

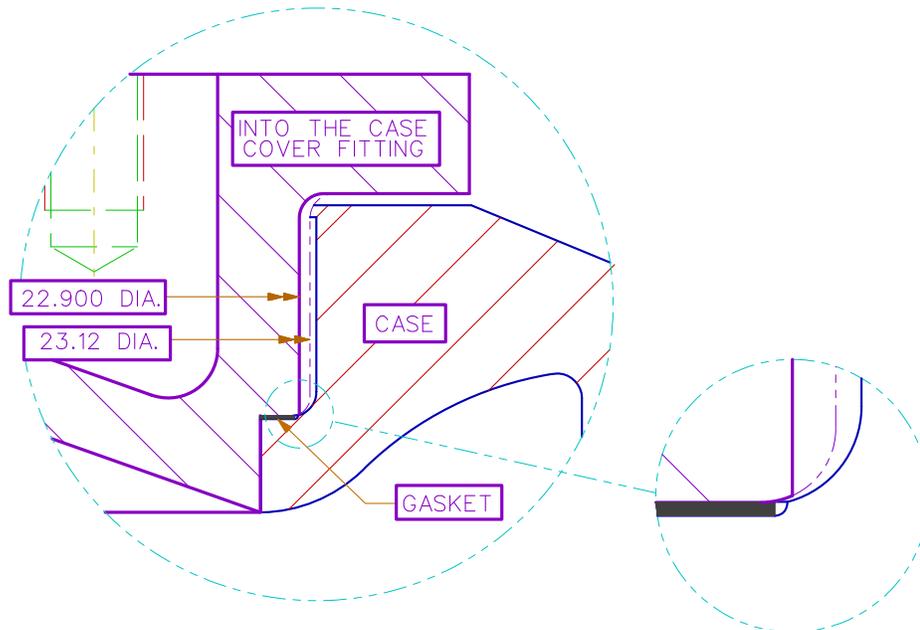
NUMBER: 02-08-15-CP Revised 22-Aug-02

McAlester Engineering

PRODUCT: MISSION **Magnum** Centrifugal Pumps**SUBJECT:** 14 x 12 Front Cover**Radiused Gasket Sealing Areas: (Reference PIB 00-10-1CP)**

Last year a change was made to incorporate a radius in the case where the stuffing box and front cover contact the gasket. To accomplish that, both the box and cover have had a smaller clearance radius added. It has been found that when the cover is supplied in high chrome iron material, the diameter where the added radius is found is undersized. This is a result of using the same pattern equipment for both materials and the fact that the high chrome iron has a greater shrinkage rate than the standard cast iron. All this results in there not being enough material on the high chrome iron covers to allow the full radius to be machined as it would be on the standard cast iron cover. Some customers have thought the lack of a radius is indicative of an older “unradiused” part.

The following illustration shows the area of concern:



If the 23.12 inch diameter is near 22.900 in the “as cast” condition, the radius (3/16) will appear not to be there. Actually the CNC machine generating that radius cuts it but runs out of material due to the under sized diameter. Since the purpose of the radius, is to clear the 1/4 radius in the case, we deem this condition acceptable.

In the future we are revising the 14 x 12 cover to have this material and be radiused as designed to avoid any confusion.

The very brittle nature of the high chrome material gives it tremendous wear properties. This is why it is a preferred material. Use care in torquing the bolt pattern. Use a torque wrench and torque to 196 ft-lbs. in a cross cross pattern to avoid excess stress and case failure.