

BMW X3 X5 X6 Gear Box Transfer Case Servo Actuator Motor Repair Gear Installation Instructions Guide.

by **x8rftd** on October 15, 2014

Intro: BMW X3 X5 X6 Gear Box Transfer Case Servo Actuator Motor Repair Gear Installation Instructions Guide.

Symptoms:

Brake, ABS, and 4X4 lights all lit. Clicking / juddering sound from transfer case "4X4 inactive" message.

The Cause:

Attached to the transfer case is an actuator motor, within in this there is a poor quality Nylon plastic gear, this is turned by a metal worm gear. Over time the Nylon wears down and strips and leads to the gear not turning; this results in the symptoms noted above. BMW do not supply this part as a spare, they will provide at vast cost a complete replacement motor, this however will fail again because of the Nylon gear.

The Solution:

Replace just the failing component the Nylon gear with our replacement gear made from a plastic / Carbon Fiber mixture; a far better quality part than OEM. This will repair the issue and save the cost of a new actuator motor that would just fail again.

Vehicles Affected:

X3 E83

2.0d 2003- 2006

2.0i 2003-2006

2.5i 2003-2006

3.0d 2003-2006

3.0i 2003-2006

X3 E83 LCI

1.8d 2009-2010

2.0d 2006-2010

2.0i 2006-2010

2.5si 2006-2010

3.0d 2006-2010

3.0i 2006-2010

3.0sd 2006-2010

3.0si 2006-2010

X5 E53

3.0d 2003-2006

3.0i 2003 (Oct onwards) -2006

4.4i 2003-2006

4.8is 2003 (Nov onwards) -2006

BMW X5 E70

3.0d 2006-2010

3.0sd 2007-2010

3.0si 2006-2010

3.5d 2008-2010

4.8i 2006-2010

X5 M 2008-2013

BMW X5 E70 LCI

35dX 2009-2013

BMW X6 E71

30dX 2007-2010

<http://www.instructables.com/id/BMW-X3-X5-X6-Gear-Box-Transfer-Case-Servo-Actuator/>

35dX 2005-2010

35iX 2007-2010

40dX some models

X6 M 2008-2014

X6 Hybrid 2009-201

Associated part numbers:

27107566296

27107568267

ATC 400 ATC 500 ATC 700

27107566296GR, 7-10-7-566-296GR, 27 10 7 566 296GR, 27107566296GR, 27-10-7-566-296, 27 10 7 566 296 , 27107566296, BOSCH 013000850, 8473227771, 8472227771, 09-3509-010, 9 3509 010, 093509010, 2710 7528559-01.



Step 1: Note orientation of components

Take note of the position of all parts of the actuator, refer back to image for reinstallation.

Note resistor on back of actuator, take care not to damage when carrying out repair, (removal is recommended for repair)



Step 2: Remove motor

Unscrew 4x bolts and remove motor body.

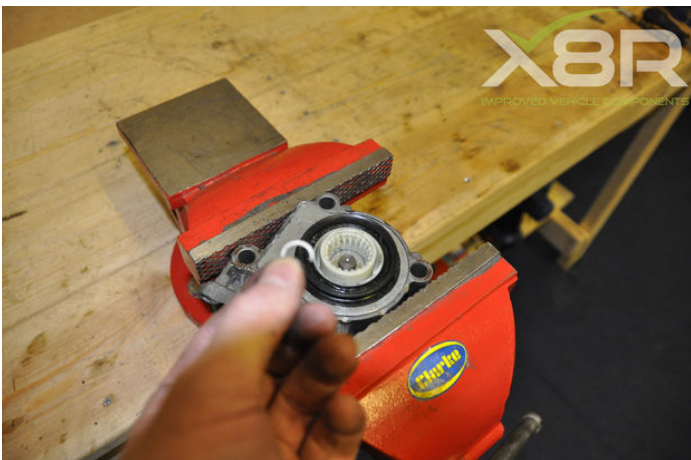
Remove plastic module noting orientation and remember to locate seals on either side of module for reinstall.



Step 3: Remove C Clip

Remove retaining C clip, this can be done with a combination of screw drivers. The easiest method we have found is to use circlip pliers to open the C then inserting a small flat head screwdriver in the space created at the top of the C to allow removal.

Remove washer.



Step 4: Remove cover

Lift off cover. Work around edge with sharp flat head screw driver, ease away at edge and increment size of screw driver to release cover.



Step 5: Clean all components

Clean up module and motor points with compressed air or suitable cleaner.

Remove gear and clean all components of actuator housing.



Step 6: Fit new gear

Grease up new gear and replace worn gear.

Grease worm gear and gear shaft.

Refit gear.

Follow guide in reverse for reinstall, take note of orientation of all parts and all seals and washer.

