



CENTRAL STATION AIR-HANDLING UNIT ELECTRONIC CONTROLS

39E
08-36

1. This catalog presents the most commonly used specified parts for the standard 39E 08-36 electronic controls and is not applicable to any special machines.

2. 39E ELECTRONIC CONTROLS INDEX

	PAGE:
Unit Mounted Control Box Catalog Instructions, Cable Assemblies & Owners Module	2
Unit Mounted Control Box Service Parts	3-6
Unit Mounted Service Box Catalog Instructions	7
Unit Mounted Service Box Service Parts	8-9
Unit Mounted Control & Service Box Mounting Service Parts	9
Cooling Coil Valve Catalog Instructions	10
Heating Coil Valve Catalog Instructions	11
Cooling Coil Valve Service Parts	12-13
Heating Coil Valve Service Parts	12, 14
Fans & MXB/FMB Actuator Service Parts	15-16
Unit Control Option Service Parts	17-20

PLEASE, READ ALL THE CATALOG INSTRUCTIONS CAREFULLY

3. The replacement parts listed in this catalog are "Factory Authorized Parts" and as a result of "standardization" may not be identical to the original part furnished on the equipment.



CENTRAL STATION AIR-HANDLING UNIT ELECTRONIC CONTROLS

39E

08-36

UNIT MOUNTED CONTROL BOX CATALOG INSTRUCTIONS

COIL TYPE	CONTROL OPTIONS	UNIT MOUNTED CONTROL BOX		UNIT HAND
Chilled Water	Constant Volume	39EK20-714		R
	Variable Volume		-744	
	CV		-844	L
	VAV		-874	
Chilled Water W/Hot Water	CV		-724	R
	VAV		-754	
	CV		-854	L
	VAV		-884	
Chilled Water W/Electric Heat	CV		-734	R
	VAV		-764	
	CV		-864	L
	VAV		-894	

Please determine the following information before ordering service parts for the unit mounted control box:

1. Coil Type
2. VAV or CV
3. Unit Hand

Go to the above chart to determine the control box assembly for your particular unit. When the control box assembly has been determined go to the top of pages 5 and/or 6 to locate the control box assembly number. The control box service parts will be listed beneath the control box assembly number.

Example:

A unit has a chilled water coil w/electric heat, it's VAV & the unit hand is right; with this information go to the above chart, the control box assembly is 39EK20-764. Go to the top of page 5 and find 39EK20-764. The control box service parts will be listed beneath this column.

ACCESSORY CABLE ASSEMBLIES (ORDERED SEPARATELY)		
USAGE	PART NO.	LENGTH
CW/HW	39EK20-662	2'-0"
	39EK30-662	3'-0"
	39EK40-662	4'-0"
	39EK50-662	8'-0"
ELEC. HEAT	39EK20-732	4'-0"
	39EK30-732	6'-0"
	39EK40-732	8'-0"

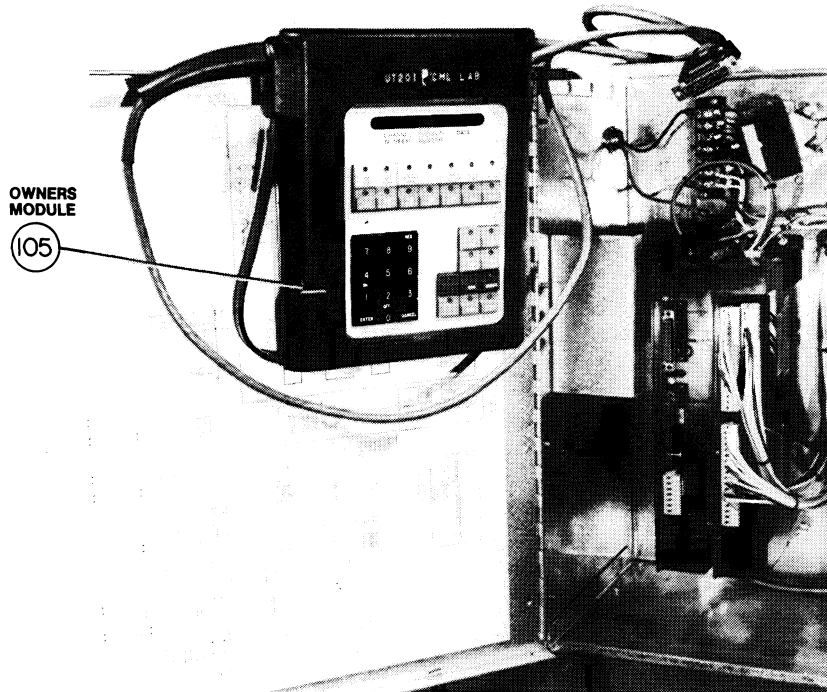
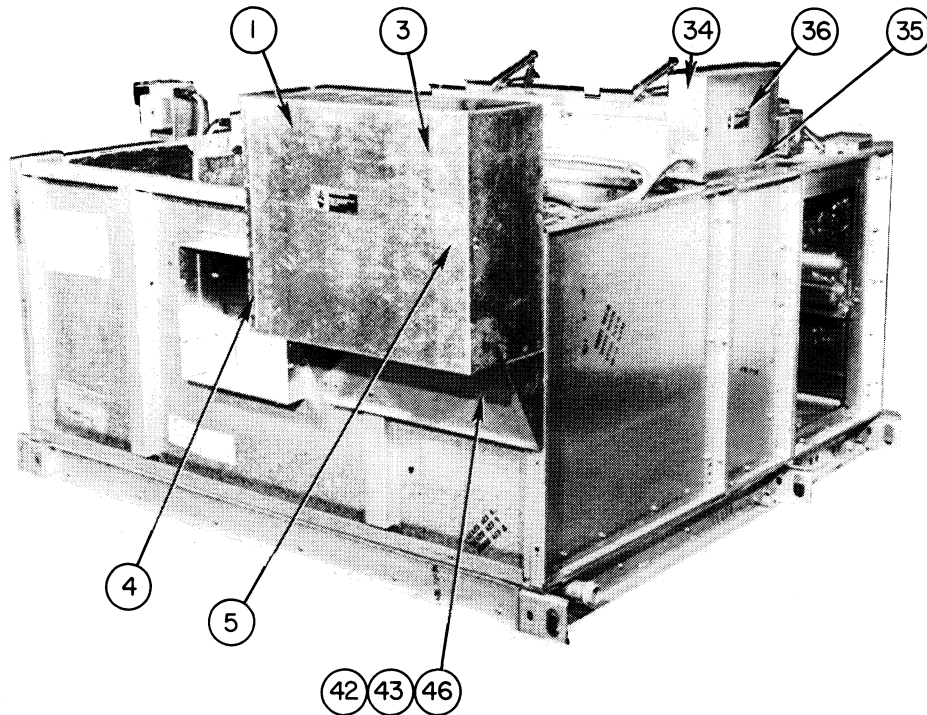
OWNERS MODULE PART NUMBER: CEAS120910-02

NOTE: See "Catalog Notes" on last page for explanation of symbolism.

CENTRAL STATION AIR-HANDLING UNIT ELECTRONIC CONTROLS

39E
08-36

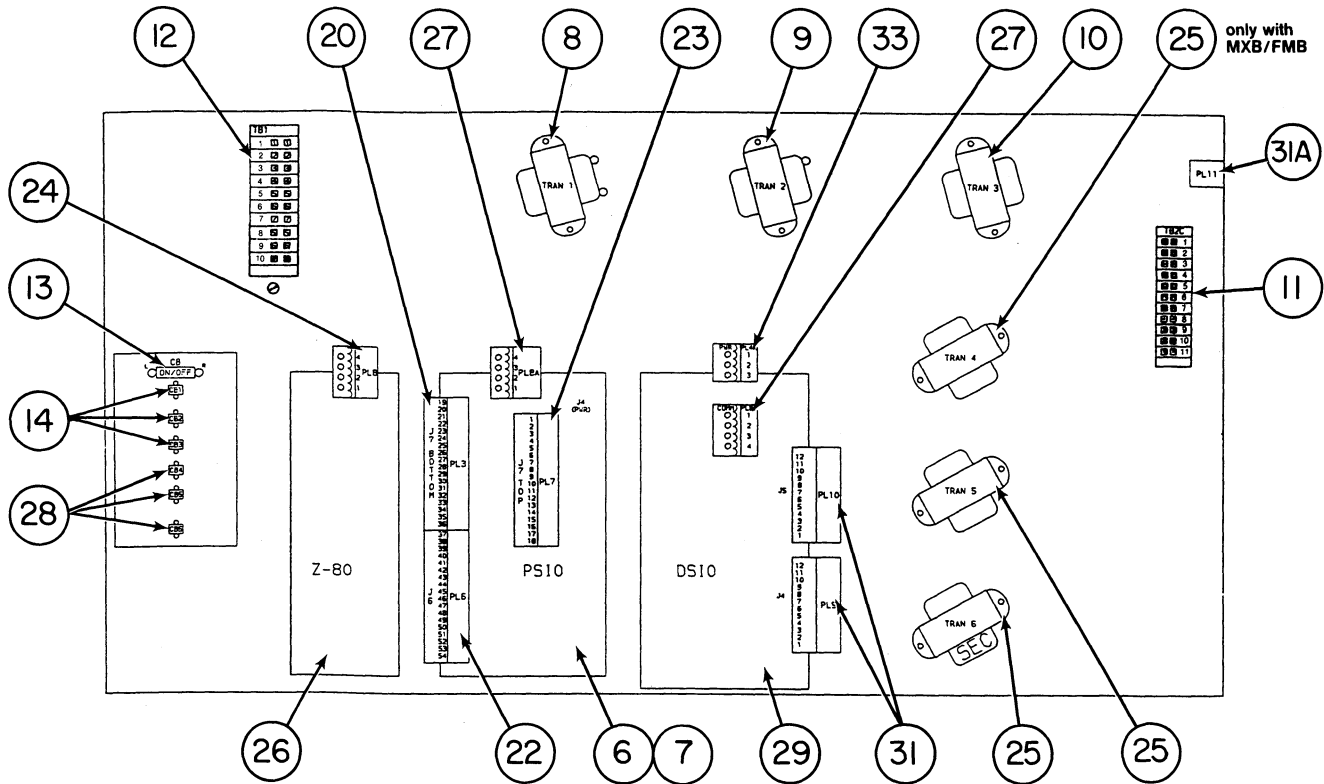
UNIT-MOUNTED CONTROL BOX



CENTRAL STATION AIR-HANDLING UNIT ELECTRONIC CONTROLS

39E
08-36

UNIT-MOUNTED CONTROL BOX





CENTRAL STATION AIR-HANDLING UNIT ELECTRONIC CONTROLS

39E
08-36

ITEM	PART DESCRIPTION	39EK20-714	39EK20-724	39EK20-734	39EK20-744	39EK20-754	39EK20-764
UNIT MOUNTED CONTROL BOX							
1	CONTROL BOX ASSEMBLY	39EK20524	→	→	→	→	→
	INCLUDES:						
2	BOX, CONTROL	39EK201014	→	→	→	→	→
3	COVER, BOX	39EK201053	→	→	→	→	→
4	HINGE	KA15BD019	→	→	→	→	→
5	LATCH	KA07SC039	→	→	→	→	→
6	SENSOR, PSIO MODULE	CEAS420775-01	→	→	→	→	→
7	BRACKET, PSIO MOUNT	39EK201142	→	→	→	→	→
8	TRANSFORMER, TS10	HT01BD114	→	→	→	→	→
9	TRANSFORMER, TS21	HT01BD113	→	→	→	→	→
10	TRANSFORMER, TS24	HT01AW229	→	→	→	→	→
11	TERMINAL BLOCK	39LC500967	→	→	→	→	→
12	TERMINAL BLOCK	39LC500986	→	→	→	→	→
13	SWITCH	HRS4ZA010	→	→	→	→	→
14	CIRCUIT BREAKER	HH83ZB001	(4) →	→	(4) →	(5) →	(4) →
15	NI SUPPORT, Z-80 & PSIO ZEE	39EK201093	→	→	→	→	→
19	NI PL1, 2 PIN CONNECTOR	HY84CA002	→	→	→	→	→
20	PL3, 18 PIN CONNECTOR	HY84EE021	→	→	→	→	→
21	NI PL4, 3 PIN CONNECTOR	HY84EE003	→	→	→	→	→
22	PL6, 18 PIN CONNECTOR	HY84EE021	→	→	→	→	→
23	PL7, 18 PIN CONNECTOR	HY84EE021	→	→	→	→	→
24	PL8, 4 PIN CONNECTOR	CEAS120777-01	→	→	→	→	→
25	TRANSFORMER, TS24	X	HT01AW229	X	HT01AW229	(2)HT01AW229	HT01AW229
26	PROCESSOR, Z-80	39EK20702	→	→	39EK20712	→	→
27	PL8A & PL8B, 4 PIN CONNECTOR	(2)CEAS120777-01	→	→	→	→	→
28	CIRCUIT BREAKER	X	(1)HH83ZB001	X	(1)HH83ZB001	(2)HH83ZB001	(1)HH83ZB001
29	CONTROLLER, DSIO	X	X	HK50AA002	X	X	HK50AA002
30	NI HARNESS, DSIO ELECTRIC HEAT	X	X	39EK30672	X	X	39EK30672
	INCLUDES:						
31	PL9 & PL10, 12 PIN CONNECTOR	X	X	(2)HY84EE012	X	X	(2)HY84EE012
31A	PLUG (PL 11)	X	X	39EK201222	X	X	39EK201222
32	NI CABLE, ELECTRIC HEAT (NOTE A)	X	X	39EK20732	X	X	39EK20732
32	NI CABLE, ELECTRIC HEAT (NOTE B)	X	X	39EK30732	X	X	39EK30732
32	NI CABLE, ELECTRIC HEAT (NOTE C)	X	X	39EK40732	X	X	39EK40732
33	PL4A, 4 PIN CONNECTOR	X	X	CEAS120777-01	X	X	CEAS120777-01
NOTE A: ELECTRIC HEAT CABLE 39EK20732 IS USED ON 08 - 13 SIZE UNITS.							
NOTE B: ELECTRIC HEAT CABLE 39EK30732 IS USED ON 17 - 23 SIZE UNITS.							
NOTE C: ELECTRIC HEAT CABLE 39EK40732 IS USED ON 29 - 36 SIZE UNITS.							

NOTE: See "Catalog Notes" on last page for explanation of symbolism.



CENTRAL STATION AIR-HANDLING UNIT ELECTRONIC CONTROLS

39E
08-36

ITEM	PART DESCRIPTION	39EK20-844	39EK20-854	39EK20-864	39EK20-874	39EK20-884	39EK20-894
UNIT MOUNTED CONTROL BOX							
1	CONTROL BOX ASSEMBLY	39EK20834	→	→	→	→	→
	INCLUDES:						
2	BOX, CONTROL	39EK201024	→	→	→	→	→
3	COVER, BOX	39EK201053	→	→	→	→	→
4	HINGE	KA15BD019	→	→	→	→	→
5	LATCH	KA07SC039	→	→	→	→	→
6	SENSOR, PSIO MODULE	CEAS420775-01	→	→	→	→	→
7	BRACKET, PSIO MOUNT	39EK201142	→	→	→	→	→
8	TRANSFORMER, TS10	HT01BD114	→	→	→	→	→
9	TRANSFORMER, TS21	HT01BD113	→	→	→	→	→
10	TRANSFORMER, TS24	HT01AW229	→	→	→	→	→
11	TERMINAL BLOCK	39LC500967	→	→	→	→	→
12	TERMINAL BLOCK	39LC500986	→	→	→	→	→
13	SWITCH	HRS4ZA010	→	→	→	→	→
14	CIRCUIT BREAKER	(3)HH83ZB001	(4) →	(3) →	(4) →	(5) →	(4) →
15	NI SUPPORT, Z-80 & PSIO ZEE	39EK201054	→	→	→	→	→
19	NI PL1, 2 PIN CONNECTOR	HY84CA002	→	→	→	→	→
20	PL3, 18 PIN CONNECTOR	HY84EE021	→	→	→	→	→
21	NI PL4, 3 PIN CONNECTOR	HY84EE003	→	→	→	→	→
22	PL6, 18 PIN CONNECTOR	HY84EE021	→	→	→	→	→
23	PL7, 18 PIN CONNECTOR	HY84EE021	→	→	→	→	→
24	PL8, 4 PIN CONNECTOR	CEAS120777-01	→	→	→	→	→
25	TRANSFORMER, TS24	X	HT01AW229	X	HT01AW229	(2)HT01AW229	HT01AW229
26	PROCESSOR, Z-80	39EK20702	→	→	39EK20712	→	→
27	PL8A & PL8B, 4 PIN CONNECTOR	CEAS120777-01	→	→	→	→	→
28	CIRCUIT BREAKER	X	(1)HB83ZB001	X	(1)HB83ZB001	(2)HB83ZB001	(1)HB83ZB001
29	CONTROLLER, DSIO	X	X	HK50AA002	X	X	HK50AA002
30	NI HARNESS, DSIO ELECTRIC HEAT	X	X	39EK30672	X	X	39EK30672
	INCLUDES:						
31	PL9 & PL10, 12 PIN CONNECTOR	X	X	(2)HY84EE012	X	X	(2)HY84EE012
31A	PLUG (PL 11)	X	X	39EK201222	X	X	39EK201222
32	NI CABLE, ELECTRIC HEAT (NOTE A)	X	X	39EK20732	X	X	39EK20732
32	NI CABLE, ELECTRIC HEAT (NOTE B)	X	X	39EK30732	X	X	39EK30732
32	NI CABLE, ELECTRIC HEAT (NOTE C)	X	X	39EK40732	X	X	39EK40732
33	PL4A, 4 PIN CONNECTOR	X	X	CEAS120777-01	X	X	CEAS120777-01
NOTE A: ELECTRIC HEAT CABLE 39EK20732 IS USED ON 08 - 13 SIZE UNITS.							
NOTE B: ELECTRIC HEAT CABLE 39EK30732 IS USED ON 17 - 23 SIZE UNITS.							
NOTE C: ELECTRIC HEAT CABLE 39EK40732 IS USED ON 29 - 36 SIZE UNITS.							

NOTE: See "Catalog Notes" on last page for explanation of symbolism.



CENTRAL STATION AIR-HANDLING UNIT ELECTRONIC CONTROLS

39E

08-36

UNIT MOUNTED SERVICE BOX CATALOG INSTRUCTIONS

COIL TYPE	CONTROL OPTIONS	UNIT MOUNTED SERVICE BOX		UNIT HAND
Chilled Water	Constant Volume	39EK20-123		R
	Variable Volume		-143	
	CV		-133	L
	VAV		-153	
Chilled Water W/Hot Water	CV		-123	R
	VAV		-143	
	CV		-133	L
	VAV		-153	
Chilled Water W/Electric Heat	CV		-123	R
	VAV		-143	
	CV		-133	L
	VAV		-153	

Please determine the following information before ordering service parts for the unit mounted service box:

1. Coil Type
2. VAV or CV
3. Unit Hand

Go to the above chart to determine the service box assembly for your particular unit. When the service box assembly has been determined go to the top of page 9 to locate the service box assembly number. The service box service parts will be listed beneath the service box assembly number.

Example:

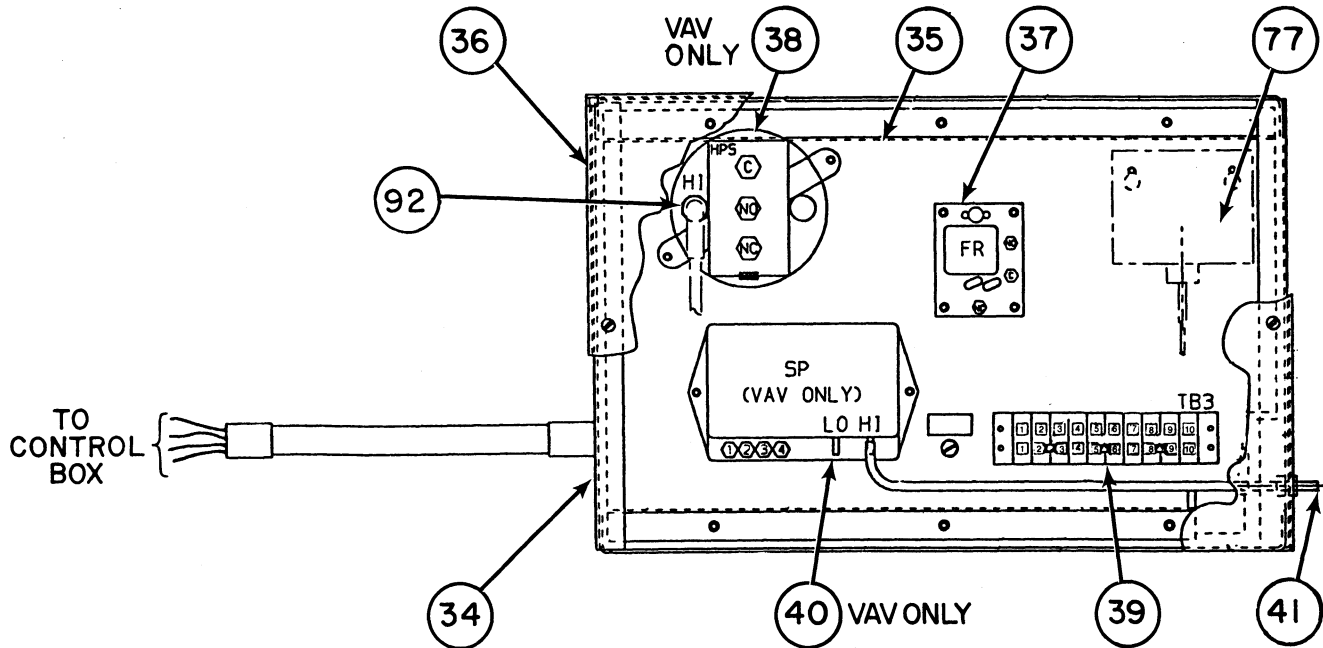
A unit has a chilled water coil w/ electric heat, it's VAV & the unit hand is right; with this information go to the above chart, the service box assembly is 39EK20-143. Go to the top of page 9 and find 39EK20-143. The service box service parts will be listed beneath this column.

NOTE: See "Catalog Notes" on last page for explanation of symbolism.

CENTRAL STATION AIR-HANDLING UNIT ELECTRONIC CONTROLS

39E
08-36

UNIT-MOUNTED SERVICE BOX





CENTRAL STATION AIR-HANDLING UNIT ELECTRONIC CONTROLS

39E
08-36

ITEM	PART DESCRIPTION	39EK20-123	39EK20-143	39EK20-133	39EK20-153		
UNIT MOUNTED SERVICE BOX							
34	BOX,ELECTRICAL	39EK201063	→	39EK201183	→		
35	PLATE,MOUNTING	39EK201073	→	39EK201193	→		
36	COVER,BOX	39EK201083	→	→	→		
37	RELAY,FAN	HK35AB001	→	→	→		
38	SWITCH,HIGH PRESSURE	X	HK02WC001	X	HK02WC001		
39	TERMINAL BLOCK (TB3)	39LC500986	→	→	→		
40	TRANSITION,TRANSDUCER PRES.	X	HK05ZG001	X	HK05ZG001		
40A NI	PROBE, STATIC PRESSURE	39EK20462	→	→	→		
41	UNION	X	KA70BS200	X	KA70BS200		
CONTROL & SERVICE BOX MOUNTING GROUP:							
42	HORZ CONTROL BOX MOUNT (NOTE1)	39EK20554					
	INCLUDES:						
43	ANGLE,HORZ. CONT. BOX MOUNTING	39EK201122					
43A NI	CHANNEL, SUPPORT	39EK201342					
44 NI	BRACKET, HORZ. CONT. BOX MOUNT	39EK201163					
45 NI	VERT CONT&SER BOX MOUNT(NOTE1)	39EK20654					
	INCLUDES:						
46	ANGLE,HORZ. CONT. BOX MOUNTING	39EK201122					
47 NI	BRACKET,HORZ. CONT. BOX MOUNT	39EK201163					
48 NI	ANGLE,VERT. SERV BOX MOUNTING	39EK201152					
49 NI	BRACKET,VERT. SERV. BOX MOUNT	39EK201173					
NOTE: 1 THE ABOVE CONTROL BOX & SERVICE BOX MOUNTING SERVICE PARTS ARE USED ON ALL 08 - 36 SIZE UNITS.							

NOTE: See "Catalog Notes" on last page for explanation of symbolism.



CENTRAL STATION AIR-HANDLING UNIT ELECTRONIC CONTROLS

39E
08-36

COOLING COIL VALVE CATALOG INSTRUCTIONS

VALVE SIZE (NPT)	WAY	COOLING COIL VALVE ASSY.		COIL TYPE
1"	2	39EK20-203		WATER
1-1/4"	2		-213	
1-1/2"	2		-223	
2"	2		-233	
2-1/2"	2		-243	
3"	2		-253	
1"	3		-263	
1-1/4"	3		-273	
1-1/2"	3		-283	
2"	3		-293	
2-1/2"	2		-303	
3"	3		↓ -313	

Please determine the following information before ordering service parts for the cooling coil valve assembly:

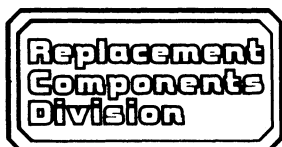
1. Coil Type
2. Valve Size (NPT)
3. 2 Way or 3 Way Valve

Go to the above chart to determine the cooling coil valve assembly for your particular unit. When the cooling coil valve assembly has been determined go to page 13 to locate the cooling coil valve assembly number. The cooling coil valve service parts will be listed beneath the cooling coil valve assembly number.

Example:

A unit has a cooling coil valve with a valve size of 2½" NPT and the valve is 2 way; with this information go to the above chart, the cooling coil valve assembly is 39EK20-243. Go to page 13 and find 39EK20-243. The cooling coil valve service parts will be listed beneath this column.

NOTE: See "Catalog Notes" on last page for explanation of symbolism.



CENTRAL STATION AIR-HANDLING UNIT ELECTRONIC CONTROLS

39E
08-36

HEATING COIL VALVE CATALOG INSTRUCTIONS

VALVE SIZE (NPT)	WAY	HEATING COIL VALVE ASSY.		COIL TYPE
1"	2	39EK20-323		HOT WATER OR STEAM
1-1/4"	2		-333	
1-1/2"	2		-343	
2"	2		-353	
2-1/2"	2		-363	
3"	2		-373	
1"	3		-383	
1-1/4"	3		-393	
1-1/2"	3		-403	
2"	3		-413	
2-1/2"	2		-423	
3"	3		-433	

Please determine the following information before ordering service parts for the heating coil valve assembly:

1. Coil Type
2. Valve Size (NPT)
3. 2 Way or 3 Way Valve

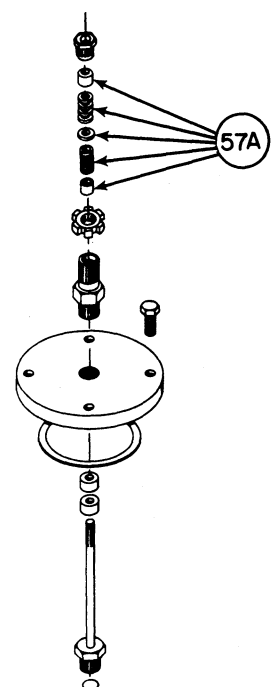
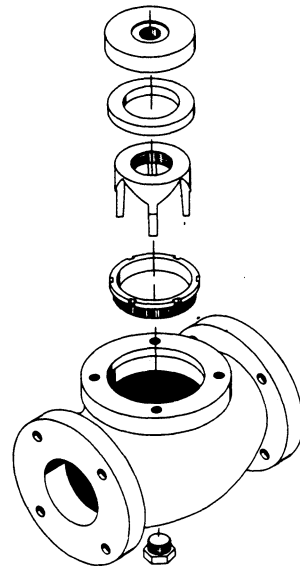
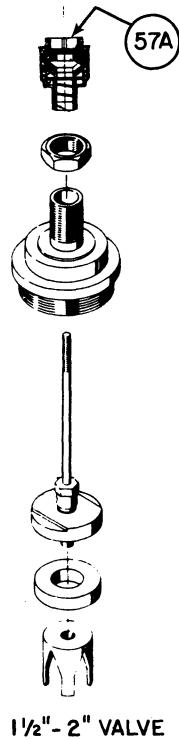
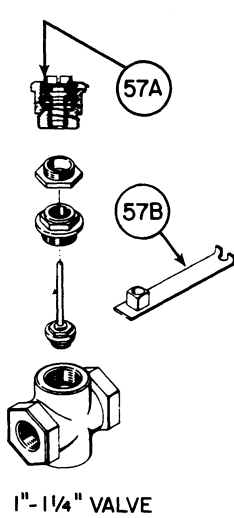
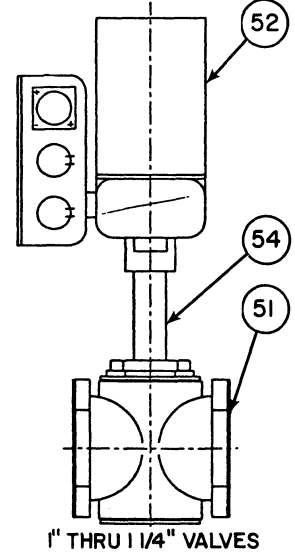
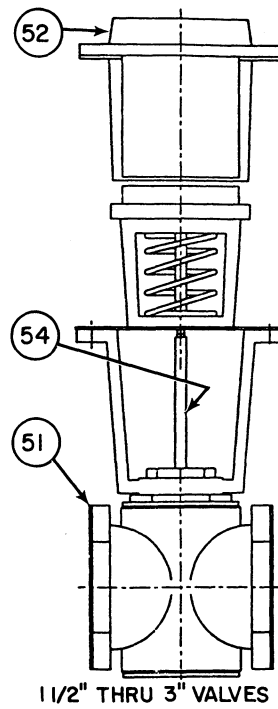
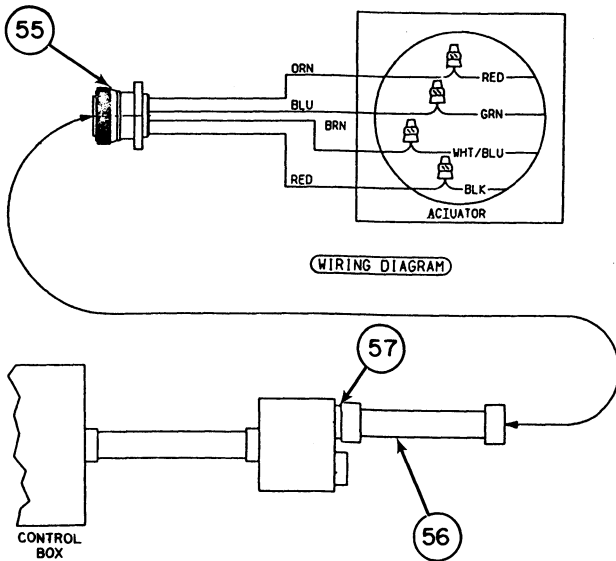
Go to the above chart to determine the heating coil valve assembly for your particular unit. When the heating coil valve assembly has been determined go to page 14 to locate the heating coil valve assembly number. The heating coil valve service parts will be listed beneath the heating coil valve assembly number.

Example:

A unit has a heating coil valve with a valve size of 2½" NPT and the valve is 2 way; with this information go to the above chart, the heating coil valve assembly is 39EK20-363. Go to page 14 and find 39EK20-363. The heating coil valve service parts will be listed beneath this column.

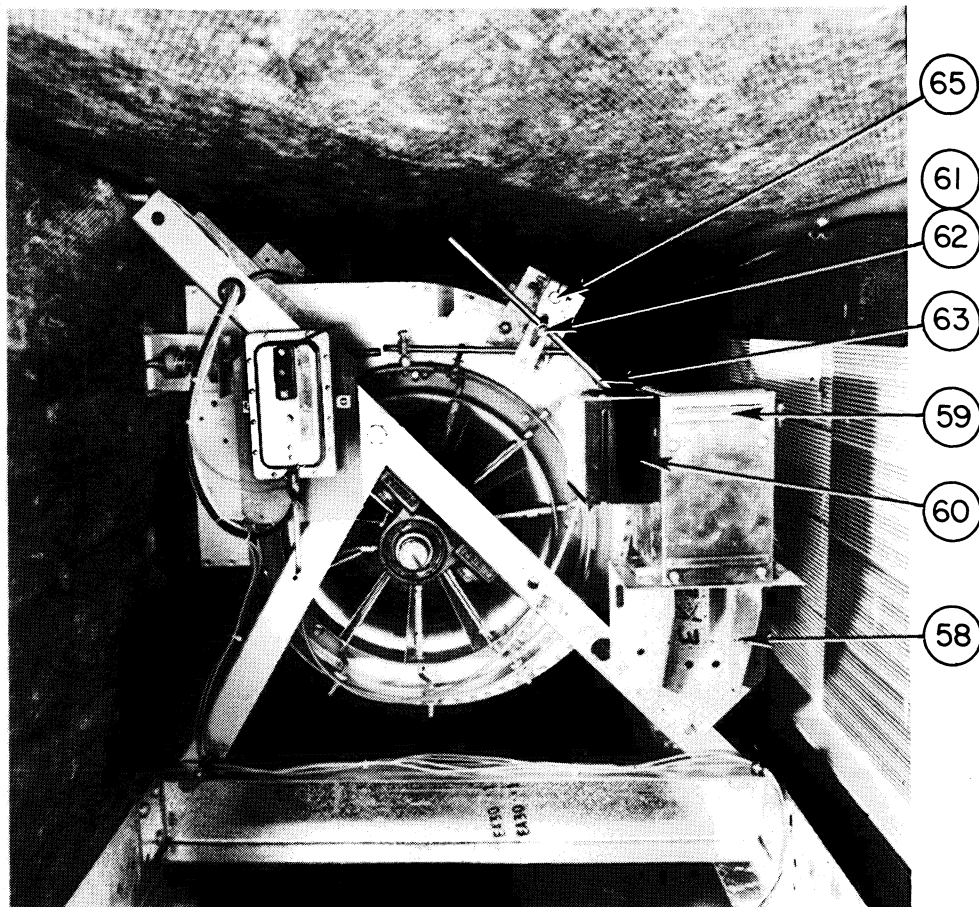
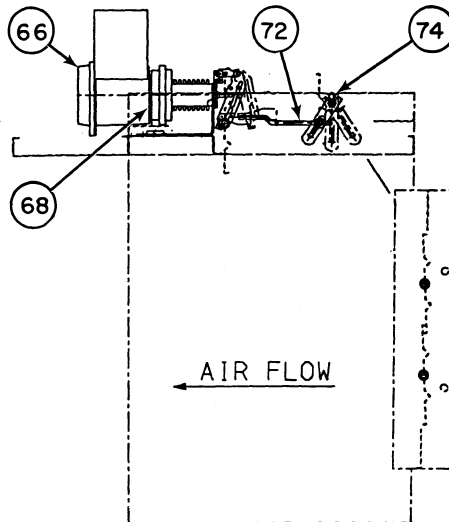
NOTE: See "Catalog Notes" on last page for explanation of symbolism.

TYPICAL COIL VALVE (HEATING OR COOLING)



TYPICAL 2-WAY HOT WATER VALVES

MXB/FMB ACTUATOR



FAN ACTUATOR



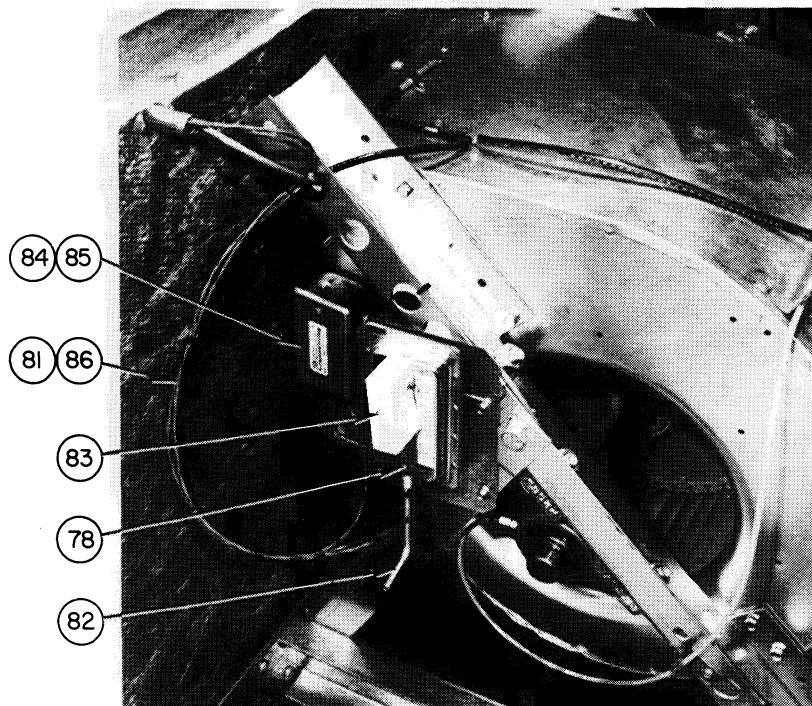
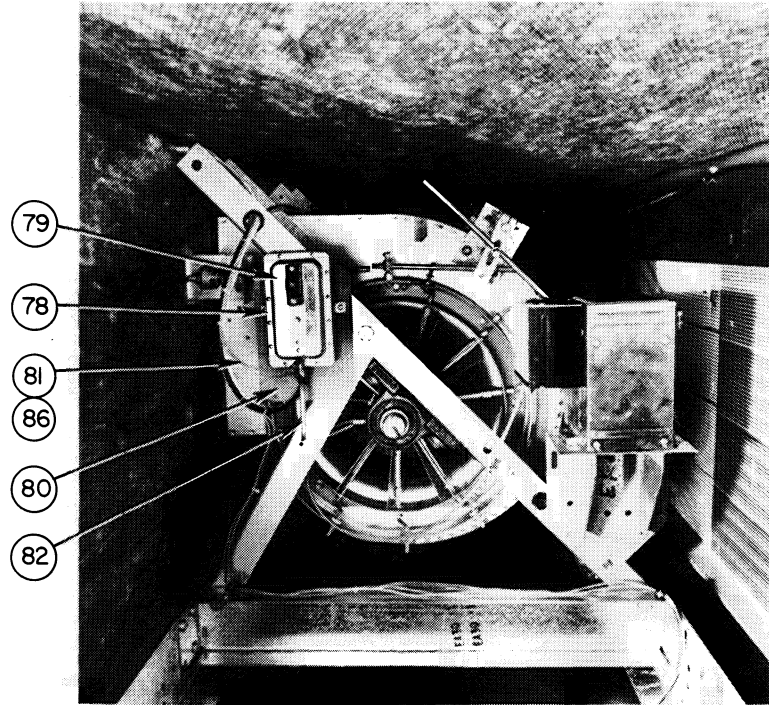
CENTRAL STATION AIR-HANDLING UNIT ELECTRONIC CONTROLS

39E
08-36

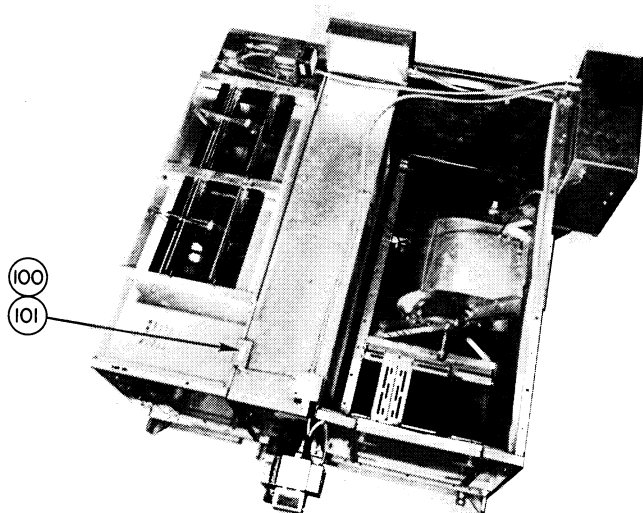
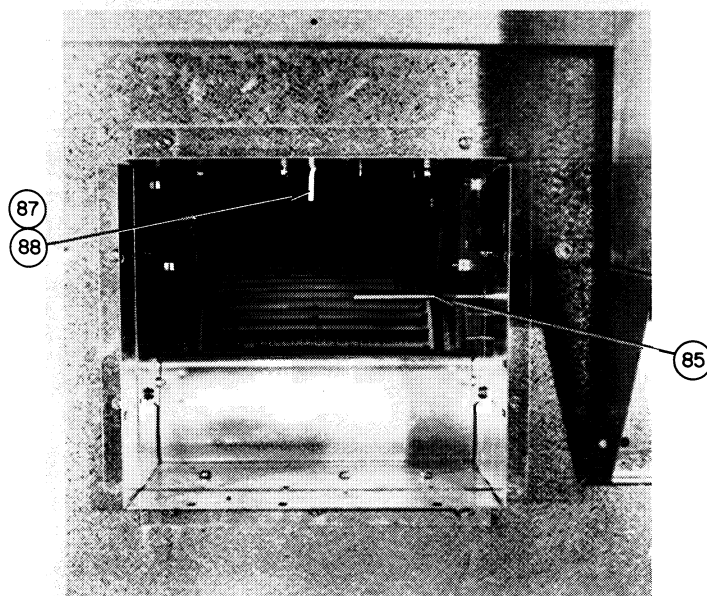
ITEM	PART DESCRIPTION	39E 08	39E 11	39E 17	39E 19	39E 23	39E 29
			39E 13	39E 19			39E 36
FAN ACTUATOR GROUP							
THE FOLLOWING ELECTRIC ACTUATOR SERVICE PARTS ARE USED WITH BOTH THE FORWARD CURVE AND AIR FOIL FAN SECTIONS WITH V.A.V.							
58	BRACKET,ACTUATOR	39EK20113	→	→	→	→	
59	OPERATOR MOTOR	HF28BB001	→	→	→	→	
60	DRIVE,ACTUATOR MOTOR	HF39CB001	→	→	→	→	
61	SHAFT	39EA256342	39EA406342	39EA556342	39EA206342	39EA656342	
62	LINKAGE,CONNECTION	(2)HF91BB115	(2) →	(2) →	(2) →	(2) →	
63	LEVER,OPERATOR (FOWARD CURVE)	HF92BB001	→	→	→	→	
63	LEVER, OPERATOR (AIR FOIL)	39EK301192	→	→	→	→	
64	NI CABLE ASSEMBLY	39EK301302	→	→	→	→	
65	LEVER,CRANK ARM	39EK201192	→	→	→	→	
MXB & FMB ACTUATOR GROUP							
THE FOLLOWING ELECTRIC ACTUATOR SERVICE PARTS ARE USED WITH MXB AND FMB SECTIONS							
66	OPERATOR,MOTOR	HF27BB009	→	→	→	→	
68	PLATE,MOUNTING	39EK201243	→	→	→	→	
72	SHAFT	39EA201132	→	→	→	→	
74	LINKAGE,CONNECTION	HF91BB115	→	→	→	→	

NOTE: See "Catalog Notes" on last page for explanation of symbolism.

UNIT CONTROL OPTIONS



UNIT CONTROL OPTIONS





CENTRAL STATION AIR-HANDLING UNIT ELECTRONIC CONTROLS

39E
08-36

ITEM	PART DESCRIPTION		39E 11	39E 17	39E 23	
		39E 08	39E 13	39E 19	39E 29	39E 36
CONTROL OPTIONS						
77	SWITCH, LOW TEMP SAFETY	HH22CZ001	→	→	→	→
78	SWITCH, AIR FLOW PROOF	39EK20484	→	→	→	→
	INCLUDES:					
79	SWITCH, PRESSURE	HK06WC030	→	→	→	→
80	BRACKET, SWITCH	39EK201182	→	→	→	→
81	CABLE	39EK201302	→	→	→	→
82	PROBE	35BB502382	→	→	→	→
83	COVER, SWITCH	39EK201223	→	→	→	→
84	SENSOR, SUPPLY AIR TEMP	39EK20494	→	→	→	→
	INCLUDES:					
85	SENSOR (NOTE 5)	HH79NZ019	→	→	→	→
86	CABLE	39EK201302	→	→	→	→
87	PROBE, HIGH DUCT PRESSURE	39EK20474	→	→	→	→
	INCLUDES:					
88	PROBE	35BB502382	→	→	→	→
89	NI TUBE, CONTROL	37AG500712	→	→	→	→
91	NI TEE	KA70PY187	→	→	→	→
92	ADAPTER	KA70PP020	→	→	→	→
93	SENSOR, O. D. AIR & ENTHALPY	39EK20534	39EK30534	39EK50534	39EK45534	39EK55534
	INCLUDES:					
94	NI SENSOR, PROBE STATIC PRESSURE	39EK20462	→	→	→	→
	NI SENSOR, SPACE AIR TEMP ZONE	HH79NZ018	→	→	→	→
98	NI CONTROL, ENTHALPY	HH57AC076	→	→	→	→
99	NI SENSOR, AIR TEMP (NOTE 5)	HH79NZ019	→	→	→	→
100	SENSOR, MIXED AIR TEMPERATURE	39EK20584	→	→	→	→
	INCLUDES:					
101	SENSOR, MIXED AIR TEMP	HH79NZ021	→	→	→	→
102	BRACKET, SENSOR	(2)39EK201182	(2) →	(2) →	(2) →	(2) →
105	MODULE, OWNER'S	CEAS120910-02	→	→	→	→
NOTE: 5 RUBBER PAD INCLUDED WITH AIR TEMP SENSOR						

NOTE: See "Catalog Notes" on last page for explanation of symbolism.