



REDUCER SERVICE MANUAL
&
ANTI BUZZING INSTRUCTION

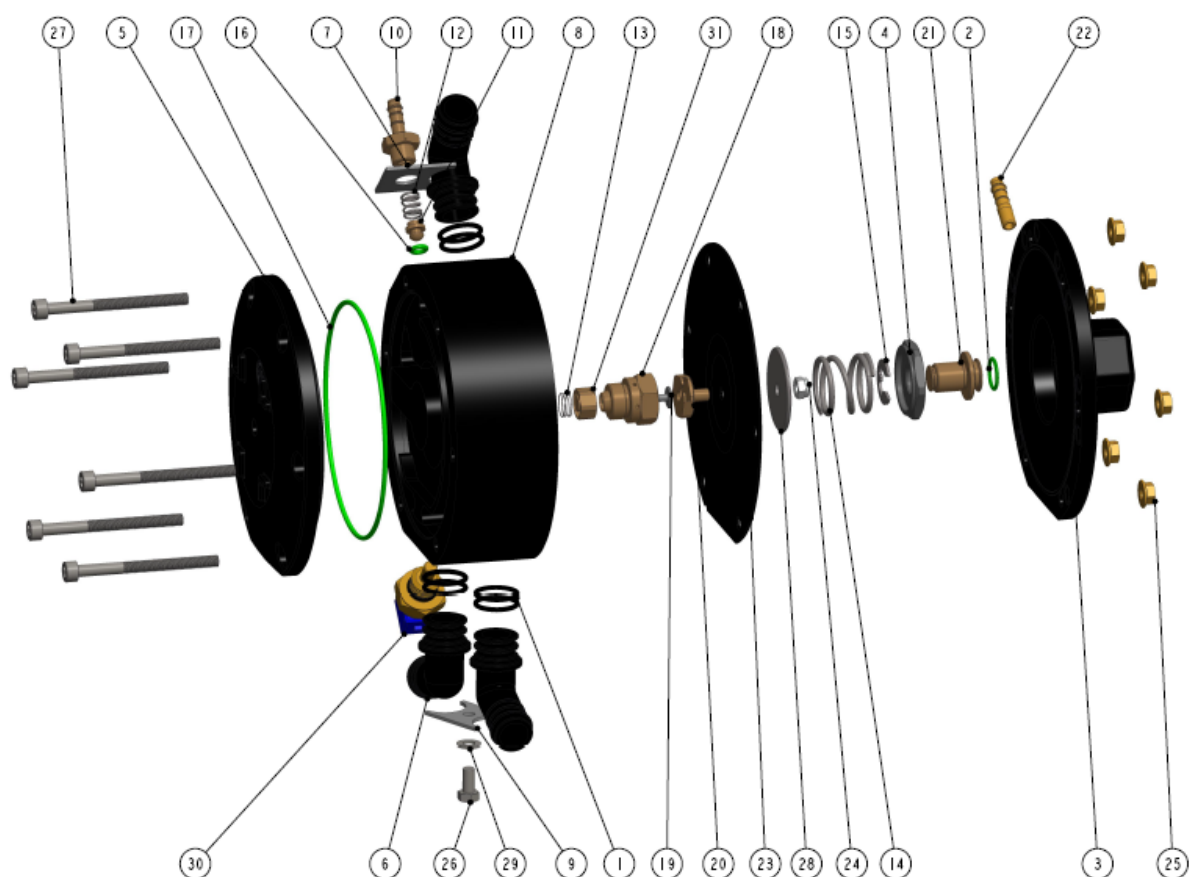


REDUCER SERVICE

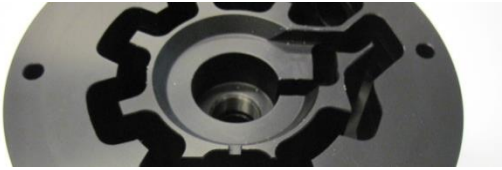
Tools and products:

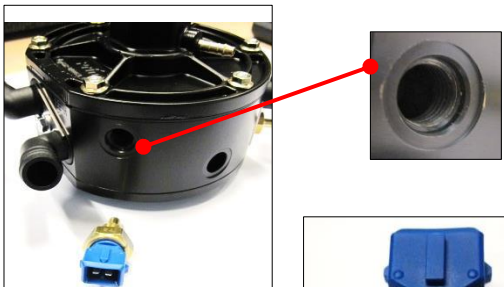
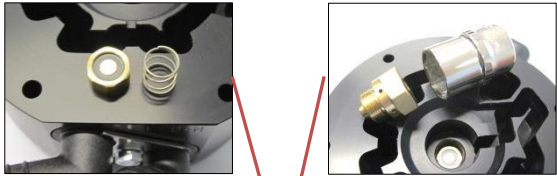
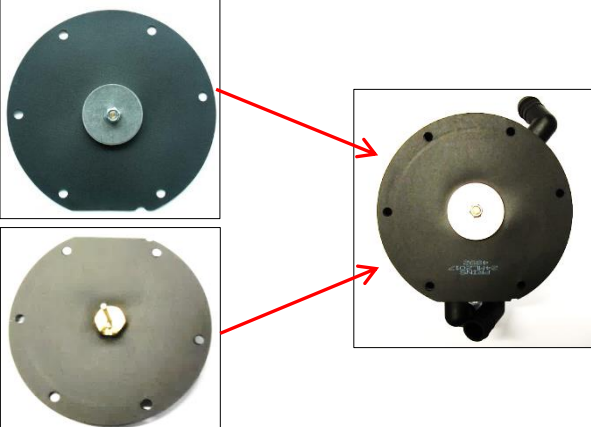
- Reducer replacement kit 180/10025/C
- Torx T25 key
- Thread cutting device M10x1
- Thread cutting device M15x1
- Ring spanner size 8 and 17 mm
- Spanner socket 19 for nozzle assembly
- Torque spanner (0 -10 Nm) with socket 14 mm / 8 mm
- 14 mm socket with ratchet
- Screwdriver (flat head)
- Hammer
- Compressed air
- Brake cleaner / carburettor cleaner

Overview



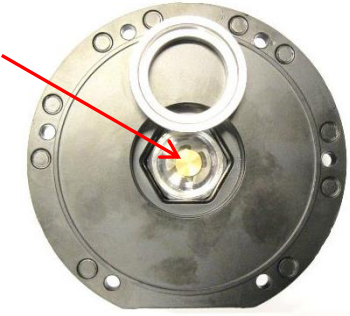
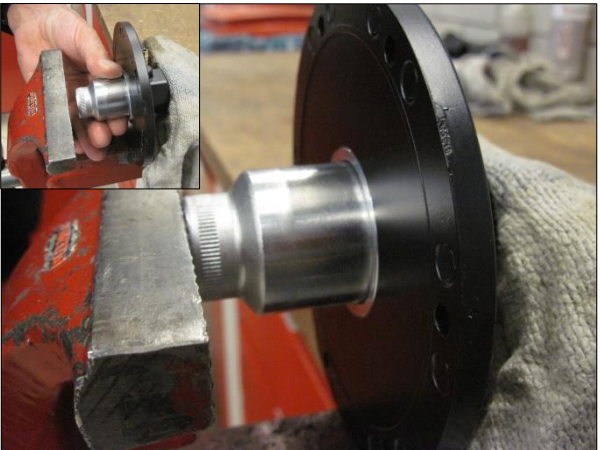
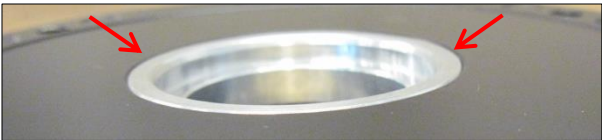
	Reducer replacement kit 180/10020 - Gas-side diaphragm - Water-side O-ring - Pressure relief valve O-ring - Locking nut M5 - Jet - Locating pin - Valve seat - Water-Gas 16mm elbow 3x - O-ring ECT sensor
	Loosen and remove the six Torx T25 screws (nr 32). <i>Do NOT loosen the “Tensilock-nuts” (nr25) itself -> this will harm the locking function.</i>
	Remove the front cover (nr 3). <i>The adjustable disc/screw (nr 2+4+21+15) in de front cover will be used again. Only the O-ring should be renewed.</i>
	Remove the back cover (nr 5). <i>Renew the O-ring (nr 17) of the back cover.</i> <i>Be careful -> do not damage the O-ring groove!</i>

	Remove the diaphragm (nr 23). <i>Remove (and renew) the diaphragm complete with locating pin, mounting plate, washer and locking nut (nr 20+19+28+24)</i>
 	Remove the jet (nr 18) and valve + spring (nr 31+13) from the main body. <i>Use a special spanner socket 19 (099/9980) to disassemble the jet.</i> <i>Clean the threaded hole with a thread cutting device M15x1mm, break cleaner and compressed air.</i>  
  	Remove 16mm GAS and water elbows (nr 6). Remove the pressure relieve pillar and valve (nr 10, 11, 16) Remove the ECT sensor (nr30) <i>Clean the main body thoroughly with break cleaner, cloth and compressed air.</i> <i>Renew the O-rings from the over pressure valve and ECT sensor.</i> <i>Renew the 3 elbows including the O-rings.</i> <i>Do not damage the O-ring groove!</i>

 	IMPORTANT: In case the ECT sensor (nr 30) has to be renewed, please pay attention to the following: - Older sensors are fitted with a brass/ALU ring. - New replacement ECT sensors have an O-ring. Only use the O-ring in case the main body has special O-ring groove (see picture). In all other cases, we suggest to fit the sensor with Loctite and an ALU/brass ring.
 	Fit the new valve (nr31) including the spring (nr 13). Fit on top of the valve, the jet (nr 18). Use a <i>very small</i> amount of locking compound threebond 1305 or equal <i>Torque setting : 4 Nm</i>
	Assemble the new diaphragm: Location pin (nr 19) -> mounting disc (nr 20) -> diaphragm (nr 23) -> washer (nr 28) -> tensi-lock nut (nr 24). <i>Torque setting (nut): 2.5Nm</i>

Anti-Buzzing ring:

In case of noise issues (buzzing noise), it is possible to fit an anti-buzzing ring according the following steps

	Be sure the adjustment mechanism is fitted in de front cover.
 	Position the anti-buzzing ring in the centre of the front cover as shown in the picture. Remark -> the ring is conical. Be sure it is positioned with the right side up. Find yourself a round piece (like a spanner socket) with the right dimension to press the ring inside the front cover. <i>Remark: be sure there are no sharp edges or damages on the press tool-> the anti-buzzing ring may not be damaged -> damages will harm the diaphragm afterwards.</i>
	Use a hydraulic press or workbench to press the ring into the front cover. <i>Remark: be sure the ring is 100% even with the inside of the front cover.</i> 
Remark: in case of an old machined MAP front cover, the anti-buzzing ring will block the MAP pillar (connection). Please drill a 3mm hole through the MAP pillar and the anti-buzzing ring. Drill this hole <u>before</u> assembling the complete reducer.	

	Position the back cover and diaphragm and fit all bolts in place. Put the spring on top of the diaphragm and be sure everything is positioned correctly.
	Place the front cover and the tensi-lock nuts on top of the bolts. Tighten the M5 bolts with a torque of 8Nm <i>Remark: Do not tighten the tensilock nut side, but the Torx bolt side</i>
	Check: - Check after installation if the reducer is not leaking (water/gas) - Check the car's coolant level after the engine has ran for about 10 minutes. - Adjust the reducer pressure according the desired/prescribed pressure.