

SERVICE BULLETIN



Carrier Corporation

North American Operations

Title: Motor Drain Line Orifice

Number: C9913

Date: 4/20/99

Supersedes: New

Date: N/A

Models Affected: 19XR Frame 2,3,4 and 5 Compressors

Purpose:

To advise the field that a separate motor drain line orifice is not utilized or necessary on the 19XR frame 2,3,4 and 5 size compressors.

Information:

Several inquiries have been received regarding the lack of the motor drain line orifice on 19XR centrifugal chillers.

On the 19XL series a separate orifice was used to keep the motor housing pressure elevated as compared to the cooler. With the transmission being vented to the cooler this allows the motor housing pressure to be maintained at a higher level than the transmission. The pressure differential between motor and transmission keeps oil that is being fed to the motor bearing from escaping into the motor shell and promotes the return of oil to the sump of the compressor.

On the 19XR centrifugal chillers the motor casting is machined to provide a restriction in the drain. The separate orifice is not necessary. Also, the transmission is vented to the downstream side of the inlet guide vanes, the lowest pressure in the system. The transmission is kept at a lower pressure than the motor housing by virtue of both the built in orifice in the motor housing drain and the venting of the transmission housing.

Action:

If a tear down is necessary which requires the disassembly and the assembly of the motor cooling drain **DO NOT** install any type of orifice in the drain line. Reassemble the drain line with the same hardware found in the machine as shipped.