

General Servicing

PRS3 Ignition switch By Enrico Agostinelli

Anyone who has driven a petrol or diesel Land-Rover built between 1954 and 1971 will be familiar with the switch that controls the side lights and headlamps/ A large, barrel shaped switch, it does the job, though the youngest of them will be 53 years old, whole the oldest are 70 years old. That is a lot of wear and tear.

This ignition switch from the Land-Rover Series 2 was grinding while turning it, and the headlight contact wasn't always stable. So while taking it apart, I decided to take some pictures and have the opportunity to write this article. I hope this will help someone else that want to attempt a fix.

Before starting, this article applies to:

- Lucas 31270 (ignition switch, headlight and sidelight)
- Lucas 35878 (headlight and sidelight switch only, no key for the ignition)
See photo to the right

Tool needed:

- Small flat screwdriver
- 1/16" or 2mm diameter bar (it can be a screwdriver)
- Grease
- A clean table



The Process:

Assuming you have already removed it from the dash, let's dismantle it starting from the front:

To remove the key barrel, with the key inserted, use the 1/16th inch or 2mm bar to insert it in the hole close to the contact plate and press (*photo 1 - green arrow*).

This will release the locking pin in the key barrel. You can now slide it out. [if you have lost the key, you can do the same, but in the barrel you also have to lower each little tab that would go down with the key profile (*photo 2 - red arrow, top next page*).]

To remove the turning knob, insert the 1/16th inch or 2mm bar in the hole on the plastic case (*photo 1 - yellow arrow, top next*

page); you can now slide out the plastic knob used to turn on the lights. If you don't feel the spring moving, use some WD40 and let it do its magic for few minutes. It's, on average, 60 year old Bakelite, so be gentle! For clarity, multiple knobs were fitted on the same PRS3 body. Land rover used 3 different types of know from S1 to S2a, but all have the same mechanism of release.



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Now on the back, where the contacts are:
Open the 3 tabs at the back of the case. *Photo 3 above*

The case is compressed by a large spring, so be careful when you open it. *Photo 4 to the right*



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Slide out the plastic/Bakelite plate with the contacts *Photo 5 above*



6

Pulling out the plastic case, also the centre metal tube will come out, be careful at the little sphere that is inside, it's pressed by a little spring. *Photo 6 above*



Note ball bearing/ sphere in photo 7 (above left). Photo 8 (above right) is how things should look at this step.



Now you can open everything and clean it and reassemble. Photos 9, 10,11



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Slide out the inner plastic sleeve (the one that contain the little ball) and you'll see there is a screw on a side. This is used to insert the ball bearing / sphere and spring during the reassembly. I strongly recommend to use grease to facilitate the sphere to stay in place and not falling constantly. *Photo 12 above*



13



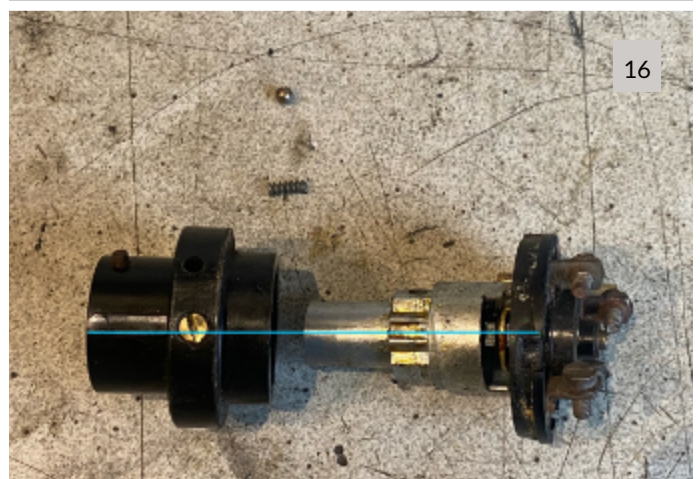
14

Now you should have the switch fully disassembled *Photos 13 & 14*



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If you have contact problems, now it's time to check every single contact. Check the continuity of every single connection, from the pin to the final tab. Sometimes the problems reside in the "pressed type" contact that connect the connector tabs to the inner contact points. The malfunction can come from an intermittent contact generated by oxidation. I wouldn't recommend disassembling those since parts are not available to replace them; so you can use a little Dremel brass brush to clean the contacts and then solder the plates together. In this way you guarantee the contact between the two (2) surfaces. *(Photo 15 above)*



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To close it, reverse procedure! – this is what I initially wrote, but friend Dixon remind me that the closing procedure can be more complicated than what it seems. So I took some more pictures! To start, identify on the metal piece the recess where the sphere will sit. During the reassembling it's easier if you keep the recess aligned to the screw hole where we will insert the sphere. Familiarise with the sliding of this 2 parts. *(Photo 16 above)*

Now it's time to reassemble it. Position all parts in line as per picture, and start the compressing it. The copper ring has 3 tabs that need to be aligned to the plastic sleeve, take your time to align it without forcing too much. The spring doesn't require too much force to be compressed, but if you need help perform this operation in 2. *(Series of photos to the right)*

The back plate has only one position to go in, so check that the plastic tab align to the recess in the metal case. To secure everything, you can now compress the 3 small strip on the metal case to lock it in position.

Now you should be able to operate your switch correctly for another 60+years!

Notes:

Some reference numbers from Rover technical publications: TP155E (October 1961) and TP365A (July 1964)

- Series I, II models -
Lucas no. LU031369 or
Rover no. 239570
- Series I, II, NADA models -
Lucas no. LU031412 or
Rover no. 240714
- Series IIA -
Rover no. 519775 (locking type)
- Late Series IIA Diesel models -
Lucas no. LU54033283 or
Rover no. 536917 (non-locking)
- NADA, Petrol models -
Rover no. 531530 (locking type)
- NADA, Diesel models -
Rover no. 547102 (non-locking)
- Knob for ignition and lamp switch
Lucas no. LU 316436 or
Rover no. 537284 (locking type)

