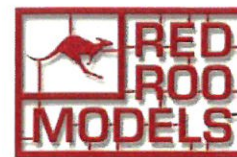


RRR72143

1/72 SCALE ARDU C-47 DAKOTA - PROJECT INGARA

7 Multimedia Parts in Resin and Brass, includes decals



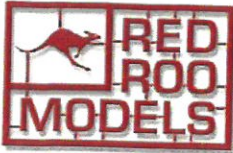
RAAF Official

Suitable for intermediate and advanced modellers.

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RRR72143



RED ROO MODELS 1/72 SCALE AIRCRAFT RESEARCH AND DEVELOPMENT UNIT C-47 DAKOTA - PROJECT INGARA

INGARA DAKOTA CONVERSION

This conversion in 1/72 scale for the Royal Australian Air Force (RAAF) Aircraft Research and Development Unit (ARDU) Project 'Ingara' Dakota is designed for the Italeri and Airfix Douglas DC-3/Dakota kit.

Technology Organisation's Project Ingara. This project was undertaken to test the design of a radar system capable of producing high resolution ground mapping images at long stand-off ranges, including detecting targets such as trucks and tanks.

Introduction

The longest serving transport in the history of the RAAF is the venerable Douglas C-47 Dakota. Long after being superseded by the Caribou and Hercules, the last survivors continued serving as research platforms with ARDU, based at Edinburgh, South Australia.

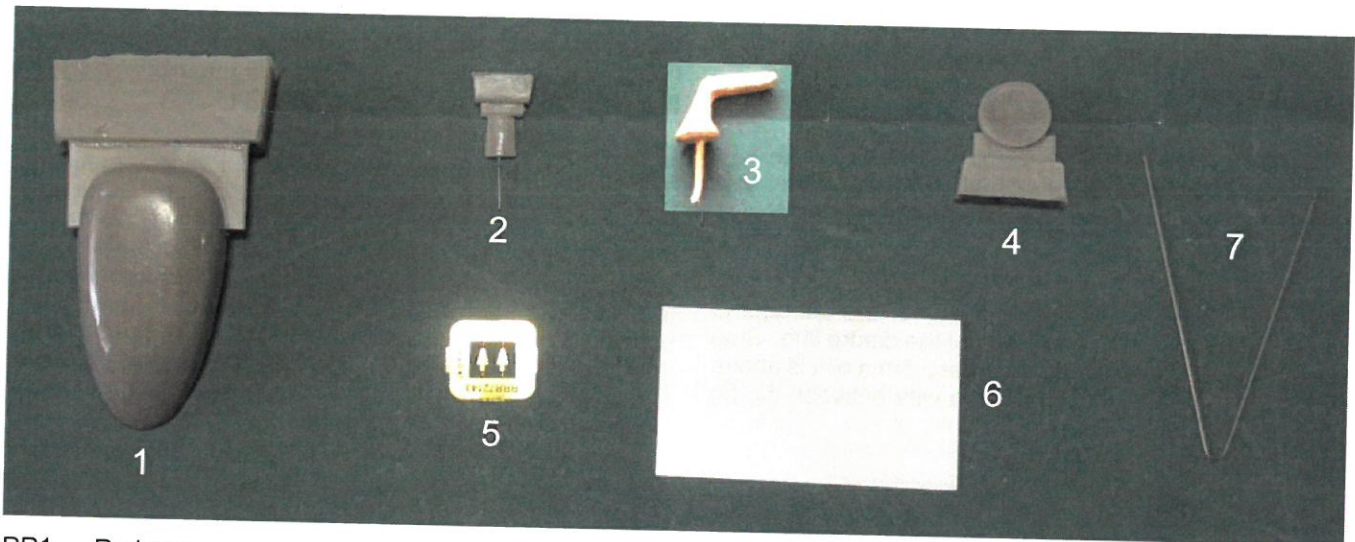
By mid 1994 some 75 hours of flight testing had produced exceptional results with further testing and refinements continuing.

The electronics were mounted in the cargo area and the system was operated by a crew of two.

One of these, A65-86, was modified in 1992 with a radome underneath the rear fuselage to house a synthetic sideways looking radar developed by the Defence Science and

On completion of the test programme the radome was removed and the aircraft was pensioned off, eventually going to the Royal Australian Navy Fleet Air Arm Museum at Nowra, New South Wales.

Ingara Dakota Parts List



- RR1 Radome
- RR2 Blade antenna
- RR3 VHF antenna
- RR4 Astrodome mount

- RR5 Transponder aeriels (etched)
- RR6 0.005" plastic card, 35mm x 20mm
- RR7 V-shaped 0.011" wire
- RR8 Decal sheet

Construction

This conversion is designed for the Italeri and Airfix DC-3/C-47 kits and involves adding the radome and radio antennas. Study the conversion instructions and drawings carefully before commencing so that you are familiar with all the details. Check the conversion drawing to ensure you select the correct engine air intakes and antennas. This aircraft is equipped with a fin mounted rotating beacon (Italeri part 58C) which should be installed as per the kit instructions and its lens painted clear red. If you are building the Airfix kit refer to the note on page 4 which

provides a guide to scratch building a suitable rotating beacon.

Construction is in accordance with the kit instructions, however we recommend that the engines and cowls be built up and painted but not fitted until the model is completed as this will facilitate access to the fuselage for ease of painting and decal application. Use engine air intakes Italeri kit part number 54 or Airfix kit parts E11 and E14. These can be glued to the nacelle using the cowl as a guide and faired into the main cowl on final assembly.

Step 1

Glue the radome (resin part 1) to the section of 0.005" plastic card and trim the edge of the card to create a flange 0.5mm wide. Seal the joint with liquid filler to create a smooth transition. Bend this flange upwards slightly to create a tight fit against the lower skin of the fuselage and glue into place. Note: the radome is offset to the right of the fuselage centre line as shown in the underneath plan drawing. Caution: this is on the left hand side when viewed from underneath.

Step 2

Glue the replacement astrodome base (resin part 4) onto the top of the fuselage over the engraved circle. Note: the under surface is curved to match the fuselage and tapered so that the highest point is at the front.

Step 3

Drill 0.013" holes (with a No. 80 drill) on the fuselage centre line for the upper and lower antennas at the positions shown on the drawings.

Resin part 2, metal part 3 and photo-etched part RR5 (use only one of the transponder aerials) are painted gloss white.

Step 4

Drill a 0.013" hole in the top leading edge of the fin and superglue a length of the 0.011" wire in place, bend and cut to create the anchor for the HF antenna wire as shown on the drawing.

Drill another hole in line with the rear of the astrodome mount, 5mm to the right hand side of the centre line. Glue a length of 0.011" wire in place so that 2.5mm of it is above the fuselage surface. Fit an antenna wire between the fin mount and the forward mast.

Similarly add the two ADF sense wires between the pitot mast (Italeri kit part 61A, Airfix kit part E23) and rear mast (Italeri kit part 55A, Airfix kit part E29) as shown on the conversion drawings. The ILS antenna (Italeri kit part 57A and part 29, Airfix kit part D36 and E34) are mounted aft of the astrodome mount.

Note: There is only one aileron trim tab on the C-47, which is located on the right hand aileron. Check your kit and fill or engrave as required.

Finish

Paint and decal your model as per the conversion decal sheet instructions. The wheel wells were usually Zinc Chromate Yellow. RAAF Dakotas had their cockpits repainted in ultra violet neutral Cockpit Green RAAF K3/193 (approximately FS 24110 - Gunze H26 Bright Green is a close match) with normal black instrument panel and details. The interior of the cabin is believed to be a medium grey – however as nothing can be seen from the outside once the fuselage has been assembled the colour is your choice.

DECAL APPLICATION – Thin Film Decals – Please Use Care

Ensure model has received a suitable coat of gloss varnish before applying these decals. Decals will always adhere better to a smooth glossy surface. It is the glossy surface that helps prevent silvering as the decal dries.

Cut around the required decal. Do not trim carrier film excessively, it is this film that protects the decal edge and prevents it from chipping. It is this film which allows the decal to "disappear" as it dries. It also acts as a buffer zone when the decal is softened using settling solutions. When these solutions are applied the decal will normally wrinkle, sometimes quite severely. As the solution evaporates and the decal dries it flattens out again. It is during this process that chipping may result if the decal has been trimmed too close to the edge of the printed area.



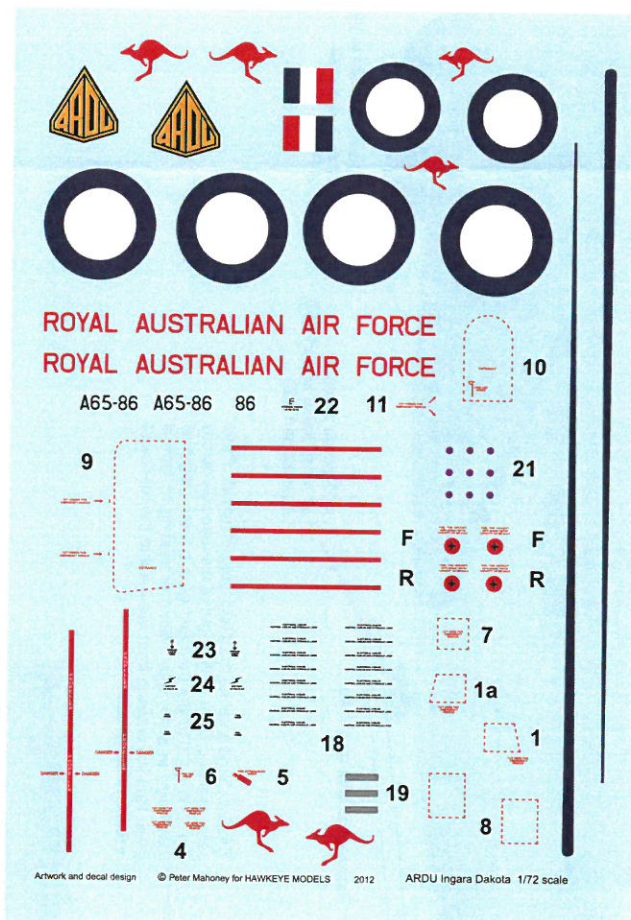
Soak the decal in water for about 60 seconds, remove the decal from the water and stand on glass or plastic surface. Do not try and force the decal off the backing paper because this will tear the decal and render it useless. Handle the decal on its backing paper with tweezers. Carry the decal to the model while it is still sliding around on the backing paper, before it has a chance to separate from the paper. Wet the application site with your favourite settling solution. Remember, the carrier film on these decals is very thin, test the effect of your settling solution on an unwanted decal if in doubt. Apply decal carefully by sliding off backing paper with a soft, long bristle brush. Position carefully, using the brush to move the decal into its final position. Do not push the decal about with your finger or a pair of tweezers as this will only damage it.

Use decal-settling solution to draw the decal down over surface detail. If air bubbles or "silvering" form during drying phase wait till decal is thoroughly dry, then pierce affected area with a pin and re-apply settling solution. Do not try to force decals to conform to surface or express air bubbles – doing this will tear the decals. Soak up excess moisture with a sponge eye shadow applicator. These great little instruments can be also used to help softened decals conform to complex surfaces. You may find you will need several applications of settling solution to get a decal to conform to some irregular surfaces. Always allow at least four or five hours between application of solution and resist the temptation to "massage" or push the decal into place to prevent damage.

Apply a coat of gloss varnish over the entire model once the decals are thoroughly dry. Apply a coat of matt varnish over the entire model when the previously applied gloss varnish is thoroughly dry to hide the carrier film.

Road Map...

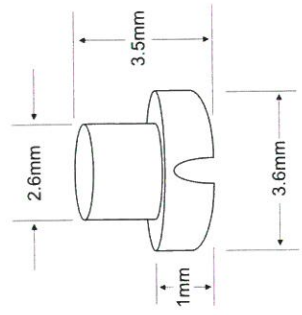
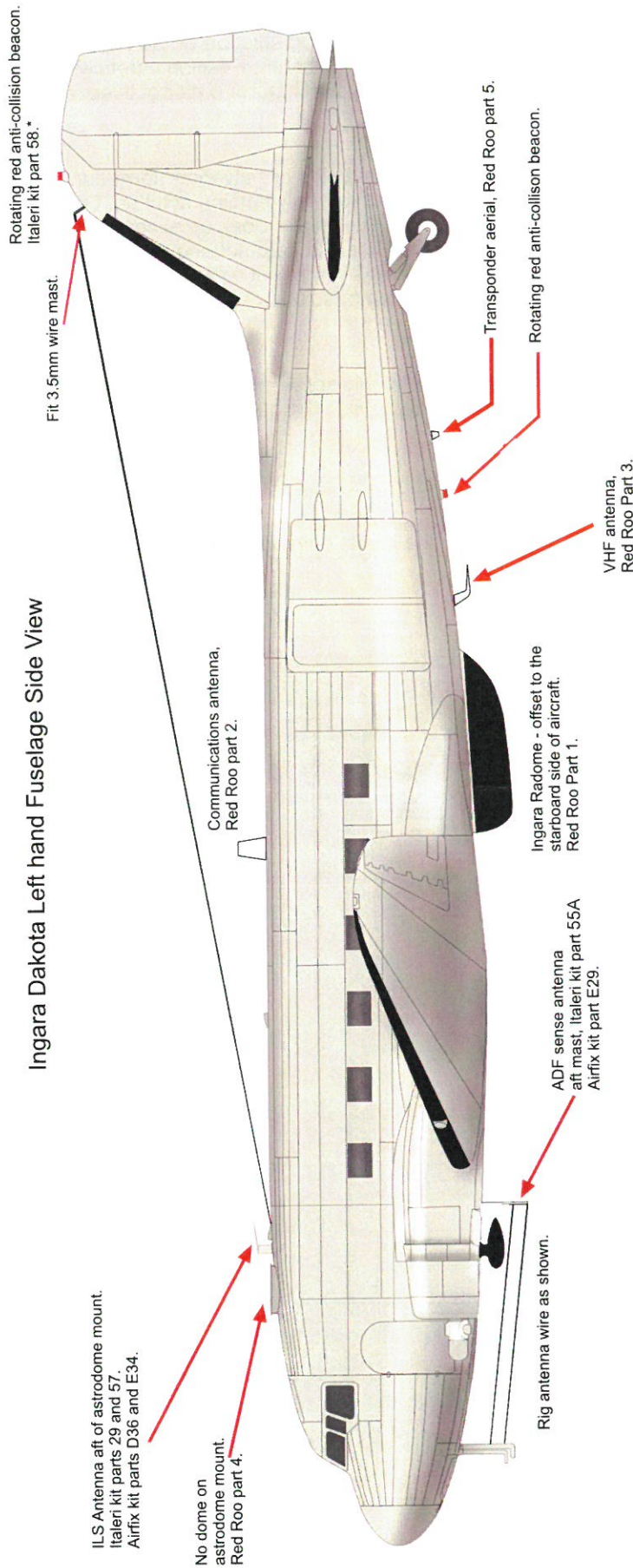
Use this road map to help you select and locate the decals called out in the profile camouflage and markings drawings on the previous three pages.



Acknowledgements:

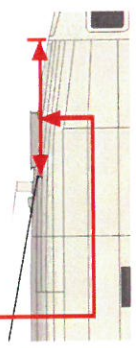
Red Roo Models gratefully acknowledges the efforts of master modeller Richard Hourigan who created the conversion and Peter Mahoney of Hawkeye Models Australia who generously allowed the inclusion of his decals in this conversion. All photographs: RAAF Official.

Ingara Dakota Left hand Fuselage Side View



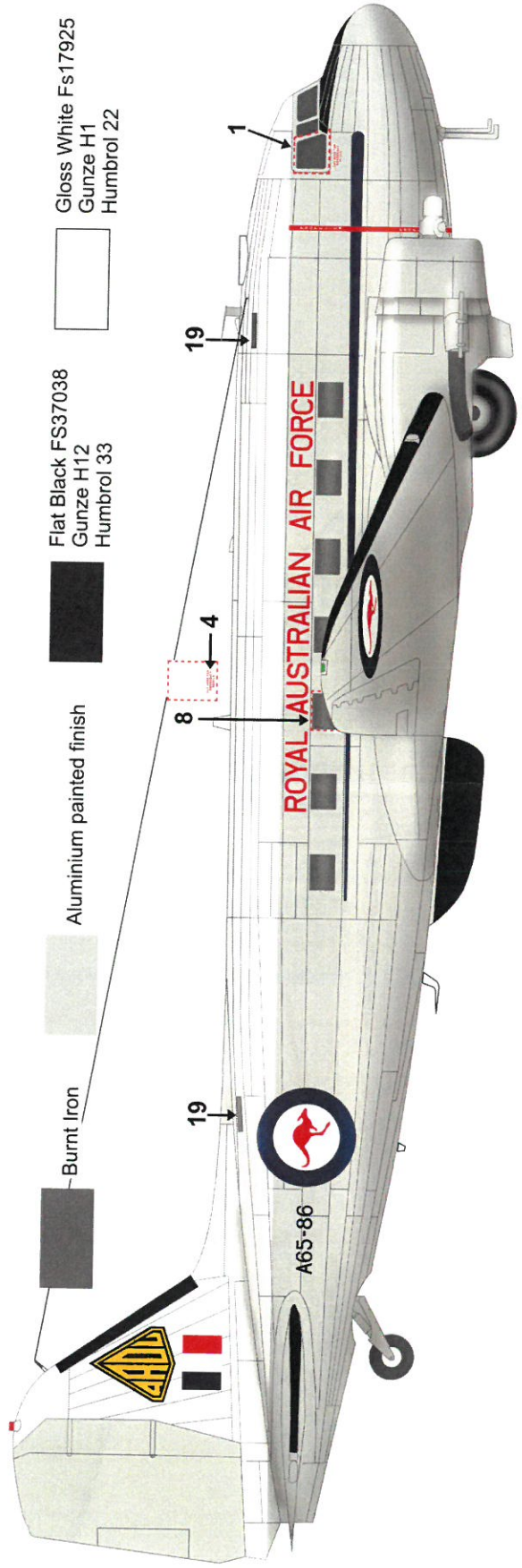
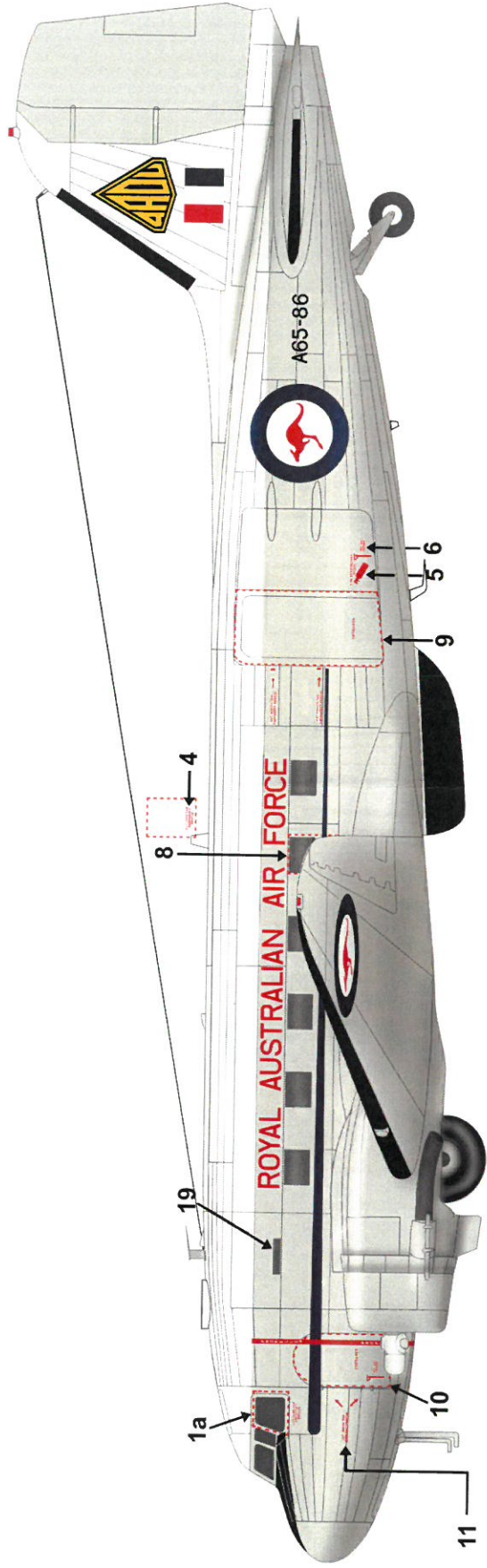
* The Airfix kit does not include a rotating beacon and some re-issues of the Italeri kit also do not include this part. If the kit you are using does not have the rotating beacon included shape a 3.5mm long piece of clear spruce to represent the beacon and glue it to a 1mm thick piece of plastic card to represent the base. File a groove in the centre of the base to fit the kit fin and glue in place. The beacon fitted to the fuselage underside should have a flat base.

The right hand antenna mast is located 21mm aft of this panel line and 5mm to the right of the fuselage centre line. Drill a 0.015 dia hole and glue a 5mm length of 0.015 wire in place with 2.5mm protruding to form a mast. Run the antenna from this mast to the wire mast on the fin leading edge.



Right hand scrap view.

Decal Placement



Gloss White Fs17925
Gunze H1
Humbrol 22



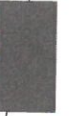
Flat Black FS37038
Gunze H12
Humbrol 33

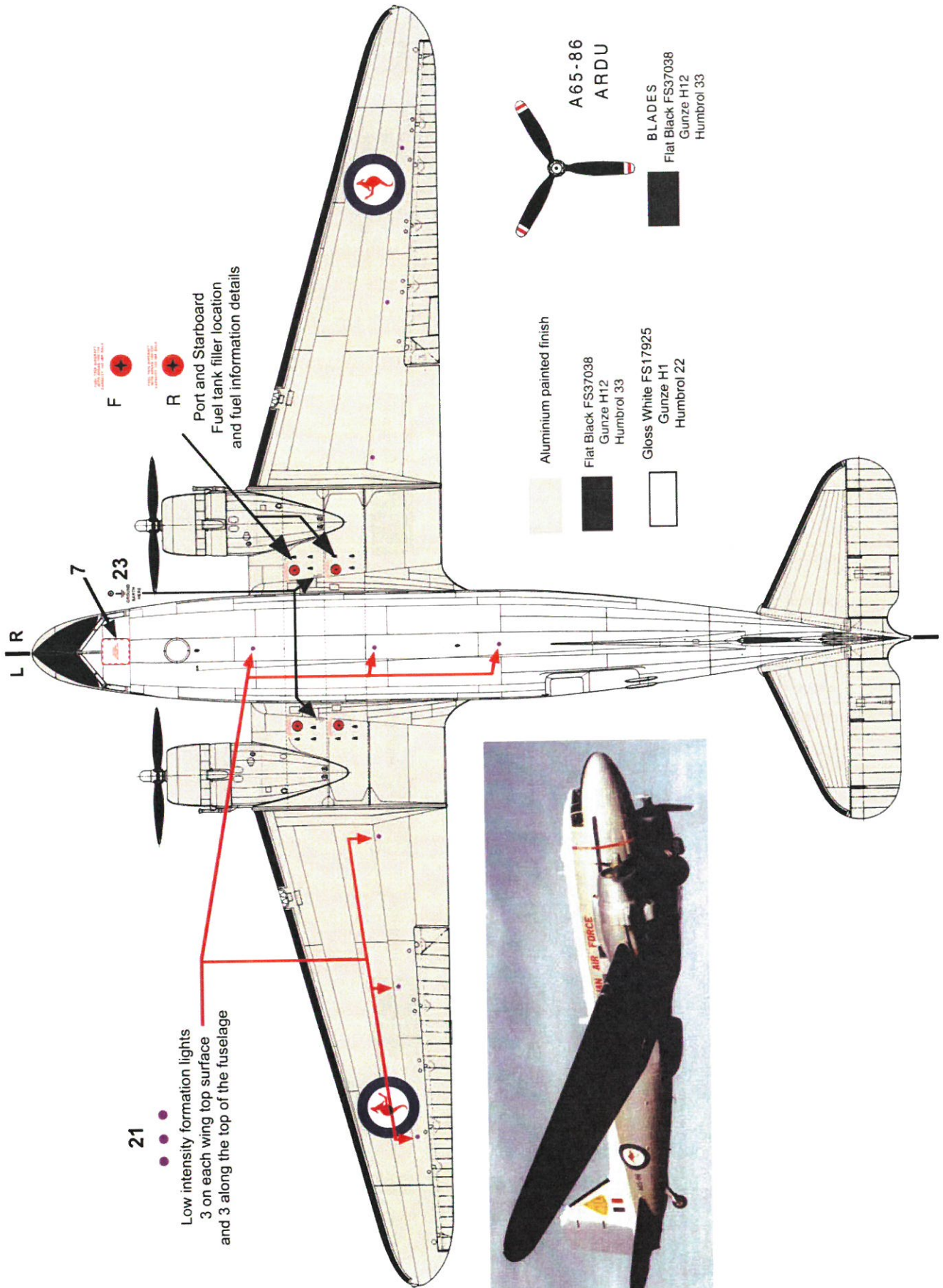


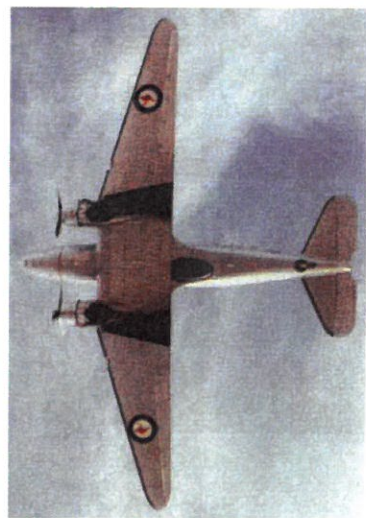
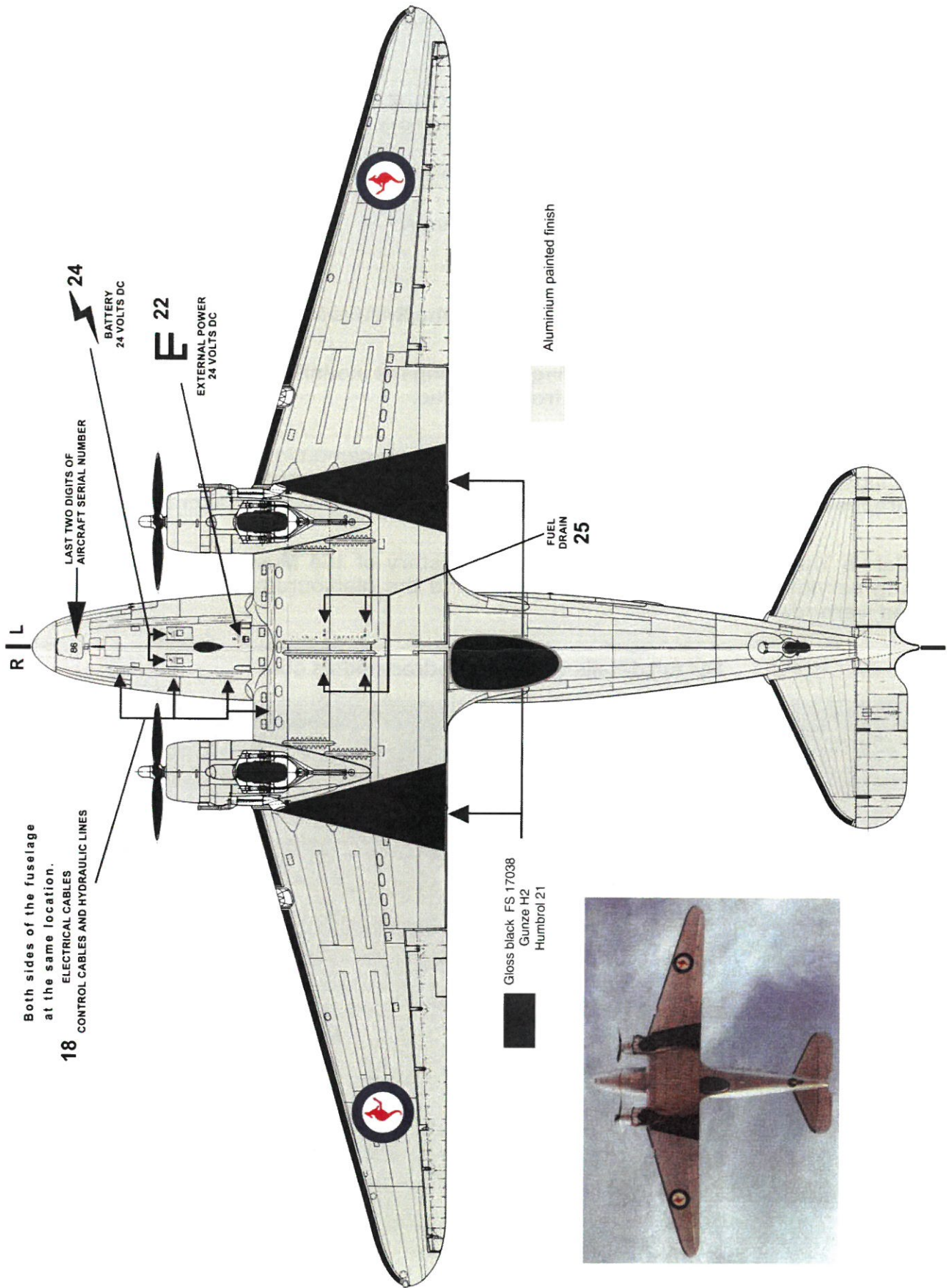
Aluminium painted finish



Burnt Iron







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