

# Montana Class 2 Rules

## Frame:

**DO NOT ALTER OR WELD THE FRAME OTHER THAN WHAT IS LISTED**

### **Frame Shortening:**

1. You may shorten the front frame only. If this is done, bumper brackets must be completely removed! You may cut the frame off flush with the front edge of the body mount hole, or up to the core support if there is no body mount hole. Lower core support must remain in its factory position whether welded or bolted. If it is a weld on mount leave the remaining portion of the body mount in place. If you remove or alter the core support body mount completely or relocate it, you will not run. If you choose not to cut the frame (hard nose) you may leave factory brackets on in factory position. Bumper may be welded to the shock, shock to the tower/horn, and horn to frame. Brackets may only be welded to frame with a single pass ½” wide bead. All thread may only pass through factory stamped core support mount hole.

### **Frame Welding**

2. No re-welding of any factory seams is allowed other than what is specified. If any welding on the frame that is not specified in the rules there will be a 3” on 3” off with full daylight slices in the illegal welded section of the frame. This applies to all parts of the frame rails.
3. No changing or doubling of the rear package tray.
4. 80’s and newer only will be allowed to cut and tilt using 14” of weld per rail or cold bend in front of transmission cross member. One method or the other not both.
5. All welding on frame may only be ½” wide beads.

### **Frame Shaping / heat treating**

6. No frame shaping is allowed.
7. No Heat treating of the frame is allowed if caught, you will be DQ’d.
8. No Fresh Paint or Undercoating on the frames at all.
9. If dimpling or notching the frame you can only do so on back frame rails behind the rear wheels. No frame pre bending.

## Rear Suspension:

1. Suspension must be stock components and working. No coil spring to leaf conversions or vice versa.
2. Leaf springs must remain stock for the car you are running and stock material. Springs must have 1” stagger with no leaf spring as long as the main leaf with the main leaf being the top spring. Total of (7) leaf springs no thicker than 3/8” thick and 2 ¾” wide. No leaf clamps allowed.
3. Leaf Spring Hangers can be made of 2” x 6” x 3/8” thick strap must be mounted with (1) ½” bolt per frame rail (No welding) You cannot pin this portion of the frame, only the bolt may pass through the frame in the stock leaf mount hole. These cannot extend past the top part of the frame only.
4. You may use 3/8” chain around your axle to the frame hump with one wrap (this may only go thru the sheet metal directly above the hump), links may not be welded or bolted to the frame.
5. No other means other than tires and springs and spring spacers (spacers can be no bigger in diameter than springs) may be used to raise the cars suspension. No All Thread Shocks.
6. Rear end control arms can’t be reinforced. They must attach in stock configuration for the suspension setup you are using.
7. Watts link conversion kits are allowed. Upper control arm bracket plate may be no larger than 6’x6”x3/8” and may not weld to the package tray in any way. Bolts may not pass through body. Lower mounts may only be 3”x3”x1/4” and only weld to the side of the frame. No gusset dot added material, and these can’t weld to top or bottom of frame in any way. All brackets must be in the position a car without watts link would be (example: 98-02 ford must be mounted like a 97 ford) All other brackets must be removed.

### Rear Ends:

1. May use any non-braced 5 lug rear end
2. No spring spacers any bigger in diameter than the springs
3. You may adjust the pinion angle. Welded, spool or posi-track allowed
4. Rear ends must not support frame or body in any way.
5. Mounting points for control arms may be homemade but nothing overkill. (Tech Discretion) Example. Welding mounting points on a leaf spring rear end for a coil car setup.
6. Pinion breaks are allowed. No protector. You may weld it on if needed but nothing more than to mount it.

### Front Suspension/Steering:

1. Suspension must be stock components and working.
2. Tie Rods must be stock. Ball joints may be replaced but must be bolt in style no welding.
3. Upper and lower control arm, struts and strut mounting, and spindles must be factory and in factory position. Do not re-engineer the way the steering components mount to the frame. You may reinforce stock tie rods with a 1"x 1" x 1/8" angle. No other front suspension or steering may be reinforced.
4. A-Arms: Upper A-arms only may be welded.
  - a. you may only use up to two 3"x4"x3/16" thick strap per upper A-arm. This strap must weld to the a-arm & frame and cannot extend farther forward or backward than 1" past the widest part of the A-arm frame.
  - b. If swapping upper control Arms, they must be direct bolt on with no manufactured mounts.
  - c. A-arm must mount in factory way.
5. Steering box – May be interchanged, A-arms must remain stock or stock replacement. No hydro steering.
6. Idler Arm & center link must remain stock or interchanged for an idler arm that is off a car that is legal in the class you are running.
7. Hubs – Must remain stock for the spindle you are using, no aftermarket spindles, hubs or rotors. Brake calipers must remain stock for the stock spindles.
8. Spindles – must be stock for a car that is legal in the class you are running, with no modifications. Spindles must be factory and in factory position. Must be sedan OEM in origin.
9. No all thread shocks

### Tires

1. No split rims, studded tires, or foam filled. **NO SOLID TIRES!** All other tires are allowed.
2. Stock Rims only, you may on the outside rim lip add a piece of 1" wide steel welded to the exterior lip only. 8" wheel centers are allowed. No other reinforcements **NO BEADLOCKS OF ANY SORT**
3. Valve stem protectors allowed. Wheel weights must be removed.
4. All cars must be able to demonstrate the ability to stop at any time. If your brakes do not work, you will not compete.
5. You may not change tires after inspection without official's consent.
6. Steering bump stops can be no bigger than 3/8" od bolt or cold roll and no longer than 4". Can only be welded or bolted on one side.

### Bumpers:

The intention of this rule is to allow you to mount the bumpers in such a way that they are less likely to fall off. Upon inspection if it is determined that you have exceeded the intention of the rule you will be given the opportunity to correct it in order to compete, if you are not willing to correct it you will be disqualified. Officials have final say.

1. Front Bumpers: Loaded bumpers may be used **CAN NOT BE WELDED TO THE BODY**. All metal for stuffing bumpers must be on the inside or internal part of the bumper. No metal may be added to the outside of the bumper and bumper must have the factory backing in place. (example: You may not build a homemade bumper, put a factory tin over it and call it a loaded bumper)
2. You may run a 5x5x1/4" piece of square tubing for a bumper. Must be hollow, open ended, and no point may be added.
3. Bumpers are interchangeable Stock O.E.M. bumpers off passenger cars may be used (do not need to be fresh)
4. Bumpers may be cut so they do not smash into the tires during the event.
5. No chrome may be welded to the body if using compression style bumpers.
6. Chrome of bumpers may be welded to the inner beam of the compression bumper/.

7. You can weld bumper brackets and shocks to the bumper. You can weld shocks to shock towers. You can collapse shocks, and you can weld the shocks to the towers.
8. Cups and or horns count as brackets.
  - a. Passenger car OEM shock tubes must be used.
  - b. Shock tubes must be on the outside of the frame unless in the frame from the factory.
  - c. Absolutely no welding anywhere on the frame other than the bumper brackets and a arm straps
  - d. You are allowed (1) 5"x5"x3/8" plate per side to mount front bumper. This may be used in any way that you like but must attach to the bumper and may not attach to body. This plate may be used in addition to oem brackets.
9. Bumper height not to exceed 22" from the bottom of the bumper to the ground and must be a minimum of 12" from the ground to the bottom of the bumper or frame. Bumpers must be in stock location.
10. Bumpers may only be welded to the shock tubes, brackets and/or frame rails. Pending your mounting choice. Brackets must be factory to the vehicle you are running. No interchanging! (1) set of brackets only may be used. Brackets must be in factory shape. You may not shape them in any way.

### **Rear Bumpers:**

11. You can stuff the rear bumper with no more than a straight piece of 5x5 square tubing. If the rear bumper is just a factory tin bumper, your square tubing must be in at least 50% of the factory tin bumper. This square tubing and bumper tin may weld to the frame where it touches and can't weld or attach to body. Bracket rules for the rear must follow the same as the front bracket rules

### **Engines:**

1. Motor - Use motor of choice, motor must be in stock location of the car you are running, within reason approximately 5" from the front edge of the original motor mount on the frame.
2. Lower Engine saddle type Cradles with a front plate up to the heads are allowed but must only attach to the engine cross member and not the frame. Engine cradle cannot go any farther back than the front factory motor mount holes on the block. Example on last page of rules.
3. If using factory engine type size mounts with rubber bushing, you may weld the pad completely. If you are hard mounting, you are allowed a maximum of 8" per side to hold the motor in. with either style cradle you may also bolt using up to quantity of (4) 5/8" bolts.
4. If trying to mount an engine with an engine cross member and the motor mounts do not line up, you may use (2) 6"X6" X 1/2" plates on the frame engine saddle to attach your engine mounts to. This may not be welded to the outer frame rails.
  - a. If using Stock motor mounts or your motor mounts are broken after a heat, Motor may be fastened with only one strap or chain per side to the top of the factory engine cradle, or you may use one length of 2" x 2" x 3/16" angle bolted to the front of the head area and may be welded within 4" of the A-arm and be welded to no more than 4" on frame/unibody.
5. There is NO modifications to the frame or engine cross member to fit engines unless it is to cut out for an oil pan or steering clearance, but nothing can be welded back in.
6. Distributor and cam sensor Protectors are not allowed. You may cut out the area behind the Distributor or hammer it back for clearance. Dist. cap clamps may be used, but only for holding the cap on.
7. Mid Plates ( plate between motor and transmission) are not allowed
8. You may use a bar between headers above air cleaner max size 3"x3" material, for hood support and to protect air cleaner. May not be any wider than the headers. You may use header protectors. These may only attach to header bar and headers above your intake manifold with a max material size of 5"x5".
9. Lower Damper pulley protectors are allowed. Must be no more than 1/2" thick plate and not more than 1" away from the front of the pulley and may only cover the lower half of the pulley. It may not come in contact with the frame, sway bar, core support etc. the only time it may touch anything is if you are FUBAR. If it is determined that it was used as a wedge you will be DQ'd.

10. You may run a aftermarket steel or aluminum bell housing. These may be no wider or taller than the transmission itself and can't attach to anything on frame or body. Transmission braces, steel tail shafts, pan protectors, after market cases will not be allowed.
11. Transmission Cross member- you must run the transmission cross member in the stock location for the car you're building and must be under the stock transmission mount, if using a tube and not a factory cross member you can weld 2" angle iron no thicker than 1/4" no longer than 8" to the side of the frame to support the cross member. You must remove the stock mount if you run the angle iron. If you replace the stock crossmember it can be no larger than 2"x2" material. The crossmember must be one piece and straight from side to side and up and down. The transmission crossmember is the only method the transmission may be tied in.
12. Frame extensions on Cadillac's must not come in contact with cross member, angle iron pieces, or transmission, during, or after the event.

**Body:**

**Body Mounts:**

1. Body mounts must remain completely stock. Rubbers and steel cones may not be altered in any way!

**Body Shaping:**

1. Body line creasing is allowed on fenders and rear quarter panels. All fenders, quarter panels, and rear sheet metal above bumper must remain in vertical position. No collapsing or wedging Dove tailing of rear quarter panels and trunks or trunk lid.
2. No welding of created seams is allowed.
3. No welding of any body sheet metal unless specified.

**Rust Repair:**

No exterior body sheet metal or engine compartment rust repair. Floorboards will be allowed sheet metal repair to mount battery boxes gas tanks, etc. for safety. Do not cut rust out, and only go 2" beyond rust with new sheet metal. Sheet metal may only be the same thickness or smaller than what you are repairing.

- A. Floorboard definition front seat and rear seat area directly behind the cross bar does not include doglegs or wheel wells or fire walls, etc. this is for mounting equipment only.

**Doors:**

4. No buffing or grinding frames or bodies except where welding is specifically allowed in these rules.
5. You may weld your doors shut with nothing larger than 3" x 3/16 strap or 1/2" round. Must use a 5 on 5 off pattern. If you choose not to weld you may use 1 loop of 3/8" chain in 6 spots per door and 6 in trunk lid. No chains may go around the frame other than rear end hump chain. May also use 3 wraps of #9 wire per spot
6. You may smash the inner and outer skin together of the window opening on doors only and weld them solid. No added material.
7. Driver's door and driver's side of front windshield may have "netting" for driver's safety. NO other windows may have "netting." You may "double skin" the driver's door for safety; however, it cannot exceed 2" O.D. past the footprint of the driver's door.
8. You can add bracing to the exterior side of the driver's door. This bracing must not stick any further out than 2" from the door and may only be 12" tall and must not have any sharp edges. You are also allowed to carry the bracing up to 6" past the exterior door seam either forward or backward.
9. You may cut wheel wells for tire clearance. Fenders may be bolted back together with (5)3/8" bolts or less with 1.25" diameter washers. No rolling your fenders and welding them. If you wrap or fold your fenders around the front of the core support do not exceed (4) 3/8" bolts with 1.25" washers to bolt back to the core support of fender.
10. Wagons must remove all rear decking and seat components. All other rules above must be followed.
11. All front clips-dog houses must mount in factory position with factory mounts. Must be family to family. (GM-GM FORD-FORD)

**Radiators, radiator supports:**

1. Only OEM style passenger car radiators may be used. Aluminum racing radiators of the same style may be used.

2. Radiator must be attached to the core support. Radiators may be mounted in such a way to hold the radiator in place, not strengthen the core support.
3. No radiator guards allowed, or spray foam may be used.
4. You may not add cooling capacity. No supplemental cooling devices allowed (electric fans are allowed).
5. Front core support cannot be moved back from its factory location. It must stay bolted to the fenders the same way that it came from the factory.
6. You may have up to 1" all-thread, it may go from the hood to the frame, but must go through the front body mounts, this may be welded to the frame after it passes through the body mount but may not be nutted underneath the body mount if it is welded. All threads are allowed 3"x3" washers. Also a 5"x5" washer may be used on top of core support and may be welded to core support.
7. You are allowed a 3"x3" core support spacer no taller than 6". Only (1) per side to be used as just that A SPACER! These may be welded to the frame or body not both and only welded with a 1/2" bead of weld around the square tubing. Do not make a way for these to be anything but a spacer. Must be vertical.
8. Radiator core support seam welding is NOT allowed. Only slight modifications due to bumper brackets for mounting core support back into the original position is allowed, Officials discretion.
9. Radiator supports may not be welded to the frame, bumper brackets, bumpers or anything else.
10. If using a condenser to protect the radiator, it may be tie wired OR BOLTED WITH MAX OF (6) 3/8 BOLTS to the core support only.
11. No spray FOAM fill can be used.

### **CAGES & DOOR BARS:**

1. All cage material must be no larger than 6" O.D. other than side bars. These can be as high as you'd like but must be 4" from the floor and no higher than the door top where the window would roll down into. (official's discretion on all parts of cage), unless specified for a specific rule smaller. It must also be a minimum of 4" off the floor everywhere except the down legs going straight down. No cage material may be within 6" of the firewall and be a minimum of 4" off the transmission tunnel. All bars must be straight. Side cage Bars may not be any longer than 60" and must follow the gas tank 4" inch rule to any sheet metal in front, rear, and floor.
2. You may weld a bar behind the seat from doorpost to doorpost, it can be an X do not connect directly to frame, and you may also have a single bar (with no extensions), across your dash area to replace your dash. Side door bars may not go past the front dash or rear seat bar. You may run a bar connecting the dash bar and rear seat bar inside of the front doors only.
  - a. For driver foot safety and to protect batteries, you may put a down bar on the driver's door and passenger door, must be vertical and can be welded to the body only. May not be any more forward then the inside front edge of the door. Max size 3"x3".
3. You may run a total of 2 down bars from the rear seat cage bar to the floor only, all down bars must be vertical. ONLY THE 1 BAR FOR DRIVERS DOOR AND PASSENGER FRONT DOOR AND ONLY THE 2 DOWN BARS OFF THE HALO ALL OTHER DOWN BARS WILL BE CUT
  - a. Back of seat cage cross bar, including roll bar must be placed above the rear side of the foot well kick up directly behind front seat.
  - b. All Down bars may not be in larger than 3"x3" going to body and must be 4" away from any body mount. These can't in any way weld to or touch the frame.
4. You must have a roll loop/Halo behind the seat, above the rear seat bar; this may extend to the floor as your rear seat down bar, not in addition to, following rule 4.
5. You may also weld a steering column to the cage.
6. Gas Tank Protector - You may run a gas tank protector. It cannot attach to anything other than your cage. It must be centered between your frame humps. It cannot exceed 36" wide ID. It must be a full 4" away from rear sheet metal, which cannot be removed. The bracing must be 4" above and away from all sheet metal, and rear window bar which cannot be removed, and using two bars running front to back of the car from the seat bar with a connecting bar behind the gas tank, the connecting bar must be 4" from the rear seat back sheet metal. You may have one gusset per side from the seat bar to the gas tank side bars. Any other bars will be removed. All bars must face towards front of car
7. Gas Tank Protector on wagons may not go any further back then the beginning of rear frame humps. This will be determined from where the sheet metal inside goes up for the hump. This rule may not be pushed or you will cut!

### **Hood and Trunk:**

1. **Be prepared to remove your hood for inspection.**
2. Trunk Lid and Hood must be 100% in stock location, hood must be able to open
3. Any cut outs in hood may be bolted back together with 3/8" or less bolts and 1.25" diameter washer no more than a total of 8 bolts allowed to pinch the hood sheet metal back together. You may cut multiple holes but do not exceed the 8 bolts.
4. Hood may be secured by a total of (6) 1" all thread. The 2 at the core support, and 4 more. Only the 2 at the core support can go to or through the frame. The rest have to be sheet metal to sheet metal and cannot exceed 8" in length. (2) 5"x5" washer maybe be used per bolt.
5. You may use 2"x5"x1/4" angle iron to mount hood. One welded on fender and one welded on hood back to back using a max of (2) 1/2" bolts per spot. You may mix and match hood securements but you may only have 6 spots max including front all threads.
6. You can fold hoods or trunk lids over. Trunk lids must be stock shape but may be folded in but keep it clean. Rear fenders see BODY #1. No collapsing or wedging of rear quarter panels and trunks or trunk lid. We will allow a 6" well or dish on the top of the quarter panel on the trunk for pre-creasing, the 6" rule also applies to dove tailing/canoeing, you may cut out sheet metal also.
7. No welding of created seams is allowed.
8. Trunk seems may be welded with no larger than 3"x3/16" strap or bolt the lid down with no larger than 3/8"x2" bolts with 1.25" od washer. Must be welded or bolted in a 5 on 5 off Pattern. DO NOT WELD SOLID. 6 spots of chain or #9 can be used if you choose not to weld.

### **Windshield Bars and Firewall:**

1. Firewall – You can lay the firewall flat by cutting reliefs and pounding flat. If you shape the firewall or weld it to reinforce it, you will cut the firewall out anywhere it is deemed to be reinforced. If you add any metal to the firewall you will be loaded without the opportunity to fix it.
2. Window Bars - For safety, all cars must have (2) windshield bars extending from the roof of the car to the firewall/dash, material can be no bigger than 3". No more than 6" of material allowed on the roof and no more than 6" of material allowed on the firewall. May not be connected to the dash bar, only sheet metal. Do not go over 6" on roof or firewall or you will cut. Must be min of 16" off the pillars.
  - a. You may connect the bars with no more than quantity (2) flat straps horizontally.
3. One rear windows bar placed off the center of the roof. Bar may not be longer than 30" long by 2" x 2" O.D. Bar may only be attached by welding directly to the sheet metal or with a mounting plate no bigger than 4" x 4" x 3/16" angle or plate on the roof, cowl, speaker deck or trunk. If using rear window bar in a Station Wagon tailgate windows are treated as a rear window, while the tailgate itself is considered a trunk, but must be mounted at the top of the tailgate, and the tailgate must be in original closed position. If your window opening is larger than 30" than you must mount the bar with the mounting plate being within 1" of the window opening.
  - a. Window bars may not be attached to the halo bar or any cage components.

### **Fuel Tank, Oil Coolers, & Transmission Coolers:**

1. Original gas tanks must be removed.
2. Metal Marine type tank, metal fuel tank or derby type metal fuel tank is highly recommended.
3. Place fuel cell behind driver's seat or in the center of the car where the back seat used to be. Must securely mounted behind the driver's seat with bolts, metal straps, or chain. No seat belts or pull tie straps may be used. No other source of gas inside the car at all.
4. Fuel lines must run inside the car, not under the car along the frame unless they are factory. Fuel line must be inside a protective line within the engine compartment.
5. Transmission and fuel coolers are allowed. These coolers cannot be placed to reinforce the car. No bolts may extend through the frame to create a body mount.

6. If you are not using a gas tank protector, the fuel cell and tranny cooler protector must be 4" away from the rear sheet metal.

**\*\*\*IF USING AN ELECTRIC FUEL PUMP, YOU MUST BRING IT TO INSPECTORS ATTENTION AT TECH\*\*\***

**BATTERIES:**

1. Batteries must be moved to passenger front floorboard. They must be properly secured and covered, unless you are using a gel cell battery. Up to (2) 12-volt Batteries may be used.
2. Battery box must be made from metal! It must be bolted to the floor. Bolts may not go thru or around the frame. Seat belts or pull type tie downs may not be used.
3. Rusted out holes in your floor sheet metal may be patched where components will be mounted or for driver's safety with sheet metal only. You may not patch clean and solid floors.
4. All body mounts must be visible.

**#9 Wire:**

1. You may #9 wire your frame rail to frame rail behind rear tires. This may only go to the frame with a max of 3 loops. No welding is allowed

**03 and Newer Fords if allowed:**

1. All steering components must be completely stock
2. Aluminum cross member must be used.
3. Engines must be put in using brackets that can't be welded to the frame in any way. Use a maximum 6"x6"x12"x1/4" angle iron and bolt them to the top two a-arm bolts. You may weld steel off those to create a surface for your motor mounts to weld to.
4. You may change upper arms and spindles to a different stock set that is off a car allowed to run in this class.
5. Watts link. Follow above watts link rules.
6. Before building an 03 and newer ford, please be sure that it's allowed to run in the show you're building for.

**FEATURE/GRUDGE MATCH (CONSD) REPAIR RULE:**

1. You may use (4) 5" x 5" x 3/16" plates. These plates must be on the outside of the frame, if using them on the frame. These plates may be cut and shaped to your liking, but you must leave them in one piece. Anything you cut off a plate can't be used elsewhere You're allowed to use the plates anywhere you want other than inside the frame. If plates are thicker or bigger than what is allowed you will be disqualified. PLATES ARE FOR PRE RAN CARS ONLY. AFTER YOUR FIRST HEAT YOUR CAR IS PRE RAN.
2. If your frame is ripped you must provide proof of rip before welding back together. You may not add material and may only have a 1/2" wide bead of weld.
3. If sheet metal on the body is ripped, you may patch it with sheet metal only. This may overlap existing sheet metal by a maximum of 2", and can only be welded on with a 1/2" bead of weld.

Engine Cradle Example

