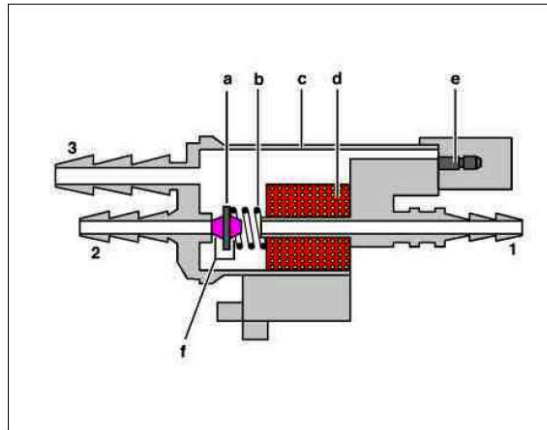


- 1 Air admission
- 2 Supply connection (from intake manifold)
- 3 Connection to the air shutoff valves

- a Armature disk
- b Return spring
- c Housing
- d Solenoid (coil)
- e Electrical connection
- f Rubber seal



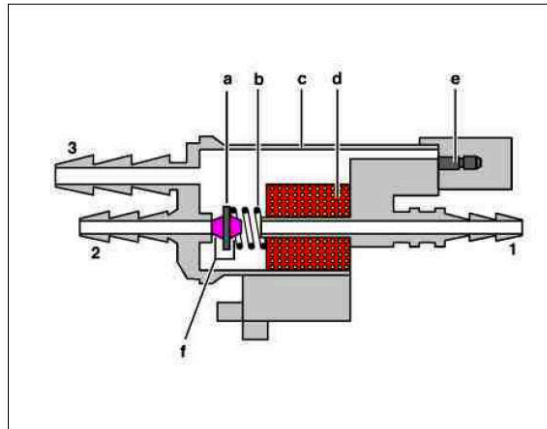
P07.10-0308-81

Fig. 5: Identifying Sectional View Of Air Pump Switchover Valve
 Courtesy of MERCEDES-BENZ USA

AIR PUMP SWITCHOVER VALVE, FUNCTION - GF14.30-P-3103-03HA

- 1 Air admission
- 2 Supply connection (from intake manifold)
- 3 Connection to the air shutoff valves

- a Armature disk
- b Return spring
- c Housing
- d Solenoid (coil)
- e Electrical connection
- f Rubber seal



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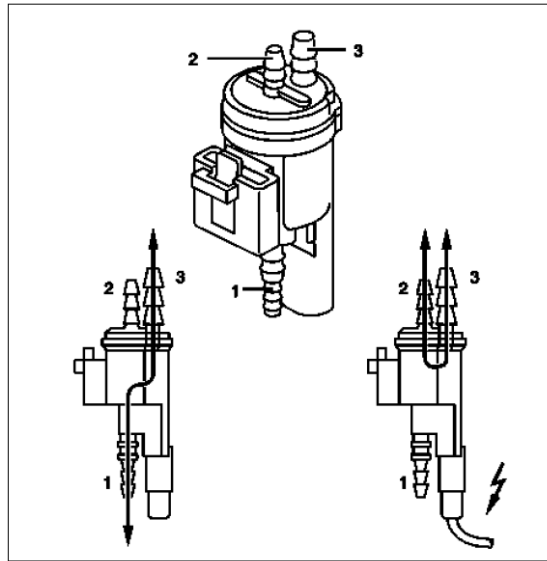
Fig. 6: Identifying Sectional View Of Air Pump Switchover Valve
 Courtesy of MERCEDES-BENZ USA

The air pump switchover valve (Y32) is actuated directly for a released air injection by the ME-SFI [ME] control unit (N3/10) by means of a ground signal. This causes anchor plate (a) to be pulled by solenoid (d), and rubber seal (f) shuts off air supply (1).

The connection between port 2 and port 3 is opened. Thus there is a vacuum built up from the intake pipe to the aspirator shutoff valves.

In a deenergized condition the connection between connection 1 and connection is reestablished, whereby connection 3 is ventilated.

- 1 Air admission
- 2 Supply connection (from intake manifold)
- 3 Connection to the air shutoff valves



P14.30-0250-12

Fig. 7: Identifying Air Pump Switchover Valve Working Diagram
 Courtesy of MERCEDES-BENZ USA

AIR PUMP SWITCHOVER VALVE, LOCATION/TASK/DESIGN/FUNCTION - GF14.30-P-3103HA

ENGINE 113.990/991/993

ENGINE 113.992/995 up to Model Year 8

Y32 Air pump switchover valve



P14.30-2057-01

Fig. 8: Identifying Air Pump Switchover Valve
 Courtesy of MERCEDES-BENZ USA

	Air pump switchover valve position		GF14.30-P-3103-01AM
	Air pump switchover valve task	The air pump switchover valve actuates the left and right aspirator shutoff valves when air injection is enabled using vacuum pressure from the intake	

2011 Mercedes-Benz G550

ENGINE Exhaust Manifolds, Emission Control - G-Class (463)

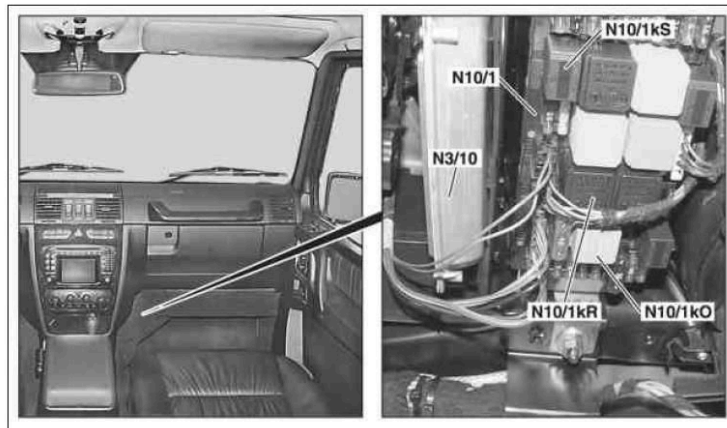
		manifold.	
	Air pump switchover valve, design		GF14.30-P-3103-02HA
	Air pump switchover valve function		GF14.30-P-3103-03HA

AIR PUMP RELAY LOCATION - GF14.30-P-3106-01GA

Model 463

The secondary air pump relay is located at the front at the SAM, at the top left of the passenger footwell.

- N3/10 ME-SFI control unit
- N10/1 Front signal-acquisition and actuation module (SAM)
- N10/1kO Secondary air pump relay
- N10/1kR Circuit 87 relay, engine
- N10/1KS Starter relay



P14.30-2118-05

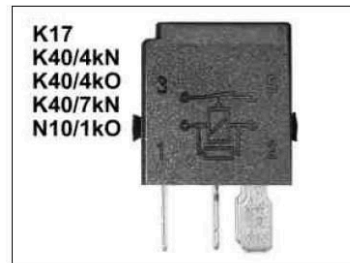
Fig. 9: Identifying ME-SFI Control Unit, Front Signal-Acquisition And Actuation Module (Sam), Secondary Air Pump And Starter Relay
 Courtesy of MERCEDES-BENZ USA

AIR PUMP RELAY LOCATION/TASK/DESIGN/FUNCTION - GF14.30-P-3106AM

ENGINE 113.990/991/993

ENGINE 113.992/995 up to Model Year 8

- K17 Air injection relay (model 211, 219)
- K40/4kN Air pump relay (model 230 up to 06/2002)
- K40/4kO Air pump relay (model 230 from 07/2002)
- K40/7kN Air pump replay (model 215, 220)
- N10/1kO Secondary air pump relay (model 463)



P15.00-2110-01

Fig. 10: Identifying Air Injection, Pump Relay And Secondary Air Pump Relay Of Different Models
 Courtesy of MERCEDES-BENZ USA

2011 Mercedes-Benz G550

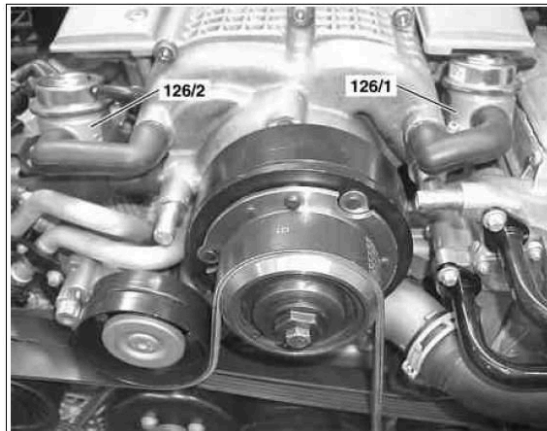
ENGINE Exhaust Manifolds, Emission Control - G-Class (463)

	Air pump relay location	Model 211, 219	GF14.30-P-3106-01TA
		Model 215, 220	GF14.30-P-3106-01M
		Model 230	GF14.30-P-3106-01R
		Model 463	GF14.30-P-3106-01GA
	Air pump relay task	The relay actuates the electric air pump for the air injection.	
	Air pump relay design	The relay is a 4-pin plug relay.	
	Air pump relay function	When actuating by means of the ME control unit (N3/10) with a ground signal, the relay closes its power contact and thus supplies the electric air pump with voltage from "circuit 87".	

AIR SHUTOFF VALVE POSITION - GF14.30-P-4028-01AM

An air shutoff valve for each cylinder head with an integral check valve is located at the top at the engine.

126/1 Left air shutoff valve
126/2 Right air shutoff valve



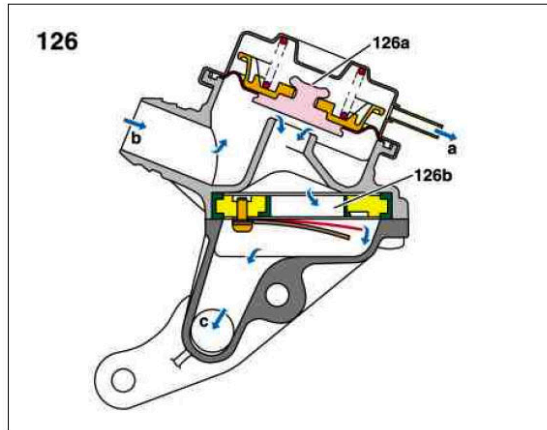
P14.30-2058-11

Fig. 11: Identifying Left And Right Air Shutoff Valves
Courtesy of MERCEDES-BENZ USA

AIR SHUTOFF VALVE, FUNCTION - GF14.30-P-4028-02HA

- 126 Aspirator shutoff valve
- 126a Vacuum diaphragm
- 126b Check valve

- a Connection to air pump switchover valve
- b Injected air from air pump
- c Injected air to cylinder head



P14.30-2007-81

Fig. 12: Identifying Air Shutoff Valve Function Diagram

Courtesy of MERCEDES-BENZ USA

The aspirator shutoff valve (126) Y32 is opened via the air pump switchover valve through vacuum or closed through ventilation.

The injected air for the electric air pump (M33) can flow in such a way for actuated air shutoff valves.

The check valve (126b) prevents flowing in of exhaust to the vacuum diaphragm (126a) for a switched off air injection and this protects this from thermal destruction and soiling.

AIR SHUTOFF VALVE, LOCATION/TASK/FUNCTION - GF14.30-P-4028HA

ENGINE 113.990/991/993

ENGINE 113.992/995 up to Model Year 8

126 Aspirator shutoff valve (with integrated check valve)



P14.30-2055-11

Fig. 13: Identifying Aspirator Shutoff Valve (With Integrated Check Valve)

Courtesy of MERCEDES-BENZ USA