

### 3.3 Criteria & conditions of Occupant Protection Authority Card

Note that the following technical requirements contained in 3.3(1) and 3.4 are those of the International Hot Rod Association (IHRA) New Zealand, and are from the IHRA Rulebook.

#### **Vehicles required to be fitted with a roll-cage and a full-harness seatbelt:**

1. A roll-cage is required by competition regulations to be fitted to the following vehicles (except 'Modern Street Cars', see section 2.12 of the IHRA Rulebook for details):
  - (a) for all open cars under 13.00 seconds, and those running slicks, a minimum of a 4-point roll-bar is required;
  - (b) for vehicles under 12.0 seconds where monocoque construction has been modified, and all vehicles 11.99 seconds to 11.00 seconds, a minimum of a 4-point roll-bar is required;
  - (c) all vehicles under 11.0 seconds as follows:
    - (i) 10.99 seconds to 10.00 seconds, a minimum of a 5-point roll-bar; and
    - (ii) 9.99 seconds and quicker, a 6-point minimum roll-cage.
2. All competition vehicles requiring a roll bar or cage, or as outlined by class requirements, must use an SFI Spec 16-1(SFI 16.5 highly recommended) driver restraint system.

#### **Renewal:**

3. Annually, the NZHRA office will forward an NZHRA Occupant Protection LVV Authority Card Renewal Form to all NZHRA and IHRA competitors who have an NZHRA Occupant Protection LVV Authority Card. All renewals are due on the 31st August annually regardless of when they were first issued.
4. The NZHRA or IHRA competitor is to fill out the NZHRA Occupant Protection LVV Authority Card Renewal Form and return it to the NZHRA office with the correct fee.

#### **Revocation:**

5. The New Zealand Hot Rod Association (Inc) reserves the right, and will exercise that right, to immediately revoke any NZHRA Occupant Protection LVV Authority Card from any NZHRA or IHRA competitor who is found to have operated a vehicle in any way that may bring the NZHRA Occupant Protection LVV Authority Card system into disrepute. This will be done in order to protect the future of the NZHRA Occupant Protection system for the ongoing benefit and enjoyment of NZHRA and IHRA competitors, current and future, who operate their dual-purpose race-road vehicles responsibly and considerately.
6. In the case of a revocation being carried out, official notification will be forwarded to the New Zealand Transport Agency and the New Zealand Police. The vehicle owner has the right to appeal the decision through the NZHRA complaints procedure. The NZHRA Executive Committee at their next quarterly meeting will consider any such appeals and provide a final determination.

7. NZHRA Occupant Protection LVV Authority Cards are not transferable either to another vehicle or to any other person.

### 3.4 Technical requirements for rollbars, roll-cages, and full-harness seatbelts

**Note that no vehicles for which an NZHRA Occupant Protection LVV Authority Card is issued, regardless of whether the vehicles are two-door or four-door vehicles, may be fitted with a rear seat. This is because of the risk of roll-bar head-strike for rear seat occupants.**

#### **Rollbar design:**

8. Dimensions - All rollbars must be within 150 mm (6") of the rear, or side, of the driver's head, extend in height at least 75 mm (3") above the driver's helmet with driver in normal driving position, and at least as wide as the driver's shoulders or within 25 mm (1") of the driver's door.
9. Must be adequately supported or cross braced to prevent forward or lateral collapse of rollbar in case of spin out, collision or upset.
10. Braces must intersect with the rollbar at a point not more than 125 mm (5") from the top of the roll bar. 10.99 to 10.00, a side bar must be included on driver's side and must pass the driver at a point midway between the shoulder and elbow.
11. All rollbar structures must have in their construction a cross-bar for seat bracing and as the shoulder harness attachment point, the cross-bar must be installed no more than 100 mm (4") below, and not above, the driver's shoulders or to side-bar.

#### **Rollbar material and construction:**

12. Material - Low carbon (mild) steel tubing is recommended for all types of rollbar construction. Braces must be of same diameter and wall thickness as the rollbar.
13. All chrome-moly welding must be done by approved TIG Heliarc process; mild steel welding is recommended to be MIG or TIG. Welding must be free of slag and porosity. Flush grinding welds prohibited.
14. Due to variations in wall thickness of drawn tubing, competitors are recommended to make allowance in construction (e.g. 3.2 mm [9/64"] wall thickness, in preference to 3.0 mm [1/8"] minimum).

#### **Rollbar attachment:**

15. Rollbar must be fully welded or fastened to the frame or frame structure; if car has no frame, a 150 x 150 x 3 mm (6" x 6" x 1/8") steel plate (or a different configuration of the same area) welded to floor, or top and bottom of floor securely bolted together with at least four 10 mm (13/32") bolts and nuts.

#### **Roll-cage design:**

16. All cage structures must be designed to protect the driver from any angle, 360 degrees.
17. Dimensions - On all full tube cars, and recommended for all other roll cages, when driver is in driving position, if helmet is forward of main hoop, a helmet bar is required. If no part of the helmet is located forward of the main hoop then a funny car roll-cage with a minimum of four points of attachment must be used.
18. The side-bar must pass the driver at a point midway between the shoulder and elbow, (passenger side bar required). All roll-cage structures must have in their construction a cross-bar for seat bracing and as the shoulder harness attachment point, cross-bar must be installed no more than 100 mm (4") below, and not above, the driver's shoulders or to side-bar.

**Roll-cage material and construction:**

19. Material - It is recommended that all cage welds be gusseted. All chrome-moly welding must be done by approved TIG Heliarc process; mild steel welding is recommended to be MIG or TIG. Welding must be free of slag and porosity.
20. No tubing will be accepted as chrome-moly that does not bear the 4130 markings. Reynolds 531 tube may be used in place of chrome-moly, with proof of tubing specification required in all cases. Japanese chrome-moly substitute will not be accepted.
21. Due to variations in wall thickness of drawn mild steel tubing, competitors are recommended to make allowance in construction, (e.g. 3.2 mm [9/64"] wall thickness in preference to 3.0 mm [1/8"] minimum).

**Full-harness seatbelts:**

22. All seatbelt/harnesses must be securely fastened to the frame, cross-member or reinforced mounting of the vehicle so that the fittings are in direct line with the direction of pull and installed to limit driver's body travel both upward and forward.
23. Any mounting through light panelling such as a stock floor panel is inadequate and will not be permitted without further reinforcement. Where belt fasteners are mounted through such panelling, a plate of no less than 2500 sq mm x 6 mm thickness (2 sq" x 1/4") per mounting must be inserted between the outer face of the panelling and belt fastener.
24. All corners and edges of the reinforcing plates must be radiused.
25. Mounting shall be accomplished with a minimum of grade 8.8 metric (grade-5 imperial) bolts at a diameter recommended by the belt manufacturer or 12 mm (7/16") where no recommendation exists. Mounting bolts inserted through belt webbing is prohibited.
26. Shoulder harnesses must be mounted in a manner to prevent them slipping off the shoulders.
27. All points of the seatbelt must be connected in the designed manner at all times when in use and each belt adjusted to give constant firm support to the wearer.

28. Belts must be maintained in good condition and discarded at any sign of belt fraying, nicks or cuts. Any belt deterioration or loss of material colour due to over exposure to sunlight or corrosive chemicals also mandates full replacement.
29. All latching and mounting hardware to be maintained in perfect operating condition.

### 3.5 Application procedure for Occupant Protection Authority Card

**To follow is the procedure to be applied when an NZHRA or IHRA competitor requires an NZHRA Occupant Protection LVV Authority Card. By following this procedure, the process will work smoothly and effectively for everyone involved.**

30. NZHRA or IHRA competitor fills out PART 1 and PART 2 of the NZHRA Occupant Protection LVV Authority Card Application Form.
31. NZHRA or IHRA competitor presents the vehicle to the IHRA Tech Inspector for its tech inspection against the applicable technical and safety requirements of the IHRA, as specified in section 3.4. Upon completion of IHRA tech inspection and subsequent approval, the IHRA Tech Inspector fills out and signs-off the IHRA Annual Tech Inspection Form, issuing the NZHRA or IHRA competitor with the pink and white copies of the form.
32. The IHRA Tech Inspector then carries out the NZHRA Occupant Protection LVV Authority Card Application Form check, and fills out PART 3 of the NZHRA Occupant Protection LVV Authority Card Application Form. The IHRA Tech Inspector gives the NZHRA Occupant Protection LVV Authority Card Application Form back to the NZHRA or IHRA competitor.
33. The NZHRA or IHRA competitor then forwards the white copy of the IHRA Annual Tech Inspection Form, and the NZHRA Occupant Protection LVV Authority Card Application Form (together with the application fee) to the IHRA Executive Officer. Do not post – courier only.  

The competitor should retain the pink copy in case he or she ever loses their logbook – the pink copy will enable a new logbook to be issued without a new tech inspection.
34. The Executive Officer of IHRA confirms that all criteria are met by the competitor, completes PART 4 of the NZHRA Occupant Protection LVV Authority Card Application Form, and forwards the form to NZHRA for approval and production of the NZHRA Occupant Protection LVV Authority Card.
35. NZHRA approves (or declines) the application, produces the NZHRA Occupant Protection LVV Authority Card and returns the Authority Card to the IHRA. (If declined, that advice is returned to the IHRA who informs the competitor that the application has been declined).
36. The IHRA forwards the NZHRA Occupant Protection LVV Authority Card to the NZHRA or IHRA competitor, together with their competition logbook.
37. The vehicle owner is responsible for ensuring that the vehicle for which the Occupant Protection Authority Card is issued, has a valid LVV Certification Plate with “Current NZHRA Authority Card required” engraved in the Exemption field of the Plate. Owners of vehicles with an LVV certification plate already issued can arrange for a new LVV certification plate with wording by contacting an NZHRA-endorsed LVV Certifier.

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- Note 1:** The safety tech inspection for NZHRA Occupant Protection LVV Authority Cards is to be handled by any IHRA Tech Inspector. These are listed, together with the contact details, on the IHRA website, <http://www.ihra.co.nz/>.
- Note 2:** If the NZHRA or IHRA competitor already has a competition logbook, he or she is to return this to their Tech Inspector with their vehicle and pink copy of their Tech Inspection form. The Tech Inspector will validate the vehicle and the competitor's pink copy against his own file yellow copy, then apply the process starting at step 3.
- Note 3:** Applications for renewals of NZHRA Occupant Protection LVV Authority Cards are to be made in the same way as the initial application, coinciding with the annual tech inspection and competition logbook renewal, using the NZHRA Occupant Protection LVV Authority Card Renewal Application Form.

