

# Renault News

# 102

Spring  
2012

## Carlisle 2012!

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## Renault Owners Club of North America

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Established in May, 1991, La Jolla, California, USA

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Renault News is the newsletter of the Renault Owners Club of North America. This newsletter is published quarterly. We are a non-profit, all-volunteer club. Our purpose is to help one another keep our Renaults in shape and on the road. This newsletter is not an official publication of Renault USA or Régie des Usines Renault. Permission to reprint original material is granted to any non-profit membership publication on a single-use basis if full credit is given to the author. Originally published items become property of the club.

## New Members

US\$25 for 1 year online membership: worldwide

US\$45 for 1 year postal membership: (U.S. only)

US\$60 International postal membership (including Mexico & Canada) Join online at <www.renaultclub.us/join.html>

Or send payment, along with details about your cars to:

Sharon Desplaines

7467 Mission Gorge Rd #81, Santee CA 92071

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## Renewals-Registry Information and Address Changes

Renew online or mail payment to:

Sharon Desplaines

7467 Mission Gorge Rd #81, Santee CA 92071

Tel: 619-334-1711

Email: hummer5@cox.net

## Classified Ads

Place ads online at <www.renaultclub.us/forum>

Or mail brief ads to:

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**Marketplace display ads available**

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**Order back issues on CD** online at club website.

**Issues 1 to 57 only \$7**

Individual hard copies US\$2 each:

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Spring 2012 Members Only section:

**Username: bell**

**Password: alpine**

### **January 2012 New Postal Members**

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### **January 2012 New Online Members**

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### **January 2012 Member Renewals**

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Damide, Francois	McLaughlin, Donald
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Green Wheels Center	Reynolds, Charles
Sustainable Transport	Russell, Dominic
Gross, Thomas	Schmelzer, John
Lea, Sandy	Shoen, Paul
Lotz, Christopher	Wheeler, Ralph
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### **February 2012 New Online Members**

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### **February 2012 Member Renewals**

Harding, David	Manuel, John
Ketchpaw, William	Nicotera, Mark
Kucsma, Giff,	Stinson, James
Kutcher, Gary	

### **March 2012 New Postal Members**

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### **March 2012 Renewal Members**

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Cavenne, Lonnie	Manuel, John
Deak Jr, Mike	Martin, Dale
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Flynn, Tim	McLaughlin, Don
Gallagher, Lisa Design	Nicotera, Mark
Glauser, Rolf	Nosaka, George
Godby, Henry	Pontin, Simon
Grigg, James	Reynolds, Charles
Harding, David	Rivera, Jose
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### **April 2012 Renewal Members**

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Mejia, David	Voglar, John
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*Continued on next page*



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### May 2012 Renewal Members

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Buschman, James	Cottle, Wayne

Djellouli, Alo  
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English, Joseph  
Eye, Gary  
Gardner, Michael  
Geslin, Guy  
Gibson, Thomas  
Gilpin, Girard  
Herrera, Miguel

Keenly, Mike  
Knapper, John  
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Russo, Mark  
Stevens, Kenneth  
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Wallace, Caleb  
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### June 2012 Renewal Members

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Atkinson, Clive  
Candy, Warren  
Hahn-Troxler, Heidi  
Knox, David

Lane, Allen  
O'Rourke, Liam  
Powers, Warren  
Weeks, Hank

## 2012 Renault Events

**June 22-23:** CHEER International Car Show Georgetown, DE  
(Featuring: Powered by Renault)

**July 6-8:** LeMans Classic, LeMans France (Featuring Alpine  
A110 50 Years)

**August 15-19:** Monterey Motorsports Reunion, Monterey, CA  
Sept 7-9 Road America Vint. Races Elkhart Lake, WI

**September 22-23:** 40th Anniversary of the Renault 5, Montl-  
héry, France

**Nov 4:** Best of France & Italy at Woodley Park, Van Nuys, CA

**Nov 16-18:** United States Grand Prix, Austin TX



## Find Us on Facebook

By Marvin McFalls

**A**fter fighting technology and the masses for years I have found my way to Facebook, so after several requests from owners, I decided to put the club on Facebook. You can check us out at Renault Club US:



[www.facebook.com/groups/291079754246181](http://www.facebook.com/groups/291079754246181)



# Ed's Renaults

By Ed

I've been a car nut all my life although I suppressed car nut behavior from shortly after marrying my wife and beginning our family up until a few years ago. As I approached retirement I relented and allowed myself the luxury of searching the web during lunch hours for the cars of my youth including a '57 Dauphine [picture 1] I owned briefly. This filled the bill until I retired in fall 2009.

Relieved of work responsibilities I allowed myself to wander back to the "car" days, thinking more about a special little red '63 Dauphine [picture 2] my wife Carolyn and I owned when we were first married, than the cars of my teens. Carolyn also realized that I was going to be around the house a lot more so she supported me "having a car to tinker with" – or in girl talk – "to keep me out her hair." So, I searched for a red Dauphine but couldn't find just the right one. About this time I ran into an old friend, Giff Kuscma, a past Renault club member and long time owner of an R10 and a very unique Renault Powered Lotus Europa which he restored. After talking about his many years with the R10, I decided to search for one. As luck would have it, I stumbled on a decent looking '69 R10 on eBay. The price was right and it wasn't too far away – in East Tennessee. After a few calls, I drove up and test drove the car and bought it. I brought it home on U-Haul trailer to Florida [picture 4]. This R10 had a little more than 53000 miles on it and had been purchased new in the Denver area where it was cared for. Then it moved east where it appears to have seen some rough times. Then it was modestly refurbished. It needed a lot of attention but the car was all there, it was drivable, and it stopped. The original blue/gray metallic finish had been repainted Viper purple metallic (yep) and the original vinyl inserts were reupholstered in a gray herringbone cloth, nicely done. The Renault AM radio worked, as did the wipers, interior lamps, speedometer, odometer, and dash lamps and gauges. It had a large bondo patch on the hood which was lifting so I had a local shop straighten it properly and refinish it. The parking lamp lenses were in bad shape so I replaced them with NOS courtesy of Giff. The Solex 26/32 carburetor had lots of issues so I installed a new 32/36 Weber carburetor similar to the one that came on some Caravelles from the factory. It starts without the choke and although over jetted it drives nicely. I did all the little stuff – checked and reset valve clearances and refurbished the distributor – a tiny thing – and freed up the centrifugal advance and then purchased a NOS vacuum advance. It's hard singlehandedly to watch the main pulley and its timing marks while holding a strobe and rotating the distributor so I experimented and got it pretty close by trial and error. I replaced the coil and plugs and it ran a little better yet. Since then, the tank's been flushed, the faux wood dash has been out and refinished, glove box linings reglued, directional switch repaired [picture 6], new proper sized Michelin ZXs put on (found a place that still spin balances tires), and the radiator repaired and bled including the heater core. Jacques Lynn provided a new thermostat and new radia-



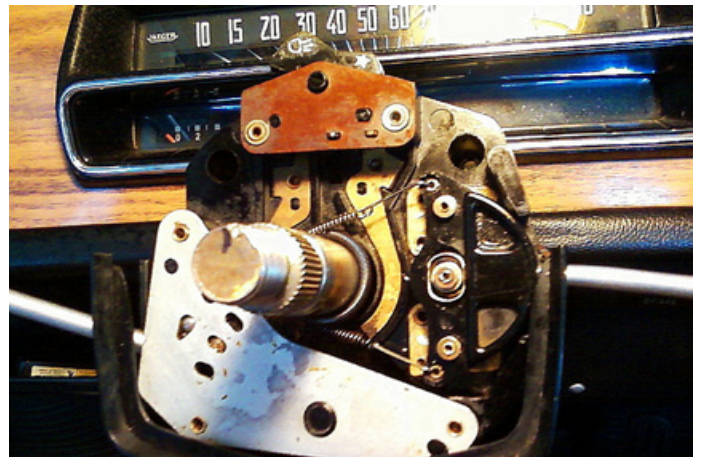
picture 1 - 1957 Dauphine I owned briefly as teen



picture 2 - Our first family car, a 1963 Dauphine



picture 4 - The R10 on trailer heading home



picture 6 - Directional return spring repair and new faux wood trim



tor cap (and numerous other items). With the radiator shroud out I redid the coolant bottle piping and replaced a half-dozen or so missing fasteners around the shroud and tightened everything up, eliminating some rattles. The muffler was about rusted through on the bottom so it was replaced with an aftermarket Spanish unit from Jacques. The water pump began to wobble and growl so I replaced it with a new unit. The driving position seemed low to me so I fabricated and added the 25mm strip spacers shown in the parts manual which made the car much more comfortable. The car wasn't level. The rear squatted and felt waggly in turns. I thought it might be sagging coils or compressed upper rubber cups in the spring towers. Since I was going to check the rear suspension out I went ahead and swapped out the rear shocks at the same time. Rear shocks are hard to find but Jacques provided some good quality Chevette shocks that just needed a "little modification" to fit. It turned out the cups and springs were still good and the rework on the shocks was worthwhile - the car rode better - but it still squatted. I mentioned this to Jacques and Jon Burnette and one or both suggested that the transmission mounts were likely delaminating and peeling off their mounting plates in effect lowering the body over the transmission and axles - which they were. With the side transmission mounts replaced the car sits more or less level [picture 8] and drives better. I installed all new rubber seals around the doors and new front side window wipes sealing the doors and quieting many rattles. And the little rubber bits around the door handle and engine door pushbuttons were missing, allowing them to rattle in their openings so I replaced those - a rubber kit from Jacques - removing yet more noises and rattles. Adding the rubber and tightening things as they should be made a much nicer car and provided protection against the elements - Florida rain especially. So the R10 was promoted to an "outdoor" car to make room for some new acquisitions. So, with the exception of the 4.50:1 final drive ratio resulting in a very busy engine at highway speeds (4000 RPM at 60) the car is enjoyable to drive except for the lack of air conditioning during the summer. I drive it all over the county - avoiding the interstate and expressways. But in spite of the fun I was having with R10 I kept a lookout online for a Dauphine - just in case.

Sure enough, a dark red 1965 Dauphine Gordini came up for sale, nearly identical [picture 9] to the one Carolyne and I had owned when we were first married - same color, two years newer and fitted with the four speed and disk brakes. Records showed it had been purchased new in Orlando, Florida, in '65, driven for several years and then stored for about 20 years in a garage. The second owner purchased the car in 2005 and went entirely through the mechanicals (engine, brakes, and transaxle) and replaced the rear wiring harness. Apparently storage had been kind to the body and upholstery. There was some refinishing done but the camel colored vinyl upholstery is original and although the front seats show some wear the inside is good overall. When the second owner completed his refurbishment he showed the car in local shows in the Orlando area, winning his class at least once. Sometime afterwards the car was sold to owner three



picture 8 - R10 after shock absorber and trans mount replacement



picture 9 - Recently acquired 1965 Dauphine Gordini



picture 10 - Sofica Heater with new ducts prior to hooking up heater hoses



picture 11 - 4CV arriving on upper level of transporter



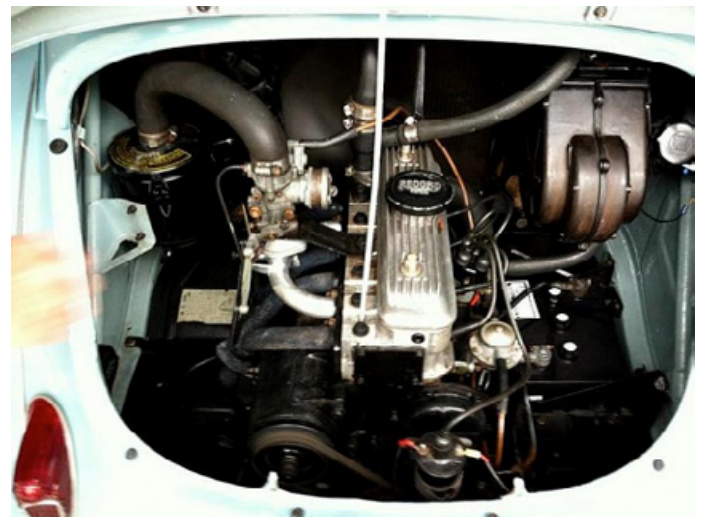
living in Fon Du Lac, Wisconsin. He used the car for weekend cruiser events and shows during the summer - but not so much in the colder weather because the second owner hadn't replaced the heater ductwork and there was no connection between the Sofica heater and the passenger compartment (no heat, no defrost). Then last year he moved and lost some very nice free covered, heated parking spaces and decided to part with Dauphine instead of a really pristine Studebaker President he shows. And it likely still has its heater. I bought the car based on telephone conversations and lots of pictures and I was happy with the car that arrived in a closed trailer. The car starts and runs fairly smoothly but suffered from a "silty" fuel tank which I've flushed a couple of times. The carb on this car, a 32PIBT Solex, has had a rebuild kit installed properly. The levers on the cabin manifold control were broken and replacements are rare. I used a combination of small pins through the breaks and clear epoxy to repair them and they work fine. I installed new flexible hot air ducting [picture 10] (Jacques). There are some loose things rattling in this car but I'll sort it out when I install new OEM door seals and rubber floor mats (Argentina). All the exterior and interior lights work including the driver and passenger side cabin lamps - and they work properly. The brakes were gone through by owner two but need a pad renewal. I was installing new sun visors and rubber bumpers when I noticed a very nice example of Dauphine's predecessor - a 4CV - for sale in a suburb of Chicago.

Did I mention that I've wanted a 4CV ever since 1962 when I worked with an engineer at Honeywell who owned a 4CV which he claimed had competed at Marlboro Raceway in the summer of '60 or '61? My coworkers and I kind figured it was baloney but a couple things gave me pause. First, I inspected the car on my lunch hour. It looked like a standard white 4CV. The exterior was quite stock with a few scuff marks, two piece wheels and street tires. Looking through the louvers at the engine (the lid was locked) I could see a very large diameter header and intake, a very large carburetor and air filter. And a large (and loud) pipe emerged from the rear. (These parts were all very much beefier than the Autobleu kit on our chief engineer's '60 4CV). Second, I was driving my Dad's '59 Rambler American six to work one morning (the Dauphine was in a body shop - another story) and came upon him and his 4CV (there was no mistaking the sound of his car) tooling along. I decided to pass him, but when I came abreast of him he recognized me and put his foot down, blocking my pass and then pulling away. Granted, a Rambler wasn't that fast but I couldn't believe a stock, or nearly stock, 4CV could dust a Rambler. So, maybe his car didn't see Marlboro but it was very fast and I wanted it. We never knew for sure about the owner's claim because he transferred elsewhere.

The one I saw was on eBay but the ad ended before I responded. But I noticed it again in the Renault Owners Forum and contacted the owner. The car is a '57 with a sun roof, Autobleu kit (standard on U.S. models) [picture 11] and 3 speed gearbox. It was worth a look so I flew to Chicago one morning and inspected the car. It was a very good example

of rehabbing a car out of storage (stored from about 1962 until 2000). As with the Dauphine the new owner did a complete mechanical going through to free up the engine, gearbox and brakes. I had it shipped enclosed (as I did the Dauphine) [picture 12]. The interior looks new but is original and the headliner is the original taupe cloth material. The exterior was very good when taken from storage and has been resprayed the original - or nearly so - light blue. It has the newer single piece steel wheels. New door and sunroof rubber seals were installed and it came with period Michelin X tires of the correct size. The only things needing attention are the brakes, which at a minimum need bleeding, but more likely a little work at the front. Having a 5:1 overall final drive ratio, we'll limit our rides to short errands.

It looks like I'm going to stay busy in retirement with our little family of cars [picture 14] - and Carolyn wants to know when she can start shopping in the 4CV. 🟢



picture 12 - 28 horsepower Autobleu (U.S.) version



picture 14 - Family Portrait



# Huixquilucan 2012

By Marvin McFalls

Unlike the past few years, when all Renaults and clubs were gathered around the display of new Renaults, this year's event was divided between the Clubs with their vintage cars in the middle and manufacturers with their display around them. It was similar to our first visit to Huixquilucan back in 2008, only this year the Alpine club was in the main display area and the other Renaults were in front of the presentation stage. Renault was actually the only major manufacturer that didn't have a display this year.

All that said, our friends from the Alpine club had pulled out all the stops in celebrating the 50th Anniversary of the A110. Brent Bartley and I flew in at 12:30 on Friday, April 20th. About an hour later, my friend Rex Parker, an A108 owner, flew in from Los Angeles. Rex is a Brazilian (as well as his Alpine) and he wanted to see the Mexican Alpine community. The three of us went to our hotel and cleaned up before paying a visit to Alberto Gironella's garage.

Brent had visited before, but for Rex it was his first visit to North America's Renault Mecca. Surprisingly, my good friend Mario Carranza was in town. Mario lives in Miami and I have been working to help him bring his Alpine to the US. As it turned out he had come home for business and was lucky to find out it was the weekend of the Concours. Alberto and his crew were working to replace the clutch in 1800S Alpine. So Mario, Brent and I bellied up to the bar while Alberto had to wear two hats; one of host and the other of shop foreman.

Meanwhile Rex was able to get a close look of all the cars in the workshop as well as check out Alberto's library. After a few hours, Alberto's wife Monica and son Alberto Jr. also arrived. By about 10PM, the guys were starting to getting tired so we caught a taxi back to the hotel. We thought we had a ride to the show, so the next morning we met in the lobby at 9AM. Unfortunately we had to come up with another plan, so I called my friend Gustavo Becerra to work out the details.

As we were getting ready to leave, Ben Becerra and his family also arrived at the hotel, so after couple of stops we finally headed out to Huixquilucan. Once we finally found the Albertos, both Gironella and Club President Gonzalez, we were able to get our tickets to enter the show. While everyone else was hungry, I decided to check out all the cars. I found my good friend Javier Gonzalez from Club Renault Gordini Sport and we spent some time hanging out. We were able to see the unveiling of club President Hector Perez's R8 as well as a Caravelle that had been converted from Dauphine engine to a later R8 drivetrain and radiator.

By then I was starting to get hungry, so I made my way to the Alpine tent for lunch. In the tent we found Mauricio Peña, Angel Espinosa and Alejandro Konstantonis. Soon we were joined by Jose Miguel Diaz Goni and his family. Angel and I had a long conversation about Fuegos as well as looking





at Goni's iPad, with an incredible slide show of R5 Turbos. By then Brent, Rex, and Gustavo returned. Rex began to hold court with Alberto Gonzalez, Carlos and Juan Antonio Calvillo and many of the other Spanish speaking members while Brent, Gustavo and I went to check out all the amazing cars.

After spending a few hours checking out cars we returned to the Alpine tent. Rex was still talking it up with all the Alpine club members. After a little snack, we headed back to the city. Gustavo wanted to show the guys his Renaults. He even allowed Brent and I to drive his Megane and R12 wagon. Unfortunately his R12 sedan had a dead battery, so we didn't get to test drive it. After a bottle of wine and nice conversation, Gustavo took us back to the hotel. Before letting him go, I presented him a gift of US model side marker lights for his R12 Sedan. Gustavo was very happy.

On Sunday we again awoke early and Gustavo came to pick us up for another day at the show. It was another beautiful day and we saw almost no traffic going to the show. Brent, Gustavo, and I stopped by the Gordini club area and spoke with Miguel Cacheaux. He showed us his R5 Alpine, Javier and his lovely wife. We also ran into Pierre Vilalta, our French friend in Mexico. Pierre's mother and father had come for a visit and his father was really enjoying the show. The rest of the morning we continued to circulate the show field, talking about cars, politics and other news of the day

We decided to leave the show at 1PM, so Brent, Rex, Gustavo and I regrettably had to say goodbye to our Alpine friends. Leaving early was hard, but it gave us the time to visit the Museo Del Automovil. All the times I have been to Mexico City I had never been there. It is quite a great museum featuring mainly American and European models from the 1920's thru the 1960s. After visiting the museum we decided to have a nice dinner to show Gustavo our appreciation for hauling us all over Mexico.

Following dinner, Gustavo proposed a visit to Cathedral and Aztec Ruins in the city. Rex had not visited Mexico City in nearly 30 years and he had never seen the ruins discovered a few decades ago. A brief history lesson was provided by Gustavo, Rex, and myself (my parents would have been proud to see me using my extensive knowledge of Aztec history). I believe Brent learned more in an hour than he had in more than fifty years about Mexican history.

On the way back to the hotel Gustavo remembered another type of ruin. Right along a major avenue in Mexico City, we found on a side street seven Renaults that had not been on the road in years. I can't believe they would allow these cars just to sit on the street. I wish my neighbors were nicer about my Renaults. As the sun started to set we returned to the hotel, Ben Becerra joined us for a final drink. We hung out in the bar lobby for a while, talking about all the wonderful cars and new friends we had made.

We finally said good night to the Becerra Brothers, and





retired for a good night's rest. The next morning we awoke early. Brent, Rex, and I went to French café for Breakfast. As we had an afternoon flight, we said farewell to Rex and went back to the hotel to pack. Our return flight went well, but when we arrived in Charlotte our gate was unavailable so we had to wait for ten minutes for another plane to move. When we finally reached customs the line was really long. After waiting an hour we finally made it through, Brent had less than fifteen minutes before his flight left by the time we made it back through security. If we had been delayed any longer he wouldn't have made it.

It had been another great trip to Mexico, I look forward to my next visit. 🍷







*And then it was on to Mexico City...*





# Visiting Friends in Mexico City

By Marvin McFalls

**F**or the first time since 2009 I returned to Mexico City. It is either the largest or 2nd largest city in the world, with a population of more than 26 million, I am not sure. I do know it is a haven for Renault enthusiasts and I wish I could spend more time there. Every time I visit, I make new friends and see old ones. This visit was no different. Even though I spent little more than two days in the city, it was a non-stop adventure.

On Sunday we returned for the Renault National meet in Queretaro. Our first stop was to visit Gustavo Beccera. Gustavo is the older brother of my friend Ben, and the one that started Ben in the world of Renaults. Gustavo has two beautiful Renault 12s. One is a white sedan and the other is an orange wagon. He also has a 2010 Megane Sedan. Gustavo gave me the honor of driving this modern Renault. We also took a trip down memory lane as he showed me photos of all his previous Renaults including several more R12s, an R4 and an Alliance.

Following a quick dinner, Ben and I were off again to meet another new friend. As we were trying to find the Mauricio Peña house, we turned onto one of the main avenues in Mexico City and there he was behind us. After flagging him down, I was able to go for a ride in his beautiful Dinalpin GT4. What a wonderful piece of machinery! After our ride we talked for a while. It turns out Mauricio has three more Dinalpins, including another GT4, a Berlinette, and a Cabriolet. I also discovered that he is a fan of the Renault Fuego. When I told him I had three of them he was very surprised. In Mexico, Fuegos are as rare as Alpines are in the U.S.

After meeting with Mauricio we made plans for Monday, which looked to be another interesting day. Our first stop was at the shop of Juan Antonio Calvillo. Juan has a printing business called Imprenta Comercial, as well as a shop where he does fiberglass preparation for Dinalpins. While we were at his shop we were able to order some new decals for the Renault Club as well as see some of the projects Juan was working on. After talking for a few hours, my oldest friend from Mexico, Francisco Miranda stopped by Juan's shop. The four of us decided to go out for some lunch.

On the way to lunch I received a call from another good friend, Alberto Gironella. He was disappointed he couldn't join us for lunch but he invited us over to his garage. So following a wonderful meal and conversation with Francisco and Juan, Ben and I made the challenging drive thru the city to Alberto's garage. While I couldn't tell you how to get there, I can tell you it is worth the drive no matter the length and the traffic.

When we arrived Alberto opened the Automatic garage doors, to me this is the most exciting part of any visit, the first sight of the most impressive collection of Renault and

Alpines outside of France. As we entered, Alberto and Elias met us. After the introductions he began the tour. As I had been there on more than one occasion and had an idea what to expect, for Ben this was his first visit and he was like a kid in a candy store. Alberto started the tour with some of his latest acquisitions, as well as a visit to the engine room.

Once we made a complete round of the room we moved upstairs to the lounge, where we discussed further our passion for Renaults. I brought Alberto the latest issue of the Renault News as well as one of the club decals Juan Antonio had made for me earlier. Alberto was surprised to see we had a printed version of the magazine. He promptly ordered one of every issue and became the newest member of the club. Following a few cocktails, we returned to the garage where Ben was able to take photos of the collection.

Before leaving, Alberto wanted to check out Ben's Renault 5 Mirage. We then thanked Alberto for the invitation and look forward to our next visit. No matter how many times I visit, I always want to return to the Mecca of the Renault world in the Western Hemisphere.

The next morning I had one more friend to visit. When I travelled to Argentina last fall I became friends with Julio Lemus. Julio isn't a car enthusiast, but we still get along well and we have a long running joke where we call each other Larry. So I could not visit Mexico without seeing my good friend Larry. Following a nice breakfast and conversation we had to head back to the airport as my time in Mexico was nearing an end.

I want to thank all my friends both new and old, as it was another memorable trip to Mexico, I hope to return again very soon. If you ever have the opportunity to travel to Mexico City, it truly is the center of the Renault universe in North America. 🟢





# Renault Fuego Convertible!

By Marvin McFalls

**A**t the Paris Motor Show in 1982, Renault introduced a unique version of the Renault Fuego. Instead of the standard coupé, they debuted a convertible variation. It was produced as a concept car realized from the French auto body Heuliez, in the historical system of Cerizay. The car was equipped with supercharged 1.6 litre engine which produced an impressive 132 brake horsepower. With a maximum speed of 124 mph (200 km/h) it was quite impressive. The element symbol of the Fuego Convertible was the absence of the typical one roll bar center.

Renault used the bumpers and trim from the new U.S. model Fuego to set it apart from the European model. Moreover, the car was recognizable for the elegant white paint job and matching convertible top, as well as its interior with high-quality leather and finishes of class. The honeycomb BBS alloy wheels completed the equipment package. While Renault kicked the idea of a convertible Fuego around, this prototype was the only one ever built. In fact, from 1980 to the 1992 Renault sold approximately 265,000 examples of the Fuego that has been also commercialized in Europe, Turkey, Argentina and on the USA market

Over the past thirty years I have seen private collectors inspired by the original prototype modify standard Fuego coupés into convertibles. However to my knowledge the original Fuego Convertible hasn't been seen since it finished its tour of the show circuit back in 1982 or 1983. Maybe it is still out there somewhere! Let me know if you see it! I would love to take her out for a test drive. 🍷





# Carlisle 2012

By Marvin McFalls

Since being the featured marque at last year's meet, we have been trying to come up with an idea for this year's Carlisle Import Show. Since Renault had no less than nine milestones either in France or the U.S. we tried to feature as many as we could get cars to represent. So center stage we featured 110 years of Renault Motorsports with the 1907 race. To the right we have 50 years of the Caravelle, and A110 as well as 40 years of the R5. To the left it was 50 years of the R8, 30 years of the Alliance and 45 Years of the R10 in the U.S. Unfortunately we weren't able to get a Fuego for its 30th or the R17 for its 40th in the U.S.

As usual I left home on Friday, but in order to get all the cars setup for our Invitational Display, John Vogler and Don McLaughlin had to haul some cars on Thursday. Friday morning I left Knoxville around 1:00 AM and arrived in Carlisle a little after 9:00 AM. This gave me an hour to work with Ed B. the Vice President of Carlisle Events. Around 10:00 AM we began lining up cars. Within a few minutes Walter Koopman's A110, Kirk Gibson's 1907 Renault, and Don McLaughlin's Renault 8 racer were in place. Les Woods had already displayed his Alliance No. 1 and Tony Concepcion, had his R10 in position. Next I placed my Black Beauty LeCar beside Walt's Alpine and Brent Bartley also arrived with his Caravelle.

With the seven milestone Renaults in place, both Walt and I worked on our individual displays. I did literature and Walt had an incredible display of diecast models. While we were working inside Don and John went to pick up more cars. Don soon arrived delivering his LeCar race car to the showfield., while John brought an Encore Racer. After one more trip to pick up Don's other R8 racer we had an impressive display of Racers for 110 years of Renault Motorsports. After getting the racers John, Don, and I went to pick up three more Renaults. All were Alliance GTAs. As we were leaving we saw another Alliance GTA, with our good friend Sandy Lea, and when we returned Nick Chenelle also had his GTA giving us a total of five. As the day went on Lloyd and Donald Mathis arrived at the fairgrounds after travelling 875 miles in Lloyd's gorgeous Dauphine.

Besides Lloyd's Dauphine, we had two more in the car coral and one in the vendor area for sale, also for sale was a 4cv. This car had been at Carlisle before and it was an award winner at our car show. To my knowledge, none of the Renaults for sale changed hands over the weekend. All told, we had 18 Renaults at the fairgrounds on Friday, an all-time record for Friday.

Besides all the great cars and their owners we had a few other guests on Friday. Lee Weaver, a longtime friend and





Renault owner came down for the weekend. Theo Audouin, John's foreign exchange student from France was a big help, and also driving in with Brent was Dan Barton who came in from Dayton, Ohio. Jamie Grigg and Jeff Bickmore drove in from Winston-Salem, North Carolina. Long time Central PA Club Secretary, John Mullin also joined us. Last but not least, Terrance Gnesko represented Canada at this year's event.

By 4PM, we decided who was going on the scenic drive, and at 4:30 we left the fairgrounds. It turned out we had three cars Don, Brent, and Dan in the lead car, Theo and I in the middle and John, Jamie and Jeff in the rear. After a fun ride to the areas highest point, we returned to the fairgrounds. Now we joined up with Lloyd and Don Mathis, as well as Matt Cotton who brought his Simca 1000 and Nick Chennelle and went down town for some dinner. This year we visited the Gingerbread Man restaurant, near the town square. After a wonderful meal, we headed back to the hotel for a good night's rest.

We awoke early the next morning, following a nice meal and conversation at the Middlesex diner went over to the fairgrounds. It was a beautiful morning and wasn't long until Aaron Cathey and Marty Mckee came in from Tennessee in Aaron's LeCar. Next was Eddie Palaghita who came in from New York in his original R10 Automatic. Finally Hector Lopez arrived with his Alliance convertible. This brought the weekend total to twenty-one Renaults.

After checking out the show field, we returned to the display building to welcome all our guests. After thanking everyone for coming, we passed out the ballots for the car show, then Walt invited us to his upcoming meet in Delaware. We reminded everyone of the upcoming seminar and awards ceremony. At 3PM, I took Aaron's LeCar to the Seminar tent, where I co-hosted with the Citroen club. The topic was Small Haulers, featuring the Renault 5 and Citroen Dyane. Following an interesting Q&A, we returned to the Renault Display for the awards.

Following the roundup of all our guests, we passed out the awards. In the closest voting ever, Lloyd's Dauphine won first place by one point over Walt's A110. Kirk's 1907 Renault came in third, followed by Brent's Caravelle. Honorable mentions went to Eddie and Tony's R10s and my LeCar. Next came some of our fun awards, which went to Sandy, Don, Theo, and Aaron. Following the awards we had our raffle. Dan's ticket was the first one drawn winning a home depot gift card. Other winners included Hector, Brent, Lee, and Aaron. Those whose number weren't drawn received some of the new club decals so everyone was a winner.

We then gathered up for another scenic drive, this time Aaron and Marty rode in the LeCar, Hector and Sandy in the Alliance convertible and the two Johns (Vogler and Mullin) in his GTA. This time Theo lead the group as well as Grant and Mike in their Alfa 164. Following another





fun drive we returned to the fairgrounds. On this night we were heading to the French car banquet. Following an incredible meal which featured five entrees and only two vegetables, was great conversation with fellow Citroen, Peugeot, and Renault owners. By 10:30 we could barely keep our eyes open so we returned to the hotel for a good night's rest.

After a great night's sleep came another beautiful morning. We enjoyed our breakfast and conversation then caravanned back to the fairgrounds. With the help of Sandy Lea and Walt Koopman we began tearing down the display. After saying goodbye to all our friends we loaded up the cars. We made our way to the Johns with the Black Beauty to drop it off and say farewell to Theo. I then returned to Tennessee with Marty and Aaron in the LeCar and Grant and Mike in the Alfa Romeo. After stopping for dinner in Virginia and dropping off Mike, Grant and I arrived at my house at 8PM.

It had been another great Carlisle meet. We are already working on ideas for next year's meet, it will be hard to do but we will do our best to top this year. If you didn't make it this year, hopefully we will see you next year. 🟢













# The French Electric Connection - Dauphine Bell Laboratories

by Peter Fuchs - translated by Michael Muller From Gazoline 183, 2011



**B**etween 1971 and 1973, Bell Laboratories developed an electric car by converting a Dauphine. They bought this car from a dealer who probably was quite happy to get rid of a practically unsellable model. It had been 12 years since the first attempt by Henney Motors (the Kilowatt) and technology had advanced quite a bit. This was especially true for the heart of this transformation, the speed controller. The first integrated circuits and the beginning of electronics improved the necessary controlling of torque and power. Better still, it was now even possible to experiment with regenerative braking. And all this 30 years before the Toyota Prius! We tested this exclusive Dauphine. On top of the impressive result one has to admit that in 40 years, despite the arrival of advanced batteries (lithium), the available range and performance improved very little. Some models are excluded, of course...

"Oh well then, there isn't anything new!" The man walks around the car and turns to his colleagues. "Did you see? It has an electric motor." He looks at us: "And you said this is from 1971? 40 years ago? That's incredible... When I think it's been around so long, this technology of the future. Speaking of progress! There has nothing been gained in range, weight, cost, and power in half a century." Yet a detail bothers him. "But if Renault already developed an electric car back then, why wait so long to release one?" The truth hits him hard. We explain to him gently that the French manufacturer has nothing to do with it. That it was one of many American

shops that put it together. In France, electricity as means of propulsion had been buried ages ago; the state preferring lucrative gas taxes over responsible environmental considerations.

America didn't lose much time before heading down the same road, but despite everything some tinkers remained to experiment. Just in case...

***Base vehicle is a Dauphine R1090 manufactured in 1962, bought used in 1971***

The car we're looking at is a Dauphine. To be precise, a type R1090 with the VIN 1.696.376, which dates it to the fall of 1962. An export model intended for the United States, as you can see by the sealed beam headlights with larger diameter (the export model uses the hood of the R1093), the rear reflectors, bumpers and the speedometer in miles.

It is still unrestored with all its bumps, worn paint, and tired interior. The owner, Yann Lelong, loves cars with patina. But the old body is healthy, obviously treated against rust as you can see by traces of the stuff used at the time.

"A French collector bought it through a middleman for \$1,500 from A&M Auto Wreckers Inc. in New York, on October 26, 2006. At the time the vehicle was said to be a Henney Kilowatt (see side bar), perhaps to facilitate a future French



registration, although the provided documentation states the type and the manufacturer Renault correctly. It was apparently rather difficult to get the car registered in France, but in 2007 it finally received collector's plates and was registered as a 1963 type R1090, with "EL" for electric drive and a tax rating of 7 CV. I really don't know how they figured that out!" The car was then taken to various shows, without trying to get it running—a set of dried up batteries from 1979 were enough for looks. Then finally it popped up somewhere and Yann bought it towards the end of 2010.

Quite obviously, this Dauphine is no Henney Kilowatt. It isn't a Yardney either, of which everyone talks without ever having seen one. So what is it? Should it be an individual conversion by an amateur? No way! Yann found a bunch of electronic diagrams on Bell Labs letterhead in the car, all dated between 1971 and 1973. They were accompanied by an invoice for ten transistors from 1973. The possibility that it could be an experiment by Bell, then located in Murray Hill, New Jersey, consequently seemed more than likely. Many hints point in that direction: the presence of a somewhat faded sticker of a European car dealer based in Morristown in the same state; a New Jersey sticker from 1978; and the fact that the Holmdel campus, the Bell Labs research center, is located not even ten miles from Morristown. Another indicator is the particularly neat electronics, with meticulous wiring and top quality connectors.

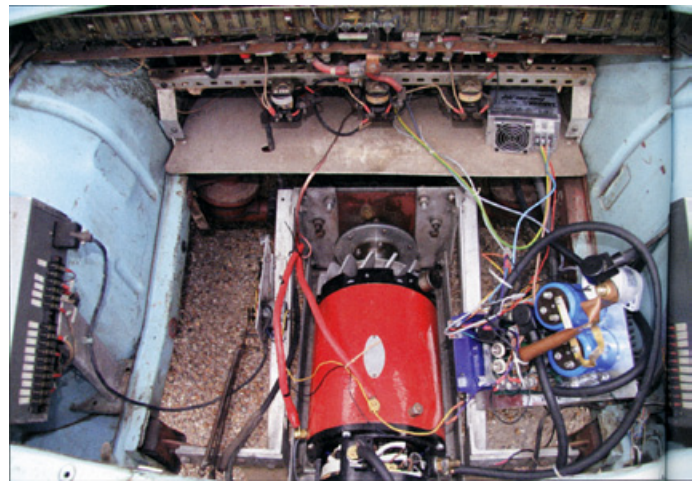
"In 1971," adds Yann, "this technology was not yet completely mastered because of the weak performances of the available power transistors, and the industry was still searching for the best compromise between output, reliability, and price." The job indeed looks very professional and required know-how not available to the common amateur.

### ***The employed electronics are very advanced, and very impressive***

It would be difficult to imagine that this conversion was carried out by a team of merry engineers on their own, without the company controlling the project, since it looks more like a major study of the electronic management of electric powertrains, involving a multitude of parameters. If you think of the prohibitive cost of the components and integrated circuits at the time, it becomes almost obvious that this is a practical application of more fundamental research. As incredible as it may seem, they even used regenerative braking!

Once you recognize the principle, you still need to ensure that it works. Incidentally, Yann works professionally with electric drivetrains and knows everything about their complex nature. His informed eye makes it possible to better understand the choices made at Bell Labs.

First observation: the engine, an 8.5" Delco Remy, "no doubt taken from a Fenwick forklift." It weighs about fifty kilos and is a DC motor with separate excitation. That may



not mean much to you, but if I tell you that its principle is the reverse of a generator, you can guess that its armature (rotor) is turned by a magnetic field generated by a fixed electromagnet (inductor or stator). The advantage of separate excitation is to enable managing the force of the magnetic field more effectively by controlling armature and stator separately. Let me explain: when starting, you need more torque, but lower voltage; as you accelerate, you have less inertia to overcome and you can decrease torque and increase voltage. Thus you play with amperage (torque) and voltage (rpm) according to Ohm's law for the armature  $U = E + RI$  ( $U$  = voltage,  $E$  = electromotive force of the engine increasing with the revolutions of the armature and the current in the stator,  $R$  = resistance,  $I$  = amperage). But to achieve this delicate balance you need a controller, sometimes very logically called a speed regulator. Many researchers stumbled exactly over this part. Bell Labs came up with embedded electronics, the first original component of its system.

Simply put, the controller is a little like a carb, the butterfly for the mixture being replaced by a turning potentiometer, actuated the same way by a cable directly connected to the pedal with a system of pulleys and return springs. You all know what a potentiometer is for: it is a variable resistor, which according to Ohm's law ( $U = RI$ ) changes the voltage. At the same time it sends the information it receives (actually the position of the pedal) to the controller via a special electronic circuit (mounted on the left in the engine compartment), which controls the armature and manages the current (amperage).

Basically, the more you press on the pedal, the more you increase it. This value is transmitted to an array of 40 transistors wired in parallel. A second box (that on the right-hand side) regulates the stator current according to the values sent by a special transistor. These two analog computers are a bit like a food processor (sometimes they are called choppers) insofar as they chop the voltage into sections. Say I have 84 V at my disposal, but need only 24 V. For this I cut my 84 V in sections of e.g. 12 V and use just two of those. I can already see the electronic specialists jumping, howling heresy. I know, the sections actually always consist of 84 V. But if you



insert sections of 0 V in between, you arrive at the desired voltage according to the chopping frequency. There is chopping frequency, average power, and duty cycle expressed as a percentage. It's comparable to controlling an electric injector: it is opened and closed several times per second because you cannot simply half-open it, but you control it in such a way that in the end it is open long enough to supply the right amount (if for example the manufacturer specified an output of 200 cm<sup>3</sup>/min under 3 bars of pressure, a duty cycle of 3% means that the combustion chamber will receive only 6 cm<sup>3</sup>/min).

#### **14 batteries supply the necessary voltage for the motor to work**



I see you're wary. And I haven't even touched the bottom of the problem with the beautiful name of pulse-width-modulation, the basis of controlling the power supply with computers in the high speed train TGV! In short, the complexity is enormous and Yann as an electronics connoisseur admires the work done.

"It's most amazing," he raves, "that the controller also manages the regenerative brakes, an option still regarded innovative today!" It is activated by a contact at the brake pedal. Very clever. "I didn't want to risk just giving juice to these old circuits. The goal was initially to get it rolling, but preserving the original equipment completely, and I adapted a modern controller that is usually installed in industrial fork lifts. Thanks to the flexible configuration of the system I could re-use the motor and even keep the old potentiometer on the gas pedal to control it. However, the motor was disassembled and cleaned, repainted and its internal electric connections were reinforced. The brushes were also replaced to avoid any problems and I noticed that this Delco Remy obviously had already been rebuilt and another novelty installed: a system to advance the brushes!"

There is absolutely nothing home-made about the set up, even if the engine mount looks a little improvised. In any case the project was probably not completely finished, retaining something temporary, as if they wanted to be able to accommodate other systems according to specifications which likely couldn't be met by testing only one electric motor,

even a powerful one. The connection at the gear box seems to prove this reasonable assumption: a double plate connects the motor shaft with the transmission input shaft using the original clutch disc, while the useless release mechanism had been sacrificed. Here is to an engine compartment where anything can be done with ease! The accessibility is so exceptional that one could have considered installing some batteries to distribute the weight even more effectively, like Yardney did, who wanted to retain the rear seats.

#### **Inside, only three instruments give away the electric conversion**



Let's talk batteries. They are the heart of this machine, the engine being only the lungs. Originally there were 14 of them, all mounted in place of the rear bench on a wooden support reinforced with cross-pieces, also made of wood. Each of the Exide brand lead-acid batteries delivered 6 V and was rated at 120 Ah. They were so called deep cycle cells as opposed to normal starting batteries you would typically find in a car. Their design is radically different, as car batteries are not designed for more than about thirty cycles (charge/total discharge) and can easily be damaged by a deep discharge, whereas deep-cycle cells can take 30 to 100 times more charge cycles and can be discharged almost completely (80%). Their lead plates are much thicker, and since the sixties they've come a long way. In today's high performance batteries the acid or electrolyte has a silica additive that causes it to stiffen (gel cell), or it is absorbed in a fiber-glass mat separator (absorbed glass mat, AGM battery). Yann chose modern batteries of this type but stuck with the original specs of 6 V at 180 Ah. There are still 14 batteries, but taking into account their higher weight, he had to distribute them differently: 6 in the front trunk, and 8 in the cockpit. "At least," smiles the man who still checks out the Dauphine, "you improved the handling. No need for sandbags in the front anymore!" This may be true, but the higher weight is an issue—480 kg in all, including 200 kg in the front, which likely will affect the suspension. "The Americans anticipated the problem for the rear and added another pair of concentric coil springs and some aluminum parts. For the moment, I haven't planned anything for the front end. Even though it





hasn't bottomed out yet, it appears to ride rather low and I will undoubtedly have to deal with it one way or the other."

Under the front hood, Bell Labs provided a built-in ventilated charger to carefully charge the battery packs of 42 V each, with an automatic cut off switch. It consisted of six 110 V transformers, cooled by a little fan, and with two settings (slow or fast). Today it has been replaced by a modern electronic charger rated at 1,500 W. Yann doesn't really know yet how long it takes to completely recharge all 14 batteries. Our story was actually the first chance to take his Dauphine for a spin, so all we can say it is probably fast enough since he didn't even have an hour to charge the new batteries, and the motor was running for one hour as well. But to be honest not with a full load.

The only remaining issue is to provide current (remember the US Dauphines came with 12 V whereas the French models had to make do with 6 V) to the instrument panel and other accessories like headlights, tail lights, turn signals, wipers, fan (by the way, what was their plan for replacing the Sofica heater which uses coolant from the radiator? Probably nothing, but they left the heater vents in place.), radio... "Originally it was designed to have a separate 12 V battery. Instead I installed a DC-DC converter for transforming the 84 V of the deep cycle batteries to regulated 13,5 V (500 W nominal output)."

So much for the technical details which only confirm the professional conversion, just as much as Yann's success in getting it running again. Finally a brief look at the interior. At first glance there are no obvious changes—if you don't look behind the front seats. The only give away is the lack of a clutch pedal and the presence of three analog instruments on the passenger side. They display the current available at the armature (up to 400 Ah, serious business!) and the stator as well as the total voltage of the batteries. There is also a switch provided to check the separate 12 V battery if installed. A small switch hidden under the instrument panel but emphasized by three labels lets you cut the power completely in an emergency. Yann preferred to add a plate with a switch and a main circuit breaker.

**100 km range, a top speed of 90 km/h... already in 1973!**

Starting the car is nothing confusing. No noise. Just a red warning light indicating that the motor is ready. No need to keep the foot on the brake like with an automatic, because as long as you don't touch the gas pedal nothing is going to happen. You just put it in first (it's a three-speed, you pull the stick towards you and back), undo the hand brake, and go. The car takes off immediately and gently. In the back, I hear a whistling noise which gets louder as I accelerate ("That is normal," Yann assures me. "The brushes are new, once they have worn down a little there will be no more noise."). Without the least jolt the speedometer needle goes up slow but steady. It is time to shift into second gear, to the right and forward, taking care to ease off the pedal to avoid a flat spot or the opposite, a kick-off effect. There is no sense of speed other than from the vehicles nearby, and they seem just as surprised as you to see such a quiet Dauphine. Braking is adequate despite the lack of the engine brake, and the additional weight encourages a rather relaxed driving style. Mind you this is also the first trip since undoubtedly 1978 and it would be a shame to wreck it! "I guess you can get up to about 90 km/h, but who would want to go so fast with such a machine? As for range, on paper and with fresh batteries you should be able to get a hundred kilometers without pushing it too hard." One needs to keep in mind that the range is largely dependent on your driving style, the speed and the torque required from the engine. In hill country it will be a lot less. If you always put your foot down, it will be even worse, and if you turn on any accessories powered via the converter, you will tap the reserves... That still means you are fairly close to the specs of modern electric cars which profit from, ahem, 40 years of technological development. "Oh well, what can you say," mutters the man. "They knew how to do it, they don't know it anymore, they know it again, and they make us believe that they never knew. I wonder..."

Yann, too. Regarding the choice of a Dauphine as test bed he can even offer several reasonable explanations: the enormous quantity of unsold cars lingering at the dealers which had to unload them at any price; the even higher number of vehicles just parked in the open with their cracking seals, gummed up engines, their paint exposed to the sun (in the end, they were hardly worth more than the weight of scrap metal); the low weight of a Dauphine compared to a VW bug or any American car; the presence of a standard transmission avoiding all the problems related to a torque converter and an auto trans which would have to be removed to preserve precious horsepower. In any case this definitely seems more likely than alleged contacts with Renault thinking to have seen the goose with the golden eggs, even though they were surely aware that their Dauphine was electrified.

Another question: what was the reason behind this study and why was it stopped? Bell Labs has since been taken over by Alcatel-Lucent and this corporation seems to ignore the past of companies it acquires. They never even deigned to respond to our requests. The only glimmer of hope are the old employees of Bell Labs who started to gather online on American forums. And the best place to do that is the EV





Album [1], started by Mike Chancey, so let's hope that some day soon we will know a little bit more. And till then, an electric Dauphine is back on the road, "and that is just amazing!" concludes the man with a moved smile.

A big thank you to the Arboretum of Chèvreloup, in Chesnay, for the cordial reception for the photo shoot. Also our thanks to the Paris Electric Vehicle Association (AVEP) and particularly to Jean-Michel Horvat and Gerard Dusailly, our excellent consultants.

[1] <http://www.evalbum.com/3729>

### Dauphine Bell Laboratories Technical Data

Motor: Delco Remy with separate excitation, 15 kW / 35 kW peak

Batteries: 6 V lead acid (AGM, 180 Ah today instead of the original 120 Ah), 6 in the trunk, 8 in the place of rear seats (originally, all installed inside the car), 15 kW/h (storage capacity)

Voltage: 84V

Charger: originally six transformers on an aluminum frame with a small fan and a switch to select slow or fast charge (today a modern electronic charger)

Speed controller: electronic with electromechanical assistance (today a SEVCON)

Accelerator: potentiometer.

Rear wheel drive

Gear box: three speeds plus reverse (first gear not synchronized) original Renault, type 314-20

Tapered hub: 8x35

Body: steel unibody construction, rear part reinforced

Front suspensions: independent A-arms, coil springs, stabilizer bars and hydraulic shock absorbers

Rear suspension: aérostable with swing axle, dual coil springs, shock mounts with Evidgom block, hydraulic shock absorbers

Brakes: drums, hydraulic

Hand brake: mechanical, acting on rear wheels

Steering: rack and pinion

Dimensions: 3.945 X 1.520 X 1.375 m

Wheel base: 2.270 m

Track front/rear: 1.250/1.222 m

Curb weight : approximately 1,100kg.

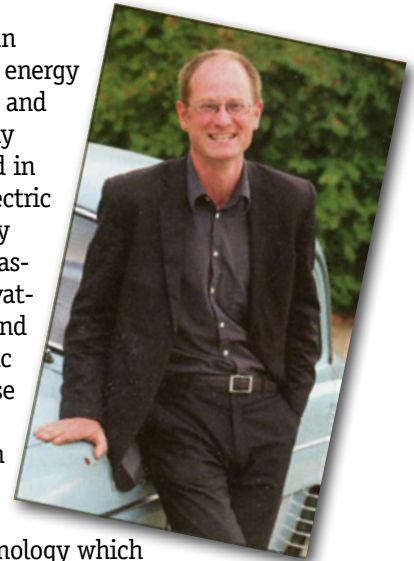
Performance: top speed 90 km/h (estimate)

Range 100 km (estimate)

Production: 1 prototype developed between 1971 and 1973.

### Yann Lelong and his Bell Labs Dauphine from 1963 "Look at China"

In his shop at Chesnay, Yann Lelong [1] designs and builds energy systems, in particular for cars and scooters. He cooperates closely with Elecity, a company based in Paris which rents and sells electric scooters and bikes. He happily matched his profession and passion, because the latter motivated him to start his business and to bet on the future of electric drive. "Not over night, because there are still too many road blocks for its development, an obvious lack of organization, a desire which is not always sincere, and especially a technology which is little understood. For a long time, the Americans were at the forefront, primarily through the independent shops. Then Victor Wouk developed the principle of a hybrid car and Toyota, which had also studied the problem, landed a big coup by releasing the Prius and beating the Americans at their own game. Moreover, General Motors' electric car was symptomatic for the political decision not to get too involved into this type of research. Those two seaters could only be leased. By contract, the leased vehicles were to be returned to General Motors after three years.



Under the pressure of the oil lobbies the program was brutally killed in 1997, after producing just 1,117 cars. The majority of the production was destroyed [2]. Today, the future of the electric car is undoubtedly neither in Europe nor in the United States, but in China. That's where they manufacture the most powerful batteries, where the electric bicycle was developed, where the majority of the electric scooters are made, where they experiment with bigger electric cars with a range of more than 300 km (e.g. the BYD e6)... "When you add to that the general reluctance (e.g. legal approval of the Bolloré Blue Car couldn't be done in France, they had to go to Spain!), we say it will take a lot of people like Yann to get somewhere. As he puts it, smiling: "It's always the little guys who make a difference. Just believe hard enough and one day, the idea will be ripe..."

(1) To contact him at his shop: 15 rue Pierre Chaulin, 78150 Le Chesnay. [yal.lelong@laposte.net](mailto:yal.lelong@laposte.net)



(2) Watch the film *Who Killed The Electric Car?*, released in 2006 and its sequel, *The Revenge Of The Electric Car*, released in 2011.

## Electric Dauphines

Since the middle of the 50s and up to the year 2000, the Dauphine kept the fans of all things electric dreaming. Here are their stories.

### HENNEY KILOWATT 1957



In business, coincidences don't exist. If the National Union Electric Company is interested in the electrification of cars it is solely to promote their Exide batteries. Since its CEO, B. L. England, found a sympathetic ear with Russell Feldman, owner of Eureka Williams Company (before he founded Motorola), this company was ready to invest seriously in the development of this new technology. The two men had no automotive experience, so they turned to a third partner, the transport subsidiary of Henney Motor Company, which had been doing custom coach work since 1868.

We don't know who was involved in the early research that led to the presentation of the 1959 model, the various contributors mentioned (Victor Wouk [1], Lee DuBridge [2], Linus Pauling Cart [3]) are mostly unconfirmed or after the initial development was done. It seems that all studies have been conducted and largely funded by Eureka Williams Company at their facilities in Bloomington, Illinois. Assembled by Henney, the Dauphine Kilowatt existed in several versions, the first receiving twelve 6 V batteries connected in series, the maximum speed being 64 km/h, with an estimated range of 64 km on a full charge. Only eight such cars were made. The following version had fourteen 6 V batteries, which increased the performance to 80 km/h and a 75 km range. There are, according to the site Dauphinomaniac, 39 cars of this version. A single Henney equipped with eighteen 2 V batteries also seems to have existed. An article published February 4, 2001 by the Bloomington Pantagraph explained that engineers had found that the lower the battery voltage, the more efficient it was (however, the present status is 36, not 18 batteries). In 1967, an article in *US News & World Report* states that 35 of these cars were sold to utility companies across the United States. Wouk, referring to his time with Russell Feldman, said that there were more than thirty electric Dauphines. This was in 1962. Internal documents indicate the production of 24 cars in 1959 and eight in 1960. All were equipped with a 7.1 HP electric motor by General Electric.

Pierre Litzler, sent to the United States in the early 60's, remembers that nobody spoke openly about the electric Dauphine, as there had clearly been no official arrangement with Renault. The bosses at Henney were content to simply order bodies and parts from Renault USA. "In Billancourt," he wrote [4], "the electric branch of the research department, from which apparently Henney never had asked anything, was still very skeptical and even sarcastic because of the 12 batteries you had to drag around and recharge every 50 km, which is basically just an hour of driving at some speed. It was all just a joke, or so it was claimed in these high places." Joke or not, the Henney Kilowatt proved its independence from the manufacturer who had to sell its bus division, and National Union Electric merged with Eureka to form the Eureka-Williams Corp. which still exists, but was taken over by Sweden's Electrolux in 1974. The company was nevertheless actively involved in the development of components which enabled the completion of the first gasoline-electric hybrid car, a Buick Skylark designed by Victor Wouk and presented in 1972 with a rotary (Wankel) engine from Mazda.

Several Henney Kilowatts survived. Two are currently in France (one is kept in the Renault collection), one is in Canada (it has since received a 10 HP Advanced DC motor), others are in the US. All are 72 V, but obviously today with different lead-acid batteries, since the originally installed Exide KSC9 are no longer available. They use either twelve Trojan T-145, Deka GC45G, or Midstate L145 (all 6 V), or six Optima 750 DS (12 V). The available information also shows that even though the majority of these cars has been purchased by utility companies, apparently it was also possible to buy them directly from Henney. We find hints of this in a letter signed by E.D. Wasson, dated December 16, 1960, and addressed to Mr. C. H. Hohensill, in which it is clearly stated that Henney was never supposed to sell the electric Dauphine to the public since it was designed exclusively for the 32 power companies [one car for each]. But they were not opposed to handing over one of these models if the buyer came up with \$ 3,650 and paid the applicable taxes in Illinois, not to exceed 10%. "We are ready to deliver upon receipt of your order. You can choose the color red, black or gray. And we hope to see you very soon among our satisfied customers in the car of the future."

For more information:

[www.intrepidtravelers.com/](http://www.intrepidtravelers.com/)

<http://www.ccds.charlotte.nc.us/~jarrett/EV/>

[1] In 1962, Victor Wouk, today considered one of the fathers of hybrid technology, was called to the rescue by Feldman. He wanted to know if he could improve the speed controller which clearly created problems. After testing a Dauphine owned by Feldman in Connecticut, Wouk said he could actually design something that would increase the potential of the car, but not the actual performance as the major concern, the batteries, didn't have enough energy to drive the car and couldn't deliver it fast enough. A subsequent experiment proved him right, and since there wasn't



much demand, it would have been too expensive to test more powerful batteries. Feldman took note and although Curtis Instruments in the end developed the controller that Wouk did not finish, it terminated the adventure of the Henney Dauphine. On the other hand this meeting had an unexpected effect, because Wouk, who was captivated by the discourse with Feldman, jumped head over heels into the research that led to the beginning of hybrid technology (as reported by Judith R. Goodstein, in an interview that he granted May 24, 2004, a year before his death).

[2] President of Caltech who employed Wouk.

[3] He was awarded two Nobel Prizes, one in 1954 (Chemistry), the other in 1962 (Peace) for his campaign against nuclear weapons testing and against the use of war to resolve conflicts. Wouk says he is not even sure he was contacted to advise on the future of batteries.

[4] Renault In History, June 2004, p. 172.

## BATTERY POWER MARS I

In 1966 Battery Power Inc., a company based in New Orleans, presented the Mars I, a Dauphine converted to electric drive. The 16 batteries were the typical lead-acid type and provided 96 V for a range estimated in August by the Shilstone Testing Laboratory to be 193.5 km (!) and a top speed of 84 km/h at full charge. This single prototype was followed by a second version, based on a Renault 10. Called Mars II, it didn't have any commercial success.

## YARDNEY DAUPHINE

Once again, coincidence had nothing to do with it. When Michel N. Yardney decided to launch his company, Yardney Electric Corporation, to be involved in the adventure of the electric car, it was only to promote his revolutionary, rechargeable silver-zinc batteries SILVERCEL. A first test performed on the General Motors project Electrovair in 1964 (13 silver-zinc batteries) proved successful, but it wasn't followed by any business. Just like the test done in France, with a Panhard Dyna 1954, a few years before (only fair, since the patent was originally filed in France by Professor Henri André, before being further developed and marketed by Yardney). They also used a Dauphine as guinea pig, with new unsold cars still abundant and therefore not expensive. It made its debut in 1967 and despite a well-run advertising campaign and a series of positive articles in the appropriate magazines, it is not known how many cars were made. Likely only one, the prototype described by Ralph Stein, a reporter from the Des Moines Sunday Register invited by Michel N. Yardney to visit him in his factory in New York. "I turned the key, and nothing happened," he wrote in the February 12, 1967 edition [... An engineer then explained to me that I

just turned on the ignition, the engine was ready to go and all I had to do is to step on the accelerator]. That's what I did, and we took off slowly and without a sound. [...] As I increased the speed [there is no clutch or gearbox!], I heard a clicking sound behind me. 'These are relays that engage,' my passenger said. 'They automatically adjust the power needed by connecting more or fewer batteries [...]. The noise will be gone on production models.'"



We know little more about this car, the tester did not dwell on technical data. He mentioned four SILVERCEL batteries and an electric motor of 7.2 HP for an estimated range of 77 miles (124 km) with a top speed of 88 km/h. But he quickly added the batteries could easily be replaced by types used by the Army and Navy and developed in collaboration with NASA.

They could double the range, but at what cost! The conversion is indeed expensive and the battery life makes one shiver: three years or 40,000 miles (64,000 kilometers). Sure, they recharge five times faster than lead-acid and weigh much less. But they cost \$ 900, to which another \$ 120 per year must be added for the right to use the silver they contain. This made the sticker price much too high to interest the public. This despite an idea that since has made headways, because it was Yardney who came up with the idea not to sell batteries, but to lease them. This was pretty much it about this project, the company was acquired two years later by Whittaker Corporation, but had achieved its primary goal: to make themselves known. Its future wasn't in cars, but in aviation, aerospace and missiles.

## FEEL GOOD ELECTRIC DAUPHINE

On February 16, 2001 at the Canadian International Auto Show in Toronto, Feel Good Cars made headlines by unveiling an electric Dauphine vehicle. Ian Clifford, the chairman, got the idea when he was given a Henney a few years earlier, and he claimed to be able to produce them immediately, having purchased a stock of cars being currently restored. The batteries, placed under the car and in the engine compartment, were said to deliver 96 V for an estimated range of 80 km and a top speed of more than 62 mph (100 km/h). There was no clutch pedal or shifter, a simple switch served to go from forward to reverse. Fifty Dauphins were acquired for conversion, but despite the existence of a fancy catalog it seems that not a single one has been sold, the price of \$ 15,000 seemed prohibitive given that the batteries had to be replaced every 40,000 km at a cost of \$ 2,000.

The company still exists, now called Zenn Motor Company. It has released a 100% electric vehicle for city use, the Zenn Electric, whose range was limited to 50 km. It had no more success than the Dauphine, and the company is now focusing on the development of electric propulsion systems. 🍷



# Queretero - 1st Annual Renault National Meet

By Marvin McFalls

**L**ate last year I began to hear about a National Renault meet in Mexico. However every time I would ask, "when is it?" I would hear, "I will have to get back to you." Once I was even told the event had been cancelled, but I was surprised when I received my invitation in December. The event was scheduled for the Queretero Speedway on Jan 21 & 22. Clubs from all over Mexico accepted the invitation including: Queretaro, San Luis Potosi, Guadalajara, and from Mexico City and I became very excited. Two days before leaving, I received an alarming call from Ben Becerra.

Ben told me that Sunday's activities had been cancelled but the show would continue on Saturday. On my way to Mexico, I was informed of a change of venues from the Speedway to a local mall. By the time I landed in Mexico I hoped the show would go on. After arriving at 1AM, we laid down for a few hours before arising early for the three hour drive to Queretero. After leaving the city we met up with Carlos, one of the event organizers. Following a nice lunch of lamb tacos, by noon we were nearing Queretero, and we hoped there would be cars. When we pulled in, there were only ten or twelve Renaults.

Driving in Ben's Fuego, a crowd quickly appeared, as they are very rare in Mexico. As the afternoon wore on, cars continued to arrive. First we met Ricardo and Alejandro from Club Renault Gordini Sport. Ricardo was driving a beautiful R18 GTX and his brother Alejandro had a Megane Renault Sport. Ricardo is a Professor of Physics, and as we soon discovered that Ricardo had worked in Oak Ridge, Tennessee where I work for the Department of Energy. It really is a small world.

Next to arrive were the Renault 5 club from San Luis Potosi. They had the largest number of cars and members at the show. Included in their group was a beautiful R5 Alpine formerly owned by Mauricio Peña as well as gorgeous Renault 4 truckette owned by a doctor. Also from San Luis was an Estafette cargo van, with only 30,000 original kilometers. The owner hoped to sell the van but there were no takers on this day, but I don't think it will take long as these vehicles are extremely rare.

The last major group to arrive was the Renault Club of Guadalajara. Included in their contingent was the only Dinalpin at the show. The A110 Berlinette was painted in Renault yellow. The owner had owned the car for nearly thirty years and he has competed in dozens of rallies all over Mexico. He mentioned that in 2008 he had competed in a 1000 Kilometer race. I was given the honor of riding from the show to dinner in the Dinalpin. He asked me to drive, but I told him that I was too large to drive a Berlinette. I enjoyed the ride thoroughly as we drove out of the Queretaro to a seafood restaurant north of the city.





Following a wonderful meal and conversation mainly in Spanish, we returned to Queretaro and checked into our hotel. Meanwhile the party continued far into the night, as many of the owners from San Luis, Guadalajara, and Mexico City remained in town. Ben said that he finally went to bed around midnight, but the party continued on without him. What a great bunch of guys.

All told we had more than 50 Renaults including: Dinalpin, R8, R12, Estafette, R4, R5, R18, Fuego, Alliance, Encore, Clio, and Megane. While it was much less than we hoped, for a first national meet it was a great turnout. Hopefully next year's meet will be bigger and better. I really appreciated the hospitality I received, and hope to attend the 2nd Annual meet. Maybe I will see you there. 🍷





# The Back Page



*Pictures of Francisco Miranda's Dinalpin GT4 at the "Back to the Past 2012" event at the Universidad Nacional Autonoma de Mexico (UNAM)*

*The background mural is from David Alfaro Siqueiros and it is titled "The People for the University. The University for the People"*

*Start Date: 1952, Completion Date: 1956*



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