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DESIGN & PRODUCTION

BRYAN NESBITT

SO FAR

executive director design, GM europe

Munro & Associates, Inc.
1749 Northwood Drive
Troy, MI 48084

(248) 362-5110

WWW.Leandesign.com

Delphi – Euro Style
Revolutionizing the Golf Car



FOR(e)-WARD THINKING AT CLUB CAR

Change is not something that occurs often in the golf car industry and when it does, you generally have to be a real insider to notice it. But when the people at Club Car realized that they could take incremental improvements only so far, they decided to get some fresh thinking from Detroit and completely change their product and process.

By Gary S. Vashtash, Editor-In-Chief

Phillip J. Tralies, president and CEO of Club Car, Inc., describes the situation in the golf car industry as being similar to that of Detroit. There is a Big Three: Club Car (parent company: Ingersoll-Rand), E-Z-Go (parent company: Textron), and Yamaha. Like the automotive Big Three, there is geographic proximity: Club Car and E-Z-Go are both in Augusta, Georgia; Yamaha is further away, in Peachtree City, but still in Georgia. While this certainly isn't Detroit/Dearborn/Auburn Hills, there is still a similarity in the comparative close grouping of the firms.

But there are distinct differences, too. For one thing, the golf car Big Three are actually the entire industry's BIG Three: Tralies estimates that the three companies "represent 95% of all golf cars built and sold in the world." That's right: world. Of that 95%, E-Z-Go and Club Car account for 42% to 44%—each. Yamaha has the remainder. The five percent is handled by a variety of smaller companies. Detroit's Big Three could only wish that they had such a grip on the market.

But like Detroit, there are some issues that need to be grappled with as regards changes in the market. Tralies points out that in the early 1990s there was a big boom in the development of golf courses. Real estate developers saw great opportunity to create communities attached to golf courses. Tralies notes, however, that by about 1995 the number of people who were taking up golf diminished, but the ardor of those developers went unabated. So there is an issue of the number of courses outstripping demand. In the golf car business, the primary customers are the courses, not individuals. This makes the market, however, different than what Detroit faces: instead of

a multitude of individuals who need to be sold on the latest equipment, in the golf car industry it is far different. "If you took an average football stadium and put all of the golf car decision makers in it," Tralies says, "it would look empty."

There is another big difference between the golf car industry and the auto industry. It is a technological difference. Dave Hardy, who was executive program director, Special Projects, at Club Car, recounts, "One of the first jobs that I had when I came here in 1978 was designing the DS model. We introduced that model in 1980." You can still buy the DS model. In fact, up until 2004, the DS model was the Club Car model. Hardy acknowledges that during the past 20 years there were a number of changes made to the DS model. For example, the body material started out fiberglass, then moved to SMC, then to a painted TPO. The basic styling stayed the same. The powertrain was redesigned. "They were evolutionary changes. It's not that some of them weren't dramatic improvements to the product, though." Still, as Hank Sanders, who was vice president of Special Projects, points out, there is only so far you can go in terms of making product or process improvements when there is a fixed design. The structure becomes a limiting factor. As the golf car industry is as competitive as any, they were always looking for the ways to improve performance and to reduce production costs. "At some point you realize that if you want to make dramatic change, you have to change what you're doing," says Hardy.

There is a problem with the notion of dramatic change. Especially in the golf car industry. That's because of the fleet sales (which are often leases, not direct sales). The typical course changes over about a third or so of its cars on an annual basis. Consequently, the status quo is comfortable from the points of view of maintenance (i.e., keeping things largely the same reduces the amount of difficulty for those who have to

keep the cars running) and of the customers: having a fleet of vehicles that look the same means that one car is generally as good as another.

There are some other considerations to take into account. For one, Club Car is a build-to-order operation. So if they don't have plenty of courses purchasing vehicles, they've got a serious problem. While they do build a variety of custom vehicles in their facility—"limousine-style" vehicles for the Japan market; trash haulers for Disney—the golf car is the primary product and so it has to be competitive. Consider an auto company dependent on a single model. What's the likelihood that with even a modicum of success they'd ever modify that model?

But at Club Car they were up against the issue of making improvements beyond the incremental. Sanders had attended some seminars and learned about things like "lean design" and "flow manufacturing." And he concluded that they were the sorts of things that, although becoming part of the process in places like Detroit, needed to come to the golf car industry. So he began to talk up the need for fundamental change at Club Car, the need to create something that was not restricted by what had come before, but which would allow the implementation of unencumbered thinking and of best practices. And he began to get converts. And eventually what was known as the "Cleansheet" project was born.

Essentially, Hardy headed up the design activities and Sanders the manufacturing activities. But the two men emphasize that they realized from the start that this was going to be a collaborative approach, with give-and-take being part of the product and process development. A handpicked team was formed.

The Club Car Precedent is the result of the proverbial "clean sheet" approach that was actually designated the "Cleansheet" program at the company. While changes in the golf car industry tend to be occasional and incremental, the team members on this program hooked up with a Detroit-based design and manufacturing consultancy and learned what they could about automotive practices. Because they were able to take a whole new look at the product and the process, they have created a golf car and a manufacturing system that are as efficient and effective as they are clever.

This team worked on Cleansheet full time; they were not part of the day-to-day activities related to getting the DS model out the door.

Doing it right, doing it differently, actually brought them to Detroit. Part of the rationale is cultural: People who have been essentially doing the same thing for 20 years are probably going to want to continue to do them the way they've done them. So how do you get breakthrough ideas? You go to the outside. In Club Car's case they hooked up with Munro & Associates (Troy, MI), a consulting firm that specializes in "design-for-(fill in the blank)" and even holds a trademark on the term "Lean Design." Sanders says that while working with the firm, they were taken to visit with people at Chrysler, Visteon, and elsewhere. They had the opportunity to see a variety of processes and practices that were foreign to the golf car industry.

They spent time with customers, both those who buy the cars and those who rent the cars from the courses. They spent time with suppliers, both those that they had historically worked with and those that they'd not worked with before.

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And they came up with a vehicle that was unlike anything that they—or anyone else in the golf car industry—had ever produced. The DS model, which they continue to keep in production, is a study in vertical integration. In effect, all of the bending, shaping, welding, and assembling that need to be done are done in house. On the other side of a wall in the factory, where the Precedent is produced, the primary job is assembling. For the DS, there is a great dependence on individual capability, as in just a few people know how to align the front suspension. For the Precedent, the front suspension is a module that comes in and is simply fitted in place.

The Precedent is a study in simplicity. There is a ladder-style aluminum frame (which they are using to marketing advantage, calling it the "AlumiCore" chassis). There is a composite friction bonded-underbody that's attached to the frame with self-tapping fasteners. The body panels have molded-in color; they're using DuPont Surlyn material (which is also used to make golf balls). There are molded-in channels to handle everything from the wiring to rain. And, as the subject is a motor vehicle (both gas and electric versions are available), it must be noted that there are cupholders.

The Precedent production line is essentially a loop with sub-assembly feeder lines. There is an abundance of bar code readers with scans at each station to assure that tasks have been completed. Where there are fasteners installed, there are Ingersoll-Rand DC nutrunners used. Not only does this assure that the proper torques are achieved, but the nutrunner system is Ethernet-enabled so that they have full accountability and traceability of the data for each of the fasteners. Not only is the process greatly simplified compared with that required for the DS, but the product is simpler, as well: there are 40% fewer parts on a Precedent.

The vehicle is actually offered in two trim levels, Professional and Champion, with the latter including such features as aluminum wheels and a choice of one of eight body colors.

To get a sense of the commitment involved, consider this: "It took two years longer and a third more than we thought that it would," Tralies admits of the golf car that is named the Precedent. "We literally threw away tooling." (Apparently, during customer research they learned that the vehicle didn't appear to have the styling cues characteristic of a Club Car product.) "We bit the bullet. We had to do it right."

Apparently, the market agrees that what is evidently a

radical development is a highly acceptable one. They have received rave reviews from the people in the industry. And Tralies says that for the first time in his career, people have actually been coming up to him and complementing Club Car on the Precedent.

Winding back to the Detroit parallel that this started with, Tralies says, "We literally took a page out of Ford's book. With the Explorer, they have different price points depending upon what you have on them. We're the first in the industry to have the same sort of thing." In addition to the two Precedent trim levels, they are offering the DS models (new and refurbished) in different levels, as well.

Because this is an industry that is not characterized by change and innovation—most certainly not to the level of the Cleansheet—there is a single question: Why? Why did they do it? Tralies, an industry veteran, arrived at Club Car after the project was underway ("I was shocked to see this project. I just didn't expect it."). But he answers the question: "The driver was that there was a clear risk of commoditization in the marketplace. What we didn't want to do was get down to low-cost wins and keep trying to drive cost out of the product." He adds of the Cleansheet program, "To say there weren't a lot of pensive moments. . . ."

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Although the Precedent is proving to be a success, there remains a question, a question that will not gain an answer for some time to come: Hank Sanders and Dave Hardy are now both retired. The champions of the Cleansheet program, the people who were instrumental in the realization of the change, are now gone from the company. Both acknowledge that this had been their plan: To see the project through to its fulfillment and then to retire.

The question that arises is whether what they have helped develop will, in effect, be a one-off, whether the Precedent will not be a precedent heralding change, but simply become another long-lived model, one that will gain but incremental changes as the years go by. "That bothers me," Sanders admits.

Still, the two men are positive in that they found that they had tremendous support from the management—all the way up into Ingersoll-Rand—and now that they have proven that it can be done, it will make it easier for those who follow in their footsteps. ✚