

Clock Spring Repair "Pre-Ramble"

As the owner of a Jaguar XJ (X351), I have noticed a real shortage of repair videos for this specific model. There are lots of repair videos and instructions for the XF, XE, or even some older XJ's, but not the Saloon car. With that in mind, I decided to document the repair of my clock spring for the XJ (2011-2015). This repair may work through the 2019 model year too.

In 2021, I bought my first Jaguar XJ from a friend that was in great shape. The only issue he knew about, was that a pesky airbag light that had been on for a while. He sincerely thought it was just a fuse. Soon after the purchase, my horn went out and an intermittent error message started appearing saying "Manual Shift Disabled". This could be cleared by pressing "OK" on the wheel. This message eventually stayed on constantly and I was unable to clear it. This meant that I could no longer access the menus or even service menu to simply check my oil. Seriously, what idiot designed that fault circuit? By the way, why the hell isn't there an oil dipstick anyway? What are they trying to be obsessive minimalist like Apple or something?

Getting back to the story, so I took the vehicle to the dealer who diagnosed it as a bad clock spring. This is a device behind the steering wheel that keeps all the electrical connections on that wheel connected and working without becoming a tangled mess as you turn this way and that way. So, \$800 later it was fixed by the Jaguar dealer in July of 2021.

Fast forward to March of 2023 (about 15K miles later), my airbag light starts staying on again. Soon, my horn stops working again and (you guessed it) the "Manual Shift Disabled" completes the *Coup de grâce*. The damn clock spring has apparently gone out again! I contacted the dealer and they said it was only warranted for 12 months. Now that is just embarrassing quality for Jaguar and the dealership alike. I decide to NOT take it back to them again.

This time I bought a used OEM part off of E-bay and decide to tackle the problem myself, using YouTube, Jaguar Forums, and wherever else I could scrounge up shared Jaguar XJ or similar model information. It was slim pickings, but thanks to other unselfish people sharing their knowledge online, I did it! Thank you again to everyone for their videos and posts. Below is the process and tools I used to successfully replace my clock spring:

Jaguar XJ – clock spring Replacement

Very Important: Disconnect both battery Negative battery terminals in the trunk (may be a 10 mm socket)

Very Important: Allow 30-60 minutes for the SRS capacitors to discharge (extra time to be safe with airbag)

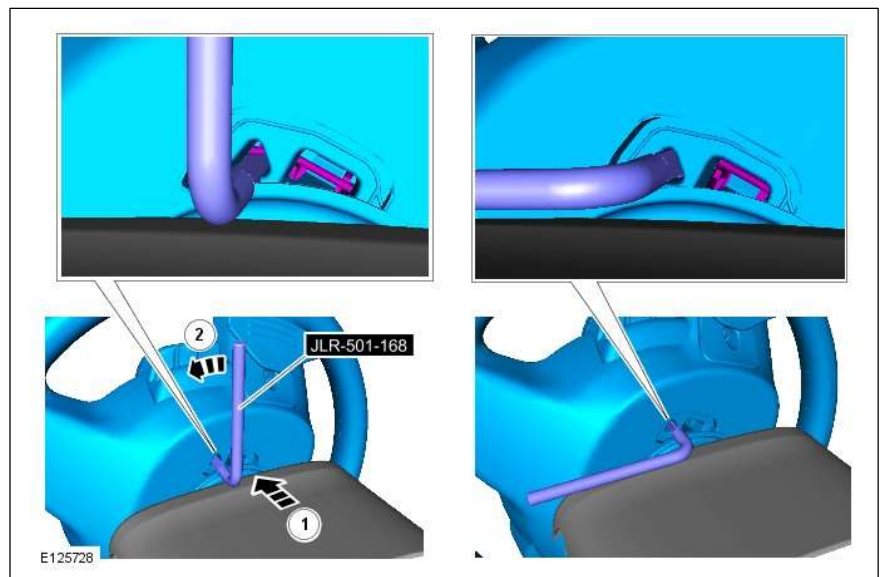
Notes on Removing the airbag:

There are no screws for this, it is done by moving two wire “spring catches” in back of the steering wheel to release the air bag. They make a specialty part for this: **JLR-501-168 DAB - AIRBAG REMOVAL TOOL**, however, it is not necessarily needed. This can also be done with an old flat head screw driver that is bent to 90°. I slightly twisted mine to allow for a little more turning leverage. My bionic hand wasn't working well, so a vice and a little muscle helped make the tool. I actually ordered the “specialty tool”, but became impatient so ended up doing the job without it. Here is a picture of the tools I used to complete the work as well as the specialty tool.



Above is the Specialty tool which wasn't used as it arrived a day late

Below are some really helpful diagrams that I referenced on the [Jaguarforum.com](https://www.jaguarforums.com). Thankfully, a senior member by the name of: **Rummy636** uploaded these diagrams, which I found useful. I don't know him personally, but Cheers mate! For reference and credit, a link to his thread is also included below along with his pictures.



Some of this below are his directions, modified to work for my XJ clock spring replacement.

**** Disconnect both battery Negative battery terminals in the trunk (may be a 10 mm socket) ****

**** Allow 30-60 minutes for the SRS capacitors to discharge (extra time to be safe with airbag) ****

1) Turn the steering wheel right, 90° to 120°.

2) Insert the 90° bent flat head screw driver blade (or specialty tool if you have it) into the triangle shaped hole on the back of the steering wheel, where it joins the steering column.

3) Turn the blade toward the driver door to release the spring catch. You should hear it release. If not heard, gently pull on the airbag to see if that side feels loose.

4) Repeat for left side: Turn the steering wheel left, 90° to 120°.

5) Insert the 90° bent flat head screw driver blade (or specialty tool if you have it) into the triangle hole on the back of the steering wheel, where it joins the steering column.

6) Turn the blade toward the Passenger door to release the spring catch. You should hear it release. If not heard, gently pull on the airbag to see if this side also feels loose. It should be fully released now, with only three electrical connectors holding it on.

** Note: Take pictures or video or both to note where and how the wires are connected and routed.

7) Disconnect the 2 airbag wires and 1 ground; store the airbag face-up, preferably outside of the car.

8) Now, make sure your steering wheel and front tires are pointing straight ahead.

9) With a permanent marker or similar, mark the 12:00 O'clock position on the Center Bolt, washer, and steering wheel frame.

10) Remove the center bolt with 13/16 " socket and set it aside. The wheel will now come right off.

11) To access the clock spring, first remove the bottom and then the top plastic casing around the base of the steering wheel. There are two Torx T-20's for bottom and then three hidden Torx T-20's holding on the top from the inside. Note that those three screws are only accessible after removing the bottom casing.

12) After that is done, now you can easily remove the four Torx T-20's holding on the clock spring.

13) Unplug and remove the connections on the old clock spring

14) Now you can easily remove the turn signal and wiper switch from the old clock spring and plug them into the new clock spring.

15) Reconnect and install the new clock spring with the four T-20's screws

16) Reinstall the steering wheel casings (top and bottom, in that order).

17) Keeping your Marks from Step 9 lined up, reinstall the steering wheel with the center bolt, using medium thread locker # 42 and a torque wrench. The center bolt should be tightened to 40 Nm (which is 29.5 Ft. lbs.).

15) Reinstall the airbag connections and then clip each side of the airbag in. You should hear a click as each side grabs the spring catch.

16) Reconnect the batteries and you should be about done. Just to make sure, start the car and see if the telltale Airbag light goes off, horn works, and that annoying "Manual Shift Disabled" error message is gone. If so, then pat yourself on the back Chico, because you are now "The Man!"

As mentioned earlier, there is a real shortage of XJ (X351) videos and repair information online. This is likely due to the fact that there are just not as many of these models out there, especially in the USA. Regardless, I truly hope my efforts here helped out some fellow Jaguar XJ or other model owners and perhaps encourage them to share their knowledge base as well. All the best!