



ARCC UPDATE

December 2013

Our New ARCC President

by George Beston, Cobourg

It's been a while now that the position of President has been vacant. Other executive members have felt that the club would be best served if they stayed with their current responsibilities in order to keep things going, and there simply hasn't been anyone to come forward and express willingness to take on the job for some time. Fortunately that situation has changed over the last few months, and Alex Sandor Csank has expressed both the interest and willingness to take on the job. Our constitution says that if the job of President is vacant, the National Executive can appoint someone to the post. As Treasurer and Newsletter Editor (both National Executive positions), I took on the task of polling the rest of the executive regarding Alex, and received unanimous support for appointing him President.

Alex is a retired Navy man and a long time Alfa enthusiast. For many years he was posted to Norfolk Virginia by the Canadian Armed Forces. About 14 years ago, Alex and I became acquainted through the Alfa Digest, and had a lot of correspondence back and forth about our common interests - things like Spider Juniors and Alfettas, as if that would be any surprise to anyone!

During his time in the USA, Alex was very active in several chapters of AROC, and chaired that club's National Convention in Frederick Md. in 2010. It was at that convention that I finally met Alex in person.

Since retiring from the Navy, and doing a few other things while down south, Alex moved back to Canada and took up residence in the Montréal area in 2010. In a very short time, he has formed the active Club Alfa Romeo Montréal with the support of Yves Boulanger, our long time regional contact in Québec.

I am confident that Alex will put some wind in our sails!

Our President Writes ...

by Alex Csank, Ste. Anne-de-Bellevue

Hi folks. I thought I would take a bit of the space available in this newsletter to introduce myself. I have been an active ARCC member since my return to Canada from an extended stay in the USA a few years ago. When I came back to my home town of Montréal, I saw the need for an Alfa Romeo specific club in the area, so with lots of help from local Alfisti, I was able to create a new and active group which has continued to thrive and grow.

But long before that, I fell in love with Alfa Romeo when I saw the Montreal prototype at Expo '67 when I was 9. My first Alfa was a neglected '69 Spider 1300 Junior, which I bought in Nova Scotia and used as a daily driver for many years. Not having much luck finding other Alfa owners in the Maritimes, I joined up with Alfisti on the internet through the Alfa Digest, where I first came into contact with George Beston, who provided me with much needed guidance, information and support.

My career as a Canadian Naval Officer took me out of Nova Scotia and down to the USA, where I joined the local Alfa Club, got immersed in Alfa culture and collected way too many orphaned Alfas. I headed the 2010 AROC (Alfa Centennial) Convention. I was also elected as a director of AROC USA, where I helped to develop national club policies and manage the club. I recently stepped down as a director, taking on the role of Social Media Chair. In that role, I created and now manage the AROC USA Facebook Page. I have written many articles over the years for various chapter newsletters, including my monthly submissions from CARM, and also for AROC USA's Alfa Owner magazine and am an active participant on several Alfa-related digests, forums and websites. I also created and manage the ARCC and the CARM Facebook pages and the CARM website. I have organized numerous club activities, including gimmick rallies, fun drives, social events, dinners, holiday parties, technical seminars, track and slalom events and mechanical sessions and meetings over the years, and I have owned, driven and played with many Alfas, from Spiders to Milanos, having used an

Alfa as my daily driver (mostly) for many years. My current Alfa is a 1985 GTV6.

My first priority will be to help the club develop stronger ties across the country through increased communication in print, email and via the internet. There is much value for Alfa owners across Canada in having a 'National' club, as it can help bring us together and in our shared passion, while we capitalize on the many benefits afforded by a larger group with greater numbers and a resulting louder voice. What would you like to see happen in the coming year and beyond? I am interested in hearing from you. To contact me, you can either go through your club's leadership, or write to me at alfaromeodriveralex@gmail.com. I will work hard to make your club even better!

Wishing you and your families and friends a very happy, healthy and hopeful Holiday Season and all the best for the New Year!

Rev High!

Alex

4C Driving Impressions

by George Beston, Cobourg

It seems like a long time coming, but we are now seeing first hand reports from journalists that have been privileged to actually experience the 4C a bit for themselves. I've had to restrain myself to avoid buying every magazine on the rack with the 4C on the cover, and I'm now settling for a quick read of the articles at the news stand and that's all. What's emerging in my mind is an image of a truly unique automobile. First and foremost it seems to be a raucous, uncompromising sports car that will delight enthusiasts. There's plenty of technical content for those of us interested in that sort of thing; carbon fibre construction, dual clutch transmission, all-aluminum turbocharged mid-engine and so on. It also has the key attribute of being easy to look at. A wide stance and very low body work label it as a supercar at first impression. Most reports say that handling and driving dynamics are excellent.

Commercially, it seems destined to fulfill its primary purpose as an attention-getter for the marque, as witnessed by the aforementioned blizzard of press coverage. For a production car from a corporation likely to be interested in profits, it's a bit of a gamble. Sure, there are cars priced like it, but the commercially successful ones are luxurious touring cars in the classic meaning of *Gran Turismo* by comparison. Being unique may well be enough to leave the 4C relatively uncontested in the market place amongst those who find it an attractive proposition. It's a little shocking to realize that the 4C, as introduced to the public, has no muffler, no

impact-worthy bumpers, no seat back adjustment, and no opening body panel on the front of the car!

Let's hope that Alfa and its parent corporation find a way to upgrade the 4C with some of the content we now take for granted from even the low end of the automotive spectrum without changing its appeal.

Electronic Engine Management

by George Beston, Cobourg

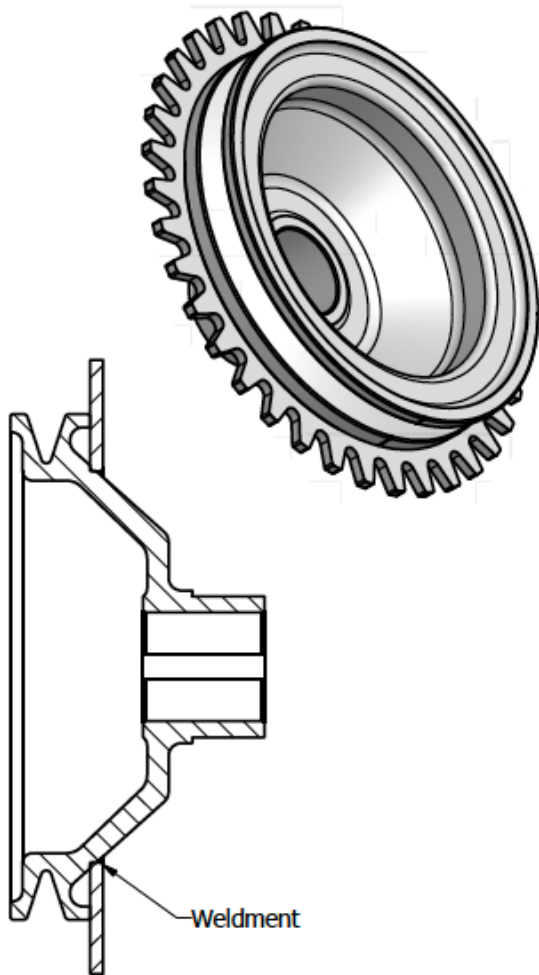
Long time members may remember something of the series of articles I have written in the Update on the subject of converting my Spider from Weber carburetors to electronic fuel injection, or EFI. This system has worked reasonably well and has provided good performance and better fuel economy than the Webers. Throughout the entire project, my goals included two more upgrades, first to high lift / long duration camshafts, and then to use the Mega Squirt system to control ignition and ignition timing.

The cams I had custom-ground were installed during the spring of 2012 with pleasing results, even if they caused a slight but noticeable loss of torque at low rpm.

The EFI setup always did use the Mega Squirt computer to fire the ignition coil, but initially it was triggered by a Crane optical system within the distributor. With that arrangement the basic timing and advance curve were still being controlled mechanically by the distributor, not the computer. It was done that way in order to minimize the work of getting the EFI system running properly. Having accomplished that, the next logical step was to upgrade to electronic engine management, EEM. In this situation, the distributor only sends the spark to the correct cylinder without controlling timing.

The first step was to install an appropriate triggering system. The most obvious choice was to attach a trigger wheel to the crankshaft pulley, and then mount a sensor on the front of the engine to pick up the motion of the trigger wheel.

Fortunately for me, there are services and suppliers that facilitate this. The trigger wheel was added by Jason Miller at www.millersmule.com.



Drawing provided by Jason Miller.

The toothed wheel is made from 1/8" steel, and there is just enough room for it to clear the front cover of the engine. The configuration of the teeth is 36-1. The missing tooth is what establishes crank location for the system. It was convenient to locate the sensor at the 9 o'clock position as seen from the front of the engine. The location of the missing tooth on the pulley itself was specified to Miller's Mule relative to the TDC mark on the pulley.



Hall effect sensors are readily available. Here is the one I ended up with from DIY Autotune. Picture from diyautotune.com.

A bracket for the sensor was fabricated from aluminum angle stock and utilized the front cover studs for mounting purposes.

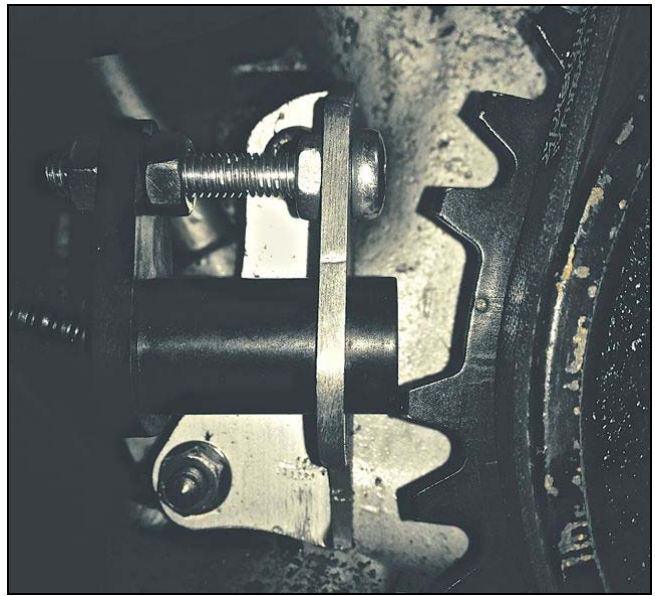


Photo by George Beston.

The missing tooth is in evidence here. Clearance between the sensor and the toothed wheel is 0.020".

Setting up the system is a process that's too lengthy for this article. Suffice it to say that it is based on the geometry dictated by sensor location and timing mark. Teeth are selected for fixed advance (only used for cranking) and trigger return functions just outside the range of expected timing extremes. Because two firings are needed per crankshaft rotation, there are two sets of triggering teeth 180° apart.

The actual ignition timing under running conditions is set in a12x12 timing table with a unique advance setting for each combination of rpm and manifold absolute pressure (MAP).

The starting point for my first attempt was a table of advance curves for Alfa distributors published in a 1988 Shankle catalogue. This was not very successful, because the low rpm flat spot was much worse with these settings than it was with distributor-based timing. I've always thought that a low rpm flat spot related to the use of a high lift cam was a carburetor fuelling issue. Apparently not! The good news is that I got to spend a very rewarding morning driving, then pulling over to add in low rpm advance via a laptop computer, and getting to a point where the flat spot totally disappeared. Subsequent investigation revealed that looking up distributor advance curves is not the place to start tuning an EEM system. I found that there are timing table generators which take some engine data and propose an initial table for further refinement. The best part is that the Mega Squirt table generator I used is a free web-based application.

Results to date are that I've been able to achieve over 40 miles per Imperial gallon under highway

conditions and my Spider feels very quick, and cruises happily at 80 mph if I'm not paying close attention. Another huge benefit at this point is that the engine can be tuned from a computer without the need to take things apart and make mechanical adjustments. It's just a matter of changing table values.

Here's the driver's view of the laptop running tuning software. The shape with a black background is a graphical representation of the timing table. Adjustments can be made by moving a red cursor around the table and adjusting advance values up and down from the keyboard.

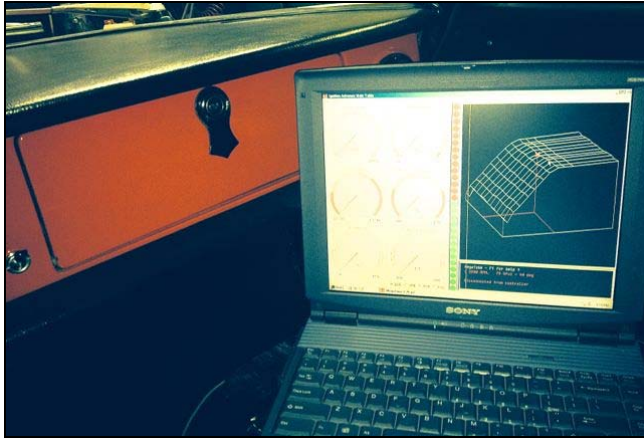


Photo by George Beston.

Future plans include spending a few hours on a chassis dynamometer to optimize wide open throttle mixture and maximum advance. The dynamometer runs will also tell me if I have anything to brag about regarding horsepower at the rear wheels. By way of caution, results from the dynamometer at the shop I'm going to use appear on a monitor named "The Heartbreaker"!

In the future, some effort will be expended on establishing a lean cruise mode to further improve mileage, and to fine tune things like closed-throttle fuel cut-off and acceleration enrichment. The season ended a bit too early to get these things done, so it's now a matter of making plans for spring!

Upcoming ARCC Events

Regional representatives are requested to send your 2013 events calendars to the secretary or the editor for inclusion in the next issue.



Does Santa have a new sleigh? Photo from nottinghamalfaromeo.co.uk.

Alfa Romeo Club of Canada

National Executive

Alex Csank	President	(514) 771-9513
Harry Hamilton	Western VP	(403) 463-2235
Tony Adams	Eastern VP	(905) 642-3749
Jack Thompson	Past President	(780) 481-1708
George Beston	Treasurer	(905) 372-3552
Christine Pickering	Secretary	(416) 498-6553
	Messages	(416) 499-7129
	Fax	(416) 499-4517

Regional Contacts

Don Best	Vancouver	(604) 939-5056
Mark Willis	Calgary	(403) 668-0379
Chesley Wells	Edmonton	(403) 963-9199
Anthony Tersigni	Toronto	(905) 918-0457
Jack Livingstone	Ottawa	(613) 232-6335
Alex Csank, or Yves Boulanger	Montréal	(514) 771-9513 (450) 692-7478

ARCC Update

Editor:	George Beston
Telephone:	(905) 372-3552
E-Mail:	gbeston@eagle.ca

ARCC On Line

Our Website:	http://www.alfaclub.ca
Webmaster:	David Munro
E-Mail:	djwmunro@yahoo.ca