

Vehicle	After-Sales Type:	Engine type	Engine suffix	Cubic capacity (cc)	Bore (mm)	Stroke (mm)	Compression ratio
Renault MODUS	XP0D	K9K	750	1461	76	80.5	17.6: 1
	XP08 XP0E		752				
	XP0F		760				17.9:1
	XP0G		762 ,768				15.3:1
	XP0H		764				
	XP0F		766				17.9:1
Renault DACIA	XS0J	K9K	790	1461	76	80.5	17.9:1
	XS0K		792				
Nissan ALMERA	-	K9K	260	1461	76	80.5	18.25:1
Nissan MICRA	-	K9K	270, 272, 274, 276	1461	76	80.5	18.25:1

Equipment required

offset thread repair kit

I - SAFETY**General information**

All information contained in these manuals is intended exclusively for automotive industry professionals.

The documentation is intended to cover all vehicles in the **RENAULT** range throughout the world, but may not cover equipment designed for use in specific countries.

The methods and fault finding procedures recommended and described in this manual have been designed by automotive industry repair professionals.

a - General recommendations

Observe basic principles of vehicle repair.

The quality of repair depends first and foremost on the care exercised by the person in carrying it out.

To ensure good repair:

- use recommended professional products and original Renault parts,
- observe the tightening torques,
- replace the recommended roll pins, nuts or bolts, after each removal,
- clean and degrease the sections to be bonded, to ensure they bond correctly.

The design quality of our vehicles demands that nothing is left to chance in making a good repair, and it is essential to refit parts or components exactly as they were originally (for instance: heat shields, wiring routing, pipe routing).

Use professional products and apply them with care, for example do not apply too much sealant to the joint face.

b - Special tooling - ease of use

The repair procedures have been designed using special tools; they must therefore be carried out using these tools to ensure a high degree of working safety and quality of repair.

The equipment we have approved has undergone careful research and testing, and must be used and maintained with care.

c - Reliability - updating

Since component specifications are subject to change during their commercial life, it is essential to check whether there are any Technical Note updates when seeking information.

d - Safety

Certain devices and parts must be handled with particular attention to safety and cleanliness and, above all, with due care.

The safety symbol used in this manual indicates that special attention must be paid to the procedure or the tightening torque values.

WARNING

Do not use flammable products to clean parts.

Working safely:

- use appropriate tools which are in good condition (using «multipurpose» tools, such as adjustable pliers, should be avoided wherever possible),
- adopt a correct posture and technique when performing heavy work or lifting loads,
- check that the working area is clean and tidy during the operation,
- use personal protection (gloves, safety goggles, work shoes, masks, skin barrier creams, etc.),
- always follow the safety instructions associated with the operation to be performed,
- do not smoke when working on vehicles,
- do not use toxic products in unventilated rooms,
- do not ingest any chemicals (brake fluid, coolant, etc.).

Respecting the environment:

- sort waste according to its particular qualities,
- do not burn waste products (tyres, etc.).

e - Conclusion

The procedures contained in this document merit your attention. Please read them carefully in order to reduce the risk of injury, and avoid using incorrect procedures that could damage the vehicle or make it dangerous to use.

Following the recommended procedures will help you to provide a quality of service which will ensure the vehicles achieve the highest levels of performance and reliability.

Engine: Precautions for repair

Maintenance and repair operations must be carried out under the proper conditions to ensure that our vehicles run safely and reliably.

II - CLEANLINESS**Risks relating to contamination**

The high-pressure direct injection system is highly sensitive to contamination. The risks caused by contamination are:

- damage to or destruction of the high-pressure injection system,
- a component seizing,
- a component not being properly sealed.

All After-Sales operations must be performed under very clean conditions. Having carried out an operation in good conditions means that no impurities (particles a few microns in size) have penetrated the system during dismantling.

The cleanliness principle must be applied from the filter to the injectors.

What are the sources of contamination?

- metal or plastic chips,
- paint,
- fibres:
 - cardboard,
 - brushes,
 - paper,
 - clothing,
 - cloth,
- foreign bodies such as hair,
- ambient atmosphere,
- etc.

WARNING

Cleaning the engine using a high-pressure washer is prohibited because of the risk of damaging connections. In addition, moisture may collect in the connectors and create electrical connection faults.

a - Cleaning cloths

Use lint free cleaning cloths (part number **77 11 211 707**).

The use of rags or ordinary paper towels is prohibited: these produce lint and lose fibres, which then contaminate the fuel circuit.

Each cloth must only be used once.

b - Blanking plugs

The blanking plugs are used to cap the fuel circuit once it is opened and to therefore prevent contaminants from entering.

A set of blanking plugs should be used once only and used plugs must be discarded after use: once used, the plugs are soiled and cleaning them is not sufficient to make them reusable.

Unused plugs must also be discarded and not used again for any other operation on an injection system.

Blanking plug kit part number:

- K9K (**DELPHI** injection): **77 01 206 804**
- K9K (**SIEMENS** injection): **77 01 476 857**

c - Protective bags

Use hermetically resealable plastic bags, using adhesive tape, for example, to store components which will be refitted and reused. Stored parts will therefore be less subject to the risk of contamination.

These bags must be used once only: once they have been used, they are to be discarded.

d - Cleaning products

Two cleaning products can be used:

- an aerosol spray brake cleaner (part number **77 11 226 128**).
- an injector cleaner (part number **77 11 224 188**),

To use the injector cleaner, be sure to have a clean brush in good condition (the brush must not lose any bristles) as well as a clean container which has no impurities in it.

Note:

Use a new injector cleaner each time work is carried out (a used cleaning agent will contain impurities).

Engine: Precautions for repair

III - GENERAL RECOMMENDATIONS

1 - Advice to be followed before any operation

1) Carry out the work in a clean working area and take care to protect removed components from dust using plastic bags which are hermetically resealable, for example.

2) Always order the following from the Parts Department before carrying out work:

- **a new blanking plug kit** ; these are specific to the engine
- a sufficient number of lint free **cleaning cloths** .
- one of the two **cleaning products** for fuel pipe unions,
- **the parts always to be replaced** after each removal operation mentioned in the operational procedures specific to the vehicle.

3) Wear safety goggles fitted with side shields to prevent the cleaning product from splashing the eyes.

4) Wear latex safety gloves to avoid prolonged contact with the skin.

Note:

If wearing leather protective gloves, cover these with latex gloves.

5) Before any operation on the injection system, using plastic bags or clean cloths, protect:

- the accessories and timing belts,
- the electrical accessories (starter, alternator, power-assisted steering pump, sensors and electrical connectors),
- the flywheel face.

2 - Instructions to be followed during the operation

Wash your hands before and while carrying out the work.

Change the latex safety gloves if they become soiled or damaged.

All components removed from the injection system must be stored in a hermetically sealed plastic bag once they have been capped.

Reseal the bag hermetically using adhesive tape, for example, even if the bag must be opened shortly afterwards: ambient air can be a source of pollution.

After opening the fuel circuit, the use of brushes, cleaning agents, air blow guns, rifle-type brushes or standard cloths is strictly prohibited: These items are likely to allow impurities to enter the system.

When replacing a component with a new one or when refitting it after storing it in a plastic bag, do not unpack it until it is time to fit it on the vehicle.

3 - Cleaning

There are currently two procedures for cleaning the fuel circuit before opening it in order to carry out work in the workshop.

These procedures enable the fuel circuit to be cleaned to prevent contamination from entering: they both have the same end result and neither is preferred over the other.

a - Using the injector cleaning agent

Clear the access to the unions that need opening, following the work procedures specific to the vehicle (see the relevant Workshop Repair Manual).

Protect sections which are sensitive to fuel leaks.

Pour the injector cleaning agent into a container which is free from impurities.

IMPORTANT

Wear latex safety gloves when using the cleaning agent.

Dip a clean brush, which is not shedding bristles, into the container of injector cleaning agent.

IMPORTANT

Wear safety goggles fitted with side shields during this operation.

Clean the unions carefully using the brush and the injector cleaning agent.

Blast the components that have been cleaned with compressed air (tools, workbench, and also parts, unions and around the injection system). Make sure there are no brush bristles remaining and that the area is clean.

Wipe the sections that were cleaned with fresh cleaning cloths.

Open the circuit at the unions and immediately fit the relevant blanking plugs.

WARNING

Do not blast with compressed air once the fuel circuit is open, otherwise impurities may enter the system. Use cleaning cloths only, if necessary.

b - Using the brake cleaning agent

Clear the access to the unions that need opening, following the work procedures specific to the vehicle (see the relevant Workshop Repair Manual).

Protect sections which are sensitive to fuel leaks.

IMPORTANT

Wear latex safety gloves when using the cleaning agent.

IMPORTANT

Wear safety goggles fitted with side shields during this operation.

Spray the brake cleaning agent onto the unions to be opened.

Clean the unions carefully using fresh cleaning cloths.

Blast the components that have been cleaned with compressed air (tools, workbench, and also parts, unions and around the injection system). Make sure there are no brush bristles remaining and that the area is clean.

Open the circuit at the unions and immediately fit the relevant blanking plugs.

WARNING

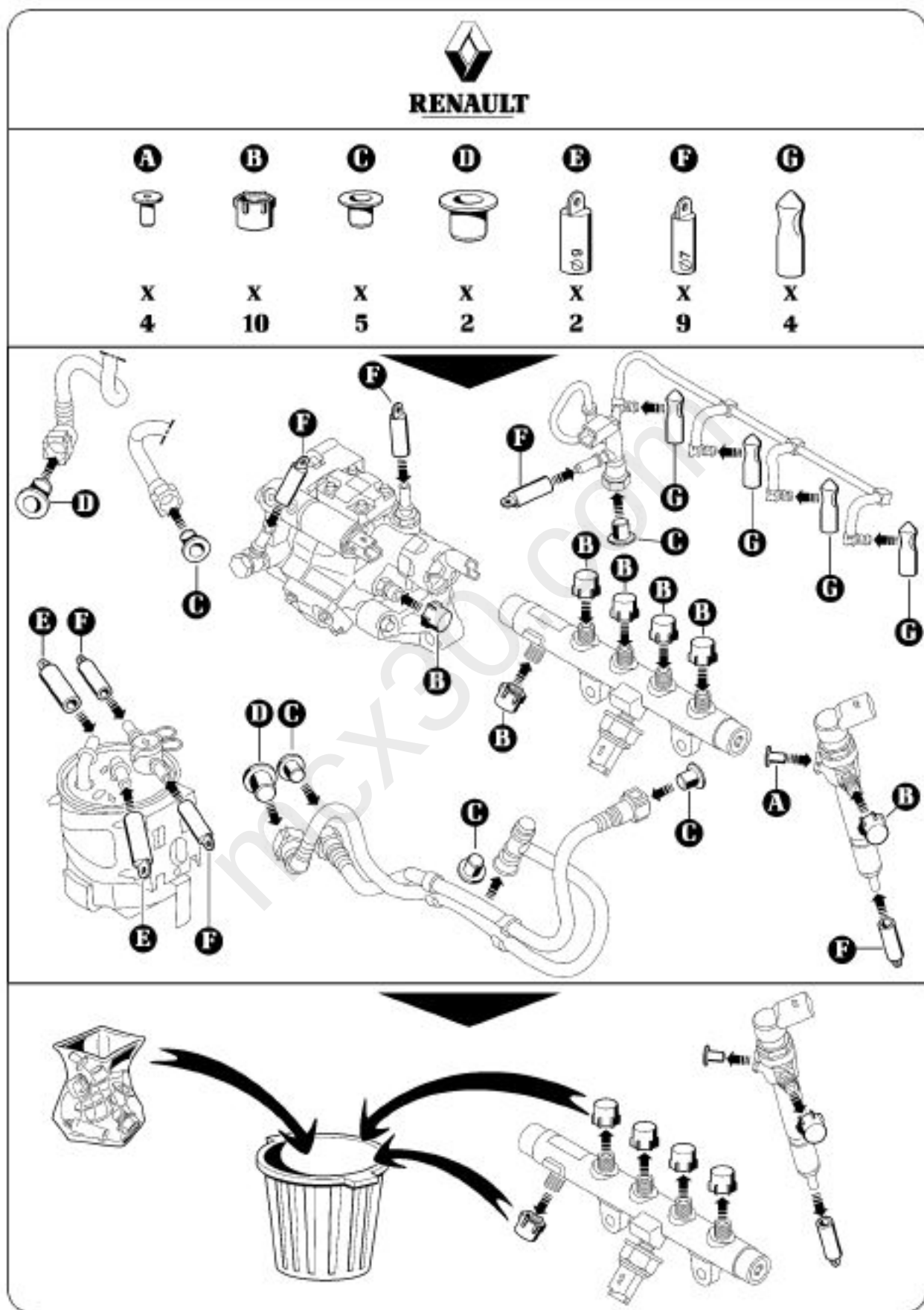
Do not blast with compressed air once the fuel circuit is open, otherwise impurities may enter the system. Use cleaning cloths only, if necessary.

4 - Instructions for fitting the plugs

K9K, and 732 or 764

mcx30.com

Part no. 77 01 476 857



113430

113430

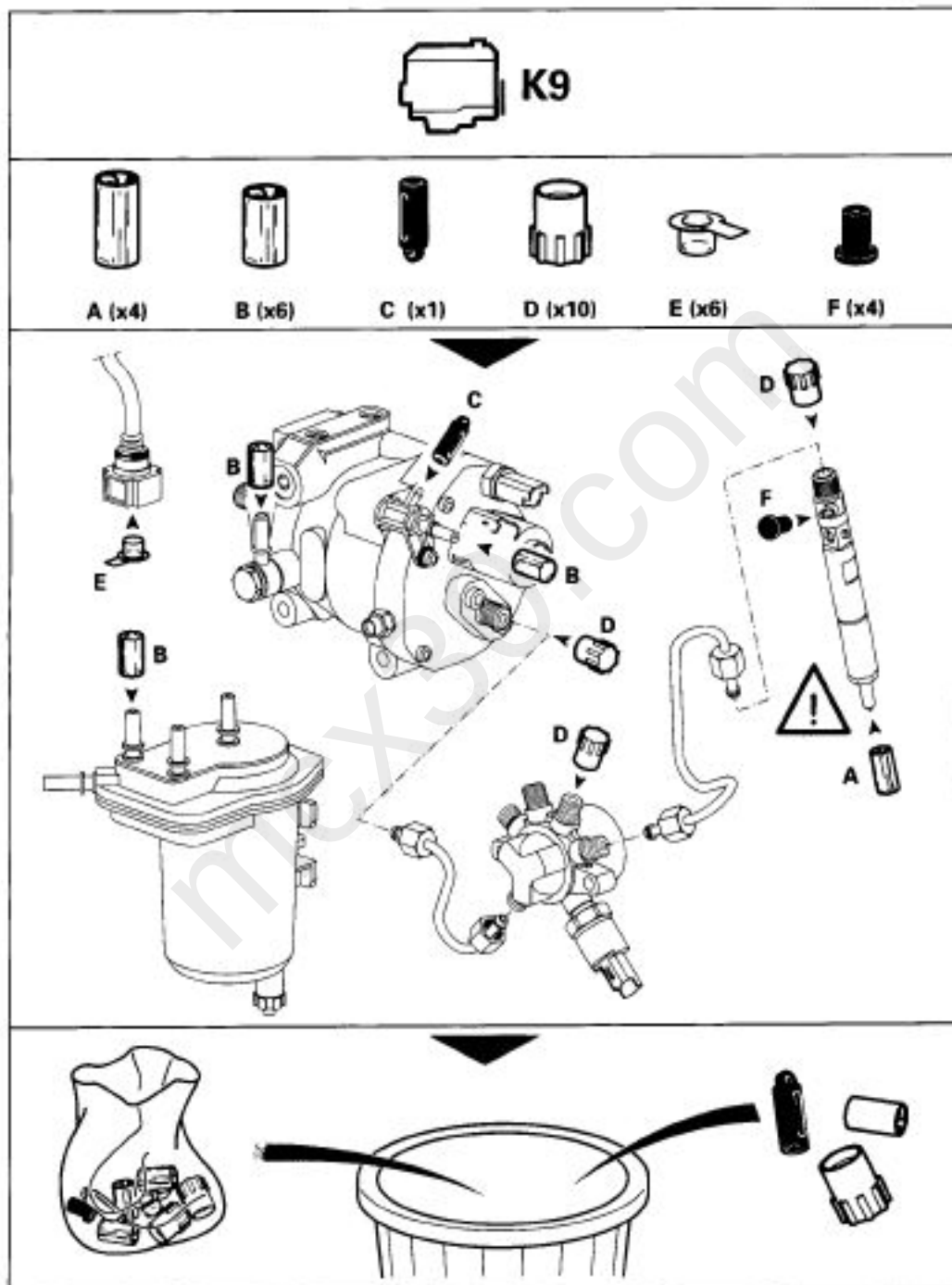


mcx30.com

K9K, and 260 or 270 or 272 or 700 or 702 or 704 or 706 or 710 or 712 or 714 or 716 or 718 or 722 or 724 or 728 or 729 or 750 or 752 or 760 or 762 or 766 or 768 or 790

mcx30.com

Part no. 77 01 206 804



20977

20977