

# A Better Approach To Long Life Coolant Filtration

**Injection Molded Plastic Chamber** contains Controlled Release Coolant Pellets, which are located upstream of the filter media.

**Controlled Release Coated Pellets** diffuse SCAs into the system (when exposed to heat and coolant flow) which are then filtered prior to entering the engine. BTE Supplemental Coolant Additives provide the best protection from cavitation, scale, rust and other forms of corrosion, while reducing the potential for water pump seal leaks.

**SCA Diffusion Control Orifice** meters diffusion of SCA chemical into coolant flow (to allow SCAs to be released in the amount required to maintain proper system balance) for up to 150,000 miles of service.

**Spring Protector** isolates dissimilar metals to prevent corrosion.

**Epoxy Coated Can** reduces the possibility of corrosion during extended service intervals.

**Synthetic Media** designed to withstand heat and degradation from long-term exposure to coolant flow. High capacity allows media to trap contaminants that could reduce system efficiency.

**Flow Control Orifice** meters flow of coolant through the filter.

**Heavy-Duty Baseplate** made from stamped steel, is designed to withstand extended service intervals.

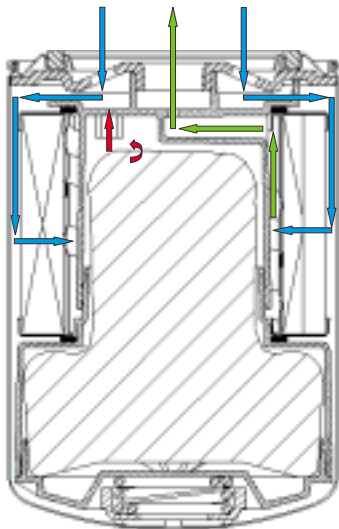
**Double-Rolled Tuck Lock Seam** prevents coolant leaks.



## Protecting your engine

Hastings Filters provides the latest technology in coolant system care. Our patented coolant filters contain Controlled Release Supplemental Coolant Additive (SCAs) to protect diesel engine coolant systems for one year or 150,000 miles. Contact your Hastings Filters distributor today and gain control of your coolant system.

# Added protection for your coolant system.



- Inlet Flow
- Outlet Flow
- Diffusing Chemical

**Flow Schematic**  
Hastings Controlled Release  
Coolant Filter

routes the coolant through the filter element first, leaving the possibility that solids could plug the flow control orifice. This would disable the filter, stopping the SCAs from entering the system and leaving engine components unprotected.

## High-Capacity, High-Strength Media

Hastings' media is a high-capacity synthetic media designed to trap contaminants and maintain its structure through a long service interval. The high-efficiency synthetic media used in some competitive products has low contaminant holding capacity, which can leave the system vulnerable. Once the filter plugs, the flow stops and no SCAs are released to protect the system. The media used in other primary competitor products is cellulose. On our simulated service laboratory test stand, the media in the filter became soft and restrictive, significantly reducing the flow through the filter. Without flow, the SCAs contained within the filter cannot be released.

## Competitive Product Can Leave You Exposed

One competitive long life design relies on corrosive coolant to begin the process that releases the SCAs into the coolant system. In this process, a magnesium plate is in contact with a copper centertube that holds the SCAs. When the coolant becomes corrosive enough, a reaction between the magnesium plate and the copper centertube occurs. As the magnesium corrodes, the SCAs are exposed to coolant and begin to dissolve into the system. It takes considerable time before the magnesium plate corrodes enough to allow the SCAs to enter the system. The coolant system is left corrosive and unconditioned for this interval.

There is no correlation between the corrosion of the magnesium plate and cavitation erosion of wet sleeve liners. A system can have low enough SCA levels to promote cavitation erosion in wet sleeve liners, and still not be corrosive enough to release the SCA chemical in the filter. This is why the competitor insists that you test your coolant additive level at every oil change interval and add liquid SCAs to the system.

## Extensive Field Testing

The Hastings Controlled Release coolant filter utilizes a patented process that allows Supplemental Coolant Additives (SCAs) to be released into your coolant system only when heat and coolant flow are present. Our field tests - over 3 million miles - show that the supplemental additives are released at an even rate. This is important because competitors' filters can "dump" all the additives at once, potentially overcharging the system, leading to additive drop out. The other extreme is not releasing enough additives toward the end of a maintenance period, thereby leaving the system vulnerable to cavitation erosion and corrosion.

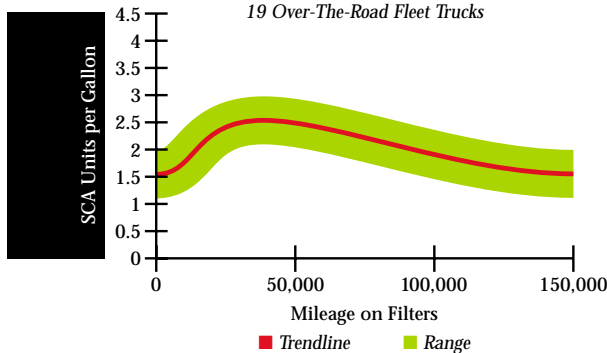
## Better By Design

With the Hastings product, all coolant is conditioned with coolant additives prior to being filtered. This insures that no undissolved particles from the chemical mass can enter the system. It also insures that the flow control orifice cannot be plugged. The competitive products have a flow pattern that

## Tests Prove Performance Superiority

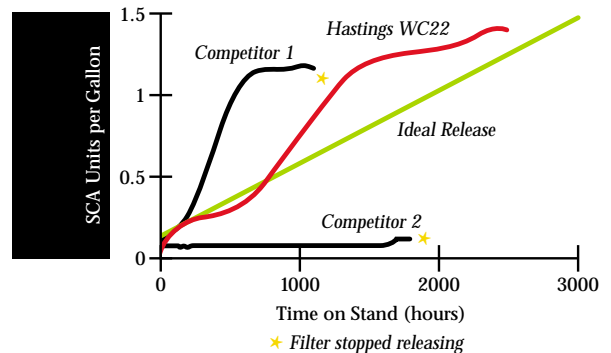
### WC22 FIELD TESTING

Performance Trendline and Range  
19 Over-The-Road Fleet Trucks



### SIMULATED SERVICE TEST

Release Patterns with No SCA Pre-Charge



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