



"All PSI products and components are proudly designed and manufactured in the USA."

SOP: Honing and Cleaning Procedure for Bolt and Housing on Continuous Screen Changers

*NOTE – Generally the continuous bolt type screen changers seize due to inadequate cleaning and lubrication of the machine. Refer to page 34, section 7.3 of the manual for proper cleaning and page 32, section 7.2 for lubrication procedures.

1. This procedure is typically preceded by ENG-0212-003 Cleaning Procedure for Seized Bolt on Continuous Screen Changers. Once the cross bolt is free from the housing if there is any galling evident on the surfaces of the cross bolt and inside the housing some minor repair may be required as described in this procedure.
2. Once the cross bolt is completely free from the housing turn off all energy sources to the machine, specifically any that bring heat to the housing.
3. Locate Rockwell C scale hardness files (Rc 55, Rc 60, and Rc 65) and be sure to never let the surface drop below Rc 55 on any areas that are cleaned with abrasive methods. Note: Rockwell surface testers that put an indentation on the surface will not work with nitrided components. Only files or superficial hardness testers will work for these components.
4. If a suitable size lathe is available chuck the cross bolt between centers on the lathe and use a mild emery cloth (sand-paper strips) of approximately 180 to 220 grit to clean off all foreign material from the outside surfaces of the cross bolt. Be very careful not to take too much metal off of the cross bolt. If available use O.D. micrometers with an accuracy of .0002" to .0003" to assure that the outside dimension remains unchanged or no more than .0001" diametrically of material is removed during this process.
5. If required use something more abrasive than the 180-grit emery cloth to remove any galling or high spots where damage has occurred. This applies to housing cleaning as well as cross bolt cleaning. After cleaning make sure that any damaged areas are at least .0001" below the adjacent surfaces to the damage.
6. Clean up any galling damage in the housing that is severe with an abrasive wheel prior to honing. Be sure to only remove material that is damaged and sticking out into the bore diameter. After cleaning the damaged areas should be lower than the adjacent surfaces by at least .0001".
7. Using a hone set up on either a drill or a vertical honing center hone the housing in a vertical orientation. Use a suitable honing oil to keep the stones lubricated while cleaning up the bore. Be sure to work out tight areas with the hone. Sunnen is a good source for honing equipment if it is needed. It is best to use hard CBN type stones for this work as the nitrided surfaces are very hard and they will clean up the bores faster than standard honing stones.
8. Once the cross bolt and housing have been sufficiently cleaned, polished, and honed re-assemble the machine and put back in service.

Department: Engineering	SOP No. ENG-0820-001	Revision No. 1
Prepared By: E. Rosamond	Approved By: D.Woodcock	Approval Date:
Effective Date: 02/15/2012	No. of Attachment: 0	Page 1 of 2



"All PSI products and components are proudly designed and manufactured in the USA."

References: <https://www.sunnen.com/>
<https://www.mcmaster.com/13705T91/>

*NOTE – If the screen bolts are cleaned on a regular basis the hydraulic pressure should never exceed 1,500 PSI. If the hydraulic pressure is above 1,500 PSI under normal operating conditions the pistons need to be cleaned and lubricated in accordance to the procedures outlined in the manual on page 32, section 7.2, and on page 34, section 7.3.

Department: Engineering	SOP No. ENG-0820-001	Revision No. 1
Prepared By: E. Rosamond	Approved By: D.Woodcock	Approval Date:
Effective Date: 02/15/2012	No. of Attachment: 0	Page 2 of 2