

**R134A AIR CONDITIONING SYSTEM - TROUBLESHOOTING**  
(Airplanes 20800274 and On, and 208B0655 and On)

1. **General**
  - A. An understanding of the system is required in order to troubleshoot a vapor cycle cooling system.
  - B. Troubleshooting should be performed at an ambient temperature above 50° F. At temperatures below 50° F, system will not function due to low refrigerant pressure.
2. **Tools and Equipment**
  - A. Refer to Air Conditioning - General, for a list of tools and equipment.
3. **Troubleshooting**
  - A. Troubleshooting charts are provided to aid maintenance technicians in system diagnosis of the R134a air conditioning system. Refer to Figure 101.

Figure 101 : Sheet 1 : R134a Cooling System Troubleshooting Chart

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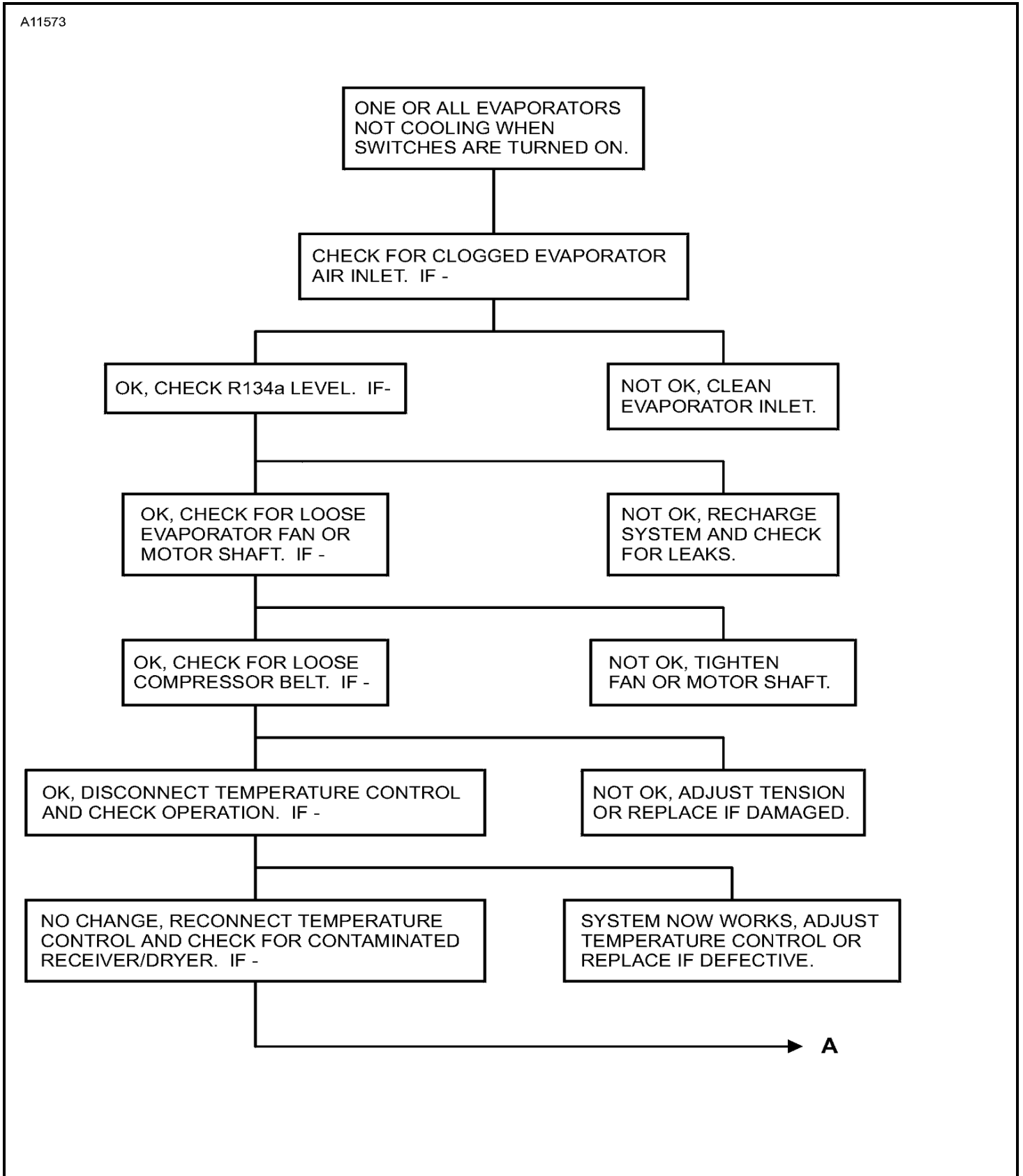


Figure 101 : Sheet 2 : R134a Cooling System Troubleshooting Chart

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NOT OK, REPLACE RECEIVER/DRYER.

**NOTE:** IF HIGH SURGES OCCUR ON BOTH THE HIGH AND LOW GAGES OF CHARGING MANIFOLD DURING CHARGING, CHECK RECEIVER/DRYER FOR CONTAMINATION. THE RECEIVER DRYER CAN BE CHECKED FOR CONTAMINATION BY FEELING INLET AND OUTLET LINES. IF OUTLET LINE IS COLDER TO THE TOUCH THAN INLET LINE, THE RECEIVER DRYER IS CONTAMINATED AND NEEDS REPLACEMENT.

IF THE SYSTEM IS OPENED TO THE ATMOSPHERE, STANDARD PRACTICE IS TO REPLACE THE RECEIVER/DRYER.

OK, REPLACE EXPANSION VALVE.

**NOTE:** IF ONE EVAPORATOR IS COOLING AND THE OTHERS ARE NOT, CHECK FOR ADEQUATE AIR FLOW ACROSS EVAPORATOR. IF AIR FLOW IS SATISFACTORY, CHECK EXPANSION VALVE. THE EXPANSION VALVE CAN BE CHECKED BY FEELING SUCTION LINE. IT SHOULD BE VERY COLD TO THE TOUCH, IF NOT, DISCHARGE SYSTEM AND REPLACE EXPANSION VALVE.

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Figure 101 : Sheet 3 : R134a Cooling System Troubleshooting Chart

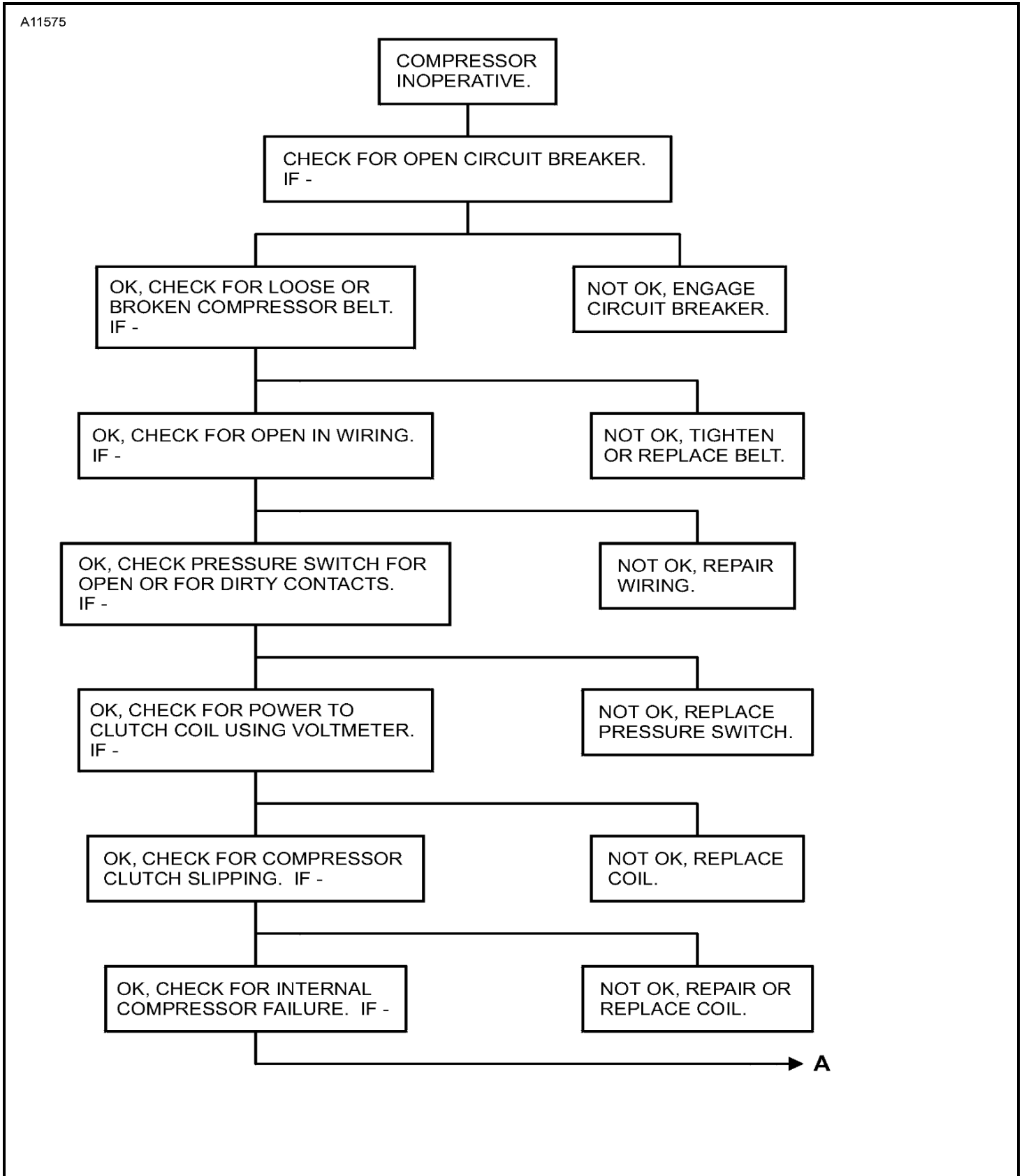




Figure 101 : Sheet 5 : R134a Cooling System Troubleshooting Chart

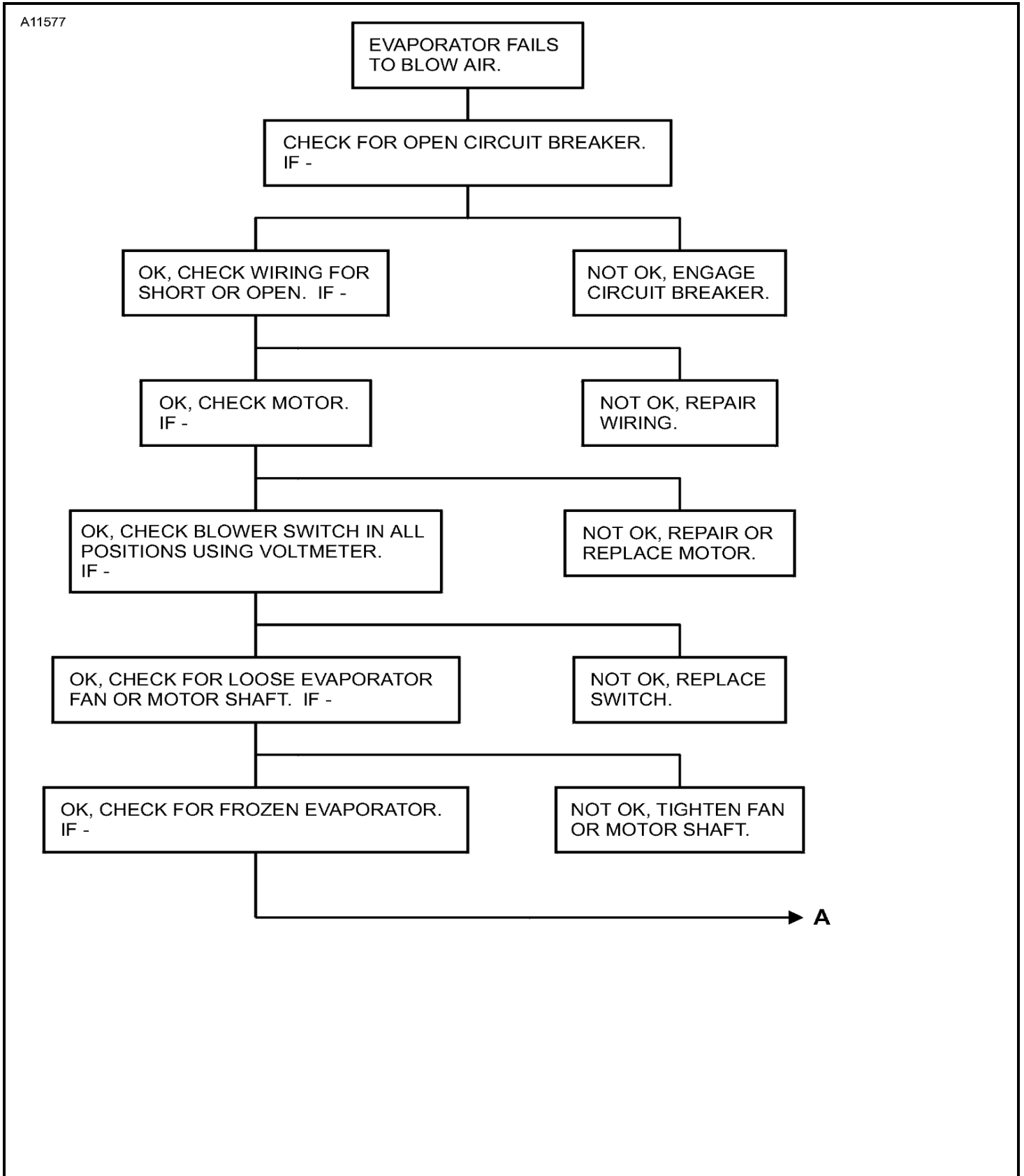


Figure 101 : Sheet 6 : R134a Cooling System Troubleshooting Chart

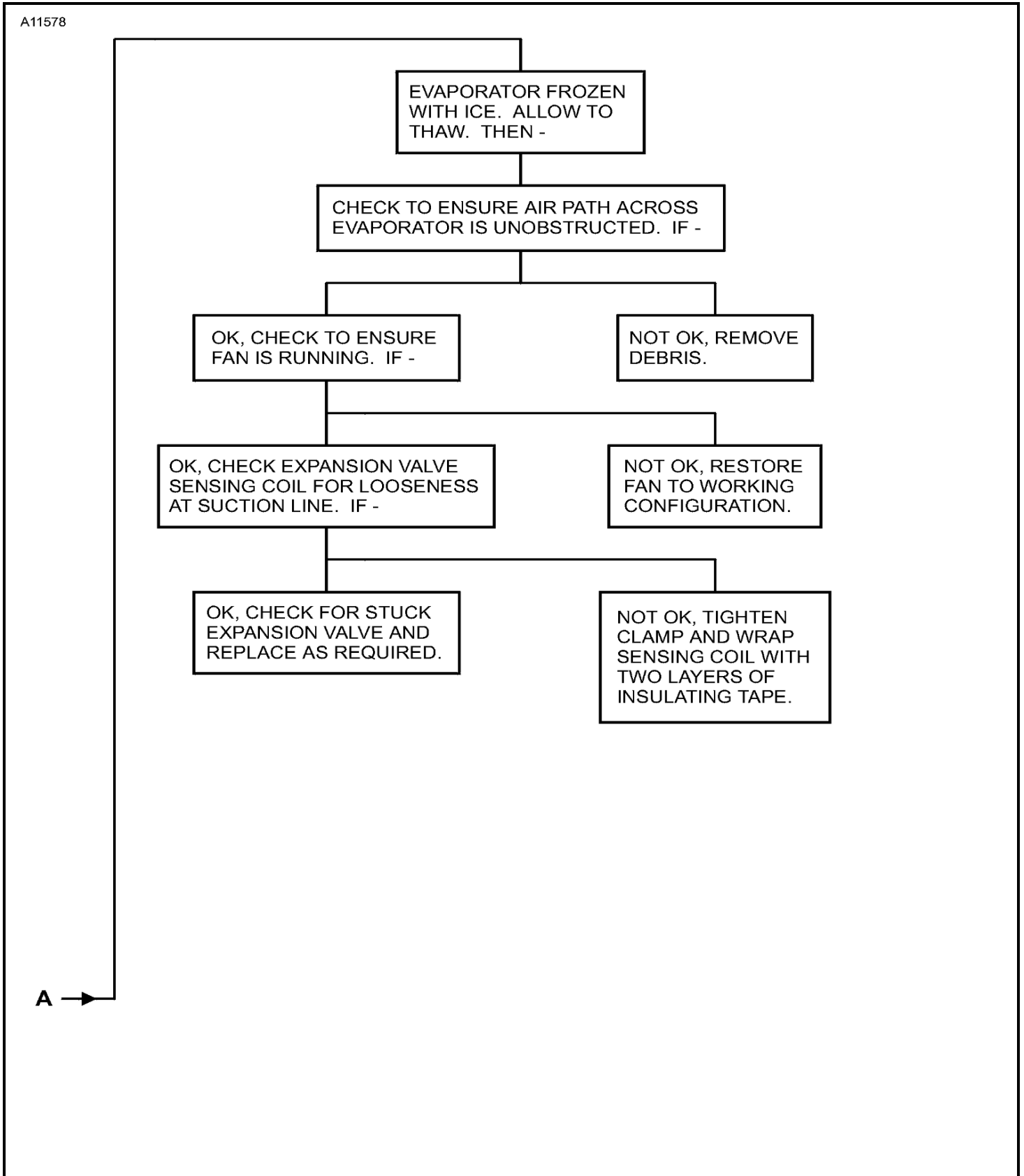


Figure 101 : Sheet 7 : R134a Cooling System Troubleshooting Chart

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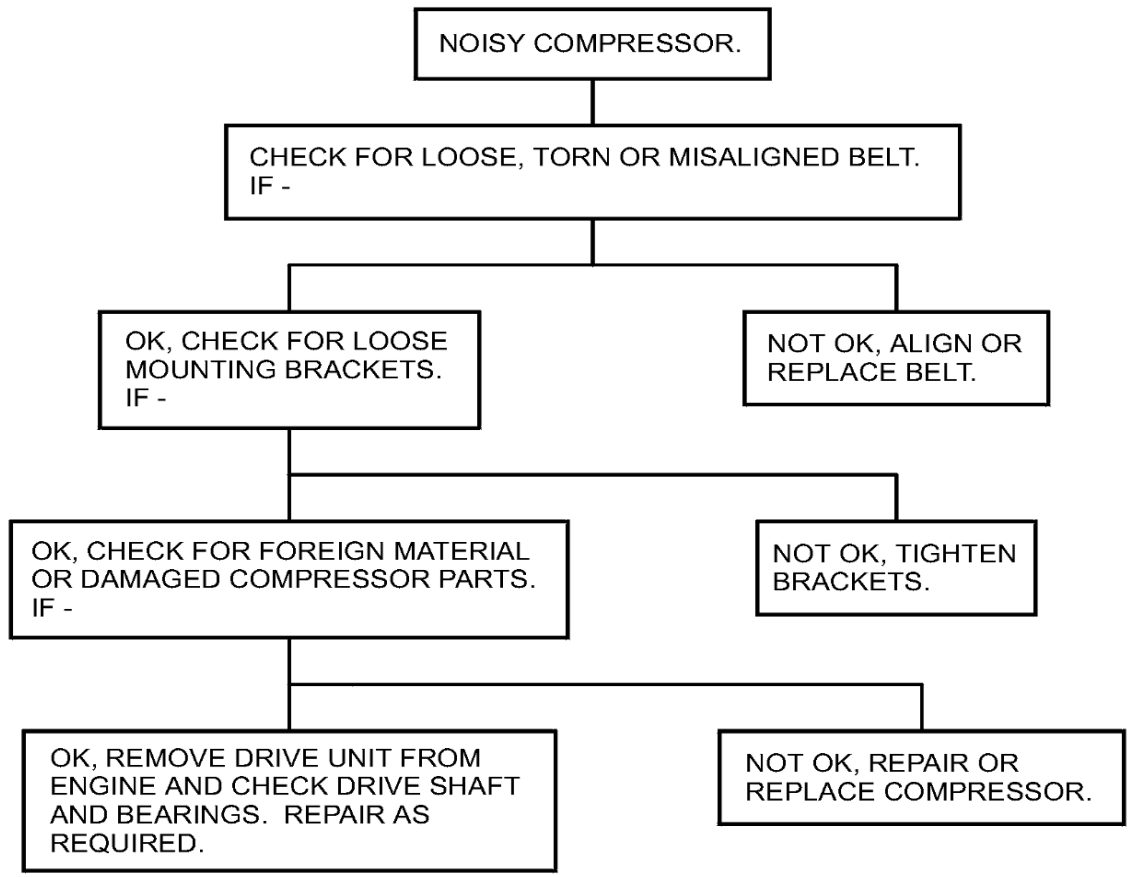




Figure 101 : Sheet 8 : R134a Cooling System Troubleshooting Chart

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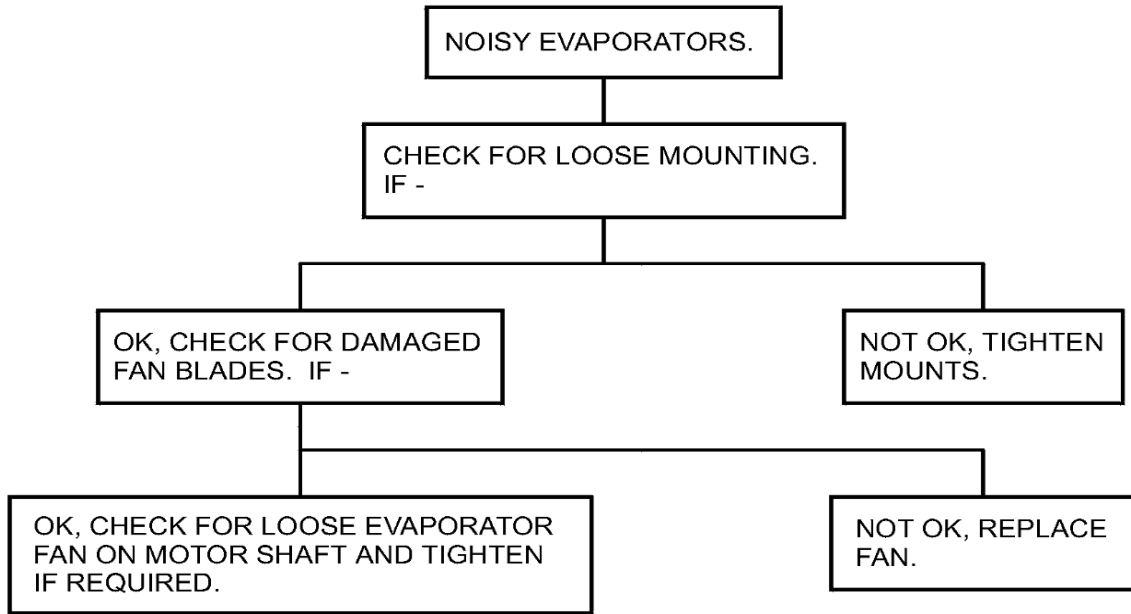


Figure 101 : Sheet 9 : R134a Cooling System Troubleshooting Chart

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