



CLARK
CONSERVATION DISTRICT

Poultry Processing Unit Borrower's Packet

Your appointment time is a specific time! If you are over 15 minutes late to your pick up or drop-off appointments, we will keep your damage deposit and you could be ineligible to rent our equipment.

The cost is \$50 plus a \$50 deposit. We take cash or check. If paying by check, please bring two separate checks. You will need a 2" ball hitch, a 4-prong flat light connector, and a truck or SUV.

All information contained (including the contract) is subject to change. Thanks for your interest and please let us know if we can answer any questions for you!

Clark Conservation District
813 West Main Street, Suite 106
Battle Ground, WA 98604

www.clarkcd.org

staff@clarkcd.org

(360) 859-4780

POULTRY PROCESSING EQUIPMENT RENTAL PROGRAM

Set Up

- Watch video demos on <https://www.feathermanequipment.com/how-to-videos/> to see how to set up
- NEVER PROCESS BIRDS IN THE TRAILER. The trailer is solely for transporting equipment.
- Spray blood catch-basin and kill cones with cooking spray to make clean up easier (included in equipment box)
- Must process in a clean spot away from area where poultry is kept to prevent spread of disease (gravel or grass, not in mud)
- Supplies the renter must provide:
 - Two strong people to move equipment (equipment is 100 pounds per piece)
 - Water spigot (2 is helpful)
 - Hose (2 is helpful)
 - Ice for chill tank (to keep processed birds cool)
 - Electricity (for plucker)
 - Propane tank (barbeque sized, not camp stove sized)
 - Sharp knives
 - Aprons, gloves, etc.
 - Table for dressing birds
 - Bags for meat
- Supplies we provide in equipment box:
 - Lighter (for scalding)
 - Bucket (for soapy water only)
 - Gut bucket
 - Ground fault interrupter (plug into outlet and plug plucker and scalding into it to prevent electrical accidents)
 - Dish soap
 - Bleach
 - Sprayer for bleach solution
 - Cooking spray
 - Scrub brushes
 - Thermometer for scalding
- Place a small amount of dish soap in scalding water for waterfowl to aid in scalding. Thermostat should be set at 145°-150°F for chickens and turkeys. If doing ducks or other downy birds you may raise the thermostat up to 170°-175°F. It is very important to return the thermostat to 145°F after use.
- Scalding: **The water will take 2-3 hours to heat depending on the starting temperature. Factor this into your timing.** Only use propane and keep thermostat horizontal, with air intake vent free of debris and water. No actual fires are to be made under the equipment to heat water.

CLEANING & CARING FOR POULTRY PROCESSING EQUIPMENT

It is your responsibility to return the equipment in a clean condition. We have made the following observations to assist you in these efforts.

- ✓ Clean the equipment as soon as you are done processing. The longer you wait, the harder it will get. The blood collecting tank is most easily cleaned by spraying with water throughout processing to prevent blood from drying on the equipment.
- ✓ **When cleaning the plucker, bend rubber fingers towards you. This will aid in feather removal as it keeps the feathers from being pinned against the plastic housing.**
- ✓ **The most common problem we experience with the feather plucker is feathers left in the exit chute. Make sure that there is no blockage of feathers by Reaching inside feather ejection chute on plucker and removing feathers caught behind the bar and then running plenty of water through the exit chute.**
- ✓ The scalding tank often gets ring around the tub. To prevent this and aid in cleaning, add water to a level above this ring as soon as you are done with the scalding process. This will prevent the dirty water from drying on the side of the tank and make cleaning easier.
- ✓ When all done processing, clean the cones first by placing in the hot scald water and soaking for a few minutes. The hot water will help loosen any dried blood, manure, feathers, etc. before you start scrubbing with soapy water. This works for scrubbing blood catch buckets, anything the cones were affixed to and other equipment you may have used during the process.
- ✓ Please spray all surfaces with bleach solution before and after use (no need to spray on motor)
1/4 cup bleach per 1 gallon water
- ✓ Give everything one last look over before returning it! Make sure all equipment is clean and dry. Remember that someone else will be getting this equipment next. Please return it in the condition you would like to receive it in.

Please take care of the equipment as if it were your own. If the equipment breaks down or needs to be fixed because of misuse or carelessness, it affects everyone else who enjoys and depends on this service. If for any reason the equipment is damaged or is not functioning properly, please notify Clark Conservation District immediately. Do not attempt to repair equipment yourself.

EQUIPMENT CLEANING CHECKLIST

Bleach Solution *1/4 cup bleach per 1 gallon water* mixed within 24 hours of use.

Clean the equipment as soon as you are done processing. The longer you wait, the harder it will get. The blood collecting tank is most easily cleaned by spraying with water throughout processing to prevent blood from drying on the equipment.

Featherman Pro Automatic Plucker

- Unplug plucker from electricity
- Spray the outside and inside of the plucker (*do NOT wet the motor assembly unnecessarily*)
- Remove all feathers from underneath the housing
- Remove all feathers from between the fingers and the plastic
- When cleaning the plucker, bend rubber fingers towards you. This will aid in feather removal as it keeps the feathers from being pinned against the plastic housing. **The most common problem we experience with the feather plucker is feathers left in the exit chute. Make sure to grab feathers from the underside of the exit chute and pull them out. Then spray water up and back down the chute to clean them all out.**
- Scrub the outside and inside with soap and water and rinse clean
- Spray with bleach solution

Featherman Scalding

- To prevent a ring around the tub, add water as soon as you are done with the scalding process. This will prevent the dirty water from drying on the side of the tank and make cleaning easier.
- Unplug the scalding from electricity
- Disconnect scalding from propane
- Drain the scalding
- Scrub with soapy water and rinse thoroughly inside and out (*Do NOT spray the controls*).
- Spray with bleach solution

Chill Tank

- Rinse the tank with soapy water and scrub
- Make sure it is clean and then spray it down with bleach solution

Kill Cones and Stand

- Remove cones from cone stand
- Soak in scalding water
- Scrub with soapy water and rinse thoroughly – inside and outside
- Be sure all blood, feathers, etc. are removed
- Spray with bleach solution
- Dry and stack cones one inside the other – place inside the scalding for transport

Small Equipment Tub

- Include clean: lighter, buckets, plug, dish soap, bleach, pump sprayer (empty), cooking spray, scrub brushes.
- Please let a staff member know if you use the last of something or break anything.**

Helpful Links

Processing Poultry

1. Special poultry permit to slaughter, prepare, and sell whole raw poultry

<https://agr.wa.gov/departments/food-safety/food-safety/special-poultry-permit>
<https://agr.wa.gov/services/licenses-permits-and-certificates/summary-descriptions/special-poultry-permit>

2. Application for Special Poultry Permit

<https://cms.agr.wa.gov/WSDAKentico/Documents/Forms/3302-application-for-special-permit-to-slaughter-poultry-rev-5-2012.PDF>

3. Handbook for Small and Direct Marketing Farms, Regulations and Strategies for farm and food Businesses: Regulations for food processing

<https://agr.wa.gov/departments/business-and-marketing-support/small-farm/the-green-book/regulations-for-food-processing>

4. Selling and processing poultry

https://cms.agr.wa.gov/WSDAKentico/Documents/DO/RM/RM/46_SellingPoultry.pdf

5. Videos on processing birds with the Featherman products

<https://www.feathermanequipment.com/how-to-videos/>
<https://youtu.be/zhHojM2IeIE>
<https://youtu.be/hAUDCdwYwqc>

6. How to process a chicken at home (with photos)

<http://www.backyardchickens.com/a/how-to-process-a-chicken-at-home>

Dealing with Mortality and Carcasses

1. On-Farm Composting of Large Animal Mortalities

<https://pubs.extension.wsu.edu/onfarm-composting-of-large-animal-mortalities>

2. Composting of Poultry Offal Demonstration Project

<http://agsyst.wsu.edu/poultryoffal.pdf>

Miscellaneous

1. Profitable Poultry: Raising Birds on Pasture

<http://www.sare.org/Learning-Center/Bulletins/Profitable-Poultry>



► **The Featherman Pro**
 Drop 4 or 5 scalded chickens into the tub and in 20 seconds they will be clean—no pin feathers, no backache. Picks all poultry 3 lbs. and up. 1 hp motor, 10:1 speed reducer, high density, UV-resistant, food grade, molded plastic tub and housing. Features feather chute, water spray ring, waterproof switch, 119 ultra-soft fingers. Also available in non-electric or 220V.
 33"H x 28"L x 25"W, 120 lbs.



► **The Featherman Gamebird**
 Identical to the Pro except the Gamebird is packed with 249 fingers, spaced tightly together to pick clean the smallest birds. Quail, dove, and squab all pick beautifully with the Featherman Gamebird. The soft fingers are gentle on smaller, thin-skinned and gun-shot birds. Great for chickens, pheasants, and all larger birds too. Also available in non-electric or 220V.
 33"H x 28"L x 25"W, 135 lbs.




► **The Featherman Turkey**
 Simply scald chickens or turkeys, then drop up to 75 lbs. of birds into the tub. In 20 seconds or less the birds will be plucked clean—no pin feathers, no backache. This plucker features 203 fingers and will easily hold three to four 15-20 lb. turkeys or six to eight broilers. Same great features as the Featherman Pro. Only available in 220V.
 33"H x 28"L x 35"W, 150 lbs.



► **The Featherman Scalder**
 A perfect feather pick begins with a perfect scald. Our scalder makes that simple. High BTU output from a propane burner. 40-gallon water capacity. stainless steel, 8 cubic foot tub. New design includes easier operation, improved air flow, increased BTUs, and handy overflow valve.
 30"H x 28"L x 26"W, 95 lbs.



► **Roto-Dunker**
 A hands-free scalding attachment that fits easily on top of the scalder, with two stainless baskets that will hold 20-30 lbs. each. Six rotations per minute offers a consistent scald which will give you a perfect pluck.



► **Shackles**
 Stainless steel shackles hold up to 5 birds, or 50 pounds. Ships FREE with Scalder.



► **Dunker**
 The spring-loaded, swiveling dunker takes the back work out of dunking. Mounts in seconds to the scalder, no tools required. Ships FREE with Scalder.



► **Chill Tank**
 300-gallon capacity will chill up to 200 birds. USDA food-grade plastic, 1" PVC drain valve, compact.
 32"H x 72 1/2"L x 30"W



► **The Featherman Pro Set-up**
 This set includes all you need to get started! The Featherman Pro Plucker, Scalder, Roto-Dunker, Kill Cone Stand, and eight Broiler Cones. Your best package option for start-up to 200 birds per hour. A savings of \$100 from individual purchases, plus a shipping savings of \$130 for a **total savings of \$230!**
 Add on our Chill Tank for \$400 (includes shipping) and save another \$125 in shipping for a **total savings of \$355!**
 Please call to customize your set-up special to fit your needs.

► **Kill Cone Stand**
 Compact, efficient, and easy-cleaning stainless steel stand. Molded plastic blood trough. Holds 8 Broiler Cones or 4 Turkey Cones.



► **Kill Cones**
 Stainless steel, folded spot welded. Birds will not back out as with flat-sided cones.
 Gamebird: 3" x 6" x 10"
 Plastic Broiler: 4" x 8" x 14"
 Stainless Broiler: 4" x 8" x 16"



Small Turkey: 5" x 11" x 23"
 Large Turkey: 8" x 14" x 19"

► **Large Kill Cone Stand**
 The eighteen-hole Featherman cone stand takes the bottleneck out of bleed-out. Blood trough keeps work space clean and captures blood in a bucket below. Kill cones rotate inside trough. The fastest and easiest on the poultry bleed out station available.
 4' diameter.



Featherman

Automatic Feather Picker

Owner's Manual

Date: _____ **Model#:** _____

Featherman Equipment
P.O. Box 62
Jamesport, MO 64648
(660) 684-6035
info@featherman.net
Website: www.featherman.net

Congratulations on your purchase of a new Featherman Plucker! You are now on your way to an exciting and possibly life-changing experience. The pastured poultry business is one of the greatest opportunities in agriculture. Your poultry will sell themselves and your customers will be asking for more products. Or, like some, with your new equipment you can start a processing sideline or even go into it full time. You can make a handsome profit easily doing work that would take others many hours. Plus you can have the satisfaction of helping others reap the rewards of pastured poultry.

Guarantee

Your entire machine is guaranteed for one year from your purchase date. Should any problems occur due to faulty parts or manufacture, we will replace the parts or replace the machine.

Maintenance

Since the plucker always waits on the scald, it is resting at least half the time. Our motor manufacturer tells us our motors will last forever in that kind of use. (To add life to your motor, start it unloaded, then add birds as recommended in Procedure).

Greasing the Drive Shaft Bearing: Depending on usage (minimal usage every 6 months, to maximum usage every week to 2 weeks), the drive shaft bearing needs to be greased to prolong and increase the life span of your plucker's bearing. Additional maintenance we recommend is a thorough wash-down after use. It is normal for feathers to catch under the fingers. The only way to remove them is by hand.

Operation

After the removal of all packaging materials, your Featherman is ready to plug in and go. Use 110 volt current (unless you have a Turkey model or specifically ordered a 220 volt Pro model) and be sure to keep the cord in good shape and out of standing water. If an extension cord is used, be sure it is heavy duty. The motor will not run properly if it is starved of electricity. Hook up a garden hose (cold water) to the spray ring. Simply open the valve to spray.

Features

- Solid and durable, high density plastic tub and motor housing are attractive, easy cleaning and USDA/FDA food grade approved.
- Rubber padded, no-slip feet.
- 1 HP motor and 10:1 speed reducer
- Light weight for easy transport and low cost shipping.
- Fingers are softest fingers made in America giving the gentlest pick possible.
- Unique feather chute keeps work space clean, speeds clean up.
- Spray ring washes feathers down automatically.
- Knee-high, water-proof on-off toggle switch handy to operate with foot or knee yet concealed to prevent accidental starting.

Basic Processing Procedure for Chickens

Handling

Always handle birds as gently as possible. Distraught birds will be harder to pick and bad handling will cause bruising. Hold by a leg or around the body, never by a wing or the head.

Restraining

We recommend the use of kill cones. Our perfectly round, stainless steel, cone will not allow the birds to back out during bleeding like they will in flat-sided cones.

Killing

Slit the carotid artery with a very sharp knife. This takes practice to avoid cutting the trachea (windpipe) or severing the spine – either of which causes trauma to the bird and will result in an inferior bleed out. A proper cut will not be felt by the bird (and is an appropriate time to give thanks to the bird). See our video tutorial.

Bleeding

Bleeding will take about two minutes. Contraction of muscles as they are oxygen starved is normal but care must be taken to avoid dislocated or broken wings or legs in this process. Watch for this and adjust the restraining technique if necessary. Again, our cones are foolproof. Collect the blood and compost it.

Scalding

Scalding is the critical step in processing and requires either a lot of experience or sophisticated equipment. The Featherman Plucker will give you squeaky clean birds with no pin feathers when you master the scald. We manufacture the Featherman Scalding to take the guesswork out of this part of the operation but it is possible to have a perfect scald with very little investment. Find the largest, heaviest scald container you can and heat it with propane or other fuel (cheaper, quicker, and less expensive than electricity). We recommend scalding at 145 - 150 degrees F. for a minute. Batches of birds will vary slightly so be prepared to adjust accordingly with temperature and/or time changes on the scald. Change water when it is dirty and scald becomes less effective.

If the scald is too long or too hot, skin will tear; if it is too short or too cold, feathers will stick. Our plucker's soft fingers give the industry's widest margin in scald temperatures, giving you more undamaged birds. Still, be careful not to over-scald. You can actually cook the breast meat. (Outdoor-raised birds are less likely to have this happen.) Pull wing feathers to check for readiness to pluck.

Dunking

You may rig up a dunking apparatus, stir with a paddle, or simply dip the birds by hand. Be sure to add some soap (like a dish detergent) to the water. This will help water penetration to loosen the feathers. We offer the options of a manual or automatic dunking apparatus to ease this job.

Plucking

Drain the birds of excess moisture, turn the Featherman on and drop the birds in. Open one of the valves on the “Y” to let the water spray. Check in 20 seconds. Give more time if necessary. Turn machine off, turn water spray off and remove birds. Because of its gentleness you will not damage the birds by leaving them in the plucker too long.

Poor Scald

Should you get a bad pick (due to a scald error or fat birds) don't be afraid to scald and pluck again. You still probably won't get all the feathers out, but you will save time over picking by hand.

Finishing the Birds

There is no substitute for sharp knives and experience in evisceration. You will be amazed at how many birds per hour you can do when you get experienced. However, quality standards should be your first priority before speed. As you gain experience you will be able to keep up the quality and do over 20 birds per person per hour. The very experienced crew can process 30 to 40 birds per person per hour. In other words, a good five-person crew can process 200 birds per hour.

Clean Up

The Featherman is made to be washed down. A pressurized spray down is all that is required. Take care to avoid wetting the motor assembly unnecessarily. A few feathers will catch between the fingers and the plastic. This happens with all pluckers and is not a concern. You may remove them if you like. The Featherman is made of FDA-approved materials and has been passed for use in USDA-approved facilities.

More Information

Don't hesitate to contact us or the dealer you purchased from if you have questions, glowing testimonies, or if you have an idea for improvement. We continue to fine tune and know that there is always another creative idea out there.

Featherman Equipment

P.O. Box 62

Jamesport, MO 64648

(660)684-6035

Web: www.featherman.net

E-Mail: info@featherman.net

Featherman Scalding Instructions – please read before operating!

General Info

The scald is the critical operation in feather removal and you now have a machine designed to make it simple for you. For a video recording of how to set up and use your scalding please go to www.featherman.net.

Set up

1. Locate your scalding in a draft free but well ventilated area. If it is cold outside move your processing operation into a warm room so you won't be fighting the elements.
2. Hook your rubber supply line hose to a propane tank. It is a brass, reverse-threaded connection. Do not over-tighten. Save the provided plastic cover on the hose end to protect your gas hose from dirt between uses. **YOUR SCALDING WILL NOT WORK PROPERLY IF YOUR PROPANE TANK IS EMPTY OR NEAR EMPTY!**
3. Hand tighten the 1" PVC valve provided for your drain port.
4. Attach a garden hose to cold or hot water supply and fill tank to within 3" of the overflow port. Cold water will take approximately 2 hours to heat to 145; hot water less than an hour. Cover your scalding during warm up to speed the process.
5. **PLUG IN ELECTRIC CORD!** Do not pass the cord under the scalding.
6. Start pilot light by turning on the gas on your propane tank then turning the gas control knob to Pilot and depressing the knob.
7. Insert the included long lighter through the 3" peephole in your scalding base to ignite the pilot flame. The pilot assembly can be found by tracing the aluminum tube to its end. Ignite the pilot. If it doesn't ignite keep the gas control Pilot button depressed and try again.
8. When lit, keep the knob depressed for another 30 seconds. The thermocouple takes this long to warm up and send a signal for the pilot gas flow to remain open. (The thermocouple is brass colored and has a tube to the gas control valve marked with 3 indentations).
9. Turn the gas control knob to "ON." You will hear and see the burner ignite. **DO NOT HAVE YOUR FACE CLOSE TO THE 3" PEEPHOLE WHEN YOU TURN THE BURNER ON!**

Operation

Your scalding's aquastat is preset to 147 degrees. This means the water temperature will cycle between about 145 and 150 degrees. We recommend having two reliable thermometers on hand to tell you when the water is ready to begin scalding. (Not before 145!)

Add enough dish detergent to make the water bubbly on top (about 1/4 cup). This will help the scald water penetrate. For higher volumes of birds we recommend a steady, small stream of water entering the scalding (preferably hot water) to keep the water level constant and the scald consistent. Attach a garden hose to the overflow port to direct any overflow water away from work area.

Scald up to 50 pounds of birds at a time in your scalding. If manually dunking be sure to allow enough time out of the water to cool the skin between dunks. As a starting point, we suggest 8 to 10 dunks over the course of one minute. You may do this by hand or with a homemade lever and shackle or with the Featherman dunker/shackles. If using the Featherman Roto-dunker the cycle is pre-set.

Too much time scalding with any method, or with water that is too hot, will result in torn skin. Learning to pull wing feathers will soon make you an expert on when the chickens are ready to be plucked. When feathers release with no resistance the birds are ready.

Cautions

Remember you are dealing with gas, water and electricity. Think safety first in the way you set up your equipment and during operation. Keep electric cords and gas lines out of the way. Keep any other electric appliances away from the scald water.

The built-in chimney improves airflow and retains more heat. Position your scalding tank so that the chimney cannot be touched accidentally. **THE CHIMNEY WILL GET VERY HOT AND CAN CAUSE SERIOUS BURNS.**

Do not operate your scalding tank without water in the tank. If scalding in a small room, be sure to ventilate the room well

Clean Up

To clean up, turn off gas, unplug electric cord and open the PVC drain valve and empty tank. Disconnect the propane tank and cover the hose end. Wash out and disinfect the tank. Don't spray the controls. Cover and store under shelter. Be sure to close the gas valve if you leave the tank attached. If you detach the gas tank, use the provided plastic cap to protect the exposed end of your scalding tank's gas line from debris or insects.

Warranty

Your Featherman Scalding Tank is designed to give you many years of reliable service. Should you encounter problems please consult our Trouble-shooting section on our website first. If your problem persists please call us. All Featherman equipment is fully guaranteed for one year and our phone number is on the controls cover.

Good luck and happy scalding!

Featherman Equipment

www.featherman.net

New PILOT LIGHT

1. Watch videos on featherman.net/video demos for how to set up system most efficiently.
2. Pilot Light tips and tricks:
 - Be gentle with pilot light switch! No hard twisting.
 - **Make sure regulator (silver circular thing at end of propane line) is level, not sideways and air intake (little silver perforated circle) is clean and exposed to air.**
 - Turn Pilot switch to pilot and push in (for sometimes nearly 3-4 mins) to get air out of propane line.
 - Light after air is out of line and continue to hold Pilot switch in for about another 60 seconds (to get thermocoupler, copper line, hot enough to keep lit)
 - Turn pilot switch to ON
 - When done, turn to Pilot first and then to OFF

Trouble-shooting for the Featherman Scaldler

Pilot won't light

1. Check to be sure propane valve is open
2. Check to be sure "Pilot" on gas control valve is aligned with slot
3. Depress Pilot valve for up to 5 minutes to purge air out of lines
4. Make sure lighter is reaching pilot light (at end of aluminum tube)

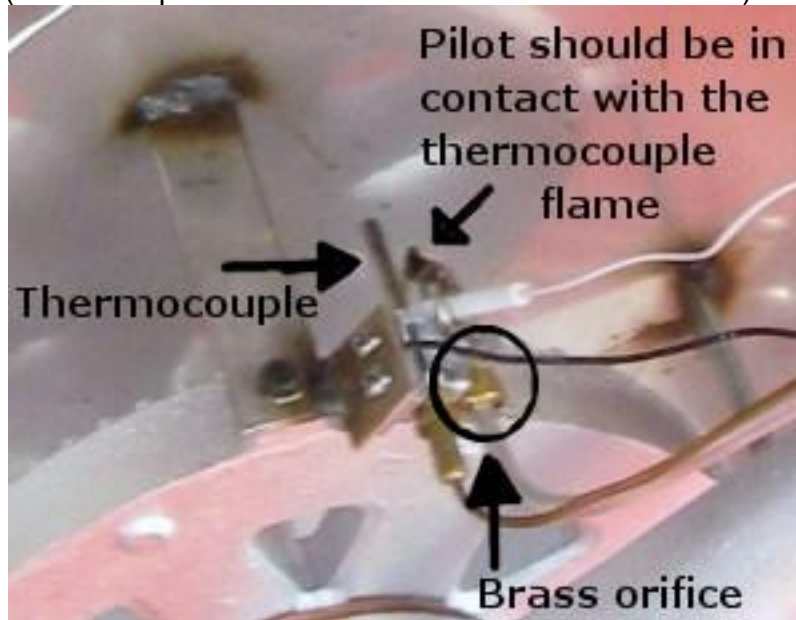
Pilot lights but burner won't light

1. Plug in electric cord and check extension cords and breakers
2. Clean orifice at end of copper line
3. Replace thermocouple

Pilot flame is too small and/or not a clean blue flame

1. You may have a small obstruction in the brass orifice
 2. To clean or check the orifice you need to loosen the brass orifice with a pair of pliers or a wrench. After that, blow air through the orifice to loosen any particles. Do not insert anything into the opening, only use air, or you may damage the orifice.
 3. Once the orifice is cleaned, reassemble
- if you have any questions, please call 600-684-6035

(below is a photo of the underneath side of the scaldler)



Scaldler gets too hot

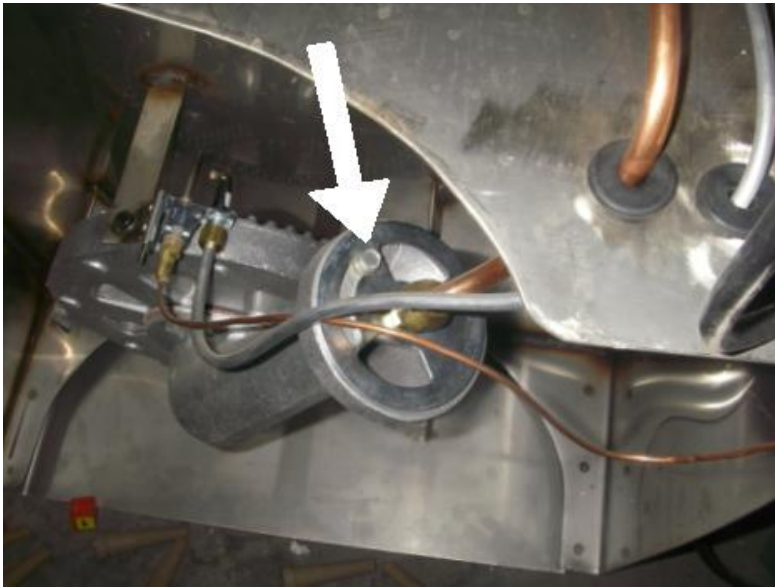
1. Check setting on Aquastat – it should be at 147.5
2. Check your thermometer (there will be a few degrees difference between water temperature in the middle and at the top of the scaldler)
3. Replace thermostat

Air Intake Adjustment

Your scaldler has been tested and set to have a perfect flame. This flame is about 1 to 1 1/2 inches high and blue. If, for some reason, your flame has become yellow and less hot, you may need to adjust the air flow into the burner.

A single 1/4" machine-head screw holds the air intake plate in place (see arrow). Loosen the screw with a 1/4" socket or crescent wrench or pliers and turn the plate so that more or less air is allowed into the burner.

When the flame is blue it is most efficient. Tighten the screw.



Trailer Instructions

Hooking Up Trailer:

- 2" ball hitch.
- Use chains provided (cross and twist as necessary to keep off ground).
- Retract stand up as high as possible.
- 4-prong-flat light connector. Some adaptors available.
- Always use kickstands at back of trailer when entering or exiting trailer when trailer is not hooked up to vehicle. Entering the trailer without these can cause the trailer to tip.
 - To engage, pull stand towards the hitch (requires strength) and swing down towards the back of trailer. Press the lever on the leg down to adjust the height of the foot.
 - Don't forget to stow the kickstands when traveling with the trailer. Push the lever down and push the height adjustment up. Then pull the stand towards the ground and swing it forward (towards the hitch) and up to the floor of the trailer.

