

Chapter 8

BURNER, TYPE CSH.103

(Completely revised)

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Introduction

1. The burner is of the Simplex type, employing one swirl chamber and a fixed exit orifice.

Description

2. The burner consists mainly of an atomizer body, a swirl plug and an air

shroud; the shroud is formed with an hexagon which is drilled with a series of air transfer holes. The atomizer body and air shroud are brazed together, and form a single assembly which houses the swirl plug, a gauze strainer, and a threaded retaining plug. The earlier burner of this type, i.e. the CSH.99, had only two holes in the swirl plug and a larger mesh strainer.

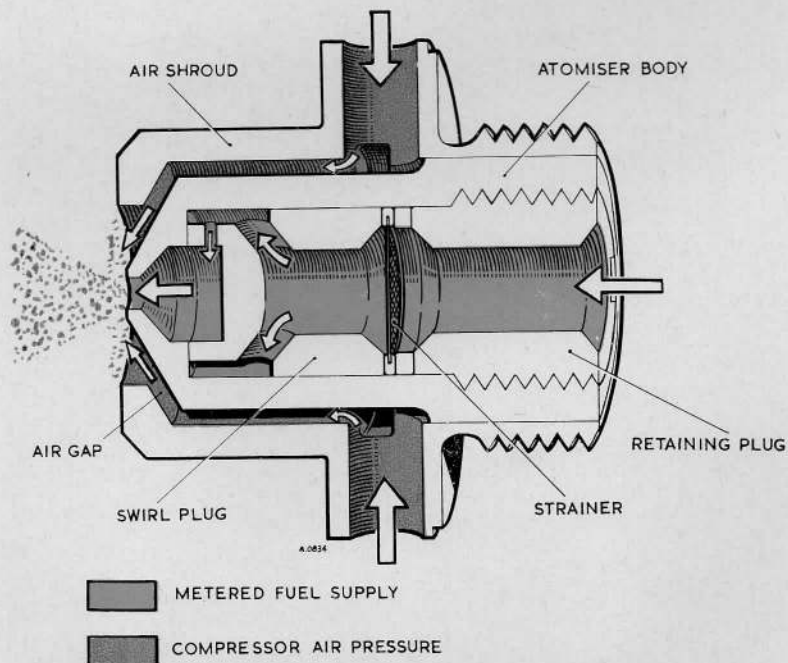


Fig. 1. Functional diagram

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Operation

3. Fuel enters the burner through the retaining plug and passes through the strainer into the swirl plug interior; from the plug interior, the fuel flows via a series of equi-spaced radial drillings to an annular space formed between the lower portion of the swirl plug and the interior of the atomizer body. From this annulus, the flow is led back through the swirl plug via three small-diameter tangential holes; the angular disposition of these holes assists in imparting a swirling effect to the fuel just before it is ejected from the atomizer body.

4. Air picked up by the shroud air transfer holes is continually flowing through the

annulus between the shroud and atomizer body before finally passing to outlet through a calibrated annular air gap which surrounds the orifice; this air-flow provides an anti-carbon measure and assists in cooling the atomizer head.

Installation

5. Information on the installing of the burner, which is screwed directly into the burner manifold, is given in the relevant engine Air Publication.

6. No servicing is required. For inhibiting instructions, refer to A.P.4471A.

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