



Shot Peening Systems by Engineered Abrasives® Are Ready to Work 24/7/365

ENGINEERED ABRASIVES® recently delivered three workhorses to a US automotive manufacturer. The shot peening systems willpeen 8-, 9-, and 10-speed transmission gears 24 hours a day, 7 days a week, 365 days a year. Given the requirements of such a work schedule, Engineered Abrasives® holds a unique position in shot peening equipment manufacturing. Not many OEMs can design, build, and install robust machinery on the scale required to meet such demanding workloads. And not only is Engineered Abrasives® capable of building these machines, the work is done entirely in-house. The three machines are identical and have the following features and benefits:

- Each machine has multiple nozzles with a double chamber pressure vessel for continuous operation. Each pressure vessel has special, customized features built just for high-volume shot peen operations. “EA® has developed these pressure vessels over the many years we’ve been building high-volume index units for the automotive industry,” said Mike Wern, President of Engineered Abrasives®.
- The machines are made from the highest-quality American steel. They are welded and have ground seams. Roofs are 1" steel plate and side walls are ½" steel plate. Machines are lined with EA’s special **Red** polyurethane sheets and durometer material that will outlast rubber 30 to 1. The polyurethane sheets also reduce noise.
- A bucket elevator system for the air blast unit allows the mounting of the Sweco screen separator unit on the floor for easier maintenance and reduced downtime. This is very important when peening 1,000 to 1,500 gears per hour: If no gears are peened, no transmissions are built, no cars are assembled.
- Camco index unit drives designed for precision stopping of robot or gantry loading. The EA®-designed **Red** solid polyurethane is molded to a 1-1/2" thick aluminum table and will outlast any table and reduce the sound levels. These machines run at 77 DBA.
- Three different gantries on each system. EA® installed and interfaced all three units on their shop floor before shipping.
- Media specially designed for these machines gives very good KSI at a lower air pressure which is a big energy savings.

“There are many other features on machines from Engineered Abrasives® that no other air peen manufacturer offers. The reason we can say this is because no other machine manufacturer in the world has a job shop operation like ours that peens gears seven days a week. We also have a washing process to meet the cleanliness specifications of the new programs for transmission and axle gears. The eleven machines in our job shop allow us to make improvements in machine design through real-life testing,” said Mr. Wern.

In addition, the in-house facility can meet production schedules over and above the capabilities of the three machines. They are able to duplicate production processes and this tandem approach assures high-quality and consistent production runs. Engineered Abrasives® also has a support team within an hour of the customer and EA® maintains a large spare parts inventory specifically for these machines.

What Does It Take to Run 24/7/365?

Engineered Abrasives® has ensured that these machines are capable of running 24/7/365. But what about the responsibilities of the end user? The following are just a few of the complex details of a maintaining a high-production shot peening facility:

- A well-stocked parts and supplies inventory, including media, Almen strips and other consumables
- A streamlined and connected workflow throughout the entire facility
- Well-trained machine operators for every shift
- Electric generators and other fail-safe systems
- Redundant production services, like the shot peening service provided by Engineered Abrasives®
- Strict adherence to specifications, regulations and laws
- Dependable suppliers

About Engineered Abrasives®

Engineered Abrasives® is a ISO/TS 16949, ISO 14001, Ford Q1 certified job shop. Founded in 1935, Engineered Abrasives® designs and fabricates standard or custom automated abrasive and shot peening systems. Engineered Abrasives® can analyze any situation and design a machine to meet production requirements. Complete turnkey systems are also available. ●

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