To a car or truck owner, a cracked engine block is a frightening thing. There are only two ways to repair a crack or hole in an engine block or head -- one way is to tear the engine apart and hot weld the crack. This is very expensive and requires considerable vehicle down time. The other way is to use CarGo SEAL-UP which is inexpensive and keeps vehicle down time to less than one day.

Cracks within an engine block or head usually occur somewhere within the water jacket. Since the cooling system is pressurized, water is forced through the crack into an unwanted area of the engine -- usually the oil and / or a cylinder. Even a crack of only a thousandth of an inch in width can spew a large amount of water. If it goes into a cylinder, it lowers the ignition temperature and greatly affects the operation of the engine. If it goes into the oil, it will damage the bearings, lifters, and other sensitive internal areas of the engine. If the crack exits externally, there is great water loss and the engine over heats.

Figure 1 is an illustration of a crack in the engine block between the water jacket and a cylinder. The crack creates a low pressure area and as the water flows past the crack under pressure, the water is forced through the crack into the cylinder. The addition of water into the cylinder dampens the firing within the cylinder. Plus, cracks in the cylinder almost always result in water flowing into the oil.

Another problem is hot spots. Since heat cannot travel across the open crack, you have a hot spot on both sides of the crack which can damage the metal in the head or block. These hot spots are represented by the shaded area in Figure 1.

Figure 2 is an illustration of the same engine conditions only with SEAL-UP added to the cooling system.

SEAL-UP is a formulation of modified liquid glass fortified with pure copper to permanently cold weld holes and cracks within the block and head of water cooled engines -- both diesel and gasoline.

The copper reinforced liquid glass molecules (illustrated as dots in Figure 2) are forced into the crack along with the water. When the SEAL-UP molecules come into contact with air from the cylinder, they instantly solidify into a ceramic-metallic cold weld. This hardening is accelerated with the heat. This ceramic-metallic cold weld is a permanent weld and will last the life of the engine.

There are two reasons for copper in the formula. First, it strengthens the ceramic weld. Secondly, since copper is an excellent heat conductor, it transfers heat across the crack eliminating the hot spots.

The larger the crack or hole, the longer it takes SEAL-UP to permanent ceramic-metallic cold weld the leak. SEAL-UP should stop leaks up to a 30 thousandths inch hole or up to a 15 thousandths inch wide crack in two to five minutes.