



SERVICE BULLETIN

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Supersedes: NOTHING

Form 160.47-M2 (SB15) (1196)

File with form: 160.47-M2 SK Manual

SUBJECT: SCREW CHILLER (125-675TR)
MICROCOMPUTER CONTROL CENTER -
VERSION S.01F.15 & S.01T.15 EPROM

On/about November 1996, the subject chillers will be shipped with eprom version S.01F.15 (P/N 031-01102-002). Version S.01T.15 (P/N 031-01102-003) will be available for GUARDIAN SERVICE/REMOTE CHILLER COMMUNICATIONS applications. These eproms contain the following enhancements that revise SERVICE MANUAL 160.47-M2 as follows:

VARIABLE ORIFICE

A solenoid valve, located in the orifice bypass line, is opened or closed by the microcomputer control center to create a VARIABLE ORIFICE. This new solenoid valve is designated 2SOL and is wired to the RELAY BOARD TB3-29.

When the chiller is not running, the solenoid is open while the 2-MINUTE LOCKOUT is in effect; closed thereafter.

While the chiller is running, the solenoid is energized (opened) or de-energized (closed) under program control by the following conditions:

- 1.) DELTA P - This is the difference between condenser pressure and evaporator pressure. This value is compared to the DELTA P SETPOINT. If the DELTA P decreases to \leq the setpoint, the solenoid is opened. It will remain open until the DELTA P increases to \geq (DELTA P SETPOINT + 10); then it will close. Conditions in either 2.) or 3.) below will override the DELTA P control.
- 2.) LOW EVAPORATOR PRESSURE - If the evaporator pressure decreases to the threshold that displays "SYSTEM RUN - LOW PRESSURE LIMIT IN EFFECT" (R22 - 56.2 PSIG; R134a 27PSIG), the solenoid is opened. This condition will override the DELTA P control above. The solenoid will remain open until the low pressure limit condition is no longer in effect (R22 \geq 57.5 PSIG; R134a \geq 28 PSIG), then the LOW PRESSURE override of the above DELTA P control will be released.

- 3.) **DISCHARGE SUPERHEAT** - This is the difference between discharge temperature and condenser saturated temperature. If the DISCHARGE SUPERHEAT is < 15 F (R22), < 10 F (R134a), the solenoid is closed. This condition will override 1.) and 2.) above. The solenoid will remain closed until the DISCHARGE SUPERHEAT increases to ≥ 20 F (R22), 15 F (R134a), then the DISCHARGE SUPERHEAT override of 1.) and 2.) above will be released.

"DELTA P" SETPOINT PROGRAMMING

To program the DELTA P SETPOINT, proceed as follows:

- 1.) Use ACCESS CODE 1-3-8-0 to gain access to PROGRAM mode. "PROGRAM MODE, SELECT SETPOINT" is displayed.
- 2.) Press CONDENSER LIQUID TEMPS key. The prompt message displayed is dependent upon the position of micro board program jumper JP2 as follows:

JP2 in - R22 applications
"DELTA P (RANGE 25 TO 130) = XXXPSID"

JP2 out - R134a applications
"DELTA P (RANGE 15 TO 90) = XXXPSID"

- 3.) Using the ENTRY keys, enter the desired value. Use leading zeroes where necessary. If the CANCEL key is pressed, default value "25" is displayed.
- 4.) Press ENTER key. "PROGRAM MODE SELECT SETPOINT" is displayed.
- 5.) Press PROGRAM key to exit.

OIL PRESSURE TRANSDUCER AUTO-ZERO ENABLE/DISABLE

In all eprom versions since S.01F.08/S.01T.08, the auto-zeroing that occurs between the evaporator transducer and oil pressure transducer could be enabled/disabled using a procedure in Service Manual 160.47-M2. This procedure now also includes the auto-zeroing that occurs between the filter oil pressure transducer and the oil pressure transducer. In the procedure below, all auto-zeroing is enabled if "enabled" is selected; all auto-zeroing is disabled if "disabled" is selected.

CAUTION!! THE AUTO-ZEROING SHOULD ONLY BE DISABLED AFTER CONSULTATION WITH THE YORK FACTORY.

- 1.) Enter **PROGRAM** mode using access code 1-3-8-0.
- 2.) Press **OIL/FILTER PRESSURES** display key. "PRESSURE TRANSDUCERS AUTO ZERO ENABLED" or "PRESSURE TRANSDUCERS AUTO ZERO DISABLED" is displayed.
- 3.) Use **ADVANCE DAY/SCROLL** key to select enabled or disabled as

desired. Each time this key is pressed, the display alternates between "ENABLED" or "DISABLED". The default value is "ENABLED".

- 4.) Press ENTER key. "PROGRAM MODE, SELECT SETPOINT" is displayed.
- 5.) Press PROGRAM key to exit. The normal foreground message is displayed.



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