

2009 WATERFORD SPEEDBOWL STREET STOCK DIVISION RULES

By registering as an owner or driver you agree to be knowledgeable and bound by the contents found herein.

4.0 GENERAL DIVISION RULES:

A) In the following rules you will see the term "stock OEM" used. This means "original equipment manufacturer". These parts must come on a standard production car.

B) No carbon fiber or titanium parts allowed.

C) None of the following will be allowed in or on any engine or driveline component or part: abrasive cleaning, acid dipping, chemical milling, coating, epoxying, finishing, grinding, painting, plating, polishing, porting, etc.

D) The rules herein are for the Waterford Speedbowl only, with no expressed or implied agreement with any other Division or Speedway as to their interpretation and/or method of inspection.

E) All equipment must be approved by track officials. No equipment is considered to be approved by reason of having passed through a technical or safety inspection unobserved. No car will be considered as having passed inspection for the event until the finish is made official.

F) All engine models, equipment changes, or modifications not specifically addressed in this rule book must be submitted to the Waterford Speedbowl for consideration of approval prior to competition.

G) All equipment is subject to the approval of the Waterford Speedbowl Officials.

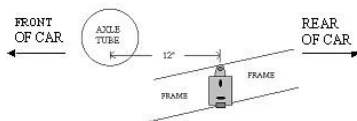
H) Once a car has been presented to the Waterford Speedbowl Officials for post race inspection the entire car and all of its components become subject to inspection. This includes but is not limited to items designated for inspection following a particular event

I) All rule changes and updates made during the course of the season for the current rulebook will be posted to the Waterford Speedbowl website (www.speedbowl.com). This will serve as the only form of official notification until the printing of the 2010 Waterford Speedbowl rule book.

J) An aftermarket, aluminum fabricated racing seat, sized correctly for the driver, must be used. The seat frame must be made of steel tubing (min 1" round or square) and must be welded to the rollcage and/or frame. The seat cannot attach to any part of the floorpan. The seat must be bolted at 4 places at the bottom of the seat, and 4 places at the back. The bolts must be 3/8" diameter grade 8, with large fender washers on the seat side. You must have (2) head supports, (2) shoulder supports, and (2) leg supports bolted to your seat.

• SCORING TRANSPONDER LOCATION:

Transponder mounting brackets will be installed on the inside (or outside) of the right rear frame rail. The round post of the bracket must be on top and the square tab on the bottom flush with the lower edge of the frame rail. The bracket must be mounted with its center line exactly 12" to the rear of the rear axle centerline and must be completely vertical to the ground. Transponder are required on the cars at all times. Any car not registering a transponder signal during practice will be black-flagged to be made aware of their scoring transponders failure and is required to remedy it before proceeding further in the event.



Transponders are available from:

AMB, US, Inc

32 Highlands Parkway, Suite 104

Smyrna, GA 30082

Tel 678-816-4000 Fax 678-816-4001

4.1 APPROVED MODELS:

Open to any rear wheel drive American car made between 1968 to 1989, with a minimum 108" wheel base. No frames or body parts from Camaros, Checker Cabs, convertibles, El Caminos, Firebirds, Mustangs, or station wagons may be used.

4.2 CAR BODY REQUIREMENTS:

The body must retain all factory listed dimensions, lines and angles. The body on your race car must look "stock OEM". All floorpans must be stock OEM or be fabricated from a minimum of 22 gauge (.030") sheet steel. Floorpans may be modified for "x" clearance and have the passenger side pan raised a maximum of 3" above the frame rails for exhaust and "X" clearance. The Vehicle Identification Number (VIN) of body being used must be on the windshield bed/dashboard and be clearly visible.

4.3 CAR WEIGHTS:

Cars will be weighed after the feature event. They must meet the following:

All weight must be placed between the frame rails, and not lower than the frame at the point at which it is attached. No weight will be allowed outside or below the frame rails.

The minimum total weight is 3000 lbs. including the driver.

The maximum left side weight is 54.0% including the driver.

4.3.1 ADDED CAR WEIGHT:

Magnetic steel or lead is the only acceptable added weight. Weight must be in block form in no less than 5 pound blocks. Weight must be painted white with your car number on it. No weight is permitted inside the driver's compartment. Weight must be encased in steel and welded or bolted to the chassis or frame with two or more (Grade 5 minimum) bolts, minimum 3/8" diameter.

All weight must be placed between the frame rails, and not lower than the frame at the point at which it is attached. No weight will be allowed outside or below the frame rails.

4.4 DETAILED CAR BODY REQUIREMENTS:

4.4.1 SPOILERS:

A spoiler is a dedicated part of the body which controls/directs the flow of air over 1 surface only.

4.4.2 FRONT SPOILER / NOSE PANEL:

A stock OEM nose panel/headlight panel or an aftermarket front bumper cover may be used. Approved aftermarket front bumper covers are the Regal, Cutlass, Monte Carlo, Thunderbird, and Avenger. All front bumper covers must maintain a minimum ground clearance of 6" at all times. An air dam (spoiler) for the radiator may be used. It must be no wider than the radiator, must not extend beyond the front bumper, and it must maintain at least 6" of ground clearance at all times

4.4.3 REAR SPOILER:

A) A solid rear spoiler of clear polycarbonate (Lexan) may be installed at the rear edge of the rear trunk deck lid.

B) The maximum spoiler size is 4" high X 60" wide.

C) Any supports used for mounting the spoiler must be located on the rear side of the spoiler only.

D) No decals, paint, or logos are permitted on the rear spoiler.

4.4.4 WINDSHIELD:

The windshield must be replaced with 1/8" thick polycarbonate (lexan). The windshield must be bolted or riveted in along all four sides.

4.4.5 REAR WINDOW:

The use of a polycarbonate (lexan) rear window is permitted. When a rear window is used, it must completely enclose the rear window opening. No decals, paint, or logos are allowed on the rear

window.

4.4.6 QUARTER WINDOW /WINDOW NET:

A) Polycarbonate (lexan) quarter windows are permitted.

B) An SFI rated nylon window net must be installed in the left side door window opening. It must be positioned to cover the driver.

C) The window net must be rib type, made from 3/4" or 1" wide nylon material with a minimum 1" and a maximum 2-1/4" square opening between the ribs. The minimum window net size must be approximately 22" wide by 16" high. All window net mounts must be a minimum 1/2" diameter solid steel rod on the bottom and a minimum 1" wide by 3/16" thick flat steel bar, or a minimum 1/2" diameter solid steel round bar on the top, with mounts welded to the roll cage. The window net, when in the closed position, must fit tight and be secured with a lever-type quick release latch acceptable to Track Officials. The lever must be secured by a detent ball in the lever and may be supplemented by a Velcro® fastener only – pins or clips will not be permitted. The latch must mount at the top in the front to roof bar (#3) and release from the inside.

4.4.7 TAIL LIGHT / BACK PANEL:

All cars must be equipped with a tail light/back panel.

A stock OEM tail light panel/backpanel or an aftermarket rear bumper cover may be used.

Approved aftermarket rear bumper covers are the Regal, Cutlass, Monte Carlo, Thunderbird, and Avenger. All rear bumper covers must maintain a minimum ground clearance of 6" at all times.

4.4.8 REAR VIEW MIRROR:

One approved 2" x 10" or smaller single panel rear view mirror mounted in the center of the car is allowed. One approved round "spot" mirror, mounted by the drivers side window post may be run.

4.4.9 DASHBOARD:

The stock OEM dashboard must be covered with sheet steel or aluminum. The dashboard must remain in the stock OEM location.

4.4.10 FIREWALLS:

A stock OEM front firewall, or a minimum of 22 gauge (.030") magnetic sheet steel replacement must be used. The front windshield bed must be in the stock OEM location. The vertical surfaces of the fabricated front firewalls must not be located any further rearward than the large body mount holes on the frame. The front firewall has to completely seal the driver's compartment from the engine compartment. A rear firewall made of 22 gauge minimum (.030") magnetic sheet steel must be run, covering the back seat shelf area. The rear firewall must be stock appearing, but the bottom may be moved forward enough to clear the rear tires (to eliminate the need for wheel boxes). It must completely seal the drivers compartment from the fuel cell/trunk area.

4.4.11 DOORS:

Stock OEM steel doors, or a manufactured or aftermarket replacement steel door may be used.

All doors must be stock appearing and made from a minimum of 24 gauge (.024") magnetic steel sheet. All doors must retain the factory stock OEM dimensions, lines, and angles.

4.4.12 QUARTER PANELS:

Stock OEM steel quarter panels, or a manufactured or aftermarket replacement steel quarter panel may be used. All quarter panels must be stock appearing and made from a minimum of 24 gauge (.024") magnetic steel sheet. All quarter panels must retain the factory stock OEM dimensions, lines, and angles.

4.4.13 HOOD / ROOF / WINDOW POSTS:

A) The hood must be the stock OEM steel or approved aftermarket fiberglass. The hood must be held down with at least 5 hood pins, three across the front and two across the back. A non functioning hood scoop, a maximum of 2-1/2" high, totally enclosed on all four sides may be used

for air cleaner clearance. The hood must lay flat and be "closed off" at the base of the windshield.

B) The roof must be the stock OEM steel roof for your car. The roof may not be modified in any way, and it must retain all factory supplied dimensions, lines, and angles.

C) The roof posts must be made of steel, and retain all factory supplied dimensions, lines, and angles.

D) The roof numbers must be readable from passenger's side of car.

4.4.14 REAR DECK LID:

The rear deck lid (trunk) must be the stock OEM steel trunk, or a dimensionally equivalent steel fabricated replacement for your car. It may have the interior panel(s) removed. It must be secured with 4 trunk pins, or 2 trunk pins and hinges.

4.4.15 BUMPERS:

If a stock OEM nose panel/headlight panel or tail light panel is used, you must run a stock style bumper. 1-3/4" diameter steel tubing bumpers may be used if you run an aftermarket bumper cover. Tubular bumpers must be two 1-3/4" pipes, one welded on top of the other. One 1" diameter steel tubing brace per side may be used.

Cars may not compete without a front or rear bumper securely and mechanically fastened in place.

4.4.16 NERF BARS:

Nerf bars made of 1" tubing, or aftermarket Lexan ones may be used. Nerf bars must be tight to the body and fabricated so as not to damage other race cars.

4.5 ENGINE:

GENERAL ENGINE ELIGIBILITY:

The following will not be allowed in or on the engine, any engine component, or part: abrasive cleaning, acid dipping, chemical milling, coating, epoxying, finishing, painting, plating, polishing, porting, etc.

4.5.1 ENGINE LOCATION:

Stock OEM style rubber motor mounts or aftermarket steel mounts may be used. Engine must be in stock location for V-8 engine in your chassis.

4.5.2 ENGINE GROUND CLEARANCE:

A minimum height of 14-1/2" must be maintained between the ground and the crankshaft centerline at all times.

4.5.3 ENGINE BLOCK:

A) The following stock OEM cast iron V-8 engine production blocks must be used:

GM- Chevrolet 305 or 350

Ford- 302, or Cleveland/Windsor 351

Mopar- 340 or 360

B) Maximum cylinder overbore is .060":

C) The engine block must be an OEM standard production cast iron engine block.

D) The engine block may not have more than 2 cylinder sleeves installed and they must be made of cast iron material.

E) The engine block must retain all standard internal and external dimensions.

F) No angle cutting of the block deck permitted.

G) The engine block may not have lifter bore corrections.

4.5.4 PISTONS:

CHEVY - must use stock OEM style cast pistons with a compression distance of 1.540", a dished cup with a depth of .110", and a cup CC of 10.5 to 12.4 .

GM MUST use the following pistons:

Stock OEM General Motors pistons,

SEALED POWER #8447P ,
BADGER #P567 ,
SILVOLITE #1470 ,
NYLEN #976P ,
TRW #3026F ,
STERLING OR FEDERAL MOGUL #423P.

FORD - must use stock type cast piston with 4 valve reliefs, with maximum compression height of 1.605".

MOPAR - must use stock type cast piston with 4 valve reliefs, with maximum compression height of 1.759".

Wrist pins must retain all stock OEM measurements, dimensions and weight. No gapless type rings.

No part of the piston may stick above the block deck surface.

The maximum engine compression will be 9.3 to 1 for all engines and will be checked with the Waterford Speedbowl "Whistler" compression tool.

4.5.5 RODS:

A) All engines must use stock OEM connecting rods. GM may use stock OEM 5.7 rods, or aftermarket magnetic steel, 5.7, I- beam, standard weight, pressed pin, sportsman style rod (scat #3-ICR5700P). You must contact the tech department for aftermarket rod approval prior to building your engine. Aftermarket rod bolts and normal machining/balancing are the only modifications you can make to them.

B) Only normal engine balancing and the use of after-market bolts are permitted.

C) All 8 connecting rods must be the same length.

D) Rods must align off the crankshaft rod journals.

4.5.6 OIL PAN:

A) A magnetic steel OEM or Canton/Moroso "stocker" style oil pan may be used. No windage trays allowed.

B) OEM type in the pan oil pumps only.

C) Oil coolers are allowed.

D) No oil tanks, external oil pumps, or accusump systems allowed.

E) No external oil return lines are allowed.

4.5.7 CYLINDER HEADS:

GM- Must run unaltered stock OEM cast iron heads, factory listed as 70 CC's or larger, or aftermarket "World Products S/R" (stock replacement) series cast iron heads, bare casting part# 043600b.

Ford- Cleveland must use unaltered stock OEM cast iron 2 bbl heads only.

Ford- Windsor must use unaltered stock OEM cast iron heads, factory listed as 60 CC's or larger, or aftermarket "World Products Windsor jr" series cast iron heads, bare casting part# 05303b, with 1.94" intake valve and 1.60" exhaust valve.

Heads may not be angle milled.

Minimum Cylinder Head C.C. -

CHEVY 305 and 350 70.0

FORD 302 53.0

Ford Windsor 60.0

Ford Cleveland 66.0

MOPAR 340 and 360 62.8

Oldsmobile 60.6

Pontiac 75.0

Maximum Cylinder Head Valve Size - INTAKE EXHAUST

Chevy 305 and 350 1.940 1.500

Ford 302 1.781 1.462

Ford Windsor 1.840 1.540

Ford Cleveland 2.090 1.710

Ford Cleveland W/ P head	1.940	1.600
Mopar 340	2.020	1.600
Mopar 360	1.880	1.600
Buick	1.870	1.550
Oldsmobile	1.870	1.620
Pontiac	1.960	1.660

There is no chemical or mechanical machining allowed in the combustion chamber or runners of the cylinder head.

If the tech inspector deems the cylinder head runners or combustion chambers have been chemically or mechanically altered in any way, the heads will be confiscated.

4.5.8 VALVES:

All valves must be identical in appearance and construction as the stock OEM type, and must be magnetic steel or stainless steel. No air directional devices will be permitted on any of the valve surfaces. No pro flo, swirl, or polished valves allowed.

4.5.9 VALVE JOBS:

All cutting and/or grinding must be centered off the centerline of the valve guide. Absolutely no hand grinding or polishing of any part of the head. On the combustion chamber side of the intake seat, no cutting and/or grinding may be larger in diameter than 2.350". On the combustion chamber side of the exhaust seat, no cutting and/or grinding may be larger in diameter than 1.930". On the bowl side of the intake and exhaust seats, the maximum angle of cutting and/or grinding will be 90 degrees. No cutting and/or grinding within 1/8" of the valve guide boss.

All other head modifications are not allowed, including but not limited to:

Altering the position or angle of the valve or valve guide.

acid/chemical milling, dipping or machining, porting, polishing, grinding, glass beading, painting, coating, removal of any flashing or casting marks.

Welding, cutting, epoxying, or sectioning.

Cooling lines in the sides of the head.

Angle milling any gasket surface.

Note: Cylinder heads will be checked for volume numbers as a routine part of post race tech.

4.5.10 VALVE SPRINGS:

Stock OEM dimension steel valve springs only. Stock OEM type steel valve spring retainers must be used.

4.5.11 CRANKSHAFT:

Must be unaltered stock OEM for the engine being used. A tolerance of +/- .015" of stock OEM stroke must be maintained.

Stock OEM forged crankshafts must weigh a minimum of 52 pounds. Stock OEM cast cranks must weigh a minimum of 51 pounds. Standard "balancing" is the only modifications allowed on any part of the counterweights or journals.

4.5.12 CAMSHAFT/TIMING GEARS:

Camshaft Maximum Gross Valve Lift:

	INTAKE	EXHAUST
CHEVY 305	.420"	.420"
Chevy 350	.390"	.410"
FORD 302	.455"	.465"
Ford 351 W	.427"	.465"
Ford 351 C	.461"	.463"
MOPAR 340	.450"	.460"
Mopar 360	.429"	.444"
Oldsmobile	.450"	.450"
Pontiac	.400"	.410"

Buick .402" .418"

Camshaft lift may be measured at the valve, rocker arm, or directly on the camshaft. Your camshaft lift may not exceed your gross valve lift divided by your factory stock OEM listed rocker ratio for your engine.

A) Only flat tappet camshafts made of magnetic steel are permitted.

B) The maximum camshaft bearing journal size is 1.870" (47.5 mm).

C) OEM sleeve type cam bearings only.

D) OEM rotation and firing order only.

E) Maximum lift at the valve with zero lash is listed above.

F) Stock OEM firing order must be maintained:

Dodge- 1-8-4-3-6-5-7-2

Ford- 1-3-7-2-6-5-4-8

General Motors- 1-8-4-3-6-5-7-2

4.5.13 VALVE LIFTERS:

Stock OEM type hydraulic flat tappet lifters must be used. They must pass a leak down test.

Lifters must maintain all stock OEM dimensions and weight for engine being used. Lifter Valley Oil Tray may be used.

4.5.14 TIMING CHAIN:

Stock OEM type chain and gears must be used. Degree buttons and offset crank keys may be used.

4.5.15 ROCKER ARMS:

Stock OEM rocker arms or aftermarket roller rockers with the stock ratio for your engine must be used. GM must use 1.5 ratio rockers. Stock OEM rockers must have stock triangular insignia.

Guide plates are allowed. Pushrods must be magnetic steel or stainless steel only, and must maintain +/- .100" of stock OEM length for your engine.

4.5.16 INTAKE MANIFOLD:

The following Edelbrock Performer Intake manifolds must be used:

Chevrolet- #2101,

Ford- #2181, 2665, or 2750

Chrysler- #7176.

Buick, Pontiac and Oldsmobile please call the tech staff for your legal intake manifold specs.

The intake manifold must be unaltered, with no modifications of any kind, including but not limited to:

acid/chemical milling, dipping or machining, drilling, porting, polishing, grinding, glass beading, internal painting or coating, removal of any flashing or casting marks.

Welding, cutting, epoxying, or sectioning.

Angle milling of any gasket surface.

A track supplied stock intake manifold must fit your engine complete with stock gaskets.

All bolt holes must maintain stock alignment and diameter.

Absolutely no coolant lines in the intake manifold.

Note: Intake Manifolds will be checked for volume numbers as a routine part of post race tech.

4.5.17 CARBURETOR:

The only approved carburetor is the Holley two-barrel model # 4412. All parts must be a Holley part for the 4412.

A) The choke assembly must be removed, and all screw holes must be permanently sealed.

B) Idle holes may be drilled into the butterflies.

C) Screw ends may be cut even with shaft but screw heads must remain standard.

D) No other modifications are allowed.

E) All air entering the engine must pass through the top of the carburetor.

F) No adjustable (jetted) air bleeds or circuits.

G) No "hp" parts allowed.

The carburetor must pass the Waterford Speedbowl tech gauges as part of the routine technical inspection process.

4.5.18 CARBURETOR SPACER:

- A) One solid spacer made of aluminum or phenolic with a maximum height of 1" must be used.
- B) Only one .075" max. gasket per side.
- C) No wedge shaped mounting surfaces, both top and bottom surfaces must be parallel.
- D) Spacer can be no larger than base of carburetor.
- E) Port holes or hole must be vertical to the surfaces with no beveling, tapering, or flaring.
- F) No additional openings for the induction of air allowed.

4.5.19 CARBURETOR JETS:

Holley 4412 type jets must be used.

4.5.20 CARBURETOR AIR FILTER/AIR FILTER HOUSING:

- A) Only one round, dry type, paper air filter element, 12" to 14" in diameter and 2" to 4" tall must be used. All air must be filtered through this element.
- B) The air filter housing top must be round, 12" to 15" in diameter, and made of steel or aluminum. The air filter housing base must be round, 12" to 15" in diameter, made of steel or aluminum, and must have one 5" to 5-3/8" diameter round hole in it (for mounting on the carburetor). The air filter housing top and bottom must be the same diameter, and must sit level and centered on the carburetor.
- C) The bottom of the air filter element must measure within 1" in height to the carburetor top (air filter housing mount) flange.
- D) A shield may be run on the front of the air filter element. It may cover up to 1/2 the diameter of the element, and must be no taller than the element.
- E) Anything that alters air flow in, on, or around the carburetor and air filter is illegal.

4.5.21 AIR INTAKE:

No cowl air induction permitted. Absolutely no ducts or baffles permitted on or leading to the air cleaner or element.

4.6 ENGINE/CAR ELECTRICAL SYSTEM:

4.6.1 IGNITION SYSTEM:

- A) An OEM type HEI distributor must be used. The distributor must have a stock type housing, have stock type controls and modules, be equipped with a magnetic pickup, be gear driven, and be mounted in the stock location.
- B) Only one ignition coil is permitted and must be mounted in the cap.
- C) Electronic firing module amplifier box is not permitted.
- D) Adjustable timing controls are not permitted.
- E) Retard or ignition delay devices are not permitted.
- F) Accessories to regulate the power supply are not permitted.
- G) The tachometer wire must run from the distributor to the tachometer along the #8 dash bar separate from any other wires and in unobstructed view for inspection. The tachometer wire must be isolated from any other wires, connection or devices. The entire length of the tachometer wire must be visible from distributor to gauge.
- H) The Vacuum advance unit may be replaced with a manual non-electronic timing adjuster that does not extend more than two inches beyond the distributor housing.

4.6.2 ALTERNATOR:

The alternator (if used) must be mounted to, and driven off of, the front of the engine.

4.6.3 STARTER:

- A) An OEM style or a gear reduction style starter is allowed.
- B) The starter must mount in the stock OEM position for your make of engine.
- C) All cars must be capable of starting under their own power.

4.6.4 BATTERY:

- A) One automotive type lead acid or gel battery must be used.
- B) The battery may be located in the right side front firewall or behind the drivers seat, mounted to the floor. The battery and/or box may not extend below the frame rails where it is mounted.
- C) The battery must be completely sealed off from the driver.

4.6.5 ELECTRICAL SWITCH LOCATION:

- A) All electrical switches must be located on the dash panel or within easy reach of the driver.
- B) A master battery switch must be installed within reach of the driver and clearly marked "on" & "off".

4.7 ENGINE COOLING SYSTEM:

4.7.1 WATER PUMP:

- A) An OEM type mechanical water pump must be used.
- B) Any serpentine, cog or V-belt pulley system is allowed.

4.7.2 FAN:

An engine mounted, pulley driven mechanical fan or an electric fan may be used.

4.7.3 RADIATOR:

- A) The radiator must remain in front of the engine, in the stock OEM location.
- B) Only water and "water wetter" brand additive may be used in the cooling system.

4.8 ENGINE EXHAUST SYSTEM:

4.8.1 EXHAUST PIPES/MUFFLERS:

- A) Unaltered stock OEM cast iron exhaust manifolds must be used. Chevy must use the stock OEM log-type, over the top manifolds. Maximum exhaust manifold outlet diameter for Chevy is 1-7/8".
- B) The maximum exhaust pipe diameter allowed is 2-1/2". No flex exhaust pipe is allowed.
- C) The exhaust pipes must extend past the main cage hoop, and turn down towards the ground.
- D) Two exhausts pipes must be used, and they may not be joined or merged into each other in any way. No crossover or "H" pipes allowed.
- F) One unaltered Lobak # RCM-25-12-25 or Moroso #94050 muffler must be used on each exhaust pipe. Mufflers must be removable for inspection.
- G) Thermal wrap is not permitted anywhere on exhaust system.
- H) Race teams are responsible for the condition of their mufflers. Mufflers found to have deteriorated baffles due to rust/rot will be treated the same as if they were modified. Your mufflers must be in good condition and have complete baffles.

4.8.2 HEAT SHIELDS:

Heat shields to cover exhaust header can be no more than 6" wide and no longer than the valve cover.

4.9 DRIVE TRAIN:

4.9.1 FLYWHEEL AND CLUTCH:

- A) A stock OEM steel flywheel or a replacement steel billet flywheel with OEM stock dimensions must be used.
- B) Pressure plate must be stock OEM or a stock OEM replacement, with a minimum diameter of 10.4".
- C) Clutch disc must be stock OEM type, with a minimum diameter of 10.4"
- D) Minimum weights:
Flywheel- (no bolts) 20 LBS.
Pressure plate- (no bolts) 13 LBS.
Disc- 3 LBS.
- E) Drilling or lightening of any part is not permitted.

- F) Steel bolts only. Flat surface machining allowed only on the face of the flywheel, any cutting on the back side of the flywheel is illegal.
- G) Stock OEM or aftermarket clutch pedal and master cylinder assembly is allowed.

4.9.2 BELL HOUSING:

- A) A commercially manufactured steel bell housing made from a minimum 1/4" magnetic steel must be used.
- B) It must enclose the flywheel and clutch completely, 360 degrees around.
- C) An opening no larger than 3-1/2" x 4" may be used for throw out bearing access. This hole may be covered with magnetic steel sheet metal.

4.9.3 TRANSMISSION:

- Only a stock OEM production 3 speed cast iron transmission, or a stock OEM production 4 speed cast iron or aluminum transmission may be used. There are no modifications allowed to the transmission. The transmission mount may be stock or fabricated. None of the following will be allowed in or on the transmission or transmission parts:
Abrasive cleaning, acid dipping, chemical milling, coating, epoxying, finishing, painting, plating, polishing, porting, etc.

4.9.4 DRIVE SHAFT:

- A) A stock OEM magnetic steel driveshaft must be used.
- B) It is mandatory that two 360-degree solid steel brackets, no less than 2" wide and 1/4" thick, be placed around the drive shaft within 6" of the universal joints, securely fastened to the frame/cage.
- C) All driveshafts must be painted white.

4.9.5 REAR AXLE:

- A) You must use the unaltered stock OEM rear end housing for your frame (GM cars must use the 7-1/2" metric rear end assembly).
- B) A completely stock OEM "open" differential must be used. Any modifications that "lock" the rear at any time is illegal.
- C) Buick Grand National type rear ends are not allowed.
- D) Aftermarket solid magnetic steel racing axles may be used. Aftermarket axles must retain all stock dimensions and weight. C-Clip eliminators are allowed.
- E) You may use one wheel spacer on each side of the rear, a maximum of 1/2" in thickness.
- F) Coatings or finishings of any kind are NOT permitted anywhere in or on the rear axle assembly.
- G) The highest numerical ring and pinion gear ratio allowed is 4.57.

4.9.6 WHEELS AND LUG STUDS/NUTS:

- A) All wheels (rims) must be magnetic steel, heavy duty, 15" diam x 7" wide, with ZERO offset. Wheel offset will be measured as follows:
The inside surface of the wheel flange (mounting surface) must be in the center of the wheel as determined by measuring from the inside bead seat to outside bead seat. A tolerance of +/-1/4" will be allowed.
- B) Solid 1/2" (minimum) diameter magnetic steel lug studs and oversized magnetic steel lug nuts must be used.
- D) Bead locks are not permitted.

4.9.7 TIRES:

- A) A track tire rule is in effect (See tire rule as posted by track).
- B) All tires must be purchased from the track tire dealer.
- C) The use of tire altering chemicals is forbidden ("soaking", inside or out).

Notice: Participants competing in any race at the Waterford Speedbowl specifically agrees that he/she acknowledges it is illegal to soak or treat racing tires and that said soaking or treatment of racing tires is against EPA regulations and further contains carcinogens and hazardous material

which are unfit for his/her health and the health of all competitors and spectators.

4.9.8 APPROVED TIRE REQUIREMENTS:

All tires must be used in approved positions, as dictated by the track tire rule in effect.

4.10 FRAMES:

4.10.1 GENERAL FRAME ELIGIBILITY:

The frame and all its components must be stock OEM for your make/model car, and meet the requirements described in the following paragraphs.

4.10.2 FRAME REQUIREMENTS:

The frame must retain all factory listed dimensions, lines and angles. 2"x3" rectangular steel tubing may be used to replace the frame rails from the aft side of the rear shock mounts to the rear bumper, and forward of the steering box area to the front bumper. The replacement 2x3 rails must be stock OEM height at the bumper ends. Unibody cars must connect subframes with 2"x3"x.125" wall rectangular steel tubing. You may install an "X" brace in the center section (C - channel area) of the frame, located between the rear trailing arm brackets and the front rise in the frame. The "X" brace may be made of 2" max diameter round or square steel tubing. You may also re-inforce the "C" channel area of the frame rails using box or round tubing, as long as the tubing fits into the stock "c" channel shape.

C) A fuel cell protector bar, using a minimum 1-1/2" seamless steel tubing, must be installed behind the fuel cell. This protective bar must be as wide as the fuel cell and as low to the ground as the fuel cell with a minimum of two uprights from the protective bar to the rear frame crossmember, evenly spaced behind the fuel cell. Two additional support bars, one at each corner of the protective bar, must extend forward and be welded to the rear frame assembly.

4.11 SUSPENSION:

4.11.1 SPRINGS:

- A) Front springs must be steel, and be the stock OEM outside diameter.
- B) Front adjustable spring spacers may be installed in upper pockets.
- C) No modifications are allowed to the lower a-frame spring pockets.
- D) Rear springs must be steel, and be the stock OEM outside diameter.
- E) Rear "can" type jacking bolts may be used. They must be centered in the rear spring pockets. They may not be reinforced in any way.
- F) Spring rubbers may be used.

4.11.2 SWAY BAR:

One stock OEM front sway bar made of magnetic steel may be used. It must bolt into the stock OEM location on the frame and the lower a-frames. Rear sway bars are not allowed.

4.11.3 SHOCKS:

- A) A steel, non adjustable, OEM style replacement shock, with a retail value of \$70 or less must be used.
- B) Shocks may not be altered in any way, and must bolt into the stock OEM mounts in the stock OEM location, front and rear.
- C) All competitors must have the retail purchase receipt for their shocks to prove their retail value.

4.11.4 UPPER/LOWER A-FRAMES:

- A) Unaltered stock OEM upper and lower control arms for the frame must be used.
- B) The "Pro-Tek" '78-'87 GM metric uppers available through Day Motorsports are allowed.
- B) The bushings and balljoints must remain stock OEM for their respective control arms.
- C) Aftermarket ball joints may be used providing they are dimensionally identical to OEM stock. They must bolt in/press in to the stock mounts, and the effective length from the center of the ball to the taper must be identical to OEM stock
- D) Control arms may not be changed from side to side.
- E) The mounting points for all control arms must remain stock OEM for the frame being used.

4.11.5 SPINDLES, WHEEL BEARINGS, AND HUBS:

A) Unaltered stock OEM steel spindles must be used. They must be "G" body Metric, Camaro, or Impala/Caprice spindles. Spindles must match, left and right. No modifications are allowed to the spindles.

B) Stock OEM steel hubs/rotors or an aftermarket steel racing hub/rotor may be used. The aftermarket hub/rotor must be dimensionally similar to the stock OEM unit.

C) Stock OEM type greased steel bearings must be used.

4.11.6 TRACK WIDTH REQUIREMENTS:

TBD

4.11.7 WHEELBASE REQUIREMENTS:

A) The stock OEM wheelbase must be maintained.

B) The allowable tolerance is +/- 1/2" on the other side.

4.11.8 BODY HEIGHT AND GROUND CLEARANCE REQUIREMENTS:

4.11.8.1 BODY HEIGHT REQUIREMENTS:

The minimum roof height is 52", measured 6" back, at all times.

The minimum body panel height is 6" at all times.

The maximum rear spoiler height is 4".

4.11.8.2 GROUND CLEARANCE REQUIREMENTS:

The minimum frame height is 6" at all times.

The minimum crankshaft centerline height to the ground is 14-1/2" at all times.

The minimum fuel cell container height to the ground is 12" at all times.

4.11.9 WEIGHT SHIFTING DEVICES:

A) No mechanical devices for shifting weight is permitted inside the driver compartment.

B) No hydraulic or electronic weight shifting devices are permitted.

4.11.10 REAR SUSPENSION:

A) Unaltered stock OEM trailing arms for the frame must be used. The stock OEM bushings must be used. The mounting points for all trailing arms must remain stock OEM for the frame being used

B) Leaf springs may be added or removed on each side. All leafs must be steel and be the same width. Adjustable shackles and lowering blocks may be used. The leafs must bolt into their stock location, front and rear. No other modifications are allowed.

4.12. STEERING COMPONENTS:

A) All cars must use the stock OEM steering box for their frame.

B) All cars must use the stock OEM idler arm, pitman arm, centerlink and tie rods for their frame.

C) The idler arm and its mounting holes may be modified. The tie rods may be modified in length.

D) The pitman arm may be modified.

E) Magnetic steel steering shaft must be used.

C) The center of the steering wheel must be padded.

D) A quick release coupling must be used on the steering wheel. The coupling cannot be covered with plastics or coatings.

4.13 BRAKES AND BRAKE COOLING:

4.13.1 BRAKE COMPONENTS:

A) A fully operational stock OEM 4 wheel hydraulic disc/drum brake system must be used.

B) All brake components must be stock OEM, except the master cylinders and pedal assembly.

The master cylinders and pedal assembly may be aftermarket type, and must mount in the stock location on the firewall or floor.

C) All other brake components must be in their stock OEM location.

D) No brake components may be altered for weight reduction.

4.13.2 BRAKE COOLING:

One air duct per wheel may be used for brake cooling. Front brake ducts must be a maximum of 3" x 8" , and may be mounted to the front bumper cover. Rear brake scoops must be a maximum of 10" long x 8" wide, and may be mounted under the car, not visible from outside the body. Brake ducts, front and rear, may have one piece of screen covering their opening, with a minimum of 1/2" openings.

4.14 FUEL:

4.14.1 DEFINITION:

The word "Fuel", whenever used in this document shall be understood to mean automotive gasoline which complies with the specifications given in this section.

4.14.2 FUEL SPEC'S:

- A) Pump gas or track supplied Sunoco/CAM II racing gas must be used.
- B) You may not mix or blend any fuels, or use any additives.
- C) Several testing procedures will be utilized to insure that all racers use only approved fuels. Any and all fuel samples taken must exactly match all of the manufacturer's printed specifications for that brand and grade of fuel, or penalties will result.
- D) Icing or cooling of the fuel system is not permitted at any time.
- E) Gasoline may be tested and certified at any event through the application of various chemical analyses as considered appropriate by officials. Gasoline may be checked before, during and after the racing events.
- F) Nothing may be placed in the fuel line other than a standard fuel filter. The use of any type of fuel catalyst or other fuel-altering devices is not permitted.

4.14.3 FUEL SYSTEM:

- A) Fuel cells, containers, or check valves which appear to be damaged will not be allowed in competition.
- B) Fuel cell vent check valves are mandatory.
- C) No pressure systems allowed. Any concealed pressure type containers, feed lines or actuating mechanism are not permitted, even if inoperable.
- D) No fuel catalysts or converters.

4.14.4 FUEL CELL:

The use of a commercially manufactured fuel cell is mandatory.

- A) The maximum fuel cell capacity, including the filler spout and overflow, is 24 gallons. The nominal fuel cell dimensions are 24-1/4" x 16-3/8" x 13-1/4".
- B) No material other than standard foam as provided by the fuel cell manufacturer is permitted to make the fuel cell meet the 24 gallon capacity.

4.14.5 FUEL CELL CONTAINER:

The use of a magnetic steel fuel cell container is mandatory.

- A) The fuel cell must be encased in a container of not less than 22 gauge (.030") steel. Fuel cells must be fitted within the container so that the maximum capacity, including filler spout will not exceed 24 gallons.

4.14.6 FUEL CELL AND FUEL CELL CONTAINER INSTALLATION:

- A) the fuel cell and fuel cell container must be installed as far forward as possible, behind the rear axle, and maintain a minimum ground clearance of 12" at all times.
- B) A "cage" for the cell must be made out of 1" minimum steel tubing. This "cage" must be attached to the cars frame rails using four (4) pieces of (1" minimum) steel tubing.
- C) The fuel cell container must be secured on top by 1" x 1" square steel tubing or 1" x 1/8" thick steel straps, two lengthwise and two crosswise. The straps must be located as close to the fuel filler/check valve housing as possible.

4.14.7 FUEL FILLER:

The gas cap must be painted white with your car number on it for identification.

4.14.8 FUEL CELL VENT:

A 1" maximum ID vent to outside of body at left rear corner must be used. A fuel vent check valve is mandatory.

4.14.9 FUEL LINES AND FUEL PUMP:

4.14.9.1 FUEL LINES:

A) Only one fuel line permitted from fuel cell to fuel pump, and one fuel line permitted from fuel pump to carb.

C) The fuel line can be no larger than 1/2" ID.

D) Fuel line from cell to pump must remain under floor of car.

4.14.9.2 FUEL PUMP:

An OEM style mechanical fuel pump that mounts in the stock location on the engine must be used.

4.14.9.3 FUEL SHUT-OFF:

A) A 1/4 turn fuel shut-off valve is required in the fuel line.

B) The fuel shut-off valve's ON and OFF positions must be clearly labeled.

C) The valve must be open when the handle is aiming front to back, and the valve must be closed when the handle is aiming left to right.

4.15 ACCESSORIES:

4.15.1 RADIOS:

One way communication from the Race Director to the driver is mandatory. A scanner must be used. The preferred scanner is the Raceceiver scanner used by 600 Racing. If a scanner other than the Raceceiver is used it must be locked onto the track tower frequency.

4.15.3 ELECTRONICS:

No Onboard Computers, Automated Electronics, Recording Devices or Digital Readout Gauges of any kind are permitted. "Tell-Tale" Type Tachometers are the only standard exception to this rule.

You must get approval before using any in-car camera equipment.

4.16.0 ROLL CAGE

All tubing shown in the roll cage diagram is mandatory and must be 1-3/4" x .095" wall (HREW or DOM) magnetic steel tubing. The tubing shown in the roll cage diagram is the minimum amount of tubing you must install in the car. Additional tubing may vary in size and thickness. All bars within reach of the driver must be padded with commercially purchased roll bar padding. Drivers door bars, seat frame and main cage in the drivers compartment must be gusseted. It is recommended that you "plate" the drivers door bars with minimum 14 gauge steel. The minimum distance from the top of the roll cage to the top of the frame rail is 38". The minimum distance from the top of the frame rail to the top of the dash bar, top door bars and the cross bar behind the drivers seat is 21". The leading edge of the roof halo bar must be within 4" of the windshield. The maximum distance from the lower a frame ball joints to the forward edge of the main cage is 36". The maximum distance from the lower a frame ball joints the rear edge of the main cage is 83-1/2".