



# The Freeway Newsletter

Vol. 1, No. 11  
Dec., 1982

31 JAN 1983



*Karl Fabian  
6209 Sharon Ln  
Hodgkins, Ill.  
60525*

*el hi*

Published Quarterly by Freeway News  
R.R. 1 Box 165  
Mission Hill, S.D. 57046  
Telephone (605) 665-1890  
Donald J. Martin, Editor

Dear Don,

I heard about your News from Comet Industries as the result of an inquiry about the service dealers of their Duster transmission. It sounds like a great idea, especially since the Freeway is a vehicle that calls for individual work and ingenuity to maintain. I think the vehicle is a great basic concept, but requires a few refinements (as do all vehicles) and with so many people being turned loose as experimenters and developers, the results should be very interesting. I've done a couple of things, and when I can send photos, I'll do so.

Has anyone tried an inverted lifting (airfoil) wing below and below the bumper to counteract the lifting effect of the body below the bumper and the fact that the whole body has an airfoil, hence lifting, effect particularly at highway speeds, say around 50 mph?

Sincerely,  
Richard A. Perkins  
1336 Milvia Street  
Berkeley, CA 94709

Dear Don,

The summer has passed quite quickly, almost as quickly as H-M-Vehicles. I found Dave Edmundson's letter in the June issue very informative and it certainly explained some differences in the experiences that different owners have had with their vehicles.

Since I have one of the last vehicles, I think that the improvements that Dave mentions having made are well represented by my Freeway. I have not experienced the numerous problems that others have had with the drive train on their vehicles. I am now up to 2800 miles.

I have had my own set of problems though. I have had an intermittent problem with the fuel supply to the engine. I would be going along fine, then suddenly lose power. Sometimes the engine would stop completely, but it never did leave me stranded. By using the manual choke, I was often able to keep the engine running until it returned to normal operation. I have cleaned out all of the fuel lines, replaced the gas line filter, put in a new air filter, put in a new impulse fuel pump kit, and dismantled and cleaned the carburetor. This accomplished just this last week and I am not confident yet that the problem is gone since it would run for several days at times with not a bit of trouble!

At 2500 miles I added one set of shims to account for slack from use. I have been using lubricant every two hundred miles. No prob-

lem with the buttons on the driven clutch yet.

At 2600 miles the oil pump went out. I have ordered one from the One Way Parts company, and am waiting for it anxiously as the engine temperature runs too high without it. I have found that the recommended 240 degrees as a normal temperature is too high. I start to get a loss of power and preignition just above that temperature. I am interested in adding an auxillary cooling unit such as Roger Mathews explained in the June issue. Where on the outside did Roger mount the cooling unit?

Doug Smith mentioned that Roy Baese had designed a heater for the Freeway that was, "beautifully logical and inexpensive". I would be glad to hear of that or any other suggestions others may have along those lines. Is it possible to use the electric heaters or rear window defrosters that are sold in automotive outlets without overloading the electrical system capacity of the Freeway? How many watts of power can one tie into the Freeway over and above what is needed for lights, pump, etc.?

I have the 12hp engine in my Freeway, but I am somewhat disappointed in the gas mileage that I have been getting. I have been running about 62 to 64 mpg since I bought the car in April, 1982. I drive mostly to and from work, a distance of 17 miles one way. Most of that is open road with few stops and starts. I usually drive at 45 to 50 mph except for the lower speed limits for a distance in town. Does this mpg figure sound a bit low compared to what others are getting with the 340 engine? Any tips on how to better tune the engine for higher gas mileage would be appreciated. I have increased the tire inflation to 30 psi in the rear tire and 24 psi in the front, instead of the recommended 24 and 18. Handling and ride have not been appreciably affected by this move.

Best regards,  
Arther D. Umland  
R.R. 1, Box 62  
Hartford, SD 57033

Dear Don,

Here is my contribution for future issues of the newsletter. You continue to improve the publication and I can only say "thanks".

# 85 is finally back together after sitting under a canvas all through the months of June, July and August.

At the end of May the jack shaft bearings went out again for the third time in 6000 miles, and the driven clutch bushing as well. I took the entire assembly out and took it to a machine shop to have the shaft duplicated. In the meantime I ordered a clutch from a local

Snowmobile dealer, he said he'd seen plenty of them and that it was no trouble.

While I waited for the shaft to be machined the clutch came in, wrong size (diameter), wrong shaft size (1"), totally and completely the wrong thing. "Well", said my local dealer, "They've discontinued yours and this is the closest thing."

Useless, of course, so the machine shop re-bushed my old one. The total tab for this, that is, the bushing, shaft, and a new drive gear since the only way to get the old one off was to break it, was \$216.00.

In the meantime I had been contacted by One-Way Auto Parts, and so I ordered bearings from them.

Finally, on Labor Day weekend, I had all the parts assembled, and was ready to go. The first thing that I discovered was that the Fafnir Pillow Blocks have a different size mounting hole in them, so I had an anxious hour of rat tail filing before I got the shaft back in there. Then, having foolishly neglected to disconnect the battery way back there in May, I found the light switch on (grandchildren I suspect) and the battery totally dead. Green fungus all over everything, had eaten completely through the choke cable and started on the wiring harness which is just below the battery.

Anyway, here are the results: Total cost this time, \$282.00 including a clutch that I can't use and the guy won't take back because he ordered it "special".

The battery did take a charge and hold it, so no problem there.

Evidently the old shaft, with the stop collars welded onto it, was out of balance from the very beginning and was probably part of the reason for the repeated bearing failures and the terrible resonance around 35 mph. The new, turned-from-stock shaft has no resonant frequency within the rpm of normal driving speeds, and the smoothness is incredible, because mine has always vibrated badly at low speeds. It now goes right up to highway speed with nary a shiver, except, of course, the engine vibration but that was nothing compared to what that welded shaft was doing at about thirty-five, screws would fall right out of the dash board.

Oh, a warning - the electrical system is backwards, don't jump your Freeway from a conventional automobile until you study the situation very carefully. If the cables are hooked positive-to-positive and negative-to-negative, you will have current flowing through the Freeway system backwards, at least on mine. No damage was done that I know of, but my hair stood right up straight on my head. (What there is of it.)

At the moment I'm offering mine for sale as it is now in better mechanical condition than when I bought it, and that's the only way I would sell it. It's just too much unless you're a machinist, and I'm a banjo player.

I want to get \$2500.00 for it, if anyone is interested.

Sincerely yours,  
Bob Ferris  
12 Rondeau Road  
Bellingham, Mass. 02019

Dear Don,

I want to thank you for sending me those back issues of the Freeway News. I see where other owners have had the same problems that I have and some of their experiences will help me to avoid some in the future. If I could have had your paper two months sooner it would have saved me much trouble with the clutch. I took it apart twice before I even knew where the buttons went. The spring had gotten out of shape but I was able to drive it anyway and received a new spring yesterday and replaced it this morning, now it runs good again.

Some problems I have resolved: put a small bolt in accelerator linkage to keep it from coming apart; using a large rubber band to keep brake plunger in its notch; put a screw in the dash holding a piece

of metal to wing over the light switch to hold it in (it failed to catch after two months and I couldn't find a replacement); replaced a headlight; replaced the oil pump (one week after warranty); one back window broke at the latch 3 weeks after delivery and the other one broke the same place 15 months later, they are still holding together.

Someone mentioned stress marks on the flat fenders. I had some on one fender for better than a year before I found out what caused it. When the vehicle hit a sharp bump the head of the front shock came up and broke through the fender and I also got stress marks on the other fender. Whenever it rained the floor was always wet and I kept sealing leaks. I finally ripped off the rubber on the front bumper and sealed it with duct tape - no more wetness until the tape started to crack. Whenever I drove in the rain beside continually wiping the windows the wheel would throw water on the drive belt and would begin to slip whenever I stepped on the gas. I just backed off a bit and never had any problems getting to where I was going.

I do like to drive my vehicle and will every chance I get but with more things likely to go wrong with it I don't know about driving home from work at one o'clock in the morning.

It's still better than a two wheeler.

Kenneth D. Webb #354  
909 East Main  
Weiser, Idaho 83672

Hi Don!

Been a while since I've written, but enjoyed the June Newsletter with Dave's last notes in it. You probably already know, but the driven clutch buttons are the same as before - the new harder ones were prone to breaking, so .....

I have 20,000 miles on my 450 now, and would have been more but it was down 3 weeks to the day! Not because of being too lazy to fix it, but because of a parts (clutch and belt) slowdown - just couldn't get people to ship to me.

I now have a Sun City office, and my Freeway is a good topic of conversation with retired people, which I need to get acquainted. We have a federal income tax planning program that is great for people who no longer want to pay and pay, but I need to meet families, and the little vehicle is a great "introducer".

Got a question to ask! I'm a WWII and Korea pilot, and have a few thousand hours of flight time. I'd like to add on to the total, but time and money have interfered with that plan. However, and this is the question, do you think the FAA would buy my flight time in the 450? Due to the condition of AZ roads, and the absence of any front end springs or shocks, I spend 30% of my driving time in the air, between the seat and the roof, and by golly, I should get credit for it!

Can't remember if I told you that I took the car to a local Tecumseh dealer, with the complaint that blue gray smoke issues out of the exhaust when I start out from a stop. The mechanic worked for 2 days, new head and valves, but it still smokes. The biggest job was to take the top of the vehicle off and then put it back on! Tecumseh paid the entire bill.

I wish you well Don - wish I could stop in on you some day, as I for one owe you a vote of thanks for keeping the lines of communication open! Good Luck!

Bill Kummer  
12630 N. 103rd Ave.  
Sun City, Arizona 85351

Dear Don,

I received many issues of your newsletters and I think you are doing a great job on publishing and distributing the letter. I think it is very important to exchange ideas and information.

We purchased our Freeway in August of 1979 and took delivery on November 29, 1980 of Freeway #121. We are very happy with it and have had some of the more

major ones if you would to include them in the newsletter.

I installed a chain tightener which is manufactured by Rowe USA Corp., P.O. Box 14, Bellflower, Calif. 90706. You remove the nylon roller on the tightener and replace it with a #50 sprocket which is about 3" in diameter. The tightener holds the chain up from the bottom. The best thing I have found to lubricate the chain is with chain saw bar's

It has an agent in the oil to make it sticky so it doesn't throw it off the chain. I also installed an oiling system for the chain. I mounted a conventional squirt oil can with a long nozzle underneath the dash. I ran a plastic hose from the tip of the oil can to the back of the vehicle to a point just above the chain so everytime I drive the vehicle I reach under the dash and give it 3 or 4 squirts.

One night I was driving in town and without warning all the lights went out. I blew a fuse, "very dangerous situation". I then purchased a circuit breaker like most cars have and installed it in place of the fuse. If you have a short circuit it will trip in and out giving you a warning that something is wrong.

We have gone through about 3 or 4 oil pumps. The last one I bought direct from the Walbro Corp. It is a heavy duty pump used for military application. It pumps faster and is quieter than the other pumps.

I redesigned the heating system. I removed the heater core from under the dash and mounted it on the cross frame that the steering gear box is mounted on, on the right side of the vehicle in a vertical position so that the hose connections point to the right side of the vehicle. I then mounted a defroster fan similar to those used on truck and bus windows that was purchased at an auto parts store behind the heater core.

I installed some dark colored film to the inside of the windshield. I used a strip about 4" wide applied to the top of the windshield on the order of the first tinted windows on regular cars. This has helped cool the car in the summer time and helps reduce glare of oncoming cars.

are keeping rather extensive records of the operation of our Freeway and figured it cost us 6¢ a mile to operate our Freeway the first full year of operation. The first year my wife drove the Freeway about 90% of the miles and really enjoyed it. We live in the country and she works in town with a 30 mile round trip a day and then last fall she took some college classes in another town and would put another 30 miles on it. The Freeway has never let us down in all the driving that we have done. We now have 12,000 miles on the most unique car on the road.

Also, I am an authorized service dealer for Briggs & Stratton and Tecumseh so if anyone is motoring through our part of the country and needs some service work done be sure and stop by here and if you need any parts be sure and let us know and we will be glad to ship them to you. We are in the small engine and refrigeration service work so Freeways are right up our alley for service work. We are hoping that there will be more Freeways on the road as soon as Dave can get started again.

Happy motoring in your Freeways!

Jake Jacobson  
Jake's Small Engine & Refrig.  
R.R.  
Badger, Iowa 50516

Dear Don,

It was a pleasant surprize to see my letter and pictures printed in the last Freeway Newsletter. Have since had questions by mail that maybe would better be answered here for all to benefit or learn. That would appear to me to be the advantage of your publication.

The heater and fan mentioned are timely due to the weather. The heater is more accurately a defroster and was given to me by another Freeway owner, Ron Lepsch, in return for a needed jackshaft. We had ordered it from J.C. Whitney and came with suction cups that proved inadequate partially because of the vibration. The suction cups were

unscrewed and 'Z' brackets attached with nuts so the ends of the 'Z' bracket could be tucked under the windshield rubber seal. So far it has stayed with no problem. However, I wired mine through the right existing defroster hole to an added dash switch. The first time I came out of work to a dead battery because I'd left the switch on, convinced me that the dash switch should be fed through the ignition switch so it won't heat unless the ignition switch is on. The fan (mine is an early Freeway with no blower) is a defroster type fan as used in older cars but mounted on the steering column so as to blow over the oil cooler coil, through the dash holes, and over the heating element. Plastic panels added to the lower edge of the dash help direct the air.

As to sparkplugs, I found myself in need of one last week and no one had an RL85 or the hotter RL86/RL86C. A cross reference told us an AC R44F would replace the RL86, and since most of my driving is short in town runs - I did locate two R44F plugs, but due to slow movement they won't restock them. This got me to wondering what other plugs would work in a pinch. I prefer Champion and should have used One Way Parts for a spare, but I didn't. So if you have the same problem some time here are the other brands and numbers listed in Champion's cross reference as comparable. However, keep in mind I have not tried any of these.

Champion number	Replacement	
RL 85/RL86	Prestolite	14ER4
		14ER6
		425
RL86/RL86C	Motorcraft	426
		AE4X
		AER6
	NGK	AE14X
		BR6HS
		BR5HS

Problems I've had with my Freeway include a rear wheel bearing going bad causing loss of control and hub damage to the degree of needing replacement and slight, repairable damage to the spindle and spacer. The problem seems to have been caused by the seal coming loose letting in moisture and dirt. This happened during the coldest weather in years and may have been caused by the weather. It was possibly the deep snow and the tendency of the rear end to slide around and hitting the solid snow and ice that popped the seal loose. Since then I've parked the vehicle during heavy snow until the roads are cleared. I'll try to deal with other problem areas in future letters.

As mentioned in the last letter, molds have been made for a 1/20 scale Freeway model of vacu-foam plastic. Enclosed is a picture of several including a four wheeled version using a reversed VW drivetrain. The molds were made several years ago when the only pictures available were incorrect ones in the sales literature and photos of the prototypes, so details are incorrect.

The other picture is of three of the fourfreeways in our area at the staging area of the National Cattle Congress parade in Waterloo last September. Ron has the fourth vehicle but had to drive another float. We are trying to get a club started to help each other out so your suggestion for an international club is of interest. I wouldn't turn down an office in such a club but because of my busy schedule I would hope someone else could find time to fill this need. Any name for such an organization should be able to be abbreviated to an easily said word. For instance, one much needed item is a Freeway repair manual. It might be called the Freeway Owner's Repair Manual (FORM).

Anyone have any pictures or info on the convertible version? Would like the address and/or literature.

Yours truly,  
Jim Newcomer

**SUBSCRIPTION RENEWAL**

IF THIS BOX IS CHECKED, THIS IS YOUR LAST COPY OF FREEWAY NEWS.

IF YOU WISH TO RENEW FOR ANOTHER YEAR SEND \$3.60 TO:

FREEWAY NEWS, R.R. #1, BOX 165, MISSION HILL, SD 57046

\*\*\*\*PLEASE NOTE THIS IS AN ADDRESS CHANGE FOR THE NEWS!

PEEL & STICK MAILING LABELS - \$2.50 per 100

J & S Custom Computing Services, P.O. Box 176, Simi Valley, CA 93062

FROM FREEWAY NEWS

R.R. #1, Box 165, Mission Hill, S.D. 57046

SCL Plastic Cleaner & Polish (8 oz.).....\$2.00 ea

RL-85 or RL 86C Spark Plug.....\$2.50 ea

#50 Chain Connection of Offset Link.....\$ .80 ea

Dear Don,

I have one suggestion and it is that each owner of a freeway have the names and addresses of each other so we can help each other with parts and in repairing our freeways.

About a club, I would like to be one of the original members. I would be willing to help any members in California.

Rev. Richard Arndt, Rt. #1, Box 355, Wilton, CA 95693 916/687-6520

Dear Don,

A quick note to you and my fellow owners. During the summer of '82 I put my 81-340 up for sale just to see if it was possible to sell it. I had 5,000 miles on it and I was asking \$3,000. I advertised in two papers and placed For Sale signs in the car. I didn't have a single call from either newspaper ad. I did receive a about 30 phone calls from people who drove or walked by and saw it. However, the price was quickly met with "Thank you, I'll think about it." Much to my surprise no one made me an offer. After three months I took the signs down. Unless an owner gets lucky, I do not believe the car can be sold for over \$2,000.

I have replaced the mirror with 6x8 inch ones; put on bigger mud flaps, and put air shocks on the rear. The air shocks have greatly improved the ride. They are by Gaberal and were intended for a corvette.

I would also like to have more info on the zerk grease fitting in the front torsion tube. By info I mean how and where.

M.B. Tussey

#1, 15 N. Main St.

Telford, PA 18969

Dear Sir,

After 4500 miles of commuting to and from work in my Freeway, I would like to share some of the problems I have had with the vehicle, and how I solved them.

After approximately 1500 miles the exhaust pipe split off at the top of the muffler. This problem was solved by brazing the pipe back on to the muffler. I then cut off a 4 inch section of the exhaust pipe and installed stainless steel flex pipe in place of the solid pipe. Since muffler breakage is due to engine induced vibration, the flex pipe isolated the engine's vibration and also reduced vibration throughout the entire behicle. After 450 miles the muffler is still intact.

Constant window fogging and condensation is easily solved by installing any number of aftermarket automotive ventilation or defogging fans. These are readily available in any automotive parts store, and in most department stores. Some of these are avaiable with small heating elements, which is an added bonus during cold weather.

After about 2500 miles, the front struts pounded their way through tops of the front fenders. I enlarged the holes and glued on a large piece of heavy rubber, which will give when the strut strikes it.

After 3200 miles the driven clutch blew. This problem is solved by replacing the driven clutch with the improved version which has a

clutch check the jackshaft keyways. The jackshaft may need replacing. Also install a lock screw in the drive sprocket and on the pillow blocks (or jackshaft bearings). All of these items are threaded for a lock screw, but have none.

Balking shifting is usually due to a dry driven clutch. Lubricate the cam ramps with a dry lubricant, available in most snowmobile shops. This is important for long clutch and belt life.

Since the Freeway is not provided with chain adjustment other than putting shims under the jackshaft blocks, a chain tensioner is highly recommended. This is available at many motorcycle shops, especially those shops specializing in dirt bikes.

Occasionally the handling of the vehicle may become sloppy. On my car I discovered that the bolts that hold the steering arm brackets to the struts were loose. These bolts are easy to find; its the one at the top of the strut that strikes the inside of the fender. Check these bolts for tightness often. A good idea is to remove the bolts and reinstall them using loc-tite thread locking compound.

Although the Freeway has many problems, none of these problems are serious enough that they are not easily rectified by anyone who has even a small mechanical ability. It's a far cry from being as reliable and rugged as most passenger cars. But compared to most motorcycles, I believe the Freeway is every bit as reliable and economical and more practical as a commuter vehicle.

It takes about 5,000 miles of use before all of the problems of the Freeway are uncovered. After these problems are rectified it is simply a matter of knowing what the weak spots in the design of the car are, and preventing them from recurring by simple fixes, and preventive maintenance.

Karl Fabian

6209 Sharon Lane

Hodgkins, Ill. 60525

Dear Don,

Your suggestion of a club which will involve more Freeway owners sounds good. I believe that the scope of the club and its name should be changed to include more than just the Freeway owners. Otherwise its existence may be limited to the lifespan of the Freeway. I believe many of the Freeway owners will try other types of high mileage vehicles either because of (or in spite of) their Freeway experience.

I finally found the owner of the yellow Freeway which has been seen in Sioux Falls. The owners name is Larry Falk. I called just a few minutes ago and visited with his wife. It seems that the Freeway was purchased for her, but a back injury has prevented her from using it. Larry is in a wheel chair, so he cannot use it without some modification. So Larry's brother has been using it in Sioux Falls.

Art Umland

Hi Don,

A photo of my vehicle was in the Nov., 82 issue of Popular Science (page 4)! What a surprise to find it there will eating lunch one day.

This Newsletter is a fantastic service. I devour it as soon as I get it and refer back to them many times. It's unfortunate you don't have room or money to include more, especially if we're missing much needed maintenance and repair information. Unfortunate driving experiences like Douglas Felt's story in #10 is also important reading. Let's never kid ourselves and act like we're driving on four wheels!

If organizing a club helps assure a strong Newsletter, I'm all for it. I might even volunteer for something if I knew what was involved. I'm confused as to the function of a club, compared to the function of our Newsletter? And how about the logistics of uniting so few people so far apart? But when it comes to club names, I think the words "High Mileage" should be left out. I think "Freeway Freaks" is a much more accurate description of what we are and how we feel!

Avi Brenner

824 Lakeview Way

Redwood City, CA 94062

415/367-9139