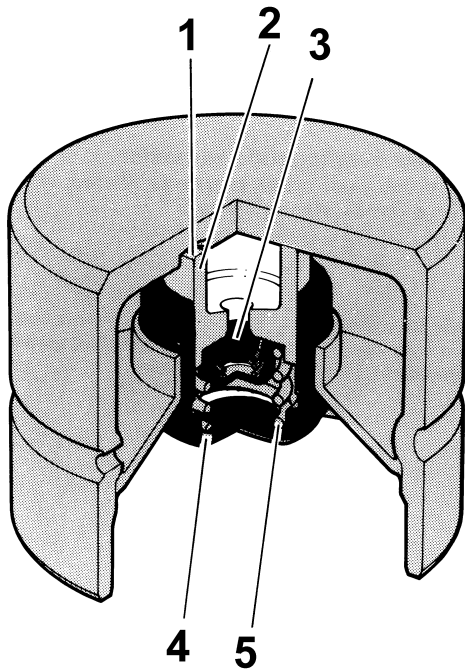


Hydraulic tappets



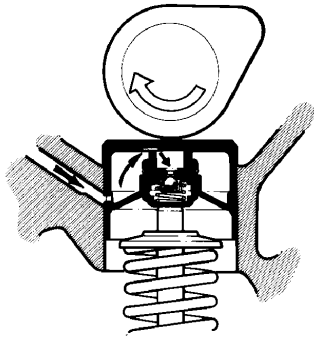
1. Slot
2. Piston
3. Check valve
4. Tappet cylinder
5. Spring

The camshafts open and close the valves via hydraulic tappet. The tappets are oilfilled and self adjusting.

A spring inside the tappet cylinder holds the tappet in contact with the camshaft, its spring force is lower than that of the valve spring to ensure that the valve can move linearly.

A check valve prevents oil from being pressed out when the camshaft is acting on the tappet and when oil pressure inside the tappet cylinder is greater than the engine oil pressure.

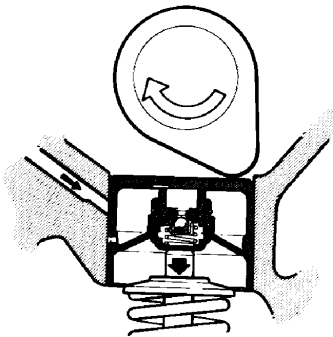
Tappet in contact with the camshaft base circle



Oil from the camshaft bearing housing oilway is pressed into the tappet via a groove and hole in its side. The oil passes through a slot at the top of the tappet and into the piston.

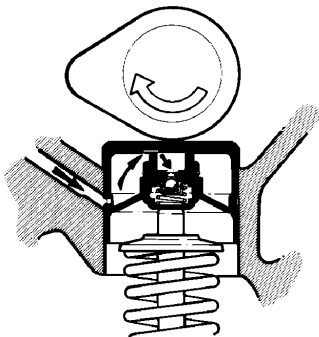
Because the engine oil pressure is higher than the oil pressure in the tappet cylinder when the tappet is not under load from the camshaft lobe, oil passes the non return valve into the tappet cylinder.

Camshaft acting on tappet



When the tappet is pressed down the oil pressure in the tappet cylinder is than the engine oil pressure, the check valve closes and the tappet operates as a unit.

Tappet back in contact with the camshaft base circle



Engine oil pressure is greater than oil pressure in the tappet cylinder, the check valve opens admitting oil so that the tappet is pressed against the camshaft.