

WELCOME TO THE

2010

NORTHWEST MODIFIED RACING SERIES

**These construction rules are written with the intent of guiding you through
building a
Northwest Modified Race car**

**The Officers and Board of Directors are here to aid you in this process.
If you have any questions or need help, ideas or parts, please call.**

Co-Presidents:

Rick Gimeno	509-999-4148
Mark Weaver	509-684-6524 (work 509-684-8419 (home)

Board of Directors:

Dave Weaver	509-684-2837 (home)
Greg Ochs	509-684-6637 (home)
Chief Salvatore	406-468-2862 (home)

ADDENDUM

For 2010 Rule Book

At the general meeting on Saturday, 30th of January, 2010, the Modified Members ruled that the organization will be Governed by Two (2) Co-Presidents as follows:

Rick Gimeno

Mark Weaver,

With the board consisting of the following:

Dave Weaver

Greg Ochs

Chief Salvatore

The co-presidents will have equal voting rights, along with the three board members.

SUSPENSION AND CHASSIS

SECTION 1: **FRAMES:**

- A. Coil-over front and rear clips to be a minimum of 2" x 3" .083 wall rectangular steel tubing for bottom section of main frame rails, from front of firewall to 24" behind rear axle housing and where main cage joins the frame. It should be plated or gusseted. Main frame rails must be made of .095 2" x 3" rectangular steel tubing. (See illustration/Exhibit A)

SECTION 2: **A-ARMS:**

- A. Top and bottom A-Arms must be steel. Aluminum cross shafts and strut supports are allowed. All construction is subject to technical inspection.

SECTION 3: **CHASSIS ADJUSTMENT:**

- A. No driver controlled chassis adjustments in cockpit of race car
- B. No independent rear suspension
- C. No open tube rear-ends
- D. No in-board brakes
- E. Brake bias adjustment is allowed

SECTION 4: **RACE CARE WIDTH**

- A. Maximum overall width outer sidewall to outer sidewall is 86" (eighty-six)

SECTION 5: **RACE CAR WHEELBASE**

- A. Minimum wheelbase, center of spindle to center of rear axle is 105" (one hundred five)
- B. Maximum overall length from front bumper to rear bumper is 16' 0" (sixteen feet)

SECTION 6: **RACE CAR WEIGHT**

- A. Overall weight, all chassis designs = 2,500 pounds minimum with driver; 58% left side bias with driver before race.

SECTION 7: **RACE CAR WHEELS**

- A. Maximum wheel width 12" (twelve) no minimum width. All wheels must be racing type, no single stock type. Steel wheels only, subject to tech.

SECTION 8: **ENGINE SET BACK:**

- A. Maximum 18" (eighteen) setback is measured from the centerline of front spindles to #1 spark plug.
- B. Engine crankshaft must be centered between front spindles (plus or minus 2")

SECTION 9: **REAR-ENDS**

- A. Quick-change rear ends are allowed
- B. All cars must have floater rear ends

SECTION 10: **TRANSMISSIONS**

- A. OEM Transmissions 3 or 4 speed or Automatic
- B. Internal clutch, after market style transmissions, Allowed

SECTION 11: **GENERAL BODY**

- A. Car bodies: The car body must be acceptable to the NWM Series Officials and meet the following requirements:
- B. Cars must be neat appearing and interior must be painted.
- C. All bodies must be installed on the frame in a manner approved by the NWM Series Officials.
- D. The intent of the body rules is to bring together body shapes and designs from the NWM, Featherline tour, IMCA style race cars as well as other racing organizations in the Northwest into a competitive, compatible group.

What we do not want is to have one car stand out as wild or off the wall looking. Our intent is to give car builders some latitude to be creative but to maintain the NWM Series as a premier racing series as well as a group of the best appearing race cars in the Northwest.

With this in mind build your modified race car body using this existing NWM race car, the IMCA Style cars and the NASCAR Featherlite Series race car as your guide line.

If you build it and it is deemed to be wild or off the wall looking by the NWM Series Board of Directors, the NWM Series Tech Officials and a group of 5 (five) owners and drivers selected by random drawing, the Race Car will be deemed illegal and not be allowed to compete.

REMEMBER, given the parameters of track width, wheelbase and the fact that the front tires and the right rear tire must be completely exposed the **LIMITS ARE CLEAR.**

SECTION 12: **SPOILERS:**

- A. Northwest Modified Series Officials must approve all spoilers. An approved spoiler can be an adjustable part of the body, which controls the flow of air over one (1) surface only. Spoiler sizes will be reviewed as testing and/or race competition dictate and adjustments may be made during the testing, official practice or prior to the Events such as time trials and/or qualifying races.

REAR SPOILERS:

- B. All rear spoilers and spoiler mounting points must be acceptable to Northwest Modified Series Officials. A solid rear spoiler of a minimum $\frac{1}{4}$ inch thick polycarbonate only, must be installed at the rear deck lid and meet the requirements that follow:
 - a. The maximum spoiler size permitted will be five hundred (500) square inches. The rear spoiler must not be wider than the standard width of the quarter panels, measured across the top. The rear spoiler must be installed at the rear of the quarter panels where the rear panels meet the interior sheet metal. During the race, the trailing edge of the rear spoiler must not extend past the rear edge of the rear bumper. Decals or logos will not be permitted on the rear spoilers.
 - b. A maximum of three (3) supports, no wider than two (2) inches wide will be permitted on the front side of the spoiler.
 - c. A maximum of three (3) supports may be attached to the rear of the spoiler. The supports, front or rear, may be attached to the spoiler using a piece of one (1) by one (1) inch aluminum angle one (1) inch long.
 - d. A maximum of thirty-six (36) inches, measured from the ground to the spoiler mounting point will be permitted.

FRONT AIR DAM

- C. An approved air dam may be mounted to the front underside of the cars. The optional metal or vinyl air dam must be mounted perpendicular to the ground and no more than three (3) inches behind the front edge of the nose panel. The front nose must maintain two (2) inches of ground clearance. The nose panel and air dam must not extend past the outside edge of the front frame rails. The air dam must have a minimum ground clearance of two (2) inches. All support brackets must be mounted to the rear edge of the air dam. Horizontal or flat air deflectors must not extend past the outer edges of the front nose panel sidewalls.

SECTION 13: WINDOWS/LIGHTS/MIRRORS

A. WINDSHIELD

- a. A single one (1) piece flat or radiused type polycarbonate windshield must be used on the driver's side, full windshields are optional, must be a minimum of 1/4 inch thick.
- b. The windshield must be mounted flush with the cowl or dashboard panel and extend up to the top of the windshield opening in the front of the driver.
- c. Decals will not be permitted on the windshield.
- d. All windshields and their installation must be acceptable to the Northwest Modified Officials.

B. REAR WINDOW

- a. The rear window glass must be removed.

C. SIDE WINDOWS / WINDOW SCREEN

- a. NO SIDE WINDOWS ALLOWED. An approved NASCAR style window net must be installed on the Driver's side window. Window net webbing shall be 3/4" minimum and 1" maximum width. Window net will be minimum 16" x 22". Window net will attach to the roll bars in a manner approved by Tech Official and be secured by an approved fastener. Seat Belt latch and Detent Ball and Lever Style, OK.

D. REAR VIEW MIRROR

- a. Only one rear view mirror will be permitted. Any rear view mirror must not extend outside of the car at any time.
- b. The mirror size and location must be acceptable to the Northwest Modified Series Officials.

SECTION 14: DASH PANELS

All dash panels must be acceptable to the Northwest Modified Series Officials.

SECTION 15: FIRE WALLS

- A. A front and rear firewall must separate the driver from the engine compartment and the fuel cell.
- B. The front firewall must be positioned below the leading edge of the windshield.
- C. The firewalls must be seated and welded in place.
- D. All firewalls must be acceptable to the Northwest Modified Series.

SECTION 16: **GRILL / AIR INTAKE**

- A. Only screen will be permitted in the opening to allow for proper cooling.
- B. Only metal grill intake housings will be permitted.
- C. Total width of nose of car can be 42" wide, maximum, side panel of nose can be 2" above top of nose panel (max), subject to tech.

SECTION 17: **HOODS**

- A. All cars must be equipped with a hood manufactured from metal or fiberglass and be acceptable to the Northwest Modified Series Officials.
- B. The hood must be manufactured so that it will completely cover the engine compartment from the left side to the right side, turn down a minimum of 4" on each side, and cover (if used) the engine side panels. No part of the hood at the side panels except for the "A" post, shock and master cylinder cover may be higher than the lowest part of the hood. Only openings for the carburetor, air cleaner, distributor and Breathers will be permitted. Hood must be fastened with positive pin fasteners evenly spaced across the front and rear of the hood.

SECTION 18: **ROLL BAR PADDING**

- A. All roll bars near driver must be padded with approved padding.

SECTION 19: **STEERING WHEEL**

- A. The center of the steering wheel must be padded.

SECTION 20: **KILL SWITCH**

- A. Ignition kill switch must be within easy reach of strapped in driver.

SECTION 21: **ABSOLUTELY NO PRESSURED FUEL TANKS. NO ELECTRIC FUEL PUMPS**

SECTION 22: **FUEL LINE**

- A. Fuel line cannot run through interior of race car.

SECTION 23: **OIL COOLERS**

- A. Oil coolers may be used
- B. **NO** oil coolers may be mounted in the driver compartment

SECTION 24: **BRAKES**

- A. **MANDATORY:** Four wheel working brakes. **STRICTLY ENFORCED**

SECTION 25: THROTTLE LINKAGE

- A. Throttle linkage must have at least two (2) return springs
- B. Cable linkage must be of heavy-duty type

WILL BE STRICTLY ENFORCED

SECTION 26: RADIOS

- A. Radio communications are allowed

SECTION 27: TRACTION CONTROL

- A. No traction control devices are allowed. **ONE YEAR SUSPENSION IF CAUGHT USING**

SECTION 28: DRIVE SHAFT

- A. One drive shaft retainer fabricated of two inch (2") by one-fourth inch (1/4") steel mounted to cross member. Must retain driveline in case of U-Joint failure. Mounted at front half of drive shaft. Drive shaft to be painted white and have car number on it.

SECTION 29: SEATBELT / SAFETY

- A. Seatbelts mounted securely to frame or roll cage must consist of at least 3 (three) inch lap belt, 3 (three) inch shoulder harness, and crotch strap no older than 5 years.
- B. Personal Driver Safety Equipment: Helmets meeting or exceeding Snell Rating and 2 layer fire suits, recommended, 1 layer must have nomex underwear. **MANDATORY!** Open-faced helmets allowed. Nomex gloves, head sock, boot socks, fireproof boots and neck yoke are **MANDATORY**. Any helmet with Snell Rating Sticker removed will not be considered as meeting minimum requirements. Snell rating of 2006. Head Restraint Systems are highly recommended.

SECTION 30: ON BOARD FIRE SUPPRESSION SYSTEM

- A. All race cars must have functional on-board fire suppression systems. The system must be a functioning 2-nozzle system. 1 nozzle to the engine compartment and a 360° (degree) nozzle in driver compartment. NO rubber or plastic tubing allowed on fire systems. Control location optional, but must be within easy reach of the driver and/or safety crew. Must have a current inspection tag. **THIS IS MANDATORY ON ALL CARS.**
- B. Each pit must have a functioning 5 lb. Fire Extinguisher within easy access of all crew member and safety personnel. **MANDATORY**. All fire bottles will be located on the right side rear of trailer. A \$25.00 fine will be assessed for no fire extinguisher.

SECTION 31: DRIVER SEAT

- A. Seat to be mounted securely to frame or roll cage.
- B. Seats to be of metal type, no fiberglass seats
- C. Right side rib support must be braced.

SECTION 32: BATTERY CONTAINMENT

- A. No batteries in driver compartment
- B. Must be enclosed in leak-proof case if not sealed type.
- C. Must be securely mounted.
- D. Battery kill switch is MANDATORY on left side rear deck, accessible by safety personnel. The kill switch is to be clearly marked "On/Off".

SECTION 33: ORIGIN

- A. American made OEM naturally aspirated engines only
- B. No after market blocks, no aluminum blocks or aluminum heads.
- C. Maximum cubic inch: Chevy 360"; Ford 360"; Mopar 364"
- D. It is the intent of this rule that all engine blocks come from passenger cars or trucks OEM only.

SECTION 34: DRY SUMPS

- A. **NO DRY SUMPS ALLOWED**

SECTION 35: MAGNETOS

- A. **NO MAGNETOS ALLOWED**

SECTION 36: CYLINDER HEADS

- A. Bow-tie heads are allowed for Chevrolet
- B. Chevrolet Part Number 10134392 to replace existing OEM heads
- C. Ford Part Number M-6049-N351 to replace existing OEM heads
- D. Dodge W-2 heads will be allowed, engines 360 c.i. maximum with .040 overbore, subject to tech.
- E. After market cast iron heads are allowed as follows:
 - Dart Part Number 10310010-P-Angle
 - 10320010-P Straight
 - Australian Pro Action 2235000-00A 50 c.c.
 - 2234000-00A 64 c.c.
 - 2232000-00A 72 c.c.
 - World Products: WRD 011150-Angle WRD 011125-Straight
 - 200 c.c. intake runners' maximum

SECTION 37: ALL AFTER MARKET HEADS MUST & WILL REMAIN UNTOUCHED

- A. No alterations other than spring pockets and rocker arm studs.
- B. No port matching, port polishing
- C. Maximum valve size: 2.02 intake, 1.60 exhaust
- E. Compression maximum 11.5 to 1 (eleven and one half to one) Engines using dome pistons must strictly adhere to manufacturer's specifications.
- F. Valve grinding; Bow Tie and 2.02 type OEM heads may blend into valve bowl a maximum of 1 inch.
- G. 1.94 heads, valve pockets may be opened 1 (one) inch from the bottom of the valve seat.
- H. Altering of combustion chamber IS NOT ALLOWED. Port matching or c.c.ing IS NOT ALLOWED
- I. Cast iron heads only. Milling of OEM heads is allowed only for achieving compression and installing of 2.02 intake and 1.60 exhaust valves.
- J. NO MUSHROOM or ROLLER CAMSHAFT Flat tappet camshafts only, oversized lifters (to Ford size) allowed or bushed lifters bores to use stock Chevy lifter sizes.

SECTION 38: ROD / CRANKSHAFT

- A. Rod and crankshaft rules are open to after market parts in any combination to reach maximum allowed cubic inches.
- B. Engines can be inspected and sealed at final assembly. An appointment can be arranged to do this. Contact the Club President to make necessary arrangements.

SECTION 39: CARBURATION

- A. Carburetors to be HP-0-805H-1 must remain stock out of box; Holley 4777 or 4777-1 is allowed also, 650 CFM and must meet the following specifications:
- B. Body of carburetor: No polishing, grinding, or drilling holes permitted.
- C. Choke horn: Choke horn may be removed with a square cut into the body of the carburetor. The air cleaner gasket ring must remain standard.
- D. Boosters may be changed and may be aligned. Height must remain standard.
- E. Venturi: area must not be altered in any manner. Casting ring must not be removed.
- F. Base plate: Must not be altered in any manner, size or shape.
- G. Butterflies: stock butterflies only. Must not be altered
- H. Throttle shafts: Must not be altered in any manner
- I. Power valves, jets and floats may be changed. Metering blocks must remain stock.
- J. External jet adjustment will be allowed. Must meet OEM specifications and flow characteristics. SUBJECT TO TECH.

- K. An after market metering block is legal on 4777 Holley carburetors. Dual power valves may also be used, with necessary drilling to make it functional.
- L. Intake; No sheet metal handmade type intakes, No tunnel rams, No CNC machined intakes, (out of box store bought intakes only), 1" tall spacers between carb and intake maximum.

AIR CLEANER/FILTER

Only round maximum 5" (five inch) in height air filter element with a minimum 12" (twelve inch), maximum 14" (fourteen inch), diameter will be permitted. All air entering carburetor must pass through filter. Air filter may not be sprayed or soaked with chemicals. Top and bottom of air cleaner must be metal and same diameter. A shield may be used in front of air filter element, up to a maximum of ½ (one half) of the air filter element circumference, and not wider than the height of the element. No air induction ducts, baffles, tubes, funnels, or anything else which may control the air leading to, inside of, or between the air filter and carburetor. The air filter base must have a minimum round opening of 5" (five inches). A 1" (one inch) maximum height spacer may be used between the carburetor and the air cleaner.

SECTION 40: FUEL INJECTION

- A. **NO** fuel injection, turbo chargers or superchargers are allowed.

SECTION 41: FUEL

- A. Racing fuel is allowed. Subject to tech. No alcohol or nitrous. Maximum octane rating is 115

SECTION 42: TIRES

- A. Only 2045 Hoosiers will be used on the Northwest Modified Series Cars. **NO EXCEPTIONS!** You may have six (6) new tires for the 1st race and two (2) new tires after each race your car races. If you skip a race, you are not entitled to have two (2) new tires for that race skipped. All tires will be etched and marked during the season. On 100 lap mains, you will be entitled to run four (4) new tires. Tires will be run as they come from the factory only. This means no soaking, grinding, buffing, sipping, growing, and removing numbers from sidewalls or alterations of any kind.

FINES OR SUSPENSION FOR ANY TIRE INFRACTION WILL BE ENFORCED

SECTION 43: ROLL CAGE, RUB RAILS and BUMPERS

- A. Construction: Roll cage construction to be one and three quarter inch (1 ¾") with wall thickness minimum of .090 magnetic steel tubing.
- B. Roll cage: There has been a change made in roll bar tubing for the roll cage only. You may use .090 1 ¾ round DOM seamless now. Steel factories have done away with .095 cold roll steel tubing that we used to

- use. You can still use it if you have it. DOM is recommended. .090 1 3/4 - .083 to front and rear clips.
- C. Gussets: Gussets mandatory on all joining tubes in roll cage if less than 1 3/4", .095 round mild steel tubing. SUBJECT TO TECH.
 - D. Driver Door Bars: all cars can have 4 (four) door bars with at least two (2) uprights between each bar in line with each other, 2 (two) uprights from main frame to bottom bar 4 Door Bars plating optional, although, if you use 3 Door Bars these must have plating. SUBJECT TO TECH
 - E. Passenger Door Bars: Passenger door bars to consist of a 1 3/4" minimum top bar and an "X" configuration from top bar to frame. SUBJECT TO TECH.
 - F. Rub Rails: Rub rails required between front and rear wheels to extend no further than outside edge of tires, and no further in than 1" (one inch) from outside of tires. Must be no further than 6" (six inches) from rear tire and 10" (ten inches) from front tire at bend. Height will be at the centerline of rear wheels, 1" (one inch) minimum size tubing. A diagonal brace is to be installed. All rub rails (nerf bars) to be capped or have rounded ends so tires do not get cut. .090 minimum thickness used on rub rails. No aluminum rub rails, mild steel only. One set on each side of car. All nerf bars shall be exposed to outer side of panels. **NO SHARP EDGES.**
 - G. Rear Bumpers to extend minimum center of rear tires. No more than outer edge of rear facing to rear (contact point) each end must be cut to 30 degree angle minimum. A chapped cap welded at each end covering sharp edges as not to cut tires. 3" (three inch) I beam will be used as rear bumper only. Front and Rear bumpers must have a 16" (sixteen inch) contact center from ground.

SECTION 44: **NOISE MAINTENANCE**

- A. Mufflers: ALL RACE CARS MUST HAVE MUFFLERS. Maximum noise level 92dB. EVERY TRACK

SECTION 45: **RACE CAR APPEARANCE**

- A. Paint and numbers must be readable contrast. Please note that dark colored cars sometimes are difficult to see and score. Side panel numbers must be a minimum of 12" (twelve inches) high and must be visible on both the right and left side of car. Rooftop numbers must face the grandstand side of the race car and must be a minimum of 18" (eighteen inches) high. Chrome, silver, or gold foil numbers are allowed but may need additional outlining if difficult to read by score keepers. Reasonable and numerous complaints from scorers may require a re-doing of numbers.
- C. Appearance: Race cars must maintain clean and neat appearances. SUBJECT TO PENALTIES.

SECTION 46: **SAFETY**

- A. Inspection: All race cars will pass all safety rules prior to participating in any competition.
- B. Fuel Cells: A fuel cell is mandatory. Must be enclosed in metal container.
- C. Must have fuel cell guard to prevent collision entry also straps top and bottom. Must have check valve in vent tube of fuel cell (one way flow). All fuel cell cages (mounts) shall have 14 ga. Steel metal piece covering all of rear outside of cage, steel plate between rear end and fuel cell is optional at this time, but highly recommended. Must be extremely well secured. Must have foam blocks inside of fuel cell.
- D. Must have minimum of 8" from back fuel cell to contact point of rear bumper.
- E. Scatter Shield three hundred sixty degree (360°) scatter shield Mandatory for OEM Stock type clutch and flywheel.