Donaldson
FILTRATION SOLUTIONS

Extend Coolant Maintenance Intervals

UP TO ONCE A YEAR OR 195,000 KM / 150,000 MI.

Donaldson Blue® premium coolant filters use Synteq™ media to remove fine contaminants from sensitive coolant systems.

Donaldson
BLUE®

Diesel Engine Coolant Filtration Systems

Coolant system filters are typically partial-flow (by-pass) filters, with less than 10% of the coolant flow circulating through the filter at any given time.

Donaldson's coolant filter offering allows you to choose the method that suits your maintenance practices and schedules.

Donaldson coolant filters are designed to work in a wide variety of operating environments and meet the service requirements of the majority of heavy-duty diesel engines.

Use of the correct filter is important to maintain the proper balance in the system to prevent over concentration (silicate drop out) or under concentration which leads to corrosion, liner pitting or other system problems.

There are multiple types of coolant filters:

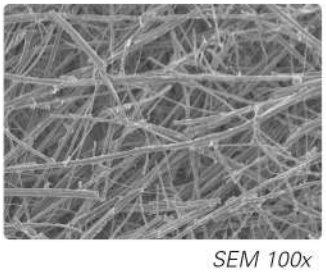
- The pre-charge filter which contains enough coolant additive to initially charge the cooling system and to allow for depletion to the first service interval.
- The standard charge spin-on filters which contain adequate chemical additive to maintain cooling systems between service intervals.
- Non-additive filters contain no chemical additives and can be used with cooling systems maintained by liquid additive, systems using long life coolants which require no additive, or on overcharged systems to bring the additive level back to a normal range. Non-additive filters are not intended to be used with water-only systems. Non-additive Donaldson Blue filters will go the distance of your coolant. These filters are intended for extended service coolant users.
- Donaldson Blue filters with additive replenishment technology contain small amounts of time-release additives to replenish coolant and maintain healthy coolant conditions. They are a direct replacement to standard filters.

Filter Media

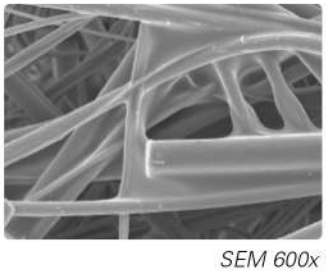
Coolant filter medias are available to meet the most stringent of engine system design challenges. Donaldson engineers have a history of development and application of media technology that exceeds application cleanliness and service life expectations.

Synteq™ Synthetic Media

Extended life intervals require micro-fiberglass synthetic media. Synteq media provides enhanced durability for extended drain intervals while maintaining or improving efficiency and capacity. This coolant media also offers lower restriction, ensuring component protection over a larger range of engine conditions.



SEM 100x



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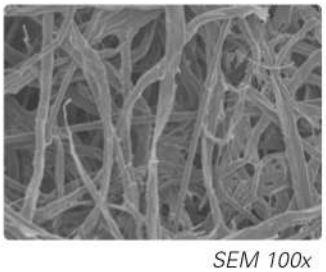
Cellulose Media

Engine coolant filter media is most commonly a pleated cellulose base material. This media effectively combines an application's efficiency and capacity requirements while maintaining cost effectiveness.



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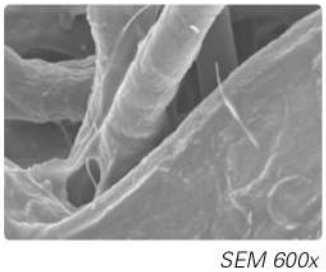

SEM 600x

COOLANT FILTRATION

Do the liquid and solid additives last the same amount of time?
Yes, when equivalent amounts of supplemental coolant additives (SCA) are added.

How often should system maintenance be performed?
This is dependent on the type of SCA you have chosen to use. Refer to engine and additive manufacturer recommendations.

How can I obtain Safety Data Sheets (SDS) for coolant additives?
SDS information is available from the coolant additive manufacturer or your filter manufacturer.

Are there environmental hazards to not treating a coolant system properly?

There are no "environmental" hazards. There are definitely mechanical hazards related to incorrect coolant system maintenance procedures. (Water pump failures, wet sleeve cavitation erosion and premature catastrophic engine failures.)

Why doesn't a coolant filter come factory installed on some engines?
Due to various engine designs, some engine and equipment manufacturers do not require coolant filtration. Coolant filtration can be added to these systems to prolong water life and/or aid with coolant maintenance.

Is regular tap water all right to use in coolant systems?
Most tap water does not meet engine manufacturer's specifications for use in coolant systems. Please refer to OEM guidelines and consider a coolant analysis program to determine suitability when in question.

I've never had cooling system problems. Why do I need coolant additives and filters?
It is very rare that a gasoline or diesel engine has "never" experienced a failure of a cooling system component, or a related part that couldn't have been prevented with the proper use of SCA's and a coolant filter. Both the short term and the long term economic benefits of properly utilizing SCA's and coolant filtration far out weigh the low initial investment for the appropriate coolant products and their installation.

How often do I need to monitor the system? How do I control monitoring when vehicles are traveling nationwide?
Monitoring, or testing, SCA levels are critical to the over all success of any coolant system maintenance program. SCA level monitoring can be done very easily by using coolant testing. Testing should be done at the maintenance interval for the type of SCA being used to determine if more additives are actually needed to accurately track SCA depletion rates. Testing can also be done at any time between maintenance intervals.

Can liquid SCA's and filters with SCA's be used together?
This depends on the total capacity of the cooling system. Most system capacities are of the size that either the liquid SCA or a filter with solid SCA is utilized. In larger capacity systems, however, both products are used for proper maintenance. Initial installation and maintenance instructions should always be consulted for proper product usage.

What is the difference between filters that are the same physical size and have the same thread size?
The differences in products that look alike are whether or not the filter contains SCA and, if it does, the type and the cooling system volume it will treat.

What is the difference between extended drain and extended service products?
If the SCA has the correct chemical formulation, the time required between total coolant system drain intervals can be extended beyond normal recommended intervals. The maintenance intervals to keep this product working effectively are not extended. Extended service interval products allow the service interval of the SCA to be extended beyond normal.

What is the correct water and antifreeze mixture to be used in coolant systems?
The ideal mixture is 50% water and 50% antifreeze. The coolant mixture should never contain less than 40% antifreeze or more than 60% antifreeze. The water used must meet engine manufacturer's guidelines for use in their coolant systems.