Vehicle Registration and Inspection in Thailand

In Thailand, the Department of Land Transport (DLT) administers two relevant pieces of legislation:

- **Motor Vehicle Act (MVA)**: smaller vehicles, including cars, pick ups, and motorcycles, taxis and so on.
- **Land Transport Act (LTA)**: heavy-duty diesel vehicles, including buses and trucks.

Responsibilities for periodic inspection of in-use vehicles are divided as follows:

- DLT inspect vehicles regulated under the LTA; and
- Private inspection stations authorized by DLT carry out inspection of motorcycles and taxis i.e. vehicles registered under the MVA.

DLT established the privately operated system of inspection stations in 1994. There are at present 225 centers in the Bangkok Metropolitan Region (BMR). The distribution of centers is as follows: 169 centers in Bangkok with a further 56 in the surrounding provinces that make up the balance of the BMR. About 70% of the centers also do repair.

Table 2.5 sets out details of vehicles that may be inspected by inspection stations in the BMR. The inspection covers safety and emissions of vehicles.

Table 2.5 - Private Inspection Centers and Authorized Vehicle Types

Type of Inspection	Bangkok	Non-thaburi	Pathum Thani	Nakon Pathom	Samut Prakan	Total
Motorcycle	25	4	1	1	6	37
Vehicle Weight up to 1,600 Kg	46	5	4	2	7	64
Vehicle Weight more than 1,600 Kg	-	-	-	-	-	-
Vehicle Weight up to and more than 1,600 Kg	44	1	4	2	5	56
Motorcycle and Vehicle Weight up to 1,600 Kg	28	3	-	2	-	33
Motorcycle and Vehicle Weight more than1,600 Kg	-	-	-	-	-	-
Motorcycle Vehicle Weight up to 1,600 kg and more than 1,600 kg	26	-	-	6	3	35
Total	**169**	**13**	**9**	**13**	**21**	**225**

Source: DLT

At present motorcycles and cars aged more than 5 and 7 years respectively must be inspected before their motorcycle registration can be renewed. The registration system relies on a log book is tied to the vehicle or motorcycle.

DLT have 13 staff in Bangkok who are responsible for monitoring the quality of inspections but each station is only monitored on average three times per year. There is no centralized reporting

of inspection results on a timely basis. The following summary provides the performance of the inspection system in Thailand (Parsons, 2000).

"The Action Plan Coordinating Unit (APCU) established on a project basis in the Ministry of Transport and Communications conducted a performance review of this system (SweRoad, 2000) and concluded that:

- Inspections at both the centralized and private inspections stations are hampered by the lack of operable equipment.
- In practice, inspections are limited to identification and a rather rudimentary visual examination of the vehicle components.
- Both the centralized and private inspection garages lack efficient inspection equipment.
- There is no quality assurance program for the private garages.
- There are no maintenance or calibration programs for the measurement instruments used at the centralized inspection stations.
- Passenger cars are not inspected until they are seven years old and motorcycles are not inspected until they are five years old.
- Very few roadside inspections are made; and
- There is an absence of technical specifications.
- The test records are manually created and processed resulting in delays in monitoring program performance.[1]

These existing I/M program and enforcement activities inefficiencies were also reflected in the Radian report (Radian, 1998). More recently, the LTD conducted random sampling of 43 private inspection centers using a single passenger vehicle and two motorcycles (Chulalongkorn University, 2000). The passenger vehicle correctly passed the inspection performed by 20 of the 22 stations the vehicle was submitted to. The remaining 2 stations made inspection minor inspection errors, which did not affect the "pass" result. The two motorcycles were failed by 12 of the 21 stations they were submitted to, and passed by the remaining 9 stations. The motorcycles failed when examined by LTD.

Noppaporn also reported (Noppaporn, 1999) that approximately 13% or less of the vehicles submitted to private inspection stations fail for either safety of emissions standard. This failure rate has been declining since 1994, and was only at 6.5% in 1997.

A study commissioned by the BMA, which formed part of the Bangkok Air Quality Management Project, showed that with the exception of private buses, less than 1% of vehicles fail for emissions (approximately 3% of private buses fail for emissions)[2]. These emissions failure rates are exceptionally low in comparison with failure rates observed in other comparable I/M programs.

Historically, between 10% and 25% of vehicles would be expected to fail the emissions test, depending on the stringency of the standards, the degree of administrative oversight, and the maturity of the program (failure rates tend to decrease over time).

The BMA and BAQMP Project Team recently conducted two workshops on the effectiveness of the existing I/M program and potential changes. During those workshops, both the TSAE and the LTD confirmed the existence of inspection equipment problems. The LTD stating that more than 90% of the equipment at LTD's centralized lanes is under standard and that there is no maintenance policy in place. They also stated similar deficiencies with equipment used by the private inspection garages and that used for roadside enforcement.

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[1] Noppaporn, 1999.

[2] Chula Unisearch, Bangkok Air Quality Management Project, supplement Report Volume 1, Component 1, prepared by Chulalongkorn University, November, 1999.

However, a number of independent studies have confirmed that a key contributing factor is that both the centralized (LTD) and decentralized (privately operated) elements of the existing hybrid vehicle inspection program are inhibited by a chronic shortage of operational and maintenance funding, which severely limits its capacity to adequately and consistently inspect vehicles. In essence, it can be concluded that many of the problems appear to stem from one or more of the following factors: inoperative, missing or improperly calibrated inspection equipment; inadequate levels of monitoring and audit; lack of operator training; or insufficient financial incentive to do a thorough inspection.

In addition, the existing program does not have the capability to measure particulate (PM) emissions from diesel vehicles, and lacks crucial quality assurance measures. LTD suggested many of these problems are due to budget constraints and internal purchasing policies that require equipment be purchased on the basis of lowest price rather than quality or reliability, and the lack of an ongoing maintenance budget.

During these same workshops, PCD indicted that they were addressing the lack of technical specifications by developing new inspection procedures for the roadworthiness and on-road inspections, and are in the process of promulgating new certification standards for new vehicles. All agencies that spoke at the workshops agreed that costs were an overriding consideration in all retrofit and inspection programs and that few recommendations would be implemented unless funding was made available"

On road enforcement of emissions

Three organizations exercise responsibility for on-road enforcement of vehicle emissions standards. These are: the Police, under the Ministry of Interior; DLT under the MOTC; and PCD. The authorizing legislation is different in each case, resulting in inconsistencies between the three agencies