



## TECH TIP COOLING SYSTEM

### BULLETIN TT006-16

› PART NUMBER:

Water Pumps

› MAKE:

All

› MODEL:

All

› YEAR:

All

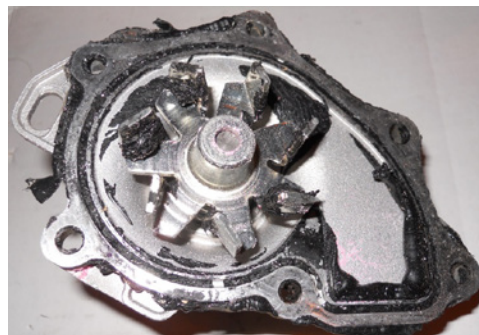
› ENGINE:

All

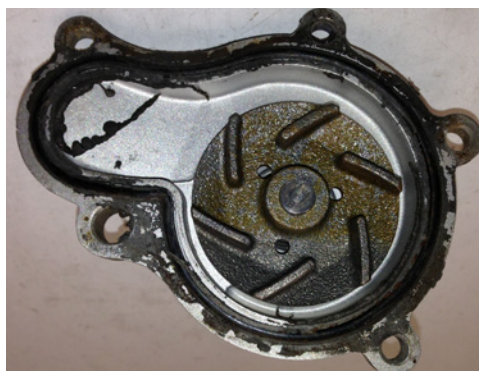
### Automotive Sealant Use During Water Pump Replacement

The improper use of sealants can contribute to premature failures of the water pump. Below are examples of improper use of sealant.

Both pumps were supplied with a cellulose / rubber binder gasket. These gaskets do not require the use of any sealants. However if the mating surface is damaged a small skim coat of sealant is allowable with these types of gaskets.



Both pumps were supplied with a rubber / O-ring style gasket. These types of gaskets do not require the use of any sealants.





Both pumps to the left were supplied with a metal gasket with a rubber lining the interior perimeter. This type of gasket does not require any sealer. It is clear that over use and misuse of sealants occurred. Installation practices of this nature will lead to premature water pump failures. Premature failures lead to product reliability / quality concerns from customers when in actuality the failure arose from miss-installation / improper use of sealants.

In the examples below one can see where sealer material has been found within the cartridge seal and has led to premature leakage of the water pump and the customer returned the pumps as an alleged manufacturer defect.



To the left are examples of Dynamic and Static seal contamination / filming caused by over use of sealants. When sealant particulates / residue get trapped between the Dynamic and Static seal faces it causes a separation of the two surfaces which leads to a seal leak.



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# TECH TIP

## COOLING SYSTEM

### BULLETIN TT005-15

- › MAKE:  
All makes with a water pump
- › MODEL:  
All models with a water pump
- › YEAR:  
All years with a water pump
- › ENGINE:  
All engines with a water pump

### Water Pump Failure Signs

If during the course of an inspection the water pump is found to look like any of the below, Gates recommends properly flushing the system, filling the system with a new mixture of the correct coolant, and possibly replacing the water pump depending on the issues found.



DEPOSITS/CALCIUM BUILDUP



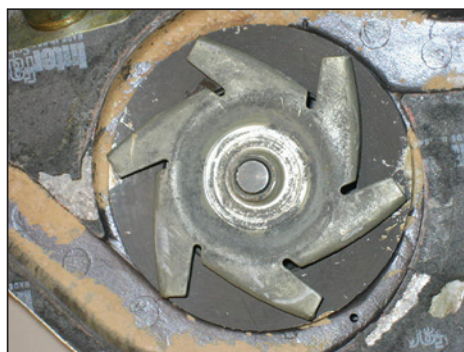
DEPOSITS/CALCIUM BUILDUP



RUST/CORROSION



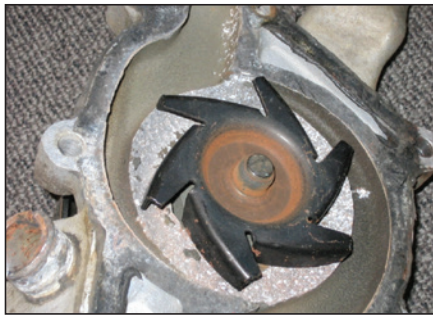
RUST/CORROSION



DEPOSIT BUILDUP



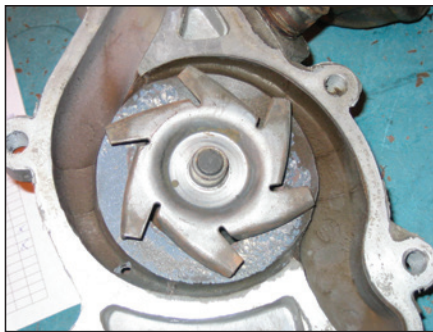
RUST/CORROSION



CAVITATION / CORROSION



CAVITATION / CORROSION



CAVITATION / CORROSION



CAVITATION / CORROSION



CHEMICAL ETCHING



CORROSION

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