

### Oil Filter Kit AFC-K012

#### **Applicability:**

Hiller Helicopter Model UH12A, 12B, 12C, 12D, 12E, & 12L4  
with Franklin Engines 6V4-200, 6V-335, 6VS-335 &  
Lycoming Engines VO435-A1C, VO540-B1A, VO540-C2A, TVIO540-A2A

**First Release 11/01/95**

**Ammended 01/08/2000**

#### Parts List No. AFC-K012-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)
04a.	MS20823-10D	Elbow, 45°	(1)
04b.	MS20822-10D	Elbow, 90°	(1)
05.	DBL-12	Bracket, Support	(1)
06.	OFM-15	Oil Filter Mount, 105°	(1)
07.	AN4H-4A	Bolt, Drilled Head	(4)
08.	AN960-416	Flat Washer	(12)
09.	AN4-5A	Bolt	(4)
10.	MS20365-428A	Locknut	(4)
11.	OFM-17	Oil Filter Mount Plate, Hiller	(1)
12.	AN3-4A	Bolt	(4)
13.	AN960-10	Flat Washer	(8)
14.	MS20365-1032A	Locknut	(4)
15.	AN3-15A	Bolt, Standoff	(4)
16.	TUB-0100	Standoff, 1"	(4)
17.	MS21919WDG-14	Adel Clamp	(4)
18.	MS21919WDG-18	Adel Clamp	(2)
19.	MS21919WDG-20	Adel Clamp	(2)
20a.	13000210-0240	Teflon Hose Assy S/90°, 24" Long, UH12D&E	(1)
20b.	13000210-0440	Teflon Hose Assy S/90°, 44" Long, UH12E	(1)
20c.	13000210-0600	Teflon Hose Assy S/90°, 60" Long, UH12D	(1)
21.	Loctite	Loctite® 567 Teflon Thread Sealant	(1)
22.	AFC-K012-II	Installation Instructions	(1)
23.	AFC-K012-MI	Instructions for Continued Airworthiness	(1)
24.	AFC-K012-PL	Parts List	(1)

## Installation Instructions No. AFC-K012-A-II

**Applicability:** Hiller Helicopter Model UH12D &12E  
with Lycoming Engines

**First Release 11/01/95**

VO-435-A1C, VO-540-B1A, VO-540-C2A, TVIO-540-A2A

**Ammended 01/08/2000**

*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.*

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

01. Remove -10 oil return line from bottom of engine to oil cooler.
02. Attach 105° oil filter mount plate (06) and support bracket (05) to oil filter base (01) using 4ea. bolts (07) & washers (08) and secure with .032 MS20995-C safety wire.
03. Install above assembly onto oil filter mount plate (11) using 4ea. bolts (09), washers (08) and locknuts (10). with angles of mounting plate facing forward and toward the engine.
04. Attach complete assembly to engine mount frame on engine side of frame (inside) using 2ea. clamps (18) & (19) and 4ea. bolts (12), washers (13), and locknuts (14). When properly installed, the bottom of oil filter mount plate (11) will be approximately 11" above lower mount attach bolt.
05. Reposition engine electrical harness on mount leg as necessary to assure proper clearance.

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

06. Install 45° fitting (04a) into inlet **Port "B"** of the oil filter base (01) so that it faces approximately 45 degree angle downward and aft.
07. Install 90° fitting (04b) into outlet **Port "A"** of the oil filter base and position fitting down towards engine deck

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

08. Install oil line (20a) connecting the 90° end of oil line (20a) to the outlet fitting on bottom of engine so hose points aft and loops upwards towards the 45° fitting (04a) previously installed into **Port "B"** of the oil filter base (01). Tighten line at both ends while adjusting position so that hose does not contact airframe.
09. Install oil line (20b) or (20c) connecting the 90° end of oil line to the oil cooler and route line under engine to **Port "A"** of the oil filter base (01). Secure oil line to engine deck with 4ea. clamps (17) as shown in installation drawing AFC-D00?? using bolts (15), 1" standoffs (16), & washers (13) as necessary to provide proper engagement of threads into nutplates. Standoffs will be used to prevent tail rotor cables from rubbing against installed oil line. Install clamps and standoffs at the following locations:
  - (a) one clamp (17) at left side of fuel tank access plate, fourth bolt from aft end.
  - (b) one clamp (17) at right side of fuel tank access plate, fourth bolt from the engine.
  - (c) one clamp (17) at right tail rotor cable pulley bracket outboard side.
  - (d) one clamp (17) at electrical junction box inboard aft attach bracket.
10. Install oil filter (03) torque per instructions on oil filter, and secure with .032 MS20995-C safety wire.
11. Run engine and check for leaks.
12. 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 (INCL. ACCESSORIES)**

## Installation Instructions No. AFC-K012-B-II

**Applicability:** Hiller Helicopter Model UH12A, 12B & 12C with  
Franklin Engines 6V4-200, 6V-335, & 6VS-335

**First Release 11/01/95**

**Ammended 01/08/2000**

*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.*

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

01. Remove -10 oil return line from bottom of engine to oil cooler.
02. Attach 105° oil filter mount plate (06) and support bracket (05) to oil filter base (01) using 4ea. bolts (07) & washers (08) and secure with .032 MS20995-C safety wire.
03. Install above assembly onto oil filter mount plate (11) using 4ea. bolts (09), washers (08) and locknuts (10). with angles of mounting plate facing forward and toward the engine.
04. Attach complete assembly to engine mount frame on engine side of frame (inside) using 2ea. clamps (18) & (19) and 4ea. bolts (12), washers (13), and locknuts (14). When properly installed, the bottom of oil filter mount plate (11) will be approximately 11" above lower mount attach bolt.
05. Reposition engine electrical harness on mount leg as necessary to assure proper clearance.  
  
**\*\*\*\*\* SEE WARNING (A) BELOW \*\*\*\*\***
06. Install 45° fitting (04a) into inlet **Port "B"** of the oil filter base (01) so that it faces approximately 45 degree angle downward and aft.
07. Install 90° fitting (04b) into outlet **Port "A"** of the oil filter base and position fitting down towards engine deck  
  
**\*\*\*\*\* SEE WARNING (B) BELOW \*\*\*\*\***
08. Install oil line (20a) connecting the 90° end of oil line (20a) to the outlet fitting on bottom of engine so hose points aft and loops upwards towards the 45° fitting (04a) previously installed into **Port "B"** of the oil filter base (01). Tighten line at both ends while adjusting position so that hose does not contact airframe.
09. Install oil line (20b) or (20c) connecting the 90° end of oil line to the oil cooler and route line under engine to **Port "A"** of the oil filter base (01). Secure oil line to engine deck with 4ea. clamps (17) as shown in installation drawing AFC-D00?? using bolts (15), 1" standoffs (16), & washers (13) as necessary to provide proper engagement of threads into nutplates. Standoffs will be used to prevent tail rotor cables from rubbing against installed oil line. Install clamps and standoffs at the following locations:
  - (a) one clamp (17) at left side of fuel tank access plate, fourth bolt from aft end.
  - (b) one clamp (17) at right side of fuel tank access plate, fourth bolt from the engine.
  - (c) one clamp (17) at right tail rotor cable pulley bracket outboard side.
  - (d) one clamp (17) at electrical junction box inboard aft attach bracket.
10. Install oil filter (03) torque per instructions on oil filter, and secure with .032 MS20995-C safety wire.
11. Run engine and check for leaks.
12. 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 (INCL. ACCESSORIES)**

# INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

Form AFC-K012-ICA Revised 10/01/00

A/C Make : Hiller Model: UH12 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><b>Introduction:</b> 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><b>Comment:</b> <u>Hiller UH12 Helicopter</u> with <u>Lycoming VO435/540 &amp; TVO540</u> and <u>Franklin 6V, 6V4, &amp; 6VS Series</u> engines.  <i>Aircraft Model</i> <i>Engine Model</i></p>
2.	<p><b>Description:</b> Of the major alteration, it's function including an explanation of it's interface with other systems, if any.</p> <p><b>Comment:</b> <b>Installation of Airwolf Remote Mounted Oil Filter Kit P/N AFC-K012</b></p>
3.	<p><b>Control:</b> Operation information: Or special procedures if any.</p> <p><b>Comment:</b> <b>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.</b></p>
4.	<p><b>Servicing information:</b> Such as types of fluids used, servicing points, and location of access panels, as appropriate.</p> <p><b>Comment:</b> <b>Oil System to be serviced in accordance with Lycoming Service Bulletin 480C or higher &amp; Franklin 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.</b></p>
5.	<p><b>Maintenance Instructions:</b> 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><b>Comment:</b> <b>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.</b></p>
6.	<p><b>Trouble shooting information:</b> Information describing probably malfunctions, how to recognize those malfunctions, and the remedial actions to be taken.</p> <p><b>Comment:</b> <u>N/A</u></p>
7.	<p><b>Removal and replacement information:</b> 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><b>Comments:</b> <u>N/A</u></p>
8.	<p><b>Diagrams:</b> Of access plates and information, if needed, to gain access for inspection.</p> <p><b>Comment:</b> <u>N/A</u></p>
9.	<p><b>Special inspection requirements:</b> Such as X-ray, ultrasonic testing, or magnetic particle inspection, if required.</p> <p><b>Comment:</b> <u>N/A</u></p>
10.	<p><b>Application of protective treatments:</b> To the affected area after inspection and/or maintenance, if any.</p> <p><b>Comment:</b> <u>N/A</u></p>

## INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

Form AFC-K012-ICA Revised 10/01/00

11.	<b>Data: Relative to structural fasteners such as type, torque, and installation requirements if any.</b>  <b>Comment:</b> __N/A
12.	<b>List of special tools:</b> Special tools that are required, if any.  <b>Comment:</b> __N/A
13.	<b>For commuter category aircraft:</b> The following additional information must be furnished, as applicable: <ul style="list-style-type: none"> <li>A. Electrical Loads</li> <li>B. Methods of balancing flight controls.</li> <li>C. Identification of primary and secondary structures&gt;</li> <li>D. Special repair methods applicable to the airplane.</li> </ul> <b>Comment:</b> __N/A
14.	<b>Recommended overhaul periods:</b> 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."  <b>Comment:</b> __N/A
15.	<b>Airworthiness Limitation Section:</b> 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."  <b>Comment:</b> __N/A
16.	<b>Revision:</b> 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.  <b>Comment:</b> __ 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 ICA 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)).

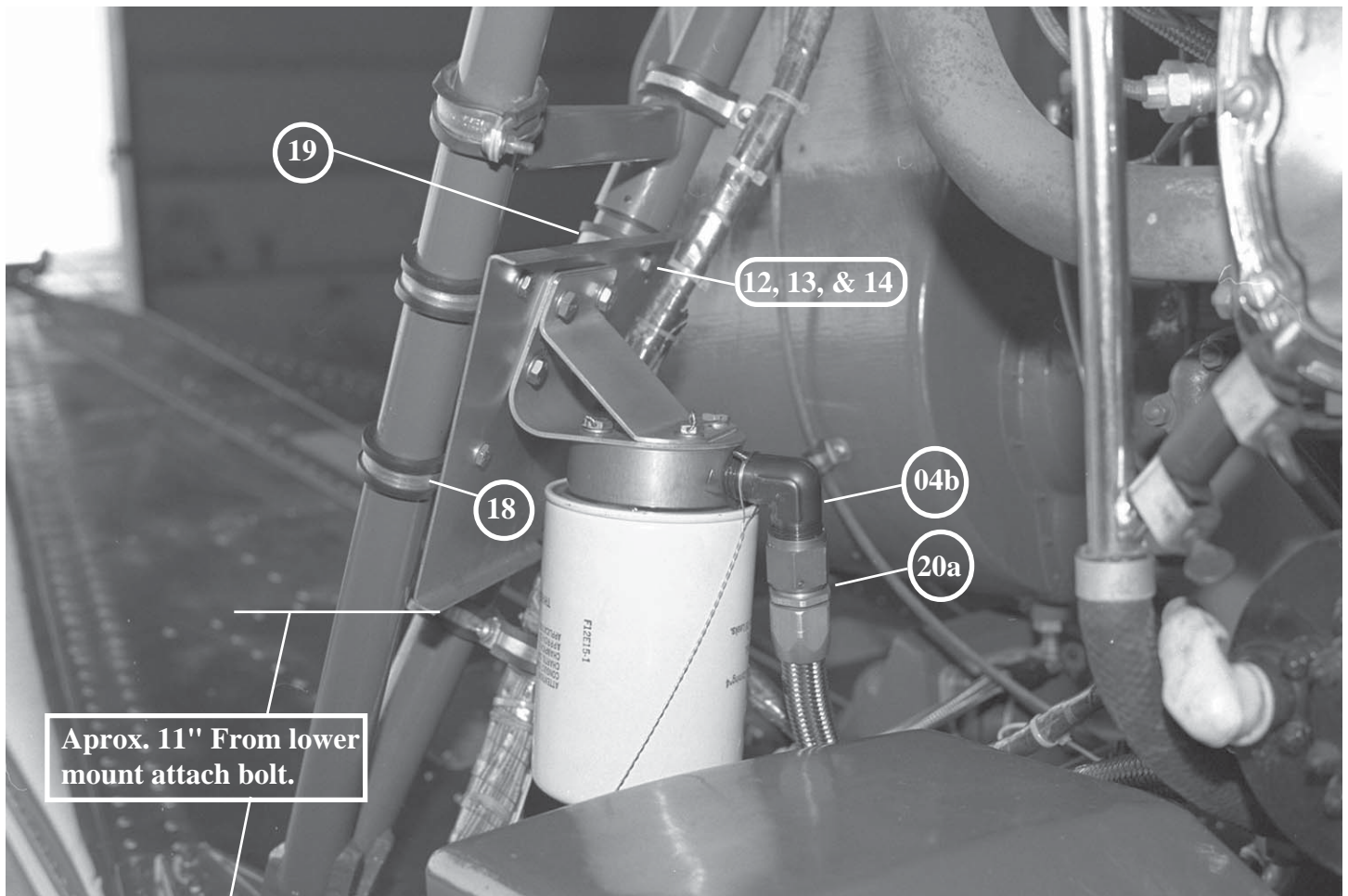
For aircraft inspected under an Approved Aircraft Inspection Program (AAIP), the operator will submit a change to the CHDO in accordance with section 135.419b).

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.

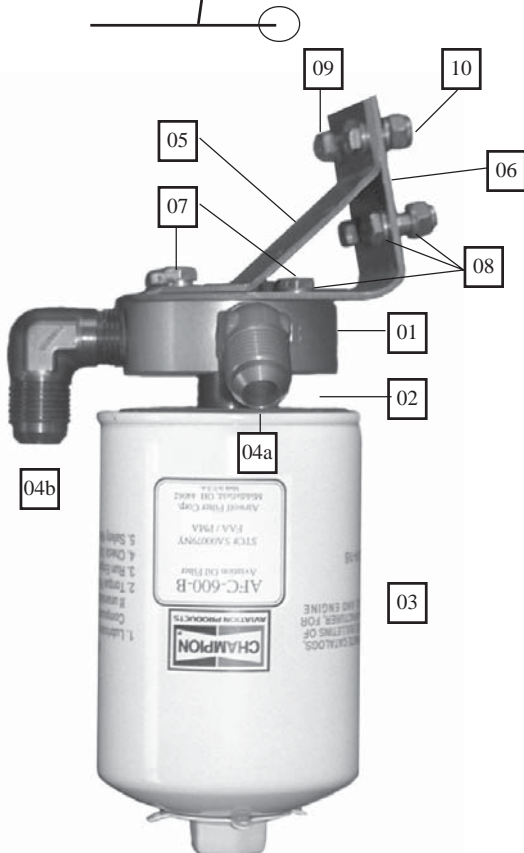
# WEIGHT AND BALANCE REPORT

## HILLER UH12 ALL MODELS

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Aprox. 11" From lower  
mount attach bolt.



### Material List

Ind.	Part Number	Description	Quantity
01.	OFB-11	Oil Filter Base, -10 Port	(1)
02.	OFS-10	Oil Filter Stud	(1)
03.	AFC-600	Oil Filter, Long	(1)
04a.	MS20823-10D	Elbow, 45°	(1)
04b.	MS20822-10D	Elbow, 90°	(1)
05.	DBL-12	Bracket, Support	(1)
06.	OFM-15	Oil Filter Mount, 105°	(1)
07.	AN4H-4A	Bolt, Drilled Head	(4)
08.	AN960-416	Flat Washer	(12)
09.	AN4-5A	Bolt	(4)
10.	MS20365-428A	Locknut	(4)
11.	OFM-17	Oil Filter Mount Plate, Hiller	(1)
12.	AN3-4A	Bolt	(4)
13.	AN960-10	Flat Washer	(8)
14.	MS20365-1032A	Locknut	(4)
18.	MS21919WDG-18	Adel Clamp	(2)
19.	MS21919WDG-20	Adel Clamp	(2)
20a.	13000210-0240	Teflon Hose Assy S/90°, 24" Long	(1)

## Airwolf Filter Corp.

Assembly Drawing.

OFB-11 Oil Filter Base

OFM-15 Oil Filter Mount 105°, OFM-17 Oil Filter Mount Plate Hiller

DBL-12 Doubler Plate

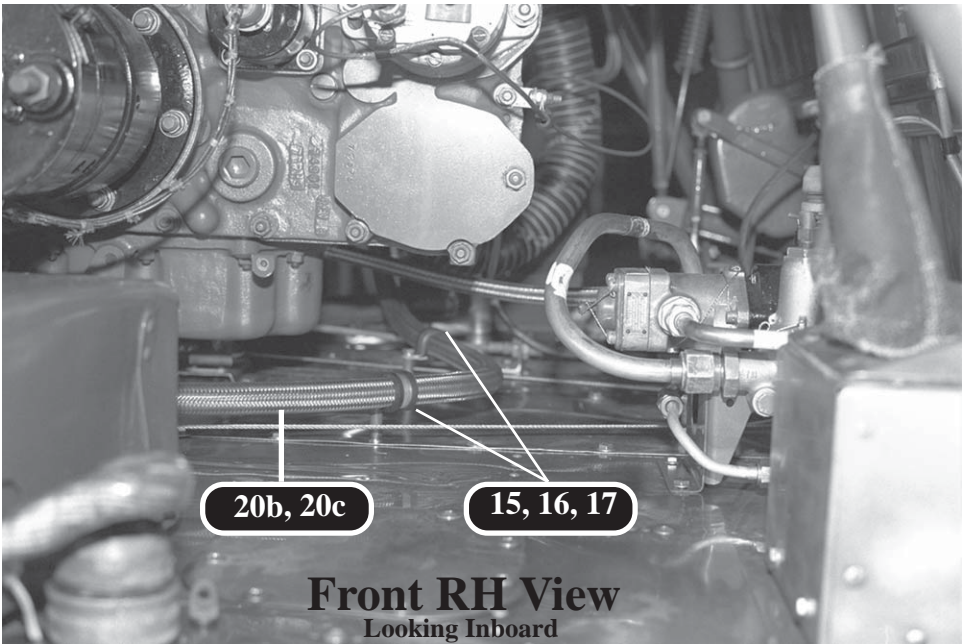
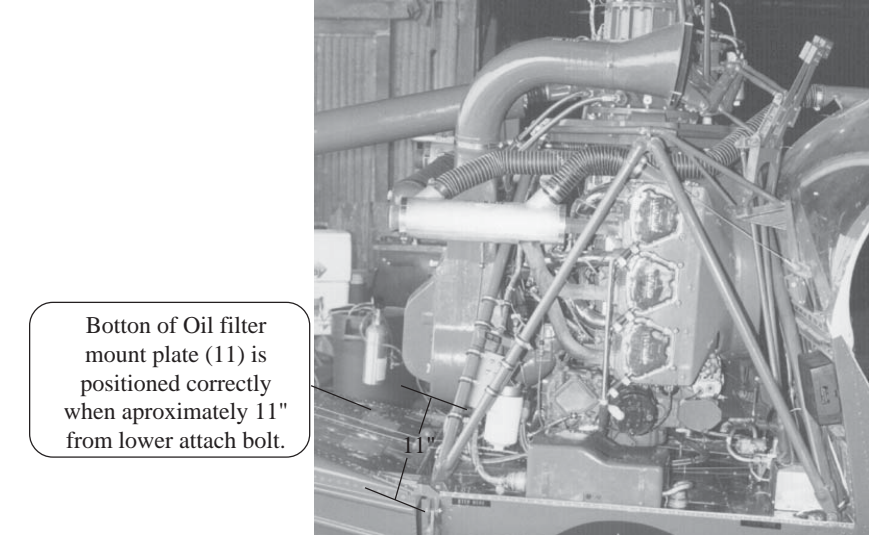
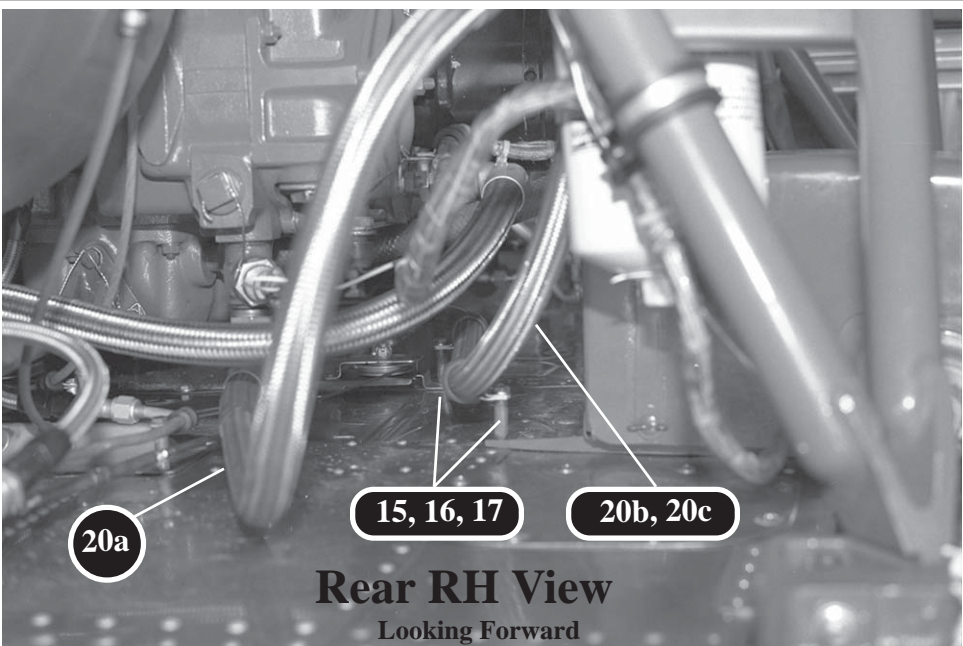
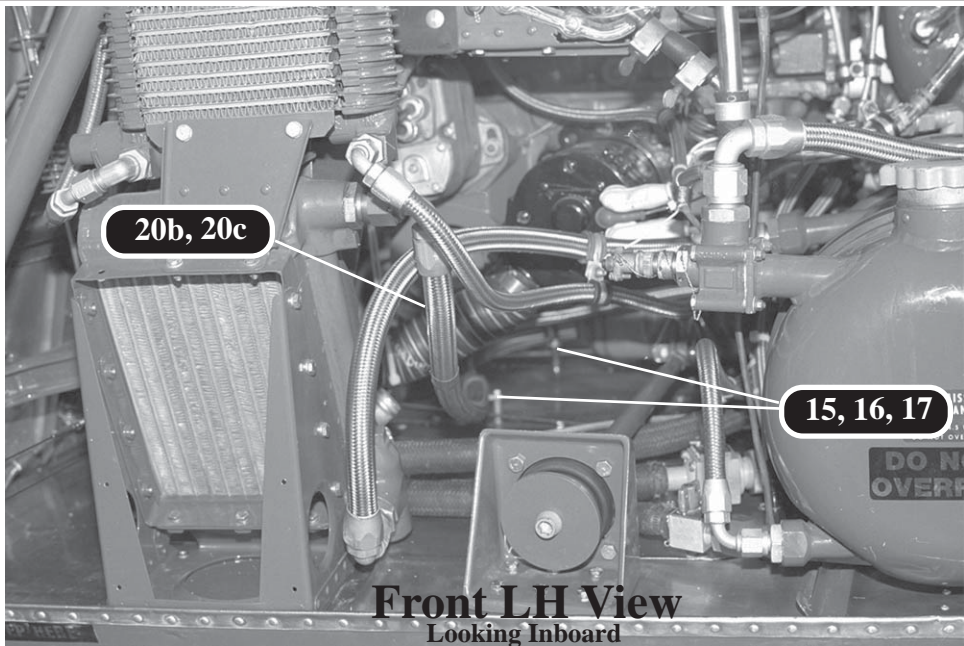
### Revisions

11/01/95

Dwg# AFC-D-0048

John P. Kochy

Installation Drawings AFC-D0049



Airwolf Filter Corp.

Installation of and hose routing of Airwolf Filter Kit on Hiller UH12 series Hiller Helicopters powered by Lycoming engines.

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Revisions			

Revisions			

GROUP 80  
SECTION 83

MODEL UH-12E PARTS CATALOG

PART 2

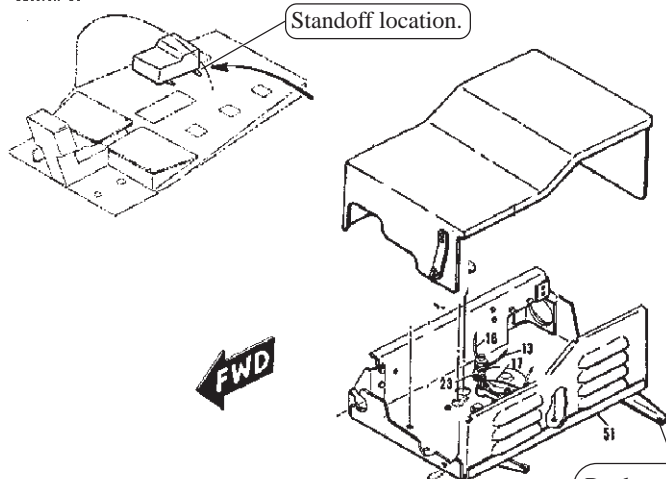


FIGURE 83-02. SHEET 1 OF 1  
JUNCTION BOX ASSEMBLY

Replace with bolt  
(15), standoff (16), &  
adel clamp (17).

GROUP 30  
SECTION 32

MODEL UH-12E PARTS CATALOG

PART 2

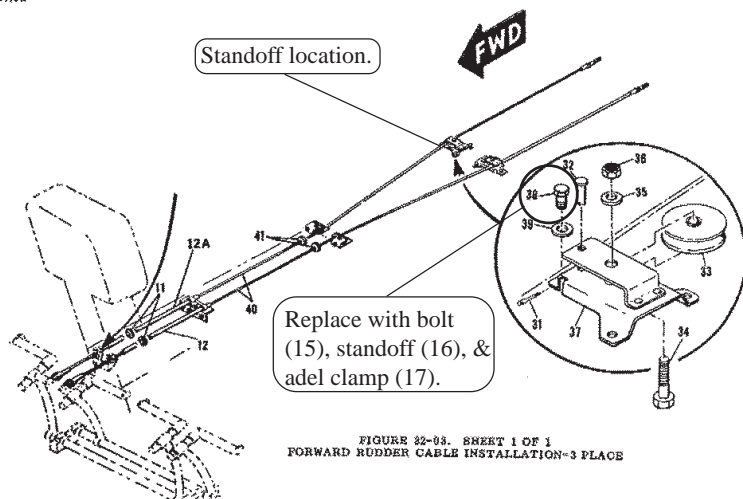


FIGURE 32-03. SHEET 1 OF 1  
FORWARD RUDDER CABLE INSTALLATION-3 PLACE

GROUP 70  
SECTION 72

MODEL UH-12E PARTS CATALOG

PART 2

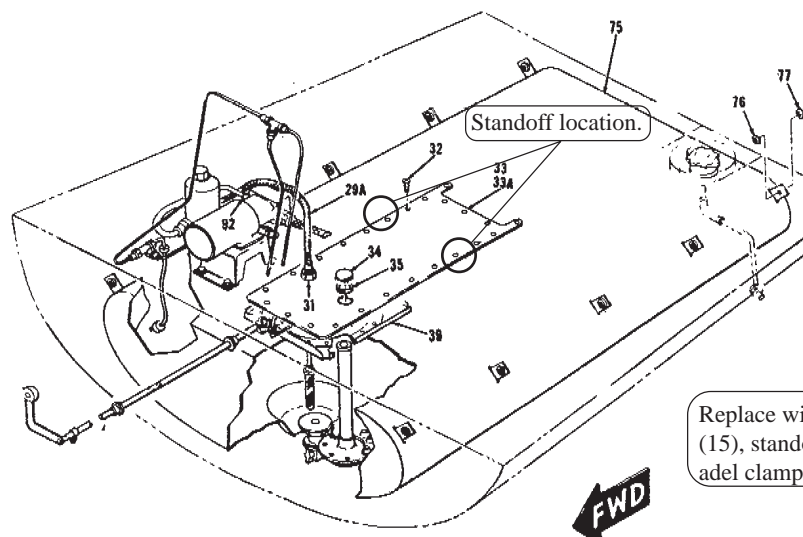


FIGURE 72-01. SHEET 1 OF 5  
FUEL SYSTEM INSTALLATION

## Airwolf Filter Corp.

Installation of and hose routing of Airwolf Filter Kit on Hiller UH12 series Hiller Helicopters powered by Lycoming engines.

11/01/95

Dwg# AFC-D-0050

John P. Kochy



**Reference Data**  
for  
**AFC-K012-A&B-II**  
for  
**STC SR00420NY**  
**Oil Filter Kit**  
**AFC-K012**

**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-K012 remote mount oil filter kit incorporates our STC approved for Hiller Helicopters, Powered by Lycoming, or 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- K012 kit and the STC# SR00420NY. 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 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

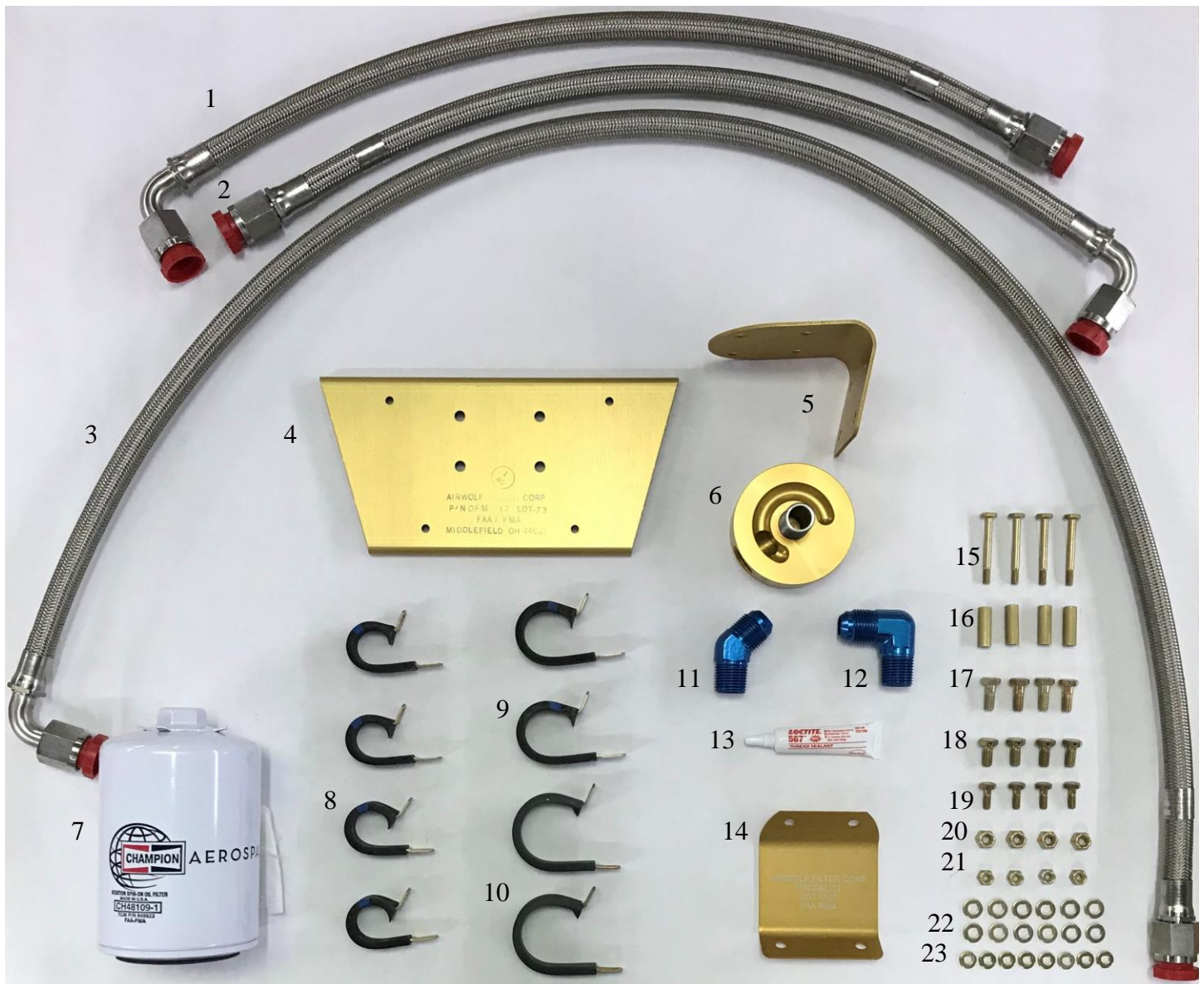
ANY OF THE THREE SCENARIOS ABOVE WILL CAUSE COMPLETE LOSS OF OIL IN A SHORT PERIOD OF TIME.

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.

**Applicability:** Illustrated Parts List No. AFC-K012-PL  
Hiller Helicopter Models: UH12A, 12B, 12C, 12D, 12E, & 12L4  
With Franklin Engine 6V4-200, 6V-335, 6VS-335 &  
Lycoming Engines: VO435-A1C, VO540-B1A, VO540-C2A, TVIO540-A2A,



Parts Illustration K012 Kit Series

**Parts List No. AFC-K012-PL**  
**(see Illustration)**

<u>Index</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
1	TBD-0240	Hose Assy S/90°, 24" Long, UH12D & E	1
2	TBD-0440	Hose Assy S/90°, 44" Long, UH12E	1
3	TBD-0600	Hose Assy S/90°, 60" Long, UH12D	1
4	OFM-17	Horizontal Oil Filter Mount Plate	1
5	OFM-15	Vertical Oil Filter Mount Plate	1
6	OFB-11	Oil Filter Base, -10 Ports, (with OFS-10 Installed)	1
7	AFC-500 or AFC-600	Oil Filter, or Equivalent [Champion CH48108/CH48109]	1
8	MS21919WDG-14	Adel Clamp	4
9	MS21919WDG-18	Adel Clamp	2
10	MS21919WDG-20	Adel Clamp	2
11	MS20823-10D	Fitting, NPT to Flare - 45°,	1
12	MS20822-10D	Fitting, NPT to Flare - 90°,	1
13	567	Loctite Thread Sealant	1
14	DBL-12	Plate, Doubler	1
15	AN3-15A	Bolt (Stand-Off)	4
16	TUB-0100	Stand-Off, 1"	4
17	AN4-5A	Bolt	4
18	AN4H-4A	Bolt, Drilled Head	4
19	AN3-4A	Bolt	4
20	MS20365-428A	Locknut	4
21	MS20365-1032A	Locknut	4
22	AN960-416	Flat Washer	12
23	AN960-10	Flat Washer	8

**Installation Instructions No. AFC-K012-A-II**

**Applicability:** Hiller Helicopter Models: UH12D & 12E  
With Lycoming Engines: VO435-A1C, VO540-B1A, VO540-C2A, TVIO540-A2A,

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

1. Remove -10 oil return line from bottom of engine to oil cooler.
2. Per Assembly Drawing AFC-D-0048, attach 105° oil filter mount plate (6) and support bracket (5) to oil filter base (1) using 4ea. bolts (7) & washers (8) and secure with .032 MS20995-C safety wire.
3. Per Assembly Drawing AFC-D-0048, install above assembly onto oil filter mount plate (11) using 4ea. bolts (9), washers (8) and locknuts (10). with angles of mounting plate facing forward and toward the engine.
4. Per Assembly Drawing AFC-D-0048, attach complete assembly to engine mount frame on engine side of frame (inside) using 2ea. clamps (15) & (16) and 4ea. bolts (12), washers (13), and locknuts (14). When properly installed, the bottom of oil filter mount plate (11) will be approximately 11" above lower mount attach bolt.
5. Reposition engine electrical harness on mount leg as necessary to assure proper clearance.  
  
**\*\*\*\*\* SEE WARNING (A) \*\*\*\*\***
6. Per Assembly Drawing AFC-D-0048, install 45° fitting (4a) into inlet **Port "B"** of the oil filter base (1) so that it faces approximately 45-degree angle downward and aft.
7. Per Assembly Drawing AFC-D-0048, install 90° fitting (4b) into outlet **Port "A"** of the oil filter base and position fitting down towards engine deck.  
  
**\*\*\*\*\* SEE WARNING (B) \*\*\*\*\***
8. Per Assembly Drawing AFC-D-0048, install oil line (17a) connecting the 90° end of oil line to the outlet fitting on bottom of engine so hose points aft and loops upwards towards the 45° fitting (4a) previously installed into **Port "B"** of the oil filter base (1). Tighten line at both ends while adjusting position so that hose does not contact airframe.
9. Per Assembly Drawing AFC-D-0048, install oil line (17b) or (17c) connecting the 90° end of oil line to the oil cooler and route line under engine to **Port "A"** of the oil filter base (1).
10. Per Installation Drawing AFC-D-0049, Secure oil line to engine deck with 4ea. clamps (3) as shown, using bolts (1), 1" standoffs (2), & washers as necessary to provide proper engagement of threads into nutplates. Standoffs will be used to prevent tail rotor cables from rubbing against installed oil line. Install clamps and standoffs at the following locations:
  - (a) one clamp (3) at left side of fuel tank access plate, fourth bolt from aft end.
  - (b) one clamp (3) at right side of fuel tank access plate, fourth bolt from the engine.
  - (c) one clamp (3) at right tail rotor cable pulley bracket outboard side.
  - (d) one clamp (3) at electrical junction box inboard aft attach bracket.
11. Install oil filter (3) torque per instructions on oil filter, and secure with .032 MS20995-C safety wire.
11. Run engine and check for leaks.
12. Determine weight and balance, initiate a 337 form, and update the equipment list.

**Installation Instructions No. AFC-K012-B-II**

**Applicability:** Hiller Helicopter Models: UH12A, 12B, & 12C,  
With Franklin Engine 6V4-200, 6v-335, 6VS-335

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

1. Remove -10 oil return line from bottom of engine to oil cooler.
2. Per Assembly Drawing AFC-D-0048, attach 105° oil filter mount plate (6) and support bracket (5) to oil filter base (1) using 4ea. bolts (7) & washers (8) and secure with .032 MS20995-C safety wire.
3. Per Assembly Drawing AFC-D-0048, install above assembly onto oil filter mount plate (11) using 4ea. bolts (9), washers (8) and locknuts (10). with angles of mounting plate facing forward and toward the engine.
4. Per Assembly Drawing AFC-D-0048, attach complete assembly to engine mount frame on engine side of frame (inside) using 2ea. clamps (15) & (16) and 4ea. bolts (12), washers (13), and locknuts (14). When properly installed, the bottom of oil filter mount plate (11) will be approximately 11" above lower mount attach bolt.
5. Reposition engine electrical harness on mount leg as necessary to assure proper clearance.  
  
**\*\*\*\*\* SEE WARNING (A) \*\*\*\*\***
6. Per Assembly Drawing AFC-D-0048, install 45° fitting (4a) into inlet **Port "B"** of the oil filter base (1) so that it faces approximately 45° angle downward and aft.
7. Per Assembly Drawing AFC-D-0048, install 90° fitting (4b) into outlet **Port "A"** of the oil filter base and position fitting down towards engine deck.  
  
**\*\*\*\*\* SEE WARNING (B) \*\*\*\*\***
8. Per Assembly Drawing AFC-D-0048, install oil line (17a) connecting the 90° end of oil line (5a) to the outlet fitting on bottom of engine so hose points aft and loops upwards towards the 45° fitting (4a) previously installed into **Port "B"** of the oil filter base (1). Tighten line at both ends while adjusting position so that hose does not contact airframe.
9. Per Assembly Drawing AFC-D-0048, install oil line (17b) or (17c) connecting the 90° end of oil line to the oil cooler and route line under engine to **Port "A"** of the oil filter base (1).
10. Per Installation Drawing AFC-D-0049, Secure oil line to engine deck with 4ea. clamps (3) as shown, using bolts (1), 1" standoffs (2), & washers as necessary to provide proper engagement of threads into nutplates. Standoffs will be used to prevent tail rotor cables from rubbing against installed oil line. Install clamps and standoffs at the following locations:
  - (a) one clamp (3) at left side of fuel tank access plate, fourth bolt from aft end.
  - (b) one clamp (3) at right side of fuel tank access plate, fourth bolt from the engine.
  - (c) one clamp (3) at right tail rotor cable pulley bracket outboard side.
  - (d) one clamp (3) at electrical junction box inboard aft attach bracket.
11. Install oil filter (3) torque per instructions on oil filter, and secure with .032 MS20995-C safety wire.
11. Run engine and check for leaks.
12. Determine weight and balance, initiate a 337 form, and update the equipment list.

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

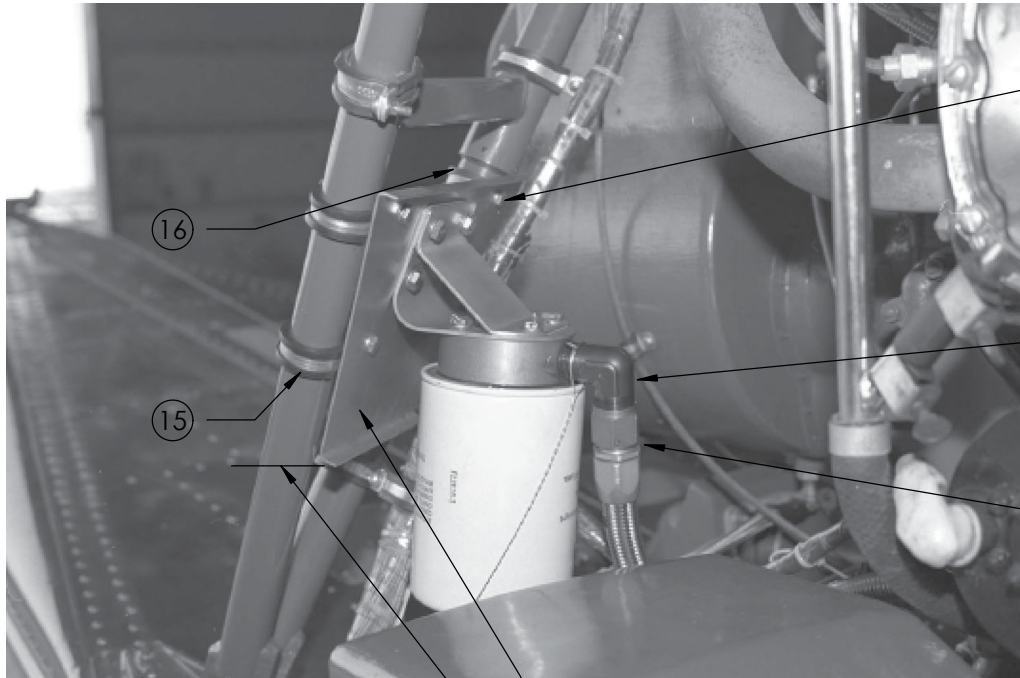
<b>SURPLUS EQUIPMENT</b>	<b>WEIGHT</b>	<b>ARM-INCHES</b>		<b>MOMENT - IN/LBS.</b>	
<b>EQUIPMENT - ITEM</b>	<b>LBS.</b>	<b>LONG</b>	<b>LATR</b>	<b>LONG</b>	<b>LATR</b>
REMOTE OIL FILTER	6.0	101.0		606.0	

## AIRWOLF FILTER CORP PROPRIETARY

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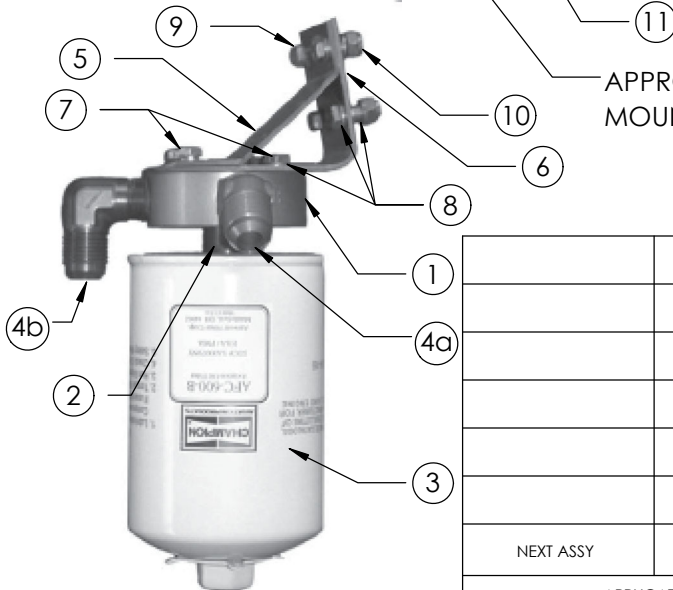
## REVISIONS

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



MATERIAL LIST			
ITEM	PART NUMBER	DESCRIPTION	QTY.
1	OFB-11	OIL FILTER BASE, -10 PORT	1
2	OFS-10	OIL FILTER STUD	1
3	AFC-600	OIL FILTER, LONG	1
4a	MS20823-10D	ELBOW, 45°	1
4b	MS20822-10D	ELBOW, 90°	1
5	DBL-12	BRACKET, SUPPORT	1
6	OFM-15	OIL FILTER MOUNT, 105°	1
7	AN4H-4A	BOLT, DRILLED HEAD	4
8	AN960-416	FLAT WASHER	12
9	AN4-5A	BOLT	4
10	MS20365-428A	LOCKNUT	4
11	OFM-17	OIL FILTER MOUNT PLATE, HILLER	1
12	AN3-4A	BOLT	4
13	AN960-10	FLAT WASHER	8
14	MS20365-1032A	LOCKNUT	4
15	MS21919WDG-18	ADEL CLAMP	2
16	MS21919WDG-20	ADEL CLAMP	2
17a	13000210-0240	TEFLON HOSE ASSY S/90°, 24" LONG	1
17b	13000210-0440	TEFLON HOSE ASSY S/90°, 44" LONG	1
17c	13000210-0600	TEFLON HOSE ASSY S/90°, 60" LONG	1

APPROX. 11" FROM LOWER  
MOUNT ATTACH BOLT.



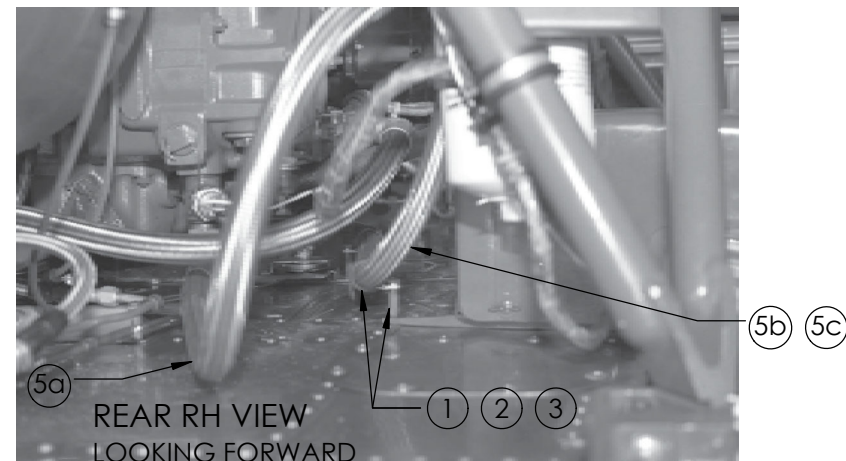
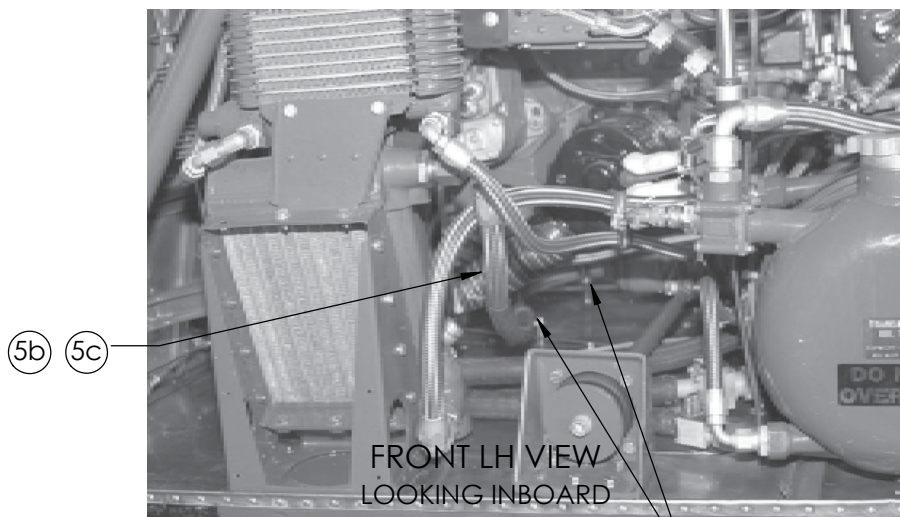
		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	Airwolf Filter Corp.			
		DIMENSIONS ARE IN INCHES TOLERANCES: 1 PLACE ±.030 2 PLACE ±.010 3 PLACE ±.005 4 PLACE ±.0005 ANGULAR ±0°30'	DRAWN	GM	12-8-2020	TITLE:  ASSEMBLY DRAWING, OFB-11 OIL FILTER BASE OFM-15 OIL FILTER MOUNT 105°, OFM-17 OIL FILTER MOUNT PLATE HILLER DBL-12 DOUBLER PLATE			
			APPR. BY	BDA	12-8-2020				
			ENG APPR.						
			MFG APPR.						
		INTERPRET GEOMETRIC TOLERANCING PER: ANSY Y 14.5H	Q.A.						
		MATERIAL				SIZE	DWG. NO.		REV
						<b>A</b>	<b>AFC-D-0048</b>		<b>A</b>
NEXT ASSY	USED ON	FINISH	COMMENTS:						
APPLICATION						SCALE:	WEIGHT:		SHEET 1 OF 1

## AIRWOLF FILTER CORP PROPRIETARY

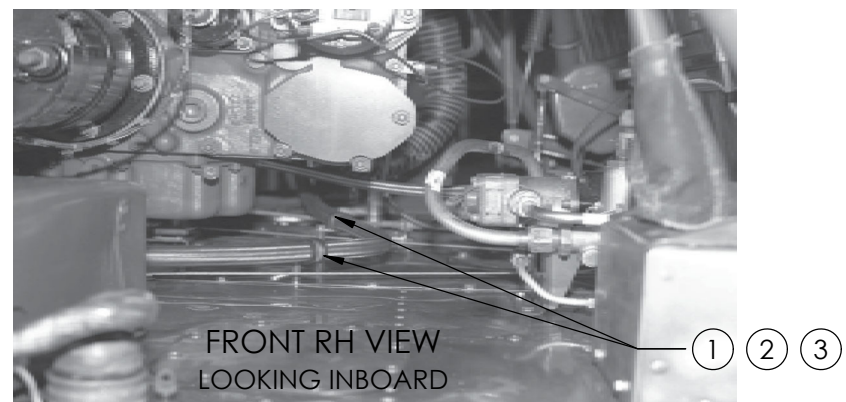
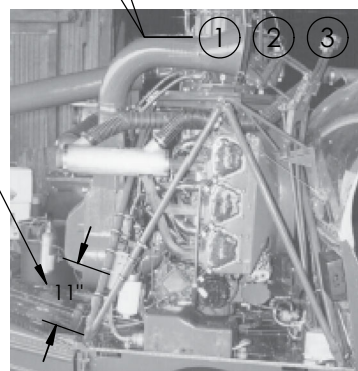
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## REVISIONS

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



BOTTOM OF OIL FILTER  
MOUNT PLATE (4) IS  
POSITIONED CORRECTLY  
WHEN APPROXIMATELY 11"  
FROM LOWER ATTACH BOLT.



## MATERIAL LIST

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	AN3-15A	BOLT	4
2	TUB-0100	STANDOFF 1"	4
3	MS21919WDG-14	ADEL CLAMP	4
4	OFM-17	OIL FILTER MOUNT PLATE, HILLER	1
5a	13000210-0240	TEFLON HOSE ASSY S/90°, 24" LONG	1
5b	13000210-0440	TEFLON HOSE ASSY S/90°, 44" LONG	1
5c	13000210-0600	TEFLON HOSE ASSY S/90°, 60" LONG	1

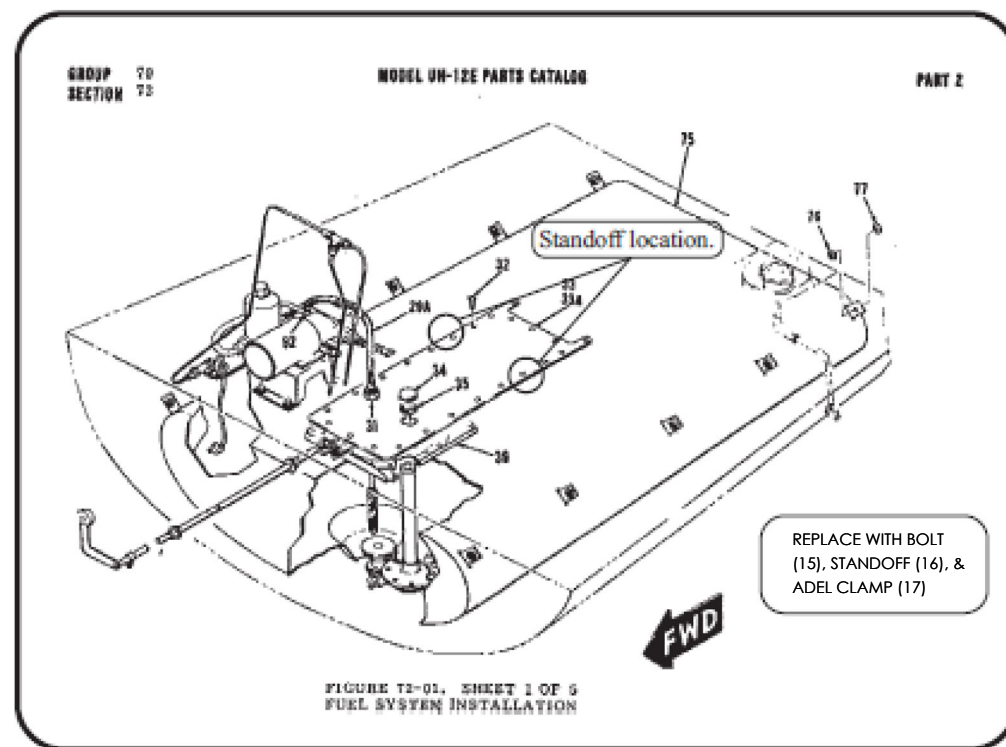
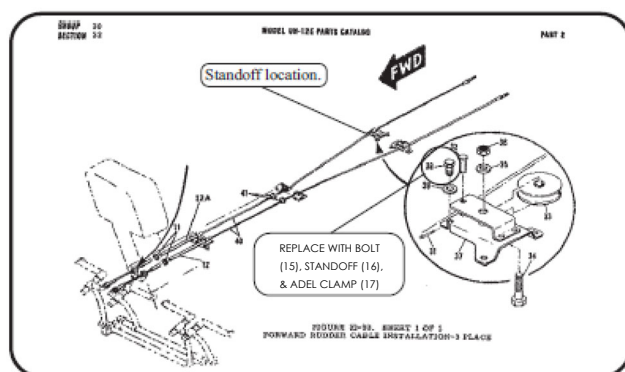
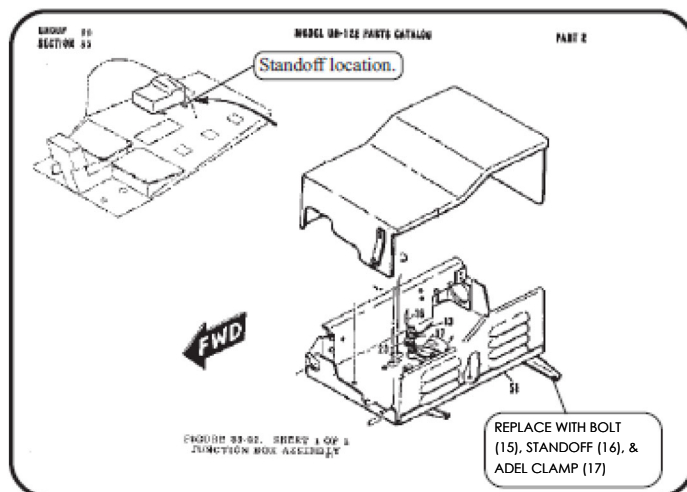
		UNLESS OTHERWISE SPECIFIED:			NAME	DATE	Airwolf Filter Corp.	
		DIMENSIONS ARE IN INCHES	DRAWN		GM	12-8-2020		
		TOLERANCES:	APPR. BY		BDA	12-8-2020		
		1 PLACE ±.030	ENG APPR.					
		2 PLACE ±.010	MFG APPR.				TITLE: INSTALLATION OF AND HOSE ROUTING OF AIRWOLF FILTER KIT ON HILLER UH12 SERIES HILLER HELICOPTERS POWERED BY LYCOMING ENGINES	
		3 PLACE ±.005	Q.A.					
		4 PLACE ±.0005						
		ANGULAR ±0°30'						
		INTERPRET GEOMETRIC TOLERANCING PER: ANSY Y 14.5H					SIZE <b>A</b>	
		MATERIAL						
		FINISH						
		COMMENTS:						
		NEXT ASSY	USED ON				DWG. NO. <b>AFC-D-0049</b>	
		APPLICATION					REV <b>A</b>	
							SCALE:	
							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.
15	AN3-15A	BOLT	4
16	TUB-0100	STANDOFF 1"	4
17	MS21919WDG-14	ADEL CLAMP	4

		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	Airwolf Filter Corp.			
		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.			TITLE: INSTALLATION OF AND HOSE ROUTING OF AIRWOLF FILTER KIT ON HILLER UH12 SERIES HILLER HELICOPTERS POWERED BY LYCOMING ENGINES			
		MATERIAL							
NEXT ASSY	USED ON	FINISH	COMMENTS:			SIZE <b>A</b>	DWG. NO. <b>AFC-D-0050</b>		REV <b>A</b>
APPLICATION						SCALE:	WEIGHT:	SHEET 1 OF 1	