

LAST MONTH SAW THE RAPTOR F85 BARE ITS TEETH FOR THE FIRST TIME IN THE RUSH CHASSIS. THE ENTIRE EPISODE LEFT NIGEL TOTALLY EXHAUSTED BUT RELIEVED TO KNOW EVERYTHING MECHANICAL WAS IN ORDER. THIS MONTH SEES THE FITMENT OF ALL THE BODYWORK, TRANSFORMING THE BARE CHASSIS INTO ITS FINAL STEALTH FORM. COVERED BY A FINE LAYER OF FIBREGLASS DUST, THE EXCITEMENT IN THE DEAN GARAGE IS STEADILY INCREASING, WITH THE COMPLETION DATE LOOMING EVER CLOSER.

RUSH

CW460

CHAPTER

10



Nigel, Kit Car's Tech Ed and in-house builder.

D n any of my kit car builds there comes a point when I can see the light at the end of the tunnel. In the case of the CW460, the milestone of running the Raptor F85 and driving the beast backwards and forwards in the garage suddenly illuminated a 1000 watt bulb in my subconscious. In principle all the

moving parts worked and all that lay ahead was the fitment of the bodywork, lights, trim, soft top and several hundred smaller items. In reality, these activities are probably the most challenging for a builder, since any mistakes, however small, can visually impact the end result. This especially applies when you are attacking the flawless gel coat with a 2000 rpm

angle grinder, but more about that in a moment.

This meant that month 10 of the Rush build presented me with countless jobs I could complete. Not one to take the easy route, I decided to plough straight into fitting the bodywork.

THE DAX RUSH BODYWORK ETHOS

Having built numerous kit cars I'm fully aware of how body panel fitment can range from a rather pleasurable pursuit to, how can I put it? ... a bleedin' nightmare. The problem is you cannot predict which it is going to be by simply looking at the pile of fibreglass bodywork. In the case of the Rush I had a pretty good idea the job was going to be fairly painless as Sevens tend to be the easiest builds when it comes to panelling. The total absence of door, roof and a boot lid reduces the number of shut lines considerably. In fact, the Rush bodywork comes in ten pieces:

- Rear tub
- Side panels (x2)
- Scuttle
- Nose
- Bonnet
- Rear wheel arches (x2)
- Front wheel arches (x2)

This may still sound a fair number, but compare it to a Lamborghini replica which has nearer thirty and you can appreciate the simplicity of the design.

Ordering the body panels in black gel coat always gives manufacturers that extra headache. As with painting a car, black is the most critical colour when it comes to showing imperfections in the moulding process. However, I'm pleased to report the Rush panels are absolutely stunning. The gel coat is flawless, all the panels have been painstakingly trimmed and many have moulded returns to provide additional strength. The logic behind opting for a gel coat finish rather than lavishing the CW460 in cellulose is not simply down to cost, but also because the standard finish is extremely durable. This is of particular importance in a Seven-style kit car, with the rather exposed rear wheel arches getting a bashing from road debris.

ASS ABOUT FACE

I must admit I have not followed the build manual's advice when it comes to fitting the bodywork. It's a big admission, knowing Peter from DAX will be scrutinising my every word! According to his words of wisdom I should have bolted it all in place way back in Chapter 4 or 5. The reason for this is the front suspension mounts through holes in the side panels, so prior to getting a Rush onto its wheels you need the side panels in place. This in turn requires the rear tub section and, at least, initial fitment of the scuttle and nose for alignment. However, the last thing I wanted to do was fit my experimental gearbox and engine into a closed-in chassis. Access would have been severely limited and chances are they would have to go in and out a couple of times. In retrospect my decision was spot-on, but not without its consequences. My alternative

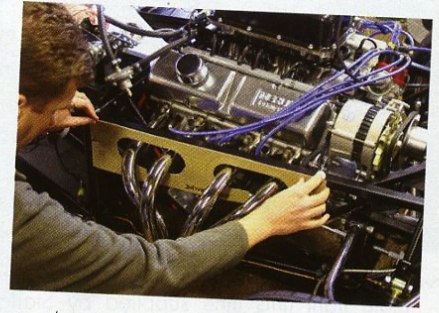
approach meant I needed to:

- Jack the entire car up off its wheels and support on multiple axle stands.
- Remove the front wheels and suspension.
- Remove the radiator and cooling fan.
- Remove all the induction hardware from the engine or else the bonnet wouldn't fit!
- ... and finally remove the exhaust system!

All a bit of pain but, in fact, it only took about an hour or two, a small price to pay for months of hindrance-free access

to the engine compartment. Just prior to removing the exhausts I produced two cardboard templates to indicate where the headers came through the chassis. These were then transposed to the side panels at a later date to aid accurate cutting of the corresponding holes.

As for putting the entire chassis on axle stands, this was a necessity not only to remove the front suspension, but also to allow access to the underside of the car. What I would add at this point is if you are considering following the order of my build, ensure you use four or even six strong axle stands. The additional weight of the engine and gearbox makes the once lightweight



Cardboard template to accurately identify the positioning of exit exhaust holes in the Rush side panels.

chassis a potential hazard – and you will be working under it for hours securing body panels!

REAR TUB

At last I was ready and the first stage in fitting the Rush bodywork was the rather large rear tub section. This literally 'springs' around the hindquarters of the chassis and encloses the fuel tank and rear suspension. Unlike many other kits which incorporate the side panels with this section, manipulating the moulding into position is a simple one-man operation. In seconds the first piece of the jigsaw fell into place, requiring only a light thud from my palm to press home the front portion - a real credit to DAX, I must add. Unlike the hours invested in fabricating components such as a throttle stop, such jobs reap huge rewards in seconds. Suddenly the project starts to look more like a car.

Initial excitement, however, is always tainted by the realisation that prior to permanently fitting the bodywork section a few other things need to be completed. When clamped firmly into position with 'G'-clamps, ten fixing holes were drilled through the fibreglass and into the chassis members underneath. Care was taken not to stress the bodywork in any area due to any distortion being clearly visible on the high gloss finish and the potential of future fracture.

As with all my builds I try and perform all necessary cutting prior to permanently fitting the panels to the chassis. This avoids the unholy mess fibreglass makes once attacked by any type of cutting tool. In the case of the rear tub, the location of the fuel filler, high level brake light and number plate light were accurately marked prior to its removal.

Spreading a cloth on the gravel drive I selected my weapons of choice: angle



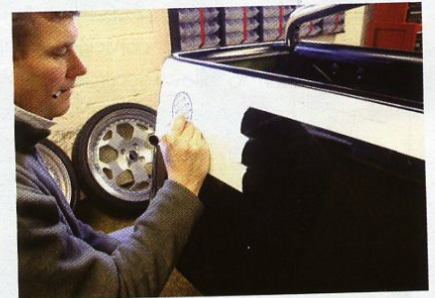
Rear body section ready for fitment.

grinder with 1 mm cutting wheel, electric drill with flap wheel, Power file and a selection of hand files. The rather terrifying angle grinder is a superb weapon when it comes to working with fibreglass, but needless to say, care is of the utmost importance! Adorning goggles and mask, the process took me no more than twenty minutes. The most challenging 'cut' by far was the 8 mm slot required to mount the high level brake light. Extremely visible, any slip would have meant a call to DAX for a replacement body section. However, my nerves held and I hope you agree the end result speaks for itself. Once I was confident all cutting was complete, the parts were removed and on went the tub once again. Totally happy with my efforts, the next stage was to paint the raw fibreglass on the inside of the body panel. This not only provides a professional finish for anyone who may look under the car in future, but also ensures no light shines through the black gel coat. So off it came again!

Utilising a satin black finish, the end result was definitely worth the effort. Some may call me a tart for being so particular, but after spending so much time making the



First time fit - a true credit to DAX.



marking out exact position for fuel filler cap.

rolling chassis look spot-on, why compromise it for the sake of a £4.50 can of aerosol and ten minutes' effort?

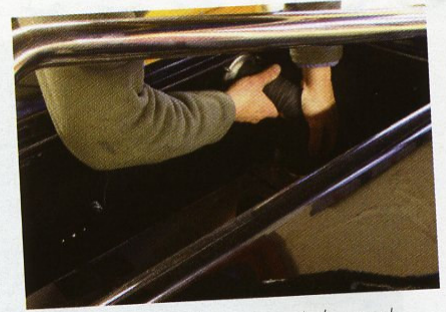
While the paint was drying, I reached for my Innotech Inno-Seal and a small bead was run along the chassis members that would come into contact with the panel. Obviously this would reduce the risk of water ingress, but just as important in my opinion is the elimination of those annoying rattles and squeaks.

Only then, almost a full day after the initial fit, was the rear tub ready. Offered up for the last time, I inserted all ten fasteners, ensuring they were completely

home but at the same time not overtightened. Then for the crowning glory: I fitted the brushed aluminium fuel filler from Car Builder Solutions and connected it to the tank by convoluted petrol-resistant hose. Next came the high level brake light (also courtesy of CBS) and, finally, the number plate light (this time supplied by Stafford Vehicle Components Ltd.) which matched the finish on the fuel filler perfectly.



Fuel filler and high level brake light in situ.



Connecting fuel filler and tank by petrol-resistant flexible hose.

SIDE PANELS

The side panels are probably the most challenging items to fit to the Rush basically because they are so long. Fortunately, the holes for the front suspension and steering arms are already beautifully cut, making initial fitment straightforward. Starting on the driver's side, the 8 foot long panel was offered up to the chassis and clipped over the top rail. Again the fit was remarkably close, with the only trimming being where it butts to the rear tub, a slight relief around the steering rack boot and exhaust mounting plate - all to be expected considering the panel is so large. Crawling under the chassis - after once again checking the axle stands - a rather challenging sight confronted me: a 10 to 15 mm gap between the side panel return and the bottom chassis member. According to the build manual this is a conscious design consideration to allow accurate packing of each fastener with washers to avoid panel distortion. Hmm, that's a big gap and considering I planned to use a dozen fasteners on each side it equated to a lot of faffing around with washers!

At moments like these I retire to the office and consult my father on the phone. After considering all sorts of options the Dean solution was to use high density rubber tubing cut to length for spacers. Once in situ the gap would be filled with

sealant for a watertight seal. Sounding a great idea, it actually worked really well. The only negative is that it took a good couple of hours to measure the required length for each rubber spacer, drill the hole and trial fit the fastener.

As for locating the top of the panel, I dismissed the self-tapping screws supplied by DAX and used stainless steel cap head

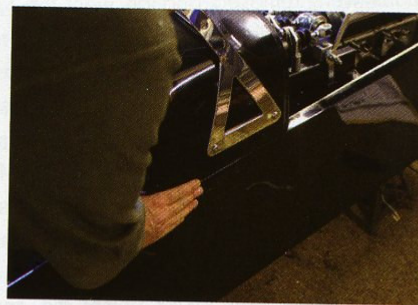
set screws - my being fussy again, but I make no excuses. However, prior to drilling the holes the scuttle had to be bolted into place to ensure panel alignment. Again everything was spot-on. This may sound like a real plug for D.J. Sportscars, but credit is seriously due here because poorly fitting panels make a kit car build a nightmare.



Driver's side panel awaiting initial fit.



On she goes, with remarkable ease.



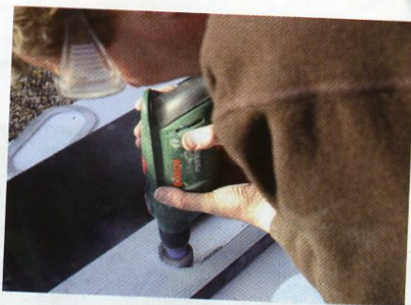
Alignment with the scuttle is essential prior to fixing to the top chassis rail.



Accurate fitment of side panel to top chassis rail.



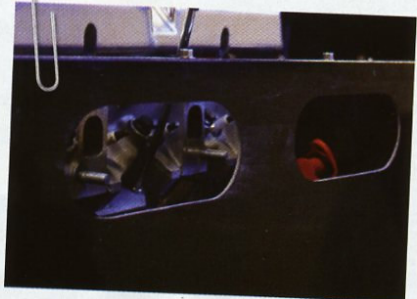
Using an angle grinder for exhaust outlets in the side panel. Carefully does it!



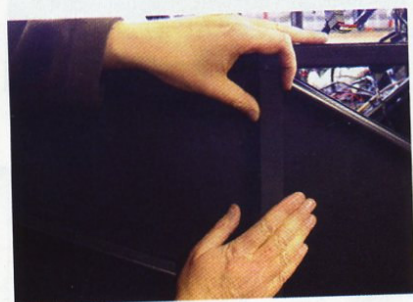
Next stage is to use a flap wheel to form the curved profile for each exhaust hole.



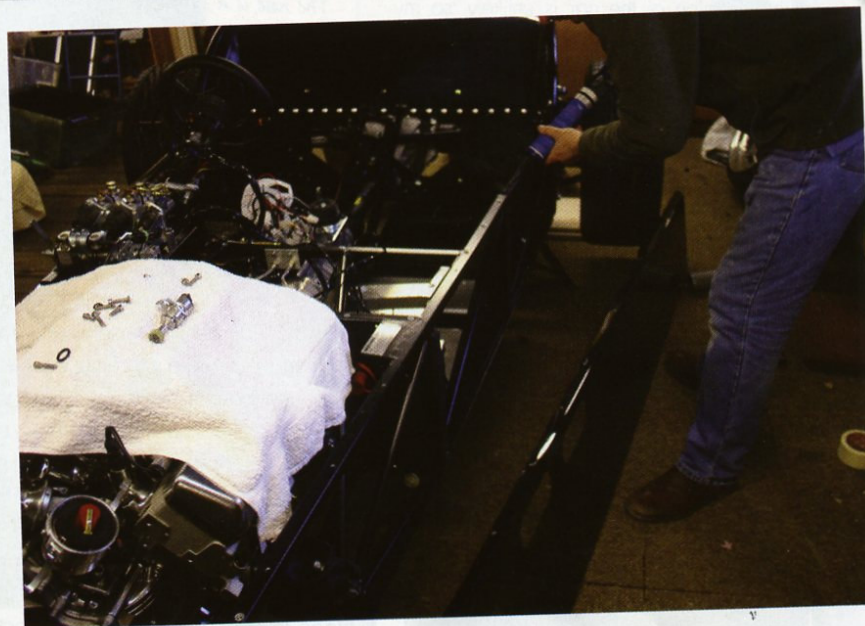
Final fettling using the polished aluminium surround as a template.



Finished, just hope they are in the right place!



Prior to fitting the side panels, high density foam is applied to the chassis uprights.



On goes the silicone sealant.

THE BIG CUT

Repeating the fitting exercise with the passenger side saw the chassis almost totally encased with fibreglass, reaffirming my suspicion that engine fitment in this state would have been challenging to say the least. The final job prior to permanently fitting the side panels was the cutting out of the holes for the headers. Utilising my trusty cardboard templates, the same process was repeated as with the fuel filler hole. This job in particular was a little stressful, with Tim the local publican from next door popping his head over the fence due to all the noise I was making. Literally covered in white dust from head to foot, I dread to think what I looked like, but the neighbours and local villagers have become used to the odd goings-on in the Dean garage. A good tip to get the worst of this itchy residue from your clothes and



Side panels on for the last time - phew!

hair is to use a vacuum cleaner - perhaps best undertaken in the privacy of your own garage because it makes you look rather demented!

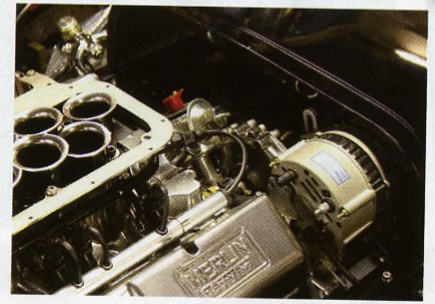
The side panels were bonded and bolted to the chassis members using silicone sealant. It's at times like these that you realise why latex gloves were invented.

NOSE

With the big panels fitted to the chassis, the next in line was the nose cone. Little drama here, apart from the need to relieve the inner lip around my rather large Kenlowe fan. Luckily the modification I undertook on the alternator mounting bracket provided more than enough clearance under the nose. Some builders pivot the nose on the lower location bolts, but the likelihood of needing to gain access to the radiator section of the car is unlikely, so my approach was to ensure an extremely rigid location to avoid potential movement.



The nose is a simple job. Just needed relief for the rather outrageous Kenlowe fan Nigel decided to fit.



Alternator clearance is absolutely fine thanks to the modified mounting bracket.

BONNET

As previously explained, I had removed the ACT induction hardware to allow the fitment of the bonnet. However, positioning the large panel over the



Trial fit of bonnet ... whoops! Even with the plenum removed it will not sit home.

Raptor F85 highlighted a slight issue: it still didn't fit. Blimey, that V8 is rather large! The only choice was to get the angle grinder out again and make a small incision in the perfect panel. Making the hole as small as possible was the aim, but this still required a foot long section to be removed. Only now could the bonnet be lowered into position, highlighting for the first time how much of the carbon fibre plenum will actually be erupting from the bonnet – all of it! She is going to look absolutely insane! At this juncture, as you will have probably guessed, I made a beeline for the mini-fridge to select a can of Amber nectar from my vintage collection. Such parts of a kit car build are literally so rewarding. I guess four days into fitting the bodywork, the bare



Out with the angle grinder yet again!

chassis had almost become the form of the finished car. Dreaming of hitting the open road, the lager tasted very sweet and all was well in the build stakes. Would it last? ... No.

WHEEL ARCHES

Suffering slightly from a rather bad hangover from the day before (thanks to my mini fridge), I decided to move on to the rear wheel arches. Having been stored away for about six months I coaxed them out of the garage loft, removed the protective covering and set about resting them on the wheels. What the ****? They didn't totally enclose the oversized Image boots! Like a Carlos Fandango hot rod, my lovely Image three piece rims literally protruded beyond each wheel arch by about half an inch. "S**t," I thought, "the wheel offset must be wrong." Even before I could find the technical data on the rims I was figuring out how to get the rear wheels back to Image for modification. Calming myself down, I checked the figures, measured the rims, checked the figures and measured the rims once again. Width:

spot-on. Offset: spot-on. So what was the problem? The arches. The Rush comes with two rear wheel arch options, wide and bleedin' wide. I went for the big boys, as they call them at D.J., but it seems I was sent the smaller ones. If anything this was the best outcome, because swapping arches is easy, even though I may have had to wait a few days.

A little dejected, work stopped in the Dean garage for a few days until Simon came to my rescue with two brand new superwide arches straight from the moulds. Arriving by courier in a box the size of Wembley stadium, the exchange was complete. A sigh of relief resounded around the Dean household. I'm pleased to say I kept my composure throughout the entire episode which I hope my darling daughter will concur in her thoughts for this month. I guess it must be an age thing or maybe that 'it's only a car' thought (a popular one with

my wife) may have resided in my grey matter for a few milliseconds.

The actual fitment of the arches was relatively straightforward with about a dozen bolts with large washers being equally spaced on each moulding. The fronts went on with little difficulty even though my father still has concerns over the minute clearance between tyre and fibreglass.



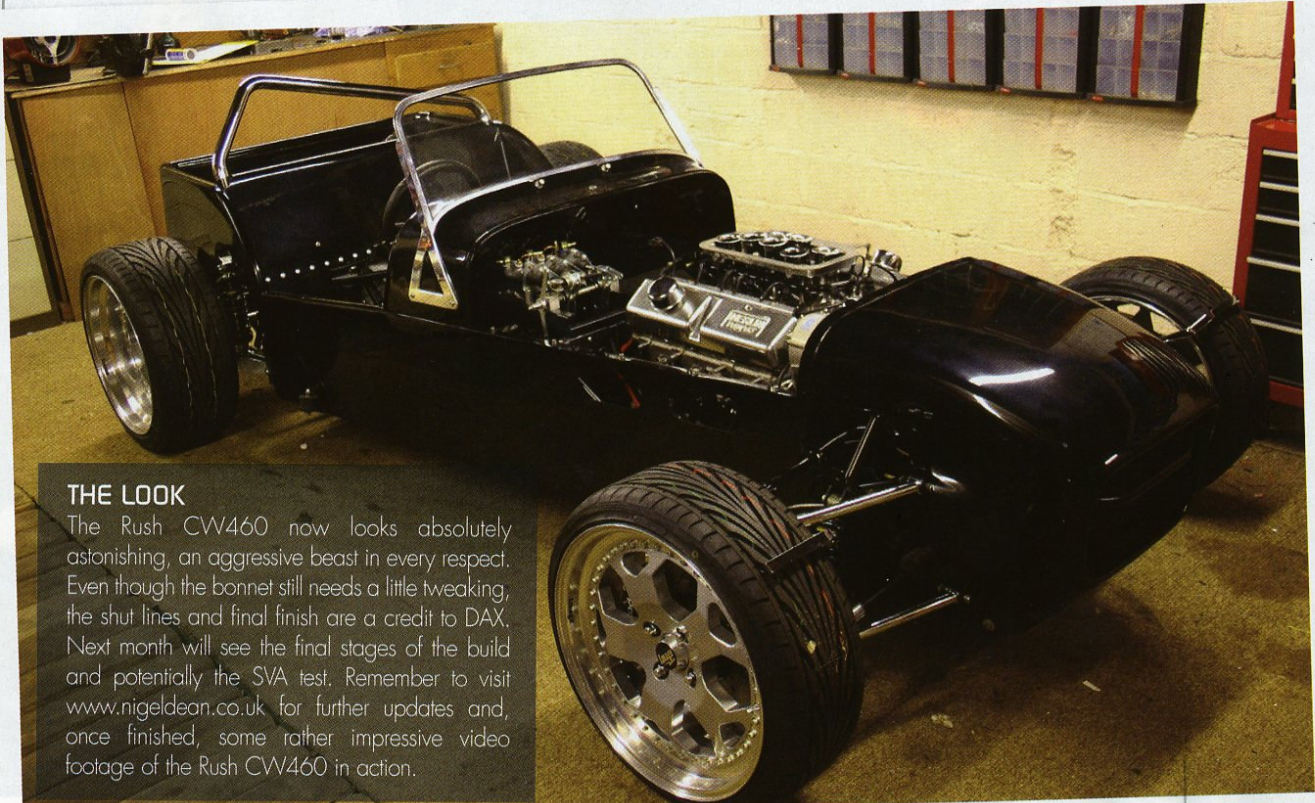
Back on with the suspension.

HOW MUCH AND HOW LONG?

Interestingly this month saw next to no expenditure since all the body panels and fasteners came

with the original kit. The fuel filler, high level brake and number plate light totalled £115. As for time, including some preparation work for my

bespoke lighting solution, I have spent another 120 hours in the garage this month. That brings my total up to just shy of 500 hours.



THE LOOK

The Rush CW460 now looks absolutely astonishing, an aggressive beast in every respect. Even though the bonnet still needs a little tweaking, the shut lines and final finish are a credit to DAX. Next month will see the final stages of the build and potentially the SVA test. Remember to visit www.nigeldean.co.uk for further updates and, once finished, some rather impressive video footage of the Rush CW460 in action.

Arches in situ and, apart from final bonnet trimming, complete on the bodywork stakes.

TEENAGER'S TAKE

Hi there keen kit car maniacs, me again. Yes, don't you just love it? After hours of hard labour led underneath a filthy wreck you men like to call a car (or 'masterpiece' if you're anything like my Dad) you finally turn to the Teenager's Take for another monthly update of life in the garage! So put down your coffee cups covered in grease and listen up. The car is finally getting there. Did you hear that? **THE CAR IS FINALLY GETTING THERE. Hurrah!!**

This month Dad tried fitting the wheel arches, but, well, the point is they didn't fit. Stressy is probably the nicest word I could use to describe him upon this discovery, but I have to say I've seen him far worse. This time the world didn't come to an end. The house didn't shake from violently slammed doors and there was no menacing black cloud above his head. I don't understand it - he simply stressed like a normal person. Steady-on Dad. He later discovered the wrong arches had been



Nigel's daughter, Evie, with another Teenager's Take.

sent and reverted back to his usual 'only slightly stressy' self.

When he was unwrapping the new bodywork he looked like a first-time father with his newborn. I've seen that look before. No, not when my brother was born, but when he was handling the Rush frame.

We all held our breath for the tricky 'fitting the bodywork procedure', but there seemed to be no repercussions when Dad was disturbed for lunch or tea. I don't really

understand it. In the past it's been a little like walking on eggshells when Dad has a project on the go, but this one has gone surprisingly smoothly. What's changed? Maybe now he's old he is more accepting of life's little ups and downs? Yeah, right. Perhaps I shouldn't tempt fate, the car's not on the road yet, but she's definitely dressed and ready for the catwalk!

Being the daughter of a kit car maniac does have its upsides, I suppose. The boys at school keep asking me these really annoying questions about Dad and saying "Wow, you must be loaded," and even, "I'll give you £70 and a massage if your dad can make me a Bugatti Veyron." Well, I guess they're talking to me, but a massage from one of the boys in my class. Ah, no thanks.

Well, finally the pieces of the puzzle are beginning to fit together. Make sure you tune in next month for the inevitable stresses and tantrums. This peace and tranquility can't continue. It's just not normal.