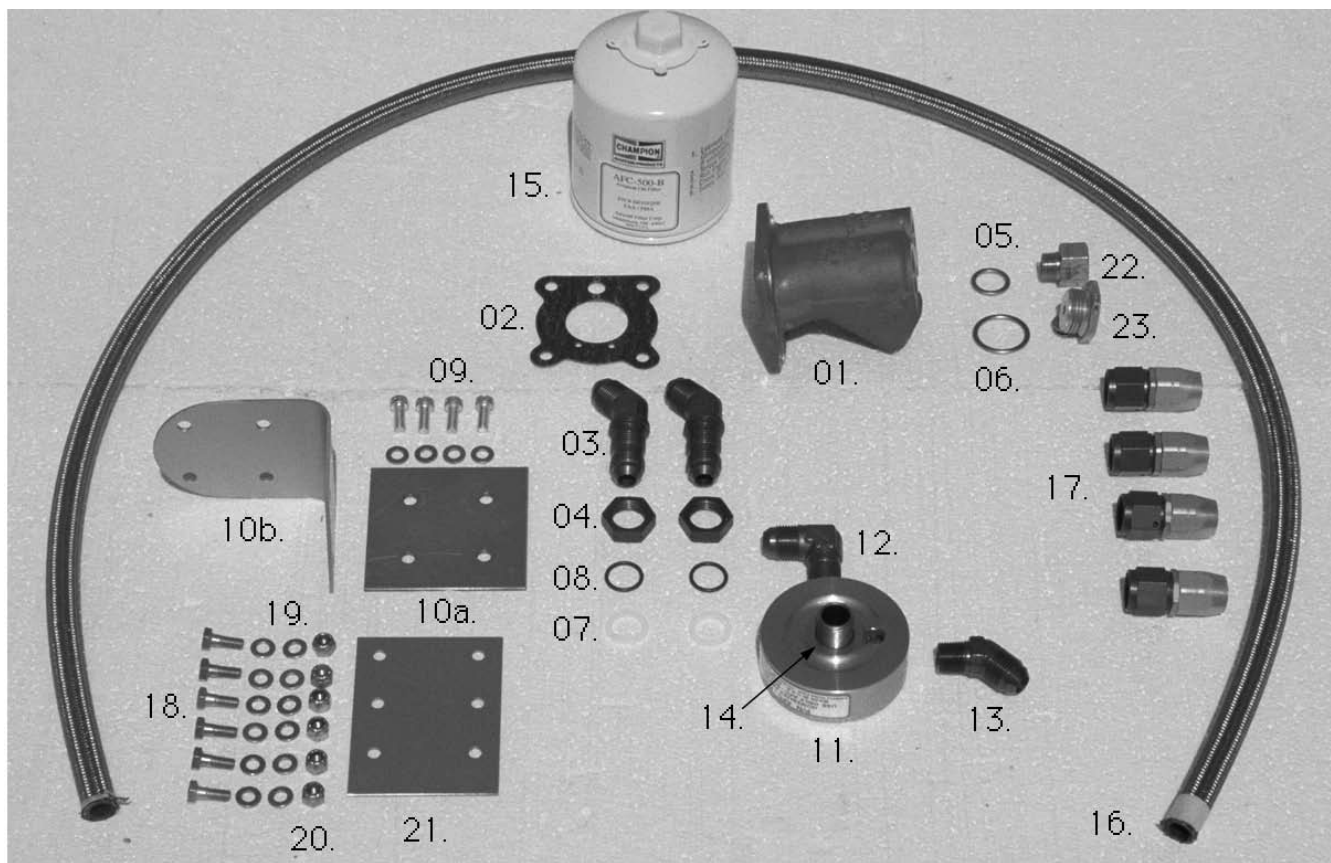




Oil Filter Kit AFC-K001

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-Ozzy	Titeflex Teflon Hose, -8 [Insert Length in inches at end of P/N]	(OPT)
17.	Note: Hoses 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)

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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.

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*******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, referenced publications, and distribution of the ICA as applicable. Comment: _____ with Lycoming _____ engine. <i>Aircraft Model</i> <i>Engine Model</i>
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 temperature 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 with Lycoming 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 structural fasteners such as type, torque, and installation requirements if any. Comment: <u> N/A </u>
12.	List of special tools: Special tools that are required, if any. Comment: <u> N/A </u>
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: <u> N/A </u>
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: <u> N/A </u>
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: <u> 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. </u>

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.

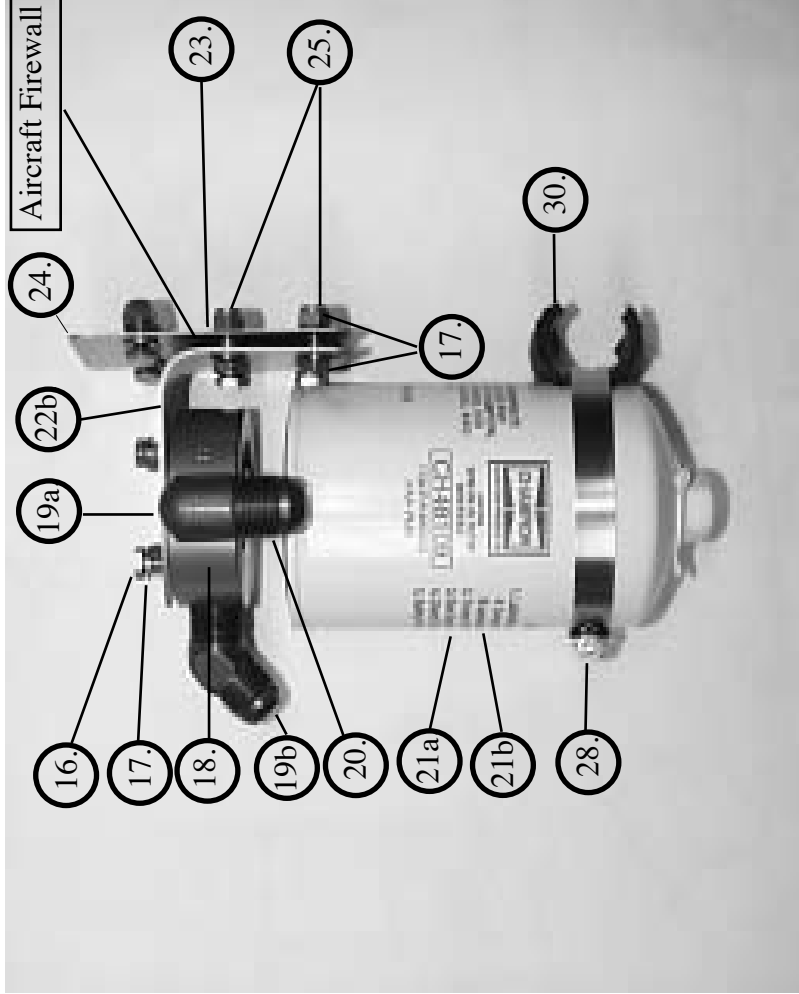
For major alterations performed in accordance with field approval on air carrier aircraft, the air carrier operator is responsible for ensuring that the CIA is made part of the applicable inspection/maintenance program for their aircraft. If a procedure is not currently included in the operator's manual 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	(1)
20.	OFS-10	Oil Filter Stud	(Opt)
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)

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Assembly Drawing.

OFM-10 Oil Filter Mount Plate - Horizontal,

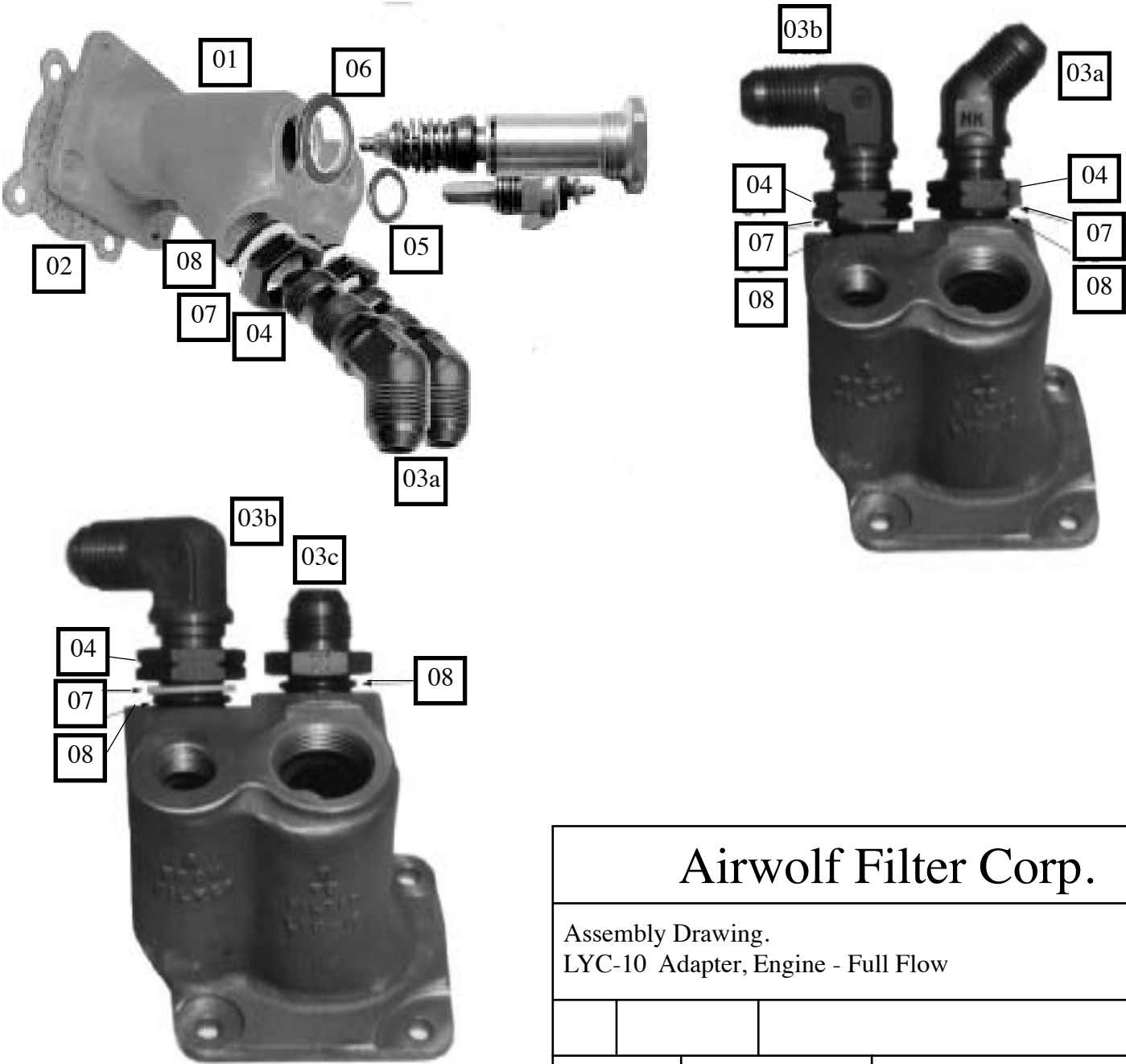
OFM-11 Oil Filter Mount Plate - Vertical,

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		