

## NEW AUTOMATED TORQUE TESTER IMPROVES MICRO CLUTCH PRODUCTION

Tokan, China

Since July of 2005 some of the MIC clutches for office automation equipment have been made in China. Between the plants in Japan and China over one million MIC clutches per month are currently being produced. The most critical feature in the MIC clutches is being able to produce rated torque. Unlike other manufacturers Ogura has a one hundred percent inspection for torque on the MIC clutches. In Japan, where the same operators have performed this function for many years, they are very familiar with reading the torque gauges. However, in China, where the turnover rate can be as high as 5%, there is difficulty keeping trained operators.

To save on the time involved in training new operators the plant management asked Ogura's robotic design engineers in Japan to come up with a new type of machine that could do automatic testing. One of the biggest challenges with making this machine was to change the way torque values are measured. Typically clutch torque values are rated in the static condition. However, during operation in a customer's machine they are actually performing in a dynamic condition.

To simulate this dynamic load an Ogura OPB magnetic particle brake was used. Specialized electronics that measure the in-rush current, temperature and a



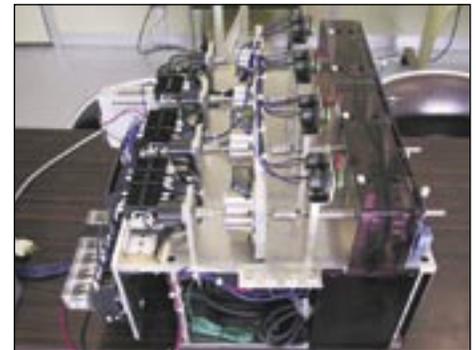
MIC assembly line



Torque test station



Old torque test fixture



New multi-clutch torque tester

rotary encoder to measure rotation over time, pinpoints whether the clutch is providing adequate torque or not.

If the torque is good the words "OK" backlit by a blue light lights up. If it is not acceptable the letters "NG" backlit by a red light lights up, so the operators, without any specialized training, can determine if the clutch meets the torque specs.

Each machine, although run from one main motor, can test multiple clutches at the same

time. This new machine was so successful that a total of 8 were installed in the China plant and these are expected to dramatically improve not only quality, but production efficiency.

This machine is a breakthrough in current clutch testing because in most cases testing dynamic torque can damage the friction surface. So until this machine, dynamic torque was always calculated by testing static torque. Now clutches are tested directly to a customer's application needs.

## NEW SALES REPRESENTATIVE PROFILE



Wide Automation's head office

## Wide Automation Sales Representative

Italy

Ogura is very pleased to announce the signing of a new sales representative to cover Italy. The company, Wide Automation, has more than 20 years experience in the Power Transmission business. They specialize in the sales of factory automation related products. Wide Automation is expanding their product portfolio with Ogura's high quality products to meet the demands of their customers. The company has 16 outside sales people that cover all of Italy. Each is highly trained with a technical background. Ogura is looking forward to working with Wide Automation and expanding their sales for Ogura products in Italy.

## Toyota Production Systems (TPS) seminar held

Kiryu, Japan

On October 20th a seminar on the Toyota Production System (TPS) was held at Ogura's main corporate office. Approximately 40 personnel from manufacturing management attended the seminar.



TPS attendees

Toyota continues to strengthen their position in the automotive market by reducing manufacturing lead times and making sure that all employees are fully competent through thorough training. TPS is the method Toyota uses to accomplish this goal. It centers around 2 main principles. The first is: Just in Time Delivery, which is based on standardization of subcomponents. The goal is to produce products that the customers need in the exact quantity and at the exact time that they are needed. The

second is Automation: to create production systems that can quickly respond to any potential subcomponent line problem.

Although the system was developed around Toyota, the exercises revolved around Ogura's production line so the attendees could use practical scenarios.

## Kawasaki Jet Ski Ultra 250XJ voted Ship of the Year

For 2007 the Japanese Maritime Association has voted the Kawasaki Jet Ski Ultra 250 as the Ship of the Year. This award is normally given to much larger vessels, but because of the innovation that Kawasaki put forth with the new 250 design it has won the award for 2007. The 250 joins an elite line of tankers, cargo ships, ferries and cruise ships that have all previously won this honor. A key contributing component to the success of the 250 has been the Ogura Supercharger, which helped take a 1.5 liter engine from 150hp to 250hp.



2007 Ship of the Year award

# MAKING A CLEAN SWEEP

Anyone who has maintained their own yard knows the work, effort and especially time involved in keeping up appearances. Raking and bagging leaves, pine needles and clippings can be a thankless chore. Multiply all that

**The 60 inch broom is driven by an Ogura GT2-SC01 clutch. The clutch had to undergo extensive testing before acceptance on the Sweepstar 60.**

many times over and you'll begin to appreciate the task facing a golf course supervisor, not just once a week, but daily.

To keep 18 fairways and greens, trimmed, aerated and

free of debris demands constant attention and an array of specialized equipment.

Smithco, headquartered in Wayne, PA manufactures a line of machinery devoted to golf course maintenance; sprayers, bunker rakes, greens care equipment and a full line of sweepers. At their plant in Cameron, Wisconsin, Smithco West builds a versatile line of sweeping and vacuum equipment designed to meet requirements of golf course, parks and municipal grounds care maintenance. Speed and efficiency are key factors in Smithco's designs. Leaves, paper, soft drink bottles, grass clippings and aeration cores are a few examples of the materials that Smithco sweepers remove.

Smithco's Sweepstar 60, is a 31 horsepower, self propelled sweeper with a 60 inch rotating broom. Scott Taylor, Smithco's chief engineer explained that

the Sweepstar 60 is most commonly used for park maintenance where almost any type of debris is encountered. He noted that branches and wet leaves are commonplace in the fall and the system is designed to handle them as easily as grass clippings in the summer months.

The 60 inch broom is driven by an Ogura GT2-SC01 clutch. The clutch had to undergo extensive testing before acceptance on the Sweepstar 60. Scott Taylor noted that the clutch provides several advantages over a directly driven reel system. The sweeper is disengaged during transport mode or otherwise not required.

This reduces wear and tear on component parts and extends machine operating life. Fuel consumption is also reduced, a very important aspect of operating cost in this age of \$3.00 plus gasoline.



**Ogura GT2-SC01**

Disengaging the load also facilitates cold weather starts on diesel engine models.

Soon to be released is Smithco West's new Sweepstar V62, available with a combination



**Smithco's Sweepstar 60**



**Smithco's Sweepstar V62**

sweeper and vacuum with a working width of 62 inches in a self contained pull-behind package. The GT2-SC01 has been selected for this model as well. On this machine the broom fingers are designed to lift embedded materials up for vacuum collection. The clutch drives the impeller that acts as both a vacuum source and a mulching system, breaking down branches and chopping leaves and twigs before blowing them to the collection bin.

Ogura is proud to be associated with a company like Smithco and pleased that after rigorous testing Ogura quality passed all operational objectives. Smithco sweepers and Ogura clutches, another example of how everything about an Ogura clutch "works."



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# Ogura Industrial



## OGURA IN THE NEWS

### “THE SEARCH FOR INTELLIGENT BRAKES”



Power Transmission Engineering article

#### Power Transmission Engineering

In the fall issue of Power Transmission Engineering an article on Ogura's spring applied brakes was published, showing how the Ogura SNB0.2 brakes help hold the antennas in position from strong winds.

The Allen Telescope Array at Hat Creek, California is a joint venture between the University of California, Berkeley and the Seti (Search for Extraterrestrial Intelligence) Institute of Mountain View, California. Once the Array is complete approximately 350 antennas will be built. Ogura is proud to be a part of the search and hopes to help contribute in some small way in finding ET.

### OGURA SHOWS PRODUCTS AT THE FIRST GIE/EXPO



Ogura show personnel ready for action

#### Louisville, Kentucky

October 2007 was the first year for the combined GIE show and Louisville Expo. Although the show attendance seemed comparable to last year, the quality of the attendees seemed greater because of the combined shows. All five series of the Ogura PTO clutch/brakes, from GT1 through GT5, were on display for customers to view and ask questions about. Many positive comments were received from the dealers and distributors that currently use Ogura products, and a strong desire to use Ogura products was voiced from dealers and distributors that did not have Ogura products on their machines.



Customers being helped with questions on clutches

### AKABORI PLANT RECEIVES SAFETY AWARD

#### Gunma, Japan

On October 19th an award ceremony was held in Saitama City honoring Ogura's Akabori manufacturing plant for having a safe work environment. The award is given by the Gunma Prefecture Safety Council and is given only to manufacturing facilities with superior safety records. Throughout all of the Gunma Prefecture only three companies were given this award.



Akabori Safety Award