

Common Issues and Quick Troubleshooting Guide For Truck

Refrigeration Unit and Parking Air Conditioner

Common issues	Possible Causes	Correction Method
Compressor not working	① Power switch and fuse failed	Replace with new fuse and reconnect the circuits.
	② Clutch not activate (too low voltage; no current in coils, wire coils burn out)	Check the clutch circuit, temperature sensor and pressure switch; Replace failed components and electromagnetic clutch
	③ Clutch activated (compressor get stuck; belt broken or skidding; clutch skidding)	Replace compressor; Adjust belt tension or replace belt; Check the clutch clearance.
Compressor working but without cooling; Low pressure at input and output	① Refrigerant leaked completely	Repair the leakage and re-fill refrigerant
	② Compressor valve parts damaged	Repair or replace Compressor valve parts
	③ Expansion valve gets stuck, system refrigerant can not recycle.	Repair or replace the expansion valve.
	④ Drier filter is jammed	Repair or replace the drier.
	⑤ Evaporator fan not work (Circuit impassibility)	Check connection and the fan blade
Insufficient cold air volume. Low pressure reading is high. High pressure reading is normal	① Fan voltage is low ② Evaporator surface gets stuck ③ Fan variable resistance failure, unable to set to high speed	① Check connection, remove poor contact ② Clean the evaporator ③ Repair and replace resistance
Condenser fan's air volume is insufficient. Both high pressure and low pressure readings are too high	① The pressure switch controlling the fan's high speed fails. ② Fan voltage is low	① Check pressure switch. ② Check power supply voltage and check the wiring to eliminate poor contact

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<p>Both high pressure and low pressure readings are too low</p>	<ul style="list-style-type: none"> ① The refrigerant is insufficient. ② Low-voltage pipeline has debris, the refrigerant circulation is not smooth. ③ Expansion valve temperature package leakage, expansion valve open too small 	<ul style="list-style-type: none"> ① Add refrigerant. ② Eliminate obstructions, repair or replace the liquid dry filter. ③ Replace with new expansion valve.
<p>Both high pressure and low pressure readings are too high</p>	<ul style="list-style-type: none"> ① The refrigerant is too much. ② Pipeline has air. ③ Expansion valve open too much. ④ Condenser is poor in releasing heat. 	<ul style="list-style-type: none"> ① Reduce some refrigerant. ② Eliminate the air in the system. ③ Reset the expansion valve. ④ Clean the condenser or adjust the fan's rotation speed.
<p>High pressure reading is too high, low pressure reading is too low</p>	<ul style="list-style-type: none"> ① Drying filter is blocked ② High pressure line is blocked 	<ul style="list-style-type: none"> ① Repair or replace drying filter. ② Eliminate debris in the system
<p>High pressure reading is normal, low pressure reading is sometimes normal, sometimes in vacuum state, the evaporator frost</p>	<ul style="list-style-type: none"> ① There is liquid in system. ② The drying filter is saturated. 	<ul style="list-style-type: none"> ① Vacuum the liquid in system. ② Replace new drying filter.

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Malfunction	Presentation status		Repair Method
Not cooling	Evaporator fan working	Condensing fan does not turn and the compressor works	Check fan connector and whether the fan is damaged.
		Condensing fan does not turn and the compressor does not work	Check whether the temperature control switch is damaged, whether the relay is engaged, and whether the relay connector is loose
		Condensing fan turn and compressor do not work	Check whether the clutch is damaged, the connector is off and the belt is loose and skid.
	Evaporator fan not working	Condenser fan turns, and the compressor works	Check whether the speed control switch fails, whether the fan line is disconnected, and whether the fan grounding wire is good.
		Condenser fan does not turn, and the compressor does not work	Check whether the fuse is damaged, check whether the relay is normal, and check whether the wiring is loose.
	Compressor works	Evaporation fan and condenser fan all work	1.The refrigerant is overcharged. Use pressure gauge to check whether it meets the specified pressure value.
			2. Not used for a long time, possible refrigerant leakage. Use pressure gauge to check whether there is refrigerant in system.
Insufficient cooling capacity	Compressor works	Both the evaporative fan and the condensing fan are working normally, both the evaporator and condenser are normal	Check whether liquid reservoir's input and output is reversed. Check whether the expansion valve is ice or dirt blocked. Replace the reservoir. Replace the refrigerant.
		The fan works normally, and other others are normal	Check whether the condenser surface is blocked by the scale.

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Errors	Possible Reason	Repair Method
The cooling performance is good at the beginning, after a period of use, the cooling air is insufficient; air bubbles appear in the sight glass; both high and low pressure reading is low	Often driving on bumpy road, causing connection loosen and refrigerant leakage.	Use the leakage detector to find out leakage part, carefully tighten the loose part, and supplement the refrigerant.
Not cooling, blows out hot air, expansion valve input and output feel no temperature difference, the low pressure reading is very low.	Improper use. The expansion valve temperature sensor wears out, and the valves worn.	Replace the expansion valve and recharge the refrigerant.
Air outlet is not cold, and the compressor's temperature rises. The low pressure meter drops rapidly, close to the "0" value, and the high pressure reading is high.	The system has impurities, expansion valve, filter screen is blocked, thin frost or "sweat" at the expansion valve.	Open the air conditioning system intermittently, can eliminate the instantaneous blockage. Or remove the expansion valve and clean it with alcohol, and recharge refrigerant.
Insufficient cold capacity, evaporator frost; both high and low pressure readings are low.	The internal orifice in the expansion valve does not work	Vacuum the system, replace the expansion valve and recharge refrigerant.
After the system is running for a period of time, the cooling capacity gradually decreases, the high pressure reading is high, and the low pressure reading is low.	The desiccator in the reservoir bottle is saturated, and the throttle of the expansion valve is blocked by ice.	Vacuum the system, replace the expansion valve and recharge refrigerant.
After opening the air conditioning system, only blows air without cold wind, both high and low pressure reading does not move.	The temperature control switch is in bad contact or the compressor electromagnetic clutch coil is damaged.	Check the temperature control switch with the multimeter; replace the compressor electromagnetic clutch.