

# INJECTORS' VALVES

Good morning to all of You, Dear Partners,

In this release we will introduce what Rabotti S.r.l is able to offer to its Customers for what concerns injectors' valves.

**OLETBO00120 (Backflow stabilisation bar 0.5 bar - picture 1)**

Valve 0.5 bar is used in Bosch solenoidal injectors (110 and 120, 124), Denso injectors (X2, G2S, G3S and G2P) and on some VDO injectors basically to make sure thar backflow's is always full avoiding in this way the presence of residual air bubbles that makes more difficult oil's evacuation from injector's valve to the exhaust and that therefore could cause a backflow's decrease in some test-point.

Picture 1



Example 1



0.5 bar valve is supplied to the customer in standard endowment and therefore is to be installed whenever an injector belonging to the families indicated above is tested. In case of Tec 101 and UNITEC EVO equipments the valve has been already integrated in the injector holder base and so can be connected easily if necessary ( example 1 - valve mounted on TEC101)

# INJECTORS' VALVE

OLETBO00136 (10 bar group valve for Piezo Bosch - picture 2)

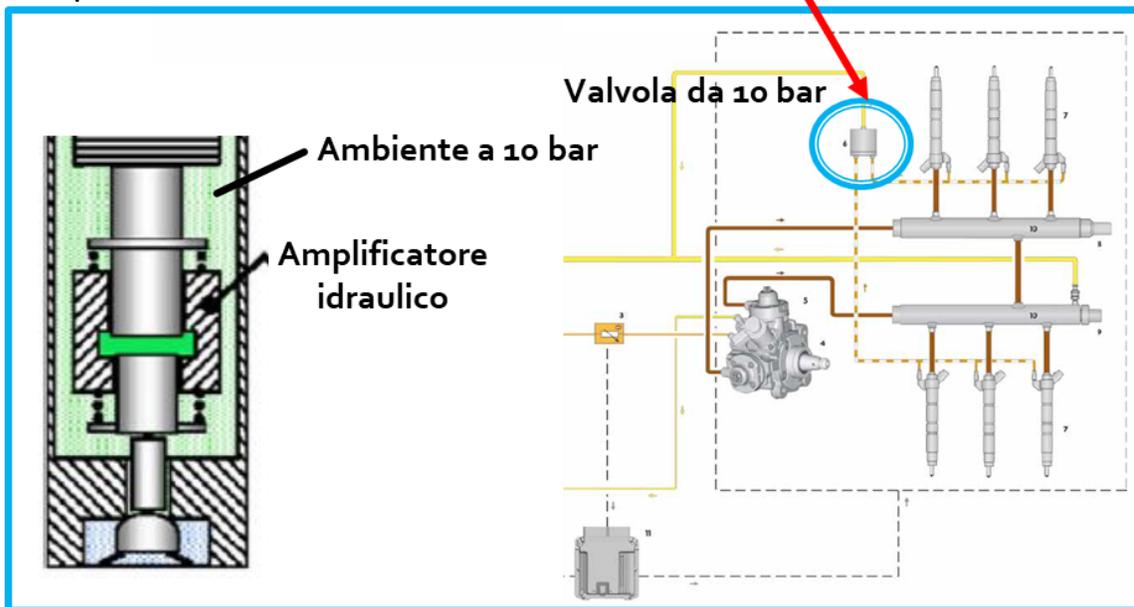
10 bar valve is installed on backflow Bosch piezoelectric injectors ( 115, 116, 117 and 118) and has the duty to avoid that hydraulic buffer present within the injector, that devices made by 2 cylinders of different diameter that have to transmit piezo-stack's pushing to injector's valve, could empty itself also only partially compromising so the normal functioning of the injector.

In case of missing use of the valve or in presence of a faulty valve, it will be impossible to make the tests of the injector because in these ones at high pressure, the injector will tend slowly to close completely ; the phenomenon is clearly audible because the noise normally produced from injector go diminishing until transforming itself in a ticking tied to the fact that piezo-stack drive remains from equipment's side (example 2)

Picture 2



esempio2



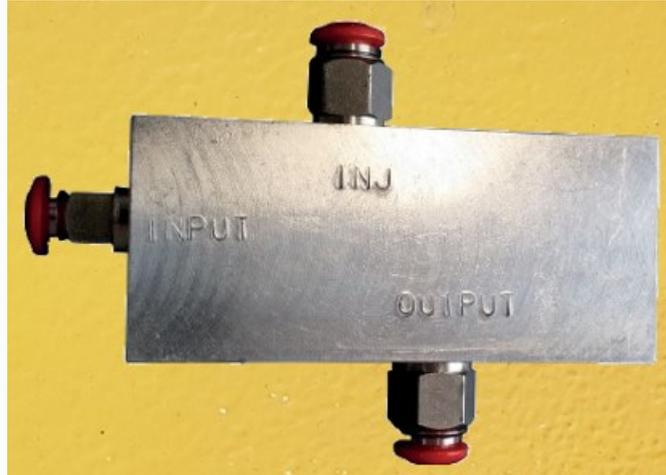
# INJECTORS ' VALVES

**MECSEM937001000 ( Block kit G3P Denso - picture 3)**

11 bar valve is matched to kit G3P supplied from Rabotti and is used with injectors G3P Denso that have within them an hydraulic buffer which adopt the same principle Bosch piezoelectric's injectors . Also here valve's purpose is basically the one to make sure that buffer would not discharge during the operation on test benches , thing that would compromise strenght's transmission between piezo-stack and injector's valve.

This valve is matched with kit G3P (PROFIN974006000) that is part of accessory's endowment of Rabotti equipments . The goal of the kit is to allow the initial pressurization of injector's line backflow until around 5 bar in a way to allow the buffer to open injector's valve to let the oil flow to 11 bar's valve integrated in the kit.

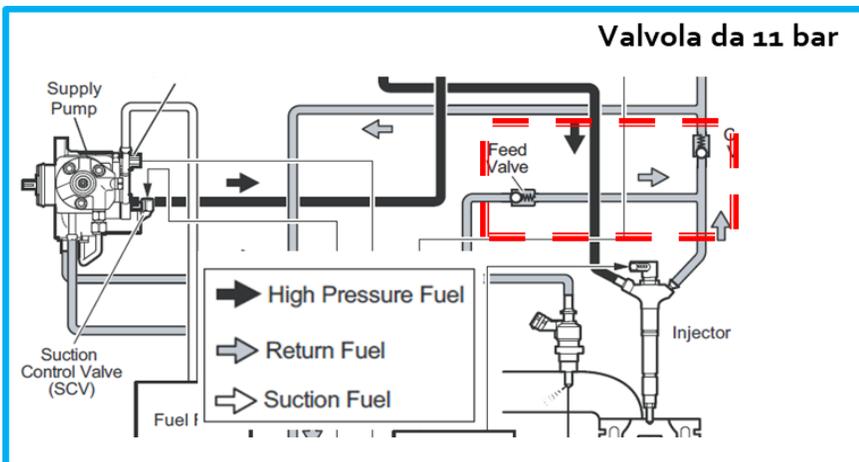
Picture 3



Initial pressurization of backflow's line in the engine is obtained taking the flow from low pressure pump integrated in HP3 and HP4 pump. In the bench it is instead obtained through an external hydraulic control unit (PROFIN149000000 - figura4) except for TEC101 and UNITEC EVO where is necessary to buy only kit G3P because its feeding is already integrated in the test bench.



Picture 4



# INJECTORS' VALVES

**OLETBO00177 ( 3 bar group valve for Siemens' injectors - picture 5)**

3 bar 's valve is matched to some VDO injectors of 2nd generation (generally the ones which present encoding ) and has the purpose to maintain constant backflow's line pressure avoiding fluctuations tha could make unstable flow measurement, especially in pre- injection test. Valve's necessity is indicated in injector's information when it's selected on the test bench.

Picture 5

