



*Benefits:
Helping Our Customers Succeed*

Military & Defense Success Story

Design to Manufacturing: Enhancing Manufacturability Reduced Weight & Cost

Challenge: Major Military & Defense Contractor had a preliminary design for the JLENS program that constructed a symmetrical storage drum out of plates being welded together to form this part out of aerospace grade aluminum. The drum was going to rotate, had to be balanced and also had weight limitations / restrictions. Although it was a large part weight had to be minimized. The concern was welding a number of plates together would add weight. It would also be difficult to balance because the erratic weight distribution caused by the multiple material levels and internal structural beams.

Solution: Carver Machine Works solution was to work with one of our material partners to provide a forged alternative that completely eliminated all of the welding thus maintaining a consistent weight throughout the part. This DTM solution also allowed a lighter and stronger unit. Carver also developed a vibration damped boring bar to be able to produce this 16 foot part on one of their lathes while maintained tight internal dimensions.

Result: Carver was able to produce a part that weighed less, cost less and performed better in the field than competing technology. The alternate fabrication method that involved welding multiple plates would have produced a part that was over 400 pounds over the specified weight requirement and would not have been able to be balance. Engaging Carver's technical team early benefits our customer, our DTM expertise can be applied to numerous metal fabrication challenges.

