

Applicability: **BEECHCRAFT**  
**V35B**  
**A36**  
**F33**

[PRESSURE GYRO SYSTEMS ONLY]  
[S/N D-9787, D-9806 & After]  
[S/N E-716, E-732 & After]  
[S/N CE-602 & After]

Drawing: **AFC-W304**  
Revision: **B**  
Date: **06/01/05**

**Airwolf Parts List No. AFC-W304-A**

<u>Index</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
01.	W-3019	AirSep Assy, 3/4" Breather	(1)
02.	W-2031	Air Siphon Pump	(1)
03.	W-2022	Air Tee	(1)
04.	W-2011	Bracket	(1)
05.	W-2150	Doubler	(1)
06.	AN526C-1032R10	Screw, #10 X 5/8" Long	(5)
07.	AN960-10	Flat Washer, #10	(5)
08.	MS20365-1032A	Locknut, #10	(5)
09.	MIL6000-1/4	Hose, 1/4" ID	(35")
10.	MIL6000-5/16	Hose, 5/16" ID	(41")
11.	MIL6000-5/8	Hose, 5/8" ID	(2")
12.	MIL6000-3/4	Hose, 3/4" ID	(9")
13.	MM-4	Hose Clamp, 1/4"	(2)
14.	MM-5	Hose Clamp, 5/16"	(2)
15.	QS100M10H	Hose Clamp, 5/8"	(2)
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.	KW-2031	Drainback Kit	(1)
21.	655528	Rocker Cover Gasket	(1)
22.	MS20074-04-46	Bolt, 1/4" X 2-7/8" Long	(1)
23.	W-2004	Bushing	(1)
24.	AN960-416	Flat Washer, 1/4"	(1)
25.	MS35333-40	Star Washer, 1/4"	(1)
26.	MS21919WDG-05	Adel Clamp, 5/16"	(1)
27.	MS21919WDG-30	Adel Clamp, 1-7/8"	(1)
28.	CAT-7	Duct, 1-3/4" ID	(28")

# FOR REFERENCE ONLY

<b>Applicability:</b>	<b>BEECHCRAFT</b>	<b>[PRESSURE GYRO SYSTEMS ONLY]</b>	<b>Drawing: AFC-W304</b>
	<b>V35TC</b>		<b>Revision: B</b>
<b>Bonanza</b>	<b>A36TC</b>	<b>[S/N EA-1 &amp; After]</b>	<b>Date: 06/01/05</b>
	<b>B36TC</b>	<b>[S/N EA242 &amp; After]</b>	

## Airwolf Parts List No. AFC-W304-B

<u>Index</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
01.	W-3019-B	AirSep Assy, 3/4" Breather	(1)
02.	W-2150	Doubler	(1)
03.	W-2011	Bracket	(1)
04.	AN526C-1032R10	Screw, #10 X 5/8" Long	(5)
05.	AN960-10	Flat Washer, #10	(5)
06.	MS20365-1032A	Locknut, #10	(5)
07.	W-2154-3	Pushrod Shroud Tube, 3/8" Inlet	(1)
08.	630286	Pushrod Tube Seal, Rocker Box Side	(1)
09.	534610	Pushrod Tube Seal, Crankcase Side	(1)
10.	655528	Rocker Cover Gasket	(1)
11.	MIL6000-1/4	Hose, 1/4" ID	(24")
12.	MIL6000-3/4	Hose, 3/4" ID	(9")
13.	MM-4	Hose Clamp, 1/4"	(2)
14.	QS100M12H	Hose Clamp, 3/4"	(2)
15.	QS100M24H	Hose Clamp, 1-1/2"	(1)
16.	QS100M72H	Hose Clamp, 4-1/2"	(1)
17.	W-2100	"C" Channel	(10")
18.	MS21919WDG-30	Adel Clamp, 1-7/8"	(1)
19.	CAT-7	Duct, 1-3/4" ID	(28")

# FOR REFERENCE ONLY

**Applicability:** BEECHCRAFT [CONVERSION FROM PRESSURE TO VACUUM SYSTEM ]  
 V35  
**Bonanza** A36, 36TC  
 F33

**Drawing:** AFC-W304  
**Revision:** B  
**Date:** 06/01/05

## Airwolf Parts List No. AFC-W304-C

<u>Index</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
01.	W-3000	AirSep Assy, 3/4" Breather, 1/2" Vacuum	(1)
02.	W-2031	Air Syphon Pump	(1)
03.	W-2018-1	Air-Tee, 5/8"	(1)
04.	W-2021	Doubler	(1)
05.	W-2011	Bracket	(1)
06.	AN526C-1032R10	Screw, #10 X 5/8" Long	(6)
07.	AN960-10	Flat Washer, #10	(6)
08.	MS20365-1032A	Locknut, #10	(6)
09.	MIL6000-1/4	Hose, 1/4" ID	(12")
10.	MIL6000-5/16	Hose, 5/16" ID	(22")
11.	MIL6000-5/8	Hose, 5/8" ID	(18")
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.	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.	KW-2031	Drain Back Kit	(1)
21.	655528	Continental Gasket	(1)
22.	MS20074-04-46	Bolt, 1/4" X 4-3/4" Long	(1)
23.	W-2004	Bushing	(1)
24.	AN960-416	Flat Washer, 1/4"	(1)
25.	MS35333-40	Star Washer, 1/4"	(1)
26.	MS21919WDG-5	Adel Clamp, 5/8"	(1)
27.	MS21919WDG-30	Adel Clamp, 1-7/8"	(1)
28.	CAT-7	Duct, 1-3/4" ID	(24")

# FOR REFERENCE ONLY

<b>Applicability:</b>	<b>BEECHCRAFT</b>	<b>[WITH IO-550 ENGINES]</b>	<b>Drawing: AFC-W304</b>
	V35B	[S/N D-9787, D-9806 & After]	<b>Revision: B</b>
	A36	[S/N E-716, E-732 & After]	<b>Date: 06/01/05</b>
	F33	[S/N CE-602 & After]	

## Airwolf Parts List No. AFC-W304-D

<u>Index</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
01.	W-3000	AirSep Assy, 3/4" Breather, 1/2" Vacuum	(1)
02.	W-2154-2	Pushrod Shroud Tube, 5/16" Inlet	(1)
03.	630286	Pushrod Shroud Tube Seal, Outer	(1)
04.	534610	Pushrod Shroud Tube Seal, Inner	(1)
05.	W-2014	AirSyphon Pump	(1)
06.	W-2018-1	Air Tee, 5/8"	(1)
07.	W-2011	Bracket	(1)
08.	W-2150	Doubler	(1)
09.	AN526C-1032R10	Screw, #10 X 5/8" Long	(5)
10.	AN960-10	Flat Washer, #10	(5)
11.	MS20365-1032A	Locknut, #10	(5)
12.	MIL6000-5/16	Hose, 5/16" ID	(18")
13.	MIL6000-5/8	Hose, 5/8" ID	(12")
14.	MIL6000-3/4	Hose, 3/4" ID	(12")
15.	MM-5	Hose Clamp, 5/16"	(4)
16.	QS100M10H	Hose Clamp, 5/8"	(2)
17.	QS100M12H	Hose Clamp, 3/4"	(2)
18.	QS100M24H	Hose Clamp, 1-1/2"	(1)
19.	QS100M72H	Hose Clamp, 4-1/2"	(1)
20.	W-2100	"C" Channel	(10")
21.	655528	Rocker Cover Gasket	(1)
22.	MS21919WDG-30	Adel Clamp, 1-7/8"	(1)
23.	CAT-7	Duct, 1-3/4" ID	(28")

Applicability:	BEECHCRAFT	[PRESSURE GYRO SYSTEMS ONLY]	Drawing: AFC-W304
	V35B	[S/N D-9787, D-9806 & After]	Revision: B
Bonanza	A36	[S/N E-716, E-732 & After]	Date: 06/0105
	F33	[S/N CE-602 & After]	

*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. Cut the existing breather tube approximately 2.0" aft of the engine rear baffle on the top of the oil cooler.
02. Remove the remaining breather tube assy and clamps, etc., from the cut point to the cowl flap area. Retain the attaching hardware.
03. Locate a point 5.5" from the left edge of the firewall inspection plate and 4.0" from the lower edge of the same plate.
04. Remove the firewall inspection plate and drill the located position on the plate using a # 11 drill.
05. Position the 4-1/2" clamp between the W-2011 bracket and the plate, and secure the bracket , and W-2150 doubler to the inspection plate using one each of #10 Screw, Washer and Locknut.
06. Install protective "C" Channel o above clamp.
07. Position the AirSep onto the W-2011 bracket with the 3/4" inlet pointing forward directly toward the existing cut off breather tube.
08. Install the 3/4" hose over one end of the 3/4" breather tube and the other end over the 3/4" inlet tube of the AirSep and clamp both ends in place using 3/4" clamps
09. Modify the existing pressure instrument manifold as shown.
10. Position the Air-Tee in the existing rubber coupling on the pressure regulator with the "V" facing down and clamp in place using the existing hardware.
11. Install the 5/8" hose over the Air-Tee and clamp in place using a 5/8" clamp.
12. Install the other end of the 5/8" hose over the cut end of the manifold as shown on and clamp it in place using a 5/8" clamp.
13. Remove the #1 cylinder rocker cover and modify it in accordance with KW-2031 (rocker box modification kit).
14. Reinstall the rocker cover using the provided gasket
15. Install the AirSyphon Pump on the newly modified rocker cover fitting as shown on sheet 2.
16. Install the 1/4" line from the 1/4" branch of the installed Air Siphon Pump to the 1/4" drain on the AirSep. Clamp both ends using 1/4" clamps.
17. Install the 5/16" line and connect one end to the r5/16" branch of the Air Siphon Pump and the other end to the 5/16" branch of the Air-Tee and secure with 5/16" clamps.
18. Install the 1-3/4" duct onto the large outlet fitting of the AirSep and clamp it in place using a 1-1/2" clamp.
19. Secure the other end of the 1-3/4" duct to the aft, lower cowl former just forward of the cowl flap using a -30 Adel clamp and secure with a #10 screw, washer, and locknut.
20. 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.**

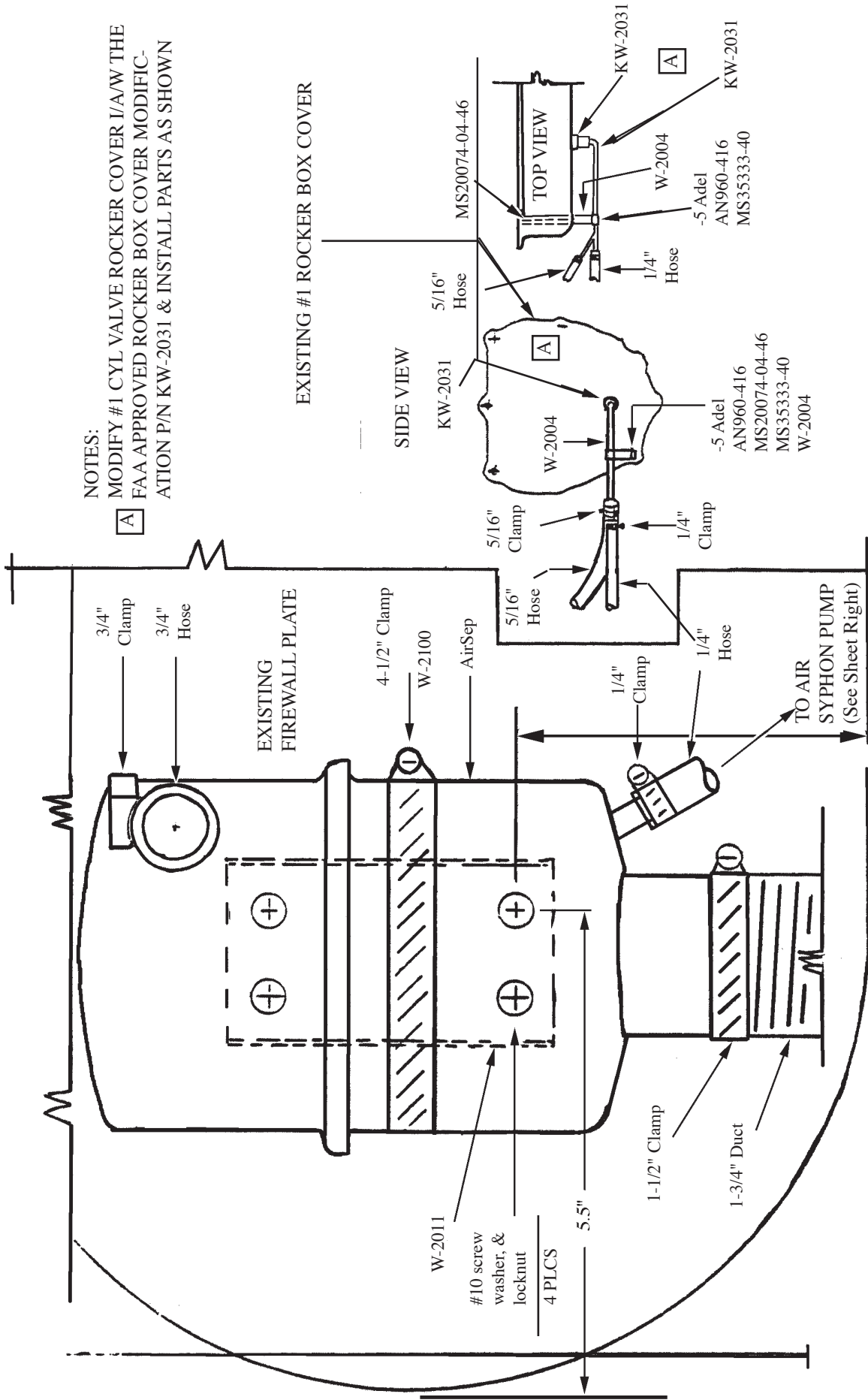
01. Remove the existing air/oil separator, lines and attaching parts.
02. Remove the existing breather tube assy from it's attaching point on the oil filler neck to the lower cowl flap area. Retain the breather tube and cut off the upper end as shown. Discard the lower section of the tube after cutting.
03. Remove the (6) attaching screws on the left side of the oil cooler.
04. Install the W-2051 doubler between the oil cooler flange and the rear engine baffle. Align the W-2150 doubler and duplicate the (6) holes in the oil cooler flange, through the doubler and reinstall the (6) screws.
05. Duplicate the (4) holes that are already in the W-2150 doubler through the rear engine baffle.
06. Secure the W-2150 doubler to the rear engine baffle in the upper and lower left corners, by using (1 ea) of a #10 screw, washer and locknut.
07. Secure the W-2011 bracket to the doubler and the rear engine baffle using (1) each of a #10 screw, washer and locknut.
08. Duplicate the lower holes in the W-2011 bracket through the W-2150 doubler. Position the 4-1/2" clamp between the W-2011 bracket and the W-2150 doubler. Secure the clamp and bracket to the doubler using (1 ea) of a #10 screw, washer and locknut.
09. Duplicate the 1.0" elongated hole that is already in the doubler (Item 3) through the rear engine baffle, using the W-2150 doubler as a guide.
10. Install one end of the 1/2" hose over the outlet fitting of the vacuum pump and secure it in place using a 1/2" clamp.
11. Install the other end of the 1/2" hose over the end of the Air-Tee as shown on and secure using 1/2" clamp.
12. Connect the 1/2" hose to the 1/2" inlet of the AirSep, and the other end to the remaining 1/2" port of the Air-Tee. Secure with 1/2" clamps.
13. Position the AirSep on the W-2011 bracket and secure the AirSep using the 4-1/2" clamp on the W-2011 bracket.  
Caution: Do not over torque the clamp.
14. Install the 5/16" hose over the 5/16" branch on the Air-Tee and clamp in place using a 5/16" clamp. Connect the other end of the same hose to the 5/16" branch of the AirSiphon Pump and secure with 5/16" clamp.
15. Connect the 1/4" hose from the 1/4" drain on the AirSep to the 1/4" branch on the Air Siphon Pump and secure with 1/4" clamps.
16. Connect the 1-3/4" duct to the bottom of the AirSep, and secure it using a 1-1/2" clamp.
17. Connect the lower end of the 1-3/4" duct to the keel structure, at the same point where the old breather tube was located and secure with -30 Adel clamp, #10 screw, washer, and locknut.
18. Determine the weight & balance, initiate Form 337, and update the equipment list.



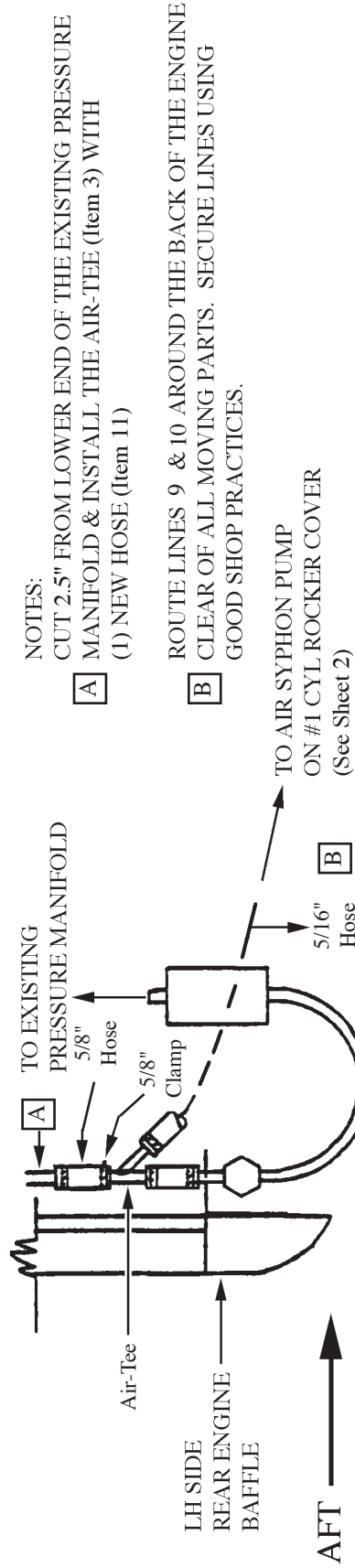
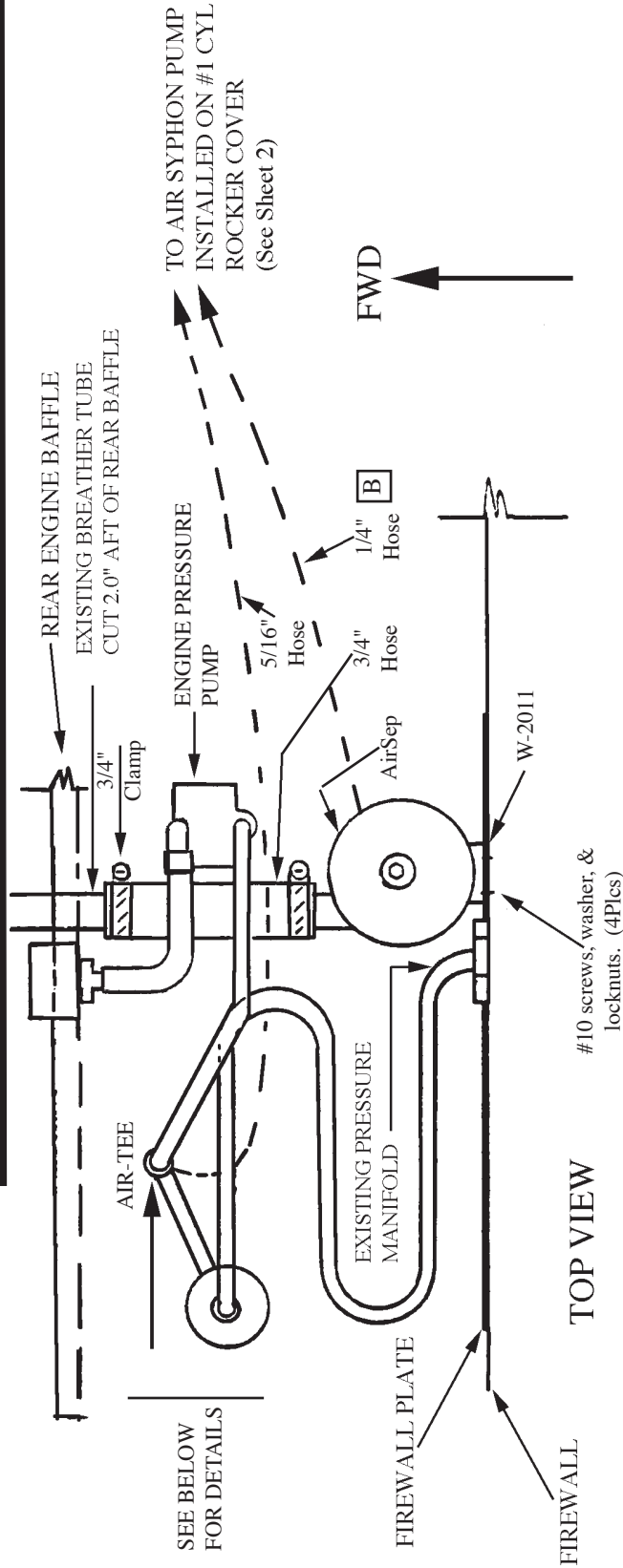
Applicability: BEECHCRAFT  
 V35B  
 A36  
 F33

[S/N D-9787, D-9806 & After]  
 [S/N E-716, E-732 & After]  
 [S/N CE-602 & After]

Drawing: AFC-W304  
 Revision: B  
 Date: 06/01/05



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



NOTES:

- CUT 2.5" FROM LOWER END OF THE EXISTING PRESSURE MANIFOLD & INSTALL THE AIR-TEE (Item 3) WITH (1) NEW HOSE (Item 11)

ROUTE LINES 9 & 10 AROUND THE BACK OF THE ENGINE CLEAR OF ALL MOVING PARTS. SECURE LINES 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.**



Applicability:

V35B  
A36  
F33

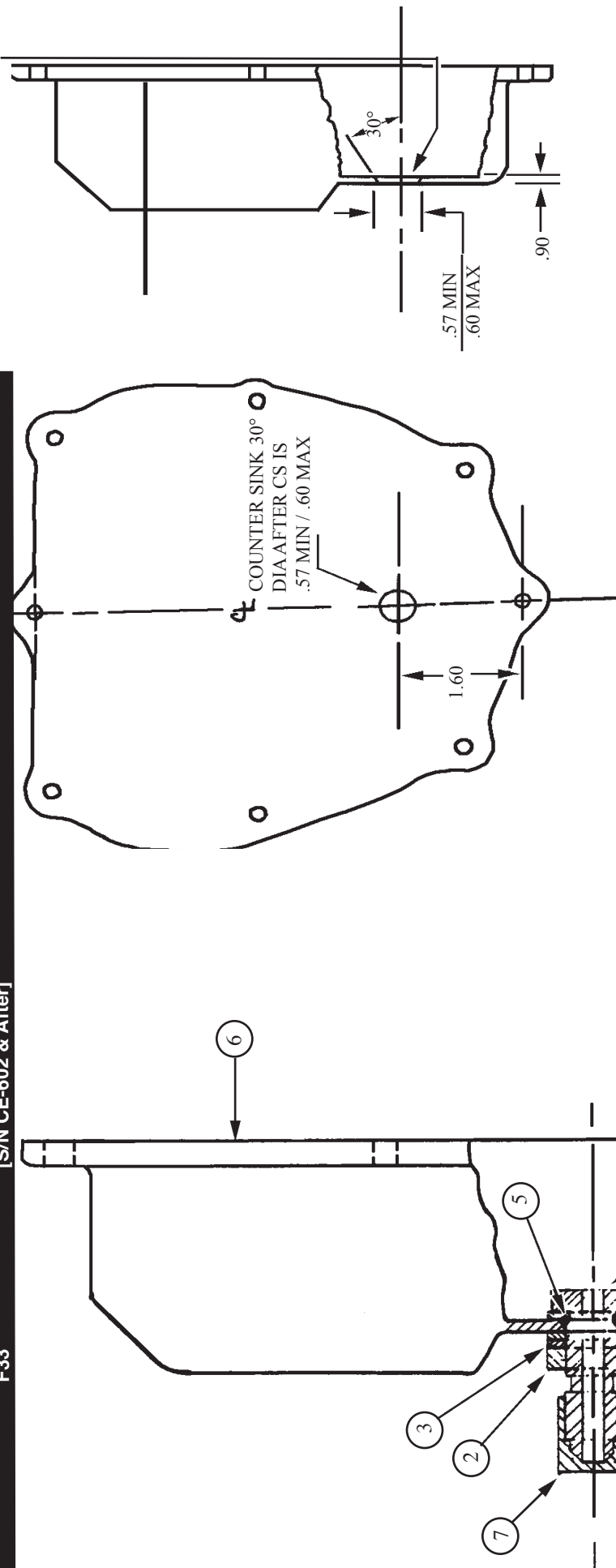
BEECHCRAFT

[S/N D-9787, D-9806 & After]  
[S/N E-716, E-732 & After]  
[S/N CE-602 & After]

Drawing: AFC-W304

Revision: B  
Date: 06/01/05

DRILL .500" HOLE  
REMOVE ALL SHARP  
EDGES



**NOTE:**  
THIS RETURN FITTING IS APPROVED ONLY FOR  
RETURNING OIL FROM THE FAA APPROVED  
AIRWOLF AIRSEP.

ASSEMBLY INSTRUCTIONS:

1. DRILL ROCKER BOX COVER PER SHEET 2.
2. INSTALL ITEM 4 ONTO ITEM 1.
3. INSTALL ITEM 5 ONTO ITEM 1, AGAINST ITEM 4.
4. INSTALL ITEM 1 INTO DRILLED HOLE IN ROCKER BOX COVER FROM INSIDE POINTING OUTWARD.
5. INSTALL IN ORDER, ITEM 4, 3, & 2, ONTO ITEM 1 AND TIGHTEN.
6. INSTALL ITEM 7 ONLY IF NO AIR/OIL SEPARATOR IS TO BE INSTALLED AT THIS TIME.

1	7	AN20-5D	Blockoff Cap, -5 [Not Included]
1	6	625615	Rocker Box Cover [Not Included]
1	5	M83248/1-013	Viton O-Ring, 1/2"
2	4	AN960-PD816	Flat Washer, 1/2"
1	3	MS35333-44	Lock Washer, 1/2"
1	2	AN924-5D	Nut, -5
1	1	AN832-5D-SP	Bulkhead Fitting, -5
<b>QTY</b>	<b>ITEM</b>	<b>PART#</b>	<b>DESCRIPTION</b>