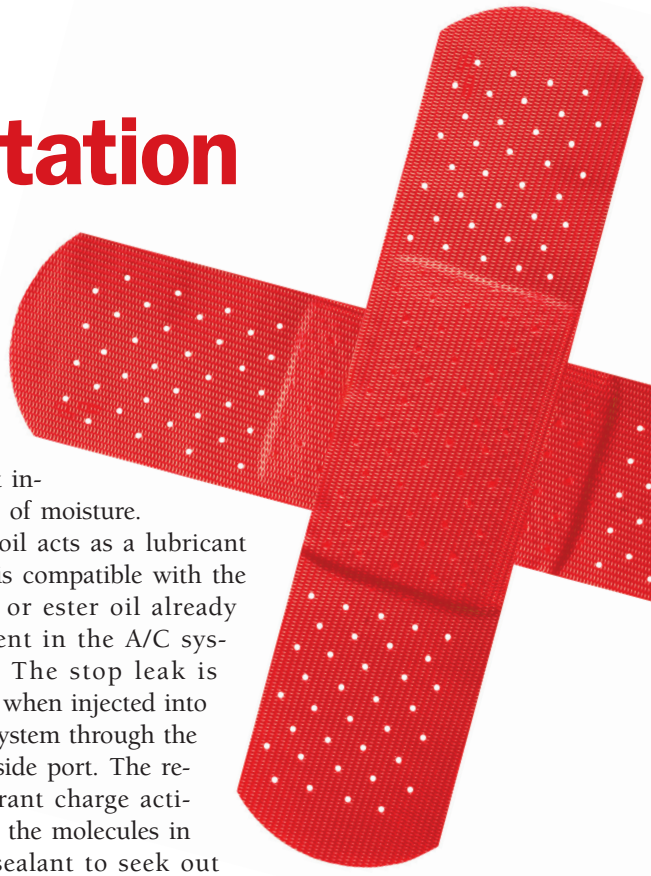
Healing the Reputation of Sealants

By Paul Fleury, Universal Products



A new generation of stop leaks emerging in the marketplace is working hard to shed the old reputation of stop leaks as dangerous "snake oils" that do more harm than good. This includes an oil-based stop leak for mobile air conditioners (A/C) that reacts to oxygen while lubricating the system.

Accompanying the new style of A/C stop leak is a chemical sealant for cooling system leaks that does not use any harmful metallic filings or pellets to plug the leak. These new stop leaks are comparable to hard part repairs in a variety of ways at a fraction of the cost. The products provide permanent repairs for customers who cannot afford an expensive repair cost or for a vehicle in which the owner decides is no longer worth spending a lot of time and money.

Air conditioning stop leaks have been a long-time enemy of service technicians and their recovery equipment, compressors and orifice tubes. With limited success at actually stopping leaks, early A/C sealers do far more harm than good by crystallizing throughout the system. These stop leaks are sold in pressurized cans and react to moisture at the leak point. The leak is moderately sealed, lasting at best for a few months. The danger of these pressurized sealants is that the remaining product continues to react with the moisture in the system. The most common place for moisture in the A/C system is the orifice tubes where condensation is ever present. This causes crystallization of the stop leak in these hoses, which eventually clogs the system. Furthermore, these crystals move into the compressor, causing it to fail within three to six months. Once the vehicle is brought in for service, an unsuspecting technician recovers the system immediately sucking these crystals in, contaminating the machine and rendering a $2,500-$5,000 piece of equipment useless. After reviewing this chronology of events, it is readily apparent how previous stop leaks got such a bad reputation.

The *new* oil-based stop leaks have a tough road ahead overcoming the negative connotations brought about by pressurized A/C stop leaks. However, this new era of sealant works in an entirely different fashion. Oil-based stop leaks are attracted to airflow and oxygen at the leak point instead of moisture. The oil acts as a lubricant and is compatible with the PAG or ester oil already present in the A/C system. The stop leak is inert when injected into the system through the low side port. The refrigerant charge activates the molecules in the sealant to seek out and react with the oxygen at the leak point forming a wax-like seal.

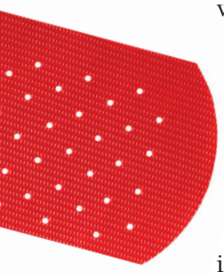
As long as the A/C system is not losing more than a pound of refrigerant per day, this repair is permanent. Once the leak is sealed, the remaining oil will continue to lubricate the system. Therefore, there is never any crystallization in the orifice tubes, no damaged compressors and, most importantly, if the system is ever recovered, the remaining stop leak is reclaimed with the oil, keeping the recovery machine safe and technicians happy.

Because this type of stop leak is safe for equipment, easy to use and compatible with a variety of refrigerants, its marketability is infinite. Service technicians can use it as preventive maintenance with almost any repair job. The oil will remain as an inert lubricant in the system waiting for a leak to present itself.

The amount of time and money saved repairing minor leaks results in larger profits and easier sales with a working air conditioner. Depending on the vehicle model, replacing a compressor or evaporator can cost anywhere from $600 to $2,000. There are a lot of vehicles on the road that are not worth that much and a lot of people who can't afford the expensive repair. Repair facilities can develop lasting relationships with customers by helping them save money when the hard part repair is not an option, while still making a profit on the system recovery and new charge. Positive word

of mouth will spread, creating new business for the shops offering the oil-based stop leak as a treatment option.

The product takes less than 15 minutes to circulate through the system, sealing any leaks. Its compatibility with a variety of refrigerants also separates itself from its predecessors. This new type of stop leak is compatible with R-134a, R-12 and R-22, as well as newer environmentally safe refrigerants. This compatibility will open the market beyond the automotive industry into home A/C applications as well. The potential for this new air conditioning stop leak is boundless because of its safety, ease of use and compatibility with a variety of vehicles and equipment.



Sealing Cooling System Leaks

Cooling system repairs like blown head gaskets, warped or cracked heads, block leaks or leaking radiators have long been a thorn in the side of many drivers. These repairs are extremely expensive and labor intensive, ranging in cost from $1,000 to $3,000. In the past, the only alternative to the hard part repair has been cheap, "band-aid" stop leaks that only work for a short period of time.

Even installing these "band-aids" can take up to 48 hours, almost the same amount of time as the hard part repair. The installation generally requires a variety of flushes and drying periods before the vehicle is road ready again.

These older stop leaks use metallic filings or pellets that act as temporary plugs that can rarely withstand the pressurization of a normal system for more than a few weeks. Furthermore, once the filings and pellets do break free, they tend to clump together and clog different parts of the cooling system.

An inexpensive alternative has finally emerged that is safe for the vehicle, easy to install and, most importantly, a permanent repair for most leaks. The new brand of cooling system stop leak uses a 100% chemical solution to form a weld over the breach in the system. Using this solution, a vehicle only needs to have the thermostat removed before the process and the system flushed once with a cleaning additive. During the sealing process while the vehicle is idling, the chemical solution reacts to temperature differential created by airflow at the leak point. From the time the thermostat is pulled out to begin the process and replaced upon completion, only three to four hours will have elapsed before the vehicle is road ready again. The strength of this chemical weld ensures that the seal will remain solid under normal operating conditions.

Because this new stop leak provides such a strong seal, repair facilities can offer this treatment process as an option for customers who can't spend thousands on a hard part repair. Just like the A/C stop leak, pre-owned vehicle lots and other resale outlets can save a lot of time and money, while still providing their customers with a vehicle that they can stand behind.

The new generation of stop leaks has just begun to make its presence felt in the marketplace and is slowly withering away the bad rap brought on by past stop leaks. Unlike older sealants, the new formulations are safe and easy to use, which makes them a great option for any DIYer. The strength of the seal allows repair facilities to offer these treatments as viable alternatives to expensive hard part repairs.

For the first time ever, consumers now have a "mechanic in a bottle" that they can trust to permanently fix the problem.

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Paul Fleury has been with Universal Products for three years helping to educate shop owners and technicians about the new, safe stop leaks available on the market. The company's goal is to teach technicians about the differences between older stop leaks that are dangerous for vehicles and the new generation of sealants that permanently fixes leaks without any risk to the vehicle.