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www.lta.gov.sg

30 September 2025

Our ref LTA/VAC/V30.000.000/35
Your ref
DID 6553 5736

All Motor Vehicle Dealers / Importers
All Electronic Service Agents

Dear Sir / Madam

REQUIREMENTS FOR CHANGE OF ELECTRIC / HYBRID VEHICLE TRACTION BATTERY AND TRACTION MOTOR

1. As a critical component of the vehicle, proper maintenance of the power train¹ is essential to ensure its safe operation. The power train includes key components such as the traction battery, traction motor, internal combustion engine (ICE), fuel tank and transmission. With the increasing adoption of cleaner energy vehicles, we anticipate a corresponding increase in maintenance needs for electric vehicle and hybrid electric vehicle power train.

2. While power train modifications are already considered major modifications requiring LTA's prior approval today, we will be making legislative changes to strengthen our regulations on vehicle safety to deter unauthorised modification of the power train.

CVP Application

3. Currently, prior to the replacement or modification of a vehicle power train², a Change of Vehicle Particulars ("CVP") application must be submitted for LTA's evaluation³. To streamline the application process, we have introduced dedicated CVP options for the change of traction battery and traction motor. Please refer to **Annex A** for a screenshot of the CVP options and **Annex B** for the documents required as part of the CVP application. [Note: Vehicles with Battery Charging and Swapping System ("BCSS") capability will be exempted from this process when swapping between batteries at authorised battery charge and swap stations, provided the replacement batteries are identical to what was approved by LTA for use in the vehicle.]

4. The CVP application must be submitted through the Vehicle Inspection and Type Approval System ("VITAS") with a payable fee of \$66.00.

¹ "Power train" is defined as the system of energy storage system(s), energy converter(s) and transmission(s) that converts stored energy to mechanical energy delivered at the wheels for propulsion of the vehicle.

² For clarity, examples of ancillary components that do not require the submission of a CVP application prior to replacement or modification include drive belt, motorcycle chains and sprockets, spark plugs and spark plug cables, intake air filter, intake manifolds, cooling system (e.g. coolant, coolant pump), etc.

³ A CVP application is required when modifying any power train component (traction battery including its modules and cells, traction motor, engine, fuel tank, or transmission), or when replacing specific components (traction battery including its modules and cells, traction motor, or engine) even if they are of the same specifications.

CVP Inspection

5. For traction battery replacement, please be informed that the requirement for a CVP inspection is currently waived. This is in consideration that some traction batteries do not have unique serial numbers displayed, which are essential for individual battery identification. Additionally, while batteries may have part or model numbers, these are not unique identifiers and physical verification can be impractical as they may be located in hard-to-access areas requiring component disassembly.

6. For traction motor replacement, the modified vehicle would have to be inspected at any LTA-Authorised Inspection Centres (“AICs”) before the CVP application can be approved. Please note that there is a separate inspection fee charged by the AICs for the CVP inspection.

7. Please disseminate the above information to your members. For any inquiries or assistance, you may contact Mr Han Hang Kwang on 6553 5263 or Mr Neo Aik Hing on 6553 5700.

8. Thank you.

Yours faithfully



Chen Xianxi
Deputy Director
Vehicle Approval & Control Division
Vehicle Services Group

CVP Options for Traction Battery and Traction Motor

☐ Change of Motor (EVs/Hybrids)

(Max. 300 characters)

☐ Change of Battery (EVs/Hybrids)

(Max. 300 characters)

Sample list of documentation required for replacement of traction battery or traction motor (list is non-exhaustive):

- a. Detailed technical specifications and installation procedures of the traction battery or traction motor (i.e. catalogue, photos, dimensions, weight, components, battery capacity, battery voltage, etc.);
- b. Certification from either the vehicle manufacturer or local motor agent as assurance that the replacement traction battery/traction motor:
 - i. will not adversely affect the safe operation and electrical system of the vehicle nor compromise the safety of the vehicle occupants and other road users;
 - ii. is suitable to be fitted for the particular make and model of vehicle (include the particulars and specifications of the replacement battery/traction motor); and
 - iii. will not affect the overall power output of the vehicle. [Note: For cases when there is a change to the traction motor OEM, LTA can accept a letter from the vehicle manufacturer or local motor agent stating that all technical specifications of the motorcycle (except overall power output) disclosed in the COC or homologation documents remain unchanged after the proposed traction motor replacement.]
- c. Invoice of the replacement traction motor or traction battery;
- d. Completed CVP application form;
- e. A copy of the vehicle's log card;
- f. Photos of the replacement traction motor or traction battery, including its serial number (if available);
- g. Undertaking letter from the entity that carried out the replacement, confirming that:
 - i. the battery/traction motor replacement is done safely and in accordance with the vehicle manufacturer's guidelines, etc.; and
 - ii. the particulars and specifications of the replacement battery/traction motor provided to LTA during the CVP application process corresponds to the actual replacement battery/traction motor installed in the vehicle.
- h. Photos of the vehicle chassis number;
- i. Authorisation letter from the registered vehicle owner (if the applicant is not the owner); and
- j. Completed declaration that all documents and information submitted in the application are true and accurate.

Distribution List

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