

COST SAVINGS THROUGH FINE BLANKING - JACKSON PRECISION INDUSTRIES

CLIENT OVERVIEW

Client: Major Tractor Manufacturer

Industry: Agriculture / Heavy Machinery

Challenge: Reducing Production Costs without Compromising Quality

Solution: Transition from Laser Cutting and Machining to Fine Blanking

Partner: Jackson Precision Industries (fine-blanking.com)

Engineer: Value Analysis/Value Engineering (VAVE) Engineer

EXECUTIVE SUMMARY

A leading tractor manufacturer partnered with Jackson Precision Industries to cut costs and enhance production efficiency. By switching from laser cutting and machining to fine blanking, they achieved cost savings of over \$8 per part. This case study outlines the challenges, solutions, and outcomes of this successful collaboration.

BACKGROUND

Facing stiff competition and rising costs, the tractor manufacturer sought cost-effective solutions while maintaining high-quality standards. Their complex transmission component, traditionally made through laser cutting and machining, was expensive and time-consuming.

CHALLENGES

1. High Production Costs:

Laser cutting and machining the complex transmission component incurred substantial production costs due to the intricate design and the need for multiple machining operations.

2. Lengthy Lead Times:

The existing manufacturing process had extended lead times, impacting the manufacturer's ability to respond promptly to market demands and changes.

3. Material Waste

Laser cutting and machining generated significant material waste, further driving up production costs and environmental concerns.

SOLUTION

Jackson Precision Industries, along with a Value Analysis/Value Engineering (VAVE) engineer, analyzed the manufacturing process and recommended transitioning to fine blanking. This precision metal forming process reduced costs, improved quality, and shortened lead times.

TRANSITION TO FINE BLANKING

After a comprehensive evaluation, the VAVE engineer recommended transitioning from laser cutting and machining to fine blanking for the transmission component. Fine blanking is a precision metal forming process that combines cutting, coining, and shearing operations in a single step, resulting in components with exceptional precision, tight tolerances, and minimal material waste.

BENEFITS

1. Cost Reduction

Savings of over \$8 per part.

2. Enhanced Quality

Improved dimensional accuracy and consistency.

3. Shortened Lead Times

Increased responsiveness to market demands.

4. Material Efficiency

Minimized material waste.

RESULTS

By adopting fine blanking, the tractor manufacturer achieved substantial cost savings, improved quality, and greater efficiency, showcasing their commitment to innovation and operational excellence.

CONCLUSION

This case study highlights the success of transitioning to fine blanking as a cost-effective and quality-enhancing solution in manufacturing a critical transmission component. It underscores the importance of reevaluating processes to meet cost reduction and quality enhancement goals.