



# THE VOLVO CLUB OF B.C.

## SEPTEMBER 2016

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Annual membership fee \$20, To join: Call or write Gregg Morris. See above.  
or view our Website [www.volvoclubofbc.com](http://www.volvoclubofbc.com)



V.C.B.C. is the

### B.C. Chapter of Volvo Sports America

### 1800 Register

To join VSA write to, PO Box 352 Fairless Hills, PA 19030-0352

Email: [membership@vsa.org](mailto:membership@vsa.org) Annual membership fee US\$35 Website [www.vsa.org](http://www.vsa.org)

## UPCOMING VOLVO EVENTS also see our website [www.volvoclubofbc.com](http://www.volvoclubofbc.com)

**SEPTEMBER 24, 2016, (SATURDAY) V.C.B.C. 25th ANNUAL CATES PARK PICNIC AND AGM** Rain or Shine, 4141 Dol-larton Highway, North Vancouver, B.C. 9 to 3. **Bring a picnic lunch! No BBQ this year!** Shine up the Volvo and bring the family.

There will be lots of raffle prizes. There will be dash plaques and trophies for the Peoples Choice, Runner Up & Modified. We will also hold our Annual General Meeting. Please bring non-perishable food donations for a Lower Mainland Food Bank. **Come and see the nicest display of Volvos in BC.** For info call **Gregg Morris 604-469-1216 or Dave McAree 604-530-6097**

**VCBC TECHNICAL SESSION** Date, Time, Subject and Location to be announced. Watch VCBC website or contact John Cripps **604-466-9110**.

**JANUARY 20, 2016 (Wednesday) VOLVO CLUB WINTER SUPPER**, 7:00 pm at the New Westminster Spaghetti Factory located at 50 - 8<sup>th</sup> St., just up from the Sky Train Station, call **Dave McAree 604-530-6097**

**VANCOUVER ISLAND EVENTS:** Watch the website. [www.volvoclubofbc.com](http://www.volvoclubofbc.com)

**WASHINGTON VOLVO CLUBS EVENTS** see [www.psvsa.org](http://www.psvsa.org)

## REPORT OF PAST EVENTS

### SPRING DRIVE 2016 TO KAMLOOPS

June 11, 12, 2016

Gregg Morris

This was a first for a spring drive. It was cancelled! The drive was supposed to happen on Saturday June 11<sup>th</sup>. The television news early that week talked of severe gas shortages in the BC interior and some shortages particularly Petrocan in all 4 western provinces. The shortage was caused by a combination of the Fort McMurray wild fires cutting off some supplies of crude oil and primarily by the extended maintenance shutdown of Suncor's refinery in Edmonton. The TV news told us that Merritt gas stations were dry and there were line ups at gas pumps in Kamloops and the Okanagan.

What the hell do we do? The choices were simple enough. 1. Assume the problem would go away by the end of the week and carry on. 2. Cancel the event. We chose to cancel because our thirsty old Volvos with small gas tanks tend to make our trips, Chevron tours of the BC interior. We always gas up in Merritt and we were heading to Kamloops, both with gas



VIKING  
AT THE  
SCANDINAVIAN  
FESTIVAL

shortages, and no predictions of imminent improvement. We had to make the decision early enough to beat the 72-hour cancellation notice required by the Motel. Wait and see did not seem like a good plan. The last straw was the prediction of rain on Friday and particularly Saturday all the way from Vancouver to Kamloops. I could just picture us stuck in the rain with empty gas tanks. Even if we made it to Kamloops, the beauty of the Hospitality Inn Motel is its beautiful elevated view of Kamloops, the Thompson River and the sunset, from picnic tables on the grass. Sitting in our rooms in bad weather would not have been fun.

I felt badly for the Hospitality Inn. They lost the rental of 15 rooms on a Saturday night, but they were very understanding. I had called later in May to get names of those who had made room reservations and I was glad I had, because that was the only way I knew who was coming. In future I will be asking people who plan on attending this kind of event to let us know who they are so we can more efficiently make contact. Also I suggest members always check our website [www.volvoclubofbc.com](http://www.volvoclubofbc.com) for any last minute information on upcoming events. The cancellation was posted on the front page of the website.

As it turned out I managed to notify all but one couple of the cancellation as they had made their reservation too late for me to know of it. They turned up at the start of the drive only to find no one else there. Dave McAree filled them in and the Motel was good about not charging them for the room.

I wondered all that week whether we had made the right decision. As it turned out the gas situation was mostly resolved by Saturday, but the weather would still have been an issue. It would have been wet from Vancouver to Kamloops and according to Dennis Cowell who lives there, Saturday wasn't particularly wet but was blowing and cold. Better luck next time.

**SCANDINAVIAN MID SUMMER FESTIVAL**

**June 18, 19, 2016**

**Gregg Morris**

June was a pretty nice month if you don't count the weekends. Looking up the weather

predicted for the Scandinavian Mid summer festival, there was a bright yellow ball on Friday and Monday and pouring rain Saturday and Sunday. Unfortunately, the prediction was right on the money.

For those of you that have not attended the Mid Summer Festival it is put on by the Scandinavian Business Club of BC, an organization of the Scandinavian countries, Sweden, Finland, Norway and Denmark. They have a big club house and a large rectangular grassed show ground, located just north of the Trans Canada Highway at the Kensington Avenue exit. The festival site is surrounded by trees and you would swear you were in some rural pasture rather than a long stones throw from the Freeway. The club house is at the north end of the show field and an outdoor elevated show stage is attached to the building. In front of that is a big tent of covered seating. Through the weekend a variety of singers, dancers and bands entertain the Festival. Along the east and west sides of the field are large display tents housing crafts, jewelry, clothes and information from the 4 Scandinavian nations and sometimes a guest nation.

There is certainly no need to go hungry or thirsty. Inside the club house they were serving a wonderful variety of Scandinavian foods. There are Swedish and Finnish meat ball dinners, and 8 kinds of open faced sandwiches such as smoked salmon, Shrimp & egg, & spiced herring. Its all reasonably priced and tastes great. Outside there are a couple of food trucks and a tent making special waffles topped with strawberries and whipping cream. Outside there is a large beer garden to help you wash down that herring.



At the far end of the field is the Viking encampment. A hardy group of families camp there from Friday through Sunday. They are all dressed in authentic Viking dress and demonstrate the Viking way of life, including pillaging the beer tent once in a while. Beside the Vikings is our Volvo Club of BC display. We set up a couple of 10x10 tents and tables to provide infor-

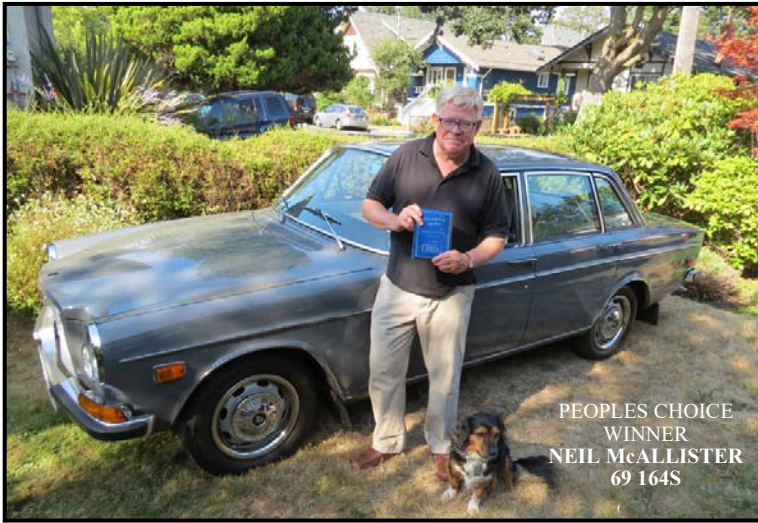


mation on the club and free Tim Hortons Coffee and Tim Bits. I think our hot coffee was helping the Vikings fend off hypothermia on Saturday.

In front of our tents, and in spite of the persistent rain, we displayed a nice variety of old Volvos. On Saturday, there were my 122S wagon, Bert Sherlock's 122 2dr, Carl Selden's 1800S, Dylan MacIntosh's 850R, Kyle Kelly's 88 780, John Cripps PV544, Rose Morris 244GL and the Lamm family of Vikings brought their 144S.

This year Joseph Daou, General Manager of Volvo of Surrey, stepped in as a sponsor of the Festival and displayed a new XC90T6 for everyone to hear, touch and sit in. It re-





PEOPLES CHOICE  
WINNER  
NEIL McALLISTER  
69 164S



ceived a lot of attention.

Sunday was a much nicer day starting overcast and ending in bright sunshine. We only had 4 cars but they were very nice examples. Bert's 122, Carl's 122, my 1800ES and John's 544. There was steady stream of people looking at the cars and reading the summary sheets we have for each of the models. Some of the spectators came to tell us about the old Volvos they had owned and other asked for help in selling the cars or parts. Many pictures were taken beside their favorite cars.

There were far more visitors of all ages on Sunday. It was Fathers day and there was no shortage of fathers in the Beer Tent. A new feature this year was a dog show of Finnish Spitz. Lots of them. Entertainment continued on the show stage and in the afternoon the famous wife carrying contest brought out a lot of contestants who were all vying for the prize – the wife's weight in beer. They had to run a challenging obstacle course. I would not have believed there were so many ways of carrying your wife. The Kama Sutra had nothing on these folks.

The race kind of signals the end of the festivities so we took down our tents and left for another year. Come and join us next year. You won't be disappointed.

**VOLVO OF VICTORIA SHOW AND SHINE**  
**Island Show-N-Shine XIII**

**July 10, 2016**

**Bob Cuthill, Vancouver Island Co-ordinator**

During a spring visit to Volvo of Victoria to update the club newsletter book I was chatting with Dustin Hofer over coffee and the subject of club meets came up. Since I had retired as the resident Island Director in Dec 2014 there had been no island events. Dustin suggested it might be time for another one and after looking at the

options and getting the boss Trevor Friesen's OK for the project, it was agreed that Sunday, 10 July would be a good date for a show and shine. Dustin and his trusty sidekick, Roland Wittall would do most of the legwork and I would get the word out to all the Island Volvophiles (some 120 on my old mailing list).

When the day finally rolled around we couldn't have asked for better weather although in all modesty, it was quite typical of summer in Victoria. The parking spaces adjacent to the showroom had been cleared and the BBQ set up and reception table set erected next to my 61 P800. Music was provided by the impressive sound system in a new XC90 and across the center lane, space for another line of up to thirty cars had been cleared. Even before our advertised start time the cars started rolling in. Each participant signed in and was give a dash plaque, a ticket for the door prize draw, ballots for the People's Choice Award and a number card for their car's windshield

An early arrival was Bert and Cathy Sherlock, one of our club directors, visiting from the mainland in a dark green 122. After the initial rush and some later arrivals we had a total of 18 cars representing a very wide variety of models including a heavily modified 240 series with a huge supercharged V8 stuffed under a modified hood. A few of the other attendees included Neil McAllister in a beautifully redone 69 164, Fleming Anderson in an 88 780 Bertone, Bill Paitson in his immaculate 98 S90, Michael and Brenda Kelly in a classic 144S still in original and glistening paint, Monica Kristensen down from Duncan in an 85 740T and Don McVicar in a 62 544.

Our Volvo of Victoria crew soon had the BBQ going and people were digging in. With a little prompting and interrupting impromptu tech

sessions we got the people's choice ballots collected after lunch and the winner by a clear margin was Neil McAllister and the grey 69 164. With very generous contributions from Volvo of Victoria and their suppliers everyone present won a door prize. What a day.

We had a lot of fun visiting other cars, getting to know some new people and renewing old acquaintances. In addition to our older models, it was interesting to tour the show room and see some of the new iron from Volvo. But time flies when you are having fun and it was soon time to wrap up and start heading home. All in all a great success. Thanks to all the attendees and especially the crew at Volvo of Victoria for all their work behind the scenes and during the day. Next year? We will have to wait and see.

**SUMMER DRIVE TO THE POWERHOUSE**  
**AT STAVE FALLS VISITOR CENTRE**

**July 16, 2016**

**Gregg Morris**

The route and destination for this summer's cruise and picnic was chosen by Allen and Dorothy Hiebert. They led the way on a 60 km tour of the back roads on both sides of the Fraser River, to our destination, the Visitor Centre and Museum at the BC Hydro Stave Falls Dam. The day threatened showers so Allen heaved our Club tent into his XC70 on the way to the start of the drive. The tent worked like a charm. It scared off rain clouds and left us with a gently overcast day. Perfect day for a drive. Everyone met at 9:30 at our old standby, the Chevron at the 232<sup>nd</sup> St. and the freeway. Before the 10:00 start there were 10 Volvos scattered around the station and Allen had given out route maps asked everyone to keep together so no one would miss a turn and get lost. **Continued on Page.12**



**SUMMER DRIVE AND PICNIC, STAVE FALLS POWERHOUSE**

## EDITORIALS AND LETTERS

### CLUB STUFF

#### **Gregg Morris**

The Volvo Club of BC, continues to thrive. Membership renewals are going well and we have a healthy bank balance. Our next event is the Cates Park Picnic and Annual General Meeting. Cates Park Picnics are always the last Saturday of September. This year is our 25<sup>th</sup> Cates Picnic and it will be held on September 24<sup>th</sup>. I encourage you to come to the picnic and invite any of your Volvo driving friends. We can always use new members. Club Director Chris Ainscough has moved to Alberta and has resigned as a VCBC director.

### **VOLVO OF NORTH VANCOUVER HAS THE BEST SERVICE TECHNICIANS IN THE WORLD.** By Gregg Morris

The title sounds like car dealership hype, doesn't it. Well read on!!!

Every second year, Volvo holds a world wide competition for their service personnel called "Volvo International Service Technician Award" or (VISTA). Winning at VISTA is the highest honour Volvo service personnel can earn. Each VISTA competition has a different goal. For 2015-2106 the participants competed in one of two categories, Service & Repair or Body Repair. The competition focussed on teamwork, workshop efficiency, and in turn, customer satisfaction.

In every market where Volvos are sold, technicians who want to compete in VISTA, face a year of preparation, tests and ever more difficult hands on challenges. In Canada the competition started with on-line testing, leading to semi-final testing which determined the top five teams. They would represent Canada in the North America finals, held in Rockleigh, New Jersey in April of 2016. The five Canadian teams competed with each other in increasingly difficult challenges over an eight-hour period. The top team from Canada, in the Service and Repair category, was Tony Do and Justin Lam from Volvo of North Vancouver. They won the right to represent Canada in the Global VISTA competition in Gothenburg, Sweden, where they would compete against 40 teams from Volvo markets all over the world.

#### **Tony Do told me the story.**

Volvo chose 'teams' as the theme for this years VISTA competition, because it aligns with their plan to change how they offer mechanical service to customers. They refer to it as Personal Service Technician or PST. Volvo loves acronyms. Currently a customer meets a Service Advisor who is not a technician. The Service advisor listens to the problem, writes a repair order which is passed to the Service Technician in the shop to do the repair. The new service model would eliminate the Service Advisor role. Instead, there would be teams of service technicians. One of the technicians in the team would talk to the customer and then work with the rest of the team to execute the repair. Volvo hopes this will streamline the service and make it quicker and allow a direct connection between



the customer and the technician who is fixing their car.

In each of the 2 man teams that entered the VISTA competition, one member of the team would act as the service technician and the other the service advisor. The actual Vista teams could be two technicians, two service advisors or one of each. In Tony Do and Justin Lams case, they are both service techs and they decided that Tony would be the technician of the team and Justin would act as the service advisor as he has experience in that role.

The competition started in January 2016 with all the Canadian competitors getting multiple choice tests on line. There were three rounds and the best teams went to a semi final round. In the semi final competition technician of the team got a timed on line test with 40 questions in 2 hours. Jason aced this one and was finished in 45 minutes. Justin's test was a roll play where he had to call a telephone number that got a recorded dialog in which he had to respond to a customer's questions and needs. It was difficult but he did well and in April Tony and Justin advanced to the finals in Rockleigh New Jersey, Volvo's North American Headquarters.

There, the 5 top Canadian teams competed against each other in 4 tests. The first test was technician solo test (bench test an XC90 instrument cluster), The second test was an Advisor Solo test (roll play with XC90T8 customer who could not get the power charging cable out and tailgate would not open), The third test was a team test to repair a rear defrost malfunction and deal with the owner. The final test was a team test of a start-stop problem with an XC90. Tony and Justin won the finals and would go to Sweden to compete against 40 other teams from all over the world. The runner up Canadian team from Edmonton, got to go along to Sweden to watch. On a separate day the American teams did the same 4 tests and the winning American team would compete in Sweden and 5 more teams would go to spectate.

In June Tony and Justin headed for Sweden. This was the first time in the history of VISTA that the top team from each of their 40 markets around the world would compete against each other. It was a challenge for the testers as well as the teams. They had to overcome the language barriers so all teams could compete equally. The other challenge was the differences in cars in different markets. As Tony said, if one of the tests had been on a right hand drive Diesel powered Volvo they would have been hooped.

In Gothenburg 20 of the teams competed on a Monday and the second 20 on a Tuesday. The first test was a 2 hour 45 question multiple choice test and it was hard. Tony and Justin finished with one minute remaining. That was followed by 4 vehicle tests, all difficult. For instance, they had to find out why a V40 air conditioning system was not working and they were not even allowed to start the car. In each test they had to handle the customer service portion of the job, fault trace the physical problem or network computer problem, look up the parts required to make the repair and in some cases actually make the repair. Tony said his proficiency in using Volvos parts system was very valuable. Tony said when he and Justin had finished the day's testing he had a good feeling.

At the awards banquet the organizers identified the position of each team, starting with 40<sup>th</sup> place. To show you how tough the competition really was, the US team only made it to 33<sup>rd</sup> place. When the roll got to the top ten, and Justin and Tony still had not been called, they started to get excited. At last the impossible happened, they were number 1. As this was the first time that Volvos VISTA competition had all 40 international markets compete against each other, I'd say that makes this competition truly the first Volvo Service Olympics. Tony Do and Justin Lam won gold.

They should be proud and we are proud of them. For more information on VISTA and the 2016 competition google [vista.volvocars.biz](http://vista.volvocars.biz)

## TECHNICAL ARTICLES

### VOLVO e1800 ELECTRICAL CONVERSION

Mike Gaston

**In the Beginning:** ...cars had internal combustion. That was compulsory. At least this is how many of us feel, here in the wee decades of the 21<sup>st</sup> Century. But electric cars actually pre-date internal combustion (IC) cars, by many decades. The idea of an electric car came out fairly early on in the 1800's. Heck, even Ferdinand Porsche created an all-electric car before the 19<sup>th</sup> century turned into the 20<sup>th</sup>, and he is credited with inventing the first gas-electric hybrid around that same time. The things that hindered the electric car's universal adoption then are still true today: battery technology and long distance capability. Then, along came the dog-gone Model T, with its \$650 sticker price, which sounded the death knell for any travel solution that did not require fossil fuel.

So, fast forward to 2016 and we are "back to the future", or is it "forward to the past"? Although battery technology is advancing quickly thanks to Tesla and the likes, a fill up of electrons is still not ubiquitous or fast. But for around town driving of less than 100 miles, electricity is a very reasonable solution.

**So why not a Volvo?** And why not a Volvo you already own? One that has given you many great memories including your first date with your wife? That is exactly what Richard Grant was thinking when he started out on this journey a little over a year ago. Now, before you purists start in with the typical "How could he do that to one of our beloved Saints?" we should mention that this is not a pristine, low mileage, concours winning Volvo 1800. Although Richard did an admirable job maintaining the car, it still had the usual weak spots like rusted out jack supports, an all but missing battery box, severely worn "Armstrong Power" steering, a propensity to break keys in the ignition, and an underwhelming B18 engine. Oh yeah, and the clock and speedometer didn't work, but really, do any of them? It ran well, but turning and stopping were events that needed to be planned well in advance.

Adding all of the above to Richard's new found infatuation with LED lighting, the swap to

an electric power plant was an obvious choice. After doing much research, he contacted EV West, located in San Marcos, CA. They are also positioned close to his home, perched teetering on the bluffs in Leucadia, CA overlooking the

bit further this time and Frenched in the headlights, smoothed over the gas cap door and as many of the remaining unnecessary holes as possible. All of the external lights have been converted to LED and the new body color is a



Pacific Ocean. EV West has made quite a name for themselves after winning the EV Pike's Peak hill climb, beating many IC cars in the process, and building several electric conversions for some prominent people in the glitterati. EV West seems to be at ground zero for electric car conversions, which you can see at their website: [www.evwest.com](http://www.evwest.com). The owner, Michael Bream, is a charismatic and energetic techno-buff. He has an infectious enthusiasm for the electric car industry and technology in general. As well as car racing, skateboarding, coffee drinking... and the list goes on. He really merits much more coverage, but this article is about an electric Volvo, so we will leave that to another article and another day. There is much more information at the EV West website and their Youtube store. You can easily burn several hours geeking out on all of it and I encourage you to do so.

**About this Volvo:** As I mentioned, this Volvo is not... well... unmolested. Richard has a specific minimalist aesthetic, a love for LEDs and a disdain for chrome. I would have to say that is the main theme to this build. It started years ago when the chrome brightwork was removed and the tailfins were blended in smooth on the top.

With the skillful assistance of Russell Miller, he took things a

never offered by Volvo "Seafoam Green". But that is only what you see on the outside. The real modifications are under the bonnet.

When I first drove the car in IC form it was immediately familiar, and just as quickly I could assess most of the issues we would need to tackle before the conversion. A conversion to electric is not for the faint of heart, or for the light of wallet. The batteries alone will set you back about \$10k. So with that kind of financial outlay it just does not make sense to drop all that copper into a vessel that is not in top shape. After the interior, engine, gas tank and all vestiges of petroleum fuel were removed, Richard took the opportunity to rebuild the front suspension and steering box, repair the usual rust areas, fill in the external body holes, smooth out the headlights and make the aging carcass worthy of the new guts. Like Steve Austin and Robocop: high tech internals with a familiar façade.

The suspension has been left stock for now, other than Bilstein shocks and polyurethane bushings. You really need to get the car complete and loaded to know how much or how little to spring and balance the ride. The batteries are always a question mark. You can get close with back of the envelope calculations, but it is always best to have the final product for testing.

One point that needs to be made is about steering. The 1800 uses a Pitman arm steering box, with all of its idiosyncrasies. On a 50 year old car, those quirks are magnified and the result is a general belief that the Volvo steering is heavy, vague and downright impossible to ma-





nipulate in a parking lot. Not so. Richard had his steering box rebuilt by Bob Workman in Vista, CA. The resulting steering feel is light and taught; truly a transformation. I am not sure what Bob does, but I have been amazed by the results.

**Electrons, hp & more:** The new power plant is a 50Hp brushless AC motor running at 125V that puts out 120 ft\*lbs of torque starting at zero RPM. An electric motor can be over-run for short periods, which explains why a 50 Hp motor can put out 76 peak Hp (or more). The motor is mated to the stock M41 4 speed-overdrive transmission. This combination gives you performance that is very comparable to the original car. As you can see from the torque curve, you get maximum Hp around 4000 RPM, which equates to about 87 MPH in a stock Volvo 1800 in over-drive. Perfect for cruising the freeway in Southern California. Top speed should be around and slightly North of 100 MPH.

The graph here shows the AC 50 motor run at 108V. The curves for this motor run at 125V are not available but are very similar, just a little more peak Hp a little closer to 4000 RPM. These graphs are similar to the Torque vs Hp curve for an IC motor,  $Hp = Torque \times RPM / 5252$ , so all

this car would be a Pacific Coast Highway cruiser between his home and his office in Cardiff by the Sea, about 5 miles down the coast so range is not that much of an issue. Besides, total battery time is more a function of your right foot than anything else.

Starting off from a dead stop is an interesting sequence of events. First you turn on the key, and get no audible acknowledgement. Then, in a familiar manner, you depress the clutch and slip the transmission into first gear. Next, you let out the clutch without touching the accelerator. Now you are ready to go. Just like a golf cart, press the accelerator and feel as much acceleration as you like, including spinning the tires. After forward motion is initiated, the rest is similar to normal driving: clutch in and shift gears, let out the clutch, give some throttle and go as fast as you are comfortable, up to and beyond the posted speed limit. Coming to a stop is easy, just apply the brakes. No need to clutch, the motor just stands at idle waiting for you to tell it to go.

One option from EV West is regenerative braking. This consists of a pressure transducer in the brake line that converts hydraulic brake pressure to an electric signal. This signal is used to



back feed current and EMF into the rotating motor armature. This has the effect of electromagnetically slowing the motor, and hence the vehicle, while simultaneously recharging the batteries. Alt-

hough this is an “option” you would be silly to not exercise it. The combination of better brakes and a free battery recharge is too beneficial to pass up. We also took this opportunity to install Willwood clutch and brake master cylinders and converted to a dual brake system for safety. **The Finished Product:** Well, this is definitely not Roger Moore’s Saint, and it is exactly what Richard wanted: a unique, efficient and eco-friendly vehicle that still has the soul of his “first date car”. The interior is Spartan: just 2 seats and gauges. But those 2 seats are leather covered Recaros and his hands grip a smaller wood rimmed Grant steering wheel. The back seat, if you ever really called that a back seat, has been replaced by just about half of the required batteries. This still leaves a tidy little parcel shelf to hold a few belongings. The rest of the batteries are taking up the space vacated by the fuel tank. There is still some trunk space, but not much. With around 100 miles of battery range you won’t really be packing for a 2 week stay anyhow.

Richard decided early on From a dead stop the car pulls away nicely, definitely more peppy than a stock 1800. The suspension is a little splashy, but that can be easily tightened up with heavier springs and shocks. The brakes are taught. They feel like a well-balanced manual system, a throwback to older times but more than adequate to stop the car quickly from any speed. The cockpit looks and feels like the original, but with no exhaust or valve train noise, just the pitter-patter of the electric lump driving a manual gearbox. The gauges are updated with GPS speedometer, tachometer, charge level gauge and a clock that actually works.

This is a potent, freeway ready car. It goes and stops and has a decent travel range. With new charging stations popping up every day, this may be the future of the classic car world. Think of it as an unholy coupling of Dr. Frankenstein and a taxidermist. Scruffy never has to actually die, he can outlive you, complete with the whirring of an electric motor and the puzzling glow of LED eyes. Finally a Stepford wife for the car collector, let’s just hope it doesn’t go “self-aware”...

**e1800-ROAD TEST**  
Gregg Morris,

Mike Gaston, the author of the e1800 technical article above, is a friend of mine in San



Diego. He is a mechanical engineer and a true car guy. He has restored a very nice 1800S, built an 1800 vintage race car and helped with the build to the e1800. I don't know where he finds the time because he is also the chief engineer for Titleist Golf Clubs alias Acushnet. Mike introduced me to Richard Grant the owner of the e1800 and Richard was kind enough to let me take it for a spin. Here are my impressions. First cosmetically, I saw a picture of the car wearing stock wheels painted flat black and I did not really like the look of the car. Richard has now added a set of classic American Racing Wheels that add just enough pizzazz to make the otherwise unadorned car look great.

Driving the e1800 was a little mind bending. Looking in the engine bay and there is this little

electric motor. The cars interior is very familiar although a close look at the instruments shows some odd ones and some neat ones, particularly the GPS driven speedometer. The stick for the transmission is still there, and still connected to the M41 transmission. In fact, the drivetrain from the motor back is stock Volvo 1800S. The clutch, brake and "gas" pedals are all where they belong. Behind the seats is a black cover hiding a battery pack and a another box in the trunk, where the gas tank used to sit, houses more batteries.

Now for the drive. Turn the key to on and its running, but of course it is silent. Dip the clutch pedal, put it in gear, let out the clutch and you are going, silently. The part that plays with your mind, is that when you come to a stop you don't have to depress the clutch pedal. That is such an automatic reaction that it is very difficult to stop yourself from depressing it anyway. You can start in any gear. The higher the gear you choose the slower the acceleration.

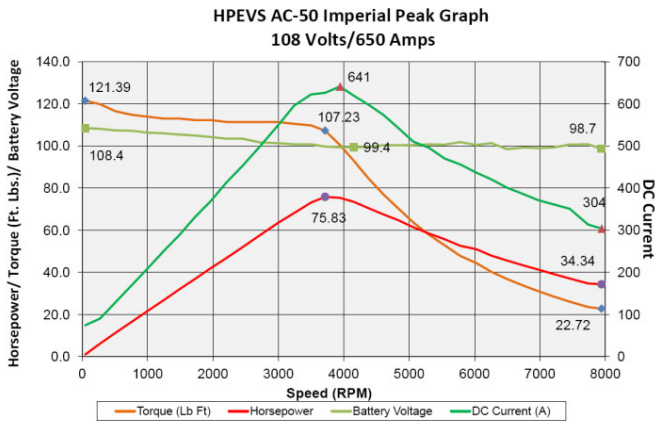
Assume you set off from a light in 1st gear then you change up through the gears and down using the clutch and transmission just as if there were a gasoline engine up front. What is totally different is the noise the electric motor makes. It is silent when you are stopped and sounds like a muted jet turbine

when you are accelerating. A very addicting noise. There are no other noises from the drivetrain or suspension and the car handles and stops very nicely. That is a testament to the care taken in building this car. In an unrestored 1800 it is common for there to be a growly transmission, clunky suspension and noisy differential. Not here.

When I returned from my test drive I was asked how the acceleration compared to a gasoline engine 1800S. It was strangely difficult to determine. In a B18 or B20 powered 1800 your sense of acceleration is very much tied up with the noise and vibration of the engine and the note of the exhaust. You don't get any of that in the electric car, consequently it does not "feel" like it is accelerating quickly but it may be. It would have to be timed to see.

I drove it on a 4 lane secondary road with traffic lights, and not on the freeway. Apparently it does just fine on the freeway and it is roughly good for a 100 miles between charges, depending on how hilly it is and how hard you are driving. That 100 miles is quite a useful distance and would serve fine in a typical city commuting situation, particularly if there were charging facilities at work. (Just for a comparison, Volvo's new XC90 T8, gas and electric hybrid can only go 25 miles on batteries alone, granted the electric motor is meant to be supplementary not the primary source of propulsion.)

All in all, the e1800 is a very impressive car. I am not ready to give up on my gas eating, oil dripping noisy cars yet, but as a town car this electric 1800 makes a lot of classic sense.



### REBUILDING 3-PISTON GIRLING BRAKE CALIPER

Gil Stuart

I have rescued a 1966 Volvo P1800 and am working through various issues common to a tired and neglected 50 year old car.

Let me share with VCBC Newsletter readers my experience with servicing seized front brake calipers (Girling single circuit system as found on early P1800 and Amazon with front disc brakes up to 1968). At today's price of over \$Cdn250 each for new calipers, I opted to rebuild the old units using kits available from specialty suppliers. Kit price is a more reasonable \$Cdn75 each. Contents are new pistons (3), new bore seals (3), dust seals and bleeder valve.

(The problems of seized brake line and/or bleeder fittings are not addressed in this article.)

If the pistons cannot be squeezed in using a clamp, they are seized. Air pressure applied through a brake line or bleeder opening may be enough to push a piston out but as soon as one comes free, the others will remain stuck. In my

case, I was able to grab each of the small pistons with a vice grip and ease them out by a combination of rotation and upward force. There is no easy way to grab the large piston however.

I chose to drill a 11/32-inch hole into the back of the caliper body directly opposite the center of the large piston being careful not to drill into the piston itself. I went over to my 12-ton hydraulic press and pushed the stuck piston out with a 5/16 bolt as a driver through the drilled hole. I then tapped the 11/32" hole to 1/8" NPT thread and screwed in a thread locked plug. (Please note that 1/8" NPT is a tapered thread so only tap as far in as needed to bury the plug to the desired depth. This tap is probably not included in a standard tap and die set so you will have to buy or borrow one.)

I then removed the old bore seals; polished the bores; blew everything clean with air; coated the new bore seals with brake fluid and inserted them; inserted the pistons and pushed them fully in; placed the dust seals over the respective pistons and gently pushed the dust seal flanges

down beside the pistons into the groove in the caliper body. At this point, the caliper is ready to bolt back onto the car.

This work can be done without separating the two halves of the caliper unit. However, I found the servicing much easier by separating the two halves (remove four bolts). After installing new pistons and dust seals, 2 new R05 o-rings (0.5" OD; 0.375" ID; 1/16" section) are needed to reassemble each unit. These are not included in the above mentioned kit but may be obtained at any parts store. The Girling factory uses rings with square shoulders. The machinist reckoned O-rings should work just as well as the square shouldered rings in the shallow recess of the caliper half.

Gregg asked me if the same system would work to remove the 2 small caliper pistons if they are seized. Plugs on that side of the caliper would be prone to interference with the wheel if they were proud of the caliper body. So, while a plug of some sort could be used, it would have to be installed flush with the caliper body. I have

not done it so I would have to test it out. A plug with a recess for use of an Allan wrench would work being very careful with the depth of the tap in order to just bury the plug at full tightness.



# VOLVO 140 SERIES

Which one you buy depends largely on how many doors you need.

VANCOUVER YOUTH SALES  
1000 WEST 4TH AVENUE #101  
OPERATED BY THE VANCOUVER YOUTH COUNCIL  
M2002-0019



## 140 THE FORGOTTEN CLASSIC Part 2

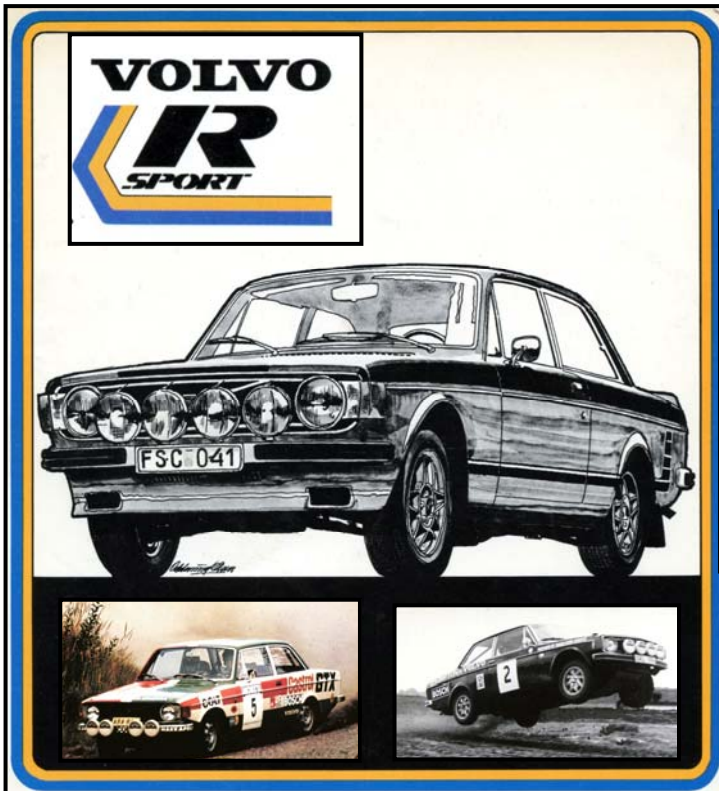
Gregg Morris

### Introduction:

140 the Forgotten Classic Part 1 was in the May 2016 newsletter and described the 140 series from design to early production. It was a

speed freeways or in stop and go traffic. As an added bonus they handled very well. All these attributes won them loyal customers.

These same attributes were noticed by motor-sports enthusiasts. Sporting owners started entering their cars in races and rallies and were suc-



cessful, particularly in endurance events. Volvo took notice of this and started sponsoring "factory" cars developing the high performance parts, needed in motor-

long gestation period. Jan Wilsgaard started working on the design in 1960 and it wasn't until 1966 that the first 144 rolled off the production line. When I was preparing Part 1 it hadn't even dawned on me that this year, 2016, is the 140 Series 50<sup>th</sup> birthday. What better time to celebrate this excellent but underrated car.

In Part 2 we will look at the evolution of the 140 series over its 8 year production; reprint the R&T road test of the 142E; and tell the stories of a couple of club members who are original owners of 140s. The '60s and '70s was a good time for Volvo everywhere, but particularly in North America. Volvos were well suited to conditions here. They could handle the extreme cold and extreme heat. They were tough and were not daunted by gravel or snow. They were fast compared to many of the competition, and were totally competent on high

Volvos also started to be supported by the aftermarket. One of the earliest, and arguably the most famous, is IPD of Portland, Oregon. They started designing and selling Volvo parts, accessories and performance products in 1963 and they are still going strong today. Volvos were great cars as they exited the factory, but now you could make them even better.

This was the world the 140 series enjoyed when it entered the scene. When you bought a new 140 you could leave it just as you received it, as most purchasers did, and rely on it to perform well and last a very long time. But it was cool to know that if you decided to enter it into the East Africa Safari Rally, all the parts, technology and experience needed to make your 140 survive such an event were all available, tested and proven.

### WE ALWAYS GOT THE GOOD ONES

In the '60s and '70s Volvo was truly becoming an international company. The 140 was assembled in 5 different locations; the Torslanda plant in Sweden, Ghent in Belgium, Halifax in Canada and Melbourne in Australia and Shaw Alam in Malaysia.

Like the PV, Amazon and 1800 series, the 140 stayed in production for a long time. In this case 8 years from 1966 to 1974 and was continually evolving throughout its life span. There were differences in cars bound for different markets. Lucky for us in North America, we always got the "good" ones. Ours were always the "sports" models with dual carbs, hotter cams, nicer interiors, sometimes overdrive transmissions and finally fuel injection.

Another unique feature of Volvo in North American is that the 140 cars we got in Canada were assembled in Canada, at the Bayers Lake Volvo plant in Halifax, Nova Scotia that started operation in 1967. Prior to the Bayers Lake plant Volvo assembled 544 and 120 series cars in a revised sugar factory on the harbor in Dartmouth, Nova Scotia from 1963. The Dartmouth plant was the first assembly plant Volvo opened outside of Sweden and the first non-domestic auto plant in North America. The 140 series cars sold in the USA came from Europe. This made for some interesting differences between the US and

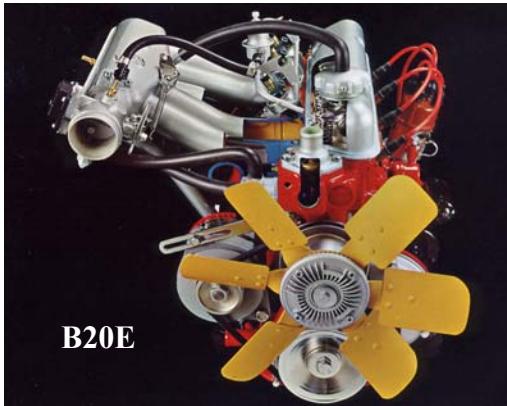
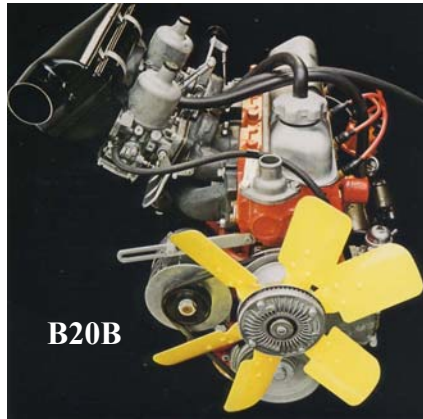


1969 142GT

sport. That led to Volvos R sport department, where Volvo owners could buy these go-fast bits and cosmetic accessories directly from the dealership network.

Canadian 140s in the later years.

What is common to every year of 140 except 1967 is that you had a choice of 3 varieties, a 2 door 142, a 4 door 144 or a 5 door 145 wagon. For me the first choice would be a 142, followed closely by a 145 and I would only have chosen a 144 if I couldn't find any of the other two. I

**B20E****B20B**

wondered how my preferences would stack up against the production numbers. Not very well as it turns out. Of the 1.25 million of the 140s made 44% were 4 doors, 34% 2 doors and 22% wagons.

#### HOW THEY EVOLVED.

The 140s from 1967 to 1970 were visually very similar. They shared nice clean lines of the body, the stamped single piece aluminum grill, 4-wheel disc brakes, 15" slotted silver steel wheels and small stainless steel hubcaps with a small V in a black circle and 12 small fins radiating from the center. (As an aside, because of the 12 fins, these hubcaps make great shop clocks. Just drill a hole in the center and add a cheap battery powered clock movement and hang it on the wall.) The interiors all had the black dash with strip speedometer, long shift lever, and neat lighted hand wheels for controlling the heater functions.

The first 140 on the market was the 1967 144S. It had a vinyl interior and black rubber floor covering and came with the M40 4speed transmission and that wonderful 115hp B18B engine with dual SU HS6 carbs that motivated the 1800 series and the 123GT.

In 1968 the 142S and 145S became available, the seats gained headrests and the Borg Warner BW35 transmission and steering column selector became an option. The 140s were not light cars, and those saddled with automatics were criminal-ly slow.

In 1969 and 1970 the B20B engine added 3 horsepower and the SUs were replaced with twin Strombergs and an alternator became standard. The 145 lost its partitioned rear side windows. The seat faces in the sedans were now pleasant and durable synthetic cloth that felt like a fine hopsacking while the 145 stayed with vinyl. The floor coverings remained rubber.

In 1969 and 1970, in Canada only, you could buy a factory constructed 142GT. It followed a similar format to the 123GT by adding a J-Type M41, overdrive transmission, 4:30 differential and a tachometer on the dash and some cosmetic details such as a console tray, bright strip around the wheel arches and upper rocker panels and 142GT badging. It retained the stock B20B engine and stock suspension, but came with red wall radial tires. These are ultra-rare cars.

In 1970 a new model called the Express was added. In 1969 the PV210 Duett (station wagon) finally went out of production, a full 4 years after the last PV544 left the factory. The Duett was a very popular tradesmans' van and Volvo needed a replacement. The replacement was the 145

Express, a raised top 145 wagon with only two seats and a cargo screen. They were made through 1973 in panel van and window van styles. The Express was not offered in North America, but could be special ordered. A few were.

Bigger changes appeared in 1971. The stamped silver aluminum grill was replaced with a handsome 3-piece unit. The road wheels were also restyled and the floors were carpeted and the windows tinted. On the 142S, 144S and 145S, models, Twin SU HIF carbs replaced the unpopular Strombergs and 2 centimeters. were added to the wheelbase of all models. 2 cm doesn't seem like much but it was added to the rear trailing arms, and you will pull your hair out trying to make early arms fit on the later cars. It is an easy mistake to make, because the arms look identical and it is not easy to see the 2cm difference in length. The biggest change for '71 was the introduction of a new performance model, the 142E with its 10.5 to 1 compression ratio, 130 hp., D-Jetronic fuel injected B20E engine (first introduced in the 70 1800E), leather interior, dash mounted tachometer and M41 overdrive transmission (or BW35 automatic). This was the most powerful and fastest stock 140 produced for North America and was available in Canada and the US.

In 1972 standard transmission cars got a nice short-stick, remote shifter and the automatic also got a floor mounted shifter. The body got flush

exterior door handles, fake wood grain dash treatment with a different consol. Now there were more differences between Canadian and US models. I believe that from 1972 on most of the US 140 series stopped using the carbureted B20B engines for emissions reasons. Instead they used a detuned version of the B20E engine now referred to

as the B20F. It was D-Jetronic fuel injected, with 125 hp. and compression ratio reduced to 8.7 to 1, but able to run on regular gas. The US cars were all badged 142E, 144E and 145E to indicate fuel injection, but all the other features were to "S" specs; that is cloth or vinyl interiors, M40 4spd or BW35 automatics.

In Canada for the 1972 model year, the B20B carbureted engine was retained for most of the 140 series, badged as "S" models with cloth or vinyl interiors, M40 4spd or BW35 automatics., but we retained the 142E as a deluxe model with the B20F engine, leather interior, M41 overdrive manual or BW 35 automatic transmission and a very nice GT instrument cluster by VDO with 4 round gauges including a tachometer. We also had a 145E with its only difference from the 145S being the B20F engine.

In 1973 the bumper regulations came into effect and the cars had larger bumpers with shock absorbers, reinforcing bars were added to the interior of the doors. The front grill was now plastic and of a different design and the taillights, and signal lights were a new design. The interior dashboard was totally redesigned and would be carried over to the 240 series. In Canada the 142,4 & 5 S still had the B20B carbureted engines and the 142E was now called the 142GL and still came with leather and overdrive and D-Jetronic fuel injection. It is a common misconception that the 1973 B20F engines were detuned even further than in 1972. This was not the case. It was simply that the horsepower rating system was changed from SAE gross to SAE net. SAE gross horsepower was measured using a blueprinted test engine running on a stand without accessories, mufflers, or emissions control devices it gave a theoretical maximum power. SAE net gave the horsepower at the flywheel with all the ancillaries included. i.e. real world horsepower.

The last iteration of the 140 series came in 1974. The only changes from 1973 were even bigger bumpers, different (and inferior) carpeting) and the 142 and 144 could be had with GL trim, leather and overdrive but now with a B20F engine with Bosch K Jet, mechanical fuel injection. The end was here. §

**1972 145E**

**ORIGINAL OWNERS**

Two of our club members still have the 140s they bought new.

**Al Imre, Original Owner of a 1971 142E**

Up until 1971 he had been driving one of the early hot versions of the Corvair. This is funny because one of the 140 ads of the day showed a Corvair with a Volvo 142. The caption read "Unsafe at Any Speed, vs. Safer Than Ever Before." In 1971 Al got married and he decided to buy a new car. He had heard something of Volvo's reputation for safety and durability from a couple of Swedish engineers he worked with at BC Hydro. What actually prompted him to test drive one was reading a road test article about the "then new" 1971 142E in Road & Track. He took a test drive and found that the 142E looked good, handled well and had lots of power due to the fuel injected B20E engine from the 1800E sports car. He was impressed and bought a gunmetal grey metallic example from Pete Docstader's, Vancouver Volvo at 1090 W. Georgia St, for \$3686.75. He still owns the car 45 years later and he is still impressed. A pretty good investment.

**Dave McAree, Original Owner of a 1973 142S**

The 73 142S was my first Volvo and I have had 4 others since. An 84 245 turbo Wagon, 1990 744 Turbo and a 2001 V70 turbo and a 1998 V70 non turbo. In 1973 Louise and I were looking for a new vehicle. I was an RCMP officer working in North Vancouver and attended a motor vehicle accident involving a Volvo and a Pontiac. The Volvo was T-boned on the passenger side, and the passenger in the Volvo was able to exit vehicle by the driver's side unhurt. The Pontiac left the scene behind the tow truck while the Volvo drove off under its own power. I told Louise we should maybe look at one of these vehicles. My enquiries on the Volvo also revealed that the 1973 model year was the first year that they installed round steel bars in the doors which again added to their safety. The new style bumpers with mini 5 mph shocks did not influence the purchase but have been tested "by accident" and held out 100%.

We purchased it at Ben Jacobsen Motors in Richmond on April 12, 1973 for \$4560 which included a \$5. radio that they sold for \$100. I chose the carburetted S model over the fuel injected GL model because as an RCMP officer I could be posted to remote communities and I thought it would be easier to find someone to service a carbureted car.

I restored it in 1995 because I always intended to keep it. Both



**AL & TODD IMRE  
1971 142E**

front fenders, hood hinge area, upper inner fenders, rear wheel arches, and one spare tire "tub" were all replaced.

The highlights of its use have been transporting my daughter, my son, and my grandson home from hospital after their respective births. The good points with this car are its reliability, comfort, good mileage and of course I like the way it

looks. The only problem area I have had is that in its early life, I replaced the water pump three times. The rest of the drive train components are original.

We have now owned it for 43 years and my son Michael will inherit the Volvo in time.



**DAVE & LOUISE MCAREE  
1973 142S**

# ROAD & TRACK ROAD TEST OF THE 1971 142E March 1971

## ROAD & TRACK ROAD TEST VOLVO 142E

March 1971

*A balanced set of improvements makes this the best 142 yet.*

All the components are familiar, the rather boxy 142 sedan, the B20E 4-cylinder pushrod engine introduced in the 1800E last year, and the M41 gearbox with hydraulic overdrive. Volvo has combined these to produce the 142E. Not really a Swedish supercar (there are no racing stripes), it is an improved version of the 142S with more power and more items included on the already impressive list of standard equipment.

It's a nice package. Besides the aforementioned items, the list includes 165SR-15 Pirelli tires, leather seats, electric rear window defroster, tinted glass, inertia reel seatbelts and carpeting.

The B20E engine is the standard B20 engine (118 bhp @ 5800 rpm and 123 lb-ft of torque @ 3500 rpm) with Bosch electronic fuel injection, 10.5:1 compression ratio and more radical cam timing which brings it to 130 bhp @ 6000 rpm and 130 lb-ft of torque at 3500 rpm. Now the Volvo owner needn't flinch when someone questions the performance of his expensive imported sedan. The following comparisons should be helpful:

	142E	1800E	142S
Test weight, lb	3080	2835	2812
0-60, sec	10.5	10.1	12.3
¼ mile, sec	17.5	17.5	18.5
Speed at end	76	80	74

The additional 7 lb-ft of torque is not noticeable at low speeds because Volvo took advantage of the fuel injection to use more radical valve timing but it is as good at low speeds as the carbureted version. One staff member complained about having to row the car in traffic but in general we found the engine to be flexible, tractable and reasonably quiet in normal driving.

The little black box (silver, actually) which is the heart of the Bosch electronic fuel injection is located in the passenger compartment under the right front seat, thus keeping it away from the damaging heat of the engine compartment.

Freeway driving is the forte of the 142E, providing relaxed (both car and passengers) cruising at and above freeway speeds. The reason for this is the Laycock-de-Normanville overdrive unit which changes the busy 4.3:1 final drive ratio to a more relaxed 3.42:1. A stalk on the steering column controls the unit and although it isn't necessary to use the clutch when going into overdrive, we found using it eliminated a clunk when it engaged.

Handling is typically Volvo, that is, lots of body lean and final oversteer. One feels secure in a Volvo, even during hard cornering, despite what you see from the outside as a spectator. Outside front tire ready to tuck under, inside rear wheel lifting off the pavement and a horrendous amount of body lean makes for scary viewing.

The 142E gave a good account of itself on the skid pad with a speed of 31.2 mph and a lateral acceleration figure of 0.649g, the Pirelli tires doing their job despite the drama.

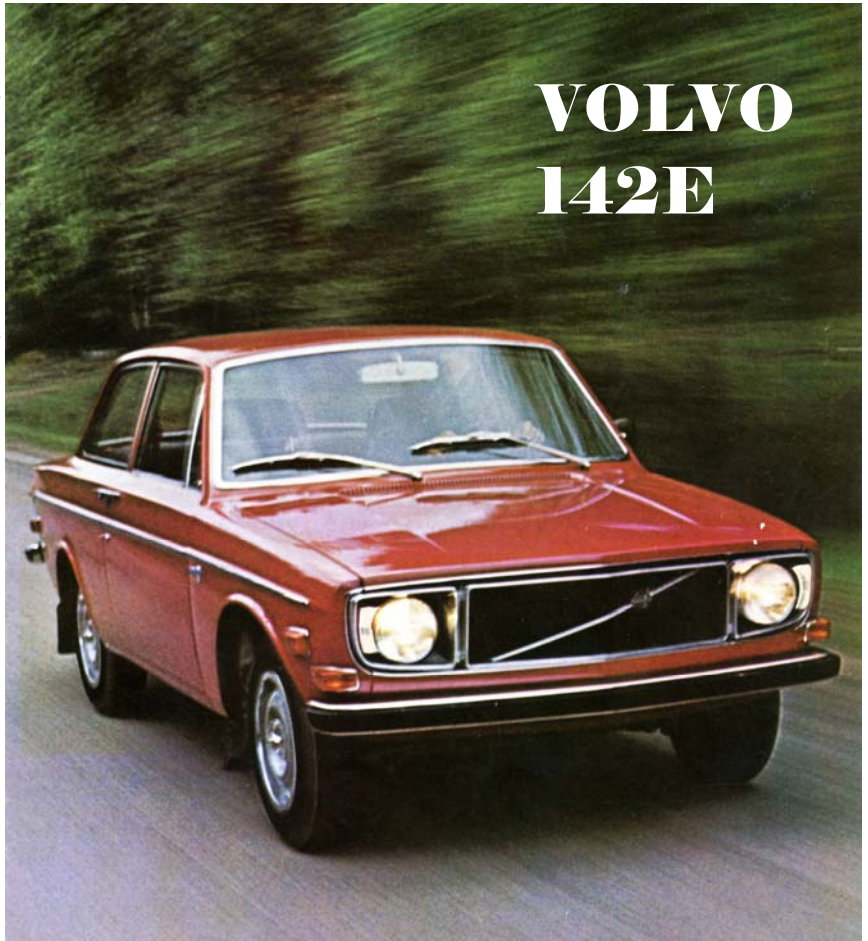
Another Volvo trait, the small turning circle, is well appreciated. The 16-ft car will turn curb-to-curb in a bit over 30 ft.

The interior, as with all the 140 Series Volvos, is comfortable. All but one of the staff liked the seats with their adjustable backrests and soft to firm settings for lumbar support.

Seat belts deserve a mention here too. The idea, 3-point belts on inertia reels, is good and superior to most systems in common use but the examples in the two cars we drove were frustrating. In both cars the passenger belts were excellent, allowing slow forward movement but locking at the slightest tug. The driver's belts, however, seemed to have minds of their own. The first allowed the driver to move anywhere he wanted; unfortunately, it would allow him to go through the windshield before it locked. The other was so sensitive it refused to be unrolled at all.

Our usual gripes about not having enough instruments, especially a tachometer, apply here. (Note: A dash mounted tachometer came in all Canadian 142Es). Also, the red light which tells the driver when overdrive is engaged is an unfortunate choice. It is a bad habit, in a car which relies on warning lights, to get used to a red light glowing on the dashboard.

The 142E renewed the Volvo speedometer controversy. It is a ribbon design with a slash cut in the red indicator to provide a pointer. The question of which portion of the ribbon to read comes up every time we test a Volvo. Reading at the pointer which seems most logical, has the speeds five mph fast on the entire scale. Reading behind the slash, where the



indicator is full width, gives spot-on speedometer readings. (Note: Canadian 142E and GL had VDO circular gauges including tachometer from 1972 to 1974.)

A tall 57 inches, the car has excellent vision in all directions. Locations of the fuse box in the centre of the dashboard beneath the heater controls makes for easy service.

A Blaupunkt AM-FM stereo radio was the only extra on our test car. It is an expensive option but made the long freeway trips at which the car excels more enjoyable.

In all we found the 142E to be an improved version of the 142S rather than a sporting sedan. If one doesn't mind shifting often in traffic, the comfort, relaxed cruising and fuel economy make it worth consideration. **(I bet if the 142E had come with IPD bars and Bilstein shocks it would have been considered a sporting sedan)**



**CONTINUED FROM PAGE 3**

The first half of the drive was north to the Fraser River and then east through lush green farm land until we reached the old Matsqui Village and ducked under the south end of the Mission Bridge.

We had a nice variety and a colourful selection of Volvos on the tour and lots of folks stopped to watch us drive by. As I remember the order it was Allen and Dorothy in their ice green 06 XC70, Dave and Louise McAree Ocean Green 73 142S, Jim and Loui Tennant light metallic blue 88 244, John and Liana Marchioni burgundy 90 244, Ed and Edith Lay red 67 123GT, Dennis Cowell (all the way from Kamloops that morning) black 92 745, Carl Selden grey 68 1800S, Al and Todd Imre metallic grey 71 142E, Rose and I red 73 1800ES and herding us from the rear John and Celine Cripps blue 63 PV544.

After we picked our way over a rutted trail under the Mission bridge we looped north onto the bridge and took the first exit north of the river. That led us to the Lougheed Hwy on the east side of downtown Mission. We continued a little east on the Lougheed then north on Stave Lake Street way up behind Mission, then west on Richards Ave. which put us on Dewdney Trunk Road that led us right to the Stave Falls Dam and the Visitor Centre/Museum.

The crest of the Stave Falls Dam is actually part of Dewdney Trunk Road and signs point you down to the large tree-surrounded parking lot. We parked the cars side by side and took a few pictures, then out came the chairs and picnic lunches. We set up on a nice elevated lawn overlooking the parking lot. After lunch we walked over to the visitor centre, which is the old Stave Falls powerhouse. It is an impressive place and the BC Hydro tour guides welcomed

us warmly. They showed us a 10-minute introductory video and then let us loose in a hall full of electricity and power interactive displays. That kept us amused for half an hour. When we had finished playing, our guide fitted us all out in hearing protectors, then electrified a large Tesla coil that produced some pretty impressive crackling arcs. This wild looking contraption led the way to electric power transmission as we know it. After that we were taken on a guided tour of the interior of the powerhouse with its century old electric power generating turbines.

By the time everyone left the visitor centre it was time to pack up and clatter off. Many thanks to Allen and Dorothy for organizing such an enjoyable drive and destination. If you have not been to the Powerhouse at Stave Falls, it is well worth a visit. Allen and Dorothy have volunteered to arrange next years' summer cruise and picnic. Don't miss it.

**B.C. DEALER DISCOUNT LISTING**

(Unless stated otherwise, the discount applies to over the counter parts only and a valid VCBC membership card is required.)

**Don Docksteaders Motors**, 8530 Cambie St, Van, 604-325-2999, or 1-800-663-3359, New pts: 15%,

**Ed Schram Motors**, 112-13375 76th Ave., Surrey, Ph. 604-599-6081, New & Used 15%

**Chapman Motors**, Cobble Hill, B.C., 1-800-663-7208, New parts 10%, Used parts 20%

**Chapmans of Victoria** 751 Cloverdale St., Victoria, Ph. 250-475-2213, parts and service: 10%

**Chapmans of Nanaimo** 20 Cliff St., Nanaimo, BC, 250-754-4807, parts and service: 10%

**Volvo of North Vancouver**, 809 Automall Drive, N. Vancouver, B.C. Ph 924-0314, New Parts 15%

**Volvo of Surrey**, North Surrey Automall, 15383 Guilford Drive, 604-588-6088 New Parts 15%

**Volvo of Victoria**, 2735 Douglas St., Victoria, BC, ph 250-250-382-6122 New parts: 15%

**Courtenay Car Center**, #12 5<sup>th</sup> St., Courtenay, BC, 1-800-663-0194, 15% parts and labour.

**Dents Unlimited** 15% w VCBC card 604-469-9545

**Lordco Part Stores** up to 30% with Lordco card.

**Oceanside Auto Appraisers Ltd** 10%: appraise cars but drive Volvos 250-927-4634

**Polar Batteries** 1258 boundary Rd. Burnaby BC, 604-294-1891

**Fibrenew** mobile leather & vinyl repair, Vancouver, 604 313-4703, 20%

**CLUB DIRECTORS:** John Cripps, Dave McAree, Gregg Morris & Bert Sherlock

**MEMBERSHIP FEES:** Annual fee: \$20 From July 1 to June 30 each year, non-prorated.

**TO JOIN:** Send \$20 cheque payable to V.C.B.C., with your name address, telephone #., E-Mail & the year model and colour of your Volvos to the club address noted on page 1 of the newsletter. Membership application form is printable from club website, [www.volvoclubofbc.com](http://www.volvoclubofbc.com)

**CLUB BENEFITS:** events, membership list, newsletters, club decal, membership card entitling members to savings from companies on our discount list.

**CLUB CLOTHES:** T shirts \$15, golf shirts \$25, Sweat Shirts \$30, Jean Shirts \$35, Ball Caps \$15

**DISCLAIMER:** VCBC cannot be held responsible for technical advice given in good faith in it's club newsletter, or by its officers, editorial staff, or members

**CLASSIFIED ADS (pictures on website)**

59-445-offers runs, drives, B20, M41, 122 disc brakes, factory roof rack, needs bodywork and paint. Richard [perry.rv@gmail.com](mailto:perry.rv@gmail.com) Saskatchewan

59-544-\$6,000. Excellent running condition. New brakes all around June 2016. Some rust around the fenders. Tom Kitchen at 250-248-6995

63 Volvo 122 2-dr-\$8000. Exc cond, reblt engine and other mech components, front seats redone, Volvo radio, minor bodywork needed est. \$500 to get collector plates. bruce, 250-318-4499 Kamloops, [bruce.dunn43@gmail.com](mailto:bruce.dunn43@gmail.com)

67-123GT-\$17,500, Restored to better than new. No rust, repainted Eng. rebuilt, custom walnut dash. New American Racing wheels & tires. Pictures on Kijiji Vancouver under classic cars. [pauljer9@gmail.com](mailto:pauljer9@gmail.com)

67-123GT-123 GT parts car, dk green/tan, could be restorable, not running, have keys. Price best offer above \$800. Photographs available. Other old Volvos for sale as well.. Located just north of Kaslo, BC. Gordon. [gandjb@netidea.com](mailto:gandjb@netidea.com)

71-1800E-\$6500, turquoise blue, original wheels, clean and runs great, As is. Where is. Bill Karr, 250-553-2318, G.D. Crescent Spur, BC, V0J 3E0 (100 miles east of Prince George off Hwy 16)

72-142S Project-\$1500, All rust removed by a professional bodyman, body in 2 part primer, front and rear suspension rebuilt, IPD lowering springs, Bilsteins, rebuilt SU carbs, head ported/polished/flow tested/planed, big valves, IPD camshaft , Radiator reblt, all parts to finish restoration, David 250-722-2596 or [mudgkin1@telus.net](mailto:mudgkin1@telus.net)

73 1800ES, restoration or parts., also some parts and rims Mark Olson, [molson88@gmail.com](mailto:molson88@gmail.com)

4 @ 164'S and parts for \$4000, 72 Teal, 4sp od & sunroof, running; 75 gold auto running; 1 parts car with rebuilt automatic and another with a good 4sp & od, plus lots of parts, good engine, manuals etc. William, 250-285-3468, Heriot Bay.

83-244, restoration or parts., also some parts and rims Mark Olson, [molson88@gmail.com](mailto:molson88@gmail.com)

88-780 Bertone-\$4000, met. Beige, tan leather, V6, 3<sup>rd</sup> owner, garaged, rust free, excellent cond. in and out, Michelin tires, Bilstein shocks, new front bushings w.pump hoses, ac pump and condenser and more, recent tune up, comes with extra parts and factory manuals, Flemming 250-516-0108, [fandersen@me.com](mailto:fandersen@me.com) Victoria .

**SANDY WILL'S PARTS COLLECTION:** Tons of pre 75 Volvo parts, all models (544/122/1800/140/160) sorted and accessible, give us a call

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122 fibreglass right and left front fenders and nose panel. Unused. bought years ago from IMPACT. Fenders \$150 each, nose \$100, plus shipping. Gordon. [gandjb@netidea.com](mailto:gandjb@netidea.com) Kaslo

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