

Dear PSP Committee,

Here at Clipper Automotive, we make all-electric taxis by retrofitting diesel cabs (specifically the LTI TX4) with an all-electric drivetrain. With zero tailpipe emissions, and recycling of the cabs, we estimate that each cab can save over 10 tonnes of CO<sub>2</sub>e a year from the get-go. Also with our on-board regenerative braking there is reduced brake-dust and so town and city centre PM<sub>2.5</sub> levels are vastly reduced.

We are seeking a legislation change, or an exemption/extension to the age limits for first time licences for fully electric Hackney carriages. Therefore this application is not just for the taxi LS62 BHN that is presented to you now, but for all converted Hackney Carriages that we provide going forward.

I have gone through the Hackney Carriage Vehicle Policy in the appendix below and highlighted whether our vehicle passes it or not. This combined with the our vehicle inspection certificate from Bristol Fleet Services shows that the cabs are not eligible for two reasons.

One is the colour of the cab we have converted - we can easily rectify this and convert (or paint) taxis to Bristol blue so we see no issue here for future cabs. The second is that the taxi fails on age limits.

*"Vehicles presented shall be less than three and a half years old from the date of registration or, in respect of vehicles that have been imported other than as new into the United Kingdom, less than three and a half years old from the date of manufacture"*

Age limits are usually in place due to emissions, trying to get older, dirtier cabs off the road, hence why there have usually been extensions for gas cabs, or exhaust improvements. As our cabs are zero emission, the main reason for age limits doesn't apply. This has given us success in Oxford who have rid their age limits for our cabs, and are now collecting fares there, but also Birmingham are close to allowing us to licence there with an age limit extension, as well as Derby and Leicester.

As stated above, vehicles can only be first licensed when the vehicle is within 3.5 years of manufacture or registration.. When we convert our cabs, we lift the body and inspect and restore the chassis, and any coils or bushes that need changing are changed. We produce new drive shafts, use new HV cabling and connections and new battery boxes, one possible route is that we could fall into that 3.5 year timeline.

Some councils have age limits to also help keep the general condition of cabs up, for example Edinburgh. Edinburgh had similar licensing rules to Bristol with new vehicles, but has agreed that zero emission vehicles should be exempt from the first licence age rule, however our taxis will need to go through 6 month inspections to make sure they are kept in good condition for both interior and exterior. This is a route that could also work with the current Bristol licensing.

Clipper Automotive decided to get voluntary third party validation for our conversion process to provide councils a source of trust. We firstly send each taxi to the Vehicle Certificate Agency (VCA) for High Voltage safety, isolation resistance, and EV vehicle regulation tests. We have provided the certification with this application to show this has passed.

After this we also send the taxis to the DVSA for a voluntary IVA to ensure good engineering practices, we have also attached the passed certificate with this application. The DVSA will not progress on an IVA for an electric vehicle retrofit until provided with a pass from the VCA, so this DVSA certification can be provided for future conversions.

Clipper Automotive has designed these cabs to comply with European regulation 100.02, and have written a detailed engineering report that shows the specifications for all parts used in the conversion against this regulation. The report also provides the steps that are taken for the conversion, and the modelling and safety features that we implemented. We would be happy to provide this report if more detail is required.

Thanks in advance for your time and consideration for age extensions/exemptions. The Appendix is found below.

Kind regards,



Harris Medwell

Clipper Automotive  
Electric Vehicle Engineer

# APPENDIX

## **Page 7 - Hackney Carriage Vehicle Specification**

Section 1: Vehicle is 100% electric and complies.

**Section 2: Age limits** - discussed above.

Sections 3,4,5,6: to be agreed with you as to age limits for our Electric Taxis. If LEVCs get 15 as a hybrid, should we be the same/more?

Section 7,8: Will be carried over as standard from TX4.

Section 9,10,11: This to be agreed around age limits, should our taxi's be inspected every 12months or 6 months, depending on the age of taxi, or when it was first registered.

Section 12-13: Will be carried over as standard from TX4.

Section 14: Our cabs are currently black, but would be able to paint to be approved. Could possibly have different livery to highlight these are fully electric?

Section 15, 16, 17, 18, 19, 20, 21, 22: Will be carried over as standard from TX4.

## **Page 24 - The Inspection of Hackney Carriage**

Section 1.3: Will be carried over as standard from TX4.

Section 1.8: All new wiring passes the max 30cm fastening distance from the DVSA IVA. All HV cabling is VCA approved and insulated.

Section 1.9: Will be carried over as standard from TX4.

Section 2: Will be carried over as standard from TX4.

Section 3.1: Spare wheel is now attached where the fuel tank used to be, and tools are within the boot to drop the wheel and change.

Section 4: Will be carried over as standard from TX4.

Section 5: Fuel system removed.

Section 6: Will be carried over as standard from TX4.

Section 7.1: Speedo still runs from Taxi diff and is unchanged.

Section 7.2: New gear shaft within nissan gearbox, new coupling, new drive shaft that attaches to existing taxi driveshaft.

Section 7.3: New Motor Mounts, new motor mount rubbers, all attached to chassis. **No modifications to chassis.**

Section 7.4: Still water cooled system to check and gearbox oil to check.

Section 7.5/6/7/8: Will be carried over as standard from TX4.

Section 8: Will be carried over as standard from TX4.