

FOR REFERENCE ONLY

Applicability:

CESSNA
310, A, B, C, D, E, F, G, H, E310H, I, J, K, L, N, P, Q
WITH TCM O/IO-470 ENGINES

Drawing: AFC-W329**Revision:** B**Date:** 06/01/05**Airwolf Parts List No. AFC-W329-A**

<u>Index</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
01.	W-3014	AirSep Assy	(1)
02.	W-2008	AirSyphon Pump	(1)
03.	W-2022	Air-Tee	(1)
04.	AN912-3D	Reducer Bushing	(1)
05.	AN816-5D	Fitting	(1)
06.	W-2011	Bracket	(1)
07.	W-2150	Doubler	(1)
08.	AN3-7A	Bolt, 7/8" Long	(4)
09.	AN960-10	Flat Washer, #10	(4)
10.	MK1000-3	Anchor Nut, #10	(4)
11.	AN426AD-3	Rivet	(8)
12.	CC-P-44	Stainless Steel Rivet	(4)
13.	MIL6000-1/14	Hose, 1/4" ID	(4")
14.	MIL6000-5/16	Hose, 5/16" ID	(28")
15.	MIL6000-5/8	Hose, 5/8" ID	(28")
16.	MIL6000-3/4	Hose, 3/4" ID	(28")
17.	MM-4	Hose Clamp, 1/4"	(2)
18.	MM-5	Hose Clamp, 5/16"	(4)
19.	QS100M10H	Hose Clamp, 5/8"	(4)
20.	QS100M12H	Hose Clamp, 3/4"	(2)
21.	QS100M24H	Hose Clamp, 1-1/2"	(1)
22.	QS100M72H	Hose Clamp, 4-1/2"	(1)
23.	W-2100	"C" Channel	(10")
24.	CAT-7	Duct, 1-3/4" ID	(10")
25.	DLW-3000-10	Drawing List	(1)

FOR REFERENCE ONLY

Applicability:

CESSNA
310, J, K, L, M
WITH TCM IO-520 ENGINES

Drawing: AFC-W329**Revision: B****Date: 06/01/05****Airwolf Parts List No. AFC-W329-B**

Index	Part Number	Description	Quantity
01.	W-3000	AirSep Assy	(1)
02.	W-2037	Bracket	(1)
03.	W-2011	Bracket	(1)
04.	W-2036	Brace	(1)
05.	W-2032	Tube	(1)
06.	W-2150	Doubler	(1)
07.	MIL6000-5/8	Hose, 5/8" ID	(21")
08.	MIL6000-5/16	Hose, 5/16" ID	(6")
09.	MIL6000-3/4	Hose, 3/4" ID	(5")
10.	QS100M12H	Hose Clamp, 3/4"	(2)
11.	MM-5	Hose Clamp, 3/8"	(4)
12.	QS100M10H	Hose Clamp, 5/8"	(2)
13.	QS100M24H	Hose Clamp, 1-1/2"	(1)
14.	QS100M72H	Hose Clamp, 4-1/2"	(1)
15.	W-2100	"C" Channel	(10")
16.	MS35489-20	Grommet, 3/4" ID	(1)
17.	AN526C-1032R10	Screw, #10 X 5/8" Long	(4)
18.	MS20365-1032A	Locknut, #10	(5)
19.	AN960-10	Flat Washer, #10	(5)
20.	AN526C-1032R8	Screw, #10 X 1/2" Long	(1)
21.	MS21919WDG-30	Adel Clamp. 1-3/4"	(1)
22.	CAT-7	Duct, 1-3/4" ID	(18")
23.	DLW-3000-10	Drawing List	(1)

FOR REFERENCE ONLY

Applicability:

CESSNA w/o Delce boots
CESSNA 310R WITH TCM IO520 ENGINES
& AIRCRAFT WITH IO550-B Colemill Conversion

Drawing: AFC-W329**Revision:** B**Date:** 06/01/05**Airwolf Parts List No. AFC-W329-C**

<u>Index</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
01.	W-3000	AirSep Assy, 3/4" Breather, 5/8" Vacuum	(1)
02.	W-2011	Bracket	(1)
03.	W-2150	Doubler	(1)
04.	AN526C-1032R10	Screw, #10 X 5/8" Long	(4)
05.	AN960-10	Flat Washer, #10	(5)
06.	MS20365-1032A	Locknut, #10	(5)
07.	W-2036	Brace	(1)
08.	W-2037	Bracket	(1)
09.	AN526C-1032R8	Screw, #10 X 1/2" Long	(1)
10.	W-2032	Tube	(1)
11.	W-2154-1	Modified Pushrod Shroud Tube, 5/16" inlet	(1)
12.	534610	TCM Pushrod Shroud Seal, Inner	(1)
13.	630286	TCM Pushrod Shroud Seal, Outer	(1)
14.	MIL6000-5/16	Hose, 5/16" ID	(24")
15.	MIL6000-5/8	Hose, 5/8" ID	(21")
16.	MIL6000-3/4	Hose, 3/4" ID	(5")
17.	MM-5	Hose Clamp, 5/16"	(4)
18.	QS100M10H	Hose Clamp, 5/8"	(2)
19.	QS100M12H	Hose Clamp, 3/4"	(2)
20.	QS100M24H	Hose Clamp, 1-1/2"	(1)
21.	QS100M72H	Hose Clamp, 4-1/2"	(1)
22.	W-2100	"C" Channel	(10")
23.	655528	TCM Rocker Cover Gasket	(1)
24.	MS35489-20	Grommet, 3/4" ID	(1)
25.	MS21919WDG-30	Adel Clamp. 1-3/4"	(1)
26.	CAT-7	Duct, 1-3/4" ID	(18")
27.	DLW-3000-10	Drawing List	(1)

Applicability:

**CESSNA with Delce boots
CESSNA 310R WITH TCM IO520 ENGINES
& AIRCRAFT WITH IO550-B Colemill Conversion**

Drawing: AFC-W329**Revision: B****Date: 06/01/05****Airwolf Parts List No. AFC-W329-D**

<u>Index</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
01.	W-3019	AirSep Assy, 3/4" Breather	(1)
02.	W-2022	Air-Tee	(1)
03.	W-2011	Bracket	(1)
04.	W-2150	Doubler	(1)
05.	AN526C-1032R10	Screw, #10 X 5/8" Long	(4)
06.	AN960-10	Flat Washer, #10	(5)
07.	MS20365-1032A	Locknut, #10	(5)
08.	W-2036	Brace	(1)
09.	W-2037	Bracket	(1)
10.	AN526C-1032R8	Screw, #10 X 1/2" Long	(1)
11.	W-2032	Tube	(1)
12.	W-2154-1	Modified Pushrod Shroud Tube, 5/16" inlet	(1)
13.	534610	TCM Pushrod Shroud Seal, Inner	(1)
14.	630286	TCM Pushrod Shroud Seal, Outer	(1)
15.	MIL6000-1/4	Hose, 1/4" ID	(24")
16.	MIL6000-5/16	Hose, 5/16" ID	(24")
17.	MIL6000-3/4	Hose, 3/4" ID	(5")
18.	MM-4	Hose Clamp, 1/4"	(2)
19.	MM-5	Hose Clamp, 5/16"	(2)
20.	QS100M10H	Hose Clamp, 5/8"	(2)
21.	QS100M12H	Hose Clamp, 3/4"	(2)
22.	QS100M24H	Hose Clamp, 1-1/2"	(1)
23.	QS100M72H	Hose Clamp, 4-1/2"	(1)
24.	W-2100	"C" Channel	(10")
25.	655528	TCM Rocker Cover Gasket	(1)
26.	MS35489-20	Grommet, 3/4" ID	(1)
27.	MS21919WDG-30	Adel Clamp. 1-3/4"	(1)
28.	CAT-7	Duct, 1-3/4" ID	(18")
29.	DLW-3000-10	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 factory air/oil separator and engine crankcase breather line (aft of the rear baffle to the overboard tube on the lower nacelle), and associated hardware, tubing, hoses, clamps, etc.
02. Remove the existing factory oil return fitting and replace with AN912-3D reducer bushing, and AN815-5D straight fitting.
03. Using W-2051 doubler as a template, locate and drill (4) .203 holes in the firewall for future mounting of AirSep
04. Attach (4) MK1000-3 anchor nuts to the W-2051 doubler and secure with AN426AD3-3 rivets.

Note This is done as it is difficult at best to get hands behind firewall to hold normal nuts.

05. Secure W-2051 doubler to inside of firewall with (4) CC-P-44 rivets.

Note This is done so in the event the W-2011 bracket is ever removed from the firewall, the W-2051 doubler does not drop down to the bottom of the nacelle, making it difficult to recover.

06. Attach W-2011 bracket to W-2051 doubler with (4) AN3-7A bolts. Do not tighten at this time.
07. Slide the QS100M72H hose clamp behind W-2011 bracket for future securing of AirSep Assy.

Note Hose clamp will be sandwiched between firewall and W-2011 bracket when installed correctly.

08. Tighten AN3-7A bolts at this time.
09. Install the AirSep onto the W-2011 bracket with the inlet ports pointing forward toward engine breather and vacuum pump
10. Secure AirSep by tightening QS100M72 clamp.

Note Encase hose clamp with W-2100 "C" channel to prevent clamp from cutting into AirSep.

11. Install the 5/8" hose from the vacuum pump to the Air-Tee and secure with 5/8" clamp.

Note Make sure flow on Air-Tee points toward the AirSep.

12. Install the 5/8" hose from the Air-Tee to the AirSep and secure with 5/8" clamp.
13. Install the W-2008 AirSyphon Pump onto the previously installed AN815-5D fitting.
14. Install the 5/16" hose and connect the 5/16" branch of the AirSyphon Pump to the 5/16" branch of the Air-Tee and secure with MM-5 clamps.
15. Install the 1/4" hose and connect the 1/4" drain on the AirSep to the 1/4" branch on the AirSyphon pump and secure with MM-4 clamps.
16. Install the 1-3/4" duct to the bottom of the AirSep and secure with 1-3/4" clamp.

Note Verify and make sure outlet of 1-3/4" duct is not located near the high velocity airstream.

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

Applicability:

CESSNA
310, A, B, C, D, E, F, G, H, E310H, I310, J, K, L, M
WITH TCM IO-520 ENGINES

Drawing: AFC-W329**Revision: B****Date: 06/01/05**

*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 all engine breather, vacuum pump outlet, and existing oil separator (if applicable) components. Retain fittings, the oil return line to the scavenge pump, and the 3/4" hose and clamps at the engine breather.
02. Place the 4-1/2" clamp between the W-2011 Bracket and the W-2037 Bracket.
03. Install the W-2011 Bracket to the W-2037 Bracket using (3) each of items 25, 26, 27, 28, leave the lower right hole open, and mount the bracket with the notches in the flanged edges pointing up. Position the clamp at the bottom of the notches.
04. Remove the upper (3) screws on the left side of the oil cooler. Match drill the (3) holes onto the flanged edge of the Adapter Bracket.
05. Secure the Adapter Bracket to the oil cooler with existing hardware.
06. Install the brace, (Item 6) between the lower right hole in the Universal Bracket and the lower left stud on the upper left accessory pad (see drawing). Secure with existing hardware and 1 ea. of #10 screw, washer and locknut.
07. Remove the Wilkie button plug from the hole in the rear baffle, to the left of the oil cooler. Enlarge the hole to 1-3/8" diameter. Install the -20 grommet into the hole.
08. Slip the aft end of the breather tube W-2032 through the -20 grommet. With the wider occluded angle forward, secure the other end at the breather using existing hose and hardware.

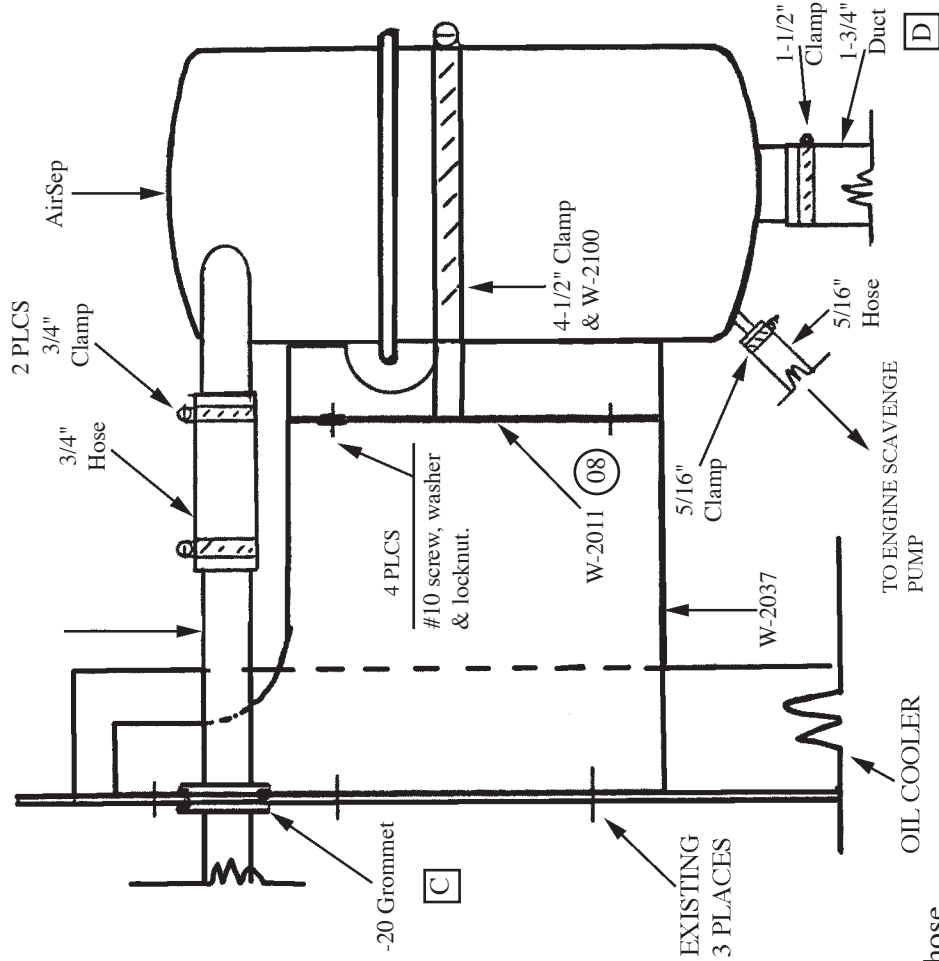
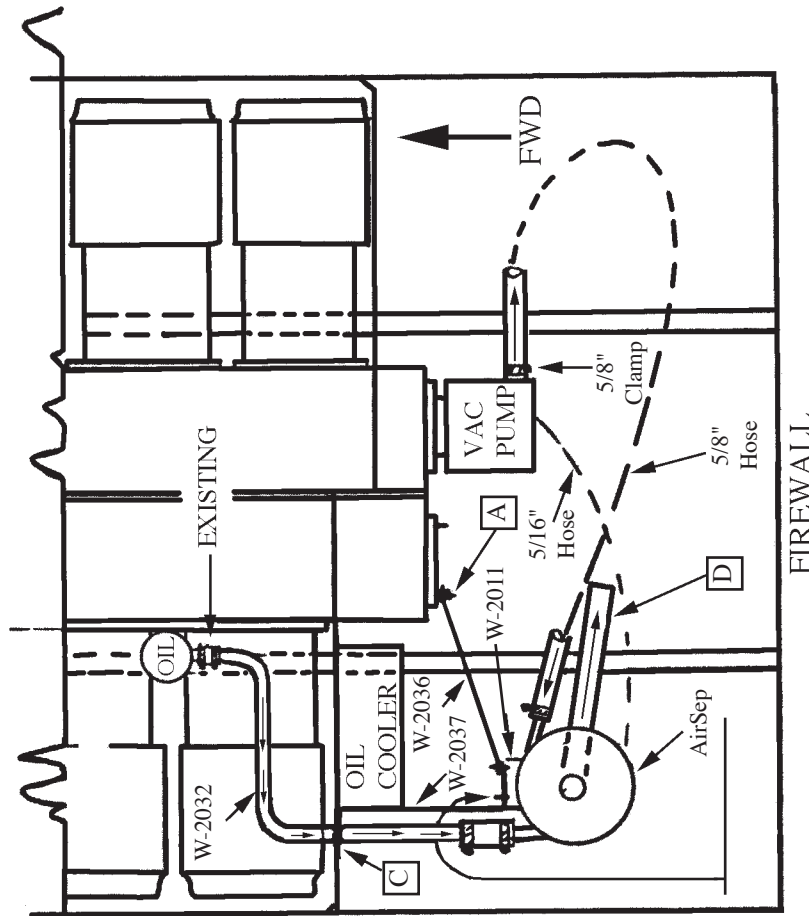
Note B: Assure sufficient clearance from #2 cylinder fins.

09. Slide the 3/4" hose over the aft end of the breather tube and secure with a 3/4" clamp.
10. Install the AirSep on the W-2011 bracket, with the 3/4" inlet of the AirSep forward, toward the breather tube. Connect the 3/4" hose between the AirSep and the breather tube and secure all clamps.
11. Connect the 5/8" hose between the vacuum pump outlet and the 1/2" inlet to the AirSep. Secure both ends with 5/8" clamps.
12. Connect the 1/4" hose from bottom of the AirSep to the existing scavenge line (see drawings) and secure both ends with 5/16" clamps.
13. Connect the 1-3/4" duct to the bottom of the Air Sep, and secure with 1-1/2" clamps
14. Route the lower end of the duct into the lower center nacelle area, away from the cowl flap area. Secure it using good shop practices.
15. Determine weight & balance, initiate Form 337, and update the equipment list.

Applicability:

CESSNA
310, A, B, C, D, E, F, G, H, E310H, I
310, J, K, L, M

Drawing: AFC-W329
Revision: B
Date: 06/01/05



- A** Remove accessory drive pad nut and install brace at that point.
- B** Remove drain hose used on original separator and install new longer hose
- C** Enlarge existing plugged hole in rear baffle to 1-1/16" and install grommet.
- D** Route CAT-4 duct towards center of engine compartment and secure using good shop practices.

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

DRAWING: AFC-W329
REVISION: B
DATE: 06/01/05

APPLICABILITY:
CESSNA
310, A, B, C, D, E, F, G, H, E310H, I, J, K, L, N, P, Q

