

Oil Filter Kit AFC-K003

Applicability: Robinson Model R-22 with Lycoming
Engines O-320 & O-360

First Release 10/05/92

Amended 01/08/2000

<u>Index</u>	<u>Part Number</u>	<u>Parts List No. AFC-K003-PL</u> <u>Description</u>	<u>Quantity</u>
01.	LYC-10	Adapter - Engine, Full Flow	(1)
02.	61173	Adapter Base Gasket	(1)
03.	AN837-8D	Bulkhead Fitting, 45°	(2)
04.	AN6289-8D	Bulkhead Nut	(2)
05.	MS35769-11	Gasket, Oil Temperature Sensor	(1)
06.	MS35769-21	Gasket, Thermostatic Valve	(1)
07.	MS28773-08	Boss Gasket	(2)
08.	MS9387-08	"O" Ring	(2)
09.	AN4H-4A	Bolt, Drilled Head	(4)
10.	AN960-416	Flat Washers	(4)
11.	OFM-12	Oil Filter Mount Plate - R-22 - All Models	(1)
12.	MS20613-3C3	Solid Rivet, Stainless	(8)
13.	OFB-10	Oil Filter Base	(1)
14.	MS20822-8D	Fitting, 90°	(2)
15.	OFS-10	Oil Filter Stud	(1)
16a.	AFC-500	Oil Filter, or Equivalent [Champion CH48108]	(1)
16b.	AFC-600	Oil Filter, or Equivalent [Champion CH48109]	(1)
17.	F13000008-0266	Titeflex Teflon Hose w/ Fire Sleeving	(1)
18.	F13000008-0236	Titeflex Teflon Hose w/ Fire Sleeving	(1)
19.	MS20365-1032A	Locknut	(2)
20.	MS21919WDG-14	Adel Clamp	(3)
21.	MS21919DG-12	Adel Clamp	(1)
22.	MS21919DG-8	Adel Clamp	(1)
23.	AN3-4A	Bolt	(2)
25.	AN960-10	Flat Washer	(4)
26.	56707	Loctite® 567 Teflon Thread Sealant	(1)
26.	AFC-K003-II	Installation Instructions	(1)
27.	AFC-K003-MI	Instructions for Continued Airworthiness	(1)
28.	AFC-K003-PL	Parts List	(1)

Installation Instructions No. AFC-K003-II

Applicability: Robinson Model R-22 with Lycoming
Engines O-320 & O-360

First Release 10/05/92

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

01. Remove the Lycoming P/N 69510 engine oil screen housing from the accessory case.
**** WARNING - DO NOT REUSE OIL SCREEN IN LYC-10 ADAPTER ****
02. Remove oil temperature sensor and thermostatic valve from old oil screen housing.
03. Per assembly drawing AFC-D-0002, install a new gasket (05) under the head of the oil temperature sensor and reinstall in the oil filter adapter (01). Turn the oil temp sensor until the sealing surfaces are in contact and then tighten an additional 135 degrees. Install a new gasket (06) under the head of the P/N 75944 Lycoming thermostatic valve, reinstall in the oil filter adapter (01), torque to 300 in/lbs and secure with .032 MS20995-C safety wire. Onto each bulkhead fitting (03), install **(in order)** 1 ea. bulkhead nut (04), boss gasket (07), and "O" Ring (08). **BE CAREFUL:** O-ring and boss gasket must seal in the smooth area between the threaded areas of the bulkhead fitting. Install each completed assembly into the oil filter adapter (01). Do not tighten fittings until after routing of hoses has been determined in step 07.
04. Per installation drawing AFC-D-0006 install gasket (02) on base of filter adapter (01) and reinstall onto the engine accessory case. Torque to specifications 96 in/lbs.
05. Inside the R-22 cockpit, remove the P/N A003-14 RH seat back assy. Using installation drawing AFC-D-0004 as a reference, (facing forward), locate area at top RH corner of bulkhead. Using the filter mount (11) as a drilling template, locate and drill mounting holes using a #40 drill. After installing rivets, locate and drill (4) filter base mounting holes using a letter "F" drill.
**** SEE WARNING (A) BELOW ****
06. Per installation drawing AFC-D-0003, install 2 ea. fittings (14) into filter base (13) and tighten. Mount to filter mount (11) per assembly drawing AFC-D-0003 using bolts (09), washers (10), and secure with .032 MS20995-C safety wire.
**** SEE WARNING (B) BELOW ****
07. Install hose assy (17) connecting the **"A" port** on the filter adapter to the **"A" port** on the filter base. Install hose assy (18) from the **"B" port** on the filter adapter to the **"B" port** on the filter base per installation drawing AFC-D-0005. Tighten bulkhead nuts (04) at this time and then tighten hose fittings to 270-350 in/ lbs.
08. Secure hoses per installation drawing AFC-D-0005 using clamps (20), (21), & 22), screws (23) & (24), washers (25), and nuts (19) provided.
09. Install oil filter (16), torque per instructions on oil filter and secure with .032 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) *******

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

******* WARNING (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.

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

Form AFC-K003-ICA Revised 10/01/00

A/C Make : Robinson

Model: R22 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>Robinson R22 Series Helicopter</u> with <u>Lycoming O320 & O360 Series</u> engine. <i>Aircraft Model</i> <i>Engine Model</i></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: Installation of Airwolf Remote Mounted Oil Filter Kit P/N AFC-K003</p>
3.	<p>Control: Operation information: Or special procedures if any.</p> <p>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.</p>
4.	<p>Servicing information: Such as types of fluids used, servicing points, and location of access panels, as appropriate.</p> <p>Comment: Oil System to be serviced in accordance with Lycoming Service Bulletin 480C or higher. Oil should be changed at least once each 12 months. Cut the old filter open with Airwolf AFC-470 oil filter cutter at each oil change and inspect for metal contamination or any evidence that may indicate impending engine problems.</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: 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.</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: __N/A</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: __N/A</p>
8.	<p>Diagrams: Of access plates and information, if needed, to gain access for inspection.</p> <p>Comment: __N/A</p>
9.	<p>Special inspection requirements: Such as X-ray, ultrasonic testing, or magnetic particle inspection, if required.</p> <p>Comment: __N/A</p>
10.	<p>Application of protective treatments: To the affected area after inspection and/or maintenance, if any.</p> <p>Comment: __N/A</p>

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

Form AFC-K003-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: <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. 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:

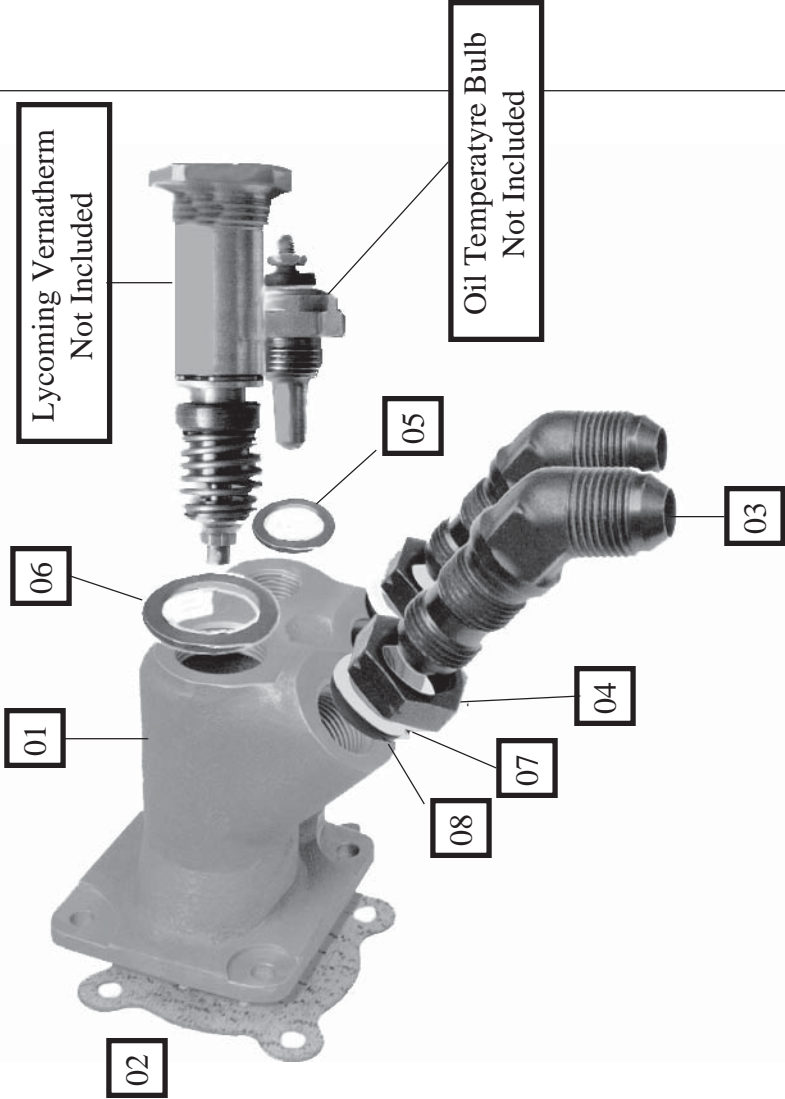
Implementation and Record Keeping: For major alterations performed in accordance with FAA Field Approval policy, the owner operator operating under part 91 is responsible for ensuring that the ICA is made part of the applicable section 92.409 inspection program for their aircraft. This is accomplished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

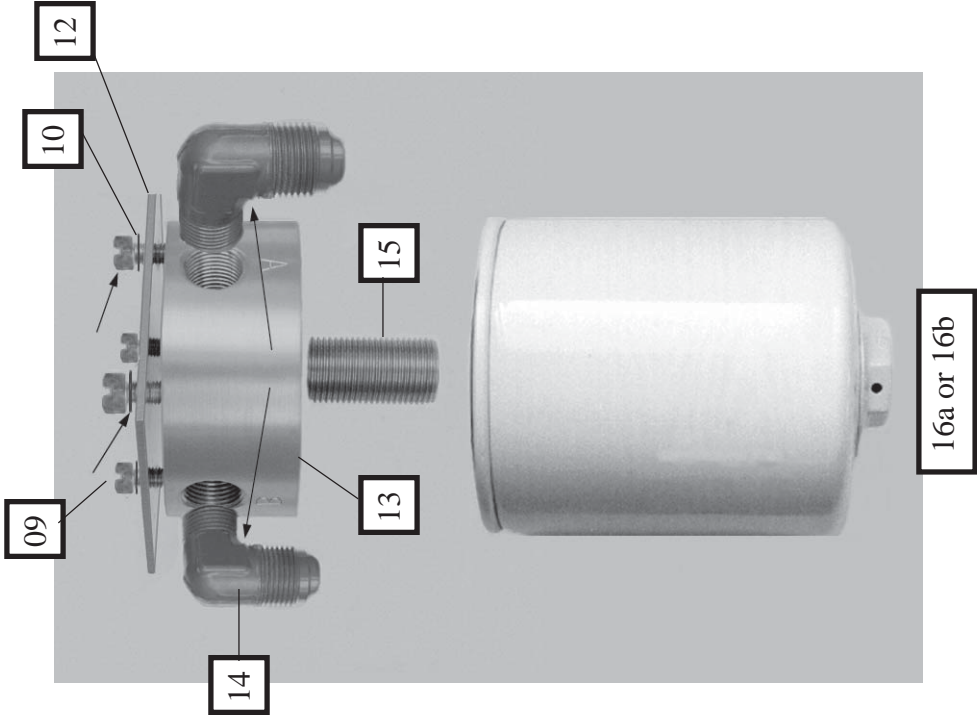
ASSEMBLY DRAWING# AFC-D-0002



MATERIAL LIST		
Index	Part Number	Qty
01.	LYC-10	(1)
02.	61173	(1)
03.	AN837-8D	(2)
04.	AN6289-8D	(2)
05.	MS35769-11	(1)
06.	MS35769-21	(1)
07.	MS28773-08	(2)
08.	MS9387-08	(2)

MATERIAL LIST		
Index	Description	Qty
01.	Adapter-Engine, Full Flow	(1)
02.	Oil Filter Gasket	(1)
03.	Bulkhead Fitting, 45°	(2)
04.	Bulkhead Nut	(2)
05.	Gasket, Oil Temperature Sensor	(1)
06.	Gasket, Thermostatic Valve	(1)
07.	Boss Gasket	(2)
08.	“O” Ring	(2)

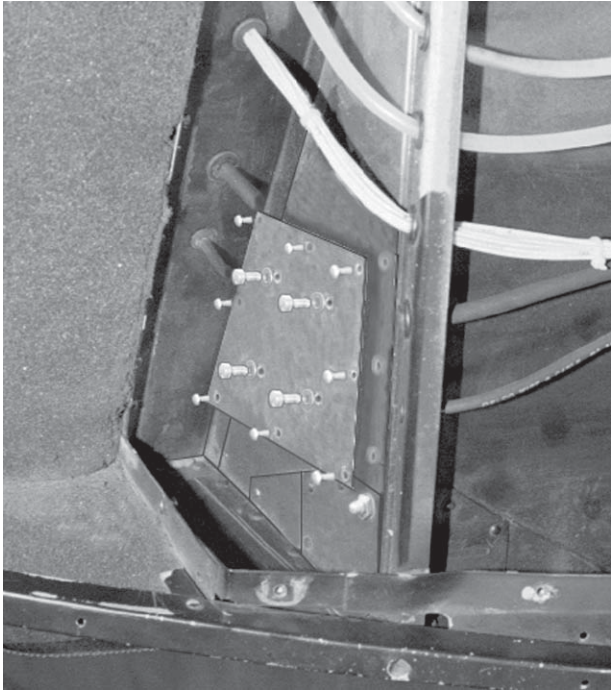
ASSEMBLY DRAWING# AFC-D-0003



MATERIAL LIST		
Index	Part Number	Qty
09.	AN4H-4A	(4)
10.	AN960-416	(4)
11.	OFM-12	(1)
13.	OFB-10	(1)
14.	MS20822-8D	(2)
15.	OFS-10	(1)
16a.	AFC-500	(1)
16b.	AFC-600	(1)

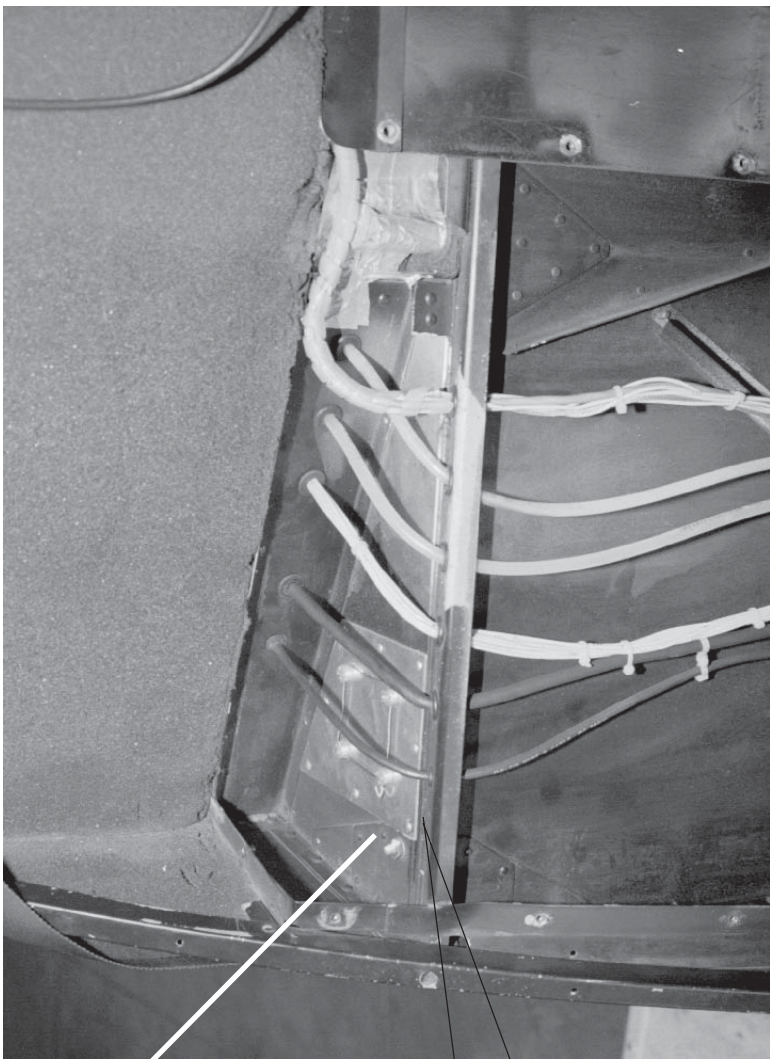
MATERIAL LIST		
Index	Description	Qty
09.	Bolt, Drilled Head	(4)
10.	Flat Washers	(4)
11.	Oil Filter Mount, R-22	(1)
13.	Oil Filter Base	(1)
14.	Fitting, 90°	(2)
15.	Oil Filter Stud	(1)
16a.	Oil Filter , [CH48108]	(1)
16b.	Oil Filter , [CH48109]	(1)

INSTALLATION DRAWING# AFC-D-0004

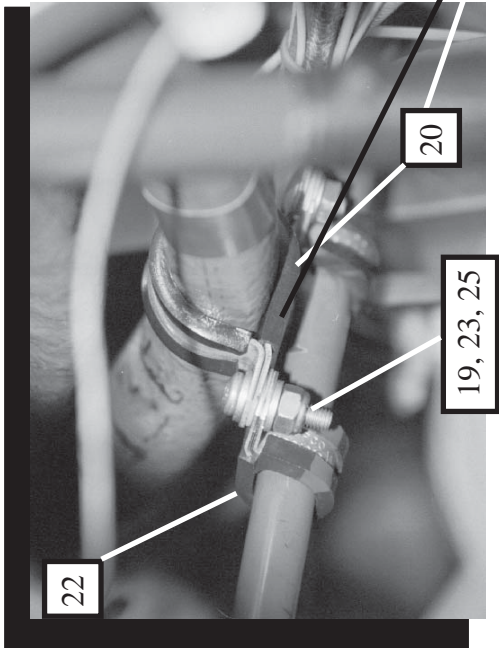


MATERIAL LIST

<u>Index</u>	<u>Part Number</u>	<u>Description</u>	<u>Qty</u>
09.	AN4H-4A	Bolt, Drilled Head	(4)
10.	AN960-416	Flat Washers	(4)
11.	OFM-12	Oil Filter Mount, R-22	(1)
12.	MS20613-3C4	Solid Rivet, Stainless	(8)

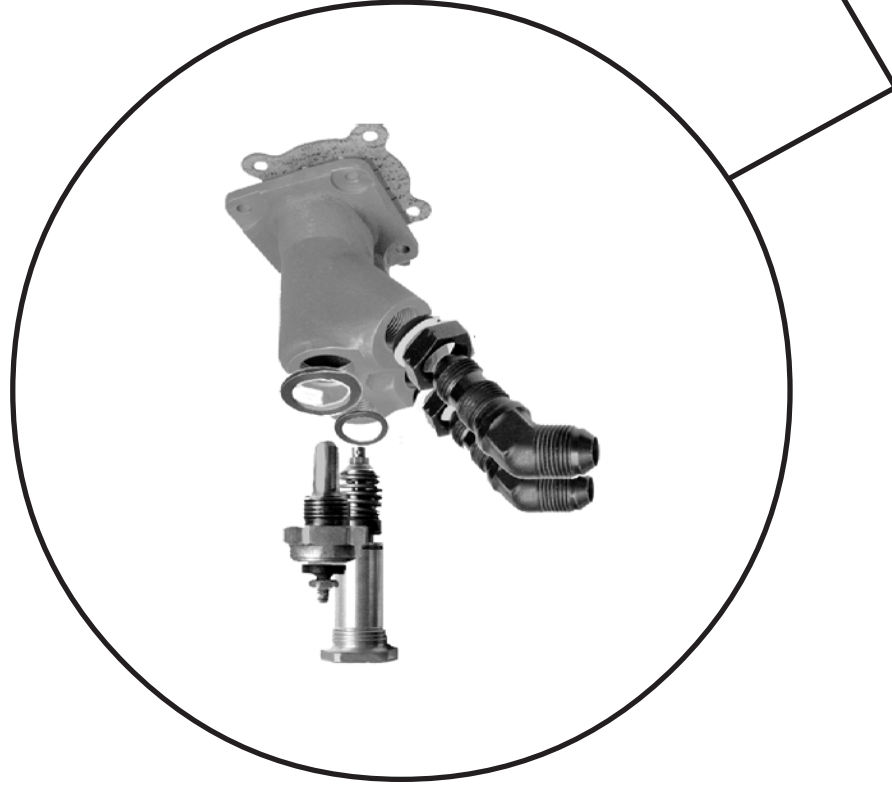
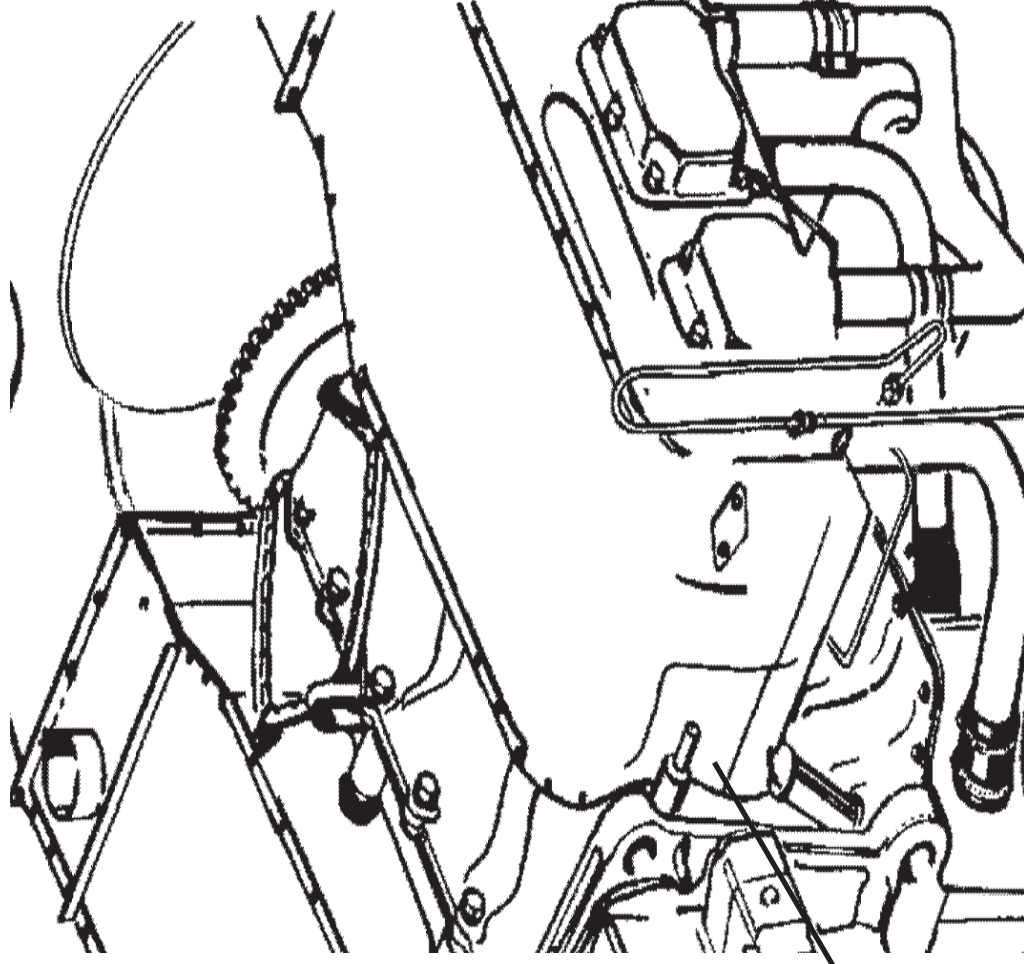


INSTALLATION DRAWING# AFC-D-0005



MATERIAL LIST			
Index	Part Number	Description	Qty.
17.	F13000008-0266	Hose Assy w/ Fire Sleeving	(1)
18.	F13000008-0236	Hose Assy w/ Fire Sleeving	(1)
19.	MS20365-1032	Locknut	(2)
20.	MS21919WDG-14	Adel Clamp	(3)
21.	MS21919DG-12	Adel Clamp	(1)
22.	MS21919DG-8	Adel Clamp	(1)
23.	AN3-4A	Bolt	(2)
25.	AN960-10	Flat Washer	(4)

INSTALLATION DRAWING # AFC-D-0006



WEIGHT AND BALANCE REPORT

ROBINSON R-22 ALL MODELS

[illegible]



Reference Data
for
AFC-K003-II
for
STC SH1052NE
Oil Filter Kit
AFC-K003

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-K003 remote mount oil filter kit incorporates our STC approved for Robinson R-22 Helicopter powered by Lycoming engine models O-320 and O360 series

Upon installing this filter kit, you will need to fill out and file a 337 form for this installation referencing the P/N AFC-K003 kit and the STC# SH1052NE.

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

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

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

DATA PERTINENT TO ALL INSTALLATIONS

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

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

1. Review all installation data and written material before beginning
2. Please inspect contents of kit and inventory components before beginning.
3. **Do not** over tighten the fittings on Adapters or housings. This can distort or crack housings, causing oil to leak.
4. It is **EXTREMELY** important that oil lines be routed properly in accordance with AC 43.13-1A & 2A Acceptable Methods and Practices. (see Tip below)
5. See Warnings and Notes contained in the instructions concerning routing of lines and the use of sealant on NPT fittings.

DO NOT USE TEFLON TAPE ON FITTINGS.

6. The use of sealant on AN/Flared type fittings is not required, it is only required on NPT fittings.
7. When mounting Adapters use the supplied doublers for reinforcing mounting locations.
8. **BE PATIENT!!!** Take your time and you will see the results of your effort.

TIP

How to get correct length of hose

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

Thank you for taking the time to read this.

WARNINGS & NOTES

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

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

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

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

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

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

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

DO NOT, UNDER ANY CIRCUMSTANCES, CONNECT AN OIL COOLER THAT DOES NOT HAVE A 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.

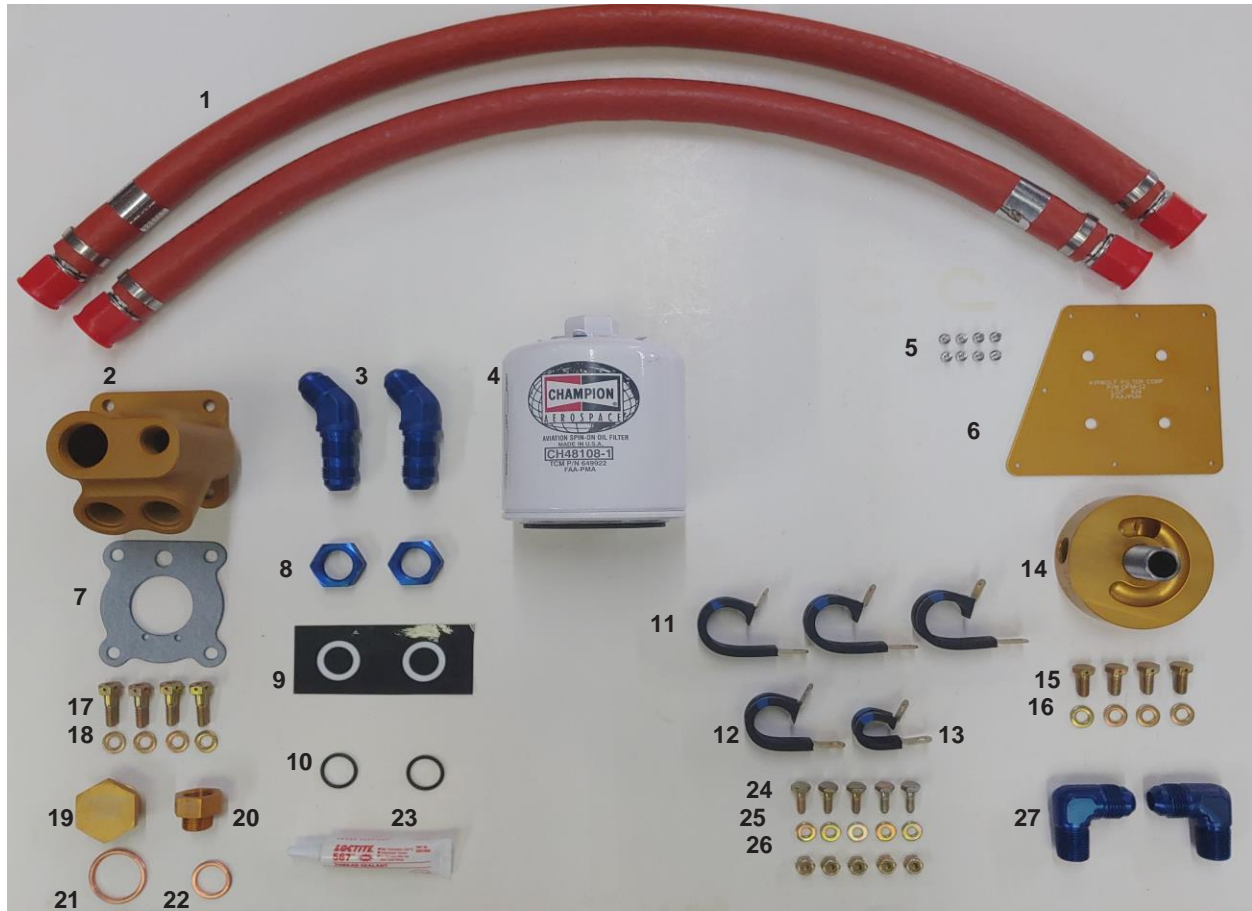
NOTE:

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 AFC-K003-PL

Applicability: Robinson Model R-22 with Lycoming O-320 & O-360.

**Parts List No. AFC-K003-PL**

Index	Part Number	Description	Quantity
1	"TBD"-0266	Teflon Hose w/ Fire Sleeving	1
1	"TBD"-0236	Teflon Hose w/ Fire Sleeving	1
2	LYC-10	Adapter – Engine, Full Flow	1
3	AN837-8D	Bulkhead Fitting, 45°	2
4	AFC-600 or AFC-500	Oil Filter, or Equivalent [Champion CH48109 or CH48108]	1
5	MS20613-3C3	Solid Rivet, Stainless	8
6	OFM-12	Oil Filter Mount Plate - R-22 - All Models	1
7	61173 or GT-61173	Gasket, Adapter Base	1
8	AN6289-8D	Bulkhead Nut	2
9	MS28773-08	Boss Gasket	2
10	M83248/1-908	"O" Rings	2
11	MS21919WDG-14	Adel Clamp	3
12	MS21919DG-12	Adel Clamp	1
13	MS21919DG-8	Adel Clamp	1
14	OFB-10	Oil Filter Base with (OFS-10 Installed)	1
15	AN4H-4A	Bolt, Drilled Head	4
16	AN960-416	Flat Washers	4
17	AN74A-6	Bolt, Drilled Head	4
18	AN960-416	Flat Washers	4
19	CAP-1350	Bypass Valve Cap (optional)	1
20	OTA-527	Oil Temp Adapter(Short)(optional)	1
21	MS35769-21	Gasket, Thermostatic Valve	1
22	MS35769-11	Gasket, Oil Temperature Sensor	1
23	56707	Loctite 271 Thread Sealant	1
24	AN3-4A	Bolt	5
25	AN960-10	Flat Washer	5
26	MS20365-1032A	Locknut	5
27	MS20822-8D	Fitting, , 90°	2

Installation Instructions No. AFC-K003-II**Applicability: Robinson Model R-22 with Lycoming O-320 & O-360.**

1. Remove the Lycoming P/N 69510 engine oil screen housing from the accessory case.
**** WARNING - DO NOT REUSE OIL SCREEN IN LYC-10 ADAPTER ****
2. Remove oil temperature sensor and thermostatic valve from old oil screen housing.
3. Per assembly drawing AFC-D-0002, install a new gasket (5) under the head of the oil temperature sensor and install in the engine adapter (1). Turn the oil temp sensor until the sealing surfaces are in contact and then tighten an additional 135 degrees. Install a new gasket (6) under the head of the P/N 75944 Lycoming thermostatic valve, install in the engine adapter (1), torque to 300 in/lbs. and secure with .032 MS20995-C safety wire. Onto each bulkhead fitting (3), install **(in order)** 1 ea. bulkhead nut (4), boss gasket (7), and "O" Ring (8). **BE CAREFUL:** O-ring and boss gasket must seal in the smooth area between the threaded areas of the bulkhead fitting. Install each completed assembly into the engine adapter (1). Do not tighten fittings until after routing of hoses has been determined in step 7.
4. Per installation drawing AFC-D-0002 and AFC-D-0006 install gasket (2) on base of engine adapter (1) and install onto the engine accessory case. Torque to specifications 96 in/lbs.
5. Inside the R-22 cockpit, remove the P/N A003-14 RH seat back assy. Using installation drawing AFC-D-0004 as a reference, (facing forward), locate area at top RH corner of bulkhead. Using the filter mount (3) as a drilling template, locate and drill mounting holes using a #40 drill. After installing rivets, locate and drill (4) filter base mounting holes using a letter "F" drill.
**** SEE WARNING (A) ****
6. Per installation drawing AFC-D-0003, install 2 ea. fittings (5) into filter base (4) and tighten. Mount to filter mount (3) per assembly drawing AFC-D-0003 using bolts (1), washers (2), and secure with .032 MS20995-C safety wire.
**** SEE WARNING (B) ****
7. Install hose assy connecting the **"A" port** on the engine adapter to the **"A" port** on the filter base. Install hose assy from the **"B" port** on the engine adapter to the **"B" port** on the filter base per installation drawing AFC-D-0005.
8. Per installation drawing AFC-D-0002, Tighten bulkhead nuts (4) at this time and then tighten hose fittings to 270-350 in/lbs.
9. Secure hoses per installation drawing AFC-D-0005 using clamps (4), (5), & (6), bolts (7), washers (8), and nuts (3) provided.
10. Install oil filter per installation drawing AFC-D-0003 (7a/7b), 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
ROBINSON R-22 ALL MODELS**

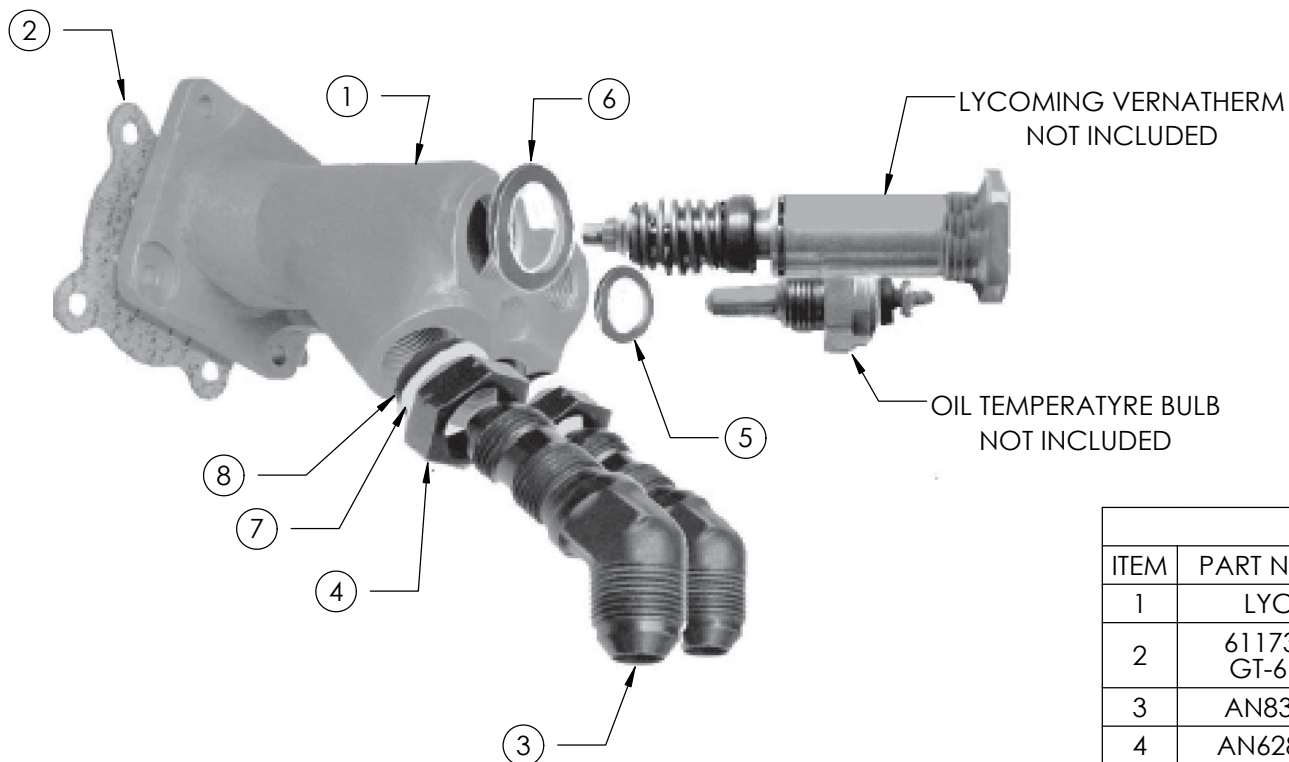
SURPLUS EQUIPMENT	WEIGHT	ARM-INCHES		MOMENT - IN/LBS.	
EQUIPMENT - ITEM	LBS.	LONG	LATR	LONG	LATR
REMOTE OIL FILTER	4.5	95.1	+ 15.0	428.0	+ 67.5

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REVISIONS

REV.	DESCRIPTION	BY	DATE
A	REDRAWN IN SOLIDWORKS	GM	12/15/2020



MATERIAL LIST

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	LYC-10	ADAPTER-ENGINE, FULL FLOW	1
2	61173 OR GT-61173	OIL FILTER ADAPTER GASKET	1
3	AN837-8D	BULKHEAD FITTING, 45°	2
4	AN6289-8D	BULKHEAD NUT	2
5	MS35769-11	GASKET, OIL TEMPERATURE SENSOR	1
6	MS35769-21	GASKET, THERMOSTATUIC VALVE	1
7	MS28773-08	BOSS GASKET	2
8	M83248/1-908	"O" RING	2

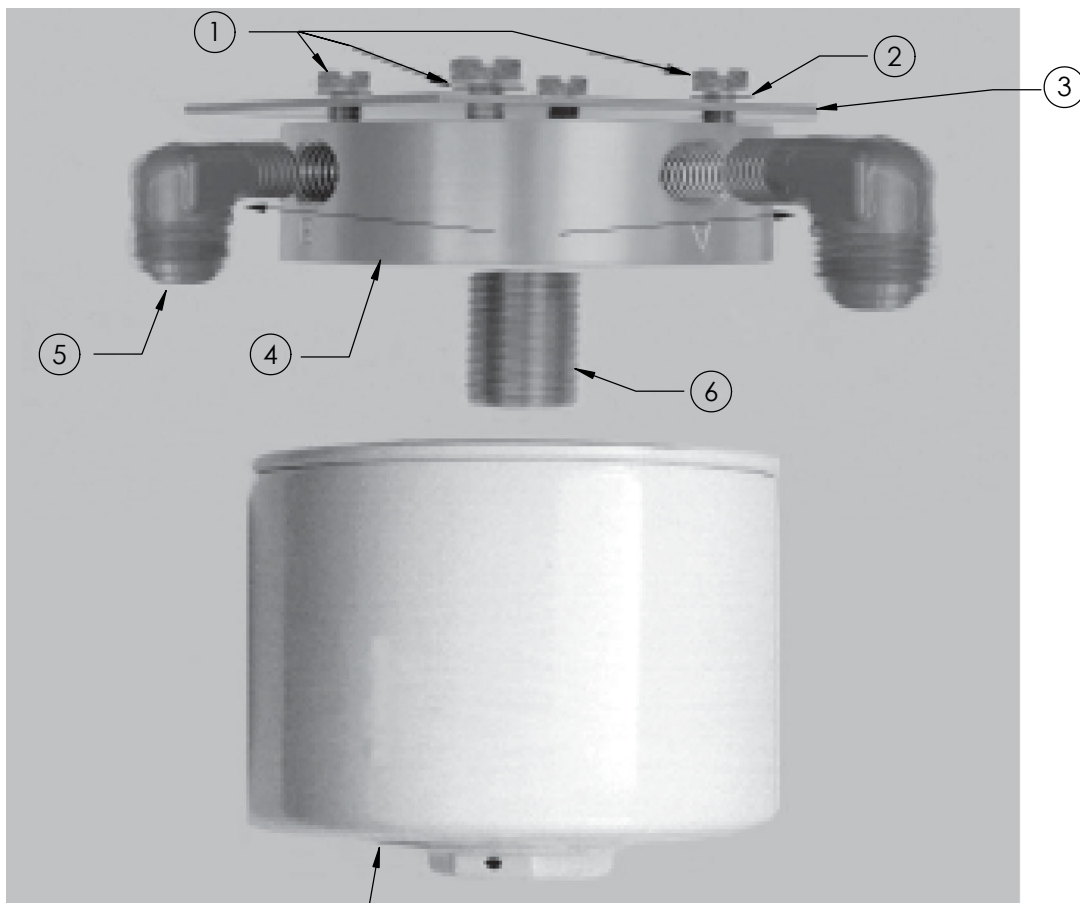
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		DIMENSIONS ARE IN INCHES			DRAWN		GM	12/15/2020	TITLE: ASSEMBLY DRAWING, LYC-10 TYPICAL
		TOLERANCES:			APPR. BY		BDA	12/15/2020	
		1 PLACE ±.030			ENG APPR.				
		2 PLACE ±.010			MFG APPR.				
		3 PLACE ±.005			Q.A.				
		4 PLACE ±.0005							
		ANGULAR ±0°30'							
		INTERPRET GEOMETRIC TOLERANCING PER: ANSY Y 14.5H							
		MATERIAL							
		FINISH							
		COMMENTS:							

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REVISIONS

REV.	DESCRIPTION	BY	DATE
A	REDRAWN IN SOLIDWORKS	GM	12/15/2020



MATERIAL LIST

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	AN4H-4A	BOLT, DRILLED HEAD	4
2	AN960-416	FLAT WASHERS	4
3	OFM-12	OIL FILTER MOUNT, R-22	1
4	OFB-10	OIL FILTER BASE	1
5	MS20822-8D	FITTING, 90°	2
6	OFS-10	OIL FILTER STUD	1
7a	AFC-500	OIL FILTER, (CH48108)	1
7b	AFC-600	OIL FILTER, (CH48109)	1

7a OR 7b

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		DIMENSIONS ARE IN INCHES		DRAWN	GM		
		TOLERANCES:		APPR. BY	BDA		
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		2 PLACE ±.010		MFG APPR.		TITLE: ASSEMBLY DRAWING, OFB-10 TYPICAL	
		3 PLACE ±.005		Q.A.			
		4 PLACE ±.0005					
		ANGULAR ±0°30'				SIZE A	
		INTERPRET GEOMETRIC TOLERANCING PER: ANSY Y 14.5H					
		MATERIAL				DWG. NO. AFC-D-0003	REV A
NEXT ASSY	USED ON	FINISH	COMMENTS:			SCALE:	WEIGHT:
APPLICATION						SHEET 1 OF 1	

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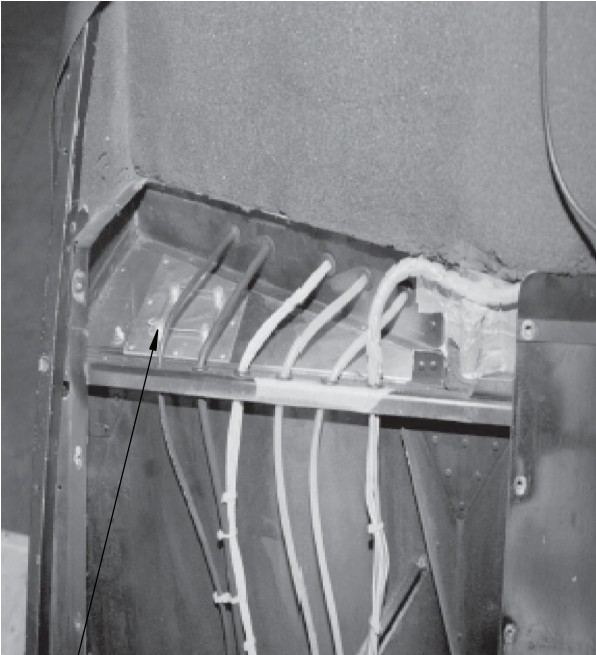
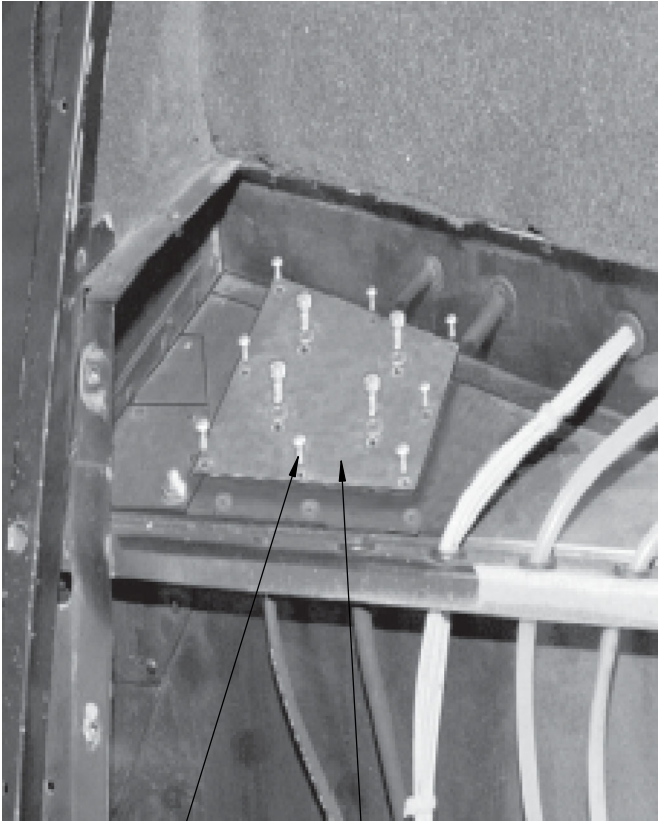
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REVISIONS			
REV.	DESCRIPTION	BY	DATE
A	REDRAWN IN SOLIDWORKS	GM	12/15/2020



MATERIAL LIST			
ITEM	PART NUMBER	DESCRIPTION	QTY.
1	AN4H-4A	BOLT, DRILLED HEAD	4
2	AN960-416	FLAT WASHERS	4
3	OFM-12	OIL FILTER MOUNT, R-22	1
4	MS20613-3C4	SOLID RIVET, STAINLESS	8

① ②

③

④

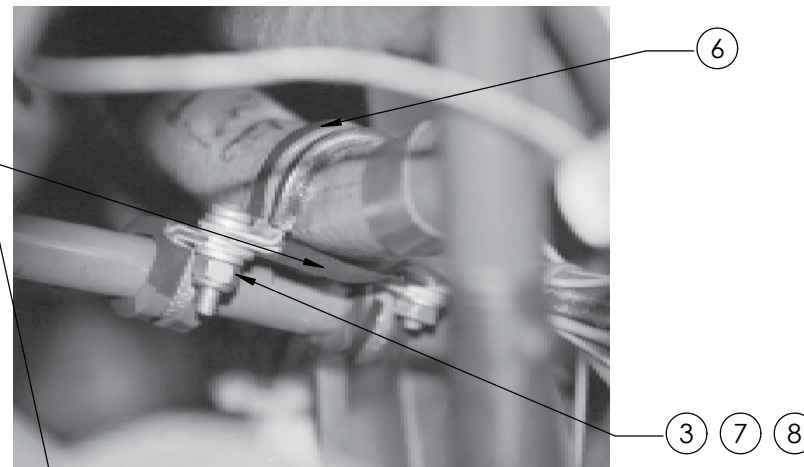
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		TOLERANCES:	APPR. BY		BDA	12/15/2020		
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		2 PLACE ±.010	MFG APPR.					
		3 PLACE ±.005	Q.A.					
		4 PLACE ±.0005						
		ANGULAR ±0°30'						
		INTERPRET GEOMETRIC TOLERANCING PER: ANSY Y 14.5H						
		MATERIAL					SIZE A	DWG. NO. AFC-D-0004
		FINISH	COMMENTS:				REV A	
NEXT ASSY		USED ON					SCALE:	WEIGHT:
APPLICATION								SHEET 1 OF 1

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REVISIONS

REV.	DESCRIPTION	BY	DATE
A	REDRAWN IN SOLIDWORKS	GM	12/15/2020



MATERIAL LIST

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	F13000008-0266	HOSE ASSY W/FIRE SLEEVING	1
2	F13000008-0236	HOSE ASSY W/FIRE SLEEVING	1
3	MS20365-1032	LOCKNUT	2
4	MS21919WDG-14	ADEL CLAMP	3
5	MS21919DG-12	ADEL CLAMP	1
6	MS21919DG-8	ADEL CLAMP	1
7	AN3-4A	BOLT	2
8	AN960-10	FLAT WASHER	4

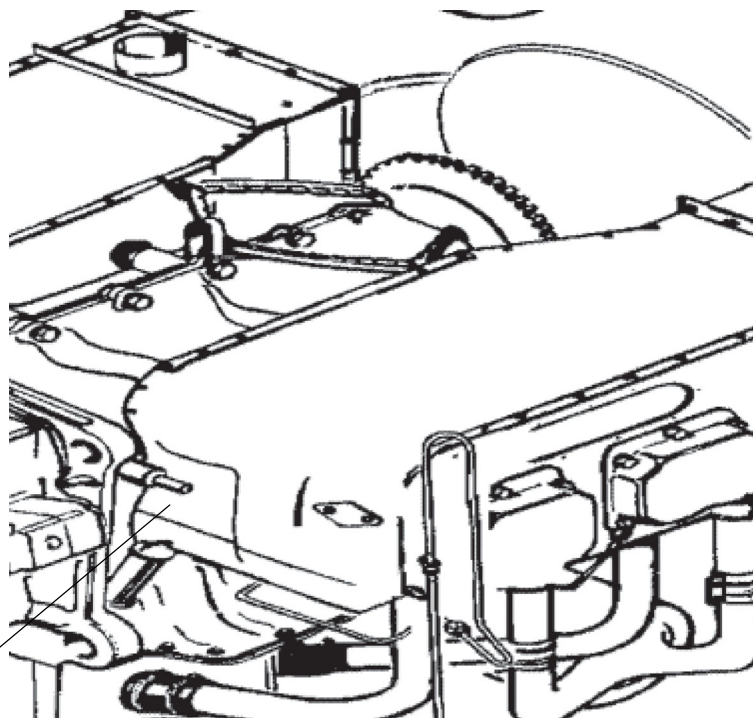
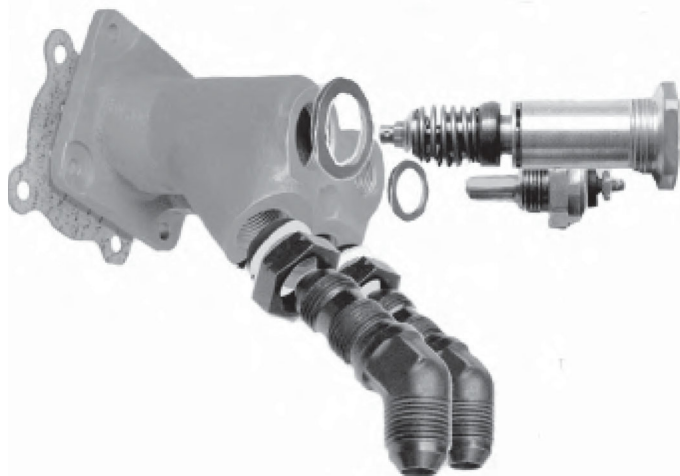
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		DIMENSIONS ARE IN INCHES		DRAWN		GM				12/15/2020	
		TOLERANCES:		APPR. BY		BDA				12/15/2020	
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		3 PLACE ±.005		Q.A.							
		4 PLACE ±.0005									
		ANGULAR ±0°30'									
		INTERPRET GEOMETRIC TOLERANCING PER: ANSY Y 14.5H									
		MATERIAL									
NEXT ASSY		USED ON		FINISH		COMMENTS:		SIZE A			
								DWG. NO. AFC-D-0005			
								REV A			
APPLICATION								SCALE: WEIGHT: SHEET 1 OF 1			

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		DIMENSIONS ARE IN INCHES	DRAWN	GM	12/15/2020	TITLE: INSTALLATION DRAWING, LYC-10 TYPICAL			
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		3 PLACE ±.005							
		4 PLACE ±.0005							
		ANGULAR ±0°30'							
		INTERPRET GEOMETRIC TOLERANCING PER: ANSY Y 14.5H	Q.A.						
		MATERIAL				SIZE	DWG. NO.		REV
						A	AFC-D-0006		A
NEXT ASSY	USED ON	FINISH	COMMENTS:			SCALE:		WEIGHT:	SHEET 1 OF 1
APPLICATION									

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