SERVICE BULLETIN

Title: **19XL PSIO Software Version 7**
Models Affected: **19XL**

Number: **C9306**
Date: **3/5/93**
Supersedes:
Date: **3/3/93**

Purpose:

To inform the field of enhancements and revisions that have been made to the 19XL PSIO module software. As of March 3, 1993, all 19XL centrifugals shipped from the factory have this upgraded software.

19XL PSIO Module Software Version 7 Dated 3/3/93 CESR 50004607

File: CMLA-SB, Controls-Wiring

Prepared By: Don Berdan **Approved By:** Alan Johnson

To determine the software version contained on the PSIO module, refer to the small sticker on the front of the PSIO module, located just below the sensor plug connectors, which will have the chiller model number, the version number, and the date printed on it. The software part number can be determined by accessing the Controller ID screen through the LID module.

Enhancements To Software:

1. A discharge temperature greater than 180 F (82.2 C) will trigger the inlet guide vanes to open (Only if an override condition is not triggering the vanes to close) by incrementally increasing the Total Error Plus Resets value. This value is found on the Control Algorithm Status, MAINT01 screen. The reset schedule is 0 F reset at 180 F up to -10 F reset at 220 F. It is a proportional increase, so that when the discharge temperature is at 200 F (93.3 C) the reset value will be 5 F (2.8 C) lower than the LCW control point. This means that the machine will go into recycle mode when the discharge temperature is high, rather than going into an alarm state for high discharge temperatures.
2. The LID default display temperature/pressure readings are frozen when an alarm occurs. The active screen is restored when the reset button is pressed.

Note: Readings are not frozen on the STATUS 01 screen.

3. If the PSIO module has been replaced, and Total Compressor Run hours and Total Compressor Starts values are not properly recovered, a one time manual entry of the total compressor starts and total compressor ontime from the LID is possible, if the initial values recovered are zero. This mode is disabled after the first successful compressor start-up.

4. Refrigerant Type selection has been added to the Controls Test menu. It will be capable of selecting operation with HCFC-22 or HFC-134a. If the type selected is incompatible with transducer pressures, a machine alarm and message will appear when attempting to start the compressor. This will also stop the compressor from running if nitrogen or too little refrigerant is in the machine.
5. The 4-20 mA input channels on the 8-input modules can now be configured for internal or external source of power. The configuration is located on the SERVICE2 screen.
6. The actual guide vane position is displayed while in the guide vane controls test.
7. The oil pressure is displayed while in the oil pump controls test.
8. The configurable recycle re-start temperature range upper limit has been increased from 5 F to 10 F.
9. The guide vane travel limit value on the SERVICE3 screen has a new configurable range of 30 to 100%, and a new default value of 50%.
10. The guide vane output signal corrects for a wide guide vane actuator deadband.
11. Broadcast acknowledger is defaulted to 'NO' (BRODEF table screen)

Corrections To Software:

1. Indications that the machine was tripping or alerting when conditions did not warrant have been corrected.
2. The motor amps value will indicate more than 650 amps now.

3. The Chillervisor lead/lag module (CSM) will operate with this version.
4. Slow time clock operation has been corrected.
5. The line voltage display will now indicate more than 650 volts.
6. A correction was made so that guide vanes will close if motor amperage exceeds 105% of full load amps during ramp loading at start-up. This demand limiting function did work properly after ramp loading was completed.