



## 190 SL GROUP

NEWSLETTER  
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### Heaters and Their Controls

by Ron Rapp

Now that we are in the middle of Winter, quite a few of us have put our favorite toys up until milder weather arrives. However, there are a few of us who are diehards and refuse to give into the cold. This article is for those diehards, and to show the other fair-weather owners that cold weather doesn't mean you have to quit enjoying your toys. All it takes is some time and preparation.

A lot has been said about the heaters in the 190SL - most of it about their inadequacies. I don't believe that this is entirely the blame of the heaters, but due to the lack of care and understanding of your heating and cooling system. In an earlier Newsletter about sidecovers and detailing sludge buildup in the engine, it was explained how this buildup could reduce the capacity of your cooling system. This same sludge builds up in the radiator and the heater cores to reduce their capacity to operate efficiently. Heater cores can be rodded out the same as radiator cores. If the radiator shop feels that your heater core(s) are too far gone to repair, replacement of them will be necessary. Here you have several alternatives. The right side (passenger) heater is still available from the dealer's for somewhere between \$700.00 or \$800.00 as of this past Summer. Good used ones are on the market at more than reasonable prices. In the February '85 issue of the Newsletter, Robby Ackerman explained how he had a new heat exchanger made by a marine heat exchanger company for \$100.00. This new heat exchanger (core) was more efficient than the previous factory part because it had six rows of six tubes that were staggered rather than five rows of five tubes in rows. The factory top, bottom, and sides of the old heater were used to rebuild his passenger side heater.

Possibly I should have started this article by discussing the thermostat, as this could be the culprit and is probably the easiest item to check and replace. But I was always one that felt that if something is not working properly, go through the entire system rather than fix one item at a time until something worked. This I felt would eliminate the possibility of something else failing ten seconds later. This is provided that the system being worked on had not previously been gone through from beginning to end and is considered to be in good working condition.

I have heard it mentioned that winter thermostats (those that open at a higher temperature) are no longer available from the Mercedes-Benz dealers. I have also heard that if left in for the summer these winter thermostats could lead to an engine overheating problem. Whether either of these are true I can't confirm. Possibly the winter thermostats were removed from the market as no one would change them as they were supposed to do and the factory felt that the removal of them for the parts available list would put an end to the complaints of overheating. However, on other unconfirmed reports you can take your present working or non-working summer thermostat to a Chevrolet parts man and order a winter or summer thermostat at a considerable savings over the Beru brand sold by Mercedes-Benz. But if you do put in a winter thermostat DON'T FORGET TO CHANGE IT.

Where I live is about one city block from a state highway with a 50mph speed limit. I travel less than two miles on this road before the temperature gauge is indicating about 180 degrees. It then drops back down to 140 or 150 degrees, indicating that the thermostat has opened. Shortly thereafter I can feel the heater operating. This was not always the case however.

After I had my radiator recored for about \$175.00 rather than buy an entire new radiator for \$2,500.00, I then had the heater cores rodded out. On reinstalling the heaters, I noticed that the controls were somewhat stiff and hard to operate. I disconnected the heater cables from the heaters, and found that the heater valves were stiff to move by hand. This led to polishing the heater core valves, replacing the "O" rings and lubricating the valves with Vaseline. This improved the stiffness to some degree, but not enough to satisfy what I felt should have been the original smoothness.

The heater control cables were then pulled. The center of each cable was removed from the outer housing. Mine were rusty. The rust was removed from the inner cable with steel wool. Any kinks in this cable should be removed and the cable straightened before reusing. The outer housing was filled with grease from a small grease gun that I have that has a needle-like dispensing point on it. New cables, the last I heard, are still available from the dealer. Depending on your access to dealers and the price, you may want to go to the local bicycle shop with

the old cables, and either have them make up new cables or buy the material to make your own. If you decide to make your own, putting the spring coils on the end will take a little bit of practice. But it will help if you can stretch this spring as you wrap it around a pin smaller than the pin of the heater control the spring must go over. A self-made tool can be easily made to stretch this wire as you wrap it around the pin.

The material needed to make this tool is a piece of metal about six inches long, 1/2 to 1-inch wide and 1/8 to 1/4-inch thick. A hole of at least twice the size of the wire should be drilled about 1/4-inch from one end. If a (compression spring) space between the coils of the spring being made is desired, this hole in the end should be located from the side an amount equal to the desired spacing of the coils. A second hole of the same size is located about an inch further back from and in line with the first hole. Rounding the edges of these hole with a larger drill bit may be necessary. The wire is then inserted in one hole and out the other. The end of the wire extending from the hole on the end is now clamped to the mandrel to which the wire will be wrapped around. The mandrel is clamped in a vise. By rotating the tool around the mandrel a spring can be made. A little experimenting will be necessary, so allow for this when purchasing the material. If spacing is desired, the tool should be touching the mandrel and preceding the spring to be wound. If no spacing is desired, the tool should lay on the wire and follow the spring to be wound. Add more holes or change the spacing of them to vary the amount of pre-stretch or tension desired on the wire.

The sliding control unit bolted the dash was also removed. These also were found to be rusty and hard to operate. After disassembly and glass beading of these units, I found that the bottom bell crank presented a large surface for friction on the mating surface of the mounting bracket. The same condition existed on the top bell crank underneath the snap ring and the fitted washer. Feeling that grease could possibly be squeezed out of these areas by the pressure spring, I punched out two washers out of five-thousandth thick Teflon for each control. With these installed the controls now were smoooooth and easy to operate.

Everything installed back into position, I felt my troubles were over. However, this was not to be. The position and clamping point of the outer cable housings are very important to the amount of travel in each direction of the valves. I found that the valves themselves would not fully shut off and on with the limit restrictors which have a square hole in them to fit the valve. These restrictors also serve as a retainer to keep the valve from coming out of the heater. After optimizing what I felt was the best clamping position for the outer cables for the heater controls, the restrictors were filed where necessary to allow the valves to turn to fully open and fully closed positions.

The passenger's top fresh air vent control wire which was bent, was straightened but still was not operating correctly on a consistent basis. This is the one where only a short length of the center of the cable s used, and once bent, it seems that it always wanted to go back to its bent position. To solve this problem I used a short piece (about 6 inches) of 3/16-inch rod, drilled a hole in each end of the rod inserted a 1/4-inch or so of the original cable swaged it, and added a touch of silver solder. The cable was then cut, leaving a little over 1-inch protruding from the rod, and reinstalled.

Now all of the controls work as I believe they were designed to. As for heat, on short trips of twenty-five miles or less you won't be run out by the heaters, but you won't freeze either. On longer trips the heater is sufficient to keep the most demanding of people warm. Now I can take the car out on an enjoyable ride on cold days. Did you ever notice how much better it runs in the cold weather?

## Fifth National Convention

The 190SL Group's Fifth National Convention and Concours will be held on September 8, 9, and 10, 1989, at the Newport Beach Marriott Hotel and Tennis Club, Newport Beach, California!

1. **REGISTRATION** - \$37.50 per person. Cost includes Friday night Welcoming Party with Cash Bar, Saturday morning Breakfast (Annual Meeting), Car Show, and Guest Speakers.

2. **DINNER** - \$42.50 per person. Saturday night Banquet and Concours Awards Ceremony (choice of beef or chicken).

Reservations for dinner and all registration fees must be sent to the 190SL Group Business Office, 3 Westpark Court, Ferndale, MD 21061. PLEASE REGISTER EARLY!

3. **HOTEL ACCOMMODATIONS** - \$79.00 per night (saving of \$60 off regular room rates). Please make all hotel reservations through the Newport Beach Marriott Hotel and Tennis Club, 900 Newport Center Drive, Newport Beach, CA 92660, (714) 640-4000. Make sure you mention the 190SL Group Convention when making reservations so you will benefit from the special Group rate.

4. **VENDOR SPACE** - \$50.00 per eight-foot, long table. Limited to the first 20 tables sold. All checks for space requirements must be sent to David Rosales, 16 Theodore Dr., E. Brunswick, NJ 08816.

5. **SECURITY** - will be provided for our cars on Friday and Saturday nights.