



COOL UNDER PRESSURE

LPG DISTRIBUTION • FRANCE'S LEADING BOBTAIL MANUFACTURER RELIES ON THE ACCURACY PROVIDED BY PERNIN'S FLOWMETERS AND BLACKMER'S PUMPS

THE SMALL TOWN of Saint-Amand-les-Eaux, nestled in the far north of France not far from the Belgian border, may seem an unlikely place to find the country's largest manufacturer of bobtail trucks and trailers for the distribution of LPG. But the town, home to around 17,000 souls, is also home to Robine Trucks, which expects to be responsible for around 80 per cent of national output of the vehicles needed to keep France's homes and businesses warm through the winter.

Being located so far away from the traditional manufacturing centres in France does not, however, mean that Robine is behind the trends that set the pace for modern LPG delivery vehicles.

"As managing director of Robine, it's important for me to find equipment for our Robine trucks that is reliable and has a good level of quality," says Anselme Danthois. "We are always looking for products that will be in accordance with

our quality standards when we build our bobtails. And we're always trying to make the customer happy."

The loading and delivery of LPG requires finely calibrated systems that will ensure that not only is the LPG delivered in precisely the volume that is required, but that it is done in the safest manner for the customer, truck driver and environment. To that end, recent technical advancements now allow remote control of all loading and unloading operations of the bobtail, which Robine builds with capacities of 13,000 to 19,000 litres and the ability to hold up to 8.5 tonnes of LPG.

"The remote controls every aspect of the delivery process," says Danthois. "The driver doesn't have to touch any other devices when he has the remote control. This allows the trucks to be safer. In case of an emergency, push the red button and everything stops, including the engine of the truck."

ENSURING ACCURACY

While ensuring the ultimate safety of the delivery process is top of the must-do list for the bobtail builder, a close second is deploying a metering system that ensures accurate delivery volumes at every stop and for every customer. This requires a metering system with unquestioned reliability, both in performance and volumetric accuracy.

For many years, the preferred metering system featured a turbine meter that would measure and record LPG flow from the bobtail to the customer's storage tank. In recent years, however, LPG tanker builders have been installing a different technology – the mass flowmeter – to measure delivery volumes.

"The advantage of the mass flowmeter is that there are no pieces that move: it's an electronic system that calculates the vibrations of a microtube inside it to measure the amount of liquid that is being pumped," says Christian Marzin, regional manager for Pernin Equipements, a systems and equipment manufacturer and distributor dedicated to the French LPG, diesel fuel and heating oil markets.

"One of the problems in the past was the need to replace parts on meters. With the mass flowmeter there is no maintenance. You just test it every year to see that the flow measurement system is correct. In addition, with the mass flowmeter there are no problems with repeatability, it is perfect."

PUMPS AT THE CORE

A critical component in the delivery system is the pump through which the LPG passes before making its way to the meter. Only pumps that can reliably deliver specific, steady, non-pulsing flow rates in sometimes severe operating conditions and through thousands of delivery cycles can be used for this crucial task. That's why Robine Trucks has chosen to outfit its LPG bobtails and semi-trailers with Blackmer's 3-inch LGL Series sliding vane pumps.



ROBINE'S OWN EXPERIENCE AND EXPERTISE, COMBINED WITH EQUIPMENT FROM PERNIN AND BLACKMER, COMBINE TO CREATE A RELIABLE AND HIGH QUALITY BOBTAIL TRUCK

"With the Blackmer pumps, it's a perfect system," said Marzin, who sells and distributes Blackmer pumps to the French LPG market for Pernin. "The Blackmer pump is completely adaptable to the system, no matter what type of meter is being used."

LGL Series pumps are ideal for the task because they are equipped with standard features that include cavitation suppression liners that reduce noise, vibration and wear; replaceable casing liners and end discs that allow for easy rebuilding of the pumping chamber to like-new condition; ductile iron construction with internal relief valves; self-priming and dry-run capabilities; a double-ended drive shaft arrangement that allows for clockwise or anti-clockwise shaft rotation; vanes that can be replaced without removing the pump from the piping system, which eliminates maintenance concerns and costly downtime; the ability to be powered by the vehicle's PTO drive or an hydraulic or electric motor; and, perhaps most importantly, they are ATEX-certified for use in explosive, hazardous or dangerous operating atmospheres.

The specific 3-inch LGLD3 models that Robine uses can deliver flow rates up to 1,325 litres per minute (350 gallons per minute) at maximum differential pressures of 10.3 bar (150 psi) and maximum working pressures of 24.1 bar (350 psi).

"For all of our trucks, we use only Blackmer pumps because they can be used with every type of metering system," says Danthois. "It's good for our customers to have only one kind of pump so they only have one kind of pump to maintain, and if they have to change a pump, they know it will be a Blackmer. If it works properly with different meters, there are no problems, and if they are happy, they will want to use the Blackmer pumps."

STAY ON TOP

Being the top producer of LPG bobtails and semi-trailers for the French market comes with a certain pressure. Robine Trucks knows that it will only continue to have success if it partners with companies that are as committed to its success as they are. Early indications are that by

partnering with Pernin Equipements and Blackmer, Robine Trucks has laid the foundation for many successful years.

"Robine Trucks also sells parts, but it makes it easier if there is only one kind of pump, and we only use Blackmer pumps," says Danthois. "We want to sell trucks, we don't want to repair trucks. We don't want to have trouble with the trucks we build, so we choose reliable equipment, such as the Blackmer pump. As a manufacturer, we are also quite happy with the support we get from Blackmer and our collaboration with Pernin. Our customers also benefit from the support we get from these good and reliable partners." HCB

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