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laser's edge

The Rapid Prototyping, Manufacturing and Product Development Newsletter

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appraise your needs, stand behind all
of our work, earn your trust, and...

the **laser reproductions** difference
routinely exceed your expectations...
...every time.

learning curves

Laser Reproductions Establishes Competitive Edge with Supreme Clear Parts

Unless there is a cause for differentiation, laser prototyping services can easily be reduced to a commodity.

One way Laser Reproductions has chosen to separate ourselves from the pack is with our expertise in supreme clear parts.

When clients request prototypes of products that will eventually contain clear pieces, such as cockpit lighting on aircrafts, automobile headlight lenses, glass dishes and electronic medical equipment, we prefer to simulate the clear parts so the prototype appears and functions authentically. Since many of the prototypes are tested in real-life applications before the final product is manufactured, they must resemble and operate like the final product to determine whether improvements must be made before taking the product to production or the market. For example, Stanley Electric US Company, Inc partners with Laser Reproductions for clear automobile head and tail light assemblies that are used by manufacturers in actual prototype test vehicles. In addition, Laser Reproductions has partnered with Troemner for clear precision weight set cases used in calibration techniques.

Because it is important for the clear parts to be authentic, the Laser Reproductions team must be precise when creating supreme clear prototypes, which can be generated in two different ways. In the

first process, a clear UV-cured epoxy part is produced in a stereolithography (SLA) machine. The part is then sanded smooth and painted with an automotive clear coat resulting in an optically clear part.

The second method employs RTV tooling and SLA master patterns. This method is used when multiple pieces of the same part are required. In this process a master pattern is produced by an SLA machine. It is then taken to the model development lab where it is sanded smooth, painted black and highly polished. It is then used as the master part to create a silicone tool from which multiple clear urethane parts can be cast.

Laser Reproductions' long history of working with clear parts has allowed the company to establish an impressive reputation and competitive edge. While some of Laser Reproductions' competitors may offer clear parts, many of them are unable to produce them through SLA machines with the same quality and precision. It is because of this and other services provided by the Laser Reproductions team that customers have trusted us with their prototyping needs for many years.

Laser Reproductions has an extensive variety of processes and a vast range of materials to accomplish your rapid prototyping, manufacturing or product development goals. Call 614.552.6905 or visit www.laserrepro.com to learn more.

Daedalus Excel approached Laser Reproductions with a need for supreme clear and show-quality painted prototypes to be professionally photographed and displayed in Troemner's company brochures. As a high profile project, the highest degree of detail, precision and quality was necessary in order to deliver professional products that Troemner can be proud to use as selling tools.



behind the scenes



Profile: Jim Davidson

As the stereolithography (SLA) operations manager, Jim Davidson is an integral part of the Laser Reproductions production team. His daily responsibilities include identifying the most efficient and cost-effective solutions for customers, closely tracking projects, reducing rebuilds and scraps to conserve time, energy and money for the company, and continuously improving production processes to exceed customer expectations and maintain excellent customer relationships. He also works closely with National RP Support to maintain optimum machine productivity.

Jim finds his work with Laser Reproductions extremely rewarding. He is able to learn about new technology and help find solutions to new or common problems in the industry. In addition, he enjoys the Laser Reproductions team, who he describes as hard-working, understanding and fun to work with.

Jim holds a BSBA from Ashland University. He and his wife, Healey, live in Westerville, Ohio with their 22-month-old son, Rowan, and 6-week-old daughter, Harper.

in production



client EMTEQ
project Plane Runway Lamp

EMTEQ, a worldwide leader of commercial and military aviation lighting solutions, contacted Laser Reproductions to assist with a project involving an under-aircraft lighting system used during runway taxing. EMTEQ requested functional prototypes for bulb lenses, bulb frames, and reflectors. Laser Reproductions produced the lenses from the supreme clear parts process. The reflectors were stereolithography (SLA) prototypes that were sanded inside and out and topped off with a vacuum metalized process so they could reflect images. Laser Reproductions' biggest challenge was in assembling the bulb frames and lenses to hide the adhesive for a more attractive and functional product.



client Cornell Law Group
project Retractable Fish Pliers

Dan Cornell, an attorney from California, found Laser Reproductions' Web site during his search for expert prototyping companies that could help him develop a unique invention for fisherman—retractable pliers. Dan requested that the pliers be designed around a purchased carabiner, which would be affixed to fisherman's vest. Dan showcased the partially-metal SLA prototypes made from ABS-like resins at the National Hardware Show and International Convention of Allied Sportfishing Trades (ICAST) Show. At both shows, the pliers caught the attention of large national retailers. Laser Reproductions is continuing its partnership with Dan to get the final product to market.

staff events



Each month Laser Reproductions employees test their euchre skills in a tournament with coworkers. June's tournament winners were Doug Weaver (first place), Octavia Sias (second place) and Michael Blaz (third place)—all of which won \$25 gift certificates. There were no prizes provided to the winners of July-October tournaments aside from office bragging rights.



Excited about the Ohio State Buckeye's football season, Laser Reproductions employees held an in-office tailgate in August with everyone's favorite tailgating fare including hotdogs, hamburgers, chips and salsa and chocolate-covered peanut butter buckeye candies. GO BUCKS!

Rapid Quote Now Live!

On July 7, Laser Reproductions launched its newest Web site addition—Rapid Quote. Visit rapidquote.laserepro.com now and find out how Rapid Quote provides accurate project quotes in seconds flat.

laserworld

Laser Reproductions Showcases New Ads in Time Compression Technologies.

Have you noticed Laser Reproductions' new ads in *Time Compression Technologies* this year? Pick up the latest copy of *Time Compression Technologies* to see Laser's newest ads.



Laser Reproductions Honors Employees

Each week, Laser Reproductions recognizes one employee with a Helping Hand Award for exceptional work performance. The employee with the most Helping Hand Awards at the end of each year receives a bonus, their name engraved on a plaque that hangs in the main lobby next to other company awards, and bragging rights, of course.

Congratulations to the employees who have received awards through third quarter 2008:

Four Awards
John Parsons

Three Awards
Deann Clark

Two Awards
Karen Bordner
Jennifer Gillespie
Bill Levings
Justin Mannon
Scott Vreeland
Travis Behara
Daren Bates
Kenny Davidson

One Award
Michael Blaz
Natalie Bordner
Cynethia Lewis
Bill Lucas
Jason Lukacsko
Todd Mendoza
Doug Weaver
Tyson Bourk
Heather Phipps
Darrel Disbennet
Brian Disbennet
Rose Moore



creating impressions

Profile: EMTEQ

laser's edge speaks with Charlie Hobson, design engineer with EMTEQ, about the variety of products for which his company collaborates with Laser Reproductions, including bulbs, housings and lenses for plane runway lamps.

What do you like most about working with Laser Reproductions?

The Laser Reproductions team has always provided their services in a timely manner with few production delays and delivered parts within the promised lead times and of the promised aesthetic quality. In addition, Laser Reproductions is always willing to extend and perfect their manufacturing techniques to suit our needs. The customer service we receive from the Laser Reproductions team is excellent.

How has this partnership been beneficial to you and your clients?

Laser Reproductions is a valuable partner of EMTEQ. Partnering with Laser Reproductions has allowed me to provide my customers with high-quality products that exceed their expectations and keep my costs down.

Would you recommend Laser Reproductions/use Laser Reproductions again?

I would absolutely recommend Laser Reproductions to other companies looking for a first-rate prototyping company and plan to use Laser Reproductions in the future.

