

# ***A Case of Mistaken Identity***

**Filler tube on JATCO five-speed  
proves to be somewhat elusive**

**By Wayne Colonna  
Technical Editor**

## **Technically Speaking**

- **Author:** Wayne Colonna, Technical Editor

---

### **Filler tube on JATCO five-speed proves to be somewhat elusive**

The recent JATCO five-speed automatic transaxle shown in **Figure 1** can be found in a variety of vehicles. In the Mazda6 and MPV it is known as the JA5A-EL; in the Jaguar X type it is known as the JF506E; in the VW Golf, GTI and Jetta it is known as the 09A; and in the Land Rover Freelander it is called the JF506E as in Jaguar vehicles.

#### **Related Articles**

- - [Transmission fluid hydraulics](#)
- - [The ins and outs of transmission diagnostics](#)
- - [Mazda FW6A-EL stored pressure switch codes](#)

<https://www.transmissiondigest.com/a-case-of-mistaken-identity-2/>

Figure 1

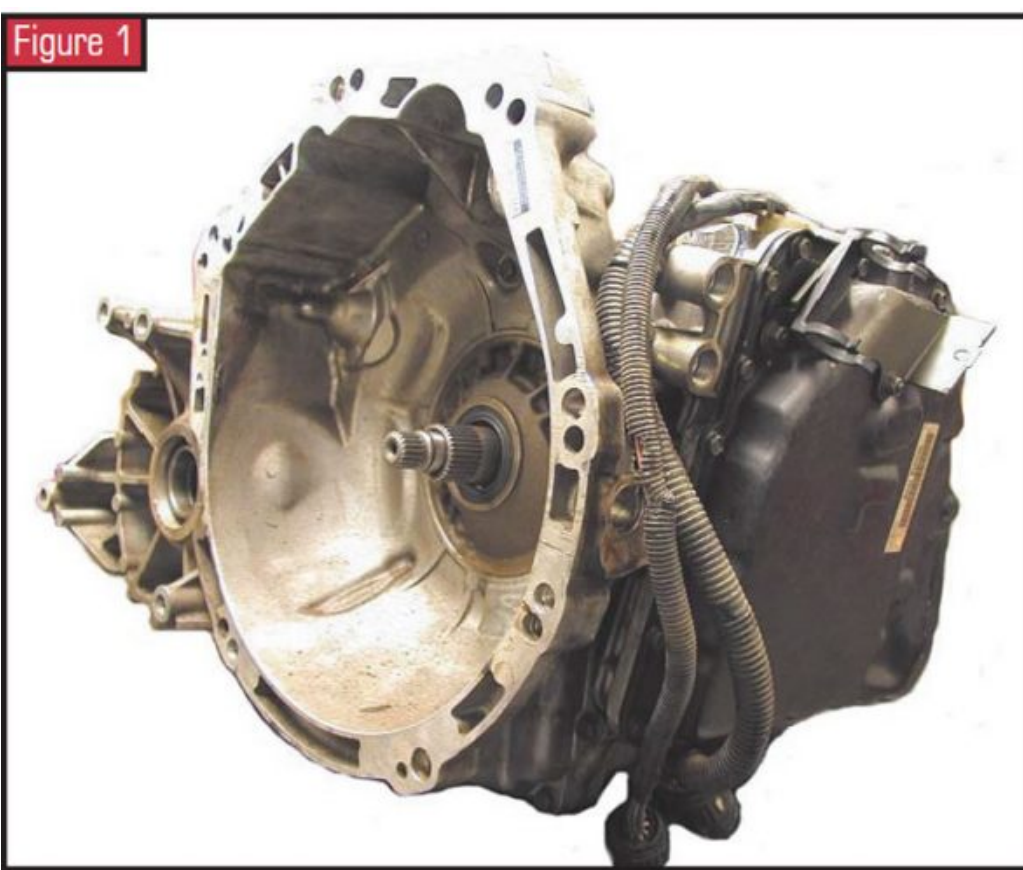
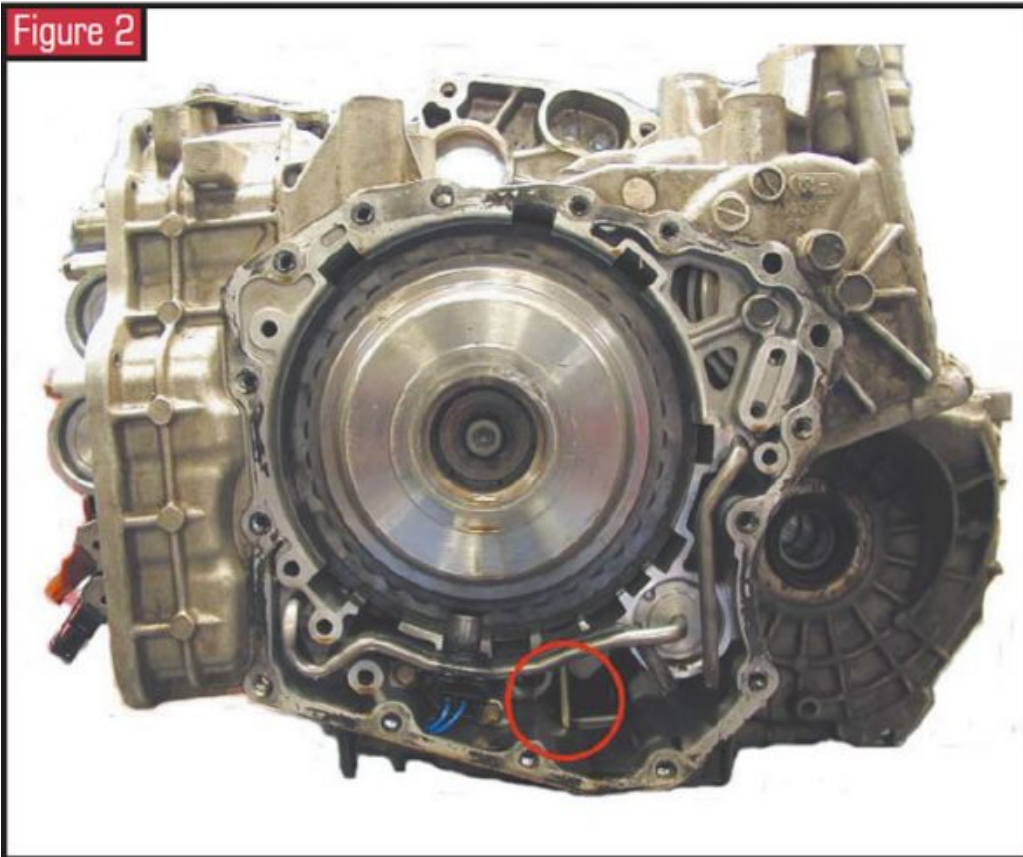


Figure 2



When you remove the back cover of this transmission, you will see a familiar fluid-level check pipe (**figures 2 and 3**). To fill the transmission, you remove the plug at the bottom of the case (see **figures 4 and 5**) and add fluid until it overflows the check pipe.

Figure 3

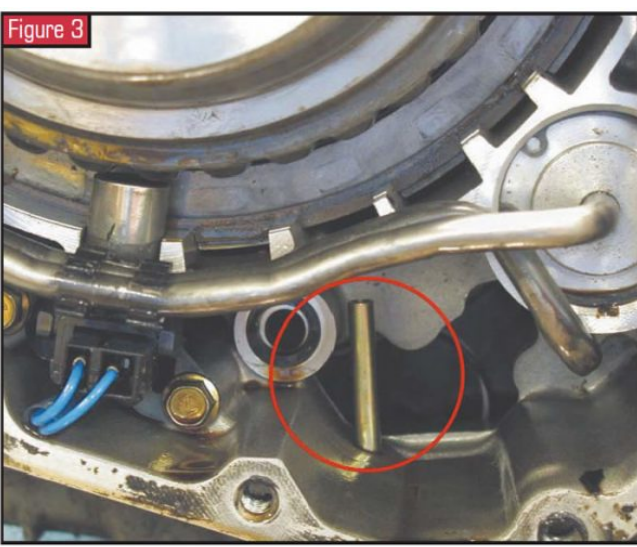
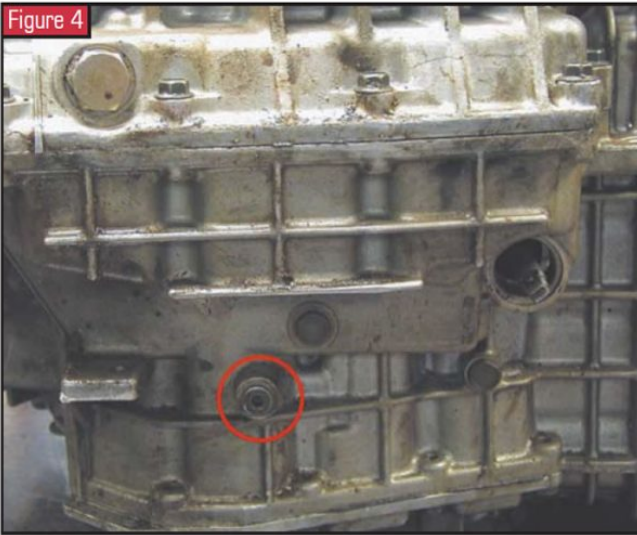


Figure 4



Since this unit is new to many, the technician installing the transmission begins to look for the fill plug and spots a large bolt on the side of the case that presents itself as the

most-likely candidate for the job (see **figures 6 and 7**).

Figure 5

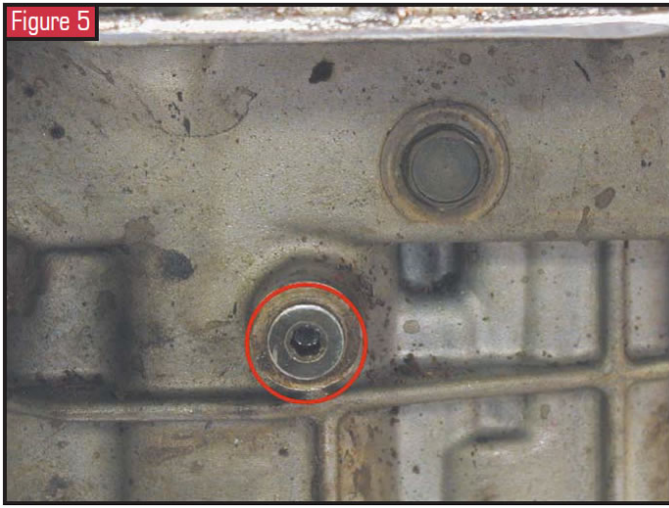


Figure 6

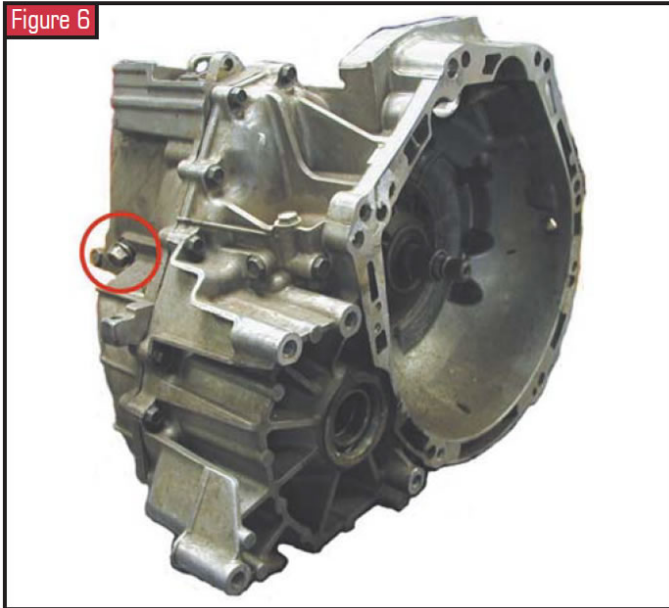


Figure 7



After filling the unit, the technician starts the car and does a road test. He immediately discovers that there is no reverse. Forward is not so good, either. When the transmission is removed and completely disassembled, the only band in the transmission – called the reduction band – is out of place and inoperable (see **Figure 8**). The builder may think he missed the band anchor and fixes the problem without mentioning anything to the technician who installed the transmission. As a result, the

technician repeats the process of filling the transmission with fluid, and the no-reverse condition occurs again.

Figure 8

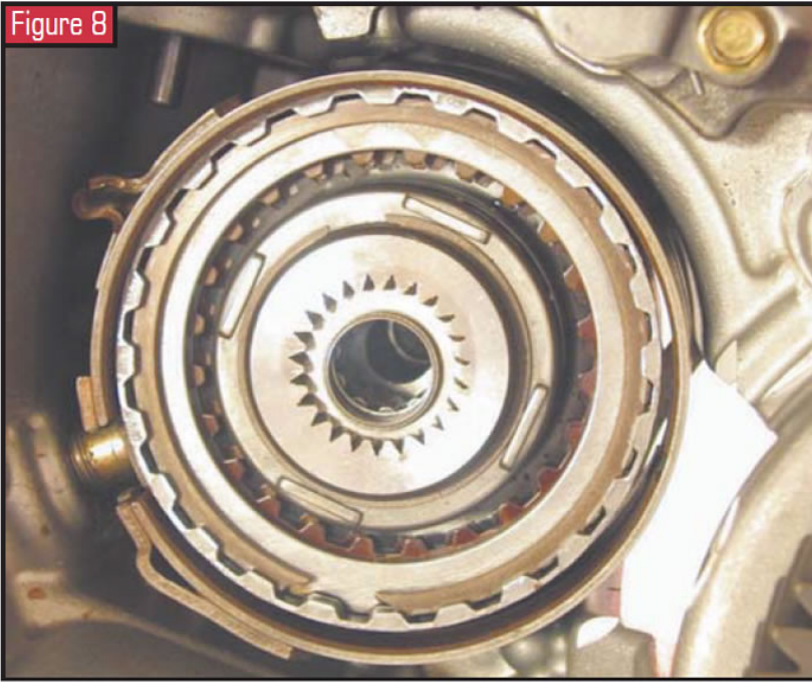
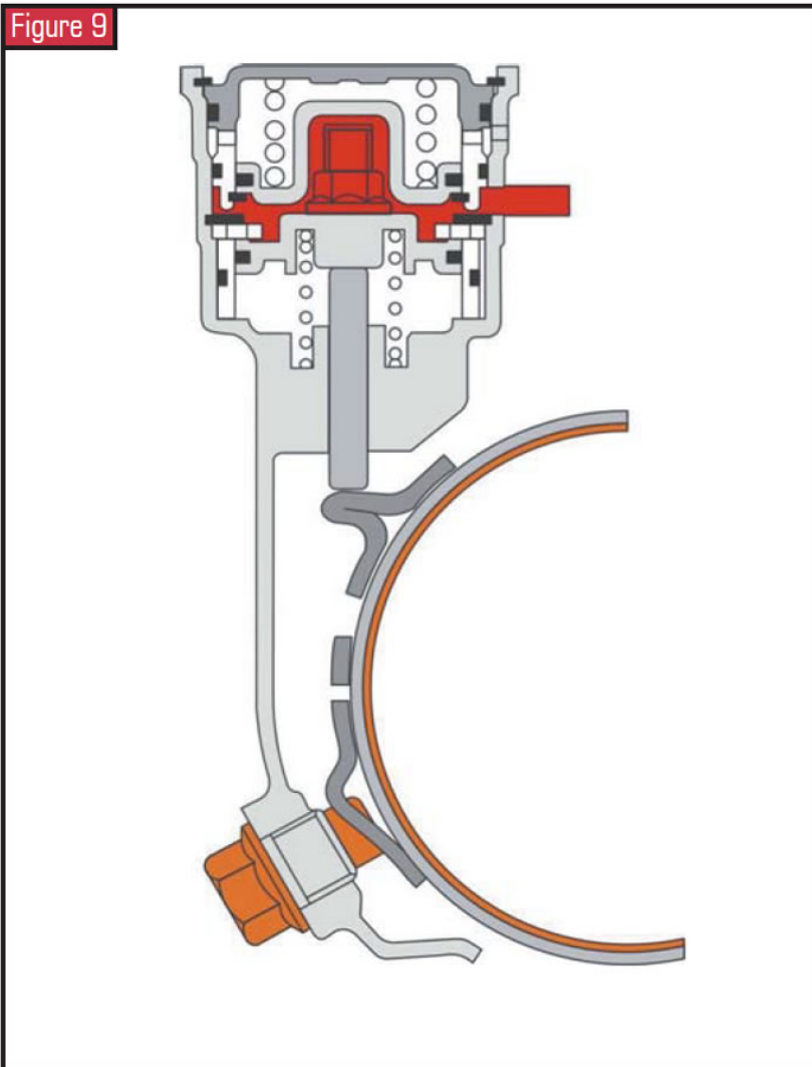


Figure 9



The bolt that appears to be a fill plug is actually the anchor stud for the reduction band (see **figures 9 and 10**). The proper fill location, on top of the pan, goes unnoticed because it looks like a vent (see **Figure 11**). The fill tube in **Figure 11** is on the

Freelander unit. VW and Jaguar units have the short fill tube off the left side of the pan. The tube on the Jaguars looks more like a fill pipe than a vent, as it is slightly longer and has a bend. The Mazda unit has an actual filler tube and dipstick (would it be proper to say Ford/Mazda has a better idea?).

Figure 10

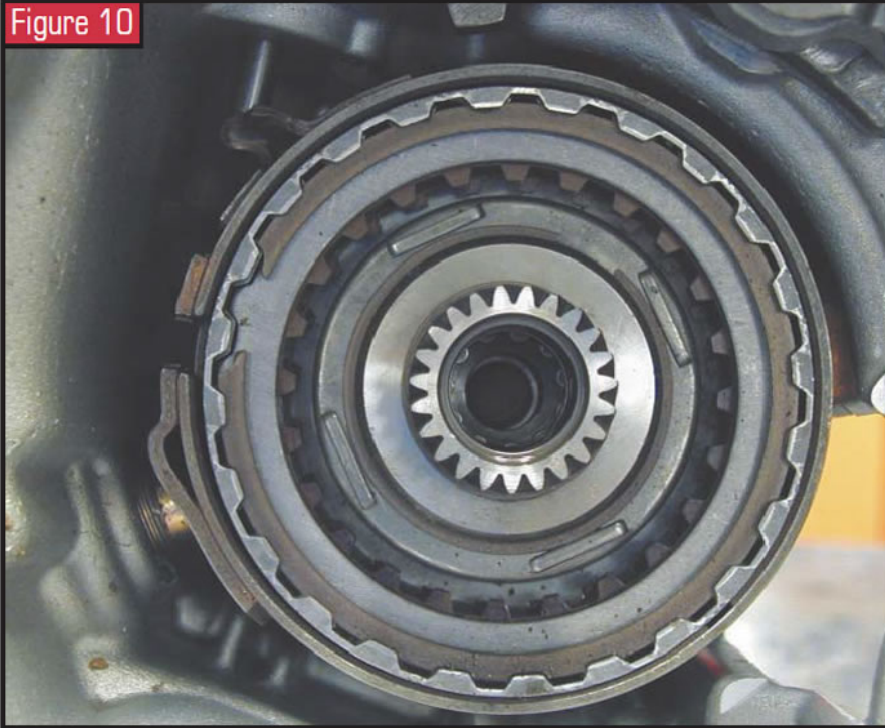
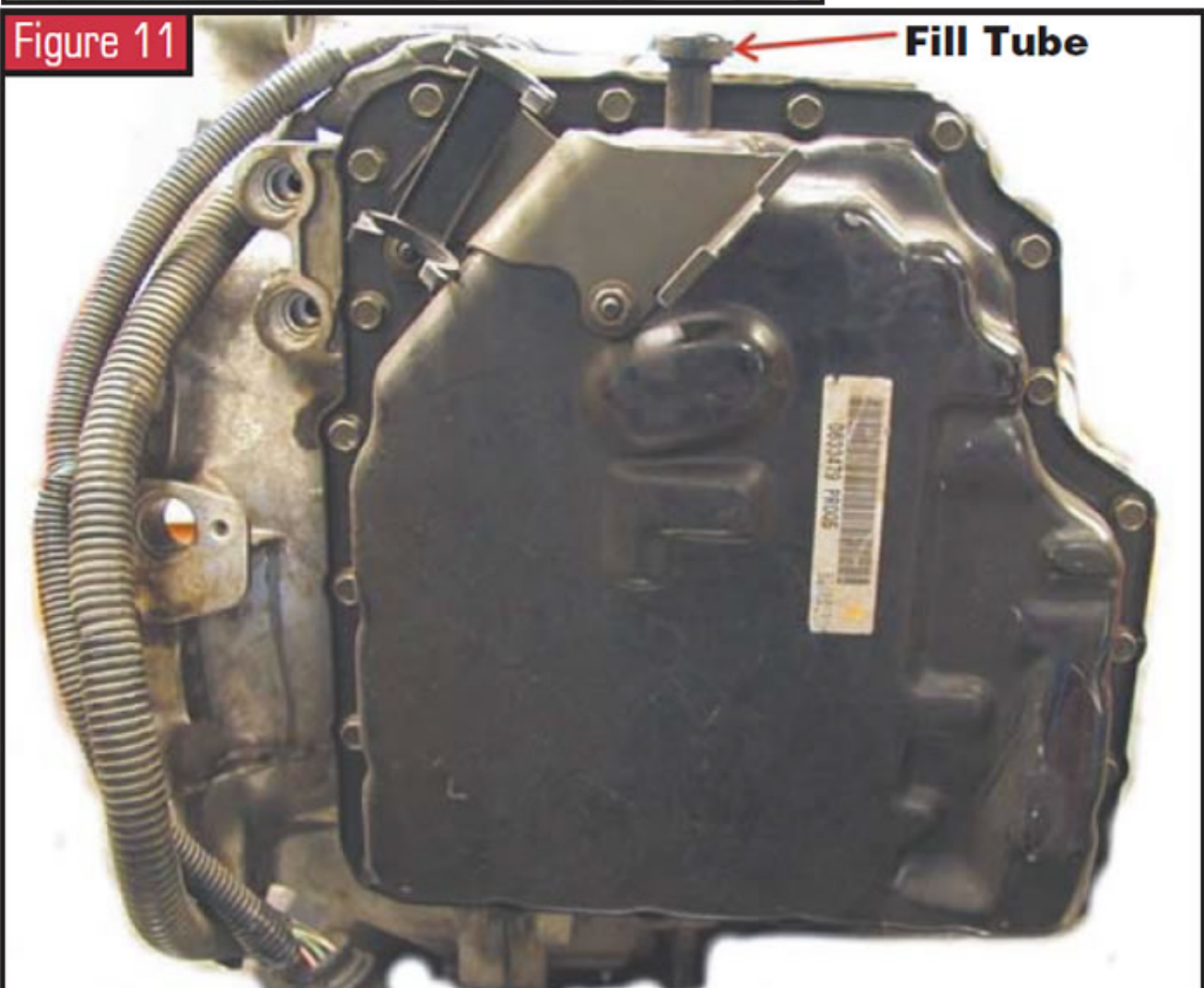


Figure 11



There is one other transmission in use that also experiences a case of mistaken identity, and that is the AW55-50 or AF23/33-5 transmission used in Volvo and Saturn vehicles. **Figure 12** shows a bolt that looks like a fill plug on top of the transmission. Pull this plug to fill the unit and you set free the third band. And you will not be singing the Lynyrd Skynyrd song “Free Band” – or was that “Free Bird”? Another case of mistaken identity, I guess.

**Figure 12**



[https://www.sonnax.com/tech\\_resources/158-mistaken-identity-jatco-5-speed-fwd-band-anchor-issues](https://www.sonnax.com/tech_resources/158-mistaken-identity-jatco-5-speed-fwd-band-anchor-issues)

May 13, 2004

[Email](#) [Share](#)

## Mistaken Identity: Jatco 5-Speed FWD Band Anchor Issues

Ed Lee

Before digging into this article, you should first read Wayne Colona's article, "A Case of Mistaken Identity," which appeared in last month's Transmission Digest. If you didn't catch it in the March issue, please take a minute or two and read it before proceeding. What follows will make a lot more sense once you have read his article.

When filling the front-wheel-drive Jatco 5-speed, it is not difficult for the technician installing the [transmission](#) to mistake the band anchor stud for the fill plug. In fact, as Wayne explained, it's not difficult to make this same mistake twice. When you consider that the shortest R&R time is 4.5 hours on Volkswagen, and the longest R&R time is 9.6 hours on the Freelander, it is important to figure out a way to rectify this problem without removing the transmission from the vehicle.

---

## Don't Drive if No Reverse

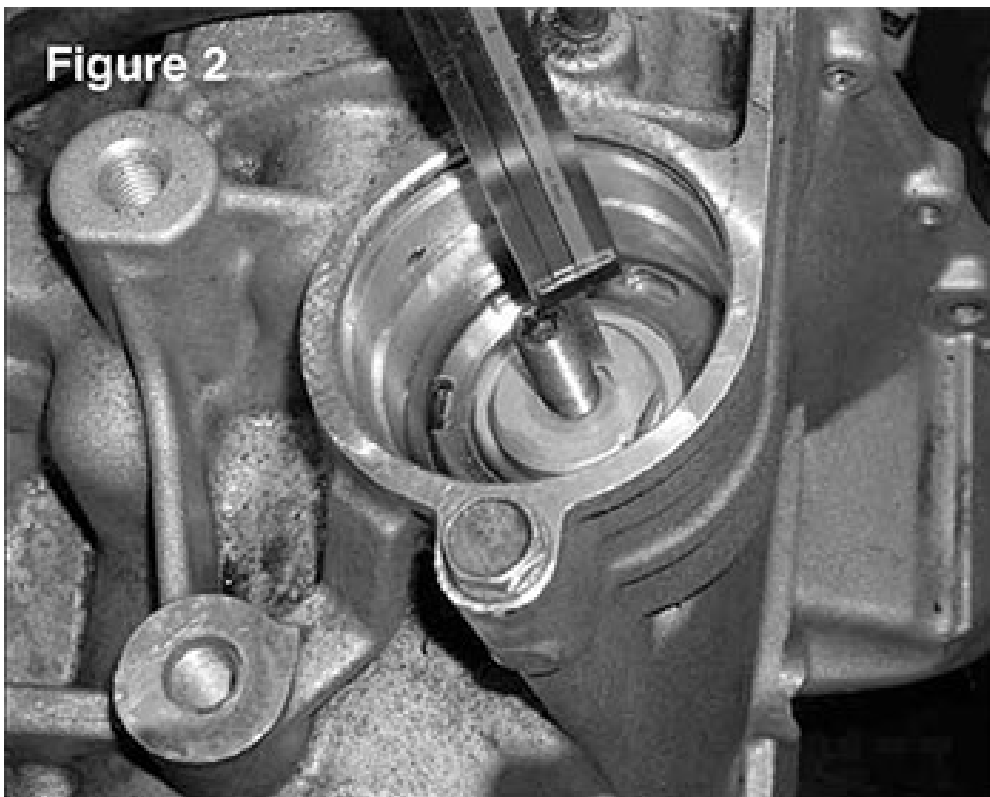
It is important that you identify the problem immediately. Do not road test the vehicle to check out the forward speeds if you are having a problem with reverse. The reduction band must be anchored to the case by the anchor stud to prevent rotation. If you try to drive the vehicle without the stud in place, the band will rotate, wedging itself between the drum and case. This will prevent the drum from rotating and will burn the clutches that try to apply for a given gear. If the clutches lose their service ability, then the transmission must be removed.

First you need to realize what is involved in the process of returning the band to its anchored position. The band looks like a shrunken-down version of the forward band in a 4T60-E. When the band is in its proper position in the case it looks as it is pictured in **Figure 1**. The anchor stud fits into the oval hole on one end of the band and the servo pushes against the other end of the band for band apply. The natural spring tension of the band aids in its release of the drum as the servo releases its pressure on the band.

**Figure 1**



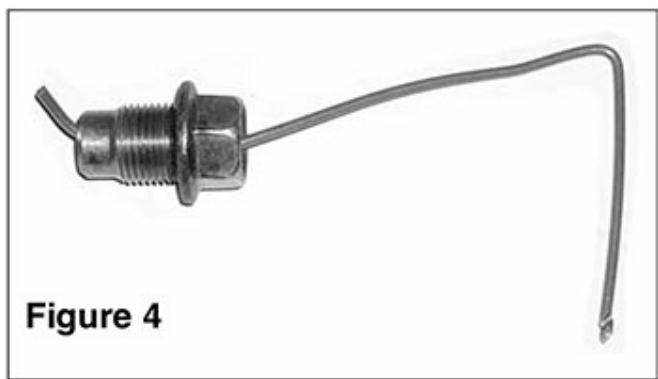
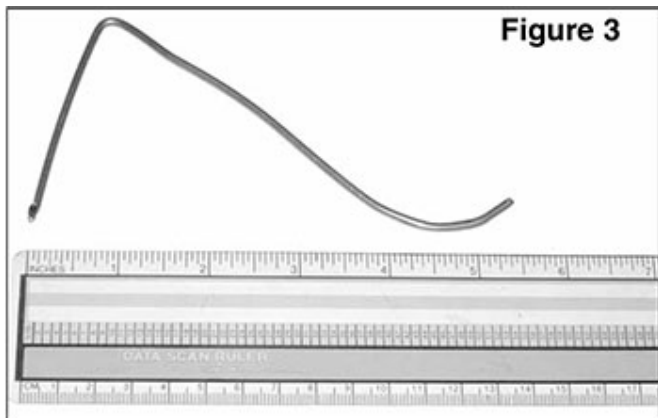
**Figure 2**



The band's spring tension would make you think that reinstalling the anchor stud into the band would be impossible. The first hurdle you have to overcome is removing the tension from the band. This can be accomplished by removing the cap from the servo cavity. Once the cap is removed you can see that the servo release movement is limited by a snap ring. The servo piston and return spring are located under the snap ring while the adjusting threads and the adjustment jam nut are located above the snap ring.

Leave the snap ring in place, loosen the jam nut and back out the servo pin adjustment until about 7/8" of threads are exposed. (See **Figure 2**). This will allow you to rotate the band closer to the position needed to reinstall the anchor stud. If you have not backed the adjustment out far enough, you will still have tension on the band and if you back the adjustment out too far, the band will rotate past the servo pin.

At this point, the task still looks impossible. To make it possible, chuck the anchor stud in a lathe and drill a hole down the center of the stud. An "R" drill bit is a good choice for drilling the hole since it is the tap drill bit for 1/8" pipe threads, and you will need to plug the hole in the stud when you are finished. Don't forget to tap the threads into the head end of the stud before proceeding. You will not want to remove the anchor stud to tap the threads once you have it back in place.



You'll need a tool to position the band while reinstalling the anchor stud. The tool shown in **Figure 3** was made from .102 music wire, although any number of substitute materials can be used. The two important things are that the tool be as rigid as possible and have as much of an arch as possible and still fit down the bore of the stud. The right-angle bend of the tool will help to guide the blind end of the tool.

If the band is wedged between the drum and the case, tap it free. Center the band, then rotate the band until the servo end of the band is resting against the servo pin. The oval hole in the band will now be exposed through the anchor stud hole in the case. Put the band alignment tool through the center of the anchor stud as shown in **Figure 4**. The tool can now be used to position the band as the anchor stud is installed into the case. When the anchor stud is successfully installed into the case, plug the hole in the stud with a 1/8" pipe plug and adjust the clearance on the band.

In World War II, an Army engineering company had the motto, "Difficult tasks we do immediately, impossible tasks take a little longer." When you've successfully replaced the band anchor stud without removing the transmission from the vehicle, you'll surely be able to relate to those soldiers.