



APPROVED:

*The Chairman of the Board of Road  
Commission*

\_\_\_\_\_  
\_\_\_\_\_, 2014

R.Cabulis

AGREED:

*LAF Scrutineer*

\_\_\_\_\_  
\_\_\_\_\_, 2014

G.Auziņš

## 2014 Latvian Drag Racing Championship and Cup Technical Regulations

### 1. CLASSES

1.1. For the purpose of the Championship, cars are assigned into the following Classes:

**Pro A Class:** having normally aspirated engines up to 2000 cm<sup>3</sup> with weight limitations according to the Technical Regulations.

**Pro B Class:** having normally aspirated engines from 2001 cm<sup>3</sup> up to 6000 cm<sup>3</sup> with weight limitations according to the Technical Regulations.

**Unlimited Class:** without the engine and weight limitations.

**ProStreet Class:** any car without engine capacity or weight limitations. Indexes: 11,5 seconds for 402m and 7,35 seconds for 201m distance.  
Factor 0.7 is applied to diesel engines (compared to naturally aspirated petrol engine).

1.2. For the purpose of the Cup, cars are assigned into the following Classes:

**Street Modified Class:** any car without engine capacity or weight limitations. Indexes: 12,5 seconds for 402m and 8,0 seconds for 201m distances.

**Street Class:** cars intended for road traffic according to Traffic Rules of Latvia and having valid (not temporary) roadworthiness inspection sticker. Indexes: 13,5 seconds for 402m and 9,0 seconds for 201m distances.

**Handicap Class:** any car without engine capacity or weight limitations, not faster than 11,5 seconds in 402m

and 7,35 seconds in 201m distances.

## **2. GENERAL REQUIREMENTS FOR DRIVERS AND CARS IN ALL CLASSES**

### **2.1. GENERAL REQUIREMENTS FOR DRIVERS**

- 2.1.1. The competitor must wear a helmet during the race. Only helmets intended for cars and motorcycles are allowed. The helmet must be of suitable size, and the clasp of straps must be buckled during the race. The helmet must not be damaged or show traces of impact or cracks.
- 2.1.2. During the race, the competitor must wear clothes that cover all body, hands up to palms and legs. Clothing made of nylon or other easily melting material is not recommended. These requirements apply also to the technicians of the competitor when they are in the zones of tyre warming-up, pre-start and start.
- 2.1.3. The competitor must wear closed footwear and socks during the race. Such footwear as step-ins, sandals and the like are prohibited. These requirements apply also to the technicians of the competitor when they are in the zones of tyre warming-up, pre-start and start.

### **2.2 GENERAL REQUIREMENTS FOR CARS**

- 2.2.1 There must not be loose objects in the car. (All objects, accessories, spare parts etc. must be securely fastened in the car.)
- 2.2.2. The battery must be securely fastened and covered to avoid short-circuit or leak.
  - 2.2.2.1. The battery must not be located in the driver's or passenger's compartment. If the battery is moved to the luggage compartment, there must be the 0.6 mm thick steel or 0.8 mm thick aluminium firewall between the cockpit and the luggage compartment. The firewall may be substituted by 0.6 mm thick steel, 0.8 mm thick aluminium or FIA-accepted polyethylene safety container. If the safety container of the battery which substitutes the firewall is closed, it may not be used for holding the battery in place, and it must be equipped with air intake having exit outside the cockpit. If the battery is not in its original location, it must be fixed to the bodywork using metal base and two metal clamps having isolating coating which are fixed to the floor of the car with bolts and nuts. Bolts for fixing of the clamps must have the diameter of at least 10mm.  
  
In case the battery is places in the car not in its original location, there must be additional circuit breaker near the battery.

- 2.2.3. There must be no leaks of any liquid in the vehicle. Climate control or air conditioning device must be switched off during the race in order to avoid dripping of the condensate onto the track.
- 2.2.4. The car must be equipped with at least three point safety belt.
- 2.2.4.1. In the cars equipped with the safety cage the 5 anchorage point safety harness must be used, and the driver's seat must be FIA-homologated competition bucket seat (standard 8855/1999). It is allowed to use fibre bucket-type seat the term of use of which has expired, and each such a case is decided by the Scrutineers. The driver must use the seat belt during the race. In places where the driver's helmet may come into contact with the safety cage the padding must ensure at least 6,35mm of compression , or it must comply with the requirements of SFI 45.1.
- 2.2.5. There must be towing loop or hook in the front par or on the roof of the car.
- 2.2.6. Both front doors must be operational from inside and outside of the car.
- 2.2.7 The car must be equipped with the fire extinguisher having capacity of at least **1kg**, however **2kg** is recommended. The fire extinguishers must have quick-release fastenings made of metal straps. The mountings of the fire extinguishers must withstand the load of **25g**. The fire extinguisher must be readily accessible to the driver.
- 2.2.8. Cars which exceed the speed of **240 km/h** on the track must be equipped with special braking parachute complying with the requirements of FIA. (<http://argent.fia.com/> figure No.10)
- 2.2.9. Cars which exceed the speed of **217 km/h** on the track must comply with the technical requirements for 10,99(6,99\*) sec cars as minimum.
- 2.2.10. The Scrutineer has right to bar from the competition the cars which comply with the requirements, but the design of which in opinion of the Scrutineer is unsafe. Mostly, this concerns the modifications made with the aim of increasing the speed, but when such systems as braking, steering, running gear etc. are not improved appropriately. In such cases installation of such additional safety elements as safety bar, safety cage with safety harness having 5 or 6 anchorage points may be demanded.
- 2.2.11. Cars having technical modifications not covered by the present regulations, but which are obviously dangerous, may be admitted to the competition only when they are rectified. Each such case is decided by the Scrutineer.
- 2.2.12. Distance from the ground to the lowermost part of the car must be at least 76 millimetres in the part of the car from its front till 304.8 mm behind the front axle. Further the ground clearance may be not less than 51 millimetre.

### **2.3 ENGINE AND ACCESSORIES**

- 2.3.1. Only internal combustion engines are allowed. Modification of the engine is allowed.
- 2.3.2. The internal combustion engine must be put in operation by the starter.
- 2.3.3. Number of engine mounting points to the bodywork must not be less than stated by the manufacturer of the engine.

Mountings may be replaced, as well as additional mountings are allowed.

- 2.3.4. In case of use of Roots-type compressor the safety mountings must comply with the requirements of SFI 14.1.
- 2.3.5. Fuel and oil pipes in the vicinity of the belt of the compressor must be crashworthy (aviation type, reinforced with metal casing) or protected with the screen made of metal or other composite material.
- 2.3.6. Engine cooling system must have expansion vessel having capacity of at least 1 litre, and it must be securely mounted.  
Water (H<sub>2</sub>O) is recommended as coolant.
- 2.3.7. In case of dry sump the overflow tank having capacity of at least 1 litre must be used.
- 2.3.8. Unfiltered sump ventilation into the atmosphere is forbidden.
- 2.3.9. Exhaust manifolds must be used, the exit of those is not regulated, but they must be free of any defects and must cause no suspicion as to their location and mounting, as well as they must not come into contact with ground during the race. Noise (decibels) is not limited.

## **2.4 FUEL FEED SYSTEM AND FUEL**

- 2.4.1. Any fuel is allowed.
- 2.4.2. The fuel tank must be outside the cockpit in the two- or three-volume cars, and separated with fireproof hermetic firewall.
- 2.4.3. All fuel feed system (fuel, pumps, ventilation filters etc.) must be outside the cockpit, within the perimeter of the car. Fuel pipes which cross the cockpit must be without connectors according to Article 253.3 of Appendix J (FIA).
- 2.4.4. The fuel tank made of composite materials must be earthed.
- 2.4.5. Exit of the fuel tank ventilation must be in direct contact with the atmosphere.
- 2.4.6. In all cases, there must be fireproof and crashworthy screen between pressurised fuel pipes and rotating belts.
- 2.4.7. Fuel tanks which are original, complying with FIA, SFI standards are allowed. Also, self-made fuel tanks are allowed, and their design must comply with all essential safety requirements, they must be equipped with the safety valve in the ventilation system of the tank. Each such case is decided by the Scrutineer.

## **2.5 NITRO DEVICES**

- 2.5.1. Only factory-made and certified NITRO devices are allowed. Use of self-made devices is prohibited.
- 2.5.2. Nitro gas cylinder must be securely mounted to the bodywork. It is allowed to use original mountings supplied with the nitro set, but for cylinders up to 15kg it is recommended to use at least two 25 mm wide steel straps, and for cylinders over 15kg – at least three 25 mm wide steel strap mountings.
- 2.5.3. There must be clearly visible marking „N2O” on the nitro cylinder.
- 2.5.4. Nitro gas cylinder must be equipped with overpressure valve having exit outside the cockpit. Modifications of the overpressure valve are prohibited.
- 2.5.5. It may not be possible to switch on the Nitro system when ignition of the car is off.
- 2.5.6. Nitro system must be equipped with separate melting fuses.
- 2.5.7. Nitro system must have the switch readily accessible to the driver, and clearly marked with the inscription "N2O. ON / OFF".
- 2.5.1. Activation of the Nitro system may take place only when the throttle(s) is (are) fully open and using purely mechanical system. In case when the system is activated electronically by means of engine control unit or special controller it must be duplicated with mechanical activation system.
- 2.5.2. Valve of the Nitro gas cylinder must be closed during the warming of tyres (so called „burnout“), and it may be opened just before the start (so called „stage“).
- 2.5.3. Only factory-made and intended for this purpose heaters having the thermostat control may be used for the heating of the Nitro gas cylinder. Self-made heaters are prohibited.

## **2.6 GEARBOX**

- 2.6.1. Type and make of the gearbox is free.
- 2.6.2. The automatic gearbox must be equipped with the lock preventing accidental engagement of the reverse gear. It must not be possible to start the engine of the vehicle with automatic gearbox when any gear is engaged.
- 2.6.3. In case of the automatic gearbox only aviation type pipes are allowed.

## **2.7 BODYWORK AND INTERIOR**

- 2.7.1. The car must not show visual and structural defects (rust, heavily deformed parts of bodywork, cracked glazing in the zone of direct vision etc.) which may in any way impair the safety of the event or

cause suspicions of that. Each such case is decided by the Scrutineer.

- 2.7.2. The bodywork of the car must bear the sticker indicating the type of the fuel used.
- 2.7.3. The car must be equipped with at least one working stop lamp. In addition: at night races the cars must be equipped with low beam lamps and rear position lamps.
- 2.7.4. The vehicle must have front doors which must be possible to easily open from inside and outside during the event. Installation of the doors made out of composite and other fibrous materials is allowed provided the car is equipped with safety cage in compliance with the requirements of FIA (<http://argent.fia.com/> figure No.16). Internal side of the doors of the cockpit must be completely covered. Those can be original trim panels or made out of at least 0,5 mm thick metal sheet, out of at least 1 mm thick carbon fibre, or out of at least 2 mm thick other solid and non-flammable material.
- 2.7.5. It is allowed to install the following parts made out of plastics or composite material: bonnet, lid of the luggage compartment, front mudguards, stop bars and roof of the bodywork.
- 2.7.6. The supporting parts of the bodywork may be reinforced by the frame structure which is connected to the supporting safety cage. Requirements of Article 253.8. of Appendix J (FIA) concerning the materials and installation of the safety cage must be complied with.
- 2.7.7. In places where the driver's helmet may come into contact with the safety bar or safety cage the padding must ensure at least 6,35mm of compression, or it must comply with the requirements of SFI 45.1. The distance between the driver's helmet and safety bar in normal seating position must be at least 76,2 mm.
- 2.7.8. Modification or replacement of the supporting structures of the bodywork is allowed provided the material of the new part is as thick as that of the original part. The supporting structure of the bodywork from the firewall till the first axle must be original, and the first axle must be mounted in the original mounting points, the front and rear semi-frames of the vehicle must be original, except if the safety cage is installed. The upper mounting of the shock absorber may be modified. The internal supporting structures of the front mudguards may be modified or replaced only if the safety cage is installed. Each such case is decided by the Scrutineers.

- 2.7.9. The windscreen must have multiple layers (Triplex type) and no defects impairing visibility. Other glazing may be replaced by at least 3 mm thick shatterproof polycarbonate.
- 2.7.10. The cockpit must be separated from the engine and transmission. The front bulkhead may not have spare openings, they must be covered with aluminium or steel plate. The pipes and hoses of the engine cooling system may not be located in the cockpit, except the standard cockpit heating system.
- 2.7.11. Serial dashboard (torpedo) may be removed or replaced by a self-made one provided the safety cage and at least 5 anchorage point safety harness is installed. For the purpose of installation of non-original gauge panels or switches modifications of the dashboard base panel may be made. The solid parts of the dashboard and of those parts in the vicinity of the driver may not have sharp edges or protruding elements which may cause injury.
- 2.7.12. The front seats must be intact and not damaged, securely mounted to the bodywork or to the frame of the vehicle. It is recommended to replace the original driver's seat with competition bucket seat (standard 8855/1999), having the FIA homologation, with five (5) openings for safety harness.  
The driver's seat must have the headrest.
- 2.7.13. Passenger' seat and rear seats may be removed.

## **2.8 RUNNING GEAR**

- 2.8.1. The vehicle must have hydraulic brakes on all wheels. Brake pipes must not be placed in the cardan arch and lower than the base of the vehicle.
- 2.8.2. Differentials must be used in all driving axles. It is forbidden to make 100% blocking by means of welding.
- 2.8.3. In vehicles where 100% blocking (so called „spool“) is made it is compulsory to use steel axle-shafts and C clip eliminators which are appropriate for the competition.
- 2.8.4. The tyres and rims of the vehicle must be completely covered in width, and they may not protrude out of the contours of the bodywork. Securely mounted wing extensions without sharp corners are allowed. Tyres may not come into contact with the parts of the bodywork.
- 2.8.5. Non-standard rims are allowed. Any modifications to the rims are prohibited.
- 2.8.6. It is forbidden to make any grooves in the working surfaces of slick or any other tyres, as well as use of tyres processed in such a manner.
- 2.8.7. The speed category of a tyre must correspond to the maximum speed of the vehicle on track, and the load capacity index – to the maximum weight of the vehicle during the race.
- 2.8.8. Tyres may not have mechanical defects or be worn to the cords. The condition of tyres is being monitored during the event.

2.8.9. It is forbidden to replace the original rear suspension with that of the „4-link“ or „ladder-bar“ type, and each such case is decided by the Scrutineer (organizer).

2.8.10. If changes or modifications are made in wheel drive, placement of the engine, placement of the transmission, placement of steering column or steering mechanism, or if there is non-original or modified axle or semi-frame on the vehicle, as well as in cases which are not covered by these regulations and substantially improve performance of the car, installation of the safety bar or of the safety cage, or of other safety elements may be demanded when the car has obviously incomplete or weak design of the bodywork or suspension.

## 2.9 MINIMUM WEIGHT OF THE VEHICLE

2.9.1. The weight of the vehicle ready to race together with the driver (or race weight) in ProA and ProB Classes may not be less than:

Engine capacity: Race weight: \_\_\_\_\_.

Up to **2000 cm<sup>3</sup>**                      **450 kg** + each following 1 cm<sup>3</sup> over **1000 cm<sup>3</sup>** gives additional **0,4 kg**.

**2001.. .3000 cm<sup>3</sup>**                      **850 kg** + each following 1 cm<sup>3</sup> over **2001 cm<sup>3</sup>** gives additional **0,2 kg**.

**3001.. .6000 cm<sup>3</sup>**                      **1050 kg** + each following 1 cm<sup>3</sup> over **3001 cm<sup>3</sup>** gives additional **0,1 kg**.

1. Example: capacity of a normally aspirated petrol engine is 2490 cm<sup>3</sup>. A car is entered in ProB Class and falls into category

2001...3000 cm<sup>3</sup>. Minimum allowed weight together with the driver is 850kg + (489cm<sup>3</sup> x 0,2 kg) = 850kg + 97,8 kg = 947,8 kg.

2. Example: capacity of a normally aspirated diesel engine is 2490 cm<sup>3</sup>. The factor of 0,7 is applied to diesel engines, so the capacity used for the calculation of the minimum weight is 2490 cm<sup>3</sup> x 0,7 = 1743 cm<sup>3</sup>. The car is entered in ProA Class and falls into category up to 2000 cm<sup>3</sup>. Minimum allowed weight together with the driver is 450kg + (743cm<sup>3</sup> x 0,4 kg) = 450kg + 297,2 kg = 747,2 kg.

In order to compensate for possible error in the weight measurements the tolerance of 5 kg is applied.

2.9.2. It is allowed to increase the weight of the car using the ballast which is rigidly mounted to the bodywork, but not more than **50 kg**. The ballast must be mounted to the supporting structure of the car, and place for sealing must be provided by the competitor. The mounting of the ballast must withstand the load of at least **25 g**.

### 3 ADDITIONAL REQUIREMENTS FOR VEHICLES CAPABLE OF REACHING 11,999(7.5)\* sec. OR

#### MORE

**In case of contradictions with the General requirements the Additional requirements prevail.**

- 3.1. In case of manual gearbox the standard flywheel and clutch may be replaced by those complying with SFI 1.1,1.2, 1.3, 1.4 or 1.5 requirements.
- 3.2. In case of tubeless type tyre the valve stem must be fixed by the nut.
- 3.3. Series front flywheel of the crankshaft may be replaced only by the front flywheel of the crankshaft (dampener).

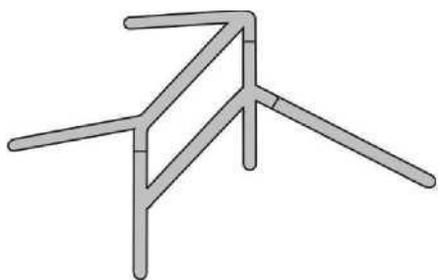
\* time of 201m distance

### 4. ADDITIONAL REQUIREMENTS FOR VEHICLES CAPABLE OF REACHING 11,499(7.35)\* sec. OR

#### MORE

**In case of contradictions with the General requirements the Additional requirements and regulations prevail.**

- 4.1. All requirements concerning vehicles capable of reaching **11.999(7.5)\* sec.** or more apply.
- 4.2. The Vehicle must have external battery master switch (which must be located in the rear part of the vehicle) which disconnects battery, generator, lamps, ignition and other circuits, and stops the engine. The switch must be marked with blue triangle, having the length of a side 80 mm.
- 4.3. The car must have NAF homologation or certification concerning the safety bars (see figure 253-1) which comprise the **main rollbar** forming the hoop with two mounting feet and **two its backstays** which connects the upper corners of the main rollbar with any of the supporting parts of the rear part of the bodywork, and one **transverse element** within the main rollbar. On the driver's side there must be one **longitudinal member** having the uppermost mounting point on the rollbar, in the height of midpoint of the door opening, measured from its base, but the lowermost mounting point – on the floor of the bodywork in the front of the door opening. The **reinforcement plate** must be used in the lowermost mounting point of the longitudinal member. (<http://argent.fia.com/> figure No. 12)



## 253.1

\* time of 201m distance

- 4.1. Free space between the driver's helmet and the safety cage when driver sits in the normal seating position with the safety harness on must be at least 3" (76 mm).
- 4.2. The vehicle, if slick tyres are used, must have the cardan ring having the following dimensions: 6 mm x 50 mm x 360 degrees, which may not be located further than 152 mm from the first universal joint (flexible universal joint). If the universal joint consists of multiple parts, there must be a ring for each part (<http://argent.fia.com/> , figure No.4)
- 4.3. All used oil and fuel hoses and pipes must be mounted using threaded connectors, and use of clip connectors is prohibited.
- 4.4. The use of aluminium wheel nuts and studs is prohibited. Wheel nuts may not be closed, so called "cap" type. The end of the wheel stud must be at least 3 mm above the external surface of the nut.
- 4.5. The seat of the driver must be equipped with the safety belt complying with the requirements of SFI 16.1 or of FIA standard 8855/1999.
- 4.6. The cars equipped with manual gearbox must have the flywheel protection complying with the requirements of SFI 6.1, 6.2, 6.3 or 9.1. If that is not available, it is allowed to make the protection which covers the flywheel area of the gearbox to the extent of 360 degrees and is made out of 6 mm thick steel, and is securely mounted.
- 4.7. Safety cage is recommended.

## **5. ADDITIONAL REQUIREMENTS FOR VEHICLES CAPABLE OF REACHING 10,999(6.99)\*sec. OR MORE**

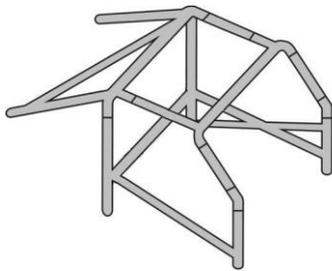
**In case of contradictions with the General requirements the Additional requirements and regulations prevail.**

- 5.1. All requirements concerning vehicles capable of reaching **11.499(7.35)\* sec.** or more.

5.2. The car must have NAF homologation or certification concerning the safety cages (see figure 253-2) which complies with the design of the basic safety cage together with the compulsory reinforcement elements. **The main rollbar + 1 front rollbar + 2 longitudinal members + 2 backstays + 6 mounting feet + 1 transverse element + 1 diagonal member** which is located in the main rollbar, the upper point of the diagonal member must be located on the driver's side.

\* time for 201m distance

**The door bars must be in the „X”** shape (cross-bars), it is recommended to mount the lower ends of the cross-bars directly to the longitudinal bar of the bodywork/chassis, and at least one part of the „X” should be of one piece. (<http://argent.fia.com/> figure No.16)



253.2

- 5.3. In case of the use of wet sump, the overflow tank having capacity of at least 1 litre and connected to the sump ventilation must be used.
- 5.4. It is compulsory to use steel axle-shafts and C clip eliminators.
- 5.5. It is compulsory to use at least 6 mm thick safety cover of the gearbox. When the vehicle is equipped with manual gearbox the safety cover must extend to all clutch chamber, when automatic gearbox is used – to whole gearbox.
- 5.6. Mountings and installation of driver's seat must comply with the requirements of Article 233.16 of Appendix J (FIA).
- 5.7. The safety belts must comply with FIA standard No. 8853/98 or 8854/98.
- 5.8. It is compulsory to use the window net on the driver's side. The window net must be mounted from the inside to the upper and middle lateral bar.

- 5.9. The driver must wear special clothing made of non-flammable material – overall, as well as socks and helmet balaclava.
- 5.10. It is compulsory to use footwear which covers ankle.
- 5.11. It is compulsory to use special gloves which in entirety are made out of leather, or having leather inside, but the lining and the outside made out of non-flammable 100% cotton material. The gloves must partially cover sleeves. The gloves may not be perforated regardless of the size of the holes.

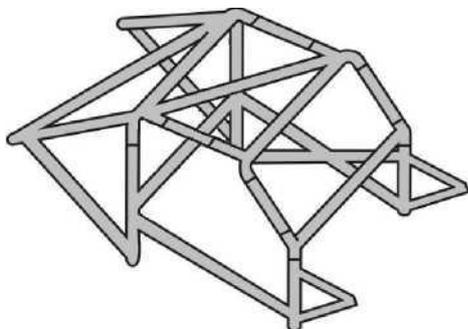
\* time for 201m distance

- 5.12. It is allowed to use only helmets having SNELL or SFI homologation.
- 5.13. The use of fire-extinguishing system is recommended.
- 5.14. It is allowed to use the safety hoop (fig.253.1) instead of the safety cage, if the firewall, floor, roof, wings of the car are retained original. This exemption does not apply to cabriolets.

## **6. ADDITIONAL REQUIREMENTS FOR VEHICLES CAPABLE OF REACHING 9,999(6.39)\* sec. OR MORE**

**In case of contradictions with the General requirements the Additional requirements and regulations prevail.**

- 6.1. All requirements concerning vehicles capable of reaching **10.999(6.99)\* sec.** or more apply.
- 6.2. The safety cage must comply with the requirements for production cars Group N, Article 253.8 of Appendix J (FIA).



253.3

\* time for 201m distance

**7. ADDITIONAL REQUIREMENTS FOR VEHICLES CAPABLE OF REACHING 8,499(5.45\*) sec. OR MORE**

**In case of contradictions with the General requirements the Additional requirements and regulations prevail.**

- 7.1. All requirements concerning vehicles capable of reaching **9,999(6.39)\* sec.** or more apply.
- 7.2. If the vehicle is designed on the basis of the tube frame, the safety cage must comply with the requirements of FIA SFI Article 25.4.
- 7.3. If the original base of the vehicle is used, the safety cage must comply with the requirements of FIA SFI Article 25.5.

- time for 201m distance

**8. IN ALL ASPECTS NOT EXPLICITLY COVERED BY THESE REGULATIONS THE FIA INTERNATIONAL DRAG RACING TECHNICAL REGULATIONS MUST BE FOLLOWED.**

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The Drag racing Working group of Road Commission of LAF

2014