



WATSON RACING 4-POINT ROLL BAR 2005-2014 Mustang Coupe

p/n WR-BOLTINCAGE

The Watson Racing 4-Point Roll Bar was designed for superior strength while allowing for installation flexibility. Professional installation is recommended, and this part is intended for off-road (race) use only.

The intent behind the design of the Watson Racing Roll Bar was that it could be quickly bolted in place for a track day, and quickly removed to resume back-seat use.

Installation options discussed:

- 1) Permanent (weld-in)
- 2) Semi-permanent (bolt-in)
- 3) Easy in/out (bolt-in)

PLEASE READ INSTRUCTIONS ENTIRELY, PRIOR TO BEGINNING INSTALLATION.

Tools Needed:

- Metric Sockets
- Ratchet
- Panel/Fork Tool
- Drill Motor
- Drill Bits
- 7/8" Hole Saw
- Rivet Gun
- Air Body Saw, Dremel, or similar
- Allen Wrenches or Sockets
- Tape Measure and Marking Utensils- marker or center punch
- Small Carpenter's Square

Kit Includes:

- Watson Racing Roll Bar Main Hoop
- Watson Racing Left/Right Diagonal bars
- (2) large square sub-floor nut plates
- (4) narrow M10 nuts plates
- (16) M10x1.5x25mm Zinc Flange Bolts
- (4) M6x1.0x20mm Zinc Socket-Head Bolts
- (4) M6 Zinc Washers
- (8) 1/8" Rivets

- 1) Remove rear seat bottom cushion by lifting upward while depressing two retainer tabs, located directly below seat cushion; one per side.



- 2) Remove rear seat back cushion by removing three bolts total- one left, right, and center, bolting hinge brackets to floor.
- 3) Remove interior door sill/scuff plates by grasping firmly and lifting up swiftly. Be cautious of wiring associated with illuminated sill/scuff plates, if equipped.



- 4) Remove interior lower side trim panels by removing push pins (behind seat back & in footwell area) and pulling inward on panel, releasing hidden retainer clips.
- 5) Dislodge wire harness retainers from floor corner gussets using fork/trim panel tool. Harnesses need to be movable to allow installation of 4-point bar.

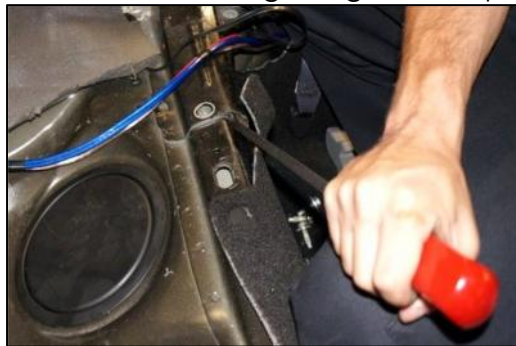


- 6) With assistance, place the Roll Bar's main hoop into place, with lower mounts straddling the corner floor gussets. Measure bar's location side-to-side, and center bar. Temporarily set the rear diagonal bars in place to set the main hoop's fore/aft location. Mark 8 hole locations (4 per side) with marker and/or center punch. Remove bar (picture on following page).



NOTE: At this point, the car and bar could be prepped for welding the bar in place. The corner floor gussets, rear floor landing area for the diagonal tubes, and the 4-point bar's mounting 'feet' would need to be ground in preparation for welding. Be sure to disconnect battery before welding to car, and take all necessary fire precautions before welding. For added strength, rear diagonal tube nut plates can be used and welded in place as well. Interior trim panel modifications are discussed in later steps.

- 7) To continue bolt-in process: remove 13mm and 15mm bolts securing factory floor gussets to the car; 9 bolts per side. Note their location in the gusset as the bolts vary in size. Save for re-use.
- 8) Remove gussets from car by using a small pry bar or panel/trim tool to gently pry upward. Some foam adhesive will be holding the gussets in place.

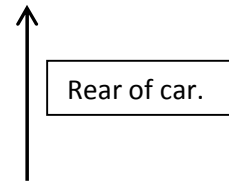


- 9) With gusset secured in a vice, drill 4 marked holes with 1/8" pilot drill bit. Enlarge with a 7/16" drill bit. Repeat with second gusset.



- 10) Return gussets to car and align with original bolt holes. Fasten with some of the bolts removed previously if needed.

11) Looking through the holes just drilled on the rear-facing side of the gusset, you will see that the sub-structure is close to the inside of the gusset, behind center-most drilled holes. This will have to be cleared. Mark this inner structure with a marker, through the gusset hole just drilled. Repeat on both sides.



12) Remove both gussets. Drill on your marks into sub-structure metal with a 1/8" pilot hole. Follow this with a 7/8" hole saw. Vacuum shavings from car.



Arrow to rear of car, Pass. side.



Arrow to rear of car, Driver side.



13) Using provided M10 bolts, bolt two nut plates to the inside of each gusset through the holes drilled previously – one nut plate for the front two holes, and one for the rear two holes. Weld-nuts face toward the center of the gusset. Note that weld-nuts are offset on brackets due to mounting hole's proximity to the bends in the floor gusset.

14) With nut plates bolted in place, draw a line between the centers of both bolts, and evenly space two 1/8" holes along this line. Install two 1/8" rivets to secure each nut plate to the gusset. The nut plates may also be welded in as well.



- 15) Loosely re-install gussets into car using all original hardware. Do not tighten at this time.
- 16) Install Watson 4-point Roll Bar into place using provided M10 bolts. With all 8 Roll Bar bolts **only started** (not tightened) tighten all factory gusset bolts. Use of threadlocker is advised on both gusset bolts and Roll Bar bolts. Leaving the Roll Bar's bolts loose may aid in the installation of the rear diagonal bars. **See step #25 regarding torque specs.

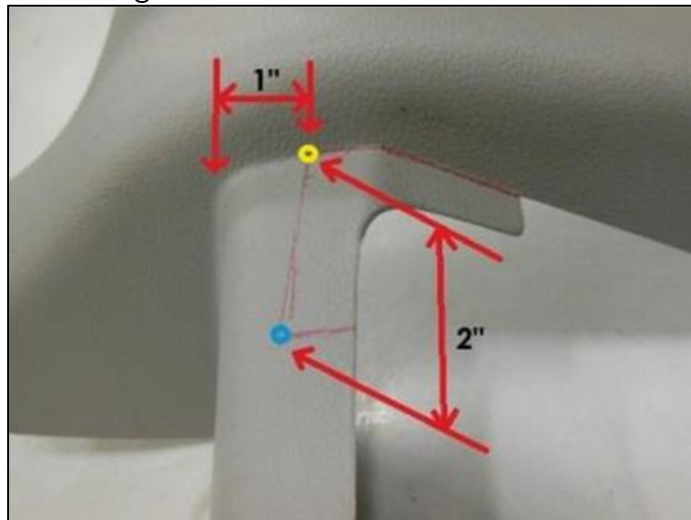
TRIM PANELS

PLEASE READ BEFORE PROCEEDING.

The intent behind the design of the Watson Racing Roll Bar was that it could be quickly bolted in place for a track day, and quickly removed to resume back-seat use. **IF** you choose to leave the bar bolted or welded in place, you may want to trim the panels tight to the bar as outlined below. **IF** you wish to be able to quickly install and remove the bar for a track day, you can either: **A)** not re-install the trim panels at all and leave them unmodified, or **B)** trim them with slightly larger openings to allow easier access to the mounting bolts.

The following instructions are intended as a guide for modifying the interior side trim panels to fit around the Watson Roll Bar. Feel free to further modify your panels as you see fit.

- 17) Remove foam blocks from backs of interior side trim panels.
- 18) Use picture below as a reference. From the forward "face" of the trim panel at the crease, measure back 1" and place a mark on the panel (yellow dot). From that mark rearward, trace along the crease. Place a small carpenter's square at the same yellow dot, and draw a line inward (toward center of car) that is 2" long (ending @ blue dot). It will be perpendicular to the crease, and NOT parallel to the front of the panel. Draw a short line rearward. Cut along these lines.



- 19) Once cut, measure upward approximately 1.5" and rearward from yellow dot approximately 4". Using a round guide, draw a crescent-shaped cut line within these dimensions (pictures on following page). Repeat all cuts on both trim panels.



20) Clean up all cut lines and reinstall trim panels into car. Feed one panel at a time under the Roll Bar main hoop in the center, then work them forward between the Roll Bar and B-pillar. You will have to bend the lower portion of the trim panel to squeeze it between Bar and B-pillar. Use masking tape if desired to protect Roll Bar and trim panels from scratches. Panel should fit as it did originally; if not, check for clearance issues and trim further if needed.



NOTE: As previously discussed, if you desire quick in/out access with trim panels installed, you will need to enlarge trim panel cuts to allow access to the Roll Bar's bolts.

- 21) Fit Roll Bar's two diagonal tubes to the main hoop. The joints are precision-machined and may be tough to fit if not aligned correctly. Remove any seam sealer under diagonal tubes' "feet" if necessary. Pulling forward on main hoop may also assist with alignment. Install two provided bolts into each diagonal tube joint and snug into place.
- 22) Mark all 6 holes through each mounting foot (12 total), and remove diagonal tubes. The forward 2 and rear-most 2 holes are drilled with 7/16" drill bit. The center 2 holes are drilled with a 9/32" drill bit.
- 23) Elevate rear of vehicle and secure with jackstands under body (NOT under axle), or place vehicle on a lift. With the help of an assistant, hold the two large nut plates under the vehicle (weld nuts facing downward) and align with drilled holes. From inside the vehicle, insert two provided M6 bolts and washers through the center two holes into the nut plates. Leave M6 bolts loose to aid in aligning Roll Bar feet. Use of threadlock recommended (pictures on following page).



24) Install Roll Bar diagonal tubes as in step 21 above. Start bolts in machined fittings first, then start all 4 bolts in each foot next. After all bolts are started, tighten all bolts, including the two M6 nut plate retainer bolts.

25) **TORQUE SPECS:** Torque specs for the factory corner gussets are not available in the factory service manuals. Based on the numbers stamped onto the bolt heads, you should be safe to torque the OEM bolts to 60 Newton Meters (NM). Similarly, the bolts we provide you with the kit for the Roll Bar can be torqued to 85NM.

26) Trunk carpet can be left un-modified and pushed back into trunk, it can be sandwiched between Roll Bar feet and floor, or it can be trimmed and placed around tubes, as shown:



27) Seat lower cushion may be reinstalled if desired. Install shoulder harnesses through Roll Bar's belt retainer loops, and fasten/secure/buckle as per harness manufacturer's instructions. Enjoy your Watson Racing 4-point Roll Bar!

Thank you for choosing Watson Racing products! If you have any technical questions or comments, please call us at: 855-WATRACE (928-7223).