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# Carter Racing

by Jack Brittain & Sim Sitkin



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BJ Carter was not sure. Chris Carter (a sibling and business partner) was on the phone and needed a decision. Should they run in the race or not? It had been a successful season so far, but the Pocono race was important because of the prize money and TV exposure it promised. This first year was hard because the team was trying to make a name for itself. They had run in a lot of small races to get this shot at “the big time”. A successful outing could mean more sponsors, a chance to start making some profit for a change, and the luxury of racing only the major events. But if they suffered another engine failure on national television...

“These engine failures are exasperating,” thought BJ. The team’s car had failed seven times in twenty-four outings this season, with various degrees of damage to the engine and car. No one could figure out why. It took a lot of sponsor money to replace a \$50,000 racing engine, and the wasted entry fees were no small matter either. BJ and Chris had everything they owned riding on Carter Racing. This season had to be a success.

Pat Edwards, the engine mechanic, was guessing the engine problem was related to ambient air temperature. When it was cold, the different expansion rates for the head and block seemed to be damaging the head gasket and causing the engine failures. It was below freezing last night, which meant a cold morning for starting the race.

Robin Burns, the chief mechanic, did not agree with Pat’s “gut feeling”. The data seemed to support Robin’s position (see Exhibit 1) in that the gasket failures had occurred over the entire temperature range. This suggested that temperature was not the issue. Robin had been racing for twenty years and believed that luck

was an important element in success. “In racing, you are pushing the limits of what is known,” Robin argued, “and that means some things are not going to be under control. If you want to win, you have to take risks. Everybody in racing knows it. The drivers have their lives on the line, I have a career that hangs on every race, and you have every dime tied up in the business. That’s the thrill: beating the odds and winning.” Last night over dinner Robin had added to this argument forcefully with *Burns’ First Law of Racing*: “Nobody ever won a race sitting in the pits.”

BJ, Chris and Robin had discussed Carter Racing’s situation the previous evening. This first season was a success from a racing standpoint, with the team’s car finishing “in the money” (one of the top five) in 12 of the 15 races it completed. As a result, the sponsorship offers critical to the team’s business success were starting to come in. A big break had come two weeks ago after the Dunham race, where the team scored its fourth first-place finish. Goodstone Tire had finally decided Carter Racing deserved its sponsorship at Pocono -- worth a much needed \$40,000 -- and was considering a full season contract for next year if the team’s car finished in the top five in this race. The Goodstone sponsorship was two million a year, plus incentives. BJ and Chris had gotten a favorable response from Goodstone’s Racing Program Director last week when they presented their plans for next season, but it was clear that Goodstone’s support depended on the visibility they generated in this race.

“BJ, we only have another hour to decide,” Chris said over the phone. “At the end of the Dunham race, we were \$80,000 in the hole. Since Dunham, we got the \$40,000 from

Goodstone and paid the \$30,000 Pocono entry fee. If we withdraw now, we can get back half the \$30,000 entry. We'll lose Goodstone, they'll want \$25,000 of their money back, and we'll end the season \$80,000 in the hole. If we run and finish in the top five, we have Goodstone in our pocket and can add another car next season. You know as well as I do, though, that if we run and lose another engine, we're back at square one next season. We'll lose the tire sponsorship, and a blown engine is going to lose us the new \$800,000 oil contract. No oil company wants a national TV audience to see a smoker being dragged off the track with their name plastered all over it. We can't live without the oil

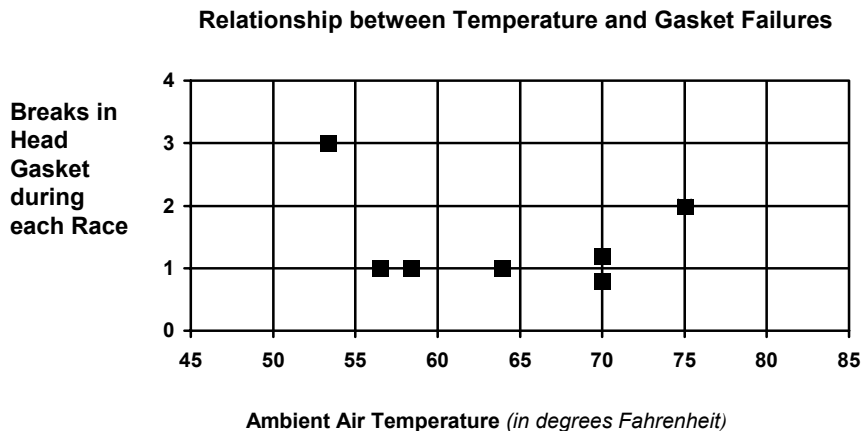
sponsorship. Think about it -- call Pat and Robin if you want -- but I need a decision in an hour."

BJ hung up the phone and looked out the window at the crisp, fall sky. The cars were already on the grid, spectators admiring the gaudy paint, excitement mounting in anticipation of the start. This was what made racing at this level special, the cars on display with crowds mingling around and waiting for the engines to roar to life. In an hour, the spectators would retreat to the stands and the cars would circle the track in anticipation of the start. The temperature sign across the street flashed "**40 DEGREES 8:23 A.M.**"

### Exhibit 1: Note from Robin Burns

BJ,

I got the data on the gasket failure problem from Pat. We've run 24 races this season, with temperatures at race time ranging from 53 to 82 degrees. Pat had a good idea in suggesting we look into this, but as you can see, this is not our problem. I tested the data for a correlation between temperature and gasket failures, and found no relationship.



In comparison with some of the other teams, we have done extremely well this season. We've finished 62.5% of the races, and when we finished, we were in the top five 80% of the time. Our rate of blown engines is 29%, but we are running fast, so we have to expect some difficulties. I'm not happy with the engine problems, but I will take the four first-place finishes and 50% rate of finishing "in the money" over seven engines any day. If we continue to run like this, we will have our pick of sponsors.

Robin