SERVICE BULLETIN

Carrier Corporation **North American Operations**

Title: **Low Oil Pressure Alarms**

Number: **C9912**
Date: **4/9/99**
Supersedes: **New**
Models Affected: **19XR Series Chillers** **Date:** **N/A**

Purpose:

To advise the field of a possible problem of a “Low Oil Pressure” alarm on 19XR centrifugal chillers with PIC II controls.

Information:

There have been reports of 19XR chillers going down on a low oil pressure alarm soon after start up. Typically oil pressure of 24 to 28 PSID is established during the prelube cycle. The chiller initiates a start, continues to operate through transition and then anywhere between 30 to 90 seconds into the start, before the guide vanes start to open, it may go down on low oil pressure. The oil pressure loss experienced can be of three forms:

1. A momentary loss of oil pressure characterized by a quick dip in oil pressure as a result of some cavitation at the inlet of the pump or another transient occurring during start up causes an alarm. The PIC II controls are able to recognize a loss of oil pressure with a duration of approximately one half of a second.
2. Gradual loss of oil pressure that can be tracked using the CVC screen causes an alarm. After the chiller starts a small drop occurs down to about 21 PSID, continues past the alert level of 18 PSID to the alarm level of 15 PSID where the chiller shuts down on low oil pressure.
3. The third form is a hybrid of the first two where after start up the pressure difference gradually decreases and then dips momentarily as described in number 1.

Action:

Product engineering is investigating the root cause of the problem. In the mean time it has been found that installing a refrigeration hose filled with oil between the oil sump and oil pump discharge transducers and the Schrader ports helps smooth out the transients so that the controls do not react to them. This can be done until a permanent solution is found. Please report the problem to Service Engineering and other temporary solutions can be discussed if this is not successful.

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