



Cooling Systems.

Cooling system failure is one of the main occurrences that prevent diesel engines from running a full life. Quality water and ethylene glycol levels must be accurately maintained at all times to provide the engine with proper cooling. The water to be used in the cooling system should have the following specifications:

Chlorides 40 mg/l (Maximum)

Total dissolved solids 340 mg/l (Maximum)

Total hardness 170 mg/l (Maximum)

PH 5.5 to 9.0 OR

You can use distilled water, de-ionized water, or de-mineralized water. Using this type of water will help in cooling system maintenance. Water to be used in the cooling system should never come from an untested water source. When water is used from an untested source the levels of unknown contaminants can harm the internal engine parts, as well as the cooling system, thus shortening the life of the engine and could result in premature engine failure. To test your water, use test strips or you can purchase a simple pool test kit to insure that the water that you are going to use in your cooling system is to specifications.

The ethylene glycol (Antifreeze) to be used in diesel engines should be of the low silicate base and should be mixed at a ratio of 40-60% with quality water, (this ratio may vary due to climate). Automotive type antifreeze should not be used due to high levels of silicates. There are some manufactures that have eliminated this by pre-mixing the quality water and low silicate antifreeze at the proper ratio. If finding a suitable water source is a problem, perhaps using the pre-mixed antifreeze is the best solution.

Most engine manufactures recommend that supplemental coolant additives be added to cooling systems to help reduce rust build up, corrosion, and liner pitting.

Engine manufactures suggest that the cooling system be checked every six months and changed every year. To help prevent premature engine failure, follow the above cooling system recommendations and your new and older engine will give you the reliability that you have come to expect.