

# ILLUSTRATED PARTS BREAKDOWN

# H745 REGULATOR

## HOW TO USE THE IPB

### GENERAL

This IPB is compiled following the organization and nomenclature of the engineering drawing structure.

### MAJOR ASSEMBLY LOCATOR

The Major Assembly Locator (first illustration) is an index that provides a description and a figure reference for all illustrations used in this manual.

### INDENTED PARTS LIST

This manual identifies each assembly being broken down (figure reference callout), and all parts of that assembly. Further breakdown of an assembly is shown by an asterisk (\*) preceding the item callouts in the Description Column. The number of asterisks preceding an item is used to denote the subordination of that item with respect to the Major Assembly. A single asterisk preceding an item description indicates that the item is part of the major assembly being illustrated. Items that are subordinate to single asterisks items, are denoted by two asterisks (\*\*) and immediately follow the related single asterisk item. Additional asterisks are used, as required, to denote further subordination. This system of part identification, provides a means for the user to identify the next higher assembly item and make alternate selections for parts when the required replacement part or assembly is not immediately available.

### COLUMN CALLOUT DESCRIPTION

**Figure & Item** — Indicates the figure number and item number of each part.

**Description** — Lists the name of the part and pertinent specifications (when required). Asterisks preceding the description denote the subordination of the part to the next higher assembly.

**DEC Part No.** — Lists the DEC part ordering number. A blank in this column indicates a DEC part number was not assigned at the time of publication.

**ECO Cut-In** — The notation at the top of this column indicates the ECO level of the system (option), at which the IPB was initially prepared. Subsequent ECO level designations, that modify existing parts or add new parts to the device, are inserted in the ECO Cut-In column next to the part that is added or modified. A bracket ([]) preceding the item description is used to indicate the parts affected by ECO's.

**Vendor Code/Part No.** — Indicates vendor parts that are not stocked by DEC. Refer to the Field Service Spares Catalog (vendor part number to DEC part number) for the vendor code cross-reference.

**Used On Code** — Letters in this column correspond to the variation codes assigned in Figure 1. Parts with an Alpha notation(s) are used only in those option variations. A blank indicates that the part is used on all option variations.

**Ref Fig No.** — A cross reference between illustrations. For each Major Assembly, the number in this column denotes the figure of the next higher assembly. For all subassemblies, the number in this column denotes the figure showing additional detailed breakdown.

### SYMBOL USAGE

**Hardware Designators** — Alpha designators for screws (S), washers (W), nuts (N), and retaining rings (R) are inserted after the item number callouts on the illustration when stacked item numbers are used.

**Attaching Hardware** — The @ symbol is inserted before any part that is used as attaching hardware. Attaching hardware is denoted as those parts that are not an integral part of the referenced assembly.

**(NFR) Not Field Repairable** — The (NFR) symbol is inserted after any assembly that is not to be field dismantled.

**Other Symbols** — Any other symbols that are required for kits, accessories, etc., will be explained and appear as part of the item description.

## REVISION HISTORY

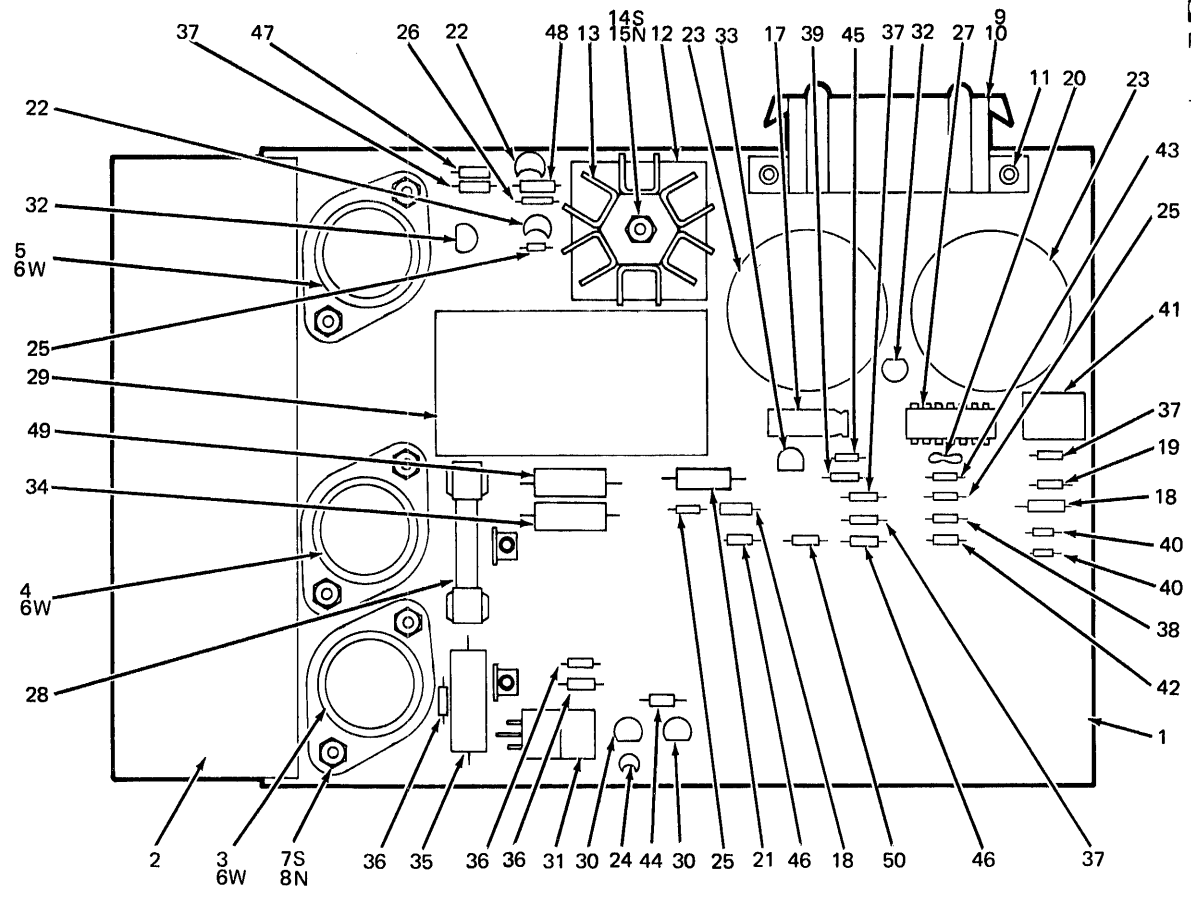
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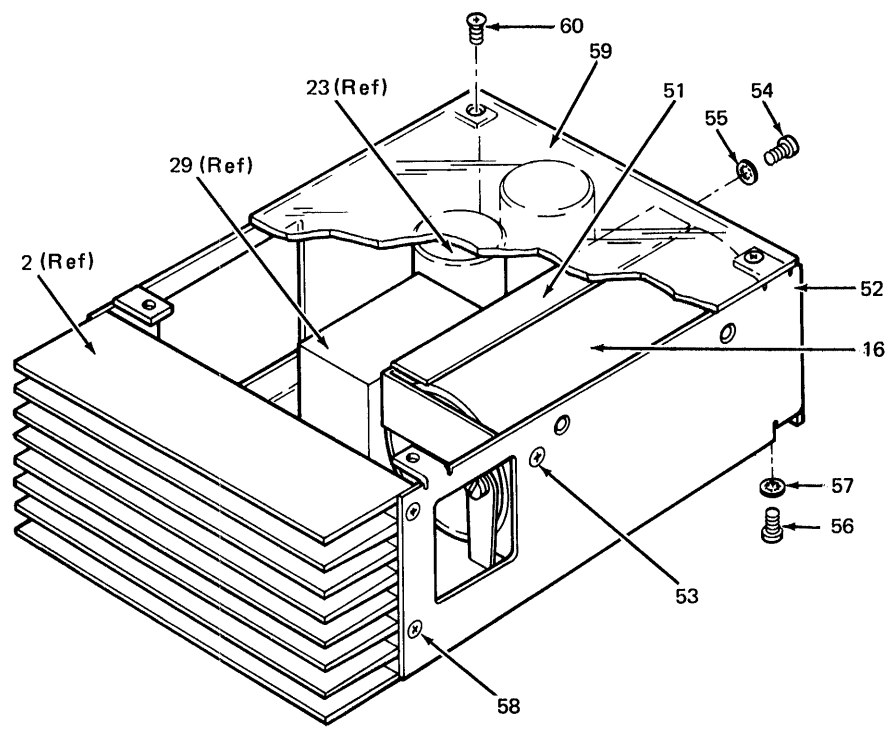
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DEC is not responsible for errors which may appear in the technical description (including illustrations and photographs) of the products covered by this manual.

None of the descriptions contained in this manual imply the granting of any license whatsoever to make, use or sell equipment constructed in accordance therewith.



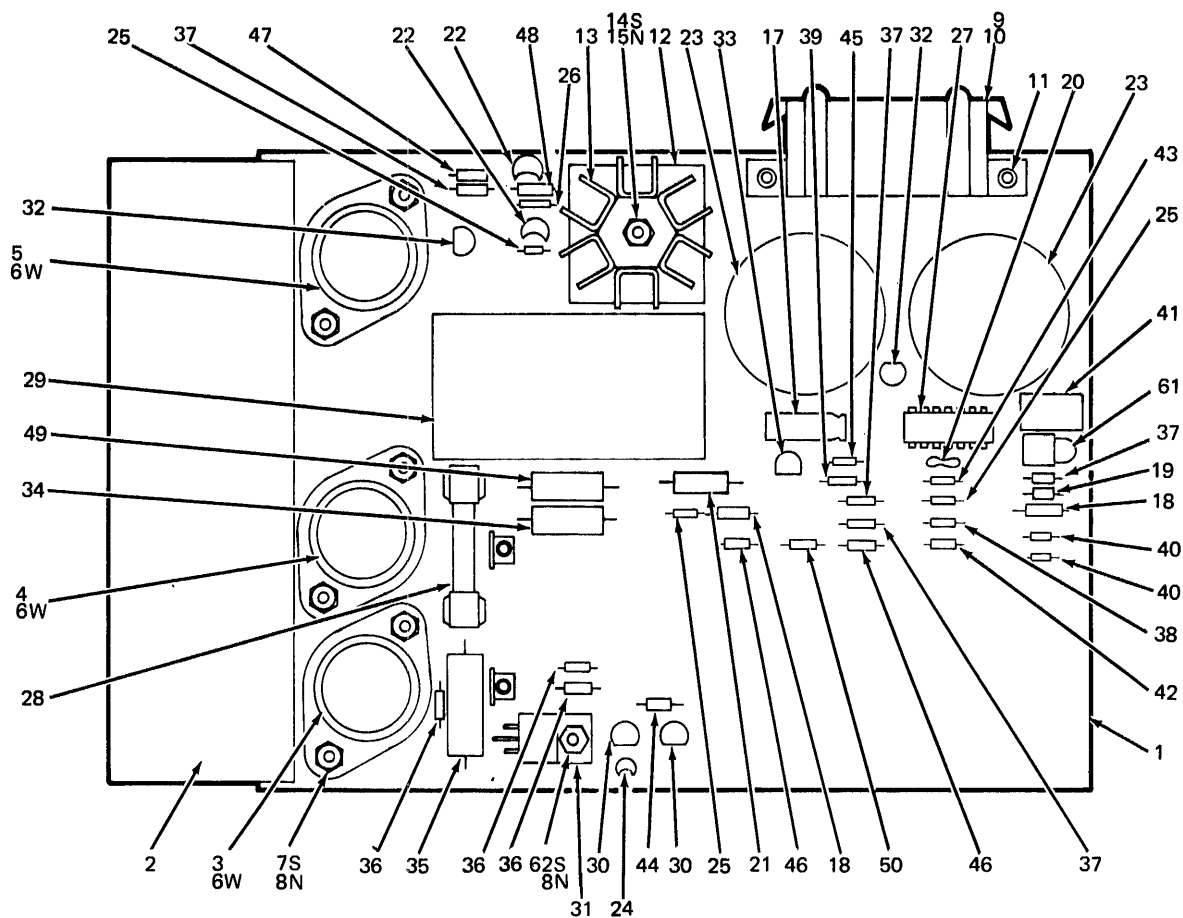
ETCH REV C



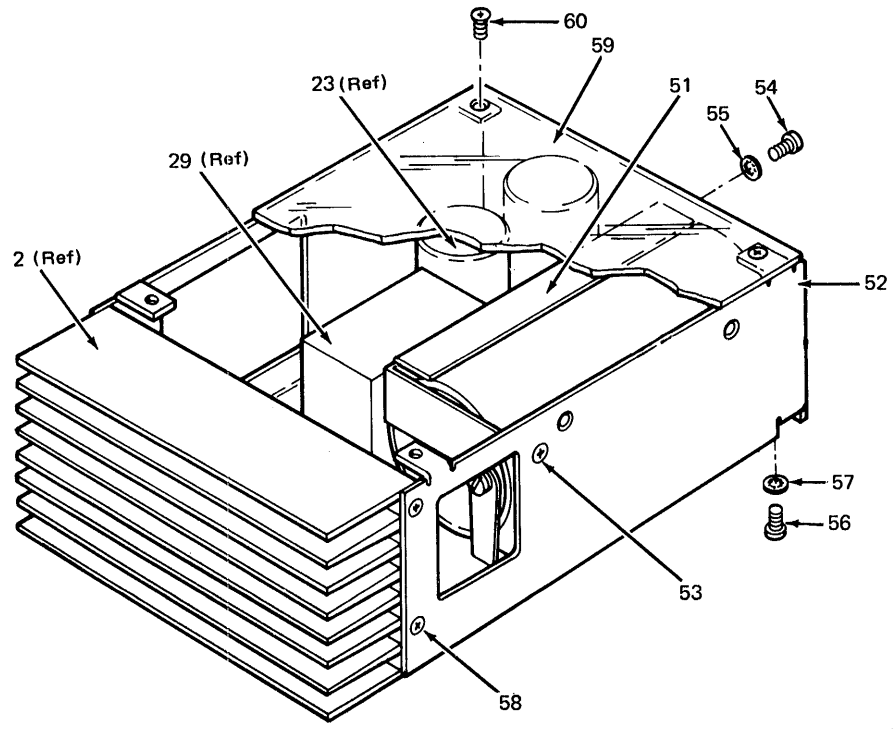
H745-01

Figure 1. H745 Regulator Assembly (Etch Rev. C)

FIG & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN H745 00000	USED ON CODE	VENDOR CODE	PART NO.	REF FIG NO.
1-	H745 REGULATOR ASSEMBLY -15V ETCH REV. C	H745-00					
1	*Board, Etched Circuit (Etch Rev. C)	50-09723-00					
2	*Heat Sink	12-10737-00					
3	*Transistor (Q2) 2N5302	15-10196-00					
4	*Diode (D4) NSR8117	11-10715-00					
5	*SCR (D5) MCR649P-2	11-09465-00					
6	*Washer, Insulator	90-06721-00					
7	*Screw, Phi. Pan Hd. No. 4-40 x 1/2	90-06013-01					
8	*Nut, Kep No. 4-40	90-06557-00					
9	*Connector, Mate-N-Lok (J1)	12-09340-00					
10	*Contact, Female	12-09456-00					
11	*Eyelet GS-4-7	90-06732-00					
12	*Diode, Bridge (D1)	11-10714-00					
13	*Heat Sink, Bridge Rect.	12-10907-00					
14	*Screw, Phi Pan Hd No. 6-32 x 1/2	90-06024-01					
15	*Nut, Kep No. 6-32	90-08185-00					
16	*Capacitor (C1) 31K MFD 50V	10-10858-00					
17	*Capacitor (C2) 50 MFD 25V -10 + 75%	10-01796-00					
18	*Capacitor (C3, C12) 2.2 MFD 35V 10%	10-02431-00					
19	*Capacitor (C4) 2700 PF 100V 5%	10-01637-00					
20	*Capacitor (C5) 56 PF 100V 5%	10-00012-00					
21	*Capacitor (C6) .068 MFD 100V 10%	10-00052-00					
22	*Capacitor (C7, C11) .01 MFD 100V 20%	10-01610-00					
23	*Capacitor (C8, C9) 3.0K MFD 25V	10-10703-00					
24	*Capacitor (C10) .05 MFD 25V -20%	10-01774-00					
25	*Diode (D2, D3, D7) D664	11-00114-00					
26	*Diode (D6) 1N967	11-10068-00					
27	*Integrated Circuit (E1) UA723C	19-10415-00					
28	*Fuse (F1)	90-07226-00					
29	*Reactor (L1) 60 UHY	16-10850-00					
30	*Transistor (Q1, Q4) A05	15-10705-00					
31	*Transistor (Q3) D45H8	15-10708-00					
32	*Transistor (Q5, Q6) A55	15-10706-00					
33	*Transistor, Uni Junction (Q7)	15-10877-00					
34	*Resistor (R1) 3.9K Ohm 1W 10%	13-02927-00					
35	*Resistor (R2) .03 Ohm 5W 3%	13-10876-01					
36	*Resistor (R3, R13, R14) 10 Ohm 1/4W 5%	13-01317-00					
37	*Resistor (R4, R10, R16, R20) 1K Ohm 1/4W 5%	13-00365-00					
38	*Resistor (R5) 39K Ohm 1/4W 5%	13-02514-00					
39	*Resistor (R6) 3.83K Ohm 1/8W 1%	13-09413-00					
40	*Resistor (R7, R8) 750 Ohm 1/8W 1% (Deleted)	13-02955-00					
	*Resistor (R7, R8) 511 Ohm 1/4W 1% (Added)	13-02411-00	00001				
41	*Resistor, Variable (R9) 200 Ohm, 20%	13-10852-00					
42	*Resistor (R11) 1M Ohm 1/4W 5%	13-09595-00					
43	*Resistor (R12) 58 Ohm 1/4W 5%	13-02602-00					
44	*Resistor (R15) 3.9K Ohm 1/4W 5%	13-00444-00					
45	*Resistor (R17) 24K Ohm 1/4W 5% (Deleted)	13-04837-00					
	*Resistor (R17) 20K Ohm 1/4W 5% (Added)	13-02391-00	00001				
46	*Resistor (R18, R24) 10K Ohm 1/4W 5%	13-00479-00	00001				
	(Note: R24 added by ECO 00001)						
47	*Resistor (R19) 5.1 Ohm 1/4W 5%	13-09422-00					
48	*Resistor (R21) 47 Ohm 1/4W 5%	13-00202-00					
49	*Resistor (R22) 5.1 Ohm 1W 5%	13-02136-00					
50	*Resistor (R23) 12K Ohm 1/4W 5%	13-00448-00					
51	*Holder, Capacitor	53-09761-00					
52	*Bracket, Regulator	53-09756-00					
53	*Screw, Phi Flat Hd No. 6-32 x 1/4	90-06020-02					
54	*Screw, Phi Pan Hd No. 6-32 x 1/4	90-06020-01					
55	*Washer, Lock No. 6	90-07649-00					
56	*Screw, Phi Pan Hd No. 4-40 x 1/4	90-06009-01					
57	*Washer, Int Tooth Lock No. 4	90-06632-00					
58	*Screw, Ph. Flat Hd No. 4 x 5/16 (Self-Tap)	90-09142-00					
59	*Cover, Component	53-09760-00					
60	*Screw, Phi Flat Hd No. 4-40 x 5/16	90-06010-02					



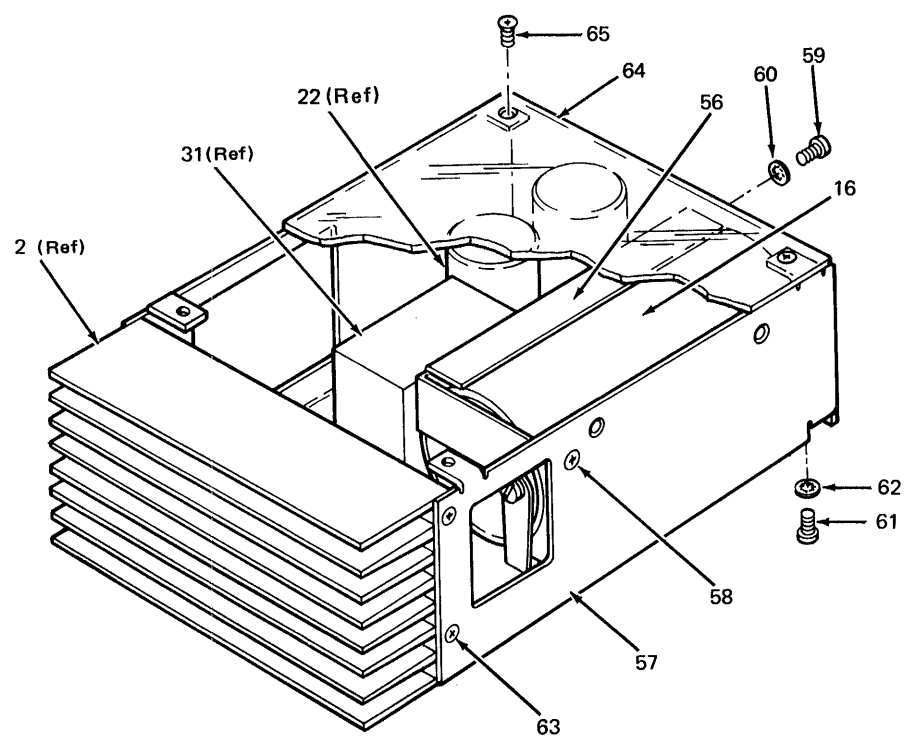
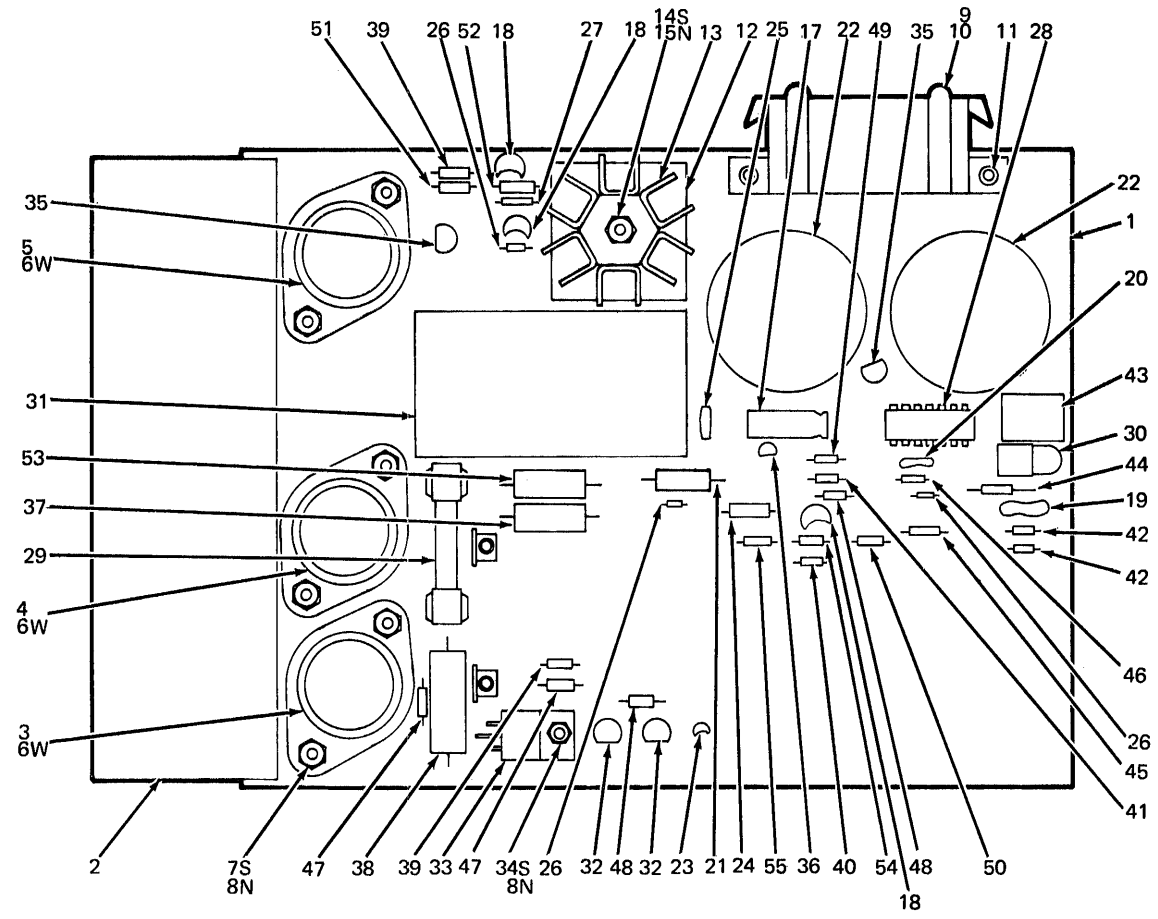
ETCH REV D



H745-02

Figure 2. H745 Regulator Assembly (Etch Rev. D)

FIG & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN H745 00002	USED ON CODE	VENDOR		REF FIG NO.
					CODE	PART NO.	
2-	H745 REGULATOR ASSEMBLY -15V ETCH REV. D	H745-00					
1	*Board, Etched Circuit (Etch Rev. D)	50-09723-00					
2	*Heatsink	12-10737-00					
3	*Transistor (Q2) 2N5302	15-10196-00					
4	*Diode (D4) NSR8117	11-10715-00					
5	*SCR (D5) MCR649P-2	11-09465-00					
6	*Washer, Insulator	90-06721-00					
7	*Screw, Phi Pan Hd No. 4-40 x 1/2	90-06013-01					
8	*Nut, Kep No. 4-40	90-06557-00					
9	*Connector, Mate-N-Lok (J1)	12-09340-00					
10	*Contact, Female	12-09456-00					
11	*Eyelet GS-4-7	90-06732-00					
12	*Diode, Bridge (D1)	11-10714-00					
13	*Heat Sink, Bridge Rect.	12-10907-00					
14	*Screw, Phi Pan Hd No. 6-32 x 1/2	90-06024-01					
15	*Nut, Kep No. 6-32	90-08185-00					
16	*Capacitor (C1) 31K MFD 50V	10-10858-00					
17	*Capacitor (C2) 50 MFD 25V -10 +75%	10-01796-00					
18	*Capacitor (C3, C12) 2.2 MFD 35V 10%	10-02431-00					
19	*Capacitor (C4) 2700 PF 100V 5%	10-01637-00					
20	*Capacitor (C5) 56 PF 100V 5%	10-00012-00					
21	*Capacitor (C6) .068 MFD 100V 10%	10-00052-00					
22	*Capacitor (C7, C11) .01 MFD 100V 20%	10-01610-00					
23	*Capacitor (C8, C9) 3.0K MFD 25V	10-10703-00					
24	*Capacitor (C10) .05 MFD 25V -20%	10-01774-00					
25	*Diode (D2, D3, D7) D664	11-00114-00					
26	*Diode (D6) 1N967	11-10068-00					
27	*Integrated Circuit (E1) UA723C	19-10415-00					
28	*Fuse (F1)	90-07226-00					
29	*Reactor (L1) 60 UHY	16-10850-00					
30	*Transistor (Q1, Q4) A05	15-10705-00					
31	*Transistor (Q3) D45H8	15-10708-00					
32	*Transistor (Q5, Q6) A55	15-10706-00					
33	*Transistor, Uni Junction (Q7)	15-10877-00					
34	*Resistor (R1) 3.9K Ohm 1W 10%	13-02927-00					
35	*Resistor (R2) .03 Ohm 5W 3%	13-10876-01					
36	*Resistor (R3, R13, R14) 10 Ohm 1/4W 5%	13-01317-00					
37	*Resistor (R4, R10, R16, R20) 1K Ohm 1/4W 5%	13-00365-00					
38	*Resistor (R5) 39K Ohm 1/4W 5%	13-02514-00					
39	*Resistor (R6) 3.83K Ohm 1/8W 1%	13-09413-00					
40	*Resistor (R7, R8) 511 Ohm 1/4W 1%	13-02411-00					
41	*Resistor, Variable (R9) 200 Ohm, 20%	13-10852-00					
42	*Resistor (R11) 1M Ohm 1/4W 5%	13-09595-00					
43	*Resistor (R12) 58 Ohm 1/4W 5%	13-02602-00					
44	*Resistor (R15) 3.9K Ohm 1/4W 5%	13-00444-00					
45	*Resistor (R17) 19.5K Ohm 1/8W 1%	13-09419-00					
46	*Resistor (R18, R24) 10K Ohm 1/4W 5%	13-00479-00					
47	*Resistor (R19) 5.1 Ohm 1/4W 5%	13-09422-00					
48	*Resistor (R21) 47 Ohm 1/4W 5%	13-00202-00					
49	*Resistor (R22) 5.1 Ohm 1W 5%	13-02136-00					
50	*Resistor (R23) 12K Ohm 1/4W 5%	13-00448-00					
51	*Holder, Capacitor	53-09761-00					
52	*Bracket, Regulator	53-09756-00					
53	*Screw, Phi Flat Hd No. 6-32 x 1/4	90-06020-02					
54	*Screw, Phi Pan Hd No. 6-32 x 1/4	90-06020-01					
55	*Washer, Lock No. 6	90-07649-00					
56	*Screw, Phi Pan Hd No. 4-40 x 1/4	90-06009-01					
57	*Washer, Int Tooth Lock No. 4	90-06632-00					
58	*Screw, Phi Flat Hd No. 4 x 5/16 (Self-Tap)	90-09142-00					
59	*Cover, Component	53-09760-00					
60	*Screw, Phi Flat Hd No. 4-40 x 5/16	90-06010-02					
61	*Lamp 15V (T1)	12-05859-00					
62	*Screw, Phi Pan Hd No. 4-40 x 5/16	90-06010-01					



H745-03

Figure 3. H745 Regulator Assembly (Etch Rev. E)

FIG & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN H745 00003	USED ON CODE	VENDOR		REF FIG NO.
					CODE	PART NO.	
3-	H745 REGULATOR ASSEMBLY -15V (ETCH REV. E)	H745-00					
1	*Board, Etched Circuit (Etch Rev. E)	50-09723-00					
2	*Heat Sink	12-10737-00					
3	*Transistor (Q2) 2N5302	15-10196-00					
4	*Diode (D4) NSR8117	11-10715-00					
5	*SCR (D5) MCR649P-2	11-09465-00					
6	*Washer, Insulator	90-06721-00					
7	*Screw, Phi Pan Hd No. 4-40 x 1/2	90-06013-01					
8	*Nut, Kep, No. 4-40	90-06557-00					
9	*Connector, Mate-N-Lok (J1)	12-09340-00					
10	*Contact, Female	12-09456-00					
11	*Eyelet GS-4-7	90-06732-00					
12	*Diode, Bridge (D1)	11-10714-00					
13	*Heat Sink, Bridge Rect.	12-10907-00					
14	*Screw, Phi Pan Hd No. 6-32 x 1/2	90-06024-01					
15	*Nut, Kep No. 6-32	90-08185-00					
16	*Capacitor (C1) 31K MFD 50V	10-10858-00					
17	*Capacitor (C2) 50 MFD 25V -10 + 75%	10-01796-00					
18	*Capacitor (C3, C7, C11) .01 MFD 100V 20%	10-01610-00					
19	*Capacitor (C4) 2700 PF 100V 5%	10-01637-00					
20	*Capacitor (C5) 56 PF 100V 5%	10-00012-00					
21	*Capacitor (C6) .068 MFD 100V 10%	10-00052-00					
22	*Capacitor (C8, C9) 3.0K MFD 25V	10-10703-00					
23	*Capacitor (C10 1.0)MFD 25V	10-10866-01					
24	*Capacitor (C12) 2.2 MFD 35V 10% (Deleted)	10-02431-00					
	*Capacitor (C12) 15 MFD 20V 10% (Added)	10-04812-00	00004				
25	*Capacitor (C13) 0.1 MFD 100V 20% (Note: Part No. 10-10621-00 MAY BE SUBSTITUTED	10-00030-00	00009				
26	*Diode (D2, D3, D7) D664	11-00114-00					
27	*Diode (D6) 1N967	11-10068-00					
28	*Integrated Circuit (E1) UA723C	19-10415-00					
29	*Fuse (F1)	90-07226-00					
30	*Lamp 15V (I1) (Deleted)	12-05859-00					
	*Lamp 15V (I1) (Added)	12-09169-00	00007				
31	*Reactor (L1) 60 UHY	16-10850-00					
32	*Transistor (Q1, Q4) A05	15-10705-00					
33	*Transistor (Q3) D45H8	15-10708-00					
34	*Screw, Phi Pan Hd No. 4-40 x 5/16	90-06010-01					
35	*Transistor (Q5, Q6) A55	15-10706-00					
36	*Transistor, Uni Junction (Q7) 2N6028	15-10877-00					
37	*Resistor (R1) 3.9K Ohm 1W 10%	13-02927-00					
38	*Resistor (R2) .03 Ohm 5W 3%	13-10876-01					
39	*Resistor (R3, R19) 5.1 Ohm 1/4W 5%	13-09422-00					
40	*Resistor (R4) 5.6K Ohm 1/4W 5%	13-01874-00					
41	*Resistor (R6) 7.5K 1/8W 1%	13-05322-00					
42	*Resistor (R7, R8) 511 Ohm 1/8W 1%	13-02411-00					
43	*Resistor, Variable (R9) 200 Ohm 20%	13-10852-00					
44	*Resistor (R10) 1K Ohm 1/4W 5%	13-00365-00					
45	*Resistor (R11) 1M Ohm 1/4W 5%	13-09595-00					
46	*Resistor (R12) 58 Ohm 1/4W 5%	13-02602-00					
47	*Resistor (R13, R14) 10 Ohm 1/4W 5%	13-01317-00					
48	*Resistor (R15, R16) 3.9K Ohm 1/4W 5%	13-00444-00					
49	*Resistor (R17) 39.2K Ohm 1/8W 1%	13-05265-00					
50	*Resistor (R18) 680 Ohm 1/4W 5%	13-01424-00					
51	*Resistor (R20) 100 Ohm 1/4W 5%	13-00229-00					
52	*Resistor (R21) 47 Ohm 1/4W 5%	13-00202-00					
53	*Resistor (R22) 5.1 Ohm 1W 5%	13-02136-00					
54	*Resistor (R23) 300 Ohm 1/4W 5%	13-01425-00					
55	*Resistor (R24) 10K Ohm 1/4W 5%	13-00479-00					

FIG & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN H746 00003	USED ON CODE	VENDOR		REF FIG NO.
					CODE	PART NO.	
3-							
56	*Holder, Capacitor	53-09761-00					
57	*Bracket, Regulator	53-09756-00					
58	*Screw, Phi Flat Hd No. 6-32 x 1/4	90-06020-02					
59	*Screw, Phi Pan Hd No. 6-32 x 1/4	90-06020-01					
60	*Washer, Lock No. 6	90-07649-00					
61	*Screw, Phi Pan Hd No. 4-40 x 1/4	90-06009-01					
62	*Washer, Int. Tooth Lock No. 4	90-06632-00					
63	*Screw, Phi Flat Hd No. 4 x 5/16 (Self-Tap)	90-09142-00					
64	*Cover, Component	53-09760-00					
65	*Screw, Phi Flat Hd No. 4-40 x 5/16	90-06010-02					





**ILLUSTRATED PARTS BREAKDOWN  
COMMENT SHEET**

Any and all comments and suggestions for correcting errors and/or additional information to improve this manual will be reviewed and researched for possible use when this manual is revised and/or reprinted. Enter your comments and suggestions in the form provided below and return to Technical Documentation.

MODEL \_\_\_\_\_

PUBLICATION NO. \_\_\_\_\_

FIGURE NO. \_\_\_\_\_ ITEM NO. \_\_\_\_\_

FIGURE NO. \_\_\_\_\_ ITEM NO. \_\_\_\_\_

CHANGE FROM \_\_\_\_\_

CHANGE FROM \_\_\_\_\_

CHANGE TO \_\_\_\_\_

CHANGE TO \_\_\_\_\_

FIGURE NO. \_\_\_\_\_ ITEM NO. \_\_\_\_\_

FIGURE NO. \_\_\_\_\_ ITEM NO. \_\_\_\_\_

CHANGE FROM \_\_\_\_\_

CHANGE FROM \_\_\_\_\_

CHANGE TO \_\_\_\_\_

CHANGE TO \_\_\_\_\_

FIGURE NO. \_\_\_\_\_ ITEM NO. \_\_\_\_\_

FIGURE NO. \_\_\_\_\_ ITEM NO. \_\_\_\_\_

CHANGE FROM \_\_\_\_\_

CHANGE FROM \_\_\_\_\_

CHANGE TO \_\_\_\_\_

CHANGE TO \_\_\_\_\_

ADDITIONAL COMMENT(S)

Name \_\_\_\_\_

Cost Center \_\_\_\_\_

date: \_\_\_\_\_

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**Fold Here** -----

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**Do Not Tear - Fold Here and Staple** -----

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