



VEE LINE

NUMBER 83

AUGUST, 1971

DIRECTOR'S CORNER

This issue, you may note, is devoted pretty much to proposals for rule changes. Sort of a preview for next month's, which will include our Annual Ballot. Items which were referred to the Car Classification Committee in the June VI, in hope that they would be clarified before the ARRC, haven't been mentioned again, but will be included on the ballot unless some action has been taken on them by that time.

If you have anything else to add, or want to comment on anything which has been suggested, do it now! We always get several letters back with the ballots, suggesting something additional, or pointing out something which might well have been considered *before* the vote, so if you want to influence the course of Formula Vee, do it now, while it can still count for something.

WHAT'S GOING TO HAPPEN AT ATLANTA?

I called Bob Sharp (Chairman of the Car Classification Committee, from which all rulings flow) before putting this thing to bed. Nothing definite has yet been decided, but something definitely will be—in time for all competitors to make their plans. The next VeeLine should have all the dope.

He says he's received at least 20 letters, so far, and has interviewed Vee people at a couple of races, and has made every effort to find out just what we all want. There are differences of opinion, of course, but the majority seem to want to stay with (return to?) "strictly stock stock" components.

My comment, to repeat what was said in the last issue, was, "Fine! And how are you going to identify strictly stock stock?" Technically, we have strictly stock stock, right now. The .039" head-space, the 43cc minimum combustion chamber volume, the stroke, the valve and port diameters, the bore and allowance for "wear" clearance—all are taken from the VW specs for stock components. Without such measurements (and, hopefully a good many more, such as are found in the Formula Ford rules) how is a Tech inspector (who may never have seen the insides of a VW engine before) going to identify parts as "stock", or "modified"? This was accepted as a reasonable argument, but then we come to the sticky part, and I'm glad I'm not going to have to make the decision.

With a complete set of specs for all the vital parts, do you then allow *everyone* to openly and legally attain those measurements, or do you restrict it only to those who can do the job skillfully enough so that it can't be detected—or proved, if it *is* detected? This, of course, is what started all this in the first place. Neal Williams was disqualified for using shims under his rocker arm shaft, in order to restore

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OIL FILTERS

In the early days there was quite a bit of agitation for the use of oil filters and coolers, but generally speaking, they were voted down on the ground that additional coolers might improve performance (a modification every one would have to adopt in order to keep up) and that "oil filters" might very well turn out to be coolers in disguise, with long copper lines and finned cases. Now, however, most of us could care less about that angle—our problem is how to keep that temperature up—not down.

There have been too many proposals for legalizing oil filters this time, to print all the letters. However, they're all quite logical, and my personal opinion is, "Why not?" With the "sump bumps" a lot of us are using the built-in settling basin under the oil screen is no longer effective, so it's no doubt true that we're using some pretty dirty oil at times. We've noted that most of our con-rod bearing failures have been on the #2 throw, which is the first outlet from the pump, which *could* indicate that some foreign particle took the shortest route to disaster there.

Any rule change permitting oil filters, however, should include specific permission to make a proper installation of a *full-flow* filter, which isn't just a case of pulling a couple of plugs and inserting hose fittings.

The common garden variety of filter, even if referred to as a "full-flow" filter in the advertisements, isn't necessarily "full-flow" in the sense that *all* the oil has to pass through it before entering the engine passages. Most of them are actually "bypass" type. If the line to the filter takes off from the pressure gauge opening in the crankcase, you can be sure that's what it is. This type has a very small restrictor—either a small hole in one of the fittings or a small "capillary tube" for a line, in order to limit the amount of oil allowed to "bypass" the normal routes by passing through

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MEMBERS' SOAPBOX

"Dear Don... The big problem for me this summer was replacing worn or damaged racing tires... Could Formula Vees be required to use a good street-type tire—perhaps a radial? ... I would like to see use of *stock* stock type parts, like buy it from the VW dealer and bolt it on. I guess it's maybe because I'm lazy, or don't have the time, money, or know-how to modify... If we can't go to fully stock, I sure hope you and other FVI members will continue to educate the entire membership on legal modifications in an effort to make this class as uniform as possible.

"I would *like* to see the basic engine assembled as a complete unit, using all stock parts, by some neutral builder—like VWo A—and then *sealed*. The Vee owner would purchase one, put on his own accessories, and go racing until the oil pressure started to drop. Then exchange it for another sealed unit, never having to remove the head or split the case. I suppose I am dreaming, but it sure would make an interesting class of racing.

Could you please mail a dozen membership application cards?

Curt Rehder, St. Paul, Minn."

We'll certainly put street tires on the ballot, and from the remarks I've been getting lately, I'll bet they'll get a lot more votes than they did a few years ago. I don't believe it's worthwhile putting the sealed engine bit on the ballot, but it is a beautiful dream. And Yes, you certainly may have some membership applications—right away!

"Dear Don... One weekend gumballs in order to be competitive have got to go! The majority of drivers I know are in favor of a minimum durometer rubber for next year—easy to check and should cut costs overall by 25%. Also, I am against fuel cells for FV. Fire seems to be a minor problem in this class... Also, I suggest that front spindles be allowed to be modified... otherwise someone will protest the fact that mine are reinforced and bent for correct Ackermann effect... One interesting dimension I might pass on is the correct assembled valve spring height—1.593". Several new head/valve combinations were checked at the dealer. The lowest reading was 1.560", which is

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The VEE LINE of FORMULA VEE INTERNATIONAL

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WHAT'S GOING TO HAPPEN AT ATLANTA?

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"stock" valve train geometry, which had been distorted when the heads were moved closer to the centerline of the engine by flycutting them to attain the 43cc combustion chamber volume. The flycutting (which has become standard practice) wasn't questioned—it was the addition of a "nonstock VW part" which was the subject of the penalty. The Court of Appeals, however, ruled that it was the flycutting rather than the shimming which was illegal. We've been operating under the assumption that it was legal to obtain legal measurements but the Court said, "Only if it's specifically authorized."

Which points up the whole problem. Should it—or should it *not*—be legal to attain the legal dimensions and specifications by modifying parts within those limits? If the ruling is "Yes", that leaves Formula Vee about where it is now, but legal. If not, that puts most of us back to 1966, when these specs were first included in the Vee rules. And back, again, to the question, "How do you enforce strictly stock stock?"

OIL FILTERS

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the filter and directly back to the crankcase. This has to be a very small percentage of the total amount pumped in order to avoid dropping the pressure below normal levels. In the meantime most of the oil is going directly to the bearings, unfiltered.

A true full-flow filter would be almost as easy to install, but would require a new, or modified pump cover, plugging the normal pump outlet, and installing a fitting in one of the plugged passages. Such "modifications", then, should be included if an oil filter is permitted. If it *is* legalized, we'll go into this in more detail.

MEMBERS' SOAPBOX

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what I use now. (Trying your suggestion in a prior VeeLine of a weak or loose spring resulted in valve float at 5500 and 4 burned exhausts.)

Robert G. Booth, Oakland, Calif."

We had a proposal on the 1968 ballot for "only tires advertised and recommended for high-speed highway use" and it was shot down by two-thirds of those voting. IMSA's sedan classes are racing on that kind of rubber, apparently with no difficulty. Want to try it again? Durometer readings MIGHT do the job, too. How about a specific figure to put on the ballot?

No one yet has suggested putting fuel cells on the ballot, but perhaps we should—a "No" vote counts, too. You're pretty safe on your spindle mods (you ARE bending the steering arm—not the spindle itself?). Check the rules—5.3-a-6.

I doubt that anyone is worrying about spring height, even though the "book" does mention "the standard dimension". That's another of the items we used to worry about but have found don't really matter. You've got the right approach—just enough spring tension to close the valves. Any additional just puts unnecessary strain on the valve train. I didn't really SUGGEST that loose valve arrangement—I just said if you want to try it, let us know how it turns out. Thanks!

"Dear Don... I would like to see 12 volt electric systems authorized... it will turn the starter over faster and perhaps the wire can be a little smaller. The advantage is that components are easier to find... I would like to see a vote on turning the manifold around and on using re-ground cams... Keep the one in there on minimum weight with driver, also.

John Carber, Pennel, Pa."

OK, John, we'll put 12 volt systems on the ballot, too. We've always made a point

of putting ANY proposal on it. We'll certainly put "1000 lb. min. weight with driver" on it, too—and all you drivers who weigh more than ANY other driver in your crowd had better give it some thought.

"Dear Don... Bearing wear is the chief problem leading to need for teardowns. Therefore it would make FV cheaper to allow filters. Isn't that the object of FVI? And what about additional oil coolers? Perhaps I should go further: Any option which doesn't increase performance should be legal!

Ralph Nodine, Concord, N.H."

We've covered the first couple of items, and up to a point, I could agree with your third one. The point is, where is that point? Certainly filling the GCR with little items like permitting screw holes in fan housings, plugging the hand-brake holes in the backing plates, etc., isn't very practical, but on the other hand, it's been pretty well proved that you can't just trust everyone to interpret for themselves just what "improves performance". As I mentioned above, at one time we were pretty well agreed that extra oil coolers might affect performance. Some people believe that reversing the manifold might give some sort of advantage. Perhaps some sort of limit such as "any protest against any unspecified modification will automatically be settled in favor of the protestor" would keep everyone honest and cover a lot of those little things that "every one is doing". What do YOU think?

"Dear Don... I think the F/V weight limit should definitely include the driver's weight (car and driver, 1000 lbs. min.) It must be pretty obvious that a lighter car (combination) is faster than a heavier car, all else being equal... I think a rule change here is definitely within the spirit of the Class, and should be included for 1972.

"I also firmly believe that F/V should be a class with strict rules governing modification of standard parts, etc., but other rules should not be arbitrary and should have some reasonable foundation. For example, overall length and wheelbase, exhaust pipe length, etc. seem to me to be purely arbitrary... the exact definitions of what to measure when determining overall length have never been clear to me... I say throw that kind of rule out anyway..."

"I think that the general philosophy behind F/V should be updated to something like, "F/V should give more *speed per dollar* than other classes". What I have in mind is allowing inexpensive modifications which will significantly upgrade performance. For example, who cares if you use a venturi in your carb, or if you remove your fan belt? (Your engine may burn up, or maybe you could keep it cool anyway?) Both of these changes can significantly improve performance and cost nothing! They should be legal, along with several similar changes.

"Also, items which might save you on long term maintenance should be allowed, e.g., full flow oil filter (this seems like an

UNCLASSIFIED ADS

FOR SALE: Latest MK 5B Autodynamics. 4 new Continental tires, 4 good Good-years, many new spares. 1971 legal, extra clean. With trailer, asking \$1950. Ray Dona (617) 393-2451 (work, days), 838-2992 (home).

WANTED: Newer Zink, well prepared, good race record. Want inspection before purchase. Robert Morris, Route 3, Box 202, Muncie, Ind. 47303, (317) 389-8565.

FOR SALE: "Wildcat" factory team car, featured Aug. 1970 VeeLine. 2 races on excellent engine, "No-dots" and 2 mounted spares. Konis, Z-bar, aircraft bolts and hardware throughout. Minimum weight, purple metal-flake body. Torsion-bar-and-shock mounted trailer. First \$1800 owns it. Wildcat Racing, 37 Wendell St. Plainview, Long Island, N.Y. 11803, (516) 938-8918.

FOR SALE: Formcar. Firestones, tow-bar, and spares. '71 roll bar. \$700. Sylvan Cornblatt, 4300 Seminole Ave., Baltimore,

Md. 21229, (301) 945-5600 or 296-0735.

FOR SALE: '68 Viper (looks like Crusader) with trailer. Good condition. Asking \$950. Dan Harman, 13423 3rd Ave. S., Seattle, Wash. 98168, (206) 248-1842.

FOR SALE: '70 "Reichmark", with Sportelli manifold, extra nose, trailer and driver's suit. Fred Ray, 6701 N.E. 19th, Tacoma, Wash., (206) WA 7-5478.

FOR SALE: Radatron VW cylinder head temp. gauge and kit, new, \$20. Koni rear shocks w/adjustable spring platforms, for AD, new, \$50. Ralph LoCurcio, 201 St. Clare Terr., Tonawanda, N.Y. 14150, (716) 692-7862.

FOR SALE: '70 Autodynamics MK 5B, rebuilt for '71. Sandblasted and epoxy painted, fresh KBS engine, '71 low profile Goodyears and Firestones, Trans. 3rd. Two bodies, chassis and suspension spares, custom cover, AD trailer, long distance tank and ATL cell available. Must sell. David Colpak, 39 Hollert St., North Scituate, Mass. 02060, (617) 545-1980.

obvious "must" but has always been forbidden) and maybe even an external oil cooler. Suppose they do cost an extra \$100? If you've got \$500-\$1000 tied up in an engine, an extra \$50-\$100 for insurance sounds good to me.

"Sooner or later F/V has to be upgraded to use newer engines and I'm afraid that when the time comes, whoever writes the rules is going to screw it up by including a lot of nonsense like there is to some degree now. I would like to see the rules proposed well in advance and given a good working over by all concerned class members until a reasonable format has been agreed upon. My immediate thought on this would be to use the latest version of a VW engine, allow essentially stock insides with a reasonably good set of dual carbs, any air cooling system, any oil cooling system, and any VW front suspension and transaxle, (which could be inverted) with everything else free, generally to be an interesting, cheap (relatively, of course) and fast class.

"Well, there's my \$7.50 worth, until next year.

John Ulmer, Redlands, Cal."

I guess you know I agree with you on the weight-with-driver question, and I'd go along with a few more inches of wheelbase and over-all length (which, incidentally is measured OVERALL, from the tip of the nose to the tip of whatever hangs out the farthest in the rear) but I think we do need limits if FV is to remain a recognizable class. Otherwise some clown would surely build a 25-foot rail job and call it a Vee.

For the "most speed per dollar", I doubt that you can equal the present Go-Karts, and I see no point in trying to. Let's stick to Formula Vee. Certainly there are some "dumb" restrictions, still, but again, let's get rid of them item by item, specifically—not by a blanket permit to "do anything which doesn't cost anything". For example, I don't care if you want to eliminate your venturi—most engine tuners would agree it won't help you any. However, if I read between the lines correctly (you mentioned it twice) you have a slick idea for cooling your engine airplane fashion, without using a fan. Great! If you could get it to the grid, and make the pace lap without burning it up, you'd no doubt make history once you got under way. You might even get away with it a couple of times, but you WOULD fry your engine, sooner or later, on a second pace lap or with a strong tail wind, or just from normal overheating. Nevertheless, everyone else, if they wanted to be competitive with you, would have to take the same chance and replace engines just as often—besides having to extensively remodel some cars for the proper air ducting. That just ain't the name of this game!

As for your future class—why wait? You've just drawn a pretty good picture of a new class we have NOW, called "Super Vee". It was conceived on the premise

you suggest, and which has been a threat ever since the 1300 VW was introduced in late 1965—"We'll HAVE to go to a later engine, because the 1200 is obsolete!" If we actually ever have such a problem, it isn't going to sneak up on us in the dark and pounce suddenly, so let's worry about it when it starts becoming a problem—or switch to S/V if you can't wait that long. However, this is just my opinion—we'll have something on the ballot for two or three writers who suggested more or less the same thing.

"Dear Don... List lengths of allowable VW pushrods so people won't make up their own to give them the best geometry for max valve lift. Allow wheelbase up to 87". Measure width and height at the engine instead of at the roll bar. Minimum weight of car, driver and fuel at the end of a race, 1000 lb. Require carb and manifold to be behind the fan shroud. Require metal gas lines except 3" flex hose for disconnect."

(Sorry, I lost the name for this one).

If Frank Schultheis' valve checking procedure is accepted as the legal standard for FV, we won't have to worry about pushrods, rocker arms, shims under the rocker arm shaft, or illegal cams. If the movement of the VALVE corresponds to the official "curve" on a graph, the length of the pushrods (or the name on the cam) won't really matter. If it doesn't, it won't even be necessary to check those items—it'll be simply, "Sorry, your car is illegal."

You've got a point there on the metal gas line—those plastic ones just don't hold up when they're laying on a hot exhaust pipe. On the other hand, a metal line sticking out from the frame almost to the centerline of the engine would be subject to a lot of vibration (which doesn't do THEM any good) besides the bending to get them out of the way each time the engine is removed. (A number of us found that out the hard way in connection with the line to the oil pressure gauge!) How about a minimum clearance between the gas line and exhaust pipes, instead?

(This one was received just after our ballot last Fall, so I saved it for this time.)

"Dear Don... I say make everything legal to improve performance as long as only work is involved. Here was a silly rule from a money standpoint—remember when you couldn't turn the carb around, and the velocity stack couldn't be attached to the carb, but had to come off with the body? Where was any expense involved? The carb could still stand some modification, which again costs nothing but time. The much mentioned removal of fan blades would cost the owner nothing but time and a file and a hacksaw or tin shears. Also, you feel that machining out the manifold will bring everyone closer to equal performance as long as you do not change the outside dimension. I disagree 100%. First, if you allow only the interior

to be made larger you are weakening the manifold, and possibly someone might get over anxious and grind a hole through it. If you are going to allow this modification, what is the difference how the size is obtained? If you force balls through it the outside diameter has to stretch. So what? The results are the same.

Ed Whitmore, Liverpool, N.Y."

You've got a couple of good points there, but again, you can't sell me on a BLANKET rule permitting ANYTHING that doesn't cost money, or ANYTHING which doesn't affect performance. If we want something specific permitted, let's say that in the rules. As for the manifold, certainly people can, and will, eat or grind holes through the metal. (Oh, you just bet they will!) But you KNOW that the inside isn't more than 25mm diameter. If you enlarge the outside, who knows what size the inside is?

Here's the gist of a phone conversation with Arthur Brow, Olmstead Falls, Ohio:

"Lots of people are filing down the screws in the butterfly shaft on the ground that 'any fasteners' may be used. Why not allow the shaft to be filed, too, for better air flow? How about people who can't find a "B" cam? Why shouldn't they be permitted to use a '3/4 race' cam, like the one you said you put in your Ghia, which was identical to the "B" even if it's not genuine VW?"

And someone else suggested adding permission to plug the holes left in the backing plate when the hand-brake components are removed, which I'd certainly go along with. We've done it on Petunia, after finding out the hard way that gravel which finds its way into the drums through that hole can't find its way out again. You have to remove the drum.

"Dear Don... Would you comment? I've seen a number of ads for what are apparently running, if not supertuned, machines with trailers for \$950 to \$1200. (Oh, yes, I read about the \$2800 deals, too.) I have tried to collect a few bits of literature from the factories and find that a kit can run from \$795 to \$1795. Would it be worthwhile to buy a rig and start reworking it as you have been doing with Petunia?

"What is the hooker? Is it like me buying a gun, trying it out, deciding it isn't my cup of tea, and selling it for half price just to unload it?

Pierre Hartshorne, Los Alamos, N.M."

I'd say it's more like you bought a Studebaker. A gun pretty well keeps its value, but an older orphaned car, regardless of miles or condition, loses its resale value rapidly in the first few years. Then it settles down to a more or less constant figure, much less than what it may be actually worth. As you almost pointed out, any Vee that will run should be worth around a thousand bucks, regardless of age or condition. And if it is somewhat aged,

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MEMBERS' SOAPBOX

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regardless of condition, it won't be sellable for much more than that.

We had a few tips for checking out more expensive used Vees in one of the back issues, but in this price range you can't go very wrong on any of them. I'd certainly suggest you look before you buy, though, because there are some real bargains, and some just good buys, in this price bracket.

"Dear Don . . . I've bought an old Autodynamics which I plan to tear down and rebuild. I'll have to make many modifications in order to fit into it, and I want to make it safer, like bringing the gas tank inside the frame. I'll let you know what I learn if it turns out to be of any interest.

"I noticed in a past VeeLine you asked about keeping rotary files clean . . . (1) Spray the file with WD-40 penetrating oil frequently; (2) use beeswax and oil on it, or (3) spin it on a cake of soap occasionally. Don Martz, Cucamonga, Cal."

You bet we could use some dope (and pictures) on updating an Autodynamics. There are probably as many of them still running as there are Formcars, and room is one thing they need lots more of. And thanks for the dope on the files. May try all three.

FRUSTRATION!

You've been told this before, in "Sports Car", and on these pages, and perhaps by your local SCCA officials—"The only way you can get a rule clarification in the middle of the season is to protest, and then appeal, and the Court of Appeals decision will be binding." (Until the end of the year, that is—if its ruling isn't included in the GCR for the following year, everything is back to square one.) This sounds reasonable, doesn't it—it's the American Way!

Dennis Hodgin, of Glastonberry, Conn., had some pretty good reasons for wanting to know what to expect at the ARRC (his car and driver are leading the NE Division) so he decided to use The System in

the prescribed manner, in order to get some answers. Here's his story, boiled down, somewhat:

"My intention was simple—just protest several drivers on the rules that I wanted clarified, hope one of the drivers was utilizing the alleged nonconformances, appeal the subsequent decisions by the Stewards, and hasta pronto, instant clarification. Right? Wrong! Over a one month period I used the system (or was it the other way around? and filed five protests, posted several large cash bonds, made some lifelong enemies, have become very frustrated, and not a single rule clarification has been made to date. A quick recap follows:

1. Engine legality protests were filed against two drivers at Lime Rock. Both refused to disassemble their engines and were penalized accordingly by the SOM (Stewards-of-the-Meet). While I feel the SOM did an excellent job of executing their duties, no rule clarifications resulted.

2. An engine legality protest was filed at Pocono. The SOM inspected the car before the race. They judged the car as not conforming to the GCR, cancelled the fourth place qualifying position, and started the car in last place. It lead the race within two laps of the start, had the fastest lap, and the SOM did *not* reinspect the car although it was impounded as the fourth place finisher. Result: No clarifications.

3. An engine legality protest was filed at Nelson Ledges. The resulting actions of the SOM suggested that they wanted the protest withdrawn—they contended the cash bond should be over \$700. The protest was *not* withdrawn and the SOM eventually decided to return my protest fee, stating that they had neither the facilities nor personnel to inspect the engine. I then protested their decision, as I felt they were not performing their duties as detailed in the GCR. Net results to date: Much frustration and still no clarifications.

It is evident that my initial attempts to use the "system" have failed. However, I

have not given up yet.

I plan to enter two Vees in a race in the very near future, and as entrant of one of the cars I will file a protest against the second car. The driver of the second car would then admit to all the alleged non-conformities.

It is my hope that this admission will avoid the necessity of inspecting the engine, since I do not relish the thought of spending additional time and money to actually build such an "illegal" engine. The SOM would then rule on the protested items, and a rules clarification would hopefully result from an appeal from their decision.

I am hoping the SCCA will hold a court of appeal in advance of the 1971 ARRC, although the court for another significant protest in the NE Division was not held until nearly a year after the protest, and the FV rule clarifications resulting have not been widely disseminated even to this day, nearly three months after the appeal court met."

Ho, Hum—so what else is new? I've said it before, and I'll no doubt say it again—It certainly seems strange that an organization which exists solely on the basis of rules, which spends innumerable hours and dollars in ESTABLISHING rules, which gives such lip service to the sanctity of rules, and has so many people involved in supposedly enforcing them, is so reluctant to actually DO it!

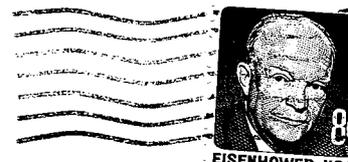
Dennis' singlehanded attempt to make the System work for him has to be applauded and encouraged! If there had been more of it, in years past, we wouldn't be in this position of frantically trying to catch up on years of neglect in just a few months.

It appears that the System CAN be made to work—it appears that FVI is going to be able to accomplish, collectively, what Dennis is trying to do alone. However, that "system" was set up, supposedly, so that an individual, on his own, COULD use it to obtain justice WITHOUT belonging to any other organization.



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