Blue Cool Drive 40 Extension Kit Ford Transit

Code: 6234448A

installation
instructions

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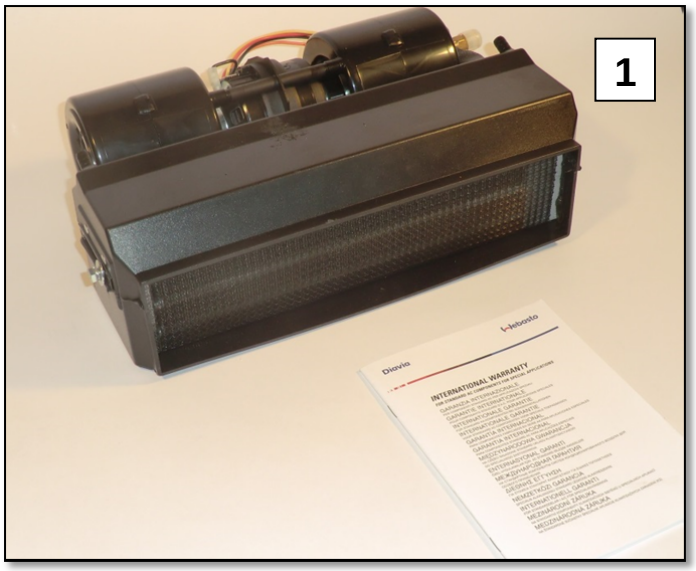
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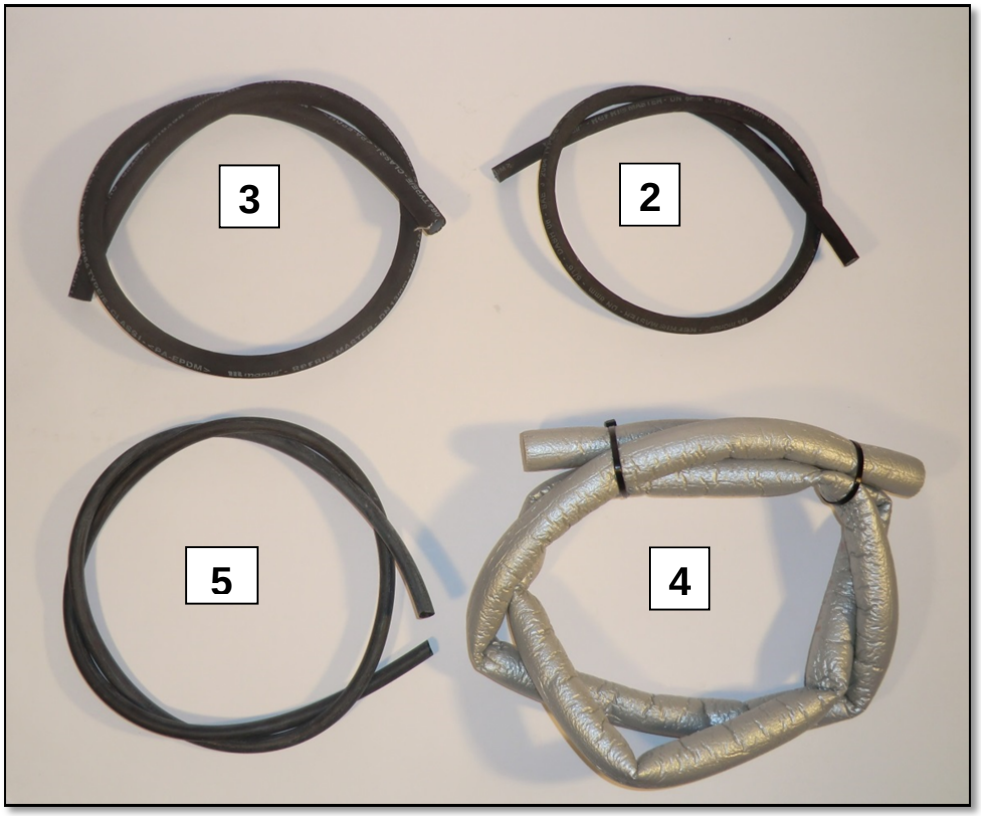
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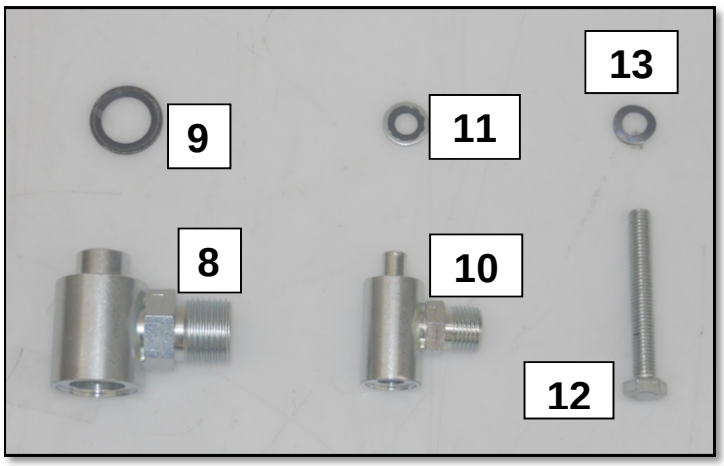
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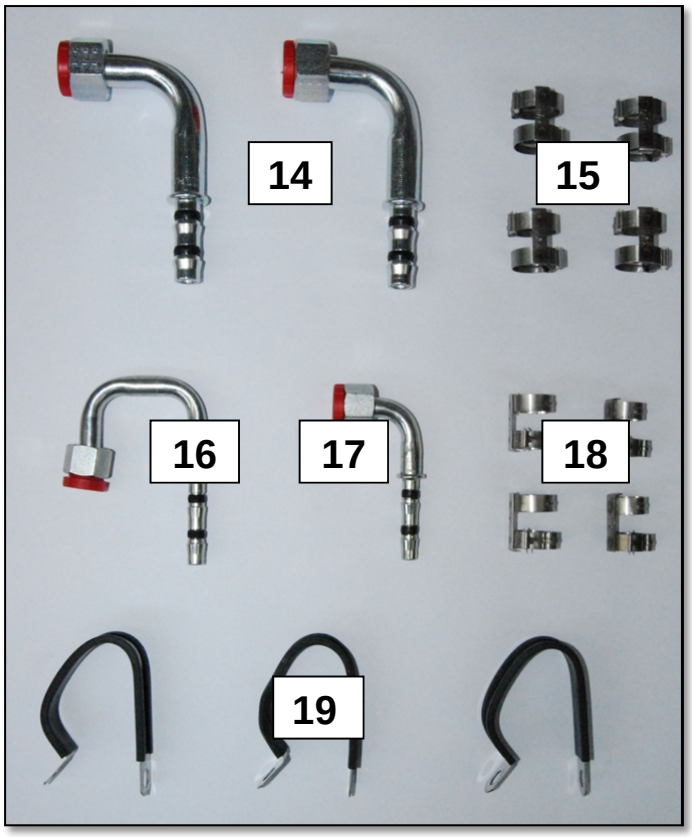
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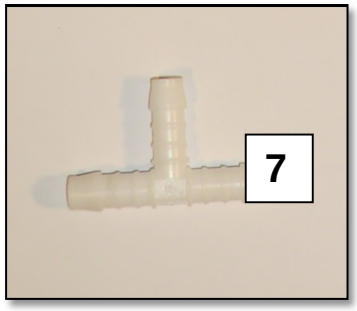
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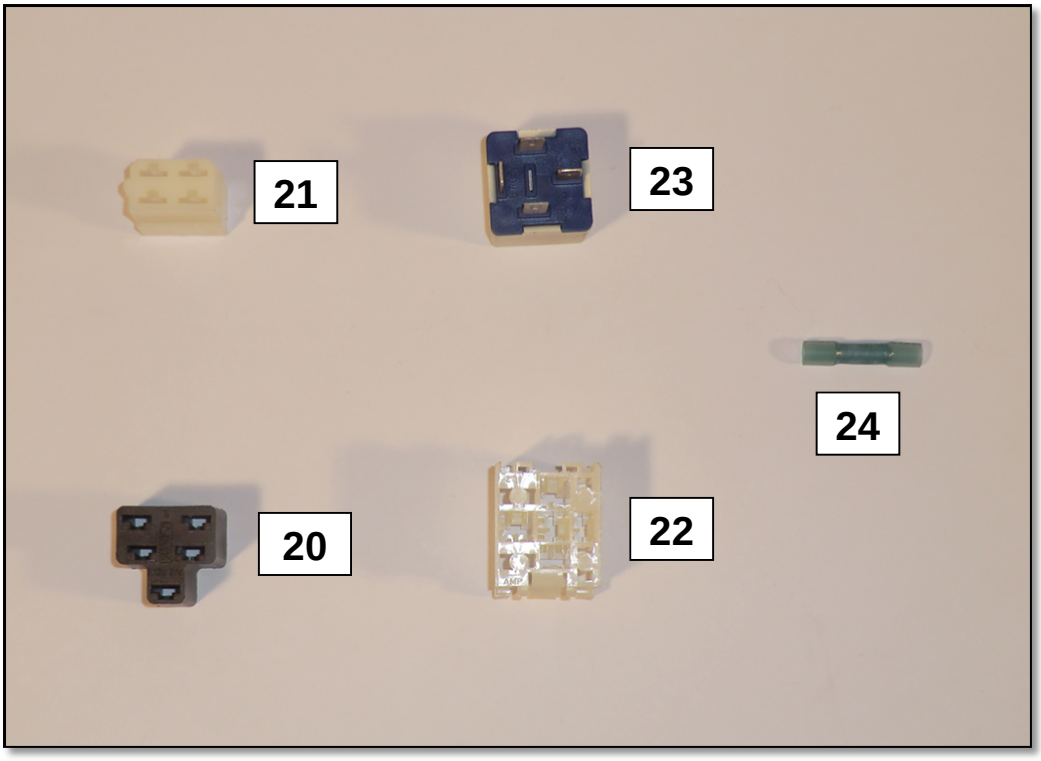
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GENERAL DESCRIPTION & DIAGRAM BLOCK

The A/C Extension kit was developed to create an extension of the existing A/C system in order to bring additional cool air to the rear part of the vehicle.

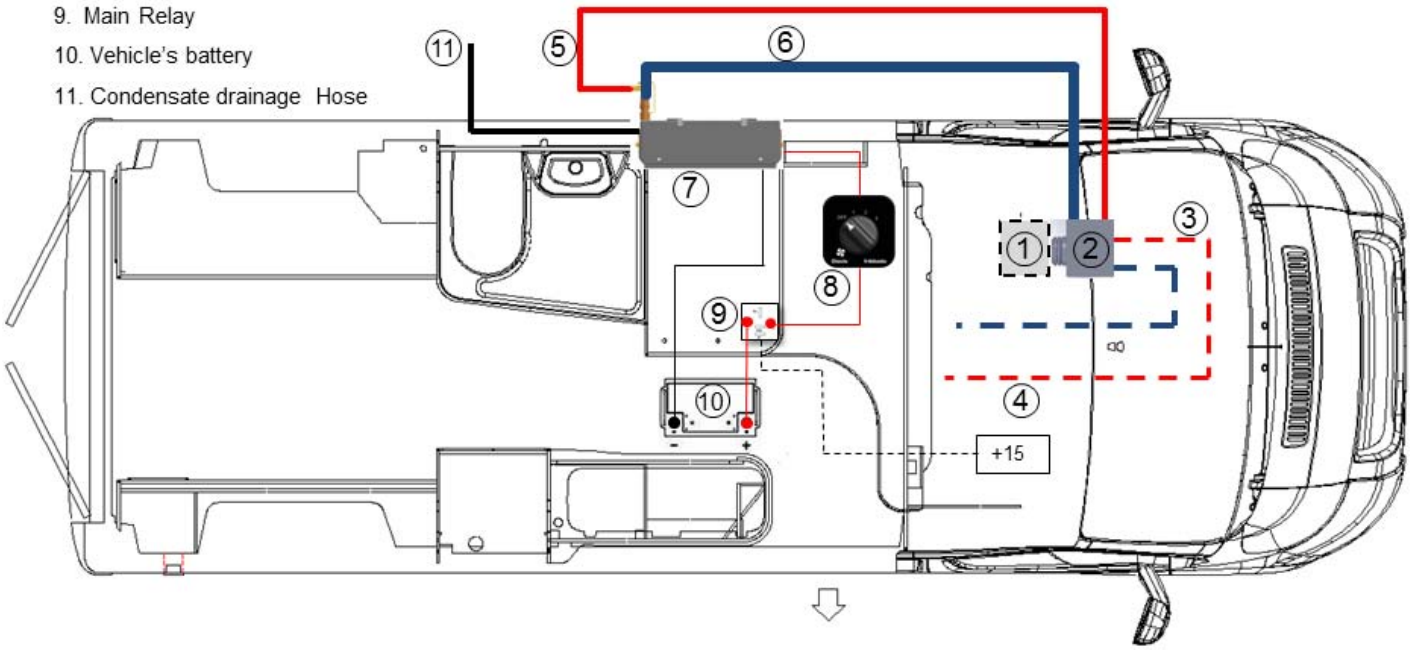
The new evaporator included in the kit can be installed inside the vehicle in your favorite position, you have 7 meters of refrigerant pipes to install it.

The kit includes a control panel , useful to select your favorite evaporator fan speed when the engine is on.

Because the extension is linked to the main A/C compressor, the system will run with the engine on only.

Legend:

1. Vehicle's HVAC Expansion valve
2. Manifold
3. Vehicle's original HVAC Hose
4. Vehicle's original HVAC Hose
5. Oakland Evaporator High pressure Hose
6. Oakland Evaporator Low pressure Hose
7. Oakland Evaporator
8. Oakland Speed selector
9. Main Relay
10. Vehicle's battery
11. Condensate drainage Hose



OPERATIONS INSIDE THE VEHICLE

A. Check the available space where to install the Oakland evaporator. Bear in mind that you have 7 meters of refrigerant hose.

B. Define the installation place according to your needs and vehicle's characteristics: Please bear in mind that you shall be able to exit from the installation place with:

1. Condensate hose.
2. High pressure hose.
3. Low Pressure hose.
4. Cable Harness.

C. The installation position shall favor an even airflow inside the vehicle and especially over the passenger seats. Since cold air is heavier than warm, a high installation position will grant you the best performance.

D. Once the best position for the new evaporator has been defined, you can start to :

- Install the Evaporator into the vehicle. Respect the installation positions of it during the assembly.
- Connect the condensate hose to the evaporator and route it outside the vehicle. Be sure that the condensate hose is always routed with a downward slope so that the condensate can easily flow out (Avoid siphons on this line) .
- Prepare the 1/2" and 5/16" (inches) connection pipes to be used respectively for the "Low Pressure" and "High Pressure Line" by means of their fittings and dedicated clamps.
- Connect them to the evaporator and tighten them with the correct suggested torque.
- Securely mount the evaporator into the designated installation space.
- Provide proper ventilation so that air can easily return back to the evaporator.. Consider maximum airflow of up to m^3 / hour.
- Whistling noise indicates that either air inlet/outlet or both are not properly dimensioned.

E. Make sure you cover the cold 1/2" low pressure refrigerant hose with the supplied insulating hose to avoid condensate dripping inside the vehicle.

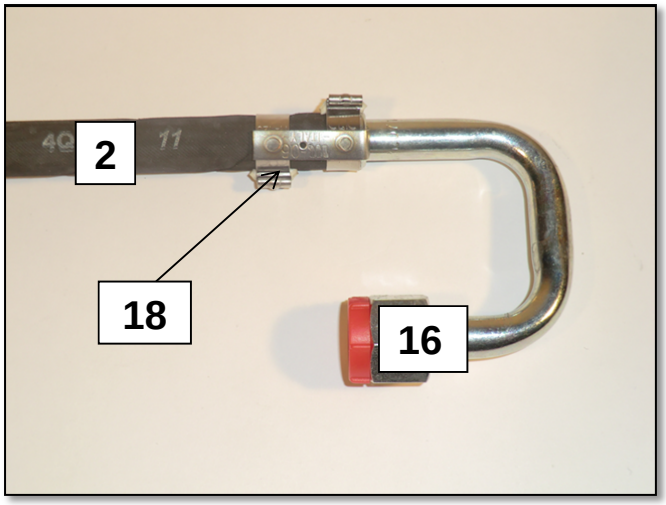
F. Route then the refrigerant hoses all the way out of the vehicle and properly fix them under the chassis. Please make sure they are protected from excess of heat and foreign objects that could be projected by tyres during vehicle's motion. Also, they need to be fixed firmly so that they are not rubbing against other surfaces.

G. When routing the refrigerant hoses ensure that they have an inclination from the evaporator towards to the compressor to ease the back flow of refrigerant to the compressor when not in use.

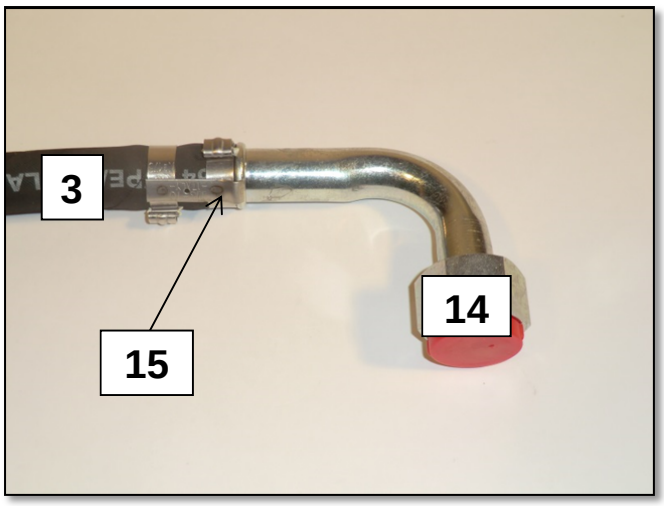
H. Reach the proximity of the original FORD Expansion valve positioned inside the engine compartment near the Cabin's air intake (as shown in the next picture).

I. Prepare the electrical connections around the Oakland evaporator (look at the electric scheme enclosed) and connect directly to the battery with a protective fuse as in our scope of supply (10 A). Please bear in mind that relay shall close only when the ignition key is : ON.

Choose a suitable installation space for the Oakland evaporator. Ideally, it is in an overhead compartment.



Connect the (U) fitting to the 5/16" refrigerant hose with the clamp, see also chapter 7.

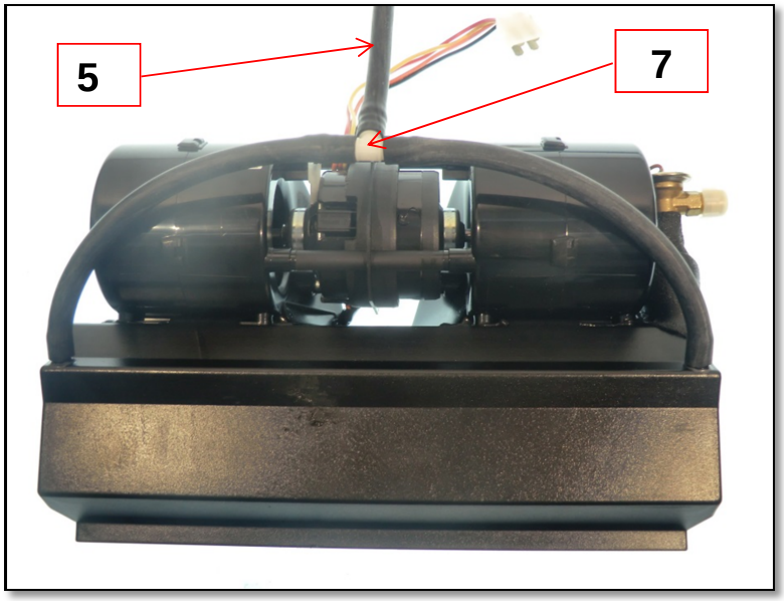


Connect the (90°) fitting to the 1/2" refrigerant hose with the clamp, see also chapter 7.

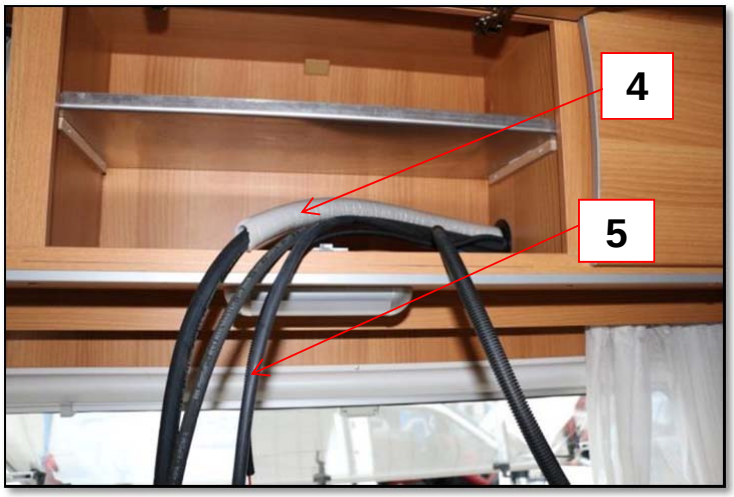
Connect the fittings to the evaporator.

Tighten the 5/16" gas connection from 15.4 to 17 Nm Torque.

Tighten the 1/2" gas connection from 24.4 to 27 Nm Torque.

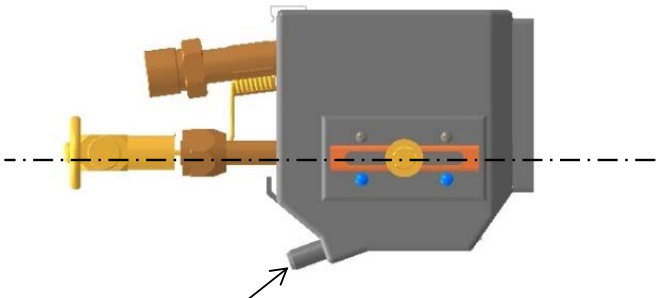


Cut two short pieces of the condensate drainage hose and connect them to the condensate outlets of the evaporator housing. Connect both short hoses with the remaining long hose (5) by using the T-piece (7) .



Insulate the 1/2" refrigerant hose using the thermal insulation hose included into the kit. Seal both ends of the insulation hose by the use of tape so that no air can enter the gap between both hoses.

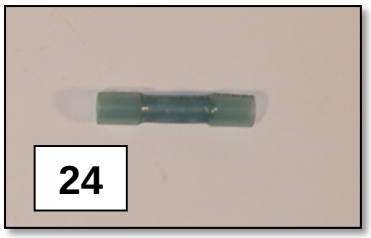
Route the condensate drainage outside the vehicle. Be sure that the condensate can easily flow out (avoid siphons on this line) .



Condensate drainage outlet.

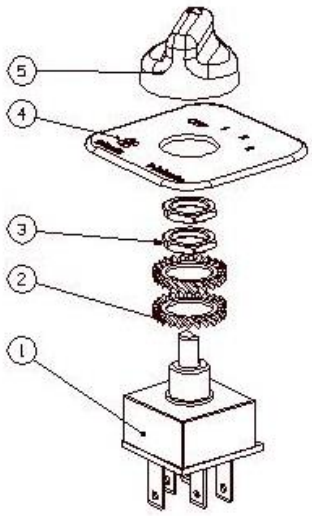
Install the Oakland evaporator horizontally. Make sure that condensate can easily exit from the condensate drainage outlets.

Make the electrical connection of the Oakland evaporator.



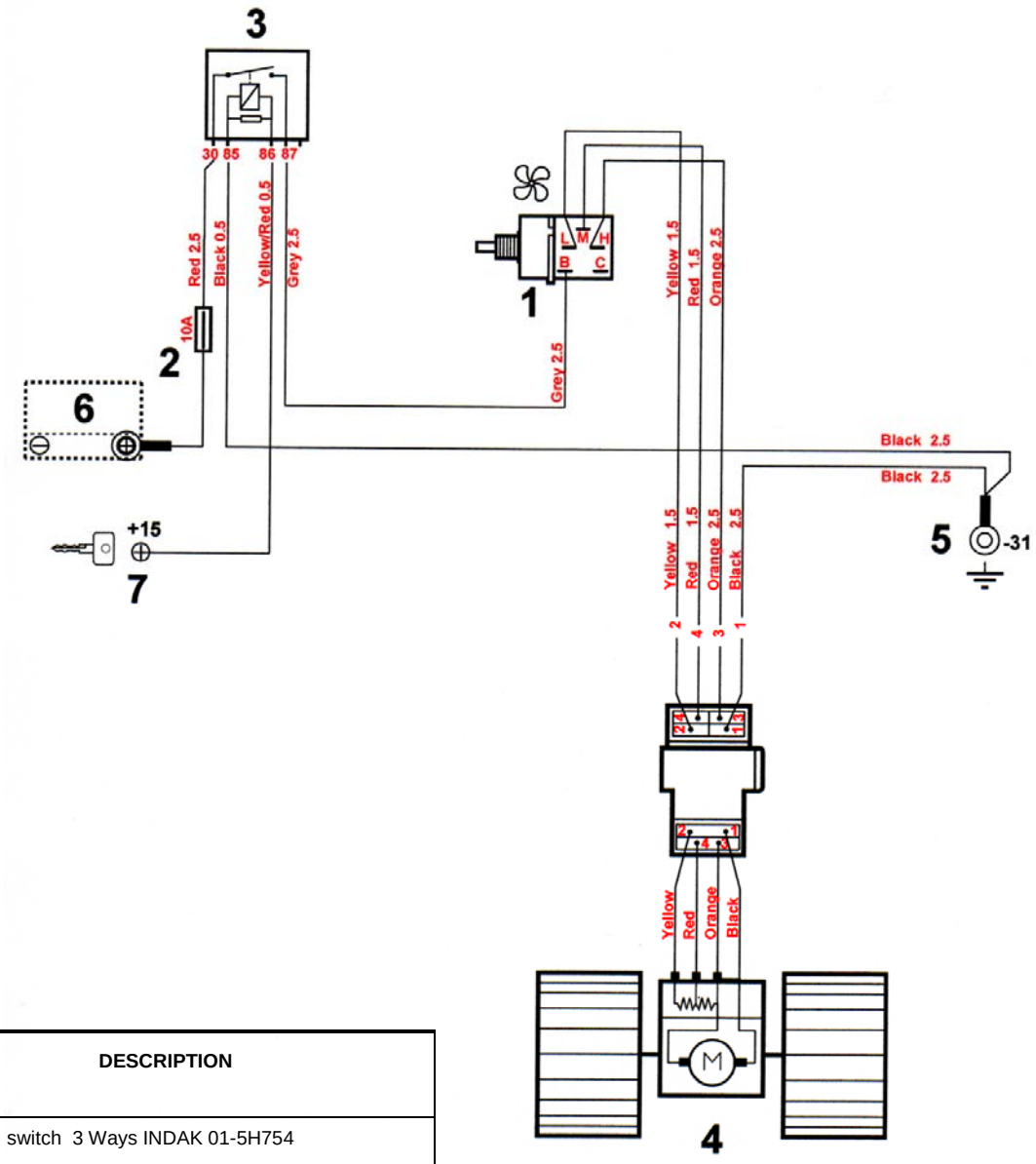
Use the Raychem connector (part. 24) provided to get the +15 from the vehicle (See page 18).

Speed regulator Kit (part.6)

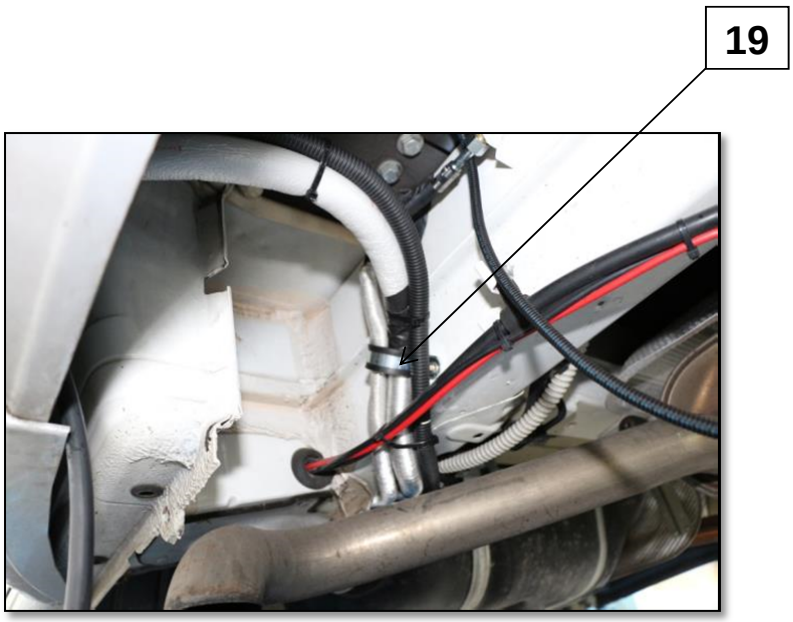


N.	DESCRIPTION
1	Ventilation switch 3 Ways INDAK 01-5H754
2	Washer D12 DIN6798A
3	Nut
4	Plate
5	Knob

ELECTRICAL SCHEME



N.	DESCRIPTION
1	Ventilation switch 3 Ways INDAK 01-5H754
2	10 A Fuse
3	Switch Relay
4	Evaporator blower
5	Negative to chassis
6	Battery
7	Positive connection from ignition (+15)



Route the refrigerant hoses out of the vehicle and properly fix them under the chassis. Please make sure they are protected from excess of heat and foreign objects that could be projected by tyres during vehicle's motion

Fix the pipes using the provided clamps (19) .

Protect piping in hot areas such as near the exhaust pipe.

OPERATIONS INSIDE THE ENGINE COMPARTMENT

As the evaporator is now installed inside your vehicle, electrically connected and you have already prepared the refrigerant pipes close to the expansion valve, you are now ready to work on the original A/C vehicle circuit.

A. Disconnect the battery

B. Empty the refrigerant from the vehicle's HVAC system using a refrigerant recovery device.

C. Remove the bolt, threaded M8 Stud from the Expansion valve and the special clamp.

D. Remove the pipes from the vehicle's HVAC expansion valve and close them with a plastic cap to avoid that humidity goes in.

E. Install the two provided manifolds onto the original expansion valve assembly , connect the original vehicle's hoses and fix them securely using the M8x60 screw, the D8 washer provided into the kit and the clamp removed before.

F. Install the pipes you already prepared for the Oakland Evaporator on the manifolds .

BEWARE:

Considering the easy and simple operation you have to do, and to minimize any possible humidity infiltration inside the vehicle's refrigerant circuit we highly recommend you to complete everything within 5 minutes.
Webasto cannot be liable of any damage in case you will leave the system open.

Empty the refrigerant from the vehicle's HVAC system using a refrigerant recovery device.

" Run the refrigerant hoses to the position where they will terminate at the vehicle's HVAC expansion Valve. Cut the hoses to the length needed. Connect the two 90° refrigerant hose fittings (part. 14 and 17) to the hoses.

Remove the M8 Bolt and threaded stud in order to remove the metallic clamp and remove the refrigerant hoses from the vehicle's HVAC.

Remove the clamp and the original refrigerant vehicle's hoses.

Install the manifolds (part. 8 and 10) on the evaporator valve.

Do not forget to install the seals (part. 9 and 11) between the manifolds and the evaporator valve .

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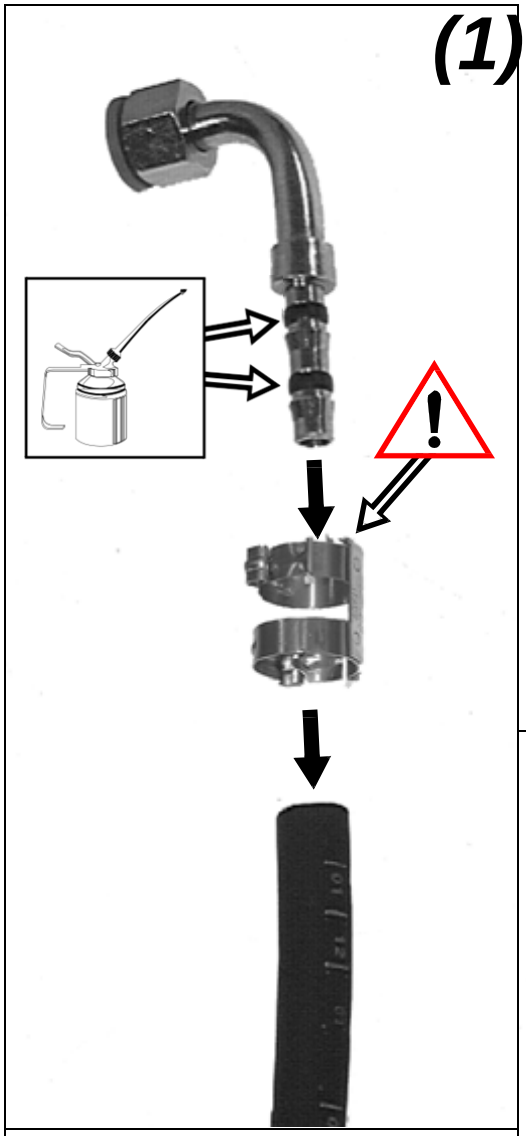
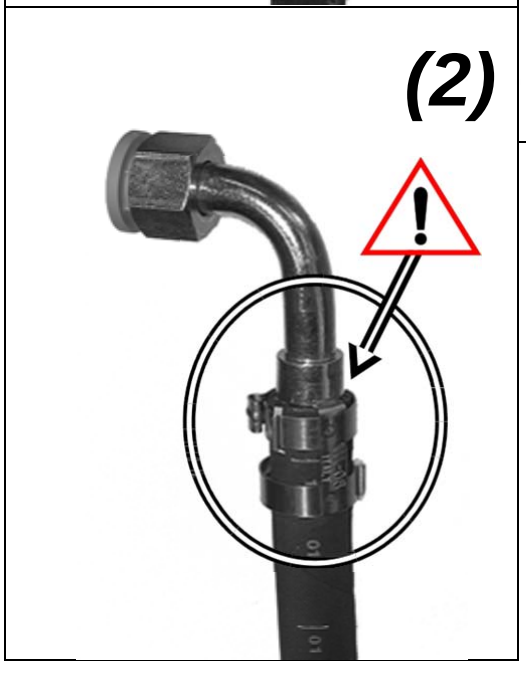
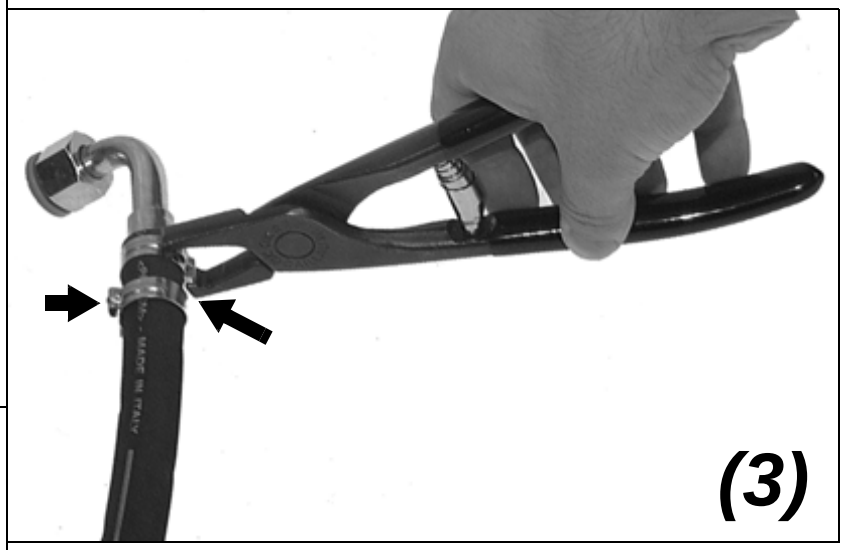
Connect the original vehicle's refrigerant hose to the manifold. Securely the new assembly using the metallic clamp and the screw M8x60 with the D8 washer provided with the kit.

Install the pipes you already prepared for the Oakland Evaporator on the Manifold and tight them with the right torque (see page 10) .

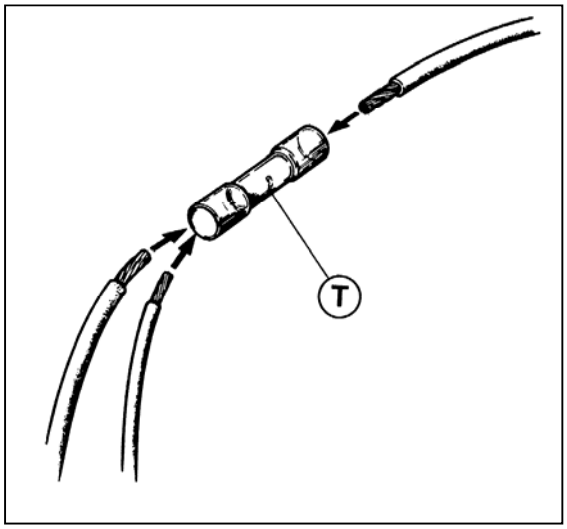


(1) Oil the O-ring; snap the connection into the hose, slide on the clamp with the tab flush in the position indicated in the figure (2); lock the clamp in place at two points using the special pliers (3).

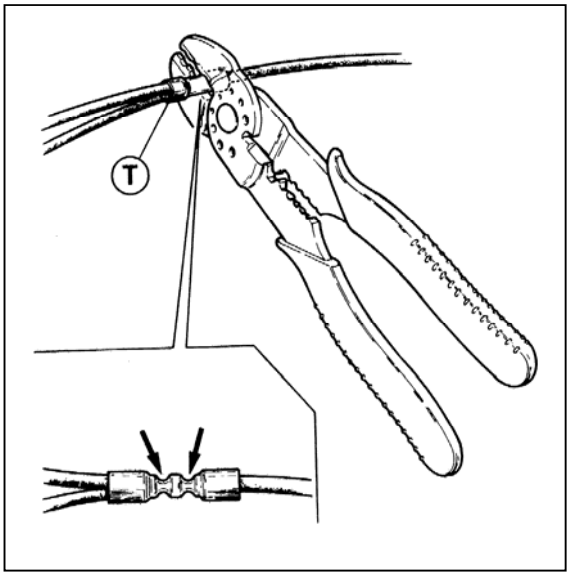




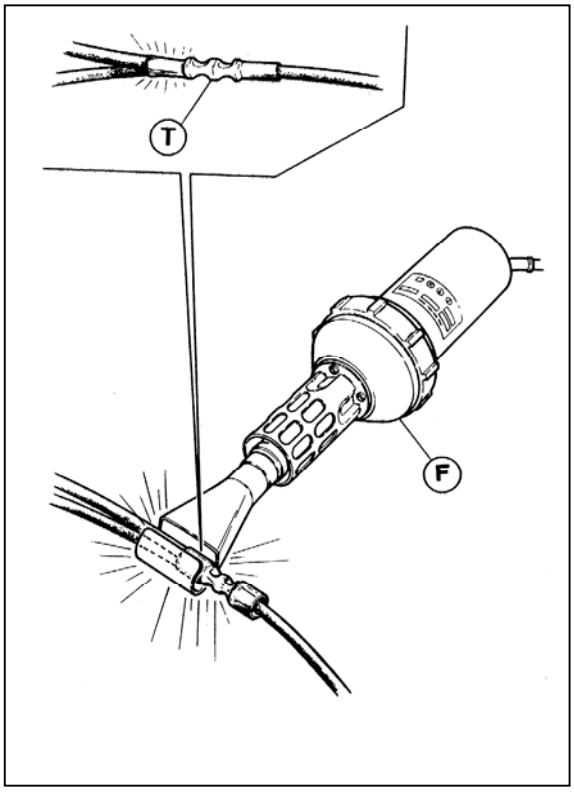
RAYCHEM CONNECTION USE



Strip the ends of the wires to be connected and insert them in the Raychem connector (T).



Lock the ends of the wires inside the connector by using the special tool to press down in the position indicated by the arrow in the figure.



Proceed with insulating the connection terminal by heating the ends of the terminal wrapped over the wires. This is done with the special heating tool «F».

HVAC REFILLING OPERATIONS

External temperature °C	Low pressure (Kg/cm²) min max	High pressure (Kg/cm²) min max
15,5	1,5……2,3	9,5……13,0
21,0	1,5……2,3	12,5……17,5
26,5	1,5……2,3	14,0……20,5
32,0	1,5……2,5	16,0……24,0
38,8	1,5……2,5	18,5……25,5
43,0	1,5……2,5	22,0……28,0

Before to refill the Vehicle's HVAC circuit vacuum it again for at least 30 minutes to remove any eventual trace of humidity inside the circuit.

We suggest you to fill the circuit using 900g of R134a refrigerant gas if you have used the complete length of refrigerant hoses .
If shorter hose lengths have been used please adjust the optimal refrigerant charge during test operation of the system .

Adjust the refrigerant charge according to the table besides.
The low pressure and high pressure values should be within the given limits.

Complete this label with the quantity of refrigerant to be charged into the A/C system.
Fix the label in the engine compartment in a protected and visible area.

TECHNICAL DATA

* Cooling capacity (W) max. 4,000
* Nominal voltage (V) 12
* Power consumption at 12 V at blower levels 1/ 2 / 3 (A) 3.9 / 4.8 / 6.6
* Nominal voltage consumption at 12 V at blower levels 1/ 2 / 3 (W) 46 / 57/ 79
* Max. air flow volume (m^3/h) 450
* Dimensions of evaporator 390 x 235 x 125
* Weight of kit (kg) 6.6
* Refrigerant R134a

WARRANTY

Please refer to the enclosed warranty leaflet.

Fill and send the warranty card to Webasto.

Warranty period : 24 Months.


Diavia Webasto

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GARANTIA INTERNACIONAL

MIĘDZYNARODOWA GWARANCJA

ENTERNASYONAL GARANTİ

МЕЖДУНАРОДНАЯ ГАРАНТИЯ

ΔΙΕΘΝΗΣ ΕΓΓΥΗΣΗ

NEMZETKÖZI GARANCIA

INTERNATIONELL GARANTI

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