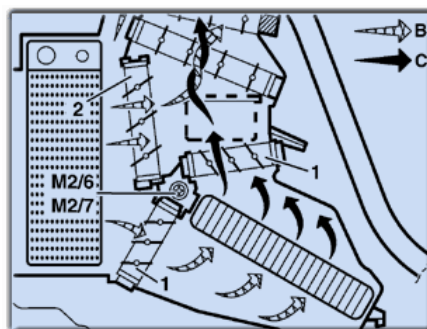


Climate Control / Ventilation / Blending Air Flap Actuator Motor

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Blending air flap actuator motor function

- | | |
|------|---------------------------------------|
| 1 | Warm air louvers |
| 2 | Fresh air/cold air louver |
| M2/6 | Left blended air flap actuator motor |
| M2/7 | Right blended air flap actuator motor |
| B | Cooled air |
| C | Heated air |



Shown on the C320 Climate Control Function

Function

The left and right blended air flaps (M2/6, M2/7) are actuated by the pushbutton control module depending on the position of the temperature selector wheels or via the warm/cold temperature buttons and the actual in-car temperature.

The blending air flaps are controlled by the left and right blending air flap actuator motors (M2/6, M2/7). The flaps increase or decrease the flow of air through the heater heat exchanger in order to mix the proportion of heated air and fresh air that is required to achieve the desired in-car temperature.

The left and right blended air flap (M2/6, M2/7) target flap angles are calculated by the pushbutton control module depending on the following information:

- specified temperature value selected on the temperature selector wheel or the warm/cold temperature buttons
- in-car temperature measured at the temperature sensors

There are usually 3 louvers at the right and left-hand sides. 2 warm air louvers (1) are available for regulating and controlling the heated air and 1 fresh air/cold air louver (2) is available for fresh air or cooled air regulation and control.

At maximum heating power the 2 warm air louvers (1) for heated air are 100% OPEN and the fresh air/cold air louver (2) for fresh air or cold air is 100% CLOSED. The opposite is the case during max. fresh air or cooling operation.

In control mode (=blended air, mixture of heated and fresh air or cooled air) the louvers work in opposite directions, i.e.

Heating>>>Cooling: Both warm air louvers (1) start to close, and at the same time the fresh air/cold air louver (2) starts to open.

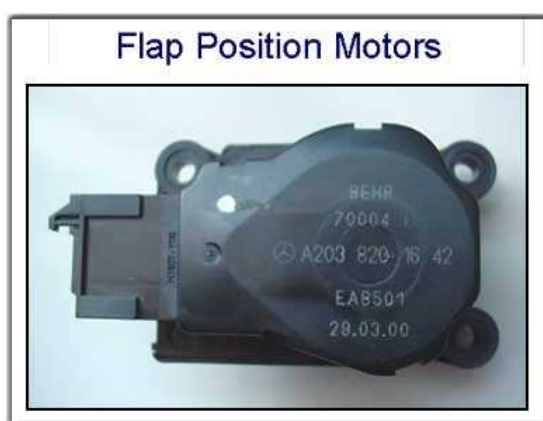
Cooling>>>Heating: The fresh air/cold air louver (2) starts to close and at the same time the two warm air louvers (1) start to open.

Note:

All the actuator motors are the same model. The assignment of the flap to operate and the actuator motor job description depends on the cable harness connections.

If a complaint is received, the defined limit positions can be called up using the Diagnosis Assistant System (DAS) and checked (value certification drive).

After an actuator motor has been replaced an adjustment run must be performed, i.e. the flap OPEN and CLOSED limit positions must be defined and recorded.



All 203 Electric Flap Motors are Identical



Motor with cover removed.



Electric Flap Motors cont.

All flap motors are connected to a common 3 wire ribbon cable to the pushbutton unit.



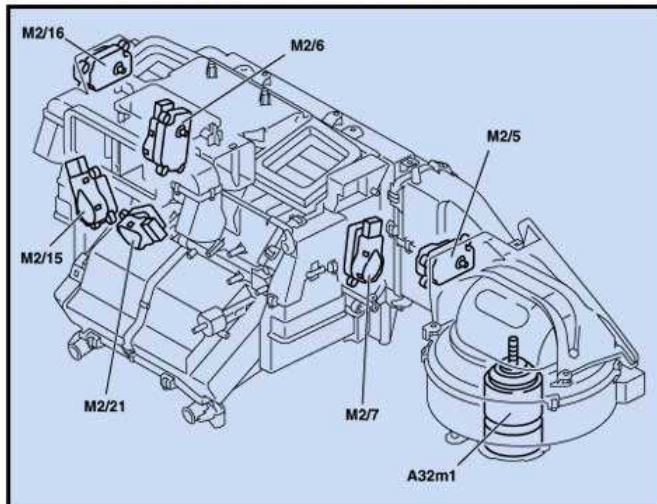
Electric Flap Motors cont.

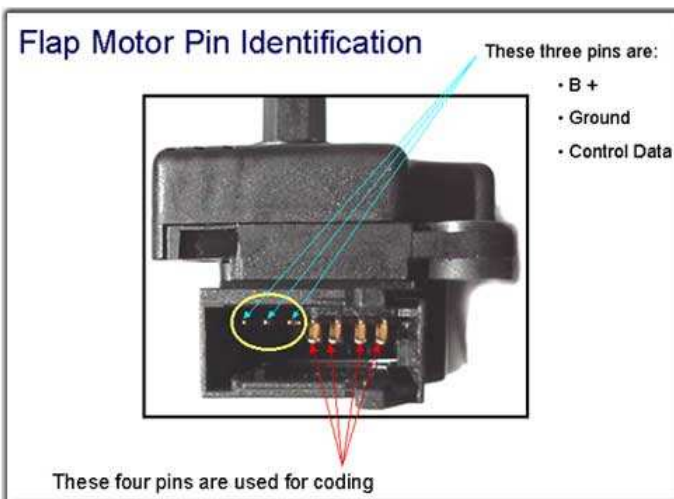
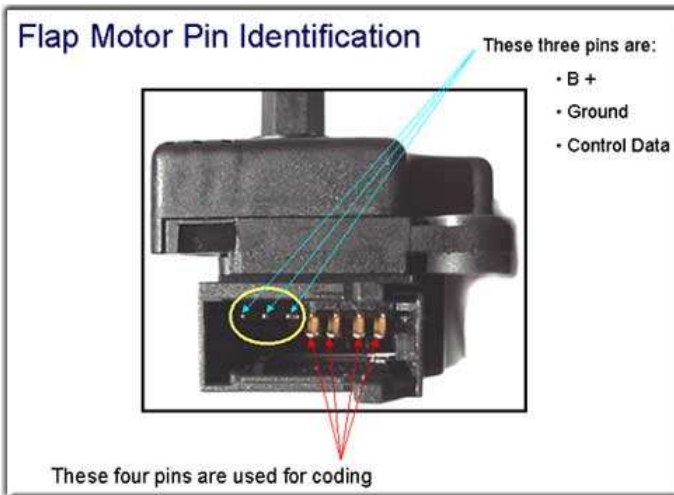
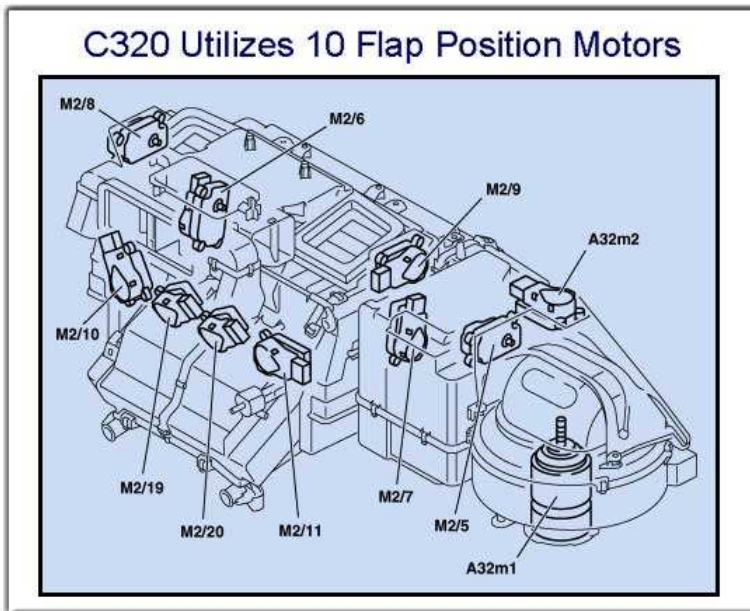
The 3 wire cable contains the following:

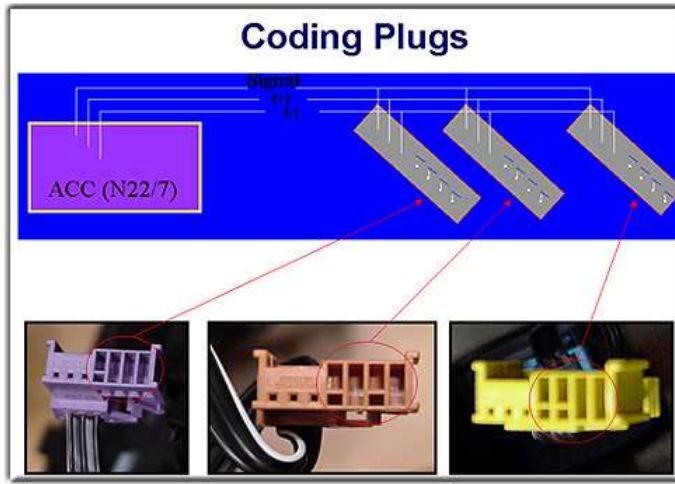
- B+
- Ground
- Control Data Signal



C 240 Utilizes 6 Flap Position Motors







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