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Repair Basics

Being a Survivor

Proper diagnosis, strategy and teamwork are critical skills in today's dog-eat-dog business world.

By Richard Goulet

It is said that we live in a world where only the fittest survive.

Nature displays this in the animal kingdom everyday. In our modern world we learn that lesson from television shows like "Survivor."

The program, which follows the exploits of a group of castaways competing for a million dollars, is successful because it combines challenging survival games with elements of teamwork, strategy, politics, personal greed, and sexual appeal.

In the automotive repair world, a shop won't survive long – and won't win the million dollars – if it doesn't have talented, experienced, knowledgeable personnel who can act as a team to tackle any problem.

Last winter I had the opportunity to test this theory when my second car, a 15-year-old beater with 259,000 kilometers on the odometer, was not delivering any heat to the passenger compartment.

During the coldest days of January, the 70-kilometer drive to and from work everyday was a painful experience, especially for my feet.

I took it to a repair centre and told them the problem was most noticeable on the highway. The heat gauge did not register any temperature reading, however when driving within the city limits at the posted street speeds, the heat gauge displayed a normal reading and the passenger compartment was warm and cozy.

Within an hour, the service adviser called me to report on their diagnosis. He pointed out that the vehicle still had the original radiator and heater core in it. They figured one or both must be faulty, possibly plugged which would cause

poor circulation in the cooling system. In addition the radiator had several rows of loose cooling fins. This restriction was responsible for the lack of heat in the passenger compartment. They recommended replacing both units and flushing the system.

Being a former technician, I was not comfortable with this diagnosis and decided to apply some basic diagnostic evaluation. Knowing that it's always best to keep an open mind, I started with the basics. I checked the cooling system for



coolant leaks, coolant flow in the radiator, coolant flow to and from the heater core, air locks in the cooling system between the engine and the heater core, electrical connections, sensor response for the electrical fan, and finally the thermostat.

My last step proved to be the most important one. As a component to the cooling system, the thermostat's primary function is to keep the engine at a specific temperature range to ensure proper fuel atomization, optimum lubricant flow and provide heated coolant to the vehicle's passenger compartment.

My inspection of the thermostat revealed that it was indeed the cause of

poor heat flow from the heater. The thermostat was a "Fail Safe" model and it was locked in the wide open position, a safety feature built into the thermostat designed to prevent the engine from overheating after the engine overheats. This vehicle had, in fact, overheated during the previous summer – a problem that was easily corrected and soon forgotten, but which had obviously taken a toll on the thermostat.

The installation of a new thermostat corrected the problem. And it was far easier than replacing the radiator and heater core – an expensive and time-consuming job that would not even have corrected the problem. A customer comeback would have occurred, and more work would have been required before there was any real resolution to the problem. Worse, a customer relations nightmare would almost certainly have ensued because the initial repair was completely unnecessary.

In "Survivor" terms, this shop would have been kicked off the island. In business terms, it would have taken a hit on the job and would have lost credibility with its customer. For a professional service facility to survive, it must be able to properly diagnose and deliver effectively service repairs the first time.

Unlike the "Survivor" television series, the only prize available in the real world of automotive repair is that the business and its employees get to do it again another day. 🚗

Richard Goulet is a veteran aftermarketer, with more than 30 years experience fixing cars and selling parts.