



INSTRUCTIONS

BMW E46
323i,325i,328i,330i,M3
1999 - 2006

E46 REAR Subframe Reinforcement Repair KIT

- Tools Needed:**
- Qualified tech and welder
 - Lift
 - Die Grinders
 - Basic tools
 - Caulking, primer and paint
 - Marker



Subframe area showing damage and cracks. This is the floor or body of a E46 that the rear subframe and suspension is bolted to. Damage can best be seen only when the rear suspension is removed. How intact is your present subframe mounting points?

IMPORTANT NOTE:

This task is best performed by a qualified welder / tech working with proper tools, safety equipment and use of a lift.



Active Autowerke E46 REAR SUBFRAME Reinforcement Repair Kit.

Included KIT parts :

- Two 12mm x 1.5 bolts
- Two front sub-frame mounting plates
- One Right rear sub-frame mounting plate
- One Left rear sub-frame mounting plate
- Two cross-member spacers
- Two trunk cover plates

This kit comprises of 16 gauge steel panels that will aid in reinforcing the sheet metal at the subframe mounting points as well as redistributing the load over the new plates. Installation will require cleaning of the damage area, cutting and fitment of these steel plates to ensure a strong and proper weld, then prime and paint/undercoat.



Place the BMW on a lift and remove the rear exhaust system, driveshaft, rear brakes.

Perform all labor as per BMW labor guidelines.



Remove exhaust and heat shields.



Remove differential assembly



Remove rear subframe components.
Disconnect and plug off all open brake lines.



Empty gas tank and remove.



Empty trunk contents, carpet, etc., anything that could possibly cause a fire. Remember, the steel plates will be welded from underneath.

Disconnect BMW battery before performing any type of welding.



To ensure a clean area for a strong weld. Position reinforcements over the general area. Use a marker to outline the steel plate reinforcement. With the use of a grinder, remove the surrounding paint and undercoating outside the marker line.

Repeat same for other 3 plates



To ensure proper alignment before welding, use the bolts supplied to hold the plates in position.

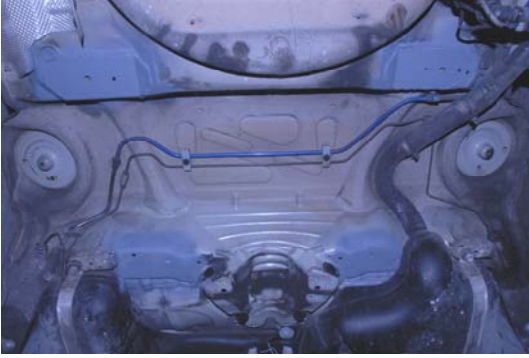
After bolting the steel plates in position, you will see other holes in the steel plate. Drill through these holes to break the outer sheet metal.

Using the welder, fill this hole to fuse the inner sheet metal to the new steel plate.



Finish welding the steel plate around to create a strong reinforcement. Repeat same for other THREE plates

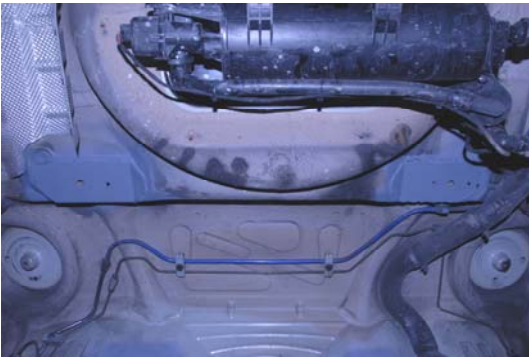
Inspect the weld and grind the weld areas FLUSH for re-installation of the suspension components later.



Clean welding area of scaling and/or flux.
Prime, then seal with caulking.
Paint area after dried



Front plates welded and prepped



Rear plates welded and prepped

Lower the BMW and look inside the trunk.
Go to the area inside the trunk that is the top of the rear subframe mounting point.
Most cracks develop at in this area, but one cannot see these cracks because it is in a box area
below the trunk surface



Place the two SQUARE steel plates in the trunk floor as per picture shown.
Draw a line around the steel plate.
Make another line about ¼" inside the line just drawn. See picture

Using grinder with a cut-off wheel, cut the trunk floor following the inner lines of the square.
The square hole cut out will be smaller than the steel plate that's supplied with the kit.



When the square is cut out, one will see a inside box section of the trunk.

At the floor of this box section, one can see 3 dimple style bumps. They form a triangle shape pattern.

Make a triangle cut inside the 3 dimples.
One will see the steel plate once the triangle is cut out.



Weld the perimeter of the triangle and other cracks you may see.

Clean welding area of scaling and/or flux.
Prime, then seal with caulking.
Paint area after dried



Place the SQUARE steel plate that comes with the kit over the smaller square hole.
Tack weld in position.
Bend and confirm shape to trunk flooring then finish weld around

Clean welding area of scaling and/or flux.
Prime, then seal with caulking.
Paint area after dried



Start re-assembly of the rear subframe and suspension.



Install the 2 aluminum flat spacers that are provided in the KIT.

Using some of the caulking, adhere the aluminum flat spacers to the left and right side of the cross member.

E46 3 series uses aluminum cross member and the M3 uses a steel cross member.

Failure to use these spacers may result in a uneven surface resulting in damage to the cross member if not installed and tightened.

Reassemble in reverse order, remember to check driveshaft bolts and brake caliper lines.

BLEED Brakes before as well.

Look over the installation and check all fittings for proper torque, perform road test then do an alignment

Thanks for choosing Active Autowerke. If you have any questions, just give us a call at 305.233.9300 EST M – F 9:00 – 6:00