

July 2023

Fogmaker News

Technical and market related information for our partners

PFAS Free for the Future

Page 6

FOGMAKER

INTERNATIONAL AB

Contents

Editorial page - Lars Alrutz	3
Pressure Gauge Quality Issues.....	4
Eco 1, PFAS Free for the Future	6
2023 Trade Shows.....	8
Spring Travels.....	10
World’s Oldest Bus.....	12
Technical Notes	13
New Customer Brochures	14
Summer Hours	15



Lars Alrutz, CEO
Fogmaker International AB.

A word from the CEO

Dear Partners,

This year has started off according to plan with an increase of 25% in total sales. We continue to take market shares and volumes, and the large OEM:s are back at similar or higher levels than pre-covid.

At Fogmaker we continue to employ new personnel to handle the growth. From September 1, we will have a new CFO, Peter Vannemyr, with a controller background. He will be involved in the total business chain from supplier to end customer. We are also employing two new KAMs. One is appointed internally, Niklas Björnvik, and one will be employed from the outside. When recruiting, we always look for talent and diversity. We need to be able to handle all different cultures we face every day.

The past weeks have unfortunately given us extraordinary work as we have had a problem with our gauge for the piston accumulator. We

will make all efforts possible to handle this in the best way for the market. Information has been sent out and if you have questions, please contact our market support function or your sales representative for answers.

We recently succeeded with certification for R107 with our ECO-1 agent. We will launch this later this year or beginning of next. What is unique is that we can use the same amount of agent as before, but we need new nozzles to get the same excellent effect for fires. More information will come.

Best regards
Lars Alrutz



Pressure Gauge Quality Issues

From March 1, 2023, we have had an issue with the process connector of the pressure gauge at the piston accumulator breaking. This causes the pressure gauge to blast out with force and the fluid to spray out with high pressure.

The probability for this happening is low, but since the pressure is 105 bar, we regard it a work safety issue. We recommend that all instructions regarding both safety and operations in the service manual are followed to the letter at all times, and that the piston accumulators are handled carefully *with the pressure gauge facing away from the operator*.

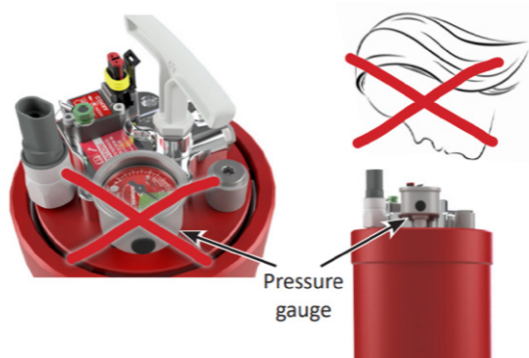
Should a problem occur, it will most likely be for products currently in stock at your facility, or shortly after installation of the system.

Update to Stainless Steel

As of Monday June 19, 2023, all new pressure gauges are of an improved model with a stainless steel process connector instead of brass.

The issue only affects certain batch numbers

Check your stock for pressure gauges with batch numbers ranging from 5433327311 to 5433441505. You can see the batch number at the bottom of the housing.



Order new spare part gauges from us (part no 6200-91). We will invoice them according to your normal price list, and when we receive return gauges with brass connectors, you will be credited for their value.



Old gauge with brass connector to the left, and new with stainless steel connector to the right.

Please pause your new installations and five-year services until you receive new pressure gauges with stainless steel process connectors. If you have to perform services before having these new gauges, reuse the old gauge - provided it works properly and has a batch number lower than 5433327311.

Replace your spare part stock:

To replace your spare part stock, follow these five easy steps:

1. Check your stock for pressure gauges with batch number ranging from 5433327311 until 5433441505.
2. Order new spare part gauges from us (part no. 6200-91) and we will confirm your orders as soon as stock levels are up.
3. This will be invoiced according to your normal price list and the price is equal to that of 6200-51 (the one that you are replacing).
4. Pack the pressure gauges that you would like to return to us and contact shipment@fogmaker.com who will arrange pick up. Size, weight, address, contact person, telephone number and email must

be provided and you will need to confirm the pick up.

5. When we receive you returned gauges we will check that they are of the correct batches and you will be credited for their value.

Gauges already installed

If you have made installations with a gauge delivered after March 1, 2023, you have two options:

1. Leave the system as it is until it's time for five-year service where the gauge will be replaced according to instructions in our service manual.

If an accident occurs, Fogmaker will cover costs for decontamination of the suppression agent, spare parts for the fire suppression system, and resetting the fire suppression system.

2. Replace the pressure gauge now, in the same manner as in a five-year service. If you choose this approach, we will credit you for the cost of the gauge once it's returned to us.

We regret the inconvenience caused by this. If you need further help or support, or have questions related to this issue, please reach out to your normal contacts at Fogmaker.



ECO 1, PFAS-Free for the Future!

Starting with the Swedish market, Fogmaker International is introducing a new, 100% PFAS free fire suppression liquid on the Swedish market. Fogmaker has spent years developing and evaluating fire suppression liquids free of PFAS chemicals to find the most effective solution.

When combined with an optimized Fogmaker system, the new Eco 1 liquid is unique in being 100% free from PFAS chemicals while also managing all three sides of the fire triangle: heat, oxygen, and fuel.

that repel fats, dirt, and water. There are thousands of PFAS chemicals on the market, used in everything from frying pans to beauty products - and fire suppression products.

PFAS chemicals are stable chemical compounds that remain in nature for a long time. Many PFAS components break down very slowly or not at all. These chemicals can also be bioaccumulating, which means they build up in animals and people.

A PFAS Ban is in the Works

On February 7, 2023, ECHA - the European Chemicals Agency - published a proposal on a ban of PFAS chemicals made by authorities in Denmark, Germany, the Netherlands, Norway, and Sweden. The goal is to lower PFAS levels in the environment with 95%.

The ban covers approximately 10,000 chemicals and is expected to take force in 2025. More nations are expected to implement bans in years to come.

Fogmaker's original liquid contains low amounts of PFAS and the transition to Eco 1 ensures that we can provide reliable fire suppression *and* protect both health and environment.

What does this mean for me?

Some markets are already using Eco 1 and right now, there's no major change for our partners. We will reach out with educational

packages and webinars as the transition to Eco 1 takes place, starting with partners in Sweden and Finland this fall.

In the future, all Fogmaker systems will use Eco 1 and while the systems are similarly dimensioned as with the original liquid, there are changes in system design. For instance, the SBF 127:17 and R107 certified systems use new kinds of nozzles.

The new systems use a "Flat Nozzle" that gives a more targeted spray of mist than the regular nozzles. This can, for instance, be used to focus the mist and increase cooling of certain areas in an engine room. The mix of flat nozzles vs other kinds is regulated in the certificates. System design will include instructions on how to angle them.

More information will come on this - keep your eyes open for trainings and webinars!

What about electric vehicles?

Water mist does not conduct electricity and can be used in electric vehicles. The mist does not penetrate components with an IP classification of 66 or higher.

As you know, Fogmaker's system can't extinguish a fire that starts in a battery, but we can cover risk areas where fires often start, thus preventing fires from spreading to the battery. If the battery still catches fire, Fogmaker cools and controls the blaze to gain time for evacuating the vehicle.

A team from Fogmaker International took part in FIVE - the International Conference on Fires in Vehicles - in Stavanger, Norway earlier this year. Research shows that 50-60% of electrical vehicle fires never involve the battery at all. With a Fogmaker system, there's a good chance of preventing a fire from reaching the battery.

Marketing

There is currently an English brochure about Eco 1 and SBF 127 available in the downloads section on the website: www.fogmaker.com. More marketing materials will be available as systems with the new liquid are introduced.



Fire Suppression Tests

Fogmaker has carried out and passed fire suppression tests with Eco 1 according to SPCR 183 and the SBF 127:17 regulations. Starting January 1, 2024, SBF 127:17 is the only regulation valid for utility vehicles in Sweden and the foundation for our worldwide utility vehicle recommendations.

Eco 1 has also passed the R107 test for buses and will be introduced in the bus segment in 2024.

Eco 1 is GreenScreen™ certified at the silver level, which means a third party has verified all substances in the liquid from an environmental perspective.



What is PFAS?

PFAS, also known as high fluorine substances, are a group of chemicals





2023 Trade Shows

Trade shows present excellent opportunities for marketing Fogmaker to new contacts as well as keeping in touch with current customers. Fogmaker International takes part in several trade shows each year, on our own or together with partners.

Thus far this year, we have among others participated in UITP Global Public Transport Summit in Barcelona, where a team from Sweden met up with Spanish partner DIMM to present our innovative fire suppression solution.

Fogmaker Nordic took part in Swedish Forestry Expo just outside Stockholm, a large event where several manufacturers of forestry machines displayed Fogmaker installations. Forestry is an up-and-coming segment with an increasing demand for reliable fire protection.



An unexpected royal visit became a highlight of Swedish Forestry Expo; Key Account Manager Erik Blomgren had the honor of demonstrating the system to Her Royal Highness, Crown Princess Victoria with family.



We also participated in TOC Rotterdam; an event focused on port equipment and material handling. Wilbert de Beer from Holland joined the Swedish team for three intense days. Fredrik Rönqvist and Niklas Björnvik had a speaking opportunity at TOC's Safety Village where they shared information about fire protection, electric vehicles, and Eco 1.



And in South America, Mario Flores, KAM for the Mining and Tunneling segment, went to Expomin together with our partner Gestion Cuatro SpA.



If you need trade show support, please plan ahead. We need time on our end, and our participation must be agreed upon with your Key Account Manager or Fogmaker's Marketing and Sales Manager.

When a Fogmaker Certified Partner participates in a show and gives at least 50% of the surface to promote Fogmaker, we can contribute half of the exhibition cost (up to \$2,000.) In return, you need to contribute when Fogmaker International participates in trade shows in your home market. At those events, we cover your hotel costs if you work in the booth.

There are photos and other materials useful when creating booths on the marketing portal.

In 2023, we are scheduled to exhibit at:

- Mittia Wood Transportation, August 18-19
- Busworld Brussels, October 7-12
- TOC Americas, October 17-19
- Stuva, Stuttgart, November 8-10
- Agritechnica, Hannover, November 12-18

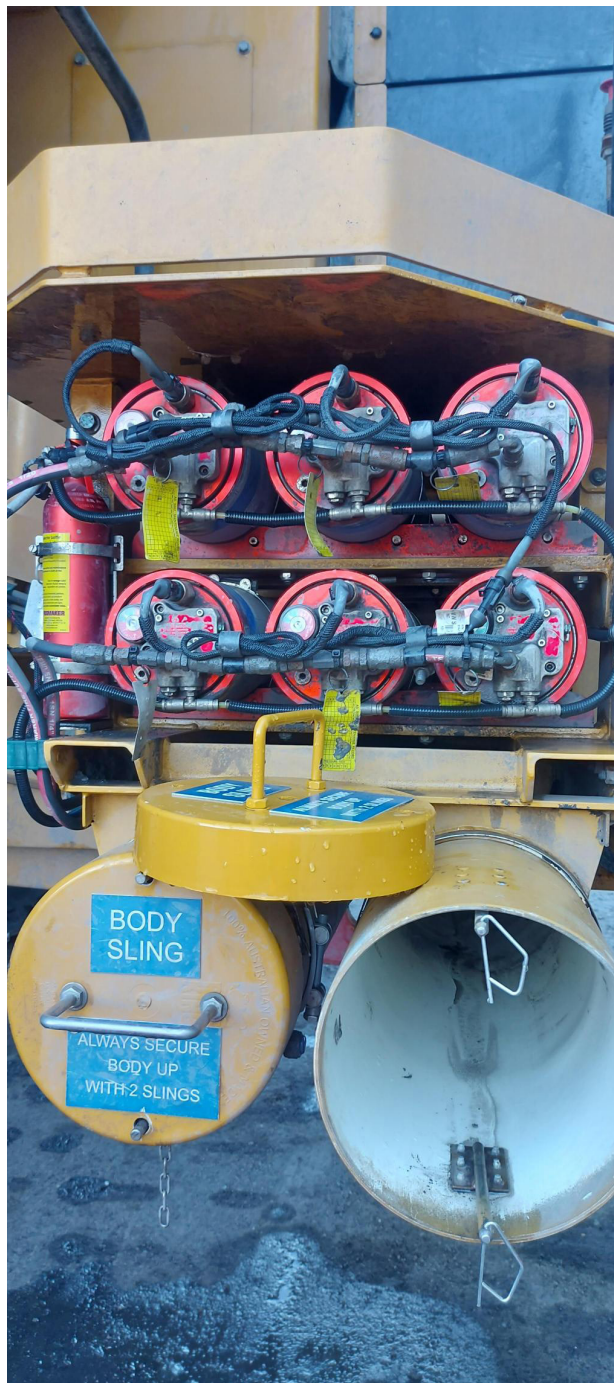
We have started planning for 2024 as well. Thus far, we're booked at Minexpo in Las Vegas and are considering several others.

Spring Travels

Keeping in touch with our partners around the world is a priority and vital to keep good business relations. Here is a snapshot of some of this year's visits.

Lars Alrutz, Maria Glosax, and Axel Carlsson traveled to Australia to visit our partner USSC - United Safety and Survivability Corporation. USSC have done very well in several segments, among others mining, and with more than 350 operating mines in the country, there is definitely a need for reliable fire protection.

Impressive equipment in an impressive country. Did you know that Australia is larger than Europe?



Left to right: Maria Glosax, Lars Alrutz, Axel Carlsson



Visiting Tyrone in Singapore

A team from Fogmaker International traveled around Asia to meet with partners and customers. They were away for several weeks, and among others visited Tyrone in Singapore.

Recent visit with PSV Transport Systems Ltd in Great Britain.



Visiting PSV Transport Systems in Great Britain

Gestion Cuatro SpA visiting Fogmaker in Sweden



Gestion Cuatro came to Växjö, Sweden, for training and business development.

The World's Oldest Bus

When motorized vehicles started to roll out on the roads, automobile sales were slow. Carl Benz looked for further uses of the new technology and in an effort to make the concept more accessible to - and accepted by - a larger group of people, he invented the bus.

Today, we take buses for granted, but it wasn't always so. The first bus was delivered in Germany in 1895. It was a two-cylinder vehicle that looked much like a horse carriage and could carry eight people including the driver.

Most of the information about these early buses has been lost, but there were at least three buses that operated in Germany from 1898 and onwards, running a 30 kilometer route. They could carry ten people at a maximum speed of 20 km/h.

These early vehicles didn't have sufficient tires for a smooth and safe ride, and there

were no gasoline stations for refueling, so the early bus operators had huge hurdles to jump through.

The break-through came with technical innovations such as the four-cylinder engine. The first buses like the one on the photo were delivered to London in 1899 and were also popular in Bavaria in Germany.

The photo is from a visit to EvoBus and - besides the beautiful vehicle - shows Robin Ekman, Simon Lundquist, Niklas Björnvik, and Carl Zandler, all from Fogmaker International.



Technical Notes

Liquid for the Detector Bottles

Many order small bottles of detector bottle liquid - 150 or 250 ml. There are larger bottles available - 1 liter or 5 liters. The label opens up and contains information in 25 languages, sorted alphabetically.



New Version of Technical Manuals

There is an updated version of the technical manuals released June 16, 2023. The manuals are available in 10 languages (EN, SE, DE, IT, FR, ES, PL, NO, FI, TR).

Examples of updated information include from which date the 5/10-year services should be counted, the new flat nozzle, Eco 1 suppression liquid, and modified nozzle distances. Each manual has a list of all changes on page 2.

The updated manuals and checklists are available for download through the Partner Portal or website (with password).

Updated Price List

The Q3 updated price list was sent out on June 28. It is important to always refer to the most recent version to ensure using the correct article numbers.

Please note that a price list update doesn't necessarily mean a price increase - there may be minor price adjustments, but the main reason for issuing new ones is to make sure any new articles are included and discontinued articles are removed.

If you did not receive the updated price list, please get in touch with us.



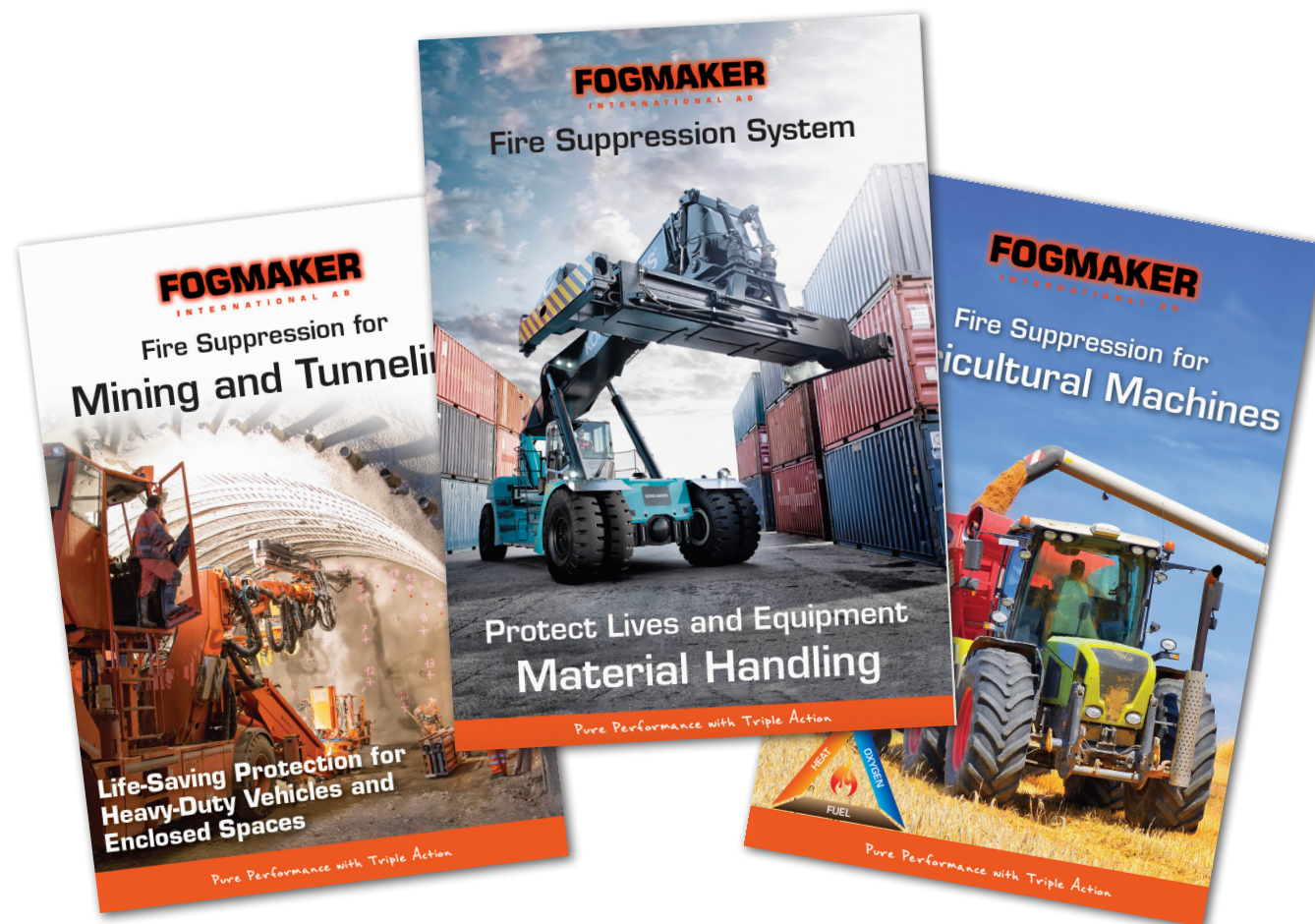
New Brochures...

...for Customers are Under Development

The new customer brochures are in A5 format - that is, half an A4 - and the intention is to have one for each segment available before the end of the year. They will be available to download from the website and marketing portal.

There is also a brochure about Eco 1 and SBF 127:17 available on the website. This is a smaller trifold, but shown as regular spreads in the PDF to make it easier to read online.

Naturally, print ready files can be provided and possibly also assistance with translations.



Have a wonderful summer!

Or winter, if you're in the southern hemisphere. In Sweden, July means vacation time and while Fogmaker will remain open all summer, we will have a few weeks with limited capacity. Please plan accordingly.

Manufacturing

July 10-16, reduced capacity
 July 17-August 6, limited capacity
 August 7-13, reduced capacity

Logistics (deliveries)

July 17-23, reduced capacity
 July 24-August 13, limited capacity
 August 14-20, reduced capacity



FOGMAKER

INTERNATIONAL AB

Photo: Servicing material handling equipment in the port of Varberg, 2023