



SESAC RIVET REMOVAL PROCEDURE

The removal of structural rivets In the event that a situation occurs where structural rivets are to be removed for bolt installation the following guidelines are to be followed.

Description: This work shall consist of the safe removal of rivets in a manner that does not damage surrounding material and replaced with high strength bolts or as directed by the engineer.

Method:

Mechanical Method - Non-Flame Cutting

Step 1: Remove the head of the rivet using a pneumatic hammer with a chisel tip (also called a "hell dog".)

Step 2: Once the head is removed, replace the chisel with a punch and push the rivet out of the hole.

Note a: Employees shall utilize a net system to catch the removed heads and shanks as they fall during removal. Under no circumstances shall any employee attempt to remove rivets without a proper net system in place to protect property and people below.

Note b: In the event that the rivet cannot be punched out of the hole, the method to be used for removal is to drill the rivet out using proper drills and bits and all PPE required during drilling. Flame cutting shall be avoided and used only as a last resort.

Step 3: Proceed with the reworking of the bolt hole and connection by following ***SESAC Bolt Installation Procedure*** as required.

Flame Cutting Method

It is SESAC's policy that in the event rivet removal is required, all mechanical removal methods are to be attempted before any flame cutting methods are utilized. Flame cutting is only to be used as a last resort method of rivet removal. A qualified employee, trained in torch cutting must perform the work as indicated. In the event that flame cutting is required the following guidelines are to be used.

Step 1: Carefully wash one head off of the rivet with an acetylene torch.

Step 2: Burn a hole along the rivets longitudinal axis.

Step 3: While the rivet is still hot, use a pin punch and a 2-4lb hammer to drive out the pin. If performed correctly, this method will leave the hole in original condition.

Step 4: Proceed with the reworking of the bolt hole and connection by following **SESAC's Bolt Installation Procedure** as required.

General Notes on Rivet Removal:

Superintendent of SESAC shall submit to the engineer for approval the proposed method for rivet removal. Rivet removal will not be permitted until the removal method has been approved and demonstrated successfully in the judgment of the engineer. In the event that the engineer determines that rivet removal work is resulting in damage to the existing steel, SESAC employees shall cease rivet removal operations until a new proposed method has been demonstrated and approved by the engineer.

Unless otherwise noted, all bolts shall be the same diameter as the rivets being replaced. All high strength bolts that replace rivets shall have a washer under the head and nut. Rivets shall be replaced one at a time. If the bolts will not fit the existing rivet holes, the holes may be carefully reamed to accommodate the bolts. For field drilling and reaming of the existing holes, no flame drilling will be permitted.

Rivets on intermediate diaphragms and cross frames that connect girders or stringers under different construction stage slab pours shall have the rivets removed and replaced with high strength bolts installed snug tight and in accordance with bolt installation procedure. The high strength bolts shall be tightened after both adjacent slab pours have been completed.