

CASE STUDIES

These case studies will show how the staff and machines at Dynamic Reproducer achieved significant cost savings when using a cast-assembly process, rather than a stamped, cold-headed or screw-machined process for creating electromechanical components.

The Problem

Many of these components were fabricated by forming the individual components through stamping, cold-heading or machining. We felt there was a more cost effective way to reduce the costs associated with the labor and secondary operations required to stake, pin, weld or otherwise join the various components into a finished assembly.

The Cast-Assembly Solution

Cast-Assembling eliminates the secondary operations usually required for a completely assembled component. With the cast-assembly process, components are formed in a single die and ejected from the casting machine completely assembled, with a perfect fit between the separate components. Dynamic Reproducer can even die cast assemblies with moving parts, which are complete and ready to be coated and shipped as they come from the machine.

CAST-ASSEMBLED

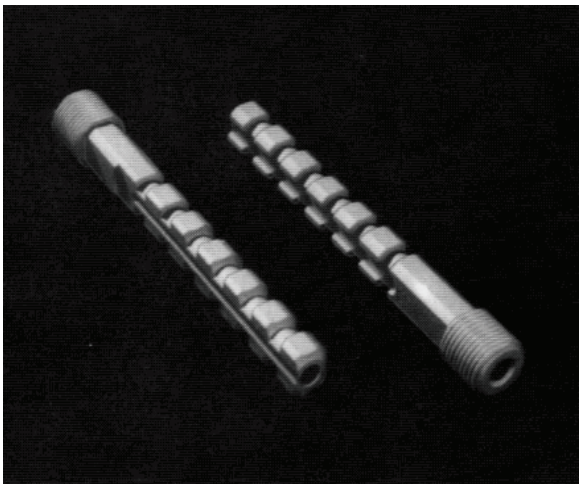
Electromechanical Components

VS.

Stamped, Cold-Headed or
Screw-Machined

Electromechanical Components

Case Study 1 - Temperature Controller



Before:

A brass screw-machine part produced in three separate operations.

Now:

Cast assembled in one piece

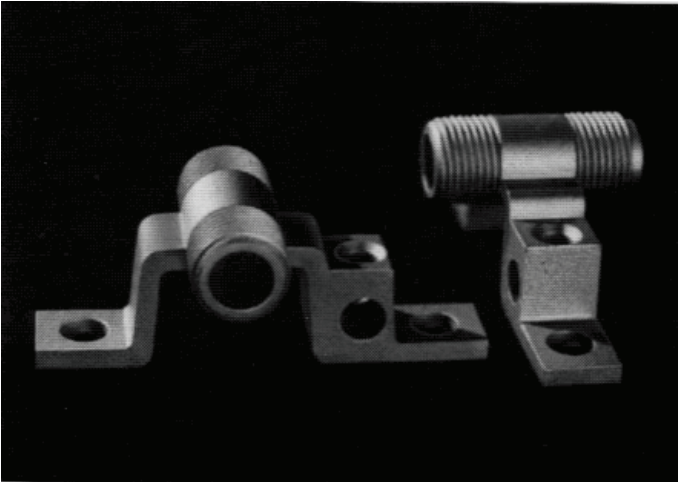
Eliminated:

Turning, drilling, three milling operations

Savings:

\$0.25 vs \$0.10 each

Case Study 2 - Grounding Block



Before:

A stamping and screw-machined part soldered together.

Now:

Cast assembled in one piece

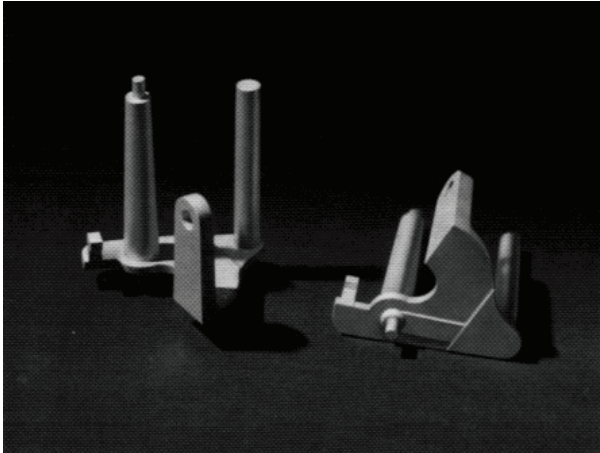
Eliminated:

Need to join two pieces

Savings:

\$0.20 vs \$0.09 each
(includes tapping)

Case Study 3 - Switch Lever



Before:

Two screw-machined parts, one stamping.

Now:

Cast assembled in one piece

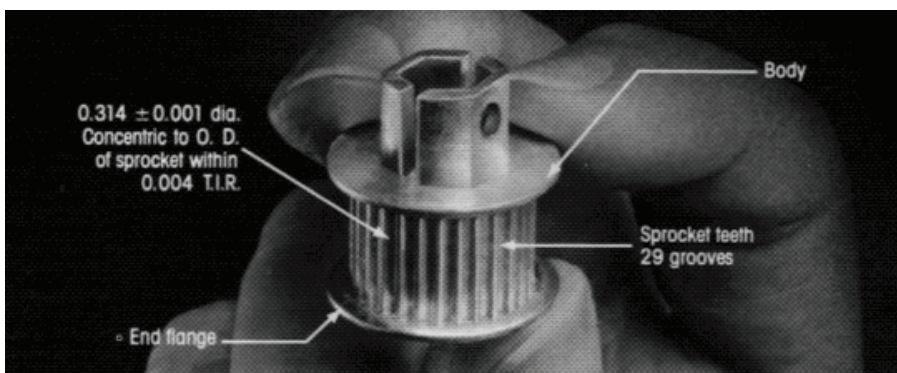
Eliminated:

Three joining operations

Savings:

\$0.31 vs \$0.15 each

Case Study 4 - End Flange



Before:

Stamping staked to a cast body.

Now:

Cast assembled in one piece

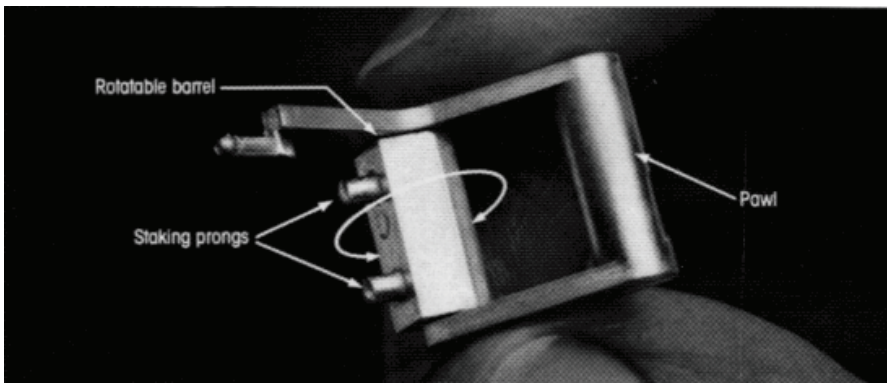
Eliminated:

Four staking operations

Savings:

\$0.75 vs \$0.25 each

Case Study 5 - Lever Assembly



Before:

A seven piece assembly of stampings, screw-machined parts and rivets.

Now:

Cast assembled in one piece

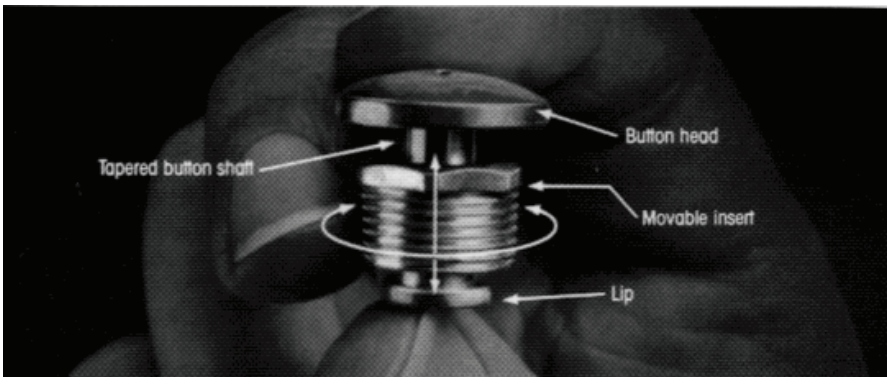
Eliminated:

Seven assembly operations

Savings:

\$1.25 vs \$0.35 each

Case Study 6 - "On-Off" Trigger



Before:

Two aluminum screw-machined parts.

Now:

Cast assembled in one piece

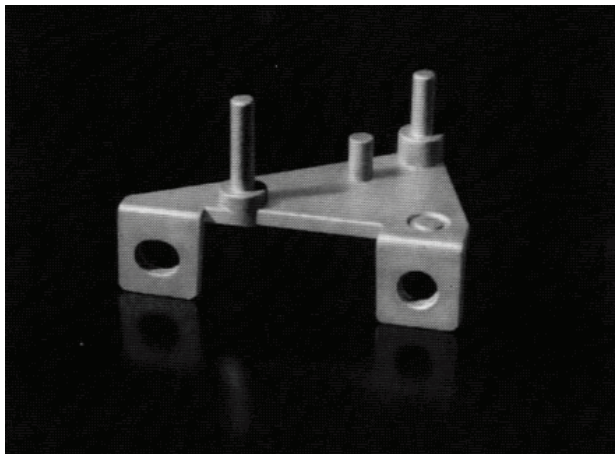
Eliminated:

All assembly

Savings:

\$1.00 vs \$0.28 each

Case Study 7 - Mounting Plate



Before:

Stamping with three dowel pins.

Now:

Cast assembled in one piece

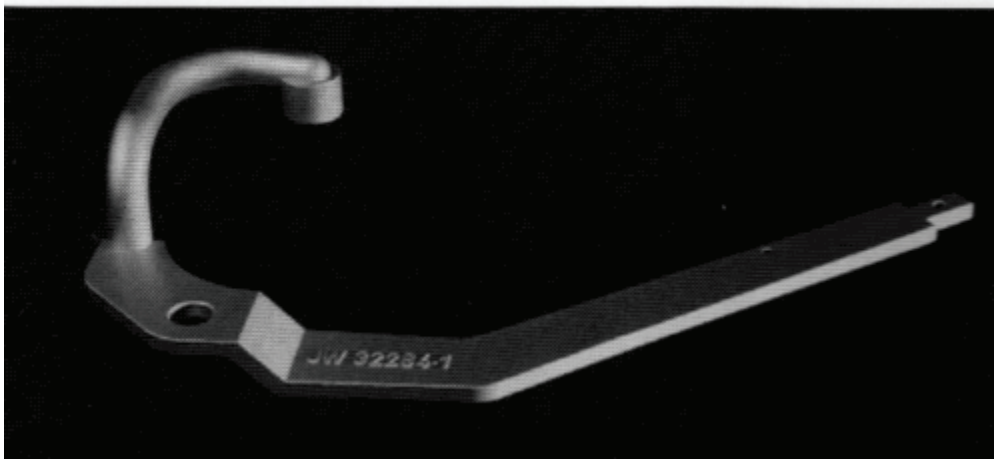
Eliminated:

Three reaming and staking operations, three inspections, cost of dowel pins

Savings:

\$0.17 vs \$0.09 each

Case Study 8 - Electronic Component



Before:
Four piece assembly.

Now:

Cast assembled in one piece with two tapped holes

Eliminated:

A stamping, bent rod part, brass roller, screw machined rivet and four drilling and tapping operations plus assembly time

Savings:

\$5.00 vs \$0.70 each

If you would like to enjoy the benefits of significant cost savings of our die casting manufacturing processes, please contact us today.

**Dynamic Reproducer
111F Belton Dr.
Spartanburg, SC 29301**

**Phone: 864-574-7981
Fax: 864 574-7984
Email: info@dynamicreproducer.com**

Note: The case studies cited were originally developed by Dynacast Inc. The machines used in the case study and some of the staff at the time of the study are now at Dynamic Reproducer.

www.dynamicreproducer.com