

Oil Filter Kit AFC-K009-A

Applicability:

Bell Helicopter Model 47, 47B, 47B3, 47D, 47D1, 47E, 47G, 47G-2, 47G-2A, 47G-2A-1, 47G-3, 47G-3B, 47G-3B-1, 47G-3B-2, 47G-3B-2A, 47G-4, 47G-4A, 47G-5, 47G-5A, 47-H1, 47J, 47J-2, 47J-2A, 47K with Lycoming Engines VO-435-A1A, VO-435-A1B, VO-435-A1D, VO-435-A1E, VO-435-A1F, VO-435-B1A, VO-435-6A, TVO-435-A1, TVO-435-B1A, TVO-435-B1B, TVO-435-G1A, TVO-435-F1A, VO-540-B1B, & VO-540-B1B3

First Release 11/01/95

Ammended 01/08/2000

Parts List No. AFC-K009-A-PL

Index	Part Number	Description	Quantity
01a.	OFB-15	Oil Filter Base, -12 Port	(1)
01b.	OFB-11	Oil Filter Base, -10 Port	(1)
02.	OFS-10	Oil Filter Stud	(1)
03.	AFC-600	Oil Filter, Long, or Equivalent [Champion CH48109]	(1)
04a.	MS20822-12D	Elbow, 90° -12	(2)
04b.	MS20822-10D	Elbow, 90° -10	(2)
05.	OFM-18	Oil Filter Mount Plate, 75°	(1)
06.	AN4H-4A	Bolts, Drilled Head	(4)
07.	AN960-416	Flat Washers	(12)
08.	AN4-5A	Bolts	(4)
09.	MS20365-428A	Locknuts	(4)
10.	OFM-19-1	Oil Filter Mounting Plate A	(1)
11.	OFM-19-2	Oil Filter Mounting Plate B	(1)
12.	AN3-4A	Bolts	(10)
13.	AN960-10	Flat Washers	(20)
14.	MS20365-1032A	Locknuts	(10)
15.	MS21919WDG-14	Adel Clamp	(4)
16a.	MS21919WDG-16	Adel Clamp	(10)
17a.	AE7010000K-0680	Aeroquip Hose Assy, 68" Length	(1)
17b.	AE7010000K-0230	Aeroquip Hose Assy, 23" Length	(1)
18.	56707	Loctite ® 567 PST Teflon Thread Sealant	(1)
19.	AFC-K009-II	Installation Instructions	(1)
20.	AFC-K009-MI	Instructions for Continued Airworthiness	(1)
21.	AFC-K009-PL	Parts List	(1)

Applicability:

Bell Helicopter Model 47G2, 47G2A, 47G2A1,
47G3B, 47G3B1, 47G3B2, 47G3B2A,
47G4, & 47G4A
with Lycoming Engines VO435-A1B, VO435-A1D, VO435-A1E, VO435-A1F
TVO435-A1A, TVO435-B1A, TVO435-G1A, TVO435-F1A, & VO540-B1B3

First Release 11/01/95

Ammended 01/08/2000

01. Remove oil cooler for ease of installation.
02. Remove oil line from engine to oil cooler.
03. Assemble mounting plate "A" (10) & "B" (11) using 4ea. bolts (12), washers (13), and locknuts (14).
04. Into top two rows of holes on assembled mounting plate, install 75° oil filter mount (05) using 4ea. bolts (08), washers (07), and locknuts (09).
05. Install oil filter base (01) onto oil filter mount (05), using 4ea. bolts (06) and washers (07). Locate inlet port to right side and outlet port aft. Secure with .032 MS20995-C safety wire.
06. Install 2ea. adel clamps (16) on bottom horizontal tube per drawing approximately 13" right of bottom fore and aft servo mount.

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

07. Install 2 ea. 90° elbows (04), into oil filter base (01) ports. Position elbow in inlet port "B" forward 35 degrees and elbow in outlet port "A" straight down.
08. Place completely assembled oil filter mount into position per drawing and attach the two adel clamps (16) to the bottom of the uprights on the oil filter mounting plate "B" (11) clamps up, using 2ea. bolts (12), washers, (13) and locknuts (14). Do not tighten at this time. Install 2 ea. adel clamps (16) onto each vertical tube per drawing and attach with 4ea. bolts (12) washers (13) and locknuts (14). Position mount to clamps and secure all bolts at this time.

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

09. Route long hose assy. (17a) from inlet port "B" of oil filter base (01), forward of throttle tube bracket, outboard of junction box, aft over sprague rod and loop to oil pump fitting. Secure hose to center frame using adel clamps (15), for the hose and 4ea. adel clamps (16) for frame tubes. Position clamps per drawing and secure with 4 ea. bolts (12), washers (13), and locknuts (14).
10. Reinstall oil cooler at previous location and secure top return oil line to oil tank.
11. Install short hose assy (17b) from outlet port "A" of oil filter base (01) to bottom oil cooler fitting and secure.

Note C: Allow clearance on throttle bracket.

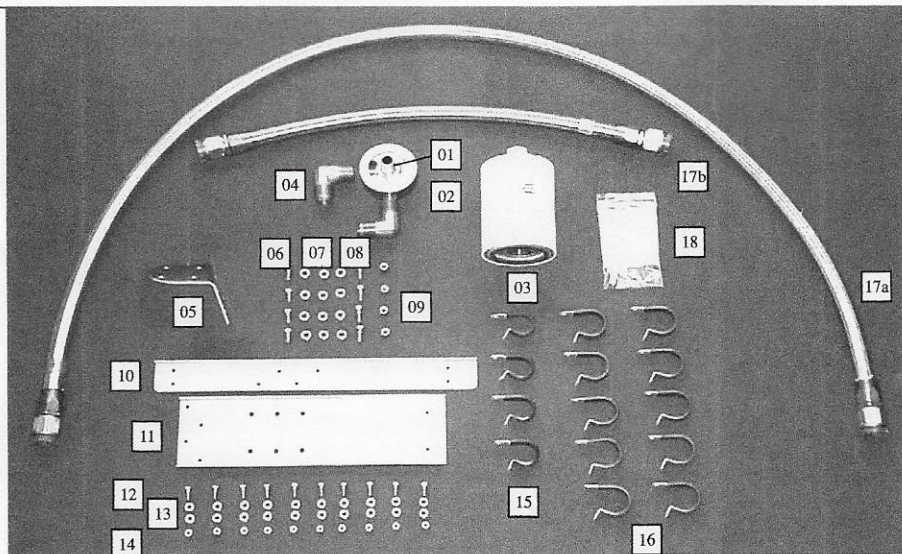
12. Install oil filter (03), torque per instructions on oil filter and secure with .032 MS20995-C safety wire.
13. Run engine and check for leaks.
14. Determine weight and balance, initiate a 337 form and update the equipment list.

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

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 (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)



Oil Filter Kit AFC-K009-B

Applicability:

Bell Helicopter Model 47, 47B, 47B3, 47D, 47D1, 47E, 47G,
47-H1, 47J, 47J-2, 47J-2A, 47K
with Franklin Engines
6V4-178-B3, 6V4-178-B32, 6V4-200-C32 & 6V5-335A

First Release 11/01/95

Ammended 01/08/2000

Parts List No. AFC-K009-B-PL

<u>Index</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
01.	OFB-11	Oil Filter Base, -10 Port	(1)
02.	OFS-10	Oil Filter Stud	(1)
03.	AFC-600	Oil Filter, Long, or Equivalent [Champion CH48109]	(1)
04.	MS20822-10D	Elbow, 90° -12	(2)
05.	OFM-18	Oil Filter Mount Plate, 75°	(1)
06.	AN4H-4A	Bolts, Drilled Head	(4)
07.	AN960-416	Flat Washers	(12)
08.	AN4-5A	Bolts	(4)
09.	MS20365-428A	Locknuts	(4)
10.	OFM-19-1	Oil Filter Mounting Plate A	(1)
11.	OFM-19-2	Oil Filter Mounting Plate B	(1)
12.	AN3-4A	Bolts, 1/2" Long	(5)
13.	AN3-25A	Bolts, 1-5/8" Long	(6)
14.	AN960-10L	Flat Washers	(30)
15.	MS20365-1032A	Locknuts	(11)
16.	MS21919WDG-14	Adel Clamp, 7/8"	(2)
17.	MS21919WDG-16	Adel Clamp, 1"	(8)
19.	TUB-0100	Spacer, 1"	(6)
20a.	AE7010000K-0230	Aeroquip Hose Assy, 23" Long	(1)
20b.	AE7010000K-0240	Aeroquip Hose Assy, 24" Long	(1)
21.	56707	Loctite ® 567 PST Teflon Thread Sealant	(1)
22.	AFC-K009-II	Installation Instructions	(1)
23.	AFC-K009-MI	Instructions for Continued Airworthiness	(1)
24.	AFC-K009-PL	Parts List	(1)

Applicability:

Bell Helicopter Model 47, 47B, 47B3, 47D, 47D1, 47E, 47G,
47-H1, 47J, 47J-2, 47J-2A, 47K
with Franklin Engines
6V4-178-B3, 6V4-178-B32, 6V4-200-C32 & 6VS-335A

First Release 11/01/95

Ammended 01/08/2000

01. Remove oil cooler for ease of installation.
02. Remove oil line from oil crossover tube to oil cooler.
03. Assemble mounting plate "A" (10) & "B" (11) using 4ea. bolts (12), washers (14), and locknuts (15).
04. Into top two rows of holes on assembled mounting plate, install 75° oil filter mount (05) using 4ea. bolts (08), washers (07), and locknuts (09).
05. Install oil filter base (01) onto oil filter mount (05), using 4ea. bolts (06) and washers (07). Locate inlet port to right side and outlet port aft. Secure with .032 MS20995-C safety wire.
06. Install 2ea. tube clamps (16) and spacers (18) on bottom horizontal tube per drawing approximately 13" right of bottom fore and aft servo mount.

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

07. Install 2 ea. 90° elbows (04), into oil filter base (01) ports. Position elbow in inlet port "B" forward 35 degrees and elbow in outlet port "A" straight down.
08. Per installation drawings, place completely assembled oil filter mount into position and attach the two tube clamps (18) and spacers (18) to the bottom of the uprights on the oil filter mounting plate "B" (11), using 2ea. bolts (13), washers (14) and locknuts (15). Do not tighten at this time. Install 2 ea. tube clamps (18) onto each vertical tube per drawing and attach with 4ea. bolts (13) washers (14) and locknuts (15). Position mount to clamps and secure all bolts at this time. Assume that adequate distance is maintained between throttle linkage and oil filter mounting plates. No restrictions or binding may occur.

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

09. Route 24" hose assy. (20b) from inlet port "B" of oil filter base (01) forward to horizontal tube of airframe outboard to oil filter assy. Then route aft and connect to oil crossover tube. Secure hose to center frame using adel clamp (16), for the hose and 1ea. adel clamp (17) for frame tube. Position clamps per drawing and secure with 1 ea. bolt (12), washer (14), and locknut (15).
10. Reinstall oil cooler at previous location and secure top return oil line to oil tank.
11. Install 23" hose assy (20a) from outlet port "A" of oil filter base (01) to bottom oil cooler fitting and secure.

Note C: Allow clearance on throttle bracket.

12. Install oil filter (03), torque per instructions on oil filter and secure with .032 MS20995-C safety wire.
13. Run engine and check for leaks.
14. Determine weight and balance, initiate a 337 form and update the equipment list.

Instructions not Verified/Completed 07/11/00

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

Form AFC-K009-ICA Revised 10/01/00

A/C Make : **Bell Helicopter Textron**Model: **47 Series** S/N: _____ Reg#: _____Revision: Date: **01/08/2000**

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.	<p>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.</p> <p>Comment: <u>Bell 47 Series Helicopters with Lycoming VO/TVO435 & VO540 Series & Franklin engines.</u> Aircraft Model _____ Engine Model _____</p>
2.	<p>Description: Of the major alteration, it's function including an explanation of it's interface with other systems, if any.</p> <p>Comment: <u>Installation of Airwolf Remote Mounted Oil Filter Kit P/N AFC-K009</u></p>
3.	<p>Control: Operation information: Or special procedures if any.</p> <p>Comment: <u>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.</u></p>
4.	<p>Servicing information: Such as types of fluids used, servicing points, and location of access panels, as appropriate.</p> <p>Comment: <u>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.</u></p>
5.	<p>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.</p> <p>Comment: <u>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.</u></p>
6.	<p>Trouble shooting information: Information describing probably malfunctions, how to recognize those malfunctions, and the remedial actions to be taken.</p> <p>Comment: <u>N/A</u></p>
7.	<p>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.</p> <p>Comments: <u>N/A</u></p>
8.	<p>Diagrams: Of access plates and information, if needed, to gain access for inspection.</p> <p>Comment: <u>N/A</u></p>
9.	<p>Special inspection requirements: Such as X-ray, ultrasonic testing, or magnetic particle inspection, if required.</p> <p>Comment: <u>N/A</u></p>
10.	<p>Application of protective treatments: To the affected area after inspection and/or maintenance, if any.</p> <p>Comment: <u>N/A</u></p>

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

Form AF-C-009-ICA Revised 10/01/00

11.	<p>Data: Relative to structural fasteners such as type, torque, and installation requirements if any.</p> <p>Comment: <u> N/A </u></p>
12.	<p>List of special tools: Special tools that are required, if any.</p> <p>Comment: <u> N/A </u></p>
13.	<p>For commuter category aircraft: The following additional information must be furnished, as applicable:</p> <ul style="list-style-type: none"> A. Electrical Loads B. Methods of balancing flight controls. C. Identification of primary and secondary structures D. Special repair methods applicable to the airplane. <p>Comment: <u> N/A </u></p>
14.	<p>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."</p> <p>Comment: <u> N/A </u></p>
15.	<p>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."</p> <p>Comment: <u> N/A </u></p>
16.	<p>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.</p> <p>Comment: <u> 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. </u></p>

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.

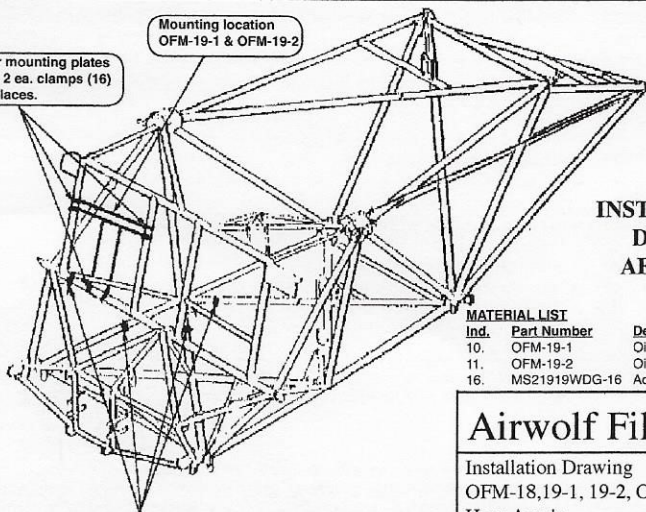
For major alterations performed in accordance with field approval on air carrier aircraft, the air carrier operator is responsible for ensuring that the CIA is made part of the applicable inspection/maintenance program for their aircraft. If a procedure is not currently included in the operator's manual 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 135.419(b).

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.

Secure oil filter mounting plates (10) & (11) with 2 ea. clamps (16) 3 Places.

Mounting location OFM-19-1 & OFM-19-2



Secure Hoses (17a) & (17b) with 1ea. Clamp (16) 4 Places.

INSTALLATION DRAWING AFC-D-0039

MATERIAL LIST

Ind.	Part Number	Description	Qty
10.	OFM-19-1	Oil Filter Mount A	(1)
11.	OFM-19-2	Oil Filter Mount B	(1)
16.	MS21919WDG-16	Adel Clamp	(4)

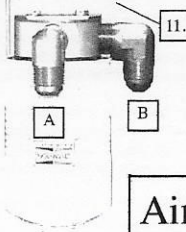
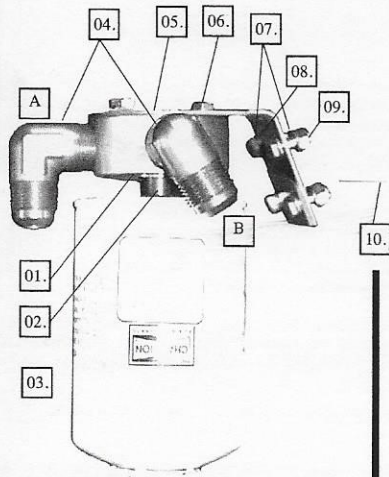
Airwolf Filter Corp.

Installation Drawing
OFM-18,19-1, 19-2, OFB-15 &
Hose Assy's.

11/01/95 Dwg# AFC-D-0039 John P. Kochy

MATERIAL LIST

Ind.	Part Number	Description	Qty
01.	OFB-15	Oil Filter Base	(1)
02.	OFS-10	Oil Filter Stud	(1)
03.	AFC-600	Oil Filter, Long	(1)
04.	MS20822-12D	Fitting, 90°	(1)
05.	OFM-18	Oil Filter Mount, 75°	(1)
06.	AN4H-4A	Bolt, Drilled Head	(4)
07.	AN960-416	Washer	(12)
08.	AN4-5A	Bolt	(4)
09.	MS20365-428A	Locknut	(4)
10.	OFM-19-1	Oil Filter Mount A	(1)
11.	OFM-19-2	Oil Filter Mount B	(1)



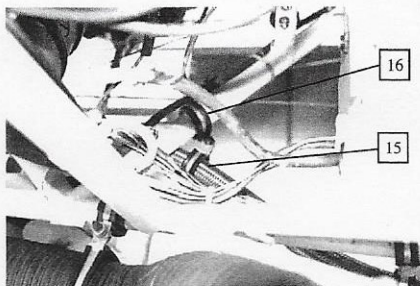
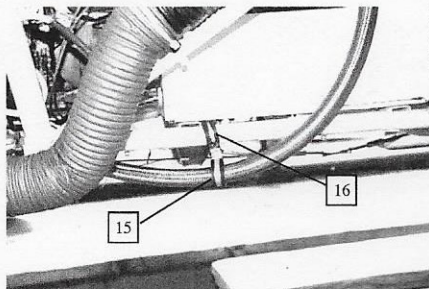
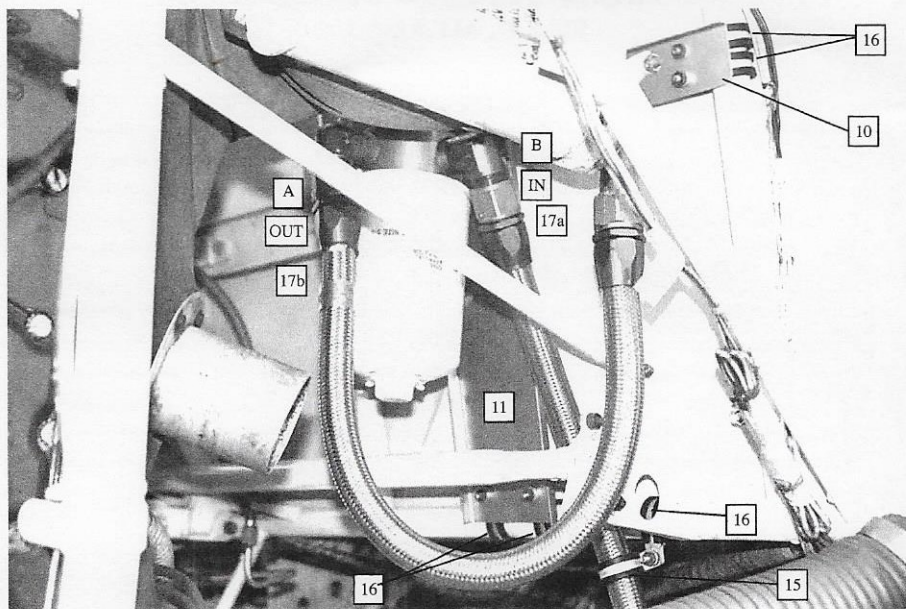
ASSEMBLY DRAWING AFC-D-0040

Airwolf Filter Corp.

Assembly Drawing
OFM-18,19-1, 19-2 & OFB-15

11/01/95 Dwg# AFC-D-0040 John P. Kochy

ASSEMBLY DRAWING# AFC-D-0041



MATERIAL LIST

Index	Part Number	Description
10.	OFM-19-1	Oil Filter Mount Plate A
11.	OFM-19-2	Oil Filter Mount Plate B
12.	AN3-4A	Bolts
13.	AN960-10	Washer
14.	MS20365-1032A	Locknut
15.	MS21919WDG-14	Adel Clamp
16.	MS21919WDG-16	Adel Clamp
17a.	AE7010000K0680	Aeroquip Hose Assy, 68" Length
17b.	AE7010000K0230	Aeroquip Hose Assy, 23" Length

Qty

(1)
(1)
(10)
(20)
(10)
(4)
(10)
(1)
(1)

Airwolf Filter Corp.

Installation Drawing.
OFM-19-1 & OFM-19-2
Oil Filter Mount Plate

11/01/95

Dwg# AFC-D-0041

John P. Kochy

WEIGHT AND BALANCE REPORT

BELL 47, ALL MODELS

[illegible]



**Reference Data
for
AFC-K009-II-A
for
STC SR00408NY
Oil Filter Kit
AFC-K009**

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

TO THE MECHANIC:

This P/N AFC-K009 remote mount oil filter kit incorporates our STC approved for Bell 47 Series Helicopters, Powered by Lycoming & Franklin Series Engines. 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- K009 kit and the STC# SR00408NY. 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. After the installation is completed service the engine with oil as per Manufacture Instructions, run the engine to check for leaks. After the engine has cooled properly recheck oil level and add as needed to restore oil level. Calculate the weight of the oil needed to restore oil level and add to weight and balance.

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 THERMOSTATIC 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.

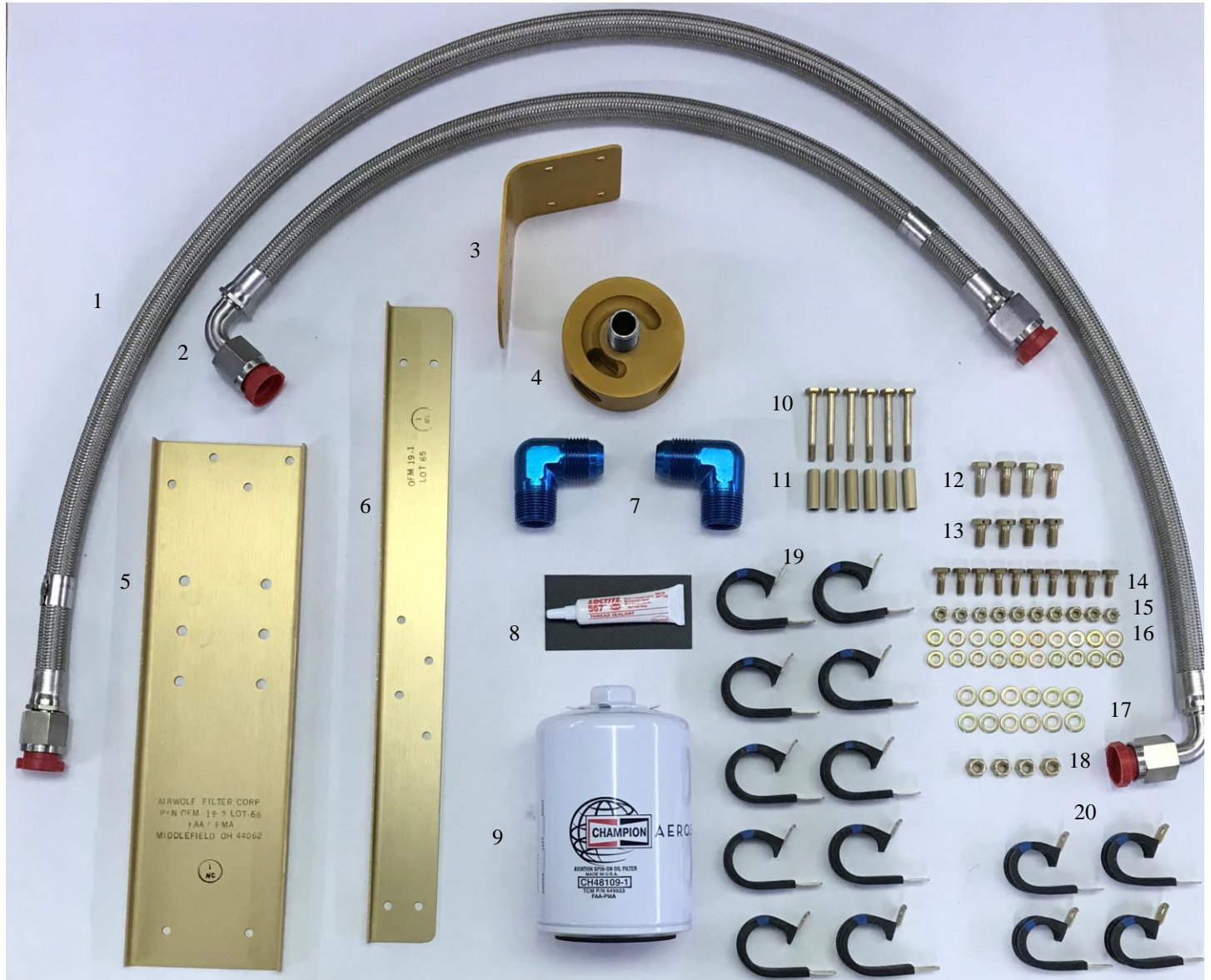
NOTE:

COMMON TO ALL INSTALLATIONS

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

Illustrated Parts List No. AFC-K009-PL-A**Applicability:**

Bell Helicopter Models: 47, 47B, 47B3, 47D, 47D1, 47E, 47G, 47G-2, 47G-2A, 47G-2A-1, 47G-3, 47G-3B, 47G-3B-1, 47G-3B-2, 47G-3B-2A, 47G-4, G-4A, 47G-5A, 47-H1, 47J, 47J-2, 47J-2A, 47K, with Lycoming Engines: VO-435-A1A, VO-435-A1B, VO-435-A1D, VO-435-A1E, VO-435-A1F, VO-435-B1A, VO-435-6A, TVO-435-A1, TVO-435-B1A, TVO-435-B1B, TVO-435-G1A, TVO-435-F1A, VO-540-B1B, VO-540-B1B3.



Parts Illustration AFC-K009 Kit

Parts List No. AFC-K009-PL-A
(see Illustration)

Index	Part Number	Description	Quantity
1	TBD-068 or 0240	Hose Assembly, 68" or 24" Length	1
2	TBD -0230	Hose Assembly, 23" Length	1
3	OFM-18	Oil Filter Mount Plate 75°	1
4	OFB-11 or -15	Oil Filter Base -10 Port or 12 Port with OFS-10 Oil Filter Stud	1
5	OFM-19-2	Oil Filter Mount Plate B	1
6	OFM-19-1	Oil Filter Mount Plate A	1
7	MS20822-10D or -12D	Fitting. Elbow, 90°	2
8	567	Loctite Thread Sealant	1
9	AFC-500 or AFC-600	Oil Filter, or Equivalent [Champion CH48108/CH48109]	1
10	AN3-15A	Bolt, 1-5/8" Long	6
11	TUB-0100	Spacer	6
12	AN4-5A	Bolts	4
13	AN4H-4A	Bolts, Drilled Head	4
14	AN3-4A	Bolts	10
15	MS20365-1032A	Lock Nuts	10
16	AN960-10	Flat Washers	20
17	AN960-416	Flat Washers	12
18	MS20365-428A	Locknuts	4
19	MS21919WDG-16	Adel Clamp	10
20	MS21919WDG-14	Adel Clamp	4
19			

Installation Instructions No. AFC-K009-II-A

Applicability: Bell Helicopter Models: 47, 47B, 47B3, 47D, 47D1, 47E, 47G, 47G-2, 47G-2A, 47G-2A-1, 47G-3, 47G-3B, 47G-3B-1, 47G-3B-2, 47G-3B-2A, 47G-4, G-4A, 47G-5A, 47-H1, 47J, 47J-2, 47J-2A, 47K, with Lycoming Engines: VO-435-A1A, VO-435-A1B, VO-435-A1D, VO-435-A1E, VO-435-A1F, VO-435-B1A, VO-435-6A, TVO-435-A1, TVO-435-B1A, TVO-435-B1B, TVO-435-G1A, TVO-435-F1A, VO-540-B1B, VO-540-B1B3.

Note: The internal oil screen, P/N 71589,72785, or any superseding part number is not removed for this installation.

1. Remove oil cooler for ease of installation.
2. Remove oil line from engine to oil cooler.
3. Per Illustrated Parts List, assemble mounting plate "A" (6) & "B" (5) using 4ea. bolts (14), washers (16), and locknuts (15).
4. Into top two rows of holes on assembled mounting plate, install 75° oil filter mount (3) using 4ea. bolts (11), washers (16), and locknuts (17).
5. Install oil filter base (4) onto oil filter mount (3), using 4ea. bolts (12) and washers (17). Locate inlet port to right side and outlet port aft. Secure with .032 MS20995-C safety wire.
6. Install 2ea. adel clamps (19) on bottom horizontal tube per drawing approximately 13" right of bottom fore and aft servo mount.

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

7. Install 2 ea. 90° elbows (7), into oil filter base (4) ports. Position elbow in inlet port "B" forward 35 degrees and elbow in outlet port "A" straight down.
8. Per installation drawings AFC-D-0039 and AFC-D-0041, Place completely assembled oil filter mount into position and attach the two Adel clamps to the bottom of the uprights on the oil filter mounting plate "B" clamps up, using 2ea. bolts (14), washers, (16) and locknuts (15). Do not tighten at this time. Install 2 ea. Adel clamps onto each vertical tube per drawing and attach with 4ea. bolts (14) washers (16) and locknuts (15). Position mount to clamps and secure all bolts at this time.

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

9. Per installation drawing AFC-D-0041, Route long hose assy. (8a) from inlet port "B" of oil filter base, forward of throttle tube bracket, outboard of junction box, aft over sprague rod and loop to oil pump fitting. Secure hose to center frame using adel clamps (6), for the hose and 4ea. adel clamps (7) for frame tubes. Position clamps per drawing and secure with 4 ea. bolts (3), washers (4), and locknuts (5).
10. Reinstall oil cooler at previous location and secure top return oil line to oil tank.
11. Install short hose assy (8b) from outlet port "A" of oil filter base to bottom oil cooler fitting and secure.

Caution:

Allow clearance on throttle bracket.

12. Install oil filter, torque per instructions on oil filter and secure with .032 MS20995-C safety wire.
13. Run engine and check for leaks.
14. Determine weight and balance, initiate a 337 form, and update the equipment list.

Installation Instructions No. AFC-K009-II-B

Applicability: Bell Helicopter Models: 47, 47B, 47B3, 47D, 47D1, 47E, 47G, 47-H1, 47J, 47J-2, 47J-2A, 47K,
with Franklin Engines: 6V4-178-B3, 6V4-178-B32, 6V4-200-C32, & 6VS-335A

1. Remove oil cooler for ease of installation.
2. Remove oil line from oil crossover tube to oil cooler.
3. Per Illustrated Parts List, assemble mounting plate "A" (6) & "B" (5) using 4ea. bolts (14), washers (16), and locknuts (15).
4. Into top two rows of holes on assembled mounting plate, install 75° oil filter mount (3) using 4ea. bolts (11), washers (16), and locknuts (17).
5. Install oil filter base (4) onto oil filter mount (3), using 4ea. bolts (12) and washers (17). Locate inlet port to right side and outlet port aft. Secure with .032 MS20995-C safety wire.
6. Install 2ea. tube clamps (19) and spacers (11) on bottom horizontal tube per drawing approximately 13" right of bottom fore and aft servo mount.

******* SEE WARNING (A) *******
7. Install 2 ea. 90° elbows (7), into oil filter base (4) ports. Position elbow in inlet port "B" forward 35 degrees and elbow in outlet port "A" straight down.
8. Per installation drawings AFC-D-0039 and AFC-D-0041, place completely assembled oil filter mount into position and attach the two tube Adel clamps and spacers TUB-0100 to the bottom of the uprights on the oil filter mounting plate "B", using 2ea. bolts (10), washers, (16) and lock- nuts (15). Do not tighten at this time. Install 2 ea. tube Adel clamps onto each vertical tube per drawing and attach with 4ea. bolts (10) washers (16) and locknuts (15). Position mount to clamps and secure all bolts at this time. Assure that adequate distance is maintained between throttle linkage and oil filter mounting plates. No restrictions or binding may occur.

******* SEE WARNING (B) *******
9. Route 24" hose assy. from inlet port "B" of oil filter base (4) forward to horizontal tube of airframe outboard to oil filter assy. Then route aft and connect to oil crossover tube. Secure hose to center frame using adel clamp, for the hose and 1ea. adel clamp for frame tube. Position clamps per drawing and secure with 1 ea. bolt (14), washer (16), and locknut (15).
10. Reinstall oil cooler at previous location and secure top return oil line to oil tank.
11. Install 23" hose assy from outlet port "A" of oil filter base (4) to bottom oil cooler fitting and secure.

Caution:

Allow clearance on throttle bracket.

12. Install oil filter, torque per instructions on oil filter and secure with .032 MS20995-C safety wire.
13. Run engine and check for leaks.
14. Determine weight and balance, initiate a 337 form, and update the equipment list.

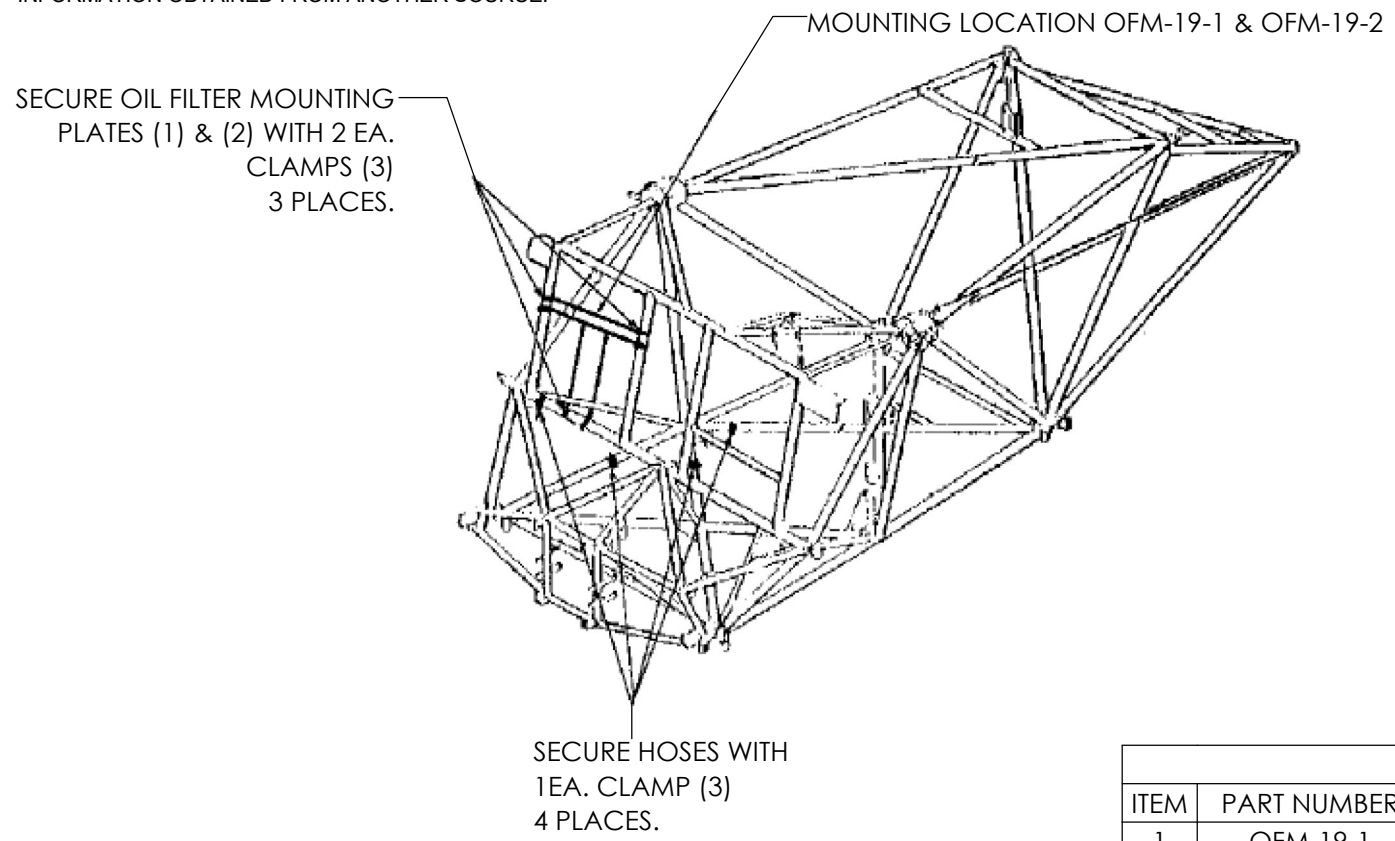
**WEIGHT AND BALANCE REPORT
ENSTROM HELICOPTER
ALL MODELS**

SURPLUS EQUIPMENT	WEIGHT	ARM-INCHES		MOMENT - IN/LBS.	
EQUIPMENT - ITEM	LBS.	LONG		LONG	
REMOTE OIL FILTER	4.25	-18.0		-76.5	

AIRWOLF FILTER CORP PROPRIETARY

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



MATERIAL LIST			
ITEM	PART NUMBER	DESCRIPTION	QTY.
1	OFM-19-1	OIL FILTER MOUNT A	1
2	OFM-19-2	OIL FILTER MOUNT B	1
3	MS21919WDG-16	ADEL CLAMP	10

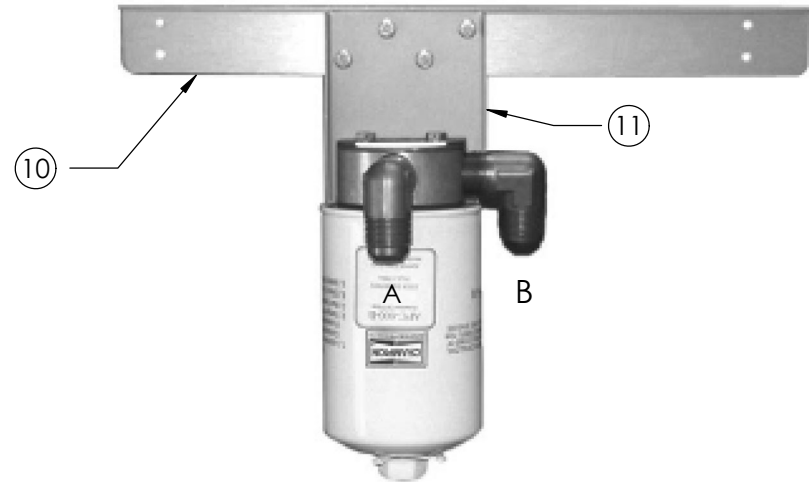
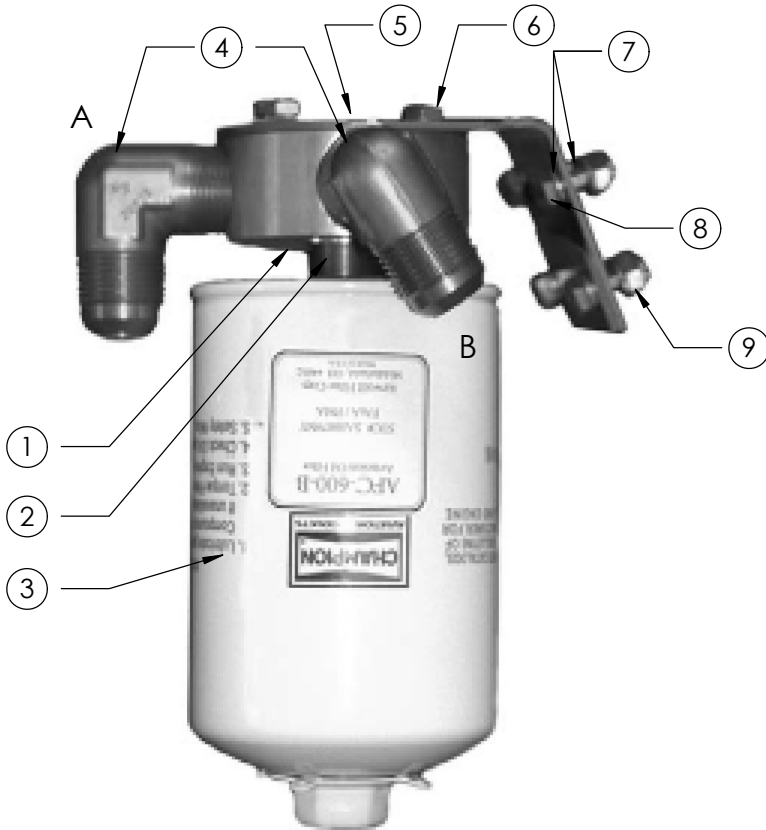
		UNLESS OTHERWISE SPECIFIED:			NAME		DATE	Airwolf Filter Corp. TITLE: INSTALLATION DRAWING OFM-18,19-1, 19-2, OFB-15 & Hose Assy's	
		DIMENSIONS ARE IN INCHES	DRAWN		GM		12-8-2020		
		TOLERANCES:	APPR. BY		BDA		12-8-2020		
		1 PLACE ±.030	ENG APPR.						
		2 PLACE ±.010	MFG APPR.						
		3 PLACE ±.005	Q.A.					SIZE A	
		4 PLACE ±.0005							
		ANGULAR ±0°30'							
		INTERPRET GEOMETRIC TOLERANCING PER: ANSY Y 14.5H						DWG. NO. AFC-D-0039	
		MATERIAL						REV A	
NEXT ASSY		USED ON	FINISH		COMMENTS:			SCALE:	
APPLICATION								WEIGHT:	
								SHEET 1 OF 1	

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REVISIONS

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



MATERIAL LIST

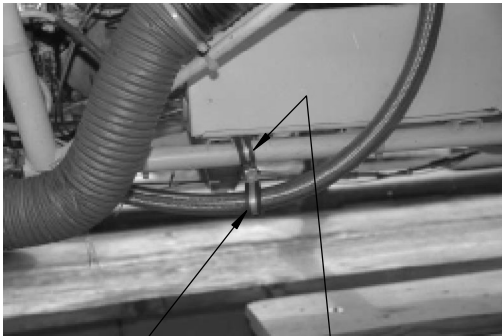
ITEM	PART NUMBER	DESCRIPTION	QTY.
1	OFB-15	OIL FILTER BASE	1
2	OFS-10	OIL FILTER STUD	1
3	AFC-600	OIL FILTER , LONG	1
4	MS20822-12D	FITTING, 90°	2
5	OFM-18	OIL FILTER MOUNT, 75°	1
6	AN4H-4A	BOLT, DRILLED HEAD	4
7	AN960-416	WASHER	12
8	AN4-5A	BOLT	4
9	MS20365-428A	LOCKNUT	4
10	OFM-19-1	OIL FILTER MOUNT A	1
11	OFM-1-2	OIL FILTER MOUNT B	1

		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	Airwolf Filter Corp. TITLE: ASSEMBLY DRAWING OFM-18,19-1, 19-2, & OFB-15		
		DIMENSIONS ARE IN INCHES	DRAWN	GM	12-8-2020			
		TOLERANCES:	APPR. BY	BDA	12-8-2020			
		1 PLACE ±.030	ENG APPR.					
		2 PLACE ±.010	MFG APPR.					
		3 PLACE ±.005				SIZE A DWG. NO. AFC-D-0040 REV A		
		4 PLACE ±.0005						
		ANGULAR ±0°30'						
		INTERPRET GEOMETRIC TOLERANCING PER: ANSY Y 14.5H	Q.A.					
		MATERIAL						
NEXT ASSY	USED ON	FINISH	COMMENTS:			SCALE: WEIGHT: SHEET 1 OF 1		
APPLICATION								

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



MATERIAL LIST			
ITEM	PART NUMBER	DESCRIPTION	QTY.
1	OFM-19-1	OIL FILTER MOUNT PLATE A	1
2	OFM-19-2	OIL FILTER MOUNT PLATE B	1
3	AN3-4A	BOLT	10
4	AN960-10	WASHER	20
5	MS20365-1032A	LOCKNUT	10
6	MS21919WDG-14	ADEL CLAMP	4
7	MS21919WDG-16	ADEL CLAMP	10
8a	AE7010000K0680	AEROQUIP HOSE ASSY, 68" LENGTH	1
8b	AE7010000K0230	AEROQUIP HOSE ASSY, 23" LENGTH	1

		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	Airwolf Filter Corp.			
		DIMENSIONS ARE IN INCHES	DRAWN	GM	12-8-2020	TITLE: INSTALLATION DRAWING OFM-19-1 & OFM-19-2 OIL FILTER MOUNT PLATE			
		TOLERANCES:	APPR. BY	BDA	12-8-2020				
		1 PLACE ±.030	ENG APPR.						
		2 PLACE ±.010	MFG APPR.						
		3 PLACE ±.005	Q.A.						
		4 PLACE ±.0005							
		ANGULAR ±0°30'							
		INTERPRET GEOMETRIC TOLERANCING PER: ANSY Y 14.5H							
		MATERIAL				SIZE	DWG. NO.		REV
						A	AFC-D-0041		A
NEXT ASSY	USED ON	FINISH	COMMENTS:						
APPLICATION						SCALE:	WEIGHT:	SHEET 1 OF 1	