



# OWNER'S MANUAL



## CDL'S ELECTRIC RELEASERS

Les Équipements d'Érablière CDL inc.

Thank you for choosing a CDL releaser. Our 40 years of experience working with sugarmakers ensures you that you acquired a performant and quality piece of equipment. Before using this product, make sure you understand all the following instructions. If there is any problem upon reception of this product, please immediately contact CDL or your local representative.

## FINDING INFORMATION

### Make a record for future use

Brand: \_\_\_\_\_

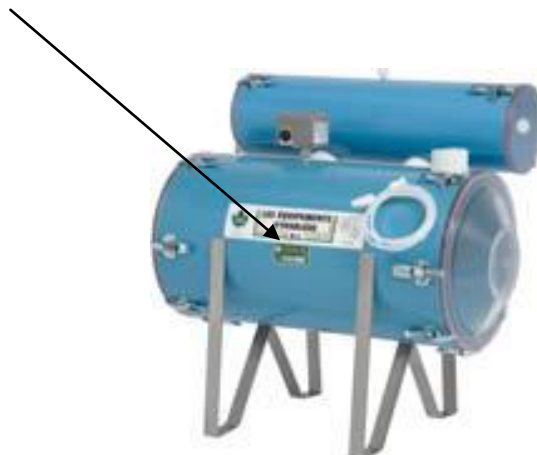
Purchased Date: \_\_\_\_\_

Model Number: \_\_\_\_\_

Serial Number: \_\_\_\_\_

### Serial number location

The serial number is located on the main cannister



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## SAFETY

A mechanical extractor is a relatively safe piece of equipment. Only make sure that it's installed on a flat, leveled and stable surface, to make sure it can't fall on something or someone.

## DEFINITIONS

Sap: sugared water coming out of maple trees.

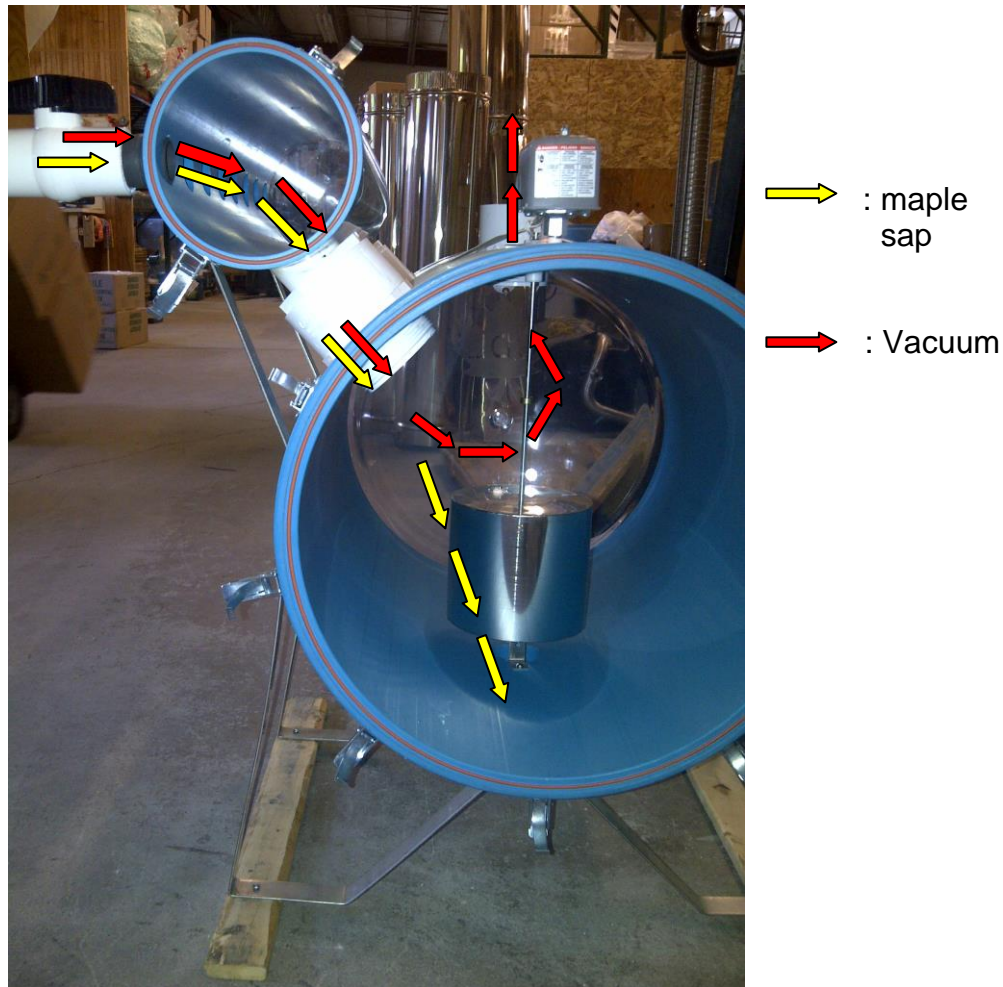
Dry line: plastic tubing installed in the woods that carries vacuum to the trees.

Wet line: plastic tubing that brings the maple sap from the woods to the pumping station.

Pumping station: room where the vacuum pump and the releaser are installed.



## HOW AN ELECTRIC RELEASER WORKS



The goal of a releaser is to separate maple sap and the air that the vacuum pump pulls from the tubing system in the woods.

The main benefit of an electric releaser is that the vacuum to the woods is continuous. It means that even when the releaser dumps, the vacuum level stays unchanged. The higher the vacuum level, the higher the production of maple sap will be. Studies show that for every additional inch of mercury in the woods, a 5% production increase will be the result. It also helps to keep a constant level of vacuum and avoid fluctuations when the releaser dumps.

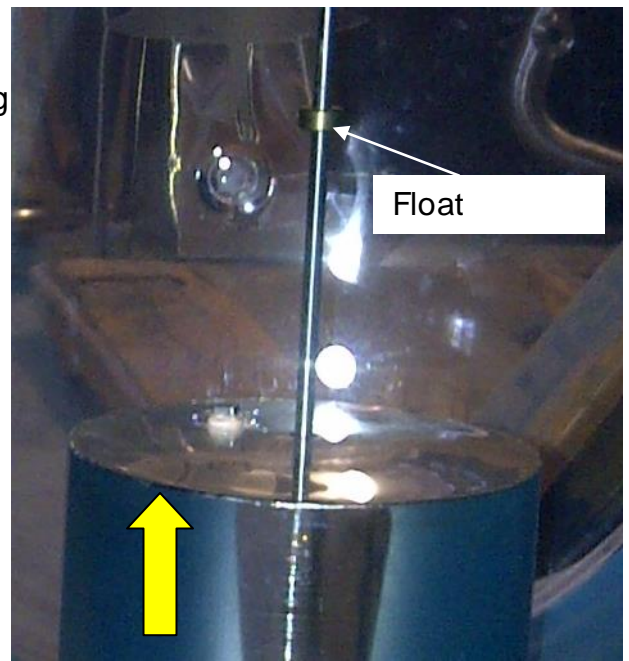
In the phase when the releaser accumulates sap, the liquid enters in the manifold and then flows in the main cannister. When the sap level increases inside the main cannister, the stainless steel float will start rising.



As the float rises with the sap level, it eventually Get to the float stopper. As the float keeps going Up, it raises the SS rod pushing up the pump Control switch on top of the releaser.



Float switch

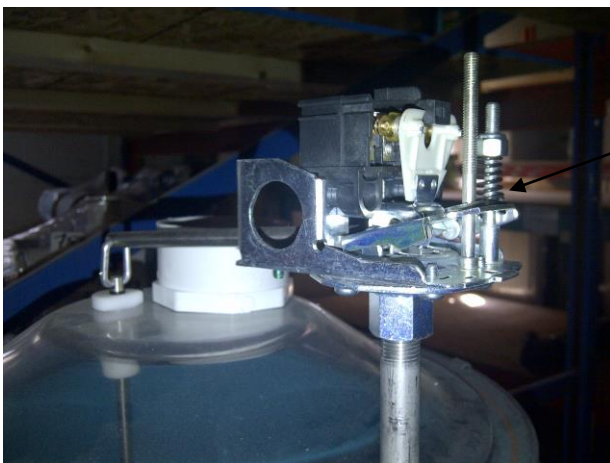


Float

As the sap level goes up, the float pushes up this arm and activates the

When the pump control switch is activated, it starts the pump that will empty the sap from the releaser, without affecting the vacuum level.

While dumping, the float goes back down the ss rod. A spring inside the electric switch keeps the pump running until the float gets to the bottom float stopper. Then, the weight of the float disengage the spring and stops the dumping pump.



Remove the switch cover to get access to the adjustment spring

Note: a vertical electric releaser works exactly the same way as a horizontal releaser.

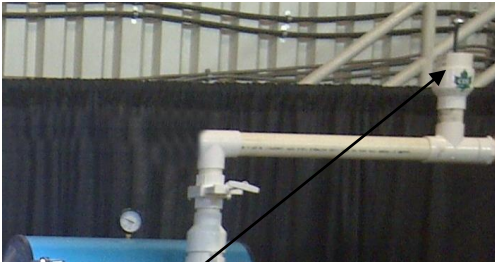


# INSTALLATION



The wet and dry lines will come in the back of the manifold in the pre-drilled holes (1 ½" diameter)

The following picture shows a typical installation.



Vacuum

Vacuum to vacuum pump

Moisture

Wet line

Dry line

Sap going to sap

Electric

Balancing line

Evacuation

Vacuum pump



Dry lines: comes in the back of the releaser manifold. Always install a valve right after the manifold on each dry line.

Wet lines: leaves from the back of the releaser manifold to the woods. Always install a valve right after the manifold on each wet line.

Electric extractor: equipment that separates maple sap and air.

Ligne de balancement: connected to the evacuation pump to keep it primed.

Evacuation pump: pump that empties the extractor and brings maple sap to the main sap tank.

Moisture trap: Equipment that is used to protect the vacuum pump in case the releaser malfunctions. If the releaser doesn't dump normally, the sap level will keep rising until it gets to the vacuum line. Then sap will get sucked directly to the vacuum pump, which can damage it. If a moisture trap is there, a ball inside the trap is there to stop the flow of sap before it gets to the pump. Another type of moisture trap has a level sensor that will detect the presence of liquid and will shut off the vacuum pump before it gets flooded.

Vacuum regulator: Part that limits the vacuum level in the system by introducing air in it. If there is not enough air coming in, the pump will cavitate. Cavitation will greatly reduce the life of a vacuum pump. A pump is cavitation if you hear crackling noises. Ideally, the vacuum regulator is located between the vacuum pump and the moisture trap.

Vacuum gauge: Optional, can be installed on the extractor manifold to monitor vacuum level.

An electric releaser can be installed outside. However, it must always be protected from rain and snow. Snow and ice can prevent the releaser from working properly.

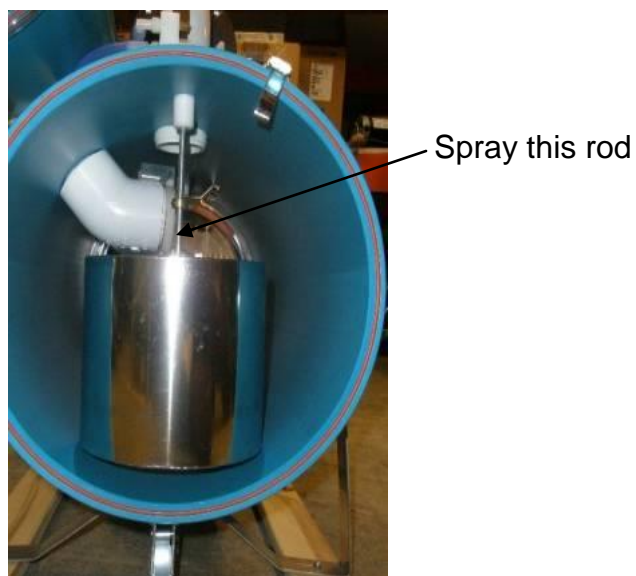


## MAINTENANCE

Two things are required in order to keep the releaser in good working condition. First, always keep it clean. To have access to the inside, release all the clip to remove the 4 covers located on each side.



Also, during the season, spray some food grade lubricant on the stainless steel rod where it goes through the main cannister. It will make it easier for the rod to go up and down.





# TROUBLESHOOTING GUIDE

Sap level rises but the pump won't start

The top float stopper needs adjustment. Lower the stopper and tighten it well.

Electric problem with the pump or the float switch.

The weld on arm of the float switch is broken. Repair the weld.

The float rod get stuck in the plastic bushing. Lubricate the rod, or change the rod if it's crooked or replace the bushing.

The pump stops before the extractor is empty.

The spring of the float switch needs adjustment, the spring lets go before the float gets to the bottom stopper. Remove the switch cover and tighten the spring.

The pump starts before the extractor is full.

The top stopper is too low. Raise the stopper and tighten.

The float get stuck and pushes up too early. Lubricate the float rod.

Air leak from one of the covers or the bottom door

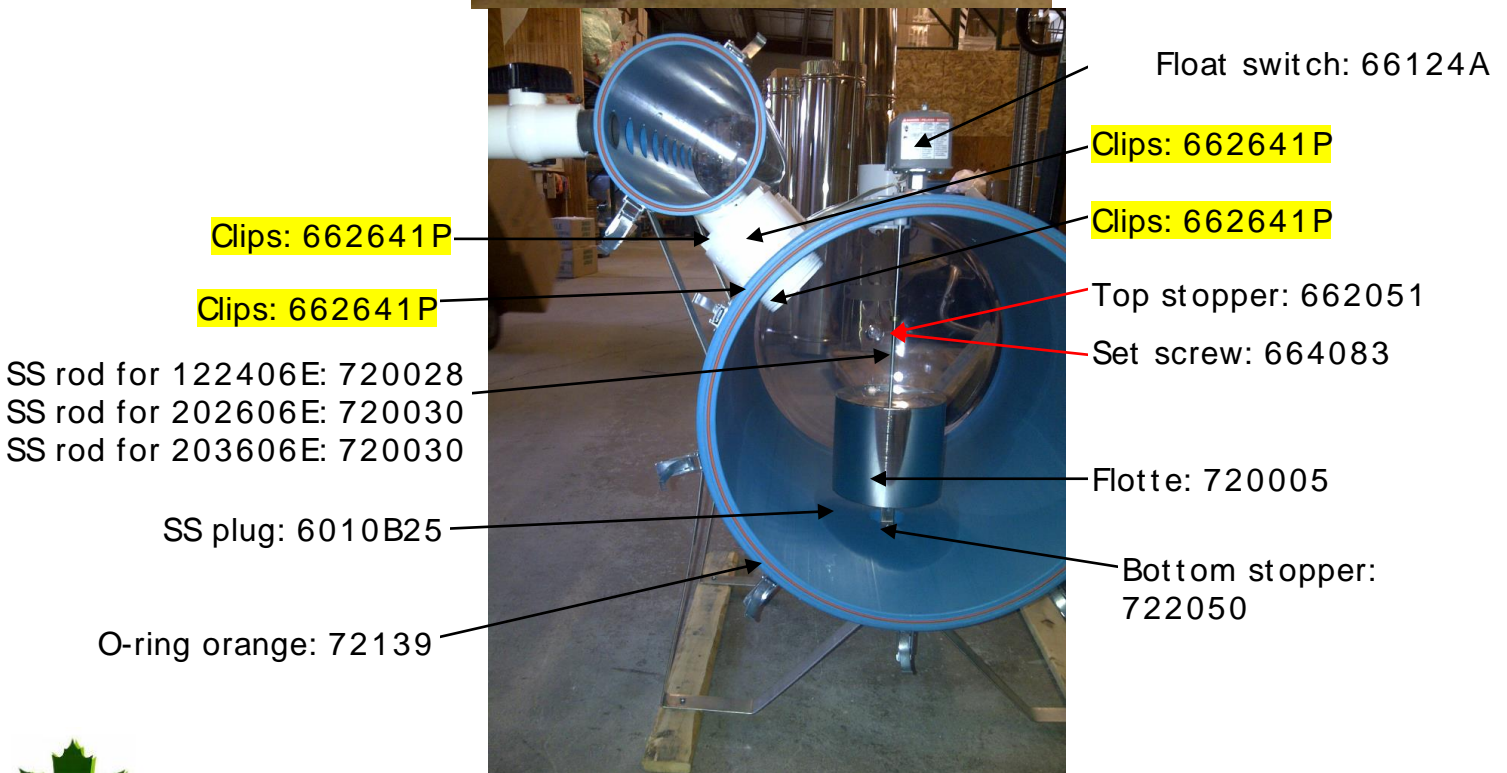
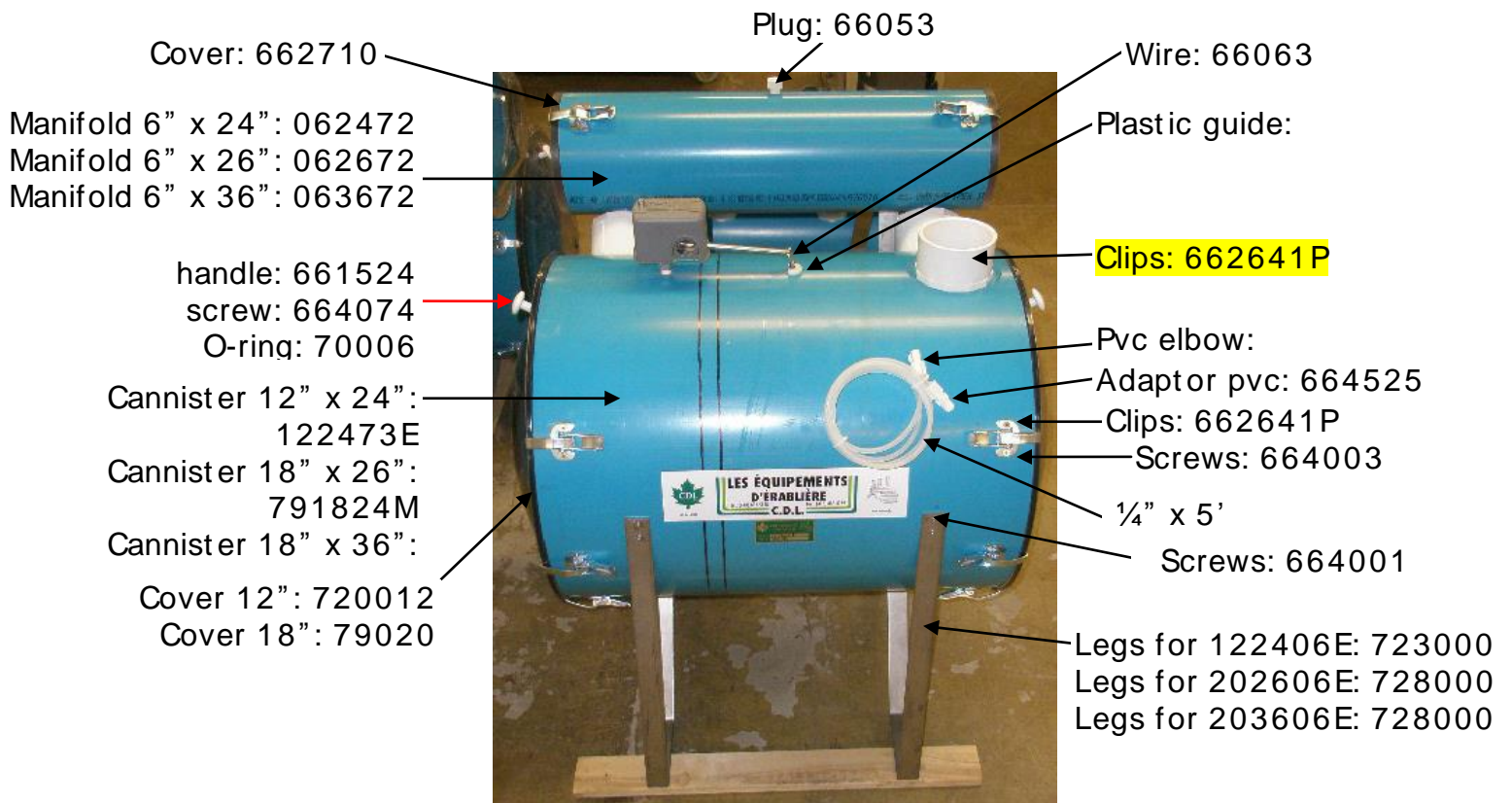
One of the orange o-rings is damaged or badly installed. Replace or reinstall the o-ring. Be very carefull when you install this o-ring. This operation is very tricky. Any bump on the surface will cause a vacuum leak. The o-ring has to be perfectly flat and it cannot be stretched. Again, any inconsistency in the o-ring will create a leak. The ends of the o-ring don't have to be welded. Just have them touch without any gap between them.

When the extractor is full, the pump runs but no sap comes out.

The vacuum level is too high for the pump. Repair or replace the pump. Temporarily lower the vacuum level to get by until the pump is fully fonctionnal.



# PARTS HORIZONTAL RELEASES



## WARRANTY

Your new CDL releaser is covered by limited 2 year warranty against manufacturing defects. For two years from your original date of purchase, Les Équipements d'Érablière CDL (CDL), will replace or replace any parts of this press that prove to be defective in materials or workmanship when such evaporator is installed, used and maintained in accordance with the provided instructions.

### Exclusions

This warranty does not cover the following:

1. Product that has been transferred from its original owner to another party or removed outside the USA or Canada.
2. If anything else than maple sap is processed in the machine.
3. If normal maintenance is not performed as specified in the CDL owner's manual.
4. Production loss due to any kind of failure of the releaser.
5. Damage cause by snow or ice if the releaser is not protected from weather conditions.
6. Revenu losses due to sap or syrup quality.
7. Service calls which do not involve malfunction or defect in materials or workmanship, or used other than in accordance with the provided instructions.
8. Service calls to correct the installation of your releaser or to instruct you how to use it.
9. Any service beyond the first two years.
10. Damages caused by: services performed by unauthorized service companies; use of parts other than genuine CDL parts or parts obtained from persons other than authorized service companies; or external causes such as abuse, misuse, inadequate power supply, accidents, fires, or acts of God.
11. It doesn't cover the consumable products or accessories.
12. If the product was damaged by abusive use, negligence, accident caused by the customer, modification made by the customer, variation in the electric power.
13. Damage cause by the use of products that are not meant for use with our equipment or a bad use of cleaning products.



**Disclaimer of implied warranties; limitation of remedies**

Customer's sole and exclusive remedy under this limited warranty shall be repair or replacement as provided herein. Claims based on implied warranties, including warranties of merchantability or fitness for a particular purpose, are limited to two years or the shortest period allowed by law, but not less than two years. CDL shall not be liable for consequential or incidental damages such as property damages and incidental expenses or loss or revenues caused by any event covered by this warranty. Some states and provinces do not allow the exclusion or limitation of incidental or consequential damages, or limitations on the duration of implied warranties, so these limitations or exclusions may not apply to you. This written warranty gives you specific legal rights. You may also have other rights that vary from states to states.

**If you need service**

Keep your receipt, delivery slip or some other appropriate payment record to establish the warranty period should service be required. If service is performed, it is in your best interest to obtain and keep all receipts. Service under this warranty must be obtained by contacting CDL at the addresses or phone numbers below. Obligations for service and parts under this warranty will be performed by CDL in Canada. Products features or specifications as described or illustrated are subject to change without notice.

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