AIRWOLF FILTER CORP.

15369 Madison Rd.
Middlefield, Ohio 44062-8404 U.S.A.
(440) 632-5136 / (440) 632-1685 Fax

TO THE MECHANIC:

This P/N AFC-K010 remote mount oil filter kit incorporates our generic STC approved for all Franklin powered aircraft up to 450 hp. The STC paperwork provided with this kit utilizes the new approved model list (AML) system recently instituted by the FAA. Although you may notice your particular aircraft is not specifically listed under this new classification, it is still approved.

Upon installing this filter kit, you will need to fill out and file a 337 form for this installation referencing the P/N AFC-K010 kit and the STC# SA00433NY. If your particular aircraft is not listed on the AML, you will also need a field approval by your local FSDO. for this installation. This is necessary because the FAA only updates this list on a quarterly basis, and until your aircraft is listed, a field approval is required. If you are unsure whether or not you need a field approval, please call us directly.

With this paperwork, your local FSDO inspector has all the approved engineering data necessary to issue a field approval . This inspector is not an engineer and typically all he is doing is seeing if you installed it I/A/W the installation instructions and usually to make sure it doesn't leak. That's it.

If your local FSDO. inspector has any questions or concerns on this STC, he is to call the following person who will clarify the details. Mr. Fiesel is very familiar with our filter kits and can address any concerns your FSDO inspector may have on your particular installation.

Richard Fiesel / Project Manager
FAA - New York Aircraft Certification Office (ACO)
Engine and Propeller Division
10 Fifth Street
Valley Stream, NY 11581
(516) 256-7504 / (516) 568-2716 Fax

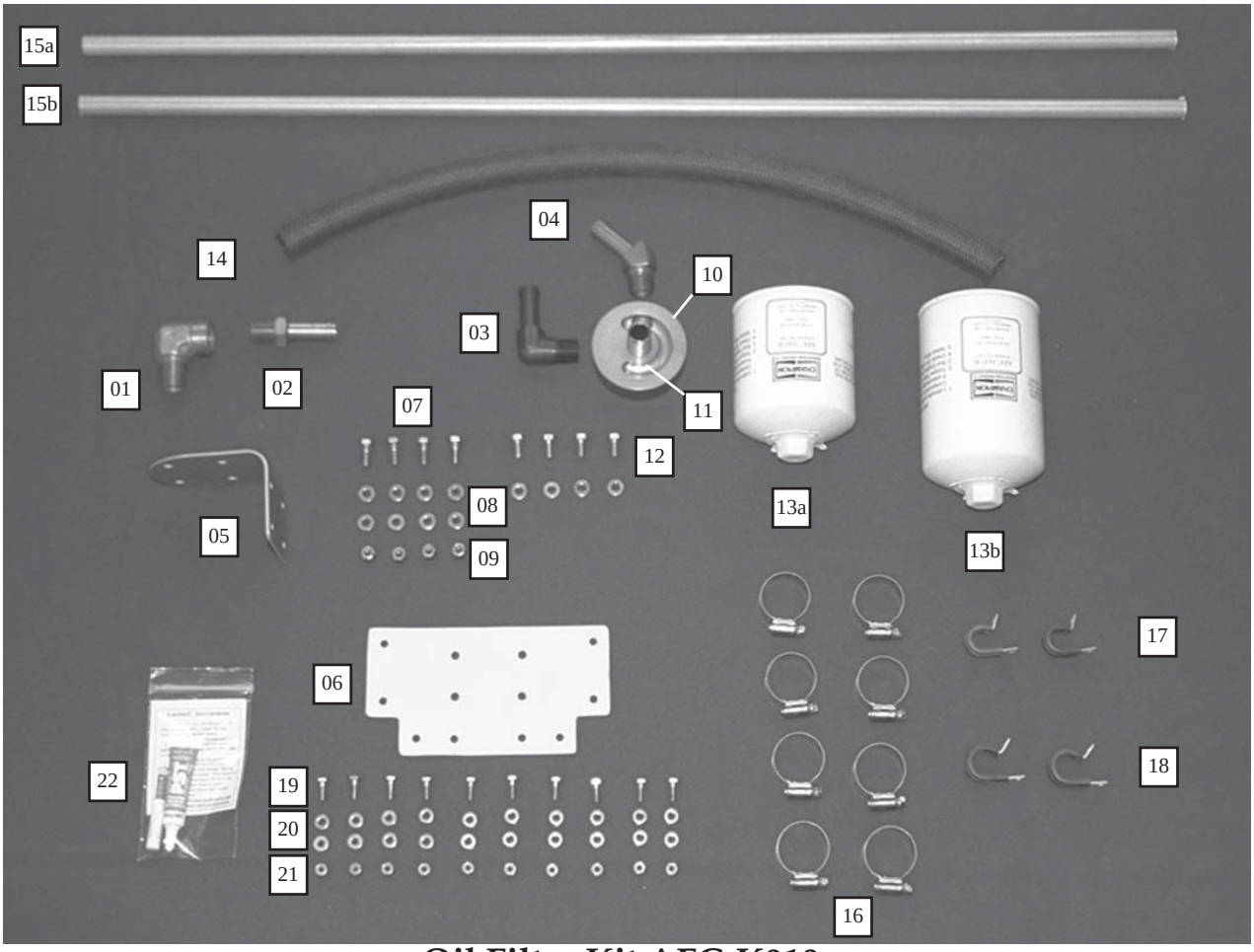
If your aircraft required a field approval, we must have a copy in order to update the (AML) list on our STC. Please send us a copy in addition to the one you will file with your local FSDO. We will then forward our copy to Richard Fiesel for him to update the (AML) list on our STC.

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 Titeflex Teflon 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 ie: Straight to Straight, Straight to 90°, Straight to 45°, etc. allowing for engine torque and vibration per AC43.13.

Thank you for your help.

Airwolf Filter Corp



Oil Filter Kit AFC-K010

Applicability: **Franklin powered Single and Multi Engine Aircraft less than 450hp. having firewalls of .021 ASTM A527 galvanized steel or equivalent.**

First Release 11/01/95

Ammended 01/08/2000

Parts List No. AFC-K010-PL

Index	Part Number	Description	Quantity
01.	AN914-4D	Elbow, Pipe, 90°	(1)
02.	AN840-10D	Adapter, Pipe to Hose, Straight	(1)
03.	AN842-10D	Elbow, Pipe to Hose, 90°	(1)
04.	AN844-10D	Elbow, Pipe to Hose, 45°	(1)
05.	OFM-11	Oil Filter Mount - Vertical	(1)
06.	DBL-11	Doubler Plate, Stinson	(1)
07.	AN4-5A	Bolt	(6)
08.	AN960-416	Flat Washer	(16)
09.	MS20365-428A	Locknut	(6)
10.	OFB-11	Oil Filter Base, -10 Ports	(1)
11.	OFS-10	Oil Filter Stud	(1)
12.	AN4H-4A	Bolt, Drilled Head	(4)
13a.	AFC-500 or	Oil Filter, Std, or Equivalent [Champion CH48108]	(1)
13b.	AFC-600	Oil Filter , Long, or Equivalent [Champion CH48109]	(1)
14.	MIL6000-5/8-24	MIL- H-6000B Hose, 5/8" I.D. x 24" Length	(1)
15a.	TUB-2950	Oil Line, "From" Oil Filter "To" Oil Cooler	(1)
15b.	TUB-2550	Oil Line, "From" Engine "To" Oil Filter	(1)
16.	QS100M10H	Clamp, Worm Gear	(8)
17.	MS21919DG-8	Adel Clamp	(2)
18.	MS21919DG-10	Adel Clamp	(2)
19.	AN3-4A	Bolt	(10)
20.	AN960-10	Flat Washer	(20)
21.	MS20365-1032A	Locknut	(10)
22.	Loctite	Loctite® 567 PST Thread Sealant	(1)
23.	AFC-K010-II	Installation Instructions	(1)
24.	AFC-K010-MI	Instructions for Continued Airworthiness	(1)
25.	AFC-K010-PL	Parts List	(1)

Oil Filter Kit AFC-K010-A

Applicability: **Franklin powered Single and Multi Engine Aircraft less than 450hp. having firewalls of .021 ASTM A527 galvanized steel or equivalent.**

First Release 11/01/95

Ammended 01/08/2000

Installation Instructions No. AFC-K010-II

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 43.13-1B & 2A.

01. Open cowl and remove bottom cowl. Note: Raise LH side cowl for better access and lighting.

02. Remove the fore and aft straight fittings from the oil pressure bypass valve located at the front LH side of the engine.

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

03 Install 90° pipe elbow (01) into aft hole of oil pressure bypass. Insert Pipe to Hose adapter (02) into previously installed 90° pipe elbow (01) and torque to specs.

04. Install previously removed Pipe to Hose adapter (02) into foreword hole of oil pressure bypass and torque to specs.

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

05. Using installation drawing AFC-D-0044 as a reference, locate the LH rear exhaust pipe hangar strap on the firewall. Position doubler plate (06) as per drawing for drilling of holes. Using the doubler plate (06) as a drilling template, locate and drill 6ea. .203 holes using a 13/64" drill and 6ea. .281 holes using a letter "K" drill.

06. Place doubler plate (06) on inside of firewall. Secure to firewall using 6ea. bolts (19), washers (20), and locknuts (21).

07. Secure oil filter mount (05) onto first two rows of holes of doubler plate (06) using 6ea. bolts (07), washers (08), and locknuts (09).

08 Install oil filter base (10) onto oil filter mount (05) using 4ea. bolts (12) and washers (08). Secure with .032 MS20995-C safety wire

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

09. Install 90° fitting (03) into **Port "A"** and 45° fitting (04) into **Port "B"** of oil filter base (10) and tighten referencing position in assembly drawings.

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

10. Cut, form and bend supplied oil lines (15a & (15b)) to the prints supplied. Bead all ends I/A/W AND10060-5/8 Type A specs.

11. Per installation drawing AFC-D-0044, install previously made oil line (15b) connecting fitting (02) on the oil bypass assembly to **Port "B"** on the filter base. Per installation drawing AFC-D-0044, install hose assy (15a) from **Port "A"** on the filter base and connect to the **Intake** side of the oil cooler. Connect hose (15a) and (15b) to oil lines appropiate length of MIL-H-6000B hose (14) and secure with 8ea. worm gear clamps (16) supplied and tighten.

12. Per installation drawing AFC-D-0044, secure oil lines (15a) and (15b) to vertical support on engine frame using adel clamps (17) & (18), bolts (19), washers (20), and nuts (21) provided.

13. Install oil filter (13a) or (13b), torque per instructions on oil filter, and secure with .032 MS20995-C safety wire.

14. Reinstall and close top and bottom cowl.

15. Run engine and check for leaks.

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

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

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

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

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

******* 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

Oil Filter Kit AFC-K010-B

Applicability:	**Franklin powered Maule Aircraft** **Aircraft less than 450hp.** **having firewalls of .021 ASTM A527 galvanized steel or equivalent.**	**First Release 11/01/95** **Ammended 01/08/2000**

Installation Instructions No. AFC-K010-II

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 43.13-1B & 2A.*

01. Gain access to the engine compartment.

02. Locate the oil hose connecting the oil cooler distribution block to the oil cooler.

03. Locate and determine proposed oil filter location on firewall.

04. Using the vertical oil filter mount (05) as a drilling template, locate and drill mounting holes using a letter “F” drill.

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

05. Secure the vertical oil filter mount (05) to Fwd side of firewall and doubler plate to Aft side of firewall using bolts (07), washers (08), and nuts (09).

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

06. Install any combination of AN fittings into oil filter base (10). Mount to vertical oil filter mount (05.) using bolts (12), washers (08), and secure with .032 MS20995-C safety wire.

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

07. Determine hose lengths and order appropriate length hoses. Last 2 xx’ s in part number is the length of the hose in inches and the z is the length in eighths of an inch. Ex. P/N for a firesleeved hose 24 7/8" long is F13000008-0247.

08. Install assembled hose assy’s connecting the outlet port on the oil cooler distribution block to the **[“B” port]** on the oil filter base (10). Connect the outlet **[“A” port]** of the oil filter base (10) to the inlet of the oil cooler. Torque hoses to 270-350 in/lbs.

Note: You always filter oil at its hottest point, which is before the oil cooler. Installing the filter in front of the oil cooler also keeps the oil cooler from being a trash collector.

09. Install oil filter (13b) torque per instructions on oil filter, and secure with MS20995-C safety wire.

10. Run engine and check for leaks.

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

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

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

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

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

******* 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

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

Form AFC-K010-ICA Revised 10/01/00

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-98-18 Dated October 7, 1998), are applicable to the aircraft above when the following equipment is installed:

SYSTEM: Airwolf Remote Mount Oil Filter System.

Airwolf Filter Corp
15369 Madison Rd
Middlefield, OH 44062

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 Franklin**_____ **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-K010**
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 withFranklin Service Bulletin. 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

Form AFC-K010-ICA Revised 10/01/00

11.	**Data: Relative to structural fasteners 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." **Comment:__N/A**
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 337. **Comment:__ A letter will be submitted to the local FSDO with a copy of the revised FAA Form 337 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 337.**

NOTE:

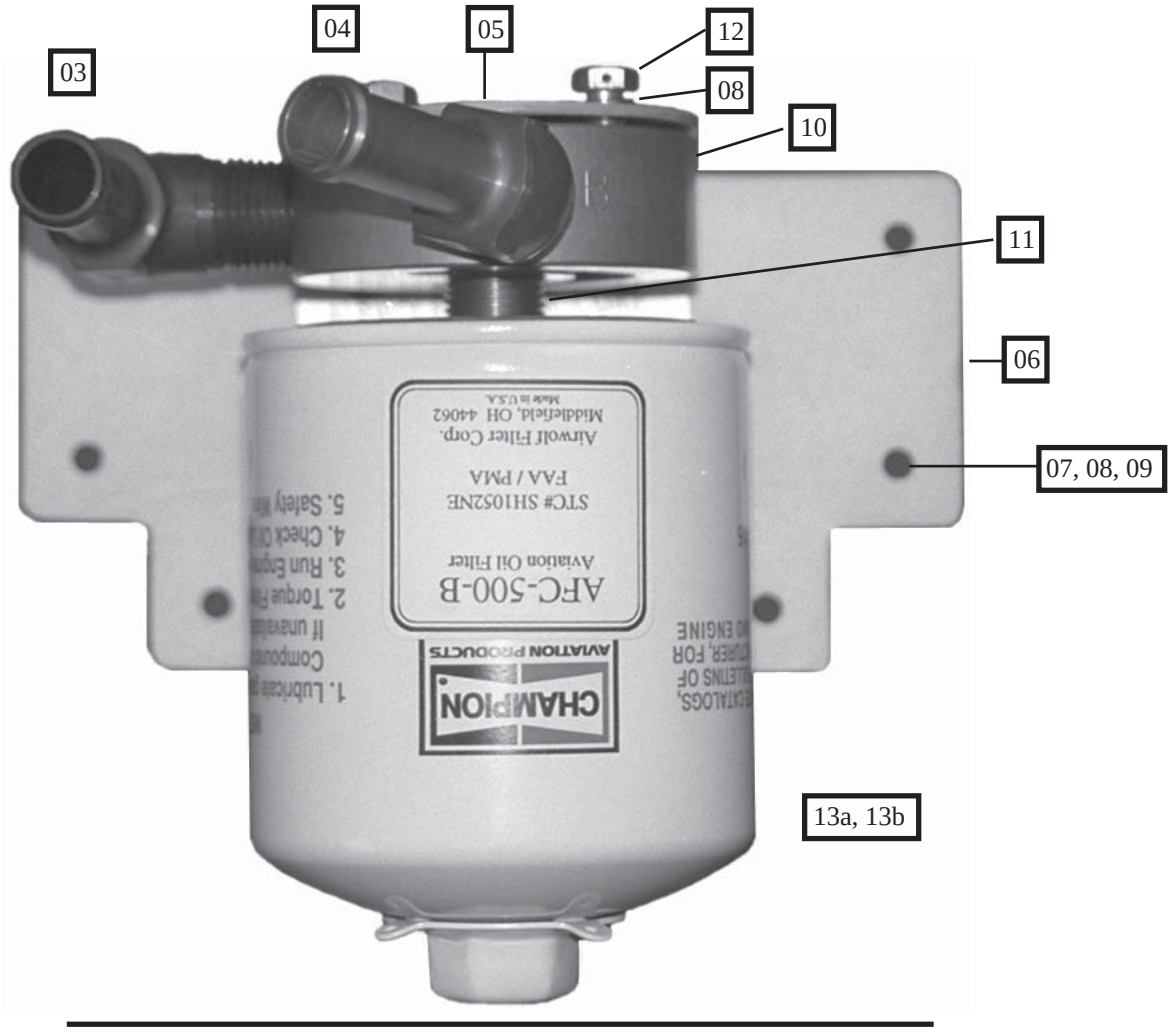
Implementation and Record Keeping: For major alterations performed in accordance with FAA Field Approval policy, the owner operator operating under part 91 is responsible for ensuring that the ICA is made part of the applicable section 92.409 inspection program for their aircraft. This is accomplished when a maintenance entry is made in the aircraft's maintenance 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.

INSTALLATION DRAWING# AFC-D-0043



Material List

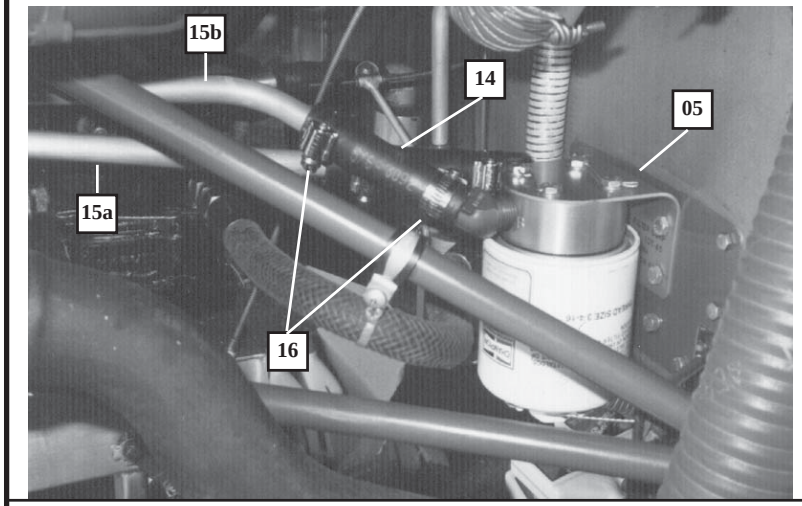
Index	Part Number	Description	Quantity
03.	AN842-10D	Elbow, Pipe to Hose, 90°	(1)
04.	AN844-10D	Elbow, Pipe to Hose, 45°	(1)
05.	OFM-11	Oil Filter Mount - Vertical	(1)
06.	DBL-11	Doubler Plate, Stinson	(1)
10.	OFB-11	Oil Filter Base, -10 Ports	(1)
11.	OFS-10	Oil Filter Stud	(1)
12.	AN4H-4A	Bolt, Drilled Head	(4)
13a.	AFC-500 or	Oil Filter, Std	(1)
13b.	AFC-600	Oil Filter , Long	(1)
19.	AN3-4A	Bolt	(6)
20.	AN960-10	Flat Washer	(12)
21.	MS20365-1032A	Locknut	(6)

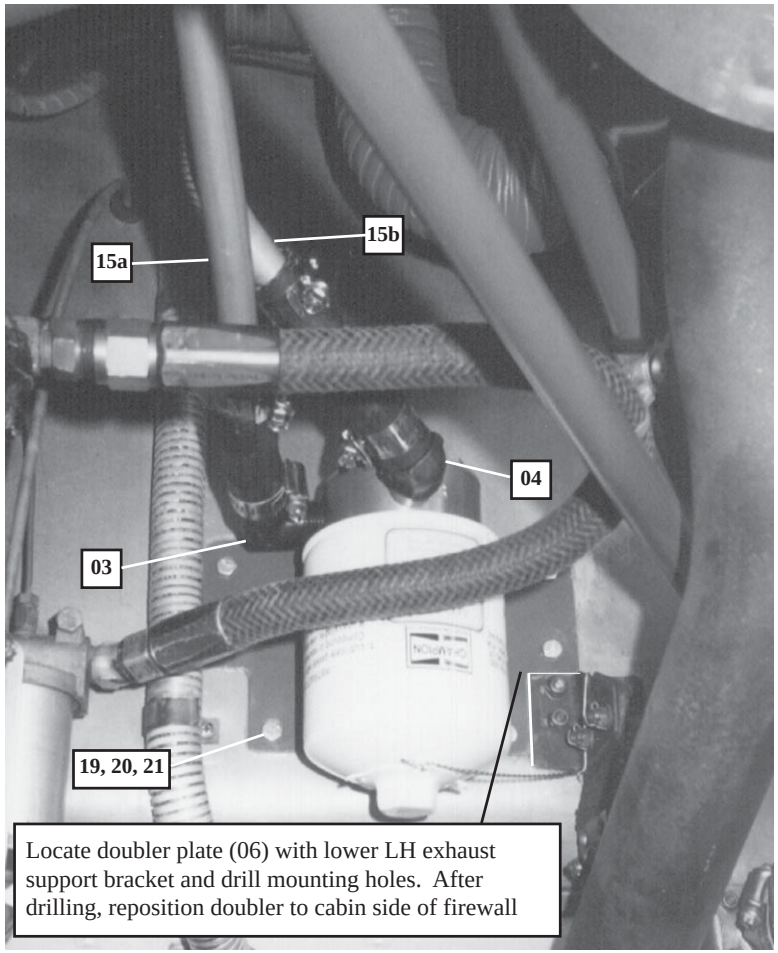
Airwolf Filter Corp.

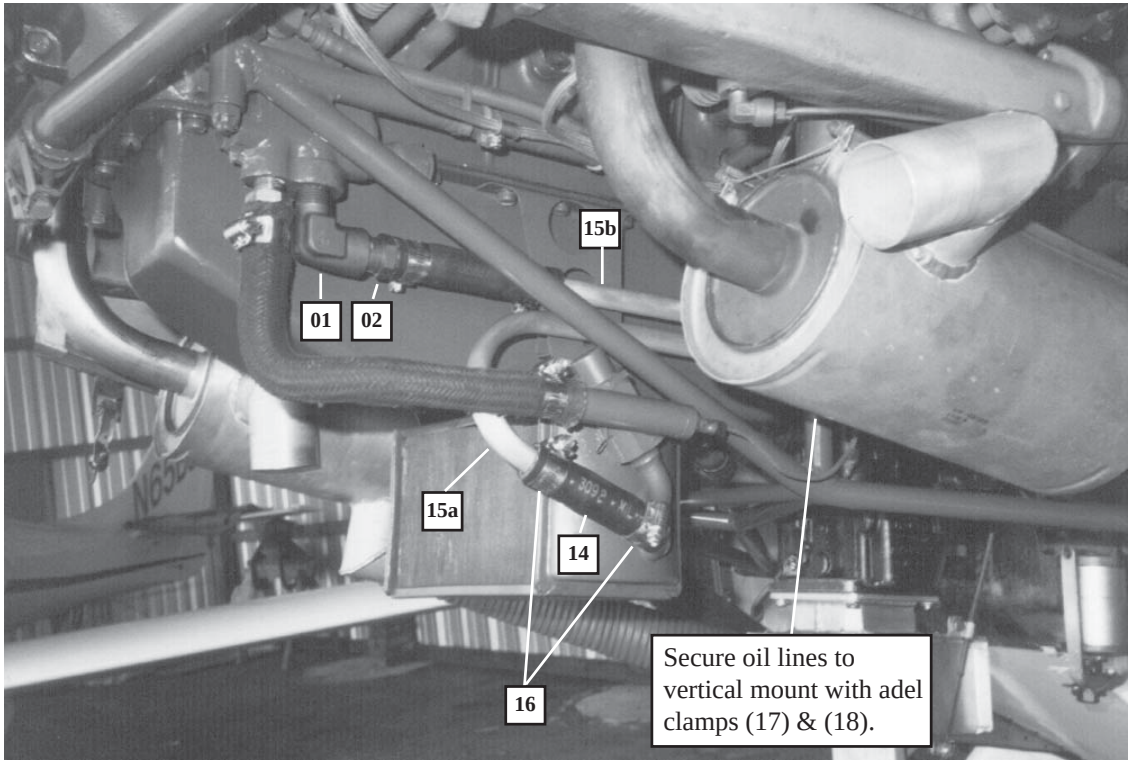
Assembly Drawing.
Assembly of Airwolf Filter Kit for Franklin Engines.

11/01/95 | Dwg# AFC-D-0043

INSTALLATION DRAWING# AFC-D-0044







Index	Part Number	Description	Quantity
01.	AN914-4D	Elbow, Pipe, 90°	(1)
02.	AN840-10D	Adapter, Pipe to Hose, Straight	(1)
03.	AN842-10D	Elbow, Pipe to Hose, 90°	(1)
04.	AN844-10D	Elbow, Pipe to Hose, 45°	(1)
05.	OFM-11	Oil Filter Mount - Vertical	(1)
14.	MIL6000-3/4-24	Hose Assy , MIL- H-6000B, 2' Length	(1)
15a.	TUB-2950	Oil Line, 5052-0 x 29-1/2" Length	(2)
15b.	TUB-2550	Oil Line, 5052-0, x 25-1/2" Length	(2)
16.	QS100M10H	Clamp, Worm Gear	(8)
17.	MS21919WDG8	Adel Clamp	(2)
18.	MS21919WDG10	Adel Clamp	(2)

Airwolf Filter Corp.

Installation of and hose routing of Airwolf Filter Kit on Stinson 108 aircraft powered by Franklin engines.

	11/01/95	Dwg# AFC-D-0044	

Reference Data
for
AFC-AFC-K010
for
STC SA00433NY
Oil Filter Kit
AFC-K010

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

Page Number	Revision	Revision Date
Cover	IR	4-2-2021
1	IR	4-2-2021
2	IR	4-2-2021
3	IR	4-2-2021
4	IR	4-2-2021
5	IR	4-2-2021
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	A	12-8-2020
12	A	12-8-2020

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-K010 remote mount oil filter kit incorporates our STC approved for all Franklin powered aircraft up to 450 hp. 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- K010 kit and the STC# SA00433NY. 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 length 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**

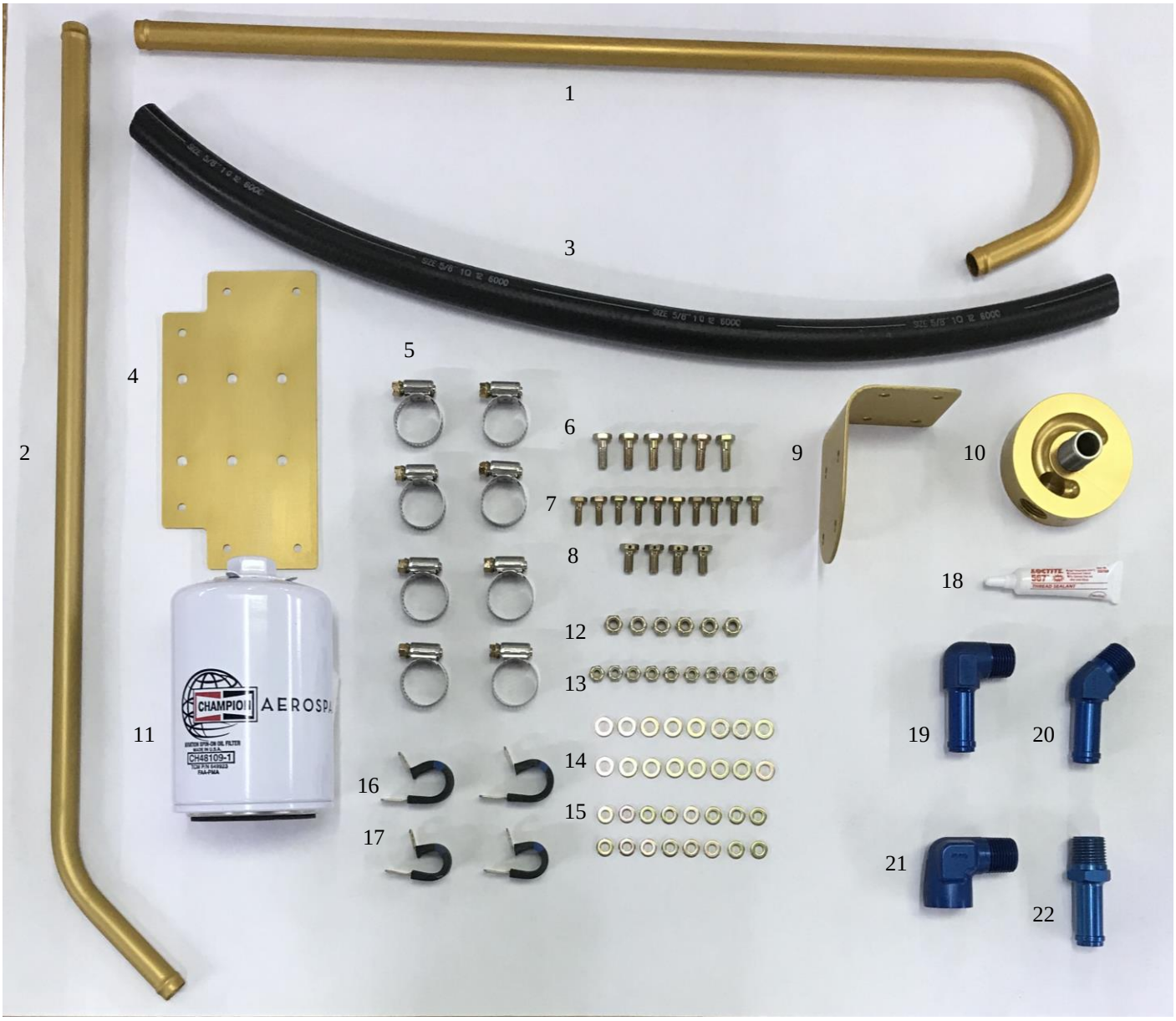
ANY OF THE THREE SCENARIOS ABOVE WILL CAUSE COMPLETE LOSS OF OIL IN A SHORT PERIOD OF TIME.

NOTE:
COMMON TO ALL INSTALLATIONS

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

Illustrated Parts List No. AFC-K010-PL

Applicability: **Franklin Powered single and multi-Engine Aircraft less than 450 hp Having firewalls of .021 ASTM A527 galvanized steel or equivalent.**



Parts Illustration Franklin Engine Series

Parts List No. AFC-K010-PL
(see Illustration)
Franklin Engine Series

Index	Part Number	Description	Quantity
1	TUB-2950	Oil line, “From” Oil Filter “to” Oil Cooler	1
2	TUB-2550	Oil line, “From” Engine “to” Oil Filter	1
3	MIL6000 5/8-24	MIL-H-6000B Hose 5/8” I.D. x 24” Length	1
4	DBL-11	Doubler Plate, Stinson	1
5	QS100M10H	Clamp, Worm Gear	8
6	AN4-5A	Bolt	6
7	AN3-4	Bolt	10
8	AN4H-4A	Bolt, Drilled Head	4
9	OFM-11	Oil Filter Mount Vertical	1
10	OFB-11	Olil Filter Base, -10 Ports	1
11	AFC-500 or AFC-600	Oil Filter, or Equivalent [Champion CH48108 or CH48109]	1
12	MS20365-428A	Locknut	6
13	MS20365-1032A	Locknut	10
14	AN960-416	Flat washer	16
15	AN960-10	Flat Washer	16
16	MS21919-10	Adel Clamp	2
17	MS21919-8	Adel Clamp	2
18	567	Loctite Thread Sealant	1
19	AN842-10D	Fitting, Elbow Pipe to Hose, 90°	1
20	AN844-10D	Fitting, Elbow Pipe to Hose, 45°	1
21	AN914-4D	Fitting, Elbow Pipe to Pipe, 90°	1
22	AN840-10D	Fitting, Adapter Pipe to Hose, Straight	1

Installation Instructions No. AFC-K010-II-A

Applicability: **Franklin Powered single and multi-Engine Aircraft less than 450 hp Having firewalls of .021 ASTM A527 galvanized steel or equivalent.**

1. Open cowl and remove bottom cowl. Note: Raise LH side cowl for better access and lighting.

2. Remove the fore and aft straight fittings from the oil pressure bypass valve located at the front LH side of the engine.

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

3. Per Illustrated Parts List, Install 90° pipe elbow (21) into aft hole of oil pressure bypass. Insert Pipe to Hose adapter (22) into previously installed 90° pipe elbow (21) and torque to specs.

4. Install previously removed Pipe to Hose adapter into forword hole of oil pressure bypass and torque to specs.

5. Per installation drawing AFC-D-0044, locate the LH rear exhaust pipe hangar strap on the firewall. Position doubler plate (DBL-11) as per drawing for drilling of holes. Using the doubler plate (DBL-11) as a drilling template, locate and drill 6ea. .203 holes using a 13/64" drill and 6ea. .281 holes using a letter “K” drill.

6. Per Installation drawing AFC-D-0044, Place doubler plate (DBL-11) on inside of firewall. Secure to firewall using 6ea. bolts (6), washers (14), and locknuts (12).

7. Per Assembly drawing AFC-D-0043, Secure oil filter mount (3) onto first two rows of holes of doubler plate (4) using 6ea. bolts (AN4-5A), washers (AN960-416), and locknuts (MS20365-428A).

8. Per Assembly drawing AFC-D-0043, install oil filter base (5) onto oil filter mount (3) using 4ea. bolts (7) and washers. Secure with .032 MS20995-C safety wire.

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

9. Per Assembly drawing AFC-D-0043, Install 90° fitting (1) into Port “A” and 45° fitting (2) into Port “B” of oil filter base (5) and tighten referencing position in assembly drawings.

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

10. Per installation drawing AFC-D-0044, install oil line (7b) connecting fitting (2) on the oil bypass assembly to Port “B” on the filter base. Per installation drawing AFC-D-0044, install oil line (7a) from Port “A” on the filter base and connect to the Intake side of the oil cooler. Connect hose (7a) and (7b) to oil lines using appropriate length of MIL-H-6000B hose (6) and secure with 8ea. worm gear clamps (8) supplied and tighten.

11. Per installation drawing AFC-D-0044, secure oil lines (7a) and (7b) to vertical support on engine frame using Adel clamps (9) & (10), bolts (12), washers (13), and nuts (14) provided.

12. Install oil filter, torque per instructions on oil filter, and secure with .032 MS20995-C safety wire.

13. Reinstall and close top and bottom cowl.

14. Run engine and check for leaks.

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

Installation Instructions No. AFC-K010-II-B

Applicability: **Franklin Powered Maule Aircraft**
Having firewalls of .021 ASTM A527 galvanized steel or equivalent.

1. Gain access to the engine compartment.

2. Locate the oil hose connecting the oil cooler distribution block to the oil cooler.

3. Locate and determine proposed oil filter location on firewall.

4. Per Assembly drawing AFC-D-0043, Using the vertical oil filter mount (3) as a drilling template, locate and drill mounting holes using a letter "F" drill.

5. Per Illustrated Parts List, Secure the vertical oil filter mount (9) to Fwd side of firewall and doubler plate to Aft side of firewall using bolts (6), washers (14), and nuts (12). using 6ea. bolts (AN4-5A), washers (AN960-416), and locknuts (MS20365-428A).

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

6. Install any combination of AN fittings into oil filter base (10). Mount to vertical oil filter mount (9.) using bolts (8), washers (14), and secure with .032 MS20995-C safety wire.

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

***** SEE TIP on Page 4 *****

7. Determine hose lengths and order appropriate length hoses. Last digits after the dash in part number is the length of the hose in inches and in eighths of an inch. Ex. P/N for a fire sleeved hose 24 7/8" long is F13000008-0247.

8. Install assembled hose assy's connecting the outlet port on the oil cooler distribution block to the ["B" port] on the oil filter base (10). Connect the outlet ["A" port] of the oil filter base (10) to the inlet of the oil cooler. Torque hoses to 270-350 in/ lbs.

Note: You always filter oil at its hottest point, which is before the oil cooler. Installing the filter in front of the oil cooler also keeps the oil cooler from being a trash collector.

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

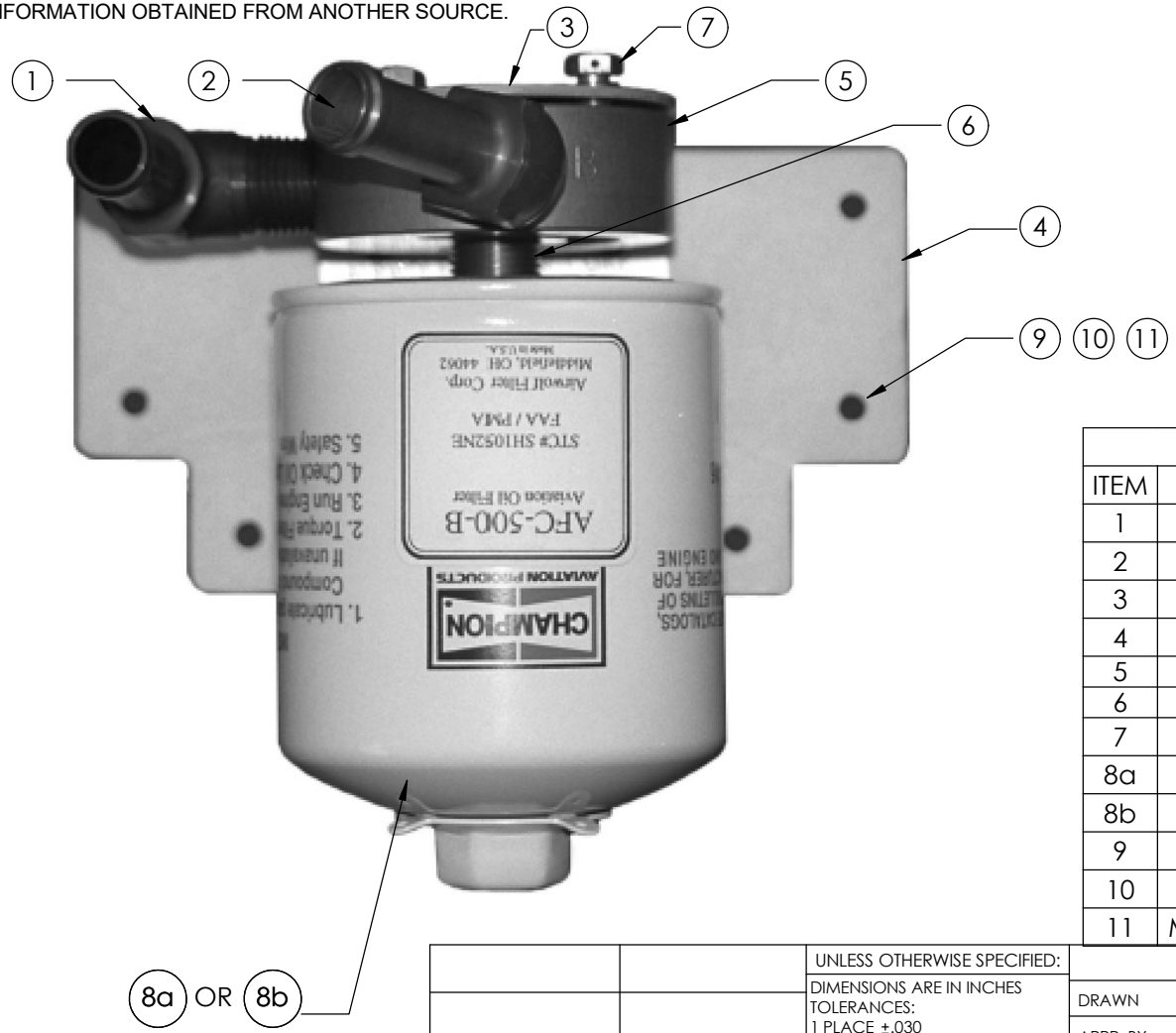
10. Run engine and check for leaks.

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

WEIGHT AND BALANCE REPORT
ALL MODELS

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

REVISIONS			
REV.	DESCRIPTION	BY	DATE
A	REDRAWN IN SOLIDWORKS	GM	12-8-2020



MATERIAL LIST			
ITEM	PART NUMBER	DESCRIPTION	QTY.
1	AN842-10D	ELBOW, PIPE TO HOSE, 90°	1
2	AN844-10D	ELBOW, PIPE TO HOSE, 45°	1
3	OFM-11	OIL FILTER MOUNT - VERTICAL	1
4	DBL-11	DOUBLER PLATE, STINSON	1
5	OFB-11	OIL FILTER BASE, -10 PORTS	1
6	OFS-10	OIL FILTER STUD	1
7	AN4H-4A	BOLT, DRILLED HEAD	4
8a	AFC-500 OR	OIL FILTER,STD	1
8b	AFC-600	OIL FILTER, LONG	1
9	AN3-4A	BOLT	6
10	AN960-10	FLAT WASHER	12
11	MS23065-1032A	LOCKNUT	6

				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	12/8/2020
			APPR. BY	BDA	12/8/2020
			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,
ASSEMBLY OF AIRWOLF FILTER
KIT FOR FRANKLIN ENGINES

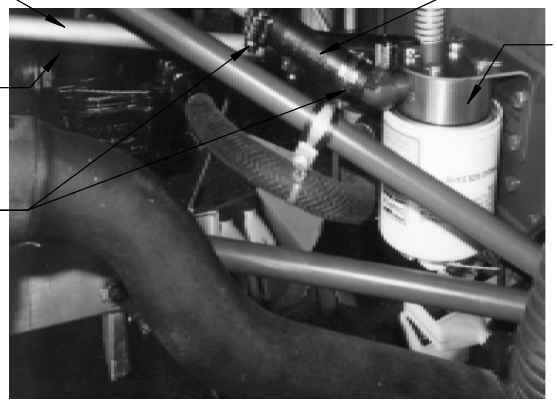
SIZE	DWG. NO.	REV
A	AFC-D-0043	A
SCALE:	WEIGHT:	SHEET 1 OF 1

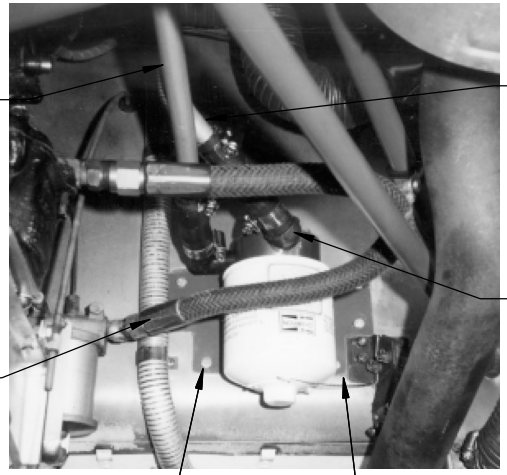
Part Number: AFC-K010

Date: 4-2-2021

5 4 3 2 1

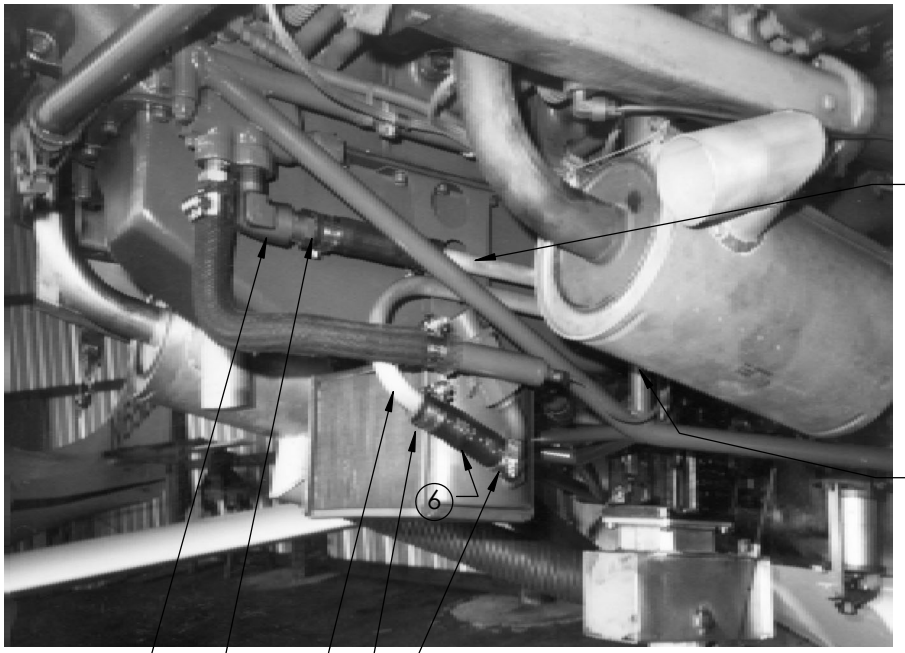
REVISIONS			
REV.	DESCRIPTION	BY	DATE
A	REDRAWN IN SOLIDWORKS	GM	12-8-2020





12 13 14

LOCATE DOUBLER PLATE (11) WITH LOWER LH EXHAUST SUPPORT BRACKET AND DRILL MOUNTING HOLES. AFTER DRILLING, REPOSITION DOUBLER TO CABIN SIDE OF FIREWALL.



SECURE OIL LINES TO VERTICAL MOUNT WITH ADEL CLAMPS (9) & (10)

MATERIAL LIST

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	AN914-4D	ELBOW, PIPE, 90°	1
2	AN840-10D	ADAPTER, PIPE TO HOSE, STRAIGHT	1
3	AN842-10D	ELBOW, PIPE TO HOSE, 90°	1
4	AN844-10D	ELBOW, PIPE TO HOSE, 45°	1
5	OFM-11	OIL FILTER MOUNT - VERTICAL	1
6	MIL6000-3/4"-24	HOSE ASSY, MIL-H-6000B, 2' LENGTH	1
7a	TUB-2950	OIL LINE, 5052-0 X 29-1/2" LENGTH	2
7b	TUB-2550	OIL LINE, 5052-0 X 25-1/2" LENGTH	2
8	QS100M10H	CLAMP, WORM GEAR	8
9	MS21919WDG8	ADEL CLAMP	2
10	MS21919WDG10	ADEL CLAMP	2
11	DBL-11	DOUBLER PLATE, STINSON	1
12	AN3-4A	BOLT	6
13	AN960-10	FLAT WASHER	6
14	MS20365-1032A	LOCKNUT	6

		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	12/8/2020
			APPR. BY	BDA	12/8/2020
			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:

INSTALLATION OF AND HOUSING ROUTING OF AIRWOLF FILTER KIT ON STINSON 108 AIRCRAFT POWERED BY FRANKLIN ENGINES

SIZE	DWG. NO.	REV
A	AFC-D-0044	A

SCALE:	WEIGHT:	SHEET 1 OF 1

5 4 3 2 1

Part Number: AFC-K010

Date: 4-2-2021