

Task Oriented Practice  
(TOP)

GROWTH/DEGROWTH

4 ESS™ SWITCH

Issue 6	DEC 1986
234-153-020	TPG
TITLE PAGE	000

**FIND YOUR JOB IN THE LIST BELOW . . . . . THEN GO TO**

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Combined Matrix Frame to Signal Processor 1 – Add (Support to Installer) . . . . .	NTP-004
Combined Matrix Frame with SP 1 – Add (Support to Installer) . . . . .	NTP-003
Combined Scan and Signal Distributor Points, Relay Only, to Signal Processor 1 – Add Block (Support to Installer) . . . . .	NTP-005
Combined Scan and Signal Distributor Points, Relay and Pulse, to Signal Processor 1 – Add Block (Support to Installer) . . . . .	NTP-006
Matrix Frame; Combined, to Signal Processor 1 – Add (Support to Installer) . . . . .	NTP-004
Matrix Frame; Supplementary, to Signal Processor 2 – Add (Support to Installer) . . . . .	NTP-009
Miscellaneous and/or Universal Scan Points to Signal Processor 1 (No Like Numbered Universal Signal Distributor K Block) – Add Block(s) (Used by Telephone Company Personnel Only) . . . . .	NTP-016
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Miscellaneous and/or Universal Signal Distributor Points, Relay Only, to Signal Processor 1 – Add Block(s) (Used by Telephone Company Personnel Only) . . . . .	NTP-017
Miscellaneous and/or Universal Signal Distributor Points, Relay Only, to Signal Processor 1 – Add Block(s) (Support to Installer) . . . . .	NTP-012
Miscellaneous Signal Distributor Points, Relay and Pulse, to Signal Processor 1 – Add Block(s) (Used by Telephone Company Personnel Only) . . . . .	NTP-014
Miscellaneous Signal Distributor Points, Relay and Pulse, to Signal Processor 1 – Add Block(s) (Support to Installer) . . . . .	NTP-013
Points; Miscellaneous Signal Distributor, Relay and Pulse, to Signal Processor 1 – Add Block(s) (Used by Telephone Company Personnel Only) . . . . .	NTP-014
Points; Miscellaneous Signal Distributor, Relay and Pulse, to Signal Processor 1 – Add Block(s) (Support to Installer) . . . . .	NTP-013

**TASK INDEX LIST**

**FIND YOUR JOB IN THE LIST BELOW . . . . . THEN GO TO**

Points; Universal and/or Miscellaneous Scan, to Signal Processor 1 (No Like Numbered Universal Signal Distributor K Block) – Add Block(s) (Support to Installer) . . . . . NTP-011

Points; Universal and/or Miscellaneous Signal Distributor, Relay Only, to Signal Processor 1 – Add Block(s) (Used by Telephone Company Personnel Only) . . . . . NTP-017

Scan and Signal Distributor Points; Combined, Relay and Pulse, to Signal Processor 1 – Add Block (Support to Installer) . . . . . NTP-006

Scan and Signal Distributor Points; Combined, Relay Only, to Signal Processor 1 – Add Block (Support to Installer) . . . . . NTP-005

Signal Distributor Points; Miscellaneous, Relay and Pulse, to Signal Processor 1 – Add Block(s) (Support to Installer) . . . . . NTP-013

Signal Distributor Points; Miscellaneous, Relay and Pulse, to Signal Processor 1 – Add Block(s) (Used by Telephone Company Personnel Only) . . . . . NTP-014

Signal Processor – Degrow (Support to Installer) . . . . . NTP-018

Signal Processor 1 With Combined Matrix Frame(s) – Add (Support to Installer) . . . . . NTP-003

Signal Processor 2 With Supplementary Matrix Frame – Add (Support to Installer) . . . . . NTP-007

Signal Processor 2 Without Supplementary Matrix Frame – Add (Support to Installer) . . . . . NTP-008

Supplementary Matrix Frame to Signal Processor 2 – Add (Support to Installer) . . . . . NTP-009

Supplementary Matrix Frame With SP 2 – Add (Support to Installer) . . . . . NTP-007

Universal and/or Miscellaneous Scan Points to Signal Processor 1 (No Like Numbered Universal Signal Distributor K Block) – Add Block(s) (Used by Telephone Company Personnel Only) . . . . . NTP-016

Universal and/or Miscellaneous Scan Points to Signal Processor 1 (No Like Numbered Universal Signal Distributor K Block) – Add Block(s) (Support to Installer) . . . . . NTP-011

Universal and/or Miscellaneous Signal Distributor Points, Relay Only, to Signal Processor 1 – Add Block(s) (Used by Telephone Company Personnel Only) . . . . . NTP-017

Universal and/or Miscellaneous Signal Distributor Points, Relay Only, to Signal Processor 1 – Add Block(s) (Support to Installer) . . . . . NTP-012

**FIND YOUR JOB IN THE LIST BELOW . . . . . THEN GO TO**

Universal Scan and Universal Signal Distributor Points to Signal Processor 1 (Each Having Like K Block Numbers) –  
 Add Block(s) (Used by Telephone Company Personnel Only) . . . . . NTP-015

Universal Scan and Universal Signal Distributor Points to Signal Processor 1 (Each Having Like K Block Numbers) –  
 Add Block(s) (Support to Installer) . . . . . NTP-010

Acceptance tests are not required for verification of the growth procedures contained in this volume. The readiness of a frame or unit to become a part of the operating system is established by the successful completion of the particular growth procedure in its entirety.

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

		RESPONSIBILITY	
1	Verify SP 1 Unit Type (UT) Translator and Compare Translations Data Against Wiring Records:		
	1. Verify SP 1 UT Translator (VER:UTYPE:SP a!)	TELCO/INST	DLP-518
	2. Compare Translations Data Against Wiring Records	INST	—
2	Connect SP Interbay Cables	INST	—
3	Perform SP Frame Power Verification	INST	—
4	Remove SP Power Using Power Switches	INST	—
5	Connect Private Signal Leads	INST	—
6	Place Strapping for K-Code, MI, GI, and Buffer Poll Option (Exclude Scan Point and Matrix Equipage Straps)	INST	—
7	Connect and Verify SP Control Frame (SPCF) and Matrix Frame(s) Alarm Cables (Power Is Restored)	INST	—
8	Verify Cabling and Assignments	TELCO/INST	—
9	Extend or Insert Peripheral Unit Bus Per TOP 234-153-045; Then Continue This Procedure at Item 10 Upon Completion	TELCO/INST	—
10	Recent Change and Verify Member Equipage From UNEQ to GROW	TELCO	DLP-501
11	At SP 1 Control Frame <b>MML</b> Switch, Rotate <b>ALM RETIRE</b> Switch to <b>RML</b>	INST	—
12	Enter Message <b>RMV:PUB 0!</b> To Remove Peripheral Unit Bus 0 From Service	TELCO	—
13	Apply Power to Growth SP Bus Interface Unit 0 and Controllers 0 and 1	INST	—
14	Diagnose Frame Controllers 0 and 1 (PUB 0)	INST	—
15	Restore Peripheral Unit Bus 0 to Service ( <b>RST:PUB 0!</b> )	TELCO/INST	DLP-504
16	Enter Message <b>RMV:PUB 1!</b> To Remove Peripheral Unit Bus 1 From Service	TELCO	—
17	Remove Power From Growth SP Bus Interface Unit 0	INST	—
	(Continued on Page 2)		

**ADD SIGNAL PROCESSOR 1 WITH COMBINED MATRIX  
FRAME(S) — SUPPORT TO INSTALLER (INST)**

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

18	Apply Power to Growth SP Bus Interface Unit 1	INST	—
19	Diagnose Frame Controllers 0 and 1 (Specifying PUB 1 and Growth)	INST	—
20	Restore Peripheral Unit Bus 1 to Service (RST:PUB 1!)	TELCO/INST	DLP-504
21	If Repair or Maintenance Was Required to IPUB or Controller Access Circuitry During IPUB 1 Testing:		
	1. Remove Power From Growth SP Bus Interface Unit 1	INST	—
	2. Repeat From Item 12	TELCO/INST	—
22	Apply Power to Growth SP Bus Interface Unit 0	INST	—
23	Diagnose Growth SP (Specifying Memory and Growth)	INST	—
24	Recent Change and Verify Submember Equipage From UNEQ to GROW [Equipped Matrix Frame(s)]:		
	A. Left Matrix Frame	TELCO	DLP-502
	B. Right Matrix Frame	TELCO	DLP-502
25	If Left CD&SM Frame Is Equipped:		
	1. Recent Change But Do Not Activate Submember Equipage From UNEQ to GROW [Equipped K Block(s)]		
	A. Combined Universal Point Block 0 (K Block 0)		
	1. TSN 0	TELCO	DLP-513
	2. TDN 0	TELCO	DLP-513
	B. Combined Universal Point Block 2 (K Block 2)		
	1. TSN 2	TELCO	DLP-513
	2. TDN 2	TELCO	DLP-513
	C. Combined Miscellaneous Point Block 0 (K Block 4)		
	1. MSN 0	TELCO	DLP-513
	2. MDN 0	TELCO	DLP-513

**ADD SIGNAL PROCESSOR 1 WITH COMBINED MATRIX  
FRAME(S) — SUPPORT TO INSTALLER (INST)**

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**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

25 (Contd)	2. Activate Submember Equipage From UNEQ to GROW [Equipped K Block(s)]		
	A. If Adding Combined Miscellaneous Point Block(s) Only, Activate Submember Equipage	TELCO	DLP-559
	B. If Adding Combined Universal And Miscellaneous Point Block(s), Activate Submember Equipage Using RC Form 600	TELCO	DLP-514
26	If Right CD&SM Frame Is Equipped:		
	1. Recent Change But Do Not Activate Submember Equipage From UNEQ to GROW [Equipped K Blocks(s)]		
	A. Combined Universal Point Block 1 (K Block 1)		
	1. TSN 1	TELCO	DLP-513
	2. TDN 1	TELCO	DLP-513
	B. Combined Universal Point Block 3 (K Block 3)		
	1. TSN 3	TELCO	DLP-513
	2. TDN 3	TELCO	DLP-513
	C. Combined Miscellaneous Point Block 1 (K Block 5)		
	1. MSN 1	TELCO	DLP-513
	2. MDN 1	TELCO	DLP-513
	2. Activate Submember Equipage From UNEQ to GROW [Equipped K Block(s)]		
	A. If Adding Combined Miscellaneous Point Block(s) Only, Activate Submember Equipage	TELCO	DLP-559
	B. If Adding Combined Universal And Miscellaneous Point Block(s), Activate Submember Equipage Using RC Form 600	TELCO	DLP-514
	27	Recent Change and Verify Member Equipage From GROW to SGRO	TELCO
28	Install Controller 0 and 1 Matrix Equipage Straps	INST	—
29	Diagnose Growth SP1 (Specifying Matrix and Growth)	INST	—
30	Recent Change and Verify Submember Equipage From GROW to SGRO [Equipped Matrix Frame(s)]:		
	A. Left Matrix Frame	TELCO	DLP-502

**ADD SIGNAL PROCESSOR 1 WITH COMBINED MATRIX FRAME(S) — SUPPORT TO INSTALLER (INST)**

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

30 (Contd)	B. Right Matrix Frame	TELCO	DLP-502
31	If Left CD&SM Frame Is Equipped:		
	1. Recent Change But Do Not Activate Submember Equipage From GROW to SGRO [Equipped K Blocks(s)]		
	A. Combined Universal Point Block 0 (K Block 0)		
	1. TSN 0	TELCO	DLP-513
	2. TDN 0	TELCO	DLP-513
	B. Combined Universal Point Block 2 (K Block 2)		
	1. TSN 2	TELCO	DLP-513
	2. TDN 2	TELCO	DLP-513
	C. Combined Miscellaneous Point Block 0 (K Block 4)		
	1. MSN 0	TELCO	DLP-513
	2. MDN 0	TELCO	DLP-513
	2. Activate Submember Equipage From GROW to SGRO [Equipped K Block(s)]		
	A. If Adding Combined Miscellaneous Point Block(s) Only, Activate Submember Equipage	TELCO	DLP-559
	B. If Adding Combined Universal And Miscellaneous Point Block(s)), Activate Submember Equipage Using RC Form 600	TELCO	DLP-514
32	If Right CD&SM Frame Is Equipped:		
	1. Recent Change But Do Not Activate Submember Equipage From GROW to SGRO [Equipped K Blocks(s)]		
	A. Combined Universal Point Block 1 (K Block 1)		
	1. TSN 1	TELCO	DLP-513
	2. TDN 1	TELCO	DLP-513
	B. Combined Universal Point Block 3 (K Block 3)		
1. TSN 3	TELCO	DLP-513	

**ADD SIGNAL PROCESSOR 1 WITH COMBINED MATRIX  
FRAME(S) – SUPPORT TO INSTALLER (INST)**

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

32 (Contd)	2. TDN 3	TELCO	DLP-513
	C. Combined Miscellaneous Point Block 1 (K Block 5)		
	1. MSN 1	TELCO	DLP-513
	2. MDN 1	TELCO	DLP-513
	2. Activate Submember Equipage From GROW to SGRO [Equipped K Block(s)]		
	A. If Adding Combined Miscellaneous Point Block(s) Only, Activate Submember Equipage	TELCO	DLP-559
	B. If Adding Combined Universal And Miscellaneous Point Block(s), Activate Submember Equipage Using RC Form 600	TELCO	DLP-514
33	Install Scan Point Straps (Only for K Blocks Being Added) and, at SPCF <b>MML</b> Switch, Return <b>ALM RETIRE</b> Switch to Normal Position	INST	—
34	Diagnose Growth SP (Specifying Matrix and Growth)	INST	—
35	At SP Bus Interface Units 0 and 1, at Pulse Point Power Switch (If Equipped), and at Controller 0, Rotate <b>OFF</b> Switches on Power Switches to Normal Position. Controller 1 Power Switch to Remain <b>ROS</b>	INST	—
36	Enter Message To Run Peripheral Unit Status Audit (AUD:PUSTAT!); Wait for Message Complete (MSG COMPL)	TELCO	—
37	Recent Change and Verify Member Equipage From SGRO to OPER	TELCO	DLP-501
38	Enter Message To Restore and Initialize Controller 0 to Simplex Operation (RST:SP a,CONTR 0!) ATP and Restore COMPLETE Required; Installer Clear Equipment Troubles	TELCO/INST	—
39	Restore and Initialize Controller 1 to Duplex Operation (Using Power Switch)	TELCO/INST	DLP-505
40	Enter Message To Run Peripheral Unit Status Audit (AUD:PUSTAT!); Wait for Message Complete (MSG COMPL) (Observe That Audit Causes Improperly Lighted Lamps at Growth Frame to Go Off Indicating Maintenance Status Is Updated)	TELCO	—
41	Recent Change and Verify Submember Equipage From SGRO to OPER [Equipped Matrix Frame(s)]:		
	A. Left Matrix	TELCO	DLP-502
	B. Right Matrix	TELCO	DLP-502
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**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

42	If MSN K Block Is Equipped, Enter Message To Run Audit 28 (AUD:NUM 28!); Wait for AUD:NUM 28 COMPLETE 0 ERRORS DETECTED Output Message	TELCO	-
43	If TSN K Block Is Equipped, Enter Message To Run Audit 27 (AUD:NUM 27!); Wait for AUD:NUM 27 COMPLETE 0 ERRORS DETECTED Output Message	TELCO	-
44	If Left CD&SM Is Equipped:		
	1. Recent Change But Do Not Activate Submember Equipage From SGR0 to OPER [Equipped K Block(s)]		
	A. Combined Universal Point Block 0 (K Block 0)		
	1. TSN 0	TELCO	DLP-513
	2. TDN 0	TELCO	DLP-513
	B. Combined Universal Point Block 2 (K Block 2)		
	1. TSN 2	TELCO	DLP-513
	2. TDN 2	TELCO	DLP-513
	C. Combined Miscellaneous Point Block 0 (K Block 4)		
	1. MSN 0	TELCO	DLP-513
	2. MDN 0	TELCO	DLP-513
	2. Activate Submember Equipage From SGR0 to OPER [Equipped K Block(s)]		
	A. If Adding Combined Miscellaneous Point Block(s) Only, Activate Submember Equipage	TELCO	DLP-559
	B. If Adding Combined Universal And Miscellaneous Point Block(s), Activate Submember Equipage Using RC Form 600	TELCO	DLP-514
45	If Right CD&SM Is Equipped:		
	1. Recent Change But Do Not Activate Submember Equipage From SGR0 to OPER [Equipped K Blocks(s)]		
	A. Combined Universal Point Block 1 (K Block 1)		
	1. TSN 1	TELCO	DLP-513

**ADD SIGNAL PROCESSOR 1 WITH COMBINED MATRIX  
FRAME(S) - SUPPORT TO INSTALLER (INST)**

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

45 (Contd)	2. TDN 1	TELCO	DLP-513
	B. Combined Universal Point Block 3 (K Block 3)		
	1. TSN 3	TELCO	DLP-513
	2. TDN 3	TELCO	DLP-513
	C. Combined Miscellaneous Point Block 1 (K Block 5)		
	1. MSN 1	TELCO	DLP-513
	2. MDN 1	TELCO	DLP-513
	2. Activate Submember Equipage From SGR0 to OPER [Equipped K Block(s)]		
	A. If Adding Combined Miscellaneous Point Block(s) Only, Activate Submember Equipage		TELCO
B. If Adding Combined Universal And Miscellaneous Point Block(s), Activate Submember Equipage Using RC Form 600		TELCO	DLP-514
46	Enter Message To Run Peripheral Unit Status Audit (AUD:PUSTAT!); Wait for Message Complete (MSG COMPL)	TELCO	-
47	At SP 1 Control Frame, Diagnose Signal Processor 1 Using <b>MML</b> Switch	TELCO/INST	DLP-500
48	If Combined Miscellaneous Point Block Is Equipped and Includes Pulse Point Circuitry:		
	A. If Left CD&SM Frame Is Equipped: Restore Pulse Point Logic to Service (RST:SP a,PPL 0!)	TELCO/INST	DLP-542
	B. If Right CD&SM Frame Is Equipped: Restore Pulse Point Logic to Service (RST:SP a,PPR 0!)	TELCO/INST	DLP-542
49	Identify and Remove Pest Conditions Set in Growth SP 1 Controller(s)	TELCO	DLP-543

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

		RESPONSIBILITY	
1	Verify SP Unit Type (UT) Translator and Compare Translations Data Against Wiring Records:		
	1. Verify Matrix Data of SP UT Translator (VER:UTYPE:SP a!)	TELCO/INST	DLP-519
	2. Compare Translations Data Against Wiring Records	INST	—
2	Perform Polarity and False Ground Check on Matrix Frame	INST	—
3	Perform Stand Alone Power Verification Test on Matrix Frame	INST	—
4	Monitor Converter Voltages	INST	—
5	Connect Private Signal Leads and Verify Proper Operation	INST	—
6	Remove Temporary Start Power and Inhibit Alarms on Matrix Frame	INST	—
7	Remove Power With <b>CONTRO</b> Switch (SPCF 0) and Remove Controller 0 and Matrix Switch Lamp Power Fuse ( <b>OMC</b> )	TELCO/INST	—
8	Connect Cables Between Growth Matrix and SP 1 Control Frame (SPCF 0)	INST	—
9	At SP 1 Control Frame <b>MML</b> Switch, Rotate <b>ALM RETIRE</b> Switch to <b>RML</b> and Insert <b>OMC</b> Fuse Removed in Item 7 and Matrix 24V Start Fuses in Controller 0	TELCO/INST	—
10	Restore Controller 0 to Service Via Power Switch <b>CONTRO</b> (SPCF 0)	TELCO/INST	DLP-506
11	Remove Power With <b>CONTR1</b> Switch (SPCF 1) and Remove Controller 1 and Matrix Switch Lamp Power Fuse ( <b>1MC</b> )	TELCO/INST	—
12	Connect Cables Between Growth Matrix and SP 1 Control Frame (SPCF 1)	INST	—
13	Install Fuses and Restore Controller 1 to Service:		
	1. Install <b>1MC</b> Fuse Removed in Item 11 and Matrix 24V Start Fuses in Controller 1	TELCO/INST	—
	2. Restore Controller 1 to Service Via Power Switch <b>CONTR1</b> (SPCF 1)	TELCO/INST	DLP-506
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**ADD COMBINED MATRIX FRAME TO SIGNAL PROCESSOR 1 —  
SUPPORT TO INSTALLER (INST)**

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**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

14	Recent Change and Verify Submember Equipage From UNEQ to GROW (Growth Matrix Frame):		
	A. Left Matrix Frame	TELCO	DLP-502
	B. Right Matrix Frame	TELCO	DLP-502
15	Apply Power to Growth Matrix Frame, Release Alarm Relays, and Install Controller 0 and 1 Matrix Equipage Straps	INST	-
16	Diagnose and Restore Operational SP Frame Controllers and Growth Matrix Equipment	TELCO/INST	DLP-507
17	If Left CD&SM Frame Is Being Added:		
	1. Recent Change But Do Not Activate Submember Equipage From UNEQ to GROW [Equipped K Block(s)]		
	A. Combined Universal Point Block 0 (K Block 0)		
	1. TSN 0	TELCO	DLP-513
	2. TDN 0	TELCO	DLP-513
	B. Combined Universal Point Block 2 (K Block 2)		
	1. TSN 2	TELCO	DLP-513
	2. TDN 2	TELCO	DLP-513
	C. Combined Miscellaneous Point Block 0 (K Block 4)		
	1. MSN 0	TELCO	DLP-513
	2. MDN 0	TELCO	DLP-513
	2. Activate Submember Equipage [Equipped K Block(s)]		
	A. If Adding Combined Miscellaneous Point Block(s) Only, Activate Submember Equipage	TELCO	DLP-559
B. If Adding Combined Universal And Miscellaneous Point Block(s), Activate Submember Equipage Using RC Form 600	TELCO	DLP-514	
18	If Right CD&SM Frame Is Being Added:		
	1. Recent Change But Do Not Activate Submember Equipage From UNEQ to GROW [Equipped K Block(s)]:		
	A. Combined Universal Point Block 1 (K Block 1)		

**ADD COMBINED MATRIX FRAME TO SIGNAL PROCESSOR 1 -  
SUPPORT TO INSTALLER (INST)**

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

18 (Contd)	1. TSN 1	TELCO	DLP-513
	2. TDN 1	TELCO	DLP-513
	B. Combined Universal Point Block 3 (K Block 3)		
	1. TSN 3	TELCO	DLP-513
	2. TDN 3	TELCO	DLP-513
	C. Combined Miscellaneous Point Block 1 (K Block 5)		
	1. MSN 1	TELCO	DLP-513
	2. MDN 1	TELCO	DLP-513
	2. Activate Submember Equipage [Equipped K Block(s)]		
	A. If Adding Combined Miscellaneous Point Block(s) Only, Activate Submember Equipage	TELCO	DLP-559
	B. If Adding Combined Universal And Miscellaneous Point Block(s), Activate Submember Equipage Using RC Form 600	TELCO	DLP-514
19	Diagnose Operational SP 1 Frame Controllers and Growth Matrix Equipment	TELCO/INST	DLP-507
20	Recent Change and Verify Submember Equipage From GROW to SGRO (Growth Matrix Frame):		
	A. Left Matrix Frame	TELCO	DLP-502
	B. Right Matrix Frame	TELCO	DLP-502
21	If Left CD&SM Frame Is Being Added:		
	1. Recent Change But Do Not Activate Submember Equipage From GROW to SGRO [Equipped K Block(s)]		
	A. Combined Universal Point Block 0 (K Block 0)		
	1. TSN 0	TELCO	DLP-513
	2. TDN 0	TELCO	DLP-513
	B. Combined Universal Point Block 2 (K Block 2)		
	1. TSN 2	TELCO	DLP-513
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**ADD COMBINED MATRIX FRAME TO SIGNAL PROCESSOR 1 -  
SUPPORT TO INSTALLER (INST)**

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

21 (Contd)	2. TDN 2	TELCO	DLP-513
	C. Combined Miscellaneous Point Block 0 (K Block 4)		
	1. MSN 0	TELCO	DLP-513
	2. MDN 1	TELCO	DLP-513
	2. Activate Submember Equipage [Equipped K Block(s)]		
	A. If Adding Combined Miscellaneous Point Block(s) Only, Activate Submember Equipage	TELCO	DLP-559
	B. If Adding Combined Universal And Miscellaneous Point Block(s), Activate Submember Equipage Using RC Form 600	TELCO	DLP-514
22	If Right CD&SM Frame Is Being Added:		
	1. Recent Change But Do Not Activate Submember Equipage From GROW to SGRO [Equipped K Block(s)]		
	A. Combined Universal Point Block 1 (K Block 1)		
	1. TSN 1	TELCO	DLP-513
	2. TDN 1	TELCO	DLP-513
	B. Combined Universal Point Block 3 (K Block 3)		
	1. TSN 3	TELCO	DLP-513
	2. TDN 3	TELCO	DLP-513
	C. Combined Miscellaneous Point Block 1 (K Block 5)		
	1. MSN 1	TELCO	DLP-513
	2. MDN 1	TELCO	DLP-513
	2. Activate Submember Equipage [Equipped K Block(s)]		
	A. If Adding Combined Miscellaneous Point Block(s) Only, Activate Submember Equipage	TELCO	DLP-559
	B. If Adding Combined Universal And Miscellaneous Point Block(s), Activate Submember Equipage Using RC Form 600	TELCO	DLP-514
23	Install Scan Point Straps (Only for K Blocks Being Added) and, at SPCF <b>MML</b> Switch, Return <b>ALM RETIRE</b> Switch to Normal Position	INST	-

**ADD COMBINED MATRIX FRAME TO SIGNAL PROCESSOR 1 -  
SUPPORT TO INSTALLER (INST)**

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

24	Diagnose Operational SP 1 Frame Controllers and Growth Matrix Equipment	TELCO/INST	DLP-507
25	Recent Change and Verify Submember Equipage From SGR0 to OPER (Growth Matrix Frame):		
	A. Left Matrix Frame	TELCO	DLP-502
	B. Right Matrix Frame	TELCO	DLP-502
26	If Combined Universal Point Block Is Equipped: Enter Message To Run Audit 27 (AUD:NUM 27!); Wait for AUD:NUM 27 COMPLETE 0 ERRORS DETECTED Output Message	TELCO	-
27	If Combined Miscellaneous Point Block Is Equipped: Enter Message To Run Audit 28 (AUD:NUM 28!); Wait for AUD:NUM 28 COMPLETE 0 ERRORS DETECTED Output Message	TELCO	-
28	If Left CD&SM Frame Is Being Added:		
	1. Recent Change But Do Not Activate Submember Equipage From SGR0 to OPER [Equipped K Block(s)]		
	A. Combined Universal Point Block 0 (K Block 0)		
	1. TSN 0	TELCO	DLP-513
	2. TDN 0	TELCO	DLP-513
	B. Combined Universal Point Block 2 (K Block 2)		
	1. TSN 2	TELCO	DLP-513
	2. TDN 2	TELCO	DLP-513
	C. Combined Miscellaneous Point Block 0 (K Block 4)		
	1. MSN 0	TELCO	DLP-513
	2. MDN 0	TELCO	DLP-513
	2. Activate Submember Equipage [Equipped K Block(s)]		
	A. If Adding Combined Miscellaneous Point Block(s) Only, Activate Submember Equipage	TELCO	DLP-559
	B. If Adding Combined Universal And Miscellaneous Point Block(s), Activate Submember Equipage Using RC Form 600	TELCO	DLP-514

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**ADD COMBINED MATRIX FRAME TO SIGNAL PROCESSOR 1 -  
SUPPORT TO INSTALLER (INST)**

**Issue 6**    **DEC 1986**

**234-153-020**    **NTP**

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**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

29	If Right CD&SM Frame Is Being Added:		
	1. Recent Change But Do Not Activate Submember Equipage From SGR0 to OPER [Equipped K Block(s)]		
	A. Combined Universal Point Block 1 (K Block 1)		
	1. TSN 1	TELCO	DLP-513
	2. TDN 1	TELCO	DLP-513
	B. Combined Universal Point Block 3 (K Block 3)		
	1. TSN 3	TELCO	DLP-513
	2. TDN 3	TELCO	DLP-513
	C. Combined Miscellaneous Point Block 3 (K Block 3)		
	1. MSN 1	TELCO	DLP-513
	2. MDN 1	TELCO	DLP-513
	2. Activate Submember Equipage [Equipped K Block(s)]		
	A. If Adding Combined Miscellaneous Point Block(s) Only, Activate Submember Equipage	TELCO	DLP-559
	B. If Adding Combined Universal And Miscellaneous Point Block(s), Activate Submember Equipage Using RC Form 600	TELCO	DLP-514
30	Enter Message To Run Peripheral Unit Status Audit (AUD:PUSTAT!); Wait for Message Complete (MSG COMPL)	TELCO	-
31	At SP 1 Control Frame, Diagnose Signal Processor 1 Using <b>MML</b> Switch	TELCO/INST	DLP-500
32	If Combined Miscellaneous Point Block Is Equipped and Includes Pulse Point Circuitry:		
	A. If Left CD&SM Frame Is Equipped: Restore Pulse Point Logic to Service (RST:SP a,PPL 0!)	TELCO/INST	DLP-542
	B. If Right CD&SM Frame Is Equipped: Restore Pulse Point Logic to Service (RST:SP a,PPR 0!)	TELCO/INST	DLP-542
33	Identify and Remove Pest Conditions Set in Growth SP Controller(s)	TELCO	DLP-543

**ADD COMBINED MATRIX FRAME TO SIGNAL PROCESSOR 1 -  
SUPPORT TO INSTALLER (INST)**

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

		RESPONSIBILITY	
1	Select Combined Distributor and Scan Matrix (CD&SM) Equipment and Determine Growth CD&SM Unit Location	INST	—
2	Verify UNEQ State of CD&SM Point Unit (K Block) Equipage (VER:UTYPE:SP a,SME b!)	TELCO	DLP-515
3	Diagnose Operational SP 1 Frame Controllers and CD&SM Equipment	TELCO	DLP-531
4	At CD&SM Frame, Remove Fuses (If Installed) for CD&SM Unit (K Block) To Be Added:		
	1. Identify Fuse Assignments for CD&SM Unit (K Block)	TELCO	DLP-511
	2. If Fuses Installed, Remove Fuses for CD&SM Unit (K Block)	TELCO	—
5	At CD&SM Frame, Mount CD&SM Unit Equipment (Not Circuit Packs) and Connect Power Cabling	INST	—
6	At CD&SM Frame, Install Cabling Between Added CD&SM Point Unit and Matrix Access Unit, and Connect Cabling at Added Point Unit	INST	—
7	At SP 1 Control Frame <b>MML</b> Switch, Rotate <b>ALM RETIRE</b> Switch to <b>RML</b>	TELCO	—
8	At CD&SM Frame, Connect Cabling, Installed in Item 6, at Matrix Access Unit	INST	—
9	At SP 1 Control Frame, Enable <b>MML</b> Switch	TELCO/INST	DLP-530
10	At SP 1 Control Frame <b>MML</b> Switch, Rotate <b>ALM RETIRE</b> Switch to <b>RML</b>	TELCO	—
11	At CD&SM Frame, Install dc-dc Converter Packs for CD&SM Point Unit (K Block) Being Added	INST	—
12	At CD&SM Frame, Install Fuses for CD&SM Unit (K Block) Being Added:		
	1. Identify Fuse Assignments for CD&SM Unit (K Block)	TELCO	DLP-511
	2. Install Fuses for CD&SM Unit (K Block)	TELCO	—
13	Measure Voltage at Growth CD&SM Unit Power Connectors	INST	—
14	At CD&SM Frame, Remove Fuses Installed in Item 12	TELCO	—
15	At CD&SM Frame, Install Circuit Packs At Matrix Access Unit and CD&SM Point Unit for K Block Being Added	INST	—
	(Continued on Page 2)		

**ADD BLOCK OF COMBINED SCAN AND SIGNAL DISTRIBUTOR POINTS (RELAY ONLY) TO SP 1 — SUPPORT TO INSTALLER (INST)**

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

16	At CD&SM Frame, Install Fuses for CD&SM Unit (K Block) Being Added:		
	1. Identify Fuse Assignments for CD&SM Unit (K Block)	TELCO	DLP-511
	2. Install Fuses for CD&SM Unit (K Block)	TELCO	—
17	Recent Change and Verify Submember Equipage From UNEQ to GROW (K Blocks):		
	1. If Left CD&SM Frame Is Growth Associated		
	A. Combined Universal Block 0 (K Block 0)		
	1. TSN 0	TELCO	DLP-502
	2. TDN 0	TELCO	DLP-502
	B. Combined Universal Block 2 (K Block 2)		
	1. TSN 2	TELCO	DLP-502
	2. TDN 2	TELCO	DLP-502
	C. Combined Miscellaneous Block 0 (K Block 4)		
	1. MSN 0	TELCO	DLP-502
	2. MDN 0	TELCO	DLP-502
	2. If Right CD&SM Frame Is Growth Associated		
	A. Combined Universal Block 1 (K Block 1)		
	1. TSN 1	TELCO	DLP-502
	2. TDN 1	TELCO	DLP-502
	B. Combined Universal Block 3 (K Block 3)		
1. TSN 3	TELCO	DLP-502	
2. TDN 3	TELCO	DLP-502	
(Continued on Page 3)			

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

17 (Cont'd)	C. Combined Miscellaneous Block 1 (K Block 5)		
	1. MSN 1	TELCO	DLP-502
	2. MDN 1	TELCO	DLP-502
18	Diagnose Operational SP 1 Frame Controllers and Growth Matrix Equipment	TELCO	DLP-507
19	Recent Change and Verify Submember Equipage From GROW to SGRO (K Blocks):		
	1. If Left CD&SM Frame Is Growth Associated		
	A. Combined Universal Block 0 (K Block 0)		
	1. TSN 0	TELCO	DLP-502
	2. TDN 0	TELCO	DLP-502
	B. Combined Universal Block 2 (K Block 2)		
	1. TSN 2	TELCO	DLP-502
	2. TDN 2	TELCO	DLP-502
	2. If Right CD&SM Frame Is Growth Associated		
	A. Combined Universal Block 1 (K Block 1)		
	1. TSN 1	TELCO	DLP-502
	2. TDN 1	TELCO	DLP-502
	B. Combined Universal Block 3 (K Block 3)		
	1. TSN 3	TELCO	DLP-502
	2. TDN 3	TELCO	DLP-502
	C. Combined Miscellaneous Block 1 (K Block 5)		
	1. MSN 1	TELCO	DLP-502
	2. MDN 1	TELCO	DLP-502
20	Install Scan Point Straps (Only for CD&SM Block Being Added)	INST	-
	(Continued On Page 4)		

**ADD BLOCK OF COMBINED SCAN AND SIGNAL DISTRIBUTOR POINTS  
(RELAY ONLY) TO SP 1 - SUPPORT TO INSTALLER (INST)**

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

21	Diagnose Operational SP1 Frame Controllers and Growth Matrix Equipment	TELCO/INST	DLP-507
22	At SP 1 Control Frame, Enable <b>MML</b> Switch	TELCO/INST	DLP-530
23	Run Audit:		
	A. If Combined Universal (TSN/TDN) Point Block Is Equipped: Enter Message To Run Audit 27 (AUD:NUM 27!); Wait for AUD:NUM 27 COMPLETE 0 ERRORS DETECTED Output Message	TELCO	-
	B. If Combined Miscellaneous (MSN/MDN) Point Block Is Equipped: Enter Message To Run Audit 28 (AUD:NUM 28!); Wait for AUD:NUM 28 COMPLETE 0 ERRORS DETECTED Output Message	TELCO	-
24	Recent Change and Verify Submember Equipage From SGRO to OPER (K Blocks):		
	1. If Left CD&SM Frame Is Growth Associated		
	A. Combined Universal Block 0 (K Block 0)		
	1. TSN 0	TELCO	DLP-502
	2. TDN 0	TELCO	DLP-502
	B. Combined Universal Block 2 (K Block 2)		
	1. TSN 2	TELCO	DLP-502
	2. TDN 2	TELCO	DLP-502
	C. Combined Miscellaneous Block 0 (K Block 4)		
	1. MSN 0	TELCO	DLP-502
	2. MDN 0	TELCO	DLP-502
	2. If Right CD&SM Frame Is Growth Associated		
	A. Combined Universal Block 1 (K Block 1)		
	1. TSN 1	TELCO	DLP-502
	2. TDN 1	TELCO	DLP-502
(Continued on Page 5)			

**ADD BLOCK OF COMBINED SCAN AND SIGNAL DISTRIBUTOR POINTS  
(RELAY ONLY) TO SP 1 - SUPPORT TO INSTALLER (INST)**

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

24 (Contd)	B. Combined Universal Block 3 (K Block 3)		
	1. TSN 3	TELCO	DLP-502
	2. TDN 3	TELCO	DLP-502
	C. Combined Miscellaneous Block 1 (K Block 5)		
	1. MSN 1	TELCO	DLP-502
	2. MDN 1	TELCO	DLP-502
25	Enter Message To Run Peripheral Unit Status Audit (AUD:PUSTAT!); Wait for Message Complete (MSG COMPL)	TELCO	-
26	At SP 1 Control Frame, Diagnose Signal Processor Using <b>MML</b> Switch	TELCO/INST	DLP-500
27	Identify and Remove Pest Condition Set in Growth Associated SP Controller(s)	TELCO	DLP-543

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

		RESPONSIBILITY	
1	Select Combined Distributor and Scanner Matrix (CD&SM) Point Unit and Determine Growth Point Unit Location	INST	—
2	Verify Combined Scan and SD Block, and Pulse Point Equipage of SP 1 UT Translator (VER:UTYPE:SP a!)	TELCO/INST	DLP-512
3	Diagnose Operational SP 1 Frame Controller and CD&SM Equipment	TELCO	DLP-531
4	At CD&SM Frame, Remove Fuses (If Installed) for CD&SM Point Unit (K Block) To Be Added		
	1. Identify Fuse Assignments for CD&SM Unit (K Block)	TELCO	DLP-511
	2. If Fuses Installed, Remove Fuses for CD&SM Point Unit (K Block)	TELCO	—
5	At CD&SM Frame, Mount CD&SM Unit Equipment and Connect Power Cabling	INST	—
6	At CD&SM Frame, Install Cabling Between Added CD&SM Point Unit and Matrix Access Unit, and Connect Cabling at Growth Point Unit	INST	—
7	At SP 1 Control Frame <b>MML</b> Switch, Rotate <b>ALM RETIRE</b> Switch to <b>RML</b>	TELCO	—
8	At CD&SM Frame, Connect Cabling Installed in Item 6 at Matrix Access Unit	INST	—
9	At SP 1 Control Frame, Enable <b>MML</b> Switch	TELCO	DLP-530
10	At SP 1 Control Frame <b>MML</b> Switch, Rotate <b>ALM RETIRE</b> Switch to <b>RML</b>	TELCO	—
11	At CD&SM Frame, Install dc-dc Converter Packs for CD&SM Point Unit (K Block) Being Added		
12	At CD&SM Frame, Install Fuses for CD&SM Point Unit (K Block) Being Added	INST	—
	1. Identify Fuse Assignments for CD&SM Unit (K Block) Being Added	TELCO	DLP-511
	2. If Fuses Installed, Remove Fuses for CD&SM Point Unit (K Block) Being Added	TELCO	—
13	Measure Voltage at Added CD&SM Point Unit	INST	—
14	At CD&SM Frame, Remove Fuses Installed in Item 12	TELCO	—
15	At CD&SM Frame, Install Circuit Packs at Matrix Access Unit and CD&SM Point Unit for K Block Being Added	INST	—
	(Continued on Page 2)		

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

16	At CD&SM Frame, Install Fuses for CD&SM Point Unit (K Block) Being Added:		
	1. Identify Fuse Assignments for CD&SM Point Unit (K Block) Being Added	TELCO	DLP-511
	2. Install Fuses for CD&SM Point Unit (K Block) Being Added	TELCO	—
17	Restore Pulse Point Power With Power Switch		
	1. If Adding K Block 4, Restore Pulse Point Power With Power Switch (Left CD&SM Frame)	TELCO/INST	DLP-528
	2. If Adding K Block 5, Restore Pulse Point Power With Power Switch (Right CD&SM Frame)	TELCO/INST	DLP-528
18	Recent Change and Verify Submember Equipage From UNEQ to GROW (K Blocks):		
	A. If Left CD&SM Frame Is Growth Associated		
	1. MSN 0	TELCO	DLP-502
	2. MDN 0	TELCO	DLP-502
	B. If Right CD&SM Frame Is Growth Associated		
	1. MSN 1	TELCO	DLP-502
	2. MDN 1	TELCO	DLP-502
19	Diagnose Operational SP 1 Frame Controllers and Growth Matrix Equipment	TELCO/INST	DLP-507
20	Recent Change and Verify Submember Equipage From GROW to SGR0 (K Blocks):		
	A. If Left CD&SM Frame Is Growth Associated		
	1. MSN 0	TELCO/INST	DLP-502
	2. MDN 0	TELCO/INST	DLP-502
	B. If Right CD&SM Frame Is Growth Associated		
	1. MSN 1	TELCO/INST	DLP-502
	2. MDN 1	TELCO/INST	DLP-502
	(Continued on Page 3)		

**ADD BLOCK OF COMBINED SCAN AND SD POINTS (COMBINATION RELAY AND PULSE) TO SP 1 — SUPPORT TO INSTALLER (INST)**

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

21	Install Scan Point Straps for K Block Being Grown	INST	-
22	Diagnose Operational SP 1 Controllers and Growth Matrix Equipment	TELCO/INST	DLP-507
23	At SP 1 Control Frame, Enable <b>MML</b> Switch	TELCO/INST	DLP-530
24	Enter Message To Run Audit 28 (AUD:NUM 28!); Wait for AUD:NUM 28 COMPLETE 0 ERRORS DETECTED Output Message	TELCO	-
25	Recent Change and Verify Submember Equipage From SGR0 to OPER (K Blocks):		
	A. If Left CD&SM Frame Is Growth Associated		
	1. MSN 0	TELCO	DLP-502
	2. MDN 0	TELCO	DLP-502
	B. If Right CD&SM Frame Is Growth Associated		
	1. MSN 1	TELCO	DLP-502
2. MDN 1	TELCO	DLP-502	
26	Enter Message to Run Peripheral Unit Status Audit (AUD:PUSTAT!); Wait for Message Complete (MSG COMPL)	TELCO	-
27	At SP 1 Control Frame, Diagnose Signal Processor Using <b>MML</b> Switch	TELCO/INST	DLP-500
28	If Combined Miscellaneous Point Block is Equipped and Includes Pulse Point Circuitry:		
	A. If Left CD&SM Frame Is Equipped: Restore Pulse Point Logic to Service (RST:SP a,PPL 0!)	TELCO/INST	DLP-542
	B. If Right CD&SM Frame Is Equipped: Restore Pulse Point Logic to Service (RST:SP a,PPR 0!)	TELCO/INST	DLP-542
29	Identify and Remove Pest Conditions Set in Growth SP 1 Controller(s)	TELCO	DLP-543

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

		RESPONSIBILITY	
1	Verify SP Unit Type (UT) Translator and Compare Translations Data Against Wiring Records:		
	1. Verify SP UT Translator (VER:UTYPE:SP a!)	TELCO/INST	DLP-521
	2. If SP Interfaces With CCIS Type Digroup Terminal (DT): Verify PSEUDO SP2 UT Translator (VER:UTYPE:SP a!)	TELCO/INST	DLP-503
	3. Compare Translations Data Against Wiring Records	INST	—
2	Connect SP Interbay Cables	INST	—
3	Perform SP Frame Power Verification	INST	—
4	Remove Power From Controllers 0 and 1, and Bus 0 and 1 Interface Units Using Power Switches	INST	—
5	Connect Private Signal Leads	INST	—
6	Place Strapping for K-Code, MI, GI, and Buffer Poll Option (Exclude Matrix Equipage Strap)	INST	—
7	Connect and Verify SP Control Frame (SPCF) and Matrix Frame Alarm Cables (Power Is Restored)	INST	—
8	Verify Cabling and Assignments	INST	—
9	Extend or Insert Peripheral Unit Bus per TOP 234-153-045, Then Continue This Procedure at Item 10 Upon Completion	TELCO/INST	—
10	Recent Change and Verify Member Equipage From UNEQ to GROW	TELCO	DLP-501
11	Recent Change and Verify Submember Equipage From UNEQ to GROW (DT Interface Circuit):		
	A. SP2EQ0 for E&M Type DT (Ports 0-3)	TELCO	DLP-502
	B. SP2EQ1 for CCIS Type DT (Ports 4-7)	TELCO	DLP-502
12	At Matrix Frame <b>MML</b> Switch, Rotate <b>ALM RETIRE</b> Switch to <b>RML</b>	INST	—
13	Enter Message <b>RMV:PUB 0!</b> To Remove Peripheral Unit Bus 0 From Service	TELCO	—
	(Continued on Page 2)		

**ADD SIGNAL PROCESSOR 2 WITH SUPPLEMENTARY MATRIX FRAME —  
SUPPORT TO INSTALLER (INST)**

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**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

14	Apply Power to Growth SP PU Bus Interface Unit 0 and Controllers 0 and 1	INST	—
15	If Any LED Lamps on Matrix Frame Converters Are Lit, Depress <b>ALM ENAB</b> on <b>MML</b> Switch	INST	—
16	Diagnose Frame Controllers 0 and 1 (PUB 0)	INST	—
17	Restore Peripheral Unit Bus 0 to Service (RST:PUB 0!)	TELCO/INST	DLP-504
18	Enter Message <b>RMV:PUB 1!</b> To Remove Peripheral Unit Bus 1 From Service	TELCO	—
19	Remove Power From Growth SP Bus Interface Unit 0	INST	—
20	Apply Power to Growth SP PU Bus Interface Unit 1	INST	—
21	Diagnose Frame Controllers 0 and 1 (PUB 1)	INST	—
22	Restore Peripheral Unit Bus 1 to Service (RST:PUB 1!)	TELCO/INST	DLP-504
23	If Repair or Maintenance Was Required to IPUB or Controller Access Circuitry During IPUB 1 Testing:		
	1. Remove Power From Growth SP BUS Interface Unit 1	INST	—
	2. Repeat Items 13 Through 22	TELCO/INST	—
24	Apply Power to Growth SP Bus Interface Unit 0	INST	—
25	Diagnose Growth SP (Specifying Memory and Growth)	INST	—
26	Recent Change and Verify Submember Equipage From UNEQ to GROW (Left Matrix Frame – BFE)	TELCO	DLP-502
27	Recent Change and Verify Submember Equipage From UNEQ to GROW [Equipped Miscellaneous Scan Number/Miscellaneous Distributor Number (MSN/MDN) K Block(s)]:		
	A. Miscellaneous Scan Block (MSN BLK) 0	TELCO	DLP-502
	B. Miscellaneous SD Block (MDN BLK) 0	TELCO	DLP-502
28	Recent Change and Verify Member Equipage From GROW to SGRO	TELCO	DLP-501
29	Diagnose Growth SP (Specifying Growth)	INST	—
30	Diagnose Growth SP (Specifying Matrix and Growth)	INST	—
	(Continued on Page 3)		

**ADD SIGNAL PROCESSOR 2 WITH SUPPLEMENTARY MATRIX FRAME —  
SUPPORT TO INSTALLER (INST)**

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

31	Recent Change and Verify Submember Equipage From GROW to SGRO (Left Matrix Frame – BFE)	TELCO	DLP-502
32	Recent Change and Verify Submember Equipage From GROW to SGRO (Equipped MSN/MDN K Blocks):		
	A. Miscellaneous Scan Block (MSN BLK) 0	TELCO	DLP-502
	B. Miscellaneous SD Block (MDN BLK) 0	TELCO	DLP-502
33	Install Matrix Equipage Strap and, at Matrix Frame <b>MML</b> Switch, Return <b>ALM RETIRE</b> Switch to Normal Position	INST	–
34	Diagnose Growth SP (Specifying Matrix and Growth)	INST	–
35	If DT Frames Associated With This SP Are Installed and Ready for Test, Assure That SP to DT Cabling Is Completed	INST	–
36	If MSN or MDN Equipage Blocks in This SP Matrix Are Assigned to Associated Growth DT or Growth MF Signaling Frame, Assure That Interface Cabling Is Completed	INST	–
37	At SP Bus Interface Units 0 and 1, at Controller 0, and at Pulse Point Logic Switch (If Equipped), Rotate <b>OFF</b> Switches on Power Switches to Normal Position. Controller 1 Power Switch to Remain <b>ROS</b>	INST	–
38	Enter Message To Run Audit 27 (AUD:NUM 27!); Wait for AUD:NUM 27 COMPLETE 0 ERRORS DETECTED Output Message	TELCO	–
39	Enter Message To Run Peripheral Unit Status Audit (AUD:PUSTAT!); Wait for Message Complete (MSG COMPL)	TELCO	–
40	Recent Change and Verify Member Equipage From GROW to OPER	TELCO	DLP-501
41	Enter Message To Restore and Initialize Controller 0 to Simplex Operation (RST:SP a,CONTR 0!) ATP and Restore COMPLETE Required; Installer Clear Equipment Troubles	TELCO/INST	–
42	Restore and Initialize Controller 1 to Duplex Operation (Using Power Switch)	TELCO/INST	DLP-505
43	Recent Change and Verify Submember Equipage From SGRO to OPER (Left Matrix Frame – BFE)	TELCO	DLP-502
	(Continued on Page 4)		

**ADD SIGNAL PROCESSOR 2 WITH SUPPLEMENTARY MATRIX FRAME –  
SUPPORT TO INSTALLER (INST)**

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

44	If MSN Block Is Equipped:		
	1. Enter Message To Run Audit 28 (AUD:NUM 28!); Wait for AUD:NUM 28 COMPLETED 0 ERRORS DETECTED Output Message	TELCO	-
	2. Recent Change and Verify Submember Equipage From SGRO to OPER (MSN BLK 0)	TELCO	DLP-502
45	If MDN Block Is Equipped, Recent Change and Verify Submember Equipage From SGRO to OPER (MDN BLK 0)	TELCO	DLP-502
46	Enter Message To Run Peripheral Unit Status Audit (AUD:PUSTAT!); Wait for Message Complete (MSG COMPL)	TELCO	-
47	At Matrix Frame, Diagnose Signal Processor Using <b>MML</b> Switch	TELCO/INST	DLP-500
48	If MDN K Block Is Equipped and Includes Pulse Point Circuitry, Restore Pulse Point Logic to Service (RST:SP a,b 0!)	TELCO/INST	DLP-542
49	Identify and Remove Pest Conditions Set in Growth SP Controller(s)	TELCO	DLP-543

**ADD SIGNAL PROCESSOR 2 WITH SUPPLEMENTARY MATRIX FRAME —  
SUPPORT TO INSTALLER (INST)**

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

		RESPONSIBILITY	
1	Verify SP Unit Type (UT) Translator and Compare Translations Data Against Wiring Records:		
	1. Verify SP UT Translator (VER:UTYPE:SP a!)	TELCO/INST	DLP-521
	2. If SP Interfaces With CCIS Type Digroup Terminal (DT): Verify PSEUDO SP2 UT Translator (VER:UTYPE:SP a!)	TELCO/INST	DLP-503
	3. Compare Translations Data Against Wiring Records	INST	—
2	Perform SP Frame Power Verification Tests and Assure That All Plug-Ins Are Properly Installed and Firmly Seated	INST	—
3	Remove Power From Controllers 0 and 1, Bus 0 and 1 Interface Units Using Power Switches	INST	—
4	Connect Private Signal Leads	INST	—
5	Place Strapping for K-Code, MI, GI, and Buffer Poll Option (Exclude Matrix Equipage Strap)	INST	—
6	Restore Power Using Frame Control Switches and Verify Alarm Cabling	INST	—
7	Verify Cabling and Assignments	INST	—
8	Extend or Insert the Peripheral Unit Bus per TOP 234-153-045, Then Continue This Procedure at Item 9 Upon Completion	TELCO/INST	—
9	Recent Change and Verify Member Equipage From UNEQ to GROW	TELCO	DLP-501
10	Recent Change and Verify Submember Equipage From UNEQ to GROW (DT Interface Circuit):		
	A. SP2EQ0 for E&M Type DT (Ports 0-3)	TELCO	DLP-502
	B. SP2EQ1 for CCIS Type DT (Ports 4-7)	TELCO	DLP-502
11	Enter Message RMV:PUB 0! To Remove Peripheral Unit Bus 0 From Service	TELCO	—
12	Apply Power to SP PU Bus Interface Unit 0 and Controllers 0 and 1	INST	—
13	Diagnose Frame Controllers 0 and 1 (PUB 0)	INST	—
14	Restore Peripheral Unit Bus 0 to Service (RST:PUB 0!)	TELCO	DLP-504
	(Continued on Page 2)		

**ADD SIGNAL PROCESSOR 2 WITHOUT SUPPLEMENTARY MATRIX FRAME —  
SUPPORT TO INSTALLER (INST)**

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

15	Enter Message RMV:PUB 1! To Remove Peripheral Unit Bus 1 From Service	TELCO	—
16	Remove Power From Growth SP PU Bus Interface Unit 0	INST	—
17	Apply Power to SP PU Bus Interface Unit 1	INST	—
18	Diagnose Frame Controllers 0 and 1 (PUB 1)	INST	—
19	Restore Peripheral Unit Bus 1 to Service (RST:PUB 1!)	TELCO/INST	DLP-504
20	If Repair or Maintenance Was Required to IPUB or Controller Access Circuitry During IPUB 1 Testing:		
	1. Remove Power From Growth SP Bus Interface Unit 1	INST	—
	2. Repeat Items 11 Through 19	TELCO/INST	—
21	Restore Power to Growth SP PU Bus Interface Unit 0	INST	—
22	Diagnose Frame Controllers 0 and 1 With Memories (Specifying Memory and Growth)	INST	—
23	Recent Change and Verify Member Equipage From GROW to SGRO	TELCO	DLP-501
24	Diagnose Growth SP (Specifying Growth)	INST	—
25	If DT Frames Associated With This SP Are Installed and Ready for Test, Assure That SP to DT Cabling Is Completed	INST	—
26	At SP Bus Interface Units 0 and 1 and at Controller 0, Rotate <b>OFF</b> Switches on Power Switches to Normal Position. Controller 1 Power Switch to Remain <b>ROS</b>	INST	—
27	Enter Message To Run Audit 27 (AUD:NUM 27!); Wait for AUD:NUM 27 COMPLETE 0 ERRORS DETECTED Output Message	TELCO	—
28	Enter Message To Run Peripheral Unit Status Audit (AUD:PUSTAT!); Wait for Message Complete (MSG COMPL)	TELCO	—
29	Recent Change and Verify Member Equipage From SGRO to OPER	TELCO	DLP-501
30	Enter Message To Restore and Initialize Controller 0 to Simplex Operation (RST:SP a,CONTR 0!) ATP and Restore COMPLETE Required; Installer Clear Equipment Troubles	TELCO/INST	—
31	Restore and Initialize Controller 1 to Duplex Operation (Using Power Switch)	TELCO/INST	DLP-505
32	Identify and Remove Pest Conditions Set in Growth SP Controller(s)	TELCO	DLP-543

**ADD SIGNAL PROCESSOR 2 WITHOUT SUPPLEMENTARY MATRIX FRAME —  
SUPPORT TO INSTALLER (INST)**

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**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

		RESPONSIBILITY	
1	Verify SP 2 Unit Type (UT) Translator and Compare Translations Data Against Wiring Records:		
	1. Verify Matrix Data of SP 2 UT Translator (VER:UTYPE:SP a!)	TELCO/INST	DLP-522
	2. Compare Translations Data Against Wiring Records	INST	—
2	Perform Stand Alone Power Verification Test on Matrix Frame	INST	—
3	Connect Growth Matrix Frame Private Signal Leads and Test Scan and SD Point Wiring	INST	—
4	Remove Temporary Power From Matrix Frame and Inhibit Alarms	INST	—
5	At Matrix Frame <b>MML</b> Switch, Rotate <b>ALM RETIRE</b> Switch to <b>RML</b>	INST	—
6	At Matrix Frame End Only, Connect SP to Matrix Interbay Cables	INST	—
7	Remove Power With Power Switch (Controller 0 – Bay 1); Installer Verify Matrix Fuse Locations Are Unequipped	TELCO/INST	—
8	At SP Control Frame Bay 1, Connect SP to Matrix Interbay Cables	INST	—
	<i>CAUTION: Following completion of Item 8 and/or 11 and restoral of controller, if interrupts occur which implicate growth matrix and repair attempts fail, complete following before next busy hour. 1) Power down out-of-service controller, 2) remove added fuses and disconnect added cables, 3) reinstall fuses, and 4) restore controller to service.</i>		
9	Insert Matrix Fuses and Restore Power (Controller 0 – Bay 1):	INST	—
	1. At Control Frame Bay 1, Install Fuses for Matrix Power	TELCO/INST	—
	2. Restore Power With Power Switch (Controller 0 – Bay 1)	TELCO/INST	DLP-522
10	Remove Power With Power Switch (Controller 1 – Bay 2); Installer Verify Matrix Fuse Locations are Unequipped	TELCO/INST	—
11	At SP Control Frame Bay 2, Connect SP to Matrix Interbay Cables	INST	—
	(Continued on Page 2)		

**ADD SUPPLEMENTARY MATRIX FRAME TO SP 2 –  
SUPPORT TO INSTALLER (INST)**

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

12	Insert Matrix Fuses and Restore Power (Controller 1 – Bay 2):		
	1. At Control Frame Bay 2, Install Fuses for Matrix Power	INST	–
	2. Restore Power With Power Switch (Controller 1 – Bay 2)	TELCO/INST	DLP-506
13	Recent Change and Verify Submember Equipage From UNEQ to GROW (Left Matrix Frame – BFE)	TELCO	DLP-502
14	Apply Pulse Point Power (If Equipped) and Enable Alarms Inhibited in Item 4	INST	–
15	Diagnose Operational SP Frame Controllers and Growth Matrix Equipment	TELCO/INST	DLP-507
16	Recent Change and Verify Submember Equipage From GROW to SGRO (Left Matrix Frame – BFE)	TELCO	DLP-502
17	Recent Change and Verify Submember Equipage From UNEQ to GROW [Equipped Miscellaneous Scan Number/Miscellaneous Distribution Number (MSN/MDN) K Block(s)]:		
	A. Miscellaneous Scan Block (MSN BLK) 0	TELCO	DLP-502
	B. Miscellaneous SD Block (MDN BLK) 0	TELCO	DLP-502
18	Diagnose Operational SP Frame Controllers and Growth Matrix Equipment	TELCO/INST	DLP-507
19	Recent Change and Verify Submember Equipage From GROW to SGRO [Equipped MSN/MDN K Blocks(s)]:		
	A. Miscellaneous Scan Block (MSN BLK) 0	TELCO	DLP-502
	B. Miscellaneous SD Block (MDN BLK) 0	TELCO	DLP-502
20	Install Matrix Equipage Scan Point Straps and, at Matrix Frame <b>MML</b> Switch, Return <b>ALM RETIRE</b> Switch to Normal Position	INST	–
21	Diagnose Operational SP Controllers and Growth Matrix Equipment	TELCO/INST	DLP-507
22	Recent Change and Verify Submember Equipage From SGRO to OPER (Left Matrix Frame – BFE)	TELCO	DLP-502
23	If MSN Block Is Equipped in This Supplementary Matrix Frame:		
	1. Enter Message To Run Audit 28 (AUD:NUM 28!); Wait for AUD:NUM 28 COMPLETE 0 ERRORS DETECTED Output Message	TELCO	–
	2. Recent Change and Verify Submember Equipage From SGRO to OPER (MSN BLK 0)	TELCO	DLP-502
	(Continued on Page 3)		

**ADD SUPPLEMENTARY MATRIX FRAME TO SP 2 –  
SUPPORT TO INSTALLER (INST)**

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

24	If MDN Block Is Equipped in This Supplementary Matrix Frame, Recent Change and Verify Submember Equipage From SGRO to OPER (MDN BLK 0)	TELCO	DLP-502
25	Enter Message To Run Peripheral Unit Status Audit (AUD:PUSTAT!); Wait for Message Complete (MSG COMPL)	TELCO	-
26	At Matrix Frame, Diagnose Signal Processor Using <b>MML</b> Switch	TELCO/INST	DLP-500
27	If MDN K Block Is Equipped and Includes Pulse Point Circuitry, Restore Pulse Point Logic to Service (RST:SP a,b 0!)	TELCO/INST	DLP-542
28	Identify and Remove Pest Conditions Set in Growth Associated SP Controller(s)	TELCO	DLP-543

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

		RESPONSIBILITY	
1	Select Universal Scan and SD Equipment and Determine Growth K Block Locations	INST	—
2	Verify UNEQ Status of Universal Scan and SD Equipage (VER:UTYPE:SP a,SME b!)	TELCO	DLP-515
3	Diagnose Operational SP Frame Controllers and Matrix Equipment	TELCO	DLP-531
4	At SP Control Frame <b>MML</b> Switch, Rotate <b>ALM RETIRE</b> Switch to <b>RML</b>	TELCO	—
5	At Distributor and Scanner Matrix (D&SM) and Distributor Applique (DA) Frames, Remove Fuses for Universal SD K Blocks Being Added:		
	1. Identify Fuse Assignments for Universal SD K Blocks Being Added	TELCO	DLP-523
	2. Remove Fuses for Universal SD K Blocks Being Added	TELCO	—
6	At D&SM Frame, Install dc-dc Converter Packs and Universal SD Circuit Packs for Block(s) Being Added	INST	—
7	At D&SM Frame, Install Fuses for Universal SD K Block(s) Being Added:		
	1. Identify Fuse Assignments for Universal SD K Blocks Being Added	TELCO	DLP-523
	2. Install Fuses for Universal SD K Blocks Being Added	TELCO	—
8	At DA Frame, Install Universal SD Circuit Packs for K Block(s) Being Added	INST	—
9	At DA Frame, Install Fuses for Universal SD K Block(s) Being Added:		
	1. Identify Fuse Assignments for Universal SD K Blocks Being Added	TELCO	DLP-523
	2. Install Fuses for Universal SD K Blocks Being Added	TELCO	—
10	At D&SM Frame, Remove Fuses for Universal Scan K Block(s) Being Added:		
	1. Identify Fuse Assignments for Universal Scan K Blocks Being Added	TELCO	DLP-525
	2. Remove Fuses for Universal Scan K Blocks Being Added	TELCO	—
11	At D&SM Frame, Install Universal Scan Point Circuit Packs for K Block(s) Being Added	INST	—
	(Continued on Page 2)		

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

12	At D&SM Frame, Install Fuses for Universal Scan K Block(s) Being Added:		
	1. Identify Fuse Assignments for Universal Scan K Blocks Being Added	TELCO	DLP-525
	2. Install Fuses for Universal Scan K Blocks Being Added	TELCO	-
13	Recent Change and Verify Submember Equipage From UNEQ to GROW [Growth SD K Block(s)]:		
	A. Universal SD K Block-TDN 0	TELCO	DLP-502
	B. Universal SD K Block-TDN 1	TELCO	DLP-502
	C. Universal SD K Block-TDN 2	TELCO	DLP-502
	D. Universal SD K Block-TDN 3	TELCO	DLP-502
14	Recent Change and Verify Submember Equipage From UNEQ to GROW [Growth Scan K Block(s)]:		
	A. Universal Scan Point K Block-TSN 0	TELCO	DLP-502
	B. Universal Scan Point K Block-TSN 1	TELCO	DLP-502
	C. Universal Scan Point K Block-TSN 2	TELCO	DLP-502
	D. Universal Scan Point K Block-TSN 3	TELCO	DLP-502
15	Diagnose Operational SP Frame Controllers and Growth Matrix Equipment	TELCO/INST	DLP-507
16	Enable <b>MML</b> Switch	TELCO/INST	DLP-530
	NOTE: Safe point to temporarily stop this procedure		
17	Recent Change and Verify Submember Equipage From GROW to SGRO [Growth SD K Block(s)]:		
	A. Universal SD K Block-TDN 0	TELCO	DLP-502
	B. Universal SD K Block-TDN 1	TELCO	DLP-502
	C. Universal SD K Block-TDN 2	TELCO	DLP-502
	D. Universal SD K Block-TDN 3	TELCO	DLP-502
	(Continued on Page 3)		

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

18	Recent Change and Verify Submember Equipage From GROW to SGRO [Growth Scan K Block(s)]:		
	A. Universal Scan Point K Block-TSN 0	TELCO	DLP-502
	B. Universal Scan Point K Block-TSN 1	TELCO	DLP-502
	C. Universal Scan Point K Block-TSN 2	TELCO	DLP-502
	D. Universal Scan Point K Block-TSN 3	TELCO	DLP-502
19	Install Scan Point Straps (Only for K Blocks Being Added)	INST	—
20	Diagnose Operational SP Frame Controllers and Growth Matrix Equipment	TELCO/INST	DLP-507
21	Enter Message To Run Audit 27 (AUD:NUM 27!) Wait for AUD:NUM 27 COMPLETE 0 ERRORS DETECTED Output Message	TELCO	—
22	Recent Change and Verify Submember Equipage From SGRO to OPER [Growth Scan K Block(s)]:		
	A. Universal Scan Point K Block-TSN 0	TELCO	DLP-502
	B. Universal Scan Point K Block-TSN 1	TELCO	DLP-502
	C. Universal Scan Point K Block-TSN 2	TELCO	DLP-502
	D. Universal Scan Point K Block-TSN 3	TELCO	DLP-502
23	Recent Change and Verify Submember Equipage From SGRO to OPER [Growth SD K Block(s)]:		
	A. Universal SD K Block-TDN 0	TELCO	DLP-502
	B. Universal SD K Block-TDN 1	TELCO	DLP-502
	C. Universal SD K Block-TDN 2	TELCO	DLP-502
	D. Universal SD K Block-TDN 3	TELCO	DLP-502
24	Enter Message To Run Peripheral Unit Status Audit (AUD:PUSTAT!); Wait for Message Complete (MSG COMPL)	TELCO	—
25	At SP1 Control Frame, Diagnose Signal Processor Using <b>MML</b> Switch	TELCO/INST	DLP-500
26	Identify and Remove Pest Conditions Set in Growth Associated SP Controller(s)	TELCO	DLP-543

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

		RESPONSIBILITY	
1	Select Universal Scan and/or Miscellaneous Scan Equipment and Determine Growth K Block Location(s)	INST	—
2	Verify UNEQ Status of Universal Scan and/or Miscellaneous Scan Equipage (VER:UTYPE:SP a,SME b!)	TELCO	DLP-515
3	Diagnose Operational SP Frame Controllers and Matrix Equipment	TELCO	DLP-531
4	At SP Control Frame <b>MML</b> Switch, Rotate <b>ALM RETIRE</b> Switch to <b>RML</b>	TELCO	—
5	At D&SM Frame, Remove Fuses for Scan K Block(s) Being Added:		
	1. Identify Fuse Assignments for Scan K Block(s) Being Added	TELCO	DLP-526
	2. Remove Fuses for Scan K Block(s) Being Added	TELCO	—
6	Install Circuit Packs for Scan K Block(s) Being Added	INST	—
7	At D&SM Frame, Install Fuses for Scan K Block(s) Being Added:		
	1. Identify Fuse Assignments for Scan K Block(s) Being Added	TELCO	DLP-526
	2. Install Fuses for Scan K Block(s) Being Added	TELCO	—
8	Recent Change and Verify Submember Equipage From UNEQ to GROW [Growth Scan K Block(s)]:		
	A. Universal Scan Point K Block-TSN 0	TELCO	DLP-502
	B. Universal Scan Point K Block-TSN 1	TELCO	DLP-502
	C. Universal Scan Point K Block-TSN 2	TELCO	DLP-502
	D. Universal Scan Point K Block-TSN 3	TELCO	DLP-502
	E. Miscellaneous Scan Point K Block-MSN 0	TELCO	DLP-502
	F. Miscellaneous Scan Point K Block-MSN 1	TELCO	DLP-502
9	Diagnose Operational SP Frame Controllers and Growth Matrix Equipment	TELCO/INST	DLP-507
10	At SP 1 Control Frame, Enable <b>MML</b> Switch	TELCO/INST	DLP-530
	(Continued on Page 2)		

**ADD BLOCK(S) OF UNIVERSAL AND/OR MISC. SCAN POINTS (NO LIKE NUMBERED UNIVERSAL SD K BLOCK) TO SP 1 — SUPPORT TO INSTALLER**

**(INST)**

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

	NOTE: Safe point to temporarily stop this procedure		
11	Recent Change and Verify Submember Equipage From GROW to SGRO [Growth Scan K Block(s)]:		
	A. Universal Scan Point K Block-TSN 0	TELCO	DLP-502
	B. Universal Scan Point K Block-TSN 1	TELCO	DLP-502
	C. Universal Scan Point K Block-TSN 2	TELCO	DLP-502
	D. Universal Scan Point K Block-TSN 3	TELCO	DLP-502
	E. Miscellaneous Scan Point K Block-MSN 0	TELCO	DLP-502
	F. Miscellaneous Scan Point K Block-MSN 1	TELCO	DLP-502
12	Install Scan Point Straps [Only for K Block(s) Being Added]	INST	-
13	Diagnose Operational SP Frame Controllers and Growth Matrix Equipment	TELCO/INST	DLP-507
14	If MSN K Block(s) Is Being Added, Enter Message To Run Audit 28 (AUD:NUM 28!); Wait for AUD:NUM 28 COMPLETE 0 ERRORS DETECTED Output Message	TELCO	-
15	If TSN K Block(s) Is Being Added, Enter Message To Run Audit 27 (AUD:NUM 27!); Wait for AUD:NUM 27 COMPLETE 0 ERRORS DETECTED Output Message	TELCO	-
16	Recent Change and Verify Submember Equipage From SGRO to OPER [Growth Scan K Block(s)]:		
	A. Universal Scan Point K Block-TSN 0	TELCO	DLP-502
	B. Universal Scan Point K Block-TSN 1	TELCO	DLP-502
	C. Universal Scan Point K Block-TSN 2	TELCO	DLP-502
	D. Universal Scan Point K Block-TSN 3	TELCO	DLP-502
	E. Miscellaneous Scan Point K Block-MSN 0	TELCO	DLP-502
	F. Miscellaneous Scan Point K Block-MSN 1	TELCO	DLP-502
17	Enter Message To Run Peripheral Unit Status Audit (AUD:PUSTAT!); Wait for Message Complete (MSG COMPL)	TELCO	-
	(Continued on Page 3)		

**ADD BLOCK(S) OF UNIVERSAL AND/OR MISC. SCAN POINTS (NO LIKE NUMBERED UNIVERSAL SD K BLOCK) TO SP 1 - SUPPORT TO INSTALLER**

**(INST)**

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

18	At SP 1 Control Frame, Diagnose Signal Processor Using <b>MML</b> Switch	TELCO/INST	DLP-500
19	Identify and Remove Pest Conditions Set in Growth Associated SP Controller(s)	TELCO	DLP-543

**ADD BLOCK(S) OF UNIVERSAL AND/OR MISC. SCAN POINTS (NO LIKE NUMBERED UNIVERSAL SD K BLOCK) TO SP 1 – SUPPORT TO INSTALLER**

**(INST)**

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

		RESPONSIBILITY	
1	Select Universal and/or Miscellaneous (Relay Only) SD Equipment and Determine Growth K Block Location(s)	INST	—
2	Verify UNEQ Status of Universal SD and/or Miscellaneous SD Equipage (VER:UTYPE:SP a,SME b!)	TELCO	DLP-515
3	Diagnose Operational SP Frame Controllers and Matrix Equipment	TELCO	DLP-531
4	At SP Control Frame <b>MML</b> Switch, Rotate <b>ALM RETIRE</b> Switch to <b>RML</b>	TELCO	—
5	At D&SM Frame and DA Frame, Remove Fuses for SD K Block(s) Being Added:		
	1. Identify Fuse Assignments for Universal and/or Miscellaneous SD K Block(s) Being Added	TELCO	DLP-527
	2. Remove Fuses for SD K Block(s) Being Added	TELCO	—
6	At D&SM Frame, Install dc-dc Converters for SD K Block(s) Being Added	INST	—
7	Install Circuit Packs for SD K Block(s) Being Added	INST	—
8	At D&SM Frame, Install Fuses for SD K Block(s) Being Added:		
	1. Identify Fuse Assignments for Universal and/or Miscellaneous SD K Block(s) Being Added	TELCO	DLP-527
	2. Install Fuses for SD K Block(s) Being Added	TELCO	—
9	At DA Frame, Install Circuit Packs for SD K Block(s) Being Added	INST	—
10	At DA Frame, Install Fuses for SD K Block(s) Being Added:		
	1. Identify Fuse Assignments for Universal and/or Miscellaneous SD K Block(s) Being Added	TELCO	DLP-527
	2. Install Fuses for SD K Block(s) Being Added	TELCO	—
(Continued on Page 2)			

**ADD BLOCK(S) OF UNIVERSAL AND/OR MISCELLANEOUS (RELAY ONLY) SD POINTS TO SIGNAL PROCESSOR 1 — SUPPORT TO INSTALLER (INST)**

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

11	Recent Change and Verify Submember Equipage From UNEQ to GROW [Growth SD K Block(s)]:		
	A. Universal SD Point K Block-TDN 0	TELCO	DLP-502
	B. Universal SD Point K Block-TDN 1	TELCO	DLP-502
	C. Universal SD Point K Block-TDN 2	TELCO	DLP-502
	D. Universal SD Point K Block-TDN 3	TELCO	DLP-502
	E. Miscellaneous SD Point K Block-MDN 0	TELCO	DLP-502
	F. Miscellaneous SD Point K Block-MDN 1	TELCO	DLP-502
12	Diagnose Operational SD Frame Controllers and Growth Matrix Equipment	TELCO/INST	DLP-507
13	At SP 1 Control Frame, Enable <b>MML</b> Switch	TELCO/INST	DLP-530
	NOTE: Safe point to temporarily stop this procedure		
14	Recent Change and Verify Submember Equipage From GROW to SGRO [Growth SD K Block(s)]:		
	A. Universal SD Point K Block-TDN 0	TELCO	DLP-502
	B. Universal SD Point K Block-TDN 1	TELCO	DLP-502
	C. Universal SD Point K Block-TDN 2	TELCO	DLP-502
	D. Universal SD Point K Block-TDN 3	TELCO	DLP-502
	E. Miscellaneous SD Point K Block-MDN 0	TELCO	DLP-502
	F. Miscellaneous SD Point K Block-MDN 1	TELCO	DLP-502
15	Recent Change and Verify Submember Equipage From SGRO to OPER [Growth SD K Block(s)]:		
	A. Universal SD Point K Block-TDN 0	TELCO	DLP-502
	B. Universal SD Point K Block-TDN 1	TELCO	DLP-502
	C. Universal SD Point K Block-TDN 2	TELCO	DLP-502
	D. Universal SD Point K Block-TDN 3	TELCO	DLP-502
	E. Miscellaneous SD Point K Block-MDN 0	TELCO	DLP-502
	F. Miscellaneous SD Point K Block-MDN 1	TELCO	DLP-502

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

16	Enter Message To Run Peripheral Unit Status Audit (AUD:PUSTAT!); Wait for Message Complete (MSG COMPL)	TELCO	-
17	At SP 1 Control Frame, Diagnose Signal Processor Using <b>MML</b> Switch	TELCO/INST	DLP-500
18	Identify and Remove Pest Conditions Set in Growth Associated SP Controller(s)	TELCO	DLP-543

**ADD BLOCK(S) OF UNIVERSAL AND/OR MISCELLANEOUS (RELAY ONLY) SD POINTS TO SIGNAL PROCESSOR 1 - SUPPORT TO INSTALLER (INST)**

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

		RESPONSIBILITY	
1	Select Miscellaneous SD Equipment and Determine Growth K Block Location(s)	INST	—
2	Verify Miscellaneous SD Data of SP UT Translator (VER:UTYPE:SP a!)	TELCO/INST	DLP-529
3	Diagnose Operational SP Frame Controllers and Matrix Equipment	TELCO	DLP-531
4	At SP Control Frame <b>MML</b> Switch, Rotate <b>ALM RETIRE</b> Switch to <b>RML</b>	TELCO	—
5	At Distributor and Scanner Matrix (D&SM) Frame and Distributor Applique (DA) Frame, Remove Fuses for K Blocks Being Added:		
	1. Identify Fuse Assignments for Miscellaneous SD K Block(s) Being Added	TELCO	DLP-524
	2. Remove Fuses for K Block(s) Being Added	TELCO	—
6	At D&SM Frame, Install dc-dc Converter Packs and Circuit Packs for K Block(s) Being Added	INST	—
7	At D&SM Frame, Install Fuses for K Block(s) Being Added:		
	1. Identify Fuse Assignments for Miscellaneous SD K Block(s) Being Added	TELCO	DLP-524
	2. Install Fuses for K Block(s) Being Added	TELCO	—
8	Remove Pulse Point Power With Power Switch:		
	A. If Adding K Block MDN 0, Remove Power With Power Switch (Left DA)	TELCO	—
	B. If Adding K Block MDN 1, Remove Power With Power Switch (Right DA)	TELCO	—
9	At DA Frame, Install dc-dc Converter Packs and Circuit Packs for K Block(s) Being Added	INST	—
10	At DA Frame, Install Fuses for K Block(s) Being Added:		
	1. Identify Fuse Assignments for Miscellaneous SD K Block(s) Being Added	TELCO	DLP-524
	2. Install Fuses for K Block(s) Being Added	TELCO	—
11	Restore Pulse Point Power With Power Switch:		
	A. If Adding K Block MDN 0, Restore Pulse Point Power With Power Switch (Left DA)	TELCO/INST	DLP-528
	B. If Adding K Block MDN 1, Restore Pulse Point Power With Power Switch (Right DA)	TELCO/INST	DLP-528
	(Continued on Page 2)		

**ADD BLOCK(S) OF MISCELLANEOUS (COMBINATION RELAY AND PULSE)  
SD POINTS TO SIGNAL PROCESSOR 1 — SUPPORT TO INSTALLER (INST)**

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

12	If LEDs of All Converters Are Not Off at DA Pulse Point Power Switch, Momentarily Depress <b>ON</b> Switch	TELCO	-
13	Recent Change and Verify Submember Equipage From UNEQ to GROW [Growth SD K Block(s)]:		
	A. Miscellaneous SD K Block-MDN 0	TELCO	DLP-502
	B. Miscellaneous SD K Block-MDN 1	TELCO	DLP-502
14	Diagnose Operational SP Frame Controllers and Growth Matrix Equipment	TELCO/INST	DLP-507
15	At SP 1 Control Frame, Enable <b>MML</b> Switch	TELCO/INST	DLP-530
	NOTE: Safe point to temporarily stop this procedure		
16	Recent Change and Verify Submember Equipage From GROW to SGRO [Growth SD K Block(s)]:		
	A. Miscellaneous SD K Block-MDN 0	TELCO	DLP-502
	B. Miscellaneous SD K Block-MDN 1	TELCO	DLP-502
17	Recent Change and Verify Submember Equipage From SGRO to OPER [Growth SD K Block(s)]:		
	A. Miscellaneous SD K Block-MDN 0	TELCO	DLP-502
	B. Miscellaneous SD K Block-MDN 1	TELCO	DLP-502
18	Enter Message To Run Peripheral Unit Status Audit (AUD:PUSTAT!); Wait for Message Complete (MSG COMPL)	TELCO	-
19	At SP 1 Control Frame, Diagnose Signal Processor Using <b>MML</b> Switch	TELCO/INST	DLP-500
20	Restore Pulse Point Logic to Service (RST:SP a,b 0!)	TELCO/INST	DLP-542
21	Identify and Remove Pest Conditions Set in Growth Associated SP Controller(s)	TELCO	DLP-543

**ADD BLOCK(S) OF MISCELLANEOUS (COMBINATION RELAY AND PULSE)  
SD POINTS TO SIGNAL PROCESSOR 1 - SUPPORT TO INSTALLER (INST)**

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

		RESPONSIBILITY	
1	Select Miscellaneous SD Equipment and Determine Growth K Block Location(s)	TELCO	DLP-544
2	Verify Miscellaneous SD Data of SP Unit Type Translator (VER:UTYPE:SP a!)	TELCO	DLP-529
3	Diagnose Operational SP Frame Controllers and Matrix Equipment	TELCO	DLP-531
4	At SP Control Frame <b>MML</b> Switch, Rotate <b>ALM RETIRE</b> Switch to <b>RML</b>	TELCO	—
5	At Distributor and Scanner Matrix (D&SM) Frame and Distributor Applique (DA) Frame, Remove Fuses for K Block(s) Being Added:		
	1. Identify Fuse Assignments for SD K Block(s) Being Added	TELCO	DLP-524
	2. Remove Fuses for K Block(s) Being Added	TELCO	—
6	At D&SM Frame, Install dc-dc Converter Packs and Circuit Packs for K Block(s) Being Added	TELCO	DLP-546
7	At D&SM Frame, Install Fuses for K Block(s) Being Added:		
	1. Identify Fuse Assignments for SD K Block(s) Being Added	TELCO	DLP-524
	2. Install Fuses for K Block(s) Being Added	TELCO	—
8	Remove Pulse Point Power With Power Switch:		
	A. If Adding K Block MDN 0, Remove Pulse Point Power With Power Switch (Left DA)	TELCO	—
	B. If Adding K Block MDN 1, Remove Pulse Point Power With Power Switch (Right DA)	TELCO	—
9	At DA Frame, Install dc-dc Converter Packs and Circuit Packs for K Block(s) Being Added	TELCO	DLP-547
10	At DA Frame, Install Fuses for K Block(s) Being Added:		
	1. Identify Fuse Assignments for SD K Block(s) Being Added	TELCO	DLP-524
	2. Install Fuses for K Block(s) Being Added	TELCO	—
11	Restore Pulse Point Power With Power Switch:		
	A. If Adding K Block MDN 0, Restore Pulse Point Power With Power Switch (Left DA)	TELCO	—
	B. If Adding K Block MDN 1, Restore Pulse Point Power With Power Switch (Right DA)	TELCO	—
	(Continued on Page 2)		

**ADD BLOCK(S) OF MISCELLANEOUS (COMBINATION RELAY AND PULSE)  
SIGNAL DISTRIBUTOR POINTS TO SIGNAL PROCESSOR 1**

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

12	If LEDs of All Converters Are Not Off, At DA Pulse Point Power Switch: Momentarily Depress <b>ON</b> Switch	TELCO	-
13	Recent Change and Verify Submember Equipage From UNEQ to GROW [Growth SD K Block(s)]:		
	A. Miscellaneous SD K Block-MDN 0	TELCO	DLP-502
	B. Miscellaneous SD K Block-MDN 1	TELCO	DLP-502
14	Diagnose Operational SP Frame Controllers and Growth Matrix Equipment	TELCO	DLP-507
15	At SP 1 Control Frame, Enable <b>MML</b> Switch	TELCO	DLP-530
	NOTE: Safe point to temporarily stop this procedure		
16	Recent Change and Verify Submember Equipage From GROW to SGRO [Growth SD K Block(s)]:		
	A. Miscellaneous SD K Block-MDN 0	TELCO	DLP-502
	B. Miscellaneous SD K Block-MDN 1	TELCO	DLP-502
17	Recent Change and Verify Submember Equipage From SGRO to OPER [Growth SD K Block(s)]:		
	A. Miscellaneous SD K Block-MDN 0	TELCO	DLP-502
	B. Miscellaneous SD K Block-MDN 1	TELCO	DLP-502
18	Enter Message To Run Peripheral Unit Status Audit (AUD:PUSTAT!); Wait for Message Complete (MSG COMPL)	TELCO	-
19	At SP 1 Control Frame, Diagnose Signal Processor Using <b>MML</b> Switch	TELCO	DLP-500
20	Restore Pulse Point Logic to Service (RST:SP a,b 0!)	TELCO	DLP-542
21	Identify and Remove Pest Conditions Set in Growth Associated SP Controllers	TELCO	DLP-543

**ADD BLOCK(S) OF MISCELLANEOUS (COMBINATION RELAY AND PULSE)  
SIGNAL DISTRIBUTOR POINTS TO SIGNAL PROCESSOR 1**

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

		RESPONSIBILITY	
1	Select Universal Scan and SD Equipment and Determine Growth K Block Locations	TELCO	DLP-548
2	Verify UNEQ Status of Universal Scan and SD Equipage (VER:UTYPE:SP a,SME b!)	TELCO	DLP-515
3	Diagnose Operational SP Frame Controllers and Matrix Equipment	TELCO	DLP-531
4	At SP Control Frame <b>MML</b> Switch, Rotate <b>ALM RETIRE</b> Switch to <b>RML</b>	TELCO	—
5	At Distributor and Scanner Matrix (D&SM) Frame and Distributor Applique (DA) Frame, Remove Fuses for Universal SD K Block(s) Being Added:		
	1. Identify Fuse Assignments for Universal SD K Block(s) Being Added	TELCO	DLP-523
	2. Remove Fuses for K Block(s) Being Added	TELCO	—
6	At D&SM Frame, Install dc-dc Converter Packs and Universal SD Circuit Packs for K Block(s) Being Added	TELCO	DLP-549
7	At D&SM Frame, Install Fuses for Universal SD K Block(s) Being Added:		
	1. Identify Fuse Assignments for Universal SD K Block(s) Being Added	TELCO	DLP-523
	2. Install Fuses for K Block(s) Being Added	TELCO	—
8	At DA Frame, Install Universal SD Circuit Packs for K Block(s) Being Added	TELCO	DLP-550
9	At DA Frame, Install Fuses for Universal SD K Block(s) Being Added:		
	1. Identify Fuse Assignments for Universal SD K Block(s) Being Added	TELCO	DLP-523
	2. Install Fuses for K Block(s) Being Added	TELCO	—
10	At D&SM Frame, Remove Fuses for Universal Scan K Block(s) Being Added:		
	1. Identify Fuse Assignments for Universal Scan K Block(s) Being Added	TELCO	DLP-523
	2. Remove Fuses for K Block(s) Being Added	TELCO	—
11	At D&SM Frame, Install Universal Scan Point Circuit Packs for K Block(s) Being Added	TELCO	DLP-556
12	At D&SM Frame, Install Fuses for Universal Scan K Block(s) Being Added:		
	1. Identify Fuse Assignments for Universal Scan K Block(s) Being Added	TELCO	DLP-523
	2. Install Fuses for K Block(s) Being Added	TELCO	

**ADD BLOCKS OF UNIVERSAL SCAN AND UNIVERSAL SIGNAL DISTRIBUTOR POINTS (LIKE K BLOCK NUMBERS) TO SIGNAL PROCESSOR 1**

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

13	Recent Change and Verify Submember Equipage From UNEQ to GROW [Growth SD K Block(s)]:		
	A. Universal SD K Block-TDN 0	TELCO	DLP-502
	B. Universal SD K Block-TDN 1	TELCO	DLP-502
	C. Universal SD K Block-TDN 2	TELCO	DLP-502
	D. Universal SD K Block-TDN 3	TELCO	DLP-502
14	Recent Change and Verify Submember Equipage From UNEQ to GROW [Growth Scan K Block(s)]:		
	A. Universal Scan Point K Block-TSN 0	TELCO	DLP-502
	B. Universal Scan Point K Block-TSN 1	TELCO	DLP-502
	C. Universal Scan Point K Block-TSN 2	TELCO	DLP-502
	D. Universal Scan Point K Block-TSN 3	TELCO	DLP-502
15	Diagnose Operational SP Frame Controllers and Growth Matrix Equipment	TELCO	DLP-507
16	At SP 1 Control Frame, Enable <b>MML</b> Switch	TELCO	DLP-530
	NOTE: Safe point to temporarily stop this procedure		
17	Recent Change and Verify Submember Equipage From GROW to SGRO [Growth SD K Block(s)]:		
	A. Universal SD K Block-TDN 0	TELCO	DLP-502
	B. Universal SD K Block-TDN 1	TELCO	DLP-502
	C. Universal SD K Block-TDN 2	TELCO	DLP-502
	D. Universal SD K Block-TDN 3	TELCO	DLP-502
18	Recent Change and Verify Submember Equipage From GROW to SGRO [Growth Scan K Block(s)]:		
	A. Universal Scan Point K Block-TSN 0	TELCO	DLP-502
	B. Universal Scan Point K Block-TSN 1	TELCO	DLP-502
	C. Universal Scan Point K Block-TSN 3	TELCO	DLP-502
	D. Universal Scan Point K Block-TSN 3	TELCO	DLP-502
	(Continued on Page 3)		

**ADD BLOCKS OF UNIVERSAL SCAN AND UNIVERSAL SIGNAL DISTRIBUTOR POINTS (LIKE K BLOCK NUMBERS) TO SIGNAL PROCESSOR 1**

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

19	Install Scan Point Straps (Only for K Blocks Being Added)	TELCO	DLP-551
20	Diagnose Operational SP Frame Controllers and Growth Matrix Equipment:		
	1. At SP 1 Control Frame <b>MML</b> Switch, Return <b>ALM RETIRE</b> Switch to Normal Position	TELCO	—
	2. Diagnose SP Frame Controllers and Growth Matrix Equipment	TELCO	DLP-507
	3. At SP 1 Control Frame <b>MML</b> Switch, Rotate <b>ALM RETIRE</b> Switch to <b>RML</b>	TELCO	—
21	Enter Message To Run Audit 27 (AUD:NUM 27!); Wait for AUD:NUM 27 COMPLETE 0 ERRORS DETECTED Output Message	TELCO	—
22	Recent Change and Verify Submember Equipage From SGRO to OPER [Growth Scan K Block(s)]:		
	A. Universal Scan Point K Block-TSN 0	TELCO	DLP-502
	B. Universal Scan Point K Block-TSN 1	TELCO	DLP-502
	C. Universal Scan Point K Block-TSN 2	TELCO	DLP-502
	D. Universal Scan Point K Block-TSN 3	TELCO	DLP-502
23	Recent Change and Verify Submember Equipage From SGRO to OPER [Growth SD K Block(s)]:		
	A. Universal SD K Block-TDN 0	TELCO	DLP-502
	B. Universal SD K Block-TDN 1	TELCO	DLP-502
	C. Universal SD K Block-TDN 2	TELCO	DLP-502
	D. Universal SD K Block-TDN 3	TELCO	DLP-502
24	Enter Message To Run Peripheral Unit Status Audit (AUD:PUSTAT!); Wait for Message Complete (MSG COMPL)	TELCO	—
25	At SP 1 Control Frame, Diagnose Signal Processor Using <b>MML</b> Switch	TELCO	DLP-500
26	Identify and Remove Pest Conditions Set in Growth Associated SP Controllers	TELCO	DLP-543

**ADD BLOCKS OF UNIVERSAL SCAN AND UNIVERSAL SIGNAL DISTRIBUTOR POINTS (LIKE K BLOCK NUMBERS) TO SIGNAL PROCESSOR 1**

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

		RESPONSIBILITY	
1	Select Universal Scan and/or Miscellaneous Scan Equipment and Determine Growth K Block Locations	TELCO	DLP-552
2	Verify UNEQ Status of Universal Scan and/or Miscellaneous Scan Equipage (VER:UTYPE:SP a,SME b!)	TELCO	DLP-515
3	Diagnose Operational SP Frame Controllers and Matrix Equipment	TELCO	DLP-531
4	At SP 1 Control Frame <b>MML</b> Switch, Rotate <b>ALM RETIRE</b> Switch to <b>RML</b>	TELCO	—
5	At Distributor and Scanner Matrix (D&SM) Frame, Remove Fuses for Scan K Block(s) Being Added:		
	1. Identify Fuse Assignments for Scan K Block(s) Being Added	TELCO	DLP-526
	2. Remove Fuses for K Block(s) Being Added	TELCO	—
6	Install Circuit Packs for Scan K Block(s) Being Added	TELCO	DLP-557
7	Install Fuses Removed in Item 5		
8	Recent Change and Verify Submember Equipage From UNEQ to GROW [Growth Scan K Block(s)]:		
	A. Universal Scan Point K Block-TSN 0	TELCO	DLP-502
	B. Universal Scan Point K Block-TSN 1	TELCO	DLP-502
	C. Universal Scan Point K Block-TSN 2	TELCO	DLP-502
	D. Universal Scan Point K Block-TSN 3	TELCO	DLP-502
	E. Miscellaneous Scan Point K Block-MSN 0	TELCO	DLP-502
	F. Miscellaneous Scan Point K Block-MSN 1	TELCO	DLP-502
9	Diagnose Operational SP Frame Controllers and Growth Matrix Equipment	TELCO	DLP-507
10	At SP 1 Control Frame, Enable <b>MML</b> Switch	TELCO	DLP-530
	NOTE: Safe point to temporarily stop this procedure		
	(Continued on Page 2)		

**ADD BLOCK(S) OF UNIVERSAL AND/OR MISCELLANEOUS SCAN POINTS  
(NO LIKE NUMBERED UNIVERSAL SD K BLOCK) TO SIGNAL PROCESSOR 1**

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

11	Recent Change and Verify Submember Equipage From GROW to SGRO [Growth Scan K Block(s)]:		
	A. Universal Scan Point K Block-TSN 0	TELCO	DLP-502
	B. Universal Scan Point K Block-TSN 1	TELCO	DLP-502
	C. Universal Scan Point K Block-TSN 2	TELCO	DLP-502
	D. Universal Scan Point K Block-TSN 3	TELCO	DLP-502
	E. Miscellaneous Scan Point K Block-MSN 0	TELCO	DLP-502
	F. Miscellaneous Scan Point K Block-MSN 1	TELCO	DLP-502
12	Install Scan Point Straps [Only for K Block(s) Being Added]	TELCO	DLP-551
13	Diagnose Operational SP Frame Controllers and Growth Matrix Equipment:		
	1. At SP 1 Control Frame <b>MML</b> Switch, Return <b>ALM RETIRE</b> Switch to Normal Position	TELCO	—
	2. Diagnose Operational SP Frame Controllers and Growth Matrix Equipment	TELCO	DLP-507
	3. At SP 1 Control Frame <b>MML</b> Switch, Rotate <b>ALM RETIRE</b> Switch to <b>RML</b>	TELCO	—
14	If MSN K Block(s) Is Being Added, Enter Message To Run Audit 28 (AUD:NUM 28!); Wait for AUD:NUM 28 COMPLETE 0 ERRORS DETECTED Output Message	TELCO	—
15	If TSN K Block(s) Is Being Added, Enter Message To Run Audit 27 (AUD:NUM 27!); Wait for AUD:NUM 27 COMPLETE 0 ERRORS DETECTED Output Message	TELCO	—
16	Recent Change and Verify Submember Equipage From SGRO to OPER [Growth Scan K Block(s)]:		
	A. Universal Scan Point K Block-TSN 0	TELCO	DLP-502
	B. Universal Scan Point K Block-TSN 1	TELCO	DLP-502
	C. Universal Scan Point K Block-TSN 2	TELCO	DLP-502
	D. Universal Scan Point K Block-TSN 3	TELCO	DLP-502
	E. Miscellaneous Scan Point K Block-MSN 0	TELCO	DLP-502
	F. Miscellaneous Scan Point K Block-MSN 1	TELCO	DLP-502
	(Continued on Page 3)		

**ADD BLOCK(S) OF UNIVERSAL AND/OR MISCELLANEOUS SCAN POINTS  
(NO LIKE NUMBERED UNIVERSAL SD K BLOCK) TO SIGNAL PROCESSOR 1**

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**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

17	Enter Message To Run Peripheral Unit Status Audit (AUD:PUSTAT!); Wait for Message Complete (MSG COMPL)	TELCO	-
18	At SP 1 Control Frame, Diagnose Signal Processor Using <b>MML</b> Switch	TELCO	DLP-500
19	Identify and Remove Pest Conditions Set in Growth Associated SP Controllers	TELCO	DLP-543

**ADD BLOCK(S) OF UNIVERSAL AND/OR MISCELLANEOUS SCAN POINTS  
(NO LIKE NUMBERED UNIVERSAL SD K BLOCK) TO SIGNAL PROCESSOR 1**

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

		RESPONSIBILITY	
1	Select Universal and/or Miscellaneous (Relay Only) SD Equipment and Determine Growth K Block Location(s)	TELCO	DLP-553
2	Verify UNEQ Status of Universal SD and/or Miscellaneous SD Equipage (VER:UTYPE:SP a,SME b!)	TELCO	DLP-515
3	Diagnose Operational SP Frame Controllers and Matrix Equipment	TELCO	DLP-531
4	At SP Control Frame <b>MML</b> Switch, Rotate <b>ALM RETIRE</b> Switch to <b>RML</b>	TELCO	—
5	At D&SM and DA, Remove Fuses for SD K Block(s) Being Added:		
	1. Identify Fuse Assignments for SD K Block(s) Being Added	TELCO	DLP-527
	2. Remove Fuses for SD K Block(s) Being Added	TELCO	—
6	At D&SM, Install dc-dc Converter Packs and Circuit Packs for SD K Block(s) Being Added	TELCO	DLP-554
7	At D&SM, Insert Fuses Removed in Item 5	TELCO	—
8	At DA, Install Circuit Packs for SD K Block(s) Being Added	TELCO	DLP-555
9	At DA, Insert Fuses Removed in Item 5	TELCO	—
10	Recent Change and Verify Submember Equipage From UNEQ to GROW [Growth SD K Block(s)]:		
	A. Universal SD Point K Block-TDN 0	TELCO	DLP-502
	B. Universal SD Point K Block-TDN 1	TELCO	DLP-502
	C. Universal SD Point K Block-TDN 2	TELCO	DLP-502
	D. Universal SD Point K Block-TDN 3	TELCO	DLP-502
	E. Miscellaneous SD Point K Block-MDN 0	TELCO	DLP-502
	F. Miscellaneous SD Point K Block-MDN 1	TELCO	DLP-502
11	Diagnose Operational SP Frame Controllers and Growth Matrix Equipment	TELCO	DLP-507
12	Enable <b>MML</b> Switch	TELCO	DLP-530
	NOTE: Safe point to temporarily stop this procedure		
	(Continued on Page 2)		

**ADD BLOCK(S) OF UNIVERSAL AND/OR MISCELLANEOUS (RELAY ONLY)  
SIGNAL DISTRIBUTOR POINTS TO SIGNAL PROCESSOR 1**

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

13	Recent Change and Verify Submember Equipage From GROW to SGRO [Growth SD K Block(s)]:		
	A. Universal SD Point K Block-TDN 0	TELCO	DLP-502
	B. Universal SD Point K Block TDN 1	TELCO	DLP-502
	C. Universal SD Point K Block-TDN 2	TELCO	DLP-502
	D. Universal SD Point K Block-TDN 3	TELCO	DLP-502
	E. Miscellaneous SD Point K Block-MDN 0	TELCO	DLP-502
	F. Miscellaneous SD Point K Block-MDN 1	TELCO	DLP-502
14	Recent Change and Verify Submember Equipage From SGRO to OPER [Growth SD K Block(s)]:		
	A. Universal SD Point K Block-TDN 0	TELCO	DLP-502
	B. Universal SD Point K Block-TDN 1	TELCO	DLP-502
	C. Universal SD Point K Block-TDN 2	TELCO	DLP-502
	D. Universal SD Point K Block-TDN 3	TELCO	DLP-502
	E. Miscellaneous SD Point K Block-MDN 0	TELCO	DLP-502
	F. Miscellaneous SD Point K Block-MDN 1	TELCO	DLP-502
15	Enter Message To Run Peripheral Unit Status Audit (AUD:PUSTAT!); Wait for Message Complete (MSG COMPL)	TELCO	-
16	At SP 1 Control Frame, Diagnose Signal Processor Using <b>MML</b> Switch	TELCO	DLP-500
17	Identify and Remove Pest Conditions Set in Growth Associated SP Controller(s)	TELCO	DLP-543

**ADD BLOCK(S) OF UNIVERSAL AND/OR MISCELLANEOUS (RELAY ONLY)  
SIGNAL DISTRIBUTOR POINTS TO SIGNAL PROCESSOR 1**

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

		RESPONSIBILITY	
1	Determine From Company Order, SP Frame To Be Degrown and Associated MFS/VIF/DT, As Required	TELCO/INST	—
2	Assure That Following Prerequisites Have Been Met: <ul style="list-style-type: none"> <li>• Associated MFS/VIF/DT Degrowth Is Completed Per TOPs 234-153-030 or 234-153-050</li> <li>• All Connections Between Associated MFS/VIF/DT and Degrowth SP Have Been Removed</li> <li>• All Miscellaneous Scan, SD, and Pulse Points That Are Presently in Use Must Be Reassigned to Other SPs</li> </ul>	TELCO/INST	—
3	Set Pests for Controllers 0 and 1 in Degrowth SP (INH:SP a,CONTR b,ALL!)	TELCO	—
4	If Matrix Frame Is Equipped and Includes Pulse Point Circuitry:		
	1. If Left Matrix Frame Is Equipped, Remove Pulse Point Logic From Service (RMV:SP a,PPL 0!)	TELCO	—
	2. If Right Matrix Frame Is Equipped, Remove Pulse Point Logic From Service (RMV:SP a,PPR 0!)	TELCO	—
	3. Remove Power From Degrowth SP Pulse Points Using Power Switches	TELCO	—
5	Recent Change and Verify Submember Equipage From OPER to SGRO (Degrow) Using RC Form 701 (Equipped K Blocks and/or SP2 DT Interface Units, As Applicable):		
	1. If Left Matrix Frame and/or SP2 DT Interface Unit(s) Is Equipped:		
	A. Universal Scan Point K Block — TSN 0	TELCO	DLP-541
	B. Universal SD Point K Block — TDN 0	TELCO	DLP-541
	C. Universal Scan Point K Block — TSN 2	TELCO	DLP-541
	D. Universal SD Point K Block — TDN 2	TELCO	DLP-541
	E. Miscellaneous Scan Point K Block — MSN 0	TELCO	DLP-541
	F. Miscellaneous SD Point K Block — MDN 0	TELCO	DLP-541
	G. SP2 DT Interface Unit 0	TELCO	DLP-541
H. SP2 DT Interface Unit 1	TELCO	DLP-541	
	(Continued on Page 2)		

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

5 (Contd)	I. SP2 DT Interface Unit 2	TELCO	DLP-541
	J. SP2 DT Interface Unit 3	TELCO	DLP-541
	2. If Right Matrix Frame Is Equipped:		
	A. Universal Scan Point K Block – TSN 1	TELCO	DLP-541
	B. Universal SD Point K Block – TDN 1	TELCO	DLP-541
	C. Universal Scan Point K Block – TSN 3	TELCO	DLP-541
	D. Universal SD Point K Block – TDN 3	TELCO	DLP-541
	E. Miscellaneous Scan Point K Block – MSN 1	TELCO	DLP-541
F. Miscellaneous SD Point K Block – MDN 1	TELCO	DLP-541	
6	Recent Change and Verify Submember Equipage From OPER to SGRO (Degrow) Using RC Form 701 [Equipped Matrix Frame(s)]:		
	A. Left Matrix Frame	TELCO	DLP-541
	B. Right Matrix Frame	TELCO	DLP-541
7	Recent Change and Verify Degrowth SP Member Equipage From OPER to SGRO (Degrow) Using RC Form 701	TELCO	DLP-540
8	Enter Message To Run Peripheral Unit Status Audit (AUD:PUSTAT!); Wait for Message Complete (MSG COMPL)	TELCO	–
9	Recent Change and Verify Submember Equipage From SGRO to GROW (Degrow) Using RC Form 701 (Equipped K Blocks and/or SP2 DT Interface Units, As Applicable):		
	1. If Left Matrix Frame and/or SP2 DT Interface Unit(s) Is Equipped:		
	A. Universal Scan Point K Block – TSN 0	TELCO	DLP-541
	B. Universal SD Point K Block – TDN 0	TELCO	DLP-541
	C. Universal Scan Point K Block – TSN 2	TELCO	DLP-541
	D. Universal SD Point K Block – TDN 2	TELCO	DLP-541
	E. Miscellaneous Scan Point K Block – MSN 0	TELCO	DLP-541
F. Miscellaneous SD Point K Block – MDN 0	TELCO	DLP-541	

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

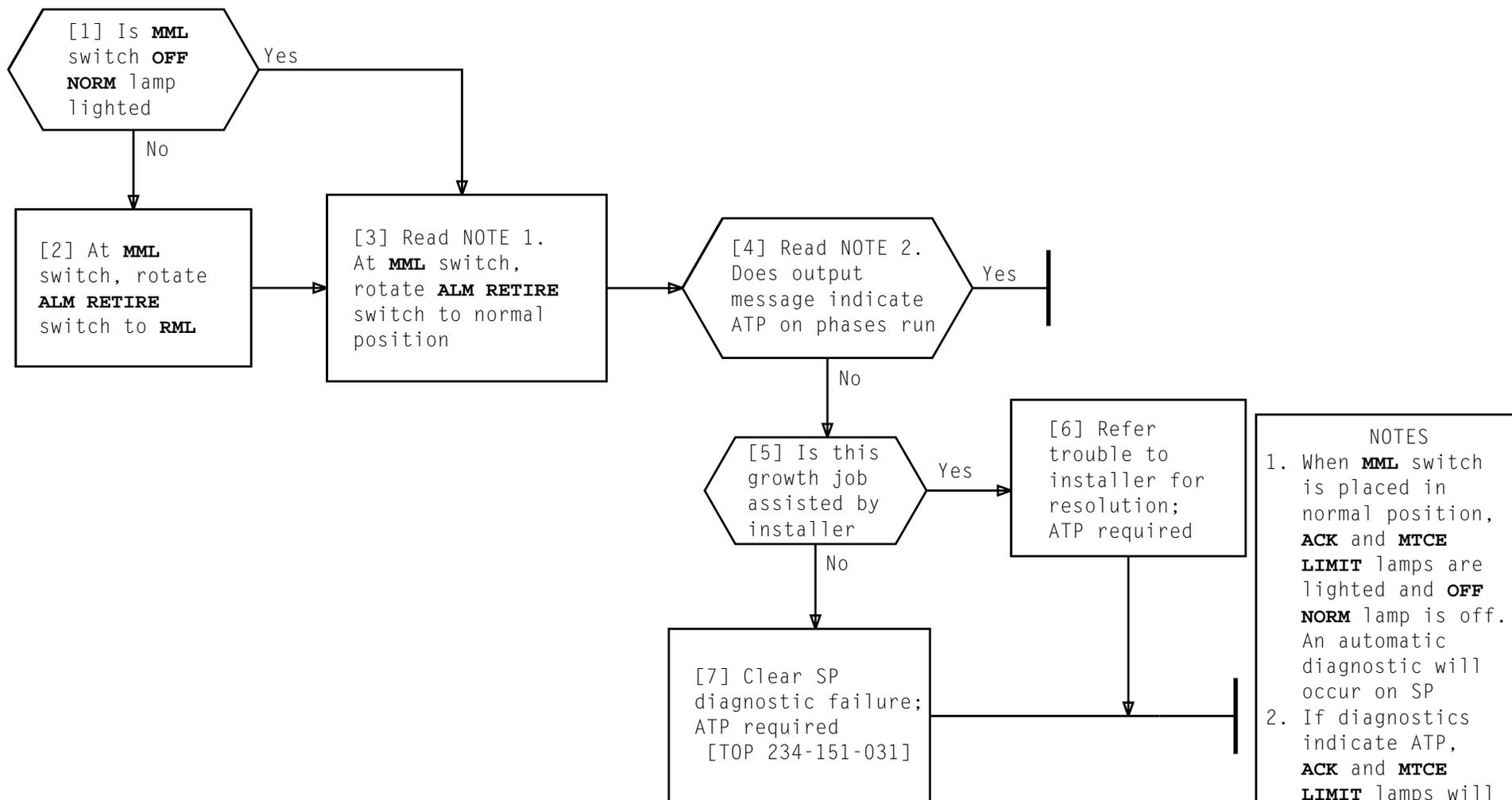
9 (Contd)	G. SP2 DT Interface Unit 0	TELCO	DLP-541	
	H. SP2 DT Interface Unit 1	TELCO	DLP-541	
	I. SP2 DT Interface Unit 2	TELCO	DLP-541	
	J. SP2 DT Interface Unit 3	TELCO	DLP-541	
	2. If Right Matrix Frame Is Equipped:			
	A. Universal Scan Point K Block – TSN 1	TELCO	DLP-541	
	B. Universal SD Point K Block – TDN 1	TELCO	DLP-541	
	C. Universal Scan Point K Block – TSN 3	TELCO	DLP-541	
	D. Universal SD Point K Block – TDN 3	TELCO	DLP-541	
	E. Universal Miscellaneous Scan Point K Block – MSN 1	TELCO	DLP-541	
	F. Universal Miscellaneous SD Point K Block – MDN 1	TELCO	DLP-541	
10	Recent Change and Verify Submember Equipage From SGRO to GROW (Degrow) Using RC Form 701 [Equipped Matrix Frame(s)]:			
	A. Left Matrix Frame	TELCO	DLP-541	
	B. Right Matrix Frame	TELCO	DLP-541	
11	Recent Change and Verify Degrowth SP Member Equipage From SGRO to GROW (Degrow) Using RC Form 701	TELCO	DLP-540	
12	Recent Change and Verify Submember Equipage From GROW to UNEQ (Degrow) Using RC Form 701 (Equipped K Blocks and/or SP2 DT Interface Units, As Applicable):			
	1. If Left Matrix Frame and/or SP2 Interface Unit(s) Is Equipped:			
	A. Universal Scan Point K Block – TSN 0	TELCO	DLP-541	
	B. Universal SD Point K Block – TDN 0	TELCO	DLP-541	
	C. Universal Scan Point K Block – TSN 2	TELCO	DLP-541	
	D. Universal SD Point K Block – TDN 2	TELCO	DLP-541	
	E. Universal Miscellaneous Scan Point K Block – MSN 0	TELCO	DLP-541	

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

12 (Contd)	F. Universal Miscellaneous SD Point K Block – MDN 0	TELCO	DLP-541
	G. SP2 DT Interface Unit 0	TELCO	DLP-541
	H. SP2 DT Interface Unit 1	TELCO	DLP-541
	I. SP2 DT Interface Unit 2	TELCO	DLP-541
	J. SP2 DT Interface Unit 3	TELCO	DLP-541
	2. If Right Matrix Frame Is Equipped:		
	A. Universal Scan Point K Block – TSN 1	TELCO	DLP-541
	B. Universal SD Point K Block – TDN 1	TELCO	DLP-541
	C. Universal Scan Point K Block – TSN 3	TELCO	DLP-541
	D. Universal SD Point K Block – TDN 3	TELCO	DLP-541
	E. Miscellaneous Scan Point K Block – MSN 1	TELCO	DLP-541
	F. Miscellaneous SD Point K Block – MDN 1	TELCO	DLP-541
13	Recent Change and Verify Submember Equipage From GROW to UNEQ (Degrow) Using RC Form 701 [Equipped Matrix Frame(s)]:		
	A. Left Matrix Frame	TELCO	DLP-541
	B. Right Matrix Frame	TELCO	DLP-541
14	Remove Power From Controllers 0 and 1 and Bus 0 and 1 Interface Units Using Power Switches on Degrowth SP	TELCO	–
15	Remove Degrowth SP From Peripheral Unit Bus Using Selected Option A or B in TOP 234-153-045, Then Continue This Procedure at Item 16 Upon Completion:		
	A. When Degrowth Frame Is Last Frame on Peripheral Unit Bus Branch	TELCO/INST	–
	B. When Degrowth Frame Is Between Two Operational Frames on Peripheral Unit Bus Branch	TELCO/INST	–
16	Recent Change and Verify Degrowth SP Member Equipage From GROW to UNEQ (Degrow) Using RC Form 701	TELCO	DLP-540
17	Remove Alarm Cables From Degrowth SP. If Degrowth Frame Is in Middle of Line-up, Place New Cable Between Remaining Frames To Bridge Open	INST	–

**DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO**

18	Remove Private Signal Leads	INST/TELCO	-
19	Remove +140V, +24V, and -24V Power From Degrowth SP at Power Distribution Frame	INST	-
20	Remove Degrowth SP Common Circuits (Telephone Jack, TTY Jacks, Appliance Outlets, and Ground Strap)	INST	-
21	Remove Degrown SP and Matrix Frame(s) From Line-up	INST	-



**NOTES**

1. When **MML** switch is placed in normal position, **ACK** and **MTCE LIMIT** lamps are lighted and **OFF NORM** lamp is off. An automatic diagnostic will occur on SP
2. If diagnostics indicate ATP, **ACK** and **MTCE LIMIT** lamps will go off. If diagnostic fails, **MTCE LIMIT** lamp will remain lighted and **ACK** lamp will go off

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## DIAGNOSE SIGNAL PROCESSOR USING MML SWITCH

**SUMMARY**

Call up recent change (RC) Form 700 on CRT. Using TTY, fill in blanks on RC Form 700 to change member equipage. Using assigned order number, activate recent change, then verify current translations.

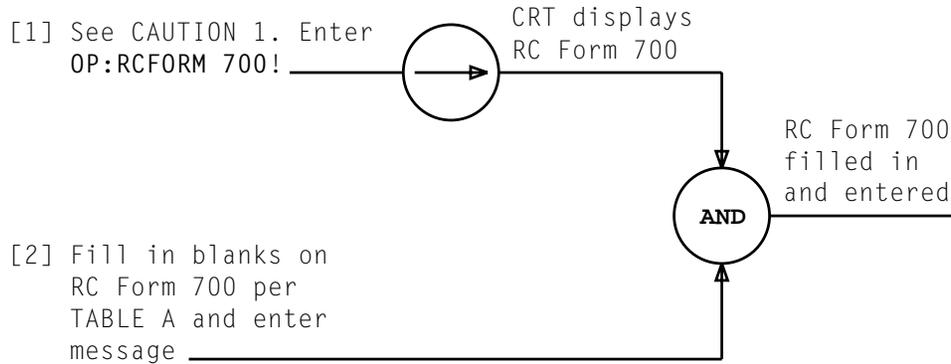


TABLE B	
RC ORNU a	SUCCESSFULLY TESTED
RC ORNU a	SUCCESSFULLY BUFFERED
RC:UTYPE;CHG;OPT(EQP,GROW),BUF:	UTYN SP,
ORNU a,	
	OLD NEW
MEMN b,	ME ( c , c ),
	OLD NEW
SUBMEM ----,	SME (----, ----),
REMARKS-----	-----!
a = RC order number	
b = Member number of growth SP	
c = Entered member equipage	

TABLE A	
RC:UTYPE;CHG;OPT(EQP,GROW),TST:	UTYN a,
ORNU b,	
	OLD NEW
MEMN c,	ME ( d , d ),
	OLD NEW
SUBMEM ----,	SME (----, ----),
REMARKS-----	-----!
a = Unit type = SP	
b = RC order number	
c = Member number of growth SP	
d = UNEQ, GROW or GROW, SGRO or SGRO, OPER	

**CAUTION 1**  
*Calling up RC form will cause all CRT data to be cleared*

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**RECENT CHANGE AND VERIFY MEMBER EQUIPAGE**

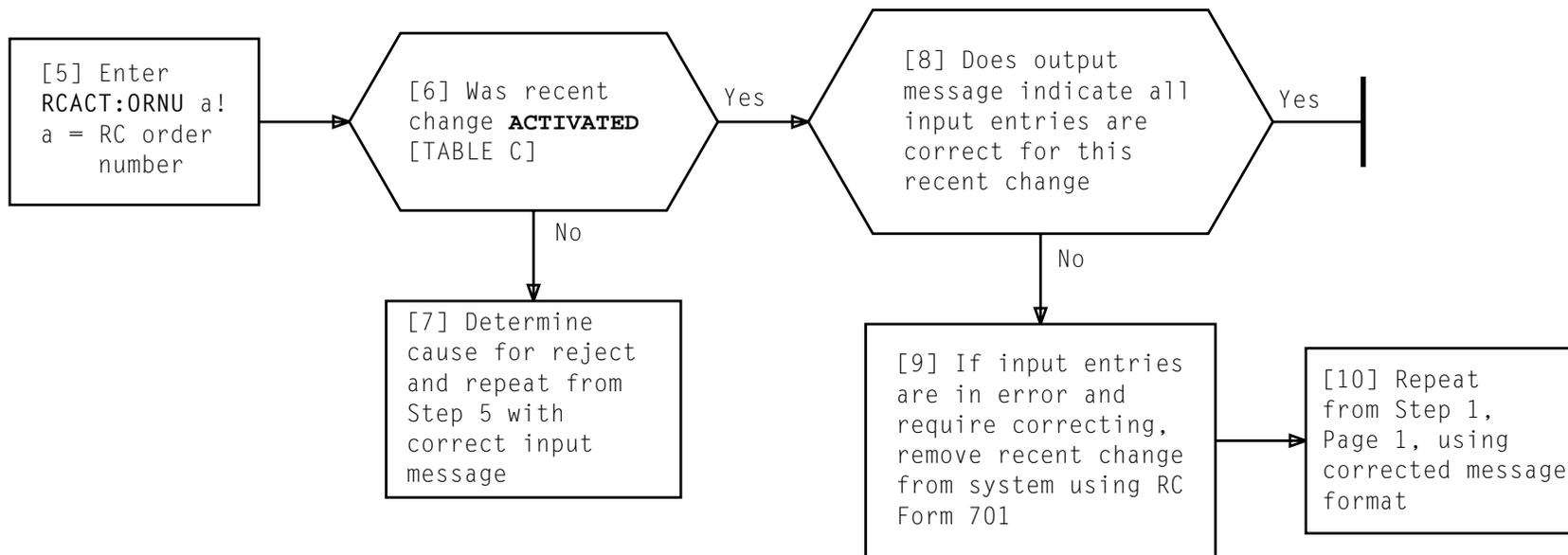


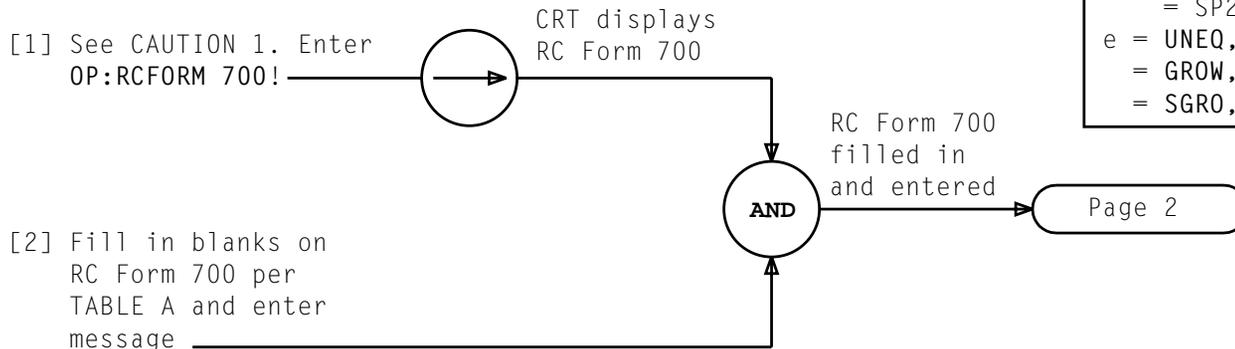
TABLE C	
RC ORNU a ACTIVATED	
RC:UTYPE;CHG;OPT(EQP,GROW),BUF:	UTYN SP,
ORNU a,	
MEMN b,	ME ( OLD NEW c , c ),
SUBMEM ----,	SME (----, ----),
REMARKS-----!	
a = RC order number	
b = Member number of growth frame	
c = Entered member equipage	

**RECENT CHANGE AND VERIFY MEMBER EQUIPAGE**

**SUMMARY**

Call up recent change (RC) Form 700 on CRT. Using TTY, fill in blanks on RC Form 700 to change submember equipage. Using the assigned order number, activate the recent change then verify current translations.

TABLE A	
RC:UTYPE;CHG;OPT(EQP,GROW),TST:	UTYN a,
ORNU b,	
MEMN c,	ME (----, ----), OLD NEW
SUBMEM d,	SME ( e , e ), OLD NEW
REMARKS-----!	
a = Unit type = SP b = RC order number c = Member number of growth associated SP d = Submember name = TSNBLK(0 to 3) (for Univ Scan Block 0-3) = TDNBLK(0 to 3) (for Univ SD Block 0-3) = MSNBLK(0 or 1) (for Misc Scan Block 0 or 1) = MDNBLK(0 or 1) (for Misc SD Block 0 or 1) = BFE (for Left Matrix Equipage) = CFE (for Right Matrix Equipage) = SP2EQ(0 to 3) (for SP2 DT Interface Unit 0-3) e = UNEQ, GROW or = GROW, SGRO or = SGRO, OPER	



*CAUTION 1  
Calling up RC form will cause all CRT data to be cleared*

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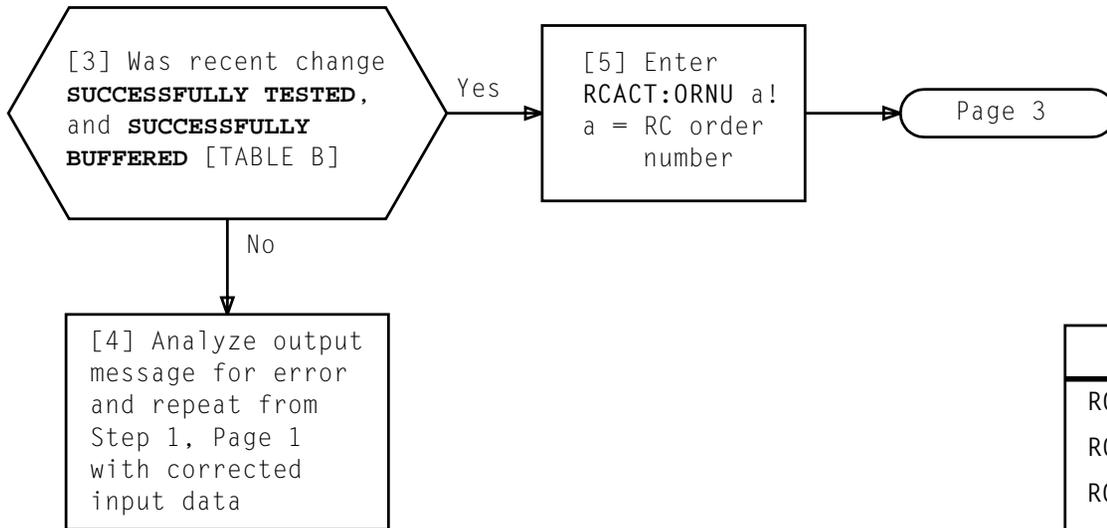


TABLE B	
RC ORNU a SUCCESSFULLY TESTED	
RC ORNU a SUCCESSFULLY BUFFERED	
RC:UTYPE;CHG;OPT(EQP,GROW),BUF:           UTYN SP,	
ORNU a,	
	OLD   NEW
MEMN b,	ME (----, ----),
	OLD   NEW
SUBMEM c,	SME ( d , d ),
REMARKS-----!	
a = RC order number b = Member number of growth associated SP c = Submember name: = TSNBLK(0 to 3) (for Univ Scan block 0-3) = TDNBLK(0 to 3) (for Univ SD Block 0-3) = MSNBLK(0 to 1) (for Misc Scan Block 0 or 1) = MDNBLK(0 to 1) (for Misc SD Block 0 or 1) = BFE (for Left Matrix Equipage) = CFE (for Right Matrix Equipage) = SP2EQ (0 to 3) (for SP2 DT Interface Unit 0-3) d = Entered submember equipage	

**RECENT CHANGE AND VERIFY SUBMEMBER EQUIPAGE**

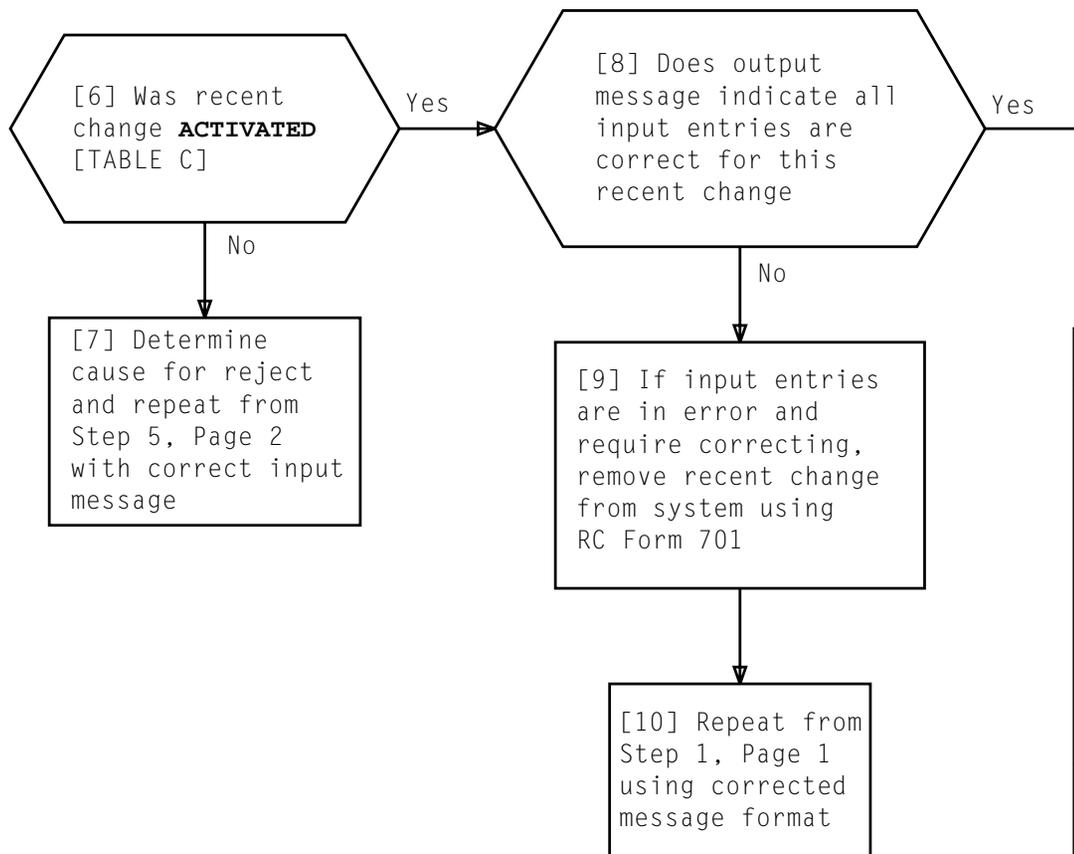


TABLE C	
RC ORNU a ACTIVATED	
RC:UTYPE;CHG;OPT(EQP,GROW),BUF:	UTYN SP,
ORNU a,	
	OLD NEW
MEMN b,	ME (----, ----),
	OLD NEW
SUBMEM c,	SME ( d , d ),
REMARKS-----!	
a = RC order number b = Member number of growth associated SP c = Submember name: = TSNBLK(0 to 3) (for Univ Scan block 0-3) = TDNBLK(0 to 3) (for Univ SD Block 0-3) = MSNBLK(0 to 1) (for Misc Scan Block 0 or 1) = MDNBLK(0 to 1) (for Misc SD Block 0 or 1) = BFE (for Left Matrix Equipage) = CFE (for Right Matrix Equipage) = SP2EQ (0 to 3) (for SP2 DT Interface Unit 0-3) d = Entered submember equipage	

SUMMARY

Using verify input message, call up PSEUDO SP2 UT translator and verify that the resulting TTY octal output data, when converted, agrees with office records. Refer to

entry word explanations in TABLE B, Page 4 as required, for assistance in interpreting specific data fields. If it is determined that UT entry data are in error, word changes(s) may be required.

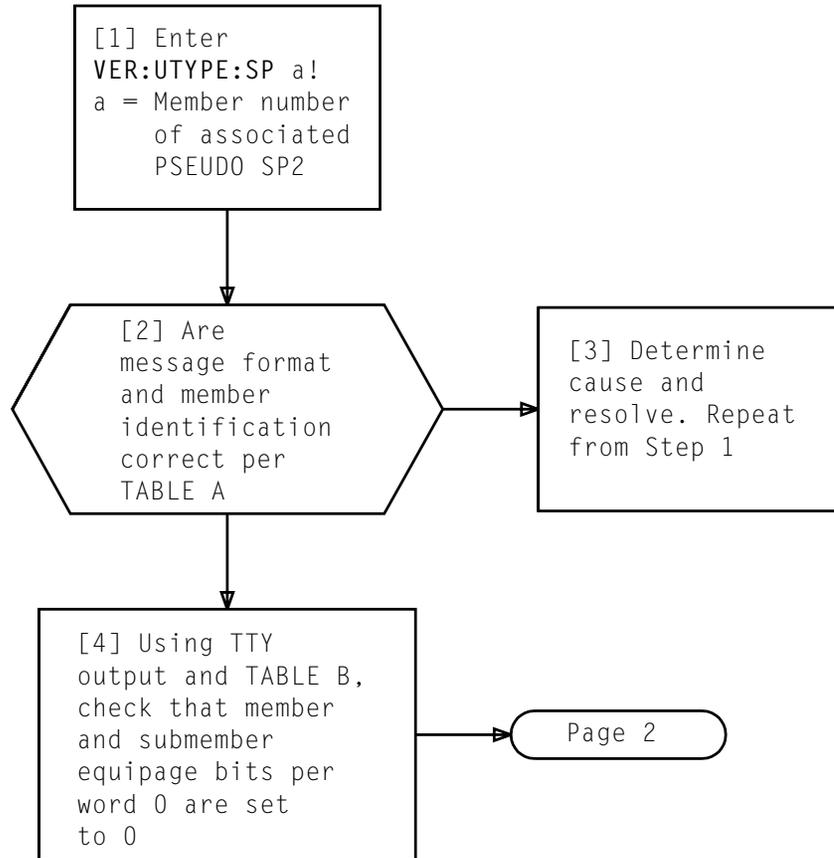
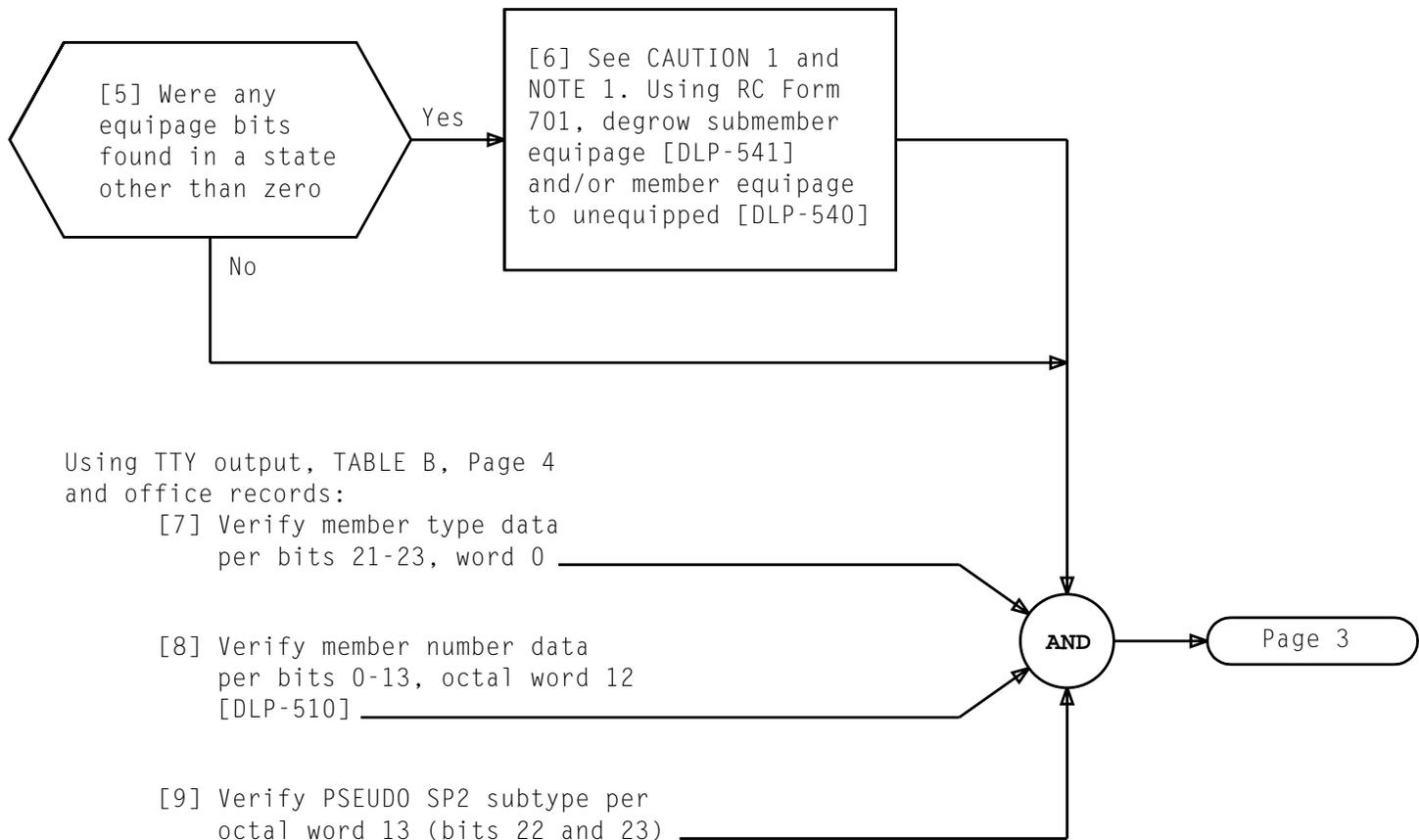


TABLE A	
VER:UTMN;OPT( ),CUR:	FLN a, UTYN SP,
MEMN b,	ME UNEQ,
ENTRY ADDRESS c,	ENTRY SIZE 16,
CUR	
WORD 0	_____
WORD 10	_____
	_____
a = Floor location number b = Member number of associated PSEUDO SP 2 c = Starting octal address for unit type entry	



NOTE 1  
 Submember equipage must be degrown first, if required, followed by degrowth of member equipage, if required

*CAUTION 1*  
 Depending on local procedures, supervisory or TELCO engineering approval must be obtained prior to performing any data change

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**VERIFY PSEUDO SP2 UT TRANSLATOR**

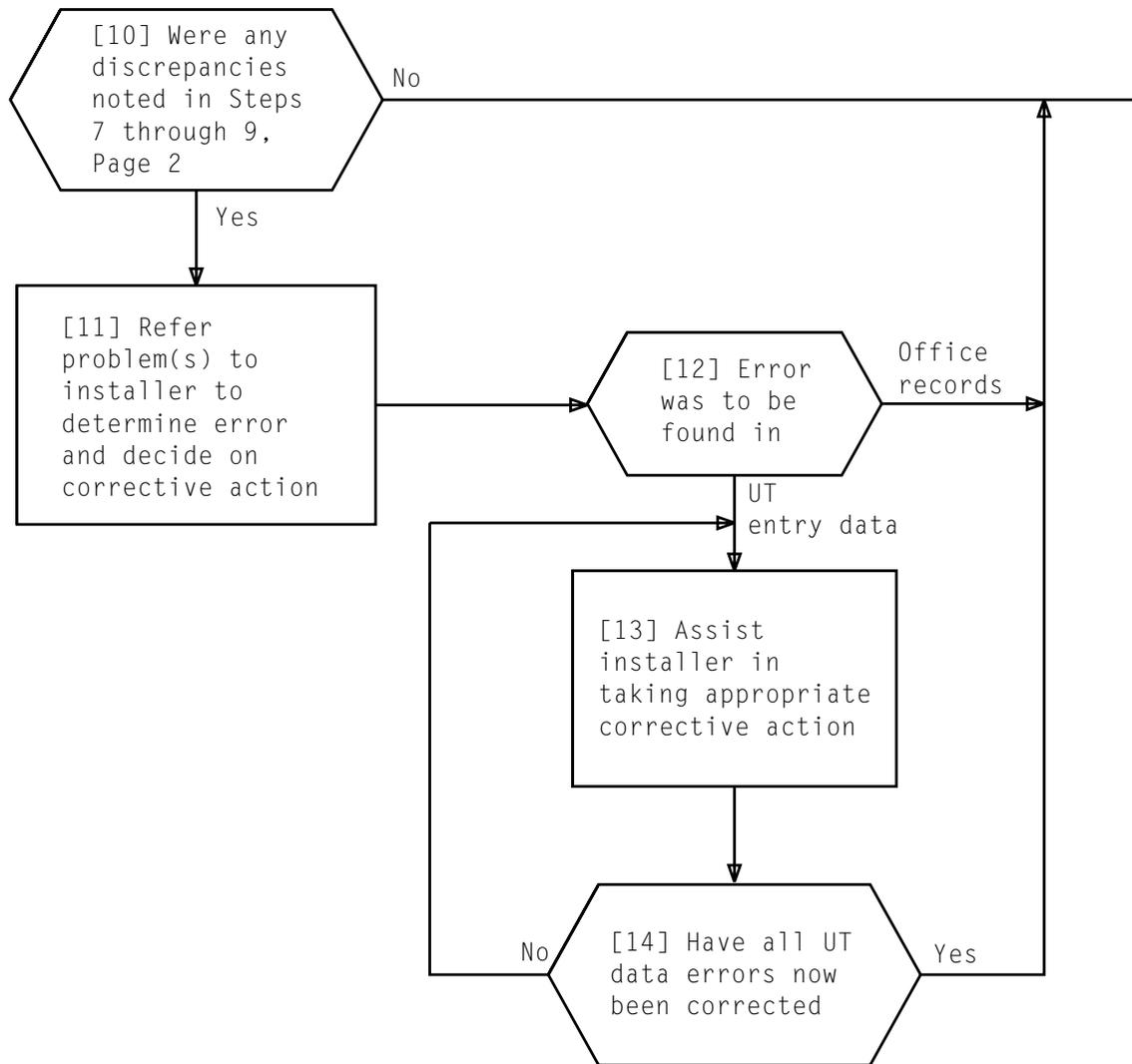
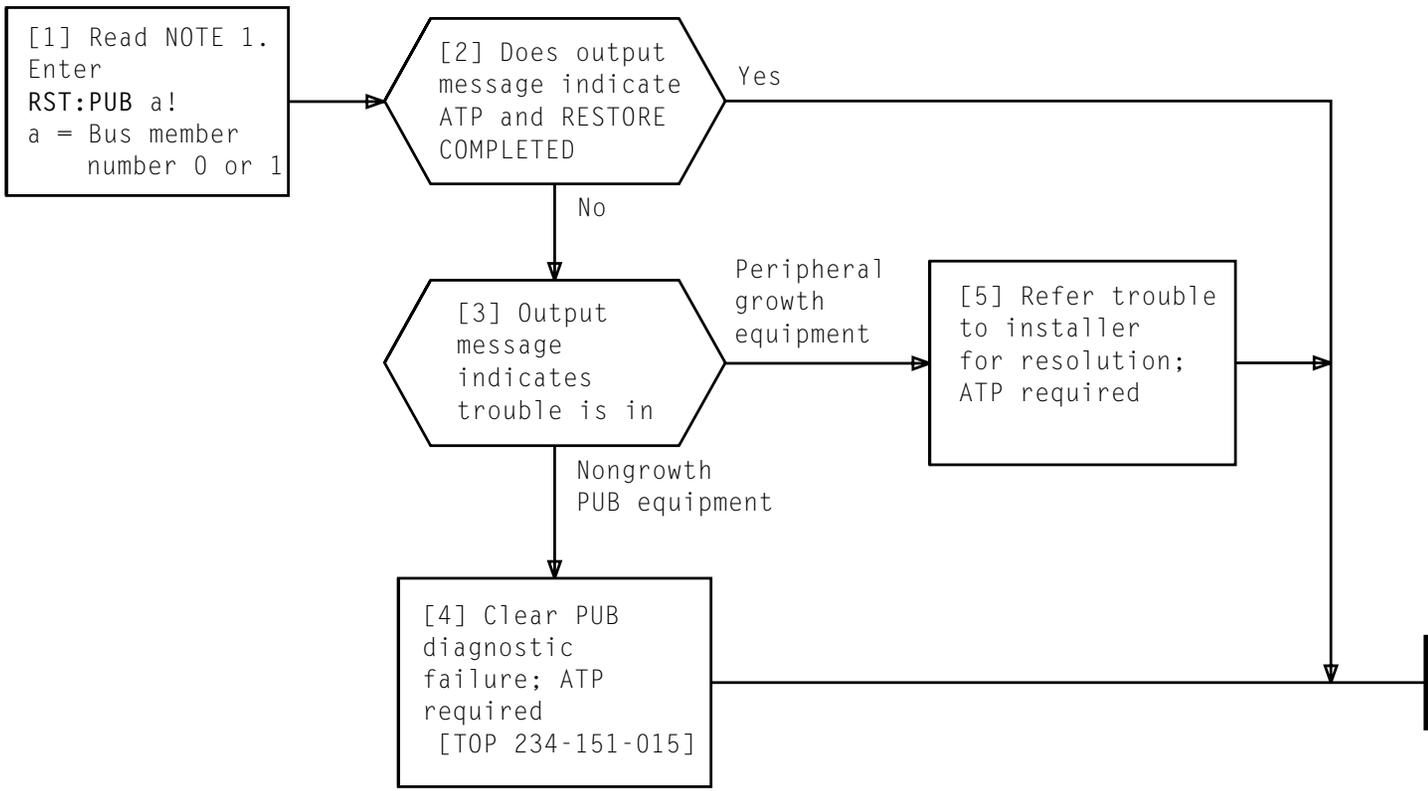




TABLE B (Contd)

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION																								
13	entry data																								
	octal output →	Y	0	0	0	0	0	0	0	0															
	bit position →	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	binary values →	X	X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBTYPE																									
<p>XX = 01 for associated CCIS type DT links 4 thru 7                      Y = Resulting octal digit determined            10 for associated CCIS type DT links 8 thru 11                      by subtype (XX) values and bit 21            11 for associated CCIS type DT links 12 thru 15</p>																									

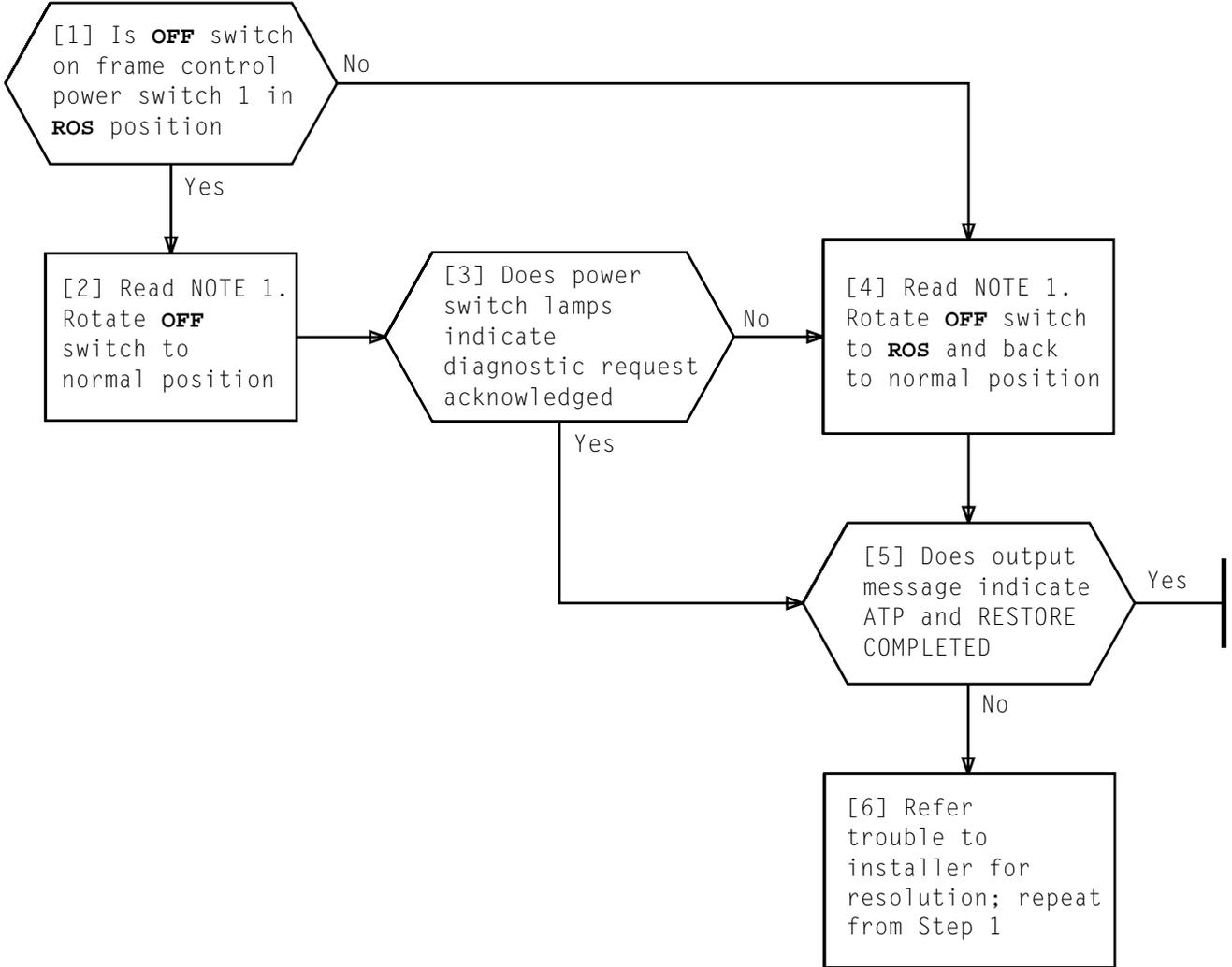


NOTE 1	
Restore message will cause PUB diagnostic to be run. PUB will be restored if ATP	
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**RESTORE PERIPHERAL UNIT BUS TO SERVICE**

SUMMARY

Frame controller 1 power switch is restored to normal. If controller 1 diagnostics are ATP, controller is restored and initialized.



NOTE 1

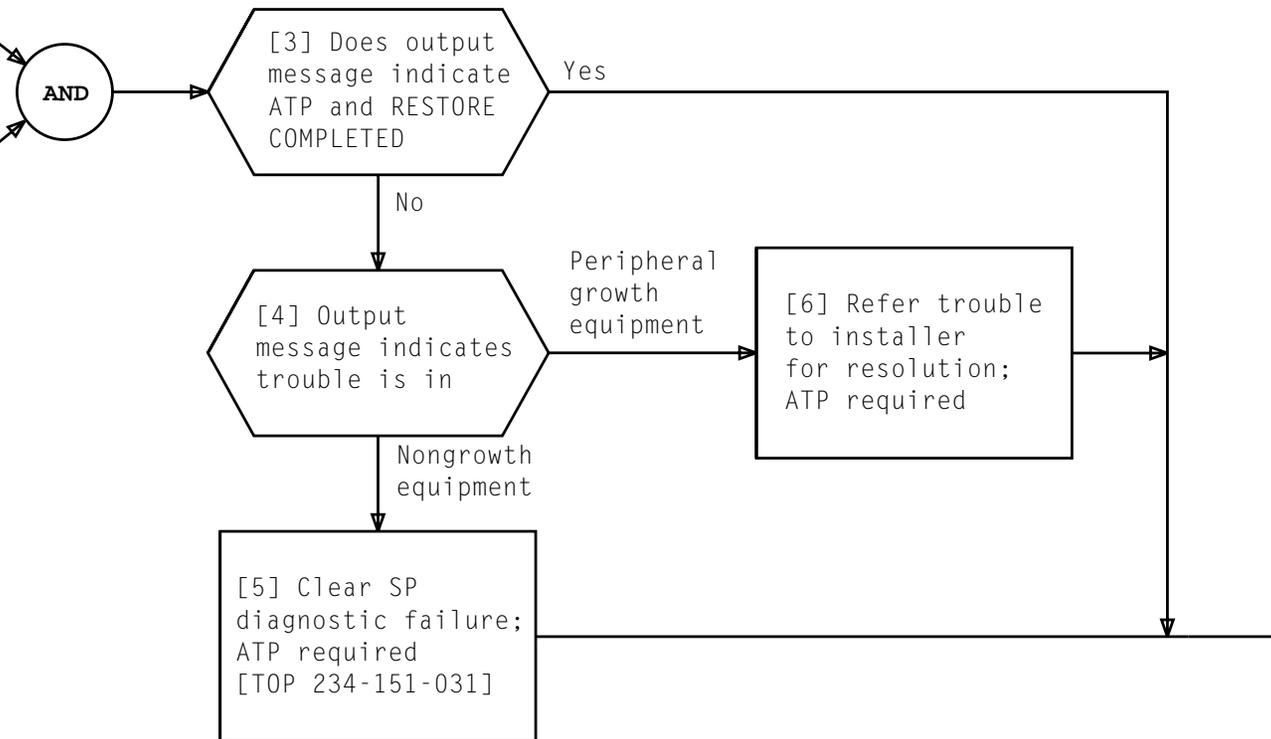
Operation of **OFF** switch should cause diagnostic to be run. Controller will be restored and initialized if ATP

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**RESTORE AND INITIALIZE CONTROLLER 1**

[1] At power switch,  
rotate **OFF** switch  
to normal position

[2] Read NOTE 1.  
Depress **ON** switch

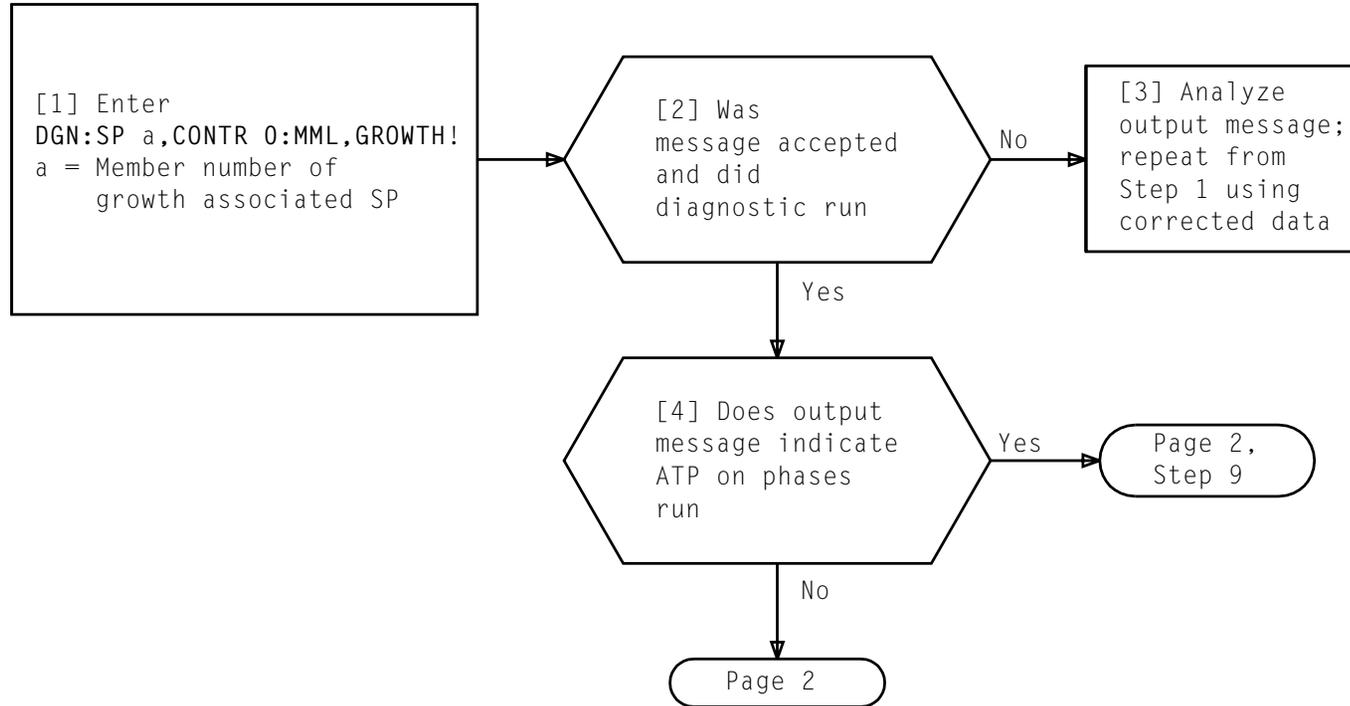


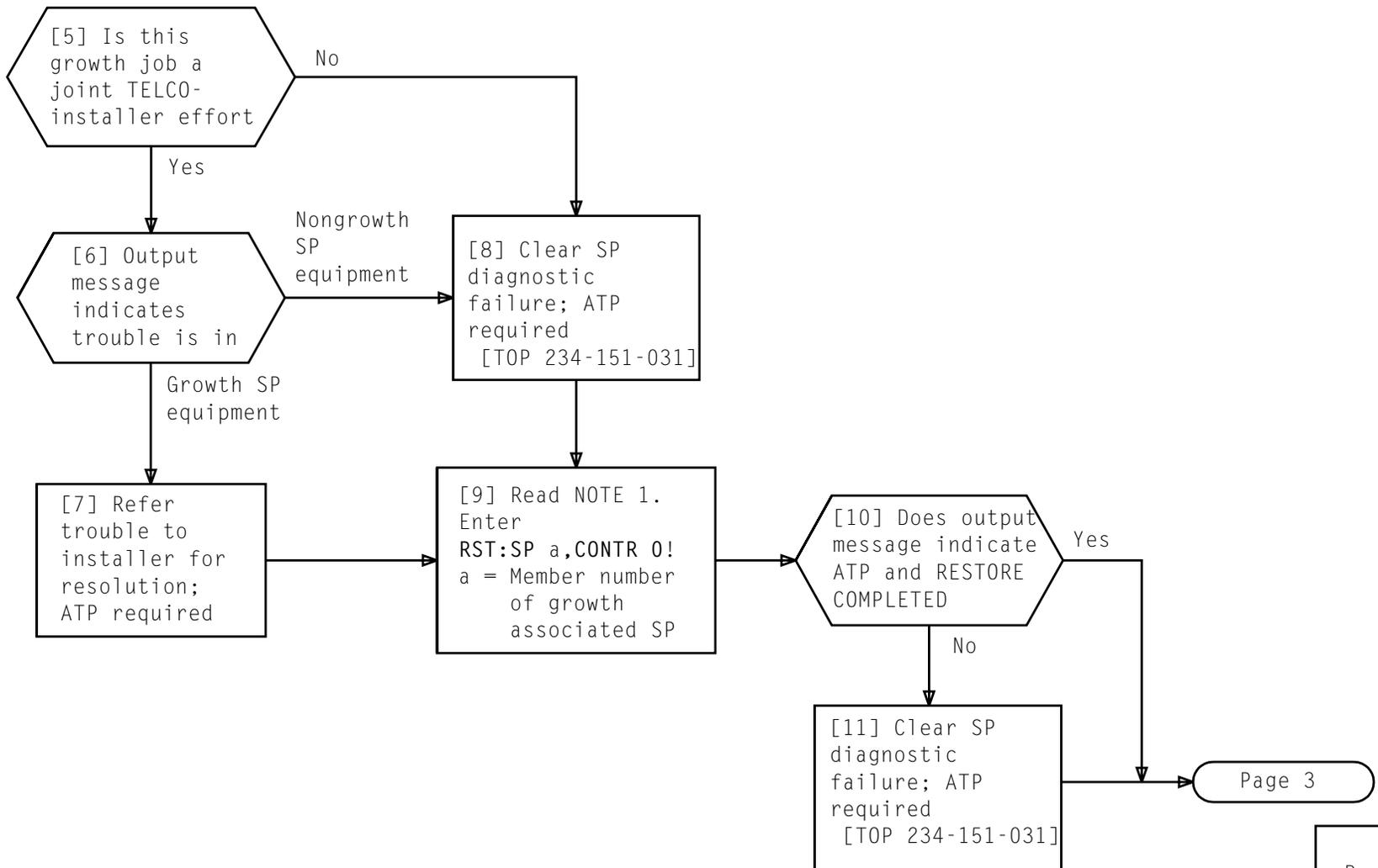
NOTE 1 Operation of <b>ON</b> switch will cause diagnostic to be run	
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**RESTORE FRAME POWER WITH POWER SWITCH**

SUMMARY

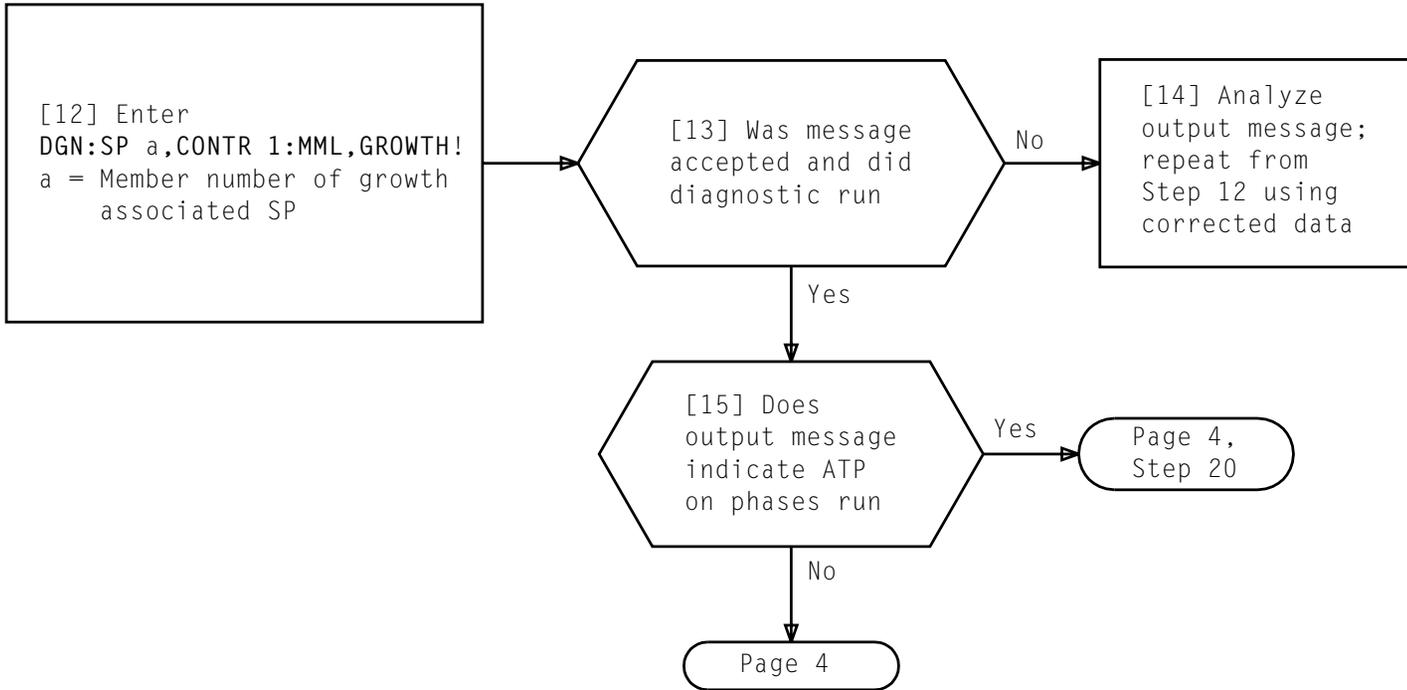
Diagnose SP frame controllers 0 and 1 and matrix, specifying GROWTH. After ATP, restore frame to service.

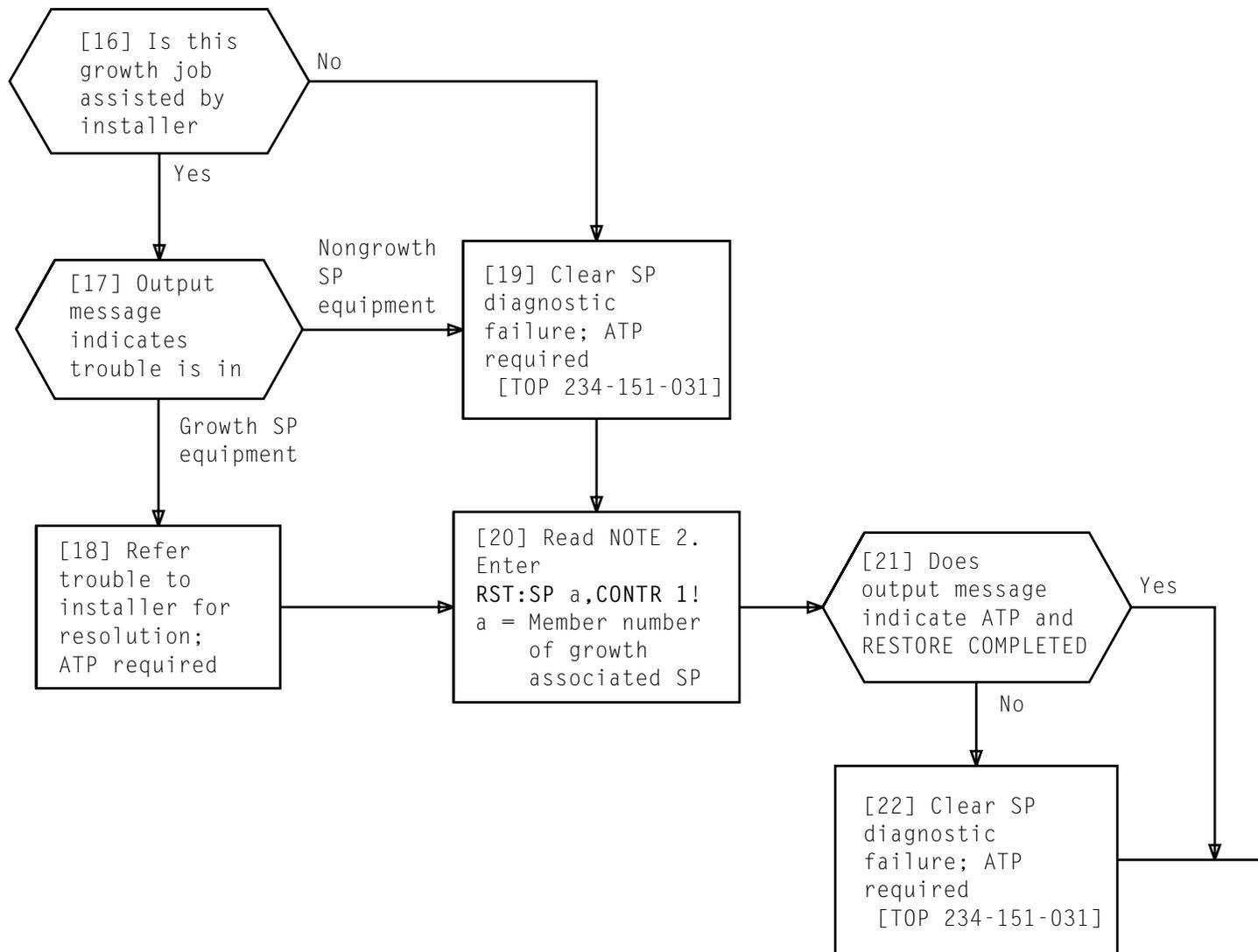




NOTE 1  
Restore input message will cause diagnostic to be run and controller to be restored if ATP

**DIAGNOSE AND RESTORE OPERATIONAL SP FRAME CONTROLLERS AND GROWTH MATRIX EQUIPMENT**





NOTE 2  
Restore input message will cause diagnostic to be run and controller to be restored if ATP

**DIAGNOSE AND RESTORE OPERATIONAL SP FRAME CONTROLLERS AND GROWTH MATRIX EQUIPMENT**

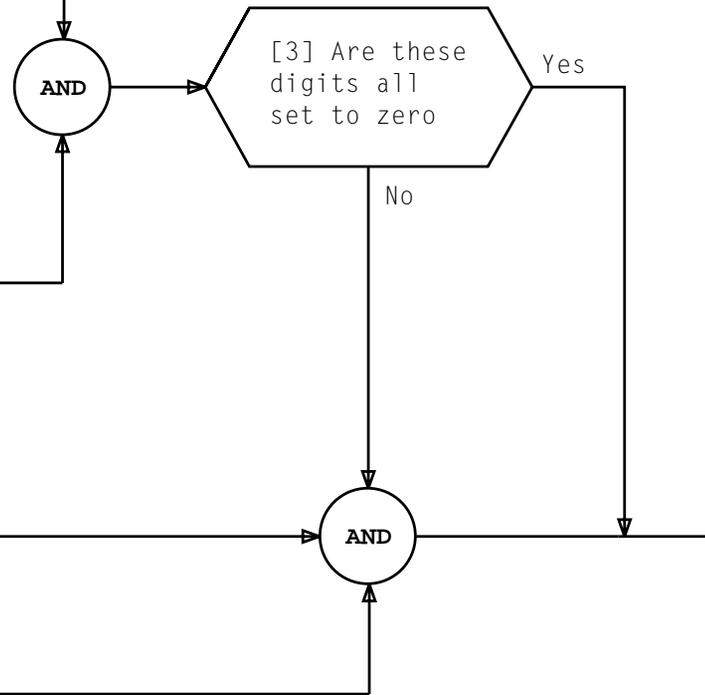
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[1] See octal word 13 in entry output message

[2] Examine 4 rightmost octal digits of octal word 13

[4] See FIG. 1, Page 2. Identify associated binary bit(s) not set to zero and note for later reference

[5] Identify equipage state(s) other than 00 to installer



**VERIFY UNEQUIPPED STATUS OF GROWTH SUPPLEMENTARY  
MATRIX EQUIPAGE**

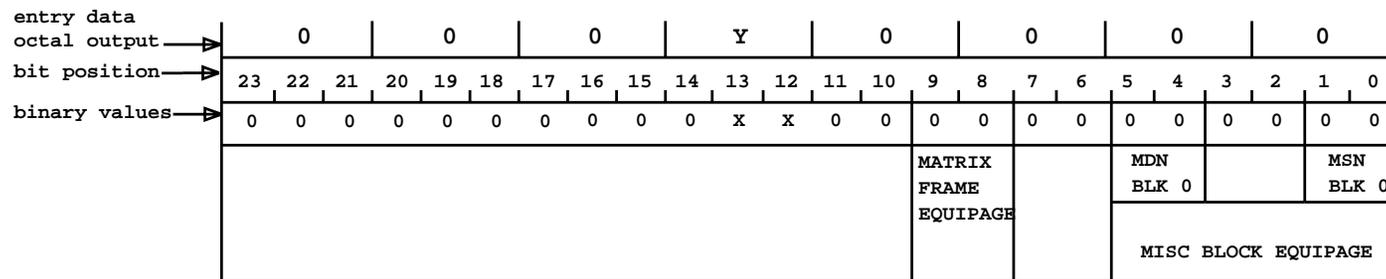


FIG. 1 - Entry Word 13 Layout

SUMMARY

Verify from entry output message, that SP 2 member and submember equipage bits are set to zero. Note any discrepancies for later reference.

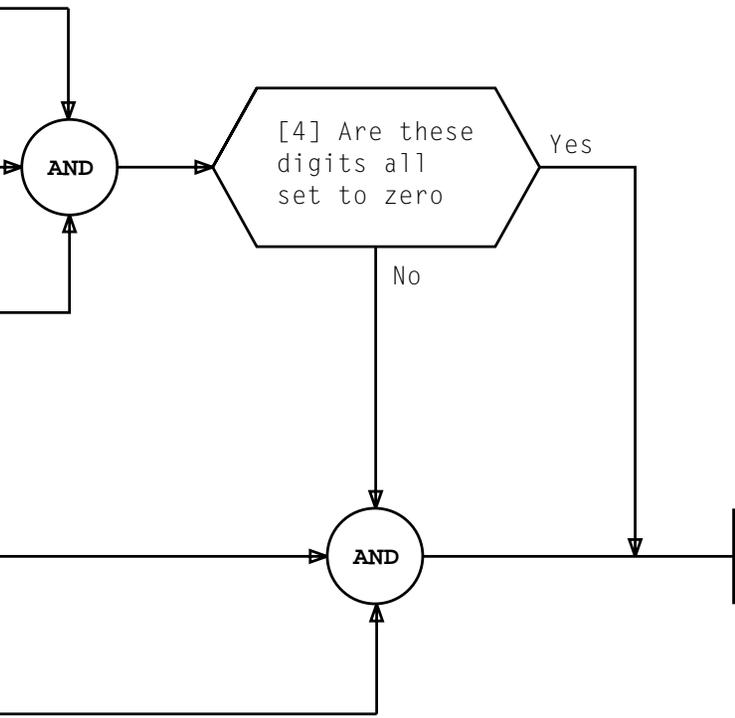
[1] See octal words to be verified in entry output message

[2] Examine 6 rightmost octal digits of word 0

[3] Examine 4 rightmost octal digits of octal word 13

[5] See FIG. 1 and 2, Page 2. Identify associated binary bit(s) not set to zero and note for later reference

[6] Identify equipage state(s) other than 00 to installer



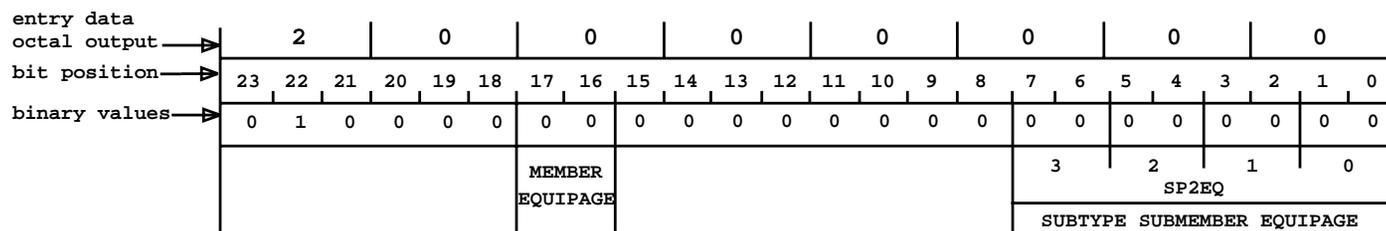


FIG. 1 - Entry Word 0 Layout

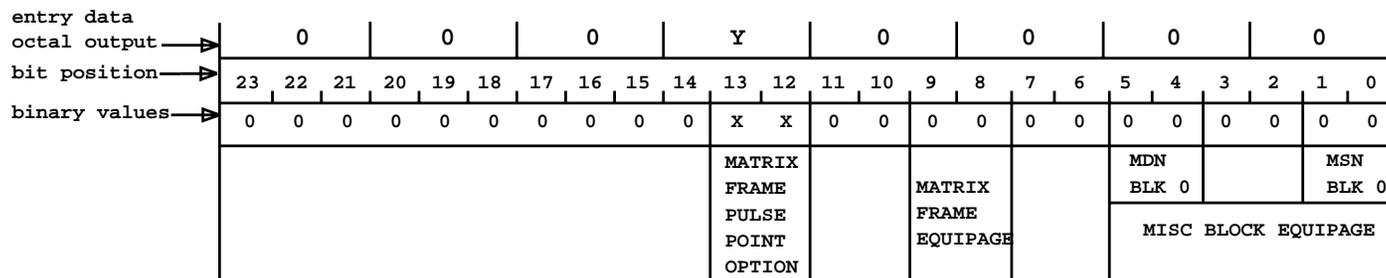


FIG. 2 - Entry Word 13 Layout

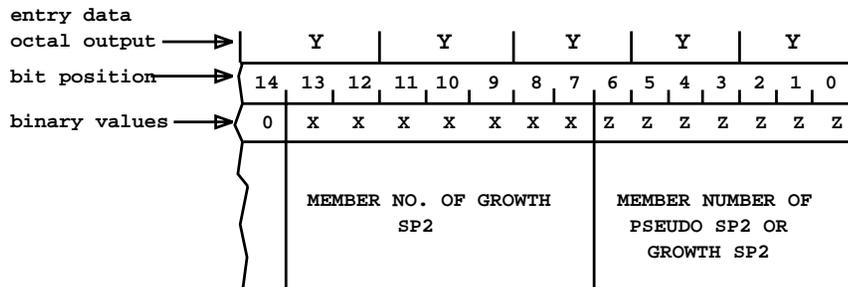
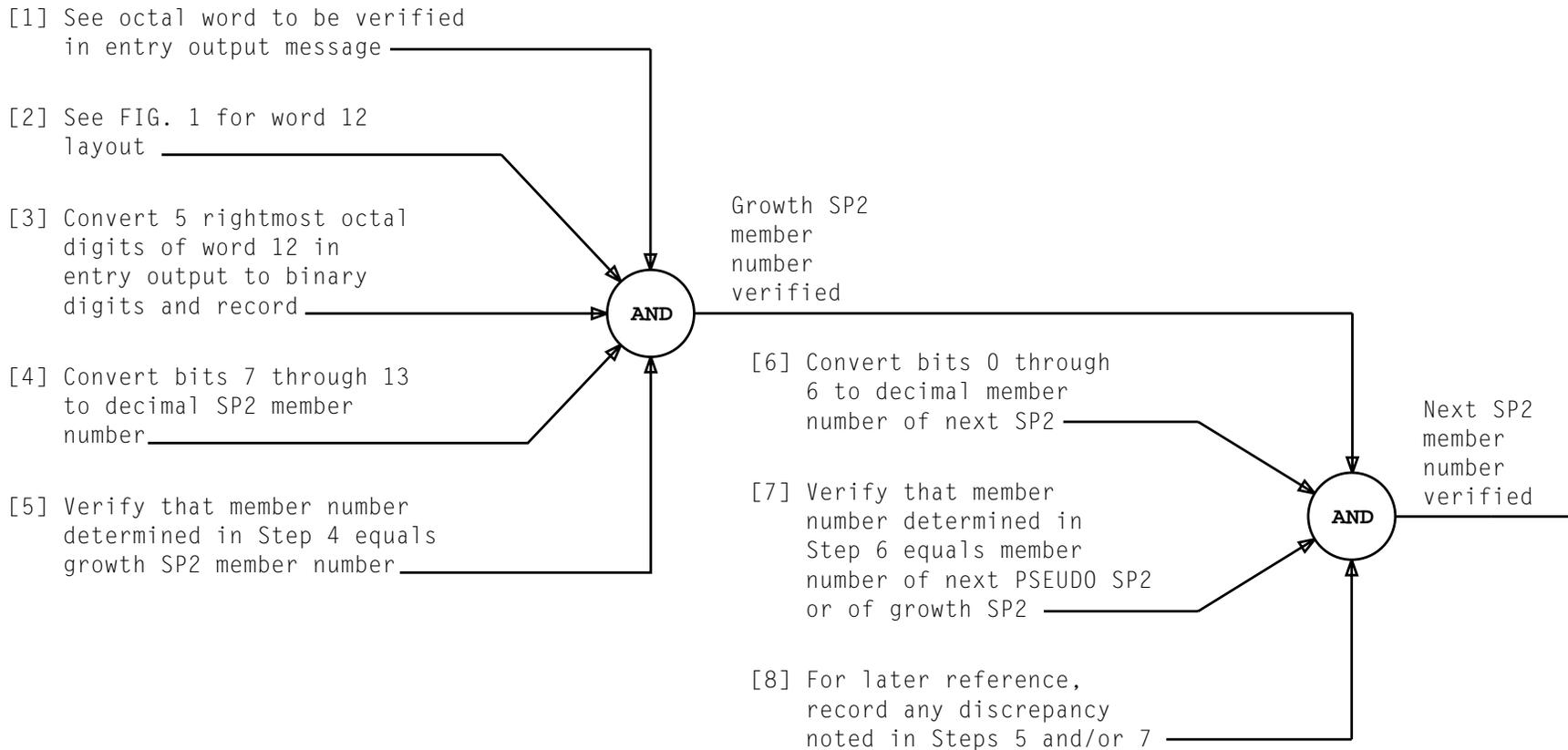


FIG. 1 - Entry Data Word 12 Layout (Partial)

VERIFY MEMBER NUMBER OF GROWTH SP2 AND NEXT SP2

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At Combined Distributor and Scanner Matrix (CD&SM) frame:  
 1. Using TABLE A, identify fuse assignments for CD&SM unit  
 (K block)

TABLE A																		
FRAME	K BLOCK	FUSE																
LEFT OR RIGHT CD&SM FRAME	K BLOCK 0 OR 1	DESIG	C0A	C0C	C0E	C0G	C0J	C0L	C0N	C0R	D0A	D0C	D0E	D0G	D0J	D0L	D0N	D0R
		LOC	007-14								007-34							
		DESIG	C1A	C1C	C1E	C1G	C1J	C1L	C1N	C1R	D1A	D1C	D1E	D1G	D1J	D1L	D1N	D1R
		LOC	107-14								107-34							
	K BLOCK 2 OR 3	DESIG	C2A	C2C	C2E	C2G	C2J	C2L	C2N	C2R	D2A	D2C	D2E	D2G	D2J	D2L	D2N	D2R
		LOC	007-20								007-40							
		DESIG	C3A	C3C	C3E	C3G	C3J	C3L	C3N	C3R	D3A	D3C	D3E	D3G	D3J	D3L	D3N	D3R
		LOC	107-20								107-40							
	K BLOCK 4 OR 5	DESIG	C4A	C4C	C4E	C4G	C4J	C4L	C4N	C4R	D4A	D4C	D4E	D4G	D4J	D4L	D4N	D4R
		LOC	007-26								007-47							
		DESIG	C5A	C5C	C5E	C5G	C5J	C5L	C5N	C5R	D5A	D5C	D5E	D5G	D5J	D5L	D5N	D5R
		LOC	107-26								107-47							

**IDENTIFY FUSE ASSIGNMENTS FOR CD&SM UNIT (K BLOCK)  
 AT CD&SM FRAME**

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SUMMARY

Using verify entry input message, call up growth associated SP 1 UT translator and verify that matrix data of the resulting TTY octal output data, when converted,

agrees with office records. Refer to entry word explanations in TABLE B, Page 3 as required, for assistance in interpreting specific data fields. If it is determined that UT entry data are in error, word change(s) may be required.

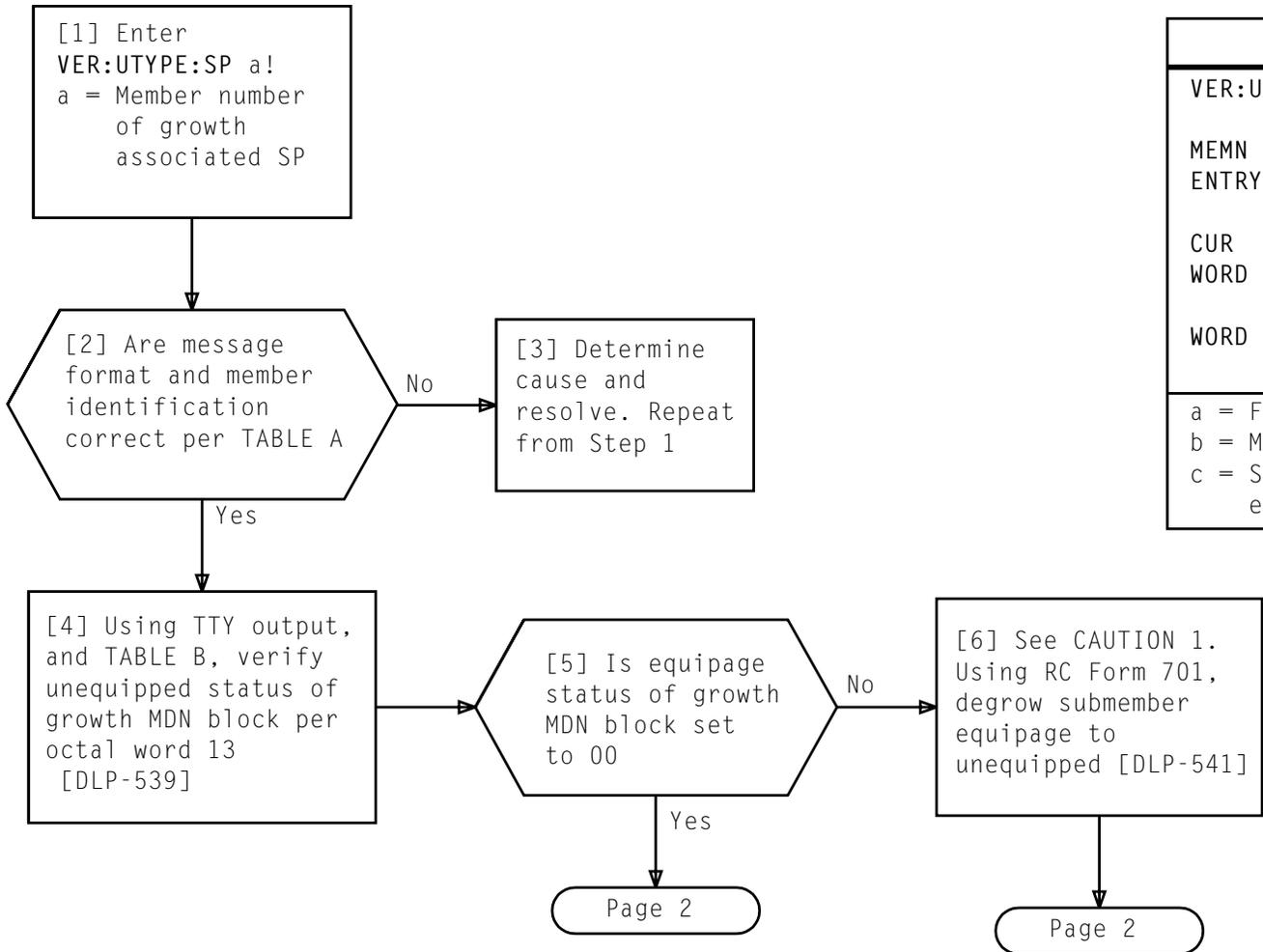
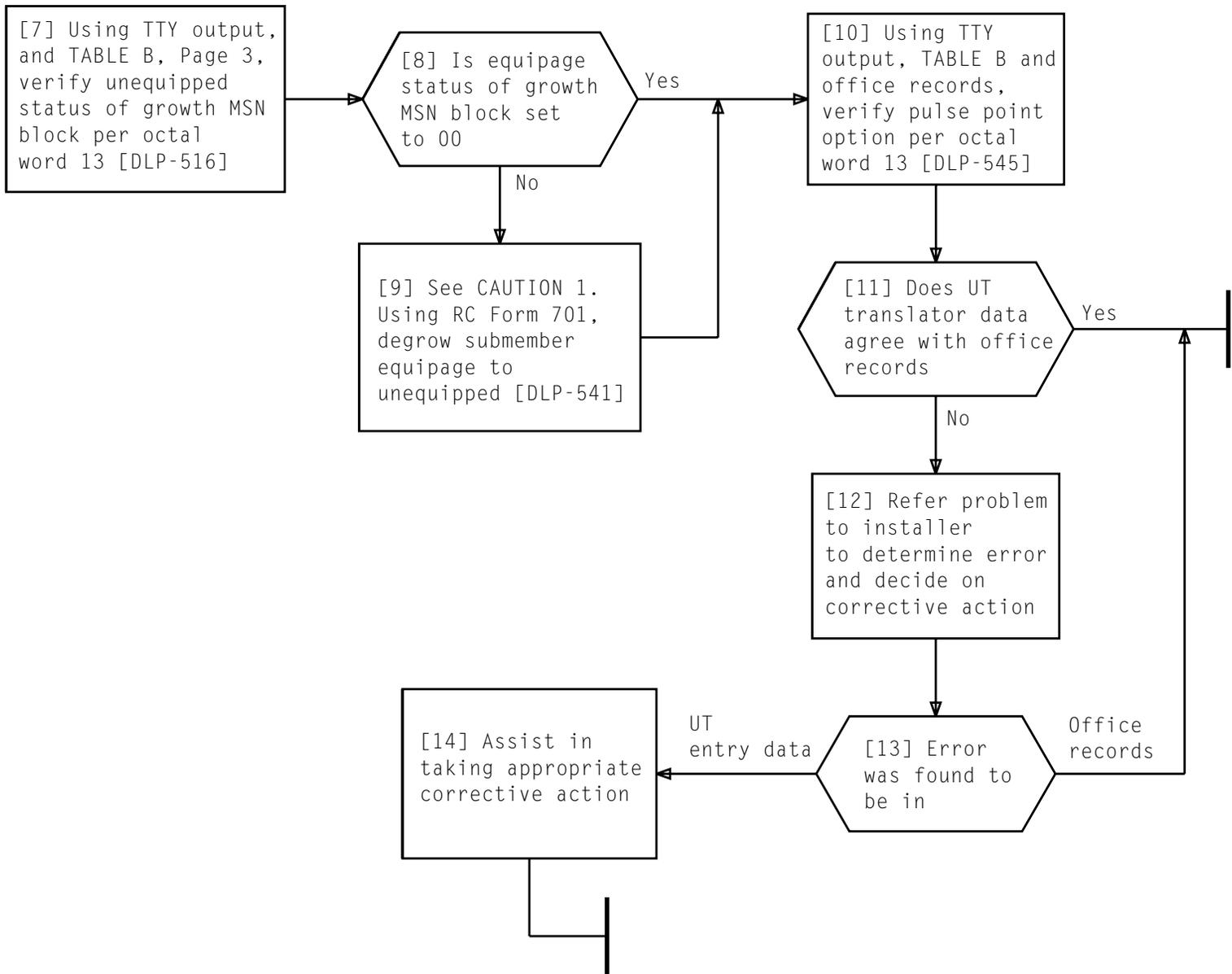


TABLE A	
VER:UTMN;OPT( ),CUR: FLN a,	UTYN SP,
MEMN b, ME OPER,	
ENTRY ADDRESS c,	ENTRY SIZE 16,
CUR	
WORD 0	_____
	_____
WORD 10	_____
	_____
a = Floor location number b = Member number of growth associated SP c = Starting octal address for unit type entry	

**CAUTION 1**  
Depending on local procedures, supervisory or TELCO engineering approval must be obtained prior to performing any data changes.

**VERIFY COMBINED SCAN AND SD AND PULSE POINT DATA OF SP 1 UT TRANSLATOR**



**CAUTION 1**  
 Depending on local procedures, supervisory or TELCO engineering approval must be obtained prior to performing any data changes.

**VERIFY COMBINED SCAN AND SD AND PULSE POINT DATA OF SP 1 UT TRANSLATOR**

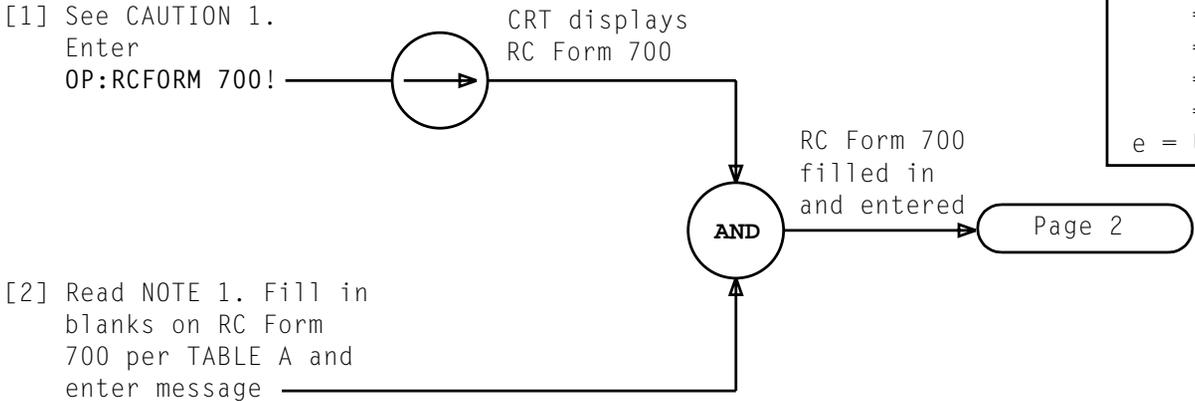
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**SUMMARY**

Request RC Form 700. Fill in blanks on RC Form 700 to change submember equipage and enter message.

<b>TABLE A</b>	
RC:UTYPE;CHG;OPT(EQP,GROW),TST:	UTYN a,
ORNU b,	
MEMN c,	ME (----, ----),
	OLD NEW
SUBMEM d,	SME ( e , e ),
	OLD NEW
REMARKS-----!	
a = Unit type = SP b = RC order number c = Member number of growth associated SP d = Submember name: = TSNBLK(0 to 3) (for Univ Scan Block 0-3) = TDNBLK(0 to 3) (for Univ SD Block 0-3) = MSNBLK(0 or 1) (for Misc Scan Block 0 or 1) = MDNBLK(0 or 1) (for Misc SD Block 0 or 1) e = UNEQ, GROW or GROW, SGRO or SGRO, OPER	



**NOTE 1**

RC order number should be recorded for later use

***CAUTION 1***

*Calling up RC form will cause all CRT data to be cleared*

**RECENT CHANGE BUT DO NOT ACTIVATE SUBMEMBER EQUIPAGE**

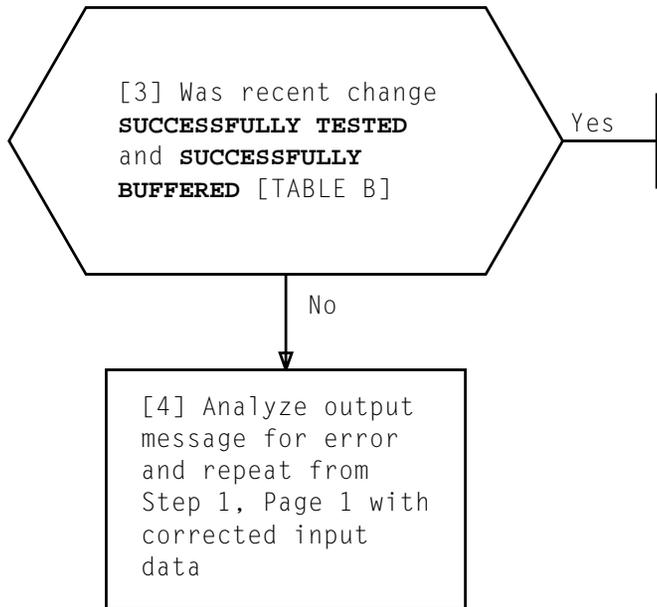


TABLE B	
RC ORNU a,	SUCCESSFULLY TESTED
RC ORNU a,	SUCCESSFULLY BUFFERED
RC:UTYPE;CHG;OPT(EQP,GROW),BUF:	UTYN SP,
ORNU a,	
	OLD NEW
MEMN b,	ME (----, ----),
	OLD NEW
SUBMEM c,	SME ( d , d ),
REMARKS-----!	
a = RC order number	
b = Member number of growth associated SP	
c = Submember name:	
= TSNBLK(0 to 3) (for Univ Scan Block 0-3)	
= TDNBLK(0 to 3) (for Univ SD Block 0-3)	
= MSNBLK(0 or 1) (for Misc Scan Block 0 or 1)	
= MDNBLK(0 or 1) (for Misc SD Block 0 or 1)	
d = Entered submember equipage	

SUMMARY

Request RC Form 600. Fill in blanks on RC Form 600 using RC Form 700 order numbers previously recorded and advance recent change to test state.

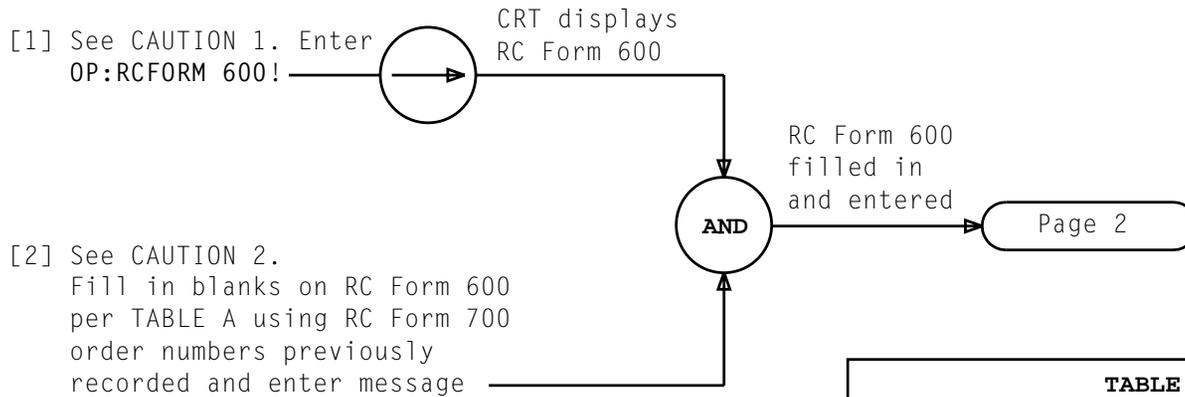


TABLE A			
RC:MISC;NEW;OPT(MULTACT),a: ORNU b,			
ORNU	ORNU	ORNU	ORNU
c	c	c	c
-----,	-----,	-----,	-----,
-----,	-----,	-----,	-----,
-----,	-----,	-----,	-----,
-----,	-----,	-----,	-----,
REMARKS-----!			
a = BUF			
b = Order number assigned for processing this RC Form 600			
c = RC numbers to be activated			

**CAUTIONS**

1. Calling up RC form will cause all CRT data to be cleared
2. RC Form 600 is initially entered into system in buffered state and then advanced to test state to activate all RC order numbers listed on form.

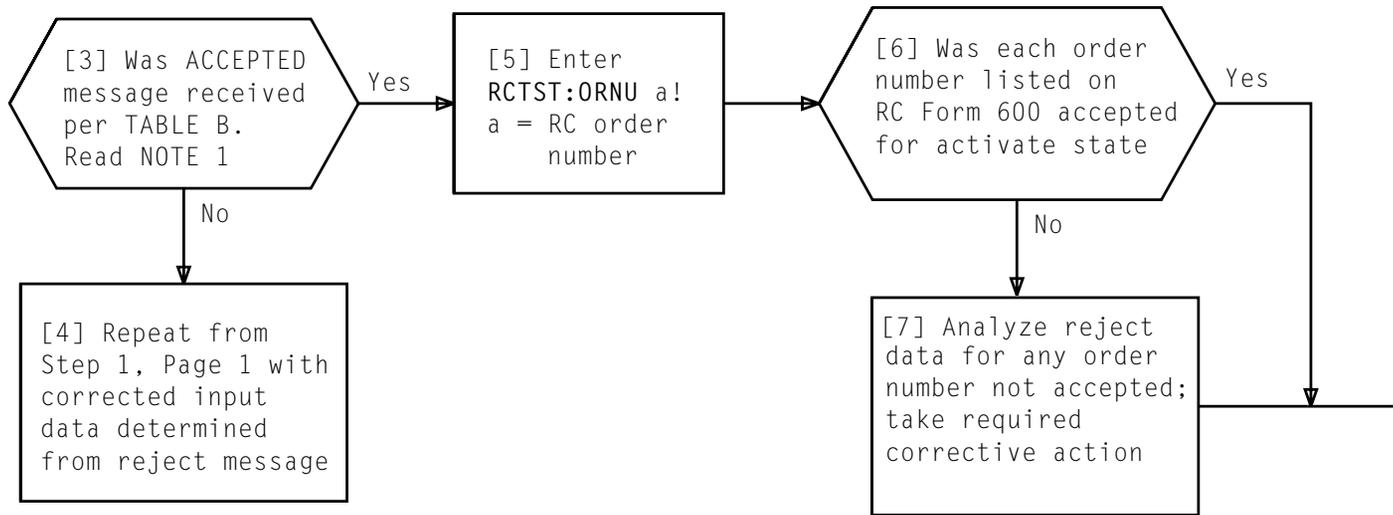


TABLE B
RC ORNU a ACCEPTED FOR BUF STATE
a = RC order number

NOTE 1 Acceptance of RC order number does not necessarily mean all input data was correct	
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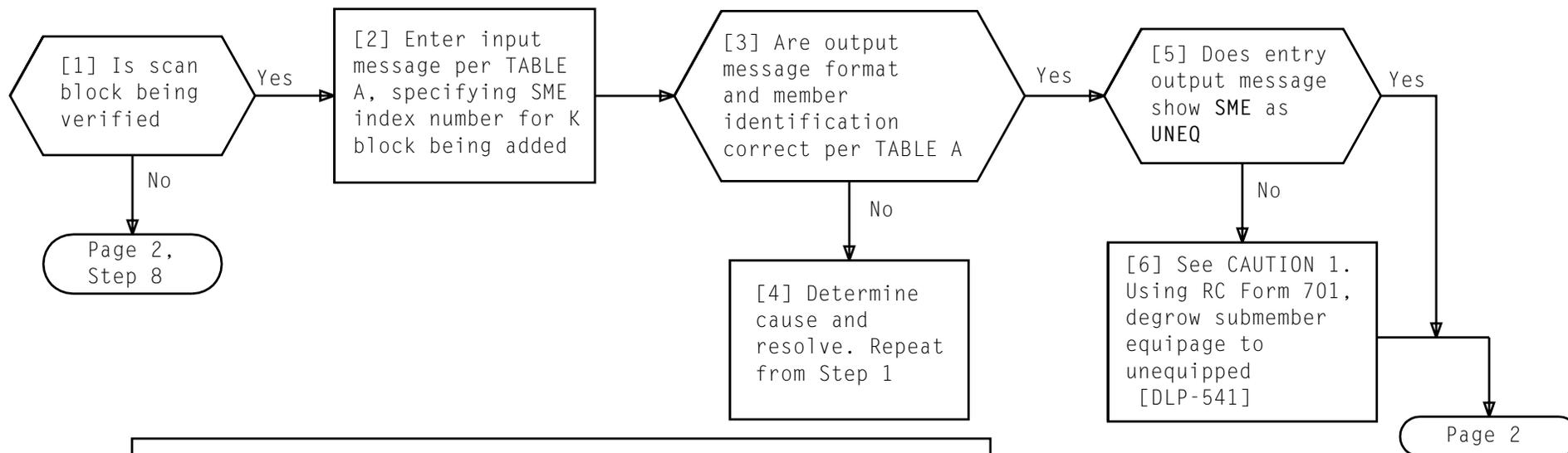


TABLE A		
INPUT MESSAGE	OUTPUT MESSAGE	
VER:UTYPE:SP b,SME c!	VER:UTMN;OPT(SME),CUR: FLN a, UTYN SP, MEMN b, ME OPER, SUBMEM c, SME UNEQ,	
a = Floor location number b = Member number of growth associated SP c = SME index number =		
K BLOCK NUMBER	SP TRANSLATION EQUIVALENT	INDEX NO.
K0	Universal Scan Block 0 (TSN 0)	16
K1	Universal Scan Block 1 (TSN 1)	17
K2	Universal Scan Block 2 (TSN 2)	18
K3	Universal Scan Block 3 (TSN 3)	19
K4	Misc Scan Block 0 (MSN 0)	24
K5	Misc Scan Block 1 (MSN 1)	25

**CAUTION 1**  
Depending on local procedures, supervisory or TELCO engineering approval must be obtained prior to performing any data changes

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## VERIFY UNEQ STATUS OF SCAN AND SD EQUIPAGE

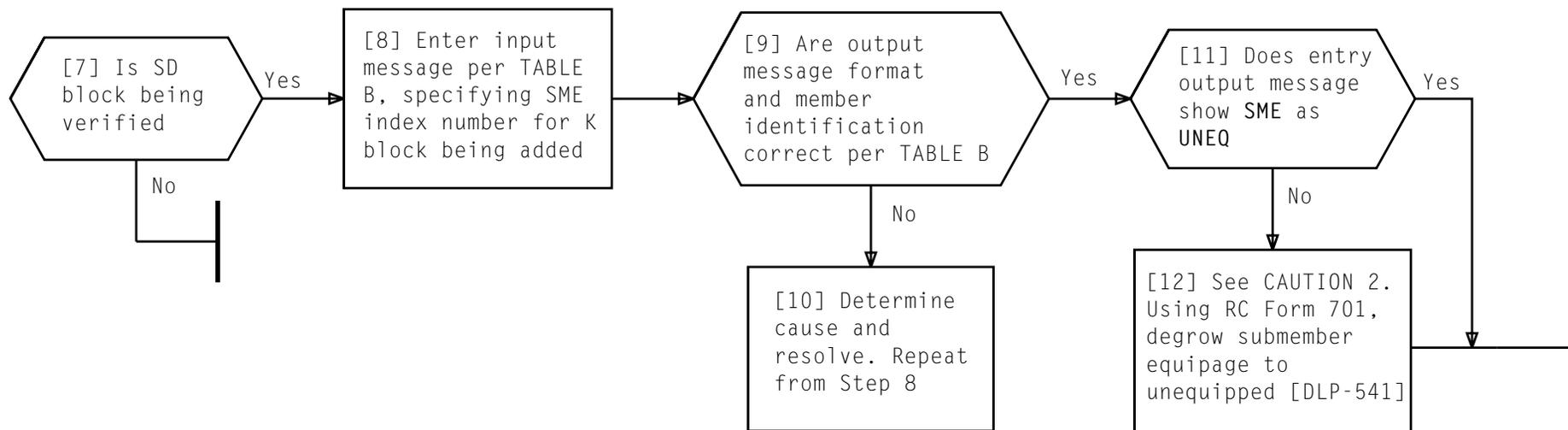


TABLE B		
INPUT MESSAGE	OUTPUT MESSAGE	
VER:UTYPE:SP b,SME c!	VER:UTMN;OPT(SME),CUR: FLN a, UTYN SP, MEMN b, ME OPER, SUBMEM c, SME UNEQ,	
a = Floor location number b = Member number of growth associated SP c = SME index number =		
K BLOCK NUMBER	SP TRANSLATION EQUIVALENT	INDEX NO.
K0	Universal SD Block 0 (TDN 0)	20
K1	Universal SD Block 1 (TDN 1)	21
K2	Universal SD Block 2 (TDN 2)	22
K3	Universal SD Block 3 (TDN 3)	23
K4	Misc SD Block 0 (MDN 0)	26
K5	Misc SD Block 1 (MDN 1)	27

**CAUTION 2**  
 Depending on local procedures, supervisory or TELCO engineering approval must be obtained prior to performing any data changes

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## VERIFY UNEQ STATUS OF SCAN AND SD EQUIPAGE

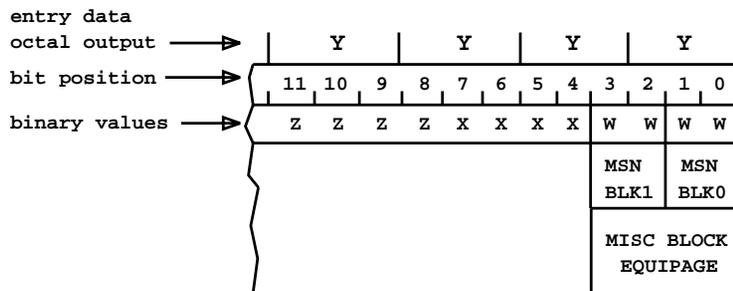
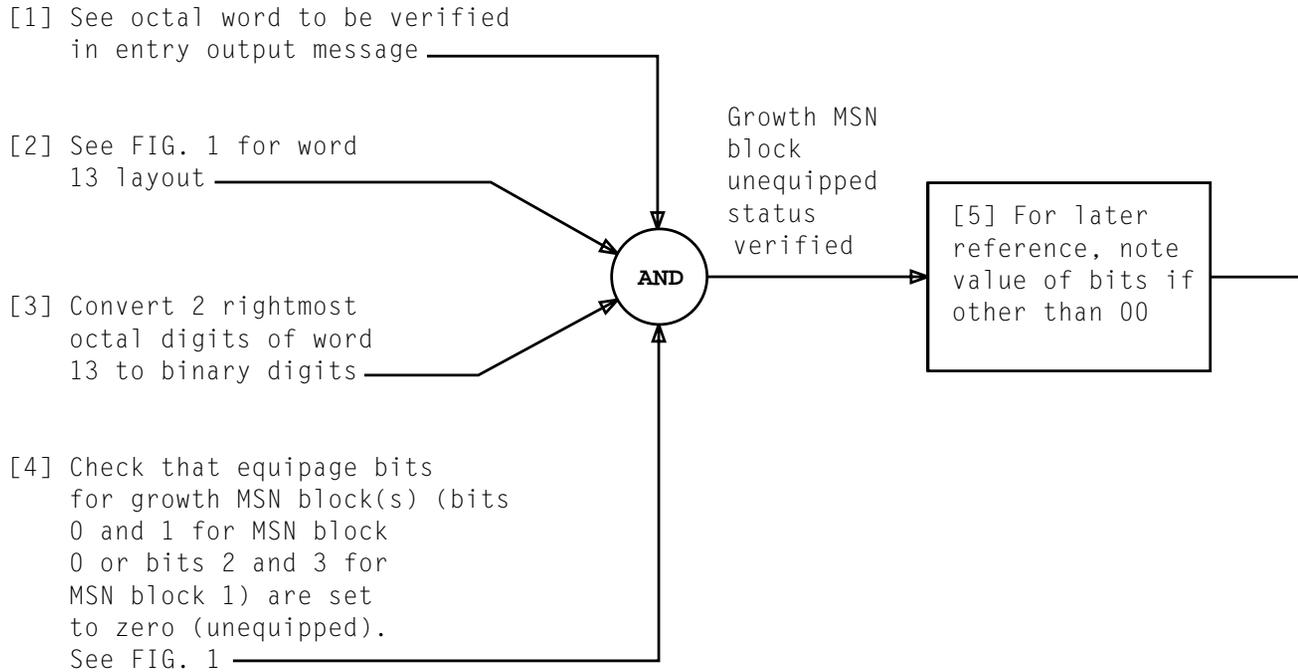


FIG. 1 - Entry Data Word 13 Layout (Partial)

VERIFY UNEQUIPPED STATUS OF GROWTH MSN BLOCK



[4] Using TABLE A, select version numbers associated with LDI issues in Step 3. See NOTE 1

[5] Compare version numbers in Step 4 with version numbers calculated in Step 2, Page 1

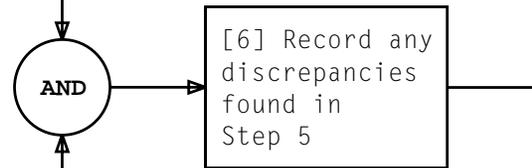


TABLE A						
UNIT	SD NUMBER	MEMBER VERSION NUMBER				
		0	1	2	3	4
SP1 Controller	4A028-01	*1A	2D	2D	-	-
	4A013-01	1A	2D	4A	-	-
SP1 Controller (Combined Matrix)	4A028-02	1A	-	1A	-	-
	4A013-02	1A	-	7A	-	-
	4A091-01	1A	-	1A	-	-
SP1 Combined Matrix	4A093-01	1A	-	-	-	-
	4A094-01	1A	-	-	-	-
	4A095-01	1A	-	-	-	-

\*LDI Issue Numbers

NOTE 1 Appropriate support organization may be consulted for current version information if not listed in TABLE A	
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**VERIFY SP1 CONTROLLER AND/OR SUBMEMBER VERSION NUMBERS**

SUMMARY

Using verify entry input message, call up growth SP1 UT translator and verify that resulting TTY octal output data, when converted, agrees with office records. Refer to entry

word explanations in TABLE B, Page 5 as required, for assistance in interpreting specific data fields. If it is determined that UT entry data are in error, word change(s) may be required.

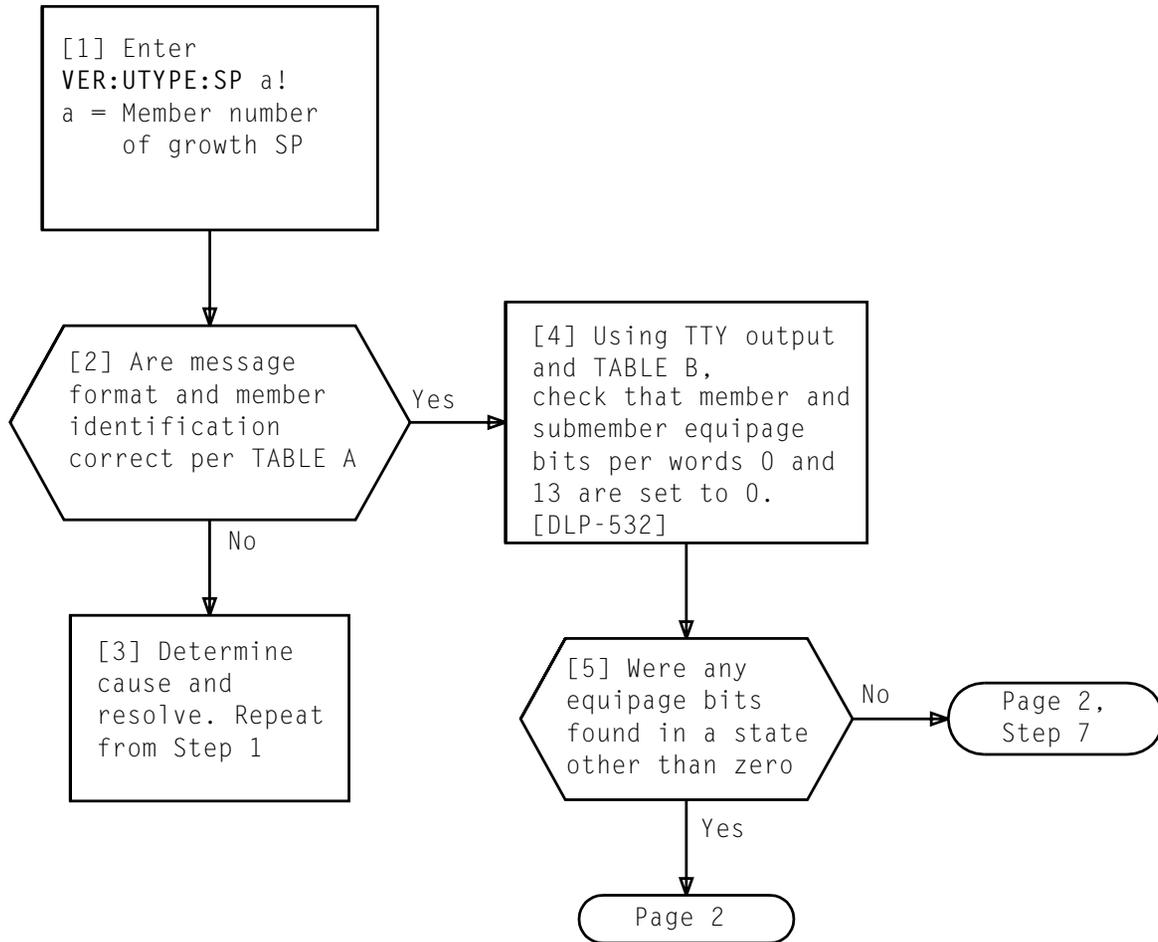
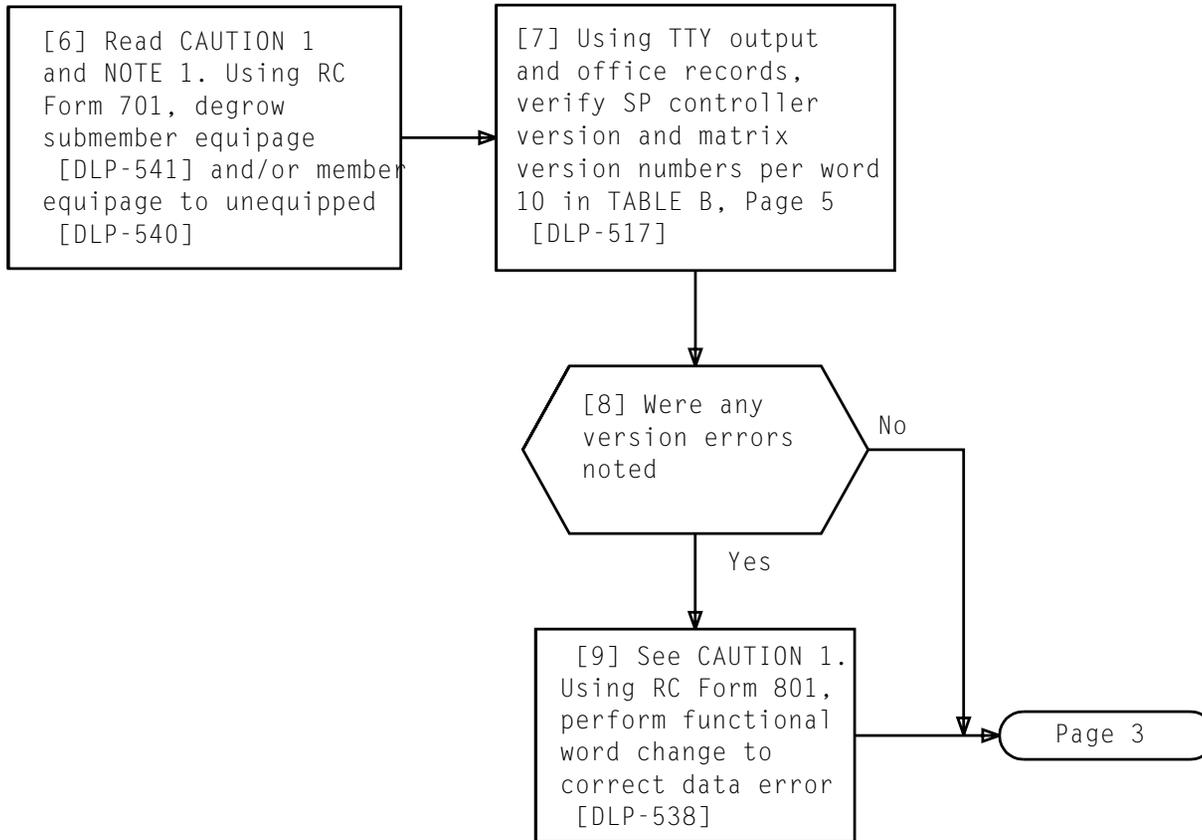


TABLE A			
VER:UTMN;OPT( ),	CUR: FLN a,	UTYN SP,	
MEMN b,	ME UNEQ,		
ENTRY ADDRESS c,	ENTRY SIZE 16,		
CUR			
WORD 0	_____	_____	_____
WORD 10	_____	_____	_____
	_____	_____	_____
a = Floor location number b = Member number of growth SP c = Starting octal address for unit type entry			



NOTE 1  
 Submember equipage must be degrown first, if required, followed by degrowth of member equipage, if required.

*CAUTION 1*  
 Depending on local procedures, supervisory or TELCO engineering approval must be obtained prior to performing any data change.

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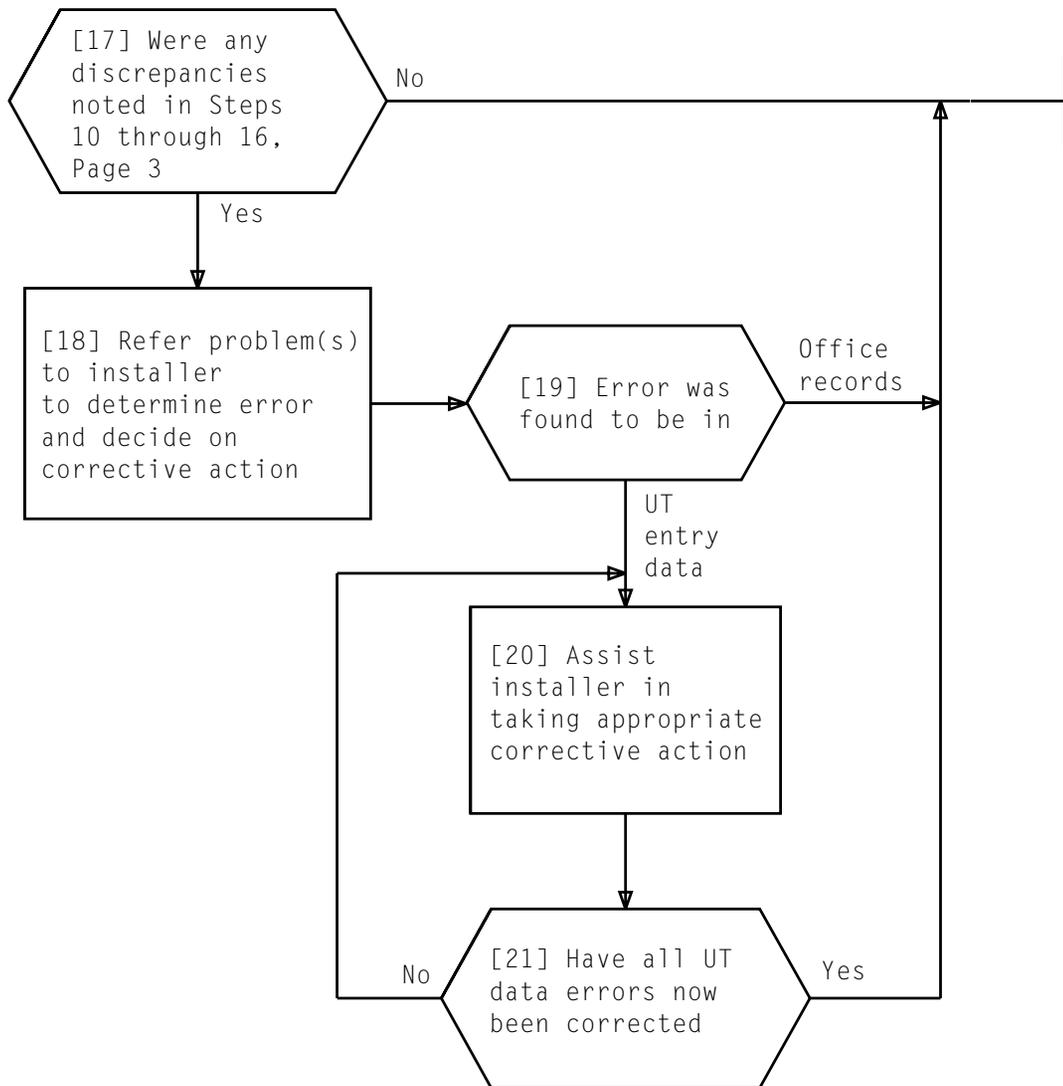


TABLE B

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION																								
0	entry data octal output	4				Y				0				0											
	bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	binary values	1	0	0	W	W	W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		MEMBER TYPE				MEMBER TYPE HARDWARE GENERATION				MEMBER EQUIPAGE				TDN BLK 3 TDN BLK 2 TDN BLK 1 TDN BLK 0				TSN BLK 3 TSN BLK 2 TSN BLK 1 TSN BLK 0							
	UNIV SD BLOCK EQUIPAGE								UNIV SCAN BLOCK EQUIPAGE																
	W.W = Member Type Hardware Generation      Y = Variable octal number 000 = SP with MF Reception 001 = SP without MF Reception																								
1	entry data octal output	Y				Y				Y				Y											
	bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	binary values	Z	Z	Z	Z	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		ASSIGNED ALARM GRID NUMBER				FRAME LINEUP NUMBER								FRAME NUMBER											
	X...X = Converts to decimal frame info as reflected in office floor plan drawing Y= Variable octal numbers ZZZZ = Converts to decimal alarm grid number as reflected in office record drawings T-nnnn-Hn-400, 401, or 402 or equivalent																								

TABLE B (Contd)

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION																									
2	entry data octal output	0		0		0		0		Y		Y		Y		Y										
	bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
	binary values	0	0	0	0	0	0	0	0	0	0	0	0	0	X	X	X	X	X	X	X	X	X	X	X	X
									SP MEMBER NUMBER		L OR R MATRIX	SP ROW NUMBER				SP COLUMN NUMBER										
		BASE SP PULSE POINT																								
	<p>X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-462 or equivalent</p> <p>Y = Variable octal numbers</p>																									
3	entry data octal output	Y		Y		Y		Y		Y		Y		Y		Y										
	bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
	binary values	0	1	Z	Z	Z	0	0	X	X	X	X	X	0	X	X	X	X	X	X	X	X	X	X	X	X
		PUB BRANCH NUMBER ASSIGNMENT				SP MEMBER NUMBER		L OR R MATRIX	SP ROW NUMBER				SP COLUMN NUMBER													
		MEMBER BASE MISCELLANEOUS SCAN NUMBER																								
	<p>X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-461 or equivalent</p> <p>Y = Variable octal numbers</p> <p>ZZZ = 3-digit code corresponding to lettered PUB branch as reflected in office record drawing T-nnnn-Hn-3840 or equivalent</p> <p>= 000 - branch A&amp;B    100 - branch K&amp;L            001 - branch C&amp;D    101 - branch M&amp;R            010 - branch E&amp;F    110 - branch T&amp;V            011 - branch G&amp;H    111 - branch W&amp;X</p>																									

TABLE B (Contd)

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION																														
4	entry data	Y						Y						Y						Y						Y					
	octal output																														
	bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0						
	binary values	0	0	0	0	0	0	0	X	X	X	X	X	0	X	X	X	X	X	X	X	X	X	X	X						
									SP MEMBER NUMBER					L OR R MATRIX		SP ROW NUMBER						SP COLUMN NUMBER									
	BUS BASE MISCELLANEOUS SCAN NUMBER																														
	<p>X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-461 or equivalent</p> <p>Y = Variable octal numbers</p>																														

TABLE B (Contd)

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION																								
5	entry data	0		0		0		1		Y		Y		Y		Y									
	octal output																								
	bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	binary values	0	0	0	0	0	0	0	0	0	0	0	1	0	X	X	X	X	X	X	X	X	X	X	X
								SP MEMBER NUMBER				L OR R MATRIX		SP ROW NUMBER				SP COLUMN NUMBER							
DUPLICATE BASE SP PULSE POINT																									
<p>X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-462 or equivalent</p> <p>Y = Variable octal numbers</p>																									
6	entry data	0		0		Y		Y		Y		Y		Y		Y									
	octal output																								
	bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	binary values	0	0	0	0	0	0	0	X	X	X	X	X	0	X	X	X	X	X	X	X	X	X	X	X
								SP MEMBER NUMBER				L OR R MATRIX		SP ROW NUMBER				SP COLUMN NUMBER							
MEMBER BASE MISCELLANEOUS SD NUMBER																									
<p>X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-462 or equivalent</p> <p>Y = Variable octal numbers</p>																									

TABLE B (Contd)

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION																																														
7	entry data	0		0		Y		Y		Y		Y		Y		Y																															
octal output																																															
bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0																							
binary values	0	0	0	0	0	0	0	X	X	X	X	X	0	X	X	X	X	X	X	X	X	X	X	X																							
								SP MEMBER NUMBER				L OR R MATRIX		SP ROW NUMBER				SP COLUMN NUMBER																													
BUS BASE MISCELLANEOUS SD NUMBER																																															
X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-462 or equivalent								Y = Variable octal numbers																																							
10	entry data	0		0		0		0		Y		Y		Y		Y																															
octal output																																															
bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0																							
binary values	0	0	0	0	0	0	0	0	0	0	0	0	0	0	X	X	X	X	X	X	X	X	X	X																							
<table border="1"> <tr> <td colspan="8" data-bbox="451 836 1144 885"></td> <td colspan="2" data-bbox="1144 836 1339 885">RIGHT MATRIX</td> <td colspan="2" data-bbox="1339 836 1501 885">LEFT MATRIX</td> <td colspan="2" data-bbox="1501 836 1633 885">CONTROLLER 1</td> <td colspan="2" data-bbox="1633 836 1829 885">CONTROLLER 0</td> </tr> <tr> <td colspan="8" data-bbox="451 885 1144 927"></td> <td colspan="4" data-bbox="1144 885 1444 927">MATRIX VERSION NUMBER</td> <td colspan="4" data-bbox="1444 885 1829 927">SP CONTROLLER VERSION NUMBER</td> </tr> </table>																								RIGHT MATRIX		LEFT MATRIX		CONTROLLER 1		CONTROLLER 0										MATRIX VERSION NUMBER				SP CONTROLLER VERSION NUMBER			
								RIGHT MATRIX		LEFT MATRIX		CONTROLLER 1		CONTROLLER 0																																	
								MATRIX VERSION NUMBER				SP CONTROLLER VERSION NUMBER																																			
X...X = Version numbers of SP equipment as reflected in appropriate office record drawings and shipping info								Y = Variable octal numbers																																							



TABLE B (Contd)

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION																									
14	entry data octal output →	Y		Y		Y		Y		Y		Y		Y		Y										
	bit position →	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
	binary values →	Z	Z	V	V	V	V	V	X	X	X	X	X	0	X	X	X	X	X	X	X	X	X	X	X	X
		TEST SCAN POINT		PULSE POINT DUPLICATE SP					SP MEMBER NUMBER					L OR R MATRIX		SP ROW NUMBER					SP COLUMN NUMBER					
LEFT MATRIX BASE MISCELLANEOUS SCAN NUMBER																										
<p>X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-461 or equivalent</p> <p>ZZ = Maintenance scan and SD point assignment (SP with universal and/or miscellaneous points)</p> <p>Left Frame      Right Frame (Used when right frame only or equipped, or if right frame equipped prior to left)</p> <p>00 = 0000      01 = 1024</p> <p>10 = 2048      11 = 3072</p>													<p>Y = Variable octal numbers</p> <p>V...V = Converts to associated SP member number, or all zeros if pulse points not equipped, or value of 31 if pulse points equipped without associated SP</p> <p>ZZ = Maintenance scan and SD point assignment (SP with miscellaneous points only)</p> <p>00 = 4607 (Misc. point 511 in left matrix)</p> <p>01 = 5631 (Misc. point 511 in right matrix)</p>													
15	entry data octal output →	Y		Y		Y		Y		Y		Y		Y		Y		Y		Y		Y		Y		
	bit position →	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
	binary values →	0	0	0	0	0	0	0	X	X	X	X	X	0	X	X	X	X	X	X	X	X	X	X	X	X
							SP MEMBER NUMBER					L OR R MATRIX		SP ROW NUMBER					SP COLUMN NUMBER							
RIGHT MATRIX BASE MISCELLANEOUS SCAN NUMBER																										
<p>X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-461 or equivalent</p>													<p>Y = Variable octal numbers</p>													

TABLE B (Contd)

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION																																																																																							
16	entry data																																																																																							
	octal output	<table border="1" style="width:100%; text-align:center;"> <tr> <td>0</td><td>0</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td> </tr> </table>																		0	0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y																																																		
	0	0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y																																																																					
	bit position	<table border="1" style="width:100%; text-align:center;"> <tr> <td>23</td><td>22</td><td>21</td><td>20</td><td>19</td><td>18</td><td>17</td><td>16</td><td>15</td><td>14</td><td>13</td><td>12</td><td>11</td><td>10</td><td>9</td><td>8</td><td>7</td><td>6</td><td>5</td><td>4</td><td>3</td><td>2</td><td>1</td><td>0</td> </tr> </table>																		23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0																																													
23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0																																																																	
binary values	<table border="1" style="width:100%; text-align:center;"> <tr> <td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>0</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td> </tr> <tr> <td colspan="7"></td> <td colspan="4">SP MEMBER NUMBER</td> <td colspan="2">L OR R MATRIX</td> <td colspan="5">SP ROW NUMBER</td> <td colspan="4">SP COLUMN NUMBER</td> </tr> <tr> <td colspan="24">LEFT MATRIX BASE MISCELLANEOUS SD NUMBER</td> </tr> </table>																		0	0	0	0	0	0	0	0	X	X	X	X	X	0	X	X	X	X	X	X	X	X	X	X								SP MEMBER NUMBER				L OR R MATRIX		SP ROW NUMBER					SP COLUMN NUMBER				LEFT MATRIX BASE MISCELLANEOUS SD NUMBER																							
0	0	0	0	0	0	0	0	X	X	X	X	X	0	X	X	X	X	X	X	X	X	X	X																																																																	
							SP MEMBER NUMBER				L OR R MATRIX		SP ROW NUMBER					SP COLUMN NUMBER																																																																						
LEFT MATRIX BASE MISCELLANEOUS SD NUMBER																																																																																								
<p>X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-462 or equivalent</p> <p>Y = Variable octal numbers</p>																																																																																								
17	entry data																																																																																							
	octal output	<table border="1" style="width:100%; text-align:center;"> <tr> <td>0</td><td>0</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td> </tr> </table>																		0	0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y																																														
	0	0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y																																																																	
	bit position	<table border="1" style="width:100%; text-align:center;"> <tr> <td>23</td><td>22</td><td>21</td><td>20</td><td>19</td><td>18</td><td>17</td><td>16</td><td>15</td><td>14</td><td>13</td><td>12</td><td>11</td><td>10</td><td>9</td><td>8</td><td>7</td><td>6</td><td>5</td><td>4</td><td>3</td><td>2</td><td>1</td><td>0</td> </tr> </table>																		23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0																																													
23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0																																																																	
binary values	<table border="1" style="width:100%; text-align:center;"> <tr> <td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>0</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td> </tr> <tr> <td colspan="7"></td> <td colspan="4">SP MEMBER NUMBER</td> <td colspan="2">L OR R MATRIX</td> <td colspan="5">SP ROW NUMBER</td> <td colspan="4">SP COLUMN NUMBER</td> </tr> <tr> <td colspan="24">RIGHT MATRIX BASE MISCELLANEOUS SD NUMBER</td> </tr> </table>																		0	0	0	0	0	0	0	0	X	X	X	X	X	0	X	X	X	X	X	X	X	X	X	X								SP MEMBER NUMBER				L OR R MATRIX		SP ROW NUMBER					SP COLUMN NUMBER				RIGHT MATRIX BASE MISCELLANEOUS SD NUMBER																							
0	0	0	0	0	0	0	0	X	X	X	X	X	0	X	X	X	X	X	X	X	X	X	X																																																																	
							SP MEMBER NUMBER				L OR R MATRIX		SP ROW NUMBER					SP COLUMN NUMBER																																																																						
RIGHT MATRIX BASE MISCELLANEOUS SD NUMBER																																																																																								
<p>X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-462 or equivalent</p> <p>Y = Variable octal numbers</p>																																																																																								

SUMMARY

Using verify entry input message, call up growth associated SP 1 UT translator and verify that matrix data of resulting TTY octal output data, when converted, agrees

with office records. Refer to entry word explanations in TABLE B, Page 5 as required, for assistance in interpreting specific data fields. If it is determined that UT entry data are in error, word change(s) may be required.

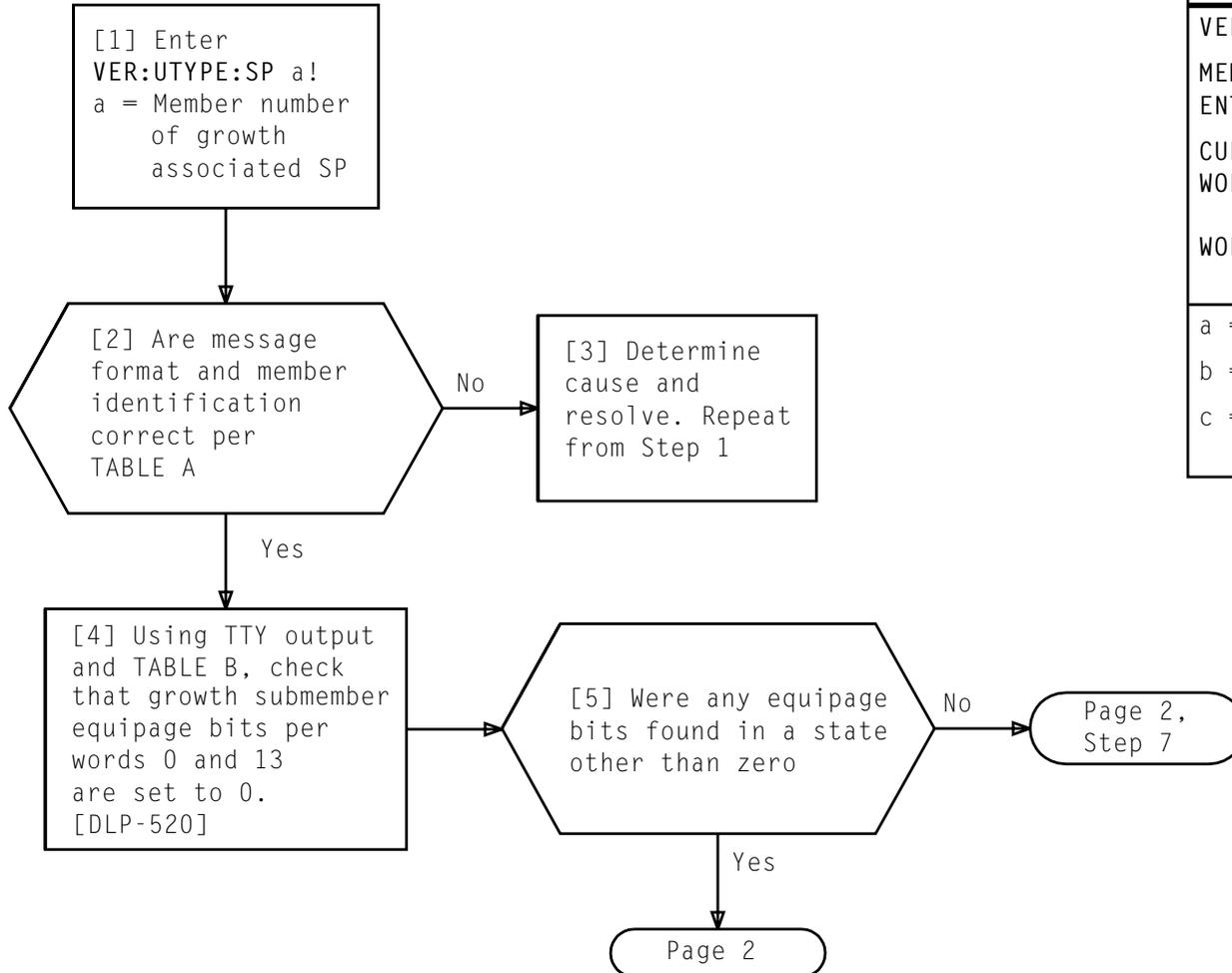
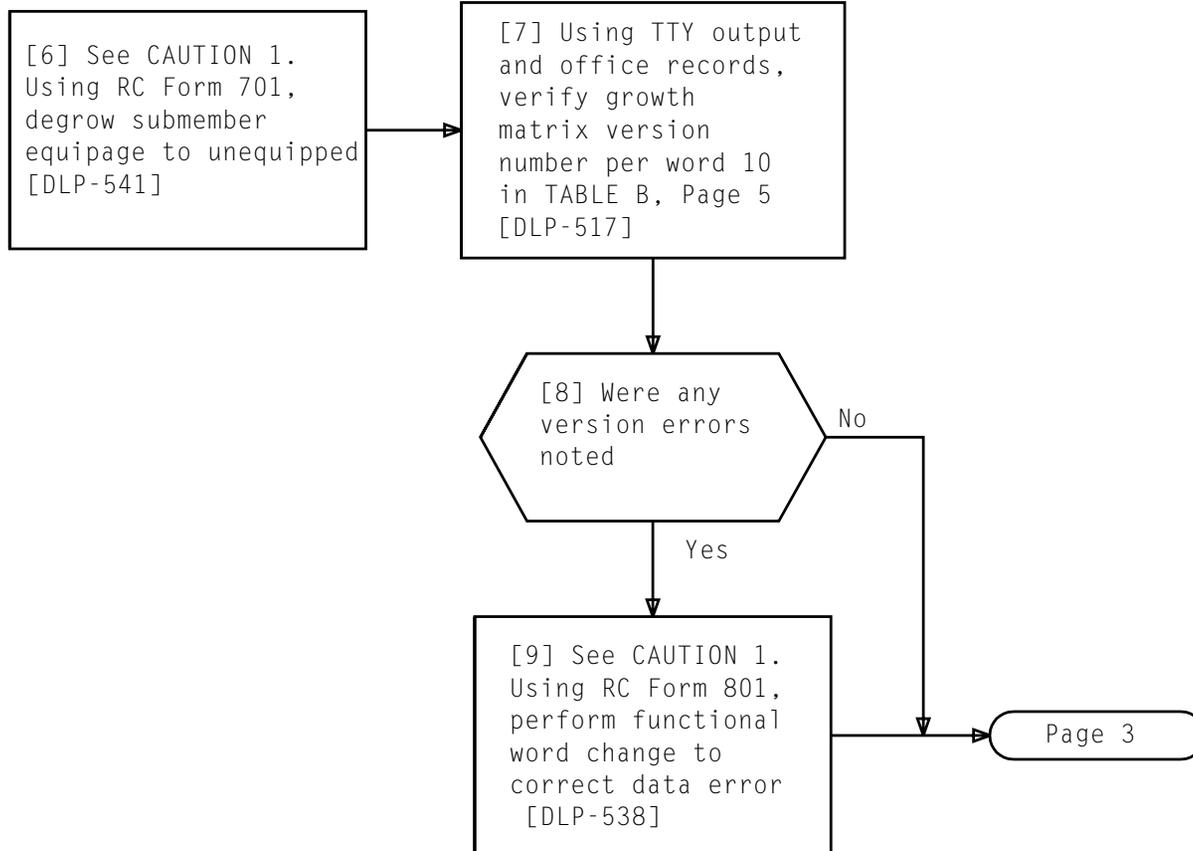


TABLE A	
VER:UTMN;OPT( ),CUR: FLN a,	UTYN SP,
MEMN b,	ME OPER,
ENTRY ADDRESS c,	ENTRY SIZE 16,
CUR	
WORD 0	___ ___ ___ ___
	___ ___ ___ ___
WORD 10	___ ___ ___ ___
	___ ___ ___ ___
a = Floor location number	
b = Member number of growth associated SP	
c = Starting octal address for unit type entry	

VERIFY MATRIX DATA OF SP1 UT TRANSLATOR

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*CAUTION 1  
Depending on local procedures, supervisory or TELCO engineering approval must be obtained prior to performing any data change.*

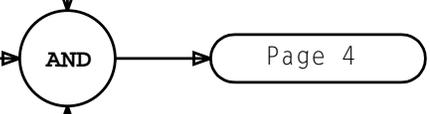
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Using TTY output, TABLE B, Page 5  
and office records:

[10] Verify SD point assignment  
for growth matrix per word  
16 or 17 [DLP-534]

[11] Verify scan point assignment  
for growth matrix per word  
14 or 15 [DLP-536]

[12] Verify pulse point option and  
duplicate SP member number per  
words 13 and 14 [DLP-537]



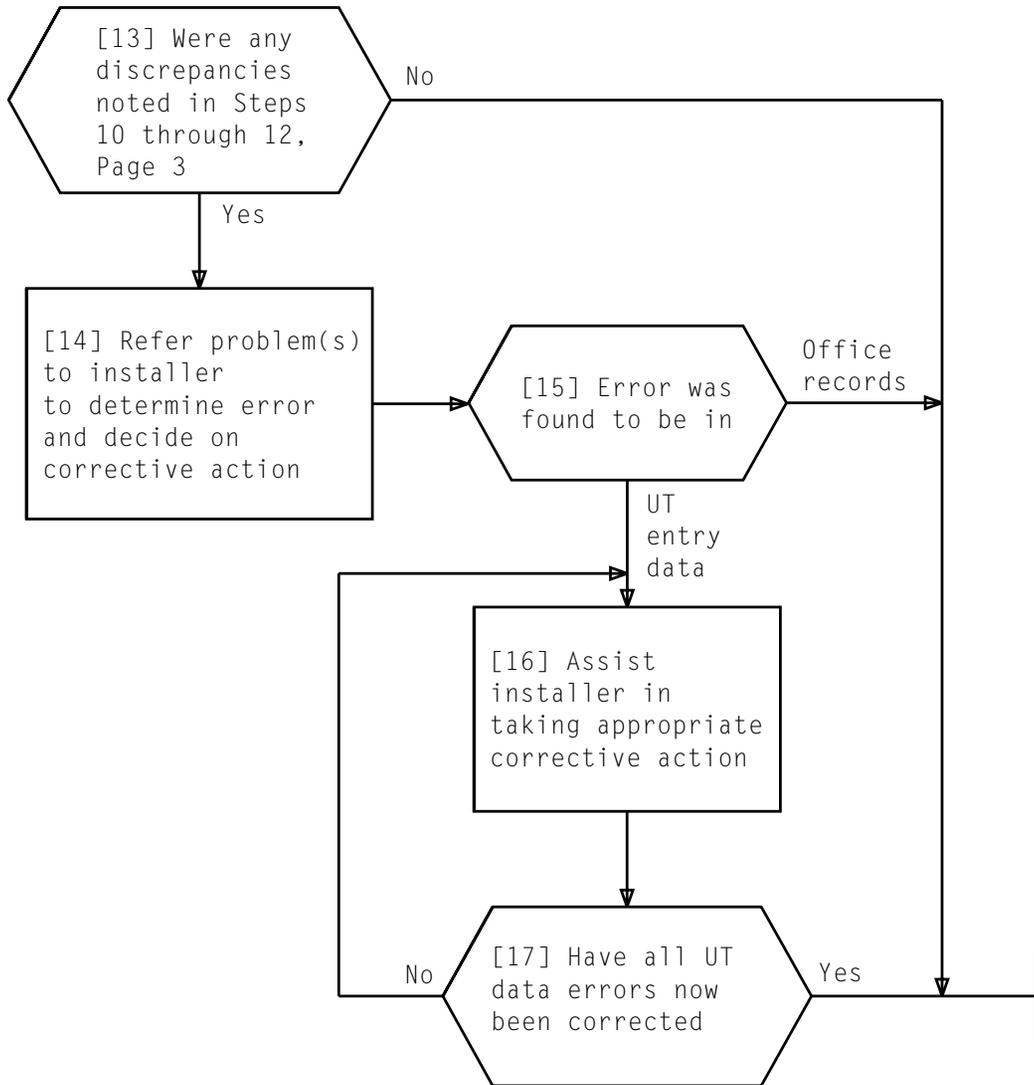


TABLE B

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION																			
0	entry data	4				Y			Y			Y			Y			Y		
	octal output →	23				22			21			20			19			18		
	bit position →	23				22			21			20			19			18		
	binary values →	1				0			0			W			W			W		
		1				0			0			W			W			W		
10	entry data	0				0			0			0			Y			Y		
	octal output →	23				22			21			20			19			18		
	bit position →	23				22			21			20			19			18		
	binary values →	0				0			0			0			0			0		
		0				0			0			0			0			0		
	MEMBER TYPE	MEMBER TYPE HARDWARE GENERATOR				TDN BLK 3	TDN BLK 2	TDN BLK 1	TDN BLK 0	TSN BLK 3	TSN BLK 2	TSN BLK 1	TSN BLK 0							
					UNIV SD BLOCK EQUIPAGE				UNIV SCAN BLOCK EQUIPAGE											
	XX ==00 For Scan Or SD Blocks Associated With Matrix Frame Being Added And Other Unequipped Blocks.				XX ==11 For Each Operational Scan Or SD Block.				Y ==Variable Octal Number											
					RIGHT MATRIX				LEFT MATRIX				MATRIX VERSION NUMBER							
	XX ==Version Number Of Matrix As Reflected In Appropriate Office Record Drawing And Shipping Information				Y ==Variable Octal Numbers															

TABLE B (Contd)

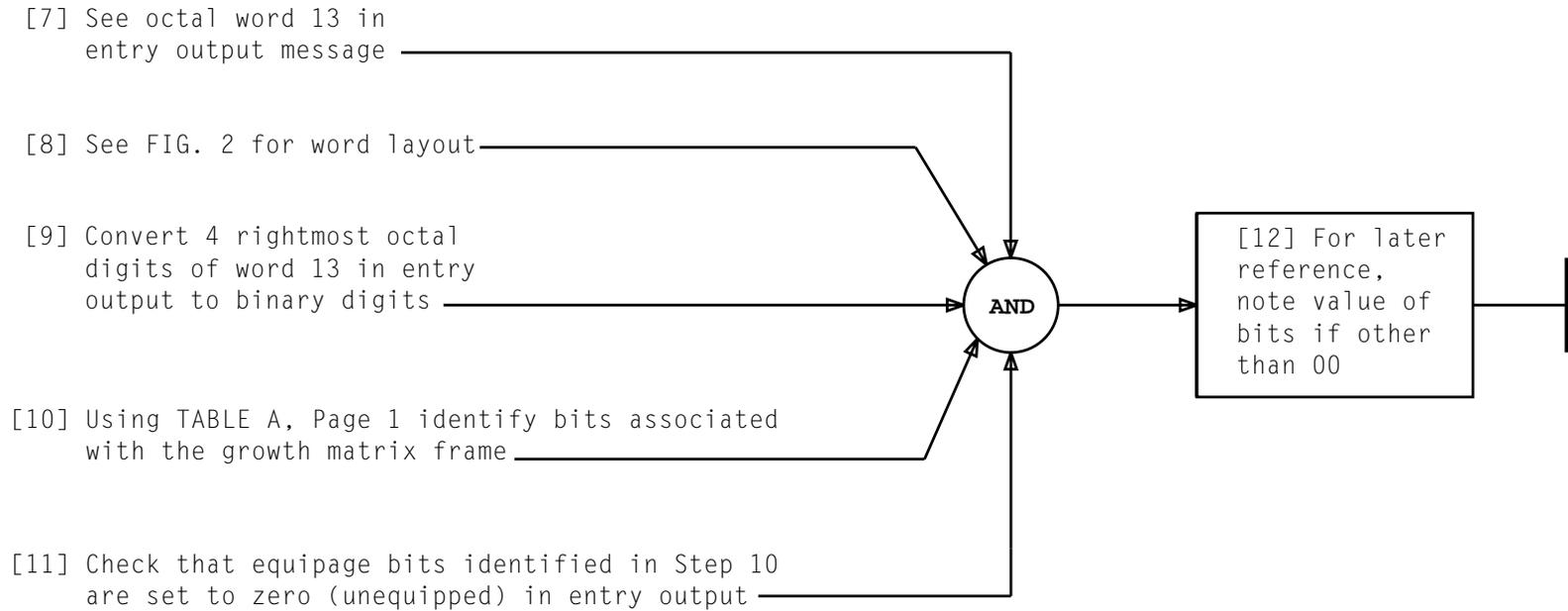
ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION																
13	entry data	0		0		Y		Y		Y		Y		Y		Y	
	octal output →	23		22		21		20		19		18		17		16	
	bit position →	23		22		21		20		19		18		17		16	
	binary values →	0		0		0		0		0		0		0		0	
		Z		Z		Z		Z		X		X		X		X	
		RIGHT		LEFT		RIGHT		LEFT		MDN BLK 1		MDN BLK 0		MSN BLK 1		MSN BLK 0	
		MATRIX FRAME PULSE POINT OPTION				MATRIX FRAME EQUIPAGE				MISC SD BLOCK EQUIPAGE				MISC SCAN BLOCK EQUIPAGE			
<p>ZZ ==2-Digit Code Corresponding To Pulse Point Option As Reflected In Office Record Drawing T-nnnn-Hn-3870 Or Equivalent</p> <p>00 For No Pulse Points, 01 For 256 Pulse Points, 10 For 512 Pulse Points, Or 11 For Invalid.</p> <p>Y ==Variable Octal Number</p> <p>XX ==00 For Matrix Frame, Scan And SD Blocks Being Added And Other Unequipped Blocks.</p> <p>XX ==11 For Other Matrix Frame And Operational Scan And SD Blocks</p>																	



TABLE B (Contd)

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION																																																																
16	entry data																																																																
	octal output	<table border="1" style="width:100%; text-align:center;"> <tr> <td>0</td><td>0</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td> </tr> </table>																				0	0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y																								
	0	0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y																																													
	bit position	<table border="1" style="width:100%; text-align:center;"> <tr> <td>23</td><td>22</td><td>21</td><td>20</td><td>19</td><td>18</td><td>17</td><td>16</td><td>15</td><td>14</td><td>13</td><td>12</td><td>11</td><td>10</td><td>9</td><td>8</td><td>7</td><td>6</td><td>5</td><td>4</td><td>3</td><td>2</td><td>1</td><td>0</td> </tr> </table>																				23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0																				
	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0																																									
binary values	<table border="1" style="width:100%; text-align:center;"> <tr> <td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>0</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td> </tr> </table>																				0	0	0	0	0	0	0	X	X	X	X	X	0	X	X	X	X	X	X	X	X	X	X	X																					
0	0	0	0	0	0	0	X	X	X	X	X	0	X	X	X	X	X	X	X	X	X	X	X																																										
	<table border="1" style="width:100%; text-align:center;"> <tr> <td colspan="7"></td> <td colspan="2">SP MEMBER NUMBER</td> <td colspan="2">L OR R MATRIX</td> <td colspan="5">SP ROW NUMBER</td> <td colspan="6">SP COLUMN NUMBER</td> </tr> <tr> <td colspan="23">LEFT MATRIX BASE MISCELLANEOUS SD NUMBER</td> </tr> </table> <p style="text-align:center;">X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-462 or equivalent      Y = Variable octal numbers</p>																											SP MEMBER NUMBER		L OR R MATRIX		SP ROW NUMBER					SP COLUMN NUMBER						LEFT MATRIX BASE MISCELLANEOUS SD NUMBER																						
							SP MEMBER NUMBER		L OR R MATRIX		SP ROW NUMBER					SP COLUMN NUMBER																																																	
LEFT MATRIX BASE MISCELLANEOUS SD NUMBER																																																																	
17	entry data																																																																
	octal output	<table border="1" style="width:100%; text-align:center;"> <tr> <td>0</td><td>0</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td> </tr> </table>																				0	0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y																					
	0	0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y																																										
	bit position	<table border="1" style="width:100%; text-align:center;"> <tr> <td>23</td><td>22</td><td>21</td><td>20</td><td>19</td><td>18</td><td>17</td><td>16</td><td>15</td><td>14</td><td>13</td><td>12</td><td>11</td><td>10</td><td>9</td><td>8</td><td>7</td><td>6</td><td>5</td><td>4</td><td>3</td><td>2</td><td>1</td><td>0</td> </tr> </table>																				23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0																				
	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0																																									
binary values	<table border="1" style="width:100%; text-align:center;"> <tr> <td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>0</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td> </tr> </table>																				0	0	0	0	0	0	0	X	X	X	X	X	0	X	X	X	X	X	X	X	X	X	X	X																					
0	0	0	0	0	0	0	X	X	X	X	X	0	X	X	X	X	X	X	X	X	X	X	X																																										
	<table border="1" style="width:100%; text-align:center;"> <tr> <td colspan="7"></td> <td colspan="2">SP MEMBER NUMBER</td> <td colspan="2">L OR R MATRIX</td> <td colspan="5">SP ROW NUMBER</td> <td colspan="6">SP COLUMN NUMBER</td> </tr> <tr> <td colspan="23">RIGHT MATRIX BASE MISCELLANEOUS SD NUMBER</td> </tr> </table> <p style="text-align:center;">X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-462 or equivalent      Y = Variable octal numbers</p>																											SP MEMBER NUMBER		L OR R MATRIX		SP ROW NUMBER					SP COLUMN NUMBER						RIGHT MATRIX BASE MISCELLANEOUS SD NUMBER																						
							SP MEMBER NUMBER		L OR R MATRIX		SP ROW NUMBER					SP COLUMN NUMBER																																																	
RIGHT MATRIX BASE MISCELLANEOUS SD NUMBER																																																																	





entry data																												
octal output	0				0				Y				Y				Y				Y				Y			
bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0				
binary values	0	0	0	0	0	0	0	0	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
													RIGHT		LEFT		MDN		MDN		MSN		MSN					
																	BLK 1		BLK 0		BLK 1		BLK 0					
													MATRIX FRAME EQUIPAGE				MISC BLOCK EQUIPAGE											

FIG. 2 - Entry Word 13 Layout

**SUMMARY**

Using verify entry input message, call up growth SP2 UT translator and verify that resulting TTY octal output data, when converted, agrees with office records. Refer to entry

word explanations in TABLE B, Page 5 as required, for assistance in interpreting specific data fields. If it is determined that UT entry data are in error, word change(s) may be required.

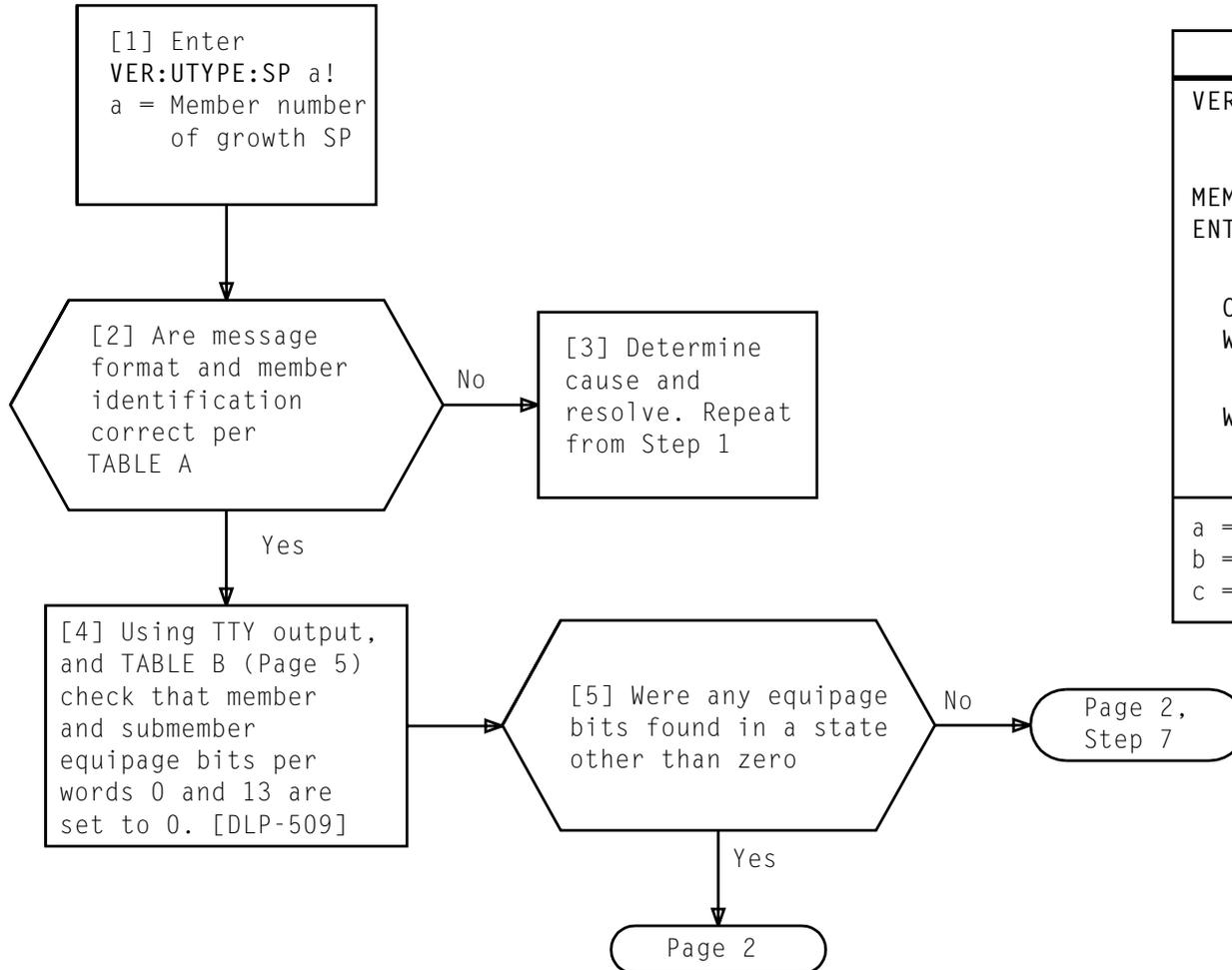
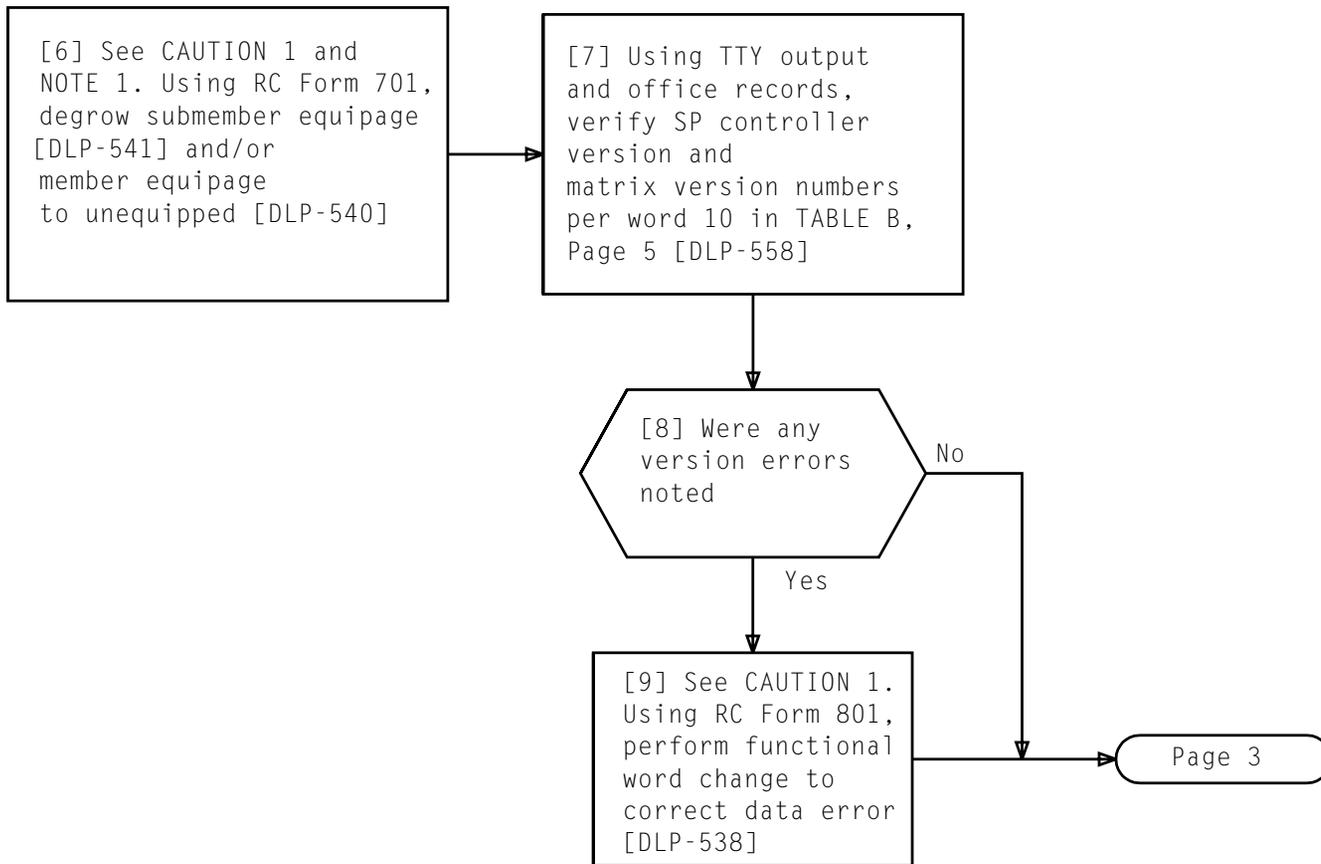


TABLE A			
VER:UTMN;OPT( ),	CUR: FLN a,		UTYN SP,
MEMN b,	ME UNEQ,		
ENTRY ADDRESS c,			ENTRY SIZE 16,
CUR			
WORD 0	_____	_____	_____
	_____	_____	_____
WORD 10	_____	_____	_____
	_____	_____	_____
a = Floor location number b = Member number of growth SP c = Starting octal address for unit type entry			



NOTE 1  
 Submember equipage must be degrown first if required followed by degrowth of member equipage, if required

**CAUTION 1**  
*Depending on local procedures, supervisory or TELCO engineering approval must be obtained prior to performing any data change.*

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Using TTY output, TABLE B, Page 5  
and office records:

[10] Verify miscellaneous member type data of  
word 0, bits 18 through 23

[11] Verify alarm grid, lineup, and  
frame assignment for growth frame  
per word 1 [DLP-533]

[12] Verify PUB branch assignment  
for growth SP per word 3  
[DLP-535]

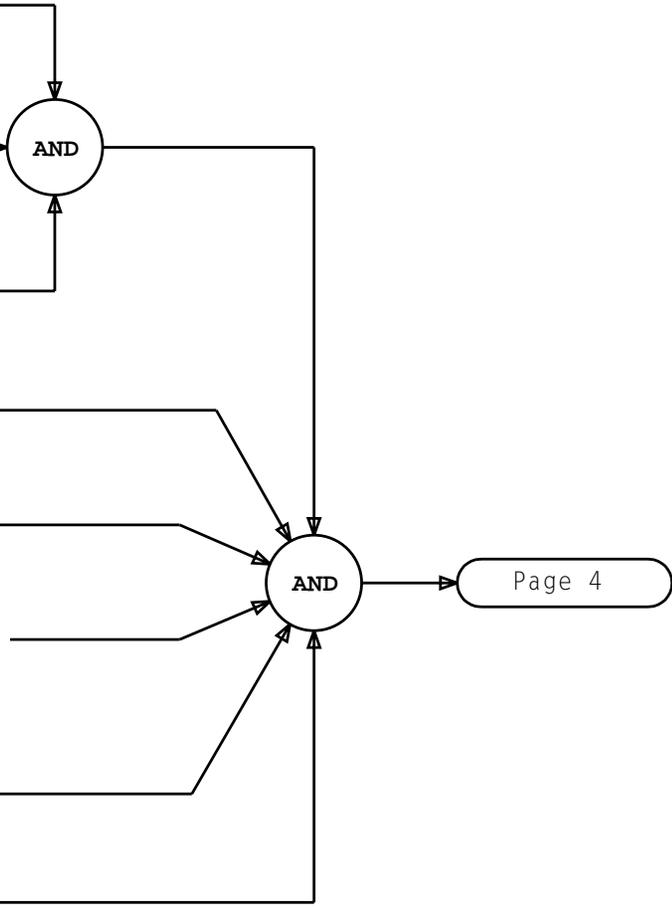
[13] Verify babbling bus changes per word 11

[14] Verify member number data per bits 0-13,  
word 12 [DLP-510]

[15] Verify pulse point option and duplicate SP  
member number per words 13 and 14 [DLP-537]

[16] Verify SD and pulse point assignments  
for growth SP per words 2, 5, 6, 7, and 16  
[DLP-534]

[17] Verify scan point assignments for growth SP  
per words 3, 4, and 14 [DLP-536]



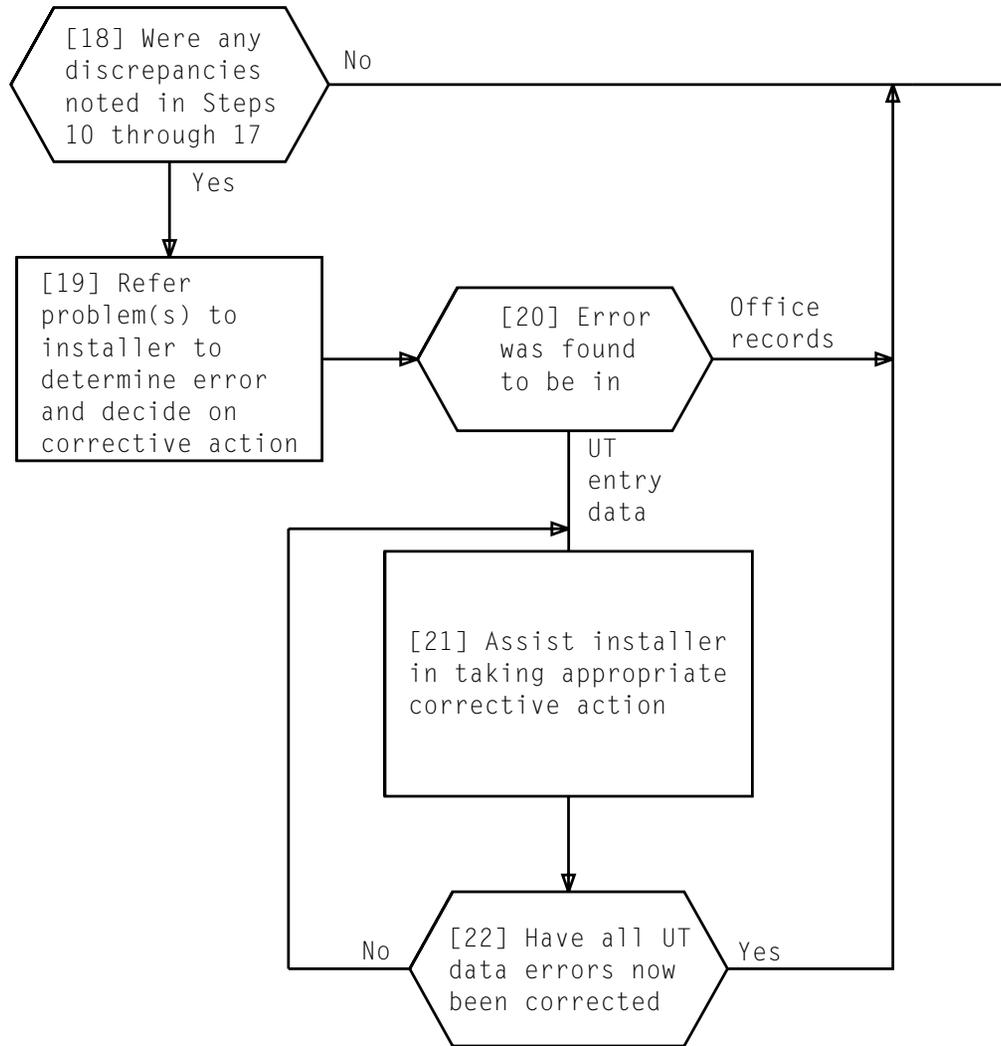


TABLE B

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION																																																
0	entry data	2		0		0		0		0		0		0		0		0																															
	octal output	23		22		21		20		19		18		17		16		15		14		13		12		11		10		9		8		7		6		5		4		3		2		1		0	
	bit position	0		1		0		0		0		0		0		0		0		0		0		0		0		0		0		0		0		0		0		0		0		0					
	binary values	MEMBER TYPE		MEMBER TYPE HARDWARE GENERATION				MEMBER EQUIPAGE								3		2		1		0		SP2EQ																									
		SUBTYPE						SUBMEMBER						EQUIPAGE																																			
1	entry data	Y		Y		Y		Y		Y		Y		Y		Y		Y																															
	octal output	23		22		21		20		19		18		17		16		15		14		13		12		11		10		9		8		7		6		5		4		3		2		1		0	
	bit position	Z		Z		Z		Z		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X		X					
	binary values	ASSIGNED ALARM GRID NUMBER				FRAME LINEUP NUMBER								FRAME NUMBER																																			
<p>X...X = Converts to decimal frame info as reflected in office floor plan drawing</p> <p>Y= Variable octal numbers</p>										<p>ZZZZ = Converts to decimal alarm grid number as reflected in office record drawings</p> <p>T-nnnn-Hn-400,401, or 402 or equivalent</p>																																							

TABLE B (Contd)

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION																								
2	entry data	0		0		0		0		Y		Y		Y		Y									
	octal output																								
	bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	binary values	0	0	0	0	0	0	0	0	0	0	0	0	0	X	X	X	X	X	X	X	X	X	X	X
		SP MEMBER NUMBER						L OR R MATRIX		SP ROW NUMBER						SP COLUMN NUMBER									
		BASE SP PULSE POINT																							
	X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-462 or equivalent Y = Variable octal numbers																								
3	entry data	Y		Y		Y		Y		Y		Y		Y		Y									
	octal output																								
	bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	binary values	0	1	Z	Z	Z	0	0	X	X	X	X	X	0	X	X	X	X	X	X	X	X	X	X	X
		PUB BRANCH NUMBER ASSIGNMENT				SP MEMBER NUMBER						L OR R MATRIX		SP ROW NUMBER						SP COLUMN NUMBER					
		MEMBER BASE MISCELLANEOUS SCAN NUMBER																							
	X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-461 or equivalent Y = Variable octal numbers ZZZ = 3-digit code corresponding to lettered PUB branch as reflected in office record drawing T-nnnn-Hn-3840 or equivalent = 000 - branch A&B    100 - branch K&L 001 - branch C&D    101 - branch M&R 010 - branch E&F    110 - branch T&V 011 - branch G&H    111 - branch W&X																								

TABLE B (Contd)

ENTRY WORD (OCTAL)		UT ENTRY DATA AND WORD CONFIGURATION																											
4	entry data	Y				Y				Y				Y				Y				Y							
	octal output																												
	bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0				
	binary values	0	0	0	0	0	0	0	X	X	X	X	X	0	X	X	X	X	X	X	X	X	X	X	X				
										SP MEMBER NUMBER				L OR R MATRIX		SP ROW NUMBER						SP COLUMN NUMBER							
		BUS BASE MISCELLANEOUS SCAN NUMBER																											
		<p>X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-461 or equivalent</p> <p>Y = Variable octal numbers</p>																											
5	entry data	0				0				0				1				Y				Y				Y			
	octal output																												
	bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0				
	binary values	0	0	0	0	0	0	0	0	0	0	0	1	0	X	X	X	X	X	X	X	X	X	X	X				
										SP MEMBER NUMBER				L OR R MATRIX		SP ROW NUMBER						SP COLUMN NUMBER							
		DUPLICATE BASE SP PULSE POINT																											
		<p>X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-462 or equivalent</p> <p>Y = Variable octal numbers</p>																											

TABLE B (Contd)

ENTRY WORD (OCTAL)		UT ENTRY DATA AND WORD CONFIGURATION																							
6	entry data	0	0	0	1	Y	Y	Y	Y																
	octal output																								
	bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	binary values	0	0	0	0	0	0	0	0	0	0	0	1	0	X	X	X	X	X	X	X	X	X	X	X
									SP MEMBER NUMBER		L OR R MATRIX		SP ROW NUMBER					SP COLUMN NUMBER							
		MEMBER BASE MISCELLANEOUS SD NUMBER																							
		X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-462 or equivalent Y = Variable octal numbers																							
7	entry data	0	0	Y	Y	Y	Y	Y	Y																
	octal output																								
	bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	binary values	0	0	0	0	0	0	0	X	X	X	X	X	0	X	X	X	X	X	X	X	X	X	X	X
									SP MEMBER NUMBER		L OR R MATRIX		SP ROW NUMBER					SP COLUMN NUMBER							
		BUS BASE MISCELLANEOUS SD NUMBER																							
		X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-462 or equivalent Y = Variable octal numbers																							

TABLE B (Contd)

ENTRY WORD (OCTAL)		UT ENTRY DATA AND WORD CONFIGURATION																							
10	entry data	0						Y		Y		Y													
	octal output	0						Y		Y		Y													
	bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	binary values	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	X	X	X	X	X	X	X	X
																MATRIX	CONTROLLER		CONTROLLER						
																FRAME	1		0						
		VERSION NUMBER																							
		<p>X...X = Version numbers of SP equipment as reflected in appropriate office record drawings and shipping info</p> <p>Y = Variable octal numbers</p>																							
11	entry data	0						Y		Y															
	octal output	0						Y		Y															
	bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	binary values	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	X	X	X	X
																BABBLING BUS FEATURE									
		<p>X ==Babbling Bus Change (bit 0-IPUB 0, CONTR 0)                      (bit 1-IPUB 0, CONTR 1)                      (bit 2-IPUB 1, CONTR 0)                      (bit 3-IPUB 1, CONTR 1)</p> <p>==0 indicates babbling bus change is not present                      1 indicates babbling bus change is present</p> <p>Y = Variable octal numbers</p>																							



TABLE B (Contd)

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION																								
14	entry data																								
	octal output →	Y		Y		Y		Y		Y		Y		Y		Y		Y							
	bit position →	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	binary values →	0	0	V	V	V	V	V	X	X	X	X	X	0	X	X	X	X	X	X	X	X	X	X	X
		PULSE POINT DUPLICATE SP		SP MEMBER NUMBER				L OR R MATRIX		SP ROW NUMBER				SP COLUMN NUMBER											
LEFT MATRIX BASE MISCELLANEOUS SCAN NUMBER																									
<p style="text-align: center;">Y = Variable octal numbers</p> <p>X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-461 or equivalent</p> <p>V...V = Converts to associated SP member number, all zeros if pulse points not equipped, or value of 31 if pulse points equipped without associated SP</p>																									

TABLE B (Contd)

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION																																																																																																																																																																																																																																							
16	<table border="1"> <tr> <td data-bbox="331 342 541 363">entry data</td> <td colspan="23"></td> </tr> <tr> <td data-bbox="331 363 541 384">octal output</td> <td data-bbox="548 363 575 384">0</td> <td data-bbox="575 363 602 384">0</td> <td data-bbox="602 363 630 384">Y</td> <td data-bbox="630 363 657 384">Y</td> <td data-bbox="657 363 684 384">Y</td> <td data-bbox="684 363 711 384">Y</td> <td data-bbox="711 363 739 384">Y</td> <td data-bbox="739 363 766 384">Y</td> <td data-bbox="766 363 793 384">Y</td> <td data-bbox="793 363 821 384">Y</td> <td data-bbox="821 363 848 384">Y</td> <td data-bbox="848 363 875 384">Y</td> <td data-bbox="875 363 903 384">Y</td> <td data-bbox="903 363 930 384">Y</td> <td data-bbox="930 363 957 384">Y</td> <td data-bbox="957 363 984 384">Y</td> <td data-bbox="984 363 1012 384">Y</td> <td data-bbox="1012 363 1039 384">Y</td> <td data-bbox="1039 363 1066 384">Y</td> <td data-bbox="1066 363 1094 384">Y</td> <td data-bbox="1094 363 1121 384">Y</td> <td data-bbox="1121 363 1148 384">Y</td> <td data-bbox="1148 363 1176 384">Y</td> <td data-bbox="1176 363 1203 384">Y</td> <td data-bbox="1203 363 1230 384">Y</td> <td data-bbox="1230 363 1257 384">Y</td> <td data-bbox="1257 363 1285 384">Y</td> <td data-bbox="1285 363 1312 384">Y</td> <td data-bbox="1312 363 1339 384">Y</td> <td data-bbox="1339 363 1367 384">Y</td> <td data-bbox="1367 363 1394 384">Y</td> <td data-bbox="1394 363 1421 384">Y</td> <td data-bbox="1421 363 1449 384">Y</td> <td data-bbox="1449 363 1476 384">Y</td> <td data-bbox="1476 363 1503 384">Y</td> <td data-bbox="1503 363 1530 384">Y</td> <td data-bbox="1530 363 1558 384">Y</td> <td data-bbox="1558 363 1585 384">Y</td> <td data-bbox="1585 363 1612 384">Y</td> <td data-bbox="1612 363 1640 384">Y</td> <td data-bbox="1640 363 1667 384">Y</td> <td data-bbox="1667 363 1694 384">Y</td> <td data-bbox="1694 363 1722 384">Y</td> <td data-bbox="1722 363 1749 384">Y</td> <td data-bbox="1749 363 1776 384">Y</td> <td data-bbox="1776 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406">7</td> <td data-bbox="1012 384 1039 406">6</td> <td data-bbox="1039 384 1066 406">5</td> <td data-bbox="1066 384 1094 406">4</td> <td data-bbox="1094 384 1121 406">3</td> <td data-bbox="1121 384 1148 406">2</td> <td data-bbox="1148 384 1176 406">1</td> <td data-bbox="1176 384 1203 406">0</td> <td data-bbox="1203 384 1230 406"></td> <td data-bbox="1230 384 1257 406"></td> <td data-bbox="1257 384 1285 406"></td> <td data-bbox="1285 384 1312 406"></td> <td data-bbox="1312 384 1339 406"></td> <td data-bbox="1339 384 1367 406"></td> <td data-bbox="1367 384 1394 406"></td> <td data-bbox="1394 384 1421 406"></td> <td data-bbox="1421 384 1449 406"></td> <td data-bbox="1449 384 1476 406"></td> <td data-bbox="1476 384 1503 406"></td> <td data-bbox="1503 384 1530 406"></td> <td data-bbox="1530 384 1558 406"></td> <td data-bbox="1558 384 1585 406"></td> <td data-bbox="1585 384 1612 406"></td> <td data-bbox="1612 384 1640 406"></td> <td data-bbox="1640 384 1667 406"></td> <td data-bbox="1667 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</table> <p data-bbox="646 597 1178 672">X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-462 or equivalent</p> <p data-bbox="1255 597 1577 618">Y = Variable octal numbers</p>	entry data																								octal output	0	0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0																													binary values	0	0	0	0	0	0	0	X	X	X	X	X	0	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									SP MEMBER NUMBER				L OR R MATRIX		SP ROW NUMBER						SP COLUMN NUMBER				LEFT MATRIX BASE MISCELLANEOUS SD NUMBER																							
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SUMMARY

Using verify entry input message, call up growth associated SP2 UT translator and verify that resulting TTY octal output data associated with growth supplementary matrix frame when converted, agrees with office records.

Refer to entry word explanations in TABLE B, Page 4 as required, for assistance in interpreting specific data fields. If it is determined that UT entry data are in error, word change(s) may be required.

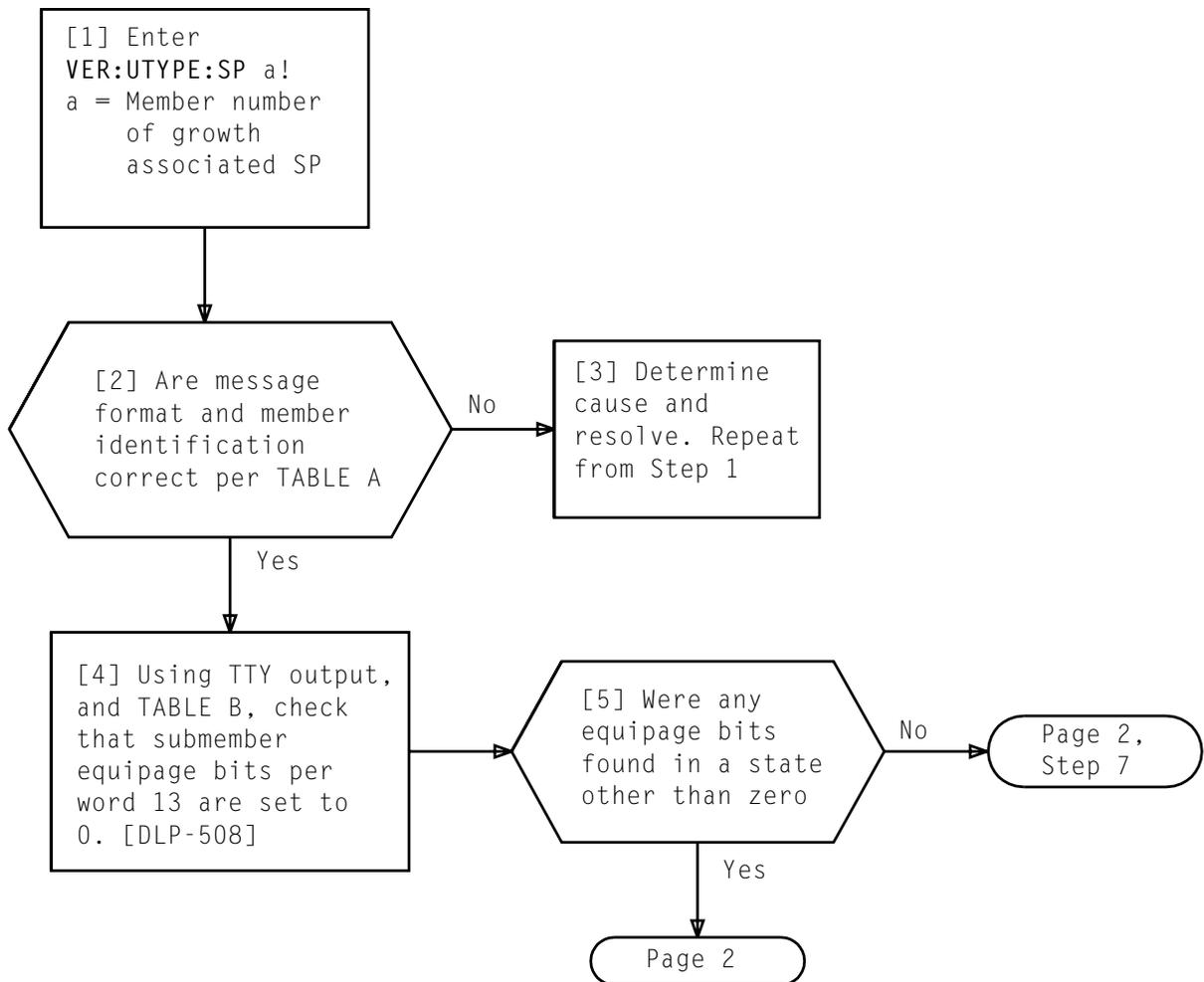
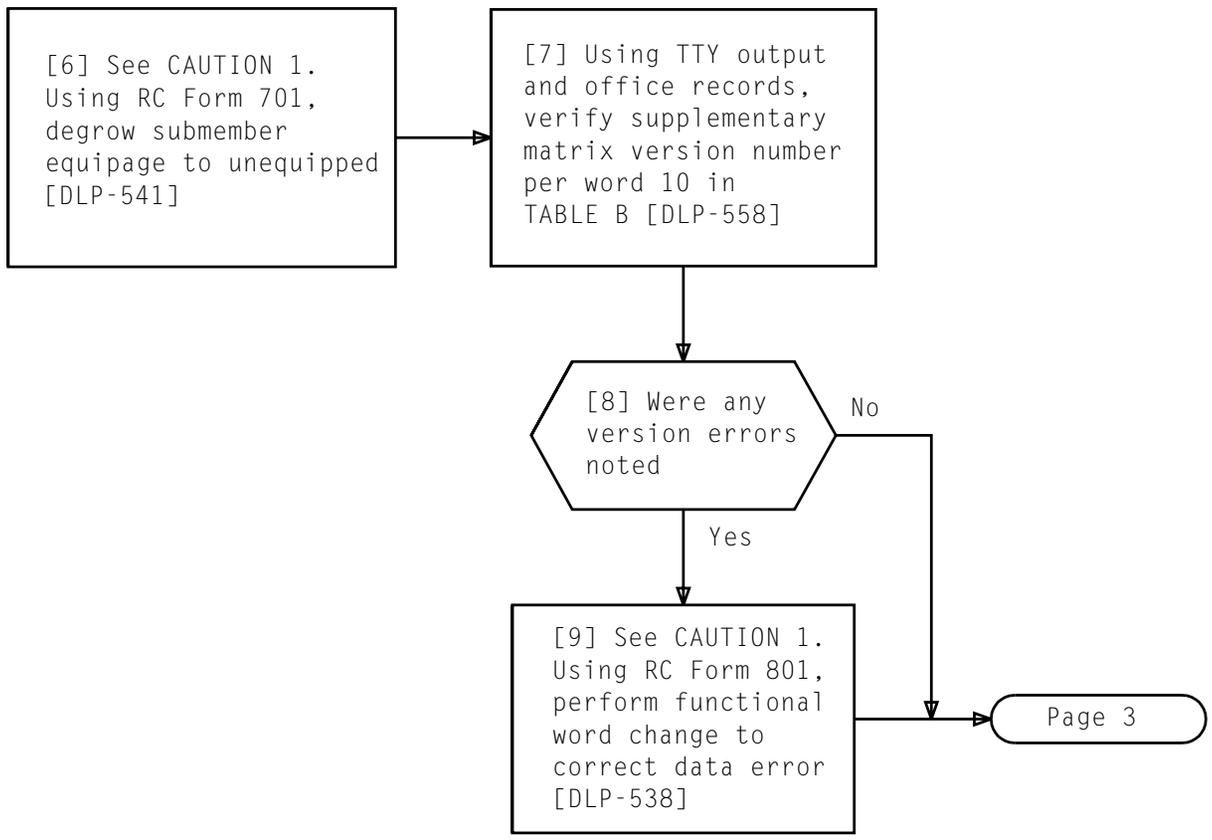


TABLE A	
VER:UTMN;OPT( ),CUR: FLN a,	UTYN SP,
MEMN b, ME OPER,	
ENTRY ADDRESS c,	ENTRY SIZE 16,
CUR	
WORD 0	_____
	_____
WORD 10	_____
	_____
a = Floor location number b = Member number of growth associated SP c = Starting octal address for unit type entry	



*CAUTION 1  
Depending on local  
procedures,  
supervisory or  
TELCO engineering  
approval must be  
obtained prior to  
performing any  
data change.*

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Using TTY output, TABLE B,  
and office records:

[10] Verify SD point  
assignment for growth matrix  
per octal word 16 [DLP-534]

[11] Verify scan point assignment  
for growth matrix per octal  
word 14 [DLP-536]

[12] Verify pulse point option  
and duplicate SP member  
number per octal words 13  
and 14 [DLP-537]

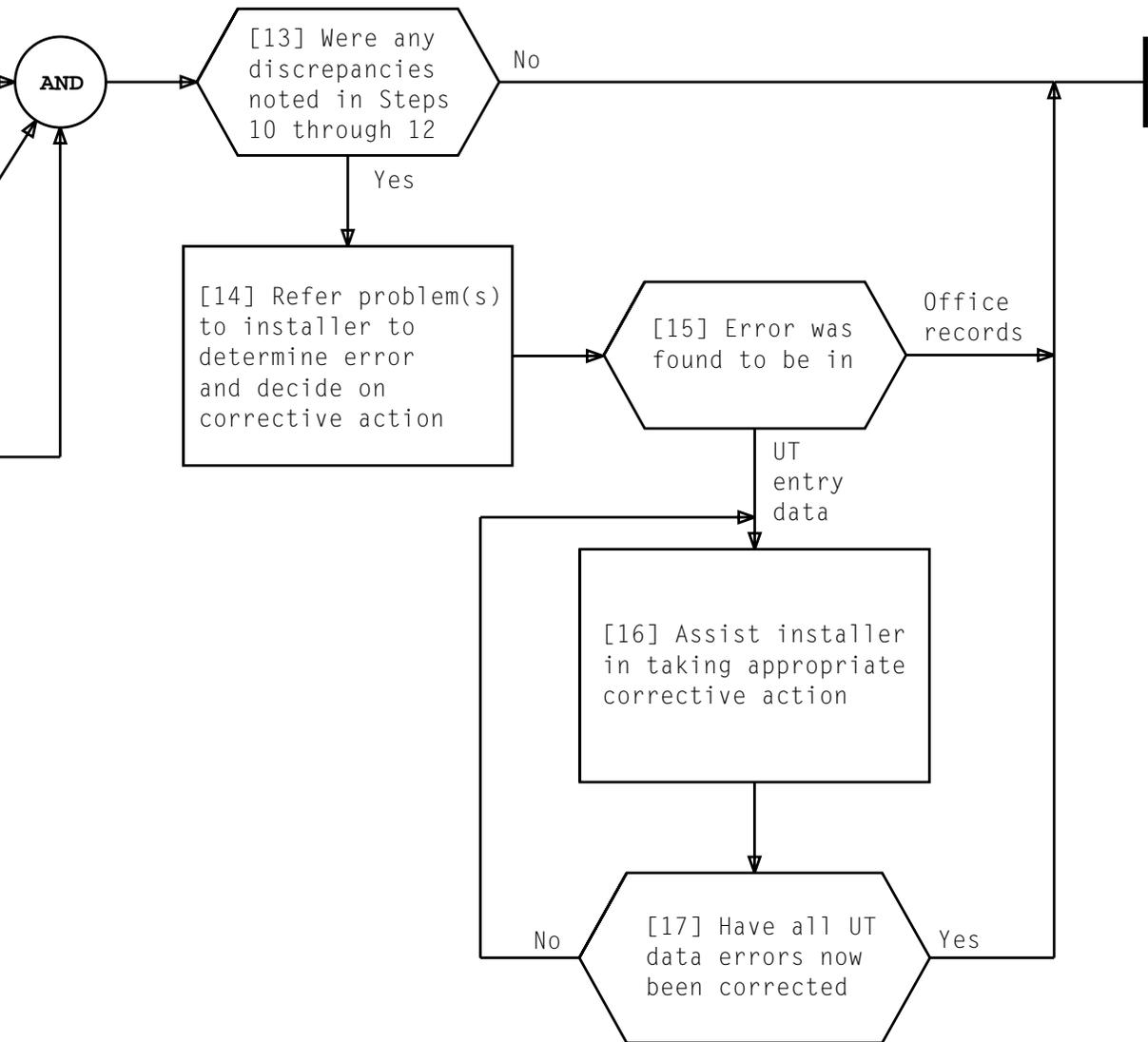


TABLE B																																																																																					
ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION																																																																																				
10	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">entry data octal output</td> <td style="width: 10%;">0</td><td style="width: 10%;">0</td><td style="width: 10%;">0</td><td style="width: 10%;">0</td><td style="width: 10%;">0</td><td style="width: 10%;">0</td><td style="width: 10%;">Y</td><td style="width: 10%;">Y</td><td style="width: 10%;">Y</td> </tr> <tr> <td>bit position</td> <td>23</td><td>22</td><td>21</td><td>20</td><td>19</td><td>18</td><td>17</td><td>16</td><td>15</td><td>14</td><td>13</td><td>12</td><td>11</td><td>10</td><td>9</td><td>8</td><td>7</td><td>6</td><td>5</td><td>4</td><td>3</td><td>2</td><td>1</td><td>0</td> </tr> <tr> <td>binary values</td> <td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>X</td><td>X</td><td>Z</td><td>Z</td><td>Z</td><td>Z</td><td>Z</td><td>Z</td> </tr> <tr> <td></td> <td colspan="16"></td> <td>MATRIX FRAME VERSION NUMBER</td> <td colspan="6"></td> </tr> </table> <p style="margin-top: 10px;"> X...X = Version numbers of SP equipment as reflected in appropriate office record drawings and shipping info  Y = Variable octal numbers </p>	entry data octal output	0	0	0	0	0	0	Y	Y	Y	bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	binary values	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	X	X	Z	Z	Z	Z	Z	Z																		MATRIX FRAME VERSION NUMBER						
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TABLE B (Contd)

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION																						
14	entry data																						
	octal output	Y Y Y Y Y Y Y Y																					
bit position	23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0																						
binary values	0 0 V V V V V X X X X X 0 X X X X X X X X X X X X																						
		PULSE POINT DUPLICATE SP					SP MEMBER NUMBER					L OR R MATRIX		SP ROW NUMBER					SP COLUMN NUMBER				
LEFT MATRIX BASE MISCELLANEOUS SCAN NUMBER																							
<p>X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-461 or equivalent</p> <p>Y = Variable octal numbers</p>										<p>V...V = Converts to associated SP member number, all zeros if pulse points not equipped, or value of 31 if pulse points equipped without associated SP</p>													
16	entry data																						
	octal output	0 0 Y Y Y Y Y																					
bit position	23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0																						
binary values	0 0 0 0 0 0 0 X X X X X 0 X X X X X X X X X X X X																						
							SP MEMBER NUMBER					L OR R MATRIX		SP ROW NUMBER					SP COLUMN NUMBER				
LEFT MATRIX BASE MISCELLANEOUS SD NUMBER																							
<p>X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-462 or equivalent</p>										<p>Y = Variable octal numbers</p>													

At Distributor and Scanner Matrix (D&SM) and/or Distributor Applique (DA) frame(s):  
 [1] Using TABLE A, identify fuse assignments for universal SD K block(s)

TABLE A																												
FRAME	K BLOCK	FUSE																										
D&SM	K0 (TDN 0)	DESIG	AA0	AB0	AC0	AD0	AA1	AB1	AC1	AD1	BA0	BB0	BC0	BD0	BA1	BB1	BC1	BD1	CA0	CB0	CC0	CD0	CA1	CB1	CC1	CD1		
		LOCN	107/607-22								209/709-30								207/707-04									
DA	or K1 (TDN 1)	DESIG	A00	A01	A02	A03	B00	B01	B02	B03																		
		LOCN	007/507-27				007/507-33																					
D&SM	K2 (TDN 2)	DESIG	AA2	AB2	AC2	AD2	AA3	AB3	AC3	AD3	BA2	BB2	BC2	BD2	BA3	BB3	BC3	BD3	CA2	CB2	CC2	CD2	CA3	CB3	CC3	CD3		
		LOCN	107/607-28								209/709-36								207/707-10									
DA	or K3 (TDN 3)	DESIG	A20	A21	A22	A23	B20	B21	B22	B23																		
		LOCN	007/507-27				007/507-39																					

**IDENTIFY FUSE ASSIGNMENTS FOR UNIVERSAL SD K BLOCKS(S)  
 AT D&SM AND DA FRAMES**

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At Distributor and Scanner Matrix (D&SM) and/or Distributor  
 Applique (DA) frame(s):  
 [1] Using TABLE A, identify fuse assignments for  
 miscellaneous SD K block(s)

TABLE A																											
OPTION	K BLOCK	FRAME	FUSE																								
256 Pulse and 768 Relay Points	K4 (MDN 0) or K5 (MDN 1)	D&SM	DESIG	AA4	AB4	AC4	AD4	AA5	AB5	AC5	AD5	BA4	BB4	BC4	BD4	BA5	BB5	BC5	BD5	CA4	CB4	CC4	CD4	CA5	CB5	CC5	CD5
			LOCN	107/607-34										209/709-42					207/707-16								
		DA	DESIG	A40	A41	A42	B40	B41	B42	PPA0	PPA1	PPB0	PPB1														
			LOCN	007/507-33			007/507-39			007/507-05			007/507-14														
512 Pulse and 512 Relay Points	K4 (MDN 0) or K5 (MDN 1)	D&SM	DESIG	AA4	AB4	AC4	AD4	AA5	AB5	AC5	AD5	BA4	BB4	BC4	BD4	BA5	BB5	BC5	BD5	CA4	CB4	CC4	CD4	CA5	CB5	CC5	CD5
			LOCN	107/607-34										209/709-42					207/707-16								
		DA	DESIG	A40	A41	B40	B41	PPA0	PPA1	PPA2	PPA3	PPB0	PPB1	PPB2	PPB3												
			LOCN	007/507-33		007/507-39		007/507-05				007/507-14															

**IDENTIFY FUSE ASSIGNMENTS FOR MISCELLANEOUS SD K BLOCK(S)  
 AT D&SM AND DA FRAMES**

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At Distributor and Scanner Matrix (D&SM) frame:  
 [1] Using TABLE A, identify fuse assignments for universal  
 scan K block(s)

TABLE A																		
FRAME	K BLOCK	FUSE																
LEFT D&SM	K0 (TSN 0)	DESIGNATION	5A0	5B0	5C0	5D0	5A1	5B1	5C1	5D1	SA0	SB0	SC0	SD0	SA1	SB1	SC1	SD1
		LOCATION	107-04								207-30							
	K2 (TSN 2)	DESIGNATION	5A2	5B2	5C2	5D2	5A3	5B3	5C3	5D3	SA2	SB2	SC2	SD2	SA3	SB3	SC3	SD3
		LOCATION	107-10								207-36							
RIGHT D&SM	K1 (TSN 1)	DESIGNATION	5A0	5B0	5C0	5D0	5A1	5B1	5C1	5D1	SA0	SB0	SC0	SD0	SA1	SB1	SC1	SD1
		LOCATION	607-04								707-30							
	K3 (TSN 3)	DESIGNATION	5A2	5B2	5C2	5D2	5A3	5B3	5C3	5D3	SA2	SB2	SC2	SD2	SA3	SD3	SC3	SD3
		LOCATION	607-10								707-36							

**IDENTIFY FUSE ASSIGNMENTS FOR UNIVERSAL SCAN K BLOCK(S)  
 AT D&SM FRAME**

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At Distributor and Scanner Matrix (D&SM) frame:  
 [1] Using TABLE A, identify fuse assignments for universal  
 and/or miscellaneous scan K block(s)

TABLE A																		
FRAME	K BLOCK	FUSE																
LEFT D&SM	K0 (TSN 0)	DESIGNATION	5A0	5B0	5C0	5D0	5A1	5B1	5C1	5D1	SA0	SB0	SC0	SD0	SA1	SB1	SC1	SD1
		LOCATION	107-04								207-30							
	K2 (TSN 2)	DESIGNATION	5A2	5B2	5C2	5D2	5A3	5B3	5C3	5D3	SA2	SB2	SC2	SD2	SA3	SB3	SC3	SD3
		LOCATION	107-10								207-36							
	K4 (MSN 0)	DESIGNATION	5A4	5B4	5C4	5D4	5A5	5B5	5C5	5D5	SA4	SB4	SC4	SD4	SA5	SB5	SC5	SD5
		LOCATION	107-16								207-42							
RIGHT D&SM	K1 (TSN 1)	DESIGNATION	5A0	5B0	5C0	5D0	5A1	5B1	5C1	5D1	SA0	SB0	SC0	SD0	SA1	SB1	SC1	SD1
		LOCATION	607-04								707-30							
	K3 (TSN 3)	DESIGNATION	5A2	5B2	5C2	5D2	5A3	5B3	5C3	5D3	SA2	SB2	SC2	SD2	SA3	SB3	SC3	SD3
		LOCATION	607-10								707-36							
	K5 (MSN 1)	DESIGNATION	5A4	5B4	5C4	5D4	5A5	5B5	5C5	5D5	SA4	SB4	SC4	SD4	SA5	SB5	SC5	SD5
		LOCATION	607-16								707-42							

**IDENTIFY FUSE ASSIGNMENTS FOR UNIVERSAL AND/OR MISCELLANEOUS  
 SCAN K BLOCKS AT D&SM FRAME**

At Distributor and Scanner Matrix (D&SM) and/or Distributor Applique (DA) Frame(s)

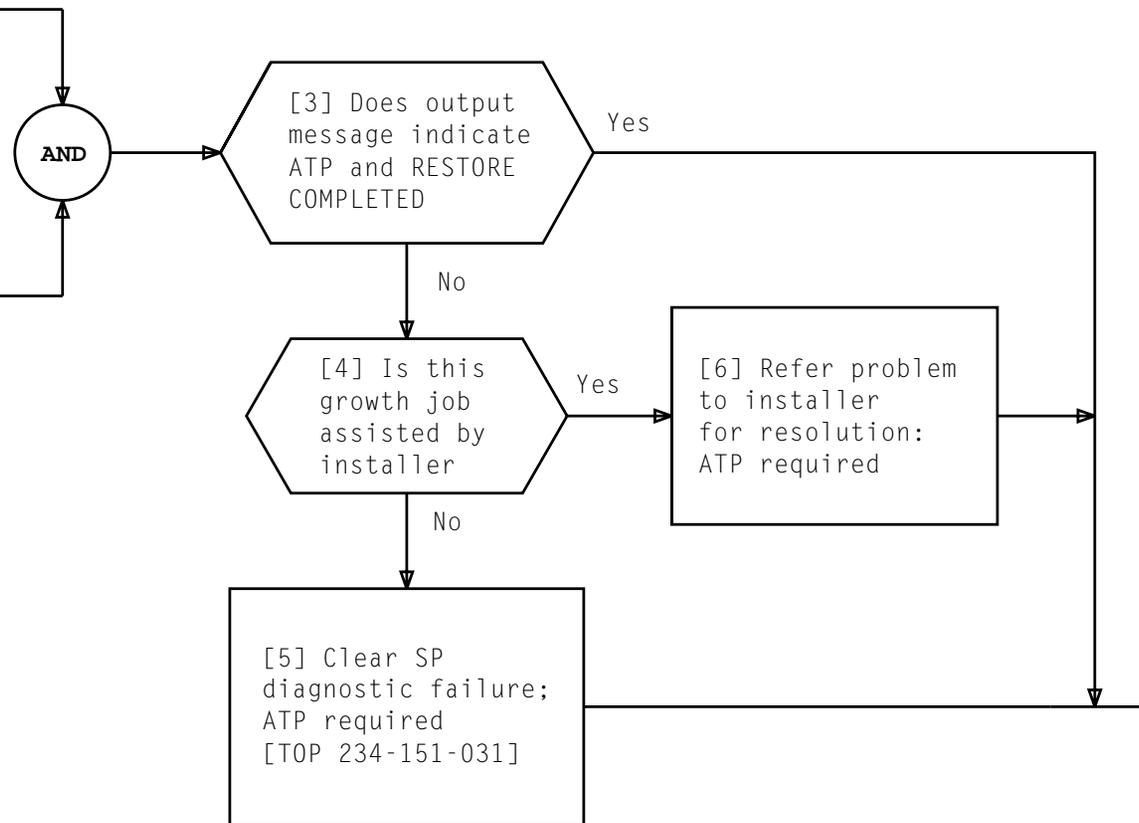
[1] Using TABLE A, identify fuse assignments for universal and/or miscellaneous SD K blocks

TABLE A																										
K BLOCK	FRAME	FUSE																								
K0 (TDN 0) or K1 (TDN 1)	D&SM	DESIG	AA0	AB0	AC0	AD0	AA1	AB1	AC1	AD1	BA0	BB0	BC0	BD0	BA1	BB1	BC1	BD1	CA0	CB0	CC0	CD0	CA1	CB1	CC1	CD1
		LOCN	107/607-22						209/709-30						207/707-04											
	DA	DESIG	A00	A01	A02	A03	B00	B01	B02	B03																
		LOCN	007/507-27				007/507-33																			
K2 (TDN 2) or K3 (TDN 3)	D&SM	DESIG	AA2	AB2	AC2	AD2	AA3	AB3	AC3	AD3	BA2	BB2	BC2	BD2	BA3	BB3	BC3	BD3	CA2	CB2	CC2	CD2	CA3	CB3	CC3	CD3
		LOCN	107/607-28						209/709-36						207/707-10											
	DA	DESIG	A20	A21	A22	A23	B20	B21	B22	B23																
		LOCN	007/507-27				007/507-39																			
K4 (MDN 0) or K5 (MDN 1)	D&SM	DESIG	AA4	AB4	AC4	AD4	AA5	AB5	AC5	AD5	BA4	BB4	BC4	BD4	BA5	BB5	BC5	BD5	CA4	CB4	CC4	CD4	CA5	CB5	CC5	CD5
		LOCN	107/607-34						209/709-42						207/707-16											
	DA	DESIG	A40	A41	A42	A43	B40	B41	B42	B43																
		LOCN	007/507-33				007/507-39																			

**IDENTIFY FUSE ASSIGNMENTS FOR UNIVERSAL AND/OR MISCELLANEOUS SD K BLOCK(S) AT D&SM AND DA FRAMES**

[1] At power switch, rotate **OFF** switch to normal position

[2] See NOTE 1. Depress **ON** switch



NOTE 1

Operation of **ON** switch will cause diagnostic to be run

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SUMMARY

Using verify entry input message, call up growth associated SP1 UT translator and verify that resulting TTY octal output data, when converted, agrees with office records. Refer to entry word explanations of TABLE B, Page 3 as

required, for assistance in interpreting specific data fields. If output data and office records do not agree, perform appropriate corrective action as determined by TELCO engineering/regional engineering and approved by office supervisor.

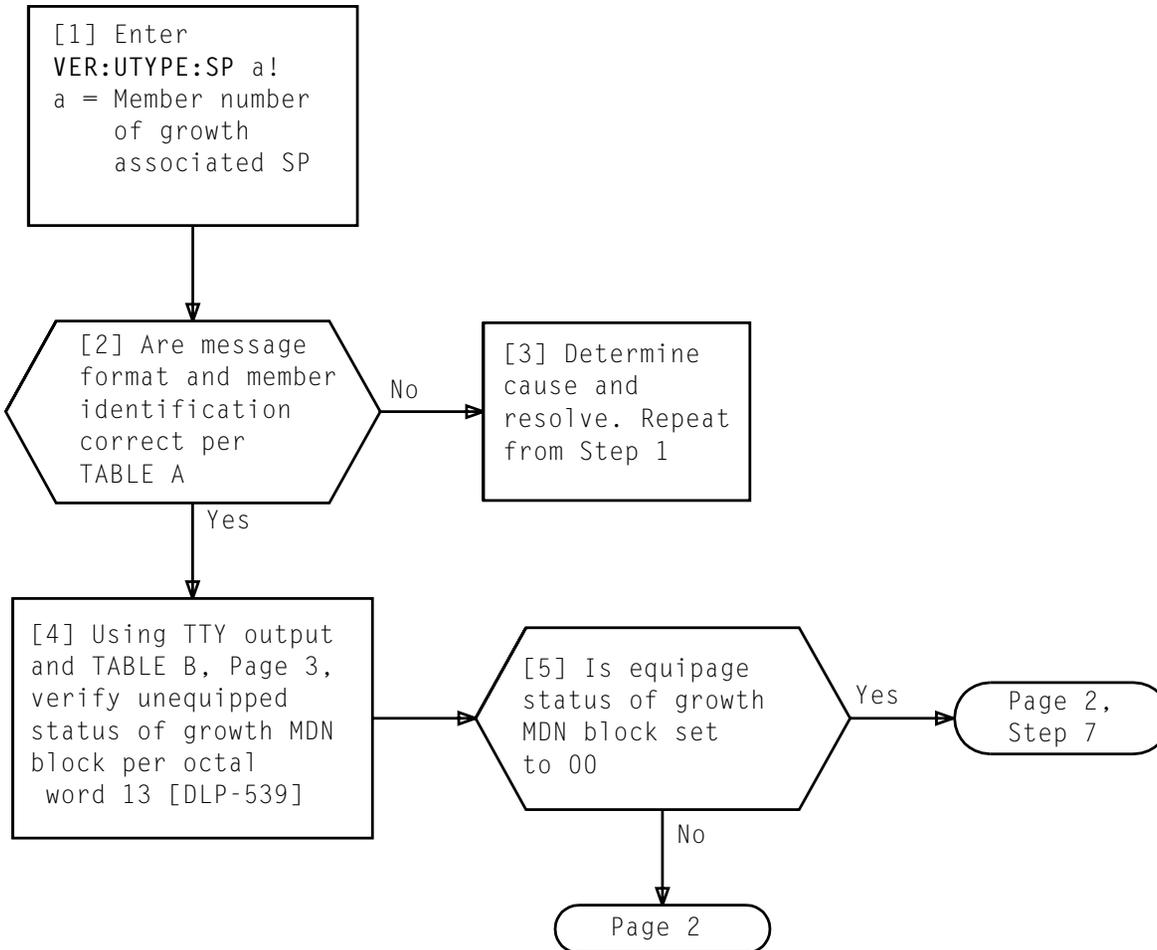
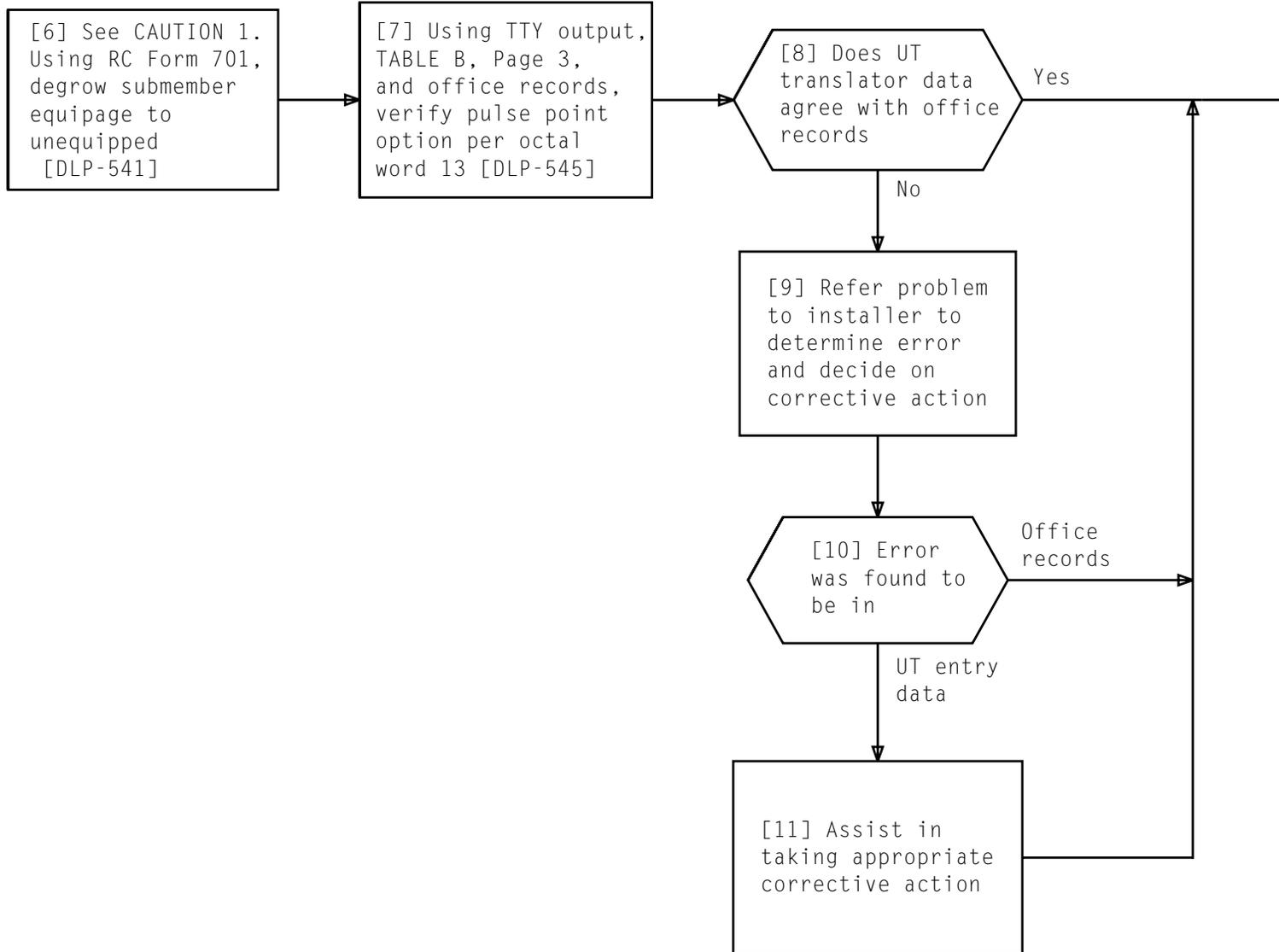


TABLE A	
VER:UTMN;OPT(),CUR: FLN a,	UTYN SP,
MEMN b, ME OPER,	
ENTRY ADDRESS c,	ENTRY SIZE 16,
CUR	
WORD 0	_____
	_____
WORD 10	_____
	_____
a = Floor location number b = Member number of growth associated SP c = Starting octal address for unit type entry	



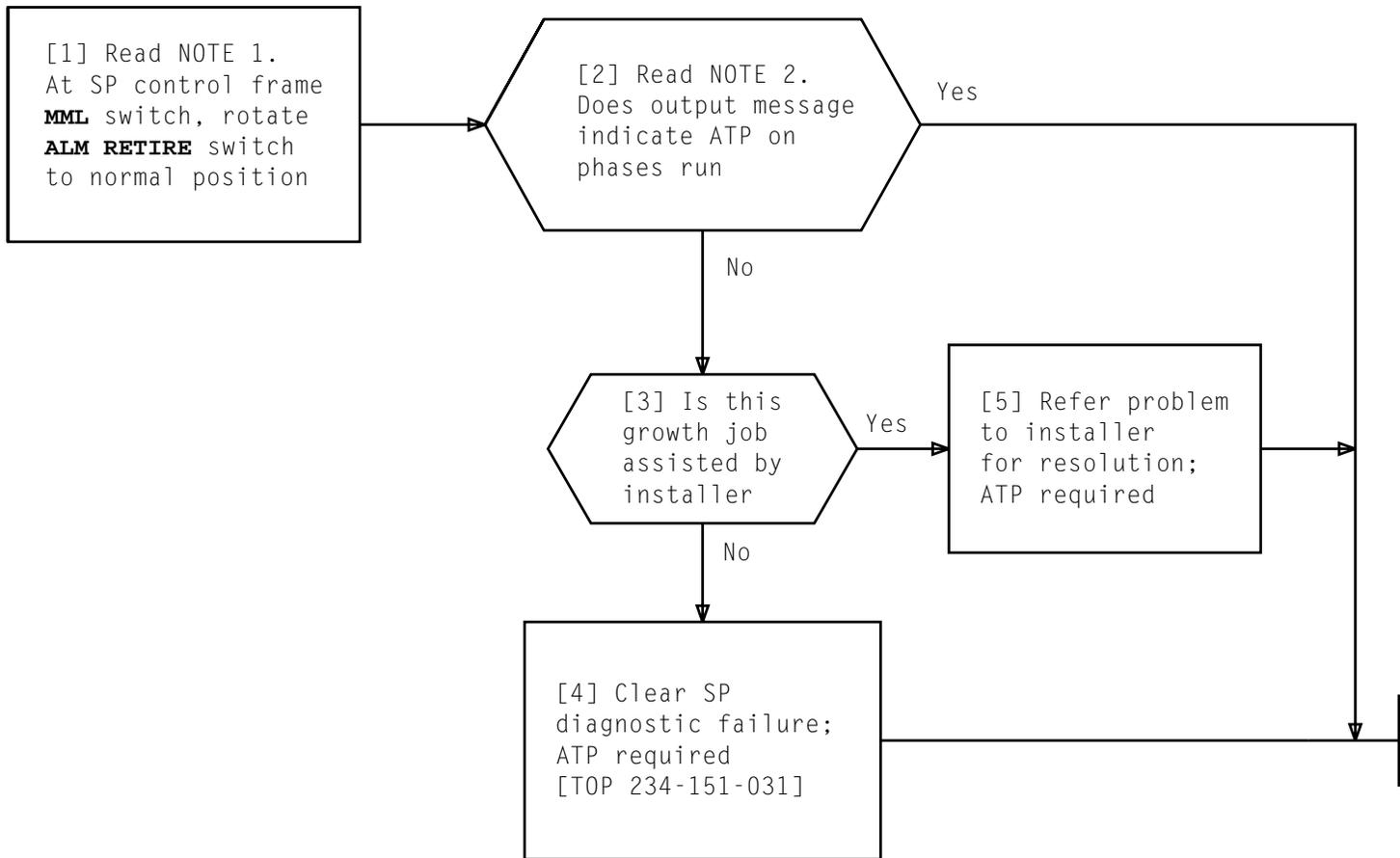
*CAUTION 1*  
*Depending on local procedures, supervisory or TELCO engineering approval must be obtained prior to performing any data changes*

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**VERIFY MISCELLANEOUS SD DATA OF SP1 UT TRANSLATOR**

TABLE B

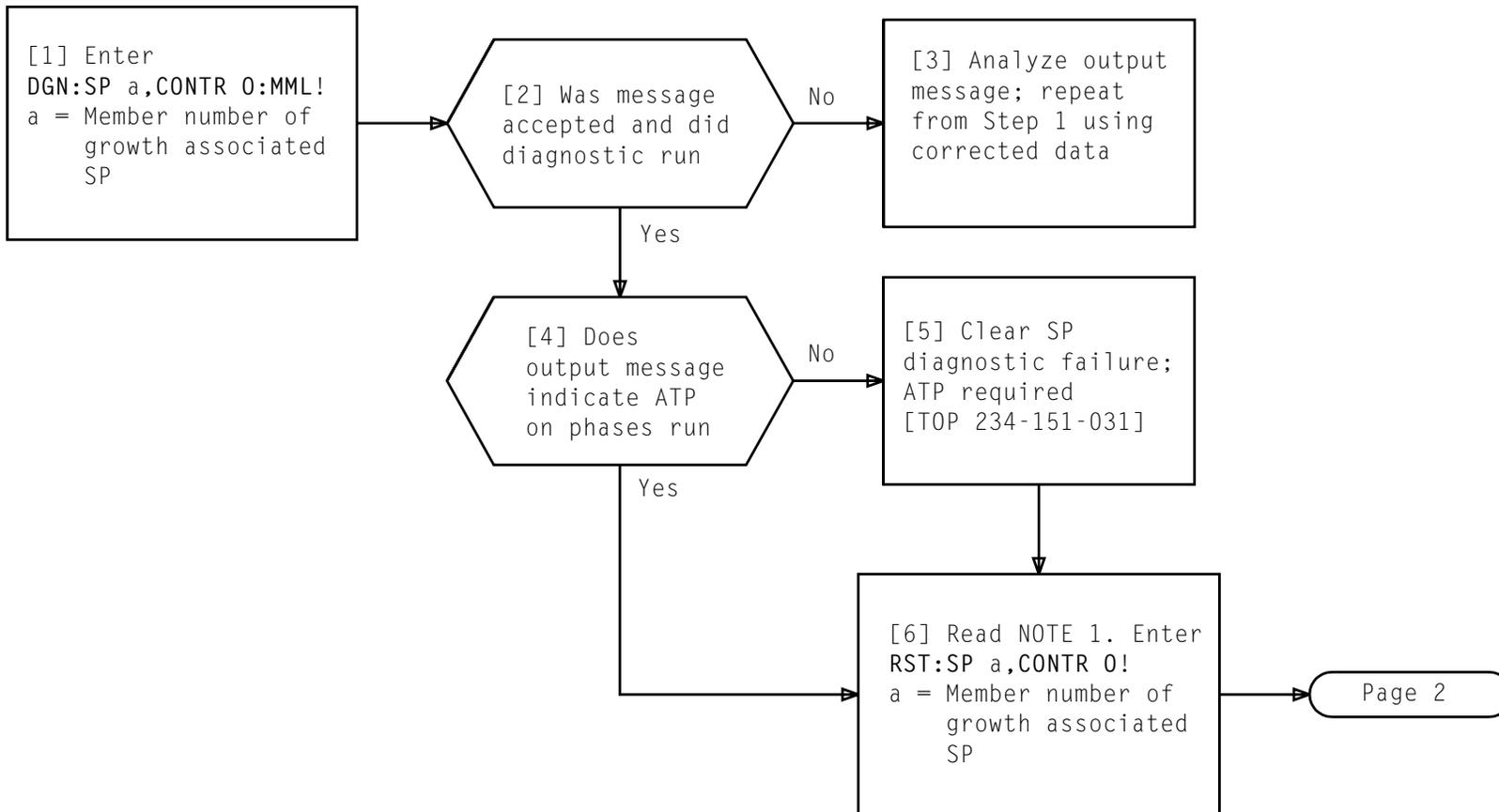
ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION																								
13	entry data octal output	0		0		Y		Y		Y		Y		Y		Y									
	bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	binary values	0	0	0	0	0	0	0	0	V	V	V	V	Z	Z	Z	Z	X	X	X	X	W	W	W	W
										RIGHT		LEFT						MDN BLK1		MDN BLK0		MSN BLK1		MSN BLK0	
										MATRIX FRAME PULSE POINT OPTION				MISC BLOCK EQUIPAGE											
<p>VV = 2-digit code corresponding to pulse point option as reflected in office record drawing T-nnnn-Hn-3870 or equivalent            = 00 = no pulse points            = 01 = 256 pulse points            = 10 = 512 pulse points            = 11 = invalid</p> <p>XX = 2-digit code giving growth status of MDN blocks            = 00 = unequipped            = 11 = operational</p> <p>Y...Y = Variable octal numbers</p>																									



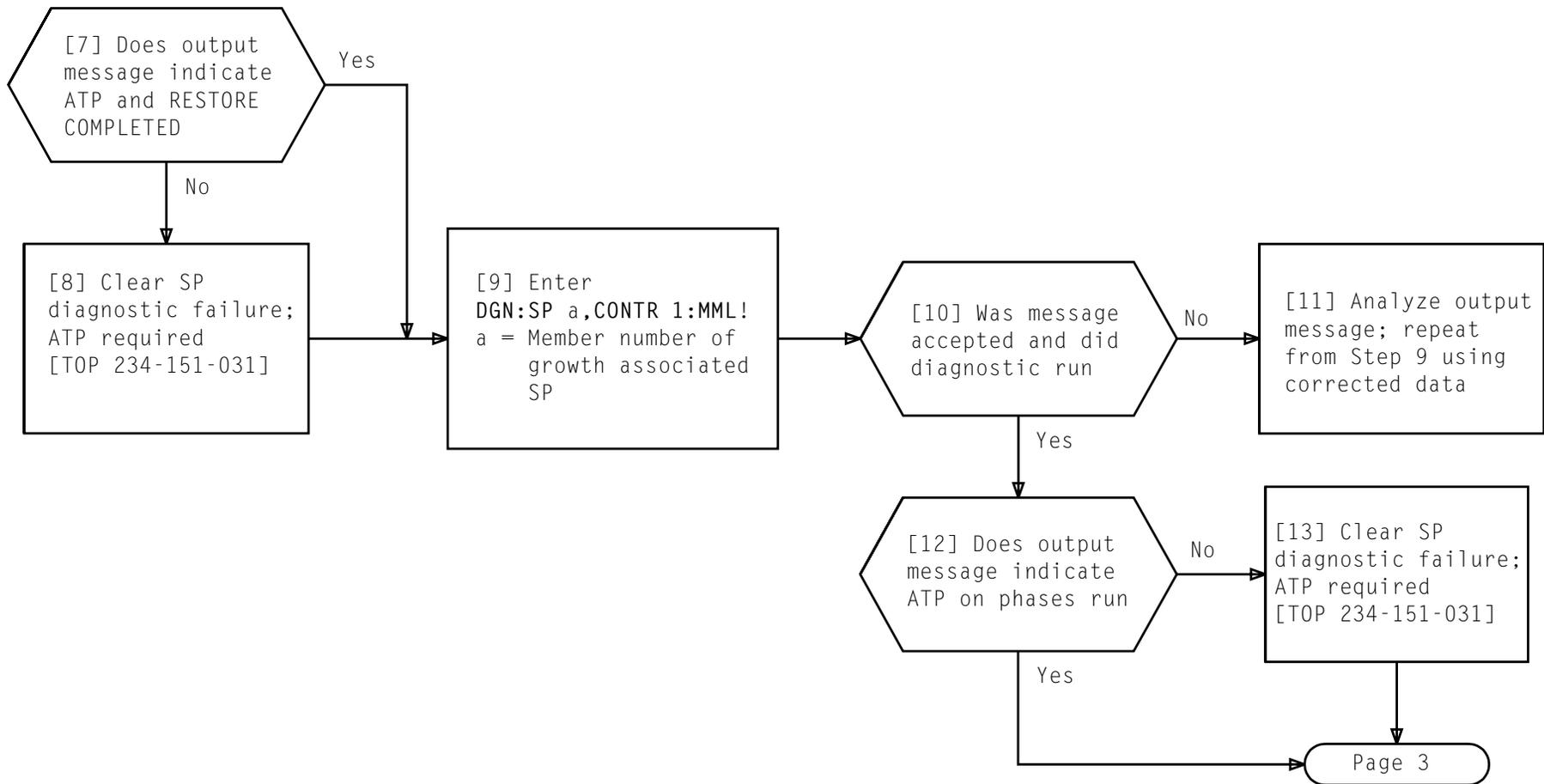
NOTES

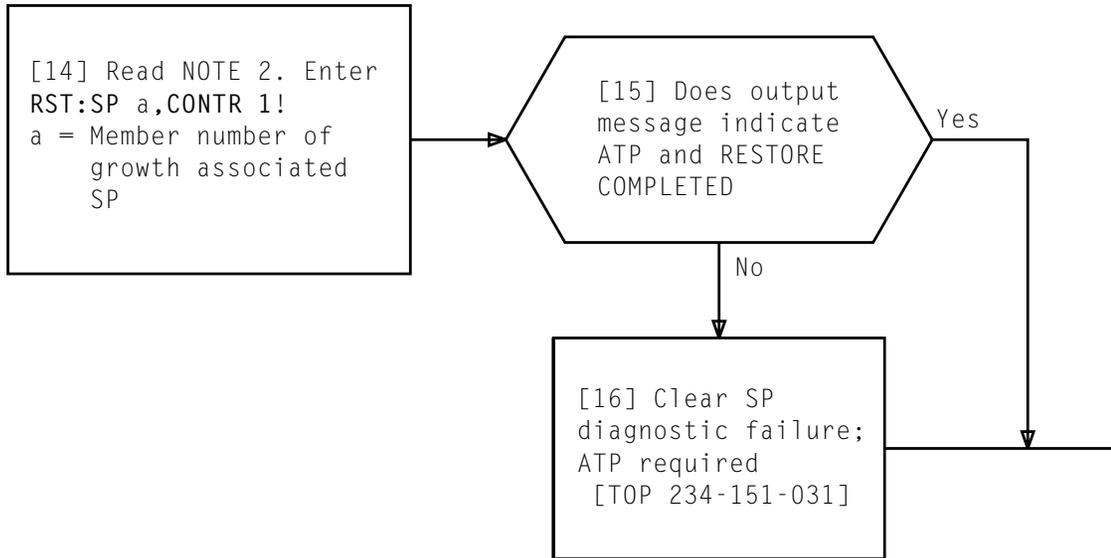
1. When **MML** switch is placed in normal position, **ACK** and **MTCE LIMIT** lamps are lighted and **OFF NORM** lamp is off. An automatic diagnostic will occur on SP
2. If diagnostics indicate ATP, **ACK** and **MTCE LIMIT** lamps will go off. If diagnostic fails, **MTCE LIMIT** lamp will remain lighted and **ACK** lamp will go off

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NOTE 1	
Restore input message will cause diagnostic to be run and controller to be restored, if ATP	
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NOTE 2	
Restore input message will cause diagnostic to be run and controller to be restored, if ATP	
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SUMMARY

Verify from entry output message, words 0 and 13, that SP 1 member and submember equipage bits are set to zero. Note any discrepancies for later reference.

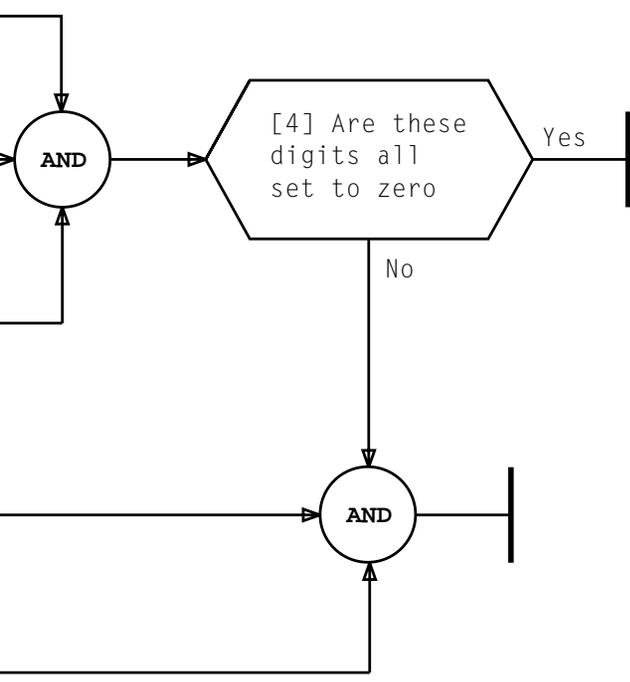
[1] See octal words to be verified in entry output message

[2] Examine 6 rightmost octal digits of word 0

[3] Examine 4 rightmost octal digits of octal word 13

[5] See FIG. 1 and 2, Page 2. Identify associated binary bit(s) not set to zero and note for later reference

[6] Identify equipage state(s) other than 00 to installer



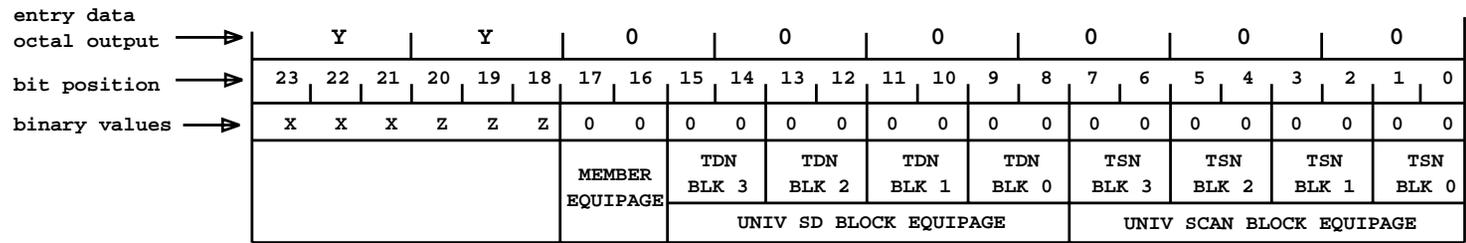


FIG. 1 - Entry Word 0 Layout

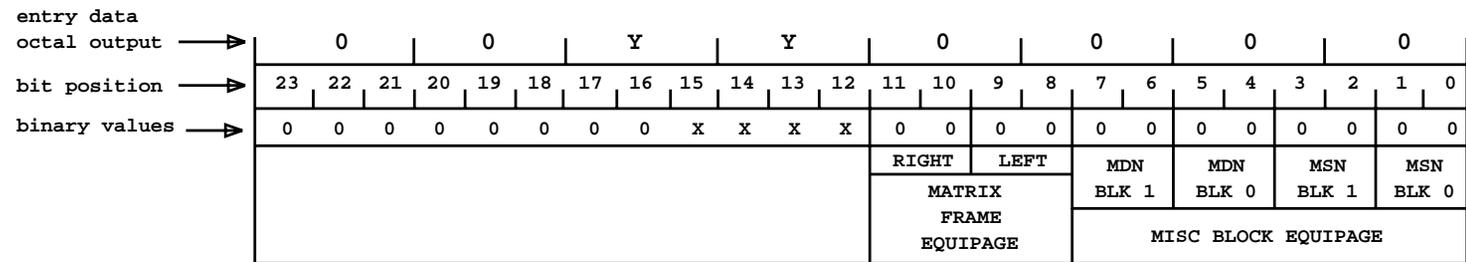


FIG. 2 - Entry Word 13 Layout



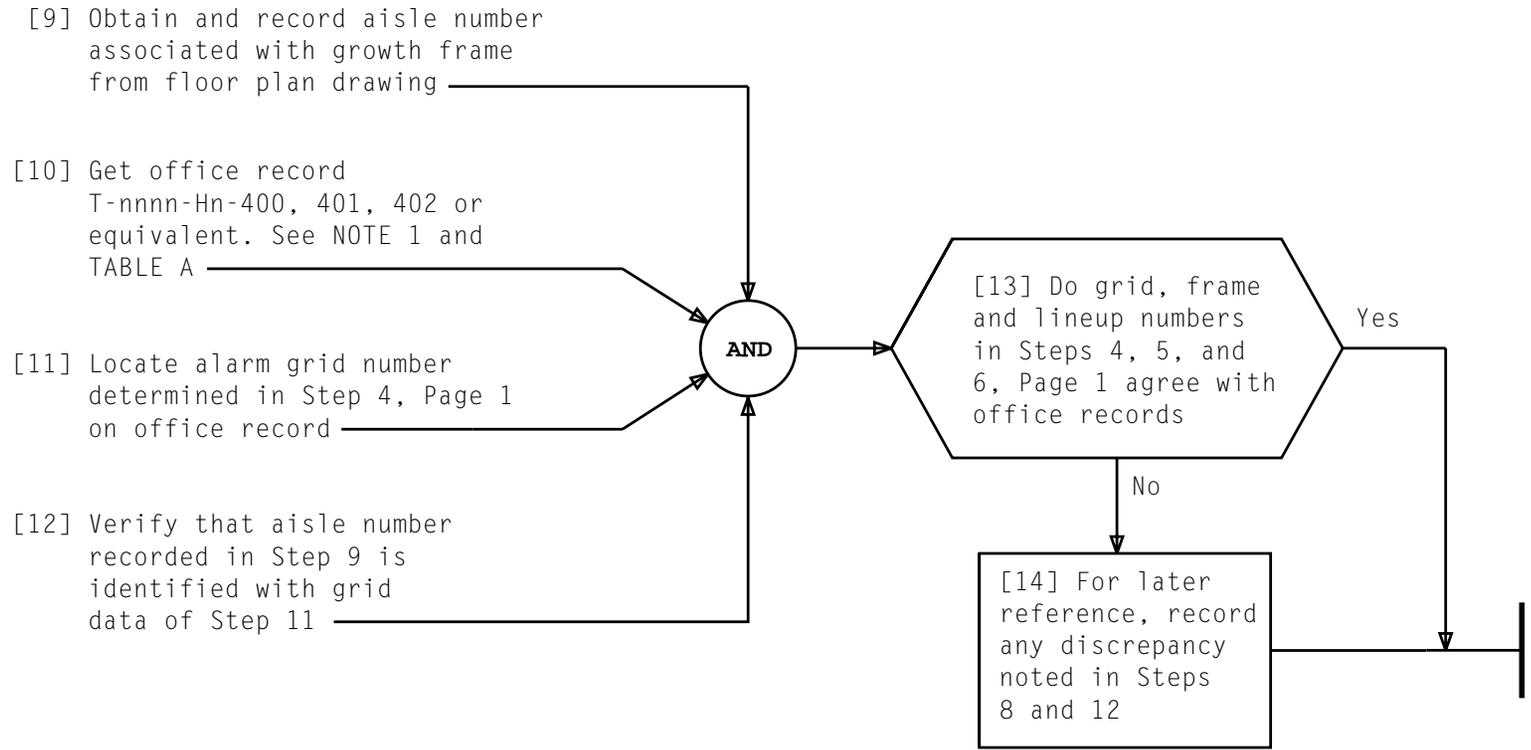


TABLE A	
ALARM GRIDS	DRAWING NUMBER
1 through 5	T-nnnn-Hn-400
6 through 10	T-nnnn-Hn-401
11 through 15	T-nnnn-Hn-402

NOTE 1 n = Office unique drawing identification number	
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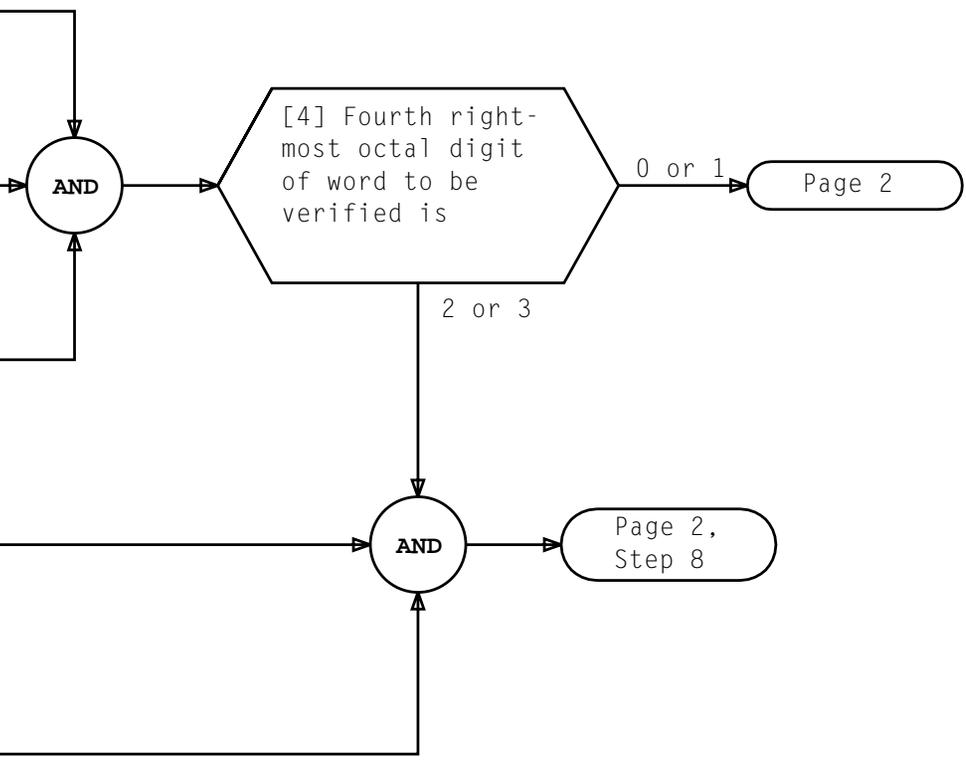
[1] Note word in output message containing SD or pulse point to be verified

[2] Convert 6 rightmost digits of word to be verified to decimal SP member, row, and column numbers using FIG. 1. Record results

[3] Get office record T-nnnn-Hn-462-xx or equivalent. xx = SP member number determined in Step 2

[5] Add 64 decimal to SP row number determined in Step 2. Record new result

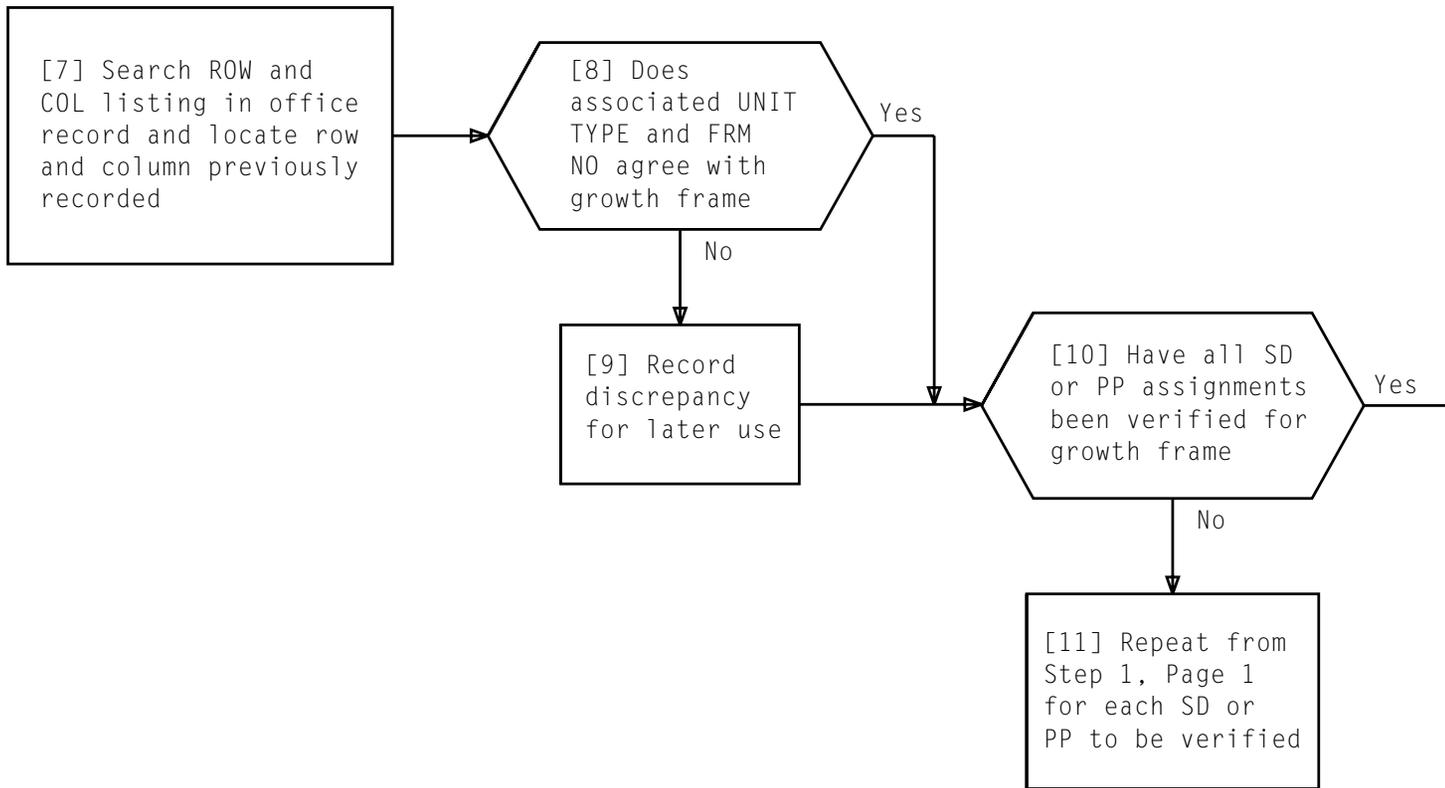
[6] Search ROW and COL listing in office record and locate row and column previously recorded



entry data																			
octal output			Y			Y				Y				Y			Y		
bit position	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
binary values	0	0	X	X	X	X	X	0	X	X	X	X	X	X	X	X	X	X	X
	SP MEMBER NUMBER						L OR R MATRIX	SP ROW NUMBER						SP COLUMN NUMBER					

FIG. 1 - Entry Data Word Layout

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**VERIFY SD OR PULSE POINT ASSIGNMENTS FOR GROWTH FRAME**

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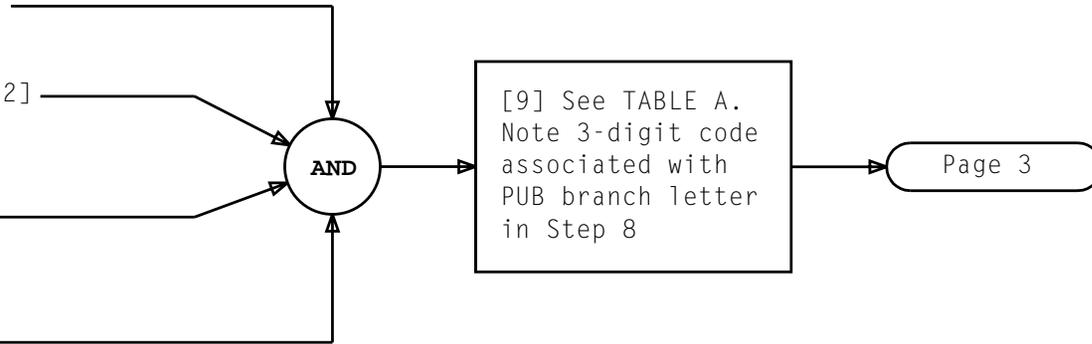


[5] Get office record T-nnnn-Hn-3840 or equivalent. See NOTE 1

[6] On drawing locate Table C. [FIG. 2]

[7] On drawing locate line on Table C containing growth frame [FIG. 2]

[8] Read left to **BUS 0 & 1** column and note PUB branch letter



[9] See TABLE A. Note 3-digit code associated with PUB branch letter in Step 8

TABLE C							
LINE NO.	BUS 0&1	FROM	THROUGH	TO	TOTAL LENGTH	TOTAL LOAD	NOTE OR TABLE
1	A	PUBB		1/0 1		1	
2	B	PUBB	TS1 00,01,02,03,04,05,06,13,12,11,10,09,08,07,	TS1 28		44	1
3	C	PUBB	VIF 020,019;SP 03;VIF 018,017,016,014,015;SP	VIF 013		12	2
4	D	PUBB	VIF 010,009; VIF 008,007,006,004,005;	VIF 003		13	2
5	E	PUBB		TG1935.1		1	
6	F	PUBB	SP II 7,8,9,10	SPII 11		6	
7	G	PUBB	SP 01	SP 00		2	
8	H	PUBB	SP 2,12,13	SP 2 14		4	
9	K	PUBB	VIF 023,022,021,SP 04,VIF 025	VIF 024		6	2
10	L	PUBB					
11	M	PUBB					
12	R	PUBB					
13	T	PUBB					
14	V	PUBB					
15	W	PUBB					
16	X	PUBB					
LNN	BS	FROM		TO	TO LG	TO LD	NTTB

FIG. 2 - Typical Table C of 3840 Drawing

TABLE A	
PUB BRANCH LETTER	3-DIGIT CODE
A and B	000
C and D	001
E and F	010
G and H	011
K and L	100
M and R	101
T and V	110
W and X	111

NOTE 1  
n = Office Unique drawing identification numbers

**VERIFY PUB BRANCH ASSIGNMENT FOR GROWTH FRAME**



[1] Note word in output message containing scan point to be verified

[2] Convert 6 rightmost digits of word to be verified to decimal SP member, row, and column numbers using FIG. 1. Record results

[3] Get office record T-nnnn-Hn-461-xx or equivalent. xx = SP member number determined in Step 2

[5] Add 64 decimal to SP row number determined in Step 2. Record new result

[6] Search ROW and COL listing in office record and locate row and column previously recorded

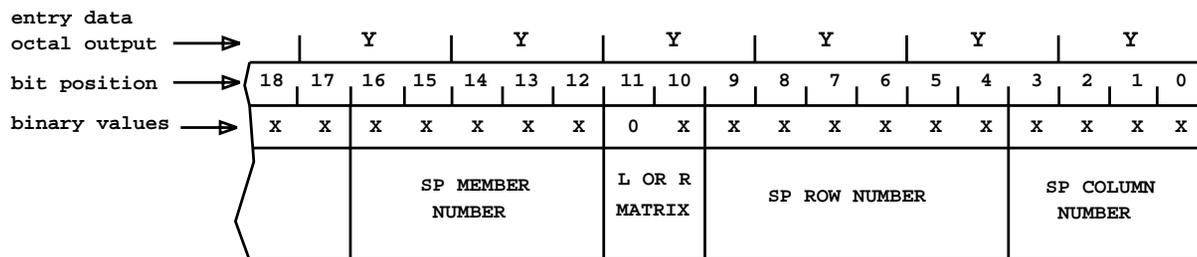
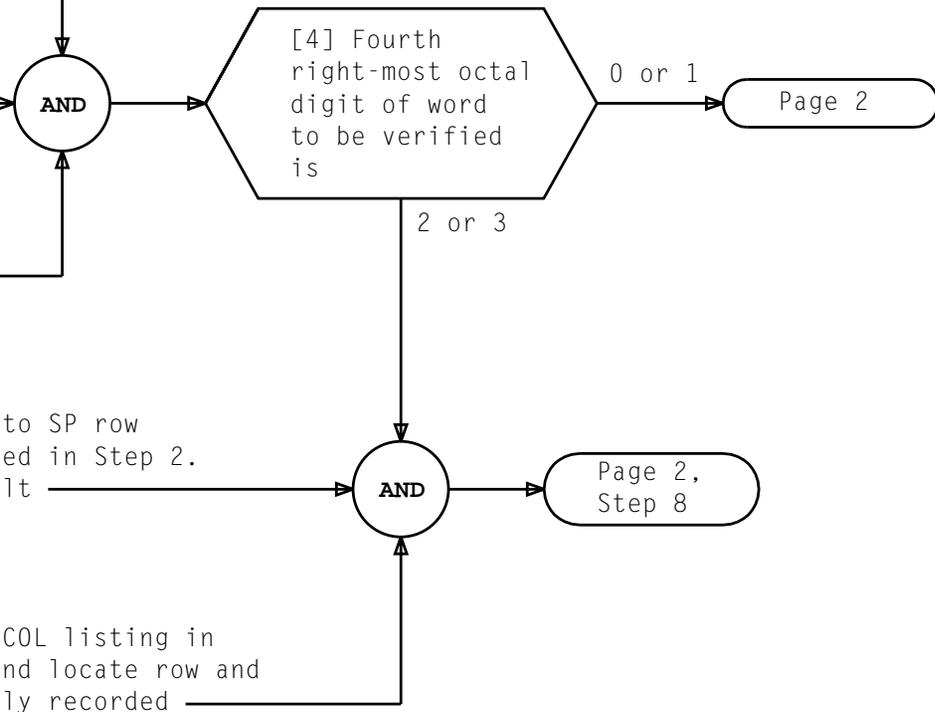
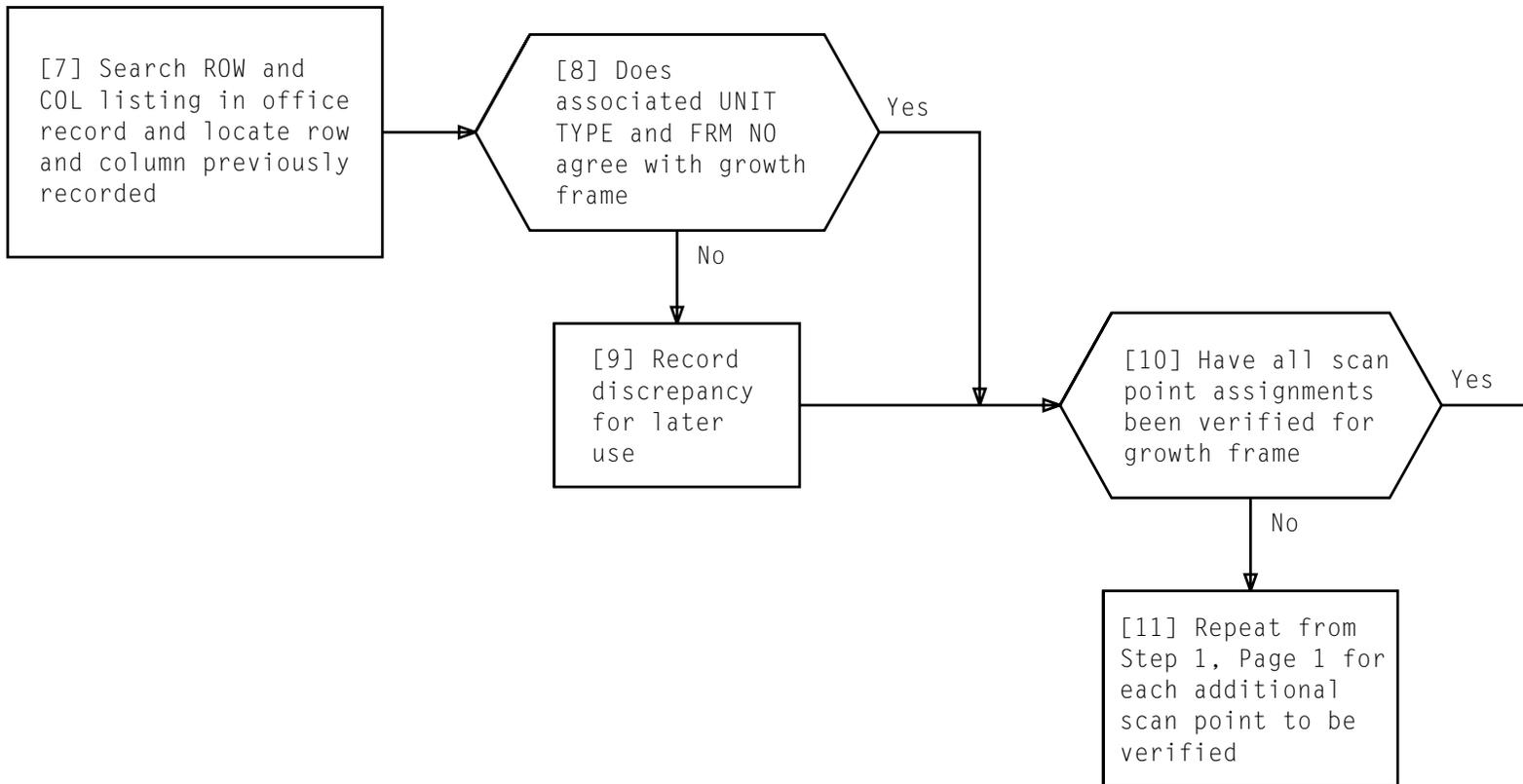


FIG. 1 - Entry Data Word Layout

VERIFY SCAN POINT ASSIGNMENT(S) FOR GROWTH FRAME

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**VERIFY SCAN POINT ASSIGNMENT(S) FOR GROWTH FRAME**

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<p style="text-align: center;"><b>SUMMARY</b></p> <p>Convert octal digits representing pulse point option of entry output word to binary. Determine actual growth frame pulse point equipage and compare actual equipage</p>	<p>with entry output data using TABLE A. Record any discrepancy. If growth frame is equipped with pulse points, verify associated SP member number and record discrepancy if entry output data is in error.</p>
--	---

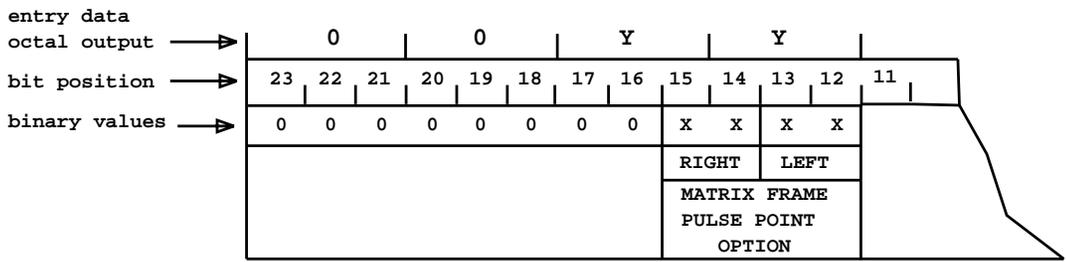
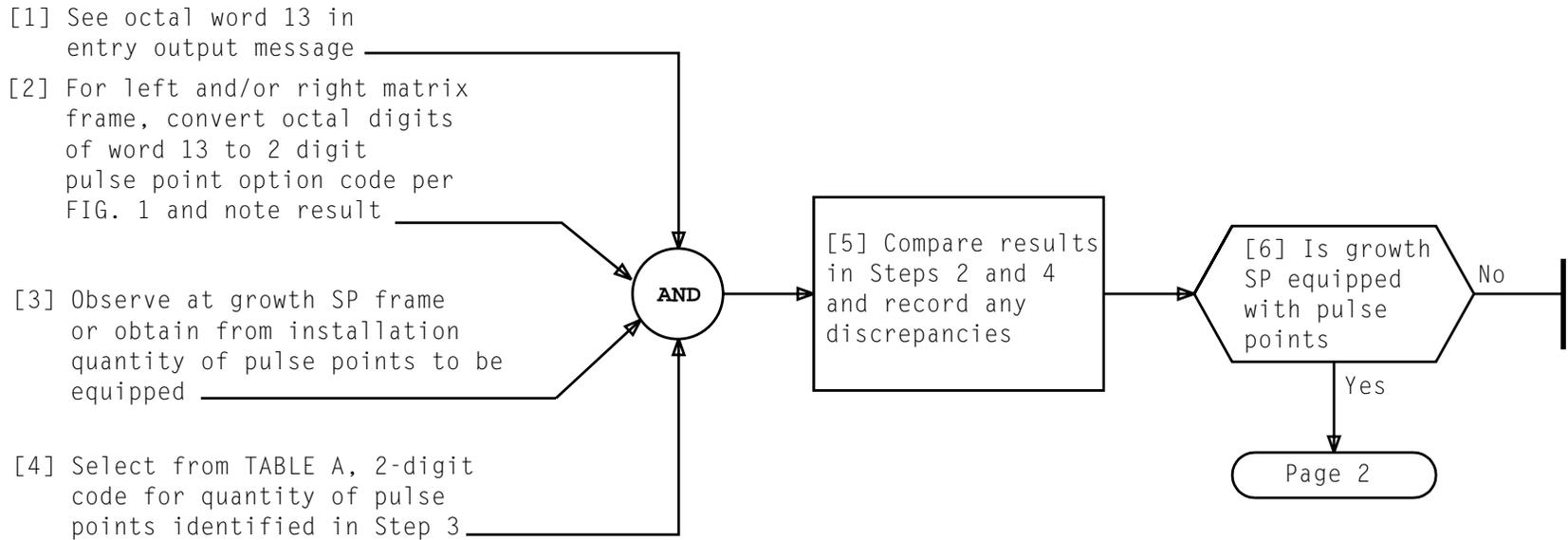


FIG. 1 - Partial Entry Data Word 13 Layout

TABLE A	
2-DIGIT CODE	POINT OPTION
00	No pulse points
01	256 pulse points
10	512 pulse points
11	Invalid

**VERIFY GROWTH SP PULSE POINT OPTION AND PULSE POINT DUPLICATE SP**

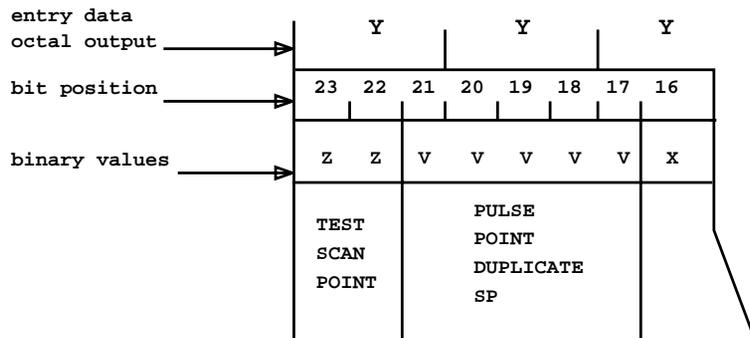
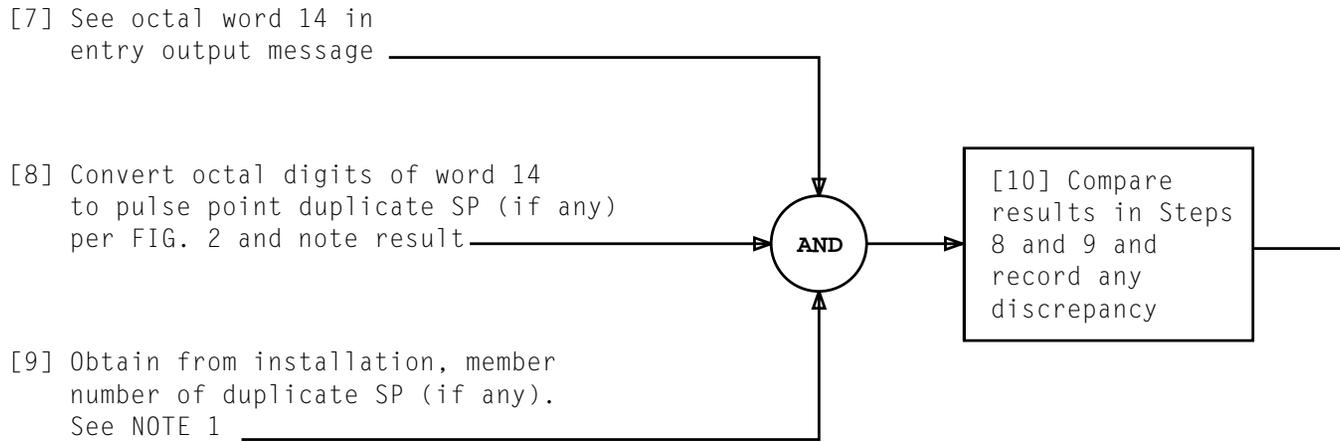


FIG. 2 - Partial Entry Data Word 14 Layout

**NOTE 1**

If growth SP has pulse point option specified and will not be mated to an operational SP or another SP being added on this growth addition the duplicate member number data will be set to 31

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**VERIFY GROWTH SP PULSE POINT OPTION AND PULSE POINT DUPLICATE SP**



Using TTY and CRT display of RC Form 801:

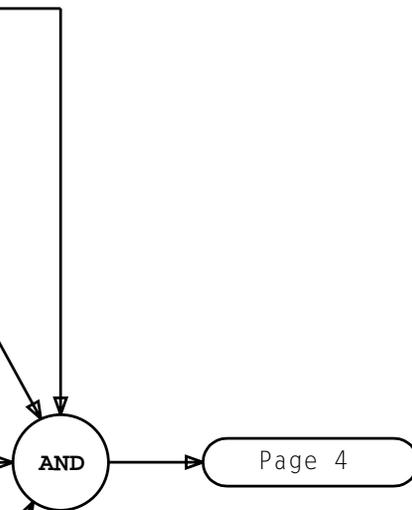
[6] In field following **WORDNO**,  
type decimal number of  
UT translator word to  
be changed

[7] Determine quantity of  
consecutive bits which  
span all bits requiring  
change in this UT  
translator word

[8] In field following **SIZE**,  
type decimal number of  
bits determined in Step 7.  
See example in FIG. 2,  
Page 3

[9] Determine bit position  
number (range of 0 to 23)  
identifying rightmost of  
consecutive bits  
determined in Step 7

[10] In field following **DISP**,  
type decimal number  
determined in Step 9.  
See example in FIG. 2



**PERFORM FUNCTIONAL WORD CHANGE TO CORRECT  
UT TRANSLATOR WORD THEN VERIFY**

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Using TTY and CRT display of RC Form 801:

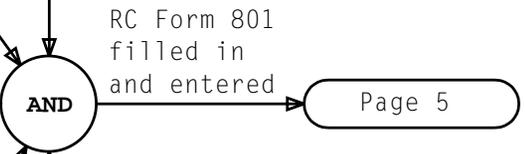
[11] Type **B** in field following **BINOCT**

[12] Read NOTE 1. Determine binary bits to be inserted into UT translator word to correct that word. See example in FIG. 2, Page 3

[13] In field following **NEWDATA**, type binary bits determined in Step 12. See example in FIG. 2

[14] Read NOTE 2. In field following **OLDDATA**, type current binary contents of only that portion of the UT translator word requiring change. See example in FIG. 2

[15] Enter form



NOTES	
1. Quantity of binary bits to be entered as <b>NEWDATA</b> must be equal to decimal number entered as <b>SIZE</b>	
2. Quantity of binary bits to be entered as <b>OLDDATA</b> must be equal to quantity of bits entered as <b>NEWDATA</b>	
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**PERFORM FUNCTIONAL WORD CHANGE TO CORRECT  
UT TRANSLATOR WORD THEN VERIFY**

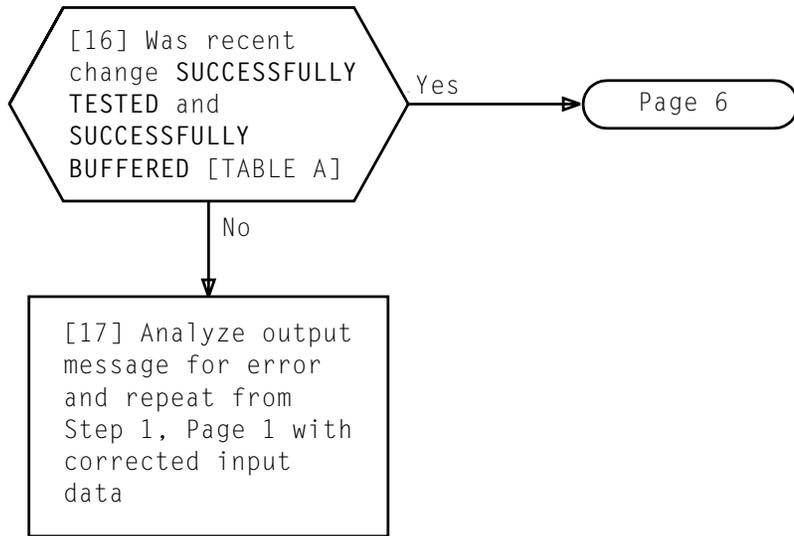


TABLE A	
RC ORNU a	SUCCESSFULLY TESTED
RC ORNU a	SUCCESSFULLY BUFFERED
RC:FUNC;CHG;OPT(TRANS),BUF:	TRANSID UTSP,
ORNU a,	
ENTRY b,	WORDNO c,
SIZE d,	DISP e,
BINOCT B,	
NEWDATA f,	
OLDDATA g,	
REMARKS	-----!
REPT:RC DUMP OF UNIT TYPE ENTRY AS IT WILL APPEAR AFTER THE MESSAGE IS ACTIVATED	
WORD 0	_____
	_____
WORD 10	_____
	_____
a = RC order number b = Member number of growth SP c = Decimal number of word changed d = Decimal number of bits changed e = Decimal number of bit position (Rightmost bit) f = Binary bits inserted to correct data g = Binary contents of portion of word changed	

**PERFORM FUNCTIONAL WORD CHANGE TO CORRECT  
UT TRANSLATOR WORD THEN VERIFY**

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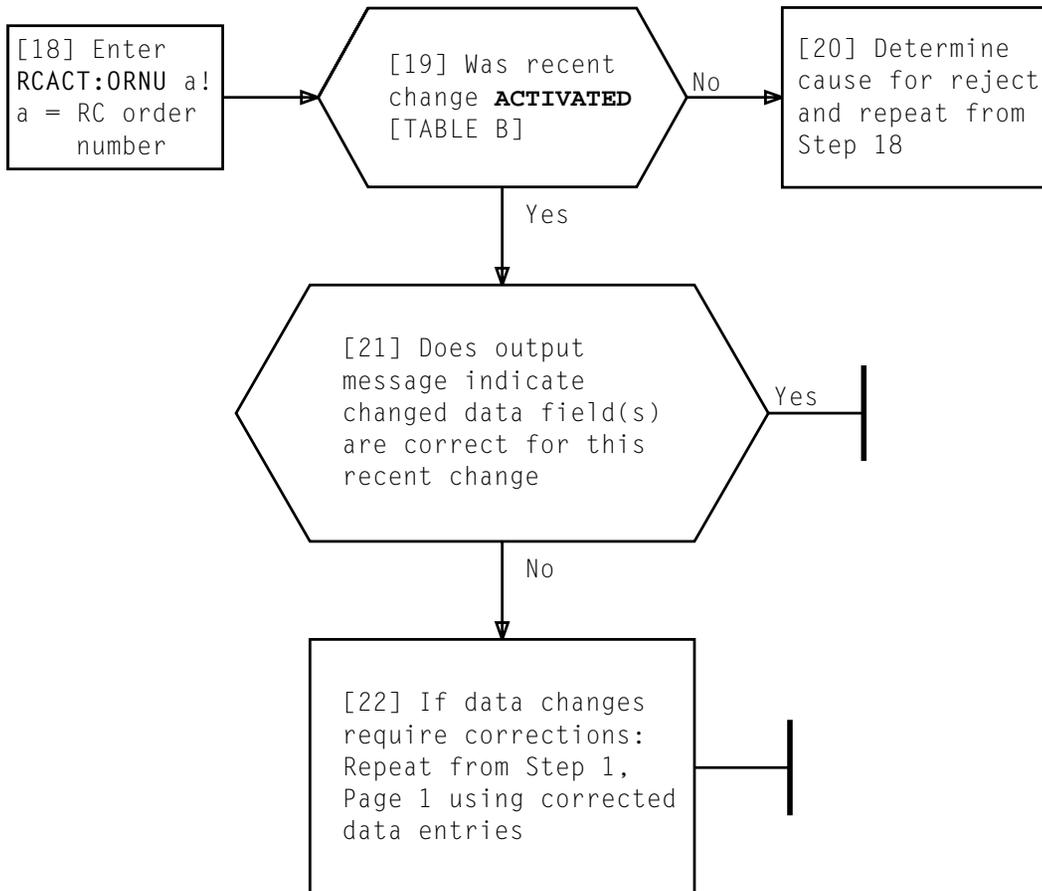


TABLE B	
RC ORNU a ACTIVATED	
RC:FUNC;CHG;OPT(TRANS),BUF:	TRANSID UTSP,
ORNU a,	
ENTRY b,	WORDNO c,
SIZE d,	DISP e,
BINOCT B,	
NEWDATA f,	
OLDDATA g,	
REMARKS..... !	
a = RC order number	
b = Member number of growth SP	
c = Decimal number of word changed	
d = Decimal number of bits changed	
e = Decimal number of bit position (Rightmost bit)	
f = Binary bits inserted to correct data	
g = Binary contents of portion of word changed	

**PERFORM FUNCTIONAL WORD CHANGE TO CORRECT  
UT TRANSLATOR WORD THEN VERIFY**

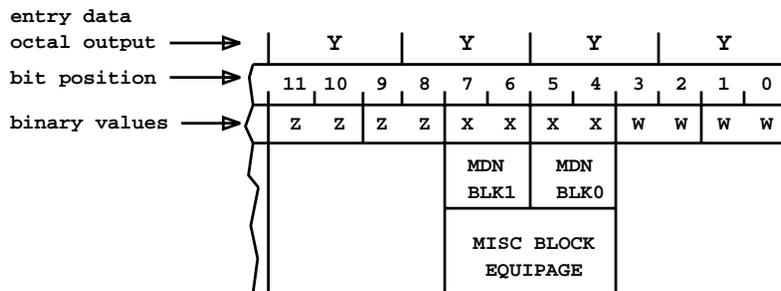
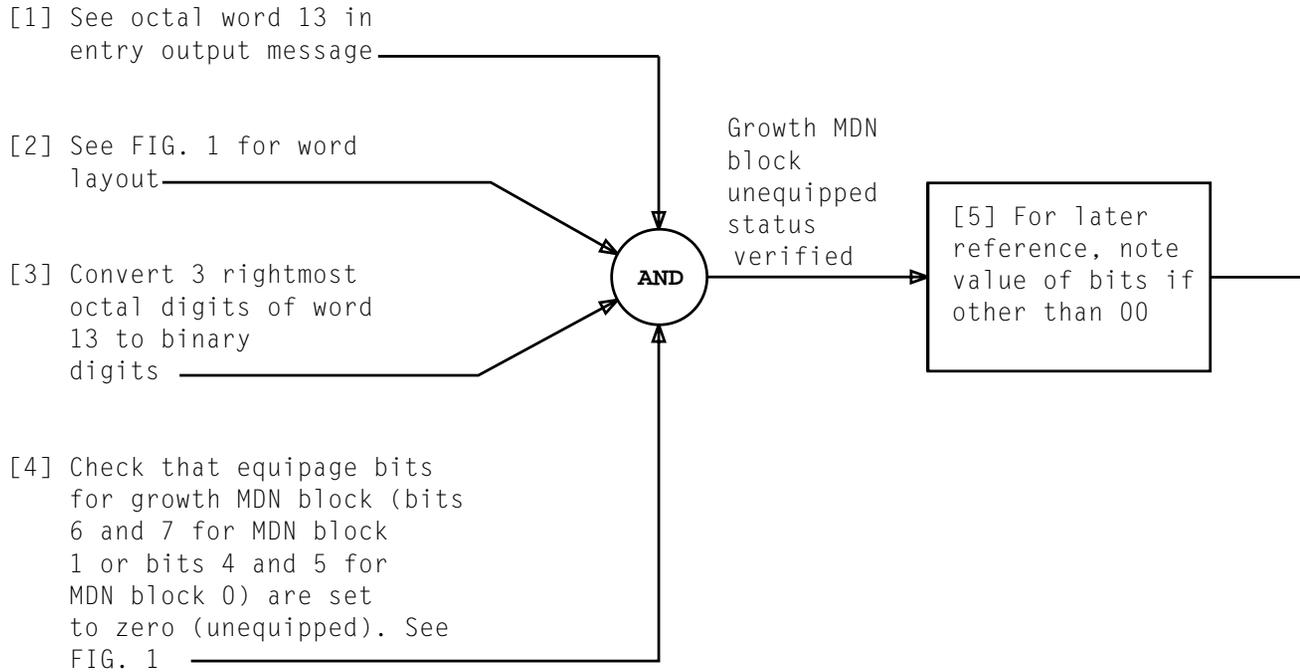
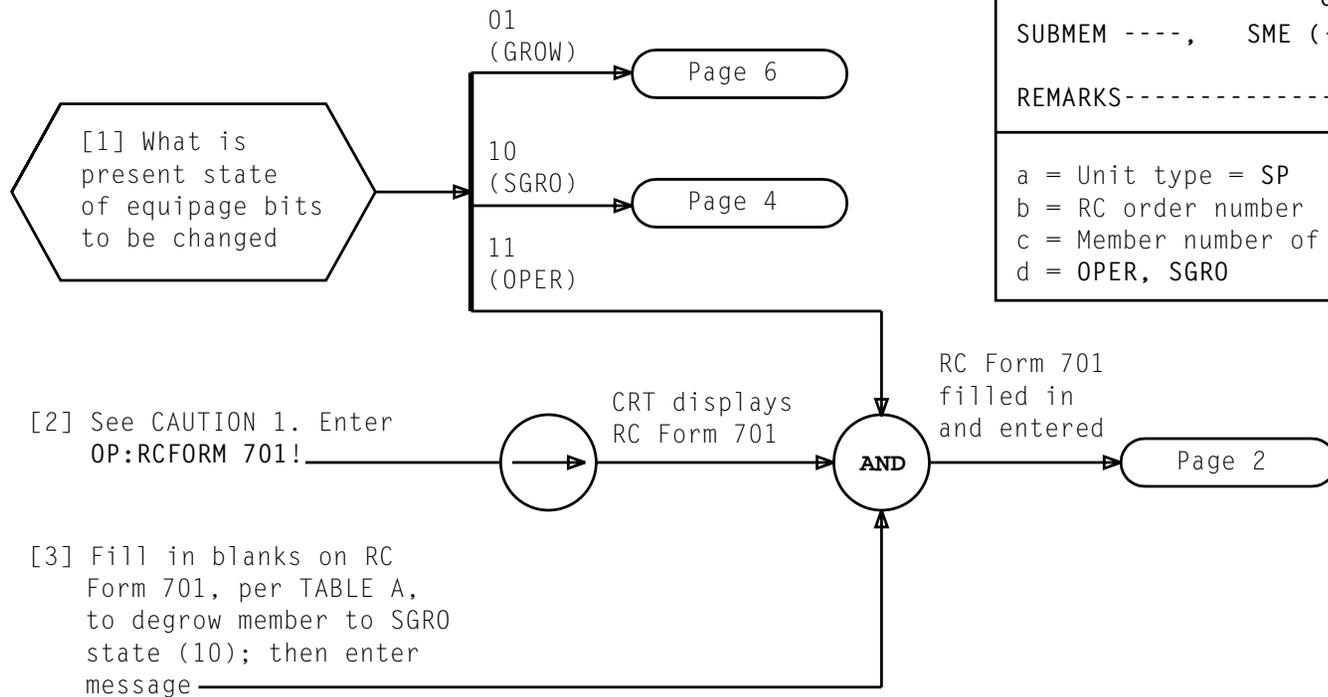


FIG. 1 - Entry Data Word 13 Layout (Partial)

**VERIFY UNEQUIPPED STATUS OF GROWTH MDN BLOCK**

**SUMMARY**

Call up RC Form 701 on CRT. Using TTY, fill in blank fields on form to degrow state of member equipage (ME) from OPER to SGRO and/or from SGRO to GROW and/or from GROW to UNEQ. Using assigned order numbers, activate each recent change then verify completion of each change of state.



**TABLE A**

```

RC:UTYPE;CHG;OPT(EQP,DEGROW),TST:      UTYN a,
ORNU b,
MEMN c,      OLD  NEW
              ME ( d , d ),
SUBMEM ----,  SME (----, ----),
REMARKS-----!
  
```

a = Unit type = SP  
 b = RC order number  
 c = Member number of degrowth frame  
 d = OPER, SGRO

**CAUTION 1**  
 Calling up RC form will cause all CRT data to be cleared

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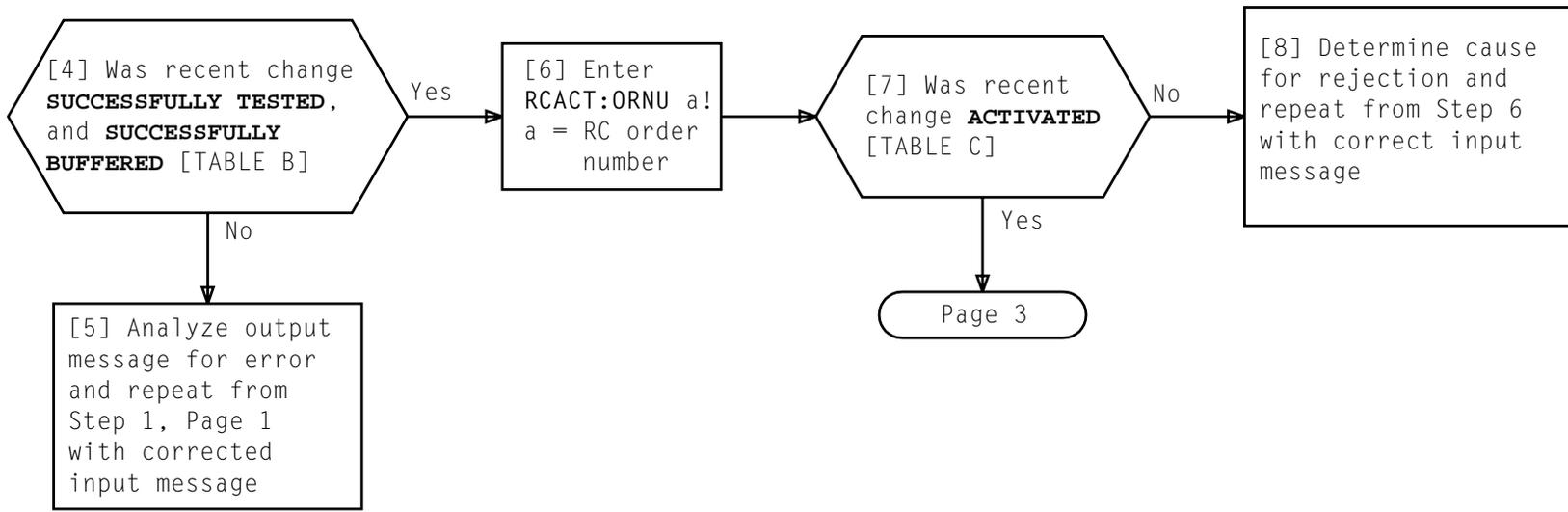
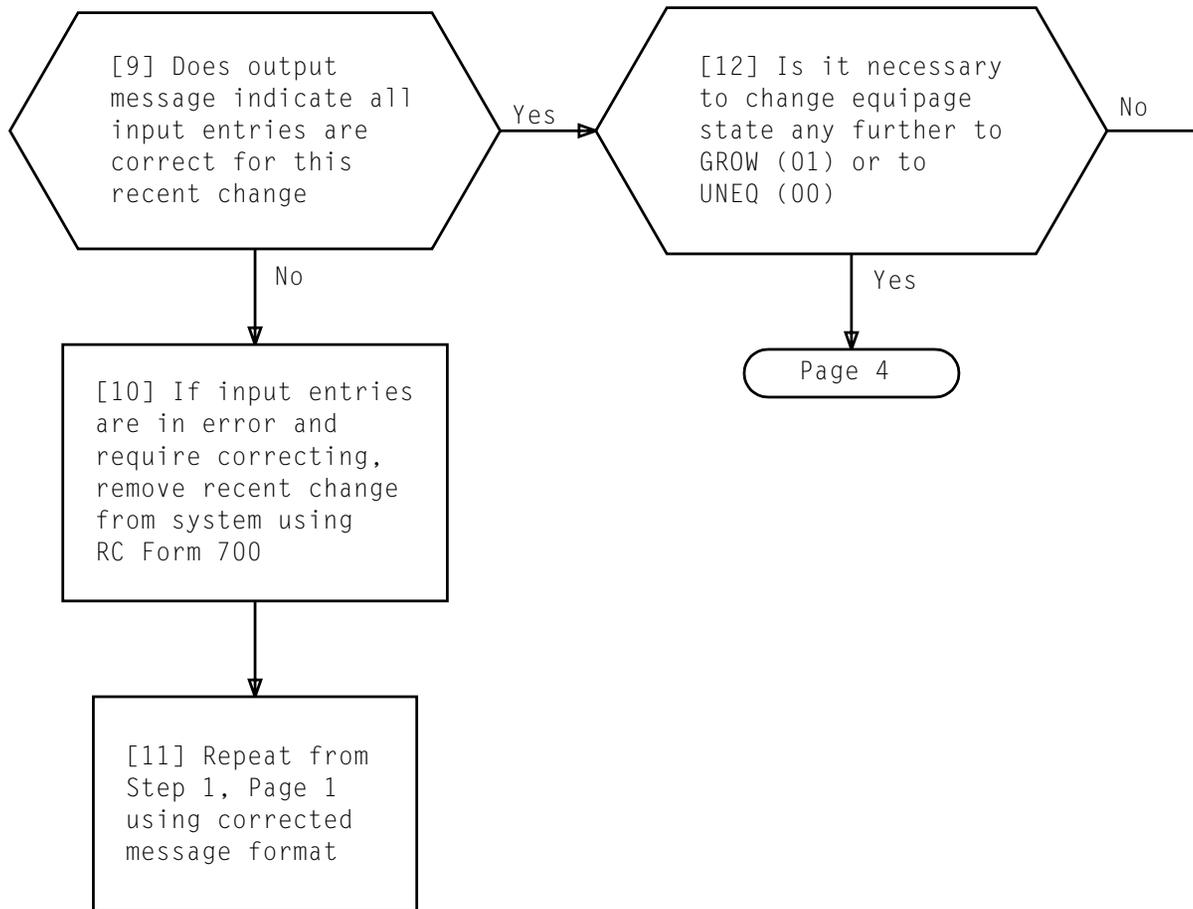


TABLE B	
RC ORNU a SUCCESSFULLY TESTED	
RC ORNU a SUCCESSFULLY BUFFERED	
RC:UTYPE;CHG;OPT(EQP,DEGROW),BUF: UTYN SP,	
ORNU a,	OLD NEW
MEMN b, ME (OPER, SGRO),	
	OLD NEW
SUBMEM ----, SME (----, ----),	
REMARKS-----!	
a = RC order number	
b = Member number of degrowth frame	

TABLE C	
RC ORNU a ACTIVATED	
RC:UTYPE;CHG;OPT(EQP,DEGROW),BUF: UTYN SP,	
ORNU a,	OLD NEW
MEMN b, ME (OPER, SGRO),	
	OLD NEW
SUBMEM ----, SME (----, ----),	
REMARKS-----!	
a = RC order number	
b = Member number of degrowth frame	



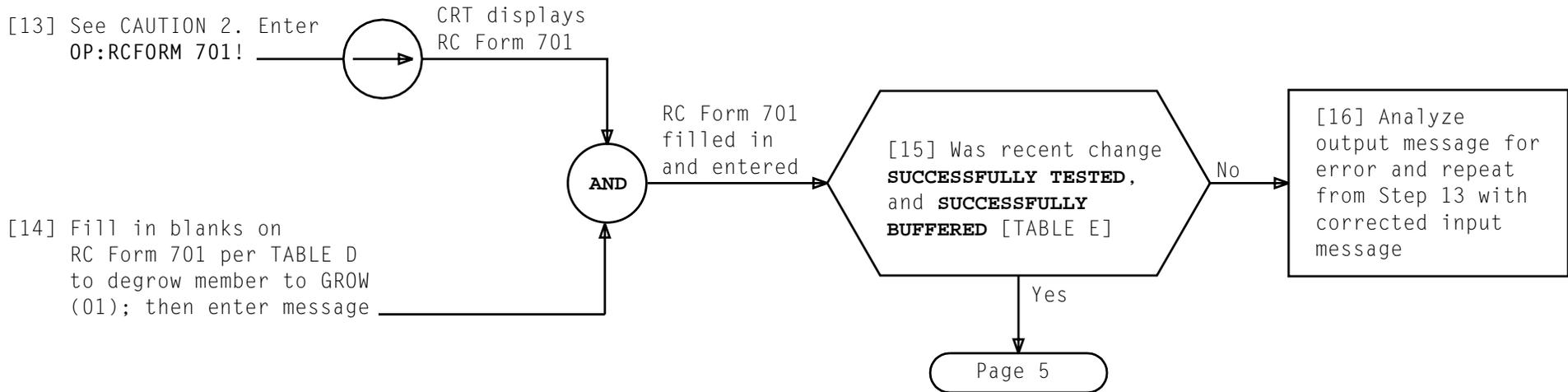


TABLE D	
RC:UTYPE;CHG;OPT(EQP,DEGROW),TST:	UTYN a,
ORNU b,	
	OLD NEW
MEMN c,	ME ( d , d ),
	OLD NEW
SUBMEM ----,	SME (----, ----),
REMARKS-----	-----!
a = Unit type = SP	
b = RC order number	
c = Member number of degrowth frame	
d = SGRO, GROW	

TABLE E	
RC ORNU a	SUCCESSFULLY TESTED
RC ORNU a	SUCCESSFULLY BUFFERED
RC:UTYPE;CHG;OPT(EQP,DEGROW),BUF:	UTYN SP,
ORNU a,	
	OLD NEW
MEMN b,	ME (SGRO, GROW),
	OLD NEW
SUBMEM ----,	SME (----, ----),
REMARKS-----	-----!
a = RC order number	
b = Member number of degrowth frame	

**CAUTION 2**  
*Calling up RC form will cause all CRT data to be cleared*

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**RECENT CHANGE MEMBER EQUIPAGE USING RC FORM 701 (DEGROW)**

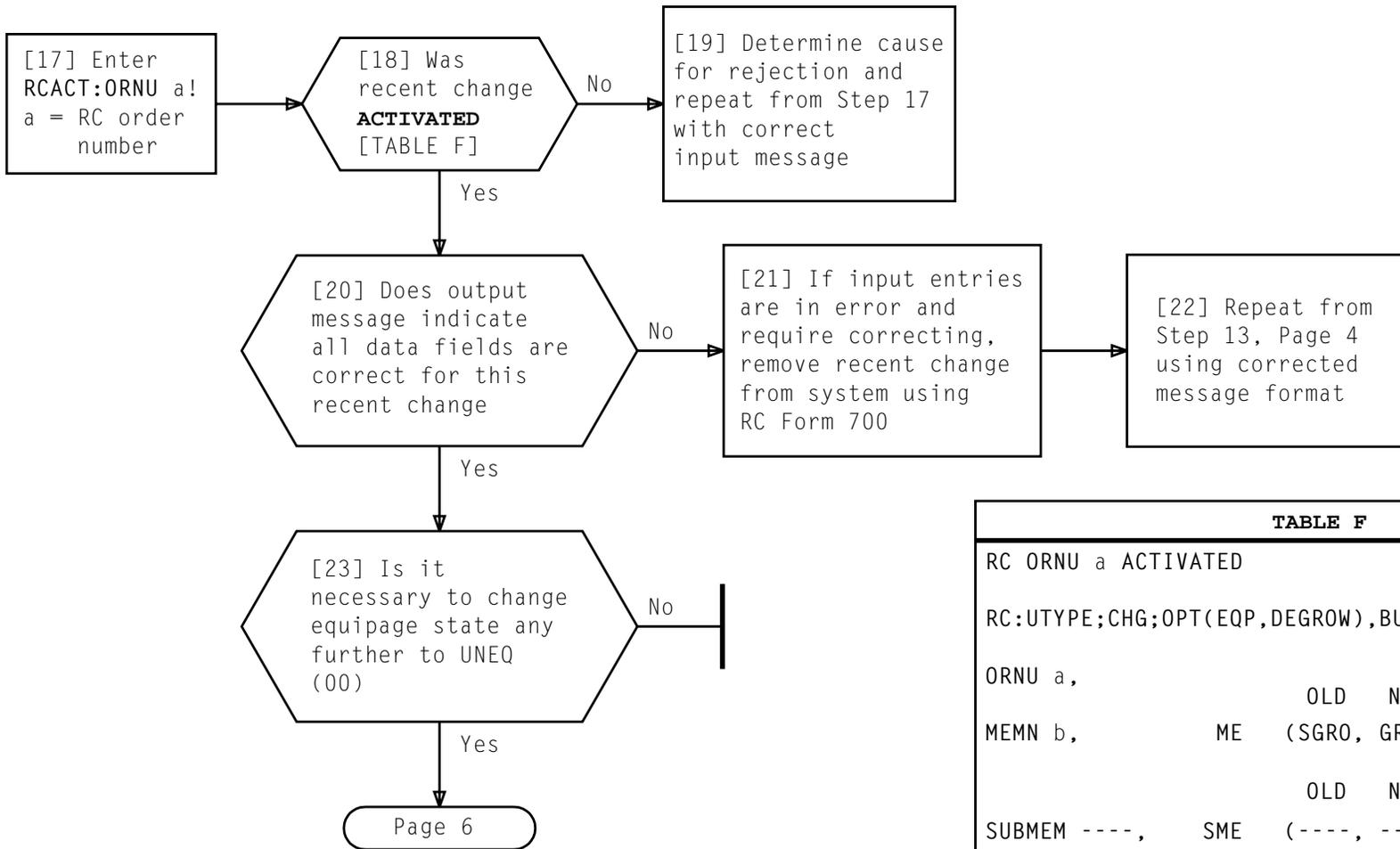


TABLE F	
RC ORNU a	ACTIVATED
RC:UTYPE;CHG;OPT(EQP,DEGROW),BUF:	UTYN SP,
ORNU a,	
	OLD NEW
MEMN b,	ME (SGRO, GROW),
	OLD NEW
SUBMEM ----,	SME (----, ----),
REMARKS-----	-----!
a = RC order number	
b = Member number of degrowth frame	

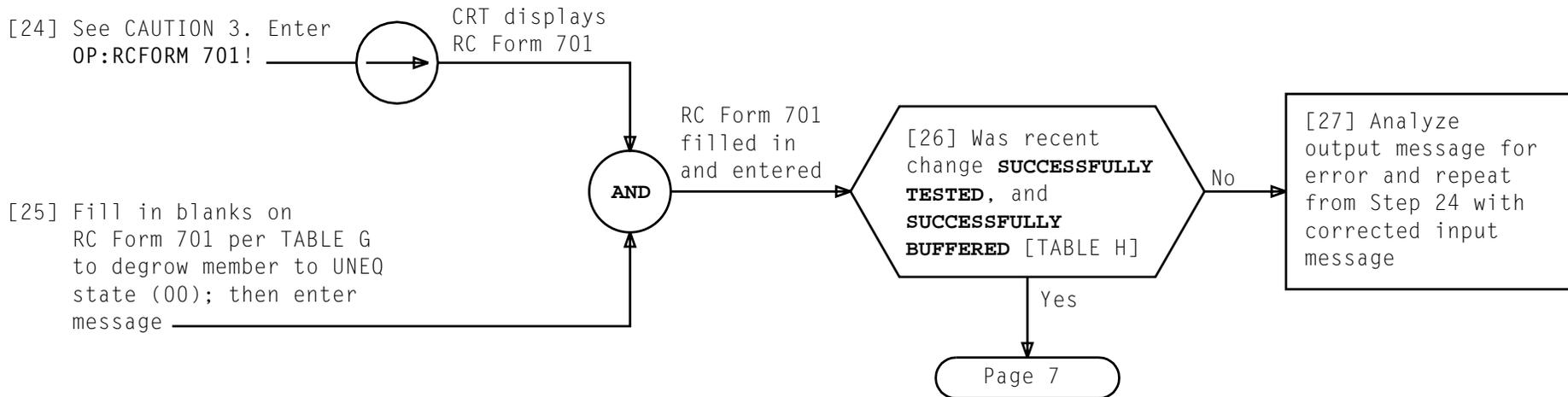


TABLE G	
RC:UTYPE;CHG;OPT(EQP,DEGROW),TST:	UTYN a,
ORNU b,	
	OLD NEW
MEMN c, ME ( d, d ),	
	OLD NEW
SUBMEM ----, SME (----, ----),	
REMARKS-----!	
a = Unit type = SP b = RC order number c = Member number of degrowth frame d = GROW, UNEQ	

TABLE H	
RC ORNU a SUCCESSFULLY TESTED	
RC ORNU a SUCCESSFULLY BUFFERED	
RC:UTYPE;CHG;OPT(EQP,DEGROW),BUF:	UTYN SP,
ORNU a,	
	OLD NEW
MEMN b, ME (GROW, UNEQ),	
	OLD NEW
SUBMEM ----, SME (----, ----),	
REMARKS-----!	
a = RC order number b = Member number of degrowth frame	

**CAUTION 3**  
*Calling up RC form will cause all CRT data to be cleared*

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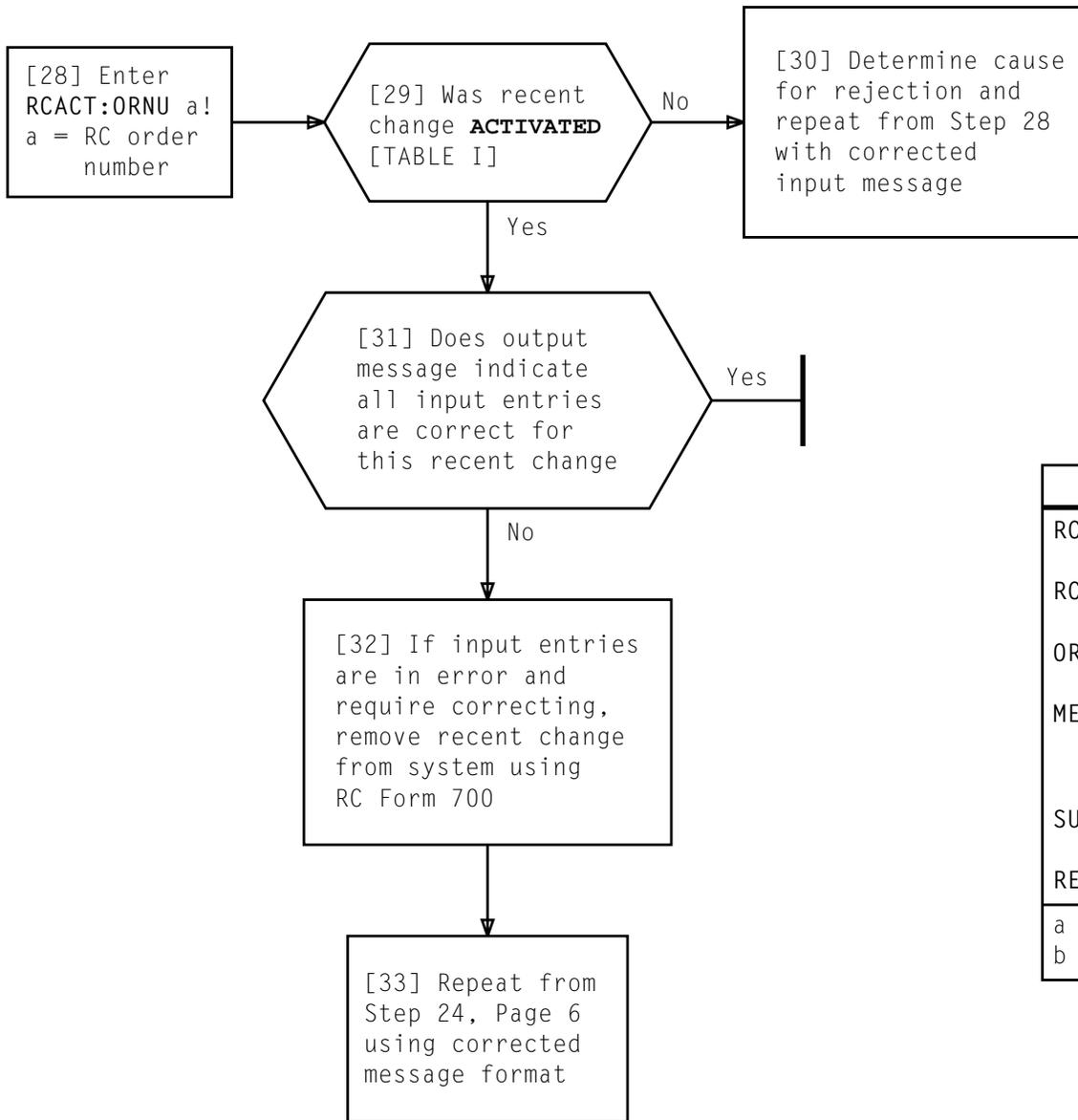


TABLE I	
RC ORNU a ACTIVATED	
RC:UTYPE;CHG;OPT(EQP,DEGROW),BUF:	UTYN SP,
ORNU a,	OLD NEW
MEMN b,	ME (GROW, UNEQ),
	OLD NEW
SUBMEM ----,	SME (----, ----),
REMARKS-----!	
a = RC order number	
b = Member number of degrowth frame	



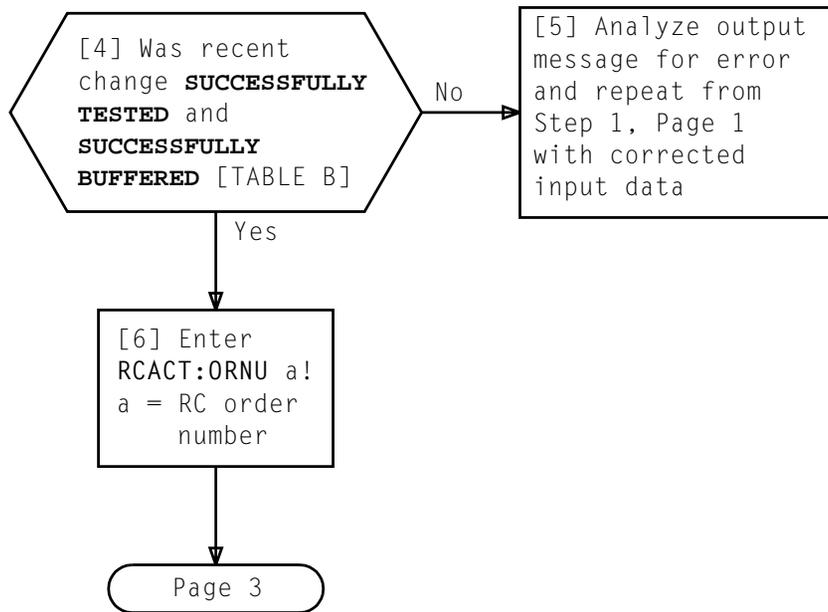


TABLE B	
RC ORNU a	SUCCESSFULLY TESTED
RC ORNU a	SUCCESSFULLY BUFFERED
RC:UTYPE;CHG;OPT(EQP,DEGROW),BUF:	UTYN SP,
ORNU a,	OLD NEW
MEMN b,	ME (----, ----),
	OLD NEW
SUBMEM c,	SME (OPER, SGRO),
REMARKS-----!	
a = RC order number	
b = Member number of degrowth associated SP	
c = Submember name:	
= TSNBLK(0 to 3) (for Univ Scan Block 0-3)	
= TDNBLK(0 to 3) (for Univ SD Block 0-3)	
= MSNBLK(0 or 1) (for Misc Scan Block 0 or 1)	
= MDNBLK(0 or 1) (for Misc SD Block 0 or 1)	
= BFE (for Left Matrix Equipage)	
= CFE (for Right Matrix Equipage)	
= SP2EQ(0 to 3) (for SP2 DT Interface Unit 0-3)	

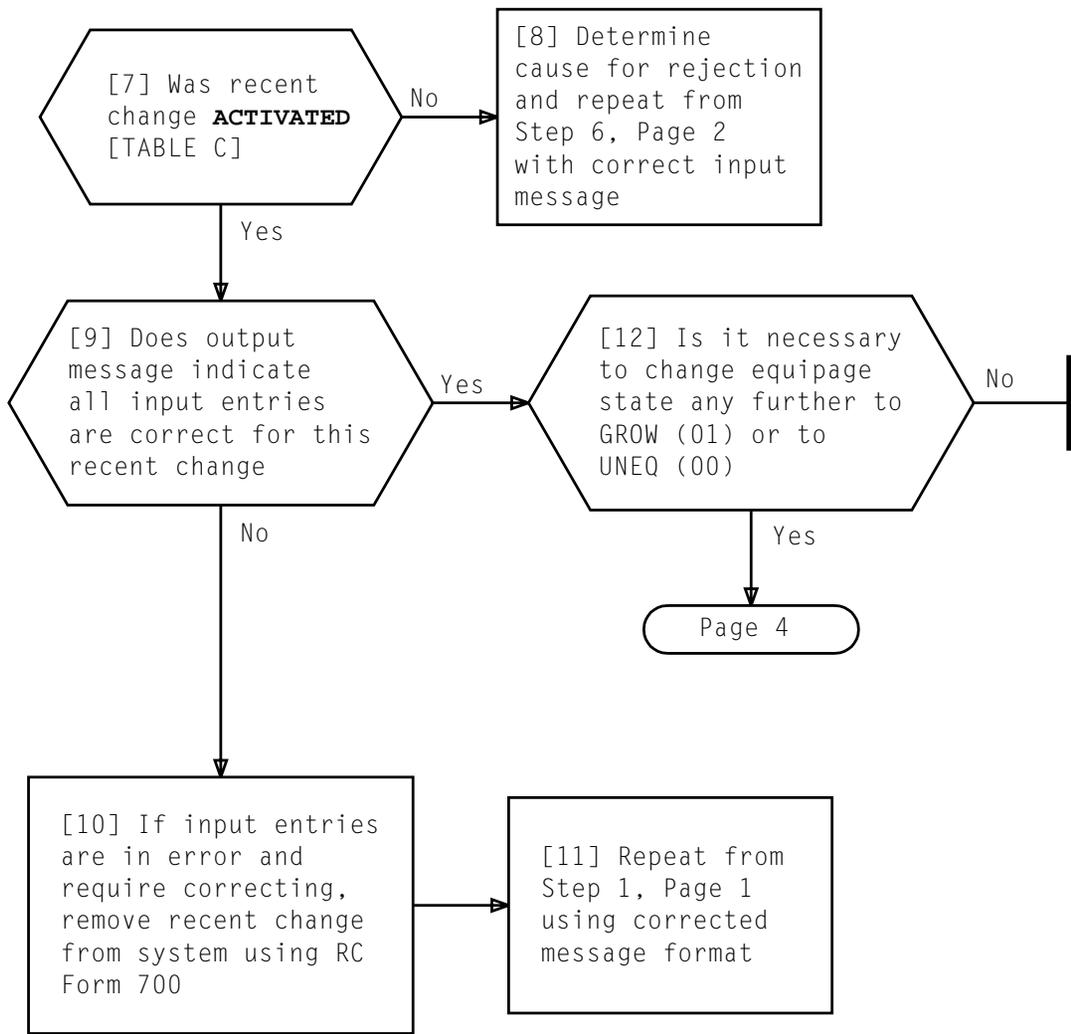


TABLE C	
RC:ORNU a	ACTIVATED
RC:UTYPE;CHG;OPT(EQP,GROW),BUF:	UTYN SP,
ORNU a,	OLD NEW
MEMN b,	ME (----, ----),
SUBMEM c,	SME (OPER, SGRO),
REMARKS-----!	
a = RC order number b = Member number of degrowth associated SP c = Submember name: = TSNBLK(0 to 3) (for Univ Scan Block 0-3) = TDNBLK(0 to 3) (for Univ SD Block 0-3) = MSNBLK(0 or 1) (for Misc Scan Block 0 or 1) = MDNBLK(0 or 1) (for Misc SD Block 0 or 1) = BFE (for Left Matrix Equipage) = CFE (for Right Matrix Equipage) = SP2EQ(0 to 3) (for SP2 DT Interface Unit 0-3)	

**RECENT CHANGE SUBMEMBER EQUIPAGE USING RC FORM 701 (DEGROW)**

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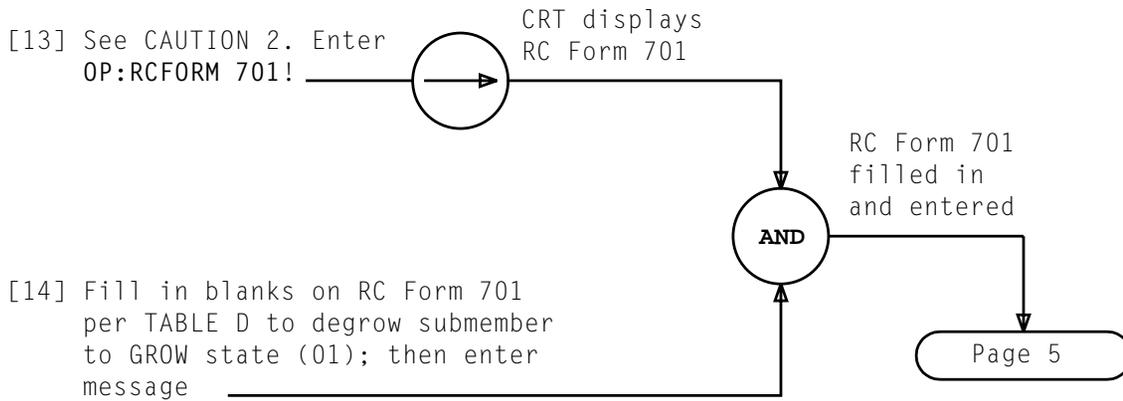


TABLE D			
RC:UTYPE;CHG;OPT(EQP,DEGROW),TST:			UTYN a,
ORNU b,		OLD NEW	
MEMN c,	ME	(----, ----),	
		OLD NEW	
SUBMEM d,	SME	( e , e ),	
REMARKS-----!			
a = Unit type = SP			
b = RC order number			
c = Member number of degrowth associated SP			
d = Submember name:			
= TSNBLK(0 to 3) (for Univ Scan Block 0-3)			
= TDNBLK(0 to 3) (for Univ SD Block 0-3)			
= MSNBLK(0 or 1) (for Misc Scan Block 0 or 1)			
= MDNBLK(0 or 1) (for Misc SD Block 0 or 1)			
= BFE (for Left Matrix Equipage)			
= CFE (for Right Matrix Equipage)			
= SP2EQ(0 to 3) (for SP2 DT Interface Unit 0-3)			
e = SGRO, GROW			

*CAUTION 2*  
*Calling up*  
*RC form will*  
*cause all CRT*  
*data to be*  
*cleared*

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**RECENT CHANGE SUBMEMBER EQUIPAGE USING RC FORM 701 (DEGROW)**

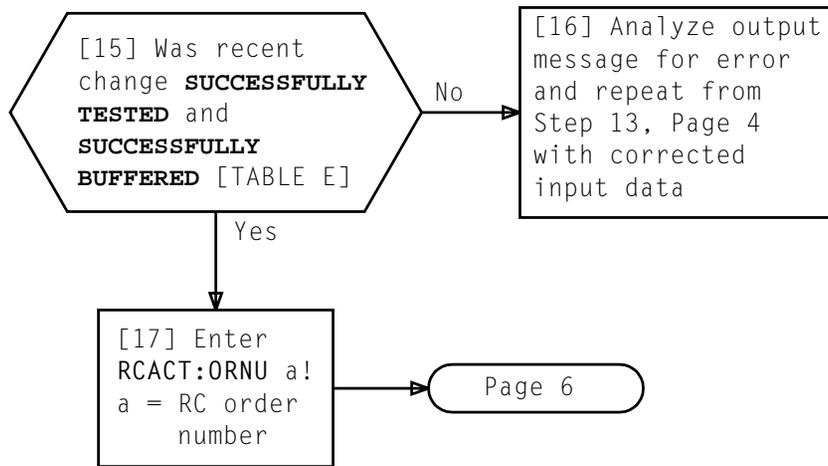


TABLE E	
RC ORNU a SUCCESSFULLY TESTED	
RC ORNU a SUCCESSFULLY BUFFERED	
RC:UTYPE;CHG;OPT(EQP,DEGROW),BUF:	UTYN SP,
ORNU a,	OLD NEW
MEMN b, ME	(----, ----),
	OLD NEW
SUBMEM c, SME	(SGRO, GROW),
REMARKS-----!	
a = RC order number b = Member number of degrowth associated SP c = Submember name: = TSNBLK(0 to 3) (for Univ Scan Block 0-3) = TDNBLK(0 to 3) (for Univ SD Block 0-3) = MSNBLK(0 or 1) (for Misc Scan Block 0 or 1) = MDNBLK(0 or 1) (for Misc SD Block 0 or 1) = BFE (for Left Matrix Equipage) = CFE (for Right Matrix Equipage) = SP2EQ(0 to 3) (for SP2 DT Interface Unit 0-3)	

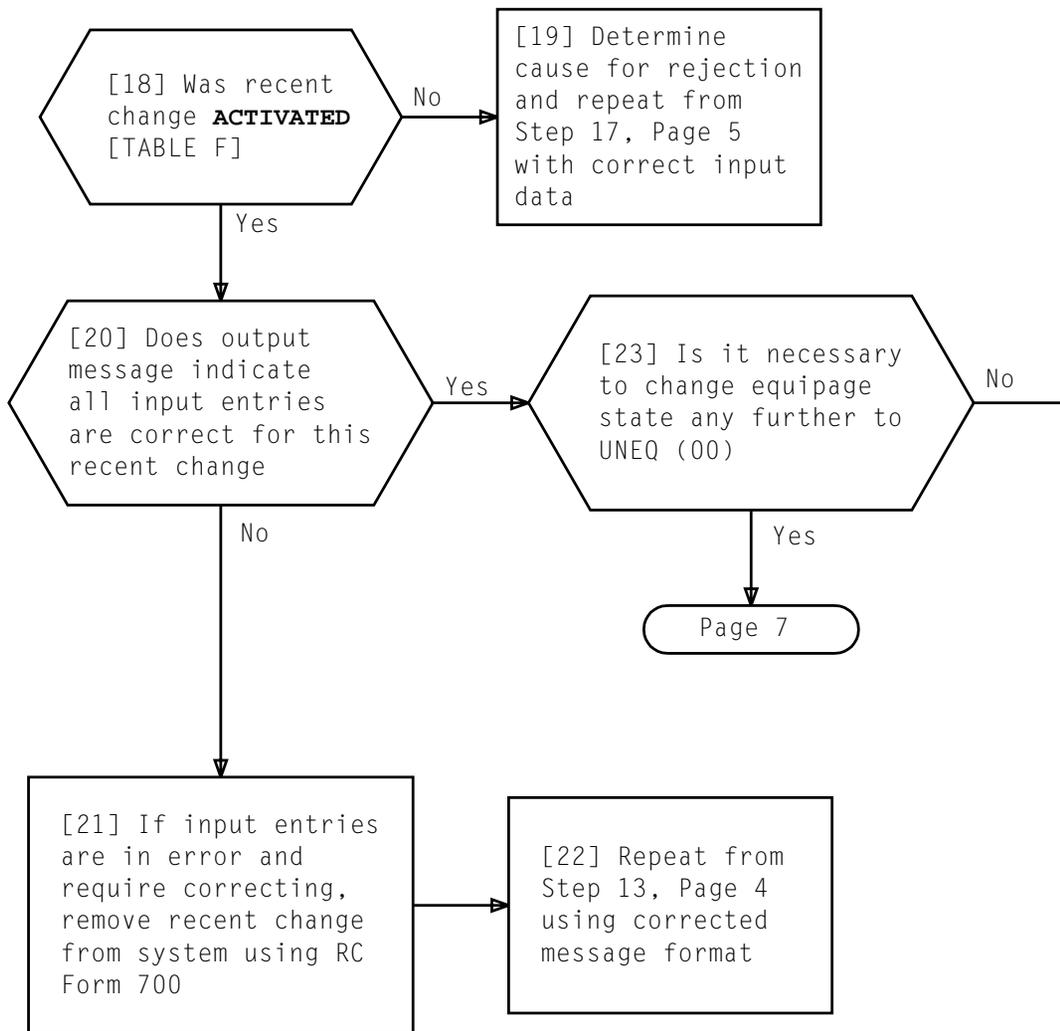


TABLE F	
RC ORNU a	ACTIVATED
RC:UTYPE;CHG;OPT(EQP,GROW), BUF:	UTYN SP,
ORNU a,	
	OLD NEW
MEMN b,	ME (----, ----),
	OLD NEW
SUBMEM c,	SME (SGRO, GROW),
REMARKS-----!	
a = RC order number	
b = Member number of degrowth associated SP	
c = Submember name:	
= TSNBLK(0 to 3) (for Univ Scan Block 0-3)	
= TDNBLK(0 to 3) (for Univ SD Block 0-3)	
= MSNBLK(0 or 1) (for Misc Scan Block 0 or 1)	
= MDNBLK(0 or 1) (for Misc SD Block 0 or 1)	
= BFE (for Left Matrix Equipage)	
= CFE (for Right Matrix Equipage)	
= SP2EQ(0 to 3) (for SP2 DT Interface Unit 0-3)	

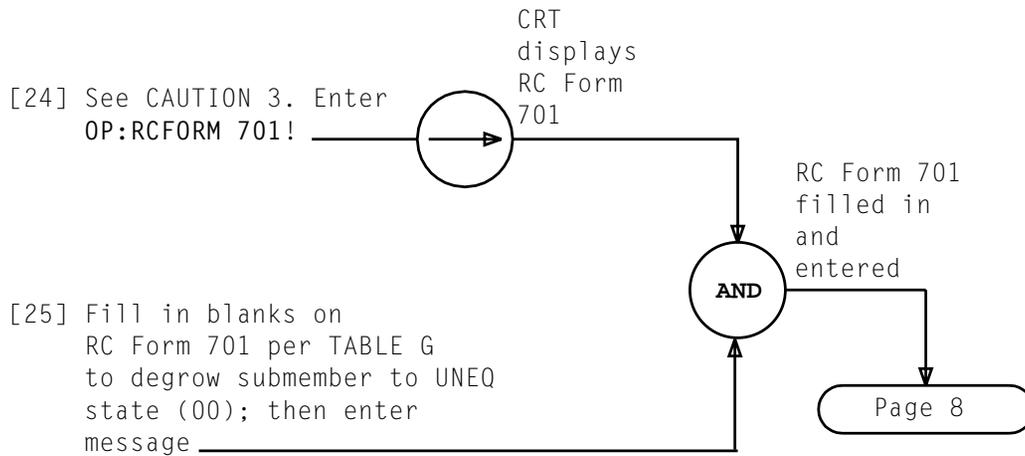


TABLE G	
RC:UTYPE;CHG;OPT(EQP,DEGROW),TST:	UTYN a,
ORNU b,	OLD NEW
MEMN c,	ME (----, ----),
	OLD NEW
SUBMEM d,	SME ( e , e ),
REMARKS-----!	
a = Unit type = SP	
b = RC order number	
c = Member number of degrowth associated SP	
d = Submember name:	
= TSNBLK(0 to 3) (for Univ Scan Block 0-3)	
= TDNBLK(0 to 3) (for Univ SD Block 0-3)	
= MSNBLK(0 or 1) (for Misc Scan Block 0 or 1)	
= MDNBLK(0 or 1) (for Misc SD Block 0 or 1)	
= BFE (for Left Matrix Equipage)	
= CFE (for Right Matrix Equipage)	
= SP2EQ(0 to 3) (for SP2 DT Interface Unit 0-3)	
e = GROW, UNEQ	

**CAUTION 3**  
*Calling up  
 RC form will  
 cause all CRT  
 data to be  
 cleared*

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**RECENT CHANGE SUBMEMBER EQUIPAGE USING RC FORM 701 (DEGROW)**

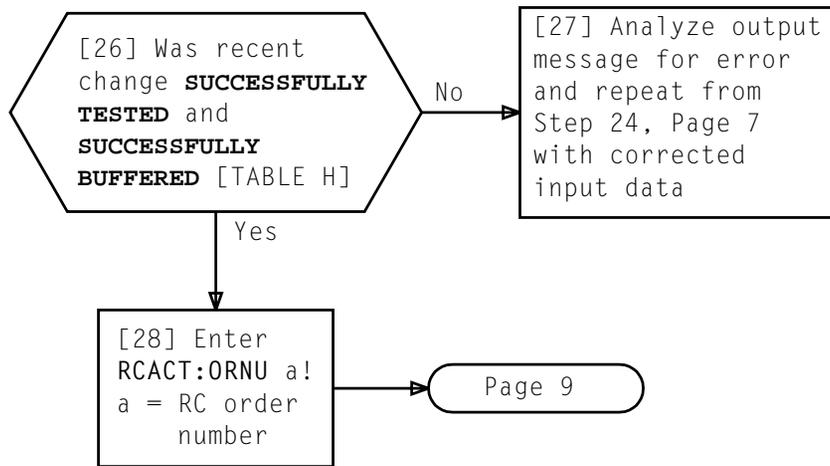


TABLE H	
RC ORNU a	SUCCESSFULLY TESTED
RC ORNU a	SUCCESSFULLY BUFFERED
RC:UTYPE;CHG;OPT(EQP,DEGROW),BUF:	UTYN SP,
ORNU a,	OLD NEW
MEMN b,	ME (----, ----),
	OLD NEW
SUBMEM c,	SME (GROW, UNEQ),
REMARKS-----!	
a = RC order number	
b = Member number of degrowth associated SP	
c = Submember name:	
= TSNBLK(0 to 3) (for Univ Scan Block 0-3)	
= TDNBLK(0 to 3) (for Univ SD Block 0-3)	
= MSNBLK(0 or 1) (for Misc Scan Block 0 or 1)	
= MDNBLK(0 or 1) (for Misc SD Block 0 or 1)	
= BFE (for Left Matrix Equipage)	
= CFE (for Right Matrix Equipage)	
= SP2EQ(0 to 3) (for SP2 DT Interface Unit 0-3)	

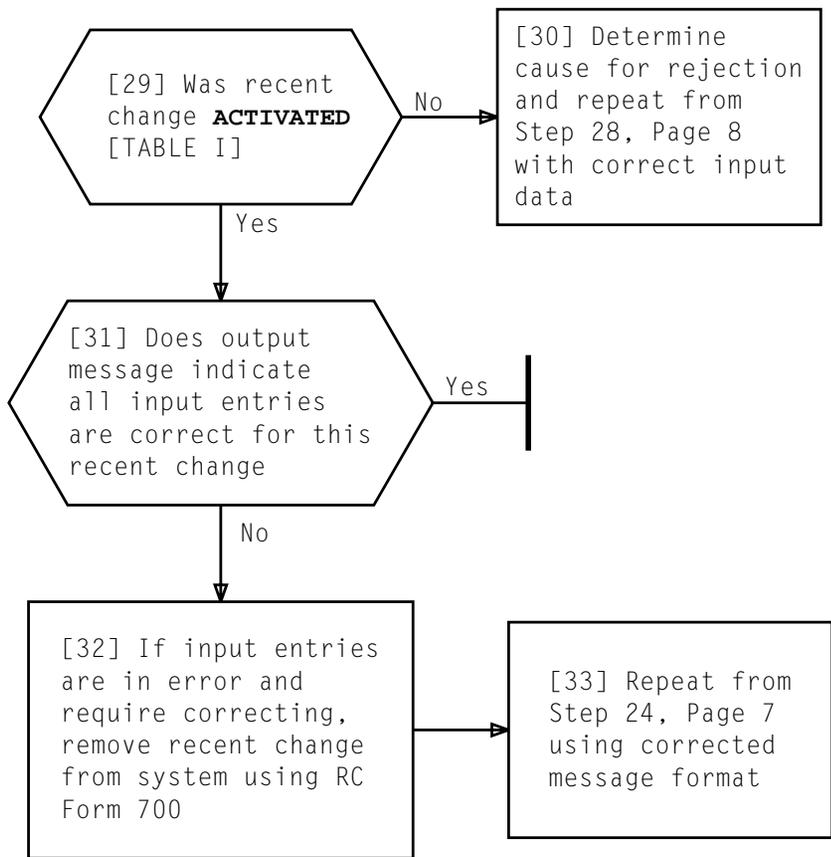
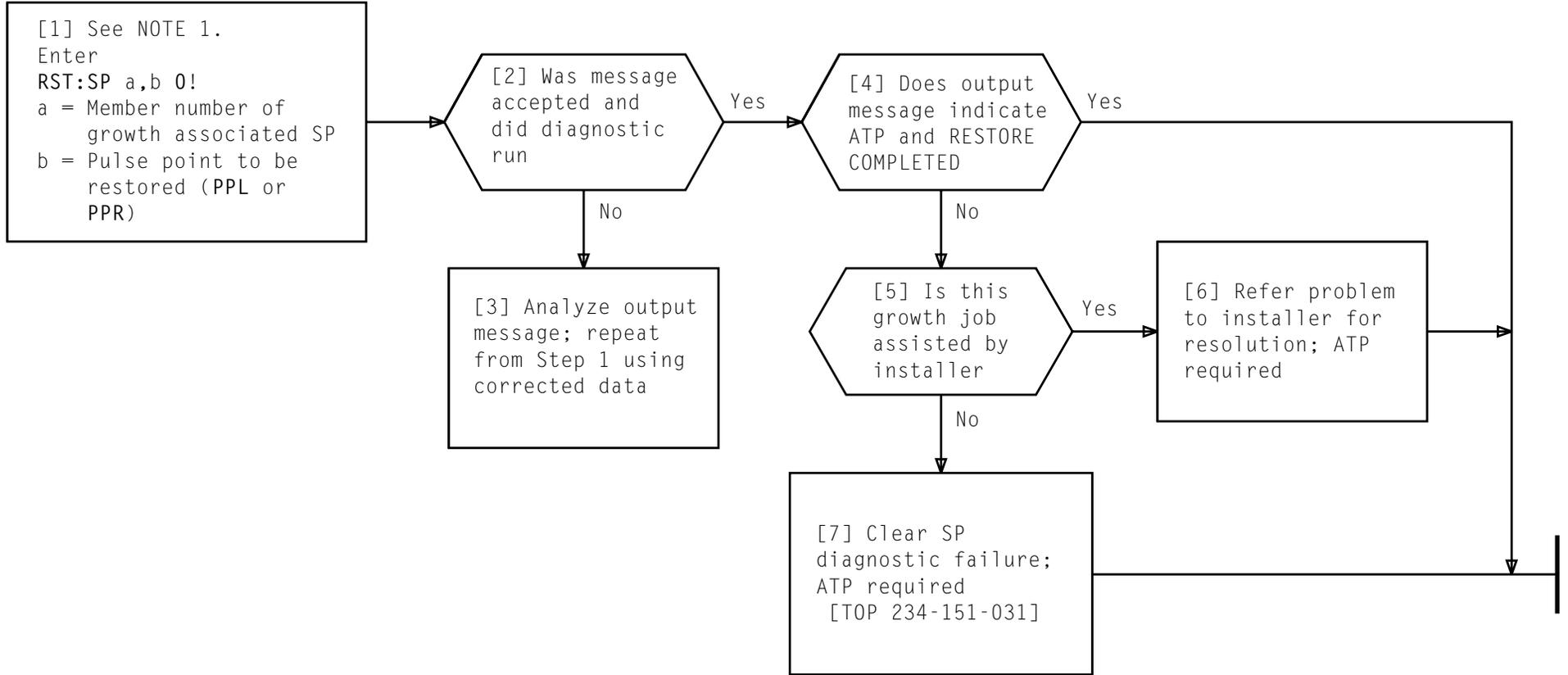
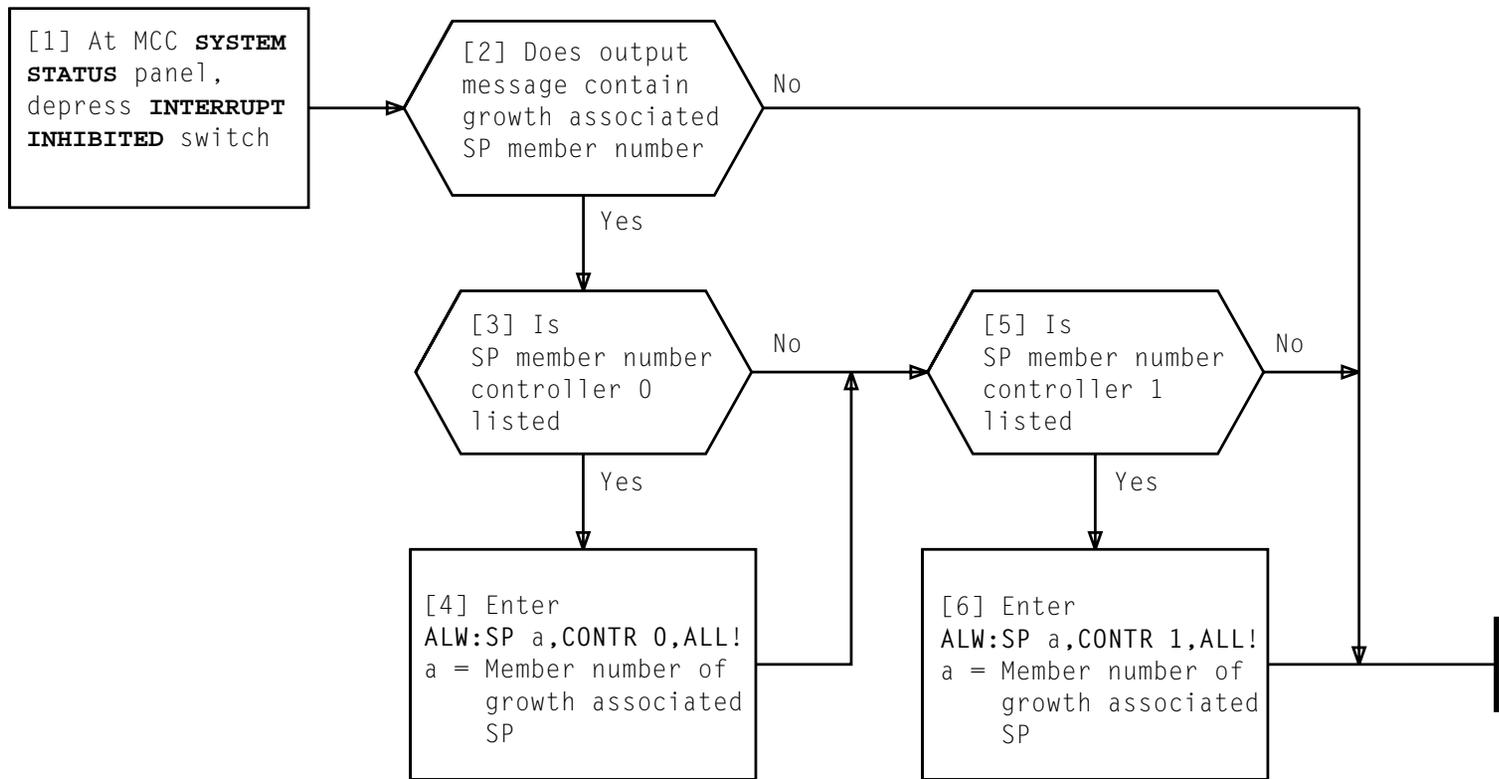


TABLE I	
RC ORNU a <b>ACTIVATED</b>	
RC:UTYPE;CHG;OPT(EQP,GROW),BUF:	UTYN SP,
ORNU a,	OLD NEW
MEMN b,	ME (----, ----),
	OLD NEW
SUBMEM c,	SME (GROW, UNEQ),
REMARKS-----!	
a = RC order number b = Member number of degrowth associated SP c = Submember name: = TSNBLK(0 to 3) (for Univ Scan Block 0-3) = TDNBLK(0 to 3) (for Univ SD Block 0-3) = MSNBLK(0 or 1) (for Misc Scan Block 0 or 1) = MDNBLK(0 or 1) (for Misc SD Block 0 or 1) = BFE (for Left Matrix Equipage) = CFE (for Right Matrix Equipage) = SP2EQ(0 to 3) (for SP2 DT Interface Unit 0-3)	



NOTE 1	
Restore message will cause diagnostic to be run. Pulse point logic will be restored, if ATP	
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**RESTORE PULSE POINT LOGIC TO SERVICE**



**IDENTIFY AND REMOVE PEST CONDITIONS**

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[1] Determine from company order member number of SP to which K block(s) is being added and K block(s) to be added. See TABLE A

[2] See FIG. 1, Page 2 and FIG. 2, Page 3 for bay numbering sequence and K block(s) location

[3] Select equipment per TABLE B for K block(s) being added. Read NOTE 1

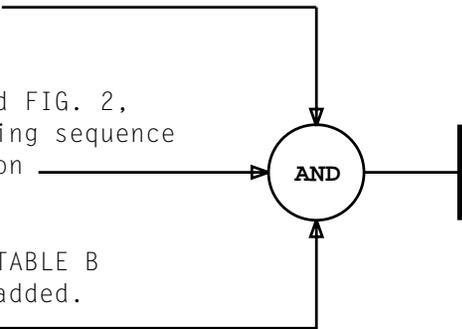


TABLE A	
K BLOCK NUMBER	SP TRANSLATION EQUIVALENT
K4	Miscellaneous SD Block 0 (MDN 0)
K5	Miscellaneous SD Block 1 (MDN 1)

TABLE B												
K BLOCK			D&SM				DA					
LEFT FRAME	RIGHT FRAME	OPTIONS	CIRCUIT PACKS		DC-DC CONVERTERS		CIRCUIT PACKS		FUSE		DC-DC CONVERTERS	
			TYPE	QTY	TYPE	QTY	TYPE	QTY	TYPE	QTY	TYPE	QTY
K4 MDN 0	K5 MDN 1	256 Pulse 768 Relay	FA605	24	J87407A-2, L2	8	FB228	96	70A	1	J87407A-2, L2	2
			FA610	8			FB229	32	70B	1		
							FB231	2	70D	2		
							FC78	2	70F	2		
K4 MDN 0	K5 MDN 1	512 Pulse 512 Relay	FA605	16	J87407A-2, L2	8	FB228	64	70A	1	J87407A-2, L2	4
			FA610	16			FB229	64	70B	1		
							FB231	4	70F	4		
							FC78	4	70G	4		

NOTE 1  
Quantities shown in TABLE B are for one K block. If K blocks 4 and 5 are being added on this order, double quantity shown when selecting equipment

**SELECT MISCELLANEOUS SD EQUIPMENT AND DETERMINE GROWTH K BLOCK LOCATION(S)**

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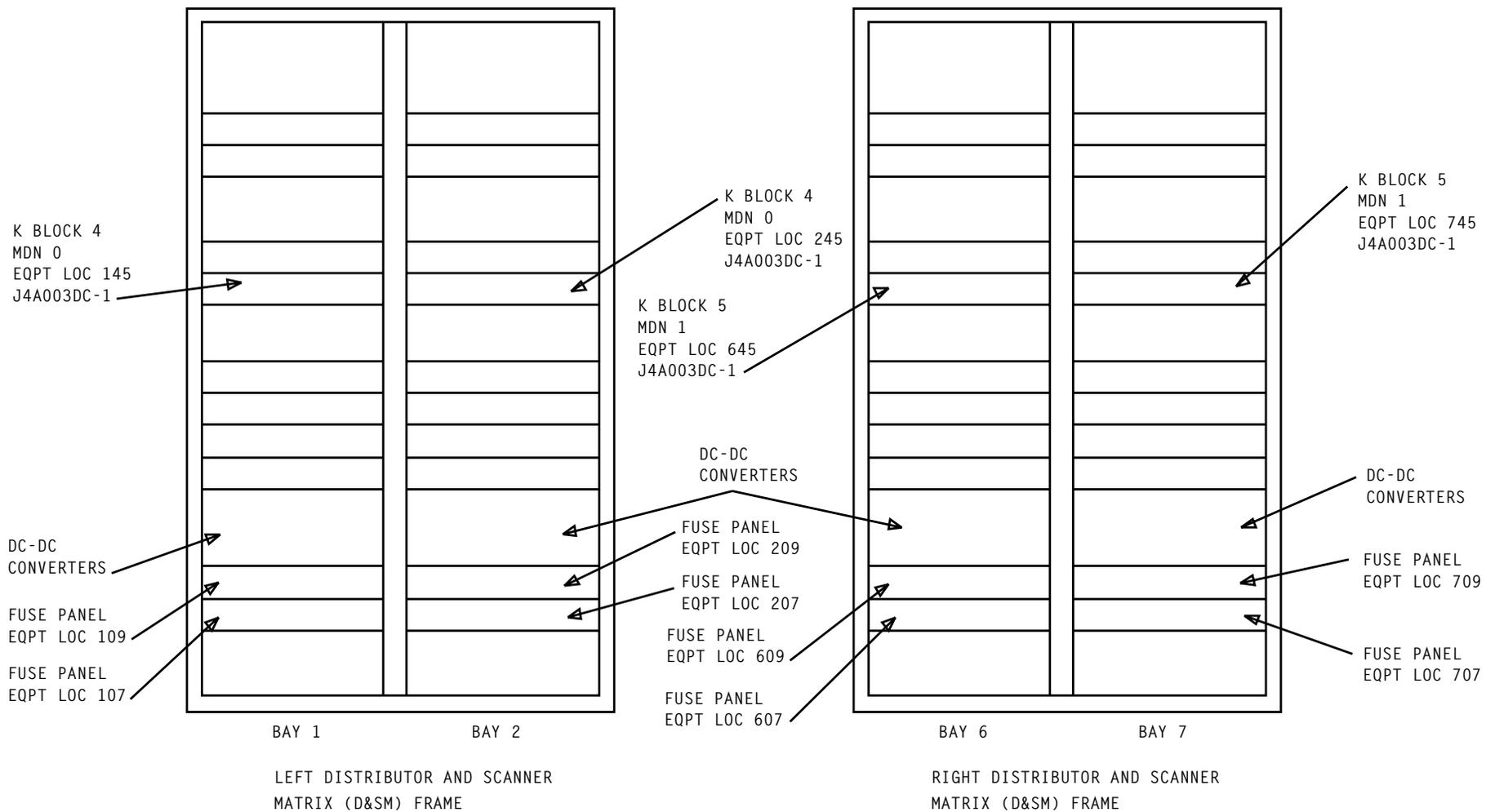


FIG. 1

**SELECT MISCELLANEOUS SD EQUIPMENT AND DETERMINE GROWTH K BLOCK LOCATION(S)**

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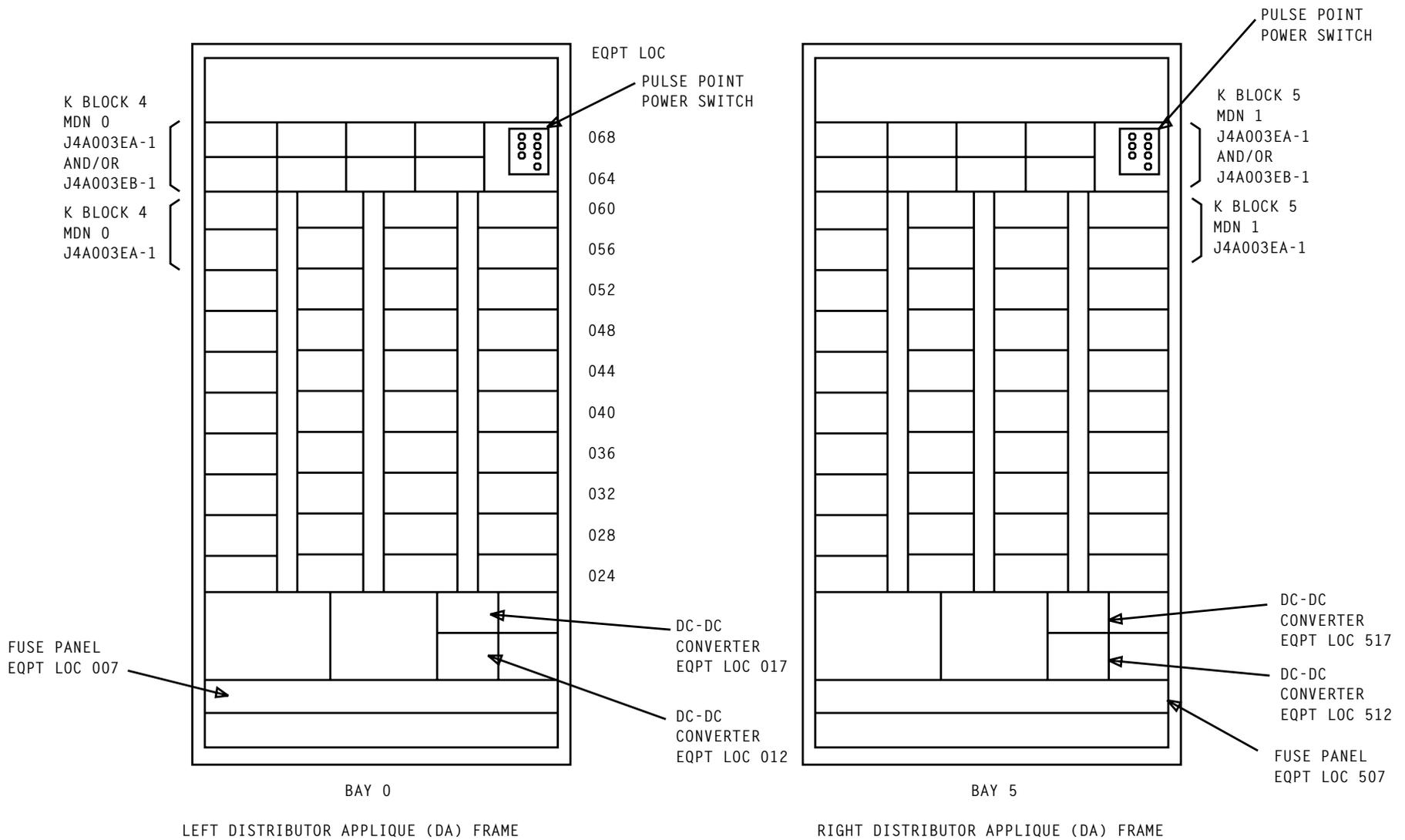


FIG. 2

**SELECT MISCELLANEOUS SD EQUIPMENT AND DETERMINE GROWTH K BLOCK LOCATION(S)**

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SUMMARY

Convert octal digits representing pulse point option of entry output word to binary. Determine actual growth associated frame pulse point equipage and compare actual equipage with entry output data using TABLE A. Record any discrepancy.

- [1] See octal word 13 in entry output message
- [2] For left and/or right matrix frame, convert octal digits of word 13 to 2-digit pulse point option code per FIG. 1 and note result
- [3] Observe at growth associated SP frame or obtain from installation quantity of pulse points to be equipped
- [4] Select from TABLE A, 2-digit code for quantity of pulse points identified in Step 3

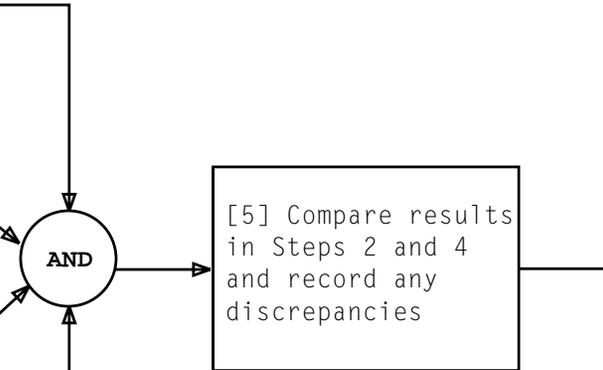


TABLE A	
2-DIGIT CODE	PULSE POINT OPTION
00	No pulse points
01	256 pulse points
10	512 pulse points
11	Invalid

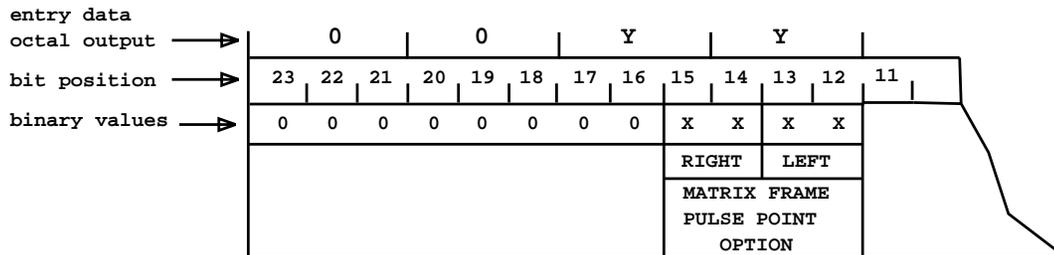


FIG. 1 - Partial Entry Data Word 13 Layout

VERIFY GROWTH SP PULSE POINT OPTION

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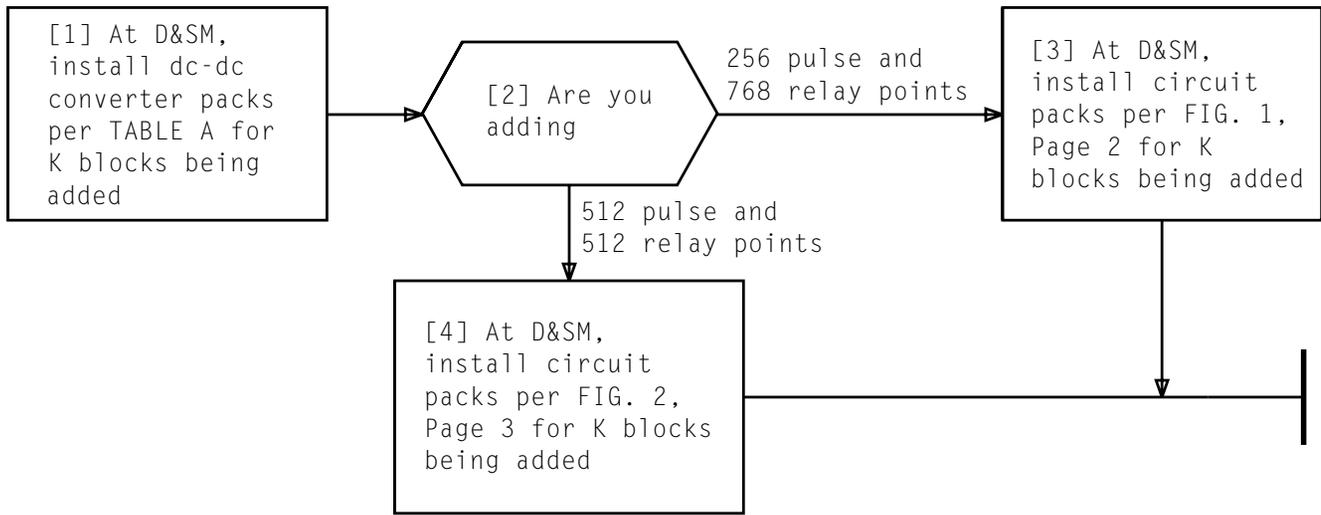


TABLE A									
K BLOCK	DESIGNATION	DC-DC CONVERTER							
		J87407A-2,L2 CONVERTER LOCATED IN POSITON SHOWN							
K4 (MDN 0)	LEFT D&SM LOC	212-36	212-39	212-42	212-45	217-36	217-39	217-42	217-45
K5 (MDN 1)	RIGHT D&SM LOC	712-36	712-39	712-42	717-45	717-36	717-39	717-42	717-45

**INSTALL DC-DC CONVERTER PACKS AND MISCELLANEOUS SD CIRCUIT PACKS AT D&SM FRAME**

J4A003DC-1 DET. A															
4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
*FC78	*FC78			FA605	FA605		FA605	FA605		FA605	FA605		FA605	FA605	
LEVEL															

J4A003DC-1 DET. B															
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
		FA605	FA605		*FC78	*FC78									
LEVEL															

**BAY 1 or 6**

J4A003DC-1 DET. A															
4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
*FC78	*FC78			FA605	FA605		FA605	FA605		FA605	FA605		FA605	FA605	
LEVEL															

J4A003DC-1 DET. D															
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
		FA610	FA610		*FC78	*FC78									
LEVEL															

**BAY 2 or 7**

\* **FC78** circuit packs are installed with initial installation of frame

**FIG. 1 – D&SM Circuit Pack Location (See TABLE B)**

TABLE B		
K BLOCK	EQUIPMENT LOCATION	
	LEFT D&SM	RIGHT D&SM
K4 (MDN 0)	145 and 245	-
K5 (MDN 1)	-	645 and 745

**INSTALL DC-DC CONVERTER PACKS AND MISCELLANEOUS SD CIRCUIT PACKS AT D&SM**

J4A003DC-1 DET. A															
4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
*FC78	*FC78			FA605	FA605		FA605	FA605		FA605	FA605		FA605	FA605	
LEVEL															

J4A003DC-1 DET. B															
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
		FA605	FA605		*FC78	*FC78									
LEVEL															

**BAY 1 or 6**

J4A003DC-1 DET. C															
4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
*FC78	*FC78			FA610	FA610		FA610	FA610		FA610	FA610		FA610	FA610	
LEVEL															

J4A003DC-1 DET. D															
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
		FA610	FA610		*FC78	*FC78									
LEVEL															

**BAY 2 or 7**

\* **FC78** circuit packs are installed with initial installation of frame

**FIG. 2 - D&SM Circuit Pack Location (See TABLE C)**

TABLE C		
K BLOCK	EQUIPMENT LOCATION	
	LEFT D&SM	RIGHT D&SM
K4 (MDN 0)	145 and 245	-
K5 (MDN 1)	-	645 and 745

**INSTALL DC-DC CONVERTER PACKS AND MISCELLANEOUS SD CIRCUIT PACKS AT D&SM**

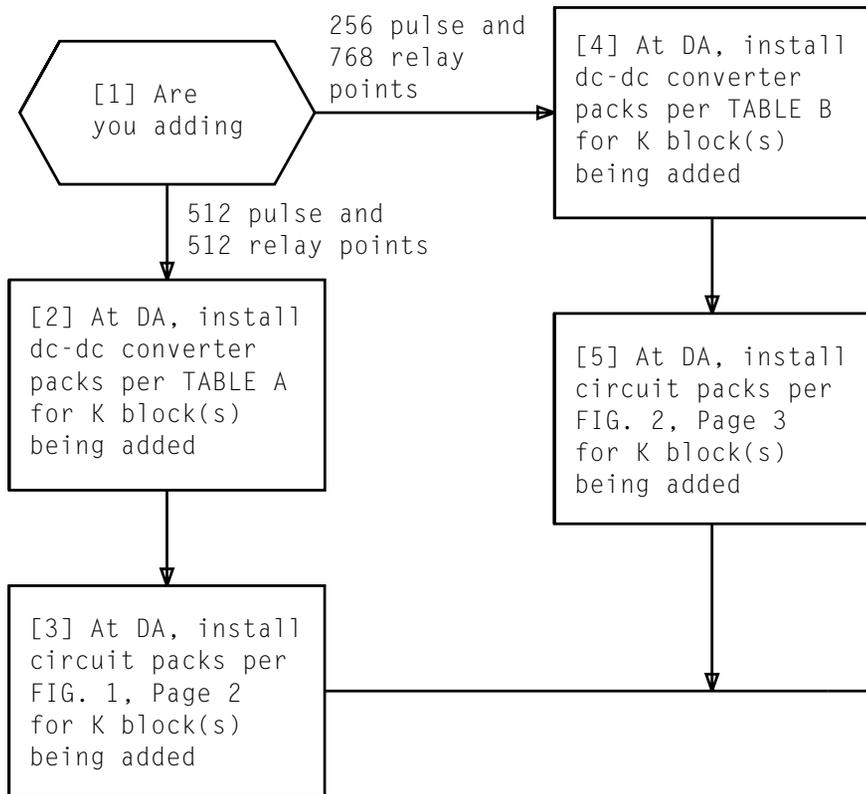


TABLE B			
K BLOCK	DC-DC CONVERTER		
	DESIGNATION	J87407A-2, L2 CONVERTER LOCATED IN POSITION SHOWN	
K4 (MDN 0)	Left DA LOC	012 - 50	012 - 56
K5 (MDN 1)	Right DA LOC	512 - 50	512 - 56

TABLE A					
K BLOCK	DC-DC CONVERTER				
	DESIGNATION	J87407A-2, L2 CONVERTER LOCATED IN POSITION SHOWN			
K4 (MDN 0)	Left DA LOC	012 - 50	012 - 56	017 - 50	017 - 56
K5 (MDN 1)	Right DA LOC	512 - 50	512 - 56	517 - 50	517 - 56

**INSTALL DC-DC CONVERTER PACKS AND MISCELLANEOUS  
SD CIRCUIT PACKS AT DA FRAME**

J4A003EB-1 DET. A									
2P	4	5P	7	8P	10	11P	13	14P	
FB229	FB229	FB229	FB229	FB229	FB229	FB229	FB229	FC78	
LEVEL X68 PULSE POINT APPLIQUE									
J4A003EB-1 DET. A									
2P	4	5P	7	8P	10	11P	13	14P	
FB229	FB229	FB229	FB229	FB229	FB229	FB229	FB229	FC78	
LEVEL X64 PULSE POINT APPLIQUE									
J4A003EA-1 DET. A									
2P	4	5P	7	8P	10	11P	13	14P	
FB228	FB228	FB228	FB228	FB228	FB228	FB228	FB228		
LEVEL X60 RELAY POINT APPLIQUE									
J4A003EA-1 DET. A									
2P	4	5P	7	8P	10	11P	13	14P	
FB228	FB228	FB228	FB228	FB228	FB228	FB228	FB228		
LEVEL X56 RELAY POINT APPLIQUE									

J4A003EB-1 DET. B									
17P	19	20P	22	23P	25	25P	28	29P	
FB229	FB229	FB229	FB229	FB229	FB229	FB229	FB229	FB231	
LEVEL X68 PULSE POINT APPLIQUE									
J4A003EB-1 DET. B									
17P	19	20P	22	23P	25	25P	28	29P	
FB229	FB229	FB229	FB229	FB229	FB229	FB229	FB229	FB231	
LEVEL X64 PULSE POINT APPLIQUE									
J4A003EA-1 DET. B									
21P	23	24P	25	27P	29	30P	32	33P	
FB228	FB228	FB228	FB228	FB228	FB228	FB228	FB228		
LEVEL X60 RELAY POINT APPLIQUE									
J4A003EA-1 DET. B									
21P	23	24P	25	27P	29	30P	32	33P	
FB228	FB228	FB228	FB228	FB228	FB228	FB228	FB228		
LEVEL X56 RELAY POINT APPLIQUE									

J4A003EB-1 DET. C									
33P	35	36P	38	39P	41	42P	44	45P	
FB229	FB229	FB229	FB229	FB229	FB229	FB229	FB229	FC78	
LEVEL X68 PULSE POINT APPLIQUE									
J4A003EB-1 DET. C									
33P	35	36P	38	39P	41	42P	44	45P	
FB229	FB229	FB229	FB229	FB229	FB229	FB229	FB229	FC78	
LEVEL X64 PULSE POINT APPLIQUE									
J4A003EA-1 DET. C									
38P	40	41P	43	44P	46	47P	49	50P	
FB228	FB228	FB228	FB228	FB228	FB228	FB228	FB228		
LEVEL X60 RELAY POINT APPLIQUE									
J4A003EA-1 DET. C									
38P	40	41P	43	44P	46	47P	49	50P	
FB228	FB228	FB228	FB228	FB228	FB228	FB228	FB228		
LEVEL X56 RELAY POINT APPLIQUE									

J4A003EB-1 DET. D									
48P	50	51P	53	54P	56	57P	59	60P	
FB229	FB229	FB229	FB229	FB229	FB229	FB229	FB229	FB231	
LEVEL X68 PULSE POINT APPLIQUE									
J4A003EB-1 DET. D									
48P	50	51P	53	54P	56	57P	59	60P	
FB229	FB229	FB229	FB229	FB229	FB229	FB229	FB229	FB231	
LEVEL X64 PULSE POINT APPLIQUE									
J4A003EA-1 DET. D									
57P	59	60P	62	63P	65	66P	68	69P	
FB228	FB228	FB228	FB228	FB228	FB228	FB228	FB228		
LEVEL X60 RELAY POINT APPLIQUE									
J4A003EA-1 DET. D									
57P	59	60P	62	63P	65	66P	68	69P	
FB228	FB228	FB228	FB228	FB228	FB228	FB228	FB228		
LEVEL X56 RELAY POINT APPLIQUE									

LEGEND:  
X = 0 (LEFT DA) FOR  
K BLOCK 4 (MDN 0)  
= 5 (RIGHT DA) FOR  
K BLOCK 5 (MDN 1)

FIG. 1 - DA Circuit Pack Locations

**INSTALL DC-DC CONVERTER PACKS AND MISCELLANEOUS  
SD CIRCUIT PACKS AT DA FRAME**

J4A003EB-1 DET. A									
2P	4	5P	7	8P	10	11P	13	14P	
FB229	FB229	FB229	FB229	FB229	FB229	FB229	FB229	FC78	
LEVEL X68 PULSE POINT APPLIQUE									
J4A003EA-1 DET. A									
2P	4	5P	7	8P	10	11P	13	14P	
FB228	FB228	FB228	FB228	FB228	FB228	FB228	FB228	FB228	
LEVEL X64 RELAY POINT APPLIQUE									
J4A003EA-1 DET. A									
2P	4	5P	7	8P	10	11P	13	14P	
FB228	FB228	FB228	FB228	FB228	FB228	FB228	FB228	FB228	
LEVEL X60 RELAY POINT APPLIQUE									
J4A003EA-1 DET. A									
2P	4	5P	7	8P	10	11P	13	14P	
FB228	FB228	FB228	FB228	FB228	FB228	FB228	FB228	FB228	
LEVEL X56 RELAY POINT APPLIQUE									

J4A003EB-1 DET. B									
17P	19	20P	22	23P	25	25P	28	29P	
FB229	FB229	FB229	FB229	FB229	FB229	FB229	FB229	FB231	
LEVEL X68 PULSE POINT APPLIQUE									
J4A003EA-1 DET. B									
21P	23	24P	25	27P	29	30P	32	33P	
FB228	FB228	FB228	FB228	FB228	FB228	FB228	FB228	FB228	
LEVEL X64 RELAY POINT APPLIQUE									
J4A003EA-1 DET. B									
21P	23	24P	25	27P	29	30P	32	33P	
FB228	FB228	FB228	FB228	FB228	FB228	FB228	FB228	FB228	
LEVEL X60 RELAY POINT APPLIQUE									
J4A003EA-1 DET. B									
21P	23	24P	25	27P	29	30P	32	33P	
FB228	FB228	FB228	FB228	FB228	FB228	FB228	FB228	FB228	
LEVEL X56 RELAY POINT APPLIQUE									

J4A003EB-1 DET. C									
33P	35	36P	38	39P	41	42P	44	45P	
FB229	FB229	FB229	FB229	FB229	FB229	FB229	FB229	FC78	
LEVEL X68 PULSE POINT APPLIQUE									
J4A003EA-1 DET. C									
38P	40	41P	43	44P	46	47P	49	50P	
FB228	FB228	FB228	FB228	FB228	FB228	FB228	FB228	FB228	
LEVEL X64 RELAY POINT APPLIQUE									
J4A003EA-1 DET. C									
38P	40	41P	43	44P	46	47P	49	50P	
FB228	FB228	FB228	FB228	FB228	FB228	FB228	FB228	FB228	
LEVEL X60 RELAY POINT APPLIQUE									
J4A003EA-1 DET. C									
38P	40	41P	43	44P	46	47P	49	50P	
FB228	FB228	FB228	FB228	FB228	FB228	FB228	FB228	FB228	
LEVEL X56 RELAY POINT APPLIQUE									

J4A003EB-1 DET. D									
48P	50	51P	53	54P	56	57P	59	60P	
FB229	FB229	FB229	FB229	FB229	FB229	FB229	FB229	FB231	
LEVEL X68 PULSE POINT APPLIQUE									
J4A003EA-1 DET. D									
57P	59	60P	62	63P	65	66P	68	69P	
FB228	FB228	FB228	FB228	FB228	FB228	FB228	FB228	FB228	
LEVEL X64 RELAY POINT APPLIQUE									
J4A003EA-1 DET. D									
57P	59	60P	62	63P	65	66P	68	69P	
FB228	FB228	FB228	FB228	FB228	FB228	FB228	FB228	FB228	
LEVEL X60 RELAY POINT APPLIQUE									
J4A003EA-1 DET. D									
57P	59	60P	62	63P	65	66P	68	69P	
FB228	FB228	FB228	FB228	FB228	FB228	FB228	FB228	FB228	
LEVEL X56 RELAY POINT APPLIQUE									

LEGEND:  
X = 0 (LEFT DA) FOR  
K BLOCK 4 (MDN 0)  
= 5 (RIGHT DA) FOR  
K BLOCK 5 (MDN 1)

FIG. 2 - DA Circuit Pack Locations

**INSTALL DC-DC CONVERTER PACKS AND MISCELLANEOUS  
SD CIRCUIT PACKS AT DA FRAME**

[1] Determine from company order member number of SP to which K block(s) is being added and K block(s) to be added. See TABLE A \_\_\_\_\_

[2] See FIG. 1, Page 2 and FIG. 2, Page 3 for bay numbering sequence and K block(s) location \_\_\_\_\_

[3] Select 64 **FB230** circuit packs for TSN K block(s) being added. Read NOTE \_\_\_\_\_

[4] Select equipment per TABLE B for TDN K block(s) being added. Read NOTE 1 \_\_\_\_\_

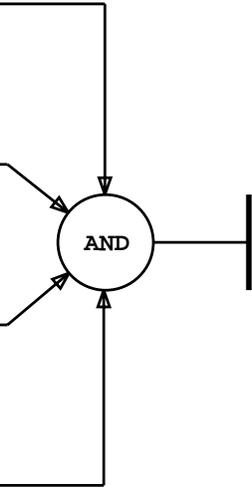


TABLE A	
K BLOCK NUMBER	SP TRANSLATION EQUIVALENT
K0	Universal Scan Block 0 (TSN 0)
K1	Universal Scan Block 1 (TSN 1)
K2	Universal Scan Block 2 (TSN 2)
K3	Universal Scan Block 3 (TSN 3)
K0	Universal SD Block 0 (TDN 0)
K1	Universal SD Block 1 (TDN 1)
K2	Universal SD Block 2 (TDN 2)
K3	Universal SD Block 3 (TDN 3)

TABLE B							
K BLOCK		D&SM				DA	
LEFT FRAME	RIGHT FRAME	CIRCUIT PACKS		DC-DC CONVERTERS		CIRCUIT PACKS	
		TYPE	QTY	TYPE	QTY	TYPE	QTY
K0 TDN 0	K1 TDN 1	<b>FA605</b>	32	J87407A-2, L2	8	<b>FB228</b>	128
K2 TDN 2	K3 TDN 3	<b>FA605</b>	32	J87407A-2, L2	8	<b>FB228</b>	128

NOTE 1  
Quantities indicated are for one K block. If more than one TSN and one TDN K block is being added on this order, quantities are to be adjusted as required

**SELECT UNIVERSAL SCAN AND SD EQUIPMENT AND DETERMINE GROWTH K BLOCK LOCATIONS**

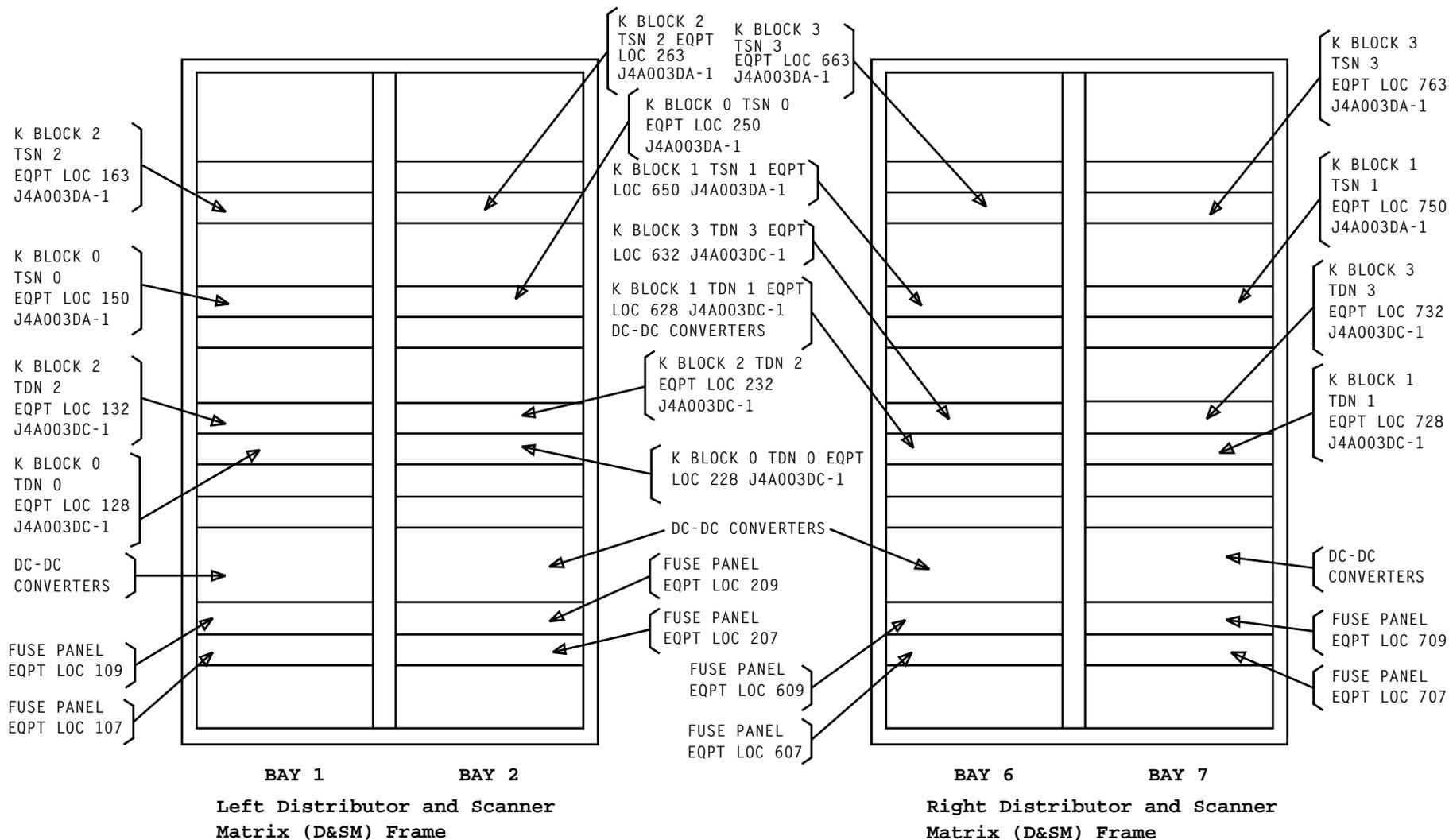


FIG. 1

**SELECT UNIVERSAL SCAN AND SD EQUIPMENT AND DETERMINE GROWTH K BLOCK LOCATIONS**

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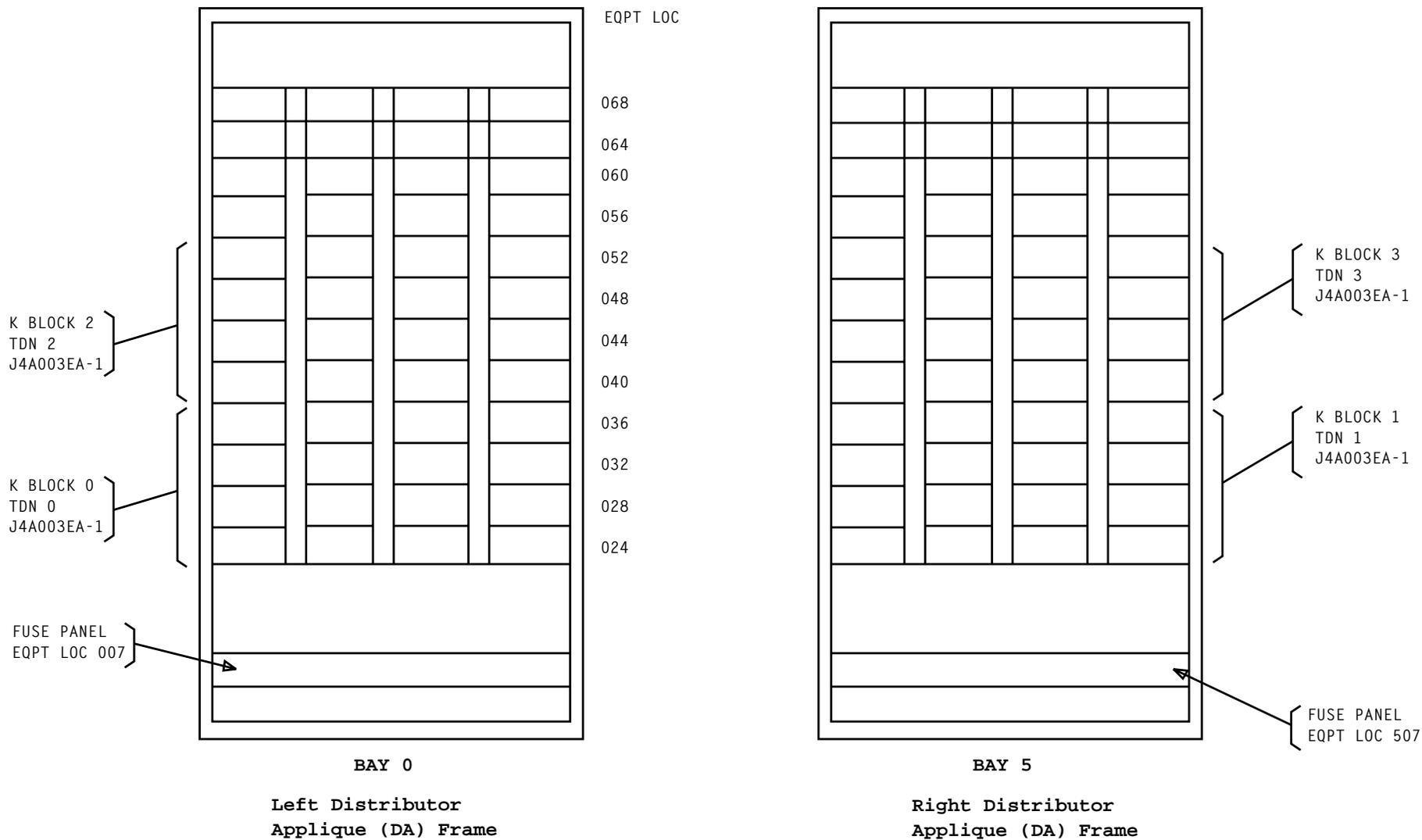


FIG. 2

SELECT UNIVERSAL SCAN AND SD EQUIPMENT AND  
DETERMINE GROWTH K BLOCK LOCATIONS

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[1] At D&SM Frame, install dc-dc converter packs per TABLE A for K block(s) being added

[2] At D&SM Frame, install circuit packs per FIG. 1 and TABLE B, Page 2 for K block(s) being added

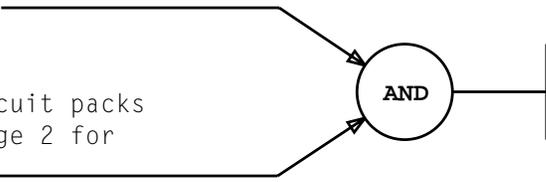


TABLE A									
K BLOCK	DC-DC CONVERTER								
	DESIGNATION	J87407A-2, L2 CONVERTER LOCATED IN POSITION SHOWN							
K0 (TDN 0)	LEFT D&SM LOC	112-36	112-39	112-42	112-45	212-12	212-15	212-18	212-21
K1 (TDN 1)	RIGHT D&SM LOC	612-36	612-39	612-42	612-45	712-12	712-15	712-18	712-21
	DESIGNATION	J87407A-2, L2 CONVERTER LOCATED IN POSITION SHOWN							
K2 (TDN 2)	LEFT D&SM LOC	212-24	212-27	212-30	212-33	217-24	217-27	217-30	217-33
K3 (TDN 3)	RIGHT D&SM LOC	712-24	712-27	712-30	712-33	717-24	717-27	717-30	717-33

**INSTALL DC-DC CONVERTER PACKS AND UNIVERSAL SD  
CIRCUIT PACKS AT D&SM FRAME**

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J4A003DC-1 DET. A															
4	5	6	7	8	9	10	11	23	13	14	15	16	17	18	19
*FC78	*FC78			FA605	FA605		FA605	FA605		FA605	FA605		FA605	FA605	
LEVEL DISTRIBUTOR MATRIX															

J4A003DC-1 DET. B															
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
		FA605	FA605		*FC78	*FC78									
LEVEL DISTRIBUTOR MATRIX															

**BAY 1 or 6**

J4A003DC-1 DET. A															
4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
*FC78	*FC78			FA605	FA605		FA605	FA605		FA605	FA605		FA605	FA605	
LEVEL DISTRIBUTOR MATRIX															

J4A003DC-1 DET. B															
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
		FA605	FA605		*FC78	*FC78									
LEVEL DISTRIBUTOR MATRIX															

\* FC78 circuit packs are installed with initial installation of frame

**BAY 2 or 7**

TABLE B		
K BLOCK	EQUIPMENT LOCATION	
	LEFT D&SM	RIGHT D&SM
K0 (TDN 0)	128 and 228	—
K1 (TDN 1)	—	628 and 728
K2 (TDN 2)	132 and 232	—
K3 (TDN 3)	—	632 and 732

**FIG. 1 - D&SM Circuit Pack Location (See TABLE B)**

**INSTALL DC-DC CONVERTER PACKS AND UNIVERSAL SD CIRCUIT PACKS AT D&SM FRAME**

At Distributor Applique (DA) frame:

1. Install universal SD circuit packs for SD K block(s) being added, per FIG. 1

J4A003EA-1 DET. A								
2P	4	5P	7	8P	10	11P	13	14P
FB228	FB228	FB228	FB228	FB228	FB228	FB228	FB228	
LEVEL* RELAY POINT APPLIQUE								

J4A003EA-1 DET. B								
21P	23	24P	26	27P	29	30P	32	33P
FB228	FB228	FB228	FB228	FB228	FB228	FB228	FB228	
LEVEL* RELAY POINT APPLIQUE								

J4A003EA-1 DET. C								
38P	40	41P	43	44P	46	47P	49	50P
FB228	FB228	FB228	FB228	FB228	FB228	FB228	FB228	
LEVEL* RELAY POINT APPLIQUE								

J4A003EA-1 DET. D								
57P	59	60P	62	63P	65	66P	68	69P
FB228	FB228	FB228	FB228	FB228	FB228	FB228	FB228	
LEVEL* RELAY POINT APPLIQUE								

BAY 0 OR 5

FIG. 1 - DA Circuit Pack Locations (See TABLE A)

TABLE A		
K BLOCK	*EQUIPMENT LOCATIONS	
	LEFT DA	RIGHT DA
K0 (TDN 0)	036 032 028 024	-
K1 (TDN 1)	-	536 532 528 524
K2 (TDN 2)	052 048 044 040	-
K3 (TDN 3)	-	552 548 544 540

[1] Read CAUTION 1. At SP control frame terminal strips B and E [FIG. 1] complete strapping per TABLE A using 26-gauge wire for K block(s) being added

TABLE A				
K BLOCK	TERMINAL STRIP B BAY 3		TERMINAL STRIP B BAY 4	
	FROM TERMINAL	TO TERMINAL	FROM TERMINAL	TO TERMINAL
0 (TSN 0)	042	052	042	052
1 (TSN 1)	043	053	043	053
2 (TSN 2)	044	054	044	054
3 (TSN 3)	045	055	045	055
4 (MSN 0)	046	056	046	056
5 (MSN 1)	047	057	047	057

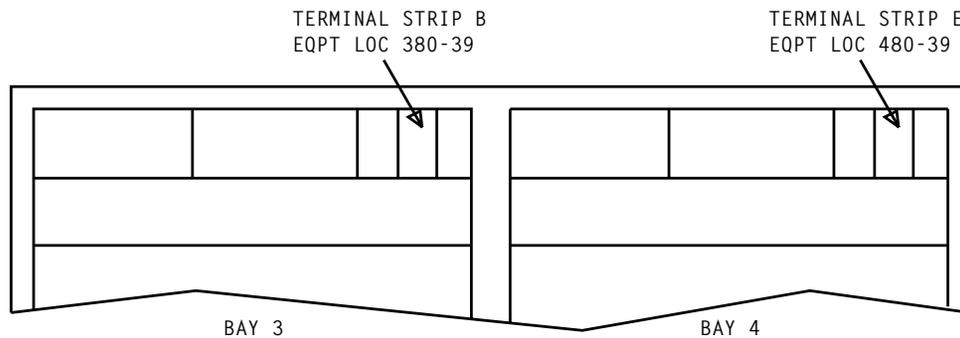


FIG. 1 - SP Control Frame - Front View

**CAUTION 1**  
Strapping connections must be made only for those K blocks being added at this time

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[1] Determine from company order member number of SP to which K block(s) is to be added and K block(s) to be added. See TABLE A

[2] See FIG. 1, Page 2 for bay numbering sequence and K block location

[3] Select 64 **FB230** circuit packs for each K block to be added

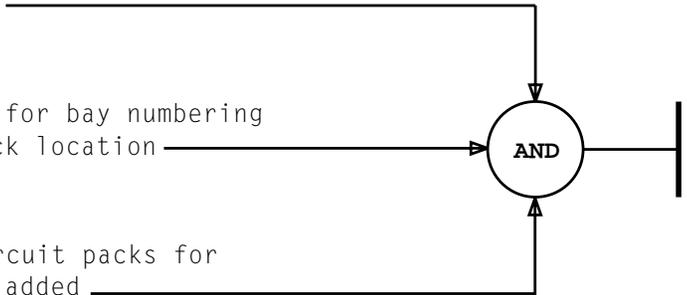


TABLE A	
K BLOCK NUMBER	SP TRANSLATION EQUIVALENT
K0	Universal Scan Block 0 (TSN 0)
K1	Universal Scan Block 1 (TSN 1)
K2	Universal Scan Block 2 (TSN 2)
K3	Universal Scan Block 3 (TSN 3)
K4	Miscellaneous Scan Block 0 (MSN 0)
K5	Miscellaneous Scan Block 1 (MSN 1)

**SELECT UNIVERSAL SCAN AND/OR MISCELLANEOUS SCAN EQUIPMENT AND DETERMINE GROWTH K BLOCK LOCATION(S)**

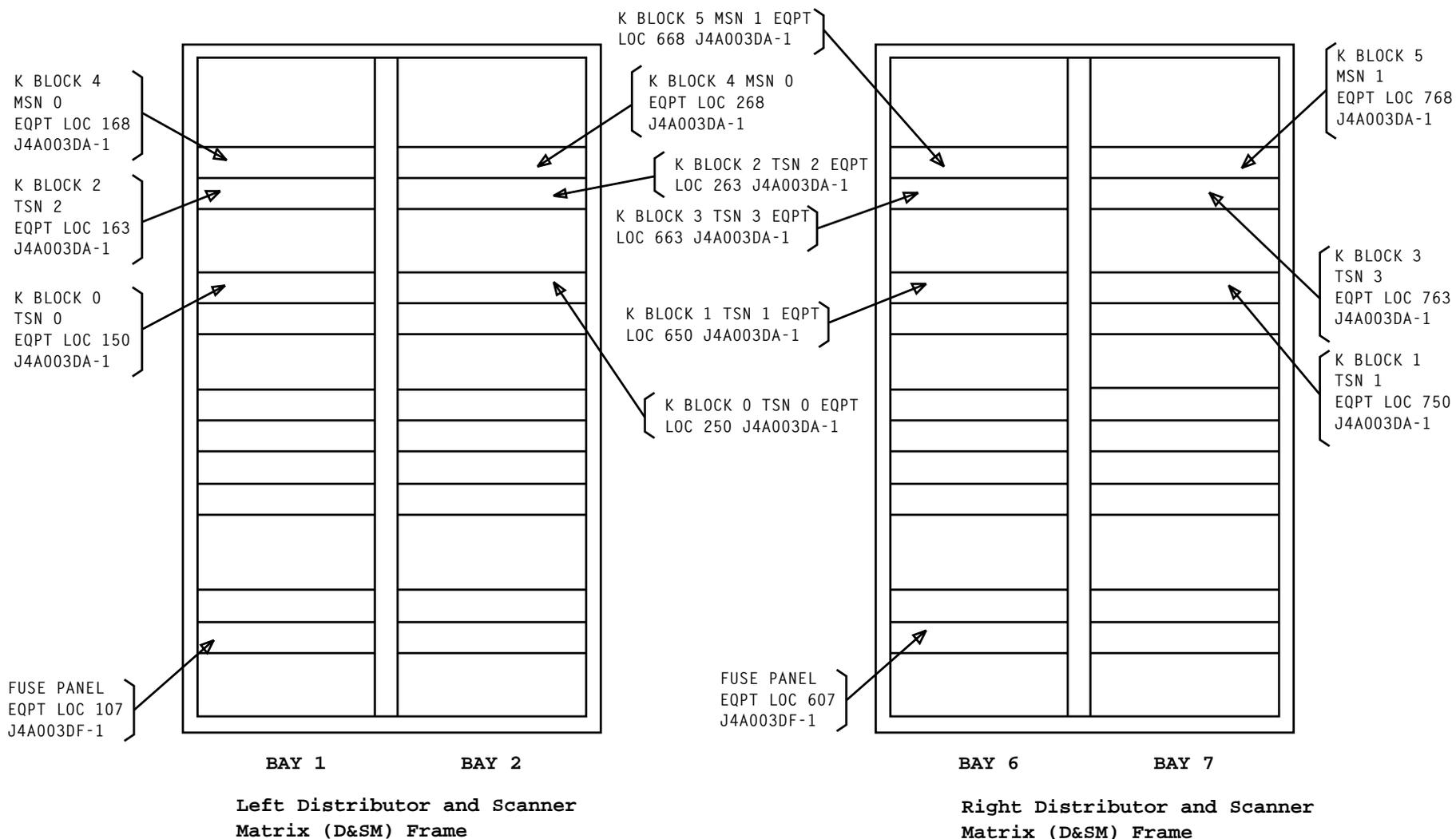


FIG. 1

**SELECT UNIVERSAL SCAN AND/OR MISCELLANEOUS SCAN  
EQUIPMENT AND DETERMINE GROWTH K BLOCK LOCATION(S)**

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[1] Determine from company order member number of SP to which K block(s) is to be added and K block(s) to be added. See TABLE A \_\_\_\_\_

[2] See FIG. 1, Page 2 and FIG. 2, Page 3 for bay numbering sequence and K block(s) location \_\_\_\_\_

[4] Select equipment per TABLE B for K block(s) being added. Read NOTE 1 \_\_\_\_\_

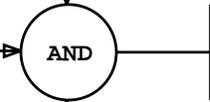


TABLE A	
K BLOCK NUMBER	SP TRANSLATION EQUIVALENT
K0	Universal SD Block 0 (TDN 0)
K1	Universal SD Block 1 (TDN 1)
K2	Universal SD Block 2 (TDN 2)
K3	Universal SD Block 3 (TDN 3)
K4	Miscellaneous SD Block 0 (MDN 0)
K5	Miscellaneous SD Block 1 (MDN 1)

TABLE B										
K BLOCK			D&SM				DA			
LEFT FRAME	RIGHT FRAME	OPTIONS	CIRCUIT PACKS		DC-DC CONVERTERS		CIRCUIT PACKS		FUSE	
			TYPE	QTY	TYPE	QTY	TYPE	QTY	TYPE	QTY
K0 TDN 0	K1 TDN 1	All relay	FA605	32	J87407A-2, L2	8	FB228	128	None	-
K2 TDN 2	K3 TDN 3	All relay	FA605	32	J87407A-2, L2	8	FB228	128	None	-
K4 MDN 0	K5 MDN 1	All relay	FA605	32	J87407A-2, L2	8	FB228	128	70D	4

NOTE 1  
Quantities shown in TABLE B are for one K block. If more than one K block is being added on this order, quantities are to be adjusted as required

**SELECT UNIVERSAL AND/OR MISCELLANEOUS (RELAY ONLY)  
SD EQUIPMENT AND DETERMINE GROWTH K BLOCK LOCATIONS**

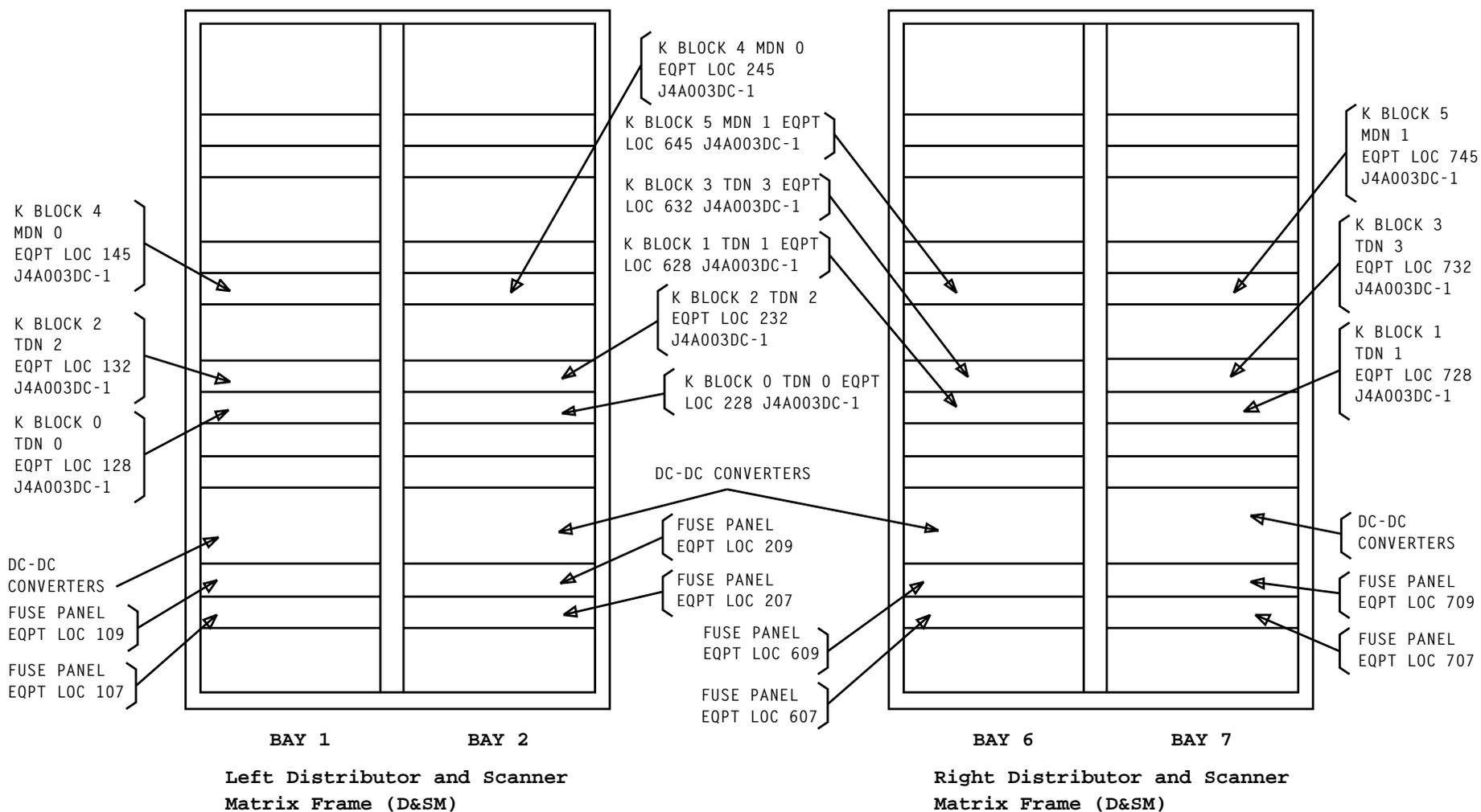
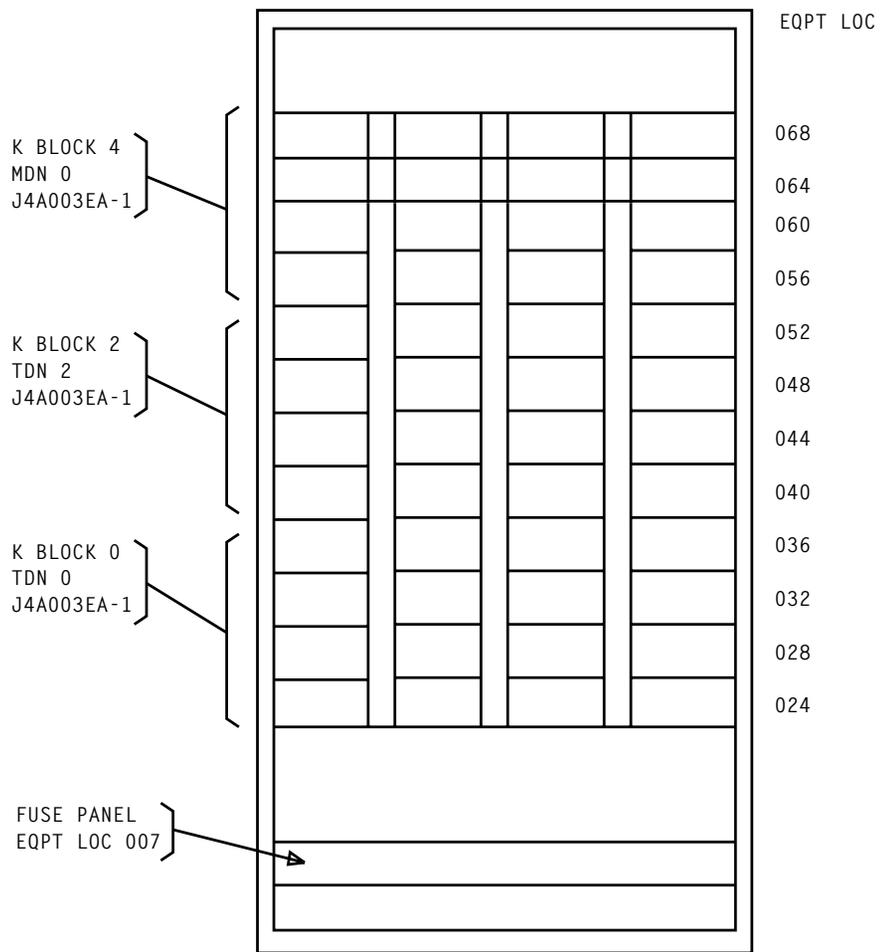


FIG. 1

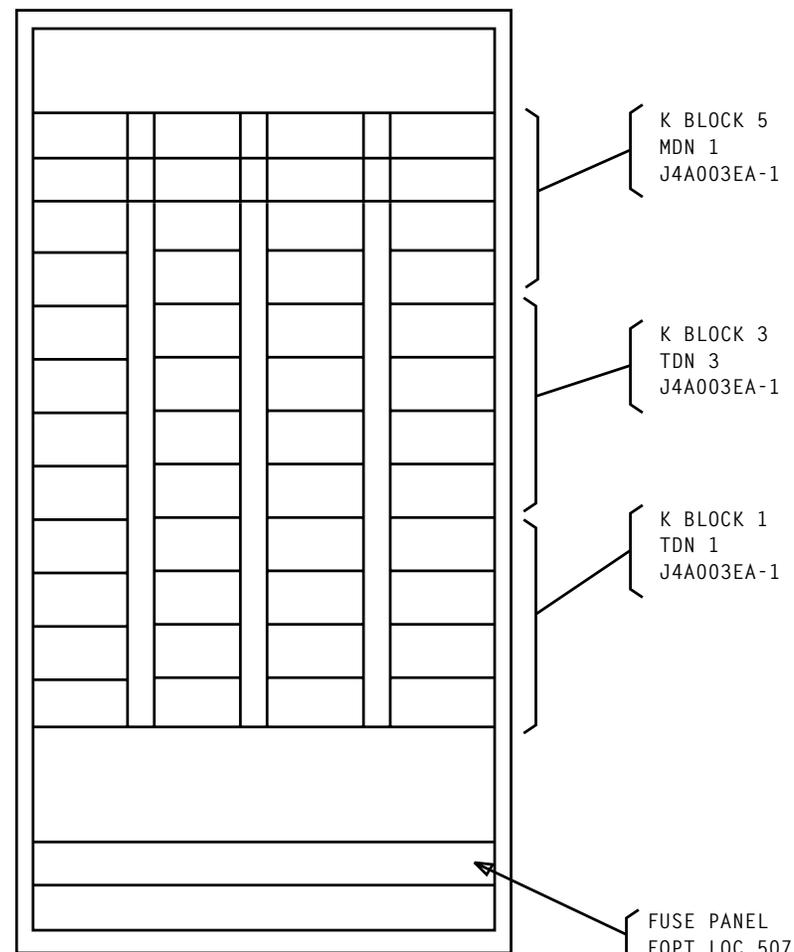
**SELECT UNIVERSAL AND/OR MISCELLANEOUS (RELAY ONLY)  
SD EQUIPMENT AND DETERMINE GROWTH K BLOCK LOCATIONS**

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BAY 0

Left Distributor  
Applique (DA) Frame



BAY 5

Right Distributor  
Applique (DA) Frame

FIG. 2

**SELECT UNIVERSAL AND/OR MISCELLANEOUS (RELAY ONLY)  
SD EQUIPMENT AND DETERMINE GROWTH K BLOCK LOCATIONS**

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[1] At D&SM, install dc-dc converters per TABLE A for K block(s) being added

[2] At D&SM install circuit packs per FIG. 1, Page 2 for K block(s) being added

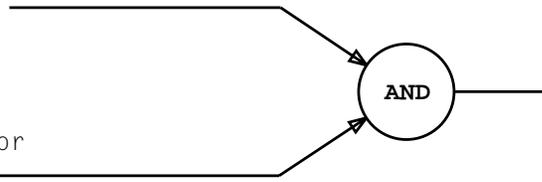


TABLE A									
K BLOCK	DC-DC CONVERTER								
	DESIGNATION	J87407A-2, L2 CONVERTER LOCATED IN POSITION SHOWN							
K0 (TDN 0)	LEFT D&SM LOC	112-36	112-39	112-42	112-45	212-12	212-15	212-18	212-21
K1 (TDN 1)	RIGHT D&SM LOC	612-36	612-39	612-42	612-45	712-12	712-15	712-18	712-21
	DESIGNATION	J87407A-2, L2 CONVERTER LOCATED IN POSITION SHOWN							
K2 (TDN 2)	LEFT D&SM LOC	212-24	212-27	212-30	212-33	217-24	217-27	217-30	217-33
K3 (TDN 3)	RIGHT D&SM LOC	712-24	712-27	712-30	712-33	717-24	717-27	717-30	717-33
	DESIGNATION	J87407A-2, L2 CONVERTER LOCATED IN POSITION SHOWN							
K4 (MDN 0)	LEFT D&SM LOC	212-36	212-39	212-42	212-45	217-36	217-39	217-42	217-45
K5 (MDN 1)	RIGHT D&SM LOC	712-36	712-39	712-42	712-45	717-36	717-39	717-42	717-45

**INSTALL DC-DC CONVERTER PACKS AND UNIVERSAL AND/OR MISCELLANEOUS (RELAY ONLY) SD CIRCUIT PACKS AT D&SM**

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J4A003DC-1 DET. A															
4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
*FC78	*FC78			FA605	FA605		FA605	FA605		FA605	FA605		FA605	FA605	
LEVEL DISTRIBUTOR MATRIX															

J4A003DC-1 DET. B															
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
		FA605	FA605		*FC78	*FC78									
LEVEL DISTRIBUTOR MATRIX															

**BAY 1 or 6**

J4A003DC-1 DET. A															
4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
*FC78	*FC78			FA605	FA605		FA605	FA605		FA605	FA605		FA605	FA605	
LEVEL DISTRIBUTOR MATRIX															

J4A003DC-1 DET. B															
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
		FA605	FA605		*FC78	*FC78									
LEVEL DISTRIBUTOR MATRIX															

**BAY 2 or 7**

\* FC78 Circuit packs are installed with initial installation of frame

**FIG. 1 - D&SM Circuit Pack Location (See TABLE B)**

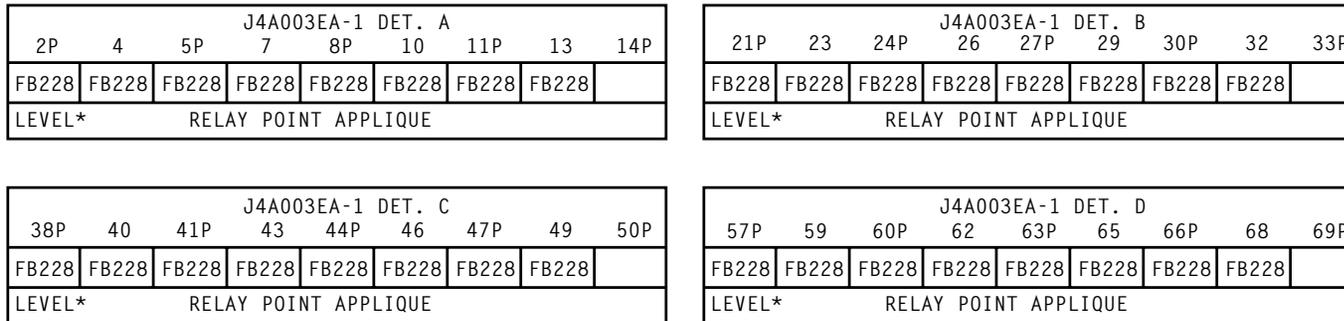
TABLE B		
K BLOCK	EQUIPMENT LOCATION	
	LEFT D&SM	RIGHT D&SM
K0 (TDN 0)	128 and 228	-
K1 (TDN 1)	-	628 and 728
K2 (TDN 2)	132 and 232	-
K3 (TDN 3)	-	632 and 732
K4 (MDN 0)	145 and 245	-
K5 (MDN 1)		645 and 745

**INSTALL DC-DC CONVERTER PACKS AND UNIVERSAL AND/OR MISCELLANEOUS (RELAY ONLY) SD CIRCUIT PACKS AT D&SM**

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At Distributor Applique (DA) frame:

1. Install universal and/or miscellaneous (relay only) SD circuit packs for SD K block(s) being added, per FIG. 1



BAY 0 OR 5

FIG. 1 - DA Circuit Pack Locations (See TABLE A)

TABLE A		
K BLOCK	*EQUIPMENT LOCATIONS	
	LEFT DA	RIGHT DA
K0 (TDN 0)	036 032 028 024	-
K1 (TDN 1)	-	536 532 528 524
K2 (TDN 2)	052 048 044 040	-
K3 (TDN 3)	-	552 548 544 540
K4 (MDN 0)	068 064 060 056	-
K5 (MDN 1)	-	568 564 560 556

**INSTALL UNIVERSAL AND/OR MISCELLANEOUS (RELAY ONLY) SD CIRCUIT PACKS AT DA FRAME**

At Distributor and Scanner Matrix (D&SM) frame:  
 1. Install universal scan point circuit packs for scan K block(s) being added, per FIG. 1

J4A003DA-1 DET. A															
4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
FB230	FB230	FB230	FB230	FB230	FB230	FB230	FB230	FB230	FB230	FB230	FB230	FB230	FB230	FB230	FB230
LEVEL*								SCANNER MATRIX							

J4A003DA-1 DET. B															
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
FB230	FB230	FB230	FB230	FB230	FB230	FB230	FB230	FB230	FB230	FB230	FB230	FB230	FB230	FB230	FB230
LEVEL*								SCANNER MATRIX							

BAY 1/2/6/7

TABLE A		
K BLOCK	*EQUIPMENT LOCATION	
	LEFT D&SM	RIGHT D&SM
K0 (TSN 0)	150 and 250	—
K1 (TSN 1)	—	650 and 750
K2 (TSN 2)	163 and 263	—
K3 (TSN 3)	—	663 and 763

FIG. 1 - D&SM Scan Point Circuit Pack Locations (See TABLE A)

**INSTALL UNIVERSAL SCAN POINT CIRCUIT PACKS**

At Distributor and Scanner Matrix (D&SM) frame:

1. Install universal and/or miscellaneous scan point circuit packs for scan K block(s) being added, per FIG. 1

J4A003DA-1 DET. A															
4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
FB230	FB230	FB230	FB230	FB230	FB230	FB230	FB230	FB230	FB230	FB230	FB230	FB230	FB230	FB230	FB230
LEVEL* SCANNER MATRIX															

J4A003DA-1 DET. B															
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
FB230	FB230	FB230	FB230	FB230	FB230	FB230	FB230	FB230	FB230	FB230	FB230	FB230	FB230	FB230	FB230
LEVEL* SCANNER MATRIX															

BAY 1/2/6/7

FIG. 1 - D&SM Scan Point Circuit Pack Locations (See TABLE A)

TABLE A		
K BLOCK	*EQUIPMENT LOCATIONS	
	LEFT D&SM	RIGHT D&SM
K0 (TSN 0)	150 and 250	—
K1 (TSN 1)	—	650 and 750
K2 (TSN 2)	163 and 263	—
K3 (TSN 3)	—	663 and 763
K4 (MSN 0)	168 and 268	—
K5 (MSN 1)	—	668 and 768

**INSTALL UNIVERSAL AND/OR MISCELLANEOUS SCAN POINT CIRCUIT PACKS**

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[4] Using TABLE A, select version numbers associated with LDI issues in Step 3. See NOTE 1

[5] Compare version numbers in Step 4 with version numbers calculated in Step 2

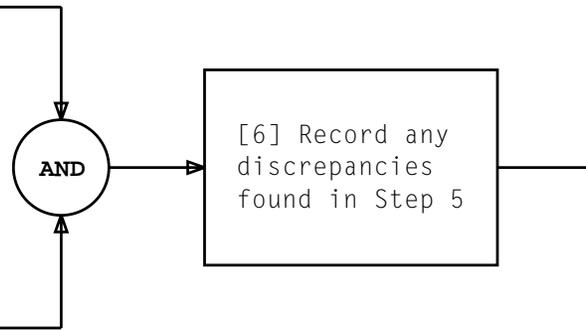


TABLE A							
UNIT	SD NUMBER	MEMBER VERSION NUMBER					
		0	1	2	3	4	5
SP2 Controller	4A067-01	*1A	2A	2C	2D	7A	8A
	4A066-01	1A	2A	2A	2A	2A	2A
	4A065-01	1A	2B	2E	2E	2E	2E
SP2 Matrix	4A068-01	1A	—	—	—	—	—
	4A069-01	1A	—	—	—	—	—

\*LDI Issue Numbers

NOTE 1  
 Appropriate support organization may be consulted for current version information if not listed in TABLE A

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[1] Determine miscellaneous point block being added using TABLE A

[2] Enter activate message per TABLE B using RC Form 700 order numbers previously recorded

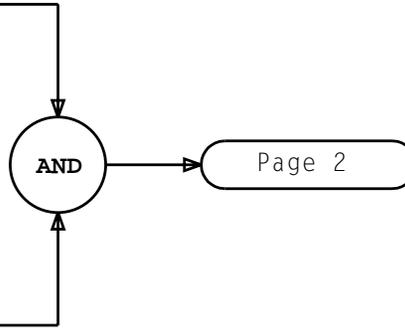


TABLE A	
K BLOCK	SP TRANSLATION EQUIVALENT
4	Comb. Misc. Scan Block 0 (MSN 0)
4	Comb. Misc. SD Block 0 (MDN 0)
5	Comb. Misc. Scan Block 1 (MSN 1)
5	Comb. Misc. SD Block 1 (MDN 1)

TABLE B
RCACT:ORNU a!
a = RC order number to be activated

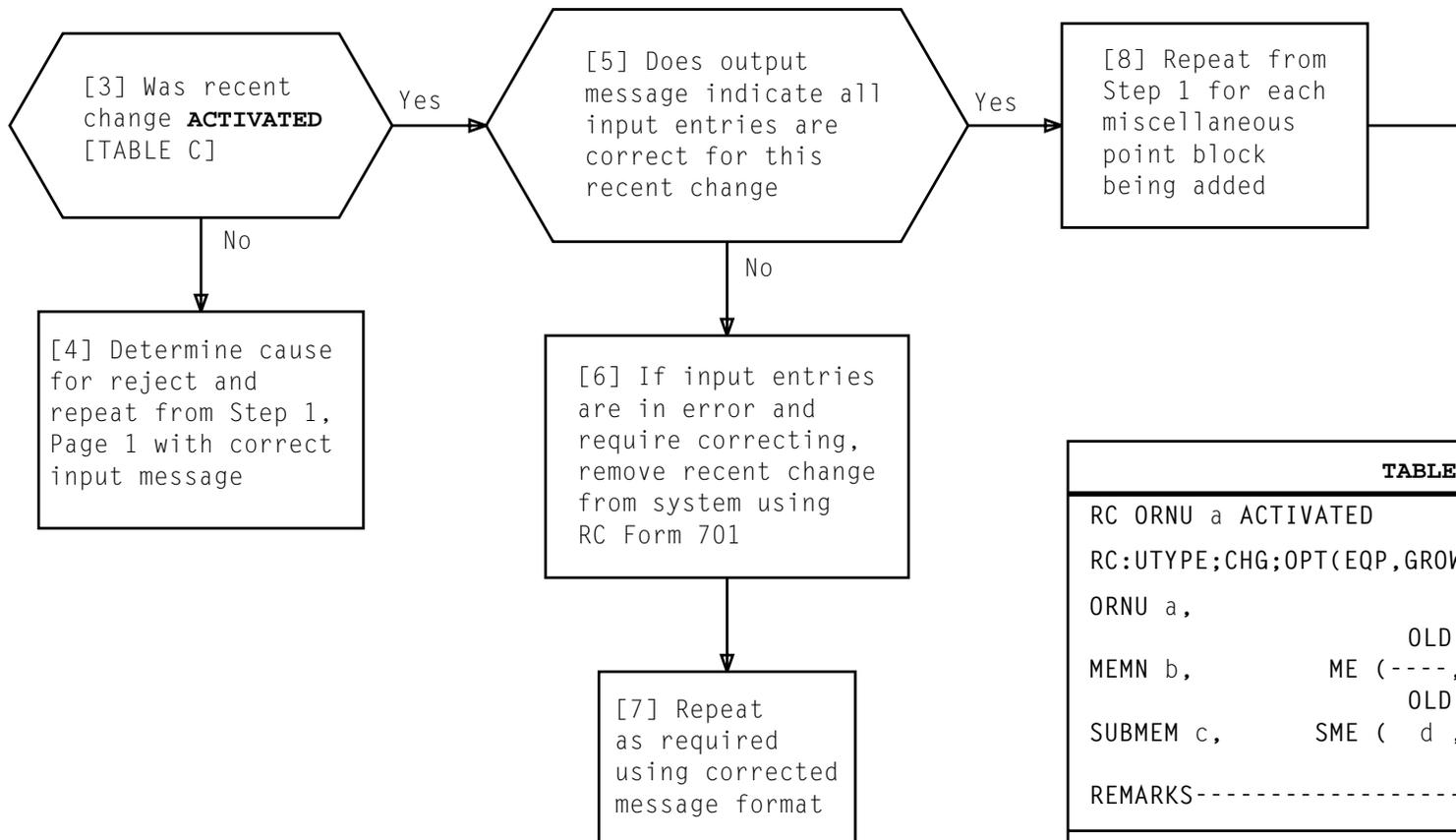


TABLE C	
RC ORNU a ACTIVATED	
RC:UTYPE;CHG;OPT(EQP,GROW),BUF:	UTYN SP,
ORNU a,	
	OLD NEW
MEMN b,	ME (----, ----),
	OLD NEW
SUBMEM c,	SME ( d , d ),
REMARKS-----!	
a = RC order number	
b = Member number of growth associated SP	
c = Submember name	
= MSNBLK(0 or 1) (for Misc Scan Block 0 or 1)	
= MDNBLK(0 or 1) (for Misc SD Block 0 or 1)	
d = UNEQ, GROW or GROW, SGRO or SGRO, OPER	

ITEM	ISSUE	ITEM	ISSUE	ITEM	ISSUE	ITEM	ISSUE	ITEM	ISSUE	ITEM	ISSUE
IXL-001		• DLP-517		• DLP-552							
NTP-002		• DLP-518		• DLP-553							
• NTP-003		• DLP-519		• DLP-554							
• NTP-004		• DLP-520		• DLP-555							
• NTP-005		• DLP-521		• DLP-556							
• NTP-006		• DLP-522		• DLP-557							
• NTP-007		• DLP-523		• DLP-558							
• NTP-008		• DLP-524		• DLP-559							
• NTP-009		• DLP-525		<input type="checkbox"/> DLP-560							
• NTP-010		• DLP-526		<input type="checkbox"/> DLP-561							
• NTP-011		• DLP-527		<input type="checkbox"/> DLP-562							
• NTP-012		• DLP-528		<input type="checkbox"/> DLP-563							
• NTP-013		• DLP-529		<input type="checkbox"/> DLP-564							
• NTP-014		• DLP-530		<input type="checkbox"/> DLP-565							
• NTP-015		• DLP-531		<input type="checkbox"/> DLP-566							
• NTP-016		• DLP-532		• CKL-891							
• NTP-017		• DLP-533		TNG-893							
• NTP-018		• DLP-534		• DPL-895							
• DLP-500		• DLP-535									
• DLP-501		• DLP-536									
• DLP-502		• DLP-537									
• DLP-503		• DLP-538									
• DLP-504		• DLP-539									
• DLP-505		• DLP-540									
• DLP-506		• DLP-541									
• DLP-507		• DLP-542									
• DLP-508		• DLP-543									
• DLP-509		• DLP-544									
• DLP-510		• DLP-545									
• DLP-511		• DLP-546									
• DLP-512		• DLP-547									
• DLP-513		• DLP-548									
• DLP-514		• DLP-549									
• DLP-515		• DLP-550									
• DLP-516		• DLP-551									

• REVISED OR ADDED ITEM

CANCELED ITEM

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**CHECKLIST**

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