

# PUBLICATION INDEX

## FOR

### SGS 1-23



K & L SOARING, LLC  
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## PUBLICATION INDEX

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## REVISION PAGE

Change Description	Revision Date
Publication Issuance	15 Feb 2010
Revised to Change to SA-001.6 from SA-001.5	20 June 2010

## 1-23 Service Bulletin Index

Number	Subject	Revision Date
102-23-1	Jamming of Spoiler Control	02 Jun 1959
102-23-2	Fin and Rudder Lower Hinge – Excessive Wear	29 Jun 1971
SA-001.6	Inspection of Tow Release Assembly	29 Dec 2009
SA-003	Aerobatics in Schweizer Sailplane	25 Mar 1987
SA-005.1	Identification and Possible Replacement of Tow Release Arm	31 Jan 1988

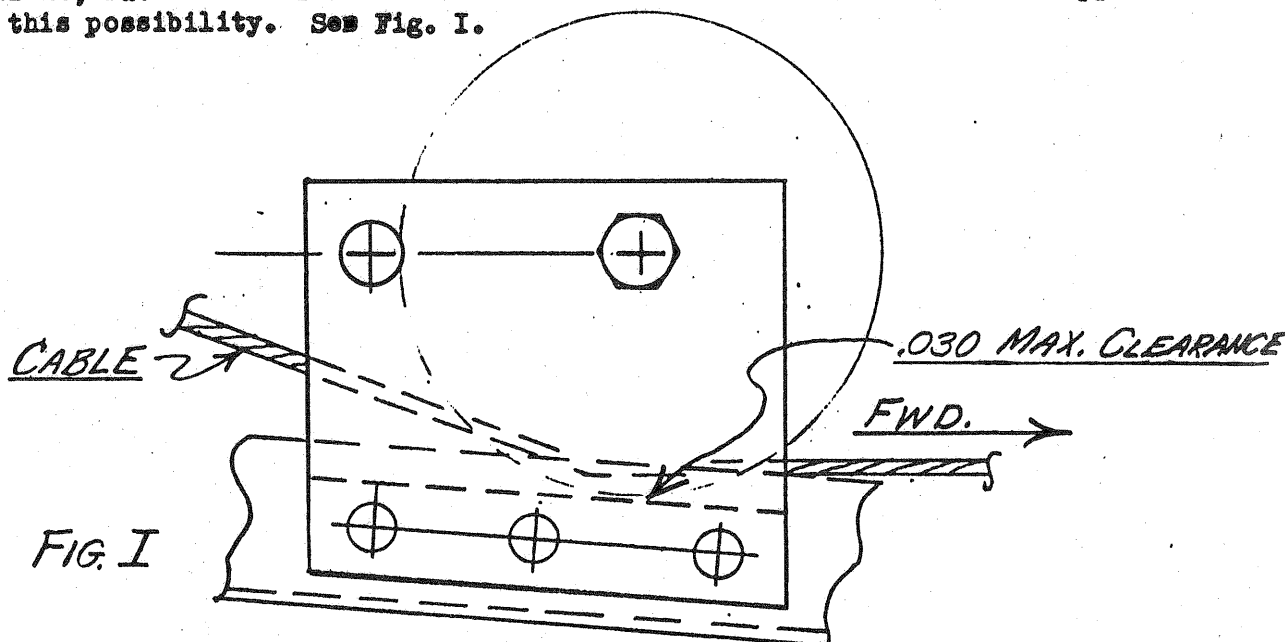
## 1-23 Service Letter Index

Number	Subject	Revision Date
SL-102-7	Vertical Surface Flutter	24 May 1971
SL-001	Annual Disassembly of Aircraft	01 Jun 1987

Model SGS 1-23D, F & G

Serial No's 25-29 and 31-44

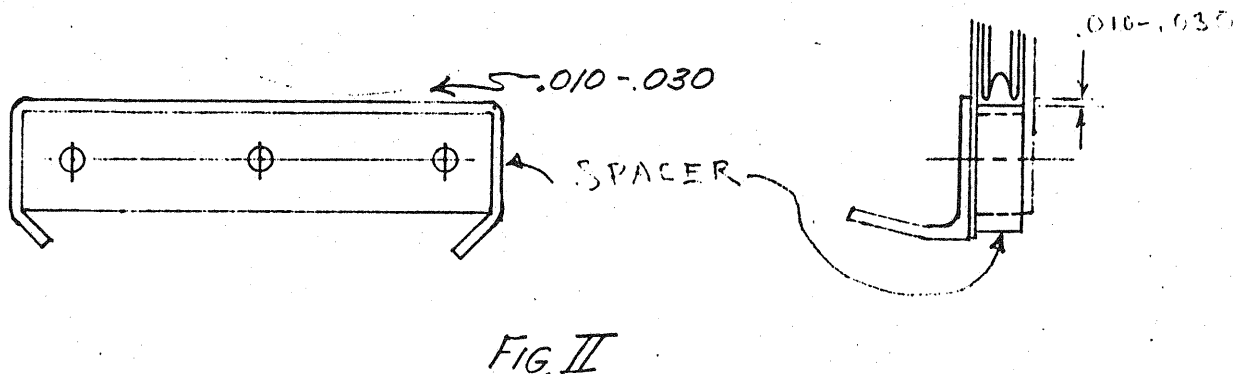
A case of spoiler control jamming has occurred on a 1-23G caused by excessive clearance between spacer block and spoiler control pulley just aft of main wing bulkhead fuselage, Sta. 76, near bottom of fuselage. This condition may exist in any of the above aircraft. The jamming has occurred only once and should not occur under normal conditions, but all aircraft should be checked and the correction below applied to eliminate this possibility. See Fig. I.



Check by using feelers inserted from aft end to determine gap between pulley and 23D117-2 block. If this exceeds .030, correction should be made as follows:

(1) Schweizer Aircraft Corp. can furnish an oversize blank 23D117-2 replacement which can be installed to bring the clearance between .010 to .030. Since this is difficult to do in the field due to the confined space, the alternate method No. 2 may be used.

(2) A spacer can be inserted as shown in Fig. II.



This spacer is made of soft aluminum sheet 3S4H, 32S0, 24S0, etc. 5/16" wide.

Schweizer Aircraft Service Bulletin No. ~~XXXX~~ 102-23-1.

(a) Form hook from Spacer stock as in Fig. III.

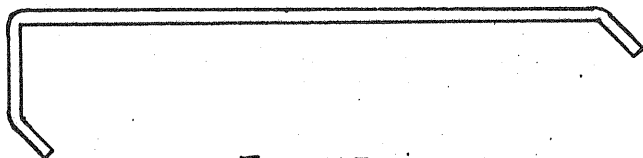


FIG. III

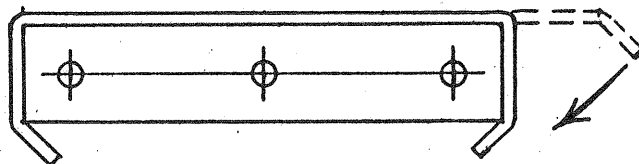


FIG. IV

(b) Remove pulley and insert hooked spacer over forward end of block 23D117-2 and form spacer as shown in Fig. IV. The forward end of hook should fit snugly over the block before forming the aft end into place. When the spacer is securely in place, recheck for gap with feelers to see that gap does not exceed .030, and reinstall and safety, cable and pulley.

Minimum thickness of spacer should be .040 and maximum thickness is .093. Width of spacer should full 5/16" so that there is no excessive gap at the edges.

If more than .093 is required, use a flat strip 5/16" wide between the space and the block as shown in Fig. V.

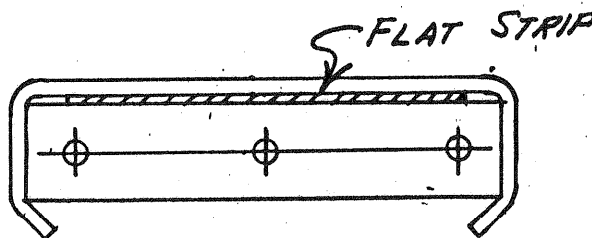


FIG. V

Schweizer Aircraft Corp. will furnish the spacers on request specifying the thickness required.

Please acknowledge receipt of this on enclosed Post Card as soon as possible.

SCHWEIZER AIRCRAFT CORPORATION  
ELMIRA, NEW YORK

6/2/59

June 29, 1971

SERVICE BULLETIN NO. 102-23-2

SUBJECT: Fin and Rudder Lower Hinge - Excessive Wear  
MODELS AFFECTED: SGS 1-23H and H15  
SERIAL NO.'s " : 45. thru 75  
REFERENCE : Schweizer Service Letter No. SL-102-7, 5/24/71

This Service Bulletin is to advise owners that tail flutter has been experienced on aircraft which were found to have excessive lower rudder-hinge wear. Compliance with the following is required within the next 25 hours of operation or the next 100 hour inspection, whichever is sooner, and at each Annual Inspection thereafter.

A. Inspection

1. Remove the rudder cable and hinge bolts and remove the rudder from the aircraft.
2. Solvent-clean the hinge lugs and hinge bolts.
3. Using a ball gage and micrometers check the lower hinge holes and bolt for size or elongation.
4. The maximum useable diameter, or elongation of the hinge holes (fin or rudder) is .252.

B. Repair Methods

1. In cases where the hole size is .250 - .252, the simplest repair is replacement of the hinge bolt with a high-limit (.249) AN4-12 bolt, or, a close-tolerance AN-174-12 bolt (.2487 - .2492 dia.).
2. Holes with a diameter or elongation greater than .252 may be repaired by enlarging the bolt holes in both the aluminum rudder hinge (23H704-11 & -17 horn and doubler) and the steel fin hinge (23H705-21) and installing an AN5-12 bolt with AN310-5 nut and cotter pin. The final hole size can best be obtained by first drilling with "N" (.302) drill and final ream, using a standard 5/16 jobbers reamer with an .005 - .007 lead. The final hole size shall be checked and found to be not greater than .3120.
3. An alternate method of repair is to replace the lower (steel) fin hinge fitting (P/N 23H705-21) with a new part. In the aluminum rudder hinge, enlarge the hinge bolt hole to .3735 - .3740 diameter. Press in a 7/16 to 1/2" long steel bushing having an .0010 to .0015 interference fit. Final ream the installed bushing to .248 - .249 I.D. to accept a new AN4-12 bolt. A bushing may be procured from Schweizer Aircraft Corp. for this application, (Drawing 7016A).

- C. Reassemble the rudder on the aircraft and apply a small amount of dry-type lubricant to the hinge bolts. It is also recommended that a new AN4-22 bolt be installed at the upper hinge location.

- NOTES:
1. To preclude possibility of change of the rudder balance, check drain holes in the lower rudder rib to assure that water is not entrapped.
  2. The above repair methods are also acceptable for repair of other models of the SGS 1-23 series.

SCHWEIZER AIRCRAFT CORP.

*Milton A. Counting*



BULLETIN NO. SA-001.6\*

DATE: Dec 29, 2009

PAGE: 1 of 13

\* Supersedes Service Bulletin  
No. SA-001.5, Dated Oct 16, 2009

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SUBJECT: ONE-TIME INSPECTION OF TOW RELEASE ASSEMBLY; DAILY INSPECTION OF TOW RELEASE ASSEMBLY; PILOT'S PREFLIGHT INSPECTION OF TOW RELEASE ASSEMBLY; 100 HOUR/ANNUAL INSPECTION OF TOW RELEASE ASSEMBLY.

AIRCRAFT AFFECTED: All the following Schweizer Sailplane Models  
SGU 1-7  
SGS 2-8 (TG-2)  
SGS 2-12 (TG-3)  
SGU 1-19  
SGU 1-20  
SGU 1-21  
SGU 2-22, 2-22A, 2-22C, 2-22CK, 2-22E, 2-22EK  
SGS 1-23, 1-23B, 1-23C, 1-23D, 1-23E, 1-23F, 1-23G, 1-23H, 1-23H15  
SGS 1-24  
SGS 1-26, 1-26A, 1-26B, 1-26C, 1-26D, 1-26E  
SGS 2-32  
SGS 2-33, 2-33A, 2-33AK  
SGS 1-34, 1-34R  
SGS 1-35C  
SGS 1-36 (Sprite)

All Schweizer Sailplanes field retrofitted to incorporate a tow release assembly

#### TIME OF COMPLAINT:

PART I: Shall be accomplished on a one-time basis within 30 days of issue date of this bulletin or at next 100 hour inspection, whichever occurs first (unless already accomplished in accordance with Part III of SA-001.4 or prior revision)

PART II: Shall be accomplished prior to the first flight of each day

PART III: Shall be accomplished at each Preflight inspection

PART IV: Shall be accomplished at each 100 hour/Annual inspection

BULLETIN NO. SA-001.6\*

DATE: Dec 29, 2009

PAGE: 2 of 13

REFERENCE: Schweizer Service Bulletin SA-005.1, 31 January 1988 AC 43.13-1A

OVERVIEW: The .5 revision is the same as the .4 revision except changes to Figures 1, 3, & 4. Figure 1 has changed to add View D to show improper engagement. Figure 3 has been changed to show proper release arm cutout. Figure 4 has been changed to show proper readings for the C.G. hook install.

PREFACE: Field reports indicate that it is possible for the tow hooks on the affected aircraft to release during towing operations without input from the sailplane pilot. Thorough analysis of this situation has allowed K & L Soaring, LLC (K & L) to attribute such incidents to (1) improper combinations of tow hooks and release arms, (2) improper installation of the tow hook into the release arm, or (3) excessive wear of the tow hook or release arm.

Parts I through IV of this Service Bulletin list instructions for a one-time inspection, a daily inspection, a Preflight inspection, and a 100 hour/Annual inspection of the tow release assemblies used on the affected aircraft. It should be noted that Part I of this bulletin need not be accomplished if Part III of Service Bulletin SA-001.( ) was previously accomplished. Any discrepancies observed while performing the inspection procedures listed in this bulletin requires the aircraft to be grounded until the situation is resolved.

In addition, since there is always the possibility of improper release of the tow hook, sailplane tow operations must always be performed where there is sufficient airfield available to accommodate such occurrences. Premature release of the tow hook from the release arm should not result in damage to the aircraft or injury of its occupants, if the recovery is executed properly.

## PART I – ONE-TIME INSPECTION OF TOW RELEASE ASSEMBLY.

### PROCEDURE

#### NOTE

Many different versions (Part Numbers) of tow hooks and release arms have been manufactured for Schweizer Sailplanes. However, as specified in Table 1 of this bulletin, only certain tow hooks/release arm combinations are compatible with each model sailplane. Unacceptable combinations must be replaced.

- a. Use Table 1 of this bulletin to determine if an acceptable tow hook and release arm are installed

**TABLE 1 - ACCEPTABLE TOW HOOK / RELEASE ARM COMBINATIONS**

<b>Aircraft</b>	<b>Tow Hook</b>	<b>Standard Release Arm</b>	<b>Superseding/ Replacement Release Arm</b>
SGU 1-7	R-200-9A or 1A218-1A or 1B-221-3	R-200-12A or 1B-217-1A	1D-217-9
SGS 2-8 (TG-2 )	R-200-9A or 1A218-1A or 1B-221-3	R-200-12A or 1B-217-1A	1D-217-9
SGS 2-12 (TG-3)	R-200-9A or 1A218-1A or 1B-221-3	12B-141 or 1B-217-1A	1D-217-9
SGU 1-19	R-200-9A or 1A218-1A or 1B-221-3	R-200-12A or 1B-217-1A	1D-217-9
SGU 1-20	R-200-9A or 1A218-1A or 1B-221-3	R-200-12A or 1B-217-1A	1D-217-9
SGU 1-21	R-200-9A or 1A218-1A or 1B-221-3	R-200-12A or 1B-217-1A	1D-217-9
SGU 2-22 (All Models) (C.G. Hook)	R-200-9A or 1A218-1A or 1B-221-3	R-200-12A or 1B-217-1A	1D-217-9
SGS 1-23 (All Models)	R-200-9A or 1A218-1A or 1B-221-3	R-200-12A or 1B-217-1A	1D-217-9
SGS 1-24	R-200-9A or 1A218-1A or 1B-221-3	R-200-12A or 1B-217-1A	1D-217-9
SGS 1-26, A, B, C, & C.G. Hook	R-200-9A or 1A218-1A or 1B-221-3	R-200-12A or 1B-217-1A	1D-217-9
SGS 1-26 D, E	1A-218-1A or 1B-221-1	1D-222-7	1D-222-13
SGS 1-26 D & E (C.G. Hook)	1B-221-1	1D-222-1	1D-222-11
SGS 1-26E (opt.)	10232A-1	1B-217-5	1D-217-11
SGS 2-32	1B-221-1	1D-222-1	1D-222-11
SGS 2-33, 2-33A, 2-33AK (C.G. Hook)	1A-218-1A or 1B-221-3	1B-217-1A	1D-217-9
SGS 2-33, 2-33A, 2-33AK (opt.) (C.G. Hook)	10232A-1	1B-217-5	1D-217-11
SGS 1-34, 1-34R	1A-218-1A or 1B-221-1	34017D-1	34017D-11
SGS 1-35C	1A-218-1A or 1B-221-1	1D-222-7	1D-222-13
SGS 1-35C (opt.)	10232A-1	1B-217-5	1D-217-11
SGS 1-36	10232A-1	1B-217-5	1D-217-11

CAUTION

THE 10232A-1 TOW HOOK IS PHYSICALLY SMALLER THAN THE OTHER TOW HOOKS. FIELD RETROFIT TO THE 10232A-1 TOW HOOK REQUIRES INSTALLATION OF A 1B-217-11 ARM AT A LOCATION FURTHER FORWARD ON THE AIRCRAFT. BE SURE TO CONTACT K & L FOR INSTALLATION INSTRUCTIONS BEFORE FIELD RETROFITTING SAILPLANE TO INCORPORATE 10232A-1 TOW HOOK

- b. Replace tow hook and/or release arm as required to obtain an acceptable combination (as specified in Table 1) for sailplane in question.

NOTE

- Proper engagement of the tow hook into the release arm is shown in Figure 1, View A, and Figure 4. Excessive wear of the tow hook step could result in improper engagement. Figure 2 of this bulletin provides inspection data and wear limits for the tow hook. Tow hooks which do not meet the specified limits must either be reworked to obtain dimensions (as specified in Figure 2) or replaced.
  - If tow hooks is able to slide into the release arm, beyond the tow hook step, as shown by Figure 1, View C, the release arm must either be reworked with a slug as specified in Figure 3, or replaced.
- c. Inspect tow hook for wear in accordance with Figure 2 of this bulletin.

CAUTION

ALL AIRCRAFT REPAIRS AND REWORK MUST BE ACCOMPLISHED WITHIN THE GUIDELINES ESTABLISHED BY AC 43.13

- d. If tow hook dimensions are not within limits specified in Figure 2, either rework the tow hook to obtain dimensions (as specified in Figure 2) or replace it with a new or serviceable, used tow hook
- e. Engage tow hook into release arm. Ensure that the tow hook properly engages as shown in Figure 1, View A.
- f. If tow hook is unable to completely engage (shown by Figure 1, View B) shorten the rubber bumper stop between the release knob and the instrument panel to allow the release assembly to close further.

- g. If tow hook is able to travel too far inboard as shown in Figure 1, View C, disengage tow hook from release arm and measure the length of the release arm slot
- h. If dimension is less than 0.66 inch, rework release arm by welding on 1B-217-19 slug at location shown in Figure 3. (Release arm may be replaced as an alternate to welding on slug)
- i. If length of release arm slot is greater than 0.66 inch, replace release arm.
- j. Perform a thorough inspection of the tow hook installation in accordance with the 100 hour inspection requirements listed in Table 2 of this bulletin.
- k. Repair or replace unserviceable component(s), as required
- l. Record compliance with Part I of this Service Bulletin in Aircraft Log Book.

## PART II – DAILY INSPECTION OF TOW RELEASE ASSEMBLY.

### PROCEDURE

#### NOTE

The following inspection does not require any disassembly of the aircraft or release assembly. However, if any defects are noted during inspection, the problem(s) must be resolved prior to next flight.

- a. Perform a thorough visual inspection of the tow release assembly and associated components in accordance with the daily inspection requirements listed in Table 2 of this bulletin.

#### CAUTION

ALL AIRCRAFT REPAIR AND REWORK MUST BE ACCOMPLISHED WITHIN GUIDELINES SPECIFIED IN AC43.13.

- b. If any defects are noted, repair or replace faulty components prior to next flight.

**TABLE 2 – DAILY, 100-HOUR, & ANNUAL INSPECTION**

	Daily	100 Hour	Annual
Visually inspect release arm for damage, cracks, deformation, and freedom of movement on pivot bolt.	X	X	X
Visually and physically inspect release arm slot for excessive wear which would allow the tow hook to engage beyond hook step. (See Figure 1, Item C.)	X	X	X
Dimensionally measure the slot in the release arm to insure that it is within tolerance as shown on Figure 3.			X
Visually check tow hook for damage, cracks, deformation, and freedom of movement on pivot bolt.	X	X	X
Visually check tow hook to insure that surface "x" and "y" of step shown in Figure 2 are flat, smooth, and properly engages release arm.	X	X	X
Dimensionally check tow hook to insure all dimensions are within tolerances in accordance with Figure 2 and for elongation of attach holes in accordance with Figure 4.			X
Inspect release damper for general condition and proper engagement of tow hook.	X	X	X
Perform operational check per Part III.	X	X	X
Perform a release check for proper release tension in accordance with Figure 4.			X
Lubricate attach hardware for tow hook and release arm.		X	X
Lubricate guide-tubes in release control with dry stick type lubricant.		X	X
Insure that tow hook moves freely on pivot bolt.	X	X	X

PART III – PREFLIGHT INSPECTION OF TOW RELEASE ASSEMBLY.

PROCEDURE

NOTE

- Figure 1 shows the proper attachment of the tow hook into the release arm. Note that the step of the tow hook should seat against the release arm. The tow hook step must fully engage the release arm to allow the release assembly to function properly. The tow hook must not be allowed to extend through the release arm beyond the step on the hook as shown in Figure 1, View C.
  - The tow rope must not be allowed to wrap around the release arm or any part of the sailplane. It must extend, unobstructed, directly forward from the sailplane to the tow vehicle.
- a. Attach tow line to tow hook and apply tension on line in direction of tow.
  - b. With tension on tow line, pull the release control on the instrument panel and check for proper release of tow line.
  - c. If tow line does not release properly, troubleshoot tow release assembly and perform necessary repairs.
  - d. Reattach tow lines to tow hook and check for retention of tow line as follows.
    - 1) Apply a moderate tug on the tow line in the direction of tow.
    - 2) Inspect the release assembly to ensure that it has remained completely closed.
    - 3) If the release assembly has opened, even partially, ground aircraft and troubleshoot release assembly. Repair or replace faulty component (s) as required.

BULLETIN NO. SA-001.6\*

DATE: Dec 29, 2009

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#### PART IV – 100 HOUR/ANNUAL INSPECTION OF TOW RELEASE ASSEMBLY

##### PROCEDURE

- a. Perform a thorough inspection of tow release assembly in accordance with 100 hour/annual inspection requirements listed in Table 2.

##### CAUTION

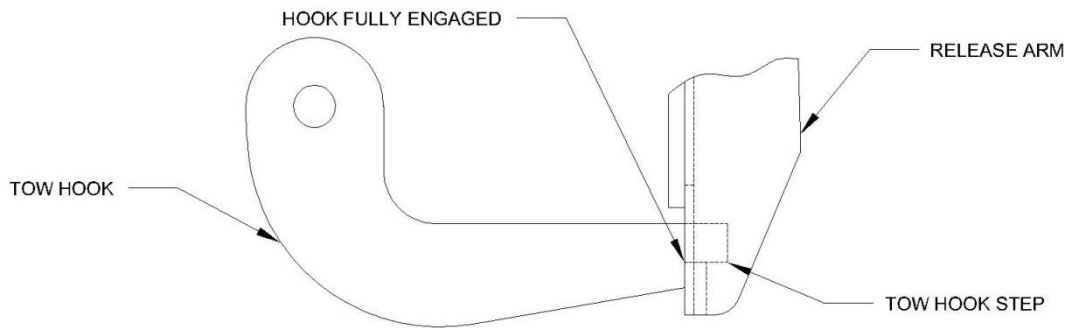
ALL AIRCRAFT REPAIRS MUST BE PERFORMED IN ACCORDANCE WITH AC43.13

- b. If defects are noted, repair or replace faulty component (s).
- c. Record compliance with Part IV of this Service Bulletin in Aircraft Log Book

##### WEIGHT & BALANCE DATA

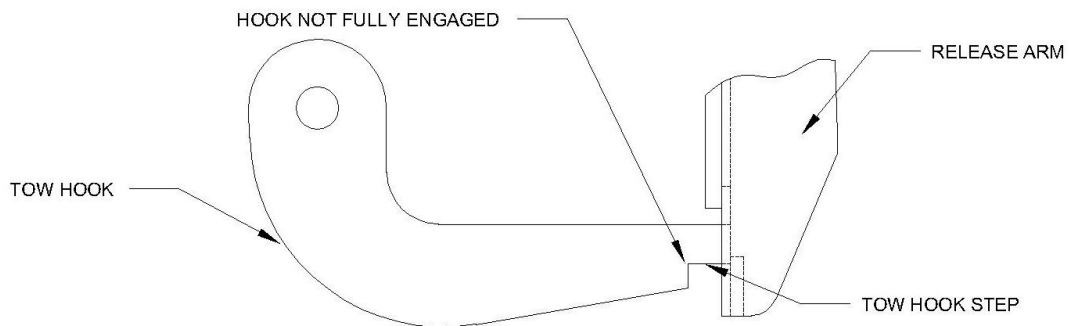
Weight & Balance not affected.





**VIEW A – PROPER ENGAGEMENT**

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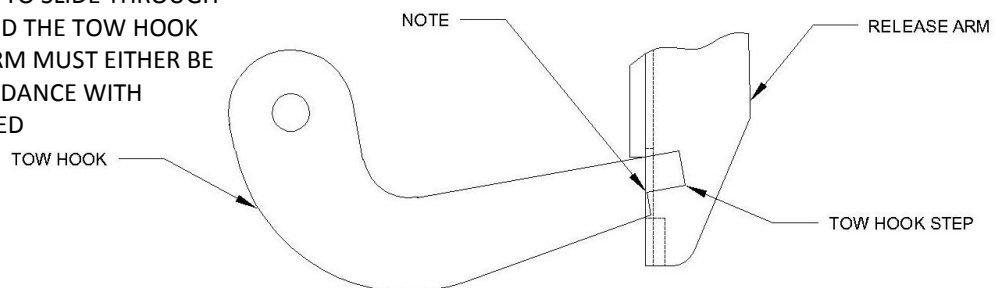


**VIEW B – IMPROPER ENGAGEMENT**

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**NOTE:**

IF TOW HOOK IS ABLE TO SLIDE THROUGH RELEASE ARM, BEYOND THE TOW HOOK STEP, THE RELEASE ARM MUST EITHER BE REWORKED IN ACCORDANCE WITH FIGURE 3, OR REPLACED



**VIEW C – IMPROPER ENGAGEMENT**

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**FIGURE 1 – ENGAGEMENT OF TOW HOOK INTO RELEASE ARM**

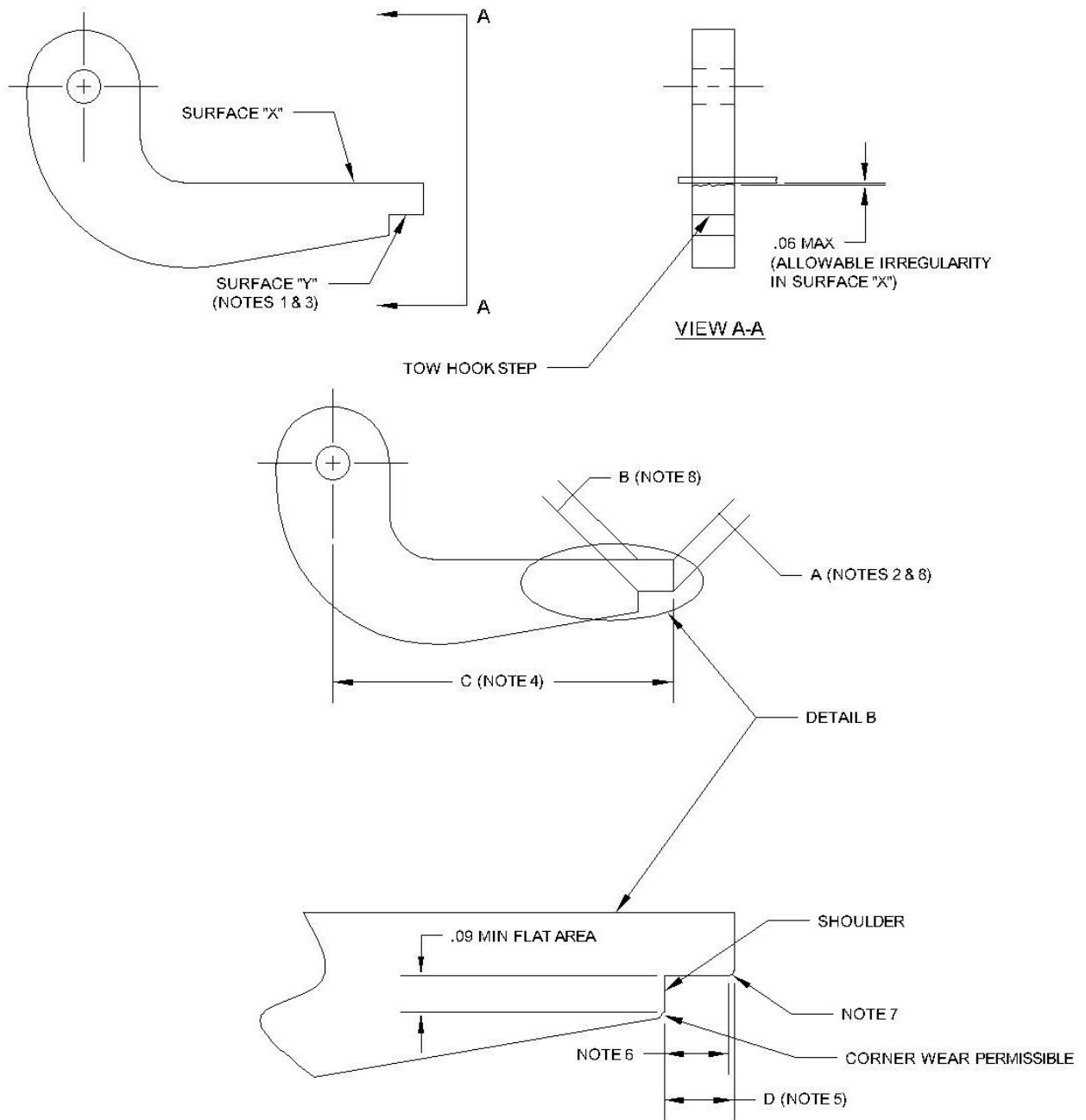


FIGURE 2 – TOW HOOK INSPECTION AND REWORK (SHEET 1 OF 2)

BULLETIN NO. SA-001.6\*

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NOTES:

1. IF WEAR OCCURS ON SURFACE "Y" IT MUST BE POLISHED FLAT WITHIN TOLERANCES PROVIDED IN FIGURE 2 (SHEET 1). IF THE HOOK CANNOT MEET THESE REQUIRED DIMENSIONS IT MUST BE REPLACED. UNDER NO CONDITIONS SHOULD SURFACE "X" BE POLISHED OR MACHINED TO CHANGE ITS ANGLE.
2. DIMENSION "A" ON STD 10232-001 HOOK SHALL BE .21 INCHES MIN. & .28 INCHES MAX. DIMENSION "A" ON STD 1A218-1A, STD 1B221-3, & R-200-9A HOOKS SHALL BE .25 INCHES MIN. & .31 INCHES MAX.
3. SURFACE "Y" MUST REMAIN FLAT, SMOOTH, AND WITHIN TOLERANCES SHOWN ON SHEET 1. (SEE ILLUSTRATION).
4. DIMENSION "C" ON STD 10232-001 HOOK SHALL BE  $2.06 \pm .03$  INCHES. DIMENSION "C" ON STD 1A218-1A, STD 1B221-3, & R-200-9A SHALL BE  $3.00 \pm .03$  INCHES.
5. DIMENSION "D" ON STD 10232-001 HOOK SHALL BE  $.25 \pm .03$  INCHES. DIMENSION "D" ON STD 1A218-1A, STD 1B221-3, & R-200-9A SHALL BE  $.31 \pm .03$  INCHES.
6. HOOK MUST REMAIN FLAT IN THIS AREA FOR A MIN. OF .21 INCHES FROM SHOULDER OF HOOK.
7. WEAR OUTSIDE OF THE .21 MIN. FLAT AREA IS PERMISSABLE.
8. DIMENSION "B" MUST BE EQUAL TO DIMENSION "A", OR LESS THAN DIMENSION "A" BY NO MORE THAN .015 INCHES AND CANNOT BE GREATER THAN DIMENSION "A".
9. ALL SURFACES EXCEPT SURFACE "X" MAY BE FILLED TO OBTAIN REQUIRED DIMENSIONS.

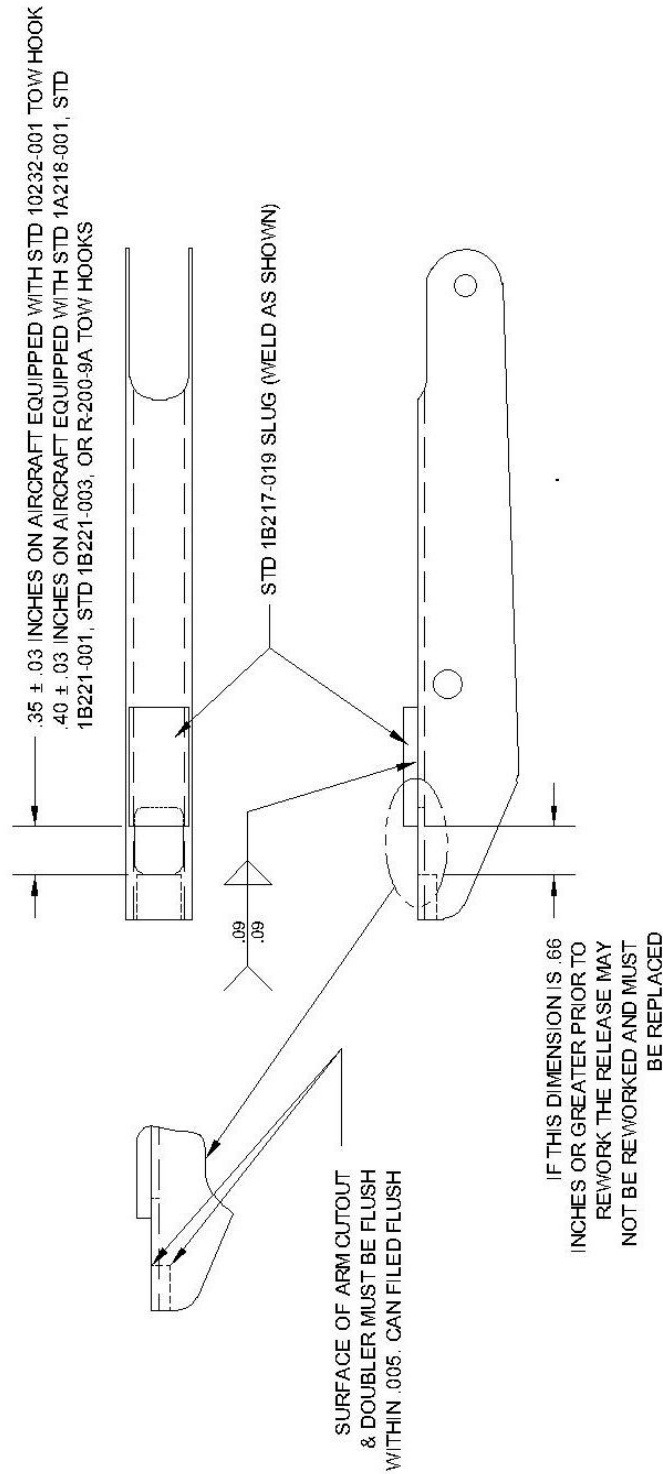
## FIGURE 2 – TOW HOOK INSPECTION AND REWORK (SHEET 2 OF 2)

BULLETIN NO. SA-001.6\*

DATE: Dec 29, 2009

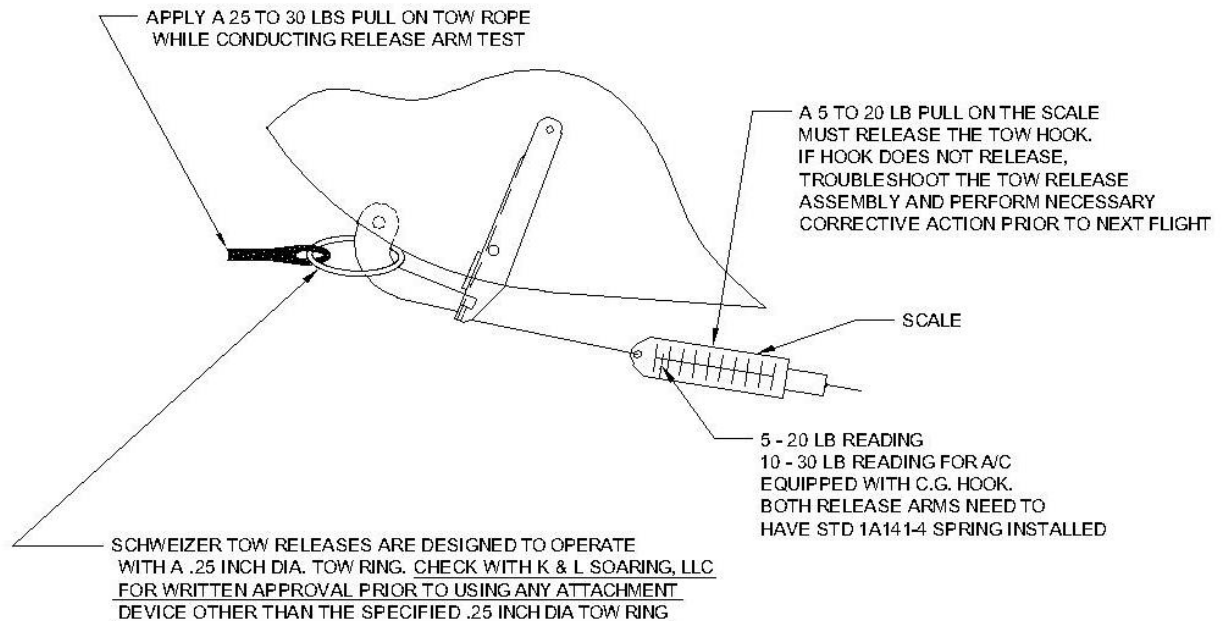
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NOTE: STD 1B217-019 SLUG IS AVAILABLE FROM K & L SOARING, LLC  
0.125 X 0.5 X 1.0 4130N STEEL



NOTE: ALL TOW RELEASE ARMS MUST BE REWORKED AS SHOWN ABOVE OR REPLACED WITH THE PROPER SUPERSEDING ARM AS SPECIFIED IN TABLE 1

FIGURE 3 - REWORK OF RELEASE ARM



NOTE: IF RELEASE LOADS ARE TOO HIGH WITH C.G. SYSTEM IT IS PERMISSIBLE TO ADD A LINK TO SHORTEN STD 1A141-2 SPRING. LINK SHOULD BE MADE AS SHOWN BELOW. IF REQUIRED THEY SHOULD BE ADDED TO BOTH RELEASE ARMS TO BALANCE BOTH RELEASE SPRINGS

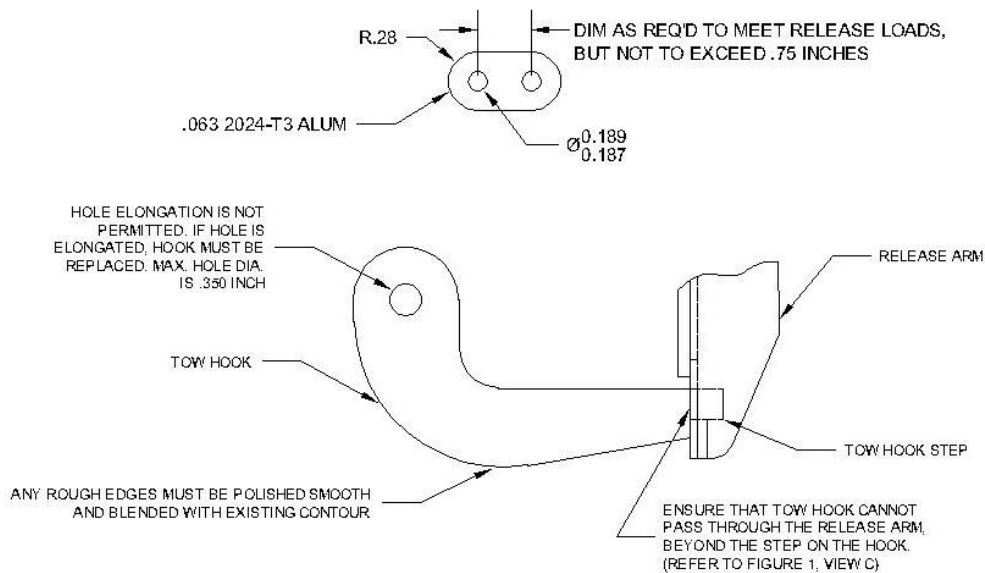


FIGURE 4 - PULL TEST OF TOW RELEASE ASSEMBLY

SERVICE BULLETIN SA-003

DATE: 25 March 1987

PAGE 1 of 2

SUBJECT: AEROBATICS IN SCHWEIZER SAILPLANE MODELS LISTED BELOW.

MODELS AFFECTED: SGU 1-7  
SGS 2-8 (TG2)  
SGS 2-12 (TG3)  
SGU 1-19  
SGU 1-20  
SGU 1-21  
SGU 2-22, 2-22A, 2-22C, 2-22CK, 2-22E, 2-22EK  
SGS 1-23, 1-23B, 1-23C, 1-23D, 1-23E, 1-23F, 1-23G, 1-23H,  
1-23H15  
SGS 1-24  
SGS 1-26, 1-26A, 1-26B, 1-26C, 1-26D, 1-26E  
SGS 2-32  
SGS 2-33, 2-33A, 2-33AK  
SGS 1-34, 1-34R  
SGS 1-35, 1-35A, 1-35C  
SGS 1-36 (Sprite)

#### NOTE

In the text of this writing, the terms "GLIDER"  
and "SAILPLANE" are to be considered synonymous.

REFERENCE: 2-32 Flight-Erection-Maintenance Manual ..... Page 1-10  
2-22 Flight-Erection-Maintenance Manual ..... Page 5  
2-33 Flight-Erection-Maintenance Manual ..... Pages 1-5  
1-26 Flight-Erection-Maintenance Manual ..... Page 5  
1-34 Flight-Erection-Maintenance Manual ..... Pages 1-7  
1-36 "Sprite" Pilot's Operating Manual ..... Page 23

DATE: 25 March 1987

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NOTE

For the purposes of this Service Bulletin, aerobatic flight means an intentional maneuver involving an abrupt change in an aircraft's attitude, an abnormal attitude, or abnormal acceleration, not necessary for normal flight. (Refer to FAR 91.71 for further information.)

PREFACE: Schweizer Aircraft Corporation DOES NOT APPROVE OR RECOMMEND that aerobatics of any kind be performed in any of the Schweizer sailplane models affected by this Service Bulletin, despite any language to the contrary in any of the Flight-Erection and Maintenance Manuals or Pilot's Operating Manual referenced herein.

Although there is language in the referenced publications that various levels of aerobatics are permitted, Schweizer Aircraft Corporation RECOMMENDS that NO TYPE of aerobatics be performed in these model sailplanes since in doing so, the structural design levels of the sailplane could be exceeded, which may result in serious personal injury to the occupants of the aircraft.

The only exception to this recommendation is spins when performed within the guidelines of, and as approved in, the Flight Manual or Pilot's Operating Handbook for the aircraft being operated. However, before performing spins in the aircraft, each pilot must receive complete instructions and training as to the proper execution of this maneuver, as well as the characteristics of the aircraft during the spin and recovery therefrom.

Schweizer Aircraft Corp.  
Post Office Box 147  
Elmira, New York 14902

# SERVICE

# BULLETIN

SERVICE BULLETIN SA-005.1\*

DATE: 31 January 1988

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\* Superseded Service Bulletin  
NO. SA-005, Dated 1 June 1987

SUBJECT: IDENTIFICATION AND POSSIBLE REPLACEMENT OF TOW RELEASE ARM.

MODELS AFFECTED: • All the following Schweizer manufactured and kit built  
Schweizer gliders and sailplane models.

SGU 1-7

SGS 2-8 (TG-2)

SGS 2-12 (TG-3)

SGU 1-19

SGU 1-20

SGU 1-21

SGU 2-22, 2-22A, 2-22C, 2-22CK, 2-22E, 2-22EK

SGS 1-23, 1-23B, 1-23C, 1-23D, 1-23E, 1-23F, 1-23G,  
1-23H, 1-23H15

SGS 1-24

SGS 1-26, 1-26A, 1-26B, 1-26C, 1-26D, 1-26E

SGS 2-32

SGS 2-33

SGS 2-33, 2-33A, 2-33AK

SGS 1-34, 1-34R

SGS 1-35C

SGS 1-36 (Sprite)

- All Schweizer Sailplanes field retrofitted to incorporate  
a tow hook installation

TIME OF COMPLIANCE: Shall be accomplished on affected aircraft prior to next  
auto or winch tow, or within 60 days of issue date of  
this bulletin, whichever occurs first.

PREFACE: Reports indicate that part number 1D217-13, 1D222-15, 1D222-17, and  
34017D-15 tow release arms may fail to properly disengage the tow  
hook from the sailplane during tow operations. The possibility of  
this incident occurring greatly increases during auto and winch tow  
operations or during an overrun of the tow line. This Service  
Bulletin requires the replacement of the above mentioned release  
arms with new or serviceable, used release arms (part numbers  
specified within procedure).



DATE: 31 January 1988

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#### PROCEDURE

- a. Visually check release arms on the affected aircraft for the presence of a lug welded to the front of the arm, below tow hook slot. (Refer to Figure 1.)

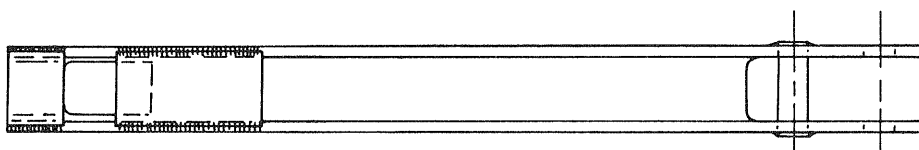
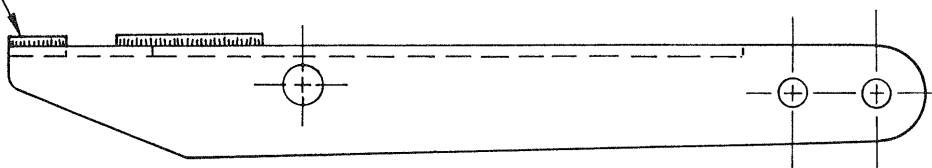
#### NOTE

- The suspect release arms (PN's 1D217-13, 1D222-15, 1D222-17, and 34017-15) may be identified by the presence of a lug welded on the front of the arm, below the tow hook slot. (Refer to Figure 1.)
  - Replace suspect release arms as follows:
    - (1) Replace 1D217-13 arm with 1D217-9 arm,
    - (2) Replace 1D222-15 arm with 1D222-11 arm,
    - (3) Replace 1D222-17 arm with 1D222-13 arm,
    - (4) Replace 34017D-15 arm with 34017D-11 arm.
- b. Remove and replace all suspect release arms (arms which incorporate lug welded to front, below tow hook slot) with acceptable replacement arm as specified in preceding NOTE.
  - c. Return suspect release arms to Schweizer Aircraft Corp. within 90 days of issue date of this bulletin for free warranty replacement. Contact Sailplane Product Support Department for exchange information.
  - d. Upon replacement of release arm, perform an operations check and maintain periodic and preflight inspections in accordance with the procedures outlined in Schweizer Bulletin SA-006.
  - e. Record Compliance with this Service Bulletin in aircraft log book.

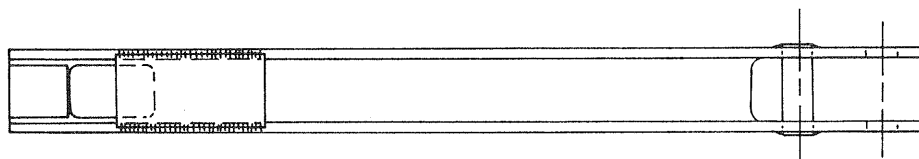
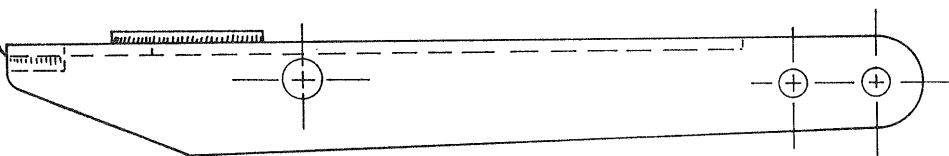
DATE: 31 January 1988

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**ANY RELEASE ARM WITH THIS LUG WELDED ON FRONT SURFACE AS SHOWN MUST BE REPLACED.**



**RELEASE ARMS WITH THIS LUG WELDED ON THE INSIDE AS SHOWN ARE NOT AFFECTED BY THIS BULLETIN.**



**FIGURE 1. RELEASE ARM**

Schweizer Aircraft Corporation  
P. O. Box 147  
Elmira, New York 14902

Service Letter No. SL-102-7  
May 24, 1971

SERVICE LETTER TO 1-23 OWNERS  
Models and Ser. No.'s Affected: All

There have been two reported occurrences of vertical surface flutter in the 1-23H Sailplane. There have been no occurrences in any of the other versions of the 1-23 series to our knowledge.

In one occurrence there appeared to be a torsional flutter condition near the red line speed, but at considerable altitude. It was reported that the pilot was flying with feet off the pedals when it occurred and it stopped when the pilot got on the rudders and slowed up.

In the other case the altitude was low and the speeds in 110 mph range according to the pilot.

In both cases the pilots were able to land with no difficulty, but significant structural damage occurred on the fuselages of both aircraft.

The 1-23 series sailplanes have had a reputation for being rugged and capable of operation at high speeds. A lot of pilots, to our knowledge, have taken liberties and operated at speeds well over the red line which we do not recommend. If a flutter should occur at the speeds over the red line, it is much more likely to be catastrophic.

None of the vertical tail surfaces or horizontal tail surfaces of the 1-23 series are balanced, but they were flutter tested to ample margins over the red line. Deterioration of the condition of the aircraft can change this. Some of these aircraft are now 23 years old.

We suggest to all owners that they check the following items:

1. Check rudder hinges for excessive play. It is better to be on the tight side as long as it does not cause too much friction in operation.
2. Also check for accumulation of dust or other material in the rudder, water or ice could also be a problem. Since this mass is at the trailing edge, it changes the balance and could cause problems.

Inspections 1. and 2. should also be carried out on the elevators.

3. It is recommended that the rear wing carry-thru fittings and bolts be checked for excessive play and corrective action taken if this is present. This situation could contribute to a flutter condition.
4. It is advisable in all cases to reduce your red line at higher altitudes. The true speed, not the indicated speed, is the critical flutter speed. There is sufficient margin in most aircraft to cover reasonable altitudes. In view the higher altitudes involved in some operations, particularly wave flying, it is advisable to avoid speeds any higher than necessary at extreme altitudes.
5. While on the subject of water and debris accumulation in aircraft, it is a good policy to check the fuselage for drainage and/or accumulation of dirt. This could cause an unexpected tail-heavy condition if not detected, or could cause a jamming condition.

# SERVICE

Schweizer Aircraft Corp.  
Post Office Box 147  
Elmira, New York 14902

SERVICE LETTER SL-001

DATE: 1 June 1987

PAGE 1 OF 1

TO: All owners and operators of Schweizer Sailplanes.

SUBJECT: ANNUAL DISASSEMBLY OF AIRCRAFT.

MODELS AFFECTED: All Model SGS 1-23, SGS 1-26, SGS 2-32, and SGS 1-34  
Schweizer Sailplanes.

Reports indicate that failure to disassemble the subject sailplanes periodically (removal of wings and stab) could result in corrosion buildup on the attach fittings and hardware, making disassembly difficult or even impossible without damage to the aircraft. For this reason, Schweizer Aircraft Corp. suggests that the affected sailplanes be disassembled at each 12-month calendar interval. After disassembly, inspect the wing and stab attachment fittings and trunnions for corrosion. Cleanup light corrosion with abrasive paper and wipe surfaces with a clean, soft, lint-free cloth. Apply light grease to all attaching fittings and parts. Ensure that all attaching parts are free of dirt, grit, and contamination, prior to reassembly. Failure to comply with this Service Letter could lead to a difficult-to-disassemble condition.

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