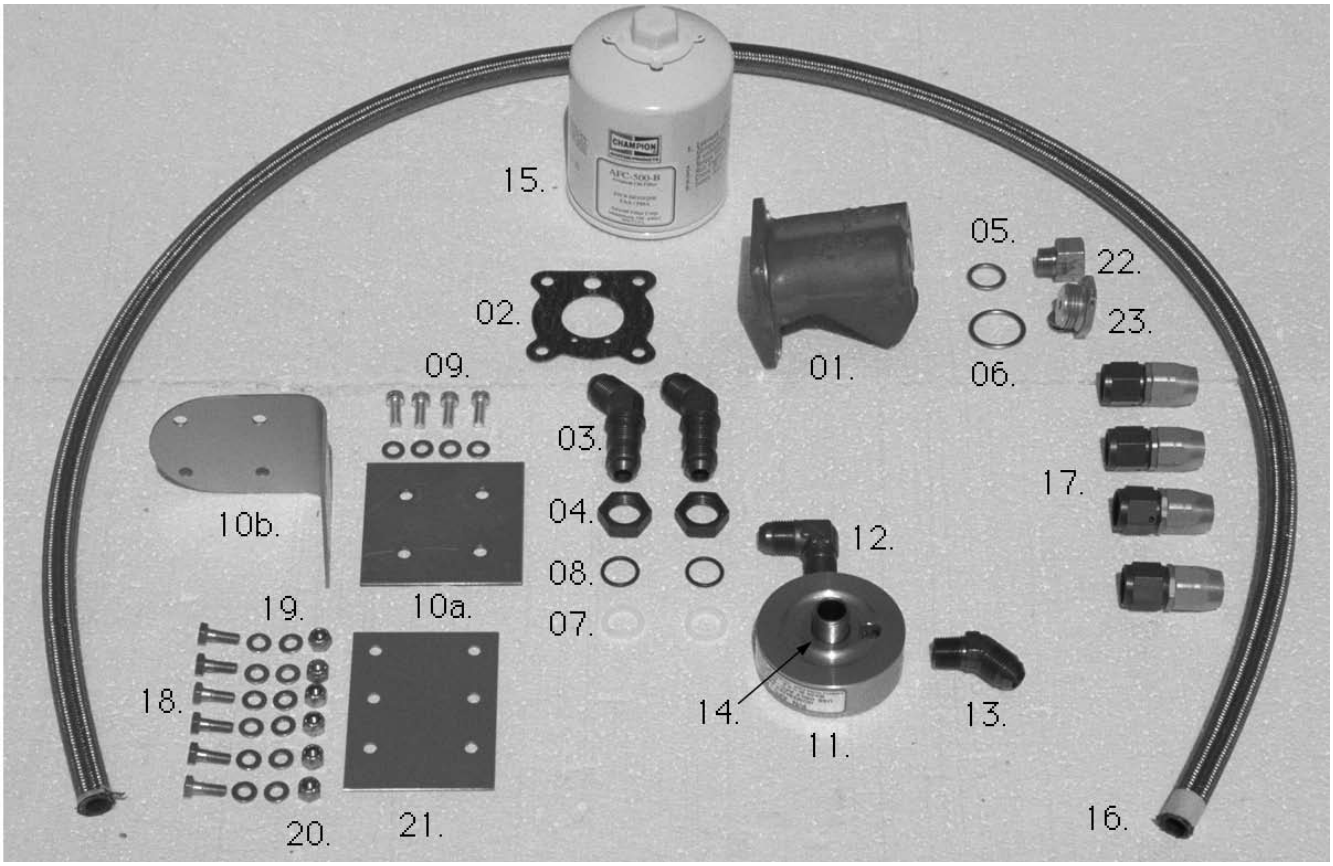


Oil Filter Kit AFC-K001

Applicability: **Homebuilt Aircraft using Lycoming O-235, 290, 320, 340, 360 & 540 Engines using the Lycoming P/N 69510, 68974, or 62815 4-bolt oil screen housings.**

First Release 06/08/84
NEW

Parts List No. AFC-K001-PL

Index	Part Number	Description	Quantity
01.	LYC-10	Adapter- Engine, Full Flow	(1)
02.	61173	Adapter Base Gasket	(1)
03.	AN837-8D	Bulkhead Fitting, 45°	(2)
04.	AN6289-8D	Bulkhead Nut	(2)
05.	MS35769-11	Gasket, Oil Temperature Sensor	(1)
06.	MS35769-21	Gasket, Thermostatic Valve	(1)
07.	MS28773-08	Boss Gasket	(2)
08.	MS9387-08	“O” Rings	(2)
09.	AN4H-4A	Bolt, Drilled Head	(4)
10a.	OFM-10	Oil Filter Mount, Horizontal	(1)
10b.	OFM-11	Oil Filter Mount, Vertical	(1)
11.	OFB-10	Oil Filter Base	(1)
12.	MS20822-8D	Fitting, 90°	(1)
13.	MS20823-8D	Fitting, 45°	(1)
14.	OFS-10	Oil Filter Stud	(1)
15a.	AFC-500	Oil Filter, or Equivalent [Champion CH48108]	(1)
15b.	AFC-600	Oil Filter, or Equivalent [Champion CH48109]	(1)
16.	F13000008-0zzy	Titeflex Teflon Hose, -8 [Insert Length in inches at end of P/N]	(OPT)
17.	Note: Hoes ends will be swaged onto end of hose at the factory.		
18.	AN4-5A	Bolts	(6)
19.	AN960-416	Flat Washers	(16)
20.	MS20365-428A	Locknuts	(6)
21.	DBL-10	Doubler Plate	(1)
22	OTA-527	Oil Temp Adapter (Optional)	(1)
23.	CAP-1350	Bypass Valve Cap (Optional)	(1)
24.	56707	Loctite 271® Thread Sealant	(1)
25.	AFC-K001-II	Installation Instructions, Homebuilt	(1)
26.	AFC-K001-MI	Instructions for Continued Airworthiness	(1)
27	AFC-K001-PL	Parts List	(1)

Installation Instructions No. AFC-K001-II

Applicability:	**Homebuilt Aircraft using Lycoming O-235, 290, 320, 340, 360 & 540 Engines using the Lycoming P/N 69510, 68974, or 62815 4-bolt oil screen housings.**	**First Release 06/08/84 NEW**

Note A: *Some hoses or wires may have to be rerouted so the oil filter assembly will fit into position. Reference and material per AC 43.13-1A & 2A.*

01. Remove the Lycoming P/N 69510, 68974 or 62815 engine oil screen housing from the accessory case. ** **WARNING - DO NOT REUSE OIL SCREEN IN LYC-10 ADAPTER** **

02. Remove oil temperature sensor and thermostatic valve from old oil screen housing.

03. Install a new gasket (05) under the head of the oil temperature sensor, reinstall in the adapter-engine (01). Turn the oil temp sensor until the sealing surfaces are in contact and then tighten an additional 135 degrees. Install a new gasket (06) under the head of the P/N 75944 Lycoming thermostatic valve, reinstall in the adapter-engine (01), torque to 300 in/lbs and safety wire.

Note B: *If you are using an older Lycoming engine and want to use the new type P/N 75944 thermostatic valve and wonder if your accessory case can accept it, your engine must have three holes under the oil screen housing for it to work. In any event contact your local Lycoming dealer or distributor for technical information concerning whether or not their P/N 75944 thermostatic valve will work on your particular engine. You must purchase the optional Bypass Valve Cap (23) when not using the newer type Lycoming P/N 75944 thermostatic bypass valve.*

Note C: *If removing the 68974 or 62815 oil screen housing from your engine which uses the older type capillary tube oil temperature probe and intend to reuse this probe in our LYC-10 Adapter, you must purchase the optional Oil Temp Adapter (22) .*

04. Onto each bulkhead fitting (03), install in order 1 ea. bulkhead nut (04), Teflon boss gasket (07), and "O" Ring (08). Install each completed assembly into the adapter-engine (01).
BE CAREFUL: O-ring and boss gasket must seal in the smooth area between the threaded areas of the bulkhead fitting.

05. Install a new gasket (02) on base of adapter-engine (01) and reinstall onto the engine accessory case. Torque to specifications 96 in/lbs.

06. Using the horizontal filter mount (10a.) or vertical filter mount (10b.) as a drilling template, locate and drill mounting holes using a letter "F" drill.

***** SEE WARNING (A) BELOW *****

07a. Secure vertical oil filter mount plate (10b) to Fwd side of firewall and doubler plate (21) to rear side (long side up) using bolts (18), nuts (20), and washers (19).

OR

07b. Secure oil filter base(11) to Fwd side of firewall and horizontal oil filter mount plate (10a) to rear side using bolts (09) and washers (19).

***** SEE WARNING (B) BELOW *****

08. Install 1 ea. fitting (12) and (13) into oil filter base (11). Mount to oil filter mount plate (10a.) or (10b.) using bolts (09), washers (19), and secure with .032 MS20995-C safety wire.

***** SEE WARNING (C) BELOW *****

09. Assemble 2 ea. hose assy's (16) and (17) using supplied material per installation instructions provided and pressure test to 2,500 lbs./sq. inch.

***** SEE WARNING (D) BELOW *****

10. Install assembled hose assy's (16) and (17) connecting the **"A" port** on the filter adapter to the **"A" port** on the filter base and the **"B" port** on the filter adapter to the **"B" port** on the filter base and torque to 270-350 in/ lbs.

11. Install oil filter (15) torque per instructions on oil filter secure with .032 MS20995-C Safety wire.

12. Run engine and check for leaks.

Oil Filter Kit AFC-K002

Applicability:	Homebuilt Aircraft using Lycoming O-235, 290, 320, 340, 360 & 540 Engines using the Lycoming P/N 69510, 68974, or 62815 4-bolt oil screen housings.	First Release 06/08/84 NEW

*****WARNING (A) *****

LOCAL STIFFENING OF THE FIREWALL MAY BE NECESSARY TO SUPPORT WEIGHT OF OIL FILTER AND PREVENT FIREWALL CRACKING.

***** WARNING (B) *****

USE LOCTITE® BRAND 567 TEFLON THREAD SEALANT BEFORE INSTALLATION OF FITTINGS.

***** WARNING (C) *****

NO ROUTING OF FLAMMABLE FLUID LINES ABOVE EXHAUST SYSTEM, UNLESS SHROUDED. INSTALLER IS RESPONSIBLE FOR INTER-RELATIONSHIP BETWEEN THIS AND OTHER ENGINE CHANGES (INCLUDING ACCESSORIES)

***** WARNING (D) *****

IF YOU ARE USING YOUR OWN OIL FILTER AND OIL FILTER BASE IN CONJUNCTION WITH OUR LYC-10 ADAPTER, ALWAYS REMEMBER THAT THE DIRTY OIL FROM THE ENGINE ENTERS THE OIL FILTER FROM THE OUTSIDE OF THE FILTER. THE CLEAN OIL EXITS THROUGH THE LARGE HOLE IN THE CENTER OF THE OIL FILTER AND RETURNS TO THE ENGINE.

***** WARNING (E) *****

DO NOT, UNDER ANY CIRCUMSTANCES, CONNECT AN OIL COOLER IN SERIES WITH OUR REMOTE MOUNT OIL FILTER KIT. OUR FILTER KIT IS A "FULL FLOW" OIL FILTERING SYSTEM WHICH MEANS ALL OF THE OIL IS FILTERED ALL OF THE TIME. DURING STARTUP ON A COLD DAY, THE COLD THICK OIL WILL PARTIALLY BYPASS A CH48108 OR CH48109 OIL FILTER UNTIL THE VISCOSITY DROPS AND THE THIN OIL CAN FLOW THROUGH THE FILTER MEDIA THEREBY ALLOWING OIL TO CIRCULATE IN THE ENGINE.

AN OIL COOLER HAS NO THERMOSTATIC BYPASS BUILT INTO THE UNIT, THEREFORE WHEN THE OIL FILTER GOES INTO PARTIAL BYPASS, THIS THICK SLUG OF OIL WILL BE STOPPED, OR SEVERELY RESTRICTED AT THE OIL COOLER. ONE OF THREE THING WILL HAPPEN,:

1. THE OIL COOLER WILL SEPARATE IN HALF.
2 THE OIL FILTER GASKET WILL FAIL AND/OR THE OIL FILTER WILL EXPLODE.
3. THE OIL HOSE WILL FAIL.

ANY OF THE THREE SCENARIOS ABOVE WILL CAUSE COMPLETE LOSS OF OIL IN A SHORT PERIOD OF TIME.

FAA/PMA

Manufactured By:
Airwolf Filter Corp.
15369 Madison Rd.
Middlefield, OH 44062-8404 U.S.A.
(440) 632-5136 / (440) 632-1685 Fax

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

A/C Make : _____ **Model:**_____ **S/N:** _____ **Reg#:** _____

Revision: Date: _____

This sixteen item checklist are Instructions for Continued Airworthiness (ICA), to comply with FAA Handbook Bulletin for Airworthiness (HBAW-98 Dated October 7. 1998), are applicable to the aircraft above when the following equipment is installed:

SYSTEM: Airwolf Remote Mount Oil Filter System.

ITEM	CHECKLIST INFORMATION
1.	**Introduction:** This section briefly describes the aircraft, engine, propeller, or component that has been altered. Include and other information on the content, scope, purpose, arrangement, applicability, definitions, abbreviations, precautions, units of measurement, reverenced publications, and distribution of the ICA as applicable. **Comment: _____with Lycoming_____ engine.** *Aircraft Model* *Engine Model*
2.	**Description:** Of the major alteration, it's function including an explanation of it's interface with other systems, if any. **Comment: Installation of Airwolf Remote Mounted Oil Filter Kit P/N AFC-K001**
3.	**Control:** Operation information: Or special procedures if any. **Comment: Pre-heating of both the engine and engine oil is recommended prior to starting the engine during periods of cold weather where the temperatire is 30°F or below.**
4.	**Servicing information:** Such as types of fluids used, servicing points, and location of access panels, as appropriate. **Comment: Oil System to be serviced in accordance withLycoming Service Bulletin 480C or higher. Oil should be changed at least once each 12 months. Cut the old filter open with Airwolf AFC-470 oil filter cutter at each oil change and inspect for metal contamination or any evidence that may indicate impending engine problems.**
5.	**Maintenance Instructions**: Such as recommended inspection/maintenance periods in which each of the major alteration components are inspected, cleaned, lubricated, adjusted, tested, including applicable wear tolerances and work recommended at each scheduled maintenance period. This section can refer to the manufactures instructions for the equipment installed where appropriate e.g. functional checks, repairs, inspections.) It should also include any special notes, cautions, or warnings as applicable. **Comment: Inspect for security at each annual or 100 hr . inspection. After any oil change, always ground run the engine and check for leaks before flight.**
6.	**Trouble shooting information:** Information describing probably malfunctions, how to recognize those malfunctions, and the remedial actions to be taken. **Comment:__N/A**
7.	**Removal and replacement information:** This section describes the order and method of removing and replacing products, parts, and any necessary precautions. This section should also describe or refer to the manufacture's instructions to make required tests trim checks, alignment, calibrations, center of gravity changes, lifting or shoring, etc., if any. **Comments:__N/A**
8.	**Diagrams:** Of access plates and information, if needed, to gain access for inspection. **Comment:__N/A**
9.	**Special inspection requirements:** Such as X-ray, ultrasonic testing, or magnetic particle inspection, if required. **Comment: __N/A**
10.	**Application of protective treatments:** To the affected area after inspection and/or maintenance, if any. **Comment:__N/A**

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

11.	**Data: Relative to sctuctural fasteneers such as type, torque, and installation requirements if any.** **Comment:__N/A**
12.	**List of special tools:** Special tools that are required, if any. **Comment:__N/A**
13.	**For commuter category aircraft:** The following additional information must be furnished, as applicable: A. Electrical Loads B. Methods of balancing flight controls. C. Identification of primary and secondary structures> D. Special repair methods applicable to the airplane. **Comment:__N/A**
14.	**Recommended overhaul periods:** Are required to be noted on the ICA when an overhaul period has been set by the manufacturer of a component, or equipment. If there is no overhaul period, the ICA should state for item 14: "No additional overhaul time limitations." **Comment:__N/A**
15.	**Airworthiness Limitation Section:** Include any "approved" airworthiness limitations identified by the manufacturer of FAA type Certificate Holding Office (e.g., An STC incorporated in a larger field approved major alteration may have an airworthiness limitation.) The FAA inspector should not establish, alter, or cancel airworthiness limitations without coordinating with the appropriate FAA type Certificate Holding Office. If there are no changes to the airworthiness limitations, the ICA should state for item 15: "No additional airworthiness limitations" or " Not Applicable."
16.	**Revision:** This section should include information on how to revise the ICA. For example, a letter will be submitted to the local FSDO with a copy of the revised FAA Form 337 and revised ICA. The FAA inspection accepts the change by signing Block 3 and including the following statement: "The attached revised/new Instructions for Continued Airworthiness (date_____) for the above aircraft or component major alteration have been accepted by the FAA, superseding the Instructions for Continued Airworthiness (date_____)." Once the revision has been accepted, a maintenance record entry will be made, identifying the revision, its location, date of the Form 377. **Comment:__ A letter will be submitted to the local FSDO with a copy of the revised FAA Form 377 and revised ICA. The FAA inspector accepts the change by signing Block 3 and including the following statement: "The attached revised/new Instructions for Continued Airworthiness (date_____) for the above aircraft or component major alteration have been accepted by the FAA, superseding the Instructions for Continued Airworthiness (date_____)." Once the revision has been accepted, a maintenance record entry will be made, identifying the revision, its location, date of the Form 377.**

NOTE:

Implementation and Record Keeping: For major alterations performed in accordance with FAA Field Approval policy, the owner/operator operating under part 92 is responsible for ensuring that the ICA is made part of the applicable section 92.409 inspection program for their aircraft. This is accomplished when a maintenance entry is made in the aircraft's maintenance entry is made in the aircraft's maintenance record in accordance with section 43.9. This entry recorded the major alteration and identifies the original ICA location (e.g., Block 8 of FAA Form 337, dated 5/28/98) along with a statement that the ICA is now part of the aircraft's inspection/maintenance requirements.

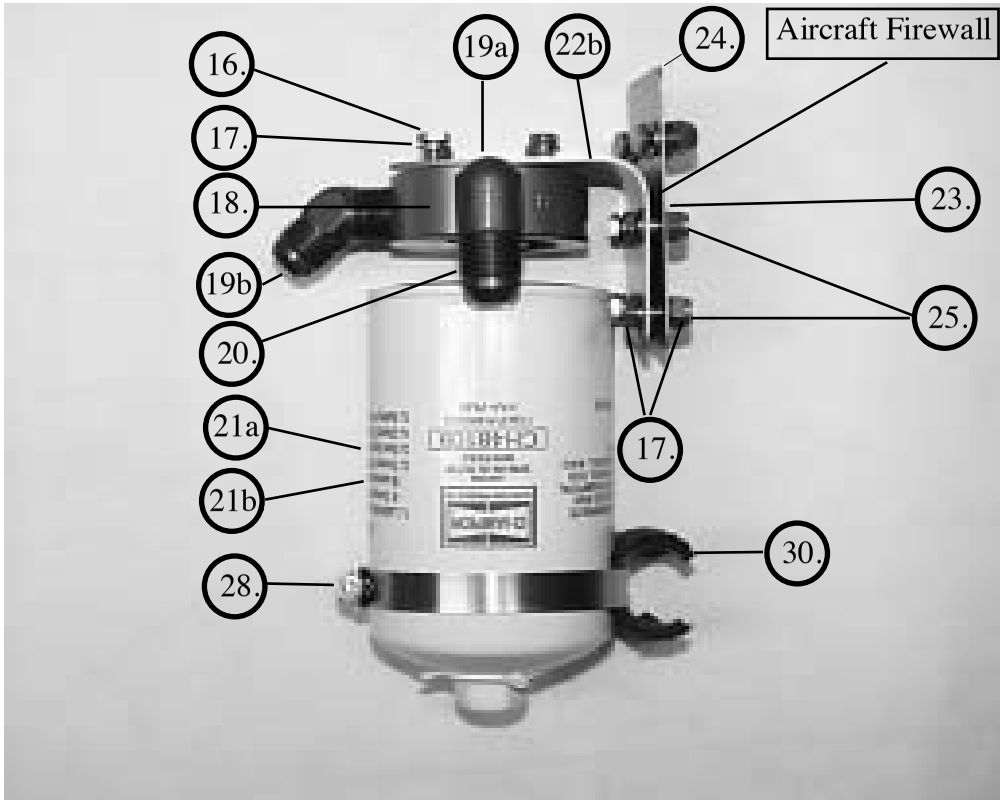
For major alterations performed in accordance with field approval on air carrier aircraft, the air carrier operator is responsible for ensuring that the CIA is made part of the applicable inspection/maintenance program for their aircraft. If a procedure is not currently included in the operator's manual to incorporate ICA, this process will need to be appropriately addressed (i.e. the operator submits a revision to its maintenance program to the applicable certificate-holding district office (CHDO).

For aircraft inspected under an Approved Aircraft Inspection Program (AAIP), the operator will submit a change to the CHDO in accordance with section 135.419b).

For air carrier aircraft inspected using an annual/100 hour inspection program, a reference to the new ICA will be made in the aircraft's maintenance record in accordance with section 43.9. This entry records the major alteration and identifies the original ICA location (e.g., ICA are located/attached to Block 8 of FAA Form 337, dated 5/28/98). In addition, the operator will request a revision to the operator's Operations Specifications, additional maintenance requirements, which incorporates the ICA into the inspection program.

ASSEMBLY DRAWING# AFC-D-0025

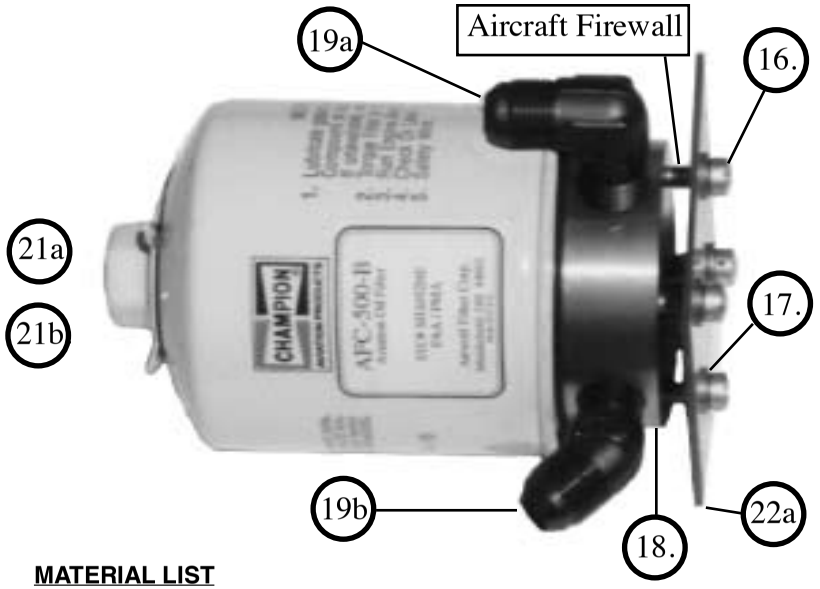
VERTICAL INSTALLATION



MATERIAL LIST

Index	Part Number	Description	Qty
16.	AN4H-4A	Bolts, Drilled Head	(4)
17.	AN960-416	Flat Washers	(16)
18.	OFB-10	Oil Filter Base	(1)
19a.	MS20822-8D	Fitting, 90°	(1)
19b.	MS20823-8D	Fitting, 45°	(1)
19c.	AN816-8D	Union	(Opt)
20.	OFS-10	Oil Filter Stud	(1)
21a. or	AFC-500	Oil Filter, Std	(1)
21b.	AFC-600	Oil Filter, Long	(1)
22b.	OFM-11	Oil Filter Mount Plate - Vertical	(1)
23.	DBL-10	Doubler Plate	(1)
24.	AN4-5A	Bolt	(6)
25.	MS20365-428A	Locknut	(6)
28.	MIL6000-3/4-2	Dampener, Vibration	(1)
30.	QS100M52H	Clamp, Dampner	(1)

HORIZONTAL INSTALLATION



MATERIAL LIST

Index	Part Number	Description	Qty
16.	AH4H-4A	Bolts, Drilled Head	(4)
17.	AN960-416	Flat Washers	(16)
18.	OFB-10	Oil Filter Base	(1)
19a.	MS20822-8D	Fitting, 90°	(1)
19b.	MS20823-8D	Fitting, 45°	(1)
19c.	AN816-8D	Union	(Opt)
20.	OFS-10	Oil Filter Stud	(1)
21a. or	AFC-500	Oil Filter, Std	(1)
21b. or	AFC-600	Oil Filter, Long	(1)
22a.	OFM-10	Oil Filter Mount	(1)

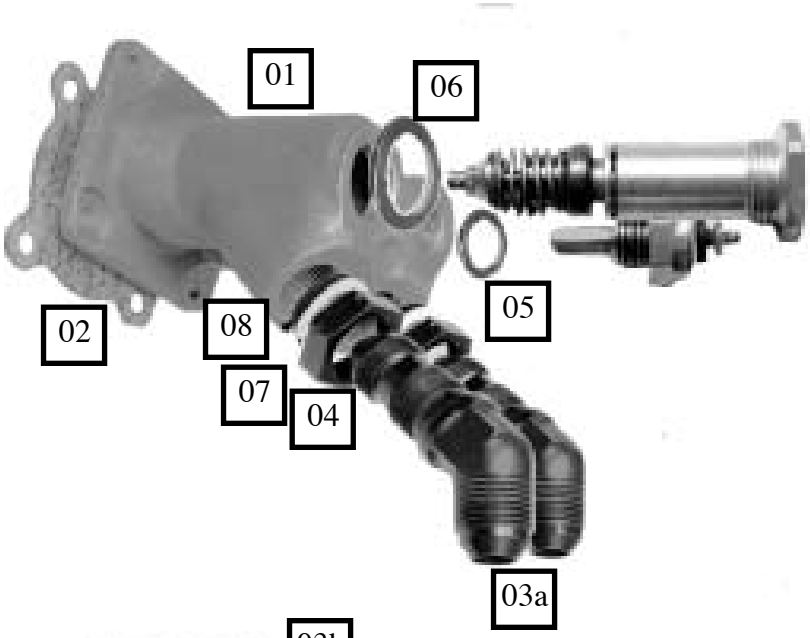
Airwolf Filter Corp.

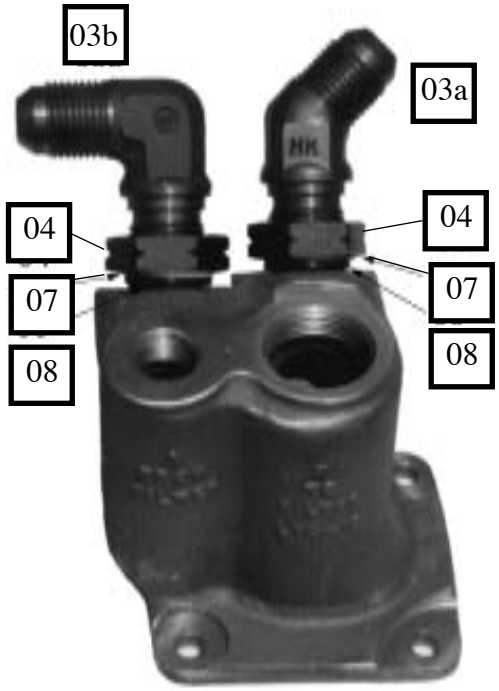
Assembly Drawing.
OFM-10 Oil Filter Mount Plate - Horizontal,
OFM-11 Oil Filter Mount Plate - Vertical,
DBL-10 Doubler Plate & OFB-11 Oil Filter Base

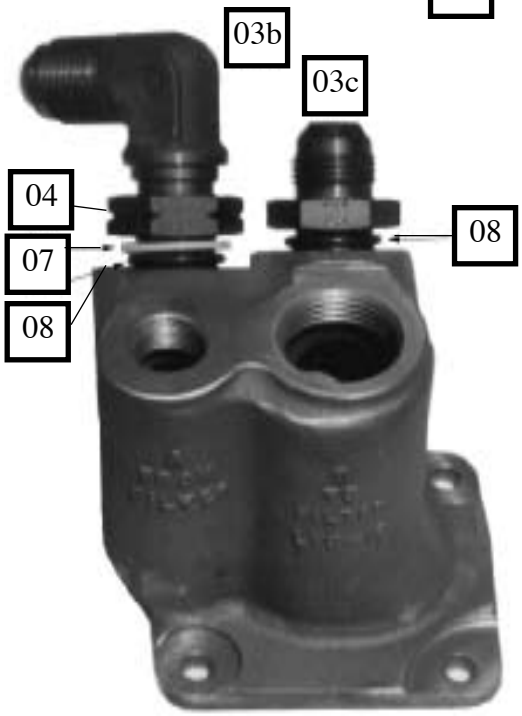
ASSEMBLY DRAWING# AFC-D-0026

MATERIAL LIST

Index	Part Number	Description	Qty
01.	LYC-10	Adapter, Engine - Full Flow	(1)
02.	61173	Adapter Base Gasket	(1)
03a.	AN837-8D	Bulkhead Fitting, 45°	(2)
03b.	AN833-8D	Bulkhead Fitting, 90°	(Opt)
03c.	AN815-8D	Union	(Opt)
04.	AN6289-8D	Bulkhead Nut	(2)
05.	MS35769-11	Gasket, Oil Temperature Sensor	(1)
06.	MS35769-21	Gasket, Thermostatic Valve	(1)
07.	MS28773-08	Boss Gasket, Teflon	(2)
08.	MS9387-08	"O" Rings, Viton	(2)







Airwolf Filter Corp.

Assembly Drawing.
LYC-10 Adapter, Engine - Full Flow

Reference Data
for
AFC-K001
for
Home Built Aircraft
Oil Filter Kit
AFC-K001

Dated: 4/2/2021

Airwolf Filter, Corp
12801 Hwy. 75 N.
OKMULGEE, OK 74447
(918) 561-8696 Ph
(918) 561-8695 Fx

List of Effective Pages

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6	IR	4/2/2021
7	IR	4/2/2021
8	IR	4/2/2021
9	IR	4/2/2021
10	IR	4/2/2021
11	IR	4/2/2021
12	IR	4/2/2021
13	IR	4/2/2021
14	IR	4/2/2021
15	IR	4/2/2021
16	IR	4/2/2021
17	IR	4/2/2021
18	IR	12/28/2020
19	IR	12/15/2020
20	IR	12/8/2020
21	IR	12/28/2020
22	A	12/28/2020
23	A	12/28/2020

Page Number	Revision	Revision Date

Table of Contents

READ THIS BEFORE INSTALLING OIL FILTER KITS, DATA PERTINENT TO ALL INSTALLATIONS

TO THE MECHANIC:

This P/N AFC-K001 remote mount oil filter kit incorporates our STC approved for all Lycoming powered aircraft up to 450 hp. Single and multi-engine fixed wing aircraft having firewalls of .021" ASTM A527 galvanized or equivalent. The STC paperwork provided with this kit utilizes the approved model list (AML) system instituted by the FAA.

Upon installing this filter kit, you will need to fill out and file a 337 form for this installation referencing the P/N AFC- K001 kit and the STC# SA00024NY. If your aircraft is not listed on the AML, you will also need a field approval by your local FSDO for this installation. This is necessary until your aircraft is listed, a field approval is required. If you are unsure whether you need a field approval, please call us directly.

If you have any questions or concerns on this STC, please call Airwolf Filter Corp, which we will clarify the details. Personnel are very familiar with our filter kits and can address any concerns you may have on your installation.

Airwolf Filter Corp
12801 Hwy 75 N.
Okmulgee, OK 74447
Phone: (918) 561-8696
Fax: (918) 561-8695

After completion of the installation of this kit, place a copy of the instructions along with the ICA in the Aircraft records for maintenance and replacement parts identification.

DATA PERTINENT TO ALL INSTALLATIONS

Prior to installing the filter kit on the aircraft, weigh the filter kit, add the weight of the hoses, and subtract the oil screen or oil filter adapter removed from the engine and determine the net weight being added to the aircraft for determining the weight and balance of the aircraft later. Once the filter kit is installed on the aircraft, if you choose to purchase the hoses from Airwolf, we will supply you with the Hoses specified in this STC. At the time of the order, we will need the flare – to - flare length of the hoses, and hose ends needed on each hose i.e.: Straight to Straight, Straight to 90°, Straight to 45°, etc. allowing for engine torque and vibration per AC43.13.

If our instructions do not specifically say you can do something, assume that means you are not allowed to do it without our written approval.

1. Review all installation data and written material before beginning.

2. Please inspect contents of kit and inventory components before beginning.

3. **Do not** over tighten the fittings on Adapters or housings. This can distort or crack housings, causing oil to leak.

4. It is ***EXTREMELY*** important that oil lines be routed properly in accordance with AC 43.13-1A & 2A Acceptable Methods and Practices. (see Tip below)

5. See Warnings and Notes contained in the instructions concerning routing of lines and the use of sealant on NPT fittings.

DO NOT USE TEFLON TAPE ON FITTINGS.

6. The use of sealant on AN/Flared type fittings is not required, it is only required on NPT fittings.

7. When mounting Adapters use the supplied doublers for reinforcing mounting locations.

8. ***BE PATIENT!!!*** Take your time and you will see the results of your effort.

TIP

How to get correct length of hose

Hose length is measured from flare to flare. Do not use a string or a tape measure but take a section of old garden hose. Touch one end of the garden hose to the tip of one fitting and touch the other end of the hose to the other fitting, that is the correct length of hose needed. The garden hose is trying to bend to its natural set, which is normally the extra needed for engine torque and vibration per AC43.13, Also, if you kink a garden hose, you are obviously going to kink an aircraft hose. Doing it this way allows you to snake a hose across the back of an engine and around obstacles and this will replicate exactly how the aircraft hose will fit.

Thank you for taking the time to read this.

WARNINGS & NOTES

*******WARNING (A) *******

USE LOCTITE® BRAND 567 TEFLON THREAD SEALANT BEFORE INSTALLATION OF FITTINGS. DO NOT ASSEMBLE FITTINGS INTO OIL FILTER BASE WITHOUT SEALANT OTHERWISE GALLING OF MATERIAL WILL RESULT.

******* WARNING (B) *******

NO ROUTING OF FLAMMABLE FLUID LINES ABOVE EXHAUST SYSTEM, UNLESS FIRESLEEVED. INSTALLER IS RESPONSIBLE FOR INTER-RELATIONSHIP BETWEEN THIS AND OTHER ENGINE CHANGES (INCLUDING ACCESSORIES)

******* WARNING (C) *******

THE USE OF PARTS AND COMPONENTS NOT INCLUDED IN THE KIT, IS NOT COVERED BY THE STC APPROVAL. ALWAYS REMEMBER THAT THE DIRTY OIL FROM THE ENGINE ENTERS THE OIL FILTER FROM THE OUTSIDE OF THE FILTER. THE CLEAN OIL EXITS THROUGH THE LARGE HOLE IN THE CENTER OF THE OIL FILTER AND RETURNS TO THE ENGINE.

******* WARNING (D) *******

DO NOT, UNDER ANY CIRCUMSTANCES, CONNECT AN OIL COOLER THAT DOES NOT HAVE A THERMOSATIC CONTROL VALVE, IN SERIES WITH OUR REMOTE MOUNT OIL FILTER KIT. OUR FILTER KIT IS A "FULL FLOW" OIL FILTERING SYSTEM WHICH MEANS ALL OF THE OIL IS FILTERED ALL OF THE TIME. DURING STARTUP ON A COLD DAY, THE COLD THICK OIL WILL PARTIALLY BYPASS A CH48108 OR CH48109 OIL FILTER UNTIL THE VISCOSITY DROPS AND THE THIN OIL CAN FLOW THROUGH THE FILTER MEDIA THEREBY ALLOWING OIL TO CIRCULATE IN THE ENGINE. IF AN OIL COOLER HAS NO THERMOSTATIC BYPASS BUILT INTO THE UNIT, WHEN THE OIL FILTER GOES INTO PARTIAL BYPASS, THIS THICK SLUG OF OIL WILL BE STOPPED, OR SEVERELY RESTRICTED AT THE OIL COOLER. ONE OF THREE THINGS WILL HAPPEN:

1. **THE OIL COOLER WILL SEPARATE IN HALF.**
2. **THE OIL FILTER GASKET WILL FAIL AND/OR THE OIL FILTER WILL EXPLODE.**
3. **THE OIL HOSE WILL FAIL**

ANY OF THE THREE SCENARIOS ABOVE WILL CAUSE COMPLETE LOSS OF OIL IN A SHORT PERIOD OF TIME.

NOTE:

ALL O-235 & O-290 OPERATORS

ON LYCOMING O-235 & O-290 SERIES ENGINES, LYCOMING MADE A DIFFERENCE IN THE PRODUCTION OF THE REAR ACCESSORY CASES. THE OIL MUST BE METERED THRU A .070 HOLE IN THE OIL SCREEN HOUSING TO PREVENT ALL THE ENGINE OIL FROM DUMPING ONTO THE OIL PUMP IDLER GEARS INSTEAD OF THRU THE OIL SCREEN. IF A REMOTE FILTER IS INSTALLED, THE OIL PRESSURE WILL TEND TO FOLLOW THE THROTTLE. BY USING THIS ENCLOSED RESTRICTOR PLATE, YOU WILL NOT EXPERIENCE THIS PROBLEM. INSTALLATION IS AS FOLLOWS:

1. **INSTALL NEW 61173 OR GT-61173 ADAPTER GASKET ON ACCESSORY CASE.**
2. **INSTALL LW-12999 OR PLT-12999 RESTRICTOR PLATE.**
3. **INSTALL NEW 61173 OR GT-61173 ADAPTER GASKET.**
4. **INSTALL LYC-10 ADAPTER.**

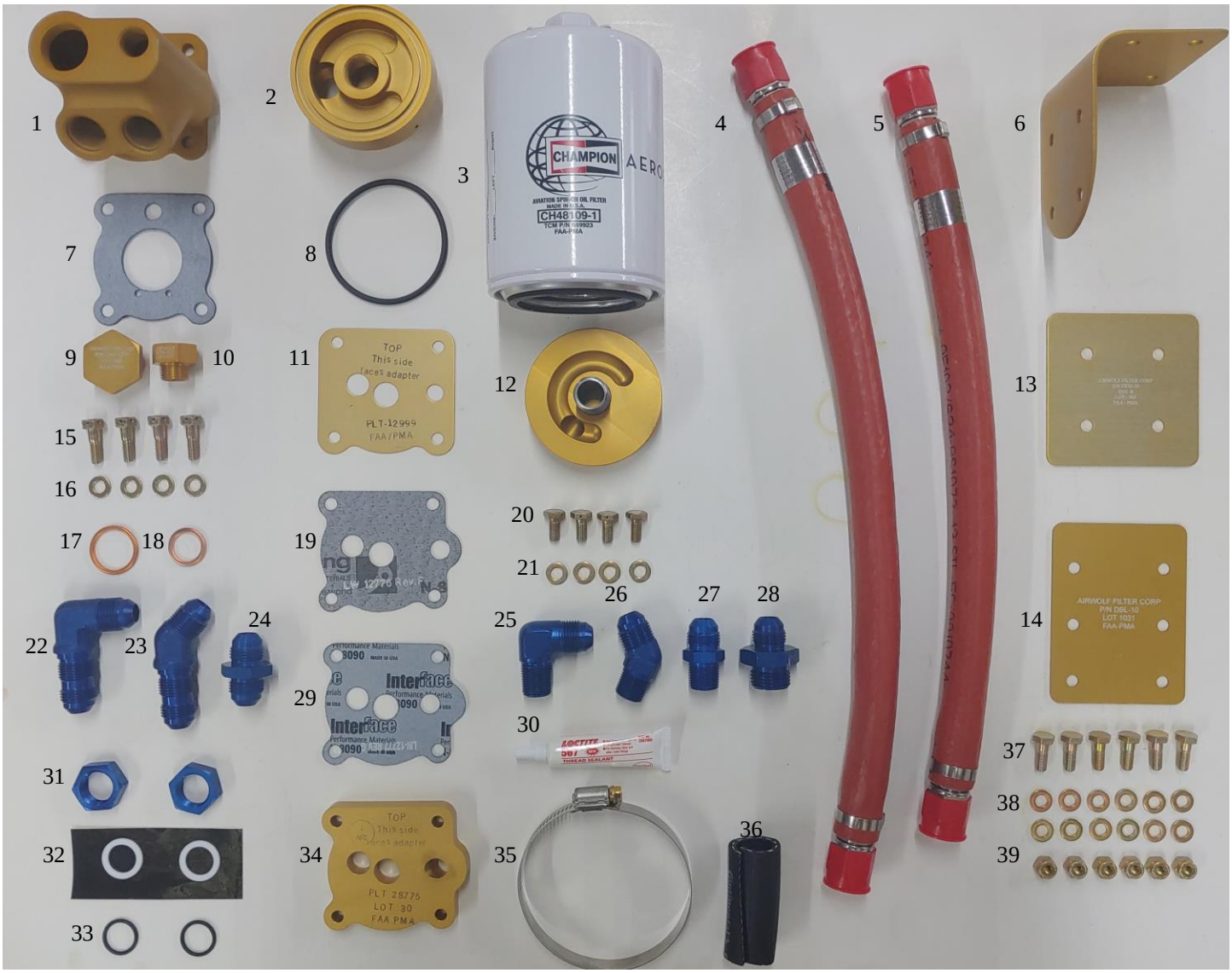
NOTE.

COMMON TO ALL INSTALLATIONS

SOME HOSES OR WIRES MAY HAVE TO BE REROUTED SO THE OIL FILTER ASSEMBLY WILL FIT INTO POSITION. REFERENCE AND MATERIAL PER AC 43.13-1B & 2A.

Illustrated Parts List No. AFC-K001-PL,

Applicability: **Lycoming Powered Single and Multi-Engine**
Fixed Wing Aircraft with O-235 – O-540 Engines.
Having firewalls of .021" ASTM A527 galvanized steel or equivalent.



Parts Illustration Lycoming Engine Series

Parts List No. AFC-K001-PL - Lycoming Engines
(see Illustration)
Lycoming Engine Series

Index	Part Number	Description	Quantity
1	LYC-10	Adapter - Engine, Full Flow, All O-235 -540 except below	1
1	LYC-11	Adapter - Engine, Full Flow, IO-720	1
2	OFB-17	Full Flow Engine Adapter, Single Drive Dual Mags	1
3	AFC-500 or AFC-600	Oil Filter, or Equivalent [Champion CH48108/CH48109]	1
4	TBD	Fire sleeved Hose Assy, TSO'D,	1
5	TBD	Fire sleeved Hose Assy, TSO'D,	1
6	OFM-11	Oil Filter Mount Plate - 90°	1
7	61173 or equivlant	Gasket, Adapter Base, O-235-540	1
8	M83248/1-230	"O" Ring, Viton, Single Drive Dual Mags	1
9	CAP-1350	Bypass Valve Cap (opitional)	1
10	OTA-527	Oil Temp Bulb Adapter	1
11	PLT-12999	Plate, Restrictor, O-235	1
12	OFB-10	Oil Filter Base, -8 Ports, O-235-540 (with OFS-10 Installed)	1
12	OFB-11	Oil Filter Base, -10 Ports, IO-720 (with OFS-10 Installed)	1
12	OFB-15	Oil Filter Base, -12 Ports, O235-540 (with OFS-10 Installed)	1
13	OFM-10	Horizontal Oil Filter Mount Plate	1
14	DBL-10	Plate, Doubler	1
15	AN74A-6	Bolt	4
16	AN960-416	Flat Washer	4
17	MS35769-21	Gasket, Thermostatic Valve	1
18	MS35769-11	Gasket, Oil Temperature Sensor	1
19	12776 or equivlant	Gasket, Adapter Base, IO-720	1
20	AN4H-4A	Bolt	4
21	AN960-416	Flat Washer	4
22	AN833-8D	Bulkhead Fitting 90°, O-235-540	Opt
22	AN833-10D	Bulkhead Fitting 90°, IO-720	Opt
23	AN837-8D	Bulkhead Fitting 45°, O-235-540	2
23	AN837-10D	Bulkhead Fitting 45°, IO-720	2
24	AN815-8D	Union, O-235-540	Opt
24	AN815-10D	Union, IO-720	Opt
25	MS20822-8D	Fitting, NPT to Flare - 90°, O-235-540	1
25	MS20822-10D	Fitting, NPT to Flare - 90°, IO-720	1
25	MS20822-12D	Fitting, NPT to Flare - 90°, GO/GSO/IGSO 435/480/540	1
25	AN842-16D	Fitting, NPT to Flare - 90°, W670	1
26	MS20823-8D	Fitting, NPT to Flare - 45°, O-235-540	1
26	MS20823-10D	Fitting, NPT to Flare - 45°, IO-720	1
26	MS20823-12D	Fitting, NPT to Flare - 45°, GO/GSO/IGSO 435/480/540	1
26	AN844-16D	Fitting, NPT to Flare - 45°, W670	1
27	AN816-8D	Nipple, NPT to Flare, O-235-540	Opt
27	AN816-10D	Nipple, NPT to Flare, IO-720	Opt
27	AN816-12D	Nipple, NPT to Flare, GO/GSO/IGSO 435/480/540	Opt
27	AN840-16D	Nipple, NPT to Flare, W670	Opt
28	AN919-15-SP	Fitting, Reducer, -10-8 Single Drive Dual Mags	2
29	12777 or equivlant	Gasket, Adapter Base, IO-720	1
30	567	Loctite Thread Sealant	1
31	AN6289-8D	Bulkhead Nut, O-235-540	2
31	AN6289-10D	Bulkhead Nut, IO-720	2
32	MS28773-08	Boss Gasket, O-235-540	2
32	MS28773-10	Boss Gasket, IO-720	2
33	M83248/1-908	Viton "O" Ring, O-235-540	2
33	M83248/1-910	Viton "O" Ring, IO-720	2
34	PLT-28775	Plate, Adapter, IO-720	1
35	QS100M52H	Clamp	1
36	MIL6000-3/4-2	Dampener, Vibration	1
37	AN4-5A	Bolt	6
38	AN960-416	Flat Washer	12
39	MS20365-428A	Locknut	6

Installation Instructions AFC-K001-II-A

Applicability: **Lycoming Powered Single and Multi-Engine**
Fixed Wing Aircraft with O-235 – O-540 Engines.
Having firewalls of .021" ASTM A527 galvanized steel or equivalent.

1. Remove the Lycoming P/N 69510, 68974 or 62815 engine oil screen housing from the accessory case.
**** WARNING - DO NOT REUSE OIL SCREEN IN LYC-10 ADAPTER ****

2. Remove oil temperature sensor and thermostatic valve from old oil screen housing.

3. As per Illustrated Parts List K001-PL - (A thru F), Install a new gasket (18) under the head of the oil temperature sensor, install in the adapter-engine (1). Turn the oil temp sensor until the sealing surfaces are in contact and then tighten an additional 135 degrees. Install a new gasket (17) under the head of the Lycoming P/N 75944 thermostatic valve, install in the adapter-engine (1), torque to 300 in/lbs. and secure. (See Drawing AFC-D-0026)

Note A: **You must use the bypass valve Cap (9) if your aircraft uses an older Lycoming engine which does not utilize the newer type Lycoming P/N 53E22144 thermostatic bypass valve (vernatherm) as your accessory case may not have been drilled by the Lycoming factory to utilize the vernatherm.**

Note B: **If removing the 68974 or 62815 oil screen housing from your engine which uses the older type capillary tube oil temperature probe and you intend to reuse this probe in our LYC-10 Adapter, it may be necessary to use our Oil Temp Adapter (10).**

4. As per Illustrated Parts List K001-PL - (A thru F), Onto each bulkhead fitting (22) or (23), install in order 1 ea. bulkhead nut (31), boss gasket (32), and "O" Ring (33). If using union (24), use only "O" Ring (33). Install each completed assembly into the adapter-engine (1). (See Drawing AFC-D-0026)
BE CAREFUL: O-ring and boss gasket must seal in the smooth area between the threaded areas of the bulkhead fitting.

Note C: **Any combination of fittings (22), (23), or (24) is acceptable.**

5. As per Illustrated Parts List K001-PL - (A thru F), Install a new gasket (7) on base of adapter-engine (1) and install onto the engine accessory case. Torque to specifications 96 in/ lbs. On O-235 Series engines, a restrictor plate (11) must be used to keep the engine oil pressure from following the throttle. Install as pictured using 1 ea. adapter base gasket (7) on each side of the restrictor plate.

6. As per Illustrated Parts List K001-PL - (A thru F), Using the horizontal oil filter mount (13) or vertical oil filter mount (6) as a drilling template, locate and drill mounting holes using a letter "F" drill.

7a. As per Illustrated Parts List K001-PL - (A thru F), Secure oil filter mount plate - vertical (6) to Fwd. side of firewall and doubler plate (14) to Aft side of firewall using bolts (37), washers (38), and nuts (39). (See Drawing AFC-D-0024)

OR

7b. As per Illustrated Parts List K001-PL - (A thru F), Secure oil filter base (12) to Fwd. side of firewall and horizontal oil filter mount plate (13) to rear side using bolts (20) and washers (21) and secure with .032 MS20995-C safety wire. (See Drawing AFC-D-0025)

******* SEE WARNING (A) *******

8. As per Illustrated Parts List K001-PL - (A thru F), Install any combination of fitting (25), (26), or (27) into oil filter base (12). Mount to oil filter mount plate (6) or (13) using bolts (20), washers (21), and secure with .032 MS20995-C safety wire.

******* SEE WARNING (B) *******

9. As per Illustrated Parts List K001-PL - (A thru F), Determine hose lengths (see Tip on page 4) and order appropriate length hoses (4) & (5). It is recommended that hoses be fire sleeved.

10. As per Illustrated Parts List K001-PL - (A thru F), Install assembled hose assy's (4) or (5) connecting the "A" port on the engine adapter to the "A" port on the filter base and the "B" port on the engine adapter to the "B" port on the filter base and torque to 270-350 in/ lbs.

11. Install oil filter (3) torque per instructions on oil filter, and secure with MS20995-C safety wire.

12. Run engine and check for leaks.

13. Determine weight and balance, initiate a 337 form, and update the equipment list.

WEIGHT AND BALANCE REPORT

SURPLUS EQUIPMENT	WEIGHT	ARM-INCHES		MOMENT - IN/LBS.	
EQUIPMENT - ITEM	LBS.	LONG		LONG	
REMOTE OIL FILTER	4.25				

REVISIONS			
REV.	DESCRIPTION	BY	DATE

MATERIAL LIST			
ITEM	PART NUMBER	DESCRIPTION	QTY.
1	AN4H-4A	BOLT, DRILLED HEAD	4
2	OFM-11	OIL FILTER MOUNT PLATE - 90°	1
3a	OFB-10	OIL FILTER BASE	1
3b	OFB-11	OIL FILTER BASE, IO720	1
4a	MS20823-8D	FITTING, 45°	1
4b	MS20823-10D	FITTING, 45°, IO720	1
5a	MS20822-8D	FITTING, 90°	1
5b	MS20822-10D	FITTING, 90°, IO720	1
6a	AN816-8D	UNION	OPT
6b	AN816-10D	UNION, IO720	OPT
7	OFS-10	OIL FILTER STUD	1
8a	AFC-500	OIL FILTER	1
8b	AFC-600	OIL FILTER, LONG	1
9	AN4-5A	BOLT	6
10	AN960-416	FLAT WASHER	16
11	MS20365-428A	LOCKNUT	6
12	DBL-10	DOUBLER PLATE	1
13	QS100M52H	CLAMP	1
14	MIL6000-1/2-2	DAMPENER	1

		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		DIMENSIONS ARE IN INCHES TOLERANCES: 1 PLACE ±.030 2 PLACE ±.010 3 PLACE ±.005 4 PLACE ±.0005 ANGULAR ±0°30'	DRAWN	GM	12/28/2020
			APPR. BY	BDA	12/28/2020
			ENG APPR.		
			MFG APPR.		
		INTERPRET GEOMETRIC TOLERANCING PER: ANSY Y 14.5H	Q.A.		
		MATERIAL			
NEXT ASSY	USED ON	FINISH	COMMENTS:		
APPLICATION					

Airwolf Filter Corp.

TITLE: ASSEMBLY DRAWING, OFM-11 OIL FILTER MOUNT PLATE - VERTICAL, DBL-10 DOUBLER PLATE & OFB-10 or OFB-11 OIL FILTER BASE

SIZE	DWG. NO.	REV
A	AFC-D-0024	IR

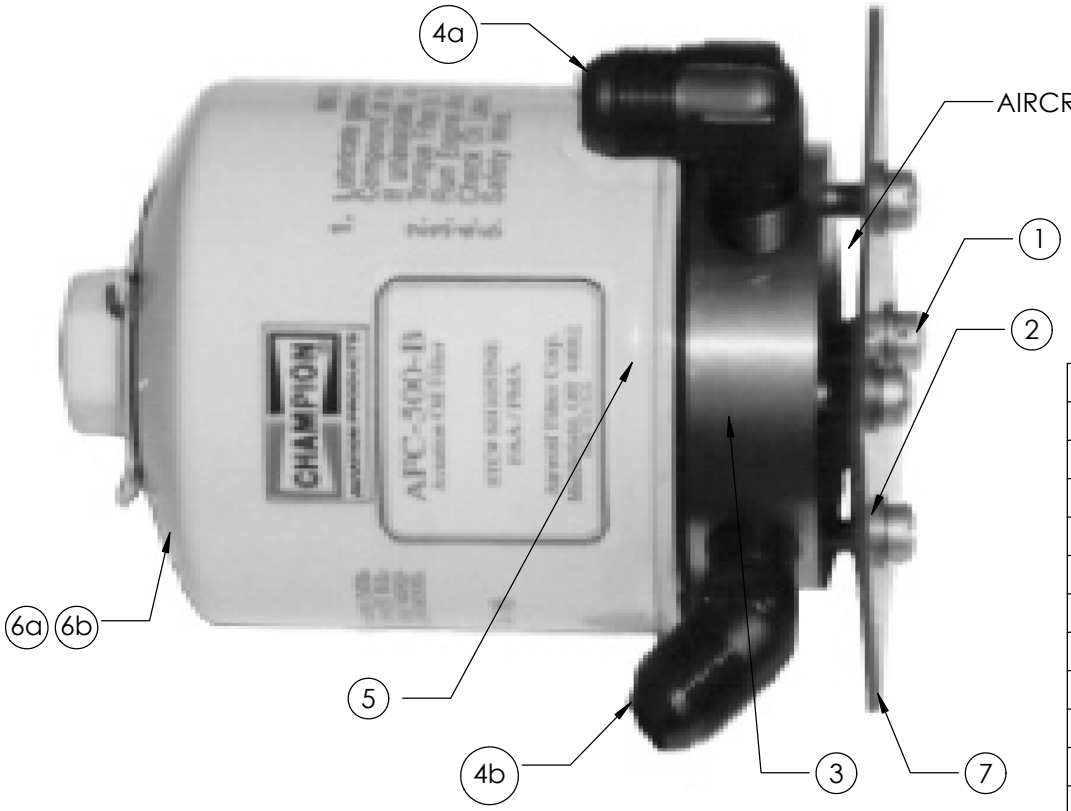
SCALE: | WEIGHT: | SHEET 1 OF 1

5 4 3 2 1

Part Number: AFC-K001

Date: 4-2-2021

REVISIONS			
REV.	DESCRIPTION	BY	DATE
A	REDRAWN IN SOLIDWORKS	GM	12/28/2020



MATERIAL LIST			
ITEM	PART NUMBER	DESCRIPTION	QTY.
1	AN4H-4A	BOLT, DRILLED HEAD	4
2	AN960-416	FLAT WASHER	4
3	OFB-10 or OFB-11	OIL FILTER BASE	1
4a	MS20822-8D or - 10D	FITTING, 90°	1
4b	MS20823-8D or -10D	FITTING, 45°	1
4c	AN816-8D or -10D	UNION	OPT
5	OFS-10	OIL FILTER STUD	1
6a	AFC-500	OIL FILTER	1
6b	AFC-600	OIL FILTER, LONG	1
7	OFM-10	OIL FILTER MOUNT PLATE	1

		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		DIMENSIONS ARE IN INCHES TOLERANCES: 1 PLACE ±.030 2 PLACE ±.010 3 PLACE ±.005 4 PLACE ±.0005 ANGULAR ±0°30'	DRAWN	GM	12/28/2020
			APPR. BY	BDA	12/28/2020
			ENG APPR.		
			MFG APPR.		
		INTERPRET GEOMETRIC TOLERANCING PER: ANSY Y 14.5H	Q.A.		
		MATERIAL			
NEXT ASSY	USED ON	FINISH	COMMENTS:		
APPLICATION					

Airwolf Filter Corp.

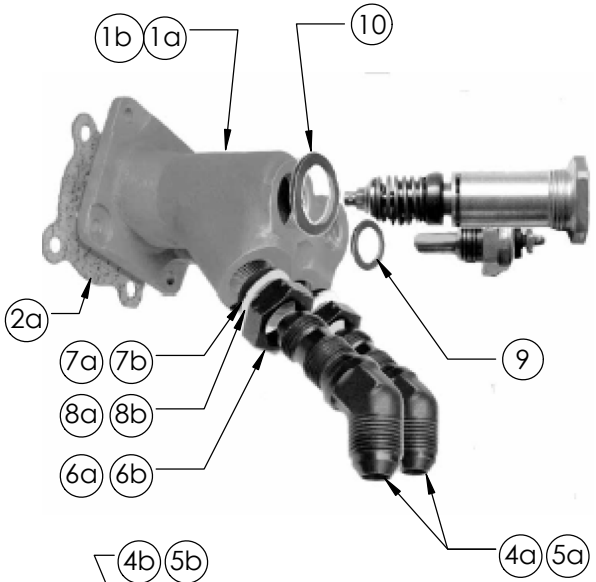
TITLE:
ASSEMBLY DRAWING,
OFM-10 OIL FILTER MOUNT PLATE - HORIZONTAL, & OFB-10 or -11 OIL FILTER BASE

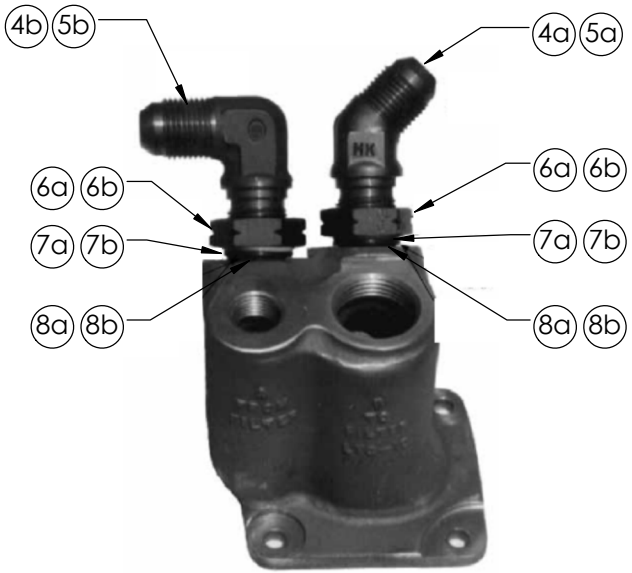
SIZE	DWG. NO.	REV
A	AFC-D-0025	A

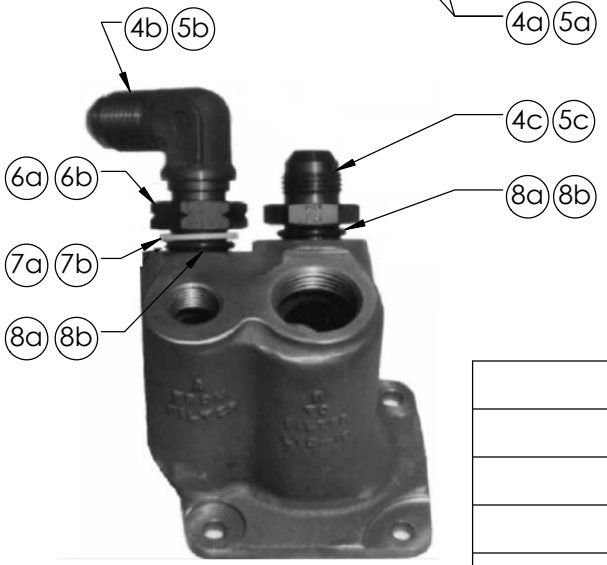
SCALE:	WEIGHT:	SHEET 1 OF 1

5 4 3 2 1

REVISIONS			
REV.	DESCRIPTION	BY	DATE
A	REDRAWN IN SOLIDWORKS	GM	12/28/2020







MATERIAL LIST			
ITEM	PART NUMBER	DESCRIPTION	QTY.
1a	LYC-10	FULL FLOW ENGINE ADPATER, O235-540	1
1b	LYC-11	FULL FLOW ENGINE ADPATER, O235-540	1
2a	61173 OR Equivalent	ADAPTER BASE GASKET, O235-540	1
2b	12777 OR Equivalent	ADAPTER BASE GASKET, IO720 (NOT SHOWN)	1
2c	12776 OR Equivalent	ADAPTER BASE GASKET, IO720 (NOT SHOWN)	1
3a	PLT-12775	ADAPTER PLATE, IO720 (NOT SHOWN)	1
3b	PLT-12999	RESTRICTOR PLATE, O235 (NOT SHOWN)	1
4a	AN837-8D	45° BULKHEAD FITTING	2
4b	AN833-8D	90° BULKHEAD FITTING	OPT
4c	AN815-8D	UNION	OPT
5a	AN837-10D	45° BULKHEAD FITTING, IO720	2
5b	AN833-10D	90° BULKHEAD FITTING, IO720	OPT
5c	AN815-10D	UNION, IO720	OPT
6a	AN6289-8D	BULKHEAD NUT	2
6b	AN6289-10D	BULKHEAD NUT, IO720	2
7a	MS28773-08	TEFLON BOSS GASKET	2
7b	MS28773-10	TEFLON BOSS GASKET, IO720	2
8a	M83248/1-908	VITON "O" RING	2
8b	M83248/1-910	VITON "O" RING, IO720	2
9	MS35769-11	OIL TEMPERATURE SENSOR GASKET	1
10	MS35769-21	VERNATHERM® GASKET	1

				NAME	DATE
		UNLESS OTHERWISE SPECIFIED:			
		DIMENSIONS ARE IN INCHES TOLERANCES: 1 PLACE ±.030 2 PLACE ±.010 3 PLACE ±.005 4 PLACE ±.0005 ANGULAR ±0°30'	DRAWN	GM	12/28/2020
			APPR. BY	BDA	12/28/2020
			ENG APPR.		
			MFG APPR.		
		INTERPRET GEOMETRIC TOLERANCING PER: ANSY Y 14.5H	Q.A.		
		MATERIAL			
NEXT ASSY	USED ON	FINISH	COMMENTS:		
APPLICATION					

Airwolf Filter Corp.

TITLE:

ASSEMBLY DRAWING,
LYC-10 ADAPTER,
ENGINE - FULL FLOW

SIZE	DWG. NO.	REV
A	AFC-D-0026	A

SCALE:	WEIGHT:	SHEET 1 OF 1

Part Number: AFC-K001

Date: 4-2-2021

5 4 3 2 1