MINOR REPAIRS

CONTENTS

Introduction

1 The following operations detail the procedure to be effected during repair of engine equipment.

2 The special tools, test equipment and materials required are listed in Table 1 and are additional to those listed in Topic -1.

TABLE 1 SPECIAL TOOLS, TEST EQUIPMENT AND MATERIALS

Item	Ref No.	Part or spec No.	Description
1	34A/9135-99-9423147	-	AVPIN fuel (NATO code S-746)

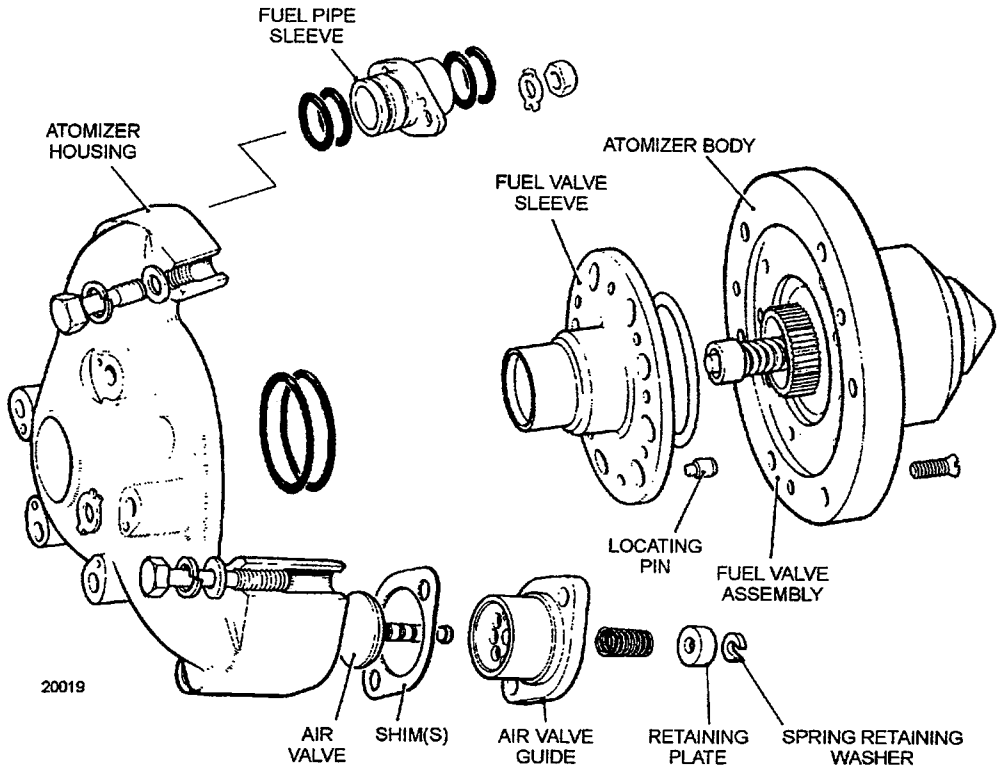

Fig 1 Atomizer assembly

ATOMIZERS

DISMANTLING (Fig 2)

Air valve from atomizer

3

3.1 Remove the nuts and bolts securing the air valve dust cover, then remove the cover.

3.2 Remove the air pipe sleeve and shim(s); record the total thickness of the shim(s) to facilitate assembly.

3.3 Remove the air valve assembly.

Air valve

4

4.1 Depress the air valve spring, then remove the retaining washer; remove the retaining plate.

4.2 Separate the air valve, guide and spring.

Atomizer

5

5.1 Remove the nuts and bolts securing the fuel inlet dust cover, then remove the dust cover.

5.2 Remove the nuts, bolts and distance pieces securing the atomizer dust cover, then remove the dust cover.

5.3 Remove the fuel pipe sleeve.

5.4 Suitably clamp the atomizer body to the housing, then remove the retaining screws.

5.5 Release the clamp, then remove the body complete with the fuel valve.

NOTE

Do not remove the PTFE sealing ring.

5.6 Suitably identify the position of the locating pin to the body and sleeve, then remove the fuel valve sleeve; collect the locating pin.

NOTE

Where the pin remains firmly located in the body and is not damaged it should not be removed.

CLEANING

6

6.1 Clean the atomizer body mounting face using cleaning fluid, Topic -1, Item 5, and lint-free cloth, Item 6. Ensure that all deposits are removed.

6.2 Immerse the components in boiling water to remove AVPIN deposits, using a lint-free cloth to remove residual deposits from the air valve guide and the plunger.

6.3 Dry the components using clean, low pressure air and ensure that all passageways are free from obstruction.

NOTE

Ensure that the air valve guide and its associated plunger are kept together as a matched assembly.

EXAMINATION

General

7

7.1 Visually examine all parts for damage; cracks on any part will entail its rejection, but scratches and burrs are acceptable provided that the raised metal is carefully removed and no source of leak is created and that exposed surfaces are reprotected.

7.2 Ensure that all joint faces are clean and undamaged and that all passageways and orifices are free from obstruction.

7.3 Ensure that the air valve guide and its associated plunger and the fuel valve guide and its associated plunger are kept together as matched assemblies.

Air valve

NOTE

Rejection of the valve plunger will entail rejection of the valve guide.

8

8.1 Examine the plunger/guide seating for damage; damage, scoring or pitting will entail rejection.

8.2 Check the condition of the PTFE coating; evidence of flaking will entail rejection.

NOTE

Apparent loss of PTFE coating should be checked using a 2X magnifying glass; where there is evidence of PTFE impregnation, particularly on the guide bore and the plunger stem and the seat mating surfaces, the PTFE coating may still be effective.

ASSEMBLING (Fig 2)

NOTES

(1) O-ring seals should be fitted in the dry condition and the exposed surface lubricated with grease, Item 5 (Table 1, Topic -1).

(2) During assembly lubricate all threads with grease, Item 4 (Table 1, Topic -1).

Atomizer

9

9.1 Position the locating pin in its original position in the atomizer body (refer para 5.6).

9.2 Fit the O-ring seal to the recess provided in the atomizer body then aligning the identification mark to the locating pin, position the fuel valve sleeve on the valve retaining nut splines.

9.3 Check that the holes in the flange are aligned and as near concentric as possible to the ports in the body; adjust the position of the locating pin in the body and sleeve to suit.

9.4 Fit the O-ring seal(s) to the groove(s) in the atomizer housing.

9.5 Position the atomizer housing, aligning the attachment holes, on the body then, using three slave nuts and bolts, clamp the housing to the body; fully tighten the nuts evenly in turn.

9.6 Using feeler gauges, check that the gap between the housing and body faces is the same all round; adjust the nuts to suit.

9.7 Secure the body to the housing with the three retaining screws; fully tighten the screws, then remove the slave nuts and bolts.

Air valve

10

10.1 Position the air valve in the guide then locate the spring, over the stem, in the guide.

10.2 Position the retaining plate, flange first, on the spring, then depress the plate and fit the retaining washer to the groove in the valve stem.

10.3 Release the retaining plate ensuring that the washer locates in the bore of the plate.

Air valve to atomizer

11

11.1 Position the air valve, seat first, in the housing inlet port.

11.2 Fit the O-ring seals to the external grooves on the air valve sleeve and the spigot on the air valve guide.

11.3 Assemble the sleeve, interposing the original shim(s), to the inlet port then, holding the sleeve firmly in position, measure the clearance between the sleeve flange and the housing; this should be between 0.002 and 0.005 in. (0.05 and 0.13 mm). Adjust the thickness of the shim(s) to suit.

11.4 Fit the O-ring seals to the internal grooves in the air valve sleeve, then assemble the air valve dust cover and secure with the nuts and bolts.

TESTING

Fuel valve

12

WARNING

AVPIN FUEL. AVPIN FUEL IS USED IN THE MAINTENANCE OF THIS EQUIPMENT. REFER TO THE AVPIN FUEL WARNING IN THE PRELIMINARY PAGES OF THIS PUBLICATION.

12.1 Support the atomizer body, nozzle downwards, clear of the bench, then carefully fill the valve chamber with fuel, Item 2.

12.2 Check, over a period of 15 minutes, for leakage through the fuel valve. No leakage is permitted.