Friday Fault to Fix: Steering Lock Failure

Fault

Brand: Mercedes

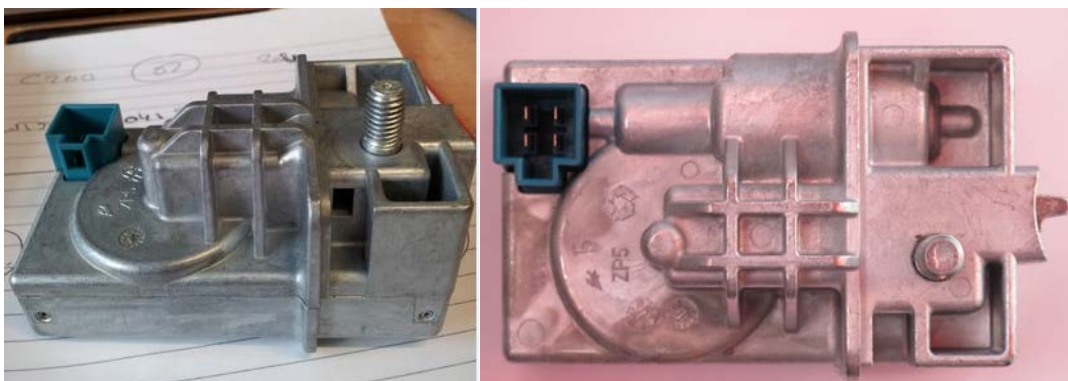Symptom: Non start, no ignition lights

Fault codes:

- A22449 - The electronic ignition lock has a malfunction. There is an internal electrical fault

- A25407 - The electric steering lock has a malfunction. There is a mechanical fault

- A25408 - The electric steering lock malfunction. There is a signal fault or the message is faulty

- A25409 - The electric steering lock has a malfunction. There is a component fault

- A25464 - The electric steering lock has a malfunction. There is an implausible signal

Fix

Cause: Electronic steering lock (ESL) is sometimes non-functional or locked on

Fix: The ESL control unit needs to be replaced

Steering lock:

1. When removing the ESL, leave the key in the ignition so that the steering system does not lock
2. A few components in the vehicle interior need to be removed in order to access the control unit. The airbag is one of these, so please make sure you follow the instructions for working with airbag units and disconnect the battery
3. You can now begin removing the necessary components

a. The steering wheel airbag
   b. The steering wheel
   c. The steering column tube switch module
4. The upper retaining bolts for the steering column tube module only need to be loosened
5. You can access the control unit by slightly tilting the steering column tube module

NOTE: When installing the ESL, be sure to apply the specified torque of 20nm to tighten the steering column tube to the cross member

6. You do NOT need to remove the whole steering column tube
7. Once the steering column tube is loosened, disconnect the electrical line from the control unit. The wire is hidden from view, so you will need to feel for it
8. After disconnecting the electrical line, unscrew the nut on the control unit
9. Next, press the grub screw into the control unit and work the control unit up and out of the steering column tube
10. If the control unit is locked, you will not be able to push in the grub screw release bolt. In this case, the steering column tube module and the ESL will need to be removed completely
11. Now take out the ESL and replace it with a new one

NOTE: Installation of the new control unit is done in reverse order

12. Once installation is complete and the vehicle is operational again, you can start with the personalisation of the ESL
13. In this example, you must have a pre-programmed orange key/blue key. This can be requested from Mercedes at the time of ordering the ESL
14. Transfer the data on the key to the new control unit in the vehicle.
15. This can be done using your AssistPlus device.
   a. In the 'Main groups' menu, select 'Control Units' > 'Body' > 'EIS (Electronic Ignition Switch)
   b. Press 'Initial Start Up' > 'Initial start-up of ESL control unit'
   c. You will now be guided through all the steps required to put the ESL into service. This includes learning the preconditions required to program the control unit properly with no problems
16. Your AssistPlus will now ask whether the control unit has already been exchanged
17. Since we have replaced the ESL, we will answer by pressing the 'Yes' button
18. The AssistPlus will now prompt you to insert workshop key into the ignition. Insert the orange/blue key. You do NOT need to turn it
19. After programming is complete, the red LED will go out. You may now remove the workshop key and put in the normal ignition key. Turn to switch ignition on
20. Turn the key to position 1 or 2
21. When you press 'Next', the AssistPlus will inform you that the ESL has been successfully installed

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- New ESL fitted
- Control module EIS is initialised = NO
- The transport protection Detached = YES
- Control module ESL personalised = NO
- Control module ESL activated = NO
- Workshop key inserted light on 5 sec approx.
- Control module EIS is initialised = YES
- The transport protection Detached = YES
- Control module ESL personalised = YES
- Control module ESL activated = NO
- Vehicle Key Inserted
- Control module EIS is initialised = YES
- The transport protection Detached = YES
- Control module ESL personalised = YES
- Control module ESL activated = YES

.

ASSISTPALUS Screenshots

1

INITIAL STARTUP

| INITIAL STARTUP CONTROL UNIT EIS | INITIAL STARTUP CONTROL UNIT ESL |

USEFUL

BACK

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INITIAL STARTUP CONTROL UNIT ESL

...OLLOWING PROCEDURE WILL GUIDE YOU THROUGH ALL STEPS REQUIRED TO PERFORM A COMPLETE INITIAL STARTUP OF SYSTEM ELECTRIC STEERING LOCK CONTROL MODULE (N26/5).

PRECONDITIONS:-

· Control module EIS is activated.

· An orange workshop key with the corresponding programming is available on site.

USEFUL

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INITIAL STARTUP CONTROL UNIT ESL

...ENTION TO NOTES:-

· Insert the program workshop key into EIS control unit (N73).

· Once the red LED in the key has gone out, programming in control module ESL [ELV] control unit (N26/5) is ended.

· Insert key into ignition lock and turn into position 1 or 2.

· Control module ESL is automatically activated by inserting a valid vehicle key. A test mode is no longer possible.

CONTINUE WITH NEXT

USEFUL

BACK   NEXT

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INITIAL STARTUP CONTROL UNIT ESL

...WILL BE GUIDED THROUGH THE FOLLOWING STEPS:-

...ce control module ESL.

· Personalise control unit ESL with the orange workshop key.

· Control module ESL is automatically activated by inserting a valid vehicle key. A test mode is no longer possible.

· Erase fault memory of control unit EIS

Note:-

The fault codes for control unit ESL are stored in the fault memory of control unit EIS.

START PROCESS WITH NEXT.

USEFUL

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