

### HAWKER P.1127

Ever since 1920 Hawker Aircraft Limited have been in continuous production of high performance aircraft for the R.A.F. and the Air Forces of other countries, such world famous types as the Hurricane and Hunter being examples.

Since 1957 studies in the Vertical Take Off, or V.T.O. field have been carried out jointly by Hawker Aircraft and Bristol Siddeley Engines, culminating in the Pegasus turbofan—the first entirely practical V.T.O. powerplant—and in the P.1127.

First flown on October 21, 1960, the P.1127 is the world's first operational aircraft designed for vertical take-off and landing. The Pegasus engine which powers the P.1127 has four individual jet outlets, two on each side of the engine. Each outlet has a nozzle which can be rotated through 90 degrees so that the jet can be used to give vertical lift or horizontal thrust. As the total aircraft weight is less than the thrust developed by the single engine the aircraft is capable of vertical take-off; once the aircraft is airborne the nozzles are gradually rotated until all the thrust is being used for forward flight.

The P.1127 began life as a private venture, intended as a replacement for the Hunter in a ground attack role and as a suitable strike aircraft for NATO. The first drawings were issued in 1959 and the prototype had been completed and hovering trials had commenced by October 1960. By March 1961 the prototype had embarked on conventional flight trials using runway take-off and landing techniques. In September 1961 the P.1127 made complete transitions from vertical to horizontal flight and back.

A number of further prototypes have been constructed for the British Ministry of Aviation for research into V/STOL characteristics and general development, and a further number of aircraft has been ordered by the United States, Western Germany and Great Britain. Some of the prototypes will be employed in testing the armament for the ground attack role. This armament will be external and carried on under-wing pylons.

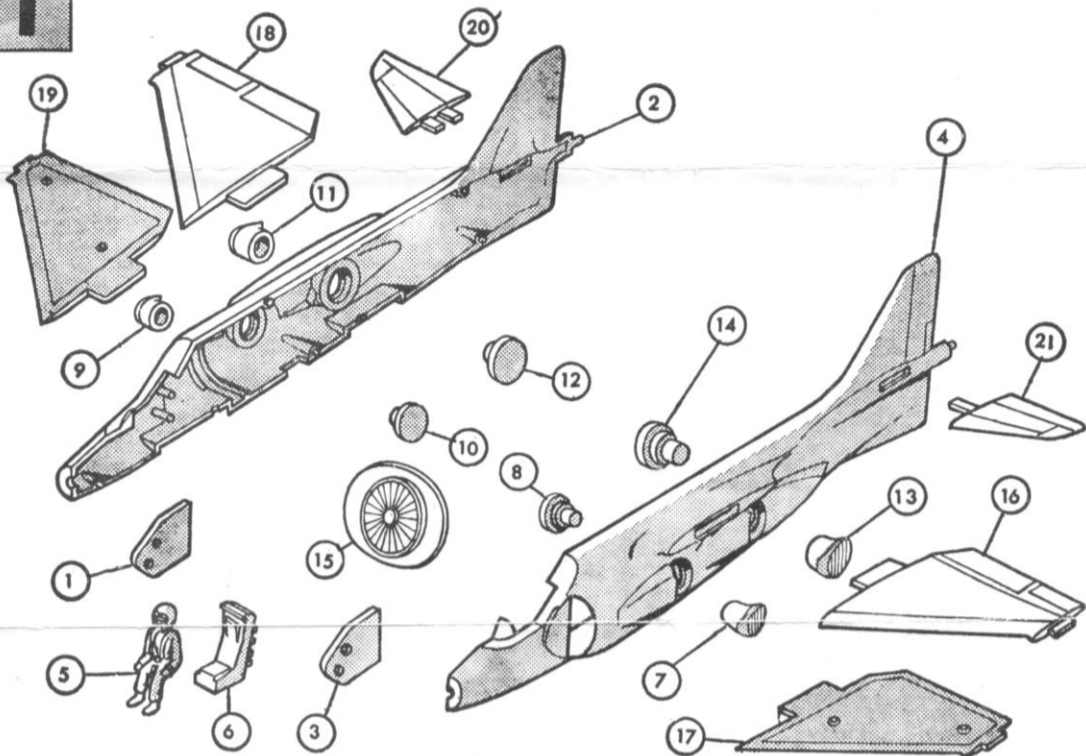
The P.1127 is powered by a single Bristol Siddeley BS.53 Pegasus turbofan of approximately 15,000 lb. s. t. giving a maximum speed slightly below Mach. 1. Possible future armament includes bombs and rockets carried beneath the wings. Wing span is 24 ft. 4 ins. and length 41 ft. 2 ins.

# HAWKER P.1127

## INSTRUCTIONS

# 1

### FUSELAGE WING & INTERIOR ASSEMBLY ETC.

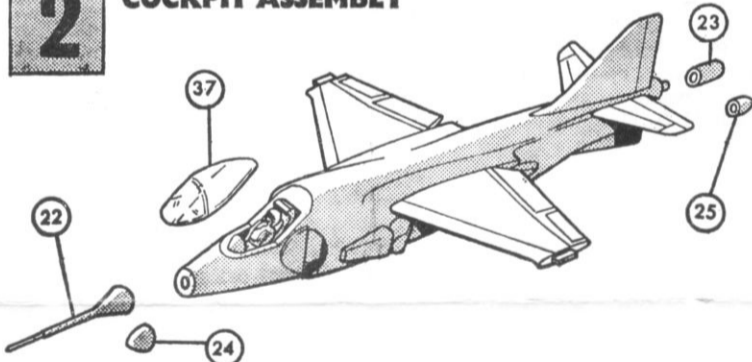


It is recommended that the instructions and exploded view are studied and assembly practised before commencing assembly. If it is wished to paint internal details such as pilot and cockpit interior, and such external details as wheels and jet nozzles this is best done before assembly.

1. Press one intake plate (1) over the two pins projecting on the inside of starboard fuselage half (2), cement in place.
2. Similarly cement second intake plate (3) into port fuselage half (4).
3. Cement pilot (5) onto ejector seat (6), after first painting if required. Locate ribs on rear of seat on projecting pins in port fuselage and cement.
4. Lay one of forward (smaller) jet nozzles (7) in forward recess in port fuselage, then cement one of smaller pivot pins (8) into nozzle from inside fuselage. ENSURE NO CEMENT COMES INTO CONTACT WITH FUSELAGE. Allow nozzle and pin to set firmly before attempting to rotate nozzle.
5. Repeat the above procedure for forward nozzle (9) and pin (10) of starboard fuselage half.
6. In the same way assemble larger nozzles (11 & 13), and pins (12 & 14) in rear recesses in port and starboard fuselage halves.
7. Locate and cement compressor (15) between vertical ribs in starboard fuselage half, then carefully cement port fuselage half to starboard ensuring compressor is correctly located.
8. Cement together upper (16) and lower (17) halves of port wing.
9. Similarly assemble upper (18) and lower (19) halves of starboard wing, then locate and cement wing tabs into fuselage slots. Note that the wings are angled down from fuselage.
10. Locate and cement starboard (20) and port (21) tail-planes into rear fuselage slot; and ensure that they are correctly set at right angles to the fin.

# 2

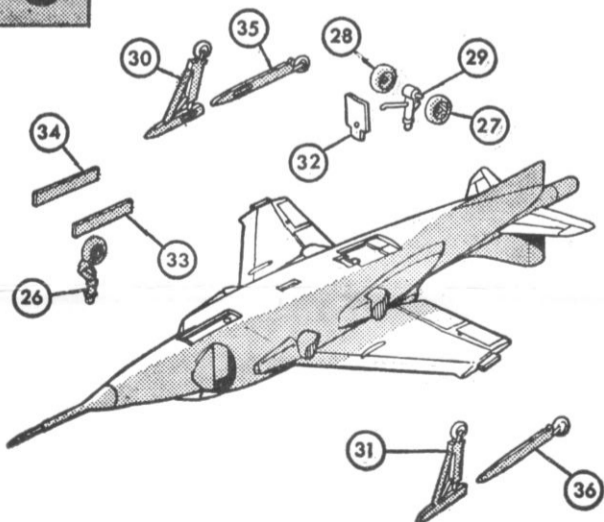
### COCKPIT ASSEMBLY



11. It will be noted that alternative nose and tail cones have been provided, the appropriate parts must be selected.
12. If the prototype version has been chosen next cement the nose cone with probe (22) on to the front of the fuselage and the plain cylindrical tail cone (23) on to the small pip at the tail end.
13. Alternatively the short nose cone (24) and the bullet shaped tail cone (25) designed for the production aircraft can be employed, these are located in the same way.
14. Cement cockpit canopy (37) in place, applying cement carefully to edges of transparency.

# 3

### UNDERCARRIAGE ASSEMBLY ETC.



15. The desired undercarriage position must now be selected. For a model with lowered undercarriage first cement the nose wheel (26) into the forward hole beneath fuselage.
16. Next cement the main wheels (27 & 28) on to the stub axles of the main undercarriage leg (29) and cement leg into rear hole below fuselage, ensuring the angled rod faces forward.
17. Cement the port extended outrigger undercarriage (30) on to the tab on port wing tip and similarly locate and cement in place starboard outrigger (31).
18. Cement main undercarriage door (32) in place. The top tab of this door rests within the stepped front of the undercarriage recess and the hole in the door locates on, and is cemented to, the angled end of the main leg rod.
19. Cement the nose wheel doors (33 & 34) to the lower fuselage along the sides of the nose wheel recess and hanging vertically down.
20. For a model with retracted undercarriage the legs and wheels are omitted and the doors cemented in place flush with the underside of the fuselage. The extended outrigger undercarriage units are replaced with the retracted outriggers, port (35) and starboard (36).

**CARE MUST BE TAKEN TO ENSURE THAT GLUE IS KEPT AWAY FROM THE EYES.**

