



Magazine Articles

"The King & His Car Builder"

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Jay Hedgecock is an outstanding stock car driver. But perhaps even more importantly, he's the guy who builds Richard Petty's cars. It was his craftsmanship that saved the King's life in that terrible Daytona flip last year.

As millions of race fans held their breath when Richard Petty took perhaps the most remembered Daytona crash of all time, Jay Hedgecock saw his car building career flash before his very eyes. Jay had just started building Richard Petty's Pontiacs in the 1988 season and his very livelihood hinged on the survival of the King.

"The biggest thing was that I just didn't want anybody to get hurt," recalled Jay. "I don't care if it was in my car or someone else's car. Besides Richard's condition, I was really concerned if we had done something that broke and caused the accident. You know, we really didn't know what was going on for a few minutes, but when they radioed us that he was alright, it really relieved me."

As bad as the accident appeared on television, Jay thought the car was repairable. "The car could have been fixed and raced again," Jay remarked. "In fact, we fixed a couple of wrecks this year for Richard that were torn up worse than that car. But I guess he had too many good offers for the car because he sold it to a collector."

Hedgecock has been building Modified, Grand Nationals, Late Model Stocks and other race cars since he was 15 years old, but never imagined one day he would be asked to build the Winston Cup cars of the King of Stock car racing.

"Richard and his people came over here in October of '87," Jay recalled. "They were looking for someone local to build their cars. They were looking for a more personal relationship where things could be changed easier and faster, where they could come over for an afternoon and get in the car. I think the big thing was that I was open for suggestions. I wasn't like some of the others who would say things had to be done this way and no way else."

"We knew Jay had a good reputation for building good, safe cars," explained Richard Petty. "We've bought cars from Laughlin and Huchinson-Pagan in the past, but they're more like production cars. Here with Jay, he's only building our cars. It's much easier to try different things with him because his shop is so close to ours. We've had semi-success. Half the time we've run good, but we don't know if our problems or successes lie with us or his chassis. We're trying to get a new breed of car going here. But the main deal with Jay, is with him being so close to us, it's almost like being in the same shop."

Naturally Jay keeps a close watch on the work being done on the Petty cars.

"I've even stopped doing most of the actual work myself," commented Jay. "I want to oversee everything, just to make sure our quality stays up to his and my standards. We must be doing something right because he's never complained about our quality. But he's always been open with me about what the car is doing and what changes he thinks we should make. We cut the deal in November and so far we've built nine cars, including his '89 Daytona Pontiac. We had 22 cars to build this winter, including 11 for Richard. His business does have the top priority in my shop."

Since it takes Jay and his two full-time employees over 120 man hours to build a car for Richard, the lights go out late some evenings in the 13,000 square foot shop.

"Basically what we build is the surface plate car," Jay explained. "First we accumulate our materials. We carry about \$10,000 of steel tubing in our shop. We use 36 pieces of one and three quarter inch .095 seamless tubing for the roll cage, two pieces of 4-by-4 .120 rectangular tubing for the side rails, nine pieces of 2-by-4 and 2-by-3 rectangular tubing for the front clip, ten pieces of 2-by-3 tubing and two pieces of 1-by-3 inch for the rear clip. All of the frame and clip material is .083 with the exception of the cross member which is .120, just to retain some strength. That's the most crucial area for the strength of the front clip. In fact, that particular area stayed rather intact during his Daytona wreck. It had a few places where the tires smashed into it and it was flattened in a few places, but the welds held and nothing was really cracked. It still had half the A-frames on it, even after the other half of them were slung off when he flipped."

After all the parts are assembled, the real work begins.

First we have to cut the tubing into the prescribed dimensions, as far as the length and angles. Some of the roll bars have to be bent before they are put on the jig. We use an electrical hydraulic tube bender to bend the pipes. That process may weaken the pipe some but the bender doesn't alter the size of the pipe as much as say, a muffler-type pipe bender would. For notching, we use an electric-over-hydraulic notcher that was built at Petty enterprises. They gave it to us to use and it really cuts down on our man hours.

"Mark Covington is our main fabricator and it takes him about six hours to cut all the tubing. Mark only works on Richard's cars, so he's got his time down just pat. He not only does all the fabricating, he also does all the welding. It usually takes him about 15 hours to assemble the frame and weld it up. Then we build the roll cage around the driver. That's another 18 to 20 man hours with all the cutting and bending. We use a somewhat different roll bar placement than most. NASCAR has a set regulation on the type bars and placements. But we place some of our bars at different angles, higher than most. Our door bars are especially high. It actually triangulates the car really well. Our cars have been flex tested by Pontiac and they tested out real well. The 4-by-4 side rails that I mentioned before also come into play, especially for side impacts. I guess we found that out when Brett Bodine T-boned the car! We also have six or more optional side roll bars in the car to protect the driver."

"We really tested the strength of his cars last year at Daytona," commented Richard. "His chassis is very strong. We wanted a car where the front and rear ends would take most of the damage in a wreck. That way, the cage would remain intact and protect the driver. At Daytona, we wiped out the front and rear ends but didn't destroy the whole car. That's what we wanted it to do. I got out without a scratch from a combined wreck that had flips, crashes, the works. I guess you could say our theory worked at Daytona!"

"Ross Freesinger does the next step," as Jay continued with his car building lesson. "That's the installation of the sheet metal. It comes in 4-by-10 sheets of 20-and 22-gauge cold roll sheet metal. It takes Ross about 25 man hours to complete that job. He has to cut and bend the sheet metal to fit the firewall, wheel tubs, and the fuel cell container. We also put in the stamped floorboards that we get from Banjo Matthews."

After about 70 hours of construction and before the crew takes the car off the jig, an important task takes place.

"Before we take the car off the jig, all the rails on the car are annealed with a torch," Jay explained. "Actually, what we do is take the torch and lightly reheat the welded areas. This relieves the stress or drawing that the weld causes on the tubing. Then we take the car off the jig, turn it over and weld the bottom side. That's about another 6 to 8 hours. Then we place the car on the surface plate where we mount the roof. We have all the templates that NASCAR uses so we're sure that it all fits right. Next, we install the windshield, mount the dash to the windshield mount, and install the suspension parts. That's all we do and it's ready to leave here."

One area that Jay has brought back to Winston Cup racing is the three point rear suspension.

"We borrowed some from Saturday night Modified and Late Model racing to come up with that idea," Jay remarked. "The three-link car is a more pivotal suspension than the usual truck arm suspension. On truck arm cars, there are two long trailing arms that bolt solidly around the rear housing. Three-point suspension also has two lower trailing arms but they are only half the length of the truck arms. Plus, there's a third top arm that connects off the top of the rear-end housing to the roll cage going forward. But there's no U-bolt. It's all monoballs and rod ends. It makes for a freer suspension."

"The biggest advantage of the set-up is the amount of bite you can get with the rear wheels and still keep the nose of the car where it will turn in the middle of the corner. Surprisingly enough, the tracks where it's performed the best were Michigan and Pocono."

"With that set-up we ran real good in eight to ten races," explained Richard. "This year we're going to mix it up some. Some of our cars will have the short arms and some will have the usual long truck arm setup. But some of them will be adaptable to either. For Daytona we're going with the long arms. If it works in practice, we'll use it; if not, we'll try something different. That's what I mean about coming to Jay for our cars! It's much easier to make changes. We ain't really trying anything new because most of these things

have been tried at one time or another in racing. We're just using different combinations. Besides, NASCAR isn't going to let anyone try anything real exotic anyway, especially with the chassis."

Besides the obvious advantages of building the King's cars, Jay has developed a good relationship with Pontiac.

"Anytime we want to try some chassis or other changes, I can call the people at Pontiac," Jay explained. "They'll run the idea on their computer, then tell us what changes it will make on the roll centers, camber changes, and tell me what it will do to the car on the track. It has really helped us with some different things we've changed on the snouts. It sure saves trial and error on the race track."

How will Jay feel the day Richard crashes in with win number 201 in a Hedgecock mount?

"When Richard wins a race, it will be great," Jay remarked. "I'm not saying that it will make my business even more successful, but it won't hurt!"

"We build all of our cars for just one reason, to win races," Jay proudly stated. "I'm not in it just for the money, because if my cars didn't win, I'd do something else for a living. But I'll tell you something about winning and Richard Petty. That man is extremely serious about winning! He told me we'd build 30 cars, one for each track, if that's what it took for him to win a race. Now that's a serious race driver. And I could sure use the business!"