

# 2012 Nile Valley B Mods

Adopted 1/6/11

## 1. SAFETY EQUIPMENT

Rules apply at all times car is on track. Helmet must SA rated, no motorcycle helmets allowed. Helmet must be in good condition with no signs of damage or excessive wear. Helmet must be worn at all times vehicle is on the track. required. Roll bar padding required in driving compartment (fire retardant recommended). SFI-approved full fire suit required. Fire retardant gloves, shoes and neck brace (or head and neck restraint) required. Right and left seat head supports required if using head restraint system with no neck collar. Recommended: Fire retardant head sock and underwear; collapsible steering shaft. Driver-side window net required, minimum 16 inch by 20 inch ribbon or mesh style, and must be mounted to roll cage so latch is at top front of window. Minimum three inch (two-inch with head restraint system) wide SFI-approved five point safety belt assembly required (Y-type shoulder harness not allowed), must be mounted securely to roll cage, recommended to be no more than one year old. Kill switch required within easy reach of driver and must be clearly marked 'OFF' and 'ON'.

## 2. FRAME

1964 or newer OEM perimeter American rear-wheel drive passenger car frame only. No sports car frames. Frame must be full and complete, cannot be widened or narrowed, and must be able to support roll cage on both sides, exceptions are: weight jack in original center line of spring tower allowed; frame may be cut a maximum 36 inches forward from center of rear end housing; horns may be removed in front of steering box and notched maximum one inch at bottom for tie rod clearance; front cross-member may be notched and boxed for radiator and/or steering clearance; maximum seven inch wide opening in side of spring tower for spring removal. Maximum two inch wide by four inch tall frame stiffener may be welded directly to outside of left side frame rail. See [www.imca.com](http://www.imca.com) for OEM frame dimensions. Minimum wheelbase 108 inches, maximum 112 inches, both sides. Maximum overall width shall not exceed 78 inches from outside of tire to outside of tire. For cars using OEM rear suspension design, rear of frame behind rear tires no further forward than one inch behind factory seam, may be replaced with two inch by three inch steel tubing with 0.095 inch wall thickness. No part of frame can be lower than four inches from ground except front cross-member.

## 3. ROLL CAGE

Must consist of continuous hoops, minimum 1.75 inch O.D. tubing, with minimum wall thickness of 0.095 inch for main cage, frame-mounted in at least six places, low carbon or mild steel recommended. Must consist of a configuration of front, rear and top hoops connected by tubing on sides or side hoops. Drivers head must not protrude outside cage with helmet on. Roll cage must be securely supported and braced with minimum one cross bar in top halo. Foot protection bar required. Main cage no further forward than rear of engine. All bars forward of cage must be lower than hood.

## 4. DOOR BARS:

All driver side door bars and uprights must be minimum 1.5 inch O.D. with 0.083 inch wall thickness. Minimum three driver side door bars, parallel to ground and perpendicular to driver,

and welded to front and rear of roll cage. Passenger side must have at least one cross door bar, horizontal or angled, minimum 1.25 inch O.D. with 0.083 inch wall thickness, and one top door bar, minimum 1.5 inch O.D. with 0.083 inch wall thickness. Steel door plate, 18 gauge or 0.049 inch minimum thickness, must be securely welded to outside of driver side door bars and cover area from top door bar to bottom door bar and from rear hoop down-post to five inches in front of seat. Must be visible for inspection.

5. **BODY:**

Nose panel must be flat with no fins or scoops allowed. Cooling holes allowed. Nose panel may be no wider, or lower than two inches outside of front frame horns. Nose panel must remain within confines of front bumper. Engine compartment must remain open (no side panels). Hood must be enclosed at rear. No panel in front of right door to engine compartment. No inner panels. No car covers. Must have front windshield and rear window support posts. Driver and passenger side windows must have at least 12 inch opening (height and width), measured at center of window, between lowest point at top of window, whether roof or roll cage, and highest point at bottom of window, whether interior or body. May use full windshield. Roof must be fiberglass or aluminum, full size and rounded down in all directions. No dished roofs allowed. Driver roof hatch allowed. Window side panels must resemble all aspects of drawing. May use lexan in window side panels. Rear spoiler (optional) may be maximum 6 inches in material height and maximum 66 inches wide. Spoiler may have rear stiffener, must be 1 inch or more down from top. Maximum 3 spoiler braces allowed, must be mounted in line. Spoiler braces must resemble all aspects of drawing. Spoiler must be mounted within confines of spoiler braces. No fins, lips or wings allowed. Tires must be widest part of car.

6. **DRIVER COMPARTMENT:**

Must have minimum three windshield bars in front of driver. Lexan or aluminum cowl panel in front of driver can be no wider than cockpit and no farther back than steering wheel. Minimum 0.125 inch aluminum, or 0.060 inch steel, complete floor pan required. Aluminum high-back seat only and must be bolted in, using minimum 0.375 inch bolts, next to left side frame rail and ahead of rear tires. Bottom of seat can be no lower than bottom of frame rail. Driver must be sealed off from track, driveline, engine, fuel cell, canisters and pumps. Oil coolers must not protrude above interior. Accumulators cannot be mounted between driver and left-side door bars. No driver-adjustable devices allowed while car is in competition except brake adjuster. No mirrors of any kind.

7. **FRONT SUSPENSION:**

All components must be steel, unaltered OEM, in OEM location, and replaceable by OEM parts, exceptions are: tube-type upper A-frames with or without aluminum or steel cross shaft, and mounts can be moved; OEM replacement stamped steel lower A-frames; rubber, nylon or steel lower A-frame bushings, no offset or bearing type; welded or bolted shock mount on lower A-frame; OEM or OEM replacement ball joints allowed. Lower A-frames must be right and left, and of same design. Lower A-frame mounts and bolt holes on frame must be in OEM location. OEM ball joints only. Sway bar must be unaltered OEM.

8. **STEERING:**

No rack and pinion. All components must be steel, unaltered OEM, in OEM location, exceptions are: outer tie rod end and adjustment sleeve may be replaced by a minimum 0.625 inch steel rod

end and steel tube; spindles can be ground for brake caliper clearance only; unaltered, OEM replacement Pinto spindles with 'IMCA' raised cast; bolt on spindle savers allowed; steel steering shafts and knuckles only driver compartment steering may be modified, must be kept on left side. Spindles must be right and left, and of same design. Quick release required – steering quickener and steering wheel may be aluminum. Idler arms, pitman arm, and center link must match frame.

9. SHOCKS:

One steel, nonadjustable, unaltered shock per wheel only. All shock mounts must be welded. No shocks allowed on screw jacks. No external or internal bumpers or stops. No coil-over shocks. No air or remote reservoir shocks. No Schrader valves or bladder type valve allowed. Front half of any shock may be shielded.

10. SPRINGS:

One steel coil or multi-leaf (rear) spring per wheel only. Minimum 4.5 inches O.D., non-progressive coils only. No torsion bars, air bags or inner liners.

11. REAR SUSPENSION:

No rotating birdcages, no 4-bar suspension or Z-link allowed.

12. REAR END:

Any steel approved OEM passenger car or truck non-cambered rear end (housing and carrier) allowed, must be centered in chassis. All components must be steel, except lowering blocks, axle cap and drive flange. Safety hubs (floater) allowed. No quick change devices. Inspection hole in housing required. Mini-spools only. Ring gear, center section and yoke cannot be lightened. Solid steel axles and one piece drive flanges only.

13. BUMPERS:

Steel bumpers must be on front and rear at all times and welded, or mounted with minimum .375 inch bolts. Rear bumper must be constructed of solid square, or minimum 1.25 inch O.D. tubing with 0.095 wall thickness, and – similar to diagram – no wider than five inches outside of rear frame rails. If wider than five inches outside rear frame rails, must be capped and bent forward 90 degrees, or constructed in a loop design. Must have at least one upright, minimum 1.25 inch with 0.065 wall thickness, from bumper to fuel cell guard. Two-bar front bumper must be minimum 1.25 inch O.D. Tubing with minimum 0.065 wall thickness (maximum 0.095 inch) mounted frame-end to frame-end, no wider than width of material outside frame horns and with bottom loop parallel to ground. Top bar must be directly above bottom bar, minimum 6.5 inches apart, measured center to center.

14. TIRES/WHEELS:

Any tire allowed that will fit on an 8" wheel. No spiked or studded snow tires. No heavy lug snow tires allowed. No chemical softening, conditioning, or grooving of tires. Tires may be ground or siped within confines of tread (not past factory straight line). No re-caps. Wheel adapters and spacers are allowed, maximum 1 1/2". No bleeder valves. May use bead lock on right rear only. External, steel bead lock only and it cannot make wheel any narrower than 8 inches and no wider than 8.75 inches. Must use only steel bolts. One foam type or plastic mud cap allowed on right rear only. Inner mud cover allowed on left rear only. Must use minimum one inch O.D. lug nuts.

15. BRAKES:

Must be steel approved OEM, operative four wheel, drum or disc. Must maintain minimum OEM dimensions for hubs/rotors and calipers, cannot be lightened. Bolt pattern may be changed. Larger

studs allowed. Rear rotors may be aftermarket 0.81 inch thickness (new). Vented rotors only, no scalloped or ceramic coated rotors. One proportioning device allowed (one-to-one ratio), front to rear only. Brake lines must be visible and must connect directly from master cylinder to calipers with no devices in between. Rear caliper brackets must be welded or bolted solid to rear-end housing.

16. EXHAUST:

Round tube headers only or OEM Manifold. All primary header tubes must enter directly into one collector, at same point at end of header. Turn down allowed. Non-stepped headers only. No heat wrap, or exotic coatings on headers. Schoenfeld mufflers, stamped IMCA 609, must be used if track has noise reduction rule of 98 d.b. or more. No exhaust sensors.

17. FUEL SYSTEM:

Racing fuel cell required, maximum 32 gallon capacity (12 gallon recommended), must be in minimum 20 gauge steel container. Cell must be securely mounted behind rear axle, between rear tires, minimum four inches ahead of bumper, minimum 10 inches above ground. Must mount with minimum two solid steel straps around entire cell, two inches wide and 0.125 inch thick. All cell mounts must be steel, securely welded to frame/cage. Protective tubing must cover rear and extend past both sides of cell. No part of cell shall be lower than protective tubing. Fuel cell vents, including cap vent, must have check valves. If fuel cell does not have aircraft style positive seal filler neck/cap system – a flapper, spring or ball type filler rollover valve is required. Pick-up must be on top or right side of cell. Limit of one fuel filter. No cool cans. Air cleaner top/stud cannot direct air into carburetor. No top flow air cleaner housings. Mechanical OEM fuel pumps only. No electric fuel pumps allowed.

18. ENGINE:

1. Engine max. displacement is 323 c.i.d.
2. Flat top pistons only
3. Hydraulic or flat tappet cams allowed, no roller cams
4. No rollerized valvetrain
5. 1 two barrel carburetor, max. 600 cfm. Must be naturally aspirated.
6. Single or dual plane manifolds ok.
7. No fuel injection
8. Roller Rocker tips allowed.
9. No Rocker stud girdles.
10. Cast iron heads only.

19. FUEL:

Gasoline only. Racing fuel allowed. No E85. Pump grade recommended. Fuel must pass both dielectric meter and chemical tests. Fuel sample may be taken from any car at any time (refer to IMCA Operations and Inspection Manual or General Rules for automatic penalties).

20. WEIGHT:

Minimum weight limit of 2,400 pounds, no tolerance, after race with driver in car. Weights must not be used in driver compartment or outside body. All weights must be securely mounted with at least two 0.5 inch bolts, painted white with car number on it. No titanium, magnesium, stainless steel or carbon fiber components. Solid steel fasteners only.

21. BATTERY/STARTER:

One 12 volt battery only, must be securely mounted between frame rails, and positive terminal must be covered. Starter must bolt on block in OEM location and directly engage flexplate/flywheel. Car must have capability of starting without being pushed or pulled. Car must leave initial staging area on demand, unaided, or go to rear of that race.

22. GAUGES/ELECTRONICS:

No unapproved cameras, transmitting or listening devices. 12 volt ignition system only. Any OEM ignition box allowed. OEM HEI distributor only. Ford/Chrysler may use HEI distributor. No billet housings or crank triggers. Ignition rotor, cap, coil and module must remain OEM appearing. Crate engine MUST use original HEI distributor with MSD #8728 rev-control with any rpm chip. Rev-control must be out of reach of driver, but accessible for inspection. No ignition boxes, remote coil or accessories. All wiring must be visible for inspection. Only gauges allowed are analog oil pressure, fuel pressure, brake bias, water temperature and analog tachometer (memory recall allowed). OEM type alternator with internal regulator allowed. No electronic traction control devices (refer to IMCA Operations and Inspection Manual or General Rules for automatic penalties).

23. TRANSMISSION/DRIVE SHAFT:

All forward and reverse gears must be operational, plus a neutral position. With engine running and car in still position, driver must be able to engage car in gear and move forward, then backward. Only OEM production transmissions allowed. No 'in and out' boxes or quick change devices allowed. Functioning shift levers must be in OEM location. One steel or aluminum OEM style/size flywheel or steel OEM style/size flexplate allowed, must be bolted directly to end of crankshaft.

Automatic: Must be unaltered, two or three speed, OEM production case with a functioning OEM appearing pump. Aluminum OEM bellhousing may be replaced with aftermarket explosion-proof aluminum bellhousing. Original OEM bellhousing must have approved scattershield constructed of minimum 0.125 inch by three inch steel, 270 degrees around flexplate. Only external lines allowed are for transmission cooler. Splined drive flange coupler or torque converter (10 inch minimum) only.

Manual: Must be unaltered, three or four speed, OEM production case and have a working 7.25 inch minimum diameter, steel and/or aluminum, single or multi-disc clutch and pressure plate bolted directly to flywheel/flexplate. These components must rotate, consistent with engine rpm, while car is in any gear. Must use explosion-proof steel bellhousing with one hole for throw out bearing lever or hose, must be 270 degrees around top of clutch and flywheel flexplate area.

Hydraulic clutch pedal allowed with manual transmission only.

Drive Shaft: Minimum two inch diameter, white, steel drive shaft. Steel slip-yokes only. 360 degree drive shaft loop required and must be constructed of at least 0.25 inch by two inch steel, or one inch tubing, mounted six inches back from front U-joint.

24. ENGINE COMPARTMENT:

Rear of engine (bellhousing flange) must be mounted at least 72 inches forward from centerline of rear axle. Engine offset must be kept within two inches of centerline of front cross-member with engine level. Minimum 11 inch engine height from ground to center of crankshaft. V-belt aluminum or steel pulleys only. Copper/brass or aluminum radiator only and must be mounted in front of engine. Mid plates are allowed, V-belts or serpentine belts allowed.