

NIAGARA REGION PCA HIGH PERFORMANCE DRIVING SCHOOL

Student Skill Sets

GREEN RUN GROUP – NOVICE STUDENT SKILL SET

Goal: To introduce a new student to the basic culture of the driving school and begin to develop the skills needed to successfully move to the next level.

Driving Skills to be consistently emphasized:

1. Braking
 - a. Emphasize braking up to the turn-in point, releasing the brake as the turn-in is initiated.
 - b. Develop an understanding of the four types of braking.
Threshold- required when the approach speed is much greater than the entry speed.
Trim- reduces speed and settles the car on the suspension; for corners where approach speed is slightly higher than the corner entry speed.
Modulation- adjusting braking force while braking as when just before entering the corner or when the braking surface is so uneven that a constant high pressure on the pedal will lock the brakes. This is not an on/off but a squeezing of the brake.
Both feet in—HARD. In a spin situation, one on the brake, one on the clutch.
 - c. Application of the brake pedal is smooth..both on and off.
2. Throttle application
 - a. Emphasize smooth on/off application of the throttle.
 - b. Understands that the degree of throttle application depends upon the amount of turn yet to be completed and the power of the car.
3. Cornering
 - a. Development of the idea of the desire for a consistent line thru each corner.
 - b. Understands that the selected entry point to a corner and the speed of the Car determines how well the corner ‘will go’.
 - c. Understand the dynamic difference between an early and later apex entry...and can recognize which they have done immediately upon entry.
 - d. Begins to practice holding the apex of a corner to assure a late apex exit.
4. Blending into the ebb and flow of traffic
 - a. Understands the protocols associated with the point by.
 - b. Knows where the passing zones are.
 - c. Uses all passing zones...points cars by and accepts point bys.

- d. Knows when there are faster cars coming up and plans ahead to point them by.
- e. Knows where all the flag stations are and *what the flags mean*.
- f. Understands that in all cases, good judgment must be exercised.
- g. Understands and practices the concept of “my brothers keeper” when on track

On-Track Driving Protocols

- 1. All passing is done with a point-by.
- 2. There will be passing on every designated straight.
- 3. All point-bys will be given with sufficient time for the passing car to get back on-line before turning into the corner.

WHITE RUN GROUP – INTERMEDIATE STUDENT SKILL SET

1. Braking

- a. Consistently brakes up to the entry to the corner. Reduces brake pedal pressure as the car slows and gets near the turn-in point of a corner. Practices braking later for corners and maintaining some braking into the first quarter to third of a corner. Recognizes that, at the limit, as the car is asked to do more turning it has to do less braking.
- b. Uses appropriate braking techniques depending on the amount of speed reduction necessary, the braking surface’s condition and it’s gradient.
- c. Brakes right up to the apex of a corner when making a late pass. Recognizes that the braking zone of any corner can extend right up to the apex of the corner. Extending the braking zone into the corner is best accomplished with an early entrance to a corner....such as when making a late pass.

2. Throttle application

- a. Practices smooth application of throttle...both on and off. Application should always be smooth and progressive. Even the release of throttle should be seamless...no jerking of the car.
- b. When cornering upon exit, unwinds the wheel as throttle is applied, uses the entire track.
- c. Understands the concept of being able to re-distribute the car’s weight in a corner front to rear using the throttle and how that helps to balance a car.
- d. All students should be practicing and becoming proficient in heel-and-toe shifting....
- c. Understands and practices....the higher the horsepower..the straighter the the steering wheel needs to be before the throttle is fully depressed.

3. Cornering
 - a. Utilizes the brake to redistribute weight to the front end of the car so as to help the car turn better into a corner.
 - b. Immediately recognizes an early entry into a corner and knows how to make adjustment by holding the apex longer and delaying throttle application.
 - c. Practices off-line entries into corners. Comfortable being off-line.
 - d. Practices early entries into selected corners carrying more speed and reducing speed by extending the brake zone into the apex of the corner. Dynamically, this means the slowest part of the corner comes at the apex. The apex must be held longer to change the early entry into a late exit. With this type of corner there can be no throttle application until the car is beginning to exit the apex.
 - e. Knows how to give and take late point-bys.
 - f. Drives consistent lines thru all corners

4. Blending into the ebb and flow of traffic.
 - a. Is always aware of all conditions on track
 - b. Gives and takes late passing signals in all corners with confidence.
 - c. Is able to anticipate well in advance...sees everything.
 - d. Is always aware of cars coming up from behind and gives timely passing signals.

On-track Driving Protocols

1. All passing done with a point-by.
2. Utilizes all passing zones.
3. Offers late passing signals whenever appropriate.
4. When giving a late point-by, maintains the normal line into a corner but reduces speed as necessary to accommodate the passing car.
5. When taking a late point-by, never tries to come back on-line before the turn.

BLACK RUN GROUP – SKILLS OF AN ADVANCED RUN GROUP STUDENT

BRAKING

- a. Uses brakes smoothly, consistently with appropriate application
- b. Brakes right up to and into the corner to enhance turn-in.
- c. Trail brakes up to the apex of a corner for the purpose of extending the braking zone, making a late pass or balancing the car in a corner.

THROTTLE APPLICATION

- a. uses the throttle to balance the car throughout the corner
- b. reduces the view of the throttle as an on/off switch

- c. identifies corners where part throttle application could begin sooner

PRACTICES NON-DRIVING SCHOOL TECHNIQUES

- a. explores different lines through corners
- b. practices off-line entries to corners
- c. develops an understanding of the better line, earlier entry under braking, adjusting line at the apex of a corner to create a “flatter” exit from the corner

BLENDS INTO THE EBB AND FLOW OF TRAFFIC

- a. Maintains an absolute awareness of all cars and conditions in the immediate area.
- b. Understands and practices protocols implemented by drivers in a less structured environment
- c. Practices techniques which allow others to maintain their momentum.