CUSTOM KIT

CK-AG-45

REV. E: 06/10/2025

FIELD CONVERSION OF S2R-T34 AIRCRAFT

10,500 LBS. MAX. GROSS TAKEOFF WEIGHT INCREASE

AIRCRAFT AFFECTED:

MODEL	**SERIAL NUMBERS**
S2R-T34	001-272, 277-289, 292-450
S2R-T34HG	101-107

David E. Yarbrough

David Yarbrough

Director of Engineering

LOG OF REVISIONS

NOTE: Reformatting and correction of typographical errors is not considered revision.

REV	PAGE	DESCRIPTION OF REVISION	BY
IR	All	New Document Initial Release.	G. Moreland 12/01/2016
A	All	Completely revised document without altering technical content.	K. Sheppard 05/09/2018
B	i	Added Note 2 regarding data plate/eligibility. Added to Notes 4-7: “The installer must determine whether this design change is compatible with previously approved modifications.”	G. Rowland 06/30/2018
C	Cover, i, 3, 19, 22, 23	Corrected eligibility to T34-277-289, 292-450. Changed hardware quantity for AN4-12 to 8. Corrected P/N AN4-54 to AN4-53. Changed hardware quantity for AN4-13 bolt: Single Cockpit-2, Dual Cockpit Single Control-2, Dual Cockpit Dual Control-4. Added hardware: AN43B-13; Single Cockpit-2, Dual Cockpit Single Control-2. Changed Table 45A 2E to P/N AN43B-13. Added “**For Dual Cockpit Dual Control aircraft use AN4-13 bolt.” Changed Wing/Aileron attach points to 6 plcs. Updated Figure 45-11 for clarity. Added “*For Canadian registered aircraft use 60359-35.”	K. Sheppard 03/19/19
D	All	Changed Thrush Aircraft, Inc. to Thrush Aircraft, LLC. Corrected page numbers. On page i, Was: 6. Aircraft equipped with vortex generators have had no flight testing to verify if eligible with this kit. The installer must determine whether this design change is compatible with previously approved modifications. Is Now: 6. Aircraft equipped with Micro AeroDynamics vortex generators installed per STC SA00178SE have been found eligible for this kit. Aircraft equipped with vortex generators different from STC SA00178SE have had no flight testing to verify if eligible with this kit. The installer must determine whether this design change is compatible with previously approved modifications.	William Griffin 09/02/2020
E	All Cover 4 & 6	Updated format of entire document. Updated Effectivity of aircraft for T34 aircraft listed in CK-AG-56. Included aircraft requirements listed in CK-AG-56.	T. Surratt 06/10/2025

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CUSTOM KIT LIMITATIONS
IDENTIFIED BY THRUSH AIRCRAFT, LLC

1. Custom Kit CK-AG-45 is limited to aircraft equipped with the PT6A 34AG engine only. No other engine was tested while evaluating this kit.
2. Locate the aircraft's data plate and verify that the TC listed is A4SW and not A3SW. A4SW aircraft are the only configuration eligible for the CK-AG-45 Custom Kit. The data plate is located on the left side of the aircraft aft of the door on the single cockpit and aft of the rear door on the dual cockpit.
3. Custom Kit CK-AG-45 is limited to aircraft equipped with the Tail Attached Brackets 95266-11, 95267-5 and NAS6207-68 Attach bolt. These parts shall be installed per Service Bulletin SB-AG-45.
4. Aircraft equipped with the Hartzell T10282N+4 propeller have had flight testing for kit eligibility. The installer must determine whether this design change is compatible with previously approved modifications.
5. Aircraft equipped with the external pitot type engine air inlet 21900-1, -21 or screened fairing panel 21922 have had no flight testing to verify if eligible with this kit. The installer must determine whether this design change is compatible with previously approved modifications.
6. Aircraft equipped with Micro AeroDynamics vortex generators installed per STC SA00178SE have been found eligible for his kit. Aircraft equipped with vortex generators different from STC SA00178SE have had no flight testing to verify if eligible with this kit. The installer must determine whether this design change is compatible with previously approved modifications.
7. Aircraft equipped with Micronair Spray System, Standard Spray System, and Calibrator agricultural equipment have had flight testing for kit eligibility. The installer must determine whether this design change is compatible with previously approved modifications.
8. In order to conduct the changes outlined in this document, aircraft must first meet the following requirements:
    1. Compliant with CK20209-96.
    2. Compliant with SB-AG-34.
    3. Equipped with 53-, 69-, 96-, or 115-gallon wings and the 4-gallon header tank.

1. PURPOSE/REASON FOR PUBLICATION

This document provides a list of the parts and installation instructions needed to qualify aircraft for the FAA approved 10,500 pounds maximum gross takeoff weight increase.

2. SCOPE/COMPLIANCE

Compliance with the requirements of this document is solely at an aircraft owner's discretion. However, compliance is required to operate at 10,500 lbs.

3. BY WHOM WORK WILL BE ACCOMPLISHED

The work is to be accomplished by an FAA licensed A&P mechanic, or foreign equivalent. The action must be recorded in the airplane logbook and signed off by the mechanic. This is a major alteration and requires Form 337 field approval in addition to the logbook entry.

4. APPROVAL

4-1 THRUSH AIRCRAFT, LLC

This Custom Kit is approved by Thrush Aircraft, LLC. Proper execution of these instructions will ensure proper field conversion.

4-2 FAA APPROVAL

The technical content of this Custom Kit is FAA approved.

5. MAN HOURS

The total estimated time required to accomplish this task is 12 hours with 2 mechanics working simultaneously.

6. CUSTOM KIT OVERVIEW

To accomplish this Custom Kit, owner/operator must:

- Determine tailwheel eligibility and replacement if not eligible.
- Install safety padding.
- Install air speed indicator.
- Install placards.
- Update aileron control system.
- Install control sticks.
- Install elevator bellcrank.
- Elevator trim tab control replacement.
- Cowling modification for starter/generator cooling.
- Be compliant with CK20209-96.
- Be compliant with SB-AG-34.
- Have aircraft equipped with 53-, 69-, 96- or 115-gallon wings and the 4-gallon header tank.

7. SPECIAL TOOLS

N/A

8. RECOMMENDED DOCUMENTS

- S2R-T34 Single & Dual Cockpit Airplane Flight Manual Supplement Restricted Category Rev. IR.
- S2R-T34 Single & Dual Cockpit Airplane Maintenance Manual Rev. 2.
  NOTE: Verify the latest FAA approved revision of both the Airplane Flight Manual and Airplane Maintenance Manual is on hand.

9. PARTS LIST

9.1 AIRCRAFT CONFIGURATION

(Use letters and numbers with (*) beside it for ordering information. See page 9 for detailed explanation.)

PART NUMBER	NOMENCLATURE	QUANTITY		
		(A)* SC	(B)* DC/SC	(C)* DC/DC
21436-239	EDGE GUARD	N/A	2	2
531120001-001	ANGLE	N/A	2	1
SL213-08-1	NUT CLIP	N/A	6	3
AN526-832R4	RECESSED HEAD SCREW	N/A	6	3
AN960-8	WASHER	N/A	6	3
20353-21	AIRSPEED INDICATOR	1	1	2
50175-749	PLACARD	N/A	1	1
21436-303	PLACARD *For Canadian registered aircraft use 60359-35	1	1	2
AN4-65	BOLT	1	1	1
AN960-416	WASHER	30	30	30
AN960-416L	WASHER	4	4	4
MS17825-4	NUT	22	22	22
MS24665-132	COTTER PIN	22	22	22
95619-1	PUSH ROD ASSY	N/A	N/A	1
AN4-12	BOLT	8	8	8
AN4-53	BOLT	1	1	1
AN4-13	BOLT	2	2	4
AN43B-13	BOLT	2	2	N/A
50356-509	CONTROL STICK ASSY	N/A	N/A	1
57055-11	TORQUE TUBE ASSY	N/A	N/A	1
AN4-37	BOLT	N/A	N/A	1
19650-15	CONTROL STICK ASSY	N/A	N/A	1
AN4-34	BOLT	N/A	N/A	1
MS24665-151	COTTER PINS	8	8	8
70403-504	BUSHING	4	4	4
21180-1	LEVER	2	2	2
21552-2	SCOOP	1	1	1
21552-3	SCREEN	1	1	1
21552-15	DUCT HOSE CONNECTOR	1	1	1
21552-17	CAP ASSY	1	1	1

21552-23	CAP ASSY	1	1	1
AN526C632-R7	SCREW	4	4	4
AN526C632-R8	SCREW	10	10	10
AN960-6	WASHER	14	14	14
MS21044N06	NUT	14	14	14
QS100M44S (10044S)	HOSE CLAMP	2	2	2
QS100M88S (10088S)	HOSE CLAMP	1	1	1
SCAT 12	HOSE	24”	24”	24”
9012-17	BELLCRANK	N/A	1	1

9.2 TAIL GEAR CONFIGURATION

(Parts Required/Furnished with this Kit for Tail Gear Installations. Reference Section 10 to determine parts necessary for tail gear replacement.)

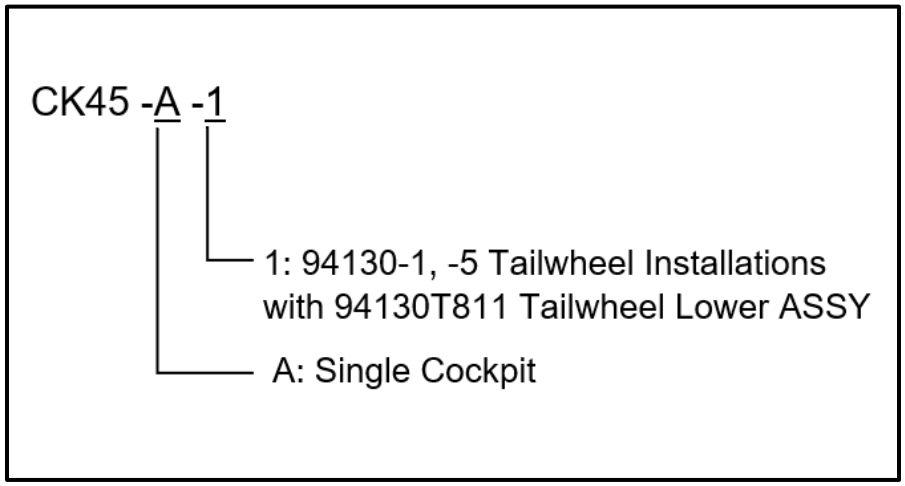
PART NUMBER	NOMENCLATURE	QUANTITY		
		(1)* 94130-1 or -5 Single Arm	**(2)*** 94130-1 or -5 Single Arm	**(3)*** 94130-7 Double Arm
21436-239	EDGE GUARD	N/A	2	2
531120001-001	ANGLE	N/A	2	1
SL213-08-1	NUT CLIP	N/A	6	3
AN526-832R4	RECESSED HEAD SCREW	N/A	6	3
AN960-8	WASHER	N/A	6	3
20353-21	AIRSPEED INDICATOR	1	1	2
50175-749	PLACARD	N/A	1	1
21436-303	PLACARD	1	1	2
AN4-65	BOLT	1	1	1
AN960-416	WASHER	30	30	30
AN960-416L	WASHER	4	4	4
MS17825-4	NUT	22	22	22

NOTE: (1) and **(2)** are interchangeable. Selection depends on owner/operator preference.

9.3 KIT PART NUMBERING BREAKDOWN

The Kit part numbers consist of basic number and letter combinations to designated options.

- Use **A**, **B**, or **C** for single cockpit, dual cockpit single control, and dual cockpit dual control, respectively.
- Use **1** for 94130-1, -5 Tailwheel Installations with 94130T811 Tailwheel Lower Assy, **2** for 94130-1, -5 Tailwheel Installations with CA84106-02-101 Custom Air, and **3** for 94130-7 Tailwheel Installations.
- If Tailwheel Installation is not required, use only **A**, **B**, or **C**.



EXAMPLE OF PARTS LIST NUMBER

Use this breakdown as a guide to specify the exact parts needed.

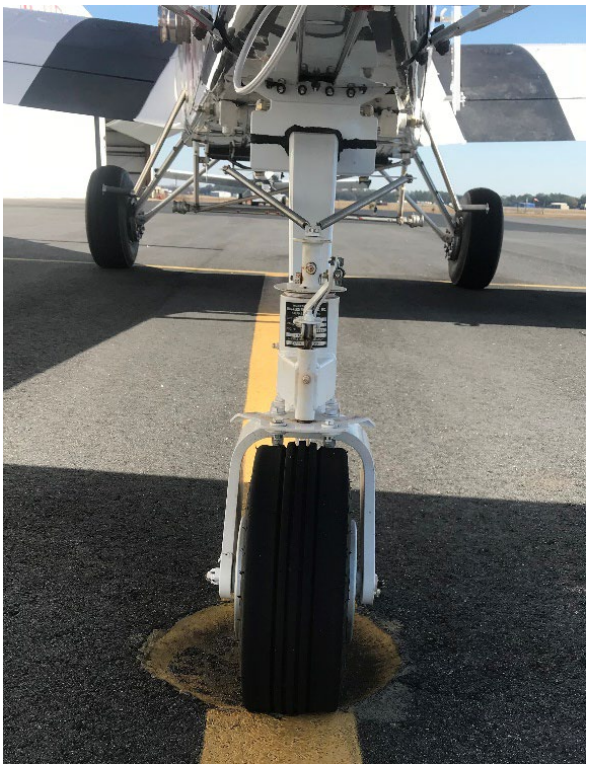
10. MODIFICATIONS

10.1 TAIL GEAR INSTALLATION 94130-9, -11 IS REQUIRED FOR THIS KIT

10.1.1 DETERMINE IF INSTALLATION ON THE AIRCRAFT IS A SINGLE ARM OR DOUBLE ARM

- Single Arm is a Custom Air design implemented by Thrush Aircraft, LLC.
- Double Arm is a Thrush Aircraft, LLC. original design.

(Figure 45-1a)
Single Arm Installation 94130-9



(Figure 45-1b)
Double Arm Installation 94130-11

After determining the type of tailwheel arm, further examination is needed for both single and double arm installations since there are variations on the tailwheel assembly. Removal and replacement of forks is described in Section 10.1.5.

10.1.2 DETERMINE IF THE SINGLE ARM INSTALLATION IS A 94130-1, -5, OR -9

TAILWHEEL ASSEMBLY IS DETERMINED BY TUBE ASSEMBLY PART NUMBER.

10.1.3 DETERMINE IF THE DOUBLE ARM INSTALLATION IS A 94130-7 OR -11

TAILWHEEL ASSEMBLY IS DETERMINED BY TUBE ASSEMBLY PART NUMBER.

Tube Assembly can be located and identified at the tail section of the aircraft.
See Figure 45-1c. Tube Assembly eligibility is given in Table 45-1.

(Figure 45-1c)

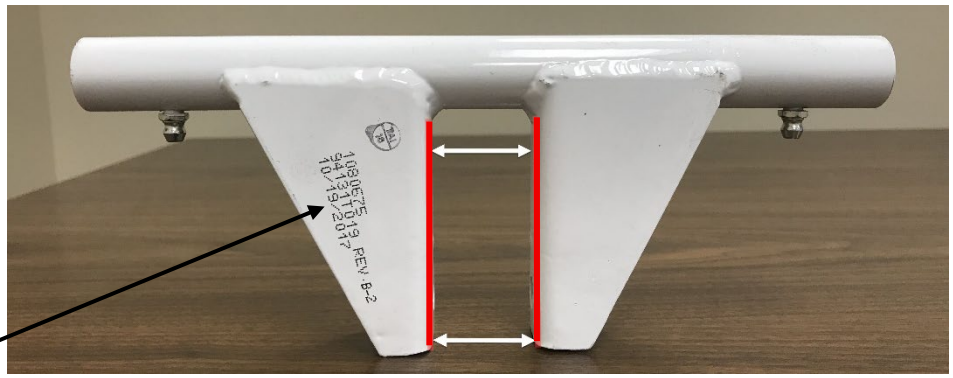
Location of Tube Assy
Tail Section

TABLE 45-1					
TAILWHEEL ASSY	**TUBE ASSY**	**DIMENSION A FIGURE 45-1D**	**DIMENSION B FIGURE 45-1E**	**NEED TUBE REPLACEMENT**	**NEED TAILWHEEL REPLACEMENT**
94130-1	94131-1	.438-.440	1.06-1.25	YES	YES
94130-5	94131-15	.375-.376	1.06-1.25	YES	YES
94130-7	94130-15	.375-.376	1.06-1.25	YES	NO
94130-9	94131-19	.375-.376	1.25-1.40	NO	NO
94130-11	94131-19	.375-.376	1.25-1.40	NO	NO

Tube Assembly 94131-19 is the only part number eligible for Custom Kit AG-45. Therefore, all Tube Assemblies that need replacement shall be replaced with P/N 94131-19.

If a part number is not legible or cannot be found, these are the locations of dimension differences between 94131-1, -15, & -19. Parts are removed from aircraft for clarity in Figures 45-1d and 45-1e.

Figure 45-1d
Dimension A – Inside Diameter



Standard Part Number Location

Figure 45-1e
Dimension B – Inside Diameter

Figure 45-1e

Dimension B – Distance Between Brackets

For Tube Assemblies that need replacement, proceed with directions as follows:

10.1.4 REPLACEMENT OF TUBE ASSEMBLY

1. Jack aircraft per S2R-T34 Maintenance Manual.
2. Remove tail wheel assembly.
3. Remove (2 inner / 2 outer) nuts from trunnion attach shaft.
4. Remove trunnion attach shaft.
5. Remove nut and bolt from tube assembly.
6. Remove tube assembly.
7. Install new tube assembly by reversing removal process. Use new hardware:
   - NAS6206-40D BOLT
   - MS20002-36 WASHER (UNDER HEAD)
   - AN960-616 WASHER (UNDER NUT)
   - AN310-6 NUT
   - MS24665-300 COTTERPIN

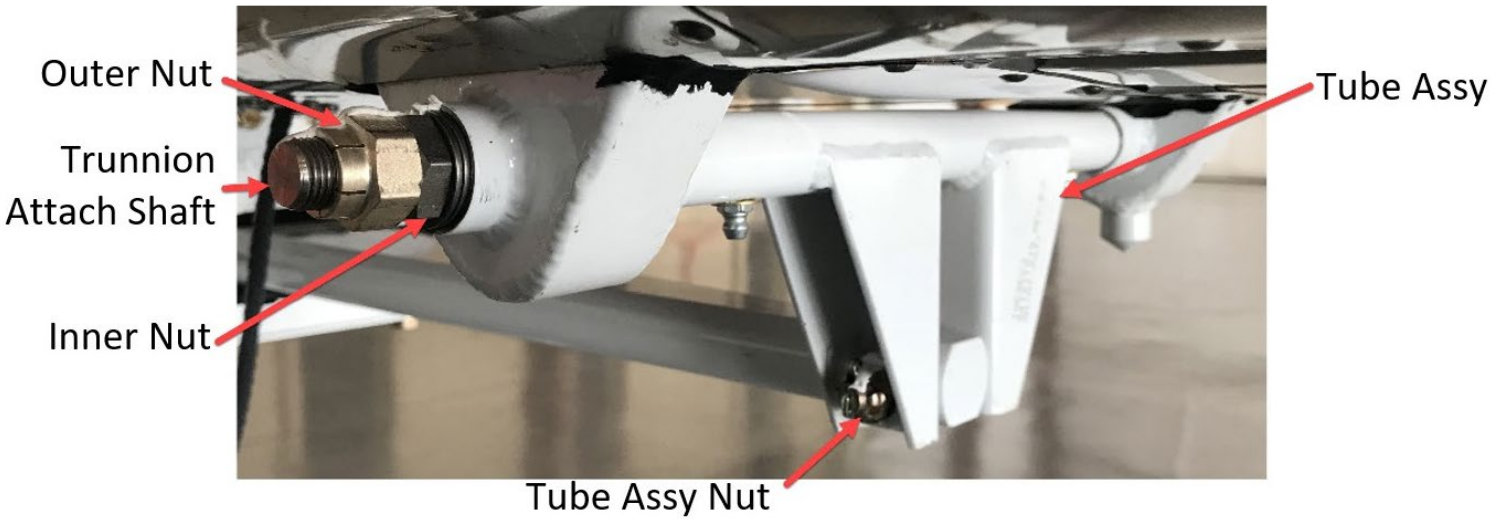


Figure 45-1f

Tube Assy Removal

10.1.5 TAIL WHEEL REMOVAL & REPLACEMENT

Single Arm Installations 94130-1, -5 (without reinforcement strap) will need to be removed and replaced with a Double Arm 94130-11 or Custom Air 94130-9 (with reinforcement strap). See Figure 45-1g.

Figure 45-1g

Custom Air 94130-9 with reinforcement strap pictured.
94130-1 and -5 do <u>not</u> have reinforcement strap.

Remove as follows:

1. Jack aircraft per S2R-T34 Maintenance Manual.
2. Separate tailwheel assembly from spring/spindle assembly by removing (4) attaching bolts. See Figure 45-1h.

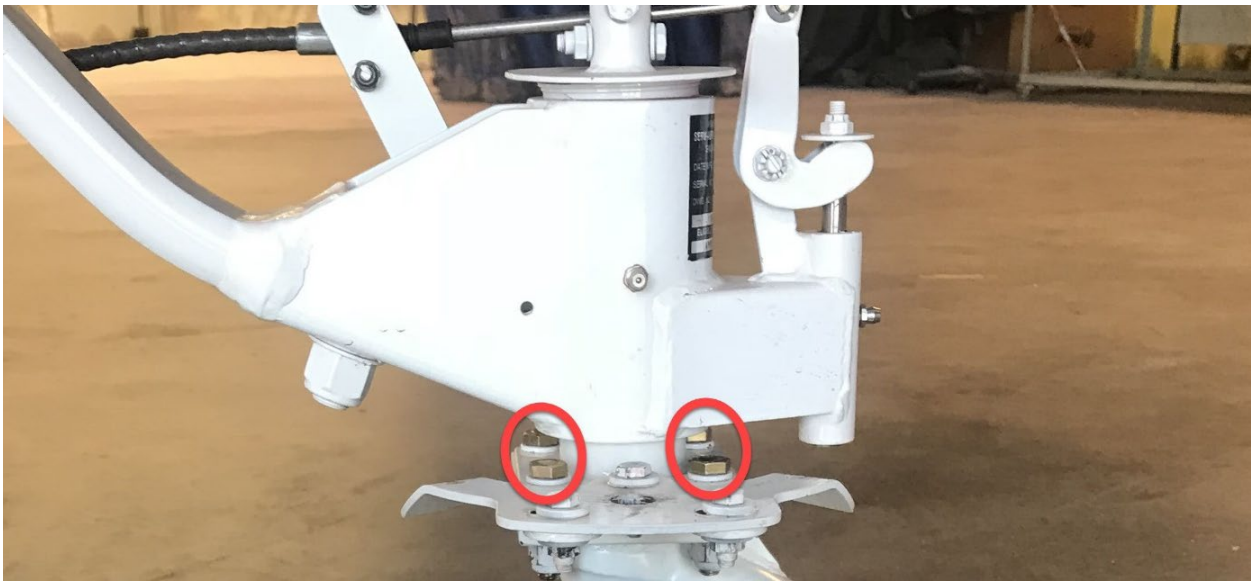


Figure 45-1h
Tailwheel attachment points.

Install replacement tailwheel. Reverse removal process using new hardware:

- (4x) NAS130-18 Bolt
- (4x) MS20002-C6 Washer (under head)
- (4x) AN960C-616L Washer (under nut)
- (4x) MS21044-N6 Nut

10.2 DUAL COCKPIT SINGLE CONTROL SAFETY PADDING INSTALLATION

1. Insert edge guard and angle flange (2 plcs) as shown in Figure 45-2.
2. Locate angle center to center nut clip hole. Drill #20 holes in angle to match nut clips (6 plcs).
3. Install using AN526-832R2 screws and AN960-8 washers (6 plcs).

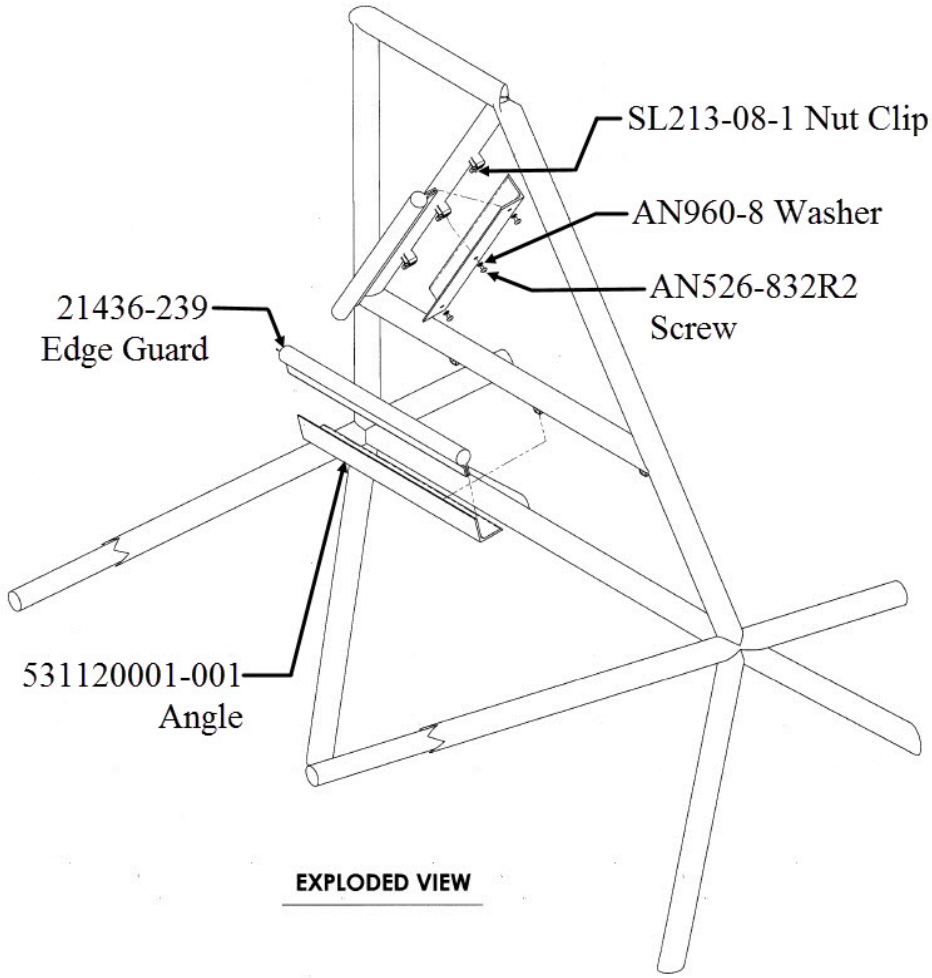


Figure 45-2

Dual Cockpit Single Control Safety Padding Installation

10.3 DUAL COCKPIT DUAL CONTROL SAFETY PADDING INSTALLATION

1. Insert top edge guard in angle flange as shown in Figure 45-3.
2. Locate angle center to center nut clip hole. Drill #20 holes in angle to match nut clips (3 plcs).
3. Install using AN526-832R2 screws and AN960-8 washers (3 plcs).
4. Locate bottom edge guard center on upper edge of instrument panel and slide on to install.

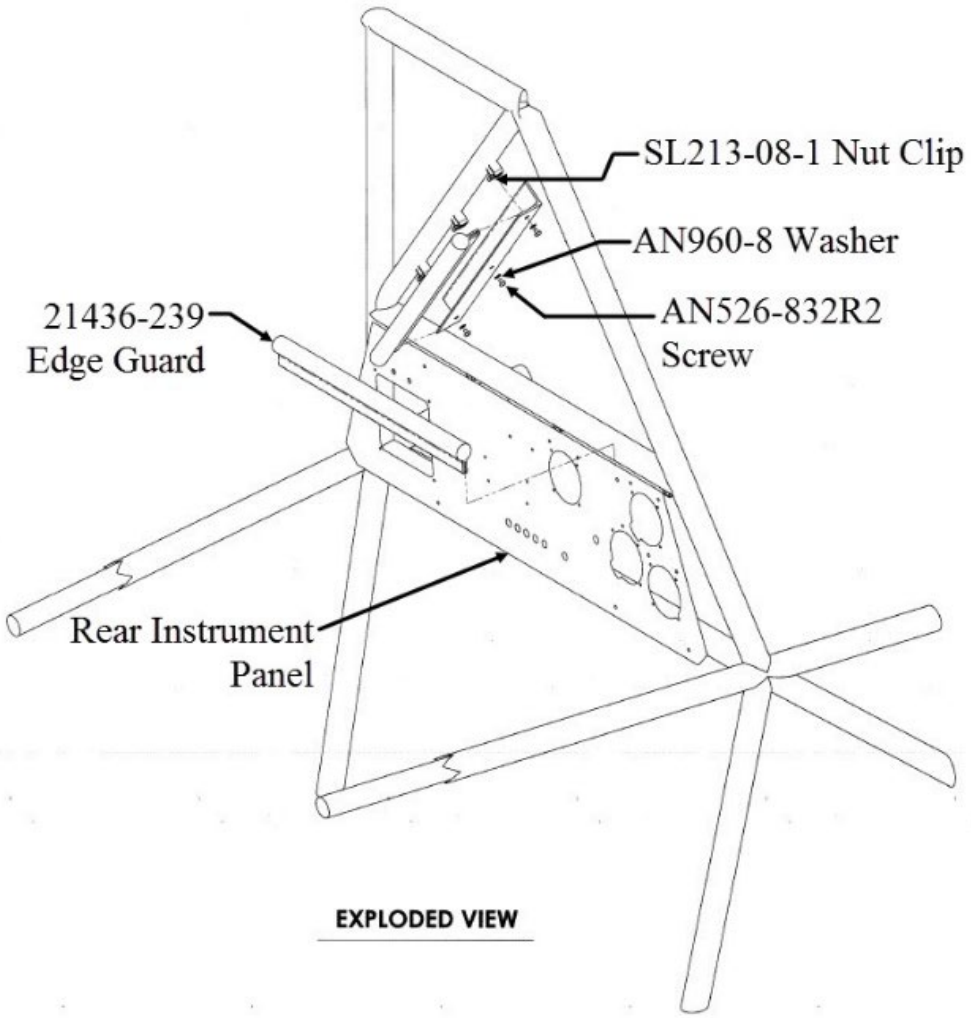


Figure 45-3

Dual Cockpit Dual Control
Safety Padding Installation

10.4 INSTALLATION OF 20353-21 AIRSPEED INDICATOR IN THE UPPER INSTRUMENT PANEL FOR SINGLE COCKPIT & DUAL COCKPIT SINGLE CONTROL AIRCRAFT

1. Original Airspeed Indicator Removal: See Figure 45-4 and 45-5.
    a. Disconnect pitot and static lines from instrument.
    b. Plug lines to prevent foreign matter or moisture from entering system.
    c. Remove screws (4 plcs), while supporting unit from behind.
    d. Remove unit from instrument panel.
2. Airspeed Indicator Installation:
    a. Place 20353-21 Airspeed Indicator in instrument panel.
    b. Secure instrument to the panel with screws (4 plcs).
    c. Remove plugs from the lines.
    d. Reconnect pitot and static lines to instrument.
3. Perform Pitot Static check per instructions in the S2R-T34 Aircraft Maintenance Manual section 31-20.02.5.

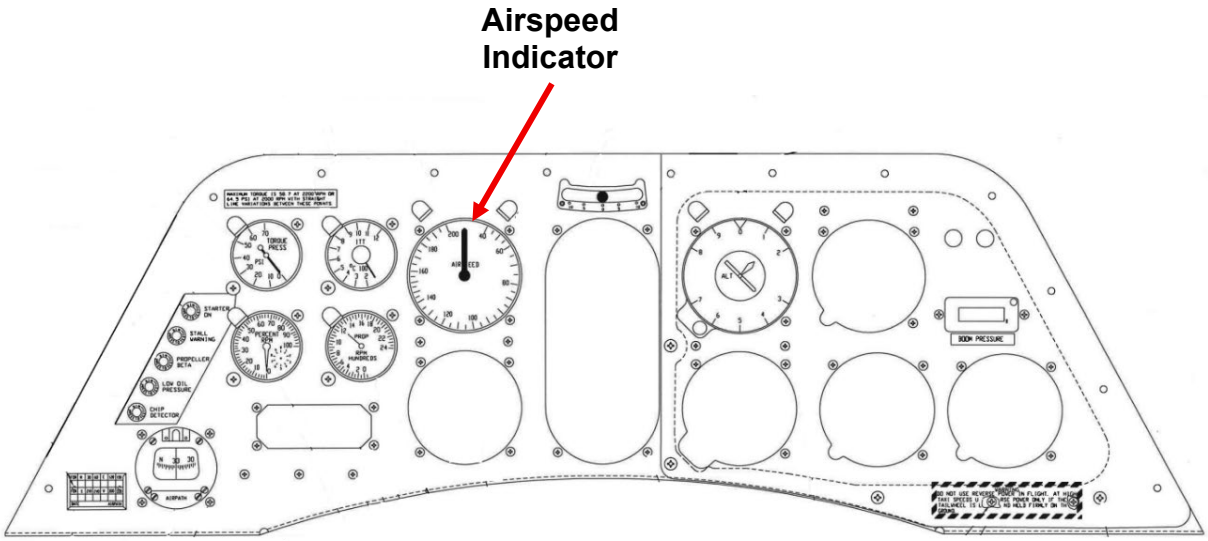


Figure 45-4

Front View Representation of
Upper Instrument Panel Assy with Round Gages

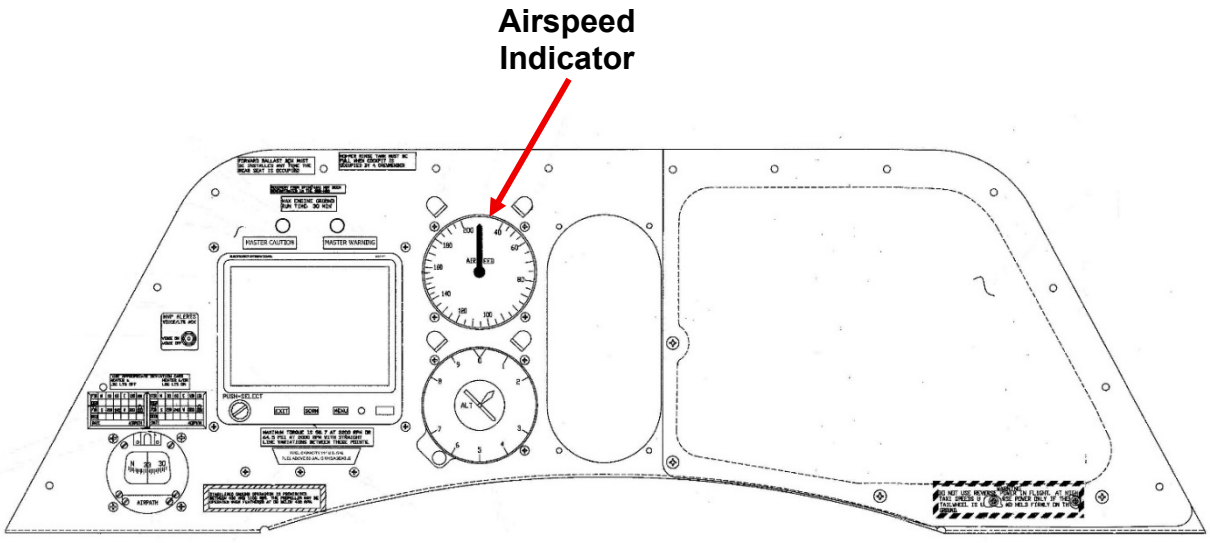


Figure 45-5

Front View Representation of
Upper Instrument Panel Assy with MVP Display Installed

10.5 INSTALLATION OF 20353-21 AIRSPEED INDICATOR IN THE REAR INSTRUMENT PANEL OF DUAL COCKPIT DUAL CONTROL AIRCRAFT

1. Original Airspeed Indicator Removal: See Figure 45-6 and 45-7.
    a. Disconnect pitot and static lines from instrument.
    b. Plug lines to prevent foreign matter or moisture from entering system.
    c. Remove screws (4 plcs), while supporting unit from behind.
    d. Remove unit from instrument panel.
2. Airspeed Indicator Installation
    a. Place 20353-21 Airspeed Indicator in instrument panel.
    b. Secure instrument to panel with screws (4 plcs).
    c. Remove plugs from the lines.
    d. Reconnect pitot and static lines to instrument.
3. Perform Pitot Static check per instruction in the S2R-T34 Aircraft Maintenance Manual section 31-20.02.5.

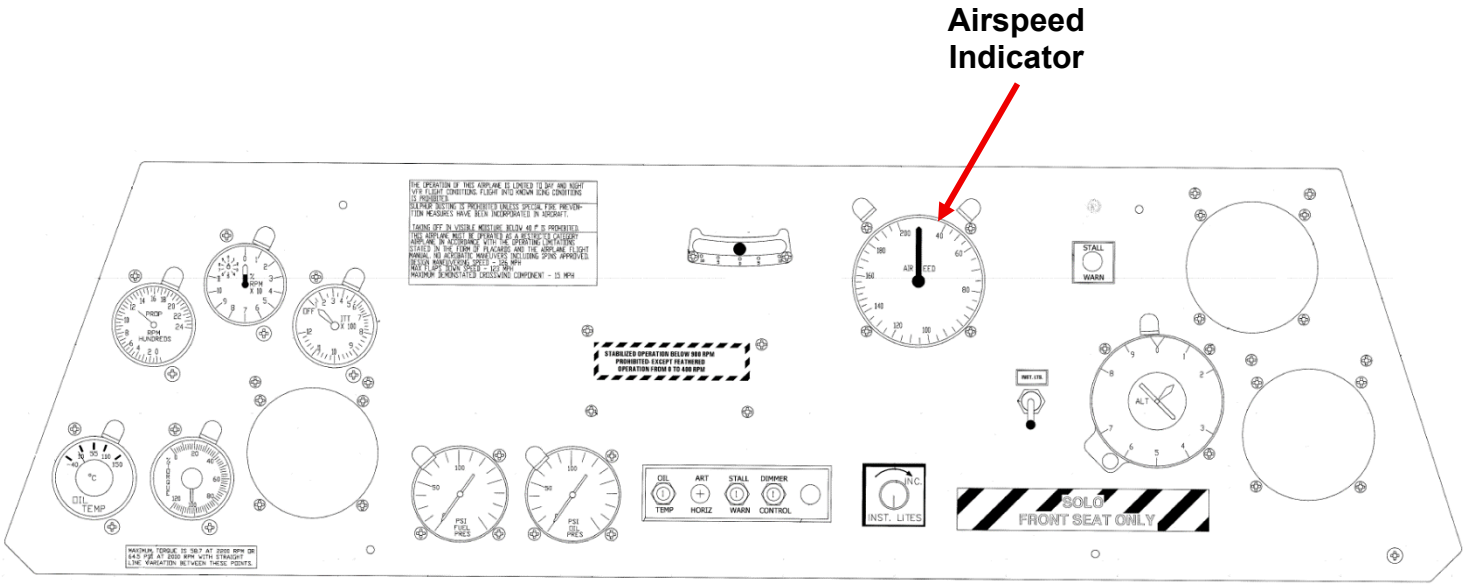


Figure 45-6

Front View Representation of
Rear Instrument Panel Assy with Round Gages Installed

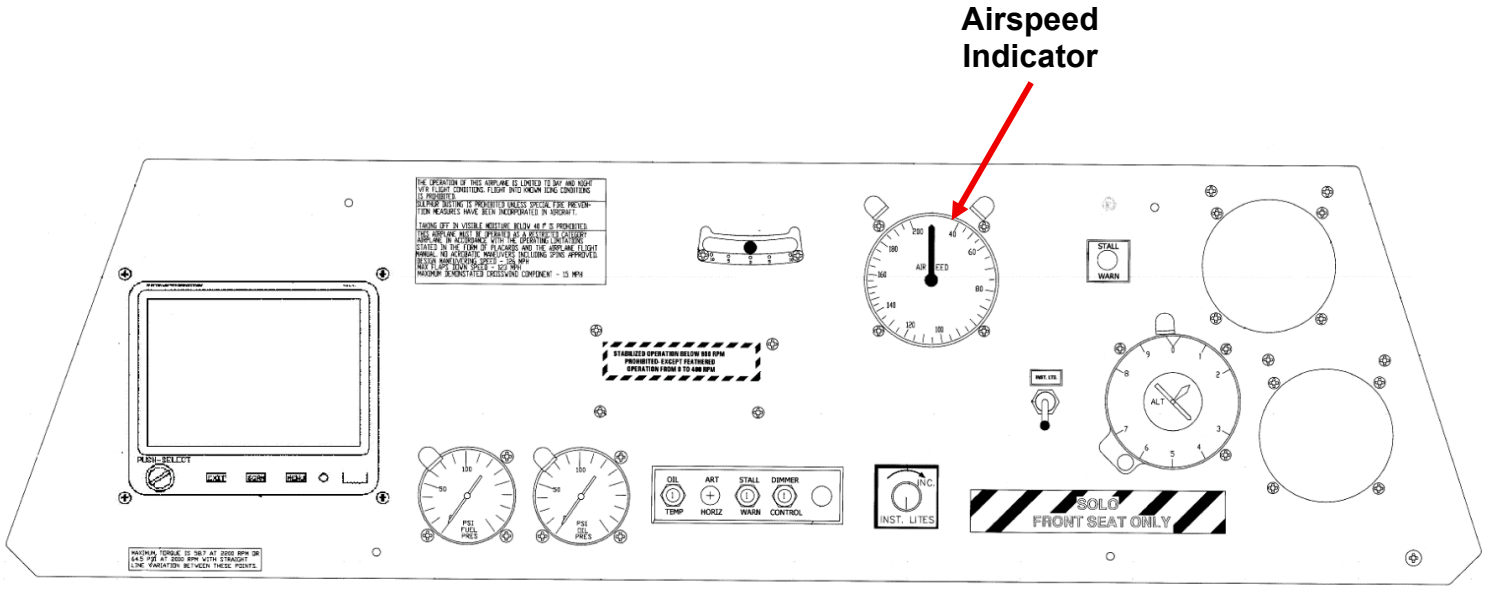


Figure 45-7

Front View Representation of
Rear Instrument Panel Assy with MVP Display Installed

10.6 21436-303 LIMITATIONS PLACARD INSTALLATION

Install new Limitations Placard on top of existing Limitations Placard in the forward and rear cockpits as follows:

1. Thoroughly clean area with isopropyl alcohol.
2. Install the 21436-303 Limitations Placard on top of the existing Limitations Placard on the right hand universal instrument panel assembly in the forward cockpit.
3. Install the 21436-303 Limitations Placard on top of the existing Limitations Placard on the rear instrument panel of the Dual Cockpit Dual Control.
4. For Canadian registered aircraft use 60359-35 Limitations Placard.
5. See Figure 45-8.

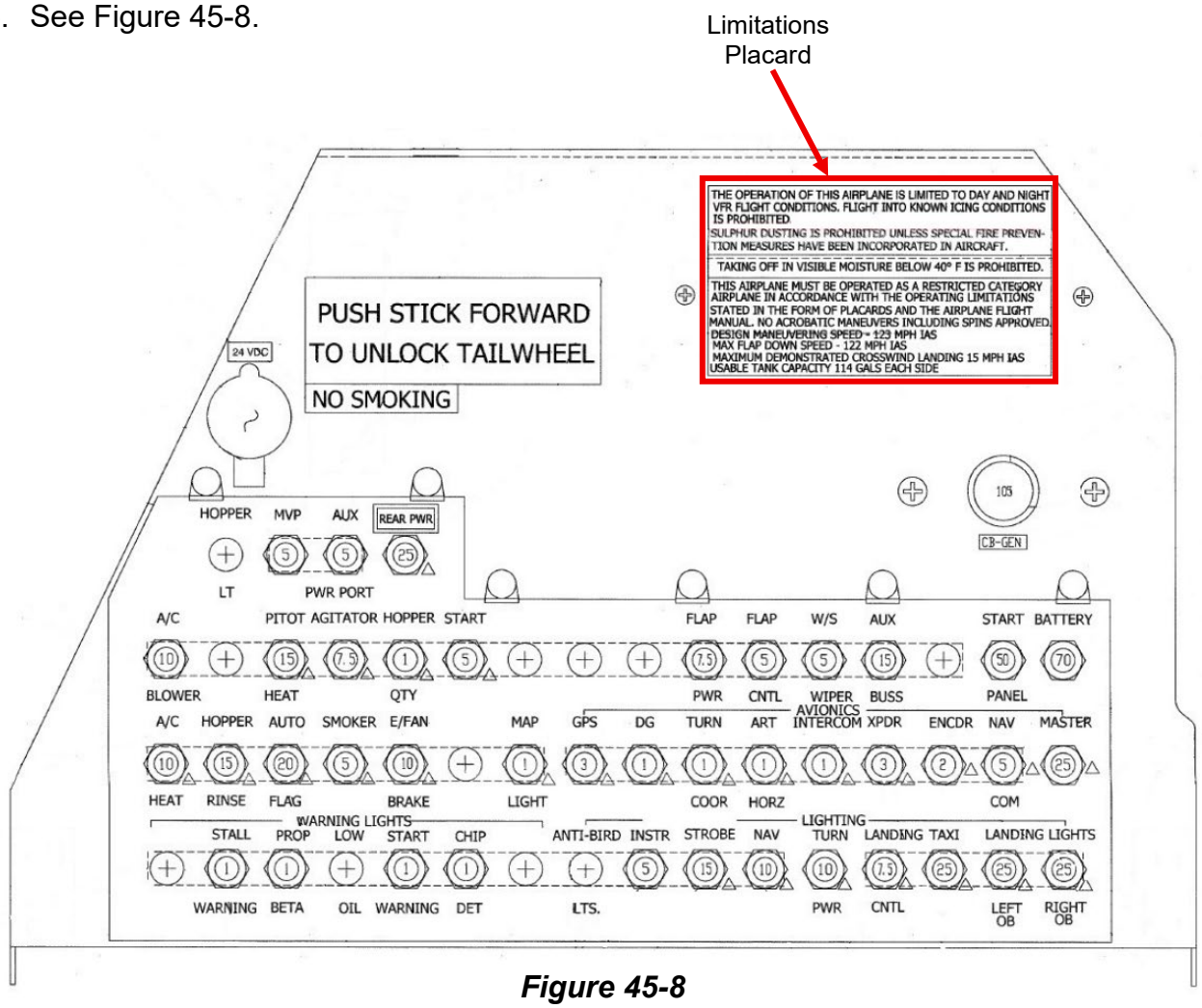


Figure 45-8

21492-87 RH Universal
Instrument Panel Assembly in FWD Cockpit

10.7 50175-749 SEATBELT/HARNESS PLACARD INSTALLATION

Install Seatbelt/Harness Placard in the rear cockpit as follows:

1. Thoroughly clean area with isopropyl alcohol.
2. Insall the 50175-749 Seatbelt/Harness Placard in the rear cockpit of the Dual Cockpit Single Control.
3. Install the 50175-749 Seatbelt/Harness Placard on the rear instrument panel for the Dual Cockpit Dual Control.
4. See Figure 45-9.

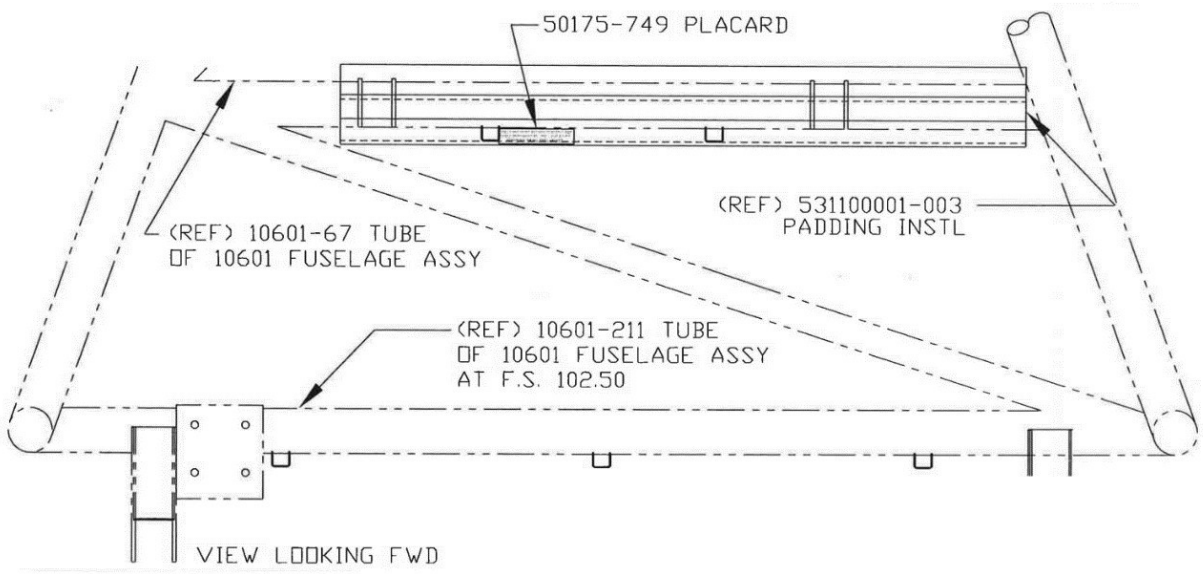


Figure 45-9

50175-749 Placard Location

10.8 UPDATE 70084-70 AILERON CONTROL SYSTEM FOR SINGLE COCKPIT, DUAL COCKPIT SINGLE CONTROL AND DUAL COCKPIT DUAL CONTROL AIRCRAFT

1. For Single Cockpit, Dual Cockpit Single Control, and Dual Cockpit Dual Control configurations:
    a. Remove existing hardware at 95619-1 Push Rod, 57052-1 Idler, 9004-13 Push Tube, and 9012-6 Bellcrank attach points. See Figure 45-10.
2. For Dual Cockpit Dual Control Configuration:
    a. Remove 901-22 Push Tube and replace with 95619-1 Push Rod Assembly. See Figure 45-10.
3. Install new hardware. See Figure 45-10 and Table 45 A. Torque hardware per Appendix B Torque Chart.

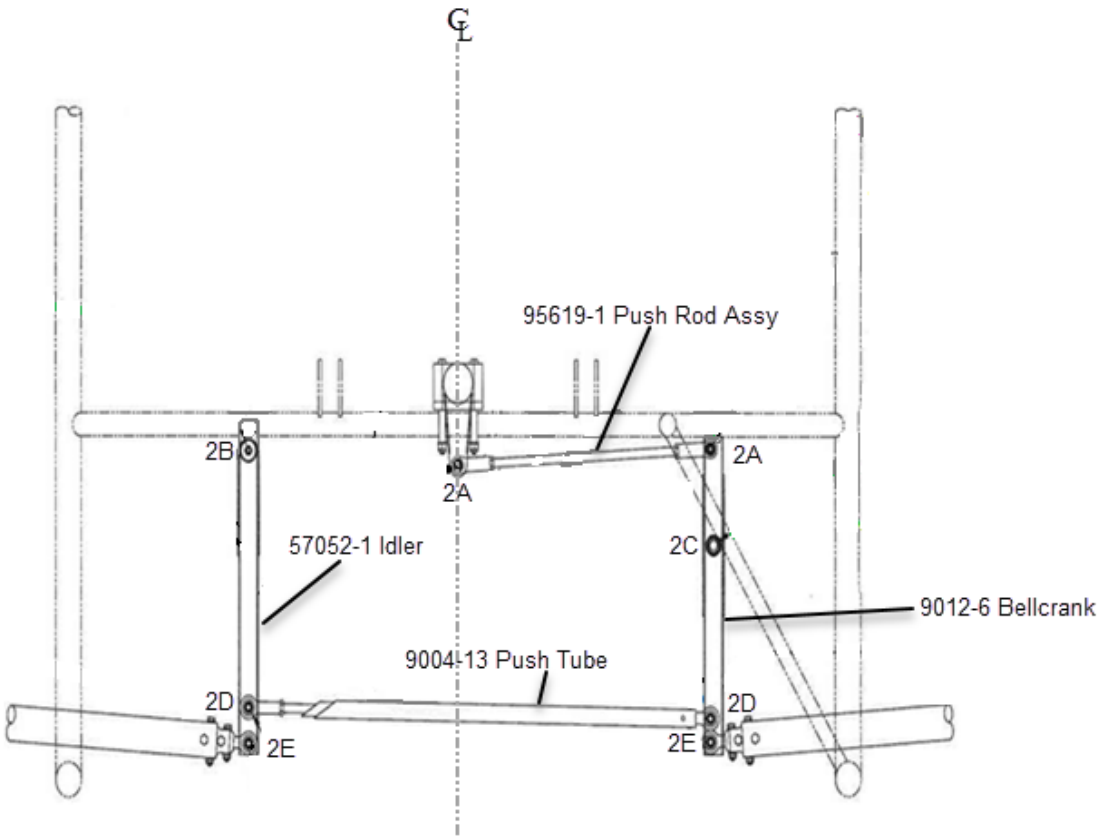


Figure 45-10

View From Within The Fuselage
Frame Between Flaps & Wings

Table 45 A **New Hardware**				
	Bolt	Washer	Nut	Cotterpin
2A	AN4-12	AN960-416	MS17825-4	MS24665-132
2B	AN4-65	AN960-416	MS17825-4	MS24665-132
2C	AN4-53	AN960-416/416L*	MS17825-4	MS24665-132
2D	AN4-13	AN960-416	MS17825-4	MS24665-132
2E	AN43B-13**	AN960-416	MS17825-4	MS24665-132

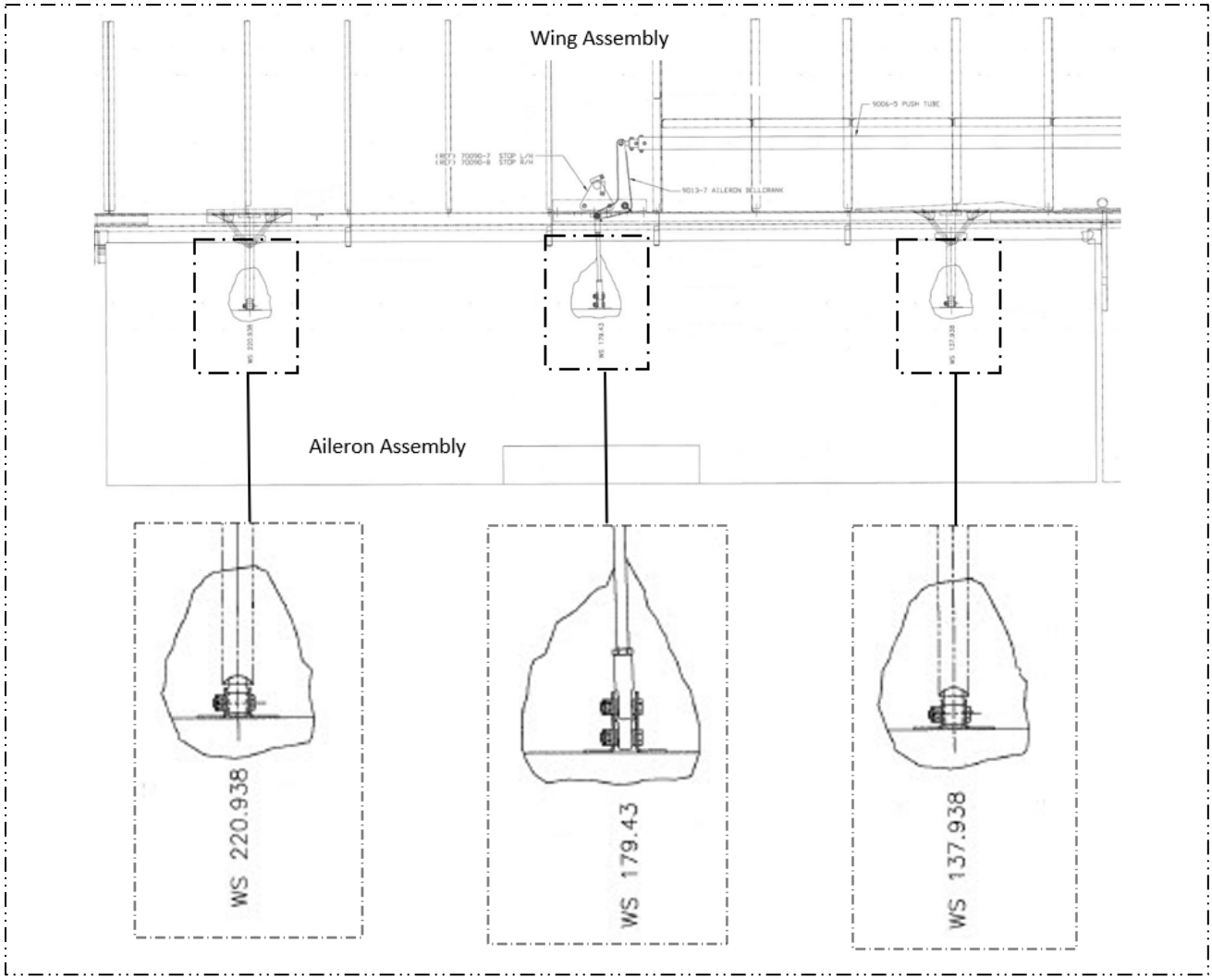
*Install between 9012-6 Bellcrank and bushing in fuselage frame.

**For Dual Cockpit Dual Control aircraft use AN4-13 Bolt.

4. For Single Cockpit, Dual Cockpit Single Control, and Dual Cockpit Dual Control configurations: Change out the existing hardware used to connect the Aileron hinges to the Wing and incorporate castellated nuts per Figure 45-11. Torque hardware per Appendix B Torque Chart.

   Replacement hardware at attach points (6 plcs) shown below:

   - AN4-12 Bolt
   - AN960-416 Washer (one under nut and each side of rod end)
   - MS17825-4 Nut
   - MS24665-132 Cotter Pin



5. For Dual Cockpit dual Control configuration **only**, incorporate changes per Figure 45-12 as follows:
   a. Remove existing Torque Tube and replace with the 57055-11 Torque Tube. Inspect the condition of the existing hardware to ensure if satisfactory for reinstallation. If not satisfactory, use new hardware.
   b. Remove existing control sticks and install the short control sticks 50356-509 FWD and 19650-15 AFT with hardware shown below.
   c. Torque hardware per Appendix B Torque Chart.

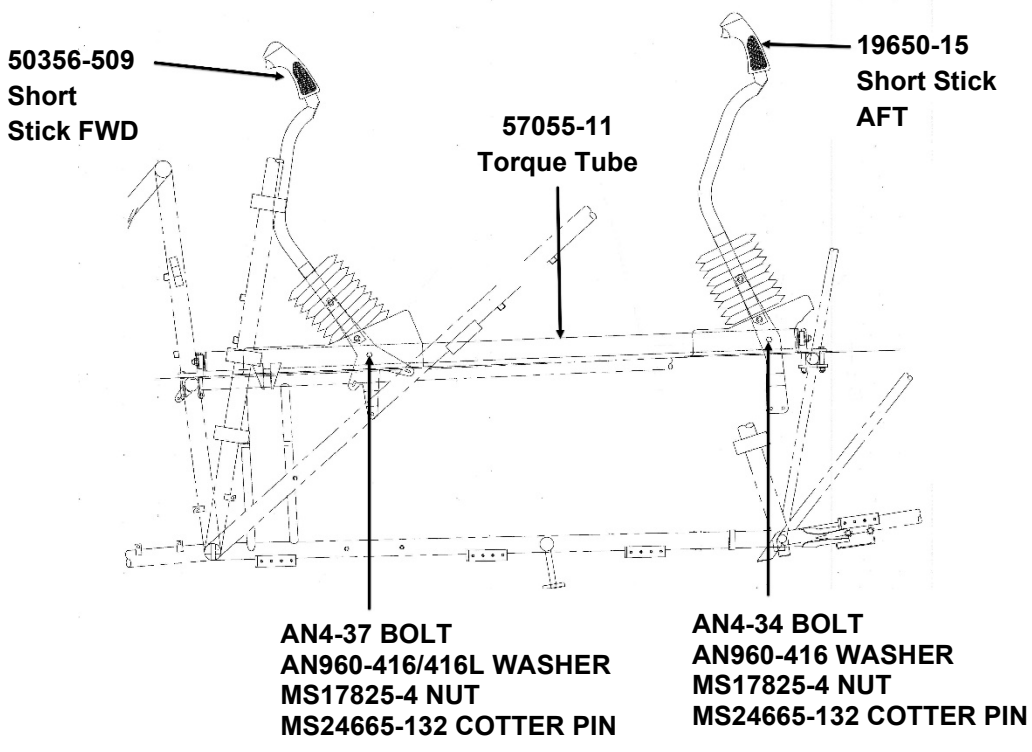


Figure 45-12

Dual Cockpit Dual Control
Control Stick Installation

10.9 DUAL COCKPIT DUAL CONTROL ELEVATOR BELLCRANK REPLACEMENT

See Figure 45-13 for location of bellcrank and use the following steps for replacement:

a. Remove 9012-8 Bellcrank from aircraft. Inspect the condition of the existing hardware to see if satisfactory for reinstallation. If not satisfactory, use new hardware.

b. Install 9012-17 Bellcrank.

c. If cable tension is loosened/tightened at installation, rig Elevator controls per S2R-T34 Aircraft Maintenance Manual section 27-30.05.

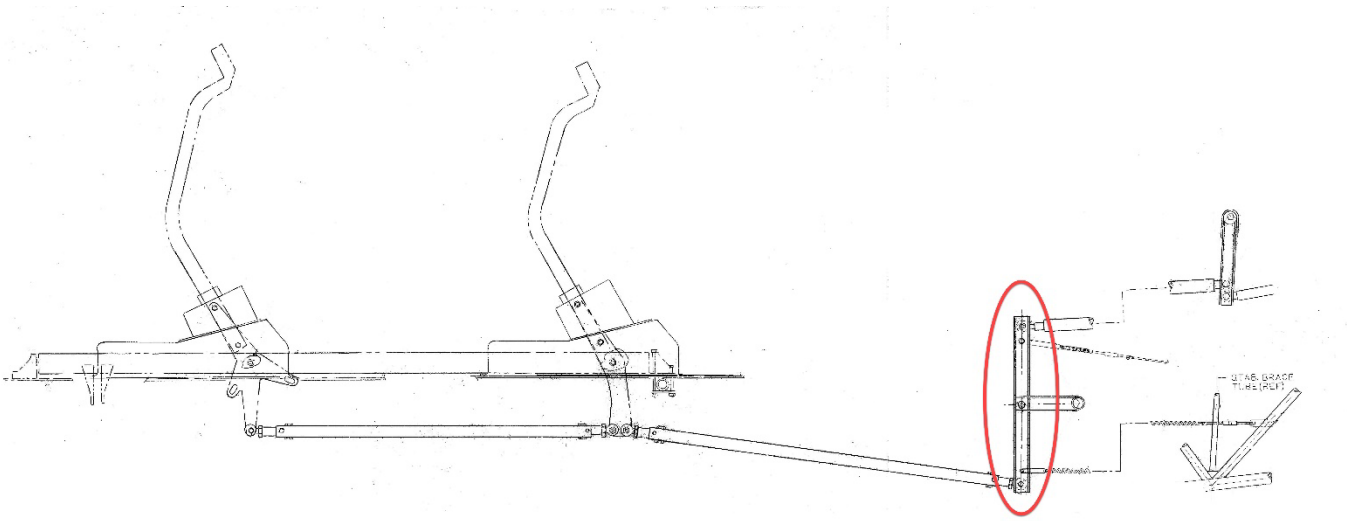


Figure 45-13

Dual Cockpit Dual Control Bellcrank Location

10.10 DUAL COCKPIT SINGLE CONTROL ELEVATOR BELLCRANK REPLACEMENT

See Figure 45-14 for location of bellcrank and use the following steps for replacement:

a. Remove 9012-8 Bellcrank from aircraft. Inspect the condition of the existing hardware to see if satisfactory for reinstallation. If not satisfactory, use new hardware.
b. Install 9012-17 Bellcrank.
c. If cable tension is loosened/tightened at installation, rig Elevator controls per S2R-T34 Aircraft Maintenance Manual section 27-30.05.

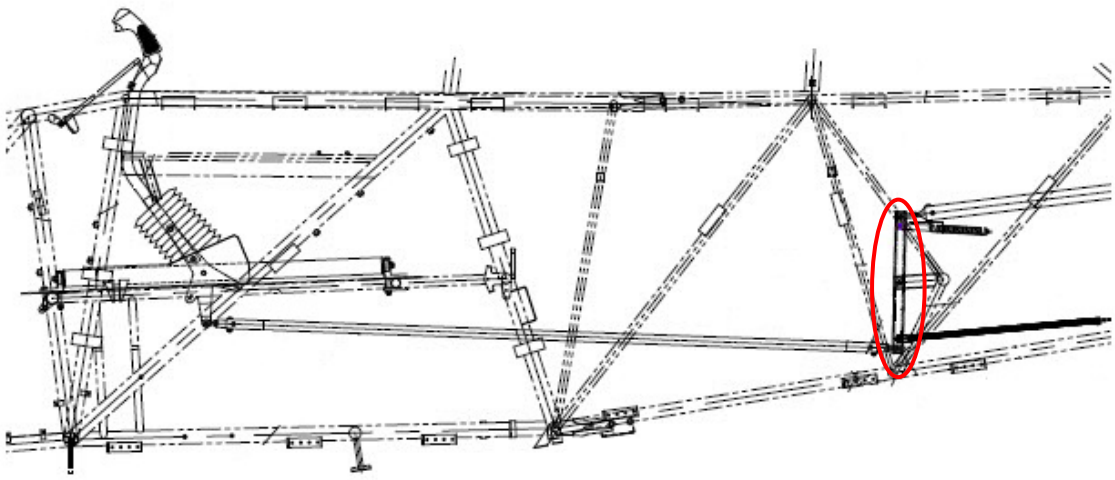


Figure 45-14

Dual Cockpit Single Control Bellcrank Location

10.11 UPDATE ELEVATOR TRIM TAB CONTROL INSTALLATION TO THE 70273-516 CONFIGURATION

See Figure 45-15 for location of Elevator Trim Tab Control and use the following steps to update:

a. Remove and discard 901-24 Push Rod Assembly from Elevator Trim Tab. Inspect the condition of the existing hardware to see if satisfactory for reinstallation. If not satisfactory, use new hardware.

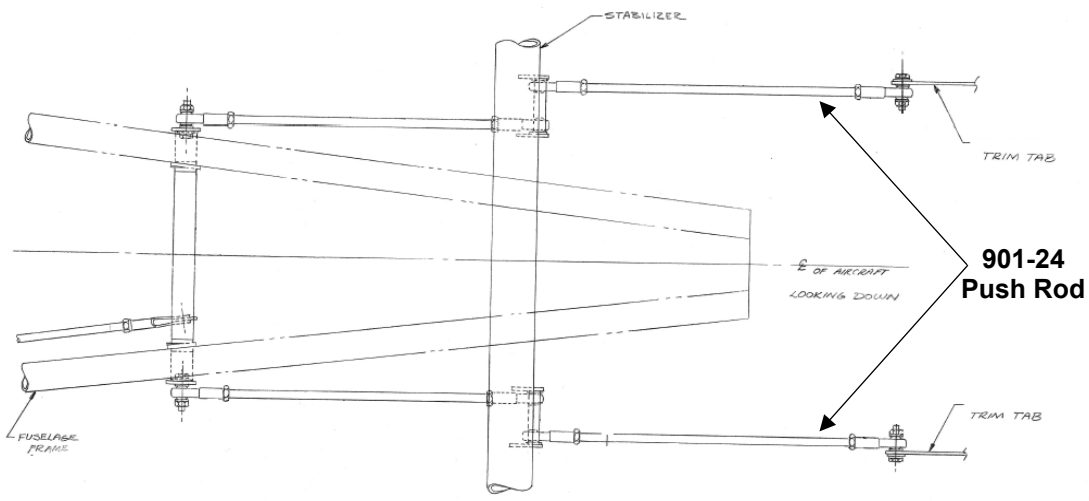


Figure 45-15
Push Rod Location

b. Install 70403-504 bushings into 21180-1 lever. See Figure 45-16.
c. Install Lever Assy to reattach Elevator Trim Tab. See Figure 45-17.
d. Rig elevator controls per S2R-T34 Aircraft Maintenance Manual section 27-30.07, if necessary.

Figure 45-16

70403-504 Bushing Installed Into 21180-1 Lever

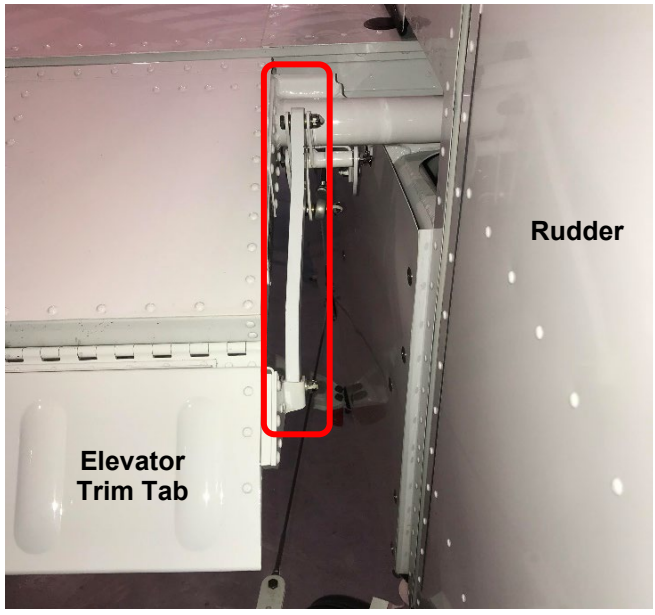


Figure 45-17

Elevator Trim Tab Lever Location

10.12 UPDATE THE 19841-15 COWLING ASSY TO INCORPORATE THE 95050-3 START GEN/COOLING INSTL

1. Remove the existing 19841-15 Cowling Skin Assy. See Figure 45-18 for existing Assy.
2. Modify the existing Cowling Skin Assy by cutting a 3-inch diameter hole per the dimensions shown in Figure 45-19. This hole is required to allow installation of the 21552-2 Scoop.
3. Assemble the 21552-2 Scoop to the Cowling Skin Assy and connect it to the Starter Generator with the hardware shown in Figure 45-20.

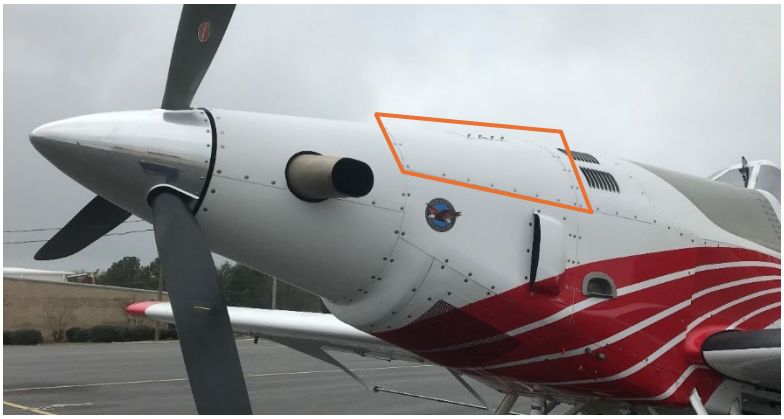


Figure 45-18

Existing Cowl Skin Assy Location

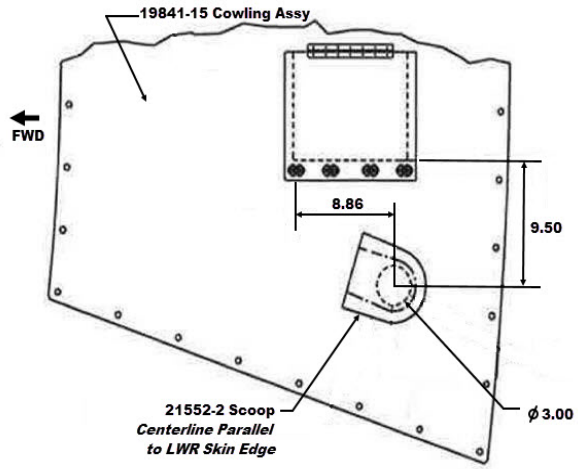


Figure 45-19

Cowl Skin Modification Location & Dimensions

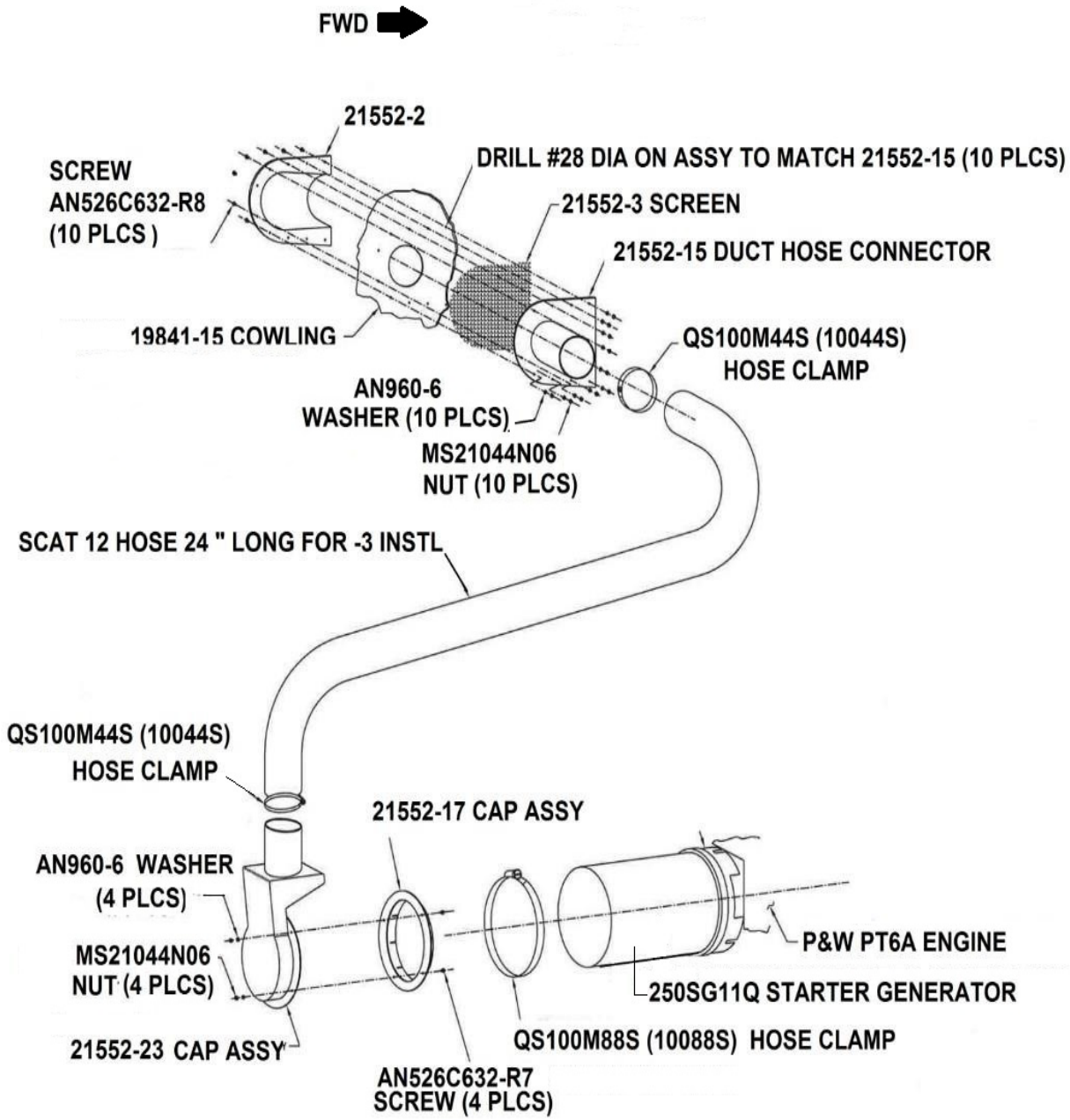


Figure 45-20

Hardware Required To Connect
21552 Scoop To Starter Generator

11. RE-WEIGH THE AIRCRAFT

Although change in weight and balance is not expected, weight and balance shall be verified after completion of this kit.
Incorporate any changes into the Weight & Balance Chart to ensure aircraft weight is within the allowable limit and the center of gravity (CG) is within the allowable range.

12. PERFORM A MAINTENANCE FLIGHT CHECK

Maintenance test flight is necessary for fine adjustments of the systems reworked and to ensure proper operation of the aircraft. Make all adjustments as necessary prior to returning aircraft to service.

13. RECORD OF COMPLIANCE

Make appropriate entry in airplane maintenance records as follows:
"Thrush Custom Kit CK-AG-45 E complied with at _____ total hours on aircraft."

Modification accomplished by:

_____

Name & Certificate # Date

14. RESPONSE CARD

The final step in compliance with this Custom Kit is to complete and return the compliance card on the next page. It may be mailed, faxed, or scanned and e-mailed.

Fax: Thrush Support 229-317-8225

Email:	Thrush Support	support@thrushaircraft.com

15. CUSTOM KIT CK-AG-45 E COMPLIANCE REPORT

Aircraft S/N:	Aircraft Owner:
Aircraft Registration #:	Address of Owner:
Airframe Total Time:	City & State:
Engine Total Time:	Physical Location:
Complied With By:	Date of Compliance:
Signature:	Certificate #:

PLEASE RETURN THIS REPORT <u>ONLY</u> AFTER MODIFICATION IS MADE
This response card may be mailed, faxed to (229) 317-8225, or emailed to support@thrushaircraft.com.

Fold, Tape, & Mail (Do Not Staple)

_____

_____

_____

Return Address:

Thrush Aircraft LLC.
Attn: Customer Assurance and Support
300 Old Pretoria Road
Albany, GA 31721

APPENDIX A

CK-AG-45

CUSTOM KIT ORDER FORM

AIRCRAFT SERIAL NUMBER: _____

AIRCRAFT DESIGNATION:

- ☐ **SINGLE COCKPIT**
- ☐ **DUAL COCKPIT/SINGLE CONTROL**
- ☐ **DUAL COCKPIT/DUAL CONTROL**

TAIL GEAR INSTALLATION:

(See Section 8.1 to aid in making a determination.)

CUSTOM AIR INSTALLATION	**94130-1**	☐
CUSTOM AIR INSTALLATIION	**94130-5**	☐
CUSTOM AIR INSTALLATION	**94130-9**	☐
FORK INSTALLATION	**94130-7**	☐
FORK INSTALLATION	**94130-11**	☐

This form to be completed when ordering CK-AG-45. Provide email address with request.

APPENDIX B

Torque Chart
MS17825-4 Nut Torque is 30-inch pounds

FINE THREAD SERIES

BOLTS	
Steel Tension	
AN 3 thru AN 20 AN 42 thru AN 49 AN 73 thru AN 81 AN 173 thru AN 186 AN 20033 thru MS 20046 MS 20073 MS20074 AN509 NK9 MS 24604 AN 525 N K525 MS27039	
NUTS	
Steel Tension	Steel Shear
AN 310 AN 315 AN 363 AN 365 NAS 1021 MS 17825 MS 21045 MS 20365 MS 20500 NAS 679 MS 21042 MS 21044N MS 21046	AN 320 AN 364 NAS 1022 MS 17826 MS 20364 MS 21083N MS 21245

Nut-bolt size	Torque Limits in-lbs.		Torque Limits in-lbs.	
	Min.	Max.	Min.	Max.
8-36	12	15	7	9
10-32	20	25	12	15
¼ -28	50	70	30	40
5/16 - 24	100	140	60	85
3/8 – 24	160	190	95	110
7/16-20	450	500	270	300
½ - 20	480	690	290	410
9/16 – 18	800	1,000	480	600
5/8 – 18	1,100	1,300	660	780
¾ - 16	2,300	2,500	1,300	1,500
7/8 – 14	2,500	3,000	1,500	1,800
1 – 14	3,700	4,500	2,200	3,300
1 1/8 -12	5,000	7,000	3,000	4,200
1 ¼ - 12	9,000	11,000	5,400	6,600

BOLTS		
Steel Tension		
MS 20004 thru MS 20024 NAS 144 thru NAS 158 NAS 333 thru NAS 340 NAS 583 thru NAS 590 NAS 624 thru NAS 644 NAS 1103 thru NAS 1120 NAS 1202 thru NAS 1210 NAS 1303 thru NAS 1320 NAS 6203 thru NAS 6220 NAS 6603 thru NAS 6620 NAS 172 NAS 174 NAS 517		
	Steel Shear	
	NAS 454	
NUTS		
Steel Tension	Steel Shear	
AN 310 AN 315 AN 363 AN 365 MS 17825 MS 20365 MS 21045 NAS 1021 NAS 679 NAS 1291 MS 21042 MS 21044N MS 21046	AN 320 AN 364 NAS 1022 MS 17826 MS 20364 MS 21083N MS 21245	

Nut-bolt size	Torque Limits in-lbs.		Torque Limits in-lbs.	
	Min.	Max.	Min.	Max.
8-36	-----	-----	-----	-----
10-32	25	30	15	20
¼ -28	80	100	50	60
5/16 - 24	120	145	70	90
3/8 – 24	200	250	120	150
7/16-20	520	630	300	400
½ - 20	770	950	450	550
9/16 – 18	1,100	1,300	650	800
5/8 – 18	1,250	1,550	750	950
¾ - 16	2,650	3,200	1,600	1,900
7/8 – 14	3,550	4,350	2,100	2,600
1 – 14	4,500	5,500	2,700	3,300
1 1/8 -12	6,000	7,300	3,600	4,400
1 ¼ - 12	11,000	13,400	6,600	8,000