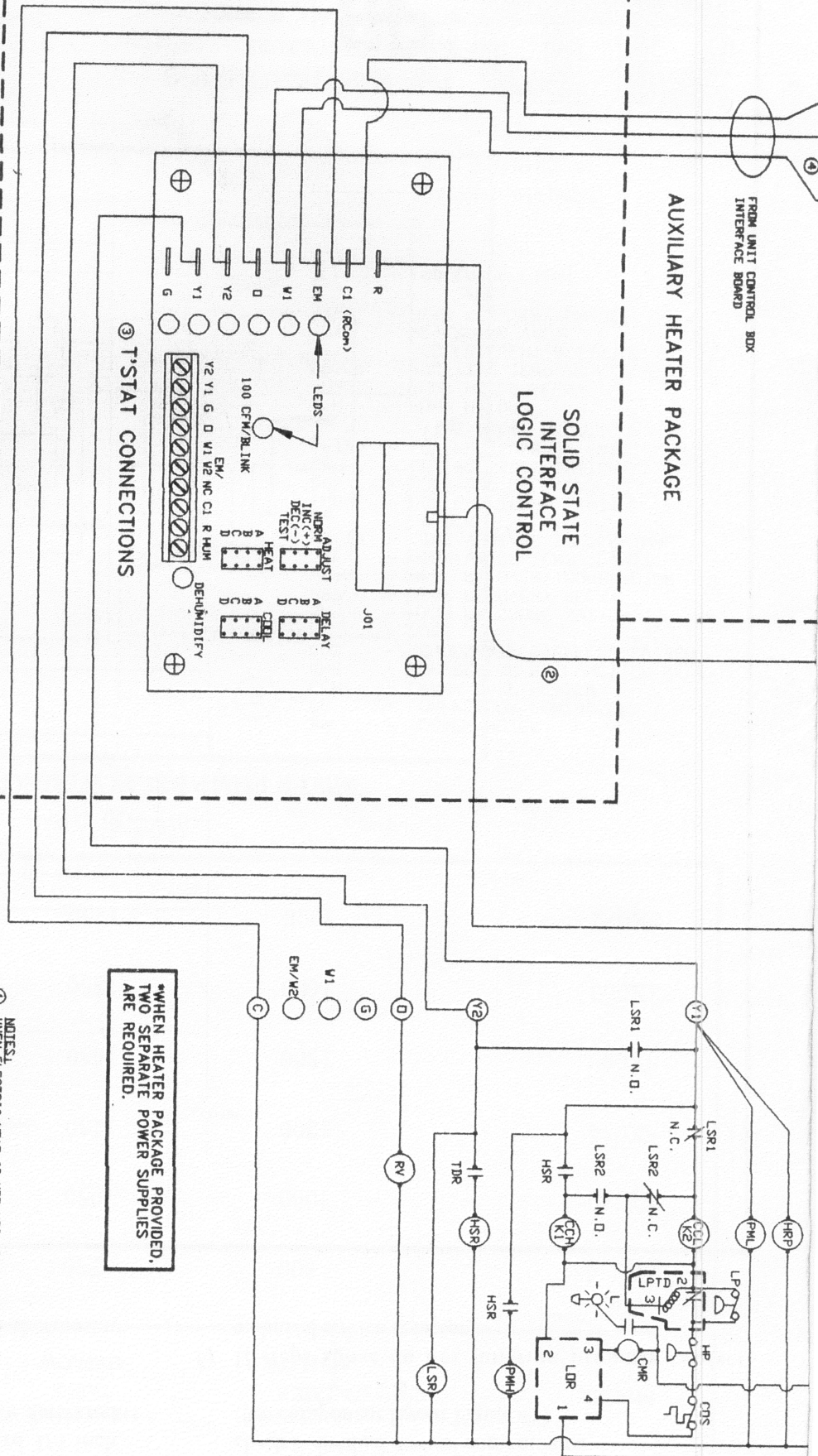


FROM UNIT CONTROL BOX  
INTERFACE BOARD

AUXILIARY HEATER PACKAGE

SOLID STATE  
INTERFACE  
LOGIC CONTROL

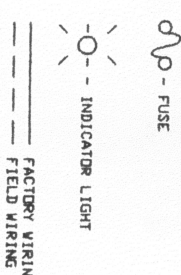


\*WHEN HEATER PACKAGE PROVIDED,  
TWO SEPARATE POWER SUPPLIES  
ARE REQUIRED.

- NOTES:
- 1 WHEN ELECTRIC HEAT IS NOT UTILIZED, FACTORY INSTALLED JUMPER FROM L1 AND L2 OF COMPRESSOR CONTACTOR TO HEAT PUMP TERMINAL BLOCK (TERMINALS 1 AND 2) ARE PROVIDED.
  - 2 16 LEAD MOTOR CONTROL HARNESS
  - 3 SEE THERMOSTAT CONNECTION DIAGRAMS
  - 4 REMOVE V1-W2 JUMPER WHEN UTILIZING OUTDOOR THERMOSTAT
  - 5 FACTORY INSTALLED HEATER PACKAGES ARE PRE-WIRED. CONNECT HEAT PUMP POWER SUPPLY TO L1, L2 OF COMPRESSOR CONTACTOR

- LEGEND:
- BM - BLOWER MOTOR
  - COH-K1 - COMPRESSOR CONTACTOR COIL, HIGH SPEED
  - COHT - CERAMIC CASE HEATER
  - CCL-K2 - COMPRESSOR CONTACTOR COIL, LOW SPEED
  - OKR - COMPRESSOR MALFUNCTION RELAY
  - ODS - CONDENSATE DRAIN/LOW SWITCH
  - OPM - COMPRESSOR PROTECTION MODULE
  - EMR - EMERGENCY HEAT RELAY
  - EHTB - ELECTRIC HEAT TERMINAL BLOCK
  - F - FUSE BLOCK
  - GRD - GROUND
  - H1 - HEAT LIMIT 1
  - H2 - HEAT LIMIT 2
  - H3 - HEAT LIMIT 3
  - H4 - HEAT LIMIT 4
  - HPT - HIGH PRESSURE SWITCH
  - HP - HEAT PUMP TERMINAL BLOCK
  - HP1 - HEAT RELAY 1
  - HP2 - HEAT RELAY 2
  - HRP - HEAT RECOVERY RELAY MOTOR
  - HRPM - HEAT RECOVERY PUMP MOTOR
  - HSR - HIGH SPEED RELAY
  - HML - HIGH WATER TEMP. LIMIT
  - L# - LINE VOLTAGE CONNECTION TO TERMINAL BLOCK
  - LGL - LOW DISCHARGE GAS TEMP. LIMIT

- LDR - LOCK-OUT RELAY
- LP - LOW PRESSURE SWITCH
- LPB - LOW PRESSURE TIME DELAY RELAY
- LSR - LOW SPEED RELAY
- LSR2 - LOW SPEED RELAY
- LSR1 - OUTDOOR THERMOSTAT (FIELD INSTALLED)
- DOT - DUCT
- PM - PUMP MOTOR
- PHM - PUMP RELAY, HIGH SPEED
- PHL - PUMP RELAY, LOW SPEED
- PCR - POTENTIAL START RELAY
- RV - REVERSING VALVE RELAY
- SVT - HEAT RECOVERY ON/OFF SWITCH
- TDR - TIME DELAY RELAY



MANUFACTURING

© Harrow company

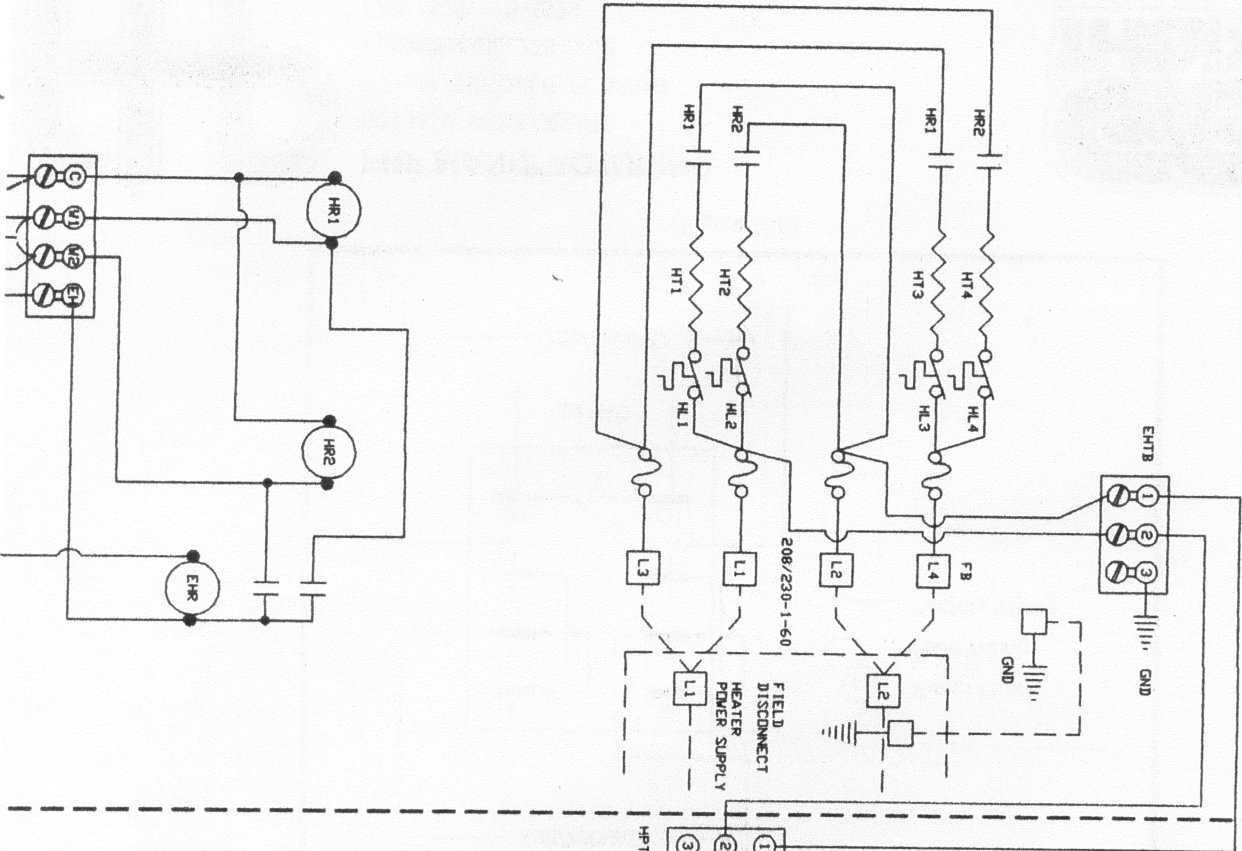
CONNECTION DIAGRAM

SX - TWO SPEED HEAT PUMPS  
WITH AUXILIARY HEAT PACKAGE  
AND HEAT RECOVERY PACKAGE

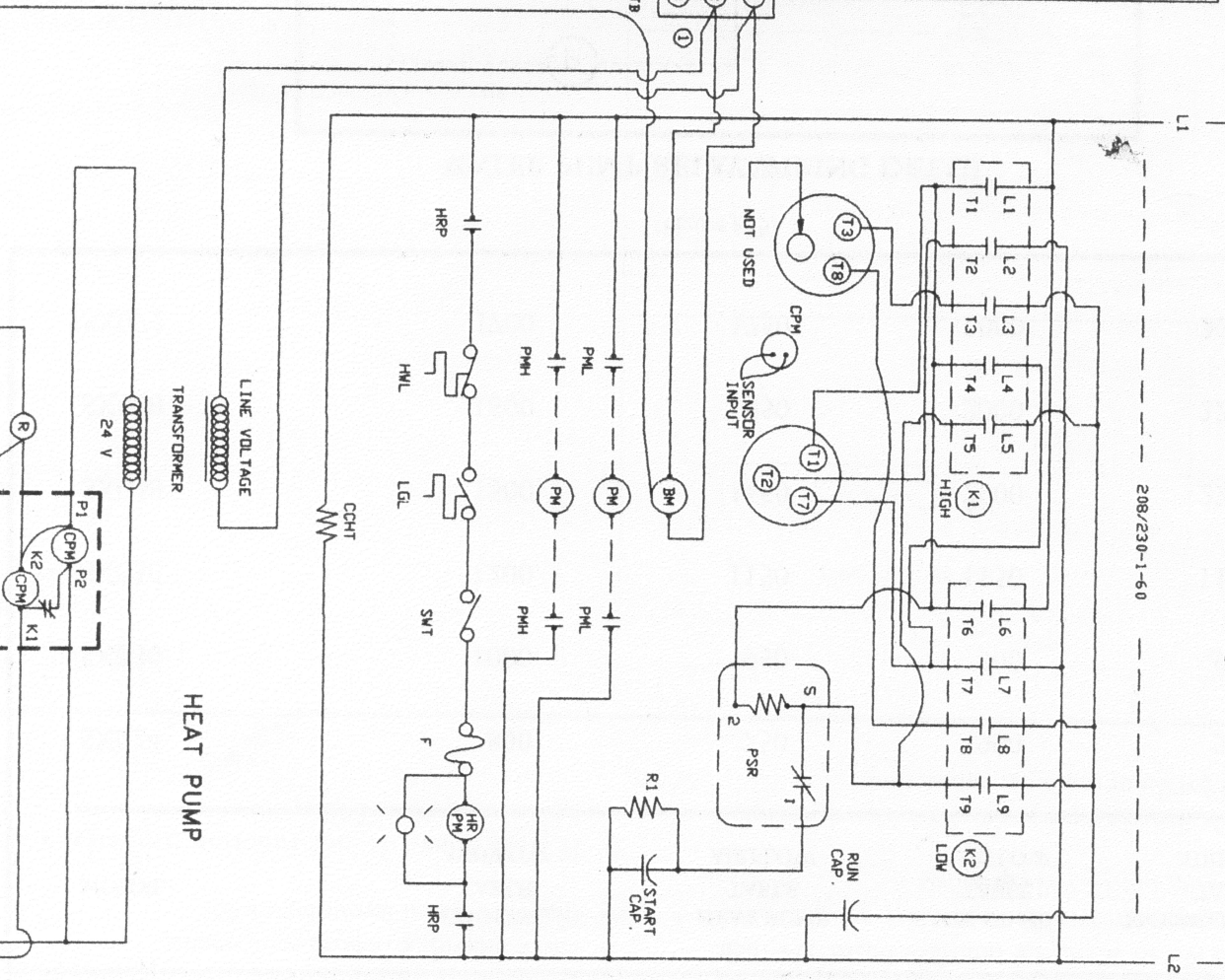
SIZE FSCM NO.	DWG NO.	DRAWN BY	REV
WD-328	WD-328	K.N.	

SCALE DATE 7-12-94

TD UNIT CONTROL BOX TRANSFORMER  
AND ICM2 MOTOR POWER SUPPLY  
208/230-1-60

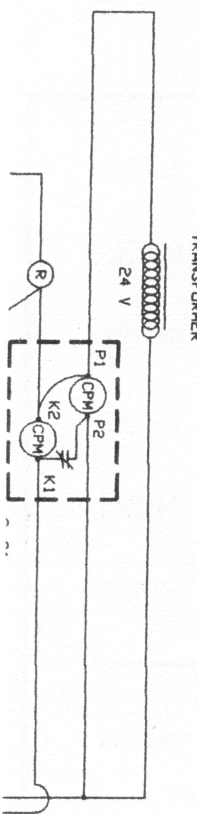


HEAT PUMP POWER SUPPLY ③

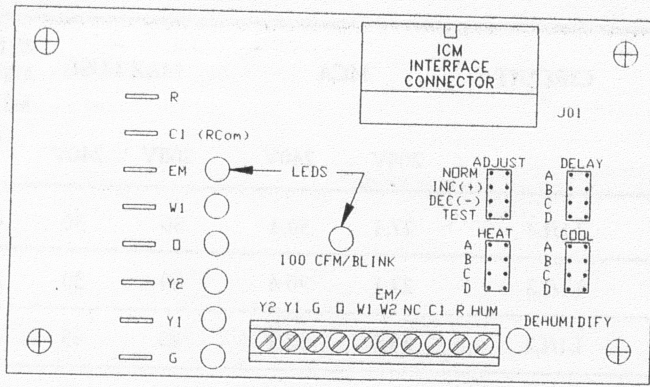


A

HEAT PUMP







( Figure #6)

**THERMOSTAT CONNECTION:** Thermostat connections are made at the board mounted ten (10) pin terminal connector. (See figure #6) Depending on the heat pump model and specified thermostat combination the number of thermostat conductors required will vary. If all functions on single speed models with programmable thermostats are utilized an (8) eight conductor thermostat cable will need to be provided. Two speed models will require (9) nine conductors.

All models incorporate a compressor malfunction relay for the sole purpose of sending a signal to the programmable thermostat's malfunction L.E.D.. When utilizing standard mercury bulb thermostats, this relay should be

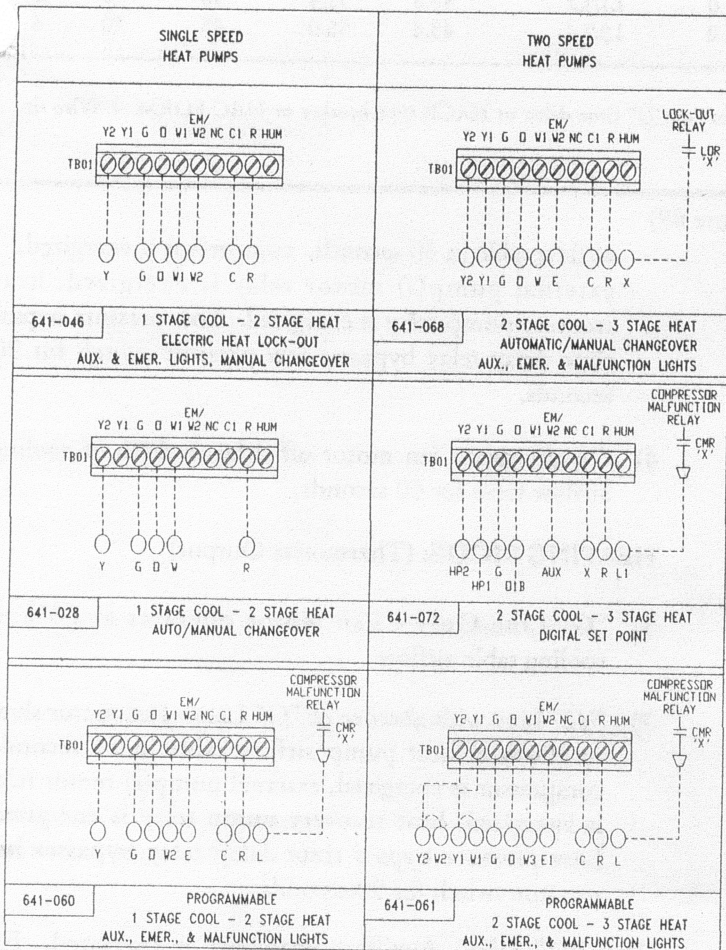
disconnected and the thermostat malfunction L.E.D. should be connected to the terminal designated "MALFUNCTION LIGHT" of the unit lock out relay.

**THERMOSTAT CONNECTION DIAGRAMS:**

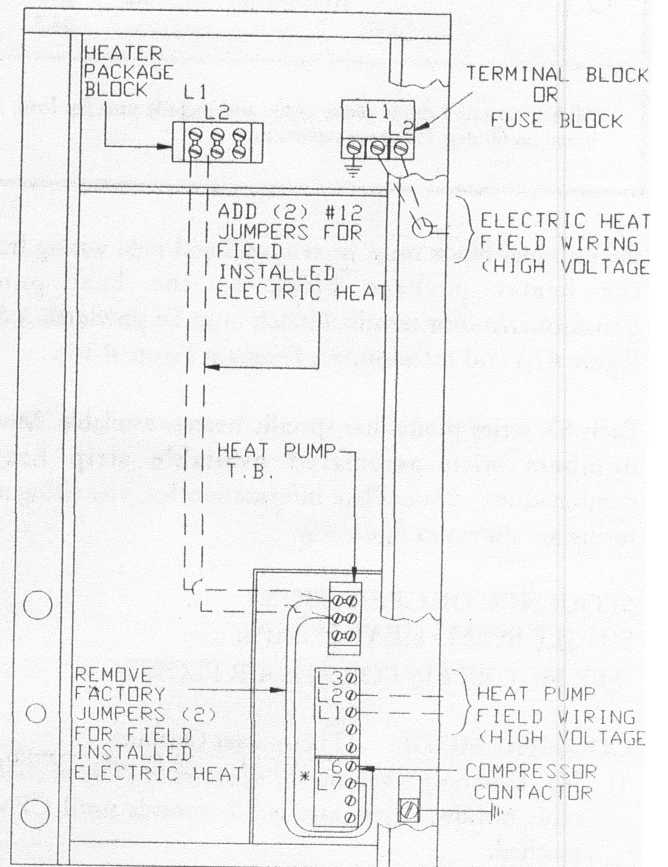
Some typical thermostat connection diagrams are shown (See Figure #7) NOTE: On single speed models Y or Y1 the thermostat is connected to Y2 of the Solid State Logic Board. This signal communicates to the ICM-2 Mot Logic indicating a single speed application. Set point still dictated by Y or Y1 signal of the thermostat.

**ELECTRIC HEATER PACKAGE OPTION:**

Factory or field installed internal heater packages are available for all SX series units. **TWO POWER SUPPLIES ARE REQUIRED** when heater packages are utilized the power supply for the heater package becomes the power supply for the heat pump blower motor and transformer. This allows control circuit and motor operation in the case of heat pump compressor or associated power supply failure. When field installing heater packages the power lines from L1 - L2 (L6 & L7 for two speed SX048, 060, 072 units) compressor contactor



( Figure #7)



\* FOR SINGLE SPEED SX024, 030, 036:  
L6=L1  
L7=L2

( Figure #7A)