

TPM Today

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1st Quarter '96

Total Productive Manufacturing: Better Processes Through People

NASCAR Success Rides on Split-Second Teamwork

Pit crew chief Ray Evernham appears to grasp how manufacturing and sports metaphors can easily mix, especially when describing the dynamics of Team 24, an auto racing unit that includes NASCAR driver Jeff Gordon, this year's Winston Cup series champion. "You have little teams within teams and departments within departments," he says, explaining how the team is organized and how his maintenance-minded crew fits into the larger picture.

His pit crew—best described as a high-performing work system—operates with split-second timing to maintain the DuPont-sponsored 1995 Chevrolet Monte Carlo driven by Gordon.

Like any high-performing workgroup, Evernham and his pit crew concentrate on efficiency, maintenance, skill refinement, increased equipment effec-

tiveness, and continuous improvement. That is what has helped Gordon achieve his dream of winning the Winston Cup championship. (The 1995 series culminated Nov. 12 with the NAPA 500 in Atlanta, Ga.)

"TEAM—Together Everyone Achieves More."

Evernham describes his own role in a way that most business managers can probably relate to. "I stand around and worry a lot," says the 38-year-old native of Red Bank, N.J., who has been with the team for three years and understands the importance of chemistry—metaphorically speaking, that is.

NATURAL WORK TEAMS

Evernham started assembling the crew back in 1992. Since then, its formula hasn't changed much; only certain elements needed fine-tuning. "I have a nu-

cleus that has been together going on three years," says Evernham, himself a former driver (modified series) and IROC mechanic whose crew now operates like a finely tuned machine.

"It didn't happen overnight," Evernham says about the team's productivity. "Everything just came together eventually. We had to keep moving people to hit on the proper mesh. I'm finally hitting the right combination."

MAXIMIZING EQUIPMENT EFFECTIVENESS

If someone were to chart Team 24's direction over the past several years, they'd see the epitome of continuous improvement. In 1993, Gordon drove the vehicle to 11 top-10 finishes and seven top-five finishes on the NASCAR circuit. In 1994, he had 14 top-10 and seven top-five finishes (including two prestigious wins—the Inaugural Brickyard 400 and Coca-Cola 600, NASCAR's longest race). This year's record included seven first-place finishes before Gordon hit the Winston Cup jackpot. (In fact, Gordon and the team claimed the cup one year ahead of schedule according to their timetable.)

This kind of progression reflects the straight-ahead course Evernham outlined in one of several motivational tools he likes to use, the Team 24 Checklist: "From nobody to upstart; from upstart to contender; from contender to winner; from winner to champion; from champion to

P&S Network Goes After Big Savings

Seeing the potential for \$25-\$30 million in savings for Nylon North America, the site engineering managers are sponsoring a Planning and Scheduling (P&S) Network.

"It's an energetic group of folks who want to rejuvenate planning and scheduling to meet the challenges facing DuPont businesses," says Nylon engineering leader John Gangemi about the Network. The Network is leading an initiative to reach 80 percent planned and scheduled maintenance at North American Nylon, Dacron®, Lycra®, and Aramid sites.

P&S, a key component of the Maintenance Excellence element of TPM, helps optimize Uptime, cuts operating costs, and boosts asset effectiveness. With the need to improve business competitiveness, the Network anticipates substantial savings will flow from revitalized P&S efforts, including the following benefits.

Zero Working Capital tied up in MRO (Maintenance, Repair, and Operating) inventories. Taking delivery of nearly all parts and supplies on a consignment, or as-needed basis, would reduce money tied up in MRO inventories to virtually zero.

Improved Cash Flow through: contractor reduction; reduced overhauls and outages because of increased mean time between failures; and overtime reduction because of

Reliability on Wheels



Thanks to his high-performing pit crew, 1995 Winston Cup Champ Jeff Gordon completed an amazing 95.4% of the laps in the 31-race series.

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NASCAR Success (continued from page 1)

dynasty." So far, the team has conformed to that outline, moving in a direction that appears to be a perfect illustration of the corporate concept of continuous improvement. Still, Evernham obviously feels more comfortable with the sports-team analogies.

SPECIAL TEAMS

"This is more like an NFL team," he says. "While we may not be as strict as an NFL team, we're as organized as one."

The makeup of Team 24 even reads like a microcosm of a big-league organization chart. There is the owner (Rick Hendrick, of Hendrick Motorsports), general manager, driver, crew chief, crew members, shop office man-

ager, scorer, chassis and engines, as well as a public relations branch. The crew subdivides itself into a trainer and coach, mechanics, body-workers, and the actual pit-crew workers themselves.

"It's like football, where you've got your offensive teams, your defensive teams and your special teams," Evernham says. "You can draw analogies between what we do and what a football team does."

Evernham's role is comparable to that of the football head coach who is ever-present on the sideline. "I play a minimal part in the pit stop," he reveals. "I talk to Jeff on the radio constantly

during races. I call the plays. I don't execute them, but I call the plays as the race goes on."

Downsizing

And the pit crew can be considered the on-the-field team, like grid-iron's so-called "eleven." But in the world of auto racing, it would have to be called the "seven," since that is number of people allowed in the pit at any one time. NASCAR officials reduced that number from nine before the 1995 season—an example of sports-world "downsizing." It was a move that required teams to streamline their operations, which was no easy task. Teams were already operating extremely efficient, since pit stops last less than half-a-minute.

Team 24—and other squads like it—responded by trimming tenths of seconds off their pit-stop time. As one would expect, this requires unified interaction matched only by Swiss watches.

Drills

Needless to say, the ability to function so precisely entails practice, and members of Evernham's crew increase their assembled efficiency by running through pit-stop drills—the same way their football-playing counterparts run through their synchronous practice plays to maintain their own effectiveness.

As with any well-oiled machine, the Team 24 pit crew undergoes its own regular and routine maintenance: Just as they maintain the condition of Gordon's car, crew members maintain their own physical conditioning with intense exercise.

"These guys are very athletic," says Evernham. "They recently won a pit-stop competition."

This kind of ambition is what Evernham would expect from this crew, which is essentially hand-picked. "I look for certain things in people—their desire, how hard they are willing to work, how much they are

willing to give up, and their common-sense smarts," Evernham avers.

Though each crew member has an individually defined role, they have been more concerned with the shared purpose, the ultimate goal—which, for Gordon and Team 24, was to win the Winston Cup series title.

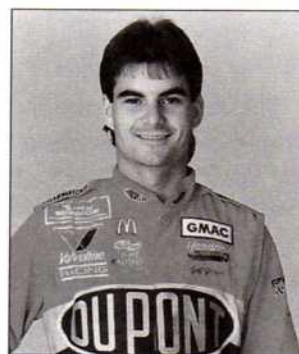
"We've been very fortunate," says Evernham. "We've done well, and we've also been able to capitalize on our good luck."

At the same time, Team 24's success didn't catch Evernham off-guard.

"We're not surprised, but we are very pleased," he says. "When you put something like this together, that is what you are aiming for. That is what we have been working towards."

Theirs is the kind of "We—not I" philosophy that characterizes the cream of professional ball clubs (and the strongest of corporations), and it is summed up best by Evernham in the motivational acronym he supplied for his crew: "TEAM—Together Everyone Achieves More."

It's the sort of slogan that is as appropriate on a plant bulletin board or boardroom chart as it is on a locker room wall. ▲



1995 Winston Cup Series Champion Jeff Gordon

Team 24's 1995 Race Finishes

Finish	Race	Track	Race laps/ laps completed
22	Daytona 500	Daytona	200/199
1	Goodwrench 500	Rockingham	492/492
36	Pontiac 400	Richmond	400/183 (mechanical)
1	Purolater 500	Atlanta	328/328
32	Transouth 400	Darlington	293/200 (accident)
1	Food City 500	Bristol	500/500
2	First Union 400	N. Wilkes-Barre	400/400
3	Haines 500	Martinsville	356/356
2	Winston 500	Talladega	188/188
3	Save Mart 300	Sonoma	74/74
33	Coca-Cola 600	Charlotte	400/283 (mechanical)
6	Miller 500	Dover	500/499
16	UAW-GM 500	Pocono	200/200
2	Miller 400	Michigan	200/200
1	Pepsi 400	Daytona	160/160
1	Slick 50 300	New Hampshire	300/300
2	Miller 500	Pocono	200/200
8	Diehard 500	Talladega	188/188
6	Brickyard 400	Indianapolis	160/160
3	Bud at the Glen	Watkins Glen	90/90
3	Goodwrench 400	Michigan	200/200
6	Goody's 500	Bristol	500/500
1	Southern 500	Darlington	367/367
6	Miller 400	Richmond	400/400
1	MBNA 500	Dover	500/500
7	Goody's 500	Martinsville	500/500
3	Tyson 400	N. Wilkes-Barre	400/400
30	UAW-GM 500	Charlotte	334/321
20	AC Delco 400	Rockingham	393/391
5	Dura Lube 500K	Phoenix	312/312
32	NAPA 500	Atlanta	328/314

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4th Quarter '96

Total Productive Manufacturing: Better Processes Through People

The Name of the Game: Excellence

Refuse to Lose...

This was the motto that helped make 1995 NASCAR Winston Cup champions out of Jeff Gordon and the #24 DuPont-sponsored race team.

Refuse to Lose...

For many of you out there driving successful TPM efforts, this is the winning philosophy that makes you champions in the less glamorous but equally important job of running DuPont manufacturing facilities.

In the ferociously competitive markets in which DuPont competes, it is this motto—and the dedication of the people who practice it—that will deliver the Company's winning edge.

Throughout the corporation, business leaders are realizing that one of the most valuable resources DuPont has for profitable growth is the people on the shop floor. Operators, mechanics,

technicians, colleagues, affiliates—these are the first people who see raw material as it enters a plant, and the last to see it out the door as finished product. These are the experts on equipment performance, and the first line of defense against defects. In the ongoing race for competitive advantage, these folks are the all-important "pit crew" who deliver winning performance.

Wherever you find outstanding performance in DuPont, you'll find a cross-functional team that has tapped the insight and ingenuity of our employees.

This was one of the key learnings recently at the first Uptime Excellence Regional Forum, in Parkersburg, West Virginia. Over the course of the day-and-a-half forum, DuPonters from the Mid-America region gathered to share ideas around improving manufacturing performance.

Though the forum was organized around the principles of Uptime Excellence, it could easily have doubled as a TPM conference. Many of the common themes that emerged in success story after success story—teamwork, education and training, communication, systematic reliability improvement—are the same familiar principles that underscore Total Productive Manufacturing.

This was no accident: Uptime Excellence was in large part inspired by TPM. In fact, if you compare Uptime Excellence's criteria for world-class manufacturing with the Five Pillars of TPM, you'll see how neatly the two philosophies overlap. (See *accompanying chart*.) Both emphasize improving performance of new and existing equipment. Both encourage development of knowledge and skill in people.

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Video Depicts Fast Track to Success

Wave the green flag and let the race begin!

World class manufacturing awaits at the finish line. The fuel to help reach that destination is "Uptime Excellence in Action."

That's the name of the just-completed videotape intended as a high-octane incentive toward building value and creating enthusiasm for improving Uptime performance. It takes the viewer behind the scenes with high-performance excellence—the 1995 Winston Cup Championship #24 DuPont team with driver Jeff Gordon—to show how its high-performance behavior makes a winner.

"Uptime Excellence in Action" resulted from a collaboration between Doug Martin and the DuPont Automotive Finishes-sponsored NASCAR team. The 25-minute production draws a direct parallel between NASCAR racing and plant operation. It illustrates how the race team is focused as a high performance work team and is a model of excellence.

"By using this example, we hope to generate excitement about fostering the growth of TPM and the use of the 'Uptime Excellence Self Assessment,'" says

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Rick Hendrick Imparts 10 Keys to Success

J.R. (Rick) Hendrick is well acquainted with achievement—and what it takes to get there.

He is the owner of Hendrick Motorsports, the organization that boasts having

three consummate high performance work systems: the NASCAR teams of #24 DuPont (the 1995 Winston Cup Champion with driver Jeff Gordon), #25 Kellogg's® and #5 Budweiser®.

But he began accumulating his list of accomplishments well before his involvement with Team #24. As a teenager, Hendrick, who is now 46, set records as a

drag racer. As a young baseball player, he displayed talent enough to be recruited by the Pittsburgh Pirates organization. After college, he went into the car dealership business. Since

opening his first dealership 19 years ago, he has earned national recognition as a trendsetting industry leader.

Rick is also a founding member of the J.D. Powers Super-Dealer Roundtable and was one of five dealers selected for the national planning committee for GM's Saturn Division. He serves on the General Motors President's Dealer Advisory Council for GM Parts. He is also a member of the board of directors of NationsBank. Besides owning

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*"Success Breeds Excitement
Excitement Creates Opportunity
Opportunity Attracts People"*
—Rick Hendrick
Hendrick Motorsports

