

SP Diesel Performance Coolant Filter Kit Install Directions

SP Diesel Performance

Thanks for your purchase!

Thanks again for your purchase of SP Diesel Products. The SP Diesel Coolant Filter, with proper use and filter changes can add life to your cooling system, including the water pump, seals, and even the coolant itself. We are certain this is one install you will be glad you did, with a minimal install effort on your part.

Kit Contents

Use the below chart to ensure you have the parts to do the recommended installation.

Part	Qty	Usage
Water Filter Head	1	Attaches to airbox wall, filter attaches to head
Water Filter	1	Filtration medium for your coolant system.
Premium Coolant Hose	4.5 Feet	Flexible plumbing for your system
3/8 th NPT to barbed Fitting	3	Used to plumb out from water pump gallery port, and in and out of your water filter& head assembly
Shutoff Ball Valve	1	Plumbs in between the in-side barbed fitting of your plumbing, and the filter head in-side itself.
Teflon Tape	1 portion	Used to properly seal all threaded connections
Brass 3/8 th Tee	1	Used to tie into the return for the degas bottle
High-Corrosion Resistant Hose Clamps	6	Used to clamp all barbed connections.
Mounting Screws and Lock Washers	4 each	Used to fix the Coolant Filter to the Airbox wall

Before you begin

Make sure you have a good understanding of the plumbing of the system. This install rates as a 2 on a scale of 1-10 (with 10 being most difficult). This item should take no more than 1 hour to install using the recommended install procedure. If you wish to customize your install, this may add or subtract from the installation time. You may also need to purchase additional supplies.

Make sure your truck is cool!

This should go without saying, but make sure your truck is cool, and has not been run for a least 3 hours, to give your engine ample time to return to near ambient temperature. Coolant gets hot; hot enough to burn you badly. Don't become an emergency room statistic by trying to install your cool new truck mod the minute you get in from work. Sorry we know 99.9% of you wouldn't need to hear this from us, but please heed our warnings.

SP Diesel Performance Coolant Filter Kit Install Directions (continued)

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Oh, leave your truck off, with the keys out until ready to test.

OK, another obvious thing to not have to put in the directions, but putting tools and body parts in moving engine parts is generally bad. So leave the truck off until you are ready to test and have cleared the engine bay of your tools and other 'things'.

OK, ready to roll

Use the below chart to speed you on your way to an easy SP Diesel Performance Coolant Filter. Remember to ensure all lines, hoses and fittings are routed away from moving engine parts like belts and pulleys

Step	Action
1	Pre-Plumb the Coolant Filter Head. Teflon Tape 2 3/8 th NPT barbs and Teflon Tape the Shutoff Valve. Orient your filter so that your barbed fitting, then valve, then head (IN), then NPT Barbed Fitting (OUT) are assembled in that order. Ensure your Teflon Tape is neat and clean, with no more than two turns around all threads. Snug up your fittings.
2	Orient your filter head on the airbox wall. The valve side (IN from Water Pump) should be facing towards rear of truck. Find a suitable location, free from the fan and belt(s) assembly to mount the coolant filter on that airbox wall. Use 4 bolts, and a lock washer on each bolt hole. You will have to remove the airbox lid, to access the inner portion of the airbox. Don't forget to clean the shavings out of your airbox from where you drilled the plastic.
3	Pre-fit 1 NPT barbed fitting to your coolant hose. Test fit the hose from the water pump connection to the IN on your coolant filter. Route the hose as far away as possible from moving parts. Cut your hose, and install your hose clamp on the water pump fitting. Don't forget your Teflon Tape on the fitting.
4	Using a good quality adjustable wrench, loosen the square pipe plug fitting just above the water pump till it just is ready to fall out. Get your Hose with fitting attached to it ready with the other hand. As you set your wrench aside, finish the loosening with your left hand, while you quickly replace the fitting with the threaded fitting and hose length you just made in the previous step. Get the threads started cleanly by hand. If you hold the other end of the hose high enough after thread-on, you won't lose any additional coolant. Finish the fitting tight with your adjustable or other suitable wrench. Snug it up good, but don't manhandle the fitting. Brass will bend if over-torqued. Don't forget to snug the hose clamp.
5	Run the hose to the IN on the coolant filter, put a hose clamp on the connection to the barbed fitting on the coolant filter, and snug it down
6	Pre-Fit your OUT side connection, by running the remaining length of hose from the out barbed fitting (slide a hose clamp on the OUT fitting now and snug it), to the degas return line on your degas bottle. Add another hose clamp to the hose and put the brass tee on the end of the hose, once you have trimmed off any excess hose remaining from your hose length. The hose should exactly intersect the return line at a point on the degas return line that is easily accessible. Snug the hose clamp on the Tee.
7	Cut the Return Line to the degas bottle and add a hose clamp to each side. Fit your cut line to the tee, and snug it all down.

SP Diesel Performance Coolant Filter Kit Install Directions (continued)

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Install Table continued Here's the rest of your install table! You are almost there...

8	Recheck your connections and fittings; make sure the valve handle is inline with the plumbing (perpendicular is closed). Double/triple check your connections.	
9	Start your truck and check for flow to the degas bottle. Check for leaks after a visual inspection, then after a short drive, and then check your fittings at every oil change to ensure they are snug and leak free.	
10	Check your SP Diesel Performance Coolant Filter at 3000, 6000, and 10000 miles. If flow is reduced by ½, then you should contact SP Diesel for a replacement filter. Coolant Filters can become clogged quickly if your system is dirty. In fact in as little as 1000 miles you may notice flow reduction.	
11	Check your SCA levels (if used) at 3000 and then every 15,000 miles thereafter. The SCA's are timed release, and should maintain a fairly steady appropriate SCA level.	

Replacement Filters These filters should be replaced when clogged, reduced flow by ½, or annually, which ever happens first.

SCA's The purpose of the SP Diesel Performance Coolant Filter Kit is to provide an excellent filtration and preventative maintenance solution for your truck. Once installed, it will save you time and money. Checking your SCAs and calculating how much to add every oil change can become a bothersome messy affair. If you are starting with properly, or near-proper SCA levels, your filter should maintain your system to the 'green' box level on fleetguard test strips. If it does not, determine what possibly could be causing this. Clogged filter? Filter on too long?

ELC Coolant or other types of NON-SCA coolants If you have a gold coolant or non-sca type coolant (evans for example), you will require a non pre-charged filter. Please contact SP Diesel if you need this type of filter instead of the pre-charged filter. Make sure you know your coolant type prior to installation!

Disclaimer Installation of the SP Diesel Performance Coolant Filter Kit is solely at your own risk. SP Diesel assumes no liability due to faulty install or component failure.

SP Diesel Performance Coolant Filter Kit Install Directions (continued)

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Install Photos

Suggested Mounting Location



Wide angle shot of complete install (not shown is shutoff valve which should be on the side facing the alternator).



SP Diesel Performance Coolant Filter Kit Install Directions (continued)

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Install Photos

Water Pump Connection



Return Reservoir Tee Connection



SP Diesel Performance Coolant Filter Kit Install Directions (continued)

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Install Photos

Install order of assembly (left to right from water pump)

1. 3/8th barbed fitting
2. 3/8th barbed fitting
3. shutoff valve
4. filter head
5. 3/8th barbed fitting
6. 3/8th Tee

