LIQUID ASSETS

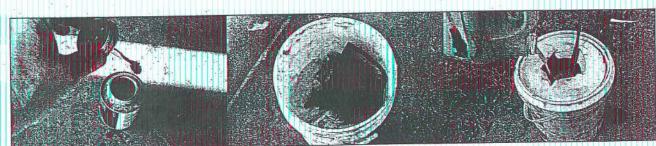
by Glenn Kinyon Contributing Editor

We call it Egypt, but the ancient Arabs called it Al-Kemia, or the "black land," in reference to its many mysteries. From the Arabic Al-Kemia, we get alchemy – the study of the changing properties of the natural elements, among other things. The most ancient of the alchemists are believed to have been Egyptian, although the practice of alchemy sprang up independently in both India and China at some point in pre-history. Interestingly, tradition in all three cultures has it that alchemy was introduced by visitors from a distant land beyond the sea (some fodder for you E.T. and Atlantis buffs). Alchemists believed that all metals were in a state of transformation, eventually reaching perfection as gold. Through the proper combining of different metals under the correct application of heat, alchemists were convinced they could find a way to accelerate the natural process of turning base metals into gold. Along with the secrets of accelerating time came the secrets of slowing time down and achieving longevity for the human body, or even immortality. The key to achieving perfection - whether with gold or immortality - lied in the mysterious element known as the Philosopher's Stone.

Alchemists saw that hidden within a living seed, there existed something that would transform it into an ant or a mighty tree, as long as the elements of water, sunlight (fire), earth, and air were combined in the correct proportions. A seed could be alive, or it could be dead. The question was: "Why?" What was that life? What was that mysterious element? Alchemists observed nature and the living transformations within it. They saw how fire transformed objects into ashes or smoke, how certain metals quickly became rust, and how living things grew old. They attempted to recreate transformations in laboratory settings. The Egyptians were believed to have discovered the secrets, and there are stories of certain medieval Europeans who had likewise gained that knowledge and earned the immortality that came with it. Whatever the truth, the alchemists, known as Philosophers (with a capital P), were the first scientists; it is to them that we owe our modern methods of scientific study.

Alchemists, however, earned a poor reputation in time as quacks, witches, and confidence artists, and were ultimately banned by the Holy Inquisition. While this didn't stop the practice, it did have something to do with a change of name sometime during the late 18th century. The study of the elements became known as chemistry, a field that went on to enjoy solid repute. To this very day, chemists study the same things that the Ancients did, although with better laboratories and apparatus. We associate chemistry today mainly with pills and medicine, but without chemists, we wouldn't have paints or varnishes, shampoo, toothpaste, plastics, or titanium... or even tires. We call it chemistry, but the vulcanization of rubber was alchemy in its purest form, as it mixed raw rubber with sulfur under the application of heat. And, the same alchemy (or modern chemistry) that gave us tires also provides us with some of the materials we use for their service.

The old woman who whipped up batches of lye soap behind her Ozark cabin in the 19th century was an alchemist of sorts. She concocted the precursor to the soaps we use today. Her great-grandchildren took her know-how a step further and invented different types of soap for different uses. Although you could, you generally wouldn't use dishwashing liquid to bathe with, or viceversa. You also wouldn't use laundry detergent in the dishwasher. Nowadays, every kind of soap has its particular application. They even have soap for different parts of your body - soap for your hair, soap for your face, soap for your teeth (kind of), and soap for the rest of you. I've been known to scrub my hands with kitchen cleanser before, but that's not its intended use. They make hand (and hands-only) soap for that. The alchemists who work in the tire service industry make "soap" for lubricating tire beads and wheels, although it comes under the heading of "mounting compound." While some mounting compounds are vegetable-oil based, nothing with a petroleum-oil base should ever be used for mounting or demounting tires, as petroleum products degrade rubber compounds. Neither should any product containing silicone or grease be used. Besides damaging the tire or







compounds these days come with rust inhibitors, and too where the presence of sparks or flames is a possibility. much water will counteract those properties. Proper eye and skin protection should also be employed

Rust is a naturally-occurring transformation that creates all | | flammable properties. kinds of problems for tire service personnel. Liquid antitime to time, as these are exposed to rain while riding in piloted wheel lug nuts before removal. If this is ever done, ... metal tools with moving parts. those lug nuts should be replaced. Inner and outer nuts in order to ensure that the correct amount of torque can be applied to them during tightening.

"bead breaker," which is intended to penetrate the area ... the rim.

even the wheel, improper compounds can cause the tire (1) between the rim and the tire bead in order to loosen or multi-piece, tube-type rims and wheels where lock rings Some mounting compounds come ready to use (either in a rand side rings are involved, rust can render an assembly the form of a liquid or a thick paste), while others require almost impossible to demount. The trick of modern tire techs to engage in a bit of their own alchemy. This latter a service alchemy has been to create a bead-breaking type is intended to be mixed with the correct portions of un product that doesn't damage tires or wheels. This has water to produce the right consistency. Too much water it been accomplished with a number of products, but will leave the mixture too runny and insufficiently thick to the because of the vapors, they must be used in a welllube a bead properly, so the tech must be at his alchemical ventilated area. And, as those vapors are flammable, best during the mixing. In addition, all tire-mounting in thead-breaking liquids should never be used in any area when using any liquid bead-breaking products with

rust products initiate a process that makes rust appear to Throughout the centuries, alchemists have on occasion vanish. While we don't actually use anti-rust substances to :::: created one result while trying for another; or, like Charles service tires, we use them on our tools. We spray WD-40 Goodyear (if the legend is accurate), have unintentionally or similar products on the hinge-pieces of our jacks or on mixed substances and come up with a useful product, as the threads of the bolts; we use them on our locking pliers WMr. Goodyear did when he knocked sulfur into a batch of or any tool we use that has moving metal parts, and we are raw rubber. A similar series of events has recently made a need to spray the hinges of our portable safety cages from new product available for tire service personnel. Pro-Chem has introduced a liquid bead breaker called Tire Release, the back of our trucks. Every service truck will have a can which is unique because it is the first product of its kind to of "loose juice" stashed on it somewhere. Since the make non-flammable, so it can be used safely around heat earliest days of truck tire service, techs have applied rust- un sources. It appears to be effective against rust, and can dissolving products to corroded inner and outer stud- it also be used like any other anti-rust agent on hinges and

are designed to be installed dry, without any form of lube, But, there's more to Tire Release than its ability to help unseat stubborn beads. It also makes a high-quality bead and wheel lube. I've tested the product myself, and I noticed that when I applied it to tire beads before Every service truck should also have a squirt-can of oil for demounting, the tire will pop off the wheel like nobody's applying between the nut body and flange of hub-piloted business. There is also very little waste involved; when a wheel nuts. The studs of a hub-piloted wheel system require swab is doused in it, the product hardly drips. Several a couple drops of oil, too. Our modern alchemists have beads can be lubed with one dunking, and it doesn't conducted thorough testing of various products, and they've and evaporate off the bead as quickly as some of the water-won't run into the tire. Testing has also shown that a tire Another liquid we use for servicing truck tires is liquid ... mounted with Tire Release results in zero slippage on TTI