CLOW

LASER-TO-STAMPING CONVERSION

HEAVY EQUIPMENT CASE STUDY

SUMMARY

A global manufacturer of construction and earthmoving equipment was producing a family of components using a laser-cutting process. The process met print specification, but it left cost and repeatability on the table—and the parts were sourced from fabrication suppliers who were already stretched thin on larger jobs.

Clow's stamping capabilities sit in the space between laser and fabrication work and high-volume progressive stamping, giving OEMs a way to convert parts that can benefit from single source affordable tooling without requiring high-volume production.

Clow proposed an alternative: convert the parts from laser cutting to value-added metal stamping, supported by tooling built in-house. The solution offered stamped parts at a lower cost and tighter part-to-part consistency. The conversion became the foundation for a supply relationship that has grown from a single pilot run into hundreds of active part numbers shipping to plants across five locations.

THE CHALLENGE

Clow's sales team began pitching stamped-part opportunities to the customer's North Carolina and Georgia facilities several years before the account opened. A plant tour finally changed the conversation. Walking the floor, Clow's team found bins of parts the customer was consuming by the hundreds each month. Many of those parts were sourced from fabrication suppliers who struggled to support higher volume orders while consistently meeting delivery dates and print tolerances.

Clow asked to quote a handful of those parts as stampings instead of fabrications. The customer agreed to a small pilot run on a single loader model.

AT A GLANCE

INDUSTRY
Heavy equipment/construction machinery

COMPONENTS
Structural, formed, and stamped parts and assemblies for bulldozers, mini excavators, and compact track loaders

PROCESS
Converted suitable laser-cut parts to metal stamping, supported by tooling built in-house and downstream manufacturing capabilities

MATERIAL
Materials represented in the current part mix include HRPO steel, A36 HRPO steel, HSLA Grade 50, copper, and round bar

VOLUME
Hundreds of parts consumed monthly per part number; hundreds of active part numbers today

SHIP-TO LOCATIONS
Georgia, North Carolina, Illinois, Texas, and Mexico

CERTIFICATION
ISO 9001:2015

THE SOLUTION

Clow evaluated the full application rather than quoting the existing laser-cut print as-is. Working with the customer's engineering and sourcing teams, Clow's tool room developed a tooling strategy for the conversion and projected the piece-cost reduction and repeatability gains that a stamped process would deliver before committing to tooling.

Clow managed the core conversion from evaluation through launch, including design input, in-house tool build, and production ramp.

The pilot run on the single loader model gave the customer a side-by-side comparison it hadn't previously considered: with the right tooling, parts it had always treated as fabrication work could be stamped at lower cost and with tighter part-to-part consistency.

As the relationship expanded, Clow continued evaluating each component individually rather than applying the same manufacturing route across the entire part family. Depending on the part, current work may include stamping, forming, machining, robotic welding, laser cutting, or coordinated outside finishing.

TWO-PIECE WELDED BRACKET ASSEMBLY

Two stamped components, welded with E-coat finish.

Dimensions: 10.272" x 10.558"

STAMPED AND WELDED BRACKET ASSEMBLY

Stamped bracket, machined boss, welded with Zinc plating.

Dimensions: 5.157" x 3.755"

BUS BAR

Blanked, deburred, formed with masked powder coat finish.

Dimensions: 2.362" x 1.669"

CLIP

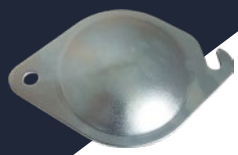
Laser cut, formed, deburred with Zinc plating and vinyl coating.

Dimensions: 2.554" x .926"

COVER

Stamped blank with shallow draw, trimmed/pierced, deburred with Zinc plating.

Dimensions: 6.929" x 4.685"



RESULTS

The pilot run opened the account. Additional part numbers followed as the customer's plants replaced laser-cut and fabricated parts with Clow-tooled stampings. The customer has since grown into one of Clow's five largest accounts, and Clow has been awarded multiple additional production programs beyond the original conversion. Clow now ships hundreds of active part numbers to customer locations in Georgia, North Carolina, Illinois, Texas, and Mexico. The two companies continue to review new laser-to-stamping conversion candidates, using the same cost, repeatability, and tooling-feasibility evaluation that opened the account in 2020.

The first project with this customer became the starting point for a long-term relationship, grounded in the same process Clow applies to every new opportunity: look past the print, evaluate the total manufacturing cost, and show the customer what a better process looks like before asking for the business.

CONNECT WITH OUR TEAM

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