

# ShopTalk

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## TECHTOPICS

# Severity, Type of Damage Dictates PTR Strategy

Our last installment of *Tech Topics* noted that the fastest growing activity in radiator shops is the replacement of plastic tanks. As might be expected, the pipeline of aftermarket replacement tanks is rapidly being filled to meet this new demand. Based on the increased availability of most popular numbers (and some not so popular), it makes sense for shops to offer new replacement tanks, as well as new gaskets, to customers whenever possible.

There are, however, some alternatives that you should be prepared to recommend, providing conditions are right. These include installing a used (pre-owned) plastic tank, if you have one in suitable condition, or repairing the customer's tank with an epoxy compound, made specifically for plastic tanks.

likelihood, and the general deterioration of the plastic due to high temperatures is such that the entire tank is a poor candidate for extended performance.

Another type of damage for which repair is ill-advised is a crack (split) along the bottom tank flange (see Figure 3). This occurs most often on older tanks which have been involved in a collision. Damage can also occur

### Some Exceptions

Certain conditions make it unwise to either reuse a plastic tank or patch it up. For example, never reuse or attempt to repair tanks which have been weakened from steam damage.

*(continued on page 2)*

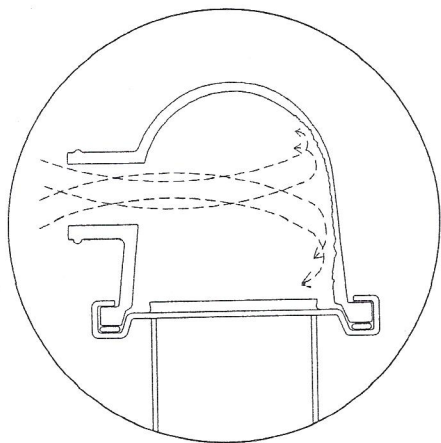


Figure 1

*Steam that enters the hose inlet of the tank will frequently attack the opposite side wall, seriously eroding the plastic surface.*

Steam damage often occurs directly behind the inlet hose connection. The photo on page 2 shows a good example of this, with a hole approximately the size of a dime caused by super-heated steam. The tank wall around the hole is extremely thin. As with the hole itself, this thinning is caused by hot steam which erodes or breaks down the plastic on the inner surface of the tank. The white residue seen on the inside surface of the tank is actually fiberglass that was mixed with the plastic material to impart strength to the tank.

Again, this type of damage should not be considered repairable. The area around the hole is so fragile that the formation of another hole is a strong

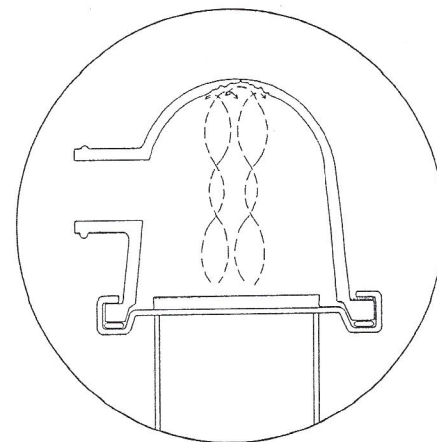


Figure 2

*If a radiator is seriously low on fluid due to a leak or other reason, steam can collect at the top of the tank and erode the surface there.*

# Guidelines Offered for Tank Repairs

(continued from page 1)

in this area when an attempt is made to seal a leak without first compressing the gasket. There's a tendency to "over-crimp" the tabs, causing the flange to break.

## Saving Used Tanks

Some shops save old tanks from junked radiators. When doing so, it is always best to cut the tank and header (with gasket in place) from the radiator. Tag and store old radiators in this fashion to keep the tank and gasket together and prevent the tank from warping.

A note of caution: Old tanks lose some of their strength over time, due to loss of moisture. Always clean and inspect each used tank before installing it. Squeeze it to feel whether it is strong enough to be re-used. Finally, ask yourself if you would use this tank in your own family car.

So far, we've talked mainly about conditions which do *not* favor the re-use or repair of plastic tanks. However,

there are situations for which re-using and/or repairing tanks is both practical and economical. Take, for example, a tank that is not too old, which has some physical damage (perhaps it is cracked or has a broken mounting bracket). It makes good sense to fix a tank like this, particularly if it is a hard-to-find number.

The repair may take a half hour or longer (more if you count the time it needs to cure), but after all, this is the repair business. Knowing when to repair versus replace is based on a lot of factors. Use your best judgement and remember, always err on the side of professionalism.

In upcoming *Tech Topics* features, we'll talk more about the materials and procedures used in plastic tank repair.

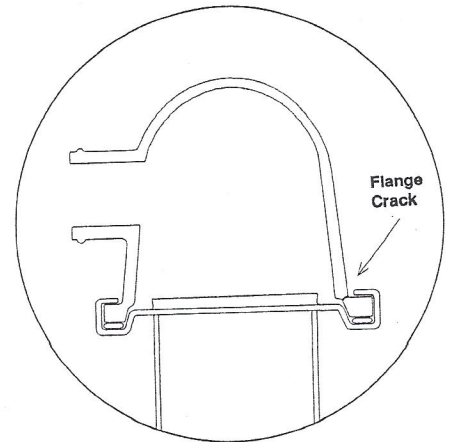
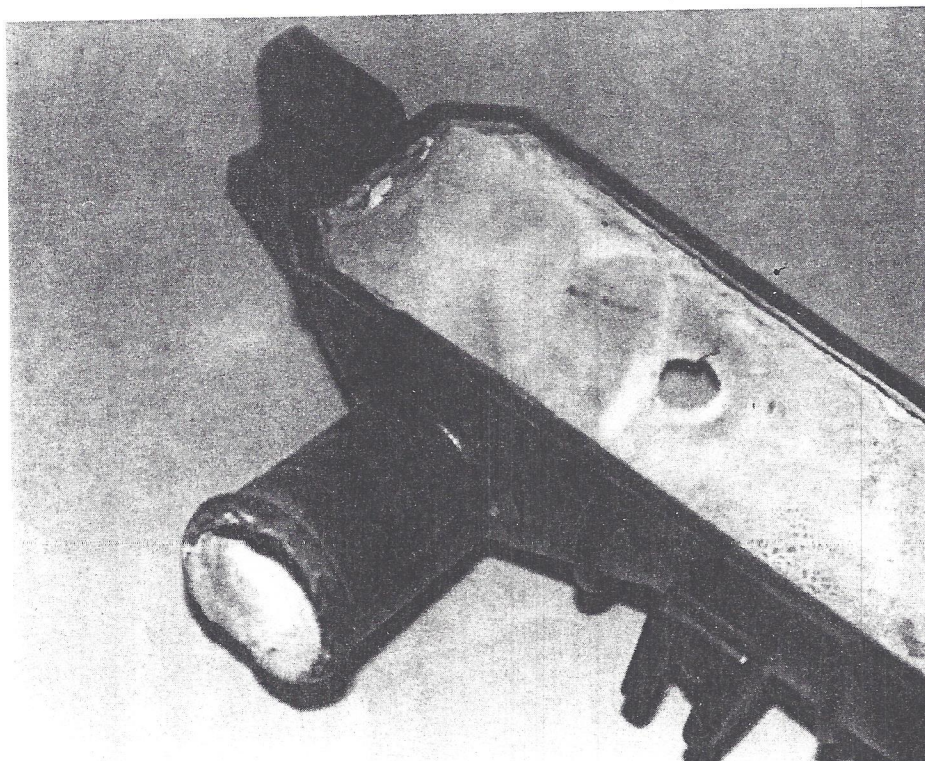


Figure 3

**Should a crack occur at the bottom of the tank flange, repair attempts are not recommended.**



**The effects of super-heated steam on a plastic tank are readily seen in this photo. There is a hole worn through the tank wall. The white lining inside the tank reflects the chemical breakdown of the plastic.**

## Modine Tanks

With the demand for replacement plastic tanks growing at a brisk pace, Modine continues to enhance its own line of quality tanks, gaskets and accessories. The Modine line, first introduced last August, now includes 25 different tanks for the most popular General Motors applications, as well as coverage for Chrysler, Ford and Volkswagen.

Modine's gaskets, as well as its plastic tanks, provide an exact fit to original equipment. Accessory parts offered include draincocks, a cap and clamp kit, hose reducer and tapping screws. The tanks and gaskets are being made available through your local source or Modine's national network of regional sales and service centers.

"As a story in the August 1991 **ShopTalk** pointed out, all tanks are not created equal," commented Ron Jake, product specialist for the Modine Aftermarket Division. "We feel that the quality of our tanks is excellent, and the response of our customers indicates that they definitely agree with that assessment."