

Chapter 5

BURNER, SIMPLEX, TYPE CSH.78

LIST OF CONTENTS

| | <i>Para.</i> |
|--|--------------|
| <i>Description</i> | 1 |
| <i>Operation</i> | 4 |
| <i>Installing and servicing</i> | 5 |

LIST OF ILLUSTRATIONS

| | <i>Fig.</i> |
|-----------------------------------|-------------|
| <i>Burner, Type CSH.78</i> | 1 |
| <i>Functional diagram</i> | 2 |

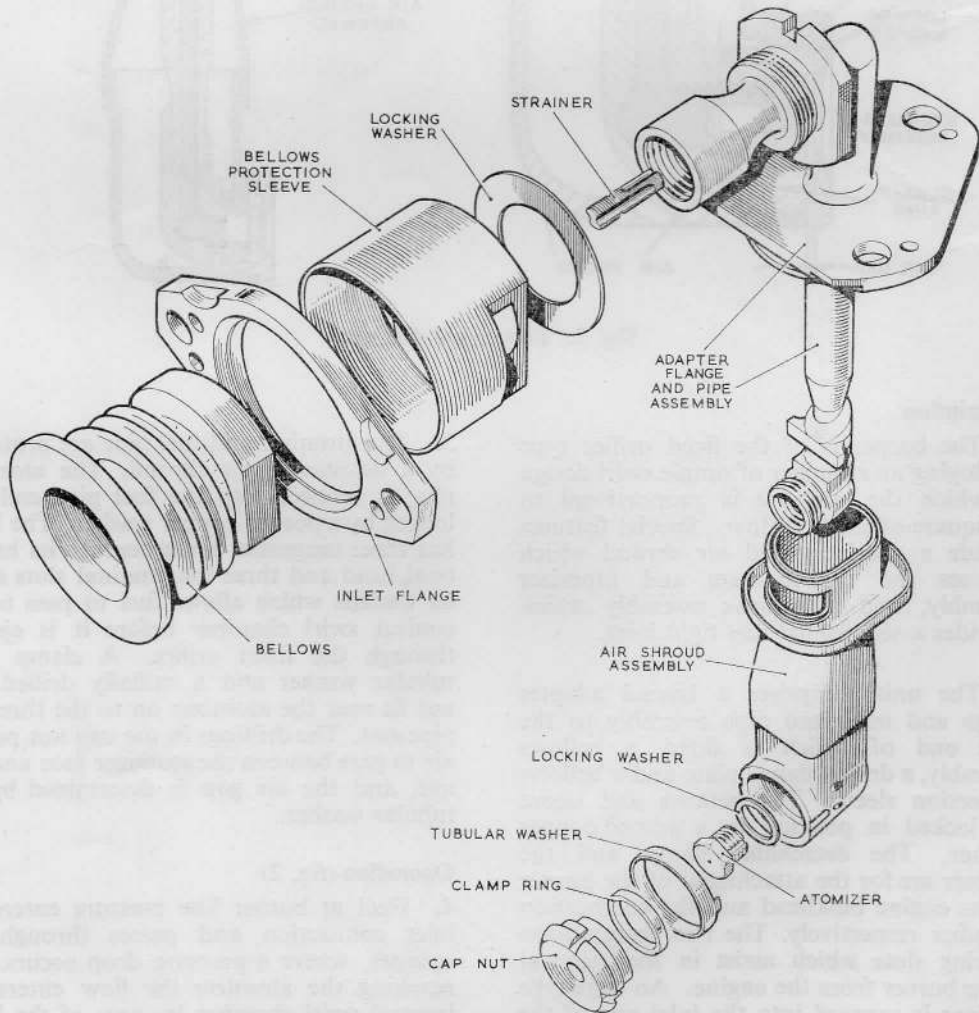


Fig. 1. Burner, Type CSH.78

RESTRICTED

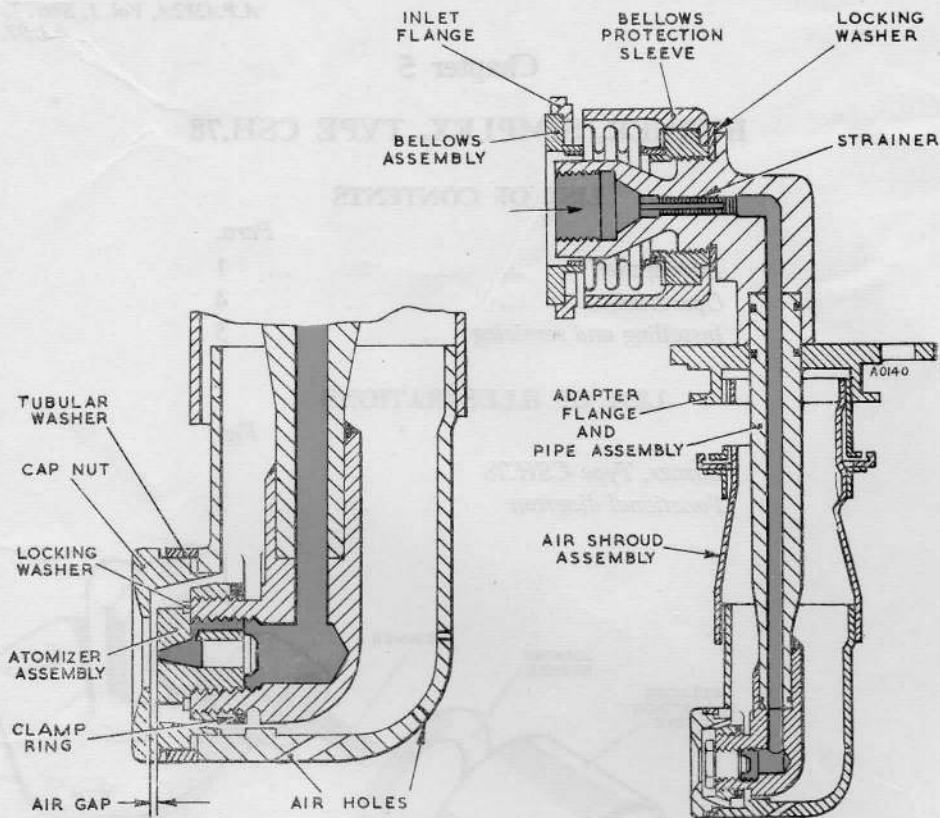


Fig. 2. Functional diagram

Description

1. The burner is of the fixed orifice type employing an atomizer of simple swirl design in which the pressure is proportional to the square of the fuel flow. Special features include a pre-fabricated air shroud which encloses the burner stem and atomizer assembly, and a bellows assembly which provides a vibrational fuel tight joint.

2. The unit comprises a brazed adapter flange and machined pipe assembly to the inlet end of which is fitted a bellows assembly, a drilled flange plate and a bellows protection sleeve. The bellows and sleeve are locked in position by a peened copper washer. The detachable flange and the adapter are for the attachment of the burner to the engine bulkhead and the combustion chamber respectively. The two flanges have levering slots which assist in the removal of the burner from the engine. An edge-type strainer is screwed into the inlet end of the adapter flange.

3. The atomizer and fuel pipe are protected by a detachable air shroud. The atomizer plug is screwed into the fuel pipe end and locked by a peened copper washer. The body has three tangential holes beneath its hexagonal head and three longitudinal slots along its threads which allows fuel to pass to the conical swirl chamber before it is ejected through the front orifice. A clamp ring, tubular washer and a radially drilled cap nut fit over the atomizer on to the threaded pipe end. The drillings in the cap nut permit air to pass between the atomizer face and the nut, and the air gap is determined by the tubular washer.

Operation (fig. 2)

4. Fuel at burner line pressure enters the inlet connection and passes through the strainer, where a pressure drop occurs. On reaching the atomizer the flow enters the integral swirl chamber by way of the longitudinal slots and tangential holes, establishing

RESTRICTED

a vortex before it is ejected from the orifice as a finely atomized, conical spray. The air holes in the shroud wall direct a flow of air, via the drilled cap nut, to the face of the atomizer and serve to reduce carbon formation.

Installing and servicing

5. Instructions for installing the burner on the engine are given in the relevant engine

Air Publication. Apart from an examination for leaks and a check on the security of the connections and mounting, no servicing is necessary.

6. When any pipes or joints have been disconnected, the system must be primed as described in the engine Air Publication.

7. Details for inhibiting the burner are given in A.P.4471A, Vol. 1.

RESTRICTED

This file was downloaded
from the RTFM Library.

Link: www.scottbouch.com/rtfm

Please see site for usage terms,
and more aircraft documents.

