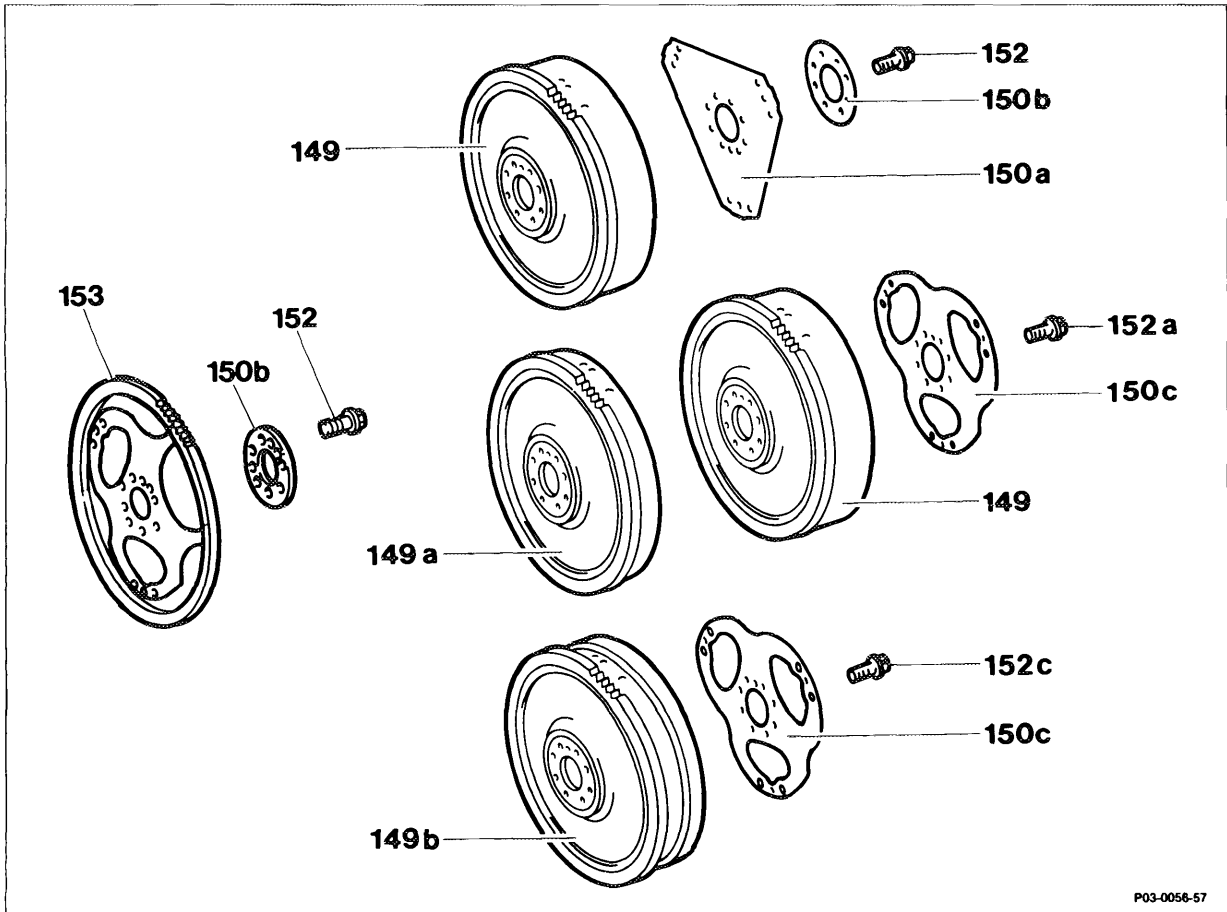


**03-410 Removal and installation of flywheel and driven plate**



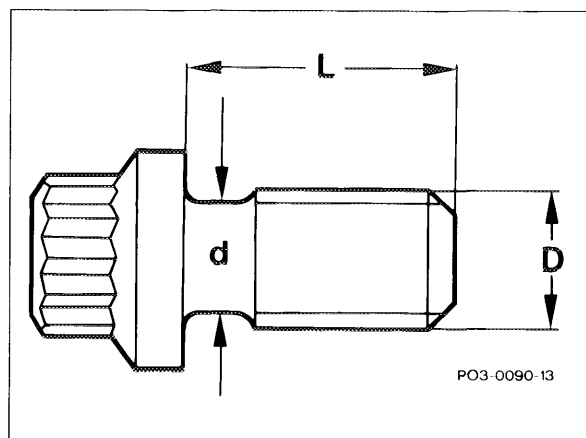
P03-0056-57

- |  |  |
|--|--|
| <p>Flywheel (149, 149a, 149b) . . . . .</p> <p>Driven plate (153) engine 603.970 . . . . .</p> | <p>unbolt, reinstall. Position lock<br/>601 589 02 40 00 in flywheel ring gear and<br/>remove flywheel together with driven plate<br/>(150a, 150c) and spacer disc (150b)<br/>(items 1, 2).</p> <p>unbolt, reinstall.<br/>Position lock 601 589 02 40 00 in teeth on<br/>driven plate and remove driven plate and spacer<br/>disc (150b) (items 1, 2).</p> |
|--|--|

Stretch bolts (152, 152a) ..... check, max. length, 1st version (152a) 26.5 mm, 2nd version (152) 22.5 mm, necked down shank diameter min. 8 mm, replace stretch bolts if required (item 2).  
 Initial torque 35 Nm,  
 rotation angle 90 – 100°.

Stretch bolts (152c) on two-mass flywheel (149b) engine 602.91, ..... check, max. length 57.2 mm, necked down shank diameter min. 8.1 mm, replace stretch bolts if required (item 2).  
 Initial torque 40 Nm,  
 rotation angle 90 – 100°.

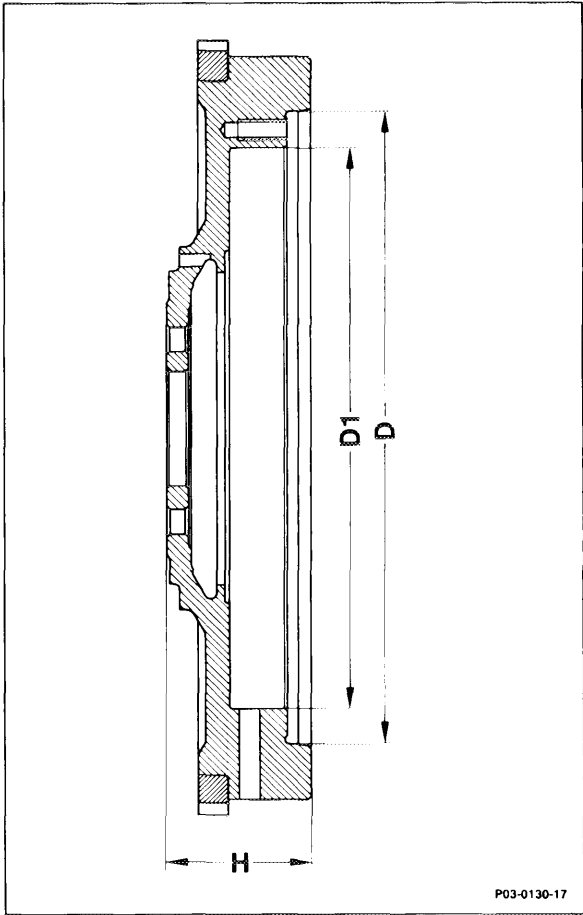
Stretch bolts		152	152a	152c
		manual and automatic transmission Driven plate 2nd version	automatic transmission Driven plate 1st version	manual transmission, two-mass flywheel
Part number		102 032 00 71	601 032 01 71	103 032 00 71
Thread D		M 10 × 1	M 10 × 1	M 10 × 1
Necked down shank dia. d	New state	8,5 – 0,2	8,5 – 0,2	8,5 – 0,2
	Min. dia.	8,0	8,0	8,1
Length L	New state	22 ± 0,2	26 ± 0,2	57 ± 0,2
	Max. length	22,5	26,5	–



**Flywheels for manual transmissions**

**Engine 602**

- D 252.94–252.98 mm
- D1 223.00–223.07 mm
- H 57 mm

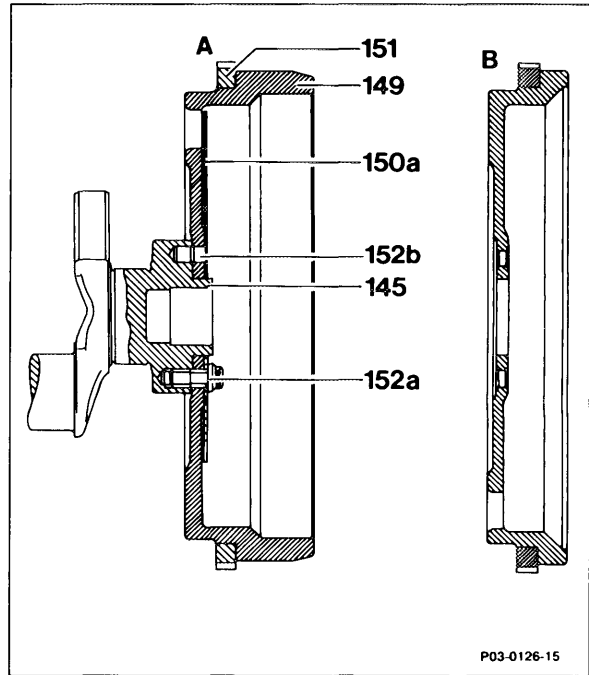


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**Engine 602.96**

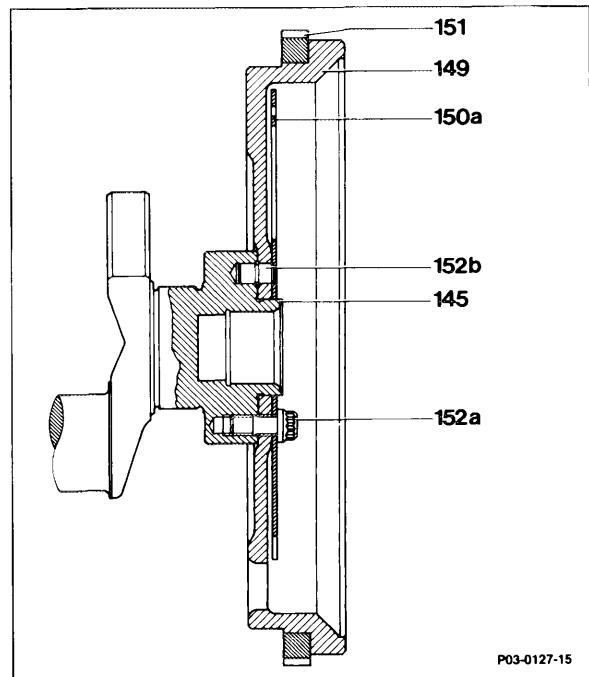
Engine 602.96 has a lighter flywheel than engine 602.91 with automatic transmission.

- A Flywheel, engine 602.91
- B Flywheel, engine 602.96
- 145 Crankshaft
- 149 Flywheel
- 150a Driven plate
- 151 Ring gear
- 152a Stretch bolt
- 152b Cylindrical pin



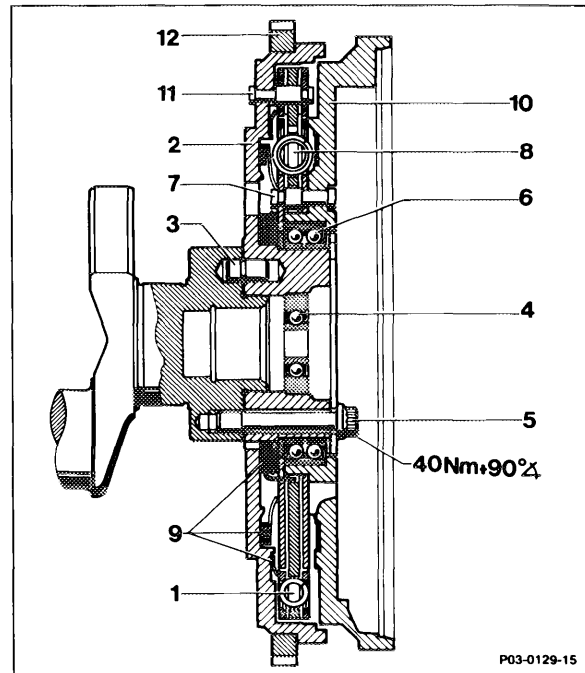
**Engine 603.96**

- 145 Crankshaft
- 149 Flywheel
- 150a Driven plate
- 151 Ring gear
- 152a Stretch bolt
- 152b Cylindrical pin



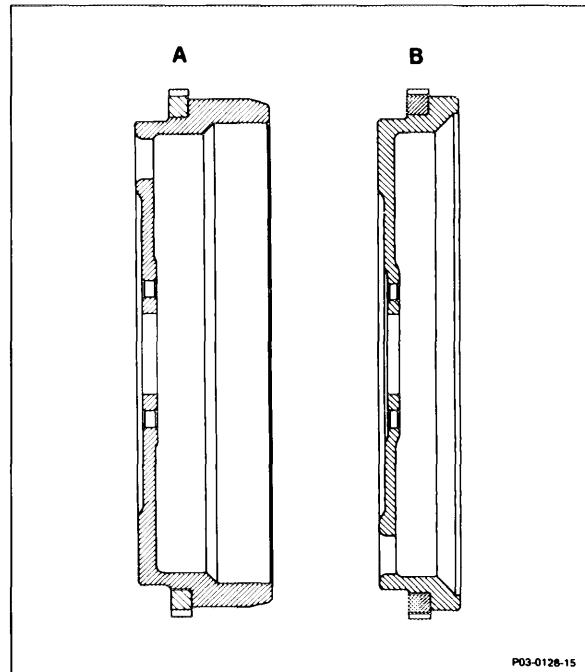
**Two-mass flywheels with manual transmissions, engine 602.91 starting 09/88.**

- 1 Stop damper
- 2 Primary flywheel weight
- 3 Fitted pin
- 4 Radial ball bearing
- 5 Stretch bolt M 10 x 1 x 57
- 6 Self-aligning bearing
- 7 Spacer bolt
- 8 Torsion damper
- 9 Friction device
- 10 Secondary flywheel weight
- 11 Spacer bolt
- 12 Ring gear

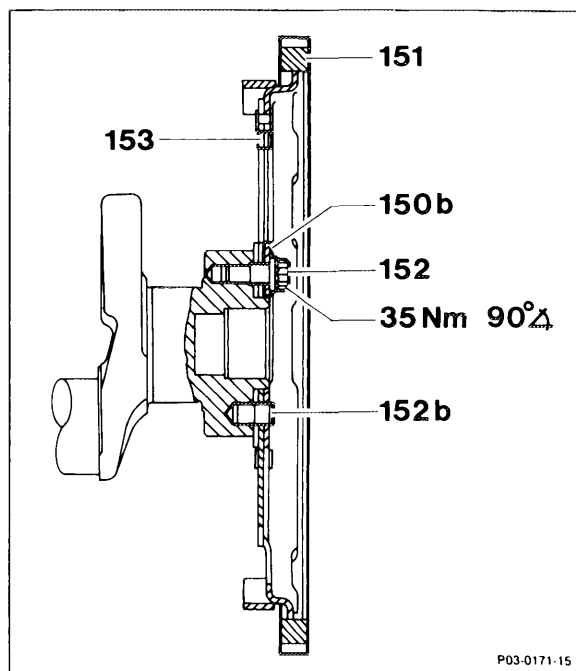


**Flywheels with automatic transmissions**

- A Flywheel, engine 602
- B Flywheel, engine 603



### Driven plate (engine 603.97 only)



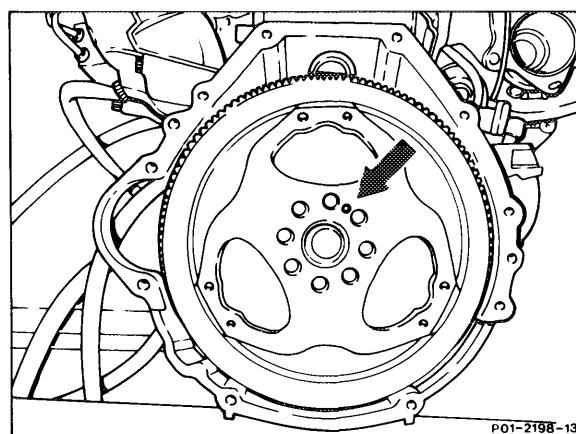
- 150b Spacer disc
- 151 Ring gear
- 152 Stretch bolt
- 152b Cylindrical pin
- 153 Driven plate

### Driven plates

The 2nd version driven plate is identical with that on engines 602 and 603.

On engine 603.96 the driven plate is bath-nitrated.

The cylindrical pin (arrow) centers the flywheel and driven plate.



Flywheel and driven plate, automatic transmission, 2nd version (except for engine 603.97)

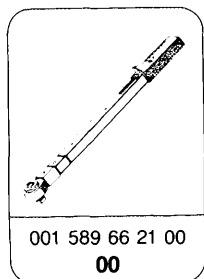
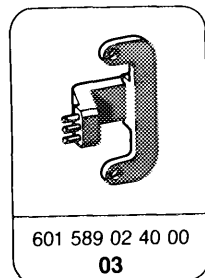
### Stretch bolts

The stretch bolts for mounting the flywheels are identical for manual and automatic transmissions starting 07/84, M 10 x 1 x 22 (previously M 10 x 1 x 26).

## Tightening torques and rotation angles

	Nm	
Stretch bolts for flywheel	35	90 – 100°
Stretch bolts for two-mass flywheel	40	90 – 100°

## Special tools



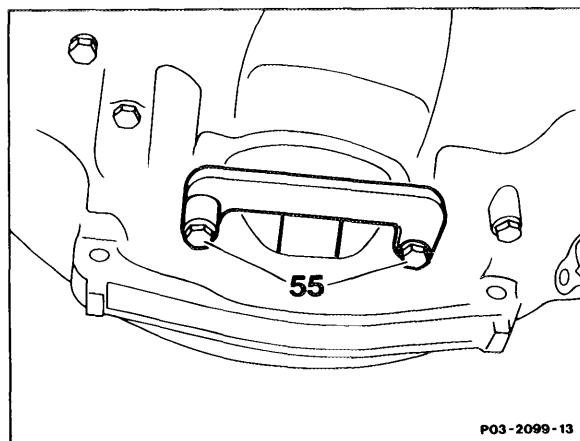
## Removal, installation

1 Remove hex. head bolts (55) and insert lock 601 589 02 40 00 into ring gear on flywheel and tighten with hex. head bolts (55).

### Installation note

Flywheels do not require balancing.

Flywheels are not interchangeable.



### Engines 602, 603

Screw out stretch bolts and remove flywheel and driven plate.

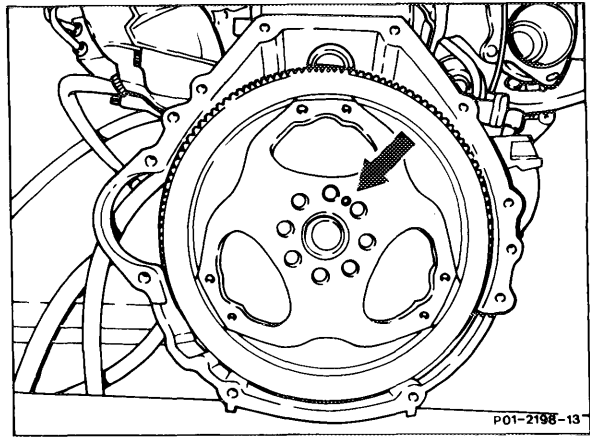
#### Installation note

The cylindrical pin (arrow) centers the flywheel, driven plate and spacer disc.

Check stretch bolts, max. length 22.5 mm, necked down shank dia. min. 8 mm, renew stretch bolts if required.

Tightening torque and rotation angle

Initial torque	35 Nm,
rotation angle	90 – 100°.



### Driven plate (engine 603.97)

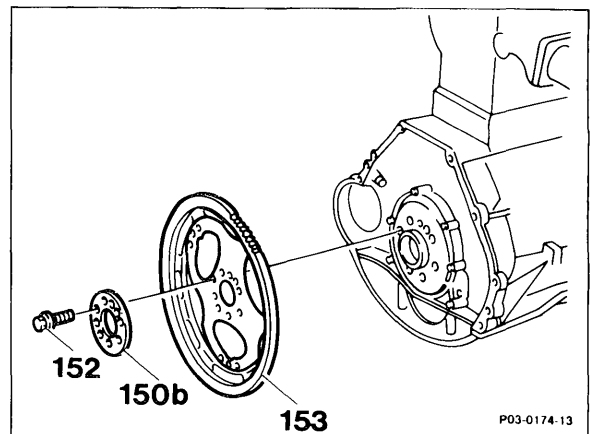
Screw out stretch bolts (152), remove spacer disc (150b) and driven plate (153).

#### Installation note

Check stretch bolts, max. length 22.5 mm, necked down shank dia. min. 8 mm, replace stretch bolts if required.

Tightening torque and rotation angle

Initial torque	35 Nm,
rotation angle	90 – 100°.





**Two-mass flywheel with manual transmission, engine 602.91**

Remove stretch bolts and remove two-mass flywheel.

**Installation note**

Check stretch bolts, max. length 57.2 mm, necked down shank dia. min. 8.1 mm, replace stretch bolts if required.

Tightening torque and rotation angle

Initial torque	40 Nm,
rotation angle	90 – 100°.

3 Install in opposite order.