



## Flushing and Bleeding of the Engine Cooling System

By: Don Steger, Professional Technical Advisor  
Photos: Kjell Myhre

*It is recommended that the engine cooling system be flushed at intervals of one year or 15,000 miles, whichever occurs first.*

### Tools Required:

- 1 Screwdriver, Medium
- 1 13mm Socket Wrench
- 1 Hose with Variable Control Nozzle
- 1 Cooling System Pressure Tester
- 1 10mm Open End Wrench

### Supplies:

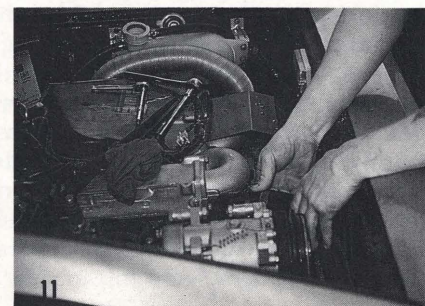
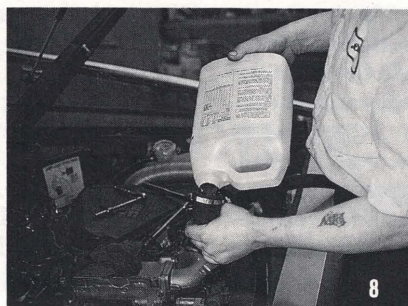
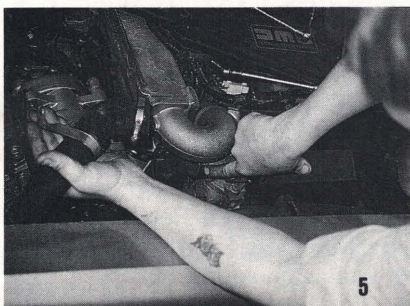
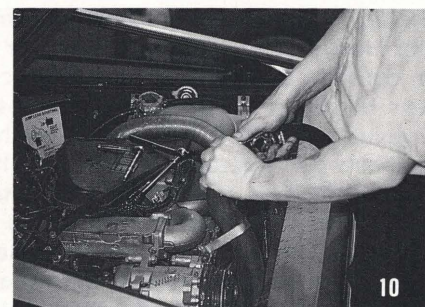
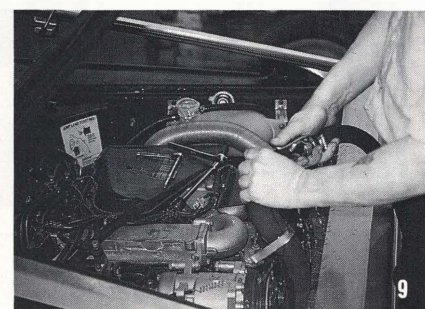
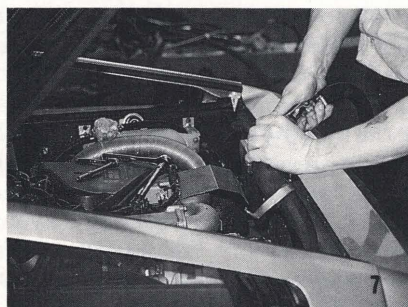
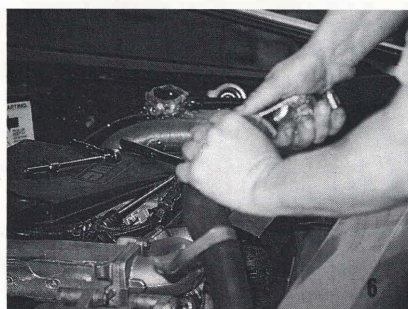
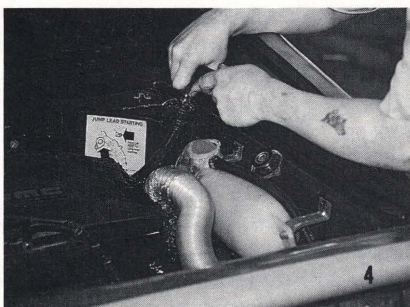
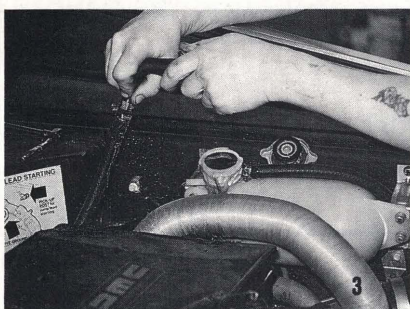
- 1½ Gallon Antifreeze Coolant, Ethylene Glycol for Aluminum Engines

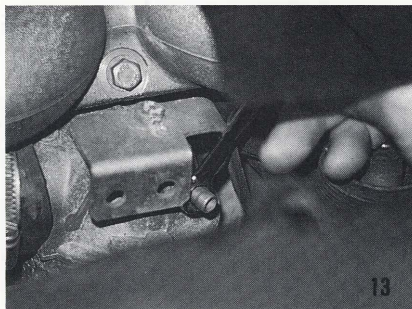
In a suitable location where excess water can drain properly, unscrew the hose clamp located forward of the filler

cap on the coolant reservoir tank (header bottle) at right side of the engine compartment (Photo 1). Remove the cap on the tank and connect the unclamped hose to the water source hose and apply pressure. Continue to run clear water until all colored water/coolant is expelled from the system by overflow at the open filler (cap) location. The cooling system is purged when the overflow (water) appears clear (Photos 2, 3, & 4). Reconnect hose to coolant reservoir bottle and tighten the clamp.

Locate the thermostat housing at the rear of the engine about the center. A larger diameter hose is attached to the left side (driver's side). Unscrew the hose clamp and hose support bracket (Photo 5). Insert the water hose into the large opening of the hose, and wrap a rag to seal excess opening (Photo 6).

Apply pressure to expel additional colored water/coolant from the system until again it overflows clear at the filler





cap (Photo 7). Remove the water hose and rag, and pour coolant from the coolant bottle into the same large diameter hose. The coolant must be poured slowly. As it is heavier than water, the coolant is forcing the water out of the system, replacing it. The first gallon will pour easily, and the remaining  $\frac{1}{2}$  gallon will be absorbed more slowly. Elevate the hose as much as possible to take advantage of gravity. (Photo 8). Again, insert the water hose into the large diameter hose, and wrap a rag to seal excess opening (Photo 9). Apply pressure until the colored coolant appears at the overflow and stop quickly to prevent loss of an excess amount of coolant (Photo 10).

Reconnect the large diameter hose to the thermostat housing quickly to prevent excess loss of water and tighten the hose clamp (Photo 11). If excess water is lost, refill at the coolant reservoir bottle all the way to the top.

At this point, install the pressure tester at the coolant reservoir bottle and pump it up to 15 psi. If the pressure holds for a period of five minutes, observing all connections for leaks, the system integrity is acceptable. A drop in pressure is indica-

tive of leakage somewhere in the coolant system and must be located by observing the entire coolant path (Photo 12).

While the pressure is still applied, locate the bleed screw (10mm) on the thermostat housing, just to the right of the large hose connection (Photo 13). Before opening the bleed screw, be sure that the large hose to the left is lower than the bleed screw to allow the air to rise into the thermostat housing and expelled upon opening of the bleed screw. Continue bleeding the coolant system observing the level at the coolant reservoir bottle, and shut off the bleed screw when the level at the reservoir bottle is at the maximum mark which is at the middle of the bottle.

Reinstall the large water hose support bracket to clear the air conditioning belt. This concludes the flushing and bleeding of the engine cooling system. Run the engine until cooling fans in front of the car turn on at a temperature of approximately 207°F. This will take about 5 or 10 minutes. Should the fans not automatically turn on, other problems in the Fan Fail System are evident. (See modification of the Fan Fail System, Vol. 3, No. 2, Page 21, of the DeLorean World). 

Dear Sir:

It may be that many of the readers of this publication have experienced a squeaky noise which seems to come from the dashboard area, or console. Pressure on the console will seem to eliminate the noise but it is not possible to ride long with one's hand on the console on a permanent basis! The cure in both my 1983 vehicles has been to take a piece of black foam and wedge it between the console and the binacle. This has eliminated the problem, and I thought perhaps this might be useful to others experiencing similar noises coming from the area described.

Respectfully,  
Wallace W. Coyner, M.D.

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