

# Affalterbach: The Home of Power and Performance

**A**t first glance, it looks like many other small German towns with an industrial area. Surrounded by a rolling countryside alternating between farmland and forest, Affalterbach sits about a half an hour north and slightly east of Stuttgart.

Silver buildings of metal and glass give little indication of anything special other than the usual tradition of industrious Germans taking pride in the tasks of their daily life.

In Affalterbach, however, secrets strain to stay beneath the surface. Some buildings discretely show signs with only three capitalized letters rather than a lengthier descriptive name comprised of words. Some vehicles wear black and



by Kevin Ehrlich and Mary Fischer | photos courtesy Kevin Ehrlich and Mercedes-AMG

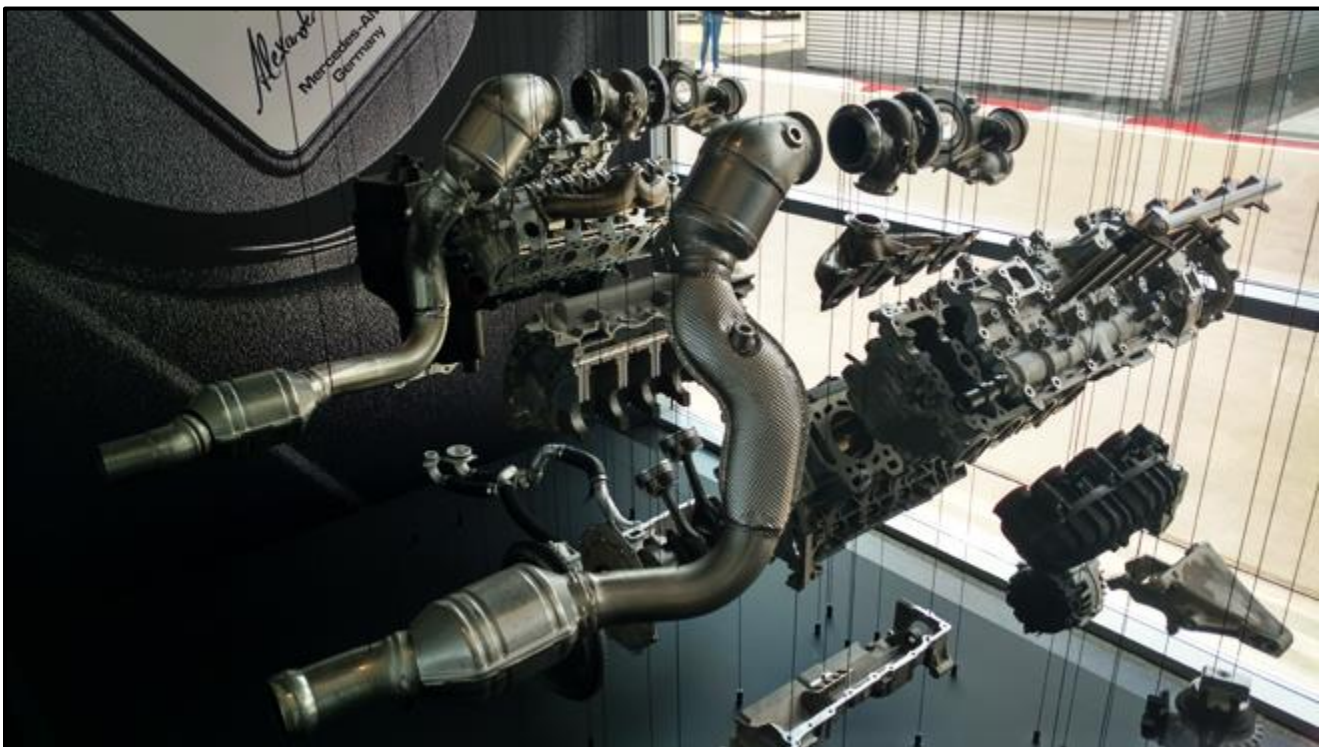
white swirls on their noses, rears and flanks. Curbing leading to the reception area for a local business is painted with alternating red and white stripes, as at a race track, rather than the customary nondescript industrial park gray. Affalterbach is home for AMG and the

epicenter of the production of power in the Mercedes Benz family of automobiles. Engines in all of the most powerful Mercedes Benz road and race cars originate from the minds and hands of the engineers in Affalterbach. This small hamlet in rural Germany is largely responsible for the high horsepower performance credibility enjoyed by cars with the three-pointed star.

Upon our arrival, we took a moment to look around. Within mere minutes, a striking new silver Mercedes Benz AMG GT C with the top down announced its presence with a V-8 grumble as it rolled past a billboard in English: "Welcome to the Home of Driving Performance." Several flagpoles displayed flags from around the world including the US Stars and Stripes (not a coincidence – flags are thoughtfully raised to correspond with nationalities of scheduled visitors each day). A quick peek through a nearby window showed a flash of the distinctive Green Hell Mango paint on car which could only have been a pre-production GT R model. Yes, we were in the right place...

AMG's operation at Affalterbach is an engineering and engine assembly center. It is not a manufacturing plant or a full-scale passenger assembly line. There is no AMG museum. It has only a small reception area where current models are on display along with a modest gift shop. The recently renovated reception area features an engine with all parts separated and suspended by wires to show the complexity. The black floor echoes a starting grid from a racetrack, complete with grid positions and black tire strips where the prior race starters would have spun their wheels and left their mark. The backdrop

looks like a tunnel from which the AMG production cars on the floor have emerged. Displays





change frequently, but a fully equipped Formula One AMG GT safety car was a popular spot for guests to take photos during our visit.

After we met our hosts for the afternoon, we walked outside the reception area and along the sidewalk towards the main engine assembly facility. We paused at the main security gate which restricts access to interior parts of the compound of buildings. As we looked through the gates, we could see a variety of production and pre-production cars lined up in an orderly fashion backed into parking spaces against the silver and glass building. Amidst the grouping of cars, a single shape was covered in black and white swirled

disguise. The shape had slightly different proportions and we ventured a guess that beneath the swirls might lurk the new GT four-door sedan. Our guide stoically looked on and we declined to push him into making a



standard “neither confirm nor deny” statement, but we’d like to think that we got a brief glimpse of a piece of AMG’s future.

As we entered the engine assembly area, we saw a row of completed engines neatly stacked and awaiting delivery to the Mercedes Sindelfingen plant. The second floor entrance into the engine assembly area required a swipe of a security badge and the doors opened directly to the assembly floor. The mighty and storied AMG engine assembly operation, the birthplace of AMG power and torque - and the group (indirectly) responsible for shredding thousands of tires - is comprised of technicians wheeling carts to various stations like a boutique grocery store with soft music wafting from the ceiling.

It was not chaotic. It was not particularly loud. It certainly was not messy. The parts themselves were manufactured elsewhere, so this facility is dedicated to assembly. A vertical display carried the individual badge of each technician involved in engine assembly, the tangible representation of the “One Man, One Engine” philosophy.

We watched the process of building an eight-cylinder AMG engine as a technician wheeled their cart to a stack of engine blocks, selected one and scanned a barcode to claim it.

They then moved to begin the assembly journey, tracing a U-shaped work path in the center of a large room. Along the way, technicians picked up specific parts at each station and scanned them with their bar code reader as they assembled them into the engine. Each station featured a screen that guided the order



of operation. Tools connected to umbilical cords fit into cradles overhead. Each tool carried a barcode that was scanned before it was used. The tool delivered a precise amount of torque and an indicator on the screen turned green to confirm correct completion. The process ensures that each engine has a detailed record of its birth. The technology is fascinating and the process is clinical, but the connection with a human to apply oil as needed and keep a skeptical eye on each part and process is ever present.

The AMG ethos requires pride of ownership. “One Man, One Engine” means that the individual technician has utilized, but not blindly relied upon, an automated process. If an engine build is still in process at the end of the workday, the cart is wheeled to the side



and engine covered to await the technician's return. Another technician does not attempt to take over midstream. When the 3.5 hour assembly process is complete, the very last step is to apply the iconic plaque of the engine maker's name and signature.



Given these engines produce hundreds of horsepower, we had the temerity to ask about the need to check quality on a dyno after assembly. Our German hosts displayed mock offense and patiently explained that with good engineering and methodical and meticulous assembly, there is no reason why an engine should not work properly. Of course.

The whole area is modest in size. There is space around the U-shaped path where parts are brought to the various stations to keep the process flowing smoothly. Along one side of the room is a training ground where new technicians are taught the AMG way. While they arrive with previous training, experience from technical schools, or experience on a Mercedes engine assembly line elsewhere, once they arrive at AMG they spend another several months under close supervision and mentoring before taking their place in the assembly rotation.

Both road car and race car engines are assembled here. The racing engines for the AMG GT3 are bigger at 6.2 liters and retain many similarities from the SLS engine. They also take a lot longer to assemble – two and a half days. The major difference is the time involved with measurements to ensure tolerances required to run in competition and also

align with specifications established by benchmark examples submitted to racing regulators.

Assembled race engines are carted across the street and down the block to the HWA facility where each is installed into a waiting race chassis and sent around the world to race in various endurance and sprint events and championships. More on that in part 3 of our trilogy...

Many of those engines bear the name of Michael Kübler. Herr Kübler is one of the few technicians who handles race engine assembly. After shooting photos of AMG GT3 race car engine compartments in many different countries and race series, your correspondent can attest that Kübler's name is perched atop the engine more often than not.

Luckily, we had the good fortune to meet Kübler during our tour. Not only was he talented and knowledgeable, but he also was polite and gracious, and clearly takes pride in his labors. Ironically, he admitted rarely having the opportunity to personally attend races to see his work in competition, but quickly added that he follows the AMG world very closely. In fact, he has become somewhat of a social media celebrity on platforms like Twitter and Instagram under the handle of @F1Mike28, with thousands of followers. No other engine builder in the world is a more effective advocate and spokesperson for their product.



He started working with Mercedes in 1998, initially working on V-6 and V-8 engines. In 2009, he transitioned to AMG and began his dream job. Off the top of his head, he estimated that he's likely assembled more than 3,000 engines in his career. Perhaps his path should not have been a surprise. Generations of family before him, stretching from both his parents back through his great-grandfather, worked at the Mercedes plant in Untertürkheim which sits next to the Mercedes museum in Stuttgart.

On our visit, Kübler was working in an area to the side of the usual production line. Instead of a Mercedes AMG V-8 engine, he was in the midst of assembling a 6.0-liter twin turbo V-12 destined for a Pagani Huayra BC coupe.

The BC – named for the late Benny Caiola who was Horatio Pagani's first customer – is limited to only 20 units and features more power (740hp) and less weight than a "standard" Huayra. It also carries a price tag in excess of €2million. A close look at the engine verifies where at least part of that money goes.

The engine is massive. Unlike the process for other AMG engines, the technician does not move a cart around an assembly line. Instead, Kübler plucked parts from shelves around him while utilizing the same process of bar coding parts and tools to assemble the engine.

Kübler is only one of two people who make Pagani engines and only one of a handful who assemble AMG racing engines.

Pagani is a rare departure for AMG outside of the Mercedes Benz family. Mercedes AMG power has been a part of every single Pagani since the company's inception in the mid-





1990s. Why does Pagani use Mercedes AMG engines? You might think the answer can be found amidst torque curves, design cues and intense boardroom negotiations. You'd be wrong.

Apparently, former F1 driver Juan Manuel Fangio gave Horatio Pagani a letter of recommendation that helped get Pagani a job at Lamborghini in 1983 at the outset of his design career when he moved from Argentina to Italy (Pagani was born to Italian parents in Argentina). Fangio was the most famous race car driver from Argentina and drove for



Mercedes with great success in 1954 and 1955. He also served as honorary President of Mercedes-Benz Argentina starting in 1987. When Pagani started the process of creating a supercar of his own, Fangio suggested that Mercedes provide the power. Pagani went with Mercedes largely as a tribute to his friend and mentor. The hand-made nature of a Pagani road car also happens to line up nicely with the AMG "One Man, One Engine" philosophy.

For some time, Pagani was AMG's only non-Mercedes customer. That changed in 2013 when AMG and Aston Martin announced a technical partnership where Daimler would take a five percent stake in Aston Martin and provide engines for a new Aston Martin model. The announcement wasn't a

complete surprise as the two companies had conversations about collaborations in the past. Aston Martin customers now have the choice to purchase an Aston Martin DB11 with an Aston Martin V-12 engine or wait a few more months for a DB11 version with a twin-turbo AMG V-8 engine producing 525 horsepower. Of course, the AMG engines destined for Aston Martin cars will be assembled in Affalterbach.



Back outside the engine assembly facility, we passed a parking lot filled with two 2014 SLS Electric Drive cars in matte neon “Electricbeam” yellow plugged in to recharging stations. The Electric Drive SLS platform trades the rumble of a big V-8 for the whine of electric motors and batteries. Priced around \$400,000, roughly 100 units were sold and the performance is reportedly very impressive. Trading electric power for internal combustion doesn’t save weight – the batteries are quite heavy.

Next to the pair of Electric Drive SLS twins, a dozen or so various road cars were parked in various states of camouflage. Most bore black and white swirls on a front fascia or rear bodywork. They likely weren’t too top secret or else they wouldn’t have been parked in

plain view but it was an interesting quick look at a step in the development process.

Walking on, the main gates opened and released a G-series in full camouflage livery. The shape



of a G-series (or G-wagen) is unmistakable so presumably the full camouflage treatment was to disguise a nuance that we failed to appreciate. But these are the vehicles that roam the roads in and around the AMG factory as a matter of course on a daily basis...

Next on our tour was a stop at the Performance Studio, which serves multiple purposes. It is the service center for AMG’s working fleet of cars such as media cars and pace cars. It is also the place where AMG customizes cars to meet any customer request, ranging from modest badging or stylistic elements to full reconfiguration. A G-wagen by the entrance was in the midst of a complete interior overhaul with a price tag that easily would have paid for a GT R.

On our entry into this working garage, we quickly spotted six or seven AMG GT R models. All except one wore the Green Hell Mango paint which has become synonymous with the car. The one exception wore the Solarbeam yellow color scheme which was remarkably striking. The amount of engineering that has gone into the aerodynamics at the front and rear alone likely deserves its own feature. Some GT R cars were media cars that had lived a difficult life at the hands of unmerciful journalists and prospective customers. Others were in the midst of the application of decals in support of their planned display at the 2017 Nürburgring 24-hour race in a few days.

A brand new GT C cabriolet in Solarbeam yellow parked in one of the service bays commanded our attention. Our host patiently explained the unique features of the GT C, including the flared rear fenders taken from the GT R. Now that we had knowledge on styling cues, we realized that the silver cabriolet that welcomed us to the AMG facility several hours before was a GT C. Both the GT R and GT C are just finding new homes with patient customers now.

To the left, we discovered a 2005 CLK-DTM AMG coupe – one of 100 built. It was in the AMG garage for service of some sort, but was in a service bay just like the 30 or so other cars in the garage. We paused for a moment realizing that we had the good fortune to see examples of both coupe and cabriolet flavors of the rare CLK-DTM during our visit after seeing the cabriolet in for service in the HWA garage.



Before we departed the Performance Studio, our hosts pointed out the brand new C43 sedan – a major point of departure for AMG. The gap between the “basic” Mercedes models and the more powerful AMG powered models has been expanding. The C43 line represents an attempt to fill that gap with AMG engineering and power, but at a lower price point. More mass production means that engines for the C43 line are not assembled with the “One Man, One Engine” philosophy but will benefit from engineering lessons learned. Mercedes and AMG hope to capitalize on the AMG reputation without losing what makes the AMG marque so special. Given the strength of the “One Man, One Engine” branding, that may be a challenge for some AMG owners.

Finally, we retreated to the private AMG lounge adjacent to the main reception area. We noted that the steps leading to the second-floor lounge were engraved with recognitions of endurance races, drivers, and championships won. Recovering from several hours of digesting AMG and HWA past and present, we asked “where did it all start?” The Affalterbach complex is a bustling engineering and manufacturing center but it didn’t start out this way. Our host again beckoned us around a corner and we followed him out onto a balcony where he pointed to a metal roofed one story building below us and another two story building to its right. We had walked past both earlier but not taken much notice of either.

Turns out the one-story building was the original AMG werks when the company first moved to Affalterbach and the two-story building next door was the home for the Aufrecht family. Our host even pointed out the small adjacent building behind the former resident and noted that it was Mrs. Aufrecht’s hair salon. While neither serve their original purpose today, the fact that both have been retained and continue to reside at the epicenter of AMG life in Affalterbach serves as a direct connection to the company’s history.

We departed with a greater appreciation of the culture and passion driving AMG. Of what goes into an AMG car, the teams that design them, the people that assemble the engines, and the drive and passion that binds them together. If you’re an AMG owner, a pilgrimage to the place of origin for your car will strengthen the connection that you already have with your car. It is a visit that every AMG owner should make at some point.