

7 MOTORCYCLES

7.A GENERAL REQUIREMENTS

7.A.1 Rider's License:

Competitors 18 and over must have a current and valid state driver's license..

7.A.3 Production Class Records:

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

7.A.4 New Race Vehicles:

It is strongly recommended that all new Special Construction class (A, APS, Streamliner, SC, or SCS) vehicles, or vehicles in these classes that have been extensively modified, be submitted for a pre-event inspection by the Board. If not practical because of distance, photographs and drawing may be submitted to Steve Strupp.

7.A.5 Appearance:

All motorcycles entered in an event shall be maintained so as to present a neat **and respectable** appearance. All owners, riders, and crews are responsible for the maintenance of their pit area and will be expected to present a neat and respectable appearance..

7.A.7 Rider Position:

Any reference to a location relative to the position of a "Rider" will be as follows: Forward of the rider is defined as any area from the most forward edge of the motorcycle to the silhouette of the rider as viewed from the side, excluding the hands and arms. Behind the rider is defined as any area from the most rearward edge of the motorcycle to the silhouette of the rider as viewed from the side.

7.A.8 OEM/Original

The term "OEM" or "Original" is defined as a manufacturer's original equipment for the particular make, model and year of motorcycle.

7.B MOTORCYCLE TECHNICAL SPECIFICATIONS & REQUIREMENTS:

7.B.1 Number/Classes:

All entries shall have the number Id/ number label that you were given at registration on the motorcycle in a clearly visible location..

7.B.2 Shut-off Requirements:

7.B.2.1 Engine Stop Switch:

All motorcycles must have a positive-off kill switch that is able to stop a running engine, remain shut-off once activated, and be operated without removing the rider's hands from the handlebar grips.

7.B.2.2 Ignition Kill Switch Lanyard:

All motorcycles, except streamliners, shall be equipped with a tether-type mechanical device attached to the vehicle and the rider so the engine ignition is shut off if the rider becomes sep- arated from the motorcycle.

7.B.2.3 Fuel Pump Stop Lanyard:

If the ignition kill lanyard does not shut off the fuel pump, the motorcycle must be equipped with a tether type shut-off device attached to the vehicle and the rider so the fuel pump is shut-off if the rider becomes separated from the motorcycle.

7.B.2.4 Gasoline Shutoff:

Gasoline class motorcycles must have a fuel shutoff operable from a normal riding position. A fuel petcock will comply with this requirement if it is within reach of the seated rider. No plastic fuel petcocks or fuel filters are allowed. A petcock is not mandatory with electronic fuel injection.

7.B.3 Throttle:

A self-closing throttle must be fitted to all motorcycles.

7.B.4 Controls:

Control levers must have at least a ½ in. diameter round ball end. The handlebars must locate the hands outside the width of the fork tubes (6 in. minimum). It is suggested that the configuration of the handlebar(s) locate the thumbs at least 10 in. apart. An entrant may be required to demonstrate low speed handling and stability to meet this requirement. Handlebars must be made of steel, aluminum, titanium or other metal approved by the Board. Fork stops must stop fork travel before the hands touch any other part of the motorcycle. No decorative bar ends or pegs. Where possible, all switches should be clearly labeled.

7.B.5 Headlight and other lens:

All glass lenses must be taped to retain breakage. On headlights, the tape is limited to the glass lens. To avoid heat build up, lamps may be rendered inoperative.

7.B.6 Mirrors:

Must be removed unless integrated into the fairing. The glass in the integrated mirrors may be taped or removed.

7.B.7 Footrests:

Footrests must be provided as per requirements of the class entered and the rider must use them during the entire run. Foot controls must be operable with feet on the footrests. Only one set of rests is allowed.

7.B.8 Tire Requirements:

All competitors going over 187 MPH must sign the tire waiver form. All ZR, Z, V, H or lower rated tires shall have been produced within the last ten years as of the date of the current event. Sidewall date coding will be checked. Tubeless, bias ply type tires may be run with tubes. Tires designed for use on the drive wheel in drag racing will not be allowed. It is the responsibility of the entrant to check inflation pressures and tire and wheel condition immediately before and after every run. All motorcycle entries, including streamliners and sidecars, must use tires with an appropriate speed rating. The required speed rating is governed by the record speed in the class entered. Tires rated H CANNOT be used beyond the speed rating. Any run in excess of 200 MPH requires that the contestant examine tires for apparent deterioration or damage before further runs are conducted.

0 to 50 MPH	Any tire designed for motorcycle use is permitted.
51 to 130 MPH	Production tire maximum speed rating J=62 MPH, K=68 MPH, L=74 MPH, M=81 MPH, N=87 MPH, P=94 MPH, Q=100 MPH, R=106 MPH, S=112 MPH, T=118 MPH, U=124 MPH, H=130 MPH
131 to 150 MPH	Production tires designed for motorcycle use with a speed rating of V or higher.
151 MPH+	Production tire designed for motorcycle use with a speed rating of ZR or special tires for racing as designated by the manufacturer. Production tires with a speed rating of V, if shaved, can be used up to 200 MPH.
Above 187 MPH competing.	All racers are required to sign a tire waiver before
200 MPH+	In excess of 200 MPH special tires for racing as designated by the manufacturer must be used.
265 MPH+	Contestants must use LSR or racing tires rated for speeds higher than the class record.

Any tire deviation or the use of any non-pneumatic wheel/tire combination shall be submitted in writing in accordance with the RULE DEVIATION procedure, Section 1.R. Any wheel/tire combination that has a square edge at the tread/sidewall is strictly forbidden. Due to the duration of this event, rear drag tires **slicks** are not acceptable.

No car tires will be permitted.

7.B.9 Valve Stems and Caps:

All tire valve stems must be fitted with metal valve caps with o-ring. Over 175 MPH, tubeless tires must use metal valve stems. Tube type tires with rubber valve stems that are angled relative to the rotational plane of the wheel must have those valve stems secured to resist centrifugal force deflection. Safety wire or other approved restraining device is required.

7.B.10 Wheels:

Wheels must have a minimum nominal diameter of 15 in., except in the Sidecar and Streamliner classes. It is highly recommended that strict attention be paid to wheel alignment, wheel balance, spoke tension and tire run-out. Non-cross ventilated front wheels are not allowed except in the sidecar and streamliner classes if the wheel is fully enclosed by the body work. It is REQUIRED that front wheels be cross ventilated by an area equal to at least 25% of nominal rim circle area. Non-cross ventilated rear wheels are allowed. No wheel discs are permitted. Wheel disc may be installed on the rear wheel only and must be installed in a secure workmanship type manner. Installation methods will be closely scrutinized.

7.B.11 Gasoline:

The addition of a power additive or changes of any nature (other than oil designated for lubrication only) to GASOLINE is prohibited. Penalty for violation of this standard shall be disqualification. See Sec. 2.B.

7.B.12 Fuels: In fuel classes, any approved liquid fuel may be used.

7.B.14 Unsafe Motorcycle:

If a Tech. Inspector or the Chief Starter judges a motorcycle to be unsafe it will not be allowed to compete.

7.B.15 Wheel Retention:

All axle retaining nuts, axle caps and axles shall be safety wired or otherwise secured by visually verifiable means. **Slippage mark paint is acceptable.**

7.B.16 Tow Starts: Dead motor tow starts will not be permitted except for Streamliners.

7.B.17 Steering Damper: Required in all classes over 125 MPH.

7.B.18 Seat and Saddle:

No part of the seat or saddle or anything to the rear of these may be more than 42 in. above the ground when the motorcycle is loaded. Exception: OEM configuration in Production classes only unless specifically permitted by class rules.

7.B.19 Chassis & Steering:

All motorcycle entries must use handlebars for steering control. All moving parts of the steering system shall operate freely without excessive play. It is recommended that all steering system components be visually inspected on a frequent basis.

Fork stops must stop fork travel before the hands touch the tank or fairing. If a hydraulic steering damper is used, the rod shaft (or piston) may not be used for the fork stops

A functional shock absorber is required for each sprung wheel, except for OE girders.

7.B.20 Exhaust:

All exhaust system outlets must be directed away from the rider, the rear tire and the course surface. All blow-off valves, wastegates and burst panels must point away from the rider.

7.B.21 Nitrous Oxide Systems:

Nitrous Oxide bottles and lines are considered a part of the fuel system and governed by all fuel system requirements. Nitrous Oxide bottles shall be securely mounted. Bottle mounting by hose clamps alone is not sufficient. Vehicles with Nitrous Oxide systems shall be visibly identified as such and the location of the bottle(s) shall be clearly indicated. The Nitrous Oxide bottle(s) must be removed when competing in Gasoline classes.

The nitrous oxide bottle pressure relief valve shall be vented away from the engine and rider, if located in an enclosed and sealed area, and shall be vented to the outside by a rigid line.

Nitrous oxide systems should be equipped to shut-off the nitrous oxide solenoid if the rider becomes separated from the motorcycle. Nitrous Oxide cylinders may not be heated by an open flame.

7.B.23 Brakes:

Rear brakes are required and must be an internal expanding drum type or disc brake. Actuation may be from a foot pedal or handlebar lever. Front brakes are required over 175 MPH. The practice of backing off brake pucks is prohibited.

7.B.24 Ballast:

Ballast may be used in all categories. All ballast must be located ahead of the rear axle (except Sidecars and Streamliners). Ballast mounting tabs can extend past the axle. Ballast shall be securely mounted, i.e. bolted to the frame structure. The use of hose clamps, wire, strapping, tape, and tie wraps, etc. for securing weight or ballast is prohibited. Ballast shall not be used to streamline the vehicle. Visible ballast is not allowed in Production classes.

7.B.25 Fuel Systems:

The complete fuel system shall be well constructed and securely mounted. The fuel fill cap/cover must fit securely. All non-valve portions of fuel or gas lines (including saddle tank crossover lines), must have fire resistant or fireproof connecting lines & fittings. Aero/quip fire sleeve cover meets this requirement.

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

7.B.26 Batteries:

All batteries shall be properly secured with metal hold downs, framework and fasteners. Plastic tie-downs are not allowed. OEM battery hold-downs may not be adequate. Traction batteries for electric vehicles must also comply with requirements in 7.B.30.

7.B.28 Windshields/Windcreens:

All windshields and windcreens shall be made of shatter resistant plastic, such as polycarbonate (Lexan).

7.B.29 Cooling System:

Any combustible or flammable coolants are strictly prohibited.

7.B.30: Additional requirements for electric motorcycles:

- Vehicles running in this class may only be powered by an electric motor.

7.B.30.1 Traction Battery Pack:

- Traction battery pack must be rechargeable.
- Driver must be shielded from traction battery by a barrier, holes in the barrier to accommodate cables and other wiring are acceptable so long as they are reasonably identifiable as such and not just large voids that cables happen to run through.
- If batteries are placed in a box the box is considered a barrier, boxes must be vented.
- Batteries must be installed using appropriately sized metal hold downs, framework, and fasteners; battery installation should be such that batteries will withstand rollover without flying loose.
- Batteries with free liquid (such as flooded lead-acid batteries) are not allowed.

7.B.30.2 Over Current Protection:

- All battery packs must have overcurrent protection; circuit breaker(s) or fuse(s) permitted.
- Overcurrent protection devices must have a DC voltage rating equal or greater than the nominal pack voltage.
- Current rating of the protection device must be lower than the short circuit current that the pack can produce without damage.
- Each battery sub-pack that is in a distinctly different location must have its own over current protection.

7.B.30.3 Master Cutoff:

- The switches described in 7.B.2.1 and 7.B.2.2 must disconnect traction battery pack.
- All vehicles except OEM must incorporate an additional master electrical disconnect switch that must disconnect traction battery pack.
- Traction battery pack must be physically disconnected when switch is in the OFF position.
- Switch must be operated by a red button, latch down mechanically once it has been operated, and require manual operation to reset.
- Switch must be located at the rear of the motorcycle and be visible and accessible to course workers.

7.B.30.4 Wiring:

- All high voltage wiring must be located and secured to prevent accidental contact by driver.
- All wiring and terminals related to the traction circuit must have appropriate cover (wires must be insulated, terminals must have boots) no exposed bare wire in the traction circuit is acceptable.

7.B.30.4 Indication of Live Vehicle:

- When the vehicle is in a powered up state (the traction circuit is complete) two indicators must be clearly visible, one on the instrument panel and one on the rear of the vehicle, indicators must turn off if stop switch, lanyard switch, or master cutoff switches are operated.
- The rear light must be red and visible from 20 feet away, from the side or rear, and must flash 1-2 times per second on a 50% duty cycle.

7.C RIDING APPAREL:

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

7.C.1 Driver's Helmet:

All riders shall wear a full-face helmet with face shield, which must meet Snell Foundation M2015 OR later specifications or European ECE 22.05 or E 22.05, 2015 or newer. No open face helmets will be allowed. Helmets will be visually inspected at least once each year.

Helmets must be undamaged, unmodified and in serviceable condition. Eyeglasses worn under the helmet must be shatterproof.

Streamliner riders must use a Snell Foundation SA2015 or later specification helmet.

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

7.C.2 Leathers:

Leathers certified by a recognized manufacturer to be suitable for the application are required. One-piece suits or two-piece suits zippered together are allowed. Required over 175 MPH: One-piece leathers or two-piece leathers with full (270 degree) zipper. Also required over 175 MPH: Special protective armor, as produced by a recognized manufacturer, with minimum coverage at elbows, knees, shoulders, hips and back. Undergarments having the required armor coverage are acceptable, when the undergarment is worn with the required leather suit.

7.C.3 Boots: Zipper, buckle or lace up leather boots of substantial construction are required and must be at least 8 in. high.

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

7.D CLASSIFICATION OF DISPLACEMENTS, FRAMES, ENGINES, AND ENGINE TYPES:

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

7.D.1 Designated Frame Class

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

7.7.D.2 Designated Engine Class

P	Production
PE	Production Electric
PP	Production Push Rod
PB	Production Supercharged
PT	Production Overhead Cam Twin
PV	Production Vintage
G	Modified Engine: Gasoline
BG	Supercharged Engine: Gasoline
PBG	Supercharged Push Rod Engine: Gasoline
TBG	Supercharged Overhead Cam Twin: Gasoline
VBG	Supercharged Vintage Engine: Gasoline

F	Modified Engine: Fuel
PF	PushRod Engine: Fuel
TF	Overhead Cam Twin: Fuel
UF	Unlimited Engine: Fuel
VF	Vintage Engine: Fuel
BF	Supercharged Engine: Fuel
PBF	Supercharged PushRod Engine: Fuel
TBF	Supercharged Overhead Cam Twin: Fuel
VBF	Supercharged Vintage Engine: Fuel
Ω (O)	Steam, Turbine
E	Electric

7.D.3 Engine Displacement Classes:

Engine Classes are shown in cubic centimeters: 50, 100, 125, 175, 250, 350, 400, 500, 650, 750, 1000, 1350, 1650, 2000 and 3000 where permitted and 3001 and above where permitted.

Displacement shall be greater than the maximum allowable for the next lower class. To permit minor reconditioning of worn cylinder blocks in classes other than Production, it is permitted to increase cylinder bore diameter .020 in. (.508 mm) beyond that which provides maximum displacement for the class only if the OEM bore diameter is within .020 in. (.508 mm) of maximum class displacement. In all cases, the resulting displacement shall be exceeded to qualify for the next higher class. The .020 in. (.508 mm) will be discounted for the record certification and will be noted on the certification card and in the logbook.

Vintage engines are allowed +.050 in overbore, see 7.J.10.

7.D.3.1 Engine Displacement Classes/Electric Motorcycle Voltage Divisions:

Division	Measured Voltage
A3	382.9 and above
A2	330.1 - 382.8
A	264.1 - 330.0
B	211.3 - 264.0
C	184.9 - 211.2
D	158.5 - 184.8
E	132.1 -158.4
F	105.7 - 132.0
G	79.3 - 105.6
H	0 - 79.2

7.D.4. Frame Class/Engine Class

Max Displ. # of Engines:

P	P, PP, PB, PPB, PV, PT, PE	3000	1
M	All Except UG, UF, P, PP, PB, PPB, PV,Ω, PE	3000	1
MPS	All Except UG, UF, P, PP, PB, PPB, PV, Ω, PE	3000	1
A	All Except UG, UF, P, PP, PB, PPB, PV,Ω, PE	3001 & above	2
APS	All Except UG, UF, P, PP, PB, PPB, PV, PE	3001 & above	2
S	All Except P, PP, PB, PPB, PV, PE	3001 & above	2
SC	All Except UG, UF, P, PP, PB, PPB, PV, Ω, PE	3001 & above	2
SCS	All Except P, PP, PB, PPB, PV, PE	3001 & above	2

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

7.D.4.1 Maximum Voltage Cap is 500 Volts:

- a. Required additional logbook data for electrics for each event including:
 - i. Number of cells
 - ii. Nominal voltage of cells
 - iii. Nominal voltage of cells
 - iv. Fully charged voltage of pack
- b. In the even of parallel cells, cell combinations must be "hard wired", series/parallel switches are not allowed.
- c. Voltage verification points must be demonstrated and accessible for inspection. Controller input lugs or battery charging connections are some examples of acceptable locations.

7.E EQUIPMENT



7.E.1 PRODUCTION

This class is limited to production, street-legal motorcycles of which 500 or more have been produced and which are available for sale to the general public through retail motorcycle dealers. Motorcycles in this class shall be equipped with full lighting equipment, frame, forks, wheels, brakes, gas and oil tank (if OEM), fenders and seat. The motorcycle must appear identical in all respects to the production model it represents, including the intake air box and exhaust system. The exhaust system, looking at the end (down its centerline) shall be unmodified, i.e. the exit diameter of the canister (muffler) cannot be enlarged. This comparison will be made when the bike is assembled as ready to run. Any performance modifications must be out of view.

Electric motorcycles ridden in this class must retain OEM motor, and OEM battery pack specifications including voltage, Amp hour rating, and chemistry.

Custom painting or decal removal does not violate the production class appearance rule however smoothing, filling, removal of badges, emblems or garnish trim or other physical changes are not permitted. Production class records are subject to approval and will be certified ONLY after comparison with the manufacturer's specifications for the model. The entrant is required to provide suitable documentation substantiating the production design of the entry at the time of the record certification inspection.

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

7.E.1.1 Handlebars:

Any shape may be fitted to original handle bar mounts, except handlebars which extend more than 15 in. above, 4 in. in front of, or 4 in. below the original handle bar mounts. Controls and switches must remain OEM.

7.E.1.2 Footrests:

OEM rider footrests must be used. Passenger footrests and their supporting brackets shall be removed unless integrated into the frame or used for a purpose other than holding the footrest, e.g. muffler bracket.

7.E.1.3 Side and Center Stands: These may be removed.

7.E.1.4 Air Cleaner Element, Toolbox, and License Plate Bracket:

Air cleaner and toolbox may be removed. License plate bracket must remain. ~~Number plates may not cover any part of the rear wheel when viewed from the side.~~

7.E.1.5 Number/Class:

Number plates, if used, shall be located behind the rider, ahead of a vertical centerline and above a horizontal centerline of the rear axle.

7.E.1.6 Lighting equipment and instruments:

Must be exactly the same as fitted to the original model when it was sold. Adjustable headlights must have the lens mounted vertical. Reflectors, turn signal lights, and their supporting brackets may be removed only if not integrated with body fairing. To avoid heat build up, lamps may be rendered inoperative.

Visible non-OEM items are not permitted, except for required safety equipment.

7.E.1.7 Fairings, windshields, seats and side panels:

Parts that are factory equipment standard for the particular model must remain on the motorcycle and be unaltered in height, width, and contour.

7.E.1.8 Tires: See Section 7.B.8.

7.E.1.10 Wheel rims:

Rims may be changed only if necessary to obtain tires that meet the necessary tire requirements.

7.E.1.11 Suspension height adjustment:

OEM Specification for minimum ground clearance must be met.

7.E.1.12 Sprocket/Pulleys:

Front and rear sprocket/pulley size is optional; OEM chain size/belt width must be maintained.

7.E.1.13 Accessories/Options:

Any accessory or option available for the make, model and year of the motorcycle will only be allowed if it is delivered from the factory direct with the accessory or option installed. Accessories and Options that are installed after delivery from the factory are not allowed.



7.F MODIFIED PRODUCTION

This Modified Class is intended for “modified” production models and not purpose-built racing bikes.

This class includes all On Road, On-Off Road and Off Road only models and limited production models (more than 50).

This class does not include factory produced road racing or any other “works” racing models.

The requirements for this class include:

- An OEM frame must be used. Steering head angle may be altered, but must remain in its original location. Swing arm length, type and mounting method may be altered. Brackets, braces, mounts, gussets, etc. may be moved, modified or removed. Perimeter type frame engine cradle tubes must remain unmodified. Spar-style main frame spars must remain unmodified. “Main frame spars” are defined as the large formed tubes which connect the steering neck to the engine mounts and swing arm pivot.
- The engine must be from the same manufacturer as the frame.
- A single engine with maximum displacement limited to 3000 cc.
- A maximum wheelbase not to exceed the original OEM specification plus 10%. Entrants shall provide acceptable documentation for record clarification.
- Handlebar grips and rider seating position must be above the top of the rear tire with the rider seated, unless original OEM design.
- Gas tanks, if not original equipment to the production model, must have a minimum capacity of 5 liters or 1.32 gallons.
- OEM lights, instruments, fenders, gas and oil tanks, seat, forks, swing arm, shocks, brakes and wheels are optional.
- Bikes that meet the requirements for the Modified Production Class by definition, cannot run in the Special Construction Class.
- Electric motorcycles ridden in this class must use a motor from the same motorcycle OEM as the frame, electric motorcycles are exempt from the gas tank requirement.

7.F.1 Foot rests:

Must be ahead of the rear axle at least by 6 in.

7.F.2 Optional exhaust systems:

Optional exhaust pipes may not extend behind the rear edge of the rear tire.

7.F.3 Number/Class Designation plates: See Section 7.B.1.

7.F.4 Fenders:

All fenders must be of sufficient strength to resist deflection at speed. Front fender and rear portion of rear fender may be removed or special fenders may be fitted. Special fenders must be made and attached in a workmanship-like manner.

7.F.4.1 Front Fenders:

Front fender is optional, and if used must comply with the following: front wheel and tire must be visible from either side for a continuous 180 degrees of their circumference. The front of the fender may not extend lower than a horizontal line drawn through the front axle. Perimeter of the fender may not be farther than 1.750 in. from the tire tread on non-OEM or modified fenders. The sides of the fender may fair in the fork tubes or sliders, but may not be over 2 in. wider overall than these parts.

7.F.4.2 Rear Fenders:

Rear fenders shall extend rearward to a point not less than a vertical line drawn through the rear axle. A seat that covers the rear wheel to the vertical line may substitute for the fender requirements. All fenders must be of sufficient strength to resist deflection at speed.

7.F.5 Reserved

7.F.6 Axles:

All axles must be of steel alloy, OEM aluminum or Titanium.

7.F.7 Forks:

Must be of sufficient strength for the motorcycle in question. Center hub steering and equivalent or derivative of this design is not permitted in this class, unless factory produced for the model.

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

7.F.10 Engines:

Only a single engine with a maximum engine displacement of 3000cc is allowed. Multiple engines are not permitted in this class.

7.F.11 Open Class:

1. No streamlining is permitted in the open motorcycle class. Streamlining is defined as any devices or objects forward of the rider that have the apparent effect of directing, limiting, or controlling airflow around the motorcycle or rider.
2. Seat or tail section must conform to partial streamlining rules.
3. Un-modified OEM air inlet scoops, OEM instruments, OEM instrument panels and/or OEM headlights mounted with un-modified OEM mounts in the OEM location are allowed in the Open class and meet the non-streaming rule.

Documentation to verify OEM parts shall be made available to the inspector by the competitor. Motorcycles using non-OEM instruments, or OEM instruments not using OEM mounts, must be mounted within an area defined as no farther forward than 6in. in front of the leading edge of the upper triple clamp nor more than 4 in. above the top of the triple clamp nor more than 2 in. below the top of the upper triple clamp nor wider than 1 in. outside of each fork tube.

7.F.12 Partial Streamlining:

The following rules apply to motorcycles not using OEM components (or replicas of those components), or using a fairing, bodywork or tail section on a production model that was not originally equipped with the components used.

No part of the fairing ahead of the front axle may be lower than the top of the front rim at the axle vertical centerline or be forward of the front edge of the rim. Forward front fender coverage may not extend lower than a horizontal line through the front axle. There must be no streamlining forward of the front edge of the front rim. There shall be no streamlining other than a seat, tail section or fender to the rear of the rider's body, and the seat, tail section or fender may not cover any of the wheel when viewed from the side. If a streamlined seat, tail section or fender is used it cannot extend further than 3" from a vertical line at the rear edge of the rear tire or be more than 42 in. from the ground with the rider seated on the bike. It must be possible to see (all of) the rider: completely from either side, except the hands and forearms; as viewed from directly above it must be possible to see all of the rider except the hands, forearms, legs and feet. It is forbidden to use any transparent material to avoid the application of these rules. Fairings or bodywork must have a minimum of three (3) separate mounting points. Egress demonstration may be required.

The OEM fairing, bodywork and tail section for the specific production model are allowed. Fairing and tail section shall be mounted in a conventional manner and all bodywork pieces must be mounted in their original relationship to each other. Replacement non-OEM fairings, bodywork and tail sections must be an exact replica of the OEM parts. Documentation to verify conformation of non-OEM parts to OEM parts must be made available to the inspector by the competitor.



7.G SPECIAL CONSTRUCTION/ALTERED

The Special Construction class is intended for the purpose-built race bikes, not production bikes with minor modifications. A Special Construction frame is unlimited in design, except for the class requirement of this section. This class includes factory produced road racing or any other racing "works" models.

Bikes in this class may have either a full APS fairing or one of the following:

- Two engines/motors
- Unlimited engine displacement, traction battery pack voltage limited per 7.D.4.2
- Seat base lower than top of rear tire with the rider seated on the bike
- Design items not permitted in the Modified Production class
- A fuel tank of any size
- Center hub steering

All components must have sufficient strength to ensure stability and safety. Weld integrity and fabrication methods will be closely scrutinized during the inspection process. The technical committee may require Non Destructive Test Certification of components and/or stress analysis of the design.

7.G.1 Footrests: Must be provided and the location is optional.

7.G.2 Optional exhaust systems:

Exhaust pipes may not extend beyond the rear edge of the motorcycle

7.G.3 Number/Class Designation plates: See Section 7.E.1.5

7.G.4 Fenders: See fenders in Section 7.F.4.

7.G.5 Gas tank: Must be mounted and constructed in a workmanship-like manner. Electric motorcycles are exempt from this requirement.

7.G.6 Wheels: Must have a minimum nominal rim diameter of 15 in.

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

7.G.9 Engine:

Any single or dual combination of motorcycle engine is permitted. No more than two engines are permitted. Maximum total engine displacement limit for the motorcycle is unlimited.

7.G.10 Open Class:

This class is limited to purpose built "bare bones" race bikes stripped of all aero and street use parts. No streamlining is permitted in the Open Special Construction class. Streamlining is defined as any devices or objects forward of the rider that have the apparent effect of directing, limiting, or controlling airflow around the motorcycle or rider. A front fender is optional, and if used shall comply with the following: the front wheel and tire shall be visible from either side for a continuous 210 deg. of their circumference. The front fender shall not extend lower than 5 in. above a horizontal line drawn through the front axle. The perimeter of the fender shall not be farther than 1.750 in. from the tread. The sides of the fender may flair into the fork tubes or tire, but shall not be over 2 in. wider overall than these parts. If a seat, tail section or fender is used, it must not extend more than 3 inches past the rear of the rear tire or cover any of the wheel when viewed from the side. No part of the tail section shall be lower than the top of the rear rim, or over 36 inches from the ground, with the rider seated on the bike.

It shall be possible to see all the rider from either side. As viewed directly from above, it shall be possible to see all of the rider except for the legs and feet. It is forbidden to use any transparent material to avoid the application of these rules.

7.G.11 Partial Streamlining:

If a streamlined seat/tail section is used, the seat/tail section cannot extend further to the rear than 10 in. beyond the rear edge of the rear tire. No part of the seat/tail section may be closer than 4 in. from the ground, or over 40 in. from the ground with the rider seated.

It shall be possible to see all of the rider: completely from either side, except the hands and forearms. As viewed from directly above it shall be possible to see all of the rider except the hands, forearms, legs and feet. It is forbidden to use any transparent material to avoid the application of these rules. Fairings or bodywork shall have a minimum of three (3) separate mounting points.

No part of the fairing ahead of the front axle may be lower than the top of the front rim at the axle vertical centerline or be forward of the front edge of the rim. There shall be no streamlining forward of the front edge of the front rim.

Front fender is optional, and if used shall comply with the following: front wheel and tire shall be visible from either side for a continuous 180 deg. of their circumference. The front of the fender may not extend lower than a horizontal line drawn through the front axle. The perimeter of the fender may not be further than 1.750 in. from the tire tread. The sides of the fender may fair in the fork tubes/sliders/tire, but must not be over 2 inches wider overall than these parts. No part of the seat/tail section behind the rear axle may be closer than 4 in from the ground with the rider seated.

7.H STREAMLINER - S

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

The vehicle, unloaded, must be capable of being leaned at an angle of 20 deg (minimum) from the vertical position without touching the ground, other than the tires, without prior contest board approval.

All components must have sufficient strength to ensure stability and safety. Weld integrity and fabrication methods will be closely scrutinized during the inspection process. The technical committee may require Non Destructive Test Certification of components and/or stress analysis of the design. Prior to starting construction it is strongly suggested that the constructor submit final design prints to the technical committee for evaluation of compliance with rules and safety

considerations.

7.H.1.1 Sealed Firewall:

There must be at least one sealed firewall between the rider and engine/fuel compartment(s) as well as adequate drains in engine/fuel compartment(s). All linkage and controls that pass through the firewall(s) must go through the upper half to avoid fuel seepage into the rider compartment.

7.H.1.2 Fire Extinguishing System:

All Streamliners must have a rider controlled fire extinguisher system directed to the engine/fuel compartment. If an automatic heat sensing control is used, a manual control must also be fitted. Refer to Section 3.Q for additional requirements.

7.H.2.2 Fire Extinguishing System:

A fire extinguisher must be directed at the battery pack.

7.H.3 Driver/Rider Suit:

A complete, approved driver/rider suit conforming to SFI specification 3.2A/15 is REQUIRED. Gloves and boots must be SFI specification 3.3/5 rating. A SFI specification 3.3 head sock must be worn under the helmet.

7.H.4 Roll Cage:

Shall completely surround the rider and shall be fitted in the rider's compartment. Minimum diameter is 1-1/4 in. with .090 in. nominal wall thickness, mechanical steel tubing. No galvanized pipe, black water pipe or threaded fittings are permitted. The design of the roll cage must incorporate the following features as a minimum: Two (2) roll bars, (one forward and one after the rider's head), which must be tied together and capped with a steel plate .090 in. thick. The cap must cover the upper 140 deg. of the rider's head. The roll bar must be braced with a tube of the same dimensions on each side. Rider head movement must be limited to no more than 2 in. to each side, top, or rear, with the rider's head in the normal position. Roll cage padding meeting SFI specification 45.1 for round tube roll cage padding and SFI specification 45.3 for flat roll cage padding is required in the vicinity of the driver's helmet.

Forward Movement: All NEW motorcycle streamliners present for inspection shall have an engineered and tested SFI spec 38.1 type head and neck restraint system.

The lateral movement structure (see 3.A.3) shall be constructed such that the helmet can not exit the outer plane of the roll cage. The seat or roll cage structure shall provide restriction to lateral head movement of less than 2" per side inclusive of structure deflection.

7.H.5 Seat Belts and Limb Restraints:

A complete competition seat belt and shoulder harness is required with shoulder, lap, and crotch straps. Arm restraints from the wrist to the central harness buckle must be used, see Section 3.D. Approved limb restraints with SFI 3.3 spec shall be in good condition and have a manufacturer's tag with a legible date not more than 5 years old on the label are required in all Streamliners.

7.H.6 Rider Compartment:

The rider compartment must be free from sharp edges, protrusions, brackets, etc., within close proximity to the rider. A rigid inner liner must be provided to retain limbs within the roll cage structure. The rider compartment must be equipped with a fresh air intake or breathing system to carry away fumes. All air breathing and cooling systems that supply air to the driver must have fire retardant protection on the hoses that supply air.

The seat shall be constructed of a metal or alloy sufficient to retain the driver under high "G" loading. Composite seats must be approved by the technical committee, no plastic or fiberglass seats will be allowed.

Secondary flooring, metal sheeting in the driver's compartment for the purpose of retaining the rider and appendages in the event of step pan or belly pan tear away must be added. See Section 3.G.

7.H.7 Windshields:

All windshields must be of shatter-resistant plastic, such as Lexan®, and provide 120 degrees of adequate horizontal forward vision.

7.H.8 Fuel Shut Off:

A remote fuel shutoff to disable pump operation that can be easily actuated from the rider compartment must be fitted. All electric fuel pumps shall have an inertial shutoff switch in the circuit to disable pump operation. Electric motorcycles are exempt from this regulation.

7.H.9 Fender:

A bulkhead or fender must be fitted around any tire within the rider compartment. The fender must be metal construction or must be covered with a ballistic shield.

7.H.10 Canopy:

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

7.H.11 Tires and Wheels:

Tire and wheel sizes are unlimited. Tires must meet the speed rating as shown in Section 7.B.8., manufactured for racing or reinforced per Section 2.G must be used.

7.H.12 Test Runs:

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

7.H.13 Parachute:

A parachute is required on all Streamliners. Streamliners going over 200 MPH are required to have two parachutes, one for high speed and one for low speed. Parachute release mechanism must be mounted in a position allowing it to be activated without removing the rider's hands from the steering mechanism. It is required that automatic mechanisms be installed that will actuate when the machine is laid over 50 deg. on enclosed tail streamliners, and 80 deg. on open tail streamliners. A demonstration of the parachute system including deployment is required at each event. All non-manual parachute release systems must have a redundant manual release as a backup.

7.H.14 Steering:

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

It is recommended that all steering system welds be visually inspected on a frequent basis. Competitors may wish to periodically qualify exceptionally critical welds by means of x-ray or magnaflux. 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 ends (i.e., Heim) used in steering systems shall not be constructed of aluminum. All spherical ends 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 must be at least grade 5. For vehicles with long steering shafts the shaft shall be collapsible or have a secondary steering shaft stop installed.

7.H.15 Brakes:

All Streamliners must be equipped with a front and rear wheel brake as required, see section 7.B.23.

7.H.16 Number/Class Designation:

Streamliners must have a minimum number/letter area of 10 in. x 12 in. on both sides of the body.

7.H.17.1 Tanks:

Fuel tank, oil tank, and battery (unless sealed in an acid spill-proof box, Section 7.H.20) must be separated from the driver/rider by a firewall. No fuel lines may be routed through the rider

compartment.

7.H.17.2: No traction batteries or traction circuit wiring are allowed in the driver compartment, non traction batteries (such as those for instrumentation) in driver compartment must comply with 7.H.17.1.

7.H.18 Engine:

Any single or dual combination of motorcycle engines permitted. No more than two (2) engines are permitted. Maximum total engine displacement is unlimited.

Any single or dual combination of motors is permitted. No more than two drive motors permitted

Traction battery pack voltage is limited per 7.D.4.2.

7.H.19 Skids:

Streamliners using skids must have a positive lock in both the 'up' and 'down' positions. The shoe or contact area must have a good form of ski-nose with a surface-friendly design. Wheels may be required on out-riggers. Skids are to be locked in a retracted position as soon as the motorcycle becomes stable.

7.H.20.1 Batteries:

All batteries shall be properly secured with metal framework and fasteners. Batteries may be mounted in the driver's compartment if sealed in an acid spill-proof box. All streamliners must be equipped with a main battery disconnect switch. The disconnect switch must be visible and clearly marked.

7.H.20.2 Batteries may not be located in driver's compartment.

7.H.21 Towing:

All streamliners shall have an obvious place for course workers to quickly attach a tow strap for emergency towing of the streamliner off the race course.

7.H.22 Chain/Belt Guard:

Guards are required to prevent a failed chain or belt from damaging fuel, oil, coolant or hydraulic lines.

7.I SIDECAR - SC

A sidecar is a three-wheel vehicle leaving two tracks with only the rear-most wheel driving. The front and rear tires shall leave one track no wider than the wider of the two tracks.

7.I.1 Passenger:

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

7.I.2 Engine Location:

The engine/engines must be located between the front and rear drive wheel, and the engine centerline located within the width of the rear tire.

7.I.3 Driver Location:

The rider must operate the sidecar outfit with motorcycle type handlebars from a position which places his centerline between the front and rear drive treads. The rider must be visible from the hips to the shoulders from the side view and be able to exit the outfit without restriction, unless in compliance with enclosed streamliner rules.

7.I.4 Chassis and Suspension:

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

7.I.5 Steering:

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

7.1.6 Sidecar:

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

7.1.7 Wheelbase and Track:

Track must be no less than 32 in. and wheelbase between 50 in. and 110 in. No wheelbase restriction on streamliners.

7.1.8 Wheel Size:

The front and rear wheel rim shall be no less than 10 in. nominal diameter. The sidecar wheel rim may be no less than 5 in. nominal diameter. No size restriction on streamliners.

7.1.9 Tires:

The speed rating requirements for solo machines apply, see Section 7.B.8.

7.1.10 Chain Guard and Wheel Cover:

See Section 7.B.22 Chain Guard requirements. The inside of the sidecar wheel must have a cover.

7.1.11 Passenger Accommodation: 7.1.11

A passenger is not allowed to ride in or on the sidecar. Sidecar platform must be able to accommodate a forward-facing, kneeling passenger with a size and weight of 5 ft. 7 in., 170 lbs. The platform must encompass a rectangular shape having a minimum dimension of 12 in. by 32 in.. The 12 in. dimension shall be oriented perpendicular (90 deg.) to the wheelbase of the motorcycle. The 32 in. dimension shall be oriented parallel to the wheelbase.

7.1.12 Sidecar Streamliner:

This is the ultimate sidecar land speed vehicle. Innovation in design is encouraged. Must meet all sidecar requirements and two-wheel streamliner requirements, except Section 7.H.19. Passenger accommodations and track requirements must conform to Sections 7.1.11 and 7.1.7. No wheel base restriction for streamliners. All sidecars not meeting the unrestricted driver exit requirement in Section 7.1.3 must run in this class.

7.1.13 Test Runs:

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

7.J ENGINE CLASSES

7.J.1 Class P - Production:

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

7.J.1.1 Class PE - Production Electric:

Production motors must be the same model as the model of the frame.

7.J.2 Class PP - Production Push Rod:

Same as Production, but must have pushrod operated valves with camshaft located at least one crankshaft stroke below the OEM cylinder deck position or utilize OEM pushrod length at least twice the crankshaft stroke.

7.J.3 Class PB - Production Supercharged:

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

7.J.3.1 Class PT - Production Overhead Cam Twin:

Same as production but must have an overhead cam(s) and two cylinder engine.

7.J.4 Class PV - Production Vintage:

Same as Production but must have been produced prior to 1956.

7.J.5 Class F - Modified Engine - Fuel:

Unlimited in design, but must consist of major parts and components designed primarily for use in motorcycle engines. No restrictions on fuel. Superchargers or turbochargers are not permitted. Fuel injection is permitted.

7.J.6 Class G - Modified Engine - Gas:

Same as Class F, except it is limited to event gasoline.

7.J.7 Class BF - Modified Engine - Fuel Supercharged:

Same as Class F, except supercharger or turbocharger is allowed. No restrictions on fuel.

7.J.8 Class BG - Modified Engine - Gas Supercharged:

Same as Class BF, except it is limited to event gasoline. See section 2.B. Water injection is allowed, but water tanks must be inspected and sealed prior to each record run.

7.J.9 Class PG and PF - Pushrod Engine - Gasoline or Fuel:

Any motorcycle engine with push rod operated valves. The camshaft must be located at least one crankshaft stroke below the OEM cylinder deck position or that utilize OEM pushrod length at least twice the crankshaft stroke.

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

7.J.9.1 Class TG – Overhead Cam Twin: Gasoline

Must have an overhead cam(s) and two cylinder engine running event gas.

7.J.10 Class VG and VF - Vintage Engine - Gasoline or Fuel:

Same as Class G or F, except that the class is limited to motorcycle engines produced prior to 1956.

For reasons of historical authenticity, vintage engine modifications are restricted to older technology levels as far as practical. Accordingly, in classes VF, VG, VBF and VBG newer technologies such as EFI, or electronic reactive ignition systems are not in keeping with the spirit of the Vintage classes and are not allowed. Computers are allowed for data collection purposes only.

Engines must utilize OEM crankcase, OEM cylinders on flatheads and two strokes and OEM heads on OHV engines. Above components made after 1955 and exact reproductions may be considered legal in Vintage classes if they offer no competitive advantage. Pre installation approval by the board is required. It is the entrant's responsibility to provide documentation and samples. A .050 in. overbore is allowed on vintage engines only (including production vintage) only if the OEM bore diameter is within .050 in. (1.25 mm) of maximum class displacement and will be discounted when the bore size is measured. Flathead engine displacement will be discounted 33 1/3% in determining engine displacement class limits. For example, a 1500cc measured displacement would run as a 1000cc.

7.J.10.1 Class VBG and VBF - Vintage Engine - Gasoline or Fuel Supercharged:

Same as class VF or VG, except that a supercharger is allowed.

7.J.11 Class PBG and PBF - Push Rod Engine - Gasoline or Fuel Supercharged:

Same as Section 7.J.9 above, push rod classes, except that a supercharger or turbocharger is allowed; subject to the same limitations as Classes BF and BG, respectively.

7.J.11.1 Class TBG – Supercharged Overhead CamTwin - Gasoline

Same as 7.J.9.1 except that a supercharger or turbocharger is allowed.

7.J.11.2 Class TF – Overhead CamTwin - Fuel:

Same as 7.J.9.1 except no restrictions on fuel.

7.J.11.3 Class TBF – Supercharged Overhead CamTwin - Fuel

Same as 7.J.11.2 except that a supercharger or turbocharger is allowed.

7.J.11.4 Class E - Electric:

Refer to 7.D.3.1

7.J.12 Class UG and UF - Unlimited Engine - Gasoline or Fuel:

Same as 7.J.11.2 except that a supercharger or turbocharger is allowed.

7.J.13 Class Ω (O - Omega):

An engine using a thermodynamic cycle other than Otto, Two Cycle or Diesel. Although electric motors are not a Thermodynamic cycle they are allowed in this class. This class includes electric, steam and turbine engines. Entry must comply with all applicable frame class requirements. Entrants must submit complete power plant details to the technical committee for safety evaluation at least 45 days prior to the meet.

7.J.14 Engine Displacement Classes:

Engine Classes are shown in cubic centimeters: 50, 100, 125, 175, 250, 350, 400, 500, 650, 750, 1000, 1350, 1650, 2000, 3000 and 3001+ where permitted.

ECTA Electric Motorcycle Voltage Divisions

Division	Measured Voltage
A3	382.9 and above
A2	330.1 - 382.8
A	264.1 - 330.0
B	211.3 - 264.0
C	184.9 - 211.2
D	158.5 - 184.8
E	132.1 -158.4
F	105.7 - 132.0
G	79.3 - 105.6
H	0 - 79.2

7.J.15 Maximum Displacements & Engines:

See section 7.D.4 on page 74.

7.J.16 Engine Cycles:

At the discretion of the Technical Committee, some engine classes may be separated into two categories. Two Cycle and Four Cycle. The engine displacement will be followed by a /2 or /4 for classification. Examples: APS/G-750/2 or P/PP-1350/4. Rotary engines may be included in this subdivision. Example: APS/G-750R. Two cycle engines are limited to 1000cc.

7.K Alternative Fuel Experimental - /AFX2 (ECTA ONLY)

This class is for any motorcycle, regardless of engine size; normally aspirated or blown, that is running on non-production pump fuels. Examples include: bio-diesel, peanut oil, soybean oil, etc. No points will be awarded for this class, however, records can be set in this class.