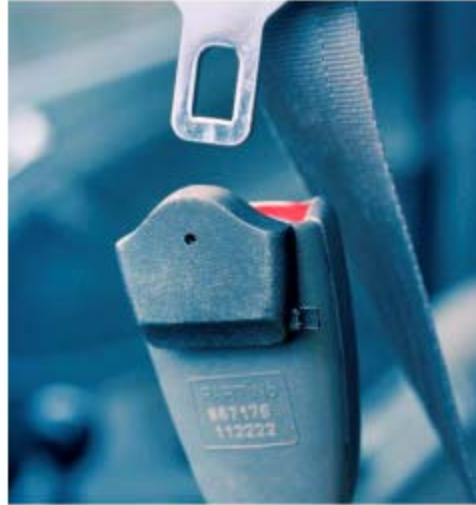


## **Welcome to Bilprovningen**

### **UN ECE-members states visit 2009-11-26**

- **9.00 Welcome**
  
- **The Swedish Vehicle Inspection Company**  
**Magnus Ehrenstråhle, CEO**
  
- **Technical information, Staffan Grandin, CTO**
  
- **CITA (International Motor Vehicle Inspection Committee)**  
**Magnus Ehrenstråhle**
  
- **10.00 Departure for Study visit, Swedish Vehicle Inspection Company, Morgan Isacsson, Technical specialist**
  
- **11.30 Departure to Hässelby Castle for lunch**



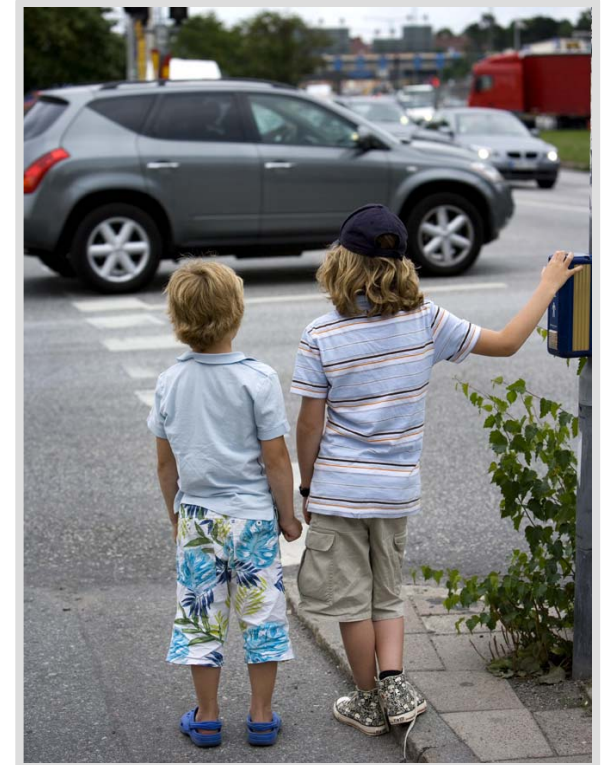
 **BILPROVNINGEN**

The Swedish Vehicle Inspection Co

## Mission

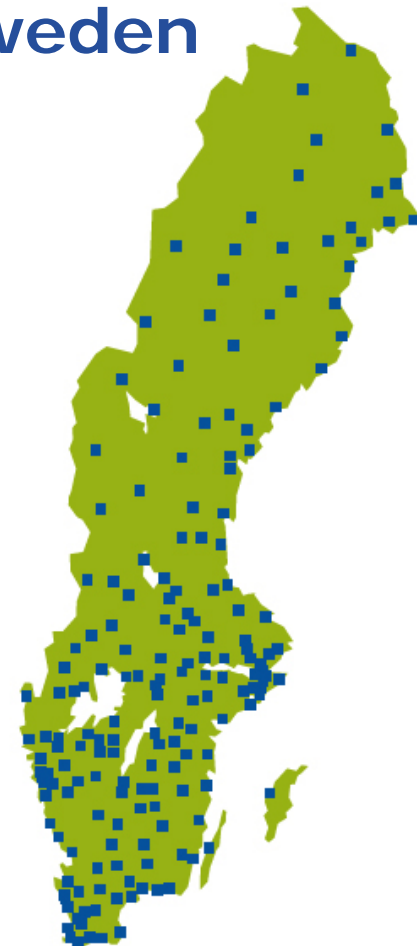
Bilprovningen, the Swedish Motor Vehicle Inspection Company, is a modern service company that performs tests and registration inspections of vehicles.

- We carry out inspections at the same low price nationwide.
- We improve road safety, contribute to a better environment and improve vehicle economy for private motorists and companies.
- Providing the customer with the best possible service is one of our most important tasks.



## High Accessibility Throughout Sweden

- 97 percent of the customers have less than 30 kilometres to an inspection station.
- Bilprovningen operates 190 stations throughout Sweden, from Trelleborg in the south to Karesuando in the far north.
- Two mobile units increase accessibility and are part of Bilprovningen's environmental strategy



## Key Figures

- 5.6 million inspections/year
- Approx. 22,000 inspections/day
- 1,850 employees
- 185 stations
- Two mobile units
- Within 30 kilometres of 97 percent of the population



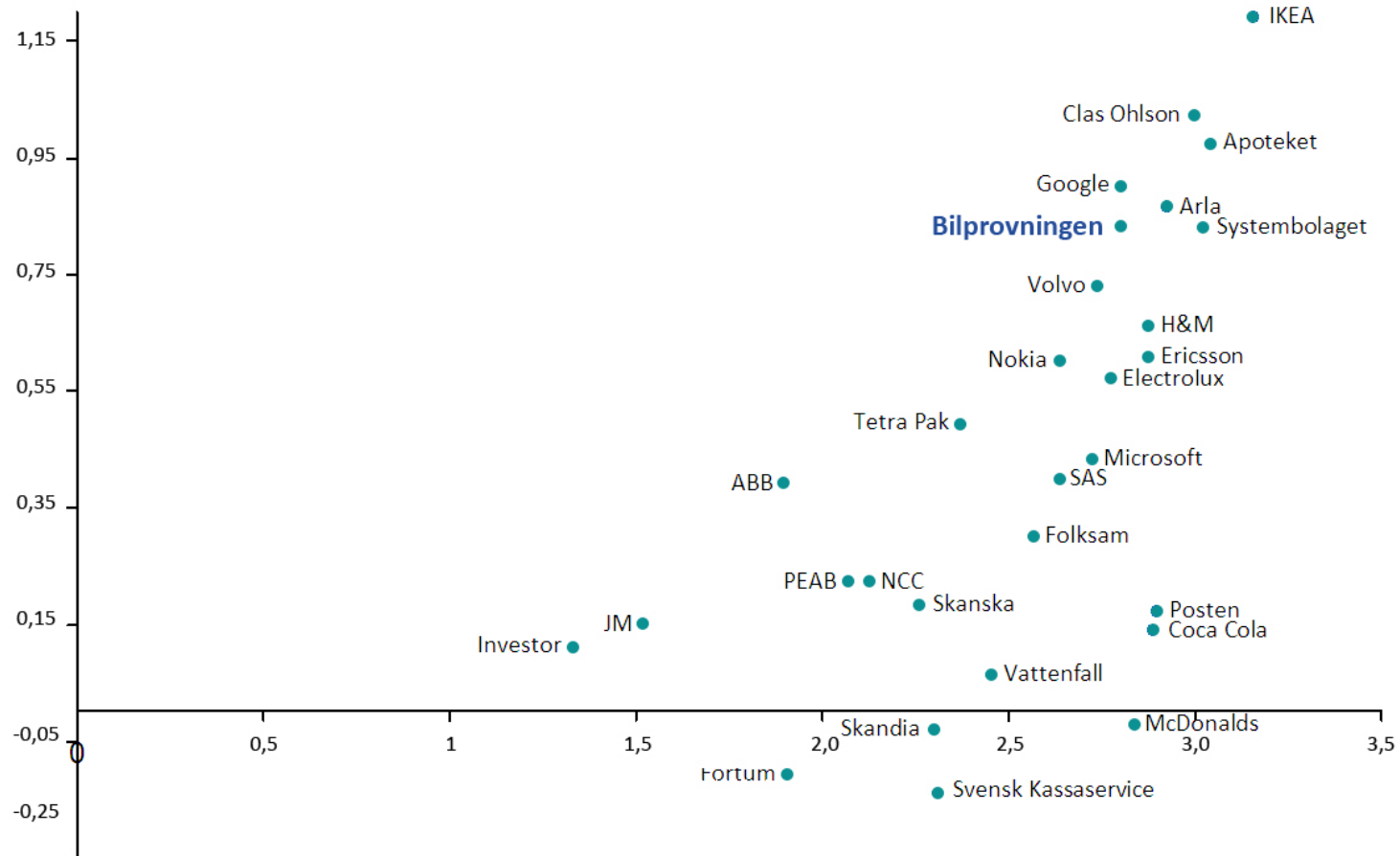
## Declaration of Intent

- We use our stations to distribute information that can influence the attitudes and behaviour of approximately four million vehicle owners yearly, in the interest of improving road safety.
- We increase accessibility and usability of our inspection test results for comparisons and exchange of knowledge between ourselves and vehicles manufacturers.
- We continuously work on developing brake tests for heavy vehicles.



# Attitude Survey Graph 2007 (TEMO Corporate image)

**Attitude**

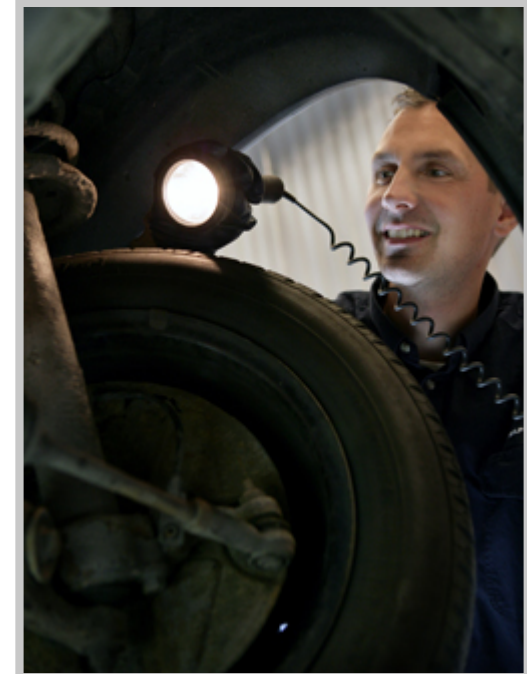


**Familiarity**

## Customer Satisfaction Survey 2009, Private Customers

- 94 (93) percent of the customers are satisfied with their visit.
- With 100 percent satisfied customers Arjeplog and Kinna received the highest rating of the stations. None received below 84 percent.
- Bilprovningen's customer service value amounts to 4.30 (on a scale from 1 to 5).

(The survey was performed by CMA in Linköping and is based on 17,500 interviews with private customers whose automobile had undergone a periodic inspection April-June 2009.)





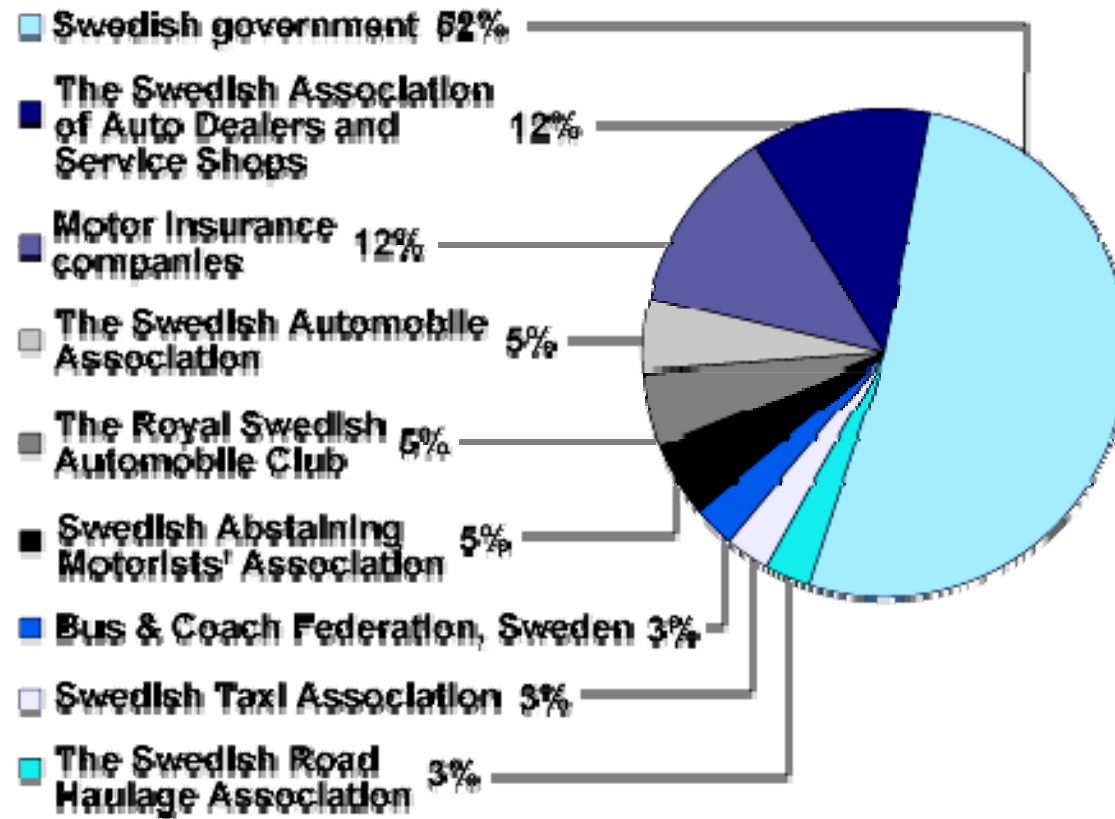
## Customer Satisfaction Survey, Public Customers 2009

- 81 percent of the customers are satisfied after their visit.
- 78 have a positive perception of Bilprovningen as a company.
- With 83 percent satisfied customers region South received the highest rating of the regions. None received below 72 percent.
- Bilprovningen's customer service value amounts to 4.19 (on a scale from 1 to 5).

(The survey was performed by CMA in Linköping and is based on 845 interviews with private customers whose automobile had undergone a periodic inspection April-June 2009.)



# Ownership Structure



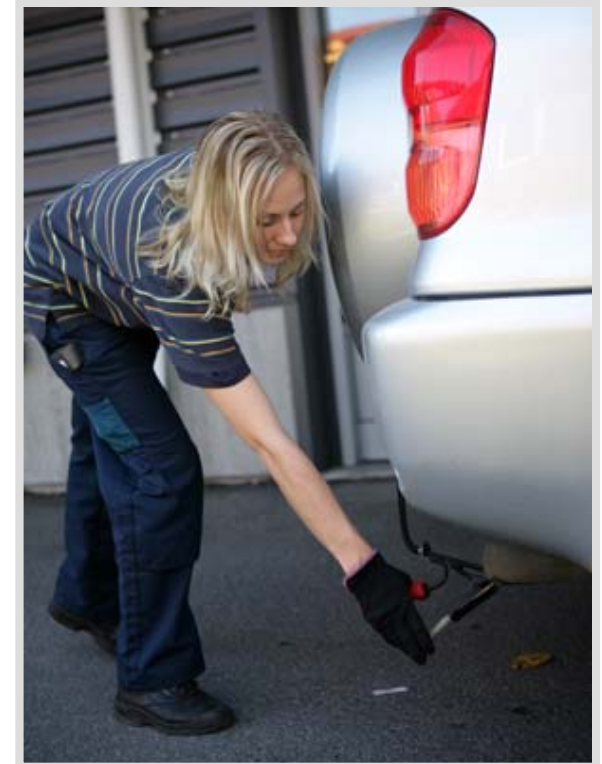
## Continuously Increased Productivity

- Better economic control
- High cost efficiency
- Improved production planning.



## Focus on Environment

- Road traffic causes major environmental problems owing to emissions of nitrogen dioxides, particles and, not least, the greenhouse effects of carbon dioxide.
- Bilprovningen works actively to reduce the environmental impact of traffic. We perform emission tests in order to reduce excessive carbon monoxide (CO), as well as hydrocarbon (HC) content in exhaust emissions.
- Bilprovningen works actively to reduce the environmental impact of its own operations for instance by reducing energy consumption.



## Road Safety

- Sweden has the world's highest road safety. Despite this, 300–400 people are killed and 3,000–4,000 are seriously injured on the roads each year.
- Bilprovningen works preventively – both in practice and with information – to improve safety on the roads.
- Each year Bilprovningen removes at least 12 000 dangerous vehicles from the roads.



## Other Activities for Improved Road Safety and Environment

Other services:

- EBK (Extra tests for brakes)
- KBV Approved garages
- Vehicle Diagnosis
- E-diagnosis

Cooperation:

- National Assembly
- European Road Safety Charter
- Nationella viltolycksrådet (tracking and humane killing of game injured on the roads)
- Däckrazzia (Tyre inspections in cooperation with the Police and National Society for Road Safety)
- Näringslivets klimatupprop

BILPROVNINGENS  
**BILDIAGNOS™**

**e-DIAGNOS**



## R&D at Bilprovningen

- Development of inspection processes, testing methods and testing equipment.
- Participating in work groups and external cooperation with CITA (International Motor Vehicle Inspection Committee)
- Experimental workshop:
  - pre-inspection of new vehicles types
  - rationalisation of inspections by means of in-depth professional knowledge.



## Current IT Support

- Bookings, September 2009:
  - Personal service, 23 percent
  - Pre-made reservations, 29 percent
  - Internet, 48 percent
  
- Handheld computer
  - Obtaining vehicle information from the Swedish Transport Agency, registration of faults and vehicle data, direct reports and printing out reports for customers.
  
- Automatic check-in machine
  - Integrated with booking and production systems.

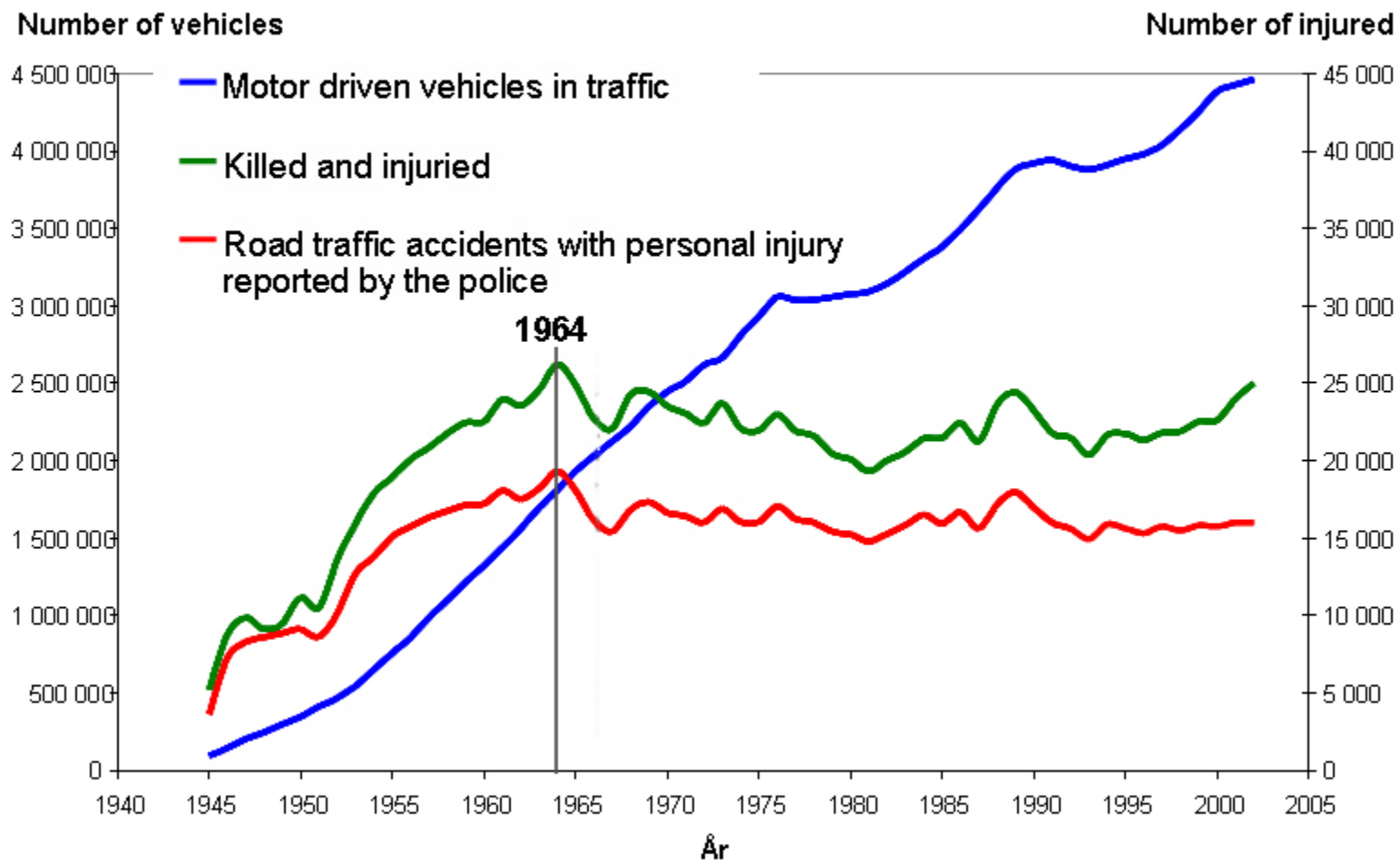




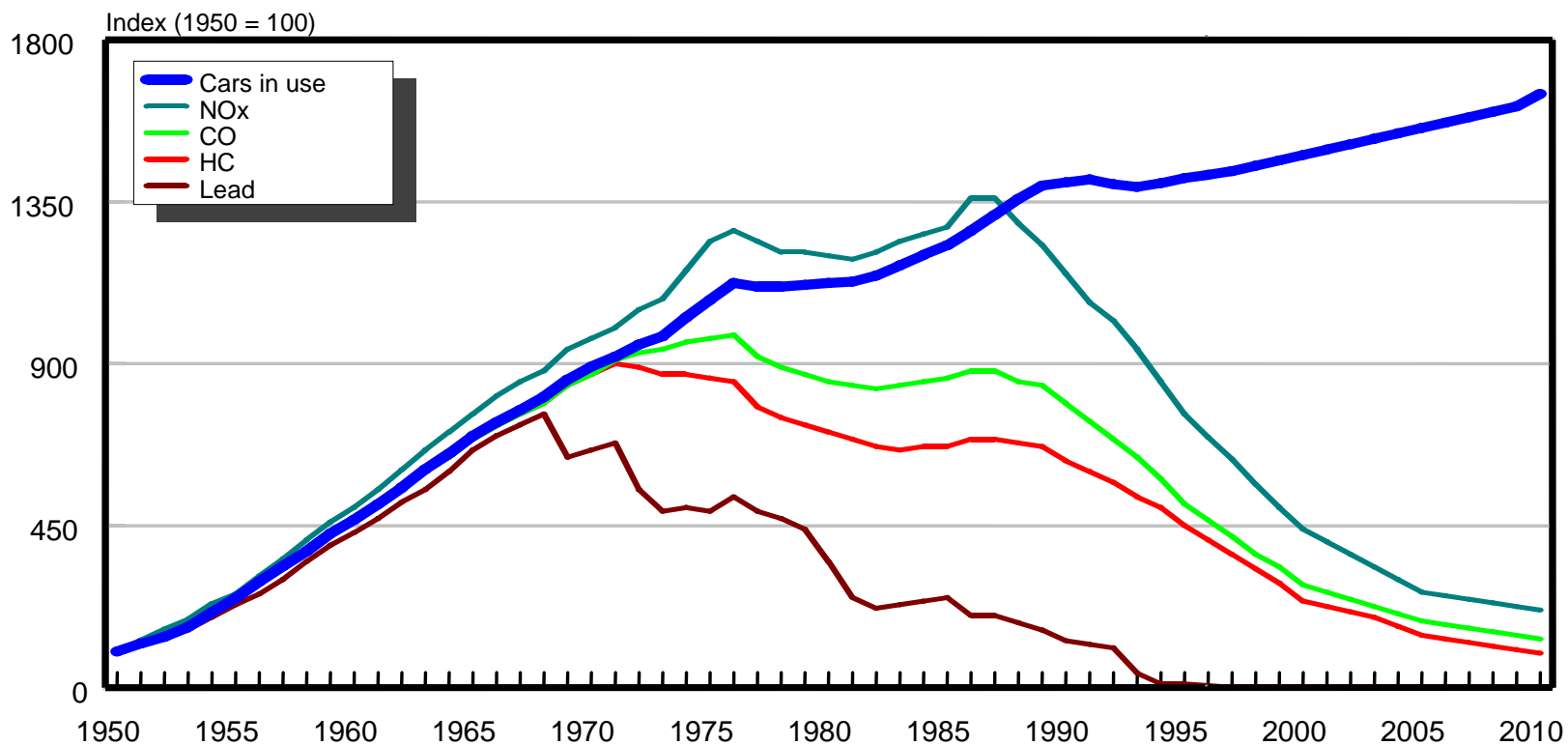


**Autofore short presentation.**

## Vehicle fleet and Accident Development in Sweden



## Total Exhaust Emissions from the Passenger Cars in Sweden



## Basic Principles of a Vehicle Roadworthiness Control System

### Technical requirements and regulations

The state authorities specify the requirements of vehicles and the framework for inspections.

### First inspections

Ensure that the requirements are fulfilled before a vehicle is taken into service.

### Periodic inspection

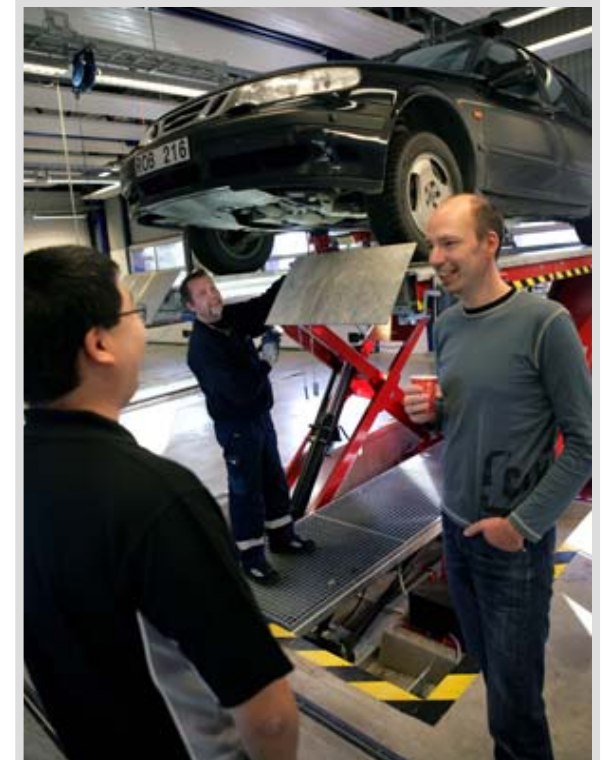
Ensures that the vehicle is maintained in a roadworthy condition.

### Roadside inspections

Ensure that the vehicle is maintained also before and between inspections. (Police).

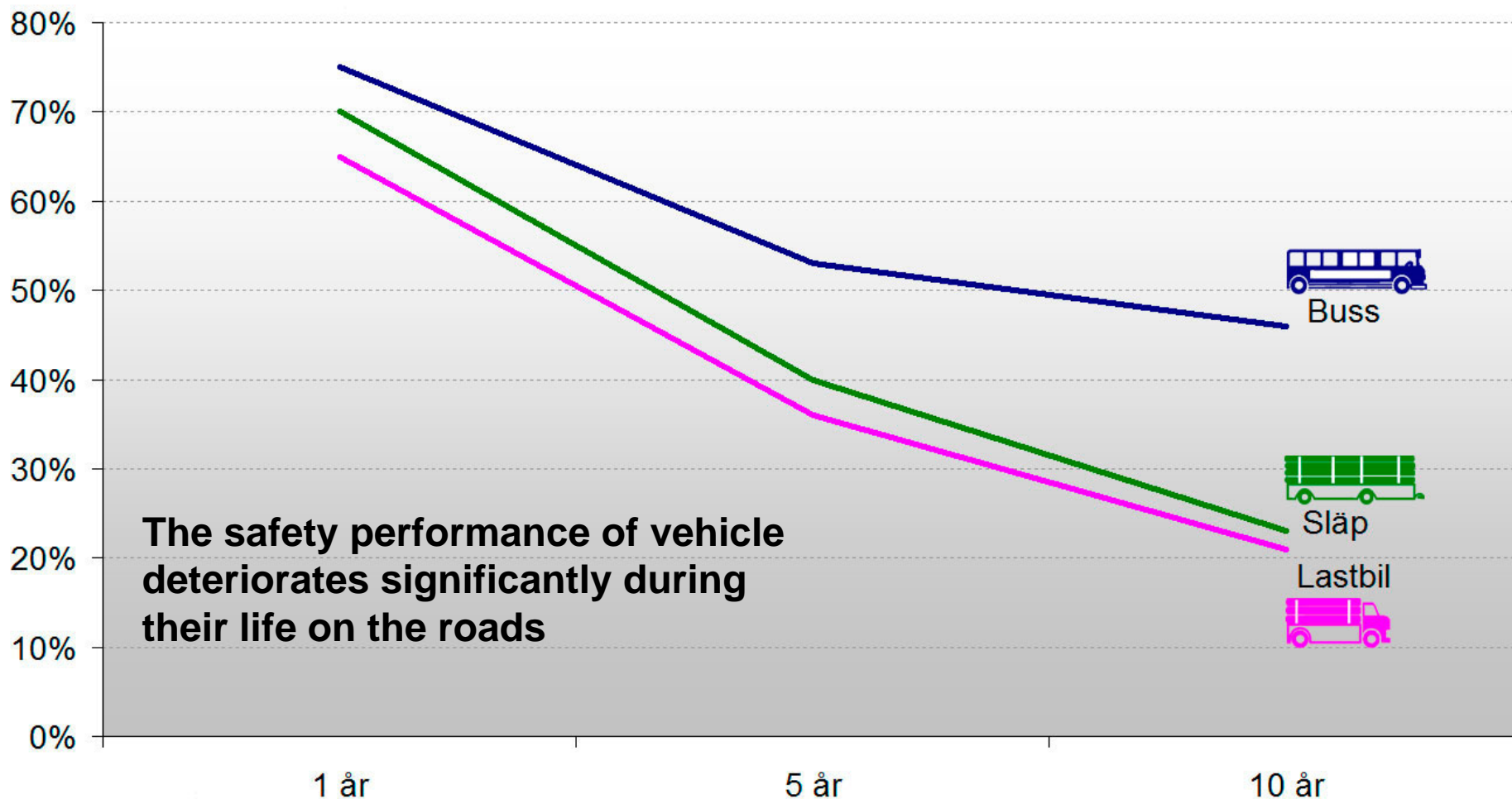
## The Usefulness of Bilprovningen

- The most common faults (2008):
  - Brake system 550,000
  - Spindle play 158,000
  - Steering play 127,000
  - Exhausts 93,000
  - Headlights 320,000
  
- Reduces the number of accidents and environmental impact.
  
- Delivers comprehensive statistics that assist customers in choosing vehicles.
  
- Influences automobile manufacturers, sales representatives and garages etc.



# PTI Results in Sweden January-July 2009

Vehicles >3,500 kg passed without remarks  
1, 5 och 10 years old



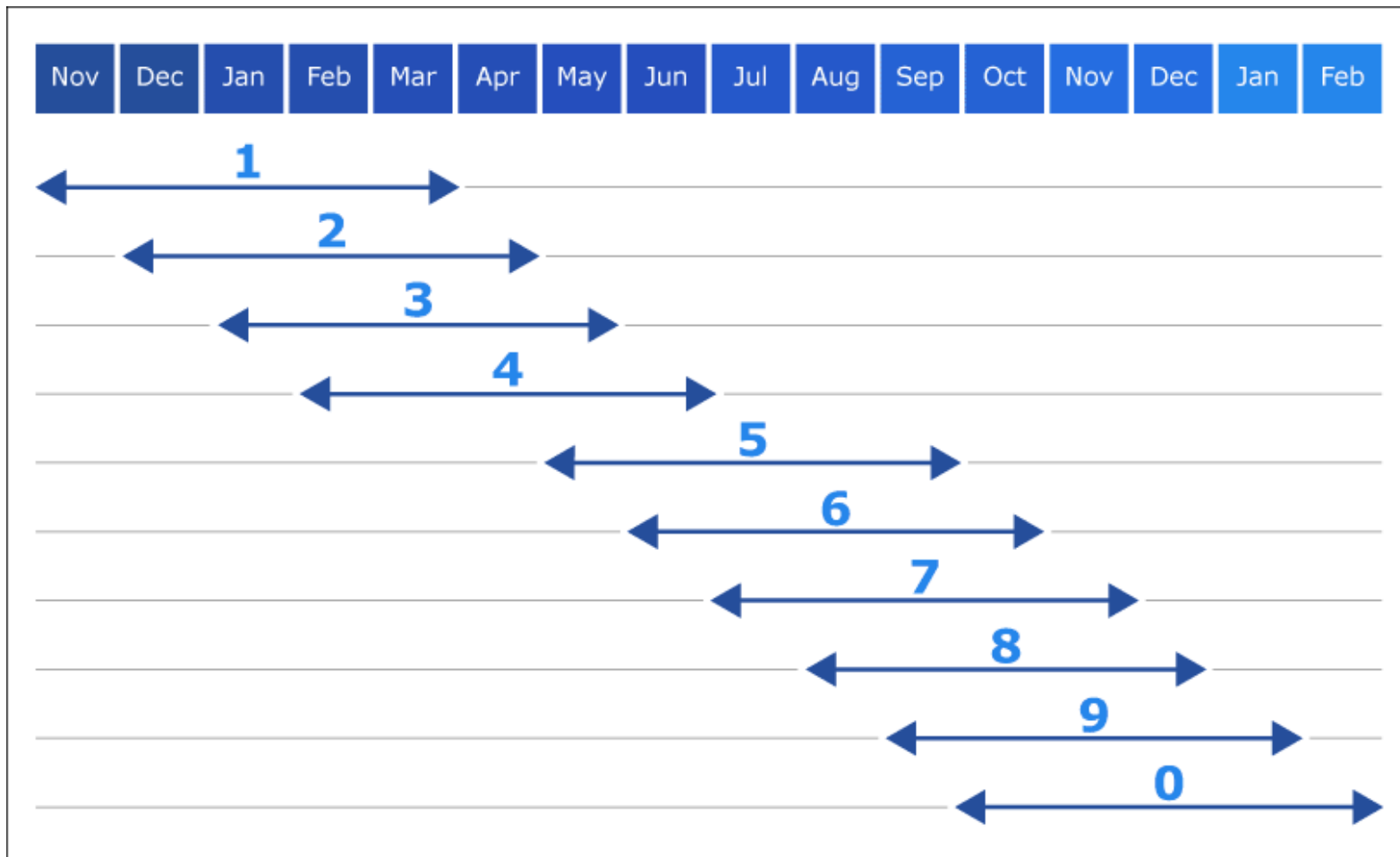
**The safety performance of vehicle deteriorates significantly during their life on the roads**

## Present Periodic Inspection Rules:

- Light vehicles    3+2+1+1+1+
- Ambulances and taxis    1+1+1+1+1+
- Heavy vehicles    1+1+1+1+1+
- Light trailers and MC    4+2+2+2+2+
- Over 30 years old    2+2+2+2+2+



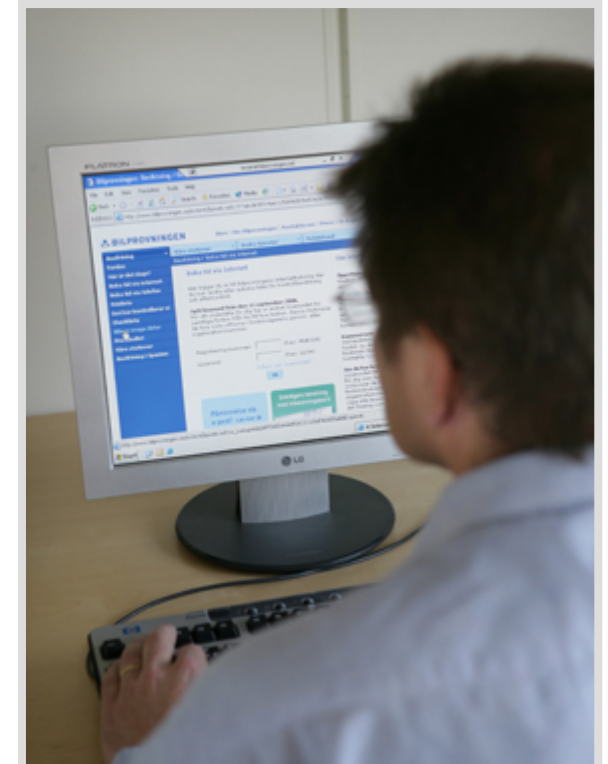
# Inspection Period for Different Final Digits





## The Process

- The summon is a friendly reminder and an invitation to Bilprovningen's nearest PTI station
- Nearly 50 percent make their booking on Internet
- The planning and booking system are fully integrated with the production system





## Register at Arrival

- Register your arrival at the PTI station directly on the touch screen and you will be attended right on time.

**JNB 642      Gate 2**



## The Handheld computer

- The handheld computer was introduced in PTI 1996
- Collects vehicle information from The Swedish Transport Agency
- Registers defects and vehicle data.
- Reports directly and prints inspection report for customer



## Emission Control Today

<i>Method for Petrol Car</i>	<i>Diagnos</i>	<i>Idle</i>		<i>High Idle (&gt; 2000 rpm)</i>	
		<i>CO [%]</i>	<i>HC [ppm]</i>	<i>CO [%]</i>	<i>Lambda</i>
<i>Cars 2002</i>	<b><i>EOBD*</i></b>	-	-	<b><i>0,2</i></b>	<b><i>1±0,03</i></b>
<i>Cars with catalytic converter (from 1989)</i>	-	<b><i>0,3</i></b>	<b><i>100</i></b>	<b><i>0,2</i></b>	<b><i>1±0,03</i></b>
<i>Cars 1985-1989</i>	-	<b><i>3,5</i></b>	-	-	-
<i>Cars 1971-1984</i>	-	<b><i>4,5</i></b>	-	-	-

\* Fault code P0100-P0500 + P0650 will fail vehicle in EOBD test

For diesel driven cars from 2004 EOBD will replace opacity metering (Before 2004 plate value)

# EOBD – The implementation in Swedish PTI 2009

- Petrol passenger vehicles from 2002
- Diesel passenger vehicles from 2004



## Requirements for EOBD-solution in Sweden

- Fully automated EOBD-inspection process to optimize time.
  - Maximum of a few pushes of a button/activation for each EOBD diagnosis done.
- EOBD-solution will use Wlan access points and fully centralized inspection software.
- Equipment is required to be able to run both EOBD and vehicle specific diagnosis
  - One equipment being able to run on two different software versions – EOBD and vehicle specific fault code reading
- A wide range of vehicle manufacturers and models covered for vehicle specific diagnosis (at least 90 % of all vehicles in Sweden from 2000 and later)



# OBD 2009

## Utrustning



Central software operates system

VCI with WLAN connects to vehicle and network automatically



VCI betyder:  
Vehicle Communication Interface  
Fordonskommunikations gränssnitt

Result is reported and printed to PTI protocoll



Handheld computer not a part of the solution

UVC / BILPROVNINGEN

Förkortningen WLAN betyder "Wireless Local Area Network" (Trådlöst lokalt datanätverk)



# 1. Localize socket and connect VCI

Bilprovningen - Microsoft Internet Explorer erhållet av Bilprovningen

http://www.e-locate.autocom.biz/Default.aspx?id=47FKYmx7I5atAorR6VLAZ9VjrHadLV3OvOLJ5e7AH8qo9qdDsDJIYoE6KICIW++Q5ZMfu55

Arkiv Redigera Visa Favoriter Verktyg Hjälp

Favoriter Förslag på webbplatser Gratis Hotmail Ladda ner fler tillägg

Bilprovningen

**BILPROVNINGEN** Hjälp

e-Locate den 25 november 2009, 13:59 [Logga in](#)

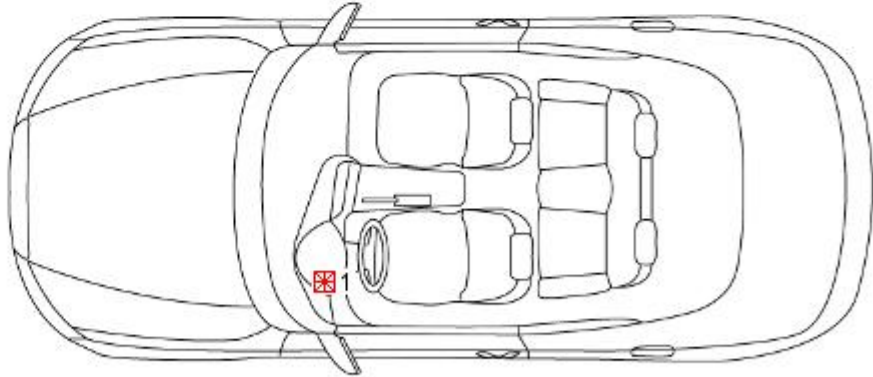

Hem Manuell sökning

Registreringsnummer:

Märke	Modell	År
BMW	1-series [E81/82/87/88]	2008

[Generell placeringsinformation för fordon med EOBD]  
Enligt kraven för EOBD skall diagnosuttaget vara placerat i närheten av förarplatsen. Kontrollera diagnosuttagets placering i bilden nedan. Exempel på placering kan vara under instrumentpanelen vid rattstången samt mellan förarplats och passagerarplats.

**Foton på placering** **Placering kontaktdon**



Motorkoder hittade: 5

1 EKPS, N43B16A, N43B20A, N47D20A, N52B30A

# OBD 2009



Turn ignition on, wait for the red and green light,  
- check the result on the computer.

OBD 2009

OBD detaljsida

Station 275

EOBD-kontroll - UMG570 - Godkänd

Standard: OBD  
MIL-status: **Släckt**  
Diagnosutrustning: I  
Tidpunkt: 10:22:11

1  
**MIL= OFF**

**UMG570**  
**SKODA FABIA CL COMBI**  
**1,4**  
**Godkänd**  
**I**

Permanent felkoder (Antal 0)

Självtester

Namn	Utförd
Feltändning	Ja
Bränslesystem	Ja

Till huvudsida

OBD 2009

**OBD detaljsida**

Station 275

EOBD-kontroll - GDJ902 - Underkänd

Standard: OBD  
MIL-status: Tänd  
Diagnosutrustning: I  
Tidpunkt: 10:41:56

**GDJ902**  
**DODGE CALIBER**  
**Underkänd**  
**I**

MIL = ON  
Fault codes

Permanenta felkoder (Antal 16 )

- P0100 Luftflödeskrets "A", massa eller volym
- P0101 Luftflödeskrets "A", massa eller volym, område/prestanda-problem
- P0102 Luftflödeskrets "A", massa eller volym låg signal
- P0200 Insprutningskrets
- P0201 Cylinder 1 Insprutningskrets / öppen
- P0202 Cylinder 2 Insprutningskrets / öppen

[Till huvudsida](#)

OBD 2009

## OBD detaljsida

Station 275

EOBD-kontroll - AYX498 - Alternativ kontrollmetod

Standard: OBD  
MIL-status: **släckt**  
Diagnosutrustning:  
Tidpunkt: 12:07:49

Anledning: **Uttag hittas inte**

Socket not found

Permanent felkoder (Antal 0)

Självtester

Namn	Utförd
------	--------

**AYX498****NISSAN XTRAIL 5D 2,5  
COL****Alternativ kontrollmetod**[Till huvudsida](#)

# Inspection report

- Information about the vehicle
- Model, registration number, meter readings
- Type of inspection
  
- Status after the inspection
  - Approved or failed
  
- Results of the inspection
  - Exhaust emission
  - Brake values

Besiktningsprotokoll: KONTROLLBESIKTNING B (inkl. 96/96/EG)

Besiktningen är utförd i Jönköping-Gamla flygfältet  
RENAULT M MEGANE 0000  
Vägmätarställning: 70088  
Fordonet har följande fel: (Totalt antal fel: 1)

1. Positionslykta, fram höger, ur funktion

**Bra att veta:**

Färdbröms bromsskiva, bak, båda sidor, rostangrepp/liten anliggningsyta

Miljökontrollvärden (gränsvärden inom parentes):  
OBD antal felkoder: 0  
OBD självtester: Genomförda  
CO (0,3) HC (100)  
CO 2500 0,0 (0,2) LAMBDA 1,00 (0,97-1,03)  
Bromsvärden:  
Vänster fram 2,4 Höger fram 2,4  
Vänster bak 1,8 Höger bak 1,6

**BESIKTNINGSRESULTAT**

Fordonet har underkänts vid kontrollbesiktning.  
Ägaren är ansvarig för att felen åtgärdas snarast.  
Fordonet behöver inte återkomma till en ny besiktning.

AB Svensk Bilprovning  
2009-11-25  
VIJA

Next step...!

## AUTOFORE 2 ?

The progress in updating directives is very necessary and urgent in order for the PTI to keep its value in road safety and environmental goals.





- UN ECE CITA Presentation



## Welcome to Bilprovningen

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