

Inside HSV

By Ian Williams

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Ian William's Clubsport R8 in front of the HSV Clayton Office

I just want one!

Harry Valder's boss called him in one morning, not for the usual lecture, but to let him know that the end of the lease was coming up on his company car, and that he better start thinking about ordering a new one.

Harry loved his motorsport, and as long as he could remember had wanted to own a Holden Special Vehicle. However the cost of raising a family had to take priority, but now the kids both had jobs. Maybe this was the time to live his dream.



After dinner that night he talked to his wife, Sue about his thoughts and she agreed that they should at least look at the HSV range before Harry decided on his new car.

The next weekend saw both of them at the local HSV Dealership looking at the range and were both struck by a beautiful Voodoo Blue "E" Series Clubsport R8 with an automatic transmission that was on display.

They could not get over how good it looked. They sat down with Peter, the HSV Sales Specialist, who explained the options and costs to the Valders. Harry was surprised that the R8 was not as expensive as he thought. As all the goodies he wanted were already standard on the R8 he would not have to spend a lot of money to option it up. Most importantly, he calculated that he was able to afford the novated lease payments.

The following week Harry and Sue returned to see Peter, and after going for a test drive they decided that the automatic Voodoo R8 was just perfect for them.



Peter then looked up the dealer's computer to check on availability. Peter explained that the dealership had to order vehicles three months in advance, and if the dealer did not have an automatic R8 in Voodoo on order, they would have to do a trade with another dealer who did.

He said that if another dealer did not have the right combination on order, it would need to be included in Peter's next order on HSV, and delivery would be in at least 3 months time. This was necessary for HSV and Holden to plan and procure the parts necessary for such a special, low volume production vehicle.



Fortunately Peter found a Voodoo R8 with an automatic transmission in another dealer's allocation, and after a quick phone call told Harry that it could be his, and that delivery would only be two months away. Another call to the Leasing Company had Harry's order faxed to Peter, the sales contract signed and a new Voodoo Clubsport R8 would be Harry's proud possession in around two months time.

Behind the scene...

Holden Special Vehicles don't just grow on trees. It takes a lot of planning and preparation just to get to the stage where Harry could actually place an order.

Eighteen months before a new series Clubsport is released, the HSV Product Group, a team of senior managers approve a business case presented to them by the Product Planning team. This presentation brings together all the ideas and requirements from the various specialist departments including Design, Engineering, Manufacturing and Sales & Marketing. These departments work closely with their counterparts at Holden so that the HSV business case would be a good fit with Holden's manufacturing capabilities and marketing strategy.



Holden make the core vehicle to HSV specifications in their Adelaide plant. Both Holden and HSV work together closely to ensure a fully integrated product with world class quality is the result. HSV products enhance the Holden brand image, and the quality Holden core vehicle develops brand loyalty over both brands. This is a partnership that is the envy of the industry.

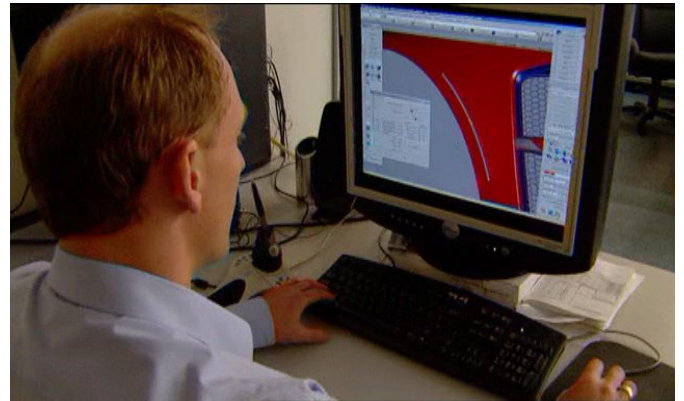
The Holden Racing Team (HRT) is also located at the Clayton facility, and it too is an important part of the overall strategy to build and enhance brand image and loyalty.



Inside the Holden Racing Team workshop

With a business case approved, product development can commence. With 301 different parts and changes from the core VE Holden, a lot of work had to be done, and quickly, in order to meet HSV's planned E Series launch date.

Designers and engineers from both Holden and HSV work with suppliers and Holden's manufacturing



team to develop parts and production methodologies to bring each new HSV Series to life.

HSV and Holden Product Planning teams also work together with their suppliers, providing both long and short term forecast requirements so that their suppliers are able to justify capital expenditure on whatever new equipment is required and that raw materials procurement can be planned accordingly.

Finally, the supply chain is geared up and starts to supply parts for test or 'pilot' vehicles, followed by the supply of final specification parts for HSV vehicle production.



The HSV Product Planning team revises their three month rolling forecasts every month to take into account changes in customer demand whilst smoothing the load on both HSV and Holden's production lines. The HSV computer system is integrated with Holden's and is also visible at the dealers. This single set of current information throughout the supply chain enables the most accurate information for the customer, and helped Harry make his buying decision with a minimum of fuss.

Getting it together.

When Harry's order was entered into the system, parts both in Adelaide and Clayton that were required for his new Clubsport's build were combined with other parts requirements and communicated to suppliers.

When the build date was scheduled for Harry's car, the computer system was updated and Peter rang Harry to advise him of the planned date.



In Adelaide, Harry's car was built by Holden to HSV's specification which comprises a blend of Calais, SS and HSV unique components. The full HSV interior was installed by Holden, as was everything else that could be added on a high volume production line without impacting cost and quality.

Now Harry's car was ready to be shipped to Clayton for final assembly by the HSV production team. It was now a complete vehicle that fully complied with all ADR's and had passed all Holden's in process checks and final quality inspections.

Harry's car looked quite weird coming out of the Holden plant, with many recyclable components installed by Holden to make the car fully roadworthy before it drove out the factory door. Returnable items including skinny wheels and tyres, dummy front and rear fascias and dummy front fender vents would all be taken off the car at Clayton and returned to Holden in Adelaide for re-use on another new HSV.



Clayton does its magic

HSV relocated from cramped leased premises at Notting Hill, Victoria to the Clayton facility over Christmas 1994. The original premises at Clayton made trams, then Volkswagens and finally Nissans before being converted to a modern business park.



When Harry's car drove through the high speed roller door into the bright, clean and airy HSV Clayton production facility with its radio aerial in the glove box, it was issued with a hard copy "work order" which was to sit under its front wiper throughout its entire journey through the facility.

The HSV production line is set up with a number of "Bays" in which Harry's car will sit for just 25 minutes before moving on to the next bay. What processes cannot be performed within that 25 minute window are performed off-line in "pre-build" areas. Each process on Harry's car must be completed within the 25 minutes so that it can drive, under its own power, to the next Bay in the process.

HSV average around 25 specially built cars per day, but has been able to produce up to 32 cars per day when it was needed.

Harry's R8 found itself alongside a Maloo in the first bay as all "mainstream" HSV's are produced together. In front of Harry's R8 were a Grange and a CSV R8 for export to the Middle East. Vauxhall VXR8's are produced on this line too. The team members use the work order on each car to decide what build specific parts that particular car requires.

This is a CSV ready for export. Note the brake corrosion protector and spacers in the springs to increase ride height for shipping purposes:



Pre-Build

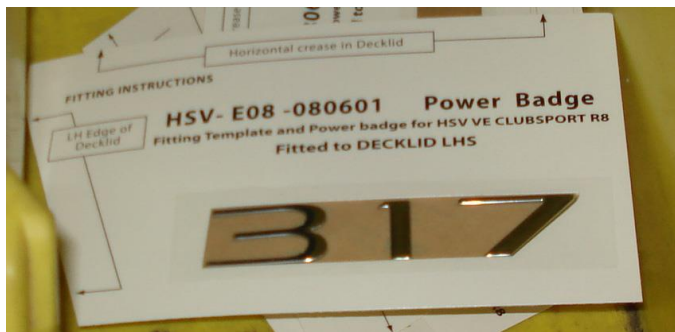
Harry's "core" car came from Holden with a complete Holden exhaust system. Prior to driving down to the production line, the cast Holden exhaust manifolds were removed and replaced by a set of HSV stainless steel headers, while the rear mufflers are installed in Adelaide.



Exterior Detail

Then Harry's R8 was driven to the first production Bay, where it had the HSV engine cover installed, the owners wallet placed in the glove box and the exterior badges applied.

Accuracy and quality are the order of the day. Each badge has a template to ensure it is positioned in exactly the right place:



Jigs were used when applying exterior badges to ensure that they are positioned in exactly the right location. The same careful process was also used to apply the HSV badge to the flip-key pod.

Once the team completed these tasks on Harry's car, the work-order was signed off and the car driven to the next production Bay.

Each car's work-order records the names of every team member who worked on each stage of the car throughout the process so that any training or quality problems can be addressed if necessary.



Preparation

Protective tape was then applied to the body areas of Harry's car to protect against damage when removing and installing various panels. The recyclable side skirts, front fascia and fender vents were removed and the panels behind the vents were blacked out so that the body colour does not show through after final assembly.



Next, the unique HSV quad exhaust tips were added and accurately positioned, again with the use of a special jig. The internal exhaust pipe was also expanded during this process to ensure a neat fit into the tip.

These processes completed, the work order was signed and Harry's car was driven to the next bay for it's front suspension work.

Front Suspension

The Holden front suspension was stripped out of Harry's car. The fender liners were also removed to allow clearer access to the suspension components.

The sub-assembly of the HSV front suspension struts is performed off line in a pre-build area.

A set of red HSV performance suspension front struts were then installed into Harry's car. The black MRC front suspension is installed in GTS and Senator models in this bay as well.

The standard Holden sway bars were then removed from Harry's R8 and placed in a bin to be sent to the metal recyclers.

Team member safety is of obvious importance at HSV as is evidenced by special wheel jigs being developed to help team members take the wheels off and on whilst Harry's car was high up on the hoist.



Rear Suspension & Brakes

Harry's car then had the Holden rear suspension removed and replaced by the red HSV units with special 2 meter high jacks assisting with this whilst the car remained high on the hoist.

Again, the black MRC rear suspension is also installed in this Bay on the specified models.

Similar to the previous bay, the sub-assembly of the rear struts is performed off line in a pre-build area.



After the HSV rear suspension was fitted, the awesome HSV brake package was added to Harry's car.

The operations in this bay are quite complex, so additional resources were added into this part of the process in order to maintain the 25 minute cycle time.

Body Panels

Holden and HSV work closely to ensure the quality of the paint work on all HSV vehicles. The same batch of paint is used by Holden for the car body and by HSV for the HSV specific panels.

The rear tail lights and quarter panel caps were then installed on Harry's car, and the rear spoiler was bolted into the holes on the SS boot lid originally designed for the SS spoiler. The recyclable rear bumper was also removed.



The pre-painted side skirts with their badges already applied were added to Harry's car, the work-order signed and the car driven on to the next process.



They are then fitted and aligned. Harry's car is finally starting to look like a Clubsport now!

Wheels & Tyres

Harry's car was up on the hoist again and had the skinny recyclable wheels and tyres replaced with the optional 20" Clubsport wheels, 8.0" wide on the front and 9.5" wide on the rear. These wheels had already been fitted with Bridgestone Potenza high performance tyres.



Mechanical lift aids allowed the team members to easily lift the wheels to the correct location for fitting

onto the hub so that the brake calipers were not marked in the process.

Inspection

After the wheels were aligned, Harry's car was driven to the bright final inspection booth, where it was closely inspected for any quality problems whatsoever.

The Final Inspector is extremely experienced and have worked in all processes within the operation.

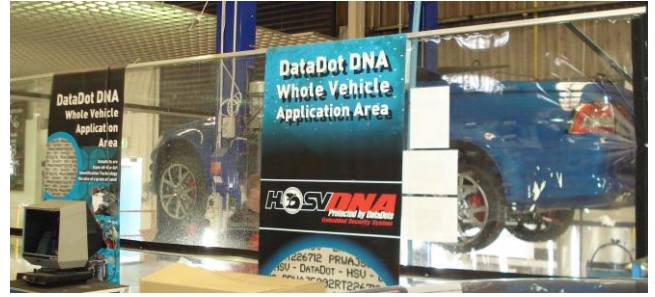


Every car is inspected in the final inspection booth, and the work of the Inspectors is also monitored by an average of one car in six being randomly audited for any inspection failures.



Data Dots

Peter had told Harry that the application of Data Dots on every HSV vehicle built since 2001 had led to major reductions in insurance premiums for owners. In fact, an evaluation in 2009 of the effectiveness of this technology showed that that just 5.66 of every 1,000 HSV vehicles (comparatively) fitted with Data Dot "DNA" had been stolen, compared to 39.33 per 1,000 cars which formed the pre 2001 control group.



When the Vehicle Identification Number (VIN) for Harry's R8 was allocated by Holden manufacturing, it became visible on the HSV computer system. HSV then arranged for the Data Dot manufacturer to be advised of this number and they produced a "pot" of microscopic data dots suspended in a UV detectable clear compound. Each data dot contained the specific vehicles VIN number.

Then, in a special booth, all under body components and other HSV components on Harry's car were sprayed with these uniquely coded Data Dots.

The build of Harry's car was now complete. His new R8 was then carefully put on a specialised car trailer for delivery to the HSV dealer who would then undertake the final detailing and preparation.

Peter phoned Harry to let him know that his R8 was on the way to the dealership and he made a time for Harry to come in and take delivery.



At last the time had come for Harry and Sue Valder to see their new Clubsport R8. They were ecstatic when they saw it and could not wait to sit in it. Peter explained the operation of the car and how to use all of its features to Harry and answered all of Harry's questions. Harry was amazed just how intuitive the controls were and after they left the dealership, he remembered just how beautiful it was to drive.

The Clubsport was no longer just a company car. Harry loved to drive his new R8 and he became quite passionate about it. This was his car. It was built especially for him by an equally passionate team of people at HSV and this car was genuinely a special vehicle.



Harry and Sue soon became members of the HSV Owners Club where they found that they really enjoyed the club cruises, social functions and car shows. Harry even became involved in some of the club's motorsport activities. He is now truly living his dream. *IW*

HSV would like to thank Ian Williams and the HSV NSW Owner's Club for permission to reproduce this article.