

**Service Letter #:** SL03-35-32015

**Date:** 01/07/11

**Part/Assembly #:** 35-32015 or 35-32010      Spreader Bar    [Replacement of]

**Float Model Affected:** Model 3500 (All) Model 3500L (All), Model 3400 (All)

**Symptom:** Damaged spreader(s) due to collision or accident – replacement procedures are the same for corrosion damage.

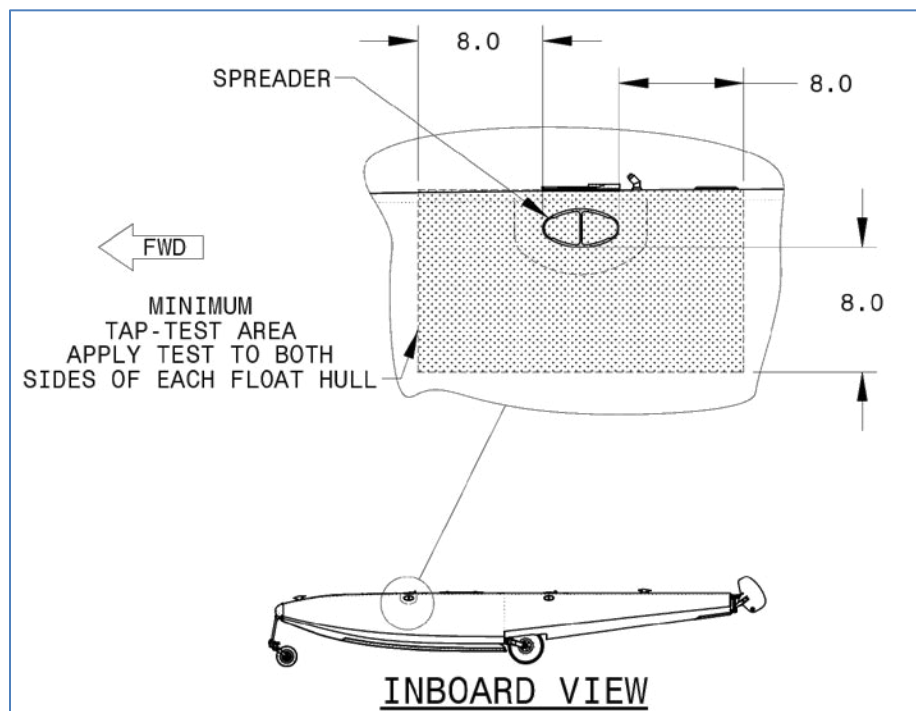
**Approval:** This is a replacement instruction set, not a design change.

**Corrective Action:** (Not disregarding all other necessary inspections following an impact, refer to Aircraft Maintenance Manual and Float Maintenance Manual for required inspections.)

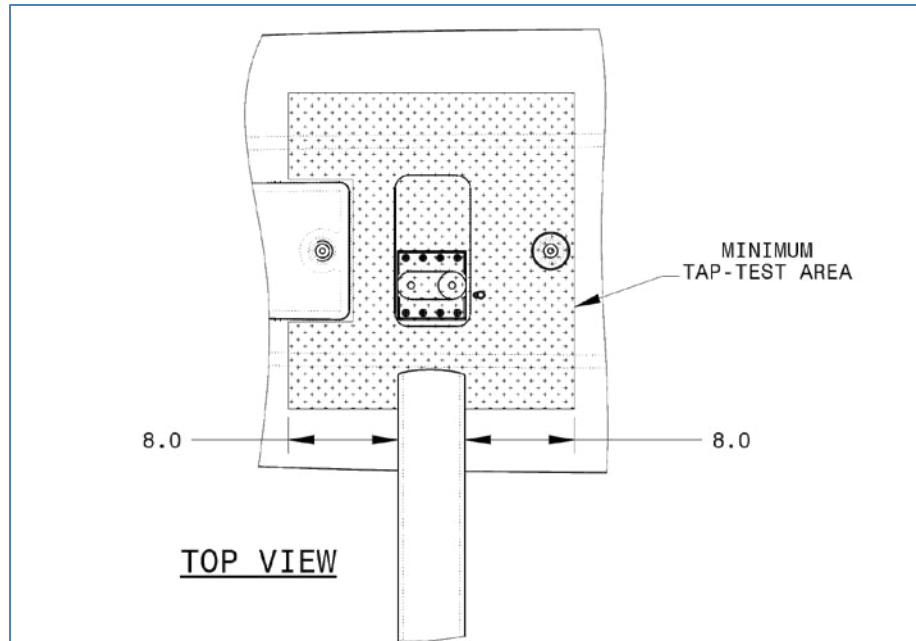
On the float hulls, carefully inspect the area surrounding the spreader sockets (A.K.A. slip tubes), for evidence of any laminate separation (de-lamination), or cracking both internally and externally. Augment visual inspection with 5X magnification and bright illumination from a flashlight or work light.

Tap-Testing of the gelcoat with a quarter or similar coin in a ½" maximum grid will help reveal any voids hidden under the gelcoat. Use this method to locate possible hidden separations by carefully comparing the audible tones while tapping across in a grid pattern until you have thoroughly tested no less than 8" surrounding the spreader socket.

The tap should be a clear tone, similar as might be expected on a countertop or a table top. A dull or non-ringing tone indicates a likely laminate separation. Trace the suspect area with a suitable marker or pencil and consult with Aerocet. To gain additional visual inspection, remove the gelcoat, documenting the extent of the damage and reporting your findings to Aerocet with attached form, descriptions and photos as necessary.

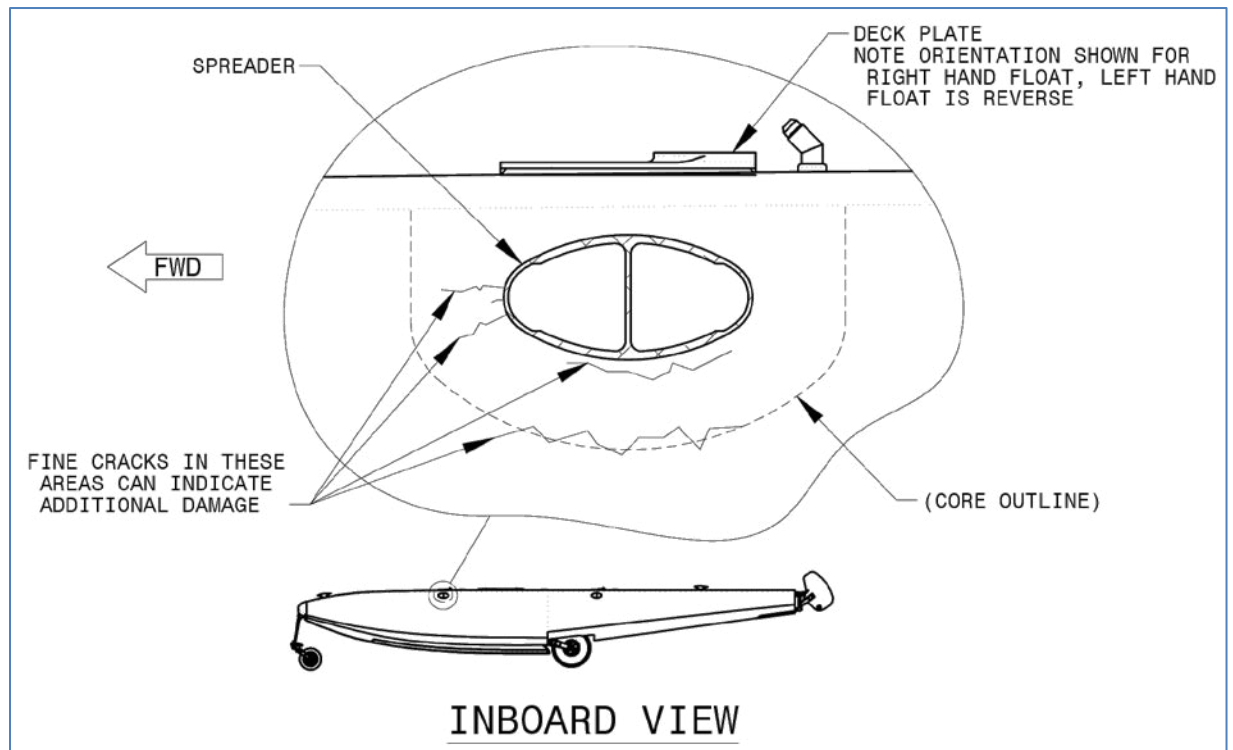


**Figure 1 – Showing inspection Side view. (See Figure 2 for Top)**



**Figure 2 – Showing minimum tap-testing area from Top view.**

Additionally, cracking in the gelcoat as illustrated in Figure 3 constitutes reason to remove the gelcoat for further inspection of the laminate.



**Figure 3 – Showing Illustrated External Damage and Deck Plate Orientation**

Using a flashlight, magnifier and/or a mirror, visually inspect the spreader socket inside and out, all reinforcements inboard and outboard, and the deck attachment area both above and below the deck of the floats.

If damage to the laminates is observed, then consult Aerocet for repair or replacement procedures for the float hull(s), and submit attached reporting form along with photos and description of damage.

Damage to the spreader, such as dents, tears or breaks constitutes reason for replacement, particularly when discovered after an impact.

Because of the fitting of individual pairs of spreaders to individual sets of floats, it is necessary to re-fit a new, un-drilled spreader for replacement rather than use a pre-drilled spreader as was originally supplied with the floats.

### Tools Needed:

1. Standard assortment of hand tools such as sockets and end wrenches.
2. Work light or flashlight.
3. Inspection mirror.
4. Magnifying glass for visual inspections.
5. Calibrated Torque wrench capable of not less than 25 ft-lbs.
6. Two straps for cinching the floats together.
7. Large, plastic or rubber "dead-blow" mallet.
8. Metal stamps, .25" letters B, F and V and a suitable hammer.
9. Power Drill capable of at least 1/2" drill operations.
10. Aerocet Drill Guide, 3/8" and 31/64" Drill Bits (Aerocet recommends a "split point" and/or carbide style to help maintain hole straightness), and 1/2" Ream.

### Materials Needed:

1. White lithium grease.
2. One-part Urethane sealant such as Sika-Flex 292 or 3M 5200.
3. Primer: BMS10-79K, Type II, Class B, Grade A.
4. Top Coat: PPG DUHS 90123, Juneau White, High Solids Urethane; or Northstar 928-7848, Juneau White, High Solids Urethane.

#### **WARNING**

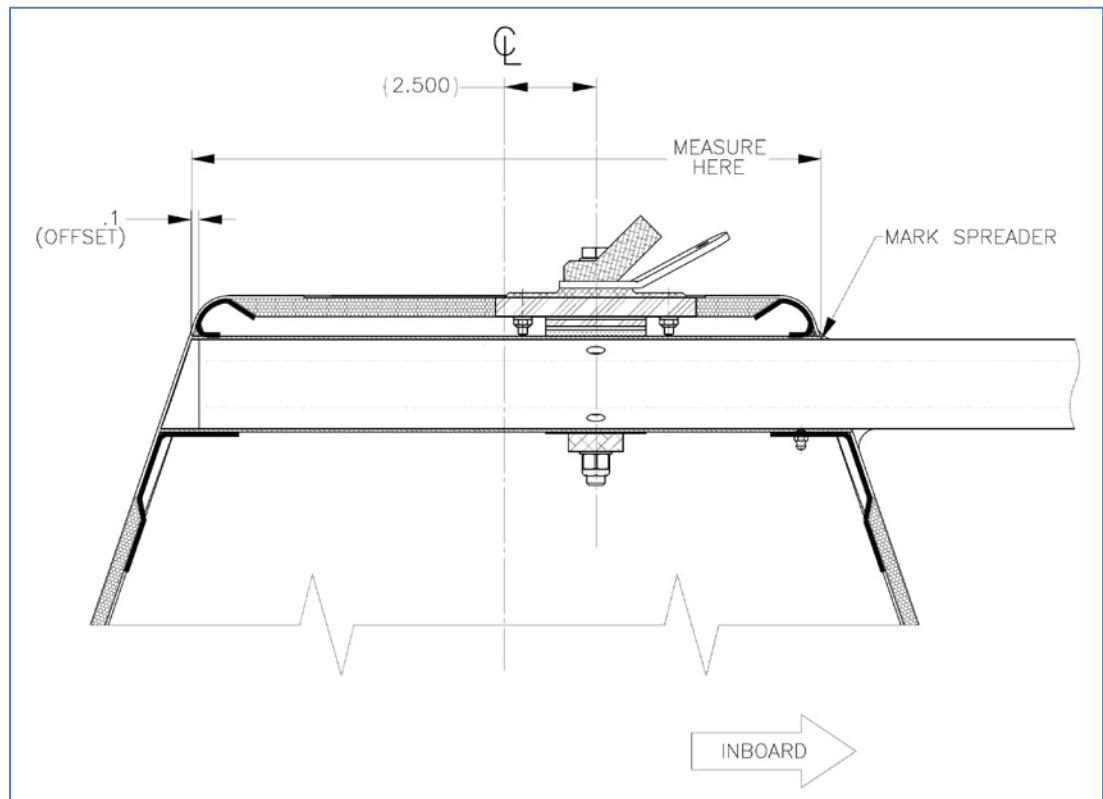
Observe all warnings and instructions provided by the manufacturer(s).

**Replacement** (*New, undrilled spreaders only – see Installation Drawings for original installation instructions for pre-fitted spreaders.*)

1. Remove the aircraft from the floats. Remove both fore and aft spreaders from the float sockets. (This will require usually no fewer than four people.)
2. Remove the Deck Plates from the floats, marking them for original position and orientation.
3. Carefully inspect float hulls for any damage (see above).
4. Remove any debris, burrs from the slip tubes, and position the floats.

5. Measure the depth of the spreader socket(s) [slip tube(s)] depth nearest the upper side center. Mark this depth, less .1" from the end of the spreader bar. This will help you avoid over-insertion, which can damage the outer skin of the floats. (Refer to Figure 4)

**WARNING:**  
DO NOT INSERT THE SPREADERS TOO DEEPLY INTO THE SOCKETS OR YOU MAY DAMAGE THE OUTER SKINS OF THE FLOATS. (See Figure 2)

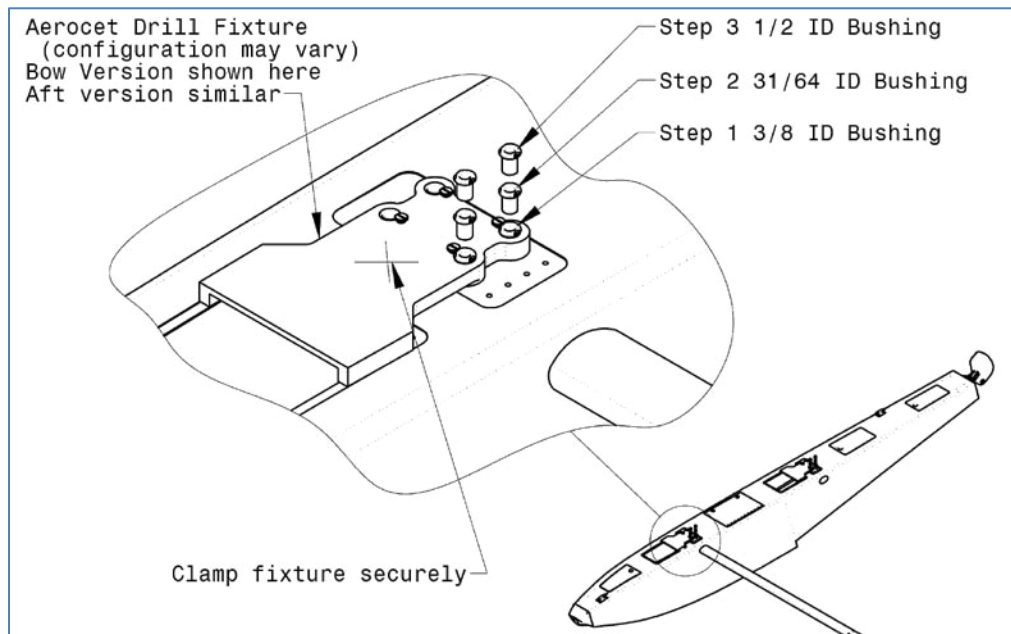


**Figure 4 – Note the .1" gap required from the top of the spreader to the outside laminates.**

6. Apply a thin coat of white lithium grease to the ends of the spreader(s) that will be inserted. (Take care to leave your measured mark visible.)
7. Insert the first end into one float, up to the measured mark made earlier. Repeat with the remaining spreader on the same float, or match to existing holes if using the original spreader. (Do not over-insert.)

8. With the first end of the spreader inserted into the first float, secure the the Aerocet Drill Fixtures with clamps, positioned on the float deck to avoid "egging-out" the existing holes:
  - i. Drill through the spreader using the smallest bushings to 3/8".
  - ii. Drill through the spreader using the next larger bushings to 31/64".
  - iii. Replace the first bushing set with the largest bushings and ream to 1/2".

**Hint:** Ensure fixture alignment to existing holes by installing the 1/2" ID bushing and a 1/2" pin or bolt while working on the other hole.



**Figure 5 – Illustrating use of the Aerocet Drill Fixtures**

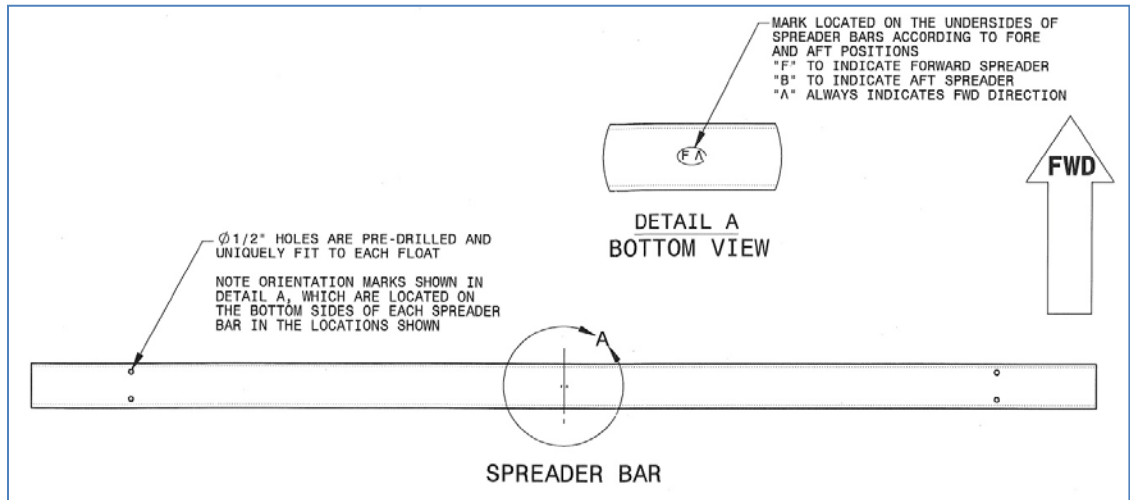
9. Install 1/2" bolts or pins through the spreader on both spreaders. This will hold the spreaders in place while the remaining float is next added.
10. With the aid of help (usually no fewer than 4 people), align the opposite float to the spreaders that have been temporarily installed in the first float.

**NOTE**

Centerline measurement between the floats shall not exceed 100 in. +/- .2in. both bow and stern. Aerocet holds +0.00"/- .125" Toe-In on the bow at the AEROCET logo.

11. Once float alignment and position is confirmed, proceed to drill the remaining holes in the same manner as with the first set.
12. If spreader is unpainted, then trace the outline of the float skin to the spreader(s) using a pencil, later applying a suitable masking tape to avoid overly thick paint application to the ends.

13. Remove the spreaders from the floats, individually marking them by position and orientation on the bottom side of the spreader(s). Aerocet uses metal stamps to accomplish this. Letter "B" indicates the Back or Aft spreader, while the letter "F" indicates the forward spreader bar. Upside-down "V" is used as an arrow to indicate forward orientation. (See Figure 6)



**Figure 6 – Showing position and orientation marking**

14. Remove all burrs and sharp edges – particularly around newly drilled holes. Clean all debris and grease from spreaders and prepare to prime and top-coat.
15. Apply primer to exterior portions. (Aerocet supplies spreaders with interior portions primed.)
16. Apply top coat to exterior portions inside the masked portions – not to the ends, unless applied thinly.
17. Reinstall the Deck Plates, ensuring proper position and orientation. Larger, thicker portion is oriented forward on the left hand float and aft on the right hand float. (Refer to Figure 1.)
18. Reinstall the spreader(s) using the original methods in the installation drawings. (Torque the ½" nuts to 25 ft-lbs.)
19. Aircraft and floats to be reinstalled per the Installation Drawings, noting that all parts and fasteners that penetrate the float hulls should be sealed with a one-part urethane sealant. (Aerocet Drawings 35-10000-3 for 3500/3500L on Cessna 180/185; 35-10050-5 for 3500/3500L for Cessna 206; 82-10000, Sheet 5 for 3500L/3400 on Cessna 182; 35A-59300 for 3400 on Cessna 180/185; or 36-15011 for 3400 for Cessna 206.)
20. Slowly introduce grease through the float grease fittings until grease appears around the spreader socket edge. Note its travel inside using a flashlight and a mirror.

**WARNING**

Introduce the grease very slowly. Grease pressure can be very high and can cause structural damage when applied carelessly.

21. A ½" radius fillet of sealant is applied at the intersection of the floats with the spreaders and after curing, apply a pin hole for a pressure relief.

**CAUTION**

Do not use silicone sealants which can cause corrosion of the aluminum spreader bars.

