



Wilton Fire Department

236 Danbury Road Wilton, CT 06897

Memorandum

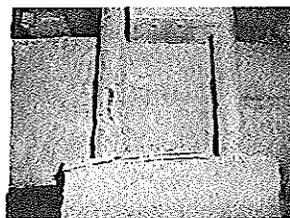
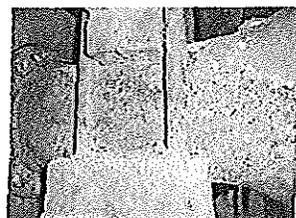
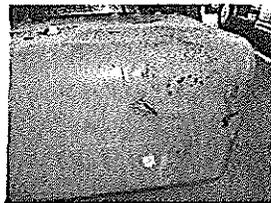
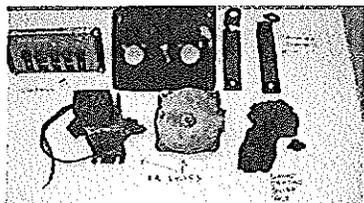
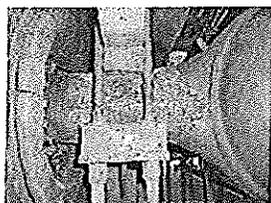
Date: February 25, 2014
To: William Brennan, First Selectman
From: Ralph Nathanson, Apparatus Supervisor
Subject: Vehicle Corrosion
Cc: Mark Amatrudo, Deputy Fire Chief

Dear First Selectman Brennan,

As Apparatus Supervisor for the Wilton Fire Department for over 34 years, I have not seen the severity of rust and corrosion to our fleet of public safety vehicles as I have in the past 5 to 7 years. Attached are a series of three short narratives and pictures depicting the rust and corrosion on our in service emergency response vehicles. As you will see, the 20 year old engine, which spent 13 years as our primary response engine shows significantly less damage than the engines we purchased 6½ years ago. That is due to it not seeing much winter service since 2007.

2007 Pierce Engine 2 (Housed at Station 2)

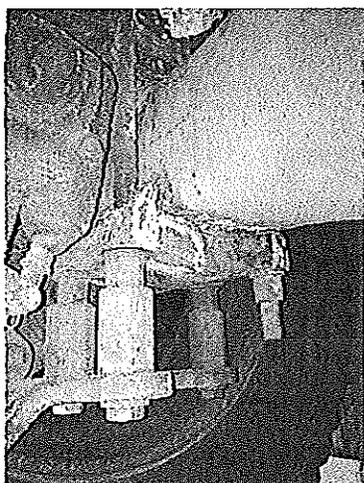
Manufactured in mid-2007, Engine 2 has approximately 50k miles from the 6½ years it has been in service. As can be seen from the following pictures, the rear section of the vehicle is severely compromised with rust and corrosion. The fuel tank had to be replaced after only 5 years of service due to severe rust and leaking diesel fuel. The rear axle and body support structure are also compromised. Numerous components have either failed or rusted away, requiring replacement. The list includes rear air brake chambers, air valves, component support brackets and expensive electronic equipment. One of my vendors made the comment "did you dip this truck in salt water"?



1994 Emergency One Engine (currently a reserve engine)

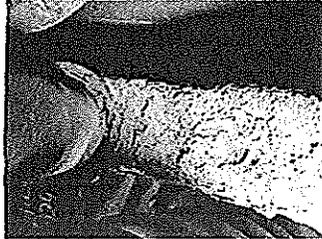
The 1994 Emergency One engine, which has accumulated 88k miles over the 20 years it has been in service, shows less corrosion than our 2007 engine. We believe this is due to the fact it was transferred to reserve status in July 2007. Since then, it has been housed primarily at Fire Headquarters. It goes into service when one of our other apparatus is out of service for maintenance or repairs, special detail assignments, fire standby or storm duty, etc.

When the pictures below are compared to those of our 2007 Engine 2, it is clear that there is significantly less corrosion and rust, even though the 1994 engine has been in service for twice as many years.



2001 Chevrolet Tahoe (HQ)

Although the body and paint look good on our 2001 Chevrolet Tahoe (73k miles), closer inspection reveals that the chassis is severely compromised with rust and is not reparable. This vehicle will be replaced this year. The following pictures provide evidence of that.



Concluding Comments

I believe the 15 year front line life expectancy of emergency fire apparatus (2009 Edition National Fire Protection Association Standard 1901, Annex D.D.1) will be shortened in part due to the current road deicing program due to severe corrosion. We have been informed that the original salt/sand mix was replaced by Calcium Chloride. Subsequently, Calcium Chloride was then replaced by the current Magnesium/salt mix, which is a perfect recipe for corrosion! With a replacement cost of \$600,000 for a standard fire engine, and over \$1,000,000 for an aerial truck, towns and cities will be replacing fire apparatus more frequently due to the products used to deice Connecticut roadways. The only opportunity to impact this situation would be to change the products used to deice our roads to something that is less or non-corrosive.

Please do not hesitate to contact me if you would like further information or would like to view any of our vehicles.

Sincerely,

Ralph Nathanson
Apparatus Supervisor
Wilton Fire Department