

The Birthing Of A Corvette

As many of you know, Sue and I ordered a 2013 Grand Sport. From coaxing of a friend of ours who works at GM we decided to do the Buyers Tour. This would be 2.5 days of watching our car get built.

So, on 26 Aug we launched for Bowling Green, KY and the Corvette Assembly Plant. We had been notified the week before by the museum that our car would go onto the assembly line at 8:30am on the 27th of August. The Buyers Tour is handled by the museum in conjunction with the plant. We also opted for the photo album, as I knew that was the only way to get photos that aren't normally allowed in the plant.

Monday morning we left the hotel and headed for the plant. We entered the plant and were greeted by our tour guide/photographer, Al Hurlbutt. Al is the owner of two Corvettes; a C5 ZO6 and a C6 ZO6. He is an Air Force retired Chief Master Sergeant and was a flight engineer on the C-130 and to top it all off, was one of the Air Force representatives to Boeing on the C-130 AMP program, a position he also did after retirement as a civilian government employee. Now days, Al is an employee of the museum. He absolutely knows his stuff about the production process of the plant.

We signed in to the plant, received a short safety video then headed through the doors and into the plant. Al informed us that our car sequence number was 4961 and the car would be coming down from upstairs into trim any minute. Sure enough, here it came. As it was nothing more than rocker panels painted and the frame and tubs that constitute the interior pieces of the car including the floorboards; the only hint that it was our car was the sequence number on the initial project sheet and the Supersonic blue rockers. The windshield frame and the halo were also on the car as it came down from up above. Once it came down the assembly process began. Pieces of trim were put on the car that would act as the receptacles for the pieces that follow.

Each stage of the process sees the car begin to take shape slowly. The first really significant event is when the VIN is stamped onto the frame. This is on the frame cross member just below the radiator thus it is hard to see after the car is complete.

The plant is currently running at 8 cars per hour and working five days a week and 10 hours a day. So, every 7.5 minutes a car is rolling off at the end of the line. When 80 cars for the day is reached the line stops and its quitting time.

We walked, really slowly, next to the car during each step of the production process. There were times during the day when there were large gaps where the car moved back upstairs in the "bank" as it got staged for the next piece of assembly. Twice during our 2.5 day experience we had 1 to 2 hour waits for a particular process to happen. That's when we headed to one of the break areas to sit down and just chat with Al or whoever else may stumble around. We had lunch in the plant cafeteria just like the workers when they took lunch, which was at 11am. One particular day I was able to chat with the Corvette Engineering Director and also that day the Corvette program manager; both friends of Al's. Came to find out Al knows nearly everyone in the plant it seemed like. Some of the down time also allowed for questions to be asked and answered. Of particular interest to me was the sequence number. What was it's significance and what did it stand for? Turns out that the sequence number is the actual build number for that particular model year. Most people think that the last four or five numbers of the VIN indicate which number their car is for that model year. Not so!

I was told that the ZR has it own VIN sequence as does the ZO6, and the 427 Anniversary Edition Convertible. The Grand Sport and Coupes also have their own VIN sequence. So, if you were able to add up all the last four or five numbers of the VIN exactly when your car was built it should equal the

sequence number. You can find this sequence number on your build sheet. It is referred to as "Job #" on most build sheets. So, that's what they told me so I am guessing it's true.

Day one was coming close to an end as we made our way over to see the seats installed and to find our engine. At the complete opposite end of the plant was the engine build-up area. It was right next to the "Great Wall of GM." That is the name given by the plant employees of a large very long plywood 8' high wall that serves as the perimeter for where another really important project is taking place...the C7! Needless to say, no one is talking about what is behind there.

We found our engine with the 4961-sequence number and it was next in line when the day was over. Our engine was scheduled to get built up starting first thing in the morning; about the same time that we were to get our rear fenders and fascia so we would have some quick moving to do if we wanted to see both.

Tuesday started off early; we had to be at the plant at 6am! We arrived there and headed directly into the plant. We headed over to the engine build area and got there just in time to see our engine get hung onto the line and begin the build up of wiring harnesses and then on down the line to be eventually be mated with the torque tube then the transmission.

But first was another significant event; the stamping of the VIN onto the engine block. After we watched we headed over to watch the rear fenders and rear fascia, rear deck, windshield, and rear glass put onto the car. Now it was beginning to look like a Corvette as the flags were put on the Butt! Then the car went upstairs into the "bank" for sequencing to the next area; the marriage!

Everything was now heading toward that really significant event; the marriage of the drive train with the body of the car. As the car came back down the rear inner fender wells were installed. The marriage happened at 10:50am on Tuesday the 28th of August.

After the drive train was installed, next came rear section of the exhaust as the car headed to get front fenders and front fascia. The tunnel plate was put in then the center exhaust pipes then the front fenders and fascia were installed as the end of the day came and the line shut down right at 4 pm.

Tuesday was full of firsts and the end of the line was near. Wednesday morning first thing would see wheels and tires installed.

We were asked to be at the plant at 7am on Wednesday morning. The plant was having an all-employees meeting at 6 that morning and we wouldn't be allowed in the plant as they would be discussing the next generation so consequently visitors weren't permitted.

At 7am we headed over to watch wheels and tires being put on the car. While there we got a chance to chat with Steve Grilli; who is the head of quality for the plant. We chatted for nearly 20 minutes about the Corvette and items going on with the car and improvements and how they learn about field problems. Interestingly, they read every bit of feedback they get on the plant web site.

Wheels and tires were installed on the car then it was time to head for fluid fill. People put the various fluid tubes in place and computers fill then either beep, ring, or buzz to indicate that the particular fluid is complete.

Once complete with fluid fill it heads toward more inspections of things such as the computer and engine systems, interior fitment of the door, hood and rear deck; and one of three inspections for fitment and quality during the process.

Next it was on to one of the two system checks. Here all of the electronic systems are checked and if one fails, it is resolved immediately. Keep in mind that the line doesn't stop unless whatever the fault is can't be rectified; then the assembly line worker can push a button and stop the line while a tune is played that is unique for that particular area that tells a supervisor that assistance is needed; fortunately, our passed with no problems.

Now we were moments away from "touchdown" where the car sits on its wheels and tires and supports it's own weight for the first time and the large assembly that has been carrying it for the past 2.5 days swings away and goes up to the second level to stage and get ready to begin the process all over with another vehicle on the other side of the plant.

Then it was on to final fit and finish. Workers went over each and every door panel and gap with gap tools and made adjustments where needed then onto final paint inspection which is a big booth with lights on each side. Paint is inspected, smudges cleaned up and the car is ready to start and roll off the line.

At this point, I was called over, got in, and started the car, then was presented with my "birth Certificate!"



This is the first time ever I have seen "0" miles on a car!



At 10:49am on Wednesday August 29th the car was started and rolled off the assembly line.



The car then went onto the alignment rack, then the dyno testing where more than 700 tests are done to verify the car systems and engine; then into the water test area, then out the door onto short test track and then the road with all the bumps and humps to check for rattles and squeaks. Fortunately our car passed all the tests.

This was the culmination of two and one half days of lots of walking, standing and waiting. We were in parts of the plant that the normal public tour doesn't go. We were free to chat with the workers and I can't tell you the number of times that we were thanked for buying our car. At nearly every step in the production process the workers asked which car was ours. We would point to it and after they did their install or quality check they would look at us and give us the thumbs up that everything was good.

One thing of particular note is that this car is basically hand built. With the exception of the initial welding of the frame that is done by robots as are the paint and frame epoxy and windshield and rear hatch adhesive. People install everything on and in this car. A real person inspects it and makes adjustments and I can tell you that the workers were darn proud of the product they produce.

If you ever get the opportunity to do this by all means do it. It is worth the money spent and gives you a really unique look at your car being built.

You can also sign up and take the VIP tour that is about three hours and covers areas of the plant that the public tour doesn't go through.

However, beginning September 14th the plant will be closed to the public due to the construction and rearrangement for the next generation of car.

Susan and I thoroughly enjoyed this and the experience far exceeded our expectations. There are some items that I couldn't cover here in writing but would be happy to share with you.

Bob and Susan