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INSTALLATION MANUAL

Reducer RED 1

version: **SILVER, GOLD**
E8 67 R-013949

Reducer R2

version: **TUR, TWIN**
E8 67 R-016555

Serial number

► Recommendations

When assembling the reducer, the following recommendations must be observed:

- ✓ we take into account the power margin on the reducer in relation to the engine power
- ✓ we install the regulator below the tank with coolant
- ✓ the mounting place of the reducer should not be exposed to any drop or a drastic increase of temperature while the vehicle is in motion
- ✓ the reducer cannot interfere with the functioning of the other devices in the engine compartment
- ✓ the installation area should ensure an easy access to the pressure adjustment screw and an easy replacement of the liquid phase gas filter cartridge
- ✓ we mount the vaporizer in such a way to ensure that it is not subject to excessive vibration when driving
- ✓ the reducer with an integrated valve cannot be mounted with the coil downwards (GOLD VT reducer)
- ✓ because of its construction the direction of the water flow in the reducer is not relevant
- ✓ after the installation, we air-release the reducer

► The liquid phase connection

- ✓ next to the reducer we mount the proper electrovalve with filter. In case of GOLD VT reducer, we mount the filtering unit only.
- ✓ we connect the electrovalve with the gas inlet by means of a copper cable or an elastic cable 6/8 mm or a brass port.
- ✓ after the system has been started up we check the tightness of connections

TWIN

Version 1 (1 electrovalve with filter in 1x8 – out 2x6)

- ✓ next to the reducer we mount the proper electrovalve with filter with the input for copper wire fi 8 and output 2 x fi 6
- ✓ we connect the electrovalve with the reducer gas inputs

Version 2 (2 electrovalves with filter in 1x6 – out 1x6)

- ✓ next to the reducer we mount 2 electrovalves with filter with the input for copper wire fi 6 and output fi 6
- ✓ we connect the electrovalves with the reducer gas inputs
- ✓ after the system has been started up we check the tightness of connections.

► The vapour phase connection

- ✓ from the reducer gas output we direct the 12 or 14 mm gas pipe to gas injectors



Connection for reducers with two gas outputs (GOLD VT, GOLD FZ8, TWIN)

- ✓ we protect all the connections by means of clamps
- ✓ after the system has been started up we check the tightness of connections.

► Water circuit connection

- ✓ we connect water cooling system parallelly to the proper circuit of the cooling medium
- ✓ the IN/OUT pipe connection does not affect the efficiency of the device
- ✓ we protect all the connections by means of clamps

► Other connections

- ✓ connect the vacuum nozzle/safety valve to the intake manifold
- ✓ the connector +12V, which is added to the reducer set, should be plugged into the gas installation harness and next plugged into the electrovalve coil
- ✓ there is possibility to connect the temperature sensor

All the rubber pipe connections require protection by means of clamps.

NOTE!

After 1000 km it is recommended that the screw is checked and tighten using 10 Nm

► Reducer pressure control

The reducer has factory regulated pressure at the level of 1,1 - 1,2 bar (for TUR). If a need occurs, after the reducer installation, the pressure should be regulated in the following way:

INCREASING THE PRESSURE

we turn the regulative screw counter-clockwise until we reach the proper pressure

DECREASING THE PRESSURE

we turn the regulative screw clockwise until we reach the proper pressure

TWIN

The reducer has factory regulated pressure at the level of 1,2 bar. If a need occurs, after the reducer installation, the pressure should be regulated in the following way:

INCREASING THE PRESSURE

- ✓ In the left-side body on the TWIN reducer (1) we rotate the regulative screw by turning it counter-clockwise until we reach the proper pressure.
- ✓ In the right-side of the reducer body (2) we rotate the regulative screw by turning it counter-clockwise until we reach the pressure higher than the pressure in the left-side body (1) by 0,1 bar.
- ✓ Next in the right-hand side of the reducer (2) we turn back the crew clockwise by one full turn.

DECREASING THE PRESSURE

- ✓ In the left-hand side (1) body of the TWIN reducer we turn the regulative screw clockwise until we reach noticeable resistance.
- ✓ In the right-hand side (2) of the TWIN reducer we turn the regulative screw clockwise until we reach the desired pressure.
- ✓ In the left-hand side (1) body of the TWIN reducer we turn the regulative screw counter-clockwise until we reach the pressure higher than the pressure in the right-hand side body (2) by 0,1 bar.
- ✓ Next in the left-hand side body of the reducer (1) we turn back the crew clockwise by one full turn.

If the TWIN reducer is incorrectly regulated, the devise will be working with just half of its power. The variation of pressure on the particular bodies is acceptable within the range of 0,03 bar.

In order to carry out the inspection of the pressure on the particular bodies of the TWIN reducer, the following actions must be taken:

CHECKING THE PRESSURE ON THE LEFT-HAND SIDE BODY (1) OF THE REDUCER

while the engine running on LPG you should block the vapour phase gas flow on the rubber hose by squeezing the hose between the right-side body (2) and a liquid gas filter. After 10 sec. we read the pressure values in the left hand-side body (1) of the reducer.

CHECKING THE PRESSURE ON THE RIGHT-HAND SIDE BODY (2) OF THE REDUCER

while the engine running on LPG you should block the gas flow on the rubber hose by squeezing the hose between the left-side body (1) and a liquid gas filter. After 10 sec. we read the pressure values in the right hand-side body (2) of the reducer.

ATTENTION!

All the regulations must be done when the engine running LPG on idle