



Adaptive and secondary controls



Hand Controls

It's a wonderful world that we live in when disabilities or debilitating injuries are not necessarily a barrier to driving independently. The technology being used in many disability adaptive control systems is amazing, including items such as joysticks to operate accelerators, braking and steering all in one, or remote-controlled thumb-operated throttles. Obviously, these systems are only as good as the person installing them, and it's due to this, and the fact they are a critical braking component, that even the latest technology requires LVV certification. In the most extreme cases, some of these systems require oversight from LVVTA's Technical Advisory Committee, who can help assess the design principles used in their construction. When required, LVVTA also calls upon steering and hydraulic specialists, to ensure that the systems are completely failsafe.

That said, even the simplest of disability adaptive controls, such as mechanical hand control systems that work on the brake and accelerator pedals can be affected by poor installation, and hence, they too require LVV certification. The certification is to ensure that the components are fit for purpose, and the installation has been performed correctly.

As the installation is a critical part of this, certification is required for each vehicle that the controls are fitted to, as opposed to a system itself being certified and then changed from vehicle to vehicle.

Pedal Extensions

The VIRM states that pedal extensions for unusually short people, do not require LVV certification if the extension:

- does not exceed 100mm length when measured from the surface of the original brake pedal, and
- is securely clamped to the original pedal by mechanical means, and
- is sufficiently strong and rigid to withstand emergency brake loads, and
- does not involve any modification to, or compromise the strength of, the original brake pedal, and
- does not significantly change the sideways load or leverage against the pedal, and
- does not significantly increase the weight of the pedal.

Any pedal extensions outside of this require LVV certification.



Driving School Vehicles

The LVV certification requirements for driving school vehicles fitted with additional brake pedals are a bit more complex, as it depends on how the additional pedals have been installed as to if they require certification or not. The wording of the Service Brake and Parking Brake section of the VIRM (Section 8-1) states LVV certification is not required if "the operation of the primary brake pedal is not affected, and no modifications to the primary brake pedal or any other part of the primary brake system has occurred". This means that an additional brake pedal, that is operated by a cable clamped to the original brake pedal, does not require LVV certification as it is not deemed to modify the original pedal. However, a secondary

brake pedal that is plumbed into the vehicle's primary hydraulic braking circuit does require LVV certification. Certification would also be required if any modifications had been made to the primary brake pedal, such as holes being drilled in it to attach the secondary system.

Conversely, vehicles manufactured with a secondary braking system from the factory (usually imported from Japan), for the purpose of being used as a driving school vehicle, would require LVV certification for removal of the secondary brake system if the primary braking system is affected.

If you are in doubt if a vehicle you're assessing requires LVV certification, contact LVVTA's Technical Team on tech@lvvta.org.nz or 04 238 4343.

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