

**COMPLIANCE CIRCULAR**

No. 03

March 21, 2001

**SUBJECT:** Amendment to the "Weld Repair of Aluminum Alloy wheel Regulations"

Registrar of Drivers and Vehicles  
Managers, West Esplanade, ICBC  
Chair, Motor Carrier Commission  
Provincial Manager of Compliance  
Regional Managers of Compliance  
Managers, Licensing  
Air Care

Managers, Government St, Victoria  
Motor Vehicle Inspectors  
ICBC Appointed Agencies  
Motor Carrier Department  
Law Enforcement Agencies  
Commercial Transport Inspectors  
(Weigh Scales)

Carrier Safety Inspectors  
Government Agents  
(Authorized)  
Driver Examiners  
Driver Services Centres  
Regional Vice Presidents  
Trucking Industry

**PURPOSE OF CIRCULAR:**

To advise law enforcement officers and industry that, effective May 1, 2001, the "Weld Repair of Aluminium Alloy Wheels Regulations" will be amended as shown in the attached Regulation, which was deposited on March 1, 2001.

**BACKGROUND:**

The existing "Weld Repair of Aluminum Alloy Wheels Regulations" was introduced in 1997. The regulations stipulate qualifications for the wheel repair shops, weld supervisors and welders, and safe repair practices and limits. There have not been any serious safety issues involved with the wheel repair industry since the adoption of the regulations.

The wheel repair industry approached ICBC in December 1999, requesting updates on the regulations. A stakeholder meeting was organized and held in June 2000. A draft of the proposed changes was circulated among stakeholders and a final proposal was presented to the government for consideration in early Fall 2000.

The impending amendments contain items that are housekeeping in nature, a new procedure for certified wheel repair shops to handle unsafe wheels, modified "permitted repairs" on wheels to reflect current industry practices, and to streamline the "test method and acceptance criteria" for welders.

Any questions on the above should be directed to the Engineer in the Compliance Program and Standards, ICBC at telephone: (250) 414-7846.

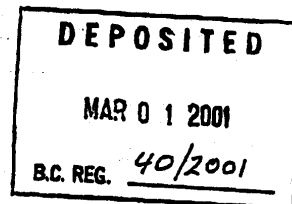
Robert G. Kroeker  
Sr. Manager  
Compliance Programs and Standards

Attachment

**PROVINCE OF BRITISH COLUMBIA**  
**REGULATION OF THE MINISTER OF EDUCATION**

**M 075 Motor Vehicle Act**

I, Joy MacPhail, Minister of Education, order that, effective May 1, 2001, the Weld Repair of Aluminum Alloy Wheels Regulation, B.C. Reg. 5/97, is amended as set out in the attached Appendix.



FEB 28 2001  
Date

Joy MacPhail  
Minister of Education

(This part is for administrative purposes only and is not part of the Order.)

Authority under which Order is made:

Act and section:- Motor Vehicle Act, R.S.B.C. 1996, c. 318, s. 217 (2)

Other (specify):- OIC 1019/94

February 1, 2001

163/2001/37/ea

S/T'd

## APPENDIX

- 1 **Section 1 of the Weld Repair of Aluminum Alloy Wheels Regulation, B.C. Reg. 5/97, is amended**
  - (a) *in paragraph (a) of the definition of "certifier" by striking out "an inspector employed by" and substituting "a designated representative of",*
  - (b) *in the definitions of "GMAW" and "GTAW" by striking out "the Canadian Welding Bureau standard W47.2-M1987," and substituting "the Canadian Standards Association W47.2-M1987 standard,".*
- 2 **Section 6 is amended**
  - (a) *in subsection (3) by adding "all weld repairs including" after "responsible for", and*
  - (b) *by adding the following subsections:*
    - (5) If it is decided under section 9 to discard a damaged wheel, the weld repair supervisor must ensure that
      - (a) the wheel is stamped as required by section 9 (3), and
      - (b) a log book is maintained in which each discard decision is recorded indicating
        - (i) the name of the owner of the wheel,
        - (ii) the date of the discard decision, and
        - (iii) the name of the weld repair supervisor who made the discard decision.
    - (6) The log book entries required by subsections (4) (b) and (5) (b) may be made in the same log book.
- 3 **Section 9 is amended by adding the following subsection:**
  - (3) If the weld repair supervisor decides that the damaged wheel cannot be safely repaired, the wheel must be discarded and permanently stamped with the word "UNSAFE", using characters not less than 5 mm in height, on the inside of the wheel rim adjacent to the valve stem hole.
- 4 **Section 11 (4) and (5) (a) and (b) is amended by striking out "CSA standard W59.2-M1991," and substituting "CSA W59.2-M1991 standard,".**
- 5 **Section 12 is repealed and the following substituted**

**Other permitted repairs**

  - 12 (1) Cold straightening of wheels is allowed if the depth of deformation on the wheel is less than the flange material thickness and under 10 cm (4 inches) in length in any one location along the wheel bead circumference.
  - (2) Heat straightening of wheels is allowed if
    - (a) the heat is restricted to not more than 204°C (400°F),

- (b) the depth of the wheel deformation considered repairable by heat straightening is not more than 10% of the wheel diameter on the front (outside) or rear (inside) bead, and
- (c) the length of the wheel deformation considered repairable by heat straightening is not more than 10% of the wheel bead circumference on the front (outside) bead or 20% of the wheel bead circumference on the rear (inside) bead.

6 *Schedule 1 is repealed and the following substituted:*

**SCHEDULE 1**  
**TEST METHODS AND ACCEPTANCE CRITERIA**  
**FOR WELDING PERFORMANCE**

- 1 Refer to the procedures outlined in Canadian Standards Association W47.2-M1987 standard or the GTAW or GMAW process for welding in a "flat position" of weld bead overlay, weld buildup and full penetration groove weld.
- 2 Refer to Canadian Standards Association W47.2-M1987 standard for a description of test methods and acceptance criteria. The welding test must be performed using one of 5083, 5086 or 6061 aluminum flat plate with an 8 mm (5/16 inch) material thickness and full penetration weld.
- 3 A welder must meet all of the following test standards:

**Pass/Fail Test Standard**

**Table 1:**

Type of Test	Qty	Acceptance/Rejection Criteria
Face bend	2	After bending, a flaw exceeding 3 mm (1/8 inch) in length is a failure.
Root bend	2	After bending, a flaw exceeding 3 mm (1/8 inch) in length is a failure.
Macro etch test	2	Incomplete penetration achieved through thickness of material welded is a failure.
Tensile test	2	A reduction of the ultimate tensile strength of aluminum alloy is a failure.
Fracture test	2	Incomplete penetration achieved through thickness of material welded is a failure.

**Note:** A tensile test is required for the initial performance test only and, once passed, it is not required for a subsequent re-test.