CDL SUGARING EQUIPMENT

OWNER'S MANUAL

Version 2.1 | 2024-06-07

INTENSE-O-FIRE 2.0 EVAPORATOR

InTens-O-Fire 2

Thank you for purchasing the **INTENS-O-FIRE 2.0** wood-fired evaporator from CDL. This guide will help you install your product and make the most of it. It has all the information you need.

INFORMATION

Write down these details for future reference

Size: _____

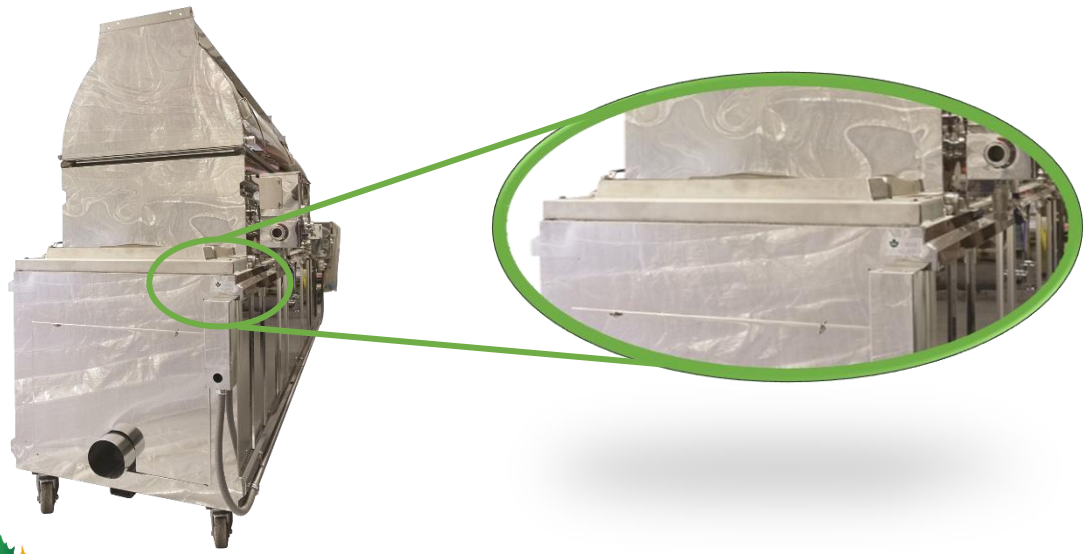
Purchase date and invoice number: _____

Serial number: _____

Representative: _____

Serial number location

The serial number can be found on the back of the evaporator.



CDL SUGARING EQUIPMENT

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SAFETY

Wood-burning evaporators are very powerful pieces of equipment. They can be dangerous if the operator does not follow the recommendations in this guide. Always wear heat-proof gloves and clothing when operating an evaporator. Visitors must also be informed of potential hazards and should keep a reasonable distance from production equipment at all times.

Wood-burning evaporators run on solid fuel and produce intense heat that could cause serious burns, both when the door is open and when it is closed. Some metal components can also be hot enough to create flash burns, mainly around the door, pans, and stacks. Operators must also watch out for boiling syrup splashes and steam backflow, as they may cause burns.

The evaporator should be installed on a fireproof surface that can bear the weight of the equipment and its contents. It should have at least 24 inches of clearance on all sides. If you need to place the evaporator closer to a wall, install a heat-resistant coating on that wall. Make sure that the stacks are not blocked by roof trusses. Correctly sized jacks must be installed for any stacks that run through the roof. We also recommend that the ceiling of the cabin be high enough to allow you to safely lift the hoods (if applicable) with a cable and pulley system.

IMPORTANT: We strongly recommend that you contact your insurance company to make sure that the evaporator is installed according to their safety rules, as different companies have different requirements.

INSTALLING THE ARCH

You will have better combustion and steam will exit more easily if your building is not insulated. If it is well insulated, you will need to make sure you have air inlets to improve combustion and stack draft.

1. Place the evaporator in the chosen location, remove the delivery wheels, and install the adjustable feet (included) in the indicated spots.
2. Remove the pans and accessories from the arch.
3. Using a level, adjust the legs so that the bottom of the arch is perfectly level along the length and width. Tighten the nuts at the bottom of the legs.
4. Connect the evaporator to the tank(s), making sure that there is a valve to block the water if necessary.
5. Have a certified electrician connect the blower and controls. (Note: the controls must be powered according to the electrical diagram in the main control panel.)

CLEANING BEFORE FIRST USE

Before using your evaporator for the first time, prepare a hot soapy water solution and add the equivalent of one cup of vinegar (250 ml) or ½ oz (15 ml) of acetic acid per gallon (4 L).

Hand clean any components, such as stainless steel pipes, fittings, and valves, that may come into contact with maple water or maple syrup. Rinse and dry the components with a soft, clean cloth. This removes any residual manufacturing oil, polish, and/or packaging debris.

BRICKING

Here is the procedure for bricking your arch. You can also view a full bricking manual on our website:

https://www.cdlinc.ca/wp-content/uploads/2018/05/Bricking-instructions-1.1-EN_low.pdf

Please note that we offer a bricking service. Contact your CDL representative for more information.

1. Place the ceramic wool against the inside walls of the arch from the bottom of the fire box upwards. Leave an 8-inch overhang on top of the rail and cut with a retractable knife. Tape down the excess if necessary. Dust masks must be worn when insulating the evaporator.
2. Use heat-resistant bricks to brick the bottom of the arch, followed by the walls. Start at the front bottom and gradually work upwards and backwards. High-temperature mortar must be applied in a thin layer behind and between the bricks to keep the bricking solid and seal any gaps.
3. The last row of bricks at the top should be cut at an angle so that the heat from the fire covers as much of the area under the pans as possible. Do not force the bricks under the top rail. The bricks will always move slightly when heated. If they are too tight, the arch frame will warp. Leave approximately ¼ inch between the top of the last row of bricks and the rail. (Diagram A)
4. Cut the excess ceramic wool at an angle, following the angle of the cut of the last brick. (Diagram B)

Diagram A

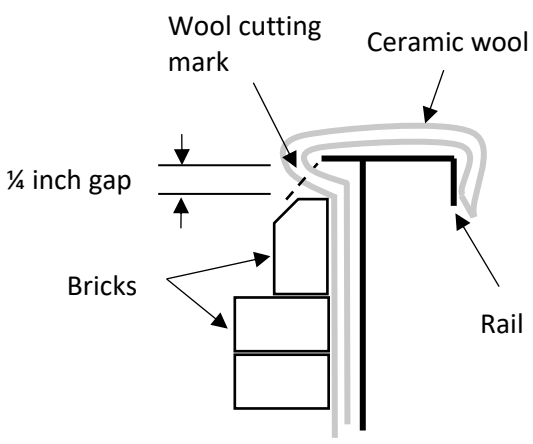
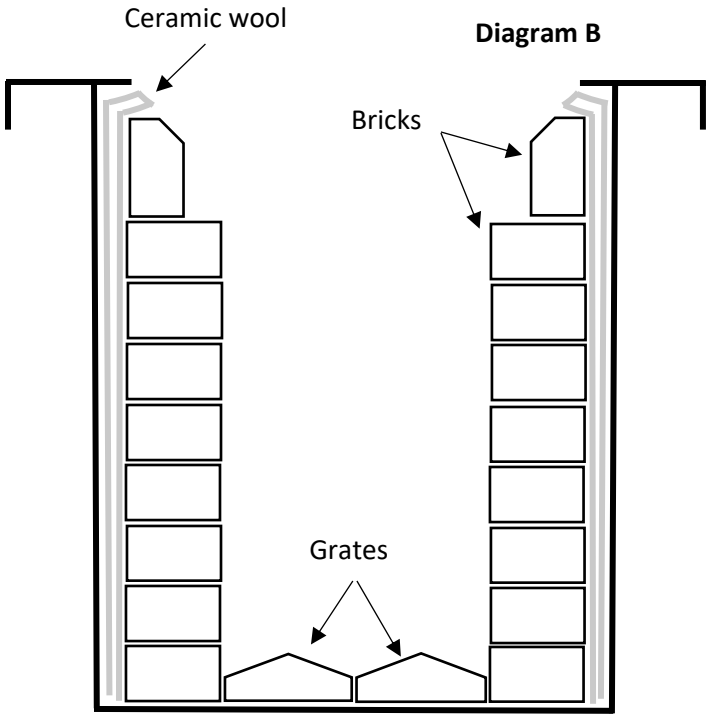


Diagram B



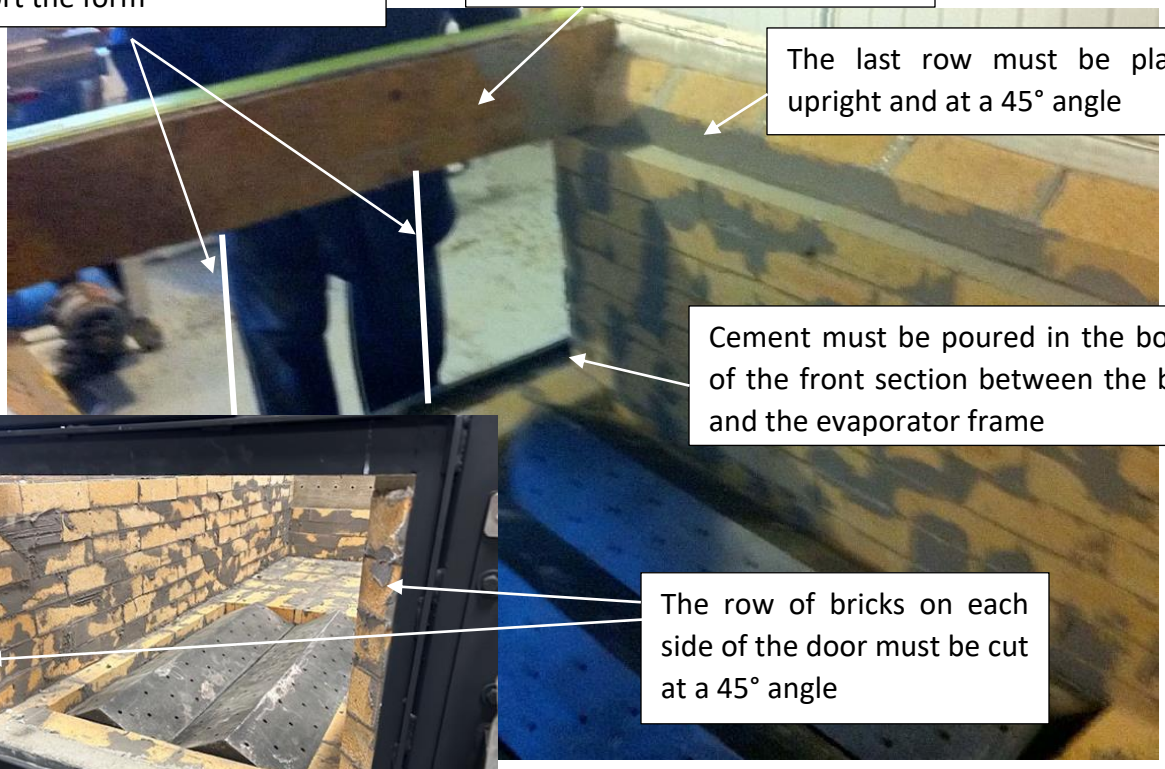
5. Build a wooden form for a Pyromix cement wall around the top, the bottom of the door, and the upper rear sections of the fire box. The metal surfaces should not be directly exposed to heat. **IMPORTANT: You must tape over the air outlets to prevent cement from getting inside.**
6. Slowly fill the form with high temperature cement. Make sure there are no air pockets in the form.
7. Let the cement stand for at least 24 hours between 60 °F and 70 °F to let it dry; you can add a heat source if needed.
8. Remove the wooden form, break the cement opposite the air inlets (if necessary), and remove the tape on the air outlets.
9. Check for cracks in the cement. If you find cracks, fill them with cement to create an even surface.

IMPORTANT: Contact your insurance company to make sure that your installation complies with its safety rules.

You can insert wooden 2x4s to support the form

A wooden form must be made for the cement

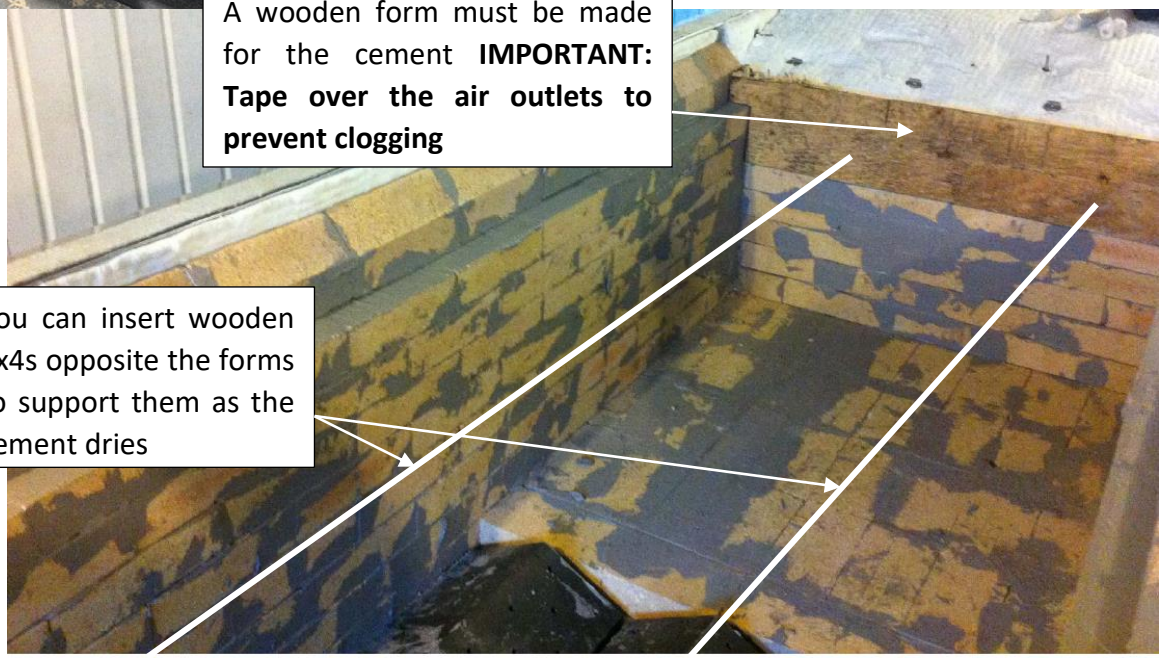
The last row must be placed upright and at a 45° angle



Cement must be poured in the bottom of the front section between the bricks and the evaporator frame

The row of bricks on each side of the door must be cut at a 45° angle

A wooden form must be made for the cement **IMPORTANT: Tape over the air outlets to prevent clogging**



You can insert wooden 2x4s opposite the forms to support them as the cement dries

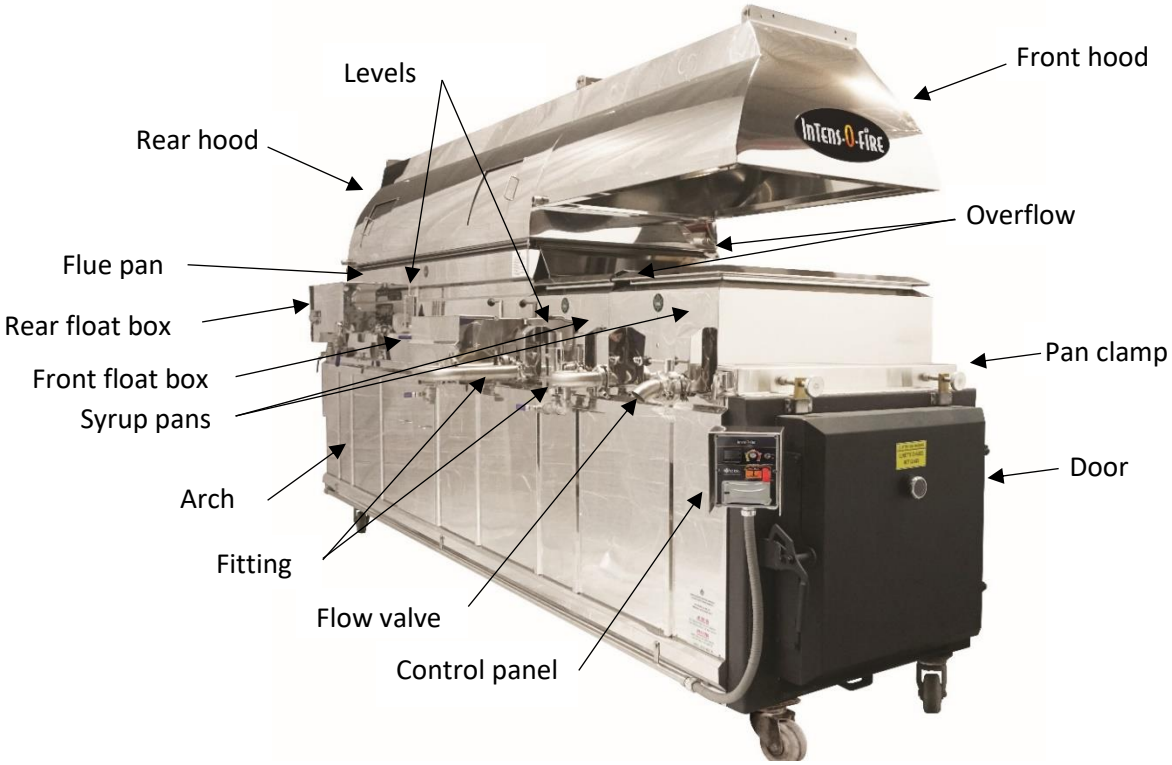
ASSEMBLY

Now that your arch has been bricked and insulated, you can assemble the pans, jacks, and collars.

1. Install the pans on the base, starting with the rear spacer and the flue pan (the largest). Do not forget to install the pan spacers. Next, install the syrup pans in the front. You must have an insulating pan spacer at each joint; make sure to install them with the curved edge facing up (see photos). Check that the pans are level and clamp them properly together using the front pan clamp.

2. Install the jack(s) on the roof; each jack must be perfectly aligned with the stacks on the evaporator. Make sure the joint is tightly sealed to prevent leakage. *(In order to avoid complications with potential claims, we suggest you check with your insurance company to find out the required clearance for the smoke stack as each insurance company has its own rules.)*
4. Using rivets or self-piercing screws, install the entire provided smoke stack, starting with the base and including the strip of insulating wool at the base of the stack. Install all pipes supplied with the evaporator; the pipes must be at least twice as tall as the length of the evaporator. The pipes must extend 2 feet beyond the pinion.
5. Install the steam stacks (if applicable) following the same procedure.
6. Place the collars, then install the China cap and/or stack covers on the outside of the building. Hinged stack covers will require you to run a cable for opening and closing the cap from inside the building. *(Note: Hinged stack covers should always be installed in a way that prevailing winds can close the cap.)*
7. Attach steel cables to the pipes to keep them attached and in place. Do not tighten the cables too much, as the stack expands as it heats up.
8. Remove the protective plastic film from the stainless steel finish on all evaporator parts. *(Note: The film can be very difficult to remove in cold weather.)*

9. Install the float boxes, fittings, and water level(s). Connect the evaporator's water inlet to your tank. The lowest level of your tank should be at least 12 inches above the evaporator's maximum water level. Place Teflon tape on all threads to prevent leakage.



Once the bricking is finished, we recommend curing the cement to maximize the lifespan of the brickwork. Here's how:

1. Air cure at room temperature (stack temperature must be between 40 °F and 100 °F) for 24 hours, keeping the surface of the cement moist by lightly spraying it with water or covering it with plastic.
2. Fill the pans with water as you would when boiling.
3. Raise the stack temperature to 400 °F and maintain it for 3 hours.
4. Gradually lower to room temperature and let it rest for 24 hours. This will prevent thermal shock and help limit cement cracking.

FUEL

Use only wood that is free of paint, staining, and other products as fuel. Some chemicals can eat through stainless steel. Use of unauthorized fuel will void the warranty.

Note: The quality of the wood is an important factor in the performance of your evaporator. Low-quality wood will cause less evaporation, requiring more frequent wood loading and leading to darker syrup. For example: oak gives 29 million BTU per cord compared to 16 million BTU for fir.

Table 1
Heat produced by different wood species (Million BTU per cord)

Oak	29	Elm	25	White pine	17
Sugar maple	29	Red maple	24	Lime tree	17
Beech	28	Larch	24	Spurce	16
Yellow birch	26	White birch	23	Fir	16
Ash	25	Poplar	18		

PREFABRICATED STACK

If you decide to purchase a prefabricated stack for use with your evaporator, please refer to the manufacturer's instructions. The temperature in the smoke stack can rise up to 1,000 °F. Before installing a prefabricated stack, make sure that it can withstand these conditions and check whether it meets your insurance company's safety standards.

SPARK ARRESTERS

We strongly recommend using a spark arrester cap on the smoke stack. Any forced-air evaporator can send sparks and embers up the stack. A spark arrester will help reduce the risk of fire. That's why proper air adjustment is important to minimize the amount of particles coming from the evaporator. It is also important to inspect the spark arrester daily, because it may become clogged over time. If ashes clog the spark arrester, air will not be able to flow out. This will hinder performance and may even damage the evaporator.

Finally, burning wood always comes with risks. Always make sure no flammable material is left around the cabin.

OPERATING THE EVAPORATOR

Checking the furnace (before first use only)

1. Make sure that the air inlets to the fire box are not obstructed (front, door, grates, rear).
2. Completely close the 4 gate valves under the evaporator (access through the panels on each side) and put the potentiometer at 0. (Photo 2, page 13)
3. Start the blower.
4. Open the door and check that some air is flowing through the duct under the door, even when the gate valves are fully closed. This is a safety measure to prevent the door from overheating. If you do not detect any airflow, contact your CDL representative.
5. Stop the blower.

Before starting the evaporator

1. Open the stack covers.
2. Check that all water supply valves are functional and make sure that the outlets are not blocked.
3. Make sure the outlet on the evaporator feed tank is at least 12 inches higher than the water level in the rear pan. Connect the tank to the rear float box.
4. We recommend installing a thermometer on each syrup pan. Calibrate the thermometers by placing them in boiling water and adjusting the temperature to 0 degrees.
5. Open the valve of the maple water tank that leads to the flue pan. Fill the pan to 1 inch over the flues.
6. Open the valve on the front float box and raise the water level in the syrup pans to at least 2 inches.
7. Using a tape measure, compare the actual reading with the scale reading on the water levels and adjust if necessary. *(Note: In the rear pan, level "0" is equivalent to a level above the terminals.)*
8. After the evaporator has been switched on, use the float boxes to stabilize the level in the pans. We recommend 1 inch above the flues in the flue pan and 1½–2 inches in the syrup pans.
9. To check whether the arch is level, measure from the bottom of the pans to above the water level in each corner of the pans; the measurement will be the same in all corners if the arch is level.
10. Make sure the valve on the water tank output is always open. If it is closed, you may burn the pan.

OPERATING INSTRUCTIONS

INTENS-O-FIRE 2.0 pre-heating

1. Open the stack cover.
2. Feed water to the evaporator and wait until the water reaches the desired level in all pans.
3. Prepare the fire using wood cut to 2 to 3 inches in diameter and 20 to 30 inches in length for small evaporators (use larger wood for larger units). Load the fire box with paper, cardboard and wood; place the wood 6 inches from the door.
4. Adjust the gate valves on the vent pipes inside the arch (accessible through the panels on each side). Here are the recommended settings for starting your evaporator; you can refer to the troubleshooting guide if you want to modify them. (Photo 1)
   a. Gate valves on the door of the front block: 25% open
   b. Rear block valve: 50% open

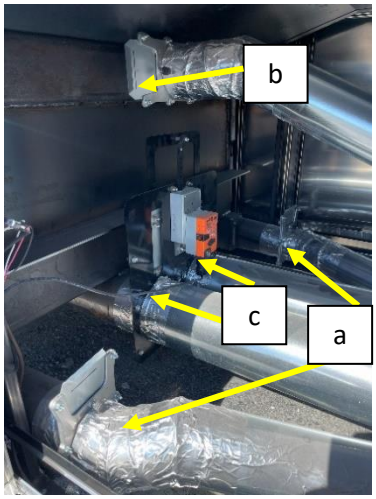


Photo 1

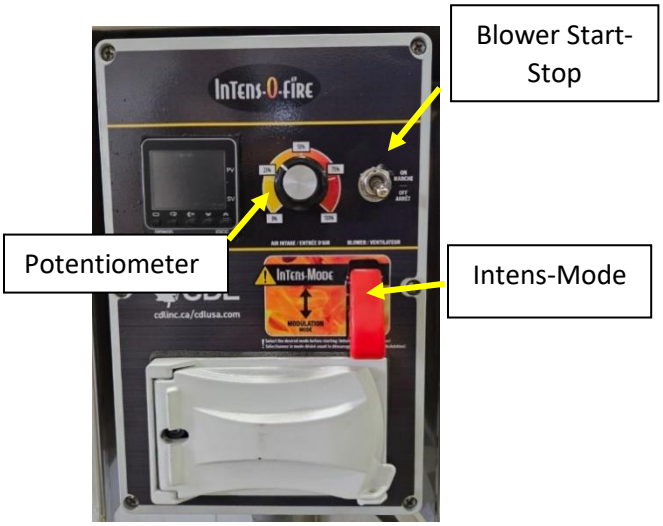
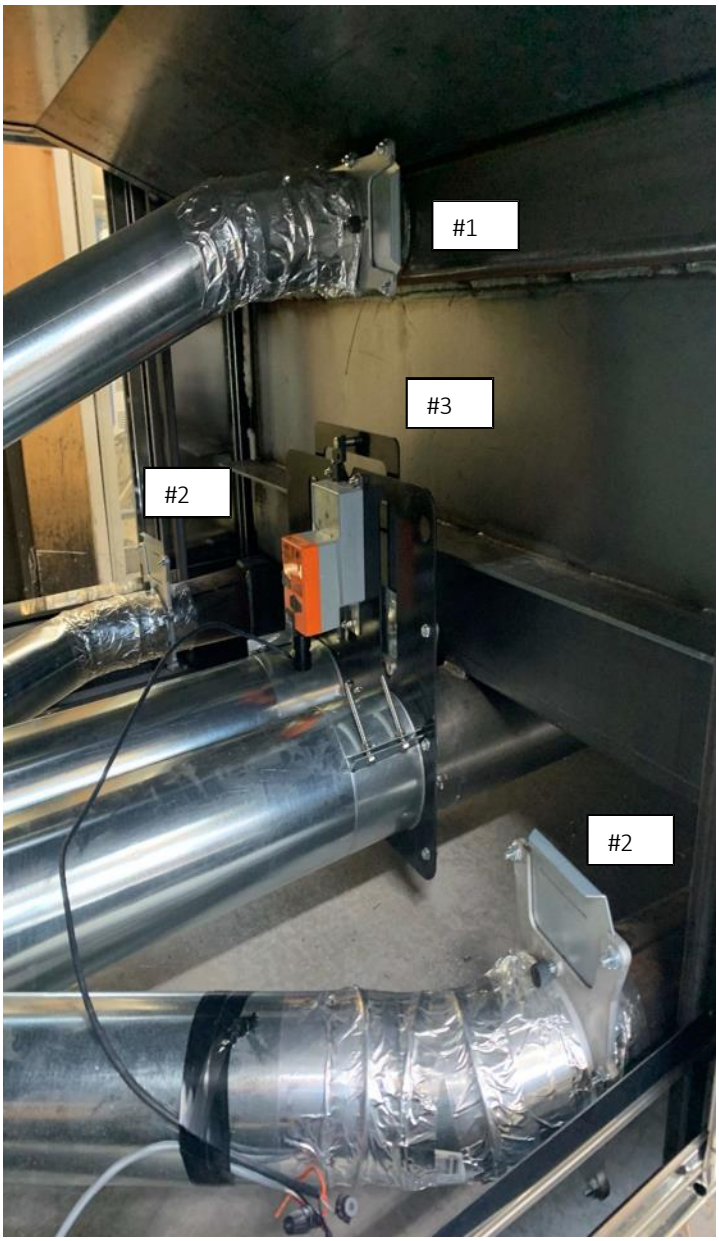


Photo 2

5. Select the desired Mode (Intens mode or Modulation mode) **(Always start with Modulation Mode and once the evaporator is heated, choose the desired mode).** (Photo 2)
6. Adjust the stack temperature using the temperature controller; we recommend a stack temperature between 600 °F and 800 °F. **(Note that above 750 °F, the base may start to yellow.)**
7. Set the potentiometer to 25%. (Photo 2); it controls the grates air supply gate valves. (Photo 1, c)
8. Start the fire and close the door.
9. Start the blower. (Photo 2)
10. Let the wood burn for about 10 minutes or until the fire is burning well.



SECONDARY AIR MANUAL GATE VALVE (#1)

The manual gate valve located at the top is called secondary air gate adjustment gate valve. This valve is required to adjust the quantity of secondary air required for an optimal and clean combustion. As a general rule, this gate valve will require adjustment on the first boil and shouldn't require any other adjustment unless type of wood used is drastically changed or blower location / air ducts configuration is modified.

DOOR AIR MANUAL GATE VALVES (#2)

The two gate valves located at the bottom of the evaporator are the door air gate valves. The purpose of these valves is to adjust the quantity of air required to avoid overheating the door. The optimal quantity of air allowed to cool the door should keep the door hot, but not hot enough to burn our hands when touching it. The door should never be cold, as it would confirm an excess of air and would affect negatively the combustion efficiency. As a general rule, this gate valve will require adjustment on the first boil only, but may require fine tuning if target temperature is set higher for example.

PRIMARY AIR GATE VALVE (#3)

The primary air gate valve, 1 or 2 depending on the size of the evaporator, is driven by a belimo linear actuator. This motor receives the signal from the potentiometer (manual mode) or the digital temperature controller (automatic mode). The role of this component is to control the power of the combustion. (Boiling rate)

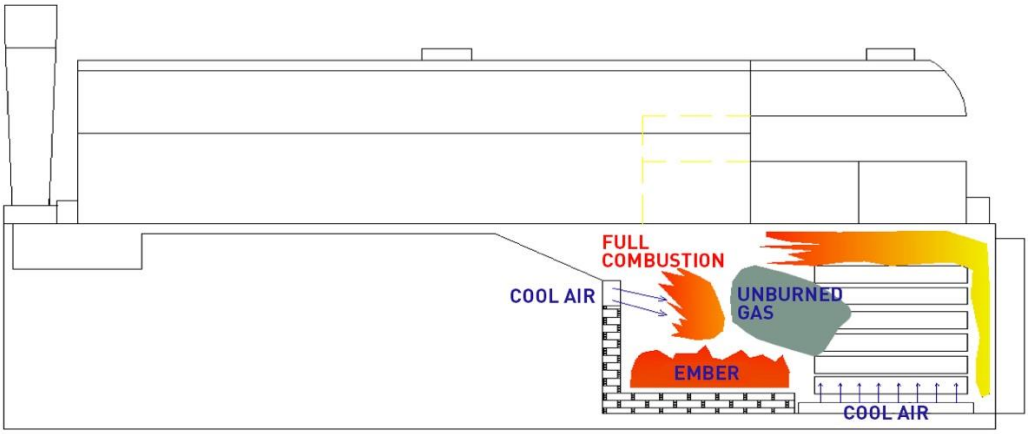
11. To adjust the potentiometer:
    a. Modulation Mode: Gradually increase the potentiometer up to 100%.
    b. Intens Mode: Increase the potentiometer gradually to the desired temperature **(See warning).**

WARNING: The Intens Mode (manual mode) deactivates the modulation and therefore the chimney temperature limitation. This mode can cause intense heat, the discoloration of the chimney and the emission of embers from the chimney. The user must be aware of these risks and ensure control of their equipment.

OPERATING INSTRUCTIONS (CONTINUED)

INTENS-O-FIRE 2.0 standard heating procedure

1. To reload wood into the fire box, wait until only 8 inches of charcoal remain, **turn off the blower only**, open the door and rake 4 inches of charcoal towards the back of the fire box. It is important to keep some embers above the grates to allow the fire to start quickly.



2. Add tightly corded wood over the grates until it sits within 4 to 6 inches of the syrup pans.
3. Close the door.
4. Start the blower.
5. Repeat from step 1.

THE HOTTER THE STACK GETS, THE STRONGER THE DRAFT WILL GET. THE POTENTIOMETER ON THE CONTROL PANEL ACCELERATES COMBUSTION AND REDUCES STACK DRAFT. THE AIR MUST BE ADJUSTED CAREFULLY TO PREVENT ASH FROM COMING OUT BETWEEN THE PANS. THIS WILL ALLOW THE EVAPORATOR TO ACCELERATE FULLY WHILE AVOIDING TOO MUCH COMPRESSION.

Adjusting the draft

Frequently clear the ash from under the grates. If there is not enough air space under the grates, they will warp.

Make sure the pipe runs at least 3 feet above the top of the roof and at least twice the length of the evaporator. If you still aren't getting enough draft, add an extra section of pipe.

BOILING

1. Defoamers are needed to keep the evaporator running smoothly. If the syrup generates too much foam, the float boxes will be unable to operate properly. This may lead to unstable water levels and a possible water shortage. The defoamer also prevents syrup from overflowing.
2. Pay special attention to the front and rear water levels; adjust as needed using the crank on each float.
3. The maple syrup is ready when it reaches 7 degrees above the boiling point of water. Open the valve when the syrup temperature reaches this level and close the valve once the temperature drops below 7 again. Do not heat the furnace if the syrup is almost ready. The temperature beneath the syrup pans will be too high and the syrup may burn. Heat after you have drawn off the syrup.
4. Repeat the previous step every time the temperature reaches 7 degrees above boiling. Your draw may vary over a single day of boiling. This is caused by a change in atmospheric pressure. Be careful and calibrate your syrup regularly using a hydrometer, densitometer or refractometer, all available at your local CDL store.
5. Once you have more experience, you can decrease the sap level in your pans. The ideal level is 1 inch above the flues in the flue pan and 1½–2 inches in the syrup pans. The lower the level, the faster the boil. However, lower levels also increase the risk of burning the pans.
6. Check the door temperature by placing your hand on the door. The door may be hot to the touch, but **NEVER** burning hot. If it gets too hot, you will need to add some air by opening the gate valves on the door of the front block. (Photo 1, a) The goal is to keep the door hot, but not burning.

IMPORTANT SAFETY NOTE

IF A POWER FAILURE OCCURS, TURN THE BLOWER OFF AND LEAVE THE EVAPORATOR DOOR AJAR BY ½ INCH. THIS WILL SUPPLY ENOUGH AIR TO SAFELY FINISH BURNING THE REMAINING WOOD IN THE EVAPORATOR.

If you have any problems, you can reach one of our technicians by calling 800-883-5158 or your CDL representative.

STOPPING THE EVAPORATOR

1. We recommend changing the dead water in the front and rear float boxes, as well as the water level, every evening.
2. When you are almost finished boiling, make sure you have enough maple water to raise the level in the pans to at least 2 inches above the normal level. This will compensate for the evaporation caused by the residual heat in the evaporator.
3. Rake the embers at the bottom of the fire box back to the grates so that they can be burnt more quickly.
4. Make sure that there is no longer any live fire in the fire box and set the potentiometer to 100%.
5. When the embers are completely burnt off, turn off the blower.
6. Close the cap on the steam stack.
7. Don’t forget to leave the door ajar when the evaporator is stopped to cool the fire box as quickly as possible. The fire box can stay hot for up to 24 hours.

IMPORTANT SAFETY NOTE

THE AREA IN FRONT OF THE EVAPORATOR DOOR IS VERY HOT WHEN THE DOOR IS OPEN. ALWAYS WEAR HEAT-RESISTANT GLOVES, PROTECTIVE CLOTHING, AND SAFETY GOGGLES. INSUFFICIENT PROTECTION MAY LEAD TO SEVERE BURNS.

MAINTENANCE

Pan cleaning

1. Fill the pans with filtrate or clean water to the top of the dividers.
2. Add CDL-recommended pan cleaner (read the label to determine how much to add). Heat the water to approximately 194 °F, extinguish the fire, and let sit overnight.
3. Drain and rinse pans thoroughly with water to ensure that no traces of cleaning product remain.
4. Fill the pans again and add baking soda to neutralize any cleaning product residue. Let sit for 15 minutes. Drain and rinse one last time.
5. Never use abrasive products, wire brushes, steel wool, or products containing chlorine or hydrochloric acid.
6. If there is burnt syrup on the outsides of the pans, use a commercial oven cleaner (cold oven) to remove it. ***Only do this if there is no more syrup in the pans.*** The cleaner will dissolve the syrup without damaging the pans. To make the pans shiny again, use an industrial foaming glass cleaner.
7. Clean the soot from underneath the pans with a brush; we recommend doing this in the middle and at the end of the season.
8. Remove excess embers in the fire box and under the grates; this maintenance is also recommended in the middle and at the end of the season.

IMPORTANT: If even the slightest amount of acid is left in the pans between seasons, it will have damaged the pans by the next season.

WHEN TO CLEAN THE PANS

How often your pans will need to be cleaned depends on the time of the season and the amount of deposit left at the bottom of the pans. Check the syrup pans every hour. When there is too much deposit at the bottom, clean the pan or replace it with a clean one. For flue pans, cleaning frequency depends on the size of the evaporator and the amount of minerals in the maple water. Generally, one cleaning in mid-season is enough. If there is too much of a mineral deposit in the flue pan, it could burn or crack at the bottom of the flues. It must be checked every day. It is a good idea to clean the pan surfaces that are in contact with the flames in mid-season. Run a brush between the flues underneath the pans to remove as much soot as possible.

STORAGE BETWEEN SEASONS

1. Lift the pans and place a block between the frame and the pans so that air can circulate around the pans. Too much moisture could damage them.
2. Make sure the pans are clean. Remove mineral deposits with a cleaning product. If necessary, clean the flues inside and outside of the flue pan with the appropriate brushes and a pressure washer.
3. Never leave cleaners in the pans. They will be damaged quickly and this damage will not be covered by the warranty.

NUMBER OF GALLONS (US) IN THE FLUE PAN

Dimension in feet	Flue height in inches	Gallons (equal flues)	Gallons (for every inch above the flues)
2.5x5	7	15.6	7.5
2.5x7	7	21.8	10.5
3x7	7	30.9	13.2
3x8	7	35.1	15
3.5x8	7	53.5	17.4
3.5x10	7	66.8	21.8
4x8	7	45.9	19.8
4x10	7	56.1	24.9
5x10	7	70.3	30.9
6x10	7	84.3	37.2
6x12	7	99.6	44.7

WARRANTY

Your evaporator is covered by a 2-year limited warranty. For two years from the date of original purchase, CDL Sugaring Equipment Inc. will repair or replace parts of this evaporator that are defective in material or workmanship provided that the evaporator is installed, operated, and maintained according to the instructions provided in the user manual.

Exclusions

This warranty does not cover:

1. Products from which the serial number has been removed or altered, or whose number is not easily readable.
2. Evaporators that have changed owners or are located outside of North America.
3. Production losses caused by problems with the evaporator.
4. Loss of income caused by the quality of the syrup.
5. Service calls that do not involve malfunctions, manufacturing or material defects, or products that were not used according to the instructions provided.
6. Service calls to verify installation or receive instruction on using the equipment.
7. Travel expenses and costs incurred to make the equipment accessible for repair.
8. Service calls to repair evaporator insulation or brickwork.
9. Service calls after two years.
10. Damage caused by repairs made by unauthorized technicians; use of parts other than original CDL parts or parts that were not obtained from an authorized technician; or external causes like abuse, misuse, accidents, fires, or natural disasters.
11. Consumable products (wood) and accessories.
12. Damage caused by misuse, negligence, modifications made by the customer, or electrical problems.
13. Damage caused by the use of products not intended for use in an evaporator, misuse of acid or cleaning products.
14. Damage caused by the use of painted wood or wood containing chemicals, glue, or any other additives.
15. Damage caused by the use of any fuel other than wood.

16. The electric motors are covered only on approval from the CDL service department. Every electric and electronic component that gets its power from a generator is not covered by the CDL warranty.

17. Damage caused by the use of Intens Mode on the equipment, including but not limited to tip burning, chimney discoloration and other similar deterioration.

18. The impact of a fire started by embers while using manual mode.

19. The user assumes full responsibility for the use of Intens mode and the resulting consequences.

Disclaimer of Implied Warranties; Limitation of Remedies

The customer's sole remedy under this limited warranty is the repair or replacement of the product as described above. Claims based on warranties, including warranties of merchantability or fitness for a particular purpose, are limited to two years or the shortest period permitted by law, which shall not be less than two years. CDL Maple Sugaring Equipment Inc. shall not be held responsible for incidental or indirect damages or for material and implicit damages. Some states and provinces do not allow limitations or exemptions on incidental or indirect damages or limitations on warranties. In this case, these restrictions or exemptions may not be applicable. This written warranty gives you specific legal rights. Depending on the state or province, you may have other rights.

If you need to call the repair service

Keep your receipt, delivery note, or other valid proof of payment to establish the warranty period in case you need to call for repairs. If a repair is made, it is in your best interest to obtain and keep all receipts. The service to which you are entitled under this warranty must be obtained by contacting CDL at the address or telephone number below.

Your evaporator will be serviced by CDL in Canada. Any features and specifications described or illustrated are subject to change without notice.

CDL Sugaring Equipment Inc
257 route 279
Saint-Lazare-de-Bellechasse, QC G0R 3J0
Canada

418-883-5158 | 1-800-361-5158
cdlinc.ca

CDL USA
3 Lemnah Drive
St. Albans VT 05478
United States

802-527-0000 | 1-800-762-5587
cdlusa.com

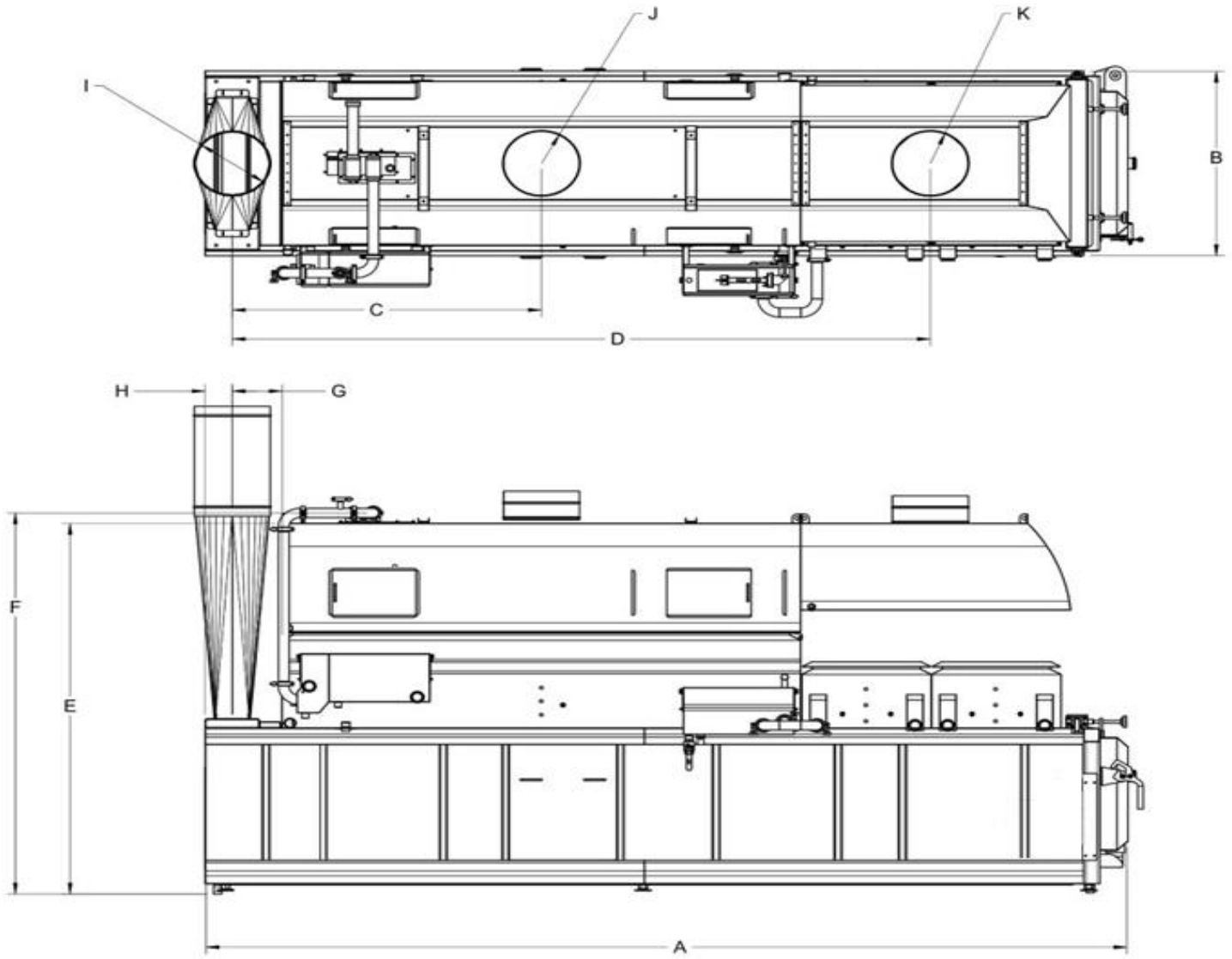
DIMENSIONS AND FEATURES OF INTENS-O-FIRE 2.0 EVAPORATORS

Models	Dimensions in inches								SMOKE DIM.	STEAM DIM.	STEAM DIM.	MIN. REAR WALL DIM.
	A	B	C	D	E	F	G	H	I	J	K	K
2.5x8	112.5	33.75	39.25	87.25	77.25	82.5	9.25	5	12	12	12	24
2.5x10	146.5	33.75	49.25	111.25	77.25	82.5	9.25	5	12	12	12	24
3x10	146.5	40.25	49.25	111.25	80	82.5	9.25	5	14	14	14	24
3x12	170.5	40.25	57.25	129.25	80	82.5	9.25	5	14	14	14	24
3x13	182.5	40.25	57.25	136.25	80	82.5	9.25	5	14	14	14	24
3.5x12	170.5	46.25	57.25	129.25	80	82.5	9.25	5	16	16	16	24
3.5x13	180.5	46.25	57.25	136.25	80	82.5	9.25	5	16	16	16	24
3.5x14	194.5	46.25	69.25	153.25	80	82.5	9.25	5	16	16	16	24
4x12	170.5	52.25	57.25	129.25	80	82.5	16.375	-2*	20	18	18	24
4x13	182.5	52.25	57.25	136.25	80	82.5	16.375	-2*	20	18	18	24
4x14	194.5	52.25	69.25	153.25	80	82.5	16.375	-2*	20	18	18	24
4x15	206.5	52.25	69.25	159.25	80	82.5	16.375	-2*	20	18	18	24
5x14	194.5	64	72	153.25	80	82.5	18.625	-0.25*	20	20	20	24
5x16	223.25	64	72	168	80	82.5	18.625	-0.25*	22	20	20	24
6x16	223.25	72	72	168	80	82.5	19.125	-1.25*				

* For evaporators of 4’ and above, the strain is off-center, which is why the “H” measurement becomes negative.

CDL SUGARING EQUIPMENT

DIMENSIONS OF INTENS-O-FIRE 2.0 EVAPORATORS



CDL SUGARING EQUIPMENT

TROUBLESHOOTING GUIDE

Problem	Possible causes	Solutions
Third pan is boiling too much	- Too much air in the door and the front section - Not enough air in the rear section - Loading too far from the door	- Make sure that the air from the door feels like a breath on your hand (slow flow) - Make sure that the door is hot to the touch, but not burning - Adjust the airflow in the rear section - Move the wood closer to the door
First pan is boiling too much	- Too much air in the rear section - Not enough air in the door - Blower is too powerful	- The key for the rear section should be more or less the same as the key for the front section - Increase the air in the door - Reduce the percentage of the potentiometer
Smoke between the pans	- Working under compression (too much air) - Cap is closed - Spark arrester screen is clogged	- Adjust the grates so they are not operating under compression - Check the cap and spark arrester screen - Reduce the percentage of the potentiometer
Trouble reaching the right stack temperature	- Incorrectly set or defective temperature controller - Defective or dirty temperature sensor - Potentiometer not set correctly - Lack of draft	- Check the set point on the temperature controller - Check the probe for dirt or defects - Check the cap and spark arrester - Check the position of the potentiometer - Check the state of the gate valves
Blower not working	- Faulty blower or evaporator circuit breaker - Faulty blower	- Check circuit breakers in the electrical panel and/or evaporator control panel - Check blower power supply - Check blower connectors

NOTES:

CDL SUGARING EQUIPMENT