

# BELZONA ENGINE BLOCK REPAIR SAVES BIG MONEY

ID: 5927

Industry: General Industry

Application: ENC-Engines and Casings

Substrate: Cast Iron

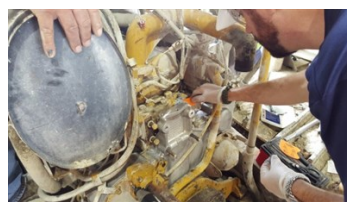
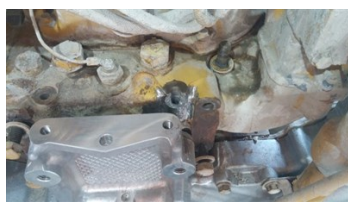
Products: \* Belzona 1111 (Super Metal) ,  
\* Belzona 9341 (Reinforcement Sheet) ,  
\* Belzona 9411 (Release Agent) ,

Customer Location: Nashville, TN, USA

Application Date: September 2015

## Problem

The engine block could not be welded on and the customer was looking for an alternative to replacing the cast block.



## Photograph Descriptions

- \* Broken bolt housing ,
- \* Surface cleaned and roughened ,
- \* Application in progress ,
- \* Bolt removed, ready for reassembly ,

## Application Situation

A bolt for a mounting bracket was broken out from the engine block.

## Application Method

The application was carried out in accordance with modified versions of Belzona Know-How System Leaflets ENC-1 & ENC-2. After cleaning and degreasing the surface, a rotary tool was used to roughen the surface. A final cleaning/degreasing was carried out. While this was occurring, two coats of Belzona 9411 were applied to the bolt, which would be used to create new threads. After Belzona 9411 dried, the threads on the block and the bolt were wetted out with Belzona 1111 and the bolt was aligned with the

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ISO 9001:2015

FS 695214

ISO 14001:2015

EMS 695213

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9000 Registered Quality  
Management System.

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remaining threads. Belzona 1111 and Belzona 9341 were used to rebuild the broken section of the block. A heat gun was used to hasten the cure time and after 4 hours the bolt was backed out and the rough edges were smoothed with a file before final reassembly.

## Belzona Facts

The alternative was to replace the cast block with the broken bolt, which the customer estimated to be over \$30,000 for materials alone. The cost savings from rebuilding with Belzona was nearly 100% of the alternative.

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