# Type Approval Authorities' EMIS hearings: the three wise monkeys

#### November 2016

## Summary

Following the discovery by the US authorities that VW installed illegal software on 11 million of its vehicles to cheat emissions tests, including 8.5 million in Europe, the European Parliament has set up an enquiry committee into the emissions scandal (EMIS). All relevant stakeholders, including industry, NGOs and policymakers at all levels have been invited to testify. The latest round of hearings focused on the primary law enforcers of EU testing system – national Type Approval Authorities (TAAs). This briefing summarises the replies of the authorities that attended the hearings (German, Italian, Dutch and Luxembourgish TAAs).

Both written and oral answers of the national regulators confirm T&E's assertion that authorities in charge of enforcing environmental and safety rules have consistently failed to do their job and rigorously scrutinise whether the vehicle complies with the requirements. No regulator: a) performed checks outside of the narrow type approval test to see how vehicles perform once on the road; b) enforced the ban on defeat devices in law since 2007; or, c) scrutinised industry's conduct and took action after much suspicious emissions evidence came to light following Dieselgate investigations. Like the proverbial three wise monkeys<sup>1</sup> they see no evil, hear no evil and speak no evil.

Industry claims that it needs to switch off emission control technology in many real-world driving conditions have been accepted without questioning and scrutiny. The health of engines (and profits of carmakers) have been given precedence over the health of citizens. No one has asked any questions and no one has taken any actions because there is regulatory capture by the industry of their approvers. The solution is to set up an independent regulator at EU level that would test cars' performance on the road.

# 1. 20 minutes of warm lab only

Today's vehicle testing system in Europe – i.e. type approval – relies on 28 national type approval authorities (TAA's) to certify that cars meet all of the requirements before they are sold and used on the roads. Carmakers can choose any one of the 28 authorities to get an approval and then sell the vehicle EU-wide. The tests are often done in carmakers' own labs and "witnessed" by technical services who are paid for their work. The enforcement of the rules is left entirely with the member states. The current Dieselgate scandal in Europe, with at least 29 million grossly polluting vehicles on the road,<sup>2</sup> contributing to 72,000 premature deaths<sup>3</sup> from breathing nitrogen dioxide has laid bare the human cost of the current inadequate and

<sup>&</sup>lt;sup>1</sup> <u>https://en.wikipedia.org/wiki/Three\_wise\_monkeys</u>

<sup>&</sup>lt;sup>2</sup> Transport & Environment, <u>https://www.transportenvironment.org/publications/dieselgate-who-what-how</u>

<sup>&</sup>lt;sup>3</sup> European Environment Agency, <u>http://www.eea.europa.eu/media/newsreleases/many-europeans-still-exposed-to-air-pollution-2015/premature-deaths-attributable-to-air-pollution</u>

corrupted system. The recent hearings of TAA's by the Parliament's VW Enquiry Committee (EMIS) providing a litany of excuses that disgraces the regulators and demonstrates member states are skewing the single market for vehicles in order to support national manufacturers or earn fees from clients.

Environmental standards on cars that are fought over in co-decision processes between the Commission, Parliament and national governments are designed to make the air we breathe cleaner and reduce fuel consumption and greenhouse gas emissions when cars are driven on the road - not just in laboratories where the tests take place. But all the evidence in the course of recent months points that none of the national regulators in Europe undertook any steps to check how cars perform on the road in *real* driving conditions prior to VW admitting cheating in the US. The **Italian TAA** MIT said<sup>4</sup> that the only checks done on the road in Italy are by carmakers themselves.<sup>5</sup> However, the 2007 Euro 5/6 Regulation on pollution limits for vehicles clearly states in its Article 5.1 that vehicle must meet emission limits in 'normal use', not labs only. The official in charge of type approval admitted that the design of vehicles today is limited to passing lab tests,<sup>6</sup> but seemed unconcerned by that. MIT added that it would be illegal to test cars outside of the official EU lab test despite failing to point out the exact articles where such prohibition is placed.<sup>7</sup>

The Luxembourgish type approval authority SNCH claimed it is for carmakers to enforce the "normal use" requirements<sup>8</sup> and that SNCH is mainly tasked with checking paper test reports sent to them by carmakers. SNCH were so efficient in their analysis they can review 3.5 test reports per hour;<sup>9</sup> with all tests conducted in the manufacturers own facilities as the authority have none of their own. The German type approval authority KBA also admitted they do not conduct any independent conformity of production checks or inuse tests on the road<sup>10</sup> or any other checks beyond the type approval test in a lab. The **Dutch type approval** authority RDW confirmed the same<sup>11</sup>; just as all the regulators (based on the written replies submitted to EMIS) market surveillance of vehicles is not something they carry out.



#### "We are proud not to have an independent lab as we don't have to worry about maintaining or renting it."

The answers to EMIS from technical services, notably UTAC (the only French technical service)<sup>12</sup> confirm why no regulator in Europe goes beyond the obsolete lab test - because there is an internal market for type approvals, such that if one authority becomes too strict and too rigorous – carmakers will simply go elsewhere and TAA will lose their clients. UTAC said that they won't have any customers left if they were checking what the car does and does not do on the road.<sup>13</sup> In their view this unhealthy competition among testing agencies can be changed if a single EU authority was put in place to control how each of the 28 regulators applies the EU law to ensure consistency.

live/en/committees/search?committee=EMIS

- <sup>8</sup> EMIS hearing of Luxembourgish TAA, 11 October 2016, <u>http://www.europarl.europa.eu/ep-</u>
- live/en/committees/search?committee=EMIS, also Question 10 of the written replies to EMIS
- <sup>9</sup> Question exchange between SNCH and Gerben-Jan Gerbrandy MEP, EMIS hearing, 11 October 2016

<sup>&</sup>lt;sup>4</sup> EMIS hearings on 10-11 October 2016, all available here : <u>http://www.europarl.europa.eu/ep-</u>

<sup>&</sup>lt;sup>5</sup> Question 6, Italian Ministry replies to EMIS,

http://www.emeeting.europarl.europa.eu/committees/agenda/201610/EMIS/EMIS(2016)1010 1/sitt-3441757

<sup>&</sup>lt;sup>6</sup> EMIS hearing of Italian TAA, 10 October 2016, <u>http://www.europarl.europa.eu/ep-live/en/committees/search?committee=EMIS</u> <sup>7</sup> Ibid. (also Question 8 of the written replies)

<sup>&</sup>lt;sup>10</sup> EMIS hearing of German TAA, 11 October 2016

<sup>&</sup>lt;sup>11</sup> EMIS hearing of Dutch RDW, 11 October 2016, also Question 3 of the written replies to EMIS, http://www.emeeting.europarl.europa.eu/committees/agenda/201610/EMIS/EMIS(2016)1010\_1/sitt-3441758

<sup>&</sup>lt;sup>12</sup> EMIS hearings from 11 October 2016, <u>http://www.europarl.europa.eu/ep-live/en/committees/search?committee=EMIS</u>

<sup>&</sup>lt;sup>13</sup> EMIS hearing of UTAC, 11 October 2016, <u>http://www.europarl.europa.eu/ep-live/en/committees/search?committee=EMIS</u>

Importantly, Article 3.9 on the Euro 5/6 implementing regulation 692/2008 stipulates that national authorities should check how emission control technologies – Exhaust Gas Recirculation and Lean NOx Traps in particular – function at low temperatures and after a cold start. However, through the EMIS hearings<sup>14</sup> it has become painfully clear no regulator in Europe has enforced these requirements or performed any checks of cars' performance in cold temperatures. The current mass use of the so-called thermal window defeat strategy, analysed by T&E earlier this year,<sup>15</sup> would have otherwise been avoided and emissions on the road substantially lowered had the TAA's done their job. TAA's must be held to account for their blatant failure to enforce the rules and have only been "reviewing documents"<sup>16</sup> (i.e. test reports) instead of testing vehicles themselves.

# 2. Ever heard of cheating?

What came to light following the many national investigations into emissions cheating is the massive deactivation of emission control systems (EGR in particular) in various driving conditions that differ from the prescribed test protocol. Most carmakers switch off or turn down exhaust clean-up in temperatures as low as 17C, in high speeds, after 22 min and so forth.<sup>17</sup> This is a serious abuse of the EU provisions on the use of defeat devices which, according to Article 5.2 of Euro 5/6 Regulation – only allow the switch off in exceptional circumstances where the safety of the vehicle is compromised - not merely for the prolongation of components' durability.<sup>18</sup> Just as in the US, engine calibrations that reduce the effectiveness of emission control on the road (compared to test performance) are banned apart from some defined derogations. The national investigations in Germany, France, the UK and other countries show that these derogations are being wilfully abused by carmakers in Europe, and could not have been had the TAA's effectively assessed vehicles against the Euro 6 and type approval regulations.

In line with the 2007 Type Approval Framework Regulation and the 2007 Euro 5/6 Regulation, today the task of finding fraud and ensuring that no illegal defeat devices are deployed by carmakers sits with the national authorities. Germany's **KBA** agreed in its earlier written reply to EMIS that "it is the type approval authority that interprets EU legislation concerning permissible exemptions from the ban of defeat devices on a case by case basis as part of the type approval procedure"<sup>19</sup>. However, in its public replies the **KBA** (supported by the German Transport Ministry) blamed regulatory ambiguity for their failure to enforce the rules on defeat devices and low temperature emissions performance<sup>20</sup> despite having never asked for any clarity in the decade since the rules came into force. The hearings have shown none of the authorities have ever asked or tried to search for such unlawful practices when approving vehicles in the past. Neither Germany, Italy, the Netherlands nor Luxembourg have been scrutinising how carmakers are using the derogations on the road.<sup>21</sup> **Italy and the Netherlands** said there are no provisions for them to look for such devices.<sup>22</sup>

<sup>20</sup> Question 9, German TAA replies to EMIS,



 <sup>&</sup>lt;sup>14</sup> Regulation 692/2008/EC, <u>http://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX:32008R0692</u>
<sup>15</sup> Dieselgate continues: new cheating techniques,

https://www.transportenvironment.org/sites/te/files/publications/2016\_05\_Dieselgate\_continues\_briefing.pdf <sup>16</sup> Question 7, German TAA replies to EMIS,

http://www.emeeting.europarl.europa.eu/committees/agenda/201610/EMIS/EMIS(2016)1010\_1/sitt-3441757 <sup>17</sup> Dieselgate continues: new cheating techniques,

https://www.transportenvironment.org/sites/te/files/publications/2016\_05\_Dieselgate\_continues\_briefing.pdf

<sup>&</sup>lt;sup>18</sup> Geulen & Klinger, Legal opinion on whether it is allowable to use switch-off devices in the emission control systems of passenger cars, compiled on behalf of the environmental body Deutsche Umwelthilfe, 22 March 2016 (a paper copy available from T&E) <sup>19</sup> Earlier written replies submitted by KBA and seen by T&E, 30 August 2016 (not public)

<sup>&</sup>lt;u>http://www.emeeting.europarl.europa.eu/committees/agenda/201610/EMIS/EMIS(2016)1010\_1/sitt-3441757;</u> also the EMIS hearing of German Transport Minister, 20 October 2016, <u>http://www.europarl.europa.eu/ep-</u>

live/en/committees/search?committee=EMIS

<sup>&</sup>lt;sup>21</sup> Based on the written replies to EMIS,

http://www.emeeting.europarl.europa.eu/committees/agenda/201610/EMIS/EMIS(2016)1010\_1/sitt-3441758

 $<sup>^{\</sup>rm 22}$  Ibid., also Question 8 of the RDW written replies to EMIS

**Luxembourg** again claimed it is up to manufacturers to enforce the ban<sup>23</sup> (calling into question exactly what the role the TAA has in the process beyond providing a rubber stamp to the approval). **Germany** went further saying that they have never heard of defeat devices before the VW scandal (despite the previous US cases and the very ban in EU legislation stemming from that) and would not look for them unless there was evidence of their existence<sup>24</sup>, ignoring the important role of regulators to ensure there is no fraud. The **Netherlands** also agreed that they cannot search for something they have no proof exists and generally trust carmakers not to cheat.<sup>25</sup>



The evidence points to a glaringly casual approach of the TAAs to their responsibility of approving cars; the *only* task of these authorities. The responses demonstrate no willingness to investigate, little scrutiny of applications and a reluctance to enforce the rules on illegal emission practices. National regulators failed to look for cheating despite the law requiring them to do so, and chose to assume that the applications carmakers made were entirely honest without checking this was the case. Even after the pan-EU revelations of the massive abuse of defeat devices and global evidence of cheating by carmakers there is no evidence that TAA's have amended their operating practices and procedures. There are still no mandatory recalls of vehicles and minimal voluntary actions.

### 3. "Wasn't me"

Another serious problem of EU's type approval system is its fragmentation and a lack of clear lines of responsibility. A carmaker not only chooses which EU country to approve their vehicles before selling the model EU-wide, they can and do also approve all its parts and components (e.g. emission system, seat belts, etc) separately, in different member states supplying different and optimised car prototypes usually to be tested in their own labs. The application for a whole vehicle type approval is a simple compilation of all the separate test certificates presented to the final authority, with no one checking the performance of the entire vehicle matches the individual tests before it is put on the market. It is common practice to get emissions approvals in one member state and the whole vehicle one in another one, with vehicles optimised for each emissions test. BMW, Opel and Mazda in their submissions all explained this is how they operate in the supplementary evidence provided for EMIS.<sup>26</sup> For example BMW chose the Irish TAA to approve emissions of some of its dirtiest models while the whole vehicle certificate was issued by Germany. For its Zafira model, Opel went to Germany for emissions but the Dutch RDW approved the final car. And Mazda preferred to go to Luxembourg for emissions while the UK Vehicle Certification Agency issued the whole vehicle type approval.

This turns what should be a robust approval system into a European shopping trip to secure the best offers across 28 authorities. It reduces the role of the issuing type approval authority to one of checking (papers of) all the necessary approvals have been obtained and not ensuring that the vehicle as a whole performs as required. The **Luxembourgish TAA** said that the role of the authorities is to simply "issue type approval

<sup>24</sup> EMIS hearing of German TAA, 11 October 2016, <u>http://www.europarl.europa.eu/ep-live/en/committees/search?committee=EMIS</u>

 $<sup>^{\</sup>rm 26}$  Extra replies from TAAs following T&E "Dirty 30" work, not public but available from T&E



<sup>&</sup>lt;sup>23</sup> EMIS hearing of Luxembourgish TAA, 11 October 2016, <u>http://www.europarl.europa.eu/ep-live/en/committees/search?committee=EMIS</u>

<sup>&</sup>lt;sup>25</sup> EMIS hearing of Dutch RDW, 11 October 2016, <u>http://www.europarl.europa.eu/ep-live/en/committees/search?committee=EMIS</u>

based on the tests performed"<sup>27</sup> (according to the applicable regulations). Given that in the majority of cases the tests are performed in carmakers labs and barely witnessed by technical services, without any involvement of the regulator, it appears that no one in the end is responsible for ensuring cars perform on the road as the laws require.

This fragmented responsibility also makes recalls of non-compliant vehicles unlikely. The type approval law says that only the authority issuing the individual type approval is responsible for non-conformity of that part or system, however, the power to recall the vehicle from the road only sits with the authority issuing a whole vehicle certificate. This makes lines of responsibility long and blurred so that in practice no one is fully responsible or accountable or wants to be the first to take action against a carmaker (either to protect a home carmaker or for fear of losing approval business in the future).



This lack of responsibility has been made apparent in the Opel Zafira case, where the model emits suspiciously high emissions and deploys a number of questionable defeat strategies, but neither of the authorities involved wants to take any action. RDW of the Netherlands issued the whole vehicle type approval while KBA of Germany approved the emissions of the vehicle. Despite the evidence of suspicious defeat devices, RDW claims that it is not their job to prove anything and that it is for KBA to inform them of the problem and take action.<sup>28</sup> KBA is unsurprisingly reluctant to question its approval of the emissions for a German brand. Despite being the only authority that has power to demand the recall of Opel vehicles RDW has not even contacted KBA, saying it is not their job.<sup>29</sup> Over 150,000 Opels with the suspicious engine drive on EU roads, emitting over 11 times the EU air pollution limit – and no regulator seems in the least concerned or willing to even investigate, let alone take action. T&E's recent analysis<sup>30</sup> discovered over 29 million Euro 5 & 6 vehicles with suspiciously high emissions on the road and none of the authorities that approved them considers it to be their job to take action. No one seems to be responsible while an estimated<sup>31</sup> 72,000 Europeans die prematurely each year as a result of high NO2 pollution in urban areas.

# 4. Because Fiat told us so

The main failure of EU type approval system is its glaring lack of any independence of the regulators who should scrutinise vehicles and enforce the law to ensure that regulations designed to improve public health and safety are effectively implemented. Instead the regulators are protecting national car companies or their own commercial interests. At the EMIS hearing in October the **Dutch regulator** RDW simply stated that looking for defeat devices was not on the political agenda,<sup>32</sup> so no one did in Europe. **Germany's KBA** went even further claiming that defeat devices that carmakers use as derogations from the ban are business secrets and so the detail of when and why they decide to turn off or down emission control should not be

<sup>&</sup>lt;sup>27</sup> EMIS hearing of Luxembourgish TAA, 11 October 2016, <u>http://www.europarl.europa.eu/ep-live/en/committees/search?committee=EMIS</u>

 <sup>&</sup>lt;sup>28</sup> EMIS hearing of Dutch TAA, 11 October 2016, <u>http://www.europarl.europa.eu/ep-live/en/committees/search?committee=EMIS</u>
<sup>29</sup> Ibid.

<sup>&</sup>lt;sup>30</sup> Dieselgate: Who? What? How? <u>https://www.transportenvironment.org/publications/dieselgate-who-what-how</u>

<sup>&</sup>lt;sup>31</sup> European Environment Agency, <u>http://www.eea.europa.eu/media/newsreleases/many-europeans-still-exposed-to-air-pollution-2015/premature-deaths-attributable-to-air-pollution</u>

<sup>&</sup>lt;sup>32</sup> EMIS hearing of Dutch TAA, 11 October 2016, <u>http://www.europarl.europa.eu/ep-live/en/committees/search?committee=EMIS</u>

disclosed.<sup>33</sup> This information could result in "competitive gain"<sup>34</sup> according to Germany. What has been created is a race to the bottom as manufacturers realise they are able to simply switch off or down the after-treatment technologies avoiding the need to fit more effective but expensive alternatives.

**Italy** is a good example of the lack of independent regulators in Europe. After the German authorities alleged that some Fiat cars switch off their emission control system after 22 minutes of driving (which is only 2 minutes longer than the EU emissions test), the Italian type approval agency firmly took Fiat's side. Italy's MIT went out of its way in EMIS defending the carmaker and explaining that instead of a complete switch off Fiat modulate rates of Exhaust Gas Recirculation (EGR) after 22 minutes<sup>35</sup> (still illegal according to article 5.2 of EU Euro 6 regulation). Italy were unable to provide any more detail or technical justification as to why this is necessary and by how much EGR is reduced. It remains a mystery what the design of those Fiat engines is if they cannot operate longer than 22 minutes and why other carmakers have managed to overcome this time hurdle on the road. MIT explained to MEPs that Fiat told the ministry they needed to protect the engine in this way, and MIT simply took their word for it.<sup>36</sup>



Interestingly, the Italian ministry said that when they did tests with Fiat's emission control completely switched off the cars emitted 13 times more nitrogen oxides than the EU NOx limit<sup>37</sup> (while the exceedance was smaller with the modulation). The recent T&E analysis<sup>38</sup> puts Fiat's average exceedance of the EU NOx standards at 14 times. This suggests that the modulation claimed by MIT is largely switching off the system.

The sad reality in Europe is that not one regulator applies the rules in an independent and consistent way that puts consumers and environment above car industry. The EU Single Market depends on honest and professional regulators to enforce rules. Instead, 12 months of the Dieselgate scandal and the EMIS hearings have demonstrated regulatory capture by the automotive industry of national type approval authorities and their Transport Ministry masters. Either through unhealthy business relationships or a desire by member states to give an unfair advantage to their national car companies (which in some cases they partly own); the national TAA's have grotesquely failed to do their job.

http://www.emeeting.europarl.europa.eu/committees/agenda/201610/EMIS/EMIS(2016)1010 1/sitt-3441758 <sup>34</sup> EMIS hearing of German TAA, 11 October 2016; also Question 2 of the written replies,

<sup>&</sup>lt;sup>33</sup> Question 2 of the German KBA written replies to EMIS,

http://www.emeeting.europarl.europa.eu/committees/agenda/201610/EMIS/EMIS(2016)1010\_1/sitt-3441757 <sup>35</sup> EMIS hearing of Italian TAA, 10 October 2016,

http://www.emeeting.europarl.europa.eu/committees/agenda/201610/EMIS/EMIS(2016)1010 1/sitt-3441758 <sup>36</sup> Ibid.

<sup>&</sup>lt;sup>37</sup> Question 4, Italian Ministry replies to EMIS,

http://www.emeeting.europarl.europa.eu/committees/agenda/201610/EMIS/EMIS(2016)1010\_1/sitt-3441757

<sup>&</sup>lt;sup>38</sup> <u>https://www.transportenvironment.org/publications/dieselgate-who-what-how</u>

## 5. What we have learnt from EMIS hearings



The learnings from the EMIS hearings with national Type Approval Authorities is like the proverbial three wise monkeys: they see no evil, hear no evil and speak no evil. Performing a minimal exercise to approve the cars with no scrutiny or performance. Specifically for TAA's:

- 1. **Only lab tests matter**: The only interpretation of the "normal use" provisions of Euro 6 emission regulations by all 28 national type approval authorities is the 20-minute-long test conducted in a warm lab and designed in the 1970s, no any check at low temperatures has been done despite the legal requirement to do so. No one conducted any independent (i.e. not done by carmakers themselves) tests on either conformity of cars in production following type approval or their in-use performance once on the road.
- 2. **Carmakers are trusted clients**: All regulators simply go with the carmakers explanations that they need to switch off emission control systems in most conditions on the road to protect engines the health of the engine has been placed above that of Europeans. Not a single authority tasked to implement the ban on defeat devices did any checks on how and whether these are used (all claim that they were not given any tools despite never worrying about this before the serious abuse of the ban became apparent in Europe).
- 3. **No one is responsible**: In the current system where carmakers shop around 28 authorities to approve vehicles, as well as their parts and components separately, the fragmented responsibility for ensuring conformity means that no any regulator wants to conduct extra checks or take any action against carmakers for fear of losing their clients.

The evidence exposes the failure of national type approval authorities, who are at the heart of EU vehicle testing system, to do their job and enforce the EU rules. The new Type Approval Framework Regulation must address these failings and put an end to this regulatory scandal. An independent EU body must be established to check how cars perform on the road (not lab), to levy sanctions and to control the way in which the national regulators carry out their duties. Only such a change will prevent further Dieselgate-like scandals.

# **Further information**

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