



**INSTRUCTIONS FOR  
CONTINUED AIRWORTHINESS  
STC SR01191SE  
1120 SERIES-ICA-1**



**ENGINE INLET AIR FILTER SYSTEM  
EUROCOPTER EC120B SERIES HELICOPTERS**

This supplement must be attached to the applicable Eurocopter EC120B, FAA Approved Maintenance Manual when the Engine Filtration System, P/N 1120IN1-1001/-1003 is installed in accordance with Supplemental Type Certificate (STC) SR01191SE. The information in this manual supplements or supersedes the basic manual only in those areas listed.

**RECORD OF REVISIONS**

<b>REV</b>	<b>DATE</b>	<b>DESCRIPTION</b>	<b>BY</b>
IR	02/27/03	Initial Release	A.G.
A	08/18/06	Minor text corrections only. Revised text description of oil color from 'red' to 'dye', Page 10, Section 4.4.	J.W.
B	10/18/07	Added text and procedures for 1120IN1-1003 Filter System. Expanded Section 4.3 for clarity. Added Sections 4.5, 4.6, 4.7, 4.8, 4.9 Minor text corrections. Updated format.	S.Y. / R.L.
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E	09/23/11	<ul style="list-style-type: none"> <li>• §1.2: Revised Scope of ICA.</li> <li>• §1.4: Revised Abbreviations.</li> <li>• §1.5: Deleted registration. Updated contact information.</li> <li>• §2: Removed Filter Element Life Limitations.</li> <li>• §3: Revised Service Intervals.</li> <li>• §4: Extensively revised servicing and inspection instructions.</li> </ul>	D.N.

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## 1.0 Introduction

### 1.1 General Product Information

The Eurocopter EC120B Engine Filter System is available in two (2) configurations:

- Engine Filter System P/N 1120IN1-1001 consists of a Filter Housing Assembly, a Filter Element, an Alternate Air Assembly, a Differential Pressure Switch, a Low-Pressure LED Annunciator System, and minor components to complete the installation.
- Engine Filter System P/N 1120IN1-1003 consists of a Filter Housing Assembly, a Filter Element, an Alternate Air Assembly, a Differential Pressure Transducer, a Filter Maintenance Monitor, and minor components to complete the installation.

The Engine Filter System is designed to protect the turbine engine from foreign object damage and erosion due to fine particulate when operating in normal and dusty environments. A specially formulated polymerized oil, suspended by a pleated wire cloth and fabric matrix, attracts and holds dust particles within the filter element. It is serviced by cleaning and re-oiling at regular intervals, per the operators approved maintenance program or 'on-condition'.

A pilot actuated alternate air system is provided to bypass the filter element in the event that filter blockage exceeds a pre-selected level demonstrated in flight tests. The alternate air system should be inspected at regular intervals as part of the operator maintenance program.

### 1.2 Scope of Installation Instructions

This manual describes the airworthiness limitations, service instructions, inspection procedures, and testing of the engine filter system and its individual components. Strict adherence to the information given herein will assure maximum filtration benefit and increased component life.

### 1.3 Precautions

The following precautions are used throughout this manual and are defined as follows:

**WARNING:** Maintenance procedure, practice, condition, etc. which if ignored could result in personal injury or loss of life.

**CAUTION:** Maintenance procedure, practice, condition, etc. which if ignored could result in damage or destruction of equipment.

**NOTE:** Maintenance procedure, practice, condition, etc. or a statement which needs to be highlighted.

## 1.4 Definitions, Abbreviations, Acronyms and Symbols

The following are used throughout the manual.

AC	Advisory Circular
$\Delta P$	Differential Pressure
DPS	Differential Pressure Switch
DPT	Differential Pressure Transducer
US fl. oz.	United States Fluid Ounce
FOD	Foreign Object Damage
ICA	Instructions for Continued Airworthiness
in-H <sub>2</sub> O	Inches of Water (Pressure)
LACU	Lighting and Ancillaries Control Unit
STC	Supplemental Type Certificate

## 1.5 Distribution

From time to time it may be necessary to revise or update information contained in this ICA. Although best efforts will be made to distribute revisions and updates to the registered owner of the product, it is ultimately the responsibility of the current user to ensure he or she is using the most current information available. When revised pages are received, insertions should be logged on the Record of Revisions page and the List of Effective Pages log should be updated. Additional copies of this and other related documents, as well as revisions and updates may be obtained by contacting the following:

### **FDC/aerofilter**

3920 Sandstone Dr.  
El Dorado Hills, CA 95762  
Tel: 415-884-0555  
Fax: 415-883-8071  
Toll Free (US & Canada): 800-350-6674

**24/7 Technical Support Line: 415-328-3725**

<http://www.fdcfilter.com>

## 2.0 Airworthiness Limitations

The Airworthiness Limitations section is FAA approved and specifies inspections and other maintenance required under §43.16 and §91.403 of the Federal Aviation Regulations unless an alternate program has been approved.

*There are no airworthiness limitations associated with this Supplemental Type Certificate.*

FAA APPROVED:

  
\_\_\_\_\_  
am Manager  
FAA Seattle Aircraft Certification Office.

## 3.0 Inspection/Test Requirements

### 3.1 General

These sections cover the basic maintenance and service requirements necessary for safe operation and continued airworthiness of the FDC/aerofilter Inlet Barrier Filter System. The service and inspection intervals designated herein are the maximum recommended and should not be exceeded.

### 3.2 Service Intervals

***When severe or unusual environmental conditions exist or as flight requirements dictate, it is the responsibility of the operator to increase the frequency and scope of inspections necessary to ensure safe operation.***

Due to the operational nature of a "barrier" type filter, an important criterion for safe and successful operation is an unobstructed inlet/filter system. This can be accomplished by visual inspection of the filter prior to each flight. Small suspended particles on the outside of the filter element do not cause an appreciable airflow restriction. However, large, obvious debris such as leaves, brush, litter, etc., should be removed prior to flight. Good judgment and practice will ensure safe operation as well as long filter life.

Inspections, scheduled and conditional, shall be performed by qualified personnel and in accordance with standard aircraft practice. Compliance with all applicable Service Bulletins and Airworthiness Directives is mandatory.

**Refer to Section 4.4 for post cleaning inspections.**

## Recommended Service Intervals

ITEM		PRE-FLIGHT	100 HOURS	300 HOURS	12 MONTHS <sup>(2)</sup>
<b>a</b>	Visual inspection of filter element (remove debris and note condition of element and associated screens) (1120IN1-1001 and 1120IN1-1003 Systems) and differential pressure transducer filter (1120IN1-1003 System only).	•			
<b>b</b>	Inspect, clean, and re-oil filter element. <sup>(1)</sup>			•	•
<b>c</b>	Inspect and clean differential pressure transducer filter. (1120IN1-1003 System only)			•	•
<b>d</b>	Inspect and cycle alternate air door.		•		•
<b>e</b>	Inspect differential pressure switch / warning annunciator components for condition, security, and corrosion. (1120IN1-1001 System only)  Inspect differential pressure transducer and monitor components for condition, security, and corrosion. (1120IN1-1003 System only)		•		•
<b>f</b>	Inspect wiring harnesses and electrical connections for condition, security, and corrosion.		•		•
<b>g</b>	Inspect attachment hardware, mounting brackets, and inlet seal for condition, security, and corrosion.			•	•
<b>h</b>	Inspect filter housing structure and associated hardware for cracks and general security.			•	•
<b>i</b>	Leak and pressure test differential pressure switch / warning annunciator system. (1120IN1-1001 System only)  Leak and pressure test differential pressure transducer and monitor components. (1120IN1-1003 System only)  ** Perform Leak and Pressure Test if a defect is discovered and/or the system integrity is in doubt.		**		•

(1) As required (failed inspection or “LOW INLET PRESSURE” annunciation), 300 hours, or 12 months, **whichever occurs first**.

(2) Hours of operation or 12 months, **whichever occurs first**.

## 4.0 Filter Element Servicing

### 4.1 General

To ensure proper function and maintain a high level of filtration efficiency, care should be taken when handling the element. The element is more likely to be damaged during servicing than in operation. Special care should be taken when removing and reinstalling the filter element. Pleated material wire mesh is easily damaged or deformed when allowed to scrape against other objects. Careful attention to the following section will ensure full service from the filter element.

When operating in the most severe conditions it is highly recommended that an additional, serviceable and oiled element is available. This will allow continued service while the previously installed element is being cleaned, inspected and re-oiled.

### 4.2 Removal and Reinstallation of Element

**CAUTION:**

Removal of Filter Element can introduce FOD to the intake plenum.  
Always inspect for FOD during Filter Element removal or  
reinstallation. Always cover engine inlet when Filter Element is  
removed to prevent FOD.

- a) Remove the element by unlatching the six latches on the top and sides of the element.
  - Inspect latches on the element for security and loose rivets. If any damaged latches or loose rivets are found, inspect inlet plenum and surrounding areas for FOD.
- b) Reinstallation is reverse of above. Be sure to latch the secondary latch springs.

### 4.3 Filter Element Cleaning

#### 4.3.1 Filter Element Cleaning – General

Remove Filter Element from the Housing Assembly. Hold the element clean side up and gently tap the element edges to dislodge any large embedded debris and dirt.

**NOTE:**

Use only FDC/aerofilter cleaner (P/N 40-15) to clean the filter  
element.

**DO NOT use any other solvents or materials to clean filter element, no other substitutes are authorized.**

**DO NOT use Pressure or Steam Cleaners**

**DO NOT use High Pressure Hose Nozzles**

**CAUTION:**

Failure to service the element correctly will harm the filter media by reducing its filtration efficiency, restricting airflow, and/or a reduction in service life.

**4.3.2 Filter Element Cleaning – Severe Conditions**

Severe Conditions are operating environments with high levels of contaminants (dust, sand, pollutants) which may result in higher amounts of filter debris than normal. In this case, the following additional cleaning steps may be required.

- a) Soak each element dirty side down in a pan of FDC/aerofilter filter cleaner to a depth to allow complete coverage of filter element.
- b) Allow cleaner to permeate for 20 to 60 minutes, depending on condition. Use caution to ensure that dirt is not transferred to the clean side of the element.
- c) Remove element and shake thoroughly to remove dirty cleaner.
- d) Resoak for five minutes in clean FDC/aerofilter filter cleaner.

**4.3.3 Filter Element Cleaning – Normal Conditions**

Normal Conditions are operating environments with lower to moderate levels of contaminants (dust, sand, pollutants) trapped in the filter media. Normal cleaning procedures may be used when the Filter Element contains less debris.

- a) Lay element on a flat, clean surface, dirty side down.
- b) Spray FDC/aerofilter filter cleaner liberally onto the entire element and allow cleaner to permeate for ten minutes. Do not use any powered device to spray the filter element.
- c) Alternatively, soak element clean side up in a shallow pan of filter cleaner and allow cleaner to permeate for ten minutes.

**4.3.4 Rinsing and Drying the Filter Elements**

- a) Rinse the elements with low pressure water from a garden hose. Always flush from the clean side to the dirty side to avoid driving particles further into the filter media.
- b) After rinsing, gently shake off the excess water and set elements aside. Allow the elements to dry naturally. It is permissible to set the Filter Element in direct sunlight to aid drying.

**DO NOT use Compressed Air**  
**DO NOT use Open Flame**  
**DO NOT use Hair Dryers or Heat Guns**

**CAUTION:**

Excess heat will cause the filter media to shrink and high pressure air will open small holes that allow dirt to pass through.

- c) Inspect element per **Filter Element Inspection – Normal Conditions** or **Filter Element Inspection – Severe Conditions** as appropriate before oiling.

#### 4.3.5 Oiling the Filter Elements

**NOTE:**

The Filter Element must be **completely dry** before oiling. Oil will not be absorbed by Element media where excess moisture is present, and therefore will not achieve maximum protection it was designed to provide.

**CAUTION:**

Use only FDC/aerofilter Oil, P/N 40-10, no other substitute is authorized.

FDC/aerofilter Oil is a compounded mineral-based blend, formulated with special polymers to form the tack barrier. A blue dye has been added to show where the oil has been applied. Eventually the blue color will fade but the oil will remain.

**CAUTION:**

Never use the filter element without FDC/aerofilter Oil.

- a) Fill sprayer with recommended quantity of FDC/aerofilter Oil: **15 US fl. oz. (440 ml)** for entire Filter Element.
- b) Charge sprayer with compressed air.
- c) Apply oil to the Filter Element with smooth, complete passes parallel to pleats.
- d) Continue to apply oil with smooth, complete passes 90 degrees to pleats.
- e) Repeat **(c)** and **(d)** until all of the measured quantity of oil recommended in **(a)** is applied to the Filter Element.
- f) Wait 30 minutes for proper wicking and lightly re-oil any light areas with additional oil if necessary.

**NOTE:**

Do **NOT** over-oil the element. Proper absorption is achieved when the filter media is completely wicked and any surplus oil has been allowed to drip from the element. This process may take 12 - 24 hours.

The filter element is now ready for installation.

#### 4.4 Inspection Procedures

#### 4.4.1 Visual / Preflight Inspection (Prior to first flight of the day)

- a) Inspect Filter Elements for large obstructions and damage.
- b) Inspect for security of all latches.

#### 4.4.2 Filter Element Inspection – Severe Conditions

In these conditions, it may be necessary to clean and inspect the Filter Element more frequently than what is described in **Recommended Service Intervals**. An Element used in such conditions should be replaced if the Element media or fine mesh screen is severely degraded. Regardless of the actual time in service, the physical condition of the Element, when exposed to these harsh conditions, must remain the most important factor used to determine the serviceability of the Element.

#### 4.4.3 Filter Element Inspection – Normal Conditions

At each cleaning carefully inspect the Filter Element as follows:

- a) Inspect the fine mesh on the upstream & downstream surface of the element pleats. Complete erosion of more than .50" (12 mm) is cause for element rejection.
- b) Inspect the coarse mesh on the downstream surface of the element. Any evidence of mesh wire wear or general signs of mesh breakage or deterioration are cause for element rejection.
- c) Inspect the pleats containing the filter media. Excessive deformation of pleats can reduce smooth and consistent airflow into the engine and is cause for element rejection (see **Filter Element Pleat Deformation**).
- d) After cleaning and before re-oiling, hold each element up to a light and check for holes in the element material greater than .030" (0.75 mm). It is normal to observe pinholes in the filter media particularly at the pleat folds. These pinholes will not allow the passage of dirt once the element is oiled. Close holes if present (see **Repairing Holes or Gaps in Filter Element Media**). Numerous holes in the media greater than .030" (0.75 mm) may be cause for element rejection (see **Holes or Gaps in Filter Element Media**).
- e) Check the condition of the Filter Element and it's mating surface on the Housing Assembly:
  - Element frame for chafing, cracks, and fretting (smoking rivets).
    - Chafing or surface finish damage may be repaired per AC 43.13.
    - Cracks on the frame are causes for element rejection.
    - Fretting (smoking rivets) or loose rivets are causes for element rejection.
    - Gouges and scratches less than .005" may be repaired per AC 43.13. Consult FDC/aerofilter Technical Support for deeper gouges and scratches.

- Element media potting compound for chips, cracks, and/or de-bonding. Contact FDC/aerofilter Technical Support if any chips, cracks, and/or de-bonding of the potting compound are found.
- Seal strips in Housing Assembly for deterioration and evidence of gaps between mating surfaces. Seal strips must be replaced if any deterioration is found.
- Latches for security and loose rivets.
- Latch Clip on the Housing Assembly for security and loose rivets.

Defects found are to be rectified. Consult FDC/aerofilter Technical Support in the event any repair cannot be performed using standard practices.

**NOTE:**  
The Filter Element shall be removed from service after 4500 hours of operation.

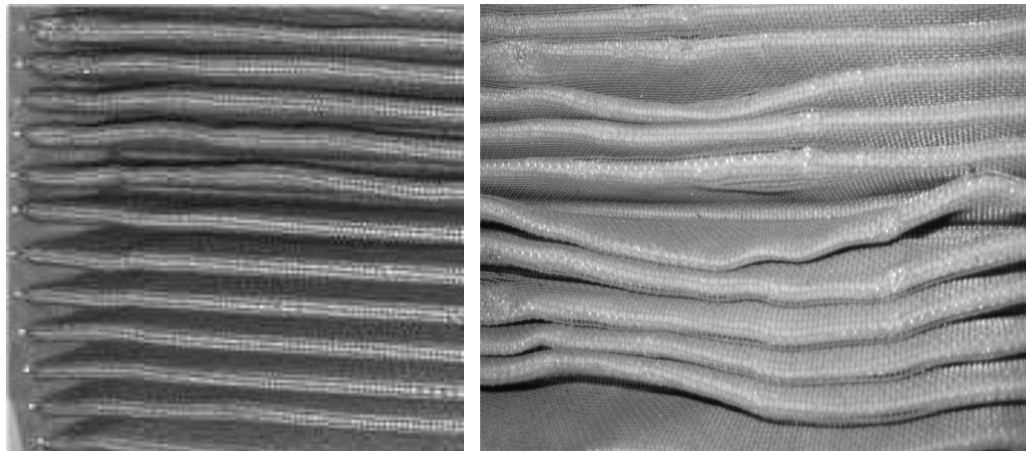
When operating in the most severe conditions it is highly recommended that an additional serviceable, pre-oiled element is available. This will allow continued service while the dirty element is being cleaned, inspected, and re-oiled.

**4.4.4 Filter Element Pleat Deformation**

The Filter Element pleat shape should be maintained as close to the original manufactured state as possible to ensure optimum airflow. As manufactured, an even spacing between crests of the pleats together with a clearly visible bend at the bottom of the inside pleat trough helps ensure optimum airflow.

Filter Element performance is not appreciably affected by a few warped pleats. However, it is advisable to repair warped pleats to prevent cumulative deformation. Use the examples in **Figure 1** to determine if Filter Element pleats are repairable. In general, if the bottoms of the inside troughs of the pleats cannot be seen when sighting the length of each pleat from above, or into the depth of the pleat, then straightening is needed. Refer to **Filter Element Pleat Straightening** for straightening procedure.

**Figure 1 – Pleat Deformation**



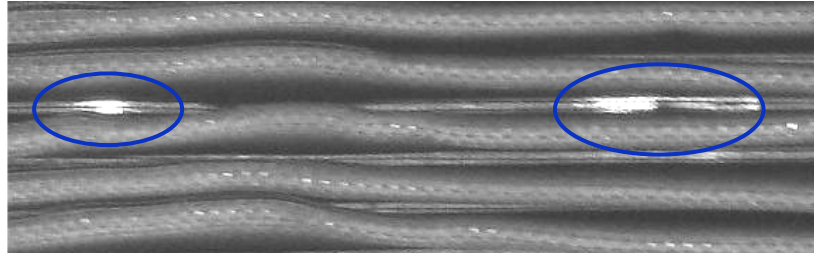
**Repairable**

**Not Repairable, Element to be Rejected**

#### 4.4.5 Holes or Gaps in Filter Element Media

Large gaps in Filter Element media may occur if the Filter Element has been subject to PROHIBITED actions such as the use of compressed air or pressure washers during servicing. Numerous holes in the media greater than .030" (0.75 mm) will reduce the filtration efficiency and may lead to engine performance degradation (Refer to **Figure 2**). Refer to **Repairing Holes or Gaps in Filter Element Media** for repair procedure.

**Figure 2 – Non-Repairable Gaps, Element to be Rejected**



#### 4.5 Filter Element Servicing – Repair & Rework

##### 4.5.1 General Information

While a Filter Element in general cannot be repaired or reworked, minor pleat deformation and small holes in media that can arise from aggressive handling, cleaning, or drying can be rectified. See **Filter Element Inspection – Normal Conditions** for inspection criteria. Take careful note of the following procedures to avoid damaging the Filter Element.

##### 4.5.2 Filter Element Pleat Straightening

Filter Element should be cleaned and completely dry before straightening deformed pleats. Do not apply Filter Oil before straightening pleats. **Figure 3** shows examples of tools that may be used to straighten pleats. It is strongly recommended to place duct tape, electrical tape, or similar cushioning material on the jaws of the hand seamers or equivalent tools to prevent damage to Filter Element fine mesh when working the Element pleats.

Figure 3 – Klein Hand Seamer Tools



Klein 86552  
Offset Hand Seamer

Klein 86553  
Straight Hand Seamer

- a) For pleats bowed or expanded: **GENTLY** crimp the pleat using a hand seamer or equivalent tool. Do not over-crimp, crease, or crush the pleat in the jaws of the seamer. Maintain the original radius at the crest and bottom trough of the pleat as much as possible when crimping.
- b) For pleats to be straightened: **GENTLY** grip the pleat with the hand seamer and rotate the seamer to restore the pleat to its correct position. Multiple adjustments may be required for each few inches of the pleat until the final result is straight.
- c) When working with the pleats, do not push the hand seamer into the pleats to their maximum depth – ensure the radius at the bottom of each pleat remains when finished.

#### 4.5.3 Repairing Holes or Gaps in Filter Element Media

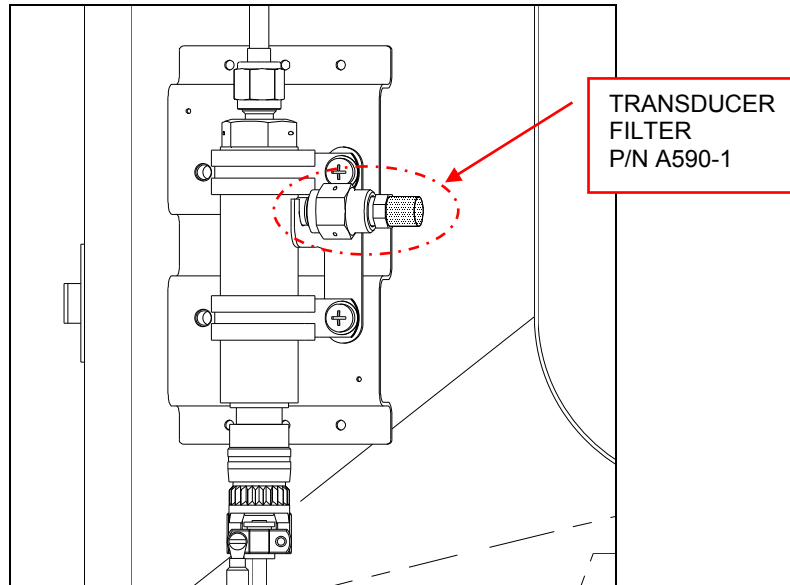
In normal practice, small pinholes will occur in Filter Elements, particularly at the pleat folds. These pinholes will not allow dirt through the Element once oiled. Holes less than .030" (0.75mm) can be closed as follows:

- a) Insert the end of a clean, fine pick into the epoxy-coated mesh, penetrating the filter media. **GENTLY** reposition the filter media a small amount at a time to close the hole. Manipulate the pick carefully to avoid damaging the fine mesh covering the media.
- b) Repeat (a) from each direction around the hole to avoid creating new holes.

#### 4.6 DPT Filter Removal, Cleaning, and Installation

- a) For 1120IN1-1003 System Only.

**Figure 4 – DPT Filter**



- b) Remove lock wire from DPT Filter.
- c) Remove Filter with 5/8" wrench.

**NOTE:**  
 Porous element and adapter fitting comprise an integral unit.  
 Do NOT disassemble fitting and element.

- d) Inspect Filter for security. Replace Filter if porous element is damaged.

**NOTE:**  
 The DPT Filter shall be removed from service after  
 4500 hours of operation.

- e) Place Filter, porous side down, into a container of solvent (commercially available, residue free, cleaner/degreaser) to loosen trapped debris. Alternately, solvent can be sprayed inside the filter to loosen and expel any debris.
- f) It is permissible to use compressed air to dry the Filter. Compressed air should be introduced from the inside to expel any loosen debris from the inside out.
- g) Re-install DPT Filter onto transducer 'ambient pressure' port fitting. It is recommended that it be installed with anti-seize compound per MIL-PRF-83483.

**CAUTION:**  
 Do NOT block port or porous element.

- h) Torque Filter to 100-140 in-lbs. Secure Filter to DPT with MS20995C32 Lockwire.

**4.7 Functional Check of Bypass Door**

**4.7.1 1120IN1-1001 System Only**

- a) Push the “ENGINE ALTERNATE AIR” switch. Observe the alternate air door for smooth operation as it opens. The annunciator should read “BYPASS DOOR OPEN”.

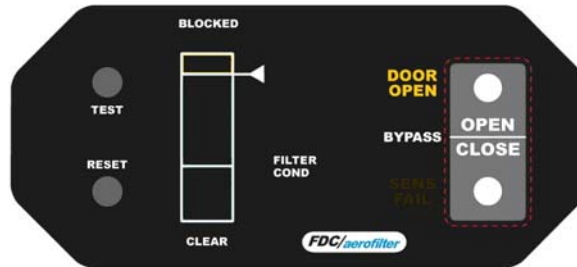


- b) Push the “ENGINE ALTERNATE AIR” switch again. Observe the alternate air door for smooth operations as it closes. The annunciator should be OFF.
- c) Repeat for several cycles.

Replace actuator if not operating properly.

**4.7.2 1120IN1-1003 System Only**

- a) Push the “OPEN” button. Observe the alternate air door for smooth operation as it opens. The “DOOR OPEN” advisory light should be illuminated.



- b) Push the “CLOSE” button. Observe the alternate air door for smooth operations as it closes. The “DOOR OPEN” advisory should be extinguished.
- c) Repeat for several cycles.

Replace actuator if not operating properly.

## 4.8 Functional Check of Pressure Sensor

### 4.8.1 Differential Pressure Testing Equipment

For certain tests and checks of the Differential Pressure Sensor, it is helpful to have the following:

- A manometer, either U-tube or digital (preferred Example: Dwyer 47x series),
- Tygon or similar tubing,
- A low-pressure vacuum source:
  - Small volume syringe (0.5 cc – 1.0 cc),
  - Brake bleeder with reservoir,
  - Deadweight tester.

Note that the vacuum to be pulled to test the DPS or DPT is very small – *less than 1.0 PSI total range*. If no compatible reservoir is available for the tools above, a sufficient length of tubing (6 – 9 ft. / 2 – 3m) may be used as a reservoir. Choose the tool that gives the most control over the amount of vacuum to be pulled, and ensure that the total vacuum is no greater than 25 in-H<sub>2</sub>O.

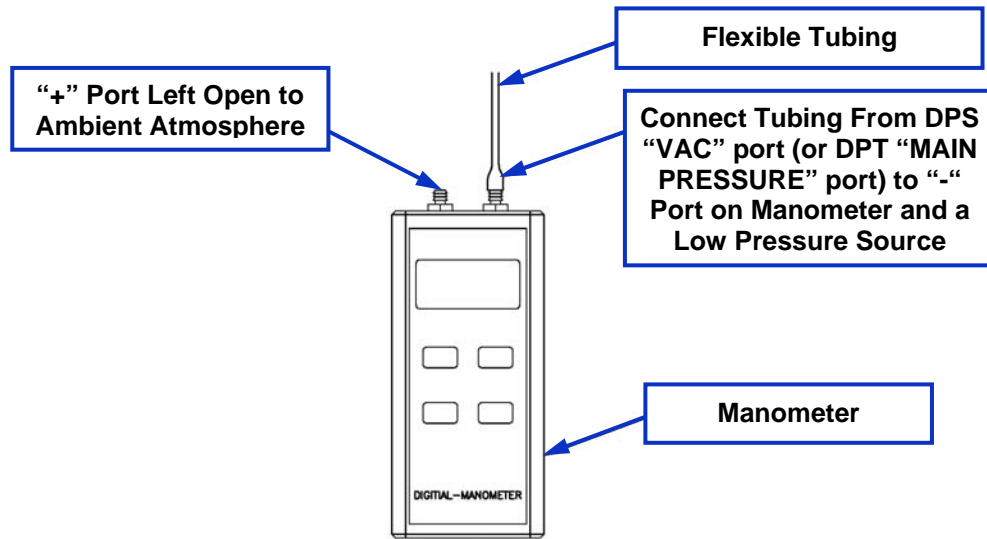
**CAUTION:**

Do not apply over 25 in-H<sub>2</sub>O  $\Delta P$  to the Differential Pressure Transducer (DPT) or apply any pressure to the ambient port.  
Damage to DPT could result.

### 4.8.2 1120IN1-1001 System Only

- a) Remove the pressure sensing tube between the plenum port and the Differential Pressure Switch (DPS).
- b) Attach flexible tubing to the DPS low pressure port (marked “VAC” on DPS) (refer to **Figure 5**).

**Figure 5 – Manometer Test Setup**



- c) Connect the other end of the flexible tubing to a manometer and a low pressure vacuum source. If a syringe or brake bleeder is used as a low pressure vacuum source, ensure a vacuum reservoir is used between the syringe and the DPS / manometer.
- d) With the aircraft power on, carefully apply LIGHT suction to the DPS while noting the manometer readings. At  $6.0 \pm 1.0$  in-H<sub>2</sub>O, the “LOW INLET PRESSURE” annunciator should illuminate.

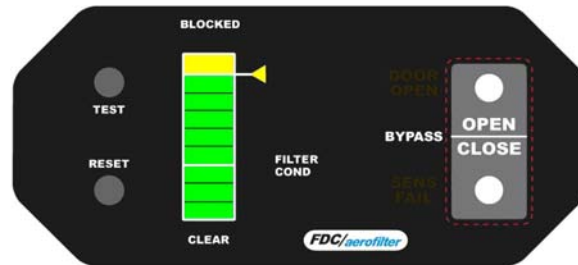


- e) Remove suction from DPS, the “LOW INLET PRESSURE” annunciation should extinguish.
- f) Remove test equipment and reinstall pressure sensing tube between the plenum port and the DPS.
- g) De-energize aircraft power.

**NOTE:**  
Contact FDC/aerofilter Technical support if the system is out of adjustment.

**4.8.3 1120IN1-1003 System Only**

- a) Remove the pressure sensing tube between the plenum port and the Differential Pressure Transducer (DPT).
- b) Attach flexible tubing to the DPT low pressure port (marked “MAIN PRESSURE” on DPT) (refer to **Figure 5**).
- c) Connect the other end of the flexible tubing to a manometer and a low pressure vacuum source. If a syringe or brake bleeder is used as a low pressure vacuum source, ensure a vacuum reservoir is used between the syringe and the DPT / manometer.
- d) With the aircraft power on, using Table 1, carefully apply LIGHT suction to the DPT while noting manometer readings. At each reading, note associated light segments and when advisory light illuminates on the Filter Maintenance Monitor.



Monitor LED Segment	$\Delta P$ across Filter (in-H <sub>2</sub> O)	Monitor Advisory
9	$\geq 6.75$	Amber Triangle Flag
8	$\geq 6.00$	Amber Triangle Flag
7	$\geq 5.25$	-
6	$\geq 4.50$	-
5	$\geq 3.75$	-
4	$\geq 3.00$	-
3	$\geq 2.25$	-
2	$\geq 1.50$	-
1	$\geq 0.75$	-
0	$< 0.75$	-

**Table 1**

- e) Amber Triangle Flag should remain illuminated when the suction has been removed. Press and hold “RESET” button for 5 to 10 seconds. Amber Triangle Flag should extinguish.
- f) Remove test equipment and replace the pressure sensing tube.

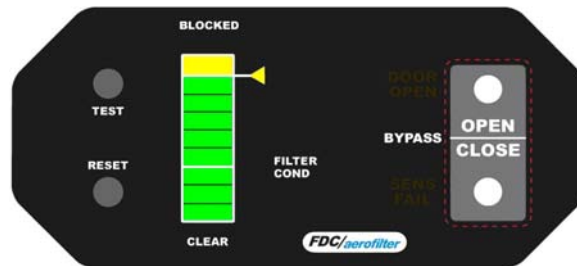
**NOTE:**  
Contact FDC/aerofilter Technical support if the system is out of adjustment.

**4.8.4 Leak Test of Pressure Sensing Tube**

- a) Disconnect pressure sensing tube at DPS (for 1120IN1-1001 System) or at DPT (for 1120IN1-1003 System).
- b) Remove DPS or DPT from the mounting base plate.
- c) Remove filter element and cap off plenum port inside filter housing.
- d) Apply light suction to the pressure sensing tube at the end disconnected from the DPS or DPT.
- e) Ensure system maintains vacuum for 15 seconds.
- f) Remove cap from plenum port and reinstall filter element.
- g) Install DPS or DPT on to the mounting base plate, and connect pressure sensing tube.

**4.9 Functional Check of Filter Maintenance Monitor**

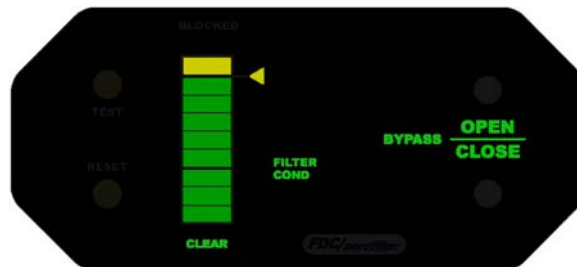
- a) For 1120IN1-1003 System Only.
- b) Press and hold the “TEST” button. The bar-graph should rise to full scale within 3 seconds (at full intensity), and all flags should illuminate.



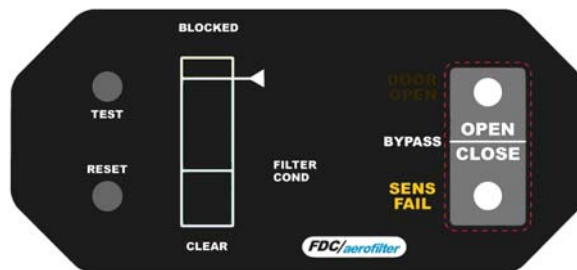
- c) Release the “TEST” button. The bar-graph should extinguish, but all flags should stay illuminated.
- d) Press and hold “RESET” button for 5 to 10 seconds. All flags should extinguish.
- e) Press and hold the LACU “LIGHT TEST” button. The bar-graph should rise to full scale within 3 seconds (at full intensity), and all flags should illuminate.
- f) Release the “LIGHT TEST” button. The bar-graph should extinguish, but all flags should stay illuminated.
- g) Press and hold “RESET” button for 5 to 10 seconds. All flags should extinguish.
- h) On the LACU, set the selector switch to “NIGHT”. All 5 backlighting locations (“CLEAR”, “FILTER COND”, “BYPASS”, “OPEN/CLOSE”, and triangle flag) are illuminated. Adjust the LACU Console Dimming control to adjust the brightness of the backlighting



- i) Press and hold the “TEST” button. The bar-graph should rise to full scale within 3 seconds (at half intensity), and all flags should illuminate (at half intensity).



- j) Release the “TEST” button. The bar-graph should extinguish, but all flags should stay illuminated.
- k) Press and hold “RESET” button for 5 to 10 seconds. All flags should extinguish. Set LACU Selector Switch to “DAY”.
- l) Disconnect Filter harness from the bulkhead connector on the transmission deck. “SENS FAIL” flag should be illuminated.



- m) Press and hold “RESET” button for 5 to 10 seconds. “SENS FAIL” flag should stay illuminated.
- n) Reconnect Filter Harness to the bulkhead connector. “SENS FAIL” flag should extinguish.
- o) Perform functional check of DPT per 4.8.3.
- p) Press and hold “RESET” button for 5 to 10 seconds. All flags should extinguish.
- q) Perform functional check of bypass door per 4.7.2.