



## TECHNICAL SERVICE BULLETIN

<b>Subject:</b> NMR-262 changing thermostat from thumbwheel switch to NEW touch pad style	<b>Bulletin No:</b> 061206
	<b>Last Issued:</b> 12/29/2006

### DESCRIPTION

To update the NMR-262 units that contain the K31-53199-10 thermostat and thumbwheel selectors to the new style K31-00871-10 thermostat and touch pad.

### PROCEDURE

1 – Remove the old thermostat.

2 – Relocate the existing jumper wire on the green thermostat holder.  
Remove wire from old location 33 to 36 to new location 37 to 38 (see schematic).

3 - Disconnect wire 11 and insulate the end. This can be done at the terminal block or at the thermostat holder.

(In the original system the circuit breaker CB4 would trip created a warning to show when a system changeover occurred and this function is now included in the new thermostat software. The thermostat led light that created the fault will remain on should a changeover occur).

4 – Install the new thermostat and schematics.

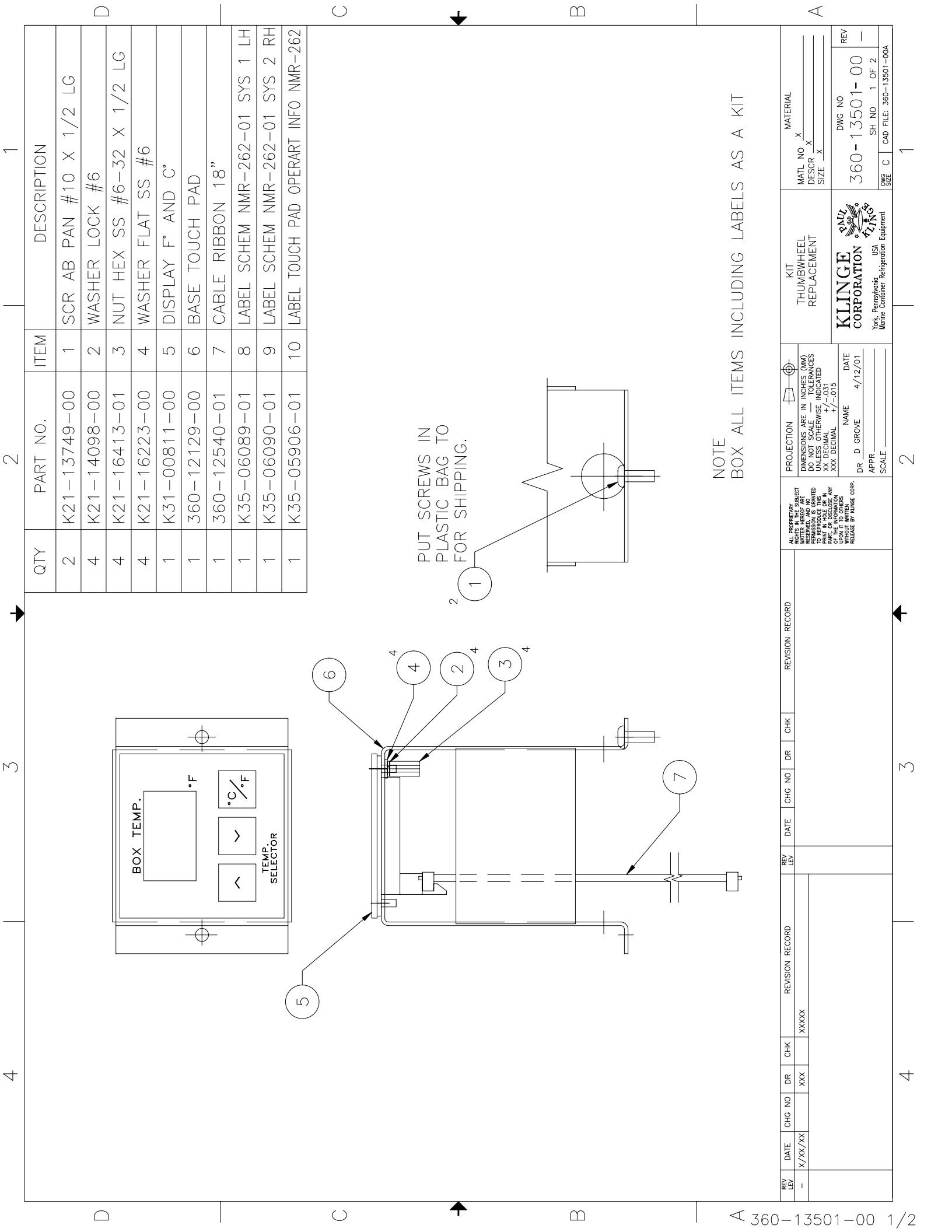
5 – Remove old thumbwheel switch and bracket. Then install the new touch pad and bracket.

Note – Both systems need to be changed for the thermostat functions to work property. Changing the new thermostats on both systems require the quantity of 2.

### CONVERSION PARTS

Item	Part Number	Description	Qty	List Price 2006
1	K31-00871-10	Thermostat	2	\$ 1475 each
2	360-13501-00	Kit touch pad replacement for thumbwheel	2	\$ 502 each

CONSUMER NOTICE: The information and instructions in this bulletin are intended for use by skilled technicians. Klinge Corporation technicians utilize the proper tools/equipment and take training to correctly and safely maintain Klinge Corporation machinery. Klinge Corporation reserves the right to alter the specifications and contents of this bulletin without obligation or advanced notice.



PUT SCREWS IN PLASTIC BAG TO FOR SHIPPING.

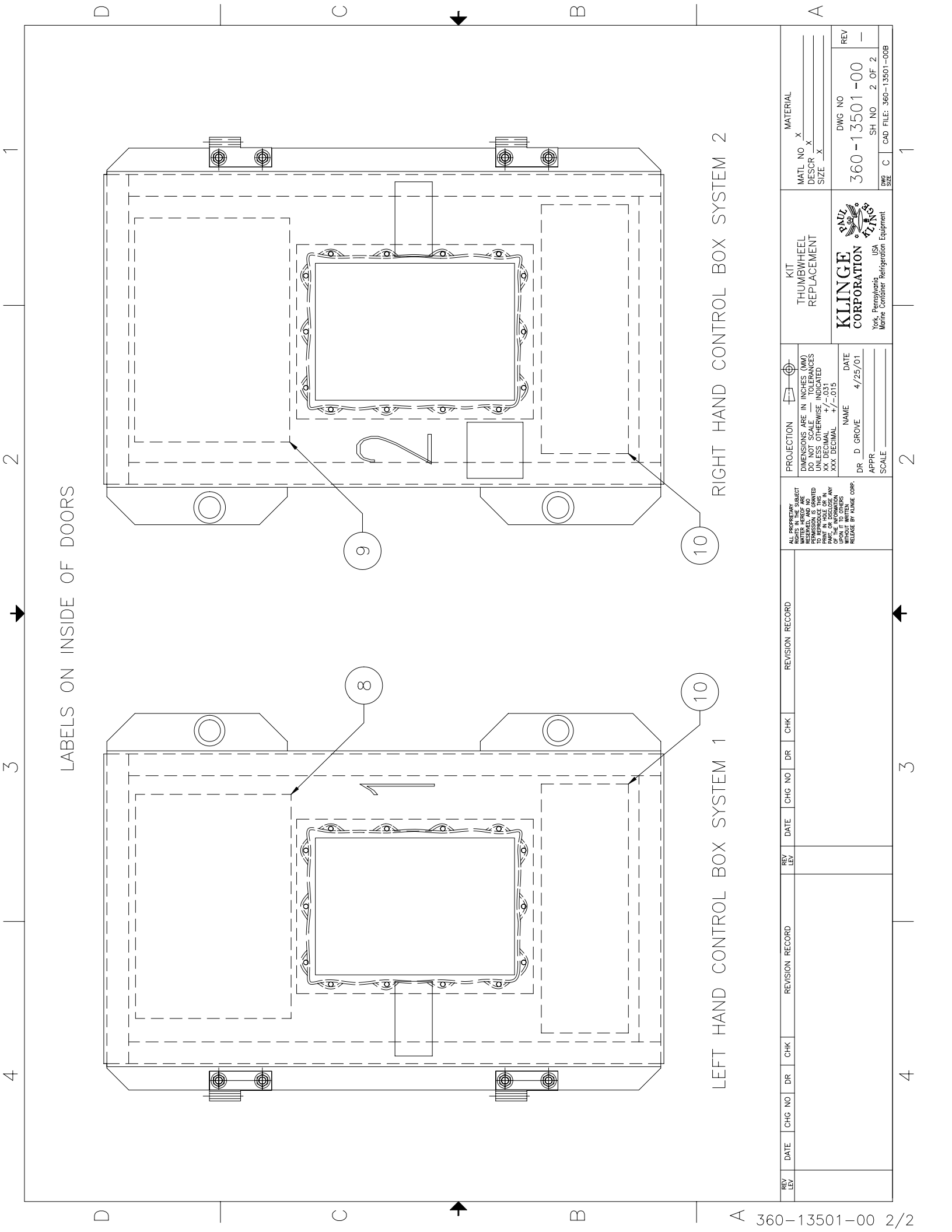
NOTE  
BOX ALL ITEMS INCLUDING LABELS AS A KIT

QTY	PART NO.	ITEM	DESCRIPTION
2	K21-13749-00	1	SCR AB PAN #10 X 1/2 LG
4	K21-14098-00	2	WASHER LOCK #6
4	K21-16413-01	3	NUT HEX SS #6-32 X 1/2 LG
4	K21-16223-00	4	WASHER FLAT SS #6
1	K31-00811-00	5	DISPLAY F° AND C°
1	360-12129-00	6	BASE TOUCH PAD
1	360-12540-01	7	CABLE RIBBON 18"
1	K35-06089-01	8	LABEL SCHEM NMR-262-01 SYS 1 LH
1	K35-06090-01	9	LABEL SCHEM NMR-262-01 SYS 2 RH
1	K35-05906-01	10	LABEL TOUCH PAD OPERART INFO NMR-262

REV LEV	DATE X/XX/XX	CHG NO	DR	CHK	REVISION RECORD	REV LEV	DATE	CHG NO	DR	CHK	REVISION RECORD
-											
					XXXXX						

ALL PROPRIETARY RIGHTS IN THE SUBJECT MATTER ARE RESERVED, AND NO PART OF THIS DRAWING IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT WRITTEN PERMISSION BY KLINGBECK CORP.		PROJECTION 	DIMENSIONS ARE IN INCHES (MAX) UNLESS OTHERWISE INDICATED DO NOT SCALE UNLESS OTHERWISE INDICATED XX DECIMAL +/- .031 XXX DECIMAL +/- .015	NAME DR D GROVE APPR _____ SCALE _____	DATE 4/12/01
KIT THUMBWHEEL REPLACEMENT		MATERIAL MATL NO X _____ DESCR X _____ SIZE X _____		DWG NO 360-13501-00	
KLINGBECK CORPORATION York, Pennsylvania, USA Marine Container Refrigeration Equipment		DWG C 360-13501-00A		SH NO 1 OF 2 CAD FILE: 360-13501-00A	



LABELS ON INSIDE OF DOORS

RIGHT HAND CONTROL BOX SYSTEM 2

LEFT HAND CONTROL BOX SYSTEM 1

REV LEV	DATE	CHG NO	DR	CHK	REVISION RECORD	REV LEV	DATE	CHG NO	DR	CHK	REVISION RECORD

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<p>KLINGBECK CORPORATION            YORK, PENNSYLVANIA, USA            Marine Container Refrigeration Equipment</p>		<p>NAME            DR D GROVE</p> <p>DATE            4/25/01</p> <p>APPR            SCALE</p>	<p>DWG NO            360-13501-00</p> <p>SH NO            2 OF 2</p> <p>CAD FILE            360-13501-00B</p>	

**SYSTEM 1 LEFT HAND**

DISPLAY SHOWS BOX TEMPERATURE LED IS ON WHEN SYSTEM IS PRIMARY TOUCHING DISPLAY BUTTON SHOWS SET POINT

TEMP. DISPLAY SELECTOR  
 F  
 C

**SYSTEM 1**

THIS CIRCUIT ON THERMOSTAT LINE 11 (WIRES 141 SYSTEM 1 & 241 SYSTEM 2 ARE NOT USED WITH THERMOSTATS K31-00821-10 REV E). IF IT IS NECESSARY TO USE AN OLDER REVISION THERMOSTAT THE WIRES 141 AND 241 MUST BE ATTACHED.

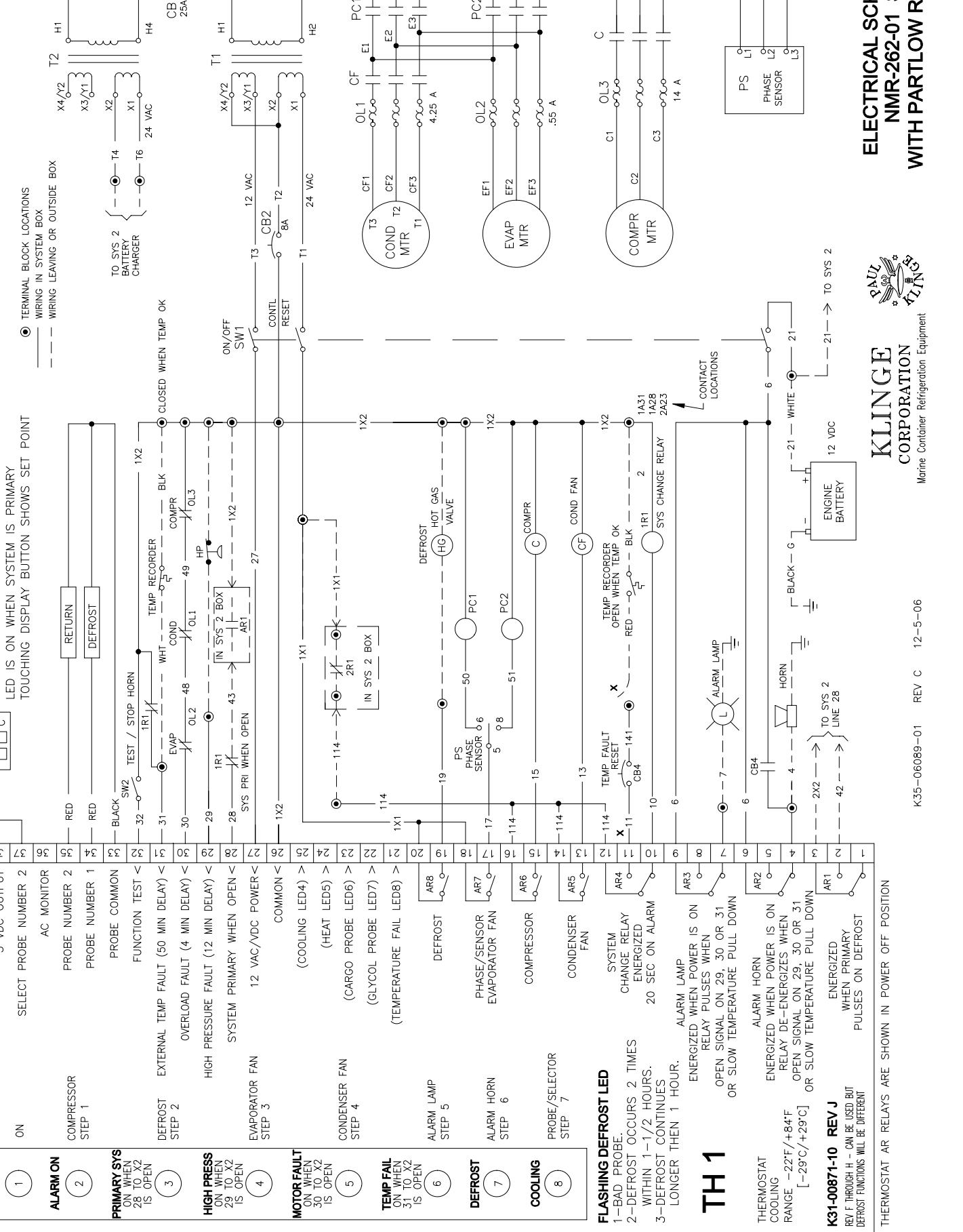
**OPERATING LEADS**

RS 485 DATA <-> Q4  
 RS 485 DATA <-> Q5  
 5 VDC OUTPUT <-> Q6  
 SELECT PROBE NUMBER 2 Q7  
 AC MONITOR Q8  
 PROBE NUMBER 2 Q9  
 PROBE NUMBER 1 Q10  
 PROBE COMMON Q11  
 FUNCTION TEST <-> Q12  
 EXTERNAL TEMP FAULT (50 MIN DELAY) <-> Q13  
 OVERLOAD FAULT (4 MIN DELAY) <-> Q14  
 HIGH PRESSURE FAULT (12 MIN DELAY) <-> Q15  
 SYSTEM PRIMARY WHEN OPEN <-> Q16  
 12 VAC/VDC POWER <-> Q17  
 COMMON <-> Q18  
 (COOLING LED4) > Q19  
 (HEAT LED5) > Q20  
 (CARGO PROBE LED6) > Q21  
 (GLYCOL PROBE LED7) > Q22  
 (TEMPERATURE FAIL LED8) > Q23  
 DEFROST AR8  
 PHASE/SENSOR EVAPORATOR FAN AR7  
 COMPRESSOR AR6  
 CONDENSER FAN AR5  
 SYSTEM CHANGE RELAY ENERGIZED AR4  
 20 SEC ON ALARM AR3  
 ALARM LAMP ENERGIZED WHEN POWER IS ON RELAY PULSES WHEN OPEN SIGNAL ON 29, 30 OR 31 OR SLOW TEMPERATURE PULL DOWN AR2  
 ALARM HORN ENERGIZED WHEN POWER IS ON RELAY DE-ENERGIZES WHEN OPEN SIGNAL ON 29, 30 OR 31 OR SLOW TEMPERATURE PULL DOWN AR1

**TH1**

THERMOSTAT COOLING RANGE -22°F/+84°F [-29°C/+29°C]

**K31-00871-10 REV J**  
 REV F THROUGH H - CAN BE USED BUT DEFROST FUNCTIONS WILL BE DIFFERENT



● TERMINAL BLOCK LOCATIONS  
 --- WIRING IN SYSTEM BOX  
 - - - WIRING LEAVING OR OUTSIDE BOX

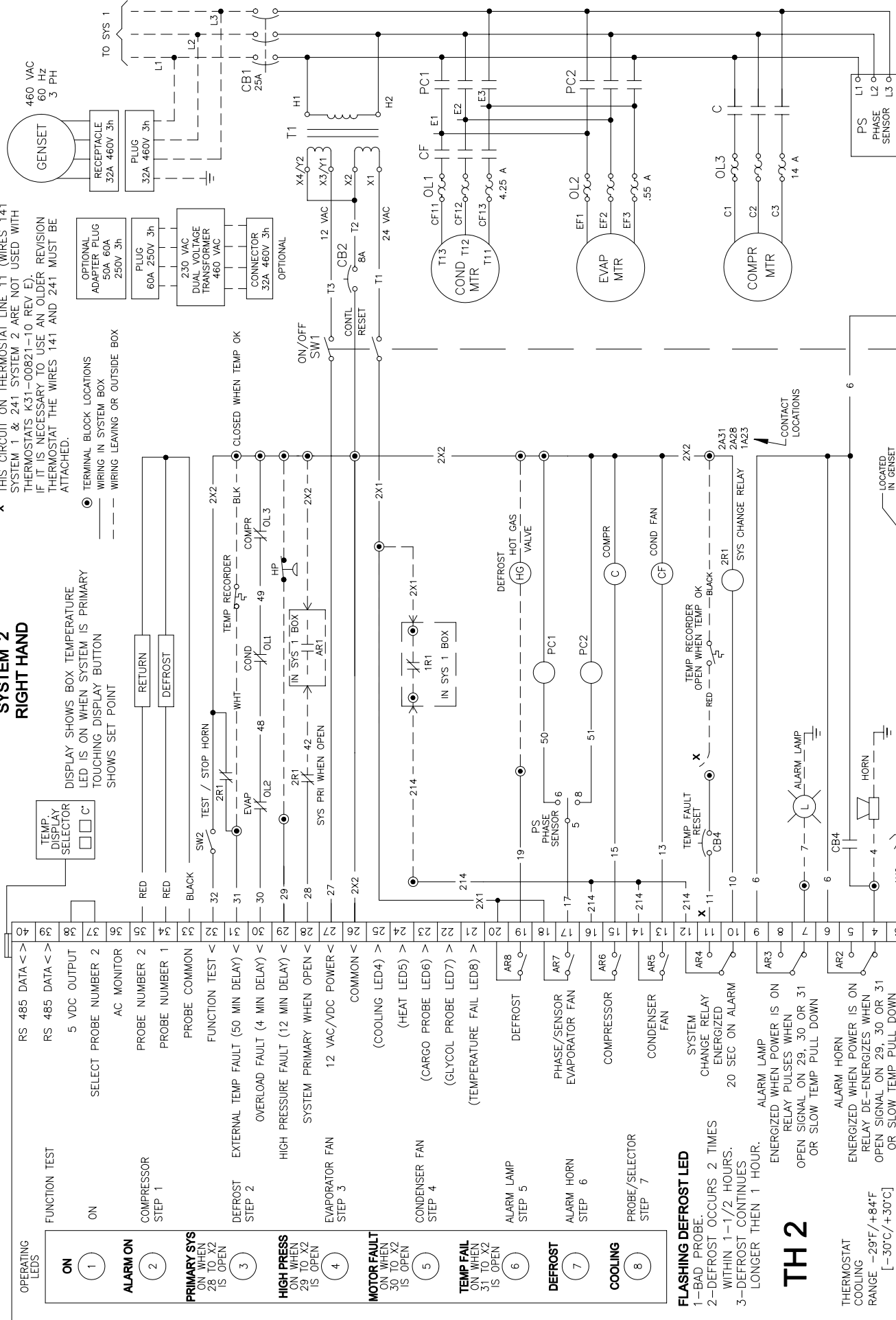
TO SYS 2 BATTERY CHARGER  
 TO SYS 2

TO SYS 2  
 TO SYS 2  
 TO SYS 2

TO SYS 2  
 TO SYS 2

## SYSTEM 2 RIGHT HAND

- x** THIS CIRCUIT ON THERMOSTAT LINE 11 (WIRES 141 SYSTEM 1 & 241 SYSTEM 2 ARE NOT USED WITH THERMOSTATS K31-00821-10 REV E). IF IT IS NECESSARY TO USE AN OLDER REVISION THERMOSTAT THE WIRES 141 AND 241 MUST BE ATTACHED.



- TERMINAL BLOCK LOCATIONS  
**○** WIRING IN SYSTEM BOX  
**---** WIRING LEAVING OR OUTSIDE BOX

DISPLAY SHOWS BOX TEMPERATURE LED IS ON WHEN SYSTEM IS PRIMARY TOUCHING DISPLAY BUTTON SHOWS SET POINT

TEMP. DISPLAY SELECTOR  
 F  
 C

OPERATING LEDS	RS 485 DATA <->	RS 485 DATA <->	5 VDC OUTPUT	SELECT PROBE NUMBER 2	AC MONITOR	PROBE NUMBER 2	PROBE NUMBER 1	PROBE COMMON	FUNCTION TEST <	EXTERNAL TEMP FAULT (50 MIN DELAY) <	OVERLOAD FAULT (4 MIN DELAY) <	HIGH PRESSURE FAULT (12 MIN DELAY) <	SYSTEM PRIMARY WHEN OPEN <	12 VAC/VDC POWER <	COMMON <	(COOLING LED4) >	(HEAT LED5) >	(CARGO PROBE LED6) >	(GLYCOL PROBE LED7) >	(TEMPERATURE FAIL LED8) >	DEFROST	PHASE/SENSOR EVAPORATOR FAN	COMPRESSOR	CONDENSER FAN	SYSTEM CHANGE RELAY ENERGIZED	ALARM LAMP	ALARM HORN	PROBE/SELECTOR
ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	

**FLASHING DEFROST LED**  
 1-BAD PROBE.  
 2-DEFROST OCCURS 2 TIMES WITHIN 1-1/2 HOURS.  
 3-DEFROST CONTINUES LONGER THEN 1 HOUR.

## TH 2

THERMOSTAT COOLING RANGE -29°F/+84°F [-30°C/+30°C]

**K31-00871-10 REV J**  
 REV F THROUGH H - CAN BE USED BUT DEFROST FUNCTIONS WILL BE DIFFERENT

AR RELAYS ARE SHOWN IN POWER OFF POSITION



## ELECTRICAL SCHEMATIC NMR-262-01 SYS 2 WITH PARTFLOW RECORDER

