# ASSEMBLY, OPERATING, AND MAINTENANCE INSTRUCTIONS

FOR

## THOMPSON MODEL A STEAMER

MANUFACTURED BY

THOMPSON MACHINE SHOP LIMITED

BURK'S FALLS, ONTARIO

(705) 382-3221

# OPERATING INSTRUCTIONS FOR THOMPSON MODEL A STEAMER

## NEW UNIT ASSEMBLY INSTRUCTIONS

Included with this unit are 1 propane regulator, 1 propane hose assembly, 1 filler plug wrench, 1 vehicle section of light wire complete with connector, and 75' of 3/4 steam hose.

Optional accessories may include the detergent attachment with 25' of 1/2" detergent hose and detergent gun or a sewer snake with nozzle.

In order to operate this unit, some assembly is required.

*Locate propane regulator and hose.

- Using appropriate thread sealant on all threaded joints, tighten one end of the propane hose into the "outlet" port on the regulator.
- Tighten other end into the coupling located on top of the angle iron frame adjacent to the propane tank mounting platform (ahead of water tank(s)).
- Remove tape from chain at propane mounting location and remove loose end from hook.
- Place 100 lb. vapour propane tank in this location and wrap chain around the tank and slide it down into hook.
- Thread tank fitting on regulator into propane tank and tighten. NOTE: thread sealant is NOT required at this connection.
- Ensure that all propane valves are closed.
- Open propane tank.
- Using a soap and water solution, check for leaks at all joints that have just been assembled.
- If bubbles appear, close tank, remove fitting and reseal or tighten until no leaks are detected.
- Please note that all factory assembled connections are factory tested.

WARNING: IF YOU SMELL GAS SHUT OFF GAS SUPPLY TO THE APPLIANCE, EXTINGUISH ALL OPEN FLAME, AND TEST ALL JOINTS WITH A SOAP SOLUTION. IF ODOUR PERSISTS CALL MANUFACTURER IMMEDIATELY.

*Unwrap supplied length of steam hose and using suitable thread sealant, thread one end of hose into the union located at the top and front of the boiler.

- Pegs for the storage of this hose are located one each on the outermost verticals of the angle iron framework on the reserve water tank side of the unit. To minimize twisting of the hose. Wrap in a “figure 8” pattern around the pegs.

*Located above the gas valves on the angle iron frame is a horizontally mounted pin. The sewer snake reel mounts here for transport and to facilitate use. NOTE: SEWER SNAKE IS MAKE OF SPRING STEEL AND IS HELD IN REEL UNDER SOME TENSION - EXERCISE CAUTION WHEN WINDING AND UNWINDING SNAKE TO AVOID INJURY.

*Located just forward of the sewer snake mounting pin is a circular hook to store the filler plug wrench.

*The vehicle portion of the light connector contains 4 wires being:

green - ground
white - right signal/stop light
red - left signal/stop light
black - tail lights

*The detergent attachment consists of a detergent tank (located ahead of the propane tank), 25’ of hose and a gun. One end of the hose threads into the bottom valve on the side of the tank and the other end threads into the small valve on the gun. The steam hose threads into the end of the gun and when not in use the hose can store the pegs with the steam hose.

# OPERATING INSTRUCTIONS FOR THE THOMPSON MODEL A STEAMER

- Ensure that unit is relatively level from front to back and that the drain valve, located between the burners, is closed.

- Remove filler plug located on top of the unit near the burner end with the supplied wrench.

- Fill with clean water until level is approximately 3/4” from the top of the sight glass indicator (on side of boiler below filler opening).

- Replace plug and tighten.

- Remove filler plug(s) on reserve water tank(s) of extended operation is desired.

- Open water level tap(s) on side of tank(s) and ensure that drain valve and drain plug on the bottom of the tank(s) are closed.

- Fill with clean water until water runs from water level tap(s) and allow excess water to drain from tap(s) before closing.

- Replace filler plugs and tighten with supplied wrench.

- Ensure that unit is located outdoors and that combustible materials are kept a minimum of 12” from the burners.

- Open propane tank.

- Remove lighter from holder and rotating counter clockwise partially open lighter valve (located above main valve assembly).

- Rotate left main gas valve 90º counter clockwise to open and while depressing plunger on safety valve, place lighter into ignition hole alongside the copper tube on the left burner until burner is ignited.

- Hold plunger in for up to 1 minute after which time burner should remain lit.

- If burner goes out wait 1 minute and repeat above procedure.

- Once burner ignition is successful, repeat procedure for second burner.

- Once ignition of second burner is successful, close lighter valve and replace lighter in holder.

- To shut burners down, rotate main burner valves 90º clockwise and close valve on propane tank. Safety valves will close automatically within 1 minute.

- With both burners running, adjust regulator at propane tank to 5 PSIG maximum.

- Ensure that all steam valves are closed.

- As pressure starts to build, open steam pressure safety valve (located on piping assembly) that leads to the top of the reserve water tank(s) once or twice to vent trapped expanding air and to ensure proper operation of the relief valve.

- NOTE: AS UNIT WARMS, A SMALL AMOUNT OF WATER WILL RUN OUT OF THE BOILER TUBES. THIS IS CONDENSATION FROM WITHIN THE TUBES AND WILL DISAPPEAR AS BOILER TEMPERATURE RISES.

- Steam pressure should reach 15 PSIG within 25 to 30 minutes. If attaining 15 PSIG requires an unusually long time or if boiler will not maintain operating pressure, refer to maintenance section.

- If outside temperature is below 0°C (32°F) it is recommended that boiler pressure be built up prior to travelling with unit to ensure that water level sight glass on boiler does not freeze and break.

- NOTE: DO NOT TOW OR MOVE UNIT WHILE BURNERS ARE ACTIVATED

- To use steamer, ignite burners and allow pressure to build up to 15 PSIG.

- Once pressure is adequate, open main steam outlet valve allowing steam to flow into hose that was previously connected.

- The valve leading to the top of the reserve water tank(s) could be opened at this time to start warming the water in the tank(s).

- CAUTION: STEAM IS HOT AND CAN BURN. Ensure that steam exits hose in a safe location.

- WARNING: RISK OF INJECTION OR SEVERE INJURY. KEEP CLEAR OF NOZZLE. DO NOT DIRECT DISCHARGE STREAM AT PERSONS. THIS EQUIPMENT IS TO BE USED ONLY BY TRAINED OPERATORS.

AVERTISSEMENT: RISQUE D'INJECTION ET DE BLESSURES GRAVES. SE TENIR A L'ECART DU JET. NE PAS DIRIGER LE JET DE SORTIE VERS D'AUTRES PERSONNES. CONFIER L'UTILISATION DE CE MATERIEL A UN OPERATEUR QUALIFIE.

- With the main steam outlet valve wide open, 75' of steam hose attached, both burners ignited and propane regulator set at 5 PSIG maximum, steamer should operate at approximately 12 PSIG.

- Attention must be given to the water level in the boiler unit. When water is within 3/4” of the bottom of the water level sight glass, water MUST be added for continued operation.

If valve leading to the top of the reserve water tank(s) has not been opened, do so now to equalize the pressure between the boiler and the tank(s).

- On steamers equipped with an additional reserve water tank, water can be used to fill the boiler unit from one or both tanks in any order or any sequence.

- Open valve located at the bottom of a reserve water tank allowing water to flow into the boiler. Carefully grasp this pipe to confirm that it cools down dramatically, indicating that water is flowing into the boiler. If the pipe does not cool down and the water level in the boiler does not increase, refer to the maintenance section.

- When water reaches 3/4” from the top of the water level sight glass, close the valve at the bottom of the reserve water tank.

- As water entering boiler from reserve water tanks is significantly cooler than that contained in the boiler, a drop in pressure may be experienced when refilling. To minimize this effect, partially close the main steam outlet valve to maintain pressure until water temperature is stabilized.

- Each reserve water tank will supply approximately 2-3 hours operation time, depending on steam flow rate. If additional water is required, close valve leading to the top of the tank(s) and open the water level tap(s) to cent the pressure in the tank(s). Once pressure is completely vented, remove water filler plug and refill.

- CAUTION: NEVER REMOVE WATER FILLER PLUG WHEN TANK IS PRESSURIZED.

- CAUTION: NEVER ADD WATER DIRECTLY TO BOILER UNIT WHEN IT IS HOT AS BOILER DAMAGE MAY OCCUR.

- To steam clean using the detergent attachment, attach the steam hose to the detergent gun and detergent hose to the bottom valve on the detergent tank. Fill tank up to water level tap and add an appropriate amount of steam cleaning detergent.

- When boiler is up to operating pressure, place nozzle end of detergent gun into water filler opening of tank and open main steam outlet valve. This will heat the water and dissolve and mix the detergent solution. When the tank feels hot to the touch, close main steam outlet valve, remove detergent gun, replace water filler plug, close water level tap, and open valve that leads to the top of the tank to equalize the pressure with the boiler.

- Ensure that the small mixing valve on the detergent gun is closed and open the valve at the bottom of the detergent tank. Open main steam outlet valve and slowly open mixing valve to achieve the desired flow.

- NOTE: Due to the very restricted nozzle opening on the detergent gun, the pressure in the boiler will rise above 15 PSIG causing the steam pressure relief valve to open. To avoid this situation, reduce the pressure at the propane regulator to approximately 2-3 PSIG to maintain approximately 12 PSIG of steam pressure.

- When steamer is not in use it is recommended that boiler and tanks be drained of all water and all water and steam valves be left open.

# MAINTENANCE INFORMATION FOR THE THOMPSON MODEL A STEAMER

As the steamer is of a simple design with very few moving parts, maintenance requirements are minimal. However, through time some maintenance may be required.

- If the steamer is unable to maintain operating pressure and/or requires an unreasonably long period of time to reach operating pressure, the burner orifices may be partially plugged. Should this occur, ensure that propane tank valve is closed, remove the wing nuts that secure the plates at the rear of the burners, remove copper gas lines and the elbows inside the burners, and using compressed air, blow through all lines, fitting and through the orifices in the burners. Then using a small wire (.055" or less in diameter) ensure that orifice opening is clear. Visually inspect the interior of the orifice to ensure that no foreign material remains. Using a small amount of suitable thread sealant, reinstall the elbow. Be certain not to allow thread sealant to enter the burner as it can plug the orifice. Reinstall copper lines and prior to reinstalling burner plates, ignite both burners (be sure to have sufficient water in the boiler) and test all connections for leaks with a soap and water solution. Reinstall the plates and wing nuts.

- Through a long service life, scale may build up inside the boiler and water tanks. Periodic flushing is recommended.

- If, when attempting to add water to the boiler, water will not flow from the reserve water tank to the boiler, the tank fitting could be obstructed. Close the steam supply to the top of the tank and drain valve at the bottom of the tank. Open water level tap to vent pressure then reopen drain valve. The pressure from the boiler should enter the tank from the bottom clearing the obstruction. The temperature of the tank will increase dramatically when this reverse flow takes place. NOTE: Of water level goes below 3/4" from the bottom of the sight level indicator, shut down burners until level can be raised from the reserve water tank or until boiler cools - NEVER ADD WATER DIRECTLY TO THE BOILER IF IT IS HOT!

- Periodically check condition of wheel bearings and service as necessary.

- IF ANY DIFFICULTIES ARISE WHEN SERVICING THE STEAMER, PLEASE DON'T HESITATE CALLING THE MANUFACTURER FOR ASSISTANCE AT 1-705-382-3221.

- ALL PIPING AND STEAM AND WATER VALVES SHOULD BE AVAILABLE FROM A LOCAL PLUMBING SUPPLIER. ALL OTHER PARTS ARE STOCKED BY THOMPSON MACHINE SHOP.

- PARTS HAVE NOT BEEN CATALOGUED BECAUSE ONLY ONE MODEL OF STEAMER IS MANUFACTURED.