



A CASE STUDY: WHEN ALUMINUM REPLACEMENT FANS BECOME VITAL

THE CHALLENGE

Jenkins received a failed electric motor from a manufacturing customer that was the result of a melted polypropylene fan. This specific motor operated in an enclosed space, leaving little variability in temperature and resulting in the motor overheating. The fan melted around the shaft, causing the motor to lock up, the bearings to fail and forcibly damaging the winding. Because Jenkins has extensive motor cooling experience, our team quickly concluded a more durable material was needed for this application. While plastic fans can be cost-effective and efficient in providing air flow, the application environment called for a Jenkins Aluminum Replacement Fan.

THE SOLUTION

Since the 1960s, Jenkins has been an industry-leading supplier of aluminum motor cooling fans. While polypropylene (the compound used to make most plastic fans) melts at 320°F, aluminum doesn't begin melting until 1,221°F . Given the environment this motor was in, the most effective cooling solution was a Jenkins Aluminum Replacement Fan.

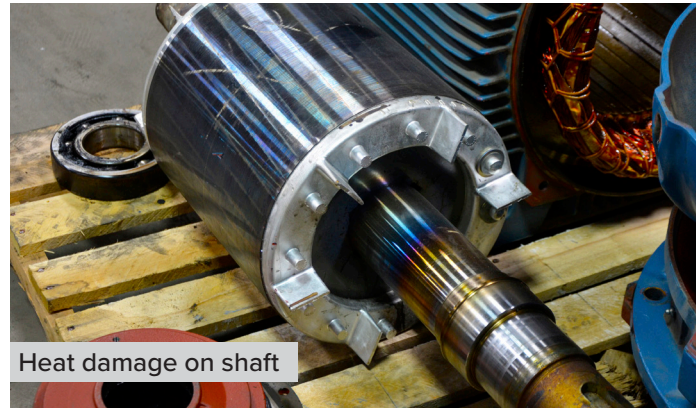
The Fan was:

- Cast in the Jenkins Foundry from one of thousands of fan patterns
- Machined to match the manufacturer's exact specifications
- Dynamically balanced to ISO 1940 standards

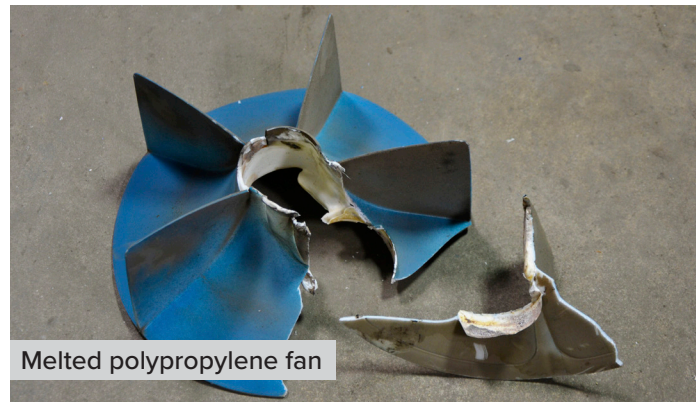
THE RESULTS

The failed motor required a complete rebuild due to the motor cooling malfunction. The rebuild included a stator rewind, balance and machining of the rotor and replacement of the bearings and bearing journal. Replacing the plastic fan with a more durable Jenkins Aluminum Replacement proved to be a better long-term investment for the customer's motor – increasing the longevity of the unit and lowering the cost of future repairs and maintenance.

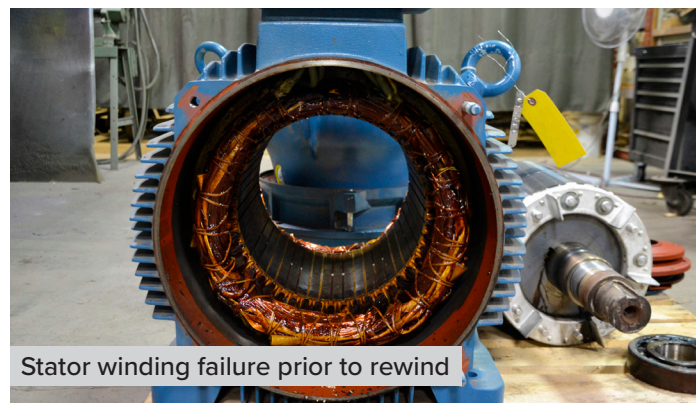
To shop the full catalog of Jenkins replacement fans visit Jenkins.com. Have additional questions? Just Ask Jenkins at answers@jenkins.com or 800-438-3003.



Heat damage on shaft



Melted polypropylene fan



Stator winding failure prior to rewind