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1. INTRODUCTION

**DRY LAKES RACERS OF  
AUSTRALIA  
Presents**

**RULES  
Lake Gairdner Salt Lake Speed  
Flats**

**NOTICE:**

The rules and/or regulations set forth herein are designed to provide for the orderly conduct of racing events and to establish minimum acceptable requirements for such events. These rules shall govern the condition of all events, and by participating in these events, all participants are deemed to have complied with these rules. **NO EXPRESSED OR IMPLIED WARRANTY OF SAFETY SHALL RESULT FROM PUBLICATIONS OF OR COMPLIANCE WITH THESE RULES AND/OR REGULATIONS,** They are intended as a guide for the conduct of the sport and are in no way a guarantee against injury or death to a participant, spectator or official.

The Chief Steward shall be empowered to permit minor deviation from any of the specifications herein or impose any further restrictions that in his opinion do not alter the minimum acceptable requirements. **NO EXPRESSED OR IMPLIED WARRANTY OF SAFETY SHALL RESULT FROM SUCH ALTERATION OF SPECIFICATIONS.** Any interpretation or deviation of these rules is left to the discretion of the officials. Their decision is final.

Although a participant's vehicle meets all safety and technical regulations, the vehicle may not be allowed to compete due to environmental or course conditions or other considerations. All decisions of the Chief Steward and the Contest Board are final.

All regulations are subject to change without notice; in the event of change, all prior inspections and classifications are nullified. Any request for deviation from any rule contained in this rule-book must be submitted, in writing, to the Contest Board no less than 45 days prior to a meet. All suggestions for rule or classifications changes, must be submitted, in writing, to the rulebook Coordinator in the form attached in Appendix D.

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**Bold face words or sentences indicate items of special importance. Underlined items indicate updated rules or specifications.**

## 2. OPERATING PROCEDURES

Prime responsibility for the safe condition and operation of a vehicle in competition rests with the vehicle's owner and driver. The main concern of the DLRA is to provide a place to conduct events. The DLRA produces guidelines based on experience and circulates valid information to help perpetuate the sport. Total responsibility must be shared by everyone associated with the sport.

Close observance of the minimum standards set forth in this Rule book is an important fundamental.

The chief steward or their delegate has the discretion to overrule or waiver any rule contained in this rule book. The decision to allow an exemption or waiver can be protested against, but the failure to grant any waiver or exemption is final, and cannot be protested against.

### 2.1. Technical Inspection:

Technical inspection must be completely and satisfactorily passed by each participating vehicle (regardless of class) before any qualifying runs will be allowed. Vehicles competing in classes in which the existing record exceeds 200-mph shall be inspected by at least two technical inspectors. Vehicles competing in classes in which the record exceeds 250-mph shall be inspected by at least three inspectors. Where applicable, vehicles should be inspected with body panels off and on to verify the driver can reach all levers, switches, etc., with the body in place. Vehicles presented for inspection must be in race ready condition, ie. race tires, seat belts, parachutes, fire bottles, etc. installed. Vehicle may be required to be presented on the ground. Limb restraint systems must be demonstrated to be effective. All technical inspections shall be made with the primary driver and all alternate drivers intending to operate the vehicle in attendance. All vehicle technical inspections shall be based on existing class record or the next higher class where a record exists.

Any body or engine class change will necessitate re-inspection. Failure to obtain such re-inspection will result in the loss of all times recorded in the new class. Vehicles exhibiting ill-handling (such as spins, fires, etc.) on the course must be re-inspected and may be barred from further competition at the discretion of the Contest Board. All vehicles for re-inspection must be presented to the inspection area. Decisions by the Contest Board are final.

A DLRA Vehicle Log Book MUST be presented for all technical inspections. The "Event Record" must be completed by the competitor for each event. The "Record of Vehicle Ownership" at the front of the log

book must be completely filled out. The line entitled "Type of Vehicle" must include the make, model and year of the vehicle being raced. (This does not apply to Special Construction Category) A vehicle cannot be declared to be different than the make, model and year as listed.

### 2.2. Classification:

It is the responsibility of the owner and/or driver to enter a vehicle in its proper class. However, a vehicle is subject to class verification by the Contest Board at any time. All vehicles will run only in the lowest primary class/category for which they are legal. If an appropriate class exists, all vehicles must run in that class. Any vehicle, which is not legal for any class, but meets all technical regulations, must run for time only. No trophies will be awarded for time only entries. The DLRA Contest Board will reclassify a vehicle if the vehicle is entered in the wrong class.

### 2.3. Starter.

An official starter and assistant starter shall be appointed by either the committee or by nomination and election at the general meeting of the DLRA, and shall have the authority to bar a vehicle from the course even though it has passed inspection. Such action may be appealed to the Contest Board, which shall have the power to overrule the starter.

### 2.4. Weather.

The Contest Board assumes no responsibility whatsoever for delays, postponements, and cancellation of all or any part of an event because of inclement weather, course conditions, and/or any other reason. The starter/timer shall close the race course in whole or in part when the wind velocity at any point exceeds 15-mph or any other adverse condition arises.

### 2.5. Course:

The straightaway speed course, conditions permitting, will be an overall distance of at least seven miles. If conditions permit, there will be two courses available. A "short" course of three miles for vehicles under 175-mph, and a "long" course of five miles for vehicles over 175-mph. The "short" course will consist of an approach of two miles from the starting line and two timing traps placed as follows: one trap timing the first quarter-mile of the third mile and a second trap timing the full third mile. The "long" course will consist of an approach of two or three miles from the starting line to three timing traps placed as follows: the first trap timing the full third mile, the second trap timing the full fourth mile and the third trap timing the full fifth

mile. The short course will generally consist of a portion of the long course. Determination of the number of courses and procedures to be used will be made at the beginning of the event and may be changed at any time at the sole discretion of the Contest Board due to weather conditions or safety considerations. There may be a startup area available.

## 2.6. Qualifying:

To qualify for a record attempt, a vehicle must exceed the existing record by at least .001-mph. Only one person will be allowed in a vehicle during competition. The number of qualifying runs allowed each vehicle is unlimited, however, any vehicle or driver considered by the Contest Board to be detrimental to the event may be barred from the course at any time. (See Section: Participant Conduct). All vehicles, except streamliners should exceed 175-mph in the first timed quarter mile of the "short" course before competing on the "long" course. Vehicles that have exceeded 175-mph in the quarter may be timed through the full five miles of the "long" course at the driver's option. The Chief Steward has discretion to allow any competitor to use the long course if requested. Any vehicle may compete on the "short" course. Class changes will not necessitate re-qualification for the long course for attempts at records in excess of 175-mph.

Classes with no listed record are considered as open. A vehicle will be considered as qualified at the completion of the first leg of the two way record attempt. Record run procedures will be the same as classes where a record exists. The same driver/rider must operate the vehicle for both halves of the record attempt for a record to be valid.

## 2.7. Record Runs:

### 2.7.1. One way Record Runs:

The DLRA recognises 2 sorts of records in this rule book, which have differing qualification and participant requirements. The least onerous record is a one way record. This is the highest recorded speed attained by a vehicle in its class. Vehicles under 175mph may be timed over the short course, other vehicles will be timed over a flying mile on part of the long course. The DLRA will automatically select the highest speed, and if it exceeds an existing one way record, the rule book will be updated. A participant is not required to take any action for a run to be considered for a record of this type. These records are recorded in the rule book in normal text.

### 2.7.2. Two way Record Runs:

A two way average record is established by a two run average over the same relative or physical mile, depending upon course length and direction. The same engine block must be used for the two run average of each record attempt. Qualifying runs that exceed the existing class record will be considered to be the first leg of the record attempt. The DLRA must be notified within 15 minutes of a run that it is to be considered the first leg of a record run. A qualified vehicle **MUST** proceed directly to the designated impound area and report to the official within 1-hour of the time stamp on the timing slip. Qualified entrants will have 4-hours from the time stamp on the timing slip to perform required maintenance on the vehicle. All impounded vehicles will make the second leg of the record attempt at a time to be determined at the event. Vehicles completing a record attempt **MUST** proceed directly to the designated impound area for certification within 1-hour of time stamp on the timing slip. If for any reason a vehicle is removed from the impound area, the record is forfeited and the vehicle must re-qualify. In the event that record runs are cancelled for that day, eligible vehicles need not re-qualify. After a vehicle leaves the starting line on a record run, any interruption, such as spins, loss of engine power, etc. will terminate the record attempt.

A two way record run is recorded in the rule book in **bold text**

The DLRA timer will police the time periods for record runs.

## 2.8. Record Body and Class Certification:

All record breaking vehicles must report immediately after their completed record run to the designated area to be inspected by an appointed official for compliance with body class, engine displacement, and technical requirements. Record breaking engines may not be removed from the chassis prior to displacement inspection. Inspection may be made with an DLRA approved displacement device if the engine displacement is not within 3% of the upper or lower cubic inch break for the class. All others will be measured by direct measurement of bore and stroke or swept volume.

All components shall be available for inspection upon request. Provision to attach a wire seal to the engine must be provided by the entrant. Following initial measurement and certification of the engine, a wire seal may be attached to the engine so that the engine need not be disassembled in the event additional records are set. This procedure applies to the **CURRENT** event only.

Record setting engines which cannot be certified by direct measurement of the bore and stroke may require special tools. Any special tooling required to measure an engine MUST be provided by the entrant. Special tools will be certified by the Technical committee for accuracy.

### **2.9. Protests:**

All protests must be made in writing using an official DLRA Protest Form. The completed protest form must be given to a Contest Board member before sundown the day of the race. All protests require a fee of \$100.00. This fee is refundable if the protest is upheld. Protest forms will be available at the registration area.

Any deviation from the protest procedure will be considered as an invalid protest. If a protest is properly filed with the impound official, the Technical Committee shall rule on the protest within 30 days. If the protest is upheld, the vehicle may not compete within the same class until modifications are made to bring the vehicle into class compliance.

### **2.10. Trophies:**

Trophies may be presented at the discretion of the DLRA

### **2.11. Timing Plaque:**

A DLRA timing certificate showing the fastest qualifying speed and a result sheet will be sent to all entries. Record setting entries will receive a timing certificate showing the record speed. All questions or requests for duplicate timing plaques should be directed to:

DLRA Timer. Peter Noy

Dash plaques may be obtained from Chris Weir, following submission of the timesheet or certificate and correct funds.

### **2.12. Participant Conduct:**

Any participant who shows any signs of intoxication will be barred immediately from an event. Any reckless conduct by a race participant, eg. Using a Competition vehicles to carry passengers, driving a competition vehicle in the pits, doing warm-up passes without helmet, suit or other required equipment, outside the designated warm-up area or powering beyond the finish line, will be referred to the Contest Board for action.

Use of the race course before, during or after a meet without authorisation is prohibited. Push trucks are not allowed to use the course unless it is the race vehicle. Riding in the back of open pick-up trucks is prohibited.

This rule will be strictly enforced. An operational CB radio must be in use in all push vehicles.

Any display of unsportsmanlike conduct or disregard of rules and policies by an entrant towards an official, another competitor, or a spectator will result in disciplinary action.

For serious incidents by a driver or member of crew, expulsion from the meeting or revocation of DLRA membership may result. The stewards are responsible for policing participant conduct. Decisions may be appealed to the contest board using the protest form. All persons using motorcycles for transportation at the event must wear a helmet. Failure to do so may result in expulsion from the event, or confiscation of the motorcycle for the remainder of the event.

No Fluids or solids other than water are to be drained or dropped on the lake surface.

### **2.13. Driver licensing:**

All drivers/riders must have a current DLRA competition license. These may be obtained by application to the DLRA officials when entering the meeting, after meeting the requirements listed below. Drivers under the age of 18 must have a signed Medical & Minor Release Form from parent or guardian before they will be allowed to compete.

All New cars/drivers/riders or drivers/riders new to car/course will be required to make runs at less than full throttle or less than full course length.

All new Drivers/Riders who have not attended the Drivers meeting must present themselves to the Chief Stewards for track orientation.

Experienced drivers/riders holding licenses in a slower category may qualify for the next faster category by satisfactorily completing one or more runs at a speed within the minimum and maximum for the next faster category. Licensing requirements are a current and valid driver's license, a DLRA driver's license, and a timing slip for the next higher category verified by the chief steward or his delegate, after viewing the licensing run. For a licensing run to be valid, the starter must be informed that the run is for licensing purposes prior to leaving the start line. Where appropriate, the licensing run will include a parachute test. Where this applies, these will be conducted on category D passes and above.

The categories are as follows:

Category E	Current and valid state driver's license
Category D	125 to 149 MPH
Category C	150 to 174 MPH
Category B	175 to 199 MPH
Category A	200 to 249 MPH



Category AA 250 to 299 MPH  
Unlimited 300 MPH and faster

Licenses will be periodically reviewed and reduced one license category for each three years of inactive competition. Licenses may be obtained [at the scrutineering tent during the DLRA speed week.](#)

#### **2.14. Course Damage:**

Any race vehicle or sub-component thereof that has the potential or has demonstrated a tendency to damage the racecourse may be barred from competition until the vehicle or component is determined by the Contest Board to no longer create an unacceptable amount of damage to the race course.

#### **2.15. Retention of Vehicle and/or Parts:**

[The](#) participant hereby grants DLRA and its [officials](#) the full and unconditional permission to collect and retain vehicles, parts of vehicles, equipment, or any other item used in conjunction with participation owned by or in the possession of participant, including such vehicles, parts of vehicles, equipment or any other items which have been involved in accidents when DLRA determines in its sole and absolute discretion that such actions are necessary incident to the investigation of an accident, the inspection or testing of such vehicles, parts or equipment, or for any other purpose.

#### **2.16. Technical Committees:**

Correspondence relating to rules or specific technical or safety questions should be directed to:

CARS: Stewards/Scrutineers  
Chief steward: Brian Nicholson  
Scrutineer: Lennie Souter  
Stewards: Bill Heeremans/Bruce Fisher

MOTORCYCLES: Stewards/Scrutineers  
Steward/Scrutineer: Gary Baker

### **3. GENERAL COMPETITION REQUIREMENTS (AUTOMOBILE)**

**Where there is a metric and an imperial measurement equivalent, the smaller of the two shall be the minimum requirement**

#### **3.1. Engines:**

Any internal combustion engine using either the Otto or Diesel cycle may run in any category, except for Vintage engine classes here-in-after described. In Production, Grand Touring, XF, XO, XXF, XXO and V4 classes, non-production engines or aftermarket blocks (even though they accept production crankshafts, cams and cylinder heads) may not be used. All other engines that transmit the power through the wheels only may run in  $\Omega$  class. Only Streamliners and Unlimited Diesel Trucks may use more than one engine at the same time. Reaction propulsion engines are prohibited, except during exclusive meets.

XF class consists of any production FORD/MERCURY, passenger car V-8 Flathead engine, 1932 through 1953, up to 325 cubic inches displacement.

XO class consists of overhead valve (OHV) and Flathead inline and Flathead V8 (except Ford & Mercury) and V12 engines, 1959 or earlier design, up to 325 cubic inches displacement. Examples include Grey Motor Holden, Chevrolet, GMC, Hudson, Packard, Buick, Lincoln and Cadillac. Foreign engines are NOT included.

XXF class is an XF engine, as described, with overhead valve conversion cylinder heads, such as Ardu Ford.

XXO class is an XO engine, as described, with a specialty cylinder head, such as the Repco crossflow or Wayne 12 port.

X class engines, as described above, which are over 325 cid, but under 375 cid, shall be classified as either XXF or XXO. Specialty cylinder heads are NOT allowed in this instance.

XX/PRO class is limited to cylinder head port configuration as originally designed. This applies to the XXF and XXO engine classes.

Vintage Four (V4) class consists of any pre-1935 American-made four cylinder automotive production engine, up to 220 cid. Specialty heads are allowed.

NOTE: See exception under Rules for Vintage Oval Track Category. Turbochargers are not allowed on

Vintage Class engines competing in Vintage Body Classes.

Vintage Four (V4) engines must compete in a Vintage body (pre-1949), (except in Special Construction) Category. Engine class allowed in Special Construction, Vintage and Modified Categories only.

### 3.1.1. Engine Class Break:

Ω Engines using a thermodynamic cycle other than Otto

	Cubic Inch Displ.	Approx. Litre Equiv.
AA	501 cid and over	(8.21 litres and over)
A	440 thru 500 cid	(7.21 to 8.19 L)
B	373 thru 439 cid	(6. 11 to 7.19 L)
C	306 thru 372 cid	(5.01 to 6.10 L)
D	261 thru 305 cid	(4.27 to 5.00 L)
E	184 thru 260 cid	(3.01 to 4.26 L)
F	123 thru 183 cid	(2.01 to 3.00 L)
G	93 thru 122 cid	(1.51 to 2.00 L)
H	62 thru 92 cid	(1.01 to 1.50 L)
L	46 thru 61 cid	(0.76 to 1.00 L)
J	31 thru 45 cid	(0.51 to 0.75 L)
K	30 cid and under	(0.50 L and under)

For reasons of economy and historical authenticity, vintage engine modifications should be restricted to older technology levels so far as is practical. Accordingly, in classes XO, XF, XXF, XXO, and V4, using Vintage bodies:

- Turbochargers are not permitted.
- Computers are allowed for data collection purposes only.

The displacement of reciprocating engines shall be computed by the following formula: bore x bore x .7854 x stroke x number of cylinders. For non-reciprocating engines, equivalent displacement (ED) will be calculated by the following formula: ED=SV x 3 where SV is the Swept Volume.

### 3.2. Fuels:

In fuel classes, any approved liquid fuel may be used. Approved fuels are: nitrous oxide, nitro methane blends, alcohol and non-approved gasoline. The contest board may choose any test or combination of tests to assure liquid fuels used in 'GAS' classes comply with specifications. The tests may include but not be limited to dielectric testing, colour comparisons, specific gravity and/or other testing methods. The addition of compounds containing nitrogen and/or oxygen may produce a mixture with a D.C. greater than 2.3. Most gasolines will meet this criteria. It is recommended that unknown gas be checked before use in competition. If

a DLRA sponsor provides an 'EVENT' gas or diesel fuel, that product MUST be used for record attempts at the event.

Water injection is allowed. The water tank must be inspected and sealed prior to each record run. When a specific class is not available engines using LPG, natural gas or diesel fuel may compete in gasoline classes. Hydrogen fuelled vehicles [are not permitted at this time.](#)

### 3.3. Frames/Chassis:

Except where specifically forbidden by class rules, any design frame may be used. The frame design is subject to the approval of the Contest Board and must be of sufficient strength to resist flex or twist. The burden of proof of the strength of the frame design lies with the entrant.

### 3.4. Shocks:

A functional shock absorber is required for each sprung wheel.

### 3.5. Drive Hubs:

Any car equipped with a non-retained axle bearing (non-Hotchkiss type rear axle) assembly must incorporate an approved hub to prevent loss of a wheel in the event of rear axle failure. Semi or full floating rear axle assemblies, as used in most late model production cars, are sufficient. Late model GM type rear ends using stock 'C' clip axle retainers are NOT acceptable.

### 3.6. Tyres:

Tyres with 2-ply construction shall be limited to speeds of less than 175-mph except tyres with manufacturers speed rating over 175-mph. The type of tyre required in each class shall be governed by the current record speed in such class at the beginning of a meet as follows:

Up to 150 MPH: Original equipment tire HR rated.

Up to 200 MPH: VR and ZR rated tires.

Up to 250 MPH: Shaved narrow tread super speedway tyres.

Up to 300 MPH: Special tyres for racing as designated by the manufacturer.

Open Record Classes: Tyre requirements shall be determined by the speed in the next larger class in which a record exists.

Any tyre deviation or use of any alloy tyre (no rubber) must be submitted to the Contest Board in writing 45 days prior to the meet. Alloy wheel/tyre combination (non-pneumatic) which utilises a design incorporating a square edge at the tread/sidewall are prohibited from use. See Section 2.14

### 3.7. Course Damage:

Other tires having the manufacturer's recommended maximum speed moulded on the tire will be accepted up to that maximum speed.

Tubes are required, except for racing tires expressly designed for use without tubes. Tubeless tires must use a metal valve stem. Minimum inflation pressure shall be 45 psi. Caution should be exercised on excessive pressure. Exceptions to any part of the foregoing may be granted in the form of a letter from the manufacturer stating the speed and pressure at which a tire may be run. No recaps are allowed. Tires are subject to inspection by the Contest Board at any time. Adequate tire clearance between the tires and body or chassis is required.

Metal tire valve caps must be fitted to all tire valve stems.

### 3.8. Wheels:

The DLRA recommends the use of mild steel wheels where possible. All nonferrous wheels on which lug nuts would come in direct contact with the wheel must have a 1/4" thick steel retaining plate or large o.d. heavy gauge individual washers under all lug nuts. This does not apply to spindle mounted nonferrous wheels. Magnesium wheels are not recommended and, if used, must have an initial Zyglo certificate and stamp. Wheels are to be re-inspected if any adverse condition arises. Inspections made with tires mounted are accepted. It is recommended that tire pressure used on two piece wheels does NOT exceed 60 psi., or manufacturer's specifications.

All Classes over 200-mph

Wheels used must be manufactured for racing or reinforced as below. 1" lug nuts are required on all vehicles. All Classes under 200 MPH. The smallest part of the hex of a lug nut must be larger than the largest part of the taper of the mounting hole. Lug nuts must torque totally against a wheel's tapered surface. A minimum of 5/8" of the stud threads must be engaged within the lug nut.

Vehicles with tires having a diameter of 29" or greater, or with wheels over 17" in diameter must use a wheel manufactured for racing or reinforced as below. Wheels must be attached with at least 5 studs with a minimum diameter of 1/2" and 1" lug nuts.

In either of the previous cases, wheels must be manufactured for racing purposes or reinforced as follows; by welding the entire area of attachment

between the rim and the centre section on either the inside or outside of the wheel.

No closed end (Acorn type) lug nuts are allowed.

Wire wheels designed for automotive racing applications such as Rudge or Dayton are allowed. Automotive OEM wire wheels are allowed only in classes under 200mph provided the centre section is adequately reinforced. Motorcycle wheels not designed for automotive use are prohibited.

Fender skirts are not allowed, except in Streamliner class. The prohibition against "wheel covering" in some class rules does not apply to "full wheel" discs, which are legal in all categories if securely fastened to the wheels with six (6) or more machine grade screws or three (3) Dzus type fasteners. Inner wheel discs must be securely mounted to the wheel or axle. All hub caps must be removed.

### 3.9. Tread:

Tread is defined as the measurement from the centre-plane of one tyre to the centre-plane of the opposite tyre of paired wheels.

The minimum tread dimensions for all Vintage Category vehicles is 44" front and 50" rear. Modified Roadster is exempt from the front tread requirement. Special Construction Category vehicles are not subject to this rule.

### 3.10. Push Bars:

All cars incapable of starting under their own power must be equipped with bumpers or push bars. Push bars must not offer any aerodynamic advantage. No horizontal panelling is allowed between the rear of the body and the bumper/push bar except in Special Construction Category. No towed starts will be permitted from the starting line without special approval.

### 3.11. Ballast:

Ballast may be carried in all categories. Ballast shall be securely mounted, bolted to the frame or the frame structure. The use of hose clamps, wire, strapping, tape, tie wraps, etc. for securing weight or ballast is prohibited. Ballast shall not be used to streamline the vehicle. It is recommended that ballast be mounted as low as possible.

### **3.12. Appearance:**

All vehicles entered in an event must be maintained so as to present a neat appearance. (All white or silver (unpainted) vehicles must also show a contrasting colour on the body.) All owners, drivers, and crews will be responsible for the maintenance of their pit area and will be expected to present a neat and respectable appearance.

### **3.13. Number/Class Designation:**

Competition numbers will be assigned as the membership number of the vehicle owner and/or driver. Numbers assigned to another member may be used by negotiation with the membership number holder concerned. In case of dispute, the number reverts to the membership number.

### **3.14. Canopies:**

Canopies enclosing the driver are permitted in Streamliner and Lakester classes only and must be securely closed in competition. Canopies must be able to be opened from both the inside and outside without the use of tools and latches must be clearly marked on the outside of the vehicles for emergencies.

### **3.15. Replica Bodies and Panels:**

Replicas of original stock bodies and panels may be used in all (except special construction) categories provided they are exact dimensional replicas of factory production units which are otherwise acceptable in the category.

### **3.16. Tarpaulins and Tonneau Covers:**

Cockpits may be covered with any non-flammable material and may be flexible or rigid unless otherwise stated in the class rules. No sharp or protruding edges are allowed. Tarpaulins, rigid or non-rigid, on pickups (including Rancheros, etc.) must be aligned with and no higher than the sides of the bed.

### **3.17. Four Wheel Drive:**

Four wheel drive systems are allowed only in Special Construction Category and Production Category, where the competing vehicle was originally equipped with four wheel drive.

### **3.18. Computer:**

Vehicles may be equipped with a computer which effects engine operations ONLY, eg., timed fuel injection, etc. (except Vintage Engine classes) see section 3.1.

Active micro-processor or non-driver controlled anti-wheel spin (traction control) devices are not allowed except on Production Class vehicles where the unit (unmodified) is OEM equipment. **Entrants using anti-wheel spin (traction control) devices are subject to a three (3) year suspension from DLRA racing activities. This policy will apply to each person listed on the entry form. A 3 year suspension will also apply to the vehicle concerned, regardless of ownership. Revocation of all records held by that vehicle/owner or driver combination will apply.**

All competitors are required to cooperate fully with the Contest Board in the inspection for such devices.

### **3.19. Data Recorders:**

Entrants in all classes may use a data recorder to record the functions of a vehicle so long as the recorder does not activate any function of the vehicle, eg., clutch operation, etc.

### **3.20. Air Duct:**

Air ducts may pierce, but shall not extend past exterior body work and shall not be utilised to eliminate a prominent feature (eg. a fender crown shall not be removed to provide a duct opening). Air ducts shall originate and exit in the rear 50% of the vehicle body and shall not be directed to or away from wheel wells. Construction shall be of non-flammable materials.

### **3.21. Belly Pan:**

All belly pans must have holes for drainage.

### **3.22. Bobbing:**

Bobbing is allowed in selected classes. See vehicle class description.

### **3.23. Floorboards:**

Floorboards shall be mounted above the frame or in stock location for the body style and year of the vehicle. Floorboards shall be inside, or over all suspension and drive line components, well fitted and securely attached with all holes sealed.

### 3.24. Hood Scoops:

On full bodied, un-blown vehicles, where allowed, hood scoops shall not extend more than 11" above the hood surface measured at the front of the scoop.

### 3.25. Step Pan:

A step pan may enclose the area from the aft-most portion of the firewall to a line 10" forward of the rear axle centerline and shall not be lower than the frame at any point plus the thickness of the material used. The step pan shall be flat and parallel to the ground. A box may be constructed to enclose the portion of the transmission, which protrudes through the step pan. The box must be rectangular in design, flat on the bottom, covering only the exposed portion of the transmission. The box shall not be tapered in any way, maximum clearance from the transmission shall be 1 ". Chassis crossmembers are not considered as part of the frame for purposes of this rule. The transition at the rear of the step pan to the floorboard shall occur at a 45 degree or steeper angle to be exempted from the definition of a belly pan. NOTE: A step pan shall not be considered as part of a belly pan for classification purposes.

## 4. TECHNICAL REQUIREMENTS

### 4.1. Driver's Protective Equipment:

All drivers must wear a driver's suit, gloves, balaclava and boots. Protective underwear is highly recommended. All items must be in clean and serviceable condition. It is advisable not to wear synthetic clothing material under the driver's suit. All Driver's suits MUST be SFI or [CAMS](#) certified and have the SFI or [CAMS](#) rating tag attached.

#### 4.1.1. Driver's Clothing:

#### MINIMUM DRIVER'S SUIT REQUIREMENTS:

##### Type of Vehicle

##### Blown front engine cars over 175 MPH

Suit SFI 3.2A/20 [or Double layer suit with underwear of CAMS approval or better](#)

Gloves SFI3.3/15

Boots SFI3.3/15

Head sock SFI 3.3

##### All other cars over 175 MPH and Motorcycle Streamliners

Suit SFI 3.2A/15 [or Double layer suit or single layer suit with underwear of CAMS approval or better](#)

Boots SFI3.3/5

Gloves SFI3.3/15

Head sock SFI 3.3

#### All vehicles under 175 mph

Suit SFI 3.2A/10 or /5 with full Nomex underwear or

[Single layer suit with CAMS approval or better](#)

Gloves SFI3.3/5

Boots SFI3.3/5

Head sock SFI 3.3

All blown front engine car drivers MUST have boots and gloves of a SFI 3.2A/15

OR SFI 3.2A/20 rating.

### 4.1.2. Driver's Helmet:

All drivers/riders must wear a full face helmet with face shield, which meets Snell Foundation 2000 SA, or later specifications. No open face helmets will be allowed. Helmets will be visually inspected in conjunction with scrutineering. Helmets must be undamaged and in serviceable condition. Eye glasses worn under the helmet must be shatterproof.

### 4.1.3. Driver's Helmet Support (neck collar):

It is required that a helmet support be used where applicable, ie. in vehicles where the existing roll bar Structure does not provide restriction to lateral head movement of less than 4".

### 4.2. Roll Bar and Roll Cage:

All cars in competition must be equipped with a roll bar or roll cage structure. All open cars must have a full roll cage. All closed cars over 175-mph and non-metallic bodied cars entered in classes with records or minimums over 150-mph must have a full cage. All deviations to roll structure rules MUST be submitted to the Contest Board 45-days prior to the event for approval.

Low carbon (mild) steel tubing is recommended for the construction of all types of roll bars and cage type structures. Threaded pipe, pipe fitting, lapweld pipe, magnesium or aluminium are not permitted. All bolts must be 3/8" minimum diameter and at least grade 5.

All bolted structures must have at least two bolts (180 degrees apart) through support pads and roll structure brace connections.

On unitized construction and monocoque cars, the roll structure and brace must have 6mm (1/4") thick support pads on the top and bottom of the floor (or sill in a sandwich construction) and must be of sufficient area to support an impact load equal to the weight of

the car. For cars weighing less than 1100Kg (2500 pounds), these pads must have a perimeter of at least 450mm (ie 100 by 125mm) (18"ie., 4" x 5") and cars over 1100Kg (2500lb) must have at least 550mm (ie. 125mm x 150mm) (22" perimeter (ie., 5" x 6")).

It is preferred that these pads have a corner radius of about 10mm to avoid punch through in an accident.

#### 4.2.1. Roll Bars:



Figure 4- 1

Minimum requirements for roll bars and roll bar braces are 1-3/4" outside diameter round steel tubing with a minimum 0.120" nominal wall thickness. All roll bars must come within 150mm (6") of the rear or side of the driver's head extending in height above the driver's helmet with the driver in normal driving position. Roll bars must be adequately supported, cross-braced and gusseted to prevent forward or lateral collapse. Braces shall intersect with the roll bar at a point not more than 5" from the top of the roll bar. On singly-braced roll bars, 3mm (1/8") minimum thickness steel gussets are required at both the top of the bar and frame anchor points of the brace.

All G,H,I,J & K classes may be made of round steel tubing not less than 1-1/2" O.D. x 0.095" nominal wall thickness. Vehicles in the classes where the existing record exceeds 175 MPH must use the larger tube minimum requirements. See Figure 4-1.

In general, this will mean that a roll bar will consist of at least a main hoop immediately behind the driver, a shoulder or taxi bar to attach the shoulder harness belts to, a diagonal to prevent sideways collapse, and at least one forward or rearward brace to prevent forward/rearward collapse.

#### 4.2.2 Roll Cage:

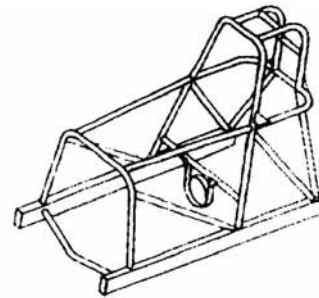


Figure 4- 2

Minimum requirements for cage type roll structure and cage type roll structure braces are 42mm (1-5/8") O.D. round steel tubing with a minimum 3mm (.120") nominal wall thickness or E4130 chromoly tubing with a minimum .095" normal wall thickness, securely mounted, gusseted and braced within 125mm (5") of the top of the roll cage structure. All cage type structures must be designed to protect the driver from any angle, including the bottom.

All roll cages for G,H,I,J & K classes may be made of round steel tubing not less than 1-1/2" O.D. x 0.095" nominal wall thickness. Vehicles in classes where the existing record exceeds 175 MPH must use the larger tube minimum requirements.

A minimum four (4) point roll cage is required if the front hoop is continuous and directly connected to the lower frame rail. A minimum five (5) point roll cage is required if the hoops and bars are mounted to the shoulder bar.

Gussets are required at tube junctions of hoops and shoulder rail. Gussets made from mild steel 3mm (0.125") minimum thickness and 100mm (4 inches) per side, (**preferably stitch welded on outside of tube junction**) are required at all shoulder bar attachments points. Grinding of welds is NOT permitted. See Figures 4-3 & 4-4.

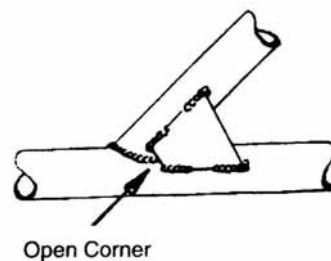


Figure 4- 3

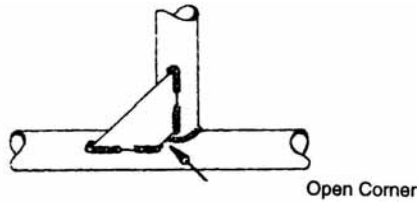


Figure 4- 4

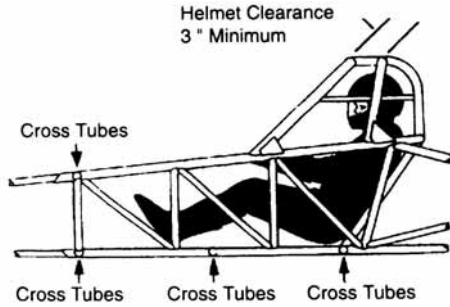


Figure 4- 5

The front hoop of the roll cage must be at least 75mm (3") in front of the driver's helmet while the driver is in his normal driving position. A helmet retaining strap within the roll cage is required. It must be a minimum of 25mm (1") wide and a minimum 3mm (0.125") thick, mild steel and welded inside the roll cage to prevent the driver's helmet from exiting the roll cage between the bars. See Figure 4-5.

Deviation requests must include strength calculations, drawings and/or pictures showing all physical dimensions of the roll bar structure or cage-type structure and adjacent frame. All roll cage structures must be designed to encapsulate and protect the entire driver's area from impact. The cage area is considered to extend from above and behind the driver's head to in front of the driver's feet, and includes both side and bottom protection.

**4.2.3. Roll Bar/Cage Padding:**

Padding meeting SFI spec 45.1 in the proximity of the driver's helmet is required.

**4.2.4. Head Rest:**

A padded head rest must be installed in all vehicles to prevent whiplash. Drivers sitting in an upright position must have the padding within 75mm (3") of the back of the helmet. See figure 4-6.

Drivers sitting in a reclining position must have the padding within 75mm (3") of the back of the helmet. See figure 4-7.

Drivers sitting in a laydown position must have the padding within 50mm (2") of the back of the helmet. See figure 4-8.

**4.3.DRIVER'S RESTRAINTS**

**4.3.1. Seats:**

Bucket seats may be used in all categories provided they are securely attached on the bottom and back to the frame, roll bar, or crossmember. Driver's seat must be braced in some manner to prevent it from collapsing rearward. It is recommended that seats designed specifically for racing purposes be used. **Vehicles using a stock seat entered in a class with a record or minimum over 150 MPH must have the stock seat guide rails removed or use a positive lock to prevent seat movement.**

**4.3.2. Seat Belts:**

Seat belts meeting SFI spec. 16.1 quick release, competition type seat belts and shoulder harness, with 75mm (3") lap belt, 75mm (3") shoulder belts and 50mm (2") crotch strap are mandatory in all categories. All seat belt and shoulder harness installations must be mutually compatible, originally designed to be used with each other. Crotch straps are required in all categories. All belts must be in good condition, and have a manufacturer's tag and legible date of manufacture on the label. It is recommended that seat belts be upgraded every two to three years. Belts will be accepted if in good condition and not over five years old. When arm restraints are worn with a belt system that utilises a "latch lever" with a built-in latch lock, a protective cover shall be installed to prevent the arm restraint from accidentally releasing the latch lever. Tape is not sufficient as protection.

[Belts older than 5 years will be accepted if they are in AS NEW condition](#)

**Recommended Seat Belt Mountings**

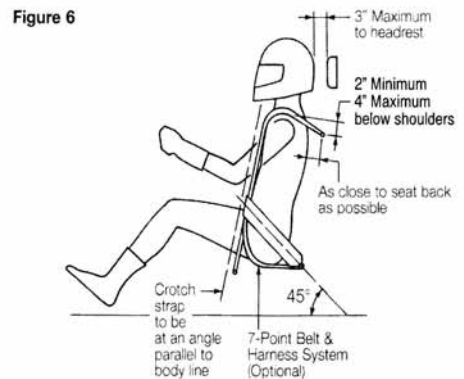


Figure 4- 6

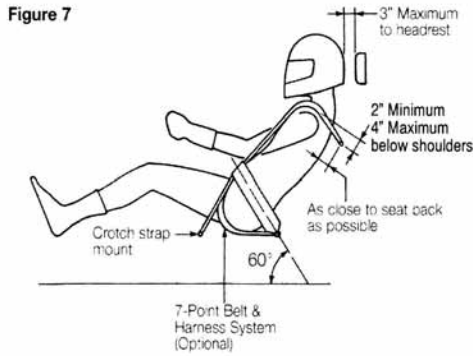


Figure 4- 7

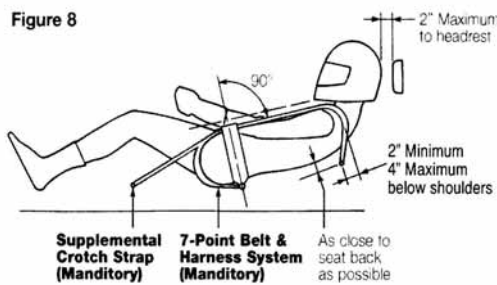


Figure 4- 8

Seat belts and shoulder harnesses should be installed to manufacturer's specifications. Seat belts must be securely fastened to the frame, crossmember or reinforced mounting so that **all fittings are in direct line with the direction of pull**. Participants are cautioned that the usual "factory" mounting through the floorboard is inadequate and will not be permitted without additional reinforcement. Mounting shall be accomplished with a minimum of grade five bolts. Under no circumstances are bolts to be inserted through the belt webbing. The shoulder harness must be mounted in a manner as to prevent slipping off the driver's shoulders. See figures 4-6, 4-7 & 4-8.

A supplemental strap to prevent the driver from sliding up into the roll cage must be added to vehicles where the driver is in a reclining position. See figure 4-8. In a vehicle with minimal cockpit room, consideration should be given to insure the seat belt tighten pull is to the centre of the vehicle. See figure 4-9.

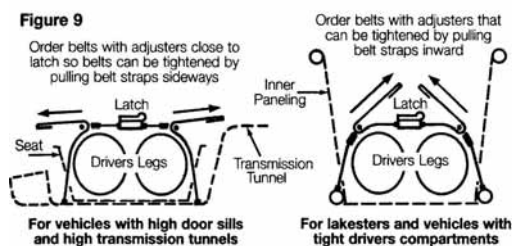


Figure 4- 9

### 4.3.3. Arm/Leg Restraints:

Limb (arm/leg) restraints are required in all vehicles, and shall be the primary restraint system in all vehicles over 175-mph and all fibreglass bodies vehicles (eg. Corvettes, Avantes, etc.). The restraint system must be capable of preventing the driver's arms/legs from extending outside the roll structure and/or frame rails in case of an incident that includes a body panel separation. Participants are cautioned that all controls be mounted as close to the steering wheel as possible to keep all arm restraints as short as possible. Arm restraints shall be combined with the driver belt system such that the arm restraints are released in conjunction with driver's belts. Restraint system must be one of the various types available on the market.

### WINDOW NETS ARE DEEMED NOT ACCEPTABLE THEREFORE ARM RESTRAINTS ARE REQUIRED.

NOTE: In CC, ALT, GC, MS, PROD, PS and GT classes the restraint systems shall be effective without the door installed. To meet this requirement, in most applications nets shall cover the entire door area, not just the window. All Special Construction vehicles must include an inner liner or system of roll cage members for driver protection in the event of body panel destruction or separation. For a restraint system to be deemed acceptable, no part of the driver shall extend outside the inner plane of the roll structure.

### 4.4. Driver's Compartment:

The driver must be able to exit the driver's compartment with ease. All doors, hatches, and canopies must be able to be opened from both inside and outside without the use of tools and non-OEM latches must be clearly marked on the outside of the vehicles for emergencies. **On closed cars, door locks and steering wheel locks must be rendered inoperative.** The driver must be able to reach all switches, valves and levers while strapped securely in the seat. Cars with front engines must have the rear of the flywheel housing forward of the driver's knees. The driver's compartment must be free from sharp edges, protrusions, brackets, etc. within close proximity of the driver. All enclosed driver compartments must be equipped with a forward pointing fresh air intake or breathing system directed to the driver and have adequate venting to carry away fumes. Compressed Oxygen breathing systems are prohibited. Any portion of the driver's body, which extends below the main frame rail, must be protected by a cross member running below the driver's body no smaller than the roll bar applicable to the class.



#### 4.4.1. Firewall:

A full firewall to provide a watertight and flame-resistant barrier between the engine and the driver is required in all categories. All non-production firewalls must be made of metal with a minimum thickness of 1.5mm (.060"). A thickness of 2.5mm (.095") is recommended. **All holes must be sealed.**

#### 4.4.2. Secondary Flooring:

All cars with modified floor pans must have secondary flooring of metal in the driver's compartment securely attached to the frame or crossmember. Expanded metal will be accepted if sufficiently rigid. Secondary flooring must be no lower than the bottom of the frame plus the thickness of material used.

#### 4.4.3. Transmission Shields:

All cars with automatic or planetary type transmissions shall be equipped with a ballistic transmission blanket or approved shield. It is recommended that the transmission blanket/shield meet SFI 4.1 certification.

#### 4.5. Vehicle:

##### 4.5.1. Transmissions:

Any type of transmission may be used in any class. Automatic transmissions **MUST** have a positive reverse lockout. Linkage must be protected from accidental reverse gear engagement.

##### 4.5.2. Fuel Systems:

The complete fuel system shall be securely mounted. Plastic fuel lines are not permitted. A metal screw type clamp must be on each connection of rubber or steel-braided fuel line that is not properly ended. Fuel lines which run into the driver's compartment must be steel or steel-braided covered. All fuel lines in the area of the clutch and flywheel shall be run through heavy steel tubing or outside the frame rail, regardless of the presence of a scattershield. All fuel tanks shall be properly vented. Fuel tank vents shall be provisioned to eliminate spillage in the event of a roll over. All fuel tanks shall be isolated from the driver's compartment and protected in the plane of the blower drive if used. Nitrous Oxide cylinders are to comply with 4.5.4. It is recommended that the fuel tank be isolated from the engine and driver compartment.

**L.P. Gas:** Vehicles equipped with L.P.G. units must have these units installed by an approved installer. Onus of proof rests with the competitor.

##### 4.5.3. Fuel Shut-off:

All cars with other than stock fuel system shall have a fuel shut-off within the driver's reach. Electric fuel pumps shall have a switch in the circuit to disable pump operation. All rotating fuel shut-off valves **MUST** have a positive stop to prevent reopening of the valve.

##### 4.5.4. Nitrous Oxide Systems:

Competitors are reminded of the dangers associated with the incorrect use of nitrous oxide. It is highly recommended that systems are sourced in complete form, from a recognised manufacturer. The following safety rules apply:

- (a) **Bottle Mounting:** Bottles must be mounted outside of the engine compartment. Any bottle located in the driver's compartment must be mounted with metal brackets secured to a structural point of the vehicle and a relief valve, vented outside the driver's compartment, to the atmosphere. Bottles must be upright or semi upright. Inverted bottles not permitted. Bottles must be equipped with on/off taps. Bottle shut-offs requiring special keys are not acceptable. Bottles used must be purpose built for use with nitrous oxide. Electric devices used for raising the temperature of nitrous oxide bottles must be produced for that purpose by an industry manufacturer and may not be modified in any way.
- (b) **Nitrous Lines:** Must be outside of driver's compartment, in which case the line must be plumbed outside the compartment as near as possible to the bottle outlet. Where lines pass converter or flywheel area, they must be encased in 3mm (1/8<sup>th</sup> inch) minimum thickness steel tubing. High pressure rated hose of minimum 1500 psi is required and a sintered bronze filter, fit for purpose must be fitted in the gas supply line.
- (c) **Switching:** Both solenoids must operate from a common switch and the system must be capable of being switched off by three means: (1) when the throttle is closed; (2) by a special arming switch that provides power to the solenoids; (3) through the normal ignition switch.
- (d) **Markers:** All vehicles using Nitrous Oxide must display special markers located on the outside of the vehicle, in the area where the supply bottle is located and in the top left hand corner of the front windscreen. The marker shall be a yellow diamond with N20 printed in black letters. These are available from ANDRA (Australian National Drag Racing Association).
- (e) **Warning Light:** A prominent blue warning light must indicate when the system is armed.

#### 4.5.5. Throttles:

All cars must be equipped with a self-closing throttle control with adequate return springs, **two (2) springs being attached directly** to the throttle shaft. There must also be a positive stop to prevent sticking in "over centre" position. Accelerator pedal toe straps are required, except on OEM cable or hydraulic throttles. **IT IS RECOMMENDED THAT PLASTIC-LINED THROTTLE CABLES BE AVOIDED.**

#### 4.5.6. Batteries:

All batteries must be properly secured with metal framework and fasteners. Plastic tiedowns are not allowed. Batteries may be mounted in the driver's compartment if sealed in an acid spill-proof box. [Plastic battery boxes bought from aftermarket suppliers are not acid proof and are not acceptable in the drivers compartment. The drivers compartment is considered to be any part of the vehicle that does not have a complete water and air seal to the drivers compartment.](#) All vehicles must be equipped with a main battery disconnect switch. The disconnect switch must be visible and clearly marked.

#### 4.5.7. Steering:

All steering systems must be gear or link type. Steering wheel must have adequate clearance. The steering column must be rigidly mounted. All moving parts must operate freely without excessive play. Steering linkage must have sufficient clearance between body and chassis.

It is recommended that all steering system welds be visually inspected on a frequent basis. Competitors will qualify exceptionally critical welds (king pin bungs, radius rod brackets, spring perches, etc.) by means of x-ray or magnaflux. The welding certificate will be made available upon vehicle inspection. The welding shall be finished in a professional manner.

All spherical ends (i.e., Heim) used in steering systems must have washers with a larger OD than the Heim to retain the joint should separation occur (solid type Heim joints are required). All bolts used in steering linkage must be at least grade 5. For vehicles with long steering shafts, as used on front engine Streamliners and Lakesters, the shaft must be collapsible or have a secondary steering shaft stop installed. Non-metallic steering wheel hub release mechanisms are not allowed.

The use of wagon wheel type steering on front wheel drive vehicles is prohibited. It is recommended that the wheel offset of front wheel drive vehicles be designed to minimise steering pull with loss of traction or drive line failure. Cable steering systems as used on the Ford Pinto are not allowed.

#### 4.5.8. Parachute:

An approved parachute is required on all cars that qualify for the long course (175 MPH). Vehicles which exceed 300 MPH shall be equipped with two (2) independent parachute systems. Parachutes must be securely mounted to a suitable crossmember. **All parachutes must be opened during inspection.** Special attention must be given to the length and mounting point of the parachute anchor line. The manufacturer's recommendations should be followed.

#### 4.5.9. Parachute Release:

Any car equipped with a parachute must have the parachute release mounted in such a fashion that the driver may actuate it under emergency conditions while strapped securely in the seat wearing a full driver's suit.

#### 4.5.10. Flywheels, Flywheel Shields and Bellhousings:

All cars, including rear engine cars, with non-automatic transmissions, must be equipped with a 360 degree, 1/4" thick steel clutch shield sufficiently wide to shield the flywheel and clutch assembly. No cast or hydroformed aluminium, cast iron or cast steel housings/shields are allowed. Hydroformed steel bellhousings are permitted. Cars utilising bellhousing engine mounts only (Corvair, VW, early Holden, etc.) must provide some additional method of retaining the engine in the car. No cast iron/cast aluminium flywheels are permitted.

#### 4.5.11. Exhaust System:

Exhaust systems may be modified in all categories. Systems must be constructed in such a way that exhaust is directed past or away from driver, fuel tanks, tires, and course. Individual stacks must be connected by welding or other means near their free end so as to prevent destruction due to vibration.

#### 4.5.12. Fire Extinguishing Systems:

While most fires will be suppressed by a professionally designed and installed fixed fire suppression system NO system can suppress every fire in every situation, the design of each vehicle will effect how a fire will react and how quickly it will spread, also many vehicles have open or partially open compartments where the wind or turbulence will reduce and sometimes negate the extinguishing capacity of the fire system, to help reduce this situation all other fire and life safety measures must be adhered to e.g. Effective sealed firewalls , driver suit and safety gear .

**All fire suppression systems shall:**

Be designed to lock on when activated, and deliver the total contents of the fire suppression system.

Be a pre engineered type manufactured by a recognized fire protection company or manufacturer, or be designed and built by a recognized fire protection company or fire engineer with certification as to its efficacy.

Be installed strictly as per the manufactures or engineers instructions, and be a type approved by Australian standards or UL or FM, or any recognized standard.

Be installed securely with metal brackets and all plumbing will be metal pipes and metal discharge nozzles, installed in a workman like manner.

Have any electrical cable used for fire suppression to be fire rated to the appropriate Australian standard.

Have all control valves or actuators within easy reach of the seated driver with seat belts on, and any agent cylinders inside the drivers compartment secured at two points with metal straps in such a manner that they will not come loose in the event of an accident

Have either mechanical, pneumatic or electrical activation of the suppression system which shall be manually controlled by the driver. Electric windows fitted to a vehicle must remain operable once the fire system has been activated.

Commencing 2004, have all electrical and fuel systems shut down totally on activation of the fire suppression system to help prevent re-ignition sources.

Automatic detection will be permitted provided it is not the sole or primary method of activation

Clean agent suppression agents, if used in the driver compartment, will require the installation of a suitable method of fresh air ventilation or driver breathing system to prevent prolonged inhalation of the suppression agent

Rear engined vehicles, where the fuel storage is in front of the driver, will require fire suppression to cover this fuel area, and a means of limiting its spread via firewalls.

By Speedweek 2007 inclusive, two fire suppression systems are recommended to be installed. One system to deliver contents to drivers compartment, the other system to deliver contents to engine bay. From and including Speedweek 2008 the two systems are mandatory.

The fire suppression system to be used for the engine bay must comply with standards already covered in this section (4.5.12) and the manufacturers specifications.

The fire suppression system used for the drivers compartment must be non-halon, non-toxic type, possibly Cold Fire 302 or a foam type. The system must also comply with the standards set out by the manufacturer of the said system.

All cars and enclosed motorcycles must have a minimum of two driver controlled fire extinguishing system in accordance with the following guidelines and applied to function as driver protection. The application and installation shall be in accord with the manufacturer's recommendations and consistent with the size and shape of the driver's compartment. The discharge rate should be designed to allow sufficient protection for the time it will take the car to stop from speed. NOTE: Care and consideration must be taken to prevent driver suffocation. Fresh air venting or breathing systems may be necessary.

All push/crew vehicles are required to have a minimum of one 2.5 kg portable dry chemical powder ABE type extinguisher.

All competition vehicle extinguishing system control valves must be within the reach of the driver while strapped in position. The valves must be designed to remain open once actuated. All agent lines and nozzles must be metal, and securely mounted with metal clamps and brackets. Experience has shown that agent cylinders within the driver's compartment must be mounted with a system more substantial than hose clamps alone. Therefore, the use of hose clamps as a primary mounting system is prohibited.

**Inspection and maintenance**

**The following information must be visible on each extinguisher.**

Type of extinguisher and contents

Capacity, weight or volume

Maintenance tag with annual inspection stamp

**All systems must be:**

Pressure tested and refilled every 4 years

Pyrogen canisters must be tested annually and replaced at a maximum of 10 years

NOTE: Agent delivery lines are subject to dust and moisture clogging. Frequent clearing of the lines is recommended.

**Definitions**

**Refer section 5.33**

**Street Class Vehicles (up to 130Mph)**

Permitted extinguishers (portable type to AS 1841) and minimum Quantity of Extinguishment

NAF- S-111 and NAF-P	3.2 KG
AFFF	2.4 LTR
DCP (powder type)	2.5 KG

Installed using a secure metal bracket within reach of the seated driver with seat belts on.

Note: Street class vehicles are **not** entered in racing classes and run for time only.

**Competition Vehicles Up To 175mph**

All competition cars and enclosed motorcycles:

Minimum of two (2) fixed type driver controlled fire suppression system for driver protection, discharging within the driver compartment and installed strictly to the manufactures instructions.

Engine bay suppression is mandatory.

**Permitted Extinguisher Types:**

**Open vehicle**

Surfactant/ wetting agent

AFFF

ATC (alcohol fuel only)

**Closed vehicle**

Surfactant/ wetting agent

AFFF

ATC (alcohol fuel only)

Approved clean agents (gases approved for occupied areas only)

**Minimum Quantities of agent**

Surfactant/wetting agent	2.4 litres or 2.5 kg
AFFF	2.4 LTRS
ATC (alcohol fuel only)	2.4 LTRS
Clean Agent	(based on cubic capacity of area to be covered - will require calculations by fire engineer)

Proof of approval for occupied spaces and calculations by engineer will be required for any clean agent.

**Competition Vehicles between 175 and 200 Mph**

Drivers compartment as per 175 Mph vehicles

In addition, a minimum of 1 manual driver controlled fire suppression system (of the fixed type) for the engine bay. A minimum of 2 discharge outlets directed at the oil pan and headers, 3 for V8's, more for multi engine setups or as directed by the manufacturer (can be a part of the drivers compartment system with the same actuation controls or it can be a separate system)

**Permitted Extinguisher Types:**

**Open Engine Bay Type Vehicles**

Surfactant/ wetting agent	AFFF
ATC (alcohol fuel only)	DCP (powder streaming agent only)

**Enclosed Engine Bay Type**

Surfactant/ wetting agent	AFFF
ATC (alcohol fuel only )	CO2
DCP ( streaming agent only )	PYROGEN
Clean Agents	

**Minimum Quantities of agent.**

Surfactant/ wetting agent	2.4 LTRS or 2.5 kg
AFFF	2.4 LTRS
ATC ( alcohol fuel only )	2.4 LTRS
DCP	2.5 KG
PYROGEN	correct MAG size for the cubic capacity of engine bay
CO2	3.5 KG
Clean Agent ( unoccupied or occupied types )	3.5 kg

**Vehicles Over 200 Mph**

All competition cars and enclosed motorcycles greater than 322 kph ( 200mph)

In addition to previous requirements, an extra 2.5 kg or 2.4 litres of suppression agent for the driver compartment

Questions concerning fire extinguishing systems may be directed to:

GARY BAKER

02-62366323 AH or 0407662118 BH

**4.5.13. Cooling System:**

All liquid cooling systems utilising non-braided circulation lines must have metal clamps at each connection.

**4.5.14. Drive Lines:**

Open drive lines in the driver's compartment must be equipped with a protective covering. In all cars, the driveshaft shall be provided with a 360 degree metal sling at least 6mm by 25mm (1/4" x 1"), attached securely and mounted in the front 25% of the driveshaft to prevent dropping or excessive whipping in the event of breakage of driveshaft or universal. Vehicles equipped with more than one driveshaft shall be fitted with a 360 degree metal sling as above in the front 25% of each driveshaft. Overrunning clutches (free wheeling) in drive lines are permissible in all categories. All traction bars and trailing links must have a metal sling near the front attaching point with a

minimum of 6mm (1/4") diameter. [This includes 4 link suspensions as used on many hotrods and more modern vehicles with coil sprung solid rear axles. Eg Commodore, Kingswood, etc](#) Torque tube (early Ford type) drive lines are exempt from the driveshaft sling requirement. If the rear wishbones are split and attached to the frame rails to act as traction bars, a 6mm (1/4") minimum metal sling is required.

#### **4.5.15. Front End and Suspension:**

All front end and suspension fasteners must be [NYLOC](#) type "self locking" nuts or have wire or keys appropriately placed to prevent them from coming apart. All spherical ends (eg., Heim joints) used in suspension systems must have washers with a larger OD than the joint to retain the joint should separation occur (solid type Heim joints are required). Unsprung A-arm front ends are prohibited from use. No front suspension shall have more than 20 deg. of steering caster unless steering stops are used. Steering stops must be installed to prevent wheel "flop over" and the tires from contacting any other component when the steering is in the full lock position.

#### **4.5.16. Windows and Windshields:**

All non-stock windows and windshields must be made of shatter proof plastic, such as polycarbonate (Lexan), and on production based vehicles must provide 120 degrees of forward vision. All vehicles are required to have adequate forward vision. This will be checked at scrutineering. On all open body cars, a windshield is recommended, but must not restrict driver entrance or exit. In all classes where headrest fairings are permitted, the windshield may sweep around driver's head and connect to fairings on either side (refer to Driver's Compartment rule concerning sharp edges). All windshield wiper blades and arms must be removed. On front and rear windows, retaining tabs or straps are required over 175 MPH.

#### **4.5.17. Hoods/Bonnets:**

Hoods are required in all categories (except Special Construction Category) and must be secured by metal fasteners, leather or webbing straps. Production hood latches are not sufficient unless the hood opens from the rear. Hood side panels (such as found on '29 Ford or older model cars) may be removed. Early type hood hold downs (spring type) are inadequate.

#### **4.5.18. Brakes:**

Adequate brakes are required in all classes. Brake controls must be within the driver's reach while the driver is securely strapped in the seat.

#### **4.5.19. Blower Restraint System:**

SFI type blower restraints shall be used on all vehicles using positive displacement blowers. Vehicles where the driver's body is within the rotational plane of the blower shall have the blower contained within an SFI type restraint bag.

## **5. DEFINITIONS:**

The following is a list of terms used by the DLRA Contest Board and their meanings:

#### **5.1. Air Duct:**

Aerodynamic pressure relief systems in which air is ducted from one point to another.

#### **5.2. Automobile:**

For classification purposes, an automobile is a land vehicle propelled by its own means, run on at least four (4) wheels not aligned, which must always be in contact with the ground, steering must be assured by at least two (2) front wheels, and propelled by at least two (2) wheels. One pair must be on the same transverse centerline.

#### **5.3. Automotive Production:**

Any component, which is offered for sale by a recognised automotive manufacturer to the general public as original equipment or accessory to a production automobile is considered automotive production. A production rate of at least 500 vehicles of the same model for sale to the general public is considered to meet the requirement of a production automobile.

#### **5.4. Ballast:**

Material added to the vehicle for the purpose of additional weight only. Heavy components, which serve another function, will be identified by that function.

### **5.5. Belly Pan:**

A skin of material used to cover the undercarriage of a vehicle. The skin must cover at least 51% of the undercarriage of the vehicle to be considered a belly pan for classification purposes. Drain holes are required.

### **5.6. Bobbing:**

The removal of material from a body component in such a fashion as to destroy the original shape at either top or bottom.

### **5.7. Chopping:**

The removal of metal from a body component in such a fashion as to reduce the overall height of the component without changing the original shape at top or bottom. Tops must be widened and/or lengthened to maintain the stock silhouette of the vehicle. Ie. No laid back windscreens

### **5.8. Contest Board:**

The [Chief Steward, Steward, Chief Scrutineer or Scrutineer](#) of [the DLRA](#) plus additional personnel appointed by either the [DLRA or by popular election at the general meeting](#).

### **5.9. Contour.**

Contour is the configuration of the external sheet metal. Removable trim, lights, windows, floor boards and interior sheet metal are not part of the contour. In the special case of chopped tops, contour is considered to have been preserved as long as the angular relationship of the top to the body proper is not changed.

### **5.10. Covered Wheel:**

For classification purposes, a wheel will be considered covered if 120 degrees of the tread circumference is shielded from the air stream by the covering.

### **5.11. Driver/Rider Committee:**

[If appointed](#), this Committee will consist of at least two [Contest](#) Board members, and a minimum of 3 non-Board members and will be responsible for licensing review and related matters. [If no committee is appointed, these functions will be performed by the Stewards.](#)

### **5.12. Engine Swap:**

An engine swap is the replacement of the original engine with one of a design, which was not available as a factory option for the particular car in question. The main factors used in determining design differences are cylinder head bolt pattern, intake manifold bolt pattern, and bell housing bolt pattern. Bore and stroke is not considered. Examples: Chevy 350 engine in a 1955 Chevrolet is not a swap, but a Chevy 396 in a 1955 Chevrolet is.

### **5.13. Firewall: (Non-Production)**

A metal barrier between the engine and driver compartment. Reference 4.4.1

### **5.14. Floorboards:**

Floorboards are defined as panelling in the lower portion of the car exclusive of the engine compartment.

### **5.15. Gasoline:**

Gasoline, as refined, is a mixture of hydrocarbons. Gasoline is a good electrical insulator, or dielectric, and its relative effectiveness as an insulator is represented by its Dielectric Constant (D.C.). The average D.C. for the hydrocarbons, which comprise gasoline, is 2.025. This is defined as a reading of zero (0) with the DLRA fuel Check Meter. To compensate for possible temperature differences of gasoline which cause slight variations of the D. C., the maximum acceptable meter reading is +/- .005, with zero (0) as the reference reading. A gasoline which has a D.C. greater than 2.3 will cause the meter reading to be outside this range.

### **5.16. Incident Review Committee:**

This Committee will consist of 2 Board members and appointed non-Board DLRA members to review and report to the committee on a specific incident, as requested by the Contest Board.

### **5.17. Inspection Committee:**

A group of DLRA members who conduct all technical inspections at any DLRA competition event. All members of the Inspection Committee [should](#) have been DLRA competitors for a least one year. The membership of this Committee is chosen by either nomination and popular election, or the Contest Board. More commonly referred to as scrutineers.

### 5.18. Limb Restraint:

Restraint system capable of containing the driver's arms/legs within the inner plane of the roll structure in case of an incident that includes vehicle body panel separation.

### 5.19. Open Car.

Any car, which may be entered and exited without unfastening, unlatching or moving any panel.

### 5.20. Open Wheel:

A wheel configuration in which no portion of the car's bodywork intrudes upon the inside plane of the tire.

### 5.21. Roof Rails:

A piece of metal angle, perpendicular to the roof, a minimum of 12mm (1/2") high to a maximum of 20mm (3/4") high. The roof rail must be attached to the roof on each side, as close to the outside edge as possible. The roof rails may extend from the base of the windshield to the base of the rear window. Roof rails may be installed on any vehicle in classes CC, ALT, GC, MS, PRO, PS and GT ONLY where the original style is a coupe or sedan, roof rails are REQUIRED when the existing class records exceeds 200 MPH. Roof rails will not be considered for classification purposes.

### 5.22. Sectioned:

The removal of a given horizontal width of a body panel and rejoining the body panel to achieve a lower height.

### 5.23. Secondary Flooring:

Metal sheeting in the driver's compartment for the purpose of retaining the driver's feet in the event of step pan or belly pan tear away. Not required in cars with floorboards in the cockpit.

### 5.24. Set Back:

The feature of a car, which is represented by the formula, D/WB where D is the distance measured from the front spindle transverse centerline to the front-most spark plug hole and WB is the wheelbase.

### 5.25. Stanchion:

An upright bar, post or support to which the windshield posts are bolted, ie., 1928-1931 Ford roadsters have this piece, 1932-1934 Ford roadsters do not.

### 5.26. Streamlining:

Any device which has the apparent purpose of directing, limiting, or controlling air flow around or within the car and was not a part of the original body. Removal of certain devices may also be considered streamlining; axle and header configuration will not. Any streamlining devices will be considered as part of the body for classification purposes. The types of streamlining devices listed below are allowed in some classes:

- a) Airdams: Devices installed below the front bumper used to inhibit and direct airflow from under the vehicle.
- b) Air Intakes: Ducted air flow devices, which are meant to provide combustion air directly to the engine. Air intakes must not originate below the original stock location and, on rear engine cars, in the rear 50% of the body. Intakes protruding from the front of the car must not exceed 48 square inches in frontal area, must not extend more than 12 inches, and must not taper, except in classes where forward streamlining is allowed. Carburetors, which protrude through the car's hood, must be covered with a flash shield.
- c) Air Vents: Aerodynamic pressure relief systems in which no ducting is utilised. Louvers and tail light removal fall under this definition
- d) Axle Fairings: Streamlining devices attached to the axle to direct airflow around axle configuration only.
- e) Belly Pans: A skin of material used to cover the undercarriage of a vehicle.
- f) Headrest Fairing: Body work, which extends rearward from the headrest for the purpose of preventing, wind buffeting of the driver. Fairings must not be wider than the headrest (or head cage in cars so equipped) at any point, nor extend past the rearmost part of the body.
- g) Skirts: Streamlining devices added to the lower portion of the body for the purpose of controlling airflow under the body. The skirt may be a max. 1/2" thick. The skirt must be in a single plane, mounted to the bottom of the body but cannot modify the contour of the body. The skirt may extend from the centre line of the front axle to a vertical plane at the rearmost point of the original body line.
- h) Spoiler. Device on the rear upper portion of the body for the purpose of spoiling lift. A spoiler is defined as having a single aerodynamic surface. The spoiler chord will be 10" maximum mounted in the upper portion of the body and behind the rear axle centerline. When the spoiler is laid flat (horizontal) the side spill plates are allowed to be a maximum of 8" above the spoiler and 8" below the spoiler. Wycer bills (Gurney strips) are allowed but cannot extend above the side spill plate. The spoiler may extend to the outside edge of the rear tires. The spill plates can extend forward to the centerline of the rear axle. The rear most portion of

the spill plate shall not extend more than 2" past the rear most part of the spoiler. Plates are required to fill in horizontal spoiler/body gap. See figure 5-1.

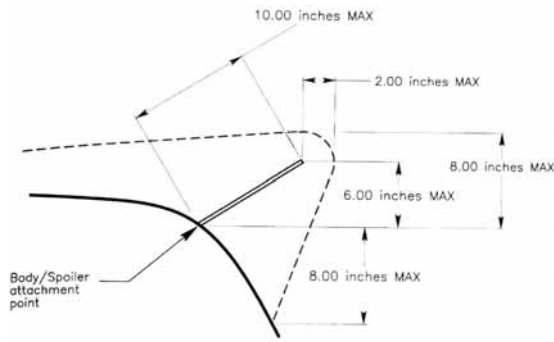


Figure 5-1

- i) Trip Fences: Devices in the upper forward part of the body for the purpose of tripping the laminar layer.
- j) Vortex Generators: Sharp edged devices placed on the body for the purpose of creating flow vortices.
- k) Wings: Wings are a special class of streamlining allowed ONLY on Streamliners, Lakesters, Modified Roadsters and Production bodies which had the wing as an option. For classification purposes, they are not considered as part of the body.

**5.27. Street Equipment:**

That equipment required for legal street operation in most states. It includes, but is not limited to, high and low beam headlights, horn, tail lights, stop lights, signal lights, windshield wipers, and exhaust system capable of being muffled.

**5.28. Supercharged:**

For purposes of classification, Blown (supercharged) will be an artificially aspirated engine with a mechanically driven supercharger or exhaust driven turbocharger by the primary engine. This will also include systems such as turbo compounding. All other engines (normally aspirated) will be classified as Unblown.

**5.29. Technical Advisory Committee:**

[The chief steward, steward, scrutineers](#), and others appointed by the Contest Board to review and update the competition rules of DLRA and to make recommendations of a technical nature to the Contest Board.

**5.30. Wheelbase:**

The distance measured from the centerline of the rear axle to the transverse centerline of the front spindles.

**5.31. Drivers Compartment:**

Any part of the vehicle that does not have a complete non flammable gas and liquid seal to the area that the driver is located. Usually includes the boot area of a production vehicle, unless sealed with metal.

**5.32. Competition Vehicle:**

Any vehicle that has been entered in the meeting, or has been presented to scrutineering for inspection.

**5.33. Fire Systems:**

**Closed Vehicle:** Any vehicle with a fully enclosed driver compartment where wind/turbulence will not affect agent delivery.

**Open Vehicle:** Any type vehicle not having a fully enclosed driver compartment or where wind/turbulence may or will affect agent delivery.

**Closed Engine Bay:** Any fully enclosed engine bay where wind/turbulence will not affect agent delivery. (Mostly streamliners and lakesters)

**Open Engine Bay:** Any engine bay where wind/turbulence will affect agent delivery. (most production vehicles and hotrods)

**Agent common or commercial names:**

DCP:	ABE type dry chemical powders
Foams :	AFFF, ATC
Powdered Aerosols:	Dynamico,Pyrogen, SFE
Surfacants:	Arctic fire, Cold Fire, Flame out
<b>Clean Agents</b>	
Halocarbons:	NAF-S-111, FM-200, FE-13, Triodide, Halotron-1
Inert gasses:	Inergen, Argonite



## 6. CAR CLASSES

The car classes are divided into four general categories: Special Construction, Vintage, Modified, and Production. The general rules for each category apply to all classes in that category.

### 6.1. SPECIAL CONSTRUCTION CATEGORY

This category is the pinnacle of the straightaway racer's art. It contains two groups, the unlimited Streamliners and open wheeled Lakesters, running both blown and unblown, gas or fuel engines. These are all-out straightaway vehicles with non-stock engine blocks allowed. Innovation is unlimited. Modified production bodies are forbidden.

It is strongly recommended that all new vehicles be submitted for a pre-event inspection by attending one of the pre meeting scrutineering meetings as advised in the DLRA newsletter.

#### 6.1.1. STREAMLINER

/BFS, /FS, /BGS, /GS, /DS

This class is for the all-out land speed record car. Cars in this class must have at least four wheels, but they need not be arranged in a rectangular configuration. Four wheel drive is allowed. The design of the body is restricted only to the extent that at least two (2) wheels must be covered-

Engine classes allowed are  $\Omega$ , AA, A, B C, D, E, F, G, H, I, J, K, XO, XF, XXF, XXO & V4.

#### 6.1.2. LAKESTER

/BFL, /FL, /BGL, /GL

Special cars constructed in such a way that there is no streamlining, fairing or covering of the wheels and tires. Tread width is optional so long as no part of the body or axle fairing is wider than the narrowest inner vertical plane of the tires. Wing struts must be within the inner vertical plane of the rear tires. The wing must be mounted at least 12" above the top of the rear tire as measured from the lowest part of the wing. Front wings must be no wider than the inner vertical plane of the narrowest set of tires.

Minimum wheel bases are as follows:

Classes AA, A	2800mm(110")
Classes B, C, D	2670mm(105")
Classes E, XXF, XXO	2450mm(100")
Classes F, XF, XO, V4	2410mm(95")
Classes G, H	2285mm(90")
Classes I, J, K	2030mm(80")

Engine classes allowed are  $\Omega$ , AA, A, B C, D, E, F, G, H, I, J, K, XO, XF, XXF, XXO & V4.

### 6.1.3. ELECTRIC VEHICLE - E

This class is for vehicles using electric power as the sole means of propulsion. The vehicles must be wheel driven, either front or rear. Four wheel drive is allowed. THE BODY CONFIGURATION IS UNLIMITED. The vehicle and driver must meet all technical and safety regulations based on the speed of the existing record. The class will be based on vehicle weight less driver. The entrant MUST provide an annual weight certificate for classification purposes.

Class I	under 1099 lb.	(less than 500 kg)
Class II	1100-2200 lb.	(500-1000kg)
Class III	2201 lb. and over	(over 1000 kg)

### 6.1.4. TURBINE VEHICLE - R

This class is for vehicles using turbine power (external combustion), as the sole means of propulsion. The vehicles must be wheel driven, either front or rear. Four wheel drive is allowed. THE BODY CONFIGURATION IS UNLIMITED. The vehicle and driver must meet all technical and safety regulations based on the speed of the existing record. The class will be based on vehicle weight less driver. The entrant MUST provide an annual weight certificate for classification purposes.

Class I	under 1099 lb.	(less than 500 kg)
Class II	1100-2200 lb.	(500-1000kg)
Class III	2201 lb. and over	(over 1000 kg)

## 6.2. VINTAGE CATEGORY

This category is specifically intended for the lovers of antique iron. With the exception of speedsters, although fibreglass and aluminium bodies are allowed, they must be an exact replica of an American production car except for the Vintage Oval Track class. No modification is allowed to the body proper from the stock firewall location back and the window down, and only limited modifications are allowed to the hood and top.

This category runs the gamut from the basically stock Street Roadster and Vintage Gas Coupe to the slightly modified highboy roadsters and Vintage Altered Coupes, to streamlined Modified Roadsters and Vintage Competition Coupes and Vintage Oval Track cars.

Except for the Vintage Oval Track vehicles, only automobile bodies produced by an American

manufacturer prior to 1948, at a rate of 500 or more yearly, or exact replicas of such bodies are allowed. Tops may be chopped, but no other alteration to the contour or size of the body shell is allowed except as specifically allowed in the class rules. Wheel wells may be filled, but not deepened. Rear axles may be narrowed as long as no part of the tires extend within the body shell. Turbochargers are not allowed on Vintage class engines competing in Vintage Body classes, see Section 3-1.

The minimum tread dimensions for all Vintage Category vehicles is 44" front and 50" rear. Modified Roadsters are exempt from the front tread requirement.

Bodies must be mounted in a conventional manner and all stock panels must be mounted in their original relationship. No fenders are allowed on MODIFIED, FUEL or GAS Roadsters. Firewalls may be altered, moved or replaced entirely.

#### **6.2.1. MODIFIED ROADSTER:**

**/BFMR, /FMR, /BGMR, /GMR**

In addition to the general category requirements, cars in this class must have a production roadster body or an exact replica of a roadster body produced between 1923 and 1938.

Any type of frame may be used, and the engine may be set back 50% of the wheelbase. The driver's seat may be at any location between the firewall and the rear axle centerline.

Streamlining ahead of, and including the cowl, and channelling is permitted. Air intakes, air vents and the following, listed in section 5-26 are allowed: Axle fairing, Belly Pan, Headrest Fairing, Skirts and Wings. No fairings or special covering of the wheels and tires are permitted, Rigid tonneau covers and headrest fairings are allowed, as long as they do not violate the definition of an open car.

The body may be cut out to move the driver as far back as possible, so long as (s)he remains seated forward of the rear axle centerline and behind the engine. Wheel wells may be filled at stock location, but the rear axle must not be narrowed to the point that the inner vertical plane of the rear tires is narrower than the original inner fender well. No alterations to the turtle deck are allowed. Headrest and parachute pack fairings are allowed, as long as they are no larger than the headrest or parachute pack and do not extend past the rear of the body shell. Push bars shall not be solid or offer any aerodynamic advantage.

Maximum wheelbase is 190". Allowable minimum tread widths are 50" rear and 38" front. Allowable minimum body width across the bottom of the body at the front doors must meet the dimension as originally

installed by the manufacturer. The entrant must provide this dimension.

Wings are allowed. The wing width, including side plates, shall not be wider than the inner vertical plane of the rear tires. The maximum allowable height of the wing shall not exceed 65" from the ground as measured to the highest part of the wing. The rear of the wing (including side plates) may not be set back more than 18" behind the rear of the body. Multiple element wings are NOT allowed. Spoilers and four wheel drive systems are NOT allowed.

#### **6.2.2.FUEL-GAS ROADSTER:**

**/BFR, /FR, /BGR, /GR**

In addition to the general category requirements, cars in this class must have a production roadster body or an exact replica of a roadster body produced between 1928 and 1938.

Any type frame may be used and the body may be channelled to the bottom of the lower frame rail. Engines may be set back 25% of the wheelbase. Driver location is optional as long as the driver's entire body is between the firewall and the rear axle centerline.

Grille shells must have a minimum of 530sq inches ('28 Ford) and must be mounted in the same vertical position as the original shell. The grille shell shall be measured at the widest point at the original shell and hood parting line.

The height of grille shell may be no higher than the cowl of the body as constructed. The grille shell width may not be altered but may be sectioned or bobbed. Grille shells manufactured after 1932 may not be used on 1932 or earlier bodies. Tanks of any kind in front of the grille shell are specifically prohibited.

The body at the original windshield line may be re-contoured to a flat configuration so long as the body contour is not lower than the top of the doors, and the distance between the bottom of the frame and body contour measured at the original windshield line is not less than 28-1/4". Grille openings may be covered by flat panels. Door hinges, windshield posts, filler caps, and brackets may be removed.

The configuration of the bodywork between the original windshield line and the grille shell is optional, as long as the overall length of the car (from the front of the grille shell to the rear of the body) with any grille shell is no greater than 143" for roadsters manufactured between 1928 and 1932. The maximum overall body length for 1933/34 Ford roadsters is 152".

Step pans are allowed, but belly pans or any other horizontal panelling not fitting the definition of

floorboard are specifically forbidden. A flat panel may be located behind the grille shell and ahead of the vertical projection of the leading edge of the engine block. The panel must not be lower than the frame at any point plus the thickness of the material used. Streamlining as defined in Section 5.26 is not allowed.

Rigid tonneau covers and headrest fairings are allowed, as long as they do not violate the definition of an open car. The body may be cut to move the driver backward, as long as s/he remains seated entirely forward of the rear axle centerline and behind the engine. The rear tires may not extend more than 1" beyond the rear most part of the body proper.

Minimum Wheelbase Requirements:

Classes AA, A, B, C, D, E, XXF, XXO	100 inches
Classes F, XF, XO, V4	95 inches
Classes G, H	90 inches

Engine classes allowed are: AA, A, B, C, D, E, F, G, H, XF, XO, XXF, XXO & V4.

**6.2.3. STREET ROADSTER:**

**/BSTR, /STR (Gas only)**

In addition to the general category requirements, cars in this class must have an American production roadster body, or an exact replica of a body produced between 1923 and 1938. The body must not be altered in height, width or contour, and all stock panels, including cowl, cowl eyebrow and windshield post mounting brackets (stanchion) must be retained. Stock panels, including hood side panels, front fenders, running boards, etc., must be mounted in their original relationship to each other. Replica panels must be exact copies of stock panels in size and contour. Hood side panels may be extended to match the length of the hood IF the hood is extended. Rear fenders may be bobbed to the bottom of the body.

Radiator shells/grille shells must be of the same manufacturer as the body (eg., Ford to Ford, etc.) or not less than 530 square inches, and may be sectioned or bobbed, but the width may not be altered. The radiator must fill the shell opening. The grille shell insert must remain open as in the original configuration and be stock style or removed completely. NO custom inserts are allowed.

Only cylindrical tanks are allowed in front of the grille. The tank MUST be mounted horizontally between and above the frame rails. The maximum allowable dimensions for the tank are: 10" outside diameter, 32" circumference, 19" long, mounted a maximum of 2" from the leading edge of the grille.

Any frame may be used which is fabricated of round, square, or rectangular steel tubing, not less than 2" x

.120" or channel not less than 4" x .120". No multi-tube frames may be used. Any type rear end may be used, and widening of the rear tread to allow the tires to protrude beyond the fenders is permitted.

Hood length, as determined by the year of the BODY, may be increased a maximum of 3" as measured along the top centerline of the hood. Front cross members may be moved to correspond to the increase in hood length. A maximum of 15% engine set back is permitted to permit adequate clearance for water pump and blower drives.

The driver must sit in the stock location, and must not be restricted from entrance to or exit from the car by the cockpit covering. The body may be channelled 6" to the bottom of the frame. Flooring in the car must be stock, or above the top lip of the top frame rail. Rigid tonneau covers are allowed, as long as they do not violate the definition of an open car. The following are NOT PERMITTED: streamlining or sectioning of the body; belly or step pans; or fairings. Headers may be used, but no individual stacks are permitted.

The following items are required: a horn, at least one tail/ stop light, a transmission and two headlights. Headlights must be at least 5" in diameter. Both lights will be mounted outside the vertical edges of the grille shell and between 18" and 24" from the ground.

The following items are optional: bumpers, current registration, floor mats, full upholstery, generator, hood side panels, parking brake, license plate, front fenders, running boards, tarp or windshield.

Engine classes allowed are: AA, A, B, C, D, E, F, G, H, XF, XO, XXF, XXO & V4.

**6.2.4. Blown & Unblown VINTAGE Classes**

Blown vintage competition coupe:  
XF/BVCC, XO/BVCC, XXF/BVCC, XXO/BVCC & V4/BVCC

Blown vintage gas competition coupe:  
XF/BVGCC, XO/BVGCC, XXF/BVGCC, XXO/BVGCC & V4/BVGCC

Blown vintage fuel altered coupe:  
XF/BVFALT, XO/BVFALT, XXF/BVFALT, XXO/BVFALT & V4/BVFALT

Blown vintage gas altered coupe:  
XF/BVGALT, XO/BVGALT, XXF/BVGALT, XXO/BVGALT & V4/BVGALT

Blown vintage gas coupe and sedan:

XF/BVGC, XO/BVGC, XXF/BVGC, XXO/BVGC & V4/BVGC.

Vintage competition coupe:

XF/CC, XO/CC, XXF/CC, XXO/CC & V4/CC

Vintage gas competition coupe:

XF/GCC, XO/GCC, XXF/GCC, XXO/GCC & V4/GCC

Vintage fuel altered coupe:

XF/FALT, XO/FALT, XXF/FALT, XXO/FALT & V4/FALT

Vintage gas altered coupe:

XF/GALT, XO/GALT, XXF/GALT, XXO/GALT & V4/GALT

Vintage gas coupe and sedan:

XF/GC, XO/GC, XXF/GC, XXO/GC & V4/GC

The rules in these classes are identical to the respective Modified category classes, except that only 1948 or earlier bodies with XF, XO, XXF, XXO, or V4 engines are allowed. In all classes except MGC, fenders and running boards may be removed if it can be done by unbolting the fenders from the body. Pre-1949 bodies can have a 3" beauty chop. Pre-1949 cars must have radiator/grille shells of same manufacturer as the body, eg., Ford on Ford, etc. Air dams are not permitted in the Vintage Gas Coupe and Sedan classes using vintage engines.

All closed vehicles that would qualify as a V4 Production coupe or sedan will compete in the V4 Gas Coupe class. All open vehicles that would qualify as V4 Production roadster will compete in the V4 Street Roadster class.

### Speedster /SPD

A speedster is a vintage car (usually a roadster) that has been modified for racing, but is not what would normally be considered as a hot rod, and does not fit in with the other vintage classes. The body can be either modified production, or hand built, as long it is in a style that would have been popular pre 1950. A speedster's appearance and mechanical components must be appropriate for the car upon which it was based. Superchargers are permitted if they are of similar same vintage as the car. Turbochargers, computers etc are not permitted. Only vintage engines are allowed, and normal engine size classes apply. Engine classes allowed are: B, C, D, E, F, G, H, & I.

## 6.2.5.VINTAGE OVAL TRACK /VOT

### MIDGET VINTAGE OVAL TRACK /MVOT

The Vintage Oval Track class is for old style race cars with pre-1948 engine block design, ie., no modern overhead V8's or blowers. This class is for vintage-engine, old-style open wheel, rear drive, dirt track and Indy, one or two seat cars, with a tapered tail, cowl, and belly pan extending at least from the firewall to behind the driver's seat. **General roll cage and driver restraint and protection provisions in section 4 will apply, as will section 3 vehicle protections.**

No production body panels are permitted, except for the grille shell, ie., no track roadsters. A fully functioning radiator must be mounted in front of the engine, and the fuel tank must be mounted in the tail behind the driver. The driver shall sit entirely behind the engine, ahead of the rear axle, and shall not recline more than 5 degrees from the vertical. The frame may be of any construction except monocoque, and all wheels must be sprung.

Wings or wheel fairings are NOT permitted, but spun aluminium wheel discs are allowed. The usual track-style nerf bars are optional if they give no aerodynamic aid.

Tarps and panels may be fitted around the cockpit, but there may be no covering above the driver's head, except for the roll cage; nor any panel which must be moved or swung to safely enter or leave the cockpit, ie., doors or hatches. Except for such tarps and panels, the appearance and design of cars in this category must be practical for, and as were used in, TRACK and SPEEDWAY competition.

Minimum wheelbase is 86", minimum tread is 50", (except for Midget class which has a minimum wheelbase of 68") and maximum of 76", a minimum tread of 42" and a maximum wheel size of 13". Direct-mounted dog clutches or Offy (NOT Ford A) drum-type flywheel-clutch assemblies need not be covered by a scattershield. All other safety rules are applicable. Particular attention will be paid to arm restraints, adequate caster, and proper steering ratios.

All cars must have a full roll cage, DLRA approved. Fuel is restricted to gas or alcohol. Nitro methane or nitrous oxide are not allowed. In this class only, non-production overhead cam engines of pre-48 design (Miller, Offy, HAL, etc.) run in XXO Class. Engine classes allowed are XO, XF, XXF, XXO, V4.

Maximum CID-Midget Vintage Oval Track/MVOT  
150 CID Flathead  
125 CID Overhead

### 6.3. MODIFIED CATEGORY

This category encompasses coupes, sedans, [utilities](#) and pickups (with full stock beds), unaltered in height, width or contour, and with all stock panels mounted in original relationship to each other, which have been modified to such an extent as to no longer fit into the production category. Cars generally accepted as sports or Gran Tourissimo coupes are specifically forbidden. A generic requirement for this category is that the car must have been originally produced with suitable seating for four (4) average adult persons.

Within the Modified category, the amount of modification determines the class. For example, a Gas Coupe is basically a Production car with an engine swap, an Altered is a Gas Coupe with headlights and grille covered and the engine set back, a Competition Coupe is an Altered with the nose lengthened and streamlined.

Front air dams are permitted in the Modified Category. The air dam may be either identical to an OEM option for the body used, available as an aftermarket part or fabricated. The air dam may extend straight down from the front bumper and may extend rearward to the leading edge of the front wheel well. The air dam must follow the contour of the leading edge of the front bumper unless the air dam is an OEM item. The air dam may be set back from the front bumper, but in no case can the air dam extend forward or above the leading edge of the front bumper.

Vehicles competing in the competition Coupe and Modified Sports classes must have documentation showing the stock vehicle BEFORE modification.

It is REQUIRED that vehicles in this category which exceed 200 MPH, or if the existing record is over 200 MPH, must have roof rails.

#### 6.3.1. COMPETITION COUPE & SEDAN:

##### **/BFCC, /FCC, BGCC, /GCC**

This class encompasses Production coupe or sedan body unaltered in width or contour. Streamlining ahead of and including the cowl, channelling, belly pans and skirts and spoilers as defined in section 5-26 h) are permitted. One of the following modifications must be done to be considered in this class:

- 1) Top must be chopped;
- 2) It must have a full belly pan;
- 3) Body from the cowl forward must be lengthened a minimum of 12";
- 4) Engine MUST be set back a minimum of 25% of the wheelbase. The engine setback cannot exceed 50% of the wheelbase. Other than top chopping, no modification to the body or quarter panels is allowed. Minimum windshield height is 5". The front and rear chop must be equal. Window openings may be covered

by flat plates on the outside of the opening or left open. Driver must sit COMPLETELY ahead of the rear axle, inside the body and behind the engine (except in rear engine cars using original engine LOCATION). Driver exit hatches in the roof are recommended, but must not change the contour of the body. Cars in this class are considered in the Modified category and must comply with general rules of the category.

NOTE: Entrants electing to use a pre-1949 body in the Competition Coupe classes need not comply with the seating requirement for four (4) average size adults. The rear inner fender panels may be modified to allow the rear tires to be located within the body. This allowance does NOT apply to Vintage Category. Drip rails may be removed.

Engine classes allowed are: AA, A, B, C, D, E, F, G, H, I, XF, XO, XXF, XXO, XF/V, XO/V, XXF/V, XXO/V and V4/V

#### 6.3.2. ALTERED COUPE

##### **FUEL ALTERED COUPE - /BFALT, /FALT GAS ALTERED COUPE - /BGALT, /GALT**

This class encompasses coupe or sedan bodies, 1928 or later, unaltered in height, width, length or contour, mounted in the conventional manner with all panels mounted in the original relationship to each other.

Any frame may be used as long as the bottom line of the frame is not higher than the outer bottom line of the body between the firewall and the rear wheels. An exception will be made if a stock frame and the same year/make of body is being used. If the ORIGINAL frame/body relationship is such that the lower bottom line of the frame is above the outer bottom line of the body, that frame/body combination may be used. The burden of proof of the ORIGINAL frame/body relationship lies with the entrant. The frame may not be exposed from the bottom of the body. This rule does NOT apply to vintage body class vehicles.

This class is allowed a 2% maximum body stretch in the cowl area, in front of the firewall similar to NHRA Pro Stock bodies. This does not apply to Vintage class. An engine swap as defined in section 5-12 is permitted.

No streamlining allowed. Wheel wells may not be filled or covered. Bumpers, grilles and front lights may be removed and the opening created may be filled or covered. The filled or covered area may be flush with the adjacent body; the basic shape and contour of the vehicle cannot be changed. Aftermarket front ends are allowed as long as the item conforms to these guidelines. Engine intake air may be ducted from these openings. Any horizontal panelling, which may be construed as a belly pan, is prohibited. No taped or filled body, door or window seams are allowed from the firewall back. Step pans are allowed. Windows

must be mounted in the stock fashion or fastened to the inside of the window openings. A non stock spoiler is permitted as defined in section 5-26 h). Any type of exhaust may be used and can exit anywhere from the body but the top.

Roof mounted spoilers (other than original for body used) are prohibited. Pre-1949 bodies may be chopped. The chop must be equal front to rear and must retain a vertical windshield height of at least 6" above the top of the cowl with a maximum horizontal length of 7" from the base of the windshield at the centre of the car. Driver must sit completely ahead of the rear axle, inside the body, and behind the engine (except in rear engine cars using the original engine LOCATION). Engines may be set back 25% of the wheelbase. Drip rails may be removed.

Cars in this class are considered in the Modified Category and should comply with the General Rules of the category.

Engine classes allowed are: AA, A, B, C, D, E, F, G, H, I, XF, XO, XXF, XXO, XF/V, XO/V, XX/V, and V4/V.

### **6.3.3. GAS COUPE and SEDAN:**

**/BGC, /GC**

This class encompasses coupes, sedans, and convertibles, which must have an engine swap, quick-change rear end, or a non-stock supercharger, any one of which makes the car ineligible for competition in Production class. Gas Coupe class includes Camaros, Barracudas, 1958 or later T-Birds, Mustangs, compacts and other cars of this type. 500 must have been produced yearly. Front wheel drive cars, which have been converted to rear wheel drive, are not permitted in this class.

As in Production, Gas Coupes may not be altered in height, width, length or contour, and all body panels must be mounted in the original relationship. An engine swap as defined in section 5.12 is permitted.

Bucket seats may be used. Upholstery, passenger seat assembly may be removed. Pre-1949 bodies may have a 3" maximum chopped top. The engine may be set back a maximum of 2% of the wheelbase.

The following items must be retained in stock location and of the same year as the body: frame, fenders, hood, grille, drip rails (must not be filled), windows, door handles, window trim, headlights (high and low beam), tail lights, parking lights, stop lights and bumpers. A conventional automotive radiator must be used in the stock location eg. in front of the engine, behind the grille. A starter capable of starting the engine is required.

Convertibles must have a full roll cage. Vehicles must run with the top and rear windows up. Convertibles are restricted to the Gas Coupe & Sedan and Production category classes only.

The following body and chassis modifications may be made: wheel openings may be radiused, generator, horn and stock gas tank may be removed and headers may be used (no individual stacks). Exhaust collectors may exit through the front fenders. Minor chrome trim and emblems may be removed, air scoops may be used.

The following are not permitted: streamlining, belly pans, step pans, air vents, headlight air scoops, channelling, exhaust outlets through the doors or hood, blocked off grilles or radiators, taped or filled body, door or window seams or one piece front ends.

NOTE: Any 'narrowing' or fairing of bumpers into the body will result in the car being placed in Altered Class. Bumpers must be stock and in stock position. Air dams are allowed, see specifications outlined in Modified category description.

Vehicles in this category that exceed 200 MPH, or if the existing record is 200 MPH, are REQUIRED to have roof rails.

Engines classes allowed are: AA, A, B, C, D, E, F, G, H, I, J, XF, XO, XXF, XXO, XF/V, XO/V, XXF/V, XXO/V and V4/V.

### **6.3.4. MODIFIED SPORTS**

**/BMS, /MS (Gas Only)**

This class is intended for production sports cars as accepted for GT class which have been modified to such an extent as to make the vehicle illegal for the Production Category. This class is limited to production, a minimum of 500 vehicles of the same model for sale to the general public, sports cars, examples of which include Chevrolet Corvette, Porsche 911, Mazda RX7, and Nissan Z series automobiles. Limited production, 50 examples produced, sports car bodies, which may be placed on any frame, will be permitted. No "one of a kind" bodies will be allowed. Production sports cars with an engine swap will be allowed.

Streamlining ahead of and including the cowl, channelling, belly pans and skirts is permitted. Removal of minor trim and bumpers is allowed as long as the body is not altered in length, width or contour. Air dams and spoilers as defined in this book are allowed. Windshields may be lowered or removed. Coupe tops may be chopped. No wings are allowed unless the wing was offered as an OEM item for the year/model of vehicle used. The wing must have been available on the vehicle as purchased new and

unmodified from the dealer. The entrant is required to provide suitable documentation.

Any frame may be used which is made of round, rectangular, or square steel tubing not less than 50mm x 3mm (2" x .120"), channel not less than 100mm x 3mm (4" x .120"), or multi-tube frames which have equivalent strength characteristics.

Maximum wheelbase allowed shall be 130". Any type of rear end may be used.

Engine placement is optional, so long as no change is made to the driver's location as originally designed. The driver must be seated behind the engine, except in the case of production and limited production bodies which were designed for mid/rear engine locations. The driver must not be restricted from entry or exit of the vehicle by the cockpit covering.

The following items are required: a starter capable of starting the engine, tail/stop lights, a transmission, either manual or automatic, and radiator when originally equipped.

The following items are not permitted: air vents, taping of body or window seams, and headrest fairings, which extend past the rear of the body.

This class may run Nitrous Oxide, but will be advanced two (2) engine classes.

Engine classes allowed are: AA, A, B, C, D, E, F, G, H, I

### **6.3.5. MODIFIED PICKUP TRUCK:**

#### **MP (Gas Only)**

This class is for 1949 and later American made pickup trucks, with full stock bed, unaltered in height, width or contour, with all panels mounted in the original relationship to each other. Samples of allowed trucks include but are not limited to; Chevrolet C series, Ford F series and others.

Pickup trucks in this class are considered in the Modified Category, Gas Coupe class and should therefore comply with all rules of this category and class.

Any supercharger moves the engine up two (2) classes; production full-time four wheel drive trucks must compete in this category and class. Engine classes allowed are: AA, A, B, C, D, E, XXO, XXF, XO & XF

### **6.3.6. MODIFIED MID/MINI PICKUP TRUCK:**

#### **M/MP (Gas only)**

This class is for 1972 and later mid and mini sized pickup trucks with full stock bed, unaltered in height, width or contour with all panels mounted in original relationship to each other. Samples of allowed trucks include but are not limited to; AU Falcon, Holden One Tonner, Ford Courier, Nissan and Toyota Hi-Lux's.

Any supercharger moves the engine up two (2) classes; production full-time four wheel drive trucks must compete in this category and class.

Pickup trucks in this class are considered in the Modified Category, Gas Coupe class and should therefore comply with all rules of this category and class. Engine classes allowed are; C, D, E, F, G, H and I.

### **6.3.7. MODIFIED UTILITY:**

#### **M/UTE (Gas only)**

This class is for any utility vehicle with an exposed load carrying area, and an integral body. EG no separate pickup body. Separate chassis is allowable. Sometimes referred to as a coupe utility. Examples. Holden ute (excluding one tonner), Falcon utility (Pre AU), Valiant, El Camino, Ranchero, 34-58 Ford Coupe Utility.

Utes in this class are considered in the Modified Category, Gas Coupe class and should therefore comply with all rules of this category and class.

Any supercharger moves the engine up two (2) classes; production full-time four wheel drive utes must compete in this category and class. Engine classes allowed are: A, B, C, D, E, X.XO.XXO.V4.XXF & XF

### **6.4. PRODUCTION CATEGORY**

This category is intended to represent typical transportation vehicles, which may be purchased from ANY automobile dealer. 500 examples of the model used must have been produced yearly. In keeping with this intent, the cars are aerodynamically "stone stock" with no body parts allowed which were not part of the manufacturer's product for the series of the vehicle involved. The engine used must have been available in the model of vehicle used as purchased from ANY automobile dealer. Modified body, body panels, spoilers, air dams, etc. intended for, as accepted or sanctioned by NASCAR, NHRA, SCCA, IMSA, etc. are not permitted for use in this category unless specifically allowed. A manufacturer's part number does not constitute an original, factory installed body

part. Both exterior and interior body panels are considered to be part of a production vehicle and must be mounted in their original relationship to each other. A different displacement size of the same design engine may be used provided it does not constitute an "Engine Swap" as defined in section 5-12. Vehicles originally produced as a front wheel drive chassis and converted to rear wheel or four wheel drive chassis are NOT eligible for competition in the Production category. Choice of camshafts, carburetion, and ignition is unlimited. Cylinder heads are limited to original number of valves and port configuration.

It is REQUIRED that vehicles in this category that exceed 200 MPH, or if the existing record is over 200 MPH, must have roof rails.

PRODUCTION RECORDS ARE SUBJECT TO APPROVAL AND WILL BE CERTIFIED ONLY AFTER COMPARISON WITH THE MANUFACTURER'S SPECIFICATIONS FOR THE MODEL ENTERED. THE ENTRANT IS REQUIRED TO PROVIDE SUITABLE DOCUMENTATION.

XX/PRO class is limited to cylinder head port configuration as originally designed. This applies to the XXF and XXO engine classes.

#### **6.4.1. PRODUCTION COUPE and SEDAN:**

##### **/PRO (Gas Only)**

This class is for coupes, sedans, unaltered in height, width or contour, with all stock panels mounted in original relationship to each other. This category does not include cars properly classified as Sports or GT, such as foreign cars without rear seats suitable for continued adult occupancy. It does include Mustangs, Camaros, Barracudas, 1958 or later Thunderbirds, [Chargers, 2 door Falcons and Monaro's](#), and other cars of this type. There must have been 500 produced yearly. Convertible tops and rear Windows must be up when running.

The following items must be retained in stock location and of the same year as the body: frame, fenders, hood, grille, drip rails (must not be filled), windows, door handles, window trim, headlights (high and low beam), tail lights, parking lights, stop lights, radiator, both bumpers and horn. Stock gas tank must be fitted, but need not be used. Any transmission, non-quick change rear end, and starter capable of starting engine may be used so long as the original running gear design is retained.

The following body and chassis modifications may be made: headers, hood scoop, wheel openings (may be radiused), passenger and rear seat may be removed. Air

dams and air spoilers identical to factory optional equipment for the body in question may be added, bucket seats may be used, original side panel upholstery or equivalent must remain, minor chrome trim and emblems may be removed.

The following are NOT permitted: streamlining, belly pans, air ducts, air vents, headlight air scoops, chopping, channelling, quick change rear ends, stepped frames, exhaust outlets through the front fenders or hood, or body, blocked off grilles or radiators, engine relocation, body or interior gutting, supercharging, engine swaps, taped body or window seams. Rules for this class will be strictly enforced to ensure that cars entered herein are typical of street machines which may be purchased from ANY automobile dealer.

Engine classes allowed are: AA, A, B, C, D, E, F, G, H,I, J, XF, XO & XXO.

It is recommended that all combustible materials i.e. roof lining, door trims (sharp edges to be covered), dashboards etc. be removed. Door inners must then be covered with a non-combustible material.

#### **6.4.2. PRODUCTION-SUPERCHARGED:**

##### **/PS (Gas Only)**

This class is intended for coupes and sedans that meet the requirement of the Production Coupe and Sedan Class that are equipped with factory supercharger systems. The vehicle must be as originally equipped and configured eg., if it comes with two (2) superchargers, it must have two (2) superchargers. Emission equipment, eg., air pumps, catalytic converters, etc. may be removed. All other requirements of the Production Coupe and Sedan class apply. Supercharged sports coupes equipped with rear jump seats, such as Mazda RX7 Turbo and Porsche 930 series which would be considered a GT class vehicle, must compete in the Blown GT class.

Engine classes allowed are C, D, E, F, G, H ,I, and J.

#### **6.4.3. GRAND TOURING SPORT:**

##### **/BGT, /GT (Gas Only)**

Series production sports cars and coupes, as well as limited production cars by a recognised automobile manufacturer, which are primarily intended for comfortable high speed touring. At least 500 of the same model must have been produced. This category does not include cars with rear seats suitable for continued adult occupancy.

The following items must be retained in stock location and of the same year as the body: frame, fenders, hood,



grille, drip rails (must not be filled), windows, door handles, window trim, headlights (high and low beam), tail lights, parking lights, stop lights, radiator, both bumpers and horn. Stock gas tank must be fitted, but need not be used. Any transmission, non-quick change rear end, and starter capable of starting engine may be used as long as the original running gear design is retained. Independent rear suspension may be replaced with any non quick change rear end.

The following body and chassis modifications may be made: wheel openings may be radiused, generator may be removed, any exhaust system capable of being closed off may be used (no individual stacks). Air dams and air spoilers identical to factory optional equipment for the body in question may be added, bucket seats may be used, as long as original side panel upholstery or equivalent remain, minor chrome trim and emblems may be removed, and air scoops may be used. Stock windshield may not be removed or lowered.

Any tarps must be non-rigid. Engine swaps are permitted, as long as they are of the same manufacturer (eg., Ford into Ford, Porsche into Porsche, etc.).

This class may run nitrous oxide, but will be advanced two (2) engine classes.

The following are not permitted: streamlining, belly pans, air ducts, air vents, headlight air scoops, chopping, channelling, quick change rear ends, stepped frames, exhaust outlets through the front fenders or hood, blocked off grilles or radiators, engine relocation, body and interior gutting, taped body or window seams.

Rules for this class will be strictly enforced to ensure that cars entered herein are typical of street machines which may be purchased from an automobile dealer.

Engine classes allowed are: AA, A, B, C, D, E, F, G, H,I, and J.

#### **6.4.4. PRODUCTION PICKUP TRUCK:**

##### **PP (Gas Only)**

This class is for 1949 and later American made pickup trucks, with full stock bed, unaltered in height, width or contour, with all panels mounted in the original relationship to each other. Samples of allowed trucks include but are not limited to; Chevrolet C series, Ford F series and others.

Pickup trucks in this class are considered in the Production Category, Production class and should therefore comply with all rules of this category and class.

Any supercharger and/or production full-time four-wheel drive trucks must compete in the Modified Category, Modified Pickup class. Engine classes allowed are: AA, A, B, C, D, E, XO & XF

#### **6.4.5. PRODUCTION MID/MINI PICKUP TRUCK:**

##### **P/MP (Gas only)**

This class is for 1972 and later American and Foreign made Mid and mini sized pickup trucks with full stock bed, unaltered in height, width or contour with all panels mounted in original relationship to each other. Samples of allowed trucks include but are not limited to; Chevrolet S-10, Ford Ranger, Nissan and Toyota.

Any supercharger and/or production full-time four-wheel drive trucks must compete in the Modified Category, Modified Mid/Mini Pickup class.

Pickup trucks in this class are considered in the Production Category, Production class and should therefore comply with all rules of this category and class.

Engine classes allowed are: C, D, E, F, G, H and I.

#### **6.4.6. PRODUCTION UTILITY:**

##### **P/UTE**

Any utility vehicle with an exposed load carrying area, and an integral body. EG no separate pickup body. Separate chassis is allowable. Sometimes referred to as a coupe utility.

Examples. Holden ute (excluding one tonner), Falcon utility (Pre AU), Valiant, El Camino, Ranchero, 34-58 Ford Coupe Utility.

Utes in this class are considered in the Production Category, Production class and should therefore comply with all rules of this category and class.

Any supercharger and/or production full-time four-wheel drive trucks must compete in the Modified Category, Modified Ute class. Engine classes allowed are: A, B, C, D, E, X,XO,XXO,V4,XXF & XF

#### **6.4.7. STREET:**

##### **ST**

This class is intended for cars that have minimal modifications, and are in street trim. No superchargers, no aftermarket heads etc. If it is believed that the vehicle has a much faster top speed, it may be denied entry to the meeting.

Cars capable of being street registered in their current state may compete in a street class. Requirements are the same as production, except speed is capped at 125MPH. Once a car exceeds 125 MPH, it can no longer participate until full compliance with the safety and production class rules.

Exemptions for this class are:

Standard throttle actuation with 2 springs allowed. (eg. No pedal toe cap)

Fixed extinguisher not required. Securely fixed hand held system is required

Roll Structure not required, except for open or non metallic bodied vehicles (Including sun roofs).

Lap/Sash 3 point restraint systems are allowable

Restraints are not required for trailing link suspension systems.

## **6.5. TRUCK CATEGORY**

### **6.5.1. UNLIMITED DIESEL TRUCK:**

#### **U/DT**

This class is for diesel powered trucks only, so modified as to be illegal for the Modified Diesel truck class. Any frame and running gear may be used and multiple engines are allowed. The body may be highly modified. Trucks weighing more than 6.5t (14,500 Lbs.). Are allowed unlimited engine displacement. Full size trucks are limited to a maximum of 750 cubic inch engine displacement. Trucks based on Mid/Mini chassis are limited to a maximum of 500 cubic inch engine displacement. There are NO engine displacement class breaks, all vehicles must compete against the same record. Skid plates must be designed and mounted so as to prevent any portion of the running gear from damaging the race course in the event of tire failure, The skid plates MUST NOT be designed so as to form a bellypan.

Tires must be certified for vehicle weight and speed of the class record or minimum. Roll bars are mandatory and must be mounted inside the cab. For other technical regulations, refer to other sections of this book. Any fuel is allowed.

### **6.5.2. MODIFIED DIESEL TRUCK:**

#### **/MDT**

This class is for diesel powered trucks only, with modified bodies not otherwise legal for Diesel Truck class. The body may not be altered in height, width or length. Truck frame and running gear must be used. Trucks weighing more than 6.5t (14,500 Lbs.), are allowed unlimited engine displacement. Full size trucks are limited to a maximum of 750 cubic inch engine displacement. Trucks based on Mid/Mini chassis are limited to a maximum of 500 cubic inch engine

displacement. There are NO engine displacement class breaks, all vehicles must compete against the same record. Tires must be certified for vehicle weight and speed of class record or minimum. Skid plates must be designed and mounted so as to prevent any portion of the running gear from damaging the race course in the event of tire failure, The skid plates MUST NOT be designed so as to form a belly pan. Streamlining devices are NOT allowed. Roll bars are mandatory and must be mounted inside of the cab. This class must use event diesel fuel. For other technical regulations refer to other sections of this book.

### **6.5.3. HIGHWAY HAULER:**

#### **HH2/DT AND HH3/DT**

American and foreign PRODUCTION diesel powered trucks of not less than 6.5t(14,500 Lbs.), unaltered in height, width and contour with all stock panels mounted in the original relationship to each other. Engines are allowed unlimited cubic inch displacement, there are NO engine class breaks, all vehicles must compete against the same record.

A stock cab must be used and be mounted in the original location with respect to the chassis. The cab must be fitted with both driver and passenger seats, and with a suitable roll cage. Running boards and steps may be removed. Side mirrors may be removed.

Any diesel fuelled engine supplied by a diesel engine manufacturer through normal channels may be used so long as the basic original design is retained. The engine may be lowered a maximum of 4" and setback a maximum of 12" from the stock location. Only pure water is allowed for water injection systems. The tank must be inspected and sealed prior to each record run.

Stock fuel tanks may be removed or retained, but the tank must not contain flammable liquid or vapour. The only approved location for the in use fuel tank is behind the cab, mounted securely between the frame rails.

The stock exhaust configuration and location must be retained. The muffler may be removed, but it must be replaced by exhaust tubing. Shortening of the exhaust system is not allowed.

Trucks must be equipped with a fifth wheel pad mounted in the original location and with functional air and electrical connections for a trailer. Trucks must be capable of hauling a trailer.

Trucks must also be equipped with brake, tail and turn signal lights. Stock headlight housings must be retained, but the glass may be removed.

In the three axle class, either a drive axle or a tag axle may be used as the second rear axle. In the case of a tag axle, tires must bear against the surface of the race track. The axle must be available as a stock item for the truck used.

Wheels and tires must be appropriate for the weight and speed of the vehicle. Generally, the stock wheels and tires, in excellent condition, will suffice. Wheels and tires designed for heavy, commercial aircraft use are also appropriate and encouraged.

Skid plates must be designed and mounted so as to prevent any portion of the running gear from damaging the race course in the event of tire failure. The skid plate must not be designed so as to form a belly pan. For other technical regulations, refer to other sections of this rule book.

This class must use event diesel fuel only. Records are subject to approval and will be certified only after comparison with the manufacturer's specifications for the model entered. The entrant is required to provide suitable documentation.

NOTE: All entrants in the Diesel Truck Classes must have equipment available to move a disabled vehicle from the race course.

#### **6.5.4. DIESEL TRUCK:**

**/DT**

This class is intended to represent typical diesel pickup trucks which may be of either American or foreign manufacture. This class is limited up to and including one (1) ton vehicles. The body must remain unaltered in height, width and contour; with all stock panels mounted in original relationship to each other.

Engine and driveline swaps are permitted. Flywheel shields are mandatory. Roll bars must be mounted inside the cab.

In this class, all other rules will be the same as Gas Coupe and Sedan class.

Rules for this class will be strictly enforced to ensure that trucks entered herein are typical of street machines which may be purchased from any automobile dealer.

This class must use event diesel fuel if made available.

Turbochargers and superchargers may be used, these engines will not be handicapped with class jump.

Engine classes allowed are AA, A, B, C, D, E, F, G and H.

## 7. Motorcycles General Competition Requirements

### Definition

The term motorcycle covers all vehicles having , in principle ,less than 4 wheels and more than 1,propelled by an engine / engines and designed essentially for the carriage of one or more persons of which one is the rider of the vehicle .Motorcycles include but are not limited to 1.Solo 2 Sidecar 3 Trike 4. Cycle car 5. FF's

### 7. A. General Requirements for All Motorcycles

**7.A.1.** Land speed record attempts or record trials are open to all DLRA members in good standing .A current and valid state drivers licence is required .

**7.A.2.** Speed trials operating procedures shall be the same as section 1.

**7.A.3.** Production records are subject to approval and will be certified ONLY after comparison with the manufacture's specifications for the model. The entrant is required to provide suitable documentation substantiating the production design of the entry.

**7.A.4.** It is **STRONGLY RECOMMENDED** that all new special construction and streamliner vehicles or any vehicle that has been extensively modified ,be submitted for a pre event inspection by the motorcycle scrutineer .If not practical because of distance , photographs and drawings may be submitted in Leu. Any submission NOT meeting any of the technical rules / specifications , must be submitted with a full tertiary qualified engineers report ,stating that the vehicle equals or exceeds DLRA minimum technical requirements , a final ruling will be made by the chief scrutineer/ motorcycle scrutineer

**7.A.5. Appearance:** All motorcycles entered in an event shall be maintained so as to present a neat appearance .All white or silver (unpainted) vehicles shall show a contrasting colour on the body. All owners /riders/ crew are responsible for their pit area and will be expected to keep it clean and respectable.

**7.A.6.** All rule change requests **MUST** be submitted on the appropriate form ,stating rule/s and reason for the change , including any documentation supporting your request at least 60 days before a meet ,this must

be in writing to the motorcycle scrutineer, a final ruling will be made with approval of the chief scrutineer

### 7.B General Equipment Standards

**7.B.1 Number / classes:** All entries must have the number and class on each side of the motorcycle, be clearly visible with the rider in the riding position and must contrast with the background on which they are applied. All entry numbers must be a minimum of 75 mm high and 25 mm wide. all class designation characters must be at least 25 mm high ,all class/ numbers may be located on a smooth flat plate or any location on the motorcycle that is clearly visible to the starter .If a plate is used it must not become a form of streamlining and comply with any partial streamlining rules .

### 7.B.2. Shut Off Requirements

**7.B.2.1. Engine stop switch :** All motorcycles **MUST** have a positive -off kill switch that must be able to stop a running engine , remain shut off once activated and be able to be operated without removing hands from the handle bar grips

### 7.B.2.2 Ignition Kill Switch

**Lanyard:** All motorcycles must be equipped with a tether type mechanical device attached to the vehicle and the rider so the engine ignition is shut off if the rider becomes separated from the motorcycle.

### 7.B.2.3 Fuel Pump Stop Switch

**Lanyard:** All motorcycles must be equipped with a tether type mechanical device attached to the vehicle and the rider, so the electric fuel pump if so equipped, is shut off if the rider becomes separated from the motorcycle.

**7B.2.4 Petrol shut off:** Gas motorcycles must have petrol shut off operable from a normal riding position.

**7.B.2.5 Fuel Shut Off:** Fuel motorcycles must have a fuel shut off operable without removing the hands from the handle bar grips

**7.B.3 Throttle:** A self closing throttle must be fitted to all motorcycles, it is highly recommended that a push-pull throttle be used

**7.B.4 Controls:** Control levers must have at least a 13 mm diameter round ball end. The handlebars must locate the hands outside the width of the fork tubes (250 mm minimum) any motorcycle equipped with vertical handle bar grips may be required to demonstrate handling and stability to meet this requirement.

**7.B.5 Headlight:** Glass headlights must be taped to retain breakage and the tape is limited to the glassed lens. Globes may be removed to avoid heat build up.

**7.B.6 Mirrors:** Must be removed unless integrated into the fairing, the glass in any integrated mirrors must be taped or removed.

**7.B.7 Foot Pegs :** foot pegs /rests must be provided as per requirements of the class entered and the rider must use them during the entire run ,foot controls must be operable with the feet on the pegs / rests .Only one set of pegs / rests is allowed .

**7.B.8 Tyre Requirements :** All production tyres rated V,Z, or ZR must have been produced within the last 10 years of the date of the current event ,sidewall date coding will be checked , Tubeless, bias ply type tyres may be run with tubes , if a tube is used the speed rating will be reduced 1 speed range ,unless otherwise indicated by the tyre manufacturer . It is the responsibility of the entrant to check, inflation pressure and tyre and wheel condition before and after each run.

All motorcycle entries, including streamliners and sidecars, must use tyres with an appropriate speed rating. The required speed rating is governed by the record speed in the class entered. Tyres rated H or V cannot be used beyond their speed rating. Any run in excess of 200 mph requires that the contestant return to scrutineering where the tyres can be checked for any apparent deterioration or damage before any further runs are permitted.

**0 to 130 mph - production tyres with a speed rating of H or higher**

**131 to 150 mph - production tyres with a speed rating of V or higher.**

**If shaved can be used up to 200 mph.**

**151+ mph - production tyres with a speed rating of Z /ZR or special tyres. For racing as designated by the manufacturer.**

For speeds above 200 mph, experience has shown that using tyres **with HARD RUBBER COMPOUNDS** and reducing the tread thickness by 2/3 by carefully shaving the tread provides the best results.

For speeds in excess of 265 mph all contestants **MUST** use LSR or other special racing tyres with a speed rating higher than the class record.

Any tyre deviation must be submitted to the motorcycle scrutineer / chief scrutineer, with sufficient supporting data to justify a deviation in writing 60 days prior to a meet.

It is forbidden to use a front tyre for driving a rear wheel if so marked (for front wheel only) on the tyre

**7.B.9 Valve stems and caps:** All tyre valve stems must be fitted with metal valve caps .Tubeless tyres must be run with metal valve stems. Tube type tyres fitted with rubber valve stems, that are angled, relative to the rotational plane of the wheel, must be secured to resist centrifugal force deflection.

**7.B.10 Wheels:** It is highly recommended that strict attention be paid to wheel alignment, wheel balance, spoke tension and tyre runout. It is required that front wheels be cross ventilated by an area equal to at least 25% of the nominal rim area , wheel discs are not permitted .

**7.B. 11 Petrol:** The addition of a power additive or changes of any nature, other than oil labelled for lubrication only, to **PETROL** is prohibited. The penalty for violation of this standard shall be disqualification. Refer to appendix A for specifications.

The chief scrutineer may choose any test or combination of tests to assure liquid fuels used in “petrol “ classes comply with specifications , it is recommended that unknown petrol be checked before use in competition .

If the DLRA establishes an ‘**EVENT**’ petrol, those products will be used for record attempts at the event.

**7.B. 12 Fuels:** In fuel classes, any approved liquid may be used. Approved fuels are Alcohol, nitrous oxide, nitro methane and unapproved petrol’s When a specific class is not available, engines using LPG, natural gas, or diesel fuel may compete in petrol classes. Hydrogen fuelled vehicles will run for time only.

Due to the special considerations required using gaseous fuels contact the gaseous fuel specialist for further advice. Refer to appendix B

**7.B. 13 Engine size:** Displacement must be greater than the maximum allowable for the next lower class. To permit minor reconditioning of worn cylinder blocks, in classes other than production, it is

permitted to increase cylinder bore diameter 0.508 mm (.020 inch) beyond that which provides maximum displacement for the class. In all cases, the resulting displacement must be exceeded to qualify for the next higher class; the 0.508mm (.020 inch) will be discounted for record certification and will be noted on the certification card and in the log book.

**7.B. 14 Unsafe Motorcycle:** if the motorcycle or chief scrutineer judges a motorcycle unsafe, it will not be allowed to compete.

**7.B. 15 Axle Nuts :** All axle retaining nuts ,pinch bolts and axle caps must be safety wired or otherwise secured by visually verifiable means. Lock washers, Nylox nuts or thread locking compounds do not meet this requirement.

**Sump plugs must be safety wired.**

**7.B. 16 Tow Starts:** Dead motor tow starts will not be permitted except for streamliners, this requirement includes designated warm up areas.

**7.B. 17 Steering Damper:**  
**Required in all classes.**

**7.B. 18 Seat and Saddle:** No part of the seat or saddle or anything to the rear of these may be more than 92cm above the ground when the motorcycle is loaded. Exception: OEM configuration in Production classes and Special construction only.

**7.B.19 Chassis and steering:** All motorcycle entries must use handlebars for steering control. All moving parts of the steering system shall operate freely without excessive freeplay. It is recommended that all steering system components be visually inspected on a frequent basis.

**7.B 20 Exhaust:** All exhaust system outlets must be directed away from rider, the rear tyre and the course surface.

**7.B.21 Nitrous Oxide Systems:** Nitrous Oxide bottles and lines are considered a part of the fuel system and governed by all fuel system requirements. Nitrous Oxide bottles shall be securely mounted. Bottle mounting by hose clamps alone is not sufficient. Vehicles with Nitrous Oxide systems shall be visibly identified as such and the location of the bottle(s) shall be clearly indicated. Nitrous Oxide installations must provide crash protection for the bottle shut off valve. The Nitrous Oxide bottle(s) must be removed when competing in gasoline classes.

The nitrous oxide bottle pressure relief valve shall be vented away from the engine and rider if located in an enclosed area; it shall be vented to the outside by a rigid line. Nitrous Oxide systems must be equipped with a device that shuts off the nitrous oxide if the rider becomes separated from the motorcycle.

**7.B.22 Chain Guard:** All chain and belt driven motorcycle entries (streamliners see 7.H.22) must be equipped with a strong metal chain or belt guard. Chain/belt must be guarded from the centre of the front sprocket to the rearmost edge of the rear sprocket measured vertically. Primary drives or exposed clutches must have a side cover to prevent rider from getting entangled. OEM chain guards may not be adequate.

**7.B.23 Brakes:** Rear brakes are required and must be an internal expanding drum type or disc brake. Actuation may be from a foot pedal or handlebar lever. Front brakes may be used and are optional.

**7.B.24 Ballast:** Ballast may be used in all categories. Ballast shall be securely mounted, bolted to the frame or the frame structure. The use of hose clamps, wire, strapping, tape and tie wraps, etc. for securing weight or ballast is prohibited. Ballast shall not be used to streamline the vehicle. Visible ballast is not allowed in Production classes. All ballast must be mounted ahead of the rear axle (except streamliners and sidecars).

**7.B.25 Fuel Systems:** The complete fuel system shall be well constructed and securely mounted. The fuel fill cap/cover must fit securely. All unvalved portions of fuel or gas lines (including saddle tank crossover lines), must have fire resistant or fireproof connecting lines and fittings. Aero/quip fire sleeve cover meets this requirement.

Plastic fuel lines are not permitted, except certified clear fuel lines, clearly marked on the fuel line by the manufacturer for fuel application. A metal screw type clamp shall be on each connection of flexible fuel line. Nitrous Oxide cylinders or any other type of oxidizer cylinder are considered the same as fuel tanks.

**7.B.26 Batteries:** All batteries shall be properly secured with metal framework and fasteners. Plastic tie-downs are not allowed. OEM battery hold-downs may not be adequate.

**7.B.27 Handlebars:** Handlebars must be made of steel, aluminium, titanium or any material approved by the motorcycle scrutineer.

## 7.B.28

**Windshields/Windcreens:** All windshields or windcreens shall be made of a shatter resistant plastic, including Production classes.

## 7.C. Riding Apparel

All motorcycle riders are required to use the following riding equipment, except where clearly inconsistent with Streamliner rules.

### 7.C.1 Driver's Helmet:

All drivers/riders must wear a full-face helmet with face shield, which meets Snell Foundation 2000, or later specifications. No open face helmets will be allowed. Helmets will be visually inspected at least once each year. Helmets must be undamaged, unmodified and in serviceable condition. Eyeglasses worn under the helmet must be shatterproof.

Effective 1/1/2007 all helmets must meet one of the following internationally recognised standards

- USA - Snell M 2000 SA 2000 (Streamliners)
- Australia - AS1698
- Europe - ECE 22-05, P

Riders must demonstrate proper helmet fit and "roll off" resistance.

**7.C.2 Leathers:** One-piece or two-piece 360 degree (zipped together) all leather is required. Limited perforations are allowed in armpit and back of knee. No cloth panels are allowed. Fairing attached to back of leathers is allowed in partial streamliner class only.

**A back protector is mandatory in all classes.** Where the class record is Above 200 MPH, full body armour is highly recommended. It is highly recommended that fire proof undergarments be used where the existing class record is above 200 MPH.

**7.C.3 Boots:** Zipper, buckle or lace up leather boots of substantial construction are required and must be at least 20cm high.

**7C.4 Gloves:** Leather gloves are required. No perforated or skeleton gloves are permitted.

## 7.D. Classification of displacements, frames, engines and engine types:

NOTE: Motorcycle classes are listed in order of displacement, frame type and engine type.

### 7. D.1 Designation Frame Class

- **P** Production
- **M** Modified
- **A** Special Construction
- **MPS** Modified Partial Streamlining
- **APS** Special Construction Partial Streamlining
- **SC** Sidecar
- **SCS** Sidecar Streamliner
- **S** Streamliner

### 7.D.2 Designation Engine Class

- **P** Production
- **PP** Production Push Rod
- **PB** Production Supercharge
- **PV** Production Vintage
- **G** Modified Engine: Gasoline
- **PG** Push Rod Engine: Gasoline
- **VG** Vintage Engine: Gasoline
- **UG** Unlimited Engine: Gasoline
- **BG** Supercharged Engine; Gasoline
- **PBG** Supercharged Pushrod Engine: Gasoline
- **VBG** Supercharged Vintage Engine: Gasoline
- **F** Modified Engine: Fuel
- **PF** Push Rod Engine: Fuel
- **VF** Vintage Engine: Fuel
- **UF** Unlimited Engine: Fuel
- **BF** Supercharged Engine: Fuel
- **PBF** Supercharged Push Rod Engine: Fuel
- **VPF** Supercharged Vintage Engine: Fuel
- **Ω** Steam, Turbine or electric

### 7.D.3 Engine Displacement Classes:

Engine Classes are shown in cubic centimetres, i.e. 50, 100, 125, 175, 250, 350, 500, 650, 750, 1000, 1350, 1650, 2000 and 3000 where permitted and 3001 and above where permitted.

### 7.D.4 Frame, engine classes, max displacement and No. of Engines:

<b>P</b>	P, PP, PB, PV	3000	1
<b>M</b>	All except UG & UF	3000	1
<b>MPS</b>	All except UG & UF	3000	1
<b>A</b>	All	3001 and above	3
<b>APS</b>	All	3001 and above	3
<b>S</b>	All	3001 and above	3
<b>SC</b>	All	3000	1

SCS All 3001 and above 3

Classes defined and not restricted under items 7.D.1, 7.D.2, 7. &D.3 and 7.D.4 are open for competition.

## 7.E. Equipment

### 7.E.1 Production Frame

A standard production street legal motorcycle of which 500 or more have been produced and which are available for sale to the general public through retail motorcycle dealers and is completely equipped with full lighting equipment, frame, forks, wheels, brakes, gas and oil tank (if OEM), mudguards and seat.

The motorcycle must be identical in all respects to the production model it represents, including the intake air box and exhaust system. The exhaust system shall be unmodified in any way, engine modifications must be out of view ie internal only.

The only modifications, which may or must be made, are as follows.

**7.E. 1. 1 Handlebars:** must be the original OEM as fitted to that model.

**7.E. 1. 2 Foot pegs / Footrests:** Must be the original OEM as fitted to that model, passenger foot pegs must be removed.

**7.E. 1. 3 Side and Centre Stands:** these may be removed.

**7.E. 1. 4 Tool Box and License Plate Bracket:** These may be removed.

**7.E. 1. 5 Number /Class:** see section 7.B.8

**7.E. 1. 6 Lighting equipment and instruments:** Must be exactly the same as fitted to the original model when it was sold for every day street use. Lenses must be cross taped. Reflectors and brackets may be removed only if not integrated with body fairing parts .Any lamp which

cannot be turned off with the motor running may be rendered inoperative.

**7.E. 1. 7 fairings, windshields, seats and side panels:** Parts that are factory equipment and standard for the particular model must remain on the motorcycle and be unaltered in height, width or contour.

**7.E. 1. 8 Tyres:** See section 7.B.1

**7.E. 1. 9 Chain guard:** see section 7.B.22

**7.E. 1. 10 Wheel rims:** They may be changed only if necessary to obtain tyres that meet the necessary tyre requirements.

**7.E. 1. 11 Suspension height adjustment:** OEM specification for minimum ground clearance must be met.

## 7.F. MODIFIED PRODUCTION CLASS

The modified class is intended for “*modified*” production models and **NOT** purpose built racing bikes.

This class includes all on road, off road and on/off road only models and limited production models (less than 500).

This class does not include factory produced (works) road racing or any other ‘works’ racing models.

The requirements for this class include:

- Frames must be based on an OEM type frame or production replacement having the same geometry.
- The engine must be from the same manufacture as the frame.
- A single engine with maximum displacement limited to 3000 cc.
- A maximum wheel base not to exceed the original OEM specification plus 10 %. Entrants must provide acceptable documentation for record certification.
- Handle bar grips and rider seating position must be above the top of the rear tyre with rider seated, unless original OEM design.
- Petrol tanks, if not OEM to that production model, must have a minimum capacity of 5 litres.

Original lights, instruments, mud guards, petrol and oil tanks, seat, forks, swing arm, front brakes and wheels are optional.

Bikes that meet the requirements for the modified production class, by definition cannot run in the special construction class.



**7.F.1 Foot pegs/footrests:** Must be ahead of the rear axle by at least 150 mm

**7.F.2 Optional exhaust system:** Optional exhaust pipes must not extend beyond the rear edge of the rear tyre, must not be aimed at the rear tyre or the course.

**7.F. 3 Number /class designation:** see section 7. B. 1

**7.F. 4 Mud guards:** All mudguards must be of sufficient strength to resist deflection at speed. Front mudguard and rear portion of rear mudguard may be removed or special mudguards may be fitted. Special mudguards must be made and attached in a tradesman like manner.

**7.F. 4. 1 Front Mudguards:** Are optional and if used must comply with the following: front wheel and tyre must be visible either side for a continuous 180 degrees of their circumference. The front of the mudguard may not extend lower than a horizontal line drawn through the front axle. Perimeter of the mudguard must not be farther than 40mm from the tyre tread. The sides of the mudguard may fair the fork tubes or sliders, but may not be over 50mm wider overall than these parts.

**7.F.4. 2 Rear Mudguards:** shall extend to a point not less than a vertical line drawn through the rear axle. A seat that covers the rear wheel to the vertical line may substitute for the mudguard requirements. All mudguards must be of sufficient strength to resist deflection at speed.

**7.F. 5 Petrol Tanks:** If not OEM to the model engine used must have a minimum capacity of at least 5 litres.

**7.F. 6 Wheels:** Must have a minimum nominal rim diameter of 15". All axles must be of steel alloy or Titanium.

**7.F. 7 Forks:** Must be of sufficient strength for the motorcycle in question. Centre hub steering and equivalent or derivative of this design is not permitted in this class, unless OEM for the model.

**7.F. 8 Brakes:** See section 7.B.23

**7.F. 9 chain guard:** See section 7. B. 22

**7.F. 10 Engines:** Only a single engine with a maximum displacement of 3000 cc is allowed. Multiple engines are not permitted in this class.

**7.F. 11 Open class:**

1. No streamlining is permitted in the open motorcycle class. Streamlining is defined as any devices or objects forward of the rider that has the apparent purpose of directing, limiting or controlling airflow around the motorcycle or rider.
2. Seat or tail section must conform to partial streamlining rules.
3. Headlights if used must be between 140mm and 180mm in outside diameter at the lens surface with a front radius of not less than 460 mm. The front surface must be perpendicular to the ground within 5 degrees with the rider in the normal riding position.

**7.F. 12 Partial Streamlining:**  
The OEM bodywork and tail section for the specific production model are allowed. Fairing and tail section shall be mounted in a conventional manner and all bodywork must be mounted in their original relationship, non OEM fairings, bodywork or tail sections must be an EXACT replica of the OEM parts. Documentation to verify conformability of non OEM parts must be available for the scrutineer. The following rules apply to motorcycles not using OEM components (or exact replicas of those parts) or the installation of a fairing, bodywork or tail section on a production model that was not so originally equipped. No part of the fairing ahead of the front axle may be lower than the top of the front rim at the axle vertical centreline, or be forward of the front edge of the rim. There must be no streamlining forward of the front edge of the front rim. There must be no streamlining other than a seat or tail section to the rear of a line drawn vertically through the axle of the rear wheel and the wheel must be clearly visible for the 180 degrees of its circumference to the rear of such a line. If a streamlined seat or tail section is used, it cannot extend further to the rear than a vertical line at the rear edge of the rear tyre or be more than 920 mm from the ground with the rider seated on the motorcycle. It must be possible to see the rider completely from either side and above except for the hands and forearms. It is forbidden to use any transparent material to avoid the application of these rules. The fairing or bodywork must have a minimum of 3 separate mounting points.

## 7.G. SPECIAL CONSTRUCTION.

A special construction frame is unlimited in design, except for the class requirements of this section. The special construction class is intended for the purpose built race bike. This class includes all factory produced road racing or any other racing 'works' models and

includes but not limited to solo ,road racing sidecars, trikes , cycle cars and FF's (unless meeting all the requirements of production class) .

Bikes in this class may have:

- One, two or three engines.
- Engine displacement is unlimited
- Seat base lower than the top of the rear tyre with rider seated on the motorcycle.
- A fuel tank of any size.
- Conventional forks, leading/trailing link or centre hub steering permitted.
- Passengers are not allowed in or on any vehicle in this class.

Any other design items not permitted in the modified production class.

A bike entered in the special construction class cannot be entered as a modified production class entry within the same racing season.

All components must have sufficient strength to ensure stability and safety. Weld integrity and fabrication methods will be closely scrutinised during the inspection process, the motorcycle and chief scrutineer may require non destructive test certification of components and or stress analysis of the design. All new special construction motorcycles will be required to prove their stability and safety by undergoing a series of speed tests similar to the rider licensing tests at 50 mph increments, starting at 100 mph, any instability or observed problems will need to be rectified before proceeding to the next speed.

### **7.G. 1 Foot Pegs/ Foot Rests:**

Must be provided and the location is optional.

### **7.G. 2 Optional Exhaust**

**Systems:** Optional exhaust pipes may not extend beyond the rear edge of the rear tyre, or beyond the rear edge of the tail section for partially streamlined.

### **7.G. 3 Number /Class**

**Designation:** See section 7. B. 1

**7.G. 4 Mudguards:** See section 7. F. 4

**7.G. 5 Fuel Tank:** Must be constructed and mounted in a tradesman like manner.

**7. G. 6 Wheels:** Must have a minimum nominal rim diameter of 15".exemption for sidecars which must have a minimum nominal rim diameter of 10".

The track of all 3 wheeled motorcycles must be a minimum of 800mm.

**7.G. 7 Brakes:** See section 7.B. 23.

**7.G. 8 Chain Guard:** See section 7. B. 22.

**7.G. 9 Engine/s:** Any single, double or triple combination of motorcycle engines is permitted, displacement is unlimited. Any single (1) automotive type engine can be used, displacement is unlimited.

**7.G. 10 Open Class;** See section 7. F. 11.

### **7.G. 11 Partial streamlining:**

**TYPE A:** There must be no streamlining other than a seat or tail section to the rear of a line drawn vertically through the axel of the rear wheel , and the wheel must be clearly visible for the 180 degrees of its circumference to the rear of such a line . if a streamlined seat or tail section is used it cannot extend further to the rear than a maximum of 200mm beyond the rear edge of the rear tyre ,or be more than 1 meter from the ground with the rider seated on the motorcycle . No part of the seat or tail section that extends beyond the rear axel may be lower than the top of the rim of the rear tyre, with the rider seated on the motorcycle. No part of the fairing ahead of the front axel may be lower that the top of the front rim at the axel vertical centreline, or be forward of the front edge of the rim. It must be possible to see the rider completely from either side and above except for the hands and forearms. It is forbidden to use any transparent material to avoid the application of these rules. Fairings or bodywork must have a minimum of 3 separate mounting points.

**TYPE B:** Partial streamlining is intended for road racing sidecars, trikes, cycle cars and FF's only. The forward extremity of the streamlining shall be not more than 400mm in front of the foremost part of the front tyre. The extreme rear edge of the streamlining must not be more than 600mm beyond the extreme edge of the rear tyre. Spoilers and other aerodynamic devices are authorised on condition that they do not extend beyond the overall dimensions of the bodywork and are an integral part of the bodywork/fairing .The ground clearance measured over the entire body length and width of the frame and other mechanical parts (engine, exhaust or platforms) excluding wheels and tyres, fully loaded with rider and ballast in a static racing position, must NOT be less than 65mm with the handle bars in the straight ahead position. It must be possible to see the rider completely from each side except for the hands and forearms ,*exception* sidecar riders who must NOT be covered from above nor be attached to the motorcycle in any way (except kill switch lanyard) it is forbidden to use any transparent material to avoid the application of these rules. The riding position for road racing sidecars weather or not a driving seat is fitted,

must be such that the riders feet are positioned behind the knees when looking in the driving direction.

- Vehicles using type B partial streamlining must have solid and effective protection between the rider and the engine/s .This protection must prevent direct contact between the rider's body and escaping flames or leaking oil / fuel.
- Where the class record is above 200 mph a functional fire extinguishing system covering the engine/s are mandatory see 4. 5. 12 (fire extinguishing systems).
- Where the class record is above 250mph a parachute (1) meeting all the requirements of 7. H. 13 is mandatory
- Any vehicle using type B partial streamlining will not be permitted to use the course when the wind on any part of the course exceeds 12kph
- A solid bulkhead must be fitted around any tyre within the rider's compartment.
- Road racing sidecars must meet all the sidecar rules of 7.I unless they conflict with requirements of this class ,which take precedence

## 7.H. STREAMLINER

A streamliner is a motorcycle designed so that it is not possible to see the rider in the normal riding position from either side or above .Wheelbase is unlimited and must make a single track. Power must be transmitted through the rear wheel only. Steering must be through the front wheel only.

All components must have sufficient strength to ensure stability and safety. Weld integrity and fabrication methods will be closely scrutinised during the inspection process. The Chief / motorcycle scrutineer may require non destructive test certification of components and or stress analysis of the design .**Prior to starting construction; it is strongly recommended that the constructor submit final design drawings and data to the chief/ motorcycle scrutineer for evaluation of compliance with rules and safety considerations.**

**7.H. 1 Sealed Firewall:** There must be at least one sealed firewall between the rider and engine/fuel compartment(s) in conjunction with adequate drains in engine/fuel compartment(s). All linkage and controls that pass through the firewall(s)

must go through the upper half to avoid fuel seepage into the rider compartment.

### 7.H.2 Fire Extinguishing System:

All streamliners must have a rider controlled fire extinguisher system directed to the rider and engine/fuel compartment. If an automatic heat sensing control is used, a manual control must also be fitted. Refer to Section 4. 5. 12 for additional requirements.

**7.H.3 Driver/Rider Suit:** A complete approved driver/rider suit conforming to SFI 3.2A/15 is REQUIRED. Gloves and boots must be SFI3.3/5 rating. A SFI 3.3 head sock must be worn under the helmet.

**7.H.4 Roll Cage:** Must completely surround the rider and must be fitted in the rider's compartment. Minimum diameter is 1-1/4" with .090" nominal wall thickness, mechanical steel tubing. No galvanised pipe, black water pipe or threaded fittings are permitted. The design of the roll cage must incorporate the following features as a minimum: Two (2) roll bars, (one forward and one after the rider's head), must be tied together and capped with a steel plate .090" thick. Said cap must cover the upper 140 degrees of the rider's head. The roll bar must be braced with a tube on each side of the same dimensions. Rider head movement must be limited to no more than 50mm to each side, top, or rear, with the rider's head in the normal position. This may be accomplished with any non-flammable, resilient material.

### 7.H.5 Seat Belts and Shoulder Harness:

A complete competition seat belt and shoulder harness is required with shoulder, lap and crotch straps. Arm restraints from the wrist to the central harness buckle must be used. (See Section 4. 3. 2)

**7.H.6 Rider Compartment:** The rider compartment must be free from sharp edges, protrusions, brackets, etc., within close proximity to the rider. A rigid inner liner must be provided to retain limbs within roll cage structure. The rider compartment must be equipped with a fresh air intake or breathing system direct to the rider and be configured to prevent contamination by fire, smoke, fumes or fire suppression agents.

**7.H.7 Windshields:** All windshields must be of shatterproof plastic, such as Lexan® and provide 120 degrees of adequate horizontal vision forward.

**7.H.8 Fuel Shutoff:** A remote fuel shutoff must be fitted that can be easily actuated from the rider compartment.

**7.H.9 A** bulkhead or fender must be fitted around any tyre within the rider compartment.

**7.H.10 Canopy:** A rider must be able to exit from streamliner without assistance, when the machine is upright or on its side. The canopy must be clearly marked on the outside with directions for opening by emergency personnel. Rider compartment cover or hatch cover must have a release mechanism allowing it to be opened quickly, without hand tools, from the inside and the outside.

**7.H.11 Tyres and Wheels:** Tyre and wheel sizes are unlimited. Tyres must meet the speed rating shown in section 7/B/8. All classes over 200mph, or wheel having a diameter of 29" or greater, must use wheels manufactured for racing or reinforced per section 2.G.wheels.

**7.H.12 Test Runs:** A series of test runs will be required of all Streamliners and riders. Vehicle stability and rider licensing evaluations will be conducted at speed increments specified in Section 1.M, Driver Licensing, until maximum speed is attained. Each run must be observed by the Contest Board observers and approved before advancing to the next higher speed. All speed tests will be terminated with a parachute test.

**7.H.13 Parachute:** A parachute is required on all Streamliners. Streamliners going over 250mph are required to have two parachutes, one for high speed and one for low speed. Parachute release mechanism must be mounted in a position allowing it to be activated without removing the rider's hands from the steering mechanism. It is required that automatic mechanisms be installed that will activate when the machine is laid over 50 degrees in enclosed tail streamliners, and 80 degrees on open tail streamliners. A demonstration of the parachute system including deployment is required at each event.

**7.H.14 Steering:** All steering systems shall be direct, gear or link type. The handlebars shall have adequate clearance and the mounting shall have sufficient support to prevent unwanted movement. All moving parts shall operate freely without excessive play. The steering linkage shall have sufficient clearance between the body and the chassis. All components must have sufficient strength to ensure stability and safety. Weld integrity and fabrication methods will be closely scrutinised during the inspection process. The technical committee may require Non Destructive Test Certification of the components and/or stress analysis of the design.

It is recommended that all steering system welds be visually inspected on a frequent basis. Competitors

may wish to periodically qualify exceptionally critical welds by means of x-ray or magnaflux certification.

All spherical ends (i.e., Heim) used in steering systems shall have washers with larger OD rather than the Heim to retain the joint should separation occur (solid type Heim joints are required). All bolts used in steering linkage must be at least grade 5. For vehicles with long steering shafts, the shaft shall be collapsible or have a secondary steering shaft stop installed.

Cable steering systems are not allowed.

**7.H.15 Brakes:** All Streamliners must be equipped with a rear wheel brake as required in 7.B.23 Brakes

### **7.H.16 Number/Class**

**Designation:** Streamliners must have a minimum number/letter area of 300 mm x 300 mm on both sides of the body.

**7.H.17 Tanks:** Fuel tank, oil tank and battery must be separated from the driver/rider by a firewall. No fuel lines may be routed through the rider compartment.

**7.H.18 Engine:** Any single or dual combination of motorcycle engines permitted. Not more than three (3) engines are permitted. Maximum total engine displacement is unlimited.

**7.H.19 Skids:** Streamliners using skids must have a positive lock in both the 'up' and 'down' positions. The shoe or contact area must have a good form of ski-nose, surface-friendly design. Skids are to be locked in a retracted position as soon as the motorcycle becomes stable.

**7.H.20 Batteries:** All batteries shall be properly secured with metal framework and fasteners. Plastic tie-downs are not allowed. Batteries may be mounted in the driver's compartment if sealed in an acid spill-proof box. All vehicles must be equipped with a main battery disconnect switch. The disconnect switch must be visible and clearly marked and placed in a location that allows shut-off if the streamliner has fallen on either side.

**7.H.21 Towing:** All streamliners shall have an obvious means of quickly attaching a tow strap for emergency towing off the race course.

## **7. I. Sidecar**

A side car is a three-wheel vehicle leaving two tracks with only the rear-most wheel driving. The front wheel's track must be entirely covered by the rear. (Road racing sidecars must run in special construction class)

**7.1.1 Passenger:** Passenger(s) are not allowed in or on the sidecar. Loading of sidecar wheel must be sufficient to assure stability. Properly secured weight or ballast may be used.

**7.1.2 Engine location:** The engine/engines must be located between the front and rear drive wheel, and the engine centreline located within the width of the rear tyre.

**7.1.3 Driver location:** The rider must operate the sidecar outfit with motorcycle type handlebars from a position which places his centreline between the front and rear drive treads. The rider must be able to exit the outfit without restriction, unless in compliance with enclosed streamliner rules.

**7.1.4 Chassis and Suspension:** The outfit's chassis and suspension may be of conventional solo motorcycle configuration utilising attached sidecar chassis and body/platform panels. Special construction chassis with integral or attached sidecars are permitted and encouraged. All wheel suspension is encouraged.

**7.1.5 Steering:** Telescopic fork, leading or trailing link or centre hub or spindle steering/suspension system may be used. Only the front wheel may be steerable. All systems must incorporate a steering damper. Cable steering is not permitted.

**7.1.6 Sidecar:** The sidecar unit may be located on either the left or right side. All universal type mounting brackets and rigid bar fittings must have adequate depth of engagement, rigidity, and security. All attaching fasteners must be safety wired or otherwise secured by visually verifiable means. Multiple rigid bars may be necessary to ensure rigidity. Universal mounts deemed inadequate for competition must be replaced with purpose-built component approved by the competition committee. Special Construction outfits with integral or attached sidecars will be evaluated for adequate dispersal of sidecar-induced stresses.

**7.1.7 Wheelbase and Track:** Track must be no less than 800mm and wheelbase between 1500mm and 3000mm. No wheelbase restriction on streamliners.

**7.1.8: Wheel size:** The front and rear wheel rim shall be no less than 10" nominal diameter. The

sidecar wheel rim may be no less than 5" nominal diameter. No size restriction on streamliners.

**7.1.9 Tyres:** The speed rating requirements for solo machines apply. See section 7.B.8

**7.1.10 Chain guard and wheel cover:** See section 7.B.22 Chain Guard requirements. The inside of the sidecar wheel must have a cover.

**7.1.11 Passenger Accommodation:** Sidecar platform must be of sufficient size and strength to accommodate a kneeling passenger. Minimum dimensions 300 mm wide by 800 mm long.

**7.1.12 Sidecar Streamliner:** This is the ultimate sidecar land speed vehicle. Innovation in design is encouraged. Must meet all sidecar requirements as well as two-wheel streamliner requirements, except Article 19, 'Skids'. Passenger accommodations and track requirements must conform to 7.1.11 and 7.1.7. No wheel base restriction for streamliners. All sidecars not meeting the unrestricted driver exit requirement in Section 7.1.3 must run in this class.

**7.1.13 Test Runs:** Vehicle stability and sidecar driver licensing evaluations will be conducted at speed increments specified in Section 1.M Driver Licensing, until maximum speed is attained. Adjustment of sidecar ballast and/or wheel alignment may be required.

## 7.J. Engine Classes

**7.J.1 Production:** Production engines must be the same model as the model of the frame being used and must have STOCK EXTERNAL APPEARANCE. Production motorcycles must use OEM cylinders, heads and crankcases to comply with this class. OEM engine displacement determines the displacement class for competition. Displacement may not be increased beyond that class limit. Starting mechanism must be retained and operable. Carburetors or throttle bodies must be OEM. Exhaust systems must remain OEM. All production engines run in gas class. (See Section 7.D.3)

**7.J.2 Production Pushrods:** Same as Production, but must have pushrod operated valves with camshaft located at least one crankshaft stroke

below the OEM cylinder deck position or utilise OEM pushrod length at least twice the crankshaft stroke.

### **7.J.3 Production**

**Supercharged:** Same as Production, but an original brand factory installed turbocharger or supercharger is allowed.

**7.J.4 Production Vintage:** Same as Production but must have been produced prior to 1956.

**7.J.5 Class F:** Unlimited in design, but must be comprised of major parts and components designed primarily for use in motorcycle engines. No restrictions on fuel. Superchargers or turbochargers are not permitted. Fuel injection is permitted.

**7.J.6 Class G:** Same as Class F, except it is limited to pump petrol.

**7.J.7 Class BF:** Same as Class F, except supercharger or turbocharger is required and must be mechanically or exhaust gas driven and must pressurise the intake system above atmospheric pressure. No restrictions on fuel.

**7.J.8 Class BG:** Same as BF, except it is limited to pump petrol. Water injection is allowed, but water tanks must be inspected and sealed prior to each record run.

**7.J.9 Class PG and PF:** Push rod engine. Any motorcycle engine with pushrod operated valves with the camshaft located at least one crankshaft stroke below the OEM cylinder deck position or utilise OEM pushrod length at least twice the crankshaft stroke.

Replacement heads must have the same number of valves as originally produced as a production engine. "G" designates a gasoline engine and "F" a fuel engine.

**7.J.10 Class VG and VF:** Same as Class G or F, except that the class is limited to motorcycle engines produced prior to 1956. Engines must utilise OEM crankcase, OEM cylinders on flatheads and two strokes and OEM heads on OHV engines. Above components made after 1955 and exact reproductions may be considered legal in Vintage classes if they offer no competitive advantage. Pre installation approval by the contest board is required. It is the entrants' responsibility to provide documentation and samples. A .050 inch overbore is allowed on vintage engines only (including production vintage) and will be discounted when the bore size is measured. Flat head engines may run with 50% more displacement than the normal class limit.

**7.J.11 Class PBG and PBF:** Same as (8) above, push rod classes, except that a supercharger or turbocharger is required; subject to the same limitations as Classes BF and BG, respectively.

**7.J.12 Class UG and UF:** Any reciprocating engine which uses the Otto cycle may run in Streamliner category or special construction category only. Supercharged engines do not advance class size.

**7.J.13 Class (Omega):** Engines using a thermodynamic cycle other than Otto. This class includes electric, steam, and turbine engines. Must comply with applicable frame class requirements. Entrant must submit complete power plant details to the technical committee for safety evaluation at least 60 days prior to the meet.

Benzene	%v/v		1.0	EN 238
RVP	kPa		9.0	EN12
Lead	g/l		0.005	EN 237
Density@15C	kg/m <sup>3</sup>	720	780	ASTM D 4052
Oxidation stability	minutes	360		ASTM D 525
Existing gum	mg/100ml		5.0	EN IOS 6246
Sulphur	mg/kg		150	ASTN D 5453
Copper corrosion	rating		C1	ISO 2160
Distillation:				
E @ 70* C	% v/v	15.0	50.0	ISO 3405
E @ 100*	% v/v	46.0	71.0	“ “
E @ 150*	% v/v	75.0		“ “
Final boiling point	*C		215	“ “
Residue	% v/v		2.0	“ “
Olefins	% v/v		18.	ASTM D1319(2)
Aromatics	% v/v		42.0	“ “
Total diolefins	% m/m		1.	GCMS / HPLC

The total of individual hydrocarbon components present at concentrations less than 5 % m/m must constitute at least 30% m/m of the fuel. The test method will be gas chromatography and /or GC/MS. The total concentration of naphthenes, olefins and aromatics classified by carbon number must not exceed the values given in the following table

%m/m	C4	C5	C6	C7	C8	C9+
Naphthenes	0	5	10	10	10	10
Olefins	5	20	20	15	10	10
Aromatics	—	—	1.2	35	35	30

The total concentration of bicyclic naphthenes and bicyclic olefins may not be higher than 1%

Only the following oxygenates are permitted: Methanol, ethanol, iso-propyl alcohol, iso-butyl alcohol, methyl tertiary butyl ether, ethyl tertiary butyl ether, tertiary amyl methyl ether, di-isopropyl ether, n-propyl alcohol, tertiary butyl alcohol, n-butyl alcohol, secondary -butyl alcohol.

## APPENDIX B Gaseous Fuels

### APPENDIX C Measurement of Capacities

#### Reciprocating movement engines ( Otto cycle)

The capacity of each engine cylinder is calculated by the geometric formula which gives the volume of a cylinder, the diameter is represented by the bore, and the height by the space swept by the piston from its highest to lowest point.

$$\text{Capacity} = \frac{D^2 \times 3.1416 \times C}{4}$$

Where D= bore C= stroke

## APPENDIX A

### Definition of Unleaded petrol (gasoline)

#### Physical properties for unleaded petrol

Unleaded petrol must comply with the following definition /specification.

Property	unit's	min	max	test method
RON		91	unlimited	ISO 5164
MON		85	“ “	ISO 5163
Oxygen	%m/m		2.7	ASTM D 5622
Nitrogen	% m/m		0.2	ASTM D 4629

### ROTARY ENGINES ( non wankel )

$$\text{Capacity} = \frac{2 \times V}{N}$$

Where V = total capacity of all the chambers comprising the engine

N= number of turns of the motor necessary to complete one cycle in a chamber

This engine is classified as a 4 stroke

### WANKEL SYSTEM

For Wankel system engines with a triangular piston , the capacity is given by the formula

$$\text{Capacity} = 2 \times V \times D$$

Where V = capacity of a single chamber

D = number of rotors

Classified as a 4 stroke

## APPENDIX D

### Motorcycle Types:

**Solo:** 2 wheeled vehicles making only one track on the ground.

**Sidecar:** Vehicles with 3 wheels making 2 tracks on the ground in the direction of forward travel

**Trike:** Vehicle with 3 wheels making 3 tracks on the ground in the direction of forward travel; the **rear** wheels are mounted on the same geometric horizontal axis

**Cycle Car:** Vehicle with 3 wheels making 3 tracks on the ground in the direction of forward travel, the **front** wheels are mounted on the same geometric horizontal axis

**FF,s** A vehicle fitting any of the above description except sidecars , the rider is seated in a prone (reclined /recumbent ) position with the ( feet forward)

## 3. APPENDIX E. TIPS

### TIPS, HOWTO AND OTHER GOOD STUFF:

Shade tents make great cover from the sun in the pits. Screw them down with roofing screws and a cordless drill.

Take plenty of drinking water. The DLRA supply water at the campsite, but it's quality is variable. Drink plenty of water. Dehydration is a risk, and has happened in the past.

Be self sufficient. There is a canteen near the lake that is run by the station owners each year, but the DLRA cannot guarantee its operation. The canteen supplies drinks and pies/pasties/steak sandwiches and hamburgers

Run the engines rich at first. It is easier to lean the engine than replace pistons.

Beware of forward facing scoops. The extra volume of air at speed can lean an engine, and turn good pistons into aluminium coating of your exhaust system.

Take a cordless drill and heaps of roofing screws. They are the best method of fastening things to the salt.

Small pieces of 3 ply and roofing screws are great for holding tarps down under vehicles. All vehicles and equipment are required to be positioned on tarps.

If you use pegs on the lake, you will need to pre drill undersize. Pegs cannot be driven into the salt.

Make sure that all tools are clean and oiled after the trip. Salt is fantastic for creating rust.

Take sunglasses, hat, lip and sunscreen. Put sunscreen on the underside of your chin etc. The reflection burns as much as the sun.

Make sure that the tow vehicle and trailer are not too low. The last 100 miles is over gravel roads.

Light Truck tyre on the trailer will minimise blowouts and punctures on the gravel.

There are no grandstands. Spectators walk through the pits and talk to the drivers and crews. Parking is in designated areas near pits and start line.

Take a chair to sit on and shade from the sun.


Bring a camera and lots of film because you will want to remember what you see. The brightly painted cars make great pictures against the stark white surface.

Binoculars are a help since the racing cars are at least 1/4 mile away when they are racing at speed.



## 4. APPENDIX F. FORMS

**F.1 Car Scrutineer's Inspection & Classification Form**

<h1 style="margin: 0;">Car Scrutineer's Inspection &amp; Classification Form</h1>	
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**Entry Number:** \_\_\_\_\_  
**Vehicle Classification** \_\_\_\_\_  
**Date:** \_\_\_\_\_  
 Entry Name \_\_\_\_\_  
 Driver \_\_\_\_\_ Owner: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Postcode \_\_\_\_\_  
 Engine: \_\_\_\_\_ CID: \_\_\_\_\_ No. Cyl: \_\_\_\_\_  
 Body Type, Year: \_\_\_\_\_ License #: \_\_\_\_\_ Class: \_\_\_\_\_

**RELEASE**

I, the undersigned, in consideration of the timing facilities and privileges extended to me, hereby agree in behalf of myself, my successors and assigns, that I shall accept full and entire responsibilities for any and all consequences, injuries or otherwise that may arise from the operation or my vehicle operated by me in any race, timing event or other contest or event conducted by the Dry Lake Racers Australia, and/or its members; and I hereby, in behalf of myself, my successors and assigns, release, covenant not to sue, and waive any and all legal liability and/or cause of action that I may have or hereafter acquire against the Dry Lake Racers Australia or any of its members or anyone employed or acting as timers, judges or any other capacity in conducting such races and/or timing events at Lake Gairdner South Australia or any other place.

_____	_____	_____
Owner's Signature	Driver's Signature	Alter. Driver's Signature
_____	_____	_____
Owner's Name	Driver's Name	Alter. Driver's Name

**UNDER 125 MPH INSPECTION**

	OK	NA	Corr.		OK	NA	Corr.
State Drivers License	_____	_____	_____	Seat Belts (Lap/Sash)	_____	_____	_____
Drivers Clothing	_____	_____	_____	Brakes	_____	_____	_____
Long Sleeve Jacket	_____	_____	_____	Front End & Steering	_____	_____	_____
Long Pants	_____	_____	_____	Tyre Condition	_____	_____	_____
Helmet - Snell 2000	_____	_____	_____	Fuel Lines	_____	_____	_____

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**VEHICLE INSPECTION CHECKLIST**

Over 200 MPH and New Cars require two inspectors

Over 250 MPH requires three inspectors

**SAFETY REQUIREMENTS**

	NA	OK-1	OK-2	OK-3
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____
12	_____	_____	_____	_____
13	_____	_____	_____	_____
14	_____	_____	_____	_____
15	_____	_____	_____	_____
16	_____	_____	_____	_____
17	_____	_____	_____	_____
18	_____	_____	_____	_____
19	_____	_____	_____	_____
20	_____	_____	_____	_____
21	_____	_____	_____	_____
22	_____	_____	_____	_____
23	_____	_____	_____	_____
24	_____	_____	_____	_____
25	_____	_____	_____	_____
26	_____	_____	_____	_____
27	_____	_____	_____	_____
28	_____	_____	_____	_____
29	_____	_____	_____	_____
30	_____	_____	_____	_____
31	_____	_____	_____	_____
32	_____	_____	_____	_____
33	_____	_____	_____	_____
34	_____	_____	_____	_____
35	_____	_____	_____	_____
36	_____	_____	_____	_____
37	_____	_____	_____	_____
38	_____	_____	_____	_____
39	_____	_____	_____	_____
40	_____	_____	_____	_____
41	_____	_____	_____	_____
42	_____	_____	_____	_____
43	_____	_____	_____	_____

**GENERAL COMPETITION REQUIREMENTS**

	NA	OK-1	OK-2	OK-3
44 Safety Hubs - NO "C" clip rears	_____	_____	_____	_____
45 Tires - as required for class or speeds	_____	_____	_____	_____
46 Alloy Wheels - 1/4" steel plate or washers	_____	_____	_____	_____
47 Magnesium wheel Zyglo stamp	_____	_____	_____	_____
48 Tires over 30" must have 1/2" studs	_____	_____	_____	_____
49 1" hex Lug Nuts where required	_____	_____	_____	_____
50 Wheel covers - 6 Screws or 3 DZUS Fasteners	_____	_____	_____	_____
51 Shock Absorbers for each sprung wheel	_____	_____	_____	_____
52 Bumper / Push Bar, NO TOWED STARTS	_____	_____	_____	_____
53 Ballast securely mounted and low	_____	_____	_____	_____
54 Neat appearance	_____	_____	_____	_____
55 NUMBER & CLASS DESIGNATION - Legible	_____	_____	_____	_____


**BODY REQUIREMENTS**

	NA	OK-1	OK-2	OK-3
56 Air Duct - rear 50% of vehicle	_____	_____	_____	_____
57 Belly Pan - Drain holes - Sub flooring	_____	_____	_____	_____
58 Step Pan - Sub flooring required	_____	_____	_____	_____
59 Floorboards - Securely mounted	_____	_____	_____	_____

\_\_\_\_\_  
1st. INSPECTORS Signature                      2nd. INSPECTORS Signature                      3rd. INSPECTORS Signature

\_\_\_\_\_  
1st. INSPECTORS Name                              2nd. INSPECTORS Name                              3rd. INSPECTORS Name

**F.2 Motorcycle Scrutineer's Inspection & Classification Form**

<h1 style="margin: 0;">Motorcycle Scrutineer's Inspection &amp; Classification Form</h1>	
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**Entry Number:** \_\_\_\_\_  
**Vehicle Classification** \_\_\_\_\_  
**Date:** \_\_\_\_\_  
 Entry Name \_\_\_\_\_  
 Driver \_\_\_\_\_ Owner: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Postcode \_\_\_\_\_  
 Engine: \_\_\_\_\_ CID: \_\_\_\_\_ No. Cyl: \_\_\_\_\_  
 Body Type, Year: \_\_\_\_\_ License #: \_\_\_\_\_ Class: \_\_\_\_\_

**RELEASE**

I, the undersigned, in consideration of the timing facilities and privileges extended to me, hereby agree in behalf of myself, my successors and assigns, that I shall accept full and entire responsibilities for any and all consequences, injuries or otherwise that may arise from the operation or my vehicle operated by me in any race, timing event or other contest or event conducted by the Dry Lake Racers Australia, and/or its members; and I hereby, in behalf of myself, my successors and assigns, release, covenant not to sue, and waive any and all legal liability and/or cause of action that I may have or hereafter acquire against the Dry Lake Racers Australia or any of its members or anyone employed or acting as timers, judges or any other capacity in conducting such races and/or timing events at Lake Gairdner South Australia or any other place.

Owner's Signature	Driver's Signature	Alter. Driver's Signature
Owner's Name	Driver's Name	Alter. Driver's Name

## TECHNICAL INSPECTION

<b>Paperwork</b>		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
1.A	TECH SHEET/LOGBOOK/TAG – check log no/tag, logbook comments, codes			
7.B.1	ENTRY NUMBER & CLASS DESIGNATION – contrasting, displayed correctly			
1.M	LICENCE – 125 mph or less – state Driver’s licence, 125+DLRA licence required			
<b>GENERAL REQUIREMENTS ALL MOTORCYCLES &amp; STREAMLINERS (if applicable)</b>				
<b>Riding Apparel &amp; Support Equipment</b>		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
7.C.1	HELMET – full-face with a shield, Snell tag SA2000 or later, M2000, AS1698			
7.C.2	RIDING SUIT – good condition, 1 piece or 2 piece zip together, all leather			
7.C.3	BOOTS – suitable for motorcycle riding and at least 8” high			
7.C.4	GLOVES – Must be leather, but no perforated or skeleton type			
1.L	SUPPORT VEHICLE EQUIPMENT – 2.5kg Fire Extinguisher and CB radio			
<b>Tyres and Wheels</b>		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
7.B.8	TYRES – Up to 130 mph – rated H or higher, 131 to 150 mph – V or higher, 151 mph + ZR or racing 250+ mph LSR or racing tyres only			
7.B.8	TUBELESS TYRES – only on tubeless rims, no tubes used on a tubeless rim			
7.B.9	TYRE VALVE STEMS & CAPS – must be metal			
7.B.9	ANGLED VALVE STEMS – must be anchored to resist deflection			
7.B.10	WHEELS/SPOKES – check for loose or missing spokes, bent or cracked rims			
7.B.15	AXLE NUTS & PINCH BOLTS must be secured by safety wire, pins or other devices			
<b>Fuel System</b>		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
7.B.25	FUEL TANK – must be well constructed and securely mounted			
7.B.25	FUEL TANK CAP – shall be a positive locking type or screw on			
7.B.25	FUEL LINES - must be safely routed and secured by metal clamps			
7.B.25	FUEL LINES – All unvalved lines are fire proofed, including tank crossover			
7.B.25	FUEL LINES – Clear fuel lines allowed if line is marked ‘for fuel use’			
7.B.21	NITROUS OXIDE SYSTEM – Bottle shut-off protected, location marked if covered			
<b>Controls</b>		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
7.B.3	THROTTLE – self-closing, quickly and smoothly, no throttle locks allowed			
7.B.23	BRAKE CONTROL(S) – operate with hand on handlebar or foot on foot peg			
7.B.2.1	ENGINE KILL SWITCH – positive off – not push and hold type, operable from grips			
7.B.2.2	ENGINE KILL LANYARD – required, check operation			
7.B.2.3	Fuel Pump Stop Lanyard – Required if engine kill lanyard does not shut-off fuel pump			
7.B.2.4	GASOLINE/FUEL PUMP SHUTOFF – operable from riding position, check operation			
7.B.2.5	FUEL SHUTOFF – operable from grips, check operation			
7.B.4	CONTROL LEVERS have ball-ends, ½” minimum diameter			
7.B.4	HANDLEBARS – handgrips must be located outside of the forks			
<b>Frame, Suspension &amp; Steering</b>		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
7.B.7	FOOT RESTS – required, location cannot expose rider to direct engine exhaust			
7.B.10	FORK STOPS – limits travel before hand touch or dampener bottoms			
7.B.4	FOR TUBE WIDTH – at least 6 inches (unless OEM)			
7.B.22	CHAIN/BELT GUARD – width at least 1.5 times chain/belt			
7.B.22	CHAIN/BELT GUARD – covers center front of sprocket to rear edge of rear sprocket			
7.B.22	PRIMARY DRIVE GEAR (counter shaft sprocket) must have side cover protection			
7.B.17	STEERING DAMPENER – required – (all classes)			
<b>Brakes</b>		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
7.B.22	BRAKES – functional front & rear brake required, unless class allows rear brakes only			
<b>Other</b>		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
7.B.24	BATTERY – securely mounted, metal frame, hold downs and fasteners only			
7.B.26	BALLAST – securely mounted, must be bolted – no hose clamps			
7.B.5	LIGHTS/MIRRORS – Removed or all glass or plastic lens are taped			
7.B.20	EXHAUST PIPE(S) – outlet(s) directed away from rider, rear wheel and the course			
7.B.14	RIDERS ‘SPACE’ – free of sharp edges, projections and other sources of injury			
7.B.12	WINDSHIELDS/WINDSCREENS – must be shatter resistant material			
<b>REQUIREMENTS FOR MODIFIED or SPECIAL CONSTRUCTION</b>				
		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
7.F.4	REAR WHEEL – must be covered by a fender or seat from the axle forward			

<b>ADDITIONAL REQUIREMENTS FOR MOTORCYCLE STREAMLINERS</b>				
<b>Apparel &amp; Support Equipment</b>		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
7.H.3	DRIVER'S SUIT/HEADSOCKS/SHOES/GLOVES – meet class requirements, SFI Tags attached			
<b>Driver Compartment</b>		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
7.H.4	ROLL BAR/ROLL CAGE/CROSS BRACES – meet class requirements, correctly braced			
7.H.4	ROLL BAR and HEADREST PAD – required in helmet contact area (SFI approved)			
3.D.1	SEAT – securely mounted – bottom and back			
7.H.5	SEAT BELT/SHOULDER HARNESS/CROTCH STRAP – securely mounted SFI spec 16.1 w/tags, not over 5 years old, add'l strap required for reclined drivers			
7.H.17	NITROUS OXIDE – no nitrous bottles in driver's compartment or engine compartment			
3.1	FUEL TANKS, BATTERY & FUEL LINES – are outside of driver compartment			
7.H.6	FRESH AIR VENT – driver compartment has adequate venting			
7.H.7	WINDSHIELD/CANOPY – shatterproof polycarbonate or acrylic or safety glass, 120 degree view			
7.H.14	DRIVER'S 'SPACE' – free of sharp edges, projections and other sources of injury			
7.H.10	BAIL-OUT DRILL – Verify driver is able to exit liner in a timely manner			
7.H.10	CANOPY – Check latch operation inside and out, exterior latch clearly marked "Open"			
3.L	STEERING CONTROL – operates freely, rigidly mounted, must have steering stops			
3.W	BRAKE CONTROL – inside cage/easy to operate with restraints on			
3.W/N/I	FIRE/FUEL/LIGNITION/PARACHUTE CONTROLS – Driver must demonstrate access/operation to each control while wearing helmet, suit and gloves and while properly restrained			
7.H.9	TYRES – fender must be fitted around any tyre within the driver compartment			
3.J	THROTTLE OPERATION – self-closing, quickly and smoothly			
<b>Fire Suppression System</b>		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
3.Q	MINIMUM AGENT REQUIREMENTS – meet class/speed minimums			
7.H.2	FIRE SYSTEM – Under 150 mph nozzle located in driver's area , over 150 mph – driver + engine			
3.Q	FIRE NOZZLES – Over 150, two(2) 180° nozzles directed to header/oil pan area			
3.Q	FIRE BOTTLES – must be securely mounted – hose clamps not acceptable			
3.Q	ANNUAL INSPECTION STICKERS – valid and readable without removing bottles			
<b>Chassis</b>		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
7.H.14	HEIM JOINTS – safety washers required on all heim joints			
7.H.19	SHOCK ABSORBERS – required for each sprung wheel			
7.H.13	PARACHUTE(S) – 1 required, 2 required over 250mph, check mounting/demonstrate operation			
7.H.23	MAIN BATTERY DISCONNECT SWITCH – visible and clearly marked outside			
7.H.19	SKIDS – positive lock in up & down positions, surface friendly design			
7.H.11	WHEELS – Over 200 mph must use race rims or be reinforced per 2.G			
7.H.1	FIREWALL – Metal/.060 minimum thickness, all holes sealed,			
3.F	Linkage passing through firewall goes through upper half only			
3.P	EXHAUST PIPE(S) – outlet(s) directed away from driver, wheels/tyres, and course			
7.H.1	DRAINS – has adequate drain holes in the engine/fuel compartment			
7.B.21	NITROUS BOTTLE – pressure relief valve vented to outside w/hard line, secure mount			
7.H.21	TOWING – must have obvious tow strap attachment			
<b>REQUIREMENTS FOR SIDECARS</b>				
		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
7.1.1	LOADING – side cars wheel must be sufficiently loaded to assure stability			
7.1.6	SIDECAR ATTACHMENT – attaching fasteners secured by safety wire, pins or other			
7.1.10	SIDECAR WHEEL – the inside (toward rider) of the sidecar wheel must be covered			

**Remarks**


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ENTRY NO: \_\_\_\_\_

F.3 Rule change or addition form

**Rule change or addition submission form**



Name: ..... Signature.....

Membership Number: ..... Date .....

Rule change   
addition

Description of change or addition (Attach additional sheets if space insufficient)

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Describe what you think the outcome of this rule change will be

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DLRA use only	Approved/Rejected/For consideration
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