

# AIRWOLF FILTER CORP.

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#### TO THE MECHANIC:

This P/N AFC-K008 remote mount oil filter kit incorporates our generic STC approved for all Continental powered aircraft up to 450 hp. The STC paperwork provided with this kit utilizes the new approved model list (AML) system recently instituted by the FAA. Although you may notice your particular aircraft is not specifically listed under this new classification, it is still approved.

Upon installing this filter kit, you will need to fill out and file a 337 form for this installation referencing the P/N AFC-K008 kit and the STC# SA00079NY. If your particular aircraft is not listed on the AML, you will also need a field approval by your local FSDO. for this installation. This is necessary because the FAA only updates this list on an semi-annual basis, and until your aircraft is listed, a field approval is required. If you are unsure whether or not you need a field approval, please call us directly.

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

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

FAA - New York Aircraft Certification Office (ACO) Engine and Propeller Division 1600 Stewart Ave. Suite 510 Westbury NY 11590 (516) 228-7300 / (516) 794-5531 Fax

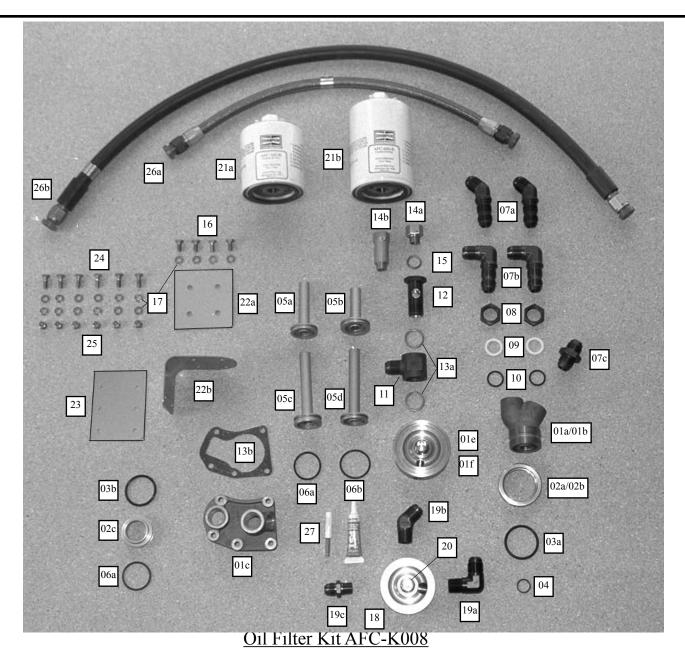
If your aircraft required a field approval, we must have a copy in order to update the (AML) list on our STC. Please send us a copy in addition to the one you will file with your local FSDO. We will then forward our copy to the ACO for their office to update the (AML) list on our STC.

## 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 Teflon Hoses specified in this STC. At the time of the order we will need the flare to flare length of the hoses, and hose ends needed on each hose ie: Straight to Straight, Straight to 90°, Straight to 45°, 45° TO 45°, or 45° to 90° allowing for engine torque and vibration per AC43.13.

Thank you for your help.

Airwolf Filter Corp



Applicability: Continental powered Single and Multi Engine First Release 01/08/94
Fixed Wing Aircraft less than 450hp.
having firewalls of .021 ASTM A527 galvanized steel or equivalent. Amended 10/01/02

		Parts List No. AFC-K008-PL	•
<u>Index</u>	Part Number	<u>Description</u>	Quantity
01a.	CON-10 or	Full Flow Engine Adapter [1-3/4"-16 Threads]	(1)
01b.	CON-11 or	Full Flow Engine Adapter [1-13/16"-16 Threads]	(1)
01c.	CON-12 or	Full Flow Engine Adapter "E" Series Engines	(1)
01d.	CON-16	Full Flow Engine Adapter C85-IO240	(1)
01e.	OFB-17	Full Flow Engine Adapter -10 Port	(1)
01f.	OFB-15	Oil Filter Base, -12 Port	(1)
02a.	RNG-10 or	Sealing Ring [1-3/4"-16 Threads]	(1)
02b.	RNG-11	Sealing Ring [1-13/16"-16 Threads]	(1)
02c.	RNG-17	Oil Divertor Ring, "E" Series	(1)
03a.	M83248/1-223	Sealing O-Ring	(1)
03b.	M83248/1-222	Oil Divertor O-Ring	(1)
04.	M83248/1-016	O-Ring, Nosepiece	(1)
05a.	EXT-10 or	Oil Screen Adapter - A50, A65, A75, A80, C75, C85, C90, C125, O-200, IO240	(1)
05b.	EXT-11 or	Oil Screen Adapter - C145, O300, GO300, & IO-360A, C, D, G, H, J, K	(1)
05c.	EXT-12 or	Oil Screen Adapter - O-470A, B, E, G, J, K, L, M, P, R, S, U,	
		IO-470C, D, E, F, G, H, J, K, L, M, N, P, R, S, U, V	
		IO-520A, D, E, F, J, K, L, / TSIO-520C, G, H, M, P, R, T	

### Oil Filter Kit AFC-K008

Applicability:

Continental powered Single and Multi Engine Fixed Wing Aircraft less than 450hp. having firewalls of .021 ASTM A527 galvanized steel or equivalent.

First Release 01/08/94

Amended 10/01/02

		Parts List No. AFC-K008-PL (continued)	
<u>Index</u>	Part Number	Description	<b>Quantity</b>
05d.	EXT-14	Oil Screen Adapter - O470-11 & 15	(1)
06a.	M83248/1-126 or	O-Ring, Use w/EXT-10 or 12 Adapter, Oil Screen, or RNG-17 Oil Diverter Ring	(1)
06b.	M83248/1-128	O-Ring, Use w/EXT-11 or 14 Adapter, Oil Screen	(1)
07a.	AN837-10D-SP or	45° Bulkhead Fitting	(2)
07b.	AN833-10D-SP or	90° Bulkhead Fitting	(Opt)
07c.	AN815-10D-SP	Union	(Opt)
07d.	AN919-15D-SP	Union, Use with OFB-16 Adapter	(2)
08a.	AN6289-10D	Bulkhead Nut	(2)
09.	MS28773-10	Boss Gasket	(2)
10a.	M83248/1-908	-8 O-Ring, Use with OFB-16 Adapter	(2)
10b.	M83248/1-910	-10 O-Ring	(2)
11.	AN776-10D	90° Fitting	(1)
12a.	TPA-775	Temp Probe Adapter	(Opt)
12b.	TPA-776	Temp Probe Adapter & Gasket	(Opt)
13a.	MS35769-18	Temp Probe Adapter Gasket	(Opt)
13b.	352067	Engine Adapter Gasket, Use with CON-12 Adapter	(1)
13c.	652070	Engine Adapter Gasket, Use with CON-16 Adapter	(1)
14a.	OTA-527 or	5/8" Long Oil Temp Adapter	(Opt)
14b.	OTA-2250	2-1/4" Long Oil Temp Adapter	(Opt)
15	MS35769-11	Oil Temp Adapter Gasket	(Opt)
16.	AN4H-4A	Drilled Head Bolts	(4)
17a.	AN960-416	Flat Washers	(16)
17a. 17b.	AN960-524	Flat Washers, Use with CON-12 Adapter	(3)
170. 18a.	OFB-11	Oil Filter Base, -10 Port	(1)
18b.	OFB-10	Oil Filter Base, -8 Port, Use with CON-16 Adapter	(1)
19a.	MS20822-10D or	90° Elbow	(1)
19b.	MS20823-10D or	45° Elbow	(1)
19c.	AN816-10D	Flared Tube Nipple	(Opt)
19d.	AN842-16D	90° Hose Elbow [Stearman Kit]	(1)
19a. 19e.	AN844-16D	45° Hose Elbow [Stearman Kit]	(Opt)
19c. 19f.	MS20822-8D or	90° Elbow, Use with CON-16 Adapter	(1)
19g.	MS20823-8D or	45° Elbow, Use with CON-16 Adapter	(1)
19g. 19h.	AN816-8D	Flared Tube Nipple, Use with CON-16 Adapter	(Opt)
20.	OFS-10	Oil Filter Stud	(1)
20. 21a.	AFC-500 or	Std Oil Filter or Equivalent [Champion CH48108]	(1)
21a. 21b.	AFC-600	Long Oil Filter or Equivalent [Champion CH48109]	(1)
210. 22a.	OFM-10	Horizonta Oil Filter Mount	(1)
22a. 22b.	OFM-10 OFM-11	Vertical Oil Filter Mount	(1)
23.	DBL-10	Doubler Plate	(1)
24.	AN4-5A	Bolts	(6)
25a.	MS20365-428A	Locknuts	(6)
25b.	MS20365-524A	Locknuts, Use with CON-16 Adapter	(3)
26a.	AE7010000J-0xxz or	Aeroquip Hose Assy w/o Fire Sleeving.	(Opt)
26b.	F13000010-0xxz	Titeflex® Teflon Hose Assy with Fire Sleeving.	
200. 27.	MIL6000-1-25	25" Long MIL 6000 Hose [Stearman Kit]	(Opt) (2)
28.	MIL6000-1-23 MIL6000-3/4-2	Dampener	(1)
26. 29.	OS100M16H	1" Hose Clamp [Stearman Kit]	(4)
30.	QS100M10H QS100M52H	3-1/4" Hose Clamp Dampener	(1)
30.	56707	Loctite® 567 PST Teflon Thread Sealant	(1)
31.	AFC-K008-II	Installation Instructions	
33.	AFC-K008-MI	Instructions for Continued Airworthiness	(1)
33. 34.	AFC-K008-PL	Parts List	(1) (1)
J4.	ArC-Ruuo-rL	I GIIS LIST	(1)

Applicability:

Continental powered Single and Multi Engine Fixed Wing Aircraft less than 450hp. having firewalls of .021 ASTM A527 galvanized steel or equivalent. First Release 01/08/94

Amended 10/01/02

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

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

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

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

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

NO ROUTING OF FLAMMABLE FLUID LINES ABOVE EXHAUST SYSTEM, UNLESS SHROUDED.

INSTALLER IS RESPONSIBLE FOR INTER-RELATIONSHIP BETWEEN THIS AND OTHER ENGINE CHANGES (INCLUDING ACCESSORIES)

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

On some Continental engines, you may find the 1-3/4"-16 UNF-3B threads in the oil pump/accessory case where the oil screen was located, to be damaged or not complete causing our CON-10 adapter to bind during installation. DO NOT FORCE our engine adapter into these damaged threads as galling WILL occur. A specially ground 1-3/4"-16 UNF-3B tap is available from Airwolf that usually will cleanup these threads.

#### Installation Instructions No. AFC-K008-II-A

Installation of the remote oil filter kit on the following engines using P/N A3568 Oil Screen Assy: First Release 01/08/94 A50, A65, A75, A80, C75, C85, C90, C125, O-200, IO240 Amended 10/01/02

- 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 Continental screen assembly P/N A3568.
- 02. Clean Screen housing and gasket surface. Assemble Engine Adapter (01a) as follows:
  - (A) Lubricate threads of Engine Adapter (01a) and Sealing Ring (02a) with suitable lubricant.
  - (B) Thread Sealing Ring (02a) onto Engine Adapter (01a) past smooth area, onto second set of threads.
  - (C) Install lightly oiled O-Ring, (03). and position in the smooth area between the upper and lower threads.
  - (D) Run Sealing Ring (02a) down against O-ring. [Assure O-ring is still centered in non threaded area.]
  - (E) Insert lightly oiled O-ring, (04) into groove inside of center opening of Engine Adapter (01a)
- 03. Install lightly oiled O-ring (06a) onto Oil Screen Adapter (05a) and insert into screen chamber of engine.

  When seated correctly, tube will extend above face of engine accessory case approximately 1/4". As adapter is inserted, resistance will be met. Continue pressure indicating compression of O-Ring (06a)- until adapter is seated in lower screen seat.
- O4. Thread engine adapter (01a) into engine oil screen opening being sure that oil screen adapter (05b) is started in center of the opening. Screw in engine adapter (01a) until light resistance indicates that O-ring (03) is seated on the accessory case. Orient the engine adapter (01a) as necessary, being careful not to screw the engine adapter (01a) in or out more than 1/2 turn from present position. This assures that the O-Ring is still centered in the non threaded area. Do not tighten sealing ring yet.
- Onto each bulkhead fitting (07a) or (07b), install in order 1 ea. bulkhead nut (08), boss gasket (09), and O-Ring (10). If using a union (07c), install O-Ring (10) only. When assembled correctly, the O-Ring (10) is positioned in the center of the non-threaded area, between the upper set of threads and the lower set of threads on the bulkhead fitting. Install each completed assembly into the engine adapter (01a) and located towards intended direction of hoses.
- CAUTION: O-ring only seals in the center of the non-threaded area between the upper set threads and lower set of threads on the bulkhead fitting. Failure to position the O-Ring in this area, may cause a small oil leak.
- 06. On A50 & A65 engines, remove the oil drain plug and relocate the oil temperature capillary tube and oil temp adapter using oil temp gasket (15) provided and safety wire.
- On A75, A80, C75, C85, C90, & O200 engines, remove one of the Continental P/N 532432 plugs located in the front of the engine which caps off access to the oil gallery. Remove the brass oil temp adapter nut from the existing oil screen and relocate the oil temperature bulb to this location. Torque to specs and secure.
- NOTE D: Capillary tube may be kept at present location provided sufficient space exists between the engine and firewall. To utilize the existing location, 1 ea. 90° Fitting (11), Temp Probe Adapter (12), Oil Temp Adapter Gasket (14), and 2 ea. Temp Probe Adapter Gasket (13a) must be used per installation drawings.
- 08. Remove the oil drain plug and relocate the oil temperature capillary tube and oil temp adapter using oil temp gasket (15) provided and safety wire

#### \*\*\*\* SEE WARNING (A) ABOVE \*\*\*\*

- 09. Using the horizontal oil filter mount (22a) or vertical oil filter mount (22b) as a drilling template, locate and drill mounting holes using a letter "F" drill.
- 10a. Secure vertical oil filter mount (22b) to Fwd side of firewall and doubler plate (23) to Aft side of firewall using bolts (24), washers (17), and locknuts (25). <u>OR</u>
- 10b. Secure oil filter base (18) to Fwd side of firewall and horizontal oil filter mount plate (22a) to rear side using bolts (16), washers (17) and secure with .032 MS20995-C safety wire.

#### \*\*\*\*\* SEE WARNING (B) ABOVE \*\*\*\*\*

- 11. Install any combination of fitting (19a), (19b), or (19c) into oil filter base (18). Mount to vertical oil filter mount (22b.) using bolts (16), washers (17), and secure with .032 MS20995-C safety wire.
- 12. Determine hose lengths and order appropriate hoses. Ex: P/N for a 24-7/8" long firesleeved hose with straight swivel fittings at each end of the hose is F13000010-0247.

#### \*\*\*\*\* SEE WARNING (C) ABOVE \*\*\*\*\*

- 13. Install 2 ea. hose assy's (26a) or (26b) connecting the "A" port on the filter adapter to the "A" port on the oil filter base and the "B" port on the filter adapter to the "B" port on the oil filter base per installation drawings and tighten hose fittings to 270-350 in/ lbs.
- 14. After hoses have taken natural set, and hose fittings tightened, tighten sealing ring (02a) with 2" Pin Spanner wrench. Do not overtighten. Secure with safety wire. Note: Approximately 1/4-1/2 turn is all that is needed to compress the Viton O-ring properly and no leakage will occur.
- 15. Install oil filter (21a), torque per instructions on oil filter and secure with safety wire.
- 16. Run engine and check for leaks.
- 17. Determine weight and balance, initiate 337 form, and update the equipment list.

#### **Installation Instructions No. AFC-K008-II-B**

Installation of the remote oil filter kit on the following engines using P/N 530003 Oil Screen Assy: C145, O300, GO300, & IO-360A, C, D, G, H, J, K

First Release 01/08/94 Amended 10/01/02

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 Continental screen assembly P/N 530003
- 02. Clean Screen housing and gasket surface. Assemble Engine Adapter (01a) as follows:
  - (A) Lubricate threads of Engine Adapter (01a) and Sealing Ring (02a) with suitable lubricant.
  - (B) Thread Sealing Ring (02a) onto Engine Adapter (01a) past smooth area, onto second set of threads.
  - (C) Install lightly oiled O-ring, (03). and position in the center of the smooth area between the upper and lower threads.
  - (D) Run Sealing Ring (02a) down against O-ring (03). [Assure O-ring is still centered in non threaded area.]
  - (E) Insert lightly oiled O-ring, (04) into groove inside of center opening of Engine Adapter (01a)
- 03. Install lightly oiled O-ring (06b) onto Oil Screen Adapter (05b) and insert into screen chamber of engine.

  When seated correctly, tube will extend above face of engine accessory case approximately 1/4". As adapter is inserted, resistance will be met. Continue pressure indicating compression of O-ring (06a)- until adapter is seated in lower screen seat.
- 04. Thread engine adapter (01a) into engine oil screen opening being sure that oil screen adapter (05b) is started in center of the opening. Screw in engine adapter (01a) until light resistance indicates that O-ring (03) is seated on the accessory case. Orient the engine adapter (01a) as necessary, being careful not to screw the engine adapter (01a) in or out more than 1/2 turn from present position. This assures that the O-Ring is still centered in the non threaded area. Do not tighten sealing ring yet.
- 05. Onto each bulkhead fitting (07a) or (07b), install in order 1 ea. bulkhead nut (08), boss gasket (09), and O-ring (10). If using a union (07c), install O-ring (10) only. When assembled correctly, the O-ring (10) is positioned in the center of the non-threaded area, between the upper set of threads and the lower set of threads on the bulkhead fitting. Install each completed assembly into the engine adapter (01a) and located towards intended direction of hoses.
- CAUTION: O-ring only seals in the center of the non-threaded area between the upper set threads and lower set of threads on the bulkhead fitting. Failure to position the O-ring in this area, may cause a small oil leak.
- 06. On C-145 & O-300 installations, remove oil scavenge screen (TCM P/N 5300050), drill & tap a 5/8" x 18 thread for future installation of oil temperature bulb, and reinstall in engine accy case. Transfer existing capillary temp probe adapter from oil pressure screen, to scavenge oil screen. Reroute oil temperature bulb into tachometer cable hole in firewall and install into adapter in scavenge oil screen and tighten.

CAUTION: Do not overtorque or break capillary tube otherwise oil temperature gage will have to be replaced.

NOTE D: Capillary tube may be kept at present location provided sufficient space exists between the engine and firewall. To utilize the existing location, 1 ea. optional 90° Fitting (11), Temp Probe Adapter (12), Oil Temp Adapter Gasket (14), and 2 ea. Temp Probe Adapter Gasket (13a) must be used per installation drawings.

#### \*\*\*\* SEE WARNING (A) ABOVE \*\*\*\*

- 07. Using the horizontal oil filter mount (22a) or vertical oil filter mount (22b) as a drilling template, locate and drill mounting holes using a letter "F" drill.
- 08a. Secure vertical oil filter mount (22b) to Fwd side of firewall and doubler plate (23) to Aft side of firewall using bolts (24), washers (17), and locknuts (25). OR
- 08b. Secure oil filter base (18) to Fwd side of firewall and horizontal oil filter mount plate (22a) to rear side using bolts (16), washers (17) and secure with .032 MS20995-C safety wire.

\*\*\*\*\* SEE WARNING (B) ABOVE \*\*\*\*\*

- 09. Install any combination of fitting (19a), (19b), or (19c) into oil filter base (18). Mount to vertical oil filter mount (22b.) using bolts (16), washers (17), and secure with .032 MS20995-C safety wire.
- 10. Determine hose lengths and order appropriate hoses. Ex: P/N for a 24-7/8" long firesleeved hose with straight swivel fittings at each end of the hose is F13000010-0247.

\*\*\*\*\* SEE WARNING (C) ABOVE \*\*\*\*\*

- 11. Install 2 ea. hose assy's (26a) or (26b) connecting the "A" port on the filter adapter to the "A" port on the oil filter base and the "B" port on the filter adapter to the "B" port on the oil filter base per installation drawings and tighten hose fittings to 270-350 in/ lbs.
- After hoses have taken natural set, and hose fittings tightened, tighten sealing ring (02a) with 2" Pin Spanner wrench. Do not overtighten. Secure with safety wire. Note: Approximately 1/4-1/2 turn is all that is needed to compress the O-ring properly and no leakage will occur.
- 13. Install oil filter (21a), torque per instructions on oil filter and secure with safety wire.
- 14. Run engine and check for leaks.
- 15. Determine weight and balance, initiate 337 form, and update the equipment list.

#### Installation Instructions No. AFC-K008-II-C

Installation of the remote oil filter kit on the following engines using P/N 538727 or 534862 Oil Screen Assy: [1-3/4" - 16 Thread]
O-470A, B, E, G, J, K, L, M, P, R, S, U,
IO-470C, D, E, F, G, H, J, K, L, M, N, P, R, S, U, V
IO-520A, D, E, F, J, K, L,
First Release 01/08/94

TSIO-520C, G, H, M, P, R, T and GTSIO-520C, D, F, H, K, L, M, N First Release 01/08/94 Amended 10/01/02

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 Continental screen assembly P/N 538727 or 534862.
- 02. Clean Screen housing and gasket surface. Assemble Engine Adapter (01a) as follows:
  - (A) Lubricate threads of Engine Adapter (01a) and Sealing Ring (02a) with suitable lubricant.
  - (B) Thread Sealing Ring (02a) onto Engine Adapter (01a) past smooth area, onto second set of threads.
  - (C) Install lightly oiled O-ring, (03), and position in the center of the smooth area between the upper and lower threads.
  - (D) Run Sealing Ring (02a) down against O-ring (03). [Assure O-ring is still centered in non threaded area.]
  - (E) Insert lightly oiled O-ring, (04) into groove inside of center opening of Engine Adapter (01a)
- 03. Insert Oil Screen Adapter (05c) without O-ring installed into screen chamber of engine. When seated, tube will extend above face of engine casting approximately 1/4". Trim as necessary to achieve the 1/4" height. Remove Oil Screen Adapter (05c) from engine
- 04. Lightly oil O-ring (06a), install onto Oil Screen Adapter (05c), and reinstall into oil screen chamber of oil pump. As adapter is inserted, resistance will be met. Continue pressure indicating compression of O-ring (06a) until adapter is firmly seated in lower screen seat.
- Thread engine adapter (01a) into engine oil screen opening being sure that oil screen adapter (05b) is started in center of the opening. Screw in engine adapter (01a) until light resistance indicates that O-ring (03) is seated on the accessory case. Orient the engine adapter (01a) as necessary, being careful not to screw the engine adapter (01a) in or out more than 1/2 turn from present position. This assures that the O-Ring is still centered in the non threaded area. Do not tighten sealing ring yet.
- 06. Onto each bulkhead fitting (07a) or (07b), install in order 1 ea. bulkhead nut (08), boss gasket (09), and O-ring (10). If using a union (07c), install O-ring (10) only. When assembled correctly, the O-ring (10) is positioned in the center of the non-threaded area, between the upper set of threads and the lower set of threads on the bulkhead fitting. Install each completed assembly into the engine adapter (01a) and located towards intended direction of hoses.

CAUTION: O-ring only seals in the center of the non-threaded area between the upper set threads and lower set of threads on the bulkhead fitting. Failure to position the O-ring in this area, may cause a small oil leak.

#### \*\*\*\* SEE WARNING (A) ABOVE \*\*\*\*

- 07. Using the horizontal oil filter mount (22a) or oil vertical filter oil filter mount (22b) as a drilling template, locate and drill mounting holes using a letter "F" drill.
- 8a. Secure vertical filter oil filter mount (22b) to Fwd side of firewall and doubler plate (23) to Aft side of firewall using bolts (24), washers (17), and locknuts (25).

OR

8b. Secure oil filter base (18) to Fwd side of firewall and horizontal oil filter mount (22a) to rear side using bolts (16), washers (17) and secure with .032 MS20995-C safety wire.

#### \*\*\*\* SEE WARNING (B) ABOVE \*\*\*\*

- 9. Install any combination of fitting (19a), (19b), or (19c) into oil filter base (18). Mount to vertical oil filter mount plate (22b.) using bolts (16), washers (17), and secure with .032 MS20995-C safety wire.
- Determine hose lengths and order appropriate hoses (26a) or (26b). Last 2 xx's in part number is the length of the hose in inches and the z is the length in eighths of an inch. The letter "F" at the beginning of the P/N denotes firesleeving. Ex: P/N for a 24-7/8" long firesleeved hose with straight swivel fittings at each end of the hose is F13000010-0247.

#### \*\*\*\* SEE WARNING (C) ABOVE \*\*\*\*

- 11. Install 2 ea. hose assy's (26a) or (26b) connecting the "A" port on the filter adapter to the "A" port on the oil filter base and the "B" port on the filter adapter to the "B" port on the oil filter base per installation drawings and tighten hose fittings to 270-350 in/ lbs.
- 12. After hoses have taken natural set, and hose fittings tightened, tighten sealing ring (02a) with 2" Pin Spanner wrench. Do not overtighten. Secure with safety wire. Note: Approximately 1/4 1/2 turn is all that is needed to compress the O-ring properly and no leakage will occur
- 13. Install oil filter (21b), torque per instructions on oil filter and secure with safety wire.
- 14. Run engine and check for leaks.
- 15. Determine weight and balance, initiate 337 form, and update the equipment list.

#### Installation Instructions No. AFC-K008-II-D

Installation of the remote oil filter kit on the following engines using P/N 536902 or A35996 Oil Screen Assy: [1-13/16" - 16 Thread]
O-470-11, & 15 as used in the Cessna 305 series aircraft
First Release 01/08/94
Amended 10/01/02

- 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 Continental screen assembly.
- 02. Clean Screen housing and gasket surface. Assemble Engine Adapter (01b) as follows:
  - (A) Lubricate threads of Engine Adapter (01a) and Sealing Ring (02a) with suitable lubricant.
  - (B) Thread Sealing Ring (02b) onto Engine Adapter (01a) past smooth area, onto second set of threads.
  - (C) Install lightly oiled O-ring, (03). and position in the smooth area between the upper and lower threads.
  - (D) Run Sealing Ring (02b) down against O-ring (03). [Assure O-ring is still centered in non threaded area.]
  - (E) Insert lightly oiled O-ring, (04) into groove inside of center opening of Engine Adapter (01b)
- 03. Insert Oil Screen Adapter (05d) without O-ring installed into screen chamber of engine. When seated, tube will extend above face of engine casting approximately 1/4". Trim as necessary to achieve the 1/4" height. Remove Oil Screen Adapter (05d) from engine
- 04. Lightly oil O-ring (06b), install onto Oil Screen Adapter (05d), and reinstall into oil screen chamber of oil pump. As adapter is inserted, resistance will be met. Continue pressure indicating compression of O-ring (06b) until adapter is firmly seated in lower screen seat.
- O5. Thread engine adapter (01b) into engine oil screen opening being sure that oil screen adapter (05d) is started in center of the opening. Screw in engine adapter (01b) until light resistance indicates that O-ring (03) is seated on the accessory case. Orient the engine adapter (01a) as necessary, being careful not to screw the engine adapter (01b) in or out more than 1/2 turn from present position. This assures that the O-Ring is still centered in the non threaded area. Do not tighten sealing ring yet.
- 06. Onto each bulkhead fitting (07a) or (07b), install in order 1 ea. bulkhead nut (08), boss gasket (09), and O-ring (10). If using a union (07c), install O-ring (10) only. When assembled correctly, the O-ring (10) is positioned in the center of the non-threaded area, between the upper set of threads and the lower set of threads on the bulkhead fitting. Install each completed assembly into the engine adapter (01a) and located towards intended direction of hoses.
- CAUTION: O-ring only seals in the center of the non-threaded area between the upper set threads and lower set of threads on the bulkhead fitting. Failure to position the O-ring in this area, may cause a small oil leak.
- 07. Install in order Temp probe adapter (12), gasket (13), 90° fitting (11), and gasket (13) and install into engine adapter (01b). Note: Oil temp adapters (14a) or (14b) may be interchanged depending on length of your oil temperature bulb.
  - \*\*\*\* SEE WARNING (A) ABOVE \*\*\*\*
- 08. Using the horizontal oil filter mount (22a) or vertical oil filter mount (22b) as a drilling template, locate and drill mounting holes using a letter "F" drill.
- 09a. Secure vertical oil filter mount (22b) to Fwd side of firewall and doubler plate (23) to Aft side of firewall using bolts (24), washers (17), and locknuts (25).

OR

- 09b. Secure oil filter base (18) to Fwd side of firewall and horizontal oil filter mount (22a) to rear side using bolts (16), washers (17) and secure with .032 MS20995-C safety wire.
  - \*\*\*\* SEE WARNING (B) ABOVE \*\*\*\*
- 10. Install any combination of fitting (19a), (19b), or (19c) into oil filter base (18). Mount to oil filter mount plate-vertical (22b) using bolts (16), washers (17), and secure with .032 MS20995-C safety wire.
- 11. Determine hose lengths and order appropriate hoses. Ex: P/N for a 24-7/8" long firesleeved hose with straight swivel fittings at each end of the hose is F13000010-0247.

\*\*\*\*\* SEE WARNING (C) ABOVE \*\*\*\*\*

- 12. Install 2 ea. hose assy's (26a) or (26b) connecting the "A" port on the filter adapter to the "A" port on the oil filter base and the "B" port on the filter adapter to the "B" port on the oil filter base per installation drawings and tighten hose fittings to 270-350 in/ lbs.
- 13. After hoses have taken natural set, and hose fittings tightened, tighten sealing ring (02a) with 2" Pin Spanner wrench. Do not overtighten. Secure with safety wire. Note: Approximately 1/4-1/2 turn is all that is needed to compress the O-ring properly and no leakage will occur.
- 14. Install oil filter (21b), torque per instructions on oil filter and secure with safety wire.
- 15. Run engine and check for leaks.
- 16. Determine weight and balance, initiate 337 form, and update the equipment list.

#### **Installation Instructions No. AFC-K008-II-E**

Installation of the remote oil filter kit on the following engines using P/N A25131 or A35996 Oil Screen Assy: E165, E185, E205 & E225

First Release 01/08/94 Amended 10/01/02

- Note A: Some hoses or wires may have to be rerouted so the oil filter assembly will fit into position. Reference and material per AC 43.13-1B & 2A.
- 01. Gain access to the engine compartment.
- 02. Remove from rear of accessory case (1ea.) P/N A25131 or A35996 oil screen assembly, P/N 40660 housing, and P/N A25132 check valve assy. Note: the A25132 check valve is only found on dry sump engines in older Bonanza's
- 03. Clean gasket surface on rear of accessory case.
- 04. Per installation drawing AFC-D-0030-A, Install lightly oiled O-ring (03b) onto Oil Divertor Ring (02c) and insert into bottom of oil gallery in rear of accessory case. Make sure nub is facing out. Note: Dry sump engines in the Bonanza's do not use this divertor ring. Reinstall A25132 check valve using new O-ring (03b) provided.
- 05. Install lightly oiled O-ring (06a) onto top of Oil Divertor Ring (02c) or A25132 check valve assy.
- 06. Using new oil adapter gasket (13b), install engine adapter (01c) onto rear of accessory case and torque to specs.

\*\*\*\*\* WARNING \*\*\*\*\* Do not over torque as binding of oil pump gears can occur.

- NOTE B: As adapter is inserted, resistance will be met. Continue pressure indicating compression of O-ring (06b)- until adapter (01c) is seated against gasket.
- 07. Onto each union (07c) install O-ring (10), insert into engine adapter(01c), and tighten.
- 08. Install new gasket (15) under the head of the 5/8" long (14a) or 2-1/4" long (14b) Temp probe adapter if used, into adapter-engine (01a). Note: Oil temp adapters (14a) or (14b) may be interchanged depending on length of your oil temperature bulb.
- 09. Install oil temperature bulb into oil temp adapter.
- NOTE C: If oil temp probe is not kept at present location on the particular aircraft, cap off hole with Continental P/N 532432 Oil drain plug and gasket (15).

#### \*\*\*\* SEE WARNING (A) ABOVE \*\*\*\*

- 10. Using the horizontal oil filter mount (22a) or vertical oil filter mount (22b) as a drilling template, locate and drill mounting holes using a letter "F" drill.
- 11a. Secure vertical oil filter mount plate (22b) to Fwd side of firewall and doubler plate (23) to Aft side of firewall using bolts (24), washers (17), and locknuts (25).

<u>OR</u>

11b. Secure oil filter base (18a) to Fwd side of firewall and horizontal oil filter mount (22a) to rear side using bolts (16), washers (17) and secure with .032 MS20995-C safety wire.

#### \*\*\*\*\* SEE WARNING (B) ABOVE \*\*\*\*\*

- 12. Install any combination of fitting (19a), (19b), or (19c) into oil filter base (18a). Mount to vertical oil filter mount(22b) using bolts (16), washers (17), and secure with .032 MS20995-C safety wire.
- 13. Determine hose lengths and order appropriate hoses (26a) or (26b). Last 2 xx's in part number is the length of the hose in inches and the z is the length in eighths of an inch. Ex: P/N for a 24-7/8" long firesleeved hose with straight swivel fittings at each end of the hose is F13000010-0247.

#### \*\*\*\* SEE WARNING (C) ABOVE \*\*\*\*\*

- 14. Install 2 ea. hose assy's (26a) or (26b) connecting the "A" port on the filter adapter to the "A" port on the oil filter base and the "B" port on the filter adapter to the "B" port on the oil filter base per installation drawings and tighten hose fittings to 270-350 in/ lbs.
- 15. Install oil filter (21a) or (21b), torque per instructions on oil filter and secure with safety wire.
- 16. Run engine and check for leaks.
- 17. Determine weight and balance, initiate 337 form, and update the equipment list.

#### Installation Instructions No. AFC-K008-II-F

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.

**TSIO550** 

- 01. Remove existing spin on oil filter from rear of engine.
- 02. Clean oil filter base and gasket surface.
- Verify oil filter stud in existing Continental oil filter base extends .375" above face of adapter. Using new oil filter adapter without O-ring installed as a reference, screw completely down onto existing stud and determine that new oil filter adapter bottoms out on existing Continental oil filter base. If not, trim oil filter stud to obtain this dimension.

  Remove new oil filter adapter.
- 04. Apply liberal amount of Dow Corning DC-4 silicon grease to Viton O-ring and place in machined groove in Adapter-Engine (01d) and reinstall onto the existing Continental oil filter adapter on rear of engine.
- 05. Screw adapter onto existing oil filter stud and position as required. Install fitting (07c), and O-ring (10) into Engine Adapter, torque to specifications and secure with .032 MS20995-C safety wire.

#### \*\*\*\*\* SEE WARNING (A) ABOVE \*\*\*\*\*

- 06. Using the horizontal oil filter mount (22a) or vertical oil filter mount (22b) as a drilling template, locate and drill mounting holes using a letter "F" drill.
- 07a. Secure vertical oil filter mount (22b) to Fwd side of firewall and doubler plate (23) to Aft side of firewall using bolts (24), washers (17), and locknuts (25).

#### OR

O7b. Secure oil filter base (18) to Fwd side of firewall and horizontal oil filter mount (22a) to rear side using bolts (16), washers (17) and secure with .032 MS20995-C safety wire.

#### \*\*\*\* SEE WARNING (B) ABOVE \*\*\*\*

- 08. Install any combination of fitting (19a), (19b), or (19c) into oil filter base (18). Mount to vertical oil filter mount (22b.) using bolts (16), washers (17), and secure with .032 MS20995-C safety wire.
- 09. Determine hose lengths and order appropriate hoses. Ex: P/N for a 24-7/8" long firesleeved hose with straight swivel fittings at each end of the hose is F13000010-0247.

#### \*\*\*\* SEE WARNING (C) ABOVE \*\*\*\*

- 10. Install 2 ea. hose assy's (26a) or (26b) connecting the "A" port on the filter adapter to the "A" port on the oil filter base and the "B" port on the filter adapter to the "B" port on the oil filter base per installation drawings and tighten hose fittings to 270-350 in/ lbs.
- 11. Install oil filter (21b), torque per instructions on oil filter and secure with safety wire.
- 12. Run engine and check for leaks.
- 13. Determine weight and balance, initiate 337 form, and update the equipment list.

#### **Installation Instructions No. AFC-K008-II-G**

Installation of the remote oil filter kit on Boeing Model 75 series aircraft with Continental W-670 radial engines.

First Release 01/08/94 Amended 10/01/02

- 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 left engine cowl (top and door) and bottom engine cowl.
- 02. Drain oil (optional).
- 03. Remove engine oil return line P/N A75N1-3004 (note this may be a length of 1" MIL 6000 hose). This line runs from the engine to the oil tank.
- 04. Turn the AN842-16D on top of the oil tank to where it points to the engine primer mounted in the step.
- 05. Remove the screw that goes through the end of the firewall stiffener P/N 75-2912. This is located on the left side of the firewall on the aft side. Loosen the screw that goes through the firewall stiffener and the tab welded on the fuselage. This screw is 4-5/16" inboard of the removed screw. (see attached drawing). Drill the hole of the removed screw to 1/4" (.250).
- 06. Measure 3-9/16" out from a vertical line drawn from the C/L of the left engine mount studs. Using reinforcing plate P/N DBL-10 as a template drill the other 5 holes 1/4" (.250). The previously drilled hole is the middle outboard hole.
- 07. Slip reinforcement plate (DBL-10) between the firewall and stiffeners. The long side goes up.
- 08. Bolt oil filter base support angle P/N OFM-11 to firewall and reinforcement plate using (6ea) provided AN 4-5A bolts.

#### \*\*\*\*\* SEE WARNING (B) ABOVE \*\*\*\*\*

- 09. Install provided AN842-816D fittings in the oil filter base. The fitting in B hole points horizontal with the filter base. The other points over the first fitting.
- Bolt oil filter base (OFB-15) to oil Filter Mount Plate, Vertical (22b) using provided AN4H-4A bolts. Oil inlet hole "B" is positioned to the front of the aircraft. Secure bolts with safety wire.
- 11. Install one 25" piece of 1" MIL 6000H hose using provided QS100M16H hose clamps. The "B" hole is the oil inlet and goes to the oil pump. The "A" port is the oil outlet and it goes to the oil tank. Tighten clamps.
- 12. Install oil filter as per manufacturers specifications and safety wire.
- 13. Using the 2" piece of 3/4" Mil 6000 hose provided, secure to bottom of oil filter with (1) QS100M52H 3-3/4" clamp obtained locally, and locate between bottom of oil filter and existing firewall. This will strengthen the oil filter mount and dampen the vibrations of the engine.
- 14. Safety wire drain and refill oil tank with 4.4 gals. oil. (If step #2 is omitted this step is not necessary).
- 15. Run engine and check for leaks.
- 16. Determine weight and balance, initiate 337 form, and update the equipment list.

#### Installation Instructions No. AFC-K008-II-K

# Installation of the remote oil filter kit on the following engines having oil cooler accessory pad C75, C85, C90, C125, O-200, IO240

- Note A: Some hoses or wires may have to be rerouted so the oil filter assembly will fit into position. Reference and material per AC 43.13-1B & 2A.
- 01. Gain access to the engine compartment.
- 02. Remove the Oil Cooler Bypass Plate from the LH rear side of the engine case.
- 03. Clean gasket surface on the engine case.
- 04. Install new P/N 652070 gasket.
- 05. Install CON-16 Adapter, and secure with MS20365-542A locknuts & AN960-516 washers provided.
- 06. Install M83248/1-908 O-rings onto AN815-8D-SP fittings. Apply light film of oil onto O-Ring and insert into CON-16 Adapter. Once oring is seated, tighten fitting 1/2-3/4 turn.

NOTE: Do not overtighten fitting. Blue hex of fitting should not come in contact with CON-16 adapter.

#### \*\*\*\* SEE WARNING (A) ABOVE \*\*\*\*

- 07. Using the horizontal oil filter mount (22a) or vertical oil filter mount (22b) as a drilling template, locate and drill mounting holes using a letter "F" drill.
- 08a. Secure vertical oil filter mount plate (22b) to Fwd side of firewall and doubler plate (23) to Aft side of firewall using bolts (24), washers (17), and locknuts (25).

<u>OR</u>

08b. Secure oil filter base (18a) to Fwd side of firewall and horizontal oil filter mount (22a) to rear side using bolts (16), washers (17) and secure with .032 MS20995-C safety wire.

#### \*\*\*\*\* SEE WARNING (B) ABOVE \*\*\*\*\*

- 09. Install any combination of fittings (19f), (19g), or (19h) into oil filter base (18b). Mount to vertical oil filter mount(22b) using bolts (16), washers (17), and secure with .032 MS20995-C safety wire.
- Determine hose lengths and order appropriate hoses (26a) or (26b). Last 2 xx's in part number is the length of the hose in inches and the z is the length in eighths of an inch. Ex: P/N for a 24-7/8" long firesleeved hose with straight swivel fittings at each end of the hose is F13000010-0247. Most likely you will need hoses that have straight swivel fittings at one end and 90° fittings a the opposite end.
- TIP: Aircraft hoses are measured tip to tip or flare to flare. The easiest way to properly measure a hose is take and old chunk of garden hose and touch one end of the hose to the fitting on the the engine adapter and one end of the hose to the fitting on the oil filter mount on the the firewall, and trim the hose to length until you have the routing the way you like it and enough extra for engine torque and vibration to be I/A/W AC 43.13-1B & 2A.. Measure this length of the sample garden hose and whatever it measures, this is the length you want to give to Airwolf or any hose shop in the world to have custom made TSO'd aircraft hoses built for your specific installation.

#### \*\*\*\* SEE WARNING (C) ABOVE \*\*\*\*

- 11. Install 2 ea. hose assy's (26a) or (26b) connecting the "A" port on the CON-16 adapter to the "A" port on the OFB-10 oil filter base and the "B" port on the CON-16 filter adapter to the "B" port on the OFB-10 oil filter base per installation drawings and tighten hose fittings to 270-350 in/lbs.
- 12. Install oil filter (21a) or (21b), torque per instructions on oil filter and secure with safety wire.
- 13. Run engine and check for leaks.
- 14. Determine weight and balance, initiate 337 form, and update the equipment list.

		INSTRUCTIONS FOR (	CONTINUED AIRW	VORTHINESS
A/C	Make :	Model:	S/N:	Reg#:
Revi	sion: Date:			
		st are Instructions for Continued Airworth tober 7, 1998), are applicable to the aircra		th FAA Handbook Bulletin for Airworthiness g equipment is installed:
SYS	TEM: Airwolf Re	mote Mount Oil Filter System.		Airwolf Filter Corp 15369 Madison Rd Middlefield, OH 44062
ITEM		CHECKL	IST INFORMATION	
1.	the content, scope,			nt that has been altered. Include and other information on autions, units of measurement, reverenced publications,
	Comment:			al engine
	Aircraft Model		Engine Model	
2.	Description:	Of the major alteration, it's function incl	uding an explanation of it'	s interface with other systems, if any.
	Comment: Installa	tion of Airwolf Remote Mounted Oil Filte	er Kit P/N AFC-K008	
3.	Control: Operation	n information: Or special procedures if an	y.	
	Comment: Pre-heatemperature is 30°		ecommended prior to starti	ing the engine during periods of cold weather where the
4.	Servicing informat	ion: Such as types of fluids used, servicin	g points, and location of ac	ecess panels, as appropriate.
	changed at least or		n with Airwolf AFC-470 o	Service Bulletin M87-12 Rev 1 or higher. Oil should be il filter cutter at each oil change and inspect for metal
5.	ed, cleaned, lubrica This section can re	ated, adjusted, tested, including applicable	e wear tolerances and work e equipment installed when	nich each of the major alteration components are inspect- recommended at each scheduled maintenance period. re appropriate e.g. functional checks, repairs, inspections.
	Comment: Inspect before flight.	t for security at each annual or 100 hr. ins	spection. After any oil char	nge, always ground run the engine and check for leaks
6.	Trouble shooting in be taken.  Comment:N/A	nformation: Information describing proba	bly malfunctions, how to re	ecognize those malfunctions, and the remedial actions to
7.	sary precautions.		to the manufacture's instruc	f removing and replacing products, parts, and any neces- ctions to make required tests, trim checks, alignment,
	Comments:N/A			
8.	Diagrams: Of acco	ess plates and information, if needed, to g	ain access for inspection.	
	Comment:N/A			
9.	Special inspection	requirements: Such as X-ray, ultrasonic t	esting, or magnetic particle	e inspection, if required.
	Comment:N/A			
10.	Application of pro	tective treatments: To the affected area af	ter inspection and/or maint	tenance, if any.
	Comment: N/A			

11.	Data: Relative to structural fasteners such as type, torque, and installation requirements if any.
	Comment:N/A
12.	List of special tools: Special tools that are required, if any.
	Comment:N/A
13.	For commuter category aircraft: The following additional information must be furnished, as applicable:  A. Electrical Loads  B. Methods of balancing flight controls.  C. Identification of primary and secondary structures>  D. Special repair methods applicable to the airplane.
	Comment:N/A
14.	Recommended overhaul periods: Are required to be noted on the ICA when an overhaul period has been set by the manufacturer of a component, or equipment. If there is no overhaul period, the ICA should state for item 14: "No additional overhaul time limitations."
	Comment:N/A
15.	Airworthiness Limitation Section: Include any "approved" airworthiness limitations identified by the manufacturer of FAA type Certificate Holding Office (e.g., An STC incorporated in a larger field approved major alteration may have an airworthiness limitation.) The FAA inspector should not establish, alter, or cancel airworthiness limitations without coordinating with the appropriate FAA type Certificate Holding Office. If there are no changes to the airworthiness limitations, the ICA should state for item 15: "No additional airworthiness limitations" or "Not Applicable."
	Comment:N/A
16.	Revision: This section should include information on how to revise the ICA. For example, a letter will be submitted to the local FSDO with a copy of the revised FAA Form 337 and revised ICA. The FAA inspection accepts the change by signing Block 3 and including the following statement: "The attached revised/new Instructions for Continued Airworthiness (date) for the above aircraft or component major alteration have been accepted by the FAA, superseding the Instructions for Continued Airworthiness (date)." Once the revision has been accepted, a maintenance record entry will be made, identifying the revision, its location, date of the Form 337.
	Comment: A letter will be submitted to the local FSDO with a copy of the revised FAA Form 337 and revised ICA. The FAA inspector accepts the change by signing Block 3 and including the following statement: "The attached revised/new Instructions for Continued Airworthiness (date) for the above aircraft or component major alteration have been accepted by the FAA, superseding the Instructions for Continued Airworthiness (date)." Once the revision has been accepted, a maintenance record entry will be made, identifying the revision, its location, date of the Form 337.
ing ac alt the	plementation and Record Keeping: For major alterations performed in accordance with FAA Field Approval policy, the owner operator operator gunder part 91 is responsible for ensuring that the ICA is made part of the applicable section 91.409 inspection program for their aircraft. This is complished when a maintenance entry is made in the aircraft's maintenance record in accordance with section 43.9. This entry recorded the major eration 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 exaircraft's inspection/maintenance requirements.
Fo	r major alterations performed in accordance with field approval on air carrier aircraft, the air carrier operator is responsible for ensuring that

**INSTRUCTIONS FOR CONTINUED AIRWORTHINESS** 

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).

applicable certificate-holding district office (CHDO).

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

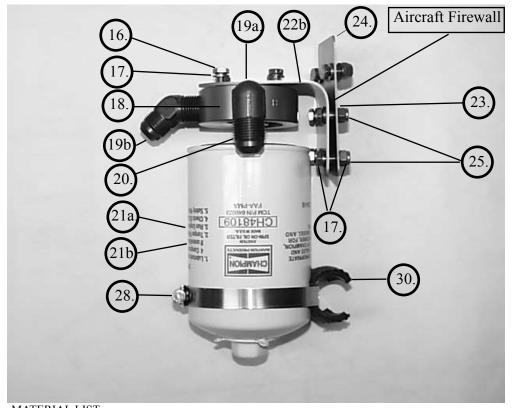
For air carrier aircraft inspected using an annual/100 hour inspection program, a reference to the new ICA will be made in the aircraft's maintenance record in accordance with section 43.9. This entry records the major alteration and identifies the original ICA location (e.g., ICA are located/attached 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-0027

22a.

OFM-10

## **VERTICAL INSTALLATION**



MATERIA	AL LIST		
<u>Index</u>	Part Number	<u>Description</u>	<u>Qty</u>
16.	AN4H-4A	Drilled Head Bolts	(4)
17.	AN960-416	Flat Washers	(16)
18.	OFB-11	Oil Filter Base	(1)
19a.	MS20822-10D	90° Fitting	(1)
19b.	MS20823-10D	45° Fitting	(1)
19c.	AN816-10D	Union	(Opt)
20.	OFS-10	Oil Filter Stud	(1)
21a. or	AFC-500	Std Oil Filter [Champion CH48108]	(1)
21b.	AFC-600	Long Oil Filter [Champion CH48109]	(1)
22b.	OFM-11	Vertical Oil Filter Mount	(1)
23.	DBL-10	Doubler Plate	(1)
24.	AN4-5A	Bolt	(6)
25.	MS20365-428A	Locknut	(6)
28.	MIL6000-3/4-2	Vibration Dampener	(1)
30.	QS100M52H	Dampner Clamp	(1)

## HORIZONTAL INSTALLATION



MAIEKIA	AL LIST		
<u>Index</u>	Part Number	<u>Description</u>	Qty
16.	AH4H-4A	Drilled Head Bolts	(4)
17.	AN960-416	Flat Washers	(16)
18.	OFB-11	Oil Filter Base	(1)
19a.	MS20822-10D	90° Fitting	(1)
19b.	MS20823-10D	45° Fitting	(1)
19c.	AN816-10D	Union	(Opt)
20.	OFS-10	Oil Filter Stud	(1)
21a. or	AFC-500	Std Oil Filter [Champion CH48108]	(1)
21b.	AFC-600	Long Oil Filter [Champion CH48109]	(1)

# Airwolf Filter Corp.

Horizontal Oil Filter Mount

(1)

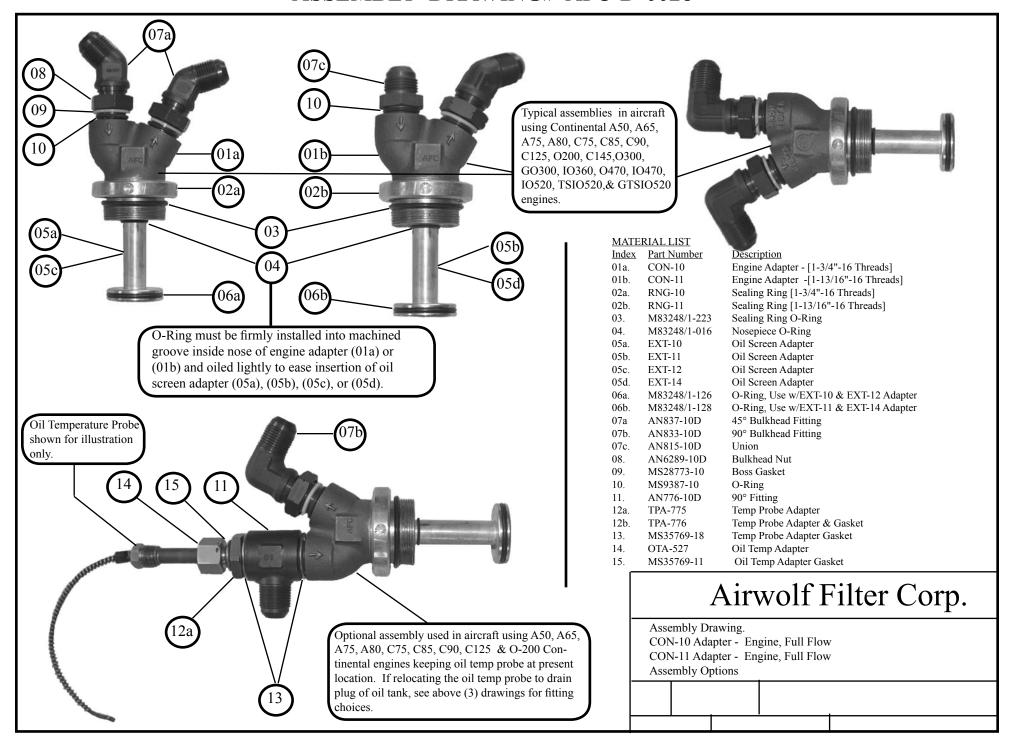
Assembly Drawing.

OFM-10 Oil Filter Mount Plate - Horizontal,

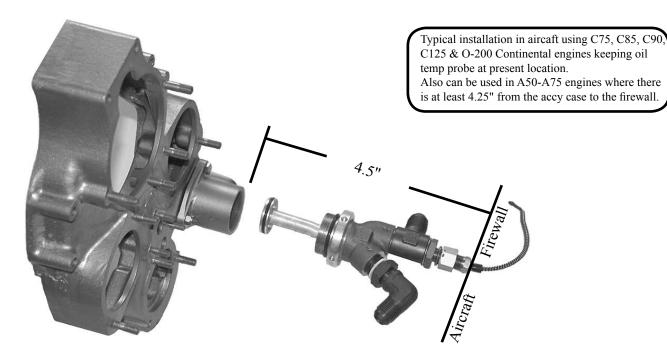
OFM-11 Oil Filter Mount Plate - Vertical,

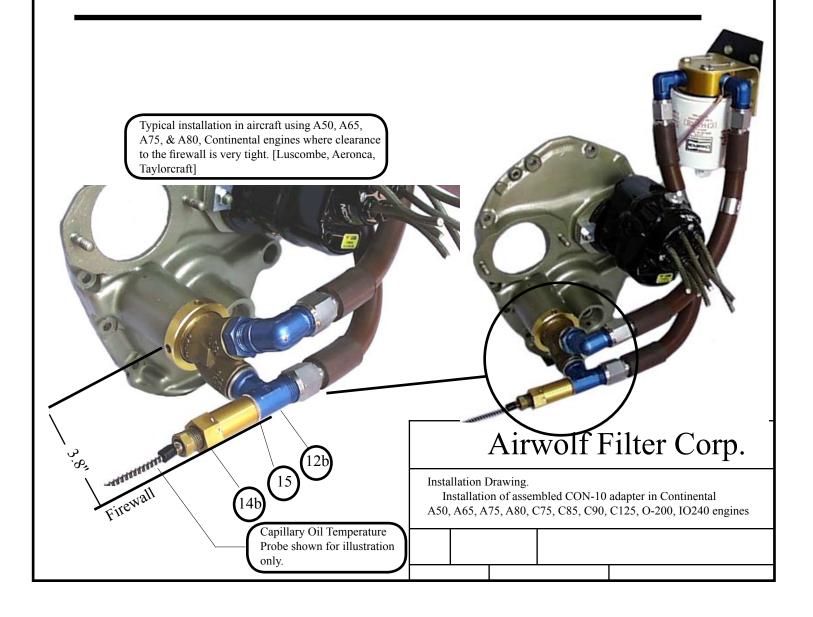
DBL-10 Doubler Plate & OFB-11 Oil Filter Base

### ASSEMBLY DRAWING# AFC-D-0028

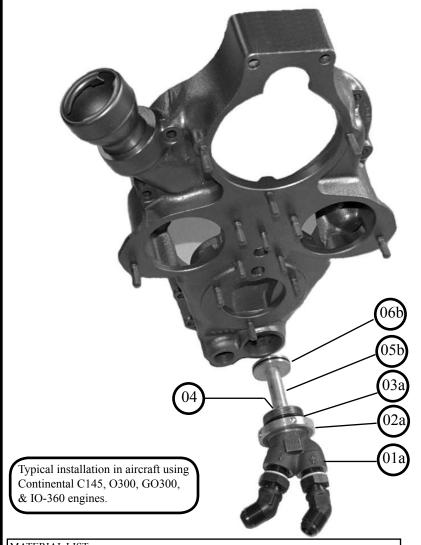






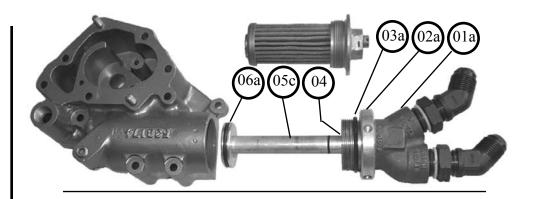


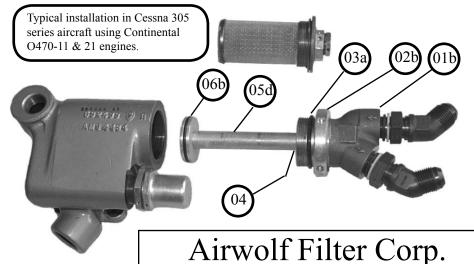
### INSTALLATION DRAWING# AFC-D-0030



MATERIAL LIST Index Part Number Description CON-10 Engine Adapter - [1-3/4"-16 Threads] 01a. CON-11 Engine Adapter - [1-13/16"-16 Threads] 02a. RNG-10 Sealing Ring [1-3/4"-16 Threads] Sealing Ring [1-13/.16"-16 Threads] RNG-11 M83248/1-223 Sealing O-Ring 03a. M83248/1-016 O-Ring, Nosepiece Oil Screen Adapter - C145/O-300/GO-300/IO-360 EXT-11 EXT-12 Oil Screen Adapter - O470/IO470/IO520 052. Oil Screen Adapter - O470-7/11/13 05b. EXT-14 M83248/1-126 O-Ring, Use w/EXT-12 M83248/1-128 O-Ring, Use w/EXT-11 & EXT-14 Adapter

Typical installation in aircraft using Continental O470, IO470, IO520, TSIO520 & GTSIO520 engines



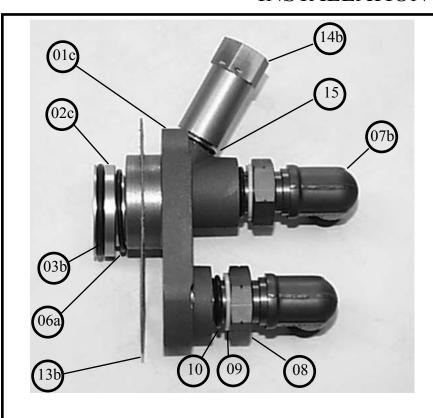


All woll Filler Corp.

Installation of assembled CON-10 adapter in C145, O300, GO300, IO360, O470, IO470, IO520, TSIO520 & GTSIO520 Continental engines, and

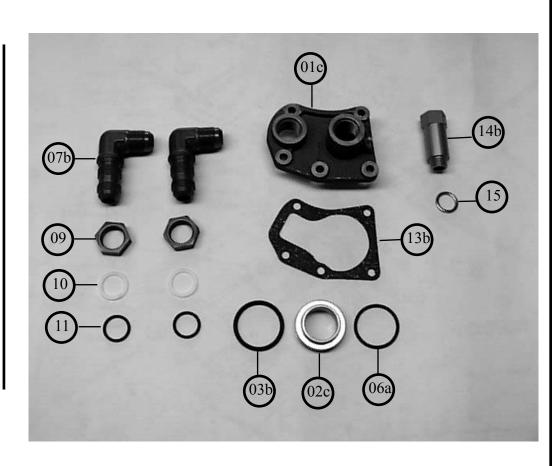
Installation of CON-11 adapter in O470--11 & 15 Continental engines,

## INSTALLATION DRAWING# AFC-D-0030-A



Typical installation as used in Continental E165/E185,E205 & E225 engines.

MATERIAL LIST Index Part Number Description 01c. CON-12 Engine Adapter - "E" Series 02c. RNG-17 Oil Diverter Ring, "E" Series O-Ring, Oil Diverter Ring 03b. M83248/1-222 O-Ring, Oil Diverter Ring 06a. M83248/1-126 90° Bulkhead Fitting 07b. AN833-10D AN6289-10D Bulkhead Nut 09. MS28773-10 Boss Gasket 10. MS9387-10 O-Ring 13b. 352067 Engine Adapter Gasket 14b. OTA-2250 Oil Temp Adapter 15. MS35769-11 Oil Temp Adapter Gasket



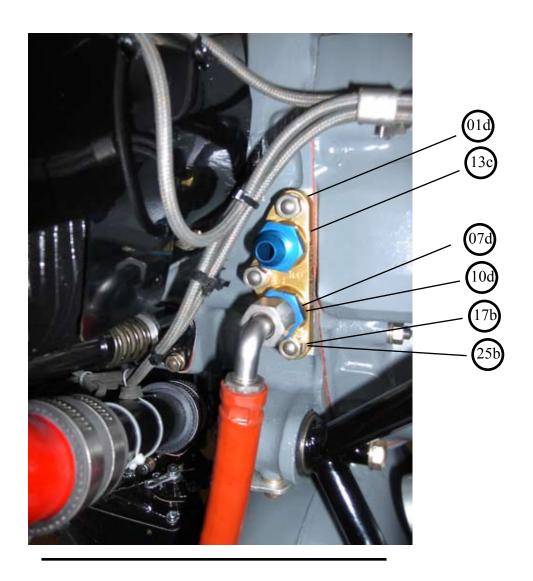
Revisions

# Airwolf Filter Corp.

Installation of CON-12 adapter in E165, E185, E205, & E225 Continental engines,

Revisions

## INSTALLATION DRAWING# AFC-D-0030-B



#### MATERIAL LIST

<u>Index</u> <u>Part Number</u> Description Engine Adapter 01d. CON-16 AN919-15D-SP 07d. Fittng 10d. M83248/1-910 O-Ring Gasket 13c 652070 17b. AN960-513 Washer 25b. MS20365-524A Nut

# Airwolf Filter Corp.

Installation of CON-16 adapter in C85 - IO240 Continental engines,

01/08/07 Dwg# AFC-D-0030-B



# **Reference Data**

for

**AFC-K008** 

for

STC SA00079NY Oil Filter Kit

AFC-K008

Dated: 4/2/2021

Airwolf Filter, Corp 12801 Hwy. 75 N. OKMULGEE, OK 74447

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# **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-K008 remote mount oil filter kit incorporates our STC approved for all Continental powered aircraft up to 450 hp. The STC paperwork provided with this kit utilizes the approved model list (AML) system instituted by the FAA.

Upon installing this filter kit, you will need to fill out and file a 337 form for this installation referencing the P/N AFC- K008 kit and the STC# SA00079NY. 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  $90^{\circ}$ , Straight to  $45^{\circ}$ , etc. allowing for engine torque and vibration per AC43.13.

If our instructions do not specifically say you can do something, 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. <u>Do not</u>** over tighten the fittings on Adapters or housings. This can distort or crack housings, causing oil to leak.
- **4.** It is <u>EXTREMELY</u> 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) \*\*\*\*\*

<u>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.</u>

#### \*\*\*\*\* WARNING (B) \*\*\*\*\*

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

#### \*\*\*\*\* WARNING (C) \*\*\*\*\*

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

#### \*\*\*\*\* WARNING (D) \*\*\*\*\*

DO NOT, UNDER ANY CIRCUMSTANCES, CONNECT AN OIL COOLER THAT DOES NOT HAVE A THERMOSATIC CONTROL VALVE, IN SERIES WITH OUR REMOTE MOUNT OIL FILTER KIT. OUR FILTER KIT IS A "FULL FLOW" OIL FILTERING SYSTEM WHICH MEANS ALL OF THE OIL IS FILTERED ALL OF THE TIME. DURING STARTUP ON A COLD DAY, THE COLD THICK OIL WILL PARTIALLY BYPASS A CH48108 OR CH48109 OIL FILTER UNTIL THE VISCOSITY DROPS AND THE THIN OIL CAN FLOW THROUGH THE FILTER MEDIA THEREBY ALLOWING OIL TO CIRCULATE IN THE ENGINE. IF AN OIL COOLER HAS NO THERMOSTATIC BYPASS BUILT INTO THE UNIT, WHEN THE OIL FILTER GOES INTO PARTIAL BYPASS, THIS THICK SLUG OF OIL WILL BE STOPPED, OR SEVERELY RESTRICTED AT THE OIL COOLER. ONE OF THREE THINGS WILL HAPPEN:

- 1. THE OIL COOLER WILL SEPARATE IN HALF.
- 2. THE OIL FILTER GASKET WILL FAIL AND/OR THE OIL FILTER WILL EXPLODE.
- 3. THE OIL HOSE WILL FAIL

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

#### **NOTE:**

**COMMON TO ALL INSTALLATIONS** 

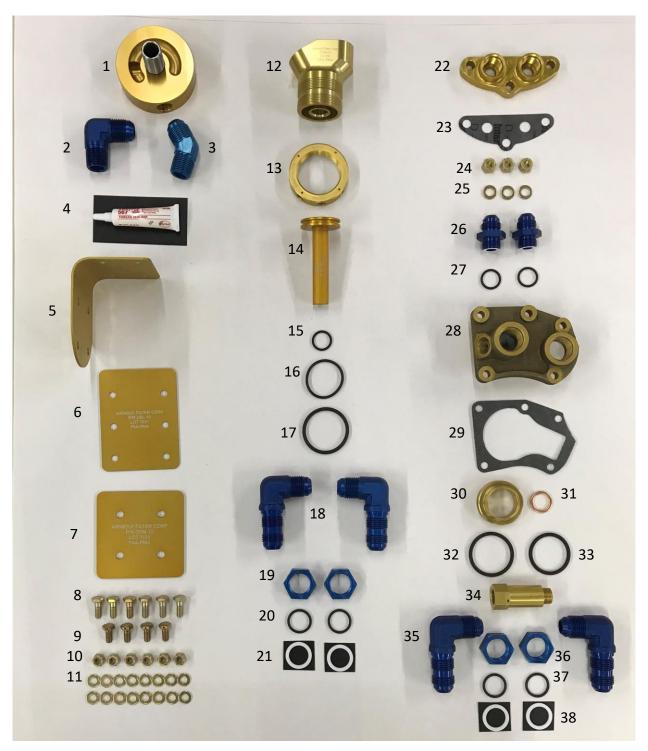
SOME HOSES OR WIRES MAY HAVE TO BE REROUTED SO THE OIL FILTER ASSEMBLY WILL FIT INTO POSTION. REFERENCE AND MATERIAL PER AC 43.13-1B & 2A.

#### Illustrated Parts List No. AFC-K008-PL

Applicability: Co

Continental Engines using P/N A3568 Oil Screen Assy, Fixed Wing Aircraft with A50, A65, A75, A80, C75, C85, C90, C125, O-200, & IO-240 Engines. Having firewalls of .021" ASTM A527 galvanized steel or equivalent.

Date: 4-2-2021



Parts Illustration Continental Engine Series

Figure 1

#### Illustrated Parts List No. AFC-K008-PL

Applicability: Continental Engines using P/N A3568 Oil Screen Assy,

Fixed Wing Aircraft with A50, A65, A75, A80, C75, C85, C90, C125, O-200, & IO-240 Engines.

Having firewalls of .021" ASTM A527 galvanized steel or equivalent.



Parts Illustration Continental Engine Series

Figure 2

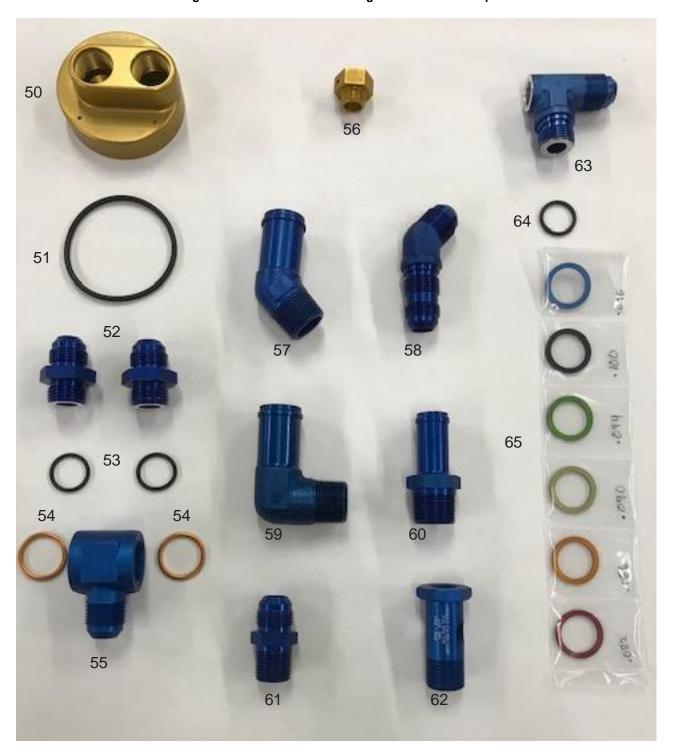
#### Illustrated Parts List No. AFC-K008-PL

Applicability: Continental Engines using P/N A3568 Oil Screen Assy,

Fixed Wing Aircraft with A50, A65, A75, A80, C75, C85, C90, C125, O-200, & IO-240 Engines.

Date: 4-2-2021

Having firewalls of .021" ASTM A527 galvanized steel or equivalent.



Parts Illustration Continental Engine Series

Figure 3

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# Parts List No. AFC-K008-PL (see Illustrations)

Figure	Index	Part Number	Description	Quantity
1	1	OFB-10	Oil Filter Base – 8 Ports, Use with Con-16 Adapter	1
1	1	OFB-11	Oil Filter Base – 10 Ports	1
1	1	OFB-15	Oil Filter Base – 12 Ports	1
1	2	MS20822-8D	Fitting Elbow 90°, Use with Con-16 Adapter	1
1	2	MS20822-10D	Fitting Elbow 90°	1
1	3	MS20823-8D	Fitting Elbow 45°, Use with Con-16 Adapter	1
1	3	MS20823-10D	Fitting Elbow 45°	1
1	4	567	Loctite Thread Sealant	1
1	5	OFM-11	Oil Filter Mount, Vertical	1
1	6	DBL-10	Doubler Plate	1
1	7	OFM-10	Oil Filter Mount, Horizontal	1
1	8	AN4-5A	Bolts	6
1	9	AN4H-4A	Bolts, Drilled Head	4
1	10	MS20365-428A	Locknuts	6
1	11	AN960-416	Washers, Flat	16
1	12	CON-10	Adapter, Engine Full Flow 1-3/4-16 UNF Thd	1
1	12	CON-11	Adapter, Engine Full Flow 1-13/16-16 UNF Thd	1
1	13	RNG-10	Sealing Ring, 1-3/4-16 UNF Thread.	1
1	13	RNG-11	Sealing Ring, 1-13/16-16 UNF Thread.	1
1	14	EXT-10	Adapter, Oil Screen,	1
-			A50,A65,A75,A80,C75,C85,C90,C125,O-200,IO240	
1	14	EXT-11	Adapter, Oil Screen,	1
			C145, O300, GO300, & IO-360A,C,D,G,H,J,K	
1	14	EXT-12	Adapter, Oil Screen,	1
			O-470A,B,E,G,J,K,L,M,P,R,S,U,	
			IO-470C,D,E,F,G,H,J,K,L,M,N,P,R,S,U,V,	
			IO-520A,D,E,F,J,K,L, / TSIO-520C,G,H,M,P,R,T,	
1	14	EXT-14	Adapter, Oil Screen, O470-11&15	1
1	15	M83248/1-016	O-Ring, Nose Piece	1
1	16	M83248/1-126	O-Ring, Use w/EXT-10 or -12 Adapter, Oil Screen or RNG-	1
			17 Oil Diverter Ring	
1	16	M83248/1-128	O-Ring, Use w/EXT-11 or -14 Adapter, Oil Screen	1
1	17	M83248/1-223	O-Ring, Sealing Ring	1
1	18	AN833-10D-SP	Fitting, Bulkhead 90°	2
1	19	AN6289-10D	Nut, Bulkhead	2
1	20	M83248/1-910	O-Ring, -10	2
1	21	MS28773-10	Gasket, Boss Teflon	2
1	22	CON-16	Adapter, Engine, C85-IO240	1
1	23	652070 or	Gasket, CON-16	1
		Equivalent		
1	24	MS20365-524A	Locknuts, Use with Con-16 Adapter	3
1	25	AN960-524	Washers, Flat, Use with Con-16 Adapter	3
1	26	AN815-8D-SP	Fitting, Union	2
1	26	AN815-10D-SP	Fitting, Union	2

# Parts List No. AFC-K008-PL (see Illustrations)

(continued)

Figure	Index	Part Number	Description	Quantity
1	27	M83248/1-908	O-Ring, -8	2
1	28	CON-12	Adapter, Engine, Continental E Series	1
1	29	352067or	Gasket, CON-12	1
		Equivalent		
1	30	RNG-17	Ring, Oil Divertor "E" Series	1
1	31	MS35769-11	Gasket, Oil Temp Adapter	1
1	32	M83248/1-126	O-Ring, Oil Divertor Ring	1
1	33	M83248/1-222	O-Ring, Oil Divertor Ring	1
1	34	OTA-2250	Adapter, Oil Temp, Long 2-1/4"	1
1	35	AN833-8D-SP	Fitting, Bulkhead 90°	2
1	36	AN6289-8D	Nut, Bulkhead	2
1	37	M83248/1-910	O-Ring, -10	2
1	38	MS28773-8	Gasket, Boss Teflon	2
2	39	AFC-600	Oil Filter, or Equivalent [Champion CH48109]	1
2	40	AFC-500	Oil Filter, or Equivalent [Champion CH48108]	1
2	41	QS100M52H	Clamp, Hose 3-1/4" for Dampener	1
2	42	MIL6000-3/4-2	Hose, 1" x 2"	1
2	43	TBD-0XXX	Fire Sleeved Hose	opt
2	44	MIL6000-5/8	Hose, 5/8" x 24"	2
2	45	MIL6000-3/4	Hose, 3/4" x 24"	2
2	46	MIL6000-1	Hose, 1" x 25"	2
2	47	QS100M16H	Clamp, Hose 1"	4
2	48	QS100M12H	Clamp, Hose ¾"	4
2	49	QS100M10H	Clamp, Hose 5/8"	4
3	50	OFB-17	Oil Filter Base	1
3	51	M83248/1-230	O-Ring,	1
3	52	AN919-15D-SP	Fitting, Union, Use with CON-16	2
3	53	M83248/1-910	O-Ring, -10	2
3	54	MS35769-18	Gasket, Temp Probe Adapter	2
3	55	AN776-10D	Fitting, 90°	1
3	56	OTA-527	Adapter, Oil Temp, Short 5/8"	1
3	57	AN844-8	Fitting, 45°, NPT to Hose	2
3	57	AN844-10	Fitting, 45°, NPT to Hose	2
3	57	AN844-16	Fitting, 45°, NPT to Hose	2
3	58	AN837-10D-SP	Fitting, 45°	2
3	59	AN842-8D	Fitting, 90°, NPT to Hose	2
3	59	AN842-10D	Fitting, 90°, NPT to Hose	2
3	59	AN842-16D	Fitting, 90°, NPT to Hose	2
3	60	AN840-8D	Fitting, Straight, NPT to Hose	2
3	60	AN840-10D	Fitting, Straight, NPT to Hose	2
3	60	AN840-16D	Fitting, Straight, NPT to Hose	2
3	61	AN816-10D	Fitting, Nipple, NPT to Flare	2
3	62	TPA-775	Adapter, Temp Probe	1
3	63	TPA-776	Adapter, Temp Probe	1
3	64	M83248/1-910	O-Ring, -10	1
3	65	TPA-776	Gasket, Washer Set, Adapter, Temp Probe	1

#### Installation Instructions AFC-K008-II-A

Applicability: Continental Engines using P/N A3568 Oil Screen Assy,

Fixed Wing Aircraft with A50, A65, A75, A80, C75, C85, C90, C125, O-200, & IO-240 Engines.

- 1. Remove the Continental screen assembly P/N A3568, Clean Screen housing and gasket surface.
- 2. Per Illustrated Parts List K008-PL, Assemble Engine Adapter (12) as follows:
  - (A) Lubricate threads of Engine Adapter (12) and Sealing Ring (13) with suitable lubricant.
  - (B) Thread Sealing Ring (13) onto Engine Adapter (12) past smooth area, onto second set of threads.
  - (C) Install lightly oiled O-Ring, (17), and position in the smooth area between the upper and lower threads.
  - (D) Run Sealing Ring (13) down against O-ring. [Assure O-ring is still centered in non-threaded area.]
  - (E) Insert lightly oiled O-ring, (15) into groove inside of center opening of Engine Adapter (12)
- 3. Per Illustrated Parts List K008-PL, install lightly oiled O-ring (16) onto Oil Screen Adapter EXT-10 (14) and insert into screen chamber of engine.
  - When seated correctly, tube will extend above face of engine accessory case approximately 1/4". As adapter is inserted, resistance will be met. Continue pressure indicating compression of O-Ring (16) until adapter is seated in lower screen seat. (see Assembly Drawing AFC-D-0029)
- 4. Per Illustrated Parts List K008-PL, thread engine adapter (12) into engine oil screen opening being sure that oil screen adapter (14) is started in center of the opening. Screw in engine adapter (12) until light resistance indicates that O-ring (16) is seated on the accessory case. Orient the engine adapter (12) as necessary, being careful not to screw the engine adapter (12) in or out more than 1/2 turn from present position. This assures that the O-Ring is still centered in the non-threaded area. Do not tighten sealing ring yet. (see Assembly Drawing AFC-D-0029)
- 5. Per Assembly Drawing AFC-D-0028, onto each bulkhead fitting (7), install in order 1 ea. bulkhead nut (8), boss gasket (9), and O-Ring (10). If using a union, install O-Ring (10) only. When assembled correctly, the O-Ring (10) is positioned in the center of the non-threaded area, between the upper set of threads and the lower set of threads on the bulkhead fitting. Install each completed assembly into the engine adapter (1) and located towards intended direction of hoses.
  - CAUTION: O-ring only seals in the center of the non-threaded area between the upper set of threads and lower set of threads on the bulkhead fitting. Failure to position the O-Ring in this area, may cause a small oil leak.
- 6. Per Illustrated Parts List K008-PL, on A50 & A65 engines, remove the oil drain plug and relocate the oil temperature capillary tube and oil temp adapter using oil temp gasket (31) provided and safety wire.
- 7. On A75, A80, C75, C85, C90, & O200 engines, remove one of the Continental P/N 532432 plugs located in the front of the engine which caps off access to the oil gallery. Remove the brass oil temp adapter nut from the existing oil screen and relocate the oil temperature bulb to this location. Torque to specs and secure.
- NOTE A: Per Illustrated Parts List K008-PL, capillary tube may be kept at present location provided enough space exists between the engine and firewall. To utilize the existing location, 1 ea. 90° Fitting (55), Temp Probe Adapter (62), Oil Temp Adapter Gasket (54), must be used. If there is not enough space to utilize the existing location, per installation drawing (AFC-D-0029). Use TPA-776 Fitting (3), Temp Probe Adapter (1), Oil Temp Adapter Gasket (2), Select the appropriate thickness of part number TPA-776 Washer/Spacer (4) that will allow you to tighten the TPA-776 adapter (3) at the correct orientation for oil line attachment.
- 8. Per Illustrated Parts List K008-PL, Remove the oil drain plug and relocate the oil temperature capillary tube and oil temp adapter using oil temp gasket (31) provided and safety wire.
- 9. Per Illustrated Parts List K008-PL, Using the horizontal oil filter mount (7) or vertical oil filter mount (5) as a drilling template, locate and drill mounting holes using a letter "F" drill.

#### Installation Instructions AFC-K008-II-A

Applicability: Continental Engines using P/N A3568 Oil Screen Assy,

Fixed Wing Aircraft with A50, A65, A75, A80, C75, C85, C90, C125, O-200, & IO-240 Engines. (continued)

10a. Per Illustrated Parts List K008-PL, Secure vertical oil filter mount (5) to Fwd side of firewall and doubler plate (6) to Aft side of firewall using bolts (8), washers (11), and locknuts (10).) (see Assembly Drawing AFC-D-0024). OR

10b. Per Illustrated Parts List K008-PL, Secure oil filter base (1) to Fwd side of firewall and horizontal oil filter mount plate (7) to rear side using bolts (9), washers (11) and secure with .032 MS20995-C safety wire.) (see Assembly Drawing AFC-D-0025).

#### \*\*\*\*\* SEE WARNING (A) \*\*\*\*\*

11. Per Illustrated Parts List K008-PL, Install any combination of fitting (2), (3), or (61) into oil filter base (1). Mount to vertical oil filter mount (5) using bolts (9), washers (11), and secure with .032 MS20995-C safety wire.

#### \*\*\*\* SEE TIP "How to get correct length of hose" \*\*\*\*\*

12. Determine hose lengths and order appropriate hoses. Ex: P/N for a 24-7/8" long fire sleeved hose with straight swivel fittings at each end of the hose is F13000010-0247.

#### \*\*\*\*\* SEE WARNING (B) \*\*\*\*\*

- 13. Per Assembly Drawing AFC-D-0029, Install 2 ea. hose assy's connecting the "A" port on the engine adapter to the "A" port on the oil filter base and the "B" port on the engine adapter to the "B" port on the oil filter base and tighten hose fittings to 270-350 in/lbs.
- 14. Per Assembly Drawing AFC-D-0028, After hoses have taken natural set, and hose fittings tightened, tighten sealing ring (2) with 2" Pin Spanner wrench. Do not overtighten. Secure with safety wire. Note: Approximately 1/4-1/2 turn is all that is needed to compress the Viton O-ring properly and no leakage will occur.
- 15. Install oil filter, torque per instructions on oil filter and secure with safety wire.
- 16. Run engine and check for leaks.
- 17. Determine weight and balance, initiate 337 form, and update the equipment list.

#### Installation Instructions AFC -K008-II-B

Applicability: Continental Engines using P/N 530003 Oil Screen Assy,

Fixed Wing Aircraft with C145, O-300, GO-300, & IO-360A, C, D, G, H, J, K, Engines.

- 1. Remove the Continental screen assembly P/N 530003, Clean Screen housing and gasket surface.
- 2. Per Illustrated Parts List K008-PL, Assemble Engine Adapter (12) as follows:
  - (A) Lubricate threads of Engine Adapter (12) and Sealing Ring (13) with suitable lubricant.
  - (B) Thread Sealing Ring (13) onto Engine Adapter (12) past smooth area, onto second set of threads.
  - (C) Install lightly oiled O-ring, (17). and position in the center of the smooth area between the upper and lower threads.
  - (D) Run Sealing Ring (13) down against O-ring. [Assure O-ring is still centered in non-threaded area.]
  - (E) Insert lightly oiled O-ring, (15) into groove inside of center opening of Engine Adapter (12)
- 3. Install lightly oiled O-ring (16) onto Oil Screen Adapter EXT-11 (14) and insert into screen chamber of engine. When seated correctly, tube will extend above face of engine accessory case approximately 1/4". As adapter is inserted, resistance will be met. Continue pressure indicating compression of O-ring (16) until adapter is seated in lower screen seat.
- 4. Per Illustrated Parts List K008-PL, Thread engine adapter (12) into engine oil screen opening being sure that oil screen adapter (14) is started in center of the opening. Screw in engine adapter (12) until light resistance indicates that O-ring (16) is seated on the accessory case. Orient the engine adapter (12) as necessary, being careful not to screw the engine adapter (12) in or out more than 1/2 turn from present position. This assures that the O- Ring is still centered in the non-threaded area. Do not tighten sealing ring yet. (see Assembly Drawing AFC-D-0030)
- Per Illustrated Parts List K008-PL, onto each bulkhead fitting (18) or (58), install in order 1 ea. bulkhead nut (19), boss gasket (21), and O-ring (20). If using a union (26), install O-ring (20) only. When assembled correctly, the O-ring (20) is positioned in the center of the non-threaded area, between the upper set of threads and the lower set of threads on the bulkhead fitting. Install each completed assembly into the engine adapter (12) and located towards intended direction of hoses.
- CAUTION: O-ring only seals in the center of the non-threaded area between the upper set of threads and lower set of threads on the bulkhead fitting. Failure to position the O-ring in this area, may cause a small oil leak.
- 6. On C-145 & O-300 installations, remove oil scavenge screen (TCM P/N 5300050), drill & tap a 5/8" x 18 thread for future installation of oil temperature bulb, and reinstall in engine accessory case. Transfer existing capillary temp probe adapter from oil pressure screen, to scavenge oil screen. Reroute oil temperature bulb into tachometer cable hole in firewall and install into adapter in scavenge oil screen and tighten.
- CAUTION: Do not over torque or break capillary tube otherwise oil temperature gage will have to be replaced.
- NOTE D: Per Assembly Drawing AFC-D-0028, capillary tube may be kept at present location provided sufficient space exists between the engine and firewall. To utilize the existing location, 1 ea. optional 90° Fitting (11), Temp Probe Adapter (12), Oil Temp Adapter Gasket (13), and 2 ea. Temp Probe Adapter Gasket (13) must be used per assembly drawing.
- 7. Per Illustrated Parts List K008-PL, using the horizontal oil filter mount (7) or vertical oil filter mount (5) as a drilling template, locate and drill mounting holes using a letter "F" drill.
- 08a. Per Illustrated Parts List K008-PL, secure vertical oil filter mount (5) to Fwd side of firewall and doubler plate (6) to Aft side of firewall using bolts (8), washers (11), and locknuts (10) (see Assembly Drawing AFC-D-0024). OR
- 08b. Per Illustrated Parts List K008-PL, secure oil filter base (1) to Fwd side of firewall and horizontal oil filter mount plate (7) to rear side using bolts (9), washers (11) and secure with .032 MS20995-C safety wire.) (see Assembly Drawing AFC-D-0025).

#### Installation Instructions AFC -K008-II-B

Applicability: Continental Engines using P/N 530003 Oil Screen Assy,

Fixed Wing Aircraft with C145, O-300, GO-300, & IO-360A, C, D, G, H, J, K, Engines. (continued)

#### \*\*\*\*\* SEE WARNING (A) \*\*\*\*\*

9. Per Illustrated Parts List K008-PL, install any combination of fitting (2), (3), or (61) into oil filter base (1). Mount to vertical oil filter mount (5.) using bolts (9), washers (11), and secure with .032 MS20995-C safety wire.

#### \*\*\*\* SEE TIP "How to get correct length of hose" \*\*\*\*\*

Determine hose lengths and order appropriate hoses. Ex: P/N for a 24-7/8" long fire sleeved hose with straight swivel fittings at each end of the hose is F13000010-0247.

#### \*\*\*\*\* SEE WARNING (B) \*\*\*\*\*

- Per Illustrated Parts List K008-PL, install 2 ea. hose assy's (43) connecting the "A" port on the engine adapter to the "A" port on the oil filter base and the "B" port on the engine adapter to the "B" port on the oil filter base per installation drawings and tighten hose fittings to 270-350 in/lbs.
- 12. Per Installation Drawing AFC-D-0030, After hoses have taken natural set, and hose fittings tightened, tighten sealing ring (2) with 2" Pin Spanner wrench. Do not overtighten. Secure with safety wire. Note: Approximately 1/4-1/2 turn is all that is needed to compress the O-ring properly and no leakage will occur.
- 13. Install oil filter, torque per instructions on oil filter and secure with safety wire.
- 14. Run engine and check for leaks.
- 15. Determine weight and balance, initiate 337 form, and update the equipment list.

#### Installation Instructions AFC -K008-II-C

Applicability: Continental Engines using P/N 538727 or 534862 Oil Screen Assy, [1-3/4"-16 Thread] Fixed Wing Aircraft with: O-470 A, B, E, G, J, K, L, M, P, R, S, U,

IO-470C, D, E, F, G, H, J, K, L, M, N, P, R, S, U, V IO-520A, D, E, F, J, K, L TSIO-520C, G, H, M, P, R, T GTSIO-520C, D, F, H, K, L, M, N

IO-550 Engines.

1. Remove the Continental screen assembly P/N 538727 or 534862, clean Screen housing and gasket surface.

- 2. Per Illustrated Parts List K008-PL, Assemble Engine Adapter (12) as follows:
  - (A) Lubricate threads of Engine Adapter (12) and Sealing Ring (13) with suitable lubricant.
  - (B) Thread Sealing Ring (13) onto Engine Adapter (12) past smooth area, onto second set of threads.
  - (C) Install lightly oiled O-ring, (17). and position in the center of the smooth area between the upper and lower threads.
  - (D) Run Sealing Ring (13) down against O-ring. [Assure O-ring is still centered in non-threaded area.]
  - (E) Insert lightly oiled O-ring, (15) into groove inside of center opening of Engine Adapter (12)
- 3. Insert Oil Screen Adapter EXT-12 (14) without O-ring installed into screen chamber of engine. When seated, tube will extend above face of engine casting approximately 1/4". Trim as necessary to achieve the 1/4" height. Remove Oil Screen Adapter (14) from engine
- 4. Per Illustrated Parts List K008-PL, lightly oil O-ring (16), install onto Oil Screen Adapter (14), and reinstall into oil screen chamber of oil pump. As adapter is inserted, resistance will be met. Continue pressure indicating compression of O-ring (16) until adapter is firmly seated in lower screen seat.
- 5. Thread engine adapter (12) into engine oil screen opening being sure that oil screen adapter (14) is started in center of the opening. Screw in engine adapter (12) until light resistance indicates that O-ring (16) is seated on the accessory case. Orient the engine adapter (12) as necessary, being careful not to screw the engine adapter (12) in or out more than 1/2 turn from present position. This assures that the O-Ring is still centered in the non-threaded area. Do not tighten sealing ring yet (see Installation Drawing AFC-D-0030).
- 6. Per Assembly Drawing AFC-D-0028, onto each bulkhead fitting (7a) or (7b), install in order 1 ea. bulkhead nut (8), boss gasket (9), and O-ring (10). If using a union (7c), install O-ring (10) only. When assembled correctly, the O-ring (10) is positioned in the center of the non-threaded area, between the upper set of threads and the lower set of threads on the bulkhead fitting. Install each completed assembly into the engine adapter (1) and located towards intended direction of hoses.

CAUTION: O-ring only seals in the center of the non-threaded area between the upper set of threads and lower set of threads on the bulkhead fitting. Failure to position the O-ring in this area, may cause a small oil leak.

- 7. Per Illustrated Parts List K008-PL, using the horizontal oil filter mount (7) or oil vertical filter oil filter mount (5) as a drilling template, locate and drill mounting holes using a letter "F" drill.
- 8a. Per Illustrated Parts List K008-PL, secure vertical filter oil filter mount (5) to Fwd side of firewall and doubler plate (6) to Aft side of firewall using bolts (8), washers (11), and locknuts (10). (see Assembly Drawing AFC-D-0024)

  OR
- 8b. Per Illustrated Parts List K008-PL, secure oil filter base (1) to Fwd side of firewall and horizontal oil filter mount (7) to rear side using bolts (9), washers (11) and secure with .032 MS20995-C safety wire. (see Assembly Drawing AFC-D-0025)

# Installation Instructions AFC -K008-II-C

Applicability:

Continental Engines using P/N 538727 or 534862 Oil Screen Assy, [1-3/4"-16 Thread] Fixed Wing Aircraft with: O-470 A, B, E, G, J, K, L, M, P, R, S, U,

IO-470C, D, E, F, G, H, J, K, L, M, N, P, R, S, U, V IO-520A, D, E, F, J, K, L TSIO-520C, G, H, M, P, R, T GTSIO-520C, D, F, H, K, L, M, N IO-550 Engines. (continued)

#### \*\*\*\*\* SEE WARNING (A) \*\*\*\*\*

9. Install any combination of fitting (2), (3), or (61) into oil filter base (1). Mount to vertical oil filter mount plate (5) using bolts (9), washers (11), and secure with .032 MS20995-C safety wire.

#### \*\*\*\* SEE TIP "How to get correct length of hose" \*\*\*\*\*

Determine hose lengths and order appropriate hoses (43). Last 2 xx's in part number is the length of the hose in inches and the z is the length in eighths of an inch. The letter "F" at the beginning of the P/N denotes fire sleeving. Ex: P/N for a 24-7/8" long fire sleeved hose with straight swivel fittings at each end of the hose is F13000010-0247.

#### \*\*\*\*\* SEE WARNING (B) \*\*\*\*\*

- Per Illustrated Parts List K008-PL, install 2 ea. hose assy's (43) connecting the "A" port on the engine adapter to the "A" port on the oil filter base and the "B" port on the engine adapter to the "B" port on the oil filter base per installation drawings and tighten hose fittings to 270-350 in/ lbs.
- 12. Per Installation Drawing AFC-D-0030, after hoses have taken natural set, and hose fittings tightened, tighten sealing ring (2) with 2" Pin Spanner wrench. Do not overtighten. Secure with safety wire. Note: Approximately 1/4 1/2 turn is all that is needed to compress the O-ring properly and no leakage will occur.
- 13. Install oil filter, torque per instructions on oil filter and secure with safety wire.
- 14. Run engine and check for leaks.
- 15. Determine weight and balance, initiate 337 form, and update the equipment list.

#### Installation Instructions AFC -K008-II-D

Applicability: Continental Engines using P/N 536902 or A35996 Oil Screen Assy, [1-13/16"-16 Thread] Fixed Wing Aircraft with: O-470-11, & 15 as used in the Cessna 305 Series Aircraft,

- 1. Remove the Continental screen assembly, clean Screen housing and gasket surface.
- 2. Per Illustrated Parts List K008-PL, Assemble Engine Adapter (12) as follows:
- a. Lubricate threads of Engine Adapter (12) and Sealing Ring (13) with suitable lubricant.
- b. Thread Sealing Ring (13) onto Engine Adapter (12) past smooth area, onto second set of threads.
- c. Install lightly oiled O-ring, (17), and position in the center of the smooth area between the upper and lower threads.
- d. Run Sealing Ring (13) down against O-ring. [Assure O-ring is still centered in non-threaded area.]
- e. Insert lightly oiled O-ring, (15) into groove inside of center opening of Engine Adapter (12)
- 3. Insert Oil Screen Adapter EXT-14 (14) without O-ring installed into screen chamber of engine. When seated, tube will extend out of the face of the engine casting approximately 1/4". Trim as necessary to achieve the 1/4" height. Remove Oil Screen Adapter (14) from engine
- 4. Per Illustrated Parts List K008-PL, lightly oil O-ring (16), install onto Oil Screen Adapter (14), and reinstall into oil screen chamber of oil pump. As adapter is inserted, resistance will be met. Continue pressure indicating compression of O-ring (16) until adapter is firmly seated in lower screen seat.
- 5. Thread engine adapter (12) into engine oil screen opening being sure that oil screen adapter (14) is started in center of the opening. Screw in engine adapter (12) until light resistance indicates that O-ring (16) is seated on the accessory case. Orient the engine adapter (12) as necessary, being careful not to screw the engine adapter (12) in or out more than 1/2 turn from present position. This assures that the O-Ring is still centered in the non-threaded area. Do not tighten sealing ring yet. (see Installation Drawing AFC-D-0030).
- 6. Per Assembly Drawing AFC-D-0028, onto each bulkhead fitting (7a) or (7b), install in order 1 ea. bulkhead nut (8), boss gasket (9), and O-ring (10). If using a union (7c), install O-ring (10) only. When assembled correctly, the O-ring (10) is positioned in the center of the non-threaded area, between the upper set of threads and the lower set of threads on the bulkhead fitting. Install each completed assembly into the engine adapter (1) and located towards intended direction of hoses.
- 7. CAUTION: O-ring only seals in the center of the non-threaded area between the upper set of threads and lower set of threads on the bulkhead fitting. Failure to position the O-ring in this area, may cause a small oil leak.
- 8. Per Assembly Drawing AFC-D-0028, install in order Temp probe adapter (12), gasket (13), 90° fitting (11), and gasket (13) and install into engine adapter (1b). Note: Oil temp adapters (14) short or long may be interchanged depending on length of your oil temperature bulb.
- 9. Per Illustrated Parts List K008-PL, using the horizontal oil filter mount (7) or vertical oil filter mount (5) as a drilling template, locate and drill mounting holes using a letter "F" drill.
- Per Illustrated Parts List K008-PL, secure vertical oil filter mount (5) to Fwd side of firewall and doubler plate (6) to Aft side of firewall using bolts (8), washers (11), and locknuts (10). (see Assembly Drawing AFC-D-0024)

<u>OR</u>

10b. Per Illustrated Parts List K008-PL, Secure oil filter base (1) to Fwd side of firewall and horizontal oil filter mount (7) to rear side using bolts (9), washers (11) and secure with .032 MS20995-C safety wire. (see Assembly Drawing AFC-D-0025)

#### \*\*\*\*\* SEE WARNING (A) \*\*\*\*\*

Install any combination of fitting (2), (3), or (61) into oil filter base (1). Mount to oil filter mount plate-vertical (5) using bolts (9), washers (11), and secure with .032 MS20995-C safety wire.

#### Installation Instructions AFC -K008-II-D

Applicability: Continental Engines using P/N 536902 or A35996 Oil Screen Assy, [1-13/16"-16 Thread]
Fixed Wing Aircraft with: O-470-11, & 15 as used in the Cessna 305 Series Aircraft,

(continued)

# \*\*\*\* SEE TIP "How to get correct length of hose" \*\*\*\*\*

12. Determine hose lengths and order appropriate hoses. Ex: P/N for a 24-7/8" long fire sleeved hose with straight swivel fittings at each end of the hose is F13000010-0247.

# \*\*\*\*\* SEE WARNING (B) \*\*\*\*\*

- 13. Per Illustrated Parts List K008-PL, install 2 ea. hose assy's (43) connecting the "A" port on the engine adapter to the "A" port on the oil filter base and the "B" port on the engine adapter to the "B" port on the oil filter base per installation drawings and tighten hose fittings to 270-350 in/ lbs.
- 14. Per Installation Drawing AFC-D-0030, after hoses have taken natural set, and hose fittings tightened, tighten sealing ring (2) with 2" Pin Spanner wrench. Do not overtighten. Secure with safety wire. Note: Approximately 1/4-1/2 turn is all that is needed to compress the O-ring properly and no leakage will occur.
- 15. Install oil filter, torque per instructions on oil filter and secure with safety wire.
- 16. Run engine and check for leaks.
- 17. Determine weight and balance, initiate 337 form, and update the equipment list.

# Installation Instructions AFC -K008-II-E

Applicability: Continental Engines using P/N A25131 or A35996 Oil Screen Assy, Fixed Wing Aircraft with E165, E185, E205, & E225 Engines.

- 1. Gain access to the engine compartment.
- 2. Remove from rear of accessory case (1ea.) P/N A25131 or A35996 oil screen assembly, P/N 40660 housing, and P/N A25132 check valve assy. Note: the A25132 check valve is only found on dry sump engines in older Bonanza's
- 3. Clean gasket surface on rear of accessory case.
- 4. Per installation drawing AFC-D-0031, install lightly oiled O-ring (3b) onto Oil Divertor Ring (2c) and insert into bottom of oil gallery in rear of accessory case. Make sure nub is facing out. Note: Dry sump engines in the Bonanza's do not use this divertor ring. Reinstall A25132 check valve using new O-ring (0b) provided.
- 5. Per installation drawing AFC-D-0031, install lightly oiled O-ring (6a) onto top of Oil Divertor Ring (2c) or A25132 check valve assy.
- 6. Using new engine adapter gasket (13b), install engine adapter (1c) onto rear of accessory case and torque to specs75-85 in lbs. in three increments.

\*\*\*\*\* WARNING \*\*\*\*\* Do not over torque as binding of oil pump gears can occur.

# NOTE B: As adapter is inserted, resistance will be met. Continue pressure indicating compression of O-ring (6a)- until adapter (1c) is seated against gasket.

- 7. Per Illustrated Parts List K008-PL, onto each union (26) install O-ring (27), insert into engine adapter (28), and tighten.
- 8. Per Illustrated Parts List K008-PL, install new gasket (31) under the head of the 5/8" long (56) or 2-1/4" long (34) Temp probe adapter if used, into engine adapter (28). Note: Oil temp adapters (56) or (34) may be interchanged depending on length of your oil temperature bulb.
- 9. Install oil temperature bulb into oil temp adapter.

# NOTE C: If oil temp probe is not kept at present location on the aircraft, cap off hole with Continental P/N 532432 Oil drain plug and gasket (31).

- 10. Per Illustrated Parts List K008-PL, using the horizontal oil filter mount (7) or vertical oil filter mount (5) as a drilling template, locate and drill mounting holes using a letter "F" drill.
- Per Illustrated Parts List K008-PL, Secure vertical oil filter mount plate (5) to Fwd side of firewall and doubler plate (6) to Aft side of firewall using bolts (8), washers (11), and locknuts (10). (see Assembly Drawing AFC-D-0024)

OR

11b. Per Illustrated Parts List K008-PL, Secure oil filter base (1) to Fwd side of firewall and horizontal oil filter mount (7) to rear side using bolts (9), washers (11) and secure with .032 MS20995-C safety wire. (see Assembly Drawing AFC-D-0025)

#### \*\*\*\*\* SEE WARNING (A) \*\*\*\*\*

12. Install any combination of fitting (2), (3), or (61) into oil filter base (1). Mount to vertical oil filter mount (5) using bolts (9), washers (11), and secure with .032 MS20995-C safety wire.

# \*\*\*\* SEE TIP "How to get correct length of hose" \*\*\*\*

13. Determine hose lengths and order appropriate hoses (43). Last 2 xx's in part number is the length of the hose in inches and the z is the length in eighths of an inch. Ex: P/N for a 24-7/8" long fire sleeved hose with straight swivel fittings at each end of the hose is F13000010-0247.

#### \*\*\*\*\* SEE WARNING (B) \*\*\*\*\*

- 14. Install 2 ea. hose assy's (43) connecting the "A" port on the engine adapter to the "A" port on the oil filter base and the "B" port on the engine adapter to the "B" port on the oil filter base per installation drawings and tighten hose fittings to 270-350 in/lbs.
- 15. Install oil filter, torque per instructions on oil filter and secure with safety wire.
- 16. Run engine and check for leaks.
- 17. Determine weight and balance, initiate 337 form, and update the equipment list.

# Installation Instructions AFC -K008-II-F

Applicability: Continental Engines using:

P/N 641574, 641575, 641639, 646253, 649217, 653489, or 653490 Oil Filter Adapters

Fixed Wing Aircraft with: TSIO-360, A, B, C, D, E, F, GB, H, JB, KB, LB, MB,

LTSIO-360, E, KB, O/IO-470 ALL IO-520B, C, M,

TSIO-520B, D, E, J, K, L, N, R, U, BE, VB, EB

IO-550B, C TSIO-550 Engines.

1. Remove existing spin on oil filter from rear of engine.

- 2. Clean oil filter base and gasket surface.
- 3. Per Illustrated Parts List K008-PL, verify oil filter stud in existing Continental oil filter base extends .375" above face of adapter. Using new engine adapter (50), without O-ring installed as a reference, screw completely down onto existing stud and determine that new engine adapter (50), bottoms out on existing Continental oil filter base. If not, trim oil filter stud to obtain this dimension.

Remove new engine adapter (50).

- 4. Per Illustrated Parts List K008-PL, apply liberal amount of Dow Corning DC-4 silicon grease to Viton O-ring (51), and place in machined groove in engine adapter (51) and reinstall onto the existing Continental oil filter adapter on rear of engine.
- 5. Per Illustrated Parts List K008-PL, screw engine adapter (50), onto existing oil filter stud and position as required. Install fitting (52), and O-ring (53) into Engine Adapter, torque to specifications and secure engine adapter with .032 MS20995-C safety wire.
- 6. Per Illustrated Parts List K008-PL, Using the horizontal oil filter mount (7) or vertical oil filter mount (5) as a drilling template, locate and drill mounting holes using a letter "F" drill.
- 07a. Per Illustrated Parts List K008-PL, Secure vertical oil filter mount (5) to Fwd side of firewall and doubler plate (6) to Aft side of firewall using bolts (8), washers (11), and locknuts (10). (see Assembly Drawing AFC-D-0024)
  - <u>OR</u>
- 07b. Per Illustrated Parts List K008-PL, Secure oil filter base (1) to Fwd side of firewall and horizontal oil filter mount (7) to rear side using bolts (9), washers (11) and secure with .032 MS20995-C safety wire. (see Assembly Drawing AFC-D-0025)
  - \*\*\*\*\* SEE WARNING (A) \*\*\*\*\*
- 8. Install any combination of fitting (2), (3), or (61) into oil filter base (1). Mount to vertical oil filter mount (5) using bolts (9), washers (11), and secure with .032 MS20995-C safety wire.
  - \*\*\*\* SEE TIP "How to get correct length of hose" \*\*\*\*
- 9. Determine hose lengths and order appropriate hoses. Ex: P/N for a 24-7/8" long fire sleeved hose with straight swivel fittings at each end of the hose is F13000010-0247.
  - \*\*\*\*\* SEE WARNING (B) \*\*\*\*\*
- 10. Install 2 ea. hose assy's (43) connecting the "A" port on the engine adapter to the "A" port on the oil filter base and the "B" port on the engine adapter to the "B" port on the oil filter base per installation drawings and tighten hose fittings to 270-350 in/lbs.
- 11. Install oil filter, torque per instructions on oil filter and secure with safety wire.
- 12. Run engine and check for leaks.
- 13. Determine weight and balance, initiate 337 form, and update the equipment list.

#### Installation Instructions AFC -K008-II-G

Applicability: Installation of the remote oil filter kit on Boeing Model 75 series aircraft with Continental W-670 Radial engines.

- 1. Remove left engine cowl (top and door) and bottom engine cowl.
- 2. Drain oil (optional).
- 3. Remove engine oil return line P/N A75N1-3004 (note this may be a length of 1" Mil 6000 hose). This line runs from the engine to the oil tank.
- 4. Turn the AN842-16D on top of the oil tank to where it points to the engine primer mounted in the step.
- 5. Remove the screw that goes through the end of the firewall stiffener P/N 75-2912. This is located on the left side of the firewall on the aft side. Loosen the screw that goes through the firewall stiffener and the tab welded on the fuselage. This screw is approximately 4-3/4" inboard of the removed screw. (see attached drawing AFC-D-0019). Drill the hole of the removed screw to 1/4" (.250).
- 6. Measure 3-9/16" out from a vertical line drawn from the C/L of the left engine mount studs. Using reinforcing plate P/N DBL-10 (6) as a template drill the other 5 holes 1/4" (.250). The previously drilled hole is the middle outboard hole.
- 7. Slip reinforcement plate DBL-10 (6) between the firewall and stiffeners. The long side goes up.
- 8. Bolt oil filter base support angle P/N OFM-11 (5) to firewall and reinforcement plate using(6ea) provided AN 4-5A (8) bolts.

#### \*\*\*\*\* SEE WARNING (A) \*\*\*\*\*

- 9. Per Illustrated Parts List K008-PL, install provided AN842-16D fittings (59) in the oil filter base. The fitting in B hole points horizontal with the filter base. The other points over the first fitting.
- Per Illustrated Parts List K008-PL, bolt oil filter base OFB-15 (1) to Vertical Filter Mount Plate OFM-11(5) using provided AN4H-4A bolts (9) and Washers AN960-416 (11). Oil inlet hole "B" on the oil filter base is positioned to the front of the aircraft. Secure bolts with safety wire.
- 11. Per Illustrated Parts List K008-PL, install one 25" piece of 1" Mil 6000H hose (46) using provided QS100M16H hose clamps (47). The "B" hole on the oil filter base is the oil inlet and comes from the outlet of the scavenge oil pump. The "A" port is the outlet of the oil filter base is the return line to the top of the oil tank or inlet to cooler if so equipped. Tighten clamps.
- 12. Install oil filter as per manufacturers specifications and safety wire.
- 13. Using the 2" piece of 3/4" Mil 6000 hose (42) provided, secure to bottom of oil filter with QS100M52H Clamp, 3-3/4" (41) and locate between bottom of oil filter and existing firewall. This will strengthen the oil filter mount and dampen the vibrations of the engine.
- 14. Safety wire drain and refill oil tank with 4.4 gals. oil. (If step #2 is omitted this step is not necessary).
- 15. Run engine and check for leaks.
- 16. Determine weight and balance, initiate 337 form, and update the equipment list.

#### \*\*\*\*\* NOTE OF CAUTION \*\*\*\*\*

NEVER, EVER INSTALL AN OIL FILTER ON THE ENGINE OIL PUMP INLET. THE OIL LINES CAN COLLAPSE, THERE BY STARVING THE ENGINE OF OIL.

THE OIL ROUTING AND OIL FLOW IS ALWAYS.

ENGINE SCAVENGE PUMP OUTLET -TO- AIRWOLF OIL FILTER -TO- OIL COOLER [if applicable] -TO- OIL TANK.

# WEIGHT AND BALANCE REPORT

SURPLUS EQUIPMENT	WEIGHT	ARM-	INCHES	MOMEN	T - IN/LBS.
EQUIPMENT - ITEM	LBS.	LONG		LONG	
REMOTE OIL FILTER	4.25				

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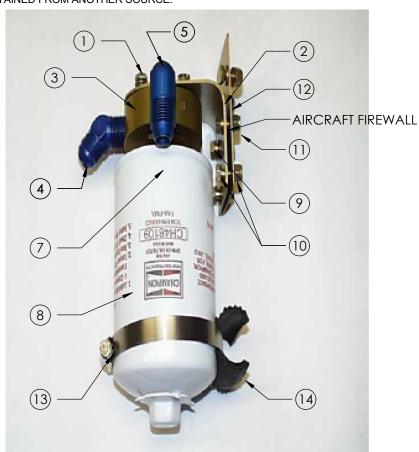
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REVISIONS					
REV.	DESCRIPTION	BY	DATE		

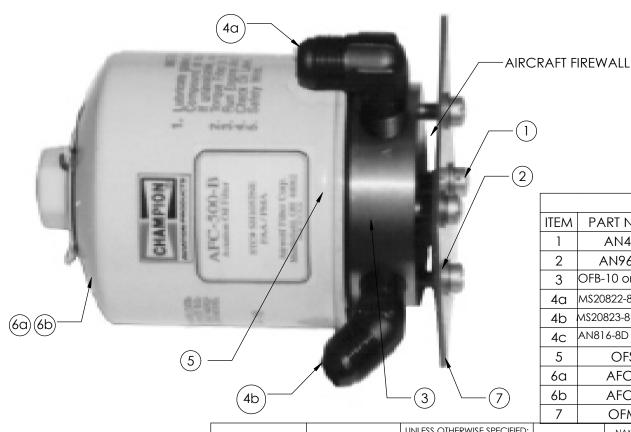


		MATERIAL LIST	
ITEM	PART NUMBER	DESCRIPTION	QTY.
1	AN4H-4A	BOLT, DRILLED HEAD	4
2	OFM-11	OIL FILTER MOUNT PLATE - 90°	1
3a	OFB-10	OIL FILTER BASE	1
3b	OFB-11	OIL FILTER BASE, 10720	1
4a	MS20823-8D	FITTING, 45°	1
4b	MS20823-10D	FITTING, 45°, 10720	1
5a	MS20822-8D	FITTING, 90°	1
5b	MS20822-10D	FITTING, 90°, IO720	1
6a	AN816-8D	UNION	OPT
6b	AN816-10D	UNION, IO720	OPT
7	OFS-10	OIL FILTER STUD	1
8a	AFC-500	OIL FILTER	1
8b	AFC-600	OIL FILTER, LONG	1
9	AN4-5A	BOLT	6
10	AN960-416	FLAT WASHER	16
11	MS20365-428A	LOCKNUT	6
12	DBL-10	DOUBLER PLATE	1
13	Q\$100M52H	CLAMP	1
14	MIL6000-1/2-2	DAMPENER	1
	NAME DITE		

		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	Δi	rwolf Filter	Cori	<u> </u>
		DIMENSIONS ARE IN INCHES TOLERANCES:	DRAWN	GM	12/28/2020	7311		OOI	<b>J</b> .
		1 PLACE ±.030 2 PLACE ±.010	APPR. BY	BDA	12/28/2020	TITLE: ASS	EMBLY DRAV	VING,	
		3 PLACE ±.005 4 PLACE ±.0005	ENG APPR.			OFM-11 C	IL FILTER MO	UNT PL	ATE -
		ANGULAR ±0°30'	MFG APPR.			VERTICAL, DBL-10 DOUBLER PLAT & OFB-10 or OFB-11 OIL FILTER BASE			
		INTERPRET GEOMETRIC TOLERANCING PER: ANSY Y 14.5H	Q.A.						
		MATERIAL				SIZE DWG.		2.4	REV
NEXT ASSY	USED ON	FINISH	COMMENTS:			A A	C-D-002	<b>24</b>	IK
APPLI	CATION					SCALE:	WEIGHT:	SHE	ET 1 OF 1

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REV.	DESCRIPTION	BY	DATE
Α	REDRAWN IN SOLIDWORKS	GM	12/28/2020



			MATERIAL LIST	
ITEM	PART NUM	∆BER	DESCRIPTION	QTY.
1	AN4H-4	1A	BOLT, DRILLED HEAD	4
2	AN960-4	116	FLAT WASHER	4
3	OFB-10 or Of	FB-11	OIL FILTER BASE	1
4a	MS20822-8D o	r - 10D	FITTING, 90°	1
4b	MS20823-8D oi	r -10D	FITTING, 45°	1
4c	AN816-8D or -	10D	UNION	OPT
5	OFS-10	0	OIL FILTER STUD	1
6a	AFC-50	00	OIL FILTER	1
6b	AFC-60	00	OIL FILTER, LONG	1
7	OFM-1	0	OIL FILTER MOUNT PLATE	1
	NAME	DATE	V . It E.It O	

		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	Δ	irwolf Filter	Corr	1
		DIMENSIONS ARE IN INCHES TOLERANCES:	DRAWN	GM	12/28/2020			COIL	<b>,</b> .
		1 PLACE ±.030 2 PLACE ±.010	APPR. BY	BDA	12/28/2020	TITLE:	CELABLY DDAV	\/I\\IC	
		3 PLACE ±.005 4 PLACE ±.0005	ENG APPR.				SSEMBLY DRAV OIL FILTER MOI		ΔTF_
		ANGULAR ±0°30'	MFG APPR.				ONTAL, & OFB		
		INTERPRET GEOMETRIC TOLERANCING PER: ANSY Y 14.5H	Q.A.			OIL FILTER BASE			
	MATE			•	•	SIZE DWG		٦٢	REV
NEXT ASSY	USED ON	FINISH	COMMENTS:		A	FC-D-002	25	А	
APPLICATION						SCALE:	WEIGHT:	SHEE	ET 1 OF 1

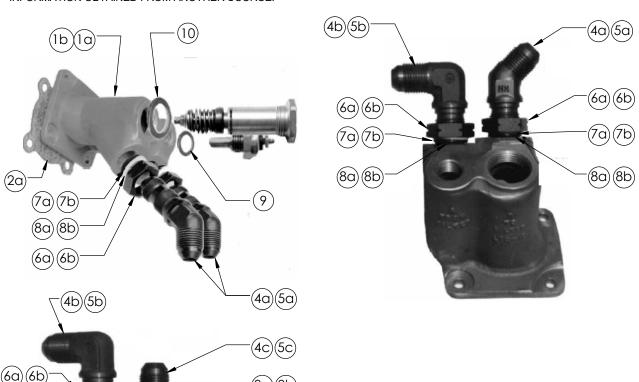
Airwolf Filter Corp.

(8a) (8b)

#### AIRWOLF FILTER CORP PROPRIETARY

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REVISIONS						
REV.	DESCRIPTION	BY	DATE			
Α	REDRAWN IN SOLIDWORKS	GM	12/28/2020			



		MATERIAL LIST	
ITEM	PART NUMBER	DESCRIPTION	QTY.
1a	LYC-10	FULL FLOW ENGINE ADPATER, O235-540	1
1b	LYC-11	FULL FLOW ENGINE ADPATER, O235-540	1
2a	61173 OR Equivalent	ADAPTER BASE GASKET, O235-540	1
2b	12777 OR Equivalent	ADAPTER BASE GASKET, IO720 (NOT SHOWN)	1
2c	12776 OR Equivalent	ADAPTER BASE GASKET, IO720 (NOT SHOWN)	1
3a	PLT-12775	ADAPTER PLATE, 10720 (NOT SHOWN)	1
3b	PLT-12999	RESTRICTOR PLATE, O235 (NOT SHOWN)	1
4a	AN837-8D	45° BULKHEAD FITTING	2
4b	AN833-8D	90° BULKHEAD FITTING	ОРТ
4c	AN815-8D	UNION	ОРТ
5a	AN837-10D	45° BULKHEAD FITTING, IO720	2
5b	AN833-10D	90° BULKHEAD FITTING, IO720	ОРТ
5c	AN815-10D	UNION, IO720	OPT
6a	AN6289-8D	BULKHEAD NUT	2
6b	AN6289-10D	BULKHEAD NUT, IO720	2
7a	MS28773-08	TEFLON BOSS GASKET	2
7b	MS28773-10	TEFLON BOSS GASKET, IO720	2
8a	M83248/1-908	VITON "O" RING	2
8b	M83248/1-910	VITON "O" RING, IO720	2
9	MS35769-11	OIL TEMPERATURE SENSOR GASKET	1
10	MS35769-21	VERNATHERM® GASKET	1

		UNLESS OTHERWISE SPECIFIED:			IAME	DATE		
		DIMENSIONS ARE IN INCHES TOLERANCES: 1 PLACE ±.030 2 PLACE ±.010		G٨	Λ	12/28/2020	İ	
				BD	Α	12/28/2020	TITL	E:
	3 PLACE ±.005 4 PLACE ±.0005	ENG APPR.				İ		
		MFG APPR.				1		
		INTERPRET GEOMETRIC TOLERANCING PER: ANSY Y 14.5H	Q.A.					
		MATERIAL				,	SIZI	E

FINISH

Airwolf Filter Corp.

ASSEMBLY DRAWING, LYC-10 ADAPTER, ENGINE - FULL FLOW

AFC-D-0026 A

SCALE: WEIGHT: SHEET 1 OF 1

5

APPLICATION 4

USED ON

NEXT ASSY

3

COMMENTS:

2

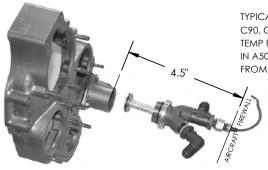
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	REVISIONS		
REV.	DESCRIPTION	BY	DATE
Α	REDRAWN IN SOLIDWORKS	GM	12/28/2020



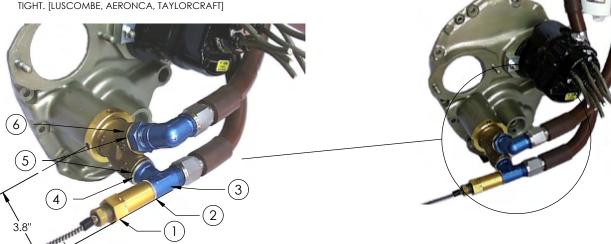
TYPICAL INSTALLATION IN AIRCAFT USING C75, C85, C90, C125 & O-200 CONTINENTAL ENGINES KEEPING OIL TEMP PROBE AT PRESENT LOCATION. ALSO CAN BE USED IN A50-A75 ENGINES WHERE THERE IS AT LEAST 4.25" FROM THE ACCY CASE TO THE FIREWALL.

TYPICAL INSTALLATION IN AIRCRAFT USING A50, A65, A75, & A80, CONTINENTAL ENGINES WHERE CLEARANCE TO THE FIREWALL IS VERY TIGHT THE COMBE. AFRONCA, TAYLOR CRAFT!

CAPILLARY OIL TEMPERATURE

PROBE SHOWN FOR

ILLUSTRATION ONLY.



#### NOTES:

SELECT THE APPROPRIATE THICKNESS OF P/N
TPA-776 WASHER/SPACER THAT WILL ALLOW YOU TO
TIGHTEN THE TPA-776 ADAPTER AT THE CORRECT
ORIENTATION FOR OIL LINE ATTACHMENT.

	MATERIAL LIST											
	ITEM	PART NUMBER	DESCRIPTION	QTY ·								
	1	OTA-2250	2-1/4" LONG OIL TEMP ADAPTER	1								
	2	MS35769-11	OIL TEMP ADAPTER GASKET	1								
	3	TPA-776	TEMP PROBE ADAPTER & GASKET	1								
7	4	TPA-776	WASHER/SPACER SET	6								
	5	M83248/1-910	O-RING	2								
	6	MS28773-10	BOSS GASKET, TEFLON	1								

Airwolf Filter Corp.

TITLE: ASSEMBLY DRAWING.

ASSEMBLY DRAWING,
INSTALLATION OF ASSEMBLED CON-10
ADAPTER IN CONTINENTAL
A50, A65, A75, A80, C75, C85, C90,
C125, O-200, IO240 ENGINES

AFC-D-0029

A REV

1 PLACE ±.030 BDA 12/28/2020 APPR. BY 2 PLACE ±.010 3 PLACE ±.005 ENG APPR. 4 PLACE ±.0005 ANGULAR ±0°30' MFG APPR. Q.A. INTERPRET GEOMETRIC TOLERANCING PER: ANSY Y 14.5H MATERIAL FINISH COMMENTS: **NEXT ASSY** USED ON **APPLICATION** 

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES

TOLERANCES:

5

4

3

2

DATE

12/28/2020

NAME

GM

DRAWN

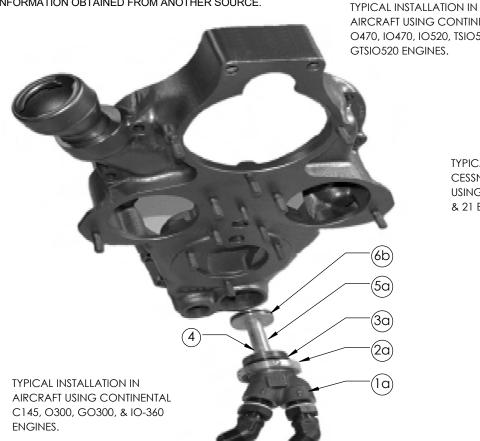
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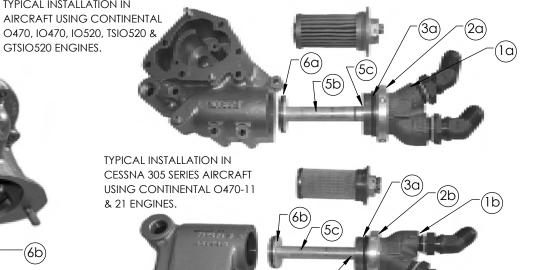
SCALE:

WEIGHT: SHEET 1 OF 1

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REVISIONS								
REV.	DESCRIPTION	BY	DATE					
Α	REDRAWN IN SOLIDWORKS	GM	12/28/2020					





MATERIAL LIST								
ITEM	PART NUMBER	DESCRIPTION	QTY.					
1a	CON-10	ENGINE ADAPTER - (1-3/4"-16 THREADS)	1					
1b	CON-11	ENGINE ADAPTER - (1-13/16"-16 THREADS)	1					
2a	RNG-10	SEALING RING - (1-3/4"-16 THREADS)	1					
2b	RNG-11	SEALING RING - (1-13/16"-16 THREADS)	1					
3a	M83248/1-223	SEALING RING O-RING	1					
4	M83248/1-016	NOSEPIECE O-RING	1					
5a	EXT-11	OIL SCREEN ADAPTER - C145/O- 300/GO-300/IO-360	1					
5b	EXT-12	OIL SCREEN ADAPTER - O470/IO470/IO520	1					
5c	EXT-14	OIL SCREEN ADAPTER - O470-7/11/13	1					
6a	M83248/1-126	O-RING, USE W/EXT-12	1					
6b	M83248/1-128	O-RING, USE W/EXT-11 & EXT-14 ADPATER	1					

5

		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	Airwolf Filter Corp.			)		
		DIMENSIONS ARE IN INCHES TOLERANCES:	DRAWN	GM	12/28/2020		/ iii Well 1 liter Gorp.				
		1 PLACE ±.030 2 PLACE ±.010 3 PLACE ±.005 4 PLACE ±.0005	APPR. BY	BDA	12/28/2020	TITLE:	I				
			ENG APPR.			C	CON-10 ADAPTER IN C145, O300, GO30 IO360, O470, IO470, IO520, TSIO520 & GTSIO520 CONTINENTAL ENGINES, AND INSTALLATION OF CON-11 ADAPTER IN O4				
		ANGULAR ±0°30'	MFG APPR.								
		INTERPRET GEOMETRIC TOLERANCING PER: ANSY Y 14.5H	Q.A.			11 & 15 CONTINENTAL ENGINES					
		MATERIAL						. NO.	20	REV •	
NEXT ASSY	USED ON	FINISH	COMMENTS:		COMMENTS:		A	FC-D-003	3U	А	
APPLICATION						SCAL	E:	WEIGHT:	SHE	ET 1 OF 1	
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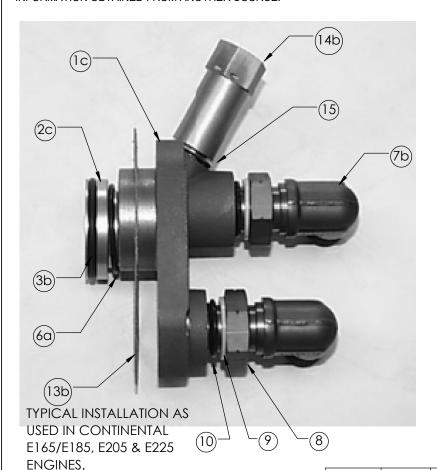
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SHEET 1 OF 1

# AIRWOLF FILTER CORP PROPRIETARY

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REVISIONS								
REV.	DESCRIPTION	BY	DATE					





General Table									
MATERIAL LIST									
ITEM	PART NUMBER	DESCRIPTION	QTY.						
1c	CON-12	ENGINE ADAPTER - "E" SERIES	1						
2c	RNG-17	OIL DIVERTER RING, "E" SERIES	1						
3b	M83248/1-222	O-RING, OIL DIVERTER RING	1						
6a	M83248/1-126	O-RING, OIL DIVERTER RING	1						
7b	AN833-10D	90° BULKHEAD FITTING	2						
8	AN6289-10D	BULKHEAD NUT	2						
9	MS28773-10	BOSS GASKET	2						
10	M83248/1-910	O-RING	2						
13b	352067 OR Equivalent	ENGINE ADAPTER GASKET	1						
14b	OTA-2250	OIL TEMP ADAPTER	1						
15	MS35769-11	OIL TEMP ADAPTER GASKET	1						

		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	Airwolf Filter C		Cor	orn			
		DIMENSIONS ARE IN INCHES TOLERANCES:	DRAWN	GM	12/28/2020			ii woii Fiitei	COI	<b>J</b> .		
		1 PLACE ±.030 2 PLACE ±.010	APPR. BY	BDA	12/28/2020	TITLE:	ASSEMBLY DRAWING, INSTALLATION OF CON-12 ADAF IN E165, E185, E205, & E225					
		3 PLACE ±.005 -4 PLACE ±.0005	ENG APPR.			INS				APTER		
		ANGULAR ±0°30'	MFG APPR.							5		
		INTERPRET GEOMETRIC TOLERANCING PER: ANSY Y 14.5H	Q.A.			CONTINENTAL ENGINES						
		MATERIAL		•	SIZE	DWG		2.1	REV			
NEXT ASSY	USED ON	FINISH	COMMENTS	COMMENTS:		COMMENTS:		A	Α	FC-D-00	<b>3</b> I	IR
APPLICATION					SCAL	E:	WEIGHT:	SHE	ET 1 OF			

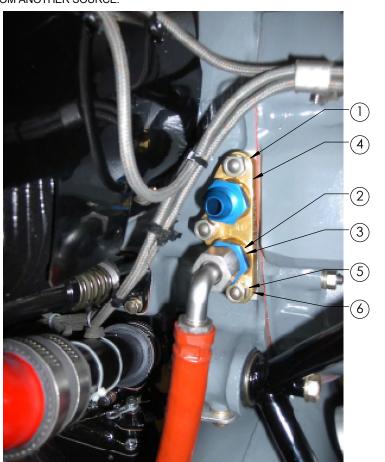
Page

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REVISIONS								
REV.	DESCRIPTION	BY	DATE					



General Table										
	MATERIAL LIST									
ITEM	PART NUMBER	DESCRIPTION	QTY.							
1	CON-16	ENGINE ADAPTER	1							
2	AN919-15D-SP	FITTING	2							
3	M83248/1-910	O-RING	2							
4	652070 OR Equivalent	GASKET	1							
5	AN960-513	WASHER	3							
6	MS20365-524A	NUT	3							

		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	Δ	irwolf Filter	Con	<b>^</b>	
		DIMENSIONS ARE IN INCHES TOLERANCES:	DRAWN	GM	12/28/2020			Joon	<b>9</b> .	
		1 PLACE ±.030 2 PLACE ±.010	APPR. BY	BDA	12/28/2020	TITLE: INIGH		V /V/IV I	$\sim$	
		3 PLACE ±.005 4 PLACE ±.0005	ENG APPR.			INSTALLATION CON-16 ADAP				
		ANGULAR ±0°30'	MFG APPR.				CONTINENTA			
		INTERPRET GEOMETRIC TOLERANCING PER: ANSY Y 14.5H	Q.A.							
		MATERIAL				SIZE DWG		20	REV	
NEXT ASSY	USED ON	FINISH	COMMENTS:		A	FC-D-00	<b>3</b> Z	IK		
APPLICATION				SCALE:	WEIGHT:	SHE	ET 1 OF 1			

SHEET 1 OF 1

AIRWOLF FILTER CORP PROPRIETARY		REVISIONS		
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VRITTEN CONSENT, AND THAT NO RIGHT IS GRANTED TO DISCLOSE OR SO USE ANY INFORMATION CONTAINED IN SAID DOCUMENT. THIS RESTRICTION DOES NOT LIMIT THE RIGHT TO USE				
NFORMATION OBTAINED FROM ANOTHER SOURCE.	AIRC	CRAFT FIREWALL		



APPLICATION

MATERIAL LIST								
ITEM	PART NUMBER	DESCRIPTION						
1	AN4H-4A	BOLT, DRILLED HEAD						
2	AN960-416	FLAT WASHER						
3	OFB-15	OIL FILTER BASE						
4a	AN844-16D	HOSE ELBOW, 45°						
4b	AN844-12D	HOSE ELBOW, 45°						
5a	AN840-16D	HOSE FITTING, STRAIGHT	2					
5b	AN840-12D	HOSE FITTING, STRAIGHT	2					
6	OFS-10	OIL FILTER STUD	1					
7a	AN842-16D	HOSE ELBOW, 90°	2					
7b	AN842-12D	HOSE ELBOW, 90°	2					
8	AFC-600	OIL FILTER, LONG, OR EQUIVALENT (CHAMPION CH48109)	1					
9	Q\$100M52H	HOSE CLAMP, 3-1/4"	1					
10	MIL6000-3/4-2	DAMPENER	1					
11	MS20365-428A	LOCKNUT	6					
12	AN4-5A	BOLT	6					
13	DBL-10	DOUBLER PLATE	1					
14	OFM-11	OIL FILTER MOUNT PLATE, VERTICAL	1					

SCALE:

WEIGHT:

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE		Airwolf Filter Corp.		
		DIMENSIONS ARE IN INCHES TOLERANCES:	DRAWN	GM	12/8/2020		All Woll I liter Gorp.		
		1 PLACE ±.030 2 PLACE ±.010	APPR. BY	BDA	12/8/2020	TITLE:			
		3 PLACE ±.005 4 PLACE ±.0005 ANGULAR ±0°30'	ENG APPR.			_ A	ASSEMBLY DRAWING -15 OIL FILTER ADAPTE	G	
			MFG APPR.			OFB-		PTER,	
		INTERPRET GEOMETRIC TOLERANCING PER: ANSY Y 14.5H	Q.A.			] F	IREWALL - VERTICA	\L	
		MATERIAL				SIZE D	WG. NO.	REV	
NEXT ASSY	USED ON	FINISH	COMMENTS:			<b>  A</b>	AFC-D-0059	IR	

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