



by



## INSTRUCTIONS FOR 1963-65 BUICK RIVIERA FRAME STUB

- 1) Set your car on jack stands and level it from front-to-back and side-to-side. Set the vehicle up in a place with a clean enough floor that you can mark with a felt tip pen. Be sure to set the stands under the frame and not under the suspension. Use shims to get the frame exactly right. Make sure the rear stands are far back enough on the rails so the frame will not tilt upwards once the original front section of the frame starts getting removed. The frame cannot move at any point from this point forward.
- 2) Use a plumb bob and a felt tip pen to ACCURATELY mark the locations, and measure and record the heights off the floor for your front body mounts, axle centerline, core support centerline, and bumper holes onto the floor below. Any measurements for a round or elongated hole should be taken at the center of that opening. Be particularly accurate with the core support since this measurement locates the new stub and greatly affects your front sheet metal alignment. We have a video on our YouTube channel that shows a stub install on a 1951 Mercury that can be used for reference. While the measurements will be different the method is the same.
- 3) Mark the frame cutoff point at 10" forward of the front body mount center. Make this measurement on the floor from the marks already made and then use your plumb bob to make the mark on the frame rails. This prevents an inaccurate mark that can be made by taking the measurement diagonally. Use a level to mark a vertical line on the frame rails and carefully cut the old frame at that point. Drill several plug-weld holes in the frame close enough to the cutoff point so you can tack and plug-weld the supplied gussets to the inside walls of the original frame rails. Once the gussets are installed the new stub can then be slid over these gussets and set on jack stands. The actual connection is figured at 10-1/4" leaving a 1/4" gap to be filled. Line up the tops of the old and new frame at the same height. You can either pre-drill the new stub for plug-welding or drill the holes once the stub is positioned and tack-welded in. On some applications it can be helpful to slit the corners of the old and new frames to get a

smooth joint. Tack-weld just the upper corners of the new frame stub and clamp it together so it can still be adjusted in the next step.

1

- 4) With the stub lightly tack-welded and clamped you can now begin matching the previously made measurements from the original front frame. The core support height and location will be the most important along with the axle centerline location. Bumper mounts can vary from vehicle to vehicle and can always be re-drilled if necessary.
- 5) Once the locations have been set and verified to be correct you can securely tack the new frame stub in place and fit the supplied blend wedges to the bottom of the rails.
- 6) At this point we HIGHLY recommend rechecking the measurements and fitting the sheet metal and bumpers back on the new frame stub. Check the wheel-to-center of fender opening also. This is the time when you can adjust if needed. Once you have verified that the new stub is correctly located you can then finish welding it in place, fill the plug-weld holes, and make sure you get complete weld penetration at all of the seams.
- 7) You can now begin installing the suspension components onto your new frame stub. Follow the supplied instructions for each of those components. At this point you can also set your drivetrain in place and set the engine and transmission mounts up.
- 8) Once the drivetrain and exhaust are in place you can set up the steering rack-to-column connection. Steering hookup may require two or three U-joints to get around the exhaust or any other components. Be sure to keep the U-joints in phase with each other and use an idler bearing when using three u-joints for stability. We have two and three U-joint kits and a braided stainless power steering hose kit available.
- 9) Once the vehicle is FINISHED and fully weighted you can set the ride height. Please do not try to install coil springs too early in the build as it can be dangerous and costly in many ways if you decide to do so. The ride height will be correct when the lower control arms are sitting level under the FULL WEIGHT of the vehicle. Once the ride height is set you can have your alignment done. The alignment specifications will be as follows:
  - 1/8" toe-in
  - 1/2 degree positive camber
  - 1-2 degrees positive caster for a manual rack
  - 3-4 degrees positive caster for a power rack