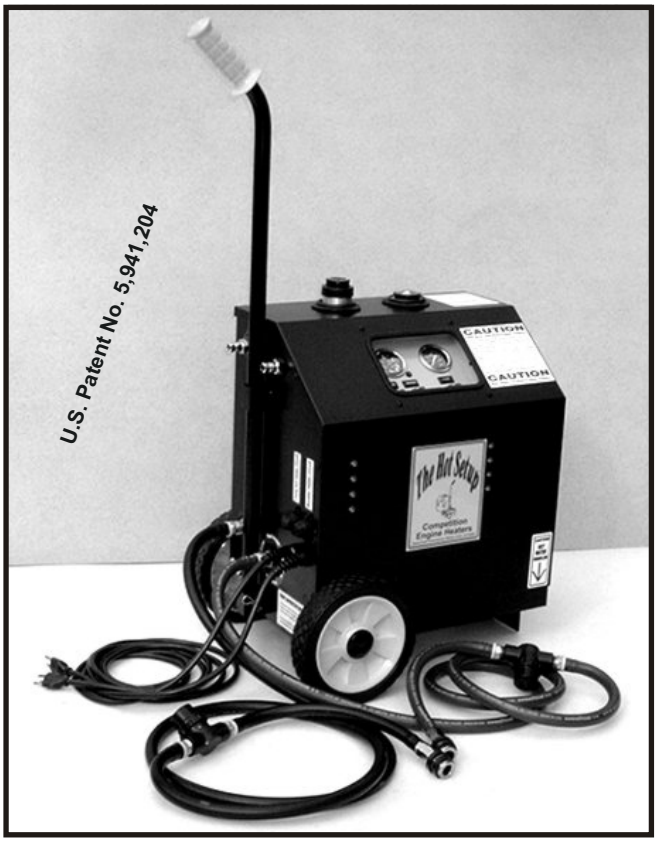
The Hot Setup™

Competition Engine Heaters

Used in:
World of Outlaws, IRL, USAC, SRL, All Stars, Grand-Am, American Le Mans, Historic Racing, NASCAR, SCTA and other series.

Adds less than 6 ounces to the race car



Standard 3,000 Watt, 60 Hz Model

Components include aluminum reservoir, cast iron circulating pump*, two 1,500 Watt "Incoloy" heating elements, two thermostat controllers with bulb and capillary sensors, thermostat pilot lamps, pump control switch with indicator lamp, heater control switch with indicator lamps, pressure gauge, temperature gauge, coolant level indicator, 8 ft. supply and return hoses with strainers and quick disconnect female couplings, two 8 ft. power cords (each 1,500 Watt heating element has its own independent power cord), and panel mounted fuses. Does not include vehicle hook-ups.

*** Bronze pump available at an additional cost.**

Additional Heater Models Available:

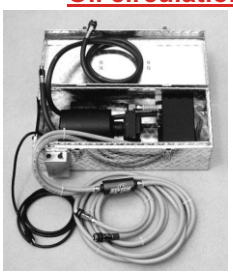
220 Volt, 60 Hz (North America):

5,000 Watt (perfect for the dyno)
6,500 Watt (5,000 Watt, 220 V and 1,500 Watt, 120 V heating elements)

220 Volt, 50 Hz (Europe, Australia, New Zealand, Japan):

3,000 Watt - 5,000 Watt - 6,500 Watt

Oil circulation heater heats oil without burning it



Consists of: pump, water-to-oil heat exchanger, oil filters, hoses, and power cord. Cold oil is pumped from the bottom of the oil tank, or oil pan, heated, and returned to the oil tank or pan. Using the 180° F hot water from the coolant heater, oil is heated and filtered (using two 35 Micron filters to remove particles and air from the oil), wthout degrading or burning it. This system heats 4 quarts of oil to 180° F in approx. 3 minutes. Available in 120 Volt or 220 Volt. May also be used to pre-lube engines.

Heats Entire Cooling System to 180° F at the Race Track or at the Race Shop

(Pressurizes Cooling System to 13 psi)

May be used to cool engines by circulating coolant using the pump without the heaters.

Pre-heating provides as much engine power as possible from qualifying to the checkered flag.

Engine builders indicate that there can be as much as an 11% horsepower gain when an engine is operated at 180° F compared to when operated at 100° F. Heating the oil alone can result in as much as an 8 horse power gain. **Ask your engine builder what the power difference between 100° F and 180° F would be for your engine.**

When a cold engine is operated, cold fuel, which needs heat for atomization and combustion, can not mix completely with cold air to form the mixture necessary for optimum combustion. Instead, droplets of raw fuel form on the cylinder walls. The raw fuel washes oil from the cylinder walls, causing increased ring wear, increased cylinder wear and possible piston scuffing. Part of the raw fuel mixes with the oil and contaminates the incoming charge, reducing the efficiency of combustion. Some of this raw fuel is blown past the rings and into the oil pan, reducing the oil's lubricating ability.

Unlike heating only the oil in the pan or dry sump tank, *The Hot Setup* heats the entire cooling system. This means the **block** (including all internal oil passages), **crankshaft**, **connecting rods**, **pistons**, **cylinder heads**, **valve springs**, **intake manifold**, **valves**, **valve guides**, **water pump**, **oil pump**, **oil pan**, **bell housing**, **transmission**, **radiator**, etc., are all heated. Note: valve spring failures occur when cold springs are run at high engine rpm. Engine preheating can reduce the chance of valve spring failures.

By heating all engine components, the oil, and all the metal that the oil contacts, is heated. As a result, the warm metal surfaces attract and hold lubrication better than cold surfaces. This provides better lubrication for all engine components. Also, less power is required to pump warm oil through a warm engine than cold oil through a cold engine and the lower viscosity of warm oil reduces crankcase windage losses. Pre-heating also allows tighter piston to cylinder clearance.

The Hot Setup heating system is completely portable. Used in the engine shop to heat engine blocks during **cylinder honing**, to heat engines prior to running on the **dyno**, to heat and pressurize complete cooling system to **ensure complete filling with coolant and leak free**, to initially **heat engine at the race track for qualifying** and to **keep engine warm between races**. Now it makes no difference if you qualify early and run late because *The Hot Setup* **will heat your engine for qualifying and keep it hot until you race.**

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