

Secrets of the Inner Circle, or How to Do Well in LeMons

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First a disclaimer, the following is all my opinion, nothing more, I am a tech inspector and a cage builder, and I work for LeMons, and what you are about to read is my opinion on how to build a Lemons car that isn't a cheater, may get you accepted to the show, and has a better than even chance of finishing in the top 10... Now if you do all I advise and you don't finish in the top 10, clearly, you've not done something right, don't blame me.

Why am I arrogant enough to think that you even care what I have to say? Well, lets just go with that, I'm arrogant, deal with it. Oh, and I build race cars for a living and have won a Lemons race. As an inspector I see how cars are built and prepped and can correlate what I see with finishing order, Its not rocket science. The other tech inspectors, judges and management are very good at predicting cars that will survive and do well. Some of that wisdom is here..

There are 4 simple things you have to do, after you get the car, to be a top finisher.

But wait, assuming you haven't already bought or been given that E-30, lets talk about car selection.

Pick a car you can work on, isn't too complex and is interesting, your chances of getting accepted go up if you bring something weird, gotta Borgward Isabella in your back 40? perfect. Your uncle had a thing for Renault Dauphines? Great, get him to sell you a rusty one for \$1.00. Found a Porsche 928 for \$250? Well, good luck with that... Another E-30, Civic, Miata, Integra, Prelude, RX-7, Supra, Camaro or Mustang, you'd better have a good theme. Themes involving scantily clad women/men/robots (your preference) are good. Clever names, good. Tiger Woods getting pummeled on the top of you car, fantastic. The starship Enterprise on your car and costumes to match, go ahead, race a Miata. Cool ghetto-charger sticking through the hood, good. Some cars will make the judges and the other competitors think you're cheating just because of what it is. Think: E-30, Mustang, Miata, RX, SER, 944, Integra or any car with a lumpy-sounding V-8, avoid them like the plague.

So, now you've chosen and acquired your car for under \$250 (you have to have something left to work with) its off to work we go. What could possibly go wrong?

My 4 simple things:

1. Make it reliable
2. Make it light
3. Make it handle
4. Don't be a Dick

That's it, are you done yet?

We'll take these one at a time

1. Reliability

Don't add or subtract anything in a way that compromises reliability. Your car is Japanese, don't mess

with the wiring, leave most, if not all of it in, If its British, rip it all out and make your own harness, stay away from wheel spacers, wrong offset wheels, high hp motors. Don't change something just because you can. Add coolers for every fluid, but do it well. A poorly installed cooler will likely leak or even restrict flow. Here is a paradox, coolers should add reliability by keeping the car cooler, but they add complexity and weight, if you aren't a good wrench, and can't do the job, don't. Make sure the radiator is cleaned out, both inside and outside (clean the crap out of the fins) Add a small mesh screen to protect the radiator and coolers, rocks thrown up from other cars will easily pop a hole into a radiator. Clean everything up, use zip ties, make sure that nothing can rub against a rotating part. Seal off and insulate every exposed, unused wire... The list is endless, you don't have any money to work with and you run into worn out hoses, wires and belts, remember beer isn't in the budget and have fun.

I consider good brakes part of reliability. Buy the BEST possible pads you can find, upgrade the brakes if you can, use 600+ degree Dot 4 brake fluid and change the hoses on any car over 10 years old, use old (but still good) OEM rotors instead of brand new cheapies, they have been heat treated and normalized over the past 20 years and are unlikely to crack like offshore \$12.99 rotors will. Rebuild or replace your calipers. 20 year old seals tend to fail when the brake fluid hits 400 degrees for the the first time.

Clean up the engine compartment, degrease everything, fix the oil leaks. At WOT racing conditions your engine gets very hot and oil fires are not fun. Check and repack or replace your wheel bearings, especially the fronts.

2. Add Lightness

Simple, take out EVERYTHING you don't need for a LeMons race. Remove insulation, dashboards (See above about reliability first.) sound deadening, sunroofs, windows, AC equipment. Send it all packing, but be careful about the wiring, don't screw it up. Again, this is simple, get the crap out of your crap-box, you'll be happy you did. Be careful here: you may need wipers, washers and lights.

3. Handling

Yep, they have corners in these races, quite a few. This is where you spend your other \$250. Get the car low, sell your soul for negative camber, get good shocks, buy the right tires. (I'll not wade into that debate.) Talk to the guys that race cars like yours, what do they do? Yeah, I know that there is no money for camber plates and adjustable shocks, but do the best you can. Rebuild your old shocks, very cheap. Keep in mind, the judges know about urethane bushings and expensive suspension mods in general, and they will nail you with penalty laps if you cheat on the \$ here. But there are ways to get the camber and damping you need for almost free, just be prepared to spend a lot of time on it. Be careful about massive or un-balanced swaybars, they can really screw up your handling, bigger isn't always better.

4. Don't, Just Don't, be a Dick

The fastest way to long penalties, getting cursed, not getting the parts you need is to be a dick to the organizers and other competitors. You think that the inspector is being tough, just ask how to fix the problem, go fix it and come back, don't argue. The Judges don't like your 17-way adjustable Ohlins shocks? Smile and take your penalty like a man. You hate the guy next to you because his umpteen-million dollar toter-home stacker trailer is blocking out the sun? Remember, he probably has a full 5 axis CNC mill in there that can make you a new billet control arm for your Om617 powered Spitfire, so be nice. You think the guy in front of you is blocking, don't dive bomb him, make contact and end up listening to bad techno for an hour. Wait, think about it, and make a better pass, live to fight another day. Come into the penalty box, swearing and claiming that you are being picked on that you are

the best driver since Jimmy Clark while the cone you hit is still stuck under your car... uh, nope, major dickness, huge penalty... You get the idea, 'nuff said.

4.1 Don't Let a Dick be on Your Team

Got a hothead brother-in-law that thinks he can race because he loves Grand Turismo? Make excuses and go for the meek geek IT guy at work who is good at saying sorry, you'll be happy you did.

Notice that I've said nothing about adding power, hell, I'd almost advocate limiting power for better reliability... No, wait, I love powerful cars, that isn't true. I would never turn down the power, but, power isn't required to win the race. Turning up the boost breaks things, takes an old crapbox beyond its design parameters and in the end will cost you the race. Keep the car circulating, don't spend too much time in the pits and you'll do well..

If you haven't started to build a car yet, go to a race and pay attention. Watch the Judges during the BS inspections, they are incredibly accurate on the relative crappiness/potential finishing ability of the cars. Walk the paddock and look at the cars, make guesses on which will finish well and why, and then compare what you thought with the actual finishing order.... Your eyes will be opened. Ask questions, help teams out, hammer back beers with guys... you will learn a lot.

That's it for now, I'm sure I'll come up with some new thoughts after you super-wrenches tell me I'm all washed up...

– From the First Letter of John to the Racers.