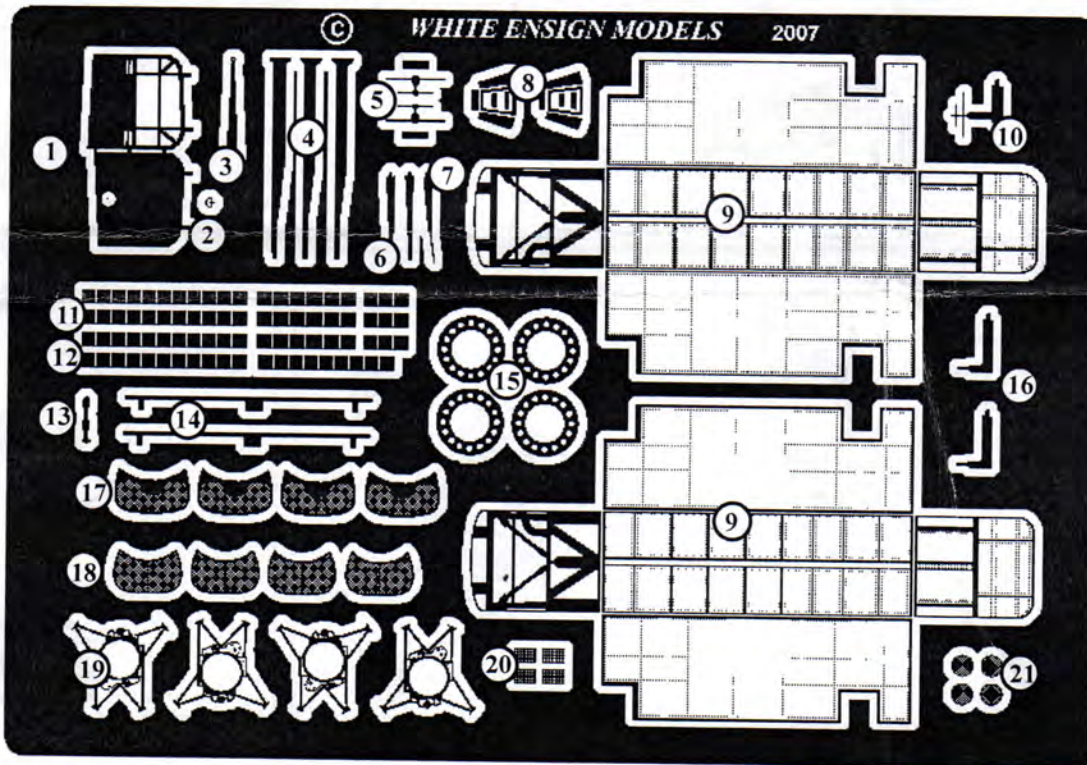




# WHITE ENSIGN MODELS

## Handley Page Halifax B1/BII/BIII/GRII

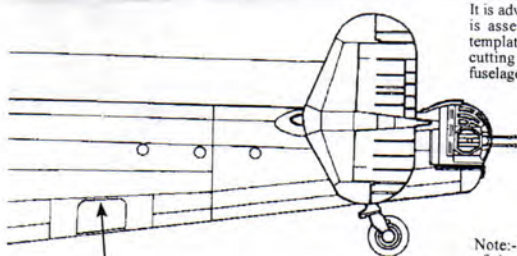
Photo Etched Parts for the Exterior of the Airfix or Matchbox/Revell kits in 1/72 scale



### Parts List

- |                              |                             |                                   |
|------------------------------|-----------------------------|-----------------------------------|
| 1. Entry Hatch Assembly      | 8. Window Chutes            | 15. Slotted Wheel Hub Rings       |
| 2. Entry Hatch Lock Handle   | 9. Undercarriage Bays       | 16. Pitot Masts                   |
| 3. HF Antenna Mast           | 10. Chin Mounted Antenna    | 17. Type 1 Merlin Radiator Grills |
| 4. Airborne Cigar Antennas   | 11. Hercules Engine Gills   | 18. Type 2 Merlin Radiator Grills |
| 5. Yagi Radar Antennas       | 12. Port Outer engine Gills | 19. Engine Cowling Attachments    |
| 6. Mandrel Antennas (Type 1) | 13. Monica Antenna          | 20. Hercules Supercharger Grills  |
| 7. Mandrel Antenna (Type 2)  | 14. Rebecca Antennas        | 21. Hercules Oil Cooler Grills    |

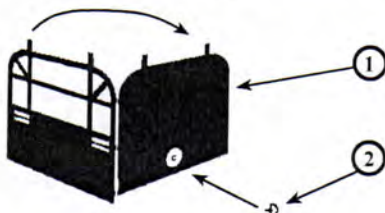
### Entry Hatch Assembly and Location



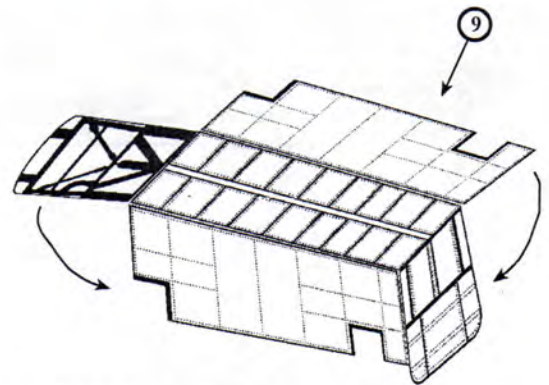
It is advised that the replacement hatch is assembled first, then use it as a template to draw round to mark out a cutting line for the entry hole in the fuselage.

Note:- The entry hatch on this type of aircraft opens inwards and upwards and secures against the inside of the fuselage.

To assemble the entry hatch, fold etched part 1 completely in half so that the framework section fit flat against the hatch skin. Secure in place. Gently roll the hatch with a metal bar or knife handle until it curves to the shape of the fuselage, with the framework inside the curve. Fit the locking handle, part 2, to the recess as shown.



### Undercarriage Bay Assembly

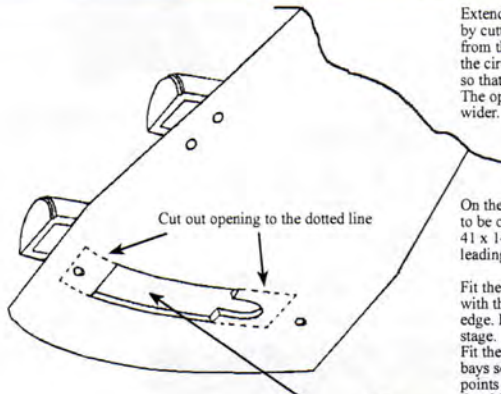


The undercarriage bays on the kits are not very well detailed, so an assembly has been provided to add some depth to the wheel wells. Fold the etched parts 9, to form box type assemblies as shown above, with the relief etched detail on the inside. Secure the corners in place with cyano adhesive (super glue). Make two of these.

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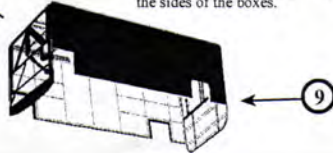
## Undercarriage Bay Location



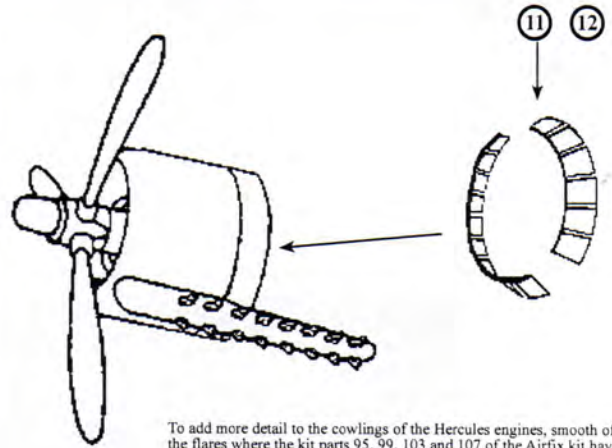
Extend the openings beneath each wing by cutting 6mm from the front and 3mm from the rear, at the same time removing the circular recess and shaping the hole so that it is rectangular. The opening should not need to be made wider.

On the Revell kit the openings will need to be opened up more, to a dimension of 41 x 14 mm that starts 3mm in from the leading edge of the wing.

Fit the undercarriage bays into the wings with the main spar brace to the leading edge. Do not secure in to position at this stage. Fit the nacelles over the undercarriage bays so that the undercarriage attachment points fit into the rectangular recesses in the sides of the boxes.



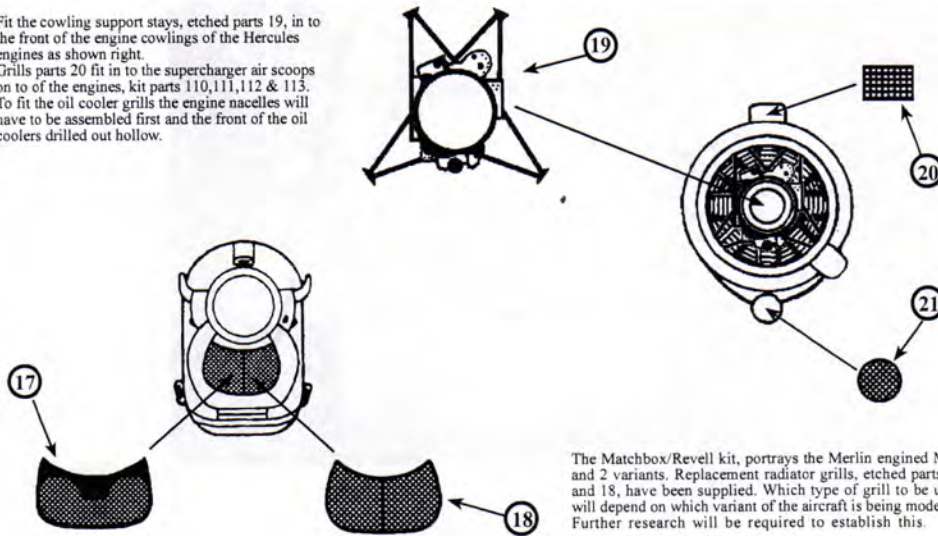
## Engine Gills Fitting



To add more detail to the cowlings of the Hercules engines, smooth off the flares where the kit parts 95, 99, 103 and 107 of the Airfix kit have had gills moulded in to place. Use etched parts 11 on kit parts 99, 103 and 107 and 12 on kit part 95 to replace the gills with items that can be set the angle desired on your model.

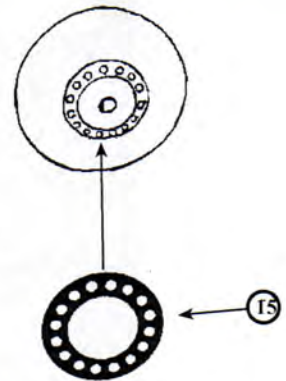
## Engine

Fit the cowling support stays, etched parts 19, in to the front of the engine cowlings of the Hercules engines as shown right. Grills parts 20 fit in to the supercharger air scoops on to of the engines, kit parts 110, 111, 112 & 113. To fit the oil cooler grills the engine nacelles will have to be assembled first and the front of the oil coolers drilled out hollow.



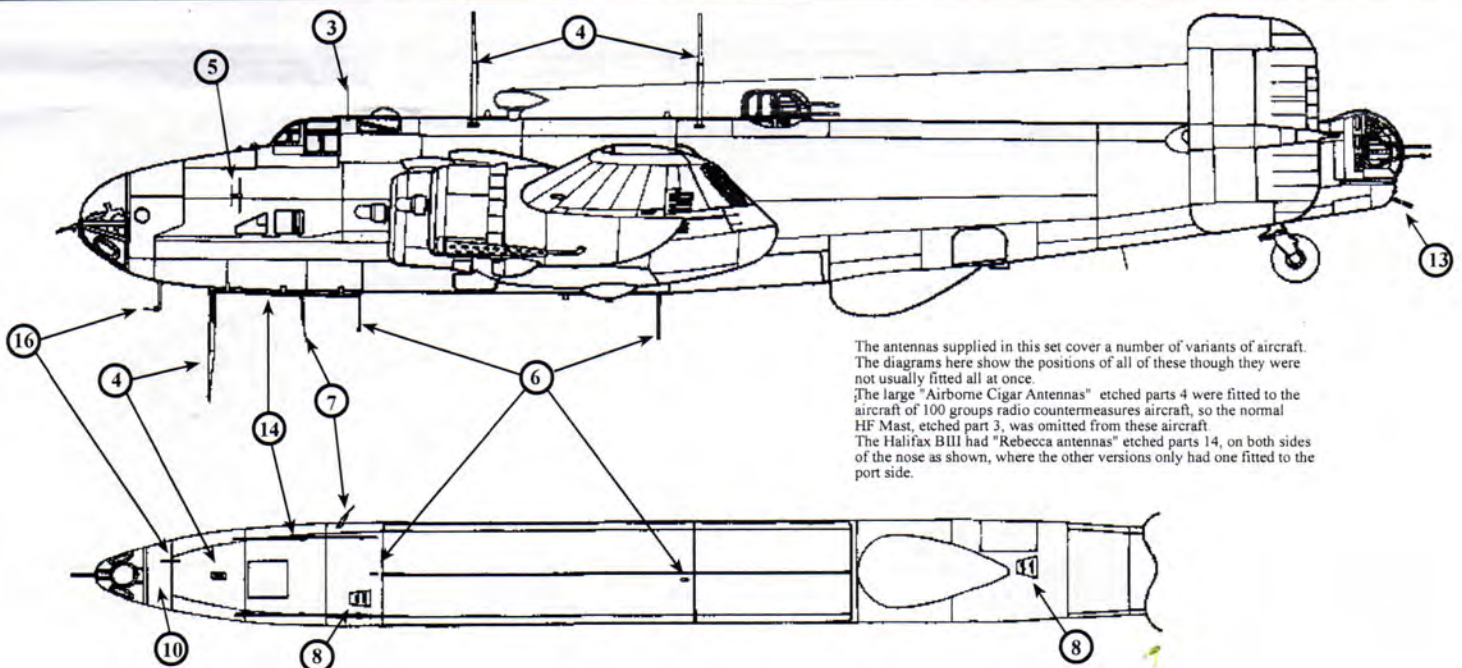
The Matchbox/Revell kit, portrays the Merlin engine Mk1 and 2 variants. Replacement radiator grills, etched parts 17 and 18, have been supplied. Which type of grill to be used will depend on which variant of the aircraft is being modelled. Further research will be required to establish this.

## Wheel Hub Rim



To fit the perforated wheel rims to the kit parts, the moulded detail will need to be removed first, as this is not only incorrect but poorly moulded. The replacement wheel rims have the correct number of holes.

## General Antenna Types and Locations



The antennas supplied in this set cover a number of variants of aircraft. The diagrams here show the positions of all of these though they were not usually fitted all at once. The large "Airborne Cigar Antennas" etched parts 4 were fitted to the aircraft of 100 groups radio countermeasures aircraft, so the normal HF Mast, etched part 3, was omitted from these aircraft. The Halifax BIII had "Rebecca antennas" etched parts 14, on both sides of the nose as shown, where the other versions only had one fitted to the port side.

The "Window" chutes, etched parts 8, were fitted to 100 group, countermeasures aircraft in the positions shown. The are assembled by folding the sides and front of the etched parts to 90° and fitting them in place so that the opening is facing rearwards. The remaining antennas were fitted to a variety of Halifax types and variants, so further research is recommended to establish the fit of the aircraft being modelled.

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### Photo Etched Parts General Instructions

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1. Do not remove the etched parts from the fret until you are ready to use them.
2. Before assembly, soak the etched parts in a suitable solvent, such as white spirit, to de-grease the surfaces for painting.
3. Cyanoacrylate adhesive (Super glue) or contact adhesive such as Elmers white glue may be used. These can be applied with a pin or piece of stretched sprue.
4. When removing parts from the fret, place the fret on a hard surface, such as a smooth ceramic tile, in order to prevent parts bending whilst cutting through the holding tabs. It is suggested that a #11 type of modelling knife blade is used for this purpose.
5. When shaping or bending a part, a straight edged blade such as a chisel blade #17 or # 18 will give a good sharp corner, or alternatively a small pair of smooth jawed pliers may be used.
6. If a part is bent incorrectly, lay it on a hard flat surface and roll it flat with a cylindrical object such as a modelling knife handle.

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### Other Instructions and References

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1. References that may be useful when modelling the Halifax are, Warpaint Series No46 Handley Page Halifax by Tony Butler. This profile type of book also has an excellent pull out plan and profile sheet that shows all the major marks of Halifax and Halton. The Ian Allen Publication Halifax "Special" by Bruce Robertson give a history of the Halifax and includes a lot of good quality photographs. The Halifax and Wellington is a large book by Chaz Bowyer and Armand Van Ishoven and deals a lot with Halifax operations, giving a good insight in to the crews points of view.
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