

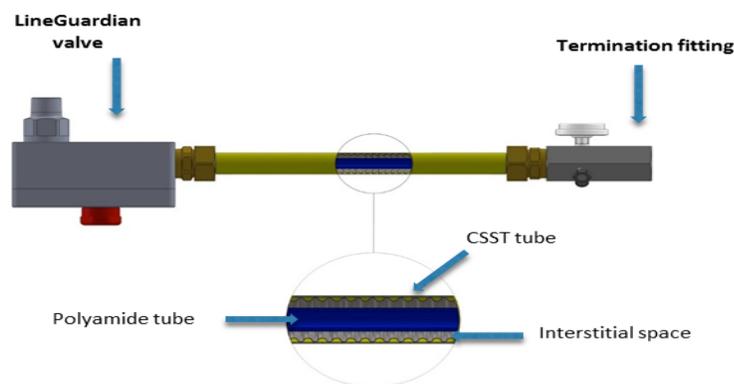
Question & Answer Document
Lorax LineGuardian™ for fuel oil release
May 2015

Q. How does it work?

A. LineGuardian is the world's first leak detection system that is purely mechanical: it can detect even the smallest of leaks – and immediately stop the flow—without power or supervision.

Simply speaking it works like this:

- 1. The LineGuardian valve attaches to your oil tank*
- 2. The termination fitting attaches to your appliance*
- 3. Our two-line system, consisting of an inner polyamide tube, and an outer corrugated stainless steel (CSST) tube, is attached to the LineGuardian valve and the termination fitting*
- 4. The polyamide tube (inner) is where the fuel flows. The CSST (outer) is for line protection, containment, and ease of installation*
- 5. The space between the tubes (interstitial space) is charged with nitrogen in order to open the normally closed LineGuardian valve.*
- 6. If damage or fire occur, the nitrogen is released, which closes the LineGuardian valve, and the fuel ceases to flow*



Q. How do I get one? - Or - Where can I purchase the unit ?

A. Home owners who heat with fuel oil can purchase LineGuardian through their fuel suppliers. A licensed technician with their supplier will install it .

Q. How much does it cost?

A. It is difficult for us to say how much it will cost because it will be up to each oil company as to how much they will charge for the unit and for the installation. Your fuel supplier will be able to provide you with that information. We do know that the cost of a LineGuardian system is minor in comparison to the hundreds of thousands of dollars it might cost if you have an oil spill.

Q. What is LineGuardian?

A. Broadly speaking, LineGuardian technology, developed in Halifax, NS, is the world's first leak detection system that is purely mechanical: it can detect even the smallest of leaks – and immediately stop the flow—without power or supervision. The specific application of LineGuardian technology we are first releasing is for home owners who heat with fuel oil.

Q. Why would homeowners need it?

A. LineGuardian is important for two major reasons: First, by detecting and stopping leaks immediately, it eliminates the environmental damage and expense of a fuel spill. Secondly, it offers advanced fire protection capabilities; stopping the flow of fuel immediately when fire is detected at the tank, the furnace, or the line in between the two.

Q. How do I know it will work?

A. LineGuardian for fuel has been in production for over six years: from concept to market it has undergone rigorous testing and has had to have North American certification in order for us to go to market with it. It is supported by the Canadian Oil Heating Association (COHA). It is an industry changer that is different from any other system because it is mechanical, meaning it does not require power or supervision. For all these reasons you can rest assured it will work.

Q. What is LineGuardian's competition? Surely there are other mechanisms on the market that help detect and stop spills?

A. There is no competition because LineGuardian is the world's first leak detection system that is purely mechanical: it can detect even the smallest of leaks – and immediately stop the flow—without power or supervision. No other device offers that critical feature. And no other device offers the advanced fire protection capabilities either, shutting off the flow of fuel when it detects fire anywhere from tank, through lines to the furnace.

Sniffers, lasers and pressure monitors, are available technologies that detect and notify when a problem occurs, but by then the fuel is already spilling. LineGuardian stops the leak upon detection. Protective sleeves or coatings reduce the risk. But substantial damage like sudden sharp strikes or deliberate cuts by vandals can penetrate the coating or the line. LineGuardian stops the leak upon detection.

Q. How long does it take to install? How much will it cost to install ?

A. An average install of approximately 25 feet takes 30-45 minutes which is 15 minutes longer than the current industry standard to install copper pipe. The cost to install can be provided by your fuel oil company and/or their technician.

Q. Can I install it myself ?

A. Only a certified technician can install it for you. Your fuel oil supplier will have certified technicians to install it for you.

Q. Will I need two units to detect a fuel leak: one on the tank, and another on the line from the tank to my furnace ?

A. You will only need one LineGuardian valve. LineGuardian detects leaks or fire at the tank, the boiler or furnace it supplies, or on the line between the two. This is called end-to-end protection.

Q. Is it guaranteed? Is there a lifetime warranty ?

A. The LineGuardian Valve System has a 5 Year Warranty and there is a 1 Year Warranty on all Fuel Lines.

Q. How do I know it has done its job/ cut off fuel flow when there is a leak ?

Is there an alarm ?

A. If the appliance that is using LineGuardian stops working, it may indicate a breach in your fuel line. Check the pressure gauge on the LineGuardian Valve System, if pressure is below 25psi, your line has been compromised and LineGuardian has stopped all fuel movement.

Q. What do I do when I discover there is a breach in my fuel line? Who do I call ?

A. Call your local fuel oil supplier, ideally the same company that installed the LineGuardian valve system, but all fuel oil suppliers will have trained technicians.

Q. How long will the unit last before it wears out ?

A. Our warranty covers you for up to 5 years. However, given our dedication to quality and craftsmanship, with proper maintenance your valve should last in excess of 10 years.

Q. Can I reuse the unit when I replace fuel lines / tanks ?

A. Yes, the unit can be re-used as long as it has not been damaged in any way and a qualified/certified technician completes the replacement.

Q. Is it a “one size fits all” ?

A. This first release of the technology for home owners who heat with fuel oil will support a 3/8” process line with larger diameter line sizes available by the end of 2015.

Q. Is your unit adaptable to all pipe composite materials (copper, lead, plastic, carbon fibre)?

A. No, LineGuardian can only be installed as a complete valve and line system. LineGuardian lines must be used.

Q. Are there any uses for the unit in the home besides fuel tank leak detection?

A. The specific application of LineGuardian technology we are first releasing is for home owners who heat with fuel oil. But broadly speaking, LineGuardian technology can detect even the smallest of leaks – and immediately stop the flow—of any liquid or gas. In fact, we are working on those applications as we speak.

Q. Who developed LineGuardian?

A. Mark Bishoff is the inventor of LineGuardian. He is founder and chief executive officer of LORAX Systems Inc., an environmental solutions company based in Halifax, Nova Scotia.

Q. How long did it take to get LineGuardian to market?

A. Six years ago, Lorax Systems Inc. founder Mark Bishoff created a prototype of LineGuardian to solve the problem of fuel oil spills. Since then, LineGuardian for fuel has been in development, undergone rigorous testing, and achieved North American certification in order for us to go to market with it.

Q. A project like LineGuardian must have cost a lot to get off the ground. How much? How was it funded?

A. We are grateful to have had the support of various government agencies such as NSBI and ACOA which provided substantial support of LineGuardian. Lorax Systems inc. is a private company and details of its finances are confidential.

Q. Where is LineGuardian manufactured?

A. Lorax Systems Inc. manufactures the LineGuardian valve at its precision-machining shop partner, Alloy Concepts Inc., and assembles the valve at Lorax's assembly plant, both located in Burnside, Nova Scotia.

Q. Why aren't you manufacturing the unit cheaper overseas where labour costs are lower ?

A. At Lorax Systems Inc., we are committed to unparalleled safety and environmental benefits. By manufacturing LineGuardian from our Halifax, NS base, we can ensure maximum quality control, as well as keep 38 important jobs in Nova Scotia.

Q. How many jobs are created by manufacturing LineGuardian?

A. At this time some 38 specialized positions are involved in the engineering, manufacturing, and marketing of LineGuardian with plans to add an additional 30 to accommodate future growth not only in Atlantic Canada, but internationally.

Q. How do I know it won't be available at Home Hardware , or Canadian Tire in six months at a fraction of the price it is available today?

A. LineGuardian is trademarked technology. No other company is able to produce it under international trade mark law. You won't find it at a retailer like Home Hardware because we only distribute it through fuel oil distributors. And it must be installed by a certified technician.

Q. Is there a multiple unit discount price ?

A. Pricing will be at the discretion of the fuel oil companies.

Q. What is your delivery timeline ?

A. We have 500-1,000 LineGuardian units available now through your fuel oil suppliers, and plans for another 18,500 - 19,000 units by year end. For delivery/installation details, please contact your supplier directly.

Q. Is LineGuardian compatible for all types of oil tanks, metal, fibreglass and plastic?

A. Yes, LineGuardian is compatible with all tanks.

Q How do I apply for a job at Lorax Systems Inc.?

A. Please contact us through our website.