



THRUSH AIRCRAFT, INC.

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CUSTOM KIT

No. CK-AG-39

Date: 8/11/06

BELLY SKIN REINFORCEMENT

MODELS AFFECTED: S2R-T34,S2RHG-T34, S2RHG-T65

REASON FOR PUBLICATION: To reinforce & prevent cracking of the 10602-1 & 10602-2 skin (fuselage, lower, center).

COMPLIANCE: At owner's discretion

BY WHOM WORK WILL BE ACCOMPLISHED: FAA licensed A&P Mechanic or foreign equivalent

APPROVAL: FAA Approved

ESTIMATED MAN-HOURS: 40 to 50 Hours

PARTS DATA: The parts required to comply with this custom kit may be obtained from your nearest Thrush authorized service center. A parts list is attached to this publication.

ACCOMPLISHMENT INSTRUCTIONS: (refer to Figures 1, 2, 3 and ESK 716):

1. Remove wing root fairings and side skins as necessary
2. Determine the extent of damage to the skin, lower center fuselage (10602-1 & 10602-2)

IF REPAIRING DAMAGED SKIN, LOWER CENTER FUSELAGE (10602-1 & 10602-2)

3. If the skin, lower center fuselage (10602-1 & 10602-2) can be repaired, a template may be needed to mark the existing hole locations contained in the damaged section or sections to be removed. Be sure to locate several holes that are not being removed on the template to act as reference points.
4. Remove all cracked and damaged areas of skin, lower center fuselage (10602-1 & 10602-2) from aircraft.
5. Replace all areas cut out with .018 304 CRES CON'D A stainless steel or equivalent in accordance with AC 43.13-1B
6. Check to ensure proper fit of angles (95695-7) according to figure 2.
7. Some aircraft may have an additional doubler (95695-9 or 95695-11) on the outside of skin, lower center fuselage (10602-1). This item should be removed in order for the angles (95695-7) to properly fit. After completion of installation the extra doubler should be scrapped.
8. Additional holes may need to be located and cut into the angles (95695-7) for items such as the battery vent tube (90097), drain assemblies (11011) and tube assemblies (81006-7). (Refer to ESK 716).
9. Remove any grommets from holes that may be covered up by the (95695-7) angles.
10. Use B-2 Sealer between (10602-1 & 10602-1) lower center fuselage skins and (95695-7) angles to ensure a tight seal.
11. Drill # 30 Dia. holes and install MS20615-4M rivets. Refer to figure 2 for new hole locations.
12. Re-insert grommets into holes. Be sure to replace any used grommets with new ones. (Refer to ESK 716 for part numbers).
13. Inspect all parts listed under the optional parts list and replace if necessary.
14. Re-install skin, lower center on aircraft (10809-1 & 10809-2)

IF REPLACING DAMAGED SKIN, LOWER CENTER FUSELAGE (10602-1 & 10602-2)

1. If the lower center fuselage skin (10602-1 & 10602-2) is damaged beyond repair then contact your thrush dealer to obtain new skins.
2. Disconnect any electrical wiring that may be become damaged by the removal of skins, lower center fuselage (10602-1 & 10602-2). Secure in a safe place.
3. Remove standoffs, drain tubes, center spray boom and other items as necessary prior to removing skins
4. Remove studs and rivets holding damaged skins, lower center fuselage (10602-1 & 10602-2) in place and remove skins.
5. Use the damaged skins to make a template marking all existing hole locations in order to transfer holes to the new skins, lower center fuselage (10602-1 & 10602-2) later.

6. **New lower center fuselage skins (10602-1 & 10602-2) will come in 2 pieces and need to be joined together by spot welds or rivets (MS20615-4M). Refer to figure 1 for details. Be sure to test fit the two skins before placing welds or rivets.**
7. **Transfer existing hole locations to the new skin, lower center fuselage (10602-1 &10602-2), using template made above.**
8. **Install stiffeners (11016-3), Angles (95695-7) and doubler (10826-1) together, drilling #30 Dia holes and using MS20615-4M rivets. Refer to Illustration 2 for hole locations and ESK 716 for assembly details.**
9. **Use B-2 sealer between (10602-1 & 10602-2) lower center fuselage skins and (95695-7) angles to ensure a tight seal.**
10. **Install brushes (94389-7) and holders (94389-1) by drilling #27 Holes through holders (94389-7), doubler (95695-9) and skin, fuselage lower center (10602-1). Install screws (AN526-632R6), washers (AN960-6) and nuts (MS21044N06). Refer to figure 3 and ESK 716**
11. **Install brushes (94389-11) and holders (94389-5) by drilling #27 Holes through holders (94389-5) and skin, fuselage lower center (10602-2). Install screws (AN526-632R6), washers (AN960-6) and nuts (MS21044N06). Refer to figure 3 and ESK 716**
12. **Install grommets. (Refer to ESK 716 for details)**
13. **Install cam lock receptacles (40R-17-2). Use your existing skin as a template for hole locations. Drill #30 holes for rivets. Rivet cam lock receptacles (40R-17-2) into place using MS20427M4 rivets.**
14. **Install cam lock snap rings (1142905), grommets (1142904) and studs (40S5).**
15. **Place skins, lower center fuselage (10602-1 &10602-2) on aircraft**
16. **Rivet skins, lower center fuselage (10602-1 &10602-2) into place. (Refer to ESK 716 for details)**
17. **Install both doublers (10826-1) using #30 holes and MS20615-4M rivets. Refer to ESK 716.**
18. **Install battery vent tube (90097). Use template to locate holes. Drill 1.52 dia hole for tube and #30 dia holes for MS20615-4M rivets. Refer to ESK 716.**
19. **Install belly skin support assembly (90230). Drill #30 holes for MS20615-4M Rivet. Refer to ESK 716**
20. **Connect any electrical wiring that may have been removed.**
21. **Re-install the drain tubes, center spray boom and other accessories removed for access**
22. **Make final inspection of parts to ensure proper installation.**
23. **Re-install wing root fairings and side skins**

WEIGHT AND BALANCE DATA: Weight and balance change negligible.

AIRCRAFT RECORDS:

Make appropriate entry in airframe permanent maintenance records as follows:

Thrush Aircraft Inc. Custom Kit No. CK-AG-39 dated August 11, 2006, entitled "Lower Center Fuselage Skin Reinforcement", accomplished @ _____HRS airframe time By _____(Name)_____, _____(Certificate #)_____, _____(Date)_____.

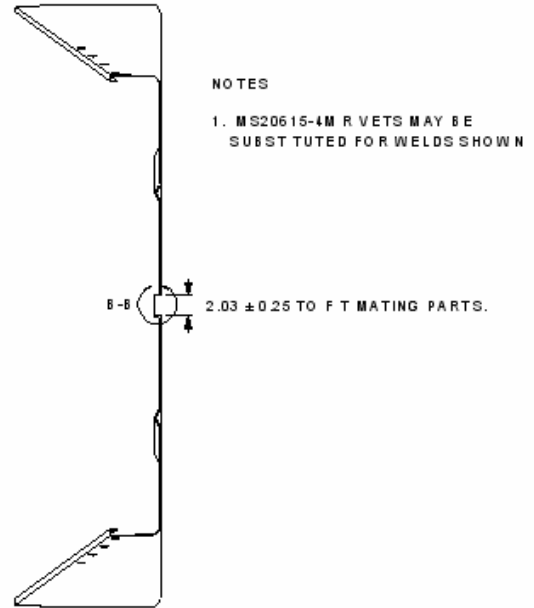
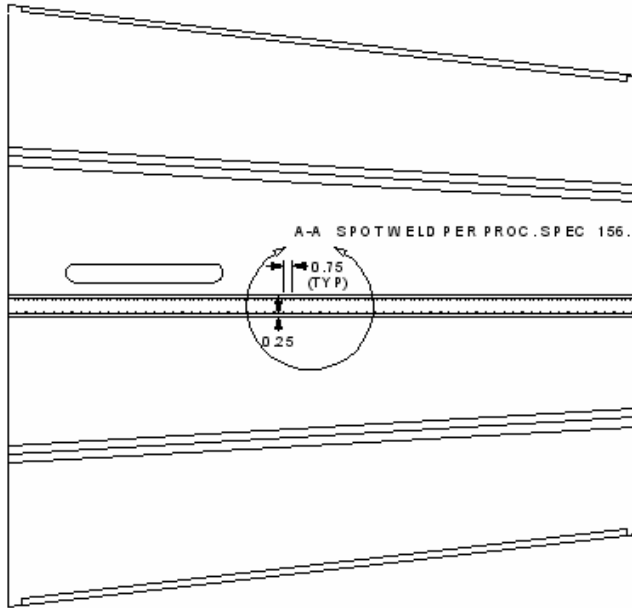
KIT PARTS LIST (Parts are available through your area dealer).

<u>QTY</u>	<u>P/N</u>	<u>DESCRIPTION</u>
4 ea.	95695-7	Angle
56 ea.	MS20615-4M	Rivet
1 ea.	95695-9	Doubler
6 ea.	AN526-632R6	Screw
6 ea.	AN960-6	Washer
6 ea.	MS21044N06	Nut

Optional parts that may be needed if original parts are damaged or corroded.

<u>QTY</u>	<u>P/N</u>	<u>DESCRIPTION</u>
1 ea.	10602-1	Skin, Fuselage, Lower Center, L/H
1 ea.	10602-2	Skin, Fuselage, Lower Center, R/H
2 ea.	11016-3	Stiffener
8 ea.	40R-17-2	Cam lock Receptacle
1 ea.	90097	Battery Vent Tube
1 ea.	90230	Support Assy, Belly Skin
2 ea.	94389-1	Holder
2 ea.	94389-5	Holder
2 ea.	94389-7	Brush
2ea.	94389-11	Brush
140 ea.	AN430M3-3	Rivet
4 ea.	AN526-632R6	Screw
1 ea.	AN931-10-14	Grommet
4 ea.	AN960-6	Washer
42 ea.	MS20427M4	Rivet
228 ea.	MS20615-4M	Rivet
8 ea.	MS20615-3M	Rivet
4 ea.	MS21044N06	Nut
2 ea.	MS35489-9	Grommet
2 ea.	MS35489-23	Grommet
2 ea.	10826-1	Doubler
8 ea.	40S5	Series Studs
8 ea.	1142904	Grommets
8 ea.	1142905	Snap Rings

FIGURE 1 SKIN ASSEMBLY



A-A

B-B

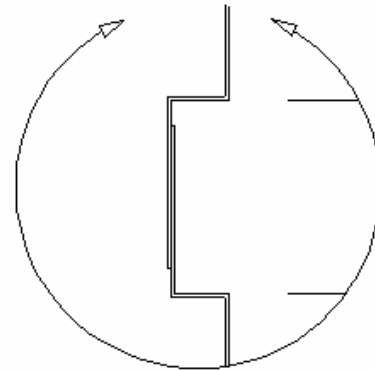
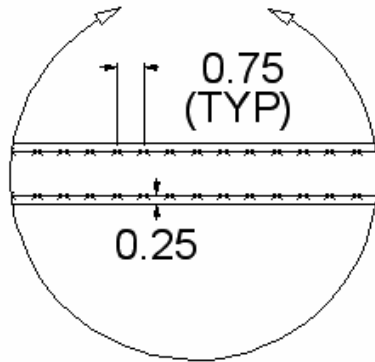


FIGURE 2 REINFORCEMENT INSTALLATION

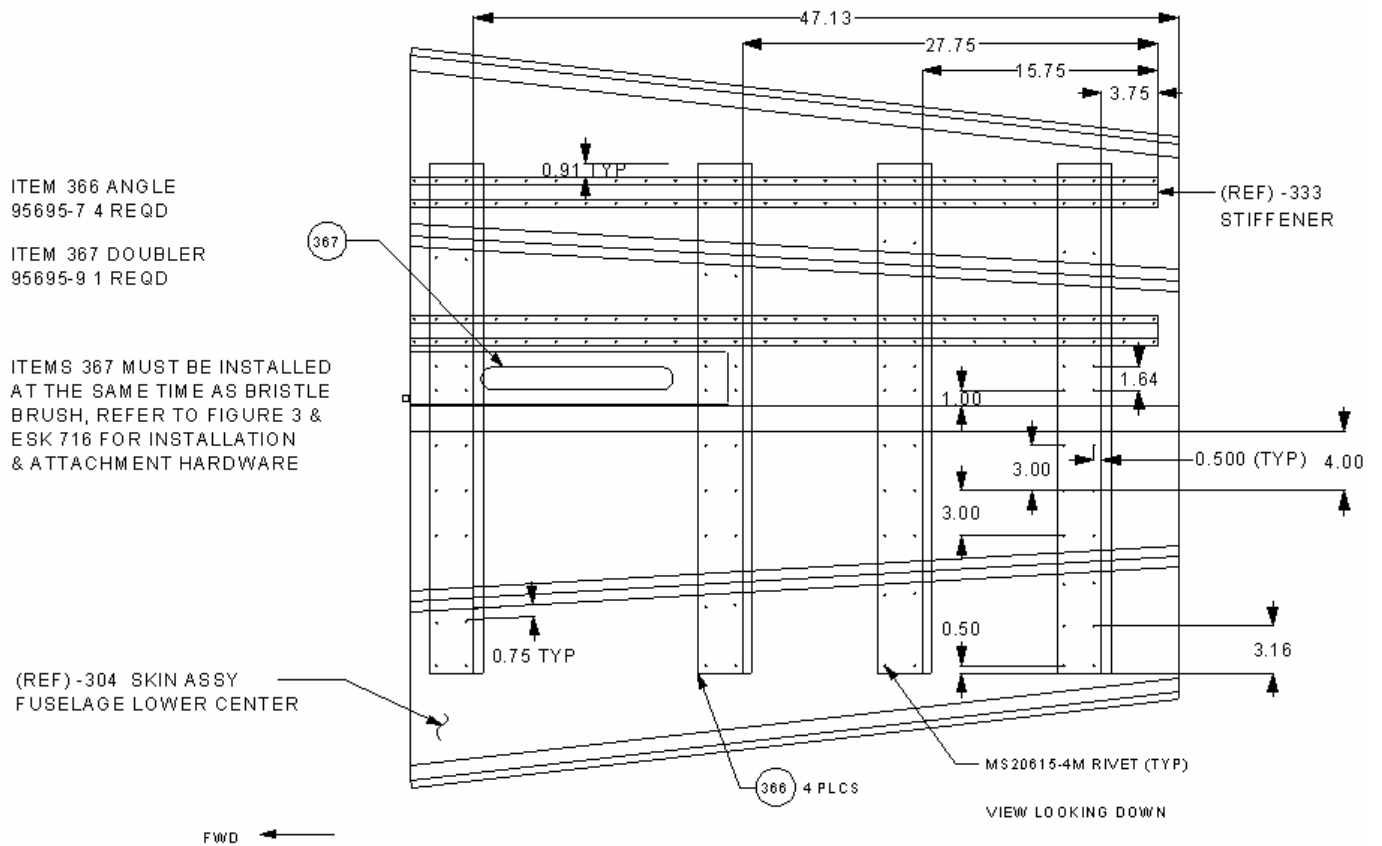


FIGURE 3 BRUSH INSTALLATION

