

## Pennington County Fair 2020 Limited Weld Class

### ❖ Frame

#### ➤ Seam Welding-

▪ You may weld the frame seam only from the a-arm forward, 1/2" wide bead maximum, only 1 pass on all frame seam welding. DO NOT re-weld the upper A-Arm brackets when rewelding top seams. You are allowed an additional 12" of welding per side behind the a-arms. This can be used to clean up any spotty welds from factory or to reweld the seams or cut where you decide to tilt the car.

▪ Mopar - Factory K-Member cars can remove k frame mounts and bolt tight with 1" bolts. K member cars may weld the K-Member to frame in (4) spots. Each spot may be 5" of weld without any filler material.

#### ➤ Tilting-

▪ Tilting vehicles is allowed, if you are tilting you cannot exceed the 8" per side you are given behind the A-Arms from the seam welding section.

#### ➤ Shortening-

▪ You may shorten the front most part of the frame rails only. You may cut the frame off flush with the front edge of the body mount hole (core support mount).

#### ➤ Frame Shaping Frames shaping is allowed

#### ➤ Pre-Ran Cars-

▪ Pre-ran cars will be allowed to plate where a car is bent. There must be a proof of bend where plate is. Plate cannot exceed 6"x6"x1/4". No more than (6) plates total on car.

▪ Fresh cars get (2) of the (6) plates above allowed fresh, this is so the pre-ran cars don't have an advantage.

#### ➤ Frame Repair-

▪ Piece may be butt welded in, no overlap, frame rust can be cut out, but we need picture evidence before you do so. Res-stubbing frames is NOT allowed If you have any questions, please call.

#### ➤ Bumper's-

▪ you may run any-mass produced bumper no stuffing of the bumper. You may trim the bumper ends and seam weld the bumper ends MUST remain open. ➤

#### Bumper option 2-

▪ You may run a 4x4 square our round tubing 1/4 thick with no added metal ends must remain open

#### ➤ Bumper Height-

▪ Cannot exceed 20" to the bottom of the bumper/frame from the ground and it must be a minimum of 15" from the ground to the bottom of the bumper or frame in the rear, whichever is lower.

#### ➤ Bumper Brackets- You get 2 choices, pick 1 or the other, not both!

▪ Any automotive bumper brackets may be used from any car that is legal to run in your class. No more than one set of brackets may be used. Welding of shocks to the bracket is allowed in the factory position. Shock must be stock with bracket. Brackets cannot go any further back than 11" from the front most part of frame.

OR

- You can use (1) 3" wide x 3/8" thick plate extending from your bumper down the frame and cannot extend any further back than 11" from front most part of frame. Bracket can only be on tire side of frame. You can 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.

- "Y" frame cars will be allowed to collapse y and weld top and bottom seam and use bracket rule.

- Rear Bumper Brackets-

- you may use the factory bracket that came on the car you are running. This bracket cannot be manipulated in any way to make it longer.

- Rear Frame Rails-

- you may tie frame rails together behind the rear end with 4 loops of #9 wire or 1 loop of 3/8 chain or cable. This may go around the frame. It may go through a factory frame holes.

- Notching/Dimpling is allowed, pre-bending rear frame rails is allowed.

- Transmission Cross Member-

- you must run the transmission cross member in the stock location for the car you are building. You can weld 2" angle iron no thicker than 1/4", no longer than 6" to the side of the frame to support the cross member. If you replace the cross member, it can be no larger than 2"x2"x1/4" square tubing or 2"x1/4" round tubing.

- The transmission cross member must be one piece and must be straight from side to side. Cross member cannot be prefabricated in any way.

- the transmission cross member is the only method which the transmission may be tied in. Nothing can be attached to the cross member besides the transmission mount.

- Body No other seams may be welded other then what is outlined in these rules! Absolutely no exceptions.

- Doors-

- You may weld your doors with nothing larger than 3" by 1/4" strap in 4 locations.

- You can add bracing to the exterior side of the driver's door. Drivers Door bracing must not stick any further out than 2" from the door and may not have any sharp edges. You are also allowed to carry the bracing up to 3" past the exterior driver door seam either forward or backward.

- Doors can be welded along the top (where the window comes through), no extra material allowed to accomplish this.

- Shaping-

- Body lines/shaping may be pounded on outside of car, no shaping other parts of car.

- Body cannot be pounded over and welded or bolted together.

- Body Mounts-

- Bolts can be replaced with up to 1" bolts, body mounts can be replaced with steel spacers or washers but must be 1" thick and have the same diameter as stock spacers. Body spacers can be welded to the frame in 2 spots, 1/2" long weld each, this is to keep them from moving when putting body back on. Bolts may extend through body and have up to a 5x5x 1/4" square or 5"x1/4" round washer on top. Do not weld body bolt washers to the body.

- \*\*\*\* Sub frame cars have a choice, they can either \*\*\*\*

◆ Use the 1" spacers and add 1 body bolt per frame rail, must be to bottom of frame rail and through sheet metal, no welding, must follow other body mount rules.

OR

◆ Not run spacers (suck sub up tight to floor), but you CANNOT add an extra mount.

▪ Bolts must be up inside of frame as factory and may not to exceed 7" long. If you choose to leave in the stock rubber pucks you must leave the metal cones inside the rubber puck. You must leave at least a 3/4 space if using the factory rubber spacer. Do not devise a way that enables you to suck them down tight.

▪ Absolutely no body mounts may be moved or added, unless otherwise specified.

➤ #9 Wire in Window Openings-

▪ You are allowed 2 spots of #9 wire (3 loops) total per car in the door window openings, these must go from roof to frame in a straight line. All #9 wire going through the windows must stay in the passenger compartment. The cage cannot support these wires in any way. Nothing may be welded or added to frame to support or route wire. You may use up to 3/8" cable NO CHAINS.

➤ Hoods and Front Clips-

▪ Hood must have at least a 12-inch square hole cut out in case of fire. Any holes in hood may be bolted back together with (6) 3/8" or less bolts and 1.25" diameter washer to pinch the hood sheet metal back together. You may cut multiple holes but do not exceed the 6 bolts.

▪ you are allowed (6) spots to hold the hood on; you must have a minimum of 4 tie down spots. You may have up to 1" all-thread.

▪ you front (2) rods must go through core support mount. You can nut the all-thread on the bottom of the core support mount, the all-thread may be welded to the side of the frame at the core support mount.

▪ The other (4) connections must be sheet metal to sheet metal or welded to the top side of the frame. ▪ If not using threaded rod for the back (4) mounts, chain (3/8" max) 9 wire (4 strands) or angle iron (4" long, 2" x 2", 1/4" material with a bolt through it) is allowed.

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➤ Core Supports-

▪ Core supports can be interchanged; core support must come from a car legal to run in this class.

▪ Core support must go in the factory location, no sliding forward or backwards. It must line up with the stock bolt holes, you may use the factory bolts and bolt holes to attach core support to fenders.

▪ If you wrap or fold your fenders around the front of the core support do not exceed (6) 3/8" bolts and 1.25" diameter washers to bolt back to the core support per fender.

▪ Radiator support mounts can be removed, and you can suck the radiator support down solid.

▪ Core support spacers cannot be welded to anything, only the threaded rod may hold them in.

▪ Core support spacers cannot exceed 2" material and cannot extend up further than the bottom of the core support.

➤ Trunks-

▪ You can fold trunk lid over. Do not slide your trunk forward or back, trunk must remain on hinges.

- Truck lids must have at least two 6" inch holes or one 12" hole cut in the first 50% of the trunk lid (holes in trunk floor will not count) for inspection purposes, inspection hole may have (4) 3/8" or less bolts and 1.25" diameter washers bolting the two layers back together.
- Your trunk lid may be V'D or canoed in the center, but the drip rail must remain at least 10" off the trunk floor. The 10" will be measured from the top of the frame rails not the spare tire hole.
- (2) 1" All-thread may go from the trunk lid to the frame or trunk pan. I. If welding to frame rod must be welded vertically and no more than 4" of weld. Threaded rod must pass through trunk lid and not through fender.
- Trunk can be fastened shut in (4) other locations then the threaded rod previously mentioned. You can threaded rod our use either chain (3/8" max), 9 wire (4 strands), or weld patches which cannot exceed 4x4 x 1/8" to fasten trunk closed.
- Firewall-
  - You can cut or remove firewall for distributor to pass through. Absolutely no pounding or shaping of firewall for a strength advantage.
  - You will be allowed (4) 2"x1/4" straps to attach dash bar to firewall, no more than 2" of welding or material on firewall.
- Front Window Bars-
  - For safety, all cars must have 2 straps or stoppers extending from the roof of the car to the firewall/dash. Straps can not be any larger than 3"x1/4". No more than 6" from the front window opening of strap material allowed on the roof and no more than 6" of strap material allowed on the firewall. Do not go over the 6" or you will cut.
- Rear Window Bar-
  - You are allowed a rear window bar which may not be any larger than 3x3x1/4" tubing or 3"x1/2" flat strapping. This bar must be centered in the car and can only extend on the rear-most part of the roof for 5", this 5" will be measured from the rear window opening. The bar must be in contact with the front trunk seam and can only extend 6" on the trunk/speaker deck and must stay on top of trunk sheet metal.
- Wheel Wells-
  - You may cut and roll wheel wells for tire clearance. Fenders may be bolted back together with (6) 3/8" bolts only. ❖ Engines, Transmissions, Braces, and other Equipment
- Gas Tank-
  - 7-gallon tank max, Fuel cells must be well constructed and out of a durable material. No plastic tanks, metal is preferred, boat tank type is fine. Any splashing, spilling, or leaking of fuel will result in a broken flag. Fuel cells are recommended to be mounted to the gas tank protector/ cage. Fuel lines must be secured.
  - Fuel tank must be bolted or chained in place with a floor mat covering it. No ratchet straps unless it's a secondary device.
- Gas Tank , Transmission Cooler ,Battery ,Pedals , Shifters , etc.
  - All equipment must be fashioned tightly to the vehicle! \* We do not want to see anything come loose during the event, if it does, your stick will be pulled. Ratchet straps will only be sufficient as a backup.

- Drive Shafts- Slider drive shafts are allowed.
- Motor-- Use motor of choice, motor must be in a like stock location.
- Engine Protectors-
  - You are allowed a simple lower cradle with front plate and pulley protector. The pulley protector cannot extend further than 2" past the water pump. This is to protect your engine, not strengthen your car. The pulley protector cannot come in contact with the steering components..
  - No distributor protector, mid-plates , carburetor protectors or full cradles are allowed.
- Engine Attachment-
  - You can attach your engine to the cross member with a clamp style/factory rubber mount. Aftermarket rubber type rubber mounts are allowed. The motor mounts can be welded to the top of the engine cross member only.
  - You will be allowed (2) additional 4x4x1/4" plates or (2) 3/8" chain (4 links) to secure your engine to the cross member. These can be welded to the cross member and connected to the engine.
- Transmission Protectors
  - Transmission braces, skid plates, steel bell housings and tail housings are not allowed.
- ❖ Cage-
  - A 4-point cage and some sort of rollover protection is mandatory, this is a non-option. Safety is our #1 priority. A 4-point cage consists of a dash bar, a bar behind your seat, and 2 bars connecting those bars running along your doors. Either a bar that extends up from the back-seat bar, behind your seat, and is welded/bolted to the roof, or a halo bar that extends up from the side bars and connects with a bar across the top of the roof will be sufficient for rollover protection.
  - 4 Point Cage-
    - All cage material may be no larger than 5" diameter.
    - Door bar lengths are not to exceed 60". This bar must not extend more than 18" behind the center post on a four-door car and 10" behind the center post on a two-door car.
    - Dash bar and seat bar can only be 5" diameter or less and you may use only one, no doubling of these bars.
    - All cage components must be a minimum of 4" off the floor, except for down legs that you will be allowed. Dash bar will be measured at the transmission tunnel; all other bars will be measured at body bolt elevation.
  - Down Bars-
    - You will be allowed (4) down legs total. Down legs can be no bigger than 2"x3"x1/4", welded to the door bars, and they must be vertical. They cannot extend higher than the cage bar unless being used as your rollover bar. These bars may be welded to the top of sheet metal only. The down legs cannot be attached to or cover any body bolts. Front down legs cannot extend further past the INTERIOR front door seam and rear seat down bar cannot extend any further backward then the rear of the door bar based the door bar criteria above.
  - Halo/Rollover Bars-
    - Must be attached to the 4-point cage following the length of bar rules above. Can be welded to sheet metal only with no larger material than 2"x3"x1/4". Must be vertical, not angled forward or back. The bars may be bolted or welded to the roof.
  - Gas Tank Protector-

- Tubing for protector must be 5" diameter or smaller. The protector cannot be wider than the frame rails at package tray/humps. Protector must be floating at least 4" off the floor and must be in the center of the car. Protector must have a 1" gap between the rear package tray and sheet metal. If you extend the gas tank protector above the package tray it must be perfectly vertical and not extend more than 6" above the speaker deck.

- ❖ Wheels, Suspension, and Steering

- Rear Suspension-

- Any leaf sprung vehicle must remain leaf sprung. Any coil car vehicle must remain coil sprung.
- The rear of cars can be squatted and chained to stiffen the rear suspension or gain your desirable ride height. This can be accomplished with 1 3/8" chain wrapped around the rear-end and wrapped around the frame. Absolutely no welding anywhere on this chain. On a unibody rear vehicle, you can cut 2 holes for this chain to pass through the body.
- Coil sprung vehicles may double springs, stretch springs etc. to get rear bumper height. You may connect springs together in 4 spots only using 3/8" bolts, 3/8" chains, or 9 wire (4 strands max). You may bolt, chain, or wire the springs to the rear-end following the same guidelines above. Do not run any of these through the body.
- Leaf sprung vehicles can restack their pack. Leaf springs must be made of a stock spring material. 3/8" max per spring, and springs cannot be more than 3" wide. 7 leaf max, you may have 1 spring as long as your rear main, but only one. These 2 must be in the top of the pack, and all other springs must stagger down 1" each spring (not a total of a 1" stagger). 6 leaf clamps are allowed on each set of springs, these may be homemade, but cannot be more than 4" long x 2" wide x 1/4" thick, (2) 3/8" bolts may be used to clamp these together.
- Leaf sprung vehicles must use the factory front leaf spring attachment method, and the main leaf spring must remain the same length as factory. The rear hangers can be homemade with (2) 1.5" wide 1/4" straps per side. These can be bolted to the frame rail and with a single bolt through it to hold the leaf spring, no welding is allowed. The leaf springs can be relocated under the frame rail. If you abuse this rule you will cut!

- Rear-Ends-

- Use rear end of choice but must be no more than 8 lugs. Welded or posi-track highly recommended.
- Stock rear end control arms can be reinforced. They may be shortened or made longer for pinion angle. They must attach in stock configuration for the suspension setup you are using. No homemade or aftermarket control arms.
- Watts Conversions are allowed, must mount in a like factory location. The top of the conversion kit must bolt in, the bottom can be welded to frame but with only 6" of welding per side. This cannot be used to strengthen the vehicle. All factory brackets must be completely cut off car.

- Tires and Wheels

- Wheels no bigger than 16", no split rims, no studded tires. Doubled tires are ok, we don't want any flats!
- Foam filled tires are not allowed on drive tires, they will be allowed on steer tires.
- Valve stem protectors are ok. Tires may be screwed to rims. Wheels may be bead locked. You may run weld in centers.
- Outside of the rim may be reinforced but not bracing may extend past the outside edge of the rim, this includes the bead lock. All wheels must have start as a factory wheel.

➤ Front Suspension and Steering-

- Tie Rods and Ball Joints-
- Tie rod tubes may be reinforced, or you may use a manufactured tie rod but must stay close to the same length and must mount in the same configuration as stock.
- Aftermarket ball joints and tie rod ends will be permitted. If using an aftermarket ball joint, it can either be a press in, weld in, or bolt in joint. If welding a ball joint in it there must be room between the ball joint collar and frame.
- All other steering components must be an OEM stock component from a vehicle allowed in this class with no bracing, no aftermarket spindles, hubs, center links, sway bars, steering boxes, or A-arm/control arms are allowed. Swapping of components is ok, but it must bolt on to the vehicle in a factory manner. No re-engineering the way your steering components work on your car.
- Arms may be welded or bolted down but may not be reinforced. You can use (2) – 2"x3"x1/8" straps to weld your upper a-arm down per side. No other material may be added to hold the suspension