



Tackling noise pollution

Driving out noise

Melissa Berry

When the first cars were produced, the engineer had little regard for the effect they would have on our tranquil environment. Why should they? There were so few cars on the road.

Jane Van Hool

For over a century, the same old techniques have been used to sell cars. But marketing managers are introducing some new ideas to pull in the buyers.

Matt Button, LEXUS

We provide luxury cars, that are very refined, and that refinement is all about quietness, peace, tranquillity, luxuries today we feel, are more about abstract concepts, like time and space.

Melissa Berry

If selling cars is all about selling lifestyle, then the industry seems to be telling us, we all need to reduce our frantic pace of life. Lexus has made the quiet car its trademark.

Matt Button

Think people spend more and more time in their cars, and one way of defining that space, it's like a third space between work and home.

Melissa Berry

This car advert seems to say you can have it all. By entering this third dimension, you can enjoy all the benefits of owning a car, without experiencing its disadvantages.

We all want to escape the constant drone of the motorcar, which seems to increasingly dominate our time and our environment. With today's roads, the car offering calm and tranquillity, seems a contradiction in terms. So can the technology really follow through with the advertising dream, and give us the peace and quiet we long for.

Resident

This noise, it's like white noise, it's constant.

Resident

It's worse in the holiday times when the children are at home or outside a lot. It's unbearable.

Resident

We were lead to believe that this was going to be constructed of a quiet whispering concrete.

Melissa Berry

The car manufacturer, can do little to help those with noisy roads thundering past their door. They have no control over road surfacing. But they can insulate the driver. Like Lexus, the

Rover M.G. company is using technology to create peace and quiet for the driver of its seventy five model. The Rover seventy five is the top of its range, and to compete in this market, the company has to adopt the same techniques used in the luxury market.

Foam plastic blocks are part of the cutting edge of quiet car technology. They're filled with a complex polymer foam. The blocks are placed at various intervals inside the car panels. This creates a sound absorbing barrier, protecting the driver and passengers from external noises.

George Linney, MG Rover

This is one of the expanding foam blocks that were used on the seventy five, to seal off the box sections through stop noise coming up to the passenger compartment. You've got plastic carriers to hold the expanding material which is the pale material, and these are clipped onto the body shell, then when the body goes through the paint shop, the heat in the paint shop expands the foam, to seal off the whole of the area.

Melissa Berry

Traditionally, cars have always been simply welded together, but in the seventy five, epoxy glue is used in conjunction with welding, to make the car a lot stiffer, reducing ominous squeaks and vibrations. The body firmly fixed together, more efforts are made to isolate the driver from the engine noise.

George Linney

The engine mounting brackets here, and the engine mount underneath it, that's to isolate the vibration of the engine from the steel body, so that we're not transmitting much noise through into the body. The mounts take the weight on each side, and then there's two tie bars to react the torque of the engine to transmit the loads in. and they're windowed to provide very soft mountings to reduce the noise transmission. and we've got a secondary bulkhead here to reduce the noise transmission into the passenger compartment, and we've also got acoustic trim on top of that to help reduce the noise.

Melissa Berry

Acoustic under trays are used to absorb engine noise, and will be of particular benefit to the environment. But ten percent of completed cars, undergo rigorous noise testing, to ensure that all models are up to standard.

Dean Brady, MG Rover

The main problem that people find with noise in cars is squeaks and rattles. This piece of equipment will help us to define where the squeaks and rattles are occurring and stop them happening.

Melissa Berry

At the test centre, the Rover experience it all, from earth quakes to cattle grids, to the urban nightmares of sleeping policemen, manhole covers, and potholes.

Dean Brady

Part of our process is an audit of the vehicles. So if we pick up on a dynamic normal road test audit that we have a problem a squeak or a rattle, then we can bring it back into the room here, we can take the car apart, we can put the pieces back onto this checking fixture behind us, and make sure that everything fits the way it's supposed to fit. If it doesn't, then we've got our root cause of our problem.

Melissa Berry

This aluminium shell represents the exact prototype of a Rover seventy five. Each component including furnishings, can be tested on this rig. To ensure that it fits to a zero point zero two millimetre specification. A painstaking process, but an essential part of creating a luxury car specification.