

FOR REFERENCE ONLY

Applicability: CESSNA [WITH 3/8" ENGINE OIL RETURN TUBES]
 Skyhawk
 172I, K, L, M, P, Q, R, S, SP
 172RG,

Drawing: AFC-W321
 Revision: B
 Date: 06/01/05

Airwolf Parts List No. AFC-W321-A

Index	Part Number	Description	Quantity
01.	W-3003	AirSep Assy	(1)
02.	W-2046	Air Syphon Pump	(1)
03.	W-2018-1	Air-Tee	(1)
04.	W-2045	Doubler	(1)
05.	W-2011	Bracket	(1)
06.	AN526C-1032R10	Screw, #10 X 5/8" Long	(1)
07.	AN960-10	Flat Washer, #10	(4)
08.	MS20365-1032A	Locknut, #10	(6)
09.	MIL6000-1/4	Hose, 1/4" ID	(34")
10.	MIL6000-5/16	Hose, 5/16" ID	(21")
11.	MIL6000-5/8	Hose, 5/8" ID	(12")
12.	MIL6000-3/4	Hose, 3/4" ID	(12")
13.	MM-4	Hose Clamp, 1/4"	(2)
14.	MM-5	Hose Clamp, 3/8"	(2)
15.	QS100M10H	Hose Clamp, 5/8"	(4)
16.	QS100M24H	Hose Clamp, 1-1/2"	(1)
17.	QS100M72H	Hose Clamp, 4-1/2"	(1)
18.	W-2100	"C" Channel	(10")
19.	AN970-3	Flat Washer, 3/16"	(2)
20.	MS21919WDG-12	Adel Clamp, 3/4"	(4)
21.	MS21919WDG-30	Adel Clamp, 1-7/8"	(1)
22.	CAT-7	Duct, 1-3/4" ID	(22")
23.	DLW-3003-1	Drawing List	(1)

FOR REFERENCE ONLY

Applicability: CESSNA [WITH 1/2" ENGINE OIL RETURN TUBES]
Skyhawk
172 N with Lyc O320-H2AD engine

Drawing: AFC-W321
Revision: B
Date: 06/01/08

Airwolf Parts List No. AFC-W321-B

<u>Index</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
01.	W-3003	AirSep Assy	(1)
02.	W-2046-1	Air Syphon Pump	(1)
03.	W-2018-1	Air-Tee	(1)
04.	W-2045	Doubler	(1)
05.	W-2011	Bracket	(1)
06.	AN526C-1032R10	Screw, #10 X 5/8" Long	(1)
07.	AN960-10	Flat Washer, #10	(4)
08.	MS20365-1032A	Locknut, #10	(6)
09.	MIL6000-1/4	Hose, 1/4" ID	(34")
10.	MIL6000-5/16	Hose, 5/16" ID	(21")
11.	MIL6000-5/8	Hose, 5/8" ID	(14")
12.	MIL6000-3/4	Hose, 3/4" ID	(16")
13.	MM-4	Hose Clamp, 1/4"	(2)
14.	MM-5	Hose Clamp, 3/8"	(2)
15.	QS100M10H	Hose Clamp, 5/8"	(4)
16.	QS100M12H	Hose Clamp, 3/4"	(2)
17.	QS100M24H	Hose Clamp, 1-1/2"	(1)
18.	QS100M72H	Hose Clamp, 4-1/2"	(1)
19.	W-2100	"C" Channel	(10")
20.	AN970-3	Flat Washer, 3/16"	(2)
21.	MS21919WDG-12	Adel Clamp, 3/4"	(4)
22.	MS21919WDG-30	Adel Clamp, 1-7/8"	(1)
23.	CAT-7	Duct, 1-3/4" ID	(22")

FOR REFERENCE ONLY

Applicability: CESSNA [With Continental C145, O300, & GO300 Engines]
Skyhawk
172 A, B, C, D, E, F, G, H,
175

Drawing: AFC-W321
Revision: B
Date: 06/01/05

Airwolf Parts List No. AFC-W321-C

<u>Index</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
01.	W-3015	AirSep Assy, 5/8" Vacuum, 5/8" Breather	(1)
02.	W-2018-1	Air-Tee, 5/8"	(1)
03.	W-2008	AirSyphon Pump	(1)
04.	AN912-3D	Reducer Bushing	(1)
05.	AN816-5D	Fitting, Straight	(1)
06.	W-2011	Bracket	(1)
07.	W-2150	Doubler	(1)
08.	AN526C-1032R10	Screw, #10 X 5/8" Long	(4)
09.	AN960-10	Flat Washer, #10	(4)
10.	MS20365-1032A	Locknut, #10	(5)
11.	MIL6000-1/4	Hose, 1/4" ID	(24")
12.	MIL6000-5/16	Hose, 5/16" ID	(24")
13.	MIL6000-5/8	Hose, 5/8" ID	(36")
14.	MM-4	Hose Clamp, 1/4"	(2)
15.	MM-5	Hose Clamp, 3/8"	(2)
16.	QS100M10H	Hose Clamp, 5/8"	(6)
17.	QS100M24H	Hose Clamp, 1-1/2"	(1)
18.	QS100M72H	Hose Clamp, 4-1/2"	(1)
19.	W-2100	"C" Channel	(10")
20.	AN526C-1032R8	Screw, #10 X 1/2" Long	(1)
21.	MS21919WDG-30	Adel Clamp, 1-7/8"	(1)
22.	DLW-3003-1	Drawing List	(1)

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

WARNING: ALL HOSES SHALL BE LOCATED AT LEAST 4.0" FROM ANY HEAT SOURCE LIKELY TO CAUSE VAPORIZATION OF THE OIL.

01. Remove the existing engine breather tube assy. from the engine breather fitting to the firewall attach point. Retain the hardware at the attach point.
02. Install the W-2045 doubler on the left side, engine mount. Position the -12 Adel clamps on the tubes with the toes pointing towards each other, the flat side outboard. Align the clamps so all holes match the holes in the W-2045 doubler. Secure it with 4 ea of # 10 screws, washers and locknuts.
03. Install the W-2011 Bracket to the W-2045 doubler. Position the bracket with the notches in the flanged edges upward. Secure it to the doubler throughout the lower two holes using 2 ea of # 10 screws, washers and locknuts.
04. Secure the AirSep to the W-2011 bracket using the 4-1/2" clamp. Position the clamp slightly below the flanged split line of the AirSep.

CAUTION: Do not over tighten the clamp.

05. Remove the #3 cylinder rocker box drain tube and replace with the applicable W-2046 or W-2046-1 AirSyphon Pump.
06. Connect the Air Syphon Pump to the existing hose and clamp assembly at the crankcase.
- 07. Install the hose (Item 15) between the Air Syphon Pump and modified drain tube. Secure it with (2) each of item 19.**
08. Tighten the "B" nut of AirSyphon Pump to the existing fitting in the rocker box.
09. Install the 3/4" hose between the engine breather and the 3/4" inlet to the AirSep and secure with 3/4" clamps.
10. Install the 1/2" hose to the vacuum pump outlet and secure with a 1/2" clamp.

Note B: Cutting of the outlet tube may be necessary for the most direct installation.

11. Install the Air-Tee in the remaining end of the 1/2" hose and secure with a 1/2" clamp.

Note C: Observe proper direction of Air-Tee (see drawing)

12. Install the 1/2" hose between the Air-Tee and the 1/2" inlet to the AirSep and secure with a 1/2" clamp.
13. Install the 5/16" hose between the 5/16" branch of the Air-Tee and the 5/16" branch the Air Syphon Pump. Secure it with 5/16" clamps.
14. Install the 1/4" hose between the 1/4" AirSep drain and the 1/4" branch of the Air Syphon Pump. Secure it with 1/4" clamps.
15. Install the 1-3/4" duct to the bottom of the AirSep. Secure it with a 1-1/2" clamp.
16. Secure the other end of the 1-3/4" duct to the lower end at the old breather tube attach point using a -30 Adel clamp and existing hardware.

Note: The lower end of the duct must not extend into the aircraft slipstream.

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

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

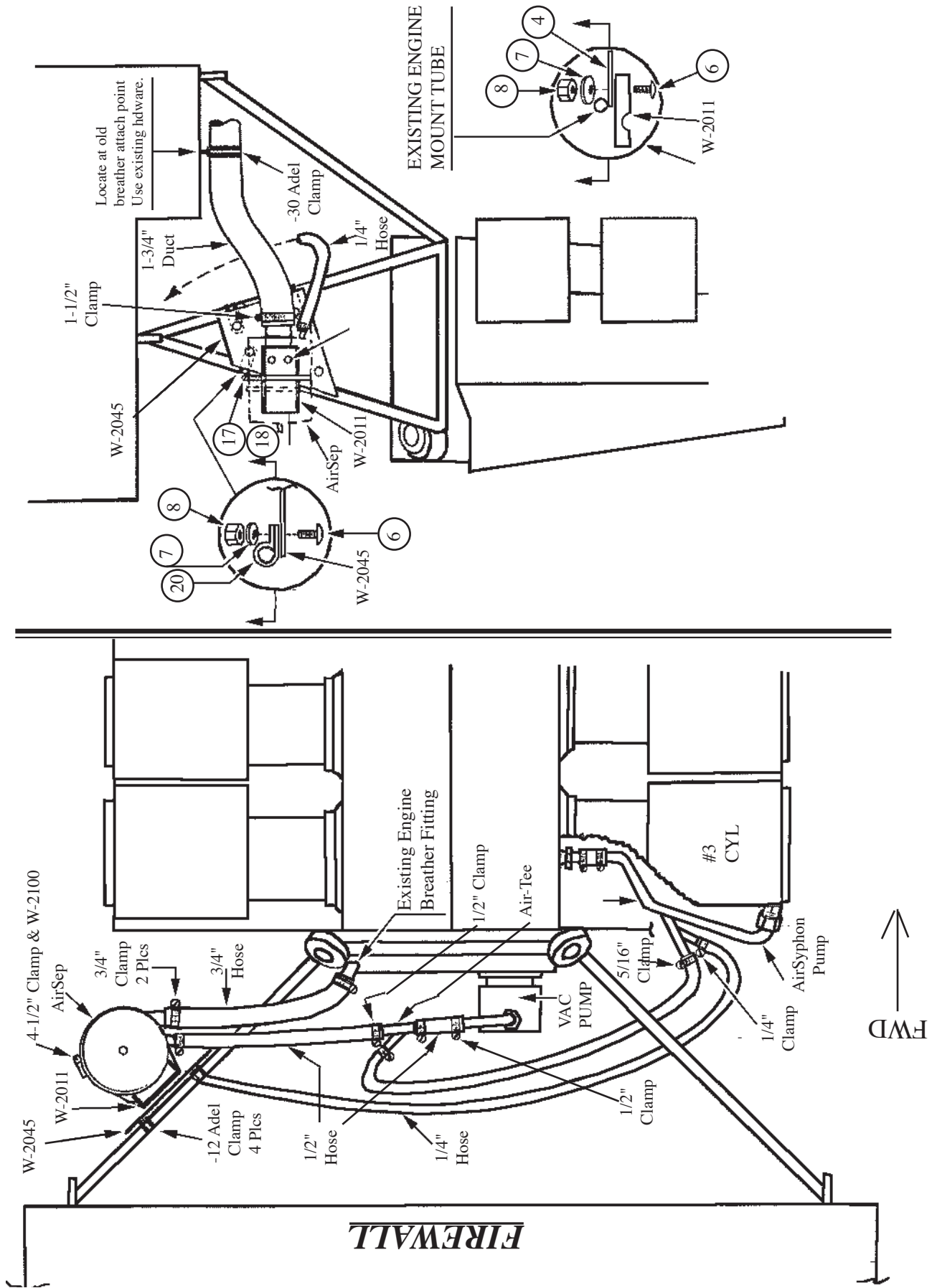
WARNING: ALL HOSES SHALL BE LOCATED AT LEAST 4.0" FROM ANY HEAT SOURCE LIKELY TO CAUSE VAPORIZATION OF THE OIL.

01. Remove existing breather tube hardware and extension to bottom of cowl.
02. Cut existing breather tube approximately 1-1/2" after it exits from rear engine baffle.
03. Mount W-2011 bracket on firewall with doubler as indicated in drawings.
04. Install AirSep on bracket with 1" and 1/2" outlets pointing towards engine.
05. Remove oil return drain plug in engine accy case housing. Install AN912-3D reducer with MS20822-5D fitting.
Connect AirSyphon Pump to MS20822-5D fitting.

Note: 1/4" line on AirSyphon Pump must point up at slight angle

06. Install 1/4" hose from the 1/4" drain on the AirSep to the 1/4" inlet on the AirSyphon Pump and secure with 1/4" clamps.
07. Remove the pressure outlet elbow from the vacuum pump, cut off at the location shown, and reinstall to point discharge pipe to point towards the AirSep 1/2" line.
08. Install 1/2" hose to vacuum pump discharge outlet elbow. Install Air-Tee with 5/16" outlet pointing in direction of airflow.
Install 1/2" hose from the Air-Tee to the 1/2" inlet on the AirSep making sure the 1/2" hose goes over the 3/4" vacuum inlet hose from the firewall.
Secure with 1/2" clamps.
09. Install 5/16" hose from the 5/16" branch of the Air-Tee to the 5/16" branch of the AirSyphon Pump.
Secure with 5/16" clamps.
10. Install 1" hose from the existing breather tube to the AirSep 1" inlet.
Secure with 1" clamps.
11. Attach the 1-3/4" duct to the bottom of the AirSep. 1-3/4" duct should not extend into the airstream below the engine cowling. Secure with -30 clamp and #10 screw, washer and locknut.
Note: All Hose connections are clamped.
13. Determine weight & balance, initiate Form 337, and update the equipment list.

Applicability: CESSNA Skyhawk 172I, K, L, M, P, Q, R, S, SP
 Drawing: AFC-W321
 Revision: B
 Date: 06/01/05

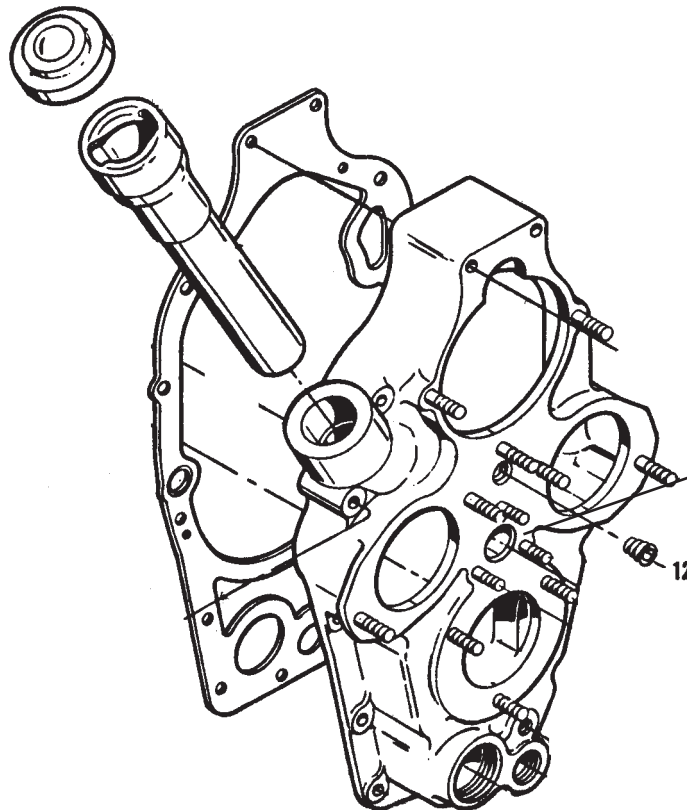


Applicability:

CESSNA
Skyhawk
172 A, B, C, D, E, F, G, H,
175

[With Continental C145, O300, & GO300 Engines]

Drawing: AFC-W321
Revision: B
Date: 06/01/05



FIREWALL