



1/48 scale
Bell 412 HR.2 Griffon
84 Sqn. RAF Akrotiri
Update Set
Set # WBA48009

Introduction

After having served in Aden, the squadron was reformed in Cyprus on 17 January 1972 from 1563 Flt and a detachment from 230 Sqn. with Westland Whirlwind HAR.10s at RAF Akrotiri. The squadron was also based at Nicosia International Airport to aid UNFICYP operations and operate search and rescue. It later (December 1981) replaced the Whirlwind with the Westland Wessex HC.2 and later still (June 1984) with the Westland Wessex HU.5C. It was the last squadron to use the Westland Wessex.

No. 84 Squadron was the first RAF contingent into Beirut in the Lebanese Crisis of 1983. This resulted in the evacuation of the peace-keeping element from the city.

Since January 2003 the squadron has been assigned to British Forces Cyprus at RAF Akrotiri in the search and rescue role using the Bell Griffon HAR.2. The helicopters are leased from and maintained by a civilian company. 84 Squadron aircraft are also used for UN duties in maintaining the buffer zone separating Cypriot and Turkish forces. In recognition of this role the aircraft are always unarmed and carry a light blue band around their tail, matching the blue berets of UN peacekeepers. These aircraft are the subject of this Detail Set.

84 Squadron is the only serving squadron never to have been based in the United Kingdom.

What you get - resin parts:

replacement cabin doors
flotation gear + mountings
FastFin tail unit
replacement exhaust - extended pipes
winch, winch pylon and connecting block
Decca box
SARBE mount
air vents for above nose
cargo hook well
2 x IR detectors for tail boom
3 x whip aerial mounts
3 x under fuselage lamps
2 x domes - alongside engine housing
upper position light
lower position light
small port cabin door with dinghy pack
large landing light - under fuselage
rounded avionics housing
blade aerial - cockpit roof
position light - starboard cabin roof
IR floodlight
spotlight on cabin roof aft of air intake
spotlights on tail boom
Small round dome on centre line
Light unit at junction of fuselage and tail boom
nose radome
2 x cockpit seats
parts to convert a AB212 to a 412 (*see later*)

Preparation: general instructions

Remove resin parts carefully from the moulding blocks to which they are attached using a scalpel or razor saw.. Sand lightly to remove any roughness and tidy up any mould lines - remember that resin dust can be harmful; we therefore suggest that you use a mask when sanding, and sand wet rather than dry.

Note that some masters have been produced using 3-D printing, and the parts therefore have an extensive support framework which must be removed with great care to avoid damage.

Resin and etched brass items can be attached with cyanoacrylate adhesive.

produced by

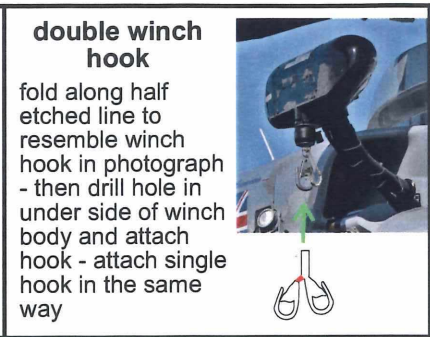
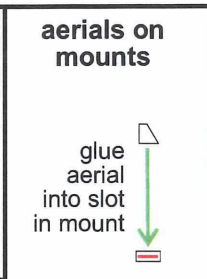
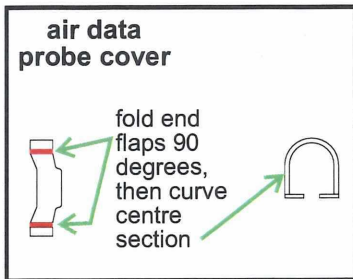
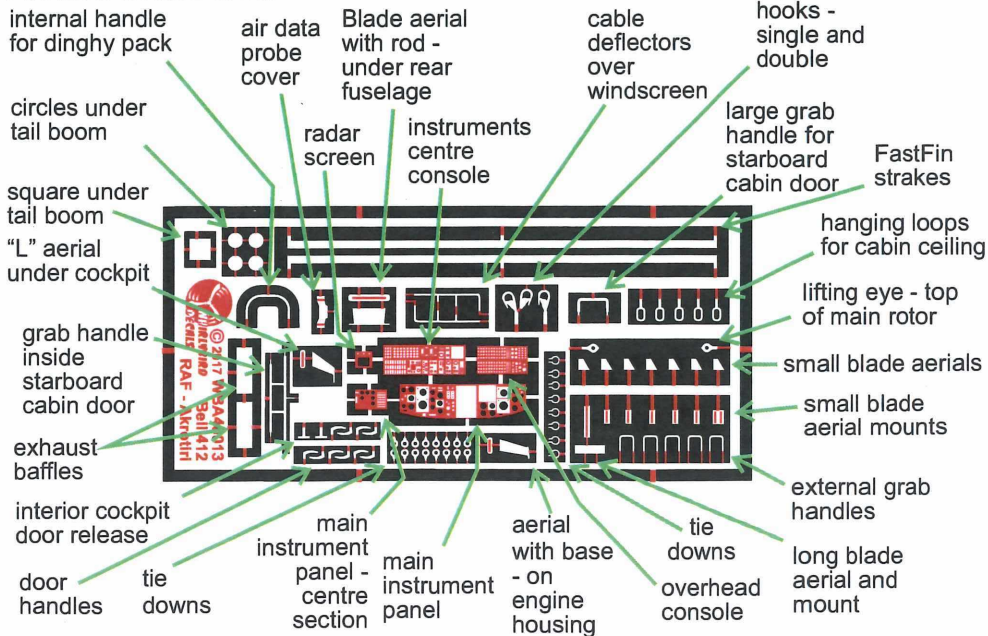
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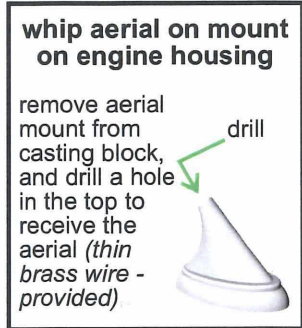
Etched brass fret:



Construction Notes

This Update Set is designed for the 1/48 Italeri Bell 212 kit. The kit has been released in several different versions - any will do. Make the kit using the kit instructions, except as detailed here. (see later for conversion from Bell 212 to Bell 412)

- Remove from underside of fuselage and smooth - light fitting under nose and mounting for cargo hook.
- Make hole in underside where cargo hook mount was (6mm).
- Remove position light on cabin roof (stbd) and replace with resin part provided as indicated (*port side remains as in kit*)
- NB: Different configurations of front section of cabin door - Seems to depend on whether flotation gear is fitted or not e.g. ZJ703 - 4 Jul 2009 no flotation gear - stbd front section RED ORANGE with window - 16 Nov 2010 with flotation gear - stbd front section GREY with no window



Cockpit

remove engraved detail from kit part 1B, and add centre console

fwd



add radar screen and centre section to main instrument panel, and glue to part 16B after removing raised detail



fwd

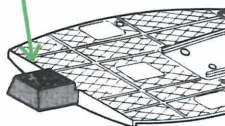
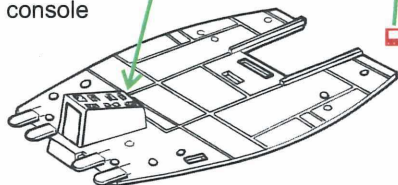


remove engraved detail from kit part 17B, and add overhead console

The RAF Akrotiri Bell 412s were fitted with commercial standard cockpit seats, so the kit seats aren't quite right.



remove RED areas and add new seats provided



Use the other cockpit and cabin parts as supplied in the Italeri, Astrokit or Revell kit.

Because the 84 Sqn. Bell 412s carried a lot of extra fittings and equipment in the cabin, **WHIRLYBIRD** have produced a Detail Set for the cabin (**WHIRLYBIRD** part no. WBA48013 - Bell 412 HR.2 Griffon - Interior set) which provides some of the items such as crew seats, fire extinguishers, a new starboard cabin bulkhead etc. which would be difficult to scratch build. This is available from **WHIRLYBIRD** direct, or from **WHIRLYBIRD** stockists.

Airframe - starboard side, starting from nose going aft

blade aerial with rod on roof of engine compartment

remove position light from cockpit roof, and replace with resin unit in this position

grab handles on side of fuselage and on cockpit roof - both sides

2 vents (to clear water from wind-screen - one each side)

add tie from end of skid to skid support - both sides

flotation gear - see later for construction

door handles

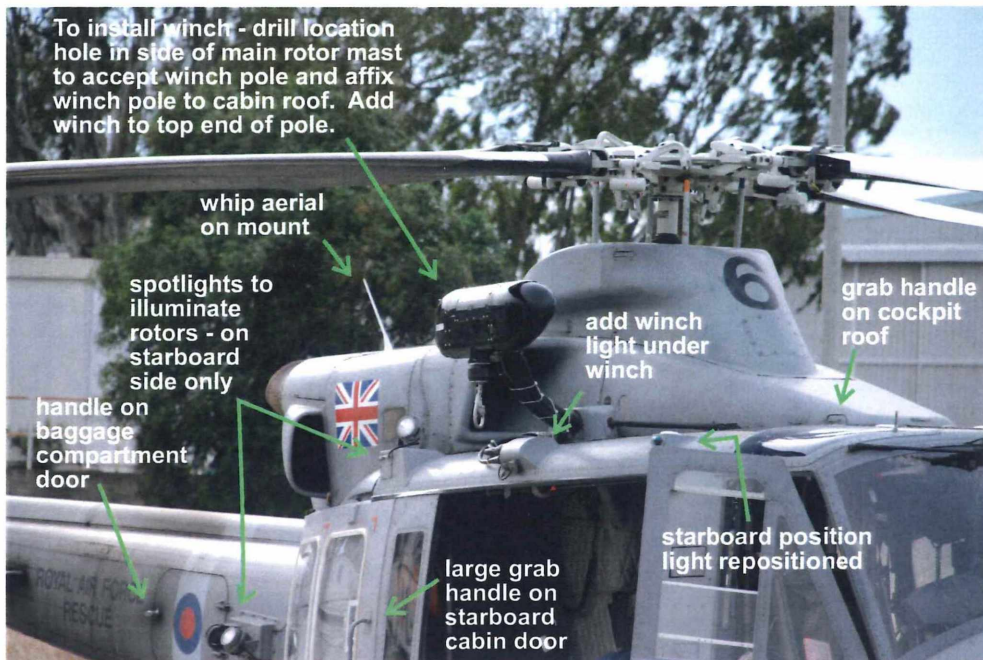
kit part 99A

air data probe cover

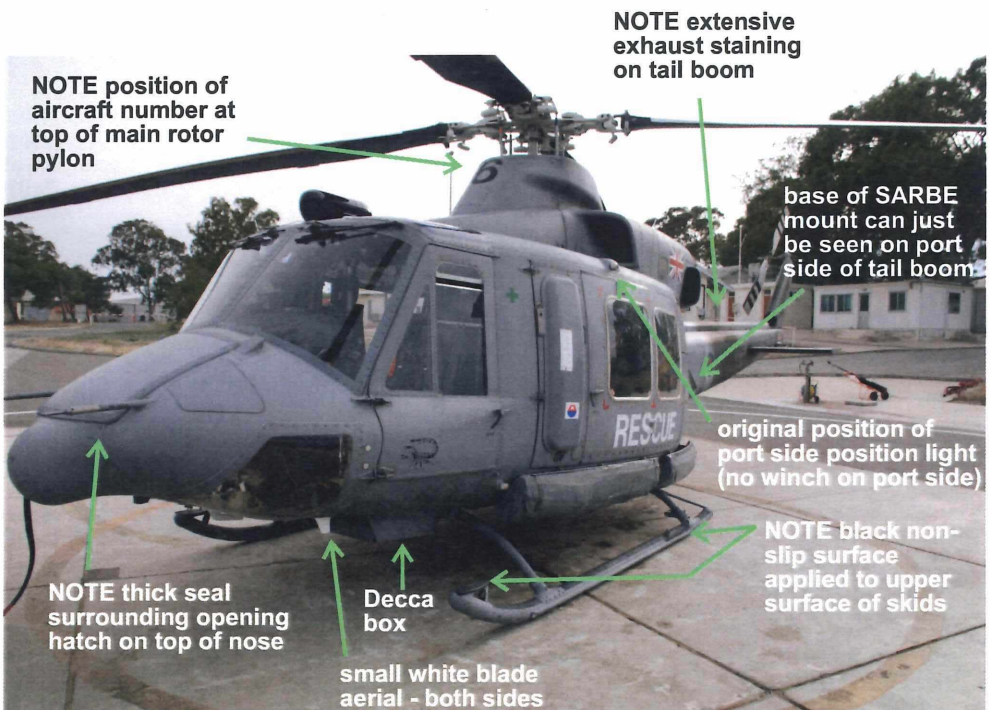
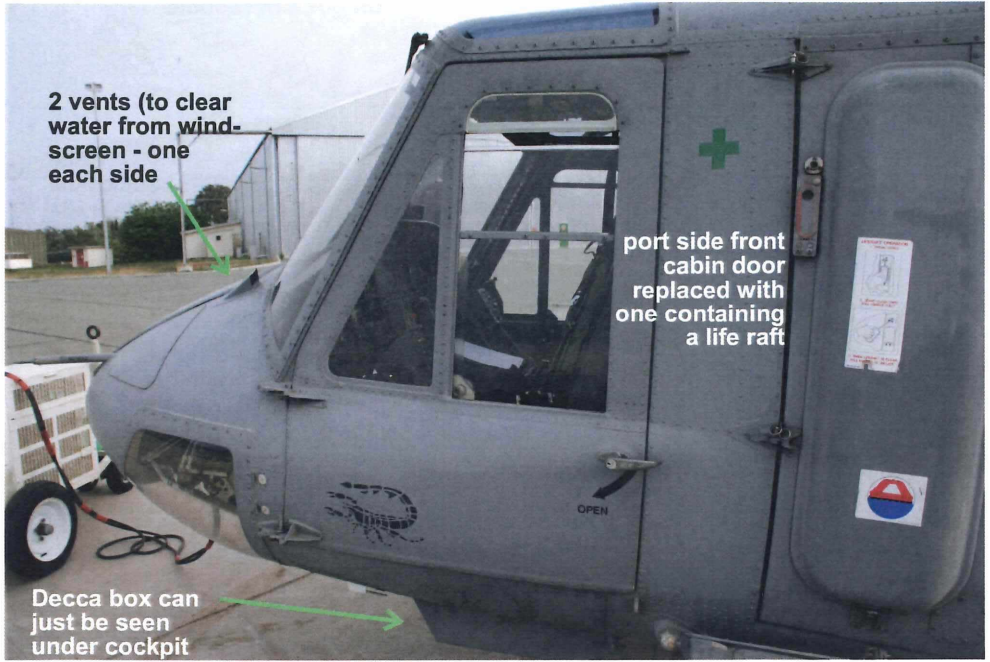
use kit radar nose and pitots



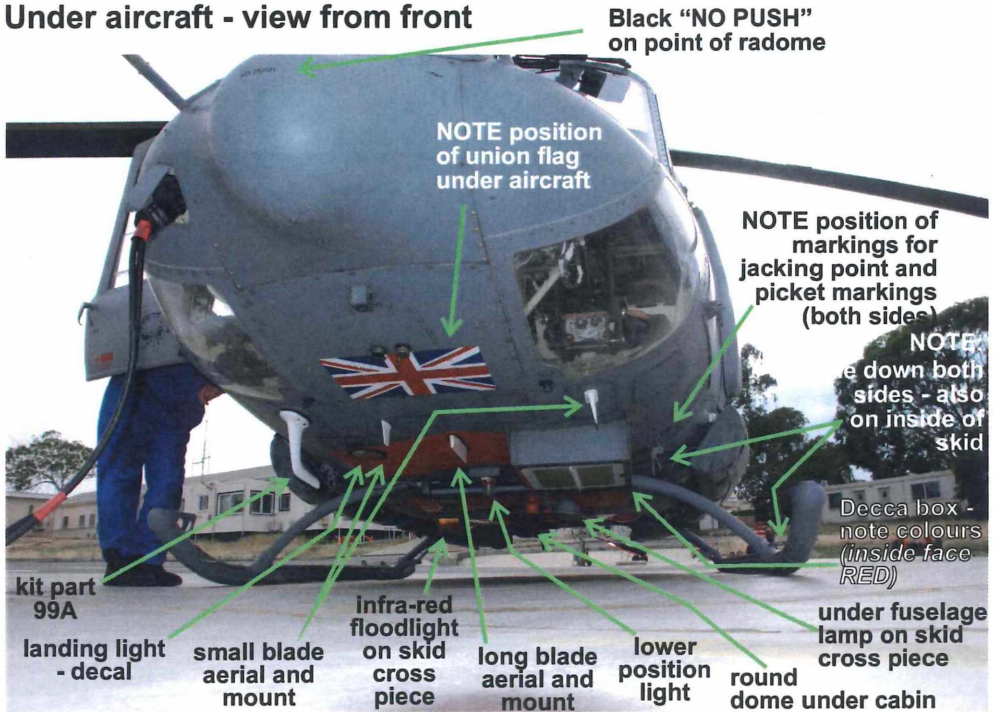
Airframe - starboard side, starting from nose going aft continued



Airframe - port side, starting from nose going aft

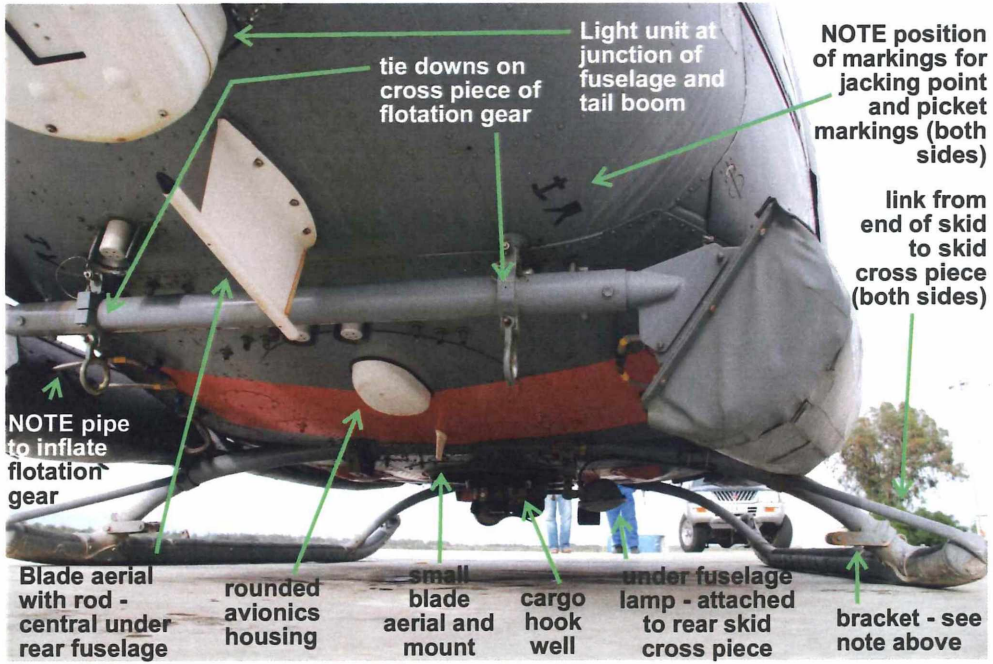


Under aircraft - view from front



NOTE about the brackets below - these allow ground movement wheels to be attached - they are not provided

Under aircraft - view from rear



Flotation gear

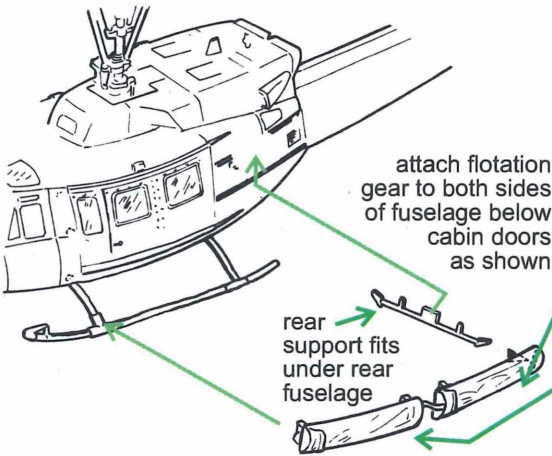
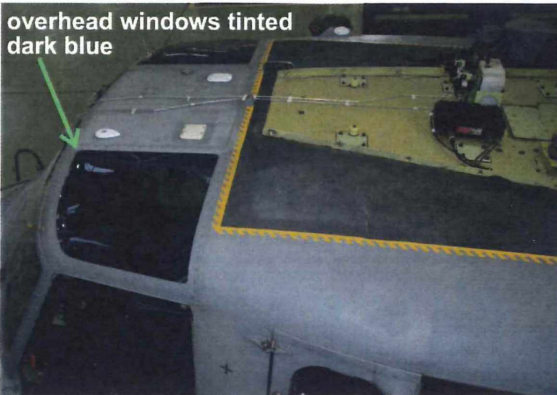
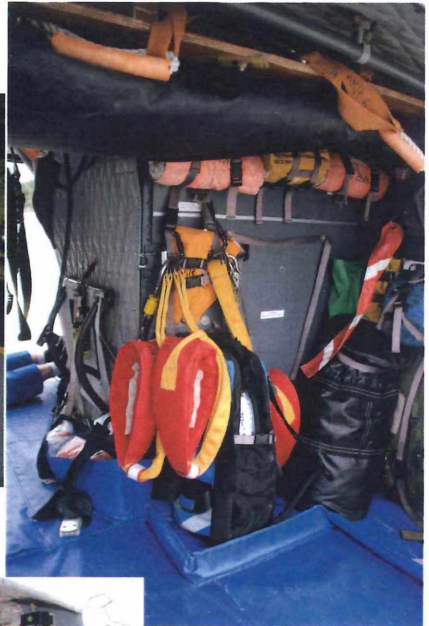


diagram shows flotation gear being fitted to a Bell 212 - the 412 is similar.

usually dark grey - almost black



taken in the workshop, this photograph shows the "humps and bumps" on the cockpit roof - also position and colour of non-slip walk way

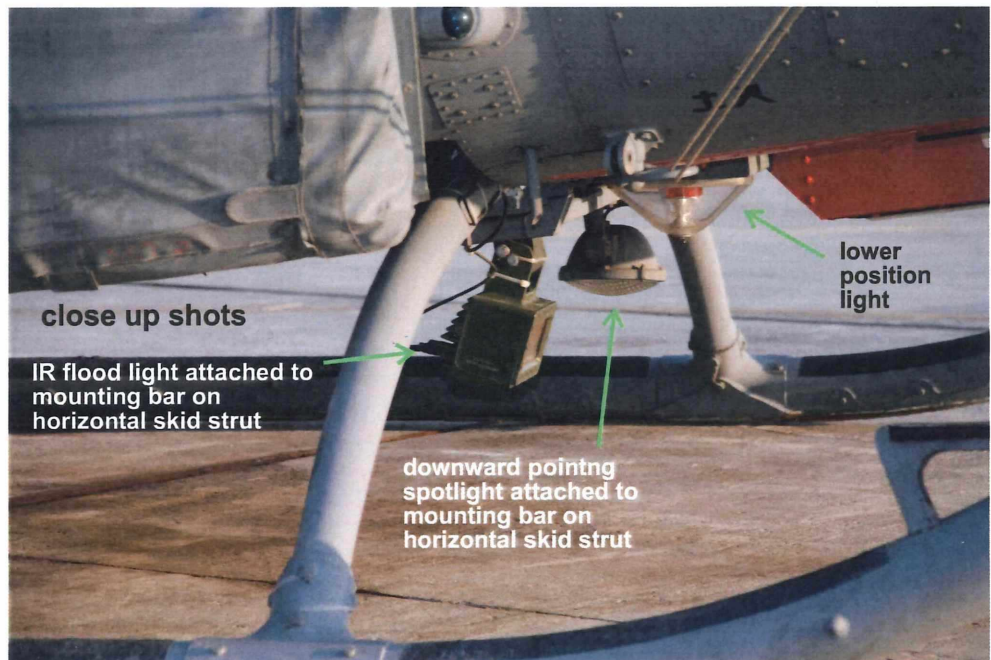
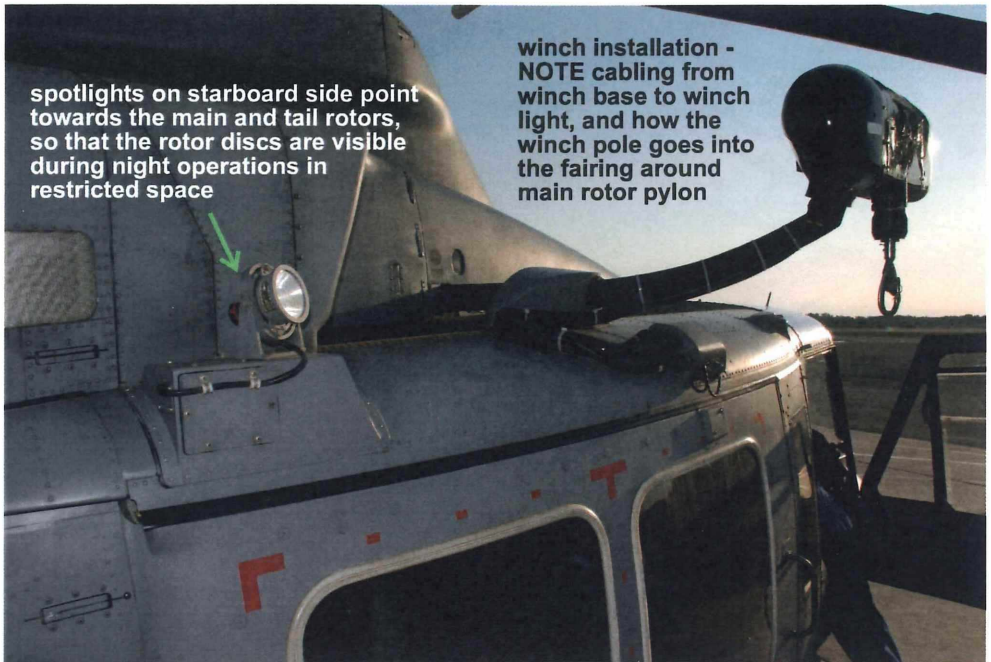


these 2 photographs give a glimpse of the interior of the cabin, with all the rescue and survival equipment and crew seats etc.



WHIRLYBIRD produce a Cabin Detail set which provides many of the items which would be hard to scratch build to detail the cabin. Set **WBA48013 Bell 412 HR.2 Griffon - Interior set**

Some more detail shots



Grateful thanks to Nick Turner, who provided all the photographs and has generously allowed us to reproduce them here. All photographs copyright Nick Turner ©

Conversion to Bell 412

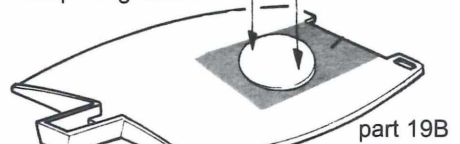
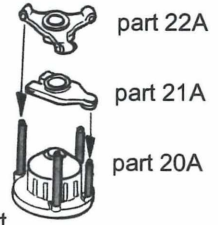
What you get

4 bladed main rotor head
4 x resin main rotor blades
5 x main rotor pitch control levers (4 needed - one spare - very fragile!)
main rotor pitch control "spider"
main rotor shaft
main rotor mast fairing
rotor balance weights
4 x left hand side
4 x right hand side

Assembly Instructions

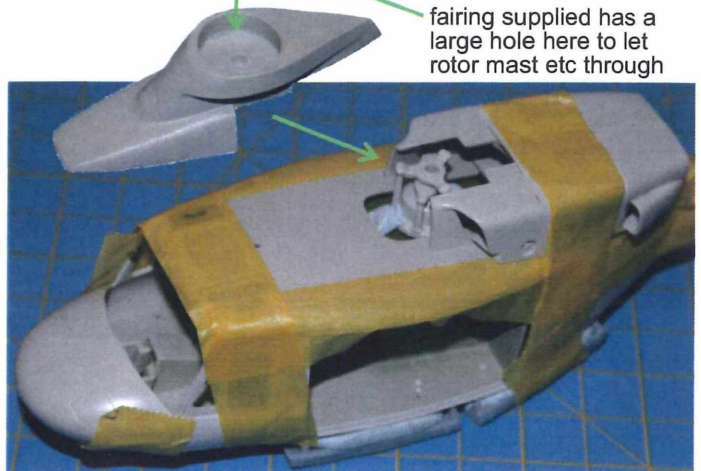
Follow kit assembly sequence for cockpit and cabin.

Assemble parts 20A, 21A and 22A, but do not add main rotor mast (part 23B). Then add this sub-assembly to cabin roof (part 19B) before completing cabin.



Finish fuselage assembly - add roof (part 30B), and make up the engine housing sub assembly (parts 35B, 36B, 37B, 38B and 39B). Use engine covers parts 42B and 44B, and add extended exhausts (resin part supplied).

Attach this in place on completed fuselage, and then add the new Bell 412 front fairing and main rotor mast. The top of the main rotor stationary swash plate just fits inside the hole in the new fairing.



Main rotor Assembly Instructions



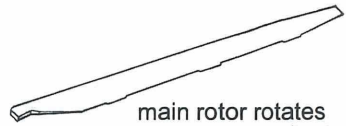
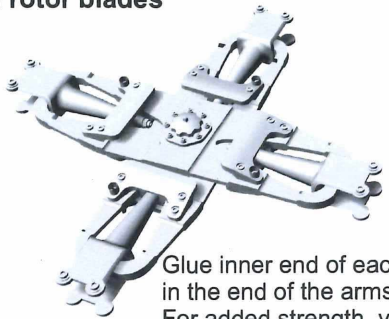
Thread main rotor shaft through hole in upper swash plate. If preferred, it can be glued in position - we suggest trying it all first before deciding which way is easier



Main rotor Assembly Instructions - continued

To attach main rotor blades

main rotor blades can be attached either before or after the main rotor head assembly is complete



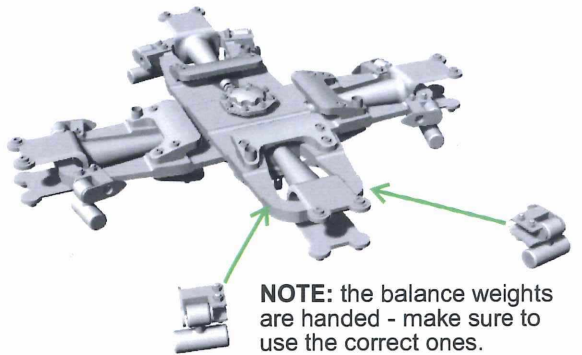
main rotor rotates anticlockwise (looked at from above, so attach rotors to rotor head orientated like this

Glue inner end of each blade into slot in the end of the arms of the main rotor head. For added strength, you may find it helpful to drill both the socket and the end of each rotor blade and insert a pin (brass rod is good for this)

To attach main rotor balance weights

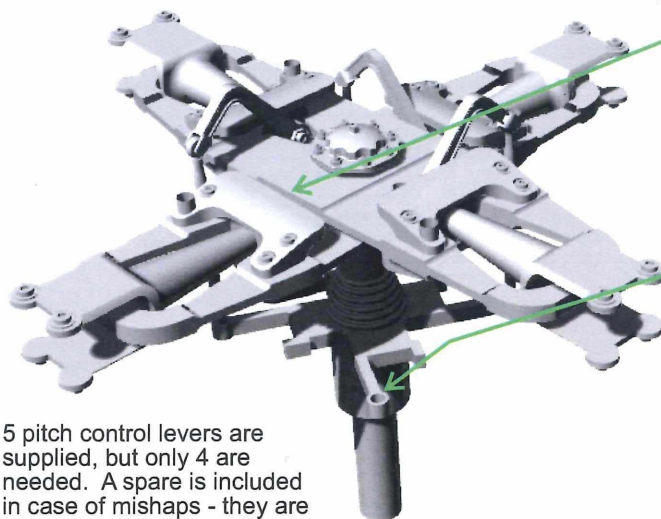
Add main rotor balance weights to both sides of each rotor blade attachment point on the main rotor head.

This can be done either before or after attaching the main rotor blades to the rotor head.



NOTE: the balance weights are handed - make sure to use the correct ones.

To attach blade pitch control levers

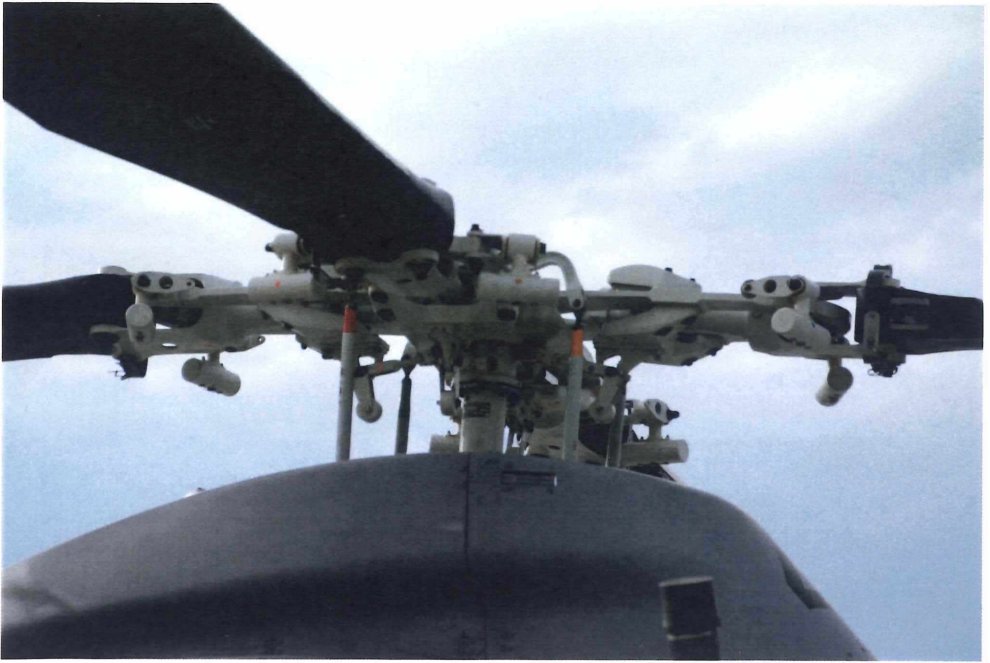


add one blade pitch control lever to each rotor blade

NOTE where pitch control lever attaches to rotor head

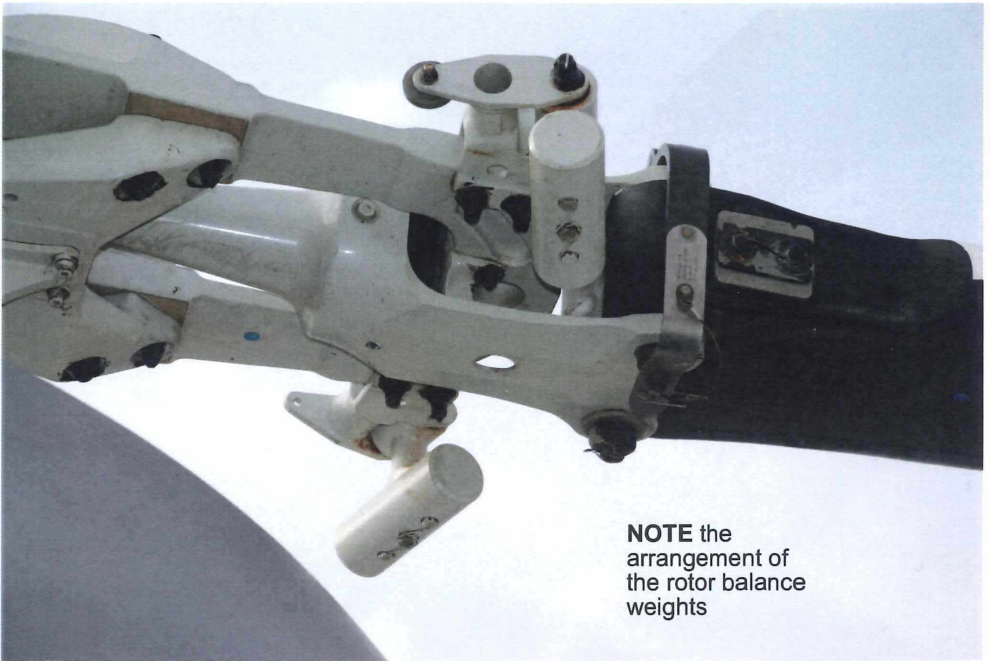
5 pitch control levers are supplied, but only 4 are needed. A spare is included in case of mishaps - they are very fragile!





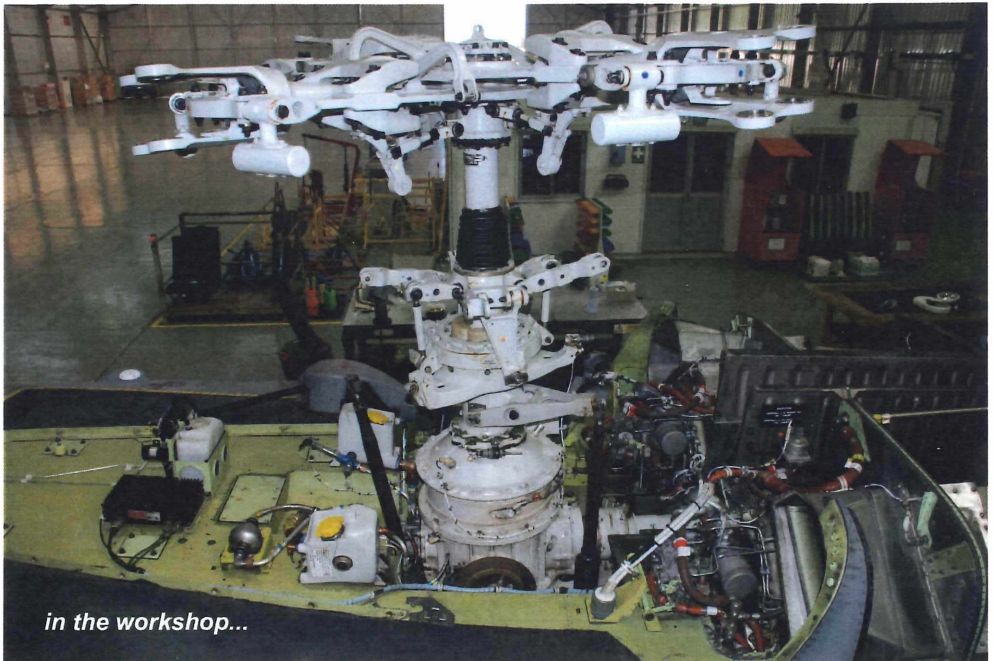
NOTE the arrangement of the rotor blade pitch control levers, and how they attach to the swash plate and the rotor head.





NOTE the arrangement of the rotor balance weights

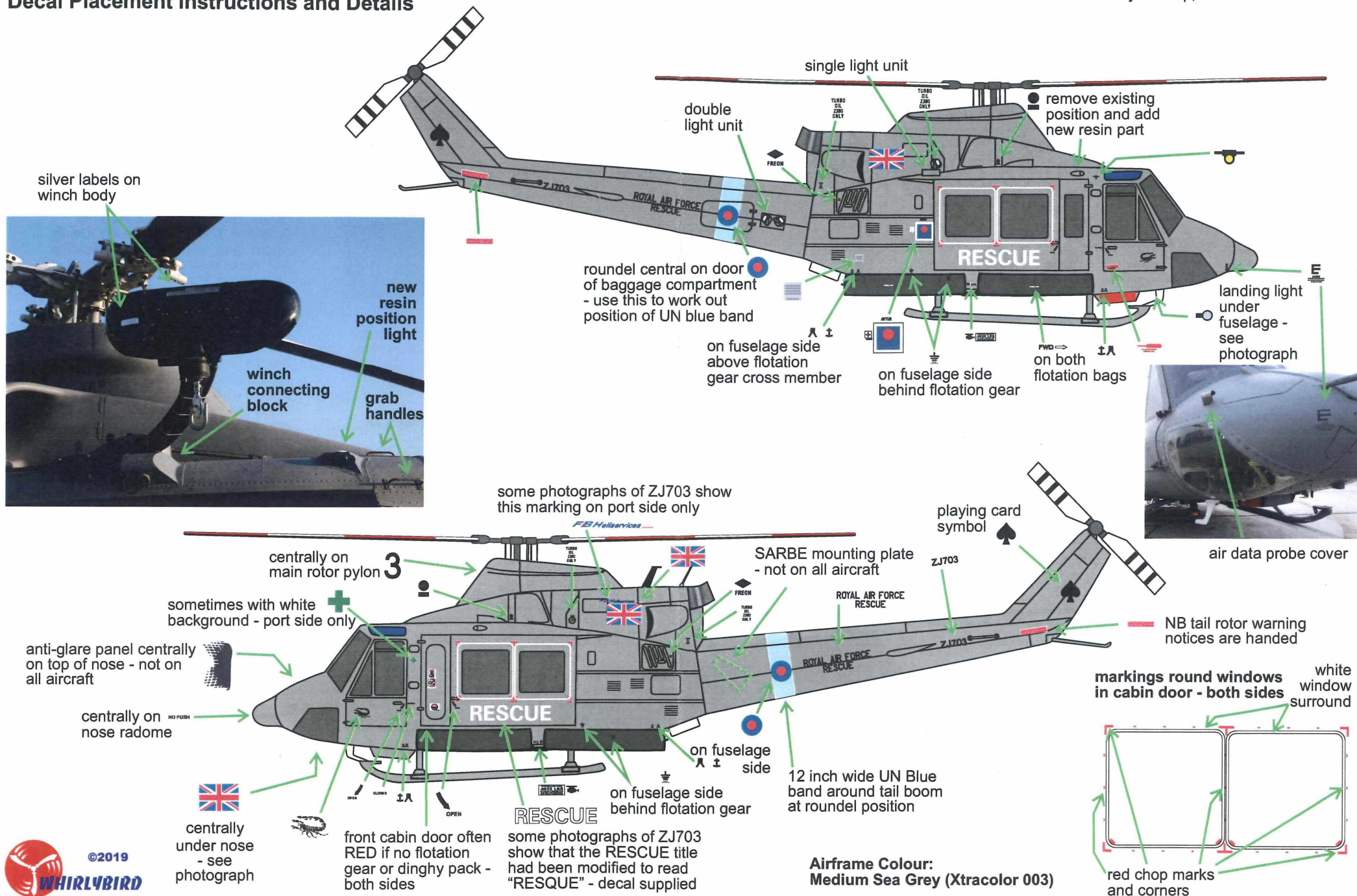
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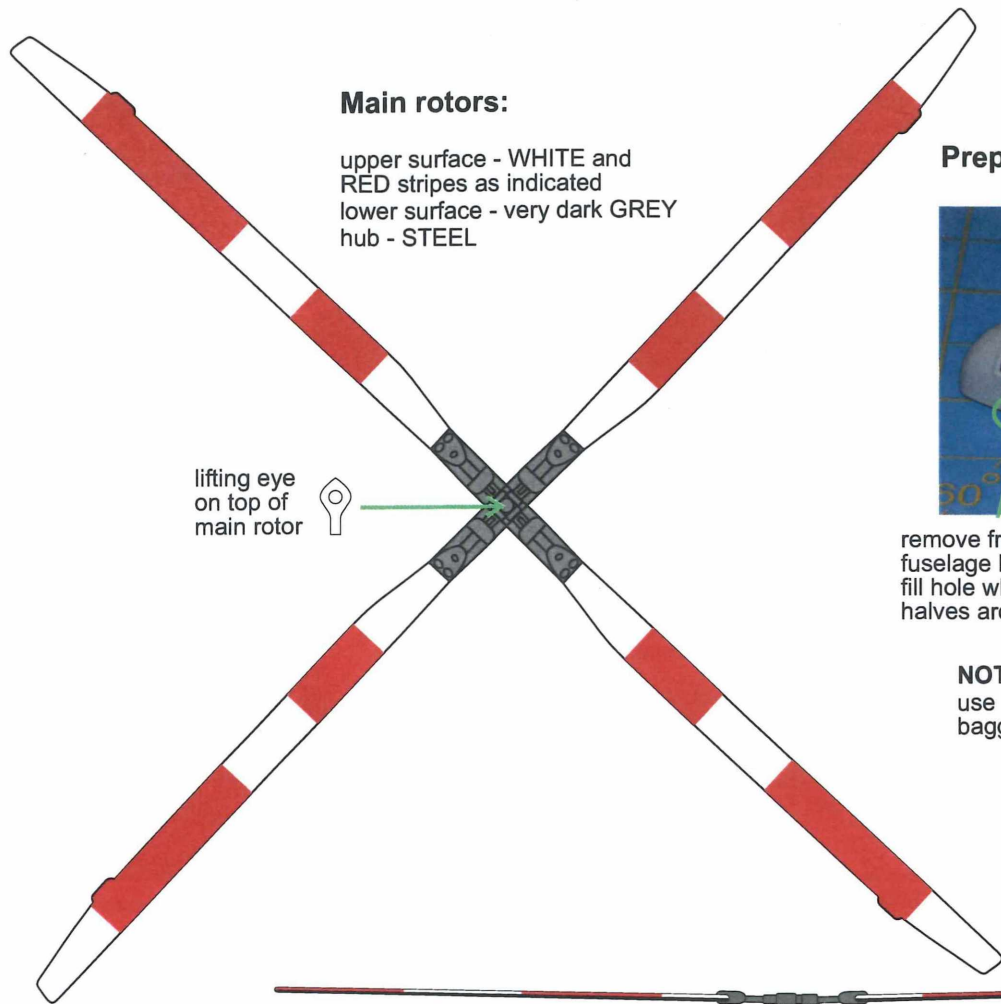


in the workshop...

WBA48009 Bell 412 HR.2 Griffon - RAF Akrotiri Decal Placement Instructions and Details

RAF Bell 412 photographs all © Nick Turner
Thanks for your help, Nick!





Main rotors:

upper surface - WHITE and RED stripes as indicated
 lower surface - very dark GREY
 hub - STEEL

lifting eye on top of main rotor

Preparation - before fuselage assembly:



remove from both fuselage halves, and fill hole when fuselage halves are joined

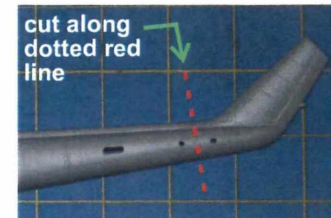
remove surface detail, and make a hole 6mm in diameter in this position to receive new cargo hook well

NOTE:

use kit part no. 52A (section of tail boom with hatch for baggage compartment) rather than part 53B.

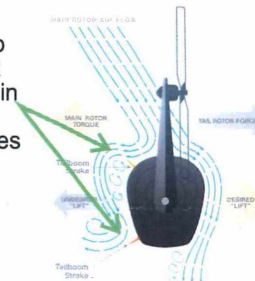
To install the FastFin tail unit

First remove the existing tail from each fuselage half along the panel line just forward of the tail rotor pylon



Then continue to assemble the fuselage in the normal way. Using super glue, attach the new FastFin tail, ensuring that the main rotor pylon is vertical.

add the etched brass strakes to the tail boom at the angles and in the positions shown - drill holes in tail boom to accept locating tabs on etched brass strakes.

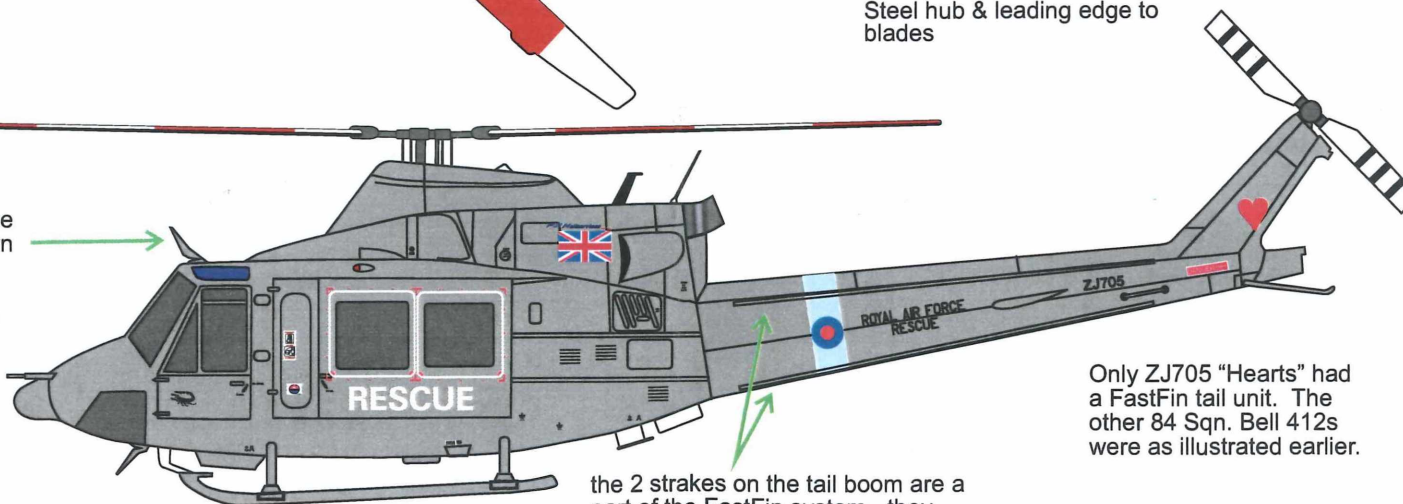


Tail Rotor colours:

WHITE with 3 BLACK bands
 Steel hub & leading edge to blades

As far as I am aware, only ZJ705 "Hearts" carried cable cutters - use Italeri parts 41A and 54A as shown in the Italeri instruction sheet.

Flotation gear was installed when the aircraft might possibly have to operate over water - such as in their Search and Rescue role in Cyprus. However, it could be removed quite easily.



the 2 strakes on the tail boom are a part of the FastFin system - they disrupt the air flow over the tail boom and make the tail rotor more effective

84 Sqn. aircraft:

(traditionally, 84 Sqn. aircraft have carried playing card symbols on their tails)

ZJ703 - Spades



ZJ704 - Clubs



ZJ705 - Hearts

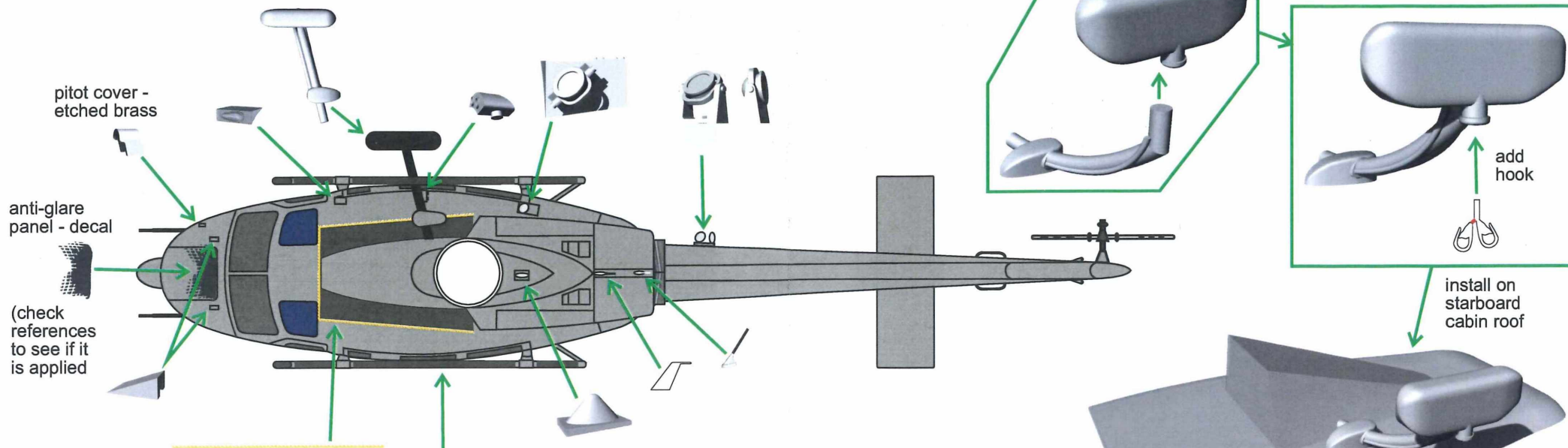


ZJ706 - Diamonds



Only ZJ705 "Hearts" had a FastFin tail unit. The other 84 Sqn. Bell 412s were as illustrated earlier.

Position of resin and other details



pitot cover - etched brass

anti-glare panel - decal

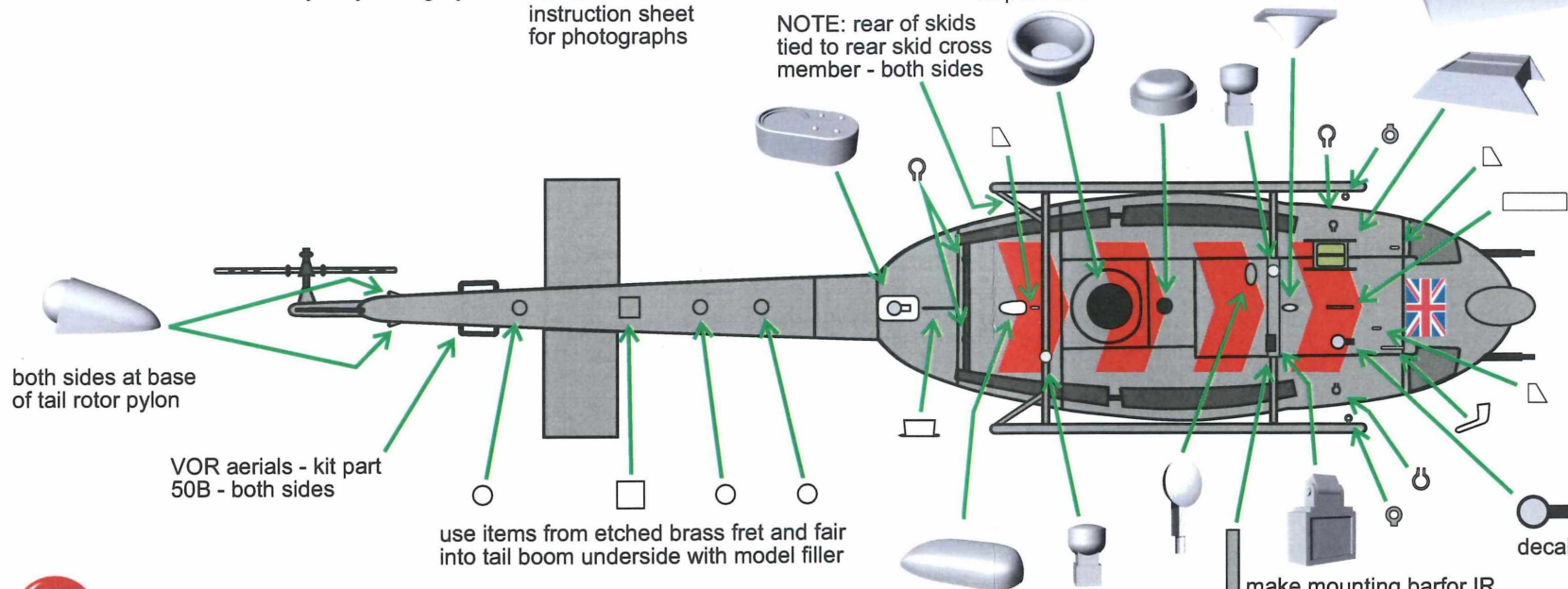
(check references to see if it is applied)

decals - cut to fit around edge of walkway. Walkway very dark grey

NOTE: BLACK non-slip patched on skids - see instruction sheet for photographs

add cargo hook kit part 43B

NOTE: rear of skids tied to rear skid cross member - both sides



both sides at base of tail rotor pylon

VOR aerials - kit part 50B - both sides

use items from etched brass fret and fair into tail boom underside with model filler

make mounting bar for IR floodlight and small spotlight from plastic strip

Colour Scheme:

- Airframe overall** - RAF Camouflage Grey BS626 (*Xtracolor X017*)
- Chevrons under aircraft** - RAL3026 Gloss Fire Orange (Humbrol HU209)
- Walkway on cabin roof** - matt very dark Grey - we suggest something like Humbrol HU067 - Tank Grey
- Main and tail rotors** - as described
- other details** - Black as shown

