

REGAL PROTOTYPES

- Sheet Metal Stampings • Assembly/Welding •
- Production Tool & Die •



Regal

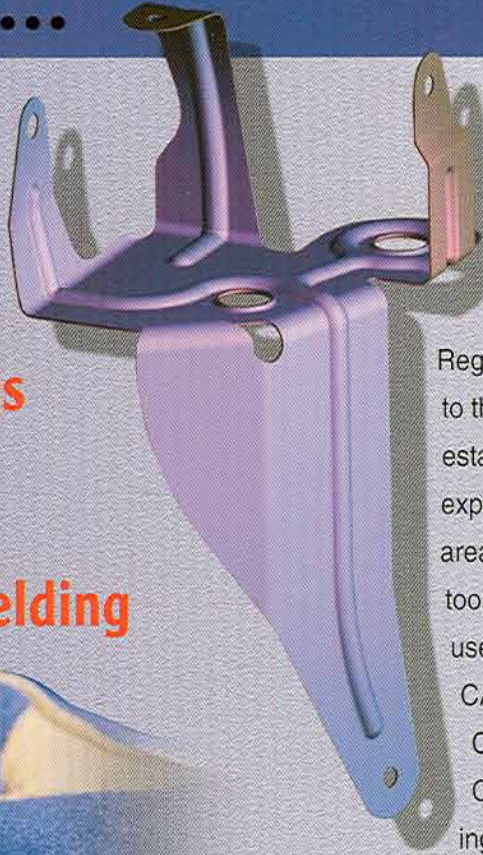
PROTOTYPES, INC.

REGAL PROTOTYPES

Manufacturing for Industry...



Sheet Metal Stampings

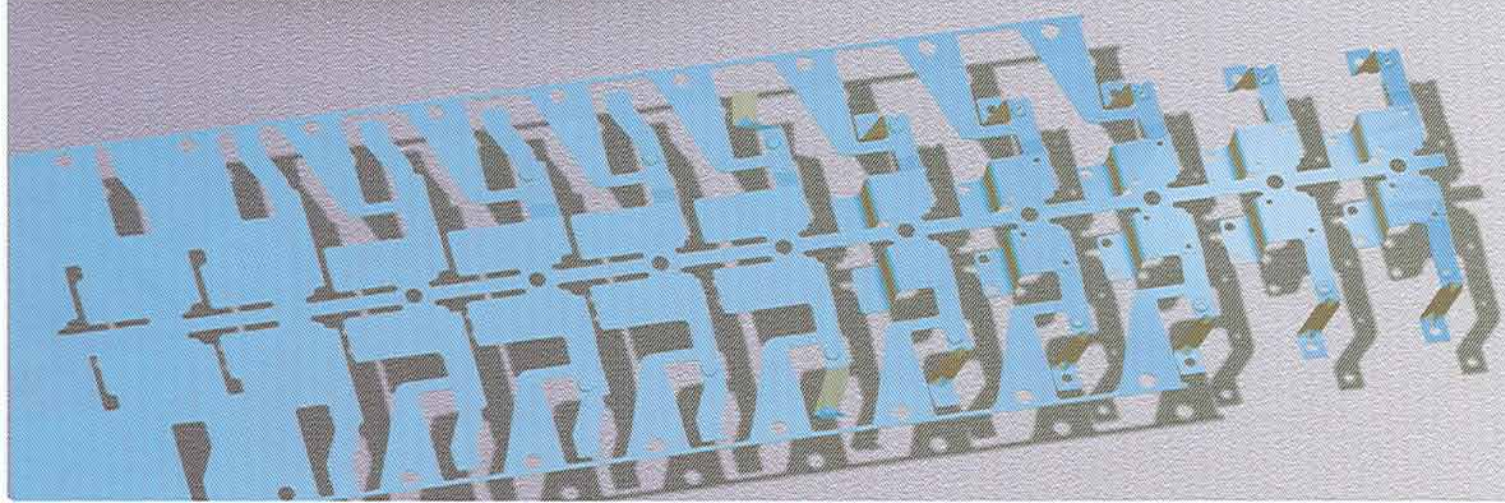


Assembly/Welding

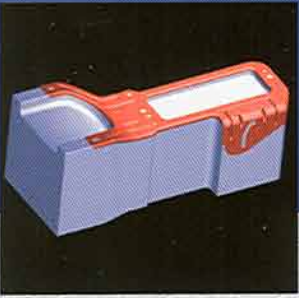


Regal Prototypes, Inc. has been a supplier to the automotive industry since its establishment in 1972. Our manufacturing expertise is concentrated in three distinct areas: sheet metal stampings, production tool and die, and assembly/welding. We use modern technologies such as CAD/CAM, 3 and 5-axis CNC machining, CNC wire EDM, laser cutting, and CMM's in the design, build, manufacturing, and inspection of our tooling, fixtures, and sheet metal parts. We supply to OEM's as well as to production stampers and tool & die manufacturers. Regal's administration and manufacturing teams are fully committed to customer satisfaction, customer service, tool and part quality, on-time delivery, and competitive costing to all of its customers.

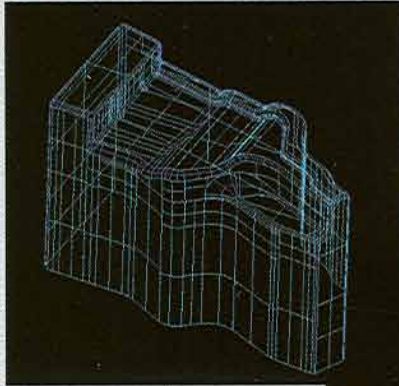
Production Tool & Die



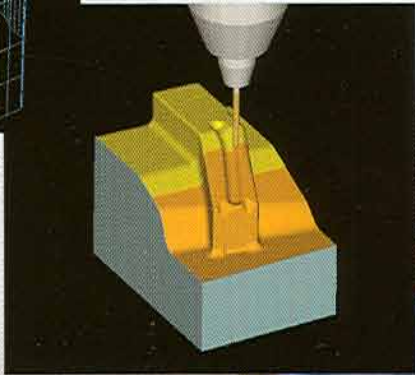
Using Industries Technologies



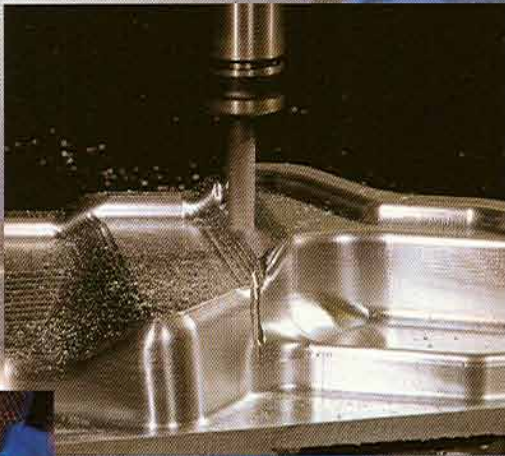
Surfacing a prototype zinc alloy draw punch using CAD software.



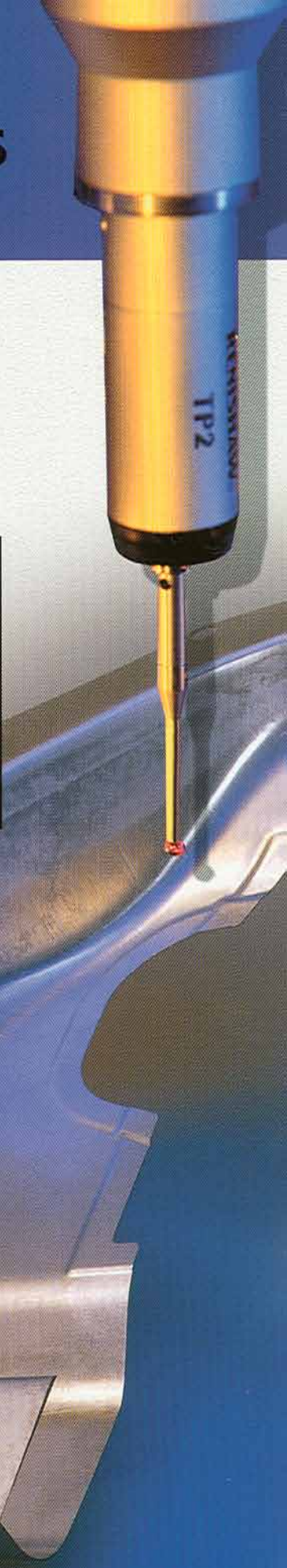
Generating cutter path from NC software.



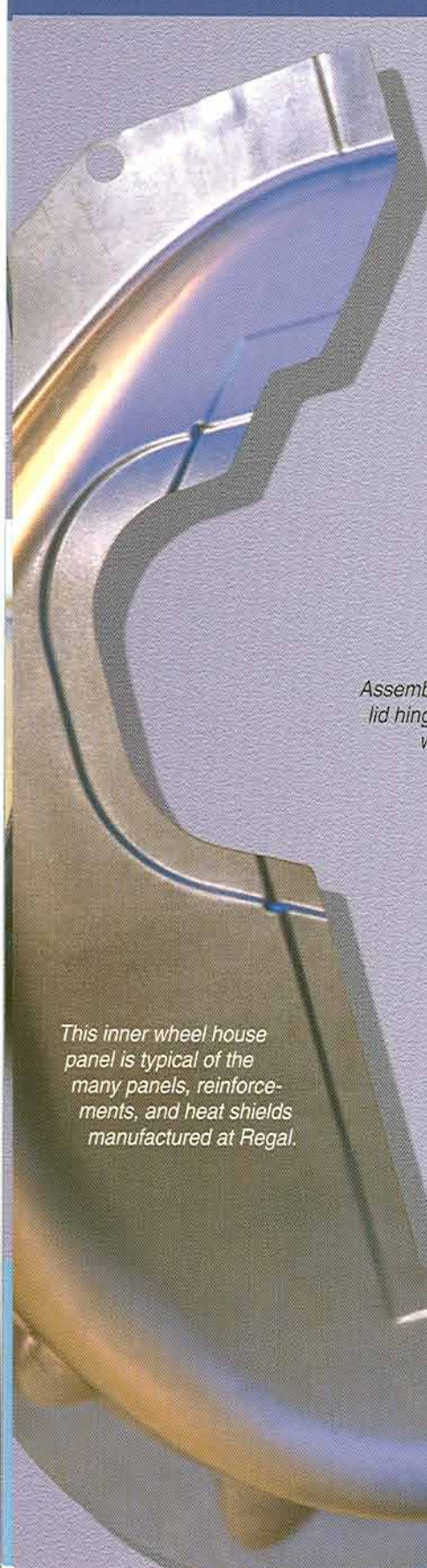
A zinc alloy form punch being CNC machined on one of our 3-axis machining centers.



A production check fixture being checked on our Brown & Sharpe coordinate measuring machine.



Sheet Metal Stampings



Assemblies produced at Regal include: fuel filler doors, deck lid hinges, and nut plate cages. Resistant spot welding, TIG welding, riveting, flanging, and crimping are assembly techniques used to manufacture such components.

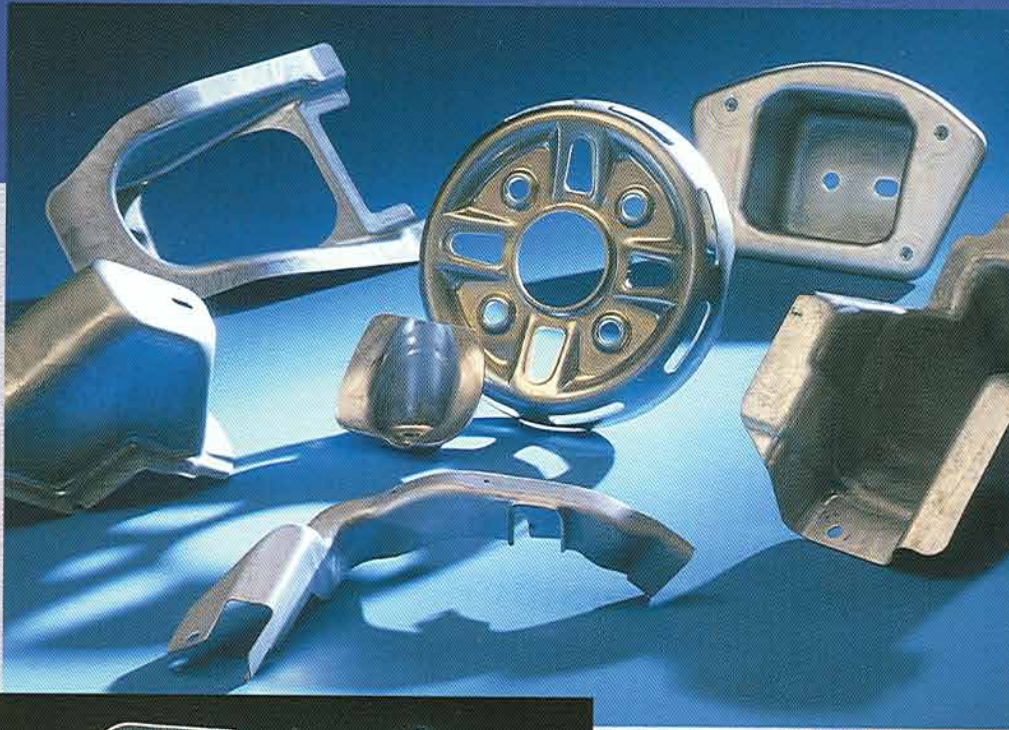
Exhaust manifolds, crossover tubes and catalytic converter components are all manufactured from varieties of stainless steel.



This inner wheel house panel is typical of the many panels, reinforcements, and heat shields manufactured at Regal.

The manufacturing of sheet metal stampings for the automotive industry has been Regal Prototypes, Inc. mainstay since 1972. Our area of stamping expertise includes deep drawn stampings, brackets, body-in-white stampings, heavy gage stampings, formed rods and tubes, assemblies, weldments, and structural deep drawn extrusions. We also have the capability to work with a variety of exotic materials, ranging from aluminum to stainless steel to titanium and high heat resistant metals. These materials are used in the many aircraft and military parts we manufacture. Regal supplies everything from very low prototype volumes through production tool tryout and short run production volumes.

From prototypes to short-run production



Wheel hubs, ignition shields, sliding door rails, and shock mounts require drawing and redrawing technologies to produce.



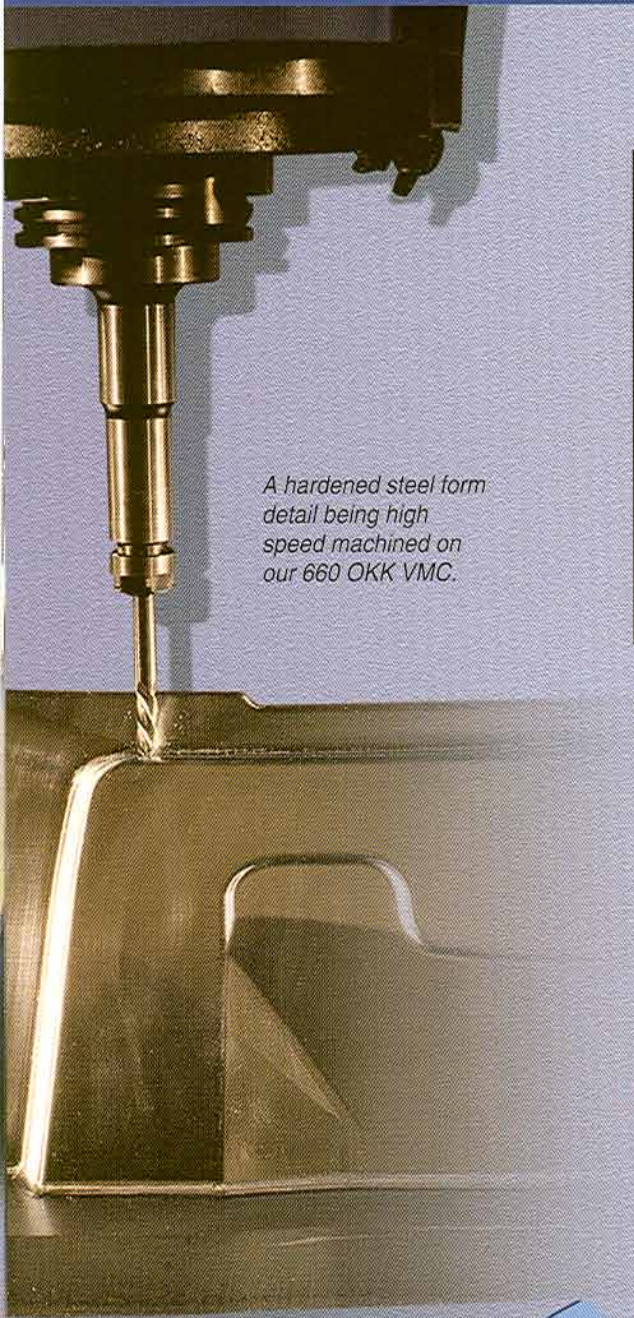
Structural deep drawn extrusions are commonly used to replace weld nuts as fasteners for safety concerns.



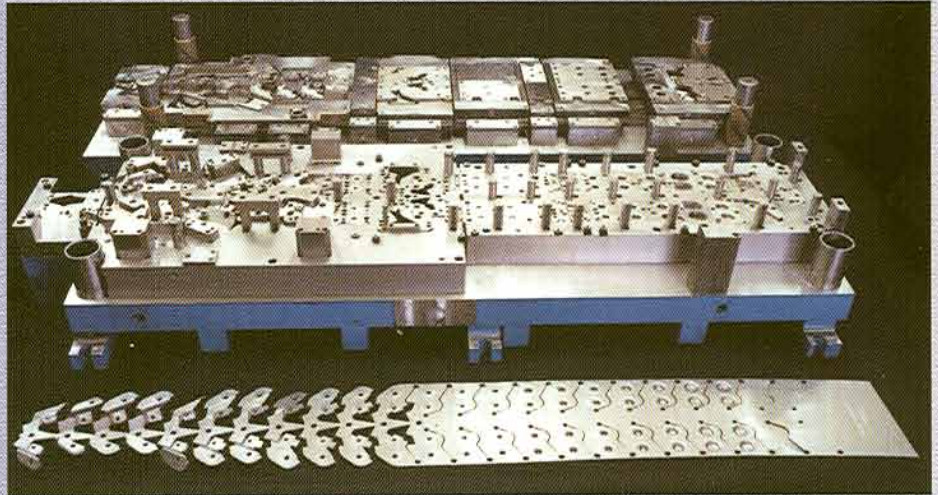
Engine mounts, frame components, and structural supports show some of the uses of heavy gage material.

REGAL PROTOTYPES

Production Tool & Die



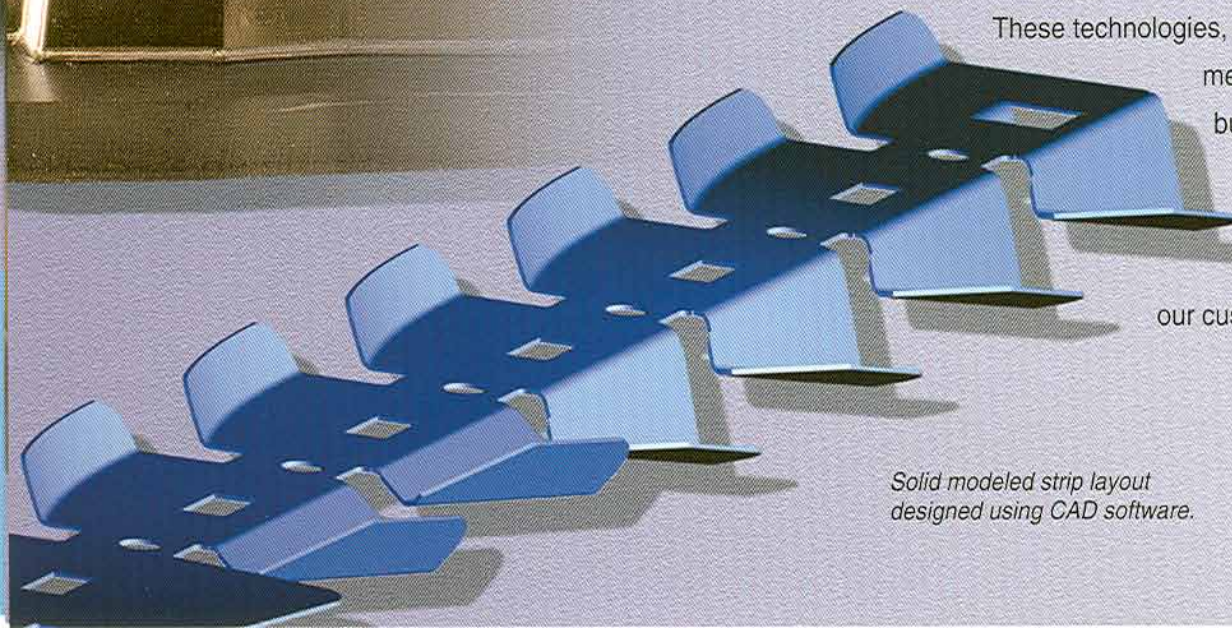
A hardened steel form detail being high speed machined on our 660 OKK VMC.



A progressive die used to stamp seat belt anchors. These parts require four deep drawn structural extrusions be formed during the stamping process. This process can be seen in the strip layout.

Regal Prototypes, Inc. provides in-house tool & die design and build services to its stamping customers. By working closely with customer engineering and design specifications, Regal ensures that all tools manufactured are to proper design and build requirements. We use the latest CAD/CAM technologies in the design and manufacturing of these dies.

These technologies, along with our commitment to quality, PPAP buyoffs, on-time delivery, and competitive pricing enable Regal to provide real tooling solutions to our customers' stamping needs.



Solid modeled strip layout designed using CAD software.

Tool concept to tool completion

Assembly/Welding



Regal Prototypes, Inc. offers full service assembly/welding capabilities to its customers. Assembly processes utilized at Regal range from resistance spot welding, MIG welding and TIG welding, to various riveting and press locking processes. All assembly processes begin with the design and manufacturing of the assembly fixture. By combining detail and assembly GD&T, assembly math data, and gage R&R (repeatability and reproducibility) into all assembly fixtures, Regal ensures that an accurate and reliable assembly process is achieved throughout the manufacturing run. All assemblies are subjected to both in-process and final inspection checks using both destructive and non-destructive testing methods. These continual checks ensure assembly quality and integrity throughout the assembly process.

At Regal, we take pride in producing stampings for our customers quickly, at competitive prices, with superb quality. Call today for a quote on any of your sheet metal stamping requirements.



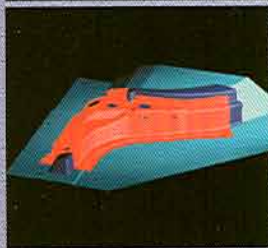
Instrument panel components being assembled using a portable resistance spot welder.

Water pump impeller shown with formed weld projections.



Destructive test samples of a resistance spot weld nugget using the "peel" technique.

REGAL PROTOTYPES



Regal

PROTOTYPES, INC.

6633 Diplomat Drive
Sterling Heights, MI 48314-1423 U.S.A.
T: 586.254.6000 / F: 586.254.6077
E-mail: Regalpro@bignet.net