



Volvo Chassis - Troubleshooting And Repair Information For The Indel B Refrigerator



> Internal Content

Identification

There are three models of refrigerator installed in Volvo vehicles. Refer to the pictures below to determine the correct model for troubleshooting and repair. If there is question of which model is currently installed, consult Parts Specifications for the correct information.

Model	L4	L4E	L5
Image (Click for full size)			
Notes	Thermostat knob located on back wall inside freezer	Digital thermostat on right wall inside door	Thermostat knob on right side of freezer door
Commonly Installed In	VAH630, VNL630, VNL670, VNR640	VNL740, VNL760	VNL730, VNL780, VNL860, VT830, VT880

For trouble shooting information refer to Impact under Function Group **885 (Refrigerator, Bench Testing (Unit Removed))**.

If troubleshooting leads you to contact indelB directly use the contact information below.

Indel B
Customer Care Dept.

Live UI **7-2888**
service@indelbnorthamerica.com



Tags

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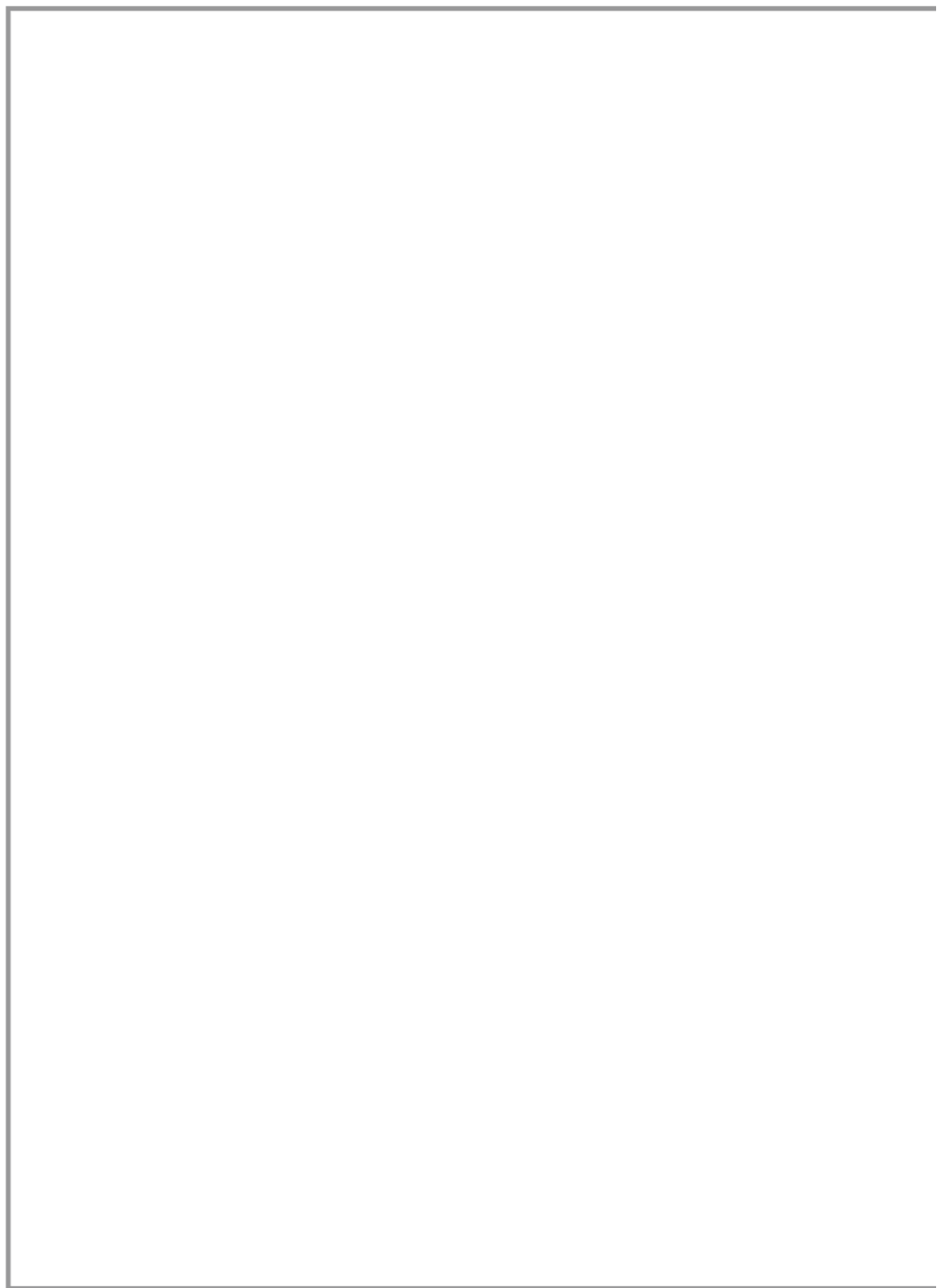


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instructions for use



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CHAPTER 1

INSTRUCTIONS FOR USE

1.1 GENERAL INFORMATION

Indel B refrigerators guarantee performance and reliability.

Provided with a totally hermetic compressor, they offer a minimal power consumption and noise level. All the models are extremely easy to install. They can work even if they are assembled at a slant of up to 30°.

In order to make sure that your Indel B refrigerator works as efficiently as possible, please pay attention to the following general instructions:

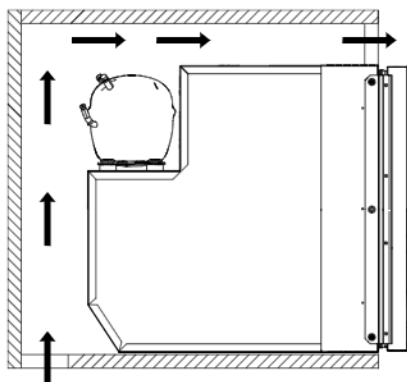
- Opening the door of the refrigerator uselessly increases the waste of energy;
- Proper ventilation of the compressor and of the condenser unit reduces the energy consumption and also ensures the yield;
- The wiring system of the vehicle is in proper condition. Routinely check the batteries and the charge level. Follow the instructions about the cable cross sections and the fuse connections strictly;
- Keep the inside of the refrigerator clean and dry. Remove any condensate water which might gather in the tray under the freezer compartment;
- Keep the door of the refrigerator slightly open in order to air it out if you do not use it for a long time, for example in winter.

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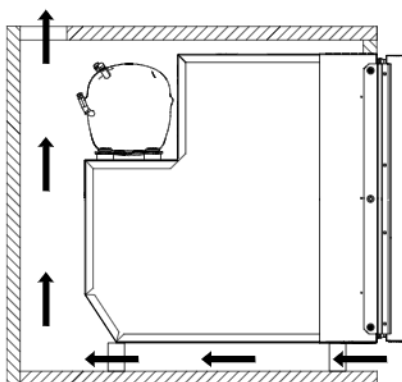
The refrigerators are pre-set for being assembled in a niche of the truck.

It is very important for the refrigerating unit, consisting of the compressor and the condenser, to be well ventilated, with the cool air coming in from the bottom and going out from the top. You must ensure proper ventilation of the refrigerating unit (Pic.1, Pic.2).

PIC. 1



PIC. 2



1.2 WIRING SYSTEM

To have the refrigerator operate with the vehicle battery, please refer to the instruction manual of the vehicle's manufacturer.

WIRING SYSTEM: FUNCTIONS AND FEATURES (WITH AUXILIARY BATTERY)

The electronic unit of the compressor is a piece of electronic equipment which pilots the motor of the compressor and carries out all the controls and electrical protection of the system. Its main features are the following:

- Protection of the battery with automatic turning off of the compressor when the feeding voltage reaches the minimum threshold (cut out)
- The compressor will start up automatically again when the voltage goes back to normal values (cut in).

TABLE FOR BATTERY SAVER TRIPPING VOLTAGES

FEEDING	CUT OUT	CUT IN
12 V	9,6 V	10,9 V

1.3 WIRING CONNECTIONS

When you connect the refrigerator, you must remember the following:

1. Use cables having the proper cross section (see table) to make the feeding lines. If possible, such cables should be without any joints on the leads which could lead to voltage drops.
2. If the wiring system of the vehicle is insufficient or not properly sized for the refrigerator, connect it directly to the battery without using intermediate wiring.
3. Any switches must have a breaking load not less than 20 A
4. Make sure the polarity is right: connect the red cable to the positive terminal (+) and the black cable to the negative terminal (-).
5. Protect the feeding line with a 15 A fuse.

CROSS SECTION CABLES mm ²	MAXIMUM LENGTH OF CABLES IN METRES
	12 V
2,5 (13 awg)	2,5 (8 ft)
4 (11 awg)	4 (13 ft)
6 (9 awg)	6 (20 ft)
10 (7 awg)	10 (33 ft)



WARNING

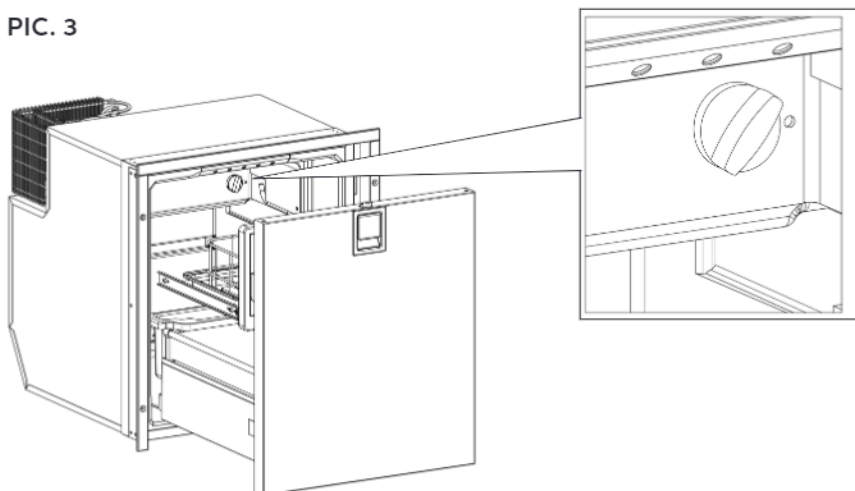
Never connect bare electric wires, and use only connectors of a size suitable to the cross section of the cable being used.

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1.4 SETTING THE INSIDE TEMPERATURE

The refrigerators are provided with a manual thermostat. Turn it clockwise to lower the temperature, and turn it counterclockwise to raise the temperature and activate the ON-OFF switch in its end position. The knob of the thermostat is located inside the refrigerator on the right side, as shown in Pic.3.

PIC. 3



1.4.1 DEFROSTING

Defrost Refrigerator after 1 month of use or one quarter inch (4mm) of ice buildup.

Set the thermostat at the OFF position. While defrosting, keep food and beverages in a cool place. Do not use any sharp metal object to remove the ice or frost. Do not start the refrigerator up again until it is completely defrosted and dry. Make sure to empty water out of the drip tray before first use.

1.5 MAINTENANCE



WARNING

Before every maintenance operation, disconnect the power supply from the electric outlet. In case of refrigerator wrong operation, contact the Indel B Service Center.

1.5.1 CLEANING

Periodically clean the inside of the refrigerator using sodium carbonate dissolved in lukewarm water. Avoid using abrasive products, cleaners or soaps. After cleaning, rinse with fresh water and dry with care. When you are not using the refrigerator, clean and dry its inside to prevent mould and bad smells formation.



WARNING

Do NOT wash the refrigerator drawers and parts in a Dishwasher.

1.6 USEFUL ADVICES

If the refrigerator does not work, or if it works wrongly, before referring to our after sales service (Customer Care Dept- Indel B North America - ph 502-867-2888), make sure that:

- a) power is not missing.
- b) the voltage which reaches the station is equal to the one shown on the plate.
- c) the connections are correctly made.
- d) the ventilation grids are not obstructed.
- e) the refrigerating unit is not near a source of heat.
- f) the fuse mounted on the feeding line is not blown.
- g) if the PCB load dump circuit board has a poor connection on the ECU, place a zip tie around the ECU/circuit board and verify operation.

If nothing is running or only fan is running, using a volt meter on 20v DC setting, check voltage at fridge with truck off and fridge off . What is voltage? Turn fridge on and see if voltage drops below 11 volts. If yes, there is most likely a wiring issue with the truck. If no, proceed to next step (for details go to Chapter 2 "How to detect functional problems and fix them").

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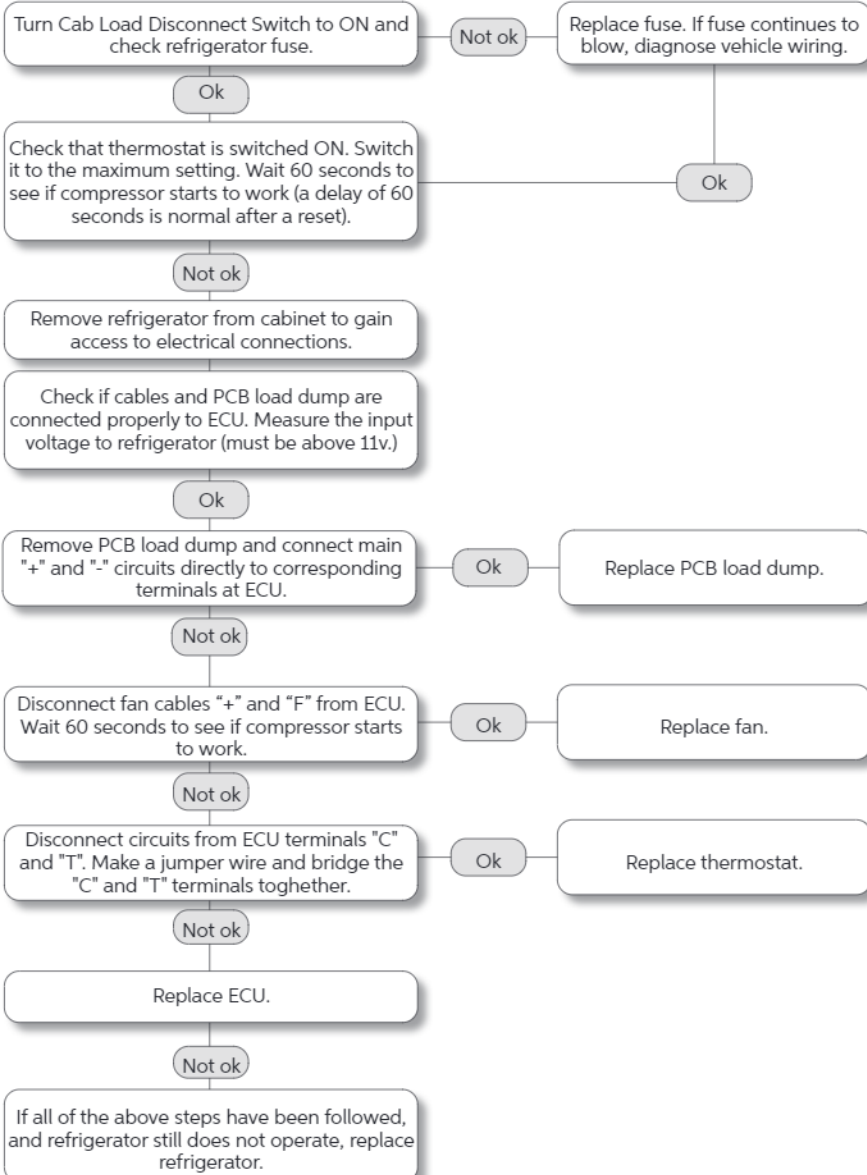
CHAPTER 2

HOW TO DETECT FUNCTIONAL PROBLEMS AND FIX THEM

2.1 NO COOLING/NO OPERATIONS FROM COMPRESSOR AND FAN

WARNING

Before replacing the refrigerator, prior be sure that voltage is ok and trouble shooting steps described in these forms have been followed!



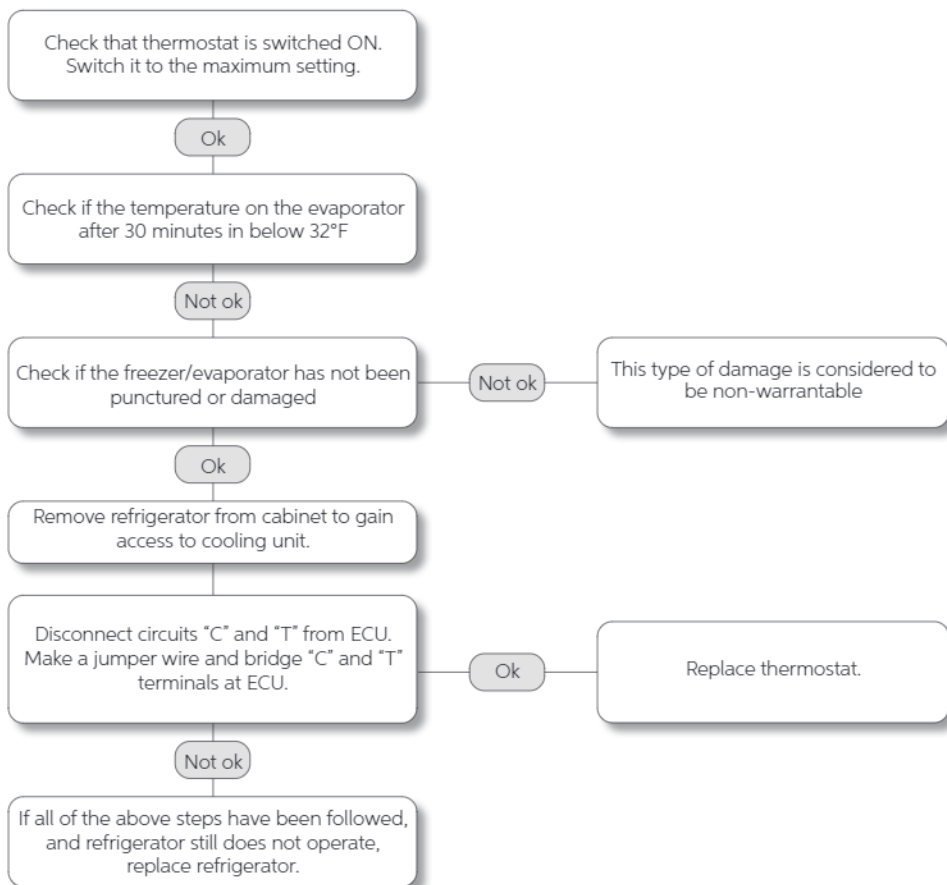
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2.2 NO COOLING / COMPRESSOR AND FAN IS OPERATING



WARNING

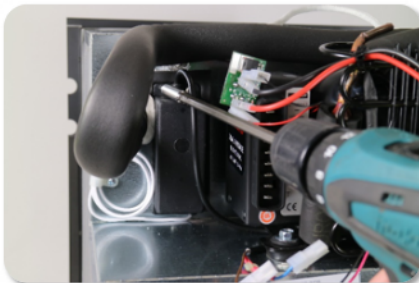
Before replacing the refrigerator, prior be sure that voltage is ok and trouble shooting steps described in these forms have been followed!



2.3 HOW TO REPLACE THE ECU



Cut the zip tie fixing the PCB Load Dump and disconnect it.
Then disconnect all the wires from the ECU



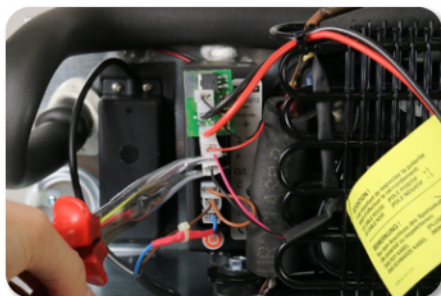
Unscrew the ECU (1 screw) and the thermostat box (3 screws)



Pull out the ECU and disconnect the ECU connector from the compressor

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2.4 HOW TO REPLACE THE FAN



Disconnect the fan wires (pink and black wires) from + and F connector of the ECU



Cut the zip ties fixing the fan wires to the condenser



Cut the 4 zip ties fixing the fan to the condenser



Remove the fan

2.5 HOW TO REPLACE THE LIGHT



Remove the 3 rivets fixing the ceiling light



Pull out the light PCB and disconnect the wire from it

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2.6 HOW TO REPLACE THE THERMOSTAT



Fully open the drawer and then pull it up to remove it



Pull out the freezer drawer while pushing down the spring lever on the left and pushing up the one on the right



Pull out the thermostat knob



Unscrew the bracket fixing the thermostat sensor (2 screws)



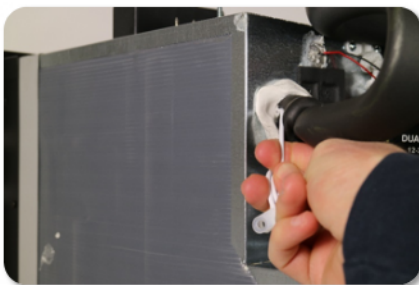
Unscrew the thermostat box (3 screws)



Disconnect the wires from the thermostat



Unscrew the thermostat and the thermostat sensor holder (3 screws)



Pull out the thermostat pulling the sensor capillary

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CHAPTER 3

HOW TO REPLACE AESTHETICAL PARTS

3.1 HOW TO REPLACE THE DRAWER



Fully open the drawer and then pull it up to remove it

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3.2 HOW TO REPLACE THE DRAWER RAILS



Fully open the drawer and then pull it up to remove it

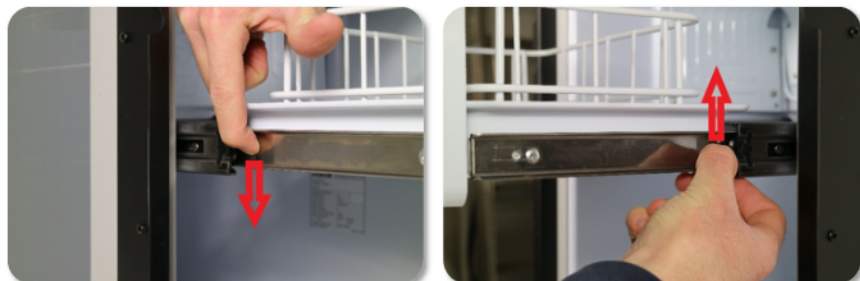


Unscrew the rails (3 screws per rail)



Remove the rails

3.3 HOW TO REPLACE THE FREEZER DRAWER



Pull out the freezer drawer while pushing down the spring lever on the left and pushing up the one on the right

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3.4 HOW TO REPLACE THE FREEZER RAILS



Align the rail to unscrew the screws fixing it (3 screws per rail)

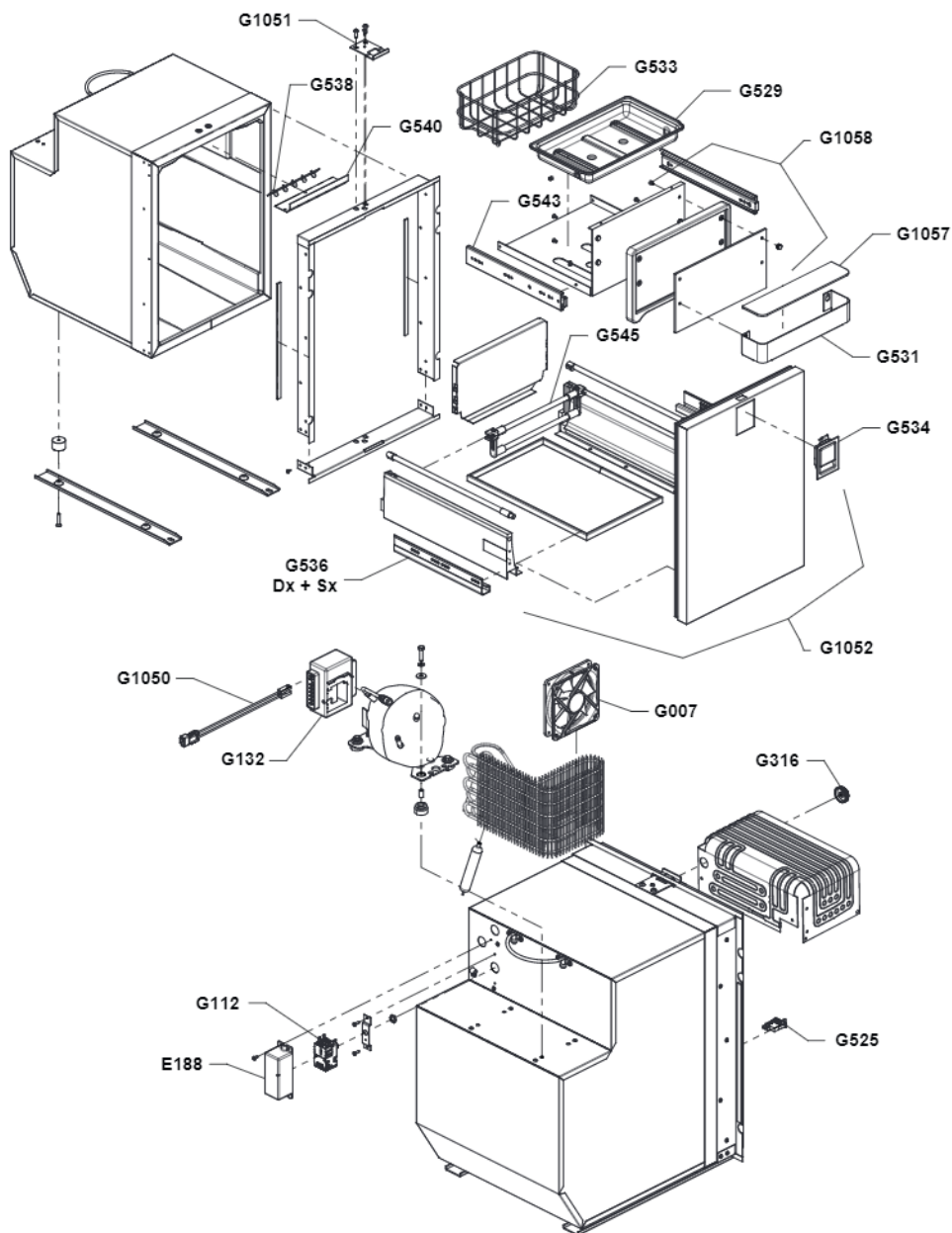


Remove the freezer rail

CHAPTER 4

SPARE PARTS

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3.1 SPARE PARTS LIST

INDEL B P/N	DESCRIPTION
E188	Thermostat box
G007	Fan
G112	Thermostat
G132	Electronic unit
G316	Thermostat knob
G525	Switch
G529	Drip collector drip tray
G531	Bracket bottle holder
G533	basket equipment freezer basket
G534	Handle complete handle
G536	Slide sliding drawer
G538	Lamp LED Lamp
G540	Lamo cover lamp protection
G543	Slide sliding freezer
G545	Bar lower drawer spacer
G1050	Cable power supply
G1051	Door closing bracket
G1052	Drawer complete drawer
G1057	Plastic bottle holder
G1058	Freezer kit freezer holder

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