

ENGINE

Engine and Gearbox Suspension - Repair Instructions

ENGINE MOUNTING

22 11 001 REPLACING RIGHT ENGINE MOUNT (N51/N52/N52K/N53)

Necessary preliminary tasks:

- Secure engine in **Installation Position** .
- Remove underbody protection.
- Remove right V-strut (E93 only).

Release screws (1) and remove engine mount.

For tightening torque refer to 22 11 1AZ in **22 11 ENGINE SUSPENSION** .

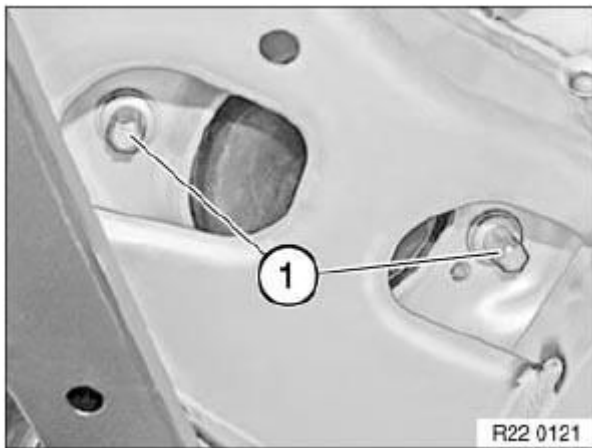


Fig. 1: Identifying Engine Mount Screws
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Rubber section (1) of engine mount must point to middle of vehicle.

Engine mount designations:

Right engine mount

- Even component number

Left engine mount

- Odd component number

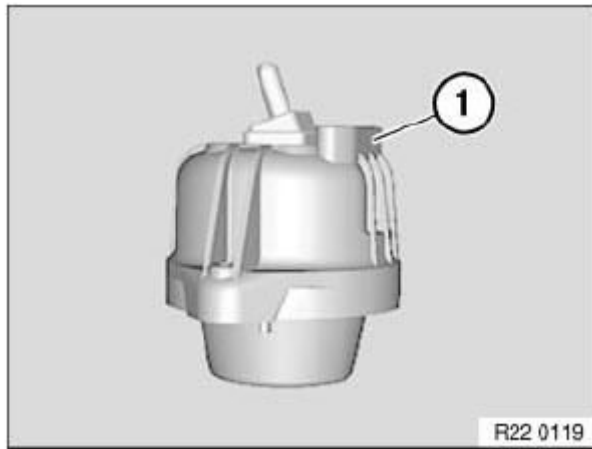


Fig. 2: Identifying Rubber Section Of Engine Mount
Courtesy of BMW OF NORTH AMERICA, INC.

22 11 011 REPLACING LEFT ENGINE MOUNT (N51/N52/N52K/N53)

Necessary preliminary tasks:

- Secure engine in **Installation Position** .
- Remove underbody protection.
- Remove **Reinforcement Strut** (E90/91/92).
- Remove left V-strut (E93 only)

Remove stiffening strut (1) (E90/91).

Release screws (2) and remove engine mount.

For tightening torque refer to 22 11 1AZ in **22 11 ENGINE SUSPENSION** .

NOTE: **Illustration similar**

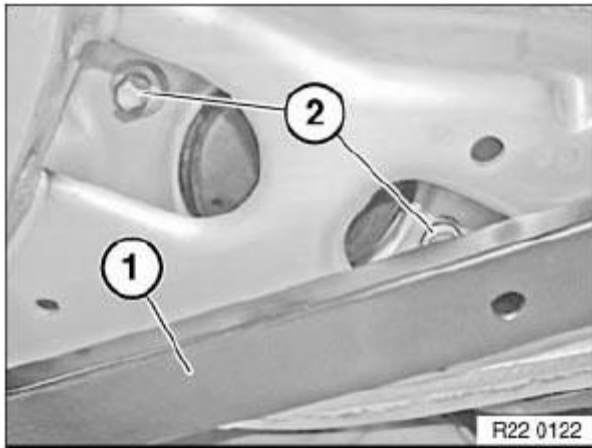


Fig. 3: Identifying Engine Mount Screws And Stiffening Strut
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Rubber section (1) of engine mount must point to middle of vehicle.

Engine mount designations:

Right engine mount

- Even component number

Left engine mount

- Odd component number

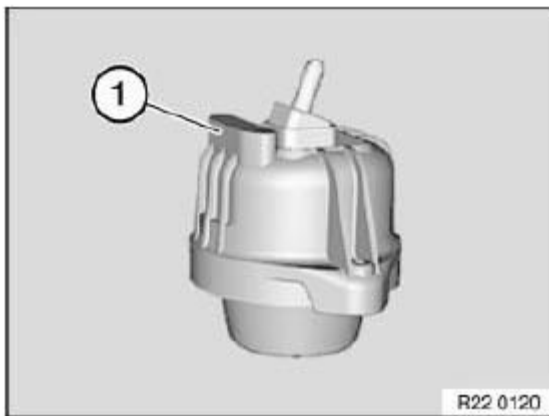


Fig. 4: Identifying Engine Mount Rubber Section
Courtesy of BMW OF NORTH AMERICA, INC.

22 11 100 REPLACING RIGHT ENGINE SUPPORT ARM (N51/N52/N52K/N53)**Necessary preliminary tasks:**

Remove **Right Engine Mount**.

Unfasten screws.

Remove engine support arm from engine.

Installation:

Aluminium screws/bolts **must** be replaced.

For tightening torque refer to 22 11 3AZ in **22 11 ENGINE SUSPENSION**

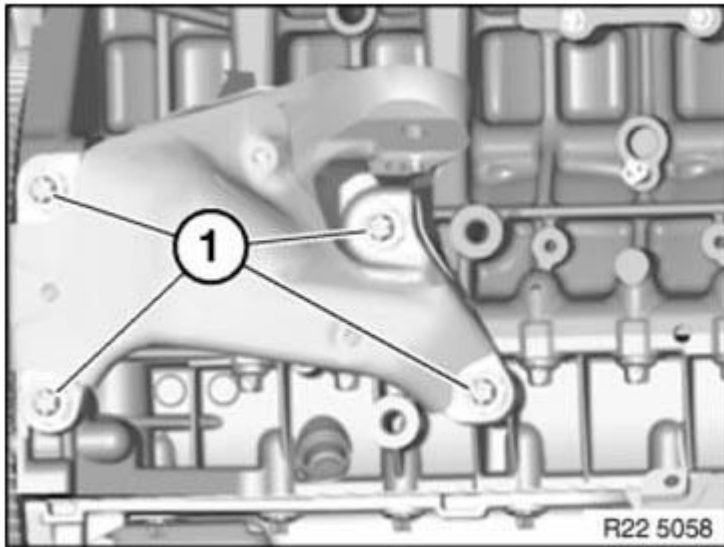


Fig. 5: Identifying Engine Support Arm Screws
Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: Illustration similar

22 11 110 REPLACING LEFT ENGINE SUPPORT ARM (N51/N52/N52K/N53)**Necessary preliminary tasks:**

- Remove underbody protection at front and rear
- Secure engine in **Installation Position**
- Remove **Intake Filter Housing**
- Remove **Reinforcement Strut** (E90/91/92 only)

- Remove V-strut (E93 only)

Release grounding strap from engine support arm.

Release screw (1).

Release corrugated tube (2) from retainer.

Release screws (3).

Remove engine support arm.

Installation:

Aluminium screws/bolts **must** be replaced.

For tightening torque refer to 22 11 3AZ in **22 11 ENGINE SUSPENSION** .

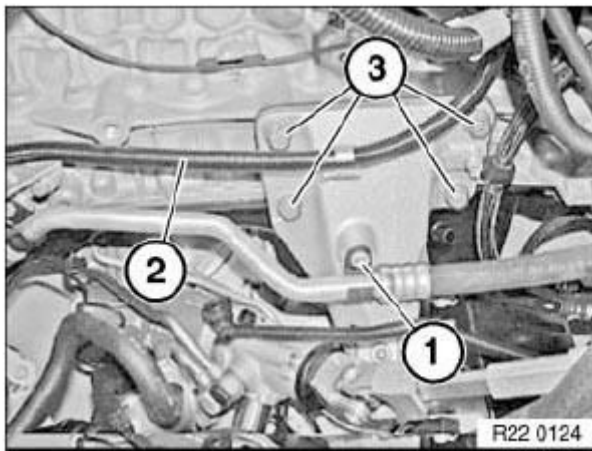


Fig. 6: Identifying Corrugated Tube From Retainer
Courtesy of BMW OF NORTH AMERICA, INC.

TRANSMISSION MOUNTING (MANUAL)

22 31 001 REPLACING RUBBER MOUNT FOR TRANSMISSION MOUNTING (MANUAL)

Necessary preliminary tasks:

- Remove rear underbody protection.
- Support transmission with lifter.

Unfasten screws (1) and nuts (2).

Remove transmission cross-member.

Remove rubber mount from transmission cross-member.

Tightening torque: see 1AZ/2AZ in **24 71 TRANSMISSION MOUNTS** .

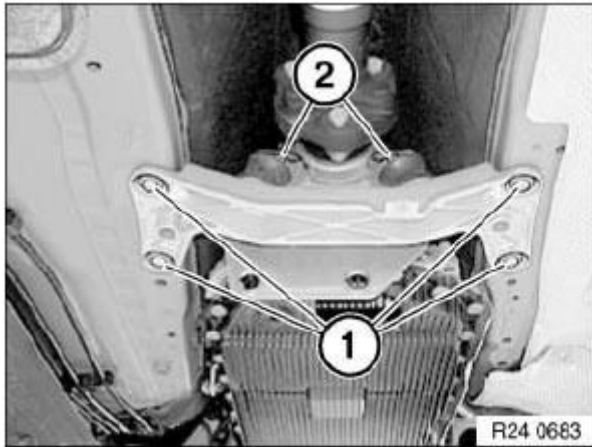


Fig. 7: Identifying Transmission Cross-Member Screw And Nut
Courtesy of BMW OF NORTH AMERICA, INC.

22 31 001 REPLACING RUBBER MOUNT FOR TRANSMISSION MOUNTING (MANUAL) (ALL-WHEEL DRIVE COUPE)

Necessary preliminary tasks

- Remove rear underbody protection.
- Replace center silencer (only E9x N53)
- Remove **COMPLETE EXHAUST SYSTEM**
- Support transmission with hydraulic lifting equipment
- Remove heat shields
- Release **FRONT PROPELLER SHAFT** , blind side
- Release **REAR PROPELLER SHAFT** , blind side
- Remove **CROSSMEMBER** from transfer box

Lower transmission with hydraulic lifting equipment.

Mount special tools **22 1 042 / 22 1 041** on transfer box.

Pull out rubber mount with thrust plate **22 1 043** by means of spindle **33 4 460** and nut 22 1 017.

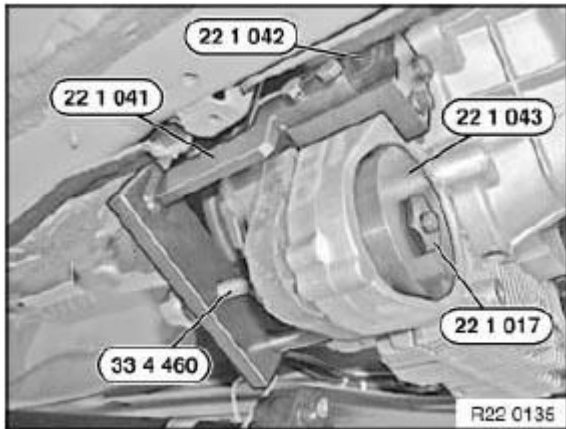


Fig. 8: Replacing Rubber Mount For Transmission Mounting (4WD) (1 Of 2)
 Courtesy of BMW OF NORTH AMERICA, INC.

Bolt special tool **22 1 044** to transfer box.

Insert special tool **22 1 045** with bolt into recesses of rubber mount.

Draw in rubber mount with special tool **33 4 460** .

Installation note:

Pay attention to installation position of rubber mount.

Coat housing bore and rubber mount with Circolight, refer to BMW Parts Department.

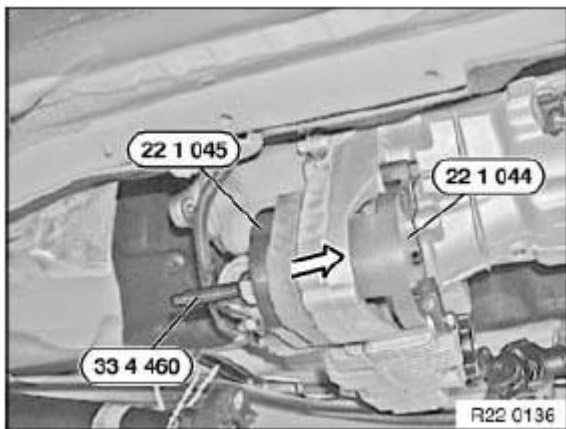


Fig. 9: Replacing Rubber Mount For Transmission Mounting (4WD) (2 Of 2)
 Courtesy of BMW OF NORTH AMERICA, INC.

22 31 050 REPLACING CROSS-MEMBER FOR TRANSMISSION MOUNTING (MANUAL)

Necessary preliminary work:

- Remove rear underbody protection.
- Support transmission with lifter

Unfasten screws (1) and nuts (2).

Remove transmission cross-member.

Tightening torque: see 1AZ/2AZ in **24 71 TRANSMISSION MOUNTS** .

NOTE: **Illustration similar.**

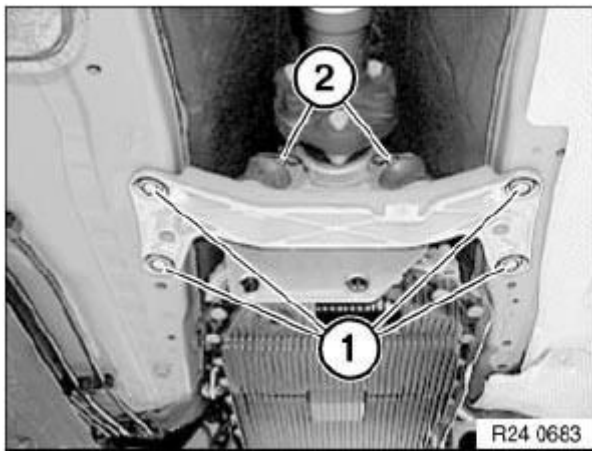


Fig. 10: Identifying Transmission Cross-Member Screw And Nut
Courtesy of BMW OF NORTH AMERICA, INC.

22 31 050 REPLACING CROSS MEMBER FOR TRANSMISSION MOUNTING (MANUAL) (ALL-WHEEL DRIVE COUPE)**Necessary preliminary work:**

- Remove rear underbody protection.
- Remove center silencer (only E9x N53)
- Remove **EXHAUST SYSTEM**
- Remove heat shields
- Support transmission with workshop jack

NOTE: **Do not M57T2**

Release screws.

Remove exhaust bracket (1).

Tightening torque: 45 Nm

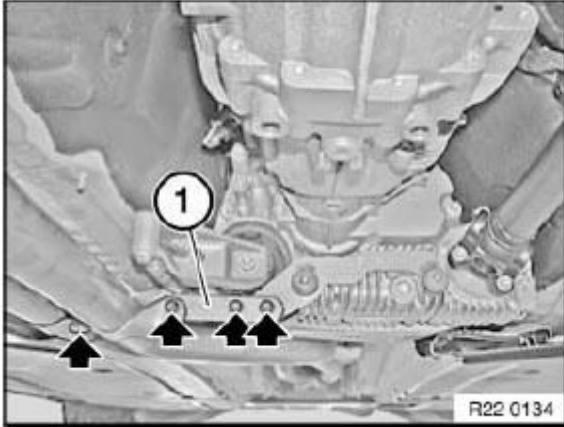


Fig. 11: Identifying Exhaust System Bracket
Courtesy of BMW OF NORTH AMERICA, INC.

Detach (only) cable from exhaust-gas temperature sensor from bracket of transmission cross-member.N53

Release screws.

Remove transmission cross member.

Tightening torque: 74 Nm

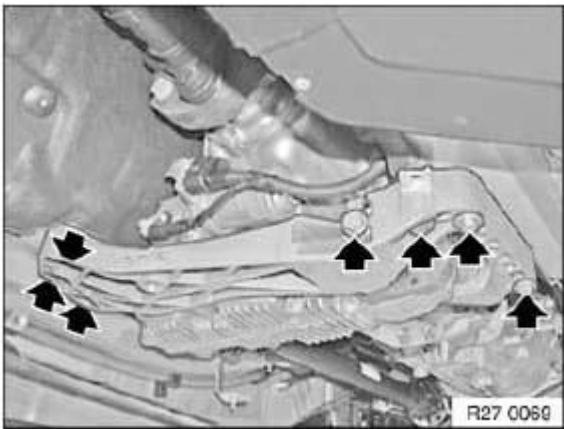


Fig. 12: Locating Transmission Cross-Member Bolts
Courtesy of BMW OF NORTH AMERICA, INC.

TRANSMISSION MOUNTING (AUTOMATIC)

22 32 001 REPLACING RUBBER MOUNT FOR TRANSMISSION MOUNTING (AUTOMATIC)

Necessary preliminary tasks:

- Remove rear underbody protection.
- Support transmission with lifter.

Unfasten screws (1) and nuts (2).

Remove transmission cross-member.

Remove rubber mount from transmission cross-member.

For tightening torque refer to 24 71 1AZ/2AZ in **24 71 TRANSMISSION MOUNTS** .

NOTE: Illustration similar.

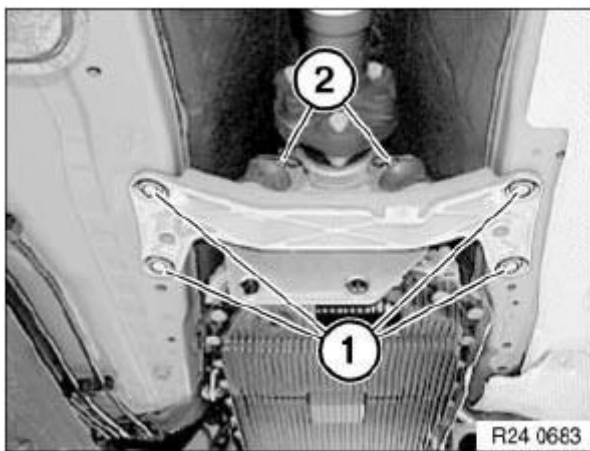


Fig. 13: Identifying Transmission Cross-Member, Screws And Nuts
Courtesy of BMW OF NORTH AMERICA, INC.

**22 32 001 REPLACING RUBBER MOUNT FOR TRANSMISSION MOUNTING (AUTOMATIC)
(ALL-WHEEL DRIVE COUPE)**

Necessary preliminary tasks:

- Remove TRANSFER CASE .

NOTE: Operation on the removed transfer case is identical to (MANUAL) (ALL-WHEEL DRIVE).

22 32 050 REPLACING CROSS-MEMBER FOR TRANSMISSION MOUNTING (AUTOMATIC)

Necessary preliminary tasks:

- Remove rear underbody protection.
- Support transmission with lifter.

Unfasten screws (1) and nuts (2).

Remove transmission cross-member.

For tightening torque refer to 24 71 1AZ/2AZ in **24 71 TRANSMISSION MOUNTS** .

NOTE: **Illustration similar.**

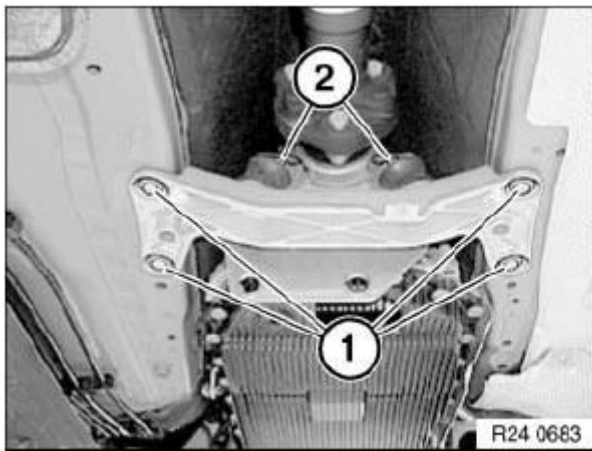


Fig. 14: Identifying Transmission Cross-Member, Screws And Nuts
Courtesy of BMW OF NORTH AMERICA, INC.

**22 32 050 REPLACING CROSS MEMBER FOR TRANSMISSION MOUNTING (AUTOMATIC)
(ALL-WHEEL DRIVE COUPE)**

NOTE: **Work is identical to (MANUAL) (ALL-WHEEL DRIVE).**