

Subject: The Best Automotive Corrosion / Rust Prevention / Inhibitor System On The Market

By: John B. Mulroy, OMGC, OJC, November 2017

Just as so many of us have tried in the past, I thought it a good idea to identify the best automotive corrosion/rust prevention/inhibitor system on the market today. After all, if I'm going to gum up the underside of my car with something, it might as well be the very best "something" available, right? Heck, I thought, it's a simple enough question.... however, the *correct* answer... well, not so much!

My name is John Mulroy, and I'm a fairly recent addition to the OMGC membership roster. I've also been a member of OJC for a little over a year now. In asking around some of the other OJC members last year about this subject, I got as many answers as the number of people I asked. One member even launched into a speech about his suing the company that had incorrectly applied his undercoating – and winning the suit! Clearly, this fact-finding method would be of little use to me. And then, right out of the blue, Mike O'Brien comes out with a rather interesting statement, specifically: "Canadian Tire has the best rust/corrosion inhibitor on the market; however, they also do the worst application". Solely driven by that statement, I started to do a little delving into the whole question of rust/corrosion inhibitors. So, I took this little project on in a completely unbiased manner, and went into this with no personal or preconceived opinion whatsoever – I knew nothing about rust/corrosion protection before I started! Now though, I can bore people to thoughts of suicide about the subject – just ask my wife!

So, for those of you who might be interested, here are my general findings, all of which are, or can be, substantiated,

1. The system that Canadian Tire uses is not proprietary.
2. The system is actually manufactured by a Canadian company, namely "Corrosion Free", with their headquarters in Brampton. It seems that the chemical treatments developed about 40 years ago (and still used today with little modification), were developed by Canadian chemical engineers specifically for the Canadian winter, to protect against all the salt/calcium we have always had to deal with on our roads. It's called a system, because it's impossible to achieve the results which they do with only one type of spray.
3. While their chemicals do provide significant and quantifiable advantages over other brands promoting rust/corrosion protection/inhibition, it is the effective, proper and *guaranteed* application of their system which makes all the difference – naturally. The company's major clients are all military, government, NGOs and QANGOs as well as large commercial users, and must all be fully trained by the company in the proper application of their system (except at CT, it seems).
4. By far, their biggest client is the US military. NASA, Boeing and the overall aerospace industry (think aluminum alloys and exotic metals), are also, to name but a few, among their larger and most prestigious clients. The Canadian military is also very high on their list of clients.
5. The products are clear; do not drip; do not gum everything up, thus making under-vehicle maintenance and inspection extremely difficult; and, will not damage rubber, synthetics or plastics – they are completely inert to these composites. Four absolute essentials, in order to even be considered for use by the military and aerospace communities. The stuff even protects plastics and rubbers against UV degradation (for those of us who drive upside down, I guess), and prevents gas and brake lines and cables from rotting. I'm even told that it can be applied when the underside of the car is wet – it just chases the water and moisture away. You'll also be glad to know that it doesn't smell. The products do not become gummy or hard over time, but continue to creep and penetrate into every joint and crevice, and leaves a protective lubricating film behind. It even prevents reaction between different metals<sup>(i)</sup>. Water spray won't wash it off – not even high pressure car washes.
6. The materials and labour, are no more expensive than any other of the more readily identified commercial rust/corrosion inhibitors, and the manufacturer only recommends reapplication every 18

months as being necessary, rather than the typical 12 months. Therefore, it actually winds up being less expensive than the better known names. Corrosion Free also has a far superior warranty program. While the warrantee doesn't do anything for older cars, it's extremely comprehensive and fair for new cars, as well as cars less than two years old. The product line is also available for purchase directly by the do-it-yourself guys, and comes in standard aerosol cans. Please see their website at [www.corrosionfree.com](http://www.corrosionfree.com) *after you've finished this article.*

Anyway, after identifying the company in question, my research quickly led me to the following Technical Publication: DRDC - Atlantic - Pub# 2006-055, which turned out to be a joint research effort by Defence Research & Development Canada (DRDC) – Atlantic, and RMCC - Kingston. The publication reports on tests conducted on behalf of the Canadian Army, where all rust/corrosion inhibitors on the market back then were tested and analyzed until tanks and trucks rusted out - kidding. The Publication's References, which begin on page 26 and go on for several pages, are absolutely astounding – you have to at least read the list. I've actually taken the trouble to read some of the referenced publications (but then, I'm the one who's putting their name on the line here), and they all come out supporting the Corrosion Free system over other better known brands, after they've done their own in-house laboratory and real-time field trials! Please see: <http://cradpdf.drdc-rddc.gc.ca/PDFS/unc53/p526285.pdf> , *but not yet!*

After assuring myself that the "Corrosion Free" system was the best choice, from a long list of uninspiring also-rans, my next task was to identify, if possible, a local operation which used the system and applied it correctly. After all, this research would have been nothing more than just a minor academic exercise, and would've stopped dead in its tracks, if I couldn't find a local qualified operation that used the "Corrosion Free" system, and who's staff could be trusted to apply it correctly. I found one.

So I set up an appointment with the owner of this local operation a few weeks ago, to view and assess his operation. The operation's owner talked to me about the proper application of the system, let me get in close to a car up on the hoist which was having the application done to it at the time, just to see first hand how things were done, and afterwards, he put my Jag up on a hoist, simply to use as a procedural example. I have to say that I was extremely impressed with the attention to detail and professionalism shown by the technician applying the stuff, and he had no idea why I was there. I asked him what would happen if he hoisted a car for treatment and found mud, thick dirt or ice on the underside. He pointed to a hose about 15 feet away, and said "simple – hose it off, and then use a scraper to get rid of the thick stuff, if I have to". When my car was hoisted and the owner started looking around underneath, I was again impressed with his immediate understanding of the rust/corrosion problems my 13 year old XJ8 had, and the detailed explanations on how to stop any further degradation in its tracks. Discussing the steel sub-frames, which did show a fair degree of surface rust but were still sound, he said that he'd use another product specifically designed for deeper penetration and extreme treatment given their condition, which would last six months before requiring reapplication. The conversation continued, and about two minutes later he went back to the previous topic, saying that he would blend another stabilizing chemical with the extreme treatment for the rusted sub-frames, which would make it last as long as the Corrosion Free treatment (18 months). This man always seems to be thinking of his clients' best interests. And as for all the rust under my car, my excuse is that I just picked up this Jag in September of last year.

I told him about an inherent problem with XJ8s of those years, where the under engine/transmission protective shroud pushes up against the underside of the front sub-frame which is flat. Salty water can be held there (and obviously had been, judging from the amount of surface rust), by the "dam" effect caused by the close contact of the sub-frame and the shroud. Before I was even finished explaining the problem, he had an answer that was so simple and fast, that I felt ridiculous not having thought of it myself!

From there, I asked him why anyone would bother treating the inside of aluminum door panels. He said that it's even more important to treat them than it is with "metal" doors because of the much higher costs associated with repairing aluminum corrosion in body panels.

OK, so far, so good! Now for the bad news that you've all been waiting for... When I pulled up in front of this guy's operation for my appointment, I was absolutely shocked! The place is a tiny little operation. It's a two hoist garage with a small office attached, and with the owner's house in front of the garage. I'm sure you can imagine some of the thoughts going through my head in those first few seconds. Anyway, I was there, my car was there, and he was there, so I thought, let's get it over with. Well, you've already read about how impressed I was with him, his staff, their knowledge, the operation, the attention to detail, etc., and I'll stand by my every word. In point of fact, I was so impressed with the operation that I immediately booked an appointment to have my Jag treated.

My appointment is scheduled for this coming week, and whereas my original, somewhat narrow, plan was to complete the research and test application, and then share the information with other Ottawa MG and Jag Club members, it has since dawned on me that these findings would be of interest to all local clubs and owners of vintage vehicles. Everyone will be informed.

On my way home, a thought I had was why the heck would a company like Corrosion Free be doing business with this tiny hole-in-the-wall operation. And then I started putting our conversation together, and it came to me. This man had been one of Corrosion Free's first customers way back 4 decades ago, when they were both just getting established. Corrosion Free probably, by executive order no doubt, only keep him on the books for reasons of nostalgia – pure and simple. It's possible that I'm being a tad unfair here...

During my fact-finding appointment with him, I asked whether he would be prepared to give OJC a club price. He enquired as to the number of members, and I told him that there were a little over 100, at which point he offered a 15% discount. I then told him that my intention was to also advise OMGC members immediately, and also make some of the other valley car clubs aware of everything, and that the total number of club members would probably hit between 600 and 700. We were interrupted at that point, and I was never able to return to negotiations. If all turns out well this coming week, it will put me in a more powerful bargaining position for all of us. I've been asked by Trish to represent OMGC's interests during negotiations.

My apologies to all, but I hope you can understand why I must withhold the name/location of the operation in question at this time, but just until final arrangements have been negotiated (probably next week). At that point, I'll rush to get the word out through an all-members' email.

Oh, and before I forget — YES, YOU CAN STAY AND WATCH!!

Whatever the final arrangements turn out to be, rest assured that they will include all vehicles owned by any club member, and not just the European makes (MG, Triumph, AH, Jag, MB, BMW, etc.)! Members will also be able to have their 2018 Lincoln Townbox or 2012 "Blazuzu" treated to the same club discount. Details to follow, after negotiations are concluded.

Well, that's all for the time being – this is where I really get to work.

Sincerely,

John B. Mulroy, OJC, OMGC

(i) Galvanic corrosion (also called bimetallic corrosion) is an electrochemical process in which one metal corrodes preferentially when it is in electrical contact with another, in the presence of an electrolyte (e.g. salt water). Metals can react with each other when they are in aqueous solution through redox reactions. (Redox stand for reduction-oxidation.)