



Title: **3200 SOFTWARE (EPROM) CHANGES - DUAL COMPRESSOR**

Number: **C8711**

Date: **12/11/87**

Supersedes: **NEW**

Date:

Models Affected: **ALL 17/19DR SERIES DUAL COMPRESSOR MACHINES**

PURPOSE:

This bulletin provides information on changes in 3200MP control logic relative to basic and options EPROM's.

BACKGROUND:

Refer to Bulletin C8707 for general information on Basic, Memory Expansion, and ESP EPROM's.

SOFTWARE VERSIONS:

The attached charts list the software versions that may be found in the field and the changes made in each version.

UPGRADING SOFTWARE:

HK98EZ031 EPROM's should be replaced by -034 or -035. The basic EPROM's, HK98EZ034 and -035 are both valid, but only HK98EZ034 is compatible with options software. HK98EZ035 includes the improved DM diffuser wall algorithm. Options software compatible with -035 will be available in early 1988.

Basic EPROMS are stocked individually by RCD under their own part number. The latest option EPROM's are only stocked in a kit, part no. 32MP660011, which includes the Basic, MX and ESP EPROMS.

FILE: CONTROLS - WIRING

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3200MP DUAL COMPRESSOR BASIC/OPTIONS SOFTWARE

NOTE: IF AN ESP IS INSTALLED, ALL SOFTWARE MUST BE FROM THE SAME BASIC/OPTIONS VERSION

EPROM		VERSION I	VERSION II	VERSION III	VERSION IV	VERSION V
PROCESSOR BOARD	(BASIC)	HK98EZ-031	HK98EZ-034	HK98EZ-034	HK98EZ-034	HK98EZ-035
M/X BOARD	(OPTIONS)		HK98EZ-040	HK98EZ-040A	HK98EZ-040D	N/A
ESP BOARD			HK98EZ-050	HK98EZ-050	HK98EZ-050E	N/A
STATUS		VOID	VOID	VOID	VALID	VALID
ESP CONTROL FEATURES		1) SELF-START AFTER POWER FAILURE 2) CHILLED WATER SETPOINT ADJUSTMENT 3) DEMAND LIMIT SETPOINT ADJUSTMENT 4) RAMP LOADING RATE ADJUSTMENT 5) REMOTE CONTACT ENABLE/DISABLE CAPABILITY 6) READING OPERATING PARAMETERS 7) READING STORED SHUTDOWN STATUS CODES				
ESP CONTROL OPTIONS		1) AUTO CHILLED WATER REBET BASED ON 4-20 Ma INPUT SIGNAL 2) AUTO CHILLED WATER REBET BASED ON A REMOTE TEMP. SENSOR INPUT 3) AUTO POWER DEMAND LIMIT BASED ON CONTACT CLOSURE 4) AUTO POWER DEMAND LIMIT BASED ON 4-20 Ma INPUT SIGNAL 5) RETURN CHILLED WATER CONTROL 6) CHILLED WATER REBET BASED ON ΔT				
A. M. JOHNSON REVISED 12/11/87						

SOFTWARE IMPROVEMENTS

VERSION II:

1. THE LAG COMPRESSOR RECYCLE AMPS ARE ADJUSTED TO PERMIT IMPROVED LAG RECYCLE. ACTUAL AMPS ARE DISPLAYED.
2. THE LAG COMPRESSOR WILL ALSO RECYCLE IF THE CHILLED WATER DROPS TO 3 DEGREES BELOW SETPOINT FOR 5 MINUTES.
3. THE DIFFUSER WALL IS STOPPED AT 105% AMPS TO MINIMIZE SUDDEN AMP SWINGS WHILE THE COMPRESSORS ARE TRYING TO WORK OUT OF A SURGE (STALL) CONDITION AT LAG START.
4. THE LEAD COMPRESSOR IS HELD AT 75% FOR 2 MINUTES DURING LAG START TO PERMIT THE LAG COMPRESSOR TO CATCH UP TO THE LEAD, REDUCING THE CHANCE OF STALL.
5. THE SURGE COUNTER (3 SURGES PRIOR TO SAFETY SHUTDOWN) IS RESET AFTER 1/2 HOUR TO MINIMIZE NUISANCE CUTOUPS.
6. THE DIFFUSER WALL CLOSE TIME IS EXTENDED TO 4 MINUTES FROM 2 AFTER A POR OR POWER UP TO ENSURE PROPER WALL CALIBRATION.
7. A 50HZ RANDOM SHUTDOWN PROBLEM HAS BEEN CORRECTED.

VERSION III:

1. A DEFECTIVE 8 START PER 12 HOUR FEATURE WHICH ERRONEOUSLY SHUTDOWN THE CHILLER AFTER 8 STARTS REGARDLESS OF TIME HAS BEEN REMOVED.

VERSION IV:

1. NUISANCE LAG STARTS IF IN DEAD BAND ARE ELIMINATED.
2. AUTO RESTART AFTER QUICK (1 CY) POWER FAILURE OR BROWNOUT IS INCLUDED.
3. A QUICK RESTART OF LAG COMPRESSOR AFTER A POWER FAILURE IS PERMITTED.
4. RANDOM COMMUNICATION FAILURES (CODE 81) ARE ELIMINATED.

VERSION V:

1. A NEW DM DIFFUSER WALL ALGORITHM (AMP AND SELECTION FACTORS) IS ADDED.
2. IMPROVED SHUTDOWN CODES ARE AVAILABLE.
3. A LAG SHUTDOWN CORRECTION FACTOR HAS BEEN ADDED.
4. TWO EXTRA SENSORS MAY BE READ WITH DATALOGER.
5. CODE 77 PROTECTION DURING "START" (ALSO DURING RUN WITH AUTO TRANSFORMER STARTERS) IS PROVIDED.