SD507

A/C COMPRESSOR INSTALLATION INFORMATION

It is imperative that you read and understand this information before you install this new compressor on any vehicle.

The SD507 compressor is a very highly reliable, efficient, tough workhorse of the automotive air conditioning industry. However there is some very important information that you must know about how to mount it and also charge the system that it is being used on.

Due to the close proximity of the service ports (being mounted on the compressor) it is possible to induce Freon into the compressor in a liquid state rather than a gas. It is not possible for the compressor to pump this liquid without damage to the reed valve plate. The result is that once this happens, the compressor will not pull properly on the suction side, nor will it pump pressure on the discharge side as the bent reeds are now being held open from sealing properly. Your observed gauge pressures will be the same on both sides, high and low, or at least very close to the same readings. It is easy to see if this has occurred upon disassembly of the head from the back of the compressor. The reed valves will be visibly bent up and in an open state, not sealing against the ports as they should. Once they are bent they can not be properly straightened. The valve plate assembly must be replaced as a unit. We have them available if this occurs. The bottom or lower cylinders will be the ones that have the bent reeds as the liquid will go to the bottom or lowest level of the compressor depending on how it is mounted. **No warranties** of these compressors will be made when this situation has happened.

The system should only be charged with a recycling machine that is capable of pumping the full Freon charge into the system WITHOUT the system running. After the system is fully charged wait a few minutes for the charge to equalize throughout the system. Then you should gently turn the compressor through by hand for several rotations before ever starting the engine and allowing the compressor to operate. Using this procedure will eliminate the possibility of liquid from being forced into the compressor and damage to the valve plate. It will also help distribute any oil you have added and not allow it to pool in the compressor also causing damage.

It is also important to use the correct amount of oil that the system calls for. A similar situation can occur if too much oil is induced into the system and a large amount of it puddles in the lower cylinders of the

compressor. When the compressor comes on it is not capable of compressing the oil and it will also cause internal damage. Always turn the compressor though by hand before ever starting the engine and running the system. **You must always DUMP OUT the assembly oil that is in the compressor and then add the proper type oil for the refrigerant you intend to use**. PAG oil for R134 and Ester oil for R12. Always use the proper amount the manufacturer says for the application you are using the unit for. Always replace the receiver drier any time you open the system. The system must be clean and free of all debris. Flush the system properly before installation of this new unit or damage will occur and no warranty will be issued. Always evacuate the system before charging it. Full vacuum for at least 45 minutes is good.

Dwb/z/9/2005

SD507

Service Port info:

Important service bulletin regarding the use of the service ports that are located on the top of these compressors!

You must read this information and understand it's message.

The High, (Discharge) side service port that is located on the top of these compressors is **NOT** what it appears, or is marked to be.

The Low, (Suction) side port is indeed just what is says it is and can be used to sample for gauge reading and system diagnostics purposes. It **will properly** sample the Low (Suction) side of the system.

The High, (Discharge) side service port **IS NOT** internally drilled properly to sample the High, (Discharge) side of the system. **It is in fact**, sharing the same internal passages of the Low (Suction) side. This is an **error** that is due in part to an incorrect rear plate that was chosen by the manufacturer and is used at this time in the assembly procedure. If you attach refrigeration gauges to the low and high side ports you will get the same readings from both ports which are as stated above, connected internally to just the **LOW** side of the system.

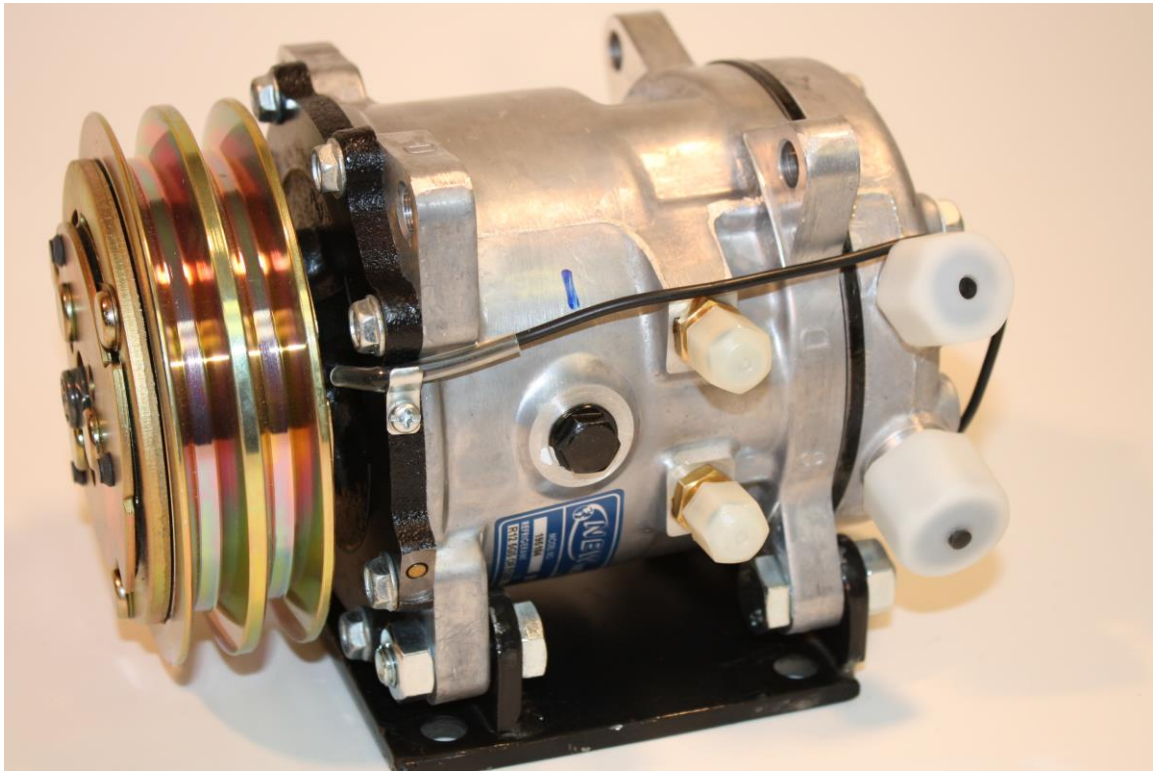
The **only proper** way to sample the **High**, (Discharge) side of the system is the addition of a service port into the actual discharge side after it comes out the compressor. We have included a 90 Degree fitting which can be used for this purpose right at the exit of the compressor. If desired, you could also substitute an inline "T" fitting with a service port in the discharge hose leading away from the compressor as well.

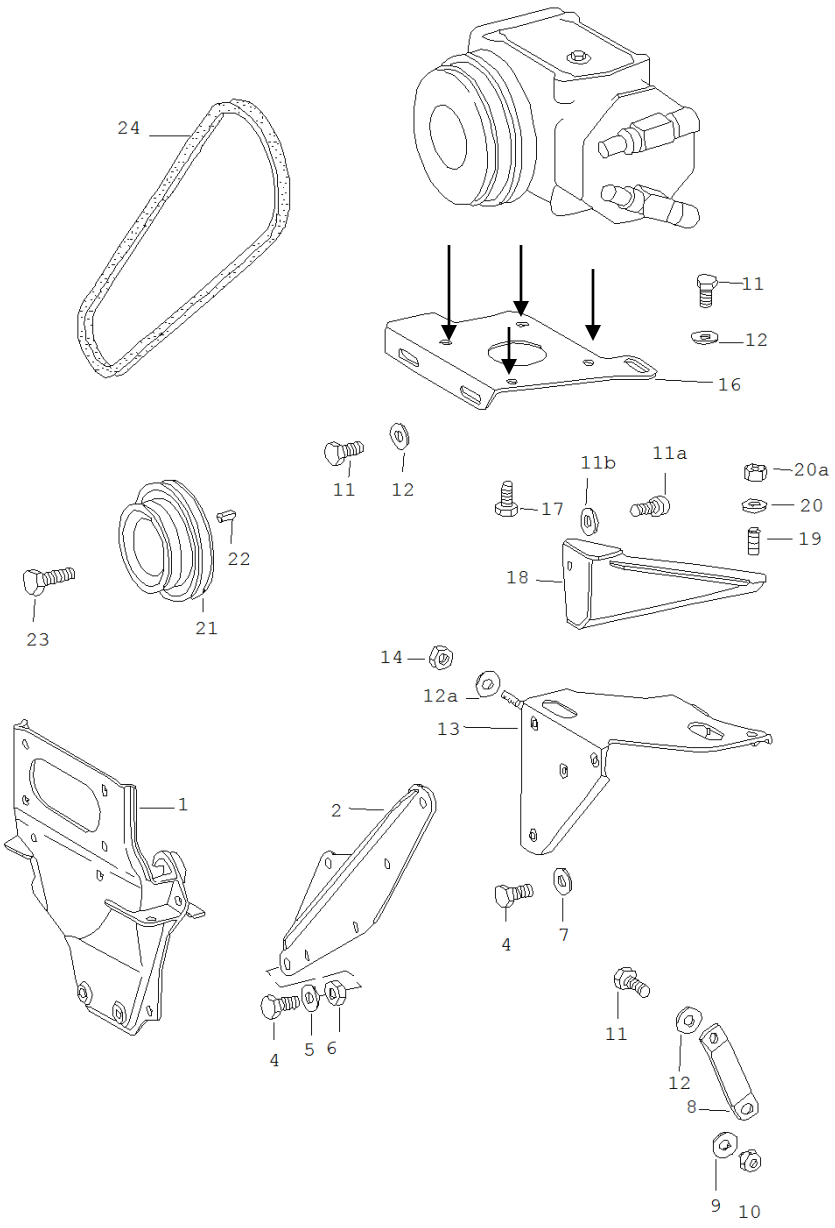
We are sorry for any inconvenience or confusion this may cause, but it is not our decision to have used this rear plate on the compressor. The manufacturer has simply made an error that we have pointed out to them but they have not, as of yet fixed the error.

This in no way affects the operation, or the ability of this compressor to fully function to its intended capabilities. It is simply a mistake that only affects the proper use of the, "on compressor" service Discharge port.

Dwb/z/9/2006

Compressor/Bracket Assembly Orientation:
Note: Bracket must be mounted to engine before compressor is mounted to bracket. Also it is suggested to rotate the compressor 90 degrees to the right which will help with clearance for the hose fittings and service ports. Some people run it straight up, some lay it over to the right. Whichever allows best access for the hoses is fine.

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This High side or Discharge port is not what it is labeled. It is actually drilled into the same port internally as the low side or Suction port. Do not use this to sample High side pressures as it is wrong !