



Cub Crafters, Inc. Considers Compliance Mandatory

EFFECTIVE DATE: This SERVICE BULLETIN is effective **December 12, 2008**

SUBJECT: Cabane Vee Attachment Reinforcement

MODELS AFFECTED: CC11-100 S/N CC11-00002 THRU CC11-00085.

COMPLIANCE TIME: Inspection (Owner/Operator Task): Prior to Next Flight
Reinforcement: At the Next Maintenance Action.
There are two alternate methods of compliance with this reinforcement.

CONTINUED INSPECTION: Inspect at Condition Inspection

PURPOSE & HISTORY: While testing for the higher gross weight of our Carbon Cub kit plane, we identified the weakest link in our landing gear system on the Sport Cub. If the airplane lands hard enough on one wheel, the first item to fail will likely be the fitting which attaches the cabane vee to the fuselage. In a normal landing, there are little loads on these fittings. However, if only one wheel stops the downward momentum of the airplane, the resulting load goes into the fuselage through just one fitting. If the aircraft load is heavier than the designed 1320 lbs at the time of a hard landing, the 50% margin of safety or reserve strength can be compromised as well.

We recommend installing either of the two methods described in this Service Bulletin to preclude the possibility of a fitting failure in an overload situation, or in the case of a very hard one-wheel landing.

We have seen two failures of this type. The first was a new owner who landed from "10 feet in the air", on his first landing. The second failure reportedly occurred on a normal roll out, but there was evidence of a very hard landing when the shock struts were later examined. It is believed this aircraft had been landed hard, and the fitting yielded at that time, but didn't fail until sometime later during a subsequent landing.

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INSTRUCTIONS:

INSPECTION:

1. Visually inspect the cabane vee attachment brackets. The cabane vee attachment is incorporated into the forward landing gear/fuselage attachment. Visually inspect these areas for any metallic deformation. Signs of deformation will be cracked or bubbled up paint on both sides of the bolt head. If obvious problems or deformation is noted, please contact Cub Crafters via the information at the end of this service bulletin for further instructions.



2. If no problems are noted, aircraft may continue to be operated until the next maintenance action for installation of the reinforcements.

REINFORCEMENT INSTRUCTIONS:

Method #1	Installation of the included Cabane Reinforcement kit. This kit contains two steel plates that are mounted on the forward and aft sides of the cabane fitting (4 plates and hardware).
Method #2	Weld 1 washer (SC15003-005) on the forward portions of the cabane attachment (2 washers total). If this is your preferred method, contact Cub Crafters for the required components.



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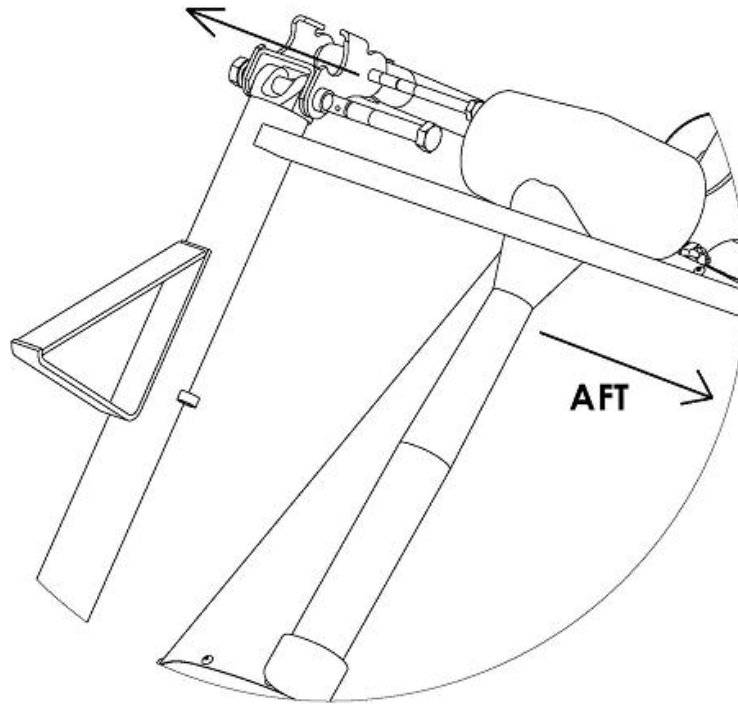
METHOD #1

Method #1 requires only minor disassembly and no paint.

PARTS LIST:	PART NUMBER	DESCRIPTION	QTY
	SC20209-001	GEAR FORWARD BRACKET REINFORCEMENT	4
	AN6-27	BOLT	2
	AN6-20A	BOLT	1
	AN4-26A	BOLT	2
	AN4-20A	BOLT	1
	AN380-3-3	COTTER PIN	2
	AN960-416	FLAT WASHER	20
	AN960-416L	FLAT WASHER, THIN	4
	AN960-616	FLAT WASHER	2
	AN960-616L	FLAT WASHER, THIN	2

1. Remove the engine cowl.
2. Secure engine hoist to the engine mounts near the firewall.
3. Place a wing jack under one wing at the outboard strut attachment point to stabilize the aircraft. Apply just enough pressure to keep the aircraft from rocking.
4. Working on one side at a time, remove nuts from cabane and forward landing gear bolts.
5. Back drive both bolts using the extra bolts provided. See Figure 1.

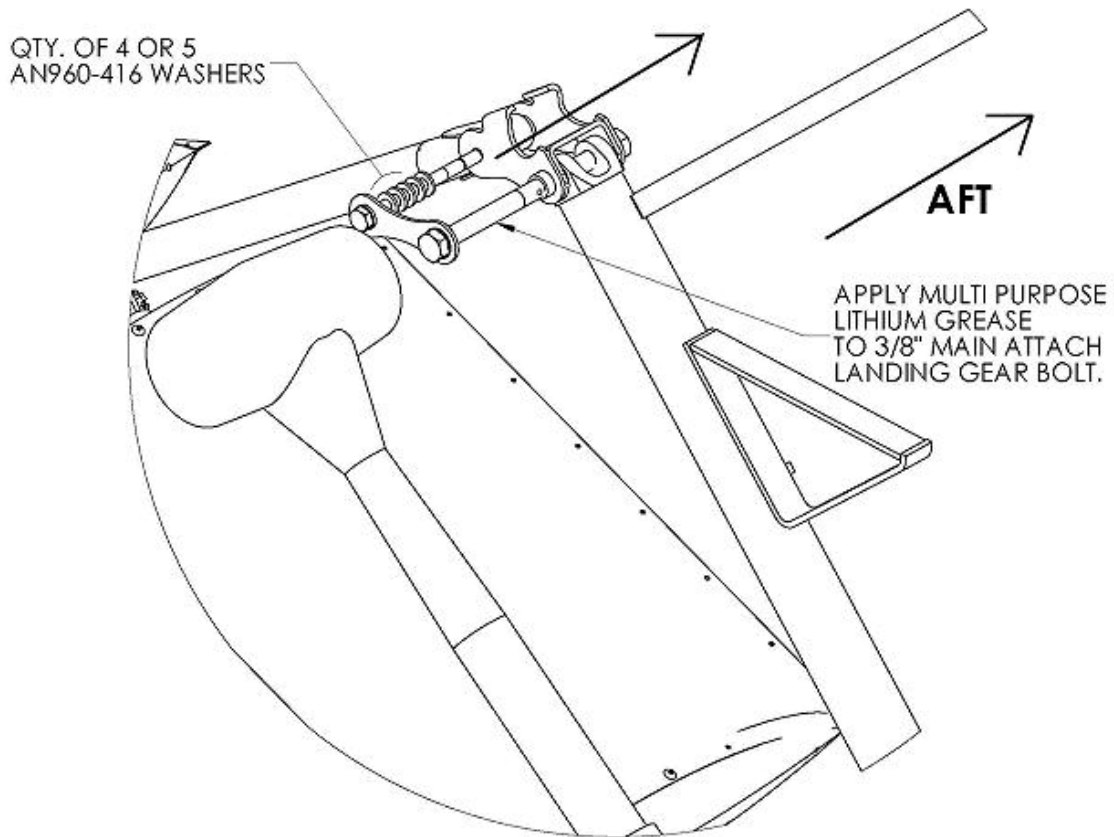
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**Figure 1 - Original Fastener Removal
(Fuselage Tubes and Covering Removed for Clarity)**

6. Install reinforcement plate over the new bolts, stack up four or five (depending on bushing length of landing gear fitting) AN960-416 washers over the cabane attach bolt. Apply a multi-purpose lithium grease to the 3/8" main attach landing gear bolt. Use the new fasteners to back drive the extra bolts back out. See Figure 2.

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**Figure 2 - Cabane Reinforcement Hardware Installation.
(Fuselage Tubes and Covering Removed for Clarity)**

7. Using AN960-416 washer, stack up approximately four or five washers (depending on bushing length of landing gear fitting) and install the second reinforcement plate. See Figure 3.
8. Install washers and nuts. Torque $\frac{1}{4}$ " cabane attach nuts to 110-120 in-lbs.

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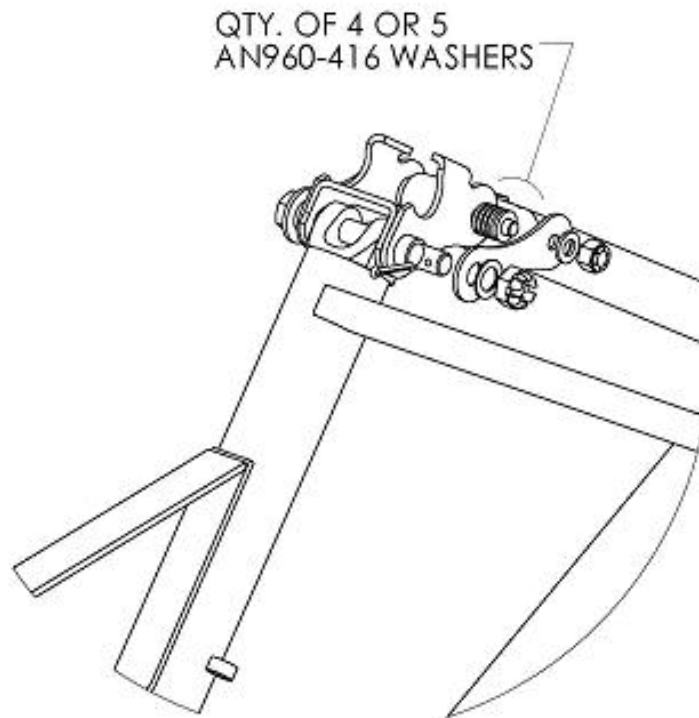


Figure 3 - Installed Cabane Reinforcement

9. Hand tighten main landing gear attach nut then continue to the nearest castellation and insert new cotter pin.
10. Repeat steps 3-9 for the other side.
11. Make a note in the aircraft logbook that Service Bulletin No. 00010 has been complied with using Method #1.

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METHOD #2

*Method #2 requires moderate disassembly and painting.
It may be preferred during a rebuild or heavy maintenance action.*

PARTS LIST:	PART NUMBER	DESCRIPTION	QTY
	SC15003-005	WASHER	2

1. Remove engine cowl.
2. Remove rivets along both sides of exhaust channel and boot cowl. See Figure 4.
3. Remove rivets along the front sides of boot cowl. See Figure 4.

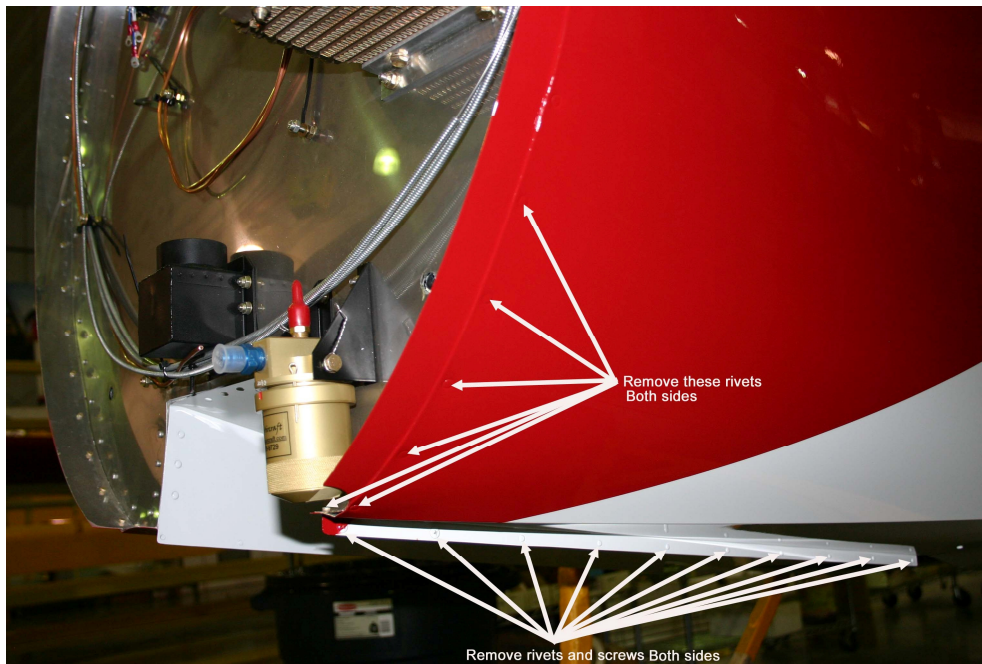


Figure 4

4. Remove screws along the back side of the boot cowl. See Figure 5.

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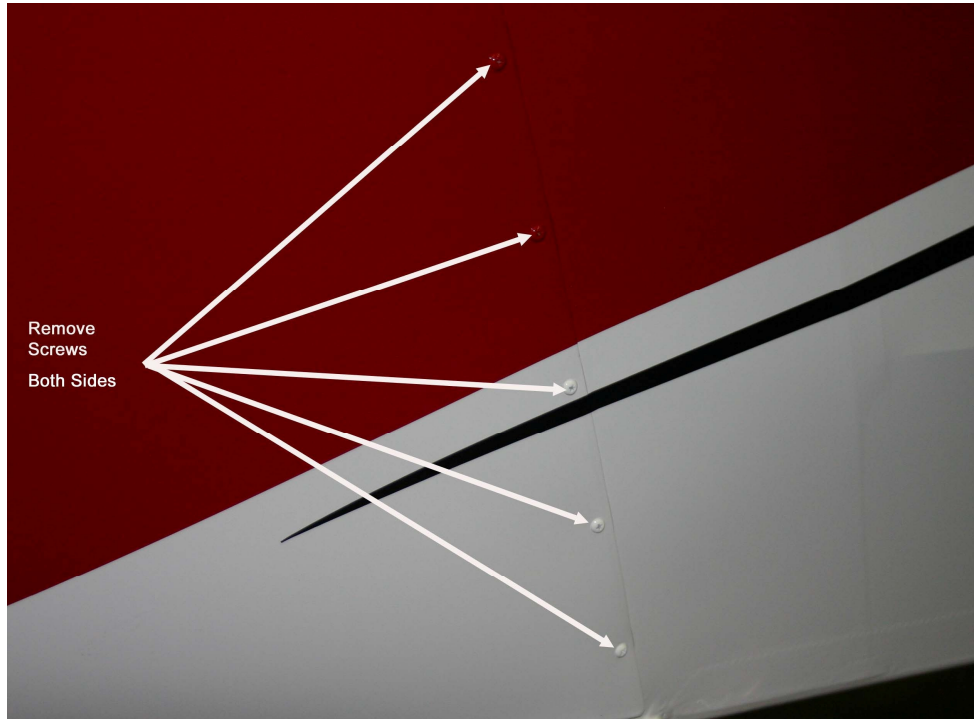


Figure 5

5. Secure engine hoist to the engine mounts near firewall.
6. Place a wing jack under one wing at the outboard strut attachment point to stabilize the aircraft. Apply just enough pressure to keep the aircraft from rocking.
7. Suspend aircraft with the hoist until the wheels are off the ground.
8. Remove nut off of forward landing gear, remove bolt by driving a second bolt back through the hole. This will allow the boot cowl to open up.
9. Remove shock struts and cabane vee.
10. Carefully rotate the boot cowl away from fuselage to allow access to the cabane mount fitting.
11. Remove paint in effected area.
12. Weld on washers per Figure 6.
13. Paint area.
14. Reassemble.
15. Touch up paint on rivets and screws.
16. Make a note in the aircraft logbook that Service Bulletin No. 00010 has been complied with using Method #2.

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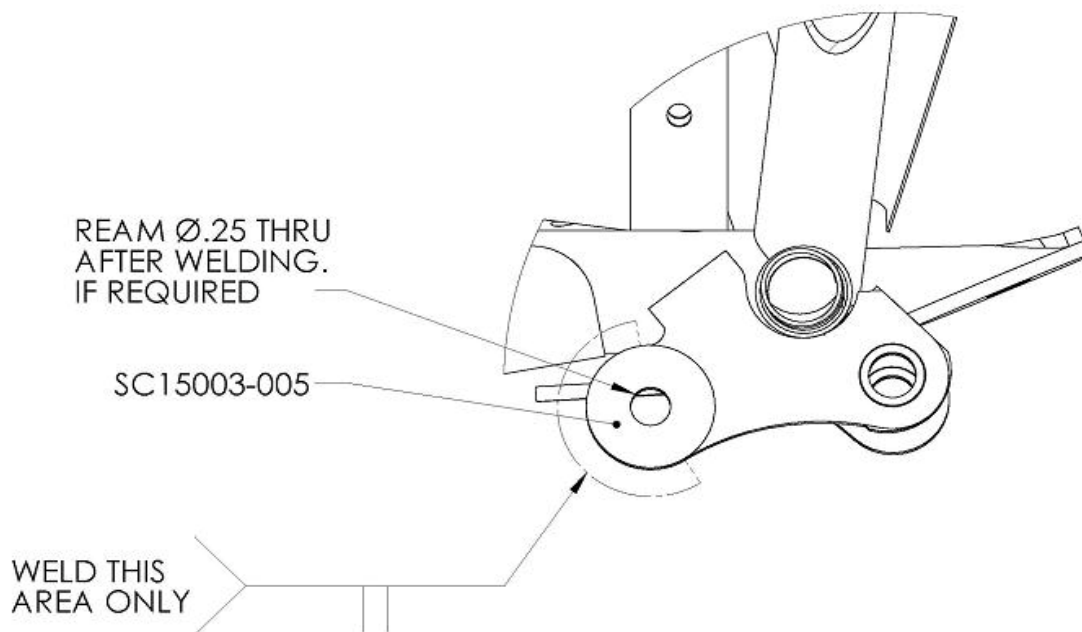


Figure 6 – Washer Weld Location and Information

WARRANTY:

It is assumed that this Service Bulletin will be complied with at the next Condition Inspection or Maintenance Action. All aircraft still within the One-Year Warranty period (delivery of aircraft after December 1st, 2007) will receive parts at no charge and a labor reimbursement of up to one hour at a rate of \$75/hour. Aircraft not within the One-Year Warranty period will receive parts at no charge.

If you are no longer in possession of this aircraft, please forward this information to the present owner/operator and notify Cub Crafters, Inc. of the address of the current owner to:

Cub Crafters, Inc.
1918 S. 16th Avenue
Yakima, WA 98903.
1-877-484-7865 or 1-509-248-9491
support@cubcrafters.com

Please include the aircraft registration number, serial number, current name, and address of the owner and/or operator.