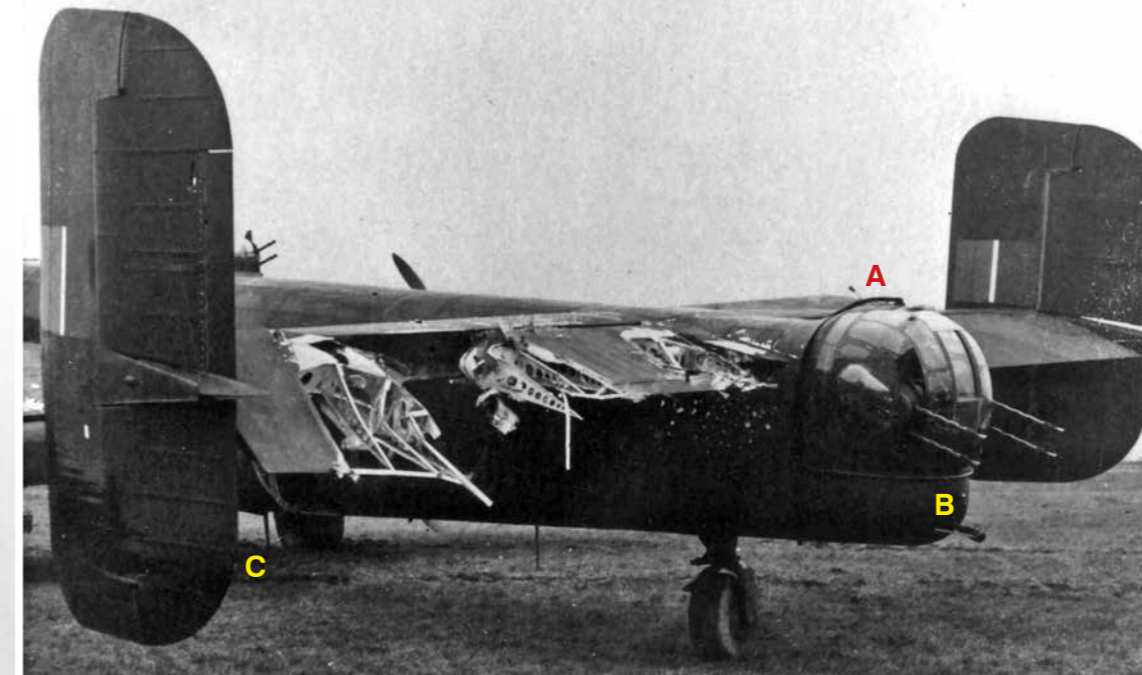


Left: With its Perspex nose and Merlin 22s it's believed that Handley Page-built HR744 would have been referred to as a Series 1A. However, the Form 78 and presence of Gallay radiators both confirm that as built the aircraft was in fact a Mk.II Series 1. Converted by Cunliffe-Owen in April 1943, GR features include .5in machine gun (A) with associated additional bracing and ammunition feed chute, AN/APN-1 AYD/AYF low range radio altimeter transmission and reception aerials (B), ASV Mk.IIIA Lucero aerial (C) and ASV Mk.III blister with 'WARNING - PERSPEX' stencil (D). Built with original style fins/rudders, the retrofitted Type D fins/rudders indicate that this photograph was taken in 1944. Towards the end of 1942 Coastal Command discontinued the use of squadron code letters, but the resulting confusion then led to the introduction of a subscript '1' or '2' after an aircraft's code letter, '1' being assigned to the lowest number squadron on a base (in this case 58 Squadron).

Main: With flaps at the 35 degree take-off setting, M-Mother of 78 Squadron is run up against the chocks at a misty Brighton in 1943. Unusually for a Series 1A the aircraft is fitted with a high-mounted mid-upper turret with large fairing. In common with other production line changeovers, the parent Handley Page company began manufacturing Series 1A airframes several months before Rootes, Fairey and the LAPG, which didn't change over until July 1943. English Electric Mk.IIs had Merlin XXs installed through to the end of production in October 1943, and although the later airframes had Perspex noses none were officially Series 1As.

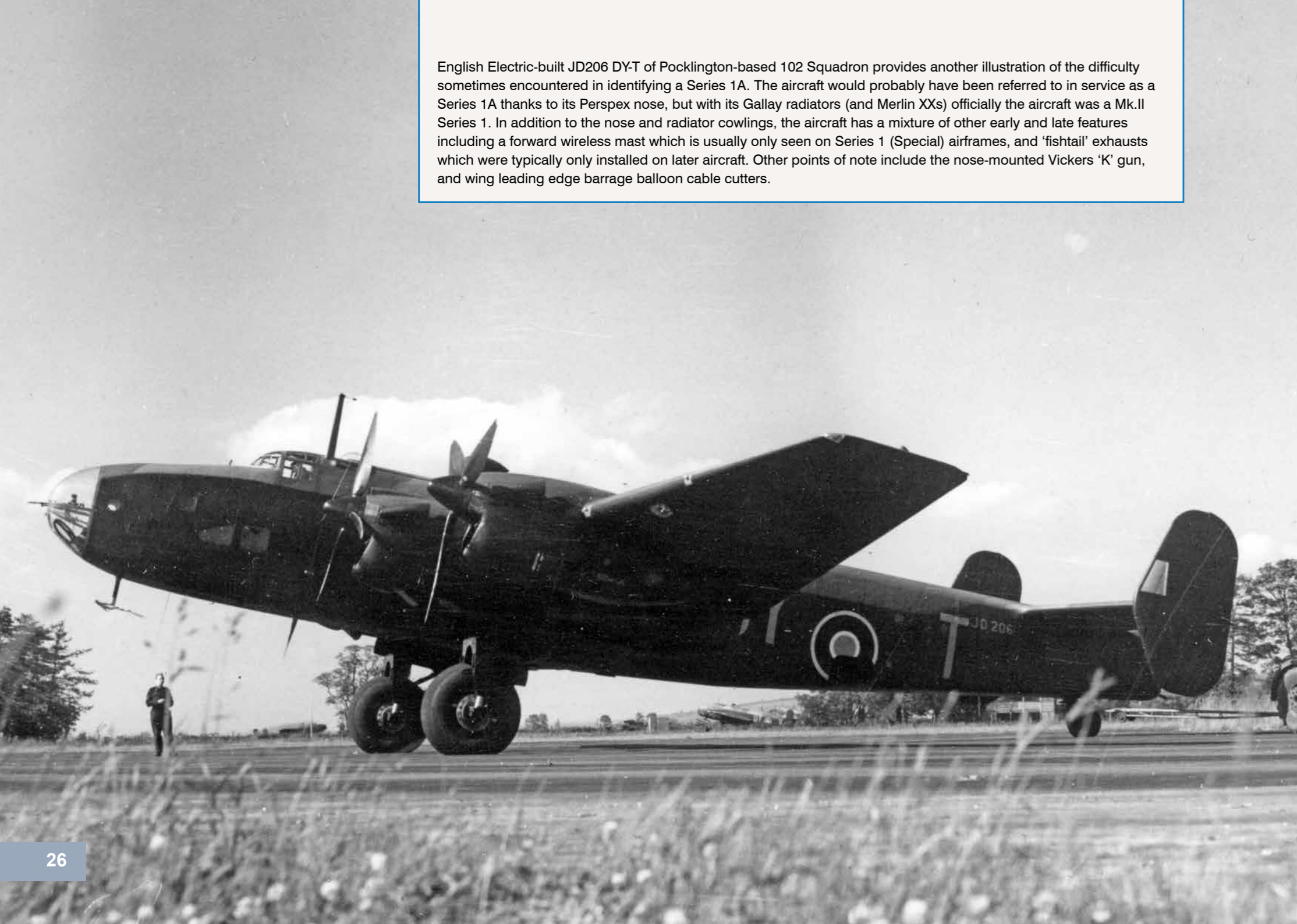


Left: Mk.II Series 1A HR868 MH-B of 51 Squadron sits forlornly at Snaith on the morning of 21 December 1943, having suffered two separate night fighter attacks during a raid on Frankfurt the previous night. The damage visible to the port elevator was caused during the initial encounter, a subsequent attack setting the aircraft on fire, damaging the nose and also preventing the bomb doors from opening properly. Points of note include the rear turret services conduit (A), Monica Mk.I aerial (B) and just visible the Mandrel aerial (C). Although as seen here HR868 is fitted with Type D fins and rudders, these would have been an in-service replacement for the aircraft's as-built original style fins and Type B rudders.

Right: A rather battered 158 Squadron HR837 NP-F is seen at Lisset on 29 June 1943, having survived a night fighter attack and being hit by a 'friendly' 1,000lb bomb over Cologne the previous night. Skipper Sgt. Doug Cameron is sitting in the space normally occupied by the aft dorsal escape hatch, the bomb having miraculously passed through the fuselage without exploding, hitting controls or terminally damaging the structure. Visible within the shattered turret are the Mk.III reflector gun sight (D) and gun breeches (E) mounted on their sides in trademark Boulton Paul fashion. Also of note is the remnant of severed T.R.1196 HF aerial cable (F).

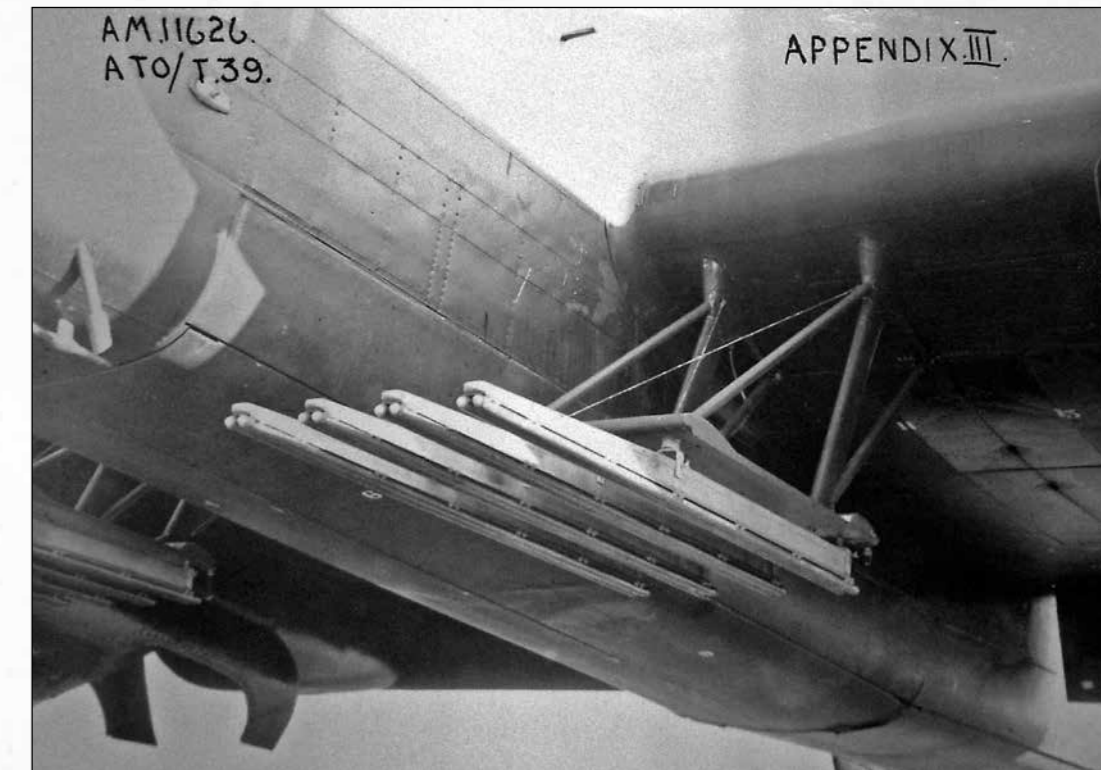


English Electric-built JD206 DY-T of Pocklington-based 102 Squadron provides another illustration of the difficulty sometimes encountered in identifying a Series 1A. The aircraft would probably have been referred to in service as a Series 1A thanks to its Perspex nose, but with its Gallay radiators (and Merlin XXs) officially the aircraft was a Mk.II Series 1. In addition to the nose and radiator cowlings, the aircraft has a mixture of other early and late features including a forward wireless mast which is usually only seen on Series 1 (Special) airframes, and 'fishtail' exhausts which were typically only installed on later aircraft. Other points of note include the nose-mounted Vickers 'K' gun, and wing leading edge barrage balloon cable cutters.

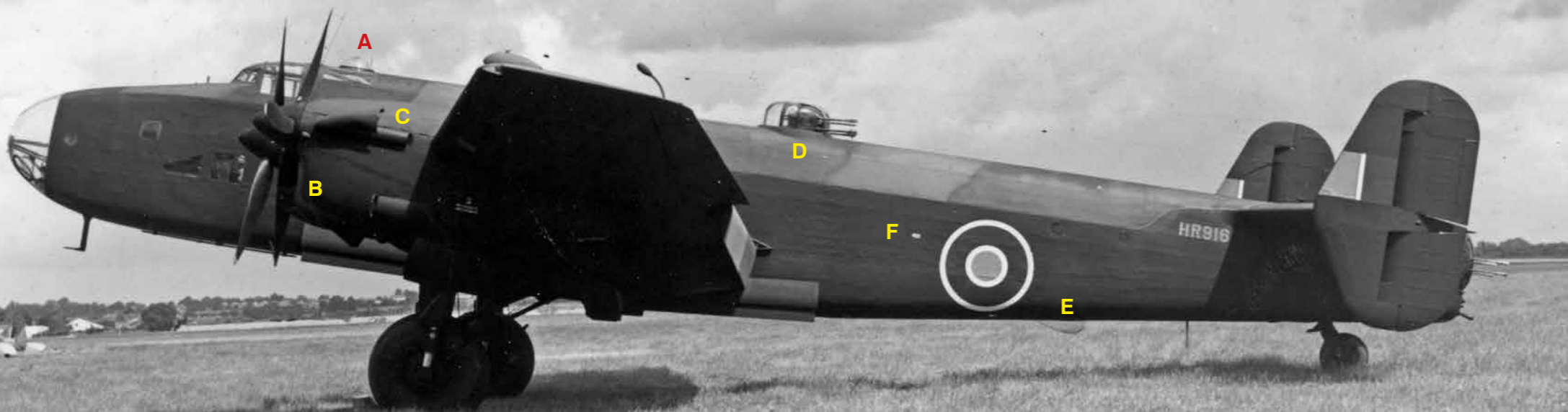


Below: Built in August 1943, JD212 was completed with Gallay radiators and Merlin XX engines, and so despite the Perspex nose (complete with Vickers 'K' gun) the aircraft was not strictly speaking a Series 1A. This is further confirmed by the presence of overwing fuel vents (arrowed) which were one of the features deleted on the Series 1A. In September 1943 the aircraft was attached to the A&AEE and is seen here in November of that year during 3in RP-3 rocket projectile trials. Completed with small fins and Type B rudders, improved Type Ds are believed to have been installed in late 1943/early 1944.

Right: Blast protection was provided by large steel plates screwed to the lower wing skin, and a standard GM.II fighter reflector gunsight was installed on a swivelling arm which allowed it to be swung upwards into the cockpit roof when not in use. A tilting reflector and graduated scale were later added to the sight to permit the use of varying diving angles. JD212 was initially test flown to assess handling with the rocket rails fitted prior to the commencement of ground firing trials. Although salvos of two and four projectiles were launched satisfactorily, the tests came to a halt when the aircraft suffered damage when six rockets were salvo fired, the project later being cancelled when the Air Ministry decided against equipping heavy bombers with RP-3s.



Several signature Series 1A drag reduction features are visible in this June 1943 dated image of newly completed HR916 including a low-profile astrodome (A), revised engine cowlings (B), six-into-one 'fishtail' exhausts (C) and low-mounted Boulton Paul Type A Mk.VIII mid-upper turret (D). Despite claims to the contrary, awareness of the dangers of night fighter attacks from below developed at quite an early stage (certainly some considerable time prior to the introduction of Schräge Musik upward firing guns), one of the results on the Halifax being the introduction of a downward vision blister (E). A quirk often seen in period images, when parked for any length of time stored hydraulic pressure caused the flaps to extend well beyond the 80-degree maximum setting. As originally designed the static air pressure source for the aircraft's air speed indicators was the nose mounted combined pitot-static probe, but the system was eventually modified by the addition of a static vent (F) which provided a more accurate static air pressure source.



# PROPELLERS

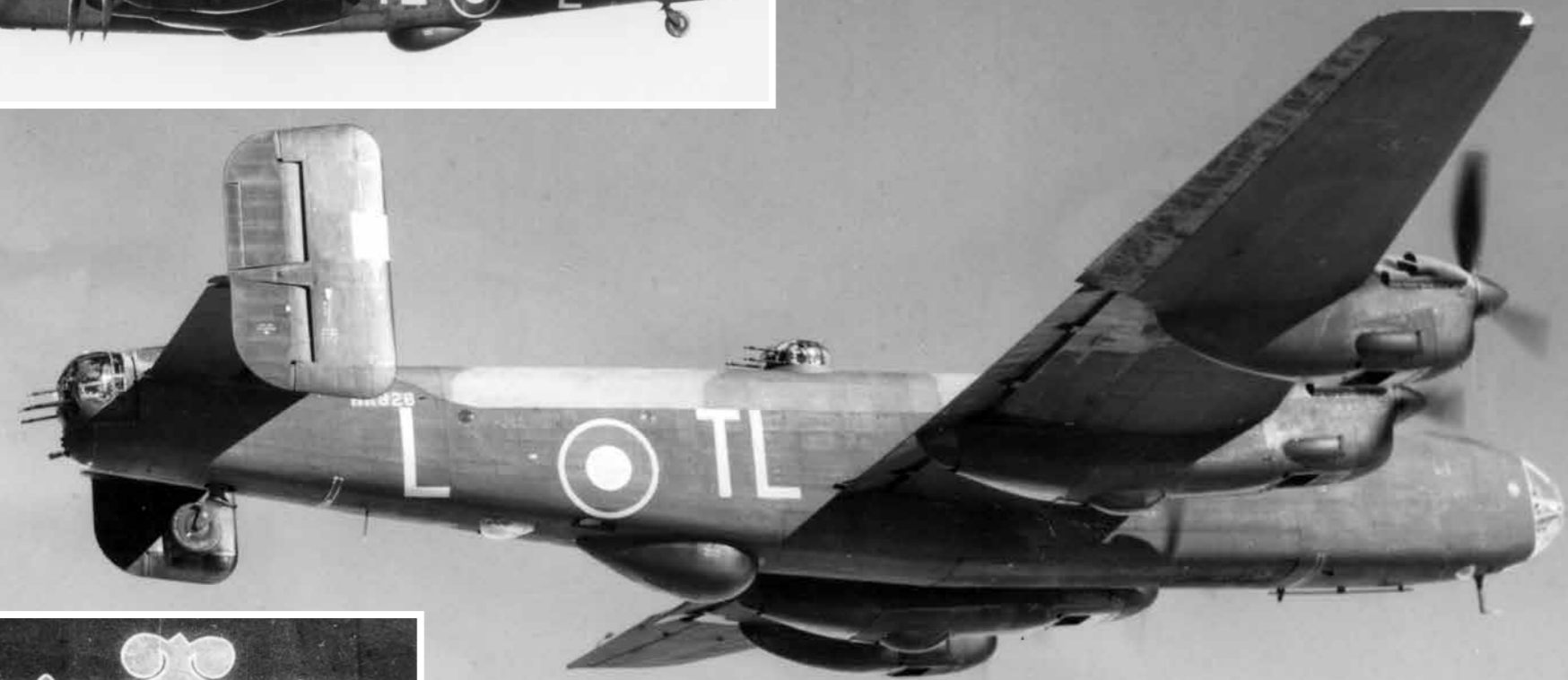
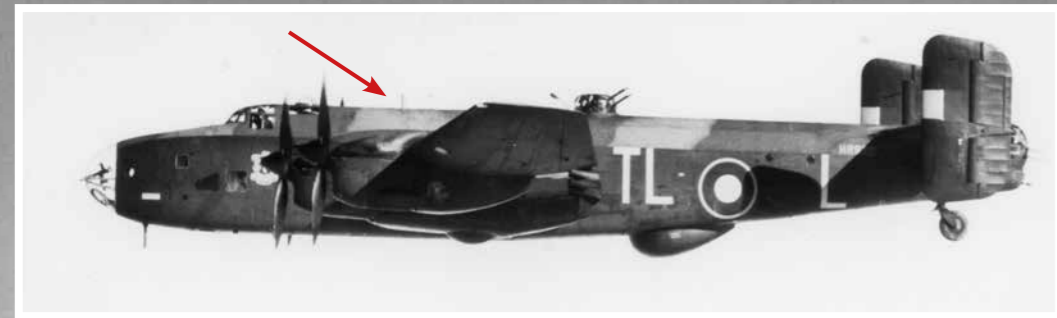
Top right: A large variety of Rotol hydraulic propeller were installed on the Mk.II and Mk.V, and one of the many variations can be seen here on Rootes Securities-built Mk.V Series 1 (Special) EB241 'A-Apple' of 427 Squadron. The blades on the port outer are of the narrow-chord rounded tip style with wider roots, while the port inner has broad chord blades with offset pointed tips. This type of blade intermix is only noted on Series 1 (Special) airframes. Although already having completed 21 ops the aircraft is in surprisingly good condition, and in addition to the bomb tally and apple nose art, EB241 sports a small red and white Maple leaf below the cockpit.



Lower right: It was initially thought that switching to three-blade de Havilland Hydromatic propellers would cure the Merlin powered Halifax's vibration problems. However, following comparison trials in mid-1943 it was instead decided to use 13ft or 12ft 6in diameter Rotol hydraulic Type B propellers with four wooden blades. Restricted wartime production rates dictated that initially the new propellers could only be installed in symmetrical pairs, and as the vibration problem was more acute on the outboard engines, the four-blade units were initially installed only in those positions, as seen on this 148 (SD) Squadron Mk.II Series 1A at Brindisi in 1944. Production of three-blade propellers for the Halifax ended in February 1944, and for the remainder of the year only four-blade units were manufactured. The mixture of exhaust types is also of note (see page 59).

Below: In addition to reducing vibration, three and four-bladed propeller comparison trials at the A&AEE using Mk.V DK145 found that four blade units improved the latter stages of the climb and also increased cruising height by 1,000 ft. Additionally the four-blade propeller's extra power absorption was felt to be useful for tired engines on HCU aircraft, and also of benefit for very long-range Coastal Command operations. The installation of four bladed propellers on outboard engines was only a temporary expedient, and as soon as production rates increased sufficiently, four-bladed props were fitted in all positions. This image shows an unusual combination of features; a Mk.II Series 1A equipped for airborne operations with troop cone & tailwheel guard. According to some sources a handful of airborne forces Halifaxes were converted from Mk.IIs, but it's unclear if the designation A. II was ever officially used.





Above: HR926 was completed with original design fins and Type B rudders, but as seen in this image which was taken shortly before its loss in October 1943, the aircraft had already been field modified with Type D units. A much rarer and unusual modification is the deletion of the D/F loop and its replacement with a short, light-coloured blade aerial (arrowed). In addition to fitting ASV Mk.III to Coastal Command Halifaxes, Cunliffe-Owen also carried out H2S Mk.II installations on Bomber Command aircraft, a stencilled 'WARNING PERSPEX!' being visible on HR926's blister.

Left: HR926 joined 35 Squadron in early August 1943 and despite its relatively short two-month service life the aircraft became famous as the personal mount of PFF legend S/L Alec Cranswick DSO DFC. The Cranswick family crest nose art was painted by rear gunner P/O Ivor Howard.

## HALIFAX Mk.II Series 1A, HR926 TL-L, 35 SQN, SEPTEMBER 1943



### Modeller's notes

Taken On Charge 35 Squadron 7 August 1943

- Cranswick family crest nose art
- Red serial numbers
- Three blade propellers with standard spinners
- Morris radiators
- Fishtail exhausts
- Type D fins and rudders
- Perspex nose with Vickers 'K' gun
- Low-mounted BP Type A Mk.VIII mid-upper turret
- IFF Mk.III aerial in standard position
- Monica Mk.I aerial
- Pilot's lower forward window replaced by camouflaged metal panel
- Downward observation blister under rear fuselage
- Black tailwheel with tyre creep marks
- Low profile astrodome
- D/F loop replaced by a short, light-coloured blade aerial
- White painted 'WARNING - PERSPEX' stencil on H2S blister
- ASI static vent on port side of rear fuselage

Shot down 22 October 1943



A small amount of flap has been deployed to help with forming during the photographic session. Partly as a result of findings from the A&AE's 1942 performance trials, in mid-October 1942 RDM2A Special Night finish was officially replaced within Bomber Command by DTD308 Night. Due to confusion over designations DTD308 Night was then renamed Smooth Night, and as seen here on HR926 this became the standard Halifax paint finish for the rest of the war.