**SAPPHIRE – BLUELINE WATER HEATING SYSTEM**

**370/454/460/570/870/1200, RAGE, CHAMP, COBALT, BLUEWAVE, THERMALWAVE**

**MACHINE OVERHEATS AND SHUTS DOWN:**

**Owner/Operator**

**Air Flow around the machine is restricted**

* Open all doors to allow maximum air flow.

**Outside air temperature plus heat exchangers are heating water above shutdown maximum**

* Turn the Heat Exchange Control to Divert/Muffler position.
* Lower the Temperature Control setting.

**Machines with Liquid Cooled Engines**

* Check engine coolant level, add coolant as needed.
* Inspect Radiator, clean and remove debris.

**Check valve orifice or filter screens are restricted**

* Remove, inspect and clean or replace orifices or filter screens as needed.

**Fuel Vapor Lock**

* Allow the machine to cool and try to restart.

**Check Circuit Breakers and Fuses**

* Reset circuit breakers as needed.
* Replace any burned fuses.

**Qualified Technician**

* Scale buildup in system hoses and components.
* Temperature control needs repair or replacement.
* Engine thermostat needs replacement.
* Check valve or screens are clogged or warn and needs repair.
* Maximum engine RPM is too high.
* Coolant overflow jug is leaking or bubbling over.

**LOW WATER TEMPERATURE:**

**Owner/Operator**

**Water temperature control is set too low**

* Increase temperature control to a higher temperature.

**Heat Exchange Control is in Divert/Muffler mode**

* Place Heat Control into Heat Exchange/Cleaning Mode.

**Qualified Technician**

* Temperature control needs repair or replacement.
* Scale buildup in system hoses and components.
* Heat Exchangers are clogged or leaking and need repair.
* High Temperature water dump system needs repair or replacement.
* Engine RPM is too low