

Advanced Driver Checklist

This article describes the skills expected of an Advanced / Solo HPDE driver. The list of skills is not arbitrary: it comes from years of work by many dedicated DE drivers and instructors that led to the HPDE Curriculum Guide.

Here we present the key skills in an easy-to-use checklist format. Every solo driver is strongly encouraged to go through the list and check off the skills they already have and flag those to work on. If you need assistance, please ask a Chief Instructor or other senior instructor. If you don't have any to work on, please think again!

Each skill is described in concrete, measurable language. Skills with an (M) are minimum skills required to be a solo driver. Others shown are those expected of an advanced driver (Black run group or experienced White run group).

The skills are presented in three categories:

1. Driving skills
2. Situational awareness and courtesy on track
3. Learning mindset

After the checklist, we describe some of the most common mistakes made by "advanced drivers." If you find that you are making any of these mistakes, please ask for assistance. You will end up safer...and going faster.

At the end, you will find pointers about Expanded Passing for black run group drivers.

As a reminder, you may recall how Ross Bentley defines advanced driving:

Ross Bentley: People ask me what the main difference is between the best and the rest.

- 3 things make the difference
 1. They focus on the basics. ***The advanced stuff is just doing the basics better.***
 2. They're committed to learning. They make learning an objective. They know the more they know, the better they will get.
 3. They prepare.

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Driving Skills

- Vision
 - (M) Look "through" all turns, including turns with limited sight lines, mentally visualizing the path their car will take
 - Find and use their own visual reference points, both on and off the track
 - Are not dependent on "turn in," "apex," or "track out" cones
 - Demonstrate expert vision skills by looking well ahead, continuously scanning down-track for emerging information
 - Maintain appropriate focus on reference points, scanning of mirrors, and awareness of flags and safety situations when driving close to other cars

- Line
 - Drive the line flawlessly and effortlessly without placing themselves or others at risk
 - Alter their line when and where necessary
 - Experiment with small adjustments in their line (e.g., turning slightly earlier or slightly later) and observe the effect on corner and/or section exit speed
 - Identify high-risk areas of the track (e.g., bumps, dips, surface material changes) and adjust driving style to manage the overall risks

- Smoothness

- (M) Brake and accelerate very smoothly, including smooth brake release
 - Release brakes gradually, with some release beyond turn-in point (trail braking) as needed to help the car turn and utilize more of the car's grip
- (M) Have mastered “heel and toe”
 - (M) Downshift using heel-and-toe technique, with only small variations in braking pressure and no sudden weight shift when the clutch is released
- Provide very smooth inputs at all speeds
 - Adjust the timing and rate of release of brake pedal pressure in small increments to fine-tune entry speed and car rotation
 - Make planned steering inputs more rapidly or more gradually (faster or slower hands) to improve grip and increase speed potential
 - Downshift using heel-and-toe, with negligible brake pressure variation and no perceptible weight shift when the clutch is released
 - Use small changes in the throttle to adjust the balance and direction of the car in a turn (i.e., throttle steer)

- Pace

- Understand and can carry considerable momentum through corners
- Drive at a pace appropriate for the run group and are approaching the limits of their car

- Car Control

- (M) Do not rely on PSM or other electronic aids except in emergency situations
- (M) Demonstrate competent car control and recovery skills when needed
 - (M) Recognize when they are unsure of a solution to a handling or performance issue and seek guidance from reliable sources

- Consistency

- (M) Recognize when their driving deviates from “normal” and take immediate corrective action.
- Perform the skills listed above lap after lap with only minor variation.

Situational Awareness and Courtesy

- Respectful and courteous
 - (M) Automatically use proper hand signals and sound judgment during all passing situations, and demonstrate courtesy to other drivers
 - Always drive in a non-aggressive manner and are respectful and courteous to other drivers, including
 - Give prompt pass signals with enough lead time that the overtaking car does not have to slow to their speed
 - Do not drive on the bumper of slower cars and avoid other aggressive behaviors
- Speed differentials
 - (M) Calmly deal with speed differentials within their run group
 - (M) Set up passing scenarios ahead of time for safe and effective presentation and execution
 - Can handle other cars being very close behind and in front, without losing focus
 - Anticipate passing situations and accomplish the pass with minimal speed adjustments and minimal time driving side by side
- Track conditions
 - (M) Notice changes in track surface conditions due to vehicle fluids, weather, debris, wildlife, etc. and respond appropriately
 - (M) Scan run-off areas so they can be included in their avoidance/action plans
 - (M) See ALL flags displayed on track during a session, especially when driving in traffic
 - Check each flag station at the earliest place on track where the station is visible
 - Detect situations far ahead on the track (incidents, flags, traffic) when track layout makes that possible
 - (M) Detect situations far ahead on the track (incidents, flags, traffic) when track layout makes that possible
 - Infer the situation on track from any flag or sequence of flags, and be prepared to execute a safe response

- Safety

- (M) Recognize when they are becoming overly focused on speed or competing with other cars (i.e., experiencing "red mist") and reorient their driving toward learning and safety
- Perform reconnaissance of a track to build knowledge of line-related track features, run-off areas, access roads, barriers, and corner-worker stations, recording the results on a track map
- Do not exhibit aggressive driving habits: see "[Aggressive Driving](#)" on the NNJR website.

Learning Mindset

- Attitude

- (M) Have a driving record and attitude consistent with NNJR's DE Philosophy

- Notes

- (M) Keep notes about which skills they are executing well, which they are working on, and how the latter skills are changing through focused practice
 - Accurately identify the strengths and weaknesses in their own driving performance, and prioritize areas on which to work that will produce the greatest improvements in driving performance

- Take advantage of resources

- Use a broad set of tools to measure and improve their performance, including instructors, video and data acquisition systems, coaches, etc.

Common Mistakes

- Overdriving: pushing too hard, trying too hard.
 - Often seen with White and some Black run group drivers. Most often exhibited by late braking, too much trail brake and too much drama in the early part of the corner. Not only is driving this way harder on the car, it reduces the margin for error and, of course, it is slower than driving properly. As advanced drivers know mentally, corner exit is the most important aspect of most corners. Making this mistake gives up huge amounts of exit speed.
 - Often the cause of a driver pushing too hard is a focus on lap times. It's very easy today to have lap time shown in the car. While data can be very useful in improving your driving, it never works to chase a lap time and can lead to unsafe driving. As Peter Krause says, it's all about the fundamentals... "Driving is all about the Best Execution of Fundamental Skills."

- Sloppy: poor line, etc.
 - Why would an advanced driver miss apexes by a foot or more? Or crab in before the turn in point? This could be a driver getting tired but sometimes it appears that drivers forget the basics. Modern Porsches are so good at getting around corners that it's easy to be lulled into a sense that the driver is doing great, when in fact, the car is helping them out more than they think.

- Reliance on technology
 - Modern Porsche PSM, traction control, etc. is very good. Sometimes it helps a driver without any indication. That said, PSM does show a light on the dashboard but not every driver sees it! A definite warning sign: when rear brake pads wear out fast, or unevenly .

- Aggressive driving: more than flashing lights
 - Most drivers don't flash lights or honk their horn behind another car. But many drivers expect to get a pass when they close on a car nearing a brake zone. Or don't give a pass signal early in a passing zone, or at all. Just like flashing lights, these are examples of aggressive driving.
 - As outlined in the NNJR guidelines on Aggressive Driving, lack of pass signals and creating a train are neither expected nor tolerated.
 - From a courtesy perspective, if you catch and pass a car with less horsepower at the end of a long straight and then hold them up through subsequent corners, its time to lift and send them by. Follow them: you may learn something!

Expanded Passing

- If you drive in the Black run group, you should be familiar with the [Expanded Passing Guidelines](#). As a reminder, they include
 - Just because you can pass anywhere, doesn't mean you should (or want to) pass anywhere, or expect to get a pass signal anywhere
 - Courtesy is still expected: DE is not racing
- Passing still should be done on straight sections
 - Passing in the corners is allowed but slows down both cars and isn't fun for either
 - If a pass does occur going into or during a corner, each driver owns only half the track. An experienced black run group driver who has been passed in a corner will duck behind the car that passed to minimize side by side driving.
- While passing is allowed anywhere on the track (except as noted by event guidelines), there are circumstances when it isn't wise to give or take a pass. For example, heavy traffic ahead can suggest waiting to give a pass signal, or waving off a pass signal. Or you may be aware of something on the track surface that is off line that will be an issue if a pass is executed. Safety and good judgement are always the first priority.

Expanded Passing: What not to expect

- A pass signal when you catch someone entering a corner (or just before one)
 - Very late passes slow down both cars
- An immediate pass signal from a "slower" car near the end of a straight
 - Especially entering a series of corners
- Multiple pass signals just because you are running nose to tail with your buddy
- An automatic pass signal because you are faster
 - Especially if you are off line expecting a pass; you may not be seen at all
- A train of cars (more than 2 or 3)
 - If there are 2 or more cars behind you for more than 2 corners, you are holding cars up. It's time to let them by!