



# BMW 6 Speed Transmission Replacement

..the following are helpful hints for the installation of 6 speed replacement transmissions, however we are unable to cover all work and safety procedures that apply. Use the vehicle manufacturer repair and safety instructions whenever possible.

## 1. ESD (electrostatic discharge)

The Mechatronic (electronic valve body) located within the transmission is a electrostatic sensitive device, avoid touching any electrical pins to prevent ESD damage.



## 2. Transmission oil cooler and cooler lines

The transmission cooler and cooler lines must be flushed before the replacement transmission is connected to the cooler lines. Use new cooler line O.-rings.

## 3. Transmission removal

- Drain the transmission fluid before transmission removal. Cores will not be accepted unless thoroughly drained.
- Use supplied plug kit to seal cooler lines connections of core.
- Handle carefully, transmissions with external damage may not be accepted for core return.

## 4. Preinstallation checks.

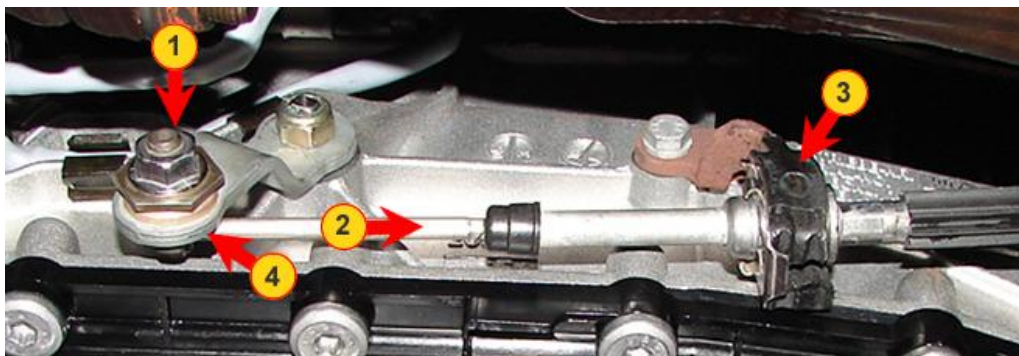
- Both engine to transmission alignment dowels must be used. Failure to use both will result in misalignment and transmission failure.
- Remove any dirt, rust or heavy paint from the engine to transmission mating surface.
- Check the engine flywheel for cracks, abnormal wear or run-out.

## 5. Transmission installation.

- Great care must be used to prevent the torque converter from sliding forward and loosing its pump alignment or falling.
- Pump damage will occur if the pump drive tabs are not properly aligned with drive slots in the torque converter hub.
- The transmission bell housing should mate flat with the engine block before bell housing bolts are tightened. If the bolts are used to pull the transmission to the engine block severe pump damage or case cracking will occur.

## 6. Selector cable adjustment – if so equipped

Adjust cable as follows:



Always check the shifter cable bracket **3** to make sure it was not bent during transmission removal.



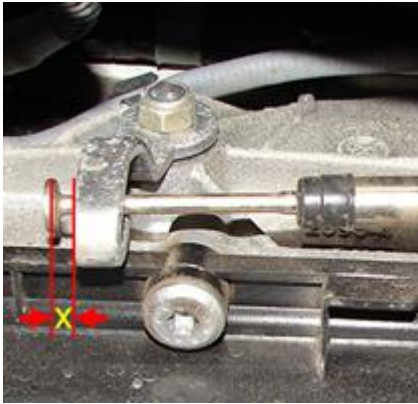
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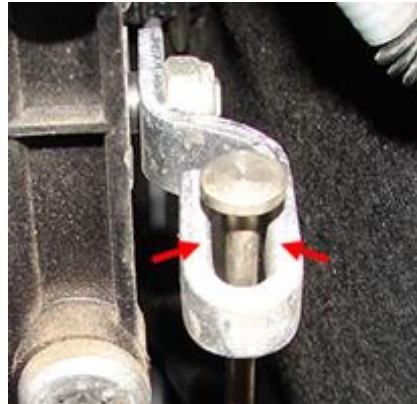
- a. Move the selector lever inside the car to position **P**.
- b. Loosen locking nut **1**.
- c. Push lever **4** in forward position (Park position).
- d. Push cable rod **2** towards the rear of the car.
- e. Secure bowden cable rod **2** by tightening locking nut **1**.

## 7. Emergency release cable – if so equipped

Adjust cable as follows:



With the emergency cable released the clearance X indicated above must be adjusted to 1.0 to 2.0 mm.



The cable should not touch the lever at any time, even if the lever is moved back and forth. If the cable does come in contact then check for a bent lever or a bent cable bracket.

## 8. Transmission programming

If the transmission was not previously programmed with vehicle specific software this must be performed at this time. Operating vehicle in failsafe mode may cause transmission damage. Vehicle must be towed to your vehicle specific dealer for programming.

## 9. Transmission Fluid

Transmissions are prefilled with ZF Lifeguardfluid6, extra fluid was added to compensate for cooler and cooler lines. After installation, fluid must be checked at 40 ° C, with vehicle level, transmission in park and engine running at idle speed. Correct fluid level as needed, using ZF Lifeguardfluid6 or OEM approved fluid.

## 10. Test drive

It is recommended to clear the fault memories before driving. Should a fail safe condition occur a clean record of events will be available for trouble shooting.

## 11. Final check

- After test drive allow the transmission fluid to cool to 40 ° C recheck transmission fluid with vehicle level, transmission in park and engine running at idle speed. Correct fluid level as needed, using ZF Lifeguardfluid6 or OEM approved fluid.
- Check for leaks at torque converter, cooler line connections and oil pan area.

## 12. Core return preparation

Install torque converter bracket and torque bolts properly, a loose converter will cause damage to the input components or pump during shipping. Return the transmission in the same box that you received it. Damage to the transmission will result in deduction or loss of your core charge refund.