



MINISTRY OF TRANSPORT AND LOGISTICS OF ETHIOPIA

**Electric Vehicle Technic Inspection Experience
and Trends in Ethiopia**

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Introduction

In Ethiopia, fuel imports account for approximately \$4 billion annually. On a global scale, the manufacturing and utilization of electric vehicles (EVs) are experiencing significant growth, driven by governments' implementation of stricter environmental protection directives. Ethiopia, with its abundant electric power resources and attractive incentives, holds immense potential for the electric vehicle sector.

Electric vehicles (EVs) are gaining popularity worldwide due to their environmental benefits and potential to reduce dependence on fossil fuels. As a result, many countries are adopting policies and regulations to promote the use of EVs. However, ensuring the safety and reliability of these vehicles is crucial for their successful integration into the transportation system. This presentation aims to shed light on Ethiopia's experience in implementing technical inspections for electric vehicles.



Background



Ethiopia, like many other countries, recognizes the importance of transitioning to sustainable transportation systems. In recent years, the government has taken significant steps to promote the adoption of electric vehicles. These efforts include providing incentives for EV purchases, establishing charging infrastructure, and implementing policies to support the growth of the EV market.

However, as the number of electric vehicles on Ethiopian roads increases, it becomes imperative to ensure that these vehicles meet the necessary safety and technical standards. Technical inspections play a vital role in this regard, as they help identify any potential issues or defects that may compromise the safety and performance of EVs.



Objective



The objective of this presentation is to present and discuss Ethiopia's experience with electric vehicle technical inspections.



Ethiopia's Experience on Electric Vehicle Technical Inspection

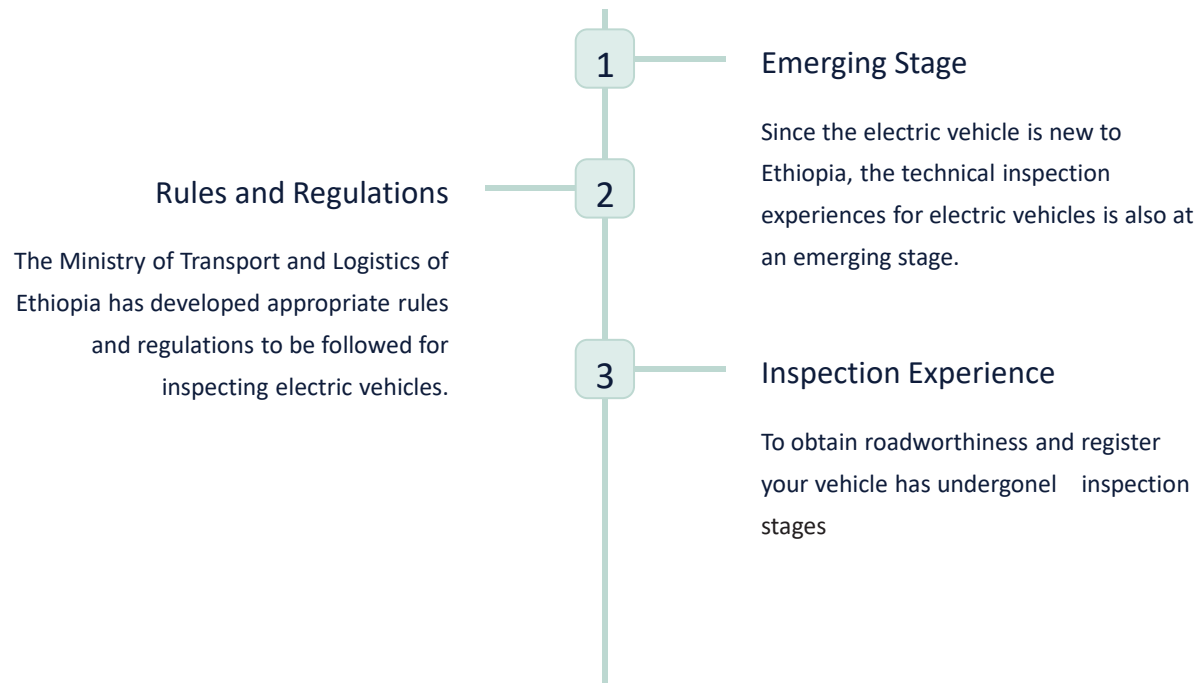
In Ethiopia, mostly vehicle registered in Addis Ababa followed by Oromia. Annual vehicle inspection is mandatory in Ethiopia. Vehicle inspection covered by private persons or companies. 80% inspection center has one line. Vehicle inspection equipment will be brake tester, sideslip tester, suspension tester, headlight tester, All equipment will integrate together to print one report



Electric Vehicle Inspection Process in Ethiopia



Electric vehicle (EV) are more reliable than conventional vehicle using internal combustion Engine(ICE) as there are fewer moving parts.Vehicle technical inspection in Ethiopia is required for both roadworthiness certification and repairs. All vehicles, including electric vehicles, undergo annual technical inspections to assess the technical systems, ,





Types of Vehicle Technical Inspections in Ethiopia



According to Proclamation No. 681/2010 ratified by the House Representative for Vehicle identification, inspection and registration there are Four types of Vehicle inspections

1. Compliance Checking with Country's Rules and Regulations:

The first type of vehicle technical inspection in Ethiopia involves a thorough examination of compliance with the country's rules and regulations. This inspection ensures that vehicles adhere to the prescribed standards and guidelines set by the authorities.

2. Vehicle Ownership Registration Inspection:

The second type of inspection focuses on verifying the ownership registration of vehicles. This inspection ensures that the vehicle's ownership details are accurately recorded and legally documented.

3. Roadworthiness Certificate Inspection:

The third type of inspection is the roadworthiness certificate inspection. This inspection assesses the overall condition of the vehicle, including its mechanical components, safety features, and general fitness for road usage. A roadworthiness certificate is issued to vehicles that meet the required standards and are deemed safe for operation on public roads.

By conducting these comprehensive vehicle technical inspections, Ethiopia aims to enhance road safety, ensure compliance with regulations, and promote a reliable and efficient transportation system.

4. random spot inspection of freight and public transport vehicles

Four types of vehicle inspection institute in Ethiopia

Level One (Small) Vehicle Inspection Institute is an institution that verifies the technical proficiency of two- and three-wheel vehicles and vehicles with a total weight of up to 450 kg and issues a certificate of vehicle technical proficiency

. **"Level two (light) vehicle inspection institute"** means an institute that verifies the technical qualification of vehicles with a total weight of 450 to 3,500 kg and issues a vehicle technical qualification certificate.

"Level Three (Medium) Vehicle Inspection Institute" means an institution that verifies the technical efficiency of vehicles with a total weight of 450 kg to 7,500 kg and issues a certificate of vehicle technical efficiency.

"Level Four (High) Vehicle Inspection Institute" means vehicles with a total weight of more than 450 kg, as well as motor tractors, semi-trailers and heavy trucks and trailers, which have been inspected and tested for their technical ability.



Vehicle Inspection Process in Ethiopia



stage 1

Visual check:

- Vehicle identity number
- Light equipment (head lamp stoplamp, front and rear lamp, direction indicator, etc)
- body condition
- wheel and tyre
- General items (high voltage cable, cable harness, horn, windscreen, safety devices etc)

Stage 2

- Brake Test: Determines the efficiency of brakes.
- The brake tester is used to measure brake performance, efficiency and drag force.
- Test results are automatically registered. Test instructions and results are displayed on the overhead indicator board



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Stage 3

- Headlight Test:Determines proper alignment and focus of headlamps.
- The headlight aimer is used to measure the luminous intensity and the horizontal and vertical aim of each headlamp at high beam

Stage4

Under Carriage Check:Checks the condition of car parts and components.

Vehicle is driven over an inspection pit for visual checks on:

- Chassis
- High Voltage cables
- Suspension system
- Steering system
- Brake system



Required Documents to Obtain Vehicle Ownership Certificate and License Plate in Ethiopia



1. Vehicle Ownership Certificate: If the Vehicle Ownership Certificate includes a credit agreement with the debtor, please provide the Vehicle Inspection Certificate.
2. The Road Worthiness Certificate should be valid for 30 days for E.T License Plates and 20 days for A.A. License Plates, starting from the date of inspection.
3. The Inspection Certificate must be approved by two technicians and the technical head, who will sign the document
4. Include a photo print that shows the vehicle inspection procedures carried out at the inspection center.
5. Provide the names and sample signatures of the two technicians, along with their educational documents registered in the inspection system software.
6. Proof of third-party insurance coverage.
7. Road Fund Fee Certificate:
8. Renewed trade license or clearance document that is registered with the chassis and engine number of the vehicle.
9. If the vehicle was not inspected last year, there will be a punishment fee and other tax fees. However, if the vehicle has the disability duty-free right, please provide a letter from the relevant authority.

CONCLUSION



- Ethiopia has made significant progress in implementing technical inspections for electric vehicles. However, there are still several challenges that need to be addressed.
- One of the main obstacles is the lack of awareness, no regulation yet on electric vehicle inspection, skilled labor, and understanding among vehicle owners and operators regarding the importance of these inspections.
- To overcome these challenges and bridge the existing gap in the industry, it is crucial to develop a comprehensive training (capacity building) program for technicians at inspection centers. This program should provide