

Inspecting Zero Emission Buses

Tim Gangell, RSI July 2024

WHAT WE'RE LOOKING FOR







Obviously, we check everything required of a diesel bus roadworthy or inspection.



All issues we've had to date when registering new ZEB's have been ADR related, not ZEB related.



Notwithstanding,



Checking orange high voltage cables near the rear axle are not damaged and properly secured.



Inspecting the batteries are correctly secured, no leakage and no signs of corrosion.



Ensure there are no electrical dash warnings indicating faults.

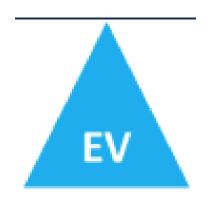


Check the number plates are fitted with either the EV tag or hydrogen tag fitted.



For a ZEB registration, we also need to identify the VIN no and a electric motor ID numbers, depending on the OEM and Make and Model and Year of manufacture.

EV and Hybrid





Section 12 - LPG, NG and Hydrogen and Electric Vehicles

12.6. Visually inspect hybrid and electric vehicle system

■ When inspecting the high voltage wiring of an electric or hybrid vehicle extra care needs to be taken. For identification purposes high voltage (HV) wires are generally colour coded orange.

Should a person inspecting a high voltage system have concerns or require more information, please contact a person certified to work on high voltage systems in your state or territory.

Reasons for rejection

- a. HV wiring (including insulation) is chafing, damaged or deteriorated
- b. HV wiring is not adequately secured
- c. Batteries and not secured
- d. Batteries show signs of leaking or expansion
- e. Battery box ventilation system is blocked or not operating
- Any HV electrical components show signs of shorting, over current draw or deterioration
- g. An electric motor does not operate as intended
- h. A generator/re-generation unit does not operate as intended



Hydrogen Buses

12.4. Visually inspect hydrogen system

Reasons for rejection

- a. The container has:
 - advanced corrosion or fire damage
 - cuts or dents which penetrate the surface of the container
 - any significant dents on the container
 - any sharp impression or crease on the container
- Any metal parts contact the container (excluding clamping bands)
- c. The container:
- is not securely restrained
- is only restrained by a single strap
- is restrained by straps that are damaged or have deteriorated
- is not attached to the vehicle structure at least at 4 points.
- If fitted the sleeving of any fuel line routed under the vehicle is damaged such that the fuel line is exposed
- Any supporting clips are missing or do not provide effective support to the fuel line
- Any provision has been made to allow use of the gasfuel for purposes other than as automotive fuel
- g. Any fuel lines, joints, connections or gas carrying components leak







- Any other component of the fuel system is cracked, broken, distorted, missing or corroded to the point where it is weakened or failure is likely to occur
- The container or gas carrying components are located within 150mm of a heat source and there is no heat shield.
- HV wiring is not adequately secured
- k. Batteries and not secured
- Batteries show signs of leaking or expansion
- m. Battery box ventilation system is blocked or not operating
- Any HV electrical components show signs of shorting, over current draw or deterioration
- An electric motor does not operate as intended
- p. A generator/re-generation unit does not operate as intended



Questions?

THANK YOU