



Delaware Valley Chapter Driver School Student Manual

Welcome to the Delaware Valley Chapter's Driver's Schools. Our events are intended to provide students of all experience levels with a driving experience that is educational, fun, and above all, ***safe!***

This event is held at a racetrack, but this is **NOT** a racing school! The purpose of this school is to help you improve your driving skills. The relationship between you, the driver, and your car, the understanding of your car's capabilities and limitations and the resulting improvement of your driving skills will combine to make you a better driver by enhancing your knowledge, confidence and awareness.

Please read this **entire** manual carefully. It will give you valuable information on how to prepare yourself and your car for the event. It will also provide you with information on the conduct of the event. You will be expected to follow the rules. If we all do, we will have a safe, fun, Driver's School.

Eligible Vehicles

Vehicles eligible for DelVal Chapter Driver Schools are Sedans and Coupes with solid metal roofs. In addition, we accept "Targa" type and "T-Top" vehicles with the hard roof panel in place. We do not allow any convertible with a soft top or folding metal top. No open cars (e.g., March F2, Lotus/Caterham, etc.) are acceptable, except for SCCA (or other recognized sanctioning body) certified "race car" with a certified full cage and "bolted-on" hard roof. Additionally, we do not allow SUV's (SAV's, PAV's, 4WD trucks, whatever!), these vehicles have an elevated center of gravity and unacceptable tires (All terrain. Snow, etc) for track activity.

Preparing For the Event

It's your car! It's your responsibility to have your car inspected prior to arriving at the event. The Technical Inspection Form, which contains the guidelines your car must meet, is available on the DelVal Chapter website (<http://www.delvalbmwcca.org/files/techform.pdf>). The form must be signed and dated by the person inspecting the vehicle. **THE OVERALL RESPONSIBILITY FOR THE SAFETY OF YOUR VEHICLE RESTS WITH YOU!** Please do not show up without this form completed. We will perform only a basic grid inspection at the track, which your car must pass to participate in the event.

Some additional guidelines:

Change your brake fluid. This is more important than you may think. BMW's brakes are excellent, but they will get hot under repeated hard usage. Brake fluid is "hygroscopic," this means it absorbs moisture from the air. When it does, it lowers the boiling point of the fluid. If your brake fluid boils, its ability to stop the car is reduced. This should be done annually anyway, so have your mechanic do it while the car is being inspected. Also, you should have a set of brake light bulbs with you. While the car is being inspected, they may work fine— but light bulbs can go at any time. If one of your brake lights doesn't work, you will **not** be able to drive on the track.

Take a good look at your tires and wheels. These events do not require special tires; in fact, we **STRONGLY** discourage beginner or novice students from using R-Compound or "track" tires. Your tires as well as your brakes will be subjected to more stress on the track than on your way to work. Visually check the tire sidewalls for signs of age, cracking, or curb

scrubs that may have damaged the sidewall integrity. If this checks out, run your hand over the tread checking for any abnormal bulges or belts popping to the surface. Next, remove the hub caps or centers and check the wheels for stress cracks. Wheels rarely crack, but it has happened. If cracks are going to appear, they would most likely be at the center of the wheel around the lug bolts or at the seam where the wheel center meets the rim. This applies to both alloy and steel wheels. While you're there, check the torque of your lug bolts to make sure they are at the correct setting. Lastly, increase your tire pressure. We can't make specific recommendations for every car, but generally, you should try to stop at a gas station and increase your tire pressure to about 40 psi (cold) before you get to the event, then adjust it down at the event, to maintain the pressure evenly at 40 psi (hot). It is a good idea to carry a portable compressor or air tank with you so air can be added as needed. There is only one air hose at the track and there will be a line to use it!

Restraint Systems - Seat belts or harnesses of equal protection must be provided for the driver and the instructor. If you have a harness setup on the driver's side only, you will not be able to use it. This rule will be enforced by the Tech officials and any vehicle not so equipped will not be "Tech accepted" and may not participate in the event. Check the condition of your seat belts, especially the attachment points and buckles. Check your pedal pads. If they look worn, replace them. They aren't expensive and this is not the time to have your feet slipping off the pedals. Anyone with racing harnesses needs to be sure that they are installed correctly—this should be performed by a professional! Take everything out of the car (the trunk, glove box, floor mats, etc.) before you go through grid tech at the event.

What to Bring

Completed Tech and Medical Information forms: You won't be able to complete Registration or participate without them. Remember, you must submit your car & completed Tech form to Tech Inspection prior to Registration.

Helmet: You must bring a Snell approved helmet, currently minimum 2000 spec. There is a sticker inside of all approved helmets and we will be checking these stickers. Starting in early 2011, Snell 2010 helmets will become available. Beginning with the 2012 Driver School season, we will start to require Snell 2005 or newer helmets. We strongly suggest that all new helmets purchased for track use have an SA rating.

Gas: Fill up before you get to the track. Fuel may be available at the track, but generally only at limited times and it may be very expensive.

Proper Clothing: Comfortable, well fitting cotton clothing is recommended. Long pants are required, no matter how hot it is. No nylon windbreakers will be allowed. If you have real "driving" shoes, use them. Otherwise choose a good sneaker, or a tight fitting street shoe with a thin, flat, rubber sole. Driving gloves are recommended, as they may help you grip a slippery steering wheel if your palms are wet. You should also bring rain gear, as there are no weather guarantees. Don't bring yellow or red rain gear. It's also a good idea to bring a brimmed hat and sunscreen.

Food and Refreshments: The track has a concession stand, but you are welcome to bring your own food. NO alcoholic beverages or drugs of any kind are allowed, no exceptions.

Oil, Coolant, Brake Fluid and Brake Pads: If your car uses oil, then it will use even more at the track, bring extra. Brake fluid and coolant are also a good idea, just in case. Always use new DOT 4 fluid from an unopened container. A spare set of brake pads (front and rear!) are a very good idea. If you installed a new set when the car was tech inspected before the event,

bring the old ones with you, if not, get a new set. It's not unheard-of to use an entire set of brake pads in a 2 day school at some tracks on some cars. You may not be able to get another set at all tracks on the weekend and that's a dumb reason to pay for a tow home.

Extra "Stuff": Paper towels and window cleaner, tape to cover your headlights and fog lights, a waterproof covering such as a tarp to protect your stuff, a tire pressure gauge and a torque wrench to check your lug bolts.

Drivers Meeting

Before there is any activity on track or in the classroom, there will be a Mandatory Drivers Meeting. Please refer to your schedule as to when this will occur and be there on time. This means that even if you are still working on your car, stop and go to the meeting. The plan for the school and many other important items will be discussed that you will be expected to know – Don't Miss the Meeting!!!

The Sessions

You will be provided with a schedule of the School's run sessions, with scheduled times. Please take note of the run group you are assigned to and the times you are scheduled to be on track and also in the classroom. While in the paddock, keep your ears tuned to the P.A. system so you'll hear the announcements for your run group to line up in pit lane. When you hear the announcement for your group, here's what happens next:

- 1 Get in your car and drive SLOWLY through the paddock to pit lane. (The speed limit in the paddock and pits is 10MPH).
- 2 Stay in your car, put on your helmet and fasten the strap. Buckle your seatbelt and make sure that it's snug.
- 3 Check your driving position. You should sit a little more upright and closer to the pedals than you would for comfortable street driving.
- 4 If you haven't been signed off, you are required to have an instructor with you.
- 5 Once your instructor is in the car, proceed to Pit Out and follow the instructions of the flagger. They will tell you when it is safe to enter the track.
- 6 When you pull on to the track, do not move on line until you're sure no one is closing in on you from behind. Check your mirrors for overtaking cars. They will be coming at you at high speed, so don't pull out in front of them.
- 7 Take it easy on the first lap to warm up your car, your tires, your brakes and your brain. Make mental notes of changing track conditions (oil, mud, dirt, shadows, etc.). Reorient yourself to the positions of the flaggers.

During your run, your biggest responsibilities will be to keep your car under control, be aware of the other cars around you, and keep a cool head. The following are some important tips for making this event safe for everyone.

Passing:

When passing another car, make sure the car you wish to pass is aware that you're there. Also make sure you are in a designated passing zone for your group (as discussed at the driver's meeting). The driver ahead of you must signal which side they want you to pass on. **Do not pass** if you do not get a hand signal! If you pass someone without a hand signal, you will be black flagged and required to pit in immediately. **Do not pass** if there are yellow flags

displayed, even if you've been given a passing signal! **Do not tailgate! This is not a race!** If the driver in front of you is slower, riding too close to them will only increase their anxiety and reduce their enjoyment of the event as well as yours. Driver courtesy will be watched closely by the officials. Conversely, watch your mirrors for people overtaking you. It is unlikely that you will be the fastest driver on the track, which is ok. Don't hold up someone else.

When you have received the signal to pass, it now becomes your responsibility to make the pass safely. If you can't complete the pass before the end of the passing zone, **slow down** and pull back into line and try again next time around. If you are being passed and you have a higher horsepower car, let up on the gas enough for the overtaking car to get by. Chances are they'll disappear through the next set of turns and you'll have a clear track. If there doesn't seem to be a way past someone, simply pull into pit lane and let the other driver get half a lap ahead of you, then pull back out with clear road ahead. If someone continuously holds up traffic, pull into pit lane and speak to the officials.

Infield Visitation:

We've all gone into a corner a little "too hot" at one time or another. The usual result of this is a visit to the infield run-off area. When you realize you are not going to make a corner, try to run off the track straight and under control. The biggest mistake that inexperienced drivers make is to try to correct for a situation that is already lost. The result usually becomes a worse trip off the track than you might have had, because now you're going sideways or spinning, neither of which much little control until the car decides to stop (or worse, hits something). Going off the track straight increases your chances of coming to a safe stop under control.

If you do spin, put "both feet in". This means put in the clutch and put on the brakes. This is to prevent you from rolling across the track (possibly into someone else's path) when your tires regain adhesion, because once they do, the car will want to go in the direction your front wheels are pointed. Once you've stopped, look for corner workers who will signal you when it's safe to re-enter the track. Use your own eyes and ears as well.

When you do get back on the track, drive off the normal line and take it very easy, because your tires are now covered with dirt, sand, or mud and will not be gripping as well as they did before you went off. Proceed to the pits, where you will check your car over and have a talk with your instructor and event administration to figure out what you did that sent you off course.

End of the Session:

When the session is over, the checkered flag will be displayed. This is your signal to begin your "cool down" lap. Acknowledge the checkered flag with a wave of your hand or flash your lights, so we know you've seen it. Then continue around the track on the normal line, but at a much slower pace. The idea is to let your engine and brakes have time to cool off before being shut down when you get back into the paddock. On your way around, it's a good idea to acknowledge the flaggers at each station with a wave. They've been standing in the hot sun (or pouring rain) working on your behalf.

The turn before the pit entrance, move over and put your left fist into the air out the driver's window to signal that you are pitting in. Pull **slowly** into the pit lane to drop off your instructor, and then proceed to your spot in the paddock. Open your hood to allow the heated air out of the engine compartment. Your brakes will be hot, and as they cool, the metal will contract around the brake shoes, so do not set the hand brake. Park the car in gear.

Classroom Sessions

In addition to track sessions, there are at least one classroom session for each run group each day. These sessions are as important as the track sessions. You are expected to attend your scheduled sessions and roll-call will be taken. If you do not attend your sessions, you may find, at the discretion of the Event Chair and the Chief Instructor, that you will not be allowed on track for the next driving session.

Between Sessions

When we put the session schedule together, we tried to leave you enough time between them to relax, eat, socialize and look over your car. We can't advise you on the social aspects, but we can recommend that you do the following to your car:

- 1 Check your oil. Wait until the car has been sitting for a while to allow the oil to drain back into the oil pan.
- 2 Check your tires. Look for damage such as chunking tread, signs of improper inflation, etc. Tires with a lot of tread or not enough air pressure can easily overheat.
- 3 Check the tightness of your wheel lug bolts. Wait until your wheels have cooled first.
- 4 Clean your windshield.

Please do all of this early enough to complete any repairs should you find anything amiss. We don't want you to miss a session!

Communicating on the Track Hand signals, flags, etc.

To make this event safe, there needs to be a set of universally understood communication rules so that the track workers can talk to the drivers and the drivers can communicate with each other.

Passing:

If you are being passed, you must tell the passing driver which side you want them to pass on. If you want to be passed on your left, extend your left arm out the driver's window and make a definite pointing motion with your hand. We can't stress enough the importance of making the hand signals **obvious**. If you wish to be passed on the right, extend your arm out the driver's window and make a pointing motion over your roof to your right. If you intend to pass someone else and they don't appear to see you, flash your lights **briefly** to alert them. Use common sense here. If it's going to be several turns before a passing zone, don't tailgate the person halfway around the track flashing your lights at them before you can be in a position to make the pass.

Entering the pits:

If you intend to enter the pits, you will obviously be slowing down, so let the driver behind you know why. Extend your left arm out the driver's window straight up in the air, making a fist. Do this at least one turn before the pit entrance.

Flagging:

The way that the track workers (corner workers and tower workers) communicate with the driver is through the use of flags. When the corner workers or tower workers put out a flag,

they like to know that you've seen it. Wave or flash your headlights. This is a nice thing to do on your way around the track for your cool down lap at the end of each session.

Flagging Information

Here is a brief description of what each flag means:

Green or No Flag:

This indicates that the course is clear and the session is in progress.

Yellow:

This flag is used to indicate a potentially dangerous situation ahead of you. Just how dangerous is indicated by how the flag is displayed. If the yellow flag is being held stationary, it means that there is something wrong near the track, such as someone getting a wheel off the track and kicking dirt or gravel on the driving surface, or a driver has gone completely off the course. In this case, be extra alert, prepare to slow down or avoid whatever it is on the track. If the yellow flag is being waved, it means there is something wrong on the track. This may be a driver who has spun and is either partially or completely on the driving surface. The waving yellow may also mean that something has been spilled on the track such as oil or coolant, or large amounts of dirt, etc. At some tracks, a yellow flag with horizontal red stripes is used to signify debris on track. The bottom line for a waving yellow is that it means imminent danger. **Slow down** and prepare to avoid the problem. **No passing will be allowed.** The yellow flag will be displayed for the entire course for the first lap or two of at least the first session to allow time for everyone's car (and senses) to come up to temperature. No passing will be allowed during the first lap while the yellow flag is being displayed.

Red:

This flag indicates that something serious has occurred that requires the session to be stopped. The red flag is usually preceded by a waving yellow flag and is displayed only upon instructions from the tower. You should slow your car to about 10mph and pull to the "off line" edge of the track to a safe stop. If you cannot see the flag station ahead of you, keep to the edge of the track and very slowly move forward until you can, then stop and wait for direction. If the incident is just ahead of you, just stay where you are until told to move. Just as you shouldn't continue at speed when you see this flag, **don't slam on the brakes either!** First, check your mirrors to see if anyone is behind you, and then slow down looking for a safe place to pull off the track. **Do not get out of your car!**

There may be emergency vehicles trying to get to the effected area, so don't be an obstacle. The red flag will be withdrawn when it is safe to proceed.

Blue/Yellow:

This is a passing flag and will be used to signal a driver that a faster vehicle may wish to pass. This flag should be acknowledged. The driver should then hold their line in a passing zone, but proceed at a moderate pace to allow the signaled car to pass. Remember to give the appropriate hand signal for each car you intend to let pass. Failure to obey this flag will result in a black flag situation.

Black:

This flag is displayed on instructions from the tower. This is used to indicate that there is something wrong with either your car or your driving. The black flag will be waved and then

pointed directly at you. If this happens, acknowledge the flag, then slow down and complete your lap off-line, pull into the pits and come to the tower. We'll explain the problem. **Do not ignore a black flag.** Failure to respond to a black flag may result in ejection from the event at the discretion of the event administration.

Checkered Flag:

The session is over. Begin your cool down lap as described before and with your instructor, evaluate what you have done and set goals for the next session. There is no passing permitted after the checkered flag has been displayed.

These events are designed to provide maximum instruction in a safe, friendly, fun environment. The rules and guidelines are intended to make sure that we all go home in the same car that we drove here. They are easy to follow and apply to everyone. Please make sure you understand them. There will be a mandatory driver's meeting before track activity (see your schedule), where these rules will be discussed and clarified as necessary.

See you at the track!!!!