



PLANT #1 PROCESS CHANGE IMPROVES ASSEMBLY TIME

Kiryu, Japan

Ogura's plant #1, in Kiryu Japan, manufactures clutches and brakes for industrial applications. Because of the variety of industrial products produced and the varying lot sizes, final assembly had a tendency to become backed up especially at the end of the month.

In the past, cell production systems and other assembly systems were tried. However, because of the small manufacturing lot size of industrial orders, visualization of the parts flow was difficult, which hindered production synchronization. It was also a problem because as sub-assembled parts piled up, basic logistics became an issue with parts carts blocking the aisles. It was decided that the only way to solve this issue was to move the model shop and eliminate the Parkerizing line,

which was adjacent to the assembly area.

The Parkerizing line (manganese phosphate coating) had been a part of plant #1 since 1984 but the equipment was getting older and costing more

for maintenance. It was decided that the time was right to discontinue the process and remove the Parkerizing line. (Parts are now plated.)

The model shop was moved from the front of the assembly area over to where part of the old Parkerizing line used to be. This allowed a much improved process flow. It allows for multiple lines so it is now visually apparent which products are at which stage of final assembly. Hardware bins and shelves were also relocated to support the products going through individual lines.

This was a significant change to the final assembly area and the whole change had to happen without any major interruptions to current production orders.

The net result was that the removal of the Parkerizing line has eliminated the cost of one operator and the entire cost of maintenance. The overall effect has been a faster flow through final assembly with the net result being decreased lead time. This process change was a major step forward for improved delivery of plant #1 products. •



Old assembly lines showing parts backup



New assembly lines with better visualization and flow

OGURA HELPS SUPPORT TSUNAMI AND EARTHQUAKE VICTIMS

The earthquake and following tsunami that hit Japan on March 11th was devastating. Japan is still coping with a crippled nuclear power plant. There are over 100,000 evacuees and a death toll that may hit 30,000 people.

The Ogura manufacturing plants in Kiryu were far enough inland and south from where the quake hit so they were not damaged and no Ogura employee was affected by the quake directly.

To help support the people in the devastated area, Ogura held fundraisers and supply rallies. Besides a significant amount of money being raised, 13,000 noodle cups, 10,000 rice balls, 2,800 bottles of water and many other supplies were loaded and delivered to the people in need. •

ISO AND JIS INSPECTIONS COMPLETED

Kiryu, Japan

This quarter, Ogura's annual ISO/TS16949 and ISO9001 certification was completed. Ogura has passed and has been recertified for these standards.

In addition to the ISO inspection, a JISQ9100 stage one inspection was completed. This specification refers to the aerospace and defense industry standard. Stage one is mainly reviewing the inspection from a documentation standpoint but it also prepares for the more detailed stage two inspection. Stage two inspection is the actual process control and manufacturing process inspections. These should be completed by June. ●



JISQ9100 Instruction

OGURA HELPS SPONSOR GREENCHOICE

Netherlands

Greenchoice Forze is a student hydrogen racing team. The team designs and builds fuel cell powered racing vehicles. The team competes in the Alternative Class 1A of the Formula Student competition in



Fuel cell powered class 1A race kart

the United Kingdom. They also showcase the cars in a number of other races and alternative fuel demonstrations throughout Europe.

To help Greenchoice produce a smaller hydrogen system Ogura is providing one of the TX series air pumps to help operate the proton exchange membrane (PEM) fuel cell. The fuel cell provides electricity to run the motors in the kart. The small fuel cell provides about 47 hp, which can easily propel the kart. For more information visit the Greenchoice website at <http://www.formulazero.tudelft.nl> ●

Application Story

WHEN YOU NEED TO CUT SLOPES WITHOUT FAIL, CALL **ROBOFLAIL**

The "RoboFlail" remote control mower is made in Germany and has been developed by the innovative KommTek company. KommTek produces the mower based upon a robotic track vehicle that was originally designed by the Niko company for work in vineyards.

The first idea about making the RoboFlail track type robotic mower was sketched out in 2007 and the first prototypes were running by April of 2008.

The mower is made for rough cutting applications like reservoir, canal or railway embankments or in applications where, for environmental reasons, it would be dangerous for an operator to be present. The unit has twin independent tracks with full zero turn capability. It can mow on inclines of up to 50° and has an operational range of about 1,000 feet. The standard cutting width is 48 inches and the unit



*Cutting 3 ft. tall brush
on steep slope*

can come equipped with standard blades, a flail system or a mulching system. With the remote control, you can start/stop the machine and control direction and speed. It even has a cruise control option. Features like the self-leveling gas tank are important especially when mowing steep slopes.

Since the RoboFlail is designed for cutting in a very rough environment, the components used in the machine have to be of the highest quality. The unit can cut trees up to two inches in diameter requiring significant torque to the cutting blades.

Because of the high torque and high quality requirements of this machine, the Ogura PTO clutch/brake, model GT-3.5 was chosen. The clutch/brake engages/disengages when the switch on the remote control is activated. When the clutch is turning the blades it is delivering over 250 foot pounds of torque. When the clutch is required to disengage, the mechanical brake components in the PTO help to slow the blades to a stop.

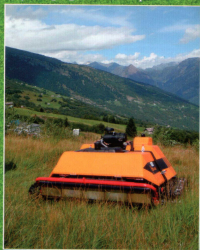
The high quality long life bearings provide worry-free operation since RoboFlail can be used in some very remote locations.

Safe, powerful and effective is KommTek's motto and also their customers' requirement. The Ogura clutch/brake is proud to be part of that motto.

Ogura's wide variety of lawn and garden clutch/brakes are used every day by people.... as well as robots. ♦



*Ogura GT 3.5 PTO Clutch/
Brake*



RoboFlail in the Alps

In The News

OGURA RECEIVES PANASONIC SUPERIOR SUPPLY AWARD

Kiryu, Japan

Last quarter, Panasonic presented Ogura with its Superior Supply Award. This award is given for providing both low cost and high quality products. This is a joint award between Ogura Japan and Ogura China. The clutches were designed and the manufacturing process was developed in Japan but the actual production of the high volume clutches came from Ogura's plant in Dongguan, China. •

OGURA HELPS SUPPORT UNIVERSITY OF TOLEDO

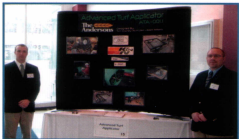
Toledo, Ohio

A design team located at the University of Toledo was in the process of designing a new turf applicator. To control the rotational function of the applicator roll, the team required an electromagnetic clutch.

The team contacted Ogura and a general purpose clutch rated at 110 ft. lbs. was suggested.

The end result was that the machine worked flawlessly and passed all tests. A

"Thank You" letter along with pictures was sent to Ogura and the important "Ogura Sponsor" sticker was placed on the machine. •



Turf applicator design presentation

LAWNMOWER RACING HITS JAPANESE PRIME-TIME TELEVISION

McDonough, Georgia

Bobby Cleveland, world record holder for the lawnmower land speed record and Ogura sponsored lawnmower racer, was recently contacted about teaching a Japanese com-



Daisuke on the BP machine with Bobby Cleveland

edian/actor the fine art of lawnmower racing. The show, which is very popular in Japan with 17-18 million viewers, aired on May 15th. It is an adventure variety television show called *Riddles at the End of the Earth*. The show's premise is that the main actor on the show, Daisuke Miyagawa, travels around the world and competes in local sports and/or events in different countries.

The TV crew came over for the STA-BIL Southern Shootout. The original intention was to have Daisuke race in the BP class but when he saw how fast the mowers could actually go, it was decided, for safety, to keep him in the AP class.

Although not shown on television, Daisuke

finished 4th and took home a trophy. For more information on U.S. lawnmower racing or to view the pictures, please visit www.letsnow.com or <http://www.facebook.com/USLMRA> •



Daisuke gets his 4th place trophy