

# DRY LAKES RACERS AUSTRALIA

Presents

## 2010 Speed Trials RULES

### 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 govern 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 **Race Director** is 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 **Race Director** 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 shall be submitted, in writing, to the Contest Board no less than 45 days prior to a meet.

The rule change process is an ongoing one. Any active DLRA member may submit a request for a rule change or clarification at any time by obtaining the proper form on-line at [www.dlra.org.au](http://www.dlra.org.au) or the registration tent at an event. The form shall be completely filled out and shall be submitted by Australia Post or submitted on-line to [info@dlra.org.au](mailto:info@dlra.org.au). The forms will be routed through the appropriate technical chair and committees for comment. When all appropriate research is completed, issues will be put on the agenda for discussion at the next scheduled meeting (usually in May of each year). Submissions received after April 1<sup>st</sup> of any year will not be considered until the next year's agenda.

### **IMPORTANT**

**Bold face words or sentences indicate updated rules.** ALL PORTIONS THAT ARE CAPITALISED CONTAIN IMPORTANT INFORMATION.

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# **SECTION 1**

## **GENERAL COMPETITION REQUIREMENTS**

The primary 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. Close observance of the minimum standards set forth in this Rule book is an important fundamental. **IT IS THE RESPONSIBILITY OF BOTH THE ENTRANT AND OPERATOR OF ANY RACE VEHICLE TO BE THOROUGHLY FAMILIAR WITH THE RULES HEREIN AND COMPLY WITH THEM.**

### **NOTICE:**

Land Speed Racing is a dangerous sport. There is no such thing as a guaranteed safe high speed run. Land Speed Racing always carries with it a risk which will always exist no matter how much everyone connected with Land Speed Racing tries to make our sport safer, Although the DLRA works hard to promote and enhance the safety of our sport, there are no guarantees that such safety measures will ensure safety. A participant always has the responsibility for their own safety and the safety of their crew. By participating in Land Speed Racing, the participant accepts all risk of injury, whether due to negligence, vehicle failure or otherwise. If at any time a participant does not accept these risks, the participant agrees not to participate in Land Speed Racing.

### **1.A TECHNICAL INSPECTION:**

Each participating vehicle (regardless of class) shall completely and satisfactorily pass Technical Inspection before any qualifying runs will be allowed. Two technical inspectors will inspect vehicles competing in classes in which the existing record exceeds 200 MPH. Vehicles competing in classes in which the record exceeds 250 MPH shall be inspected by at least three inspectors.

Where applicable, vehicles may 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 SHALL BE IN RACE READY CONDITION, i.e. RACE TYRES, SEAT BELTS, PARACHUTES, FIRE BOTTLES, ETC INSTALLED.** It may be required that the vehicle be presented for inspection on the ground. **LIMB RESTRAINT SYSTEMS EFFECTIVENESS SHALL BE DEMONSTRATED.** 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 require re-inspection. Failure to obtain such re-inspection will result in the loss of all times recorded in the new class. **VEHICLES EXHIBITING ILL HANDING SUCH AS SPINS, FIRES, ETC ON THE COURSE SHALL BE RE-INSPECTED AND MAY BE BARRED FROM FURTHER COMPETITION AT THE DISCRETION OF THE COTEST BOARD.** All vehicles to be

re-inspected shall be presented to the inspection area. Decisions by the Contest Board are final.

A DLRA VEHICLE LOG BOOK AND INSPECTION FORM SHALL BE PRESENTED FOR ALL TECHNICAL INSPECTIONS. The competitor for each event shall complete the "Event Record". The "Record of Vehicle Ownership" at the front of the logbook shall 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. Vehicles shall display an identification sticker matching the logbook number, permanently attached to the frame/chassis. Replacement identification stickers will be issued with DLRA Board approval only upon receipt of a written request citing circumstances.

Race vehicles, components or equipment are not considered approved or compliant by reason of having passed through technical inspection at any time, or any number of times. Moreover, a vehicle which has passed technical inspection at any time or any number of times is not a defense to a violation found on further inspections.

#### **1.B 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. THE DLRA CONTEST BOARD WILL NOT RECLASSIFY A VEHICLE ENTERED IN THE WRONG CLASS. ALL VEHICLES WILL RUN ONLY IN THE LOWEST PRIMARY CLASS/CATEGORY FOR WHICH THEY ARE LEGAL. IF A VEHICLE IS NOT LEGAL FOR A SPECIFIC CLASS IT MAY NOT NECESSARILY BE LEGAL FOR ANOTHER CLASS. THE VEHICLE SHALL MEET ALL CLASS REQUIREMENTS TO BE LEGAL FOR COMPETITION. ONCE A VEHICLE HAS LEFT THE STARTING LINE, THE ENTRY NAME AND CLASSIFICATION INFORMATION WILL NOT BE CHANGED.

If an appropriate class exists, a vehicle shall run in that class. Any vehicle, which is not legal for any class, but meets all technical regulations, may be allowed to run for time only. No trophies will be awarded for "time only" entries. Any questions regarding the proper classification of a vehicle shall be directed to the class chairperson as listed in Section 16.

Vehicle data codes shall be entered on the entry/inspection form. See Vehicle Entry Data Codes – Appendix A in the back of this book. All entrants running in Classic, Modified and Production classes must have pictures of the car as produced with their Log Book for certification purposes.

Proposal for the creation of new classes will be discussed at even year rule meetings for implementation in odd year rulebooks only i.e. 2011, 2013, 2015, etc.

### **1.B.1 CLASS CHANGE:**

A class change is defined as an engine displacement change, a change from Gas to Fuel, Blown to Un-blown or a body change such as Gas Coupe to Altered. A class change will require a complete re-inspection of the vehicle, issuance of a new number by the Registrar, the completion of a Class Change Form, and the payment of additional entry fees.

### **1.C STARTER:**

An official starter and assistant starter shall be appointed by either the Contest Board [or by nomination and election at the General Meeting of the DLRA](#), and will 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.

### **1.D 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.

### **1.E 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 **one mile** from the starting line and three timing traps placed as follows: the first trap timing **the entire second mile, the second trap timing the first quarter-mile of the third mile and a third trap timing the entire third mile**. The "long" course will consist of an approach of two miles from the starting line to four timing traps placed as follows: the first trap timing the first quarter mile of the third mile, the second trap timing the entire third mile, the third trap timing the entire fourth mile and the fourth trap timing the entire fifth mile. 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. All vehicles shall have a system for the timely removal from the race course. Pushing or towing is an acceptable method of removal.

All new vehicles shall not exceed 175 MPH or a speed as determined by the technical Committee on the first run. All new vehicles shall deploy the parachute, if equipped, on the first run. A new vehicle sticker will be endorsed by the starter following the successful completion of the requirement.

## **1.F 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 1.L. All vehicles, except streamliners shall 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 mile trap on the short course may be timed through the full five miles of the "long" course at the driver's option. A vehicle must qualify for the long course in the SAME class in which it is entered. Any vehicle may compete on the "short" course.

A vehicle will be considered as qualified at the completion of the first leg of the two way record attempt. The same driver/rider shall operate the vehicle for both halves of the record attempt for a record to be valid. Except for Streamliners, record attempts against records of less than 175 MPH SHALL be made on the short course regardless of previous vehicle performance.

**NOTE:** Classes with no listed record are considered as open. Record run procedures will be the same as classes where a record exists.

## **1.G RECORD RUNS:**

### **1.G.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 175 MPH 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.

### **1.G.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. Only the fastest average speed will be used for record calculation. The same engine block shall be used for the two run average of each record attempt. Qualifying runs that exceed the existing class record are 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 shall 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 of check-in to 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 shall 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 DLRA Rule Book in **bold text**.

If a DLRA sanctioned event has a designated gasoline/diesel fuel sponsor, that sponsor's product SHALL be used for all class record attempts. All tanks will be sealed by a DLRA official or designee for all qualifying and record runs. Vehicles competing in fuel classes are exempt from this requirement. A technical station may be used to assure compliance of the gasoline/diesel fuel.

**NOTE:** The Bonneville 200 MPH Club records and minimums may not be identical to the SCTI-BNI records listed in the SCTA-BNI Rule Book and may differ to the requirements of the DLRA 200 MPH Club.

#### **1.H RECORD BODY AND CLASS CERTIFICATION:**

All record breaking vehicles shall 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 a 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. Engine seals are good for one year, 365 days.

Record setting engines which cannot be certified by direct measurement of the bore and stroke or with the DLRA air pump may require special tools. The entrant shall provide any special tooling required to measure an engine. The Technical Committee will certify special tools for accuracy. Any engine that cannot be measured using the DLRA air pump or special tools will require disassembly for direct measurement of cubic inch displacement.

After a new record has been established and there is a question as to the legality of the vehicle the Contest Board has the authority to place the record on hold or reverse the record.

### **1.I PROTESTS:**

All protests must be made in writing using an official DLRA Protest Form. The completed protest form shall be given to a Contest Board member prior to record certification or within 24 hours of the record being certified. All protests require a fee of \$100.00. This fee is refundable if the protest is upheld, and if the protest is denied the fee is forfeited to the DLRA Treasurer. 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.

### **1.J TROPHIES:**

Trophies may be presented at the discretion of the DLRA.

### **1.K TIMING PLAQUES:**

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 certificates 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.](#)

### **1.L PARTICIPANT CONDUCT:**

Any participant who shows any signs of intoxication will be barred immediately from an event. A DRIVER/RIDER SHALL BE IN OR UPON THE RACE VEHICLE ANY TIME THE ENGINE IS RUNNING. 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 also the race vehicle. Riding in the back of open pick-up trucks is prohibited. This rule will be strictly enforced. AN OPERATIONAL CB RADIO (UHF) SHALL BE IN USE IN ALL PUSH/RECOVERY/SUPPORT VEHICLES. HAND HELD CB RADIOS DO NOT QUALIFY DUE TO LIMITED RANGE AND POWER.



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.

**ALL VEHICLES INCLUDING PUSH CARS ARE TO HAVE FULL LENGTH DROP SHEETS PLACED UNDER THE VEHICLE WHIST STATIONARY ON THE LAKE SURFACE.**

### **1.M DRIVER LICENSING:**

All drivers/riders shall have a current DLRA competition license. These may be obtained by application to the DLRA officials after meeting the requirements listed below. ALL DRIVERS SHALL COMPLETE & SUBMIT A MEDICAL INFORMATION FORM. A driver under the age of 18 must have a signed Medical & Minor Release Form from a parent or guardian before he/she 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. Successful completion of the license requirements shall include, but not be limited to, starting line procedure, course navigation and shutdown procedure as determined by the Contest Board. ALL NEW DRIVERS/RIDERS SHALL ATTEND A ROOKIE ORIENTATION MEETING PRIOR TO THEIR FIRST COMPETITION RUN. The official conducting the meeting will issue a signed rookie sticker. Time and place for the orientation meeting will be announced at the start of the meet.

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

Drivers/riders upgrading their license(s) are restricted to using the short course for license grades below 175 MPH, (Category C and below). The driver shall exceed 175 MPH in the quarter mile trap of the short course before moving to the long course for further license upgrades.

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.](#)

#### **1.N COURSE DAMAGE:**

Any race vehicle or sub-component thereof such as header exit, total loss of water system, non-pneumatic wheel/tyre combination, etc that has the potential or has demonstrated a tendency to damage the race course 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.

#### **1.O RETENTION OF VEHICLE AND/OR PARTS:**

The participant hereby grants the DLRA and its assigns 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 the 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.

#### **1.P TECHNICAL COMMITTEES:**

Correspondence relating to rules or specific technical or safety questions shall be directed to the Car/Motorcycle Technical Committee Chairperson, see **Section 9 Officers and Board Members Contact Information.**

#### **1.Q SAFETY EQUIPMENT:**

Additional safety equipment or safety enhancing equipment is always permitted. The levels of safety equipment stated in the Rule Book are the minimum prescribed levels for a particular competition class and do not prohibit the use of additional safety equipment. Participants are encouraged to investigate the utilization of additional safety devices for their application to the competition class entered. In the case of a dispute as to whether an item is safety-enhancing or performance-enhancing, the final decision will rest, solely and absolutely, with the DLRA.

## SECTION 2

# CAR COMPETITION SPECIFICATIONS

### 2.A ENGINES:

Any internal combustion engine using either a two stroke or four stroke Otto cycle or Diesel cycle may run in any category, except for Vintage engine classes here-in-after described. In XF, XO, XXF, XXO and V4 and V4F 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 class. Only Streamliners and Unlimited Diesel Trucks may use more than one engine at the same time. For any engine to be considered for cubic inch (cc) requirements, the engine shall have contributed to the propulsion of the vehicle, Reaction propulsion engines are prohibited, except during exclusive meets.

The displacement of reciprocating engines will 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. The cubic inch to litre conversion shall be computed by the formula: cid/61.024 = litre.

### ENGINE CLASS BREAK

Ω Engines using a thermodynamic cycle other than Otto

	Cubic Inch Displacement	Approx. Litre Equivalent
AA	501.00 cid and over	(8.210 litres and over)
A	440.00 thru 500.99 cid	(7.210 to 8.209 L)
B	373.00 thru 439.99 cid	(6.112 to 7.209 L)
C	306.00 thru 372.99 cid	(5.015 to 6.111 L)
D	261.00 thru 305.99 cid	(4.277 to 5.014 L)
E	184.00 thru 260.99 cid	(3.015 to 4.276 L)
F	123.00 thru 183.99 cid	(2.016 to 3.014 L)
G	93.00 thru 122.99 cid	(1.524 to 2.015 L)
H	62.00 thru 92.99 cid	(0.016 to 1.523 L)
L	46.00 thru 61.99 cid	(0.754 to 1.015 L)
J	31.00 thru 45.99 cid	(0.508 to 0.753 L)
K	Up to 30.99 cid	(0.507 L and under)

### 2.A.1 VINTAGE ENGINES

**Vintage engine classes listed below refer to “blocks or crankcases” and are intended to be representative examples of those listed and recognisable as such. Vintage engine class competitors are required to use production blocks as specified. Modification to such blocks shall be limited to original factory authorised replacements and shall retain all original dimensions, excepting modifications involving intake/exhaust ports, cooling ports and specialty head adaptation pursuant to the following criterion: Cylinder bore centres shall be maintained to**

**within .150” of original design; crankshaft centerline to original deck height measurement shall be within .150” of original design; original deck material and thickness shall be maintained to within .150” of original design.**

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 above, with a specialty cylinder head as described below, e.g. overhead valve conversion cylinder heads, such as Ardun Ford.

XXO class is an XO engine, as described above, with a specialty cylinder head as described below e.g. the Repco cross-flow or Wayne 12 port.

A specialty cylinder head is fabricated, created from billet stock or cast. At least one valve per cylinder shall be in the head. All X class engines, as described above, which are over 325 cid, but less than 375 cid, shall be classified as either XXF or XXO. Specialty cylinder heads are NOT allowed in this instance.

Overhead cam specialty cylinder heads are not allowed in the XF, XO, XXF, & XXO engine classes.

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.

The Vintage Four (V4) engine class is allowed in Special Construction and Vintage categories only.

**NOTE:** See exception under Rules for Vintage Oval Track Category.

V4F (Flathead Vintage Four) consists of any pre-1935 originally designed and American made flathead four-cylinder automotive production engine, up to 220 cid. The engine shall have been produced as a valve in block engine, the camshaft must remain in the same location as produced (in the block). Only flathead-type cylinder heads (valve in block) are allowed. No specialty OHV or OHC conversion cylinder heads are allowed.

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 & V4F, using Vintage bodies:

1. Turbochargers are not permitted.
2. Computers are allowed for data collection purposes only.
3. Electronic fuel injection prohibited.
4. Any ignition system may be used.

## **2.B FUELS:**

### **FUEL CLASSES:**

In fuel classes, any approved liquid fuel may be used. Examples of approved fuels are: all alcohols and ethers, hydrogen, nitro methane blends, nitrous oxide, and unapproved gasoline.

### **GASOLINE CLASSES:**

The DLRA defines gasoline to contain no nitrogen bearing compounds, no propylene oxide, no ethylene oxide, and no more than 10% methanol. The contest board may choose any test or combination of tests to assure liquid fuels used in GASOLINE classes comply with specifications. The tests may include, but will not be limited to testing for the dielectric constant (D.C.) value, colour comparisons, specific gravity, gas chromatography, mass spectrometry and/or other testing methods. The addition of compounds containing oxygen, such as ethanol, methanol and other oxygenates, may produce a mixture with a D.C. greater than 15.0 as measured with a Kalvico Model FT-K01 “DC Meter” zeroed on reagent grade, pure CYCLOHEXANE. 15.0 is the current dielectric ceiling. Most gasoline will check under this ceiling. At a non-“EVENT” gasoline meet, any gasoline that measures 15.0 or less on the DC scale and meets all other DLRA requirements will be allowed.

All liquid gasoline blends can be tested and certified to have a specific D.C., colour, specific gravity, and other chemical properties. All gasoline that is tested and meets the DLRA definition of gasoline may be allowed on a case by case basis by the Contest Board. It is recommended that unknown gas be submitted to the DLRA and checked before use in competition.

### **EVENT GASOLINE:**

If the Contest Board establishes an “EVENT” gasoline or multiple gasolines or diesel fuel, those fuels shall be used for record attempts where required by class rules. A gasoline may be approved that does not meet the simple 15.0 or below D.C. constant measurement, if the DLRA Board receives proof from a reliable, certified source that the gasoline in question meets the DLRA definition of gasoline.

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 will compete in gasoline classes. Diesel fuels may also be tested.

Due to special considerations required when using gaseous fuels, contact the Fuel Specialist for further information, see Section 9.

## **2.C 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 shall be of sufficient strength to resist flex or twist. The burden of proof of the strength of the frame design lies with the entrant.

## **2.D SHOCKS:**

A functional shock absorber is required for each sprung wheel.

## **2.E DRIVE HUBS:**

Any car equipped with a non-retained axle bearing (non-Hotchkiss type rear axle) assembly shall 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.

## **2.F TYRES:**

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 100 MPH:	Original equipment tire Q rated.
Up to 115 MPH:	Original equipment tire S rated.
Up to 120 MPH:	Original equipment tire T rated.
Up to 130 MPH:	Original equipment tire U rated.
Up to 150 MPH:	Original equipment tire H rated.
Up to 200 MPH:	VR and ZR rated tires.

In excess of 200 MPH: Special tires 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.

The use of non-rated tyre(s) such as implement, farm, aircraft or reproduction of a vintage automobile or motorcycle tyre, or any non-pneumatic wheel/tyre combination (no rubber) shall be submitted for approval to the Contest Board in writing 45 days prior to the event. Any wheel/tyre combination that has a square edge at the tread/sidewall, is strictly forbidden, see Section 1.N.

Tubes are required, except for racing tires expressly designed for use without tubes. It is mandatory that all entrants follow the tyre manufacturer's air pressure recommendations. Caution should be exercised on excessive pressure.

Exceptions on any part of the foregoing may be granted by submission of a letter from the manufacturer stating the speed and pressure at which a tyre may be run. No re-caps are allowed. Tyres are subject to inspection by the Contest Board at any time. Adequate tyre clearance between the tyres and the body or chassis is required.

Metal valve caps shall be fitted to all tyre valve stems.

## **2.G WHEELS:**

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, shall have an initial Zyglo certificate and stamp available. Inspections made with tires mounted are accepted. Wheels are to be re-inspected if any adverse condition arises. 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:** One inch (1in.) lug nuts are required on all vehicles  
Wheels used must be manufactured for racing or reinforced as below:

**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 shall be manufactured for racing purposes or reinforced as follows; **REINFORCEMENT SHALL BE DONE** 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 shall be securely mounted to the wheel or axle. All hub caps must be removed.

## **2.H TREAD:**

Tread is defined as the measurement from the centreline of one tyre to the centreline of the opposite tyre of paired wheels.

### **2.I PUSHBARS:**

All cars incapable of starting under their own power shall be equipped with bumpers or push bars. Push bars shall not offer any aerodynamic advantage. No horizontal paneling is allowed between the rear of the body and the bumper/push bar. No towed starts will be permitted from the starting line without special approval. All cars shall be equipped with a push bar or a permanent tow attachment.

### **2.J 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. See Section 4.CC. It is recommended that ballast be mounted as low as practical.

### **2.K APPEARANCE:**

All vehicles entered in an event must be maintained so as to present a neat appearance. All white, silver or 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.

### **2.L 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.](#)

Numbers shall be a minimum of 3in. high. The current class designation shall appear on the race vehicle adjacent to the number. The sale of a race vehicle does not transfer the number to the new owner. Changes shall be reported to the Competition/Entry Numbers Coordinator, see Section 16.

New numbers- Concerning the availability or assignment of numbers, contact the Competition/Entry Numbers Coordinator, see Section 16.

### **2.M CANOPIES:**

Canopies enclosing the driver are permitted in Streamliner and Lakester classes only. The canopy shall be securely closed in competition by the employment of a mechanical fastening. The steering mechanism can move, but the canopy shall not be attached to the steering column. Canopies shall be capable of being opened from both the inside and outside without the use of tools. Latches shall be clearly marked on the outside of the vehicle.

### **2.N 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 that are otherwise acceptable in the category.



**2.O TARPULINS 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 pickup beds shall be aligned with and no higher than the sides of the bed.

**2.P 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.

**2.Q COMPUTER:**

Vehicles may be equipped with a computer which effects engine operations ONLY, eg., timed fuel injection, etc. (except Vintage Engine classes) see Section 2.A.1.

**2.R DATA RECORDERS:**

Entrants in all classes may use a data recorder.

# SECTION 3 TECHNICAL SPECIFICATIONS & REQUIREMENTS

## 3.A DRIVER'S CLOTHING:

All drivers shall wear a driver's suit, gloves, head sock or helmet skirt and boots. Protective underwear is highly recommended. All items shall be in clean and serviceable condition. It is advisable not to wear synthetic clothing material under the driver's suit. All drivers' suits shall be SFI certified and have the SFI rating tag attached.

### 3.A.1 Minimum Driver's Suit Requirements:

Type of Vehicle

Blown front engine cars over 175 MPH

Suit	SFI 3.2A/20
Boots	SFI 3.3/15
Gloves	SFI 3.3/15
Head sock	SFI 3.3

All other cars over 175 MPH

Suit	SFI 3.2A/15
Boots	SFI 3.3/5
Gloves	SFI 3.3/5
Head sock	SFI 3.3

All vehicles under 175 MPH

Suit	SFI 3.2A/10 or /5 with full Nomex underwear
Boots	SFI 3.3/5
Gloves	SFI 3.3/5
Head sock	SFI 3.3

ALL DRIVERS SHALL WEAR A HEAD SOCK OR HELMET SKIRT.

### 3.A.2 Driver's Helmet:

All driver's/riders shall wear a full-face helmet with face shield. A Snell Foundation tag reading SA2000 or M2000 or later is required. **Snell Foundation 2005 or later certification will be required on all car and motorcycle streamliner helmets beginning on January 1, 2011.** No open face helmets will be allowed. Helmets will be visually inspected at least once each year. Helmets shall be undamaged and in a serviceable condition. Eyeglasses worn under the helmet shall be shatterproof. **All cars and motorcycle streamliners require SA rated helmets.**

### 3.A.3 Driver's Helmet Support:

A forward, side and rear helmet support system shall be used in all vehicles.

**Forward movement:** All NEW cars and motorcycle streamliners presented for inspection shall have an engineered and tested SFI spec 38.1 type head and neck restraint system. **Beginning January 1, 2011 all cars and motorcycle streamliners shall have an engineered and tested SFI spec 38.1 type head and neck restraint system.**

**Lateral movement:** The seat or roll cage structure shall provide restriction to lateral head movement of less than 2 in. per side inclusive of structure deflection, see Section 3.B.1.

**Rear movement:** see Section 3.C.

### **3.B ROLL CAGES:**

**ALL CARS IN COMPETITION SHALL BE EQUIPPED WITH A FULL ROLL CAGE.**

ALL DEVIATIONS TO ROLL CAGE STRUCTURE RULES SHALL 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 roll cage structures. Threaded pipe, pipefitting, lap weld pipe, magnesium or aluminum is not permitted. All bolts shall be 3/8 in. minimum diameter and a grade 5 minimum.

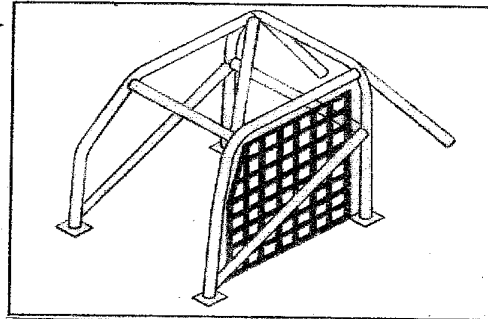
All bolted structures shall have at least two bolts (180 deg. apart) through the support pads and roll cage structure brace connections.

On unitized construction and monocoque cars, the roll cage structure and braces shall have 1/4-in. thick pads on the top and the bottom of the floor (or sill, in a sandwich construction) and shall be of sufficient area to support an impact load equal to the weight of the car. For cars weighing less than 2500 pounds these pads shall have a perimeter of at least 18in. (i.e., 4in. x 5in.) and cars over 2500 pounds shall have at least 22in. perimeter (i.e., 5in. x 6in.).

#### **3.B.1 Roll Cage:**

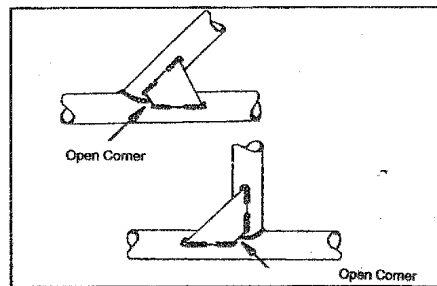
Minimum requirements for the roll cage structure and the roll cage structure braces are 1-5/8 in. O.D. round steel tubing with a minimum .120 in. nominal wall thickness or E1430 chromoly tubing with a minimum .095 in. nominal wall thickness, securely mounted, gusseted and braced within 5 in. of the top of the roll cage structure. All roll cage structures shall be designed to protect the driver from any angle, including the bottom and the rear. All roll cages for G, H, I, J & K classes may be made of round steel tubing not less than 1-1/2 in. O.D. x .095 in. nominal wall thickness. Vehicles in classes where the existing record exceeds 175 MPH shall 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, see Figure 1.



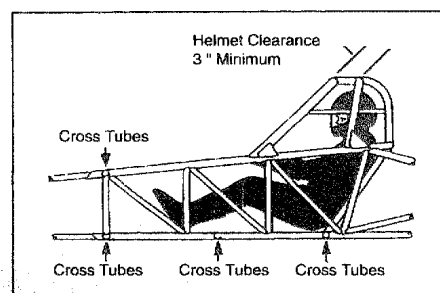
**FIGURE 1**

Gussets are required at tube junctions of hoops and shoulder rail. Gussets shall be made of mild steel, .125 in. minimum thickness and 4 in. per side, preferably stitch welded on the outside of the tube junction, and are required at all shoulder bar attachment points, Grinding of welds is NOT permitted, see Figure 2 and 3.



**FIGURE 2 and 3**

The front hoop of the roll cage shall be at least 3 in. in front of the driver's helmet whilst the driver is in his normal driving position. A lateral movement structure, see Section 3.A.3 shall be constructed such that the helmet cannot exit the outer plane of the roll cage, see Figure 4.



**FIGURE 4**

Deviation requests shall include strength calculations, drawings and/or pictures showing all physical dimensions of the roll cage bar structure and adjacent frame. All roll cage structures shall be designed to encapsulate and protect the entire driver's area from impact. The roll 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.

### **3.B.2 Roll Cage Padding:**

Padding meeting SFI SPECIFICATION 45.1 for round tubing and SFI SPECIFICATION 45.2 for flat plate construction is required in the proximity of the driver's helmet.

### **3.C HEAD REST:**

A padded head rest shall be installed in all vehicles to prevent whiplash. All drivers shall have the padding within 2 in. of the back of the helmet.

## **3.D DRIVERS RESTRAINTS**

### **3.D.1 Seats:**

All vehicles shall use a seat designed for racing. The seat shall be constructed of a metal or alloy sufficient to retain the driver under high "G" loading. Composite seats must be pre-approved by the technical committee. No "plastic" seats will be allowed. The seat shall be securely fastened and have a maximum of 1 in. of padding. Sprung or compressible seats are prohibited. Seats shall be securely installed and braced to prevent rearward collapse.

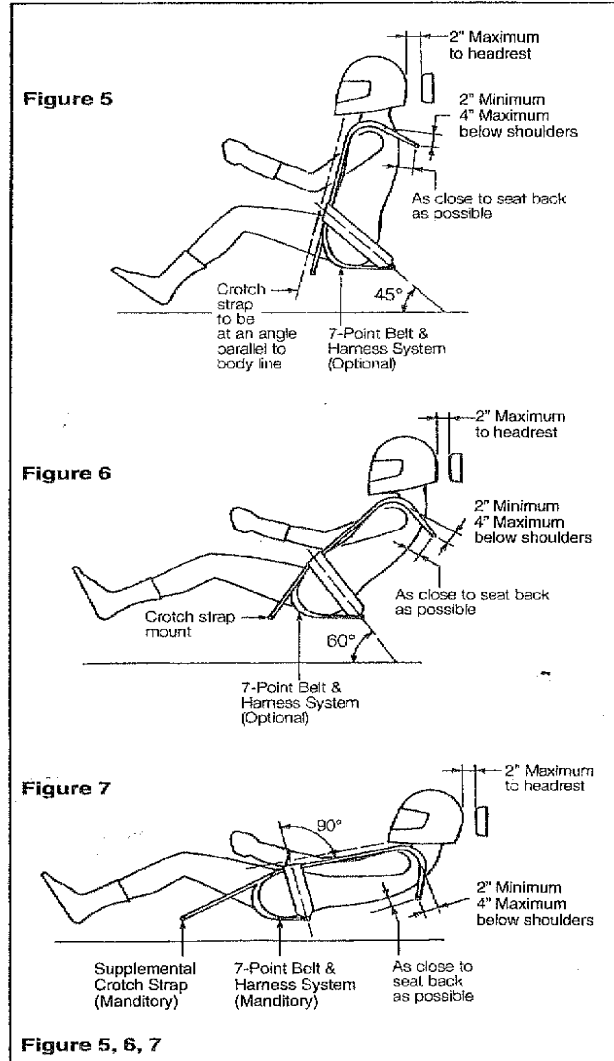
### **3.D.2 Seat Belts:**

Seat belts meeting SFI specification 16.1 quick release, competition type seat belts and shoulder harness, with 3 in. lap belt, 3 in. shoulder belts (unless designed to meet the installation requirements of a helmet support system, SFI 38.1), and 2 in. crotch strap are mandatory in all categories. All seat belt and shoulder harness installations shall be mutually compatible, originally designed to be used with each other. Crotch straps are required in all categories. All belts shall be in good condition and have a manufacturer's tag with a legible date not more than 5 years old on the label. It is recommended that the seat belts be upgraded every two to three years. When arm restraints are worn with a belt system that utilizes 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.

Seat belts and shoulder harnesses shall be installed to the manufacturer's specifications and in compliance with the helmet support requirements with special consideration given to the shoulder belt interaction with the HANS type device, i.e. belts not being properly retained in support of the device. Seat belts shall be securely fastened to the frame, cross member or reinforced mounting points so that 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 5 bolts. Under no circumstances are bolts to

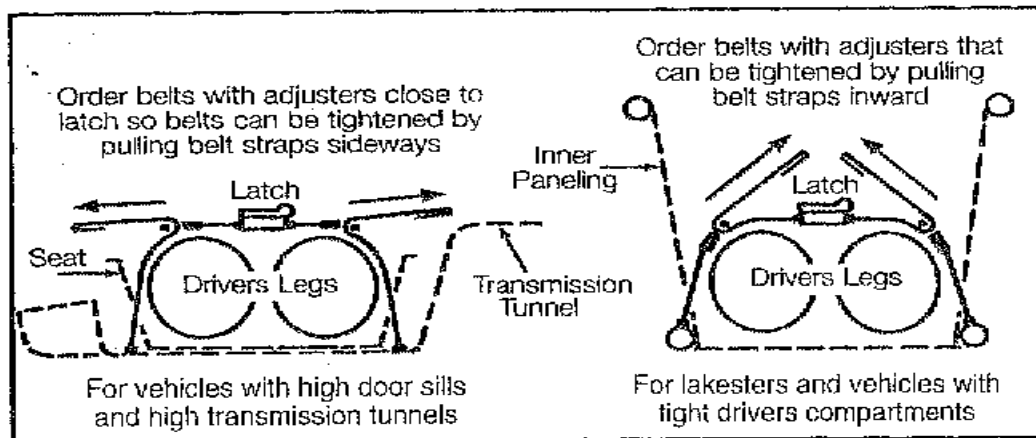
be inserted through the belt webbing. The shoulder harness shall be mounted in a manner as to prevent slipping off the driver's shoulders, see figures 5, 6 & 7.

### Recommended Seat Belt Mountings



A supplemental strap to prevent the driver from sliding up into the roll cage shall be added to vehicles where the driver is in a reclining position, see figure 7. In a vehicle with minimal cockpit room, consideration should be given to ensure the seat belt tighten pull is to the centre of the vehicle, see Figure 8.

**THE SEAT BELT CLINCHING MECHANISM SHALL NOT BE ON TOP OF EITHER THE SFI TAG OR A MANUFACTURER'S LABEL. IF THE BELT CANNOT BE INSTALLED IN THIS MANNER, THE TAG SHALL BE RELOCATED SO AS TO BE VISIBLE.**



**FIGURE 8**

### 3.D.3 Arm/Leg Restraints:

SFI specification 3.3 arm restraints with a manufacturer's date of 2006 or later are required in all vehicles.

Legs shall be restrained by tethers, panels, bars or a net. The restraint system shall be capable of preventing the driver's arms/legs from extending outside the roll cage structure and/or frame rails in case of an incident that includes a body panel separation. Participants are cautioned that all controls are 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 with the driver's belts. The restraint system shall be one of the various types available on the market.

NASCAR nets are acceptable as the primary leg restraint system. All mounting tabs/brackets shall not be exposed to the track surface in case of an incident or come in contact with the driver's body. All nets shall be mounted in such a manner that they fall from the top and out of the driver's way. All nets shall be mounted so that the driver can exit the car without assistance. The manufacturer shall perform any modifications to window nets.

NOTE: In all categories when a coupe, sedan or pickup body is used the restraint systems shall be effective without the door installed. To meet this requirement it shall be necessary to have arm restraints and a "full" door net. All door net mounting bars shall not be flexible and shall be attached with a positive locking system, e.g. seat belt hardware.

All Special Construction vehicles shall 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 cage structure.

### **3.E DRIVER'S COMPARTMENT:**

All driver compartments, driver's positioning and surrounding structures shall be designed to support good forward vision. The driver shall be able to exit the driver's compartment with ease. All doors, hatches and canopies shall be able to be opened from both inside and outside the vehicle without the use of tools. Non OEM latches shall be clearly marked on the outside of the vehicle.

On closed cars, door locks and steering wheel locks shall be rendered inoperative. The driver shall be able to reach all switches, valves and levers while strapped securely in the seat. Cars with front engines shall have the rear of the flywheel housing forward of the driver's knees. The driver's compartment shall be free from sharp edges, protrusions, brackets, etc. within close proximity of the driver. All enclosed driver's compartments shall be equipped with a forward pointing fresh air intake or breathing system directed toward the driver and have adequate venting to carry away fumes. COMPRESSED OXYGEN BREATHING SYSTEMS ARE PROHIBITED. All air breathing and cooling systems that supply air to the driver must have fire retardant protection on the hoses that supply air. A cross-member running below the driver's body, no smaller than the roll cage diameter applicable to the class, shall protect any portion of the driver's body that extends below the frame rail.

### **3.F 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 shall be made of metal with a minimum thickness of .060 in. A thickness of .095 in. is recommended. All holes shall be sealed.

### **3.G SECONDARY FLOORING**

All cars with modified floor pans shall have secondary flooring of metal in the driver's compartment capable of retaining the driver and appendages in the event of the loss of the modified floor/belly pan(s). The secondary flooring must be securely attached to the frame or cross member. Expanded metal will be accepted if sufficiently rigid. Except in Vintage Oval Track Class, secondary flooring shall be no lower than the bottom of the frame plus the thickness of the material used.

### **3.H TRANSMISSION SHIELDS:**

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

#### **3.H.1 Transmissions:**

Any type of transmission may be used in any class. Automatic transmissions shall have a positive reverse lockout to prevent accidental reverse gear engagement.



### **3.I FUEL SYSTEMS:**

The complete fuel system shall be securely mounted. Plastic fuel lines are not permitted. A metal screw type clamp shall be on each connection of rubber or steel-braided fuel line. **No flexible fuel lines of any kind are allowed in the driver's compartment.** 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 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 be protected in the plane of the blower drive, if used. Nitrous Oxide cylinders or any other type of oxidizer cylinder are considered the same as fuel tanks and shall not be mounted in the driver's compartment.

#### **3.I.1 Fuel Shut-off:**

All cars equipped with other than a 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 electric fuel pumps shall have an inertial **or other positive "shut off switch" e.g. microprocessor controlled or oil pressure switch.**

All rotating fuel shut-off valves SHALL have a positive stop to prevent reopening of the valve.

#### **3.I.2 Nitrous Oxide Systems:**

Nitrous Oxide bottles and lines are considered a portion 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 indicated on the exterior of the vehicle. The Nitrous Oxide bottle(s) shall be removed when competing in gasoline classes.

THE NITROUS OXIDE BOTTLE PRESSURE RELIEF VALVE SHALL BE VENTED TO THE OUTSIDE OF THE VEHICLE BY A RIGID LINE.

### **3.J THROTTLES:**

All cars shall be equipped with a redundant, self-closing throttle control with two (2) adequate return springs. There shall also be a positive stop to prevent sticking in the "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.

### **3.K 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 shall be equipped with a main battery disconnect switch. The disconnect switch must be visible and clearly marked.

### **3.L STEERING**

All steering systems shall be gear or link type. The steering wheel shall have adequate clearance. The steering column shall be rigidly mounted. All moving parts shall operate freely without excessive play. The steering linkage shall have sufficient clearance between the body and the chassis. Steering shall be assured by at least two (2) front wheels.

It is recommended that all steering system welds be visually inspected on a frequent basis. Competitors may wish to periodically qualify exceptionally critical welds (king pin bugs, radius rod brackets, spring perches, etc.) by means of x-ray or magnaflux. If a potential problem is observed in the inspection process, the Technical Committee may require the competitor to provide an x-ray or magnaflux certification.

All spherical rod ends (i.e; Heim) used in steering systems shall not be constructed of aluminum and shall 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 shall be at least grade 5. For vehicles with long steering shafts, as used on rear-engine Streamliners and Lakesters, the shaft shall 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 minimize steering pull with loss of traction or drive line failure. Cable steering systems as used on the Ford Pinto are not allowed.

### **3.M PARACHUTE:**

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

Parachute failures, such as the parachute pack not opening, parachute canopy not opening, parachute separation from the vehicle, handling problems as a result of parachute opening, etc: all require re-inspection.

**ALL VEHICLES HAVING A PARACHUTE FAILURE SHALL RETURN TO THE INSPECTION AREA WITH ALL COMPONENTS OF THE PARACHUTE SYSTEM. A NOTATION SHALL BE MADE IN THE VEHICLE LOG BOOK DESCRIBING THE FAILURE AND SOLUTION.**

### **3.N PARACHUTE RELEASE**

Any car equipped with a parachute shall 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 all safety equipment. All non-manual parachute release systems must also have a redundant, manual release as a backup that meets the above requirements.

### **3.O FLYWHEELS, FLYWHEEL SHIELDS and BELHOUSINGS:**

All cars, including rear engine cars, with non-automatic transmissions, shall be equipped as follows:

- **Flywheels:** No cast iron/aluminum flywheels shall be permitted.
- **Flywheel Shields:** Flywheel Shields shall be SFI specification 6.1, 6.2 or 6.3 depending on the application. A DLRA-approved flywheel shield, made from ¼ in. thick steel, providing 360 deg. coverage and constructed in such a manner to provide retention of clutch and flywheel assembly parts may be used in the event that an aftermarket flywheel shield is not available. On cars where no aftermarket flywheel shield is available, and on smaller cars with limited space to install either an SFI specification or a DLRA-approved flywheel shield, a SFI specification 4.1 blanket specifically manufactured for the particular application may be used as a flywheel blanket (shield). **All such uses shall be submitted to the Car Technical Chairperson in accordance with Section 1.P, Technical Committees, and must receive prior approval before use.**
- **Bellhousings:** Cars utilizing bellhousing engine mounts only (Corvaair, VW etc.) shall provide some additional method of retaining the engine in the car.

### **3.P EXHAUST SYSTEMS:**

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

### **3.Q FIRE EXTINGUISHER SYSTEMS:**

All cars and enclosed motorcycles shall have a minimum of one driver-controlled fire extinguisher system using a minimum of 5lbs. of extinguishing agent designed and applied to function as driver protection. Approved agents include certain AFFF systems such as Cold Fire 302, ESS Foam, Firefox Gem Foam or other Halon replacement system certified by the manufacturer for use in a confined space. Dry chemical and CO2 may be used in the engine compartment only. The application and installation shall be in accordance with the manufacturer's recommendations for 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 shall be taken to prevent driver suffocation. Fresh air venting or breathing systems may be necessary.

ALL VEHICLES OVER 150 MPH shall have an additional 5 lbs. of fire extinguishing agent (a total of 10 lbs. onboard) that can be applied via fixed nozzles to serve the engine area. The additional 5 lbs. may be in conjunction with the driver system or a separate system. Acceptable agents in the engine area include CO2, foam, a Halon replacement or a dry chemical. The engine system shall include two (2) nozzles directed toward the header/oil pan area. Only AFFF systems or other Halon replacement agents may be used in the driver's compartment.

ALL VEHICLES OVER 200 MPH, because of the additional time required to stop, shall be equipped with additional extinguishing agent (in addition to the 5 lbs. minimum) which is designed and fitted for driver protection. The installation should be commensurate with driver compartment size and speed of the vehicle. Contact a reputable safety equipment manufacturer for installation advice.

Minimum Agent Requirements:

0-150	MPH	5 lbs. min.	Driver area
151-200	MPH	10 lbs. min.	Driver & Engine
201+	MPH	11 lbs. min.	Over 5 lbs. for driver

NOTE: The amount of required agent should not be confused with the total bottle weight.

All push/recovery/support vehicles are required to have a minimum of one 4 lb. portable fire extinguisher.

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

A current inspection/filling certification (no more than 24 months old) for each agent bottle shall be visible to the technical inspector without removing the bottle.

NOTE: Agent delivery lines are subject to dust and moisture clogging. Participants are responsible to assure that the fire system is full and operable before each event. Frequent clearing of the lines is recommended. Aqueous foam systems require that the nozzles be directed appropriately so that the agent does not impede the vision of the driver.

Questions concerning fire extinguisher systems may be **directed to the Fire Extinguishing Specialist, see Section 9.**

**3.R COOLING SYSTEM:**

All liquid cooling systems utilizing non-braided circulation lines shall have metal clamps at each connection. The use of plastic tubing in a cooling system is not allowed. No flammable or combustible coolants are allowed.

### **3.S DRIVE LINES:**

Open drive lines in the driver's compartment shall be equipped with a protective covering. In all cars with a drive shaft, see Section 4.II, there shall be a 360 deg. metal sling (at least ¼ in. x 1 in.), 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 joints.

Overrunning clutches (freewheeling) in the drivelines are permissible in all categories. All traction bars and trailing links shall have a metal sling near the front attaching point with a minimum of ¼ in. diameter. Torque tube (early Ford type) drivelines 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 ¼ in. minimum metal sling is required.

### **3.T FRONT END AND SUSPENSION:**

All front end and suspension fasteners must be aircraft type "self locking" nuts or have wire or keys appropriately placed to prevent them from coming apart. All spherical ends (e.g., Heim joints) used in suspension systems shall not be constructed of aluminium and shall have washers with a larger OD than the joint to retain the joint should separation occur (solid type Heim joints are required). Un-sprung 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.

### **3.U WINDOWS AND WINDSHIELDS:**

All non-stock windows and windshields must be made of shatter-resistant plastic, such as polycarbonate (Lexan), and shall provide 120 degrees of adequate forward vision. On all open body cars a windshield is recommended, but shall not restrict the driver entrance or exit. In all classes where a headrest fairing is permitted, the windshield may sweep around driver's head and connect to the fairing 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

Vehicles with T-Tops or moon roof panels shall have the panels retained with tabs or straps.

**All vehicles shall have all non-laminated safety glass windows with safety film ON BOTH SIDES, or replace the windows with polycarbonate material. All other glass such as headlights shall be covered with a safety film.** Additional bracing must be installed to prevent window blowout or collapse.

### **3.V HOODS:**

Hoods are required in all categories (except Special Construction Category) and shall 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.

**3.W 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.

**3.X 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.

## **SECTION 4 DEFINITIONS**

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

### **4.A AIR DUCT:**

Aerodynamic pressure relief systems in which air is ducted from one point to another. Air ducts may pierce, but shall not extend past exterior body work and shall not be utilised to eliminate a prominent feature (e.g. 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.

### **4.B AIR INTAKES:**

Ducted airflow devices which are meant to provide combustion air directly to the engine. Air intakes shall not originate below the original stock location and, on rear engine cars, the air intake shall originate in the rear 50% of the body. Air intakes protruding from the front of the car (other than OEM) shall not exceed 48 sq. in. of frontal area and shall not extend more than 12 in. and shall not taper, except in classes where forward streamlining is allowed. Carburetors that protrude through the car's hood shall be covered with a flash shield.

### **4.C AIR VENTS:**

Aerodynamic pressure relief systems in which no air ducting is utilized. Louvers and tail light removal fall under this definition.

### **4.D 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 shall always be in contact with the ground. Steering must be assured by at least two (2) front wheels. The vehicle shall be propelled by at least two (2) wheels. One pair of wheels shall be on the same transverse centerline.

### **4.E AUTOMOBILE 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.

### **4.F 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.

**4.G 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 IN THE ENGINE AREA.

**4.H BOBBING:**

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

**4.I 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.

**4.I.1 CHANNELING:**

The lowering of the body over the frame rails.

**4.J CONTEST BOARD:**

The board of Directors of the DLRA plus additional personnel appointed by the DLRA President.

**4.K CONTOUR and BODY RELATIONSHIP**

Contour is the configuration of the external sheet metal and windows. Removable trim, lights, windows, floor boards and interior sheet metal are not part of the contour. All body panels and windows shall be mounted in their original relationship as manufactured unless otherwise allowed. Moving body panels and windows from their original relationships to control air flow, tighten gaps, altering the original panel shape and filling seams with caulking or foam tape is considered streamlining.

**4.L 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.

**4.M 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.

**4.N ENGINE SWAP:**

An engine swap is defined as when the use of an engine from an engine design family that was not available as a factory or dealer installed option for a given vehicle year is used.

An engine design family is defined as engines which are made with the same basic material, have the same bore centers, crankshaft supports, deck height, cam location,



head mounting, bell housing and engine mount patterns, etc. All OEM parts shall fit the block without modification.

The use of an OEM or aftermarket replacement engine block from the same design family is not considered a swap. "Crate engines" are not considered engine swaps. Direct replacement aftermarket engine blocks are not considered engine swaps (Dart, World Products, etc.) if they meet the above engine swap definition criteria.

#### **4.O FIREWALL: (NON-PRODUCTION)**

A metal barrier between the engine and driver compartment, see Section 3.F.

#### **4.P FLOORBOARDS:**

Floorboards are defined as paneling in the lower portion of the car exclusive of the engine compartment. Floorboards shall be mounted above the frame or in the stock location for the body style and year of the vehicle. Floorboards shall be inside or over all suspension and driveline components, well fitted and securely attached with all holes sealed.

#### **4.Q GASOLINE:**

Gasoline, as produced, is a mixture of hydrocarbons which may include some DLRA acceptable oxygenates. The DLRA further defines gasoline as a liquid that does not contain nitrogen bearing compounds, nor propylene oxide, nor ethylene oxide, and no more than 10% methanol. Gasoline is an electrical insulator, or dielectric liquid, and its Dielectric Constant (D.C.) represents its relative effectiveness as an insulator. The average D.C. for the mixture of hydrocarbons and possibly allowable oxygenates which comprise gasoline varies but is testable and definable for the approved liquids which follow the DLRA definition of gasoline. For select events the DLRA will specify the use of an "EVENT" gasoline, see Section 2.B. D.C. numbers and other chemical properties for any approved "EVENT" gasoline are known. These properties are recorded and the records are maintained by the DLRA technical staff.

For other events where a specific "EVENT" fuel is not called out, those same fuels provided as an "EVENT" gasoline may be used. The approved "EVENT" gasoline has had the chemical properties and D.C. recorded by the DLRA, these records are maintained by the DLRA technical staff. When a competitor at a non "EVENT" gasoline meet wishes to use a fuel that has not been approved for use as a prior "EVENT" gasoline, that fuel must test under the specified DLRA D.C. ceiling of 15.0 as measured with a Kalico Model FT-K01 "DC" Meter. If the proposed liquid fuel does not fall underneath the DLRA specified D.C. ceiling, appropriate testing for compliance with the DLRA definition of gasoline as noted above may be required. The testing shall be performed by a DLRA-approved laboratory at a cost to the competitor or to the provider of the gasoline. Once tested and approved for use, a non-"EVENT" gasoline will have its crucial chemical properties, including the dielectric constant recorded by the DLRA technical staff or possible future acceptance as an approved gasoline.

#### **4.R HOOD SCOOPS:**

A hood scoop is a functional air intake device used on full body, un-blown vehicles, where allowed. No part of a forward facing hood scoop can extend forward of the leading edge of the hood, be more than 11" above the surface of the hood at the centerline or extend past the trailing edge of the hood more than 11". Clearance between the scoop and the windshield must be a minimum of 1/2". On rearward facing scoops they cannot be more than 11" above the surface of the hood at the centerline. They can extend past the trailing edge of the hood but the rear must be totally open and clearance between the scoop and the windshield must be a minimum of 2". No foam sealing is allowed between the scoop and the windshield. On rear engine cars the scoop may be built on the engine cover. The scoop shall not extend more than 11" above the surface of the roof and no further forward than the front edge of the back window.

#### **4.S INCIDENT REVIEW COMMITTEE:**

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

#### **4.T INSPECTION COMMITTEE:**

A group of DLRA members who conduct all the technical inspections at any DLRA competition event. The Contest Board chooses the membership of this committee.

#### **4.U LIMB RESTRAINT:**

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

#### **4.V OPEN CAR:**

Any car which may be entered and exited without unfastening, unlatching or moving any panel. All open cars as described, except in Special Construction Category, SHALL have the driver's line-of-sight above the body. No periscopes allowed.

#### **4.W OPEN WHEEL:**

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

#### **4.X 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 shall be attached to the roof on each side, as close to the outside edge as possible. The roof rails shall be parallel from the front to the rear. 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.

#### **4.Y SECTIONED:**

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

#### **4.Z SECONDARY LOORING:**

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

#### **4.AA 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 or centerline of the front most cylinder on compression ignition engines and WB is the wheelbase.

#### **4.BB WINDSHIELD POST MOUNTING SUPPORT:**

An upright bar, post or support to which the windshield posts are bolted, i.e., 1928-1931 Ford roadsters have this piece, 1926-1927 and 1932-1934 Ford roadsters do not.

#### **4.CC 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 will be considered as streamlining.

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, see Section 2.J. The types of streamlining devices listed below are allowed in some classes:

##### **4.CC.1 Air Dams and Splitters:**

OEM or fabricated devices installed below the front bumper used to inhibit and direct airflow from under the vehicle. Air dams and splitters can be set inward from the front bumper but cannot extend above or beyond the original contour of the leading edge and sides of the front bumper (See 4.JJ for the definition of a bumper). Both can extend rearward to the leading edge of the front wheel well. Splitters are allowed as long as they follow the same contours requirements as an air dam. Bodies cannot be cut away to accommodate air dams or splitters.

##### **4.CC.2 Axle Fairing:**

Streamlining devices attached to the axle to direct airflow around axle configuration only.

##### **4.CC.3 Belly Pan:**

A skin of material used to cover the undercarriage of a vehicle.

##### **4.CC.4 Headrest Fairing:**

Body work, on an open car, see Section 4.V, which extends rearward for the purpose of preventing wind buffeting of the driver. The fairing shall not be wider than the roll cage at any point, nor extend past the rearmost part of the body.

#### **4.CC.5 Skirts:**

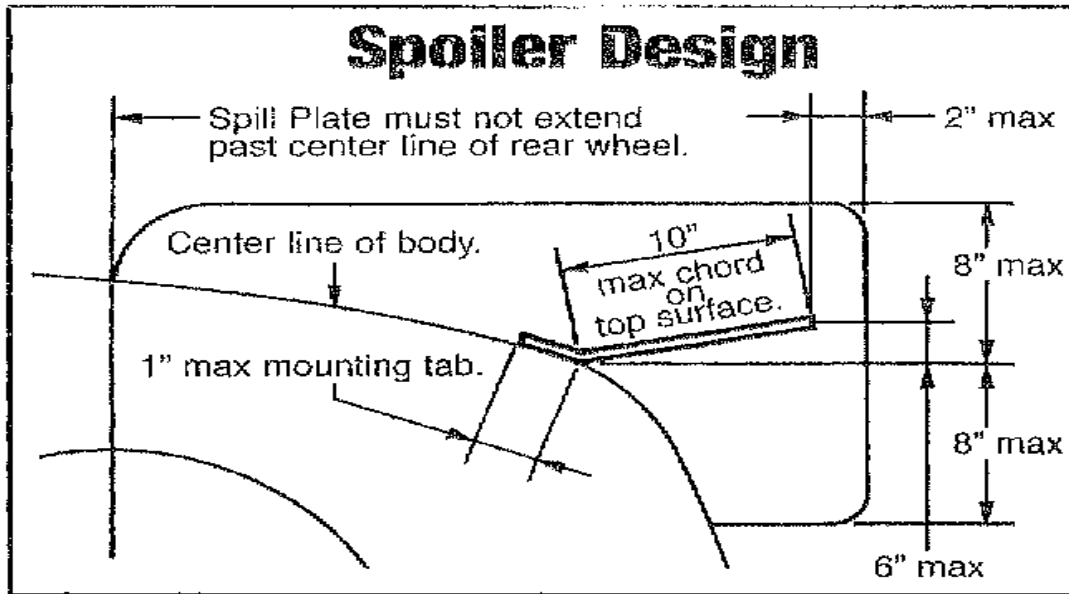
Streamlining devices added to the lower portion of the body for the purpose of controlling airflow under the body. The skirt may be a max. ½” thick. The skirt must be in a single plane, mounted to the bottom of the body but cannot modify the contour of the body. The skirts may extend from the centreline of the front axle to a vertical plane at the rearmost point of the original bodyline.

#### **4.CC.6 Spoiler:**

A device on the rear upper portion of the body for the purpose of spoiling lift. The spoiler shall be mounted in the rear portion of the body behind the rear axle centerline. Two different designs can be used but not mixed together, see Figures 9 and 10.

#### **Design one-**

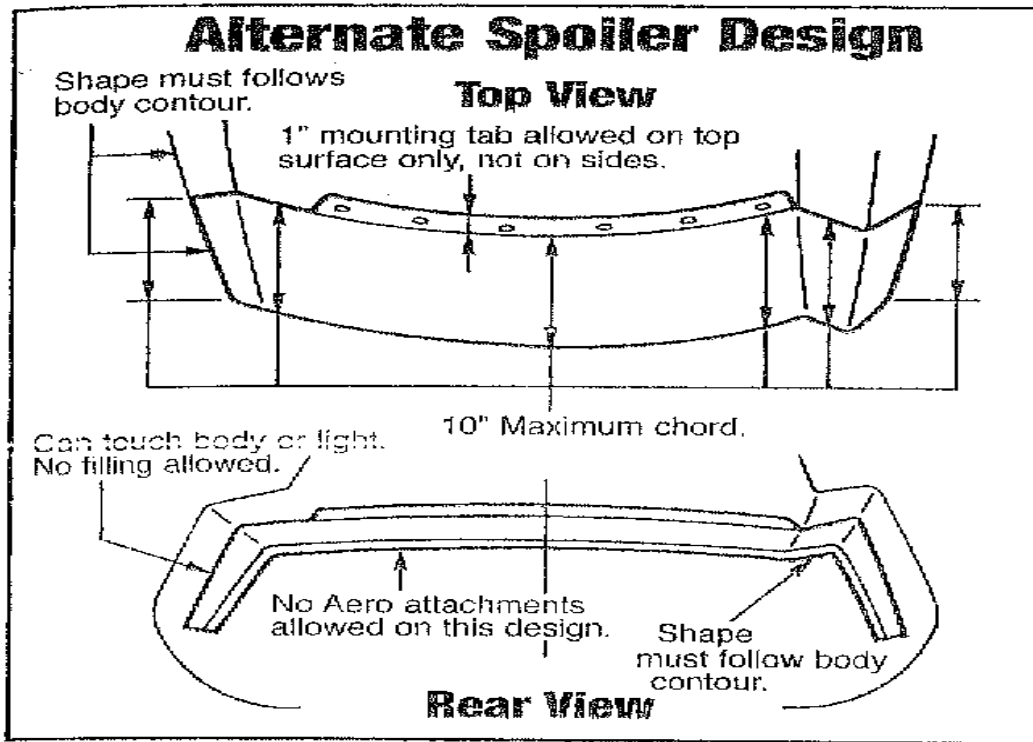
The spoiler must have a single surface no wider than the outer edge of the rear tyres. The maximum chord measured on the top surface at the centre of the car can be 10 in. A 1in. tab or hinge can be added to the leading edge of the spoiler for mounting purposes only. A spill plate on each side of the spoiler is allowed and must be flat on both sides and parallel to each other vertically and horizontally. It can extend forward to the rear axle centerline. Spill plates are allowed to be 8 in. above and below the forward mounted position of the spoiler when laid flat and extend 2 in. max. past the end of the spoiler. No appendages or holes that direct air are allowed on/in the spill plates. Gurney flaps are allowed but cannot extend above or behind the spill plates. The spoiler is allowed to fill in the horizontal gap between the leading edge of the spoiler and the body with a plate no farther forward than the centerline of the rear axle.



**Figure 9**

**Design two-**

The spoiler must have a single surface with no side plates. Maximum spoiler chord measured on the top surface is 10 in. from the trailing edge of the body. A 1 in. tab can be mounted on the leading edge of the spoiler for mounting purposes only. The ends of the spoiler must follow the outside contour of the body and shall not extend beyond the outside edges of the body at any point. When laid flat the width of the spoiler can be a maximum of 16 in. wider than the outside plane of the rear tyres. No other aero devices or Gurney Flap are allowed with this design.



**Figure 10**

**4.CC.7 Trip Fences:**

A device in the upper forward part of the body for the purpose of tripping the laminar layer.

**4.CC.8 Vortex Generators:**

Sharp edged devices placed on the body for the purpose of creating flow vortices.

**4.CC.9 Wings:**

Wings are a special class of aerodynamic effect devices intended to provide down-force, which are 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.

**4.DD 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, and an exhaust system capable of being muffled. Decals are not acceptable as meeting the headlight and taillight requirements.

**4.EE 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, parallel to the ground (side to side) and no wider than the frame rails. A box may be constructed to enclose the portion of the transmission, which protrudes through the step pan. The box shall 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 cross-members 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.FF SUPERCHARGED:**

For purposes of classification, Blown (supercharged) will be an artificially aspirated engine with a mechanically-driven supercharger and/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 un-Blown.

**4.GG TECHNICAL ADVISORY COMMITTEE:**

A group of competitors, manufacturers' representatives 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.

**4.HH WHEELBASE:**

All vehicles shall have at least two parallel axles. The wheelbase is the distance measured from the centerline of the rear axle to the transverse centerline of the front spindles. The wheelbase shall be equal on the left and right sides of the vehicle to within 1 in.

Streamliners are exempt from this rule.

**4.II DRIVESHAFT:**

A driveshaft is defined as the connection from the engine or transmission to the rear drive unit in a conventional front-engine/rear-drive configuration.

**4.JJ BUMPER:**

A bumper is a metal device that bolts to a car's chassis to provide collision protection and may be removed in some classes. A bumper is typically 16-20 in. above the road surface. Bumper covers (thermoplastic body pieces on cars starting around 1978) are considered to be part of the body. The bumper cover cannot be removed or altered in shape and contour if not allowed by class rules. For the purpose of streamlining, any fascia covering the front bumper bar ceases to be part of the bumper once above or below the primary impact absorbing region.

## SECTION 5 CAR CLASSES

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

### 5.A SPECIAL CONSTRUCTION CATEGORY

This category is the pinnacle of the straightaway racer's art. It contains three main groups. In the Automobile group are the unlimited Streamliners and open wheeled Lakesters with a 4+ wheel configuration and in the motorcycle group are the Streamliner and Streamliner Sidecar classes. These classes allow both blown and un-blown, gas or fuel engines. These are all-out straightaway vehicles with non-stock engine blocks allowed, (with the exception of specific Vintage engine classes). **Innovation is encouraged, within the rules.** Modified production bodies are forbidden. Four wheel drive is allowed in the automotive group only.

It is strongly recommended that all new vehicles be submitted for a pre-event inspection by appointment with the Technical Committee. If not practical because of distance, photographs and drawings may be submitted to the Technical Committee Chairman, see Section 16.

#### 5.A.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. The design of the body is restricted only to the extent that at least two (2) wheels must be covered. Turbochargers, superchargers and any choice of fuel are allowed in Diesel Streamliner class.

Engine classes allowed are  $\Omega$ , AA, A, B C, D, E, F, G, H, I, J, K, XO, XF, XXF, XXO & V4 and V4F.



### 5.A.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 shall 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.

Classes AA, A	2800mm(110")
Classes B, C, D	2670mm(105")
Classes E, XXF, XXO	2450mm(100")
Classes F, XF, XO, V4, V4F	2410mm(95")
Classes G, H	2285mm(90")
Classes I, J, K	2030mm(80")

Engine classes allowed are Ω, AA, A, B C, D, E, F, G, H, I, J, K, XO, XF, XXF, XXO & V4 and V4F.

### 5.A.3 Electric Vehicle - /E

This class is for vehicles using electric power as the sole means of propulsion. The vehicles shall be wheel driven. THE BODY CONFIGURATION IS UNLIMITED. The vehicle and driver shall 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 shall 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

### 5.A.4 Turbine Vehicle - /T

This class is for vehicles using turbine power (external combustion), as the sole means of propulsion. The vehicles shall be wheel-driven. THE BODY CONFIGURATION IS UNLIMITED. The vehicle and driver shall 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 shall 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

## **5.B VINTAGE CATEGORY**

This category is specifically intended for the lovers of antique iron. Although fibreglass and aluminium bodies are allowed, the body shall 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 is organized into three groups: ROADSTERS, from the highly modified to the street roadster; VINTAGE COUPES AND SEDANS, which are special vintage classes for the modified category; and VINTAGE OVAL TRACK, a special class for oval track and speedway vehicles with pre-1948 designed engines.

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 extends within the body shell. **TURBOCHARGERS ARE NOT ALLOWED ON VINTAGE CLASS ENGINES COMPETING IN VINTAGE BODY CLASSES**, see Section 2.A.1.

The minimum tread dimensions for all Vintage Category vehicles are 44 in. front and 50 in. rear. Modified Roadsters are exempt from the front tread requirement. The minimum wheel diameter for all Vintage Category vehicles with the exception of /VOT is 14 in.

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

### **5.B.1 Modified Roadster - /BFMR, /FMR, /BGMR, /GMR**

In addition to the general category requirements, cars in this class shall 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, as defined in Section 4.CC are allowed: Axle fairing, Belly Pan, Headrest Fairing, Skirts and Wings. No fairing or special covering of the wheels and tires are permitted. A rigid tonneau cover and headrest fairing 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 the driver remains seated forward of the rear axle centerline and behind the engine. Wheel wells may be filled at stock location, but the rear axle shall 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. The body at the original windshield line may be re-contoured to a flatter configuration, so long as the body top contour is not lower than the top of the doors as measured at the front edge of the doors.

Headrest and parachute pack fairings are allowed, as long as the fairing is no larger than the headrest or parachute pack and does not extend past the rear of the body shell. Push bars shall not be solid or offer any aerodynamic advantage.

Maximum wheelbase is 190 in. Allowable minimum tread widths are 50 in. rear and 38 in. front. Allowable minimum body width across the bottom of the doors shall meet the dimension as originally produced by the manufacturer. The entrant shall 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 in. 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. The total wing area (measured by the fore to aft dimension times the side to side dimension, on the top surface) shall not exceed 1152 sq. in. The lowest portion of the wing shall be at least 12 in. above the roll cage structure. Multiple element wings are NOT allowed. Spoilers and four wheel drive systems are NOT allowed.

Classes AA, A	2800mm(110")
Classes B, C, D	2670mm(105")
Classes E, XXF, XXO	2450mm(100")
Classes F, XF, XO, V4, V4F	2410mm(95")
Classes G, H	2285mm(90")

Engine classes allowed are: AA, A, B C, D, E, F, G, H, XO, XF, XXF, XXO & V4 and V4F.

### **5.B.1a Rear Engine Modified Roadster - /BFRMR, /FRMR, /BGRMR, /GRMR**

In addition to the general category requirements, cars in this class shall 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. The driver's seat shall be entirely in front of the engine. The entire engine shall be forward of the centerline of the rear axle. The driver's line of sight shall be over the body work.

Streamlining ahead of and including the cowl and channelling is permitted. Air intakes, air vents and the following, as defined in Section 4.CC are allowed: Axle fairing, Belly Pan, Headrest Fairing, Skirts and Wings. No fairing or special covering of the wheels and tires are permitted.

A rigid tonneau cover and headrest fairing are allowed, as long as they do not violate the definition of an open car.

Wheel wells may be filled at stock location, but the rear axle shall 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. The body at the original windshield line may be re-contoured to a flatter configuration, so long as the body top contour is not lower than the top of the doors as measured at the front edge of the doors.

Headrest and parachute pack fairings are allowed, as long as the fairing is no larger than the headrest or parachute pack and does not extend past the rear of the body shell. Push bars shall not be solid or offer any aerodynamic advantage.

Minimum wheelbase is 140 in. and maximum wheelbase is 190 in. Allowable minimum tread widths are 50 in. rear and 38 in. front. Allowable minimum body width across the bottom of the doors shall meet the dimension as originally produced by the manufacturer. The entrant shall 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 in. 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. The total wing area (measured by the fore to aft dimension times the side to side dimension, on the top surface) shall not exceed 1152 sq. in. The lowest portion of the wing shall be at least 6 in. above the highest point of the body. Multiple element wings are NOT allowed. Spoilers and four wheel drive systems are NOT allowed.

Engine classes allowed are: AA, A, B C, D, E, F, G, H, XO, XF, XXF, XXO & V4 and V4F.

### **5.B.2 Fuel-Gas Roadster - /BFR, /FR, BGR, /GR**

**YET TO BE COMPLETED**