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Components

- RCL control module (N54),
- IR DAS control module (N54/1),
- IR transmitter and mechanical key with transponder,
- Coil in steering lock (L11),
- 3 IR receivers
 - Models 129, 140 on driver's door (A26/1), passenger door (A26/2), trunk lid (A26/3).
 - Models 202, 210 on driver's door (A26/1), trunk lid (A26/3), interior rear view mirror (A26/7).
- Mechanical rotary lock switch
 - Models 129, 140 on driver's door (S86/1) and trunk lid (S88/2).
 - Models 202, 210 on passenger door (S87/1) and trunk lid (S88/2).

IR DAS control module (N54/1):

The IR DAS control module (N54/1) performs the following functions:

a) Infrared remote control

- Receiving and evaluation of the signals rotary lock switch 1 and 2 from the RCL control module (RCL) (except model 129)
- Activation of:
 - of the central locking system (CL) (except model 129)
 - of the remote trunk release (RTR) (Model 140 and 202/210 sedans only)
 - of the anti-theft alarm (ATA) (except model 129)
 - of the convenience feature (CF) (except model 129)

- Programming and evaluating of the mechanical rotary lock switches or switching and working elements (except model 129)

b) Drive authorization system stage X

- Activation of the coil for transponder on steering lock
- Programming and evaluating of the transponder signals
- Release of engine control module via CAN with valid transponder code.

Note:

The Drive Authorization System (DAS) is independent in function from the of the RCL lock status and battery voltage in the IR transmitter keys.

An additional requirement is that the transponder in the ignition key supply the IR DAS control module (N54/1) with data via the coil in the ignition switch.

Note:

RCL control module (N54):

The RCL control module (N54) performs the following functions:

- Receiving of the IR signal.
- Activation of:
 - IR DAS control module (N54/1) via signals from rotary lock switch 1 and 2 (except model 129),
 - Lock/unlock verification signals via receiver units
 - ATA (model 129 only),
 - Convenience Feature (CF) (model 129 only).



- The reception of a valid IR signal is indicated by a verification signal (feedback) via the indicator lamps in the IR receiver units.
- The verification signal occurs only at the IR receiver which was activated by the IR signal.
- When unlocking or locking the vehicle via the mechanical key, a verification signal is not indicated.

Deactivation of the motor electronics is accomplished via the IR DAS control module (N54/1). The IR DAS control module (N54/1) is also connected to the engine control module via the CAN data bus. Upon deactivation of the motor electronics (ignition key has been removed from the ignition switch), the engine control module in turn deactivates the fuel injection system. The IR DAS control module (N54/1) and engine control module are married together via an identification code exchange. This identification can not be erased. Therefore, it is impossible to swap control modules (either IR DAS or engine control modules) for troubleshooting purposes.

Actual values:

Via the Hand-Held-Tester (HHT) up to 8 different transponders can be tested for locking approval. Additionally, the indication is given if the IR DAS control module (N54/1) is married (via an identification code), after approx. 250 activations, (circuit 15 ON), thereafter changes in version coding can no longer be done. The readout of actual values is menu driven.

Version coding

Replacement of IR DAS control module requires version coding via the HHT. The version coding is menu driven.



The IR DAS control module (N54/1) and engine control module are married together via an identification code exchange. These identification codes can not be changed and this code remains with the vehicle for its service life. Only the mechanical locks can be replaced.

If the IR DAS or RCL control module is defective:

- A new IR DAS or RCL control module must be specially ordered for the specific vehicle, using the same identification code as the previously installed IR DAS or RCL control module.

If a mechanical lock or key is defective:

- Replace the mechanical lock or key with a new one, using the same mechanical lock code number (special order from your facing PDC).

If the customer loses an IR transmitter key (which includes a mechanical key):

- The vehicle's RCL identification code remains, the lost IR transmitter key (s) is made invalid via desynchronization in the RCL control module (N54) and by deactivation of the transponder in the IR DAS control module (N54/1). To maintain vehicle security, all mechanical locks may be replaced if desired, using a new mechanical lock number code. You must notify your facing PDC of any mechanical lock changes, by using the Lock Change Notice Form.

Desynchronization

If an IR transmitter is lost, it must be desynchronized in the RCL control module (N54) and the mechanical locks replaced. The desynchronization is only possible via the Hand-Held Tester (HHT) and is menu driven. After desynchronization, all still available IR transmitter must be resynchronized (see owner's manual).

During desynchronization of an IR transmitter, the transponder is **NOT** locked.

Transponder Deactivation

Deactivation of the transponder is accomplished at the IR DAS control module (N54/1).

- Via the Hand-Held Tester (HHT), the transponder in the IR transmitter keys can be **revocably** deactivated. The deactivation of individual transponders is menu driven. The reactivation of **revocably** deactivated transponders is accomplished via the HHT.
- Via the HHT, the transponder in the IR transmitter keys can be **irrevocably** deactivated (**only upon vehicle owner's consent**). The deactivation of the transponder is menu driven. The reactivation of **irrevocably** deactivated transponders is **not** possible.



If a mechanical key is lost, the transponder must be deactivated as well.

Electrical Test Program - Component Locations

Model 129 with ME-SFI

Note:

Mechanical lock cylinders are located on left door and trunk lid only.

A mechanical lock cylinder is not located on the right door.

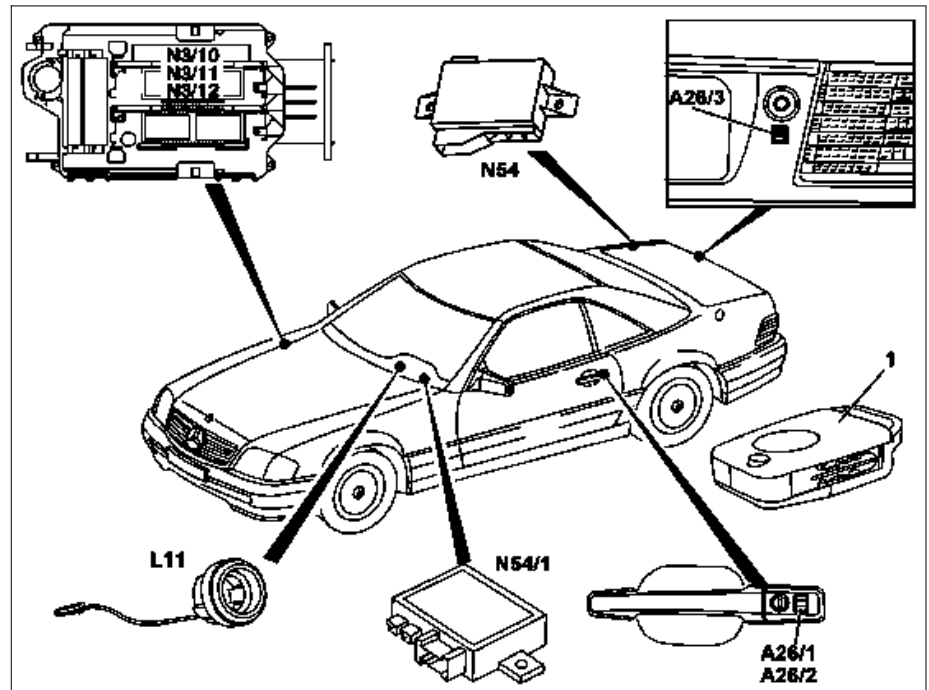


Figure 1

- A26/1 Left front door IR receiver
- A26/2 Right front door IR receiver
- A26/3 Trunk lid IR receiver
- L11 Transponder coil (on ignition/starter switch)
- N3/10 Engine control module (ME-SFI)
- N3/11 Left engine control module (ME-SFI)
- N3/12 Right engine control module (ME-SFI)
- N54 RCL control module
- N54/1 IR DAS control module (behind instrument cluster)
- 1 IR transmitter with transponder

U80.30-0342-06

Electrical Test Program - Component Locations

Model 140 with ME-SFI

Note:

Mechanical lock cylinders are located on left front door and trunk lid only.

A mechanical lock cylinder is not located on the right front door.

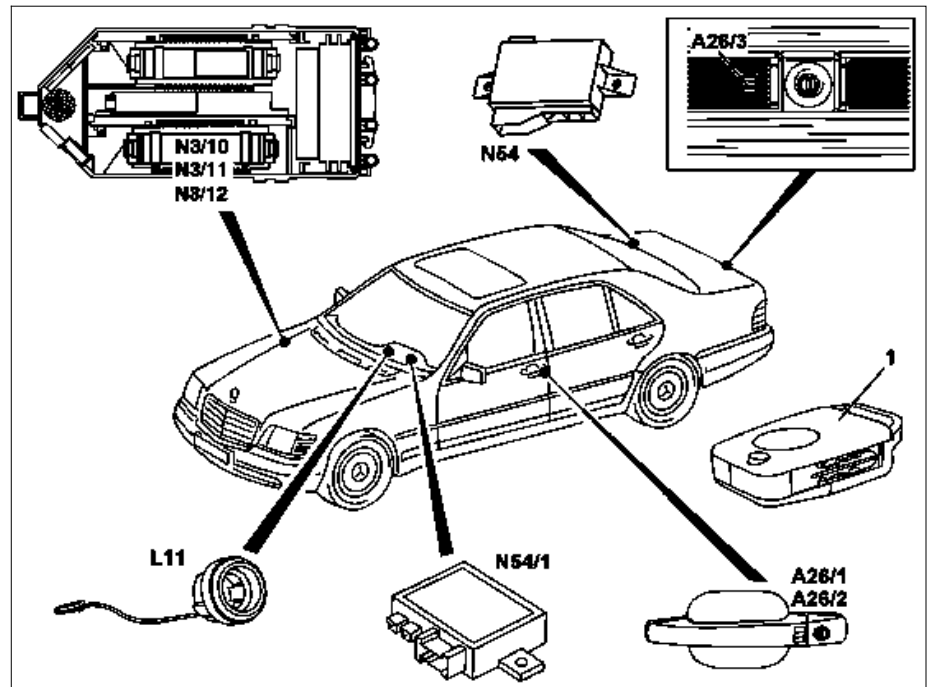


Figure 2

- A26/1 Left front door IR receiver
- A26/2 Right front door IR receiver
- A26/3 Trunk lid IR receiver
- L11 Transponder coil (on ignition/starter switch)
- N3/10 Engine control module (ME-SFI)
- N3/11 Left engine control module (ME-SFI)
- N3/12 Right engine control module (ME-SFI)
- N54 RCL control module
- N54/1 IR DAS control module (behind instrument cluster)
- 1 IR transmitter with transponder

U80.30-0339-06

Electrical Test Program - Component Locations

Model 140 (coupé) with ME-SFI

Note:

Mechanical lock cylinders are located on left door and trunk lid only.

A mechanical lock cylinder is not located on the right door.

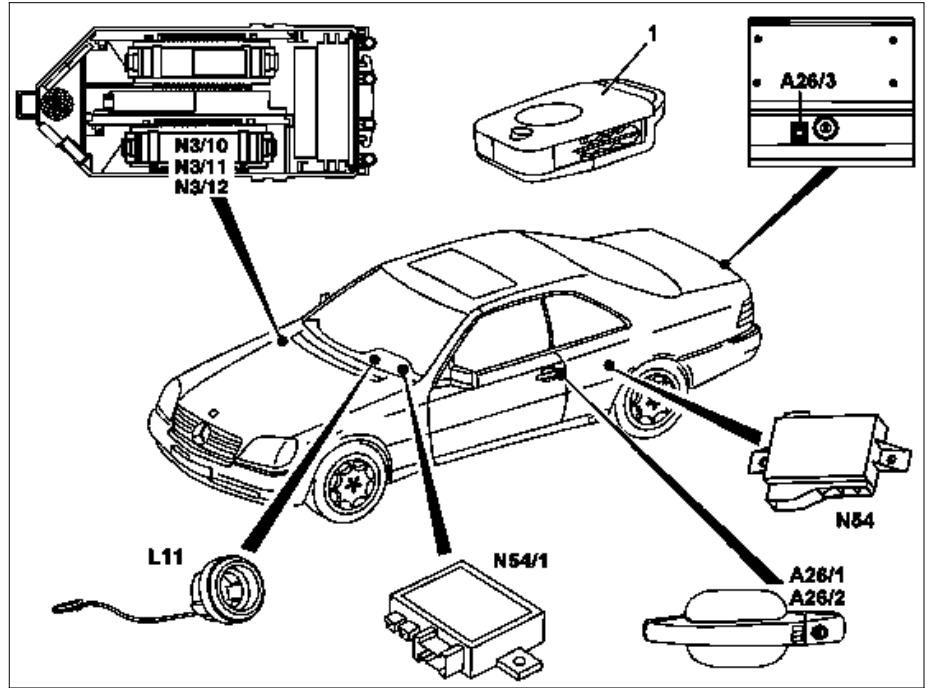


Figure 3

- A26/1 Left front door IR receiver
- A26/2 Right front door IR receiver
- A26/3 Trunk lid IR receiver
- L11 Transponder coil (on ignition/starter switch)
- N3/10 Engine control module (ME-SFI)
- N3/11 Left engine control module (ME-SFI)
- N3/12 Right engine control module (ME-SFI)
- N54 RCL control module
- N54/1 IR DAS control module (behind instrument cluster)
- 1 IR transmitter with transponder

U80.30-0343-06

Electrical Test Program - Component Locations

Model 202 with ME-SFI

Note:

Mechanical lock cylinders are located on right front door and trunk lid only.

A mechanical lock cylinder is not located on the left front door.

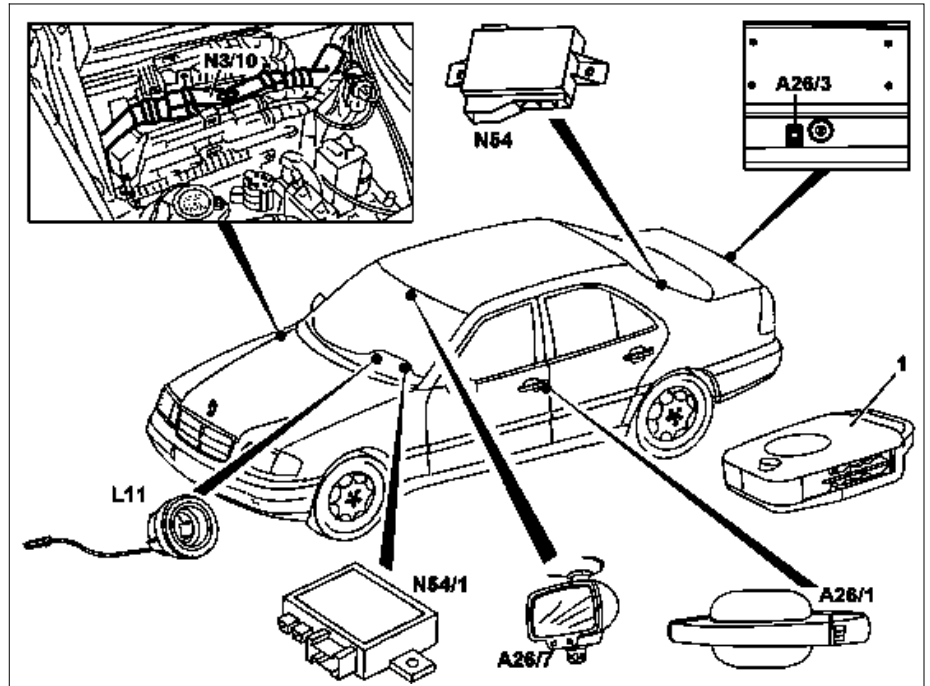


Figure 4

- A26/1 Left front door IR receiver
- A26/3 Trunk lid IR receiver
- A26/7 RCL receiver (interior rear view mirror)
- L11 Transponder coil (on ignition/starter switch)
- N3/10 Engine control module (ME-SFI)
- N54 RCL control module
- N54/1 IR DAS control module (behind instrument cluster)
- 1 IR transmitter with transponder

U80.30-0341-06

Electrical Test Program - Component Locations

Model 210 with ME-SFI

Note:

Mechanical lock cylinders are located on right front door and trunk lid only.
A mechanical lock cylinder is not located on the left front door.

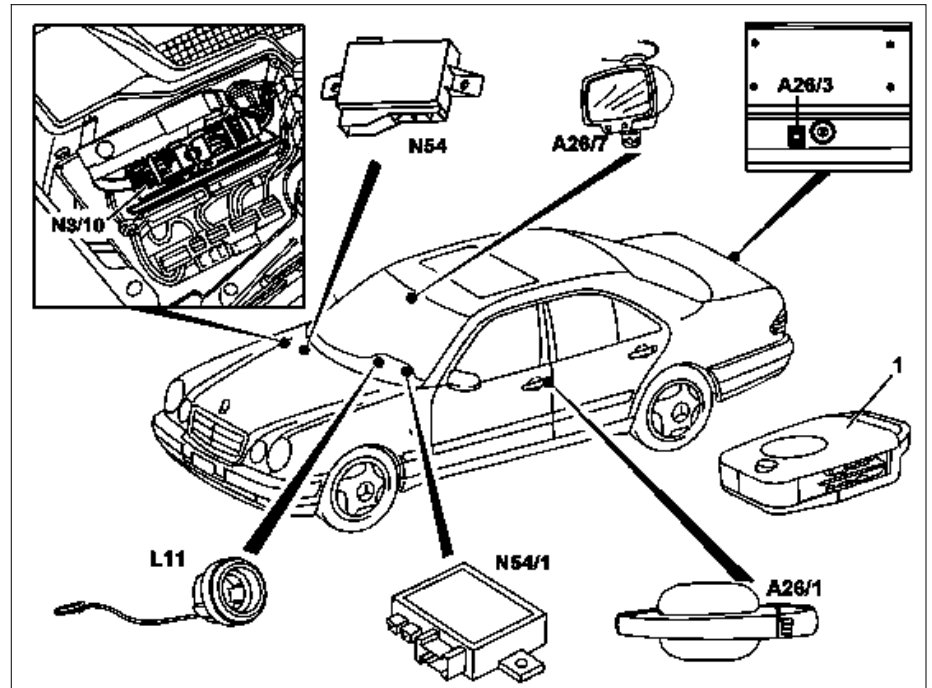


Figure 5

- A26/1 Left front door IR receiver
- A26/3 Trunk lid IR receiver
- A26/7 RCL receiver (interior rear view mirror)
- L11 Transponder coil (on ignition/starter switch)
- N3/10 Engine control module (ME-SFI)
- N54 RCL control module
- N54/1 IR DAS control module (behind instrument cluster)
- 1 IR transmitter with transponder

U80.30-0340-06