

TRANSMISSION 716.6

Transmission designation:

- SG - Manual transmission
- S - Standard type of drive
- 250 - Torque transmission in Nm
- 6.1 - Spread (ratio of lowest to highest gear)



P26.00-2017-01

Model	Transmission designation
716.60	SG-S250/6.1
716.62	SG-S270/5.5
716.64	SG-S370/6.1
716.66	SG-S400/5.3

The new manual transmission 716.6 is a fully synchronized two-shaft transmission with six forward gears and one reverse gear and is used for all passenger car series with conventional rear drive with gasoline and diesel engines.

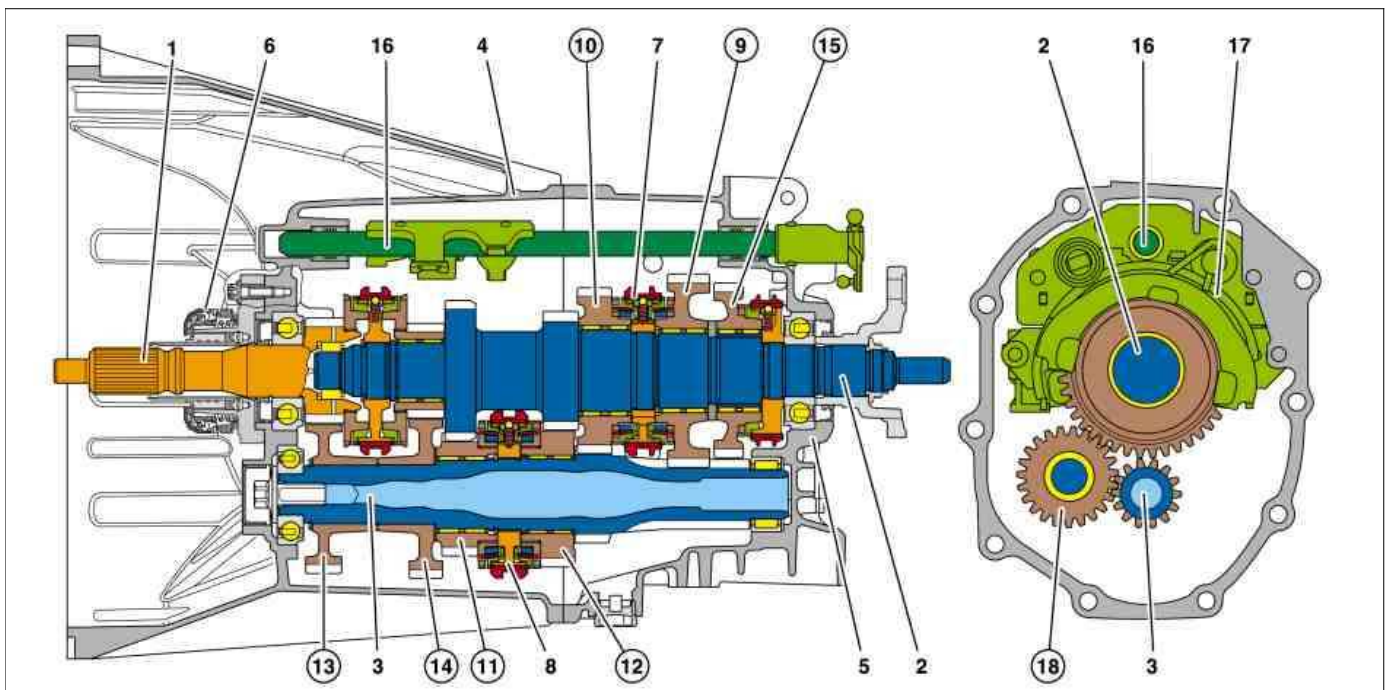
Four versions of the 6-speed manual transmission are used, with a torque transmission capability of 250 to 400 Nm.

The 6th gear is used to save fuel and reduce engine speed. Due to the additional 6th gear, the wider spread and the higher torque transmission, the new 6-speed manual transmission is heavier than the 5-speed manual transmission.

The manual transmission is equipped with a conventional dry clutch with automatic wear adjuster which is operated by a central clutch operator familiar from the 168 series. The transmission is maintenance-free and has a permanent oil fill.

A precise and light shift with short shifting travels is achieved by the following measures:

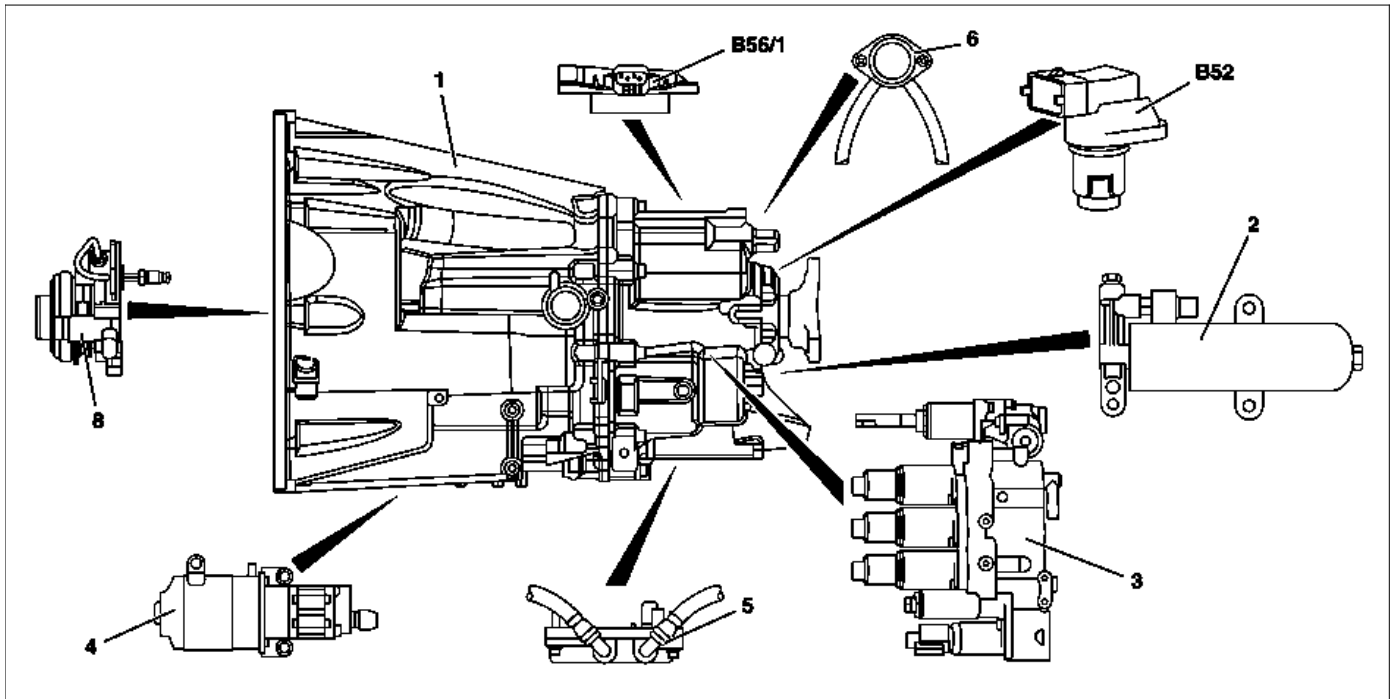
- Transmission of the shift lever movement to the transmission by the shift rod and control cable
- Central shift shaft supported on needle bearings
- Multiple-cone synchronization in 1st, 2nd, 3rd and 4th gear
- Fully-synchronized reverse gear



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TRANSMISSION 716.6 in MODEL 203, 230
with CODE (424) Sequentronic automated manual transmission (SEQ)
up to Model Year 08 /modification year 07

TRANSMISSION 716.6 in MODEL 208, 209, 211 with CODE (424) Sequentronic automated manual transmission (SEQ)



P26.00-2019-09

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|---|-----------------------------------|---|---------------------------|-------|------------------------------------|
| 1 | 6-speed manual transmission 716.6 | 4 | Hydraulic pump | 8 | Hydraulic clutch-release mechanism |
| 2 | Hydraulic pressure reservoir | 5 | Hydraulic fluid reservoir | B52 | Clutch RPM sensor |
| 3 | Hydraulic controller unit | 6 | Bleeding | B56/1 | Gear recognition sensor |

Function

The "Sequentronic" automated manual transmission is a system which automatically triggers gear changes and automatically actuates the clutch. This explains the absence of a clutch pedal. The drive train elements (clutch and manual transmission) are actuated with power assistance and mutually coordinated by means of a higher level control system. The shift request is initiated by the driver using the touch shift. Because of the actuating power requirements and the highly restricted installation conditions in the tunnel area, the Sequentronic system is supplied with hydraulic energy. This energy is produced by a hydraulic pump and supplied to the actuators (hydraulic elements) via the hydraulic controller unit.

All components except for the ECU and the central shift mechanism are installed either in or on the base transmission unit.

The enhanced-convenience manual transmission consists of the following components:

- 6-speed manual transmission 716.6 (1)
- Sequential floor shift
- Hydraulic controller unit (3)
- Hydraulic pump (4)
- Hydraulic pressure reservoir (2)
- Gear recognition sensor (B56/1)
- Hydraulic oil reservoir (5)
- Hydraulic central clutch operator with integral clutch travel sensor (8)
- Automated manual transmission control unit (/)N15/6

	Sequentronic automated manual transmission (SEQ), driver information	Model 203, 208 Model 209, 211 Model 230	GF26.00-P-0002-01A GF26.00-P-0002-01T GF26.00-P-0002-01R
	Starting and parking the vehicle, function	Model 203, 208, 209, 211 Model 230	GF26.00-P-3006A GF26.00-P-3006R
	Moving off and stopping the vehicle, function		GF26.00-P-3007A
	Shift into optimum gear, function	Model 203, 208 as of 01.10.01 Model 209, 211, 230	GF26.60-P-3004A
	Manual shifting from 1st to 2nd gear, function		GF26.60-P-3001A
	Manual shifting from 2nd into 3rd gear, function		GF26.60-P-3002A

1	Input shaft	7	Multiple-cone synchronization, 1st/2nd gear	13	5th gear
2	Main shaft	8	Multiple-cone synchronization, 3rd/4th gear	14	6th gear
3	Countershaft	9	1st gear	15	Reverse gear
4	Front transmission housing	10	2nd gear	16	Central shift shaft
5	Rear transmission housing	11	3rd gear	17	Inner shift module
6	Central clutch operator	12	4th gear	18	Reverse gear idler gear

The gear assemblies and shafts are located between two bearing planes, the third bearing plane on the previous 5-speed manual transmission is no longer used.

The divided transmission housing is made up of a light metal alloy, the housing parts of which are sealed with liquid sealing agent.

The input shaft (1) is supported by a pilot bearing in the flywheel and by a deep-groove ball bearing in the transmission housing. The main shaft (2) and input shaft are inserted into each other on a common shaft plane in the transmission housing and are supported by deep-groove ball bearings.

The countershaft (3) is designed as a hollow shaft to reduce weight and is supported by a deep-groove ball bearing and a roller sleeve.

The shaft play does not have to be adjusted due to the very tight production tolerances of the gear wheels and housing halves as well as the use of roller sleeves.

	Manual transmission (MT), gear ratios		GF26.10-P-0002-01A
	Shift, function		GF26.60-P-2000A
	Multiple-cone synchronization, location/task/design/function		GF26.60-P-2102A
	Multiple-cone synchronization, task		GF26.60-P-2102-01A
	Multiple-cone synchronization, function		GF26.60-P-2102-02A
	Reverse lamp switch, function		GF26.19-P-2101A