

Flowmaster®, a customer of Wolf® Robotics since 1996, is the leading manufacturer of high performance stainless steel exhaust systems, street performance and race mufflers, cold air intakes, tuners, exhaust accessories, and more for most popular modern cars, classic cars, trucks, and SUV's. Through the years, Wolf Robotics has manufactured several robotic welding systems for Flowmaster. In 2017, Flowmaster requested Wolf Robotics to retrofit a robotic system that was built in 1996.

**Problem:** Flowmaster's robotic system was close to 20 years old. It was nearing the end of it's useful life. Frequent failures of electronics, as well as limited or no availability for new replacements forced them to buy used parts, which in many cases, were as old as the defective ones.

## Flowmaster had 3 choices:

- 1. Continue to spend money to keep the older system running as good as possible. Interface issues accounted for significant downtime and the average cost of replacement boards were \$800-1200. The digital motor controls had to replaced frequently accounting for even more downtime. Flowmaster had to keep \$8,000 of spare parts in inventory, plus the time to source these spare parts.
- 2. Purchase a new robotic welding system.
- 3. Retrofit and replace the older technology with new technology while keeping the "bones" of the cell.

**Solution**: Retrofit. The technology available 20 years ago required Wolf Robotics to use a third party motion control solution to insert the muffler baffles to their programmed locations. The new technology now allows for direct integration between a servo motor and the robot. This solution provides a much simpler, efficient, and robust robotic welding system AND Flowmaster saved money by not purchasing a new system. They were able to keep what was still working and replace only what needed to be replaced.



## Results

» After crunching the numbers, Flowmaster saved close to 75% off the cost of purchasing a new system by retrofitting the existing system. Flowmaster made the right decision by keeping the components that were still working and having Wolf Robotics update the technology that was causing downtime.

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