COVER STORY

PHOTOS BY CHRIS KEANE
Peddle to the metal

BY EDWARD MARTIN

Gene Haas is betting a billion bucks that his F1 team will win Grand Prix races and a worldwide market for his machine tools.
For pilgrims to the shrines of speed north of Charlotte, this is a cathedral. Through a glass wall in the lobby of Stewart-Haas Racing LLC in Kannapolis, a dozen fans watch mechanics and engineers scramble around 20 Chevrolet race cars on a spotless shop floor the size of a football field. When sated, they browse the adjoining souvenir shop. Some carry off $4.99 jars of hot salsa bearing the likeness of Tony Stewart, the driver they call “Smoke.” One admires a smashed, lime-green fender from a wrecked Danica Patrick racer. Price: $125. In a bucket on the checkout counter repose other relics for the faithful. It’s full of used lug nuts from Stewart-Haas cars, 50 cents each.

The headquarters of Stewart-Haas Racing, which employs about 250 people, covers nearly 4 acres. Next door is a building nearly the same size that smells of fresh concrete and new carpet. In a conference room, Gene Haas, the less-visible half of one of NASCAR’s most successful organizations, plops in the chairman’s seat. He’s a businessman, founder of the largest maker of computer-controlled machine tools in North America, not an impassioned racer. “If I can make something mechanical that can compete,” he says, “that’s the holy grail for me.” Oxnard, Calif.-based Haas Automation Inc. — he’s sole owner — makes tools used by automakers and hundreds of other manufacturers. “We’ve got about 50% market share here,” Haas, 62, says, “but only about 5% in the rest of the world.” From this building, completed in October, he is bent on correcting that with a move as bold as Tony Stewart would attempt on the track. Haas Formula LLC’s Haas F1 Team will be the first U.S. one to race in international competition since 1986. It’s likely to cost him $1 billion.

It’s really simple, he says. Marketing is the difference between 25-cent, store-brand sodas and the $3 Red Bulls that have become the world’s best-selling energy drinks. One way the Austrian beverage-maker markets itself is with its flashy F1 cars, and Haas wants to become the Red Bull of machine tools. “Making machine tools is more difficult than soda, but market them right and you can sell a lot more. Our goal is to double sales from $1 billion a year to $2 billion. Most of that will come from the overseas market.” Skeptics might twitter, but in the nine months or so since he announced his plans, Haas Automation’s sales have increased $50 million. The plan might be simple, but its execution isn’t. This is Piedmont North Carolina, not Monte Carlo. NASCAR idol Dale Earnhardt Sr., son of shade-tree mechanic and racer Ralph Earnhardt, honed his skills on these back roads. Ralph Earnhardt lies buried in Kannapolis; his son rests in a dark-marble mausoleum behind his race shops in nearby Mooresville. NASCAR is Timex, Talladega, country singers, Southern drawls and Budweiser. Formula One is Rolex, the Riviera, movie stars, Italian accents and Dom Pérignon. State industry hunters hope Haas F1 will give the world a different view of the state’s $6 billion-a-year racing industry, cracking the door open for more parts-makers and helping end the quest for their own holy grail: an automobile assembly plant.

Landing a Formula One team is in itself a breakthrough — Haas plans to create 200 to 300 well-paying jobs, the bulk of them in Kannapolis — but Gov. Pat McCrory wants more. He has urged Haas to move Haas Automation, which employs about 1,500 and is the largest supplier of machine tools to domestic automakers, to North Carolina. And Haas sounds interested. “In California, our jobs probably average $60,000. You can’t buy a house [with] that there. Here, you can buy a house and have two cars in the garage.” Sources say the governor and N.C. Department of Commerce officials met with British racing-industry representatives in Charlotte last spring to tout the region as a rival to “Motorsport Valley,” the section of southern England where nearly 3,500 racing-related businesses employ about 40,000 people. It’s where most F1 teams are based, the hub of Grand Prix races in 20 countries. Commerce
**Driving ambition**

Formula One is an international phenomenon that expanded beyond its European roots but has never attracted widespread interest in the U.S. NASCAR exploded in popularity in the 1990s and is extending its brand internationally. In each circuit, a handful of owners dominates the Winners Circle. Gene Haas wants to conquer both formats.

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### Highest-paid drivers

Salary and winnings in 2013, not including endorsement fees.

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<th>Driver</th>
<th>2013 Salary</th>
<th>2013 Winnings</th>
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<tr>
<td>JIMMIE JOHNSON</td>
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<td>DALE EARNHARDT JR.</td>
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<td>TONY STEWART</td>
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### F1 sponsors by industry

- Telecom: 19%
- Automotive: 18%
- Fashion: 17%
- Beverage: 11%
- Finance: 9%
- Oil: 5%
- Travel: 3%
- Tobacco: 1%
- Other: 17%
counts more than 1,000 motorsports-related companies in the state, most clustered around Charlotte. Haas’ employees will be split between both places. “I’d imagine our average engineer salary will be about $100,000. Overall, employees will probably average about $60,000.” A few doors down, Formula One veteran Gunther Steiner, a sharp-featured Italian with a German name who is the team’s principal, is assembling people and deals to put Haas F1 on the grid for the Australian Grand Prix in March 2016.

“Until six months ago, there were two words you’d never use in the same sentence,” says Tom Cotter, a member of the racing faculty at Belmont Abbey College in nearby Belmont. “They were ‘Kannapolis’ and ‘Formula One.’ Now we’re seeing how a Southern town can become the capital of high-tech racing in this country.” A former Charlotte Motor Speedway executive and president of a group trying to land a Formula One race in New Jersey, he is writing an authorized book on the Haas team’s startup, a gargantuan gamble in a business fraught with failure. Last year, two Formula One teams folded, underfunded despite burning through $100 million of capital. Four years ago, Charlotte-based US F1 collapsed after investing tens of millions of dollars but never making it to track. Formula One is infamous for rule changes that gobble huge bankrolls. Haas shrugs. “I don’t pay too much attention to the numbers. I just know what I want to do and hope the numbers add up.”
LIGHTS COME ON at Charlotte Motor Speedway in Concord as dusk gathers on a cool fall evening, and 43 stock cars fire up for the Bank of America 500. The guttural roar carries in the damp air, arriving like distant thunder at Haas F1 headquarters 7 miles and a world away. Both have four wheels, but similarities between the business, mechanics and culture of Formula One and stock cars pretty much end there. “In terms of technology, none of the other kinds of competition are even close” to Formula One, says engineer Mesbah Uddin, who directs the NC Motorsports and Automotive Research Center at UNC Charlotte. That explains why manufacturers such as Italy’s Ferrari, Britain’s McLaren, Germany’s Mercedes and France’s Renault each devote as many as 500 employees and annual budgets upward of $500 million to the sport. Honda, now building business jets in the Triad, is set to join the lineup this season. “Before winding up its Formula One business, Toyota was spending $350 million a year,” Uddin says.

He and Steiner, Red Bull’s former Formula One technical director who arrived in Charlotte in 2007 to head its Toyota stock-car team, say NASCAR intentionally stifles innovation to restrain costs. Rigid engine and other restrictions are enforced by post-race teardowns at its $50 million NASCAR Research and Development Center in Concord, and violators are slammed with fines and penalties. The result is cars built for brute speed, not finesse, rolling billboards laden with sponsor decals as diverse as Miller Lite and the nonprofit Drive to End Hunger. Stockers weigh more than a ton and a half, are powered by heavy engines that generate 850 horsepower and rev to about 9,000 revolutions per minute, hurling boxy steel bodies around banked circles at 200 mph. Nothing about them is stock — even headlights that look real from afar are decals — but they’re relatively cheap. A typical NASCAR team will build 10 to 15 cars a season, at about $150,000 each. Total budget for top teams can reach $30 million a season.

NASCAR taught Haas patience that he’ll need to break into Formula One. “We spent eight years not winning, then, all of a sudden, not just winning became possible but winning a lot,” he says. “You’ve got to have tenacity.” He entered NASCAR as a sponsor but became a car owner in 2003, initially as Haas CNC Racing. In 2009, he gave Tony Stewart a half-interest, insiders say mostly to gain the volatile three-time NASCAR champion’s pit-road and fan credibility. Stewart-Haas now consists of four teams: Stewart, Patrick, Kurt Busch and Kevin Harvick, who clinched the 2014 championship in November. “Gene’s different from, say, if Donald Trump decided to get into Formula One,” says Jason Dial, president of Circuit of the Americas LLC, the $450 million track near Austin, Texas, that has been the site of the U.S. Grand Prix since 2012. “Trump would be a pop-culture play. Gene, with all he’s accomplished in motorsports, is a proven entity.”
Dial, who has met several times with Haas, has a stake in this, too. American enthusiasm could lead to lucrative, NASCAR-size television deals. “Formula One is similar to World Cup soccer. Interest in the U.S. has always been lower. Gene could help change that.”

Dial, whose track has drawn near-sellout crowds for its first three Grand Prix events, says fans are attracted by both the bling and technology. “It’s a more glamour-driven sport. The education level and economic status is much higher than the average sport. It’s more like a PGA — Professional Golfers’ Association — demographic.”

Like all F1 teams, Haas’ will race two cars, each weighing about 1,500 pounds, as set by regulations. That’s less than half the weight of their stock-car cousins, and their 1.6-liter engines are not even a third as large — smaller than a Toyota Corolla’s. They are, however, the most sophisticated wheeled machines on Earth. Engines use exhaust gases to spin turbochargers and rev to 15,000 rpm, generating a near-NASCAR-level 700 horsepower. They’re famous for their shriek.

Formula One plans 20 races on five continents in 2015.

Abu Dhabi | Hungary
Australia | Italy
Austria | Japan
Bahrain | Malaysia
Belgium | Mexico
Brazil | Monaco
Britain | Russia
China | Singapore
Canada | Spain
Germany | USA

Formula One plans 20 races on five continents in 2015.

As many mechanical components as Ferrari will give us and regulations will allow.”

Locating Haas F1 in Kannapolis makes sense for another reason — one that the Charlotte Regional Partnership and other Tar Heel industry hunters delight in touting. Though NASCAR is comparatively crude, it’s the nucleus of highly sophisticated racing infrastructure increasingly spilling over into nonracing endeavors. Though it has yet to land an auto plant, North Carolina has more than 160 companies in the motor-vehicle industry making original equipment for car manufacturers and replacement parts and even building trucks and buses. “The automotive sector’s been on the list of industries we target in our recruiting for some time,” says David Rhoades, Commerce’s deputy communications director. Haas, for example, opened his $50 million Windshear wind tunnel in Concord in 2008, years before F1 was a gleam in his eye, and it
is regularly used not only by race teams, but also automakers — Chevrolet developed its new Corvette there. One of only three like it in the world, the tunnel places full-size cars on a rolling-road conveyor belt to test them under stresses up to 180 mph. There are two other wind tunnels nearby, and Uddin and the UNCC center have tested and researched cars and equipment for Dodge Motorsports and others. Since 2006, Penske Racing Inc., an Indianapolis 500 winner, has built its Porsches for sports-car racing and IndyCar Series open-wheel cars, similar in appearance to those of Formula One, at its 425,000-square-foot complex in Mooresville. Nearby, Riley Technologies Inc., builds Le Mans-type sports cars for Chip Ganassi and other top teams. David Miller, director of the Charlotte-based North Carolina Motorsports Association, says the racing industry directly and indirectly employs about 17,000.

“Obviously, there’s an awful lot of racing people here and infrastructure you won’t find in any other area,” Haas says. “We’re going to be racing for the world championship all over the world. But the fact is, the basic racing structure we need is right here in Kannapolis. London is one of the takeoff points for Formula One teams, and from that perspective, Charlotte works better for us than, say, Los Angeles.” Steiner declines to reveal his budget — “other teams would know the level of our plans” — but veterans estimate it will top $200 million a year. “I don’t think we’re going after Mercedes or Ferrari in the next three to five years,” he adds. “But I want to make it clear: We’re not going into this to finish last.”

WITHIN SIGHT OF THE TRACK, Texas longhorns still grazed. Inside Circuit of the Americas on a radiant fall day two Novembers ago, flags represented the nations of that year’s Grand Prix schedule. The 117,000 fans recognized many, such as Canada and China. Many of the 18 others, including Bahrain, Malaysia and Hungary, they probably did not. It was here that Steiner introduced Haas to a then-83-year-old British eccentric Steiner had known from his days in Europe. Bernie Ecclestone is the billionaire CEO of Formula One Group, owned by Delta Topco Ltd., a British consortium of investment companies. The white-haired major-domo of Grand Prix liked Haas. “People in Formula One want an American team,” Steiner says. “Gene Haas knows racing. He’s not like a hedge-fund manager who’s made a billion dollars and says, ‘I’m the greatest guy on Earth, and now I’m going to do Formula One.’” Though strong globally — Miller calls it a “mania” in Europe — Formula One needed an American team to boost fan interest here. But Ecclestone had a warning for Haas: Expect to spend $1 billion just to make the lineup.

That figure underscored just how far behind Haas had left his Rust Belt roots.

Fast companies
North Carolina’s motorsports industry at a glance:

- About 1,000 related businesses
- $6 billion-a-year direct and indirect economic impact
- About 15,000 direct and 12,000 indirect and induced jobs
- Average annual compensation: $75,000
- Three major wind tunnels

Motorsports education programs:
Belmont Abbey College; Forsyth Technical Community College; NASCAR Technical Institute; N.C. State University; N.C. A&T University; Winston-Salem State University; UNC Charlotte; Rowan-Cabarrus Community College; Central Piedmont Community College

Major non-NASCAR operations:
Haas F1 Team, Kannapolis, Formula One; Chip Ganassi Racing, Concord, IndyCar and Tudor sports-car series; Team Penske, Mooresville, IndyCar Series; Riley Technologies, Huntersville, Tudor sports-car series; McLaren Applied Technologies, Huntersville, Formula One

Sources: N.C. Department of Commerce, Charlotte Regional Partnership, UNC Charlotte Urban Institute

Born in Youngstown, Ohio, he was in grade school when his father moved the family to California to take a job in an aircraft factory. “Los Angeles was smoggy, hot and crowded,” Haas recalls. There were four siblings. “My mom would take us kids back to Ohio, where she grew up, for the summer. Youngstown had steel mills, and you’d get up in the morning with soot all over you, but it was fun. Ohio was more of a working-class state.” Growing up, he delivered newspapers, then at 14 found an after-school job in a machine shop sweeping floors. Three years after graduating from California State University with a degree in accounting and finance,
he opened his first machine shop in 1978 with two employees. He found his rhythm dreaming up advanced, relatively low-cost, computer-programmable tools. In 1983, he started Haas Automation in a 5,000-square-foot plant with 10 employees. Today, from its million-square-foot Oxnard plant, his tools are sold in 80 countries and to companies such as Caterpillar, General Motors and John Deere. Along with his success, he developed the grit to deal with setbacks. The 2007-09 recession, for example, hit automakers hard. “We went from about $900 million a year in sales to $300 million. Now we’re back to about a billion. Not that a billion is a bad number, but we’re not growing like we used to.” Hence his high hopes for Haas F1 as business-to-business marketing to other Formula One teams and foreign manufacturers. Small Haas Automation decals will appear on Ferrari’s team cars this year, then adorn his own in 2016.

He’s been toughened by worse, too. Less than a year after former President George W. Bush cited Haas Automation’s success as an exporter, the Internal Revenue Service accused him of tax fraud in 2006. The charges came a month after he had won a lawsuit against a former executive accused of stealing $27 million from the company — the executive was the IRS’s star witness. That time, Haas didn’t gamble. “They said, ‘If you take this plea, you’ll be out in 10
months. Or do you want to take a chance on 25 years?” He served 10 months in a low-security prison in Lompoc, Calif., then three months under house arrest. In retrospect, any lessons learned? “Not really,” he says softly. “It’s just one of those things that happen in life, like having a heart attack.”

August, he paid a $100 million fine to avoid trial — a practice permitted by German law — without admitting guilt.

Now, time will tell how much of a gamble Haas’ foray into Formula One really is. He has doubters in high places. Indy 500 and seven-time Formula One winner Juan Pablo Montoya, who recently finished a seven-year NASCAR stint, says Haas “is completely mad.” To which Stein says: “Juan Pablo’s a friend of mine, and we had a big argument about that. I asked him when he’d last run a Formula One team.” The engine and components partnership with Ferrari, for example, took many Formula One veterans by surprise. “I might agree with Juan if we were starting from nothing,” Stein says “You can beat yourself up like that. But we’re not.” The business risk, surprisingly, might be less a gamble than the competitive one, especially if balanced against the possible reward. Analysts calculate that Red Bull has spent more than $1.2 billion on its team but has reaped more than $1.6 billion in advertising exposure the last five years. Formula One has an estimated worldwide fan base of about 500 million, more than five times NASCAR’s.

A few miles away, late-afternoon traffic is building on N.C. 3 — the number Dale Earnhardt rode to fame and to his death during the Daytona 500. Gene Haas is no Dale Earnhardt. He could pass for a sexagenarian member of the Beach Boys, and unlike fans still browsing in the Stewart-Haas souvenir shop next door, he’s no couch racer. “I like building things, things like fast cars,” he says. The next several years — and a billion dollars — will see just how fast.