



Michael Byrne Manufacturing Co., Inc.

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On June 29, 2009 Michael Byrne Mfg received a call from Pacific Boring Inc. seeking immediate repair of an Italian made planetary gearbox that had broken down on their job. MB agreed to look at the gearbox and see if repairs were possible. Upon inspection of the gearbox MB found the output carrier and output shaft failed in multiple locations. After discovering the extensive damage in that gearbox the remaining three gearboxes were also disassembled and numerous stress cracks in the planetary carriers were revealed in those as well. The Italian manufacturer had already given Pacific Boring a lead time of nearly 5 months for a new gearbox and several months for parts just to repair

the existing units, Pacific Boring's job had to be completed in November (do the math and waiting for new Italian gearboxes or parts is not a workable solution).



Michael Byrne assisted Pacific Boring in locating a similar planetary and then utilizing their in house gear machining equipment make the necessary modifications to adapt the replacement planetary gearbox to match the existing gearbox, Michael Byrne also as assisted Pacific Boring in repairing the cracks in the other three planetary gearboxes. Although MB was able to offer no guarantee regarding the longevity of the repairs, they were able to have the gearboxes repaired and shipped in a matter of 10 business days. Pacific Boring was back in business and the job continued on.

Due to the uncertain life expectancy of the repaired units Pacific Boring decided to order four new Planetaries, so on July 15, 2009 Michael Byrne was given a purchase order to design and assemble four new planetary gearboxes. Michael Byrne immediately began by engineering a gearbox with greater capacity, yet able to fit the tight space and meet the stringent operating requirements.

On Sept 1, 2009 one of the repaired Italian gearboxes failed, yet Pacific Boring was able to install an additional 1,250 feet of tunnel (20% of the total bore). On Sept 7, 2009 the four Michael Byrne gearboxes were shipped to Pacific Boring's job site for installation. While the gearboxes weighed almost

800 lbs more than the original gearboxes, they fit in the confined space and mounted perfectly. Pacific Boring was back in business. On Nov 10, 2009 boring of the 6,300+ linear foot tunnel was complete. Michael Byrne Mfg was able to repair four Italian gearboxes, re-engineer a totally new gearbox design and produce four triple stage planetary gearboxes between July 3, 2009 and September 7, 2009, quite a feat!

