

**CCMTA Best Practices Guide for
Power Assisted Cycles**

December 2002

CCMTA Best Practices Guide for Power Assisted Cycles Final Report

Background:

A project group on Low Speed Vehicles (LSVs) was formed in June 2000 to develop a best practices document on the use of LSVs. In December 2000, this was expanded to include a sub-project group on power-assisted cycles (*and motorized scooters*).

The best practices report will assist regulators by providing guidelines for new or amended regulations, helping to encourage consistency of rules across jurisdictions.

A preliminary report on power assisted cycle best practices was developed from a survey of Canadian jurisdictions that was conducted in May 2001, and was distributed for comment to the Drivers and Vehicles Committee (D&V) in October 2001.

Summary of Results:

Nine of the thirteen jurisdictions provided comments on the report. Of these nine one jurisdiction agreed in full with the suggestions while the other eight suggested some changes. One jurisdiction (NB) provided comments to the Proposed Final Report (Total commenting jurisdictions: 9).

General Comments:

<u>Jurisdiction</u>	<u>Comments</u>
AB	Support the report, but with some suggested changes
BC	Support practices in principle but unable to implement all in regulation
MB	Supported the Preliminary Report with only minor changes
NB	Supported the Proposed Final Report with only minor changes
NL	No Changes to the Preliminary Report
NS	No response
NU	PACs are treated like bicycles, limited comments
ON	Support practices in principle but unable to implement all in regulation
PE	No response
SK	Supported the Preliminary Report with only minor changes
QC	Support practices in principle but unable to implement all in regulation
YT	No response
NT	No response

Specific comments from the nine responding jurisdictions are provided in the Appendix.

1. Provincial Legislation

Jurisdictional regulations for power assisted cycles should be as consistent as possible with regulations for bicycles and tricycles (e.g. lighting requirements, reflectors and the rules of the road should be the same as for non-motorized cycles.)

Jurisdictional regulations should be consistent with federal statutes concerning power assisted bicycles.

Jurisdictional regulations should not accommodate the on-road use of stand-upon, kick and push type of motorized scooter.

2. Operator Requirements

A power assisted cycle must not be operated by a person under the age of 14 years.

The operator of a power assisted cycle must wear a bicycle helmet while operating the power assisted cycle.

The operator of a power assisted cycle is not required to hold a drivers licence.

3. Equipment Standards

The following equipment standards are recommended (*the rationale for each is to increase safety.*)

Motor:

- a) The motor must be attached to a power assisted cycle in a manner that prevents the motor from being operated simultaneously with any other motor attached for propulsion on the same motor assisted cycle.

It may be argued the Transport Canada federal requirement, "has an electric motor only," refers not to the number of motors but rather the characteristic of such motors. This report does not recommend against two motors on a power assisted bicycle, only that they should not operate simultaneously.

- b) The motor of a motor assisted cycle must be an electric motor and must not require or allow clutching or gear shifting by the operator after the motor assist system has been engaged.

Wheels:

- c) A motor assisted cycle must have wheels of a diameter of 350 mm or more.
- d) The tires on a motor assisted cycle must have a minimum tire width of 35mm.
- e) A motor assisted cycle must not have more than 3 wheels in contact with the ground.

Motor Shut-off:

- f) The motor of a motor assisted cycle must cease to function or be disengaged when the operator stops pedaling; or when an accelerator or a motor control switch located on the handlebar is released; or when a brake or brakes are applied.
- g) A motor assisted cycle must be equipped with a mechanism that:
 - (i) is separate from the accelerator and allows the driver, while operating the motor assisted cycle, to turn the electric motor off from a normal

seated position with the shut-off switch readily accessible and located ahead of the operator; or,

- (ii) prevents the motor from being engaged before the motor assisted cycle obtains a speed of 3 km/h.

Generators:

- h) A motor assisted cycle must not be equipped with a generator, alternator or similar device powered by an combustion engine.

Brakes:

- i) A motor assisted cycle must be equipped with brakes on all wheels or axles. The braking system must be capable of bringing the motor assisted cycle, **loaded to its** total capacity and traveling at a speed of 30 km/hr., to a total standstill within 9 m from the point at which the brakes were applied.

Maximum Weight:

- j) A motor assisted cycle must not have a net weight exceeding 50 kg., including the weight of the battery, but excluding the weight of a towed trailer.

Securement of Drive System and Equipment

- k) The motor drive system and all energy storage devices of a motor assisted cycle must be secured to prevent movement in any direction relative to the motor assisted cycle when the motor assisted cycle is operating.

Electric Terminals

- l) All electrical terminals on a motor assisted cycle must be fully insulated or covered.

4. Tampering

Tampering to increase the speed or power of a motor assisted cycle beyond what is allowed by regulation is prohibited.

Operating a power-assisted cycle that has been altered so that it does not conform to regulations is prohibited.

5. After Market Kits

After-market motor kits to transform a cycle into a power assisted cycle should not be restricted, provided that they meet the requirements for power assisted cycles set out by Transport Canada and established in provincial and territorial regulations.

6. Consumer Awareness / Safety Education

Retailers should be encouraged, but not required by regulation, to provide basic safety information about power assisted cycles to their customers.

Jurisdictions should make regulations that require retailers to affix a label on power assisted cycles, or on a power assisted cycle kit. The label should indicate operating requirements (e.g. operator age, helmet use.)

Rationale - it is a good means to ensure all potential operators are aware of safety requirements supported by most jurisdictions.

Jurisdictions should participate in a program with the insurance industry to promote awareness of safe and legal electric bicycle operation.

7. Serial Numbers (Anti-Theft)

As part of consumer awareness initiatives, owners of electric bicycles may be advised to record the serial number or engrave an identifying set of characters (eg. drivers licence number) on their power assisted bicycle if a serial number is not apparent.

*Rationale - to discourage theft and to assist with theft recovery.
Motor vehicle administrators should not become responsible for tracking serial numbers of power assisted cycles, but should support efforts by other groups to do so.*

Rationale - power assisted bicycles are not high enough in value to justify using vehicle registration systems and motor vehicle department resources, and it is generally outside the mandate of motor vehicle registrars to maintain records on power assisted bicycles.

8. Bike Paths

Operation of power assisted cycles on bicycle paths should be permitted, except for areas or specific paths that have been specifically prohibited by provincial or territorial regulations or by municipal or regional district bylaws.

Rationale - power assisted cycles are regulated to operating characteristics that mimic regular bicycles and as such should be afforded the same privileges as given to regular bicycles, and it provides simplicity for enforcement.