Installation Guidelines For Audi-VW ZF 5-Speed Automatic Transmission Output Flange Seal

! CAUTION !
Performing work on your automobile without having proper knowledge, mechanical ability
or the proper tools and safety equipment, can cause severe injury, death or automobile mechanical problems!
BLAUfergnugen! Inc. recommends you have an A.S.E. Certified Audi Vw Technician install your parts to ensure your safety.
ALWAYS WEAR SAFETY GLASSES AND OTHER SAFETY ITEMS WHEN PERFORMING THE FOLLOWING WORK !
Always read the factory service manual safety instructions and guideline before installing this kit.
Check the factory manual and always verify the automatic transmission fluid supplied in this kit is recommended for your specific model and year vehicle. Failing to verify can result in transmission failure.

NOTE: It is best to use a drain pan that has measuring capacities, you will then have an accurate idea of the amount of new fluid to put back into the transmission.
NOTE: Many of the steps below are to be performed on an approved automotive lift. Warning: Use safety precautions. People should never be under the car or in front of the wheels when performing this operation! Serious injury or death could result!
NOTE: When performing transmission maintenance, cleanliness is of great importance. Always use lint free rags, confirm all transmission parts are clean, and cover transmission components when removed from transmission.

PLEASE READ: The ZF 5 speed transmissions are equipped in several Audi and VW models. Depending on the model and year of your vehicle there will be slight differences in the exhaust system and heat shield locations. The instructional image references still apply.

For high mileage vehicles or very rusty exhaust clamps a torch may be needed to remove the bolt or nut heads. If the head of the bolt or nut is rusted gone, a 1/2 inch 16mm socket can be pounded on to the head of the bolt. You may also choose to simply tighten the bolt or nuts to shear them off.

Exhaust System and Catalytic Converter Dis-Assembly

2.8L, 2.7T, 4.2L Engines

1. Position vehicle up on proper automotive jack stands.
2. Loosen exhaust sleeve clamps joining the catalytic converters and mid exhaust system. A 1/2 inch drive ratchet wrench and a 17mm socket works best. (Image 1)
3. Tap exhaust sleeve clamps onto mid exhaust system. (Image 2)
4. Gently lower catalytic converters and tap exhaust sleeve clamps off mid exhaust. Do not stress the oxygen sensor wires. (Image 3 and 4)
5. Remove under car heat shield. A ¼ ratchet wrench, 6 inch extension and 10mm socket works well. On most vehicles there are 6 to 8 nuts holding the shield in place. (Image 4)
6. Slide under car heat shield to the forward part of car and set off to the side.
7. Proceed to output flange seal / tail-shaft flange seal dis-assembly.

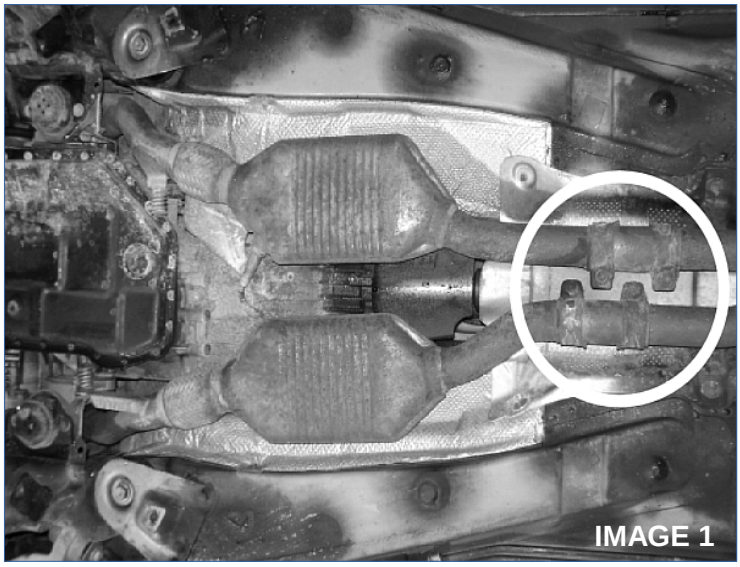
IMAGE 1

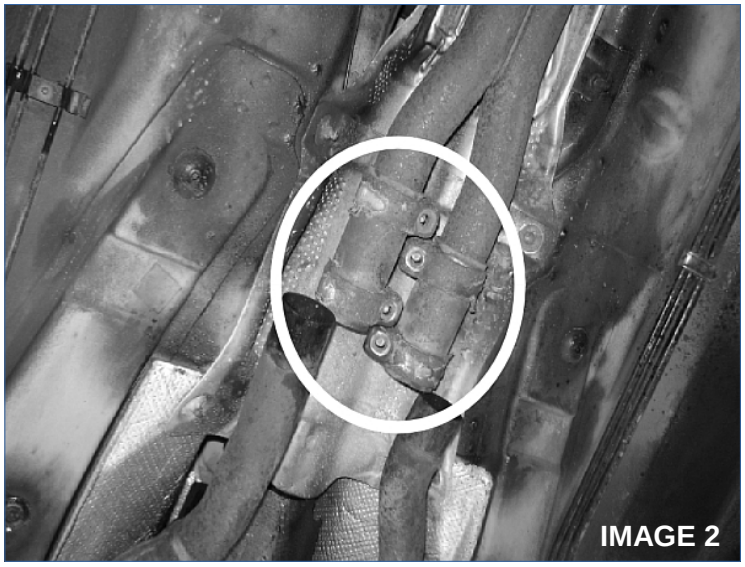
IMAGE 2


IMAGE 3

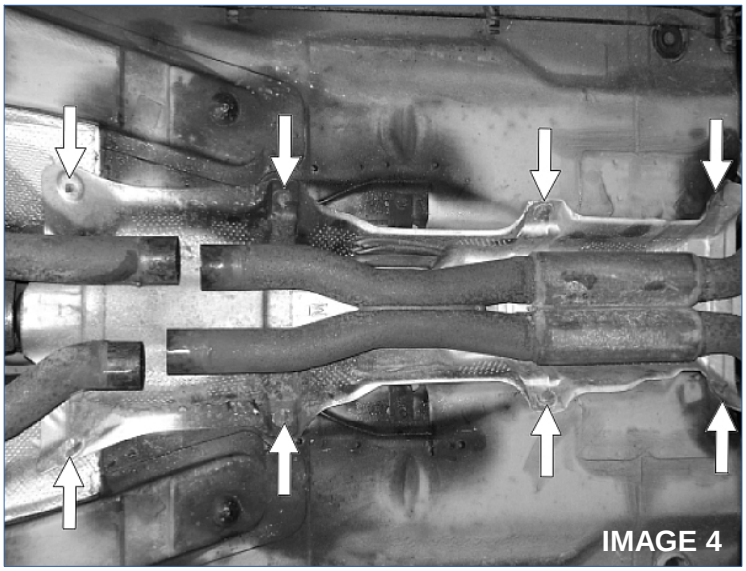
IMAGE 4

3.0L Engines

1. Loosen exhaust sleeve clamps joining the catalytic converters and mid exhaust system. A 1/2 inch drive ratchet wrench and a 17mm socket works best. (Image 5)
2. Tap exhaust sleeve clamps onto mid exhaust system. (Image 6)
3. Remove two mid exhaust system rubber hangers while the exhaust system is being supported. Hang or support the exhaust system in a lowered position 8-12 inches from the bottom of the car to allow access to the drive shaft area. (Image 7)
4. Tap exhaust sleeve clamps off mid exhaust.
5. Proceed to output flange seal / tail-shaft flange seal dis-assembly.

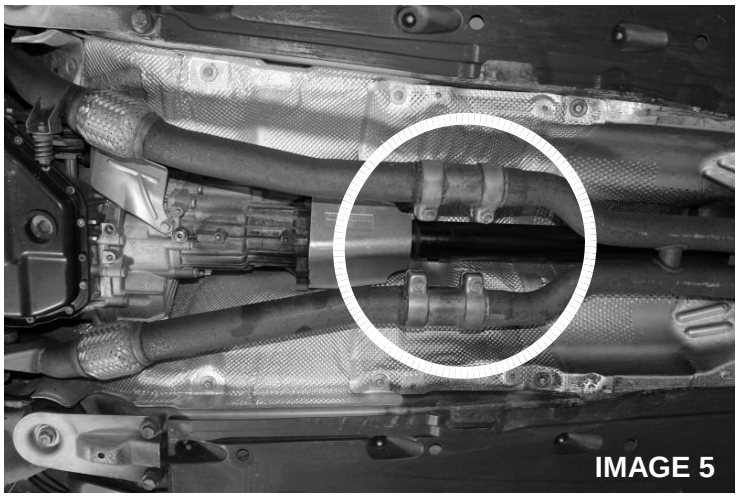
IMAGE 5

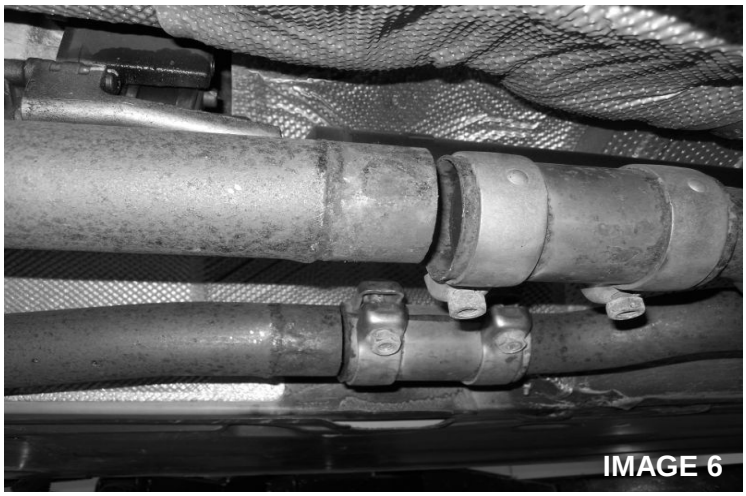
IMAGE 6

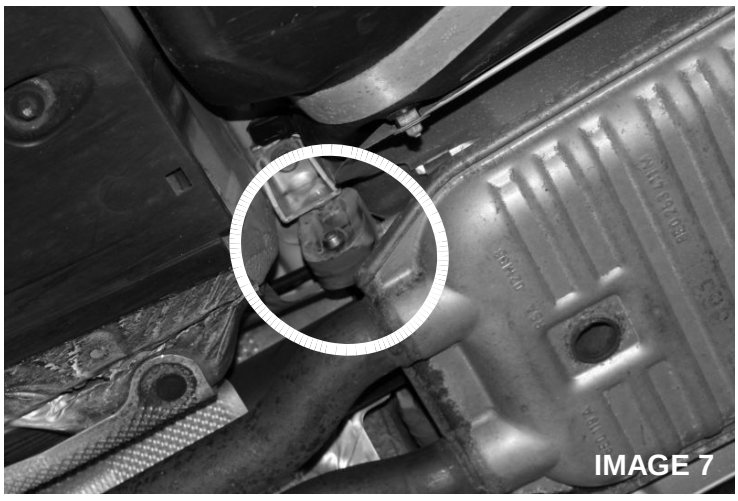
IMAGE 7

1.8T Engines

1. Loosen the exhaust sleeve clamp joining the down-pipe and mid exhaust system. A 1/2 inch drive ratchet wrench and a 17mm socket works best. (Image 8)

Note: For the best access to the output flange loosen and remove the exhaust sleeve clamp joining the down-pipe and mid exhaust system. Some may choose to not remove the exhaust sleeve clamp due to still having some minor accessibility to the output flange area.

2. Tap exhaust sleeve clamp onto mid exhaust system.
3. Gently lower the down-pipe or mid exhaust and tap exhaust sleeve clamp off mid exhaust.
4. Proceed to output flange seal / tail-shaft flange seal dis-assembly.


IMAGE 8

Output Flange / Tail-Shaft Flange Seal Dis-Assembly

1. Using 3/8 drive ratchet wrench, 6 inch extension and t-45 torx remove (2) fasteners and drive-shaft C/V joint protective heat shield. (Image 9)

2. Holding drive shaft in place, use 3/8 drive ratchet wrench and 6mm allen socket to remove six drive-shaft C/V joint fasteners. (Image 10)

3. Tap the C/V joint with a hammer to release the joint from the flange.

4. Push C/V joint toward the back of the vehicle to allow the joint to clear the output flange and swing the drive-shaft down off to the side. (Image 11) (Mechanics wire works well to hold the drive-shaft off to the side. It's good to cover the C/V joint with a plastic bag to keep the c/v joint, yourself, and the area clean.)


IMAGE 9

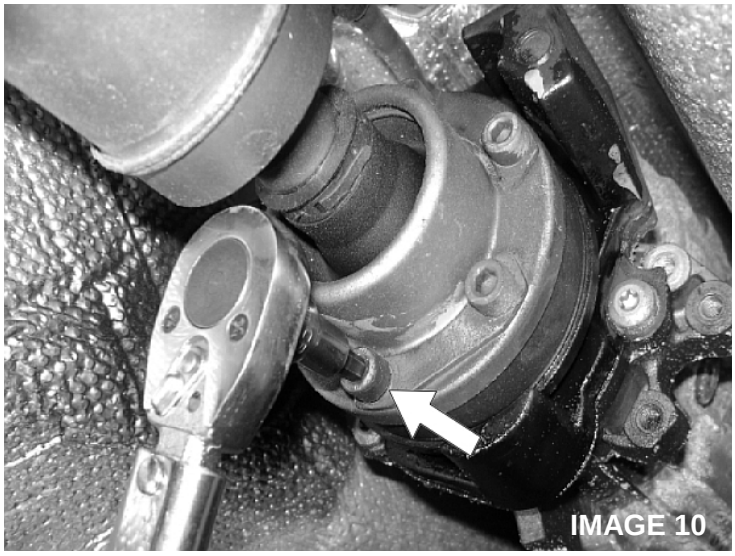
IMAGE 10


IMAGE 11

5. With rag, remove old grease inside transmission output flange. (Image 11 and 12)
6. Install (2) C/V joint fasteners back into the transmission output flange. (Image 12)
7. Counter hold transmission output flange with pry bar as pictured, and use a 3/8 drive rachet and t-40 torx to remove the fastener in center of the output flange. (Image 12)
8. With a suitable drain pan available, gently slide the transmission output flange out and allow old gear oil to drain into the drain pan. (Image 13)

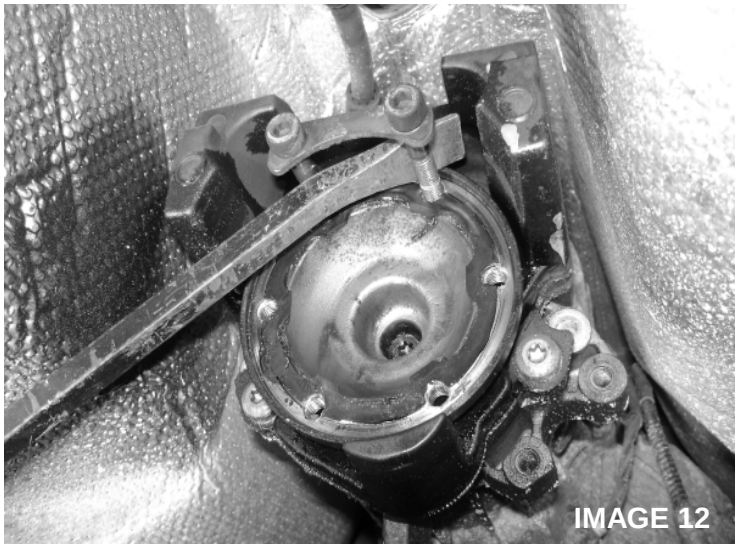
IMAGE 12


IMAGE 13

9. Using 1/2 inch drive racket wrench and 8 mm allen, loosen the fill plug from the passenger side of the transmission. (Image 14)

10. Using 1/2 inch drive racket wrench and 6 mm allen, remove the drain plug from the bottom of transmission and drain the remaining old gear oil into a suitable drain pan. (Image 15)

11. Once all old gear oil has been drained re-install the drain plug and torque to 14 ft lbs.

12. Using large regular screw driver gently pry out the old seal. Proceed cautiously to avoid scarring the wall of the transmission housing. (Image 16)

13. Thoroughly clean any deposit or grease buildup in the seal area with a lint free rag or cloth.


IMAGE 14

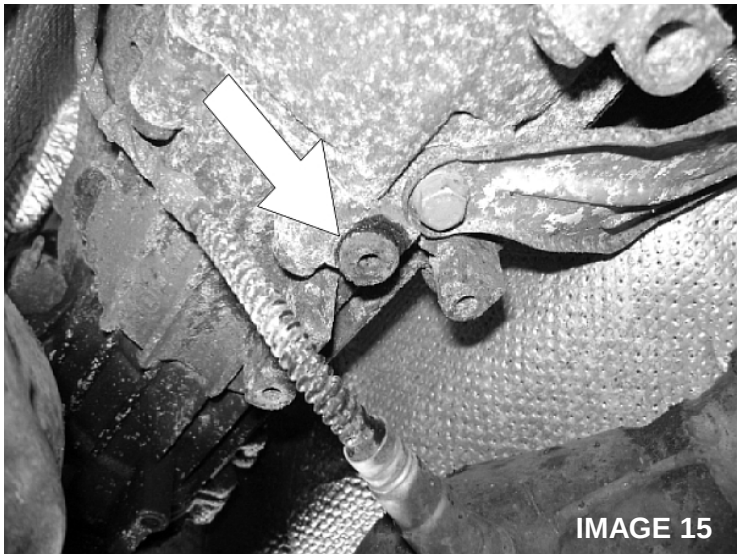
IMAGE 15


IMAGE 16

14. Using a deep well socket similar to the outer diameter size of the transmission output flange seal, evenly tap seal into transmission until flush with casting. If a groove existed in the tailshaft flange, recess the new seal slightly deeper so the seal lip rides on a new surface area. (Image 17)(NO lubricants for this step.)

15. Thoroughly clean the output flange to C/V joint surfaces of all buildup, deposits, and grease as pictured. (Image 18)


IMAGE 17

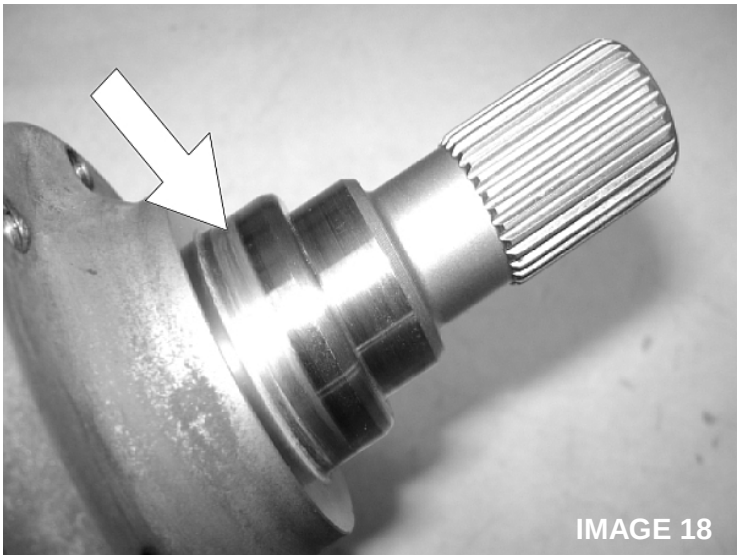
IMAGE 18

16. Remove old drive-shaft C/V joint gasket and install the new one. (Image 19)

17. Lubricate the surface of the transmission output flange that will slide into the seal. (Image 20)

18. Align the transmission output flange spline shaft with the transmission and gently slide the flange into place.

19. Install (2) C/V joint fasteners back into the transmission output flange. (Image 12)

20. Thread t-40 torx into transmission output flange. Counter hold transmission output flange with pry bar as pictured and torque transmission output flange to 18 ft lbs using 3/8 drive torque wrench. (Image 12)

21. Fill the center concave area of the transmission output flange with the supplied grease. (Image 21)

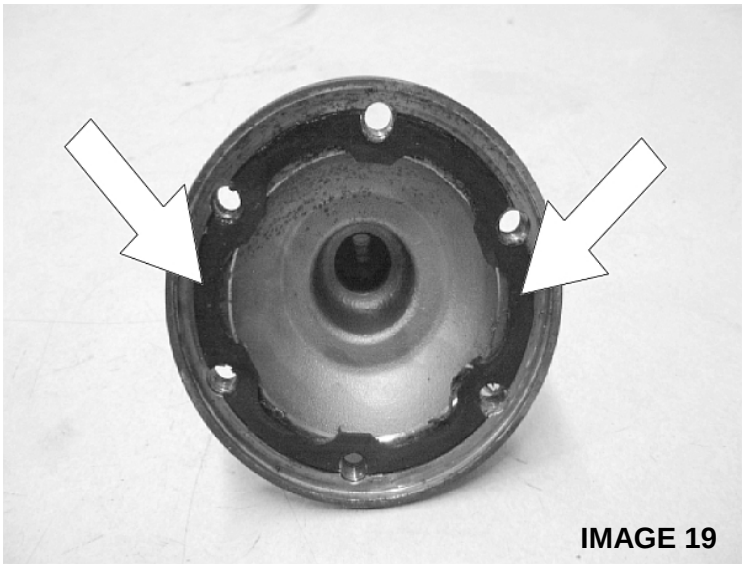
IMAGE 19

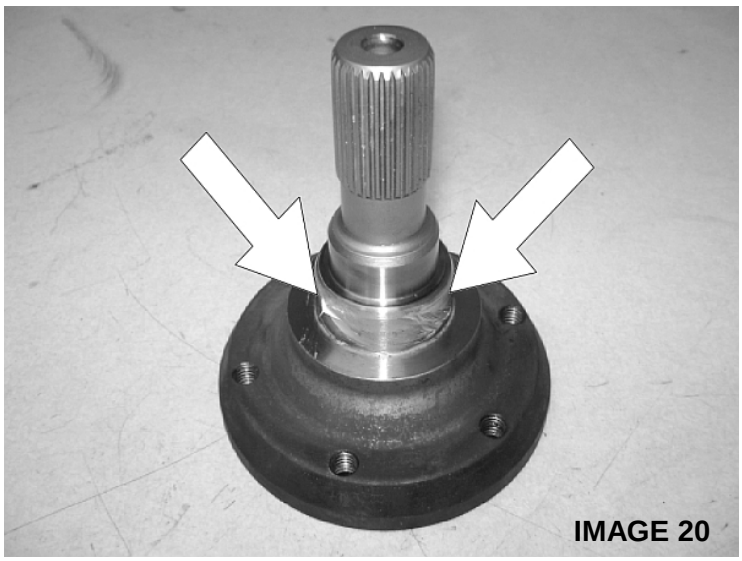
IMAGE 20


IMAGE 21

22. Swing the drive-shaft up into the output flange, align C/V joint with the output flange, and install the (6) 6mm allen fasteners and washers. Holding drive-shaft in place, evenly tighten the fasteners by working your way around the joint making sure the drive-shaft is fully drawn into the output flange. Torque the fastens to 40 ft lbs. (Image 10)

23. Using 3/8 drive ratchet wrench, 6 inch extension and t-45 torx re-install the drive-shaft C/V joint protective heat shield and torque to 14 ft lbs.

24. Using the supplied 75w90 GL-5 gear oil, install the 7 inch plastic tubing onto the cap.

25. With the vehicle level, Insert the plastic tubing into the filler hole on the side of the transmission. Use the supplied 75w90 gear oil to fill the differential. Fill with gear oil until gear oil flows from the filler plug hole. Allow gear oil to settle in all areas and air to escape. Re-top off if needed.

26. Re-install 8mm allen fill plug and torque to 25 ft lbs.

27. For the remaining reassembly of your vehicle, follow steps 1-6 in reverse.

28. Review each step found in this set of guidelines to ensure each component has been addressed properly and has been re-fastened to specification.

29. After the output flange seal has been installed on the vehicle drive the vehicle for 15 minutes, allow vehicle to cool off, then re-check gear oil level. During a 15 minute drive the gear oil level will drop in the center differential. This is due to transfer between the torsen differential and the output cover.

(NOT STOP AND GO, 15 MINUTES OF CONSISTENT DRIVING IS REQUIRED)(To re-check gear oil level and top off you may need to loosen catalytic converter clamps for clearance. Remember to torque fill plug to 25 ft lbs.)