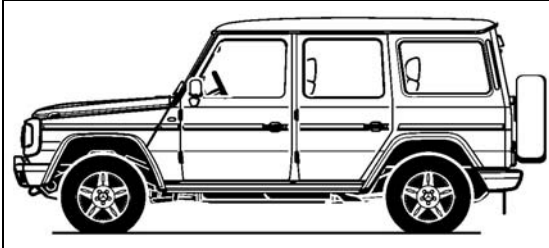




Mercedes-Benz

Name _____



Module Number: 06-1

Subject: Front axle disassembly

Objective:

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

- Remove and install front axle joint housing
- Remove and install rear and front axle differential
- Remove and install front and rear axle differential lock

Vehicle and tools required:

- Front Axle 730.390, right joint housing removed
- Vernier Caliper
- Sockets 13, 16, 21, 27mm and ratchet
- Wrench 13mm, open end
- Small Screwdriver
- Hammer – dead blow
- 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 45 minutes



Means Safety Issue. Proceed with caution.



Always install safety pin in mounting stand bracket after any repositioning of front axle!

Task: Remove joint housing with drive shaft (AR33.20-P-0600A)

1. Mark the installed position of the shift cylinder relative to axle tube. This saves time on reassembly when differential lock parts aren't being replaced
2. Remove the differential lock shift cylinder (13mm)
3. Rotate the axle assembly on the work stand so that the differential input flange is facing downwards and install safety pin
4. Measure adjustment length of the steering angle stop bolt with a Vernier caliper: Distance from seal retainer surface to screw head _____ mm
5. Mark the location of the steering angle stop and detach seal retainer from the joint housing (13mm)

Note: There are 2 longer bolts that are positioned at the steering bearings

★ Instructor check point _____

6. Detach steering knuckle arm (21mm). Use a hammer if necessary to tap the steering arm out
7. Measure the thickness of the steering knuckle arm adjustment shim ____mm
Note: Keep shims with their respective steering knuckle or an adjustment of the steering knuckle bearings must be performed



Do not introduce your fingers into the steering knuckle holes. Use screwdriver if necessary

8. Detach steering knuckle pin (21mm). Use a hammer if necessary to tap the steering pin out. Hold on to the joint housing!
9. Are the bolts on the steering pin shorter than the ones on the lower steering knuckle arm? YES NO

10. Measure the thickness of the steering knuckle pin adjustment shim ____ mm
Note: Keep shims with their respective steering knuckle or an adjustment of the steering knuckle bearings must be performed
11. Remove the joint housing with attached drive shaft from the axle housing.
 Take care not to damage the axle shaft seal or bushing during removal
Note: Secure bearings as they may fall out!
12. Remove the steering knuckle bearings and cup-shaped washers. Keep together with respective steering knuckle pin/arm and shims.
13. Are the steering knuckle bearings for arm and pin identical? YES NO
14. What is the specification for the grease in the joint housing of the front axle?

15. How much grease is needed when servicing the joint housing? _____ gr.

★ **Instructor check point** _____

Task: Remove/Install differential (AR33.30-P-0432A)

1. Remove cover from axle differential housing(13mm)
2. Remove both bearing caps (16mm). Mark as necessary to keep track of their installed positions (may have paint marking from factory)
3. Where is the bevel on the adjustment shims positioned? _____
4. Brace axle housing. Optional tool 460 589 05 31 00 is used to spread the axle housing. Tighten tool (27mm) in small increments until ring gear and pinion can be removed
5. Remove differential. Identify the left and right bearing shims and outer races
6. Measure the thickness of the left and right bearing shims. _____ L, _____ R
7. Remove shift sleeve and shift tube from the left axle tube

★ **Instructor check point** _____

8. Install shift tube and shift sleeve. What needs to be observed when installing the shift tube? _____
9. Insert differential together with outer bearing races and shims. The thinner shim is to be installed on what side? _____
10. Remove spreader tool
11. Install bearing caps and differential cover (Torquing is unnecessary for our purposes!)

Task: Install joint housing with drive shaft (AR33.20-P-0600A)

1. Prior to installing drive shaft smear new shaft seal with multipurpose grease!
2. Rotate the axle assembly on the work stand so that the differential input flange is facing upwards and install safety pin
3. Position shift tube with shift lever hole at outside end stop
4. Install respective steering knuckle bearings and cup-shaped washers in their locations in the axle housing

Note: Use of some grease helps hold things in place during assembly

5. Is it possible to install the steering bearings in either location in the axle housing? YES NO
6. What effect would an improper positioning of the steering knuckle bearings have on axle assembly? _____

7. Install joint housing with drive shaft attached so that it engages the shift sleeve and differential

Note: Splines for shift sleeve and differential on drive shaft are phased off!

★ ***Instructor check point*** _____

6. While holding the joint housing in place, insert steering knuckle pin and arm.
Use hammer to tap in as necessary

Note: Do not forget to install respective adjustment shims!



Do not introduce your fingers into the steering knuckle holes to align washers. Use screwdriver if necessary

7. Screw down steering knuckle pin and arm (Applying Torque is unnecessary for our purposes!)

8. Install steel ring of joint housing seal into notch inside joint housing

9. Should a new sealing ring be used on every assembly? YES NO

10. Install seal retainer to joint housing

Note: Be aware of screw length and steering angle stop bolt position

11. Adjust steering angle stop bolt to length measured in step 4

12. Install differential lock shift cylinder in marked position

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** _____