

## ASDI Annual Maintenance Instructions for “Second Sun Flameless Tank Heaters” all models

1. Call your local Algas-SDI Customer Service, with the Second Sun Serial Number to determine the current upgrades available for your heater.
2. Remove Second Sun tank heater from tank to a clean dry location.
3. Inspect the tank surface for any paint chips, corrosion or paint failure and repair to prevent tank surface corrosion.
4. Perform a visual inspection of the mounting hardware, all components, heater cabinet, catalytic cartridges and identify if there is any physical or water damage, or missing fixings.
5. Check the condition of the heat sink on the outside of cabinet and ensure it is not loose or that the cooling fins are not plugged with dirt or debris.
6. Take note of the condition of all seals: side seal and temperature switch band seal. The top edge cabinet seal should be replaced every time the tank heater is removed or if there is evidence that the seal has leaked.
7. Inspect for contaminants on the face of the cartridge, such as dirt, dust, oils or any other debris that may have collected over the season. Do not attempt to clean the cartridge with chemicals. Try to remove contaminants with low pressure air directed at a shallow angle to the catalytic pad surface.
8. Check all electrical connections to ensure they are tight and unbroken. This would include the gas valve, safety temperature switches, safety pressure switches, and the terminal strip. Clean any corrosion from contacts.
9. Upon completion of inspection and component replacement, reinstall tank heater to a clean tank surface, free of irregularities that may prevent a good seal. Consider starting the heater to ensure it is operating correctly before reinstalling it on the tank.
10. Mount the heater away from weld seams, if possible. Rotate the heater to the lowest location without covering the drip line (Invert) of the tank for optimal performance. Ensure that the end seal (located at the left end of the cabinet) is folded outward, and not trapped under the end of the cabinet. Also verify that the temperature switches, located in the band at the control end of cabinet, are lying flat against the tank for maximum contact to the tank surface. Make sure that the top edge cabinet seal is tightly compressed to the tank, and there are no gaps for water to pass through. As a rule, the tank radius should always be larger than that of the tank heater radius. This guarantees contact of the tank heater seal to the tank surface.
11. After connecting to the battery check the voltage inside the preheater cable connection box to ensure it is 11.0 volts or greater.
12. When reinstalled, clean and leak test all gas connections before starting. If a fitting is visibly worn, replace it! Ensure all gas lines are connected correctly (tank pressure to *High Pressure Inlet*) and Regulated pressure is connected to the low-pressure inlet on the heater that includes the ¼” NPT ball valve.
13. Inspect the tank heater regulator to ensure it is not damaged and the vent is not blocked. Make sure it is mounted above the vapor space of the tank and the outlet is connected properly to the “Regulated Gas Inlet” of the heater.
14. Check that both the pilot and full heater will engage. Check the millivolt reading between terminals 3 and 5: they should read about 400 mV when on pilot only and about 300 mV when on full heat mode.
15. Check the pressure setting of the variable pressure switch and inspect the wires at the top of the switch to make certain they are good and the insulation is continuous and intact.
16. If you have any questions about the operation of your ASDI Second Sun Flameless Tank Heater, please contact your local reseller...or call Tim Hicks at (206) 789-5410 ext. 116.



## Second Sun Trouble Shooting Inspection Guidelines

Serial Number:

Date:

List anticipated updates based upon serial number

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Visual Inspection

Components

Wiring

Terminals

Temp switches

Adjustable pressure switch

High pressure switch

Robertshaw Valve

Side shields

Lip seal

Damage (dents, scratches, tool marks

Catalytic  
cartridges

Evidence of water damage

Start Preheat

Check voltage

Check gas flow and regulator pressure

To heater and through pilot

Check millivolts

Range and rate (if possible)

Engage pilot

Thermal image or with hand

Engage main

Main manifold pressure and flow (if possible)

Thermal image or hand

Check switching to main

Check temp switches