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TEC Torch

memo

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CAUTION

Ref: ON-DEMAND COOLER SYSTEMS

The following TIG machines have "on-demand" cooler systems. This means that the water cooler operates only when there is welding current running through the TIG torch. Once the arc is stopped the cooler is switched off automatically after a short delay. This set up is disaster for the TIG torch. When the cooler pump stops the coolant remaining in the hot torch body can heat up turning to steam and as soon as the cooler pump starts again the steam build up in the torch body is pushed out of the torch body into the power cable causing the power cable tubing to melt or burst usually a few inches beyond the handle.

The machines are:

Lincoln Precision TIG 275 & 375 with integrated coolers attached to the machine unit.
Note: by changing the plug in position on the duplex outlet from the cooler position to the other outlet which is for tools such as grinders and lights etc. will eliminated the problem as the other (tool) outlet is not controlled by the arc-on sensor.

Miller Syncrowave 250 & 350 (older style machines, 2005-2008).
Note: with these models the cooler and the machine are wired together and can only be changed by a service technician. The cooler only runs in the on-demand mode as long as the machine is on, (this condition has been changed on newer machines by Miller). Newer versions of these models have the cooler as part of the undercarriage. With these models the cooler should be plugged into a separate 115 volt outlet, independent of the welding machine, and allowed to run continuously while the machine is running.

With water cooled TIG torches, **the cooler must operated continuously** as long as the welding machine is running. Continuous flow of coolant through the torch will not harm the torch and will dissipate any heat built up in the torch body or power cable during the welding cycle.