



Beauties: Cherie Saxton & Gayle Huff



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November 2007

## Jan 9 **TPOC mtg 7PM at Mimi's on Brookhurst Fountain Valley.**

**Willow Springs Event story and pics by Cherie Saxton.** West Coast Racing with the help of TPOC and the Ferrari Club pulled off an exciting and successful weekend. Jim and Cherie put in hundreds of hours for the event. 500 event forms are mailed. Some require follow-up phone calls, e-mails, and faxes to place the drivers in the proper class. Arrangements go well beyond just the track. Forming teams of corner workers, pre-grid, professional instructors while purchasing of insurance, trophies and supplies are all part of the preparations. This year's TPOC volunteers were Bob Singer, Bob Culpepper, Bill Wright, Rod Kunishige, Ron and Gail Huff with Chris Qualls and Colin Haney doing car techs outside.



Beasts: TPOC gang



"Mind the Gap" must be a Brit owner. But who?

The first lap of the day brought an adrenalin rush as a red Ferrari spun around to rest 3" from the pit wall. His progress was all of 10 feet on cold tires. The mêlée of cars slipping and sliding forced a special meeting before this class could return to the track again. The actual 12 lap race at noon was super exciting for both drivers and audience. Watching race trucks spar against each other as they lapped the slower cars brings a good deal of renewed respect for the drivers. There were so many off road excursions during the race that one would think that this was a SCORE meet. A 70 Z28 Camero driver speaking with an accent proudly pointed to a "Damn British Drivers" slogan painted on his car's rear. He gave American race drivers an opportunity to improve their reading skills as he passed them during the race. The spectrum of vehicles in the four classes ranged from completely stock including a rental Lotus from San Diego to purpose built track cars like the new Lotus offering. It sported race ready features like a full cage, all safety equipment and even an intercooler the size of a large ice chest fed by a monster turbo. At days' end, everyone met for free beer and awards. All the drivers were so very pleased with the trophies earned by their performance!

West Coast Racing will enter the 21st Century with a fantastic Web site by January. March event entries will be emailed for the first time.

Why not gather a small group to cruise out to the track March 1, 2008? Plan for a 10AM arrival to allow time to stroll through the open pits prior to lunch. Just let Cherie know you'll be joining us for her free lunch and enjoy the noon race. The track is normally open to all cars for a lunchtime parade at highway speeds with no passing so you can drive the track with your street car. **YOU ARE ALWAYS WELCOME!**

ED: Two things sadden me about this event. First is that there were NO Panteras in the race so there was no show of cat power. Second despite walking around with my helmet, no ride was offered. Perhaps March will be better. One can only hope.

**Cleveland vs Windsor** November 28, 2007, Rod Kunishige

Before addressing this continuous topic, let's dismiss the Modified block known as 351M/400M. They share many of the same features of its predecessor, our 351C open chamber 2V, yet they stand 1.1 inch taller, use a different motor mount, and demand a big block Ford (429/460) bellhousing pattern.

The Cleveland stands alone but it does have some interesting variants. It comes in two basic flavors of canted valve heads: 2V and 4V are named for the production two and four barrel carbs they carried. Each require their own intake and exhaust manifolds. The first variant is the famous Boss 351C. It uses the 4V heads but with adjustable valves. The second is the Australian heads. These feature a 2V design with smaller chambers and slightly larger intake valves (2.065int/1.655exh vs. 2.03/1.67) to give us both excellent flow and burn characteristics; whereas, the 4V and BOSS 351 have large 2.19/1.71 valves.

Windsors come from the early 60s through the 80s sized as 221ci, 260, 289 302 and 351W. They share the same cylinder-head bolt pattern, bore spacing, motor mounts, and bellhousing with the Cleveland. Heads, intakes, exhaust manifolds, fuel pumps and most bolt-ons do not interchange. A variant worth considering is the BOSS 302. Here a 302W was mated with the canted head that is the forefather of the Cleveland head. It boasted the canted intake valves of 2.23 reduced to 2.19 in 1970.

Now here's the head-flow (CFM) comparison. Let's assume the same bottom end, matched cam/heads, rocker arms and 10:1 compression:

	Port	Valve	CFM		
			0.5	0.6	.70 lift
<b>Cleveland</b>					
2V stock	int	2.030	196.5	198.5	
	exh	1.670	159.6	162.7	
2V ported	int	2.030	272.4	247.0	
	exh	1.670	204.6	221.5	225.8
2V Australian	int	2.065	206.0	204.9	206.0
	exh	1.655	154.2	168.1	174.2
2V Edelbrock	int	2.070	253.9	255.1	257.0
pn61626	exh	1.600	161.7	168.1	169.2
4V stock,	int	2.190	271.4	295.7	309.5
BOSS 351	exh	1.710	171.7	181.3	184.4
<b>Windsor</b>					
5.0L	int	1.700	156.0	156.0	
	exh	1.450	116.0	117.0	
351W	int	1.840	183.0	185.0	186.0
	exh	1.540	118.0	118.0	117.0
AFR 165*	int	1.900	243.0	245.0	
* 289/302	exh	1.600	190.0	191.0	
AFR 195	int	2.020	267.0	277.0	
	exh	1.600	185.0	191.0	

\*Note: AFR 165 is better for smaller 289-302ci but AFR 195 approaches our stock 4Vs.

The table clearly shows that breathing has always been a problem area for the Windsor. New head design or hand porting open the full potential of these engines. Porting the 351 2V yields gains worthy of the effort. The stock 351 4V can regain some low end with some flooring and direct flow work then add lift not normally placed on our street Panteras. It would be wise to lighten and internally balance the rotating assemblies regardless of engine choice in order to push the revs to or above 7,000 rpm.

The winner for me is the 4V. Some head work and careful valve overlap planning should draw air well while singing in the high revs. Even the 2V shows impressive numbers when ported correctly. Windsor, consider buying the AFR 195. (Keeping my 4V & 2V.)

Source: Hot Rod January 2008 issue page 142.

Head flow numbers support using 4V heads for those of you who have them. 2V owners are best served by porting them or simply buying Edelbrock 351C 2V #61626. A distant runner up would be to hunt down an Australian 2V set. Of course, those BOSS 351 heads are for the guys who love to adjust mechanical valves a couple of times a year or after each track day.

There is more to do for those of us with the low compression engine. The stock 2V heads stall out around .4 lift and its 77cc open chambers suffer against Edelbrock's 60cc. The later brings your compression to about 9:1. Be sure to dump the Performer for a higher revving RPM Air-Gap 351C 2V giving you revs to 6,500 rpm. Swap out the cam for 230/236 degree at .050 (Comp XE27H 32-346-4) with 1.73:1 rockers. Strive for 10:1 to get the best low end power by either measuring the head gasket spacing or selecting the proper pistons.

Measure the valves at maximum lift to verify that they will not touch piston tops. Valve float has managed to cause some unexpected booms. These are often followed by a call to a local tow truck.

**Gondola** evening is also scheduled so send your money to Bob Singer 714 960-2323 now.

**Reminders:** from [rkunishige@hotmail.com](mailto:rkunishige@hotmail.com). Please email needed corrections/additions to me.

- Dec 9 *Xmas Party* \$40pp for a sure winner. Santa will be in the same place as last year. Were you nice all year?
- Dec 29 *Gondola Evening in Naples* Bring your loved one or more (\$20pp) for a ride in the canals and then to a dinner at nearby Crab Shack.
- Jan 9 *TPOC Mtg* 7PM Mimi's 18461 Brookhurst & Ellis, Fountain Valley.