

## L. Testing Valve Timing

Checking and corrections, if required, of the valve timing for models 180 a, 180 b, 180 c, 190, 190 b, 190 c, 190 SL, 220 a, 219, 220 S and 220 SE are the same as described in the Workshop Manual for model 190.

### Valve Timings with a Test Clearance of 0.4 mm

Model	Camshaft		Code No. <sup>2)</sup>	Inlet		Outlet		Remarks
	Design acc. to Part No.	Assembly <sup>1)</sup> acc. to Part No.		opens BTDC	closes ABDC	opens BBDC	closes ATDC	
180 a 180 b 190, 190 b	121 051 11 01	121 050 00 01	11	12°	44°	51°	15°	—
180 c 190 c	121 051 42 01	—	42	10°	46°	44°	12°	improved valve control
190 SL	121 051 14 01	121 050 01 01	14	16°	63°	60°	25°	1st Version: standard equipment up to engine No. 5500183
	121 051 15 01	121 050 02 01	15	17.5°	60.5°	61.5°	22.5°	2nd Version: standard equipment as from engine No. 5500184
190 SL	121 051 44 01	—	44	13°	55°	51°	17°	improved valve control
220 a	180 051 14 01	180 050 03 01	14	9°	41°	51°	15°	1st Version: standard equipment up to engine No. 5504778
220 a, 219 220 S	180 051 14 01	180 050 03 01	14/1	12°	44°	51°	15°	For model 220 a: 2nd Version (standard equipment as fr. engine end No. 5504779) For models 219 and 220 S with compression $\epsilon = 7.6:1$
219, 220 S	180 051 33 01	180 050 06 01	33	10°	46°	42°	10°	with compr. $\epsilon = 8.7:1$
220 SE	180 051 50 01	180 050 08 01	50	9°	41°	44°	8°	—

<sup>1)</sup> Camshafts are supplied complete only (with one cover, for 6-cyl. engine with an additional oil transfer tube acc. to part No. named in column "Assembly").

<sup>2)</sup> The Code No. of camshaft is always punched-in on camshaft end face.

**Note:** If replacements are required, only camshaft part No. 180 050 06 01 will be supplied for models 220 a, 219 and 220 S. Camshaft part No. 180 050 06 01 may be used only in combination with sodium-filled exhaust valves. If instead of camshaft part No. 121 050 01 01 camshaft part No. 121 050 02 01 is installed in models 190 SL, the supporting surfaces at the cylinder head for the thrust rings at the inlet valves opposite the top edge of the cylinder head should be milled deeper by 1.0 mm, because otherwise the larger stroke of the inlet cams might punch solid the valve springs when the valves are fully open (refer to Fig. 01-4/32).