



Install Directions

S38 + M30 Low Profile Engine Mount Arm





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From all of the asses at Angry Ass, thanks for purchasing an Angry Ass S38 + M30 Low profile engine mount arm!

Please read this entire installation manual prior to attempting to install or use the Angry Ass S38 + M30 Low profile engine mount arm to ensure proper installation and safe use.

The Angry Ass S38 + M30 Low profile engine mount arm should only be installed by persons skilled in vehicle component installation and performance. Angry Ass Limited shall not be held liable for any damage or personal injury (including direct, indirect, or consequential damage) sustained as a result of improper installation of the Angry Ass S38 + M30 Low profile engine mount arm or its use and maintenance contrary to the instructions and warnings contained herein.

If you have any questions regarding the installation and/or proper use of the Angry Ass S38 + M30 Low profile engine mount arm, or this manual, please contact Angry Ass via our official website at: www.Angry-Ass.com.

All statements made are made in respect to the Angry Ass S38 + M30 Low profile engine mount arm being used "as is". Any modifications to the Angry Ass S38 + M30 Low profile engine mount arm or its improper installation, use or maintenance that is not in accordance with this installation manual, may result in severe damage to the engine and/or vehicle as a whole, as well as personal injury. Angry Ass Limited reminds you to be responsible and stay safe!!

Thanks again for choosing Angry Ass!



PARTS LIST

The following parts are contained in your kit:

1. 1X Low profile engine mount arm
2. 1X M8X25 Allen head bolt
3. 1X M8 Nord-Lock washer
4. 3X M10X25 10.9 SEMS bolts
5. 1X M10X1.5 Tap
6. 2X Loctite 243
7. 1X 2 AWG Ground cable
8. 1X Fuchs Chemplex 825 dielectric grease

TOOLS & SHOP SUPPLIES

You will need the following:

1. Ratchet
2. Torque wrench capable of 100 Nm
3. Breaker bar
4. 10mm socket
5. 13mm socket
6. 15mm socket
7. 17mm socket
8. 6mm Allen drive
9. 6-12" extension
10. Cleaner/degreaser
11. Scotch bright or other abrasive
12. Tap handle
13. Small adjustable wrench or flat jawed pliers
14. Jack or vehicle lift
15. 4X Jack stands if using jack
16. 4X Wheel chocks
17. Multimeter
18. Engine beam if doing work in the car



FOREWORD

Ideally this work should be accomplished while the engine is out of the car and on an engine stand to allow for easier access and added safety. That being said we understand this isn't always possible so we will be describing how to replace the engine mount arm in the vehicle. **ATTENTION: This adds complexity due to needing to properly support the engine and ensure it does not shift while the arm is unbolted. You can be badly injured or killed if you do not take the proper precautions!!**

1. Begin by immobilizing the vehicle to allow safe lifting of the entire vehicle. Properly chock the rear axle wheels, ensure the vehicle is in park (automatic) or in gear (manual), and engage the parking brake.
2. Proceed to safely lift the vehicle. If using a jack, install jack stands under the vehicle in appropriate locations to support the vehicle. If using a vehicle lift (lucky you), ensure that lift safety locks are engaged.
3. Place engine beam across engine bay, secure and level. Attach engine beam hook to front lifting hook of engine. See Figure 1 for M30b35 and Figure 2 for S38b36 & b38. **CAUTION: Under no circumstances should this be done with an engine hoist! You have a very high chance of lifting the car off the lift or jackstands and/or not controlling the engines mass when the arm is unbolted!! If you do not have the proper equipment do not proceed!!**

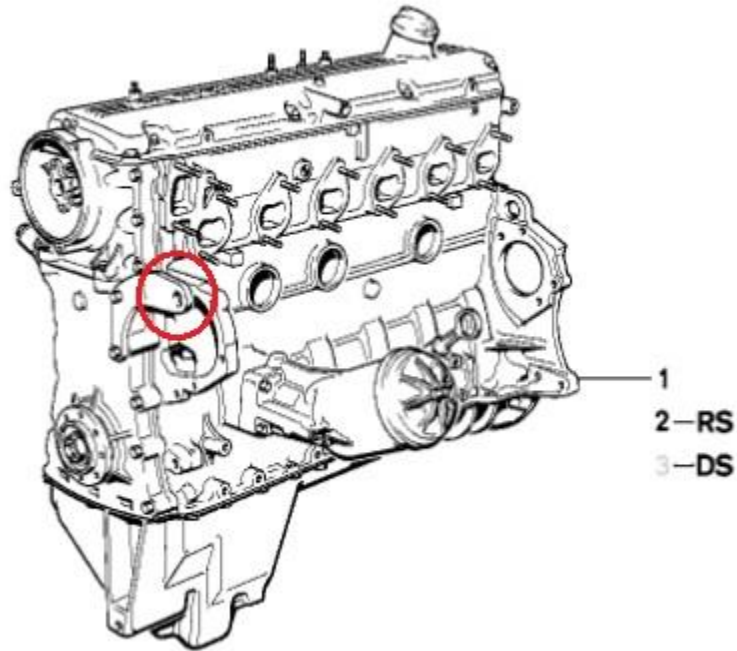


Figure 1

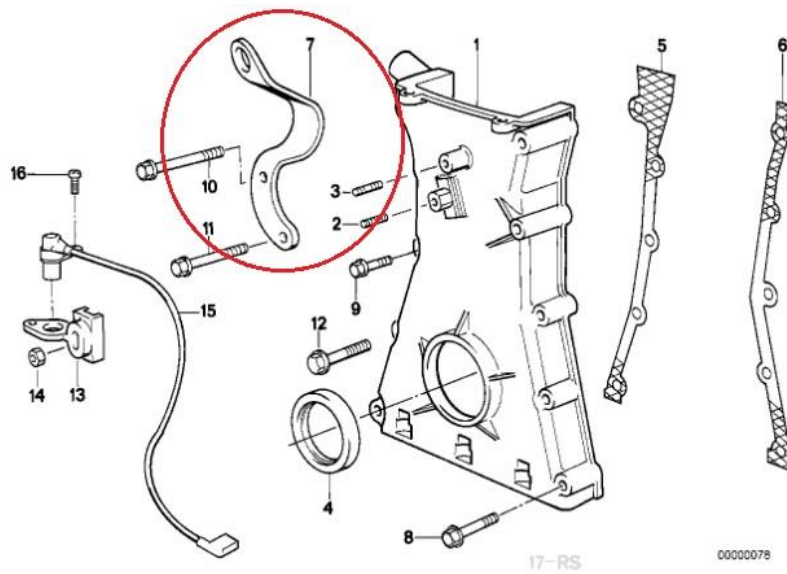


Figure 2



4. With the engine beam connected to the engine apply a slight lifting load on the engine through the engine beam to stabilize it during the removal of the engine mount arm.

5. Proceed to remove the underbody shield using your 10mm socket and ratchet.



Figure 4



6. With the underbody shield removed it's time to start removal of the mount arm. On the S38 you need to unbolt the exhaust heat shield using your 13mm see Figure 5. M30 proceed to step 7.



Figure 5



7. Next using your 13mm socket and breaker bar unbolt the engine to chassis ground cable at the chassis position. See Figure 6.

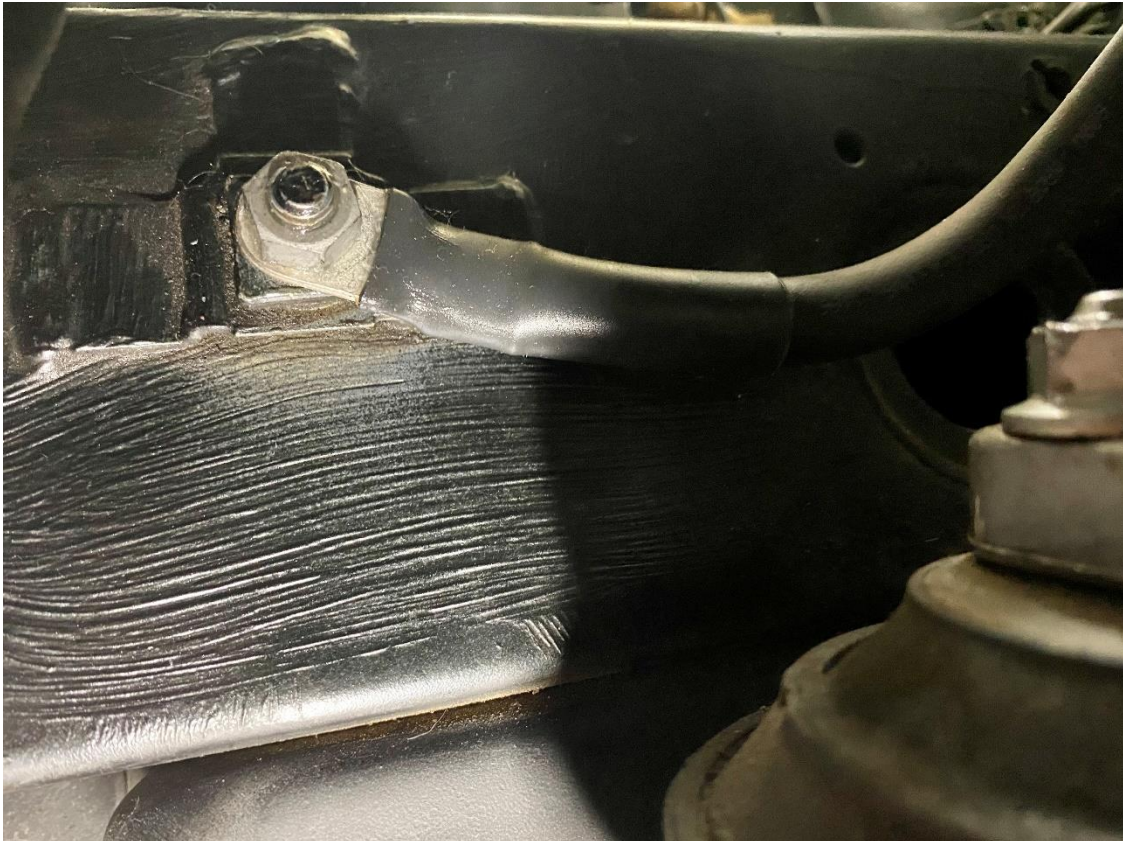


Figure 6



8. With the ground cable disconnected move on to removing the engine mount arm to isolation mount nut using your 15mm socket and breaker bar. See Figure 7.



Figure 7



9. Next up its time to remove the engine mount arm from the engine, it's attached with 3X M10 screws that require a 17mm socket and your breaker bar. We have found it easiest to loosen all of the bolts enough to verify that the arm is under no load due to being supported by the engine beam, you should be able to move the arm by hand. If not increase lifting load on the engine beam. We have found it easiest to remove the bottom two bolts first and the top last. See Figure 8.

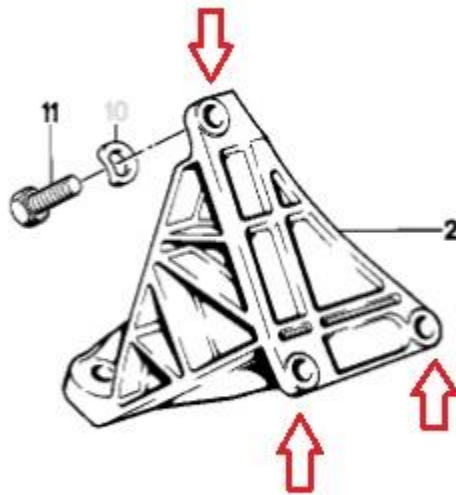


Figure 8

10. With the bolts removed it's time to remove the arm. **CAUTION: Be very aware of your hand and tool locations when removing the last bolt in case the engine shifts!!**



11. Once you've removed the engine mount arm it's time to prep the mounting surfaces for your Angry Ass S38 + M30 Low profile engine mount arm. Start by thoroughly cleaning the mount pads and then ensure there is no rust or scale using your abrasive. See Figure 9.



Figure 9



12. Once you have the pads cleaned up its time to chase the threads using your included M10X1.5 tap. We aren't cutting new threads we are only cleaning out the existing threads, start by hand threading the tap in to ensure you are properly aligned. Then use your tap handle or if you are low on room your adjustable wrench or flat jawed pliers. If you are uncomfortable using a tap or don't know how you should use one of your old bolts that has clean threads and thread it in and out of the holes a few times to ensure the threads are clean. See Figures 10 & 11.



Figure 10



Figure 11



13. With your threads and pads cleaned it's time to install your mount arm. Position your arm over the engine isolation mount stud (motor mount) and line up your arm on the three mount holes we will be using. See Figure 12.

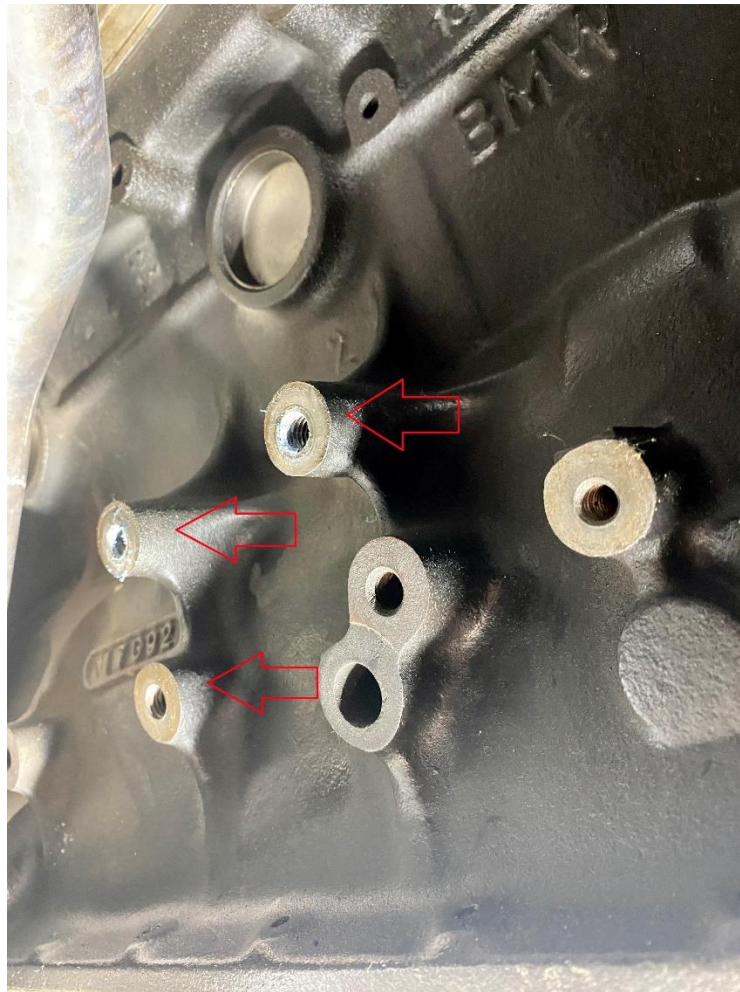


Figure 12

14. Using your new M10 10.9 hardware apply a drop of Loctite 243 to the threads of the bolts and thread them in by hand.



15. Using your 15mm socket and torque wrench torque the 3X mounting bolts to 66 Nm. See Figure 13.



Figure 13

16. Add a drop of Loctite 243 to the threads of your motor mount stud and torque the nut to 47 Nm.



17. Remove your existing ground cable from your old engine mount arm (makes a great paper weight!) using your 13mm socket and ratchet. If you selected our optional chassis to ground cable now is the time to open it. If your old ground cable lugs are oil or dirty degrease them and your chassis mount now. **ATTENTION: It's critical that these positions are free of oil and dirt.**

18. Attach the engine side (end without Angry Ass logo) of the ground cable to your low-profile engine mount arm using the M8 socket head screw and Nord-Lock washer, making sure that the lug is in the rectangular recess of your mount arm and the Nord-Lock washer is on top of the cable lug not below. Use 6mm Allen drive to tighten to 24 Nm and ensure no rotation. **ATTENTION: Do not use Loctite here!** See Figure 14.



Figure 14



19. With the mount arm side of the ground cable attached next attach the chassis side making sure to route along the chassis rail using your 13mm socket and ratchet and torque to 24 Nm. You can put a small amount of Loctite on the nut threads, make sure not to get any on the cable lug. Ensure no components are in contact with the cable and that it has plenty of clearance to any hot components, we recommend a minimum of 5mm. See Figure 14 & 15.



Figure 15



20. As a final step with the ground cable use a multi-meter to check continuity from the chassis ground lug to the oil pan, you may have to dig your probe into the aluminum a bit to get passed the oxide layer. Record your resistance in the “Notes” section of this manual. Wrap up the ground cable by covering the arm and chassis lugs and any exposed metal with dielectric grease. See Figure 16 & 17.



Figure 16



Figure 17

21. Reinstall your underbody shield using your 10mm socket and ratchet.

22. Due to the broad application of the Angry Ass S38 + M30 Low profile engine mount arm and with most of those being custom we don't offer a heatshield option for the arm and the isolation mount but we highly suggest using one. If you need help with creating a heatshield, please get in touch at info@angry-ass.com.



NOTES