

## CEREMONY HELD FOR NEW SANSEN SITE

Japan

Approximately one year ago, Ogura acquired Sansen Co. Ltd., with the primary goal of utilizing the manufacturing facility that existed in Thailand.

Last quarter, a ceremony was held for a new building site for Sansen Co. Ltd., in Japan. September, in Japan, is believed to be the month with the most harmony, with its long nights, rice harvesting and blooming chrysanthemums.

The Shinto ceremony of purifying the new building and offering prayers for construction safety was attended by Mr. Ogura, president of Ogura and Mr. Akiyama, president of Sansen Co. Ltd., as well as other senior officials. ●



Mr. Ogura, Mr. Akiyama, and other senior officials

## NEW PURCHASE BUTTON ADDED TO OIC WEBSITE

Somerset, NJ

Many visitors to OIC's website request information on where they can purchase aftermarket products. To help them, a new button has been added to the home page menu called "Purchase". When customers click on this button, they can find links to distributors and also back to original equipment manufacturers. By being directed to approved sources, customers can be assured they are getting authentic Ogura replacement products for their machinery. There is a lot of misdirection on the web regarding replacement parts, and in some instances, customers were buying what they thought were Ogura original clutches and brakes. This type of direct linking will avoid customers unknowingly purchasing counterfeit products. ●



New purchase section

## NEW PRODUCT/MARKET BROCHURES AVAILABLE FROM OGURA

Somerset, NJ

Ogura Industrial has created six new product/market brochures highlighting the many design advantages for a wide variety of industrial and mobile clutches and brakes.

The first industrial brochure shows the traditional single face, multiple disc and tooth electromagnetic clutch designs. The second industrial brochure concentrates on holding brakes. This is the fastest growing industrial market since holding brakes are used on robotics, medical, and many of the latest automation equipment for both manufacturing and warehousing. The last industrial brochure features hysteresis and magnetic particle clutches and brakes for tension and torque control applications.

The mobile brochure covers the traditional engine driven pump and compressor applications and also highlights the new MMC high torque series. The general purpose brochure features the new 1.5 clutch series with both flange output and integrated pulleys. The PTO brochure highlights the new patented clutch brakes from Ogura for lawn and garden applications.

These new brochures are available from your local sales representative or by contacting Ogura Industrial directly. ●



# Ogura Sales Rep Profile

**Lennie Iuliano**  
**PALS-Sales, United Kingdom**

**H**i, my name is Lennie Iuliano and I represent Ogura in the United Kingdom and Ireland.

My first job was with Gates Hydraulics Ltd., responsible for new customer solutions from first off sample right through to a production item on the customer's machine.

After that, I joined GL Rexroth Ltd. now Bosch Rexroth as mobile applications engineer responsible for new system designs and applications on mobile equipment.

Just before starting PALS-Sales I worked with Lenze Ltd. with responsibility for coupling technology sales including products such as clutches, brakes and mechanical power transmission solutions.

I look forward to developing the Ogura business and meeting new and old customers.

Outside work, I spend time with my family and friends, I am happily married to my wife Silvana and we have two fantastic sons working within the computer industry. We enjoy fine dining and relaxing. ●



*Lennie Iuliano*

## MECHANICAL FAIR

*Kiryu, Japan*

**L**ast quarter, Ogura took part in the 26th Mechanical Fair 2019 organized by the Japan Society of Mechanical Engineers (JSME). The slogan for the fair was “come see, touch and get a gift”.

The fair encourages students to experience machines in action and to stimulate an interest in science and engineering. Ogura exhibited two demonstration machines, one with a torque sensor and the other one with a remote control operated robotic arm equipped with an ultra small holding brake. Students had fun operating the demonstration machine with the torque sensor, trying to lift candies without breaking them.

Over 400 school students came by the Ogura booth this year to see the Ogura components and operate the machines.

Ogura believes that these types of events will help children to expand their interest in science and technology. ●



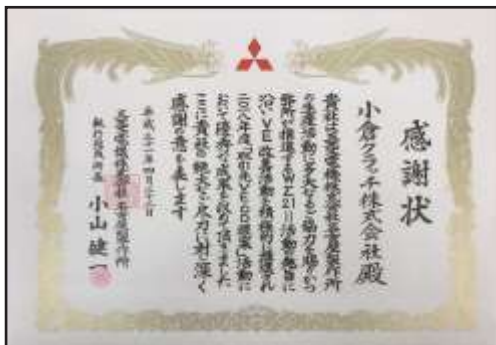
*Students operate Ogura's demonstration machines at the fair*

## APPRECIATION FROM MITSUBISHI ELECTRIC

*Kiryu, Japan*

**L**ast quarter, the Mitsubishi Electric Corporation Nagoya Works presented a letter of appreciation to Ogura for their valued engineering and cost reduction efforts.

In addition, Ogura was able to respond to the larger than normal demand for production orders for power off brakes for small motors. ●



*Mitsubishi Electric Letter of Appreciation*

## MINI-INTERNSHIP HELD

**L**ast quarter, students from Gunma University had a mini-internship with Ogura's technology department. The students came to get some real-world experience outside the classroom, and to get some practical experience on what may be required within their chosen field of study.

Over five days, real workplace challenges were given to the students and Ogura management was impressed to see the students' enthusiasm and results. The students thanked Ogura for giving them the opportunity to “learn even more than they had imagined.” Ogura hopes that this internship will help students use this practical knowledge to enhance their professional future. ●



*Student enjoying mini-internship*

# Application Story

## *Electric Supercharger Used for Next Generation Cold Weather Emission Controls*

**D**uring 2015, a major class 8 truck engine manufacturer approached Ogura with a challenge; to accurately deliver air, under pressure, for a controlled burn in a diesel-particulate system cleaning cycle with a one million mile service warranty. In that application, a TX02 fitted with an Ogura electric clutch was used, driven by a poly-v belt coupled to an Ogura TX02 supercharger to deliver fresh air.

One of the shortcomings of the clutched Ogura TX02 supercharger, in that application, was that the blower shaft speed (and hence, flow) was derived from the engines accessory drive belt ratio. This meant that to control the amount of air, the engine was required to increase or lower RPM as required or a complicated air throttling valve system was needed.

Today, those same engineers who had worked on the previous challenge, were tasked with now meeting the 2021 guidelines for reduced emissions, but now at extremely cold temperatures.

They designed a new system driven by an electric motor, so air flow is then independent of engine RPM, and controlled by computer software, not engine RPM.

With pressures to 12 PSI and flows needed to 60 M<sup>3</sup>/Hr, the TX02 previously used with a clutch was the perfect candidate for this new requirement but instead of using a clutch, the customer tasked Ogura with delivering a close coupled motor/blower combination in one small lightweight package.



*Ogura Superchargers*

housing and rotors are made from aircraft grade aluminum. Their dual rotors are coated with a unique high temperature coating for long life and an excellent tolerance to external airborne contamination.

This package had to be mounted under the truck's floorboards so robustness and small size were critical. So, Ogura teamed with Parker Hannifin Corporation, Electromechanical & Drives, North America to produce a new configuration of their new high efficiency GVM Brushless 24 VDC motor.

With speeds to 7,000 RPM and flexibility to match customer needs, this new electrified Ogura TX02 supercharger has applications today in fuel cells, emission systems as well as small engine supercharging for overall higher horse powers and increased fuel efficiency.●



*Engineers were tasked with meeting new guidelines for reduced emissions, but at extremely cold temperatures*

The TX02 is a roots style blower whose internal dual lobes rotate smoothly at 90 degrees to one another. Precision beveled timing gears are used to maintain precise timing of lobes. Exceptionally close internal tolerances between rotating and stationary parts result in very high efficiencies and produce repeatable performance for many years with zero maintenance. Ogura supercharger



*Parker TX02*



## Ogura in the News

### OGURA'S 25<sup>TH</sup> YEAR AT THE GIE EXPO

*Louisville, Kentucky*

**F**or the 25<sup>th</sup> year, Ogura participated in the GIE Expo in Louisville, KY. This year, Ogura's booth was upgraded to include four larger external monitors showing Ogura's animation

and installation procedures for PTO clutches and four vertical internal monitors showing customers and applications in the four main product lines for outdoor power equipment. These are:



*Booth support staff of OIC personnel and sales reps*

commercial mowing equipment, consumer mowing equipment, forestry and ag and pump applications like pressure washers and spraying equipment.

A single sheet, quick reference troubleshooting guide was handed out to many of the booth visitors. Dealers as well as end users were able to ask questions on clutch performance and visually see product differences from over 30 clutch models on display. ●



*Busy booth traffic all three days of the show*

### NEW SLIPPER CLUTCH RELEASED BY OGURA

*Kiryu, Japan*

**O**gura has announced its first slipper clutch in the ORC product line for motorcycles. Slipper clutches are primarily used in motorcycle racing and in high performance motor bikes to provide control during a hard downshift. By having the clutch slip a little bit, it prevents the wheels from skidding, allowing the driver to maintain more controllability.

This new clutch was designed using the same experience gained from Ogura's designs in four wheel drive ATV clutch technology. The slipper clutch features three levels of adjustment and slip torque. Unlike some other slipper clutches that use just a cam, Ogura's design incorporates a ball cam mechanism to provide a smooth and stable torque. ●



*New Ogura slipper clutch*