MID-WEST RACING ASSOCIATION

CLASS INFORMATION

CLASSES

Racing classes are determined by the amount of modifications to a machine. MWRA and it's officials reserve the right to order an inspection of a vehicles modifictaions at any time or if a top three race finish is protested. Anyone found in violation of the class rules and limitations will be banned from the series for the remainder of the current season. The placement of the race in question will be forfieted to the next runner up. It is MWRA's perogitive to hold a fair and honest competition and we retain all rights to maintain this.

GROUPS "A" and "B"

The MWRA series races in two groups within each class. GROUP B is for models 700cc displacement and under. Group A is for models with 701cc or over. Scoring will be recorded for both groups within each class. If a group has more than fifteen entries at a particular race, MWRA may offer a group/class exclusive heat.

GROUP "A" HANDICAPS

Due to the recent increase of performance UTV displacement, MWRA reserves the right to apply an elapsed time handicap on some models in Group A to insure the most even competition. All handicaps must be agreed upon with a vote by all active MWRA officials. In the event of a handicap enactment a racer may chose to advance to the next class.

RUN GROUPS

If a particular racing class has less than five entrees at a given race the entrants heats will be combined with the heats of the nearest class with less entrees. Likewise, if a group has greater than twelve entrees the group may request their own Run Group and run their own heats. MWRA officials reserve the right to refuse Run Groups if the track, weather or timing become a factor.

STARTING POSITION DETERMINATION

A driver may not qualify more than one entry per class. The starting position of each heat will be determined by a random drawing. If an entrant is not present for the drawing they will automatically be placed at the end of the field.

CLASSES

***STOCK – CLASS 9 -** Allows for changes to tires, wheels, roll cage, bumpers and skid plates, air box and exhaust. No suspension or internal motor modifications allowed—no motor modifications besides airbox/filter and exhaust. No ignition / fuel controllers or rev limiter changes allowed. Maximum vehicle width is 61". NOTE: RZR S is allowed in this class only if the vehicle remains factory stock.

***STOCK MOD – CLASS 8 –** Allows for all of the above plus: Aftermarket suspension, ignition / fuel controlers, rev limiter changes and clutch modifications. No internal engine modifications allowed. Maximum vehicle width is 63" No wheelbase modification allowed.

***LIMITED – CLASS 6 –** Allows for all of the above plus: Aftermarket suspension up to 68" overall vehicle width, wheelbase modification up to 4" overall, internal engine modifications, Fuel tank and battery relocation and bed deletion. Drivers seat must remain in OEM location.

****SUPER MOD – CLASS 3 –** Allows for all of the above plus: Aftermarket suspension up to 72" overall vehicle width, chassis modification / reinforcement (within MWRA class limitations) and seat relocation.

****OPEN – CLASS 1 –** Allows for all of the above plus: forced induction, nitrous oxide, 4WD elimination and engine relocation. OEM base chassis and drivetrain must be retained. Bolt on roll cages must have at least six (6) mounting points.

This lists what CAN be changed per class. If a change is not stated you probably CANNOT change it. See the CLASS SPECIFIC COMPITITION RULES for more information or contact the MWRA Technical Director for specific instructions

ALL CLASSES REQUIRE 4WD EXEPT CLASS 1 OPEN.

* All classes are regulated and inspected by SE Rules 1-13 and COMP Rules 1-33

** SUPER MOD (Class 3) and OPEN (Class 1) are additionally regulated by COMP Rules 34-39

Each driver is responsible for the tech approval of their own machine. It is MWRA's right to refuse any vehicle from competition if we do not feel it meets all safety and/or technical requirements.

MWRA UTV SERIES SAFETY RULES

The aforementioned rules will apply to all classes. All rules are intended to meet the safety requirements to afford the MWRA UTV Series safe and competitive events. Any modification or addition to these rules is prohibited, unless changed by the proper method of notification by the series Technical Director, in accordance with such notification rules as set forth in this rulebook. Use of optional equipment is not permitted unless the competitor has prior written approval of the series Technical Director. Any deviation from the MWRA Rules will result in disqualification from the event or the series. Right of appeal to such actions is available through the governing body of the MWRA Series.

*** - Notes variations to rules based on classes or modifications. Please take note. If a rule section has no asterisk the rule applies to EVERYONE, no matter what.**

* All classes are regulated and inspected by SE Rules 1-13 and COMP Rules 1-33

** SUPER MOD (Class 3) and OPEN (Class 1) are additionally regulated by COMP Rules 34-39

SAFETY EQUIPMENT

SE-1 Equipment

A. No passenger is allowed on the race vehicle at any time the vehicle is in motion.

B. The event promoter will have safety and emergency equipment on the premises prior to the start of any event.

C. No race vehicle will be permitted on the track until the track has been opened for official practice.

D. No driver will compete in any event with his/her head or arm extended outside of the closed body race vehicle.

E. Additions to race vehicle bodies, such as fins, scoops, wings or other extruding additions will not be permitted in competition.

SE-2 Helmets

A. It is required that helmets meet the specifications set forth in Federal Motor Vehicle Safety Standard Regulations or meet the specifications set forth by the American National Standards Institute, Inc.

B. Helmets must be of the type approved by the Snell Memorial Foundation (2000 or newer), with a Snell approval sticker attached. Straps must have D-ring fasteners only.

C. No snaps or Velcro will be permitted. The interior and exterior areas of the helmet must be free of defects (i.e., the padding must be in good condition and the exterior of the helmet must not be damaged). MWRA strongly recommends that entrants use helmets specifically designed for racing.

D. Helmet must be full faced and M-rated.

E. Driver windshield rock guard highly recommended.

SE-3 Fire Suits

A. One-piece fire-suits are optional for all classes except the OPEN class wherein they are required. The suits must cover from the neck to the ankles and to the wrists. All suits must be made from fire-resistant material with the manufacturer's fire resistant rating label attached. Fire-suits must be in good condition with no rips or worn areas.

B. Fire resistant gloves are required in the OPEN class only.

SE-4 Eye Protection

A. Shatter resistant eye protection is required for all entrants competing in a MWRA event.

SE-5 Fire Extinguisher

A. It is highly recommended (but not required), at a minimum each vehicle should carry a portable UL approved 2.5+ lb. ABC-class dry chemical type or equivalent Halon fire extinguisher. Fire extinguisher should have a gauge, be fully charged, and be easily accessible from inside of the vehicle. Portable and on-board fire extinguishers must have a current (less than one year old) fire marshal's seal and attached label.

B. On-board HALON system fire extinguishers are highly recommended in addition to the portable fire extinguisher.

C. MWRA and affiliates are not responsible for any damages, including fire damages, incurred during an event.

SE- 6 Co-driver

A. Co-drivers are NOT permitted in any class unless there is a pre-determined co-driver race.

SE-7 Driver Medical Attention

A. If competitor requires medical attention, by track or other medical teams, medical technician must release competitor before returning to competition. Failure to comply with advice of the medical technician will result in disqualification from competition for the balance of the event. MWRA Competition Director will administer procedure.

B. If a driver loses consciousness at anytime during an event, the driver cannot compete for at least seven (7) days and must be cleared by a doctor.

SE-8 Quality of Workmanship

A. Race vehicle workmanship must meet with the MWRA Technical Director's approval.

SE-9 Fueling of Race Vehicle

A. No fuel will be added to race vehicles in staging or on the starting line prior to a race or practice.

SE-10 Safety Harnesses *

STOCK (Class 9) *

A. OEM seatbelts are allowed but HIGHLY discouraged.

ALL OTHER CLASSES *

B. All vehicles must have a minimum of a heavy-duty type four-point fast release latch seat belt. Anti-submarine straps are highly recommended. Metal to metal latches and connectors are required. The four-point harness system shall consist of one 2-inch wide seat belt and two 2-inch wide shoulder straps minimum.

C. Harness material shall be made of nylon or Dacron polyester. Harness must be in new or perfect condition. All harnesses must show the manufacturer's name and the date of manufacture, and must not be used beyond two years from this date. No portion of the harness may be altered in any fashion from the manufacturer's standard design.

D. All mounting parts of belts must be mounted to chassis. Shoulder straps must be mounted behind the occupant's seats and be located a minimum of 4 inches below the top of the occupant's shoulders. Seat belt should be mounted a minimum of 2.5 inches forward of the intersection of the back of the seat and the sitting portion of the seat. All adjustment buckles must be a minimum distance of 1.5 inches from the seat to prevent loosening or chafing. Mounting hardware must be a minimum of 0.312-inch hardened steel bolts.

E. When bolting through the body or frame, flat washers, lock nuts, and cotter keys must be used. All harness hardware must be safety tied. If wrap around type harnesses are used, care must be taken to prevent them from slipping and chafing on sharp frame components.

F. No push button type (automotive) harnesses permitted.

G. No "Y" type shoulder belts permitted. "V" types are allowed but the mounting tab must be mounted in a position which compliments the direction of force.

H. Harness material must not be cut, frayed, stained, dirty, or rigid at start of race.

I. No surplus safety harnesses are permitted.

SUPER MOD (Class 3) and OPEN (Class 1) *

J. A 2-inch wide anti-submarine strap is required on all SUPER MOD and OPEN vehicles.

SE-11 Head and Neck Restraints

A. D-cell R 3 or hybrid device are highly recommended. Driver should use a neck ring at minimum.

SE-12 Safety Nets *

A. MWRA requires that occupants of all vehicles must be protected during a roll over in such a manner that prevents them from extending the body outside the frame of the vehicle.
B. Some form of safety netting is required on all vehicles so as to keep the driver restrained with in the vehicle at all times.

* EXEMPTION: STOCK (Class 9) is exempt from this requirement although it is highly recommended to use some measure of safety to protect the driver in the event of a crash.

SE-13 Doors *

A. MWRA requires some form of side protection on all vehicles so as to protect the driver in the event of a protrusion into the cab area during a side impact or a roll over.

* EXEMPTION: STOCK (Class 9) and STOCK MOD (Class 8) are exempt from this requirement although it is highly recommended to use some measure of safety to protect the driver in the event of a crash.

UTV COMPETITION RULES

*** - Notes variations to rules based on classes or modifications. Please take note. If a rule section has no asterisk the rule applies to EVERYONE, no matter what.**

CHASSIS / BODY

COMP- 1 Vehicle Identification

A. UTV Numbers will be designated by class in brackets of 100 per class. Number x00 will be reserved for past year champion.
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B. Currently there are two displacement groups within each class. These groups shall be designated by an "A" or a "B" and the end of each vehicles number. (See CLASS INFORMATION for more info)

COMP-2 Numbering

A. Numbers must be located in the following positions:
1. Back of the vehicle facing to the rear – 4 inch minimum height
2. One number on each side of vehicle either on door panels or on number plate mounted high and close to the back of the roof – 6 inch minimum height and 1 ½ inch minimum width
3. Driver's side visor – 4 inch minimum height
4. Roof – 8 inch minimum height and 1 ½ inch minimum width

B. Concessions will be made for STOCK class vehicles in the event they do not have suitable locations for all required numbers. The minimum requirement is numbers located on both sides of the vehicle.

COMP-3 Wheels and Tires

A. Maximum tire size is 30 inches outside diameter. No multiple tires per corner permitted. Tires will be visually checked for condition and must be considered reasonably safe by MWRA prior to competing.

COMP-4 Fasteners

A. It is recommended that all component parts on the vehicle's suspension system, chassis and running gear be secured with S.A.E. Grade 8 or better nuts and bolts. Bolts must be secured with either lock nuts, lock washers, cotter pins or safety wire and have at least one full thread showing through the nut.

COMP-5 Steering

A. All steering components must be in good condition and in proper working order. Tie rod ends must be secured with a cotter pin or Nyloc nut in each one. Power steering is permitted. MWRA must consider steering reasonably safe before vehicle is permitted to compete.

COMP-6 Brakes

A. Brakes must be in a safe working condition and be able to apply adequate force to lock up all four tires. Turning or cutting brakes will NOT be permitted. Brakes must be in a safe operating condition during the entire event. If brake system problems do occur during the event they must be repaired before continuing in competition.

COMP-7 Shocks

A. There must be at least one and only one shock absorber per wheel in working condition at the start of the race. Shock absorber mounting points may be moved in designated classes.

COMP-8 Bump Stops

A. Suspension bump stops must be of the solid type. No hydraulic bump stops are allowed at this time.

COMP-9 Torsion System

A. Currently the only torsion system that is acceptable is a coil-over shock. Sway bars are allowed.

COMP-10 Suspension

A. All a-arm mounting points must remain in the stock location and position as delivered from the manufacturer; however they may be reinforced for strength. This rule applies to ALL classes.

COMP-11 Wheel Spacers

A. Wheel spacers will be permitted in all classes as long as the vehicle does not exceed the class width regulation.

COMP-12 Measurements *

A. The maximum width of the UTV, measured from outside of tire to outside of tire is as follows:

Class 9 – 61"
Class 8 – 63"
Class 6 – 68"
Class 3 – 72"
Class 1 – 72"

B. The maximum overall wheelbase from spindle to spindle may be modified as follows:

Class 9 – None
Class 8 – None
Class 6 – 4"
Class 3 – 8"
Class 1 – 8"

C. There is currently no minimum weight requirement for any class.

COMP-13 Chassis and Body

A. All UTV vehicles must utilize the OEM chassis and maintain stock appearance. The chassis may be modified for durability and strength but must retain the stock width, length, and configuration. The Main lower structure of the vehicle must be retained from front to rear of the platform.

B. * OPEN (Class 1) Allows for width and length changes.

COMP-14 Roll Cages *

A.* **Class 9 and 8** – Use of the stock roll cage is allowed in these classes but highly discouraged. The OEM roll cages have been proven to be unsafe in almost all roll-over situations. MWRA highly recommends at minimum to incorporate the use of some additional bracing if the vehicle will be using the factory roll cage.

B. * **Class 6 and 3** – The factory roll cage is not permitted in these classes. Most aftermarket roll cages will be permitted with the expectations that the main structure will be built with the material listed in section 14-D & E. The main structure shall consist of: A full halo or equivalent, "A" and "B" pillars, dash cross bar and rear lower cross bar. Some form of diagonal bracing is required in the plane of the "B" pillars as well. This bracing may be made of a lighter or smaller diameter tube(s).

C. * **Class 1** – Same requirements as section 14-B plus: A minimum of six (6) mounting points to the chassis, additional bracing in the windshield and roof area and a full door system which incorporates an upper door bar which connects the lower points of the "A" pillars to the "B" pillars in a permanent fashion.

D. Roll cage construction material may be CREW, DOM, mild carbon steel or 4130 chromoly. MWRA HIGHLY RECOMMENDS THE USE OF 4130 CHROMOLY CONDITION "N"or 1018/1012/ASTM/DOM.

E. Minimum tubing dimensions for main structure is 1.5" O.D. x .095". Or .083" may be used ONLY if the material is 4130 Chromoly.

MWRA officials reserve the right to reject a vehicle at any time if the required roll cage seems unsafe or unfit for competition.

COMP-15 Driver Compartment

A. The vehicle occupant must be able to enter and exit, unassisted and with great ease, the driving compartment with the vehicle in any position.

B. Firewalls and/or bulkheads must separate the driving compartment from any fuels, engine fluids and acids.

COMP-16 Mirrors

A. A rear view mirror is recommended on all vehicles. Mirrors should have at least 6 square inches of mirror surface. Mirror should have a reasonably unobstructed view of area behind vehicle.

COMP-17 Skid Plates

A. Skid plates designed to reasonably protect the front suspension, steering and brake components are recommended on all vehicles. Skid plate must be made of metal or UHMW and be securely attached.

COMP-18 Floor Boards

A. Stock UTV floorboards are acceptable. Although adding extra protection made of metal or aluminum is highly recommended.

COMP-19 Storage

A. All spare parts and extra equipment carried on a vehicle must be securely fastened to prevent movement during competition. All spare parts and extra equipment must be carried in such a manner as to reduce the risk of injury to the occupants.

COMP-20 Fenders

A. Fenders must be securely attached to vehicle. The removal of fenders during competition for any reason other than damage incurred during the competition will result in disqualification.

ENGINE / DRIVETRAIN

COMP-21 Fuel *

A. Any of the following commercially available fuels may be used:

1. Service station pump gasoline (the type normally used in passenger vehicles for highway use)
2. Racing gasoline as manufactured and available to the public
3. Commercial aviation gas
4. Diesel fuel

B. Commercially produced nationally advertised fuel additives may be used.

C. No alcohol or nitro-methane is permitted.

D.* Nitrous Oxide (NOS) is permitted in OPEN (Class 1) ONLY.

COMP-22 Batteries *

A. Batteries must be securely mounted with metal-to-metal tie downs. All flooded cell batteries must be fully enclosed including the sides and bottom. Enclosure must be able to contain the quantity of acid contained in the battery if inverted. The stock battery cover will be safety approved if bolted down, to prevent battery cover from falling off. This only applies to the Rhino stock battery box.

B. Batteries may not be located in the driver's compartment. Batteries will be considered as being in the driver's compartment if there is no firewall between the battery and the driver.

C. Gel cell batteries are highly recommended.

* EXEMPTION: If a stock-type battery is used in its original location with original connections the vehicle may be exempt from rules 22-A, B and C.

COMP-23 Starter

A. All vehicles must be self-starting by use of an onboard electric starter.

COMP-24 Engine Replacement

A. Engines may be replaced during an event with prior MWRA authorization.

B. An engine change may result in a starting position change

COMP-25 Engine Locations & Displacement *

A. All vehicles must use OEM type engine cases and cylinder head.

B.* Engine relocation is prohibited except in OPEN (Class 1)

C. Engine location may be checked by MWRA. MWRA reserves the right to mark engine blocks prior to an event.

D. All vehicles must use the same fuel delivery system as stock and designed by factory. Electric fuel pumps are permitted in accordance with MWRA safety requirements for fuel pumps.

E. Engine displacement not to exceed 1100cc's and may be checked by MWRA Officials.

COMP-26 Exhaust

A. Exhaust systems must be routed in such a manner that is a safe distance away from all fuel system entities.

B. Exhaust should be a minimum of 6 inches away from fuel lines and 18 inches away from fuel filler.

COMP-27 Transmission

A. Every vehicle must use the OEM type transmission and clutch.

B. Every vehicle must have a functional reverse gear.

C. The OEM differential(s) must be used.

COMP-28 Fluid Coolers

A. Oil coolers, transmission coolers and radiators located ahead of the driver or in the passenger compartment must have a shroud that will prevent liquids from blowing back or leaking onto the driver in the event of a rupture or leakage.

B. All hoses running through the passenger compartment must be shielded. Steel braided hoses do not constitute a shield.

COMP-29 Auxiliary Equipment

A. All vehicles must start race with a functional generator or alternator, fan, water pump (water-cooled vehicles) and a complete functional electrical system.

COMP-30 Superchargers & Turbochargers

A. Superchargers or turbochargers are <u>only</u> allowed in the OPEN class.

COMP-31 Hoses

A. All fuel and brake line hoses including metal lines and fittings must be clamped and/or safety wired.

COMP-32 Fuel Cells and Tanks *

* NOTE: Rules 32 -C & D and 33-A-F apply <u>ONLY</u> to vehicles using a fuel tank other than the OEM system.

A. All fuel tanks must be securely mounted.

B. Auxiliary fuel tanks are not allowed.

C. Fuel tank must be filled from and vented to the outside of the vehicle. There must be a substantial cross member and firewall between the fuel tank and the occupants. Safety fuel cells shall consist of a bladder enclosed in a smooth skinned container. The container shall be constructed of 20ga. steel, 0.060-inch aluminum or 0.125-inch Marlex. Rotary molded polymer cells are acceptable. Magnesium is strictly prohibited. Container must be securely attached to vehicles with bolts or steel straps. All fittings must be built into the skin and bonded to the skin as an integral part of the tank or mechanically sealed by a ring and counter ring system by either flat joint or an "O" ring. Internal baffling is mandatory in all fuel cells. Bladder construction shall be of nylon or Dacron woven fabric impregnated and coated with a fuel resistant elastomer. The physical properties minimum standards are in accordance with the following table:
Test Type - Minimum Standard
Test Specification
Tensile Strength - 450 lbs.
Spec CCC-T-1916 Method 5102
Tear Strength - 50 lbs.
Spec CC-T-1916 Method 5134
Puncture Test - 175 lbs.
Spec MIL-T-6396 Article 4.5.17

D. These physical properties must be maintained throughout all areas of the finished bladder including seams, joints and fittings.

COMP-33 Fuel Fillers, Vents, and Caps

A. Fuel filler lines and positive-locking non-vented fuel filler caps must be located and secured in such a manner as to prevent being knocked off or opened during movement, rollover or accidental impact.

B. Design and installation must be in such a manner as to prevent fuel escaping from pickups, lines, fillers and breather vents if vehicle is partially or totally inverted. Fuel breather lines must have a rollover check valve incorporated into the fuel cell. The vent line must extend to the highest point of the roll-cage nearest the fuel cell, across the width of the vehicle, and down to below the belly pan of the vehicle or 3 inches below the fuel cell, whichever is lower.

C. OPTIONAL PLACEMENT: The vent line may be wrapped one full loop around the outside of the fuel cell near the top of the fuel cell and then down below the vehicle 3 inches below the lowest point of the fuel cell. Where the vent line attaches to the fuel cell there must be a loop above the fuel cell that extends 4 inches higher than the top of the fuel cell. The breather line must be vented outside of driver's compartment and be directed away from the engine and exhaust system. All fuel fillers attached to the frame or body panel must use a flexible coupling to the tank. All fuel fillers must be surrounded by a boot or splashguard (body panel is acceptable as a splashguard if sealed). Boot or splashguard must direct fuel spillage to outside of vehicle and away from driver's compartment, engine and exhaust.

D. A fuel filler rollover-check-valve must be incorporated into all fuel cells.

E. Monza/flip-type caps are strictly forbidden.

F. It is highly recommended that all detachable fuel filler caps have a flexible strap or chain attached between it and the frame of the vehicle.

SUPLIMENTAL

COMP-34 Seating

A. All vehicles must use seats designed specifically for racing applications manufactured by a recognized racing seat manufacturer.

B. All seats must be securely mounted to frame of vehicle and be properly reinforced in such a manner as to keep seat from moving in relationship to the frame. Adjustable track type seats must be securely mounted as to allow no lateral or vertical movement.

C. Head and neck restraints designed and installed to prevent whiplash are highly recommended for all vehicles. Restraints must be a headrest constructed of at least 2-inch thick resilient padding and be approximately 36 square inches in area.

COMP-35 Ignition

A. Each vehicle must have a positive action on/off switch in good working order. The switch must be highlighted in red. The switch must be labeled "ignition" on/off and be located within easy reach of the driver and from the outside of vehicle.

B. All electric fuel pumps with independent switches must be labeled "fuel" on/off and be within easy reach of driver and from outside of vehicle.

COMP-36 Doors

A. Must have 'X', 'A' or Ladder design bracing in door area (designed to provide maximum protection to the driver). 'X' or 'A' designs must use a minimum 1.5" outside diameter, .090" wall thickness 4130 chromoly or 1018/1012 CDS/DOM. Ladder design must use a 1.5" diameter, .090" wall thickness for main rails and 1.25" diameter x .090" wall thickness for rungs.

B. Doors area must be covered with sheet metal or a minimum of .063 thick aluminum.

COMP-37 Roll Cages – For modified chassis

B. Roll-cages must be designed and constructed with one front vertical hoop, one rear vertical hoop, two interconnecting top bars, two rear down braces, one diagonal brace and all necessary gussets. The two top interconnecting bars must be placed as far to the outside of the top part of the front and rear hoops as possible.

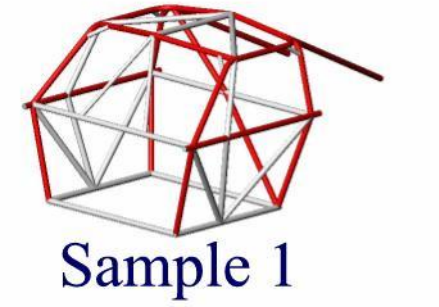
C. Rear down braces and diagonal brace must angle a minimum of 30 degrees from vertical. At the bottom of the diagonal brace there must be a cross member of the same tubing material and dimensions as the hoop.

D. All roll-cage components (hoops, braces, gussets, etc.) must have a minimum of 5-inch clearance from the component to the vehicle occupant's helmet when occupant is seated in their normal riding position. All portions of the roll bar or bracing that might come into contact with the vehicle occupant's helmet must be padded.

E. Roll-cages must be securely mounted to the frame or body. All intersecting points must be gusseted and braced. Roll-cage terminal ends must be attached to a frame or body member that will support maximum impact and not shear or allow more than 1.5 inches of movement in the cage terminal end.

F. Gussets constructed of 0.125-inch x 3-inch x 3-inch flat-plate or split, formed and welded corner tubing, or tubing-gussets made of the same material and thickness as the roll-cage may be used. Gussets must be installed at all major intersections, including diagonal and rear down braces, where single weld fractures can affect occupant's safety.

G. Table 1. Minimum Tubing Dimension for designated areas:
Vehicle Weight:
Under 1000 lbs. 1.5" x 0.83"
Over 1000 lbs. 1.5" x 0.90"



H. See manufacturer's' reference charts for alloy steel tubing equivalent strengths. No aluminum or other nonferrous materials are permitted.

I. Roll cage construction material may be CREW, DOM, mild carbon steel or 4130 Chromoly condition N.

J. MWRA HIGHLY RECOMMENDS THE USE OF 4130 CHROMOLY or 1018/1012/ASTM/DOM.

K. All welds must be of high quality and craftsmanship with good penetration and with no undercutting of parent material. Stress relieve all welded intersections by flame annealing.

L. Oxy-acetylene brazing on roll-cage is strictly forbidden

M. The roof must be covered with sheet metal or .063" minimum aluminum and roll cage roof bars must have diagonal bracing.

COMP-38 Bumpers

A. Must have rear bumper secured to frame using minimum 1.5" outside diameter, .090" wall thickness CREW, 1012/1018/1020/ASTM/DOM or Chromoly. Ends must be capped and rounded to prevent any sharp edges.

B. Bumpers and nerf bars must be designed in a way as to reasonably inhibit two vehicles from becoming locked together. A safe front and rear bumper is required on all vehicles.

C. No hazardous front or rear bumpers, nerf bars, frame heads or other protruding objects from vehicles are permitted.

COMP-39 Window Nets

A. MWRA approved safety nets are mandatory on all vehicles and must cover the complete open area of the cockpit on both sides of the vehicle.

B. Nets must be installed on the inside of the roll cage to prevent them from being damaged or coming off in the event of a roll over or slide on the side. Nets must be installed so that the occupants can release the netting unassisted and exit the vehicle regardless of the position of the vehicle.

C. The window net latch must be located at the front top of the window opening. Net installation must meet with the approval of MWRA.

D. The net border or edge and the net attachment must be made of materials that are as strong as or stronger than the net itself. Net attachments must be every 6 inches. Acceptable attachments may include but are not limited to the following: hose clamps, snaps, heavy-duty nylon ties, lift-a-dot, metal hooks and steel rods. Steel rods are acceptable methods of bottom fastening.

*All rules are tentative and may be changed, altered, or updated as the MWRA season progresses.