AIR PUBLICATION

105C-0106-13A

(Formerly A.P.4303Z, Sect. 2, Chap. 1)

HUNTER
HARRIER

FILTER
PALMER AERO PRODUCTS
TYPE D1072

NOTES

GENERAL AND TECHNICAL INFORMATION
ILLUSTRATED PARTS CATALOGUE

BY COMMAND OF THE DEFENCE COUNCIL

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Ministry of Defence

FOR USE IN THE
ROYAL AIR FORCE

(Prepared by the Ministry of Technology)

Issued Sep. 69

FILTER

PALMER TYPE D1072

LEADING PARTICULARS

Part No. D10721	**Ref. No. 27VC/89**
Part No. D10723	**Ref. No. 27VC/1450653**
Element	*Stainless steel wire cloth*
Flow capacity	90 *ft* ^{3}*/min*
Connections (inlet and outlet)	1 *in BSPF*

Introduction

1. Type D1072 filters are of the in-line parallel-flow pattern and consist of a casing, end cap and element. Filters D10721 and D10723 are identical apart from the material of the casings (hiduminium 100 for D10721, titanium for D10723).

SERVICING

Dismantling

2. Remove the locking wire, unscrew the end cap and withdraw the element.

Cleaning

3. *Casing and end cap.* Wash these parts in clean trichloroethane, dry them in a clean air stream then place them in a clean covered container.

4. *Filter element.* When handling the filter element, take care not to damage or deform the wire cloth corrugations. Make a soft rubber plug to fit into the bore of the steel olive; the plug should have a central hole to accommodate a pipe for connection to a clean air supply.

(1) Support the element with the fingers at the olive and press the rubber plug into the bore of the olive.

(2) Connect a low-pressure air supply (15 to 20 lbf/in^2) to the pipe and blow off any loose dust.

(3) With the air supply closed, immerse the element in oil OM-15 (or Avtur) and allow it to soak for a few minutes.

(4) Alternately open and close the air supply for approximately one minute.

(5) Repeat operation (4) three or four times at intervals long enough to allow the element to fill with fluid.

(6) Remove the element from the oil and immerse it in clean trichloroethane.

(7) Repeat the blowing-off operations in (5).

(8) Dry the element in a clean dry air stream.

Examination

5. Examine the element for deformation of the pleated wire cloth and for any damage that may have been caused in service. Again clean the element in trichloroethane as in para. 4(6), (7) and (8).

Assembling

6. Immediately upon completion of the final cleaning operations on the filter element, ensure that the olive is likely to make an air-tight seal and insert the element into the casing. Smear grease ZX-28G on the mating threads on the casing and the end cap, then fit and tighten the end cap.

Testing

Leak test

7. (1) Blank off the outlet and connect an air supply to the inlet.

(2) Immerse the filter in water (or other suitable liquid) and apply a pressure of 150 lbf/in^2; there should be no leakage.

(3) Remove the filter from the water, dry it in an air stream and disconnect the air supply.

Flow test

8. Fig. 2 gives guidance for local manufacture of adapters for the flow test. Detail C and Items 3

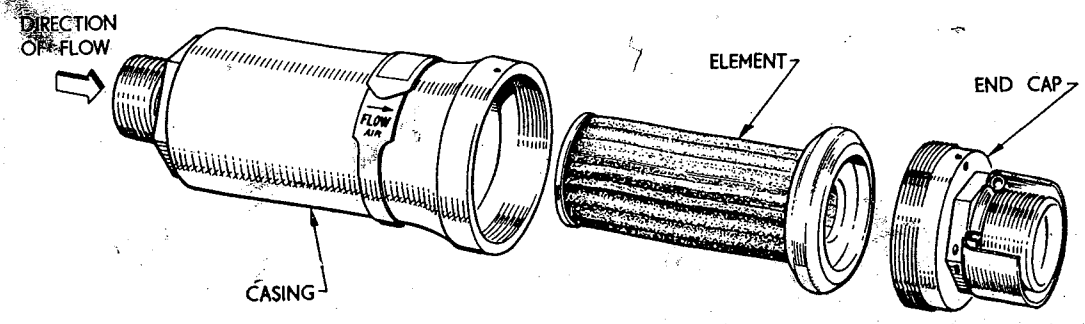

Fig. 1 Palmer type D1072 air filter

should be bronze or silver soldered to Items 1 and 2. The 45 deg. chamfer on Detail C must face outwards.

9. (1) Connect the filter to an air supply as shown in fig. 2; the supply should incorporate a regulating valve and be capable of delivering 90 ft³/min.

(2) Slowly open the regulating valve until the downstream gauge registers 2·6 lbf/in².

(3) Examine the upstream gauge; the pr shown should not exceed 4·6 lbf/in².

After-test procedure

10. Fit protective caps to the inlet and outle connections and lock the end cap to the casing with locking wire to DTD 161 or 189A.

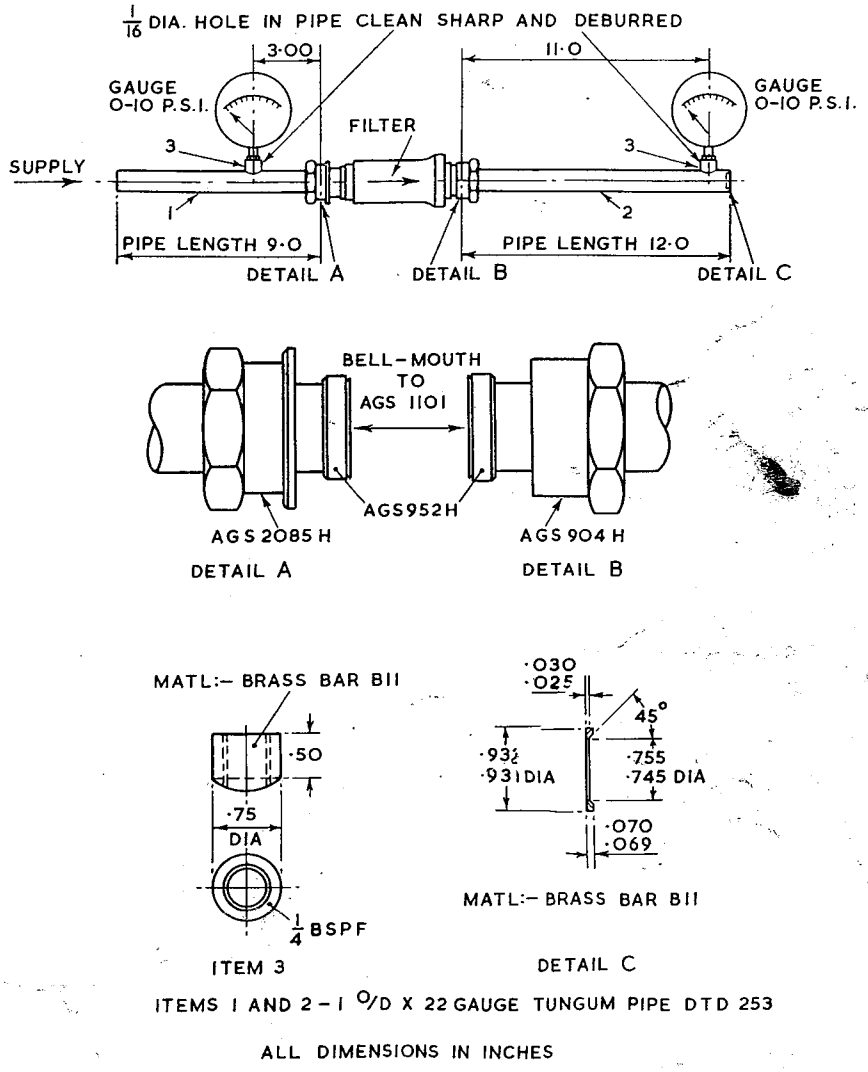

Fig. 2 Flow test details

RESTRICTED

Printed for Her Majesty's Stationery Office by Qualitex Printing Limited, Cardiff

(9781) 840528 200 9/70 483/8

ILLUSTRATED PARTS CATALOGUE (-3A)

PREFACE

DEMANDS:

1. Parts are to be demanded under Vocabulary Section 27VC except where the list shows that the part is held under a different Vocabulary Section.

LOCAL MANUFACTURE:

2. Parts annotated "LM" are to be manufactured from local resources. If the manufacture of such items is beyond the capacity of the Unit, the demand is to be endorsed "Unable to manufacture locally".

MAJOR REPAIR:

3. "MR" indicates that an item is required for major repair purposes only and will not normally be held in store by Units other than those authorised to undertake major repair of the equipment.

UNITS PER ASSEMBLY:

4. The number quoted is the quantity required per next higher assembly in the position shown except "attaching parts" which quote the quantity required to attach one item. The letters "AR" in the "Units per assy." column indicate that the quantity is "as required". Where applicable the quantity normally fitted is shown as a nominal figure e.g. (Nom. 3). Where an item is listed only for reference purposes the letters "(RF)" are quoted.

CLASSIFICATION OF EQUIPMENT:

5. The Class of Equipment is indicated by a single letter as laid down in AP 830 Volume 1 or BR 4.

CONDITION OF SUPPLY (Interchangeability Code):

6. Condition of Supply is indicated by one of the following letters and is only quoted against parts which are not directly interchangeable:-

V	Open up holes on assembly
W	Partially assembled
X	Ream or machine on assembly
Y	Drill or drill and tap on assembly
Z	Trim on assembly

OBSOLESCENT STOCK:

7. An asterisk in the "Part No." column indicates that no further purchases of the item will be made but the part is to be used until stocks are exhausted.

FIG AND INDEX	REF. No.	PART No.	NOMENCLATURE 1 2 3 4 5 6 7	USAGE CODE	UNITS PER ASSY	ICY CODE/MR	C OF E/LM
*1-	1450653	D10723	FILTER, ASSEMBLY				A
-1	1450633	D2389	. CAP, End		1		C
-2	90	D2054	. ELEMENT 15 MICRON		1		B
	NEW REF 1460758						
			*Fig.1 in A.P.105C-0106-1				

VOCAB.	N.A.T.O. STOCK No CLASS	COUNTRY	REF. No. / NIIN	CHAP No.	FIG./INDEX No.	VOCAB.	N.A.T.O. STOCK No. CLASS	COUNTRY	REF. No. / NIIN	CHAP No.	FIG./INDEX No.
27VC	1650	99	1450633		1-1						
27VC	1650	99	1450653		1-