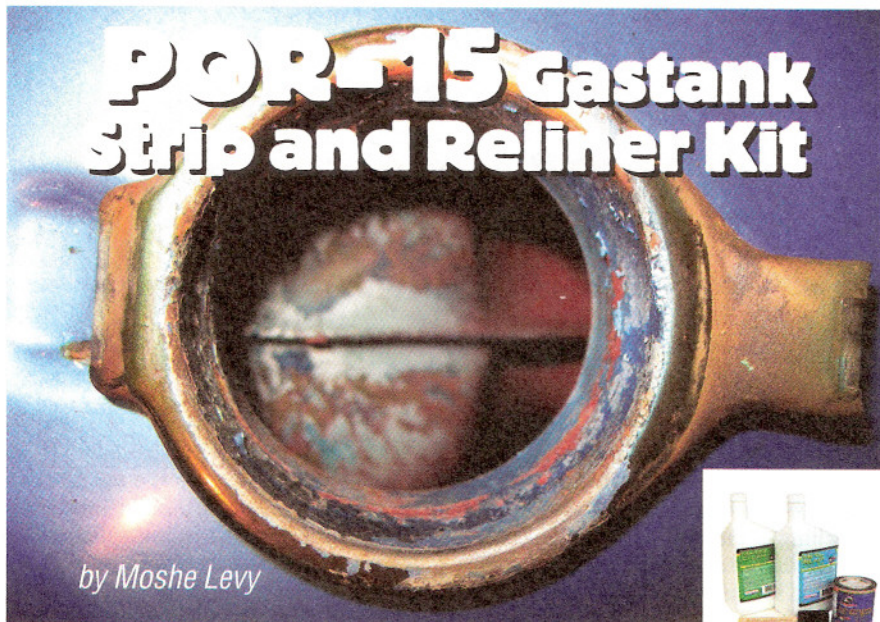


## POR-15 Gastank Strip and Reliner Kit

by Moshe Levy



**I**N THE SUMMER of 2003 I purchased a 1973 BMW R75/5 in Monza Blue Metallic paint, and proceeded to disassemble a perfectly good, running motorcycle with the idea of conducting a frame-up restoration over the winter.

Fast forward to this month, when the sight of the disassembled R75/5 finally became too much to bear! Digging through the boxes and refamiliarizing myself with the various parts, it quickly became clear that after 36 years, the R75/5's gastank should be relined.

Actually, old steel Airhead gastanks are justifiably famous for their OEM red tank coating, which often lasts forever if given care. Obviously, rotting in my garage for six years was not an example of good care, and the experts on the BMW Airhead forums unanimously pointed to POR-15 as the product of choice for this job.

Please note that my initial application attempt of POR-15 failed. Let me share how it *should* be done, not how I did it.

The POR-15 Utility & Cycle Fuel Tank Repair Kit tested here is designed to strip out any OEM liners, as well as rust, and to reline steel gastanks. All required chemicals and a brush are included with the kit. The price is \$40.25 plus S&H.

**Pre-Prep:** Potential users should be fully aware that the chemicals utilized in the kit are quite potent and must be treated with care and respect. All the various treatments must be performed in a very well ventilated area, with skin and eyes well protected to prevent contact with the compounds. This is one DIY job where safety is of paramount concern, because one wrong move could lead to serious health consequences. Also, since I was

planning to have the tank professionally repainted after recoating, I was not concerned with protecting its finish. If you care about your tank's current finish, however, you must be very careful to ensure that the chemicals do not make any contact with the paint. Just a few seconds of acquaintance with the strippers/cleaners are all that is required to cause the existing paint finish to bubble up or strip away entirely. Finally, when draining or disposing of the chemicals, it is assumed that such activity will be performed as governed by any applicable local, state or federal regulations.

**Step 1—Preparation:** The tank should obviously be emptied and afterward rinsed out with water. Any gas caps, gaskets, petcocks, floats, filters, or other fittings should be removed and the holes plugged. I found some cork plugs at the local hardware store (20 cents each), that were perfect for plugging up the bungs as shown in Figure 3. I had some duct tape nearby to seal the tank's filler hole as well, as shown in Figure 4. Access to warm running water is also required, and for this I used a common garden hose hooked to my large utility sink's faucet.

**Step 2—POR-Strip:** The first step in using the kit involves POR-Strip, a powerful paint stripper designed to dissolve any previous tank lining that remains in the tank. The one quart POR-Strip container is emptied into the tank, which then must be agitated for between 15 minutes and one hour, according to the instructions. Once the time has elapsed, warm water is used to flush out the POR-Strip and the old lining. Upon draining, sure enough, I could see the old red OEM lin-

ing running out of the bungs in small, gooey droplets.

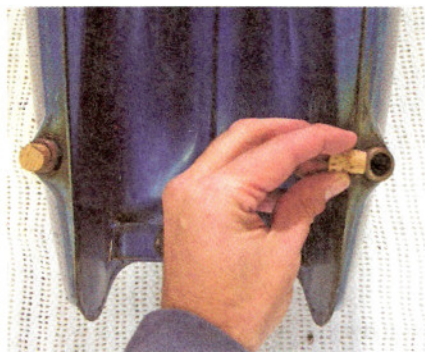
**Step 3—Marine Clean:** Marine Clean is a water-based cleaner designed to dissolve the gum or varnish left behind by stale fossil fuels, such as found in tanks which have been sitting partially filled for extended periods of time. This cleaner is nasty, caustic stuff, which leaves the metal surfaces inside the tank alkaline. One quart of Marine Clean needs to be mixed with 1 quart of warm water before being poured into the tank, as heat helps to activate the chemical's agents. Once inside, the tank needs to be agitated again, this time for a recommended 20 minutes, before the used solution is poured out and the tank once again rinsed out with water.

**Step 4—Metal Ready:** Next up is a quart of the Metal Ready solution, which is designed to change the pH of the tank from alkaline to acidic, since the POR-15 tank lining itself sticks better to acid-prepped metal. The Metal Ready also dissolves rust and scale that may have built up in the tank over the years. The solution is poured into the tank undiluted, and then the tank "rolled" for a minimum of 20 minutes to ensure all surfaces are covered. The tank can be left idle in different positions for 30 minutes at a time for extra coverage, but the instructions state to drain the Metal Ready after two hours maximum. Once drained, the tank is rinsed out with warm water several times.

**Step 5—Tank Sealer:** Here is where most non-pros make their most fatal error. The tank must be completely and totally dry before the Tank Sealer is applied, and forced hot air is really the only way to do it. I rigged up my heat gun as shown in Figure 5, and let it sit undisturbed on high setting for a few hours. Then, after a brief rest to let things cool down, I repeated the cycle again just to be safe. The tank should be allowed to cool to room temperature before application. There is also a series of prep measures in case any leaks are discovered, and a piece of repair cloth is included in the kit. Luckily, the R75/5's old gastank continued to be leak-free, so these steps were skipped.

Once the tank is verified bone-dry and any leaks attended to, the sealer may be applied. Eight ounces of sealer are included with the kit, which is adequate for tanks up to about six gallons. It must be stirred for a good while upon opening, and its pungent stench can cause serious health risks if inhaled directly for long periods of time, so take the kit's suggestion to work in well ventilated areas very seriously! The thick, viscous coating is poured into the tank and rolled around slowly to coat all surfaces evenly, taking





**Left:** Corks from the local hardware store are perfect for plugging the tank bungs. **Center:** Duct tape works well to seal the tank's filler hole. **Right:** Use a heat gun to *completely* dry the tank prior to application of the final sealer—this is critical.

care not to let it puddle around low areas (such as the bung exits or seams). The excess must be drained out once the interior is coated, and again one must be careful not to let the residue harden on exterior paint surfaces, bung threads, etc. Curing time is four days, after which fuel can be poured in. Incidentally, whatever sealer is left over cannot be reused—once the can is opened and the sealer oxidizes, it must be discarded.

**Caution—Where I Went Wrong:** This is a job that rewards unlimited patience, a virtue which I admittedly have in too short supply. Upon examining my handiwork after the POR-15 cured, I noted a few small flakes of the red OEM lining still intermingled with the new POR-15 liner, a testament to my poor application of the POR-Strip in Step 2, as well as my hasty rinsing afterward. I also discovered upon close inspection that I had not coated all surfaces evenly with the Sealer, a fact not readily apparent until a very detailed examination was performed. It's easy to perform such an exam when the product is dry, but much more difficult when it's wet and the noxious fumes are inches from your face as you peer into the gastank's filler hole. Unfortunately, once it's cured, any such mistakes like these render the whole job worthless, and one must start over again from scratch. *Serenity now!*

**How The Pros Do It:** I knew what I had done wrong, but putting my pride aside, I searched for a professional to perform a proper application of the kit. I enlisted the help of Stephen Saucier, owner of European Cycle Services in Middletown NY, and a proponent of POR-15 for gastank lining projects on BMWs, Ducatis, Triumphs and other European marques. Saucier explained that, in the application of these chemicals, patience that would make a Shaolin monk envious is what separates the professional application from the novice. Having learned all this the hard way, here are some tips to help potential DIYers do it right the first time:

1) *Roll the tank slowly, evenly, and constantly:* Saucier was very slow and even in his rolling of the tank during Steps 2-5, and unlike me continued rolling for very long periods of time, stopping to rest only briefly before rolling again. By contrast, I tried getting away with setting the tank in various positions for longer periods of time, followed by short rolls. Obviously, Stephen's methodology was better.



**Gastank after:** Properly applied; even coverage on all interior surfaces of the tank.

2) *Check inside often:* Check inside the tank often, especially before the application of the next chemical in the sequence, to ensure that the surfaces are prepped in accordance with the instructions.

3) *Rinse thoroughly:* An added hint was to always rinse very thoroughly, to wash out any remnants of the preceding chemical before applying a new one, so that no intermingling takes place. It also ensures any loose debris is totally flushed out.

Once the tank came back from Saucier's shop, I peered inside with a high-powered flashlight, and was delighted to see the smooth, uniform, spotless coverage of the gray-colored POR-15 tank sealer on every surface in sight. Figure 6 is a close-up of the filler hole, showing the visible coverage.

**Lessons Learned:** In retrospect, this is one job which I would definitely rather pay someone else to do. Detailed Material Safety Data Sheets for each of these powerful compounds is available at POR-15's site, but suffice it to say that it's no picnic spending an afternoon in the presence of these noxious chemicals. It's also mind numbingly boring to roll the tank for hours on end, and dangerous to deal with any hazardous cleanups that occur if you don't seal the tank's holes flawlessly. Unlike other DIY projects where an owner bonds with the motorcycle by carefully learning more about its mechanical intricacies and how they relate to its harmoniously working whole, this project basically tests how much endurance one has to perform a very monotonous task amongst the sickening smell of toxic chemicals.

This isn't brain surgery by any means, but the prep and instructions really do need to be strictly followed to the letter, and with boundless patience, for the product to bond correctly. I have no doubt that as properly applied here, the POR-15 product will now last the life of the BMW's tank, since scores of other Airhead restorers are reporting many years of success. But as for the application of the product itself, next time around I'll leave that to the pros, who typically charge between four to five hours labor to do the job. Expect to pay less if you do some proper prep work up front, more if you don't, and more still if you have a paint finish that needs to be protected. ●

## CONTACTS

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