Chapter 13
More Designing

I went back to the drawing board. In one of my seminars in Spokane, I had an individual who claimed to be an ex-engineer from Detroit. This man claimed that out on the test tracks after a new car was constructed, rather than use a conventional carburetor for the testing, they put on some type of carburetor that attained tremendous gas mileage. He said that after the testing was done, the carburetor would be removed and a conventional carburetor was put in its place. The point the man was making was that in Detroit they don't want to pay a dollar-fifty a gallon for fuel while testing all of these thousands of new cars on the track. He also stated that it was difficult to tell one of these test carburetors from a conventional carburetor by the outside appearance. If this is so, then I assumed that I was doing something terribly wrong.

My unit is large and bulky. What is it that they have done to condense the size of theirs? I knew with enough time, I could do the same.

By the way, this man's claims sounded reasonable to me. Have you ever heard stories about a man who went to Detroit to pick up his new car or truck that he had ordered? As the stories go, the guy picks it up and finds that it gets 75 or 80 miles to the gallon. I've heard plenty of these stories. Unfortunately, as soon as someone gets hold of one of these vehicles, the first thing he does is begin bragging to everyone who will listen about what kind of mileage he is getting. Soon afterward the company will come out and take the car back and give the individual another car. Ask someone you know if they have heard of one of these cases if you have not. I have two individuals who claim that this has happened to them here in Tacoma. Many more are unconfirmed reports. The story that the Detroit ex-engineer gave me would offer an explanation of these mysterious

carburetors. From what I have gathered, about one out of maybe a million cars in Detroit slips out with one of these test carburetors on them.

As far as our development is going in the pursuit of this smaller, more efficient carburetor, we are making great progress. As the situation stood, we needed to attain the required amount of heat to vaporize gasoline completely. There was the problem of carbon deposits. As I stated earlier, the gasoline being sold now is more difficult to vaporize. More sludge and deposits accumulate on the heating apparatus. This means that in most vaporizers, periodical cleaning is required.

I developed a unit that would not have this probelm, which is a catalyst. In other words, a portable cat cracker. Many factors were considered in the design of this unit. One was how to expose the fuel safely to great amounts of heat and not risk ignition. Getting back to the basic understanding of fuel, any fuel needs oxygen to burn. The solution to the problem was to generate the vapor in a chamber that contained no oxygen, or even air. This could be done in a vacuum, but that is not practical. The exhaust gases will produce mostly pure carbon dioxide if the car is running on vapor. What we needed was a source of heat that would not present the problem of accumulating carbon deposits. I will not get into the method at which I developed the solution, but I will explain what the solution was. A catalytic converter on a car was explained in the earlier part of this book. A limited amount of air is pumped into the exhaust gases for the purpose of burning off the excess unburned fuel in this holding chamber. This chamber is filled with porcelain beads that are slightly agitated against each other and retain the heat that they are exposed to, therefore, keeping themselves clean and exposing the incoming gases to additional heat. This also causes the gases to be cleansed by the heat.

So, if the fuel was introduced into a small stream of exhaust gas and then passed through a chamber full of porcelain this would be a start. What about heat for this chamber. It would be desirable to heat this chamber to a consistent 900 degrees. By doing this it would allow the gasoline passing through the chamber to be vaporized. I

decided to heat the chamber by burning a small amount of the fuel itself. The question was, how could I burn a select amount of carbon dioxide; nothing will or can ignite the gasoline mixture in the chamber - even to the slightest degree. But, if I introduced a very small amount of air into the CO_2/air mixture I could support a limited amount of burning. The smaller the supply of air, the smaller the amount of burning. By passing a certain amount of CO_2 exhaust gas through a vacuum type fuel jet right after the fuel mixes, introduce a regulated amount of air, then igniting the mixture with a spark. I could obtain about any temperature that I would desire in the catalyst chamber. (See Illustration #14)

By using a small supply of pressurized air and then regulating the flow of this air into the fuel jet, a constant desired temperature could be maintained. This is considering that the air flow would vary in relationship to the amount of fuel being introduced.

This is possible by placing a temperature probe in the chamber to send out an electrical impulse to a regulator valve placed in the air supply line to either increase or decrease the air flow to maintain the 900 degree temperature. At the rear side of this catalyst, pure gasoline vapor will exit in a stream of CO_2. This mixture will be completely neutral and non-explosive until introduced into the air. The mixture in our test vehicle was introduced to the engine through the PCV line opening at the base of the carburetor. If it is a safe supply of pure gas vapor that you desire, this unit will produce it. On top of being able to do this, it also cleans itself.

As can be seen in the Illustration, the flow of exhaust gases through the fuel jet will determine how much fuel will be drawn from the jet. The flow of exhaust gases is determined by the butterfly valve at the entrance of the unit. This flow or butterfly valve setting will be controlled by the accelerator pedal pressure. The conventional carburetor is left intact. While the catalyst is powering the vehicle, the conventional carburetor is inactive. The only function it will perform will be the regulation of how much air will enter the intake manifold. The fuel flow, and regulation, will be controlled by the butterfly valve in the catalyst unit.

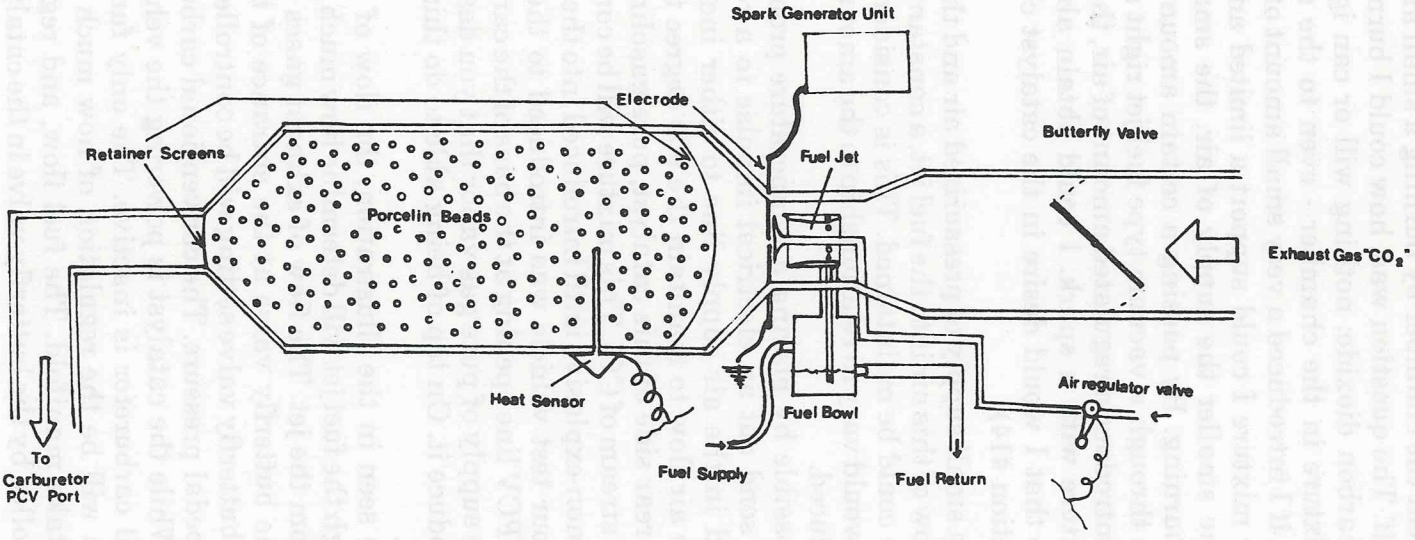

Illustration #14

Linkage that controls the catalyst valve will be directly connected to the carburetor linkage. The fuel flow will be proportional to the air flow.

Immediately after the exhaust gas passes the fuel jet, there is a tube that runs through the center of the jet that opens up into a flange. The fuel will turbulently collect behind this flange due to the lower pressure behind it. The air supply, which is moving at a much slower speed and pressure than the exhaust gas, will be exiting this flange.

The result will be a fuel/air mixture at this point with most of the CO_2 exhaust gas passing by this pocket of fuel/air. The fuel/air mixture is ignited by the electrodes located at this flange. The mixture will be snuffed out almost immediately by the exhaust gases. As soon as the burning fuel/air mixture hits the outer stream of exhaust gas, it will be dissipated into a non-combustible mixture. The limited amount of burning that did exist will spread heat throughout the chamber. The porcelain beads will then absorb and retain this heat and transfer it back to the unvaporized fuel passing through the chamber.

There was only one problem to be solved at this time. It is apparent that the car will not start when cold with the catalyst. The exhaust gases, prior to the car starting, will contain no CO_2 due to the fact that the engine has not been in operation. The problem presented would be that until the engine was operational and producing CO_2, the unburned fuel and air being pushed through the exhaust pipe would pass through the catalyst. If the spark igniter succeeded in igniting this mixture, the safety of the unit would be endangered due to a purely explosive mixture passing through it.

What we did to eliminate this danger was to install a heat sensor. The type required sends out a signal to the idiot light in the car when the engine heat exceeds 190 to 200 degrees in the catalyst on the exhaust side. When the exhaust side gained over 200 degrees of heat, it would send out an electrical current that would turn on the spark igniter. How was the car going to warm up in the first place to attain the 200 degree temperature for the exhaust gas. We placed a cold start valve in the intake manifold. A vacuum sensor was also tied into the vacuum lines on the car. This sensor detected a drop in vacuum below about 10 inches. If there is

under 10 inches of vacuum, the sensor sends out a current which actuated the cold start nozzle. Once the intake manifold pressure dropped below 10 inches, the sensor would break the current. So, when accelerating, this set-up also serves as an accelerator pump on top of serving as a cold start nozzle.

We have been amazed at the amount of success that we have attained with this unit in our testing so far. The system is still under development and this discription has indicated our development to this point. As a matter of fact, this publication of the catalyst is the first documentation that we have released to the public. It looks so good to us that it makes us very nervous to be the only ones holding the plans to it. It does seem that the good systems and inventors seem to disappear the quickest.

We are considered to be unwise by some for disclosing all of our information to the public rather than holding it in complete secrecy. It is our opinion that is we had kept our information to ourselves, we wouldn't have been hard to stop. This way, the public is now armed with the technological capacity to reproduce our efforts. We are hoping to leave plans of fuel saving devices behind to flood out of the woodwork all over the country. If this happens, maybe one person can be stopped, but they can't stop us all.

We don't claim to have perfected any of these systems, but we have proven to ourselves and others that it is possible to attain a greatly sizable increase in gas mileage. Proving that we are not getting from Detroit and the Federal Government what we should be. If you prove this to yourself and neighbors, we are convinced that you will do everything in your power to see that the situation gets righted.

If, by some chance, you still don't believe that there not only is an organized and long standing effort to keep us dependent on oil, but great amounts of it, consider this:

A full-sized diesel rig, a Peterbilt for example, hauling a 70,000 pound gross weight can attain up to 7 miles to the gallon on the highway. The average car weighs around 3,000 pounds and attains maybe 10 to 20 miles to the gallon. There isn't a great difference between the mileage of the two. According to simple logic, if the truck weighs 70,000 pounds and the car weighs 3,000 pounds, then the car

weighs 23.3 times less than the truck. So, if the truck gets 7 m.p.g. on the highway, then the car should get about 23.3 times that, or 163 miles to the gallon. It is a fact that these trucks are utility vehicles. Our country depends on the economy of their operation, so therefore, apparently, the government and Detroit have made exceptions for them. They seem to have allowed the trucks to attain a much greater efficiency than the American automobile has been attaining. People are not blind, they saw this tremendous difference in economical utilization of fuel and began demanding of Detroit to produce Diesel automobiles. With seemingly reluctance, they finally gave them to us. For some reason, however, they did not produce the kind of proportional increase that was expected by the public. It seems that all they did was convert conventional gasoline engines to only operate off diesel fuel. The fuel is not utilized in the same manner that it is on the trucks. They got us again!

Here is another factor that you might take into consideration. The soft tires that are monopolizing the industry, rob you of economy and power in more ways than you can comprehend. Picture the difference of how easy an English racer bicycle is to ride at less use of your strength, opposed to a standard bicycle with the large soft tires. The more weight that is put on the bike with the soft tires, the harder it is to pedal and the quicker it will slow down. If the tire has "give" it will create drag. The Viking project was a car built by a Washington university recently. They constructed a lightweight car with solid tires using a Volkswagon Rabbit engine. The car attained 80 miles to the gallon. In some reports, I heard of as high as 90 miles to the gallon.

A soft rubber inflated tire on your car is like driving a bicycle through mud. If your tires were solid rubber, your economy would increase tremendously, even leaving your carburetor operating as inefficiently as it does. The comfort of the ride could be replaced by improving the suspension or by inserting the steel part of the wheel with a small amount of spring to absorb severe bumps. Steel belted radials increase mileage noticably. They are slightly more rigid than standard tires. It is still obvious from just looking at them just how little that they have.

You still cannot convince me that Detroit is not aware of this. Look again at the efficiency of diesel rigs. Did you know that their tire pressure is from 90 to 125 pounds per square inch? This is another reason for their increased mileage.

I believe that between NASA and Detroit they must have technology which not only could inexpensively reduce gasoline consumption, but replace it with an alternative. Who restricts their freedom to utilize this technology. If there is an attempt to keep this book off the market, you can bet it will be the same people! If propaganda comes out discrediting the information in this book, all I can advise is for you to form your own opinion. If you believe in it, do what you can to help. We can beat this together but not as individuals. I encourage you to share your knowledge of this book and its contents with your friends, relatives, and civic organizations. Tell people of the new knowledge that you have gained and together you can find a way of making a contribution to this effort.

If anything should happen to any of us at Carburetion Technology Enterprises, I hope that it will be investigated and not forgotten.

Thank you and good luck in your efforts,
Larry D. Wagner/Pres. of C.T.E.

CREDITS

At this time, I would like to express my thanks to all who have been supportive and helpful to our efforts at C.T.E. up to this point.

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Finally, I would like to offer a sincere thanks for those of you who have volunteered time and materials with no obligation, to see that this effort was to succeed. Without you, chances are, we could not have continued.

Sincerely,
Larry D. Wagner

P.S. I would encourage anyone to investigate the possibility of becoming a member of the N.C.D.A.

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