

Engineering change:
 Addition of 1/16" weep hole in scroll plug.

Rationale for change:
 • Weep hole allows excess glue to escape from scroll plug cavity.

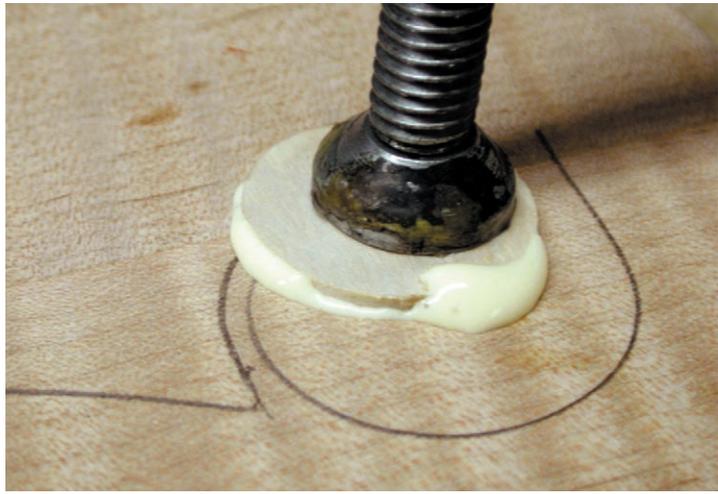
Manufacturing/product change:
 A 1/16" hole is drilled at a 45° angle through the plug. The hole is located at the extreme end-grain position to force the hole to be in the scroll region and to help orient the plug during assembly.

Technology change:
 In the absence of a weep hole, a tightly-fitted scroll plug can trap glue between the plug and the bottom of the cavity. The best physical connection is where the glue is bonding the wood together rather than becoming a hardened mass of dried glue that acts as a spacer between the wood parts. A weep hole allows excess glue to escape and ensures that the bottom of the plug fits flush to the bottom of the scroll strengthener cavity.

Background:
 From close inspection of various F2 and F4 scrolls we have repaired, it appears that excess glue under some early scroll strengtheners may have been the cause of weakened strengthener plugs. Further, cross sectional evaluations of test plugs reveal that even with substantial clamping pressure not all of the glue is allowed to escape from beneath the plug.

We make our scroll plugs .005" oversize of their 1" diameter to ensure a tight interference fit into the plug's cavity. In the absence of a weep hole, the interference fit inhibits excess glue from escaping from the cavity.

To provide for a better adhesion between the glued surfaces, we recommend the addition of a weep hole to ensure that the wood-to-wood bond is maximized.



As the clamp forces the strengthener plug in place, the weep hole allows excess glue to escape from the cavity below the plug. Excess glue is left to be sanded away when dry.

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Engineering Change Notice Title: Weep Hole, scroll plug ECN#:38 View: top Scale: 1:1 Units: inches	Date: 12/6/04 Ref: A By: Roger Siminoff Notes:
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