



ShopTalk

VOLUME 4, NO. 10

MARCH, 1992

TECHTOPICS

Product Knowledge Essential for Effective Selling, Repair

This "Tech Topics" segment is the third authored by Larry LePrevost, national sales manager for the Johnson Manufacturing Company. Larry has 20 years of experience with the Johnson organization, which produces a wide range of products and supplies for radiator shops nationwide. The



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appearance of Larry's observations on these pages does not necessarily imply Modine's endorsement of same. Questions relative to subject matter can be directed to Larry at the Johnson Manufacturing Company, 114 Lost Grove Road, Princeton, Iowa 52768. Or, telephone 319-289-5123.

concept that PTRs (plastic tank radiators) are repairable. And, they are backing it up by offering fast service and competitive prices. They have continually upgraded their PTR knowledge and have made investments in tools and equipment necessary to do PTR work efficiently.

Good Inventory Critical

It has become increasingly important to maintain a good stock of all the popular replacement tanks, gaskets and parts, and to know where to get the fastest service on the ones you don't have. It's also advisable to save used tanks (especially the hard-to-find ones), as we noted in the January ShopTalk, as long as they have not been damaged by steam or are too weak or too old. Having the broadest selection of tanks and gaskets will enable you to offer the fastest tank replacement in your area, which should give you an edge over your competition.

Maintaining this kind of inventory normally requires having more than one source, and perhaps many different brands. Each brand has its own characteristics with which you should become familiar. Some aftermarket tanks and gaskets offer true O.E.M. quality. Their construction is superb, leaving no webs of excess plastic in the openings or uneven mold joints on tank flanges. In the world of plastic tanks, those with O.E.M. quality generally fit the best and therefore are easiest to install.

Some tanks require a little clean-up or modification prior to installation. It is

usually best to dry fit these tanks before placing pressure on them. One shop owner told us recently that he had to round off the corners of some imported tanks so they would fit into the header. We've also seen some tanks which were uneven along the side, while others had some uneven mold spots in the bottom of the tank flange. For shops that run into these situations, a small bench-top belt sander can prove handy.

Gasket Advice

It's always best to install the same type of gasket as the one you removed,

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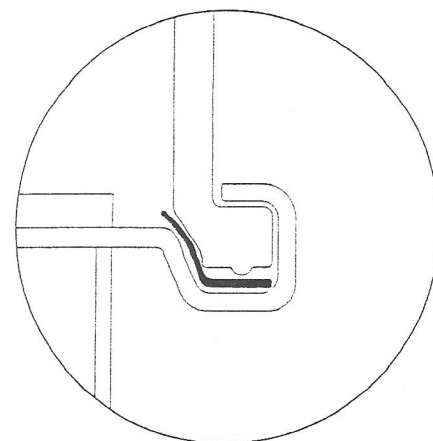


Figure 1
GM uses a special style flat gasket. Note the stress riser on the bottom of the tank, which presses into the gasket.

Contrary to what you may have heard, *selling* is the oldest profession in the world.

Every day, each of us engages in some form of selling—of ourselves, our products or services to customers.

Some radiator shops have become very good at selling. You can often tell by the way they "dress up" their shops. Many excel at using a personal approach, making sales calls, sending thank you cards, etc.

There's another characteristic that the vast majority of successful shops have in common: they are all selling the

Proper Parts Match-up Is Critical

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especially if you are installing an O.E.M. quality tank. Figures 1, 2 and 3 illustrate distinctly different types of tanks, each requiring different gaskets.

Figure 1 shows how a GM style tank and flat gasket system work together to form a tight seal. You will notice a small, narrow rib which runs all the way around the bottom of GM tanks. Since wide, flat gaskets are more difficult to compress than o-rings, GM has compensated by adding this narrow rib, called a "stress riser." It's designed to press into the gasket to insure a tight seal. Without this rib, it would be very difficult to form and maintain an effective seal.

Do not use round o-ring gaskets under GM style tanks that have this stress riser, as the o-ring will tend to

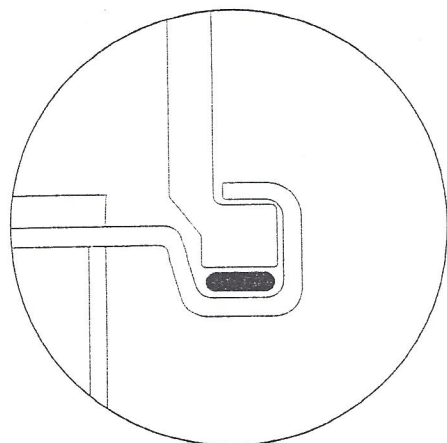


Figure 2
Ford tanks use a round, o-ring gasket shown here compressed.

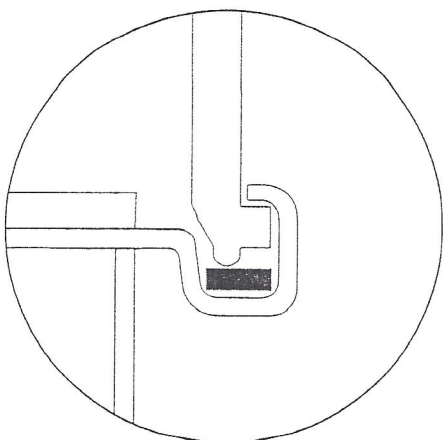


Figure 3
Chrysler's rounded tank flange is designed for flat gaskets as shown.

move from one side of the rib to the other when being compressed.

It's best to use only the GM style flat gaskets for these tanks.

Figure 2 shows a typical Ford style tank and gasket combination. Ford supplies o-ring gaskets which are easy to compress, and thus their tanks do not include a stress riser.

Once again, it is best to install a new o-ring gasket under these tanks, especially if the tank is O.E.M. quality.

Figure 3 shows how a Chrysler tank flange is rounded to form a tight seal when pressed against a flat gasket. Using a round o-ring gasket under this tank is not recommended.

Your chances of creating a tight seal are much better if you use the correct gasket for each type of tank. And, it also helps you maintain the same tab length. Having the proper match-up for each tank and gasket combination means you will not end up with too much, or too little tab length.

More on Match-Ups

The proper match-up of parts, in fact, can be crucial to your success with every job. Since you can't change the thickness of the header or the length of the tabs, let's look closer at the components over which you can exercise some control: (a) the tank, (b) the gasket, and (c) the way the tabs are closed.

If the thickness of the flange on the replacement tank is the same as the tank you removed, and if the gasket is the same type and thickness, the tabs will close with the same clearance as before. You should always observe whether there is a difference between the thickness of the flange on the replacement tank versus the original by holding them side by side. If the tank flange is not the same thickness, select a gasket of the correct type, but one with a different thickness to help reach the proper overall thickness. Flat gaskets come in a variety of thicknesses, but they require more force to compress.

Always inspect your work to ensure that all the tabs are properly aligned before crimping (see Figure 4). If, for example, you fail to tap the outer leg of the tabs up to a vertical position, close to the tank, you may end up with tabs which are too short to reach over the tank. (You may wish to refer to the December ShopTalk where we

discussed how to safely restore the alignment of the tabs by supporting them with a TankMate™ repair fixture directly behind the gasket trough to eliminate damage to the header and/or header joints.

Should You Lubricate?

For the past five years or so, almost everyone (myself included) has suggested it is always wise to lubricate the gaskets that you install. If so, why don't the manufacturers do it? One engineer told me recently that it is not necessary to lubricate gaskets because the pressure placed upon them is static (only one direction, down). He indicated that it was different for engine and transmission coolers where lubricity is needed when you are "tightening threaded parts directly against gaskets using a turning motion."

There is no substitute for good, clean, smooth, dry parts to inspect. If you lubricate your gaskets, however, we suggest that you use either clean antifreeze or RTV silicone (not both).

When using antifreeze, it works best to dip the gasket in it. If you squirt antifreeze directly into the gasket trough, things can get messy.

If you are using RTV silicone, apply a thin even coat by pulling it through your fingers, being careful not to stretch the gasket. Using RTV as a lubricant lets you install the tank right away. If you

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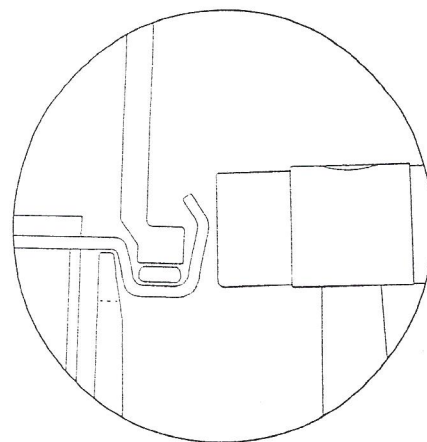
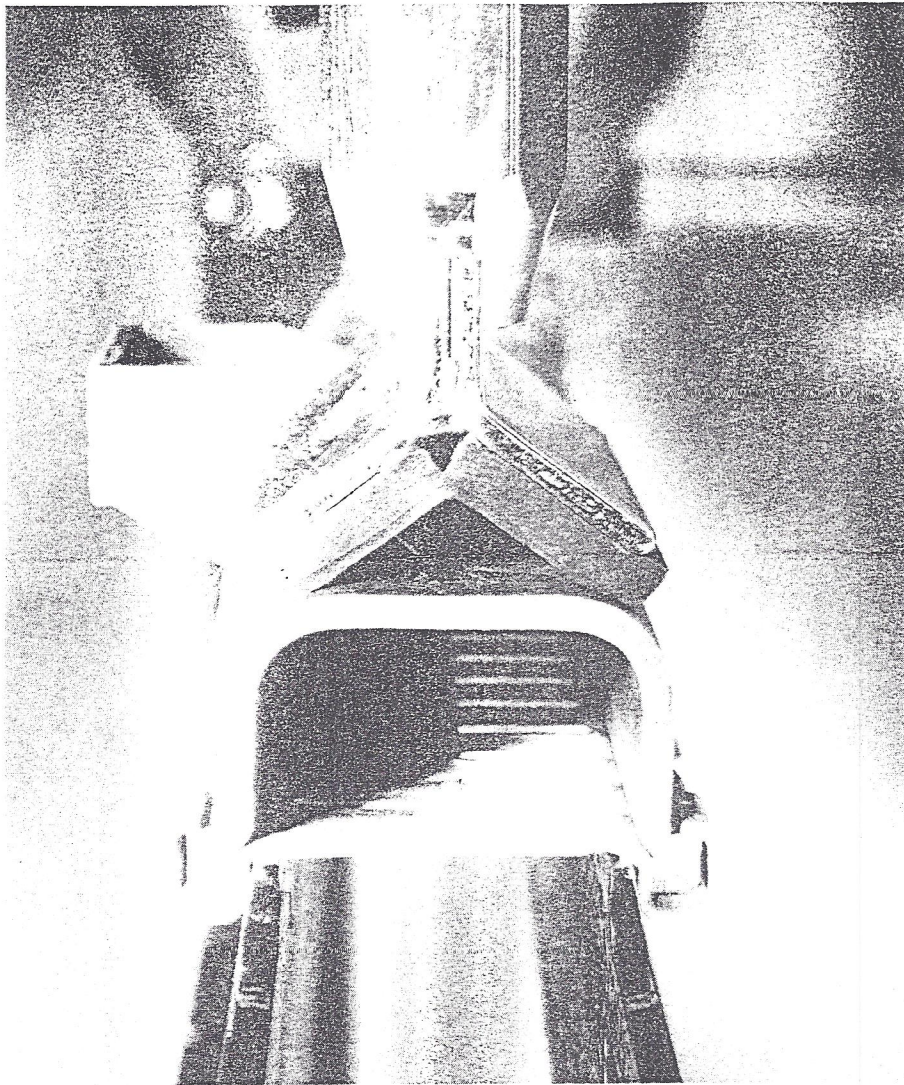


Figure 4
A soft-faced hammer is recommended for restoring the vertical alignment of tabs, prior to final crimping.



In this cross-section view of a Renault tank and header, we see a TankMate™ fixture applying 135 pounds of force to properly compress the o-ring gasket.

4 Gasket Kits Cover Popular Truck Cores

Modine has added four new gasket kits for heavy-duty applications. The kits cover 16 of Modine's most popular cores (including Kenworth model 3R 1077). Part numbers for the kits and additional details for each are as follows:

4R 80170 NAVISTAR
 Fits: Header sizes 6" x 38-1/2".
 Bolt Holes: 48
 Fits: Core numbers 3R 1060, 3R 1070 and 3R 1079.
 Navistar Part Number: 578498C1

4R 80171 PETERBILT
 Fits: Header sizes 6-1/2" x 37-1/2".
 Bolt Holes: 42
 Fits: Core numbers 3R 1078, 3R 1086, 3R 1089, 3R 1100 and 3R 1101.

4R 80172 NAVISTAR
 Fits: Header sizes 6" x 30 3/4"
 Bolt Holes: 40
 Fits: Core numbers 3R 1049, 3R 1051, 3R 1054 3R 1055, 3R 1069, 3R 1080 and 3R 1085.

4R 80174 KENWORTH
 Fits: Header sizes 7-1/4" x 32 1/8".
 Bolt Holes: 40
 Fits: Core number 3R 1077.

Additional information on these gasket kits and other radiator accessories is available from all Modine product sources.

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are using it to fill voids or imperfections. or as insurance when making a splice, then allow approximately 20 minutes for it to tack up before installing the tank.

A Final Suggestion

One final reminder: whether you use lubricant or not, all of the components should be clean and dry so they can be inspected for imperfections in the surface, before assembly. Always clean the gasket trough with a *small* wire brush, not a big scratchy brush that can gouge an aluminum or brass surface. A general adherence to cleanliness helps virtually any repair operation

In our next installment of "Tech Topics", we'll discuss tricks and tips for using Nylobond and other epoxies.

Condenser Line Expands

Modine has announced the introduction of nine models to its line of A/C condensers, fitting a wide range of popular Honda applications. The new models are:

1K 600040
 1991-88 Honda Prelude.

1K 600041
 1991-88 Honda Civic 3-door & 4-door.
 1989-88 Honda Civic Wagon.
 1989-88 Honda Civic Wagon Van, 4WD
 1991-88 Honda CRX.

1K 600042
 1985-84 Honda Civic

1K 600043
 1987-86 Honda Civic

1K 600045
 1987-84 Honda Prelude

1K 600047
 1989-86 Acura Integra

1K 600049
 1989-86 Honda Accord

1K 600050
 1992-90 Honda Accord
 (except '92 USA model.)

1K-600051
 1985-84 Honda Accord

Additional information on these products and other condensers in the Modine line is available from your Modine product source.