

Split-Molded Urethane Sprockets

Plan Tech uses a split-mold method instead of injection molding to make cast polyurethane drive and gear sprockets, pads and more. The result is a superior product with a process that can be used for custom parts, as well as production runs for agriculture and other industries.

“Most polyurethane products today are injection molded,” says Kevin Healy, Plan Tech. “We use a 2-part cured system that produces parts that are twice as good as injection molding in terms of tensile strength, rebound, compression, etc.”

Plan Tech starts out by making compression molds for each side, creating mirror images of up to 9 parts per mold. Technicians then hand mix each batch of polyurethane and pour it into the molds.

Once the materials have cured, pairs of parts are put together under 50 tons of pressure.

“The pressure chemically bonds the two together, and it then cures as one form,” says Healy. “The process is economical, too. A sprocket that we make and sell for \$10 originally sold for \$25.”

The company has perfected the process, enabling the production of thousands of parts of different sizes each month. Each is perfect and requires no machining. However the process also lends itself to smaller, even individual runs. Custom sprockets can be produced as small as 1/2 in. or as large as 4 ft. in dia.

Existing sprockets with a hub or core that are still in good shape can be recoated, cleaned and refurbished with a new urethane coating. Gear sprockets can also be reverse-engineered or redesigned with a new profile or detail added. In high stress applications, a steel core can be added to increase load capacity.

“If you have a part that is already in circulation, we can engineer, mold and make it in your preferred color and hardness,” says Healy.

Not all the jobs require the double cast molding process. Parts can also be machined out of urethane.

“We do a lot of parts for antique farm equipment,” adds Healy.

A recent custom job was a 50-year old track



Plan Tech uses a split-mold method to make cast polyurethane drive and gear sprockets. “Parts we produce are twice as good as injection molding in terms of tensile strength and compression,” says Kevin Healy.

tractor drive sprocket. Previous coatings had worn away to the original steel core. After cleaning the wheel cores, marks were made for machining. A low cost mold was made to over pour the wheel into a solid blank disk, which was then machined to the exact shape

needed.

Contact: FARM SHOW Followup, Plan Tech, 7031 Shaker Rd., Loudon, N.H. 03307 (ph 877 349-0620; info@plantech.com; www.plantech.com).



Klamp-It Brake Service Tool makes it easy for one person to change the brake diaphragms right on a truck.

Handy Air Brake Service Tool

“Our new Klamp-It Brake Service Tool makes it easy to change the brake diaphragms and/or brake parking chambers right on your truck. It turns a tedious job that normally requires 2 people into a quick and easy job one person can do,” says Perry Adams, P&K Tools, LLC, Phelps, N.Y.

Adams grew up on a dairy farm in New York where the family also had trucking interests. “After more than 30 years of doing my own brake maintenance on trucks, I came up with the idea for an air brake tool.

“The problem is that the rubber diaphragm on air brakes occasionally fails, and to replace it you have to line up the diaphragm, service chamber and parking brake chamber perfectly,” says Adams. “A 2-piece clamp connects the two chambers together, with the diaphragm between them. The problem has always been getting the replacement parts aligned properly, and also getting the clamp to seal properly. The Klamp-It holds all these components in place, while leaving both your hands free to line everything up properly and to re-attach, align and tighten the 2-piece clamp.”

The Klamp-It is equipped with a “hook” at one end and a trigger-type handle on the other end. The operator installs a cage bolt in the parking brake chamber and then backs off the brake’s slack adjuster to pull the push rod out. He places the hook over the push rod and then pushes the handle over the cage bolt, squeezing the trigger handle to pull everything in place.



Two-piece clamp is equipped with a “hook” at one end and a trigger-type handle at other end, making it easy to align replacement parts properly.

The 2-piece clamp is then removed and then the parking brake chamber, allowing the diaphragm to be replaced. The operator then re-installs the Klamp-It with the brake chamber to align and then tighten with the trigger handle, leaving both hands free to install and tighten the clamp.

“The hook has a built-in swivel feature so you can use it either from the left or right side of the air brake assembly.”

You can watch a demonstration video of the tool on his company’s website.

The Klamp-It Brake Service Tool sells for \$149.95 plus S&H. The company also offers a brake return spring installation tool that sells for \$19.95 plus S&H.

Contact: FARM SHOW Followup, Perry Adams, P&K Tools, LLC, 643 S. Marletown Rd., Phelps, N.Y. 14532 (ph 315 359-7397; perrya77@hotmail.com; www.klamp-it.com).



Don Prestien used the fan drive pulley and pto shaft off an old portable grain dryer to turn an old engine-driven, 10k generator into a pto-driven unit.

Engine-Driven Welder Converted To Pto Drive

Don Prestien, Wildwood, Mo., turned an old engine-driven 10k generator into a pto-driven unit that can operate off any tractor’s 540 rpm pto. He took the fan drive pulley and pto shaft off an old portable grain dryer to do the job. The generator mounts on a home-built 2-wheeled trailer that’s designed to hook up to a tractor’s 3-pt. hitch or drawbar.

“I already had the generator, which I had bought years ago but never used because I didn’t have a gas engine for it,” says Prestien. “The generator was designed to operate at 3,600 rpm’s, but all my tractors are equipped with a 540 pto. I calculated that I would need a 2-ft. dia. drive pulley to belt-drive the generator. The pulley from the grain dryer happened to be just the right size.”

He used steel tubing to build a trailer frame that supports the generator and pto shaft and welded 3-pt. brackets onto it. The trailer’s tires and spindles are off an old Deere 110 garden tractor.

The generator is equipped with a circuit breaker box that includes a 220-volt outlet and three 110-volt outlets – one 30-amp and the others 20-amp.

“It works as good as commercial pto-driven generators that sell for thousands of dollars. I use a pair of jacks to stabilize the unit whenever I run the generator. I added metal shrouding over the pulley to serve as a safety guard. I paid \$200 for the generator and already had most of the materials that I



Generator mounts on a home-built 2-wheeled trailer (small pulley shown near fan drive pulley is not used to operate generator).

needed to convert it.

“Since there’s very little mechanical resistance in the pulley drive system, it can generate electricity very efficiently. One time we had a bad wind storm that knocked out the power for about 12 hrs.

“After running the generator to power both my home and my neighbor’s, fuel use came out to just one pint per hour. My small 2-cyl. diesel Yanmar tractor is very fuel efficient.”

Prestien says others could try this idea, too. “There are a lot of old portable grain dryers sitting around that can be used to convert a generator like I did.”

Contact: FARM SHOW Followup, Don Prestien, 3028 Lake Country Lane, Wildwood, Mo. 63038 (ph 314 680-1122; dwprestien@yahoo.com).