

INSTRUCTIONS FOR CONFIGURATION AND ASSEMBLY OF FEATURE GROUPS
AND KEYTOPS FOR THE 42/43 BUFFERED TELEPRINTERS

CONTENTS	PAGE	CONTENTS	PAGE
1. GENERAL	1	5. DOCUMENTATION.....	37
KEYTOP MODIFICATION KITS...	2	6. GLOSSARY OF ABBREVIATIONS.	40
FEATURE GROUPS.....	2	7. ADDENDUM TO HOW TO	
SETS W/O FEATURE GROUPS...	2	OPERATE MANUAL.....	41
OPERABLE SETS.....	3	8. ADDENDUM TO INSTALLATION	
2. ASSEMBLY INFORMATION.....	4	AND ROUTINE SERVICING	
LABELS.....	4	MANUAL.....	43
APPLICATION PROGRAM CARD..	5	1. GENERAL	
CONTROLLER SELF-TEST.....	8	1.01 The 42/43 Teleprinter Buffered Sets	
KEYTOPS.....	9	consist of standard units and components,	
A. 411377 Modification Kit.....	10	except that the controllers are not equipped	
B. 411378 Modification Kit.....	12	with Application Program Cards.	
C. 411379 Modification Kit.....	14	1.02 The addition of an Application Program	
D. 411380 Modification Kit.....	17	Card (circuit card portion of feature	
E. 411381 Modification Kit.....	18	group) from a stock of several variations of	
F. 411384 Modification Kit.....	20	feature groups, provides an operable set for a	
G. Keytops in 43FG110/BA/03...	22	specific service.	
H. Keytop in 43FG210/AA/02 ...	23	1.03 Only a few 42/43 Teleprinter Buffered	
MAPL2 OR MAPL5 MOS		Sets thus need to be stocked, with the	
IC PACKS.....	24	various feature groups giving a multiplicity of	
SET DESCRIPTION AND KEY-		arrangements to meet users needs. Arrangements	
BOARD LABEL.....	26	may be made up as required.	
3. PARTS LISTS.....	30	1.04 To provide a variety of keyboard arrange-	
A. 43FG110/AA/02.....	30	ments, only the most common sets of key-	
B. 43FG110/BA/03.....	30	tops are furnished on the keyboards of the stocked	
C. 43FG210/AA/02.....	30	sets. Other operable arrangements are supplied	
D. 43FG210/BA/02.....	30	by substituting different keytops from designated	
E. 411377 Keytop		set of parts.	
Modification Kit.....	31	1.05 A set is not operable until equipped with	
F. 411378 Keytop		the Application Program Card. The	
Modification Kit.....	31	Application Program Card is a "piggyback"	
G. 411379 Keytop		plug-in to the large circuit card in the set con-	
Modification Kit.....	33	troller. Although self-test features for major	
H. 411380 Keytop		components are operable before the set is com-	
Modification Kit.....	34	pletely assembled, they are intended for use	
I. 411381 Keytop		during trouble analysis of assembled sets and are	
Modification Kit.....	35	specified in the appropriate service manual.	
J. 411384 Keytop		Controller self-test procedures are also shown in	
Modification Kit.....	36	this specification on Page 8 to assure the feature	
4. SUPPLEMENTAL SUPPORT		group card is properly assembled.	
INFORMATION.....	37		
A. Testing.....	37		
B. Tools.....	37		
C. Disposition of Teleprinter			
Station.....	37		

SPECIFICATION 51049S

1.06 The labels accompanying the Application Program Card in a feature group are applied to the set directory card and to the cover of the cabinet. (Refer to 2.01 and 2.02.) See paragraph 6 for definitions of abbreviations.

Note: When ordering replaceable components, unless otherwise specified prefix each part number with the letters "TP" (ie, TP452811).

KEYTOP MODIFICATION KITS

1.07 Keytop modification kits supplied for converting keytop arrangements include:

- * 411377 — Converts 43K202GAG to 43K202GAD (42 SC to 42 SR) w/all white symbol keytops.
- *† 411378 — Converts 43K202GAB to 43K202GAD (43 SR to 42 SR) w/all white symbol keytops.
- † 411379 — Converts 43K202GAB to 43K202GAG (43 SR to 42 SC)
- 411380 — Converts 43K202GAB to 43K202GAF (43 SR to 43 SC)
- ‡ 411381 — Converts 43K202GAD to 43K202GAG (42 SR to 42 SC) w/all white symbol keytops.
- § 411384 — Converts 43K202GAG to 43K202GAF (42 SC to 43 SC)

* Contains MAPL5 for printing INTF (International Font — Large and small caps).

‡ Contains MAPL2 for printing ASCII (Uppercase — Lowercase letters).

† If the Model 42 customer label is desired, 430907 customer label must be ordered separately. See paragraph 2.02.

§ If the Model 43 customer label is desired, 430906 customer label must be ordered separately. See paragraph 2.02.

1.08 Keytop modification kits 411377, 411378 and 411381 contain MAtrix Printer Logic (MAPL) MOS circuit packs that provide for printing of a different font.

(a) In the 411377 and 411378 modification kits, the 430995 MAPL5 circuit pack provides the International Telex Font (INTF) with large and small capital letters. It replaces the 430681 MAPL2 circuit pack (ASCII font) which has upper and lowercase letters.

(b) In the 411381 modification kit, the 430681 MAPL2 circuit pack replaces the 430995 MAPL5 circuit pack to provide upper and lowercase letters.

(c) The MAPL circuit packs mount to the Printer Logic circuit card. (Refer to 2.16.)

FEATURE GROUPS

1.09 Feature groups consisting of Application Program Cards and corresponding labels are available as follows:

<u>Feature Group</u>	<u>Use</u>
43FG110/AA/02	Buff 42 SR INTF w/EF (International Font)
43FG110/BA/03**	Buff 42 SC w/EF (Enhanced Features)
43FG210/AA/02**	Buff 43 SR w/ER (Enhanced Retrieve)
43FG210/BA/02	Buff 43 SC EC (Enhanced Contention)

**Includes keytops to convert 43K202GAG to 43K202GAH (42 SC to 42 SC w/EF)

**Includes keytop to convert 43K202GAB to 43K202GAJ (43 SR to 43 SR w/ER)

SETS W/O FEATURE GROUPS

1.10 Coded Teleprinter Buffered Sets supplied without feature groups include:

(a) 115 Vac Sets

<u>Set Code</u>	<u>Similar to</u>	<u>Keyboard</u>	<u>Set Description</u>
4240 BZB	4240 BAC	43K202GAD	Buff 42 SR (F) w/o FG INTF CLDKT (Colored Keytops)
4240 BZD	4240 BBD	43K202GAG	Buff 42 SC (F) w/o FG
4340 BZD	4340 BAD	43K202GAB	Buff 43 SR (F) w/o FG
4340 BZJ	4340 BAJ	43K202GAB	Buff 43 SR (T) w/o FG

(b) 115/230 Vac Sets

<u>Set Code</u>	<u>Similar to</u>	<u>Keyboard</u>	<u>Set Description</u>
4240 BZC	4240 BAC	43K202GAD	Buff 42 SR (F) 230V w/o FG INTF CLDKT (Colored Keytops)
4340 BZE	4340 BAB	43K202GAB	Buff 43 SR (P) 230V w/o FG
4340 BZF	4340 BAD	43K202GAB	Buff 43 SR (F) 230V w/o FG
4340 BZK	4340 BAJ	43K202GAB	Buff 43 SR (T) 230V w/o FG

OPERABLE SETS

1.11 Operable sets which can be assembled in the field from components listed on Page 2 include:

(a) 115 Vac Buff 42 Sets

<u>Set No.</u>	<u>Set Without Feature Group</u>		<u>Feature Group</u>		<u>Keytop Mod Kit</u>		<u>Set Description Label Designation</u>
1	4240 BZB	+	43FG110/AA/02	=			Buff 42 SR (F) INTF CLDKT w/EF
2	4240 BZB	+	43FG110/BA/03	+	411381	=	Buff 42 SC (F) w/EF
3	4240 BZD	+	43FG110/AA/02	+	411377	=	Buff 42 SR (F) INTF w/EF
4	4240 BZD	+	43FG110/BA/03	=			Buff 42 SC (F) w/EF
5	4340 BZD	+	43FG110/AA/02	+	411378	=	Buff 42 SR (F) INTF w/EF
6	4340 BZD	+	43FG110/BA/03	+	411379	=	Buff 42 SC (F) w/EF
7	4340 BZJ	+	43FG110/BA/03	+	411379	=	Buff 42 SC (T) w/EF

(b) 115 Vac Buff 43 Sets

<u>Set No.</u>	<u>Set Without Feature Group</u>		<u>Feature Group</u>		<u>Keytop Mod Kit</u>		<u>Set Description Label Designation</u>
8	4240 BZD	+	43FG210/BA/02	+	411384	=	Buff 43 SC EC (F)
9	4340 BZD	+	43FG210/AA/02	=			Buff 43 SR w/ER (F)
10	4340 BZD	+	43FG210/BA/02	+	411380	=	Buff 43 SC EC (F)
11	4340 BZJ	+	43FG210/AA/02	=			Buff 43 SR w/ER (T)
12	4340 BZJ	+	43FG210/BA/02	+	411380	=	Buff 43 SC EC (T)

(c) 115/230 Vac Buff 42 Sets

<u>Set No.</u>	<u>Set Without Feature Group</u>		<u>Feature Group</u>		<u>Keytop Mod Kit</u>		<u>Set Description Label Designation</u>
13	4240 BZC	+	43FG110/AA/02	=			Buff 42 SR (F) INTF CLDKT w /EF 230V
14	4240 BZC	+	43FG110/BA/03	+	411381	=	Buff 42 SC (F) w/EF 230V
15	4340 BZF	+	43FG110/AA/02	+	411378	=	Buff 42 SR (F) INTF w/EF 230V
16	4340 BZF	+	43FG110/BA/03	+	411379	=	Buff 42 SC (F) w/EF 230V
17	4340 BZK	+	43FG110/BA/03	+	411379	=	Buff 42 SC (T) w/EF 230V

SPECIFICATION 51049S

(d) 115/230 Vac Buff 43 Sets

Set No.	Set Without Feature Group		Feature Group		Keypop Mod Kit		Set Description Label Designation
18	4340 BZE	+	43FG210/AA/02	=		=	Buff 43 SR w/ER (P) 230V
19	4340 BZE	+	43FG210/BA/02	+	411380	=	Buff 43 SC EC (P) 230V
20	4340 BZF	+	43FG210/AA/02	=		=	Buff 43 SR w/ER (F) 230V
21	4340 BZF	+	43FG210/BA/02	+	411380	=	Buff 43 SC EC (F) 230V
22	4340 BZK	+	43FG210/AA/02	=		=	Buff 43 SR w/ER (T) 230V
23	4340 BZK	+	43FG210/BA/02	+	411380	=	Buff 43 SC EC (T) 230V

Note: 115/230 Vac sets may not be UL listed or comply with CSA requirements.

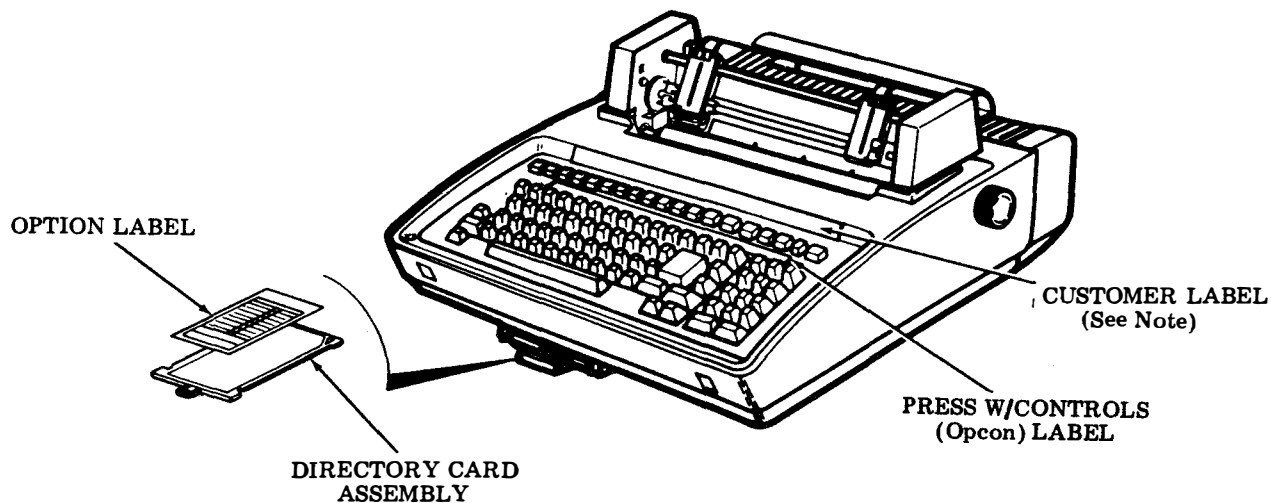
1.12 Refer to 3. PARTS LISTS and verify that the items listed in each feature group and modification kit are present at the installation location after the boxes are unpacked. If the set configuration for your application is not covered in this specification, refer to the specifications which are included with the feature group, keytop modification kit or other devices present at the installation location.

2. ASSEMBLY INFORMATION

LABELS

2.01 Peel the protective backing from the options label of the feature group. Apply the label to the side of the directory card assembly opposite the "frequently called numbers" list. Install the directory card assembly into its holder.

2.02 Peel the protective backing from the press w/controls (opcon) label and apply the label to the cover strip located between the two top rows of keyboard keys. Press the label firmly in place.

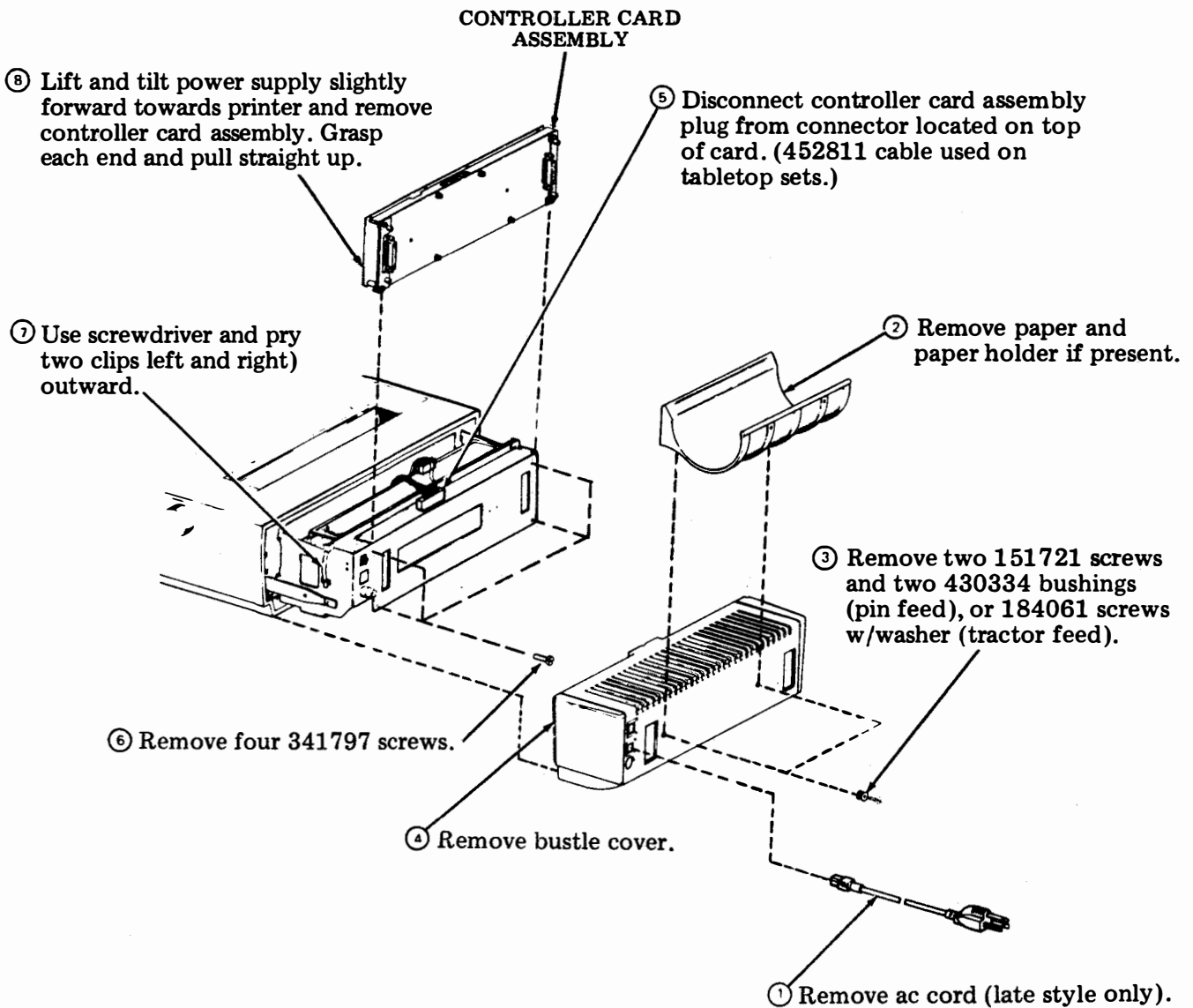


Note: If the Model 42 customer label is used (43 to 42), remove the old Model 43 label, peel the protective backing from the 430907 Model 42 label and apply to the cover. If the Model 43 customer label is used (42 to 43), remove the old Model 42 label, peel the protective backing from the 430906 Model 43 label and apply to the cover.

APPLICATION PROGRAM CARD

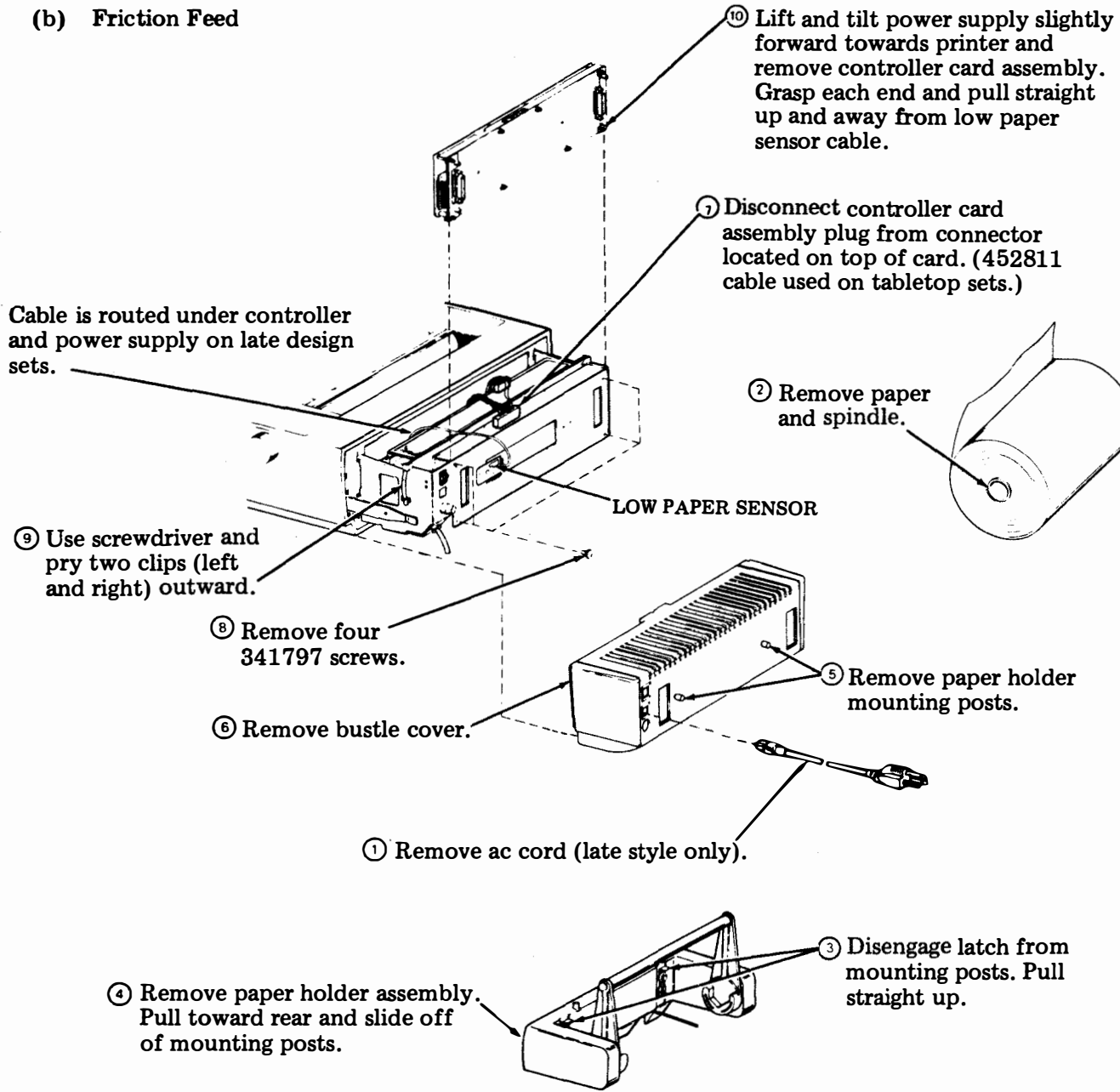
2.03 Remove the controller card assembly as follows:

(a) Pin Feed or Tractor Feed

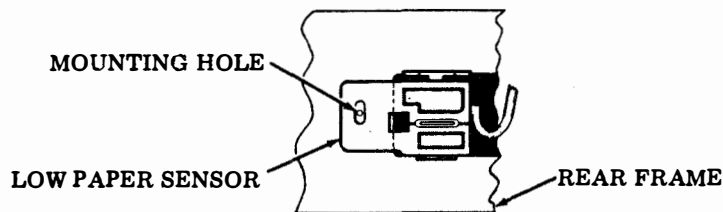


SPECIFICATION 51049S

(b) Friction Feed

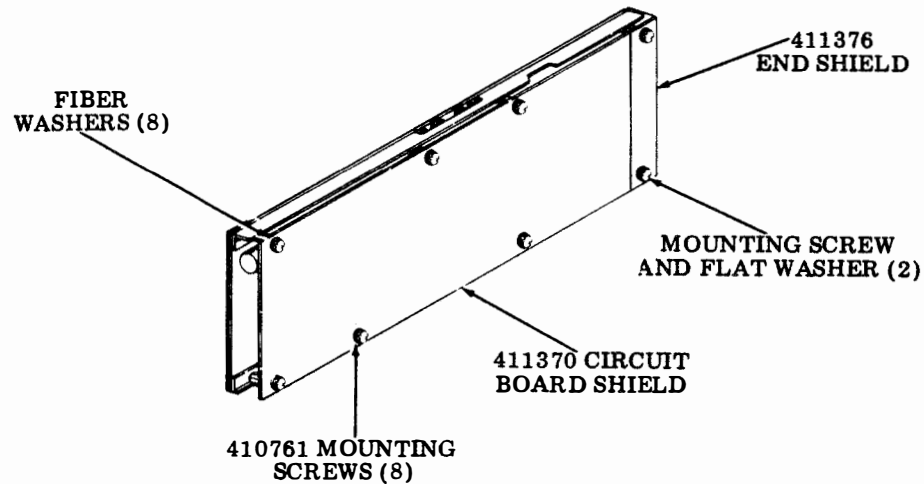


Note: In reassembly, align low paper sensor mounting hole with mounting hole in rear frame.

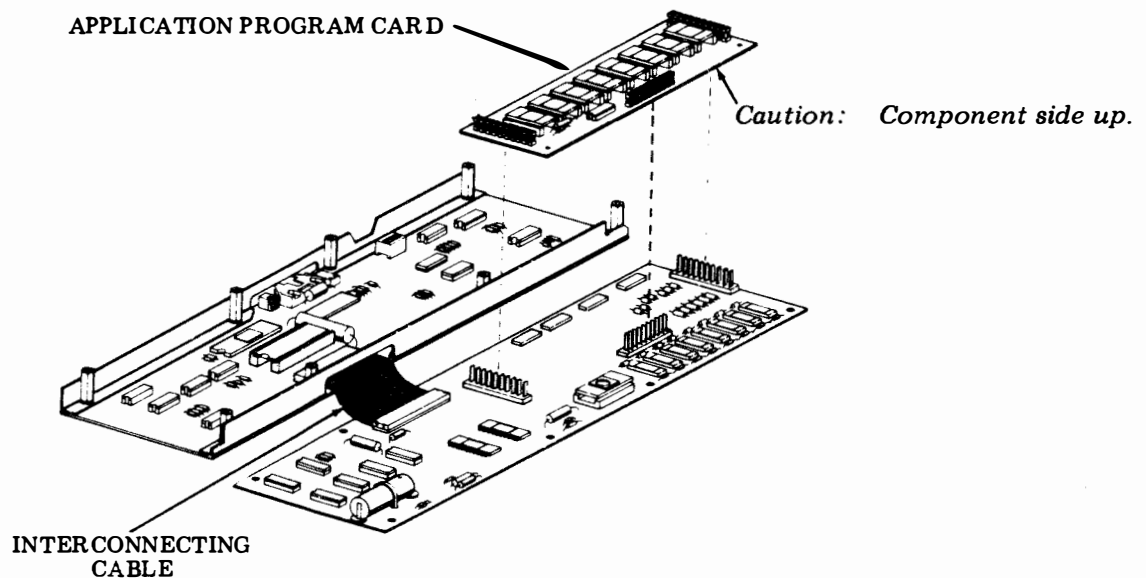


2.04 Disassemble the controller card assembly as follows:

- ① Remove eight 410761 mounting screw (do not remove end shield) retain the two flat washers between the end shield and circuit board shield.
- ② Slide the circuit board shield and the circuit board to the left until they clear the end shield.
- ③ Remove the circuit card shield (note the eight 411118 fiber washers between the shield and the circuit card -- retain for reassembly).



- ④ Open the controller cards as shown below.
- ⑤ With component side up, assemble the applications program card (place over interconnecting pins and carefully push down).

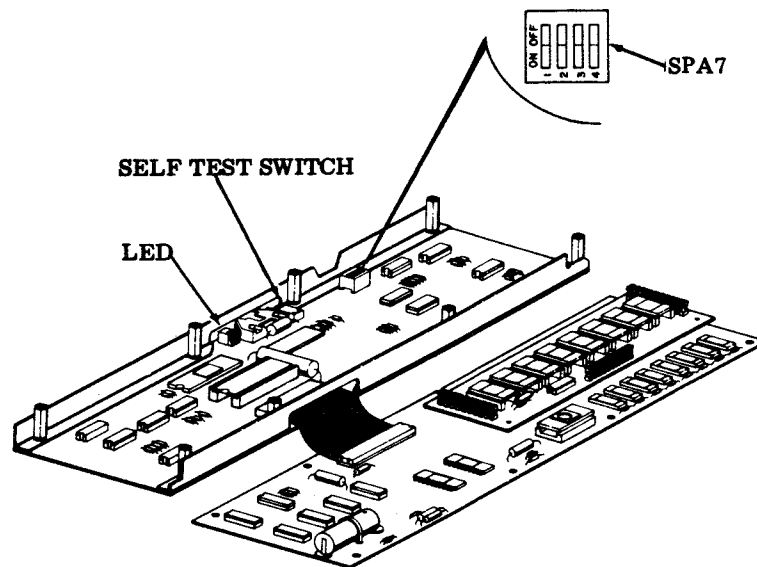


SPECIFICATION 51049S

2.05 Place SPA7 switches to ON position (if not already ON).

2.06 Reassemble controller card assembly and place into rear frame of teleprinter. (Refer to paragraph 2.03.)

Note: In reassembly, copper clad side of circuit board shield to face away from controller card assembly.



2.07 Reconnect cable plug to top of controller assembly.

CONTROLLER SELF-TEST

2.08 Temporarily remove the packing detail securing the print head and the ribbon in place. Apply power to the teleprinter and momentarily depress self-test switch.

- (a) The controller LED turns on and will flash periodically during the test (approximately 30 seconds) indicating the test is in progress.
- (b) When the test is concluded, the LED will flash six times then turn ON indicating that the controller passed the self-test.

2.09 If the self-test passed, proceed to paragraph 2.11. If the self-test failed, remove the application program card from the controller assembly. Reassemble and place the controller without the application program card into the rear frame. Reconnect cable plug to top of controller assembly. Place SPA7 switches as follows and repeat the self-test (refer to paragraph 2.03).



1, 2 and 3 — OFF
4 — ON

2.10 If the LED is ON at the end of the test, replace the defective application program card. If the LED is OFF at the end of the test, replace the teleprinter or refer to the appropriate service manual and perform the troubleshooting procedures.

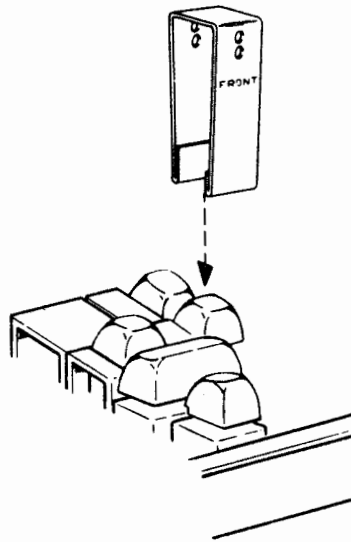
2.11 Verify SPA7 switches are in ON position and replace the print head packing detail and reassemble the remaining components removed in paragraph 2.03.

KEYTOPS

2.12 There are two types of keytops used on the operator console.

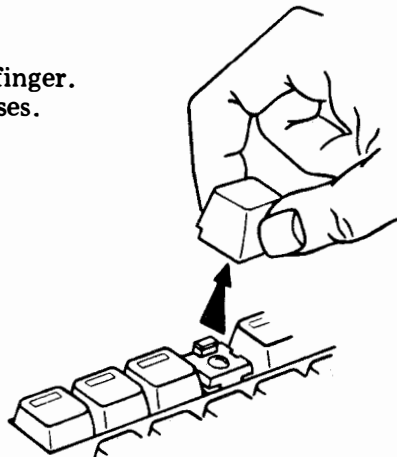
- | | |
|---------------------------|--|
| (1) Control Keytop |  |
| Indicator
Nonindicator | |
| (2) Data Keytop |  |

2.13 To remove data keytops, place 420204 tool over the keytop and pull up to remove.



2.14 To remove control keytops:

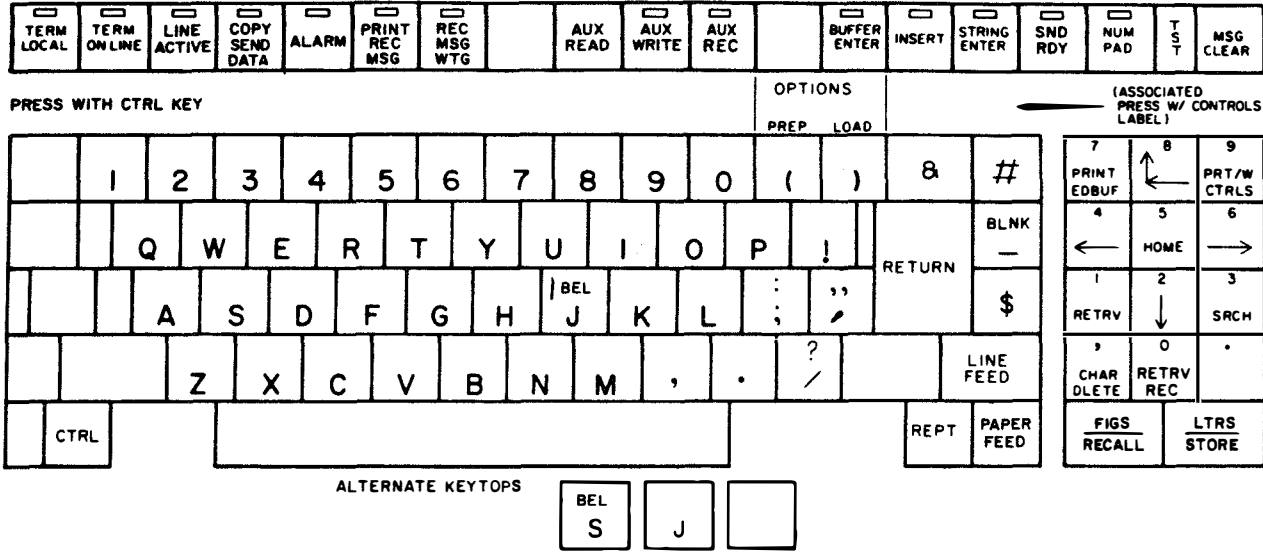
- (1) Grasp keytop using thumb and index finger.
- (2) Exert upward force until keytop releases.



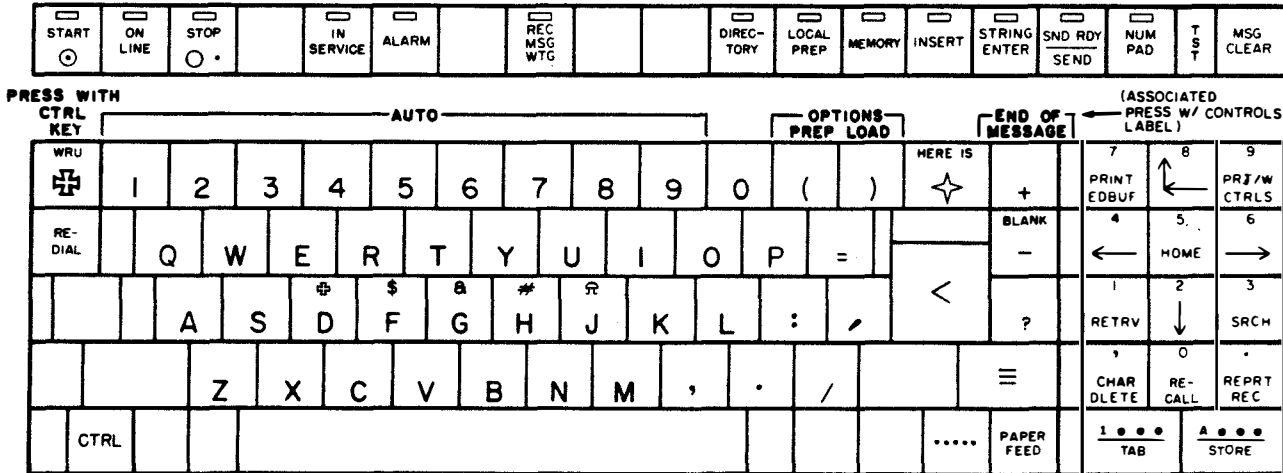
2.15 For installations requiring new keytop arrangements, replace individual keytops per the following lists using the 420204 keytop extractor (supplied in each kit).

SPECIFICATION 51049S

A. 411377 Modification Kit (converts 43K202GAG to 43K202GAD - 42 SC to 42 SR w/all white symbol keytops).



43K202GAG (before conversion)



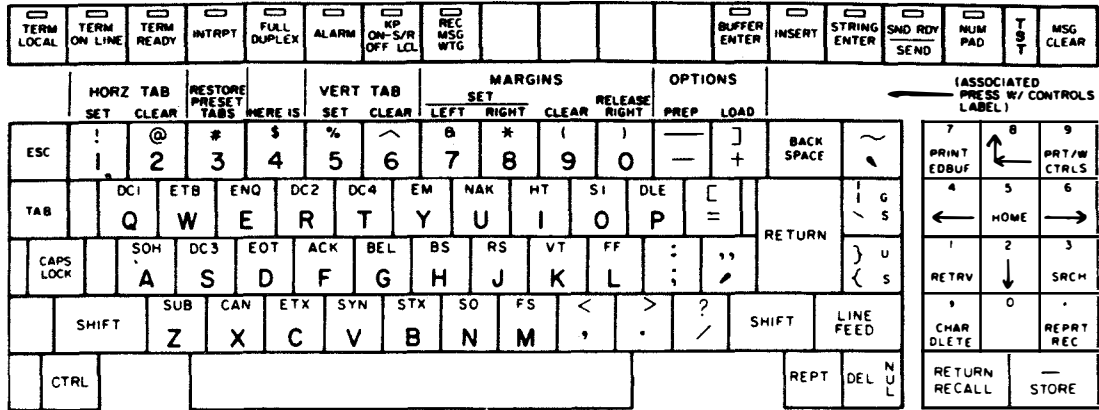
43K202GAD (after conversion)

<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>REPLACES</u>	<u>DESCRIPTION</u>
454324	START	346839	TERM LOCAL
346882	ON LINE	346840	TERM ON LINE
454326	STOP	454353	LINE ACTIVE
340701	BLOCKING	454351	COPY SEND DATA
346113	IN SERVICE	346163	ALARM
346163*	ALARM	454352	PRINT REC MSG
	(just removed above)		
340701	BLOCKING	346843	REC MSG WTG
346843*	REC MSG WTG	340701	BLOCKING
	(just removed above)		
340701*	BLOCKING	454366	AUX READ
	(just removed above)		(if present)
346829	DIRECTORY	454365	AUX RCV
454327	LOCAL PREP	340701	BLOCKING
340701*	BLOCKING	454367	AUX WRITE
	(just removed above)		(2 spaces to left)
454328	MEMORY	346844	BUFFER ENTER
346847	SND RDY/SEND	454355	SND RDY
347169	WRU	340714	BLOCKING
347170	HERE IS	347236	&
347183	+	347237	*
347171	REDIAL	340714	BLOCKING
341003	=	347238	!
346683	S	347240	BEL/S (if present)
347180	MALT. CR./D	341005	D
346691	\$/F	341006	F
346692	&/G	341007	G
346693	*/H	341008	H
347176	BELL/J	346694	BEL/J
		or 346559	J (if present)
346684	:	340861	:/;
346685	,	340862	"/,
347153	<	347149	RETURN
347181	?	347239	\$
346550	/	340877	?//
346689	LN FD SYMBOL	340986	LINE FEED
347184	0/RECALL	347218	0/RETRV REC
346602	./REPRT REC	347225	.
347182	.....	340988	REPT
347178	1.../TAB	347241	FIGS/RECALL
347179	A.../STORE	347242	LTRS/STORE

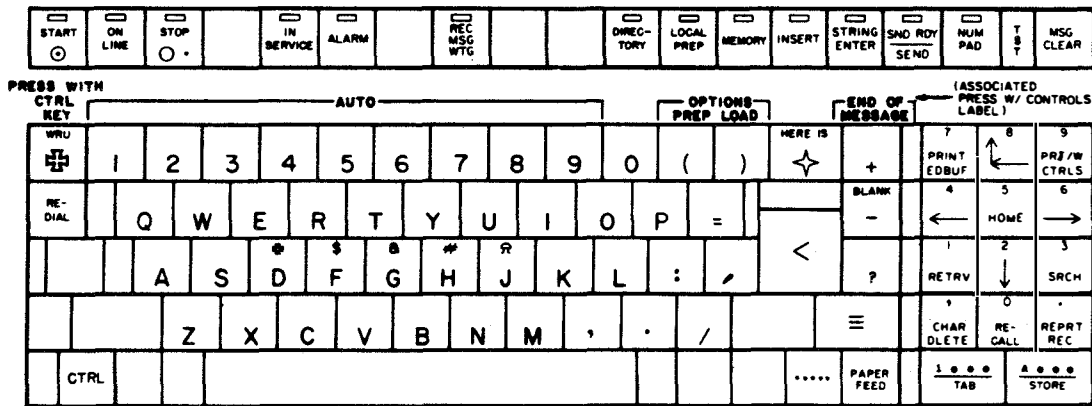
*Not part of modification kit.

SPECIFICATION 51049S

B. 411378 Modification Kit (converts 43K202GAB to 43K202GAD – 43 SR to 42 SR w/all white syn bol keytops).



43K202GAB (before conversion)



43K202GAD (after conversion)

<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>REPLACES</u>	<u>DESCRIPTION</u>
454324	START	346839	TERM LOCAL
346882	ON LINE	346840	TERM ON LINE (remove 346409 spacer under lamp)
454326	STOP	346127	TERM READY
340701*	BLOCKING (from 8 positions to right)	346106	INTRPT
346113	IN SERVICE	346841	FULL DUPLEX
340701*	BLOCKING (from 5 positions to right)	346842	KP/ON-S/R/OFF LCI
346829	DIRECTORY	340701	BLOCKING (that was moved 8 positions to left)
454327	LOCAL PREP	340701	BLOCKING (that was moved 5 positions to left)
454328	MEMORY	346844	BUFFER ENTER
347169	WRU	340975	ESC

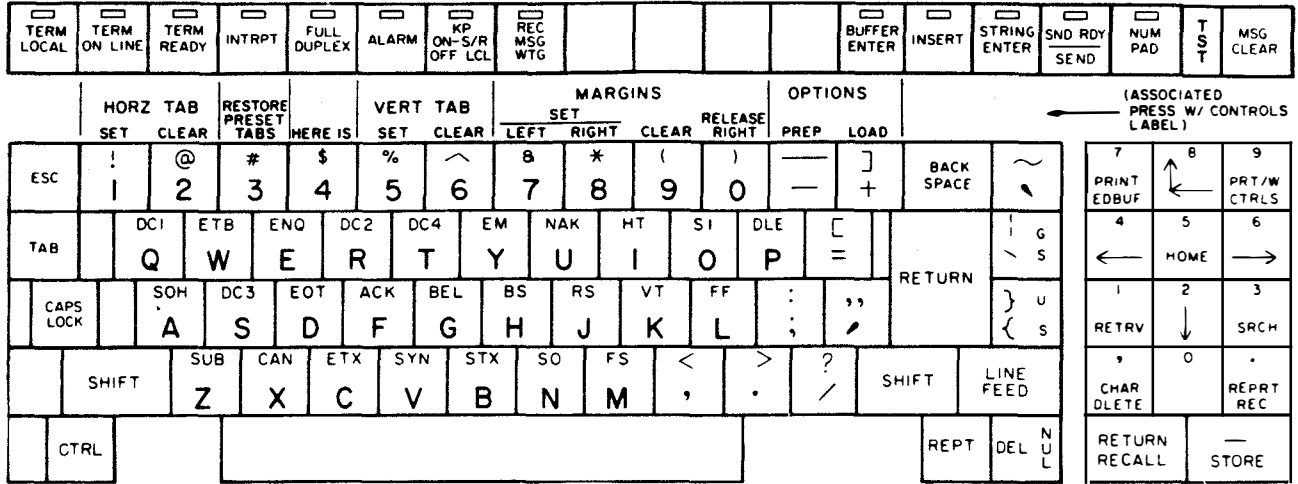
*Not part of modification kit.

(Contd on next page)

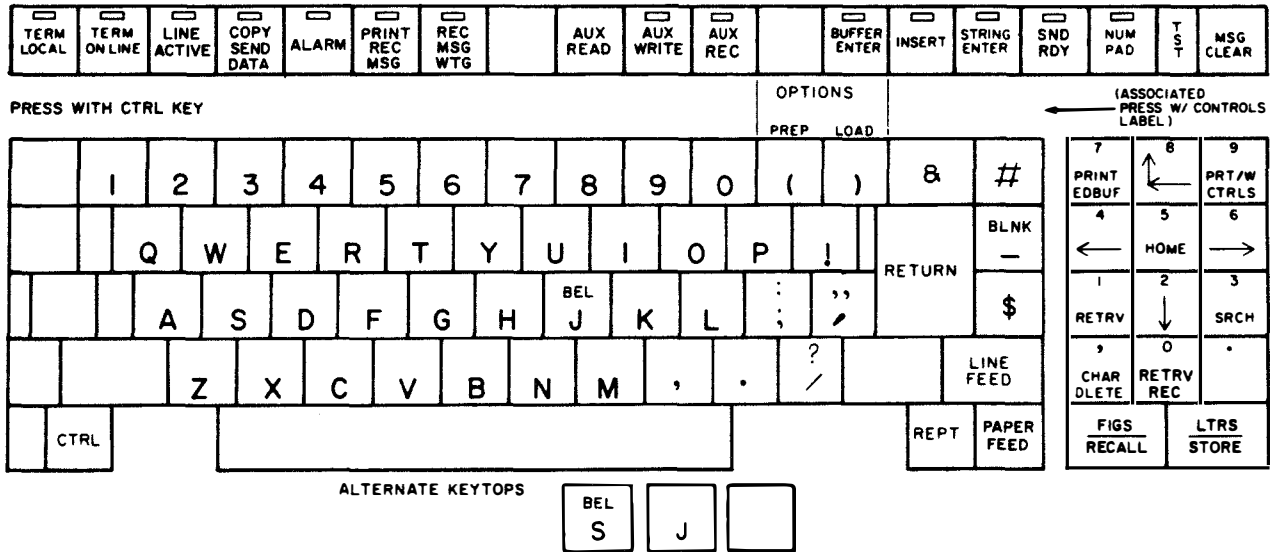
<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>REPLACES</u>	<u>DESCRIPTION</u>
346536	1	340821	!/1
346537	2	340822	@/2
346538	3	340823	*/3
346539	4	340824	\$/4
346540	5	340825	%/5
340990	6	340826	~/6
346541	7	340827	&/7
346542	8	340828	* /8
346543	9	340829	(/9
346544	0	340830	) /0
346675	(	340831	- /-
346676	)	340889)/+
347170	HERE IS	340976	BACK SPACE
347183	+	340977	~/
347171	REDIAL	346589	TAB
340993	Q	340838	DC1/Q
340994	W	340839	ETB/W
340995	E	340840	ENQ/E
340996	R	340841	DC2/R
340997	T	340842	DC4/T
340998	Y	340843	EM/Y
340999	U	340844	NAK/U
341000	I	340978	HT/I
341001	O	340846	SI/O
341002	P	340979	DLE/P
341003	=	340890	[/=
347172	BLNK/-	340981	|\
340714	BLOCKING	340894	CAPS LOCK
346682	A	340852	SOH/A
346683	S	340853	DC3/S
347180	MALT. CR./D	340854	EOT/D
346691	\$/F	340855	ACK/F
346692	&/G	340856	BEL/G
346693	*/H	340982	BS/H
347176	BELL/J	340858	RS/J
341009	K	340859	VT/K
341010	L	340860	FF/L
346684	:	340861	:/;
346685	/	340862	"/
347153	<	347149	RETURN
347181	?	340983	}/{/US
341020 (2 places)	BLANK	340867	SHIFT (2 places)
341012	Z	340984	SUB/Z
341013	X	340869	CAN/X
341014	C	340870	ETX/C
341015	V	340985	SYN/V
341016	B	340872	STX/B
341017	N	340873	SO/N
346558	M	340874	FS/M
346548	,	340875	< /,
346549	.	340876	> /.
346550	/	340877	?//
346689	LN FD SYMBOL	340986	LINE FEED
347184	0/RECALL	346601	0
347182	.....	340988	REPT
347177	PAPER FEED	346590	DEL/NUL
347178	1.../TAB	346603	RETURN/RECALL
347179	A.../STORE	346604	-/STORE

SPECIFICATION 51049S

C. 411379 Modification Kit (converts 43K202GAB to 43K202GAG – 43 SR to 42 SC)



43K202GAB (before conversion)



43K202GAG (after conversion)

<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>REPLACES</u>	<u>DESCRIPTION</u>
Remove 346409 spacer under TERM ON LINE lamp.			
454353	LINE ACTIVE	346127	TERM READY
454351	COPY SEND DATA	346106	INTRPT
346163*	ALARM	346841	FULL DUPLEX
454352	(from next position to right) PRINT REC MSG	346163	ALARM
346843*	REC MSG WTG	346842	(just moved above) KP/ON-S/R/OFF LCL
340701*	(from next position to right) BLOCKING	346843	REC MSG WTG
454366	(from next position to right) AUX READ	340701	(just moved above) BLOCKING
			(that was just moved above)
454367	AUX WRITE	340701	BLOCKING
454365	AUX RCV	340701	BLOCKING
454355	SND RDY	346847	SND RDY/SEND
340714	BLOCKING	340975	ESC
346536	1	340821	!/1
346537	2	340822	@/2
346538	3	340823	#/3
346539	4	340824	\$/4
346540	5	340825	%/5
340990	6	340826	^/6
346541	7	340827	&/7
346542	8	340828	*/8
346543	9	340829	(/9
346544	0	340830	)0
346675	(	340831	_-
346676	)	340889]/+
347236	&	340976	BACK SPACE
347237	#	340977	~/\
340714	BLOCKING	346589	TAB
340993	Q	340838	DC1/Q
340994	W	340839	ETB/W
340995	E	340840	ENQ/E
340996	R	340841	DC2/R
340997	T	340842	DC4/T
340998	Y	340843	EM/Y
340999	U	340844	NAK/U

*Not part of modification kit.

(Contd on next page)

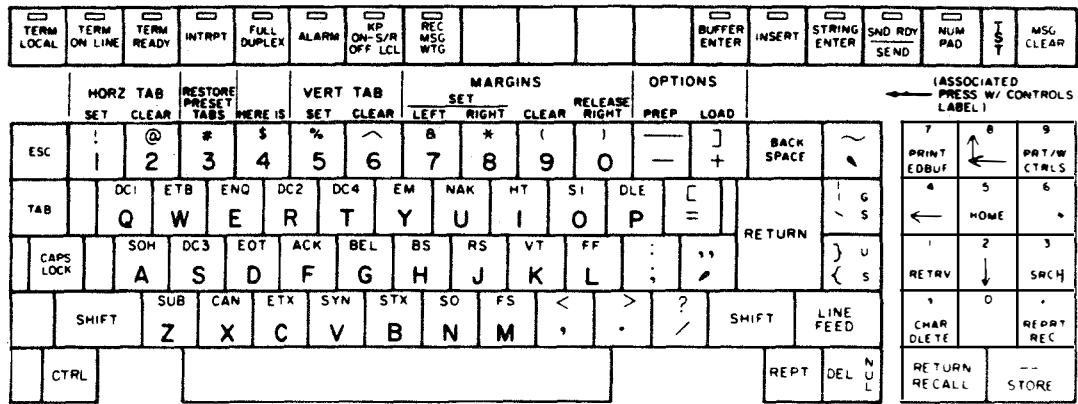
SPECIFICATION 51049S

C. 411379 Modification Kit (Contd)

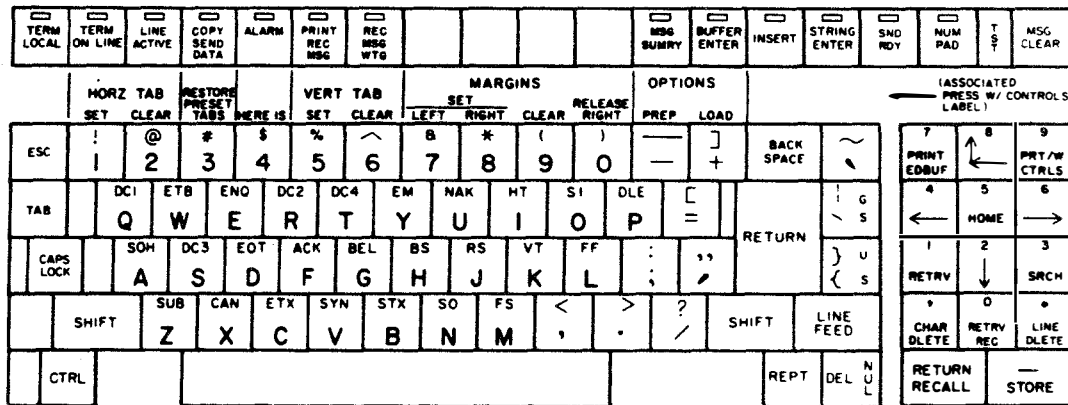
<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>REPLACES</u>	<u>DESCRIPTION</u>
341000	I	340978	HT/I
341001	O	340846	SI/O
341002	P	340979	DLE/P
347238	!	340890	[/=
347172	BLNK/-	340981	!/\GS
340714	BLOCKING	340894	CAPS LOCK
346682	A	340852	SOH/A
346683	S	340853	DC3/S
341005	D	340854	EOT/D
341006	F	340855	ACK/F
341007	G	340856	BEL/G
341008	H	340982	BS/H
346694	BEL/J	340858	RS/J
341009	K	340859	VT/K
341010	L	340860	FF/L
347239	\$	340983	}{/US
341020 (2 places)	BLANK	340867	SHIFT (2 places)
341012	Z	340984	SUB/Z
341013	X	340869	CAN/X
341014	C	340870	ETX/C
341015	V	340985	SYN/V
341016	B	340872	STX/B
341017	N	340873	SO/N
346558	M	340874	FS/M
346548	,	340875	</,
346549	.	340876	>/.
347218	0/RETRV REC	346601	0
347255	.	346602	./REPR/REC
347177	PAPER FEED	346590	DEL/NULL
347241	FIGS/RECALL	346603	RETURN/RECALL
347242	LTRS/STORE	346604	-/STORE
340701 †	BLOCKING		Spare, for optional use.
346559 †	J		Spare, for optional use.
347240 †	BEL/S		Spare, for optional use.

† Retain if not used and forward with set for future use.

D. 411380 Modification Kit (converts 43K202GAB to 43K202GAF - 43 SR to 43 SC).



43K202GAB (before conversion)



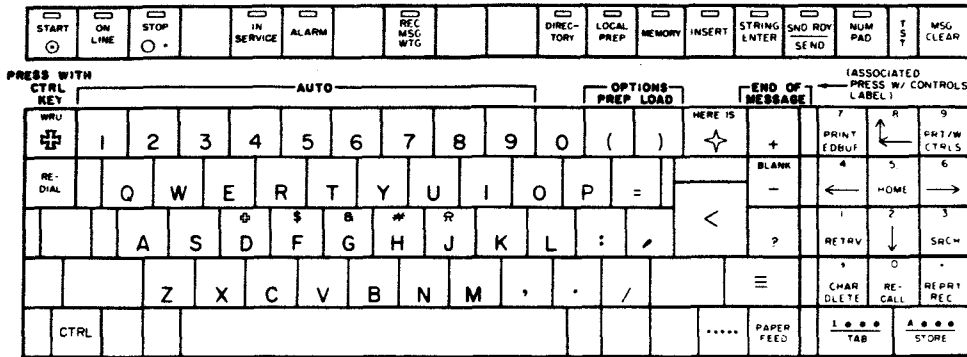
43K202GAF (after conversion)

<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>REPLACES</u>	<u>DESCRIPTION</u>
	Remove 346409 spacer under TERM ON LINE lamp.		
454353	LINE ACTIVE	346127	TERM READY
454351	COPY SEND DATA	346106	INTRPT
346163*	ALARM	346841	FULL DUPLEX
454352	(from next position to right) PRINT REC MSG	346163	ALARM
346843*	REC MSG WTG	346842	(just moved above) KP/ON-S/R/OFF LCL
340701*	(from next position to right) BLOCKING	346843	REC MSG WTG
454354	(from 6 positions to right) MSG SUMRY	340701	(just moved above) BLOCKING
454355	SND RDY	346847	(just moved above) SND RDY/SEND
347218	0/RETRV REC	346601	0
347219	./LINE DLETE	346602	./REPT REC

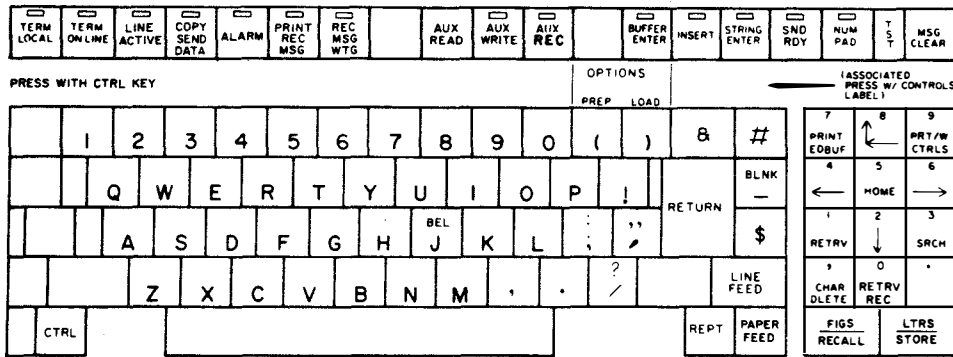
*Not part of modification kit.

SPECIFICATION 51049S

E. 411381 Modification Kit (converts 43K202GAD to 43K202GAG - 42 SR to 42 SC w/all white symbol keytops).



43K202GAD-(before conversion)



43K202GAG (after conversion)

<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>REPLACES</u>	<u>DESCRIPTION</u>
346839	TERM LOCAL	454324	START
346840	TERM ON LINE	346882	ON LINE
454353	LINE ACTIVE	454326	STOP
454351	COPY SEND DATA	340701	BLOCKING
454352	PRINT REC MSG	346163	ALARM
346163*	ALARM	346113	IN SERVICE
	(just removed above)		
346843	REC MSG WTG	340701	BLOCKING
340701*	BLOCKING	454356	REC MSG WTG
	(just removed above)		(orange)
		or 346843	REC MSG WTG
454366	AUX READ	340701	BLOCKING
454367	AUX WRITE	340701	BLOCKING
340701*	BLOCKING	454327	LOCAL PREP
	(just removed above)		(2 spaces to right)
454365	AUX REC	454357	DIRECTORY
			(orange)
		or 346829	DIRECTORY
346844	BUFFER ENTER	454358	MEMORY (orange)
		or 454328	MEMORY
346845	INSERT	454359	INSERT (orange-
			if present)
346846	STRING ENTER	454360	STRING ENTER
			(orange-if present)

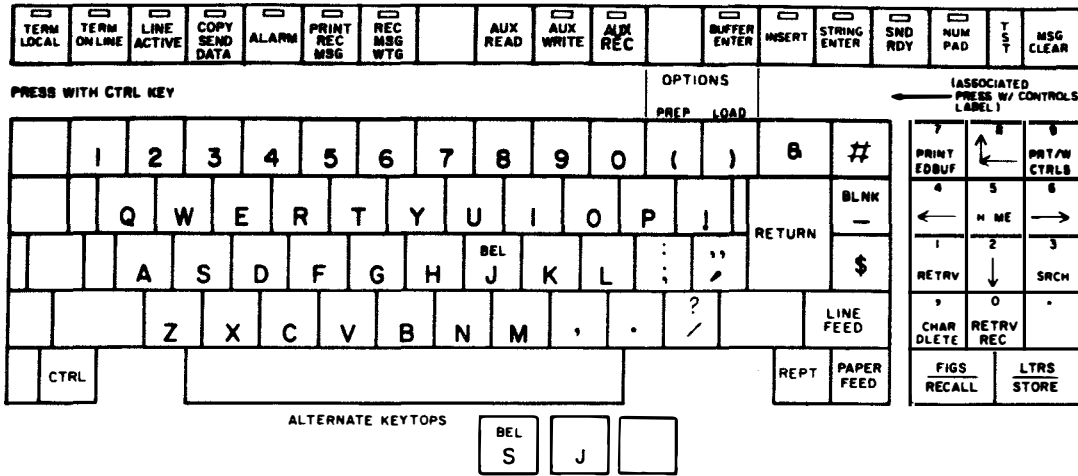
*Not part of modification kit.

<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>REPLACES</u>	<u>DESCRIPTION</u>
454355	SND RDY	454361	SND RDY/SEND (orange)
346848	NUM PAD	or 346847 454362	SND RDY/SEND NUM PAD (orange- if present)
346849	MSG CLEAR	454363	MSG CLEAR (orange- if present)
340714	BLOCKING	347169	WRU/MALT. CROSS
347236	&	347170	HERE IS
347237	#	347183	+
346591	7/PRINT EDBUF	347220	7/PRINT EDBUF (orange-if present)
346592	8/UP/LEFT ARR.	347221	8/UP/LEFT ARR. (orange-if present)
346593	9/PRT/W CTRLS	347222	9/PRT/W CTRLS (orange-if present)
340714	BLOCKING	347171	REDIAL
347238	!	341003	=
346594	4/LEFT ARR.	347223	4/LEFT ARR. (orange-if present)
346595	5/HOME	347224	5/HOME (orange-if present)
346596	6/RT. ARR.	347225	6/RT. ARR. (orange-if present)
341005	D	347180	MALT. CR./D
341006	F	346691	\$/F
341007	G	346692	&/G
341008	H	346693	#/H
346694	BEL/J	347176	BELL SYMB./J
340861	:/;	346684	:
340862	"/	346685	'
347149	RETURN	347153	<
347239	\$	347181	?
346597	1/RETRV	347226	1/RETRV (orange-if present)
346598	2/DOWN ARR.	347227	2/DOWN ARR. (orange-if present)
346599	3/SRCH	347228	3/SRCH (orange-if present)
340877	?//	346550	/
340986	LINE FEED	346689	=
346600	./CHAR DLETE	347229	./CHAR DLETE (orange-if present)
347218	0/RETRV REC	347230	0/RECALL (orange)
347255		or 347184 347231	0/RECALL ./REPRT REC (orange)
340988	REPT	or 346602 347182	./REPRT REC
347241	FIGS/RECALL	347232	.....
347242	LTRS/STORE	or 347178 347233	1.../TAB (orange)
		or 347179	1.../TAB
347240 †	BEL/S	346683 †	A.../STORE (orange)
346559 †	J	347176 †	A.../STORE S (if required) BEL/J (if required)

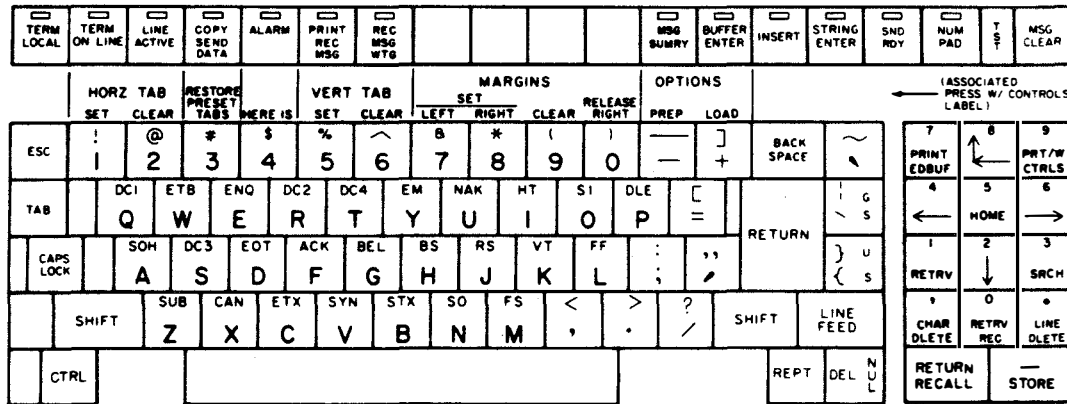
† Retain if not used and forward with set for future use.

SPECIFICATION 51049S

F. 411384 Modification Kit (converts 43K202GAG to 43K202GAF – 42 SC to 43 SC).



43K202GAG (before conversion)



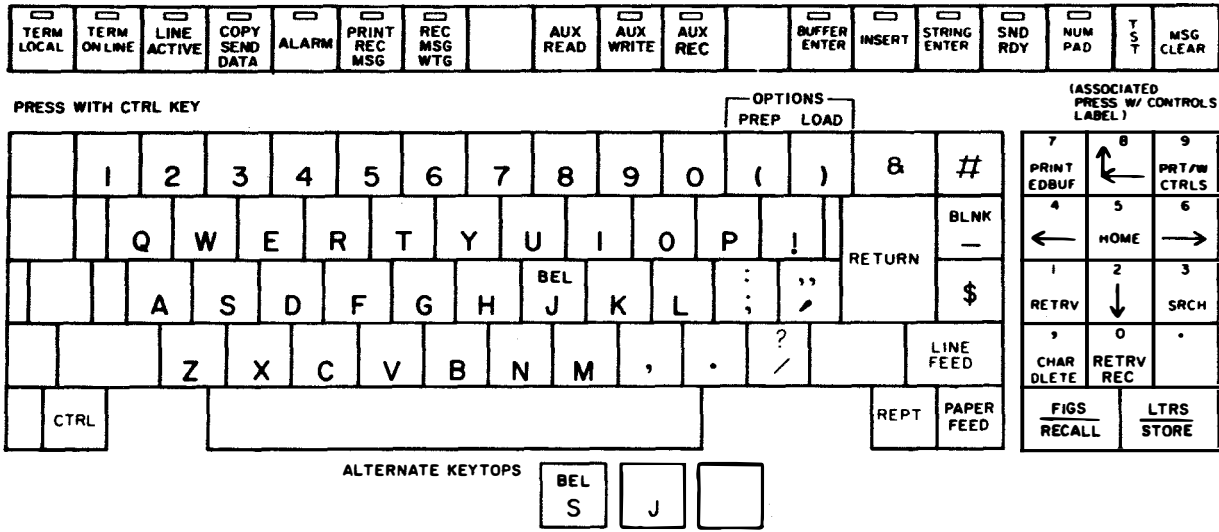
43K202GAF (after conversion)

<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>REPLACES</u>	<u>DESCRIPTION</u>
340701	BLOCKING	454389	AUX SEND (if present)
340701	BLOCKING	454366	AUX READ
340701	BLOCKING	454367	AUX WRITE
340701	BLOCKING	454365	AUX REC
454354	MSG SUMRY	340701	BLOCKING (if present)
340975	ESC	340714	BLOCKING
340821	!/1	346536	1
340822	@/2	346537	2
340823	#/3	346538	3
340824	\$/4	346539	4
340825	%/5	346540	5
340826	~/6	340990	6
340827	&/7	346541	7
340828	*/8	346542	8

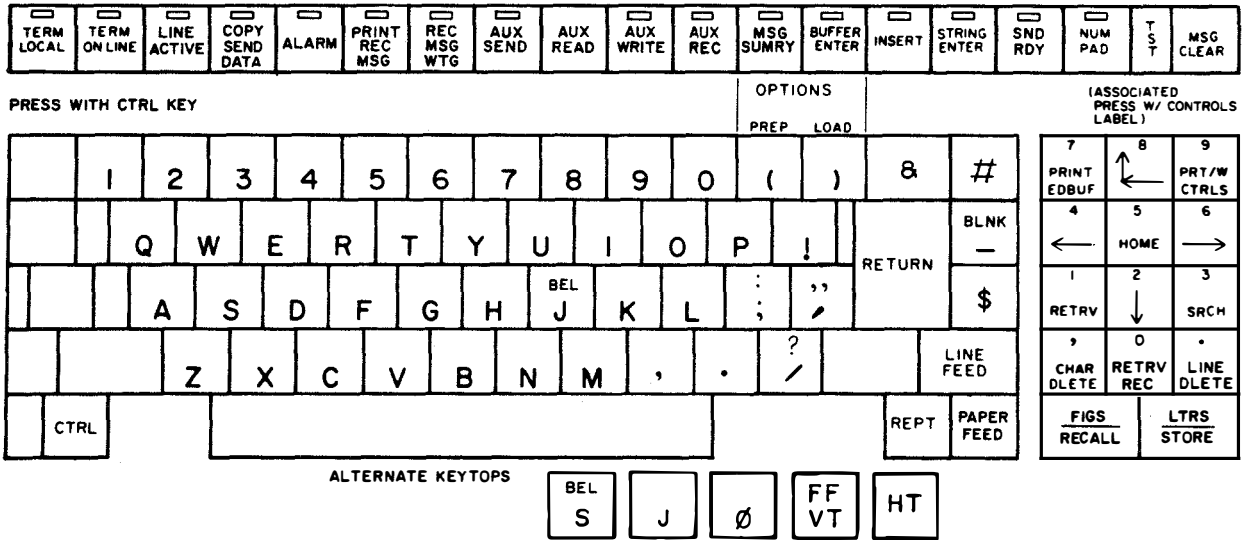
<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>REPLACES</u>	<u>DESCRIPTION</u>
340829	(/9	346543	9
340830	)0	346544	0
340831	-/-	346675	(
340889	]/+	346676)
340976	BACK SPACE	347236	&
340977	~/	347237	#
346589	TAB	340714	BLOCKING
340838	DC1/Q	340993	Q
340839	ETB/W	340994	W
340840	ENQ/E	340995	E
340841	DC2/R	340996	R
340842	DC4/T	340997	T
340843	EM/Y	340998	Y
340844	NAK/U	340999	U
340978	HT/I	341000	I
340846	SI/O	341001	O
340979	DLE/P	341002	P
340890	[/=	347238	!
340981	!/\GS	347172	BLNK/-
340894	CAPS LOCK	340714	BLOCKING
340852	SOH/A	346682	A
340853	DC3/S	346683	S
		or 347240	BEL/S
340854	EOT/D	341005	D
340855	ACK/F	341006	F
340856	BEL/G	341007	G
340982	BS/H	341008	H
340858	RS/J	346694	BEL/J
		or 346559	J
340859	VT/K	341009	K
340860	FF/L	341010	L
340983	}{/US	347239	\$
340867	SHIFT	341020	BLANK
340984	SUB/Z	341012	Z
340869	CAN/X	341013	X
340870	ETX/C	341014	C
340985	SYN/V	341015	V
340872	STX/B	341016	B
340873	SO/N	341017	N
340874	FS/M	346558	M
340875	< /,	346548	,
340876	> /.	346549	.
340867	SHIFT	341020	BLANK
347219	./LINE DLETE	347255	.
346590	DEL/NUL	347177	PAPER FEED
346603	RETURN CALL	347241	FIGS/RECALL
346604	-/STORE	347242	LTRS/STORE

SPECIFICATION 51049S

G. Keytops in 43FG/110/BA/03 (converts 43K202GAG to 43K202GAH - 42 SC to 42.SC w/EF).



43K202GAG (before Conversion)



43K202GAH (after conversion)

<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>REPLACES</u>	<u>DESCRIPTION</u>
454389	AUX SEND	340701*	BLOCKING (to right of REC MSG WTG)
454354	MSG SUMRY	340701*	BLOCKING (to right of AUX REC)
413850*	Ø (slash zero)	346554*	0 (zero, if required)
413872*	HT	347236*	& (if required)
413873*	FF/VT	340862*	"/(if required)
347219*	./LINE DELETE	347255*	

*Retain if not used, and forward with set for future use.

H. Keypoint in 43FG/210/AA/02 (converts 43K202GAB to 43K202GAJ — 43 SR to 43 SR w/ER)

TERM LOCAL	TERM ON LINE	TERM READY	INTRPT	FULL DUPLX	ALARM	KP ON-S/R OFF LCL	REC MSG WTG					BUFFER ENTER	INSERT	STRING ENTER	SND RDY SEND	NUM PAD	T S	MSG CLEAR	
HORZ TAB SET CLEAR		RESTORE PRESET TABS	HERE IS	VERT TAB SET CLEAR		MARGINS SET LEFT RIGHT CLEAR			RELEASE RIGHT		OPTIONS PREP LOAD		(ASSOCIATED PRESS W/ CONTROLS LABEL)						
ESC	!	@	#	\$	%	^	8	*	(	)	-	]	BACK SPACE	~	7	8	9	
TAB	DC1	ETB	ENQ	DC2	DC4	EM	NAK	HT	SI	DLE	[	RETURN	|	G	4	5	6	
CAPS LOCK	SOH	DC3	EOT	ACK	BEL	BS	RS	VT	FF	:	;	RETURN	}	U	1	2	3		
SHIFT	SUB	CAN	ETX	SYN	STX	SO	FS	<	>	?	/	SHIFT	LINE FEED	{	0	.			
CTRL													REPT	DEL	N	U	L		
															RETURN RECALL	CHAR DELETE	RETRV REC	SRCH	REPRT REC
																			STORE

43K202GAJ

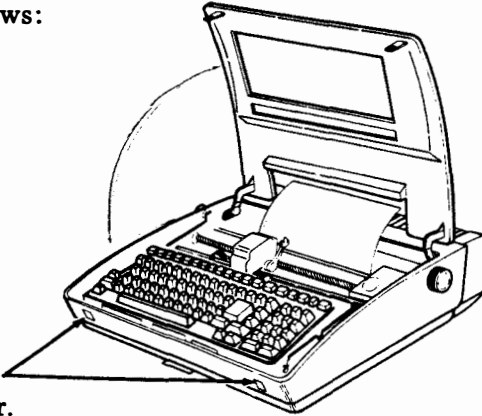
<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>REPLACES</u>	<u>DESCRIPTION</u>
347218	0/RETRV REC	346601	0

SPECIFICATION 51049S

MAPL2 OR MAPL5 MOS IC PACK

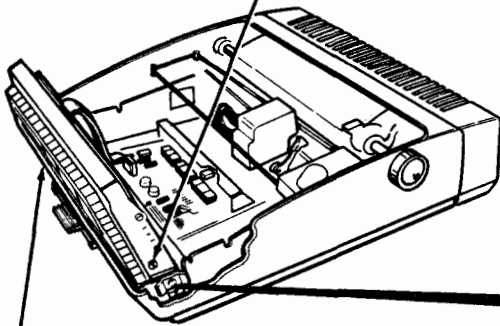
2.16 When using the 411377, 411378 or 411381 Keytop Modification Kit, perform the following:

(a) Disassemble the teleprinter as follows:

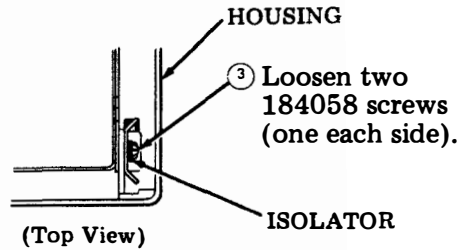


① Depress locking tabs (part of cover) to release and lift cover. Open fully to rear.

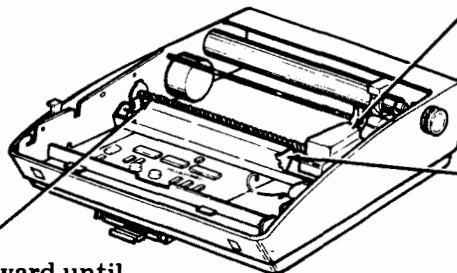
② Loosen two 181240 screws (one each side).



④ Lift rear edge of opcon and pivot it forward on front mounting bushings.



⑤ Move print head and carriage fully to the right.

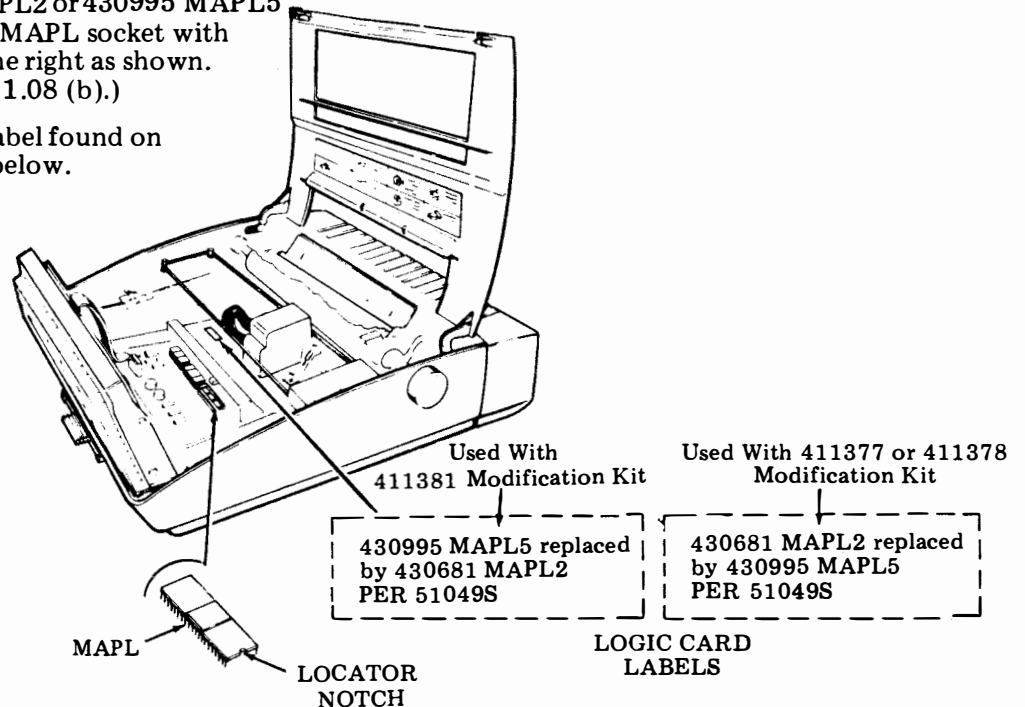


⑦ Slowly rotate cover rearward until extension on cover aligns with locking hole in side frame. Apply slight leftward pressure until the extension engages the hole in the side frame, locking the cover into position.

⑥ Grasp each end of the logic card front cover and push outward on the sides until the locking tabs are free of the logic card.

(b) Install the MAPL2 or MAPL5 MOS pack as follows:

- ① Remove and retain for future use the MAPL MOS IC pack from its socket using 407326 IC extractor. Lift straight up to protect against bending of pins. (Note location of locator notch.)
- ② Insert the 430681 MAPL2 or 430995 MAPL5 MOS IC pack into the MAPL socket with the locator notch to the right as shown. (Refer to 1.08 (a) and 1.08 (b).)
- ③ Install the logic card label found on Page 25/26 as shown below.



- ④ Reassemble the teleprinter (refer to paragraph 2.16 (a) and perform the KEYBOARD TO COVER ALIGNMENT adjustment below).

The following two requirements must be met:

(1) Requirement

Left to Right Positioning — When the free play movement of the cover (left to right) is taken up lightly in each direction, the cover shall not touch any opcon keytops.

To Adjust

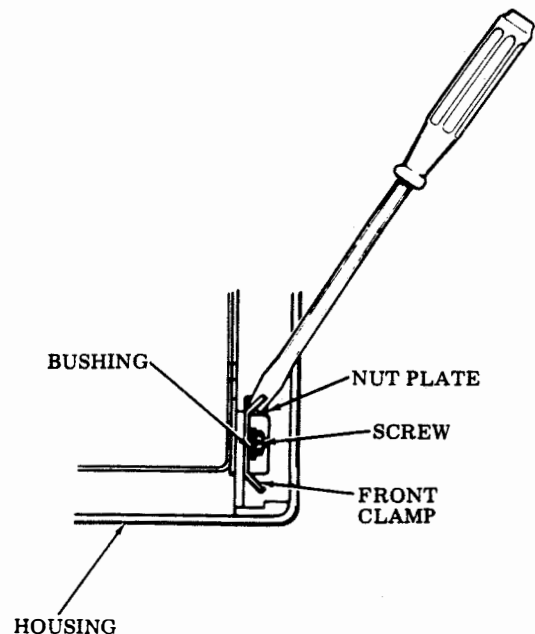
Loosen two screws and position the printer and rear frame assembly to meet the requirement.

(2) Requirement

Forward Positioning — The two front bushing clamps shall firmly engage the opcon bushings and hold the printer and rear frame assembly fully forward into the housing. There should be no front to rear play between the bushing and clamp (left and right sides).

To Adjust

Insert a screwdriver into the square hole in the nut plate and gently twist (or pry) the screwdriver with enough force to meet the requirement.



(Top View — Right Corner)

Warning: Do not overtwist the screwdriver.

SPECIFICATION 51049S

SET DESCRIPTION AND KEYBOARD LABEL

- 2.17 After the teleprinter is equipped with the feature group and keytop modification kit, peel the protective backing from the correct Set Description Label which matches the operable set in paragraph 1.10 and affix as shown on Page 27.
- 2.18 If any keytops on the keyboard were changed, affix the keyboard label to the front of the keyboard. Place tape over the existing keyboard code plate.
- 2.19 If a MAPL MOS IC pack was replaced in paragraph 2.16, verify that the proper Logic Card label was correctly affixed to the logic card. (Refer to 1.08 (a), 1.08 (b) and 2.16.)

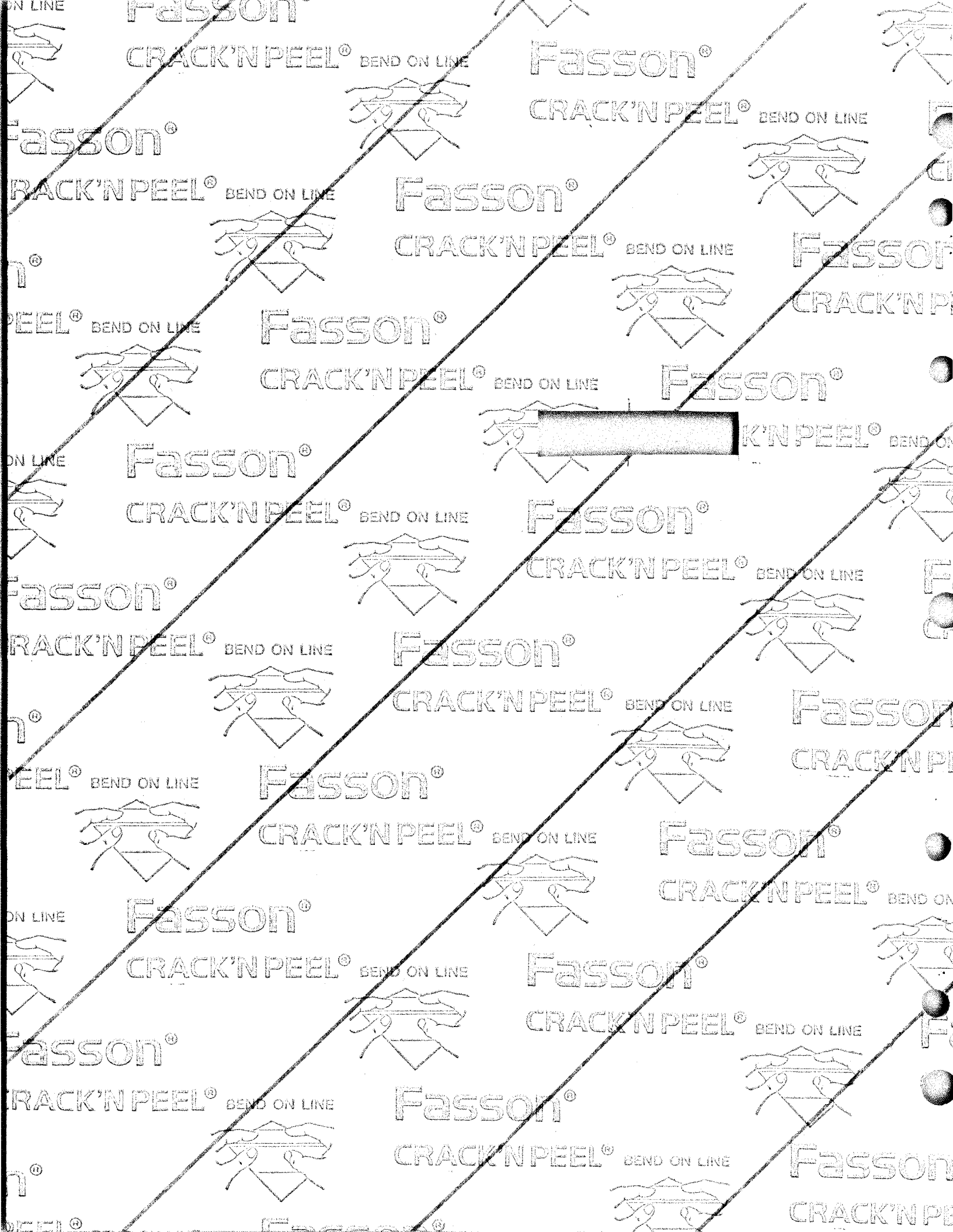
SET NO.

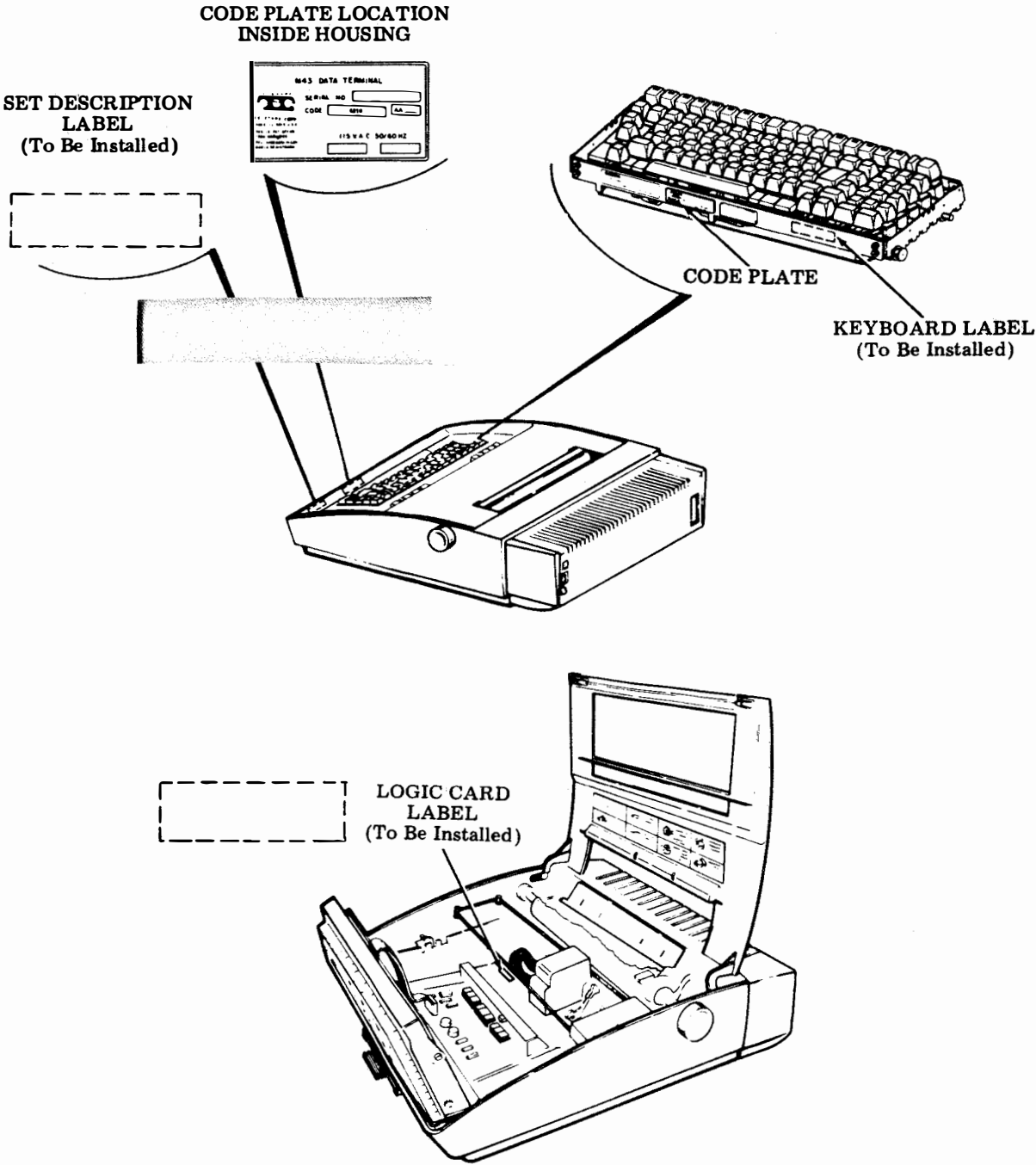
1	BUFF 42 SR (F) INTF CLDKT w/EF PER 51049S
3, 5	BUFF 42 SR (F) INTF w/EF PER 51049S
2, 4, 6	BUFF 42 SC (F) w/EF PER 51049S
7	BUFF 42 SC (T) w/EF PER 51049S
9	BUFF 43 SR w/ER (F) PER 51049S
8, 10	BUFF 43 SC EC (F) PER 51049S
11	
12	BUFF 43 SC EC (T) PER 51049S
13	BUFF 42 SR (F) INTF CLDKT w/EF 230V PER 51049S
15	BUFF 42 SR (F) INTF w/EF 230V PER 51049S
14, 16	BUFF 42 SC (F) w/EF 230V PER 51049S

SET NO.

17	BUFF 42 SC (T) w/EF 230V PER 51049S
18	BUFF 43 SR w/ER (P) 230V PER 51049S
19	BUFF 43 SC EC (P) 230V PER 51049S
20	BUFF 43 SR w/ER (F) 230V PER 51049S
21	BUFF 43 SC EC (F) 230V PER 51049S
22	BUFF 43 SR w/ER (T) 230V PER 51049S
23	BUFF 43 SC EC (T) 230V PER 51049S
Keyboard Label	MODIFIED per 51049S
Logic Card Label	430995 MAPL5 replaced by 430681 MAPL2 PER 51049S
Logic Card Label	430681 MAPL2 replaced by 430995 MAPL5 PER 51049S

Cut out labels on dotted line.





Set Description, Keyboard and Logic Card Label Location

SPECIFICATION 51049S

3. PARTS LISTS

3.01 Following is a list of the Feature Groups and Keytop Modification Kits and their parts lists.

A. 43FG110/AA/02 — Buff 42 SR INTF w/EF

<u>QTY</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	411956	Circuit Card, Application Program
1	430361	Label, Press w/Controls (Opcon)
1	51049S	Specification

B. 43FG110/BA/03 — Buff 42 SC w/EF

<u>QTY</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	411960	Circuit Card, Applications Program
1	430234	Label, Options
1	430362	Label, Press
1	420204	Extractor, E
1	347219	Keytop, ./LINE DELETE
1	413850	Keytop, 0 (Slash Zero)
1	413872	Keytop, HT
1	413873	Keytop, FF/VT
1	454354	Keytop, MSG SUMRY
1	454389	Keytop, AUX SEND
1	51049S	Specification

C. 43FG210/AA/02 — Buff 43 SR w/ER

<u>QTY</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	411961	Circuit Card, Applications Program
1	455031	Label, Options
1	430358	Label, Press w/Controls (Opcon)
1	347218	Key, 0 RETRV REC
1	420204	Extractor, Keytop
1	51049S	Specification

D. 43FG210/BA/02 — Buff 43 SC EC

<u>QTY</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	411958	Circuit Card, Applications Program
1	430234	Label, Options
1	430358	Label, Press w/Controls (Opcon)
1	51049S	Specification

E. 411377 Keytop Modification Kit

<u>QTY</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	454324	Keytop, START
1	346882	Keytop, ON LINE
1	454326	Keytop, STOP
2	340701	Keytop, BLOCKING
1	346113	Keytop, IN SERVICE
1	346829	Keytop, DIRECTORY
1	454327	Keytop, LOCAL PREP
1	454328	Keytop, MEMORY
1	346847	Keytop, SND RDY/SEND
1	347169	Keytop, WRU
1	347170	Keytop, HERE IS
1	347183	Keytop, +
1	347171	Keytop, REDIAL
1	341003	Keytop, =
1	346683	Keytop, S
1	347180	Keytop, MALT. CR./D
1	346691	Keytop, \$/F
1	346692	Keytop, &/G
1	346693	Keytop, #/H
1	347176	Keytop, BELL/J
1	346684	Keytop, :
1	346685	Keytop, ' ,
1	347153	Keytop, <
1	347181	Keytop, ?
1	346550	Keytop, /
1	346689	Keytop, LN FD SYMBOL
1	347184	Keytop, 0/RECALL
1	346602	Keytop, ./REPRT REC
1	347182	Keytop,
1	347178	Keytop, 1.../TAB
1	347179	Keytop, A.../STORE
1	420204	Extractor, Keytop
1	430995	MAPL5 MOS Pack
1	51049S	Specification

F. 411378 Keytop Modification Kit

<u>QTY</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	454324	Keytop, START
1	346882	Keytop, ON LINE
1	454326	Keytop, STOP
1	346113	Keytop, IN SERVICE
1	346829	Keytop, DIRECTORY
1	454327	Keytop, LOCAL PREP
1	454328	Keytop, MEMORY
1	347169	Keytop, WRU
1	346536	Keytop, 1
1	346537	Keytop, 2
1	346538	Keytop, 3
1	346539	Keytop, 4
1	346540	Keytop, 5
1	340990	Keytop, 6
1	346541	Keytop, 7
1	346542	Keytop, 8

(Contd on next page)

SPECIFICATION 51049S

F. 411378 Keytop Modification Kit (Contd)

<u>QTY</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	346543	Keytop, 9
1	346544	Keytop, 0
1	346675	Keytop, (
1	346676	Keytop,)
1	347170	Keytop, HERE IS
1	347183	Keytop, +
1	347171	Keytop, REDIAL
1	340993	Keytop, Q
1	340994	Keytop, W
1	340995	Keytop, E
1	340996	Keytop, R
1	340997	Keytop, T
1	340998	Keytop, Y
1	340999	Keytop, U
1	341000	Keytop, I
1	341001	Keytop, 0
1	341002	Keytop, P
1	341003	Keytop, =
1	347172	Keytop, BLNK/-
1	340714	Keytop, BLOCKING
1	346682	Keytop, A
1	346683	Keytop, S
1	347180	Keytop, MALT. CR./D
1	346691	Keytop, \$/F
1	346692	Keytop, &/G
1	346693	Keytop, #/H
1	347176	Keytop, BELL/J
1	341009	Keytop, K
1	341010	Keytop, L
1	346684	Keytop, :
1	346685	Keytop, /
1	347153	Keytop, <
1	347181	Keytop, ?
2	341020	Keytop, BLANK
1	341012	Keytop, Z
1	341013	Keytop, X
1	341014	Keytop, C
1	341015	Keytop, V
1	341016	Keytop, B
1	341017	Keytop, N
1	346558	Keytop, M
1	346548	Keytop, ,
1	346549	Keytop, .
1	346550	Keytop, /
1	346689	Keytop, LN FD SYMBOL
1	347184	Keytop, 0/RECALL
1	347182	Keytop,
1	347177	Keytop, PAPER FEED
1	347178	Keytop, 1 . . . /TAB
1	347179	Keytop, A . . . /STORE
1	420204	Extractor, Keytop
1	430995	MAPL5 MOS Pack
1	51049S	Specification

G. 411379 Keytop Modification Kit

<u>QTY</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	454353	Keytop, LINE ACTIVE
1	454351	Keytop, COPY SEND DATA
1	454352	Keytop, PRINT REC MSG
1	454366	Keytop, AUX READ
1	454367	Keytop, AUX WRITE
1	454365	Keytop, AUX REC
1	454355	Keytop, SND RDY
1	346536	Keytop, 1
1	346537	Keytop, 2
1	346538	Keytop, 3
1	346539	Keytop, 4
1	346540	Keytop, 5
1	340990	Keytop, 6
1	346541	Keytop, 7
1	346542	Keytop, 8
1	346543	Keytop, 9
1	346544	Keytop, 0
1	346675	Keytop, (
1	346676	Keytop,)
1	347236	Keytop, &
1	347237	Keytop, #
1	340993	Keytop, Q
1	340994	Keytop, W
1	340995	Keytop, E
1	340996	Keytop, R
1	340997	Keytop, T
1	340998	Keytop, Y
1	340999	Keytop, U
1	341000	Keytop, I
1	341001	Keytop, O
1	341002	Keytop, P
1	347238	Keytop, !
1	347172	Keytop, BLNK/-
3	340714	Keytop, BLOCKING
1	346682	Keytop, A
1	346683	Keytop, S
1	341005	Keytop, D
1	341006	Keytop, F
1	341007	Keytop, G
1	341008	Keytop, H
1	346694	Keytop, BEL/J
1	341009	Keytop, K
1	341010	Keytop, L
1	347239	Keytop, \$
2	341020	Keytop, BLANK
1	341012	Keytop, Z
1	341013	Keytop, X
1	341014	Keytop, C
1	341015	Keytop, V
1	341016	Keytop, B
1	341017	Keytop, N
1	346558	Keytop, M
1	346548	Keytop, ,

(Contd on next page)

SPECIFICATION 51049S

G. 411379 Keytop Modification Kit (Contd)

<u>QTY</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	346549	Keytop, .
1	347218	Keytop, 0/RETRV REC
1	347255	Keytop, .
1	347177	Keytop, PAPER FEED
1	347241	Keytop, FIGS/RECALL
1	347242	Keytop, LTRS/STORE
1	340701*	Keytop, BLOCKING
1	346559*	Keytop, J
1	347240*	Keytop, BEL/S
1	420204	Extractor, Keytop
1	51049S	Specification

H. 411380 Keytop Modification Kit

<u>QTY</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	454353	Keytop, LINE ACTIVE
1	454351	Keytop, COPY SEND DATA
1	454352	Keytop, PRINT REC MSG
1	454354	Keytop, MSG SUMRY
1	454355	Keytop, SND RDY
1	347218	Keytop, 0/RETRV REC
1	347219	Keytop, ./LINE DLETE
1	420204	Extractor, Keytop
1	51049S	Specification

*Spare for optional use.

I. 411381 Keytop Modification Kit

<u>QTY</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
2	340714	Keytop, BLOCKING
1	340861	Keytop, :/;
1	340862	Keytop, "/
1	340877	Keytop, ?//
1	340986	Keytop, LINE FEED
1	340988	Keytop, REPT
1	341005	Keytop, D
1	341006	Keytop, F
1	341007	Keytop, G
1	341008	Keytop, H
1	346559*	Keytop, J
1	346591	Keytop, 7/PRINT EDBUF
1	346592	Keytop, 8/UP/LEFT ARR.
1	346593	Keytop, 9/PRT/W CTRLS
1	346594	Keytop, 4/LEFT ARR.
1	346595	Keytop, 5/HOME
1	346596	Keytop, 6/RT. ARR.
1	346597	Keytop, 1/RETRV
1	346598	Keytop, 2/DOWN ARR.
1	346599	Keytop, 3/SRCH
1	346600	Keytop, ,/CHAR DLETE
1	346694	Keytop, BEL/J
1	346839	Keytop, TERM LOCAL
1	346840	Keytop, TERM ON LINE
1	346843	Keytop, REC MSG WTG
1	346844	Keytop, BUFFER ENTER
1	346845	Keytop, INSERT
1	346846	Keytop, STRING ENTER
1	346848	Keytop, NUM PAD
1	346849	Keytop, MSG CLEAR
1	347149	Keytop, RETURN
1	347218	Keytop, O/RETRV REC
1	347236	Keytop, &
1	347237	Keytop, #
1	347238	Keytop, !
1	347239	Keytop, \$
1	347240*	Keytop, BEL/S
1	347241	Keytop, FIGS/RECALL
1	347242	Keytop, LTRS/STORE
1	347255	Keytop, .
1	454351	Keytop, COPY SEND DATA
1	454352	Keytop, PRINT REC MSG
1	454353	Keytop, LINE ACTIVE
1	454355	Keytop, SND RDY
1	454365	Keytop, AUX REC
1	454366	Keytop, AUX READ
1	454367	Keytop, AUX WRITE
1	430681*	MAPL2 MOS Pack
1	420204	Extractor, Keytop
1	51049S	Specification

*Spare part, if required.

SPECIFICATION 51049S

J. 411384 Keytop Modification Kit

<u>QTY</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
4	340701	Keytop, BLOCKING
1	340821	Keytop, !/1
1	340822	Keytop, @/2
1	340823	Keytop, #/3
1	340824	Keytop, \$/4
1	340825	Keytop, %/5
1	340826	Keytop, ^/6
1	340827	Keytop, &/7
1	340828	Keytop, */8
1	340829	Keytop, (/9
1	340830	Keytop,)/0
1	340831	Keytop, _/-
1	340838	Keytop, DC1/Q
1	340839	Keytop, ETB/W
1	340840	Keytop, ENQ/E
1	340841	Keytop, DC2/R
1	340842	Keytop, DC4/T
1	340843	Keytop, EM/Y
1	340844	Keytop, NAK/U
1	340846	Keytop, SI/O
1	340852	Keytop, SOH/A
1	340853	Keytop, DC3/S
1	340854	Keytop, EOT/D
1	340855	Keytop, ACK/F
1	340856	Keytop, BEL/G
1	340858	Keytop, RS/J
1	340859	Keytop, VT/K
1	340860	Keytop, FF/L
2	340867	Keytop, SHIFT
1	340869	Keytop, CAN/X
1	340870	Keytop, ETX/C
1	340872	Keytop, STX/B
1	340873	Keytop, SO/N
1	340874	Keytop, FS/M
1	340875	Keytop, </,
1	340876	Keytop, >/.
1	340889	Keytop,]/+
1	340890	Keytop, [/=
1	340894	Keytop, CAPS LOCK
1	340975	Keytop, ESC
1	340976	Keytop, BACK SPACE
1	340977	Keytop, ~/'
1	340978	Keytop, HT/I
1	340979	Keytop, DLE/P
1	340981	Keytop, !/\GS
1	340982	Keytop, BS/H
1	340983	Keytop, }{/US
1	340984	Keytop, SUB/Z

<u>QTY</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	340985	Keytop, SYN/V
1	346589	Keytop, TAB
1	346590	Keytop, DEL/NUL
1	346603	Keytop, RETURN RECALL
1	346604	Keytop, -/STORE
1	347219	Keytop, ./LINE DLETE
1	454354	Keytop, MSG SUMRY
1	420204	Extractor, Keytop
1	51049S	Specification

4. SUPPLEMENTAL SUPPORT INFORMATION

A. Test

An installation checkout of the buffered teleprinter station with feature group and keytops should be performed under direction of the appropriate service manual.

B. Tools

The feature groups and keytop modification kit can be installed without the use of any special tools. The 346260 keytop extractor is supplied with each keytop modification kit. Other standard tools required are a screwdriver and a 1/4 inch socket bit with handle.

C. Disposition of Teleprinter Station

Refer to the appropriate installation manual and install the teleprinter station or repack for storage or shipment.

5. DOCUMENTATION

5.01 The following table includes the associated documentation for each configuration covered in this specification. The How To Operate Manual and Installation and Routine Servicing Manual should be obtained (if not present) and accompany the assembled set.

Manual Issue Status

- MS 146 — ER (Enhanced Retrieve) sets require Manual 386, Issue 5 or later and Manual 451, Issue 3 or later.
- MS 146 — Tractor feed sets require Manual 451, Issue 2 or later.
- *MS 146 — 230V sets require Manual 386, Issue 5 or later and Manual 451, Issue 3 or later.
- MS 150 — Tractor feed sets require Manual 466 and 498, Issue 2 or later.
- MS 150 — EC (Enhanced Contention) sets require Manual 466 and 498, Issue 3 or later.
- *MS 150 — 230V sets require Manual 466 and 498, Issue 3 or later.
- *MS 161 — 230V

*The information on Pages 41 and 43 covers 230V set operation and will be included in the manual issues listed above. Until these issues of manuals are available, this specification should be retained with the set and the information on Pages 41 and 43 should be placed in the applicable How To Operate, Installation and Routine Servicing Manuals.

SET NO.	SET DESCRIPTION	SHOULD ACCOMPANY ASSEMBLED SET										ASSOCIATED DOCUMENTS												MANUAL SET REFERENCE NUMBERS											
		HOW TO OPERATE MANUALS					INSTALLATION & ROUTINE MANUALS					SERVICE MANUALS†				REPAIR MANUALS†				SHOP MANUALS†															
		3 8 6	4 5 4	4 6 6	4 7 5	4 7 9	4 8 8	5 6 4	5 6 5	5 6 6	5 6 9	5 6 7	4 5 1	4 5 8	4 9 8	5 6 7	5 6 1	4 0 6	4 2 5	4 6 8	4 8 2	3 8 5	4 1 6		4 4 2	5 2 2	5 2 3	5 3 0	5 3 3	5 3 4	5 3 9	4 7 8			
1	BUFF 42 SR (F) INTF CLDKT w/EF					✓	✓	✓	✓									✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	172	
3, 5	BUFF 42 SR (F) INTF w/EF					✓	✓	✓	✓					✓					✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	172	
2, 4, 6	BUFF 42 SC (F) w/EF				✓					✓									✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	178	
7	BUFF 42 SC (T) w/EF				✓					✓									✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	178	
9	BUFF 43 SR w/ER (F)	✓									✓								✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	146	
8, 10	BUFF 43 SC EC (F)		✓	✓									✓						✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	150	
11	BUFF 43 SR w/ER (T)	✓									✓								✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	146	
12	BUFF 43 SC EC (T)		✓	✓									✓						✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	150	
13	BUFF 42 SR (F) INTF CLDKT w/EF 230V					✓	✓	✓	✓					✓					✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	172	
15	BUFF 42 SR (F) INTF w/EF 230V					✓	✓	✓	✓					✓					✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	172
14, 16	BUFF 42 SC (F) w/EF 230V				✓					✓									✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	178
17	BUFF 42 SC (T) w/EF 230V				✓					✓									✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	178
18	BUFF 43 SR w/ER (P) 230V	✓									✓								✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	146
19	BUFF 43 SC EC (P) 230V		✓	✓									✓						✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	150
20	BUFF 43 SR w/ER (F) 230V	✓									✓								✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	146
21	BUFF 43 SC EC (F) 230V		✓	✓									✓						✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	150
22	BUFF 43 SR w/ER (T) 230V	✓									✓								✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	146
23	BUFF 43 SC EC (T) 230V		✓	✓									✓						✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	150

†Refer to Product Support Manual 416 for a complete description and issue requirement of the documentation shown above.

Refer to Product Support Manual 416 for a complete description and issue requirements of the documents shown below.

HOW TO OPERATE MANUALS

MANUAL	DESCRIPTION
386	43 Teleprinter — Buffered KSR (Full Duplex Batch and Send/Receive)
454	42 Teleprinter — Tabletop Buffered KSR and ASR
466	43 Teleprinter — Buffered Selective Calling for Multipoint Private Line
475	Brief Operator Guide — 43 Buffered Selective Calling
479	Brief Operator Guide — 42 Buffered Selective Calling
488	Brief Operator Guide — 42 Telex
564	Simplified Reference Guide — 42 Telex Buffered KSR and ASR w/Enhanced Features
565	Introductory How To Operate — 42 Telex Buffered KSR and ASR w/Enhanced Features
566	Supplementary How To Operate — 42 Telex Buffered KSR and ASR w/Enhanced Features
569	Supplementary How To Operate — 42 Buffered Selective Calling with Enhanced Features for Multipoint Private Line
577	Simplified Reference Guide — 43 Teleprinter BSR

INSTALLATION AND ROUTINE SERVICING MANUALS

MANUAL	DESCRIPTION
451	43 Teleprinter — Tabletop Buffered KSR Terminals
455	42 Teleprinter — Buffered Tabletop KSR and ASR Stations
498	43 Teleprinter — Buffered Selective Calling Terminals
567	42 Teleprinter — 42 Buffered Telex w/Enhanced Features
571	42 Teleprinter — Buffered Selective Calling w/Enhanced Features

SERVICE MANUALS

MANUAL	DESCRIPTION
406	43 Teleprinter — Buffered Pedestal Based and Tabletop Versions
422	42/43 Paper Tape Unit
425	42 Teleprinter — Buffered KSR and ASR Pedestal Based and Tabletop Versions
468	43 Teleprinter — Buffered Selective Calling Terminals
482	42 Teleprinter — Buffered Selective Calling Terminals

REPAIR MANUALS

MANUAL	DESCRIPTION
385	Circuit Diagrams
416	Product Support
442	42/43 Paper Tape Unit
522	TTL and SSI Logic Cards
523	Power Supplies
530	SSI Keyboards
533	Parts — Enclosures, Paper Handling and Misc. Accessories
534	Interfaces, Controllers and Mod. Kit Circuit Cards
539	Printer Mechanisms

SHOP MANUALS

MANUAL	DESCRIPTION
478	Tabletop Buffered Controller

SPECIFICATION 51049S

6. GLOSSARY OF ABBREVIATIONS

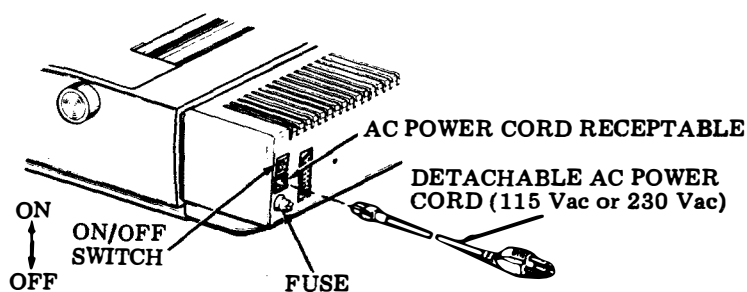
- (F) — Friction Feed**
- (P) — Pin Feed**
- (T) — Tractor Feed**
- 42 SR — 42 Send Receive — Telex**
- 42 SC — 42 Selective Calling — Multipoint Private Line**
- 43 SR — 43 Send Receive — Switched Network**
- 43 SC — 43 Selective Calling — Multipoint Private Line**
- INTF -- International Font — International Telex — Large and Small Caps**
- W/USP — With Unshift on Space**
- CLDKT — Colored Keytops — Orange**
- LED — Light Emitting Diode**
- EC — Enhanced Contention**
- W/EF — With Enhanced Features**
- W/ER — With Enhanced Retrieve**

7. ADDENDUM TO HOW TO OPERATE MANUAL

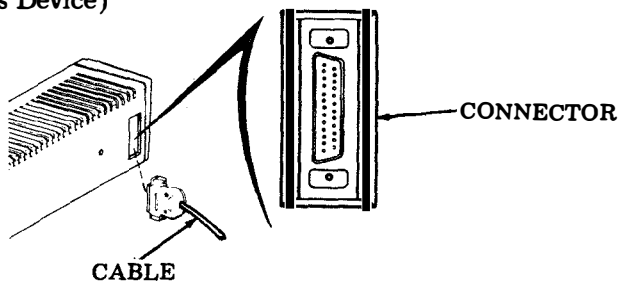
7.01 Cut out on dotted line and insert in the How To Operate Manual associated with this teleprinter if 230V set information is not included.

CONNECTIONS AND POWER TURN ON

- Make sure ac power cord and modular cords or cord to any external communications device are connected as shown before turning on power.



(To External Communications Device)



- Turn on power to teleprinter by depressing upper half of ON/OFF switch.

8. ADDENDUM TO INSTALLATION AND ROUTINE SERVICING MANUAL

8.01 Cut out on dotted line and insert in the Installation and Routine Servicing Manual associated with this teleprinter if 230V set information is not included.

430181 OR 430290
BUSTLE (115 Vac Sets)

ON/OFF SWITCH

FUSE

ATTACHED
3-WIRE POWER CORD

AC POWER ARRANGEMENT
(Early Version 115 Vac Only)

ON/OFF SWITCH

DETACHED POWER CORD
(Only Furnished With Late Version
115 Vac Only Terminals)

430670
BUSTLE

STANDARD 3 PIN
I.E.C. POWER CORD CONNECTOR

AC POWER ARRANGEMENT
(115 Vac or 230 Vac)

Variable Features

430760 POWER SUPPLY ONLY

473. 115/230 Vac Teleprinter Operation	ST2 (410703 CARD) SW2 (410704 CARD)	SET LINE FUSE F1
a. 230 Vac	In 230V position	143306 1.0A SLO-BLO †
b. 115 Vac	In 230V position	341686 1.5A SLO-BLO

†Factory furnished state of option.

To change the option from 230 Vac to 115 Vac

① Remove power supply from teleprinter, refer to Specification 51049S, paragraph 2.03 and perform ① through ④ (Early Design only -- Late Design go to ⑤).

To remove 410703 circuit card from 430760 power supply:

③ Remove two screws and two spacers. Remove card.

COVER

410703
CIRCUIT CARD

HEAT SINK

② Remove ten mounting screws
and remove heat sink.

(Early Design)

OPTION STRAP
ST2

(Late Design)

OPTION SLIDE
SWITCH
SW2

Insert 1

8.02 Cut out on dotted line and insert in the Installation and Routine Servicing Manual associated with this teleprinter if 230V set information is not included.

To change the option from 230 Vac to 115 Vac (410703 circuit Card)

① The 410703 circuit card is shown optioned for 230 Vac. To option the 410703 circuit card for 115 Vac, remove strap ST2 from its 230 Vac location and solder it into the 115 Vac position. Mark the power supply to show the option change.

115 VAC
OPTION
LANDS

RT1
R V1
230
ST2
RT2
CR7
CR8
CR9
CR10
R3
R4
C4
C6

410703 CIRCUIT CARD

② To change the option from 230 Vac to 115 Vac (410704 circuit card) operate the slide switch on top of the power supply card to the 115V position.

SLIDE
SWITCH

115V
230V

Note: Change the set line fuse from 143306
1.0 Amp SLO BLO to 341686 1.5 Amp SLO BLO.

Insert 2