Audi B7 A4 2.0T Lightweight Flywheel

Installation Tutorial ES2739501

Safety

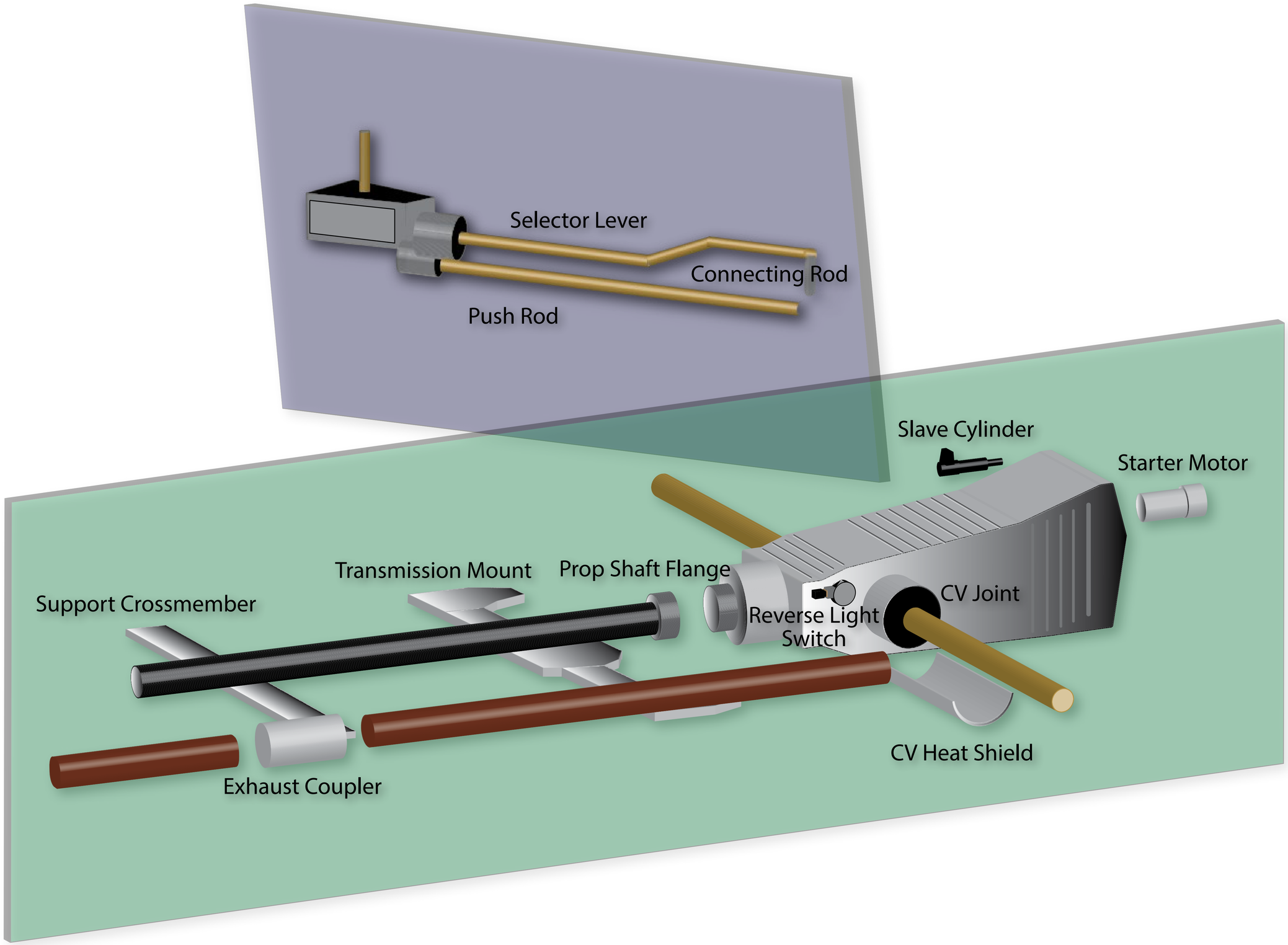
- Leave the car in neutral.
- Park the vehicle in a safe, well lit, level area.
- Open the hood and place protective covers over both fenders, front bumper, and grille.
- Disconnect the battery*

Note: Disconnecting the battery will erase keep-alive memory data from control unit RAM, including learned adaptive strategies and onboard emissions data - this data will reset after several miles of driving.

Tools Required:

- T40 Torx socket
- T45 Torx socket
- 3/8” ratchet on 3” extension
- M10 triple-square Socket
- M12 Triple-square Socket
- 6mm Allen socket
- Flat-head screwdriver
- 16mm socket
- 13mm wrench
- 18mm wrench
- Pilot bearing puller
- Zip-Ties
- Ball-pein hammer
- 18mm socket
- 13mm socket

Overview of Major Part Locations

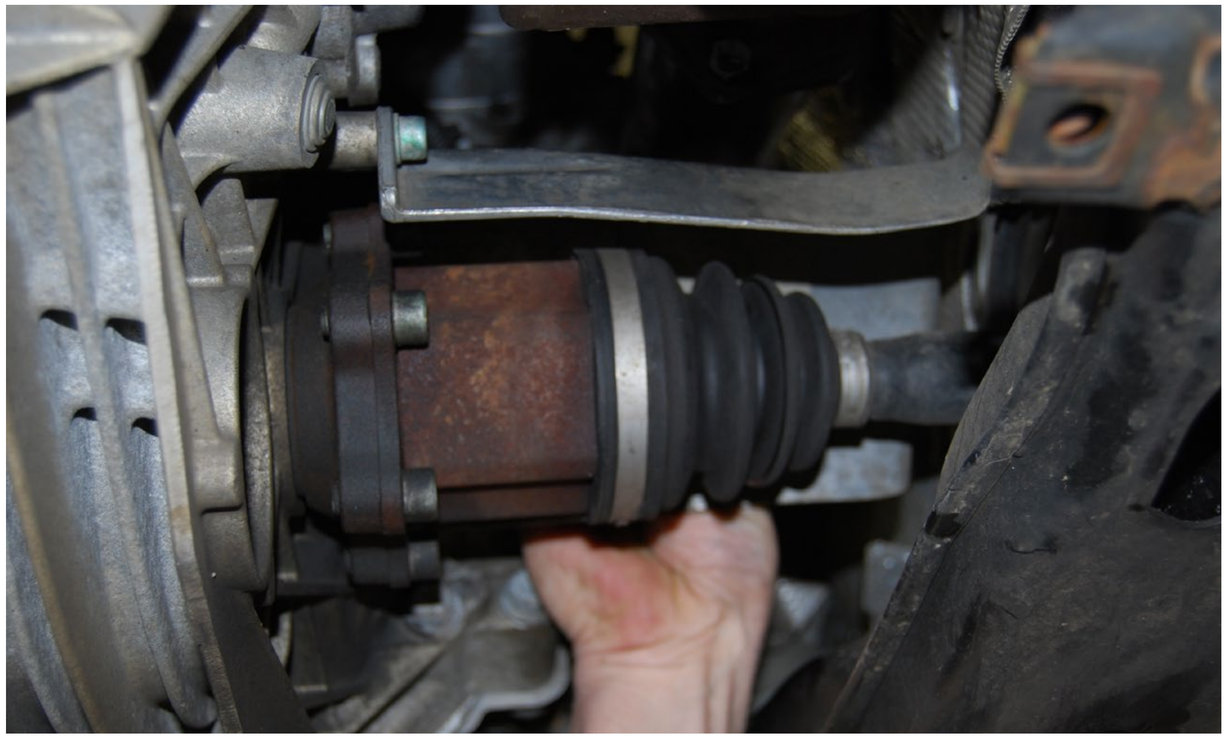


Note: Before beginning the installation, support the full weight of the engine using an engine support bar or other safe and secure method.
Doing so prevents damage to the engine mounts, various hoses, and wiring harnesses that can occur as the weight of the engine shifts throughout the procedure.

Step 1

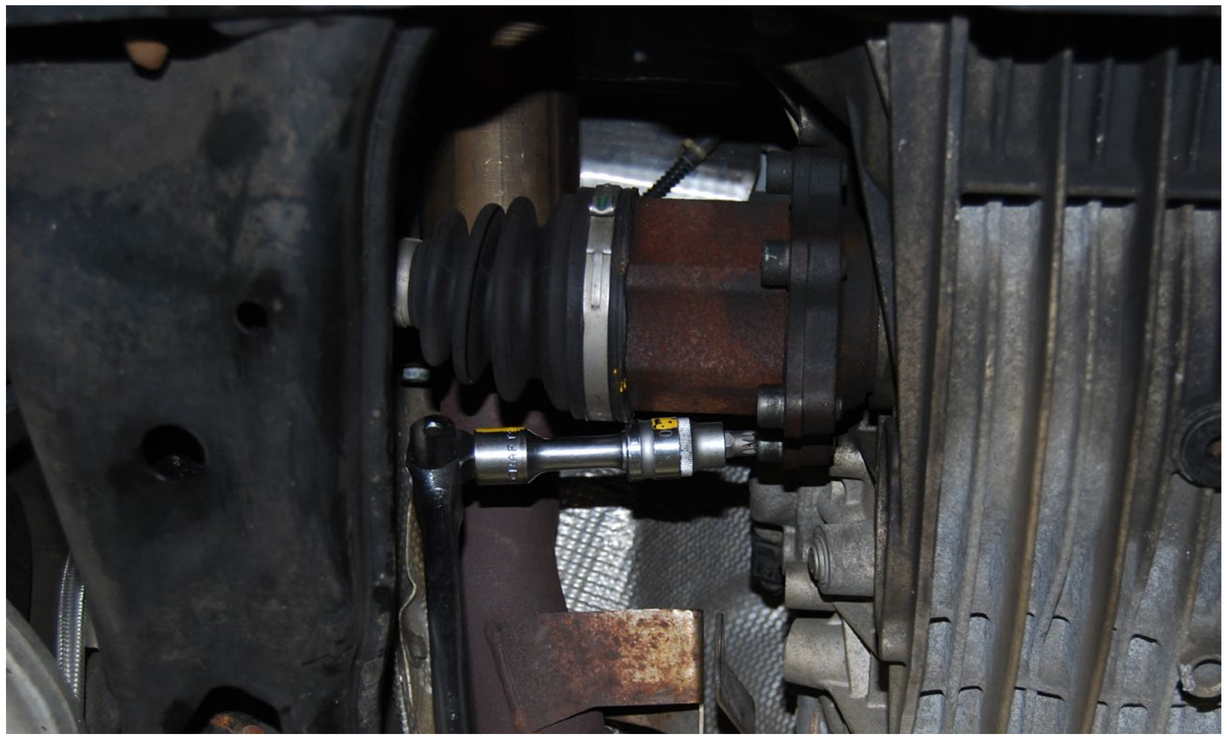
Remove the heat shield that protects the inner CV boot on the passenger's side using a T40 Torx on a 3" extension.

There are three bolts securing the heat shield in place.



Step 2

Remove the M10 triple-square bolts that secure the left and right CV joints to the transmission. There are six bolts per side.

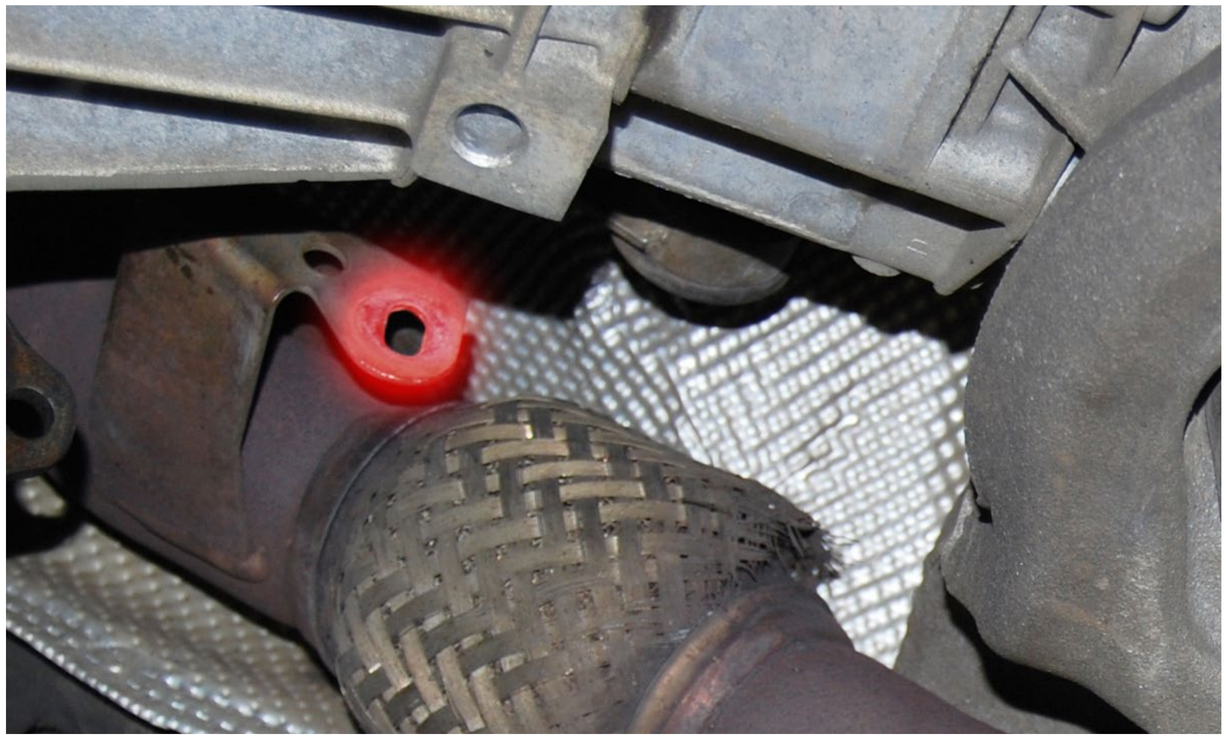


Step 3

Remove the four M10 triple-square bolts that secure the body cross-member.

Step 4

Remove the bolt securing the downpipe bracket to the transmission.



Step 5

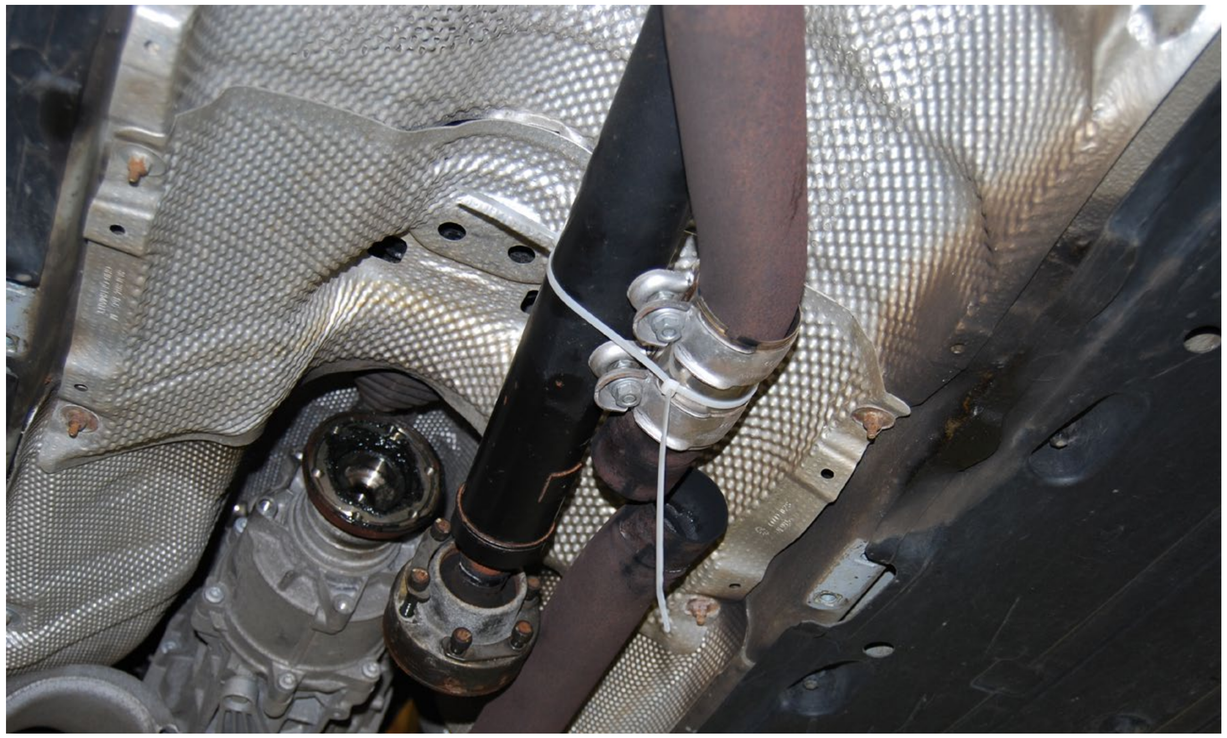
Remove the four T40 Torx bolts for the prop shaft flange heat shield, then remove the six propeller shaft bolts using a 6mm Allen socket.

Separate the propshaft from the propshaft flange. You may have to lightly tap on the propshaft joint to release it from the flange.

Step 6

Loosen the exhaust coupler and slide it rearwards onto the rear exhaust section.

Zip-tie the prop shaft to the rear exhaust pipe so that it does not rest on the rear prop shaft bushing.



Step 7

Remove the starter using a 16mm socket.

There are two bolts, a longer upper bolt and a shorter lower one.

Step 8

Unbolt the starter motor while leaving the cables and wires connected; position the starter away from your work space.

Note: The starter uses an alignment pin; it may be stuck. Spray the alignment pin and pin hole with penetrating oil to loosen if needed.

Step 9

Remove the four 16mm bolts and single 16mm nut that mate the lower engine plate to the bell housing.

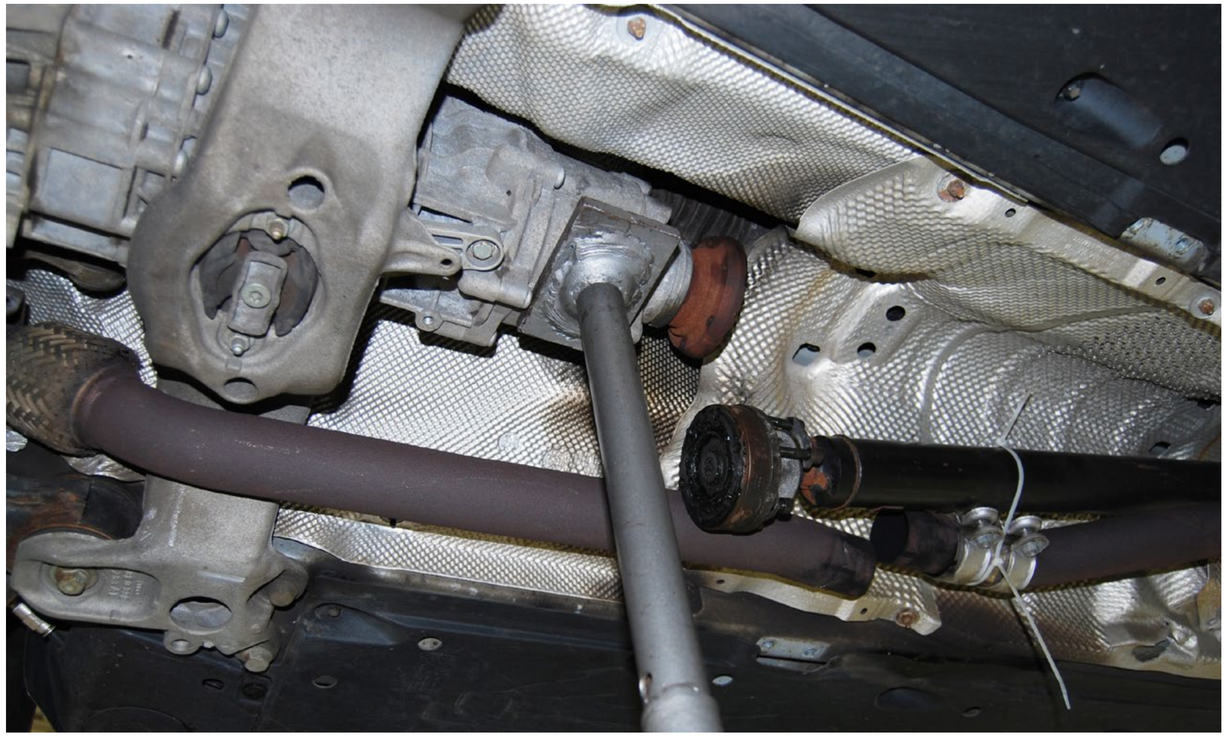
Step 10

Many of the bolts are difficult to reach.

The front subframe will make clearances tight, however, with some finesse each bolt can be removed without any further dismantling of the vehicle.

Step 11

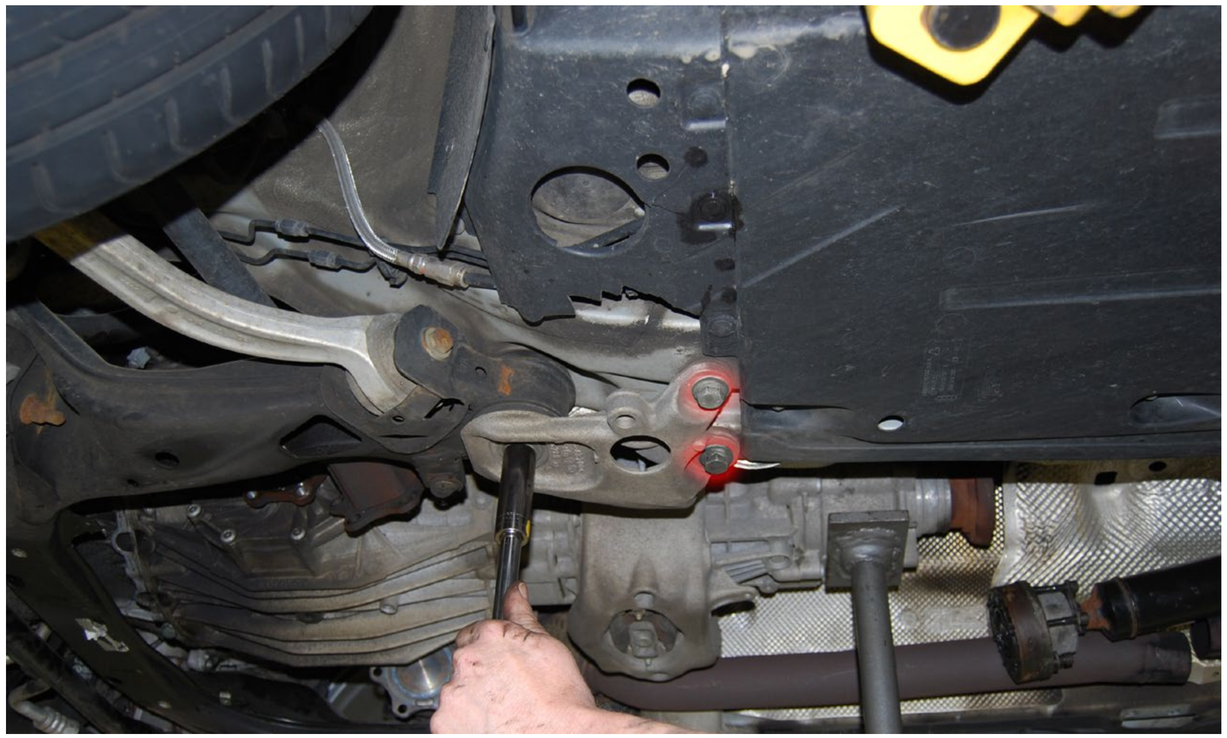
Support the transmission with a jack stand as shown before continuing the procedure.



Step 12

Remove the six 18mm bolts that secure the transmission mount cross-member.

Remove the four rearmost bolts first, then the two front.



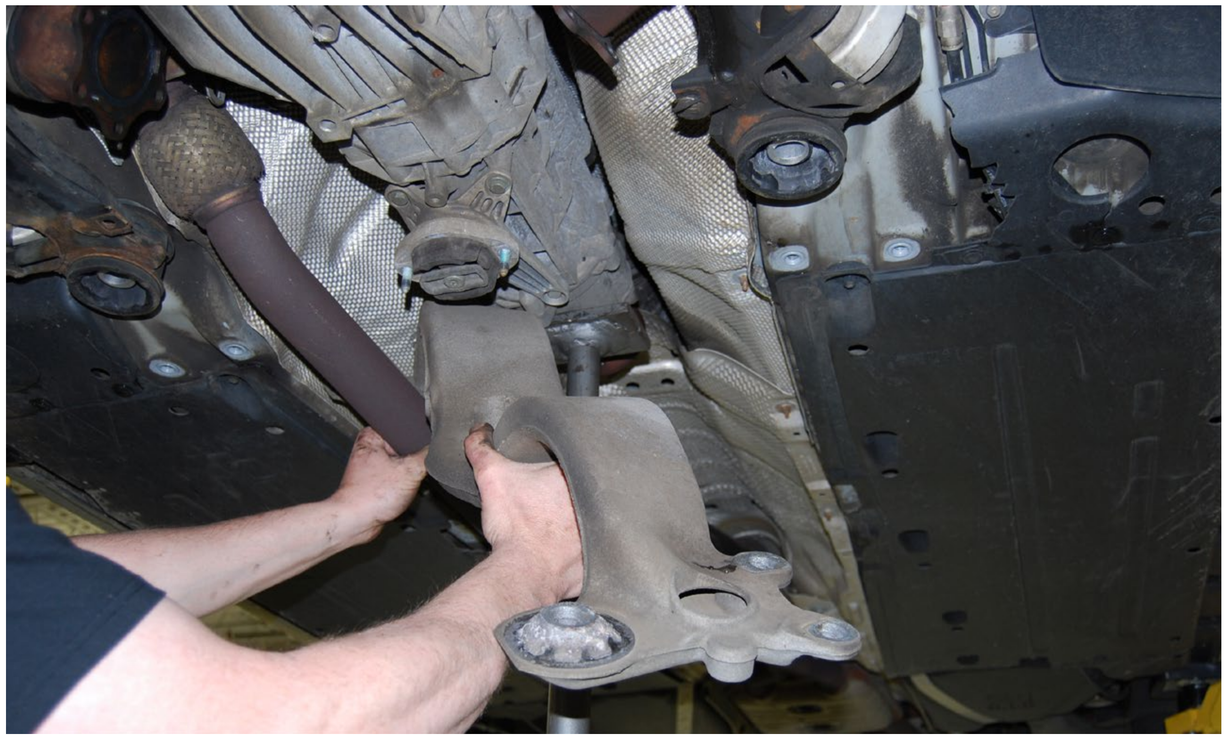
Step 13

Remove the two 13mm nuts from the center of the transmission mount, and slide it rearwards over the front exhaust section.

Remove the transmission crossmember.

Step 14

Do not allow the front exhaust member to bend too severely when removing the transmission crossmember.



Step 15

The reverse light connector is located on the passenger side of the transmission bell housing.
Lowering the car on the lift may allow for easier access to the connector.

Step 16

To disconnect the reverse light connector, release the locking tab on the connector as shown and pull the connector off of the switch.

The connector can be difficult to remove using only your hands; use a metal pick tool or a dedicated connector removal tool to make the task easier.

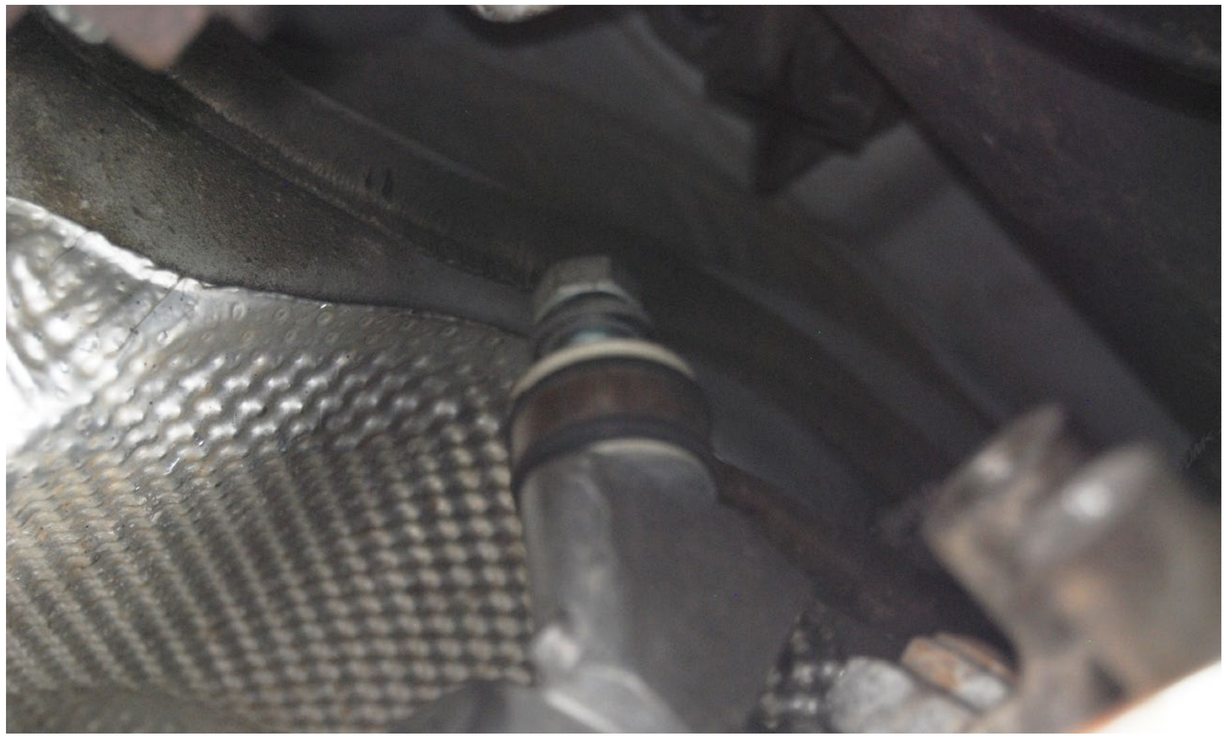
Removing the Shifter Mechanism

Step 17

Locate the left and right connecting locations for the shift linkage.

One the passenger side, a front bolt secures the shifter connecting rod to the bell housing. Remove the bolt using a 13mm socket.

On the passenger side rear, remove the shifter push rod using an 8mm hex key.



Step 18

Remove the driver side selector lever nut using a 13mm socket, and slide the selector lever off of the selector shaft.

Step 19

Remove the 6mm Allen bolt that secures the clutch slave cylinder to the left side of the bellhousing. When the bolt is removed, pull the slave cylinder straight out of the bellhousing, leaving the hydraulic hose attached.

Note: Do not press on the clutch pedal with the slave cylinder removed.

Step 20

Remove the six 16mm bolts that secure the transmission bellhousing to the engine block. Note: The bolts may be different lengths - put the bolts in order for reinstallation.

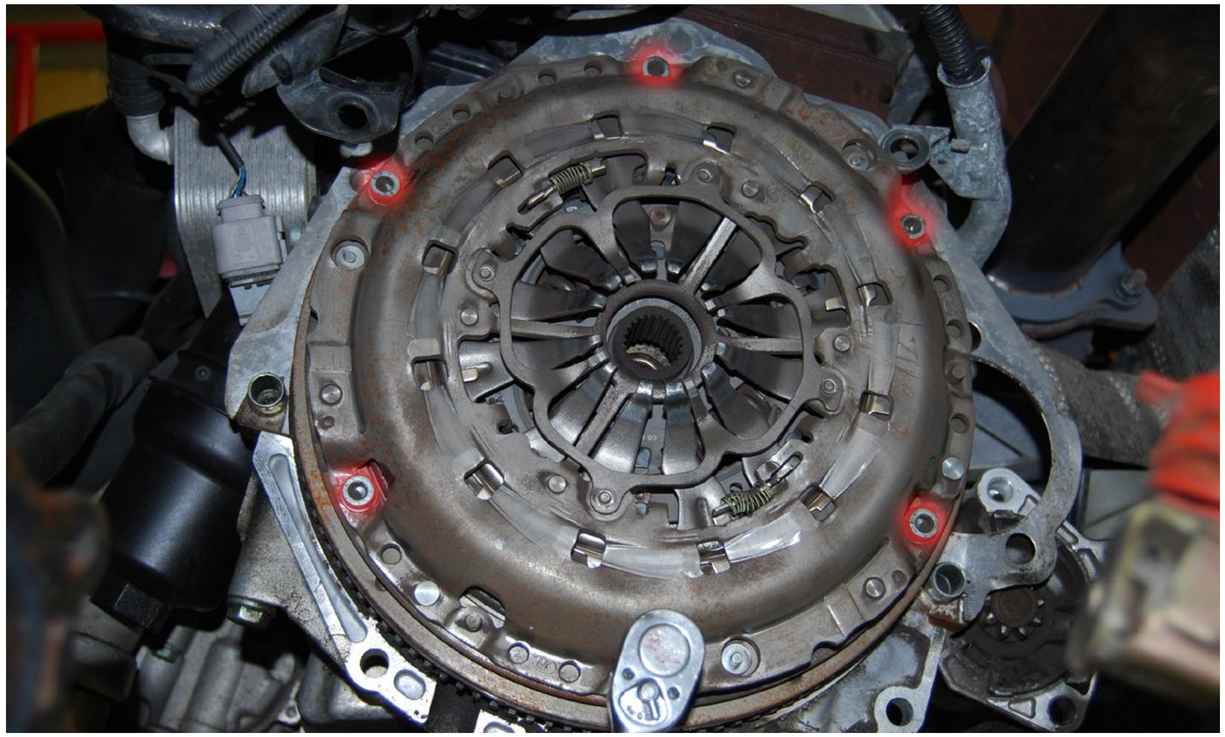
When all bolts are removed, pull the transmission straight back until the input shaft clears the pressure plate. Lower the transmission from the vehicle.

Replacing the Clutch Assembly and Flywheel

Step 21

Remove the large metal transmission spacer and set it aside.

Remove the six Allen bolts that secure the pressure plate to the flywheel using a 6mm Allen wrench.



Step 22

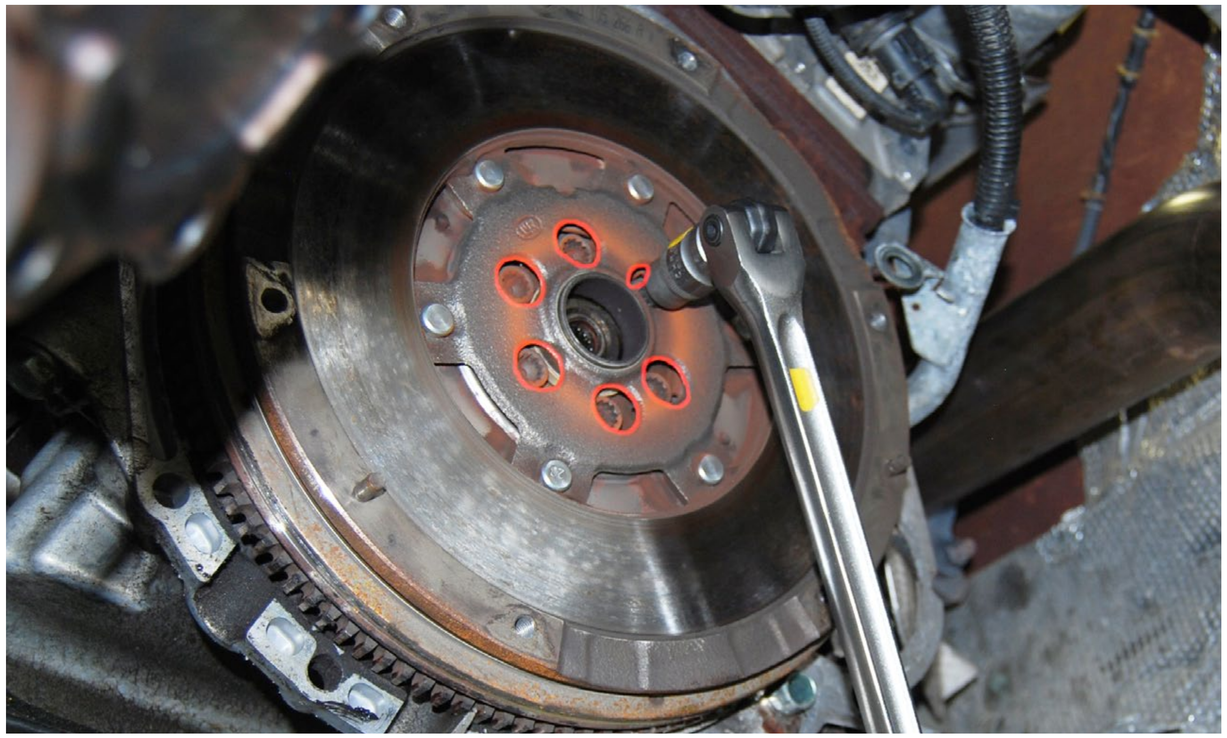
Carefully remove the pressure plate and clutch disc.

Step 23

Six M12 Triple-square bolts secure the flywheel.

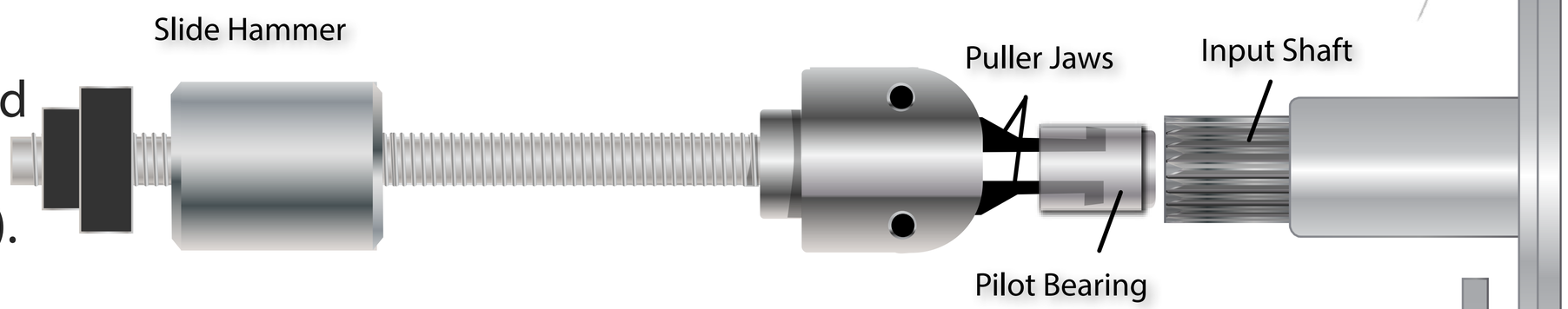
Hold the flywheel in a fixed position as you loosen the flywheel bolts.

If you do not have a flywheel locking tool, thread two bolts into the flywheel and use a long pry bar to hold it steady as the bolts are loosened and removed.



Replacing the Pilot Bearing

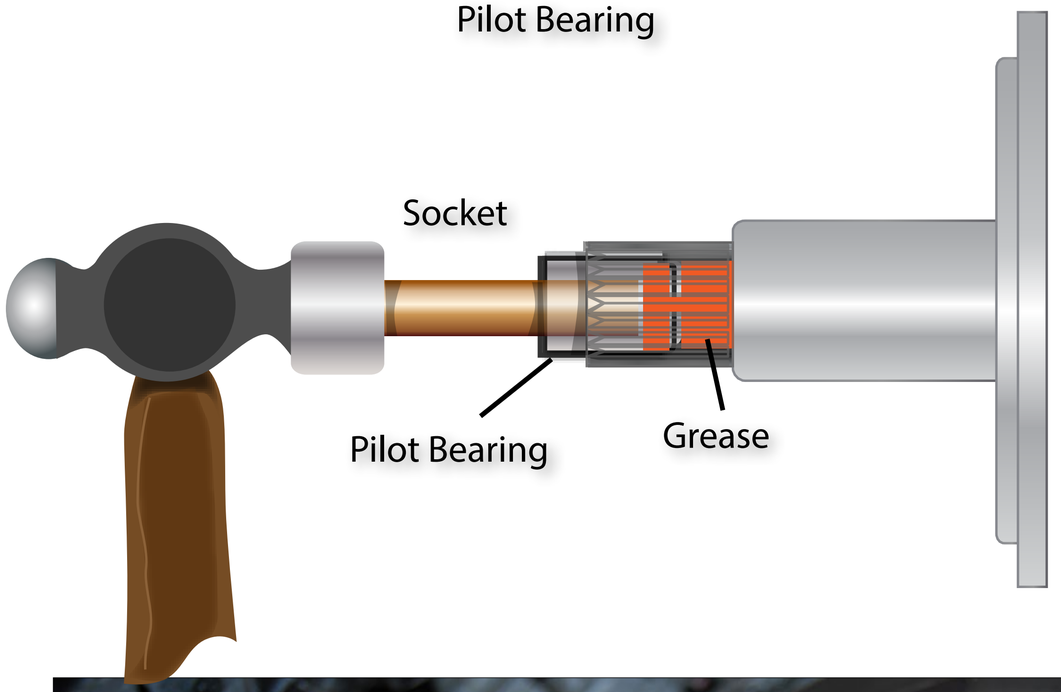
The RS4 Clutch Kit includes an RS4 Pilot Bearing. Please discard and use ES#279979 (included with this kit).

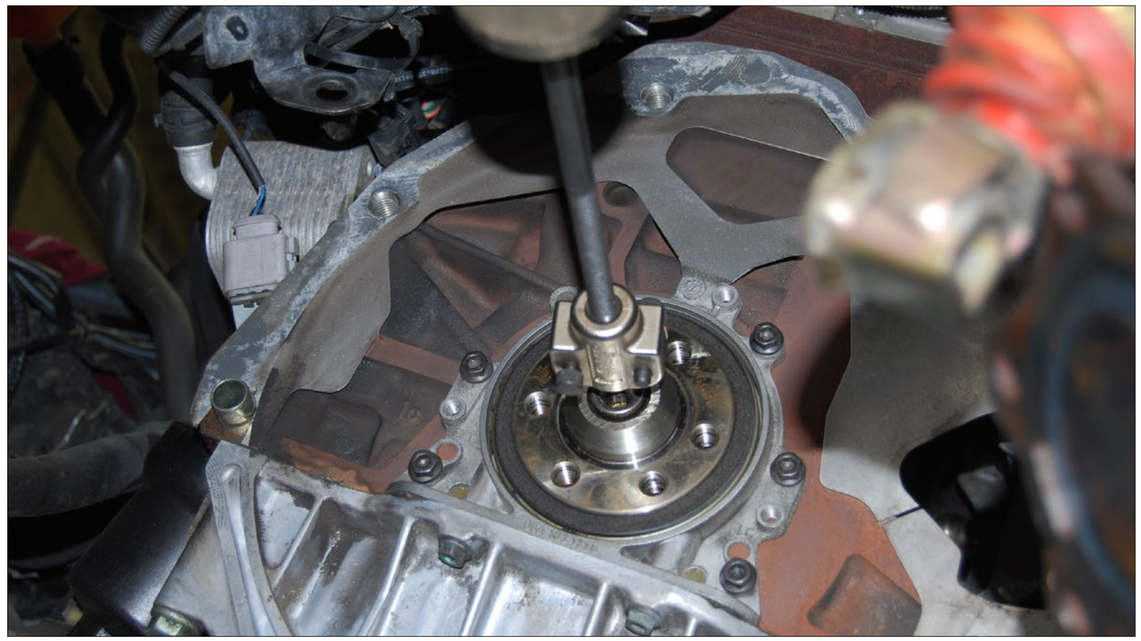


Step 24

Remove the old bearing with a pilot bearing puller.
Use a bearing driver or appropriate sized socket to drive in the new pilot bearing.

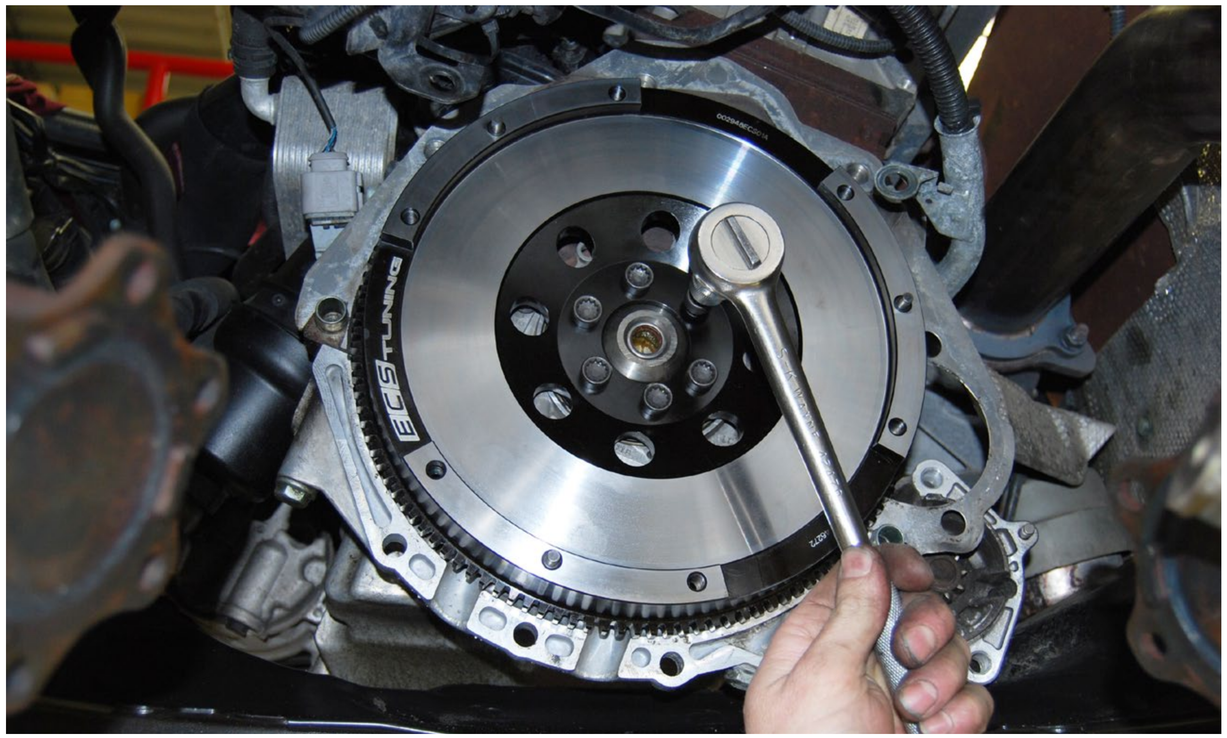
Note: Pay attention to the depth of the original bearing and the direction of installation.





Step 25

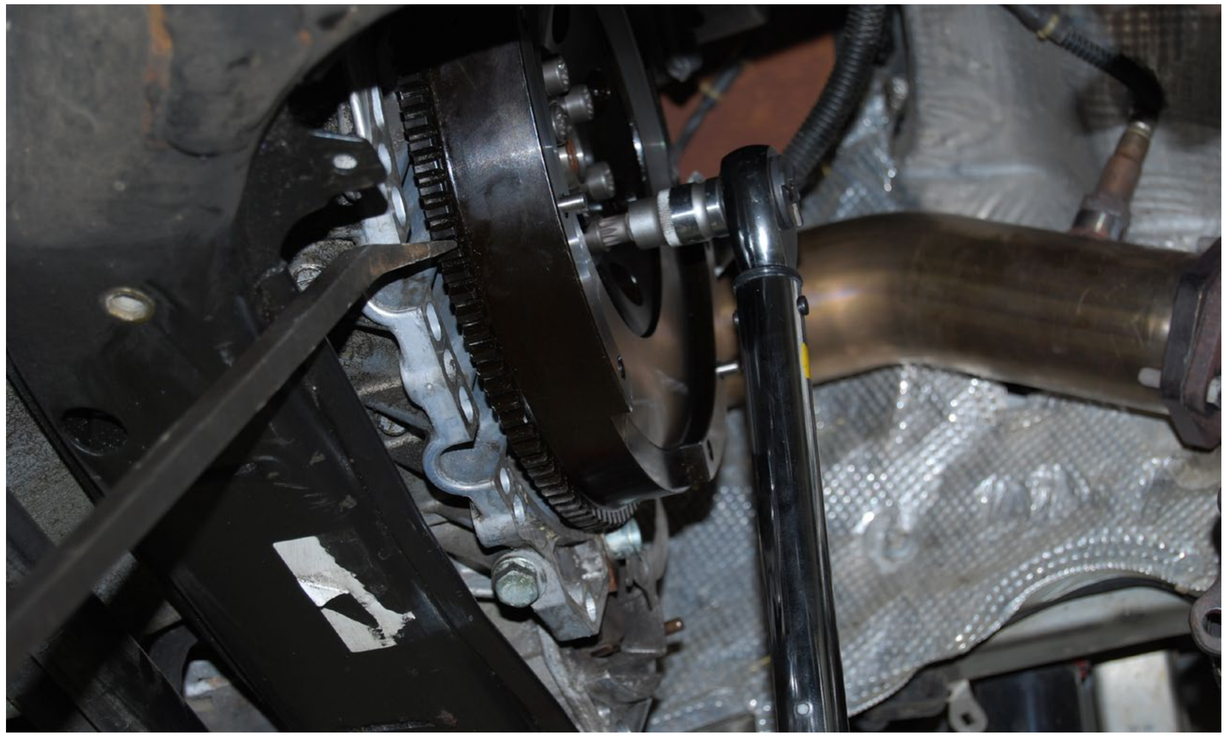
Install the new single-mass flywheel using the six M12 triple-square bolts. Install all six bolts until snug, then torque to specification.



Step 26

Clean the surface of the flywheel with brake cleaner.

Note: Do not use carb cleaner or any other solvent that might leave an oily residue.

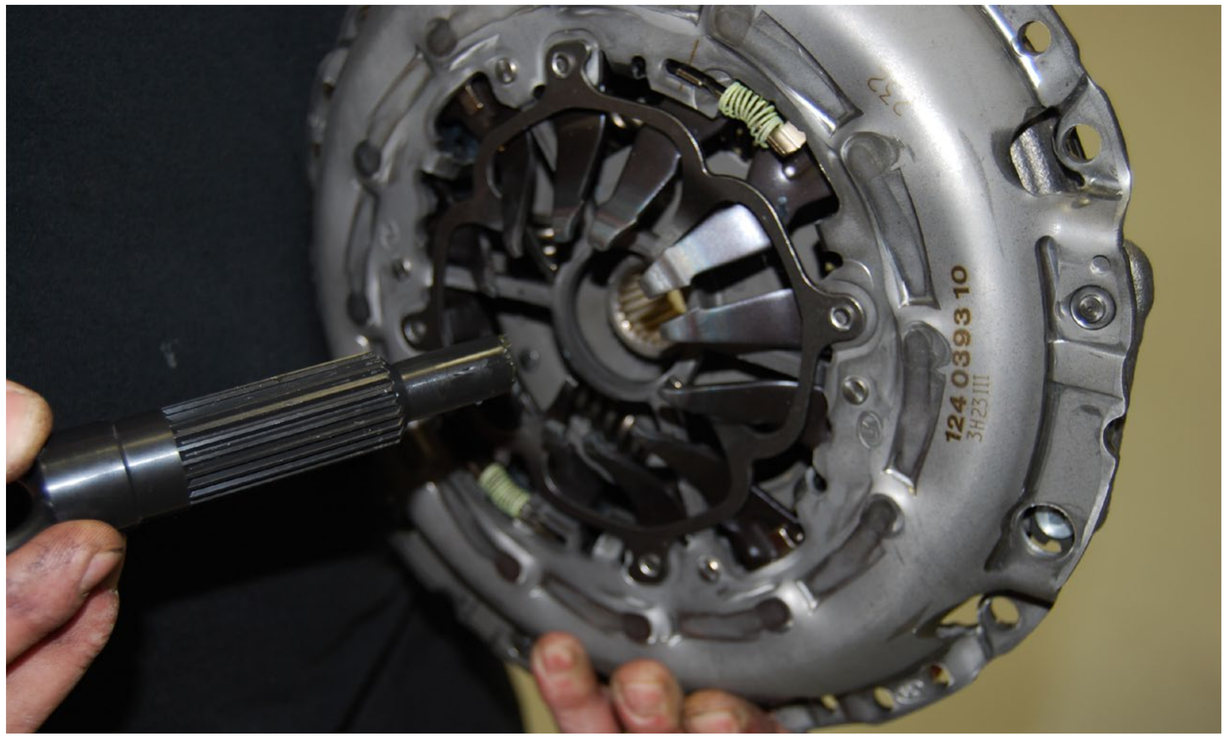


Step 27

Clean the pressure plate surface and place the disc on the pressure plate.

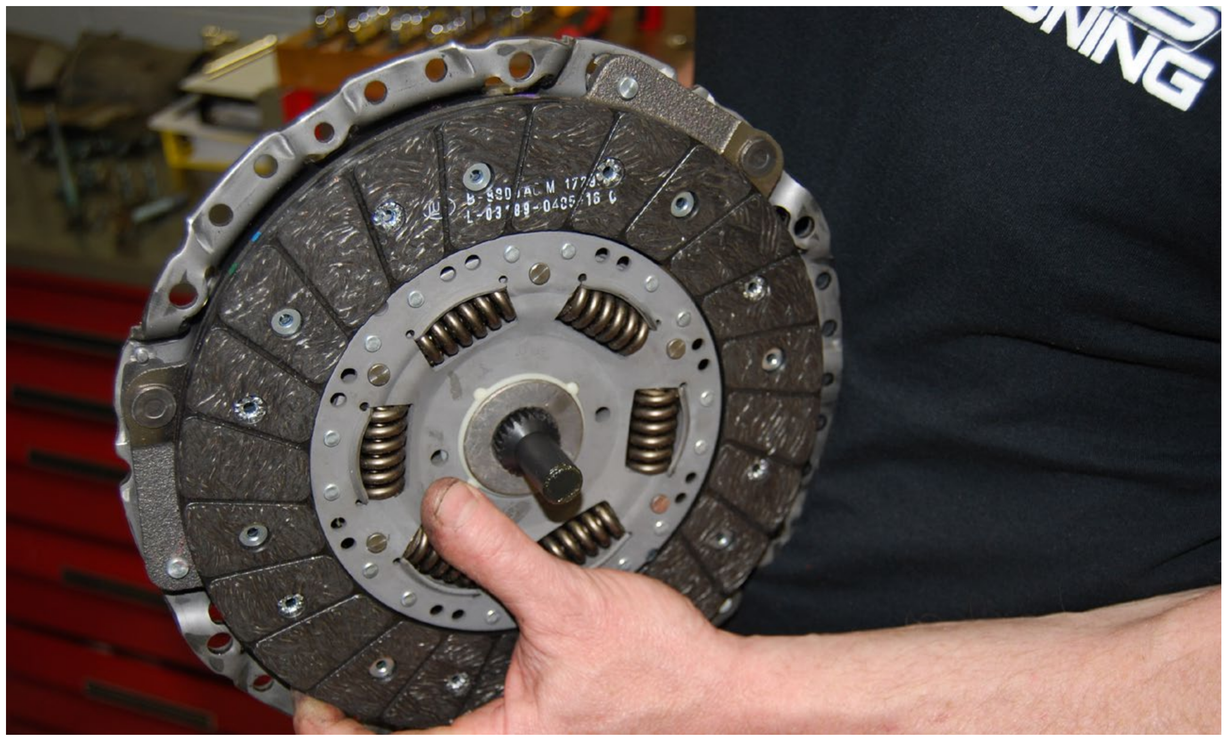
Use the special pilot tool to center the friction disc when installing the new clutch assembly.

Insert tool into the splines of the clutch disc as shown.



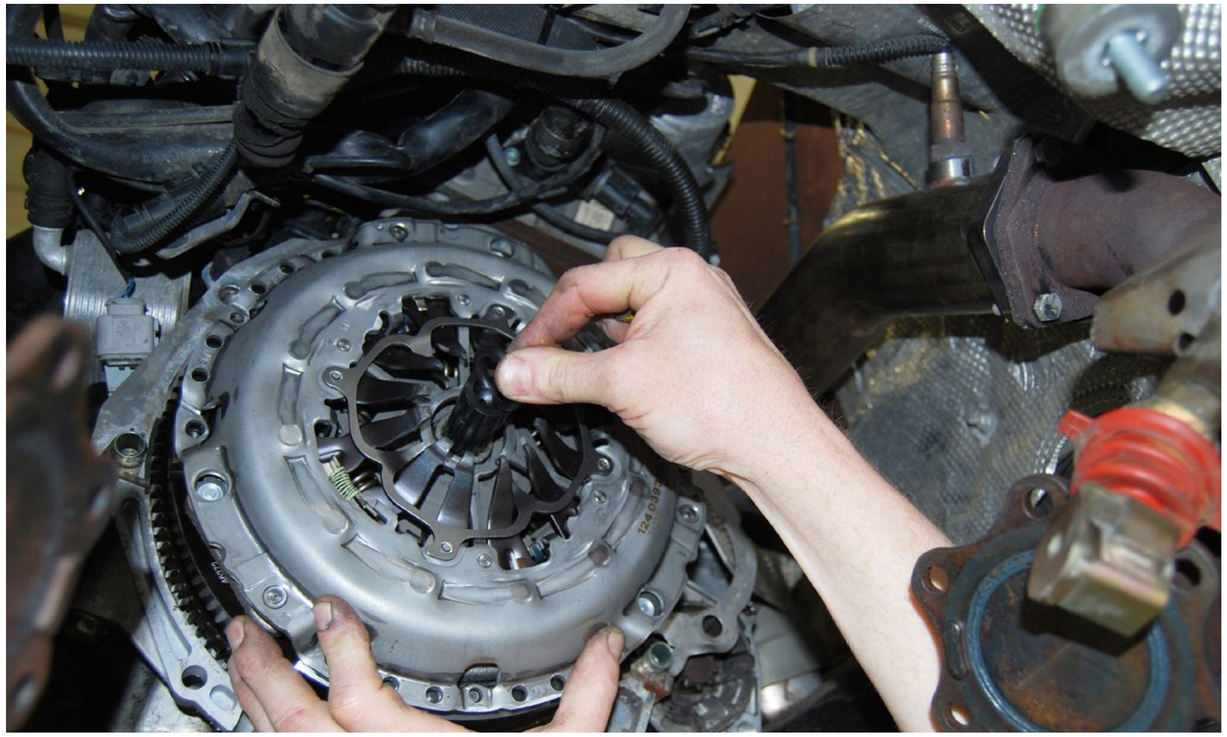
Step 28

Make sure the word “Getriebeseite” on the friction disc (German for *gearbox side*) is facing the pressure plate.



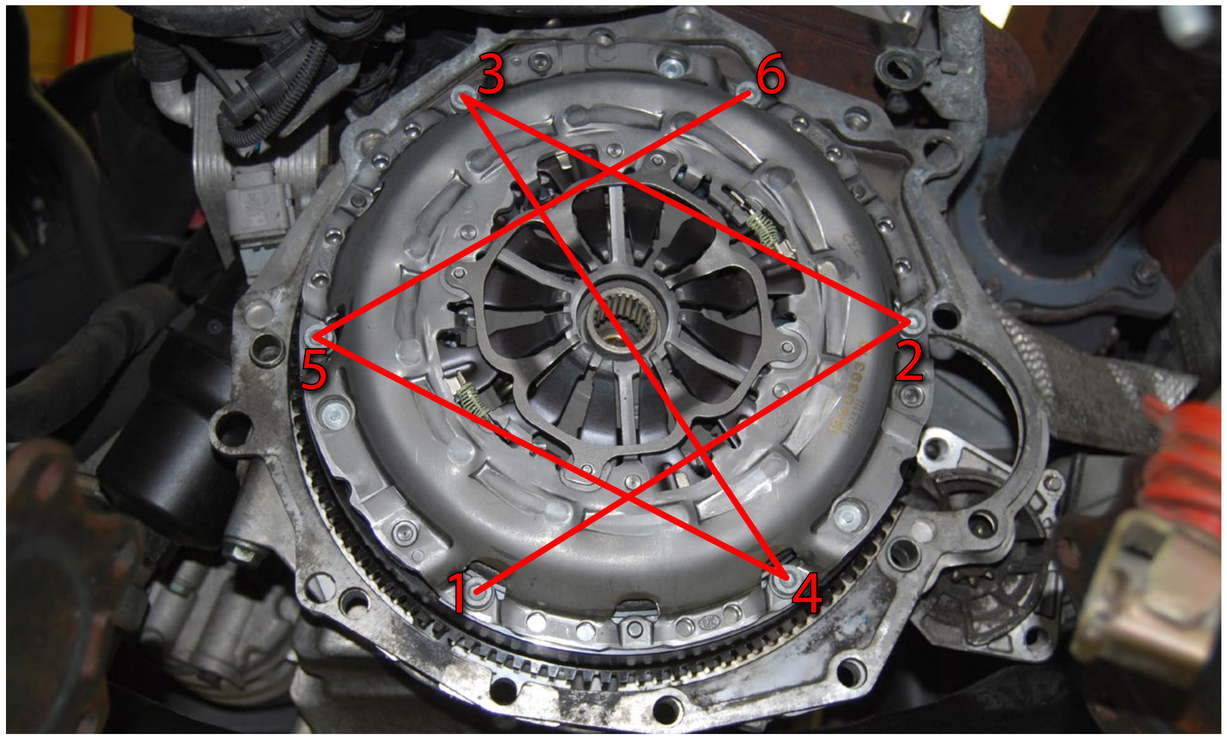
Step 29

Place the assembly on the flywheel using leaving the pilot tool in place.
Install the six 6mm Allen bolts that secure the pressure plate to the flywheel to
22 Nm.



Step 30

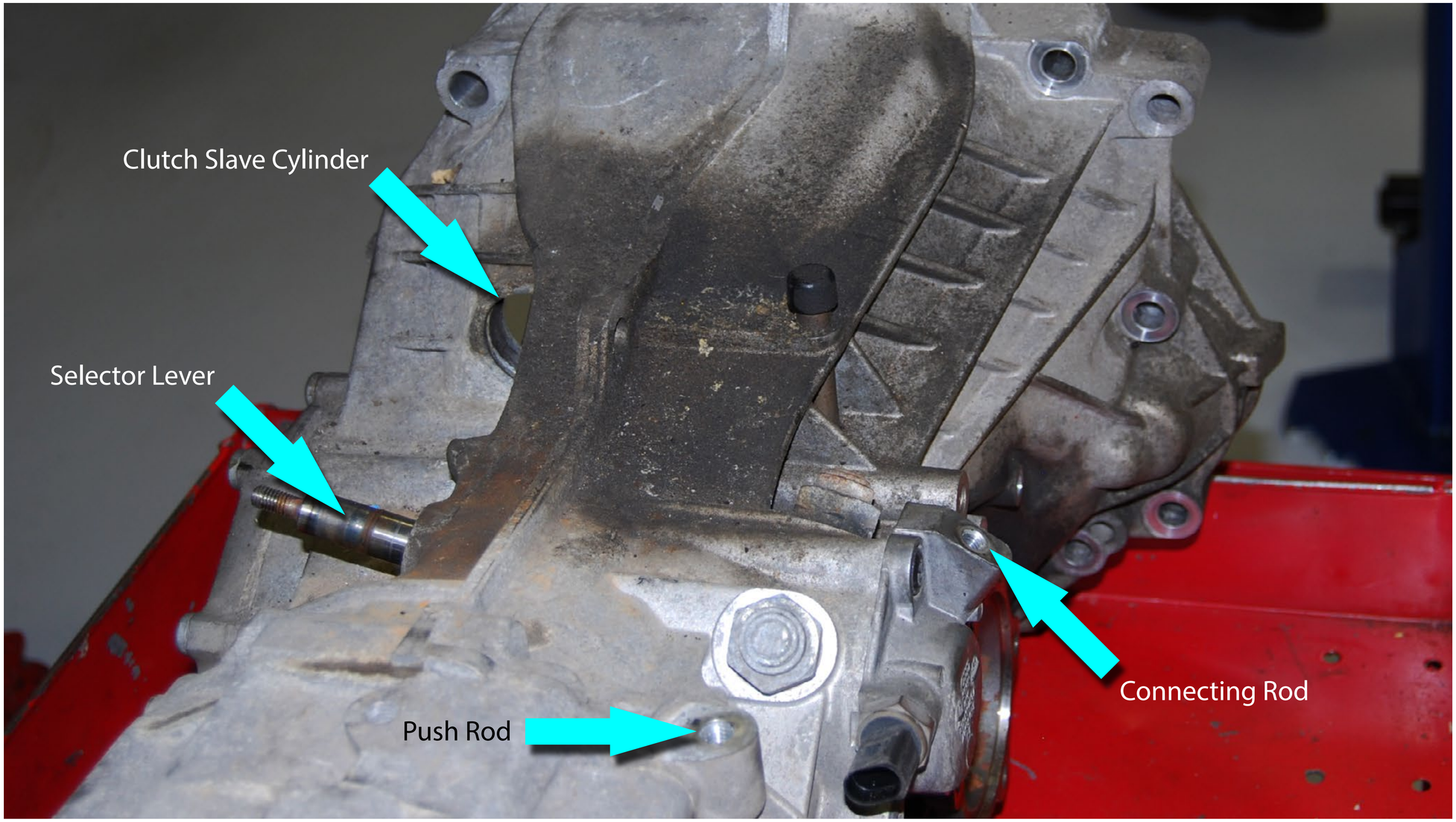
Tighten the bolts alternately,
ensuring even torquing and proper seating.



Reinstalling the Transmission

Before continuing the procedure:

- Note the locations of the shift linkages and clutch slave cylinder.
- Clean the slave cylinder bore and lubricate the slave cylinder bolt with silicone spray.
- Arrange the shift linkages such that they will easily mate up at their correct location before raising the transmission into the vehicle.

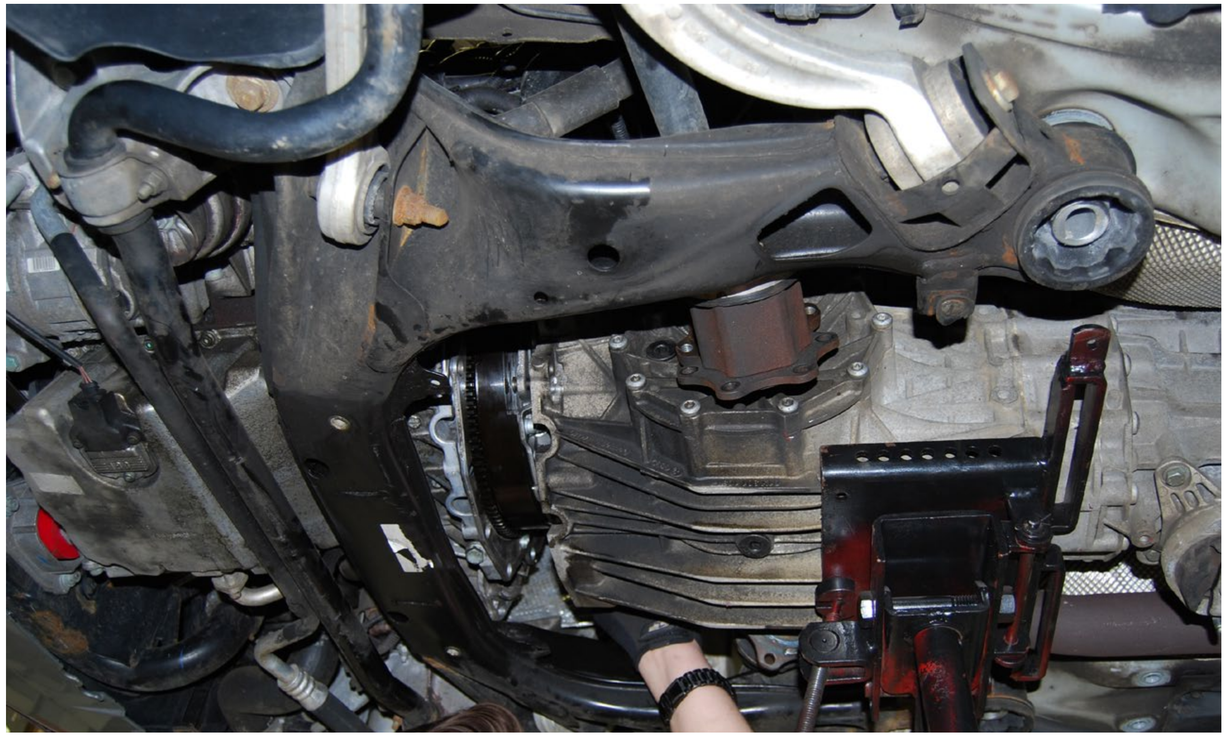


Step 31

Put the transmission up onto the jack. Extra help may be required to correctly position the transmission for installation.

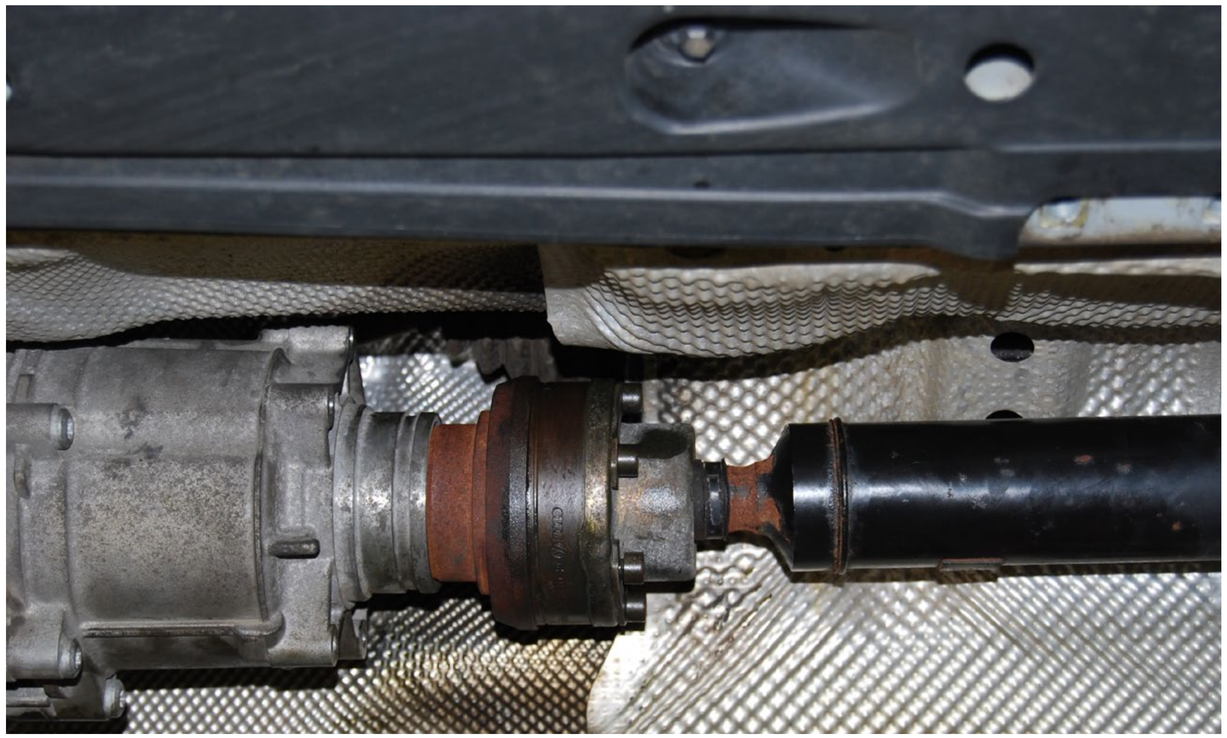
Make sure the transmission is fully seated, then re-install the transmission bolts.

Note: Arrange any electrical wires such that the transmission will not interfere during resinstallation



Step 32

Reinstall the bolts for the prop shaft.



Step 33

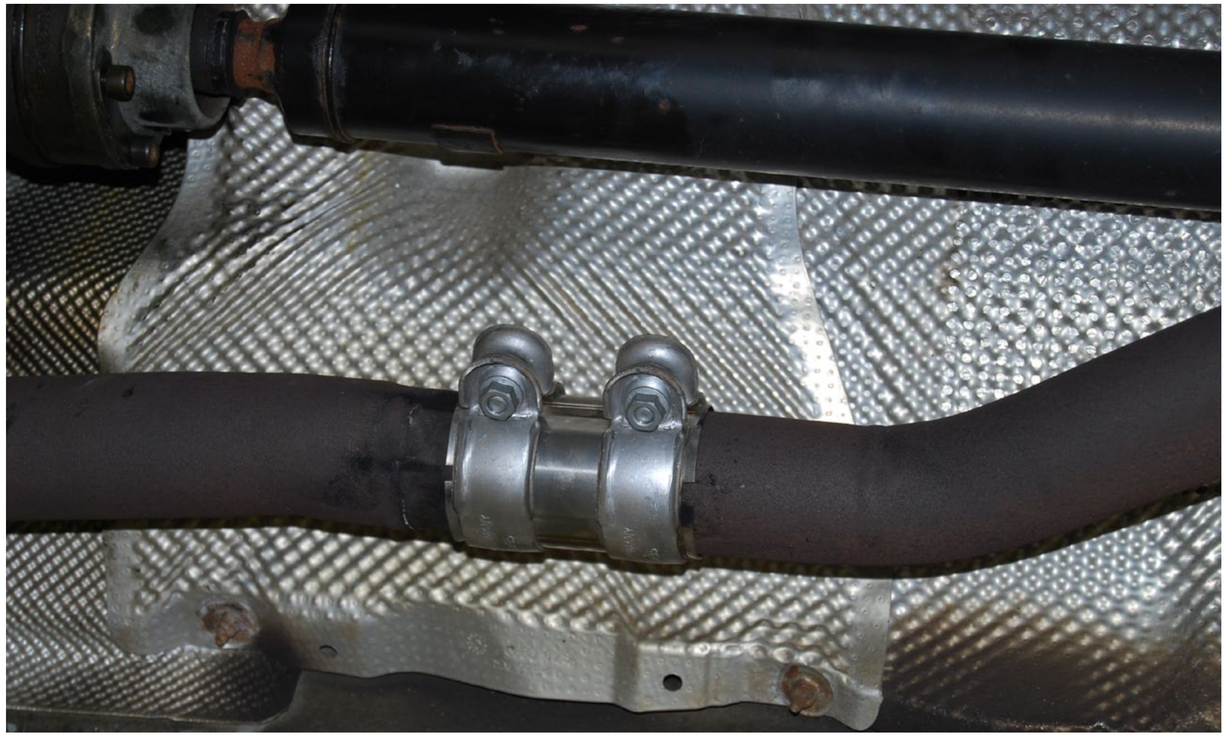
Reinstall the starter motor, inserting the longer bolt through the top of the mounting bracket, and the shorter at the lower position.

Step 34

Reinstall the transmission mount crossmember.

Step 35

Reinstall the coupler for the front and rear exhaust sections.



Step 36

Using a crowbar to fix the CV joints in place, tighten the 6 bolts on both sides of the vehicle.

Step 37

Reinstall the heat shield for the CV boot from the passenger side of the vehicle.

The lightweight flywheel installation is complete.

Enjoy your New ECS Lightweight Flywheel!

You will now notice faster revs, quicker shifting, and faster acceleration.

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