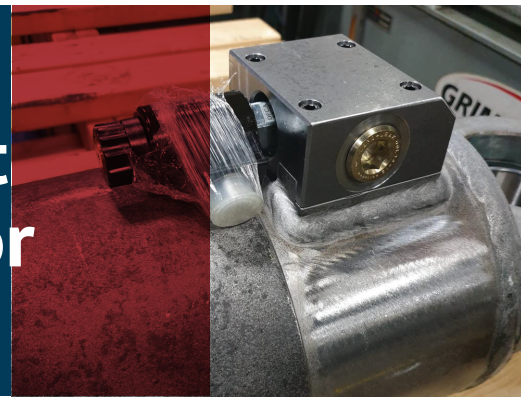


JARP's Remanufacturing Services Saved Department of Defense Prime Contractor Thousands

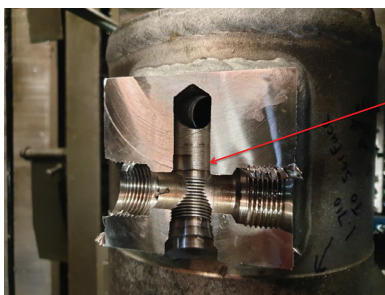


The problem: A manifold block failure causing defense logistics safety concerns

A US based defense contracting company and loyal JARP customer came to us with a cylinder field issue. They specifically had issues with the primary lift cylinder responsible for elevating heavy equipment and materials to loading height onto military transport planes.

When this cylinder fails, it's a significant safety hazard that makes loading and unloading cargo extremely dangerous. Our goal was to improve the quality and safety of the cylinder without manufacturing a new cylinder, while keeping the cost and lead time to the customer to a minimum.

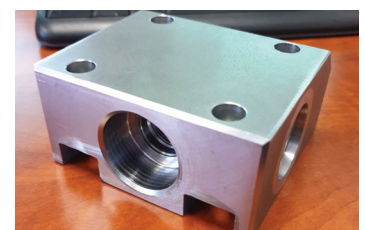
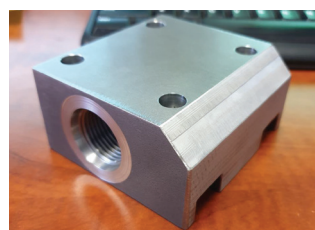
After inspection, JARP found that the welded manifold block's T-13A cavity sealing surface was out of tolerance from the original cylinder manufacturer. This led to challenging design constraints as the remanufactured design was required to fit in the same tight envelope as the existing manifold.



Since the barrel was manufactured using a thin-walled, high-strength alloy tube, a welded replacement of the block was also prohibited. Additionally, the location of the block didn't allow re-machining of the valve cavity and the size of the seal made an oversized house seal option unreliable.

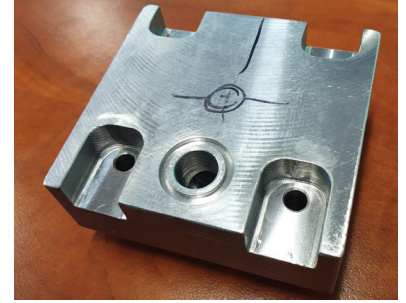
The solution: Engineering a new bolt-on manifold block

JARP created a bolt-on manifold block utilizing the existing design envelope to replace the out-of-tolerance part. This design incorporated the use of a face seal and allowed for transparent integration of the repair.



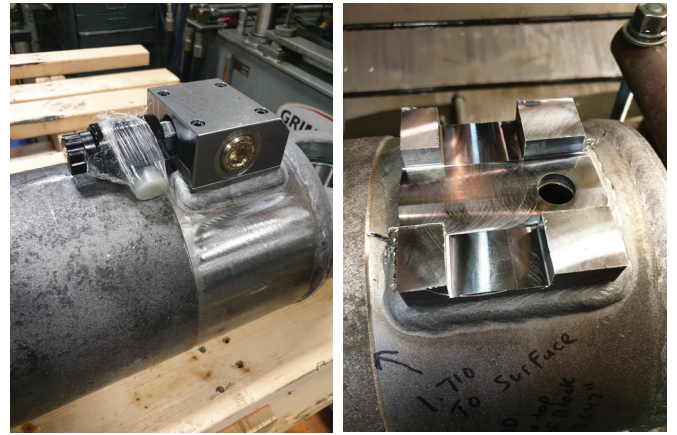
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Progress was quick; we went from napkin sketches to machined proof of concept and testing in only a week. To do so, the JARP engineering team generated a 3D model, performed numerous calculations, and used finite element analysis testing. Once the solution was approved by the prime contractor, the solution yielded outstanding results with zero leakages across the board.



The result: Remanufacturing saved thousands of dollars

JARP's remanufactured solution cost our client a one-time engineering fee that was less than half the cost of a new cylinder. The cost to repair future blocks would be less than one thousand dollars for the installation of a new block design on a remanufactured cylinder. More importantly, the JARP team was able to complete this type of project within a 1.5 to 2 week lead time from design, concept, to testing.



Without JARP's remanufacturing expertise, a new cylinder would have cost the customer tens of thousands of dollars per cylinder. Coupled with a 22 week lead time due to material availability, buying new would have been an expensive and timely option.

Once the JARP team was engaged, it was solved quickly and confidently. This can-do attitude exceeded the customer's expectations who had been struggling with this unresolved field issue.



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