

Why is it that one cooling system filter continuously RISES ABOVE the rest?



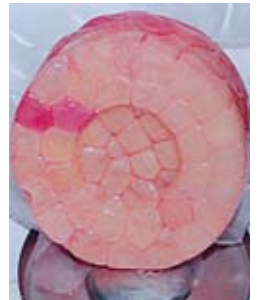
How about because it has had almost 40 Billion Miles of proven service since 2004!



Penray Need-Release® Technology

The Penray Need-Release® Extended Service Interval filter contains patented technology that delivers chemical additives to your system exactly when you NEED them. Dump truck, city delivery, long-range hauler or anything in between, it doesn't matter. The filter monitors the coolant and keeps the protection levels stable. The corrosivity of the coolant eats a tiny hole in the patented membrane and dissolves the coolant additive into the system. No messy globs to stop the flow of coolant, or prevent the additive from entering the system. The Penray Need-Release offers maximum protection for the life of the engine.

All the others use pellets (shown above) to deliver chemicals on timed increments, regardless of your truck type, use, or need. This means that, despite the concentration of additives in the coolant, whether they are needed or not, these time-release filters will deliver additives to the system. Plus, in ASTM testing, at 50,000 miles all of the separate, individual pellet-shaped capsules melded into a single, solid, gelatinous clod. (See inset at right) The clod completely blocked the flow of coolant through the filter, resisting even the full pressure produced by the system's water pump. From 50,000 miles and on, there are no more chemicals to protect the coolant, rendering the filter completely useless.



Individual Pellet Capsules after 50,000 miles of use.

RISE ABOVE the rest! Choose cooling system protection that actually works!

The Penray Companies, Inc. - Customer Service: Ph. 800.373.6729 Fx. 800.634.0276 E. customerservice@penray.com W. www.penray.com



Need Release Rise Above Flyer 0107.pdf

There is NO replacement for the Penray Need-Release® filter.

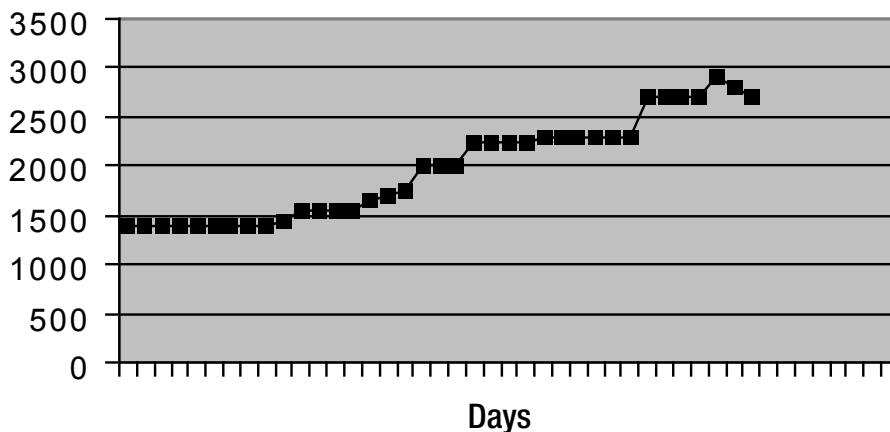


A competitive coolant filter was installed on a stationary "Simulated Service" rig (used in ASTM D 2570). The condition of the coolant was monitored frequently. After forty-five days of operation, the filter was cold to the touch, indicating that it had become plugged and that there was no coolant flow through the filter. The filter was removed from the rig and carefully opened to investigate the cause of the failure.

1. All of the separate, individual pellet-shaped capsules have melded into a single, solid, gelatinous clod. The clod completely blocked the flow of coolant through the filter, resisting even the full pressure produced by the system's water pump.
2. After less than 5 weeks of action, equivalent to about 44,000 miles, the filter reached it's swelled state. At this point the entire contents, all the SCAs, had been dumped into the system.

The idea of a time-release filter is to add SCA to the system when it is required. Fully formulated coolant takes time to deplete. It is at this point when the coolant needs the chemical addition to ensure engine protection. The chart below demonstrates the concentration, measured in PPM, of nitrite versus time, at which SCAs are distributed from the competitive filter. Within 38 days, the filter dumped most of the chemical charge into the system. Dumping all of the SCA's into the system so quickly could lead to drop-out, radiator plugging, and water pump seal failure. Furthermore, with no more SCA's to offer, the entire cooling system is left unprotected after 50,000 miles.

Nitrite Levels From Baldwin BW5200



Individual pellet capsules after 50,000 miles of use meld into a single, gelatinous clod blocking the flow of coolant through the filter.



Penray Need-Release has billions of miles of service behind it, proving that our cooling system programs offer maximum protection for the life of the engine. The Need-Release senses the condition of the coolant and releases the proper chemical additives only when needed.

(Penray Need-Release results are documented in an SAE Publication No. 960642.)

