

ENGINE

Engine & Gearbox Suspension - Repair Instructions - X6 (N54)

ENGINE SUSPENSION

22 11 001 REPLACING RIGHT ENGINE MOUNT (N54)

Necessary preliminary tasks:

- Remove **right engine support arm** . See **22 11 100 REPLACING RIGHT ENGINE SUPPORT ARM (N54)**.

Detach vacuum hose (1) from engine mount.

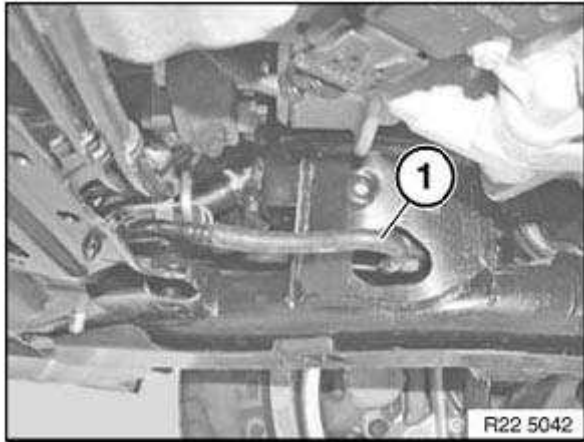


Fig. 1: Identifying Vacuum Hose

Courtesy of BMW OF NORTH AMERICA, INC.

Release screws (1) and remove engine mount (2).

Tightening torque. See 22 11 1AZ in **22 11 ENGINE SUSPENSION** .

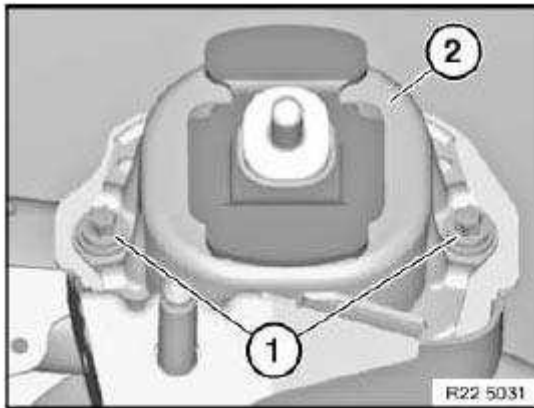


Fig. 2: Identifying Engine Mount And Screw
 Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Holes (1) in engine mount must point to middle of vehicle.

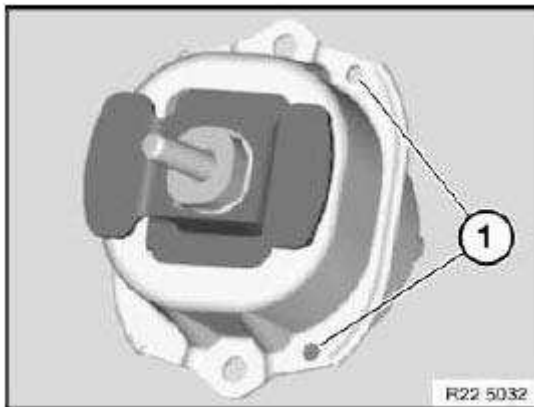


Fig. 3: Identifying Engine Mount Holes
 Courtesy of BMW OF NORTH AMERICA, INC.

22 11 011 REPLACING LEFT ENGINE MOUNT (N54)

Necessary preliminary tasks:

- Remove **left engine support arm** . See **22 11 110 REPLACING LEFT ENGINE SUPPORT ARM (N54)**.

Detach vacuum hose (1) from engine mount.

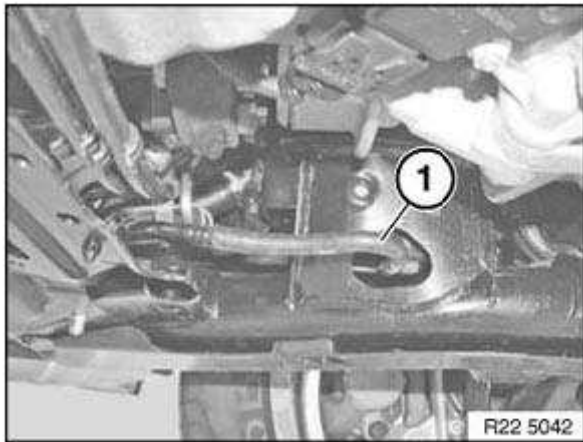


Fig. 4: Identifying Vacuum Hose

Courtesy of BMW OF NORTH AMERICA, INC.

Release screws (1) and remove engine mount (2).

Tightening torque. See 22 11 1AZ in 22 11 ENGINE SUSPENSION .

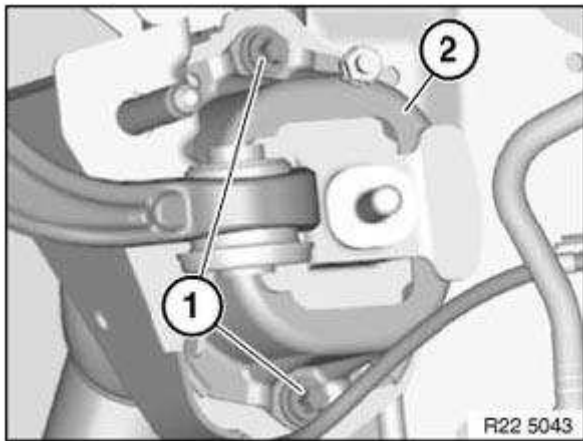


Fig. 5: Identifying Engine Mount And Screws

Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Holes (1) in engine mount must point to middle of vehicle.

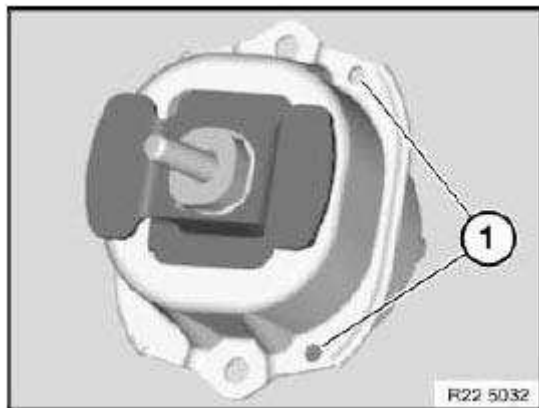


Fig. 6: Identifying Engine Mount Holes
Courtesy of BMW OF NORTH AMERICA, INC.

22 11 100 REPLACING RIGHT ENGINE SUPPORT ARM (N54)

Necessary preliminary tasks:

- Secure **engine in installation position** . See **11 00 670 SECURING ENGINE IN INSTALLATION POSITION (N54)** .
- Remove **catalytic converter for cylinders 1-3** . See **18 32 050 REMOVING AND INSTALLING/REPLACING CATALYTIC EXHAUST-GAS CONVERTER FOR CYLINDERS 1-3 (N54)** .

Observe safety instructions on raising the vehicle . See **00 LIFTING VEHICLE WITH A LIFTING PLATFORM** .

Release screws.

Tightening torque. See 22 11 3AZ in **22 11 ENGINE SUSPENSION** .

Remove engine support arm.

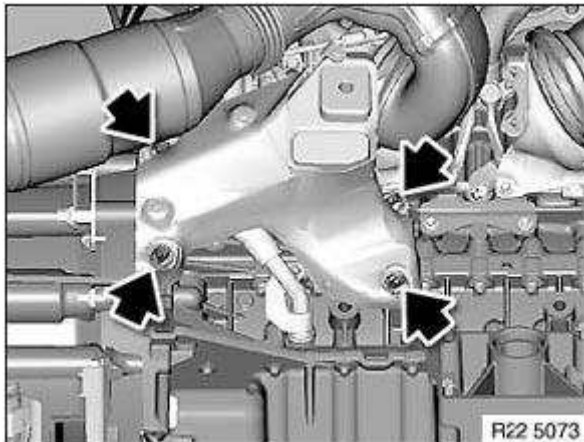


Fig. 7: Locating Engine Support Arm Screws
Courtesy of BMW OF NORTH AMERICA, INC.

22 11 110 REPLACING LEFT ENGINE SUPPORT ARM (N54)

Necessary preliminary tasks:

- Secure engine in **installation position** . See **11 00 670 SECURING ENGINE IN INSTALLATION POSITION (N54)** .
- Remove **intake filter housing** . See **11 61 050 REMOVING AND INSTALLING INTAKE AIR MANIFOLD (N54)** .
- Remove **charge air duct** . See **11 61 368 REMOVING AND INSTALLING/REPLACING REAR LEFT CHARGE-AIR DUCT (N54)** .

Release nut (1) on grounding strap.

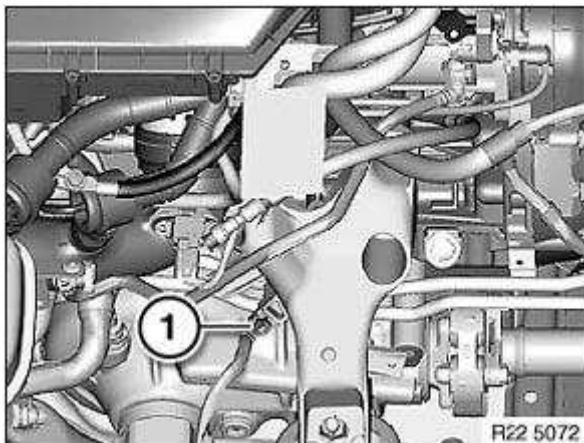


Fig. 8: Identifying Grounding Strap Nut
Courtesy of BMW OF NORTH AMERICA, INC.

Release screws (1).

Remove engine support arm.

Tightening torque. See 22 11 3AZ in 22 11 ENGINE SUSPENSION .

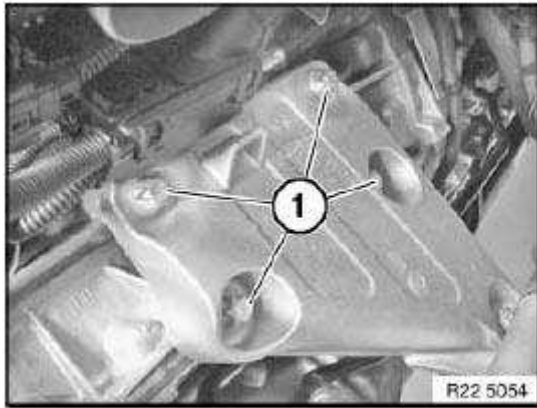


Fig. 9: Identifying Engine Support Arm Screws
Courtesy of BMW OF NORTH AMERICA, INC.

TRANSMISSION SUSPENSION

22 32 001 REPLACING RUBBER MOUNT FOR TRANSMISSION MOUNTING (ATC 450)

Necessary preliminary tasks:

- Remove **crossmember** for transmission mounting. See 22 32 050 REPLACING CROSSMEMBER FOR TRANSMISSION MOUNTING.

Attach special tool 22 1 051 with screw (1) on the housing. Pull out rubber mount with special tools 22 1 052 / 33 4 465 and 33 4 466.

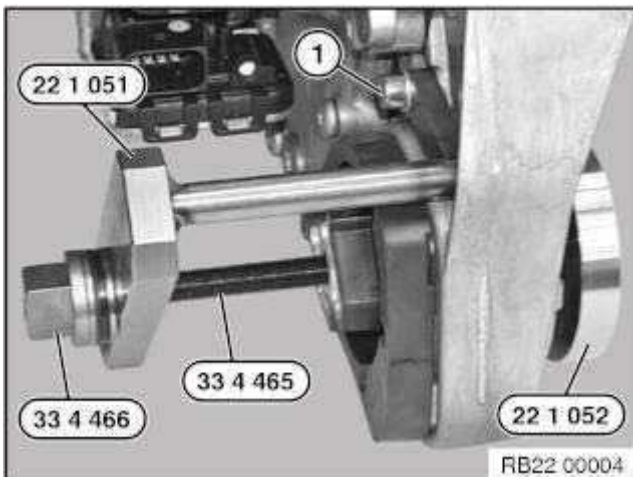


Fig. 10: Attach Special Tool 22 1 051 With Screw (1) On The Housing
Courtesy of BMW OF NORTH AMERICA, INC.

Installation note: Observe installation position of rubber mount. Arrow on rubber mount must point to arrow on housing. Coat housing bore and rubber mount with Circolight, refer to BMW Parts Service.



Fig. 11: Observe Installation Position Of Rubber Mount
Courtesy of BMW OF NORTH AMERICA, INC.

Insert special tool 22 1 102 with bolt into recesses of rubber mount.

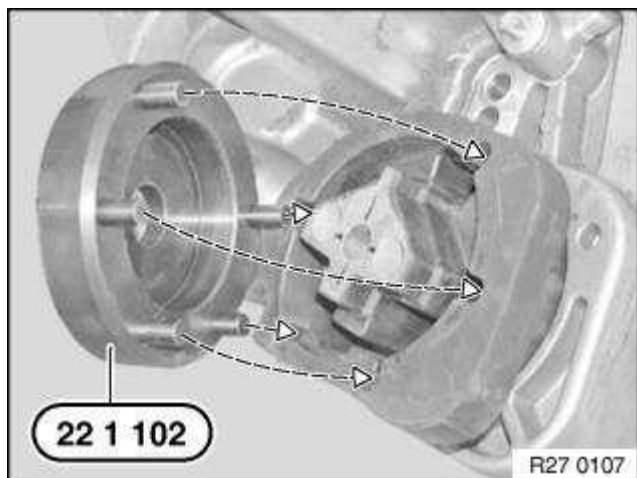


Fig. 12: Insert Special Tool 22 1 102 With Bolt Into Recesses Of Rubber Mount
Courtesy of BMW OF NORTH AMERICA, INC.

Draw in rubber mount with special tools 22 1 102 / 22 1 053 / 33 4 465 and 33 4 466.

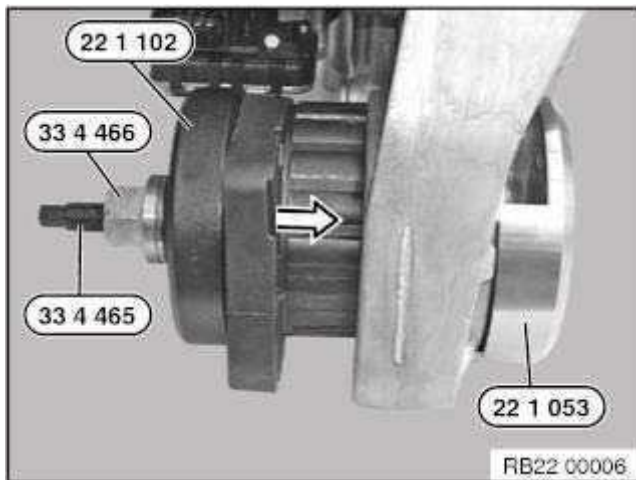


Fig. 13: Draw In Rubber Mount With Special Tools
 Courtesy of BMW OF NORTH AMERICA, INC.

22 32 001 REPLACING RUBBER MOUNT FOR TRANSMISSION MOUNTING

Special tools required:

For the following special tools, refer to **ENGINE AND GEARBOX SUSPENSION - SPECIAL TOOLS (N54, N63)** .

- 22 1016
- 22 1 017
- 22 1 101
- 22 1 102
- 22 1 103

For the following special tools, refer to **REAR AXLE - SPECIAL TOOLS** .

- 33 4 465

Necessary preliminary tasks:

- Remove **crossmember** for transmission mounting. See **22 32 050 REPLACING CROSSMEMBER FOR TRANSMISSION MOUNTING**.

Place special tool **22 1 016** on opening (1) and insert screw (2) until hand-tight against housing.

Pull out rubber mount with special tools **22 1 101 /33 4 465** and nut (**22 1 017**).

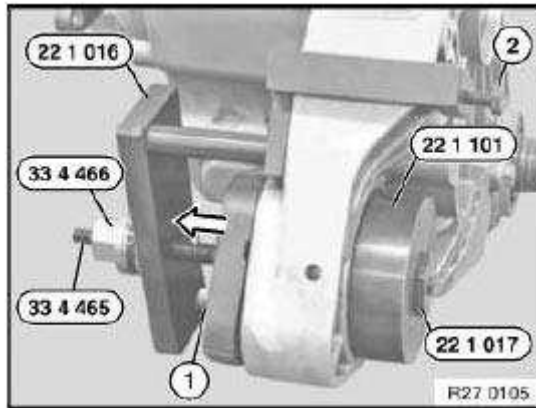


Fig. 14: Pulling Out Rubber Mount Using Special Tools 22 1 101, 33 4 465 And 22 1 017
 Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Arrow on rubber mount must point to arrow on housing.

Coat housing bore and rubber mount with Circolight (refer to BMW Parts Service).

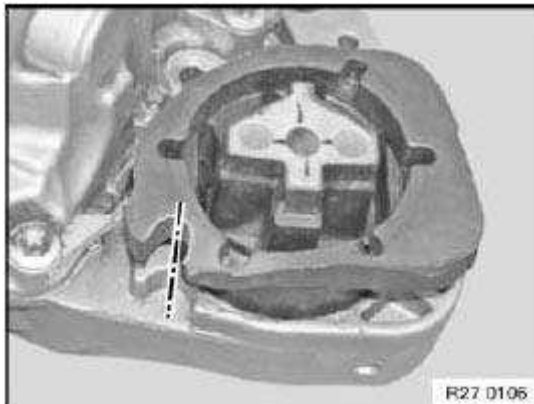


Fig. 15: Identifying Arrow On Rubber Mount And Housing
 Courtesy of BMW OF NORTH AMERICA, INC.

Insert special tool 22 1 102 with pins into openings of rubber mount.

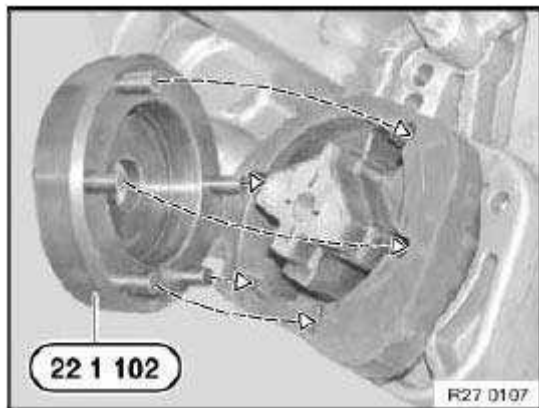


Fig. 16: Identifying Special Tool 22 1 102 On Openings Of Rubber Mount
 Courtesy of BMW OF NORTH AMERICA, INC.

Install rubber mount with special tools 22 1 102 /22 1 103 /33 4 465 and 22 1 017 .

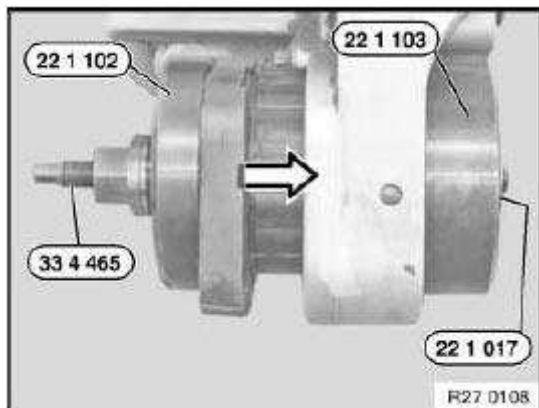


Fig. 17: Installing Rubber Mount Using Special Tools 22 1 102, 22 1 103, 33 4 465 And 22 1 017
 Courtesy of BMW OF NORTH AMERICA, INC.

22 32 050 REPLACING CROSSMEMBER FOR TRANSMISSION MOUNTING

Special tools required:

For the following special tools, refer to **00 2 030 UNIVERSAL HYDRO-LIFTER BASIC UNIT** .

- **00 2 030**
- **23 4 050**

Necessary preliminary tasks:

- Remove rear **underbody protection** . See **51 47 491 REMOVING AND INSTALLING/REPLACING REAR UNDERBODY PROTECTION** .
- Remove heat shields

- Remove **side underbody panelling** . See **51 47 ... REMOVING AND INSTALLING/REPLACING LEFT OR RIGHT UNDERBODY PANELLING** .
- Remove **exhaust system** (not M57T2). See **18 00 020 REMOVING AND INSTALLING COMPLETE EXHAUST SYSTEM (N54)** .

Supporting transmission:

Support transmission with special tools **23 4 050** , **00 2 030** .

Secure transmission to mounting with tensioning strap (1).

Tasks are described in **Transmission bracket** . See **23 ... UNIVERSAL BMW TRANSMISSION TAKE-UP** .

After completion of work, check transmission oil level.

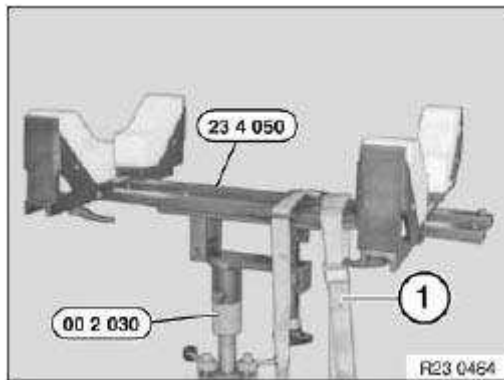


Fig. 18: Supporting Transmission Using Special Tools 23 4 050 And 00 2 030
Courtesy of BMW OF NORTH AMERICA, INC.

Release screws.

Tightening torque. See **22 32 4AZ** in **22 32 TRANSMISSION MOUNTS** .

Release screw (1).

Tightening torque. See **22 32 5AZ** in **22 32 TRANSMISSION MOUNTS** .

Remove crossmember.

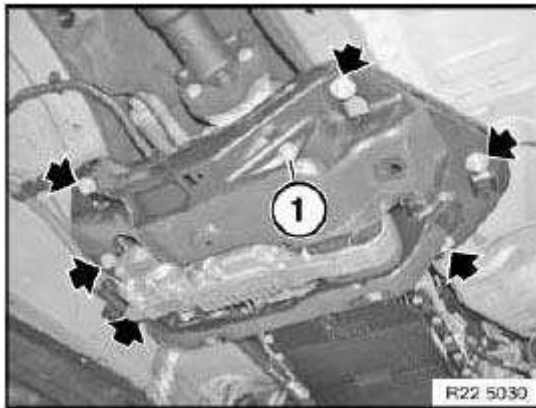


Fig. 19: Locating Crossmember Screws
Courtesy of BMW OF NORTH AMERICA, INC.