

PEAK VALUES



Beneath the Volkswagen case

Analysis

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The Volkswagen Case

I. Facts











The Volkswagen case broke out on the 18th of September 2015 when the Environment Protection Agency (EPA) in the United States accused the German car manufacturer¹ of having installed thousands of vehicles with a software that tricked anti-pollution tests. The investigations were initiated in 2013 by International Council on Clean Transportation (ICCT), a US based non-governmental organisation. The ICCT had approached the Center for Alternative Fuels Engines and Emissions (CA-FEE) of the University of West Virginia to conduct a study on three diesel vehicles of German automobile brands. Once the study was published in May 2014, the EPA took over the case.

The EPA's press release gave birth to a heavily mediated scandal. This led to a sharp drop in Volkswagen's shares and the resignation of its CEO, Martin Winterkorn. US authorities also started a legal action, which according to the initial estimates could have obliged Volkswagen to pay fines of over 20 billion USD. And above all, the case kicked off a series of reactions that affected the entire European automobile industry.

Before all analysis of this complex affair, we provide the reader with a detailed chronology that will help identifying key actors. Colours with specific codes have been used to classify facts on the arena; blue stands for actors on the economic arena, orange for political and green stands for the societal arena.




















¹ A detailed profile of Volkswagen is available in the annexe to this document.

Chronology

June 2012:		WHO labels diesel exhausts as carcinogen.
2013:		ICCT requests CAFFEE to carry out tests. The tests target three vehicles. Two of them are of the Volkswagen brand (Jatta and Passat models) and one BMW vehicle (X5).
July 2013:		TAFTA negotiations begin.
May 2014		Publication of the CAFFE report. ICCT informs the EPA and the latter launches its own investigations.
28 November 2014		A communiqué by the ICCT points out the gap between laboratory testing conditions and the real-life testing conditions on CO2 emissions in Europe.
July 2015		VW announces it is the world's leading car manufacturer.
17 September 2015		Frankfurt Auto Show opens (17 - 27 September).
18 September 2015		EPA accuses VW of having installed in at least 11 million diesel vehicles a software that cheats during anti-pollution tests.
20 September 2015		VW accepts fraud accusations.
		Several countries announce they will measure emissions from all of Volkswagen's models.



Beneath the Volkswagen Case

23 September 2015		VW shares drop by 35% between 21 and 23 September.
23 September 2015		Martin Winterkorn, who had been heading the company since 2007, files his resignation.
25 September 2015		Matthias Müller, 62, previously CEO of Porsche, takes over as the new CEO of VW.
27 September 2015		The founder of Tesla says: 'With hydrocarbon combustion we've hit the limits of physics – improvements are very tiny. There must have been lots of VW engineers under pressure – they've run into a physical wall of what might be possible so trickery was the only option' (<i>Le Monde</i> , 27-28 September 2015).
28 September 2015		France announces it will set up random tests for diesel vehicles.
October 2015		VW's US branch faces investigations; consumers begin filing legal complaints.
1 October 2015		France launches a series of tests on diesel vehicles to detect suspected frauds.
		VW sales up by 12,8 % in France.
		French government says it will ask VW to reimburse subsidies that the state had provided to encourage consumers to buy "cleaner" cars.
8 October 2015		8.5 million vehicles are called out of the system, of which 2000 from China. Police investigation at VW HQ in Germany happens on the same day.
9 October 2015		VW USA Director appears at the Congress.
15 October 2015		Police investigations launched at VW Italy HQ.
18 October 2015		Police investigations launched at VW France HQ.
28 October 2015		The EU mulls the new tests for NOx emissions.
2 November 2015		EPA says VW has also cheated on more powerful engines (Porsche).
8 November 2015		Several VW employees admit having tampered CO ₂ emissions data on VW vehicles.
9 November 2015		VW sends a letter to its clients who have 2.0L TDI and 3.0L TDI engines.
2016		A California judge asks VW to present a scheme before April 2016 by which vehicles will meet all norms.
1 January 2016		Calling back of vehicles to continue throughout 2016.
4 January 2016		The US department of Justice and the EPA launch a civil case against VW. They call for a fine of over 20 billion dollars.
11 January 2016		VW extends all warranty, offers to repair vehicles as donate 1000 dollars to all inconvenienced car-owners.



19 February 2016



In France, investigations launched on the basis of “serious cheating”.

2 March 2016



VW releases a communiqué tracing all the events. According to this document, Martin Winterkorn had been informed about the problem in May 2014.



The investigations on VW sold in France confirm that the frauds were intentional.

12 March 2016



A former VW employee accuses the carmaker of destroying all proofs.

II. Uncovering the US investigations

Most media channels provided conventional analysis based on the description of a series of steps that allowed Volkswagen to carry out the frauds, and its effects on the financial and economic situation of the carmaker. Although such analysis holds ground, it remains partial and incomplete as it ignores the strategic aspect of the affair. In fact, there are a set of elements that lead the reader to think that the VW frauds had been orchestrated by the USA as an information war in order to strengthen their economic and political position vis-a-vis the European Union.

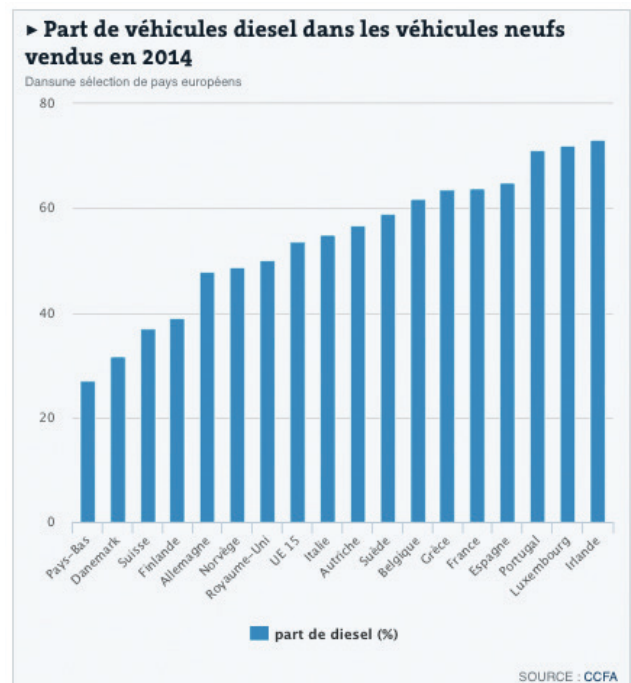
A. Biased approach

The first point is that the ICCT's and the CAFEE's approach, as well as the EPA's approach are biased. The question one raises is: if gas emissions by vehicles is a global problem, why test only diesel cars? The reasons may be hiding behind the fact that in the US, only 5% of the vehicles², run on diesel whereas the figure is as high as 53.6% in the European Union³.

One infers therefore that the initial choice of the ICTT is all but neutral: attacking Volkswagen's diesel cars is to attack the technological advantage the European auto-industry enjoys over its American competitors.

² www.lemonde.fr/economie/article/2014/01/14/aux-etats-unis-pays-du-tout-essence-le-diesel-gagne-du-terrain_4347589_3234.html

³ www.lemonde.fr/les-decodeurs/article/2015/09/23/la-france-toujours-amoureuse-du-diesel_4768746_4355770.html



Share of diesel cars in total sales in 2014. Countries in ascending order: the Netherlands, Denmark, Switzerland, Finland, Germany, Norway, UK, EU-15, Italy, Austria, Sweden, Belgium, Greece, France, Spain, Portugal, Luxembourg, Ireland. Source: CCFA

In fact, the VW scandal has an impact on all diesel vehicles. For the European car industry, the costs are enormous: In the short term, the image of car-makers takes a beating, it has to undergo more tests to regain trust and even call back cars as an emergency measure. In the medium term, it faces intense scrutiny from the media and NGOs and will be forced to reduce its dependency on diesel fleets in the future. On the other hand, American carmakers are convinced their European rivals will not be able to play the “clean diesel” card in order to enter the US market. It makes sense to underline that VW is accused



on having violated the Clean Air Act (1970), a legislation that had two aims right from its inception: protection of public health as well as the interests of the US car industry. “Abroad - in Japan and in Europe – (the Clean Air Act) were quickly seen as protectionist measures as, technologically and economically, American vehicles were better suited to anti-pollution techniques (of that period) as compared to their Japanese and European rivals”⁴. Even today, the specialisation of US carmakers on petrol engines falls in line with the US preference for the fight against NO_x emissions over the fight against CO₂ emissions.

B. Faulty Methodology

The methodology used by the ICCT and the Center for Alternative Fuels Engines and Emissions CA-FEE has inherent faults. Not only is the number of vehicles tested (three in this case) surprisingly low, several aspects of the tests raise justifiable questions⁵.

1. Test protocols at the EPA

It is useful to learn about the protocols of tests at EPA. These tests are carried out under controlled conditions in a laboratory by using a trial procedure that has been fixed by the Federal Law. Carmakers test their own vehicles, which is generally their pre-production prototype and send the results to the EPA. The EPA examines the results and carries out counter-tests of its own on 10% to 15% of the criteria results provided by carmakers at the National Vehicles and Fuel Emissions Laboratory⁶.



The test protocols use criteria including accelerations, slowing downs and continuous drives at different gears. The speeds must be within a range of reference figures. Under laboratory conditions, the vehicles are placed on roller sets.

Test cycles in the USA (FTP-75 & US06) and in Europe (NEDC) are different

Table 3.4: Comparison of characteristics of light-duty vehicle certification cycles

Cycle	FTP-75	US06	NEDC
Cycle duration [sec]	1877	596	1180
Cycle distance [km]	17.77	12.89	10.93
Avg. vehicle speed [km/h]	34.08	77.84	33.35
Max. vehicle speed [km/h]	91.25	129.23	120.00
Avg. RPA ³⁾ [m/s ²]	0.23	0.52	0.15
Characteristic Power [m ² /s ³]	1.65	4.55	1.04
Share [%] (time based)			
- idling (<=2 km/h)	19.6	7.2	24.8
- low speed (>2<=50 km/h)	59.3	18.8	53.9
- medium speed (>50<=90 km/h)	19.5	18.0	14.2
- high speed (>90 km/h)	1.6	56.0	7.0

However, in Europe, vehicles are tested and certified by approved laboratories before entering the market. This test cycle as defined by the European Directive 70/220/CEE has been followed in the European Economic Community since July 1973. As the conditions under which vehicles are used have changed, experts from the EU, Japan and India are working to replace it with a new set of globally viable cycles: the Worldwide harmonized Light vehicles Test Procedures (WLTP).

⁴ *La révolution automobile*, J. P. Bardou, J. J. Chanaron, P. Fridenson, J. M. Laux, Albin Michel, 1977.

⁵ Unless otherwise mentioned, the images and screen captures presented here come from the CAFEE report.

⁶ The following images have been taken from the website of the EPA.



2. The Vehicles Tested

The ICCT had selected 3 vehicles

Vehicle		A	B	C
Brand		VW	VW	BMW
Model		Jetta Sportwagen	Passat	X5
				
Mileage at test start [miles]		4,710	15,226	15,031
Fuel		ULSD	ULSD	ULSD
Engine displacement [L]		2.0	2.0	3.0
Engine aspiration		Turbocharged / Inter-cooled	Turbocharged / Inter-cooled	Turbocharged / Inter-cooled
Max. engine power [kW]		104@4200 rpm	104@4200 rpm	198
Max. engine torque [Nm]		3200@1750 rpm	3200@1750 rpm	–
Max. after-treatment technology		OC, DPF, LNT	OC, DPF, urea-SCR	OC, DPF, urea-SCR
Drive train		2-wheel drive	2-wheel drive	4-wheel drive
Applicable emission limit	U.S. EPA	T2B5 (LDV)	T2B5 (LDV)	T2B5 (LDV)
	CARB	LEV-II ULEV	LEV-II ULEV	LEV-II ULEV
EPA Fuel	City	29	30	19
Economy	Highway	39	40	26
Values [mpg]	Combined	33	34	22
EPA CO2 Values [g/km]*		193	186	288

* EPA advertised fuel economy and CO2 emissions values for new vehicles in the US (www.fueleconomy.gov)

Vehicle A (VW Jetta) and vehicle C (BMW X5) had been rented from two different agencies and vehicle B (VW Passat) had been obtained from a private individual. Vehicle A (VW Jetta) had a mileage of 7580 km. Vehicle B's (VW Passat) mileage was 24503 km and vehicle C's (BMW X5) was 24190 km.

The tests focussed only on just three cars.

An analysis of data at EPA's website www.fueleconomy.com provides information about the market share (MS) of diesel vehicles approved each year.

	2012	2013	2014	2015
Diesel	17	22	35	39
Total	1153	1185	1228	1284
MS (%)	1.47%	1.86%	2.85%	3.04%

Until 2014, only European diesel cars were approved by the EPA. In 2014, 5 American models were approved for the first time. They were Jeep Grand Cherokee 2WD and 4WD, RAM 1500 2WD and 4WD and Chevrolet Cruze. One may therefore question the validity of a study that only focuses on three German models.



3. The infrastructure of Tests

In order to carry out real world tests, the vehicles had to be fitted with specialised measuring equipment:



Figure 3.21: Vehicle A instrumentation setup



Figure 3.22: Vehicle B instrumentation setup



Figure 3.23: Vehicle C instrumentation setup

The additional weigh that each vehicle carried in presented in the table below

Vehicle	A	B	C
Brand	VW	VW	BMW
Model	Jetta Sportwagon	Passat	X5
Weight of additionally fitted measuring equipment	305 kg	314 kg	533 kg

The joints between measuring equipment and the exhaust pipes prevent the closing of the car boots:

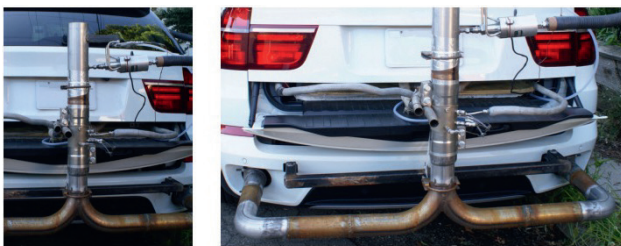


Figure 3.26: Exhaust adapter setup for Vehicle C, left: 3.5" exhaust flow meter (EFM), right: joining double vehicle exhaust stack into exhaust transfer pipe

Contrary to the test protocols as laid down in the federal law and implemented by the EPA, these real world-testing equipment increased the excess weight on the cars considerably.

As the added weight sits on the boot of the vehicle, the rear end of the car is much heavier than the front part of the car. This has an impact on the motor capacity of the front wheels of VW Jetta and Passat models. Meanwhile, to hold together all the added equipment fitted in the car and the exhaust pipes, the tailgate cannot be closed. This changes the ergonomics of the vehicles and thereby, its performance coefficient. This affects the consumption levels of the vehicle.

4. What real world tests were made of

Five trial itineraries were set up in three high-population areas in California: Los Angeles, San Diego and San Francisco. This allowed for the tests to include diverse topologies and driving habits exactly as in real life conditions under which vehicles run in these cities

The itineraries fell into four categories:

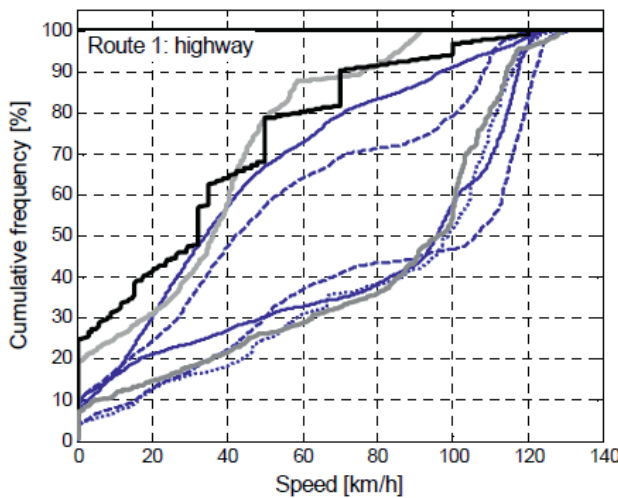
- **highway operation:** high speed driving on highway during office hours with frequent stop and go
- **urban driving:** urban area driving at low speeds and frequent stop and go
- **rural driving:** driving in rural areas at medium speed, and with some stops in the suburban parts of metropolitan cities.
- **uphill/ downhill driving:** Driving on roads with a slope compared to usual roads, at lower and higher speeds
- Each vehicle is driven on a different route

As the traffic conditions were not the same on each route, the laboratory compared the cumulative speeds during each test drive with the test protocols defined by the US Federal Law (FTP-75 & US06) and the European regulations (NEDC).



Table 3.15: Vehicle test matrix

Route	Vehicle A	Vehicle B	Vehicle C
Route 1: highway	2	2	1
Route 2: urban (Los Angeles)	2	2	2
Route 3: rural - uphill/downhill	2	2	3
Route 4: urban (San Diego)	2	2	
Route 5: urban (San Francisco)		1	2
Cross-State Trip CA to WA		X	



The test protocols in real world conditions do not allow for a fixed sequence of tests as each drive is unique and is composed of a set of variables

- Speeding and slowing down phases
- Climate and weather conditions
- Road Traffic
- The operator who adapts to a given surrounding at a given moment
- Other drivers
- etc.

5. Fuel used during the tests

The diesel used during the tests was Ultra-Low Diesel Fuel (ULSD). The fuel for vehicles A and B came from the same lot, purchased at an oil station for trucks in Fontana, CA. The fuel used for test drives on Vehicle C was purchased at Quick Gas Valero oil-station in Ontario, CA. The vehicles drove from the State of California to the State of Washington. During this drive, the ULSD used in vehicle B was purchased exclusively at Shell oil-stations on Highway I-5.

The three vehicles did not use the same fuel during the tests. Additionally, there is no information of the fuel used by the EPA in its report and this eliminates the possibility of detecting any differences. This becomes an issue as the quality of fuel and fuel additives used by oil companies and distributors influences the condition of engines (fuel injectors and valves)⁷. The report has no further information on the kinds of fuels used on the three test vehicles by their previous drivers.

6. Conclusion

The report puts forward various differences between the certification measures by the EPA and the real world tests carried out by CAFEE, based on the kind of vehicles, their itineraries and their analysis. The CAFEE report does not scientifically demonstrate the use of faulty software that twists the results by cheating the certification standards of the EPA.

The protocols, standards and criteria of tests carried out by CAFEE are different from the EPA tests, the latter being defined by US federal law. It is therefore not abnormal that the results are different.

By and large, the general impression is that the ICCT and the CAFEE found what they wanted to find.

C. The Storytelling campaign

The Volkswagen case has all the key elements of the art of storytelling: a small independent NGO spots a problem almost by chance. It then asks a small research centre or a small university to find out the cause of the problem. The researcher is modest, works in a small team of four and has a budget of 50000 USD, and within a few months, uncovers the biggest trickery of one of the biggest and growing multi-nationals.

Several newspapers had adopted a rather fable-like tone to narrate a story that is very fitting of a Hol-

⁷ Source: Total



lywood plot. Four examples will point out at the similarities between articles across newspapers in various countries:

- 23 September 2015, Reuters publishes an article “West Virginia engineer proves to be a David to VW’s Goliath”: “Daniel Carder⁸, an unassuming 45-year-old engineer with grey hair and blue jeans, appears an unlikely type to take down one of the world’s most powerful companies. But he and his small research team at West Virginia University may have done exactly that, with a \$50,000 study which produced early evidence that Volkswagen AG (VOWG_p.DE) was cheating on U.S. vehicle emissions tests, setting off a scandal that threatens the German automaker’s leadership, reputation and finances.”
- The very same day, the Daily Mail⁹ published an article titled: “How West Virginia engineer exposed Volkswagen’s catastrophic environmental fraud and wiped BILLIONS off company’s shares”, and it used the Reuters article as its source: “An unassuming West Virginia engineer has been identified as the man responsible for exposing Volkswagen’s catastrophic environmental fraud that promises to go down in corporate history as one of the worst and most harmful of its kind.”
- On the same day, French business daily Les Echos¹⁰ published an article with the following title “Daniel Carder: The man who shook Volkswagen”: “At the age of 45, Daniel Carder, researcher at the University of West Virginia is the man who shook the biggest European car-maker. Armed with a study that cost him just 50000 dollars, and with the help of four colleagues, he proved that the

data on emission levels of Volkswagen’s diesel engines had been tampered.

- Similarly, the French weekly L’Obs¹¹ used the Reuters article as a base and published an article with the following title: “Daniel Carder, the man who shook Volkswagen”: “With his greying hair, Daniel Carder hardly looks like the white knight who can shock one of the biggest companies of the world. However, this is exactly what the 45 year old man and his team of four researchers at the University of West Virginia have done, armed with a study that cost just 50000 dollars that established the tampering of emission levels of Volkswagen’s diesel motors”.

None of these newspapers investigated into this narrative. It would have been worthwhile to reveal that the Climate Works Foundation, the main funding agency the ICCT¹² (8 920 000 USD out of the total of 9 150 891 USD in 2012, then 8 205 000 USD out of the total 11 266 298 USD in 2013)⁶, receives subsidies from the Ford Foundation¹³. These very connections between the three organisations are worthy of investigative journalism.

More importantly, the landing page of CAFEE’s website, underwent several changes in the past two years. On the 27th February 2014, on could read that the CAFEE was conducting tests for a variety of companies and organisations, including Ford and General Motors:

Achievements

- CAFEE developed the world’s first mobile on-board emission testing system, an achievement born from the [Environmental Protection Agency’s](#) dictate that heavy-duty equipment manufacturers comply with emissions standards while the vehicle is in actual use rather than in static lab tests.
- CAFEE features one of the few engine labs in the country recognized by both the stringent [California](#) and [Texas](#) air quality boards, where reporting requirements must be accurate within $\pm 0.5\%$.
- For the U.S. Department of Transportation, CAFEE developed discrete and continuous emission and performance models, including the well-received Integrated Bus Information System (IBIS), a life-cycle cost model that incorporates capital, maintenance, and operating expenses to provide a holistic, realistic view of public transportation technologies costs.
- CAFEE’s laboratories conduct high-level research for a variety of companies and organizations, among them fuel suppliers (BP, Chevron), engine manufacturers (Caterpillar, Cummins, Detroit Diesel), vehicle manufacturers (Ford, General Motors), and federal and state agencies that regulate engine emissions.
- CAFEE built the largest national database of heavy-duty vehicle exhaust emissions and fuel efficiency data. The transit bus portion of which is accessible to the public as part of the IBIS website.

⁸ www.reuters.com/article/us-usa-volkswagen-researchers-idUSKCN0RM2D720150924

⁹ www.dailymail.co.uk/news/article-3245167/West-Virginia-engineer-proves-David-VWs-Goliath.html

¹⁰ www.lesechos.fr/23/09/2015/lesechos.fr/021348208497_daniel-carder--l-homme-qui-a-fait-chanceler-volkswagen.htm

¹¹ tempsreel.nouvelobs.com/monde/20150923.REU5181/daniel-carder-l-homme-qui-fait-chanceler-volkswagen.html

¹² www.theicct.org/sites/default/files/2013_ICCT_AFS.pdf

¹³ www.climateworks.org/about-us/partners/foundation-partners/

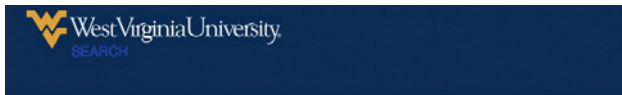


This information was still available on 1st January 2016 :

Learn About Our Capabilities

CAFEE research appeals to both equipment manufacturers, who must certify their vehicles to meet government emissions performance standards, and government agencies, which are charged with enforcing such regulations. The center has received research funding from the U.S. Department of Energy, U.S. Department of Transportation, the Environmental Protection Agency, major engine manufacturers, the California Air Resources Board, and several state and municipal transit agencies. CAFEE's laboratories conduct high-level research for a variety of companies and organizations, among them fuel suppliers (BP, Chevron), engine manufacturers (Caterpillar, Cummins, Detroit Diesel), and vehicle manufacturers (Ford, General Motors).

However, it was removed on the 8th of February 2016. There is not trace of the two US carmakers either on this website.



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Did the information go missing just by chance?

D. When the Judiciary serves the interests of the economy

The attitude of US authorities reveals that their objectives lie far away from public health concerns. In the civil case initiated on the 4th of January 2016 against Volkswagen, the US department of Justice and the EPA imposed a fine of more than 20 billion dollars. This implies a fine of at least 32500 dollars per vehicle, 2750 dollars per software¹⁴. The amounts are highly disproportionate compared to previous cases of fines against carmakers. In 2014, Toyota was imposed a fine of 1.2 billion dollars, the highest ever in the auto industry, for having "wilfully reduced the damages caused by defects noted by its own teams in some its own cars". It had emerged¹⁵ that "at least five people had died in accidents that resulted from uncontrolled acceleration." On the 17th of September 2015, that is one day before the Volkswagen case emerged, General Motors faced a fine 900 millions dollars¹⁶ "for having withheld information regarding mechanical defects that had resulted in the death of 124 deaths and hundreds of injured."

The treatment meted out therefore changes according to the carmaker. Toyota's fine is higher than the fine for General Motors although the number of deaths attributed to the former is 25 times lower than the ones attributed to the latter. Similarly, the fine imposed on Volkswagen is more than 25 times higher than the one imposed on General Motors although no deaths have been attributed to the German carmaker. Based on such facts, one may reasonably conclude that the motivation of US authorities is as influenced by a desire to weaken it as it is by a desire to prevent further frauds.

The legal cases held against Volkswagen are to be seen in a much wider context: the rising number of fines imposed by US authorities on foreign com-

¹⁴ www.lemonde.fr/automobile/article/2016/01/04/moteurs-truques-les-etats-unis-poursuivent-volkswagen-aucivil_4841559_1654940.html

¹⁵ www.lesechos.fr/20/03/2014/LesEchos/21651-073-ECH_toyota-ecope-d-une-amende-historique.htm

¹⁶ www.lesechos.fr/17/09/2015/lesechos.fr/021334765464_rappel-de-vehicules---une-amende-de-900-millions-de-dollars-pour-gm.htm



panies and particularly on European companies. In the past years, Alstom, BNP Paribas, Crédit Suisse, Deutsche Bank, Barclays and HSBC had to face fines from the US Department of Justice. It is often in the name of anti-corruption measures that the Department of Justice initiates legal actions. In fact, the perimeter of the application of Foreign Corrupt Practices Act (FCPA) has been extended to a number of foreign companies since 1998¹⁷. The figures are staggering: “by the end of the year 2014, an OECD report¹⁸ mentioned that since the USA had been the starting point for more than 50% of the sanctions taken against cross-border corruption.” Although US companies have faced fines too, it is noteworthy that out of the “10 biggest fines imposed on companies in the USA, 7 were imposed on non-American companies.”¹⁹. Add to this a set of legal texts (the Helms-Burton and D’Amato laws, the Dodd-Frank Law, the Foreign Account Tax Compliance Act, etc.) that give extra-territorial powers to the US department of Justice in various fields²⁰. It is also worthwhile to note that for the companies facing fines, the damages are not just pecuniary. Very often, in order to reduce the amount of the fines, they have no other choice but to hand over several key and confidential documents to the US Department of Justice and even accept the long-term presence of an “independent” controller whose duty is to “cross-check that US compliance rules are being respected.”²¹. This increases the real risks of industrial spying.

E. Perfect Timing

The last point to be taken into account is the time at which the case erupted. It is so well orchestrated that it is hard to believe that all of this has happened just by chance.

1. *The Economic Arena*

When the case was made public, Volkswagen had just become the world’s biggest car maker²². This coincides with another previous case: in 2014, Toyota faced fines of up to 1.2 billion dollars soon after the Japanese car maker overtook General Motors which had been the number one car-maker for 70 years²³.

In fact, for the past several years, Volkswagen had been trying to increase its share in the US market. In 2011, it had inaugurated a factory in Chattanooga (Tennessee) in the presence of the Secretary of State for Transport²⁴ of Barack Obama and had focussed its communications on “clean diesel”²⁵. Meanwhile, the US car brands were coming out of the serious crisis of 2008-2009 that had required state intervention²⁶. By 2015, it had registered its best performance since 2000²⁷. The Volkswagen case erupted at a bad time for the German car-maker: it was being destabilised in a market that had started growing and in which it had made massive investments. But for its competitors, this was the best time to weaken it.

Add to this that diesel consumption has been on the rise in the US. “Between 2012 and 2013, in the US market, diesel car sales rose by 33%. According to HIS, the market share for diesel vehicles would stand at 8% by the end of the decade (2010)”²⁸.

²² www.lefigaro.fr/societes/2015/07/28/20005-20150728ARTFIG00047-volkswagen-ravit-le-titre-de-premier-constructeur-mondial-a-toyota.php

²³ www.lefigaro.fr/flash-eco/2015/10/26/97002-20151026FILWWW00013-toyota-redevient-leader-devant-volkswagen.php

²⁴ www.lesechos.fr/industrie-services/automobile/021341655201-quand-un-ex-ministre-dobama-encensait-les-moteurs-diesel-de-volkswagen-1157661.php

²⁵ bigbrowser.blog.lemonde.fr/2015/09/23/ces-publicites-dans-lesquelles-volkswagen-vantait-son-diesel-propre/

²⁶ www.lefigaro.fr/societes/2013/07/05/20005-20130705ARTFIG00805-l-incroyable-renaissance-de-l-automobile-americaine.php

²⁷ www.challenges.fr/entreprise/industrie-automobile/20160106.CHA3513/annee-record-pour-l-industrie-automobile-americaine-en-2015.html

²⁸ www.lemonde.fr/economie/article/2014/01/14/aux-etats-unis-pays-du-tout-essence-le-diesel-gagne-du-terrain_4347589_3234.html

¹⁷ www.fondation-res-publica.org/Une-offensive-judiciaire-globale_a950.html

¹⁸ www.challenges.fr/monde/ameriques/20150924.CHA9760/volkswagen-bnp-alstom-quand-chevenement-tacle-le-protectionnisme-judiciaire-americain.html

¹⁹ Idem.

²⁰ www.fondation-res-publica.org/Une-offensive-judiciaire-globale_a950.html

²¹ Idem.



One may therefore presume that the Volkswagen case would indirectly benefit the US carmakers at the cost of Volkswagen's troubles.

It is worth underlining that the EPA published its report just a day after the Frankfurt Auto Show began in 2015. Volkswagen was surrounded by a gigantic media pool, which had anyway decided to cover the Auto Show. This confirms that the US agency wanted an immediate and damaging media impact. It is safe to conclude therefore that its goals were not purely related to uphold the values of the judiciary.

2. *The Political Arena*

The TAFTA negotiations had begun in July 2013. And in such a context, the Volkswagen case carries two advantages for the USA.

One of the main advantages of the Europeans in these negotiations is a widely shared belief that US norms are lenient, particularly regarding the environment and public health, compared to European norms. But the VW case presents Europe in bad light and lead the world to believe that in reality, European norms are too lax. The impact is huge, particularly as it is the German reputation around the world of being strict and disciplined that is attacked. Europeans find themselves weakened, as indicated by the European Commissioner for Commerce, Cecilia Malmström²⁹: "I had to spend a lot of time convincing the Americans that in Europe, we have strictest environmental norms, but now it appears that we are not perfect."

According to a study by the Petersen Institute of International Economics, an American think tank, European carmakers would have swallowed "almost three fourths" of the annual profits worth 18 billion euros from TAFTA³⁰. The weakening of VW and its cancelling of all expansion plans in the US and the general bad reputation of diesel seem to happen at the same time.

3. *The Societal Arena*

The Volkswagen case broke out just two months before COP21 that took place in Paris. For many years, the USA has faced criticism, particularly from the Europeans, for its reluctance to fight against global warming. They haven't signed the Kyoto protocol and are blamed for the failure of the Copenhagen Summit as they signed a parallel agreement with China.

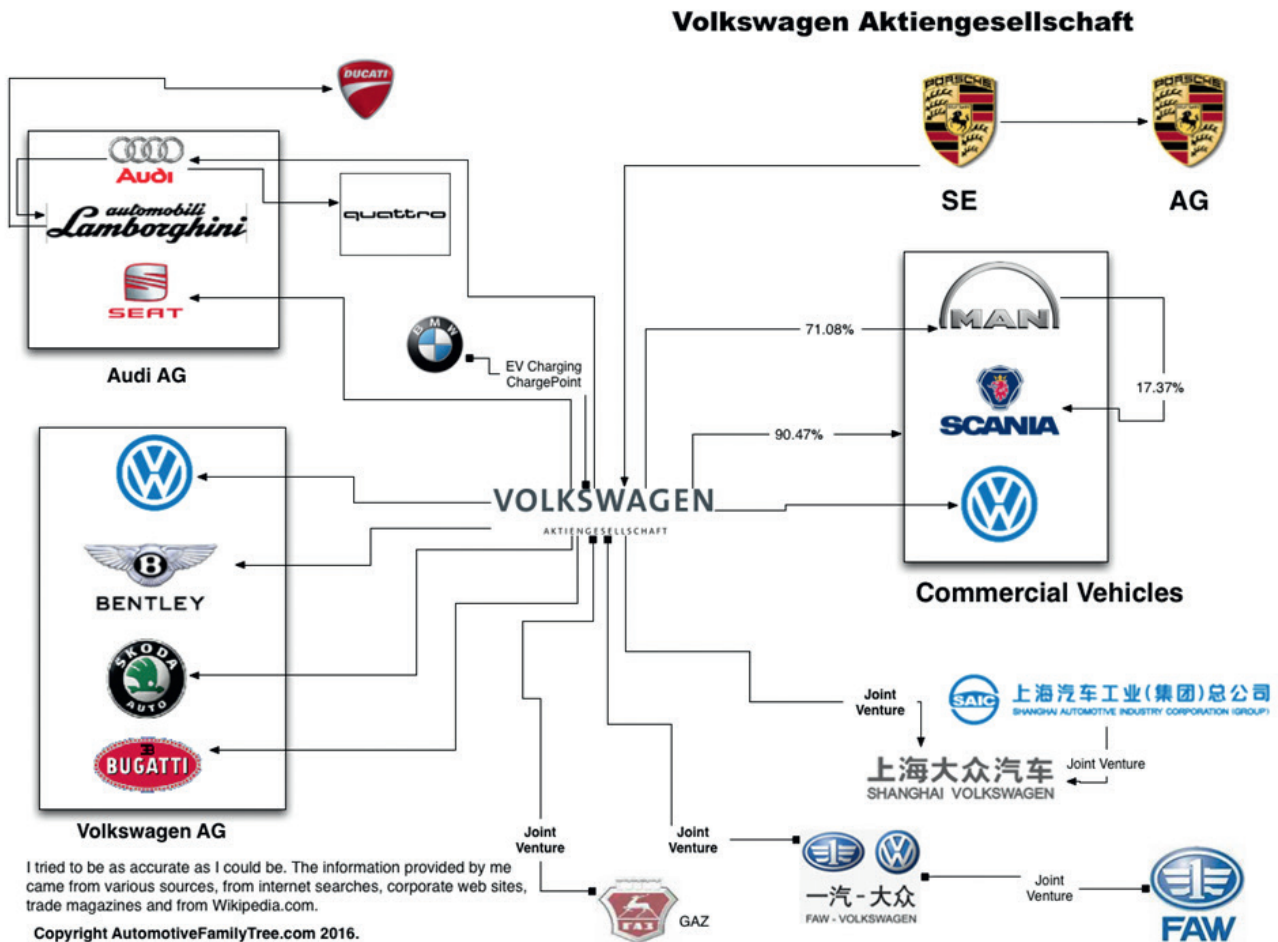
With a masterstroke, the VW case shifted the debate from the field of greenhouse gas emission to the field of public health and on the other hand, block all capacity of Europeans to hold anything against the USA on the environmental field. It therefore strengthened the position of the USA just before COP21.

²⁹ www.la Tribune.fr/economie/international/le-ttip-menace-par-l-affaire-volkswagen-510649.html

³⁰ www.euractiv.fr/section/transport/news/ttip-les-constructeurs-automobiles-europeens-devraient-rafler-la-part-du-lion/



Annexe : cartographie détaillée du groupe Volkswagen







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