

LENNOX

Industries Inc.

INSTALLATION INSTRUCTIONS

501,861M
12/84

Litho U.S.A.

ELECTRIC UNITS KITS AND ACCESSORIES

RELAY REPLACEMENT KIT

INSTALLATION INSTRUCTIONS FOR RELAY REPLACEMENT KITS (LB-53619CA-CN)

I - SHIPPING AND PACKING LIST

See table 1 for packing list for kits LB-53169CA-CN.

TABLE 1

KIT NUMBER	PARTS LIST
LB-53619CA	1 - Relay no. 58C9701 1 - Sticker no. 438D
LB-53619CB	1 - Relay no. 58C9901 1 - Sticker no. 439D
LB-53619CC	1 - Relay no. 69C9901 1 - Wire nut 1 - Sticker no. 440D
LB-53619CD	1 - Relay No. 69C9801 1 - Wire nut 1 - Sticker no. 441D
LB-53619CE	1 - Relay no. 58C9601 1 - Relay no. 14B0501 2 - Wires 1 - Sticker no. 442D
LB-53619CF	1 - Relay no. 58C9601 1 - Relay no. 14B0401 2 - Wires 1 - Wire nut 1 - Sticker 443D
LB-53619CG	1 - Relay no. 58C9801 1 - Relay no. 14B0401 2 - Wires 3 - Wire nuts 1 - Sticker no. 444D
LB-53619CH	1 - Relay no. 14B0401 1 - Sticker no. 445D
LB-53619CJ	1 - Relay no. 14B0301 1 - Relay no. 14B0501 1 - Sticker no. 446D

TABLE 1 CONT.

KIT NUMBER	PARTS LIST
LB-53619CK	1 - Relay no. 14B0301 1 - Relay no. 14B0401 1 - Sticker no. 447D
LB-53619CL	2 - Relays no. 14B0301 1 - Relay no. 14B0501 4 - Wires 1 - Sticker no. 448D
LB-53619CM	2 - Relays no. 14B0301 1 - Relay no. 14B0401 4 - Wires 1 - Sticker no. 449D
LB-53619CN	1 - Relay no. 14B0301 1 - Sticker no. 450D

II - APPLICATION

Tables 2 through 14 indicate diagram designations and part numbers to be omitted and added for each kit and unit.

TABLE 2

LB-53619CA (CAT. NO. 14G91)

UNIT	OMIT		ADD	
	UNIT WIRING DIAGRAM DESIGNATION	PART NUMBER	UNIT WIRING DIAGRAM DESIGNATION	PART NUMBER
CHP8-953-7M CHP8-953-7Y CHP8-1353-6G CHP8-1353-6Y HP6-953V-6M HP6-953V-6Y	TIME DELAY RELAY	35A3001	TIME DELAY RELAY	58C9701
CB11-41-171-1P,-2P,-4P CB11-21-171-1P,-2P CB11-26-171-1P,-2P ECB11-26-171-1T ECB11-41-171-1T	HEAT RELAY #1	35A3001	HEAT RELAY #1	58C9701
ES602-161-2P E1202-5-1P	HEAT RELAY #1	48A0501	HEAT RELAY #1	58C9701

TABLE 3
LB-53619CB (CAT. NO. 14G92)

UNIT	OMIT		ADD	
	UNIT WIRING DIAGRAM DESIGNATION	PART NUMBER	UNIT WIRING DIAGRAM DESIGNATION	PART NUMBER
ES5Q2-241-2P ES5Q2-321-2P ES5Q3-321-2P E12Q2-10-1P E12Q3-10-1P	HEAT RELAY #1	42A3401	HEAT RELAY #1	58C9901
CB11-41-261-1P, -2P, -4P CB11-41-341-1P, -2P, -4P CB11-21-261-1P, -2P CB11-21-341-1P, -2P CB11-26-261-1P, -2P, -4P ECB11-26-341-1P, -2P, -4P ECB11-26-341-1T ECB11-41-341-1T	HEAT RELAY #1	35A2901	HEAT RELAY #1	58C9901

TABLE 4
LB-53619CC (CAT. NO. 14G93)

UNIT	OMIT		ADD	
	UNIT WIRING DIAGRAM DESIGNATION	PART NUMBER	UNIT WIRING DIAGRAM DESIGNATION	PART NUMBER
CB11-41-511-1P, -2P, -4P CB11-26-511-1P, -2P, -4P	HEAT RELAY #1 HEAT RELAY #2	35A3101 35A3001	HEAT RELAY #1	69C9901

TABLE 5
LB-53619CD (CAT. NO. 14G94)

UNIT	OMIT		ADD	
	UNIT WIRING DIAGRAM DESIGNATION	PART NUMBER	UNIT WIRING DIAGRAM DESIGNATION	PART NUMBER
CB11-41-601-1P, -2P, -4P	HEAT RELAY #1 HEAT RELAY #2	35A3101 35A2901	HEAT RELAY #1	69C9801

TABLE 6
LB-53619CE (CAT. NO. 14G95)

UNIT	OMIT		ADD	
	UNIT WIRING DIAGRAM DESIGNATION	PART NUMBER	UNIT WIRING DIAGRAM DESIGNATION	PART NUMBER
ES5Q2/Q3-391-2P ES5Q2/Q3-471-2P	RESISTOR HEAT RELAY #1 HEAT RELAY #2	P-8-6256 42A3501 42A3401	HEAT RELAY #1 HEAT RELAY #2	58C9601 14B0501
E12Q2/Q3/Q4/Q5-15-1P	RESISTOR HEAT RELAY #1 HEAT RELAY #2	P-8-6321 42A3501 42A3401	HEAT RELAY #1 HEAT RELAY #2	58C9601 14B0501

TABLE 7
LB-53619CF (CAT. NO. 14G96)

UNIT	OMIT		ADD	
	UNIT WIRING DIAGRAM DESIGNATION	PART NUMBER	UNIT WIRING DIAGRAM DESIGNATION	PART NUMBER
ES5Q3/Q5-551-2P ES5Q2/Q3/Q4-631-2P	RESISTOR HEAT RELAY #1 HEAT RELAY #2 HEAT RELAY #3	P-8-6256 42A3501 42A3501 48A0501	HEAT RELAY #1 HEAT RELAY #2	58C9601 14B0401
E12Q3/Q4/Q5-20-1P	RESISTOR HEAT RELAY #1 HEAT RELAY #2 HEAT RELAY #3	P-8-6321 42A3501 42A3501 48A0501	HEAT RELAY #1 HEAT RELAY #2	58C9601 14B0401

TABLE 8
LB-53619CG (CAT. NO. 14G97)

UNIT	OMIT		ADD	
	UNIT WIRING DIAGRAM DESIGNATION	PART NUMBER	UNIT WIRING DIAGRAM DESIGNATION	PART NUMBER
ES5Q3/Q5-711-2P ES5Q3/Q4/Q5-781-2P	RESISTOR HEAT RELAY #1 HEAT RELAY #2 HEAT RELAY #3 HEAT RELAY #4	P-8-6256 42A3501 42A3501 48A0501 42A3401	HEAT RELAY #1 HEAT RELAY #2	58C9801 14B0401
E12Q4/Q5-25-1P	RESISTOR HEAT RELAY #1 HEAT RELAY #2 HEAT RELAY #3 HEAT RELAY #4	P-8-6321 42A3501 42A3501 48A0501 42A3401	HEAT RELAY #1 HEAT RELAY #2	58C9801 14B0401

TABLE 9
LB-53619CH (CAT. NO. 14G98)

UNIT	OMIT		ADD	
	UNIT WIRING DIAGRAM DESIGNATION	PART NUMBER	UNIT WIRING DIAGRAM DESIGNATION	PART NUMBER
E11Q2-371-3P	HEAT RELAY #1 HEAT RELAY #2	46A2701 48A0501	HEAT RELAY #1	14B0401

TABLE 10
LB-53619CJ (CAT. NO. 14G99)

UNIT	OMIT		ADD	
	UNIT WIRING DIAGRAM DESIGNATION	PART NUMBER	UNIT WIRING DIAGRAM DESIGNATION	PART NUMBER
E11Q2/Q3/Q4-561-3P	HEAT RELAY #1 HEAT RELAY #2 HEAT RELAY #3	48A0601 48A0501 46A2701	HEAT RELAY #1 HEAT RELAY #2	14B0301 14B0501

TABLE 11
LB-53619CK (CAT. NO. 15G00)

UNIT	OMIT		ADD	
	UNIT WIRING DIAGRAM DESIGNATION	PART NUMBER	UNIT WIRING DIAGRAM DESIGNATION	PART NUMBER
E11Q3/Q4/Q5-751-3P	HEAT RELAY #1 HEAT RELAY #2 HEAT RELAY #3 HEAT RELAY #4	48A0601 48A0501 46A2701 48A0501	HEAT RELAY #1 HEAT RELAY #2	14B0301 14B0401

TABLE 12
LB-53619CL (CAT. NO. 15G05)

UNIT	OMIT		ADD	
	UNIT WIRING DIAGRAM DESIGNATION	PART NUMBER	UNIT WIRING DIAGRAM DESIGNATION	PART NUMBER
E11Q4/Q5-941-3P	HEAT RELAY #1 HEAT RELAY #2 HEAT RELAY #3 HEAT RELAY #4 HEAT RELAY #5	48A0601 48A0501 48A0601 48A0501 48A0501	HEAT RELAY #1 HEAT RELAY #2 HEAT RELAY #3	14B0301 14B0301 14B0501
ECH9-46/65-783-2G ECH9-46/65-943-2G ECH9-46/65-1133-2G	HEAT RELAY #1 HEAT RELAY #2 HEAT RELAY #3 HEAT RELAY #4	62A2301 42A3501 62A2301 42A3401	HEAT RELAY #1 HEAT RELAY #2 HEAT RELAY #3	14B0301 14B0301 14B0501

TABLE 13
LB-53619CM (CAT. NO. 15G06)

UNIT	OMIT		ADD	
	UNIT WIRING DIAGRAM DESIGNATION	PART NUMBER	UNIT WIRING DIAGRAM DESIGNATION	PART NUMBER
E11Q5-1121-3P E11Q5-1123-3L	HEAT RELAY #1	48A0601	HEAT RELAY #1	14B0301
	HEAT RELAY #2	48A0501	HEAT RELAY #2	14B0301
	HEAT RELAY #3	48A0401	HEAT RELAY #3	14B0401
	HEAT RELAY #4	48A0501	HEAT RELAY #3	14B0401
	HEAT RELAY #5	42A3401		
ES5Q3/Q5 861-2P ES5Q3/Q4/Q5-941-2P ES5Q5-1021/1101-2P ES5Q5-943/1023/1103-2L	HEAT RELAY #1	48A0601	HEAT RELAY #1	14B0301
	HEAT RELAY #2	48A0501	HEAT RELAY #2	14B0301
	HEAT RELAY #3	48A0401	HEAT RELAY #3	14B0401
	HEAT RELAY #4	48A0501		
	HEAT RELAY #5	42A3401		

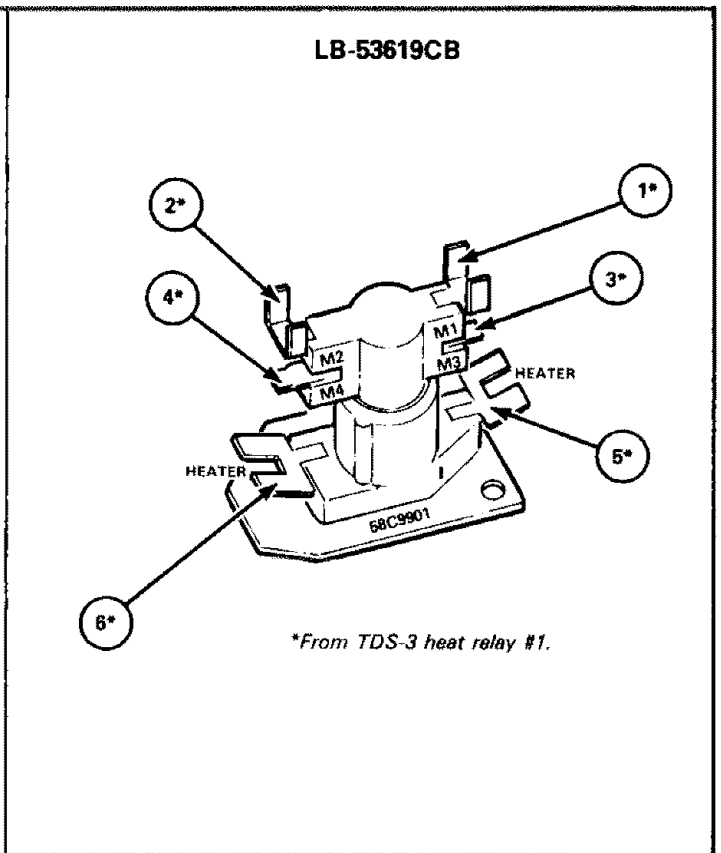
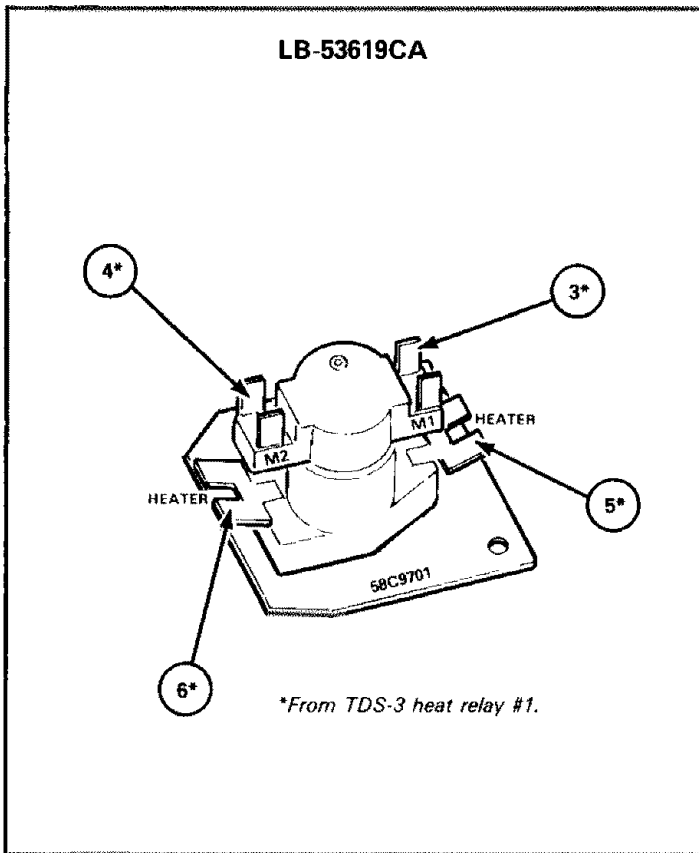
TABLE 14
LB-53619CN (CAT. NO. 15G07)

UNIT	OMIT		ADD	
	UNIT WIRING DIAGRAM DESIGNATION	PART NUMBER	UNIT WIRING DIAGRAM DESIGNATION	PART NUMBER
ECH9-46/65-313-2G	HEAT RELAY #1	62A2301	HEAT RELAY #1	14B0301
ECH9-46/65-563-2G	HEAT RELAY #2	42A3401		

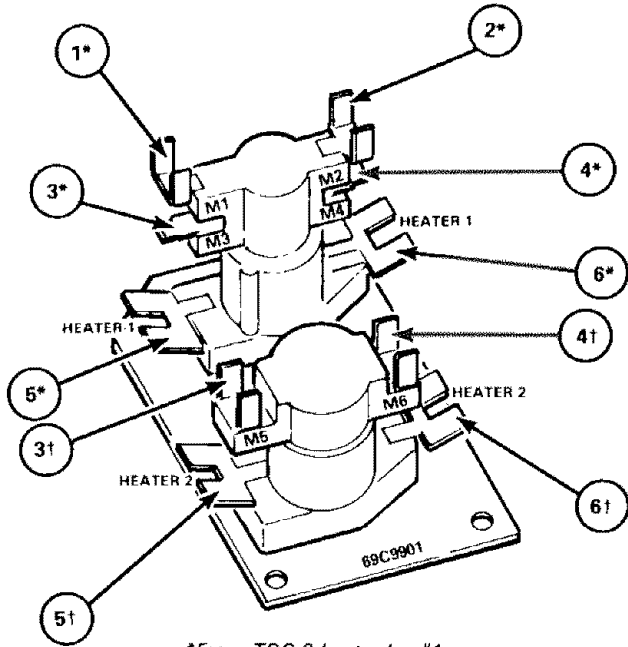
III - INSTALLATION

The following illustrations show the wiring of replacement relays. The circled numbers next to each replacement relay terminal represent corresponding TDS-3 relay terminals. For example, in the first illustration (LB-53619CA) the wire connected to terminal M2 of the replacement relay was removed from terminal 4 of TDS-3 heat relay #1.

After installing and wiring replacement relay(s), be sure to affix the terminal designation sticker (provided) in a readily visible location.



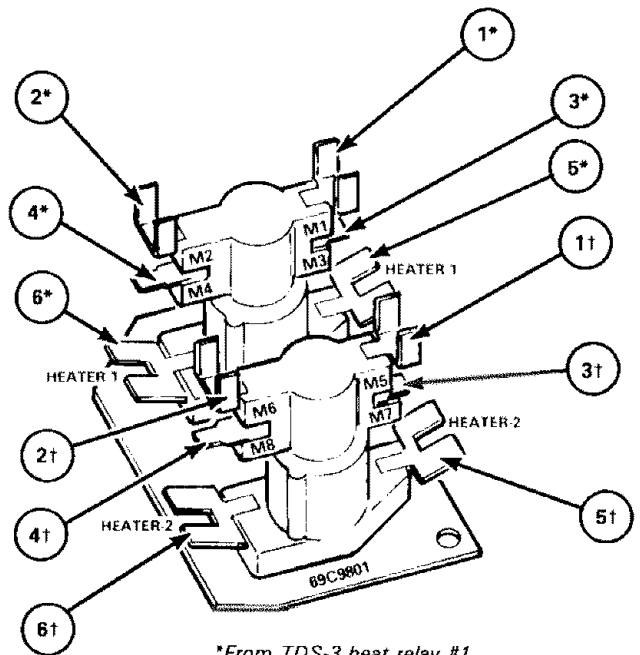
LB-53619CC



*From TDS-3 heat relay #1.
†From TDS-3 heat relay #2.

NOTE - Remove terminals from ends of wires connected to terminals 7 and 9 of TDS-3 heat relay #1 and tie together with wire nut.

LB-53619CD

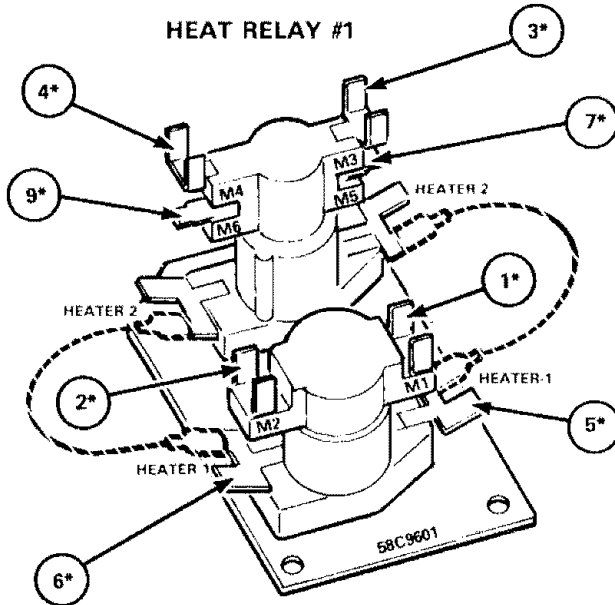


*From TDS-3 heat relay #1.
†From TDS-3 heat relay #2.

NOTE - Remove terminals from ends of wires connected to terminals 7 and 9 of TDS-3 heat relay #1 and tie together with wire nut.

LB-53619CE

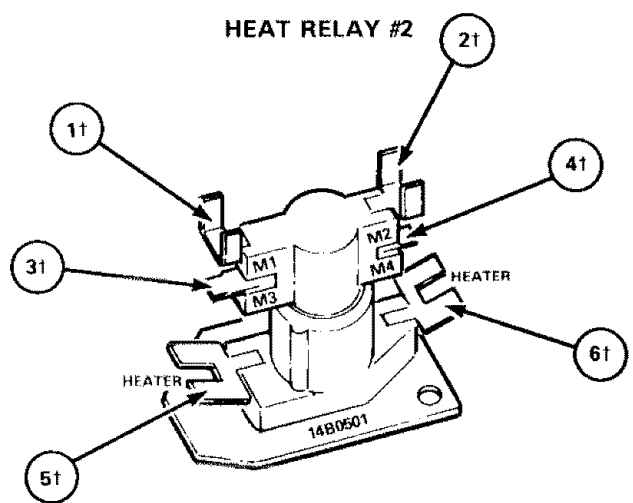
HEAT RELAY #1

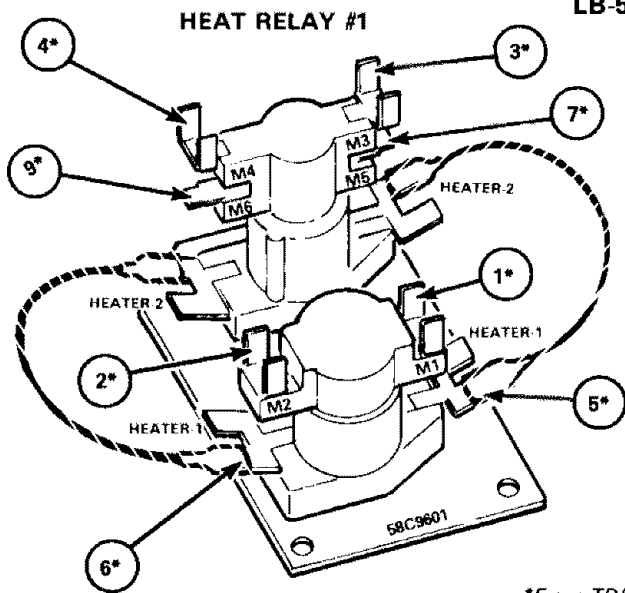


*From TDS-3 heat relay #1.
†From TDS 3 heat relay #2.

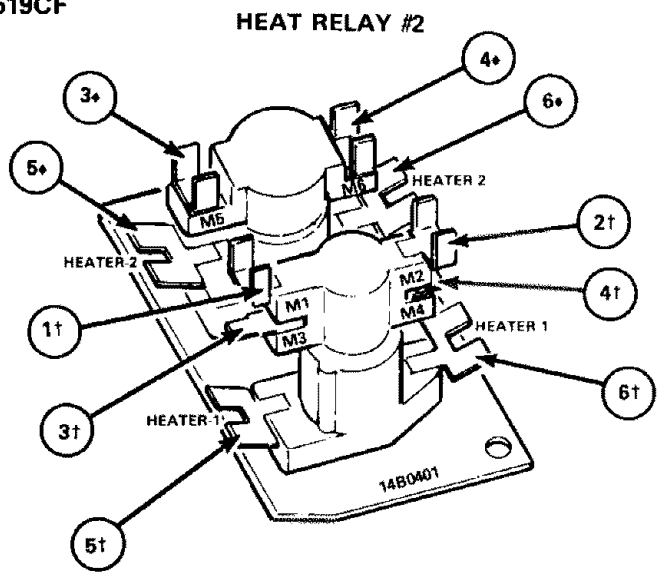
NOTE - Add the following wires:
1 - Wire #3 connecting HEATER-1 (right side) and HEATER-2 (right side) terminals of replacement heat relay #1.
2 - Wire #4 connecting HEATER-1 (left side) and HEATER-2 (left side) terminals of replacement heat relay #1.

HEAT RELAY #2





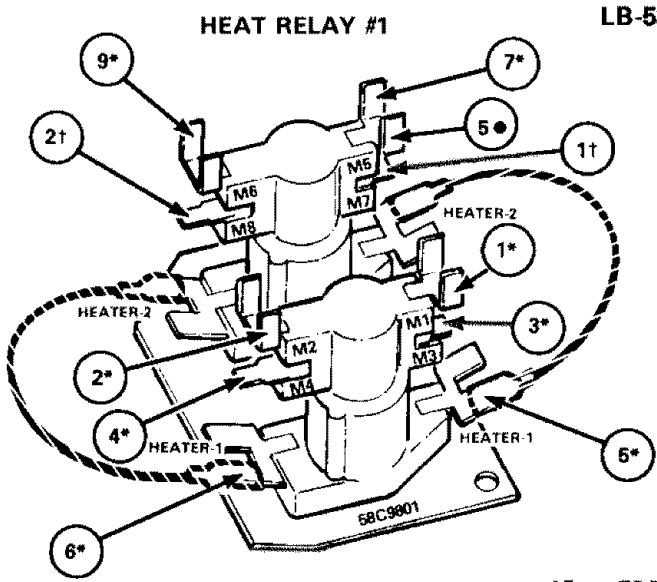
LB-53619CF



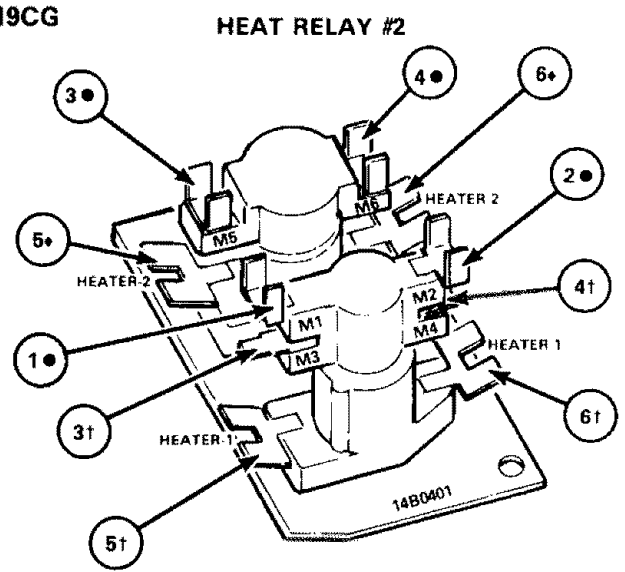
*From TDS-3 heat relay #1.
 †From TDS-3 heat relay #2.
 ◆From TDS-3 heat relay #3.

NOTE - Make the following wiring changes:

- 1 - Add wire #3 connecting HEATER-1 (right side) and HEATER-2 (right side) terminals of replacement heat relay #1.
- 2 - Add wire #4 connecting HEATER-1 (left side) and HEATER-2 (left side) terminals of replacement heat relay #1.
- 3 - Remove terminal ends of wires connected to terminals 7 and 9 of TDS-3 heat relay #2 and tie together using wire nut.



LB-53619CG



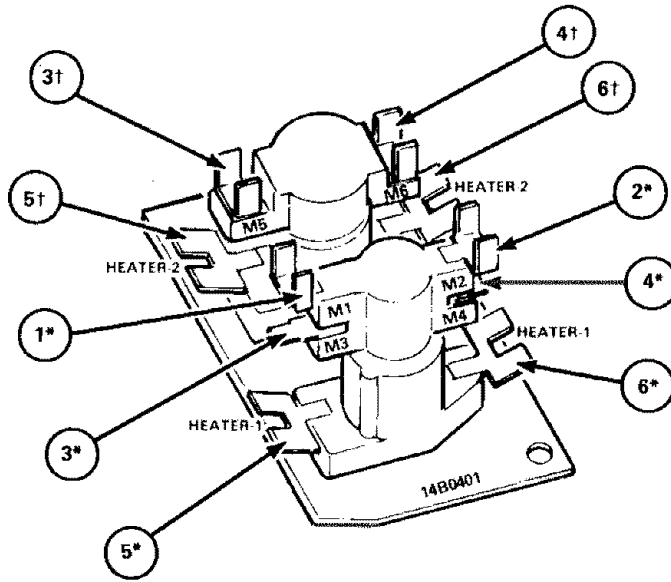
*From TDS-3 heat relay #1.
 †From TDS-3 heat relay #2.
 ●From TDS-3 heat relay #3.
 ◆From TDS-3 heat relay #4.

NOTE - Make the following wiring changes:

- 1 - Connect HEATER-1 (right side) and HEATER-2 (right side) of replacement heat relay #1 using wire #3.
- 2 - Connect HEATER-1 (left side) and HEATER-2 (left side) of replacement heat relay #1 using wire #4.
- 3 - Remove wires connected to terminals 7 and 9 of TDS-3 heat relay #2.

- 4 - Remove terminal ends of wires connected to terminal 3 of TDS-3 heat relay #3 and tie together using wire nut. Remove terminal ends of wires connected to terminal 4 of TDS-3 heat relay #3 and tie together using wire nut.
- 5 - Remove terminal ends of wires connected to terminal 6 of TDS-3 heat relay #4 and tie together using wire nut. Move wire from terminal 5 of TDS-3 relay #4 to M5 of replacement relay #1.

LB-53619CH

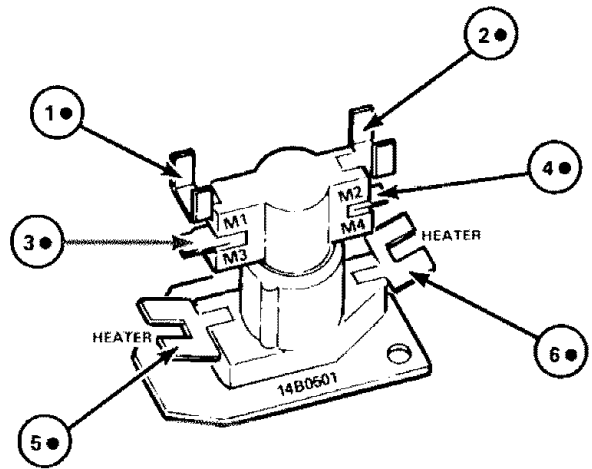
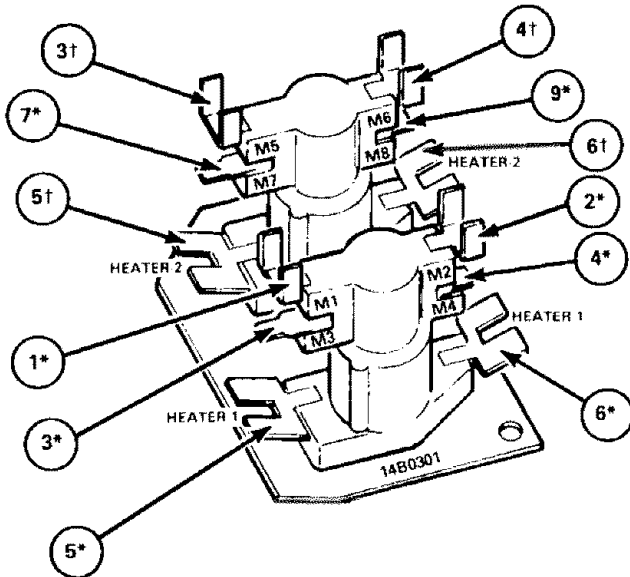


*From TDS-3 heat relay #1.
†From TDS-3 heat relay #2.

HEAT RELAY #1

LB-53619CJ

HEAT RELAY #2

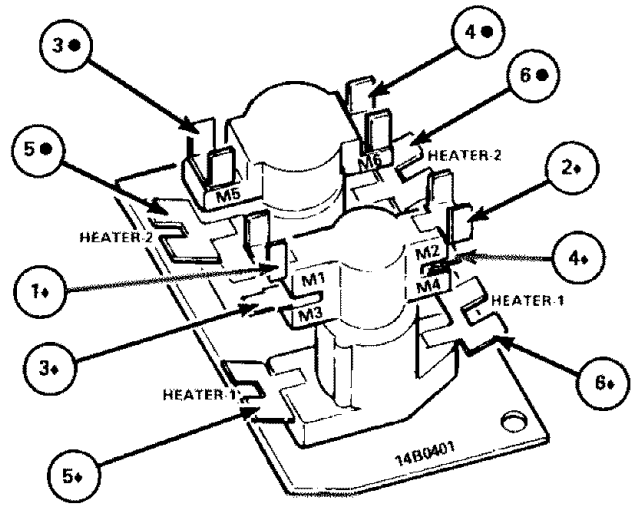
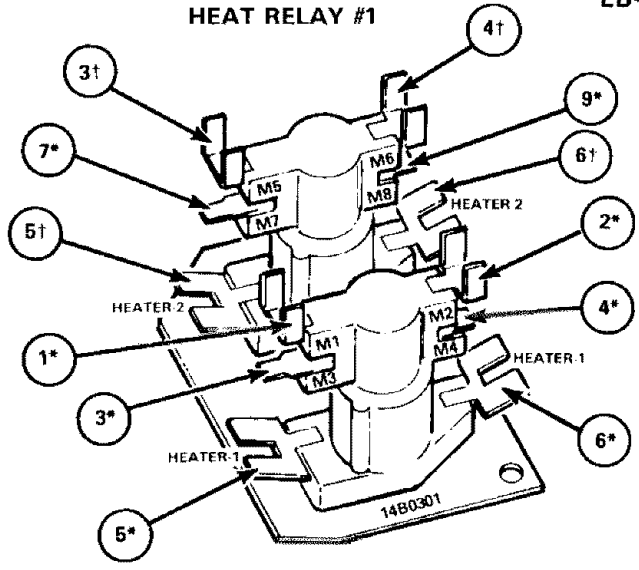


*From TDS-3 heat relay #1.
†From TDS-3 heat relay #2.
●From TDS-3 heat relay #3.

HEAT RELAY #1

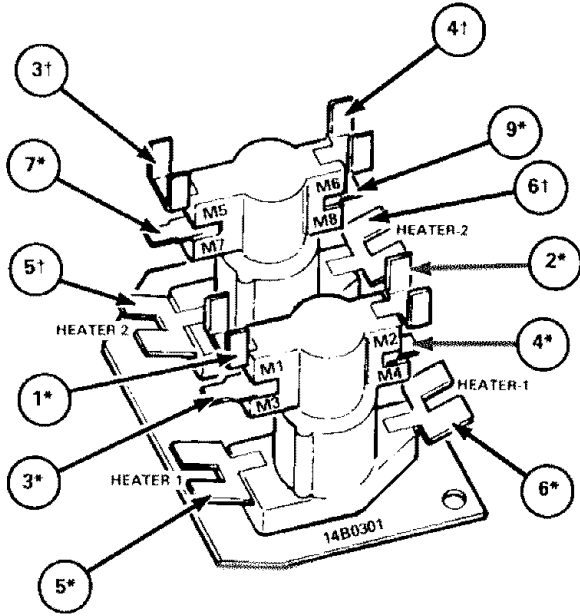
LB-53619CK

HEAT RELAY #2

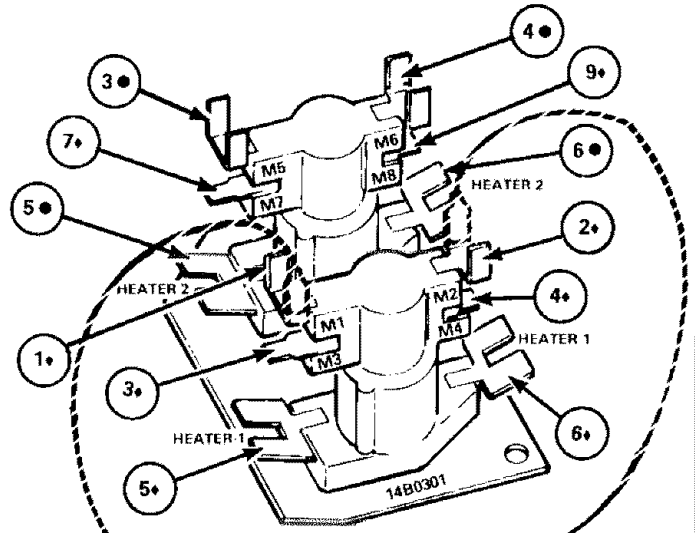


- *From TDS-3 heat relay #1.
- †From TDS-3 heat relay #2.
- ◆From TDS-3 heat relay #3.
- From TDS-3 heat relay #4.

HEAT RELAY #1

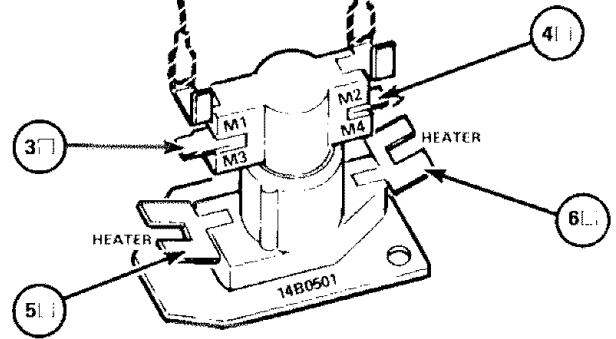


HEAT RELAY #2



- *From TDS-3 heat relay #1.
- †From TDS-3 heat relay #2.
- From TDS-3 heat relay #3.
- From TDS-3 heat relay #4.
- From TDS-3 heat relay #5.

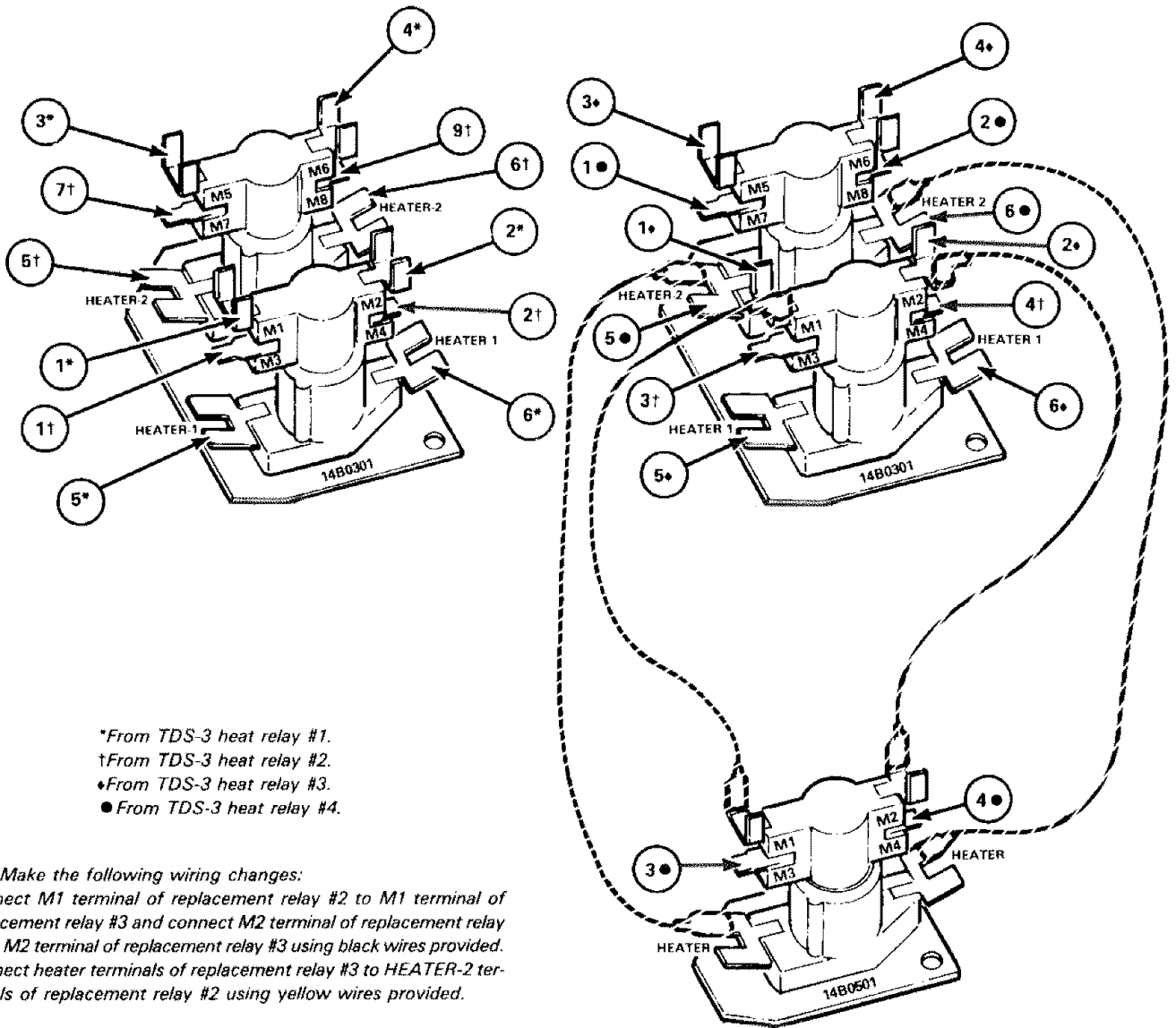
NOTE - Connect M1 terminal of replacement relay #2 to M1 terminal of replacement relay #3 and connect M2 terminal of replacement relay #2 to M2 terminal of replacement relay #3 using black wires provided.



HEAT RELAY #3

E11Q4/Q5-941-3P APPLICATION

LB-53619CL



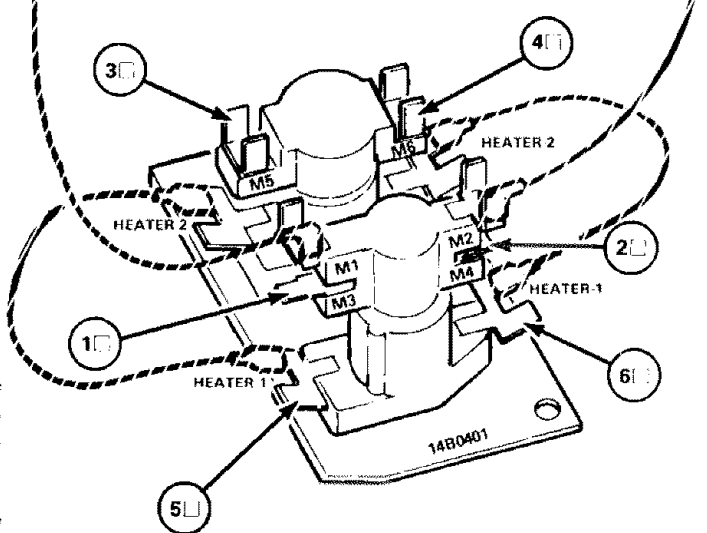
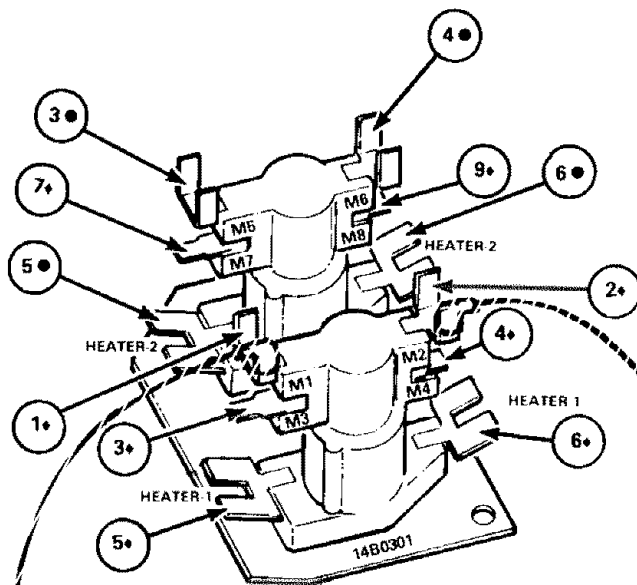
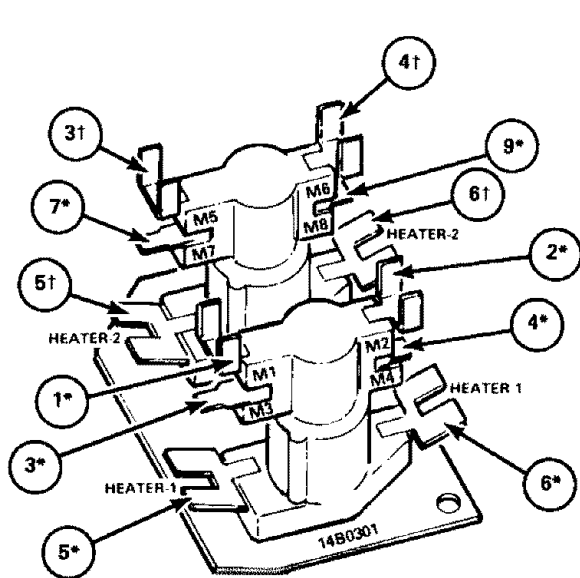
- *From TDS-3 heat relay #1.
- †From TDS-3 heat relay #2.
- ◆From TDS-3 heat relay #3.
- From TDS-3 heat relay #4.

NOTE - Make the following wiring changes:

- 1 - Connect M1 terminal of replacement relay #2 to M1 terminal of replacement relay #3 and connect M2 terminal of replacement relay #2 to M2 terminal of replacement relay #3 using black wires provided.
- 2 - Connect heater terminals of replacement relay #3 to HEATER-2 terminals of replacement relay #2 using yellow wires provided.

ECH9-46/65-783-2G, ECH9-46/65-943-2G and ECH9-46/65-1133-2G APPLICATION

LB-53619CM

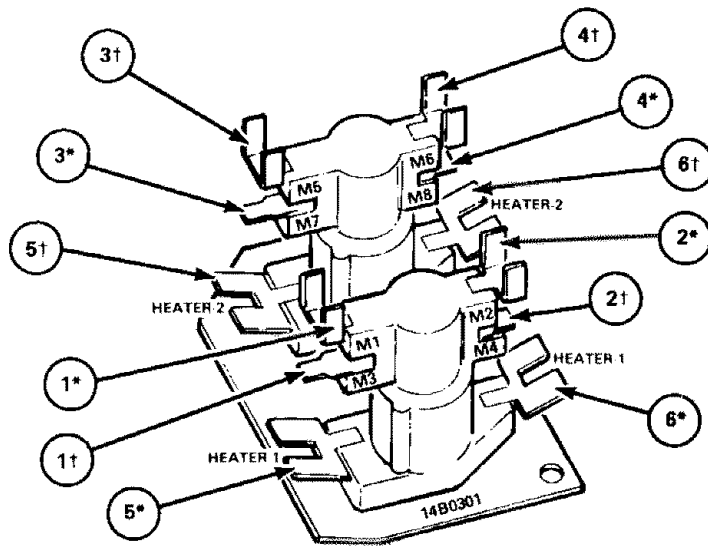


- *From TDS-3 heat relay #1.
- †From TDS-3 heat relay #2.
- From TDS-3 heat relay #3.
- From TDS-3 heat relay #4.
- From TDS-3 heat relay #5.

NOTE - Make the following wiring changes:

- 1 - Connect terminal M1 of replacement relay #2 to terminal M1 of replacement relay #3 and connect terminal M2 of replacement relay #2 to terminal M2 of replacement relay #3 using the two black wires provided in kit.
- 2 - Connect HEATER-2 terminals of replacement relay #3 to HEATER-1 terminals of replacement relay #3 using two yellow wires provided in kit.

LB-53619CN



*From TDS-3 heat relay #1.
†From TDS-3 heat relay #2.