

# Spring Mountain Motorsports Advanced Driving School

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I signed up for the level 1 course at Spring Mountain Advanced Driving School while at the ALMS race in Laguna Seca last October. I had considered other schools like Skip Barber and Bob Bondurant, but this school seemed to offer the most bang for the buck in the corvette. The clock had been ticking since then and the summer in the desert did not seem like a great idea!

Carole and I arrived in Pahrump, NV Sunday night February 17<sup>th</sup>. The school is located about 50 miles northwest of Las Vegas, about an hour drive through the mountains. It is probably a beautiful drive if not done at 10pm. Pahrump has a population of approx. 25,000 with all the basics: Wal-Mart, McDonalds, Burger King, a couple of casinos and hotels dot the landscape. Strangely there are a couple of good restaurants and a winery, one of three in Nevada! Pahrump also has the market cornered on highway billboards as the road into town is lined on both sides with huge billboards for miles!!!

Spring Mountain Motorsports is on the outskirts of town. It is an advanced driving school specializing in Corvettes. They also

offer schools in Lotus and Radical cars. Radicals are custom built race cars with motorcycle motors in a 1200 lb car. They cost \$60K and can beat a vette on the track. Lots of speed!

## **Day One:**

We arrived at the track on Monday morning at 7:30 (is there anything related to a corvette that doesn't involve early mornings?). The registration went smooth and they had printed name badges for the 16 students in the full class. The plan was for Carole to drop me off and head out into the sprawling metropolis of Pahrump and entertain herself for the three days. Dave, the senior instructor invited her to sit in on the class and ride with the instructors in their cars during the training. This turned what would have been a pretty boring three days for her into a very exciting three days.

They had coffee ready and by 8:30 we were in the class room, and Dave was into his briefing and outlining the next 3 days for us. After assessing our backgrounds and experience, he went into a power point presentation which included AVI sections to illustrate what he was teaching. The school works you through the basics on the first day in preparation for track experience on days 2 and 3. There were 4 instructors for the 16 of us this first day. There were 5 on days 2 and 3. The group was split in two and by 9:30 we were in C6 Z51 and ZO6 corvettes and on the track. We did slow laps behind an instructors showing us the track.

After track familiarization, one group went out to the back straightaway section on the track to work on heel & toe downshifting and smooth braking. The other group went to the skid pad to learn braking. We had received classroom instruction on the heel & toe shifting and now experienced it by accelerating to 65mph and then at the first

of 4 cones down slow smoothly to 15-20 by the fourth cone. We then U turned and went in the other direction doing the same thing, initially only using breaks. Once we had the braking smooth and consistent, we added in blipping the gas while maintaining smooth brake pressure and dropping the gear from 4 to 3 then 3-2 while still doing the smooth stop in the prescribed distance... we just keep repeating it. An instructor pulled one of us at a time out of formation and we took the passenger seat as he showed us how it is done.



While this was going on for group 1 group 2 was on the skid pad. There is a large black top area (paddock) that is used for several training events. The brake training one involves lining up the 8 cars and launching one to 30mph towards a water soaked section. The first phase involved hitting the brakes as you pass between 2 cones. The ABS fuse had been pulled from the cars and the idea is to lock up all 4 wheels. I got them locked up with a half rotation on the rears before locking... after we did this they had us come in to the skid pad and told us that the way to brake is to slam on the brakes... anyone braking the brake pedal could keep the car... I was in a ZO6 and nearly broke my foot trying to get the car... I didn't succeed.



The instructor took a car and demonstrated for us, and then we were back at it for a second run. This time most everyone locked up and put the cars off to the left in so doing. That point illustrated, they demonstrated how to control this. Next we High Impact Braked at the cones by depressing the clutch, slamming on the brakes, turning the wheel 1/4 rotation to the right (our hands that were at 3:00 and 9:00 now and noon and 6:00), releasing the brake, change lanes one to the right, straighten out and brake to a controlled stop. At 35mph this all takes place in a second or two... then we did it at 40 and 45mph. After this they engaged the ABS system and we did the same thing with ABS. This time we learned that utilizing ABS, when we slammed on the brakes we could do a minimal wheel turn to the right to change lanes and stop the car. Our braking lessons were now complete.

Lunch was catered: Salad, chicken in Ziti with cream sauce, corn, cookies, drinks... all very good. During this time I got to meet and talk with Pete Callaway who was tweaking the 560hp Callaway C6 that we were going to add to the fleet of cars to drive. Pete is the son of Reeves Callaway. They have opened a west coast facility in Irving, CA and are building a new one in Santa Ana. This model was a 2007 C6 with the intercooled supercharger; it also had the Callaway suspension and

Callaway brake package, (manufactured by Stop Tech). The car also has Ricaro seats, Carbon Fiber wheels and a short throw shifter. This one has the manual transmission. They also offer it in automatic. The power train is a \$17,000 option to a base vette and the suspension adds about another \$5000. The wheels are \$1900 / \$2100 each depending on the size.



The afternoon consisted of one group doing the oval and skid car while the other group did a track drive in the van with an instructor stopping and pointing out each area and how to handle it. Then we got in vettes and drove them following the instructor's line. All the cars are equipped with 2 way radios.

The track time consisted of progressively faster laps behind the instructor learning "the line" to take through the curves and when to brake and for how long. Every few laps the instructor has the car behind him move to the right and drop to the rear so the next student gets to follow him.

While this is going on the other group split in two. Half went to the "skid car" and half to the "oval course".

The skid car is a specially set up Pontiac with outriggers on it through which the instructor can raise or lower the front and

rear suspension to induce an oversteer or understeer condition in the car. This proved very entertaining for everyone from the instructor to the driver to the rear seat passengers... maybe mostly the rear seat passengers... the car gets out of control very fast and you learn how to bring it back into control, while entertaining the other students in the process. Both recoveries are just so against your instincts it is amazing. For oversteer you keep looking in the direction you want to go, not where you are sliding, and very lightly apply brakes to shift weight onto the front wheels while steering with the skid until it regains traction. For understeer you still look where you WANT to go and steer with the slide while applying gas to shift the weight to the rear tires... not an easy thing to do since it goes against your instincts.

In "the oval" you drive an oval course and have to:

- set up the turn
- steer to the apex
- unwind while accelerating to the next turn

Sounds simple but is not.

Day one came to a conclusion and we went to an absolutely fabulous restaurant in "The Winery" very near the track. This turned out to be a diamond in the rough of Pahrump.

### **Day Two:**

8:00AM class room briefing.

8:45 we are on the track doing "lead / follow" exercises where we follow the instructor at increasing speeds through the course learning how to use the brakes and accelerator to keep the car in balance through turns, not to slow or accelerate the car. We practice visual scanning to view the entire spectrum of view and not just the road in front of us... we practice looking ahead and around the next turn and not

just the next move. They stress the turn in point and the apex of the curve as well as keeping the car in balance through the curve. We then do more heel & toe downshifting exercises some of which have the instructor in the car with us. The stress is to make all moves concise, on time and relaxed.

The speed is picked up. We then do lead follow with the student leading and the instructor following... all in radio contact pointing out mistakes and giving instructions to improve the driving. Things are starting to come together... shifts are getting done more precise and timed closer to when they should ... the turns are coming off more in balance and the car is in better control... there is less steering corrections through turns. Time for lunch, again catered in and again good. More classroom briefings then back on the track... the Callaway is in play now along with the C6 Z51's and C6 and C5 ZO6's including a couple of 2008 C6's which are noticeably improved in performance over the 2007's.



Time to be humbled ... we ride passenger and the instructors show us how it should be done... at 65% of track speed in these stock vettes... about 15% faster than the best we have done so far and they are talking and making it look like nothing. Then back to the classroom to analyze

what we saw with the instructors driving so we can apply it to our driving... of course the instructors make 12,000 laps / year...

While group one does the rides with the instructors, group two does a slalom through cones on the paddock area, practicing at low speed how to clip the apex of a turn...some of the time the windshield is blocked to make us use the side windows teaching peripheral vision control of the car and where to be looking.

Day two ends and Carole and I drive 60 miles to Death Valley to see the sunset and really spectacular views of the mountains and valleys that make up Death Valley. We then returned to Pahrump to wine taste at the winery (and of course buy some wine) then go to dinner at the Nugget followed by a couple hours of Blackjack ... we broke even... then off to bed to get ready for the final day...



### **Day Three:**

The final day proved interesting. Everyone was excited because this was open track day, the day we get turned loose by ourselves on the track. The day started out in the 30's and cloudy. It got worse from there. We started the day in the classroom as usual, getting a briefing and reviewing past critical points. We then hit the track for more heel & toe shifting exercises... we were noticeably improved

by day three. On day one we rushed our up shifts to get to 65 then did rough braking and poor blips and missed or rough downshifts. By today, the acceleration was smooth, shifts slower (but still need work). We hit 65 in gear 4 and had time to think before hitting the first cone and started the smooth steady braking to 15-20 by cone four while:

- clutching
- shifting to neutral
- blipping the engine to 3500 RPM's
- shifting to the 3

This was repeated for the 3-2 by reaching the fourth cone and 20MPH. We were not perfect, but substantially improved.

Next was a lead follow session, again with notable improvement over the previous days. After this we debriefed in the classroom then broke for lunch, beef today...

After lunch we split into two groups. Group A hit the track; it had rained and was on and off light raining at this point. Two cars spun out and one went off track... we heard this over the radio in the class while we were briefed on SCCA flags and the response to them. This course is halfway to an SCCA certification.

Group A came in and Group B, my group, went out. I grabbed a 2008 C6, not trusting the Callaway or ZO6 on the now wet roads. The rain had stopped so the track was a mix of wet and semi dry... probably worse than all wet. We took it easy, feeling the track, staying off the curbs that we intentionally hit when dry. We didn't want to make the mistakes group A made, and we didn't no spin outs and everyone on track. I certainly tested the road and felt the ABS and Active Handling engage slightly but never excessively. I stayed off the shifting for this run.



We went to the classroom and group A went back out and did better, but, the rain was back now. They came in and we went out for run two. This time I took a new white 08. The car felt good... I pushed it and by lap three passed a ZO6 on the back straight then a C6 on the short straight at the front of the track and on the next back straight another ZO6... I could feel it going to the limit and holding. Then came turn 3... I think I got my downshift late putting me late into the turn in for the apex and had to correct steering mid-turn. That combination combined with probably going into the turn too fast was too much. Despite light brakes to shift weight forward to give the front tires traction, the car started sliding sideways on all four wheels and off I went into the gravel. I radioed in and was told to hold position even though I could easily get back on track. I think it is to show everyone else that you are off to teach them and me a lesson. An instructor showed up and told me to resume and pull into the pit for a "talk with Dave". He wanted to know what went wrong and I told him. He then wanted to know what I was looking at when I slid and I told him the next turn (the right answer it turned out). They checked the car and sent me out again. This session ended. Group B went out... it was raining pretty good now. Nothing eventful happened ... they seemed to have really slowed down.

We went out for our final run. I took a C6 Z06. My concerns were founded... too much car for the rain. It was much more difficult to control than the standard C6. Despite some sliding around, I did pass a couple of cars, one with the rear dancing as I pushed it to 110 on the back straight followed by a really tense turn 8. I started the next lap and had a slide, correct, another slide and correct in turn 5a and b. This must have been something to see because in the wrap up after this run, one of the students stood up and said that they needed to name turn 5 after George, he was behind me and said it was quite a show keeping the Z06 on track through it...



We were all awarded our certificates and group photos, congratulated by the instructors, and, congratulated the instructors: Dave, Gene, JJ, Ken and Jordan and said goodbye to a great three day experience.