

2006 NASA SE7ENS CHALLENGE™ West Coast

The NASA SE7ENS CHALLENGE™ is an affordable program that offers a complete progression from training to full racing. It provides “Sevens” owners (Lotus Seven, Caterham, Birkin, Westfield, Stalker, Locost, and other Lotus Seven replicas) a place to safely develop driving skills and to enjoy the fantastic performance of these cars:

- For the beginners who simply want to learn what this experience is all about, there is no better venue.
- For people who want track time on a road course in a safe and controlled environment, it is the perfect opportunity.
- For those with a competitive itch, but not yet committed to full on racing, the NASA Time Trials give Se7ens Challenge participants a transition opportunity between training and actual racing.
- And then, there is the most exhilarating experience of all: wheel-to-wheel racing with other Sevens like yours!

Why are we doing this?

We want to assemble a group of like-minded Sevens owners to race in a low key, controlled environment under the NASA Pro-Racing program. In the two years since the NASA Se7ens Challenge was formed in Northern California, we have seen this group form and grow, with many regulars attending the track days and time trials (and enjoying our gourmet Se7ens barbecues!) For 2006, our goal is to add to this several wheel-to-wheel races with a field of at least six cars and drivers ready to grid by the middle of the race season.

The race group will emphasize fun, safety and learning. We will allow anyone with a Sevensque car to join the group. We will encourage drivers to comply with a group spec to maximize the competitiveness of the group, but we won't turn anyone away just because their car does not meet the spec.

We have a number of instructor-rated seven owners who are willing to help enthusiastic novices and experienced but unlicensed drivers move through the NASA HPDE driving program and obtain race licenses quickly. This will require considerable commitment from the instructors, and in return we ask that you commit to see the program through. In short, if we are going to make the effort to put this program together, you need to show up.

Don't they make Coke bottles out of HPDE?

No. HPDE stands for "High Performance Driving Experience" and was created by NASA in California. The program is being replicated across America because it offers the best available progression of driving experience from novice to racer. The program comprises four HPDE groups, with Group 1 being novice and Group 4 being the most advanced. Drivers may progress through the groups at their own pace with the approval of the group instructor. You can read about the HPDE program at: www.nasaproracing.com/socal and www.nasaproracing.com/norcal.

There are four HPDE run groups:

- Group 1: Novice with instructor – mandatory for first timers.
- Group 2: Novice without instructor – suitable for inexperienced drivers who do not need one-on-one instruction.
- Group 3: Experienced drivers who are ready to build their experience by progressively "opening the track" to passing. Typically, the passing rules are relaxed over the course of the weekend, and the goal is to have at least one session with full open track if everyone behaves and is comfortable.
- Group 4: Open track. Passing is permitted anywhere on the track, but dicing is not permitted and driving etiquette is strictly enforced.

For each group, mandatory download meetings are held immediately after each track session. The "downloads" are an ideal forum to analyze mistakes and learn from the group's collective experience. They also foster a sense of camaraderie amongst the participants, and give a better feeling of "who else is out there with me on the track". The few mavericks who don't get along with the program (miss a download, drive recklessly, etc.) may be parked for a session or ejected from the program. Our experience with the NorCal program is that drivers take the program seriously and drive with care. Idiots generally leave (or are invited to leave) the program quite fast.

The normal weekend involves four sessions of 20 minutes each per day. Throw in a few beers on Saturday night with the now regular Se7ens barbecue and you will be well satisfied by the end of the weekend. In 2005, a full weekend cost \$275 for HPDE (\$295 for a race group). One day costs a little over half that. You can sign up and pay for each event online. Note that the Infineon events sell out fast, so you should sign up for that track at least one month before the event.

Yeah, But I Want to Go Racing

So do we – and we would like you to join us. If you already have a racing license from a different organization, then you can probably obtain an equivalent from NASA (contact the NASA office at 510-232-6272 for details). If you aren't yet licensed for racing, but have a season or more of track days or autocross under your belt and are eager to develop your driving skills, you can probably move through the HPDE program and get a competition license fast.

How fast? As fast as you and the group leaders feel comfortable with. We can help and coach you at every step, and we will address each case individually. When you are ready, a competition test is taken during a day in HPDE group 4. The test involves driving the circuit in a regular group 4 session, but with the licensing instructor following behind to observe your line and driving skills, occasionally nosing in on corners etc. to see whether you can handle traffic.

The requirements for a competition license are described in NASA's Club Code and Regulations (CCR). The current CCR can be viewed and downloaded at: www.nasaproring.com/rules/ccr.pdf. In short, you need: (1) a race car with log book (see below); the required nomex safety apparel as outlined in the CCR; (3) a completed medical form, which requires a trip to the doctor; (4) a valid state drivers license; (5) a completed provisional license application form (which you can download from www.nasaproring.com/forms.html); and (6) a \$50 license fee. The paperwork and fee must be submitted 10 days prior to the test.

This sounds ve-e-ery interesting. What is the schedule of events?

A combined NorCal and SoCal NASA calendar is included below, with the NASA Se7ens Challenge events highlighted. The four racing weekends (in red) will combine our NorCal and SoCal groups together. Sevens drivers from other regions are invited to participate as well.

Okay, count me in. How do I get plugged in?

First, we encourage you to join the NASA Se7ens Challenge mailing list:

<http://sports.groups.yahoo.com/group/nasa-sevens-challenge>

It is a source of information and allows everyone to keep updated with the upcoming events.

Then, become a NASA member. Go to www.nasaproring.com. You can join NASA online for a \$40 annual fee. The annual fee also gets you a subscription to a groovy monthly magazine called Grassroots Motor Sport. NASA's site has all of the information that you will need to get started and to sign up for HPDE and race events. You will need to select the relevant region – NorCal or SoCal – using the dropdown box on the home page.

NASA has confirmed that our group will be allowed to participate in both NorCal and SoCal events (i.e., SoCal members may run in NorCal events and vice versa).

What are the vehicle requirements for HPDE?

The rules are included the CCR. There are very few special rules for HPDE – stock street equipment is generally acceptable, provided the car is in good condition and passes tech inspection. **Important: don't think you need to buy fancy upgrades in order to run with us!** In most cases, reliability trumps finicky upgrades, and a good road car will teach you more than a virtual rocket. In doubt, please call or email one of us.

You should also ensure that your roll bar is padded wherever it might conceivably contact your helmet or body. That includes the top bar as well as the diagonal cross bar.

Your car must be inspected and have a completed tech sheet (put it under your windshield wiper when you line up for the first run group; the official will take it and give you a sticker which is good for the weekend.) NASA provides tech inspectors at the track but, in Northern California, encourages off-track inspection by charging exorbitant fees for inspections at the track. Try to get your car tech'd before you get to the track. The NASA website includes a list of approved inspection shops.

As for clothing, the same rules apply for HPDE as for most other non-racing track events- neck to wrist and ankle covering of non-flammable clothing such as jeans. No synthetics. Helmets are required. You should also have gloves and arm restraints.

A word of warning: You will be driving fast in HPDE. Mechanical failure can have severe consequences, so you should prepare your car with the same rigor whether you are driving in the HPDE program or a race group. Go over the entire car (chassis, suspension, engine) and check for loose fasteners, cracks, leaks. Talk to the group about known failure points (each brand has its own idiosyncrasies) in the suspension and chassis elements, and check those points before every weekend.

Additional Car Requirements for Racing

If your car meets the technical requirements for HPDE, it is pretty close to meeting the technical requirements to race as stated in the CCR and in the NASA Se7ens Challenge rules: www.nasaproracing.com/rules/Se7ens-Challenge.pdf. Read both these documents carefully. Here are some highlights:

- A roll cage is required. The good news is that we are working on a deal with a fabricator, C-Ray, to bring you an outstanding cage at around \$2000, in the required 1.375" x 0.098" DOM/seamless tubing (as per NASA CCR). Each cage will be custom-fitted to the car, and can be removed in five minutes (bolt-on / bolt-off design). It will have two under-tray bars for improved safety, and a removable diagonal bar for strength and rigidity. A choice between low-front hoop and high front-hoop designs will be offered. Our fabricator is located in the Bay Area, but has agreed to travel to South California if a group of cars is ready to receive a cage there. Contact us as soon as possible if you are interested. See www.teambirkinsport.com/gallery/rollcages for some photos of cars with similar cages fitted. Should you decide that you want to source another cage, you are welcome to do so, but please ensure that it will meet the NASA CCR, especially with regard to tube size and construction, as well as weld quality. NASA will reject non-conform cages such as the so-called "Roadsport FIA cage", whose tubing is too small.
- A driveshaft safety loop is required, and can also be provided by our fabricator. It will be similar to the one on www.teambirkinsport.com/gallery/driveshaft_loop.

- You need a fire extinguisher rated as per CCR Section 15.1 with a metal (not plastic) mounting bracket and a gauge showing the fill level. You can buy one from Pegasus for \$35 (www.pegasusautoracing.com).
- You must have a battery master cutoff switch accessible from the outside of the car.
- Your battery positive terminal must be covered by an insulated boot.
- The cutoff switch and the fire extinguisher must be marked with appropriate decals – buy these from Pegasus or the supplier of your choice.
- You also need race numbers. The numbers and those retro-cool white circles that the numbers are provided by NASA or can be purchased from Pegasus and other retailers.

We will be happy to advise racers on car preparation and inspection.

Can I race in my Tommy Bahamas?

No. You will need fireproof apparel as stipulated in the CCR. This means a one-piece race suit, possibly nomex underwear (depending on the rating of the suit – see the CCR Section 15.17.2), balaclava, gloves, boots and socks. You can wear your Tommy B's in the paddock. The umbrella girls appreciate well-dressed guys¹.

The generously proportioned gentleman may find fitment of a race suit to be problematic, so online shopping could be hit or miss and you will need to measure carefully. The other stuff can be purchased from a variety of online retailers – try for example www.racerwholesale.com. Be sure that all of the equipment meets the applicable rating standards as specified in the CCR.

Your helmet must be full-face and at least SA1995 certified. This means it must be fire rated. (Motorcycle helmets, which are typically M-rated or DOT rated, are not acceptable.) If you do not have a compliant helmet, consider buying an SA2005 rated helmet, which has only recently become available. SA2000 rated helmets will likely be required in 2007.

You must have arm restraints. These are readily available from the usual race suppliers.

Tire Specification for Sevens Challenge Cars

As noted above, we will welcome any Sevensque car to the group. However, in order to promote cost containment and close competition, for this year we will mandate DOT “R” tires (or higher wear rating) in the race group (no slicks).

¹ Did we mention the umbrella girls? Sevens drivers are very popular with the umbrella girls.

Schedule

Here is the NASA schedule for the West Coast (NorCal and SoCal) in 2006. Highlighted are the Se7ens Challenge dates:

In Green, events with coaching and time-trial. In other words, we'll move our butts to a track near you to applaud your time-trial heroics and bring you the finest instruction available...

In Red, four racing week-ends (8 races total). HPDE and Time-Trial also available, but no Sevens-specific instructor provided.

For all these events, we encourage participants from both NorCal and SoCal to join.

Date	NorCal	SoCal
Jan 21 22	Laguna	
Jan 28 29		
Feb 04 05	Infineon	
Feb 11 12		Willow Springs
Feb 18 19		
Feb 25 26		
Mar 04 05		
Mar 11 12	Thunderhill	California Spdw
Mar 18 19		
Mar 25 26		
Apr 01 02	Thunderhill	
Apr 08 09		Buttonwillow
Apr 15 16		
Apr 22 23		
Apr 29 30	Infineon	
May 06 07		Willow Springs
May 13 14		
May 20 21		
May 27 28	Thunderhill	
Jun 03 04		
Jun 10 11		Buttonwillow
Jun 17 18		
Jun 24 25	Reno-Fernley	

Date	NorCal	SoCal
Jul 01 02		
Jul 08 09		Willow Springs
Jul 15 16		
Jul 22 23		
Jul 29 30		
Aug 05 06		Willow Springs
Aug 12 13	Thunderhill	
Aug 19 20		
Aug 26 27		
Sep 02 03		
Sep 09 10	Mid Ohio Nationals	
Sep 16 17		
Sep 23 24		
Sep 30 01		
Oct 07 08	Infineon	
Oct 14 15		Buttonwillow
Oct 21 22		
Oct 28 29		
Nov 04 05		
Nov 11 12	Thunderhill	Buttonwillow
Nov 18 19		
Nov 25 26		
Dec 02 03	25 hrs of Thunderhill	

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