



ARCC UPDATE

May 2016

President's Letter

by Alex Csank, Vankleek Hill

Greetings!

Our "up and down" springtime is still playing tricks on us! As I write this little missive, this week's wonderful 20+ degree temperatures (in this part of the country) are plummeting back down to the single digits by tomorrow. Meanwhile, the dry winter, combined with a very hot and windy spring contributed to one of the worst series of wildfires in Western Canadian history, including the tragic events affecting Fort McMurray and the surrounding area. I sure hope that all of you, your families and friends aren't impacted. And if you are, that your challenges will be quickly overcome and sorted. It will be great for us all to be able to get out and enjoy our Alfas in the sun!

On the 19th of April, Diane and I drove up to Ottawa and were welcomed by Marc Faubert and the Alfa Romeo Club of Ottawa (ARCO) folks at their annual meeting. As I had done in Toronto earlier in the month, I was there to present the current status of our plan for the convention in 2017 (ALFA EXPO '17) and to meet more of the wonderful folks who make up our club membership. Many thanks to Marc and the rest of the gang for making Diane and I feel so welcome.

As George Beston reminded me today, I am pretty much "always busy", but these days Diane and I are particularly occupied with the minor renovations, moving and other details to get ourselves transplanted from our little village at the western tip of the island of Montreal, to our new 116-year-old home in the Eastern Ontario town of Vankleek Hill. Our muscles and joints ache every evening from all the lifting and painting and moving and sawing and drilling and... well, I'm sure you get the picture. We keep getting reminded that we are just NOT in our 20s... uhhh 30s.... 40s anymore! In any event, it will be a very nice little place for us when all is said and done.

Upcoming Events

Looking ahead at our various published club calendars, there are some terrific events coming up and I would like to highlight just a few of these and encourage you to join in on the fun.

June

First up are the great events in Montreal on the weekend of 10-12 June, held in conjunction with the Canadian Grand Prix. CARM will be having its traditional Grand Prix BBQ on Saturday, once again being hosted by the always friendly Sam and Lucy at their city home. Please let CARM's president Jean-Michel Reysset know if you will be attending. The following weekend is Ottawa's Italian Festival, celebrating everything Italian from the 17th through the 19th of June. The very popular Italian Car Parade and gathering, hosted by the Italian Car Club of Ottawa, ARCO and other Italian hobby clubs will take place on Saturday, the 18th. Please contact ARCO's president Marc Faubert for other details. This is the first of our "Club AMICI" (an association of Italian auto clubs in the Montreal-Ottawa-Toronto areas) combined 2016 events.

July

Montreal's biggest Italian car festival is called 'FIAT BREAKOUT', and is a huge gathering of Italian cars, motorcycles and other machines. It will be held on Sunday, the 3rd with a "rain date" of the 10th. Once again, Jean-Michel is the best contact if you want to join in. And while we're on the subject of July events, please mark your calendars now to come and join the fun for our annual regional ARCC Convention weekend, our 4th annual RADUNO ESTIVO, which will be held on the weekend of the 15th through the 17th. Our little weekend Alfa getaway will see three groups of cars driving some lovely roads on the way from their home areas (GTA, Ottawa and Montreal) towards Kingston. There, the three clubs will meet up for a group supper, followed by some fish stories and tire kicking. We'll then head for our

hotel(s) and get some rest before the next day's activities. The next morning we'll head off for a quick 'fun' rally, followed by a 'show and shine'. The events will wrap up with a late lunch before the groups (or individual cars) head for home. Please let me and your local club president know if you plan to attend. I'm hoping for a really great turn out this year! Many of us have stayed at the Comfort Inn Highway 401, which is reasonably priced and has a free breakfast. I'll be glad to get a block of rooms reserved at the best rate as I have done previously.

For more information on upcoming events please read the published calendars on the back page of this *ARCC Update*. Remember that the Alfa virus is contagious! So, please invite your friends along as guests anytime.

Please keep sending your feedback, photos, articles and ideas for the newsletter. George Beston is always looking for your input for upcoming editions.

Until next month,
Rev high!

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Above are two photos of a CARM gathering on April 30 at Les Galeries Normandie north of Montreal. Photos by Alex Csank.

Toronto Chapter Cruise Night

by George Beston, Cobourg

We had a good turnout for our first cruise night of the season, even if the weather was a bit on the cool side. There was lots of opportunity to catch up with other members after the long off season.

It's always great to meet Alfas I haven't seen before, or maybe just can't remember. The Gregory family from Dundas showed up with two GTs, a very pretty GTV and a GTV6 that has been converted from Bosch to MegaSquirt fuel injection.



The Gregory's coupes. Photo by Ken Lee.

Also, Oliver Collins gave us a "reveal" of the latest addition to his fleet, a very pretty and well restored 2600 Spider by Touring.



Above and below, Oliver's recently acquired 2600 Spider. Photos by Ken Lee.



Cam Timing Tools

by George Beston, Cobourg

Once in a while, some of us get the urge to enhance the performance of our Alfa engines and decide to alter cams and camshaft timing as a means to that end.

The long serving Alfa Nord engine is well suited to this sort of modification. Cams are easy to access and remove & replace. Also, the cam drive sprockets are equipped with a vernier adjustment system with 15 holes in the sprocket and 16 holes in the keyed fitting at the end of the camshaft. That means that there are 240 different possible locations for the sprocket relative to the cam, with adjustments available in 1.5 degree increments, or 3 degree increments in crankshaft terms.

Cam timing is usually decided by factory specifications, the recommendations of expert engine tuners, or by actual experiments on a dynamometer. Most of us rely on the recommendations of others.

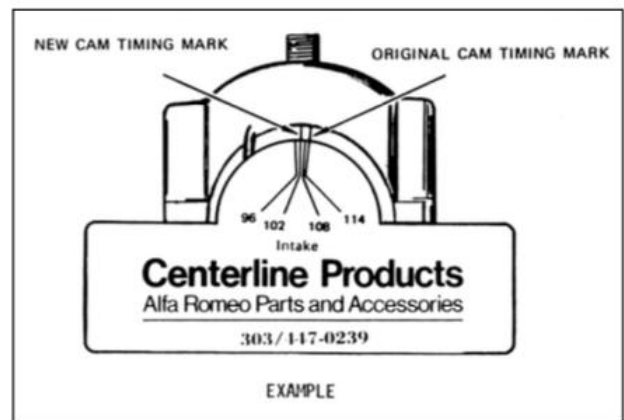
Cam timing in unmodified engines is set by aligning cuts on the camshaft with marks on the cap of the front camshaft bearing. This setting is worth having a look at after, say, removing the cams for valve clearance adjustment, but with the cam chained properly tensioned, the alignment of the cams is unlikely to change over the life of the engine.

In setting cam timing, engine builders use a degree wheel with the engine on a stand, but with the engine in the car, the traditional degree wheel is not an option due to space constraints.

A common approach is to re-mark the front cam bearings for the new timing. Centreline, the well-respected aftermarket parts supplier publishes templates on its web site for this purpose. I found myself unable to use them as is because I was looking for timings not included in these templates, and because I have no faith in my own ability to accurately scribe a new mark on a cam bearing cap.

There are a few other reasons that give me pause on this. I would prefer not to mark the caps because if I want to change the timing again in the future, a multitude of marks on the cap could make achieving the intended timing difficult. Also, the cam bearings are line bored to ensure they are perfectly straight, and as such the caps shouldn't be considered as replaceable service parts.

Here is what the Centreline templates look like:



Here is a cam bearing cap from my Alfetta's original engine. Note that there are two factory marks, presumably one for California cars and the other for cars intended for the rest of North America.



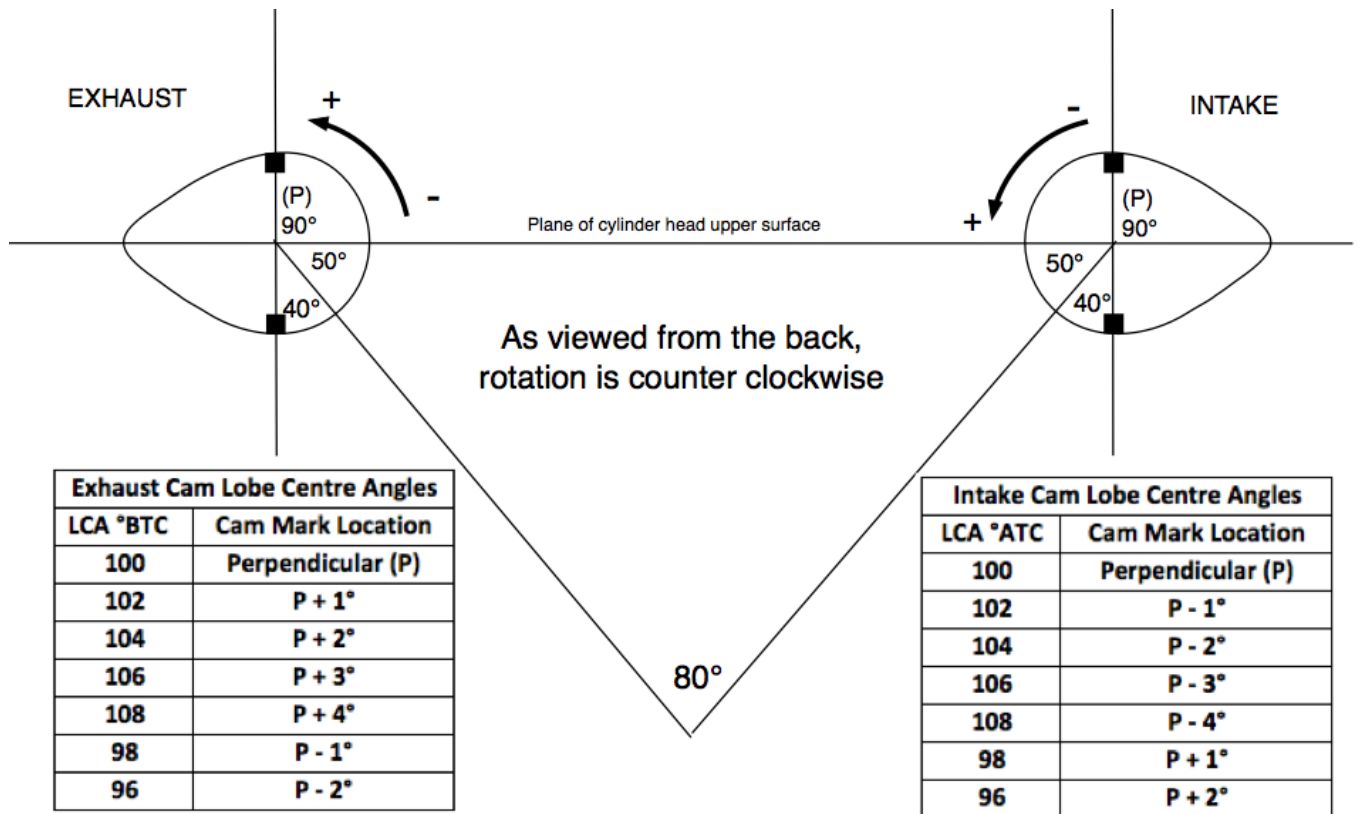
My modification of this method is to use templates that fit over the area of the camshaft containing timing marks with a printed line that aligns with the cam mark at the desired timing.

First, I had to figure out how these angles should be set. With the aid of a useful drawing program (EazyDraw) and what I could remember of my high school geometry, I was able to sort this out. Assumptions behind the work included the valve angle of 80°, the cam marks being 180° apart with both being 90° from the lobe. From that it was possible to deduce the angle of the mark relative to the machined top surface of the head for a given cam lobe centre setting.

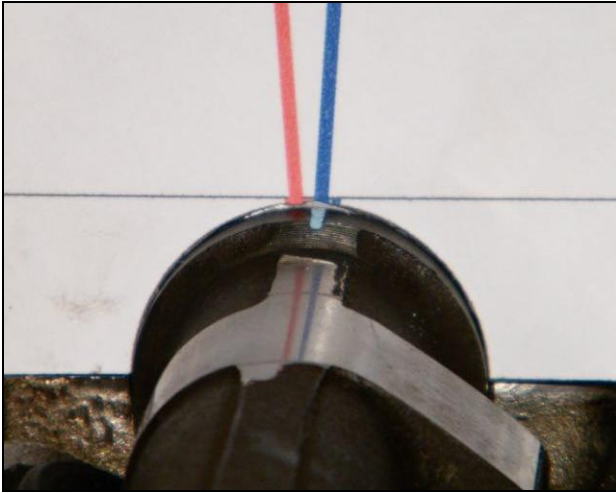
Starting with the #1 piston at TDC on the compression stroke, the #1 cam lobes point to the outside of the engine.

For the exhaust cam, if the cam markings are perpendicular to the upper head surface and the lobe axis is parallel to that surface, the cam lobe must rotate through 130° to reach lobe centre. That represents 260° of crankshaft rotation, which brings the piston position to 100° BTC on the exhaust stroke. To adjust exhaust cam timing to, say 102° BTC, the cam needs to be advanced one degree from that perpendicular position.

For the intake cam, starting from the same TDC position with its lobe facing outwards, the cam must rotate through 230° to reach lobe centre. That represents 460° of crankshaft rotation, which brings the piston to 100° ATC on the intake stroke. To adjust the cam timing to, say, 104° ATC, the cam needs to be retarded two degrees from the perpendicular position.

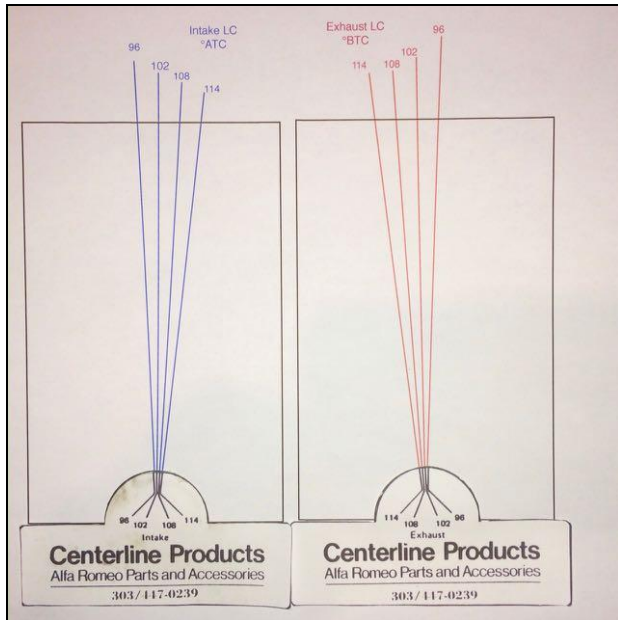


I made up drawings for templates and then printed them on 100 pound card stock so they would more or less stand on their own.



Note that the lines are formatted to match the width of the cam mark. In this case, the blue line was printed for intake cam timing and the red line for exhaust cam timing.

It was very reassuring to get good agreement between my drawings and the Centreline templates:

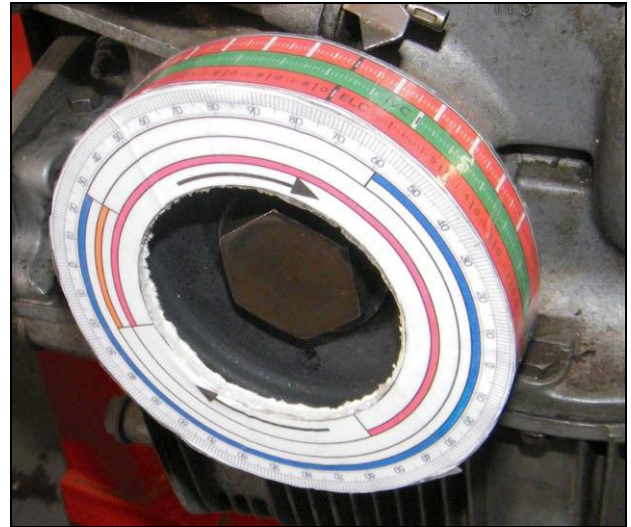


With the files that I have created in EazyDraw, it is now very simple for me to adjust the line angle and print out a new template for any desired cam timing.

As I was working on this, I felt that some validation of my results was necessary before publishing them for other enthusiasts. Also, I have heard and read that cams that have been created by welding up and regrinding factory cams do not necessarily maintain the relationship

of the cam marks to lobe centres. This eventuality would make timing set by these templates inaccurate.

In light of that, I developed my own version of a degree wheel for the purpose. Since space is the biggest constraint, I came up with an arrangement that consists of a shallow cup that fits over a crankshaft pulley once the fan belt has been removed. On the edge it carries degree tape highlighting significant engine cycle events, particularly the lobe centre timings. I also put a scale of degree marks centered on the lobe centre locations. See the markings under the pointer in the picture below:



This made taking readings of the crank shaft position very simple while using a dial indicator on the cam follower to measure valve movement on either side of the intended lobe centre. With the opening in the centre of the cup, I was able to turn the crankshaft with a large socket. It didn't hurt that there was no fan shroud or other hardware in the way. I'm sure that with many of our Alfas, some other way of turning the engine would have to be used.

The face of the degree wheel started with an on-line degree wheel image from www.machinerycleanery.com. It was resized and embellished with other graphics using EasyDraw. The timing tape segments were created in Excel and sized to exact length in EasyDraw.

The end result of using the timing tape / degree wheel is that I found that the use of templates is adequate for original equipment cams, but in my experience with re-ground cams, half of them so far have required further adjustment based on degree wheel readings.

I am happy to share the files I have or templates I can easily make with anyone who wants to use them.

Upcoming ARCC Events

Regional representatives are requested to send your 2016 events calendars to the secretary or the editor for inclusion in the next issue.

Club Alfa Romeo de Montréal

Date	Time	Event
1 st Saturday	Monthly	Alfas & Espresso, LaSalle Alfa
May 15		Gimmick Rally
May 22		St Lambert Antique Auto Show
May 29		Road Adventure
June 11		Grand Prix Barbeque
June 19		Fathers' Day Veterans Tribute Car Show
July 24		Meet with Scuderia Alfa Romeo
August 21		Wine Tour
Sept 10-11		Lake Placid Road Trip
October 3		Vineyard Tour
October 16		Fall Colours Drive
November 26		Holiday Party

Regional Events – Eastern Region

Date	Time	Event
June 17-19		Italian Car Day, Ottawa
June 12-19		AROC Convention, Nashville
July 3		FIAT Breakout, Montréal
July 15-17		Raduno Estivo, Kingston
July 27-31		Fiat Freakout, Auburn Hills
August 6		Italian Car Day, Woodbridge
September 25		Raduno Montebello

Alfa Romeo Club of Canada

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Alfa Romeo Club of Edmonton

Date	Time	Event

Calgary Alfa Marque Society

Date	Time	Event

Toronto Chapter

Date	Time	Event
May 23	9 am	Victoria Day Pancake Drive
June 5	10 am	Canadian Warplane Drive
June 7	7 pm	Cruise Night
June 17-19	TBD	Vintage Festival & Drive
June 26	10 am	Rattlesnake Run
July 5	7 pm	Cruise Night
July 10	10 am	Sun Collision Event
August 2	7 pm	Cruise Night
August 21	10 am	Italian Gathering
September 6	7 pm	Cruise Night
September 11	10 am	Wine Tour & Drive
October 4	7 pm	Cruise Night
October 16	9 am	Fall Colours Drive
November 26	6 pm	Holiday Dinner Party

Alfa Romeo Club - Ottawa

Date	Time	Event
April 19	6 pm	ARCO AGM
May 28	2 pm	Car Christening and BBQ
October 16	10 am	End of Season Drive and BBQ
February	7 pm	Annual Pot Luck Dinner

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