

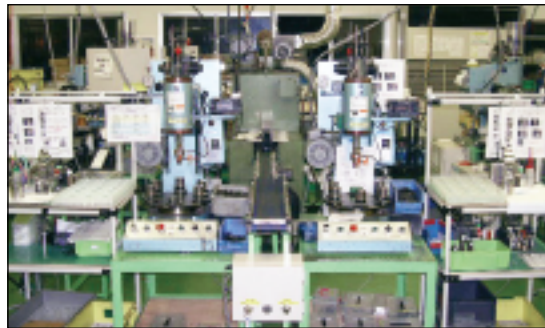
KOUBAYASHI PLANT IMPROVES PRODUCTIVITY

Koubayashi, Japan

Although the Koubayashi plant in Japan mainly manufactures air conditioning clutches for passenger car applications, they also produce other types of clutches that are used in passenger cars. One of the clutches, which is mainly used by Toyota, has made improvements to its production process.

In the previous process, batch production was used (a single part number was completed in one run from start to finish). With eleven different part numbers it took time to run each through this process.

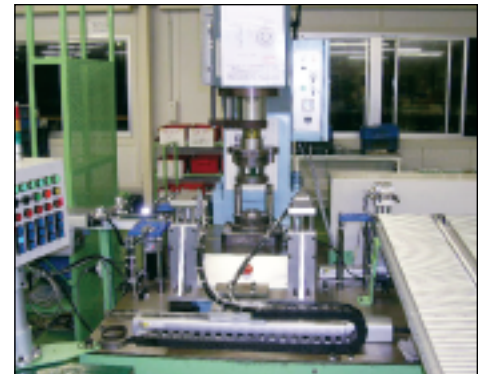
The largest obstruction to quicker assembly time was on the rotor line. Prior to the change, the rotor forgings came in from an outside supplier which were then machined in house. They were then sent outside to



Parallel high and low volume assembly lines

another supplier for the pressing operation and then sent to another supplier for the final plating operation. This required too many parts in transit and too many delays in transportation.

With the new process, all these operations have been brought in house. A new hydraulic press was purchased and coupled to the lathe. The plating operation was also changed to e-coat. This allowed all of



New hydraulic press

these operations to be done in the Koubayashi plant.

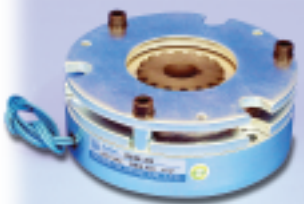
The other significant change was to the assembly line. In the past there was one line handling all eleven different part numbers. Since they needed to be made in a batch process a smaller volume run could not be finished until the higher volume run preceding it was complete. If there was a rush order on a particular line, preceding parts were stopped and pulled to the side to allow an expedited order to go through. This caused a lot of "work in process" and a significant amount of time to put the various "work in process" in and out of storage.

To help reduce pressure on the line a second production line was added that can handle the smaller part runs, or urgent orders. This has allowed the main line to run almost continuously, eliminating the need to handle any work in process and has almost eliminated any type of storage requirement.

Because of these changes productivity was increased by 20% with minimal investment in machinery and no changes in personnel. This production line is now working towards the Japanese "Six S" quality process.

ENVIRONMENTAL UPDATES

All standard industrial products manufactured by Ogura are now RoHS compliant. Labels showing this compliance are being put on the exterior of all shipping boxes. Production is in the process of adding this compliance label to the clutch or brake body. This new labeling is being rolled into production and should be completed for all parts by the end of the third quarter.



Newly added RoHS label

As part of Ogura's internal "Green Procurement Directive", Ogura is confirming with all of their component suppliers the actual amount of any potential unfriendly environmental chemicals. So customers can be guaranteed not only Ogura's compliance, but can also determine the total amount of any hazardous chemicals used in their machinery.

OIC PROFILE

Steve Wright

New Sales Representative



Steve Wright

Hi, I'm Steve Wright. My wife, Merlyn, and I recently purchased G/S Associates, Inc. G/S is a well established mechanical and electrical representative. Merlyn has worked for G/S for 30 years.

I come from a distribution background and have sold both mechanical and electrical components for the last 30 years. I started with King Bearing in the 70's, then moved to Washington Belt & Drive Systems. Before purchasing G/S, I was operations manager for Applied Industrial Tech in Vancouver, WA.

I spend a lot of my leisure time with my wife. We have a cabin on the Oregon coast and spend most of our week-ends there. My wife and I also enjoy hiking and hunting.

I am glad to be a part of the Ogura team and look forward to a long and successful relationship.

OIC RECEIVES THANK YOU PLAQUE FROM OHIO STATE UNIVERSITY TRACTOR DESIGN TEAM

A plaque acknowledging Ogura's contribution to the 2006 1/4 scale tractor design competition was given to Ogura Industrial Corporation from the Ohio State University Department of Food, Agricultural and Biological Engineering.

Ogura provided electromagnetic clutches to the 25 student design team. This year the students won first place in the ability of the tractor to be mass produced efficiently and economically. In the future OIC will continue to support these types of design efforts and Ogura will be supporting the Ohio State University team in 2007. 2007 marks the 10 year anniversary for OSU to participate in the tractor competition. The 2007 competition is also being held in conjunction with the international meeting of the American Society of Agricultural and Biological Engineers, so this will be a great showcase for all the teams participating in the 2007 competition.



Plaque from Ohio State Tractor Design Team

Ogura Website is now available in other languages

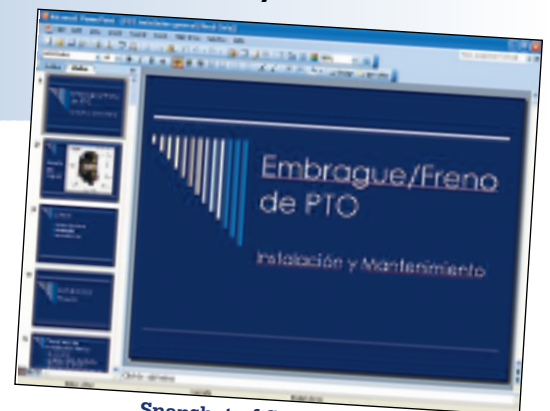


Snapshot of Translation Button on Ogura Home Page

The Ogura website has added a translate button to each page of the site. This gives the website visitor the option to have it translated into Russian, German, Spanish, French and Portuguese. In the future this basic machine language translator will be updated to provide more accurate technical translations.

Installation PDF for PTO Clutch/ Brakes now available in Spanish

The installation and maintenance PDF for PTO clutch/brakes is available on the Ogura website in Spanish. This step-by-step installation and maintenance PDF will be able to supply Hispanic customers with clear instructions on how to install and service Ogura PTO clutch/brakes.



Snapshot of Spanish PDF

APPLICATION STORY

NEW AND IMPROVED TREATMENT FOR RECEDING LAWNS

Many of us enjoy outdoor activities, whether it be a picnic under a shady tree, spending a day at the ballpark, watching our children's soccer game, playing a round of golf or just a lazy stroll down the lane on a summer evening. There's a common denominator that enhances our enjoyment of these activities or simply makes them possible – grass. It's everywhere, and many of us spend countless hours trying to improve what we loosely refer to as our "lawns".

But how does so much grass get planted on such large expanses of land like playing fields or municipal golf courses, and how is it done economically?

With 250 ft. lbs. of torque, the MA-GT-ST1W allows for accurate feed rates without slippage, regardless of speed.

chopped from sod (they also make these machines) into smaller clumps. Simply described, the device takes sprigs of grass and plants them in the ground. The sprigs taken from a 30 square foot piece of sod will plant over 600 square feet, making this type of

planting quite economical. (For those with thinning hair lines, a way to relate to this would be the term "plugs".)

The Sprigmaster Pro and No-Till Sprigger are pull behind units driven by a tractor PTO. The assembly consists of a hopper; a floor feed conveyor, a self-feeding rollback system and a series of coulters and disks which assure correct planting depth of the sprigs. In operation, the ground wheels power the chain which feeds the roll-back system. This "conveyor" delivers the sprigs through a chute and past the coulters for planting. The drive wheels then firm the soil around the sprigs. Accurate distribution is critical.

In his previous design, Jesse found the distribution rates to vary widely. After reviewing his application, the Ogura General Purpose clutch MA-GT-ST1W was recommended. The clutch is driven from the packing tire via a sprocket and chain. Because this is a pull behind device, input speed to the clutch is timed to the speed of the tractor. When engaged, the clutch then powers a series of sprockets which turns the floor conveyor and allows the sprigs to be either broadcast or dropped. With 250 ft. lbs. of torque, the MA-GT-ST1W allows for accurate feed rates without slippage, regardless of



Tow behind Sprig machine



Wheel (ground) driving clutch



Clutch before sprocket is attached

speed. When turned off, the clutch disengages the conveyor and allows the wheels to turn, free of load, for transportation. The high torque and small package size of the ST1W not only improved reliability of distribution, but saved over 5 times the cost of the previous assembly. These features, as with all Ogura General Purpose products, convinced Sprigger's to apply the ST1W to all their sprigging products. (Now if they could only make a tiny unit for hair...)



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Autumn Greetings from the staff of
Ogura Industrial

OGURA IN THE NEWS

BOBBY CLEVELAND WINS US LAWNMOWER RACING CHAMPIONSHIP

Mansfield, Ohio

On September 2nd at the STA-BIL lawnmower racing championships in Mansfield, Ohio Bobby Cleveland, riding the Ogura clutch machine, won the IMOW race. This win gave Bobby 600 points to lock in his position as the IMOW points champion for the 2006 season.

2006 has been an exciting year for Bobby. On July 4th he set an official land speed record for a lawnmower, achieving 85 mph on the Bonneville Salt Flats.

One of the other racers on Bobby's team, Shane Shellnut, who usually races in the BP class, could not complete the season due to personal reasons, but in the first half of the year, Shane was among the series point's leaders.

Watch for lawn mower racing on Speed TV during the month of September and on Saturday October 7th at 7pm.

If you are planning on attending the Louisville Expo Bobby Cleveland will be there along with some of his racing lawnmowers so you can get a first hand look at the machines.

Next year, Bobby may be adding a former lawnmower championship

driver to his team. If this happens there will be a announcement in the 2nd quarter 2007 Ogura Newsletter.

Congratulations to Bobby and his 2006 racing team.



Shane (Insane) Shellnut
doing his famous one
wheel wheelie



Bobby Cleveland takes the
checkered flag and wins the IMOW Division
Championship Race

Ogura Shows New Fire Safety Equipment at the Security and Safety Trade Expo

Tokyo (Big Site),
Japan

Although not widely known, Ogura has a division that makes fire safety and rescue equipment. At the recent Security and Safety Trade Expo, Ogura demonstrated some of their equipment for this industry.

The Ogura rescue equipment is designed to be as mobile as possible. Both the standard jaws and the cutting jaws operate via electro-hydraulics. They utilize a motor and battery identical to what is used on a cordless drill as the power source. This



Electro Hydraulic Mobile
rescue equipment

powerful but light weight design allows individual rescue personnel to move equipment into an accident site very quickly. (Last year at the Amagasaki train accident in Japan, Ogura equipment was used to help extract people. The

Tokyo Fire Department now has 24 of the Ogura systems.)

Besides rescue tools the safety airbags and photoelectric fire sensors were also on display. If you would like more information on Ogura's fire equipment please visit www.oguraclutch.co.jp and click on the disaster relief equipment.



Slippery conditions for Bobby and the
IMOW Ogura clutch machine