

Current I/M practice and a future
national I/M regulation of China

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Current I/M system

At present, test method of I/M program in China is primarily idle test

- Two speed idle is adopted in some regions such as Beijing
- In general, the test methods include periodic and random inspection:
 - ✧ Periodic inspection annual
 - ✧ Random inspection roadside check

Current I/M system

↪ I/M administrative institutions

I/M program in China is primarily involved with three administrative departments their cooperation is the major issue of a successful I/M program

- ✧ Traffic administration agency under public security is in charge of the organization and administration of annual inspection system
- ✧ Transportation agency is in charge of maintenance
- ✧ Environmental protection bureau responsible for supervision of vehicle pollution

Current I/M system--Weakness

- ↘ Cooperation among the administrative organizations is to be strengthened
- There is a lack of effective supervision method to the irregular behavior of drivers, inspection and maintenance personnel

Supervision on the quality of vehicle maintenance is to be strengthened

- There is insufficient knowledge of I/M program for drivers and daily service in the society
- Lack of effective method for the analysis of implementation effect

National I/M Framework

- **Air quality needs Exceeding AQS?**
 - From motor vehicle?
- **Vehicle population**
- **Economy level**
- **Public opinion**
- **Enhanced I/M, Basic I/M?**

I/M performance standard Enhanced

- **Performance**
 - **Emission reduction**
- **Network**
 - **centralized**
- **Frequency**
 - **annual**
- **Vehicle coverage**
 - **all**
- **Test procedure**
 - **Loaded test**
- **Cutpoints**
 - **National standard**
- **Visual Check**
- **Roadside test**

I/M performance standard

- **Performance**
 - Emission reduction
- **Network**
 - centralized
 - hybrid
- **Frequency**
 - annual
- **Vehicle**

coverage

- all
- **Test procedure**
 - Idle test Cutpoints
 - National standard
- **Visual Check**
- **Roadside test**

Requirements

- **_ Enforcement and coordination**
 - renewal of registration
 - reasonable test charge
- **Quality control**
- **Audit**
- **Contractor**

Requirements

- **Training**
- **Data reporting**
- **Public awareness**
- **Repair training**
- **Effectiveness evaluation**

City-wide I/M implementation

- **Implementation plan covering all items**
 - **Air quality data**
 - **NO_x shall be addressed?**
 - **Program type**
 - **Vehicle coverage and test frequency**

This is designed in Beijing's program

I/M implementation plan

- **Network type**

- **Centralized**

- **government or contractor run**

- **Most effective**

- **Lost management cost**

- **Best quality**

- **Equally effective?**

**The hybrid network is not changed in
Beijing**

I/M implementation plan

- **Network type of Beijing**
 - **Inspection station runs small repairs**
 - **Competition for customer**
 - **' u • M' x 50%**
 - **Enforcement bind to safety test stations**

The current program in Beijing is much less effective than a real centralized one (Contractor run)

I/M implementation plan

- **Resources**

- **Covering quality audit, data analysis, auditing equipment and manpower, public awareness, etc.**

The current test charge doesn't include above items

- **Quality control**

This is covered in Beijing program

Enforcement

- **_ Testing**
 - registration
 - sticker
 - computer
 - punishment

 - computerized
 - Indirect charging
- **_ Repair**
 - Mechanic training
 - Transient tesing
 - NOx, simutaneous control
- **adjustment**
 - Remote sensing
 - roadside testing

Repair

- **Repair reduces emission**
 - poor repair is common
 - affect vehicle performance
 - cause re-adjustment
 - reducing emission and improving performance
- **Mechanic training**
 - focusing on emission
 - Diagnosis is the key
 - Y Test equipment is needed too
- **Repair management**
 - support I/M target
 - understanding program detail

- **I/M effectiveness evaluation report**
- **Quality audit**
- **Record auditing and other types of auditing**
- **Data collecting and analyzing**
- **Evaluation report**

This is partly done in Beijing, but network is not established, and evaluation is not carried out