WESTERN AUSTRALIAN SPEEDWAY COMMISSION INC

*Excellence in racing Safety, Education and Training*

2016

# Race Vehicle Scrutineering Accreditation

## General Resource

*Based on the Australian Speedway Racing Rules & Regulations*

Information used in presentation of this training program comes with assistance from WA Speedway Commission, Speedway Australia & Australian Sports Commission National Officiating Program.

# CONTENTS

# 1. INTRODUCTION

Race vehicle scrutineering can be very satisfying when taken seriously. A good scrutineer does not merely pass some exams and check a few race vehicles as part of a practical test. A good scrutineer builds on this coursework and gains experience through real life situations with a desire to do the best that they can without having to be everyone's friend.

If you imagine that being a scrutineer is an opportunity to gain political power or to expand your sphere of influence, you are getting involved for the wrong reasons!

A scrutineer has a major effect on the lives of all involved in speedway, competitors, spectators, officials, promoters and clubs members. By doing the job to the best of their ability, scrutineers reduce risk to the lives and lively-hoods of many people. They reflect the trust in their judgment by the people who have appointed them to this very important position within the speedway industry as well as to the spectators who expect to be entertained in a safe environment.

**Accredited scrutineers will be given authority to:**

- carry out thorough, fair and thoughtful examination of race vehicles to approved specifications, with the emphasis on “safety” for all persons who may come into contact with any part of the race vehicle;
- acknowledge the compliance of a race vehicle to approved specifications;
- sign off a log book, vehicle registration, drivers licence or other accepted documentation;
- accurately document findings or requirements for persons involved in making further decisions relating to a race vehicle; and
- act in a responsible manner at all times with a view to duty of care.

**Accredited scrutineers will *never* be given the authority to:**

- carry out a vendetta against people they dislike;
- drag a highly competitive, but legal race vehicle, back to the rest of the field;
- argue with anyone;
- change a given interpretation of a rule or guideline;
- offer criticism of personnel choices; or
- show political distaste for a racing format, a prize-money breakdown, the decision of a chief steward, promoter or club official.

## 1.1 The Purpose, Conduct and Responsibilities of Scrutineers

### 1.1.1 Purpose of a Scrutineer

Together with clubs, tracks and divisions the WA Speedway Commission promotes speedway in Western Australia in a safe, organised and orderly manner. This is achieved by operating a system of checks and inspections against specified criteria.

The scrutineer functions to fulfil a role in this process. Scrutineering is an important function in the conduct of speedway and if properly carried out results in raising the standard of race meetings and promotion of events for the benefit and enjoyment of all concerned.

### 1.1.2 Conduct of Scrutineers

In addition to the roles and responsibilities outlined in the Accreditation Course, scrutineers have a responsibility to the promoter or club who is conducting the race meeting, to make themselves available as required. It is important to remember that the race meeting cannot be conducted without scrutineers present, so availability is imperative.

Scrutineers should notify the WA Speedway Commission office at their earliest convenience if they have been appointed to a race meeting on behalf of the Commission and are unable to attend to allow time to provide a replacement.

This courtesy should also be offered to a club or promoter if officiating at a meeting organised by them.

Scrutineers have an obligation to fill, by way of conduct and performance. The measure of the performance of a scrutineer is a reflection on the maturity that is required in dealing coolly and impartially with any controversy or dispute. A positive attitude is required when advising other scrutineers, stewards and competitors with respect to specifications. Scrutineers are not expected to be able to quote every specification, but have sufficient understanding of them and be able to direct persons to relevant sections.

Presentation is of high importance. When representing the Commission, scrutineers will be required to wear a Speedway West shirt and name badge. For club meetings neat casual clothing should be worn.

**To summarise:-**

- be on time
- introduce yourself to the Chief Steward, other stewards, the promoter or club president
- be constructive
- be positive
- be informed
- be responsible
- be consistent
- be appropriately attired

- leave your personal issues/ concerns at the gate.

**A scrutineer's conduct must be of the highest level.**

**Lead by example.**

**Scrutineers are expected to:**

- Be impartial, consistent and objective at all times.
- Understand the purpose of the specifications.
- Be co-operative and understanding in the interpretation and application of specifications.
- Make a personal commitment to keep informed of sound officiating principles and specification updates.
- Seek continual self-improvement through study, performance appraisal and regular updating of competencies.
- Ensure behaviour is consistent with the principles of good sporting behaviour. Actions speak louder than words.
- Condemn unsporting behaviour and promote respect for all competitors.
- Place the safety and welfare of the spectators and participants above all else.
- Ensure the "spirit" of competition is maintained.
- Value the individual in sport.
- Avoid use of derogatory language on gender or race.
- Refrain from any form of sexual harassment towards officials and competitors.
- Encourage understanding of; and access to knowledge, of all areas of officiating.

**Personal Relationships**

Scrutineers are expected to set aside personal feelings and judge each case on its merits. Occasions will arise where this may mean finding against a personal friend. Scrutineers will be judged on their impartiality in adjudicating cases and this will reflect on how they are viewed by their fellow scrutineers.

### 1.1.3 Legal Responsibilities

Any person acting as a scrutineer has a legal responsibility to provide the utmost care for competitors and any other person at a race meeting. Every scrutineer has a legally owed duty to use common sense and act in a responsible manner.

***Will the law involve itself in sport?***

Many people are surprised that the law will become involved in sport. A number of sports have experienced litigation as a result of negligence by officials.

**Negligence**

Negligence refers to the failure to perform a legally owed duty, with that failure resulting in actual damage or injury as a result of a breach of the duty of care.

### Duty of Care

Duty of Care refers to what a scrutineer of the same standard and experience should have reasonably foreseen. That is, the actions of a scrutineer will be judged on what a reasonable person would have done in the same situation.

A breach of the standard of care may occur as a result of an omission, error or action. The standard of care will be judged not by what the scrutineer knows, but by what the scrutineer should have known. Scrutineers must therefore endeavour to keep updated with new developments, rules and specification changes and adhere to those set procedures.

## 1.2 Understanding Racing Specifications

Every competitor is expected to know the requirements of the racing specifications of their State or National controlling body. Therefore, it is not unreasonable to expect that scrutineers controlling vehicle examinations would have as good or better knowledge of the specifications.

It is not expected that scrutineers know the specifications book, chapter and verse. They should however, be able to locate and understand a specification confidently and quickly. Specification books are live documents that are amended from time to time. By making recommendations to WA Speedway Commission scrutineers are able to input into changes that could benefit the industry.

### Supplementary Regulations

Supplementary regulations are used in conjunction with racing specifications for an event. All supplementary regulations created for an event will be given to drivers prior to the race date. This should include any supplementary regulations on specifications. Scrutineers need to keep themselves aware of any supplementary regulations introduced for specific events.

## 1.3 Equipment and Check lists

### 1.3.1 Scrutineer’s Equipment Folder

All scrutineers are expected to carry a folder with appropriate paperwork. It should contain:

- Specifications books appropriate for the event
- Racing specification books appropriate to the competing divisions
- Tape Measure
- Torch
- Box of Dots
- Chalk
- Any other equipment necessary to inspect racing vehicles.

### 1.3.2 Checklists

It is important that the scrutineer has a set procedure to follow prior to advising the Chief Steward that all vehicles have been checked and cleared. A checklist is a helpful way to remember all the items that need to be in place or checked.

On arrival the scrutineer should advise the Chief Steward of their presence and seek out other scrutineers. They should sign on and collect any relevant information, supplementary regulations or equipment needed for the race meeting. In conjunction with the Chief Steward, note and check the fire extinguishers and their position, taking note of the position of the crash crew and ensure they have the appropriate equipment.

## 1.4 Reporting and Record Keeping Requirements

### 1.4.1 Serious / Fatal Injury Report Procedures

Please follow the procedure as listed on the report found in the Scrutineers Equipment Folder. This procedure has been accepted by the State Coroner.

### 1.4.2 Scrutineers Report

Scrutineers are required to complete their Technical Officials Log Book with race meeting details at the completion of each event. This record is required as evidence of scrutineering activities in order to maintain accreditation levels or to upgrade to a higher level.

Scrutineers are expected to assist the Chief/ Club Steward in completing their Stewards Race Report by providing details of pre-race safety checks, log book checks and any incident/ accident reports.

### 1.4.3 Licences and Log Books

All competitors should produce their licence and log book to the Chief Scrutineer or nominated scrutineer. If there is any doubt that a licence has been issued, the competitor must not participate.

Scrutineers must advise competitors that it is a serious offence to falsely complete a declaration and/or compete without a valid licence. Scrutineers must also advise competitors that it is not sufficient to have applied for a licence. The competitor MUST be the holder of a licence.

# 2. LEGAL RESPONSIBILITIES & RISK

## 2.1 Duty of Care Statement

Normally read by the Chief Steward

**This duty of care statement is to be read out to the Competitors at every drivers meeting before the start of any race meeting, with *NO EXCEPTIONS***

It is my duty to advise you of the following;

- That motor racing can be dangerous; your equipment could be damaged or destroyed; and you may suffer serious personal injury or worse.
- If there is any aspect of this race meeting that causes you concern for your personal safety or for that of any member of your crew, whether that concern be with the track, the venue or the manner in which the meeting is being conducted it is your obligation to bring those concerns to the attention of the Clerk of Course or Chief Steward.
- If after doing this those concerns are not addressed to your satisfaction, you are advised to withdraw from this race meeting.
- Does everyone understand his or her obligations and rights in this regard?
- It is also my duty to advise you that at any time during this race meeting random drug and or alcohol testing may take place.
- If you have any doubts as to your ability to pass such a test with a negative or zero reading you should withdraw from this race meeting IMMEDIATELY.
- Does anyone have any questions?

*You will find this Duty of Care Statement on PAGE IV of the Australian Speedway Racing Rules and Regulations*

## 2.2 Legal Responsibilities for Officials

There are four essential areas of the law which officials need to be aware of:

- Contracts / agreements
- Crime
- Harassment
- Duty of care / negligence

### 2.2.1 Contracts / Agreements

An official may enter into a contract for example in relation to providing their officiating services. If an official receives some benefit (called 'consideration'), such as money or clothing, then a contract is likely to exist between the official and the club / promoter they are officiating on behalf of.

If the contract requires the official to comply with a code of ethics, or not to harass others and they don't comply with this requirement in the contract, they could be sued for breach of contract.

Generally, only the parties to a contract can sue and/or be sued on a contract.

**Why should a contract be in writing?**

- CERTAINTY is the most obvious reason.
  The official should be clear about the various matters relevant to the position.
  - How long the appointment is for
  - What benefits the official is entitles to receive
  - Who the official is accountable to
  - Who the official is responsible for, and
  - What is the nature of the relationship
- MUTUAL COMMITMENT to each other.
  In the case of a volunteer official, they are giving up their free time to officiate. The sport should recognize that commitment and not abuse it. By having the length and nature of the commitment recorded, both parties are clear about the future. Similarly, sport will want to ensure the official is committed to the position and understands all that it entails.
- RECOGNITION
  This can be shown by many things such as invitations to dinners and awards, reimbursement of expenses, supply of clothing and sponsors apparel, use of computer and perhaps an honorarium. The official should ensure that if these things are provided, that they are recorded so that sport cannot later renege on the deal reached.
- RISK MANAGEMENT
  An official has a duty of care to the participants to ensure they are not injured or harmed (see Risk Management section of this course)
- POLICIES AND CODES OF ETHICS
  The official should be aware of all policies and codes the club has in place

**Official's Responsibilities – What are they?**

- Duty to enforce rules
- Duty to protect participants
- Duty to warn
- Duty to anticipate reasonably foreseeable dangers
- Duty to control and supervise the race meeting
- Have an understanding of Appeal processes and abide by them

### 2.2.2 Indemnification of Scrutineers and Officials (Section 5.6)

As per rule 5.6 of the Australian Speedway racing Rules and Regulations:

The safety standard of any race car, equipment or apparel is a joint responsibility of the car owner and driver. Any safety check carried out by a Speedway Australia or affiliated association licensed official does not guarantee that the race car is without fault and does not absolve the owner and driver of this joint responsibility.

As an official, by working within the parameters of the association's constitution, policy, bylaws, racing rules and specifications you will be deemed to have conducted yourself in a proper and appropriate manner.

## 2.3 Risk Management – What Is It?

The Australian standard defines Risk Management as:

> *"The culture, processes and structures that are directed towards the effective management of potential opportunities and adverse effects"*

This means that risk management becomes ingrained in the way you do business, the process is disciplined and follows a logical sequence, and the focus is directed towards better outcomes for the organisations.

**Establish the context**

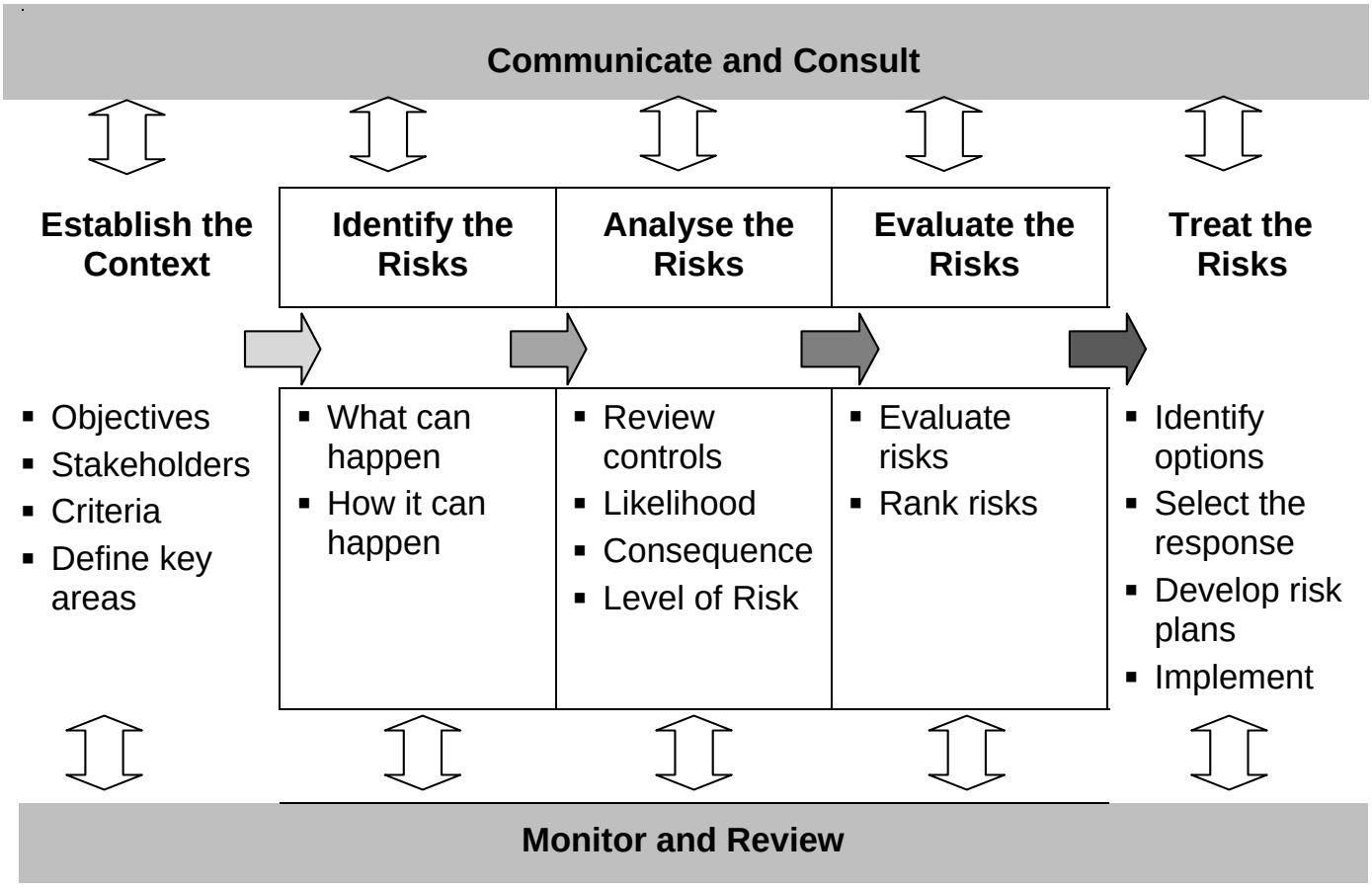
Establishing the context means we need to:

- define what it is that we do
- how we can measure if we are successful at doing it
- who we may impact upon in doing our work
- what are the categories or groups of activities that make up our work.

*Key elements* are the categories or groups of activities that make up our work.

*Stakeholders* are those people and organisations who may affect, be affected by, or perceive themselves to be affected by the Governing Body.

### 2.3.2 The Risk Management Process

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**Risk Identification**

Risk Identification is the process that defines those events or outcomes that may have a measurable impact on the success of an organisation.

**Risk Analysis**

Risk analysis determines how large the impact of a risk may be and how likely this impact is to occur.

**Risk Evaluation**

Risk Evaluation determines which risks should be managed first by comparing the level of risk against organisational objectives.

**Evaluate the Risks and Treatment of Risk**

- A risk priority is a measure of how significant a risk is.
- Risk Management controls are policies, processes or procedures that may already be in place in an organisation to address risks that have previously been identified.
- Risk Treatment is action that is taken as a result of a risk being identified and assessed as being unacceptable to the organisation.

### 2.3.3 Liability Issues

The most common claim made against an official is negligence. With any concept of care, there is a corresponding concept of risk. To minimise the risks occurring, an official should adopt a risk management program.

Risk management is a tool by which an official can seek to meet their duties and thereby limit their liability.

# 3. SCRUTINEERING AT RACE MEETINGS

## 3.1 Scrutineering Process

1. The scrutineer may engage one or more assistants but the scrutineer is ultimately responsible for all assigned duties.
2. Be familiar with all Specification Manuals.
3. Scrutineers must be conversant with the Australian Speedway Racing Rules and Regulations Book.
4. Ensure there are enough scrutineers to cover the number of cars nominated.
5. Collect and retain all log books and drivers infringement cards. Race day scrutineers are to check:

   **1. Licence & Infringement Card**

   – Valid Licence Infringement Card
   – Current for the season
   – Photo of holder
   – Signed by holder
   – Any fines or suspensions noted have been paid or served

   **2. Log Books**

   – Current for the season
   – Valid for car presented
   – All particulars completed
   – Any faults noted at previous inspection have been fixed

   **3. Car Registration**

   – Check for current season Decal
   – NOTE: Each state will formulate its own Policy regarding drivers racing on Official Club receipts until they receive their documentation from the State Secretary. At no time should this period exceed one (1) month from date of receipt.
   – For all Title and advertised Feature Race Meetings competitors will not be permitted to compete without full documents. (Licence, Infringement Card Log Book, Decal etc.)
6. Dual registration of SSA Inc. cars has been accepted if the car is duly scrutineered and monies paid for each division. The car can only run in the division it nominates for, on the night and the alternate decal should be removed or covered.
7. Hand log books and drivers infringement cards to the Pay Out Officer at completion of the race meeting or as per Club policy.
8. Check all cars at race meetings for compliance to specification manual.
   – Make entries into Vehicle Log Book of any faults found.
   – If, after a visual inspection of the race car and safety gear, no faults were found – write in log book – N.V.F.F. (No Visible Faults Found)
   – Scrutineer and driver to sign the log book.

9. Drivers Race Suit, Helmet, Gloves, Boots, Socks, Underwear and Balaclava etc must be checked. Scrutineers may mark these safety items if so desired; in such manner that it will not damage the items, to prevent another driver resubmitting these items at inspection. Offenders who are caught resubmitting any items shall be reported to the Chief Steward.
10. If any fault is found in any safety equipment, which in the opinion of the scrutineer renders the safety equipment no longer suitable for continued use, a notation is made in the vehicle's log book and also in the Technical log book. The driver must sign both books.
11. Notify the Chief Steward of any major faults by way of a Technical Infringement Notice.
12. If unsure on any specifications, contact the State Technical Representative.
13. Make sure a scrutineer is available to be on duty on the infield during the running of the meeting.
14. Make sure a scrutineer is available to be on duty in the pit area during the running of the meeting, to check any race damage, before car races again and report any major damage to the Chief steward.
15. Any major crash or rollover MUST have a full inspection before a race car can compete again.
16. Be available to give evidence at any Technical appeals on the race night.
17. Report any major faults on any specifications to the State Technical Officer.
18. At the end of the race meeting, fill in your Technical Log Book and have a Club Committee Member sign the appropriate page.

## 3.2 Open Wheel Section Checklist

- Check steering drag link for direction
  - This means the direction of the thread
- Check front drag link mount
- Check king pin support bolts (Plain arm to stub axle bolt)
- Check seat mount bolts,
  - seat belt separate mount to seat bolts
- Check seat belt mount is attached to chassis
- Check 5th seat belt mount - must attach to chassis
- Check fuel lines and return line – tight at tank
- Check fuel on/off and not lockwire – wire tied
- Check head height – head to roll cage
- Check exhaust straps – to chassis
- Check torque tube straps/ hoop
- Check metal wheel centres
  - dzuz fasteners must be tight - otherwise it allows wheel covers to come off and is a danger to others
- Containment seat – is to be a full containment seat
  - must be contained on both sides

## 3.3 Equipment Required to Take Measurements

- Measuring Tape
- Rim Gauge
- Spirit Level
- Head Clearance Gauge
- Track Gauge
- Jack
- Wheel Chock and Jack Stands
- Sonic Tester
- Scales
- Carby Tool
- Throttle Body
- Verniers
- Ride Height Gauge
- Fuel Testing Gear
- SSA Inc. Specification Books
- Technical Infringement Notices

## 3.4 Scrutineering Duties

1. All cars and driver safety attire will be inspected for conformation with the appropriate specifications and must be passed by the scrutineers prior to racing. All engines are to be sealed to enter events (SSA).
2. Each driver or their representative will produce the log book, and License for “their” particular division of racing, Speedway Australia license, and Drivers Infringement Card, current racing rules and regulations to the officials concerned, upon request.
3. The driver or representative and the scrutineer must sign the log book after scrutineering.
4. The log book and Drivers Infringement Card will be retained until the completion of the meeting, when it must be collected by the driver or representative. The retention of the Driver’s license cards during competition may be subject to local speedway by-laws.
5. Scrutineering will close fifteen minutes before advertised starting time unless otherwise notified. Any scrutineering after this time will be by special arrangement and may incur a fee or penalty.

## 3.5 Technical Rules

All race cars shall comply with the specification requirements of the relevant state, national or other controlling or sanctioning bodies. These bodies shall be the sole authority for race car compliance, and also should provide recommendations on actions or penalties in respect to race car non-compliance to the Chief Steward. The Chief Steward must have regard to the guidelines for penalties provided in the Australian Speedway Racing Rules and Regulations (ASRR) or associated publications referred to in the ASRR (if any) when imposing penalties for non-compliance.

If at any time during a race meeting or during subsequent inspection after a race meeting, a race car is found to be not complying with the specification requirements the Chief Steward will issue an Infringement Notice to disqualify that car from the race meeting and, in the Chief Steward's discretion, impose a fine of up to $2,000 and/or a suspension of up to two years.

## 3.6 Appeals Process

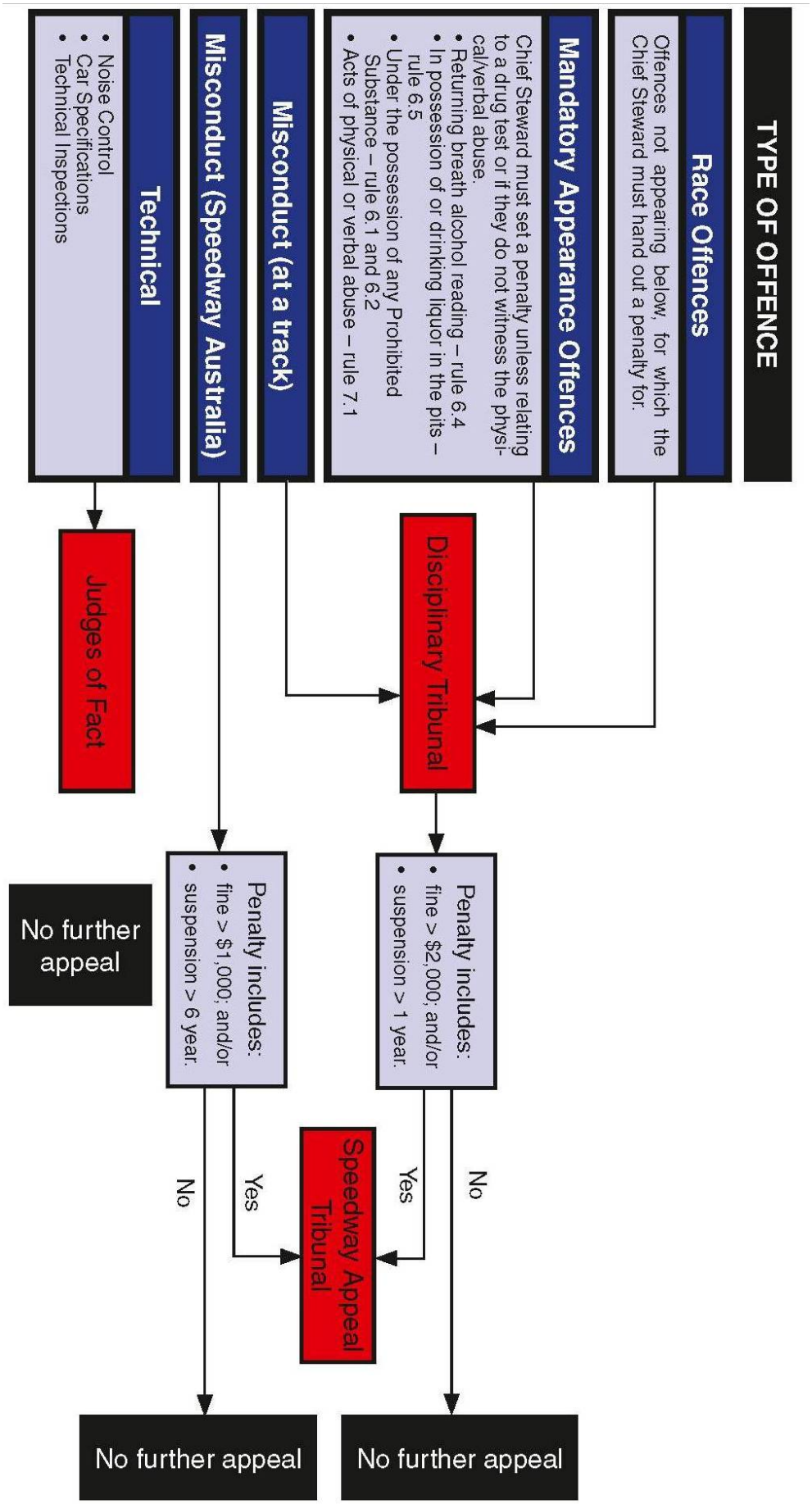
1. All technical appeal hearings will be held in accordance with the Australian Speedway Racing Rules and Regulations.
2. The appeal form can be obtained from the appeals officer and it must be fully completed and returned to the respective official within 30 mins of notice of infringement
3. A technical appeal can be lodged at any time during that race meeting. The appeal must state the specification(s) with which the car does not comply.
4. If a race car is passed to compete by a scrutineer and another driver wishes to lodge objection, that driver may lodge a technical appeal against the vehicle's eligibility, or the engine eligibility.
5. Appeal lodgement fee must accompany the completed appeal form.
   - If the appeal is upheld the lodgement fee is returned.
   - If the appeal is dismissed the lodgement fee is retained, UNLESS ENGINE DISASSEMBLY WAS REQUIRED, in which case, the appeal lodgement fee is given to the respondent to assist with re-assembly.
6. All appeals of a technical nature will be heard by persons of technical advice. National appeals of a technical nature will be heard by the National technical committee

The Australia Speedway Racing Rules and Regulations state that any breach of the following Australian Speedway Racing Rules and Regulations, as determined by Judges of Fact as nominated from time to time, shall be final and binding:

- Car specifications: ASRR Rule 7.9.1
- Noise requirements ASRR Rule 3.5
- Technical inspections ASRR Rule 7.9.2

Appeals should be referred to the relevant association for due consideration.

Refer to Appeals Process Flowchart


TYPE OF OFFENCE
Race Offences
Offences not appearing below, for which the Chief Steward must hand out a penalty for.
Mandatory Appearance Offences
Chief Steward must set a penalty unless relating to a drug test or if they do not witness the physical/verbal abuse.
• Returning breath alcohol reading – rule 6.4
• In possession of or drinking liquor in the pits – rule 6.5
• Under the possession of any Prohibited Substance – rule 6.1 and 6.2
• Acts of physical or verbal abuse – rule 7.1
Misconduct (at a track)
Misconduct (Speedway Australia)
Technical
• Noise Control
• Car Specifications
• Technical Inspections
Disciplinary Tribunal
Judges of Fact
Penalty includes:
• fine > $2,000; and/or
• suspension > 1 year.
Penalty includes:
• fine > $1,000; and/or
• suspension > 6 year.
No further appeal
Yes
No
Yes
No
Speedway Appeal Tribunal
No further appeal
No further appeal

## 3.7 Chief Scrutineer - Principle Duties

The principle duties of the Chief/ Club Scrutineer are to:

1. Ensure that all vehicles have been inspected and passed and that the driver's safety attire and equipment is correct, prior to any practice or competition on race day. Vehicles may be inspected or impounded to determine eligibility at any time and will be excluded if they do not conform. The Chief Scrutineer must enter any details in the log book and sign the book in conjunction with the driver or driver's representative.
2. Inspect any vehicle that has been involved in an accident to ensure that it is track worthy. In conjunction with the Chief Steward, the scrutineer can exclude any vehicle that may become a source of danger.
3. Recommend to the Chief Steward to exclude any vehicle from competition that has not affected the repairs or adjustments that have been noted in the vehicle's log book. The Chief Steward will then issue an infringement notice, which will include the specification(s) to be adhered to.
4. Be available on club registration day and to be satisfied that the vehicles conform to the specifications prior to registration and to ensure that the relevant registration forms are submitted to the Registration Official. If there is any doubt over a vehicle's specifications, the State Technical Officer shall be contacted and the problem rectified before the registration for that vehicle will be approved.

# 4. MINIMUM APPAREL STANDARDS

## 4.1 Apparel & Helmets

**The following minimum standards apply to:**

**AA:** All Divisions

**A:** All Open Wheeled Divisions (excluding AMCA)

**ASCF:** Super Sedans

- Race Suit must meet minimum standard of either SFI 3.2A/5 or FIA 8856-2000 and be a one (1) piece suit.

Full faced and comply with the Snell SA-2015*(Introduced on October 1st 2015),* Snell SA-2010 or

Snell SA-2005
Standard. or BS 6658-85 Type A/FR. (BS 6658- 85 Type A/FR helmet must be no older than 5 years from manufacturer date). *Please note all Snell SA-2005 Standard Helmets cannot be used after July 1st 2016)*

- Drivers in all categories must wear full faced helmets (see definition below) with a visor that must be closed whilst competing (no goggles).
- Head and Neck Restraint must be worn and meet FIA or SFI 38.1 Standard (a horse collar is optional when wearing a Head and Neck Restraint )

manufacturer date (please check the manufacturer date prior to purchase).

**The following minimum standards apply to:**

**A:** All Sedan Divisions & AMCA

**ASCF:** All Divisions Except Super Sedans

**B:** All Divisions

**V:** All Classic Drivers

**JD:** Junior Competitors & Extraneous Events^ (see below)

- Race Suit must meet minimum standard of either SFI 3.2A/1, FIA 8856-2000 or the higher standard of apparel and be a one (1) piece suit.

Full faced and comply with the Snell SA-2015 (Introduced on October 1st 2015), Snell SA-2010 or Snell SA-2005 Standard. or BS 6658-85 Type A/FR. (BS 6658-85 Type A/FR helmet must be no older than 5 years from manufacturer date). (Please note all Snell SA-2005 Standard Helmets cannot be used after July 1st 2016)

- All drivers must wear a full faced helmet (see definition below) with a visor that must be closed whilst competing (no goggles) in all divisions.

- Horse collar is compulsory without a Head and Neck Restraint. If you wear a Head and Neck Restraint, it must conform with either the FIA or SFI 38.1 standards. However, if you are using a AS1698 helmet with the device, you may not modify the helmet in any way. If the helmet must be modified to wear the head and neck restraint device, you must wear the Snell helmet.

^ *Extraneous Events such as demo derby will have their own standards.*

# ***A full face helmet*** *covers the entire head, with a rear that covers the base of the skull, and a protective section over the front of the chin. Such helmets have an open cut out in a band across the eyes and nose, with a visor or shield that generally swivels up and down to allow access to the face that must be closed whilst competing (no goggles). No Open Faced or Modular (flip-up) helmets allowed.*

## 4.2 Sewing Badges onto Race Suits

Sewing badges onto race suits can be highly dangerous in the event of a fire if the incorrect procedures have been followed.

We strongly recommend that if you wish to sew on badges to your race suit you consult with the suit manufacturer regarding this.

Some recommendations we can provide are:

- The backing material of any badges and the thread attaching the badge to the race suit must be flameproof and in conformity with the standard ISO 15025
- The badge should be of the same fabric that is used in any FIA 8856-2000 race suit outer layer and use compliant Nomex thread
- If you're hand-stitching the badge, the badge should be sewn only to the outer layer of the suit and not through all layers
- The badge must NOT be heat bonded to the suit
- The suit cannot be cut in any way.

Please understand these recommendations are for your safety and wellbeing.

## 4.3 Boots, Balaclavas, Gloves & Underwear

**The following minimum standards apply to:**

**All Divisions**

- Boots are compulsory in all divisions and must comply with SFI 3.3 or FIA 8856-2000.
- Balaclavas are compulsory in all divisions and must comply with SFI 3.3 or FIA 8856-2000.
- Gloves are compulsory in all divisions and must comply with SFI 3.3 or FIA 8856-2000. It is recommended they are the Gauntlet Style glove and they must not be modified in any way.

- Underwear must be worn conforming with SFI 3.3 or FIA 8856-2000. All drivers must wear cotton under-garments (eg. no synthetic boxer shorts), and no under wires on bras. There must be no synthetic attire and no jewellery to be worn by a competitor whilst competing.

## 4.4 Head & Neck Restraints

Head and neck restraints are now used and trusted by major motor sport organisations worldwide. They have been mandatory in Australian Sprintcar competition since 2004 and are now mandatory for AA, A Open Wheeled and ASCF Super Sedans license categories, excluding AMCA (from the 1st of July 2008).

Only FIA (approved by the Federation Internationale de l'Automobile) and SFI 38.1 (approved by the SFI Foundation) head and neck restraints will be allowed in line with the Speedway Safety Advisory Committee (SSAC) recommendations ratified by the Speedway Australia Board.

As of July 1st 2008 the following devices are SFI approved (in no particular order):

- HANS Device
- Leatt Brace - MotoR
- LFT Technologies R3 Device
- LFT Technologies R3 Rage Device
- Safety Solutions Hutchens-II Device
- Safety Solutions Hutchens Hybrid Device
- Safety Solutions Hutchens Hybrid X Device
- Safety Solutions Hutchens Hybrid Rage
- Safety Solutions Hutchens Hybrid Pro
- DefNder

Therefore the following devices, which were Speedway Australia approved prior to 30th June 2008, **cannot** be used until they meet SFI 38.1 specifications:

- D-Cel Harness
- G Force SRS-1
- Tucker Helmet Harness
- Wright Device

**Please note:**

1. A horse collar is optional when wearing an approved head and neck restraint device
2. It is highly recommended that all other categories wear a head and neck restraint device
3. It is ***strongly*** recommended that all Junior drivers wear a head and neck restraint device
4. A head and neck restraint device ***cannot*** be used with a AS1698 helmet.

Be alert and make sure you purchase a SFI 38.1 approved head and neck restraint.

The SFI Foundation offers speedway drivers comprehensively tested global standards. The SFI Foundation operates a laboratory dedicated to the evaluation of safety products and has an extensive list of tested and approved racing apparel and equipment.

Speedway Australia identified, in consultation with QBE International (Public Liability Insurers) and QBE Mercantile Mutual (providers of Personal Accident Insurance), that since head and neck restraints became mandatory for Sprintcars and highly recommended in other classes, the number of head and neck injuries fell by 48% over all Speedway Australia sanctioned speedway divisions from October 2004 to June 2006.

Head and neck restraint devices assist in preventing injuries by limiting extreme head motion and neck loads. They are not designed to assist in preventing thoracic and lumbar back injuries.

Speedway Australia highly recommends that all speedway competitors wear a head and neck restraint device and STRONGLY recommended that all junior drivers wear a head and neck restraint device.

Purchase and use of a head and neck restraint is an important and necessary decision, which can only be made by the user after careful consideration of their individual circumstances.

Speedway Australia will officially advise when further devices pass SFI product tests

For more information visit:

- Speedway Australia web site www.speedwayaustralia.net.au
- The SFI Foundation web site www.sfifoundation.com
- Your local safety apparel retail outlet and ask if your head and neck restraint is SFI approved.
- Speedway Australia booklet - “Mandatory Head & Neck Restraint Device Implementation – revised approved list (including all general information on newly approved devices)” at: http://www.speedwayaustralia.net.au/uploads/Head-Neck-Restraint-July-09-UPDATED.pdf

### *HANS Device Certification Clarification (Updated)*

**Aug 12, 2013**, by Speedway Australia

Recently the Sprintcar Control Council (SCCA) issued a press release advising their members of an existing SFI requirement.

SFI, who certify the HANS device and many other Head & Neck devices under SFI 38.1, require the purchaser to send their device back to the original manufacturer for assessment after 5 years from the manufacture date, to be checked and re-certified.

The HANS device however, is also certified by the FIA, who do not have this requirement in place.

As a result of Speedway Australia requiring all head and neck restraints to meet the requirements of at least one certification (either SFI or FIA - see Australian Racing Rules and Regulations Annexure D, Section 1) any device that is certified and marked by the FIA do not need to fulfil this requirement.

**For HANS Device Recertification, please visit Revolution Racegear for further information at:** http://www.revolutionracegear.com.au/index.php?PCID=21520

## 4.5 Minimum Standards for Karts

- All karts drivers must wear abrasive resistant overalls (to the satisfaction of the Scrutineer). No press-studs are allowed and disposable type overalls are not acceptable.
- All drivers must wear cotton under-garments (e.g. no synthetic boxer shorts), and for females, there may be no under wires on bras.
- There must be no synthetic attire and no jewellery to be worn by a competitor whilst competing.
- Karts drivers must wear approved karting boots.
- All drivers must wear a full faced helmet (#see definition below) with a visor that must be closed whilst competing (no goggles) in all divisions.
- Helmet must meet minimum standard of either:
  - AS1698 (helmets must be no older than 5 years from the manufacturer date)
  - Snell M 2005
  - Snell M 2010
  - Snell SA-2005
  - Snell SA-2010
  - BS 6658 – 85 Type A/FR (helmets must be no older than 5 years from the manufacturer date)
  - **Snell M 2000 & SA-2000 are no longer acceptable as of 1 July 2011**.
- No head and neck restraint device allowed with an AS1698 helmet but a horse collar must be worn.

# ***A full face helmet*** *covers the entire head, with a rear that covers the base of the skull, and a protective section over the front of the chin. Such helmets have an open cut out in a band across the eyes and nose, with a visor or shield that generally swivels up and down to allow access to the face that must be closed whilst competing (no goggles). No Open Faced or Modular (flip-up) helmets allowed.*

# 5. SEAT BELTS INCLUDING BELT WEBBING AND MOUNTING

**Please refer to the Minimum Safety Requirements of the relevant National Division/ Association Specifications.**

## 5.1 Safety Bulletin: Updated SFI Seatbelt Standard

**Aug 6, 2013** By Speedway Australia

Speedway Australia wishes to advise competitors of recent changes to SFI standards in relation to seatbelts.

SFI is an internationally recognised authoritative testing body for motorsport safety equipment. Speedway Australia, like many other motorsport peak bodies around the world, recognise SFI's standards and policies in relation to many areas of motorsport safety.

Recently the SFI updated their 16.1 Seatbelt standard and it is important that all competitors, clubs and associations are aware of these changes and ensure they comply to meet the new standards.

**Most notably, the standard requires that seatbelts must be either replaced or re-webbed every 2 years from the manufacturing date, which is stamped on the belts.**

SFI also advises of changes to their date stamping policy, which allows the belts to be stamped 90 days forward of the manufacturing date to allow for shipping time and shelf life.

The link below comprehensively explains SFI's testing of seatbelts and the reasons behind their updated standards.

http://www.sfifoundation.com/seatbelt.html

## 5.2 Getting Belted:

### 5.2.1 How to properly install safety belts in a race car

Safety belts must be tight and correctly installed if expected to do their job

*by Sleepy Gomez (2005)*

Safety harnesses for racers have come a long way. Back in the '60s, We recall seeing a driver tied in with a big rope. I never knew what kind of knot was used, but I'll bet it was not a quick release. Another ancient device was the Sam Brown belt. It consisted of a belt worn higher than usual, with a strap running from one side in the front over the opposite shoulder. Rollbars (not 'cages) were often about as high as the driver's neck. The Sam Brown belt was supposed to allow him to duck in a rollover. He would usually stay in the car (i.e., if his legs didn't break too badly).

In today's racing world, most of us pay more attention to our personal safety than ever before.

G-Force Racing Gear makes a seven point polyester harness in its ProSeries. The polyester material is less susceptible to damage from the elements This design combines the five point and six point designs G-force state this design gives the driver a more cradled feeling especially in layback seat designs.

The five-point harness has become the standard today. A six-point harness is an improvement. If you are building a new race car, you should consider using the six-point harness. A sternum belt is not a bad idea, either. This attaches the shoulder belts across the chest and keeps them from spreading during an impact. If the shoulder belts spread on impact, the sternum (which holds your ribs together) is unsupported and may become fractured as a result.

One other thing to consider is the mounting hardware itself. The conventional lever latch has been around for many years, and it works well. The other is the snap-in, turn-to-release type. This is a convenient system that does not lend itself to accidental unlatching. I've used both, but I don't really have a preference.

Use what is comfortable for you.

Once the restraint system has been selected, the thought process should turn to installation. It is easy to install a restraint system the wrong way. There are simple rules to follow for doing it right.

The Crow five-point harness is a standard type for stock car belt systems. There is a Velcro cover to keep the latch handle from being accidentally released. The belt tabs are stacked on the left and then latched to the right. Image by Crow Enterprizes.

Selecting the type of restraint that suits you takes a little thought. To begin, consider the type of attachment you need to attach to the chassis. If your car is not protected from harsh weather, the belts will be exposed to these conditions and will begin to deteriorate. The belts may look OK, but they may have lost much of their strength.

A race car kept in a shop is not subjected to this problem.

If your race car is subjected to the elements for much of its life, then consider clip-in belts. These belts have a double hook that can be released, allowing the belts to be removed and stored inside.

Bolt-in belts stay with the car. You won't forget to take them with you. They are also more difficult to change. Many sanctioning organisations require belts to be replaced at certain ages. Sometimes belt attachments are located in a position difficult to reach once the car is complete. In this case, replacement with newer, stronger belts can easily be overlooked. If the belts are bolted in, the car should be garaged or otherwise kept out of the weather.

**Wrong shoulder seatbelt mountings** During a presentation at the South County Career Centre in Ruskin, Florida, I used two students to demonstrate proper shoulder belt mountings. Here, Jeff Pate holds the belts lower. When the belts were attached, Jeancarlo Rodriguez (seated) could lean forward with the belts slipping over his shoulders. With the belts mounted like this, a driver can contact the steering wheel with unpleasant results during a frontal impact. *Image by Sleepy Gomez*

Belt attachments should always be fitted with Grade-8 hardware. There are six marks on the head of a Grade-8 bolt. Grade bolts will have two fewer marks on the head than the grade number.

Where possible, belt attachments should be bolted in double shear. An example of double shear would liken the seatbelt tab to the meat in a sandwich, where the two slices of bread would be steel tabs. A&A Manufacturing makes these double-shear tabs, which are an easy one-piece weld. You will be safe using the hardware that comes from the manufacturer of your belts.

Where the belts are attached is as important as the hardware used to attach them. Any bolt used to secure a belt tab should be bracketed so that it is 90 degrees to the direction of pull. The belt tab should never pull where it would stretch the bolt in length or put a bending load on the tab.

Belt attachments should never be directly fastened to floor sheet metal. Of course, the seat mounting should be a part of the roll cage so that you move with the 'cage in the event of a crash. If some of the belt attachments are mounted to the 'cage while others are attached to the car body, you could get squeezed when one moves and one doesn't.

If there is no convenient place to mount the shoulder belts rearward, install a bar behind the seat and attach it to the cage (demonstrated by student’s arm) so that the belts go back over and then down. This bar lets the belts pull from a straight-back position. The shoulder belts should be from straight back to no more than 10 degrees down from the shoulders. *Image by Sleepy Gomez*

Mount the lap belts so that they are positioned across the lap, holding the pelvis. They should be at a 45-degree angle to the welded-on mounting tabs. Pay attention to where the belts cross through the seat. There should be an opening for the belts, and the belt should not rub against a rough edge when you are seated.

I do not consider a seat to be safe when the belts lap over the top of the seat side. In an impact, the seat sides can cave in and effectively loosen the lap belt. If you are very slender, the belt might not even tighten against you. I have modified this type of seat with openings in the sides and positioned the belt mounts accordingly. I was not altogether satisfied with the result. Get a good seat!

The anti-submarine belt should not be tight against the driver. The real purpose of this belt is to keep the lap belt in place so that you don't slide through. Mount it slightly behind the chest line.

So what is a potato doing in a stock car you might ask?
If your lap belt and anti-submarine belts are not properly installed, your fate could be the same as many potatoes – mashed. The potato is leaning back at 20 degrees, like most driver's seats. The lap belt is across the pelvic area at a 45 degree angle. The anti-submarine belt follows the chest line down, then it is mounted slightly to the rear of this line. The function of the anti-submarine belt is to keep the lap belt in place during an impact.
*Image by Sleepy Gomez*

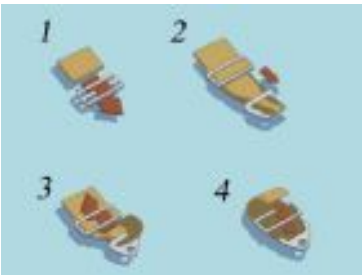
The shoulder belts are often improperly mounted. Yes, they always go over the shoulder, but the way they are mounted might determine if they stay there. With separate, parallel shoulder belts, the mounting could be too wide. In the violence of a crash, one could slip off the shoulder with dire results. These belts should be mounted so they fall about the width of the neck as they cross the shoulder.

The shoulder belts should extend rearward off the shoulders, and be level to a solid mount or at least a 'cage bar. They can also be at a slightly downward angle.

Shoulder belts should not be used to hold the driver down in the seat--this is the job of the lap belt. The shoulder belt keeps the driver's torso from moving forward. If the belts are mounted to pull down on the driver's shoulders, they can also allow him to pivot forward. Pulling down on the shoulders during a crash could lead to compression injuries.

Lastly, think about the use of separate, parallel shoulder belts and the Y belt. The Y belt was in vogue some years ago. Remember, with this there is only one belt to secure your torso in a crash, and belts do stretch.

### 5.2.2 Fitting

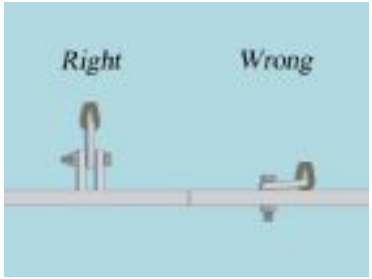



**Step 1:** Insert the strap through the tightening buckle

**Step 2:** Pull the strap 8 to 10 inches beyond the buckle, fold the edges and insert it in mounting bracket

**Step 3:** Fold the strap back and reinsert it through the buckle as shown.

**Step 4:** Fold the strap back again and insert it through the bottom portion of the buckle. Locking the three-bar slide adjuster(buckle) shown in steps 1 through 4 is very important. The three-bar slide adjuster must be located as close as possible to the bolt in the mounting bracket. *Image by Crow Enterprizes*




These sketches show the right and wrong way to attach belt mounting hardware to the chassis.

Never mount hardware where the belt puts it in a bending load

Read more:
http://www.stockcarracing.com/howto/scrp_0603_racing_seatbelt_installation/

# 6. FIRE AND EMERGENCY CONSIDERATIONS

## 6.1 Pit Area Fire Extinguisher Rule

All speedway teams are required to carry as a minimum in the pit area/transporters effective immediately:

- A 2.0kg Dry Chemical Powder Extinguisher OR GREATER. It must strictly be used with the following compliance points:
  1. The fire extinguisher is compliant with AS(Australian Standard)1841.5 and carries the Australian Standards Tick Certification sticker on the body of the extinguisher. AS1841.5 pertains to (powder extinguishers) design and commissioning standard.

  2. The standard AS/NZS1841.1 also is stamped on the bottom or rim of the Extinguisher under the powder coat or paint. AS/NZS1841.1 pertains to (General Requirements) for Design, and Commissioning Standard.

     Simply, most extinguishers imported into Australia usually carry these marks and or approvals. Please check for the above items before you buy.

  3. The extinguisher must carry a yellow date tag. This tag is the last part of the requirement and it ensures that the extinguisher is serviced and maintained in accordance to AS1851 section 15. The tag should have the standard AS1851 printed on it. In simple terms AS1851 section 15 means a deemed competent person services the portable fire extinguisher routinely ever six months. Such checks include: accessibility, anti tamper device, operating labels, tag, damage, corrosion, hose condition, pressure indicator, head or cap assembly, signage, bracket, discharge nozzle. If serviced correctly all of these items should be a pass only. You may find the tags hard to find, a fire protection company will have them. Retailers like hardware stores etc won't have them.

Other types of fire extinguishers that will comply to this ruling are:

- 9 Litre AFFF Foam extinguishers, AR or ATC type concentrate are the best types but AFFF will pass. These extinguishers must comply with compliance points 2 & 3 above.
- 9 Litre Cold Fire extinguishers. These extinguishers must comply with compliance points 2 & 3 above.

All of the above information was taken from AS1851-2005 (maintenance of fire protection systems and equipment) Australian Standard Professional Pack.

## 6.2 Considerations for Fire and Emergency Personnel

Units who are not familiar with speedways rules, regulations, equipment or methods must take into account the following considerations. It is advised that some time be spent in the pits before an event so that crews can inspect and become familiar with the different classes of vehicles and speak to pit crews to locate points of importance on the vehicles.

### 6.2.1 FUELS

Speedway vehicles use 2 main types of fuel. Unleaded and methanol. Both react very differently when burning.

**PETROLEUM FUEL (UNLEADED)**

- Must common fuel used by internal combustion engines
- Unleaded is a complex hydrocarbon
- Liquid – purple or bronze in colour
- Strong gasoline odour
- Extremely flammable liquid & vapour
  - flash point > -40*c
  - auto ignition temp >350*c
- Avoid all possible sources of ignition (spark or flame)
- Causes irritation in contact with eyes and skin. Harmful if swallowed. Aspiration into the lungs caused by vomiting is harmful and can be fatal. Unleaded is classified as a category 2 carcinogen
- Burns with a bright yellow flame

**IF A FIRE OCCURS;**

1. Dry Chem – rapid & portable extinguishment
2. Foam – can be used for spills & preventing re-ignition
3. Water Fog – slow to use & extinguish
4. CO2 - cools but not as effective in open areas.
   - Hazchem code: 3YE
   - Cold fire

**METHANOL FUEL**

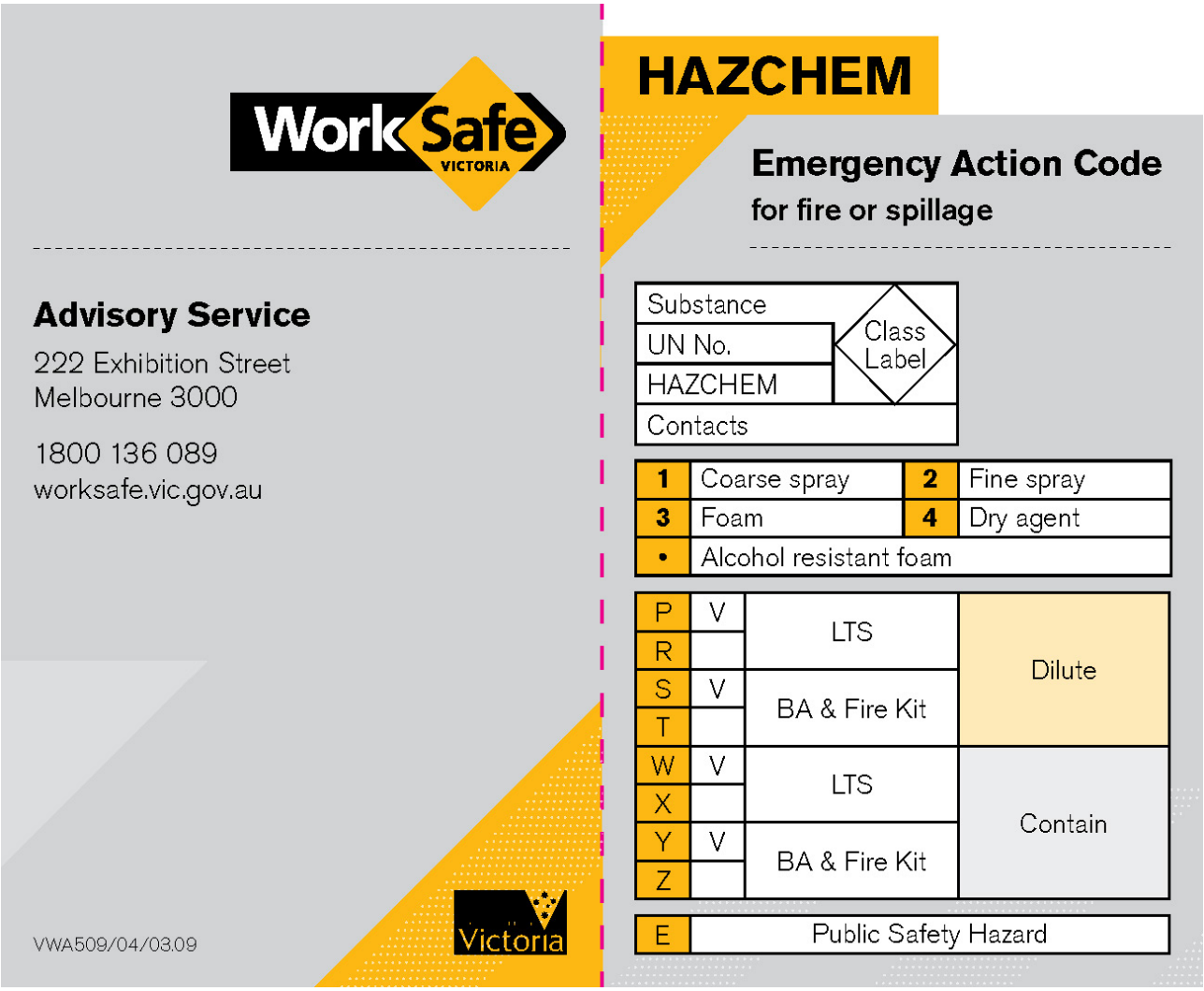
- Alcohol base fuel
- Methanol is also a hydrocarbon product contains oxygen in its chemical structure
- A clear liquid form
- Sweetish, pungent odour
- Highly flammable liquid & vapour
  - Flash point >12*c
  - Auto ignition temp >450*c

- Burns 25% faster than gasoline, but only produces 1/8th of the heat gasoline produces. This means that radiant heat may be difficult to feel especially through protective clothing.
- Causes irritation in contact with eyes and skin. Harmful if swallowed. Aspiration into the lungs caused by vomiting is harmful and can be fatal.

**IF A FIRE OCCURS;**

- Burns with no visible flame – pure methanol burns with a light blue flame but difficult to see. (note: flame can be seen easily at night)
- Look for a heat shimmer for signs of fire
- Dry chem – rapid & portable extinguishment
- Foam – can be used for spills & preventing re-ignition
- Water fog – slow to use & extinguish
- CO2 – cools but not as effective in open areas.

Hazchem Code: •2W



# HAZCHEM

## Emergency Action Code

**Dry agent**
Water **must not** be allowed to come into contact with the substance at risk.

**Alcohol resistant foam •2 or •3**
Alcohol resistant foam is the preferred medium. If not available:
**•2** use Fine Spray or Water Fog
**•3** use Normal Protein Foam

**V**
Substance can be violently or even explosively reactive, including combustion.

**LTS**
Liquid-tight chemical protective suit with BA. Full FIRE KIT should also be worn for thermal protection if the substance is:
Liquid Oxygen, or

## Additional Information

Liquefied Toxic Gas (Division 2.3), or
Toxic Gas with sub-risk 2.1 or 5.1, or
Class or sub-risk 3, or
Division 5.1 PGI with sub-risk 6.1 or 8, or
Carried at temperature >100°C

**Dilute**
May be washed to drain with large quantities of water.

**Contain**
Prevent, by any means available, spillage from entering drains or water course.

**E**
People should be warned to stay indoors with all doors and windows closed. Evacuation may need to be considered. Consult control, police and product expert.

## Portable Fire Extinguisher Guide

FPA AUSTRALIA
Fire Protection Association Australia

You should know the PASS-word for using portable fire extinguisher

**P** ull the pin or release any other locking device

**A** im low, pointing the extinguisher nozzle at the base of the fire

**S** queeze the handle to release the extinguishing agent

**S** weep from side to side at the base of the fire until the fire is extinguished

Remember, fire extinguishers are for small fires only - don't endanger yourself when using them.

If you have used an extinguisher you should arrange to have it recharged immediately.

PFEG — JAN 2010

FPA AUSTRALIA
Fire Protection Association Australia

# Portable Fire Extinguisher Guide

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Printed in the interest of protecting life and property from fire

## Portable Fire Extinguisher Guide

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FPA AUSTRALIA Fire Protection Association Australia

Type of Fire, Class and Suitability

| Pre 1997 | Current | Extinguishing Agent | | A Wood Paper Plastic | B Flammable & Combustible Liquids | C Flammable Gases | E Electrically Energised Equipment | F Cooking Oils and Fats | Comments | D Metal Fires |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Water | | ✓ | ✗ | ✗ | ✗ | ✗ | Dangerous if used on flammable liquid, energised electrical equipment and cooking oil/fat fires | Use only special purpose extinguishers and seek expert advice. |
| | | Wet Chemical | | ✓ | ✗ | ✗ | ✗ | ✓ | Dangerous if used on energised electrical equipment | |
| | | Foam* | | ✓ | ✓ | ✗ | ✗ | LIMITED | Dangerous if used on energised electrical equipment | |
| | | Powder | (ABE) | ✓ | ✓ | ✓ | ✓ | ✗ | Look carefully at the extinguisher to determine if it is a BE or ABE unit as the capability is different | |
| | | | (BE) | ✗ | ✓ | ✓ | ✓ | ✓ | | |
| | | Carbon Dioxide | | LIMITED | LIMITED | ✗ | ✓ | ✗ | Not suitable for outdoor use or smouldering deep seated A Class Fires | |
| | | Vaporising Liquid | | ✓ | LIMITED | LIMITED | ✓ | ✗ | Check the characteristics of the specific extinguishing agent. 5 Yearly servicing must be done by ODS &SGG licenced persons. | |
| | | Fire Blanket | | LIMITED* | LIMITED | ✗ | ✗ | ✓ | * Fire Blankets may be used as a thermal barrier against radiated heat and to control a fire in clothes being worn by a person. | |

LEGEND ✓ = the class or classes in which agent is most effective
✗ = not recommend for these class of fires
For more information go to: www.fpaa.com.au
LIMITED = indicates that the Extinguishant is not the agent of choice for the class of fire, but it may have a limited extinguishing capability
* Solvents such as alcohol or acetone mix with water and therefore require special foam



### 6.2.2 HARNESSES AND SEATS

Current speedway regulations require all vehicles to be fitted with a 5 point harness. The standard 5 point harness that is approved for use in speedways when coupled with the standard racing seats greatly reduces the chance of drivers being injured as the result of an impact. These devices do pose special problems for rescue crews when injuries occur.

- The harnesses used have one central locking latch which when opened causes all 5 point to be released.
  Note: some seat belts have a velcro cover over the latch to reduce the chance of accidental release, (i.e. Need to pull the velcro strip back off the latch, to release the latch itself)
- The latch is very difficult to open while under load. This means that when a vehicle is upside down or on its side the driver may have to be supported so their weight is not on the harness in order for the latch to be opened.
- The racing seats used are made of welded aluminian plate and bars and they cradle the driver to limit movement of the driver. This can make it difficult to manoeuvre a driver out of a vehicle especially if there is any chance of spinal or neck trauma.

- In addition to this, some cockpits in AA or A class vehicles are very restricting and it is very important that fire crews are aware of this.

*5 Point Hand Latch*

### 6.2.3 ISOLATIONS

Speedway vehicles are designed with isolations on them that are used to quickly shut down the vehicles fuel and electrical systems in the event of a crash. These isolation points are in standard positions in race vehicles

However different classes of race vehicles have different standards

**ELECTRICAL ISOLATIONS - SEDANS**

- Located front windscreen - left of centre
- 45$^{o}$ turn for either on or off mode, or
- Simple push down button
- Easy to access
- 

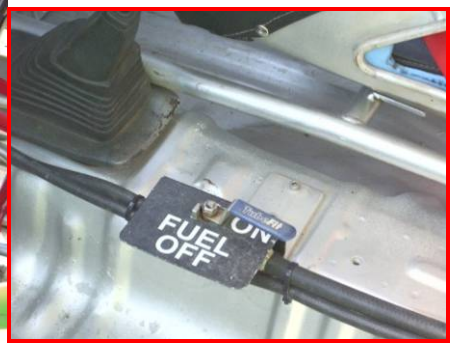
## OPEN WHEELERS

- Located on LHS of dash
- Toggle switch with safety cover
- Writing next to switch
- Have to access inside vehicle


## FUEL ISOLATIONS

### SEDANS

- Located left of driver's seat – along centre gearbox arch
- Ball valve tap
- Tap is running parallel to fuel line – fuel is still on
- Tap is at right angles to fuel line – fuel is off
- EFI engines don't have fuel isolation valves

**OPEN WHEELERS**

- Located on right of driver's seat – mid wall height
- Ball valve tap
- May have secondary tap (butterfly) next to tank by rhs rear tyre (sprint cars)


**SPRINTCARS**

- Located RH side of cockpit and also at fuel line exit point on fuel tank.
- (Tank mounted tap is still on the RH side but at the fuel hose exit point of the tank not next to the driver)

### 6.2.4 STEERING WHEELS AND COLUMNS

In order to assist in removing casualties and for ease of generally getting in and out of the racing seat most classes of speedway car use detachable steering wheels.

There are 2 main types used:

1. Collar
2. Pin lock

**1. COLLAR STEERING WHEEL**

To remove this type of steering wheel

- Push palm into centre of steering wheel
- Extend fingers past steering wheel and pull the collar back to steering wheel
- Pull towards you


**2. PIN LOCK**

The pin is located behind the steering wheel. Simply pull the pin and at the same time pull the steering wheel of the column

### 6.2.5 WINDOW HARNESSES

There is a variety of ways that teams use to secure the driver side window harness.

Fire crews should inspect vehicles in the pits before racing commences in order to gather an idea of what styles are being used at that meet.

### 6.2.6 TRACK CAMBER

Speedway tracks are designed with a camber in them around the corners. The actual angle of the camber will vary from speedway to speedway. The main concern relating to the track camber is that, as with any motor vehicle accident, there is potential for flammable fluids to be spilled. Fire crews need to be aware that parking appliances or positioning fire marshals on the low side of a vehicle crash puts them in the line of fire should fuels leak and combust.

### 6.2.7 FLAGS

Speedways use a number of flags to communicate with drivers while they are racing. In addition to this some tracks will also have light boxes which display the current flag colour. There are 3 flags that are of particular importance to fire crew.

1. Green Flag

- Signals that racing has begun/ is in progress
- Fire crews must be well clear of the track

2. Yellow Flag

- Signals a caution to the drivers. Drivers will continue to move around the track but must slow down. Yellow flags are used for minor incidents that are to be handled by push cars only as well as for a number of other reasons including warm up laps and false starts.
- Fire crews are not permitted to enter the track on a yellow flag.
- Should the crew wish to investigate an incident they may approach the incident and if they require to enter the track they must request a *red flag* from the Chief Steward.

3. Red Flag

- Signals that all drivers must come to a complete stop. Usually only utilised when a major incident has occurred and fire crews/ambulance is required to attend.
- The chief steward will instruct gate officials to keep the gates closed. The gates will only be opened for ambulances. Any other vehicle can only enter the track if it has been requested by the Chief Fire Marshal.
- Fire crews must make sure all racing vehicles near the incident have come to a complete halt before entering the track.

### 6.2.8 DRIVER PPE

Drivers PPE is strictly regulated. Things that fire crews need to be aware of are:

1. Helmets

- Are required to be full face and should not be removed by fire crews under any circumstances in the event of an accident. Ambulance or medical personnel are the only people who should remove helmets after a crash

2. Head and Neck Restraints

- Are mandatory in many classes and many drivers in non mandatory classes voluntarily use them.
  These devices are expensive and there are proper techniques to remove them. Be aware that removing head and neck restraints causes a loss of support for the head and neck and so should only be done in consultation with ambulance officers or ambulance personnel.

# 7. CASE STUDIES AND SCENARIOS

1. A competitor presents a helmet with no obvious standards sticker. The helmet visually appears to be in excellent condition.

What action should be taken?

2. You are the chief scrutineer and have advised a competitor that the competitor's vehicle has been deemed unsafe and is ineligible to race. The competitor is unhappy with the decision and consults the steward, who is also a scrutineer, for a second opinion.

What action should be taken and by whom?

3. A competitor comes through scrutineering who you suspect is under the influence of alcohol. Another competitor confirms your suspicion.

What action should be taken?

4. You note that a competitor's helmet has a minor crack in the crown. The competitor does not have another and wishes to use the helmet in the next event of that meeting.What action should be taken?

5. You are the scrutineer at a two day race meeting. A vehicle is presented with excessive movement in one of the front wheels. The competitor states that he/she does not have a spare part there but will replace/repair the worn/ damaged component before racing on the second day of the event.

What action should be taken?

6. A competitor arrives late for scrutineering because of work commitments. There is only fifteen minutes before racing begins. You examine the vehicle and discover the rear brakes do not function. The competitor tells you that he/she utilises very little rear brake because he/she is able to adjust them via the brake balancing bar and, in any case, he/she only wants to run a couple of laps to check handling.

What action should be taken?

7. You are a scrutineer at a race meeting. At the end of the meeting vehicles are impounded and you find the wining car has been modified. It does not comply with its nominated class.

What action should be taken?

8. At a race meeting a number of cars have been presented without a muffler fitted. There is a noise limit requirement for that venue, but there is no noise meter available.

What action should be taken?

9. After impounding a car the mechanic refuses to remove a component for inspection and verbally abuses you.

What action should be taken?

10. While scrutineering a car you notice that a required helmet net is secured in such a way that it is not being utilised. The competitor informs you that the specifications only require that it be in the vehicle and they do not clearly state that it must be mounted in a specific way. Besides the competitor has raced that way at many other race meetings in the last 12 months or so.

What action should be taken?

11. During scrutineering you notice that a car has a small fuel leak from the fuel system. The competitor advises that it only leaks when it is at idle and does not leak while racing. You confirm this by raising the engine speed and find that the leak appears to stop.

What action should be taken?

12. A competitor is wearing a driving suit manufactured from materials no longer allowed under that car's class specifications. The competitor advises that the material was legal last year and he/she is wearing an extra layer of clothing under the approved underwear.

What action should be taken?

13. While scrutineering a car you notice that a seat strap has obvious damage where it passes through the seat, but the belt itself is far wider and far thicker than the class specifications call for as a minimum.

What action should be taken?

14. During scrutineering you notice that a weld at a rollcage joint is cracked. The competitor advises you that the damaged weld will be repaired as soon as possible and anyway; the part of the rollcage concerned is on the opposite side of the car from the driver's position. Therefore it is not a danger.

What action should be taken?

15. While scrutineering you notice that a suspension mounting point has been deliberately re-located to improve handling. This re-location is outside the class specifications. The re-mounting has been carried out extremely professionally and could not be considered unsafe.

What action should be taken?

16. After a race meeting you are responsible for the weighing of a car that weighs in marginally under the minimum weight for its class. The amount under-weight is slightly below the advised percentage of error allowed for by the calibrated scales. The competitor is a close friend of yours.

What action should be taken?

17. You are checking a competitor's fire retardant apparel. You notice that some of the stitching under the arms appears to be frayed.

What action should be taken?

# APPENDICES

## TRACK GRADE & VEHICLE CLASSIFICATION

### VEHICLE CLASSIFICATIONS 2013

| Category | Division Classification |
|---|---|
| **A** | Open Sprint cars, 360 Sprintcars, Limited Sprintcars, 320 Sprintcars<br>Speed cars, Wingless Sprintcars, Formula 500, V8 Dirt Modified |
| **B** | Late Model Sedans, Super Sedans, Litre Sprints<br>Super Six Sedans, Super Modified, AMCA Nationals<br>Winged Dirt Speedway Karts (QRC) |
| **C** | Modified Sedans, Street Stock Sedans, Junior Sedans,<br>Modified & Production Sedans, Rally Cross/Buggies, Qtr Midgets<br>Go Karts, Demolition Derby<br>Quad Bikes, Auto Cross, Stock Bikes |

- All vehicles must be registered with a club or other organisation endorsed by the WA Speedway Commission to control that class of vehicle.
- Every vehicle must have a logbook to record all inspections, repairs and modifications. Only one logbook per vehicle.
- All vehicles must be safety examined in accordance with the rules governing that class of vehicle, by a vehicle examiner accredited by the WASC to examine that type of vehicle, prior to each meeting.

The scrutineer must provide a record of the inspection showing the condition of the vehicle and any remedial works required. Inspection details should be recorded in the vehicle logbook and club register, in addition to any other statutory notification required by other class rules.

| Track Grade | Permitted Classes | Vehicles allowed |
|---|---|---|
| Grade 1 | ALL Vehicles | Category's A, B, &C |
| Grade 2 | ALL vehicles except Category A | Category's B & C |
| Grade 3 | ALL vehicles except Category A & B | Category C |

# SEALING AN ENGINE: SSA PROCEDURE

**a) General:**

Seal wires must be kept as short as possible. Seals are to be easily seen when the engine is in the car. It is a good idea to seal the timing cover as well, in case the sump needs to be removed for any reason. It can then be resealed again easily.

**b) Street Stock and Junior Sedans:**

Engine to be checked with the head and sump removed.

**Block bottom:**

- Check crankshaft and conrods are correct type for the block being used and block is correct for the model of car.
- No polishing, lightening or deburring, no extra counter weights on crank.
- Check that the sump is visibly standard externally.
- Seal sump on. One seal on each side, through sump to block flange.

**Block top:**

- Measure Bore and Stroke. Check size list in back of book
- Check pistons do not protrude above block
- Check pistons are the correct type, dished or not as per O.E.M.

**Head:**

- Measure diameter of the valve head, check list in book.
- Check valve seats, throats and ports are not enlarged or polished.
- Visual check on valve springs (single or double). Seal head on.

**c) Modified and Production Class:**

- Engine to be checked with head only removed.
- Check stroke; must be standard for engine block series.
- Check head is the correct one for the engine block series.
- Seal sump on. One seal on each side through sump to block flange.
- V6 seal through two top timing cover bolts.

**d) Super Sedans:**

- Engines: Check with one head removed.
- Measure Bore and Stroke, calculate capacity, 367ci MAX
- Seal Sump and/or Timing cover on.
- 6 Cyl. And Rotary engines, seal for eligibility only.

## SSA SEAL COLOURS

| | | |
|---|---|---|
| Super Sedan | = | Yellow |
| Modified Production | = | Blue |
| Production | = | Green |
| Street Stock | = | Red |
| Junior | = | Orange |

- Seals are to be stamped ASCF and numbered.

- Seals are placed on the engine in the following positions:

| | |
|---|---|
| Super Sedan | - 1 x Sump and Timing Cover |
| Production/Modified Production | - 1 x Sump and Timing Cover |
| Junior | - 2 x Sump and Cylinder Head |
| Street Stock | - 2 x Sump and/or Timing gear &<br>- 1 x Cylinder Head |
| V6 Engines | - Intake Manifold, Sump and Timing Cover |

## DIRT MODIFIEDS AUSTRALIA ENGINE SEALING PROCEDURE

There are two accepted methods of engine sealing under Dirt Modifieds Australia specifications.

1. With complete engine assembled.
   a) Check cylinder head part numbers and cross reference with numbers listed in currant specification book.
   b) Check port to deck height.
   c) Using Bubble Test equipment, with engine at room temperature (cold), establish capacity of engine in cubic inches. BE SURE to clear any residue fuel or oil from cylinder being checked as this will give an incorrect reading in the Bubble Tester gauge.
   d) Carry out compression ratio check with whistler equipment and read off compression ratio. This test MUST be done step by step as per the instructions listed with this equipment OR listed at the rear of the DMA specification book.
   e) The engine once established as correct, can be sealed by drilling both L/H and R/H front intake manifold bolts and joining these two bolts together using the seals supplied by DMA State Technical Representative. Owner to supply predrilled bolts.
2. Engine disassembled.
   a) Check cylinder head part number.
   b) Check port to deck height.
   c) Measure cylinders for displacement using the following formula:
      Bore x Bore x Stroke x **.**7857 x 8 = Cubic inch displacement of engine.
   d) Measure compression ratio. Refer appendix item courtesy of JE pistons, Calculating Compression Ratios page 44.
   e) Engine can be sealed if found to conform to specifications.

      **Maximum engine to be 361 cubic inches absolute.**

      **Maximum engine compression to be 11.5 to 1.**

# CONVERSION FORMULAE FOR CUBIC ENGINE CAPACITY:

**Bore x Bore x .7857 x Stroke x No. of cylinders = CU inches**

For example, a Holden 202/3.3 where

Bore = 3.625
Stroke = 3.250
Cylinders = 6

| Bore | x | Bore | x | .7857 | x | Stroke | x | no. Cylinders | = | CU inches |
|---|---|---|---|---|---|---|---|---|---|---|
| 3.625 | x | 3.625 | | | | | | | | |
| | = | *13.140625* | x | .7857 | | | | | | |
| | | | = | *10.320646* | x | 3.250 | | | | |
| | | | | | = | *33.542102* | x | 6 | | |
| | | | | | | | | | = | 201.252614 |

# CAPACITY OF FUEL TANKS:

Round Tanks: Diameter x Diameter x .7857 x Length.

Square Tanks: Height x Depth x Length.

To convert CU Inches to Litres – Multiply by 0.016387

# FUEL TESTING AND TAKING SAMPLES

1. Fuel testing may be carried out at any time using any accredited means available.
2. Fuel testing may be carried out when race cars are presented for or during scrutineering, practice or racing.
3. Testing or removal of fuel samples to be carried out by accredited scrutineers.

**Fuel Samples:**

- Two samples will be taken on every test.
- Test bottles will be sealed in front of Drivers / Owners and seals
- signed.
- The Driver/Owner must then sign testing approval sheet.
- Refusal to sign seals or approval sheet will incur a 2 year ban from competition.

**Sample Testing Using Deakin University Test Kit**

1. Place the fuel to be tested into the glass tube (at least 5 ml is required – approximately half the volume of the glass tube). Immediately screw the black cap tightly onto the glass tube to ensure that minimum loss due to evaporation occurs and that no leakage occurs during transport.
2. Place the glass tube into the plastic transport bottle.
3. Screw/snap the white tamper proof cap onto the plastic bottle.

4. Repeat steps 1 to 3 for the other glass sample bottle in the kit.
5. Take each large identification label and fill in your name (Tester), the date the sample was taken and the sample number (same number on both bottles) and sign the label (Tester Signature).
6. Now fill in the Competitors name and ask the competitor to sign each label.
7. Peel off the label backing and place the label on the plastic bottle so that the label extends up the length of the bottle, over the cap then down the length of the bottle.
8. Repeat step 7 for the other sample.
9. Now peel the backing of the corresponding smaller labels (Deakin reference seals) and wrap this around the bottom of the plastic bottle, ensuring that it covers both ENDS of the larger identification label.
10. Repeat step 9 for the other plastic bottle.
11. Retain on sample for your reference.
12. One sample will be sent to a qualified testing laboratory for testing against known sample/specifications.
13. Second sample will be held until after results of first test are known.
14. If first test results are outside of specifications the Driver/Owner will be notified and the second sample will then be sent for analysis.
15. If this test is still outside of specifications the Driver/Owner will incur a ONE YEAR BAN and $1000.00 fine.
16. If any test complies with the specifications all remaining samples relating to that sample will be destroyed.

**WARNING:**

**Do not send the sample(s) via postal mail. It is illegal to send dangerous goods through the postal system.**

**The sample(s) must be sent via courier, but do not require a dangerous goods declaration because the quantities are below the legal limit (as long as there are less than 100 samples).**

**Deakin University Fuel Testing Kit:**

- 2 x 10 ml glass fuel sample tubes with caps;
- 2 x plastic transport bottles;
- 2 x Identification seals (to be dated, labelled and signed by both the competitor and the fuel tester);
- 2 x Deakin reference seals (to be placed over label seals).

**ADDRESS:**

Return one sample bottle to the address below:

National Motorsports Laboratory
School of Biological and Chemical Sciences
Deakin University
Geelong Campus
GEELONG Vic 3217

# CALCULATING COMPRESSION RATION AND HEIGHT/ DISTANCE

www.jepistons.com/PDFs/TechCorner/2006-je10.pdf

## TECH AND INSTALLATION TIPS

### CALCULATING COMPRESSION RATIO

$$CR = \frac{\text{SWEPT VOL.} + \text{TDC VOL.}}{\text{TDC VOL.}}$$

***Swept Volume =*** 3.1416 x Bore x Bore x Stroke ÷ 4

***TDC Volume =*** Cylinder Head Volume + Gasket Volume + Deck Volume + Piston Dish (-Dome) Volume

***Gasket Volume =*** 3.1416 x Gasket Bore x Gasket Bore x Compressed Gasket Thickness ÷ 4

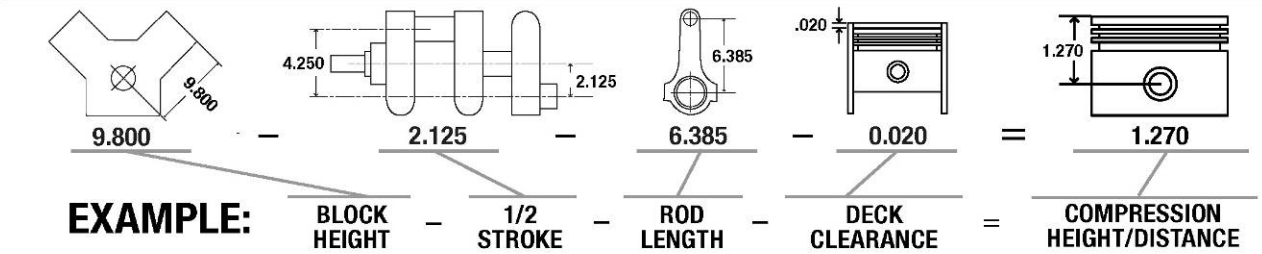
***Deck Volume =*** 3.1416 x Bore x Bore x Deck Clearance ÷ 4

***Piston volume =*** as published in JE catalog x –.061

***Head volume =*** as published in cc's x .061

Always use cc's or ci's, do not mix the two. To convert cc's to ci's multiply cc's by .061

### CALCULATING COMPRESSION HEIGHT/DISTANCE



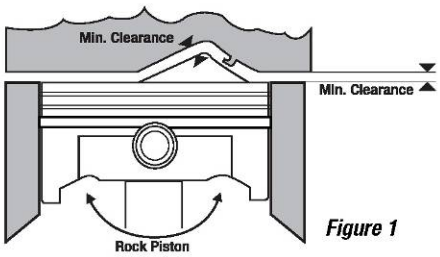




*Figure 1*

### PISTON/DOME TO HEAD AND SPARK PLUG CLEARANCE

Always check piston/dome to head and spark plug clearance to assure proper clearance (See fig.1). Minimum clearance for steel rod =.040", aluminum =.060". Check using clay with piston installed on rod at TDC, be sure to rock the piston back and forth in the bore to get total minimum running clearance.

### PISTON TO VALVE CLEARANCE

Piston to valve clearance is determined by cam lift, lobe separation, duration, valve margin, head design, and aftermarket milling of cylinder head. **Minimum recommended clearance for intake & exhaust valve is .100" in depth and .050" radially.** Check by using clay or follow cam manufacturers recommendations for checking clearance, making sure the cam is degreed exactly as it will be during operation.

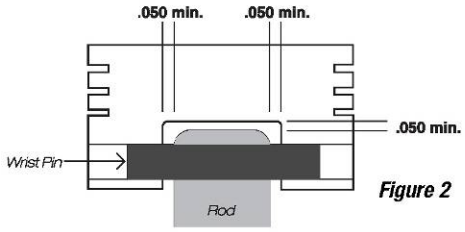



*Figure 2*

### CRANK COUNTERWEIGHT TO PISTON CLEARANCE

Always check crank counterweight to piston clearance at BDC. Recommended minimum is .060".

### CONNECTING ROD TO PISTON CLEARANCE

Due to the large variation in rod widths and material thickness above pin, always check for proper piston to rod clearance on OEM, aftermarket steel rods and aluminum rods. Recommended clearance is .050" min per side and .050" min from top of rod to piston. With the piston installed on the rod, rock the piston side to side and rotate forward and backward to ensure proper clearance. See figure 2.

# HOW TO FIT A HELMET PROPERLY:

There are five key steps in determining proper helmet fit:

1. MEASUREMENT
2. TRY ON
3. HORIZONTAL AND VERTICAL MOVEMENT CHECK
4. RETENTION CHECK
5. PRESSURE POINT CHECK

## 1. MEASUREMENT

Measuring the head is a starting point for the entire sizing procedure. Due to varying shapes, heads that are apparently the same size when measured by a tape may not necessarily fit the same size helmet. The circumference of the head should be measured at a point approximately two centimeters above the eyebrows in front and at a point in the back of the head that results in the largest possible measurement. Take several measurements to make sure you have the largest one.

## 2. TRY ON

Once you have determined your preliminary tape measurement, select the helmet that is closest in hat size to the tape measurement and try on the helmet. If it is between sizes, round up to the next largest one. The correct procedure to put on the helmet is:

1. Grasp the helmet by the chin straps, with the front of the helmet towards you and the top of the helmet facing down.
2. Place the thumbs on the inside surface of the straps and balance the helmet with the index fingers.
3. Spread the helmet apart with the hands, and slip down over the head.

If the helmet slides down on the head with no resistance, you have your first indication that it may be too large. Obviously, if it will not slide down over the head at all it is too small. Many people unfamiliar with helmets are reluctant to pull down if they meet resistance as the helmet goes on, however if it is just snug going on, we recommend to get the helmet on. Only if the helmet is impossible to put on should you move up to the next size, as helmets that go on snug generally fit very well once all the way on. It is a fact that most people will select a helmet that is too large for them, if left to make their own choice. The eyes should be approximately in the center of the eye port with the top edge of the liner padding just above the eyebrows.

## 3. CHECKING HORIZONTAL AND VERTICAL MOVEMENT.

Once you are wearing the helmet, you should look carefully at the way it fits. Check to see if the cheek pads are in contact with the cheeks. Is there excess pressure on the cheeks ? Look for gaps between the temples and the brow pad. Check the back of the helmet where the neck roll (if the helmet has one) makes contact with the neck. Does it touch at all? Or is it pushing the helmet away at the rear causing it to roll down over the eyes in front.

After you have made your visual check, grab the helmet in your hands - one on either side - and while holding your head steady try to rotate the helmet from side to side. Note any movement of the skin while doing this, as well as the amount of resistance to movement.

Next, check movement up and down, again noting skin movement and resistance. If in either test there was little or no skin movement, and/or the helmet moved very easily, the helmet is too large. A properly fitted helmet will cause the skin to move as the helmet moves. And, it will feel to the wearer as if evenly distributed pressure is being continuously exerted around the head.

NOTE: Helmets are a little like shoes, in that they do break-in a little. For this reason the best attitude to have when fitting is that the helmet should be as tight as the customer can stand to wear it.

4. RETENTION CHECK.

This test may be a little uncomfortable, but it is very important to check. Fasten the chin strap tightly fastened, hold your head steady, and grab the rear bottom edge with your fingers. Then try to roll the helmet off your head. If it comes off, it is undoubtedly too large. WARNING: Do not buy a helmet that can be rolled off the head with the strap fastened.

5. PRESSURE POINT CHECK.

Finally, unfasten the chin strap and remove the helmet. Immediately after the helmet has been removed, observe coloration of the skin of the forehead and cheeks. A reddening of the skin in a small area may indicate a pressure point. Pressure points sometimes are not noticed by the wearer for several minutes, or even hours later. They sometimes cause headaches, and are at the least, uncomfortable. If you notice a pressure point, but cannot remember experiencing discomfort there while wearing the helmet, put the helmet back on for a few minutes, paying particular attention to the anticipated pressure point. If you experience complains of pressure point discomfort either time, go to the next larger size, repeating steps four and five.

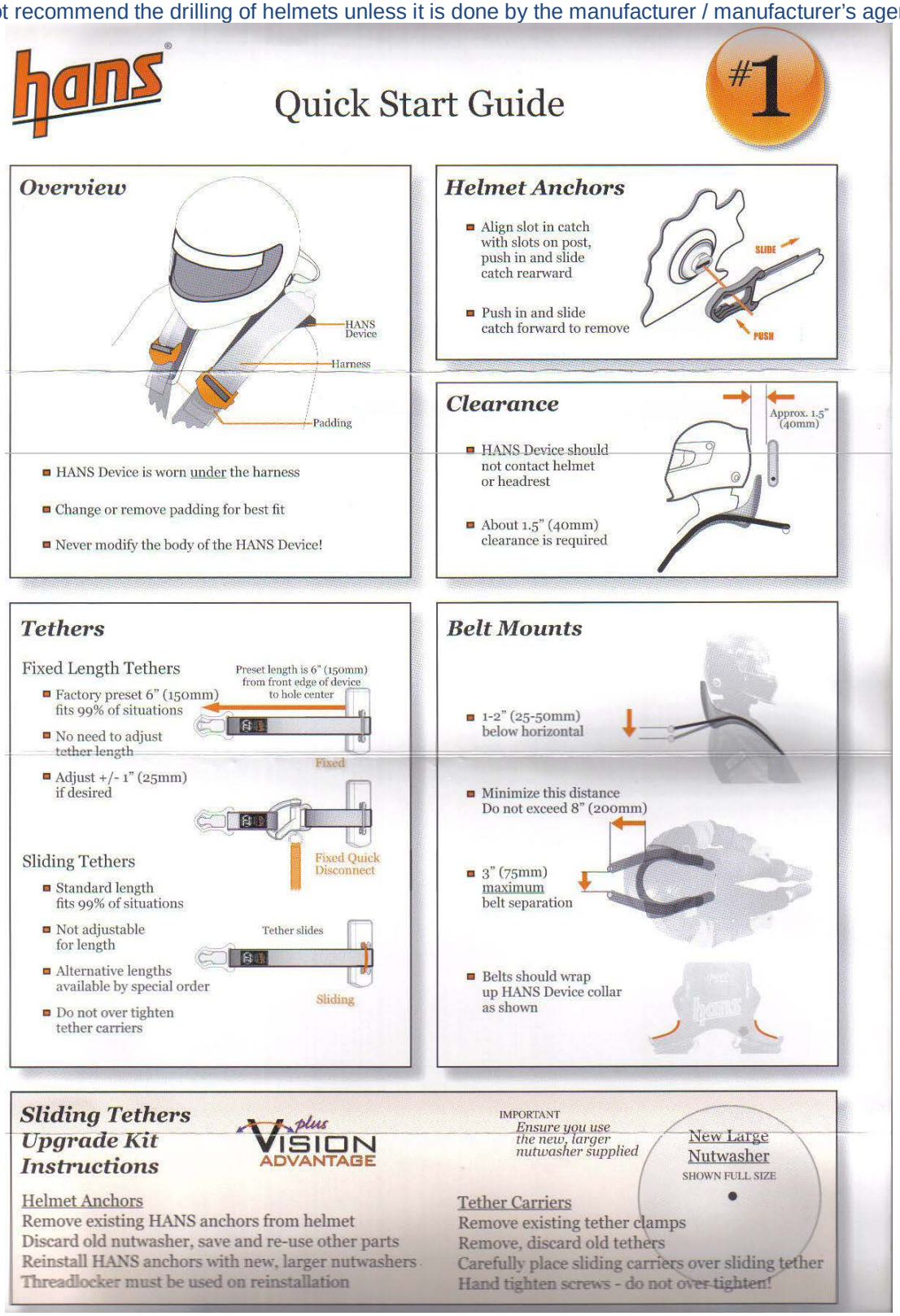
CONFIRM PROPER FIT.

The best way to evaluate proper fit is to try on helmets that are one size larger and one size smaller than the one you think is right. Keep in mind, people gravitate toward larger sizes.

If, by chance, you are unable to fit satisfactorily in one of our models, please call the Australian Bell Racing Distributor, Revolution Racegear at 08 9201 9998 for assistance.

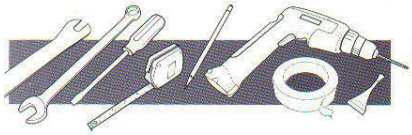
# HELMET POST – ANCHOR INSTALLATION


"The following is for information value only and a guide for correct fitment! Being an item of safety the SSA does not recommend the drilling of helmets unless it is done by the manufacturer / manufacturer's agent."




"The following is for information value only and a guide for correct fitment! Being an item of safety the SSA does not recommend the drilling of helmets unless it is done by the manufacturer / manufacturer's agent."

# Helmet Post-Anchor Installation



Get ready by assembling these tools: wrenches, screwdriver, measuring tape, pen, drill, masking tape and threadlocker.

*Use masking tape to protect your helmet*

1. Apply masking tape to protect your helmet before you start. Using a flexible scale, measure from a hard point (shield pivot screw etc.) on each side back to the approximate center of the helmet (fig. 1.) Draw a line on each side – the actual center line will be between your two measurements (fig. 2.).

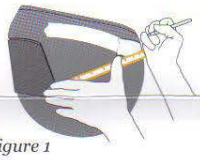


*figure 1*

2. Draw three horizontal lines on the tape 1.5" (40mm) up from the top edge of the rubber molding (figs. 2, 3.) Measure 6" (150mm) forward from the rear center line on each side of the helmet. Mark where this measurement intersects the horizontal line – this is where you will install the anchors (fig. 3.) Make sure you have two marks, each 6" (150mm) forward from the rear center line and 1.5" (40mm) up from the top edge of the helmet's rubber edge molding.

*figure 2*

3. Slowly drill a ¼" (6mm) hole at the two hole centers marked above. Drill through the helmet shell but not through the soft padding. A thin piece of sheet metal can be slipped between the shell and padding to help this (fig. 4.) De-burr and clean the holes.

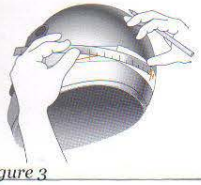


*figure 3*

4. Gently pry helmet liner away from shell using blunt instrument (fig. 5) and insert the nutwasher inside the helmet using a wrench, and align with hole. Put a drop of threadlocker sealant on post threads, then insert post through cap, spring and base and screw into nutwasher. Take care not to cross thread the assembly. Hand tighten until the point of the post faces rearward and slightly downward. Make sure the assembly matches the exploded view below.

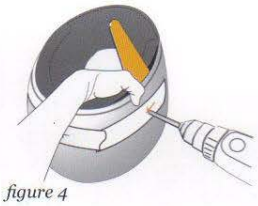


*figure 4*

5. Use a 7/16" (11mm) wrench to hold the post anchor outside of the helmet in position and tighten from inside (fig. 6.) Tighten ¼ turn beyond snug. The flats and slot of the post anchor should be roughly parallel with the ground and the point of the anchor should face toward the rear of the helmet.

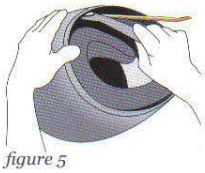
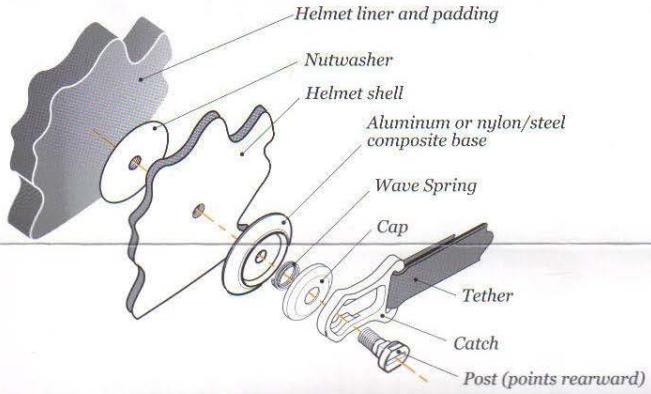


*figure 5*




**Helmet Post Anchor Exploded View**

*figure 6*

Speedway Sedans Australia Inc – Tek Torque June 2008

# COUNTERFEIT HANS POST ANCHORS - SAFETY ALERT

SAFETY ALERT

## COUNTERFEIT HANS POST ANCHORS DISCOVERED IN U.S.A

Number 7 August 2009

### Purpose

This safety alert informs all motor sport stakeholders and in particular competitors of a recent media release in relation to HANS Performance Products investigating the finding of counterfeit HANS post anchors.

The **HANS device** (also known as a **head restraint**) (**Head and Neck Support** device) is a safety item compulsory in some motorsport disciplines . It reduces the chances of head and/or neck injuries in the event of a crash.

1. HANS device,
2. Tether (one per side),
3. Helmet anchor (one per side)
4. Shoulder


### Background

It has come to the attention of the SFI Foundation that parts of a head and neck restraint system certified to SFI Quality Assurance Specification 38.1 have been counterfeited, have not been tested, and could present a serious safety related problem.

Recently HANS Performance Products has found counterfeit Post Anchor parts on a helmet purchased from Impact Racing Products.

Preliminary investigations suggest that counterfeit parts may have been supplied with other helmets provided by Impact. "We are seeking the source of the counterfeit anchors and to establish how widely they may have been distributed," said HANS CEO Mark Stiles. He continued, "It is extremely possible that counterfeits may have been installed on other helmets, either factory-fitted by a helmet manufacturer or by racers installing replacement parts during equipment changes." The only counterfeit parts identified so far look like HANS' current

"Professional" Post Anchors, which are designed to offer robust durable service – these have a "teardrop" shaped head to the "post" and an aluminium base engraved with HANS, SFI and FIA markings. Other Post Anchor designs, such as the similar current "Standard" version, which have the same teardrop post but a simpler black plastic base, and older designs which had a round shaped head to the post, do not seem to have been counterfeited.

Stiles said, "If racers want to check their Professional Series Post Anchors, one quick test is to touch a magnet to the post. The posts used in all our designs since July 2005 are magnetic. The posts on the counterfeits we have seen are not magnetic." He continued, "Our earlier designs used a non-magnetic material for the post, so a non-magnetic post is not necessarily a counterfeit, but it is a reason why a racer should contact us for more information." The link below shows what to look for when testing the Post Anchor.

https://system.netsuite.com/core/media/media.

To ensure all racers have confidence in their safety equipment, HANS is implementing a program to replace any counterfeit Post Anchors free of charge. Details of the program, other information and program updates are available at hansdevice.com, or by calling HANS direct at 1-888-HANS-999, or contacting one of the 200 authorized North American HANS factory trained dealers nationwide. Details and information about HANS Performance Products are available at www.hansdevice.com or by calling 1-888-HANS-999 or 770-457-1046.

In a recent update from Atlanta, Georgia (August 21, 2009) – HANS Performance Products has been trackside the past few days.

investigating the counterfeit HANS Post Anchor problem reported earlier.COO Gary Milgrom has been focused on circle track racing, while Sales Director Howard Bennett has been at the drag strip. "I must have seen about 150 helmets and exchanged over 50 sets of counterfeit anchors," said Milgrom.He continued, "On the whole, I've not had to touch any Simpson, Bell, Arai or Stand21 helmets – they've already been fitted with genuine HANS Post Anchors."Simpson, Bell, Arai and Stand21 have had substantial long-standing relationships with HANS.

Performance Products. They are among the 200 authorized dealers throughout North America that receive direct factory support.

Bennett said, "We've had a lot of support and thanks from crew chiefs, teams and racers for putting safety first. To ensure all racers have confidence in their safety equipment, we're continuing our program to replace any counterfeit Post Anchors free of charge."

Details and updates are available at www.hansdevice.com, or by calling HANS direct at 1-888-HANS-999,

or contacting any of the company's dealers.

# LIST OF TECHNICAL PERSONNEL AND RESOURCES REQUIRED FOR TITLES

- Steward present from start of scrutineering.
- Chief Scrutineer to be present (minimum of 1)
- One scrutineer per 10 cars e.g. 60 cars would have 6 scrutineers
- Person needed to check log books and licences.
- Persons needed to write check sheets and log books; minimum 1 per line of cars.
- Place to write and examine cars under cover - firm base and preferably access under cars.
- Person to keep others not involved out of area (security)
- Copy of information sheets to be given to drivers at scrutineering by WA Speedway Commission OR RECOGNISED State or National Body personnel.
- Tables and chairs for writers and officials.
- Person to collect passes and issue to avoid scrutineers leaving the area.
- Access to toilets and drinks during scrutineering.
- Access to food outlets for lunches.
- State to provide necessary equipment to scrutineers and basic hand tools for infield use. Liaise with technical personnel.

# SAWA SPRINTCAR SAFETY INSPECTION FORM

Note : This list does not include items related to enforcement of engine and/or handling enhancements

| Driver Apparel: | Pass | Fail |
|---|---|---|
| **Driving suit,** - mandatory minimum SFI 3.2A/5 and/or FIA 8856-2000 rating (Minimum of 2 layer 1 piece suit plus separate fire retardant underwear with long sleeve and not V neck) | ❑ | ❑ |
| **Balaclava** - mandatory - SFI 3.3 and/or FIA8856 -2000 and/or FIA IS06940 rating | ❑ | ❑ |
| **Gloves** - mandatory - SFI 3.3 and/or FIA8856-2000 and/or FIA IS06940 rating | ❑ | ❑ |
| **Footwear/socks** – mandatory - SFI 3.3 and/or FIA8856-2000 and/or FIA IS06940 rating | ❑ | ❑ |
| **Driver Safety Equipment:** | | |
| **Helmet -** SNELL 2005 or 2010 - "SA" standard, Age 5 years maximum (Motorcycle helmet not acceptable) | ❑ | ❑ |
| **Helmet Net** - mandatory on RH side unless fitted with an approved containment seat offering helmet support/protection (Note: Sprintcar frame fitted with a "Halo" bar must have a LH helmet net and cage padding as well) | ❑ | ❑ |
| **Arm restraints** – mandatory | ❑ | ❑ |
| **Head/Neck restraint** - mandatory SFI 38 1 rating (Must be approved e.g. Hans, Hybrid, R3. Hutchence). SFI rated to be recertified every 5years (if FIA certified this is not required) | ❑ | ❑ |
| **Sprintcar Protective Equipment:** | | |
| **Seat Belts,** SFI 16.I rating, lever latch on ly, 2 years old max, shoulder straps to be level or within 1" below shoulder height , 5 mounting points minimum, including crutch strap<br>Belt Webbing – recommended to be 70mm wide min 3mm thick (50mm "SFI 16.1 shoulder straps are ok) | ❑ | ❑ |
| **Belt Mounting** , Shoulder belts "must not" be mounted to the same "A" frame bar that is used to mount the seat (i.e. Cannot have seat bolts on same bar as the shoulder belts are mounted to) | ❑ | ❑ |
| **Seat,** approved metal seats only & must incorporate head rest (Minimum of 4 mounting bolts 8mm(5/16'") minimum or equivalent, protruding Seat bolts must be padded) (Non-metal Racetech Seat has been specifically approved) - | ❑ | ❑ |
| **Seat Base**, Protection bar to be fitted across the cage to reduce the chance of the diff snout hitting the base of the seat | ❑ | ❑ |
| **Drag Link Strap**, connected to chassis is mandatory to retain drag link after accident/breakage | ❑ | ❑ |
| **Knee Protection** , must be fitted | ❑ | ❑ |
| **Torque Tube Strap or Hoop,** must be fitted | ❑ | ❑ |
| **Steering Wheel Hub,** metal only and quick release | ❑ | ❑ |
| **Rock/Debris Screen,** must be fitted - minimum of 50mm vertical (Secured at 3 points not plastic ties) | ❑ | ❑ |
| **Misc Safety:** | | |
| **Head/Helmet Clearance**, minimum 80mm measured from the top of the cage (excluding padding) to top of helmet when driver strapped in (Note: Sprintcar frame fitted with a "Halo'· bar to attain minimum clearance of 80mm must have a LH helmet net & cage padding as well as the RH net) (*Full containment seat= No Nets) | ❑ | ❑ |
| **Steering,** Drag link and track rod heim joints must be steel with steel bolts used for retention (i.e. No aluminium heims or drilled/ lightweight bolts on the drag link or track rod) | ❑ | ❑ |
| **Steering Bolts**, Blind bolts on steering to be lockwired and/or pinned | ❑ | ❑ |
| **Drop Arm** , Lock bolt and washer to steering box shaft is mandatory(i.e. fitted as extra to the through bolt on the drop arm) | ❑ | ❑ |
| **Roll Cage,** Diameters, size, configuration appear to be suitable? Main roll cage tube is 35mm (1 3/8") OD | ❑ | ❑ |
| **Cage Opening,** 500mm cylindrical area above the drivers head is clear of obstruction s, LH side opening is suitable for driver entry/exit & RH panel opening is suitable (Vertical minimum is 255mm, horizontal is 530mm) | ❑ | ❑ |
| **Throttle,** to be fitted with 2 separate springs, free in operation (Can be cable) | ❑ | ❑ |
| **Fuel Tank & Lines**, bladder is mandatory, fuel cap is secure, one way positive Breather valve is mandatory, all fuel lines & fittings are secure. free of leaks | ❑ | ❑ |
| **Fuel Tap**, is mandatory on RH side of cabin clearly marked on/off on outside panel (Note fuel lap mounted to tank is acceptable) | ❑ | ❑ |
| **Brakes,** minimum of one operative brake mounted inboard at rear is mandatory | ❑ | ❑ |
| **Side Nerf Bars**, mounted and secure at all 3 points and protects most of front & rear tyres | ❑ | ❑ |
| **Rear Push Bar,** secured at all 4 spud s, protects tail tank offers suitable support for push starts | ❑ | ❑ |
| **Rim s/Tyres,** must be suitable and in good condition, free of crack s, etc | ❑ | ❑ |
| **Ignition Switch** , To be clearly marked On/Off· | ❑ | ❑ |

*WA Speedway Commission thank you for your attendance and wishes you luck in your future endeavours as an Official*

**WA Speedway Commission**

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