

# Hospital - Air Handler Fan Wheel Shaft Repair With Belzona

ID: 8499

Industry: *Buildings & Structures*  
Application: *FBC-Fans, Blowers and Compressors*

Customer Location: *Florida*  
Application Date: *01/15/2021*

Substrate: *Steel Shaft*  
Products: *\* Belzona Shaft Former ,*  
*\* Belzona 9411 (Release agent) ,*  
*\* Belzona 1111 (SuperMetal) ,*

## Problem

*The fan was not operating safely with the risk of a complete failure impacting critical air circulation. The replacement shaft lead time is 3 months.*



## Photograph Descriptions

- \* Picture 1 - Shaft damage ,
- \* Picture 2 - Shaft surface prepared ,
- \* Picture 3 - 3D former in place ,
- \* Picture 4 - New bearing in place ,

## Application Situation

Air handler pillow bearing ceased and galled a 1/8" groove into the air handler fan wheel shaft.

## Application Method

3D Printed Former was commissioned through Belzona Inc. to the exact tolerances of shaft dimensions. The damaged area on the shaft was undercut and prepared with grinder and file to create ample anchorage point for Belzona 1111. Release agent added to the former surface to aid removal post cure. Material and Former put in place and allowed to follow the initial cure process. Post-cure heating was performed to accelerate the curing process to bring the air handler online as quickly as possible. The former was removed and the material refined and brought into exact tolerance with emery cloth. Post cure heating to 140°F was

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FS 695214  
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completed after 4 hours and the air handler was assembled and put back into service.

## Belzona Facts

The risk to continue operations was too high for patient and healthcare provider safety. Part availability critically impacted the hospitals' choices. A custom shaft could have been made but the air handler would have to have been disassembled and further challenges could have developed. Belzona offered a proven and effective repair that has lasted beyond the customer's needs and expectations. The repair was done insitu and have the system back online in less than 8 hours.

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