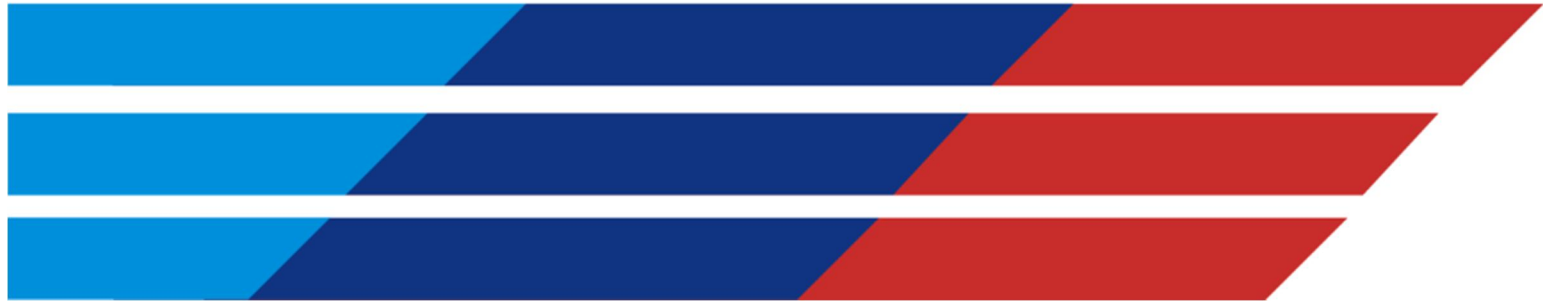


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## **Z3 DIFFERENTIAL INSTALLATION**

**WARNING: ANY AND ALL AUTOMOTIVE WORK CARRIES SIGNIFICANT RISK! THIS GUIDE IS FURNISHED AS A HELPFUL DOCUMENT FOR THE DO-IT-YOURSELF INDIVIDUAL. THE AUTHOR AND ALL ASSOCIATED PARTIES ACCEPT NO RESPONSIBILITY OR LIABILITY FOR DAMAGES AND/OR LOSSES RESULTING, INCLUDING SERIOUS INJURY OR DEATH, FROM THE USE OF THIS GUIDE OR ANY OTHER MATERIALS.**

### **STEP 1:**

**USING A HYDRAULIC JACK, PLACE THE DIFFERENTIAL ON THE JACK AND SLOWLY LIFT THE DIFFERENTIAL BACK INTO THE CAR. IT MIGHT TAKE A FEW TIMES TO GET IT TO BALANCE CORRECTLY ON THE JACK. LINE UP THE DRIVE SHAFT BOLTS AS YOU ARE PUSHING UP. IT HELPS TO HAVE THE TRANSMISSION IN NEUTRAL AT THIS POINT TO ALLOW THE DRIVE SHAFT TO SPIN IF NECESSARY. NOW HERE IS THE TRICKY PART - YOU NEED TO LIGHTLY THREAD IN ALL FOUR BOLTS ON THE TOP OF THE DIFFERENTIAL. LEAVE THE DIFFERENTIAL AS LOW AS POSSIBLE TO GET THEM ALL STARTED. THE TWO ON THE VERY TOP ARE THE HARDEST TO LINE UP - I SUGGEST THAT YOU DO THESE FIRST. AFTER THEY ARE ALL STARTED, TIGHTEN ALL FOUR OF THEM UP. THE TORQUE SPEC IS 110NM ON THESE BOLTS, BUT REALISTICALLY IRRELEVANT AS THERE IS NO WAY TO MEASURE IT IN THAT SMALL SPACE. I GO WITH THE THINKING THAT YOU DON'T WANT YOUR DIFF LOOSE, SO TIGHT AS POSSIBLE. MY GENERAL RULE IS AS TIGHT AS POSSIBLE WITH AN 18" BREAKER BAR.**

**BIMMERDIFFS NOW OFFERS A Z3 DIFFERENTIAL STUD KIT TO AID WITH RE-INSTALLATION. THE LOW PRICED KIT MAKES ATTACHING THE DIFFERENTIAL TO THE SUBFRAME MUCH EASIER.**

### **STEP 2:**

**THE HALF SHAFTS ARE AT THE PERFECT HEIGHT TO ATTACH TO THE DIFF AGAIN, SO DO IT! AT THIS HEIGHT, IT'S PRETTY EASY TO REASSEMBLE.**

**STEP 3:**

**REINSTALL REAR SPRINGS.**

**STEP 4:**

**JACK UP DIFFERENTIAL INTO CAR. MAKE SURE TO PROPERLY SIT INTO DIFF EAR. INSERT DIFF EAR BOLT AND TIGHTEN. THIS IS THE 19MM BOLT AND NUT.**

**STEP 5:**

**SUBFRAME SHOULD NOW BE AT THE APPROPRIATE HEIGHT TO REINSTALL THE SUBFRAME RETAINER PLATES. LOOSELY INSTALL RETAINER PLATES WITH 6MM ALLEN AND POSITION CORRECT TO PUT SUBFRAME BUSHING NUTS BACK ON. TO GET THE SUBFRAME TO SIT CORRECTLY, YOU MAY NEED TO USE A RUBBER Mallet TO BEAT INTO PLACE.**

**STEP 6:**

**TIGHTEN SUBFRAME RETAINER NUTS INTO PLACE WITH A 22MM SOCKET. ONCE COMPLETELY TIGHTENED, TORQUE THE FOUR 6MM HEX RETAINER BOLTS.**

**STEP 7:**

**IT'S TIME TO REMOVE THE JACK. MAKE SURE EVERYTHING IS TIGHT AND SLOWLY LOOSEN IT.**

**STEP 8:**

**THE DRIVESHAFT 16MM NUTS CAN NOW BE REATTACHED. THIS REQUIRES PLACING THE TRANSMISSION INTO GEAR, INSTALLING A FLANGE NUT, PUTTING THE TRANSMISSION IN NEUTRAL, SPINNING THE DRIVESHAFT 90 DEGREES, AND REPEATING.**

**STEP 9:**

**REATTACH EXHAUST HANGERS WITH 13MM NUTS. REMEMBER THAT IF YOU HAVE GROUNDING STRAPS, THEY NEED A DOUBLE NUT.**

**STEP 10:**

**USE FLOOR JACK TO ELEVATE TRAILING ARMS AND REINSERT 18MM SHOCK BOLT.**

**STEP 11:**

**REATTACH DIFFERENTIAL SPEED SENSOR.**

**STEP 12:**

**REATTACH ALL WIRING PREVIOUSLY LOOSENEED FOR REMOVAL.**

**STEP 13:**

**USING A 17MM SOCKET, REATTACH REAR WHEELS. WHEELS NEED TO BE PROPERLY TORQUED – THIS IS CRITICAL!**

**STEP 14:**

**JACK UP REAR END UNDER THE DIFFERENTIAL AND REMOVE JACK STANDS. REMOVE FRONT WHEEL CHOCKS.**

**STEP 15:**

**REFILL / TOP OFF FLUID. OUR FLUID PREFERENCE IS AMSOIL SEVERE GEAR. CONTACT BIMMERDIFFS FOR A QUOTE IF YOU NEED ANY GEAR OIL OR OTHER SUPPLIES.**