

**Tarheel & Toe Driver School**  
**Student Confirmation Packet**  
**Tarheel Chapter BMW CCA**  
*Virginia International Raceway, Alton, VA*

Welcome to the Tarheel Chapter BMW CCA “Tarheel & Toe Driver School”. **The purpose of the school is to provide a safe, controlled environment in which participants learn how to drive their BMWs with greater awareness and skill.** This is **not** a racing school. No racing or competition will be tolerated. This is **not** “driver’s ed” to teach a non-driver how to drive. It **is** a High Performance Driver School for the advancement of licensed drivers. It emphasizes ‘handling’ and ‘car control’. It enhances driver skills to improve awareness and enable the drivers to practice precise car placement and accident avoidance skills.

## **GENERAL INFORMATION PRE-EVENT**

**Technical Inspection of car:** Mandatory within 3-6 weeks of the event by a Professional Mechanic familiar with High Performance Driving on Track. **We DON’T Tech at the track. You must bring the completed form from this packet.**

**Helmet:** Mandatory. **Without exception helmets must meet SNELL 2010 or newer standards.** Both SA and M standards are accepted. Note: SNELL rating is inside your helmet under the lining.

**Food and drinks:** Available for purchase at track or bring your own. No glass containers.

**Gasoline** may be purchased with a valid credit card at the VIR pumps, open at all times.

**NO passengers will be allowed in students’ cars other than instructors.**

**Attire:** **Natural fiber long pants and long sleeved shirt are required unless specifically stated otherwise.** Per VIR Rules beginning 2017, occupants of vehicles with aftermarket rollbar structures are required to wear long sleeves. Wear comfortable, natural-fabric clothing. Shoes should cover the foot, fit snugly, and have a thin, flexible sole. Souvenir shirts when provided may be short sleeved, so bring long sleeved shirts for driving.

**Street Tires are highly recommended for C and D group students.** You learn more and faster on street tires. Improve the driver first. The event will run rain or shine. You might be surprised at just how much you will learn on a wet surface, and in the rain Street Tires rule!

### **Cancellation Policy \*\*REVISED for 2018\*\***

**You must cancel by using the self-cancellation on Motorsportreg.com site and please, also email the Event Registrar via the MSR registrar contact link.** The timestamp is automatically added to the private note letting organizers apply the refund policy. **Cancel 30+ days in advance**, receive 100% track fee credit on your MSR account to be applied to future registration. **Cancel 10 to 29 days in advance**, a \$100 cancellation fee is applicable. Balance will be credited on your MSR account to be applied to future registration. If you cancel within 10 days in advance or NO-SHOW, fees are forfeited. NO refund or credit. For a refund in lieu of MSR credit as outlined above, an additional \$30 handling fee is applicable. Refund must be requested at time of cancellation. **NO EXCEPTIONS** due to mechanical failure. Prepare your car carefully. Aborted events (as determined by the Driving Events Committee) may trigger a refund/credit to paid registrants in a prorated amount to be determined.

**Property Damage – VIR will bill the chapter and Tarheel chapter will bill you for any damage you cause to VIR property.** Examples are guardrail replacement, oil-dry (kitty litter), or tire bundle repair. Recognize incidents are very rare, but it is your responsibility to pay for what you damage.

**Event Insurance: Tarheel club insurance does not cover damages caused BY you or your car or TO you or your car. The waiver you signed protects the club, organizers, staff and the track in the event of a lawsuit. That puts the responsibility for damage on each of the participants just as it is on public roads. Signing the waiver makes you a participant in the liability insurance.**

## On-Site Registration

**When:** 12 noon until 10:00 pm on Friday. Make every effort to register Friday. Avoid the Saturday morning rush and stress, and be assured of not missing any valuable track time. We are not set up for, nor expect many registrations Saturday morning.

**Where:** Classroom North Paddock at VIR. Turn right after the Security Gate.

**What:** Bring completed forms included in this packet [Tech & Medical], Your valid Driver's License and Helmet.

**Note:** Detailed event schedule, **car numbers**, and run group assignments will be provided in the on-site registration packet. Registration is open for a brief time Saturday AM.

**Car Drop off:** Driver School participants may sign the VIR gate waiver and bring a car/rig for drop-off on Friday afternoon and until 10:00 PM as Registration is open till then.

**Student Meeting:** Mandatory participation. 7:30 AM. Dining Room, upstairs in the Pagoda Concession Building.

**Instructor/Student Meet & Greet:** Students line up facing hot pits (A & C students nearest the classroom; B & D students, mid-fence). Students hear your name, walk forward, meet your instructor and leave the pairing area together. If you have connected via email prior to the school please, let the CI call your name and respond.

**Classroom:** Bottom of the Timing/Scoring Building North Paddock.

# THINGS TO BRING TO THE EVENT

- This packet (including **completed** Technical Inspection Sheet, and Medical Form used at registration).
- **Helmet (SNELL 2010 or newer).**
- **Cotton/natural fiber long pants; long & short sleeved shirts; closed toe shoes.**
- Extra quart (or two) of oil
- Beverages: water, sports drink. May bring adult beverages for after track closes. No Glass
- Glass cleaner and paper towels
- Gas - fill up before arriving at the track to save time. Gas is available at track by credit card pumps (open all of the time). Prices are higher than local stations.
- Other tools and parts as desired. Examples: extra brake fluid, coolant, etc.
- Sunscreen and/or a hat and maybe bug spray; a poncho and umbrella
- Lawn chair(s) and a cooler for your beverages
- A tarp or two to protect your gear from the elements (remember, it might rain)
- Most important a relaxed, open mind for learning something new and exciting, and the willingness to be guided by your instructor.

## Accommodations

**Headquarters Hotel** will be **Sleep Inn Suites** located on 58 East at 1483 South Boston Rd., across from the Danville Airport just 11 miles from the track. **Phone: 434 793 6090**. We have blocked rooms for this event, so please mention **Tarheel BMW** when making reservations to secure the group rate. VIR offers luxury Villas, Garage Suites and The Lodge, all on site. For more info contact them at 434-822-2680 or via [www.virclub.com/lodging](http://www.virclub.com/lodging).

<b>Sleep Inn –</b>	<b>1483 South Boston Road-Route 58 E.</b>	<b>(434) 793 6090</b>
	Also nearby:	
Holiday Inn Express –	2121 Riverside Dr.	(434) 793-4000
Best Western -	1292 South Boston Road-Route 58 E.	(434) 483 5000

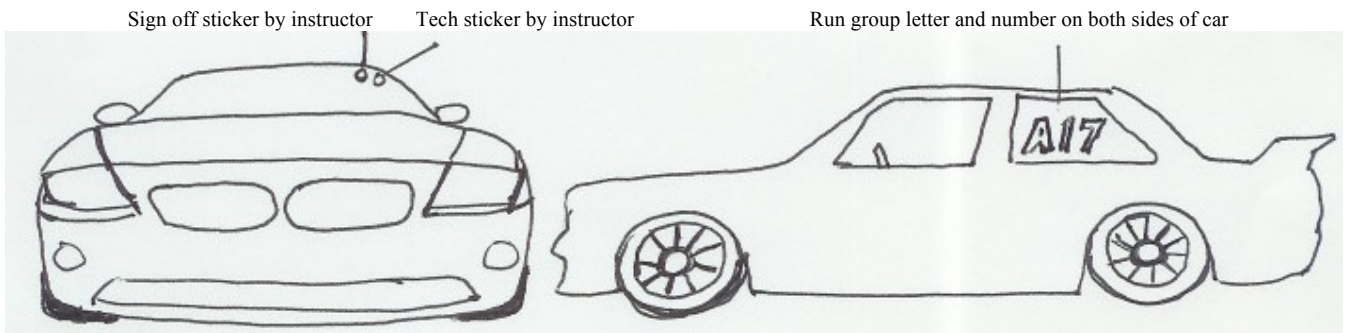
**VIR Club website:** (<http://www.virclub.com>). Learn more about the track including maps, directions, on-site lodging, and lap descriptions. We look forward to a fun filled event. Our focus is on enabling you to have a safe and rewarding experience.

# **SATURDAY MORNING IN THE PADDOCK**

- **Proceed directly to the paddock area and park.** Make sure you are registered and have signed the waiver.
- **Unload your car.** All items, which are not permanently secured, must be removed. For example, remove:
  - Floor mats
  - Contents of glove box
  - Handset of cellular phone
  - Garage door opener
  - Contents of trunk (spare tire may stay)
  - Contents of side door pockets
  - Radar detector
  - Check under seats for loose items!

**Please be on time to the morning meetings. Roll call will be taken both days!**

- **Inspection sticker and run group color:** on driver side windshield, top outside corner
- **CAR NUMBERS:** on rear side windows; run group letter first, followed by the number. BINGO!
- If this is the July school in conjunction with the Race school then your colored run group dot goes in the upper center of your windshield.



- **If two drivers share a car,** place second run group letter and number below the first.
- **Please check your tire pressures. Air is available at the tech shed, side nearest classroom.**
- **Check your lug nuts (bolts) and tire pressure prior to each session,** not just after your session (hot). **Do not** tighten hot lug nuts (bolts). Don't set your parking brake just after a run.
- **All participants must wear a wristband both days!** It is OK to shower with the band on.
- **Keep your schedule with you at all times!** Run group sessions may not always be announced or heard. It is your responsibility to follow the schedule and be prompt! In the event of incidents that cause delays, adjust your schedule.
- **Information Table staff are here to assist you.** They can not change your run group; can not change your instructor. This is done by the Chief Instructor. After the school is running smoothly, you **and** your in-car instructor may ask.

Instructors will also be available to assist you with any questions or problems

**Keep the shiny side up! Pavement good, grass not good, tire-wall very bad!!!**

# VIR Rules

**All paved access roads** - Speed limit paddock **15** mph; access roads **25** mph. Cars & Motorcycles: No one under 16 years of age may operate any motorized vehicle.

**Asphalt** - **Do not pound stakes or make any holes for any reason in any asphalt surface. Offenders will be fined and ejected.** All trailer footings and jack stands must be underlaid with plywood bases. **Do not fuel cars on any paved areas without a fuel catch pan underneath.** If you must temporarily jack a vehicle on asphalt, you **MUST** have metal or wood under the jack and jack stands **NO EXCEPTIONS!** **Fines can be in excess of \$1000.**

**Pets** - VIR discourages bringing pets to the track. If you keep your pet quiet, leashed, under your control, and clean up after it, they will allow it. If we see pets unleashed, we will find the owner and they will be asked to leave. **Do NOT bring pets onto false grid or pit areas or inside any VIR building.**

**Disposal of waste fluid** - Use of the drums, located in several areas in the paddock(s), is mandatory for used oil antifreeze brake fluid and other polluting material. Spillage will not be tolerated and may result in hefty penalty from the facility. Participants must remove all used tires, batteries and unwanted parts. Environmental debris left behind will result in fines to the participant or the renter [Tarheel Chapter] if the participant cannot be identified.

**Fuel** - VIR's fuel pumps are operable by Credit Card. 110 leaded and 100 unleaded Racing Fuel as well as 93 octane unleaded gas. Come with a full tank, fill-ups are convenient but pricey.

**Showers** - The showers are located in the North paddock main concession building restrooms. Please be considerate of your compatriots regarding all water use. Please do not waste water.

**Music** – Do not play loud music of any kind; be considerate of others.

**Power** - There is limited electrical power available. Standard 20-amp duplex and 30/50-amp “shore” power for motor homes and large rigs/trailers are available for rent. VIR personnel will tag lines and collect the fees.

**ATV's, golf carts, and bicycles** - Use of ATV's, golf carts, pit carts, and bicycles is a fact of life in the track paddocks. Common sense and care must be applied to their use. Children should not “learn to drive” on VIR property. Bicycle use will be tolerated as long as used safely. Children (under 16) are prohibited from riding bikes, roller blades, skates, skateboards and scooters in the paddock during hot track hours.

**Noise** – **Un-muffled engines must not be run** between 6:30 PM and 8AM. In Respect for nearby churches, loud engines must not run from 11:00 to 12:00 am on Sunday. We post lunch during this “Quiet” hour. Do not use it to work on your car if it involves running the engine to do so.

# ***RULES OF THE ROAD***

## **GENERAL**

- All students **must be at the drivers meeting each morning**. Important information will be made available to you and it may not be the same as last school.
- Both the driver side window and passenger side window must be fully down at all times when the car is on the race track [even in the rain].
- No passengers will be allowed in participants' cars other than instructors. Instructors are allowed to take passengers; 16 to 18 year olds must have a notarized waiver signed by both parents to ride with instructors and wear the appropriate wrist band.
- Passing is allowed in designated areas only. Passing shall occur only after a clear signal is given as to which side the overtaken car wishes the overtaking car to pass. Passing areas will be discussed/designated in the meeting and classroom at the event.
- When slowing to enter pit road, the driver shall signal by raising his/her arm out the window with a raised clenched fist, remain OFF LINE, and enter at a slow pace.
- All loose objects must be removed from the passenger compartment/trunk of your car

## **FLAGS: The means of communication from corner worker to cars on track**

- Green \*** A session is underway and the course is open.
- Yellow \*** Take care. Slow down. **No passing**. Be prepared to stop. A yellow flag may be displayed at the first lap to insure that all cars & drivers warm up prior to hot laps.
- Red \*** Session stopped. Check mirrors then come to a controlled, safe stop on the RIGHT edge of the asphalt in sight of a corner station or behind a car with sight of the station; leave the center clear for emergency vehicles. Red is followed by Black Flag All.
- Yellow w/ Red Stripes** Debris on the track. Shown if oil, coolant, sand, dirt, are on the track ahead.
- Blue / Yellow Stripe** Is not thrown to insult you! It means that in the corner-worker's opinion a faster car is approaching. Allow it to pass at the next passing zone. A small in-car wave to let the faster car know that you know that you saw him/her and intend to signal a pass is very helpful both to you and the car behind you. This courtesy prevents tailgating and "driving in your mirrors", and promotes a safer event. Beginners, your instructor will assist you.
- Black** Summons to the pits. Acknowledge the Black Flag and enter the pits at the next opportunity to consult with a school official. This is not optional. After a Red Flag the Black Flag will be shown at each station. Slow and come into the pits.
- Checkered** The session is over. Finish the lap as a "cool-down" lap. Slow-down, use the brakes as little as is safe. Allow the car and you to cool down and relax. Take the opportunity to drive "a perfect lap" on the line, or to practice off line driving. Either way, you should tell your instructor your plan. Proceed to pit lane.

# CAR PREPARATION

BMW's are well-engineered, well-built cars that are designed for enthusiastic driving. Several members have asked if there are modifications that should be made to their cars prior to the driving school. **NO!** Modern cars are quite competent for this type of driving right from the showroom. What IS required is that your car be in top condition. See that your car is functioning as it is designed to and that it is well maintained and passes Tech (see your Tech form).

## *PREPARING YOUR CAR*

- Prior to the event, have your car inspected by a professional mechanic. Included in this packet is a pre-event Technical Inspection Form that must be completed, signed, and brought with you to the event.
- It is recommended that your car have a recent tune-up so that is running at its best. You'll certainly enjoy it more.
- The brake fluid should be changed and the system bled as close to the event as possible. Brake fluid absorbs water (from the humidity in the air) which reduces the boiling point of the fluid. When people "lose their brakes" at an event like this, it is more often than not the result of boiling the brake fluid. The brake pads should have at least one-half of their original thickness. If they don't, replace them in time to bed-them-in adequately before the event. You may want to bring the newly removed old pads with you just in case.
- The coolant system should have been flushed and coolant changed within a few months of the event to prevent overheating. Check your coolant level.
- Tires must have at least 2/32's of tread depth, with no blisters, bald spots, or other imperfections. Also, tires that have been patched or plugged are not recommended. On street tires you should inflate your tires a bit more than indicated on the door. Never exceed the max tire pressure printed on the tire. Remember that tire pressure will increase 2- 6 lbs when you drive at the track. Generally, for street tires 36-38 psi is a good starting point. Your instructor will advise you and air is available at the tech shed in the paddock.
- If applicable, remove sunroof wind deflectors. At high speeds, some of these will vibrate and may make a very disconcerting noise. Also, if your car has removable wheel centers, trim rings, etc., these should also be removed to ensure they won't fall off during the event.
- All loose objects must be removed from the passenger compartment and trunk of your car. This includes all items from the glove box and side pockets. It is unnerving and potentially dangerous to have loose objects flying around you during hard braking and cornering. Radar detectors (if removable) and garage door openers often get left on sun visors. Double-check your car **before your first session each day**.

# DRIVING TERMS AND TOPICS

Some useful terms and definitions:

- Understeer** There is traction at the rear tires, but the front tires lose traction, regardless of steering correction, the front of the car slides towards the outside of the turn; Also called “push” or “plow”. Understeer increases the radius of the turn (passenger puckers).
- Oversteer** There is traction at the front tires, but the rear tires lose traction and try to pass the front. Also called “loose”; Oversteer decreases the radius of the turn (driver puckers).
- Trailing-Throttle** [TTO] Oversteer is induced by lifting off the throttle while cornering. When the throttle is lifted, weight is transferred to the front of the car, which suddenly has better traction than it had before; weight is transferred off the rear of the car, which suddenly has less traction than it had before (frequently the cause of spin).
- Line** The most efficient on-track route that a car takes through a given turn.
- Turn-in** The point at which you begin turning into a corner. The turn-in point has direct effect on the apex and track out (exit) of a given line.
- Apex** The area of a corner in which the inside front tire runs closest to the outside of the turn is the called the Apex. It may be at the ½ way point or more often near the end of the curbing for that turn. Your instructor will enable you to know which is coming next.
- Track-out (exit)** The area of the track where the turn is completed is called the track-out. The track-out point is determined by the turn-in and apex; depending on the turn-in and apex, will either be on the track, or off the track.
- Trail Brake** Trail braking (releasing the brake gradually) occurs while turning, and after the major braking for the corner has occurred. Braking pressure is only a fraction of full (10 to 20 percent), and is gradually decreased while making the transition to acceleration.
- Camber** The angle of the wheel from vertical as viewed from head-on. Negative camber has the top of the wheel leaning towards the center of the car. Cornering pulls the bottom of the outside tires in so that the tires exhibit positive camber, or less negative camber.
- Toe-in** The alignment of the tires as viewed from above, with the front of each wheel pointing in toward the centerline. Forward motion tends to pull the tires backwards in an arc so that the tires tend to toe-out (or have less toe-in).
- Type of Turn** Turns are divided into three types and are driven differently. Type I turn is a turn leading to a straight (late apex to maximize exit speed onto the straight eg. T12- Oaktree at VIR); Type II turn is at the end of a longer straight when the turn leads to a very short straight (carry straight speed into corner eg. T1-at VIR); Type III turn is a turn leading to another turn (sacrifice first turn to maximize exit of final turn, eg, T14-14a at VIR). Ask your instructor how different turns affect your entrance and exit and to help you identify the types of turns.

## DON'T STOP HERE

**The following pages contain the Medical Form and Technical Inspection Form that must be completed and brought with you to the track.**



**TARHEEL CHAPTER BMW CCA**  
**PARTICIPANT MEDICAL INFORMATION**  
*(confidential)*  
**PLEASE PRINT LEGIBLY**  
*(fold in half, tape and print your last name first in right upper corner)*

Date: \_\_\_\_\_ Event: \_\_\_\_\_

Name: \_\_\_\_\_ Year of Birth: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Telephone: \_\_\_\_\_

Medical Insurance Carrier and Policy Number: \_\_\_\_\_

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fold line

Whom to notify in case of emergency: \_\_\_\_\_

Relationship to you: \_\_\_\_\_ are they at this event? Yes  NO

If not at the event, phone number where they can be reached: \_\_\_\_\_

Blood type and RH: \_\_\_\_\_ Do you wear contacts? \_\_\_\_\_

Date of last tetanus: \_\_\_\_\_ Prosthesis? \_\_\_\_\_

Allergies: \_\_\_\_\_

Present Medications: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Significant illness or condition, which might affect you at the track: \_\_\_\_\_

\_\_\_\_\_

This information will be kept confidential and only be used in case of emergency. It is destroyed following the event.  
\*fold in half and print your name, last name first on the right corner

Tarheel BMW CCA Event Medical Form (page 2)

Last Name \_\_\_\_\_ First Name \_\_\_\_\_

This page intended to be the outside of your confidential medical form when printing double-sided and folded as directed. If you printed single sided sheets, you may discard this page.

# Tarheel BMW CCA TECHNICAL INSPECTION FORM

## Engine Compartment / Interior:

- Battery securely fastened
- Brake fluid: level, fluid fresh, system bled
- Date of last fluid change: \_\_\_\_\_
- No visible fluid leaks (gas, oil, coolant, hydraulics)
- Coolant system: level, condition of hoses, no leaks
- Pressure test radiator cap
- All V-belts: proper tightening, inspect for wear, cracks, fraying
- Brake lights: all working
- Brake pedal: firm
- Throttle linkage: no sticking/ sloppiness
- Windshield wipers: working and good condition
- Mirrors: left-hand exterior required

## On lift and under car

- Condition of tires, sidewall and tread. Min. 2/32" tread. H, V, or Z speed rating recommended.
- Check wheel bearings for excessive play.
- Brake pads & calipers: Adequate pad thickness (at least 1/2 pad left). Rotors within factory specs. Calipers working properly. Hoses, lines, calipers clean and dry.
- Steering linkage, suspension: No excessive play. Suspension mounting: no cracks or excessive rust.
- Check rear engine & transmission seals for excessive seepage.
- Check for hydraulic leaks at wheels and clutch slave cylinder.
- Check half-shaft bolts for looseness
- Check transmission and differential fluid levels
- Wheels not bent, no cracks
- Exhaust: no under-car leaks.

## Other

- Windshield free of large cracks
- Both front seat belts are properly operable and in good condition. Equivalent restraint systems for both seats.
- If roll bar: adequate padding required on all roll bar/cage installation at any possible contact with driver or passenger.

**Inspected by** (Signature or Shop Stamp): \_\_\_\_\_ **Date:** \_\_\_\_\_

I understand that the condition of my car is my responsibility and the technical inspector is not responsible for any potential failure of my car. **Please sign and print your name below:**

**Owner signature:** \_\_\_\_\_ **Print Name** \_\_\_\_\_

**Date:** \_\_\_\_\_