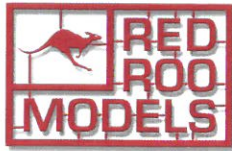


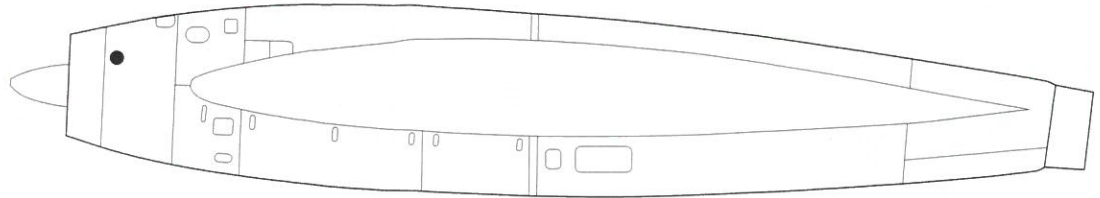
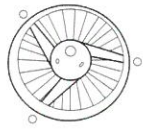
RRR48141



1/48 SCALE

RAAF CANBERRA ROLLS ROYCE AVON JET ENGINE STARTER FAIRING

(INCLUDES TURBINE BLADES)



Overview:

The Avon turbojet was Rolls-Royce's first axial flow jet engine, and went on to become one of their most successful post-WWII engine designs. It was used in a wide variety of aircraft, both military and civilian, and only ended production in 1974, after almost 25 years of production.

The Avon design started life on the drawings board of a team that was headed by Cyril Lovesey, who had previously been in charge of Merlin development. The engine was intended both as an experiment in axial-flow engines, as well as (if successful) a replacement for the 5,000 lbf (22 kN) Nene. Originally known as the AJ.65 for Axial Jet, 6,500 lbf which was designed by Alan Arnold Griffith, the engine developed as a single-spool design with a 15 stage compressor, mass flow rate of 150 lb/s (68 kg/s) and a pressure ratio of 7.45. Development started in 1945 and the first prototypes were built in 1947. Introduction was somewhat slowed by a number of minor problems.

The engine eventually entered production in 1950, the original RA.3/Mk.101 version providing 6,500 lbf (29 kN) thrust in the English Electric Canberra B.2. Similar versions were used in the Canberra B.6, Hawker Hunter and Supermarine Swift. Uprated versions soon followed, the RA.7/Mk.114 producing 7,350 lbf in the de Havilland Comet C.2, the RA.14/Mk.201 of 9,500 lbf (42 kN) in the Vickers Valiant and the RA.26 of 10,000 lbf (44 kN) used in the Comet C.3, Sud Aviation Caravelle, and Hawker Hunter F.6. An Avon-powered de Havilland Comet 4 flew the first scheduled transatlantic jet service in 1958. The line eventually topped out with the 12,690 lbf (56,450 N) and 16,360 lbf (72,770 N) in afterburner RA.29 Mk.301/2 used in later versions of the English Electric Lightning. Other aircraft to use the Avon included the de Havilland Sea Vixen and Fairey Delta.

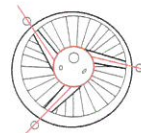
Australian Canberra Engines:

The Australian government had been negotiating with English Electric and Rolls Royce to commence licensed production of the Canberra, equipped with the Rolls Royce Tay engine as the preferred powerplant. The change to the Avon engine was forced upon the Australian government when Rolls Royce abandoned its development in favour of the Avon, licencing the Tay to Pratt and Whitney. Canberra aircraft A84-228 to A84-248 were powered by two Rolls Royce RA.7 Avon Mk 109 engines, easily distinguished by the longer starter fairing and the three peripheral starter cartridge exhaust ports visible on the engine air intake. The longer housing was needed to accomodate the tripple cartridge breech.

What's What:

This accessory provides the larger starter fairing and turbine faces for the last 20 Australian-built Canberra bombers. The conversion comprises:

- 2 x starter fairings,
- 2 x turbine faces and
- 1 x length of annealed brass .040 wire.



Make sure that you fit the wire parts at 120° to the centre of the diameter and the outside of the starter fairing.

Using the Conversion:

This conversion is designed to work on either the 1/48 scale Aeroclub vacform kit or the Classic Airframes injection moulded kit. Check the fit of the parts against the kit you are using and adjust if required. Firstly, prepare the resin parts and ensure that the central hole in the turbine face is opened up. Then carefully trim the moulding pip on the starter fairing and locate it centrally on the turbine face. Glue these parts together. It is suggested that you fit the two halves of the air intakes on the Classic Airframes kits to their respective wing halves before you fit the Red Roo Models parts.

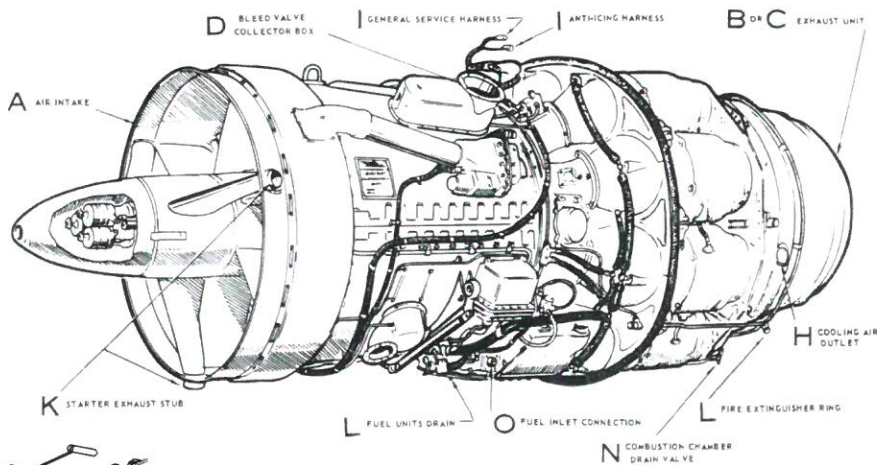
Trim the annealed brass wire into three lengths and roll them straight. Glue the wires into their locating holes in the starter fairing and make sure that everything is in true when viewed from the front. If you have a pair of calipers available, use them to measure the length of the wire that you require or otherwise, offer the parts up to the kit

engine air intake and trim to fit. Adjust as necessary. We have elected to use brass wire for the cartridge exhausts rather than resin as we felt it was easier to work with and that when viewed from the front of the intake the three dimensional nature of the exhaust is not apparent. Carefully note the angle of these exhaust tubes in relation to the starter housing and outer casing.

Some modellers may wish to drill out the exhaust ports in the external skin of their kit's intakes. Alternatively small circles of black decal may be used to represent these.

Painting and Finishing:

The starter cartridge fairing was painted in the squadron colour: check your references carefully to determine which colour to apply. It is suggested that you assemble and paint the starter cartridge fairing, turbine face, air flow vanes and starter cartridge exhausts before fitting the sub-assembly to your kit's engine air intake. Use the photos below as a colour guide.



Cast and Crew

Red Roo Models wishes to thank Richard Hourigan for his outstanding work on the creation of the master for this accessory.

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