



CHANGING SPRINGS ON A JAGUAR MKII, S TYPE, 420

Changing springs on a Jaguar is a dangerous activity due to the forces involved in the compression of the springs. Inadvertent release of the spring creates a projectile that has the potential to kill or seriously injure the people in proximity of the event. The following report explains a process used by members of the Ottawa Jaguar Club to replace the front springs in a 1965 MKII. It is based upon the guidance found in the official workshop manual with some adjustments made that were learned in the process. While this describes the process of installation in a reconditioned cross member it applies equally to spring removal.

Tools required: For best results an air tool is of greatest benefit. Sockets are generally ½ inch or 9/16. A special tool kit consisting of:

- A long 5/8th inch threaded rod with two washers and two nuts at one end and two washers and one nut at the other. The length of the rod must allow it to pass through the spring pan at the bottom and the upper cross member tower shock mounting hole with the spring fully decompressed and the capability to insert the washers and tighten the nuts with an inch to spare at each end.
- four “T” handled 14 inch long 3/8 inch rods with a national fine thread equivalent to the bolts that hold the lower spring pan on, and
- A shock absorber mounting bracket with a ¾ inch hole centered to allow the threaded rod to pass through it.
- Our T handles were manufactured by a local machine shop.



Process:

- Assuming that the cross member has been refurbished, install it with the upper and lower spring pans attached. Install the swivel arm complete with new ball joints. Remove the lower spring pan.
- Holding the lower A arm parallel to the ground, insert the spring with a spacer on top of it into the upper shock tower. Note that the spacer shown in this picture should be inserted in the upper shock tower on top of the spring, not in the lower A arm. The spring must be turned so that the open end inserts itself into the end of the groove in the lower spring pan. If the springs are new the upper spacer may not be necessary. We found that the height of the used springs from our project were exactly the same height as a new spring when decompressed however we assumed that over time the spring would have lost some



of its tensile strength so we added one spacer.



- Insert the four “T” handled threaded rods through the corner holes of the lower spring pan and into the lower A arm and tighten them equally so that they are secure in the lower A arm spring pan bolt holes. These rods will allow the spring pan to rise into position evenly without spilling the spring as a projectile.

- With the lower nuts and washers and shock mounting bracket in place on the rod insert it with the upper washers and nut removed, from the bottom through the spring pan, the spring and then through the upper shock tower shock mounting hole. Attach the upper washers and the single nut. Using two bolts from the shock mount bolt the mount with the large hole on the spring pan.

- Compress the spring by hand by lifting the lower spring pan up as high as possible by sliding it up the rods. The rods will benefit by smearing them with white grease. In our attempt on the first spring we used a ratchet ended wrench to tighten the lower nuts as shown in this picture. Our rod was too long and prevented the rod from exiting the upper shock hole far enough as it would have hit the fender. By shortening the rod to the minimum distance needed with the spring decompressed, the bottom nuts could be turned with an air tool. With the spring under ever-increasing load the upper nut is captured by a wrench or socket and held in position while the lower doubled nuts stay in position and are **SLOWLY** turned by the air tool.

- Once the lower spring pan has joined the lower A arm, insert the bolts in the open holes and then replace one “T” handle at a time with a bolt. When all bolts have been installed remove the threaded rod and the lower shock mount.

- As described in the manual, removal of the spring is the reverse. Obviously there will be much more preparation required as bolts will be rusted etc.

