B. Testing Valve Springs

The inner and outer valve springs of models 180 a, 180 b, 180 c, 190 b, 190 SL, 220 a, 219, 220 S and 220 SE are the same as for model 190.

The wear limit for the final load given in the table is –10 %.

Testing Table for Valve Springs

Model 180 a, 180 b, 180 c, 190, 190 b, 190 SL, 220 a, 219, 220 S and 220 SE

	External Diameter mm	Wire gage mm	Free Length mm	Length load depressed		Length under final load	
				mm	kg	mm	kg
Inner spring	20.7	2.6	42	34.2	8.9	25.7	18.6^{+2}_{-1}
Outer spring	30.6	4	47	38.4	23.1	29.9	$45.9^{+4.5}_{-2.2}$

C. Sealing Valve Stem

The valve stem sealing system for models 180 a, 180 b, 190 b, 190 SL, 220 a, 219 and 220 S is the same as for model 190.

While on model 220 SE the valve stem seal for the exhaust valves are also similar, the inlet valves are sealed with a silicone sealing ring (4), which is held against the valve guide by means of the sealing ring retainer (3) and the inner valve spring (4). (Fig. 05–5/4).

Hardened or cracked silicone sealing rings should be replaced. The same applies for sealings rings which have been compressed too hard. When new, the distance between the sealing ring retainer (3) and the washer (2) should be approx. 1 mm.

For models 180 c and 190 SL with further modified valve timing, refer to valve sealing Fig. 01–4/20 c and d.

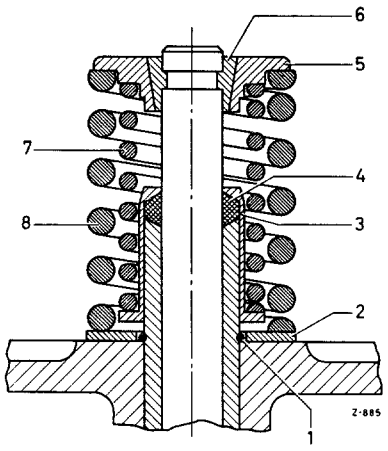

Fig. 05–5/4

Valve Stem Sealing at Inlet Valve Model 220 SE

1 Snap ring
2 Washer
3 Sealing ring retainer
4 Sealing ring (silicone)
5 Valve spring retainer
6 Valve cone half
7 Inner valve spring
8 Outer valve spring