

# C Modified Quarterly **cm-q**

## V2-I1 / Winter 2000

### Club Racing to Solo2

Changing the set up of a formula car from its original Club Racing specification to that of Solo2 is something new for me. The two formula cars I purchased prior to my recently acquired Swift SE3 FF2000 were already set up for Solo2.

Beyond basic maintenance, the only thing that I needed to do to my Solo Vee and FF was to learn how to drive to get the most out of these cars. This was a good thing because, looking back, I didn't have the slightest idea of what was involved in configuring a successful Solo2 formula car.

Although I have learned a lot in my nine years of Solo Vee and FF ownership, I'm not going to say that I have all the knowledge necessary to set up a National caliber Solo2 formula car. I'm bound to make a number of mistakes in my effort to set up the SE3 for BM, but the experience gained through such mistakes is invaluable.

Lack of experience with aerodynamic downforce has led to my first quandary with regards to set up. What is the proper spring rate and ride height for a winged Solo2 formula car?

After reading the chapter on "Street Fighting" in Carroll Smith's "Drive to Win", I came to the conclusion that, in general, the aerodynamic effect of wings at Solo2 speeds will be minimal. If you use this line of reasoning, the Solo2 set up of the SE3 should be very similar to that of a FF1600.

Drawing on my Solo2 Reynard 85F FF1600 background, my initial plan is to raise the ride height to its maximum after first installing the softest springs in my inventory.

At the moment, I don't know how high I can set the ride height on the SE3, but on the 85F I recall being nearly at the limit of adjustment with the front at 2" and the rear at 2.5". I chose these heights after, quite literally, a few years of "hit or miss" adjustments. As I will be running on the same sites I did with the 85F, I am targeting to achieve the similar ride heights with the SE3.

The spare springs that came with the SE3 would allow a drop in spring rate of 150# per wheel. To be honest, I don't have the slightest idea if 150# per wheel is too much or too little! Again, the only experience I have to go on is

what worked on the 85F. The lower I dropped the spring rates on the 85F, the better the car worked.

Validation of basing the SE-3 set up on concepts that worked for the 85F will come at an early season Solo2 test session; that is, if the test session does not conflict with the driver school I hope to run.

### Driver's School

As the SE3 currently configured for Club Racing, I thought that now would be the best time to take advantage of this set up before reconfiguring it for Solo2. Beyond the usual nut, bolt, and fluid check, the SE3 would only need a gear change to prepare it for the driver's school.

The driver's school I plan to attend is being held at a smaller track on the north side of Detroit called Waterford Hills. The size of this track is such that I only need to make minimal changes to my Solo2 ratios to have adequate gearing. After dropping out the integral 1st, the remaining ratios are moved down one gear leaving room for a new higher 4<sup>th</sup>. I admit that this might not be the best gearing for this track, but for the purposes of a driver's school it should prove sufficient.

A driving instructor has told me having a sufficient set up for Waterford Hills is not nearly as important as having a car that is as mechanically perfect as possible. A car that is perfectly set up but not running does not lead to the most important thing you need to get at driver's school; seat time!

Seat time is one of the motivating factors behind my decision to attend the Waterford Hills driver's school. Over the two days of the school, I have been told to expect up to two hours of track time! For me, that represents nearly two years of Solo2 run time! I can think of no better way to get rapidly accustomed to my new car.

If everything goes according to plan, by the next issue of **cm-q** I will have run a Club Racing driver's school, a Solo2 test session, and two important Solo2 events. I'm really looking forward to how it all pans out considering I still do not even own a trailer to haul the SE3!

-pru-  
50 bm/fc

**"Riding High" – pru in the 85F - Oscoda, MI - 8/99**



photo courtesy of Michael Clevenger Photography  
<http://members.aye.net/~racerx/>

## Details

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### Treasury

1999 cm-q Expense / Income*	
Publication Expenses	\$134
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\*Through V1-I4

### Disclaimers

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## Books

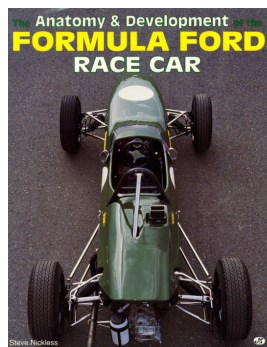
Anatomy & Development of the Formula Ford Race Car  
by Steve Nickless

Published in 1993 by Motorbooks International. \$29.95. Out of print.

I purchased this book on a whim in December of 1993. At the time, I was a SoloVee owner with no intention of switching to FF. Little did I realize how often I would reference this book over the next six years!

In my opinion, the best part of Anatomy & Development is the chapter on chassis builders, which contains a brief review of over 200 FF constructors. Simply awesome!

Hopefully Motorbooks International prints another batch of this Formula Ford "history" for those of you who missed it the first time around!



## Letters

### 2000 Solo2 Season Preparation

*Bill Engle Jr. sent this to me at the same time he posted it to autox-cm@autox.team.net. I feel that it's well worth repeating here for those of you who might have missed it the first time!*

-pru-

The 2000 Autocross season is fast approaching. Here are 30 things you can do now to get ready for it:

1. Put on clothes you would typically wear on a hot day. Run in place, in your shower, with cold water cascading down on you, and sporadically bend over and pick up something. Do this for 1 hour.
2. Throw \$25 away right now (SCCA members \$20).
3. Fill a blender with ice, hit the pulse button and let the spray blast your face. Leave the ice on your face until it melts. Let it drip into your clothes.
4. Throw \$25 away right now (SCCA members \$20).
5. Put on clothes you would typically wear on a cold day. Go to a steel plant and run in place next to the smelter and sporadically bend over and pick something up. Do this for 1 hour.
6. Throw \$25 away right now (SCCA members \$20).
7. Got to a tanning salon and get a good sunburn on your face. Then, put your face in front of a fan, turn the fan on, and throw sand into the back of it.
8. Throw \$25 away right now (SCCA members \$20).
9. Crawl under your car and sporadically drop nuts and bolts, hot oil, grease, and old rubber hoses on your face. Scrape a hose clamp across your knuckles.
10. Throw \$25 away right now (SCCA members \$20).
11. Pour oil and anti-freeze all over your body, put sunscreen in your eyes, and stand in the sun for 1 hour.
12. Throw \$25 away right now (SCCA members \$20).
13. Don't drink any liquid for 12 hours. Then quickly drink 4 cans of beer.
14. Throw \$25 away right now (SCCA members \$20).
15. Drink 3 cups of coffee and wait 6 hours before going to the bathroom at the worst gas station you can find.
16. Throw \$25 away right now (SCCA members \$20).
17. Push your car up and down the block 3 times wearing your helmet with the visor down.
18. Throw \$25 away right now (SCCA members \$20).
19. Find a highway construction area and run over every orange cone you can see. Then get out, walk back, and put every cone back in its place while arguing with each construction worker you encounter.
20. Throw \$25 away right now (SCCA members \$20).
21. Get up at 4:00am and drive in heavy traffic for five hours - anywhere - towing your race car.
22. Throw \$25 away right now (SCCA members \$20).

...continued on page 9...

## **cm-q** Subscribers

Note that if the names of your favorite CM competitors are not on this list, they are not currently receiving **cm-q**. Please forward the appropriate information and I will send them the latest issue

## CM Numbers

Here's the latest national CM Numbers listing. As is usually the case in the off season, cars are being sold, switched, updated, painted, etc. Please review all of the information and forward any updates for the 2000 season. As some on this listing are not **cm-q** subscribers, I ask that you update the information for those lost soles that you know.

## Technical Contributors

Without the following contributors, the **cm-q** Technical columns would not be possible. Please make the effort to contact these businesses the next time you are in the market for a given product or service.

-pru-

### Driveline Specialist

For a free drivetrain catalog, contact Taylor Race Engineering at 972 422 0567 or toll free at 800 922 4327. Our fax number is 972 422 8677. Check out our online catalog at [www.taylor-race.com](http://www.taylor-race.com). We can also be reached via e-mail at [tayrace1@airmail.net](mailto:tayrace1@airmail.net).



### Engine Development



### Tires & Wheels

Tom Reichel  
Mid-Atlantic Motorsport  
51700 U.S. 31 N. (IN 933)  
South Bend, IN 46637

Phone: 219-243-5553  
Fax: 219-243-5355  
E-mail: [hoosier-tom@worldnet.att.net](mailto:hoosier-tom@worldnet.att.net)

## Contacts

Here the latest revision to the **cm-q** contacts listing. To facilitate ease of use, this listing has been squeezed to one page. Let me know if it is too difficult to read. Also, please forward any additional contacts that you would like to see listed.

-pru-

## Driver / Car

Since the inception of the class in 1990, a fair number of couples have competed together in CM, but none longer than Bill and Linda Smiley. Since 1991, Bill and Linda have fiercely competed in CM. I would like to extend my sincere thanks to Bill and Linda for a most candid interview.

-pru-

**cm-q:** What are your full names?

**B&L:** Bill and Linda Smiley.

**cm-q:** Do you have any nicknames?

**B&L:** None that we can repeat!

**cm-q:** What are your ages?

**B&L:** Bill is 53. Linda is 49.

**cm-q:** Where do you live?

**B&L:** Kettering, Ohio. It's just south of Dayton.

**cm-q:** What are your occupations?

**BS:** I'm an Automotive Technician specializing in derivability and major system components such as computer control and ABS.

**LS:** I'm an Insurance Agent and Customer Service Rep. I handle the details for large business and personal line accounts.

**cm-q:** What is your SCCA Region / Division?

**B&L:** Western Ohio Region / CenDiv.

**cm-q:** How long have you been a SCCA members?

**BS:** Since March of 1977.

**LS:** November of 1978.

**cm-q:** How long have you been autocrossing?

**BS:** I ran my first autocross in a FF in March of 1977 shortly after I joined the SCCA.

**LS:** I started autocrossing in March of 1978.

**cm-q:** What have been your primary autocross cars?

**B&L:** Prior to the FF's, we ran Mustangs.

**Bill Smiley at Wurtsmith AFB, at Oscoda, Michigan**



photo courtesy of Michael Clevenger Photography  
<http://members.aye.net/~racerx/>

**cm-q:** How many Solo2 Nationals have you attended?

**B&L:** Everyone since the Chicago event in 1982.

**cm-q:** What have been your best Solo2 Nationals results?

**BS:** 3rd in CM in 1991.

**LS:** National Champion in FSL in 1986 and 1988.

National Champion in ESPL in 1990. National Champion in CML in 1999.

**cm-q:** Have you ever Solo1 or Club Raced?

**BS:** In 1978 and 1979 I did a couple of driver's schools. I co-drove a car with the owner doing mechanical work in exchange for sharing the fun. In 1979, I ran 13 laps at IRP before being taken out by the leader of the race. Just after the leader passed me, a rear shock broke on his car that ultimately led to me hitting the wall! After putting the car back together, the owner ran it one more time and then sold it! Needless to say, that was the end of my road-racing career.

**cm-q:** How many years have you run in CM?

**B&L:** Since 1991.

**cm-q:** Why did you pick CM?

**B&L:** We wanted to move out of stock but stay with a Ford. We considered preparing the Mustang for CP before deciding on CM.

**cm-q:** What CM number do you normally run?

**B&L:** 95. It was the number that was on the Tiga when we bought it.

**cm-q:** How did you acquire your CM cars?

**B&L:** After the 1990 season, we spent a lot of time on the phone taking to people about FF. In February of 1991, we spotted a SportsCar ad for a Tiga located in Dallas. After speaking with the owner, we decided to buy, as everything about the car sounded right. We made a weekend trip down to Texas in the Mustang to pick it up.

We bought the Van Diemen after reading Calhon's post about the car on the CM list. We had been considering moving to a newer car for a couple of years. Andresen had the car in his shop, so we drove up to Chicago to take a look. We towed it home on Super Bowl weekend 1999.

**cm-q:** What year and model are the Tiga / Van Diemen?

**B&L:** The Tiga is a 1982 FFA. The Van Diemen is a 1985 RF-85 with an updated wide track front suspension from a RF-86.

**cm-q:** What are the manufactures serial and SCCA log book numbers for the Van Diemen?

**B&L:** Serial number 906. Log book number 33-1937.

**cm-q:** Any significant previous owners / drivers?

**B&L:** Bruce Gilles shared the car with Tom Andresen.

**cm-q:** Who currently prepares your car?

**B&L:** We do all of the work.



## Driver / Car Continued

**cm-q:** What tires do you normally run?

**B&L:** Hoosier R25's

**cm-q:** What type of rain tires do run?

**B&L:** We have some real old Hoosier's and Goodyear's. It was apparent after the 1999 Solo2 Nationals that we need a new set! We need a good set of Hoosier rains or may have to consider something else, maybe Avon's.

**cm-q:** What of wheels do you run?

**B&L:** We have a set of center lock Panasports and a set of the center lock Van Diemen Compomotives.

**cm-q:** Who builds your engines?

**B&L:** The Tiga has a Farley. The Van Diemen has an Andresen.

**cm-q:** Who builds / maintains your gearbox?

**B&L:** Taylor Race Engineering

**cm-q:** What ring and pinion do you run?

**B&L:** 9:31.

**cm-q:** What gears do you run?

**LS:** Five of them, but I've yet to find reverse!

**BS:** We're geared for 80 mph at 7000 rpm.

**cm-q:** What shocks do you run?

**BS:** At the moment the Van Diemen has Fox, but I have a set of double adjustable Koni's that I'm thinking about trying.

**cm-q:** What brake pads do you run?

**LS:** Little square ones!

**BS:** Ferodo.

**cm-q:** Do battery do you run?

**LS:** A little green one!

**BS:** Too be honest, I don't know the type, but it's been a good one.

**cm-q:** Do you use an external "jump" battery?

**B&L:** Yes. With two drivers it's almost a necessity.

**cm-q:** What clutch do you run?

**B&L:** F3 Tilton. We tried a Quartermaster in the Tiga, but after experiencing a larger amount of chatter on initial engagement we switched back to a Tilton.

**cm-q:** What type of oil do you run?

**B&L:** Mobil 1 10w30.

**cm-q:** What type of coolant do you run?

**B&L:** 25/75 mix of anti-freeze and water.

**cm-q:** What type of fuel do you run?

**BS:** Turbo Blue. I love the smell of that stuff!

**LS:** Yea, you should see the soot ring around his nose after he's been in the garage running the car!

**cm-q:** Have you made any special modifications?

**BS:** Seat insert. Tiger tail.

**LS:** I have a set of fuzzy balls attached to the roll bar!

**cm-q:** What the name of your team / sponsor?

**B&L:** Smiley Racing is our e-mail address. We're also part of Big Wrench Racing. Big Wrench is working a FF starter for less than \$350. The Wheel Source is our sponsor.

**cm-q:** What's the "ideal" CM car?

**B&L:** Whatever goes that fastest! Hopefully this year it's ours.

**cm-q:** What's the "coolest" CM car?

**B&L:** There are so many. All are individuals. They're all cool in some way or another.

**cm-q:** What do you like the most about CM?

**B&L:** The people we compete against. We also like the level of the competition.

**cm-q:** What do you like the least about CM?

**B&L:** Running in the first heat at Nationals! We know it's a tough request, but wouldn't it be nice if everyone took a turn running first?

**cm-q:** What would you do to improve CM?

**B&L:** Get more people involved. We would like to see bigger turnouts.

**cm-q:** Do you have anything you would like to add?

**B&L:** We are currently crossing our fingers that parts for our motor home will arrive in time for the start of the season. It was the victim of a hit and run while parked on the street in front of our house. It took a direct hit in the nose causing over \$7000 worth of damage! The police still don't have any answers although the details we have heard make us wonder.

Finally, we like the quarterly!

Linda Smiley at BFG #8 in Louisville



photo courtesy of Michael Clevenger Photography  
<http://members.aye.net/~racerx/>



## For Sale

### 1984 Van Diemen Formula Ford



Campaigned as Solo II car 6 weekends in the last two years. Wife says some of these toys must go. Rockerarm rear and pushrod front suspension. Two spare noses. Small amount of other spares but has two sets of mounted slicks and one set of mounted rains. Enough to do a season of autocross up to nationals. Minor work to return to road race if desired(reinstall fire system). This is a good car, I simply have no time to learn to drive it at it's considerable limit. Great beginner road racer or great entry to C mod autocross. Would consider package deal with 18 ft enclosed trailer set up for this car. 1600 Kent last rebuilt by Andreson. Has been reliable. Hewland Mark 8. Excellent shifting. You only need the clutch for starts once you are experienced with this set up. Call or E mail for more info. Would consider enclosed trailer package with car for \$9000. \$6500.

Contact Albert at 319-338-1085 or via email at [acram@home.com](mailto:acram@home.com)

### 1983 Van Diemen Formula Ford



Campaigned as Solo II car for last 6 seasons but easily converted back to RR if desired. Has updated wider front suspension. Rockerarm at all corners. Single adjustable Koni shocks. Spare springs if you don't like my setup. New fuel cell summer of 1999. 1600 Kent last rebuilt 5 seasons ago by Clem but only autocross since. Has been reliable. Hewland Mark 8. Excellent shifting. Spare gears. Set up with autocross integral shaft first. Would consider enclosed trailer package with car for \$9000. \$6500.

Contact Albert at 319-338-1085 or via email at [acram@home.com](mailto:acram@home.com)



### 1992 Ford E-350 Super Van Conversion

Excellent condition, well-maintained, 106k. 460 FI V8, New upgraded E4OD auto. Blue and Silver Clearcoat. Blue interior. Class IV trailer hitch with electric brake controller. RV-type swing-out trailer towing mirrors. 4 Captains Chairs with electric bench/bed. Front and Rear heater/air conditioning. Premium CB with weather alert channels. Premium in-dash radio/cassette with 10-disk CD changer. 5 winter tires on stock rims. 5 summer tires on American Racing wheels. New front rotors and brakes with a spare set of rotors. Full set of shop manuals and log book. This is a very comfortable tow vehicle that has never let us down. Must be seen to be appreciated. Asking \$11,500 (Kelley Blue Book value).

Call Grayden Obenour at (219)637-2009.

## Letters Continued

...continued from page 2...

23. Push a small bucket over your head before you go to bed each night.
24. Throw \$25 away right now (SCCA members \$20).
25. If you wear glasses, begin wearing them with glue smeared on the lenses. Sporadically pop one of the lenses out and scrape it on the ground.
26. Throw \$25 away right now (SCCA members \$20).
27. Buy a new pair of driving gloves or shoes and immediately throw one away.
28. Throw \$25 away right now (SCCA members \$20).
29. Slam your thumb in a car door. Take a short length of 2" round pipe and bash yourself in the head with it. Run over your foot with your car. Periodically stumble and fall.
30. Repeat all of the above every Sunday until it's time for the real thing.

Dean Smith  
A Stock MR-2 Turbo

## V2-I2 Preview

For the **cm-q** V2-I2 Technical article, Tom Reichel of Mid-Atlantic Motorsports has agreed to provide his insights regarding FF/S2 tires and wheels.

I plan on taking up Josh Sirota on an offer he made some time ago to be the subject of the **cm-q** V2-I2 Driver / Car column.

I welcome any and all of your submissions. If all goes according to plan, **cm-q** V2-I2 will be mailed the second week of June.

Go speed racer, go!

-pru-