

BLUE STAR CONVERSION

INSTALLATION OF CONTINENTAL IO-470-N

IN H35 BONANZA

SERIAL NUMBER D-4866 THROUGH D-5330

LWS 470-H35

STC# SA2660SW

SAMPLE

BLUE STAR CONVERSION

TABLE OF CONTENTS

<u>PAGE DESCRIPTION</u>	<u>PAGE NO.</u>
Table of Contents	2
Revision List	3
Parts List	4
List of Fasteners	5
Instructions (Steps 1-5)	6
Instructions (Steps 6-9)	7
Instructions (Step 10-12)	8
Instructions (Figure #1)	9
Instructions (Figure #2)	10
Instructions (Figure #3)	11
Instructions (Figure #4)	12
Instructions (Figure #5)	13
Instructions (Figure #6)	14
Equipment List Revisions	15

Revision #
September 16, 1977

BLUE STAR CONVERSION

LIST OF REVISIONS

SAMPLE

Revision # _____

September 16, 1977

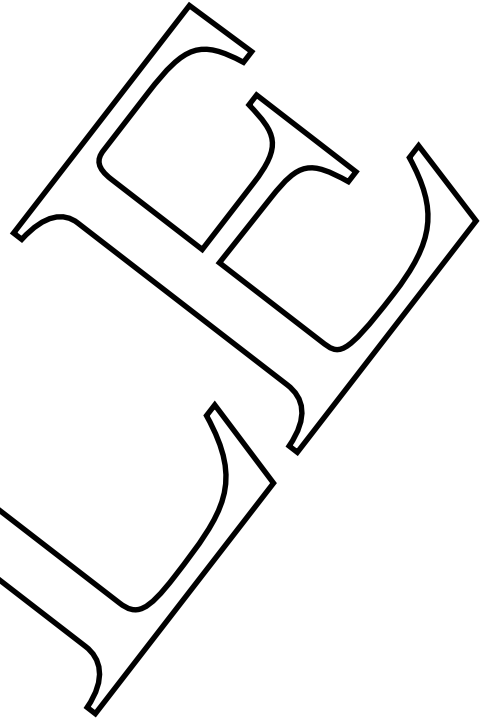
BLUE STAR CONVERSION

PARTS LIST

<u>QUANTITY</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	
1 ea.	4140-00-39	Dukes Pump	
1 ea.	367-00	Check Valve	
1 ea.	366-00	Check Valve	
1 ea.....	335-380053-654.....	Switch	
1 ea.	Adel AC-40	Clamp	
1 ea.	Adel MS21919-DG16	Clamp	
2 ea.	115167CXZ060285	Duct	
1 ea.....	Alcor VCW-1.....	Control	
1 ea.	115167CXX140153	Duct	
1 ea.	35-910066-227	Baffle	#74 on figure #5
1 ea.	35-910066-233	Baffle	#75 on figure #5
2 ea.....	35-910066-111.....	Baffle	#73 on figure #5
1 ea.	35-910066-207	Baffle	#72 on figure #5
1 ea.	35-910066-215	Baffle	#71 on figure #5
4 ea.	45-910315-1	Clip	#80 on figure #5
4 ea.....	45-910314.....	Plate	#81 on figure #5
1 ea.	35-910294	Baffle Support	
1 ea.	35-910066-149	Baffle Front	
1 ea.	35-910066-1	Baffle Rear	
1 ea.....	95-910019-13.....	Muffler Shroud	
1 ea.	35-910295-19	Shroud	
1 ea.	35-910295-23	Shroud	

BLUE STAR CONVERSION

1 ea.	35-910295-27	Shroud
1 ea.....	35-910295-31.....	Shroud
1 ea.	35-910295-35	Shroud
1 ea.	35-910295-39	Shroud
1 ea.	002-410023-5	Louver
4 ea.	002-410023-6	Louver



LIST OF FASTENERS

BOLTS

- AN525-832
- AN525-632
- AN4
- AN3

WASHERS

- AN960-8
- AN960-6
- AN960-4
- AN960-102

NUTS

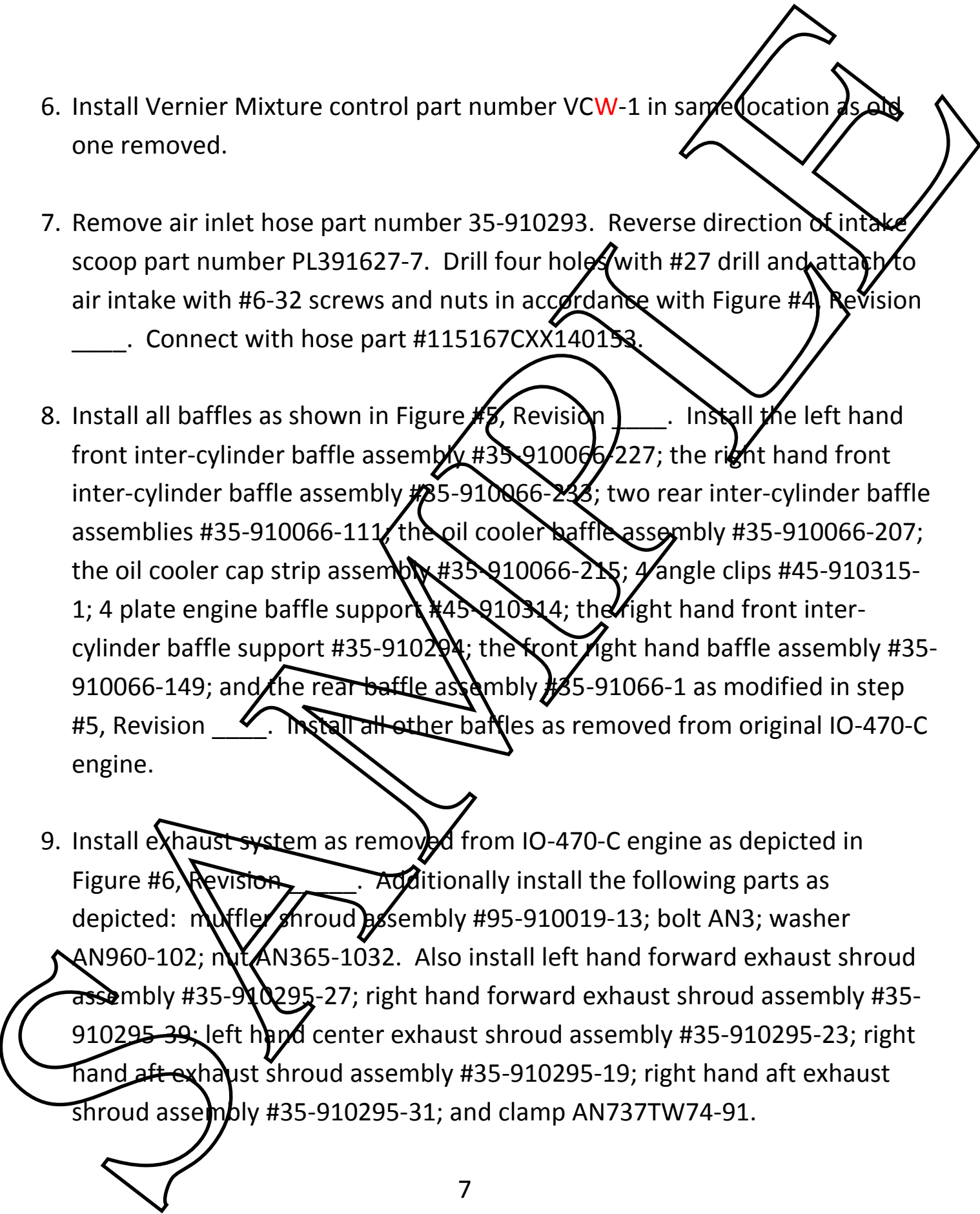
- AN365-832
- AN365-632
- AN365-4
- AN365-1032

RIVETS: MS20426AD-3 Use #40 Drill and Countersink

Revision # _____
September 16, 1977

INSTALLATION INSTRUCTIONS

1. Remove Continental IO-470-C engine and Beechcraft Propeller, Model 278-100.
2. Install electric fuel pump. Install Dukes 4140-00/39 pump on firewall above rudder pedals as shown on Figure #1, Revision _____. Use Adel AC-40 clamp. Install one way check valve #367-00 in fuel line from electric pump to engine driven pump. Install electrical wiring as depicted, Figure #1, Revision _____.
3. Remove primer switch #623. Install fuel boost pump switch #335-380053-654 in hole from which primer switch was removed. Placard electric fuel pump switch according to flight manual supplement, STC #SA2660SW.
4. Install one way check valve #366-00 in the vapor return line. Attach check valve to the front side of the firewall with an Adel clamp MS21919-DG16. See Figure #3, Revision _____.
5. To accommodate the inlet for the air blast duct #115167CXZ060285 to the engine driven fuel pump, add a 1 1/2" diameter hole to the rear baffle assembly #35-910066-1. Locate the hole as depicted in Figure #2, Revision _____ and Figure #4, Revision _____. Install air duct #115167CXZ060285 using the following attaching parts: Clamp NAS397-28; 4 screws AN530-8R10; 4 washers AN960-8; and 4 nuts NAS395-16. Cut hole for #2 spark plug lead as shown

- 
6. Install Vernier Mixture control part number VCW-1 in same location as old one removed.
 7. Remove air inlet hose part number 35-910293. Reverse direction of intake scoop part number PL391627-7. Drill four holes with #27 drill and attach to air intake with #6-32 screws and nuts in accordance with Figure #4, Revision _____. Connect with hose part #115167CXX140153.
 8. Install all baffles as shown in Figure #5, Revision _____. Install the left hand front inter-cylinder baffle assembly #35-910066-227; the right hand front inter-cylinder baffle assembly #35-910066-233; two rear inter-cylinder baffle assemblies #35-910066-111; the oil cooler baffle assembly #35-910066-207; the oil cooler cap strip assembly #35-910066-215; 4 angle clips #45-910315-1; 4 plate engine baffle support #45-910314; the right hand front inter-cylinder baffle support #35-910294; the front right hand baffle assembly #35-910066-149; and the rear baffle assembly #35-91066-1 as modified in step #5, Revision _____. Install all other baffles as removed from original IO-470-C engine.
 9. Install exhaust system as removed from IO-470-C engine as depicted in Figure #6, Revision _____. Additionally install the following parts as depicted: muffler shroud assembly #95-910019-13; bolt AN3; washer AN960-102; nut AN365-1032. Also install left hand forward exhaust shroud assembly #35-910295-27; right hand forward exhaust shroud assembly #35-910295-39; left hand center exhaust shroud assembly #35-910295-23; right hand aft exhaust shroud assembly #35-910295-19; right hand aft exhaust shroud assembly #35-910295-31; and clamp AN737TW74-91.

10. Install side cover louvers: 4 ea. #002-410023-5 and 4 ea. #002-410023-6 using Template to locate.
11. Install all accessories as removed from IO-470-C engine. Install engine and propeller on aircraft. For information pertaining to propeller reference: Item 6a and b; 9a, b and c; 11a, b and c; in Equipment List Revisions.
12. Fill out form **337** and make appropriate log book entry. Mark instruments in accordance with Flight Manual Supplement. Mark fuel tanks 100 Oct Only! Make changes in Equipment List.

Revision # _____

September 16, 1977

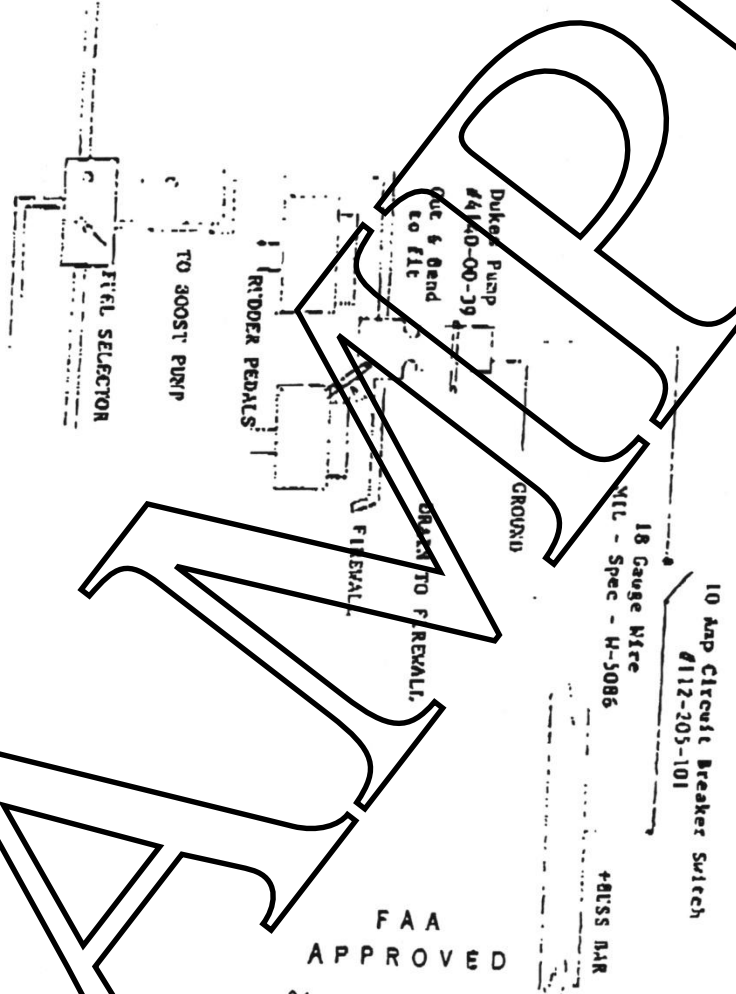
"PROPRIETARY"
 The information contained in or disclosed by this document is considered proprietary by D'Shannon Products. This document and the items and information contained or disclosed herein shall not be used, copied, or reproduced in whole or part nor shall the contents be revealed in any manner to any person unless permission is obtained from D'Shannon Products.



LOU STALLINGS AIRCRAFT
 BOX 15213
 TULSA, OKLAHOMA 74112
 (918) 835-7462

Step #2.
 Fuel System Modification
 and Switch Installation

INSTALLATION OF
 CONTINENTAL IO-470-N
 IN H-35 BONANZA



FAA
 APPROVED

09 SEP 17 1996

CHICAGO AIRCRAFT
 CERTIFICATION OFFICE
 CENTRAL REGION

Revision #
 September 16, 1977

Figure #1
 Page 2

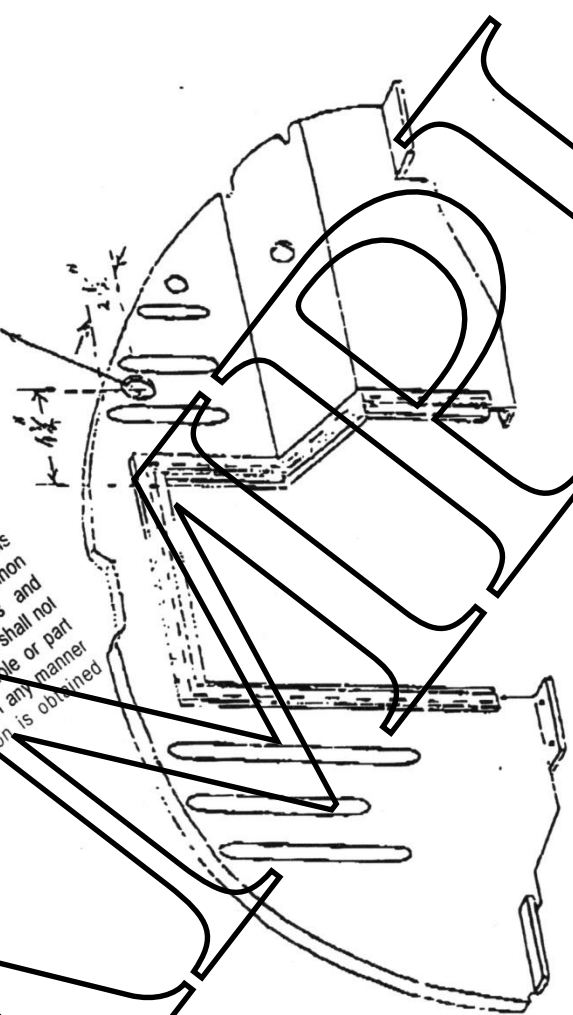
S

SAFETY

SAFARI

"PROPRIETARY"
The information contained in or disclosed by this document is considered proprietary by D'Shannon Products. This document and the items and information contained or disclosed herein shall not be used, copied, or reproduced in whole or part nor shall the contents be revealed in any manner to any person unless permission is obtained from D'Shannon Products.

1 1/2" DIA. Hole



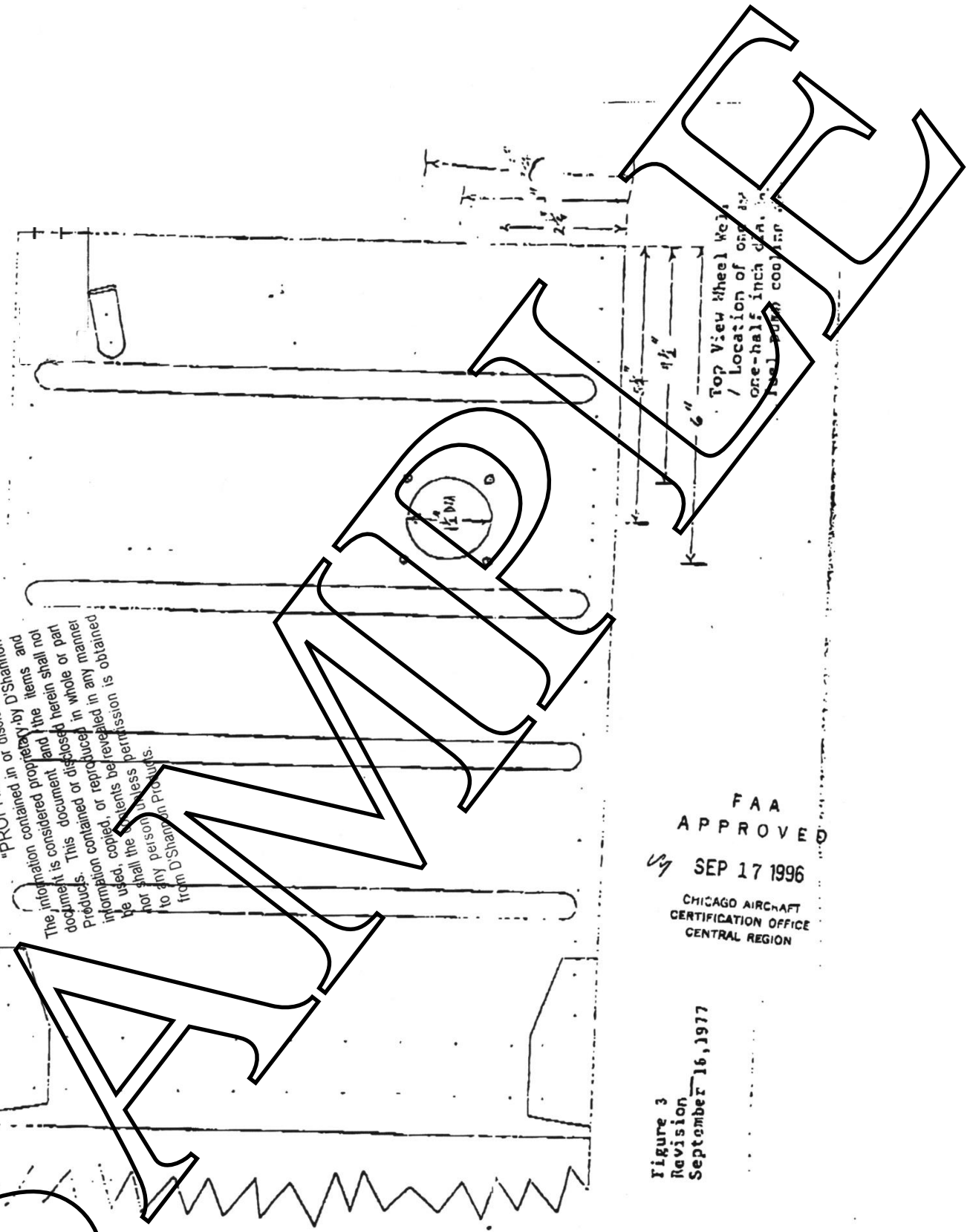
Rear Baffle Assembly
P15-910056-157 / Location of
hole and one-half inch dia.
hole for air bleed duct
P115JUN77CY2460205 inlets /

FAA
APPROVED
49 SEP 17 1996
CHICAGO AIRCRAFT
CERTIFICATION OFFICE
CENTRAL REGION

Figure 2
Revision
September 16, 1977

S

"PROPRIETARY"
The information contained in or disclosed by this document is considered proprietary by D'Shannon Products. This document and the items and information contained or disclosed herein shall not be used, copied, or reproduced in any manner without the written consent of D'Shannon Products. No part of this document shall be disclosed to any person without the written consent of D'Shannon Products.

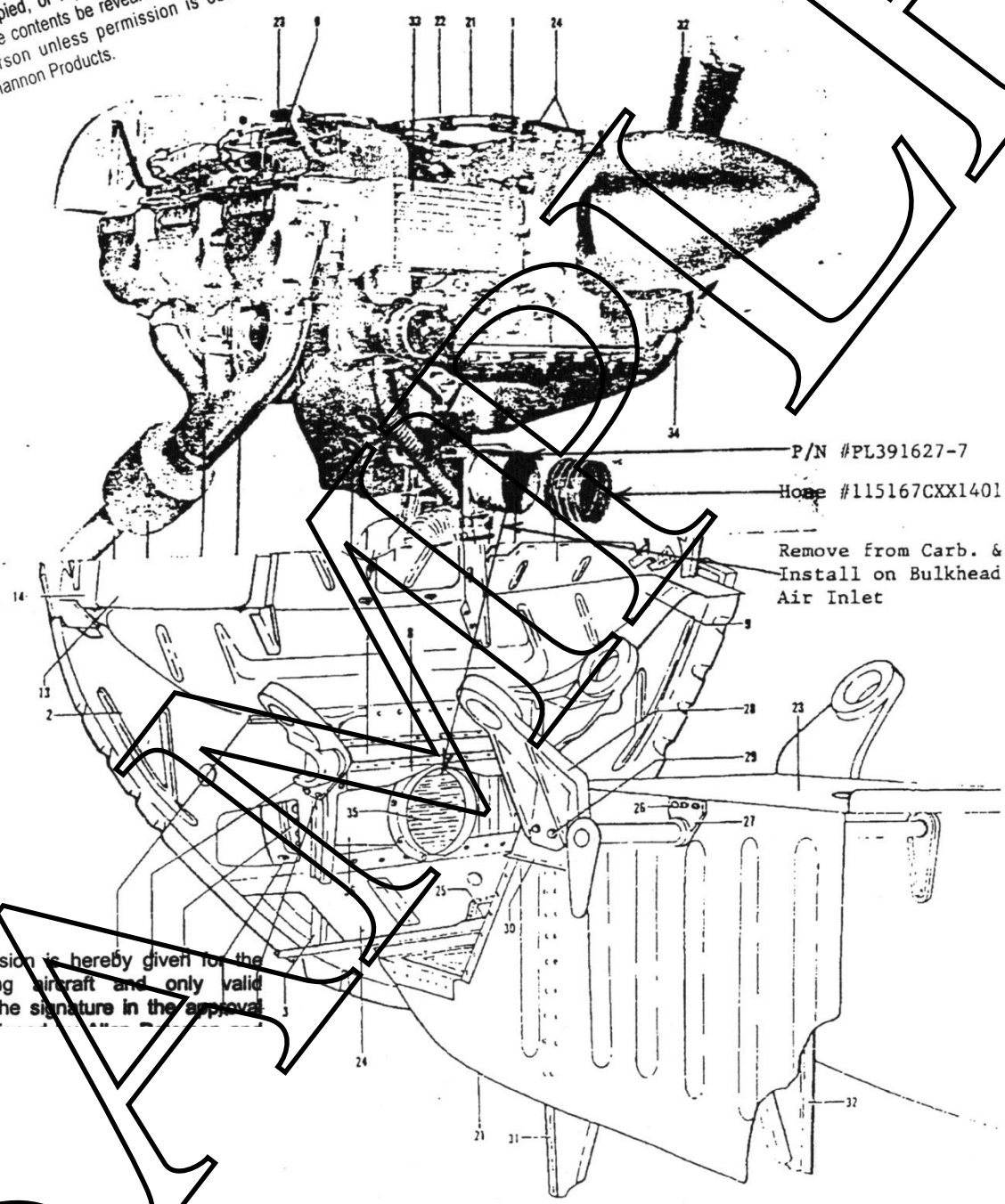


FAA
APPROVED
SEP 17 1996
CHICAGO AIRCRAFT
CERTIFICATION OFFICE
CENTRAL REGION

Figure 3
Revision
September 16, 1977

"PROPRIETARY"
 The information contained in or disclosed by this document is considered proprietary by D'Shannon Products. This document and the items and information contained or disclosed herein shall not be used, copied, or reproduced in whole or part nor shall the contents be revealed in any manner to any person unless permission is obtained from D'Shannon Products.

35 PARTS CALL OUT



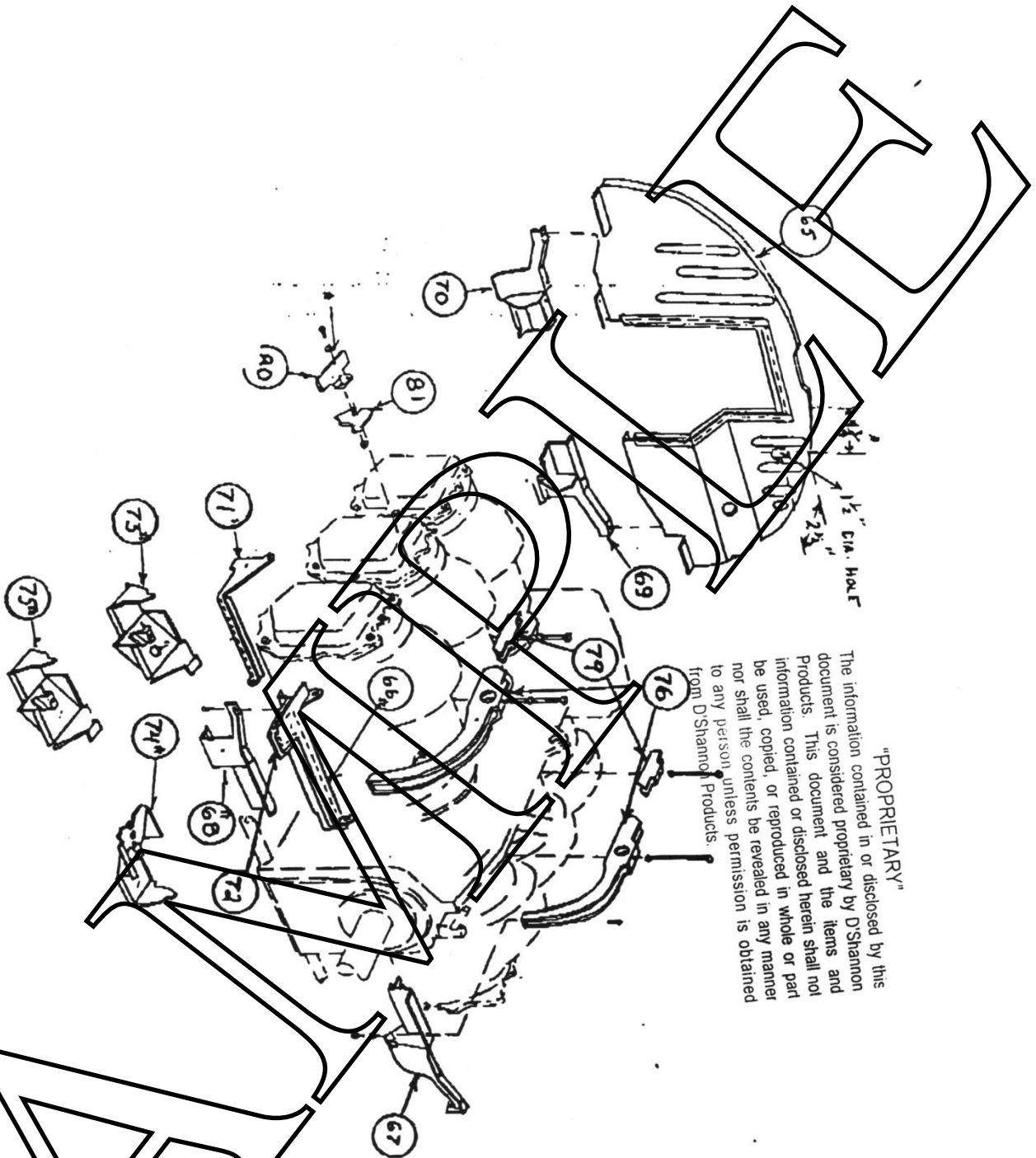
Permission is hereby given for the following aircraft and only valid when the signature in the approval

Figure 8. Nose Section

Figure #4
 Revision #
 Date: September 16, 1977

INSTALLATION OF
 AIR SCOOP

Figure #5
Revision # _____
Contract # 14 1177



"PROPRIETARY"
The information contained in or disclosed by this document is considered proprietary by D'Shannon Products. This document and the items and information contained or disclosed herein shall not be used, copied, or reproduced in whole or part nor shall the contents be revealed in any manner to any person unless permission is obtained from D'Shannon Products.

Engine Baffles

SAFARI

35-910295-27 Shroud LH Fwd.
 35-910295-23 Shroud LH Ctr.
 35-910295-19 Shroud LH Aft

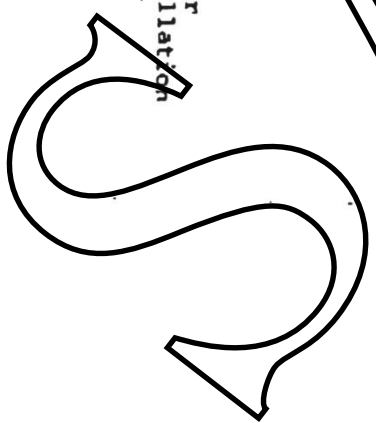
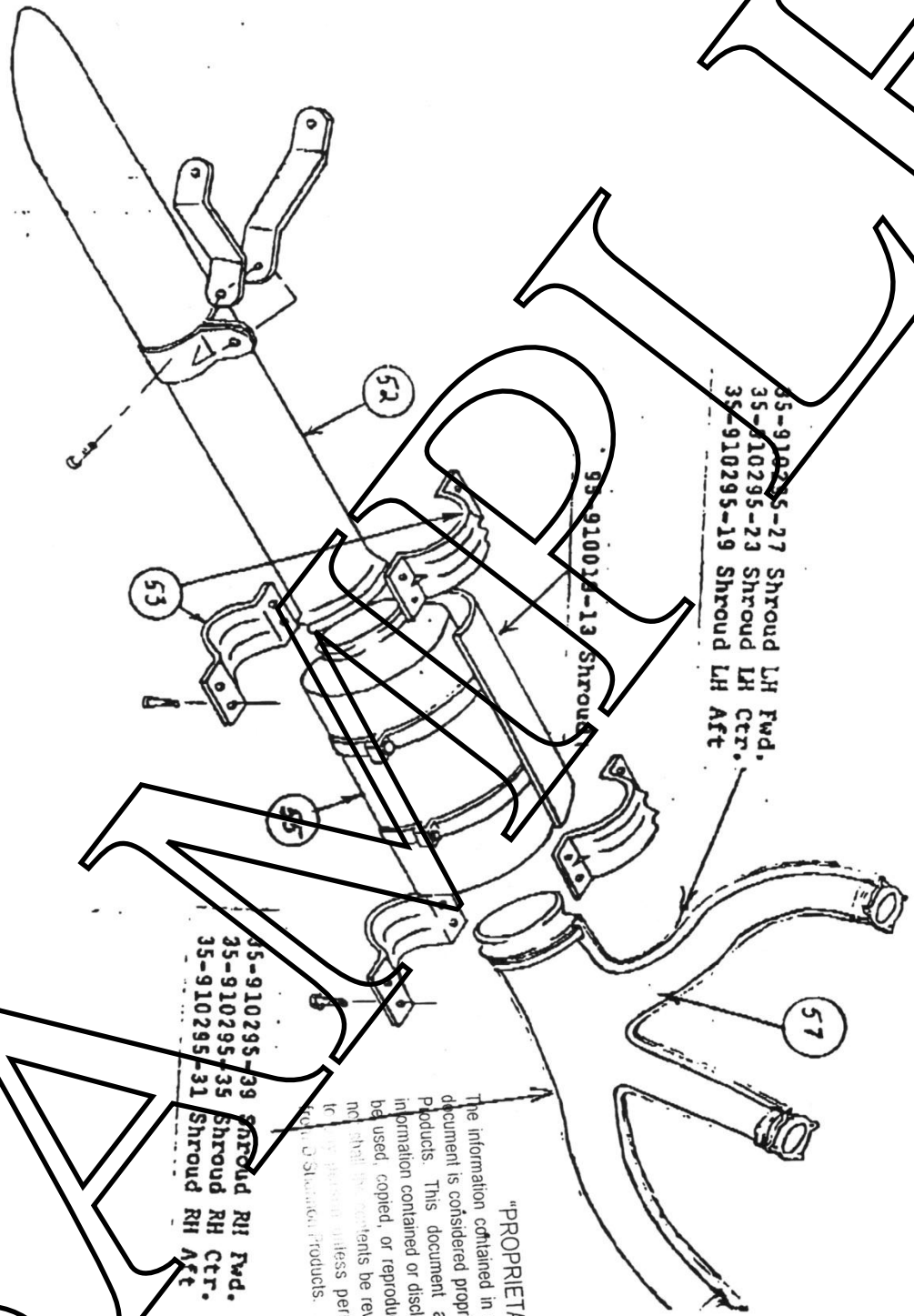
93-910028-13 Shroud

35-910295-39 Shroud RH Fwd.
 35-910295-35 Shroud RH Ctr.
 35-910295-31 Shroud RH Aft

"PROPRIETARY"
 The information contained in or disclosed in this document is considered proprietary by D'Sha Products. This document and the information contained or disclosed herein shall not be used, copied, or reproduced in whole or in part without the express written permission of D'Sha Products.

Figure #6
 Revision #

Exhaust System-Muffler
 Shroud Assembly Installation



EQUIPMENT LIST REVISION

"X" Applicable Propeller

ITEM

- 6. Beech constant speed propeller installation
 - a) Beech 278-100-11 or 278-100-13 Hub with 278-214-82 blades.
Diameter: 82", no cutoff permitted. Pitch settings at 33" sta.:
low 13.5, high not under 30
 - and b) Woodward Hydraulic governor (210235, 21035 or 210686).

- 9. Flottorp constant speed propeller installation (J35, K35, M35, N35, P35)
 - a) Flottorp F12A-3, K35, with 8400-2 Blades. Diameter: (J35, K35, M35 only) - not over 82", not under 81 1/2" (N35, P35 only) not over or under 82" (No cutoff permitted) Pitch settings at 33" sta.: low 13.5, high 30 minimum. Airplane Flight Manual Supplement dated August 30, 1962, F/N 35-590106 required.
 - b) Woodward governor (210452)
(Maximum RPM at 2600 for J35, K35, M35)
(Maximum RPM at 2625 for N35, P35)
 - c) Flottorp FS 200-1 spinner assembly

- 11. McCauley constant speed propeller installation
 - a) McCauley 2A36C23 hub with 84B-0 Blades. Diameter: not over 84", not under 82". Pitch settings at 30" sta.:
Low 13.3, High 29.2 (IO-470-N engine)
 - b) Woodward governor (210452 or A210680)
 - c) McCauley D3290A spinner assembly.

101. Fuel Pumps

Auxiliary Dukes 4140-00-39 or Auxiliary Weldon 4032A
Engine Driven Continental 626062-3A1

D'SHANNON PRODUCTS

ENGINEERING ORDER

DATE 12/08/97	MODEL H35	EFFECT ON LWS-470-H35	E.O. NUMBER ECO470H35-A.1
		E.O. TYPE DESIGN	
		AUTHORITY ENGINEERING	

PARTS MADE OK TO USE MAY BE REWORKED NOTED

DWG TO BE CHANGED YES NO x	E O BY. M. TRUDEAU	RELEASE DATE 12/08/97
----------------------------------	--------------------	-----------------------

TYPE	DOCUMENT NUMBER	REV	TITLE	DRAWING DATE
------	-----------------	-----	-------	--------------

DWG.	LWS-470-H35	IR	Blue Star Conversion, Installation of Continental IO-470-N in H35 Bonanza Serial Number D-4806 Through D-5538.	Sept. 18, 1977 FAA Approved Sept. 17, 1996
------	-------------	----	--	---

Page 3

Note 1: Baffle components listed herein are standard components used on the original O-470-G installation. Replace with new parts where necessary.

Note 2: The installation of four Lord Mount heat shields, part numbers 35-910003-85 is an accepted alternative to installing collector pipe heat shrouds listed on this parts list.

"PROPRIETARY"
The information contained in or disclosed by this document is considered proprietary by D'Shannon Products. This document and the items and information contained or disclosed herein shall not be used, copied, or reproduced in whole or part nor shall the contents be revealed in any manner to any person unless permission is obtained from D'Shannon Products.

REFERENCED E.O.'S

S

D'SHANNON PRODUCTS

ENGINEERING ORDER

DATE 02/27/98	MODEL Beech 33	EFFECT ON LWS 470-33, Revision 5	E.C.O. NUMBER ECOLWS470-33-6B
		E.O. TYPE DESIGN	
		AUTHORITY ENGINEERING	

PARTS MADE	OK TO USE <input type="checkbox"/>	MAY BE REWORKED <input type="checkbox"/>	NOTED
------------	------------------------------------	--	-------

DWG TO BE CHANGED	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	E.C.O. By M. TRUDEAU	RELEASE DATE 02/27/98
-------------------	---	-------------------------	--------------------------

TYPE	DOCUMENT NUMBER	REV	TITLE	DRAWING DATE
------	-----------------	-----	-------	--------------

Inst. Man.	LWS 470-33	5	Blue Star Conversion, Installation of Continental IO-470-C or IO-470-N in Beech Model 35-33 through F33.	Feb 5, 1996 FAA App. May 10, 1996
------------	------------	---	--	--------------------------------------

Add: Page 9(b) Eligible Propeller Installations:

Note 1. Woodward model V210992 propeller governor is eligible for installation where this installation manual specifies that either a Woodward model 210452 and/or a A210680 propeller governor be installed. The model V210992 is a direct replacement for these older models. Adjust maximum RPM to that specified in the Flight Manual Supplement applicable to your installation. A factory new unit will come set at a maximum RPM of 2625. Turn max RPM stop screw one turn clockwise for 2600 RPM installations.

"PROPRIETARY"
The information contained in or disclosed by this document is considered proprietary by D'Shannon Products. This document and the items and information contained or disclosed herein shall not be used, copied, or reproduced in whole or part nor shall the contents be revealed in any manner to any person unless permission is obtained from D'Shannon Products.

REFERENCED E.O.'S

S

Scott, Terry,

Beech part for H35 IO-470-N Conversion - STC SA2660SW

33-380006-5 (post lit)

33-380017-3 (Int. lit)

** Two blade prop versions need Yellow arc on MP side from 26.7" to 29.6" (take off only range), red line at 29.6" - has to do with FAR part 36 (noise compliance). Three blade installation are identical range marking wise as the off-the-shelf Beech part

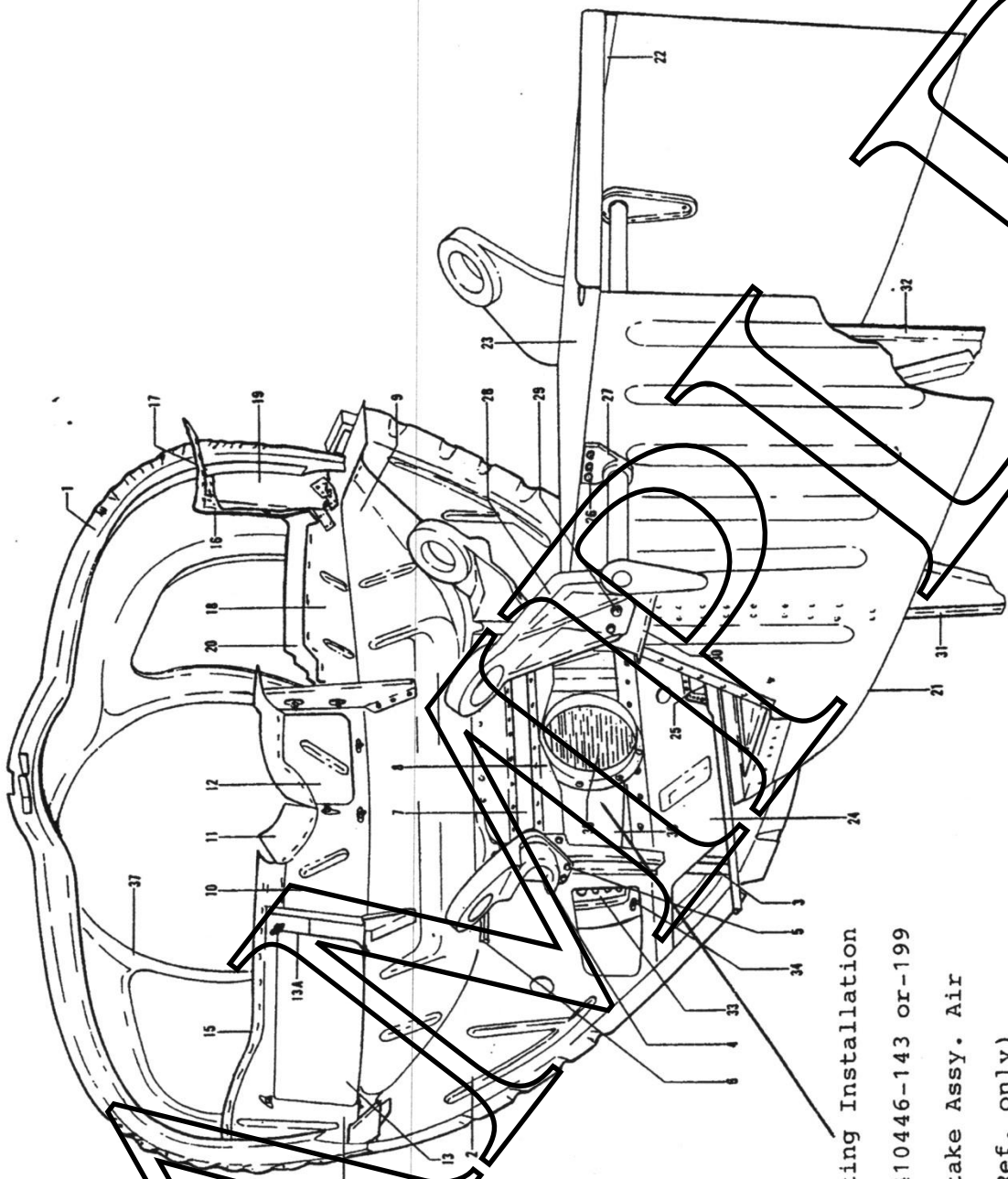
"PROPRIETARY"
The information contained in or disclosed by this document is considered proprietary by D'Shannon Products. This document and the items and information contained or disclosed herein shall not be used, copied, or reproduced in whole or part nor shall the contents be revealed in any manner to any person unless permission is obtained from D'Shannon Products.

Mik

SAMPLE

ASA

FAA Approved
Date: _____



"PROPRIETARY"

The information contained in or disclosed by this document is considered proprietary by D'Shannon Products. This document and the items and information contained or disclosed herein shall not be used, copied, or reproduced in whole or part nor shall the contents be revealed in any manner to any person unless permission is obtained from D'Shannon Products.

X Existing Installation

35-410446-143 or-199

Intake Assy. Air

(Ref. only)

LWS C-470-N

July 19, 1983