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# Formula One's New-Age Hybrids Find Their Footing



Lewis Hamilton passes his Mercedes-Benz teammate, Nico Rosberg, on the first lap of the Bahrain Grand Prix. LUCA BRUNO / ASSOCIATED PRESS

By JOHN F. BURNS APRIL 11, 2014

Lewis Hamilton, the 29-year-old Englishman who won it, called it "a racer's race," perhaps the best ever of his 24 victories, and by the measure of how many others in the sport described it, that was no boast.

For many who follow Formula One, the Bahrain Grand Prix last weekend was the best in a decade, more spectacular for being staged at night under floodlights. Comparisons have been drawn with some of the great duels in the history of grand prix racing, evoking Nuvolari, Fangio, Clark and Senna in their prime.

In the desert setting, the Silver Arrows of Mercedes-Benz, driven by Hamilton and Nico Rosberg of Germany, drove wheel-to-wheel to the checkered flag, swapping the lead back and forth and finishing barely a second apart to give Mercedes its second 1-2 finish in grand prix racing since it re-entered the series in 2010. The team's 1-2 finish a week earlier in Maylasia was its first such result since Fangio's heyday in 1955.

"Twinvincible!" Mercedes shouted from full-page ads in British newspapers on Monday. The success in Bahrain, after opening the season with victories in Australia and Malaysia, seemed to have satisfied executives in Stuttgart that Formula One was doing for the company what was intended when it re-entered the series as a factory team five seasons

ago: building on success in the highest-technology form of motorsport to lend a contemporary edge to a traditionally stolid image.

The heroics of the Mercedes drivers were replicated throughout the field, with passing and repassing lap after lap. It was as if Formula One had determined, at last, to mock those who have dismissed it in recent years as a stage for tedious lights-to-flag processions. Some might say that grand prix racing had never been in more desperate need of a showcase event.

The immediate challenge in Bahrain was to continue demonstrating the viability of the new hybrid power units that made their debut this year. In place of the 750-horsepower naturally aspirated V8 engines that were used in recent years, the 2014 power units combine 1.6-liter turbocharged V6 engines with two generator units that harvest energy from the braking and engine's exhaust to provide an electrically powered boost of up to 30 percent of the piston engine's output. The total horsepower is close to what was available from last year's V8s.

Highly complex and costing millions to develop, the new hybrid powertrains are the sport's response to demands by major manufacturers — Mercedes and Renault, already competing, and Honda, pledged to return in 2015 — for engine technologies that are relevant to production cars and to the efficiency mandates that guide them. The new rules also impose a fuel limit that represents about a 35 percent reduction from the consumption of the V8 era.

Though wary of the seeming oxymoron — mating flat-out, pinnacle-of-the-sport racing to a culture that prizes low-carbon technologies — Formula One has crossed a Rubicon of sorts.

But, until Bahrain at least, the compact had proved highly vexed, and possibly doomed. Preseason testing featured such a rash of breakdowns, with teams like the Renault-powered Red Bulls barely able to complete a handful of laps at a stretch, that disaster seemed inevitable. Concerns arose that only a handful of cars would reach the finish at the race in Melbourne last month, and that the racing would assume the nature of an economy run.

Major figures in the sport were in open rebellion, with Ferrari's chairman, Luca di Montezemolo, warning of a new era of "taxi cab driving." He was joined by Bernie Ecclestone, the sport's commercial rights holder, in predicting "boring" races that would further alienate a global TV audience, estimated by Formula One's own figures at about 450 million, that shrunk by at least 20 percent in the last years of the old engine formula.

Sebastian Vettel, the Formula One champion for the Red Bull team for the past four years, joined a chorus of contempt for the new engines and their subdued exhaust noise. With a

low-pitched growl and a turbo's whistle, the hybrid powertrains lack the adrenaline punch of the screaming 18,000-r.p.m. V8s.

The situation is worse when cast in the context of Formula One's other woes. A sport where top teams can spend the best part of \$500 million a year to field a two-car team over 19 races — the ballpark figure for Ferrari and Mercedes, with others like McLaren and Red Bull not far behind — was always at risk of becoming an anomaly in an era of economic malaise.

Teams fielding at least half of the 22 cars that start each race have been teetering on the edge of bankruptcy, and efforts to persuade the wealthier teams to forgo their advantage by accepting budget caps have failed. Some second-tier teams have been unable to pay their drivers, and others have resorted to fielding only drivers, some unproven in Formula One, who can bring big sponsorship deals.

Compounding this, Ecclestone faces trial on fraud, bribery and embezzlement charges relating to the series' 2006 change of ownership maneuvered to keep him in charge. The trial is scheduled for later this month.

And then there was Bahrain. Ahead of the race, much attention was focused on a meeting that brought together Ecclestone, di Montezemolo and Jean Todt, the former Ferrari team manager who is now president of the sport's regulatory authority, the Fédération Internationale de l'Automobile, and a prime mover behind the move to hybrid power. Their discussions were quickly widened to include Niki Lauda of Mercedes, Christian Horner of Red Bull and Ron Dennis of McLaren.

What transpired was an impasse between the haves — in this case, Mercedes, and the teams that use its engines — and the have-nots. With Ferrari and Red Bull trailing in the new-era races, the paddock talk was of a private deal that would use Todt's powers to cut race distances, ease fuel limits and approve changes to the Pirelli tires to even out the racing.

"To have drivers who save fuel and tires, this is not Formula One," di Montezemolo declared on arrival in Bahrain. But Lauda and Dennis took a stand in favor of sticking with the rules as they are, at least for the 2014 season.

What followed on the track was more than a matter of compelling racing. The speeds seemed to quash any argument about taxi cab driving. The fastest straight-line speed of 204 m.p.h., by the Mercedes-powered Force India car of Sergio Perez, was 9 m.p.h. hour faster than the best of last year's V8s.

Pointedly, Ecclestone and di Montezemolo left the track for their executive jets before the race ended, taking with them a solitary concession: that Todt's officials would work with the teams to seek ways of changing the V6's exhaust systems to generate more of the noise that many see as essential to spectator appeal. The aim is get the engineering done in time for tests after the Spanish Grand Prix on May 11.

"I think the noise matters," said Lauda, who was a three-time Formula One champion with Ferrari and McLaren and had the task of persuading Mercedes to stick with its program in the years when its cars were frequently uncompetitive.

While speaking with an indulgent tone on the issue of engine noise, Lauda managed to convey the sense that nothing now was likely to deny Mercedes the Formula One championship or cut the advantage that rivals said gives the team an advantage of as much as two seconds a lap.

"It gets in our head that the more noise you get the quicker you go," he said. "It's an emotional thing."

Correction: April 20, 2014

An article last Sunday about the unexpectedly competitive Formula One racing season misstated the timing of notable results by Mercedes-Benz. While its drivers finished first and second at the Bahrain Grand Prix, it was not their first 1-2 finish since 1955. A week earlier, the team took first and second in Malaysia.

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