



## Eaton's new DuraForce products help trailer the load

**Location:**

Osaka, Japan

**Segment:**

Heavy cargo transport

**Challenge:**

Meet customer's short lead-time for pump and motor requirements.

**Solution:**

Shorten lead-time through full Eaton endorsement and close communication between customer, axle supplier, and Eaton and Linde teams.

**Results:**

Eaton and axle components arrive on time to meet production schedule.

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*Despite high customer demand, Eaton® high-pressure pumps and motors arrived just in time for installation on an 18-axle carrier.*

**Background**

It takes a lot of hydraulics muscle to move oceangoing ships, but the job is not too weighty for Eaton's new DuraForce™ high-pressure pumps, motors, and control valves.

Developed in a global strategic alliance with Linde, the Eaton products are performing wheel drive, steering, and jack-up functions on all 18 axles of a customized 500-ton-capacity carrier built by Toyo Trailer Company, Ltd. of Osaka, Japan. The 59-foot (18-meter) carrier was delivered in July 2011 to an Asian shipbuilder.

The business generated \$1 million for Eaton in 2011.

**Challenge**

Toyo Trailer turned to Eaton Industries Ltd. in Osaka for hydraulics expertise for the unconventional trailer

design featuring eight drive axles and 10 non-drive axles. Eaton sales and engineering personnel met with representatives of Toyo Trailer and Okubo Gear Company, the axle provider, to discuss hydraulic system requirements and how Eaton DuraForce pumps and motors could respond to those needs.

A delay in the customer's component selection meant Eaton would need to provide the DuraForce products, which were in high demand globally, in a much shorter lead-time than originally discussed.

Compounding the delivery deadline was the fact that Japan's catastrophic March 2011 earthquake delayed Okubo's receipt of axle components that needed to be integrated with the Eaton hydraulic components.



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### Solution

Eaton and Linde management personnel fully endorsed the business by committing adequate resources to all functional areas. At the same time, Eaton sales personnel worked to gain customer trust by communicating each procedural step with Toyo Trailer personnel and implementing a more efficient shipping process.

But that's not all. Eaton also worked with Okubo to locate alternative axle component suppliers that could deliver the needed parts on time.

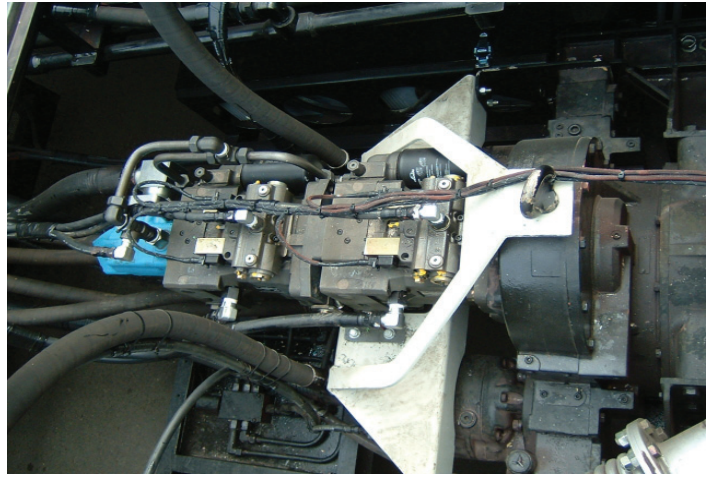
### Results

Eaton's full support enabled Eaton DuraForce products and the axle components to arrive in May 2011—just in time to meet Toyo Trailer's production schedule at its Dalian, China, facility. And when the customer needed assistance making hydraulic system adjustments during

the carrier's assembly, Eaton immediately responded to the midnight call for help.

"Meeting Toyo Trailer's production requirements was a direct result of Eaton's systems engineering strength, value-added products, and the unified commitment of our sales, engineering, and management teams to meet customer needs," said Eaton's Yukimune Shibayama, sales manager—West Japan Division.

As a result of this success, Toyo Trailer has committed to two DuraForce product orders in 2012 and four more in subsequent years.



*Eaton DuraForce pumps, motors, and valves are equipped on the trailer's hydraulic system that powers 18 axles.*

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