Compressor

Troubleshooting

NOTE: Performance Test on page 15-57.

TEST RESULTS	RELATED SYMPTOMS	PROBABLE CAUSE	REMEDY
Discharge (high) pressure abnormally high	After stopping compressor, pressure drops to about 196 kPa (28 psi) quickly, and then falls gradually	Air in system	Evacuate system; then recharge Evacuation: page 15-54 Recharging: page 15-56
	No bubbles in sight glass when condenser is cooled by water	Excessive refrigerant in system	Discharge refrigerant as required
	Reduced or no air flow through condenser.	• Clogged condenser or radiator fins • Condenser or radiator fan not working properly.	• Clean • Check voltage and fan rpm
	Line to condenser is excessively hot	Restricted flow of refrigerant in system	Expansion valve
Discharge pressure abnomally low	Excessive bubbles in sight glass; condenser is not hot	Insufficient refrigerant	• Charge system • Check for leak
	High and low pressures are balanced soon after stopping compressor	• Faulty compressor discharge or inlet valve • Faulty compressor seal	Replace compressor Repair
	Outlet of expansion valve is not frosted, low pressure gauge indicates vacuum	• Faulty expansion valve	Repair or repalce
Suction (low) pressure abnormal low	Excessive bubbles in sight glass; condenser is not hot Expansion valve is not frosted and low pressure line is not cold. Low pressure gauge indicates vacuum.	Insufficient refrigerant • Frozen expansion valve • Faulty expansion valve	Check for leaks. Charge as required. Replace expansion valve
	Discharge temperature is low and the air flow from vents is restricted	Frozen evaporator	Run the fan with compressor off then check the thermostat and capillary tube.
	Expansion valve frosted	Clogged expansion valve	Clean or repalce
	Receiver dryer is cool (should be warm during operation)	Clogged receiver dryer	Replace
Suctoin pressure abnormally high	Low pressure hose and check joint are cooler than around evaporator	• Expansion valve open too long • Loose expansion valve	Repair or replace
	Suction pressure is lowered when condenser is cooled by water	Excessive refrigerant in system	Discharge refrigerant as necessary
	High and low pressure are balanced too equalized as soon as the compressor is stopped	• Faulty gasket • Faulty high pressure valve • Foreign particle stuck in high pressure valve	Replace compressor
Suction and discharge pressures abnormally high	Reduced air flow through condenser	• Clogged condenser or radiator fins • Condenser or radiator fan not working properly	• Clean condenser and radiator • Check voltage and fan rpm
	No bubbles in sight glass when condenser is cooled by water	Excessive refrigerant in system	Discharge refrigerant as necessary.
Suction and discharge pressure abnormally low	Low pressure hose and metal end areas are cooler than evaporator	Clogged or kinked low pressure hose parts	Repair or replace
	Temperature around expansion valve is too low compared with that around receiver-driver.	Clogged high pressure line	Repair or replace
Refrigerant leaks	Compressor clutch is dirty	Compressor shaft seal leaking	Replace compressor shaft seal
	Compressor bolt(s) are dirty	Leaking around bolt(s)	Replace compressor
	Compressor gasket is wet with oil	Gasket leaking	Repalce compressor