

SIAM Viewpoint for improved Inspection & Maintenance in India

**GITE Regional Workshop on Transport Sector
Inspection & Maintenance Policy**

10th-12th December 2001

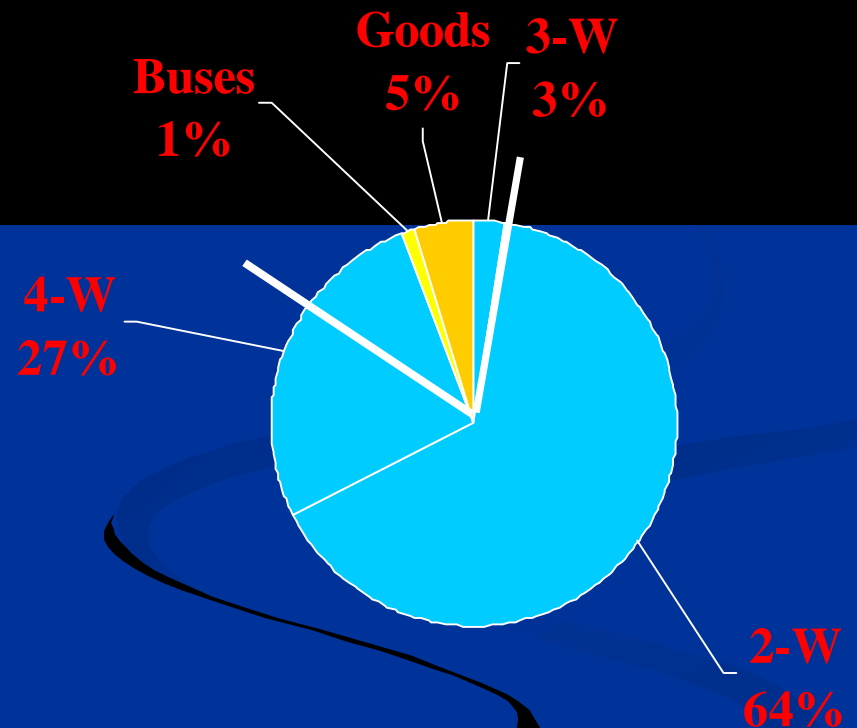
Bangkok

Indian Scenario

- Two types of I&M programmes are operational in India

- Fitness Test for Transport Vehicles*
- Emission Check for all Vehicles

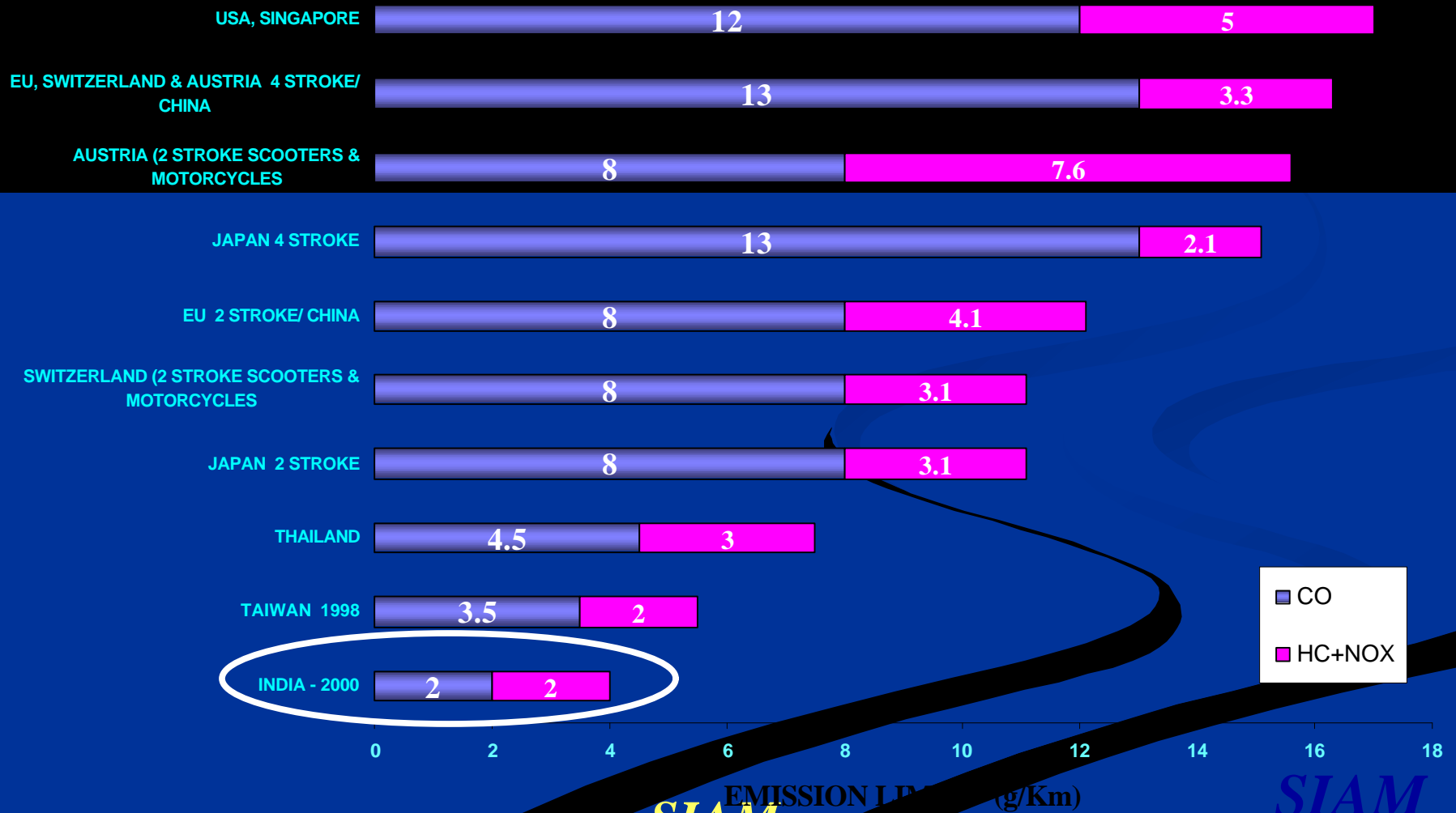
**Transport Vehicles*- Buses, Trucks, Taxis & Three-Wheelers



Data based on Delhi's Total No. of Registered Vehicles- Source: Transport Department, Government of Delhi (As on 31st March 2001)

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Comparison Of Emission Norms For 2 Wheelers - WORLDWIDE IN YEAR 2000

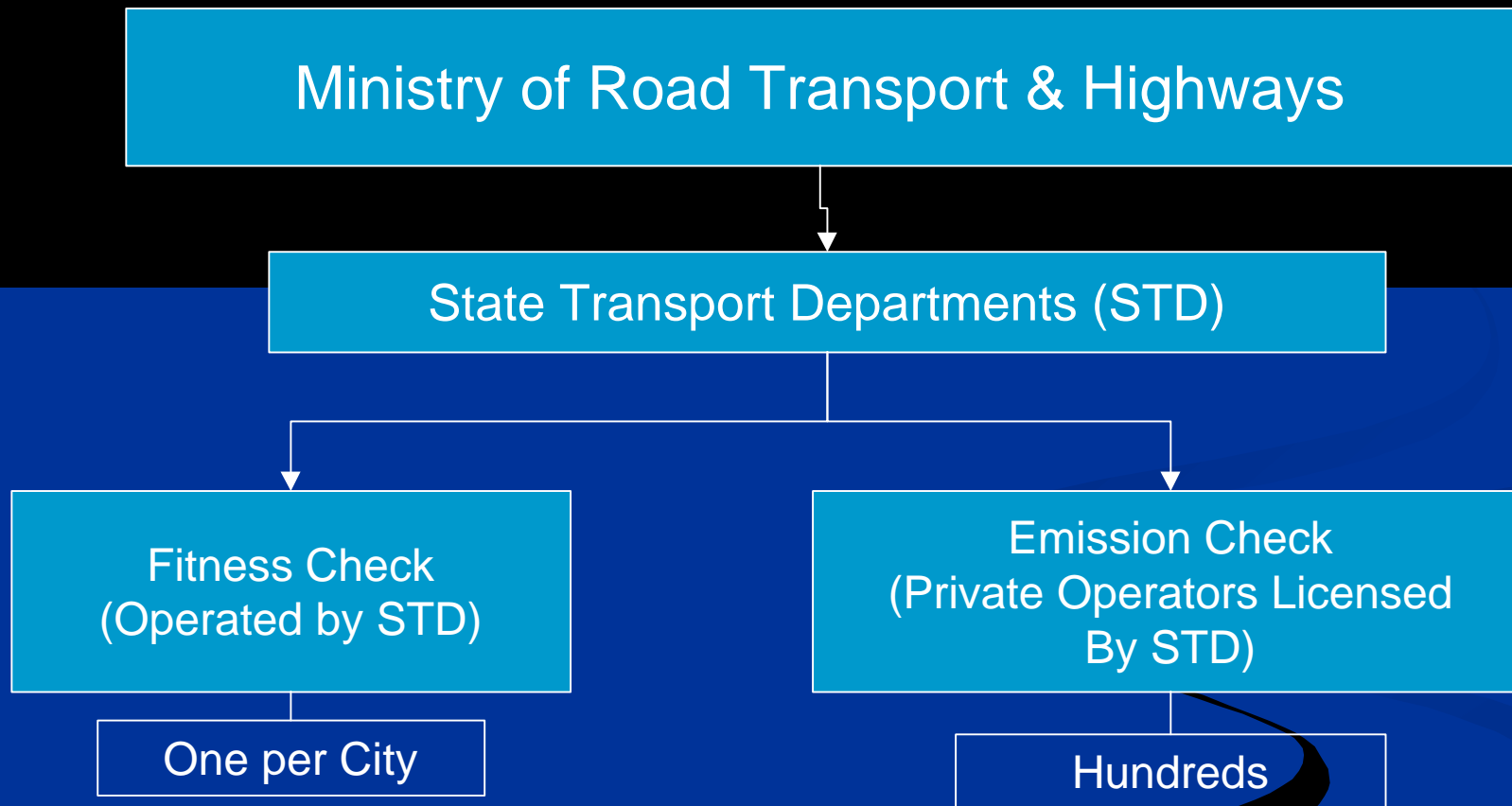


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EMISSION LIMIT (g/Km)

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Present Structure



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Fitness Check

- Transport vehicles need to undergo an annual Fitness check carried out by Regional Transport Offices (RTO) :

- Emission
- Safety
- Roadworthiness

Problems of present Fitness Checking System in India

- Infrastructure not available
 - Emission Check done using Gas Analyser/ Smoke Meter
 - Test equipment not available for checking safety related components viz. brakes, lights, etc.
- Test procedures not defined
- No Audit system

Fitness Check - Future Programmes

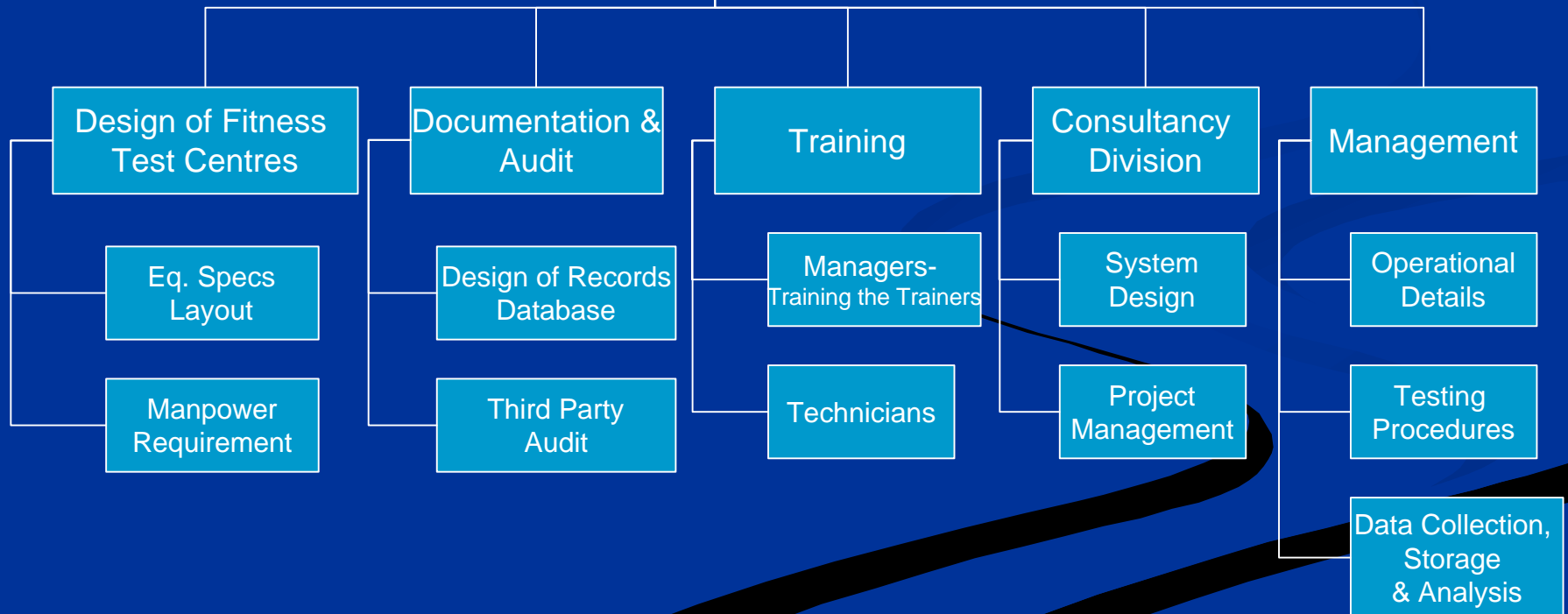
- Private organisations can set up Vehicle Fitness Centres
 - “Loaded Test” is also being Considered
- Need to extend Fitness Test for all category of vehicles
 - Awaiting Government notification
- Government of India has recognised the need to form a National Board

Suggested Institutional Set Up for - Fitness Check

Ministry of Road Transport & Highways

National Board

Regional Boards



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Emission Check

- All Vehicles need to undergo a periodic emission check (every 3 months/ 6 months) - at Fuel Stations or at Private Garages authorised by State Transport Department

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Problems of Present Emission Checking System

- The objective of reducing pollution not achieved
- Reasons:
 - Independent centres do not follow rigorous procedures due to inadequate training
 - Equipment not subjected to periodic calibration by independent authority
 - Lack of professionalism has led to malpractice
 - Issue of certificates without checks or production of vehicles- major concern



SIAM Initiatives on I&M

- Organised several Inspection & Maintenance clinics across the country
- Lab Test on in-use vehicles
- Organised Workshops & Conferences

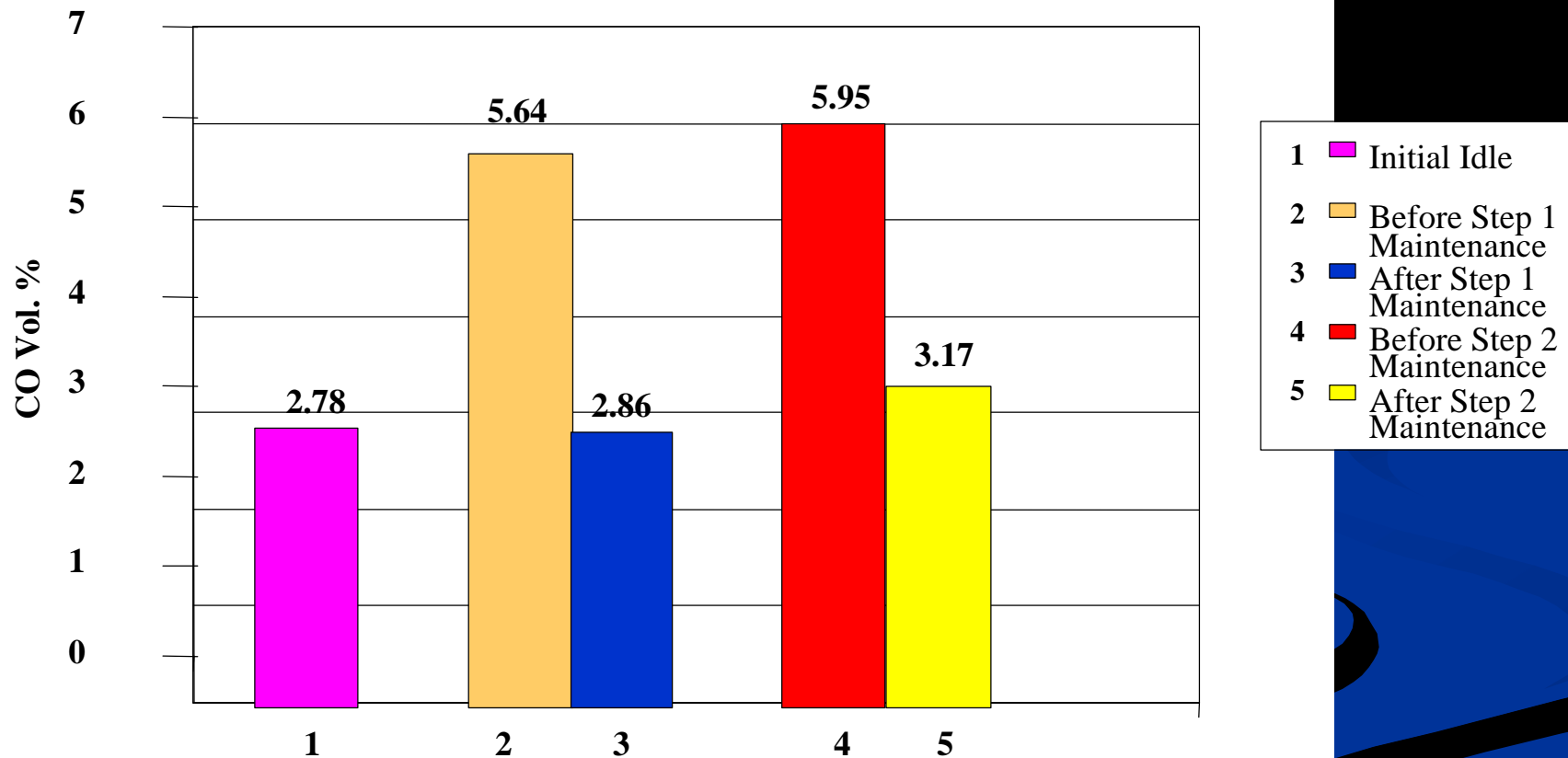
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I&M Camps Organised by SIAM

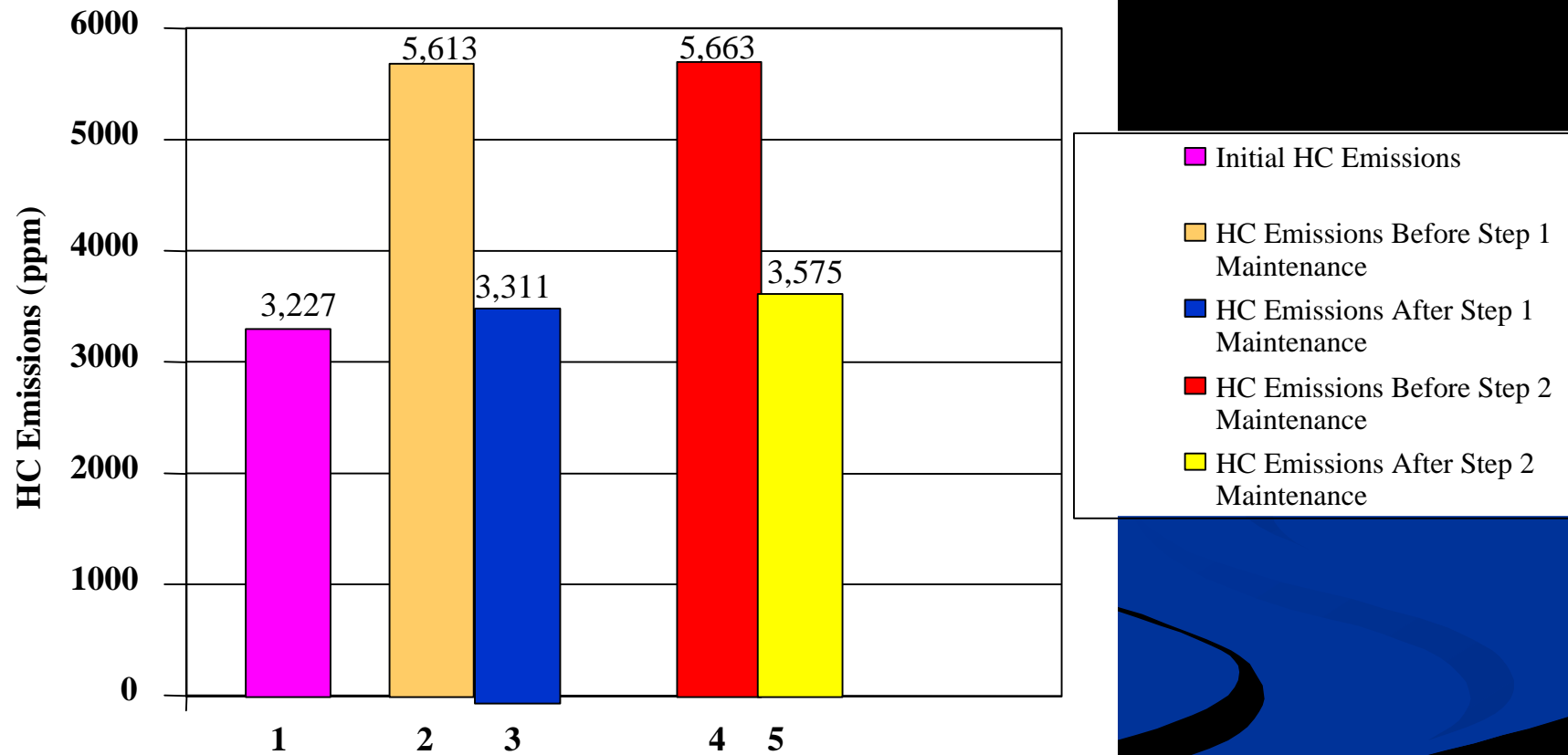
Sl. No.	Date	Category	City	Approx. No. of Vehicles
1	11 th Nov- 2 nd Dec 1999	2-Wheelers	Delhi	66,000
2	24 th Nov- 26 th Nov 1999	Cars	Mumbai	500
3	14 th Dec- 17 th Dec 1999	Commercial Vehicles	Delhi	1,500
4	12 th Oct- 15 th Oct 2000	2-Wheelers, 3-Wheelers & Passenger Cars	Hyderabad	10,500
5	19 th Oct- 21 st Oct 2000	3-Wheelers	Chennai	2,900
6	9 th Nov - 10 th Nov 2000	Govt. Vehicles (Cars & Jeeps)	Chennai	275
7	18 th Nov - 21 st Nov 2000	Govt. Vehicles (Cars & Jeeps)	Hyderabad	1,800
8	20 th Nov- 24 th Nov 2000	2-Wheelers & Cars	Kolkata	3,500
9	18 th Dec- 23 rd Dec 2000	Commercial Vehicles	Chennai	950
10	9 th Jan – 11 th Jan 2001	Two Wheelers & 3-Wheelers	Bangalore	5,500
11	2 nd April – 4 th April 2001	Two/Three & Petrol Four Wheelers	Delhi	3624
12	18 th May– 20 th May 2001	Two Wheelers & Petrol Passenger Cars	Mumbai	1600
13	13 th -15 th Oct 2001	Two/Three & Petrol Four Wheelers	Delhi	1800

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I/M Can Reduce About 3% Vol. CO Idle Emissions



I/M Can Lower Idle HC Emissions By 40%



Effect of I&M on Mass Emissions Reductions

■ No. of Two-Wheelers tested : 22

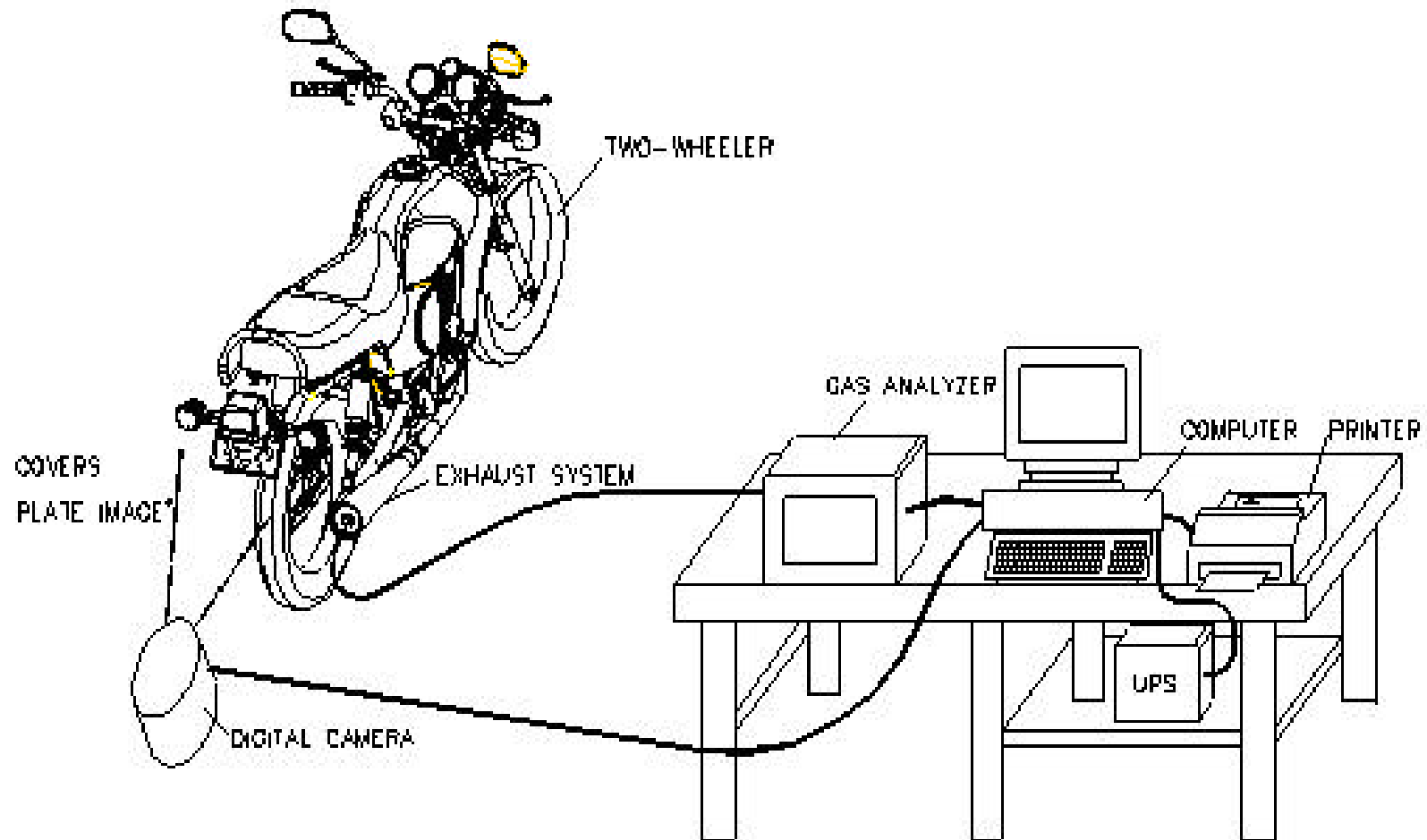
	CO (g/km)	HC(g/km)
Reduction	39.16%	20.22%

■ Fuel Efficiency improvement 15-20%

Conclusion from I&M Camps

- Significant reduction in emission by minor adjustments
- Improvement in fuel efficiency
- Need to have a sustainable programme
- Emission Check Centres are the only existing Infrastructure available in India for all vehicles
 - Upgrade this system to make it effective

Schematic of Computerised System



Sample Test Certificate

EMISSION TEST CERTIFICATE

(Rule 231 (B) (81 of KMV Rules 1989)

Serial Number : KAXXX200100005 Make : TVS Date : Apr 04, 2001
Registration Number : KA 05 EA 2192 Model : SUZUKI Time : 3:00:40 PM
Year of Registration : 1999 Type Of Engine : 2S Catalyst : No
Speedometer Reading : 4500
(Kms)
Type of Vehicle : 2W

Test Result : IDLING

	Regulation (%)	Actual Reading	
CO	4.5	2.4	% Vol

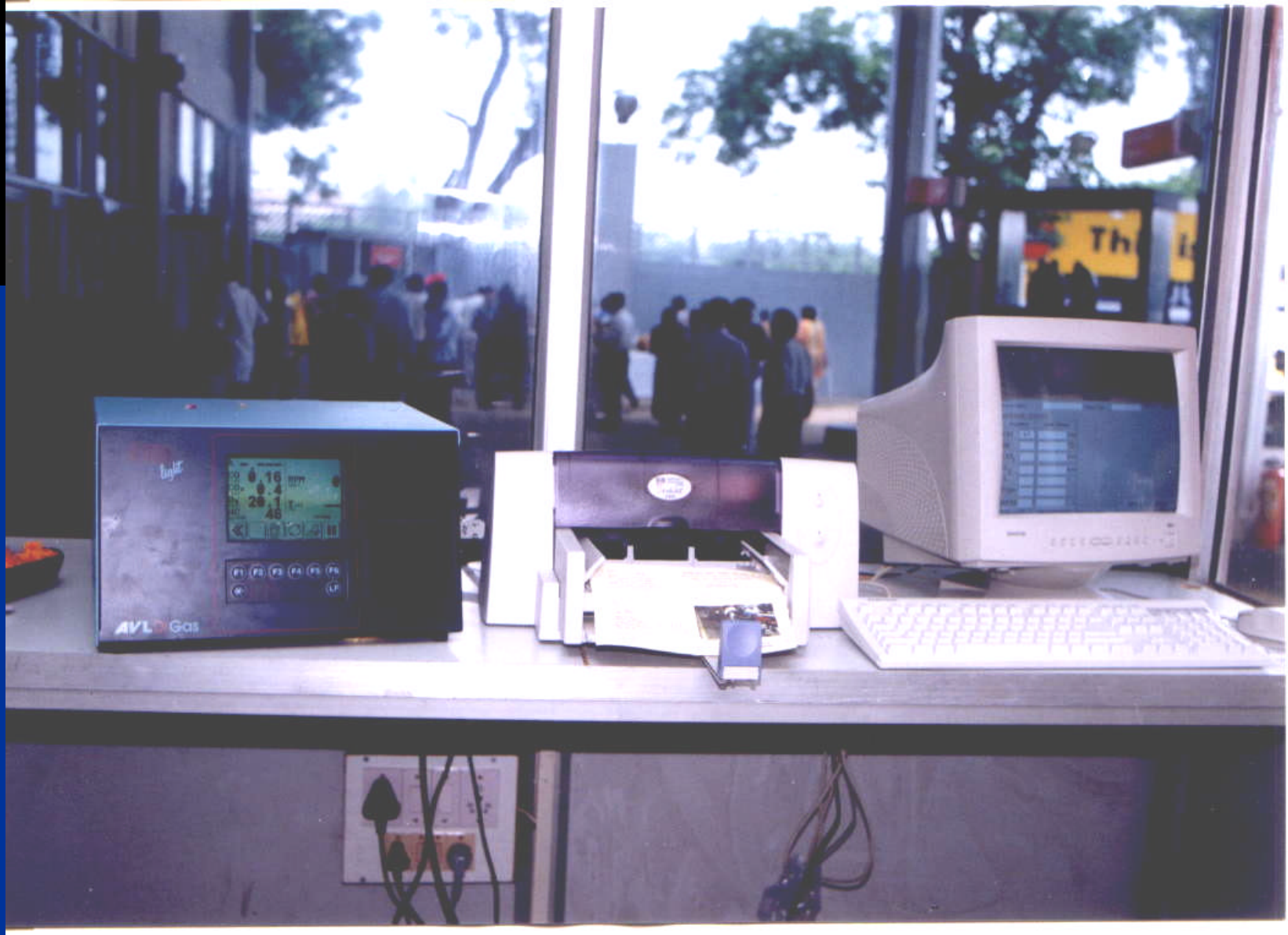
This vehicle has been tested as per details shown in the certificate and meets the Emission Standards prescribed by the Rule 115(2) of Central Motor Vehicle Rules 1989.



GRADE : A Valid Upto: Oct 04, 2001

SEAL OF TEST STATION	CODE OF TEST STATION	TRANSPORT DEPT. SEAL
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Computerised Emission Checking system



SIAM Model Centre in Delhi



COMPUTERISED EMISSION TEST CENTRES SET UP by SIAM

No	City	Date	Installed at
1	Kolkata	5 th June 2001	<ul style="list-style-type: none"> • M/s Uma Service Station Service Garage 2. M/s Asoke Automobiles (Indian Oil Retail Outlet)
2	Bangalore	24 th July 2001	<ul style="list-style-type: none"> 3. M/s Girimaji Enterprises, Service Garage 4. M/s Varadaraja Service Station, (Indian Oil Retail Outlet)
3	New Delhi	8 th August 2001 29 th August 2001	<ul style="list-style-type: none"> 5. M/s Bhatia Service Station (Indian Oil Retail outlet) 6. M/s Ram Service Station (BPCL Retail outlet)
4	Chennai	19 th Sept 2001	<ul style="list-style-type: none"> 7. RTO (South), Thirunaumiur 8. Automobile Association of Southern India.
5.	Gangtok	28 th Sept 2001	<ul style="list-style-type: none"> 9. Transport Department , SNT Complex, Gangtok

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Conclusions

Two-Pronged Approach

■ Fitness Test

- Formation of a National Board for Inspection & Maintenance
- Set up necessary infrastructure for modernising the fitness test
- Include all categories of vehicles

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Conclusions

Two-Pronged Approach (Contd.)

- Computerise emission checking system
 - SIAM Suggestion – Creation of a “Clean Air Fund” for creating a structure for better management for I&M activities

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Thank You!

Society of Indian Automobile Manufacturers

Core 4B, 5th Floor, India Habitat Centre

Lodi Road, New Delhi – 110 003

INDIA

Tel: 91-11-4647810/11/12

Fax: 91-11-4648222

Email: siam@vsnl.com; siam@bol.net.in

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