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## **BMW RACING PERFORMANCE FRONT STRUT BAR ONE PIECE INSTALLATION INSTRUCTIONS**

BMW has manufactured thousands of these cars and they are not all the same. This is called manufacturers tolerance. With age the chassis strut towers migrate/change location after years of use. In some cases this can cause assembly problems for the front strut installers. The 3 piece adjustable strut bars are easier to install but not as rigid or structurally sound.

Put the car on a flat surface, set rear brake, chock rear wheels, and remove front strut top nuts, 13 mm. 3 pieces on both sides. Attempt to install bar over studs, sometimes it will slide over with no problems. Because the front towers are inclined in 2 planes of angularity-to achieve caster-camber settings- the studs are at different angles in respect to each other. To make the bar fitting easier- jack up the front chassis so one side of the studs will be flush with shock tower- loosely attach opposite side bar and nuts, then carefully lower car so other side studs will raise up through bar holes into proper location. Finish by removing jack and tightening all stud nuts. I recommend using anti-seize on stud threads.

# **MASON** ENGINEERING

PROTOTYPE DESIGN  
MONOCOQUE CONST.  
SHEET METAL DEVELOPMENT

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## **BMW RACING PERFORMANCE REAR SHOCK TOWER STRUT BAR INSTALLATION INSTRUCTIONS**

This bar was intentionally made to have a snug fit; this is customary for race car chassis components. In cars with high mileage or cars that have been in an accident the shock towers may be closer together than normal. This can cause high spots which can cause fitting interference.

The bar can only fit one way, meaning, that the left hand shock tower has a different shape than the right shock tower. On E30 chassis the left hand tower, which is the driver side, appears to have less curvature than the right and also has two (2) bent corners at the top of the side skirt, also the right hand appears to have more curvature and appears to be more rounded.

On E36 chassis the right hand tower has less curvature and the left hand tower has more noticeable curvature.

In cars with carpeting we recommend a vertical cut made with a razor blade, approximately 3" top to bottom, where the stress bar horizontal tube will come through or the carpet can be removed and reinstalled after installation of bar.

For installation jack up the rear of the car from the cradle or suspension cross beam with the rear wheel clear off the ground. This is to allow the shock tower to separate slightly which will make for an easier installation. Clean the undercoat from the area where the bar will be attached. The bar assembly is made to fit so precisely that it does not allow for undercoat. Drop the bar in to the correct position, use four (4) 8mm. nuts and bolts the same as the shock studs, use these to temporarily bolt the bar down through the stud holes, these will be discarded later. Now you are ready to drill holes through the fender house, 1/4" dia, use the included hardware to fasten the bar skirts to the shock tower housing.

If for any reason the shock tower bar assembly is not fitting correctly it is permissible in some cases where needed to use a plastic mallet to lower the high spots of interference or slightly alter the contour of the shock tower house to allow bar assembly to drop in place