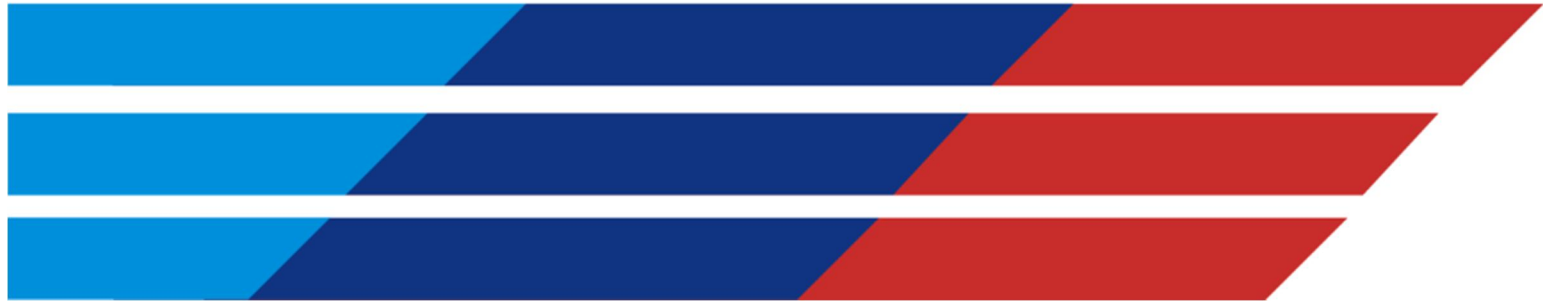


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Z3 DIFFERENTIAL REMOVAL

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STEP 1:

USING A HIGH QUALITY JACK, LIFT THE REAR OF THE CAR. THE BEST WAY TO JACK THE REAR IS UNDER THE DIFFERENTIAL (BUT NOT BY THE DIFFERENTIAL COVER!).



STEP 2:

PLACE JACK STANDS UNDER THE REAR HOCKEY PUCKS (JACK POINTS) AND LOWER THE CAR ONTO THEM. BLOCK THE FRONT WHEELS TO PREVENT THE CAR MOVING.



STEP 3:

REMOVE REAR WHEELS FROM CAR USING A 17MM SOCKET.



STEP 4:

REMOVE EXHAUST HANGERS FROM THE BODY WITH A 13MM SOCKET. YOU DON'T HAVE TO REMOVE THE HANGERS FROM THE EXHAUST.



STEP 5:

PULL DOWN SLIGHTLY ON BOTH SIDES OF EXHAUST TO GET A BIT OF HANG FROM THEM. DON'T WORRY IF THEY DON'T DROOP TOO MUCH AS IT'S ONLY NECESSARY TO GET A BIT OF DROP.

STEP 6:

REMOVE LOWER SHOCK BOLT USING AN 18MM SOCKET.



STEP 7:

USING AN E12 FEMALE STAR SOCKET, REMOVE ALL 12 HALF-SHAFT BOLTS CONNECTED TO THE DIFFERENTIAL. USE THE HAND BRAKE TO KEEP THE DIFF IN POSITION WHEN DOING THIS. REMOVE A FEW, LOOSEN HAND BRAKE, SPIN HALF SHAFTS, AND THEN RESET HAND BRAKE.



STEP 8:

UNCLIP, BUT DO NOT DISCONNECT ALL ABS AND BRAKE SENSOR LINES. THIS WILL ALLOW FOR THE SUBFRAME TO DROP JUST A BIT WITHOUT RIPPING WIRES.



STEP 9:

DISCONNECT SPEED SENSOR.



STEP 10:

REMOVE DIFF EAR BOLT USING A 19MM SOCKET (AND IMPACT HELPS OUT). YOU MUST PUT A BOX END WRENCH ON THE NUT. TRY TO WEDGE THE WRENCH AGAINST THE DIFFERENTIAL AND TURN THE EXPOSED REAR BOLT. MAKE SURE THAT THE DIFFERENTIAL IS STILL SUPPORTED BY THE JACK.



STEP 11:

REMOVE DRIVE SHAFT NUTS WITH A 16MM WRENCH. THE BOLTS ARE PRESSED IN, SO JUST THE NUT COMES OFF. THIS WILL REQUIRE PUTTING THE CAR IN GEAR, REMOVING ONE, PULLING THE CAR IN NEUTRAL, SPINNING THE DRIVESHAFT 90 DEGREES, AND PUTTING IT BACK INTO GEAR TO GET THE NEXT.



STEP 12:

USING A 6MM ALLEN SOCKET, REMOVE THE SUBFRAME SUPPORT BRACKETS FROM THE FRAME. IT IS BEST TO HAMMER IN THE SOCKET, THEN USE A BREAKER BAR TO REMOVE. THEY CAN BE NASTY TO REMOVE. TAKE YOUR TIME AND DO NOT STRIP THE INSIDES.



STEP 13:

USE A 22MM SOCKET TO REMOVE THE SUBFRAME BUSHING RETAINER. THE SUBFRAME WILL REMAIN IN ITS POSITION BECAUSE THE JACK IS STILL HOLDING THE DIFFERENTIAL AT THIS POINT.



STEP 14:

SLOWLY DROP THE JACK HOLDING THE DIFFERENTIAL. SLOW IS THE KEY HERE. IF THERE'S ANY HOLDUPS, STOP AND FIND OUT THE RESISTANCE. THE SUBFRAME, INCLUDING THE DIFFERENTIAL WILL SLOWLY DROP WITH THE JACK. YOU MAY NEED TO PUSH SIDE TO SIDE ON THE SUBFRAME TO GET IT LOOSE ENOUGH TO START DROPPING.



STEP 15:

THE REAR SPRINGS SHOULD NOW BE REALLY LOOSE. PULL THEM OUT.



STEP 16:

CONTINUE LOWERING THE SUBFRAME UNTIL ALL FOUR TOP BOLTS ON THE DIFFERENTIAL ARE ACCESSIBLE. YOU WILL NEED TO FIT A BREAKER BAR OR 18" RATCHET IN THERE.



STEP 17:

MAKE SURE THE DIFFERENTIAL IS STILL SUPPORTED BY THE JACK. THIS IS IMPORTANT. USING A 16MM SOCKET AND BREAKER BAR, REMOVE ALL FOUR DIFF BOLTS. DO NOT TRY TO REMOVE THE DIFFERENTIAL YET.



STEP 18:

JACK THE DIFFERENTIAL BACK UP ENOUGH TO GET THE SUBFRAME BUSHINGS AT A POINT WHERE YOU CAN START THE NUT ON THE RETAINER. HAND TIGHTEN THE SUBFRAME RETAINER NUTS TO RETAIN THE SUBFRAME IN THE CAR.



STEP 19:

PULL THE HALF SHAFTS AWAY FROM THE DIFFERENTIAL. TYPICALLY THIS IS PRETTY EASY, BUT IF THEY ARE SEIZED, JUST TAP WITH A RUBBER Mallet.



STEP 20:

GENTLY START DROPPING THE DIFFERENTIAL WITH THE JACK. DROP JUST ENOUGH TO CLEAR THE DIFF EAR. AT THIS POINT, THE DIFFERENTIAL NEEDS PULLED BACKWARDS AND SEPARATED FROM THE DRIVESHAFT. ONCE SEPARATED FROM THE DRIVESHAFT AND CLEAR OF THE SUBFRAME, DROP IT COMPLETELY. CONGRATULATIONS, YOU JUST REMOVED YOUR DIFFERENTIAL.

