

# 2012 NES SPORTSMAN RULES

The following changes have been made to this class for 2012:

Minimum Weight = 2450 LBS.

Tires... See Tire Section.

Fuel... See Fuel Section.

Master Shut Off Switch... See Safety Section.

Hydraulic Panhard Adjuster... See Suspension Section.

Helmet Spec... See Driver Safety Section.

One Race Grace Period... See Beginning of Engine Section.

**If your questions are not in these rules, don't assume it is legal and ask first.**

## **GENERAL SAFETY:**

All cars must have a New Egypt Speedway inspection decal to be authorized to race. All cars are subject to inspection at any time and must be free of mechanical defects and be in safe condition to race. The decision of officials regarding car safety will be final. All the following rules are mandatory and will be strictly enforced.

**ALL SPORTSMAN CARS MUST WEIGH A MINIMUM OF 2450 LBS WITH DRIVER AT COMPLETION OF ALL QUALIFYING RACES AND FEATURE EVENT.**

## **MANDATORY SAFETY RULES:**

### **THESE RULES ARE MANDATORY AND WILL BE STRICTLY ENFORCED:**

Failure from a driver, crew, or car to follow any safety rules or NJ laws will automatically be disqualified from the event, fined \$500.00 and suspended for a period of time not to exceed one (1) year. Suspension will be at track discretion and based on severity of offense.

All cars are subject to inspection at any time. All cars must be free from mechanical defects and be in safe racing condition. NES official's decision regarding any safety infractions will be final.

All drivers must wear approved helmet, approved racing suit and shoes, approved fire retardant underwear to include socks, approved neck and arm restraints anytime while on racetrack.

## **SAFETY - FRAME:**

Per NJ State Law all cars will be required to maintain a minimum of 3 inches head clearance above the seated drivers helmet.

Only round steel roll over bars may be used. Front and rear roll bars must be connected at top in a cage type configuration. Two round horizontal side bars on each side are mandatory. The top side bar must be a maximum of 20" below the top roll bar. Proper bracing and triangulation on front and rear roll bars is required. All roll bar bracing must be a minimum of 1-1/2" diameter by .095" wall thickness. A minimum of one diagonal bar across the top of the roll cage is mandatory.

The rear main roll bar hoop must be a minimum of 26" measured across from outside to outside of tubing and must maintain that measurement from the bottom all the way to the top of the cage. Bottom of the rear roll bar must be directly welded to the 2 x 4 frame (no outriggers). The front roll bar must be measured and constructed the same way, except that the allowable taper in the frame rules will govern the width dimension.

Only two roll bar diameters will be permitted. Roll bars of 1 3/4" diameter will require a minimum of .095" wall thickness. Roll bars of 1-1/2" diameter will require .120" wall thickness.

Shock resistant roll bar padding must fully cover all bars that that may come in contact with the driver's head while strapped in the seat. On center type steering, all housings, lines and fittings must be covered with shock resistant roll bar padding. The steering wheel center must also be padded. The starter housing and any other points of contact that could potentially injure the driver must also be adequately padded. It is recommended that this padding be flame retardant.

All cars must have a functional padded headrest, which must be in line with center of driver's head, if not built into the seat.

Adequate window openings on both sides of the car must be maintained for emergency exit of the driver. The minimum opening size is that which will allow a rectangular box with dimensions of 15" high by 15" wide to be passed through the inside of the car from one window through to the other side. Any obstacles other than the driver's headrest, which prohibit the passage of the inspection box through the cockpit, must be removed.

All cars must have a drive shaft cover. All cars with open drive shafts, must have a tunnel, made from a minimum of 1/8" thick steel which extends from 2" under front edge of seat to the back of the transmission covering the shaft and "U" joint, and output flange on top and both sides. It must extend completely down to floorboards. It must be held in place with a minimum of four 3/8" diameter bolts at bottom connected to a substantial cross-member. This drive shaft cover must be a solid unit with no cut-aways for lightening purposes.

Two steel safety rings diameter to suite x 1/4" wall thickness x 2" wide, each fastened by two 3/8" grade 5 bolts to the torque arm side plates or the frame must be installed around each universal joint.

Closed drive type cars, torque tubes, or bells that already have a 360 degree covering from "U" joint back to seat will be accepted as is. To protect the driver, any suspension link such as a torque arm, coil over or trailer bar inside the driver's compartment must have a steel cable

(1/4" in diameter or more) or clamp connecting it to a substantial cross-member to limit its range should it break loose. These parts must have no sharp edges and must be padded.

Firewalls, both front and rear are mandatory. The rear firewall must extend from the top of the fuel cell to the belly pan to isolate the driver from the fuel cell. A minimum thickness of .050" aluminum or steel is required. A minimal amount of sheet metal may be cut out for drive shaft clearance. The front firewall must fully isolate the driver from the engine compartment.

Belly pans are mandatory and must extend from front firewall to rear firewall and be attached at both spots. It is mandatory to have a separate floor to protect the driver's feet in the event the under pan falls off. This extra floor must be attached to the frame or cross-member or both, and extend from the front firewall past front of edge of the seat.

### **SAFETY SEAT AND SEAT BELTS:**

All cars must be equipped with 5 point seat belts to SFI 16.1 specifications. All belts must be securely fastened to the frame or cage. Bolts may not be inserted through webbing for mounting.

Seat belt webbing that comes into contact with any sharp or un-radiused metal edge must be protected from that edge by means of push on grip vinyl trim. The areas of concern are the webbing slots in the metal racing seats. All the seat manufacturers either roll the edge or supply the seat with trim protecting the webbing from abrasion or cutting under impact conditions. Webbing entry slots into the seat with an existing metal roll of 1/8 inch smooth radius will not require vinyl trim.

The areas where the webbing slot has been enlarged by filing or cutting are of particular concern. In most instances the edges have been left sharp, increasing the incidence of belt failure. As racing seat belts are subjected to severe conditions, it is required that worn/frayed belts are replaced immediately, and that undamaged belts are replaced every 24 months. The date sewn into the webbing should be used as a guide. Damaged belts will not be permitted.

### **DRIVERS SEAT:**

Shall be metal only; one piece and high-back style, and provide support of both left and right sides from shoulders to the legs. No fiberglass or plastic seats. Seat shall be securely fastened to frame in six (6) places, using a minimum of six (6) 3/8" bolts, four on bottom and two on seat back. All bolts securing seat to frame must be connected together by a minimum 1/8" thick steel bracket or 3/16" thick aluminum bracket. Brackets must between the bolt head and seat 1 bracket is required connecting the 2 bolts on the seat back and 2 plates are required connecting the 4 bolts on the seat bottom. All seats must have a minimum 1/8" steel plate, as wide as the seat, under and up the back 4". In Modified and Sportsman cars, seat and steering must be centered in frame.

### **SAFETY DRIVERS EQUIPMENT:**

Per New Jersey State Law all drivers are required to wear a full-face helmet meeting SNELL specification SA2005 or newer.

All drivers must wear a clean one piece SFI driver's suit with fire retardant LONG sleeve underwear, head socks, gloves, foot socks and shoes to SFI specification 3.2a and 3.3.

Arm restraints and a neck brace are MANDATORY.

### **SAFETY FUEL:**

All crews must carry an operable fire extinguisher of 20 pounds marked with the car number in 2 inch numbers/letters in the rear of their transporter, capable of extinguishing gas and oil fires.

On board "flame-out" systems installed in the race car are recommended.

A fuel cell with a maximum capacity of 24.5 U.S. gallons is mandatory. No pressure tanks are permitted on fuel systems.

The fuel cell must be fully encased in a steel container with a minimum thickness of 20 gauge. An optional aluminum container may be used with a minimum thickness of .060". The cell must be fully foamed with just a minimal cut -out for filler. Cut -out may be no larger than 6" wide by 10" long by 7" deep. Fuel lines must siphon from the top only. There must be a one-way safety valve in the vent line. Fuel tank must be mounted behind driver. Fuel tank must be secured by 3 steel/aluminum straps (each strap must be a minimum of 1" wide x ¼" thick) and bolted to frame of car with at least 5/16" diameter grade five (3 line) bolts.

Fuel cells should be to SFI 28.1/2 or FT3. No fuel cell bladders may be older than 5 yrs from date of manufacture.

A horizontal bar with minimum dimensions of 1" by .095" wall thickness must be mounted behind the fuel cell for rear impact protection.

No racing fuel in drums may be brought on to track premises.

A fuel shut-off valve must be mounted within easy reach of the driver and the safety crew. It must be labeled in a clearly visible location with words FUEL ON/OFF with a bright colored paint or decal.

A minimum of two throttle return springs and a steel toe loop on gas pedal are required.

### **SAFETY ANCILLARIES:**

All cars must have an ignition switch which is easily accessible within the driver's compartment. The ignition switch must be marked ON/OFF with a bright colored paint or decal and be clearly visible and easily accessible to the driver.

Fuel lines, power steering lines and fittings running through the driver's compartment must be made from an approved braided type line only. No plastic or glass fuel filters permitted. High pressure lines and fittings or hot fluid lines running through the driver's compartment must be encased or shielded by a deflector to prevent driver injury.

All cars must at all times have four wheel hydraulic brakes in good working order. Brake tests may be held throughout the year. Rear wheels must have a minimum of five lug nuts. A minimum of three lug nuts is required on front wheels only. No knock off hubs are permitted on any wheel.

Exhaust headers must be safe for the driver and exit past the driver's seat.

All exhaust pipes must exit facing the rear of the car and be directed in such a way as to disturb as little dust as possible. Pipes may not exit through the doors or in front of the rear tires.

### **SAFETY – BODY:**

No mirrors or reflecting devices permitted.

Inspectors reserve the right to request body or sheet metal to be replaced and painted if it has any sharp edges or is not looking presentable to the sport.

No oil cooler may be mounted external to the bodywork. All oil cooler piping shall be routed under the bodywork, as safely away from driver as practical.

Oil coolers may be no further forward than the centerline of the rear axle. The cooler must be horizontal and flush with the cut out in the deck.

Oil coolers with a duct covering them on both sides and the rear may be mounted further forward than the centerline of the rear axle.

Oil coolers may be mounted under the hood ahead of the motor.

Max rear spoiler height, regardless of ride height, not to exceed 50". This height will be randomly measured during an event. Cars not complying will be excluded. It is suggested that manufacturers do not make tall cars that can only pass tech at low ride heights. The following driver must be able to see through for clear view of track ahead.

All cars must have a full steel windscreen (rock guard) of substantial material with a maximum individual hole opening of 2" by 1" by 1/16" (no chicken wire or aluminum). Screen must cover entire windshield area left to right across the cage and from top of cage down to hood or cowl. Clear lexan or safety glass windshields may be used for additional protection if they are in the driver's line of sight. They must be shatterproof and mounted behind the screen, enabling driver to wipe them clean. Any additional windshield must not obstruct the emergency exit of the driver.

### **SAFETY – BATTERY:**

The battery must be properly secured and must have top and terminals completely covered by rubber. 12 VOLT ONLY. 14v max. No step up transformer or any other device to increase voltage allowed.

All Cars in all divisions shall have a mandatory master disconnect switch, which shall disconnect any and all electrical functions of the race car. This switch shall be mounted in the area where the "A" pillar meets the top horizontal bar on the left "driver's side" of the roll cage. This switch shall be painted red and clearly marked ON/OFF and must be accessible from the outside of the race car.

### **BODY STYLE AND DIMENSIONS:**

**ALL MEASUREMENTS MAY BE TAKEN WITH OR WITHOUT DRIVER AND OR WITH OR WITHOUT FUEL.**

TOLERANCE PERMITTED ON ALL BODY DIMENSIONS IS MAXIMUM 1/2 INCH. THIS IS A TOLERANCE, NOT A DIMENSION TO BE ADDED TO THE BODY DIMENSIONS.

### **BODY MATERIAL:**

Only aluminum or steel will be permitted for all inner and outer body panels.

The overall dimensions of the doors and door extensions must meet the specifications.

The roof must be fiberglass only. Hood, hood scoop, windshield cowl, right rear inside tire clearance cover and front spoiler may be constructed of either fiberglass or aluminum.

Only clear lexan will be permitted for the rear spoiler and the rear wing windows. NO STICKERS OR WRITING WILL BE ALLOWED ON SPOILER OR WINDOWS!

### **ROOF:**

The roof must be centered from side to side on roll cage and also be centered on frame (no offset bodies). Leading edge of roof must be fastened in a stationary position a minimum of 33" and a maximum of 48" in front of rear axle centerline. The roof must be securely fastened at the back and on both ends.

Length of the roof: maximum 60", minimum 48". Width of roof: maximum 52", minimum 48". It must display a turtleback style and shape with at least 3/4" belly front to rear and 3/4" side to side. The roof contour must fit DIRT's roof template patterns left to right and front to back (NO FLAT ROOFS). Front lip may not be more than 1/2". Side edges may be no longer than 1 1/8" break.

The roof cannot change shape or location while racing.

Overall height (top of highest point): minimum 52", maximum 61", measured from the ground. Maximum roof angle is 5 degrees on the NES gauge.

The roof must be one piece fiberglass only and be a single ply, one contour inside and out. No carbon fiber. Roll bars must be exposed. No vertical metal used to mount roofs will be permitted covering the roll bars. The roof must weigh a minimum of ten pounds.

Any proposed new roof design must be approved in writing by NES.

## **FRONT DOOR POSTS:**

Door posts must be flat aluminum sheet metal only. They must go in a straight direct line from the roof to the doors. From a side view they must be seen as a 2" dimension. They must be no wider than 2". They may be bead rolled or have a lip for re-enforcement, but can't exceed a 3/8" maximum thickness at that area. The material thickness used may be a minimum of .050" to a maximum of .090" inches. Only a one-piece construction will be accepted! There will be no Tolerance on these measurements. Door posts must attach securely to the metal roof support and doors. They may be bolted with a min. of (2) 3/16" bolts to the door bracket for the ease of fabrication.

No lexan vent windows or excessive sheet metal will be permitted in the vent corner where the post meets the door panel.

## **REAR WING WINDOWS:**

All rear wing panels and windows must resemble a current OEM body style.

Their upper profile may not protrude above a straight line drawn from the rear of the roof to a point 3" higher than the rear deck. There must be at least a 2" indent in the profile, so as not to make this panel a fast back. (see drawing)

The maximum base length must not exceed 61". Left and right must be of the same style and dimension! See drawing in back of book.

All window styles must be nominally 160 square inches (suggested 10" tall X 16" long), clear, smooth lexan with no bends or breaks.

No writing or decals permitted on the wing windows.

Rear view of the wing window must go in a straight line from top of quarter panel or body line to the roof with a maximum gradual bow of 2" in the center of wing window.

See drawings in rear of book:

REAR WING WINDOW / SIDE VIEW / REAR VIEW

BODY WIDTH AND GROUND CLEARANCE

Body width (measured anywhere along the body line, front or back): 68" maximum, 64" minimum.

Minimum body and chassis ground clearance 2 1/2".

No fan or ground-effects cars are permitted.

No rubber skirts, fins, or spoilers of any description are permitted under the car.

A 2" max air deflector is permitted in front of radiator to facilitate cooling.

## **DOOR PANELS:**

Side door panel: minimum 60", maximum 70" in front of centerline of the rear axle. Doors, front door extensions and rear quarter panels must be flat and mounted in a vertical position. They shall remain flat with no louvers, bead rolls, holes or protrusions from top to bottom, the exception being for rub rails. They may have a max. of a 1" long lip at a 45 deg. outward angle 1/2" away from the sheet metal for the purpose of reinforcement. This will be allowed at the top and bottom of the panels.

All outside sheet metal, door panels, door extensions, air dams, front nose & hood fins must be the same shape, size, and angle on both sides of the car. (Must be symmetrical)

Bead rolls around the outside perimeter of these panels and the wing windows will be allowed. Bead roll edges must face towards center of chassis.

Front door extensions will be permitted up to 20" behind the front axle centerline.

Ground clearance on the bottom of the doors must be a minimum of 6" and a maximum of 12" from the ground. Right side may be higher for roll clearance.

All doors and rear quarter panels may have a maximum lip of 1 1/2" rounded at 90 degrees and facing inward only, on the top and the bottom.

At the top of the doors and rear quarter panels, a lip angled out at a maximum of 45 deg., protruding away from the door no more than 1/2" and no more than 1" in length before it bends inward for strength will be permitted.

Minimum window opening 15" x 15" on both sides of the car.

## **REAR QUARTER PANELS:**

Rear quarter panels must match each other.

They must be a maximum of 47" and a minimum of 40" from the ground at the rear and continue in a straight line with top of door. See body drawing in back of book.

A fender flare, up to a maximum of 2" from the body may be used, but the overall body width must still be maintained at a 68" maximum.

Rear quarter panels can extend back to 48" maximum at top and may incline down to 44" maximum at bottom measured from center of rear axle to rear of car.

Ground clearance on rear quarter panels must be a minimum of 8" and a maximum of 16".

## **REAR SPOILER:**

The rear spoiler must be clear one piece lexan with a maximum height of 5" from the rear deck and must not have any writing or stickers on it.

The rear spoiler must be non-adjustable (no hinges or slides).

No metal Gurney tabs permitted. Lexan may have brake (top only) for rigidity.

Spoiler maximum height from ground is not to exceed 50".

A maximum of four vertical supports may be used to fasten the spoiler to the rear deck. These supports may not exceed 2" in vertical height and 10" in length.

### **REAR DECK:**

The rear deck must be a maximum height of 47" and minimum of 40" from the ground.

Rear deck lid (i.e. trunk lid) must be fully enclosed from quarter panel to quarter panel and have a minimum height of 9" and a maximum of 14" in vertical coverage behind the fuel tank.

Left and right rear trunk lids must be symmetrical in size and shape and show no specific bulge or extension to cover fuel filler hose or apparatus within the 9" to 14" of vertical coverage. This panel must completely cover the fuel cell, filler hoses, and vent lines.

At the discretion of the chief tech inspector, older cars with tall gas tanks may have a step in the deck to accommodate the tank.

The fuel tank must be completely enclosed from the bottom of this panel to the bottom of the fuel cell.

The fuel cell must also have both sides completely covered by sheet metal in addition to the container it is enclosed in. Within these dimensions there can be no openings.

No openings from top of fuel cell to bottom of trunk lid are permitted.

Any vent line nozzle used for catch can purposes must be mounted on the left side quarter panel only.

No crewmember will be permitted behind the car during pit stop refueling.

### **HOOD, NOSE, AND FRONT SPOILER:**

The hood, nose, and front spoiler can be no wider than 36" and no narrower than 24".

The nosepiece must end at the front of the shock towers. The spoiler must be separate.

The nosepiece shall start where hood ends and end at the shock towers.

Shock covers or deflectors may not be part of or riveted to the nose or spoiler exceeding the 36" width maximum.

Fabric shock covers are permitted as long as they are used for the prevention of dirt getting at the shock piston and not used for any aerodynamic advantage.

The front spoiler must not extend any more than 20" in front of the front axle centerline.

The front spoiler must be non-adjustable (no hinges or sliders).

The hood shall be considered from the front roll cage to on top and even with the front of the radiator.

Both hood and nose may have 2" maximum lips up or down on both sides following the contour of the body. Both lips must be symmetrical.

The hood, nose, and spoiler may not overlap each other's location on the frame.

Any part of hood may not exceed 10 degrees nor can sheet metal have an opening or extrusion between the hood and nose.

The hood must extend over the radiator and have complete sides.

### **HOOD SCOOP:**

The hood must be fully enclosed.

Two options of hood scoops mounted on top of the hood for the purpose of enclosing the carburetor, or ram air will be permitted providing they meet the following specifications:

Both style scoops may be made of fiberglass.

Ram air type scoop: Maximum length, 30" measured from rear motor plate to front of hood scoop. Maximum width 18". The front vertical opening of the scoop can be a maximum of 6" at the beginning of the scoop only. The overall height of this scoop must maintain a minimum of 8" of vertical vision for the driver. This measurement will be taken from a horizontal line from the highest point of the hood scoop to the lowest point of the front roll cage and/or roof. Hood scoop must be fastened to the hood and completely enclose the carburetor and air filter.

The conventional no ram air scoop: a maximum of 25" is permitted from center of the carburetor forward to end of scoop. The width permitted is a maximum of 22". The height must maintain a minimum of 8" of vertical vision from the top of the scoop to the lowest point under roof or roll cage.

### **INTERIOR SHEET METAL:**

Any horizontal body support, other than the inner pods, whether in front or rear must be a maximum of 1" deep by 1" thick tubing or flat stock only.

No inside or outside wings, spoilers, air foils, or wind deflectors are permitted.

No double panels that create a wing effect will be permitted.

A 1" maximum reinforced lip will be permitted on all lexan, but all specified measurements must still be maintained.

All inner sheet metal used must completely cover areas from door to door, quarter panel to quarter panel. No holes or openings are permitted in this area.

No vertical fins, air dams, or fairings permitted on the sides or behind the roll cage.

Sheet metal must be a flat single plane across the inside of the car.

No covered roll bars are permitted. Sheet metal that is one-piece and part of a body panel bent around tubing (for purposes of protecting the driver or finishing off panel) is not considered an aerodynamic advantage provided it is not to excess.

No louvers or holes in the interior or exterior sheet metal are permitted with the exception being the cooling of the radiator, engine, and oil cooler.

The floor pan or underpan may not be any wider than the frame, from front to back, and may not have any lips or fins facing downward.

### **NUMBERS:**

The track handicapper reserves the right to issue or change a car's number to prevent duplication and maintain proper records.

Team cars must be clearly distinguishable from one another and use a different number or letter.

All numbers and letters will be limited to three digits. If three digits are used, two shall be primary numbers. Numbers are required on roof, nose, rear deck and both doors.

All numbers and letters must be a minimum of 18" high on the roof and doors, and 8" high for the rear deck and nose. All numbers and letters must be of equal size and painted or decaled. If numbers "3", "6" or "9" are used make sure that they are distinguishable. Nerf bars must not block visibility of number.

### **CHASSIS SPECIFICATIONS:**

#### **FRAME:**

Only 2 x 4 box frames are permitted between axle centers, front and rear. The 4" side must be vertical. Frame rails must be steel only. All 2 x 4 rails must be .120" wall thickness only. At the discretion of the officials, it may be necessary to drill a 3/16" hole in frame rail for inspection of thickness. No other holes will be permitted. All tubing permitted for the frame rails must be either 1 1/2" dia. x .095" wall or 1 3/4" x .095" wall.

Frame width shall be as follows: Front (at shock towers): 24" minimum, 35" maximum. Rear: 26" minimum, 35" maximum. The minimum frame width at the rear roll bar must be 26". All measurements are to be taken from the outside of the frame rails. These measurements shall be taken at both top and bottom of frame at its longest length. Clips, sub-frames, etc. are considered part of the frame..

Minimum length of the 2 x 4 frame rails must start at 14" in front of rear axle centerline and extend to the front of the radiator. All kick up material must be same specifications as the roll cage or frame material. Left and right frame rails (both top and bottom rails) must be equal distance from the driveline centerline in a vertical plane along the total length of frame. The only exceptions will be the lower left rear frame rail, which will be permitted at 4" maximum indent for suspension clearance, and the two upper frame rails in the engine compartment to allow for the clearance of large cylinder heads.

Titanium or carbon fiber materials are not permitted on the chassis.

### **ROLL CAGE:**

The roll cage shall be integral with the frame. All frames built in 2005 must have a manufacturer's unique serial number plate prominently attached by welding on the left side front roll cage upright. The letters and or numbers shall not exceed 8 in number and be 1/2" in height.

All cars for 2006 and beyond will be required to have a serial number.

Only round steel roll over bars may be used. Front and rear roll bars must be connected at top in a cage type configuration. Two round horizontal side bars on each side are mandatory. The top side bar must be a maximum of 20" below the top roll bar. Proper bracing and triangulation on front and rear roll bars is required. All roll bar bracing must be a minimum of 1 1/2" diameter by .095" wall thickness. A minimum of one diagonal bar across the top of the roll cage is mandatory.

The rear main roll bar hoop must be a minimum of 26" measured across from outside to outside of tubing and must maintain that measurement from the bottom all the way to the top of the cage. Bottom of the rear roll bar must be welded to the 2 x 4 frame (no outriggers). The front roll bar must be measured and constructed the same way, except that the allowable taper in the frame rules will govern the width dimension.

Only two roll bar diameters will be permitted. Roll bars of 1 3/4" diameter will require a minimum of .095" wall thickness. Roll bars of 1 1/2" diameter will require .120" wall thickness.

### **RADIATOR:**

Only one (1) radiator permitted and it must be centered squarely, not angled, in front of motor in a vertical position.

No plastic or carbon fiber permitted.

No auxiliary cooling tanks or catch cans are permitted in driver's compartment.

### **ENGINE:**

The engine must be centered in the front of the chassis and placed in an upright position.

Engine set back: minimum 56", maximum 66" with 1/2" absolute maximum tolerance. Set back will be measured from the center of the front axle to the rear machined bellhousing surface of the engine.

### **TRANSMISSION:**

Approved North American or Canadian manufactured manual shift transmission only, no automatics are permitted.

No overdrive or under-drive transmissions are permitted.

No running through reduction gears; transmission must be direct drive to rear end at racing speed.

Transmission must have forward, neutral, and reverse gear in good working condition. From a neutral position with the motor running, a car must be able to go forward and backward in a smooth manner. Transmission must bolt to the bell housing.

The car must start and move under own power.

### **DRIVELINE:**

All driveline components between the rear of the crankshaft and the rear end assembly shall be steel only. No aluminum, titanium, or carbon fiber ones permitted. This includes, crankshaft coupler, all transmission shafts and gears, all yokes, slip yokes, flanges, drive flanges, driveshaft, universal joints, and universal joint retaining ports.

There will only two universal joints per driveline.

A cockpit driveline shield and 2 steel safety rings are mandatory (see safety rules for detailed requirements). No weight of any kind may bolt to shield.

### **REAR END:**

Competition rears only.

No hypoid type rears are permitted. (No 9" Ford type rears allowed)

No limited slip type rear ends or hubs are permitted.

No lockers or two speed rears are permitted.

Rear end must have solid aluminum or steel spool only. Drive axles must be solid steel or gun-drilled steel only. No aluminum, titanium, or carbon fiber are permitted. Rear hub drive flanges may be steel or aluminum only. No titanium or carbon fiber are permitted.

Rear spindles may be steel or aluminum only. Aluminum must be a one-piece tube and spindle with a minimum outside diameter of 2 7/8" and maximum inside diameter of 2 1/2".

Live rear ends with aluminum or steel axles are permitted.

The rear end or chassis must not be offset more than MINIMUM of 4" MAXIMUM of 8" from center of the inside tire width. This will be measured from the inside of the left rear tire to the inside of the right rear tire, at axle height. See chassis drawing in back of book for front and rear end offset details.

### **FRONT END:**

The front axle must be straight, one piece steel tubing only with no camber adjustments.

No split axle or dropped axle permitted.

All brackets on the front axle must be bolted or welded (no bird cages or slides).

Modified type front spindles only.

It is recommended that bearing shafts be made of steel.

Chassis may not be offset any more than 4" from center of inside tire width, measured from the inside of the left front tire to the inside of the right front tire at axle height. See chassis drawing in back of book for front end offset details.

Front wheels must be fully exposed. No fenders are permitted.

### **WHEELBASE AND TREAD:**

Wheelbase: minimum 106", maximum 110". This measurement will be taken from the center of the rear axle to the center of the front axle, for both left and right sides with a maximum tolerance of 1/2".

Tread width: front - maximum 86", minimum 74". Rear tread, maximum 86", minimum 80".

### **CHASSIS GROUND CLEARANCE:**

There must be a minimum of 2 1/2" ground clearance from the chassis or anything attached to it, including any part of the body.

No metal, lexan, or rubber air dams, fins, spoilers or skirts are permitted under the car.

No ground effects cars are permitted.

### **SUSPENSION:**

No independent suspensions front or rear.

No "A" frames or ball joints may be utilized for steering axis (kingpin only).

No four wheel steering permitted that is actuated by steering wheel.

All suspension systems must be mechanical with no form of hydraulic, air, electrical, radio, or computer assistance for adjustments, in or out of cockpit allowed.

Electric/Hydraulic pan hard adjuster is **NOT** permitted.

Cockpit adjustable brake bias is permitted.

Right rear spring rod is a suitable substitute for radius rod with no cockpit adjustment

### **SPRINGS:**

Any form will be permitted (torsion bars, coilovers, leaf springs, etc.).

No carbon fiber or titanium springs are permitted.

### **SHOCKS:**

Only one shock per wheel permitted. Shocks may not be driver externally adjustable.

External reservoirs are not permitted. Manufacturers must submit shocks for approval 2 weeks prior to being raced.

All shocks used **MUST** be freely available to all competitors. Failure to easily purchase a type of shock could result in those shocks not being permitted.

### **BRAKES:**

All cars must have four wheel hydraulic brakes in good working condition.

No carbon fiber, carbon, titanium, ceramic or aluminum pads or rotors are permitted.

On live rear axles, one inboard and one outboard brake assembly is permitted.

Brake tests may be conducted throughout the year.

Brake bias may be cockpit adjustable.

No manual brake shut offs permitted. Only the right front will be allowed a shut off.

### **FRONT BUMPER:**

Must be made from round steel tubing only, with a minimum diameter of 1 1/4" by .095 wall thickness for main bumper and all bracing.

It must consist of two rails, an upper and lower and at least 1 or 2 vertical braces equally spaced. These rails must have four sockets or supports attached to the frame.

The four tubes that support the bumper from the four frame sockets must be horizontal. These rails must also be a minimum of 6" apart and a maximum of 12" measured from top to bottom and maintain that measurement for a minimum width of 24" or a maximum width of 30". It must also have an 18" center measured from the ground up to the middle of the bumper.

The front bumper may not extend more than 24" in front of front axle center centerline.

No V-shaped bumpers, crash area must be flat and vertical for the full width of bumper.

The bumper must have all rounded ends and no sharp edges.

The end bracing tubes of the bumper must be angled in such a way as to prevent the bumper interlocking with another cars bumper. See drawing in back of book.

### **REAR BUMPER:**

The rear bumper must be made of round steel tubing, with a minimum diameter of 1 1/2" by .095" wall thickness for main bumper and all bracing.

It must consist of two rails, an upper and lower, which must have four sockets and horizontal support bars attaching it to the frame. These rails must also be a minimum of 10" apart and a maximum of 16" measured from top to bottom and maintain that measurement for a minimum width of 64" or a maximum width of 86".

The rear bumper or any side bars cannot extend past the outside of tire sidewalls on both sides. It also must have an 18" center measured from the ground up to middle of bumper.

The rear bumper may not exceed 52" back of the rear axle centerline.

No V-shaped bumpers, crash area must be flat and vertical for the full width of bumper.

Bumper must have all rounded ends and no sharp edges.

Bumper mandatory to compete in event

### **RUB RAILS:**

The rub rails must be made of round steel tubing, with a minimum diameter of 1 1/2" by .095" wall thickness.

All bracing must also be a minimum of 1 1/2" outside diameter by .095" wall thickness.

Maximum wall thickness must be .095" with no solid bars or ballast added inside.

Rub rails must be outside of body panels but may not exceed the outside edge of the tires. The exception is the left rub rail only, which may extend an absolute maximum of 2" outside the left rear tire sidewall.

Rub rail ends must be rounded with no sharp edges and bent at a gradual 90 degrees and must protrude a minimum of 6" back in past the body.

Rub rails must be a minimum of 50" long, socket to socket.

### **ALL BUMPERS AND RUB RAILS:**

5/16" attachment bolts with nyloc nuts or approved quick release solid pins are the only permitted fasteners. NO COTTER PINS!

All 3 rub rail sockets must be pinned or bolted.

Front and rear rub rails must have a 360 deg. sleeve 3/8" wide x .095" wall min. welded to the rub rail tube butted up against the support socket to prevent pins from shearing.

### **FUEL TANK:**

The fuel cell must be fully encased in a steel container with a minimum thickness of 20 gauge. An optional aluminum container may be used with a minimum thickness of .060". The cell must be fully foamed with just a minimal cut-out for filler. Cut-out may be no larger than 6" wide by 10" long by 7" deep. Fuel lines must siphon from the top only. There must be a one-way safety valve in the vent line. Fuel tank must be mounted behind driver. Fuel tank must be secured by at least two steel straps (each strap must be a minimum of 1" wide x 1/4 " thick) and bolted with at least 5/16" diameter grade five (3 line) bolts.

Only one SFI 28.1/2 or FT3 fuel cell with a maximum of 24.5 US. gallons is mandatory (used for gasoline only).

Fuel tank height: 12" minimum from the ground to the bottom of the tank.

Tank must be centered inside of the frame rails and be rectangular or square in shape on all sides for measuring capacity. The capacity will be measured as a maximum of 5660 cubic inches using the formula with all sizes of the metal container measured externally in inches: Length minus 1/2" x width minus 1/2" x depth minus 1/2"= no greater than 5660CI.

Tank panels may not be bowed out or bellied to increase capacity. No tolerance.

Tanks may not be altered in any way to increase capacity. No large or long fuel lines, oversize filter housings or fuel coolers or other to increase fuel capacity.

Cars teched before the event will have the opportunity to correct any fuel capacity infraction, time permitting. Cars found with illegal fuel capacity after an event will be disqualified and placed last in that event. All legal cars will move up in position for any applicable points and prize money. Fuel tank must be fully encased in a steel container with a minimum thickness of 20 gauge. An optional aluminum container may be used with a minimum thickness of .060".

Fuel tank must be fully foamed with just a minimal cut-out for filler. Cut- out may be no more than 6" wide x 10" long x 7" deep.

Fuel lines must siphon from top only.

No fuel lines bigger than #10 are permitted.

No auxiliary tanks are permitted.

No fuel filters with more than 1/2 quart capacity are permitted.

Fuel tank vent line must have an inline one-way valve for the prevention of fuel spillage.

Only one carburetor fuel log will be permitted and is limited to a maximum outside diameter of 1".

### **MUFFLERS AND EXHAUST SYSTEM:**

Each car must have one unaltered muffler per bank.

Mounting position front to back will be optional however the exhaust must exit past the driver.

Each muffler must have a tail pipe no less than 10" long measured off the back of the muffler and must direct the exhaust to the rear of the car only so as to disturb as little dust as possible.

No exhaust pipe may face outside the car.

No cross over pipes are permitted connecting the two banks of cylinders.

TRI-Y Headers are permitted. All conventional style (non-tri-Y) headers must not exceed 1-7/8" maximum outside diameter measurement. No stainless steel, no ceramic coatings, no merge collectors.

All exhaust must be securely mounted to car and tech inspector will have final say on mounting.

### **BALLAST WEIGHT:**

Any ballast weight used must be mounted within the vertical planes formed by the frame rails, must be securely fastened, and must remain stationary while racing.

Weight may be added prior to the event or time trial.

No weight pack may exceed 75 pounds.

All weight packs must have a minimum of two 1/2" securing bolts/studs of grade 5 or higher. These bolts/studs must be securely anchored to the frame by a suitable clamp.

No bolts / studs welded to the frame will be permitted. Clamp around weights are permitted.

All weights must be painted white and carry the car number in a legible fashion. White duct tape marked with a wide black sharpie is acceptable for a one race grace period.

### **BATTERY:**

Only one 12V American Passenger Car sized battery is permitted.

The battery may be mounted outside the frame rails. Refer to Section 3.7 Safety - Battery above.

The battery voltage must not measure more than 14V. max. NO step up transformer or any other device that increases the voltage will be allowed!

### **WHEELS:**

Only one piece, steel wheels with a maximum width of 14" and diameter of 15" are permitted.

Beadlocks are permitted. Any wheel or beadlock that is used must maintain a minimum diameter of 11" hole inside beadlock and wheel. Beadlocks may be outside only,

### **WHEEL COVERS:**

No wheel covers held on by dzus buttons or similar type fasteners will be permitted. Only wheel covers that are bolted to the beadlock or are part of the beadlock will be permitted. Foam inserts will be permitted.

### **TIRES:**

#### **Tire size                      Compound**

Only NES stamped track tires are permitted.

RF/LF: 33, 38, 44 or 48 compound only.

LR/RR: 44 or 48 compound only.

Maximum size 92" - NO DRAG RUBBER.

Minimum right rear tire pressure 12 PSI.

Only foam pillow-type mud plugs permitted in right rear.

No tire softener or liquids of any kind will be permitted on the inside or outside of tires.

Heating of tires by torch, blankets, or exhaust system is not permitted.

No type of inner liner is permitted.

Durometer readings may be taken periodically.

No defacing or re-facing of any sidewall lettering on tires is permitted. No covering up of lettering of any kind.

### **MINIMUM WEIGHTS:**

Cars will be weighed with the fully suited driver seated. The minimum weight permitted before and or after an event or time trial will be as measured by the track scales in the unit of track scale pounds (tsp). All cars found light before an event or time trial will be permitted to add weight, time permitting. The number of top finishing cars to be weighed after an event will be announced at the drivers meeting. Those cars must be weighed before going to their pit or winners circle. A car not presented for weighing directly after an event will be deemed to be light and will be disqualified. Cars found light after an event or time trial, will be disqualified. **ALL CARS DISQUALIFIED FOR WEIGHT INFRACTIONS WILL BE PLACED LAST, SCORING LAST PLACE POINTS AND PRIZE MONEY ACCORDINGLY. ALL LEGAL CARS WILL MOVE UP IN POSITION FOR BOTH POINTS AND PRIZE MONEY.**

**THE MINIMUM CAR WEIGHT IS: 2450 lbs**

Track scale weights will be final.

All weights are subject to NES review to keep classes even under competition.

### **ENGINE SPECIFICATIONS:**

This class is reserved for North American passenger car V-8 engines with cast iron blocks and cylinder heads.

ONLY NON-PORTED STOCK OEM CAST IRON BLOCK AND HEADS ARE ALLOWED. ALL ENGINE PARTS MUST HAVE CASTING OR PART NUMBERS ON THEM FOR IDENTIFICATION. **All SPORTSMAN ENGINES THAT RACE AT NEW EGYPT SPEEDWAY MUST BE INSPECTED AND SEALED AT THE TIME OF ASSEMBLY BY NES TECH OFFICIALS. ANY ENGINE THAT NEEDS TO BE TAKEN APART FOR REPAIR OR CHANGE, MUST BE BROUGHT TO THE ATTENTION OF NES TECH OFFICIALS. CONTACT NES TECH OFFICIALS FOR SEALING INFORMATION.**

IN THE EVENT OF A RAIN OUT OR CANCELLATION AT A NEIGHBORING TRACK ANY OUTSIDE COMPETITOR WHO WISHES TO VISIT NES WITH AN UNSEALED SPORTSMAN ENGINE MAY DO SO, AND WILL BE GIVEN A **ONE RACE** GRACE PERIOD. AFTER THAT IT IS MANDATORY THAT THEIR ENGINE BE SEALED.

ENGINES MUST REMAIN STOCK AS MANUFACTURED WITH THE FOLLOWING EXCEPTIONS:

1 **BLOCKS:** Only American made cast iron V8 engine block. Chevy, Ford, or Chrysler. No aluminum blocks. Aftermarket cast iron blocks such as Dart Iron Eagle, Merlin, Dart Little M sportsman block (part # 311511) bowtie are permitted. No performance blocks such as Rocket Blocks are permitted. The engine block and all internal parts must meet stock specifications for its make.

2. **Chevy, Ford, or Chrysler** cast iron factory production heads only. GM Bowtie phase 2 & 3 are permitted. 180cc Dart Iron Eagle heads are permitted. Ford performance cylinder head N352, N351 and GM Bowtie Vortec, and GM Vortec heads with casting numbers **10239906, 12558062, 25534351** are permitted. Chrysler W-2 performance head are permitted. All heads must maintain the stock valve guide angle. Valve head sizes are optional provided they maintain stock OEM positioning in valve guides. Valve guides liners are allowed. Any angle valve job will be permitted as long as it is done on a machine that cuts concentric to the valve center. THIS IS AN UNPORTED CLASS. All cylinder heads shall be required to pass a ball test and meet stock port size requirements. A go/no-go gauge will be used to determine the height of the intake port. A go/no-go gauge will be used to determine the height and width of the exhaust port. A go/no-go intake runner ball will be used to determine the dimension of the intake runner. An exhaust valve seat ball consisting of a .531" diameter ball bearing welded to a ¼" flexible shaft will be used with the valve fully opened, the ball will be placed against the valve stem and moved in a full circle (360 degrees) around the valve stem. If the ball drops down through the valve seat in any position around the full circle of the valve stem, it will be deemed illegal. An intake valve seat ball using the same procedure as described for the exhaust side will be used, except the ball size will be .787. All cylinder heads must remain in factory condition with no modifications. No modifications means no sand blasting, bead blasting, acid dipping, porting, port matching, gasket matching, polishing, welding, or epoxy. No relieving or unshrouding of the valves in the combustion chamber. No hand grinding, sanding, blending, or deburring. Inspection will be conducted with the head on the engine, but the method of checking may require the removal of the intake and exhaust manifolds. Heads will be removed only to surrender to NES Speedway officials for appeal or protest and to visually inspect for any modifications. The modification of the valve spring pockets to accept larger valve springs for higher RPM operation is permitted. Screw in rocker studs and guide plates are permitted. Angle milling or straight milling of the cylinder heads to increase compression ratio is permitted. The angle milling procedure may include re-machining intake surfaces, opening pushrod holes and straightening and chamfering head bolt holes. No titanium or carbon fiber engine parts of any kind except for valve keepers/retainers and locks. Call NES Speedway tech inspector as to legality prior to performing any maintenance on heads.

3. **RODS:** Any factory production or aftermarket cast iron or forged solid steel connecting rod. No aluminum, titanium, polished or billet. There is a 6" maximum rod length except for Chrysler which may be 6.125". No machine work may be done to connecting rods except for shot peening, and normal balancing and resizing procedures.

4. **CRANKSHAFT:** Any stock appearing cast iron or forged steel crankshaft is permitted. No lightweight crankshaft permitted. Lightening or balancing holes through rod journals are permitted. No knife edging, narrowing or cutting down the diameter of the crank counterweights. No machine work to be done to crank counterweights or journals with the exception of normal balancing and resurfacing procedures. Only stock type engine bearings allowed. No roller or needle bearing engine bearings permitted. Bore or stroke combination must remain stock for the engine being used and must fall within guidelines contained in the chart below.

Chevy 350 CID                      4.00" bore x 3.480 stroke  
Maximum overbore to +.070 = maximum CID 362.20

Chrysler 340 CID 4.04" bore x 3.313" stroke  
Maximum overbore +.060 = maximum CID 349.92

Chrysler 360 CID 4.00" bore x 3.578" stroke  
Maximum overbore + .010 = maximum CID 362.49

Ford 351 CID 4.00" bore x 3.500 stroke  
Maximum overbore + 0.60 = maximum CID 362.40

5. **PISTONS:** Any brand, three ring flat top aluminum pistons only. No coating of any kind are allowed. 0 deck height. No part of piston can extend above the block.
6. **VIBRATION DAMPENERS:** Any steel or cast iron, stock OEM vibration dampener is permitted providing it is not machined or altered in any way. No fluid or friction dampeners are allowed.
7. **CAMSHAFT:** No roller cams, roller gear driven cams, roller, mushroom lifters or lash caps are allowed. Camshaft may be of any brand. Only hydraulic or mechanical/solid flat tappet type camshafts permitted. Camshaft and lifters must be solid steel or cast iron construction only. No titanium, ceramic, or other exotic materials permitted. Camshaft must be located in factory position in block. Stock type and size cam bearings only. No roller or needle bearing cam bearings permitted. Lifters and lifter bores are to remain stock in diameter and are to remain in stock location within block. Sleeving of the lifter bores to compensate for wear is permitted. Must utilize stock type timing chain and gears only. No gear drives, belt drives or devices with external camshaft timing provisions are allowed. Roller rocker arms of any ratio are permitted. No shaft type rocker assemblies are permitted except on engines that came from the factory with shaft type rocker assemblies. **Stud girdles are permitted.** Aftermarket "rev-kits" are prohibited.
8. **INTAKE MANIFOLD:** Must be a stock passenger car, cast iron 2 barrel intake manifold only. No porting, polishing, welding, gasket matching or acid dipping is allowed. An optional aluminum four barrel as cast box stock, spec manifold may be used. No work of any kind may be done on this optional manifold. The manufacturer is Brodix part #HV1011 for Chevy, 1986 and older and Dart heads. Edelbrock #2913 for Vortec Heads with casting #10239906 or 12558062. Edelbrock #2814 for Vortec Bowtie heads with casting #2553451. Edelbrock #2926 for Chrysler 340-360 heads. Edelbrock #2920 for Chrysler w-2 heads. Edelbrock #2981 for Ford 351w.9.
9. **CARBURETOR:** The Holley carburetor, part #4412 is the only acceptable carburetor and may run a MAXIMUM spacer adapter of 1 1/16" including gaskets, measured from the top mounting surface of the intake manifold to the bottom of the carburetor base plate. The adapter that turns the carburetor sideways is considered to be a spacer and will be measured as such. No modifications of any kind will be allowed to these carburetors except those listed below (box stock only). No fuel logs or fuel cooling devices are permitted. Only 1 stock type mechanical fuel pump located in stock location on engine is permitted. Utilizing a mechanical throttle linkage only. Double return springs required. Conventional round type air cleaners only. Air cleaners that provide ventilation through the top cover (such as the K & N brand) are permitted. No air induction plastic carburetor inserts or other devices to direct air into intake.

No air diffusers are allowed. CARBURETOR MODIFICATIONS ALLOWED ARE LISTED BELOW, ANY OTHER MODIFICATION NOT MENTIONED IS NOT LEGAL.

- Holes drilled in the throttle plates for proper idling.
- Drilling, tapping and plugging of unused vacuum ports.
- Welding of throttle shaft to linkage arm.
- Drilling of idle or high speed air correction jets.
- Milling of center carburetor body metering block surface a maximum of .015" on each side.
- Removal of choke plate and shaft.
- The jets may be changed as needed.

10. **IGNITION:** Only stock type battery ignition systems permitted. Use of aftermarket stock type distributor is permitted. No external or internal ignition boxes or ignition amplifier permitted except for Ford which may use an OEM type external ignition box. No MSD or performance type external ignition box. No crank trigger ignition systems. No traction control devices of any kind. The use of aftermarket add-on rev-limiter to protect engine from over-revving is permitted. **The use of aftermarket, heavy duty, replacement coil and control module both mounted in stock location is permitted.**

11. **LUBRICATION SYSTEM:** No dry sump system is allowed. Oil must be in steel or aluminum pan only. Oil pan must have 1" inspection hole for connecting rod verification on left side of pan. No external oil pumps or Accu-sumps allowed. No form of engine evacuation system by internal or external driven pumps or by connection between exhaust system and valve covers, intake manifold or oil pan. Oil coolers will be permitted providing they are mounted under the left wing or under the hood only.

12. **WATER PUMPS:** May be cast iron or aluminum only. Radiator fan must be steel or aluminum only. No electric cooling fans or pumps.

### **FUEL:**

Although not mandatory it is highly recommended that the fuel be purchased from New Egypt Speedway. The baseline fuel used for our testing will be the fuel that is sold at the track on that particular day. When track fuel is not used by a competitor, the track is not responsible for any disqualification for a "dirty" fuel test. Racing gasoline only with no additives. No E85 or other exotic fuels are permitted. No oxygenated fuels, top lubes, performance enhancement additives, or any other kind of additives are permitted.

No cool cans or fuel cooling devices are permitted.

All fuels are subject to random testing.

No electric fuel pumps are permitted.

### **RADIOS AND TIMING:**

No two way radios are permitted! Scanners or raceceivers required when on the track

All cars must provide for the attachment of AMB TRANS X 260 transponders. See drawing 4.7.2.

### **TRACTION CONTROL:**

All traction control devices utilizing wheel sensors, automated brake controls or any means of measuring ground speed to control wheel spin is prohibited.

Adjustable ping control devices, dial chip controls, timing controls, or automated throttle controls are NOT permitted in the cockpit or any other position accessible to the driver.

Any remote controlled components inside or outside the cockpit of any competitor's race car are NOT permitted.

No data acquisition systems are permitted.

Any competitor found with any of the above will be fined, will be disqualified and will be suspended for up to a year.

### **FINES AND DISCIPLINE:**

Should a competitor be in breach of the rules after the event, where this breach would improve his performance or chance of winning, that competitor will be subject to disqualification. Where the breach of the rules does not improve his performance or chance of winning, then he shall be subject to a point loss and fine.

Should a competitor flagrantly build a car or component on a car with the sole intention of circumventing these rules to his advantage, that competitor will be subject to any/all of the penalties listed below:

Disqualification

Loss of New Egypt license for up to a year

Loss of all points

Loss of prize monies

Illegal part(s) being confiscated

The senior New Egypt official at the event will have the power to impose a fine or total of fines not to exceed \$500 per competitor, per event.

Any infraction of these rules requiring a fine in excess of \$500 will be dealt with after the event by New Egypt's Chief of Technical Operations and Management.

**INTERNAL COCKPIT MECHANICAL APPROVED ADJUSTERS (NO HYDRAULIC OR ELECTRICAL).**

Panhard Bar Adjuster

Brake bias