

# New Emission Legislation of Iran

## Getting very close to EU levels of UFP in one big step



**Soot-free Tehran**

International workshop on solutions for eliminating diesel and gasoline emitted soot from urban air

Date: September 7<sup>th</sup>, 2016

Venue: Sharif University of Technology

United Nations Educational, Scientific and Cultural Organization

Sharif University of Technology

ISUZU

TÜV SÜD

The poster features a stylized graphic of a hand holding a cityscape, with a network of lines connecting various points. Logos for the United Nations Educational, Scientific and Cultural Organization, Sharif University of Technology, ISUZU, and TÜV SÜD are displayed at the bottom.



# TÜV SÜD

## Auto Service

Presented by Mr. Karsten Mathies  
TÜV SÜD, Germany  
Moderator of Iran's DPF legislation stakeholder process  
September 7<sup>th</sup>, 2016



Choose certainty.  
Add value.

***Soot-free Tehran***  
International workshop on solutions for eliminating Diesel and gasoline emitted soot from urban air



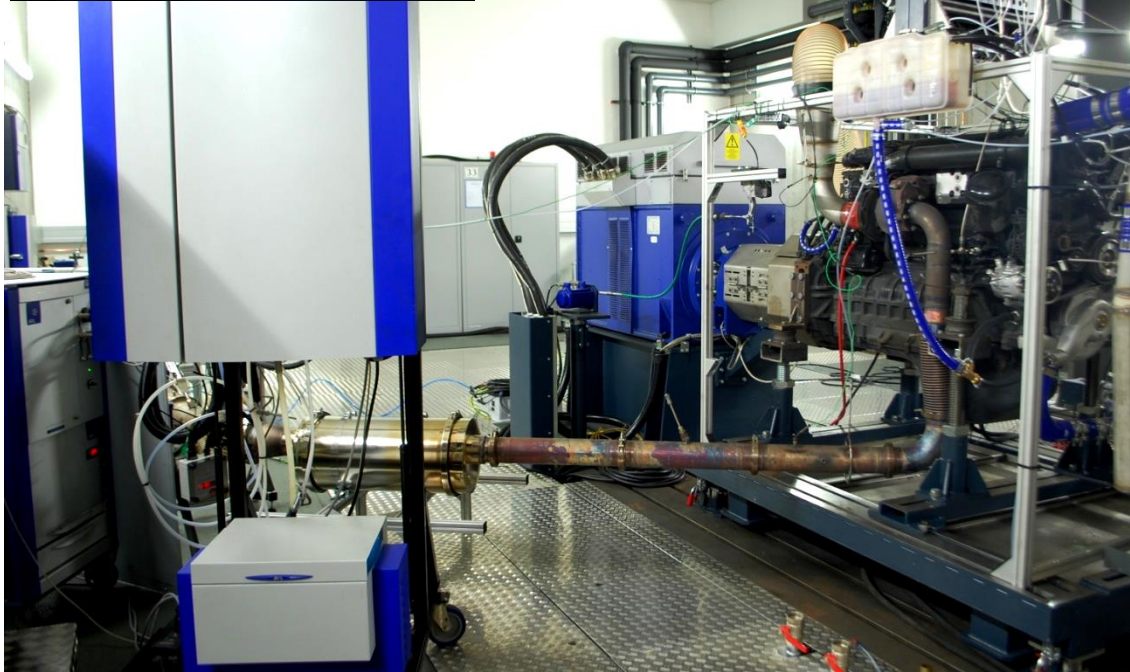
Private Public Partnership for elimination of ultrafine particle emissions in Iran

Proposals for Detailing the Cabinet of Ministry's Decision

Compression Ignition Commercial Vehicles DPF Proposal  
Regulation for **new Heavy Duty Vehicles**

## The Tool: Engine test bench with EURO VI PN Particulate number counting

Automotive Test Center TÜV SÜD  
Pfungstadt



- No IRAN IV engine family certified yet?
- IRAN IV DPF Trial Test runs in Pfungstadt Germany
- EURO VI Level Equipment, ETC transient Test with PN Particulate counter
- UFP control means particulate number counting: Instrument and process from EURO VI
- DPF Filtration efficiency runs



Tehran, 2015



Istanbul, 2015

## Moderation and Guidance Document Proposal by TÜV SÜD : Start Begin of 2015

قوانین جدید آلاینده‌ی موتورهای دیزل سنگین با  
کاربری زمینی یا متحرک

Stakeholders		
OEM International	OEM IRAN	Associations Authorities
Daimler Scania Isuzu	Iran Khodro Diesel Saipa Diesel Bahman	DOE MOI AQCC VERT Iran manufacturing Association

قوانین جدید آلاینده‌های موتورهای دیزل سنگین با کاربری زمینی و متحرک  
همکاری بخش خصوصی و عمومی برای کاهش انتشار ذرات فوق ریز در ایران  
سند راهنما برای جزییات مصوبه هیات وزیران  
استفاده از فیلتر جاذب ذرات معلق خودروهای تجاری اشتعال تراکمی برای وسایل نقلیه  
جدید

سند جزییات قانون فیلتر دوده سازمان حفاظت محیط زیست  
آلاینده‌های وسایل نقلیه سنگین در ایران توسط فرایند ذی نفعان

کارستن ماتیس  
شرکت بازرسی فنی - هسن  
مرکز آزمون زیست محیطی و فناوری  
خیابان ۳۳۵ - ورنر - زیمنس  
پفونگشتات - ۶۴۳۱۹۵  
آلمان

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Pfungstadt, Germany, February 29th, 2016

## Guidance Document for detailing the Heavy Duty Emission Legislation for the Introduction of DPF in IRAN from the Stakeholder Process.

- Based on intense technical discussions and discussed solutions
- Focused on UFP Ultra-Fine Particle Emission Control by newest methods
- Took hardships away from the industry, by allowing OEM or Option Fit DPF solutions
- Tailored to Iran Fuel quality & plans
- Considering Iran altitude conditions for emission measurements and engine application
- Does not invent something new, but takes known European emission certification practices
- Promotes research and development -> leads into the future
- Translates High Level decisions into technical directives that are understood by engineers
- Clarification for Option Fit



## Certification of Light Duty Commercial Diesel Vehicles: Van – Pickup N1, N2

- Certification on Chassis Dyno in NEDC with PN measurement and Limits
- Based on EURO IV + DPF; alternate EURO 5b Approval accepted
- Agreement reached in Stakeholder Meeting: agreement with Isuzu and even Daimler VAN
- Guidance document can be published immediately

## 2016 Recent Change in German Emission- Whole vehicle Type Approval Authority

- Did not have any emission measuring & test equipment
- ***Buerocratic approach*** with quality focus on paperwork correctness

Changed to

- Takes an engineering approach to ***challenge the manufacturer about the real emission performance of the vehicles***
- Authority ordered PEMS systems for „Real driving Emissions“ RDE test and also an emission chassis dyno
- Contracts TÜV to perform tests according to directives and new: also special focused emission tests, before issuing new approvals

## Recommendations and Summary



- In the stakeholder process we have seen solutions from all manufacturers to comply with the new Iran emission legislation – given some would have to be developed
- The Emission cabinet of ministries decision plus the stakeholder process plus lots of F2F meetings was international state of the art process for emission legislation.
- Bypassing or ignoring this process should not be rewarded with any concession
- Emission legislation needs focus to improve **Air quality AND Economic Growth** -> moves to more complex deals
- Publish the certification new legislation guidance paper
- Strengthen the technical expertise in Type Approval TA backed by Iran National “Know How” Emission laboratory
- Increase resources in emission type approval and focus more towards Real World Emissions
- Accompany New DPF Legislation with PTI Periodical Technical Emission Inspection new measures: namely “CITY VEHICLES”



## Imagine.....

- Please imagine the chances and attractiveness of Tehran and of course IRAN with clean air...
- How much this is worth and how this would promote economic growth, employment, quality of life...



## ***Soot-free Tehran***

International workshop on solutions for eliminating Diesel and gasoline emitted soot from urban air

September 7th, 2016 Sharif University, Tehran, Iran

**Discussions are welcome**  
**Thank you for your attention**

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## Reference Material TÜV SÜD

- PTI Periodical Technical Inspection



## 150 YEARS | INSPIRING TRUST

### **Inspiring trust since 1866**

The year 2016 marks the 150th anniversary of TÜV SÜD. Since 1866, the company has been partnering businesses and inspiring people to trust in new technologies.

Today, TÜV SÜD has grown into an international service company with global representation in over 800 locations, and with over 50 per cent of its employees working outside Germany.

In the decades to come, it will continue to make the world a safer place as a future-oriented company shaping the “next practice” in safety, quality and sustainability.

## MOBILITY



- **Employees:** 5,539
- **Sales Revenue:** € 638.8 million
  - **Auto Service:** 100.0 %

## INDUSTRY



- **Employees:** 8,164
- **Sales Revenue:** € 945.4 million
  - **Industry Service:** 63.6 %
  - **Real Estate Service & Infrastructure:** 36.4%

## CERTIFICATION



- **Employees:** 6,061
- **Sales Revenue:** € 556.7 million
  - **Product Service:** 74.8 %
  - **Management Service:** 25.2 %

## Automotive R&D and manufacturing



**Services for automotive suppliers and Original Equipment Manufacturers (OEM) include:**

- Component and full vehicle testing (including emissions)
- Homologation, certification and international regulatory compliance management
- Quality & safety services (including functional safety)

## Transportation



**Services for repair shops and car dealerships, leasing companies and fleet management companies include:**

- Vehicle and used car management
- Damage assessments
- Value appraisals
- Quality and process optimization
- Performance audits
- System certification
- Training

## Road safety & traffic



**Services for government transport authorities include:**

- Legal framework advisory
- Development of periodic transport inspection solutions
- Transport research and advisory
- Driving Licence

**Services for private vehicle owners include:**

- Periodic technical inspections
- Used vehicle assessment & valuations
- Expert reports and damage assessments
- Issue of emission stickers

## Focus on commercial vehicle industry



## Transportation and commercial vehicle have special requirements – we have experts & solutions

- More than **300 experts**
- We provide customized, modular and pragmatic solutions via the following Segments
  - Homologation / type approvals
  - Periodical Testing Inspection
  - Value Appraisals
  - Damage Assessments<sup>1)</sup>
  - Load Securing

<sup>1)</sup> e.g. standardized, multilingual buy back appraisals in > 20 countries for MAN





Auto Service

## TÜV SÜD Auto Service Germany



### TÜV SÜD Auto Service Statistics (2015):

- Holdings: Subsidiary of TÜV SÜD Auto Service and Auto Partner offices
- Turnover: **€ 679** million
- **4,700** qualified employees
- **100** qualified Auto Partner offices (Franchise)
- **406** service-centers
- **16.000** partner-garages (PTI)
- **5,9 million** vehicle inspections per year (germany wide)
- **485,000** driving tests per year

### Range of Services:

- Periodical technical inspections
- Periodical emissions tests
- Driving licence

### Clients:

- Private clients
- Commercial clients





## ATISAE Statistics:

- 100% TÜV SÜD
- 34 PTI Stations
- 990.000 vehicle inspections per year

## Range of Services:

- Vehicle inspections and service
- Sales and service tests
- Automotive Consulting

## Clients:

- Private clients
- Commercial clients



## TÜV TURK Statistics (2014):

- Subsidiary of TÜV SÜD Auto Service and others
- Turnover: € 350 million
- 3,500 qualified employees
- 203 test centers
- 100 mobile test centers
- > 10 million vehicle inspections per year

## Range of Services:

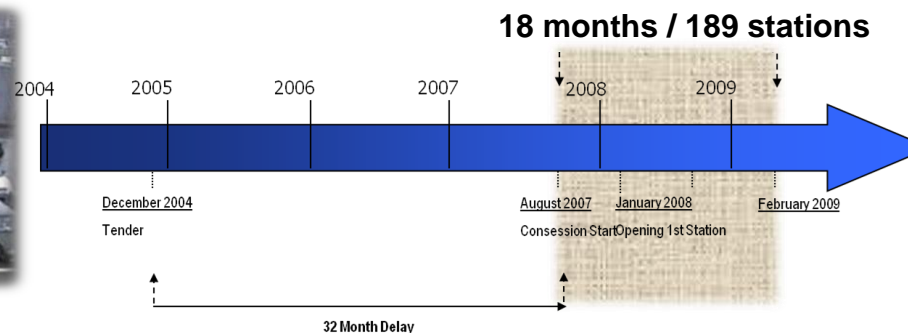
- Periodical technical inspections
- Periodical emissions tests

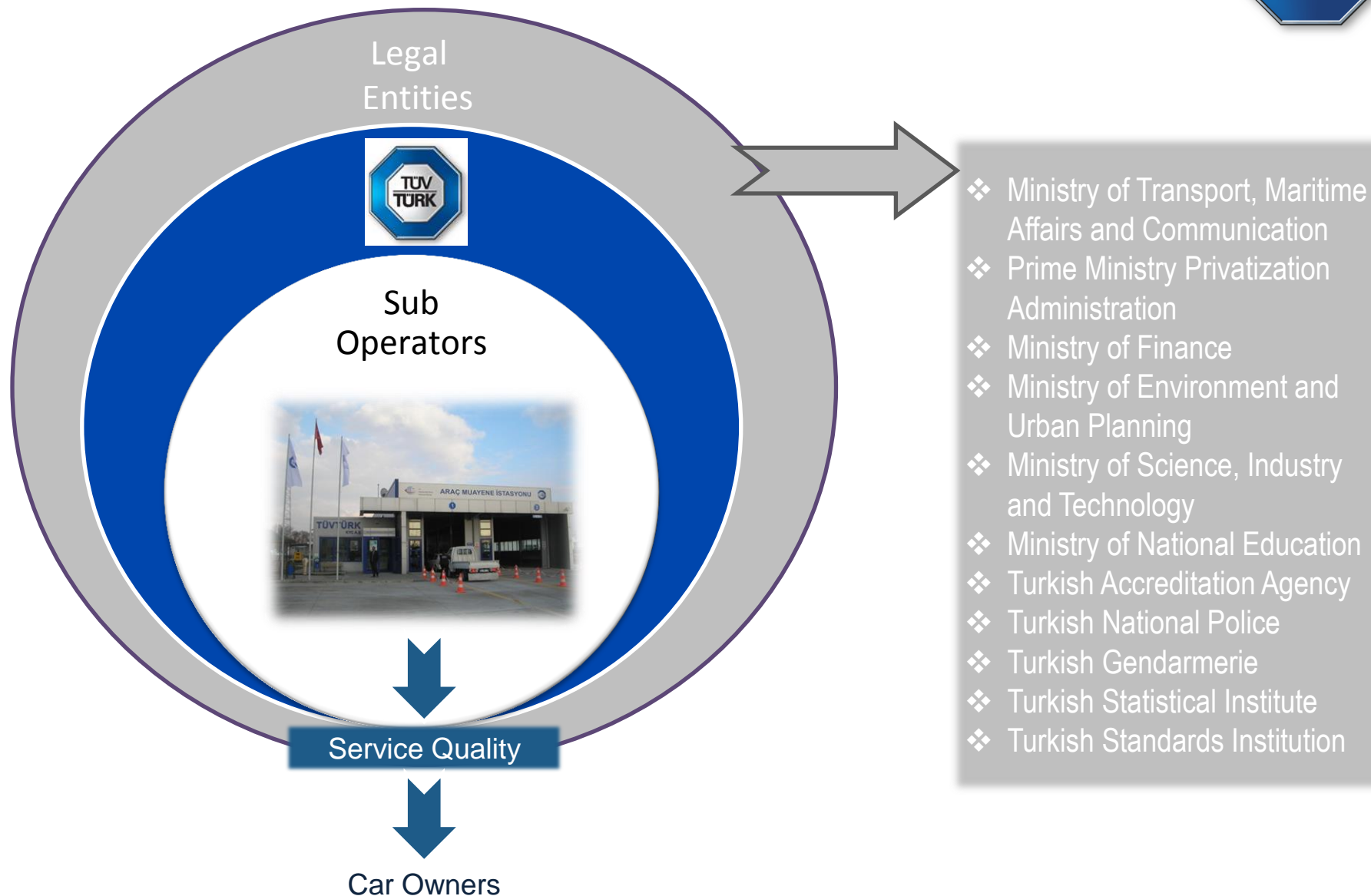
## Clients:

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<b>Target:</b>	Vehicle Inspection Network allover Turkey
<b>Size:</b>	189 Stations, 81 Mobile Units
<b>Test Standard:</b>	96/96 EG
<b>Realisation Time:</b>	18 months
<b>Company:</b>	TÜVTURK
<b>Shareholders:</b>	TÜV SÜD, Doğuş, Akfen (shares sold to Bridgepoint in 2009)
<b>Employees:</b>	2.200
<b>Operation Period:</b>	20 Years
<b>Operation Condition:</b>	Monopoly
<b>Investment:</b>	630 Mio. Euro



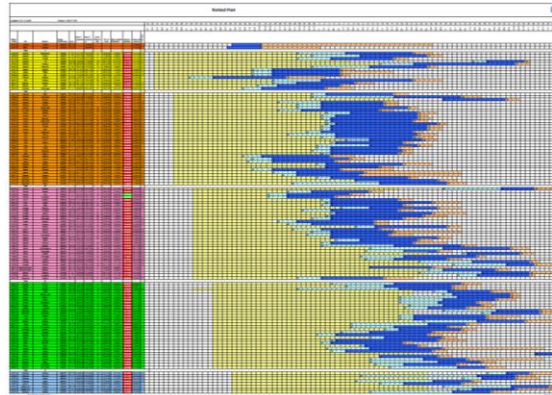


## Knowledge Transfer



- Train the Trainer in Germany
- Continuous Monitoring of the training through TÜV SÜD-Experts
- Creating of a new kind of training
- Qualitymanagement
- Stationdesign
- Station (test) equipment

## Project Management



- Control of the installation of 189 stations in 18 months with a international, professional team with employees of all 3 partner
- Steering of approx. 70 station constructions simultaneously
- Installation of Equipments just in time
- Projectplan day specific for each station
- Continuous checks on the construction sites
- Continuous meetings with project members – intensive communication
- Fast decisions

## IT



- Usage of the existing Inspection Software of TÜV SÜD
- Software Transfer from TÜV SÜD to TÜVTÜRK
- Online Reservation System
- Queue System
- Electronic Archive System
- ...