

Baker & Provan Engineering News

Heavy Engineering & Reclamation Specialists



September 2007 Newsletter

Large CNC Machining Centre – 4 metre table

One means of remaining competitive in today's global manufacturing market is investing in technology to provide machined components at a more efficient rate. Baker & Provan has been, on average, investing annually in new machines, and other tooling developments, to stay in touch with the most modern manufacturing methods.

In 2007, Baker & Provan took delivery of a large CNC machining centre with table dimensions of 4 metres by 2 metres. The 4 axis vertical machining centre complements the 4 CNC horizontal borers to offer flexibility and alternatives to our customers.

This machine has been in high demand since installation in January 2007. Machine particulars are

- 4 metre length,
- 2 metre width
- 1 metre height under head
- automatic tool changer
- vertical / horizontal adaptor head



Small Turning and Milling

While Baker & Provan is more known for its medium to heavy machining capability, the small machines tend to stay out of the lime light. However, the smaller CNC machines, and their operators, also manage to punch out some very intricate and interesting work pieces to our customers, as individual components or as sub-components to a larger job. Below are some interesting work pieces that were turned and milled on our small CNC machines.



NuBuilt Reclamation – Did you say “Unrepairable”?

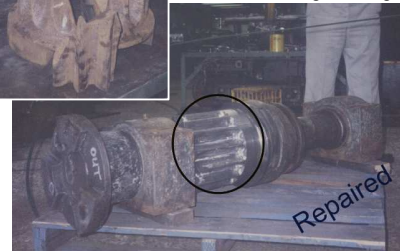
Baker & Provan's unique reclamation capability comes from the merger of NuBuilt Castings with Baker & Provan in 2005. NuBuilt reclamation, managed by Eddie Gove, continues to offer its unique reclamation capability now utilising Baker & Provan's larger workshop facilities.

Over the last 25 years of reclamation work, NuBuilt or more correctly, its Reclamation Manager, Eddie Gove, has been confronted with many challenges to come up with creative and unique repair methods. We use the word 'unique' because we truly believe that in many instances we are able to, “repair the unrepairable”. Also, we can offer more than one repair solution providing the customer the choice to decide the best repair solution for their circumstances.

The gear wheel below had been damaged beyond repair.



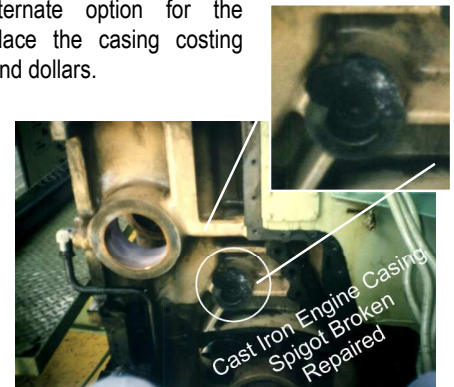
However, as spares were not available, the gear wheel was repaired by selecting a specific welding procedure to ensure sufficient weld bonding strength between parent weld and weld deposit. Then, on the machining front, carefully picking up the gear profile to ensure satisfactory operation. The end result was that the gear went into



service without a hitch, while the spare was left on the shelf, upon arrival, until required.

Another example shows the top half of a spigot on a large power station diesel engine, that was chipped off warranting the entire engine casing as NFG – a technical term meaning “no longer usable”. This damage was **repaired without welding**. An insert was locked into position and machined to exact size providing the required alignment for the shaft. This repair method re-established the full rating of the engine, without compromise. The alternate option for the customer was to replace the casing costing several hundred thousand dollars.

We enjoy these difficult problems and hope that you may have some challenges for us to work on and pass on savings to your repair and/or maintenance costs.



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