



HPDE 2 Session Drill
Offline Driving & Passing – Instructor Pacing
Session #4 on Saturday

Goal

Combine multiple skill development situations into a single drill. Continuous passing in groups of 3-6 cars will allow the drivers to experience passing in new locations on track, and in closer proximity, than is typical. Instructors pace the drill while students follow and perform “leap frog” passing. Skills such as car control, visual awareness, and input smoothness are sharpened.

Drill Rules

Control

- Drill Duration ○ **For NCM only**, the drill will last for just the out lap (1 lap) ○ All other tracks, the drill will commence at the start of the session, and last for the out lap and the next complete lap (i.e. 2 laps including the out lap)
- All flag stations will display the Blue passing flag for the duration of the drill.
- As the lead group crosses the start/finish after the second lap, the Start/Finish flag station will display a green flag. Pull the Passing flags ahead of the lead group and as the remaining groups complete the drill.

Drivers

- **Watch the drill’s Video on the HPDE 2 webpage**
<http://nasagreatlakes.com/DriverGroups/HPDE2.aspx> – **“HPDE 2 Paced Passing”**
- **Cars will be “assigned” to a Pacing Instructor as you leave grid.**

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- Drivers will be grouped behind an instructor's car, the **Pacing Instructor**, when exiting the grid. Follow the Grid Workers instructions and signals. The Pacing Instructor will lead your group of 3-6 cars during the drill. Do not pass the Pacing Instructor during the drill

Drill Duration ○ **For NCM only**, the drill will last for just the out lap (1 lap) ○ **All other tracks**, the drill will commence at the start of the session, and last for the out lap and the next complete lap (i.e. 2 laps including the out lap)

- All flag stations will display the Blue Passing Flag for the duration of the drill.
- The drill begins **immediately** after leaving the pits on the out lap, while still observing the blend line. There is no signal to begin, the last car in the group self-starts the drill
- The drill ends after the first grouping passes the start/finish for the second time (i.e. the out lap and 1 complete lap) at which time a Green flag will be waved and Passing flags will be pulled

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The mechanics of the drill are as follows:

- **The usual passing rules are suspended for the duration of this drill** ○ **As soon as the last car in the group clears the blend line exiting the pits, that car should move to the open side of the track and accelerate to begin passing the cars in the group** (Out lap = *Passing* on the **right** side, Second Lap = *Passing* is on the **left** side)
- The pass should be accomplished **quickly** with the passing car pulling in **behind** the instructor. This will require the passing car to increase its speed (accelerate aggressively) and then slow to blend smoothly into the gap behind the instructor and in front of the group. Once behind the instructor, be sure to provide a gap between your car and the Pacing Instructor for the next passing car to pull into.
- **As soon as** the passing car has reached the front of the group, the "new" rear car will perform the passing process.
- Repeat this as frequently as possible to continually cycle the cars through the group.

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- **Continue following the instructor as they switch from track left to track right**
 - **NCM Only** the switch occurs after turn 12 (Deception)
 - All other tracks the switch occurs around the start / finish line
- The goal is to have **continuous** passing going on throughout the drill
- **Do not pass the group's Pacing Instructor anytime during the drill**
- **The group should follow behind the Pacing Instructor throughout the drill, except when passing**
- Speed limits for your group will be maintained by the Pacing Instructor which will lead each group.**
- **Do not pass the Pacing Instructor's car during the drill**
- It is essential to be crisp and smooth when passing and pulling in behind the Pacing Instructor. Both the accelerator and brake pedals should be used.
- Remember, once you have passed the group and pulled in behind the Pacing Instructor, create a gap between your car and the Pacing Instructor for the next passing car to pull into
- Maintain 1- 1.5 car lengths spacing between cars in your group (keep it relatively tight)
- Passing should be **continuous and occur through corners**. The usual passing rules are suspended for the duration of this drill

Instructors

- **Watch the drill's Video on the HPDE 2 webpage**
<http://nasagreatlakes.com/DriverGroups/HPDE2.aspx> – ***"HPDE 2 Paced Passing"***
- **Your role in the drill is to be the Pacing Instructor.**
- **The usual passing rules are suspended for the duration of this drill**
- **Be sure to have an instructor "X" on the front and rear of your car**

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- **Grid in the front, drivers will be grouped behind you when leaving grid**
- **Create a gap between you and the group ahead when leaving grid. This is so the last car of the group ahead does not confuse you as part of their group.**
- **The drill begins immediately after leaving the pits (still observing the blend line). Issue the Lead / Follow rotate hand signal if drivers hesitate.**
- Drill Duration
 - **For NCM only**, the drill will last for just the out lap (1 lap)
 - All other tracks, the drill will commence at the start of the session, and last for the out lap and the next complete lap (i.e. 2 laps including the out lap)
 - The drill ends when the start / finish stand displays the Green flag. All stations should also pull the Passing flag.
- Drive track left initially. Switch to track right at these locations...
 - **NCM only**, after turn 12 (Deception)
 - All other tracks – on the start / finish straight
- Th passing behind you occurs to the “open” side of the track
- Approximate instructor speed limits – 70 MPH on straights (slowing to 30 in braking zone), and 30 MPH through corners. Passing cars will make the pass at faster speeds.
- Total cars in your group will vary based on the track and total cars in HPDE2, but expect 3-6
- It is better to be a little too slow than too fast
- Drive using your mirrors
 - Make sure cars are able to pass. Example: you may need to adjust speed to help cars pass on the outside of corners
 - Keep your group bunched – about 1-2 car lengths between cars. Slow down if they get too spaced out
 - Adjust your speed to help the passing car get in line behind you, then slow down again
 - Be sure to ‘assist’ lower horsepower cars in completing a pass by controlling group speeds

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- Keep some spacing between the group ahead of you and your group. This will allow you more flexibility in adjusting speeds to keep your group better bunched.
- After the drill you can point-by cars in interesting locations. Keep it tight and give the student driver 1.5 car widths open track to complete the pass. You are free to remain on track for the entire session.