



VEE LINE

NUMBER 22

JULY 1966

DIRECTOR'S CORNER

I had a phone call last night from a new Vee owner. He wanted to know "What percentage of Vees in the Northwest would you say are illegal?"

Well, maybe I'm a patsy, but I don't believe that *any* of them are—not really, anyhow. There are, no doubt, items which could be challenged on many Vees (for instance, a number of them are still seen with the VW sway bar, in addition to the substituted one inside one of the front axle tubes) but I doubt very much that any of them are deliberately in violation of the rules. There have been enough teardowns in the past three years to have convinced anyone, I should think, that crime does not pay.

This caller, though he would not mention names, claimed that he knew of several cars which were using illegal cams. Well, in the first place, if he *knows* they are illegal, it is not only his privilege, but his duty, to protest them. However, the only teardown I have witnessed was due to a protest by a driver who *knew* that the winning Vee was using oversize valves, and was willing to put up the protest fee to prove it. It wasn't.

If there *is* cheating, I would say it would be more likely to be found among cars back in the pack than among the front runners. Who is going to protest a fourth-place car? And who is more likely to feel that he *has* to cheat? The drivers who are in contention for championship points can't *afford* to cheat—they have too much to lose, and have worked too hard to get where they are. If anyone can afford to get caught, it would be someone with nothing to lose.

To top off this conversation, this driver admitted that on the straight at PRI (Kent) he was unable to get more than 4200 RPM from his Vee! I'll say it again—if you can't get within hoping distance of 5000, no one *has* to cheat you. This figure is not out of reach, and doesn't take a lot of expensive "preparation" either.

SPEAKING OF ENGINES

This question has been asked before, with no result, but we'll try again—"Do you know of anyone using the 30HP VW1200 engine in a Vee?" Also, "Do you definitely know of any interchanges possible, without violating the no-alteration rules, between the 30HP and 34HP engines?" (Those are the brake horsepower designations—also known as the 36HP SAE and the 40 or 41.5HP SAE engines.)

In other words, would anyone be hurt by designating the legal Vee engine as "a standard VW1200 power plant, serial number from 5,000,001"? That number is the first 34HP engine, used in the '61 VWs.

This change, of course, wouldn't mean anything to those who already have Vees, but you would be surprised at the number of people who pick up a '56 or '58 VW, at a "bargain", expecting to build a Vee around it. The present part numbers are meaningless, really, to anyone outside a VW dealer's parts room.

FOLLOW-UP

We mentioned a couple of months ago that Jim Miller had been protested, found legal on disassembly, but found to be a couple of thousandths short on the "top of piston to top of cylinder" measurement on one cylinder during reassembly, and disqualified. His appeal has since been upheld, the disqualification nullified, and all penalties have been revoked.

COMPENSATOR

"....A few issues back you asked for comments on camber compensators..."

I had a local spring company make one from the same stock as the EMPI compensator, and by making the proper curves and cutting it in half at the center and using the regular EMPI transmission mount, I am able to shim it up with washers to give more stiffness on either side, as I may wish. As far as handling, I am still a lousy driver....but it feels much more stable in the turns, and with the use of Goodyear T-7 racing tires, I feel I can induce oversteer easily, rather than having the troublesome understeer without the compensator.

I haven't been competitive so far, as I had the same fuel pump problem which you described in an earlier issue of Vee-Line, but a few seasoned drivers have driven it both with and without, and they feel there is about an 80% increase in good handling characteristics.

If you are interested in a diagram, I will be glad to send one.

Bill Griffin,
Memphis, Tenn."

This sounds very interesting, Bill. If it isn't a weight-carrying device let's have some sketches. If it is, a new type of suspension is something Formula Vee doesn't need, and I hope to see this spelled out in the very near future. don

THE "B-K SPECIAL"

One of the best looking Vees I've ever seen is a "special" (not a "home-built") put together by Glen Biren and Gary Kelly, of San Jose, Cal. It originated as an aircraft wing tank, but would never be recognized now.

The tank was split down the middle; the two halves separated about 18", and a filler strip was inserted in the middle. The "front" of the tank is to the rear, to accommodate the engine, but even that is not noticeable. A form was taken from an Autodynamics rear section for the hump over the engine (with a few alterations) and the overall result is beautiful!

All the joints were made by riveting a backing strip behind the seam (no lap joints) using over a thousand countersunk rivets. The joints were then filled with body putty and sanded smooth. After two years there are a few spots where the joint is detectable, but just barely.

The biggest job, they said, was not assembling the wing tank sections, but disassembling the original tank. The inside was full of baffles and bulkheads, spot welded to the shell. Each spot weld had to be carefully drilled out without going through the shell. In the process they made an important scientific discovery—brake fluid is the only product they found which would remove the zinc chromate primer from the aluminum.

A beautiful design, near-perfect workmanship, and it is currently in first place for National points in the Northern Pacific Division.

Incidentally, at the June 5 Stockton National all the Vee drivers agreed beforehand to request a teardown of one of the first three Vees. The winner of this honor to be decided by tossing a coin. Glen (who took second) "won" the toss. His engine was opened up, bore and stroke miked, valves and valve gear inspected, etc. He was, of course, found to be legal. His only complaint was that the teardown was not complete enough—he was afraid there might still be some room for suspicion.

This process did not require a protest, or any other formal action. After taking an informal poll of the drivers several of them merely went to the officials and made their request. Why not try this in your area?

SHOWY TOW CAR

Rodney Gehrlein, Waterford, Pa., is another Aztec builder. What a tow-car that would make for a Vee!

STILL GROWING

Formula Vee doesn't get much publicity, but when it does the results are terrific. Volkswagen of America publishes a small quarterly magazine which goes mostly to VW owners, called "Small World". The Spring edition carried a short article and a number of pictures on Formula Vee, and was responsible for nearly two hundred inquiries on the Class. At least twenty-five of those inquiring have since then bought cars and joined this Association.

The Vee article in the July issue of Sports Car Graphic has already been responsible for nearly three hundred letters, and they're still coming in. Many are obviously from kids, and from people who are totally unfamiliar with sports car racing, but many more are definitely set on driving a Vee. Most of them, by the time they convince their wives that a Vee will keep them out of the taverns, get their cars built, and get through the red tape of getting licenses, won't get on a track till next year, but you can bet there will be even more Vees in 1967.

Speaking of Sports Car Graphic—in my opinion their introduction to the article was the most convincing part—"While SCG remains unenthusiastic about Formula Vee (mainly on the basis that they don't 'prove' much) we must grudgingly admit the class *has* caught on, provided fun-type racing for an ever-growing number of entrants, and that the restrictive rules *have* held the cost of participation down to an attractive level." What could be fairer than that?

We could no doubt argue that Vees *do* prove something, but SCG is obviously open-minded on the subject, so if they're still "unenthusiastic", that's OK, too.

POUND CUTTING

Chuck Tatum (Stockton, Cal. designer and builder of the Crusader) has a few hints for weight cutting—

"Weight of many of the older Vees is way over the 825-pound minimum. By taking weight off the car you can 'add horsepower', but of course you want to do it safely. These may help—

"We have installed a 4½-pound Honda battery directly over the starter. It seems to be completely adequate for the job, and means a weight loss of 25 pounds, including the 3-pound battery box and 1½-lb. of cable. Cost is about \$10 or so for the 6-volt battery.

"Open up the front suspension, and with a rag and a rod remove the 3 or 4 pounds of old grease from the axle tubes. It all helps.

"I strongly recommend use of a VW flexible coupler on the steering shaft on all Vees. Otherwise you might bend the shaft should you bang the front and it will then be likely to break when you need it most.

"Another tip—One gallon of gas weighs 7 pounds. Carry only what you'll need for the race, making sure of the length of the run before you gas up."

MORE FROM BRUCE

Last month Bruce Redding described how his Vee had catapulted him into racing in Formula 3 in Europe next year. He also mentioned how he built an improved exhaust system. Here's the sequel—

"....I didn't sell the Vee, so I put a 1599cc full-house EMPI-VW engine in it to run Formula B for the rest of the year, I'll let you know how it runs after the Riverside Nationals.

"Have had 2 offers from interested parties to drive sports cars in some events while I'm in Europe (I guess it pays to advertise).

"A diagram of my exhaust system is enclosed. I hope it helps some of your readers. As you can see, I am a man of limited artistic talents. Most important—all 4 pipes should be the same length before bending.

Bruce"

Hate to see a good Vee wasted that way, but it should be interesting, at the very least. Just don't call it a "modified Vee", please! Was it your VeeLine advertising that paid off? Congrats, anyhow. As to your exhaust system, I hate to spoil your fun, but here's the one we built last winter for about \$11.00. don



The right-angle bends are from Montgomery Ward's catalog, the center bends were already in the old pipes, and a two-foot section of additional pipe was needed. The slip-joints make fitting easy, and are welded when everything is lined up. I can't really say the sound is louder, but it is a nice, even, race car-type noise. It will really surprise you if you've been driving your Vee long enough to be accustomed to its present sound.

This is essentially the same design as Bruce's, apparently, and much less expensive. Custom bending of pipes like this, would no doubt cost some cash—even if you could find someone in the next block who had the equipment to do the job.

MILESTONE!

Whit Tharin sends along an announcement in connection with the Charleston Region's "Swamp Fox Runs" at Savannah, July 23 & 24—

"For the absolute first time anywhere, the FEATURE RACE on Sunday will be for FORMULA VEE!

"It is fitting that this should come to pass at the Savannah course, for there the Vees had their first full-fledged race nearly four years ago when four of them sprinted ahead of an F, G, & H Production field. Formula Vee has taken giant strides since then and now this same course will be the first to give the 'little buggers' appropriate acknowledgement and recognition.

"No effort has been spared to offer the Vees a slam-bang weekend, including main-event top-billing, an extra special trophy, and, of all things, a Le Mans start!"

That Le Mans start, alone, should be worth the price of admission, though it makes my shins ache, just imagining wriggling into the average Vee in a hurry. Sorry this announcement won't reach you in time to allow you to do anything about it, though I believe Whit is giving it a lot of publicity on his own in that part of the country. How about a story on it for the next issue, Whit? don

PROBLEM

The following is from Richard Widmann, of Lock Haven, Pennsylvania—

"Dear Sir:

Enclosed please find my check and application to FVI. You could be of unquestioned assistance to me from the start of our relationship by suggesting something that I can do about my engine running excessively hot...." Following is a description, complete with diagrams, showing how his Autodynamics is ventilated, which would seem to be very adequate.

Besides vents over the valve covers and in the belly pan, the rear has had ventilation holes cut in it, and the upper half, leading to the fan, has been separated from the rest of the body so that it would seem only cool outside air could reach the fan.

His oil pressure stays between 20 and 40 pounds but the temperature goes up to 250. This is in 90-degree weather, but it still seems excessive.

About the only suggestion that comes to my mind is to test the heat indicator by immersing the bulb in boiling water to see if it reads the proper temperature for that (212). If it does, then what? Anyone else had this experience?

The VEE LINE of
Formula Vee International

Dan Cheesman, Director

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THE VEE AND ME

WHIT THARIN

A recent announcement by Californian Bruce Redding that he had parlayed 1½ years of Vee driving into a Formula 3 ride in Europe prompted me to reflect on other former Vee drivers who are making their names better known in other classes now. Among the first to come to mind is Lew Kerr. He won the first ARRC at Riverside in 1964 after a successful year in Formula Vee. In 1965 Lew switched to E-Mod and won the NE Championship and the Daytona ARRC to boot! The 1965 Champion from the NE was Roger Barr. I can tell you from experience that he is swift, smooth and smart. I'll bet on him at Riverside.

Closer to home, the SE Divisional Champion back in 1963 was Bob McQueen. He stuck a super-90 engine in his Formcar in 1965 and won the SE Championship for Formula B, then took 4th with it at Daytona. That's pure driving. And the 1964 SE Champ, Shelly Dobkin, recently returned to racing with a homemade G-Mod (Sprite engine) and won over a field that included three Lotus 23B's at the Savannah National!

Two other former Vee drivers who are now drawing attention are Mak Kronn and Jerry Hansen on the USRRRC circuit. Dave Talaksen is another who tried the Vees for a while. (*Was President of this organization for its first couple of years. don*) In 1964 he took up E-Prod, took his Elva Courier to Riverside, and had the very hot West Coast drivers talking to themselves. Dave drove Sebring and the Continental this year, as did Walt Hane and Bill Bencker, all with a season or more of Vee experience.

Most of the above drivers had previous experience, but will admit that while in Vees they learned more, faster, and for less money than ever before or since.

To further denote the level of competition and rate of progress in F Vee, the Castrol "Rookie of the Year" has twice been a Vee driver—Ray Caldwell in 1964 and Kurt Reinold in 1965. If a guy can win it in this class we know he deserves the trophy. There are others, to be sure, but this should be sufficient to prove the point—Formula Vee is a *Driver's* class!

Many a promising driver has gone unrewarded and unnoticed because he simply could not afford the machinery to compete on even near-equal terms with others. Some have had the good fortune to obtain sponsors or "rides" in spite of limited funds, and have made their way to the top. But how many latent Champions were overlooked for lack of competitive equipment? This is what Formula Vee is all about—cars as equal as rules and regulations can make them; costs as low as possible for real road-racing machinery; and competition as stiff and severe as any in the world. What more could a budding driver ask?

VEE PRIMER

"T" is for Tachometer. A tachometer is an instrument used in race cars. It looks something like a speedometer, only different. It doesn't tell you how fast you're going, exactly, but it is better than a speedometer because you can make the needle wiggle by stepping on the throttle, even when the car is standing still. It will tell you what condition your engine is in because if it won't show nearly 5000 on a long straight it isn't the tachometer that's sick, it's the engine. It is the most important instrument on the dash because it is the biggest. Tachometers are used on Vees because *all* race cars have tachometers. That's all you really need to know about tachometers, though a few other comments might possibly be of interest.

In a sense, a tachometer is a speedometer. It won't tell you miles per hour, but if you ask, it will tell you "too fast", or "too slow". Instead of driving by feel, or instinct, or the sound of the engine, try watching the tach as you approach a corner. Check your RPMs at the last instant, and if you make the turn easily, try for another hundred revs the next time around, at the same spot. When you feel you have reached the maximum, use your tach so you can take it the next time at the same safe speed. Especially when there are other cars near you, the sound of your engine or the apparent speed of the landscape passing by aren't very reliable indicators of your speed. The temptation to keep up with the other fellow can get you into trouble if you don't know your limit, and how near you are to it.

Your tach can save you money when shifting gears, too. Downshifting, especially, is often done more or less unconsciously in the heat of battle, and even the pros occasionally blow an engine in the process. If your tach is showing 4000 in 4th when you shift down to 3rd, your engine jumps immediately to nearly 6000. This isn't fatal the first time, or the first few times, but your mill won't stand very many seconds at that speed, and every time it happens those seconds add up. 5000 seems to be a fairly safe top speed (though there don't seem to be many Vees getting the bearing life for which VWs are famous). Keeping below that figure means that downshifting should not be done at more than 3400 in 4th.

Your tach can also save you time in going up through the gears. The horsepower curve drops off rather sharply from 5000 RPM on—in fact it isn't very impressive at even that figure. Staying in the lower gears waiting for that last 100 revs is a waste of time, then, as you could be doing better in the next higher gear. Try setting your redline at 4800, or even less. Your engine doesn't sound as wild, but an acceleration test against a stop watch will convince you.

FROM OUR VP

For the benefit of our new members—our Vice President, Vi Hendrickson (recently from Winter Park, Fla.) flipped her Vee on March 6, mangling her right hand between the steering wheel and the pavement.

"Dear Don—

As you can see by the return address, we are no longer in Florida. David left the Martin Co. and is now with Sylvania, in Waltham, Mass. He was in the process of negotiating the position when I did my spectacular flip in the Vee. As soon as I was through with the doctor we picked up our beds and moved to Needham which is a small town about 15 minutes from Waltham.

This is beautiful country up here My only regret was leaving all those who had become dear to me over those 9 years

We haven't had time to go to any races Dave has been traveling for the company, and it takes a while to get the car ready, as you know

Hope you can read my writing. Since switching to my left hand, it's been a chore to learn to write all over again, but when "have to" has a hold of you, there are lots of things you can and do do.

Don, I'll never race again—I guess you know that I can't get enough grip on the steering wheel to feel secure in a car like a Vee. I can drive the family car with no sweat, but a competition car is something else

As soon as Dave settles down and we can get the car ready, we'll get to one of these races, and I'll give you the lowdown on the NE Region My very best,

Vi"

George Eickhoff, (Los Alamitos, Cal.) recently purchased Bill Hinshaw's Formcar. Bill gave up Vee racing after being what was generally felt to be unfairly blamed for one of those "nerfed-by-a-Vee" accidents some time ago. He is now reportedly racing a motorcycle.

ENDURO, ANYONE?

" I have been in limited conversation with officials of my region about the possibility of a Vee endurance race as the climax of a Regional meet. I think a 100-mile affair—not unlike the F3 events in Europe—would be very attractive to Vee drivers at one of the more interesting courses such as Marlboro or Lime Rock. Perhaps a plug in the Vee-Line would precipitate a strong indication (keep those cars and letters comin', folks!) of support that I could present to the Race Chairman.

Bill Maisey,
306 Duke Street
Alexandria, Va."

(don't write me—write to Bill. don)

FAVORS EXHAUST RULE CHANGE

"Dear Don —

Enclosed is my dues payment, the best \$5.00 I spend in racing a Vee. I think you are doing an excellent job of representing our types to Westport. I'm afraid the Class would soon die if its future were left to the whims of SCCA with no guidance from the drivers. An example of the lack of knowledge was the cylinder bore foul-up this year. I was assured by letter and telephone from Westport that the large size was legal in December, prepared an engine for the Phoenix National in January, and then had to scrap the jugs and pistons. The GCR misprint was due to ignorance, rather than printing. The point is, we must guide SCCA in detail.

There are six Vees in this region (Rio Grande) with more abuilding. Since our area is notorious for small fields in races, we are the only class assured of a good race, as we make our own.

I will advocate one change in the Class, primarily to up the image. I feel that an improved exhaust system would be an asset to the Class. Certainly no great performance gains will be realized without carburetion changes, but we could sound as fast as we are. The result would be a few more \$, and a better show for spectators. Our drivers as a group favor a better exhaust. (Read that "louder".) Thanks again for your information in Vee-Line, and the coordination FVI gives the Class.

David Nokes,
Albuquerque, N.M."

Thank you, for the encouragement, Dave. What did you people have in mind for an exhaust improvement? Can you propose a rule change covering it, so we can put it to a vote?

How about the system described elsewhere in this issue? It sounds good, is inexpensive and is legal, already.

TIRES

"....What tire pressure do you recommend for Dunlop R-6's (4.50:15 all around). We've been told widely divergent pressures varying from 18F & 24R to 42F and 46R (recommended by Performance Tire, Michigan). The tires have proved skittish in our first few outings.

Jerry Nelson,
Eatontown, N.J."

Jerry, you've already learned that you can't believe what anyone tells you about tire pressures — not even me! In the first place, there probably isn't any best pressure, even for one given make and size of tire. This depends on so many variables, such as whether the track is smooth (slick) or rough, even or bumpy, wet or dry, how your shocks are set, etc. Just as a very rough rule of thumb — if your wheels bounce, your tires are too hard — if the tires squeal easily, they may be too soft. From there the best advice I know of on tire pressure was given by Whit Tharin in an article in the #17 Vee-Line (also some good advice on suspension, too). All the back issues — except #3 — are again available, in case you didn't know. 25¢ each (adv.).

SIGNS OF THE TIMES

The 19th Annual Watkins Glen Grand Prix Sports Car Road Races" (wow!) is for "SCCA Production Classes A, B, C, D, E, F, G, H, and Formula Vee". How about that?

HANDY

If there was a jack with the wrecked Beetle you bought, don't throw it away. In its original state it's not much good for anything except lifting VW's, but by removing the round cast iron foot and welding a piece of ½" x 1" flat bar in its place, long enough to match the extension on the lifting mechanism it works beautifully. It's narrow enough to get in tight spots, it will drop to within inches of the ground, and lift high enough for anything on your Vee.

FROM AUSTRALIA

Relying on assurances that adoption of SCCA rules was "approved", I have evidently been premature in stating that they had been adopted in Australia. The following is from a special bulletin put out in June by CAMS (the Australian "SCCA").

"In view of the interest shown locally in Formula Vee, CAMS has decided in the interests of uniformity to endorse the details of this Formula for general application in Australia.

"Formula Vee 1966 as adopted and promulgated by "Formula Vee International" and endorsed by the Sports Car Club of America, is that approved by CAMS and printed in full below...."

Included was a note from Mr. D. K. Thomson, their Secretary General — "Just to show you that, though the mills of CAMS grind slowly, they grind it out, in time."

NEWS FROM BOBSY

Jerry Mong sends a press release about a two-carb set-up he has developed for VWs. In an attached note he says, "This won't do FVee owners any good, but if they have a VW tow car it will sure help Don't worry, I'm not going to suggest that Vees be permitted to run two carbs."

I'm sure he's not. Jerry was one of the foremost, in our rules discussions last year, to insist on keeping FV restricted.

ANOTHER CORRECTION

"Dear Don —

Regarding the last paragraph of 'Director's Corner' in the May issue of VeeLine: not 'entries', but 'starters'. Quite a difference.

Dic Van der Feen,
Public Relations Director, SCCA"
Right! Thanks, Dic — glad to know you read this stuff. don



Formula Vee
International

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