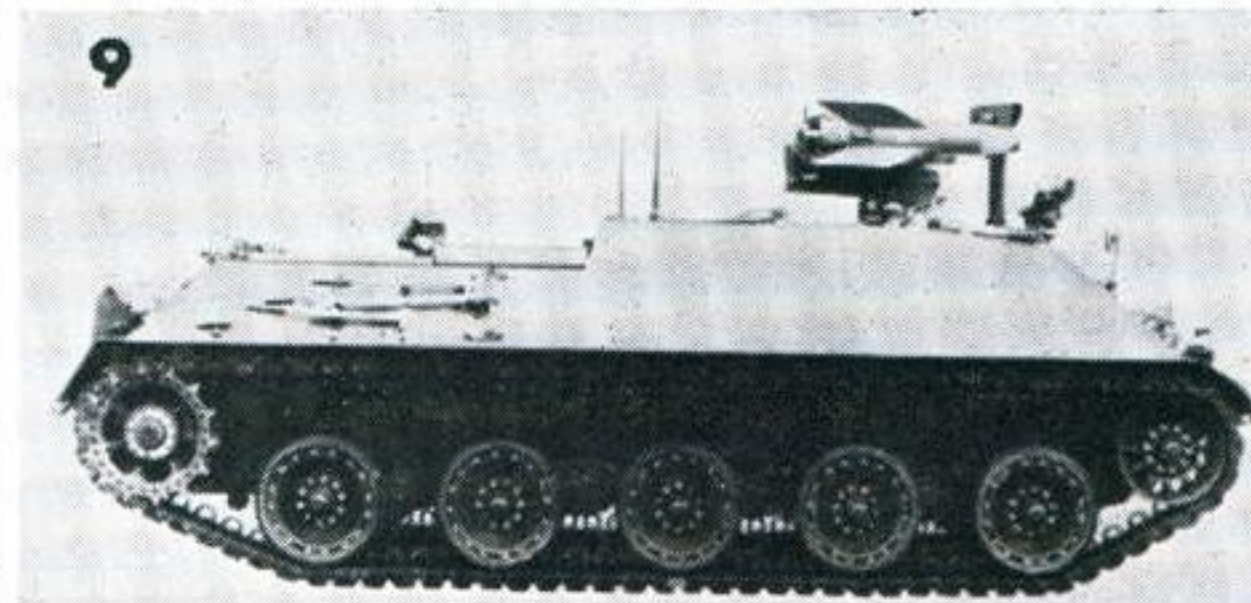
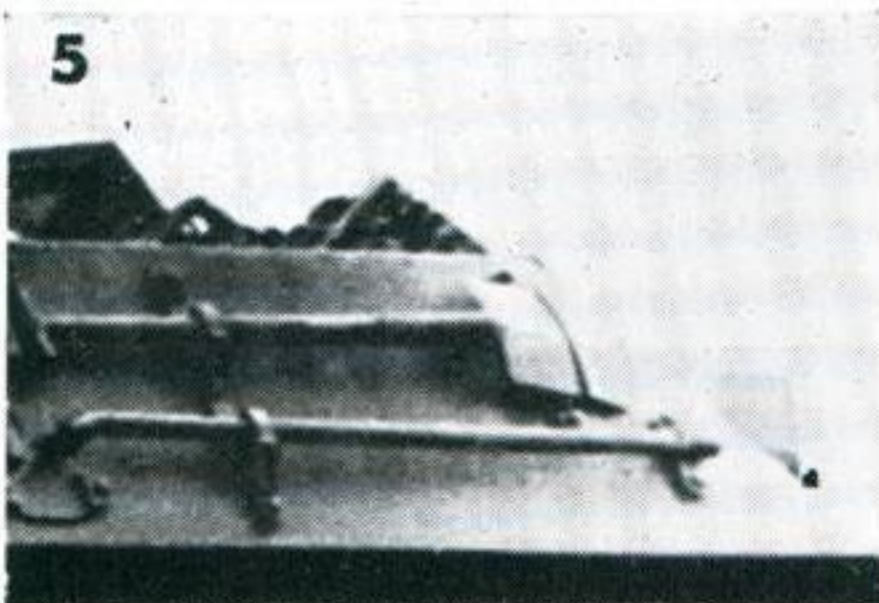
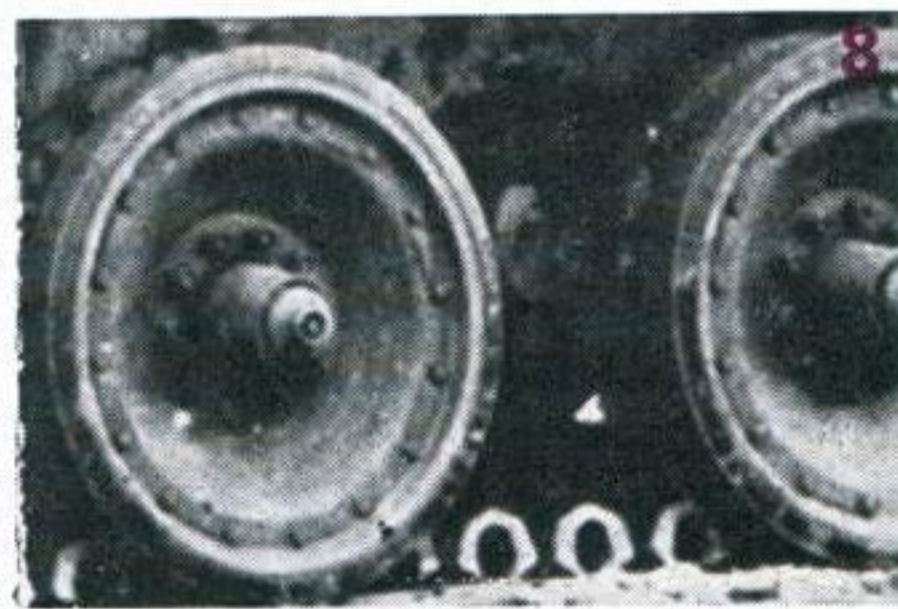
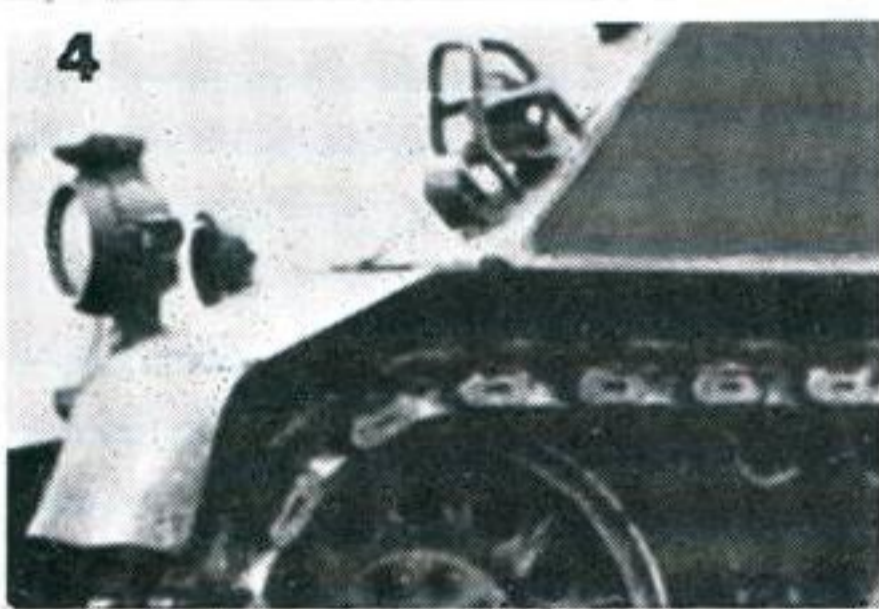
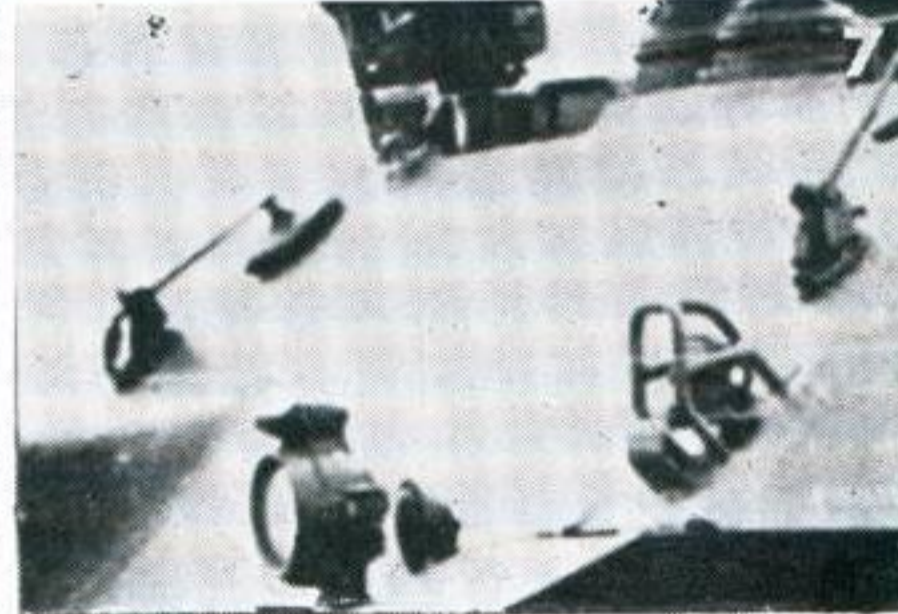
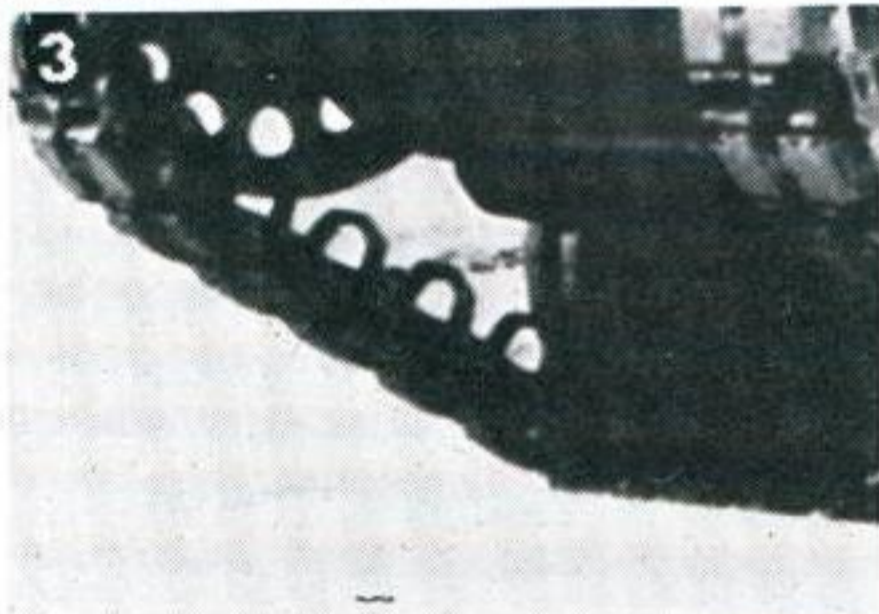
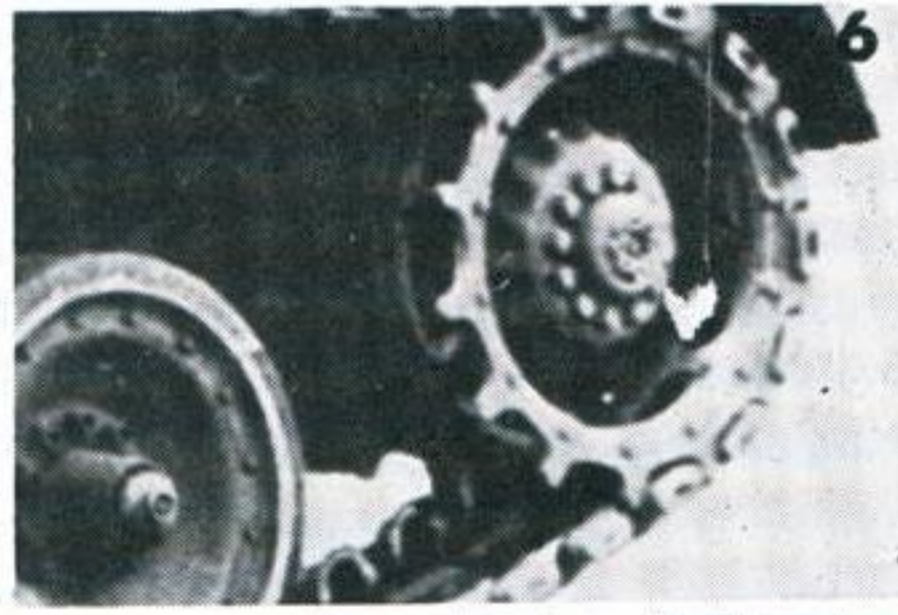
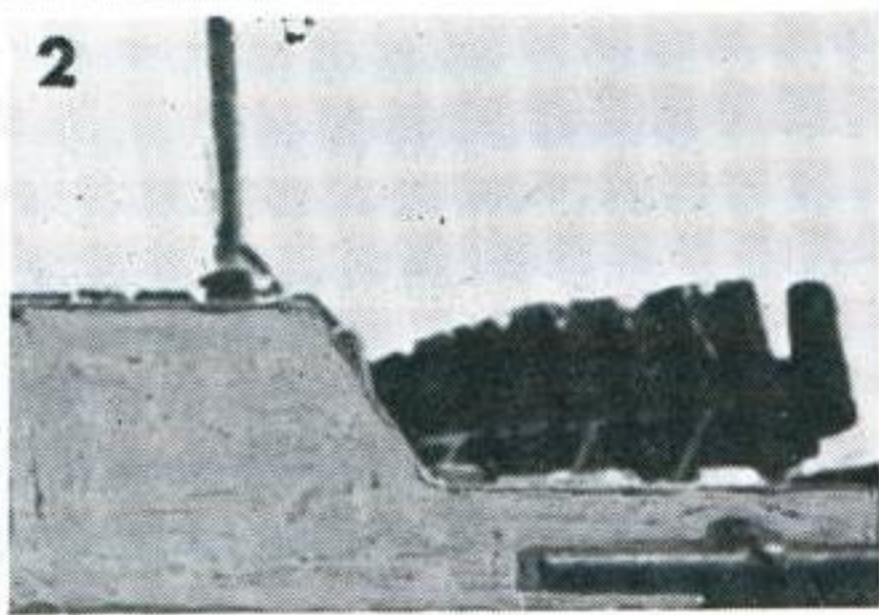
Solutions on the back cover





German Anti-tank Guided Missile Launcher

JAGDPANZER, RAKETE



The closest equivalent in English to *Jagdpanzer* is "tank destroyer" and the addition of the word *Rakete* means that it fires rockets, or more exactly guided missiles. This distinguishes the *Jagdpanzer, Rakete* from the *Jagdpanzer, Kanone*, which was the subject of a lesson in the March issue of the *Journal* and whose main armament consists not of anti-tank guided missiles but of a 90-mm. gun. Otherwise the two types of tank destroyers are very similar, although the gun-armed model could also be called a self-propelled anti-tank gun, or assault gun, while the other might be best designated an anti-tank guided missile launcher.

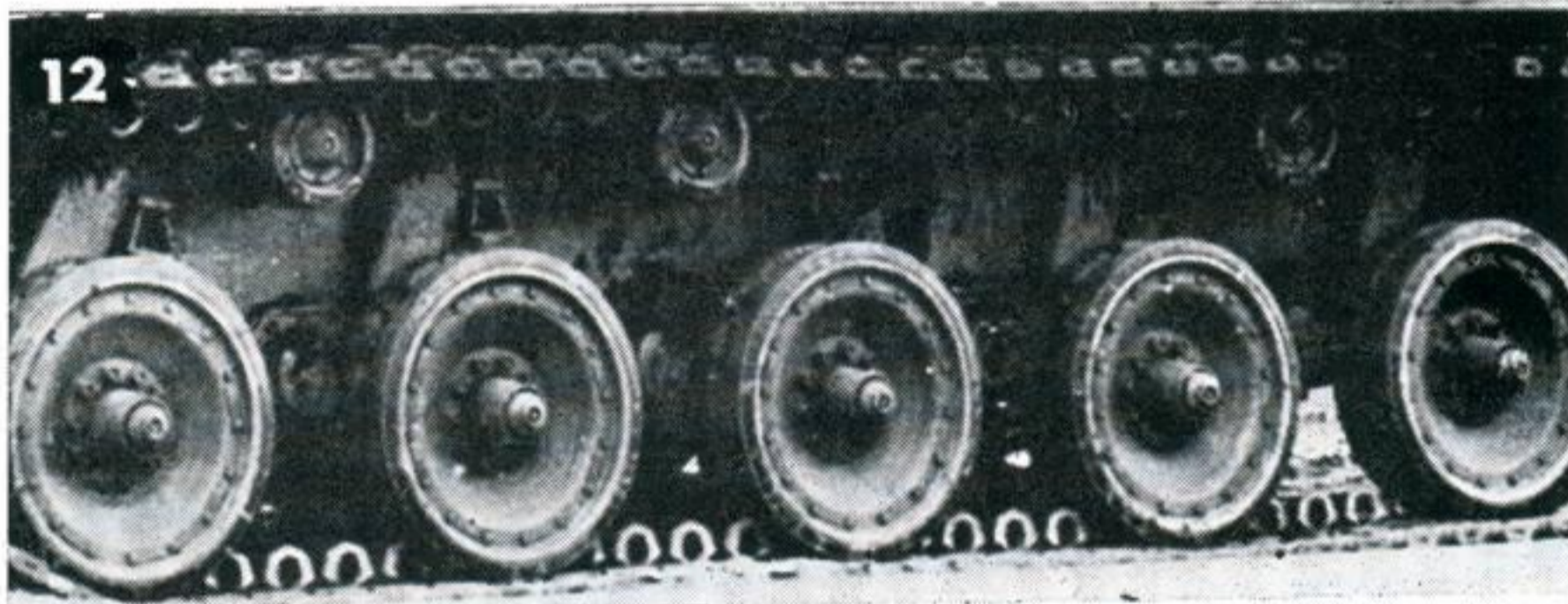
To complicate matters still further, the name *Jagdpanzer, Rakete* covers not one but two vehicles. They are the original JPz 3-3 and the new JPz, Rak. Externally the two are very similar and being both armed with SS-11 anti-tank guided missiles they are intended to perform identical roles. However, the JPz 3-3 is based on the HS-30 and the new model on the SPz (Neu) armoured personnel carriers, respectively. In consequence, the new JPz, Rak is mechanically different from its predecessor, which includes being larger and heavier. It also has a machine gun mounting in the front glacis plate but both models have five road wheels per side. Lesson instructions are on page 171.

continued overleaf



KEY

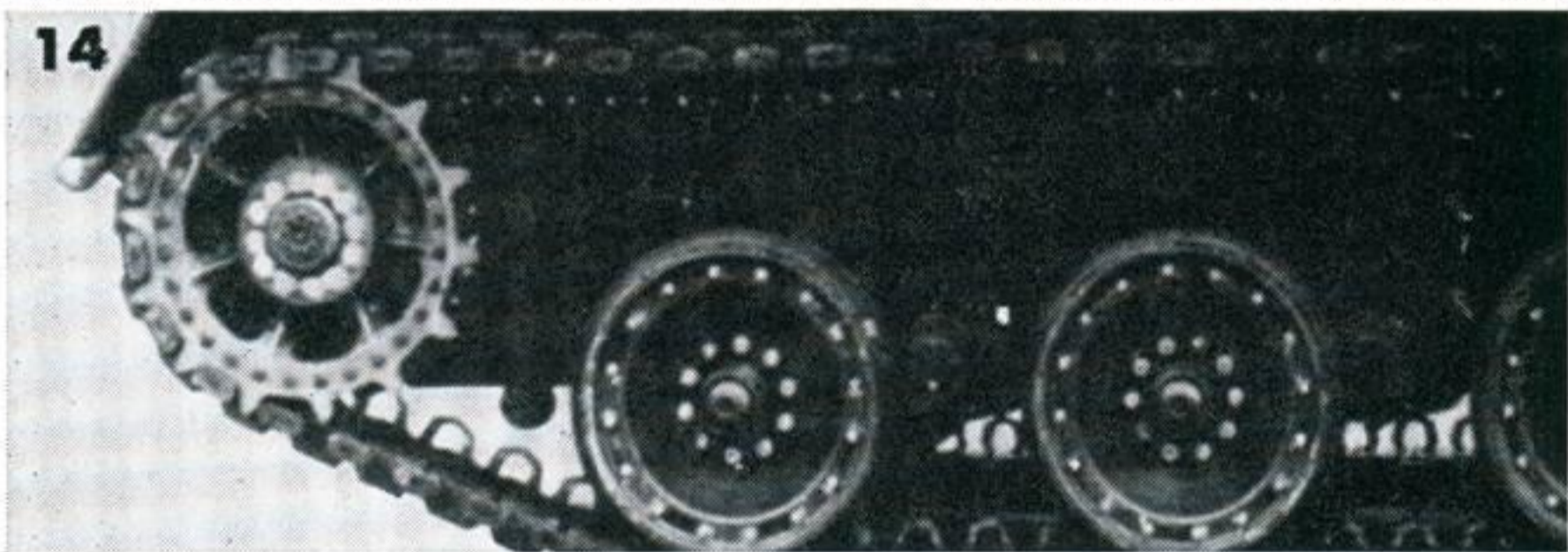
JAGDPANZER, RAKETE



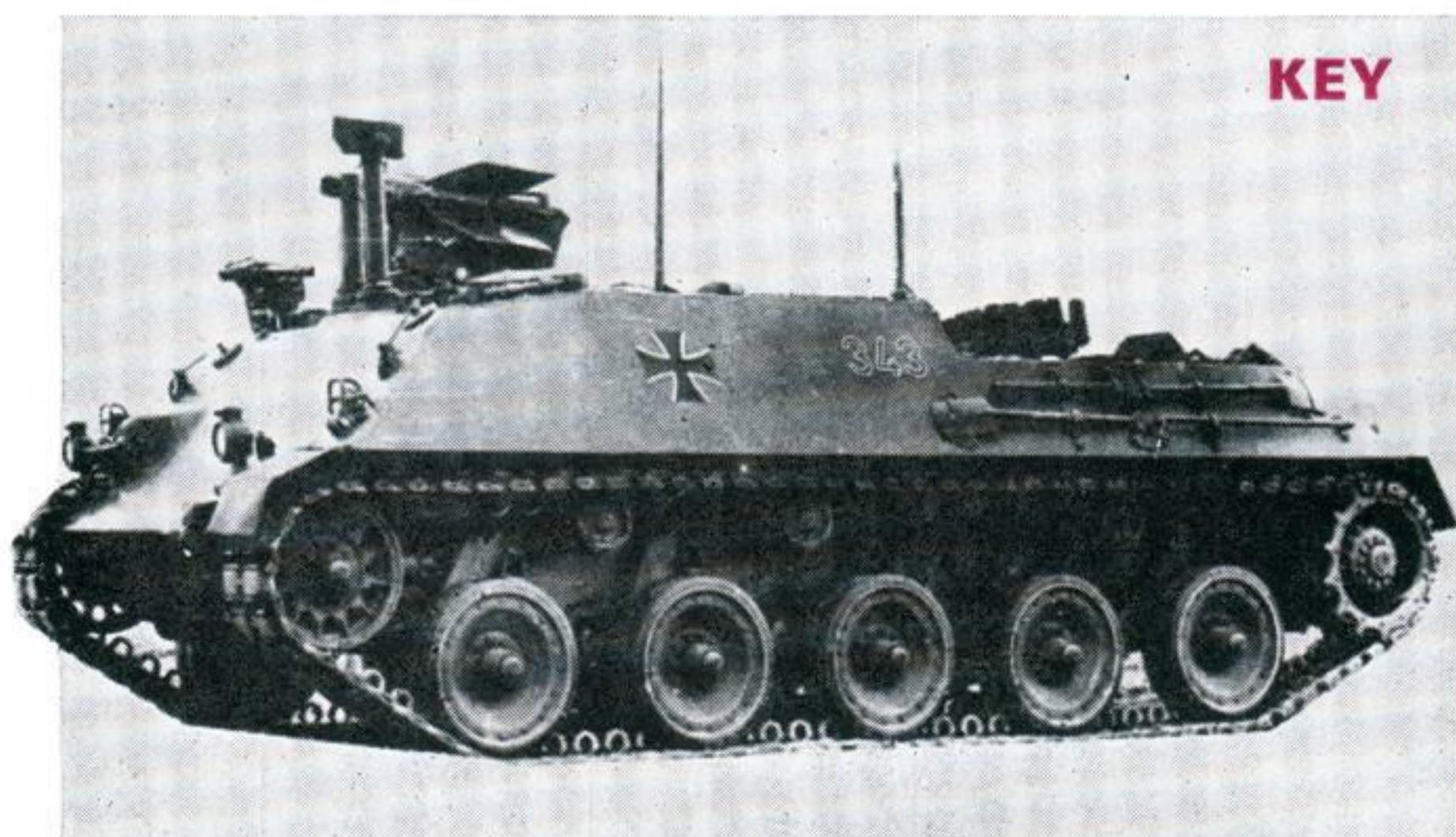
12



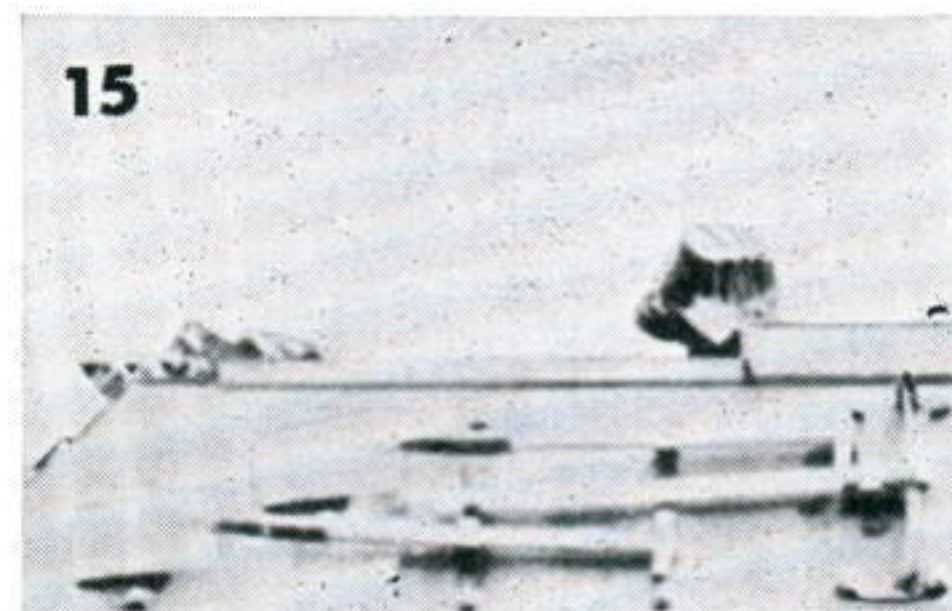
13



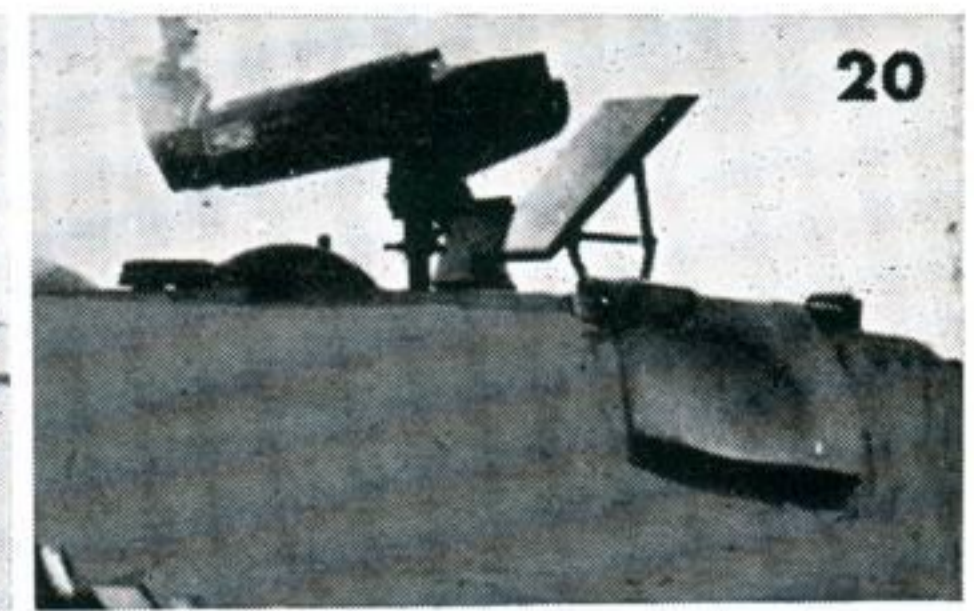
14



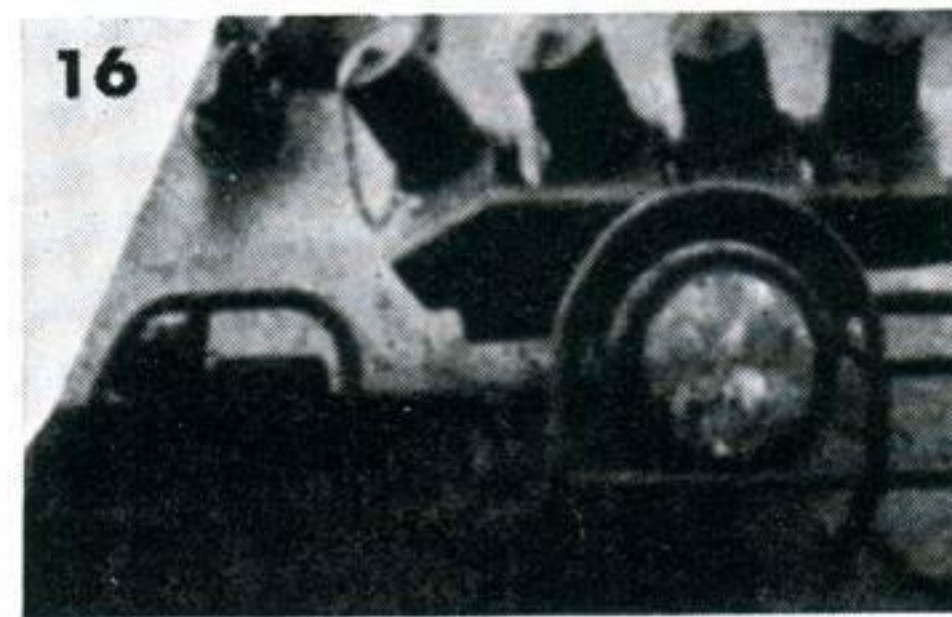
KEY



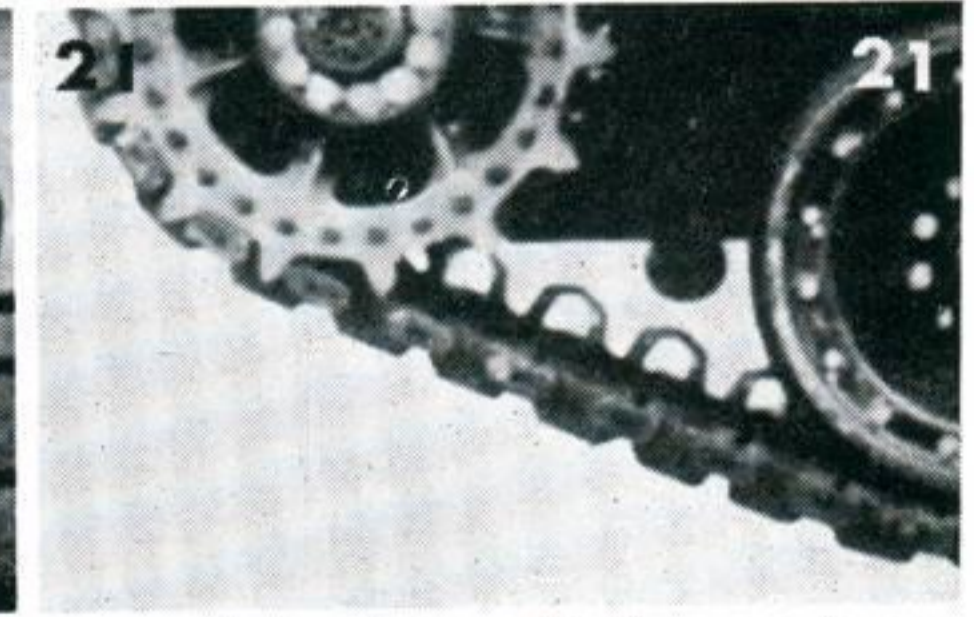
15



20

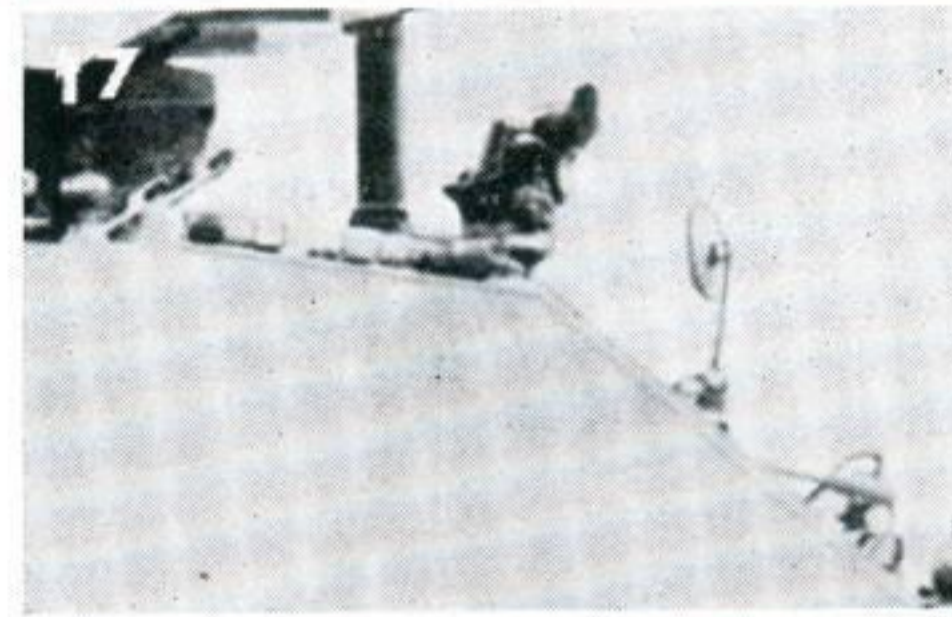


16

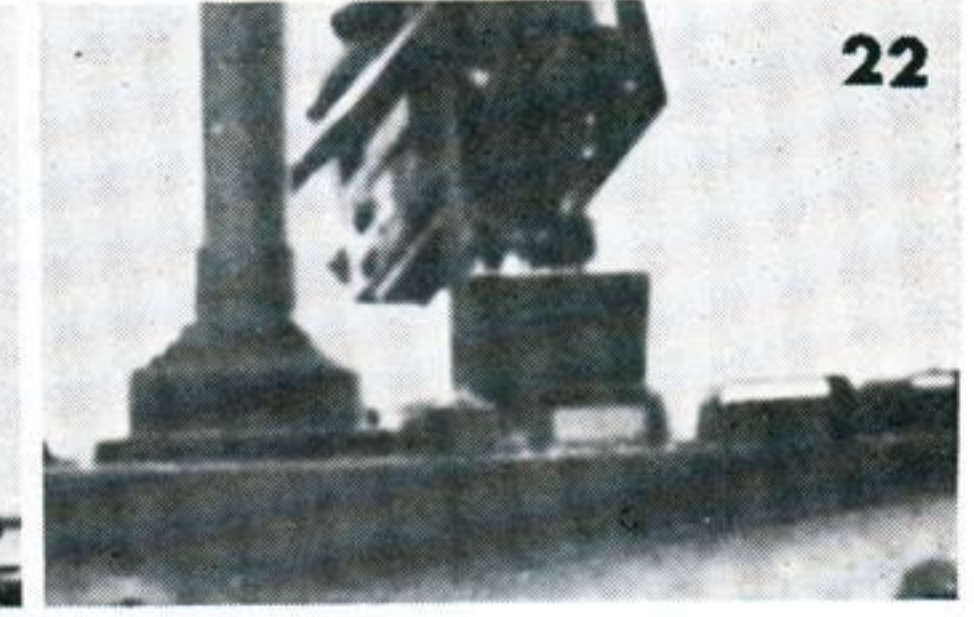


21

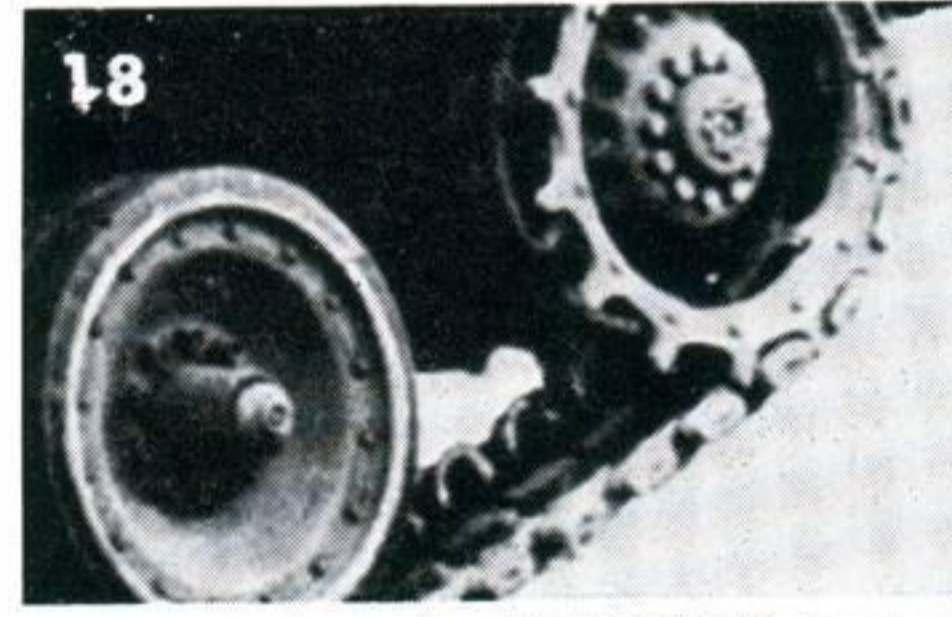
21



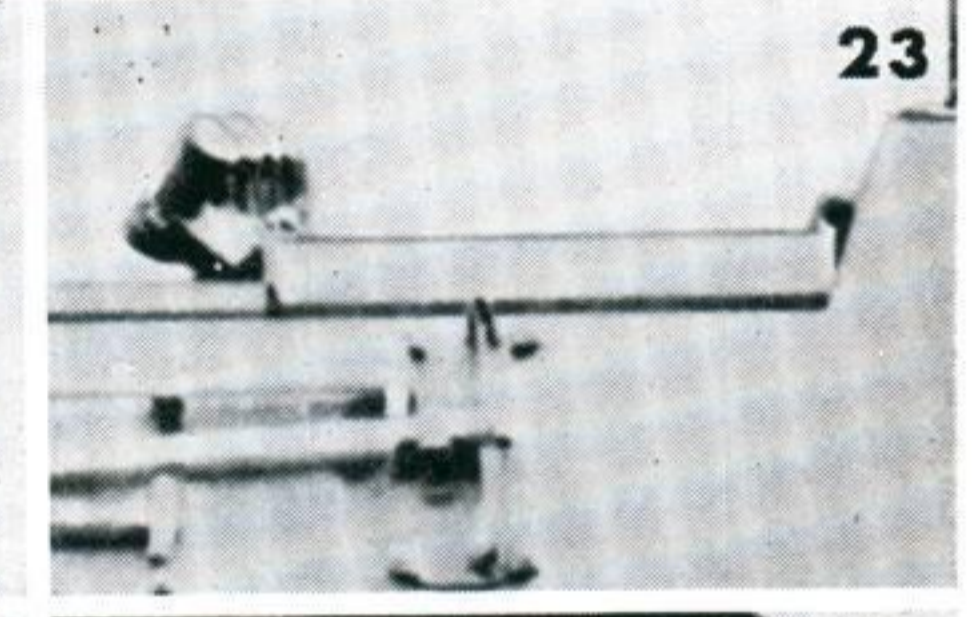
17



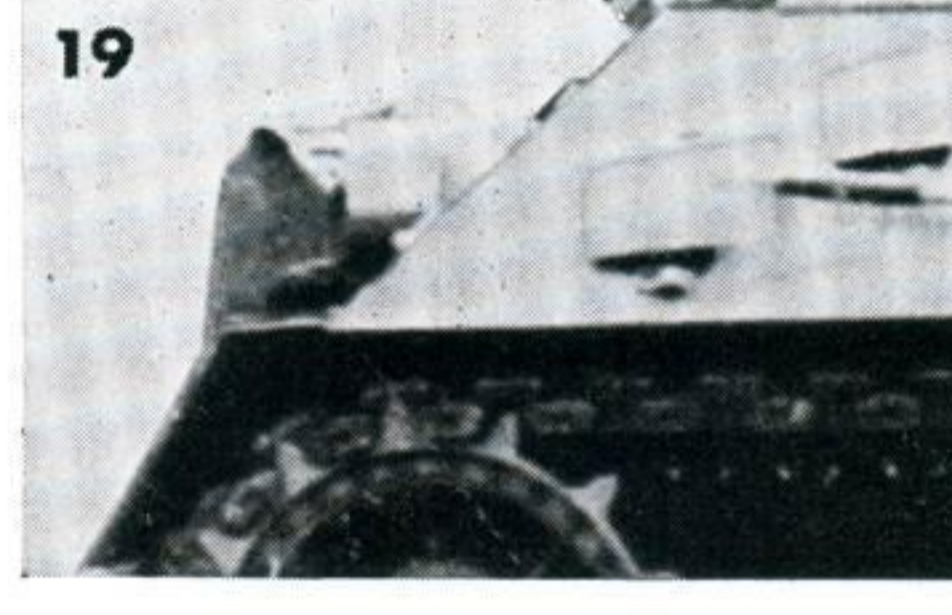
22



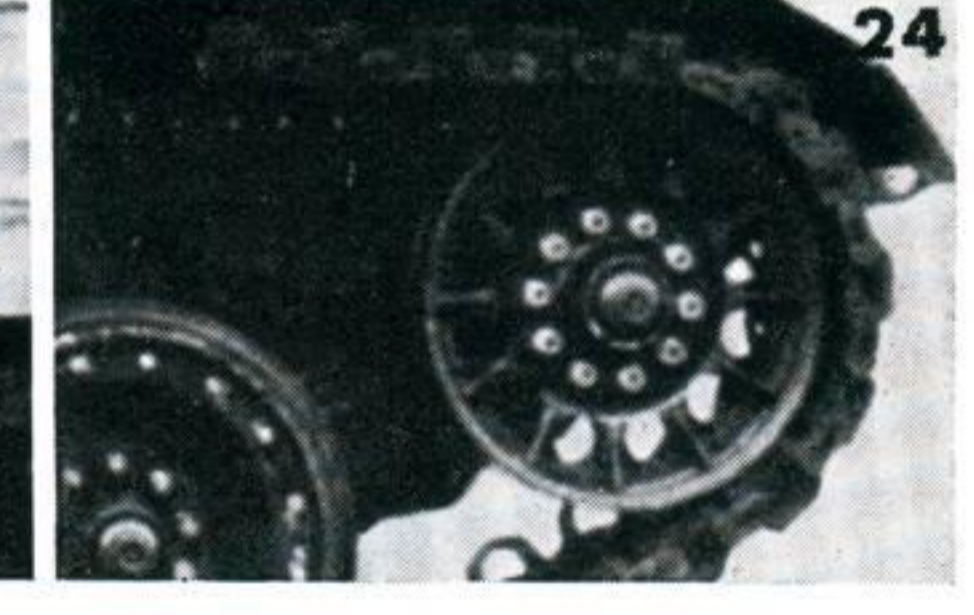
18



23

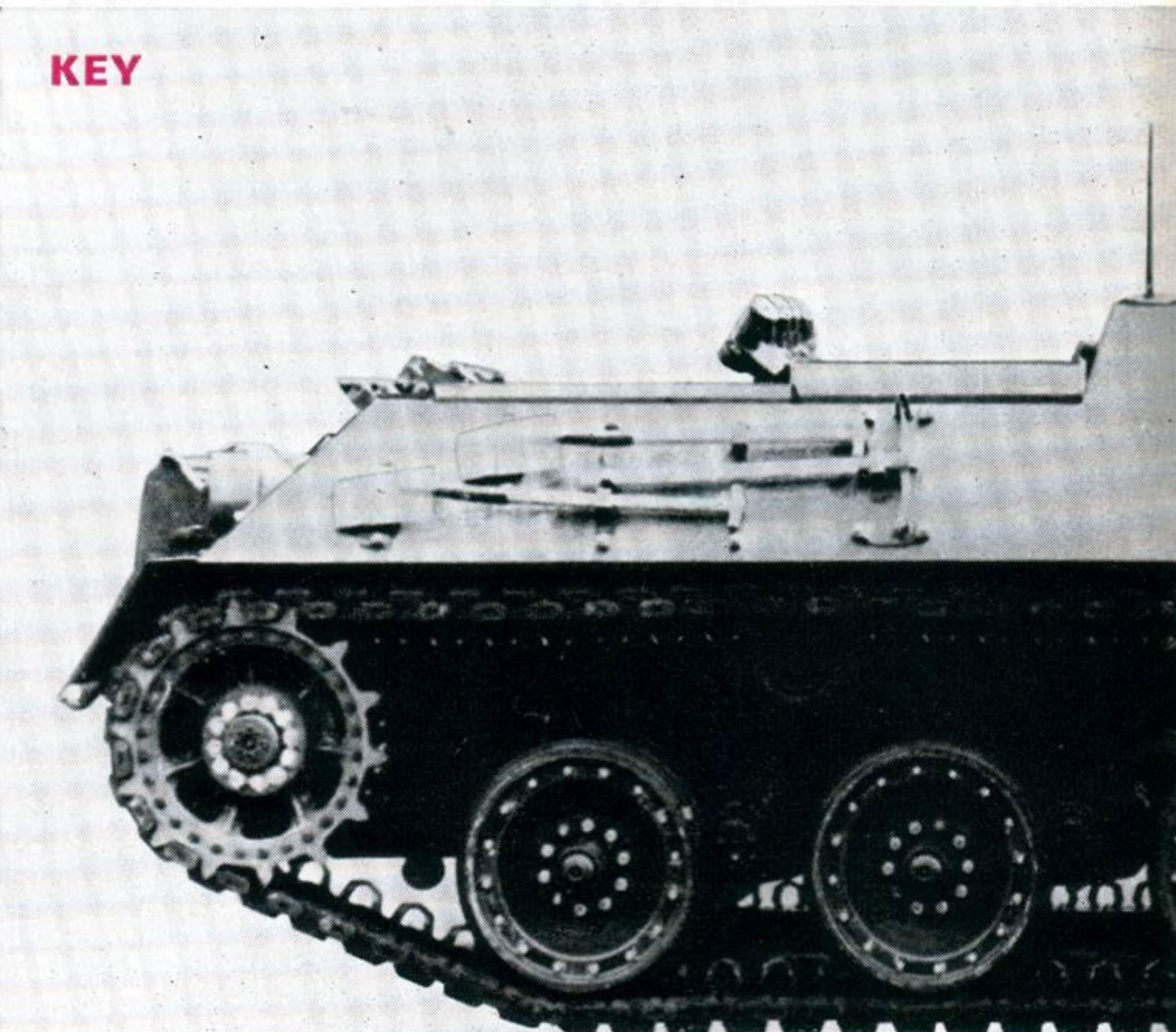


19



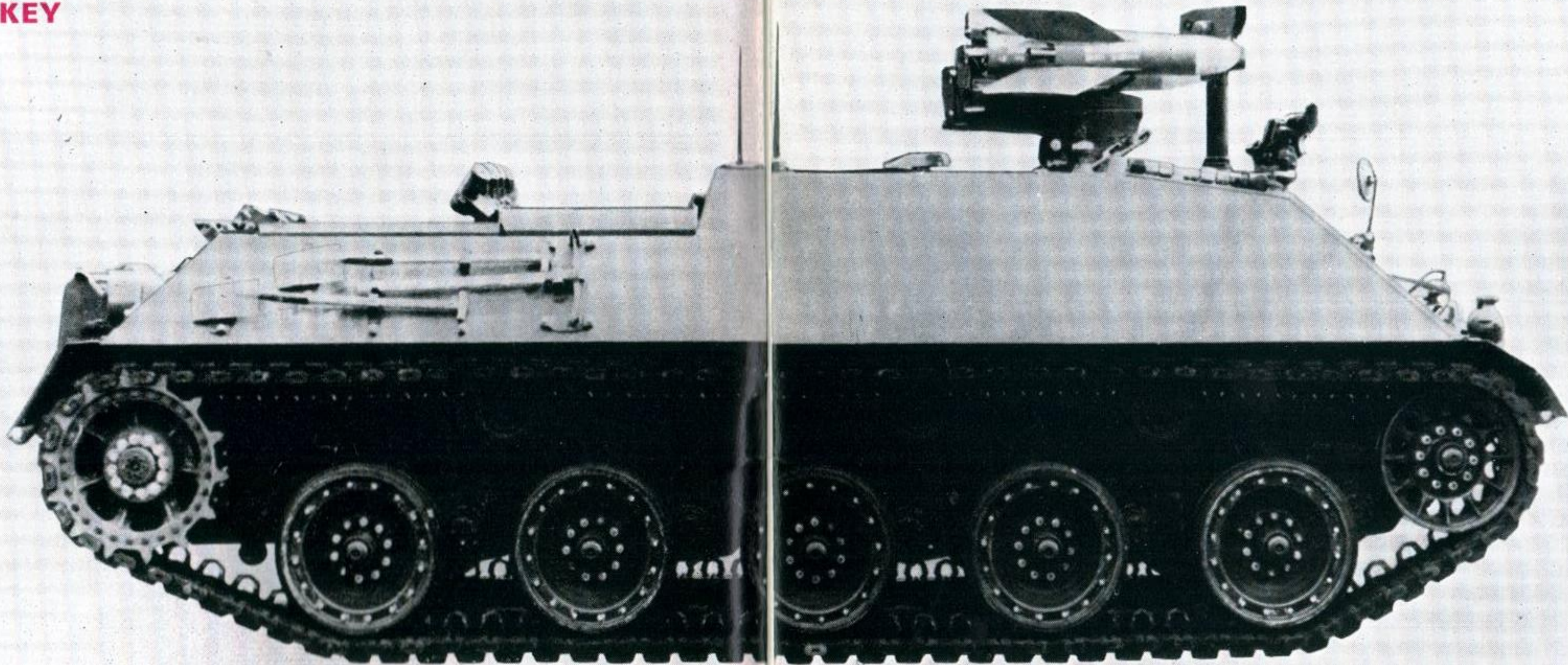
24

Lesson instructions are on page 171

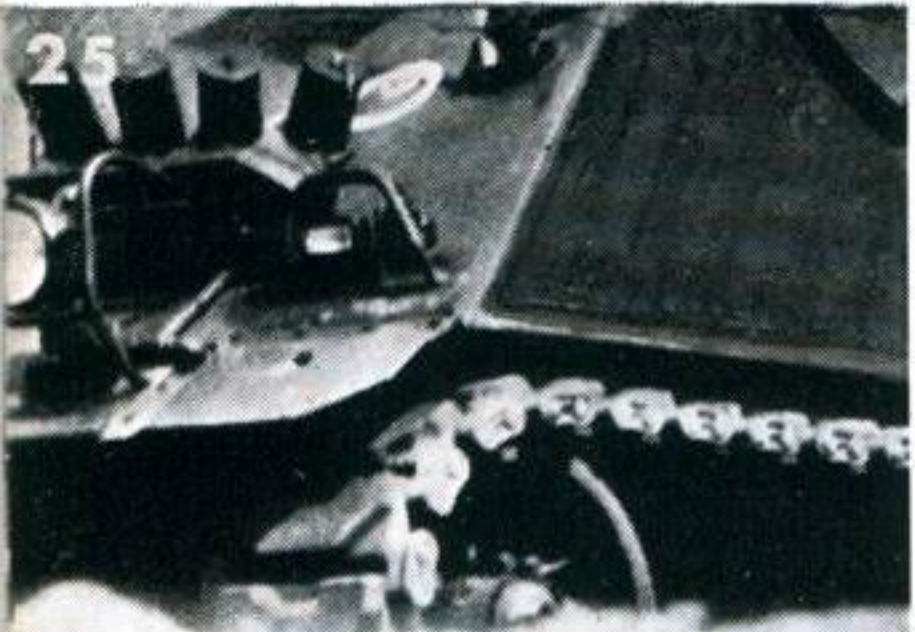


KEY

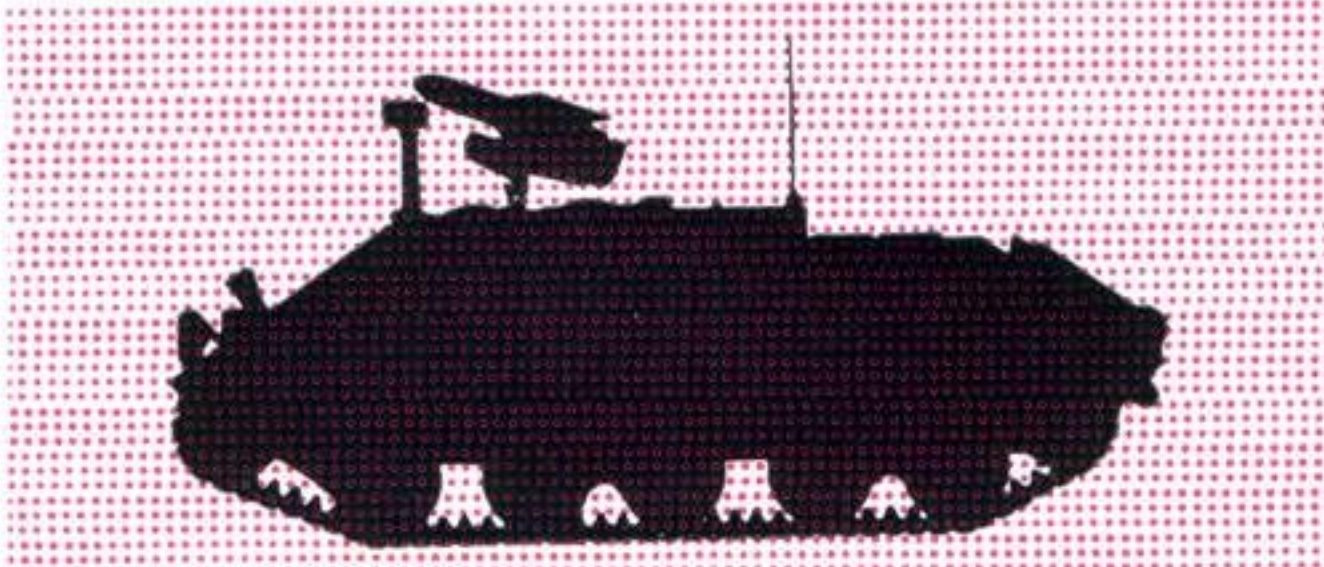
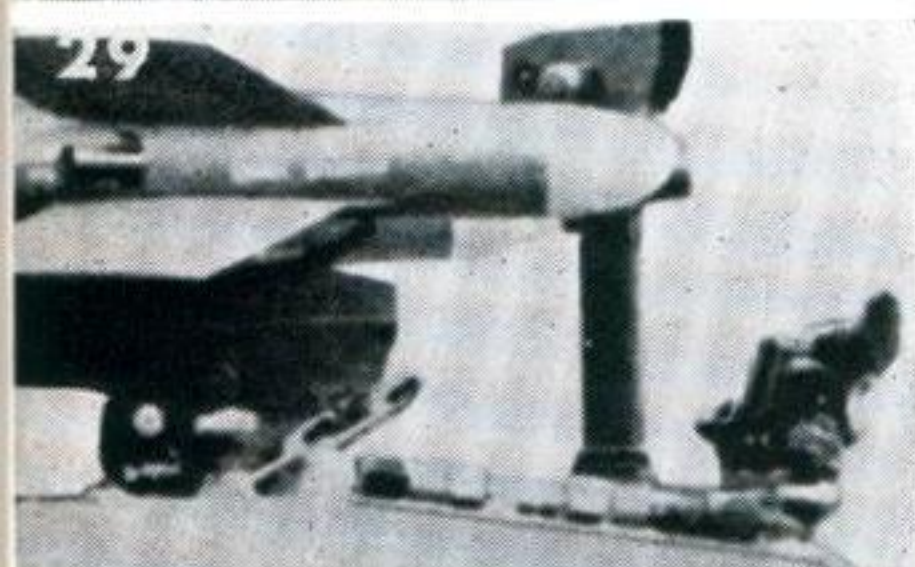
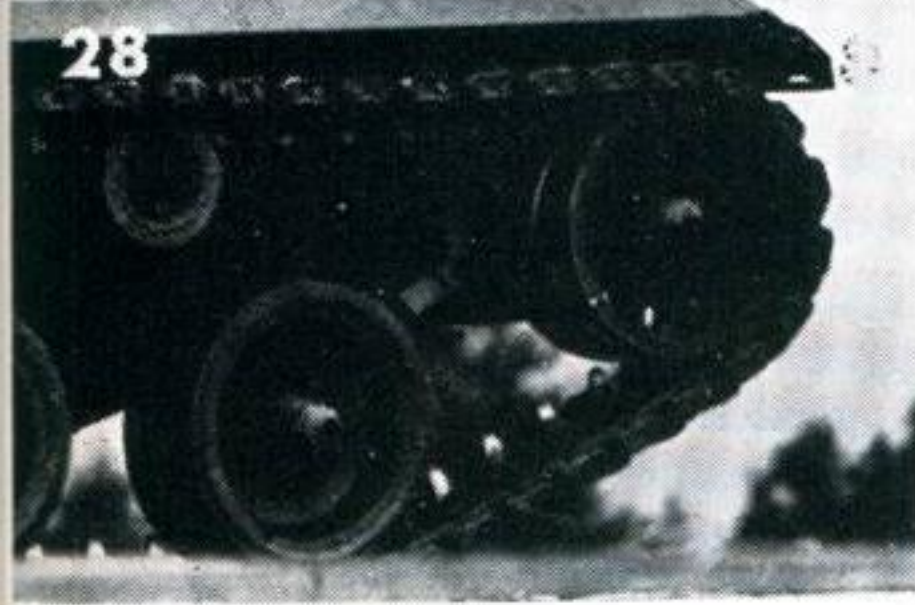
KEY



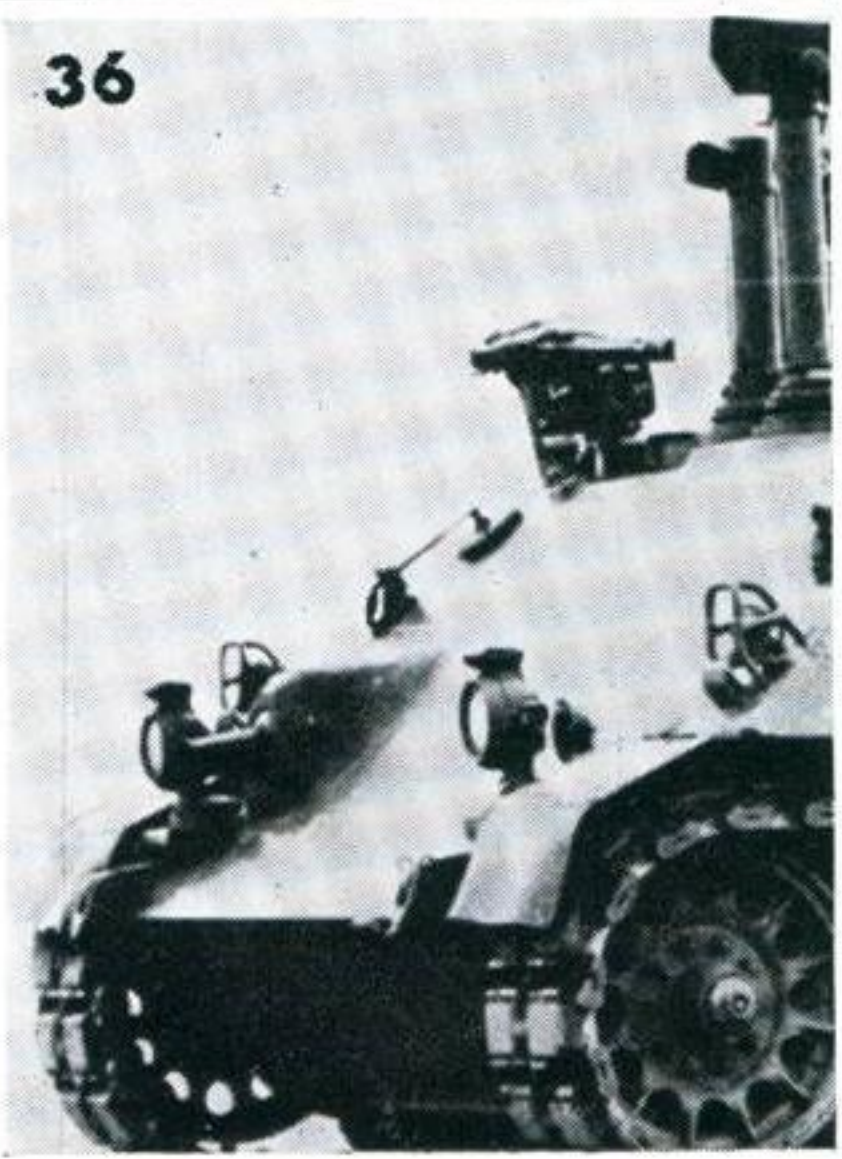
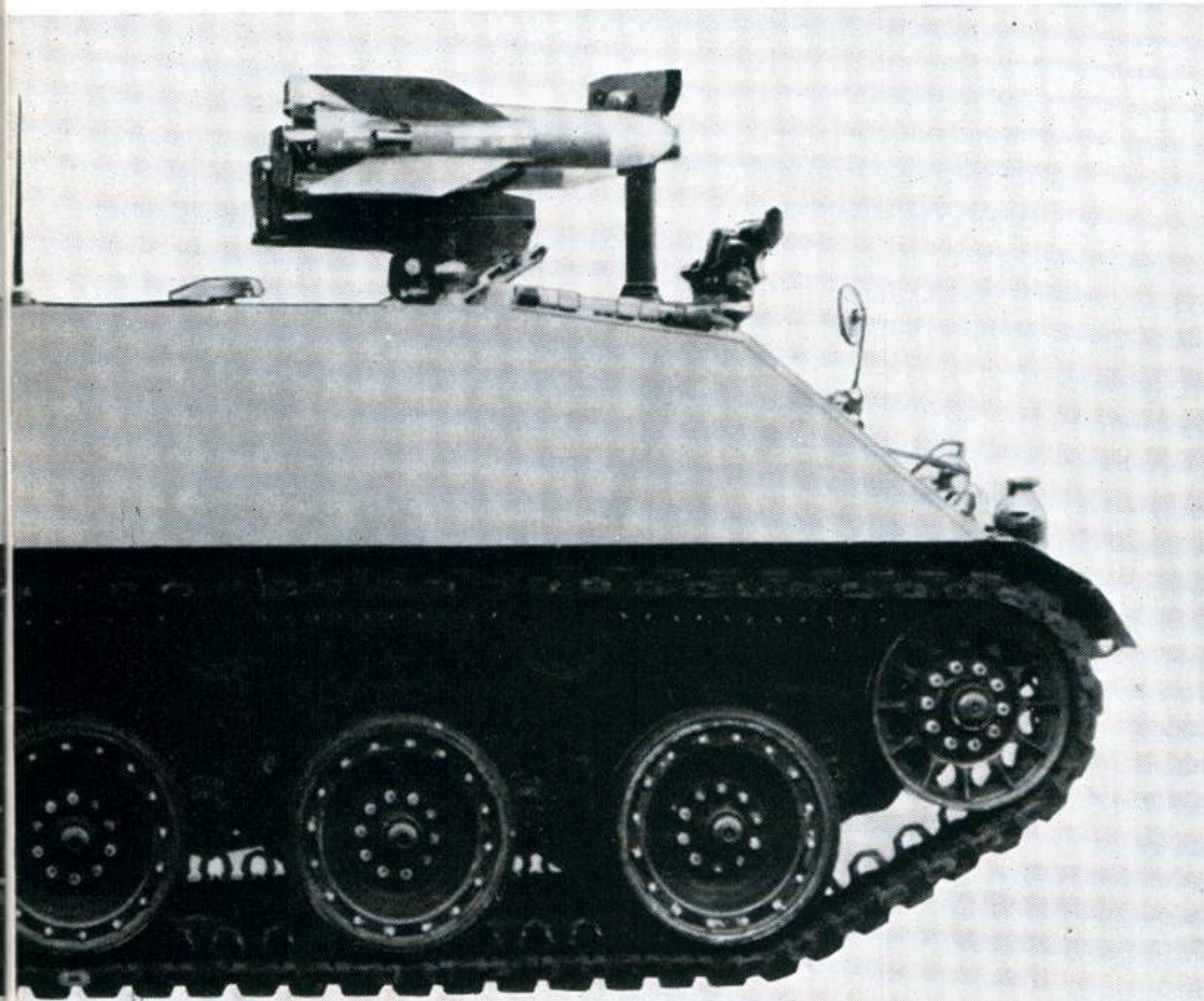
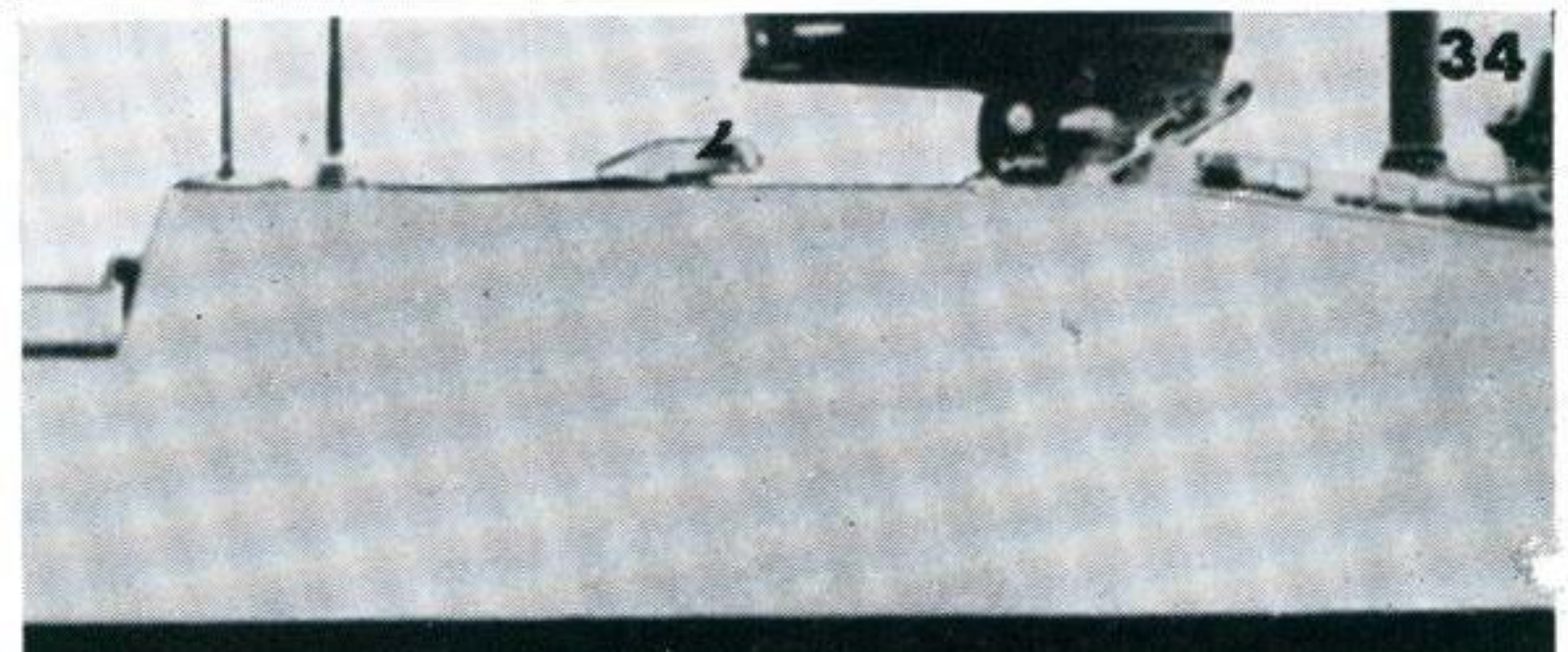
KEY



KEY



Solutions on the back cover





KEY

CLEAT

Lesson instructions are on page 171

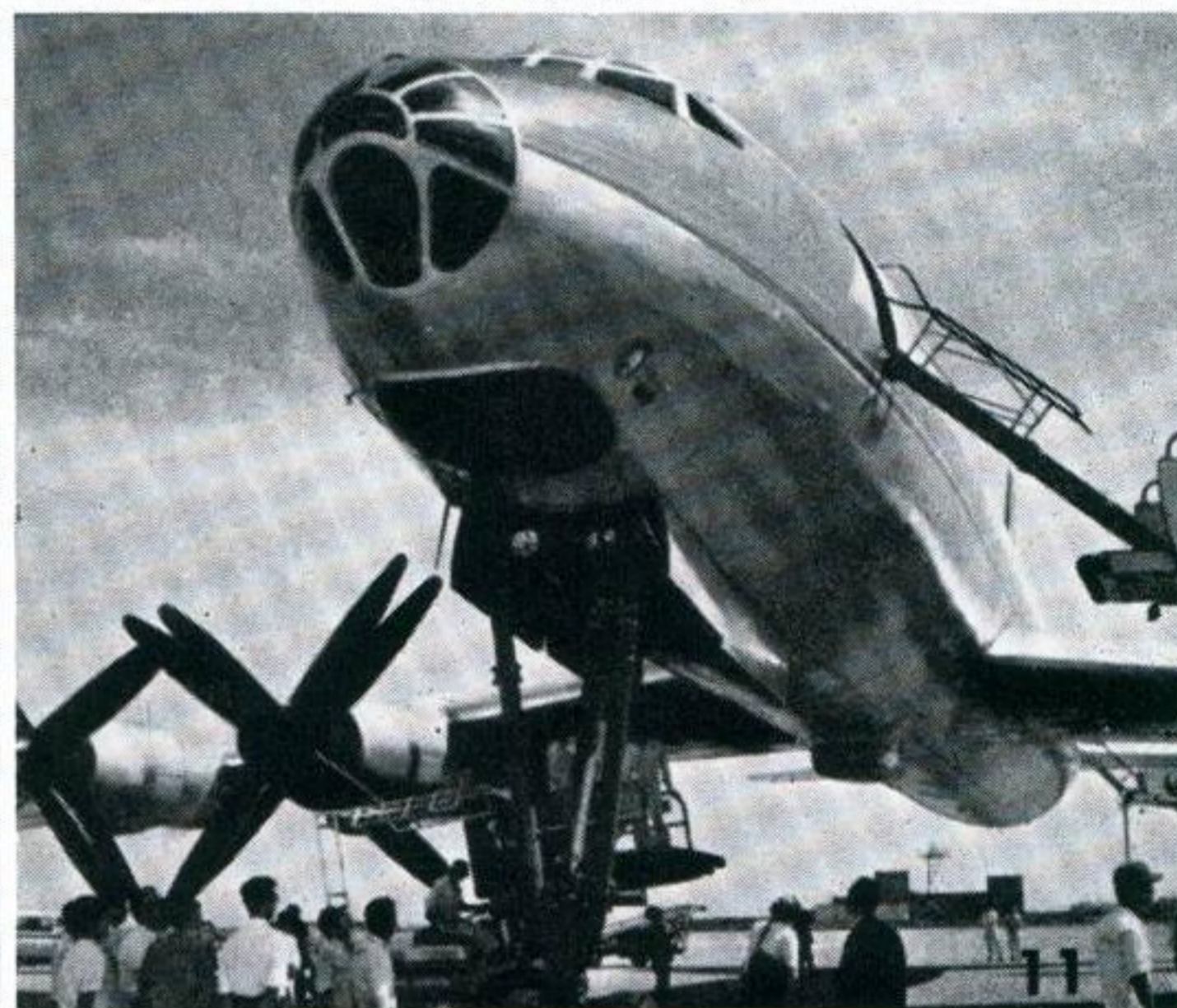
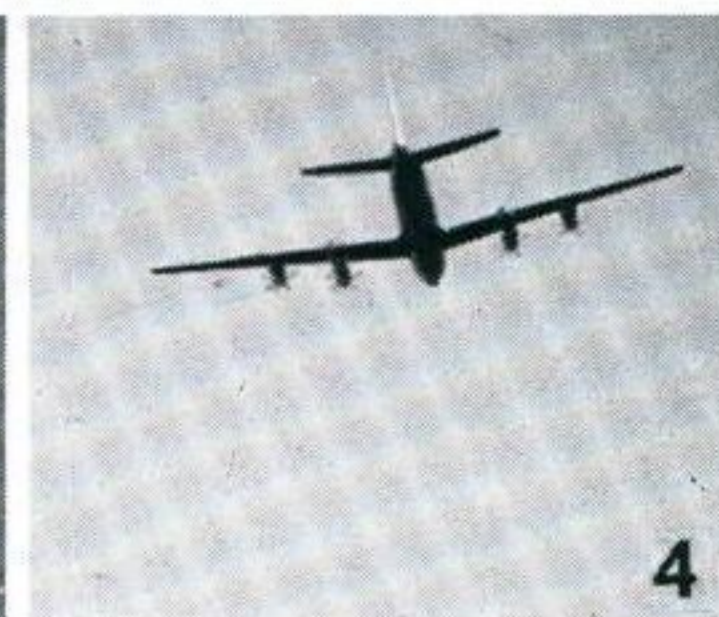
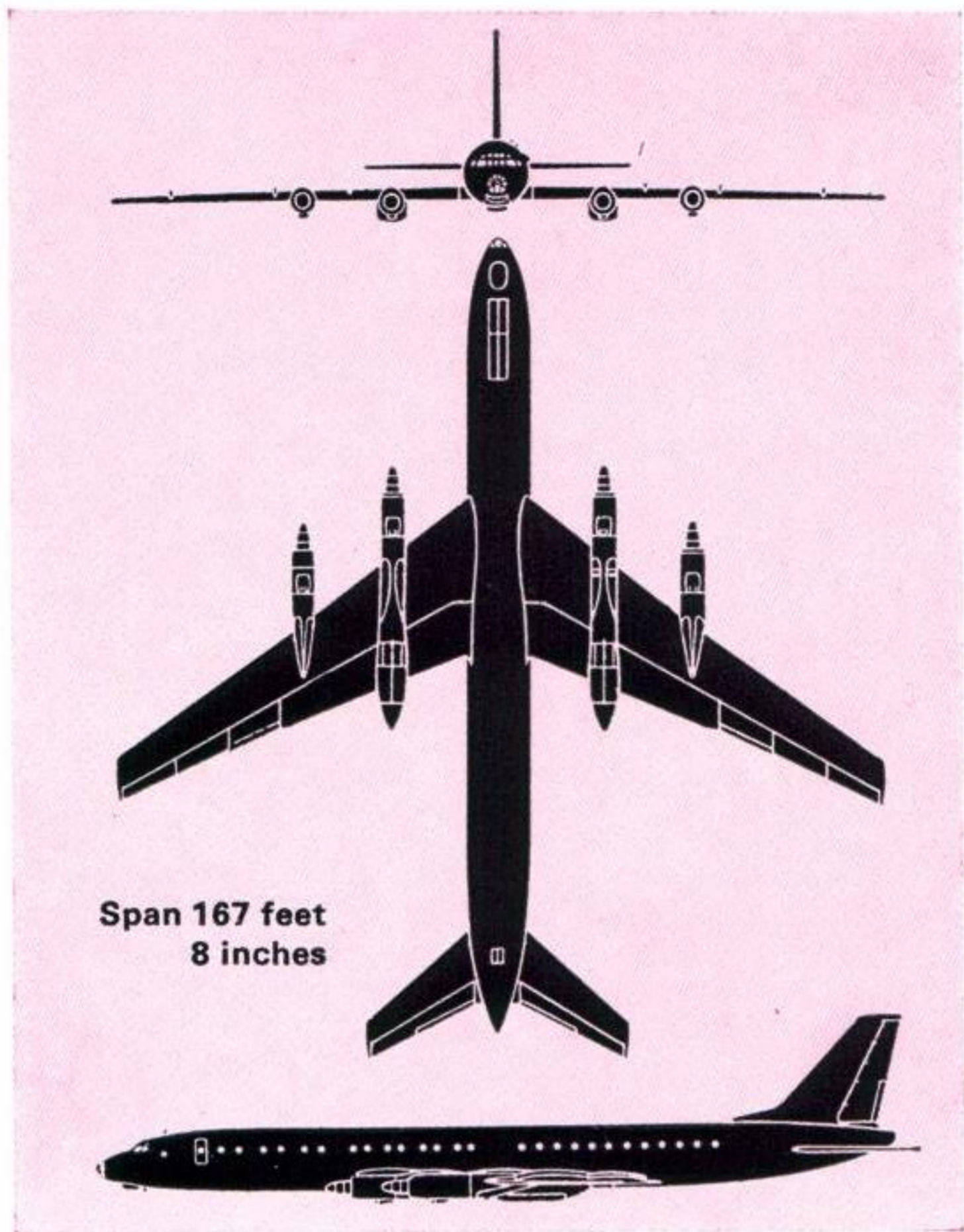
Solutions on the back cover

Russia's Tupolev Tu-114 turboprop-powered long-range passenger transport first flew in late 1957 and is a civil counterpart of the Tu-20 bomber (Bear), the main visible difference, of the standard Cleat being the redesigned fuselage—of greater girth and length. Cleat is operated by Aeroflot and is, in fact, the largest and heaviest airliner yet to enter commercial service.

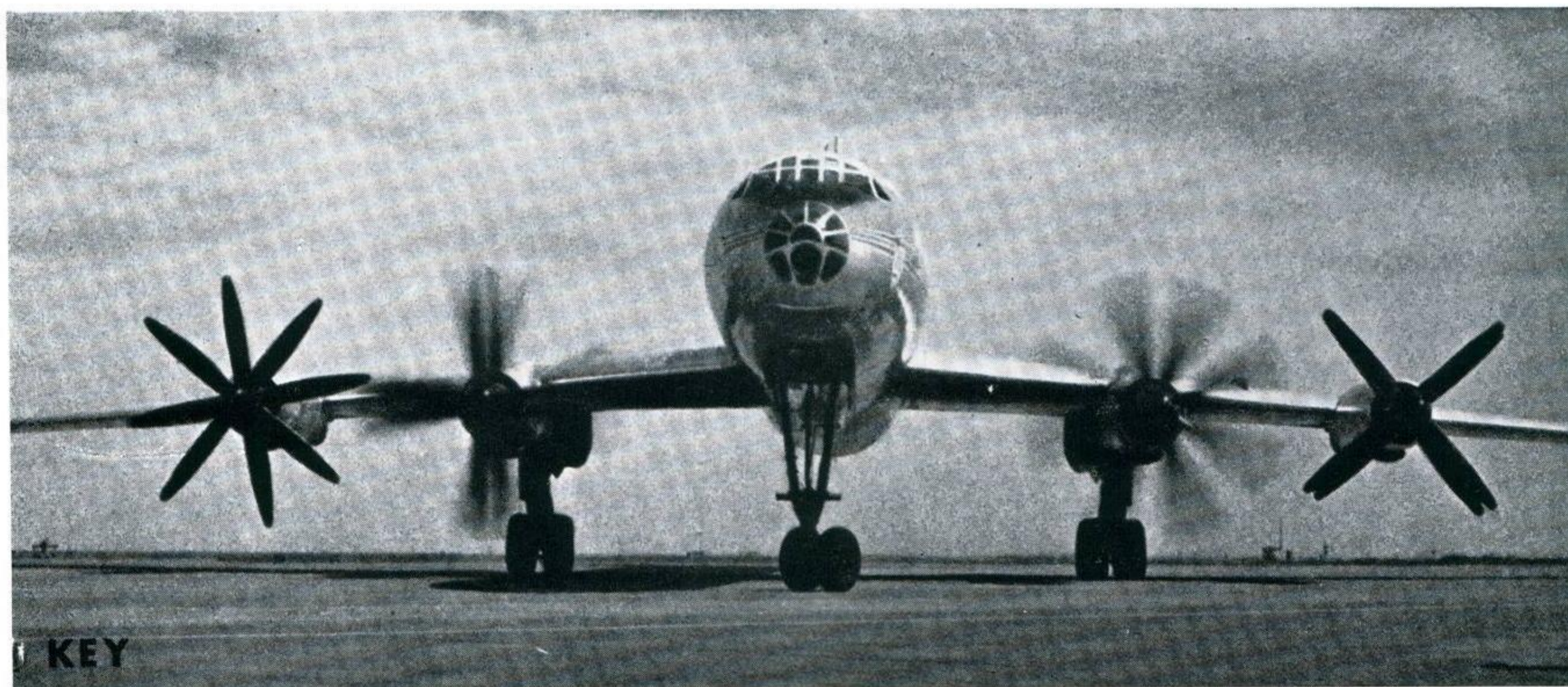
Two airliner versions are in service—the standard version, seating up to 220 passengers, and a version known as the Tu-114D with a shorter and slimmer fuselage of similar size to that of Bear.

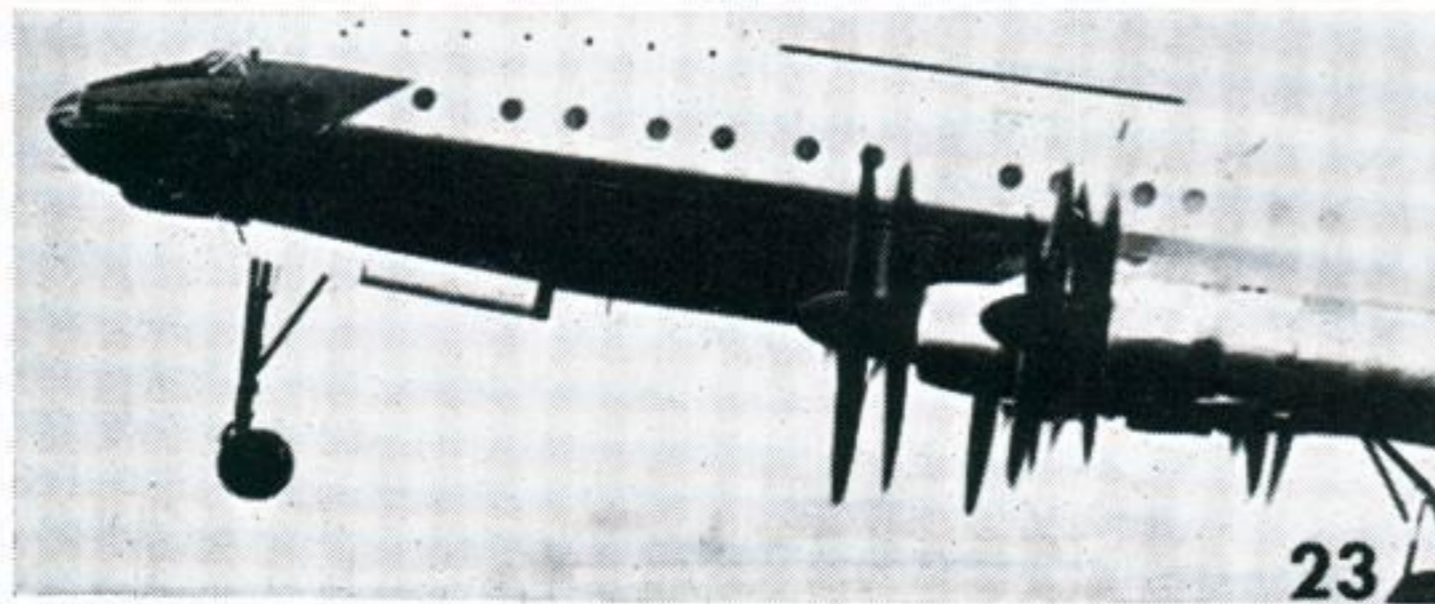
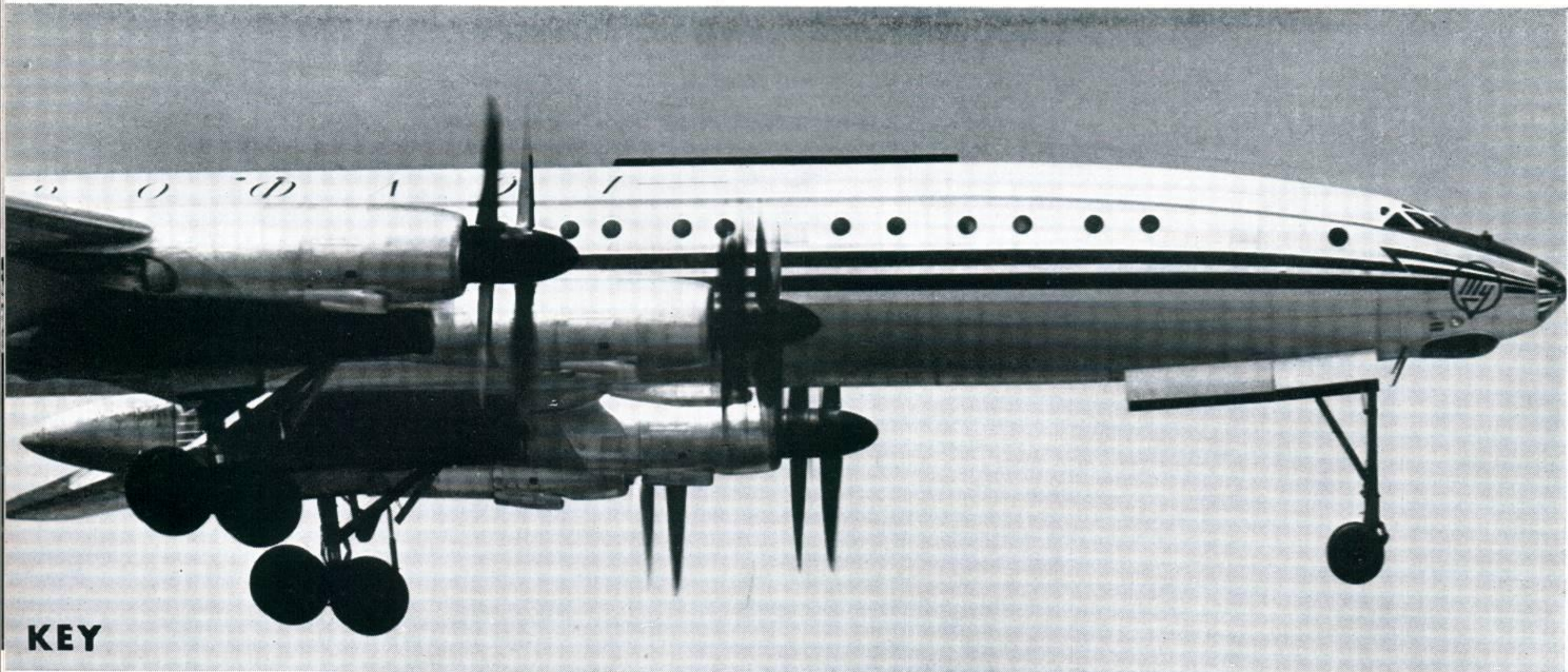


KEY



continued overleaf

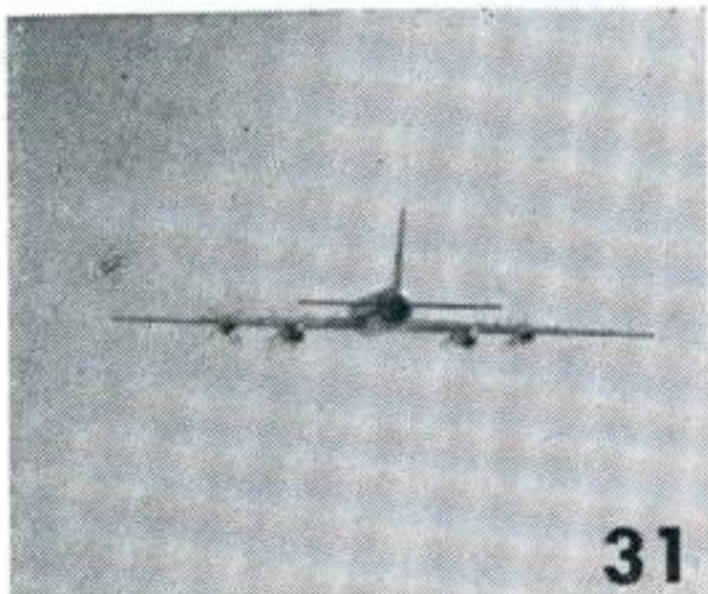
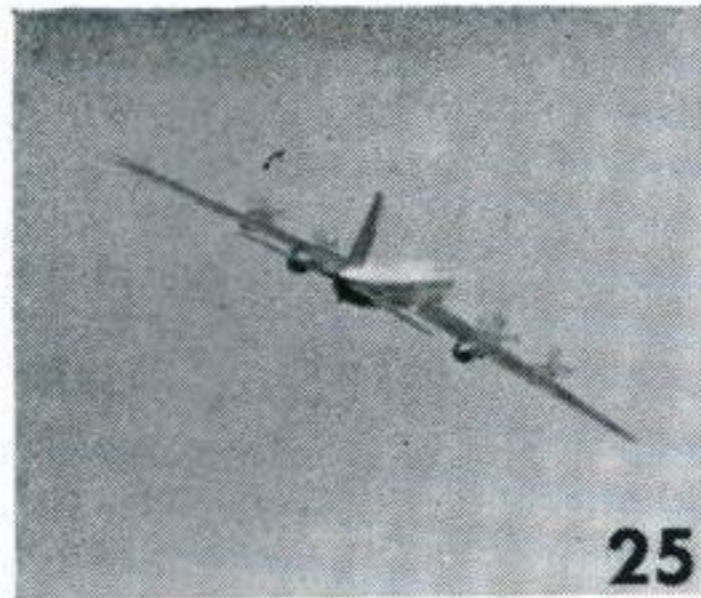
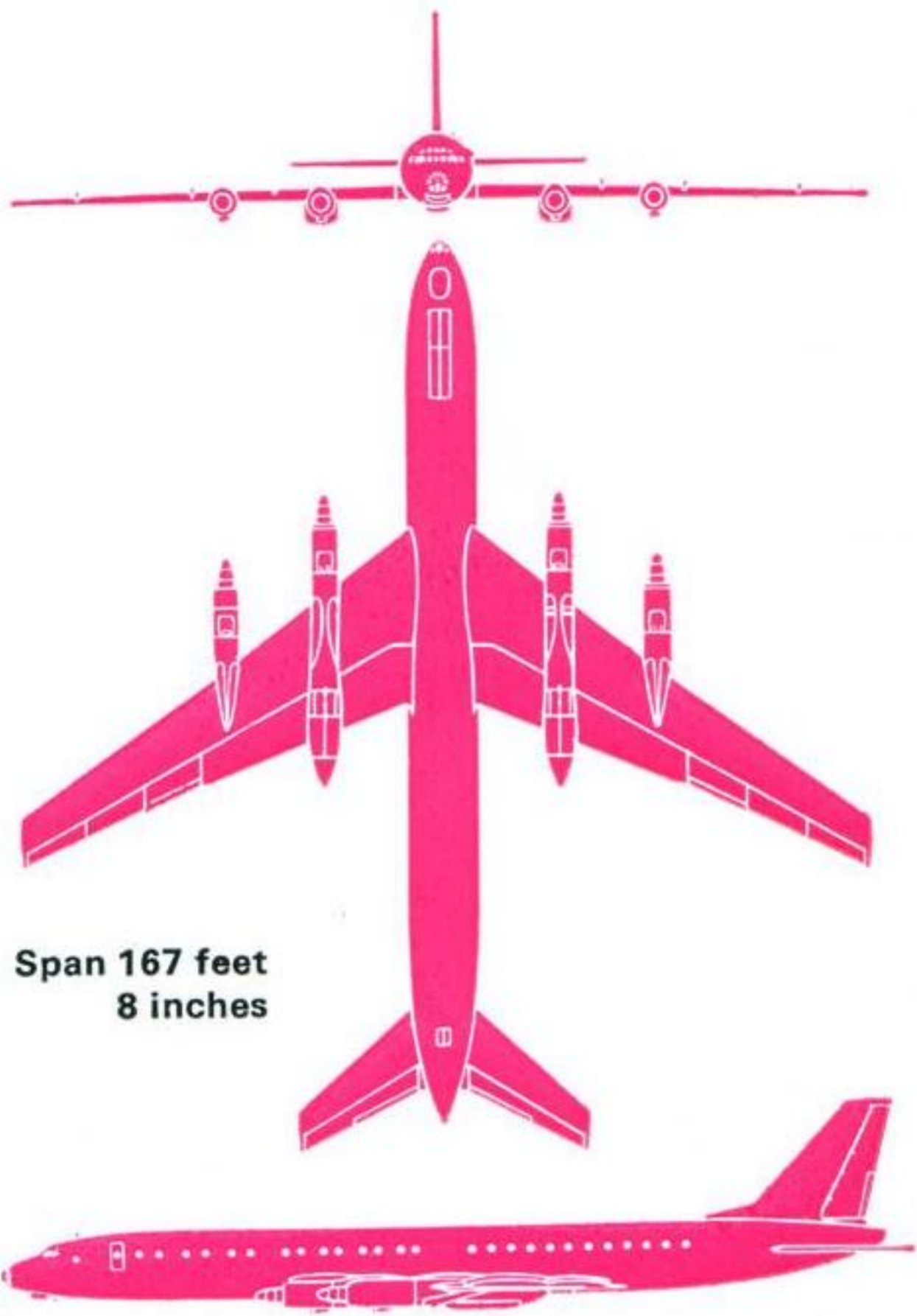




CLEAT *continued*

Evidence that a military version of Cleat exists was seen in a Russian documentary film released in the West in 1968. Sequences showed a Tu-114 carrying above its fuselage a "saucer"-type early warning radar of the type fitted to the U.S. Navy's E2-A Hawkeye.

Lesson instructions are on page 171, solutions on the back cover.

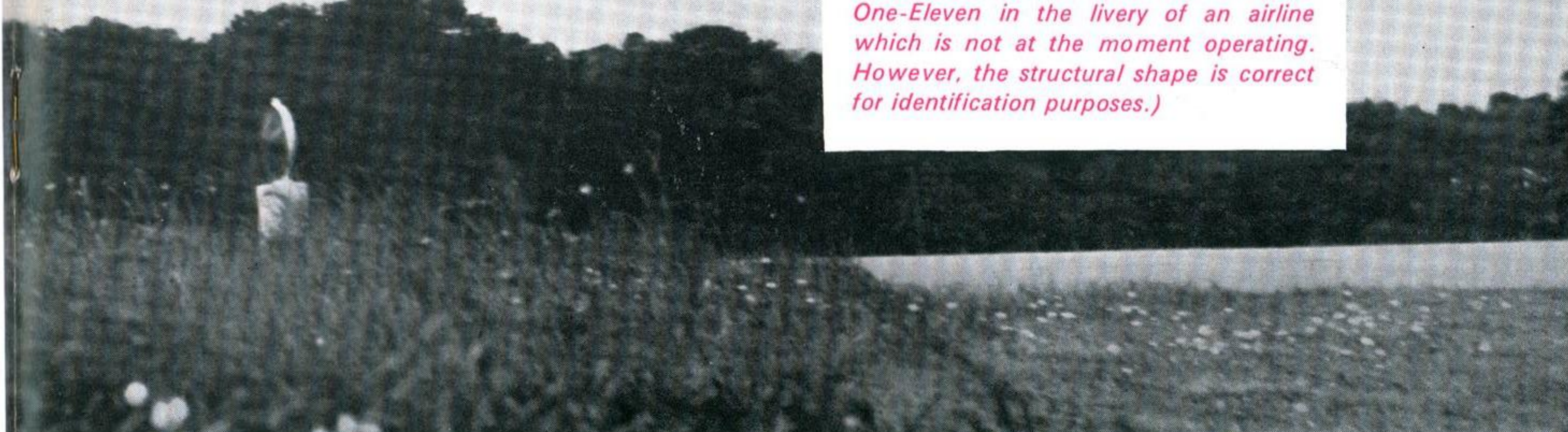


BAC ONE-ELEVEN



First flown in August 1963, the BAC One-Eleven was produced as the jet successor to the Viscount and it has been in service since April 1965. The original Series 200, an example of which is seen above, was followed into service by the Series 300 and 400 in 1966, and then in 1968 the first of the stretched Series 500s (inset) came into use.

(The upper photograph shows the BAC One-Eleven in the livery of an airline which is not at the moment operating. However, the structural shape is correct for identification purposes.)



Lesson begins overleaf



KEY

BAC ONE-ELEVEN

Lesson instructions are on page 171

The world's first short/medium haul jet airliner, the BAC One-Eleven twin-jet is in service world-wide and has so far been built in four main versions—the Series 200, with Rolls-Royce Spey-2 engines of 10,600-lb. thrust, the Series 300 and 400 with Spey-25s of 10,000–11,400-lb. thrust, and the enlarged Series 500 with Spey-25 Mk. 512s of 12,000-lb. thrust. Seating

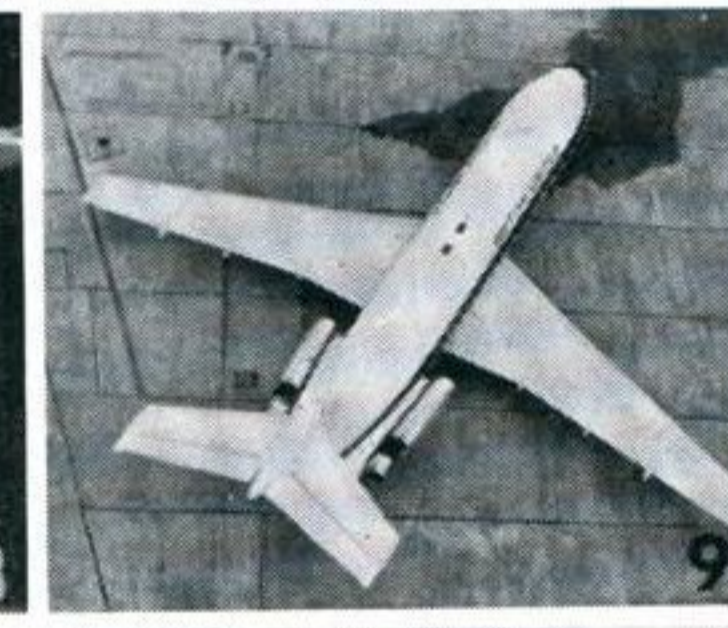
configurations of the Series 200, 300 and 400 range from two-class layouts for 63 passengers to one-class layouts for 84. The Series 500, which has a fuselage 13.5 feet longer than the earlier models and also an increased-span wing, carries up to 97 passengers. The Series 500 first flew on June 30th, 1967, and is seen in the large key view above.

continued overleaf

(Series 500)
93 feet 6 inches



Span 88 feet 6 inches
(Series 200, 300 and 400)



Solutions on the back cover

KEY





KEY

ONE-ELEVEN *continued*



15



16



17



18



19



20



21



22



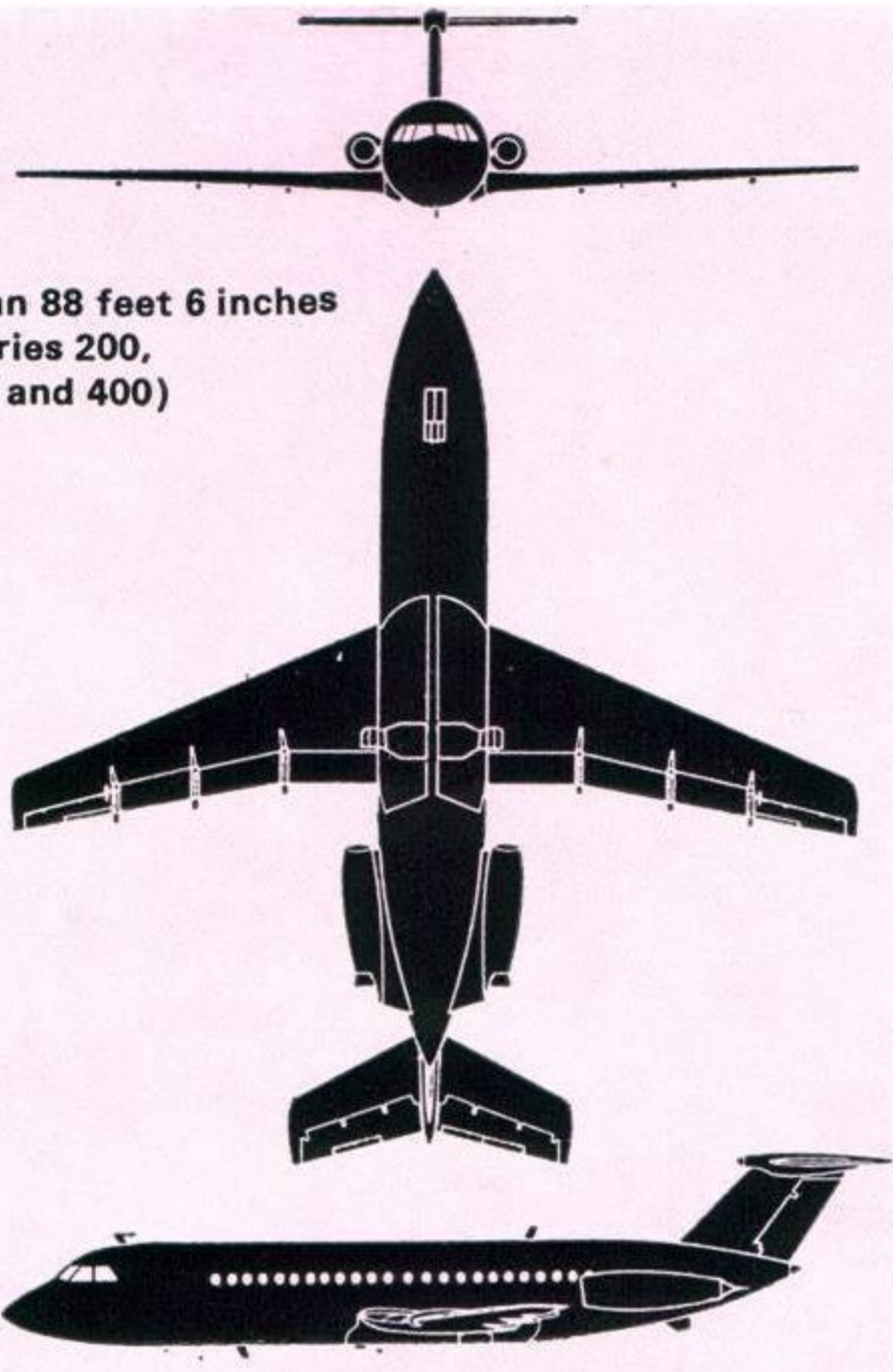
23



24

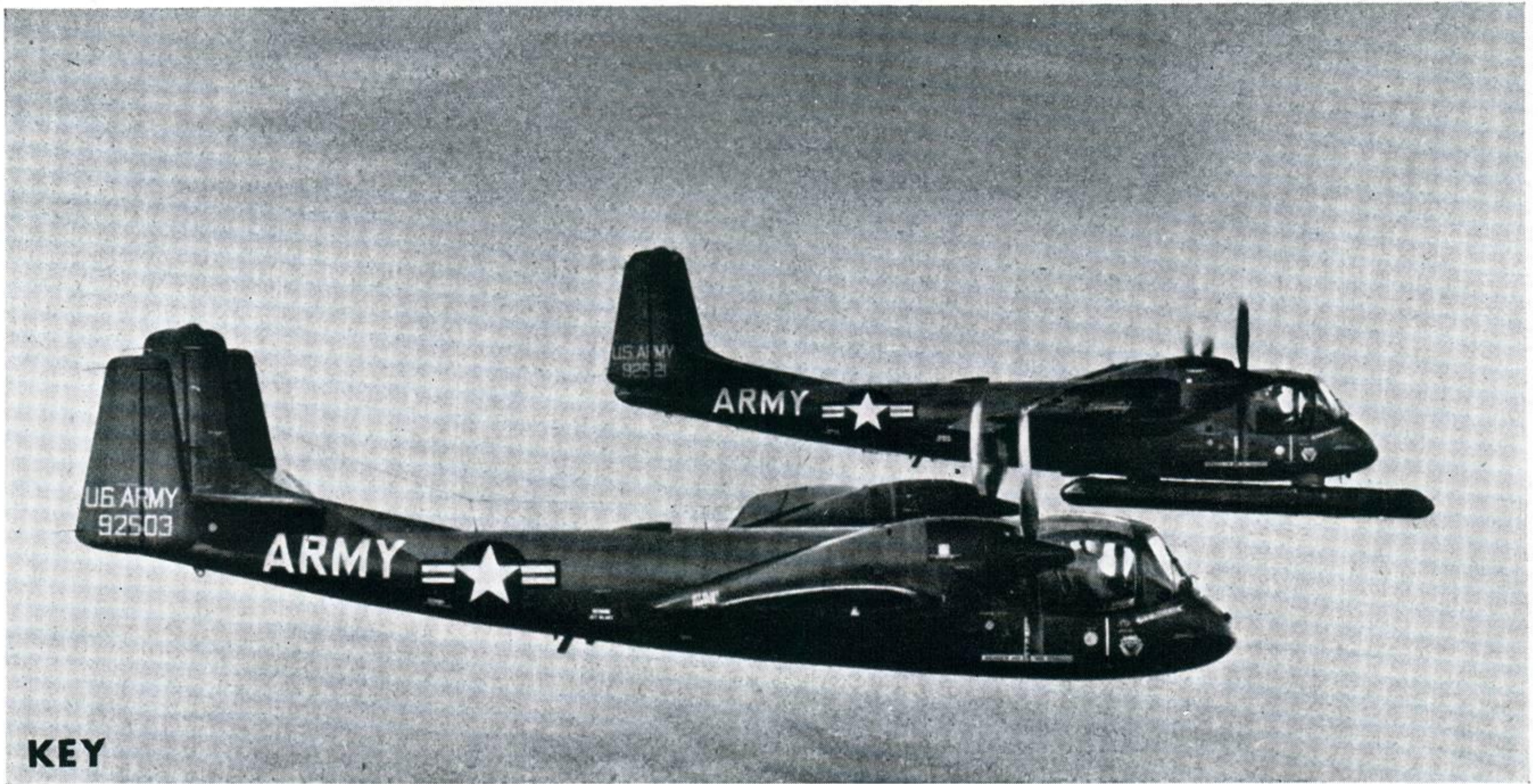
Though the One-Eleven can be confused with other twin- and tri-jet airliners, training should be confined to this lesson before any comparisons are made with similar twin- and tri-jet airliners. Work to the lesson instructions on page 171 and report all targets as One-Eleven—or otherwise if jokers—and check your answers with the solutions on on the cover.

Span 88 feet 6 inches
(Series 200,
300 and 400)



KEY





MOHAWK

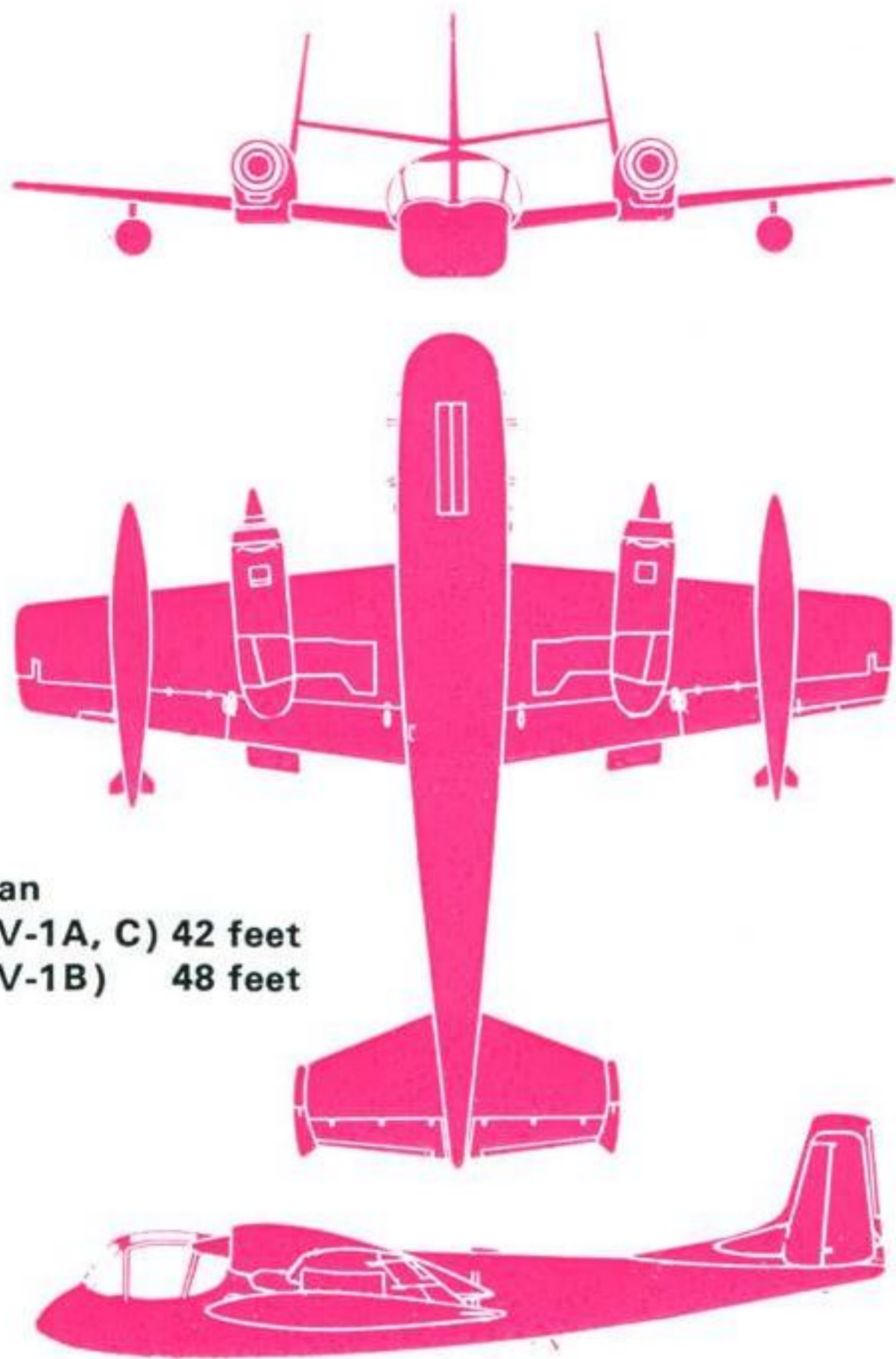
Lesson instructions are on page 171

Developed by Grumman for the U.S. Army, the OV-1 (formerly AO-1) Mohawk is a two-seat observation aircraft and was the first turboprop-engined type to go into service with the U.S. Army. Several versions have been announced since the first test aircraft flew in April 1959, and these include the OV-1A, primarily for photo reconnaissance; the OV-1B with side-looking

airborne radar (SLAR) in a cigar-shaped pod slung beneath the fuselage and increased wing span and area; the OV-1C with infra-red mapping gear; and the OV-1D with provision for conversion between SLAR and infra-red modes. Deliveries of the Mohawk began in 1961 and many are now in service, mostly OV-1B and OV-1C models.

continued overleaf



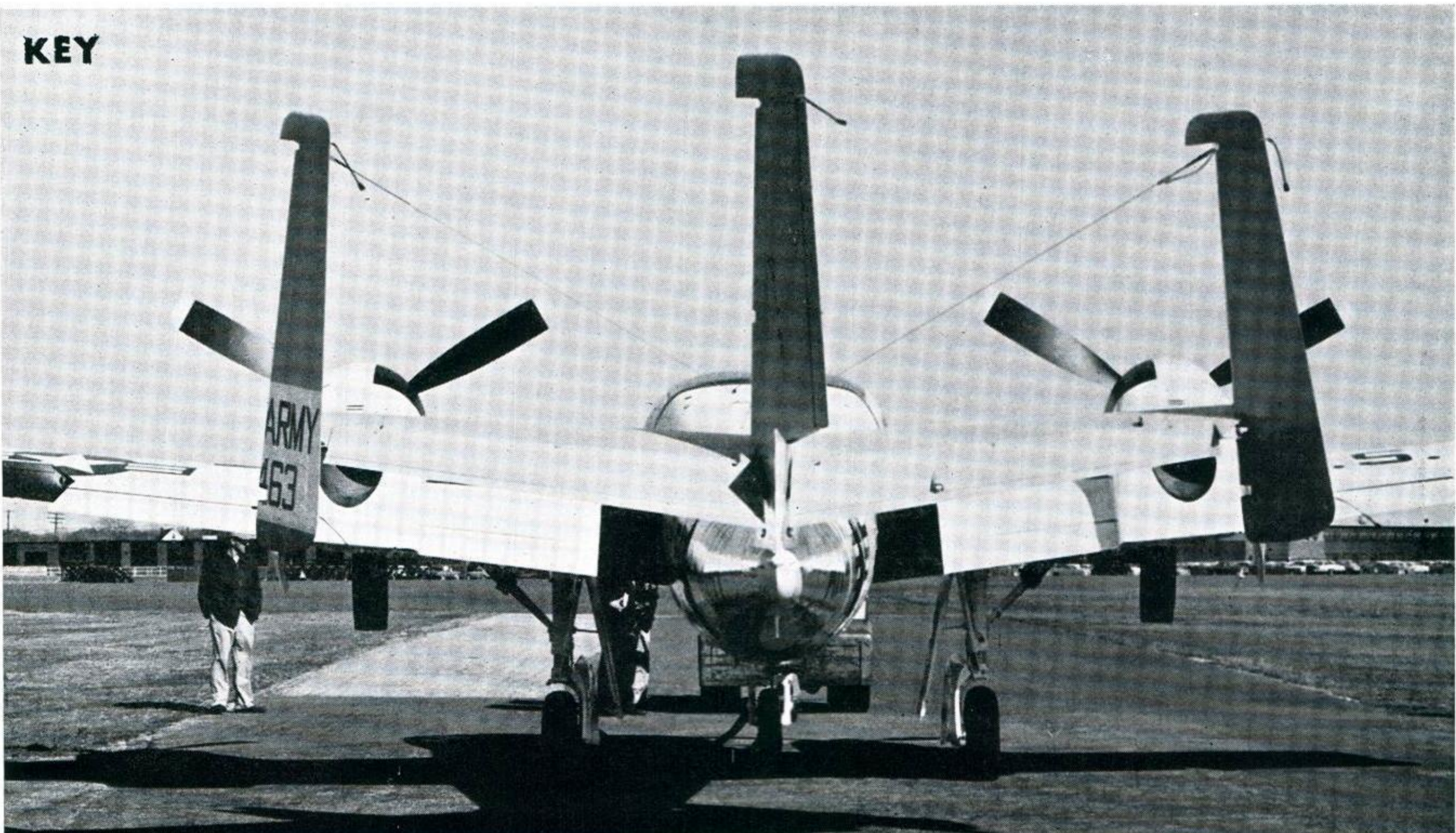


Span
 (OV-1A, C) 42 feet
 (OV-1B) 48 feet



Solutions on the back cover

KEY





KEY

MOHAWK *continued*



13



14



15



16



17



18



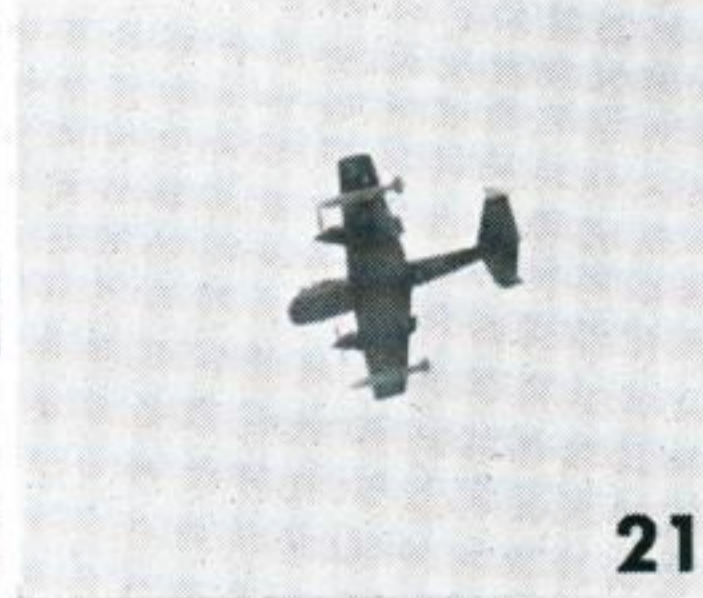
22



19



20



21



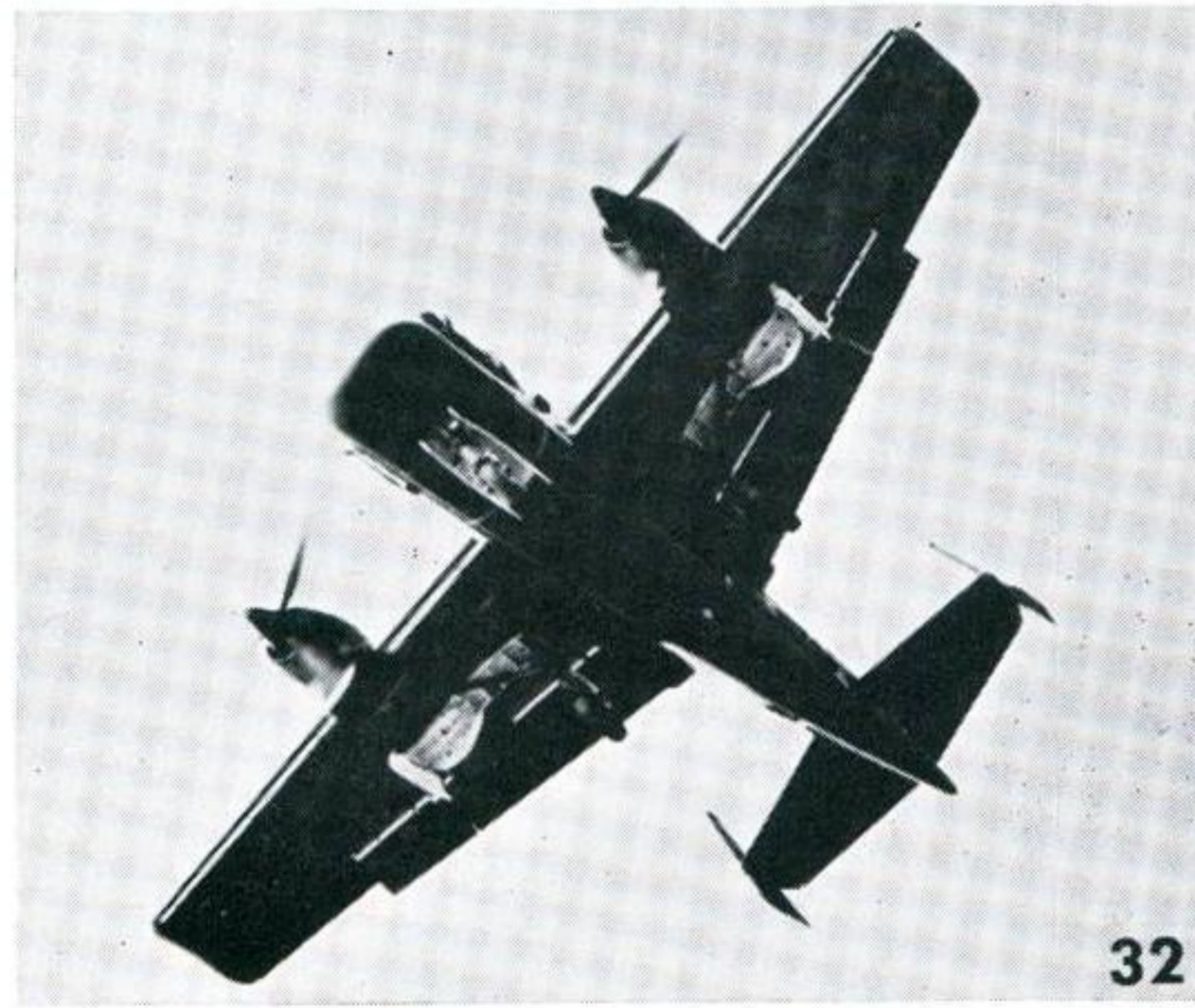
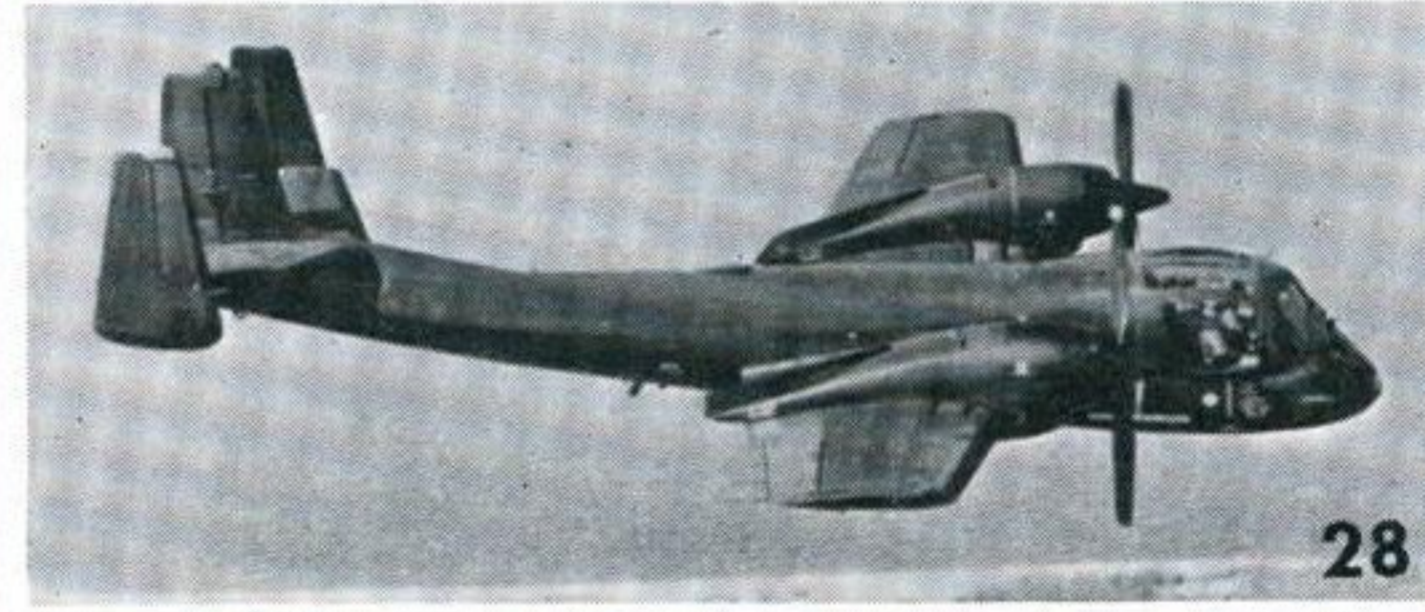
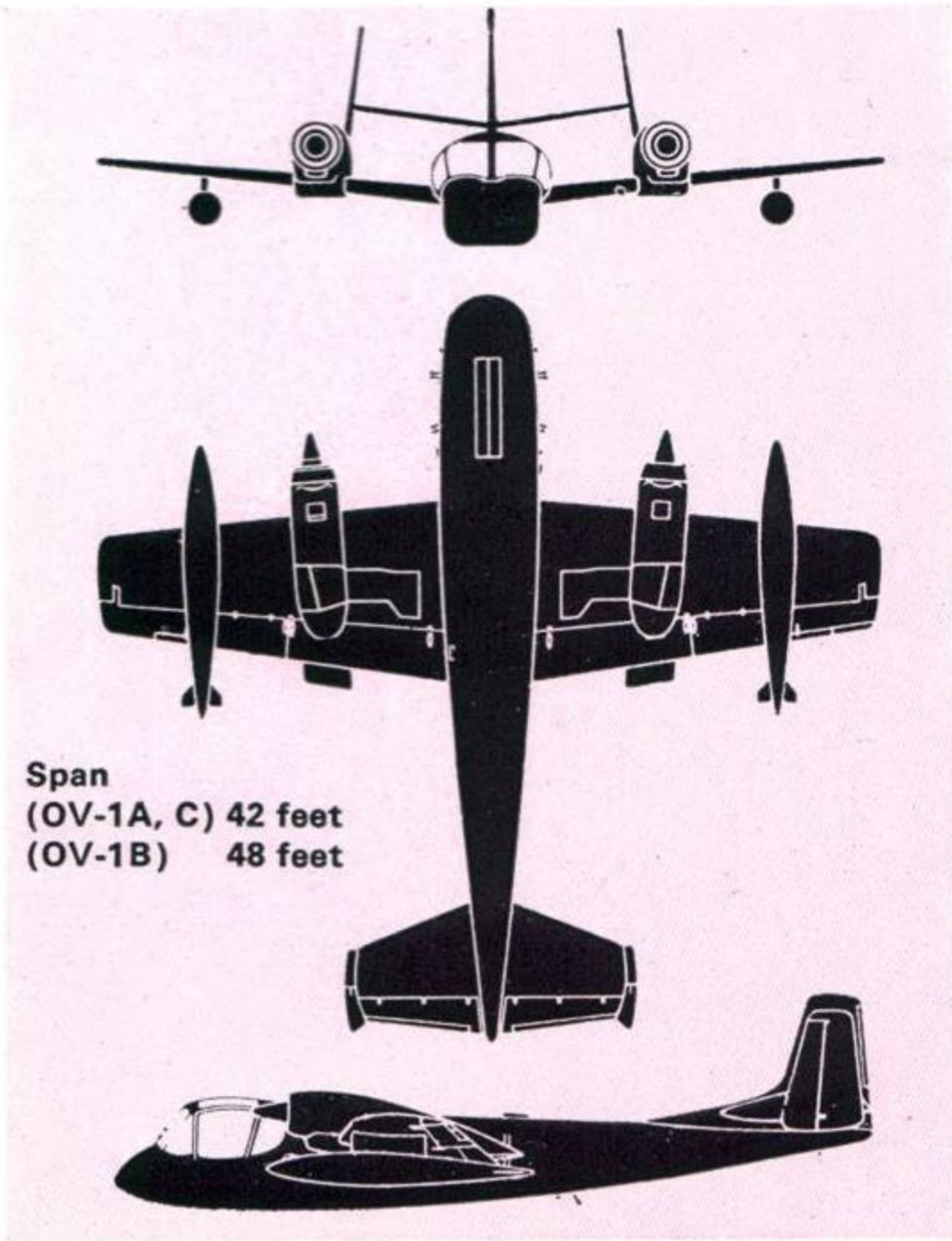
23



24

Latest version to be announced is the OV-1E, a projected development with modified forward fuselage and intended for advanced electronic surveillance duties, crew proficiency training and cargo transport.

Lesson instructions are on page 171, solutions on the back cover. Note that Mohawks can be seen with underwing tanks or other stores.





CRUSTY

Lesson instructions are on page 171

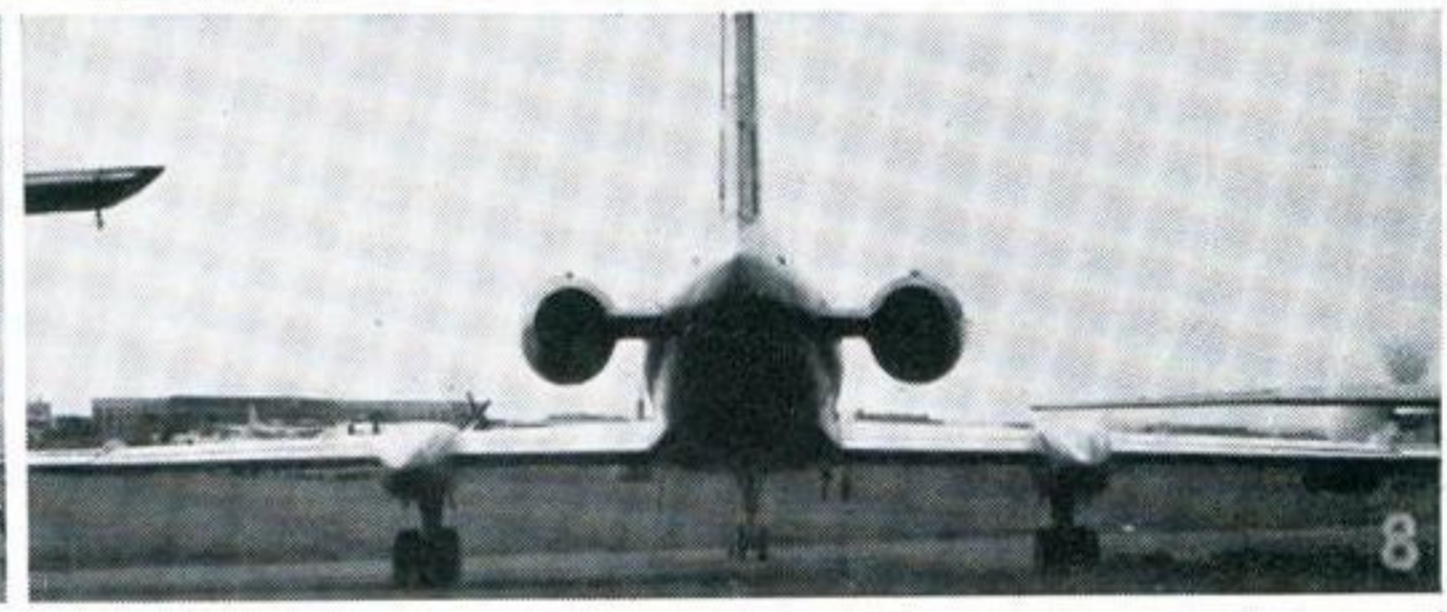
Solutions on the back cover

Russia's answer to the BAC One-Eleven, the Tupolev Tu-134A, is a development of the Tu-124 (Cookpot) but with the engines relocated on the rear fuselage, a "T" tail and many other detail changes.

First announced in September 1964, Crusty entered international service on Aeroflot's Moscow–Stockholm route in September 1967 after a period on domestic services, and examples have since been ordered by airlines in Czechoslovakia, East Germany, Bulgaria, Poland and Hungary.



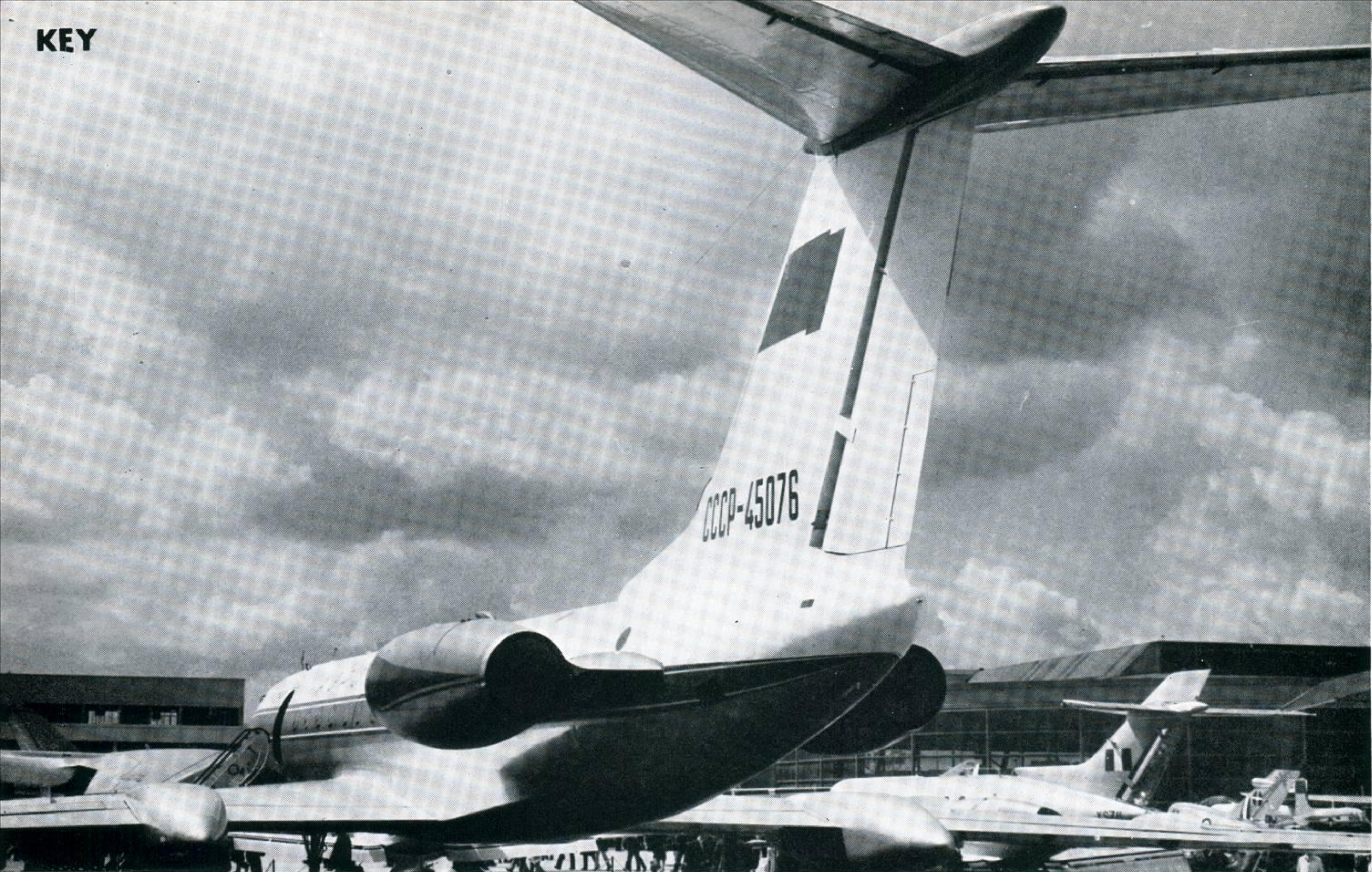
Span 95 feet 2 inches



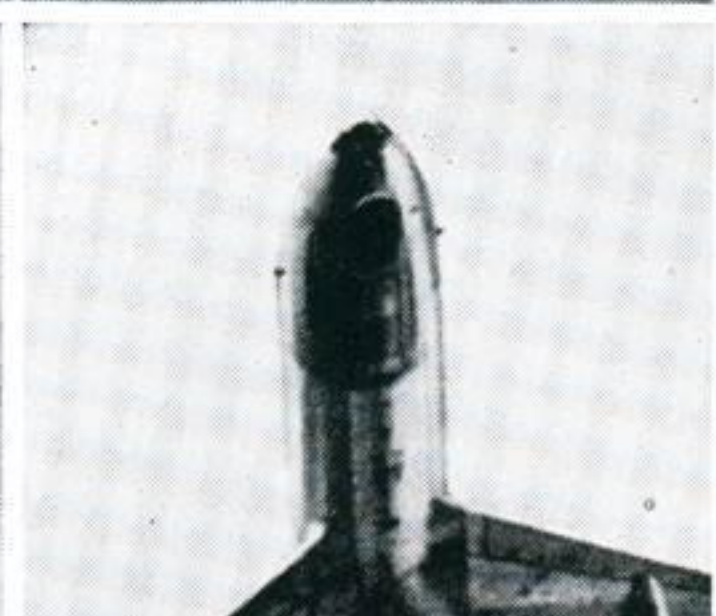
continued overleaf

KEY



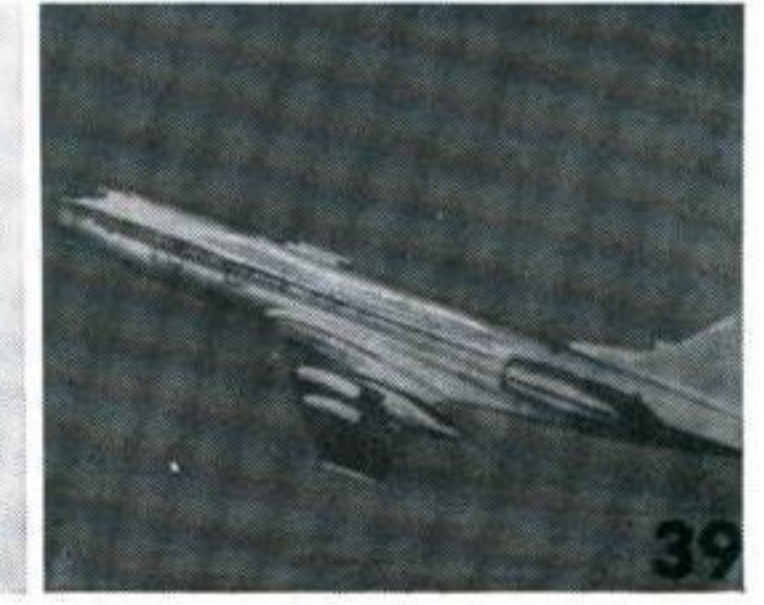
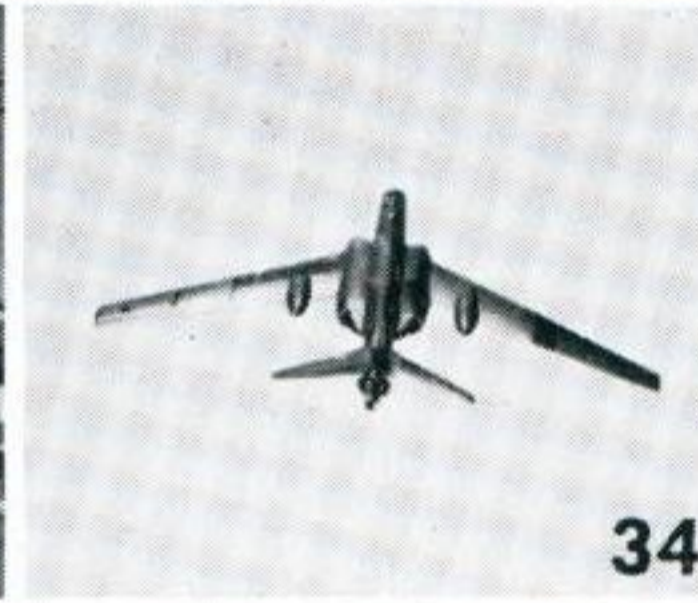
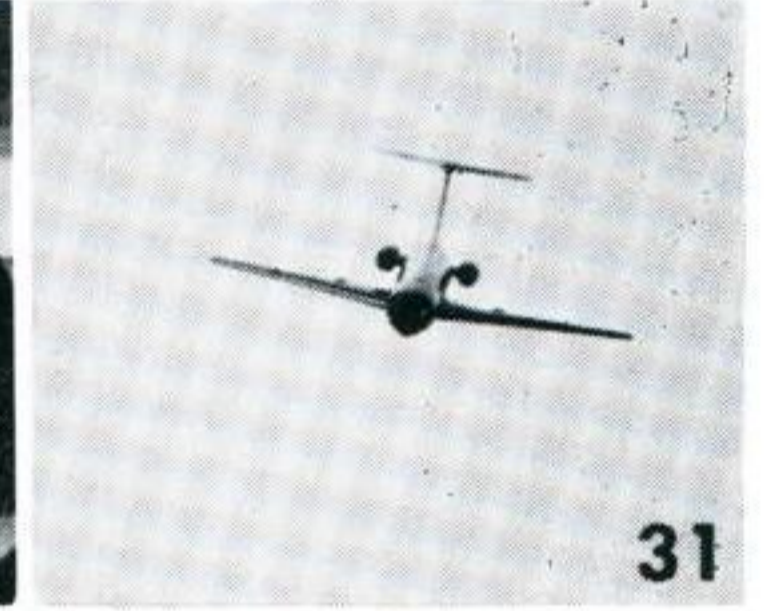
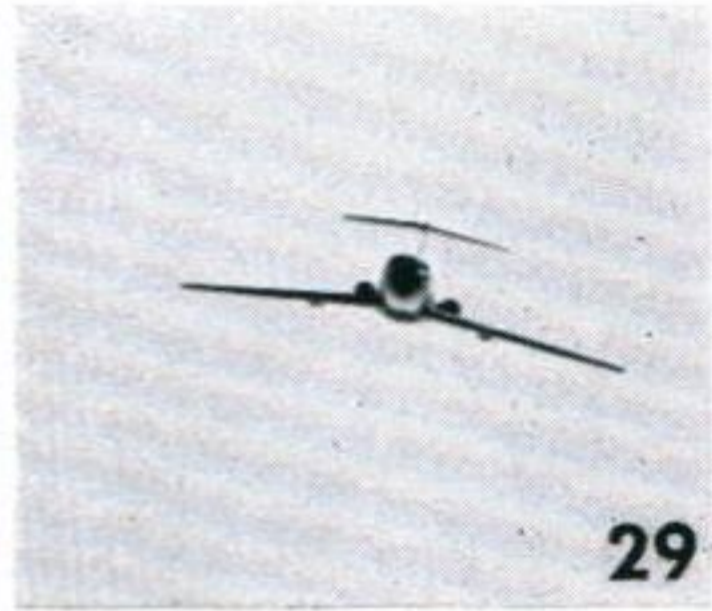
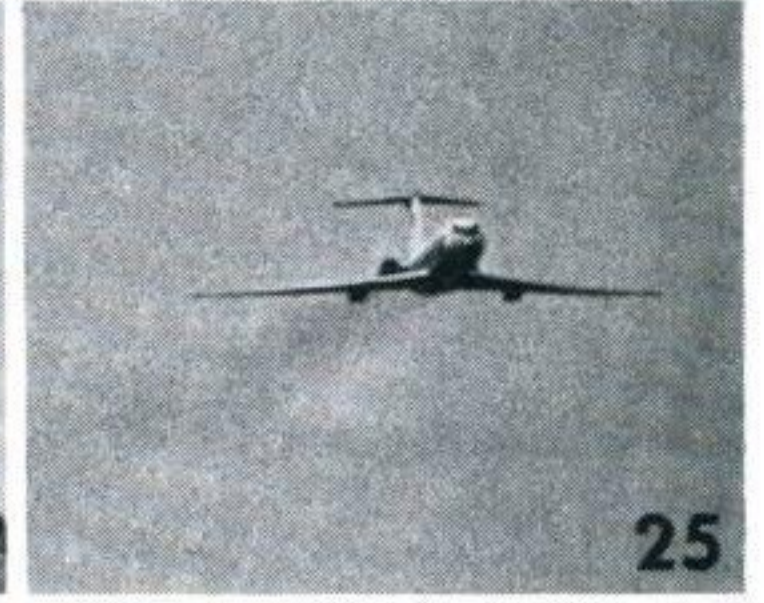
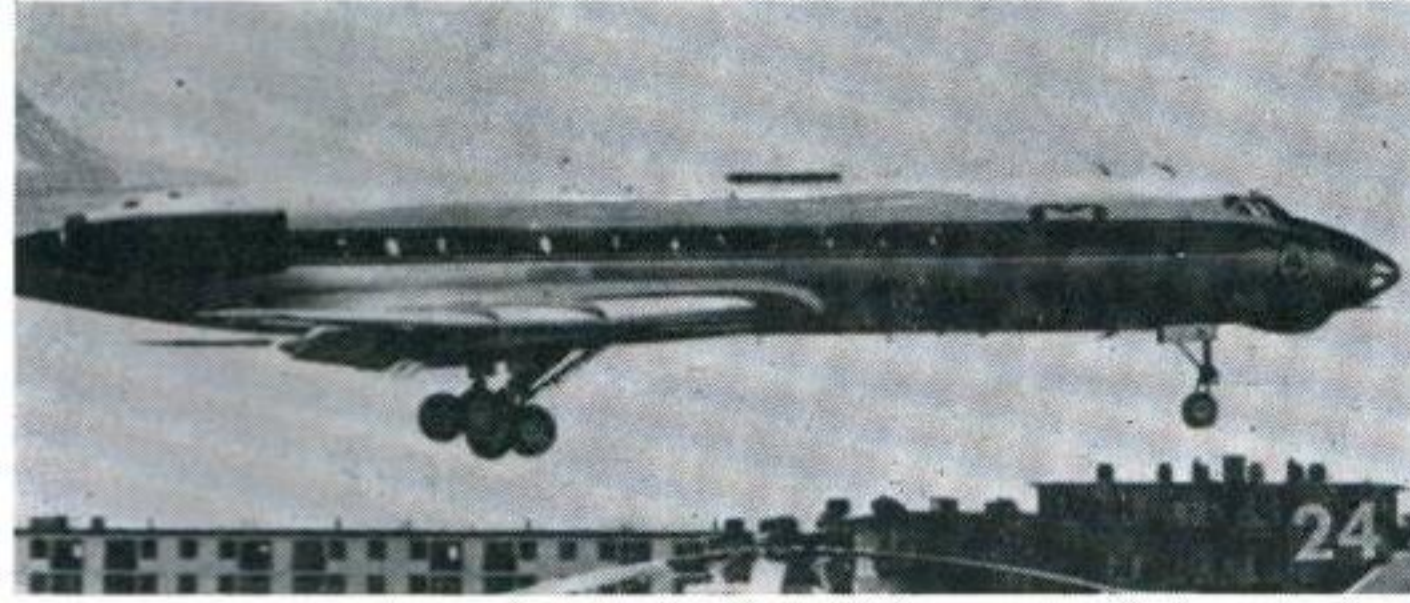


CRUSTY *continued*



As the Tu-134A closely resembles such types as the One-Eleven and Caravelle from some angles, it needs to be learned thoroughly. To do this, work to the lesson instructions on page 171 and report all targets as Crusty—or otherwise if jokers—and check your answers with the solutions on the back cover.

Span 95 feet 2 inches



KEY





Cover Photo: RAF Canberra and RN Buccaneer overfly three ships of the Royal Navy in the Mediterranean during the NATO exercise Eden Apple. The ships, left to right, are HMS *Torquay*, HMS *Eastbourne* and HMS *Hampshire*. HMS *Torquay* and HMS *Eastbourne* are "Whitby" Class, Type 12, Anti-Submarine Frigates and HMS *Hampshire* is in the "County" Class, Guided Missile Armed Destroyers.

SOLUTIONS TO TESTS AND EXERCISES

Page 172

SKYVAN

All targets are **Skyvan** except Nos. 4 and 14 **Clod** and 12 **Islander**.

Page 175

JAGDPANZER-RAKETE

All targets are **Jagdpanzer-Rakete** except No. 31.

Page 178

CLEAT

All targets are **Cleat** except Nos. 10 and 30 (**Bear**) and No. 14 (**Britannia**).

Page 182

ONE-ELEVEN

All targets are **One-Eleven** except Nos. 12, 24 and 33 which are **Trident**.

Page 188

MOHAWK

All targets are **Mohawk** except Nos. 15 (**Greyhound**) and 30 (**Caribou**).

Page 192

CRUSTY

All targets are **Crusty** except Nos. 10 (**Caravelle**), 20 and 34 (**Badger**) and 38 (**VC-10**).



WESTERN FLEET SHIPS IN SOUTH AMERICA

Seven ships of the Royal Navy's Western Fleet, led by the guided missile destroyer H.M.S. *Hampshire*, have been paying courtesy visits to five South American countries—Peru, Chile, Argentine, Brazil and Uruguay. On passage through the Panama Canal H.M.S. *Juno* (left), H.M.S. *Arethusa* and the submarine H.M.S. *Narwhal* berth alongside the Rodman U.S. Naval Base, Panama.