

Manual for the sealing seat cleaning and milling kit for Renault, Nissan, Opel M9R / M9T (180° Ø17 mm)

P/N. 90391500/90391550
(legally protected)



No.	P/N	Description	90391500	90391550
1	9039034	Flexible Bit Holder ¼"(custom made)	1	1
2	6039070	Sealing Ring Extractor	1	-
3	9039045	Basic Device	1	1
4	9039033	Holder For Special Wire Brushes	1	1
5	9039031	Special Wire Brush Ø19 mm	1	1
6	9039027	Special Wire Brush Ø26mm	1	1
7	9039044	Injector Seat Milling Cutter 180° Ø17 mm	1	1
8	9049027	Wire Brush	2	2
9	60390080	Set of 6 Sealing Plugs With Setting Tool	1	1

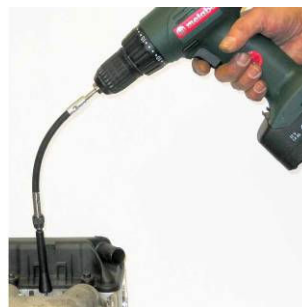
Optional

P/N	Description
90390421	Injector Seat Milling Cutter 120° Ø17/ Ø18 mm.
9039043	Injector Seat Milling Cutter 180° Ø15/ Ø17/ Ø19 mm
60390750	Slide hammer 1350gr.
9039029	Special Wire Brush Ø21 mm
9039032	Special Wire Brush Ø18 mm

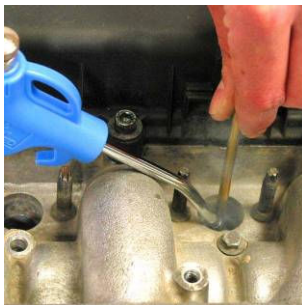
1. Screw a sealing plug on to the Setting Tool (p/n 9039008) and close the nozzle bore in the cylinder head so no dirt can get into the combustion chamber, remove the Setting Tool.



2. Place the Wire Brush (p/n 9039027 or p/n 9039031) into the Brush Holder (p/n 9039033) and secure it with an allen key. Place the Holder with Brush into the Flexible Bit Holder (p/n 9039034) and then by using a drill or an electric screwdriver clean the injector shaft thoroughly.



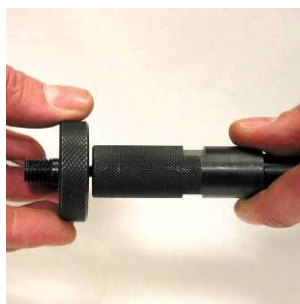
3. Again screw the Setting Tool into the Sealing Plug (p/n 9039008) and hold the plug down, dirt is then removed using compressed air or a vacuum cleaner. Remove the plug using the Setting Tool or a magnet.



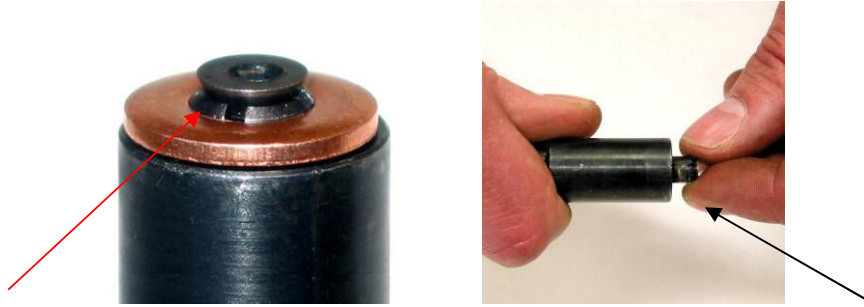
Before using the Sealing Ring Extractor (p/n 6039070) observe the following points!



4. The knurled actuator of the sealing ring extractor must be freely movable and should have some play (see picture) from the knurled pipe.



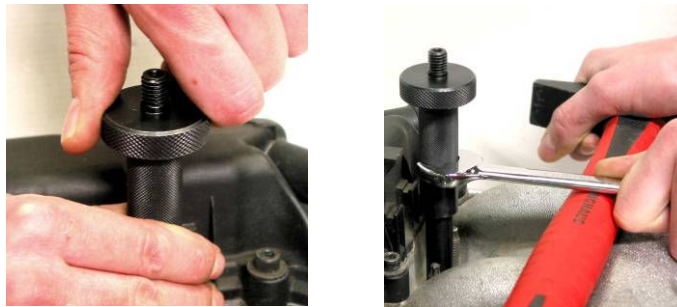
5. Get a new sealing ring and place it on the extraction claw in order to adjust the grip depth. The length of the claw can be changed by turning. The claw is optimally adjusted when the collar protrudes minimally over the sealing ring (see picture). If the collar protrudes too much, then the Extractor will jam in the bore of the nozzle. If the claw is not adjusted enough, then the Extractor will not grip the sealing ring.



6. After being used several times it can happen that the four claw elements get overstretched and do not fit in the sealing ring anymore. This can be corrected by squeezing them together with a pair of long-nosed pliers.



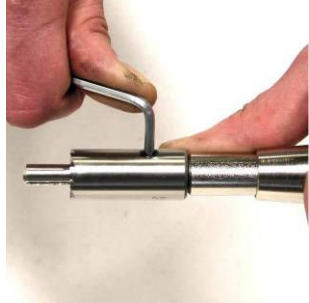
7. Place the Extractor in the shaft and grip the sealing ring by turning the knurled actuator and holding the knurled pipe. Extract the sealing ring from the shaft. Additionally you can help to lever it out using a spanner on the extractor.



8. If it is not possible to extract the sealing ring by hand, you can use a slide hammer (p/n 6039080 short version, which also fits into the engine compartment of the Citroen C8, Peugeot 807 etc.) to extract the ring.



9. When the sealing ring is removed, then install the suitable Injector Seat Milling Cutter (p/n 90390421, 9039043 or 9039044) onto the Basic Device (p/n 9039045) and moisten the cutting surface of the Cutter with grease in order to collect any particles. Pull the centring cone of the Basic Device upward until it stops then insert the complete Milling Tool into the injector shaft. Push the locking collar of the Basic Device down in order to centre the Milling Tool and secure it with an Allen key.



10. Rotate the Milling Tool, applying slight pressure, clockwise. The cutting surface of the drill will fill with deposited dirt, in order that not too much material is cleared away from the cylinder head examine the sealing surface with a lamp (e.g. p/n 4010300). Clean the drill, grease it again and if necessary repeat the procedure as often as needed until the sealing surface is clean.



11. Finally clean the injector nozzle bore with the wire brush (p/n 9049027). If the injector is strongly coked or carbonised, then the sealing seat can be cleaned with the Milling Cutter (p/n. 90390421, 9039043 or 9039044) without having to use the basic device.

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