Deciding your Emissions Test Route: What to Consider

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Photo credit: Daisy Thomas

So, you're thinking of undertaking some vehicle emissions testing and you're wondering what to take into account when designing a test route? The first questions you have to ask yourself are: What test am I wanting to perform? What type of driving am I trying to capture? What am I actually measuring?

Now, if you are following a standard test such as the Real Driving Emissions or "RDE" test, then there will already be some requirements that you have to follow. The RDE test, for example, must have 1/3 each of urban, rural and motorway, and adhere to other dynamic properties, such as the number of stops and amount of time stopped during the urban drive section. You may also need to make sure that your test route will give you as good a chance as possible of satisfying the test requirements.

Real Roads, Real Problems

Notice that I said 'as good a chance as possible'? That's because, unless you're testing on a chassis dynamometer or 'rolling road' (and assuming you don't have access to your own private air field) you're probably going to be out on real roads, encountering other vehicles that have no consideration of your need to adhere to specific dynamic requirements. This can be a big problem with on-road testing, as I've learned the hard way when performing RDE testing. Choosing the right time of day and route are both very important on this front (don't go to a city centre or main arterial road during rush hour unless that's the sort of driving that you want to capture!) The best way to find this out, if you can afford the time, is to check out how busy certain areas are at different times of day and choose whatever looks best. Unless there's an accident or other event, the traffic is usually pretty predictable from one day to the next. (On a side-note: traffic lights change their operation depending on the time and day of the week! Beware of this if you're trying to do something really specific.)

Roadworks and congestion, both avoidable with a bit of careful route-planning. Image Credit: Expressandstar.com.

The Route

Now, assuming you have worked out what time of day you need to test, the best way to find a good route is simply to get out there and give it a go! You'll quickly find routes that work and routes that don't work. If you're relying on GPS tracking for your test cycle, then it's a good idea to avoid tunnels, as even state-of-the-art GPS tracking systems struggle to penetrate through concrete. Planning routes out on a mapping website such as Google maps is also a great idea, as you can measure the distance for different section and check the estimated journey time for different times of day. Remember, if you know how far and how long a certain circuit takes to complete, you can always just go round again (and again!) to build up the test.

The Road Surface

Road surface is also very important! You may not notice speed bumps and potholes when you're driving in your own car to the shops, but you certainly will if you have a bulky sampling system hanging down from your tailpipe, or expensive equipment that doesn't like bouncing around in the boot! I would always recommend driving a chosen test route at least once to ensure the surface is as smooth as possible.


Bulky sampling systems can make road surface a serious consideration on real roads! Image credit: Daisy Thomas

And Finally…

Just before you leave the garage, it's a good idea to check for congestion or accidents on your chosen route. Google maps is a godsend here. Having two or more different possible routes to choose from can then help you deal with unexpected traffic if you're on a strict time schedule.

Good Luck!