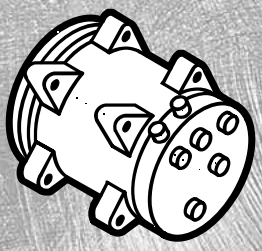


75R SERIES

Compressors

Clutches, Mount Kits & Service Parts

Did You Know...

Poor system performance may be due to faulty compressor reed valves.

Service Tip

An internal hissing sound immediately after compressor shutdown indicates high side to low side pressure leakage. With manifold gauges attached, readings showing lower than normal discharge pressures and high suction pressures or a rapid stabilization of gauge readings shortly after shutdown indicate leaking reed valves or head gasket.

Service Procedures R-12 to R-134a Conversion

1. Connect R12 service equipment and recover R-12.
2. Thoroughly evacuate.
3. Remove R-12 service equipment.
4. Remove as much mineral oil as possible.
5. Change accumulator/drier and disturbed O-Rings to R-134a specifications.
6. Repair A/C system if required.
7. Add Ester Oil for R-134a.
8. Change service fittings to R-134a specifications.
9. Connect R134a equipment and evacuate.
10. Charge with R-134a.
11. Check cooling performance.
12. Change R12 labels to R-134a.

NOTICE: RETROFITTED TO R134a

⚠ CAUTION System to be serviced by qualified personnel. R-134a Refrigerant under high pressure.

Retrofit procedure performed to SAE J1661

134a Charge Amount: 2.5 lbs.

134a Lubricant Type: Ester Amount: 8 oz.

Retrofit performed by:

Name: Eiderdown Refrigerant Service

Address: 1234 Main Street

City Seattle State WA Zip 98138

Date of Retrofit: 1/5/2012

LZ-4320 0194M

COMPRESSOR TROUBLESHOOTING GUIDE

Compressor Troubleshooting Guide

To Bench Test Compressor Suction and Discharge Pressures.

1. Grasp clutch hub and Rotate compressor by hand. At the same time plug discharge port only with thumb or palm of hand. The compressor should begin to build discharge pressure while rotating.
2. Plug suction port and repeat the above step to confirm presence of suction pressure.

   Note: Absence of suction and/or discharge pressure.

Clutch Specifications

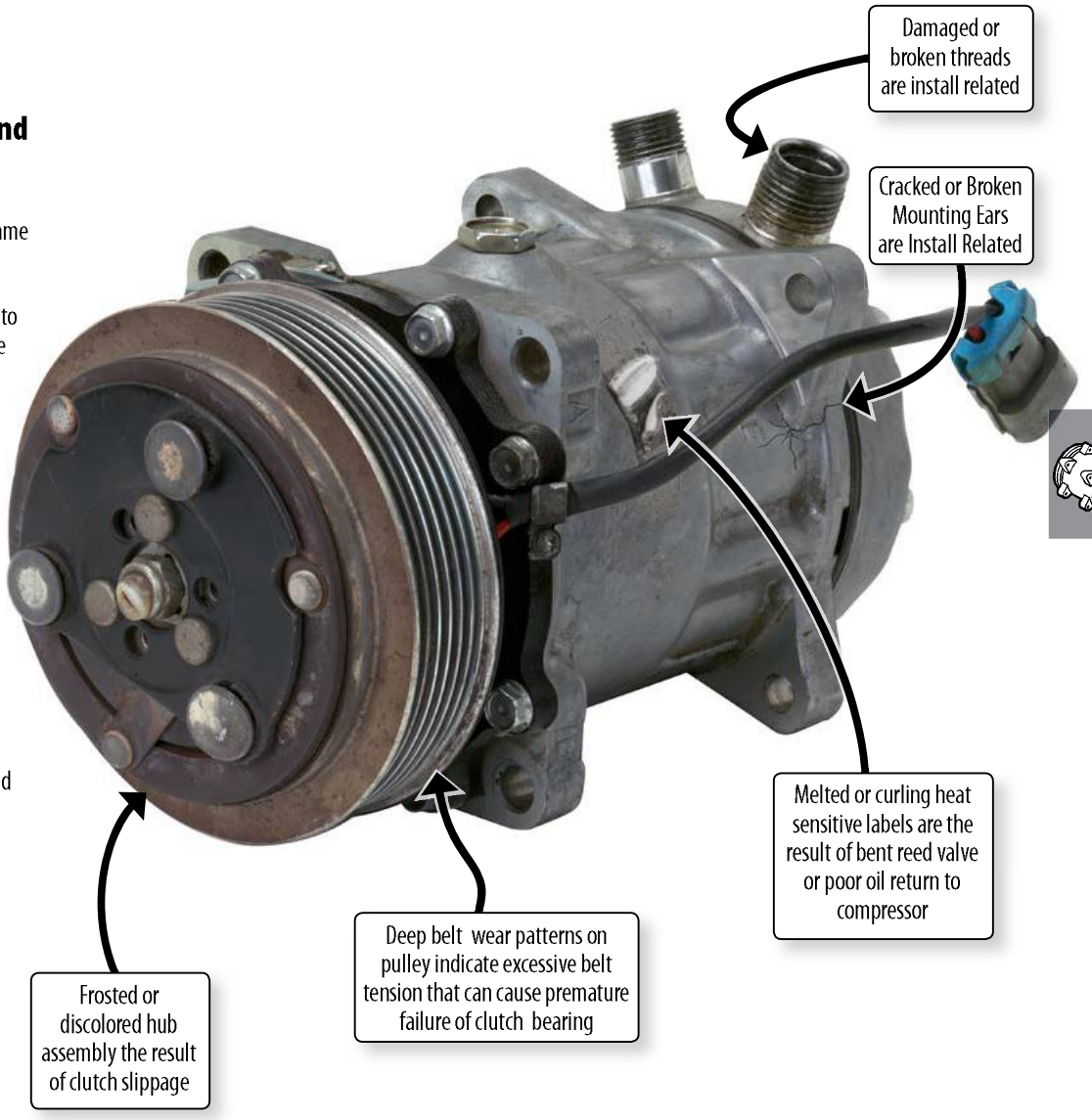
12 Volt clutch

Amperage draw 2.5 to 3 amps

Pull - in voltage 6 - 7 VDC

Working voltage 10.5 VDC

Note: less than 10.5 volts supplied to clutch coil during compressor operation will result in clutch slippage and eventual failure.



COMPRESSOR TROUBLESHOOTING GUIDE

SYMPTOM	PROBLEM DIAGNOSIS		INSPECTION	REMEDY
IMPROPER COOLING	No Unusual Compressor Noise	High Suction Pressure Low Discharge Pressure	1 Inspect Valve Plate Reed and Gasket Areas	Replace Valve Plate and Gaskets • Broken Head or Block Gasket • Broken or Deformed Reed Valve • Foreign Substance under Reed Valve or Gasket
			2 Consult System Manual	
		Low Suction Pressure Low Discharge Pressure	1 Inspect Valve Plate Reed and Gasket Areas	Repair or Replace: • Shaft Seal Leak • Cylinder Head Leak • Gaskets Leak • Oil Fill Plug Leak • Cracked Cylinder Block • Front Housing O-Ring Leak
			2 Leak Check Compressor	
			3 Consult System Manual	
	Internally Noisy Compressor	Intermittent or Non-Functioning	1 Check Belt Tension	
			2 Check Clutch Volts and Amps	Repair or Replace: • Broken Lead Wire • Clutch Coil Defect - Internal System Ground
			3 Consult System Manual	
		Rough Running	1 Check Compressor Temperature Component Parts Run-out	Change Out Compressor
			2 Consult System Manual	
EXCESSIVE NOISE		Clutch Engaged	1 Check Compressor Mounting Components	Torque to Specifications
			2 Check for Other Engine Noise	
			3 Check for Clutch Slippage	Adjust Air Gap – Defective Coil
			4 Check for Proper Refrigerant Charge	Charge as Necessary
			5 Check Clutch Components Clearing, etc.	Replace If Needed
			6 Check Compressor Oil Level	Fill to Recommended Level
			7 Check Valve Plate	Repair or Replace: • Broken Discharge Valve Reed or Retainer • Broken Suction Valve Reed • Broken Gasket
			8 Consult System Manual	
		Clutch NOT Engaged	1 Check Compressor Mounting Components	Repair or Replace: • Adjust Air Gap • Defective Clutch Pulley or Front Plate

COMPRESSOR TROUBLESHOOTING GUIDE

WHAT TO LOOK FOR & HOW IT LOOKS

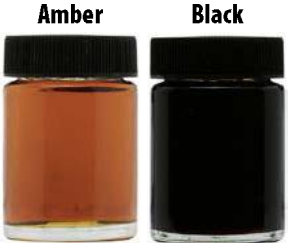
In a properly maintained air conditioning system, defects in materials or workmanship will typically surface shortly after the system has been put into service. Refer to oil table shown below for oil color and system condition.

	Things to check before accepting	Explanation
1	Mounting Ears	Fractured or broken compressor mount ears are install related, non-warrantable condition.
2	Heat Sensitive Labels	Overheat condition : Melted labels due to lack of oil return or bent reed valves due to liquid slugging, non-warrantable condition.
3	Compressor Rotation	Check compressor rotation for intermittent catches or seized condition.
4	Oil Level	Remove oil plug, there should be ½ to 1 ounce of oil left in compressor to perform oil inspection.
5	Oil Color and Condition	See oil color table shown below for compressor acceptance criteria.
6	Internal Center Ball Condition (Sanden Only) view through drain plug hole	Normal: Should be chrome color with no signs of dis-coloration from heat or gauling. Discolored center ball is generally the result of poor oil return to the compressor.
7	Clutch Hub (non-seized compressor only)	Should be no signs of frosting or discoloration from clutch slippage. Clutch slippage is the result of insufficient voltage, poor compressor ground, liquid slugging or rapid cycling, all are non-warrantable conditions.
8	No Suction or Discharge Pressure	Caused by bent or broken reed valves; non-warrantable..
9	Clutch "V" groove area	Deep belt wear patterns indicate excessive belt tension that can cause premature failure of clutch bearing.
10	Clutch Bearing	Rotation should be smooth with no rough spots.
11	Clutch pulley	Check for run-out should rotate truly with no visible wobble.
12	Suction/Discharge Port	Damaged or broken threads are install related.

Return Status	Oil Color	System Condition
Warrantable	**Clear**	Normal
Warrantable	**Clear Green**	Leak detection dye is present in oil
Warrantable	**Yellow**	Moisture may be present in A/C system
Warrantable	**Grey**	Normal failure, wear material from failed component suspended in compressor oil.
Non-Warrantable Condition	**Amber**	System contaminated and acidic. Contains copper ions from coils in evaporator and condenser.
Non-Warrantable Condition	**Black**	System contaminated, oil has turned black due to presence of carbon sediment caused by severely acidic system.

WARRANTABLE

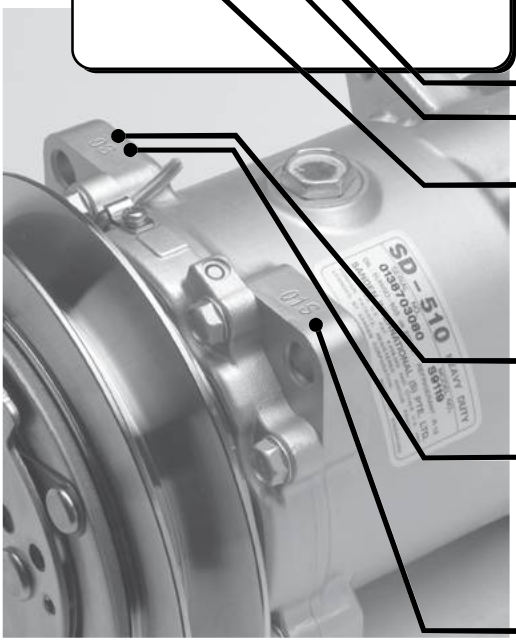
NON-WARRANTABLE



IDENTIFYING SANDEN COMPRESSORS

The metal nameplate located at the top front of the compressor serves as a means of identification. There are also numbers stamped on the mounting ears that indicate manufacturing dates.

Data inscribed on the nameplate includes the serial number, combination model/part number and the date of manufacture.



Manufacturing Location Code
00-06 Japan
70-79 USA
80-89 Singapore

Model Number
(see cross reference grid on following page)

Year of Manufacture (last digit)
Month of Manufacture (1-12)

Manufacturing Date Codes are stamped on the compressor (US manufacture only)

Year of Manufacture (first digit)
i.e. 3 indicates manufacture in 1993

Month of Manufacture (last digit)
January thru September are 1 thru 9
October = X
November = Y
December = Z

T

SANDEN COMPRESSORS NOMENCLATURE

R-12 Compressors

SD – 7 09

- 09 — Approximate Displacement in Cubic Inches
- 7 — Number of Cylinders
- SD — Sanden Reciprocating Wobble Plate Compr

R-134a Compressors

SD 7 H 15 HD

- HD — Heavy-Duty (HD) or Sealed Heavy-Duty (SHD) Clutch
- 15 — Approximate Displacement in Cubic Centimeters (divided by 10)
- H — Port Location (H if on Head; B if on Block)
- 7 — Number of Cylinders
- SD — Sanden Reciprocating Wobble Plate