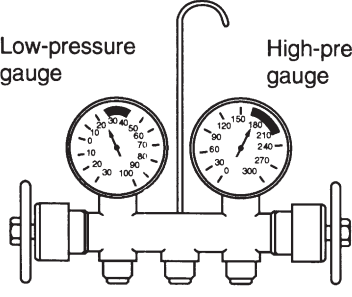
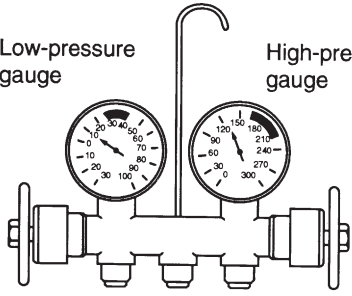
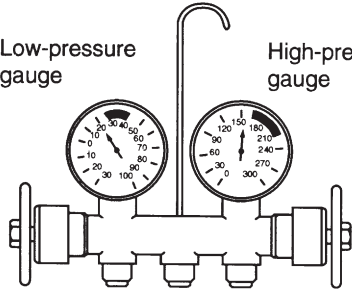




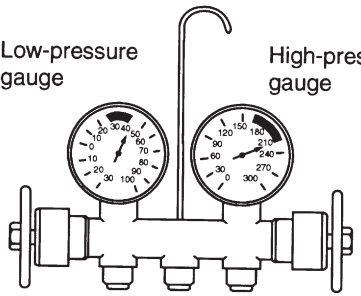
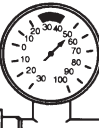

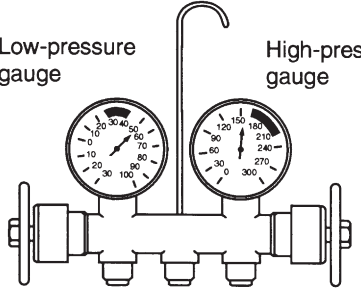

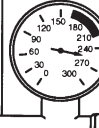
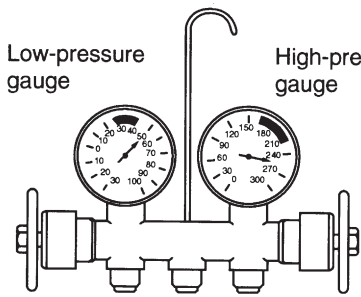

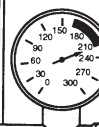
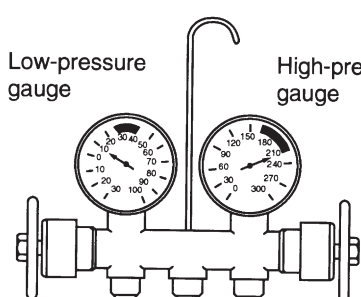
2. Performance Test Diagnosis

If various conditions caused to other air conditioning system, the characteristics revealed on manifold gauge reading are shown in the following:

As to the method of a performance test, refer to the item of "Performance Test".

Each shaded area on the following tables indicates a reading of the normal system when the temperature of outside air is 32.5°C (91°F).

Condition	Probable cause	Corrective action
<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">INSUFFICIENT REFRIGERANT CHARGE</div> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Low-pressure gauge</p>  </div> <div style="text-align: center;"> <p>High-pressure gauge</p> </div> </div> <p style="text-align: right; font-size: small;">G4M0673</p>	<p>Insufficient cooling</p>	<p>Refrigerant is small, or leaking a little.</p> <ol style="list-style-type: none"> 1. Perform leak test. 2. Repair leak. 3. Charge system. <p>Evacuate, as necessary, and recharge system.</p>
<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">ALMOST NO REFRIGERANT</div> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Low-pressure gauge</p>  </div> <div style="text-align: center;"> <p>High-pressure gauge</p> </div> </div> <p style="text-align: right; font-size: small;">G4M0674</p>	<p>No cooling action</p>	<p>Serious refrigerant leak.</p> <p>Stop compressor immediately.</p> <ol style="list-style-type: none"> 1. Perform leak test. 2. Discharge system. 3. Repair leak(s). 4. Replace receiver drier if necessary. 5. Check oil level. 6. Evacuate and recharge system.
<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">FAULTY EXPANSION VALVE</div> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Low-pressure gauge</p>  </div> <div style="text-align: center;"> <p>High-pressure gauge</p> </div> </div> <p style="text-align: right; font-size: small;">G4M0675</p>	<p>Slight cooling; Sweating or frosted expansion valve inlet.</p>	<p>Expansion valve restricts refrigerant flow.</p> <ul style="list-style-type: none"> ● Expansion valve is clogged. ● Expansion valve is inoperative. <p>Valve stuck closed. Thermal bulb has lost charge.</p> <p>If valve inlet reveals sweat or frost:</p> <ol style="list-style-type: none"> 1. Discharge system. 2. Remove valve and clean it. Replace it if necessary. 3. Evacuate system. 4. Charge system. <p>If valve does not operate:</p> <ol style="list-style-type: none"> 1. Discharge system. 2. Replace valve. 3. Evacuate and charge system.

Condition	Probable cause	Corrective action	
<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Low-pressure gauge</p>  </div> <div style="text-align: center;"> <p>High-pressure gauge</p>  </div> </div>  <p style="text-align: right;">G4M0676</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Low-pressure gauge</p>  </div> <div style="text-align: center;"> <p>High-pressure gauge</p>  </div> </div>  <p style="text-align: right;">G4M0677</p>	<p>Insufficient cooling; Sweated suction line. No cooling; Sweating or frosted suction line.</p>	<p>Expansion valve allows too much refrigerant through evaporator. Faulty seal of O-ring in expansion valve.</p>	<p>Check valve for operation. If suction side does not show a pressure decrease, replace valve.</p> <ol style="list-style-type: none"> 1. Discharge system. 2. Remove expansion valve and replace O-ring. 3. Evacuate and replace system.
<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">AIR IN SYSTEM</div> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Low-pressure gauge</p>  </div> <div style="text-align: center;"> <p>High-pressure gauge</p>  </div> </div>  <p style="text-align: right;">G4M0678</p>	<p>Insufficient cooling</p>	<p>Air mixed with refrigerant in system.</p>	<ol style="list-style-type: none"> 1. Discharge system. 2. Replace receiver drier. 3. Evacuate and charge system.
<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">MOISTURE IN SYSTEM</div> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Low-pressure gauge</p>  </div> <div style="text-align: center;"> <p>High-pressure gauge</p>  </div> </div>  <p style="text-align: right;">G4M0679</p>	<p>After operation for a while, pressure on suction side may show vacuum pressure reading. During this condition, discharge air will be warm. As warning of this, reading shows 39 kPa (0.4 kg/cm², 6 psi) vibration.</p>	<p>Drier is saturated with moisture. Moisture has frozen at expansion valve. Refrigerant flow is restricted.</p>	<ol style="list-style-type: none"> 1. Discharge system. 2. Replace receiver drier (twice if necessary). 3. Evacuate system completely. (repeat 30-minute evacuating three times.) 4. Recharge system.

Condition	Probable cause	Corrective action
<div data-bbox="121 199 673 252" style="border: 1px solid black; padding: 2px;"> <p>FAULTY CONDENSER</p> </div> <div data-bbox="186 283 609 577" style="text-align: center;"> <p>Low-pressure gauge High-pressure gauge</p> </div> <div data-bbox="592 598 673 630" style="text-align: right;"> <p>G4M0680</p> </div>	<p>No cooling action; Engine may overheat. Suction line is very hot.</p>	<p>Condenser is often found not functioning well.</p> <ul style="list-style-type: none"> ● Check condenser cooling fan. ● Check condenser for dirt accumulation. ● Check engine cooling system for overheat. ● Check for refrigerant overcharge. <p>If pressure remains high in spite of all above actions taken, remove and inspect the condenser for possible oil clogging.</p>
<div data-bbox="121 667 673 720" style="border: 1px solid black; padding: 2px;"> <p>HIGH-PRESSURE LINE BLOCKED</p> </div> <div data-bbox="186 745 609 1039" style="text-align: center;"> <p>Low-pressure gauge High-pressure gauge</p> </div> <div data-bbox="592 1060 673 1092" style="text-align: right;"> <p>G4M0681</p> </div>	<p>Insufficient cooling; Frosted high-pressure liquid line.</p>	<p>Drier is clogged, or restriction in high-pressure line.</p> <ol style="list-style-type: none"> 1. Discharge system. 2. Remove receiver drier or strainer and replace it. 3. Evacuate and charge system.
<div data-bbox="121 1136 673 1188" style="border: 1px solid black; padding: 2px;"> <p>FAULTY COMPRESSOR</p> </div> <div data-bbox="186 1218 609 1512" style="text-align: center;"> <p>Low-pressure gauge High-pressure gauge</p> </div> <div data-bbox="592 1533 673 1564" style="text-align: right;"> <p>G4M0682</p> </div>	<p>Insufficient cooling</p>	<p>Internal problem is in compressor, or damaged gasket and valve.</p> <ol style="list-style-type: none"> 1. Discharge system. 2. Remove and check compressor. 3. Repair or replace compressor. 4. Check oil level. 5. Replace receiver drier. 6. Evacuate and charge system.