

2012 Waterford Speedbowl Street Stock Rules

(Last Updated: 12-24-11)

All items marked in **RED** are new and/or are wording changes to the **2012 Street Stock 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 your 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 **2013 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 roll cage 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.

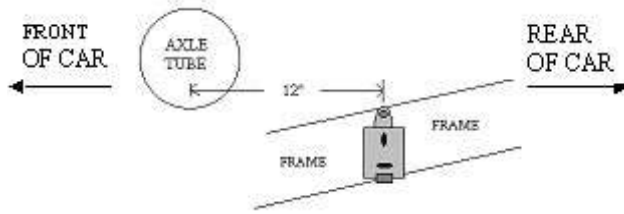
*****Cars of a similar division from other race tracks may be eligible for competition, pending a discussion with track officials and subsequent inspection of said car*****

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. Transponders are required on the cars at all times. Any car not registering a transponder signal at the start of an event may be black-flagged to the pit area for repairs.

Transponder scoring is used for all laps except the final (checkered flag) lap. Hand scoring is used to

determine the finish, with any visual "ties" being broken by the transponder results.



Transponders are available from: AMB, US, Inc. 32 Highlands Parkway, Suite 104 Smyrna, GA 30082
Tel 678-816-4000 Fax 678-816-4001

4.0.1 DRIVER ELIGIBILITY:

All drivers must have a valid 2012 NASCAR Charger Division Driver or higher driver's license. Drivers may be a minimum 14 years of age (only pending approval from the Race Director) to compete in the Street Stock division.

4.1 APPROVED MODELS:

Open to any 1968 to 1989 rear wheel drive American made car between that has a minimum 108" wheel base.

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" for your make/model/year. All floor pans must be stock OEM or be fabricated from a minimum of 22 gauge (.030") magnetic sheet steel. Stock OEM floor pans may be modified for "x" clearance. Fabricated floor pans may be raised a maximum of 4" over the right side frame rail for "x" clearance. The overall body width (at its widest points) cannot exceed 72" across, not including the side nerf bars.

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, below or above the frame rails.**

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

The maximum left side weight is 55.0% 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, below or above 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 or tail panel.

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.

D) "A" pillar windows, made of clear polycarbonate, measuring 6" or less in any direction may be installed at the forward edge of the door (the wing window area).

4.4.7 TAIL LIGHT / BACK PANEL:

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

A stock OEM tail light /back panel 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 main vertical panels on an aftermarket front firewall must be even with or forward of the large body mounting holes on the main rail area. 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 and shelf area. The rear firewall top shelf must be no closer than 16" from the main roll cage hoop. The top shelf must then angle down and extend forward no farther forward than the main cage hoop at floor height.

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. 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 or the aftermarket Street Stock fiberglass roof assembly. The roof may not be modified in any way, and it must retain all factory supplied dimensions, lines, and angles.

C) The stock OEM roof must use steel roof posts, and retain all factory supplied dimensions, lines, and angles. The aftermarket fiberglass roof assembly must use the roof posts as supplied.

D) The roof numbers must 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 for your car. It may have the interior panel(s) removed.

4.4.15 BUMPERS:

If a stock OEM nose panel/headlight panel or tail light panel is used, you must run a stock style OEM bumper. Aftermarket or manufactured steel tube bumpers may be used if you run an aftermarket bumper cover. Cars may not compete without a front or rear bumper securely and mechanically fastened in place, unless inspected and approved by an official.

4.4.16 NERF BARS:

Nerf bars made of 1" tubing, or Lexan 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. The distance between your fuel pump and the frame crossmember must remain stock OEM. A stock length driveshaft must be used. GM Metric chassis must use a 52-3/8" long driveshaft (u-joint centerline to u-joint centerline).

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 for GM , Ford and Mopar 340 is .060". Maximum cylinder overbore for Mopar 360 is .040".

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 or hypereutectic 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.

4.5.6 OIL PAN:

A) A stock type magnetic steel oil pan must 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 pro- flow, swirl, or polished valves allowed. Maximum undercut on valve stem is .015".

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 on 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 crankshaft.

The journals may not be drilled, and the counterweights may not be machined.

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.
No coolant lines allowed in the intake manifold.
The heat crossover passages may only be blocked off using the gasket and plates.

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 spacer with a maximum height of 1" must be used.
- B) Only one .075" max. gasket per side.
- C) Spacer can be no larger than base of carburetor.
- D) 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 (non-oiled), paper air filter element, 10" to 14" in diameter and 1" to 4" tall must be used. All air must be filtered through this element.
- B) The air filter housing top and bottom pieces must be made of metal and be 10" to 15" in diameter.
- 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.
- F) The air filter assembly must fit below the hood without making the hood "bow" significantly and/or causing the rear edge of the hood to lift away from the base of the windshield.

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) An 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 box may be made of steel and welded in place, or made of plastic and have a steel frame welded in place around it.
- D) The battery must be padded or lined to prevent battery from moving inside the box.
- E) The battery box must be completely sealed off from the drivers compartment.

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.
- C) Aluminum water pumps are NOT permitted for use**

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 passenger car cast iron exhaust manifolds must be used. No center dump or "ram" style manifolds.
- B) The maximum exhaust pipe diameter allowed is 2-1/2". No flex exhaust pipe is allowed.
- C) The exhaust pipes must extend rearward past the main cage hoop.
- 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) Exhaust pipes may exit one on either side, or both out the right side.
- I) 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. Stock type mechanical linkage or hydraulic slave or bearing 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.

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 style OEM length and diameter magnetic steel driveshaft must be used. GM metric cars must use a driveshaft that is 52-3/8" long from u-joint centerline to u-joint centerline, and it must be 2-1/2" in diameter.
- 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 solid 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 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" diameter 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 +/-3/8" will be allowed.
- B) Solid 1/2" (minimum) diameter magnetic steel lug studs and oversized magnetic steel lug nuts must be used.
- C) You may use one solid wheel spacer on each side of the rear axle housing only, each one a maximum of 1/2" in thickness.
- 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 stock OEM 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 reinforce 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.

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. **No modifying of frame rails to gain frame height. Frame rails must remain stock**

The Johnson Chassis "X-Y-G Metric" chassis and front clip are permitted. No other reproduction chassis or parts have been approved. The chassis and the front clip must be purchased with, and retain all of, the

factory stock OEM upper a-frame and lower a-frame mounting locations, shock locations, rear trailing arm locations, steering component locations, and engine mount location.

4.11 SUSPENSION:

4.11.1 SPRINGS:

- A) Front springs must be magnetic 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 magnetic 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.
- 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, using bolts, washers and spacers (no heims). Rear sway bars are not allowed.

The sway bar saddles must be the stock steel OEM ones that came on your frame, and must be bolted into the stock location. Bolt holes in the frames may be replaced with nuts welded in place.

4.11.3 SHOCKS:

- A) A steel, OEM style replacement shock, with a retail value of \$75 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) Shock spacers are not allowed.

GM Metric chassis approved shocks:

<u>BRAND</u>	<u>FRONT</u>	<u>REAR</u>
KYB	KG4513	KG5548
NAPA MONROE	5840	5802
MONROE SSF SERIES	N/A	12475-6-7-8
MONROE SENSATRAC	5840	5802
DOETSCH	0101	0102
PRO SHOCK	SS-100 SS-100A	SS-201 SS-201A
BILSTEIN	1043 1051	1044
AFCO	1020 1021 1022	1030 1031 1035
QA1 / CARRERA	EC-1956P EC-1957-3P EC-1958P	EC-1685P EC-1683-5P

4.11.4 UPPER/LOWER A-FRAMES:

The mounting points for all a-frames must remain stock OEM for the frame being used.

UPPER A-FRAMES:

- A) Stock OEM upper ball joints must be used. Any rubber or poly bushing may be used, but cannot be offset.
- B) Stock OEM upper a-frames for your make/model chassis may be used.
- C) Aftermarket direct replacement all steel tubular upper a-frames may be used. GM metric chassis must use Speedway Motors part # 910-34394L and 910-34394R, or identical equivalent. These a-frames must have a steel cross-shaft, accept the stock GM metric bolt-in ball joint, and be OEM stock factory offset. They measure 8" long for the right side and 8.5" long for the left side.
- D) The a-frames may not be swapped from side to side or be run upside down.

LOWER A-FRAMES:

- A) Stock OEM lower ball joints must be used. Any rubber or poly bushing may be used, but cannot be offset.
- B) Stock OEM lower a-frames for your make/model chassis may be used.
- C) Johnson Chassis stock OEM lower a-frames, part # JCI-09-02-01RC-SP may be used. The Johnson Chassis lower a-frames must be purchased with the rubber bushings installed and the GM metric small diameter press-in lower ball joint.

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 magnetic steel bearings must be used.

4.11.6 TRACK WIDTH REQUIREMENTS:

The maximum track width measured across the rear, from tire bulge to tire bulge is 69".
The maximum track width measured across the front, from tire bulge to tire bulge is 70" at spindle height.
You may use one solid wheel spacer on each side of the rear housing only, each one a maximum of 1/2" in thickness. Wheel spacers may not be used in the front.

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 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".
The overall body width (at its widest points) cannot exceed 72", not including the side nerf bars.

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) The stock OEM chassis bumpstops may be used
- B) Any mechanical, hydraulic or electronic device that may be used for the transfer of weight is not permitted.

4.11.10 REAR SUSPENSION:

- A) All trailing arms must be the Stock OEM length (installed) as measured from bolt hole to bolt hole.

- B) Any rubber or poly bushing may be used, but cannot be offset.
- C) Unaltered stock OEM trailing arms must be used.
- B) GM Metric cars may use the Johnson Chassis part #JCI-09-03-03B lower arm.
- C) GM Metric cars may use the Johnson Chassis part #JCI-09-03-04 upper arm.
- D) The Johnson Chassis arms must be purchased with the rubber bushings installed, and must be installed at the factory stock OEM length.
- E) 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, center link and tie rods for their frame.
- C) The adjusting tie rod sleeve may be replaced with a radius rod.
- D) The idler arm mounting holes may be modified.
- E) The pitman arm may be modified.
- F) A magnetic steel steering shaft must be used.
- G) The center of the steering wheel must be padded.
- H) A quick release coupling must be used on the steering wheel.

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 steel OEM, except the master cylinders and pedal assembly. The master cylinders and pedal assembly may be aftermarket type, and may mount in stock location on firewall or be a floor mount type. Aftermarket master cylinders must mount on forward side of firewall.
- 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 and/or track supplied Sunoco/CAM II racing gas may be used.
- B) You may not mix or blend any additives to your fuel.
- C) Icing or cooling of the fuel system is not permitted at any time.
- D) 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 or after the racing events.

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.

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, centered between the frame rails, 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/Tower to the driver is mandatory. A scanner must be used. The preferred scanner is the Raceceiver scanner used by 600 Racing, available at G2 Radios (www.G2radios.com 609 876 9530). If a scanner other than the Raceceiver is used it must be locked onto

the track tower frequency, 464.3250. Monitoring the track is your responsibility. You may be placed at the tail end of the field for failure to monitor the track frequency. No other type of communication, one way or two way, is permitted. Drivers found using any type of communicating device other than the Raceceiver or scanner locked on 464.3250 may be disqualified for that event. If the Raceceiver is not working, you may be black flagged from the event if it presents a problem on the race track.

4.15.3 ELECTRONICS:

No onboard computers, automated electronics, recording devices or digital readout gauges of any kind are permitted. 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 mandatory that you "plate" the drivers door bars with minimum .080 thick steel plate. Please see the 2012 General Rules for door bar plating requirements.**

Stock OEM chassis: 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".