Monitoring Emissions of new and In-use vehicles

Importance of vehicle pollution monitoring

Importance of vehicle pollution monitoring :

In the present world the automotive power has come up as the biggest boon to reduce down the distances and bring people closer, but has also brought a very big problem of air and sound pollution.
AVL is working hard to curb this menace by offering this world the equipment to monitor the emissions and help to bring down the same.
The importance of vehicle pollution monitoring is to give good health to our engines which in turn gives cleaner world to mankind.

Some shocking Facts !

World Health Organisation estimates of mortality indicate that on a yearly basis about 800,000 people die prematurely because of exposure to urban outdoor air pollution. Of these about 5,00,000 are believed to be in ASIA

Air pollution in addition to health impacts , also leads to substantial financial and economical costs to households, industry and government in ASIA

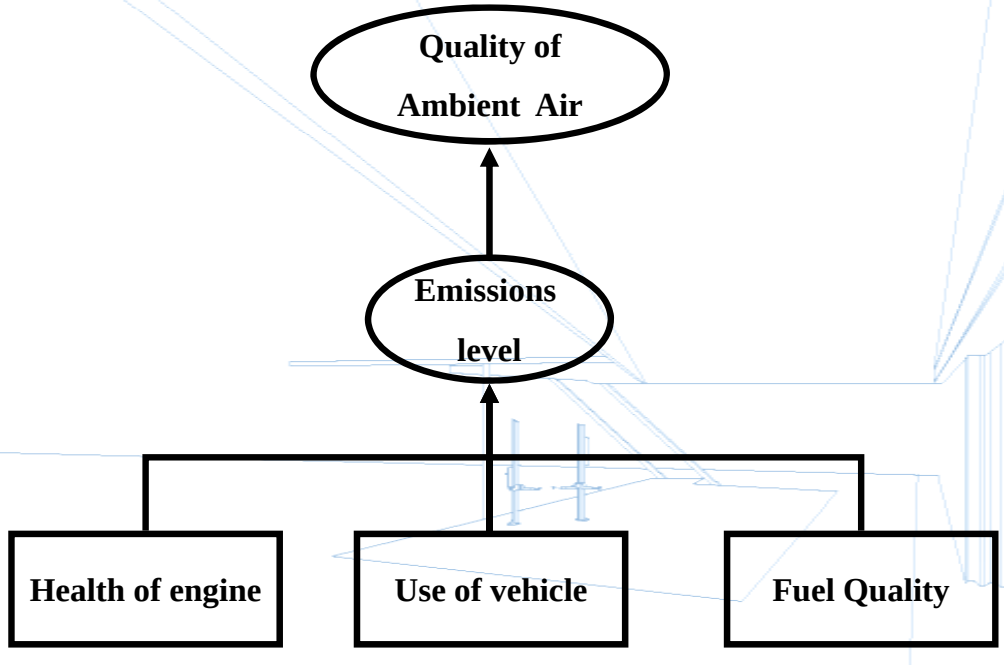
Why this problem ?

Air pollution in Asian cities comes from different sources such as mobile sources like buses, trucks, cars or two wheelers, stationary sources or industries, etc.

According to EPA(environmental protection agency) , driving a car is single most polluting thing that most of us do.

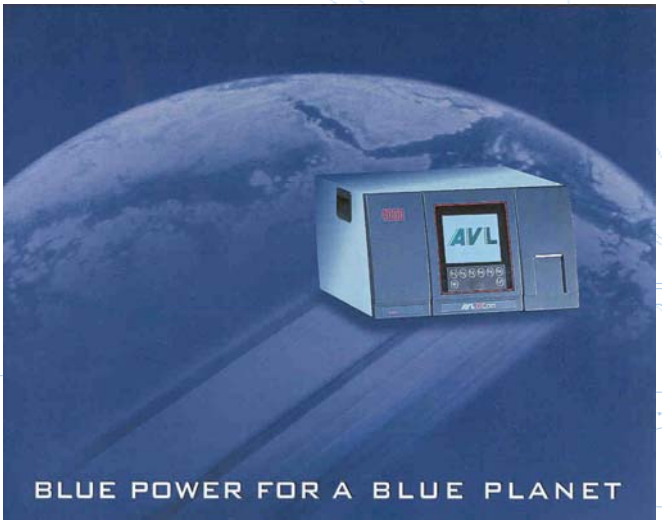
Mobile sources are expected to continue to be the main source of pollution in the future

Factors influencing quality of ambient air by automobiles:



Type of vehicle to be tested

- Diesel Engines
- Petrol engines



Emission of Petrol Vehicles

Petrol engine : Spark Ignition Engine (SI)

These type of engines use volatile liquids or gases as fuel
Have carburetors ,gas mixing valves or fuel injection systems.
Gasoline is the fuel commonly used in these engines .
The mixtures used generally are near chemically correct.

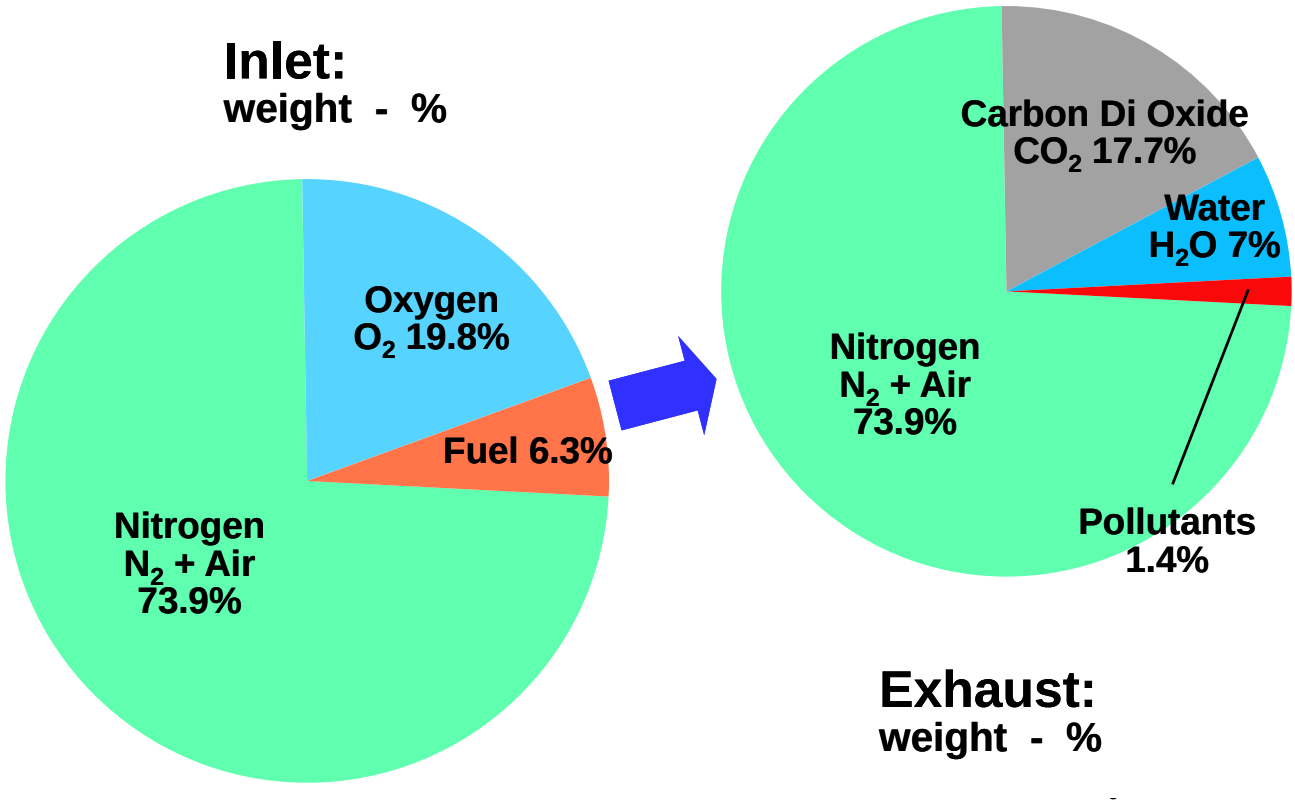
Advantages

Low first cost,
Low specific weight
Low cranking effort
Wide variation attainable in terms of speed and load
High mechanical efficiency

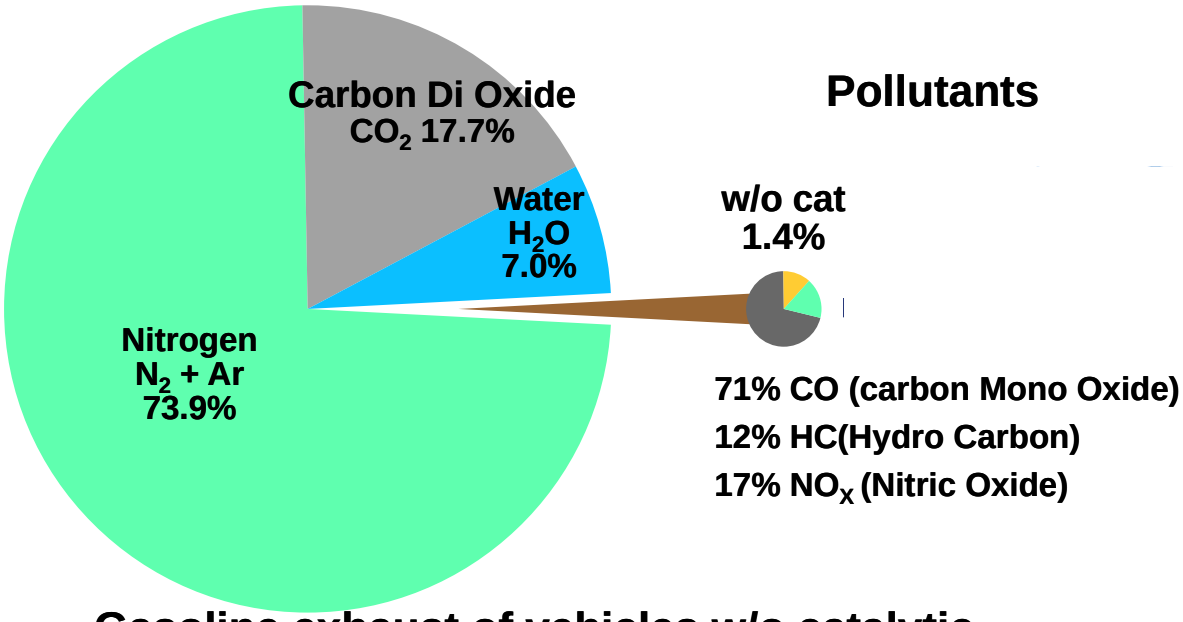
Disadvantages

Emission like Carbon Monoxide (CO), Carbon Dioxide (CO2), Hydro
Carbons(HC), NOx (Nitric Oxides),etc.

Gasoline Combustion :

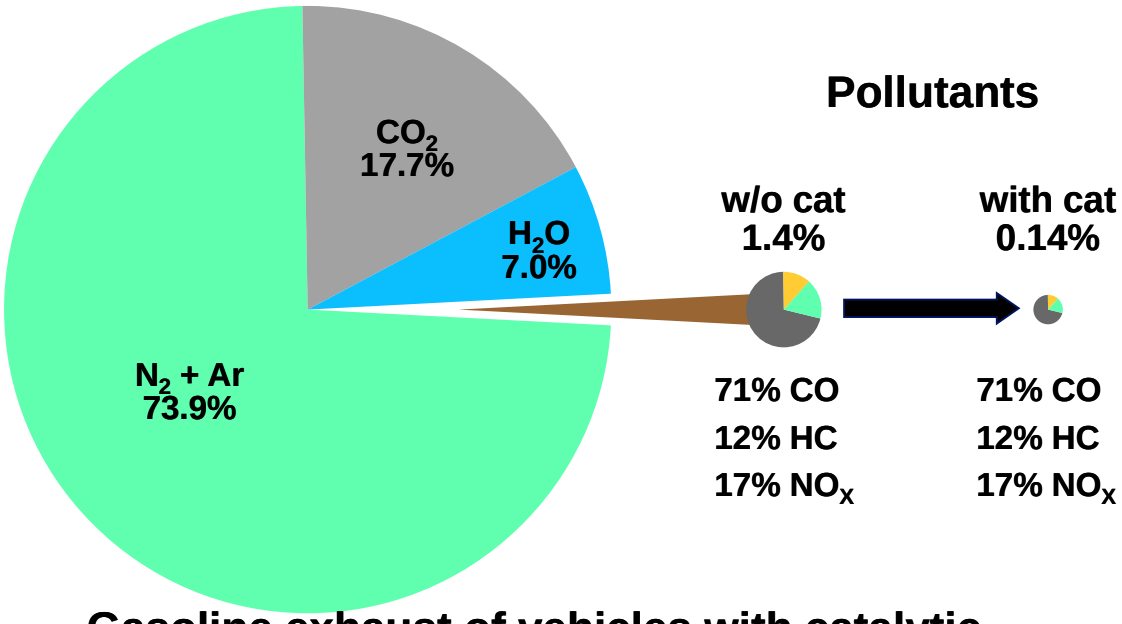


Gasoline Combustion - Exhaust Pollutants without Catalytic Convertor :



Gasoline exhaust of vehicles w/o catalytic convertor

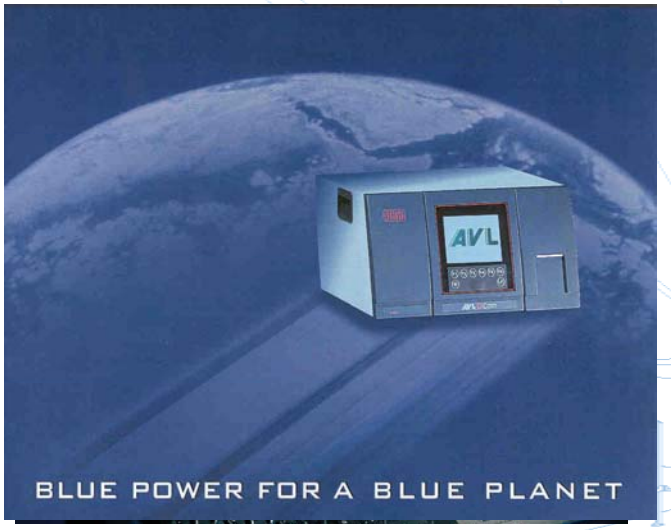
Gasoline Combustion - Exhaust Pollutants with Three Way Catalytic convertor :



Gasoline exhaust of vehicles with catalytic convertor

Major pollutants from automobile emission:

- Carbon dioxide (CO2)
- Hydro carbons (HC)
- Nitrogen oxides (NO & No2)
- Sulfur dioxide (So2)
- Lead particulates (tetraethyl lead : Pb (C2H6)4),
  (tetraethyl lead : Pb (CH3)4)



Petrol Emission Measurement

NDIR (Non Depressive Infrared Measurement):

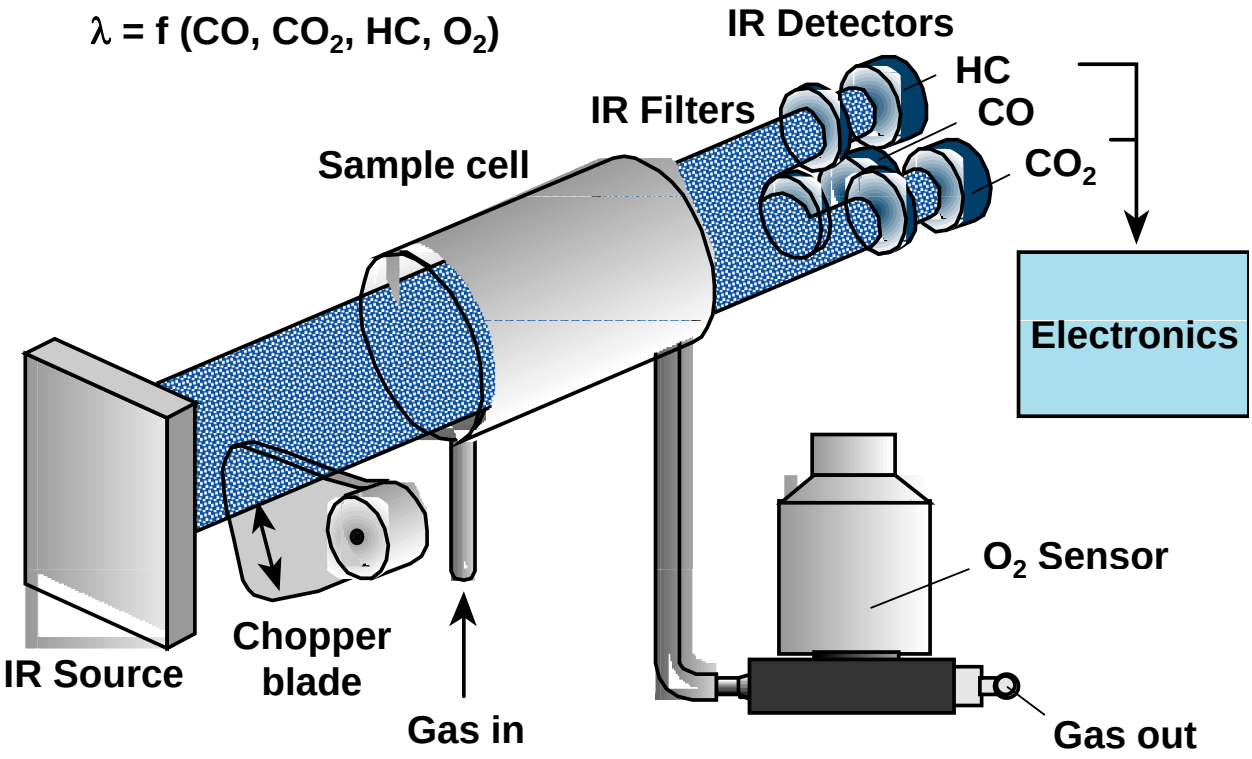
Principle :

A single wave band within the infrared spectrum is selected for each gas to measure where its absorption is known to be substantially high and where no other background gas absorbs significantly. Optical band pass filter, which transmits IR energy only within the waveband is placed before the thermocouple detector. When the cell is filled with sample gas the IR detector measures the resultant reduction of transmitted IR energy within the wave band of each gas.

The signal processing electronics determines the differential
i/io = degree of absorption

Where io : Is being reference signal.
I : Is sample signal for each gas to measure .

Gas Analyser Architecture :



Emission of Diesel Vehicles

Diesel Engine : Compression Ignition Engine (CI)

These type of engines use Low volatile liquids as fuel
Generally no ignition device is used.
Load and speed are controlled by varying the fuel quantity .
The mixtures used generally are near chemically correct.

Advantages

Low specific fuel consumption
High thermal efficiency
Lower fuel cost
Low CO and Hydrocarbon emission
High mechanical efficiency

Disadvantages
High particulate matter in emissions

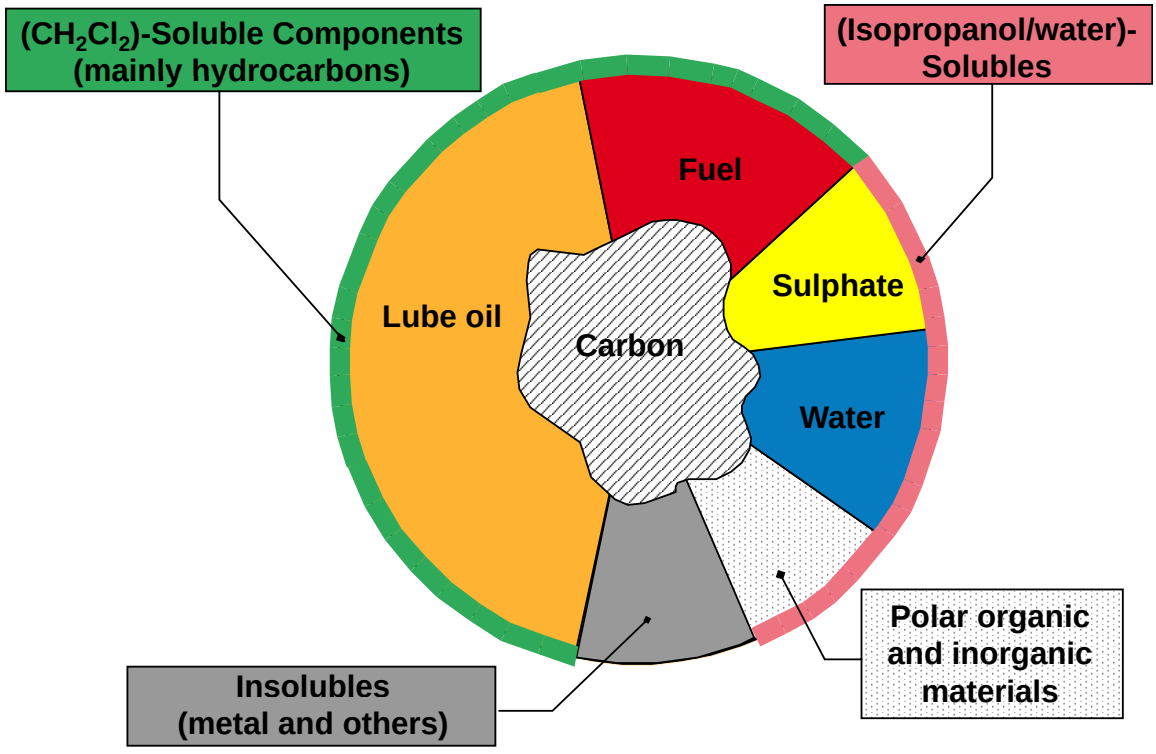
Potential of Danger :
Engine Exhaust Combustion Components

Particles (particulates) : Black carbon, lead

- noxious
- poison
  - cancerous

- smog relevant
  - particles increase the opacity

Diesel Particulate – Carbon Core, with Condensed and Absorbed Substances :

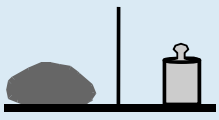


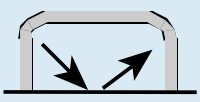
Diesel Emission Measurement

SAMEER BHATNAGAR – Bangkok - 2008

Diesel Smoke Measurement Methods :

Gravimetric	Filter Paper	Opacity, Absorption
g/m^3	FSN	% , m^{-1}
weight	optic reflective	optic light extinction : Partial flow & Full Flow





Diesel Smoke Measurement Methods :

Optic Light Extinction :Partial Flow
Open and Close Head

Open Head

Closed Head

Advantages:

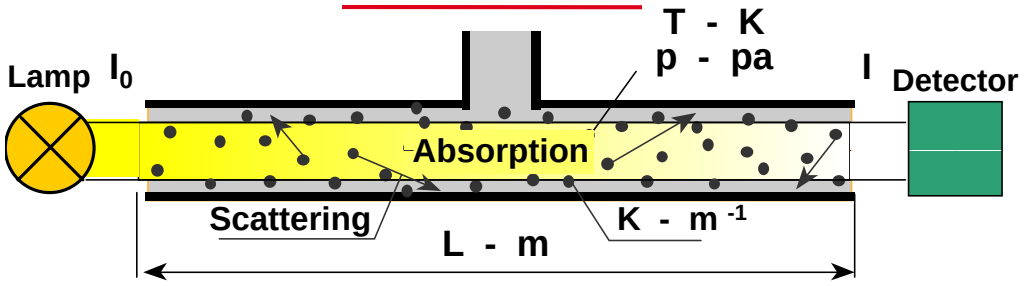
The Best suited method for measurement of opacity is partial flow in closed head measurement method

Advantage of using a closed measurement head is the measured value does not get effected by ambient light and other outside factors.

The advantage of partial flow measurement over full flow is , the measurement Chamber length remains fixed and hence the results are more accurate as Compared to full flow in which the length of measurement head Has to be adjusted Depending upon the exhaust diameter

Principle of Opacity Measurement :

Beer - Lambert



Extinction = Absorption + Scattering

I_0	...	Light intensity at entry
I	...	Light intensity at outlet
K - m^{-1}	...	Absorption coefficient
L - m	...	Measuring length
T_0 - K	...	Ambient temperature
p_0 - pa	...	1,013.155 pa, normpressure
p - pa	...	Ambient pressure
N - %	...	Opacity

$$\frac{I}{I_0} = e^{-K.L.\frac{T_0.p}{T.p_0}} = \left(1-\frac{N}{100}\right)$$

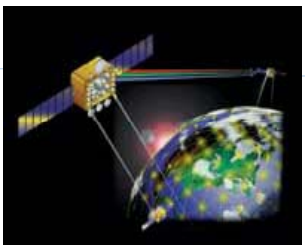
$$N = 100.\left(1-e^{-K.L.\frac{T_0.p}{T.p_0}}\right)$$

Fig. I

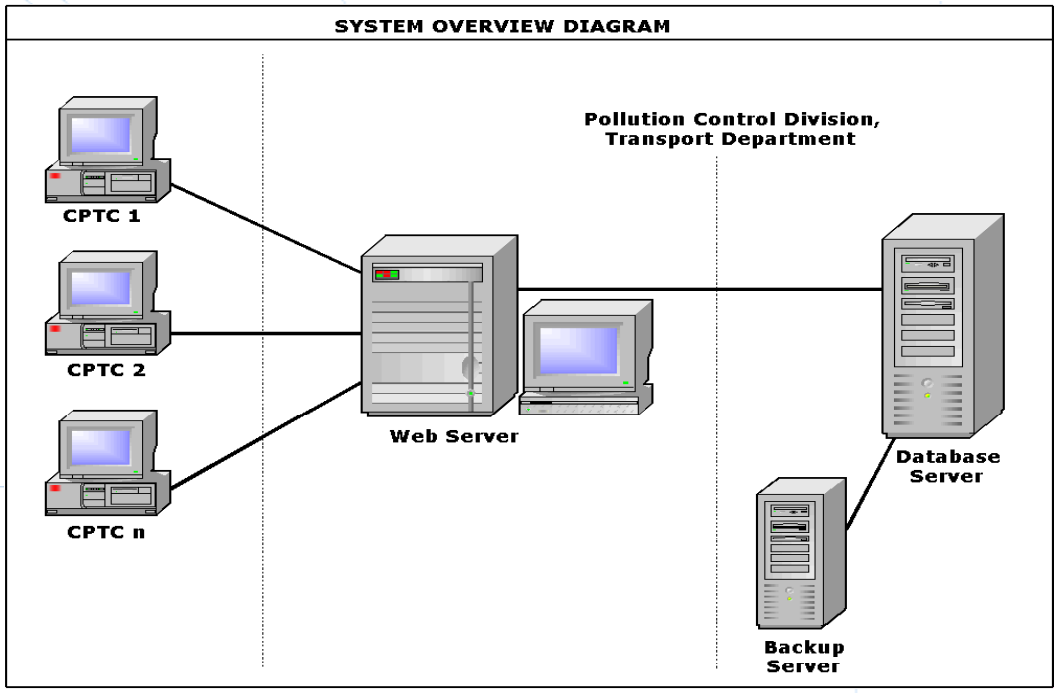
Networking of Pollution testing stations

GREEN@NET™

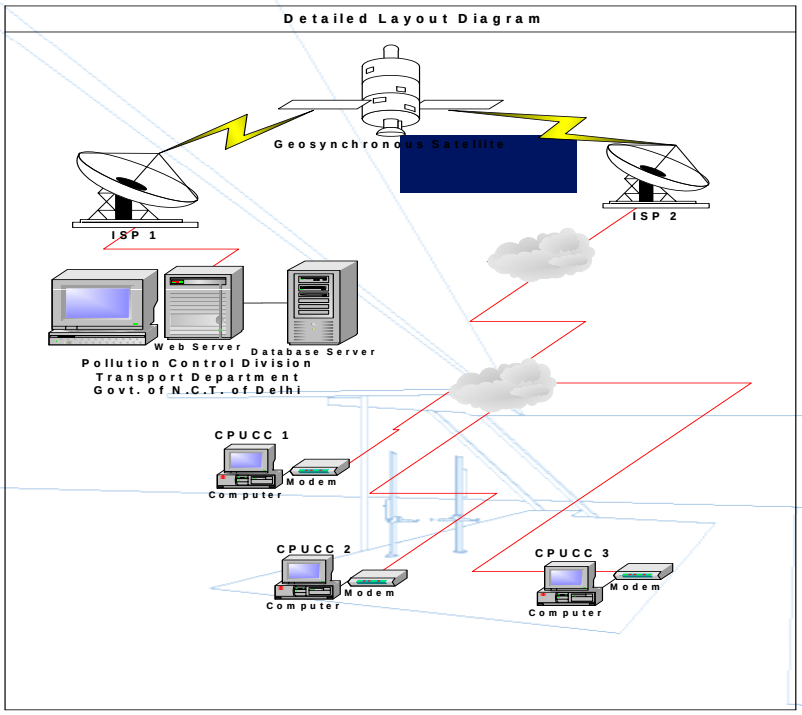
To connect all Computerised Pollution Under Check Centers (PUCC) to a server situated at the Pollution Control Division, Transport Department, in order to capture data of all Computerised Pollution Testing Centers for Online Testing and enhanced analysis, inspections, reporting and future planning.

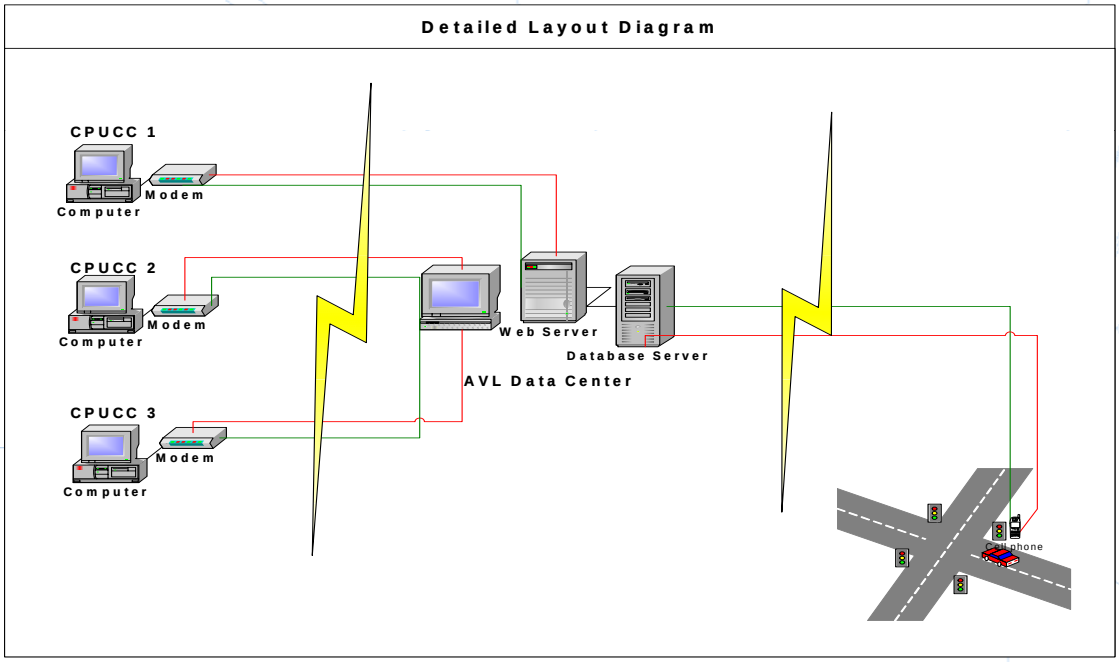


System Overview Diagram



System Overview Diagram



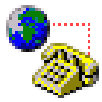


System Overview

- The PUCC centre will be connected to a centrally located server hosted by Pollution Control Division, Transport Department.
- The PUCC centre will have on line subscription for usage of Pucc system and generating certificate
- The Transport Authority will have the full control of the web server and the database server, which are just the logical partitions and can be their on a single machine (PC).
- The Transport Authority can analyse the compiled data on various basis provided at their end.
- The Road side Inspector can cross check the test data of vehicle under question on line from server.

Connecting Media

GREEN@NET™



Telephone Landline

1. **Broad Band**: Here the PUCC user will use telephone line as the medium on line data transfer to server. It will require the use of modem and a broadband internet connection.

2. **CDMA/ GSM card:** Here the PUCC user will use CDMA/GSM card as the medium for on line data transfer . This will be more reliable and efficient than the telephone line.

- **Only Internet connectivity is required with PUCC subscription**

Database Server

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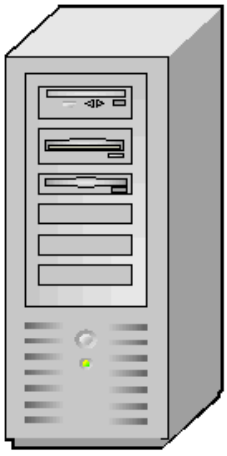


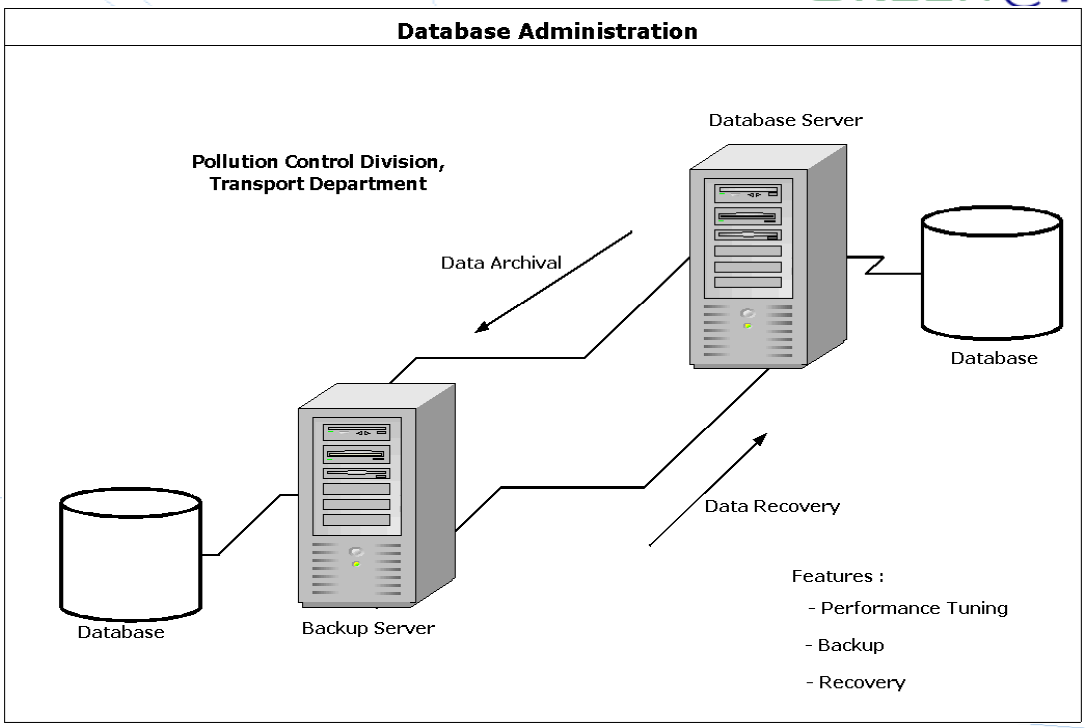
Database Server

Tools:
Database server can be loaded with software tools such as SQL SERVER/ ORACLE.

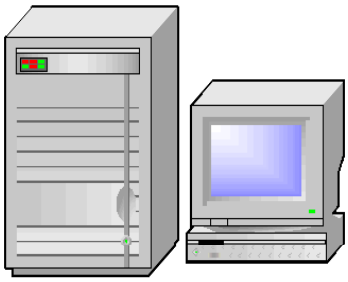
Features:
Both of the tools provide features such as

1. Reliability.
2. Security management.
3. Distributed database management.
4. Concurrency management.
5. Scalability.

Database Administration



Web Server



Tools:

Options for software requirement available for a web server on Microsoft platform is Internet Information Server and SQL Server.

Add-on- AVL developed web system

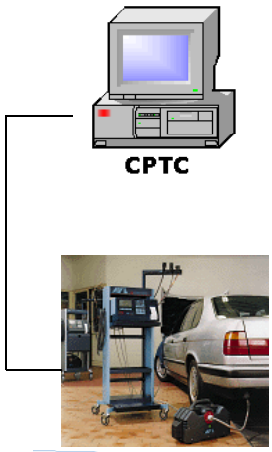
Features:

1. It acts as a interface between the database server and the CPTC user.

2. It guards the database server.

3. It compiles and sends back the static content to the client, and forwards the transactions (dynamic content retrieval and manipulation) to the database server, also forwards back the results from the database server to the CPTC .

PUCC



Tools:

Options for software requirement available for a PUCC on Microsoft platform is Internet Explorer

Features:

1. The PUCC user will connect the main server at Pollution Control Division through internet, Transport Department
2. PUCC center will login to the server online and
3. PUCC center will have web page which will interact with equipment and generate the certificate at the server
4. This certificate will be printed online by PUCC center
5. No data will be maintained at PUCC , All control will at Transport Department.
6. PUCC center will work like terminal

Software Classification

1. **PUCC Terminal:** There will be only Internet connectivity with PUCC subscription..
2. **Server Software:** This software runs in the server located at a central location, it is required for the following:

   (a) Web page management

   (b) Online data capturing from Pucc center

   (C) Certificate generation.

   (d) Database Management.

   (e) Data Analysis.

   (f) Customised Report Generation.

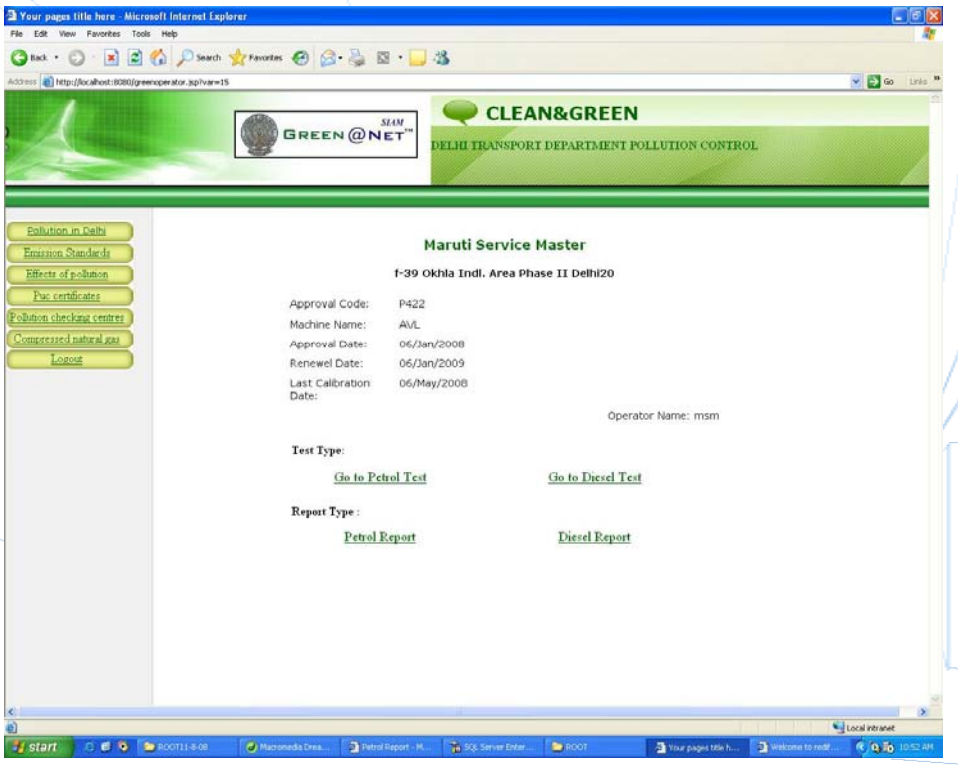
PUCC Web Pages

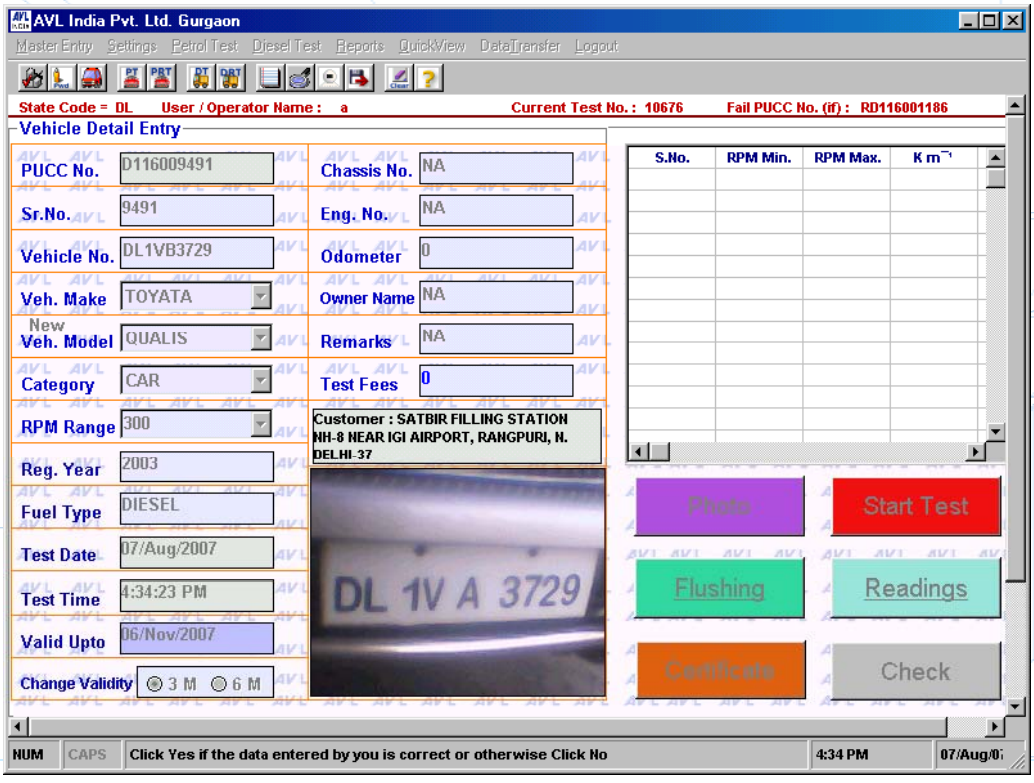
Delhi networking Solutions

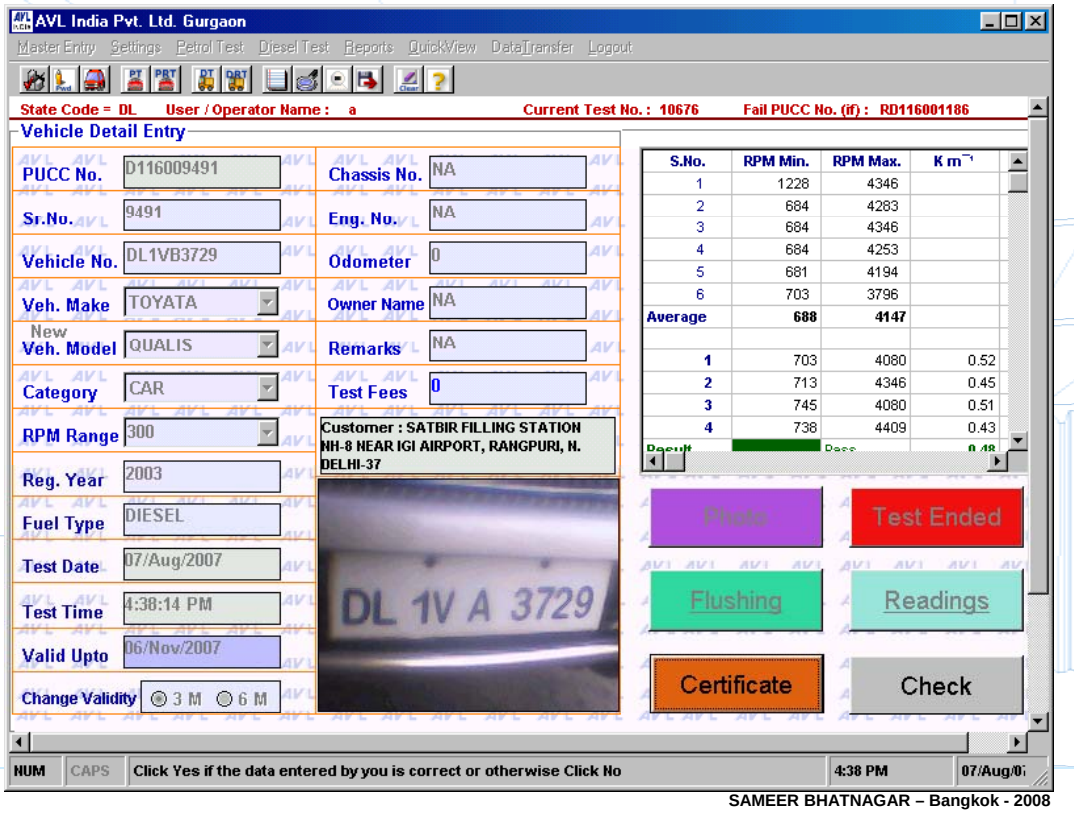
(www.delhitransportpuc.in)

Log in Page

Customer account page



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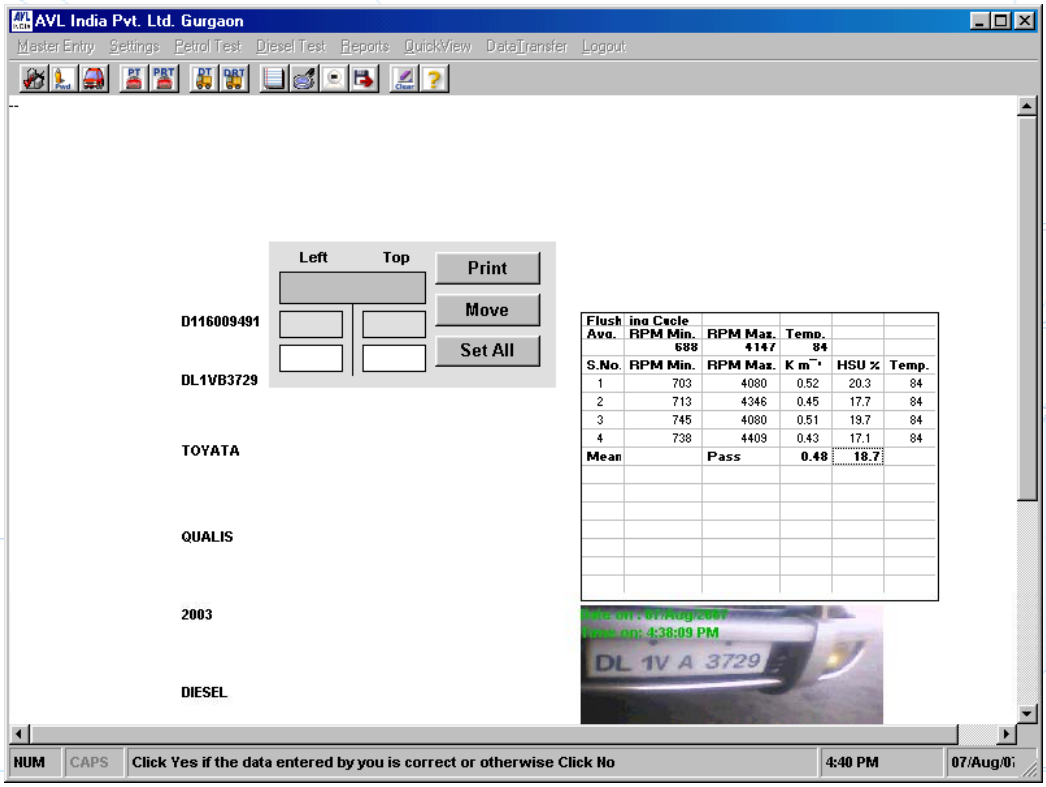
Master Entry Settings Petrol Test Diesel Test Reports QuickView DataTransfer Logout
State Code = DL User / Operator Name : a Current Test No. : 10676 Fail PUCC No. (if) : RD116001186
Vehicle Detail Entry
PUCC No. D116009491
Sr.No. 9491
Vehicle No. DL1VB3729
Veh. Make TOYATA
New Veh. Model QUALIS
Category CAR
RPM Range 300
Reg. Year 2003
Fuel Type DIESEL
Test Date 07/Aug/2007
Test Time 4:38:14 PM
Valid Upto 06/Nov/2007
Change Validity 3 M 6 M
Chassis No. NA
Eng. No. NA
Odometer 0
Owner Name NA
Remarks NA
Test Fees 0
Customer : SATBIR FILLING STATION NH-8 NEAR IGI AIRPORT, RANGPURI, N. DELHI-37
DL 1V A 3729
S.No. RPM Min. RPM Max. K m⁻¹
1 1228 4346
2 684 4283
3 684 4346
4 684 4253
5 681 4194
6 703 3796
Average 688 4147
1 703 4080 0.52
2 713 4346 0.45
3 745 4080 0.51
4 738 4409 0.43
Photo
Test Ended
Flushing
Readings
Certificate
Check
NUM CAPS Click Yes if the data entered by you is correct or otherwise Click No 4:38 PM 07/Aug/0


AVL India Pvt. Ltd. Gurgaon
Master Entry Settings Petrol Test Diesel Test Reports QuickView DataTransfer Logout
Left Top
Print
Move
Set All
D116009491
DL1VB3729
TOYATA
QUALIS
2003
DIESEL
Flushing Cycle Avg. RPM Min. 688 RPM Max. 4147 Temp. 84
S.No. RPM Min. RPM Max. K m⁻¹ HSU % Temp.
1 703 4080 0.52 20.3 84
2 713 4346 0.45 17.7 84
3 745 4080 0.51 19.7 84
4 738 4409 0.43 17.1 84
Mean Pass 0.48 18.7
Date on : 07/Aug/2007
Time on: 4:38:09 PM
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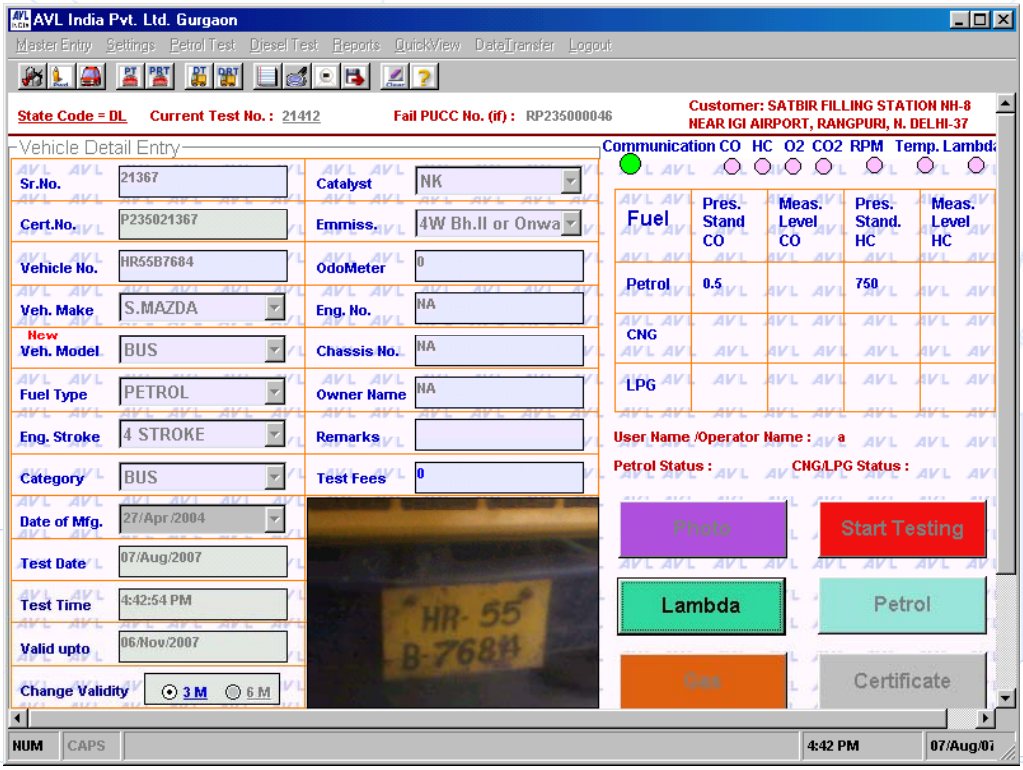
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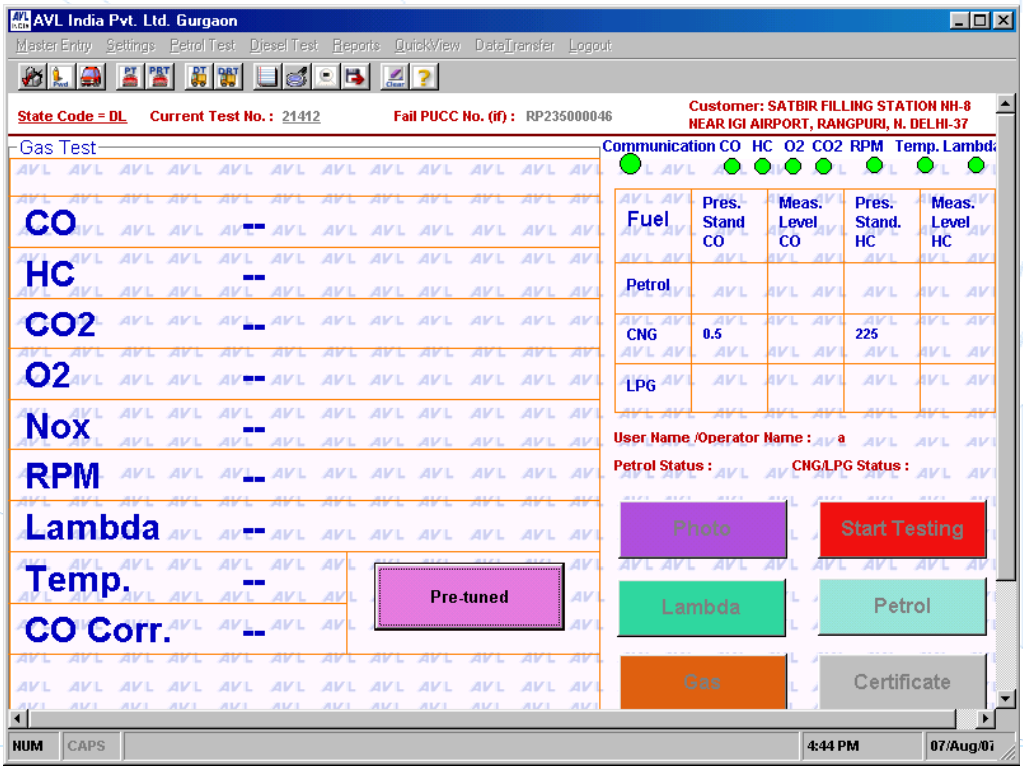
Master Entry Settings Petrol Test Diesel Test Reports QuickView DataTransfer Logout
State Code = DL
Current Test No. : 21412
Fail PUCC No. (if) : RP235000046
Customer: SATBIR FILLING STATION NH-8
NEAR IGI AIRPORT, RANGPURI, N. DELHI-37
Vehicle Detail Entry
Sr.No. 21367
Cert.No. P235021367
Vehicle No. HR55B7684
Veh. Make S.MAZDA
Veh. Model BUS
Fuel Type PETROL
Eng. Stroke 4 STROKE
Category BUS
Date of Mfg. 27/Apr/2004
Test Date 07/Aug/2007
Test Time 4:42:54 PM
Valid upto 06/Nov/2007
Change Validity 3 M 6 M
Catalyst NK
Emmiss. 4W Bh.II or Onwa
OdoMeter 0
Eng. No. NA
Chassis No. NA
Owner Name NA
Remarks
Test Fees 0
Communication CO HC O2 CO2 RPM Temp. Lambda
Fuel
Pres. Stand CO
Meas. Level CO
Pres. Stand. HC
Meas. Level HC
Petrol 0.5 750
CNG
LPG
User Name /Operator Name : a
Petrol Status :
CNG/LPG Status :
Photo
Start Testing
Lambda
Petrol
Gas
Certificate
NUM
CAPS
4:42 PM
07/Aug/07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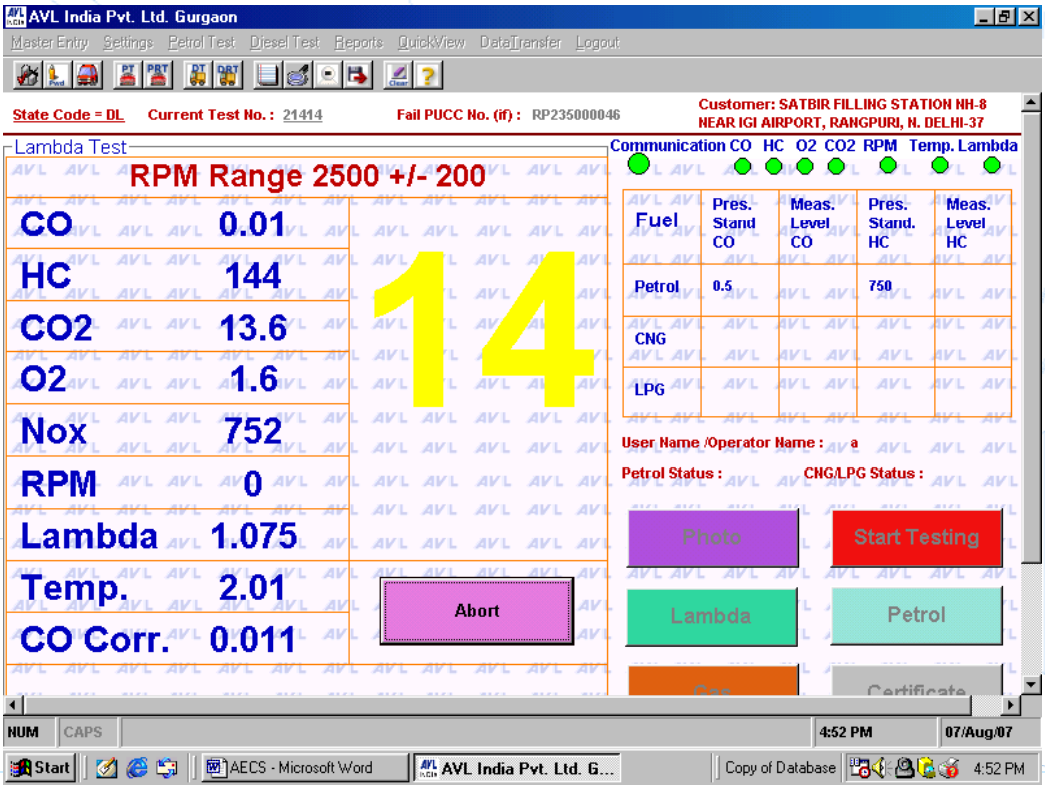
State Code = DL
Current Test No. : 21412
Fail PUCC No. (if) : RP235000046
Customer: SATBIR FILLING STATION NH-8
NEAR IGI AIRPORT, RANGPURI, N. DELHI-37
Gas Test
CO --
HC --
CO2 --
O2 --
Nox --
RPM --
Lambda --
Temp. --
CO Corr. --
Pre-tuned
Communication CO HC O2 CO2 RPM Temp. Lambda
Fuel
Pres. Stand CO
Meas. Level CO
Pres. Stand. HC
Meas. Level HC
Petrol
CNG 0.5 225
LPG
User Name /Operator Name : a
Petrol Status :
CNG/LPG Status :
Photo
Start Testing
Lambda
Petrol
Gas
Certificate
NUM
CAPS
4:44 PM
07/Aug/07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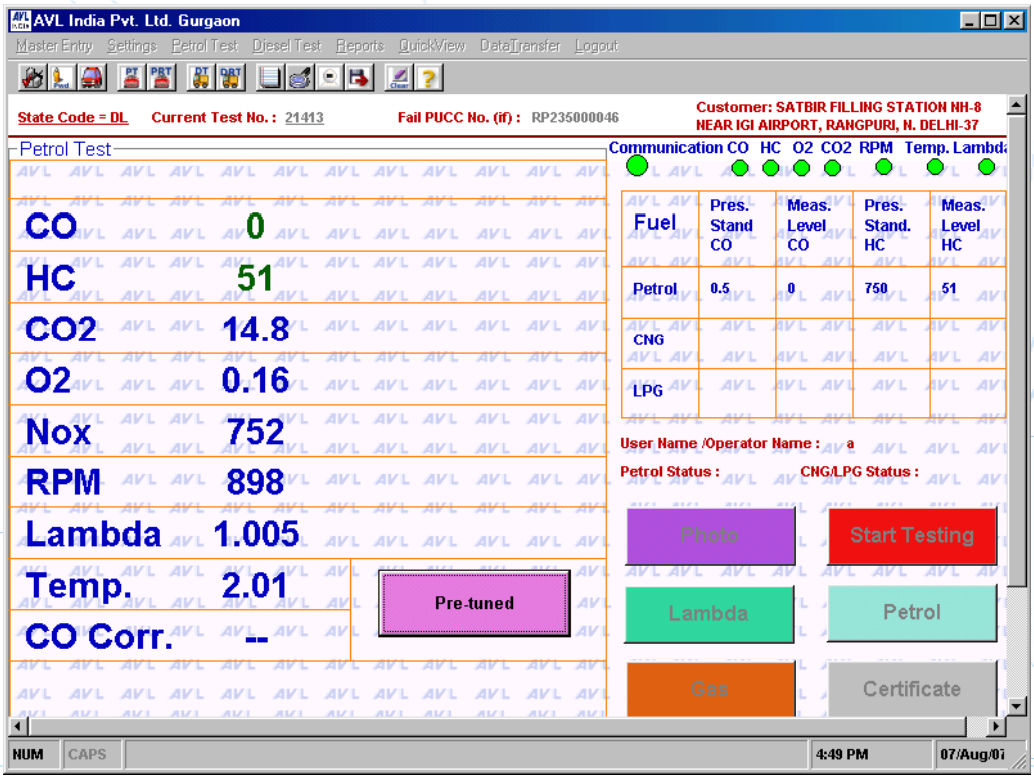
Fail PUCC No. (if) : RP235000046
Customer: SATBIR FILLING STATION NH-8
NEAR IGI AIRPORT, RANGPURI, N. DELHI-37
Lambda Test
RPM Range 2500 +/- 200
CO 0.01
HC 144
CO2 13.6
O2 1.6
Nox 752
RPM 0
Lambda 1.075
Temp. 2.01
CO Corr. 0.011
14
Abort
Communication CO HC O2 CO2 RPM Temp. Lambda
Fuel
Pres. Stand CO
Meas. Level CO
Pres. Stand. HC
Meas. Level HC
Petrol 0.5 750
CNG
LPG
User Name /Operator Name : a
Petrol Status :
CNG/LPG Status :
Photo
Start Testing
Lambda
Petrol
Gas
Certificate
NUM CAPS 4:52 PM 07/Aug/07
Start AECS - Microsoft Word AVL India Pvt. Ltd. G... Copy of Database 4:52 PM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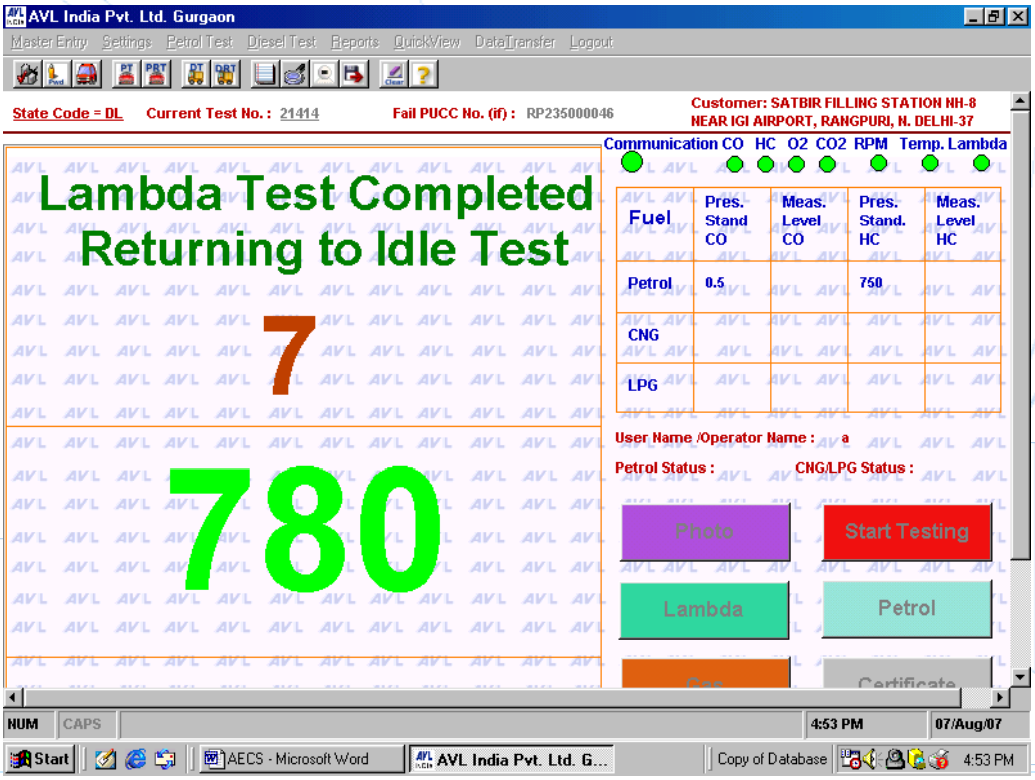
Customer: SATBIR FILLING STATION NH-8
NEAR IGI AIRPORT, RANGPURI, N. DELHI-37
Petrol Test
CO 0
HC 51
CO2 14.8
O2 0.16
Nox 752
RPM 898
Lambda 1.005
Temp. 2.01
CO Corr. --
Pre-tuned
Communication CO HC O2 CO2 RPM Temp. Lambda
Fuel
Pres. Stand CO
Meas. Level CO
Pres. Stand. HC
Meas. Level HC
Petrol 0.5 0 750 51
CNG
LPG
User Name /Operator Name : a
Petrol Status :
CNG/LPG Status :
Photo
Start Testing
Lambda
Petrol
Gas
Certificate
NUM CAPS 4:49 PM 07/Aug/07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Fail PUCC No. (if) : RP235000046
Customer: SATBIR FILLING STATION NH-8
NEAR IGI AIRPORT, RANGPURI, N. DELHI-37
Communication CO HC O2 CO2 RPM Temp. Lambda
Lambda Test Completed
Returning to Idle Test
7
780
Fuel
Pres. Stand CO
Meas. Level CO
Pres. Stand. HC
Meas. Level HC
Petrol
0.5
750
CNG
LPG
User Name /Operator Name : a
Petrol Status :
CNG/LPG Status :
Photo
Start Testing
Lambda
Petrol
Certificate
NUM
CAPS
4:53 PM
07/Aug/07
Start
AECS - Microsoft Word
AVL India Pvt. Ltd. G...
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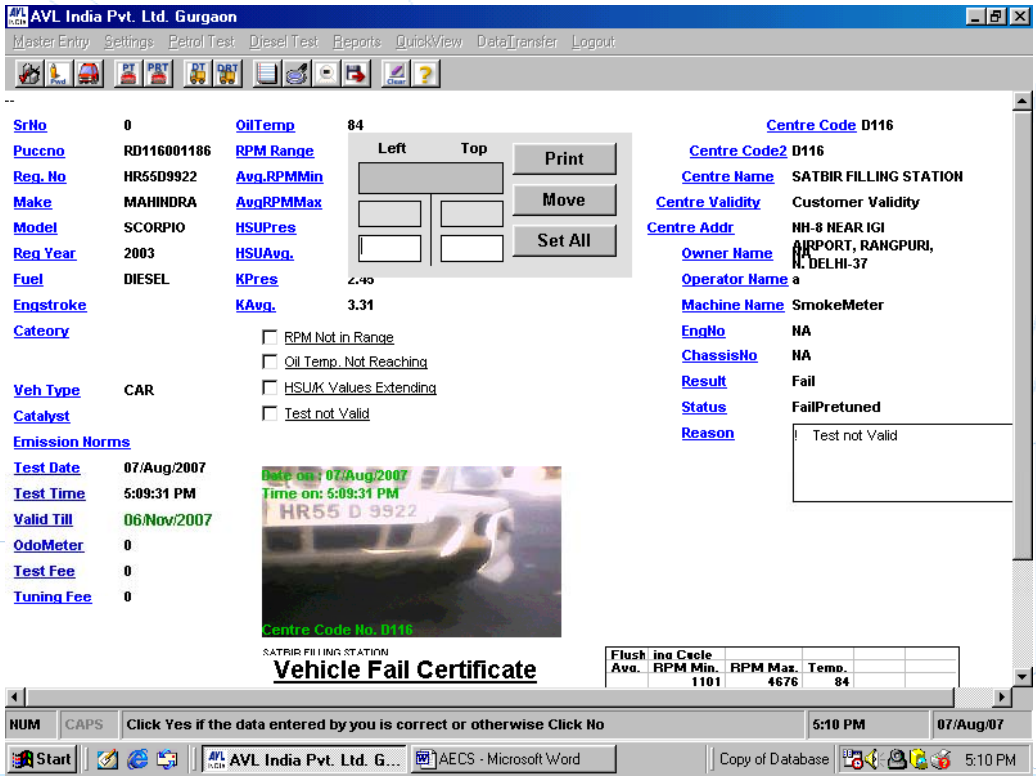
4:53 PM


AVL India Pvt. Ltd. Gurgaon
Master Entry Settings Petrol Test Diesel Test Reports QuickView DataTransfer Logout
SrNo 0
Puccno RD116001186
Reg. No HR55D9922
Make MAHINDRA
Model SCORPIO
Reg Year 2003
Fuel DIESEL
Engstroke
Cateory
Veh Type CAR
Catalyst
Emission Norms
Test Date 07/Aug/2007
Test Time 5:09:31 PM
Valid Till 06/Nov/2007
OdoMeter 0
Test Fee 0
Tuning Fee 0
OilTemp 84
RPM Range
Avg.RPMMin
AvgRPMMax
HSUPres
HSUAvg.
KPres
KAvg. 3.31
Left Top
Print
Move
Set All
RPM Not in Range
Oil Temp. Not Reaching
HSU/K Values Extending
Test not Valid
Centre Code D116
Centre Code2 D116
Centre Name SATBIR FILLING STATION
Centre Validity Customer Validity
Centre Addr NH-8 NEAR IGI AIRPORT, RANGPURI, N. DELHI-37
Owner Name NA
Operator Name a
Machine Name SmokeMeter
EngNo NA
ChassisNo NA
Result Fail
Status FailPretuned
Reason
Test not Valid
Date on: 07/Aug/2007
Time on: 5:09:31 PM
HR55 D 9922
Centre Code No. D116
SATBIR FILLING STATION
Vehicle Fail Certificate
Flush ing Cycle
Avg. RPM Min. 1101
RPM Max. 4676
Temp. 84
NUM
CAPS
Click Yes if the data entered by you is correct or otherwise Click No
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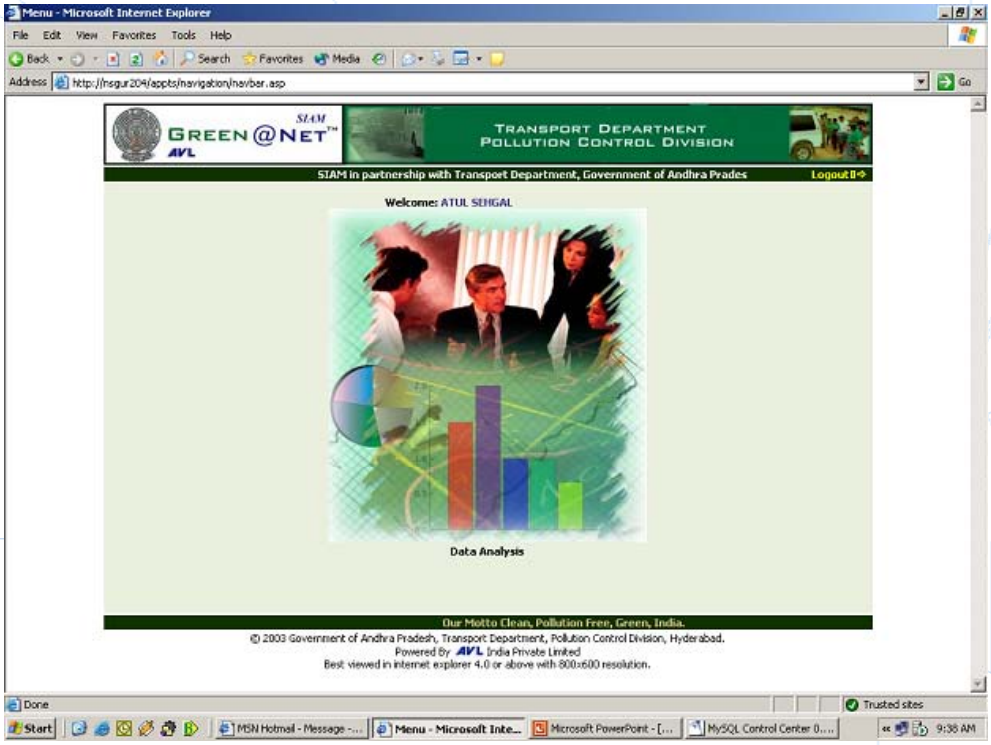
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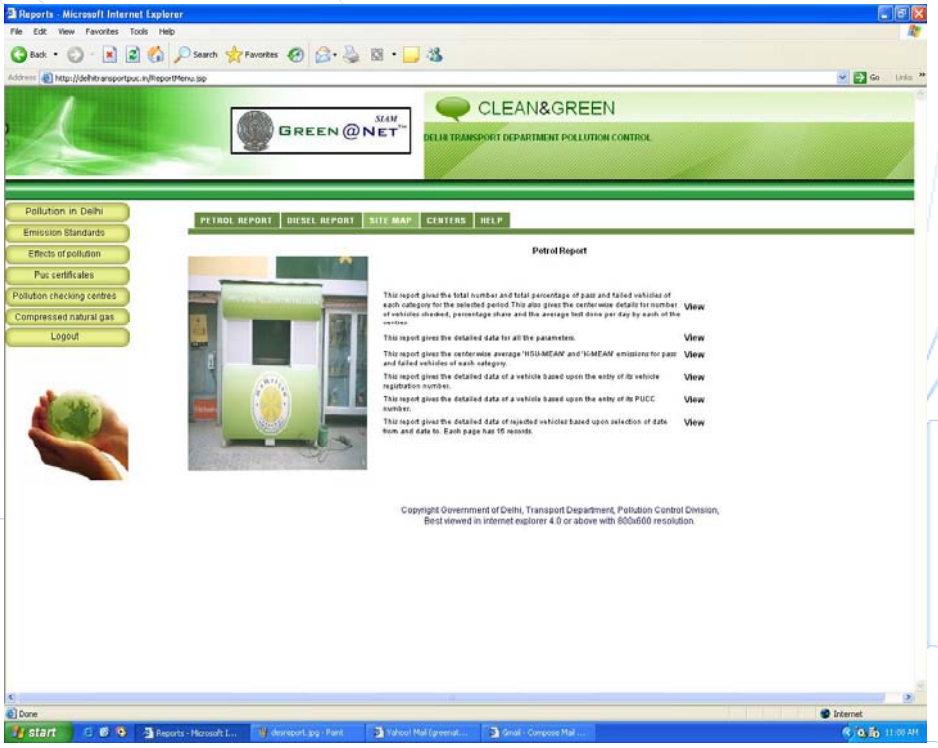
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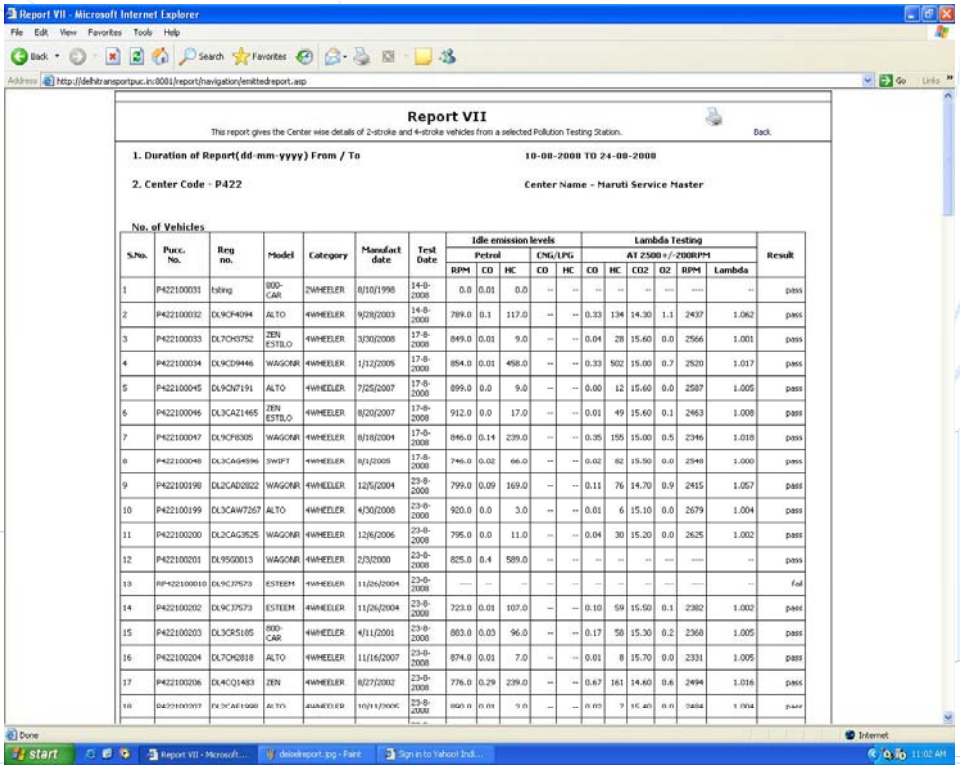

Report VII - Microsoft Internet Explorer

Report VII

This report gives the Center wise details of 2-stroke and 4-stroke vehicles from a selected Pollution Testing Station.

Back.

1. Duration of Report(dd-mm-yyyy) From / To 10-08-2008 TO 24-08-2008

2. Center Code - P422 Center Name - Maruti Service Master

No. of Vehicles

S.No.	Pucc. No.	Reg no.	Model	Category	Manufact date	Test Date	Idle emission levels					Lambda Testing						Result
							Petrol			CNG/LPG		AT 2500+/-200RPM						
							RPM	CO	HC	CO	HC	CO	HC	CO2	O2	RPM	Lambda	
1	P422100031	tsbing	800-CAR	2WHEELER	8/10/1998	14-8-2008	0.0	0.01	0.0	--	--	--	--	--	--	----	--	pass
2	P422100032	DL9CF4094	ALTO	4WHEELER	9/28/2003	14-8-2008	789.0	0.1	117.0	--	--	0.33	134	14.30	1.1	2437	1.062	pass
3	P422100033	DL7CH3752	ZEN ESTILO	4WHEELER	3/30/2008	17-8-2008	849.0	0.01	9.0	--	--	0.04	28	15.60	0.0	2566	1.001	pass
4	P422100034	DL9CD9446	WAGONR	4WHEELER	1/12/2005	17-8-2008	854.0	0.01	458.0	--	--	0.33	502	15.00	0.7	2520	1.017	pass
5	P422100045	DL9CN7191	ALTO	4WHEELER	7/25/2007	17-8-2008	899.0	0.0	9.0	--	--	0.00	12	15.60	0.0	2587	1.005	pass
6	P422100046	DL3CAZ1465	ZEN ESTILO	4WHEELER	8/20/2007	17-8-2008	912.0	0.0	17.0	--	--	0.01	49	15.60	0.1	2463	1.008	pass
7	P422100047	DL9CF8305	WAGONR	4WHEELER	8/18/2004	17-8-2008	846.0	0.14	239.0	--	--	0.35	155	15.00	0.5	2346	1.018	pass
8	P422100048	DL3CAG4596	SWIFT	4WHEELER	8/1/2005	17-8-2008	746.0	0.02	66.0	--	--	0.02	82	15.90	0.0	2546	1.000	pass
9	P422100198	DL2CAD2822	WAGONR	4WHEELER	12/5/2004	23-8-2008	799.0	0.09	169.0	--	--	0.11	76	14.70	0.9	2415	1.057	pass
10	P422100199	DL3CAW7267	ALTO	4WHEELER	4/30/2008	23-8-2008	920.0	0.0	3.0	--	--	0.01	6	15.10	0.0	2679	1.004	pass
11	P422100200	DL2CAG3525	WAGONR	4WHEELER	12/6/2006	23-8-2008	795.0	0.0	11.0	--	--	0.04	30	15.20	0.0	2625	1.002	pass
12	P422100201	DL9SQ0013	WAGONR	4WHEELER	2/3/2000	23-8-2008	825.0	0.4	589.0	--	--	--	--	--	--	----	--	pass
13	RP422100010	DL9CJ7573	ESTEEM	4WHEELER	11/26/2004	23-8-2008	----	--	--	--	--	--	--	--	--	----	--	fail
14	P422100202	DL9CJ7573	ESTEEM	4WHEELER	11/26/2004	23-8-2008	723.0	0.01	107.0	--	--	0.10	59	15.50	0.1	2382	1.002	pass
15	P422100203	DL3CR5165	800-CAR	4WHEELER	4/11/2001	23-8-2008	863.0	0.03	96.0	--	--	0.17	58	15.30	0.2	2360	1.005	pass
16	P422100204	DL7CH2818	ALTO	4WHEELER	11/16/2007	23-8-2008	874.0	0.01	7.0	--	--	0.01	8	15.70	0.0	2331	1.005	pass
17	P422100206	DL4CQ1483	ZEN	4WHEELER	8/27/2002	23-8-2008	776.0	0.29	239.0	--	--	0.67	161	14.60	0.6	2494	1.016	pass
18	P422100207	DL3CAE1998	ALTO	4WHEELER	10/11/2005	23-8-2008	860.0	0.01	9.0	--	--	0.00	7	15.40	0.0	2484	1.004	pass

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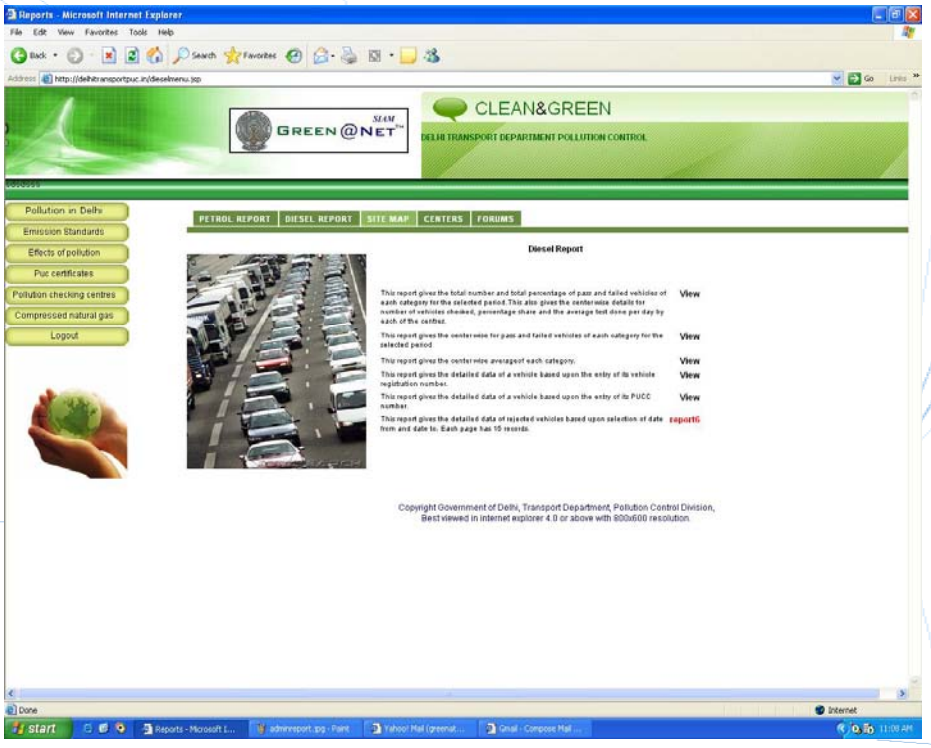

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- Pollution in Delhi
- Emission Standards
- Effects of pollution
- Puc certificates
- Pollution checking centres
- Compressed natural gas
- Logout

PETROL REPORT | DIESEL REPORT | SITE MAP | CENTERS | FORUMS

Diesel Report

This report gives the total number and total percentage of pass and failed vehicles of each category for the selected period.This also gives the centerwise details for number of vehicles checked, percentage share and the average test done per day by each of the centres. View

This report gives the centerwise for pass and failed vehicles of each category for the selected period. View

This report gives the centerwise averagesof each category. View

This report gives the detailed data of a vehicle based upon the entry of its vehicle registration number. View

This report gives the detailed data of a vehicle based upon the entry of its PUCC number. View

This report gives the detailed data of rejected vehicles based upon selection of date from and date to. Each page has 10 records. report6

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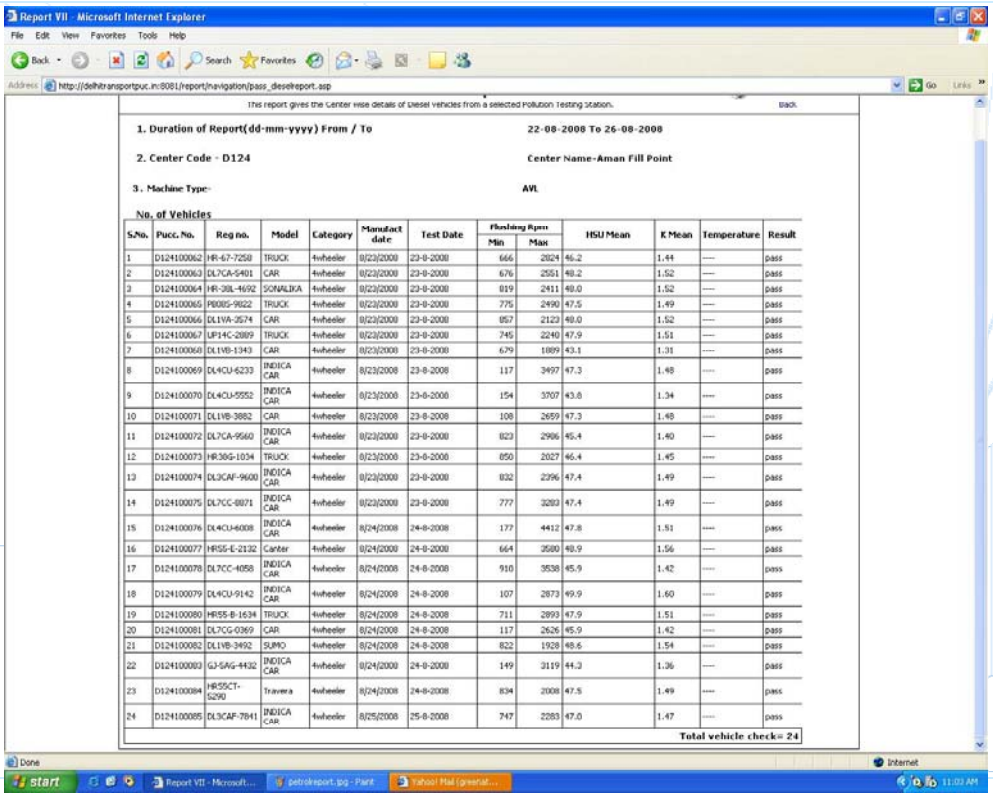

S.No.	Pucc. No.	Reg no.	Model	Category	Manufact date	Test Date	Flushing Rpm Min	Flushing Rpm Max	HSU Mean	K Mean	Temperature	Result
1	D124100062	HR-67-7258	TRUCK	4wheeler	8/23/2000	23-8-2008	666	2824	46.2	1.44	----	pass
2	D124100063	DL7CA-5401	CAR	4wheeler	8/23/2000	23-8-2008	676	2551	48.2	1.52	----	pass
3	D124100064	HR-38L-4692	SONALIKA	4wheeler	8/23/2000	23-8-2008	819	2411	48.0	1.52	----	pass
4	D124100065	PB08S-9822	TRUCK	4wheeler	8/23/2000	23-8-2008	775	2490	47.5	1.49	----	pass
5	D124100066	DL1VA-2574	CAR	4wheeler	8/23/2000	23-8-2008	857	2123	48.0	1.52	----	pass
6	D124100067	UP14C-2889	TRUCK	4wheeler	8/23/2000	23-8-2008	745	2240	47.9	1.51	----	pass
7	D124100068	DL1VB-1343	CAR	4wheeler	8/23/2000	23-8-2008	679	1809	43.1	1.31	----	pass
8	D124100069	DL4CU-6233	INDICA CAR	4wheeler	8/23/2008	23-8-2008	117	3497	47.3	1.48	----	pass
9	D124100070	DL4CU-5552	INDICA CAR	4wheeler	8/23/2008	23-8-2008	154	3707	43.8	1.34	----	pass
10	D124100071	DL1VB-3882	CAR	4wheeler	8/23/2008	23-8-2008	108	2659	47.3	1.48	----	pass
11	D124100072	DL7CA-9560	INDICA CAR	4wheeler	8/23/2000	23-8-2008	823	2906	45.4	1.40	----	pass
12	D124100073	HR38G-1034	TRUCK	4wheeler	8/23/2008	23-8-2008	850	2027	46.4	1.45	----	pass
13	D124100074	DL3CAF-9600	INDICA CAR	4wheeler	8/23/2000	23-8-2008	832	2396	47.4	1.49	----	pass
14	D124100075	DL7CC-8871	INDICA CAR	4wheeler	8/23/2008	23-8-2008	777	3283	47.4	1.49	----	pass
15	D124100076	DL4CU-6008	INDICA CAR	4wheeler	8/24/2008	24-8-2008	177	4412	47.8	1.51	----	pass
16	D124100077	HR55-E-2132	Canter	4wheeler	8/24/2000	24-8-2008	664	3580	48.9	1.56	----	pass
17	D124100078	DL7CC-4058	INDICA CAR	4wheeler	8/24/2008	24-8-2008	910	3538	45.9	1.42	----	pass
18	D124100079	DL4CU-9142	INDICA CAR	4wheeler	8/24/2008	24-8-2008	107	2873	49.9	1.60	----	pass
19	D124100080	HR55-B-1634	TRUCK	4wheeler	8/24/2008	24-8-2008	711	2893	47.9	1.51	----	pass
20	D124100081	DL7CG-0369	CAR	4wheeler	8/24/2008	24-8-2008	117	2626	45.9	1.42	----	pass
21	D124100082	DL1VB-3492	SUMO	4wheeler	8/24/2008	24-8-2008	822	1928	48.6	1.54	----	pass
22	D124100083	GJ-5AG-4432	INDICA CAR	4wheeler	8/24/2000	24-8-2008	149	3119	44.3	1.36	----	pass
23	D124100084	HR55CT-5290	Travera	4wheeler	8/24/2008	24-8-2008	834	2008	47.5	1.49	----	pass
24	D124100085	DL3CAF-7841	INDICA CAR	4wheeler	8/25/2008	25-8-2008	747	2283	47.0	1.47	----	pass

On Line - Demo

System Benefits

Benefits- PUCC User

GREEN@NET™

1. Automated online of data and analysis.
2. User Friendly system .
3. Uniform system of testing and compilation.
4. No PUCC S/W required
5. Time efficient system.
6. Cost Effective, Reliable and uses latest technology.

Benefits - Transport Department

GREEN@NET™

1. Automated On line Data availability from the PUCC end.
2. Pass / Fail judgment at Government department end .
3. PUCC center has no control works only like terminal.
3. Reliability of data is insured at the server end.
4. Online Reports : Read only access to data reports can be provided to any autonomous national/ international body.
5. Automated response can be sent to the vehicle owners for reminding them of the validity of their certificates, through e-mail or snail mail from the Transport Department
6. On road inspection online is possible.

Press Releases

Networked PTCs to help curb pollution

Express News Service
Hyderabad, Jan 9

A small but definitive beginning has been made to monitor emission levels of automobiles at different pollution testing centres in the city.

The Society of Indian Automobile Manufacturers, in partnership with the State Transport Department, launched the networking of pollution test centres. This way, authorities can know which particular brand and model causes more pollution.

The network, aided by United States Agency for International Development and ICICI bank, was inaugurated by Transport Commissioner CR Biswal, at RTA office premises in Khairatabad today.

As part of a trial run, the system will connect seven pollution test centres from Basheerbagh to ESI in the city and the data of each vehicle tested will be sent to the Transport Department daily.

Speaking on the occasion, Joint Transport Commissioner CLN Gandhi said that this concept has been introduced for the first time in India and it would enable the RTA to see the emission data of any vehicle plying in the city. This would encourage owners to maintain their vehicles properly, he said.

It is also felt by the transport officials that the data will assist the department and other policy makers to improve the enforcement and credibility of pollution-checking of vehicles.

Once all the 146 centres in Hyderabad are connected it would also be possible to analyse the emission of different vehicle categories.

"Presently, only 30 vehicles per day are being tested on this corridor. So, this network may not be of much use, but in future when pollution testing is made compulsory to all vehicles, this software would be useful to us," Gandhi said.

A law is on the anvil to make pollution testing mandatory to get fuel refills.

The software costing Rs 52 lakh was developed by AVL India Private Limited.

Pollution testing centres linked for better service

TIMES NEWS NETWORK

Hyderabad: A pilot project to network seven pollution testing centres in the city was inaugurated by transport commissioner C R Biswal at the Regional Transport Authority (RTA) office at Khairatabad on Friday.

The new system, funded by the United States Agency for International Development (USAID) and ICICI Bank, would enable analysis of emission data of any vehicle plying in the city. Despite pressure to establish the project in New Delhi, the Society of Indian Automobile Manufacturers chose Hyderabad, joint transport commissioner C L N Gandhi said.

The project will be funded by the agency for a year and after that, the department will incur the costs. The project would help real-time assessment of pollution levels of a large number of vehicles. From the database of the vehicles registered, if a vehicle fails to renew pollution checks, a notice will be issued to the owner to get the pollution under control certificate before the expiry date. "The collation and analysis of the data will assist the department and other policy makers to improve the enforcement and credibility of pollution checking of all vehicles," SIAM assistant director Atanu Ganguli said.

Thank You