



Small Refrigerated Truck Troubleshooting: Common Faults & Quick Fixes

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Small refrigerated trucks are essential for cold chain delivery. Unexpected breakdowns may cause cargo damage and costly downtime. This guide covers the most common faults, root causes, and on-site solutions for your reefer unit.

1. Common Refrigeration System Faults

No Cooling / Poor Cooling Performance

- Refrigerant leakage
- Dirty condenser or faulty cooling fan
- Heavy evaporator frosting
- Loose drive belt
- Frozen expansion valve (moisture in system)
- Excessive compressor oil

Solutions: Locate and repair leaks → clean condenser → defrost evaporator → adjust belt tension → replace drier filter → drain excess oil.

High Pressure & Compressor Overheating

- Condenser blocked or fan failure
- Overcharged refrigerant

Solutions: Clean condenser fins → check fan motor → adjust refrigerant volume.

Low Suction Pressure

- Too much compressor oil
- Frozen expansion valve
- Insufficient refrigerant

Solutions: Drain oil to standard level → thaw expansion valve → recharge refrigerant properly.

2. Mechanical & Belt Drive Problems

Weak Cooling Output

- Loose drive belt

Solution: Adjust belt tension to factory standard.

Bearing Noise & Rapid Wear

- Over-tight belt

Solution: Loosen belt tension; replace bearings if damaged.

Short Compressor Service Life

- Insufficient lubrication oil
 - Long-term low-temperature high-speed operation
- Solution:** Check oil regularly; avoid continuous heavy-load running.

3. Electrical & Control System Issues

Compressor Cycles Frequently



- Thermostat failure or misaligned sensor bulb
- Incorrect refrigerant level
- Air or moisture inside the system

Solutions: Replace thermostat → vacuum and recharge the system.

Unit Fails to Start or Stops Suddenly

- Weak battery
- Loose wiring connections
- Blown fuse
- Faulty control panel or sensor

Solutions: Test battery voltage → tighten terminals → replace fuse → inspect panel and sensors.

4. Faults Caused by Improper Operation

- Cargo blocks air ducts → poor cold air circulation
- No pre-cooling before loading
- Lack of regular filter replacement → moisture damage
- Long-term continuous high-speed running at low temperature

Solutions: Keep ducts clear; pre-cool the box; replace parts on time; avoid over-use.

Quick Troubleshooting Priority List

No cooling / Poor cooling

Refrigerant leakage → Dirty condenser → Evaporator frost → Loose belt → Frozen valve → Excess oil

Compressor cycles frequently

Thermostat fault → Wrong refrigerant amount → Air/moisture in system

Short compressor life / Abnormal noise

Low oil → Over-tight belt → Continuous heavy operation

Unit will not start

Weak battery → Loose wiring → Blown fuse → Panel/sensor failure

High pressure

Poor condenser cooling → Overcharged refrigerant

Daily Maintenance Tips

- Pre-cool the compartment before loading goods
- Keep air ducts clear for smooth circulation
- Avoid continuous high-speed operation at low temperature
- Replace oil and drier filter every 500 hours
- Clean condenser, check belts, and inspect electrical parts regularly

Safety Warnings

- Refrigerant charging and vacuum work must be performed by certified technicians.
- Disconnect power before inspecting belts or electrical components.
- Avoid scalding when warming the expansion valve.



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FAQ

Why is my small reefer truck not cooling?

The most common causes are refrigerant leakage, dirty condenser, evaporator frosting, or a loose drive belt.

Why does the compressor start and stop frequently?

It is usually caused by a faulty thermostat, wrong refrigerant level, or air/moisture in the system.

How to extend the life of the compressor?

Maintain proper oil levels, adjust belt tension, and avoid long-term low-temperature high-speed operation.