



**Module Number: 05-1**

**Subject:** Transfer case service  
and research (in vehicle)

**Objective:**

At the conclusion of this module you will be able to:

- Remove and install actuator motor
- Remove and install radial shaft seals
- Remove and install front transmission cover
- Remove and install differential lock
- Explain the procedure for differential axial play adjustment

**Vehicle and tools required:**

- Transfer case 750.654 on work stand
- Vernier caliper and feeler Gage
- Sockets 10, 13, 14, 17, 19mm
- Ratchet and extension
- Needle nose pliers - large
- Small screwdriver
- Hammer – dead blow, ball pen
- MB Special Tools

**Required materials:**

- Hand out material for Transfer Case
- WIS

**Instructions:**

1. Follow the attached instructions and answer the questions
2. Use your hand out and ask your instructor for assistance
3. Stop at “★ *Instructor check point* \_\_\_\_\_” for signature
4. It should take you about 70 minutes

**Task: Remove/install transfer case actuator motor (AR28.19-P-1004GM)**

**Note:** Do not actually perform this work

1. What is the torque specification for the transfer case motor mounting?  
M6 \_\_\_\_\_Nm    M8 \_\_\_\_\_Nm
2. What special instructions are given concerning the ground cable on the motor? \_\_\_\_\_  
\_\_\_\_\_
3. At which mounting bolt is the ground cable to be attached? \_\_\_\_\_
4. Why is it necessary to connect SDS after installing the motor? \_\_\_\_\_  
\_\_\_\_\_

**Task: Remove/install radial shaft seal (AR28.40-P-0001B)**

**Note:** The procedure is similar for the input and output shafts. Demonstrations to be done on the front axle output shaft

1. What step should be taken prior to removing the propeller shaft and shaft flange?  **!** \_\_\_\_\_

**Note:** Front and rear output shaft flanges are identical and should not get mixed up!

2. What is the procedure given to loosen the flange nut without special tools if transfer case is installed in the vehicle? \_\_\_\_\_  
\_\_\_\_\_
3. Remove radial shaft seal as described in WIS (AR28.10-P-1000-15B)  
Is it possible to remove without damage?  YES  NO
4. What are the instructions when installing the radial shaft seal? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
5. Install radial shaft seal as instructed (old part as is)



10. Would it be possible to install the sliding sleeve upside down?  YES  NO

11. What would be the result of incorrectly installing the sliding sleeve?

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12. Reassemble the front transmission cover and shift cylinder in reverse order

**Note:** When assembling the shift housing and sliding shaft assembly, be sure to reinstall the small O-ring on the sliding shaft.

**Task:** Checking axial play of differential, adjusting (AR28.50-P-1023-04B)

**Note:** Currently one can only find this job if selecting the previous transfer case version 750.653 from the list of repair documents (Install new differential, adjust bearings AR28.50-P-1024B)

1. Are shims used for the axial play adjustment of the differential?  YES  NO

2. At which component is the axial play of the differential adjusted?

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3. What special tools or materials are needed to perform this measurement?

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4. What should the order of the shims be inside the bearing cover?

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Return tools and component to their original condition. If you have noticed any parts that need to be replaced please inform your instructor

★ **Instructor check point** \_\_\_\_\_