

Tarheel & Toe Driver School

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 to drive their vehicles 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’s a High Performance Driver School for skills 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.

On-Site Registration

When: Friday 8am-10am and 5pm-7pm
Saturday 6:30am-7:30am

Where: Tech Shed North Paddock at VIR. Turn right after the Security Gate.

What: Items needed

- **Tech form** filled out by a qualified shop before the event
- **Valid Driver’s License**
- **Helmet**
- **Online waiver** completed ahead of time at <https://ews.bmwcca.org>

Note: Detailed event schedule, car numbers, and run group assignments will be provided in the on-site registration packet.

Event Schedule

We will be using <https://bmw.mytrackkeeper.com/> for the event schedule. There is an IOS app as well if you have an apple device. Sometimes TrackKeeper is not immediately updated for a delay, so listen for paddock announcements. There is a paper copy of the schedule in your name card, in your packet. **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!

Tarheel Chapter BMW Car Club of America

Drivers Education Vehicle Technical Inspection



Driver 1: _____ Emergency Contact: _____ Phone: _____

Event Date: _____ Year of Car: _____ Model: _____ Color: _____ Vin: _____

Driver 2: _____ Emergency Contact: _____ Phone: _____

Technical Inspection (To be completed by a professional mechanic within 4-6 weeks of the event):

| Vehicle Interior | Pass | Fail | Suspension & Running Gear | Pass | Fail |
|---|------|------|---|------|--------------|
| Interior Mirror: (1) Minimum in good condition; securely mounted. | | | Wheel Bearings: Proper free rotation; no looseness in hub. | | |
| Helmet: Snell current or last date certified, no cracks; chin strap in good condition (Certification within 11 years of current date) | | | Structural Integrity: No loose body or interior parts; no structural rust at or near suspension points. | | |
| Roll Bar/Cages: Must pass the broomstick test: must be covered with closed cell foam padding where a helmet comes in contact with the bar. Please refer to "Driver School Rules for closed cars and open cars" on the following website for more details. https://www.tarheelbmwcca.org/track.html | | | Front Suspension: No excessive play; ball joints and tie rods secure, boots and all seals in good condition. | | |
| Seat belts/Harnesses: Factory or better installation in both seats. Must be securely mounted: belts not frayed; equal restraints for passenger and driver. 4-point harnesses prohibited except Schroth Quick Fit. 5, 6 and 7 point harnesses must use seat with factory routing holes/safety pinned. | | | Rear Suspension: Half shaft bolts tight, boots in good condition; mounting hardware in good condition; no leakage. | | |
| Pedals: All pedals must have free return and be in good operating condition. Brake pedal must be firm. | | | Brakes: Sufficient brake pads (50% minimum); rotors and pads are in good condition; no cuts or abrasions in brake lines. There should be no visible cracks extending to the edge of the rotor. With co-driver, pads should exceed minimum standard | | |
| Windshield/Wipers: No cracks, condition does not impair vision. Wipers in good working order. | | | Brake Fluid: Sufficient brake fluid; premium fluid; Brake fluid must be changed at least every 6 events or one year. | | month / year |
| Doors: Must be operational from inside and outside. | | | Tires: General good condition; no cracks, cuts, cords or blisters, the tires should be the ones used at the track. | | |
| Accessories secure: Stereo, camera, etc. | | | Steering linkage: No excessive play. | | |
| | | | Wheels-Overall Condition: All lug nuts engaged. Wheel Center-locks: Locking devices are fully engaged. For track tires, steel lug nuts should be used. No cracks, bends or flaws. | | |
| Engine & Trunk Compartment | Pass | Fail | Vehicle Exterior | Pass | Fail |
| Battery: Properly secured; no apparent corrosion. | | | Hood & Deck lids secure | | |
| Electrical: Harnesses/relays/wires secure. | | | Brake Lights: Functional and visible brake lights. | | |
| Belts: Fans / auxiliary belts in good condition with proper tension. | | | Fluids: Appropriate levels, and no dripping leaks of any fluids. | | |
| Throttle Return: Freely operating and proper tension. | | | Exhaust System: securely fastened and in good condition. | | |
| Fuel Lines: Proper fittings and line condition. | | | Exterior Mirrors: In good condition. | | |
| Engine: General condition of engine and accessories. | | | Gas Cap: Tightly closed / no leaks. Caps for all fluids are secure. | | |
| Coolant system: Level, condition of hoses and no leaks. | | | | | |
| Firewall: Must not have any unplugged holes in the firewall. | | | | | |

THE UNDERSIGNED HEREBY CERTIFY:

1. This OFFICIAL TECHNICAL INSPECTION FORM (THE "FORM") submitted to Tarheel Chapter of the BMW Car Club of America, in connection with the above noted High Performance Driver Education Event was performed on the date shown below by a mechanic and/or shop qualified to conduct such a track inspection.
2. The completed Form correctly and accurately shows the condition of the Car identified above on the date of the inspection.
3. There have been no changes in the condition of the Car since the date of the inspection that would affect the track worthiness of the Car. The undersigned hereby agrees to defend, indemnify and hold harmless BMWCCA, its chapters, and/or inaccurate statements set forth in this form.

I understand that the technical inspection performed on my car and my helmet is solely for the purpose of meeting minimum standards of car preparation for the Chapters's High-Performance Driving Event. No warranties or guarantees are implied or expressed by the passing of the inspection performed. I acknowledge that the safe condition and operation of my Car is entirely my responsibility. I take full and sole responsibility for any vehicle problems, malfunctions, or damage that may occur in connection with the operation or performance of my Car prior to, during, or subsequent to the event.

Inspection Facility Information and Stamp

Shop Stamp, Business Card, or Inspection Invoice Required

Tech Inspectors Name: _____

Tech Inspectors Signature: _____

Signature Driver 1: _____ Date: _____

Signature Driver 2: _____ Date: _____

GENERAL INFORMATION Pre-Event

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. If wearing a firesuit (optional), VIR 2024 Rules require the suit be of one piece construction, SFI or FIA rated and a minimum of 2 layers.

VIR FIRESUIT POLICY STATEMENT

- VIR has instituted a policy requiring a firesuit be worn by all occupants of vehicles with any portion of the factory interior removed. Tarheel Chapter BMW CCA has an arrangement with VIR to waive this requirement for our driving schools. To reiterate: **A FIRE SUIT is NOT a requirement for this event.** This is a dynamic situation and may evolve over the season. The Tarheel Chapter wants to ensure the utmost safety at all of our events.

Car Drop off: Driver School participants may sign the VIR gate waiver and bring a car/rig for drop-off Friday afternoon and evening. VIR has 24-hour security.

Technical Inspection of car: Mandatory within 4-6 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 Technical Inspection form from this packet.

Helmet: Mandatory. **Without exception, helmets must meet SNELL 2015 or newer standards.** Both SA and M standards are accepted. Note: SNELL rating is inside your helmet under the lining. "DOT" helmets are not satisfactory. Open-face helmets are allowed, but you'll be more comfortable and safer from debris with closed helmets. In-Car communicators (provided by your instructor) work much better without the wind interference inherent in open face helmets.

Food and drinks: Available for purchase at track or bring your own. No glass containers in the paddock please.

Fuel: May be purchased with a valid credit card at the VIR pumps, open at all times. They have 93, 100 and 110 Unleaded, as well as 114 Leaded race fuel.

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

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.

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. Incidents are very rare, but it is your responsibility to pay for what you damage.

Event Insurance: Your standard insurance may not cover activities on a "competition surface". Don't ask your agent about that. Rather, ask for a detailed copy of your policy and all exclusions. "Track Day Insurance" is readily available and may be acquired through several specialty vendors such as Hagerty or Lockton Affinity.

Pre-Event Email Meet-n-Greet: On Tuesday or Wednesday of event week, you should receive email contact from your assigned instructor. Take this opportunity to get to know your instructor. Share information about yourself and your goals for the weekend.

On Track Exercises: One session Saturday is usually reserved for specific driving exercises. Instructors and students must review exercise details in the packet. **Failure to do so will result in confusion on track.**

MANDATORY MORNING MEETINGS IN THE PADDOCK

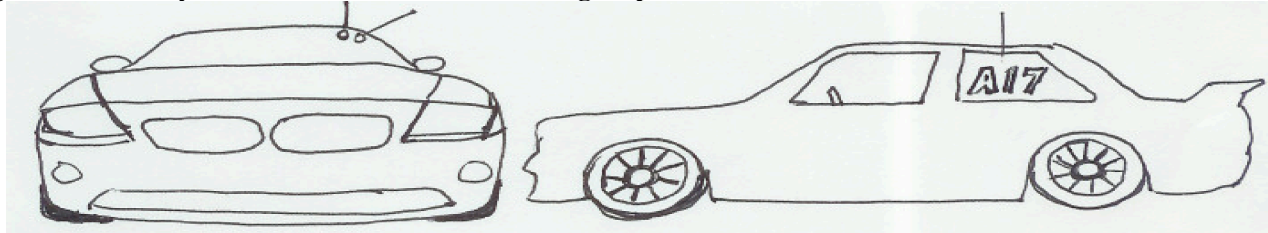
- **Mandatory All Driver meeting @8:30AM (For Instructors, Racers & A-Plus)**
- **Mandatory Saturday morning meeting (7:30 AM):**
- **Mandatory Sunday morning meeting (7:45 AM):**
 - **Instructors - Tech Shed Outside**
 - **Students - Timing and Scoring outside, Classroom if raining**
 - **Classroom:** Student Classroom is held in the Drivers Meeting Room in the basement under the Garages in North Paddock.
- **8:15am Meet-and-Greet at the Timing and Scoring building.** Students hear your name called, 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.
- **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:
 - Contents of trunk (spare tire may stay)
 - Contents of side door pockets
 - Radar detector
 - Check under seats for loose items!
 - Floor mats
 - Contents of glove box
 - Handset of cellular phone
 - Garage door opener

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

- **CAR NUMBERS:** on rear side windows; run group letter first, followed by the number. BINGO!
- If this is a school in conjunction with a Race School you'll be issued a colored run group dot that goes in the upper center of your windshield
- **WHERE TO PLACE VINYL NUMBERS AND STICKERS WE GIVE YOU...**

Sign off sticker by instructor

Run group letter and number on both sides of car



- **If two drivers share a car,** place second run group letter and number below the first.
- **Please check your tire pressures. Air is available near the Sunoco Fuel Pumps.**
- **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 on left wrist both days!** It is OK to shower with the band on.
- **Information Table staff are here to assist you.** They cannot change run groups or instructor/student pairings. This is done by the Chief Instructor. After the school is running smoothly you may approach them to ask.
- The driver side window must be fully down at all times when the car is on the track [even in the rain]. The passenger side window may be up in the rain if the driver is solo.
- No passengers will be allowed in participants' cars other than instructors. Instructors are allowed to take passengers; 16 to 17 [change to 17] year olds must have a minor waiver signed by a parent to ride with instructors and wear the appropriate wrist band.
- Passing is allowed in designated areas only. Passing shall occur only after a clear point signal is given. Passing areas will be discussed/designated in the meetings 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 full track right and enter at a slow pace.
- All loose objects must be removed from the passenger compartment/trunk of your car

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.

Motorized Paddock Vehicles must be registered with VIR.

Noise – **Un-muffled engines must not be run** between 6:30 PM and 8AM.

FLAGS:

The means of communication from corner worker to cars on track



A session is underway and the course is open.



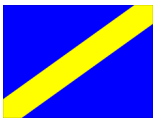
Take care. Slow down. **No passing.** Be prepared to stop. A yellow flag may be displayed at the first lap to ensure that all cars & drivers warm up prior to hot laps.



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.



Debris on the track. Shown if oil, coolant, sand, dirt, are on the track ahead.

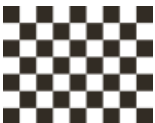


Is not thrown to insult you! It's a Passing Advisory Flag. In the corner-worker's opinion a faster car is approaching. If true, you're expected to allow it to pass at the next passing zone. A small in-car wave acknowledging the car behind is standard practice. They'll know you saw them and intend to facilitate a passing opportunity ASAP. This courtesy wave prevents tailgating and "driving your mirrors", which promotes a safer event. Novices, your instructor will assist you.



Open flag: 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.

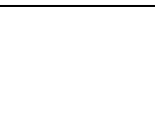
Closed flag: (fureled and pointed) A closed or furled black displayed with a number board at the Start Bridge is a warning to a driver that improper actions have been observed. You know what you're doing and cut it out. Pit in not required.



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.



Indicates that a vehicle is being summoned to the pits due to serious mechanical problems or loose bodywork that presents a risk to other competitors.



Slow vehicle ahead.

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 | In basic terms, the apex or clipping point is the point on the inside portion of a corner that a vehicle passes closest to. The apex can also be described as the point of minimum radius and slowest speed achieved in a corner. 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. |

Vehicle Checklist

Tarheel & Toe Driver School

Virginia International Raceway

Students are encouraged to bring a copy to the track and complete this checklist prior to the first on-track session. These are our suggestions for a safe uneventful weekend.

Instructors and students (B, C and D) are strongly encouraged to complete this before going on track. Keep a copy handy as a guide for sanity checking your student cars.

Group A students are expected to complete this unassisted.

Instructors, please **observe** your student checking the following:

- ☐ Seat belts: OE or acceptable after-market installation.
- ☐ Front and rear glass: clean and unobstructed.
- ☐ Battery: securely mounted, cap tight.
- ☐ Brake lights: all working.
- ☐ Wheel bearings: tight.
- ☐ Tire pressure: adjusted for track conditions.
- ☐ Lug nuts: none missing; tightened to manufacturer's specified torque.
- ☐ Hub caps: removed.
- ☐ Gas cap: tight.
- ☐ All loose items removed from trunk and interior; glove box empty or locked
- ☐ Special accessories (cameras, data acquisition, etc.) securely installed.
- ☐ Car numbers: on both sides of cars rear passenger's side windows. Run group letter first then number, as in bingo. B52, A29 etc.
- ☐ Helmet: Current valid SNELL sticker. **This is absolutely required.**
- ☐ Clothing: natural fibers (e.g., wool, cotton) or fire-resistant material; **long sleeves, long pants and closed toe shoes**
- ☐ Fire safety gear (as appropriate) Suit, Balaclava, Gloves, Firebottle safety pin removed

THINGS TO BRING TO THE EVENT

- This packet (including **completed** Technical Inspection, and Electronic Waiver signature proof/printout).
- **Helmet (SNELL 2015 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 consumption after the track goes cold(closes for the day). (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.

| | | |
|-----------------------|---|-----------------------|
| Sleep Inn – | 1483 South Boston Road-Route 58 E. | (434) 793 6090 |
| | 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.