

# Montana Class 4

## Frame:

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

#### **Frame Shortening**

1. You may shorten the front frame only. 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.

#### **Frame Welding**

2. No re-welding of any factory seams is allowed other than what is specified. If there is 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. 14" total of welding is allowed between the back of the a-arm and transmission cross member. 80's and newer cars will be allowed to cut and tilt using the 14" of weld or cold bend in front of transmission cross member. All old iron cars will be able to use the 14" to reweld seams where the factory missed or any other factory welded seam (weld must be continuous).
5. Frame seams can be welded top and bottom control arm forward.

#### **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.

#### **Rust Repair:**

Must be the same thickness material. No cutting any rust out! It must stay intact so you can visibly see it was rusted through. Material that you are welding on may only go 1" past the rust hole and welded on with a 1/2" bead.

#### **Rear Suspension:**

1. Suspension must be stock components and working. You may leaf convert coil cars or coil spring cars may run hump plates. (1) 22"x6"x1/4" plate per side. If leaf converting, you may use 3"x3"x4" max size square tubing per end of leaf pack to attach leafs to the frame. These may only weld to one side of the frame and only use (1) 1/2" bolt per corner.
2. Leaf springs must remain 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 3/4" wide.
3. Leaf Spring Hangers can be made of 2" x 6" x 3/8" thick strap must be mounted with (1) 1/2" bolt per frame rail.
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.
6. Rear end control arms can be reinforced. They must start from a stock set but can 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 gussets or added material, and these cannot 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 passenger vehicle rear end
2. Rear end bracing is allowed
3. No spring spacers any bigger in diameter than the springs
4. You may adjust the pinion angle. Welded, spool or Posi-track allowed
5. Rear ends must not support frame or body in any way.
6. No overkill on bracing on rear ends. (Tech Discretion)

### **#9-WIRE**

1. You're allowed to use 8 places of #9-wire anywhere on the car with a max of 3 wraps per spot
2. You may weld (1) 2" o.d. diameter washer per spot to help attach #9 wire.

### **Front Suspension/Steering:**

1. Suspension must be stock components and working.
2. Tie Rods and Ball Joints – After Market tie rods and ball joints may be used.
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 1/8" angle. No other front suspension or steering may be reinforced.
4. Ball joint sleeves-rings can be 1/2" bigger than the outside diameter of the ball joint itself and 4" tall and may be welded to control arm and frame with no added metal. Example on last page of rules.
5. A-Arms: Upper A-arms only may be welded. 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 further forward or backward than 1" past the widest part of the A-arm. If swapping upper control Arms, they must be direct bolt on with no manufactured mounts.
6. Steering box – May be interchanged, A-arms must remain stock or stock replacement.
7. 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.
8. Hubs – Must remain stock for the spindle you are using, no aftermarket spindles.. Brake calipers must remain stock for the stock spindles.
9. 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 OEM in origin.
10. 03 up fomoco (if permitted to run) may wrap stock aluminum cross member in 1/4" plate, or replace aluminum engine cross member with a bolt in style cradle (Ex. Ryno derby parts/ Johnson cradles) Nothing more than these examples. You may use a mounting plate for your steering box. This plate may be no taller than the frame and no longer than the steering box and may only bolt to the frame in three spots.

### **Tires**

1. No split rims, studded tires, no foam filled tires on the rear. All other tires are allowed. Any rim is allowed, Valve stem protectors allowed. Wheel weights must be removed.
2. All cars must be able to demonstrate the ability to stop at any time. If your brakes do not work, you will not compete.
3. You may not change tires after inspection without official's consent.
4. 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. Loaded bumpers may be used CAN NOT BE WELDED TO THE BODY

2. Homemade bumpers are allowed if building a point on the bumper you must have a 6" point spread over at least 32" no sharp points (officials discretion) max size of bumper 6" x 6" CAN NOT BE WELDED TO THE BODY
  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 only.
  7. Non-compressions factory bumpers for that year of car may be welded to the body. Non-compression bumpers may be welded to the outside body only. No filler metal. (Note: Hood must be able to open).
  8. No more than one set of bumper brackets may be used. You can weld bumper brackets to the frame. Bracket may be shaped to fit the frame, but not cut apart, if you cut the bracket those pieces cannot be used elsewhere. You can weld bumper brackets and shocks to the bumper. You can weld shocks to shock towers. You can collapse shocks, and you can bolt the shocks to the towers with ½" bolt or less, and it must be done vertically.
  9. Cups and or horns count as brackets.
  10. No brackets or shock tubes can extend any further back than the front of the a-arm. 15" for the rear 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. Instead of using bumper brackets you can use (1) 4" wide x 3/8" thick strap per side extending from your bumper down one side of the frame and cannot extend any further back than the front side of the a-arm You are also allowed to wrap this strap around the front of the frame 4" to create an (L) shape this is to give you enough material to weld your bumper to the strap. Plate may be formed but it cannot double at any point. Do not abuse this rule you will cut it. You will not be able to use a shock tube if using the strap.
    - d. Strap Must be on the Exterior of frame left, right, top, bottom
    - e. Can only use factory mount or 3/8" plate bracket not both.
    - f. NO ADDED METAL TO MOUNT BUMPER
  11. 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.
  12. Bumper straps can be no longer than 30" and no larger than 3" x ¼" thick. Max of (2) straps per bumper. Each bumper strap must be in one-piece, bumper strap may not be attached to any part of the frame.
- The bumper must be completely in front of the frame rails. No part of the bumper may extend back past the front most part of the frame rails.
13. Bumpers may only be welded to the shock tubes, brackets and/or frame rails. Pending your mounting choice.

### **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.

7. Mid Plates 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 and may not attach to the hood.
9. Header protectors can only be the shape of the header and may not go any lower, in front, or behind the valve cover. See example on last page of rules.
10. No protectors of any sort can come in contact with, engine cradle, transmission, bell housing, firewall, or window bars.
11. Lower Damper pulley protectors are allowed. Must be no more than ½" 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, 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.
12. Transmission braces will not be allowed.
13. Skid plate/ pan protectors may not be used, no aftermarket transmission pans, aftermarket bell housing and tail shafts are the only aftermarket parts to use on the transmission. If using a spacer between transmission bell housing and block the spacer can be no larger than the factory bell housing or nerat bell housing size. Example on last page of rules. NO BRACES AT ALL
14. No part of the transmission bell housing or the engine cradle can come in contact with each other.
15. Transmission Crossmember- Must mount to side rails of frame only. You may weld 2" angle iron no thicker than ¼" no longer than 8" to the outside frame rail to support the cross member (1) per frame rail. 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"x3"x1/4" 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.
16. Frame extensions on Cadillac's must not come in contact with crossmember or transmission, during, or after the event.
17. **If and only if all of these rules in the engine section above are followed, then you are allowed to add (1) 2"x2"x1/4" square tubing (kickers) per side extending from the back of the a-arm to the dash bar. You may run a full engine cradle and complete transmission brace if you decide not to run kickers. Engines and transmission may be welded to cross members and come in contact with sheet metal. However they may not be welded to sheet metal.**

### **Body:**

#### **Body Mounts:**

1. Body mounts may be removed but must have a 1" space between frame and body.
2. Spacer size 1"x3" od can be made of anything you'd like but must be 1" tall/thick and no bigger than 3" in diameter NO WELDING
3. Body mount washers may not be any bigger than 3"
4. Can replace body mount bolts with 3/4" bolts with 3" OD washer
5. Radiator support mounts can be removed, and you can suck the radiator support down solid. (see Radiator rules)
6. Absolutely no body mounts may be moved or added, do not shorten the front of your car and move back past the body mount hole as your car will not run.
7. If you have to build core support spacers you may weld it either to the body or the frame mount, but only one side can be welded. Core support spacers cannot exceed 6" in length and 3" in width.
8. The front frame must not be shortened to far that the 1" all thread must pass through the factory stamped hole. The all-thread may only be welded to the side of the frame in this location. Chrysler k-member cannot be altered.
9. You may have up to 1" all-thread, it may go from the hood to the frame, only 4" of weld on all thread to frame.
10. Must go through the front body mounts, or down the side of the frame and welded to the frame only. this may be welded to the frame after it passes through the body mount but may not be nuted underneath the body mount if it is welded. One per frame rail.
11. MAX WASHER SIZE ON CORE SUPPORT BOLTS IS 3"
12. Body must remain in factory location and body bolt must go through factory body mount hole.

#### **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:**

You may patch rust on body with the same thickness material you are fixing and may only be patched 2" past the rust.

#### **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 stock and must follow the door seam. Do not overlap strap or you will cut the strap off.
- 6. You may smash the inner and outer skin together of the window opening on doors only and weld them solid. You may use the same filler as in welding the door seams but no longer than the window opening per door.
- 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 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.
- 7. 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.
- 8. Radiator supports may not be welded to the frame, bumper brackets, bumpers or anything else.
- 9. If using a condenser to protect the radiator, it may be tie wired OR BOLTED WITH MAX OF (4) 3/8" BOLTS to the core support only.
- 10. No FOAM fill can be used.

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

- 1. All cage material must be no larger than 6" O.D. (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 protector 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 frame or body but not both. May not be any more forward than the inside front edge of the door. Max size 3"x3". Must be on the outside frame rails.
3. You may run a total of 2 down bars from the rear seat cage bar to the floor or frame, not both; 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 larger than 3"x3" going to frame and must be 4" away from any body mount. Must be on the outside frame rails.
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. You may have one 2" X 2" gusset 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 than the middle or center of rear end sheet metal.

### **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 (8) 1" all thread. The 2 at the core support, and 6 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. **NO ANGLE IRON**
5. 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. Trunk may well or dish on the top of the quarters 6". Canoeing trunk is allowed.
6. No welding of created seams is allowed.
7. May add (2) 1" all thread welded to the side of the frame and up to the trunk lid with 5"x5" washer. Must be vertical with only 4" welded. Must be no farther forward than base of humps.
8. Truck seems may be welded solid 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.

### **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. Only metal Marine type tank, metal fuel tank or derby type metal fuel tank is required.
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. 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.

### **FEATURE/GRUDGE MATCH (CONSI)REPAIR RULE:**

You may use (8)- 5" x 5" x 3/16" plates. Must be on outside of frame if using them on the frame, these plates can't be cut apart must remain in one piece. You're allowed to use the plates anywhere you want other than inside the frame if plates are thicker or bigger you will be dq'd we will supply the plates PLATES ARE FOR AFTER THE FIRST HEAT

**Transmission Spacer Example**



**Ball Joint Sleeve/Ring Example**



**Engine Cradle Example**



**Header Protector Example**

