

# SERVICE BULLETIN



Carrier Corporation

North American Operations

**Title:** Low Oil Pressure Alarms

**Number:** C9912A

**Date:** 6/6/99

**Supersedes:** C9912

**Date:** 4/9/99

**Models Affected:** 19XR Series Chillers

## **Purpose:**

To advise the field of a possible problem of a "Low Oil Pressure" alarm on 19XR centrifugal chillers with PIC II controls. This addendum describes an alternate fix to the fix described in C9912 for scenarios 1, 2, 3 described below.

## **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:**

On all 19XR chillers (or compressors) in which a problem with low oil pressure alarms arises, install a 100 microfarad electrolytic capacitor rated for 25 volts to terminals 4(-) and 5(+) on the upper J3 plug as shown in the wiring diagram. The capacitor smoothes out the oil pump discharge pressure transducer signal without affecting oil pressure sensing. Please report the problem to Service Engineering and other solutions can be discussed if this is not successful. The factory will be installing a capacitor on all 19XR chillers starting the first week of June.

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