



Eli Bridge Company

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Release Date: May 1, 2019

Effective Date: Before the 2020 season starts

Supercedes: Information in Manuals

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SAFETY ALERT

Ride Manufacturer: Eli Bridge Company **Affected Production Dates:** All Scrambler® Seats 35 years and older
Ride Names: Seats for Scrambler®, TMS® (Trailer Mounted Scrambler®) and 28' RS® Trailer Mounted Scrambler

Abstract of Issue: The Seats on a BIG ELI SCRAMBLER®, TMS®, or RS® are an aircraft design, built with aircraft aluminum and aircraft aluminum rivets. They were built for strength and to be as lightweight as possible. They have proven to be an excellent design. However, one of the characteristics of aluminum is that it has a finite fatigue life. Older Scrambler® Seats are in the fatigue phase of their useful life. No two seats have had exactly the same experience factor to predict the point of failure so Eli Bridge Company is mandating visual inspection on the inside of the seats and measurement of the skin thickness if corrosion is found.

Reason For Release: (1) We have had a number of seats in our shop in the past 10 years which showed minimal damage on the outside, but had critical damage (brittleness, corrosion, numerous extra drilled holes, etc.) on the inside. We sent out a bulletin in 2006 which outlined different types of damage which could be seen from the outside and what should be done. With the aging population of Scrambler® Seats (the Scrambler® celebrated its 65th birthday last year) we are requiring a visual inspection of the inside of the seat and measurement of the skin thickness.
(2) Scrambler® seats over 35 years old and older must be inspected internally.

Actions to be taken:

For the most minimally invasive inspection for every component of the inside of the seat, (Option 1) an ASNT (or equivalent) Level II VT/OT (Visual Testing/Optical Testing) inspector using an articulated borescope with a light and clear picture taking capabilities may be used, OR (Option 2) the outside seat skin needs to be removed, which involves more labor. Holes for the borescope will need to be drilled in the top "trays" centered between the front and middle rib & sides and then again between the middle and back rib & sides so the complete inside of the seat can be photographed. The holes should be no larger than necessary, max of 1/2", to accommodate the borescope. Plug the holes and seal with silicone sealant when finished. If irregularities, damage or corrosion are found, the outside skin of the seat needs to have the rivets drilled out with a #20 drill bit and the skin removed. This will allow you to look at the internal sides of the skins, the ribs, flanges, and other internal parts of the seat. If any of the components are damaged from **a)** additional holes having been drilled in the flange, **b)** corrosion or breakage of the flange, corrosion damage to the skin or other internal components, **c)** corrosion damage to any rivets or bolts or **d)** any cracking, embrittlement, thinning, stretching or elongation of the skin or holes, then that component must be replaced.

To check corrosion for embrittlement, pitting, thinning and/or delaminating, use a straight edged tool, such as a putty scraper or similar tool or steel wool, and scrape off the corrosion back to good metal, if possible. If there is pitting, flaking or delaminating, it must be replaced. If the putty scraper can push through the skin with just a bit of pressure, then it is too brittle. If the skin otherwise appears good, thickness must be measured and if the metal is less than .038" thick, then it must be replaced. If a rib or its flange is less than .060" then it must be replaced.

Special notice must be taken of the flanges because in many cases, the skins may have been replaced during the life of the seat but not the flanges. Therefore, the flanges may be very brittle, pitted or stretched, even if the skins appear to be good. Often, there is white corrosion along the bend of the flange or stretching, weakening it and bringing it much closer to failure. If this is the case, the ribs must be removed and replaced.

As a general rule, if two skins & a rib or two ribs & a skin (or more) need to be replaced, then it is more cost effective to purchase a new seat shell or seat because of the labor it takes to drill out all the necessary rivets. Please see the pictures and explanations on pages 2 and 3 for further clarification.



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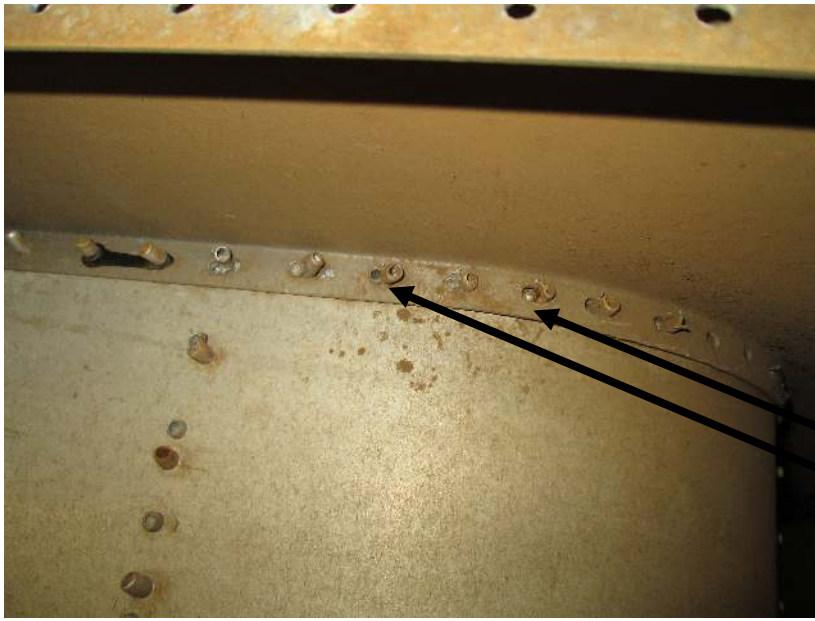
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Action to be taken: (cont.)

The borescope procedure, Option 1, does not need to be done if you prefer to go straight to Option 2, the procedure for removing the rivets and outside skin.

The above procedure must be repeated every five (5) years.



#1 It is obvious in the photo that new holes were drilled in the rib instead of properly aligning the holes in the skin with the holes in the rib. This causes the two holes to become a slot. New holes should NOT be drilled when replacing the skin. Call the factory if you have difficulties with this. The skin has misaligned holes as well from side to side. Both the skin and the flange must be replaced.

The misaligned holes caused slots to form which do not keep the rivets tight and take too much Material out of the flange.



#2 shows advanced corrosion on both the skin and the fasteners causing cracking around the fasteners. Notice too, the delaminating just to the right and below the fasteners on the right. This seat must be replaced.



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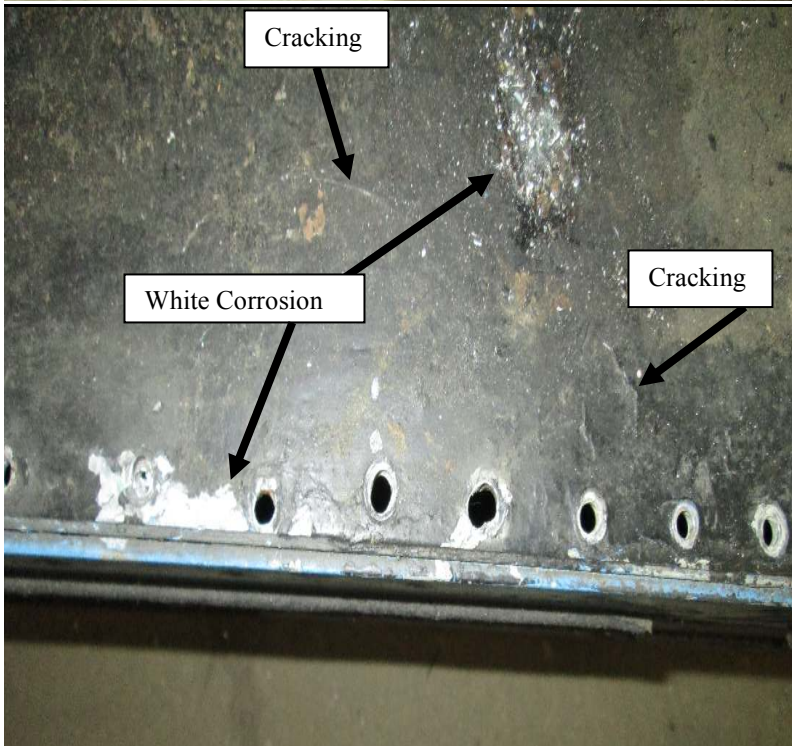
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Action to be taken: (cont.)



#3) shows multiple problems with corrosion and misaligned rivets. There should only be one line of rivets on the left side attached to the above skin. There should be no rivets on the side of the rib as are shown in this picture. There is also significant corrosion on the bottom of the skin. This seat must be replaced.



#4) shows several areas of white corrosion and misaligned holes such that some have become slots, which are unacceptable. The arrows show cracking on the skin, most likely from embrittlement. This seat skin must be removed and replaced. When the skin is removed, if the rib to which it was attached has holes like the ones shown and or corrosion, it must also be removed and replaced.