Task Oriented Practice
(TOP)

4ESS™ SWITCH

MAS, PUC, TMS, AND TSI

GROWTH/DEGROWTH

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TITLE PAGE	000

FIND YOUR JOB IN THE LIST BELOW	THEN GO TO
Acceptance	NTP-002
Add Memory Blocks to Time Multiplexed Switching (TMS) Frames in Four TMS Office (Support to Installer)	NTP-009
Add Memory Blocks to Time Multiplexed Switching (TMS) Frames in Two TMS Office (Support to Installer)	NTP-008
Add Time Slot Interchange (J4A001B) (TSI-2) Frame and TMS Interface (Support to Installer)	NTP-004
Add TMS Frame and Change Office Configuration From One to Two TMS Office (Support to Installer)	NTP-003
Add TMS Frames and Change Office Configuration From Two to Four TMS Office (Support to Installer)	NTP-006
Convert TSI to Wideband Capability	NTP-011
Degrow Mass Announcement Service (MAS) and Peripheral Unit Controller (PUC) Hardware (Support to Installer)	NTP-012
Degrow Time Slot Interchange (TSI-2) Frame (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 Time Multiplexed Switching (TMS) Unit Type (UT) Translator (VER:UTYPE:TMSP 1!)	TELCO/INST	DLP-515
2	Compare Translations Data Verified in Item 1 Against Wiring Records (TMS 1)	INST	—
3	Assure That Circuit Access and Power Verification Tests Have Been Completed for TMS 1	INST	—
4	Remove All TMS 1 Frame Power Using Frame Power Switches	INST	—
5	Connect Private Signal Leads	INST	—
	CAUTION: Ensure that correct fuses are removed. Removal of wrong fuse could cause loss of service.		
6	Remove Power From Network Clock Cable Drivers Associated With TMS 1	TELCO	DLP-567
7	Connect Network Clock Cabling for TMS 1	INST	—
8	Replace Fuses Removed in Item 6	TELCO	—
9	Connect Office Alarm Cabling for TMS 1	INST	—
10	Connect Frame Member Number Strap on TMS 1	INST	—
11	Verify TMS 1 Private Signal Leads	INST	—
12	Verify Office Alarm Cabling	INST	—
13	Extend or Insert Peripheral Unit Bus for TMS 1 per TOP 234-153-045; Then Continue This Procedure at Item 14 Upon Completion	TELCO/INST	—
14	Recent Change and Verify Member Equipage From UNEQ to GROW (TMS 1)	TELCO	DLP-502
15	Recent Change and Verify Submember Equipage From UNEQ to GROW (TMS 1, Controller 0)	TELCO	DLP-503
16	Recent Change and Verify Submember Equipage From UNEQ to GROW (TMS 1, Controller 1)	TELCO	DLP-503
17	Recent Change and Verify Submember Equipage From UNEQ to GROW (TMS 1, Controller 0, Memory Block 0)	TELCO	DLP-503
18	Recent Change and Verify Submember Equipage From UNEQ to GROW (TMS 1, Controller 1, Memory Block 0)	TELCO	DLP-503

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
19	Recent Change and Verify Submember Equipage From UNEQ to GROW (TMS 1, Controller 0 Memory Block 2)	TELCO	DLP-503
20	Recent Change and Verify Submember Equipage From UNEQ to GROW (TMS 1, Controller 1 Memory Block 2)	TELCO	DLP-503
21	Enter Message **RMV:PUB 0!** To Remove Peripheral Unit Bus 0 From Service	TELCO	—
22	Apply Power to TMS 1 Controllers 0 and 1 and Bus Interface Unit 0 Using Following Power Switches: • **C0IPUB0** and **C1IPUB0** to **ROS** • **CONTR0** and **CONTR1** to Normal Position	INST	—
23	Diagnose TMS 1 Controllers 0 and 1 (PUB 0) Specifying GROWTH and Phases 1 Through 7	INST	—
24	Remove Power From Bus Interface Unit 0 Using **C0IPUB0** and **C1IPUB0** Switches	INST	—
25	Restore Peripheral Unit Bus 0 to Service (**RST:PUB 0!**)	TELCO/INST	DLP-507
26	Enter Message **RMV:PUB 1!** To Remove Peripheral Unit Bus 1 From Service	TELCO	—
27	Apply Power to TMS 1 Bus Interface Unit 1 Using **C0IPUB1** and **C1IPUB1** Switches (**OFF** Switch To Remain in **ROS**)	INST	—
28	Diagnose TMS 1 Controllers 0 and 1 (PUB 1), Specifying GROWTH and Phases 1 Through 7	INST	—
29	If Repair or Maintenance Was Required to IPUB or Controller Access Circuitry During IPUB 1 Testing, Continue at Next Item; Otherwise Continue at Item 33	TELCO/INST	—
30	Remove Power From Growth TMS Bus Interface Unit 1 Using **C0IPUB1** and **C1IPUB1** Power Switches	INST	—
31	Restore Peripheral Unit Bus 1 to Service (**RST:PUB 1!**)	TELCO/INST	DLP-507
32	Repeat From Item 21	TELCO/INST	—
33	Restore Peripheral Unit Bus 1 to Service (**RST:PUB 1!**)	TELCO/INST	DLP-507
34	Apply Power to TMS IPUB 0 Using **C0IPUB0** and **C1IPUB0** Switches	INST	—
35	Recent Change and Verify Member Equipage From GROW to SGRO (TMS 1)	TELCO	DLP-502
36	Recent Change and Verify Submember Equipage From GROW to SGRO (TMS 1, Controller 0)	TELCO	DLP-503

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
37	Recent Change and Verify Submember Equipage From GROW to SGRO (TMS 1, Controller 1)	TELCO	DLP-503
38	Recent Change and Verify Submember Equipage From GROW to SGRO (TMS 1, Controller 0, Memory Block 0)	TELCO	DLP-503
39	Recent Change and Verify Submember Equipage From GROW to SGRO (TMS 1, Controller 1, Memory Block 0)	TELCO	DLP-503
40	Recent Change and Verify Submember Equipage From GROW to SGRO (TMS 1, Controller 0, Memory Block 2)	TELCO	DLP-503
41	Recent Change and Verify Submember Equipage From GROW to SGRO (TMS 1, Controller 1, Memory Block 2)	TELCO	DLP-503
	CAUTION: Do not request diagnostic phases 8 or 9		
42	Diagnose TMS 1 Controllers 0 and 1 Specifying GROWTH, and Phases 1 Through 7	INST	—
43	At TMS 0 Identify and Carefully Tag Coaxial Cables To Be Relocated and Secure Cables Not To Be Moved to Prevent Dislodging Connectors	INST	—
44	Notify TOC To Suspend All Manual and Automatic Trunk Testing	TELCO	—
45	Enter Message **INH:AUD:NUM (8,26,50)!**	TELCO	—
	CAUTION: Item 46 through 68 must be performed without interruption. Item 50 commits office to completing 2 TMS reconfiguration. Once cabling changes are started there is no way to "Rollback" without losing call processing capability		
46	Enter FOCUS Overwrites (Contact Appropriate Support Organization for Instructions on Application of FOCUS Overwrites)	TELCO	—
47	Mount Current Issue of Office Library Tape on Idle Tape Unit	TELCO	DLP-516
48	Load Library Package Program LGxTMSG	TELCO	DLP-517
49	Enter Message **INH:WPAD!**	TELCO	—
	NOTES: 1. If system takes a phase before Task 1 of TMS growth program is executed, item 48 through 50 must be repeated 2. Task 1 and 2 of library program could take up to 35 minutes to run		
	(Continued on Page 4)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
50	Execute TMSG Library Program LGxTMSG (Task 1)	TELCO	DLP-519
51	Change Call Store Word (OD4TMSNUM) To Update TMS Network Configuration Size	TELCO	DLP-518
52	Execute TMSG Library Program LGxTMSG (Task 2)	TELCO	DLP-519
53	Enter Message **ALW:AUD:NUM (8,26,50)!**	TELCO	—
54	Temporarily Protect Wiring Side of **FC77** Filter Packs Located Next to Coaxial Cables Identified in Item 43	INST	—
	CAUTIONS: 1. Controllers 0 and 1 on TMS 0 must remain in service while performing Items 55 through 58 *2. Do not remove any cables from TMS 0-0 at this time*		
	NOTE: Items 55 and 57 are very time consuming; consideration should be given in planning TMSP growth		
55	Relocate Coaxial Cables From TMS 0-1 to TMS 1-1	INST	—
56	Diagnose TMS 1, Controller 1, Specifying GROWTH and PH8	INST	—
57	Relocate Coaxial Cables From TMS 0-0 to TMS 1-0	INST	—
58	Diagnose TMS 1, Controller 0, Specifying GROWTH and PH8	INST	—
59	Set TMS 1 Frame Power Switches As Follows: • **C0IPUB0**, **C0IPUB1**, **CONTR0** to Normal Position • **C1IPUB0**, **C1IPUB1** to Normal Position, and **CONTR1** to **ROS**	INST	—
60	Recent Change and Verify Member Equipage From SGRO to OPER (TMS 1)	TELCO	DLP-502
61	Recent Change and Verify Submember Equipage From SGRO to OPER (TMS 1, Controller 0)	TELCO	DLP-503
62	Recent Change and Verify Submember Equipage From SGRO to OPER (TMS 1, Controller 1)	TELCO	DLP-503
63	Recent Change and Verify Submember Equipage From SGRO to OPER (TMS 1, Controller 0, Memory Block 0)	TELCO	DLP-503
	(Continued on Page 5)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
64	Recent Change and Verify Submember Equipage From SGRO to OPER (TMS 1, Controller 1, Memory Block 0)	TELCO	DLP-503
65	Recent Change and Verify Submember Equipage From SGRO to OPER (TMS 1, Controller 0, Memory Block 2)	TELCO	DLP-503
66	Recent Change and Verify Submember Equipage From SGRO to OPER (TMS 1, Controller 1, Memory Block 2)	TELCO	DLP-503
67	Enter Message To Restore and Initialize TMS 1 Controller 0 to Simplex Operation (**RST:TMSP 1,CONTR 0!**) ATP and RESTORE COMPLETE Required; Installer Clear Equipment Troubles	TELCO/INST	—
68	Enter Message To Run Peripheral Unit Status Audit (**AUD:PUSTAT!**); Wait for Message Complete (**MSG COMPL**)	TELCO	—
69	Restore and Initialize TMS 1 Controller 1 to Duplex Operation (Using TMS 1 **CONTR1** Power Switch)	TELCO/INST	DLP-509
70	Notify TOC To Resume Trunk Testing	TELCO	—
71	Degrow TMS 0 Memory Block 3:		
	A. If Memory Block 3 Circuit Packs Are To Remain in Place in TMS 0 Frame:		
	1. Recent Change TMS 0, Controller 0, Memory Block 3 Submember Equipage to GROW Using RC Form 701 (Degrow)	TELCO	DLP-556
	2. Recent Change TMS 0, Controller 1, Memory Block 3 Submember Equipage to GROW Using RC Form 701 (Degrow)	TELCO	DLP-556
	B. If Memory Block 3 Circuit Packs Are To Be Removed From TMS 0 Frame:		
	1. Recent Change TMS 0, Controller 0, Memory Block 3 Submember Equipage to GROW Using RC Form 701 (Degrow)	TELCO	DLP-556
	2. Recent Change TMS 0, Controller 1, Memory Block 3 Submember Equipage to GROW Using RC Form 701 (Degrow)	TELCO	DLP-556
	3. Diagnose TMS 0 Controllers 0 and 1 Using Restore Message (**RST:TMSP a,CONTR b!**)	TELCO	DLP-532
	4. Remove Power With Power Switch (TMS 0, **CONTR0** Power Switch)	TELCO	—
	(Continued on Page 6)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
71 (Contd)	5. Recent Change TMS 0, Controller 0, Memory Block 3 Submember Equipage to UNEQ Using RC Form 701 (Degrow)	TELCO	DLP-556
	6. At TMS 0-0, Remove Memory Block 3 Circuit Packs	INST	—
	7. Restore Frame Power With Power Switch (TMS 0, **CONTR0** Power Switch); Wait for RESTORE COMPLETE Message	TELCO/INST	DLP-510
	8. Remove Power With Power Switch (TMS 0, **CONTR1** Power Switch)	TELCO	—
	9. Recent Change TMS 0, Controller 1, Memory Block 3 Submember Equipage to UNEQ Using RC Form 701 (Degrow)	TELCO	DLP-556
	10. At TMS 0-1, Remove Memory Block 3 Circuit Packs	INST	—
	11. Restore Frame Power With Power Switch (TMS 0, **CONTR1** Power Switch)	TELCO/INST	DLP-510
72	Degrow TMS 0 Memory Block 1:		
	A. If Memory Block 1 Circuit Packs Are To Remain in Place in TMS 0 Frame:		
	1. Recent Change TMS 0, Controller 0, Memory Block 1 Submember Equipage to GROW Using RC Form 701 (Degrow)	TELCO	DLP-556
	2. Recent Change TMS 0, Controller 1, Memory Block 1 Submember Equipage to GROW Using RC Form 701 (Degrow)	TELCO	DLP-556
	B. If Memory Block 1 Circuit Packs Are To Be Removed From TMS 0 Frame:		
	1. Recent Change TMS 0, Controller 0, Memory Block 1 Submember Equipage to GROW Using RC Form 701 (Degrow)	TELCO	DLP-556
	2. Recent Change TMS 0, Controller 1, Memory Block 1 Submember Equipage to GROW Using RC Form 701 (Degrow)	TELCO	DLP-556
	3. Diagnose TMS 0 Frame, Controllers 0 and 1 Using Restore Message (`RST:TMSP a,CONTR b!`)	TELCO	DLP-532
	4. Remove Power With Power Switch (TMS 0, **CONTR0** Power Switch)	TELCO	—
	5. Recent Change TMS 0, Controller 0, Memory Block 1 Submember Equipage to UNEQ Using RC Form 701 (Degrow)	TELCO	DLP-556
	6. At TMS 0-0, Remove Memory Block 1 Circuit Packs	INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
72 (Contd)	7. Restore Frame Power With Power Switch (TMS 0, **CONTR0** Power Switch); Wait for RESTORE COMPLETE Message	TELCO/INST	DLP-510
	8. Remove Power With Power Switch (TMS 0, **CONTR1** Power Switch)	TELCO	—
	9. Recent Change TMS 0, Controller 1, Memory Block 1 Submember Equipage to UNEQ Using RC Form 701 (Degrow)	TELCO	DLP-556
	10. At TMS 0-1, Remove Memory Block 1 Circuit Packs	INST	—
	11. Restore Frame Power With Power Switch (TMS 0, **CONTR1** Power Switch)	TELCO/INST	DLP-510
73	Verify TMS 0, Unit Equipage and Growth Status Indicator	TELCO/INST	DLP-566
74	Verify TMS 1, Unit Equipage and Growth Status Indicator	TELCO/INST	DLP-566
75	If Library Program Tape Is Mounted on Tape Transport, Demount Tape on Tape Transport, Tape Unit	TELCO	DLP-500
76	Remove FOCUS Overwrites (Contact Appropriate Support Organization for Instructions on Removal of FOCUS Overwrites)	TELCO	—
	NOTE: TMS growth addition is not completed until FOCUS overwrites are totally removed from 4 ESS Switch		
77	Complete TWRP of Office ODA to Reflect Updated Network Status (Reconfiguration) per TOP 234-151-002	TELCO	—
78	Determine PS Member Number Assigned K-Code 34 When TMSG Library Program Was Executed (**OP:PSSTATUS!**)	TELCO	—
79	Set PS Assigned K-Code 34 (Item 78) to NORM (**SET:PS** a;**NORM!**)	TELCO	—
80	Enter Message **ALW:WPAD!**	TELCO	—

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

		RESPONSIBILITY	
1	Assure That TSI Frame Power Verification Tests Have Been Completed	INST	—
2	Verify TSI Unit Type (UT) Translators (Both Even and Odd Members) and Compare Translations Data Against Wiring Records:		
	1. Verify TSI UT Translator (Even Member Number TSI) VER:UTYPE:TSI a!)	TELCO/INST	DLP-501
	2. Verify TSI UT Translator (Odd Member Number TSI) VER:UTYPE:TSI a!)	TELCO/INST	DLP-514
	3. Compare Translations Data Against Wiring Records	INST	—
3	Remove All Frame and Bus Power From Growth Frame Using Following Switches: • **IPUB0** and **IPUB1** • **ALC0** and **ALC1** • **CONTR0** and **CONTR1**	INST	—
4	Connect Private Signal Leads	INST	—
5	Install Strapping for K Code, MI, GI Options, and Verify That All TSI Port Loop Devices Are in Place	INST	—
6	Connect Major and Minor Alarm Cables	INST	—
7	Verify Major and Minor TSI Alarm Cables	INST	—
8	Verify TSI Private Signal Leads	INST	—
9	Connect Network Clock Coaxial Cables (Clock Distribution Cables Involved)	INST	—
10	Extend or Insert Peripheral Unit Bus Per TOP 234-153-045; Then Continue This Procedure at Item 11 Upon Completion	TELCO/INST	—
11	Recent Change and Verify Member Equipage From UNEQ to GROW (TSI Even Member Number)	TELCO	DLP-502
12	Enter Message RMV:PUB 0! To Remove Peripheral Unit Bus 0 From Service	TELCO	—
13	Apply Power to Controllers 0 and 1 and Network Drivers 0 and 1	INST	—
14	Apply Power to Growth TSI Bus Interface Unit 0	INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
15	Diagnose TSI Frame Controllers 0 and 1 (Specifying Phases 1-23, PUB 0, and Growth)	INST	—
16	Remove Power From TSI Bus Interface Unit 0	INST	—
17	Restore Peripheral Unit Bus 0 to Service (**RST:PUB 0!**)	TELCO/INST	DLP-507
18	Enter Message **RMV:PUB 1!** To Remove Peripheral Unit Bus 1 From Service	TELCO	—
19	Apply Power to Growth TSI Bus Interface Unit 1	INST	—
20	Diagnose TSI Frame Controllers 0 and 1 (Specifying Phases 1-23, PUB 1, and Growth)	INST	—
21	If Any Repair or Maintenance Was Required to IPUB or Controller Access Circuits During IPUB 1 Testing:		
	1. Remove Power From TSI IPUB 1	INST	—
	2. Restore Peripheral Unit Bus 1 to Service (**RST:PUB 1!**)	TELCO/INST	DLP-507
	3. Repeat From Item 12	TELCO/INST	—
22	Restore Peripheral Unit Bus 1 to Service (**RST:PUB 1!**)	TELCO/INST	DLP-507
23	Apply Power to Growth TSI Bus Interface Unit 0	INST	—
24	Diagnose TSI Frame Controllers 0 and 1 (Specifying Phases 1-23 and Growth)	INST	—
25	Diagnose TMS Frame Controllers Using Restore Message (All TMS Frames)	TELCO	DLP-532
26	Determine Where TSI-TMS Coaxial Cables Are To Be Connected	INST	—
27	Check Continuity of TSI-TMS Transmit Coaxial Cables Which Have Been Prerun and Then Connect	INST	—
28	Check Continuity of TSI-TMS Receive Coaxial Cables Which Have Been Prerun and Then Connect	INST	—
29	If Growth TSI Interfaces With TMS Memory Blocks Added for This TSI Growth Addition and Memory Blocks Are Not Marked Operational:		
	A. If in Two TMS Office, Verify Current Equipage Status of Growth Memory Blocks 1 and 3 of Both Controllers 0 and 1, for TMS Frames 0 and 1	TELCO/INST	DLP-522
	B. If in Four TMS Office, Verify Current Equipage Status of Growth Memory Block(s) 1/2/3 of Both Controllers 0 and 1, for All Frames	TELCO/INST	DLP-522
	(Continued on Page 3)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
30	If Equipage State of Growth TMS Memory Blocks Equal GROW:		
	A. If in Two TMS Office, Recent Change and Verify Submember Equipage From GROW to SGRO for Memory Blocks 1 and 3 of Both Controllers 0 and 1, for TMS Frames 0 and 1	TELCO	DLP-503
	B. If in Four TMS Office, Recent Change and Verify Submember Equipage From GROW to SGRO for Memory Block(s) 1/2/3 of Both Controllers 0 and 1, for All TMS Frames	TELCO	DLP-503
31	For Any TMS Memory Blocks Being Interfaced With Added TSI and Which Were Changed to SGRO State per Item 30 Above, Activate TMS Memory Blocks to Operational Using RC Form 600	TELCO	DLP-523
32	Enter Message To Run Peripheral Unit Status Audit (**AUD:PUSTAT!**); Wait for Message Complete (**MSG COMPL**)	TELCO	—
33	Recent Change and Verify Member Equipage From GROW to SGRO (TSI Even Member Number)	TELCO	DLP-502
	NOTE: TSI and TMS diagnostic tests are used to test growth TSI-TMS interfaces. It should be noted that when TMS DGN is used and one TMS controller is out-of-service for diagnostic testing, if failure occurs in any active TMS controller on other side of network, it can result in TMS duplex failure condition. Demand TMS diagnostic phases 8 and 9 retain simplex TMS controller configuration longer than regular TMS diagnostic phases. Each office should be assured that any known TMS frame or network problems are cleared before proceeding with growth TSI-TMS interface testing. TSI diagnostic (PH 23) does not simplex TMS configuration and should first be used to test TSI-TMS ALINK interface		
34	Diagnose TSI Controllers 0 and 1 (Specifying Phases 1-23 and Growth)	INST	—
35	Diagnose and Restore TMS Frame Controllers 0 and 1 (Specifying Phase 8 and Growth) (All TMS Frames)	TELCO/INST	DLP-521
	NOTE: Phase 9 of TMS diagnostics may be used for troubleshooting specific network path problems		
36	Assure That Buses 0 and 1, Controller 0, and **ALC** Power Switches Are Powered Up With **OFF** Switches in Normal Position and Controller 1 Power Switch Powered Up With **OFF** Switch in **ROS**	INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
37	Recent Change and Verify Member Equipage From SGRO to OPER (TSI Even Member Number)	TELCO	DLP-502
38	Enter Message To Pest Growth TSI, Controller 0 and 1:		
	1. INH:TSI a,CONTR 0,SPEC! (Wait for Repeat of Input Message To Be Printed)	TELCO	—
	2. INH:TSI a,CONTR 1,SPEC! (Wait for Repeat of Input Message To Be Printed)	TELCO	—
39	Enter Message to Unpest Growth TSI Ports:		
	1. ALW:TSI a,SPC 0,ALL! (Even Member TSI)	TELCO	—
	2. ALW:TSI a,SPC 1,ALL! (Even Member TSI)	TELCO	—
	3. Repeat Item 39 for Odd Member TSI	TELCO	—
40	Enter Message To Restore and Initialize Growth TSI Controller 0 to Simplex Operation (RST:TSI a,CONTR 0!) ATP and Restore COMPLETE Required; Installer Clear Equipment Troubles	TELCO/INST	—
	CAUTION: With one TSI controller in service (simplex configuration) during this procedure and problem develops in that controller, even member equipage must be degrown [DLP-555] to special growth. If controller powers down due to the problem, member equipage must be degrown before controller power is reapplied. This procedure is then reentered at Item 36 or 37 as applicable.		
41	Enter Message To Inhibit Growth TSI KCODE (INH:TSI a,KCODE!); Wait for Repeat of Input Message To Be Printed	TELCO	—
	CAUTION: If Item 42 cannot be completed successfully during work shift, frame should be degrown [DLP-555] to special growth state prior to next office busy hour. The procedure should be reentered at Item 36 or 37 as applicable when resuming growth activity. If following procedure cannot be completed, it is advisable to request assistance from the Appropriate Support Organization before proceeding.		
42	At Growth TSI Controller 1 Power Switch, Rotate **OFF** Switch From **ROS** to Normal To Restore and Initialize Controller 1 and Frame to Duplex Operational State; ATP Required	TELCO/INST	—
	A. If Controller 1 Fails To Exhibit ATP Conditions, Attempt Trouble Analysis and Repair Based on Raw Data and TLP Information	INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
42 (Contd)	B. If Trouble Analysis Indicates That Controller 0 Is at Fault, Following Sequence Is To Be Executed To Resolve Controller 0 Fault:		
	1. Degrow Growth TSI Even Member Equipage From OPER to SGRO	TELCO	DLP-555
	2. Enter Message To Run Peripheral Unit Status Audit (**AUD:PUSTAT!**); Wait for Message Complete (**MSG COMPL**)	TELCO	—
	3. Assure That **IPUB 0** and **1**, Controller 1 and **ALC** Power Switches on Growth TSI are in Normal Position. Place Controller 0 Power Switch to **ROS**	INST	—
	4. Recent Change and Verify Member Equipage From SGRO to OPER (TSI Even Member Number)	TELCO	DLP-502
	5. Enter Message To Restore and Initialize Growth TSI Controller 1 to Simplex Operation (**RST:TSI a,CONTR 1!**) ATP and Restore COMPLETE Required; Installer Clear Equipment Troubles	TELCO/INST	—
	6. Diagnose Growth TSI Controller 0; ATP Condition Must Be Obtained	INST	—
	7. At Growth TSI Controller 0 Power Switch, Rotate **OFF** Switch From **ROS** to Normal To Restore and Initialize Controller 0 and Frame to Duplex Operational State	INST	—
43	Enter Message To Diagnose and Restore Growth TSI Frame (**RST:TSI a,CONTR b!**), b Equals Controller 0 or 1 Which Was Brought Into Service First; ATP Required	TELCO/INST	—
	A. If Controller Fails To Exhibit ATP Conditions, Attempt Trouble Analysis and Repair Based on Raw Data and TLP Information	INST	—
	B. If Trouble Analysis Indicates That Active Controller Is at Fault, Frame Should Be Degrown [DLP-555] to Special Growth Prior to Next Office Busy Hour and Request Assistance From PECC Diagnostic Center Before Proceeding	TELCO/INST	—
44	Enter Messages To Reset Growth TSI Pest Conditions:		
	1. **ALW:TSI a,CONTR 0,SPEC!**	TELCO	—
	2. **ALW:TSI a,CONTR 1,SPEC!**	TELCO	—
	3. **ALW:TSI a,KCODE!**	TELCO	—
	A. If No Interrupts Occur After Releasing Pest Controls, Proceed to Item 45	TELCO/INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
44 (Contd)	B. If "F" Level Interrupt Occurs When Pest Controls Are Released, Normal Trouble Analysis for Interrupts Should Be Executed (TOP 234-151-012)	TELCO/INST	—
	C. If Frame Cannot Be Maintained in Duplex Condition Prior to Next Busy Hour, Complete Following Sequence:		
	1. Degrow Growth TSI Even Member Equipage From OPER to SGRO	TELCO	DLP-555
	2. Contact PECC Diagnostic Center for Assistance	TELCO/INST	—
	3. At Beginning of Next Growth Testing Interval, Repeat From Item 36	TELCO/INST	—
	NOTE: NETEX is a library program whose purpose is to heavily load TSIs and TMSs with connections at a very high rate in order to force system to generate TRPFs on marginal circuit packs.		
45	Read Entire Test Procedure To Become Familiar With its Contents Before Beginning NETEX Testing	TELCO/INST	—
	CAUTION: To avoid any service interruptions, measures should be taken to avoid running NETEX continuously for more than 2 hours at a time. NETEX should be periodically terminated, audits which are inhibited during testing should be released and run [DLP-549], and NETEX testing restarted. Testing should resume at same place it was when terminated		
	NOTES 1. If ODA structures and TAN assignments for all trunks associated with growth TSI have not been built, maximum occupancy levels for test cannot be met 2. Measures should be taken to ensure that NETEX testing does not take place during busy hours. NETEX should be terminated and audits which were inhibited during testing should be run if this condition exists. NETEX testing should be resumed during next low traffic period 3. If NETEX testing is temporarily stopped due to trouble condition which simplexes TSI under test or any system TMS, observe output message which may indicate that NETEX is in hold state. When frames are restored to duplex operation, NETEX exercise will automatically restart 4. All trunks assigned to TSI(s) to be tested must be in CAD.DSA state before TSI(s) can be tested by NETEX		
46	Establish Frame Hardware Status Required	TELCO	DLP-535

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
47	Review Requirements To Maintain Log Sheet	TELCO	DLP-542
48	Perform Pretest Activities	TELCO/INST	DLP-543
49	Input NETEX Execution Data	TELCO	DLP-544
50	Run Growth TSIs at 200 Connect Level	TELCO/INST	DLP-545
	NOTE: Safe point to temporarily stop procedure		
51	Investigate Any Trouble Patterns	TELCO/INST	DLP-546
	NOTES: 1. Safe point to temporarily stop procedure 2. Final criteria for NETEX testing is that all network routing configurations on growth TSIs complete 2-hour test interval without triggering any TRPFs		
52	Run NETEX on Growth TSIs at 800 Connect Level	TELCO/INST	DLP-547
53	Enter Message To Delete NETEX From Program Store (STOP:LIBSYS;RELEASE!)	TELCO	—
54	If No Further NETEX Testing Is Anticipated, Enter Message To Remove NETEX From File System (INIT:LIBSYS,PKG LGxNETX!)	TELCO	—
55	Determine PS Member Number Assigned K-Code 34 When NETEX Library Program Was Executed (OP:PSSTATUS!)	TELCO	—
56	Set PS Assigned K-Code 34 (Item 55) to NORM (SET:PS a;NORM!)	TELCO	—

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

		RESPONSIBILITY	
1	Verify Time Multiplexed Switching Pair (TMS) Unit Type (UT) Translator and Compare Translations Data Against Wiring Records:		
	1. Verify TMS UT Translator (VER:UTYPE:TMSP 2!)	TELCO/INST	DLP-515
	2. Compare Translations Data Against Wiring Records (TMS 2)	INST	—
	3. Verify TMS UT Translator (VER:UTYPE:TMSP 3!)	TELCO/INST	DLP-515
	4. Compare Translations Data Against Wiring Records (TMS 3)	INST	—
2	Assure That Circuit Access and Power Verification Tests Have Been Completed (TMS 2)	INST	—
3	Remove All Growth Frame Power Using Frame Power Switches (TMS 2)	INST	—
4	Connect Cabling to TMS 2 in Accordance With Cable Running List (Detailed in Following Items)	INST	—
5	Connect Private Signal Leads (TMS 2)	INST	—
	CAUTION: Ensure that correct fuses are removed. Removal of wrong fuse could cause loss of service		
6	Remove Power from Network Clock Cable Drivers and Connect Cabling for TMS 2 (TELCO Replace Fuses Previously Removed)	TELCO/INST	DLP-567
7	Connect Office Alarm Cabling (TMS 2)	INST	—
8	Connect Frame Member Number Strap on TMS 2	INST	—
9	Verify Private Signal Lead Cabling and Assignments	INST	—
10	Verify Major and Minor Alarms	INST	—
11	Extend or Insert Peripheral Unit Bus:		
	1. If TMS 3 Is To Be Connected to Same Bus Branch As TMS 2; Repeat From Item 2 for TMS 3	TELCO/INST	—
	2. Extend or Insert Peripheral Unit Bus for TMS 2 and/or TMS 3 per TOP 234-153-045; Then Continue This Procedure at Item 12 Upon Completion	TELCO/INST	—
12	Recent Change and Verify Member Equipage From UNEQ to GROW (TMS 2)	TELCO	DLP-502

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
13	Recent Change and Verify Submember Equipage From UNEQ to GROW (TMS 2):		
	1. Controller 0	TELCO	DLP-503
	2. Controller 1	TELCO	DLP-503
	3. Controller 0, Memory Block 0	TELCO	DLP-503
	4. Controller 1, Memory Block 0	TELCO	DLP-503
	5. Controller 0, Memory Block 1	TELCO	DLP-503
	6. Controller 1, Memory Block 1	TELCO	DLP-503
14	Enter Message **RMV:PUB 0!** To Remove Peripheral Unit Bus 0 From Service	TELCO	—
15	Apply Power to TMS 2 Controllers 0 and 1 and Bus Interface Unit 0 (2 Switches) (**OFF** Switches To Remain in **ROS**) as follows: •**IPUB0** •**CONTR0** and **CONTR1**	INST	—
16	Diagnose TMS 2 Frame Controllers 0 and 1 (PUB 0) Specifying GROWTH and Phases 1 Through 7	INST	—
17	Remove Power From Bus Interface Unit 0 (2 Switches)	INST	—
18	Restore Peripheral Unit Bus 0 to Service (**RST:PUB 0!**)	TELCO/INST	DLP-507
19	Enter Message **RMV:PUB 1!** To Remove Peripheral Unit Bus 1 From Service	TELCO	—
20	Apply Power to TMS 2 Bus Interface Unit 1 (2 Switches) (**OFF** Switch To Remain in **ROS**)	INST	—
21	Diagnose TMS 2 Frame Controllers 0 and 1 (PUB 1), Specifying Growth and Phases 1 Through 7	INST	—
22	If Repair or Maintenance Was Required to IPUB or Controller Access Circuitry During IPUB 1 Testing:		
	1. Remove Power From Growth TMS Bus Interface Unit 1	INST	—
	2. Restore Peripheral Unit Bus 1 to Service (**RST:PUB 1!**)	TELCO/INST	DLP-507
	3. Repeat From Item 14	TELCO/INST	—
23	Restore Peripheral Unit Bus 1 to Service (**RST:PUB 1!**)	TELCO/INST	DLP-507
24	Apply Power to TMS IPUB 0	INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
25	Recent Change and Verify Member Equipage From GROW to SGRO (TMS 2)	TELCO	DLP-502
26	Recent Change and Verify Submember Equipage From GROW to SGRO (TMS 2)		
	1. Controller 0	TELCO	DLP-503
	2. Controller 1	TELCO	DLP-503
	3. Controller 0, Memory Block 0	TELCO	DLP-503
	4. Controller 1, Memory Block 0	TELCO	DLP-503
	5. Controller 0, Memory Block 1	TELCO	DLP-503
	6. Controller 1, Memory Block 1	TELCO	DLP-503
	CAUTION: Do not request diagnostic phases 8 or 9		
27	Diagnose TMS 2 Frame Controllers 0 and 1 Specifying GROWTH, and Phases 1 Through 7	INST	—
28	Repeat From Item 2 or 12, as Applicable, for TMS 3	TELCO/INST	—
	NOTE: Item 29 can also be performed on in-service TMSs prior to starting this growth procedure		
29	At TMS 0 and 1, Identify and Carefully Tag Coaxial Cables To Be Relocated and Secure Cables Not To Be Moved To Prevent Dislodging Connectors	INST	—
30	Get Current Library Program Tape and Program Listing PR 4A918-01	TELCO	—
31	Mount Current Library Tape on Idle Tape Unit	TELCO	DLP-516
32	Notify TOC To Suspend All Manual and Automatic Trunk Testing	TELCO	—
33	Enter Message **INH:AUD:NUM (8,26,50)!**	TELCO	—
	NOTE: FOCUS overwrites controls amount of traffic directed to Specific A Links or TMS Frames		
34	Enter FOCUS Overwrites (Contact Appropriate Support Organization for Instructions on Application of FOCUS Overwrites)	TELCO	—
	CAUTION: Item 35 commits office to completing 4 TMS reconfiguration. Once cabling changes are started, there is no way to "Rollback" without losing call processing capability. Item 34 through 55 must be performed without interruption		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
	NOTES: 1. If system takes phase before Task 1 of TMS growth program is loaded and executed, Item 35 must be repeated 2. Task 1 and 2 of library program could take up to 35 minutes to run		
35	Load and Execute Task 1 of TMS Growth Program:		
	1. Load TMSG Library Program	TELCO	DLP-517
	2. Execute TMSG Library Program (Task 1)	TELCO	DLP-519
36	Change Call Store Word (OD4TMSNUM) To Update TMS Network Configuration Size	TELCO	DLP-518
37	Execute TMSG Library Program (Task 2)	TELCO	DLP-519
38	Enter Message **ALW:AUD:NUM (8,26,50)!**	TELCO	—
39	Temporarily Protect Wiring Side of **FC77** Filter Pack Located Next to Coaxial Cables Identified in Item 29	INST	—
	CAUTIONS: 1. Controllers 0 and 1 on TMS 0 and 1 must remain in service while performing Items 40 through 45 *2. Do not remove any cables from TMS 0-0 or 1-0 at this time*		
	NOTE: Items 40 and 43 are very time consuming; consideration should be given in planning TMSP growth		
40	Relocate Coaxial Cables From TMS 0-1 and 1-1 to TMS 2-1 and 3-1	INST	—
41	Diagnose TMS 2, Controller 1, Specifying GROWTH and PH8	INST	—
42	Diagnose TMS 3, Controller 1, Specifying GROWTH and PH8	INST	—
43	Relocate Coaxial Cables From TMS 0-0 and 1-0 to TMS 2-0 and 3-0	INST	—
44	Diagnose TMS 2, Controller 0, Specifying GROWTH and PH8	INST	—
45	Diagnose TMS 3, Controller 0, Specifying GROWTH and PH8	INST	—
46	Set Frame Power Switches As Follows: • TMS 2-0, **IPUB0**, **IPUB1**, **CONTR0** to Normal Position • TMS 2-1, **IPUB0**, **IPUB1** to Normal Position, and **CONTR1** to **ROS**	TELCO	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
46 (Contd)	• TMS 3-0, **IPUB0**, **IPUB1**, **CONTR0** to Normal Position • TMS 3-1, **IPUB0**, **IPUB1**, **CONTR0** to Normal Position and **CONTR1** To **ROS**		
47	Recent Change and Verify Member Equipage From SGRO to OPER (TMS 2)	TELCO	DLP-502
48	Recent Change and Verify Submember Equipage From SGRO to OPER (TMS 2):		
	1. Controller 0	TELCO	DLP-503
	2. Controller 1	TELCO	DLP-503
	3. Controller 0, Memory Block 0	TELCO	DLP-503
	4. Controller 1, Memory Block 0	TELCO	DLP-503
	5. Controller 0, Memory Block 1	TELCO	DLP-503
	6. Controller 1, Memory Block 1	TELCO	DLP-503
49	Enter Message To Restore and Initialize Controller 0 to Simplex Operation (**RST:TMSP 2,CONTR 0!**) ATP and Restore COMPLETE Required; Installer Clear Equipment Troubles	TELCO/INST	—
50	Enter Message To Run Peripheral Unit Status Audit (**AUD:PUSTAT!**); Wait for Message Complete (**MSG COMPL**)	TELCO	—
51	Restore and Initialize Controller 1 to Duplex Operation (Using TMS 2 **CONTR1** Power Switch)	TELCO/INST	DLP-509
52	Recent Change and Verify Member Equipage From SGRO to OPER (TMS 3)	TELCO	DLP-502
53	Recent Change and Verify Submember Equipage From SGRO to OPER (TMS 3):		
	1. Controller 0	TELCO	DLP-503
	2. Controller 1	TELCO	DLP-503
	3. Controller 0, Memory Block 0	TELCO	DLP-503
	4. Controller 1, Memory Block 0	TELCO	DLP-503
	5. Controller 0, Memory Block 1	TELCO	DLP-503
	6. Controller 1, Memory Block 1	TELCO	DLP-503
	(Continued on Page 6)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
54	Enter Message To Restore and Initialize Controller 0 to Simplex Operation (**RST:RMSP 3,CONTR 0!**) ATP and Restore COMPLETE Required; Installer Clear Equipment Troubles	TELCO/INST	—
55	Enter Message To Run Peripheral Unit Status Audit (**AUD:PUSTAT!**); Wait for Message Complete (**MSG COMPL**)	TELCO	—
56	Restore and Initialize Controller 1 to Duplex Operation (Using TMS 3 **CONTR1** Power Switch)	TELCO/INST	DLP-509
57	Notify TOC To Resume Trunk Testing	TELCO	—
58	Degrow TMS 0 and 1 Memory Block 3:		
	A. If Memory Block 3 Circuit Packs Are To Remain in TMS 0 and 1 Frames: Recent Change Submember Equipage Using RC Form 701 (Degrow Memory Block 3 to GROW State):		
	1. TMS 0, Controller 0, Memory Block 3	TELCO	DLP-556
	2. TMS 0, Controller 1, Memory Block 3	TELCO	DLP-556
	3. TMS 1, Controller 0, Memory Block 3	TELCO	DLP-556
	4. TMS 1, Controller 1, Memory Block 3	TELCO	DLP-556
	B. If TMS Memory Block 3 Circuit Packs Are To Be Removed From TMS 0 and TMS 1 Frames:		
	1. Recent Change Submember Equipage Using RC Form 701 (Degrow Memory Block 3 to GROW State):		
	1. TMS 0, Controller 0, Memory Block 3	TELCO	DLP-556
	2. TMS 0, Controller 1, Memory Block 3	TELCO	DLP-556
	3. TMS 1, Controller 0, Memory Block 3	TELCO	DLP-556
	4. TMS 1, Controller 1, Memory Block 3	TELCO	DLP-556
	2. Diagnose TMS 0 Frame Controllers 0 and 1 (**RST:TMSP a,CONTR b!**)	TELCO	DLP-532
	3. Remove Power With Power Switch (TMS 0, **CONTR0** Power Switch)	TELCO	—
	(Continued on Page 7)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
58 (Contd)	4. Recent Change Submember Equipage Using RC Form 701 (Degrow TMS 0, Controller 0, Memory Block 3 to UNEQ State)	TELCO	DLP-556
	5. At TMS 0-0 Frame, Remove Memory Block 3 Circuit Packs	INST	—
	6. Restore Frame Power With Power Switch (TMS 0, **CONTR0** Power Switch); Wait for RESTORE COMPLETE	TELCO/INST	DLP-510
	7. Remove Power With Power Switch (TMS 0, **CONTR1** Power Switch)	TELCO	—
	8. Recent Change Submember Equipage Using RC Form 701 (Degrow TMS 0, Controller 1, Memory Block 3 to UNEQ State)	TELCO	DLP-556
	9. At TMS 0-1 Frame, Remove Memory Block 3 Circuit Packs	INST	—
	10. Restore Frame Power With Power Switch (TMS 0, **CONTR1** Power Switch)	TELCO/INST	DLP-510
	11. Diagnose TMS 1 Frame Controllers 0 and 1 (RST:TMSP a,CONTR b!)	TELCO	DLP-532
	12. Remove Power With Power Switch (TMS 1, **CONTR0** Power Switch)	TELCO	—
	13. Recent Change Submember Equipage Using RC Form 701 (Degrow TMS 1, Controller 0, Memory Block 3 to UNEQ State)	TELCO	DLP-556
	14. At TMS 1-0 Frame, Remove Memory Block 3 Circuit Packs	INST	—
	15. Restore Frame Power With Power Switch (TMS 1, **CONTR0** Power Switch)	TELCO/INST	DLP-510
	16. Remove Power With Power Switch (TMS 1, **CONTR1** Power Switch)	TELCO	—
	17. Recent Change Submember Equipage Using RC Form 701 (Degrow TMS 1, Controller 1, Memory Block 3 to UNEQ State)	TELCO	DLP-556
	18. At TMS 1-1 Frame, Remove Memory Block 3 Circuit Packs	INST	—
	19. Restore Frame Power With Power Switch (TMS 1, **CONTR1** Power Switch)	TELCO/INST	DLP-510
59	Degrow TMS 0 and 1 Memory Block 2:		
	A. If Memory Block 2 Circuit Packs Are To Remain in TMS 0 and 1 Frames, Recent Change Submember Equipage Using RC Form 701 (Degrow Memory Block 2 to GROW State):		
	1. TMS 0, Controller 0, Memory Block 2	TELCO	DLP-556

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
59 (Contd)	2. TMS 0, Controller 1, Memory Block 2	TELCO	DLP-556
	3. TMS 1, Controller 0, Memory Block 2	TELCO	DLP-556
	4. TMS 1, Controller 1, Memory Block 2	TELCO	DLP-556
	B. If TMS Memory Block 2 Circuit Packs Are To Be Removed From TMS 0 and TMS 1 Frames:		
	1. Recent Change Submember Equipage Using RC Form 701 (Degrow Memory Block 2 to GROW State):		
	1. TMS 0, Controller 0, Memory Block 2	TELCO	DLP-556
	2. TMS 0, Controller 1, Memory Block 2	TELCO	DLP-556
	3. TMS 1, Controller 0, Memory Block 2	TELCO	DLP-556
	4. TMS 1, Controller 1, Memory Block 2	TELCO	DLP-556
	2. Diagnose TMS 0 Frame Controllers 0 and 1 (**RST:TMSP** a,**CONTR** b!)	TELCO	DLP-532
	3. Remove Power With Power Switch (TMS 0, **CONTR0** Power Switch)	TELCO	—
	4. Recent Change Submember Equipage Using RC Form 701 (Degrow TMS 0, Controller 0, Memory Block 2 to UNEQ State)	TELCO	DLP-556
	5. At TMS 0-0 Frame, Remove Memory Block 2 Circuit Packs	INST	—
	6. Restore Frame Power With Power Switch (TMS 0, **CONTR0** Power Switch), Wait for RESTORE COMPLETE	TELCO/INST	DLP-510
	7. Remove Power With Power Switch (TMS 0, **CONTR1** Power Switch)	TELCO	—
	8. Recent Change Submember Equipage Using RC Form 701 (Degrow TMS 0, Controller 1, Memory Block 2 to UNEQ State)	TELCO	DLP-556
	9. At TMS 0-1 Frame, Remove Memory Block 2 Circuit Packs	INST	—
	10. Restore Frame Power With Power Switch (TMS 0, **CONTR1** Power Switch)	TELCO/INST	DLP-510
	11. Diagnose TMS 1 Frame Controllers 0 and 1 (**RST:TMSP** a,**CONTR** b!)	TELCO	DLP-532
	12. Remove Power With Power Switch (TMS 1, **CONTR0** Power Switch)	TELCO	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
59 (Contd)	13. Recent Change Submember Equipage Using RC Form 701 (Degrow TSM 1, Controller 0, Memory Block 2 to UNEQ State)	TELCO	DLP-556
	14. At TMS 1-0 Frame, Remove Memory Block 2 Circuit Packs	INST	—
	15. Restore Frame Power With Power Switch (TMS 1, **CONTR0** Power Switch)	TELCO/INST	DLP-510
	16. Remove Power With Power Switch (TMS 1, **CONTR1** Power Switch)	TELCO	—
	17. Recent Change Submember Equipage Using RC Form 701 (Degrow TMS 1, Controller 1, Memory Block 2 to UNEQ State)	TELCO	DLP-556
	18. At TMS 1-1 Frame, Remove Memory Block 2 Circuit Packs	INST	—
	19. Restore Frame Power With Power Switch (TMS 1, **CONTR1** Power Switch)	TELCO/INST	DLP-510
60	Verify TMS Unit Equipage and Growth Status Indicator:		
	1. TMS 0	TELCO/INST	DLP-524
	2. TMS 1	TELCO/INST	DLP-524
	3. TMS 2	TELCO/INST	DLP-524
	4. TMS 3	TELCO/INST	DLP-524
61	If Library Program Tape Is Mounted on Tape Transport, Demount Tape on Tape Transport, Tape Unit	TELCO	DLP-500
62	Remove FOCUS Overwrites (Contact Appropriate Support Organization for Instructions on Removal of FOCUS Overwrites)	TELCO	—
	NOTE: TMS growth addition is not completed until FOCUS overwrites are totally removed from 4 ESS switch		
63	Complete TWRP of Office ODA To Reflect Updated Network Status (Reconfiguration)	TELCO	—

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

		RESPONSIBILITY	
	NOTE: This procedure contains soak intervals for verifying system operation and stability during growth. During the soak interval, all abnormal conditions (such as interrupts, interjects, and diagnostic failures related to growth) must be investigated and resolved immediately. Growth equipment being soaked must be error free for at least the time specified		
1	Select TMS Memory Block Equipment, If Required	INST	—
2	Verify UNEQ Status of TMS Memory Blocks 1 and 3 of Both Controllers 0 and 1 for TMS 0 and 1 (VER:UTYPE:TMSP a,SME b!)	TELCO	DLP-537
3	Diagnose TMS Frame Controllers Using Restore Message (Member Numbers 0 and 1 — Controllers 0 and 1) (RST:TMSP a,CONTR b!)	TELCO	DLP-532
4	Remove Power With Power Switch (TMS Member Number 0 — Controller 0)	TELCO	—
5	Install Circuit Packs and Assure That Circuit Packs Are in Correct Locations and Firmly Seated in TMS Frame (TMS Member Number 0 — Controller 0)	INST	—
6	Recent Change and Verify Submember Equipage From UNEQ to GROW (TMS Member Number 0 — Controller 0, Memory Blocks 1 and 3)	TELCO	DLP-503
7	Restore Frame Power With Power Switch (TMS Member Number 0 — Controller 0) (Leave **OFF** Switch in **ROS**)	TELCO/INST	DLP-513
8	Diagnose TMS Growth Equipment Specifying Memory (TMS Member Number 0 — Controller 0) (DGN:TMSP 0,CONTR 0:MEMORY,GROWTH!)	TELCO/INST	DLP-533
9	Rotate **OFF** Switch to Normal Position (TMS Member Number 0 — Controller 0)	TELCO	—
10	Remove Power With Power Switch (TMS Member Number 1 — Controller 0)	TELCO	—
11	Install Circuit Packs and Assure That Circuit Packs Are in Correct Locations and Firmly Seated in TMS Frame (TMS Member Number 1 — Controller 0)	INST	—
12	Recent Change and Verify Submember Equipage From UNEQ to GROW (TMS Member Number 1 — Controller 0, Memory Blocks 1 and 3)	TELCO	DLP-503
13	Restore Frame Power With Power Switch (TMS Member Number 1 — Controller 0) (Leave **OFF** Switch in **ROS**)	TELCO/INST	DLP-513

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
14	Diagnose TMS Growth Equipment Specifying Memory (TMS Member Number 1 — Controller 0) (DGN:TMSP 1,CONTR 0:MEMORY,GROWTH!)	TELCO/INST	DLP-533
15	Rotate **OFF** Switch to Normal Position (TMS Member Number 1 — Controller 0)	TELCO	—
16	Suspend TMS Memory Block Growth. Resume This Procedure After Next Peak Traffic Period Provided No Memory Parity Failures Have Occurred and Transmit Receive Parity Failure (TRPF) Rate Has Not Increased Over Previous Office Norm	TELCO/INST	—
17	Remove Power With Power Switch (TMS Member Number 0 — Controller 1)	TELCO	—
18	Install Circuit Packs and Assure That Circuit Packs Are in Correct Locations and Firmly Seated in TMS Frame (TMS Member Number 0 — Controller 1)	INST	—
19	Recent Change and Verify Submember Equipage From UNEQ to GROW (TMS Member Number 0 — Controller 1, Memory Blocks 1 and 3)	TELCO	DLP-503
20	Restore Frame Power With Power Switch (TMS Member Number 0 — Controller 1)	TELCO/INST	DLP-513
21	Diagnose TMS Growth Equipment Specifying Memory (TMS Member Number 0 — Controller 1) (DGN:TMSP 0,CONTR 1:MEMORY,GROWTH!)	TELCO/INST	DLP-533
22	Rotate **OFF** Switch to Normal Position (TMS Member Number 0 — Controller 1)	TELCO	—
23	Remove Power With Power Switch (TMS Member Number 1 — Controller 1)	TELCO	—
24	Install Circuit Packs and Assure That Circuit Packs Are in Correct Locations and Firmly Seated in TMS Frame (TMS Member Number 1 — Controller 1)	INST	—
25	Recent Change and Verify Submember Equipage From UNEQ to GROW (TMS Member Number 1 — Controller 1, Memory Blocks 1 and 3)	TELCO	DLP-503
26	Restore Frame Power With Power Switch (TMS Member Number 1 — Controller 1) (Leave **OFF** Switch in **ROS**)	TELCO	DLP-513
27	Diagnose TMS Growth Equipment Specifying Memory (TMS Member Number 1 — Controller 1) (DGN:TMSP 1,CONTR 1:MEMORY,GROWTH!)	TELCO/INST	DLP-533
28	Rotate **OFF** Switch to Normal Position (TMS Member Number 1 — Controller 1)	TELCO	—
	(Continued on Page 3)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
29	Allow Soak Interval Same As Item 16	TELCO/INST	—
	NOTE: Growth memory blocks are to remain in GROW state. Memory block growth beyond GROW state is completed in TSI frame growth procedure provided no memory parity failures have occurred and TRPF rate has not increased over previous office norm. However, if interfacing TSI frame addition will be delayed, memory block equipage can be updated to operational after growth testing is completed		

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

		RESPONSIBILITY	
	NOTES 1. Only one memory block can be grown at a time and you must grow the lowest memory block first. Repeat this procedure for each memory block that is to be grown. 2. This procedure contains soak intervals for verifying system operation and stability during growth. During the soak interval, all abnormal conditions (such as interrupts, interjects, and diagnostic failures related to growth) must be investigated and resolved immediately. Growth equipment being soaked must be error free for at least the time specified		
1	Select TMS Memory Block Equipment, If Required	INST	—
2	Verify Equipage Status of TMS Memory Block(s) Being Added Using SME Verify Message:		
	A. If Adding TMS Memory Block 1, Verify UNEQ or GROW Status of Memory Block 1, Both Controllers 0 and 1 of All TMS Frames (VER:UTYPE:TMSP a,SME b!)	TELCO	DLP-537
	B. If Adding TMS Memory Block 2, Verify UNEQ or GROW Status of Memory Block 2, Both Controllers 0 and 1 of All TMS Frames (VER:UTYPE:TMSP a,SME b!)	TELCO	DLP-537
	C. If Adding TMS Memory Block 3, Verify UNEQ or GROW Status of Memory Block 3, Both Controllers 0 and 1 of All TMS Frames (VER:UTYPE:TMSP a,SME b!)	TELCO	DLP-537
3	Diagnose TMS Frame Controllers Using Restore Message (Controller 0 and 1, All Member Numbers) (RST:TMSP a,CONTR b!)	TELCO	DLP-532
4	Remove Power With Power Switch (TMS Member Number 0 — Controller 0)	TELCO	—
5	Install Circuit Packs or Assure That Circuit Packs Are in Correct Locations and Firmly Seated in TMS Frame (TMS Member Number 0 — Controller 0)	INST	—
6	If Growth TMS Memory Blocks Are in UNEQ State as Determined in Item 2, Recent Change and Verify TMS Memory Block(s) Being Added to TMS Member Number 0 — Controller 0:		
	A. If Memory Block 1 Was Equipped in Item 5, Recent Change and Verify Submember Equipage From UNEQ to GROW (Memory Block 1)	TELCO	DLP-503
	B. If Memory Block 2 Was Equipped in Item 5, Recent Change and Verify Submember Equipage From UNEQ to GROW (Memory Block 2)	TELCO	DLP-503
	C. If Memory Block 3 Was Equipped in Item 5, Recent Change and Verify Submember Equipage From UNEQ to GROW (Memory Block 3)	TELCO	DLP-503

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
7	Restore Frame Power With Power Switch (TMS Member Number 0 - Controller 0) (Leave **OFF** Switch in **ROS**)	TELCO/INST	DLP-513
8	Diagnose TMS Growth Equipment Specifying Memory (TMS Member Number 0 - Controller 0) (**DGN:TMSP 0,CONTR 0:MEMORY,GROWTH!**)	TELCO/INST	DLP-533
9	Rotate **OFF** Switch to Normal Position (TMS Member Number 1 — Controller 0)	TELCO/INST	—
10	Remove Power With Power Switch (TMS Member Number 1 — Controller 0)	TELCO	—
11	Install Circuit Packs or Assure That Circuit Packs Are in Correct Locations and Firmly Seated in TMS Frames (TMS Member Number 1 — Controller 0)	INST	—
12	If Growth TMS Memory Blocks Are in UNEQ State As Determined in Item 2, Recent Change and Verify TMS Memory Block(s) Being Added to TMS Member Number 1 — Controller 0:		
	A. If Memory Block 1 Was Equipped in Item 11, Recent Change and Verify Submember Equipage From UNEQ to GROW (Memory Block 1)	TELCO	DLP-503
	B. If Memory Block 2 Was Equipped in Item 11, Recent Change and Verify Submember Equipage From UNEQ to GROW (Memory Block 2)	TELCO	DLP-503
	C. If Memory Block 3 Was Equipped in Item 11, Recent Change and Verify Submember Equipage From UNEQ to GROW (Memory Block 3)	TELCO	DLP-503
13	Restore Frame Power With Power Switch (TMS Member Number 1 — Controller 0) (Leave **OFF** Switch in **ROS**)	TELCO/INST	DLP-513
14	Diagnose TMS Growth Equipment Specifying Memory (TMS Member Number 1 — Controller 0) (**DGN:TMSP 1,CONTR 0:MEMORY,GROWTH!**)	TELCO/INST	DLP-533
15	Rotate **OFF** Switch to Normal Position (TMS Member Number 1 — Controller 0)	TELCO/INST	—
16	Remove Power With Power Switch (TMS Member Number 2 — Controller 0)	TELCO	—
17	Install Circuit Packs or Assure That Circuit Packs Are in Correct Locations and Firmly Seated in TMS Frames (TMS Member Number 2 — Controller 0)	INST	—
	(Continued on Page 3)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
18	If Growth TMS Memory Blocks Are in UNEQ State As Determined in Item 2, Recent Change and Verify TMS Memory Block(s) Being Added to TMS Member Number 2 — Controller 0:		
	A. If Memory Block 1 Was Equipped in Item 17, Recent Change and Verify Submember Equipage From UNEQ to GROW (Memory Block 1)	TELCO	DLP-503
	B. If Memory Block 2 Was Equipped in Item 17, Recent Change and Verify Submember Equipage From UNEQ to GROW (Memory Block 2)	TELCO	DLP-503
	C. If Memory Block 3 Was Equipped in Item 17, Recent Change and Verify Submember Equipage From UNEQ to GROW (Memory Block 3)	TELCO	DLP-503
19	Restore Frame Power With Power Switch (TMS Member Number 2 — Controller 0) (Leave **OFF** Switch in **ROS**)	TELCO/INST	DLP-513
20	Diagnose TMS Growth Equipment Specifying Memory (TMS Member Number 2 — Controller 0) (DGN:TMSP 2,CONTR 0:MEMORY,GROWTH!)	TELCO/INST	DLP-533
21	Rotate **OFF** Switch to Normal Position (TMS Member Number 2 — Controller 0)	TELCO/INST	—
22	Remove Power With Power Switch (TMS Member Number 3 — Controller 0)	TELCO	—
23	Install Circuit Packs or Assure That Circuit Packs Are in Correct Locations and Firmly Seated in TMS Frame (TMS Member Number 3 — Controller 0)	INST	—
24	If Growth TMS Memory Blocks Are in UNEQ State As Determined in Item 2, Recent Change and Verify TMS Memory Block(s) Being Added to TMS Member Number 3 — Controller 0:		
	A. If Memory Block 1 Was Equipped in Item 23, Recent Change and Verify Submember Equipage From UNEQ to GROW (Memory Block 1)	TELCO	DLP-503
	B. If Memory Block 2 Was Equipped in Item 23, Recent Change and Verify Submember Equipage From UNEQ to GROW (Memory Block 2)	TELCO	DLP-503
	C. If Memory Block 3 Was Equipped in Item 23, Recent Change and Verify Submember Equipage From UNEQ to GROW (Memory Block 3)	TELCO	DLP-503
25	Restore Frame Power With Power Switch (TMS Member Number 3 — Controller 0) (Leave **OFF** Switch in **ROS**)	TELCO/INST	DLP-513
	(Continued on Page 4)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
26	Diagnose TMS Growth Equipment Specifying Memory (TMS Member Number 3 — Controller 0) (DGN:TMSP 3,CONTR 0:MEMORY,GROWTH!)	TELCO/INST	DLP-533
27	Rotate **OFF** Switch to Normal Position (TMS Member Number 3 — Controller 0)	TELCO/INST	—
28	Suspend TMS Memory Block Growth; Resume This Procedure After Next Peak Traffic Period Provided No Memory Parity Failures Have Occurred and Transmit Receive Parity Failure (TRPF) Rate Has Not Increased Over Previous Office Norm	TELCO/INST	—
29	Remove Power With Power Switch (TMS Member Number 0 - Controller 1)	TELCO	—
30	Install Circuit Packs or Assure That Circuit Packs Are in Correct Locations and Firmly Seated in TMS Frame (TMS Member Number 0 — Controller 1)	INST	—
31	If Growth TMS Memory Blocks Are in UNEQ State As Determined in Item 2, Recent Change and Verify TMS Memory Block(s) Being Added to TMS Member Number 0 — Controller 1:		
	A. If Memory Block 1 Was Equipped in Item 30, Recent Change and Verify Submember Equipage From UNEQ to GROW (Memory Block 1)	TELCO	DLP-503
	B. If Memory Block 2 Was Equipped in Item 30, Recent Change and Verify Submember Equipage From UNEQ to GROW (Memory Block 2)	TELCO	DLP-503
	C. If Memory Block 3 Was Equipped in Item 30, Recent Change and Verify Submember Equipage From UNEQ to GROW (Memory Block 3)	TELCO	DLP-503
32	Restore Frame Power With Power Switch (TMS Member Number 0 — Controller 1) (Leave **OFF** Switch in **ROS**)	TELCO/INST	DLP-513
33	Diagnose TMS Growth Equipment Specifying Memory (TMS Member Number 0 — Controller 1) (DGN:TMSP 0,CONTR 1:MEMORY,GROWTH!)	TELCO/INST	DLP-533
34	Rotate **OFF** Switch to Normal Position (TMS Member Number 0 — Controller 1)	TELCO/INST	—
35	Remove Power With Power Switch (TMS Member Number 1 — Controller 1)	TELCO	—
36	Install Circuit Packs or Assure That Circuit Packs Are in Correct Locations and Firmly Seated in TMS Frame (TMS Member Number 1 — Controller 1)	INST	—
	(Continued on Page 5)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
37	If Growth TMS Memory Blocks Are in UNEQ State As Determined in Item 2, Recent Change and Verify TMS Memory Block(s) Being Added to TMS Member Number 1 — Controller 1:		
	A. If Memory Block 1 Was Equipped in Item 36, Recent Change and Verify Submember Equipage From UNEQ to GROW (Memory Block 1)	TELCO	DLP-503
	B. If Memory Block 2 Was Equipped in Item 36, Recent Change and Verify Submember Equipage From UNEQ to GROW (Memory Block 2)	TELCO	DLP-503
	C. If Memory Block 3 Was Equipped in Item 36, Recent Change and Verify Submember Equipage From UNEQ to GROW (Memory Block 3)	TELCO	DLP-503
38	Restore Frame Power With Power Switch (TMS Member Number 1 — Controller 1) (Leave **OFF** Switch in **ROS**)	TELCO/INST	DLP-513
39	Diagnose TMS Growth Equipment Specifying Memory (TMS Member Number 1 — Controller 1) (DGN:TMSP 1,CONTR 1:MEMORY,GROWTH!)	TELCO/INST	DLP-533
40	Restore **OFF** Switch to Normal Position (TMS Member Number 1 — Controller 1)	TELCO/INST	—
41	Remove Power With Power Switch (TMS Member Number 2 — Controller 1)	TELCO	—
42	Install Circuit Packs or Assure That Circuit Packs Are in Correct Locations and Firmly Seated in TMS Frame (TMS Member Number 2 — Controller 1)	INST	—
43	If Growth TMS Memory Blocks Are in UNEQ State As Determined in Item 2, Recent Change and Verify TMS Memory Block(s) Being Added to TMS Member Number 2 — Controller 1:		
	A. If Memory Block 1 Was Equipped in Item 42, Recent Change and Verify Submember Equipage From UNEQ to GROW (Memory Block 1)	TELCO	DLP-503
	B. If Memory Block 2 Was Equipped in Item 42, Recent Change and Verify Submember Equipage From UNEQ to GROW (Memory Block 2)	TELCO	DLP-503
	C. If Memory Block 3 Was Equipped in Item 42, Recent Change and Verify Submember Equipage From UNEQ to GROW (Memory Block 3)	TELCO	DLP-503
44	Restore Frame Power With Power Switch (TMS Member Number 2 — Controller 1) (Leave **OFF** Switch in **ROS**)	TELCO/INST	DLP-513
45	Diagnose TMS Growth Equipment Specifying Memory (TMS Member Number 2 — Controller 1) (DGN:TMSP 2,CONTR 1:MEMORY,GROWTH!)	TELCO/INST	DLP-533

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
46	Rotate **OFF** Switch to Normal Position (TMS Member Number 2 — Controller 1)	TELCO/INST	—
47	Remove Power With Power Switch (TMS Member Number 3 — Controller 1)	TELCO	—
48	Install Circuit Packs or Assure That Circuit Packs Are in Correct Locations and Firmly Seated in TMS Frame (TMS Member Number 3 — Controller 1)	INST	—
49	If Growth TMS Memory Blocks Are in UNEQ State As Determined in Item 2, Recent Change and Verify TMS Memory Block(s) Being Added to TMS Member Number 3 - Controller 1:		
	A. If Memory Block 1 Was Equipped in Item 48, Recent Change and Verify Submember Equipage From UNEQ to GROW (Memory Block 1)	TELCO	DLP-503
	B. If Memory Block 2 Was Equipped in Item 48, Recent Change and Verify Submember Equipage From UNEQ to GROW (Memory Block 2)	TELCO	DLP-503
	C. If Memory Block 3 Was Equipped in Item 48, Recent Change and Verify Submember Equipage From UNEQ to GROW (Memory Block 3)	TELCO	DLP-503
50	Restore Frame Power With Power Switch (TMS Member Number 3 — Controller 1) (Leave **OFF** Switch in **ROS**)	TELCO/INST	DLP-513
51	Diagnose TMS Growth Equipment Specifying Memory (TMS Member Number 3 — Controller 1) (DGN:TMSP 3,CONTR 1:MEMORY,GROWTH!)	TELCO/INST	DLP-533
52	Rotate **OFF** Switch to Normal Position (TMS Member Number 3 — Controller 1)	TELCO/INST	—
53	Allow Soak Interval Same as Item 28	TELCO/INST	—
	NOTE: Growth memory blocks can remain in GROW state. Memory block growth beyond GROW state is completed in TSI frame growth procedure provided no memory parity failures have occurred and TRPF rate has not increased over previous office norm. However if interfacing TSI frame addition will be delayed, memory block equipage can be updated to operational state after growth testing is completed.		

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

		RESPONSIBILITY	
	NOTE: This procedure may not be executed with DIF/DT/EST/VIF associated with degrowth TSI in OPER state		
1	If Associated DIF/DT/EST/VIF Is Operational, Degrowth Is Required. DIF/DT/EST/VIF Degrowth Procedures Are Contained in TOP 234-153-030	TELCO/INST	—
2	Verify That All TSI Ports Have Been Degrown From Degrowth TSI (**VER:UTYPE:TSI** a!)	TELCO	DLP-512
3	If All TSI Ports Are Not UNEQ per Item 2, Discontinue This Procedure Until All TSI Ports Are Degrown. TSI Port Degrowth Procedures Are Contained in TOP 234-153-030	TELCO	—
4	Recent Change and Verify Member Equipage of Degrowth TSI From OPER to SGRO Using RC Form 701 (Degrow)	TELCO	DLP-555
5	Run Peripheral Unit Status Audit (**AUD:PUSTAT!**)	TELCO	—
6	Remove Power From IPUB 0 and IPUB1 Using Power Switches	TELCO	—
7	Recent Change and Verify Member Equipage of Degrowth TSI From SGRO to GROW Using RC Form 701 (Degrow)	TELCO	DLP-555
8	If Degrowth TSI Member Number Is 16 and Only TSI That Required Additional TMS Memory Blocks in Fully Equipped Two TMS Office and No Higher TSI Member Number Exist; Degrow Associated TMS 0 and 1, Controllers 0 and 1, Memory Blocks 1 and 3:		
	1. Degrow TMS 0 Memory Block 3:		
	A. If Memory Block 3 Circuit Packs Are To Remain in Place in TMS 0 Frame:		
	1. Recent Change TMS 0, Controller 0, Memory Block 3 Submember Equipage to GROW Using RC Form 701 (Degrow)	TELCO	DLP-556
	2. Recent Change TMS 0, Controller 1, Memory Block 3 Submember Equipage to GROW Using RC Form 701 (Degrow)	TELCO	DLP-556
	B. If Memory Block 3 Circuit Packs Are To Be Removed From TMS 0 Frame:		
	1. Recent Change TMS 0, Controller 0, Memory Block 3 Submember Equipage to GROW Using RC Form 701 (Degrow)	TELCO	DLP-556
	2. Recent Change TMS 0, Controller 1, Memory Block 3 Submember Equipage to GROW Using RC Form 701 (Degrow)	TELCO	DLP-556

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
8 (Contd)	3. Diagnose TMS 0 Controllers 0 and 1 Using Restore Message (RST:TMSP a,CONTR b!)	TELCO	DLP-532
	4. Remove Power With Power Switch (TMS 0, **CONTR0** Power Switch)	TELCO	—
	5. Recent Change TMS 0, Controller 0, Memory Block 3 Submember Equipage to UNEQ Using RC Form 701 (Degrow)	TELCO	DLP-556
	6. At TMS 0-0, Remove Memory Block 3 Circuit Packs	INST	—
	7. Restore Frame Power With Power Switch (TMS 0, **CONTR0** Power Switch); Wait for RESTORE COMPLETE Message	TELCO/INST	DLP-510
	8. Remove Power With Power Switch (TMS 0, **CONTR1** Power Switch)	TELCO	—
	9. Recent Change TMS 0, Controller 1, Memory Block 3 Submember Equipage to UNEQ Using RC Form 701 (Degrow)	TELCO	DLP-556
	10. At TMS 0-1, Remove Memory Block 3 Circuit Packs	INST	—
	11. Restore Frame Power With Power Switch (TMS 0,**CONTR1** Power Switch)	TELCO/INST	DLP-510
	2. Degrow TMS 0 Memory Block 1:		
	A. If Memory Block 1 Circuit Packs Are To Remain in Place in TMS 0 Frame:		
	1. Recent Change TMS 0, Controller 0, Memory Block 1 Submember Equipage to GROW Using RC Form 701 (Degrow)	TELCO	DLP-556
	2. Recent Change TMS 0, Controller 1, Memory Block 1 Submember Equipage to GROW Using RC Form 701 (Degrow)	TELCO	DLP-556
	B. If Memory Block 1 Circuit Packs Are To Be Removed From TMS 0 Frame:		
	1. Recent Change TMS 0, Controller 0, Memory Block 1 Submember Equipage to GROW Using RC Form 701 (Degrow)	TELCO	DLP-556
	2. Recent Change TMS 0, Controller 1, Memory Block 1 Submember Equipage to GROW Using RC Form 701 (Degrow)	TELCO	DLP-556
	3. Diagnose TMS 0 Frame Controllers 0 and 1 Using Restore Message (RST:TMSP a,CONTR b!)	TELCO	DLP-532
	(Continued on Page 3)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
8 (Contd)	4. Remove Power With Power Switch (TMS 0, **CONTR0** Power Switch)	TELCO	—
	5. Recent Change TMS 0, Controller 0, Memory Block 1 Submember Equipage to UNEQ Using RC Form 701 (Degrow)	TELCO	DLP-556
	6. At TMS 0-0, Remove Memory Block 1 Circuit Packs	INST	—
	7. Restore Frame Power With Power Switch (TMS 0, **CONTR0** Power Switch); Wait for RESTORE COMPLETE Message	TELCO/INST	DLP-510
	8. Remove Power With Power Switch (TMS 0, **CONTR1** Power Switch)	TELCO	—
	9. Recent Change TMS 0, Controller 1, Memory Block 1 Submember Equipage to UNEQ Using RC Form 701 (Degrow)	TELCO	DLP-556
	10. At TMS 0-1, Remove Memory Block 1 Circuit Packs	INST	—
	11. Restore Frame Power With Power Switch (TMS 0,**CONTR1** Power Switch)	TELCO/INST	DLP-510
	3. Repeat Item 8 for TMS 1 (Degrow TMS 1, Memory Blocks 3 and 1)	TELCO/INST	—
9	If Degrowth TSI Member Number Is 16 and Only TSI That Required Additional TMS Memory Blocks in Half Equipped Four TMS Office and No Higher TSI Member Number Exist; Degrow Associated TMS 0, 1, 2 and 3, Controllers 0 and 1, Memory Block 1:		
	1. Degrow TMS 0 Memory Block 1:		
	A. If Memory Block 1 Circuit Packs Are To Remain in Place in TMS 0 Frame:		
	1. Recent Change TMS 0, Controller 0, Memory Block 1 Submember Equipage to GROW Using RC Form 701 (Degrow)	TELCO	DLP-556
	2. Recent Change TMS 0, Controller 1, Memory Block 1 Submember Equipage to GROW Using RC Form 701 (Degrow)	TELCO	DLP-556
	B. If Memory Block 1 Circuit Packs Are To Be Removed From TMS 0 Frame:		
	1. Recent Change TMS 0, Controller 0, Memory Block 1 Submember Equipage to GROW Using RC Form 701 (Degrow)	TELCO	DLP-556
	2. Recent Change TMS 0, Controller 1, Memory Block 1 Submember Equipage to GROW Using RC Form 701 (Degrow)	TELCO	DLP-556
	(Continued on Page 4)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
9 (Contd)	3. Diagnose TMS 0 Controllers 0 and 1 Using Restore Message (RST:TMSP a,CONTR b!)	TELCO	DLP-532
	4. Remove Power With Power Switch (TMS 0,**CONTR0** Power Switch)	TELCO	—
	5. Recent Change TMS 0, Controller 0, Memory Block 1 Submember Equipage to UNEQ Using RC Form 701 (Degrow)	TELCO	DLP-556
	6. At TMS 0-0, Remove Memory Block 1 Circuit Packs	INST	—
	7. Restore Frame Power With Power Switch (TMS 0, **CONTR0** Power Switch); Wait for RESTORE COMPLETE Message	TELCO/INST	DLP-510
	8. Remove Power With Power Switch (TMS 0, **CONTR1** Power Switch)	TELCO	—
	9. Recent Change TMS 0, Controller 1, Memory Block 1 Submember Equipage to UNEQ Using RC Form 701 (Degrow)	TELCO	DLP-556
	10. At TMS 0-1, Remove Memory Block 2 Circuit Packs	INST	—
	11. Restore Frame Power With Power Switch (TMS 0,**CONTR1** Power Switch)	TELCO/INST	DLP-510
	2. Repeat Item 9 for TMS 1 (Degrow TMS 1, Memory Block 1)	TELCO/INST	—
	3. Repeat Item 9 for TMS 2 (Degrow TMS 2, Memory Block 1)	TELCO/INST	—
	4. Repeat Item 9 for TMS 3 (Degrow TMS 3, Memory Block 1)	TELCO/INST	—
10	If Degrowth TSI Member Number Is 32 and Only TSI That Required Additional TMS Memory Blocks in 3/4 Equipped Four TMS Office and No Higher TSI Member Number Exist; Degrow Associated TMS 0, 1, 2 and 3, Controllers 0 and 1, Memory Block 2:		
	1. Degrow TMS 0 Memory Block 2:		
	A. If Memory Block 2 Circuit Packs Are To Remain in Place in TMS 0 Frame:		
	1. Recent Change TMS 0, Controller 0, Memory Block 2 Submember Equipage to GROW Using RC Form 701 (Degrow)	TELCO	DLP-556
	2. Recent Change TMS 0, Controller 1, Memory Block 2 Submember Equipage to GROW Using RC Form 701 (Degrow)	TELCO	DLP-556
	(Continued on Page 5)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
10 (Contd)	B. If Memory Block 2 Circuit Packs Are To Be Removed From TMS 0 Frame:		
	1. Recent Change TMS 0, Controller 0, Memory Block 2 Submember Equipage to GROW Using RC Form 701 (Degrow)	TELCO	DLP-556
	2. Recent Change TMS 0, Controller 1, Memory Block 2 Submember Equipage to GROW Using RC Form 701 (Degrow)	TELCO	DLP-556
	3. Diagnose TMS 0 Controllers 0 and 1 Using Restore Message (**RST:TMSP** a,**CONTR** b!)	TELCO	DLP-532
	4. Remove Power With Power Switch (TMS 0,**CONTR0** Power Switch)	TELCO	—
	5. Recent Change TMS 0, Controller 0, Memory Block 2 Submember Equipage to UNEQ Using RC Form 701 (Degrow)	TELCO	DLP-556
	6. At TMS 0-0, Remove Memory Block 2 Circuit Packs	INST	—
	7. Restore Frame Power With Power Switch (TMS 0, **CONTR0** Power Switch); Wait for RESTORE COMPLETE Message	TELCO/INST	DLP-510
	8. Remove Power With Power Switch (TMS 0, **CONTR1** Power Switch)	TELCO	—
	9. Recent Change TMS 0, Controller 1, Memory Block 2 Submember Equipage to UNEQ Using RC Form 701 (Degrow)	TELCO	DLP-556
	10. At TMS 0-1, Remove Memory Block 2 Circuit Packs	INST	—
	11. Restore Frame Power With Power Switch (TMS 0,**CONTR1** Power Switch)	TELCO/INST	DLP-510
	2. Repeat Item 10 for TMS 1 (Degrow TMS 1, Memory Block 2)	TELCO/INST	—
	3. Repeat Item 10 for TMS 2 (Degrow TMS 2, Memory Block 2)	TELCO/INST	—
	4. Repeat Item 10 for TMS 3 (Degrow TMS 3, Memory Block 2)	TELCO/INST	—
	(Continue on Page 6)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
11	If Degrowth TSI Member Number Is 48 and Only TSI That Required Additional TMS Memory Blocks in Fully Equipped Four TMS Office and No Higher TSI Member Number Exist; Degrow TMS 0, 1, 2 and 3, Controllers 0 and 1, Memory Block 3:		
	1. Degrow TMS 0 Memory Block 3:		
	A. If Memory Block 3 Circuit Packs Are To Remain in Place in TMS 0 Frame:		
	1. Recent Change TMS 0, Controller 0, Memory Block 3 Submember Equipage to GROW Using RC Form 701 (Degrow)	TELCO	DLP-556
	2. Recent Change TMS 0, Controller 1, Memory Block 3 Submember Equipage to GROW Using RC Form 701 (Degrow)	TELCO	DLP-556
	B. If Memory Block 3 Circuit Packs Are To Be Removed From TMS 0 Frame:		
	1. Recent Change TMS 0, Controller 0, Memory Block 3 Submember Equipage to GROW Using RC Form 701 (Degrow)	TELCO	DLP-556
	2. Recent Change TMS 0, Controller 1, Memory Block 3 Submember Equipage to GROW Using RC Form 701 (Degrow)	TELCO	DLP-556
	3. Diagnose TMS 0 Controllers 0 and 1 Using Restore Message (RST:TMSP a,CONTR b!)	TELCO	DLP-532
	4. Remove Power With Power Switch (TMS 0,**CONTR0** Power Switch)	TELCO	—
	5. Recent Change TMS 0, Controller 0, Memory Block 3 Submember Equipage to UNEQ Using RC Form 701 (Degrow)	TELCO	DLP-556
	6. At TMS 0-0, Remove Memory Block 3 Circuit Packs	INST	—
	7. Restore Frame Power With Power Switch (TMS 0, **CONTR0** Power Switch); Wait for RESTORE COMPLETE Message	TELCO/INST	DLP-510
	8. Remove Power With Power Switch (TMS 0, **CONTR1** Power Switch)	TELCO	—
	9. Recent Change TMS 0, Controller 1, Memory Block 3 Submember Equipage to UNEQ Using RC Form 701 (Degrow)	TELCO	DLP-556
	10. At TMS 0-1, Remove Memory Block 3 Circuit Packs	INST	—
	11. Restore Frame Power With Power Switch (TMS 0,**CONTR1** Power Switch)	TELCO/INST	DLP-510

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
11 (Contd)	2. Repeat Item 11 for TMS 1 (Degrow TMS 1, Memory Block 3)	TELCO/INST	—
	3. Repeat Item 11 for TMS 2 (Degrow TMS 2, Memory Block 3)	TELCO/INST	—
	4. Repeat Item 11 for TMS 3 (Degrow TMS 3, Memory Block 3)	TELCO/INST	—
12	Remove Power From Degrowth TSI Controllers, IPUBs and ALCs Using Power Switches	TELCO	—
	NOTE: Do not remove +140V and +24V power from degrowth TSI at the power distribution frame at this time		
13	At TMS Frame, Identify and Carefully Tag A Link Coaxial Cables To Be Removed	INST	—
14	Remove A Link Cables Between Degrowth TSI and Associated TMS Frames	INST	—
15	Remove Degrowth TSI From Peripheral Unit Bus Using Selected Option A or B in TOP 234-153-045; Then Continue This Procedure at Item 15 Upon Completion		
	A. When Degrowth Frame Is Last Frame on PUB Branch	TELCO/INST	—
	B. When Degrowth Frame Is Between Two Operational Frames on PUB Branch	TELCO/INST	—
16	Remove Network Clock Coaxial Cables From Degrowth TSI	INST	—
17	Recent Change and Verify Member Equipage for Degrowth TSI From GROW to UNEQ Using RC Form 701 (Degrow)	TELCO	DLP-555
18	At MCC **SYSTEM ALARMS** Panel, Depress **SERVICE DEGRADING FAILURE** Key to Get A Service Degrading Report Printout		
	A. If There Are No Service Degrading Peripheral Units on Printout, Enter Message INIT:PERIFINH!	TELCO	—
	NOTE: Entering INIT:PERIFINH! unpests the TSI		
	B. If There Are Service Degrading Peripheral Units on Printout, Clear Service Degrading Condition of Each Unit Before Continuing Degrowth	TELCO	—
19	Remove Alarm Cables in Degrowth TSI. If TSI Is in Middle of Lineup, Place New Cable Between Remaining Frames To Bridge Open	INST	—
20	Remove Private Signal Leads (MSD, PP, MSN)	INST	—
21	Remove +140V and +24V Power From Degrowth TSI at Power Distribution Frame	INST	—
22	Remove Degrowth TSI Common Circuits (Telephone Jacks, TTY Jacks, Appliance Outlets)	INST	—
23	Remove Degrown TSI Frame From Lineup	INST	—

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

		RESPONSIBILITY	
	NOTE: Only one SPC can be converted at a time. This procedure must be repeated for each SPC being converted		
1	Ensure That CN Associated With Wideband Capability in TSI Frame Has Been Applied to Each Controller. Contact Product Engineering Control Center (PECC) at 1-800-225-4672 For CN Information	TELCO	—
2	Determine Member Number of TSI Frame To Be Converted	TELCO	—
3	Request Machine Administration Center To Determine If Any TANTOTANs and/or Nailup Connections Are Assigned to SPC in TSI To Be Converted	TELCO	—
4	If TANTOTANs Are Assigned, Obtain CIN Assignments of TANTOTANs on SPC To Be Converted for Later Use	TELCO	—
5	If Nailup Connections Are Assigned, Obtain TAN Assignments of Nailup Connections on SPC To Be Converted for Later Use	TELCO	—
6	Diagnose Controllers 0 and 1 in TSI Being Converted Using Restore Message (**RST:TSI** a,**CONTR** b!)	TELCO	DLP-568
7	Ensure That 16 **FA1816** and 16 **FA1817** Circuit Packs Are Available for SPC Being Converted	TELCO	—
8	Remove Power From Bay 0 of TSI Frame Being Converted Using **CONTR0** Power Switch	TELCO	—
9	If Additional 245A Converter Needs to be Added in Bay 0, Add Converter		
	1. Install 245A Converter (OCOB) at Location 0-14-36	TELCO	—
	2. Install Fuse (OAOB) at Location 0-07-09	TELCO	—
	NOTE: When converting to wideband capability, additional 3-volt power is required. This can be accomplished in two ways: install an additional 245A converter if frame is equipped with a third bulk power converter, or replace both 245A converters with 245C converters. (There can be three 245A's in one bay and two 245C's in the other bay)		
	1. Add Additional 245A Converter		
	A. Remove Shorting Circuit Card From Center Converter Connector	TELCO	—
	B. Install 245A Converter (OCOB) at Location 0-14-36	TELCO	—
	C. Install Fuse (OAOB) at Location 0-07-07	TELCO	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
9 (Contd)	2. Replace the Two 245A Converters With the Two 245C Converters (AT&T Practice TOP 234-151-012, DLP-549)	TELCO	—
10	Replace **FA1780** and **FA1781** Circuit Packs With **FA1816** and **FA1817** Circuit Packs, Respectively, in J4A001BB Unit in Bay 0	TELCO	DLP-569
11	Perform Functional Word Change of Wideband Capability Indicator	TELCO	DLP-570
	NOTE: When power is restored to Bay 0, Phase 23 will fail diagnostics		
12	Restore Power to Bay 0 Using **CONTR0** Power Switch	TELCO	DLP-571
13	Determine Active Trunks for SPC Being Converted. Save Printouts for Later Use (**OP:TRKSTAT,TAN** aab**0001:NUM 840,STAT ACT!**)	TELCO	DLP-572
14	Set All Trunks Associated With Unit Being Converted to CAD.DSA State (**SET:TRKSTAT CAD.DSA,TAN** aab**0001;SUM:NUM 840!**)	TELCO	DLP-573
15	Verify That No Trunks, Set to CAD.DSA State in Item 14, Are Active (**OP:TRKSTAT,TAN** aab**0001;SUM:NUM 840,STAT ACT!**)	TELCO	DLP-574
16	If TANTOTANs Are Assigned to SPC Being Converted (Item 3), Using CIN Assignments Obtained in Item 4, Take Down Each TANTOTAN (**ORD:TANTOTAN;RLS,CIN** a**:CIN** b! a = CIN of First Trunk, b = CIN of Second Trunk)	TELCO	DLP-580
17	If Nailup Connections Are Assigned to SPC Being Converted (Item 3), Request Machine Administration Center To Delete Each Nailup Connection on List Obtained in Item 5 Using Recent Change Form 206	TELCO	—
18	Enter Message **INH:TSI** a**,CONTR 0,SPEC!** (a = TSI Member Number) To Inhibit TSI Controller 0	TELCO	—
19	Enter Message **INH:TSI** a**,CONTR 1,SPEC!** (a = TSI Member Number) To Inhibit TSI Controller 1	TELCO	—
20	Restore TSI Controller 0 to Service Unconditionally (**RST:TSI** a**,CONTR 0;UCL!**)	TELCO	DLP-575
21	Dump TSI Critical Registers and Ensure Bits 4 Through 11 in Word 3 Are Set to 0 (**DUMP:TSI** a**,CREG!**)	TELCO	DLP-576
22	Remove Power From Bay 1 of TSI Frame Being Converted Using **CONTR1** Power Switch	TELCO	—
23	Enter Message **ALW:TSI** a**,CONTR 0,SPEC!** (a = TSI Member Number) To Allow TSI Controller 0	TELCO	—
24	Enter Message **ALW:TSI** a**,CONTR 1,SPEC!** (a = TSI Member Number) To Allow TSI Controller 1	TELCO	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
25	Set All Trunks That Were Disabled in Item 14 to ACT State (Use Printout From Item 13) (SET:TRKSTAT ACT,TAN a;SUM:NUM b!)	TELCO	DLP-577
26	If TANTOTANs Were Taken Down In Item 16, Set Up Each TANTOTAN Connection That Was Taken Down (ORD:TANTOTAN;CONN,CIN a:CIN b! a = CIN of First Trunk, b = CIN of Second Trunk)	TELCO	DLP-581
27	If Nailup Connections Were Deleted in Item 17, Request Machine Administration Center To Add Each Nailup Connection That Was Deleted Using Recent Change Form 205	TELCO	—
28	Verify That All Trunks Set in Item 25 Are Active (OP:TRKSTAT,TAN aab0001;SUM:NUM 840,STAT ACT!)	TELCO	DLP-578
29	If Additional 245A Converter Needs to be Added in Bay 1, Add Converter		
	1. Install 245A (1COB) at Location 1-14-36	TELCO	—
	2. Install Fuse (1AOB) at Location 1-07-09	TELCO	—
	NOTE: When converting to wideband capability, additional 3-volt power is required. This can be accomplished in two ways: install an additional 245A converter if frame is equipped with a third bulk power converter, or replace both 245A converters with 245C converters. (There can be three 245A's in one bay and two 245C's in the other bay)		
	1. Add Additional 245A Converter		
	A. Remove Shorting Circuit Card From Center Converter Connector	TELCO	—
	B. Install 245A Converter (OCOB) at Location 0-14-36	TELCO	—
	C. Install Fuse (OAOB) at Location 0-07-07	TELCO	—
	2. Replace the Two 245A Converters With the Two 245C Converters (AT&T Practice TOP 234-151-012, DLP-549)	TELCO	—
30	Replace **FA1780** and **FA1781** Circuit Packs With **FA1816** and **FA1817** Circuit Packs, Respectively, in J4A001BB Unit in Bay 1	TELCO	DLP-569
31	Restore Power to Bay 1 Using **CONTR1** Power Switch (Controller 1 Restored to Service)	TELCO	DLP-579
32	Enter Message RST:TSI a,CONTR 0! (a = TSI Member Number) To Diagnose Controller 0 ATP	TELCO	—

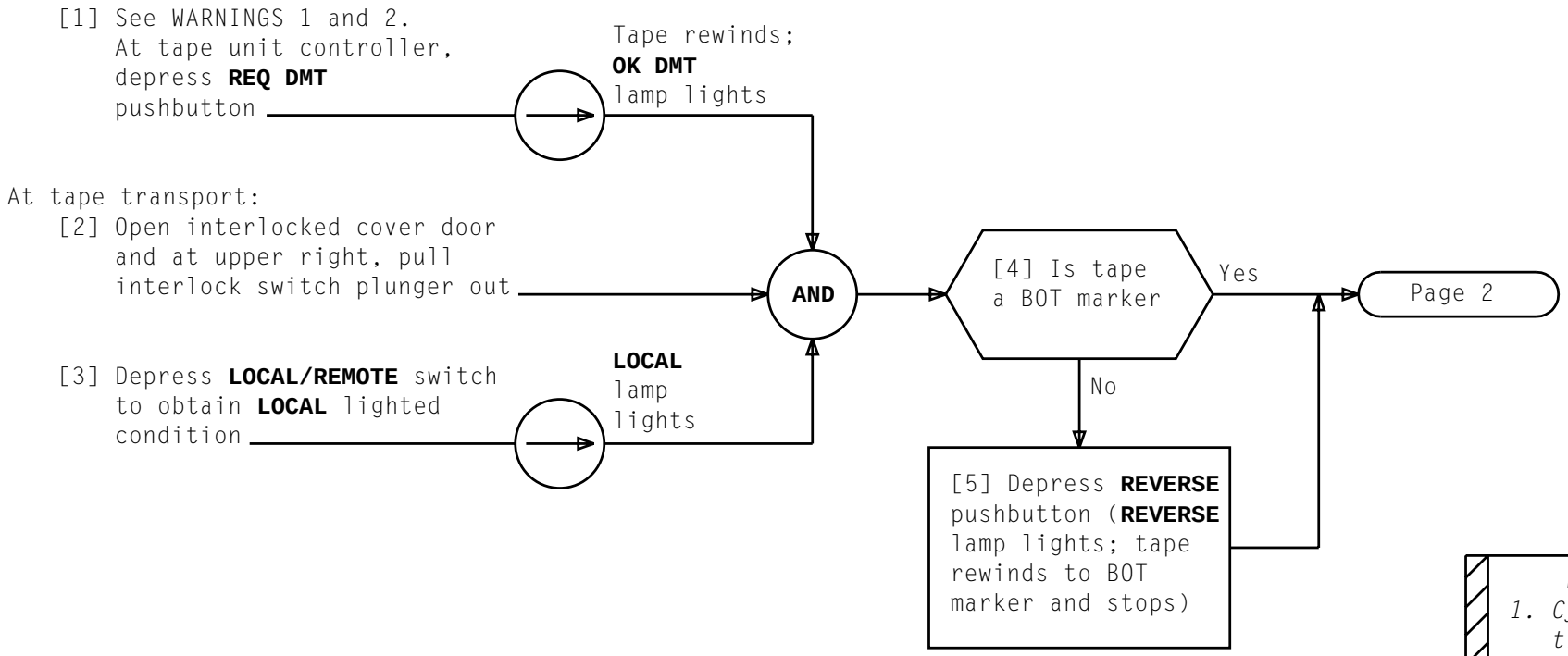
DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO

		RESPONSIBILITY	
1	To Prepare for Degrowing MAS and PUC, Complete Following Steps Prior to Actual Start of Degrowth Procedure:	—	—
	1. Ensure All Traffic Is Off Equipped MASs	TELCO	—
	2. Obtain Blank Copy of PUC and MAS Degrowth Recording Sheet	TELCO	DLP-589
	3. Determine Following MAS Frame UT Translator Information (**VER:UTYPE:MAS** a!) and Record on PUC and MAS Degrowth Recording Sheet • Associated PUC Member Number (Word 3, Bits 17 Through 23) • PUC Unit (Word 6, Bits 0, 1 and 12, 13) • TSI Port Numbers (Word 6, Bits 2 Through 4 and 14 Through 16) • SPCs (Word 6, Bits 5 and 17) • TSI Member Numbers (Word 6, Bits 6 Through 11 and 18 Through 23)	TELCO	DLP-582
	4. Determine Member Numbers of TSIs Supplying Clock and Record on PUC and MAS Degrowth Recording Sheet	TELCO	DLP-586
	5. Determine Clock Number in TSIs Supplying Clock and Record on PUC and MAS Degrowth Recording Sheet	TELCO	DLP-587
	NOTE: Remainder of this procedure must be performed during light traffic periods		
2	Verify MAS Announcement Status and Ensure No Announcements Are Assigned to Degrowth MAS Frame (**VER:PASANN!**)	TELCO	DLP-583
	CAUTION: Do not continue past this point if announcements are assigned to Degrowth MAS frame. Be sure TANs unassigned or trunks are in CAD.DSA state		
3	Verify Status of Trunks Assigned to Degrowth Associated TSI Using TAN for MAU 0 Recorded in Item 1 (**OP:TRKSTAT,TAN a:NUM 120!**); Ensure All Assigned Trunks Are in CAD.DSA State	TELCO	DLP-584
4	Verify Status of Trunks Assigned to Degrowth Associated TSI Using TAN for MAU 1 Recorded in Item 1 (**OP:TRKSTAT,TAN a:NUM 120!**); Ensure All Assigned Trunks Are in CAD.DSA State	TELCO	DLP-584
	CAUTION: All assigned trunks to Degrowth MAS must be in CAD.DSA state before continuing		
5	At MTC Channel, Enter Message **INH:AUDMSG:NUM 19!**; Ensure **OP:AUDSTAT** Message Is Received Listing Audit 19	TELCO	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
	NOTE: Since operational TSI ports cannot be pested, duplex failure of MAS frame will cause F-level interrupts only to TSI associated with powered down MAU		
6	Duplex Fail Degrowth MAS Frame; Ensure F-level Interrupts are Received Only Against TSI Associated With Powered Down MAU	TELCO	DLP-585
7	Recent Change Degrowth MAS Submember Equipage for MAU 0 From OPER to SGRO Using RC Form 701	TELCO	DLP-556
8	At MTC Channel, Enter Message **AUD:NUM 19!**; Ensure **COMPLETE** Message Is Received. If Errors Were Detected, Enter Message **AUD:NUM 19!** Until **0 ERRORS DETECTED** Message is Received	TELCO	–
9	Recent Change Degrowth MAS Submember Equipage for MAU 1 From OPER to SGRO Using RC Form 701	TELCO	DLP-556
10	At MTC Channel, Enter Message **AUD:NUM 19!**; Ensure **COMPLETE** Message Is Received. If Errors Were Detected, Enter Message **AUD:NUM 19!** Until **0 ERRORS DETECTED** Message Is Received	TELCO	–
11	Enter Message **ALW:AUDMSG:NUM 19!**; Ensure **OK** Received	TELCO	–
12	Recent Change Degrowth MAS Member Equipage From OPER to SGRO Using RC Form 701	TELCO	DLP-555
13	Recent Change PUC Submember Equipage Associated With MAU 0 (Item 1) From OPER to SGRO Using RC Form 701	TELCO	DLP-556
14	Recent Change PUC Submember Equipage Associated With MAU 1 (Item 1) From OPER to SGRO Using RC Form 701	TELCO	DLP-556
15	Recent Change TSI Port Submember Equipage Associated With MAU 0 (Item 1) From OPER to SGRO Using RC Form 701	TELCO	DLP-556
16	Recent Change TSI Port Submember Equipage Associated With MAU 1 (Item 1) From OPER to SGRO Using RC Form 701	TELCO	DLP-556
17	Recent Change Degrowth MAS Submember Equipage for MAU 0 From SGRO to GROW Using RC Form 701	TELCO	DLP-556
18	Recent Change Degrowth MAS Submember Equipage for MAU 1 From SGRO to GROW Using RC Form 701	TELCO	DLP-556
19	Recent Change Degrowth MAS Member Equipage From SGRO to GROW Using RC Form 701	TELCO	DLP-555
20	Recent Change Degrowth MAS Submember Equipage for MAU 0 From GROW to UNEQ Using RC Form 701	TELCO	DLP-556
21	Recent Change Degrowth MAS Submember Equipage for MAU 1 From GROW to UNEQ Using RC Form 701	TELCO	DLP-556

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
22	Recent Change Degrowth MAS Member Equipage From GROW to UNEQ Using RC Form 701	TELCO	DLP-555
23	Recent Change PUC Submember Equipage Associated With MAU 0 (Item 1) From SGRO to GROW Using RC Form 701	TELCO	DLP-556
24	Recent Change PUC Submember Equipage Associated With MAU 1 (Item 1) From SGRO to GROW Using RC Form 701	TELCO	DLP-556
25	Recent Change PUC Submember Equipage Associated With MAU 0 (Item 1) From GROW to UNEQ Using RC Form 701	TELCO	DLP-556
26	Recent Change PUC Submember Equipage Associated With MAU 1 (Item 1) From GROW to UNEQ Using RC Form 701	TELCO	DLP-556
27	At MTC Channel, Enter Message **AUD:PUSTAT!** To Run Peripheral Unit Status Audit; Wait For Message Complete (**MSG COMPL**)	TELCO	—
28	Recent Change TSI Port Submember Equipage Associated With MAU 0 (Item 1) From SGRO to GROW Using RC Form 701	TELCO	DLP-556
29	Recent Change TSI Port Submember Equipage Associated With MAU 1 (Item 1) From SGRO to GROW Using RC Form 701	TELCO	DLP-556
30	Check For Pested Ports	TELCO	—
31	At TSI Associated With MAU 0 in Degrown MAS, Disconnect DS120 MAS Link Cable From TSI Port Recorded in Item 1 and Connect TSI Port Cable to This Port	INST	—
32	At TSI Associated With MAU 1 in Degrown MAS, Disconnect DS120 MAS Link Cable From TSI Port Recorded in Item 1 and Connect TSI Port Cable to This Port	INST	—
33	Diagnose and Restore TSI Frame Controllers 0 and 1 Associated With MAU 0:		
	A. If TSI Is J4A001A (**DGN:TSI** a,**CONTR** b:**PH 13!**)	TELCO	DLP-588
	B. If TSI Is J4A001B (**DGN:TSI** a,**CONTR** b:**PH 20!**)	TELCO	DLP-588
34	Diagnose and Restore TSI Frame Controllers 0 and 1 Associated With MAU 1:		
	A. If TSI Is J4A001A (**DGN:TSI** a,**CONTR** b:**PH 13!**)	TELCO	DLP-588
	B. If TSI Is J4A001B (**DGN:TSI** a,**CONTR** b:**PH 20!**)	TELCO	DLP-588
	(Continued on Page 4)		

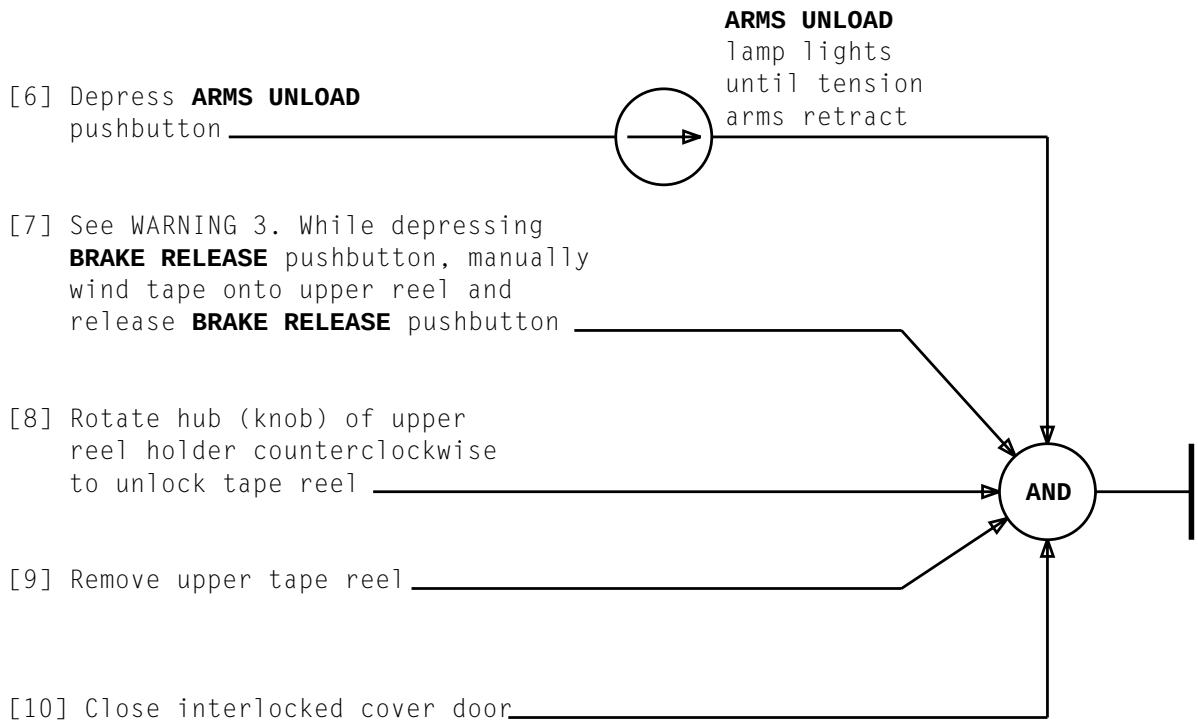
DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
35	At MTC Channel, Enter Message **ALW:TSI** a,**SPC** b,**PORT** c! (a, b, c = Information Recorded in Item 1) To Allow TSI Port Associated With MAU 0	TELCO	—
36	Enter Message **ALW:TSI** a,**SPC** b,**PORT** c! (a, b, c = Information Recorded in Item 1) To Allow TSI Port Associated With MAU 1	TELCO	—
37	Enter Message **OP:PERIFINH!**; Ensure TSI Ports Associated With MAU 0 and MAU 1 Are Not Listed	TELCO	—
38	Recent Change TSI Port Submember Equipage Associated With MAU 0 (Item 1) From GROW to UNEQ Using RC Form 701	TELCO	DLP-556
39	Recent Change TSI Port Submember Equipage Associated With MAU 1 (Item 1) From GROW to UNEQ Using RC Form 701	TELCO	DLP-556
	NOTE: MAS and associated equipment is degrown to unequipped. PUC degrowth starts now		
40	Recent Change Degrowth PUC Member Equipage From OPER to SGRO Using RC Form 701	TELCO	DLP-555
41	At MTC Channel, Enter Message **AUD:PUSTAT!** To Run Peripheral Unit Status Audit; Wait For Message Complete (**MSG COMPL**)	TELCO	—
42	Remove Power From Degrowth PUC Controllers and IPUBs Using Power Switches	TELCO	—
	NOTE: Remove Power From IPUBs First		
43	Recent Change Degrowth PUC Member Equipage From SGRO to GROW Using RC Form 701	TELCO	DLP-555
	NOTE: Safe point to temporarily stop procedure		
44	Remove Degrowth PUC From Peripheral Unit Bus Per TOP 234-153-045, and Continue This Procedure at Item 45 Upon Completion	TELCO/INST	—
45	Recent Change Degrowth PUC Member Equipage From GROW to UNEQ Using RC Form 701	TELCO	DLP-555
46	Remove Clock Leads From TSI Associated With PUC Controllers (Item 1) and Install Terminating Plugs	INST	—
47	Remove Power From Degrowth MAS Frame (Including Disks) Using Power Switches	TELCO	—
48	Remove EIB Cabling From Degrowth MAS Frame	INST	—
49	Remove Private Signal Leads, Alarm Leads, Power Cables, and Common Circuits From MAS (Including Disks) and PUC Frames	INST	—
50	Remove Degrowth Equipment From Lineup	INST	—



WARNINGS

1. *Cycling tape transport or tape unit controller with tape over read/write heads may garbage tape*
2. *If tape is being demounted due to faulty tape unit, proper tape unit maintenance documentation should be used*

DEMOUNT TAPE ON TAPE TRANSPORT



WARNING 3
Pulling or dragging last 2 feet of tape across heads may contaminate heads

DEMOUNT TAPE ON TAPE TRANSPORT

SUMMARY

Using verify entry input message, call up growth TSI-2 UT translations for even member number and verify that resulting TTY octal output data, when converted, agrees with office records. Refer to entry word explanations in TABLE B, Page 6, 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.

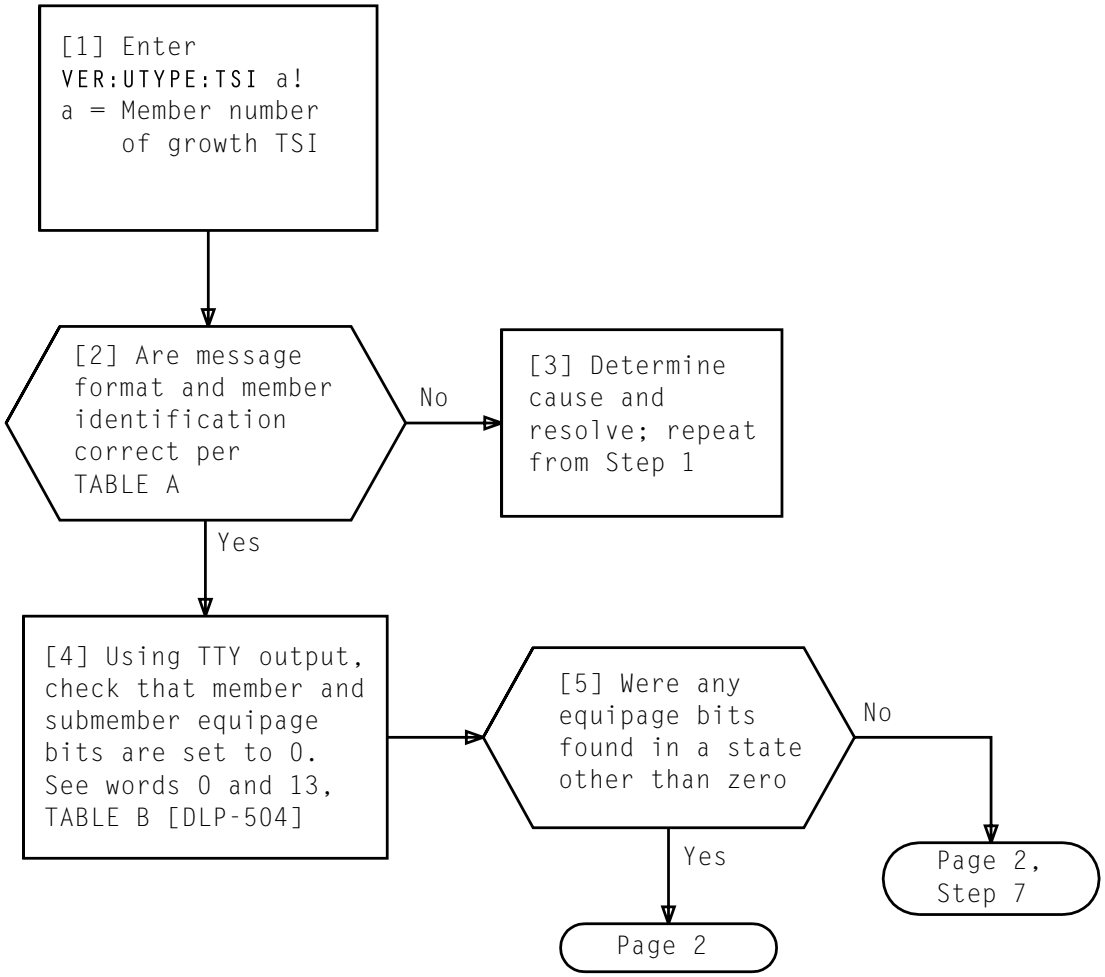


TABLE A

```
VER:UTMN;OPT(),CUR:     FLN a,              UTYN TSI,

MEMN b,           ME UNEQ,
ENTRY ADDRESS c,                ENTRY SIZE 33,

  CUR
  WORD 0  ________ ________ ________ ________
          ________ ________ ________ ________

  WORD 10 ________ ________ ________ ________
          ________ ________ ________ ________

  WORD 20 ________ ________ ________ ________
          ________ ________ ________ ________

  WORD 30 ________________ ________ ________
          ________ ________ ________ ________

  WORD 40 ________
```

a = Floor location number
b = Member number of growth TSI
c = Starting octal address for unit type entry

VERIFY TSI-2 UT TRANSLATOR FOR EVEN MEMBER NUMBER

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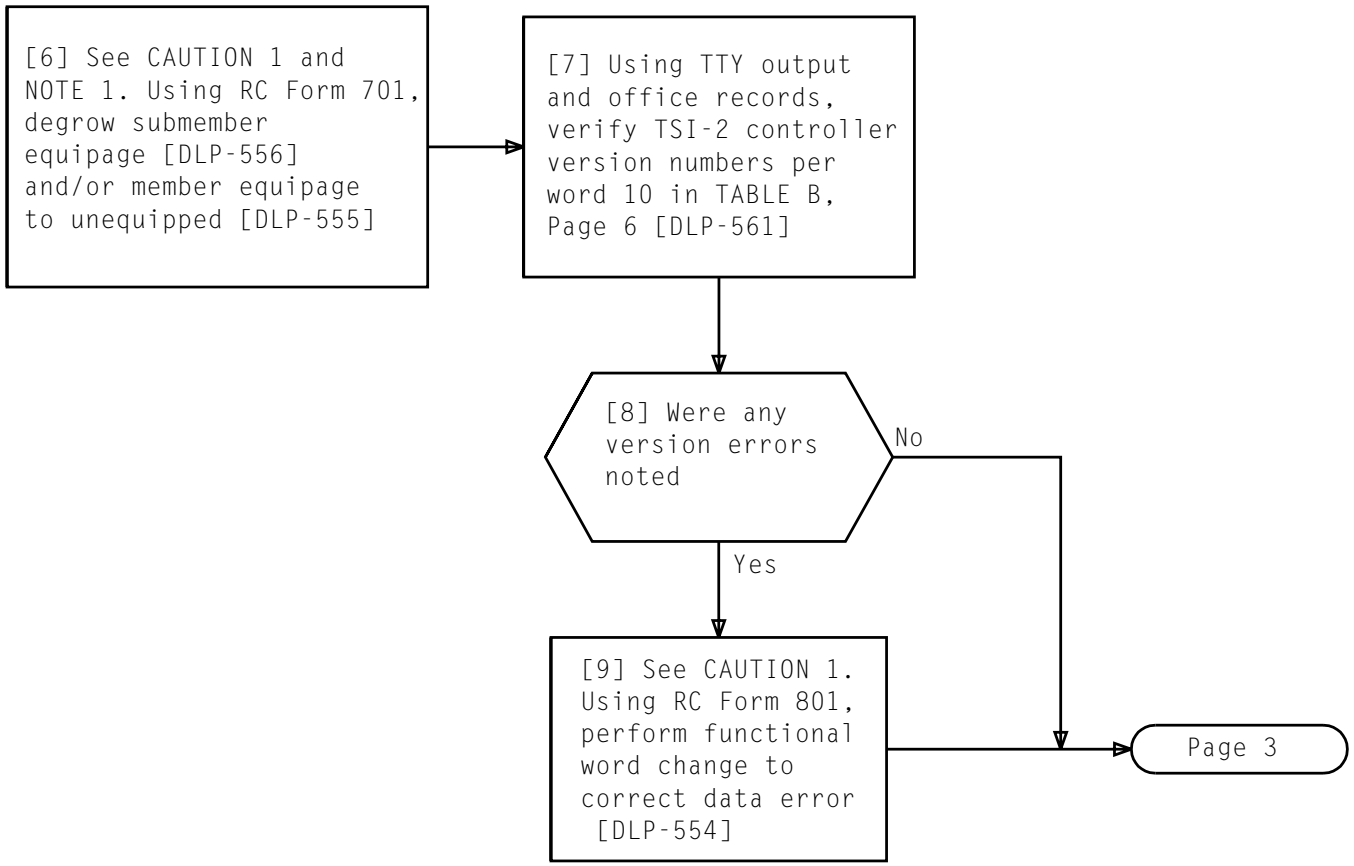


NOTE 1
Submember equipage must be degrown first if required followed by degrowth of member equipage, if required

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

VERIFY TSI-2 UT TRANSLATOR FOR EVEN MEMBER NUMBER

Using TTY output, TABLE B, and office records:

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

[11] Verify alarm grid, lineup, and frame assignment for growth frame per word 1 [DLP-552]

[12] Verify PUB branch assignment for growth frame per word 3 [DLP-553]

[13] Verify scan point assignments for growth TSI-2 per words 3 and 4 [DLP-563]

AND

[14] Verify EST member number (if any) and indicator per word 5 [DLP-564]

[15] Verify SD and pulse point assignments for growth TSI-2 per words 2, 5, 6, and 7 [DLP-562]

AND

Page 4

[16] Verify babbling bus changes per word 11

[17] Verify frame even and odd member numbers per octal word 12

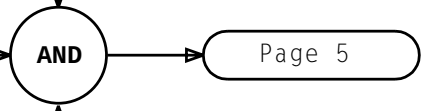
[18] Verify ESU strap indicators per octal words 14 and 15 [DLP-565]

VERIFY TSI-2 UT TRANSLATOR FOR EVEN MEMBER NUMBER

[19] Using TABLE C, identify octal word associated with each SPC-PORT

Using TTY output, TABLE B, and office records:

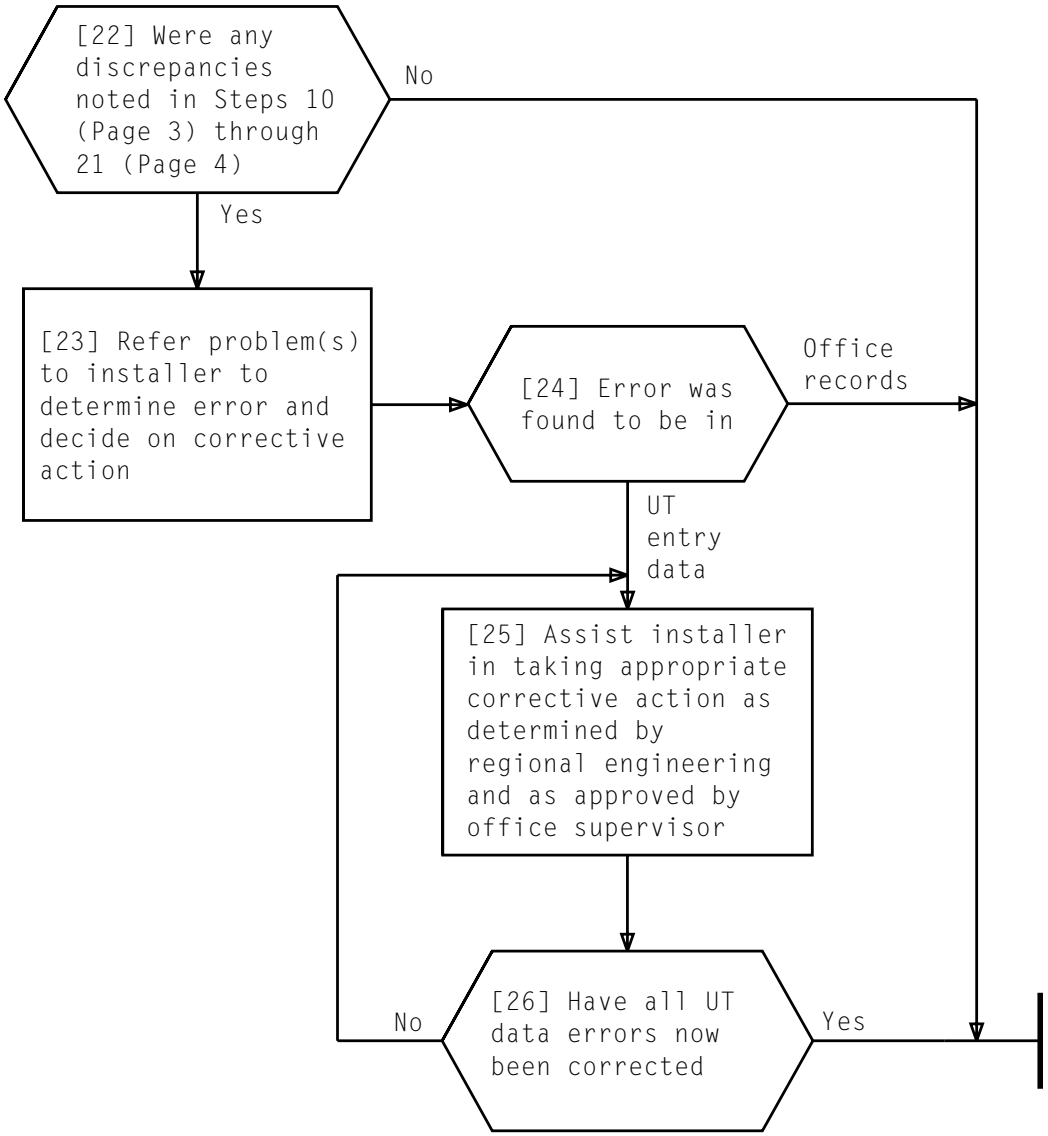
[20] Verify TSI port to VIU/ DTU/DIU/MAU assignments per words identified in Step 19 [DLP-505]



[21] Verify TSI clock assignments per words 16, 17, and 20 [DLP-511]

TABLE C	
SPC AND TSI PORT	**OCTAL WORD**
SPC 0 — PORT 0	21
— PORT 1	22
— PORT 2	23
— PORT 3	24
— PORT 4	25
— PORT 5	26
— PORT 6	27
SPC 1 — PORT 0	31
— PORT 1	32
— PORT 2	33
— PORT 3	34
— PORT 4	35
— PORT 5	36
— PORT 6	37

VERIFY TSI-2 UT TRANSLATOR FOR EVEN MEMBER NUMBER



VERIFY TSI-2 UT TRANSLATOR FOR EVEN MEMBER NUMBER

TABLE B

ENTRY WORD (OCTAL): 0

UT ENTRY DATA AND WORD CONFIGURATION

entry data octal output	2			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	0	1	0	0	0	0	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		7		6		5		4		3		2		1		0			
									TSI-2 PORT NO. — SPC 0																	
									TSI-2 PORT SUBMEMBER EQUIPAGE																	

ENTRY WORD (OCTAL): 1

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	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

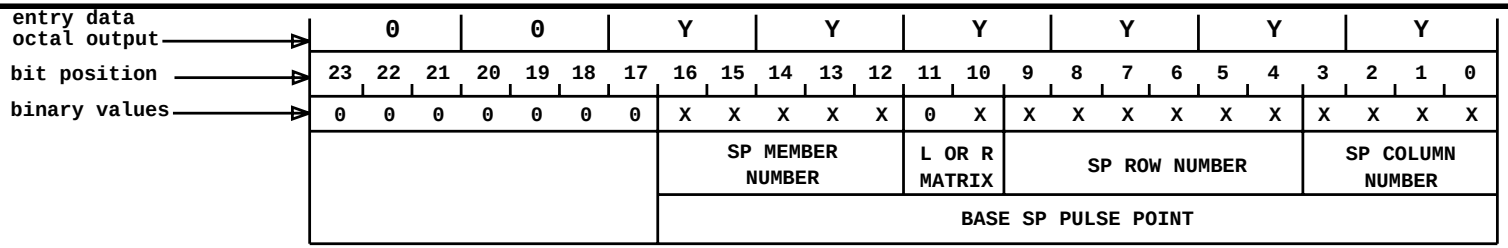
Y= Variable octal numbers

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**

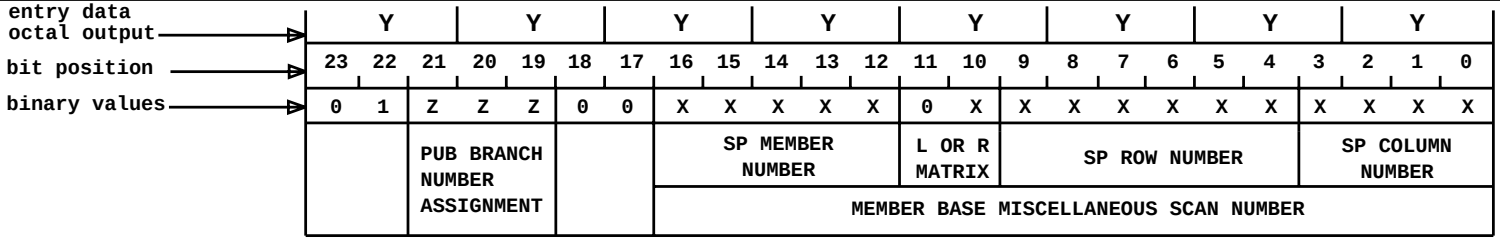
2



X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-462 or equivalent

Y = Variable octal numbers

3



X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-461 or equivalent

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

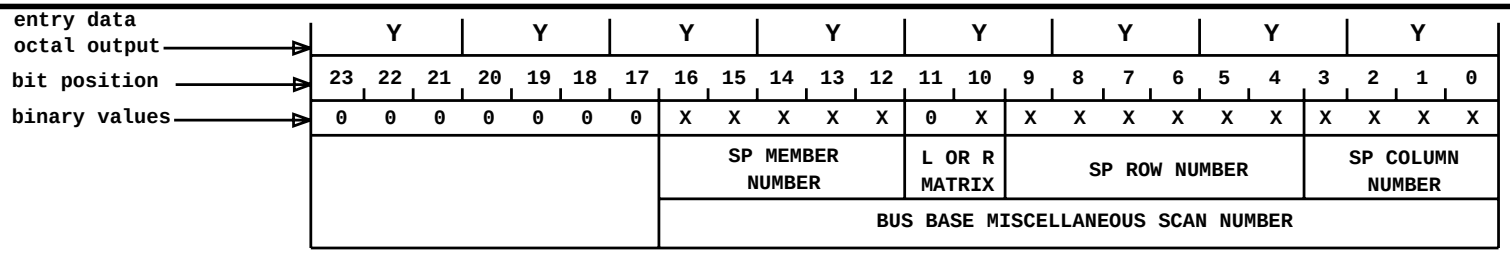
Y = Variable octal numbers

VERIFY TSI-2 UT TRANSLATOR FOR EVEN MEMBER NUMBER

TABLE B (Contd)

ENTRY WORD (OCTAL) | **UT ENTRY DATA AND WORD CONFIGURATION**

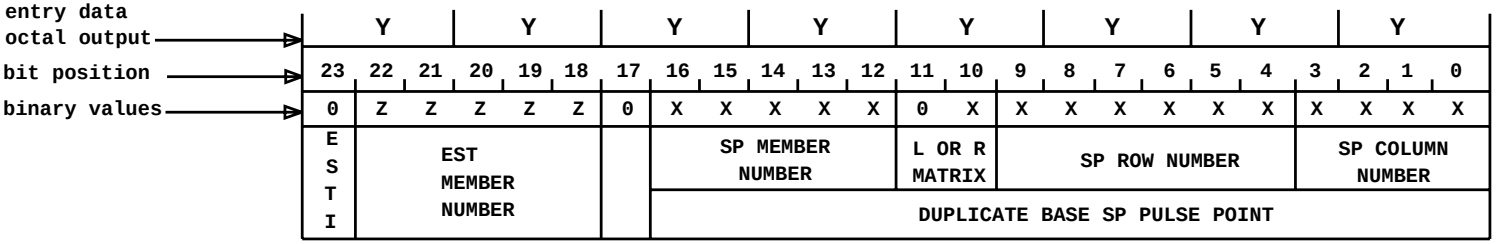
4



X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-461 or equivalent

Y = Variable octal numbers

5



X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-462 or equivalent

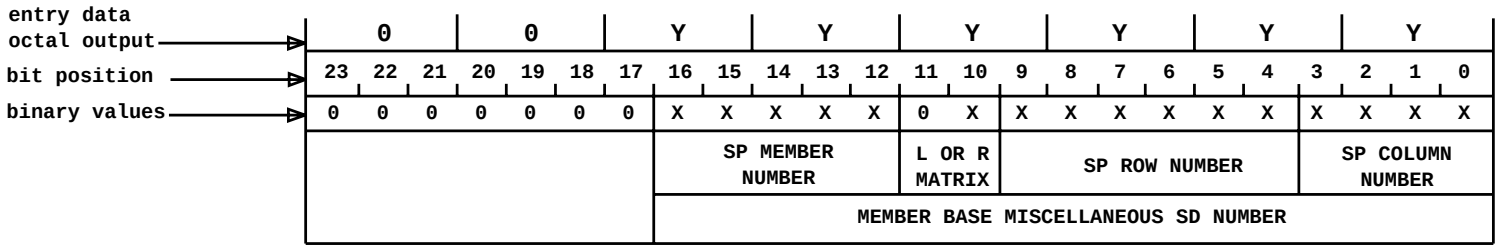
Y = Variable octal numbers

Z...Z = Converts to decimal EST member number info as reflected in appropriate office record drawing

TABLE B (Contd)

ENTRY WORD (OCTAL) | **UT ENTRY DATA AND WORD CONFIGURATION**

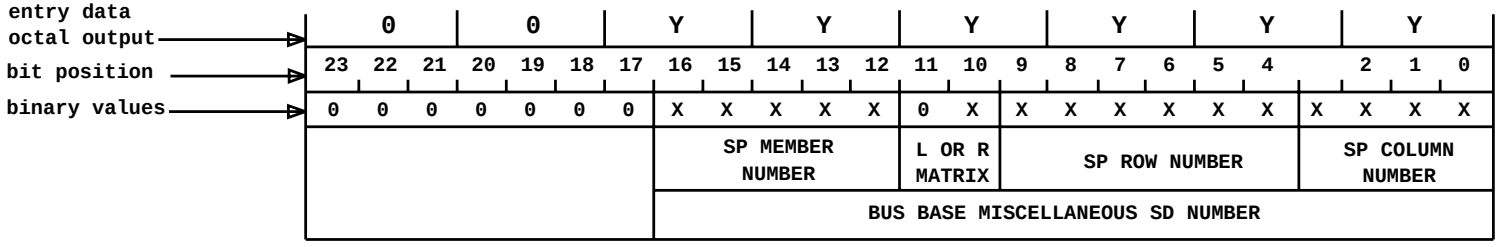
6



X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-462 or equivalent

Y = Variable octal numbers

7



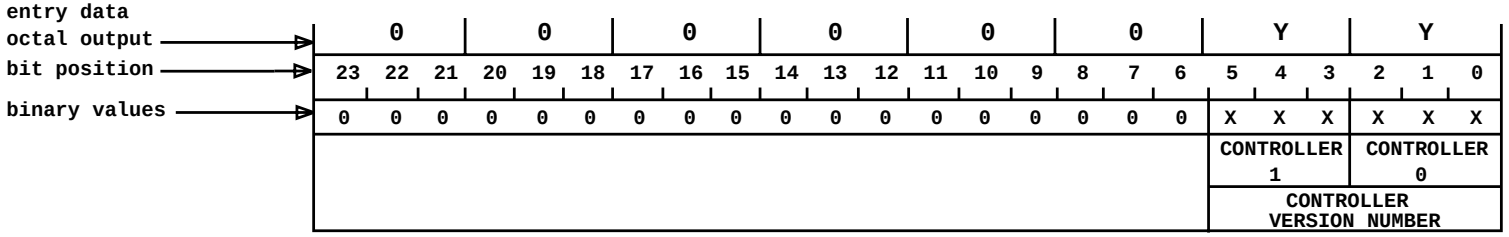
X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-462 or equivalent

Y = Variable octal numbers

TABLE B (Contd)

ENTRY WORD (OCTAL) | **UT ENTRY DATA AND WORD CONFIGURATION**

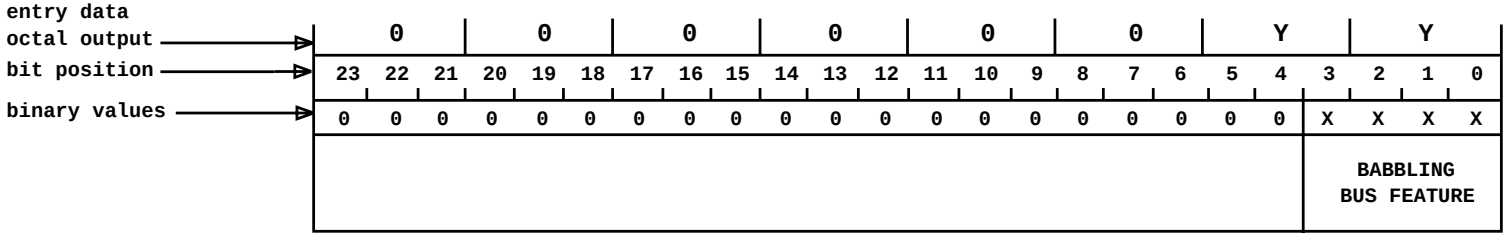
10



X...X = Version numbers of TSI-2 equipment as reflected in appropriate office record drawings and shipping info

Y = Variable octal numbers

11



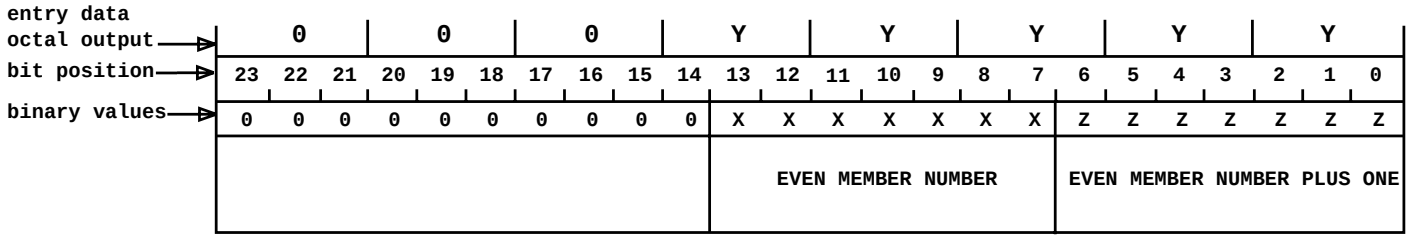
X = Babbling Bus Change
(bit 0-IPUB 0, CONTR 0)
(bit 1-IPUB 0, CONTR 1)
(bit 2-IPUB 1, CONTR 0)
(bit 3-IPUB 1, CONTR 1)
= 0 indicates babbling bus change is not present
1 indicates babbling bus change is present

Y = Variable octal numbers

TABLE B (Contd)

ENTRY WORD (OCTAL) | **UT ENTRY DATA AND WORD CONFIGURATION**

12

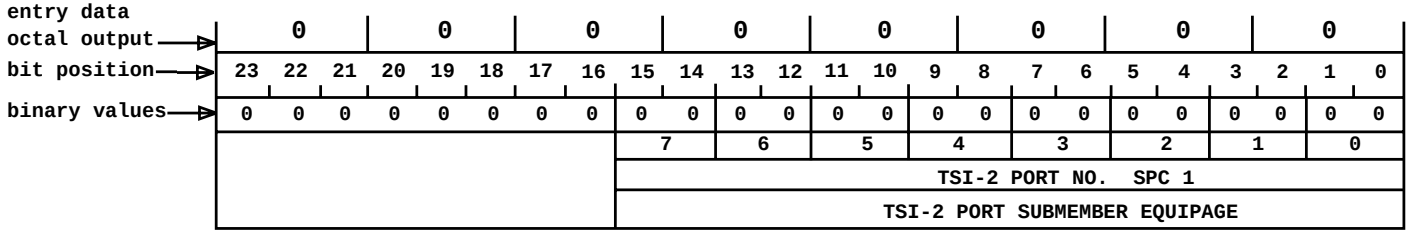


X...X = TSI-2 even member number

Y = Variable octal numbers

Z...Z = Member number of odd member within frame

13

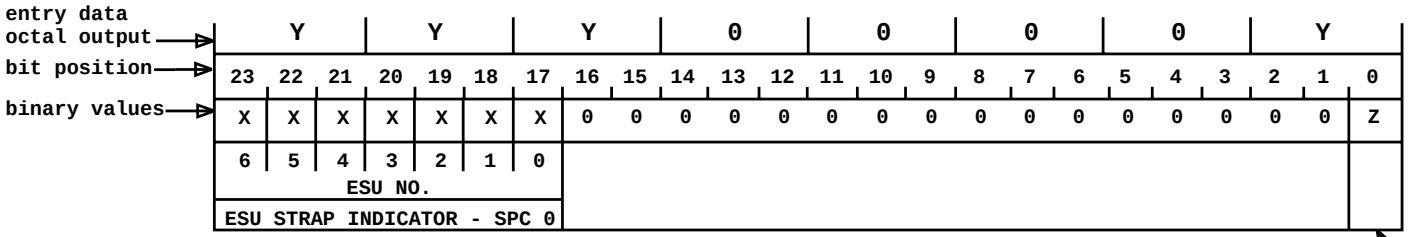


VERIFY TSI-2 UT TRANSLATOR FOR EVEN MEMBER NUMBER

TABLE B (Contd)

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION

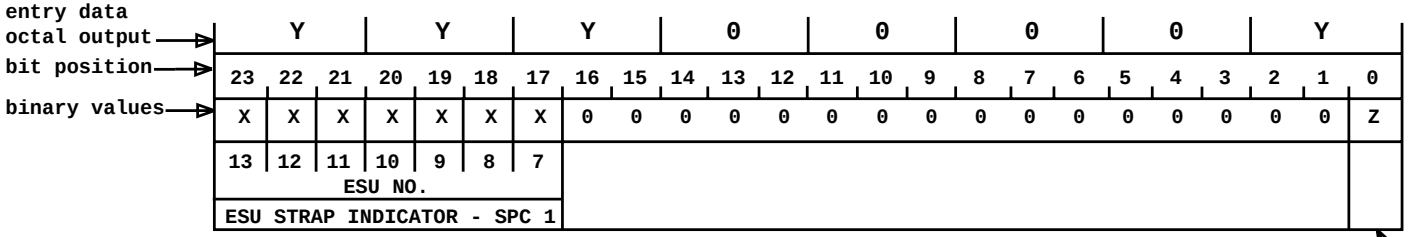
14



X...X = All zeros if no EST associated with growth TSI-2 or
= All ones if growth TSI-2 will interface with EST

Y = Variable octal numbers
Z = 0 Not equipped for Wideband
= 1 Is equipped for Wideband

15



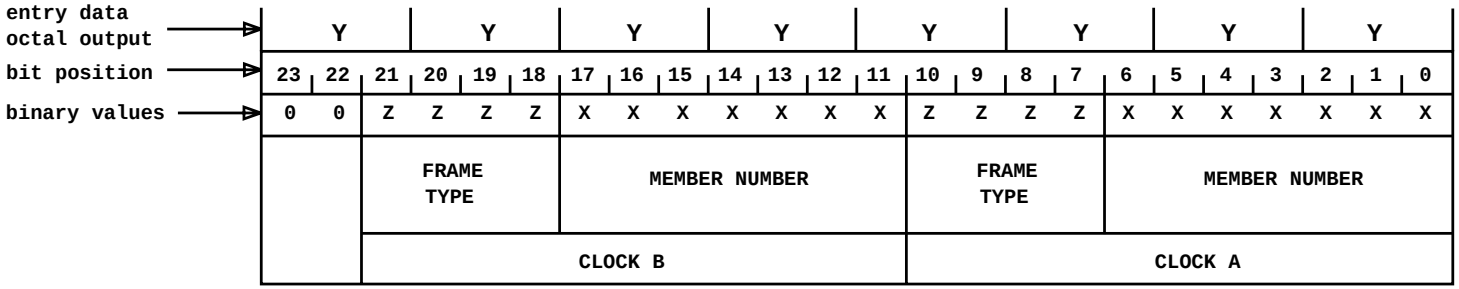
X...X = All zeros if no EST associated with growth TSI-2 or
= All ones if growth TSI-2 will interface with EST

Y = Variable octal numbers
Z = 0 Not equipped for Wideband
= 1 Is equipped for Wideband

TABLE B (Contd)

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION

16

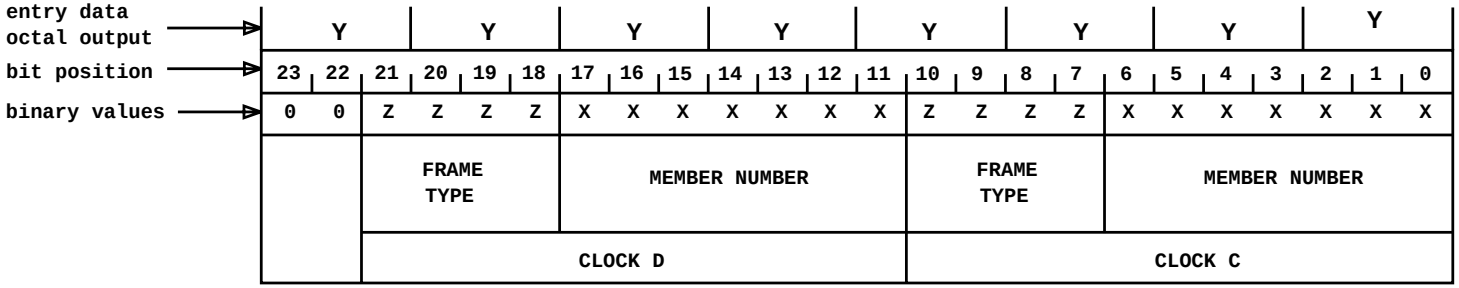


X...X = Converts to decimal TSI clock information as reflected in office record drawing T-nnnn-Hn-467 or equivalent

Y = Variable octal number

ZZZZ = 0011 for VIF
0001 for DT
0100 for DIF

17



X...X = Converts to decimal TSI clock information as reflected in office record drawing T-nnnn-Hn-467 or equivalent

Y = Variable octal number

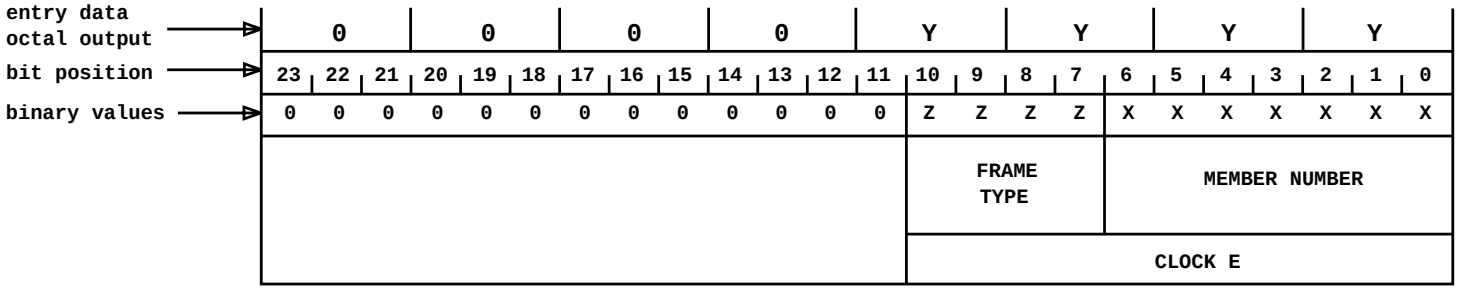
ZZZZ = 0011 for VIF
0001 for DT

VERIFY TSI-2 UT TRANSLATOR FOR EVEN MEMBER NUMBER

TABLE B (Contd)

ENTRY WORD (OCTAL) 20

UT ENTRY DATA AND WORD CONFIGURATION

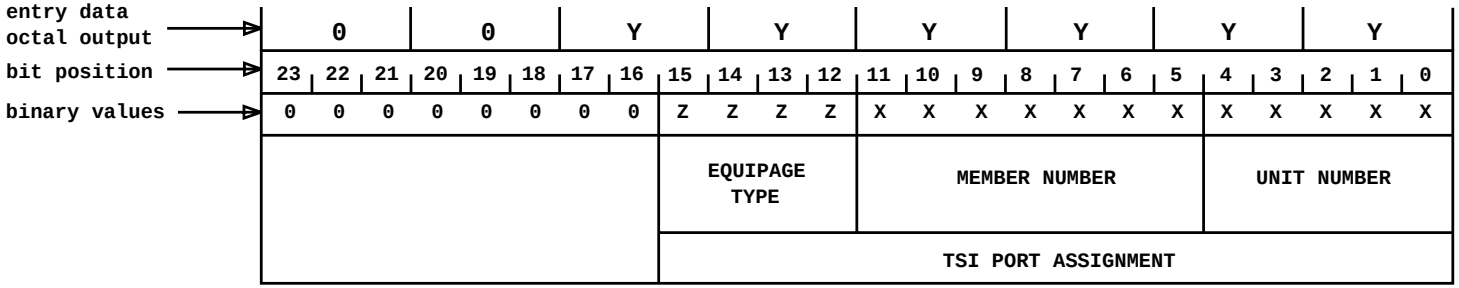


X...X = Converts to decimal TSI clock information as reflected in office record drawing T-nnnn-Hn-467 or equivalent

Y = Variable octal number

ZZZZ = 0011 for VIF
0001 for DT

ENTRY WORD (OCTAL) 21 through 27 and 31 through 37



X...X = Converts to decimal TSI clock information as reflected in office record drawing T-nnnn-Hn-467 or equivalent

Y = Variable octal number

ZZZZ = 0011 for VIF
0001 for DT
0100 for DIF
0110 for MAS

VERIFY TSI-2 UT TRANSLATOR FOR EVEN MEMBER NUMBER

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 member equipage. Using the assigned order number, activate the recent change, then verify current translations.

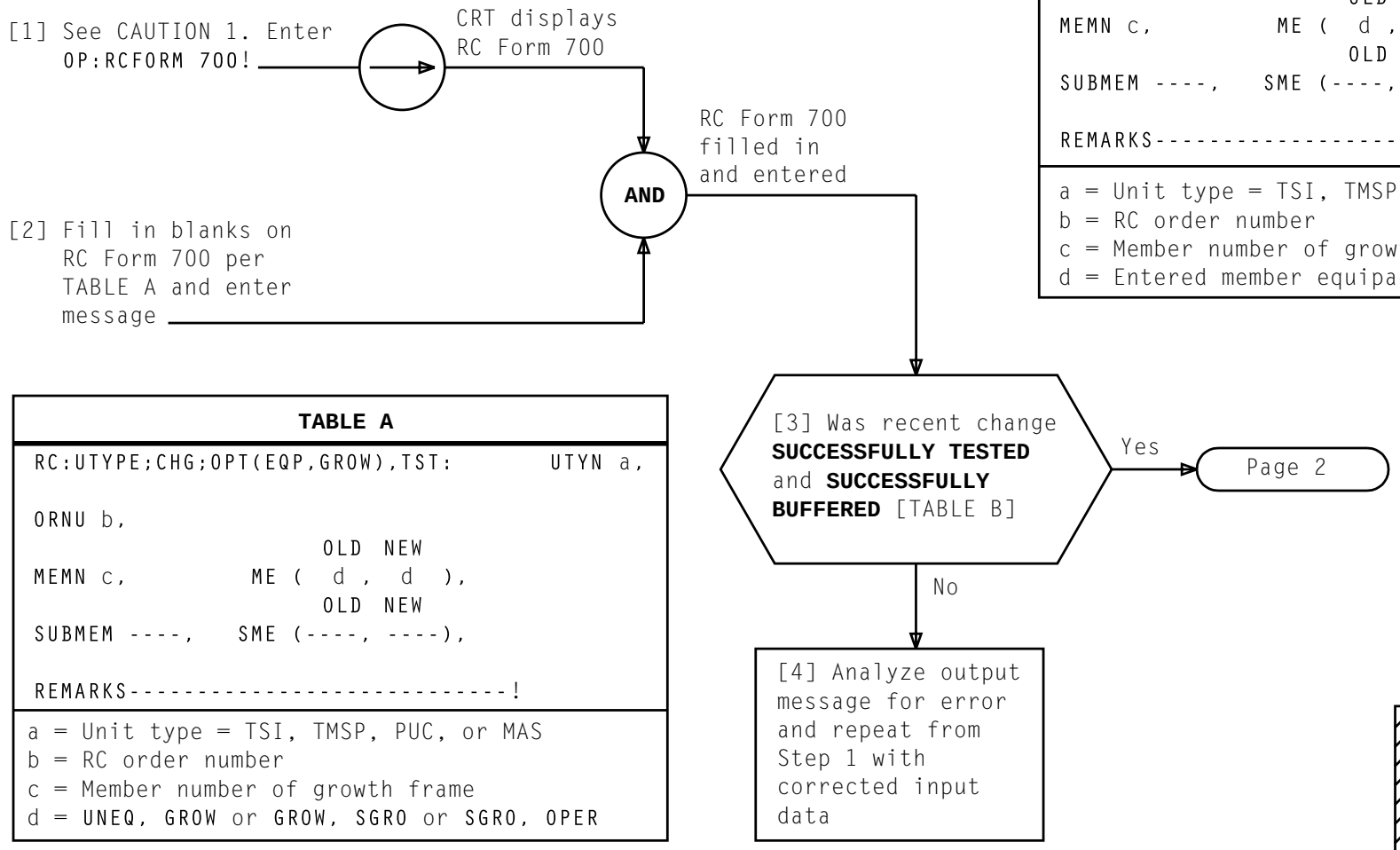


TABLE A

```
RC:UTYPE;CHG;OPT(EQP,GROW),TST:        UTYN a,

ORNU b,
                        OLD  NEW
MEMN c,           ME (   d ,   d   ),
                        OLD  NEW
SUBMEM ----,    SME (----, ----),

REMARKS----------------------------!
```

a = Unit type = TSI, TMSP, PUC, or MAS
b = RC order number
c = Member number of growth frame
d = UNEQ, GROW or GROW, SGRO or SGRO, OPER

TABLE B

```
RC ORNU b, SUCCESSFULLY TESTED

RC ORNU b, SUCCESSFULLY BUFFERED

RC:UTYPE;CHG;OPT(EQP,GROW),BUF:       UTYN a,

ORNU b,
                        OLD  NEW
MEMN c,           ME (   d ,   d   ),
                        OLD  NEW
SUBMEM ----,    SME (----, ----),

REMARKS----------------------------!
```

a = Unit type = TSI, TMSP, PUC, or MAS
b = RC order number
c = Member number of growth frame
d = Entered member equipage

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

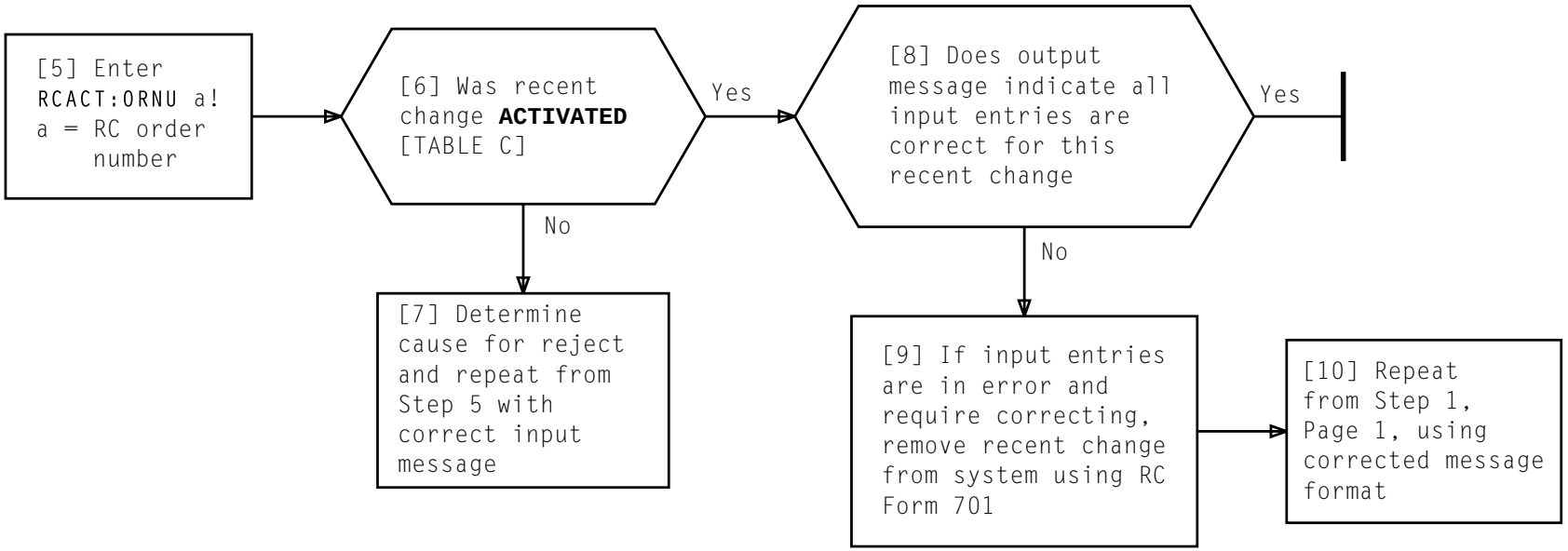


TABLE C

```
RC ORNU b ACTIVATED

RC:UTYPE;CHG;OPT(EQP,GROW),BUF:      UTYN a,

ORNU b,
                        OLD  NEW
MEMN c,           ME (   d ,   d   ),
                        OLD  NEW
SUBMEM ----,    SME (----, ----),

REMARKS----------------------------!
```

a = Unit type = TSI, TMSP, PUC, or MAS
b = RC order number
c = Member number of growth frame
d = Entered member equipage

RECENT CHANGE AND VERIFY MEMBER EQUIPAGE

SUMMARY

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

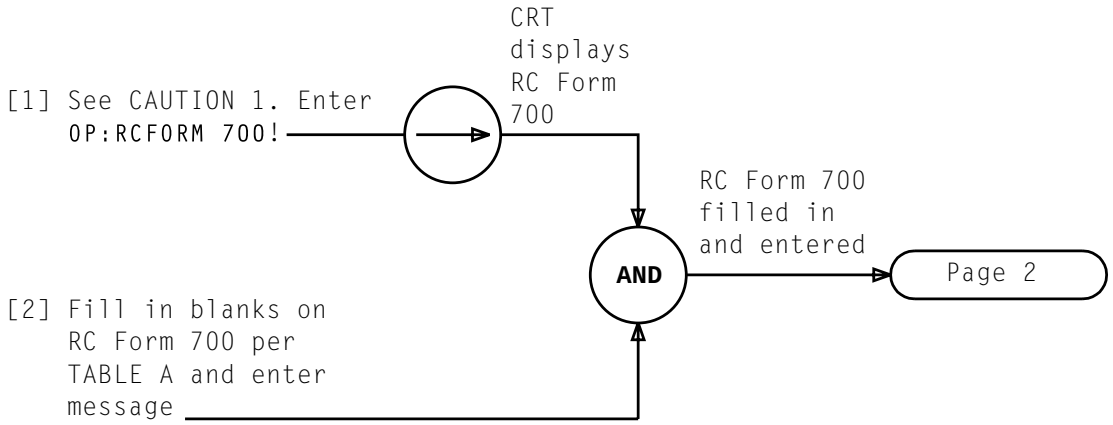


TABLE A

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

a = Unit type = TMSP, TSI, PUC, or MAS
b = RC order number
c = Member number of growth associated frame
d = Submember name:
= C0GRWTH (for TMS Controller 0)
= C1GRWTH (for TMS Controller 1)
= C0MBLK(0 to 3) (for Cont 0, Mem Blk 0-3)
= C1MBLK(0 to 3) (for Cont 1, Mem Blk 0-3)
= T0PRTEQ(0 to 6) (for SPC 0 Ports 0-6)
= T1PRTEQ(0 to 6) (for SPC 1 Ports 0-6)
= PUCUEQ(0 to 3) (for PUC Units 0-3)
= MAUEQ(0 or 1) (for MAS Units 0 or 1)
e = UNEQ, GROW or
= GROW, SGRO or
= SGRO, OPER

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

RECENT CHANGE AND VERIFY SUBMEMBER EQUIPAGE

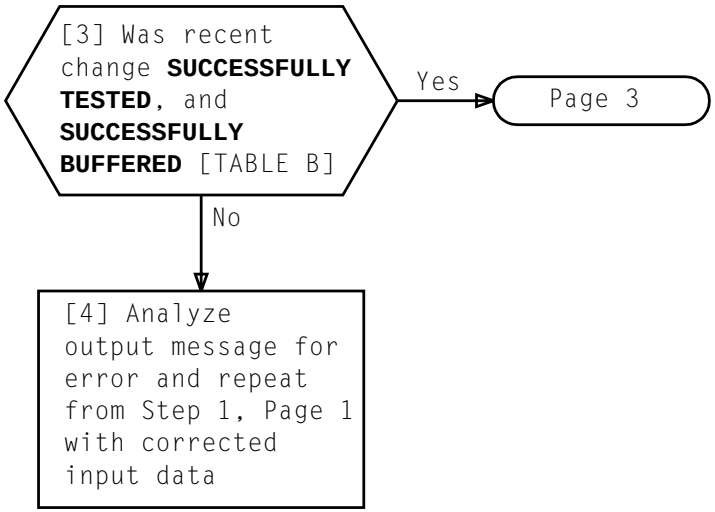


TABLE B

```
RC ORNU b SUCCESSFULLY TESTED

RC ORNU b SUCCESSFULLY BUFFERED

RC:UTYPE;CHG;OPT(EQP,GROW),BUF:   UTYN a,

ORNU b,
                          OLD  NEW
MEMN c,          ME    (----, ----),
                          OLD  NEW
SUBMEM d,        SME   (  e ,  e  ),

REMARKS----------------------------!
```

a = Unit type = TMSP, TSI, PUC, or MAS
b = RC order number
c = Member number of growth associated frame
d = Submember name:
= C0GRWTH (for TMS Controller 0)
= C1GRWTH (for TMS Controller 1)
= C0MBLK(0 to 3) (for Cont 0, Mem Blk 0-3)
= C1MBLK(0 to 3) (for Cont 1, Mem Blk 0-3)
= T0PRTEQ(0 to 6) (for SPC 0 Ports 0-6)
= T1PRTEQ(0 to 6) (for SPC 1 Ports 0-6)
= PUCUEQ(0 to 3) (for PUC Units 0-3)
= MAUEQ(0 or 1) (for MAS Units 0 or 1)
e = Entered submember equipage

RECENT CHANGE AND VERIFY SUBMEMBER EQUIPAGE

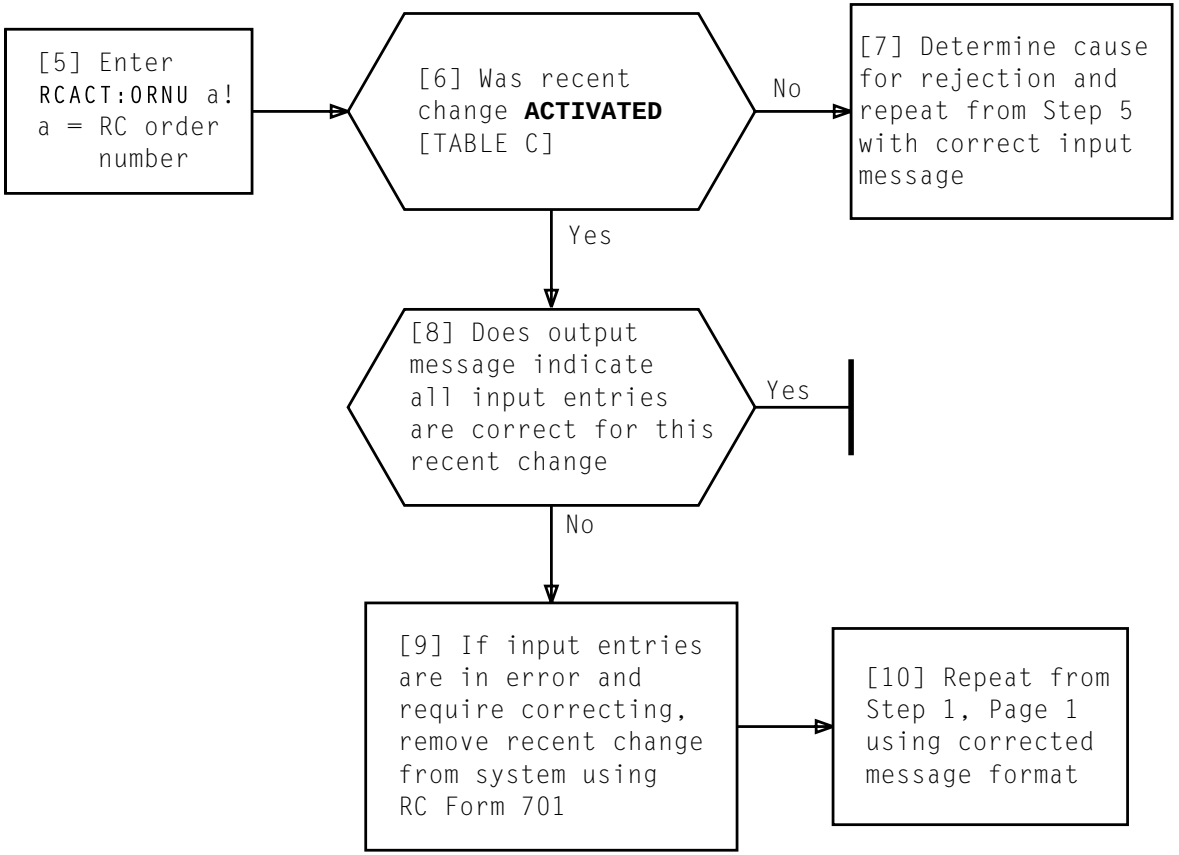


TABLE C

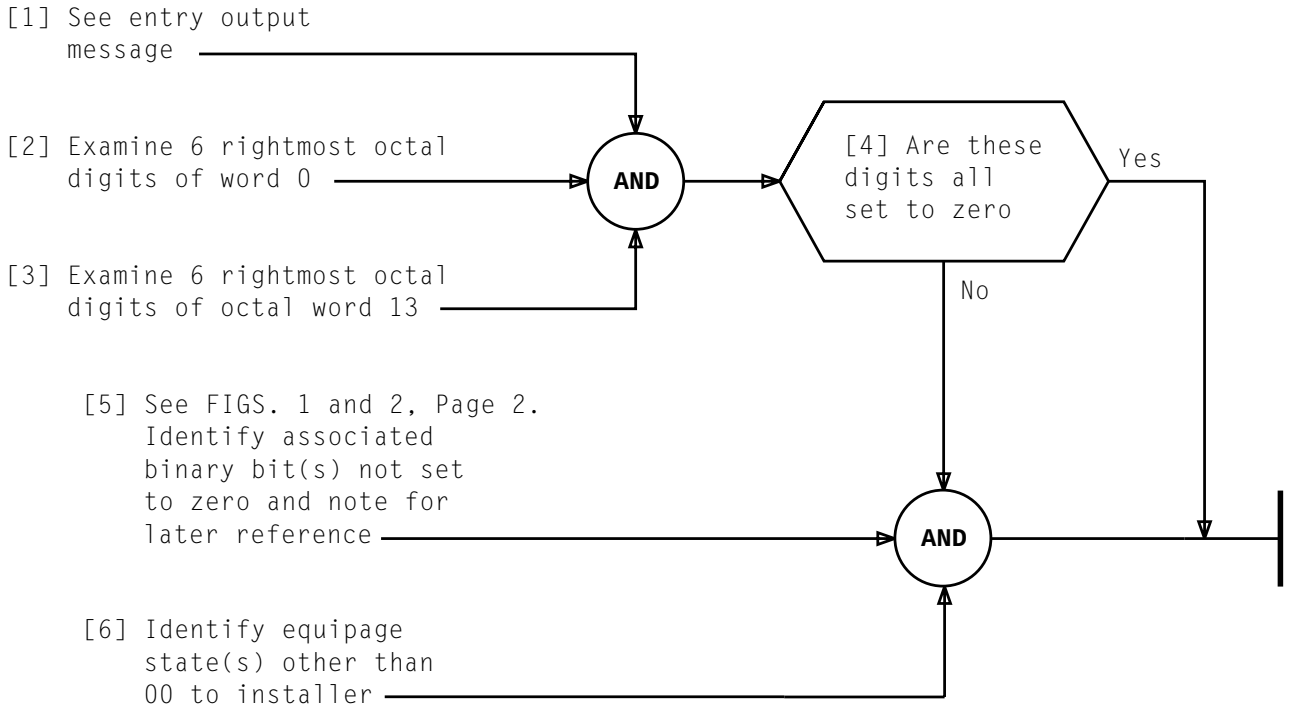
```
RC ORNU b ACTIVATED

RC:UTYPE;CHG;OPT(EQP,GROW),BUF:   UTYN a,

ORNU b,
                              OLD  NEW
MEMN c,          ME    (----, ----),
                              OLD  NEW
SUBMEM d,        SME   (  e ,  e  ),

REMARKS----------------------------!
```

a = Unit type = TMSP, TSI, PUC, or MAS
b = RC order number
c = Member number of growth associated frame
d = Submember name:
= C0GRWTH (for TMS Controller 0)
= C1GRWTH (for TMS Controller 1)
= C0MBLK(0 to 3) (for Cont 0, Mem Blk 0-3)
= C1MBLK(0 to 3) (for Cont 1, Mem Blk 0-3)
= T0PRTEQ(0 to 6) (for SPC 0 Ports 0-6)
= T1PRTEQ(0 to 6) (for SPC 1 Ports 0-6)
= PUCUEQ(0 to 3) (for PUC Units 0-3)
= MAUEQ(0 or 1) (for MAS Units 0 or 1)
e = Entered submember equippage

RECENT CHANGE AND VERIFY SUBMEMBER EQUIPAGE

SUMMARY

Verify from entry output message, words 0 and 13, that TSI-2 member and submember equipage bits are set to zero. Note any discrepancies for later reference.



VERIFY UNEQUIPPED STATUS OF GROWTH TSI-2 MEMBER AND SUBMEMBERS

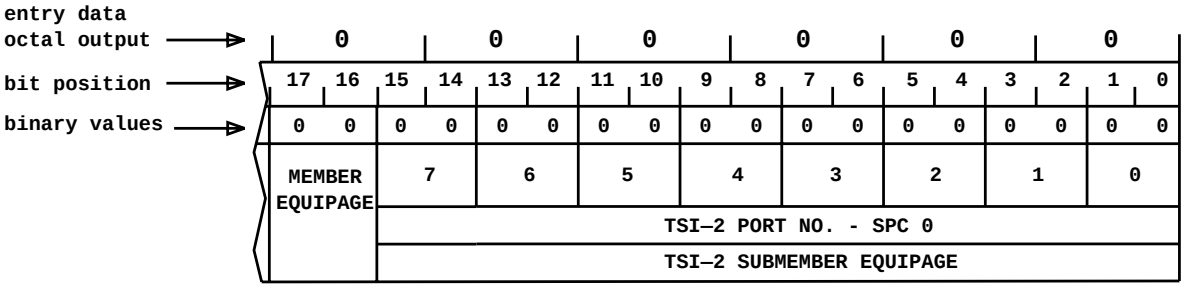


FIG. 1 – Partial Entry Word 0 Layout

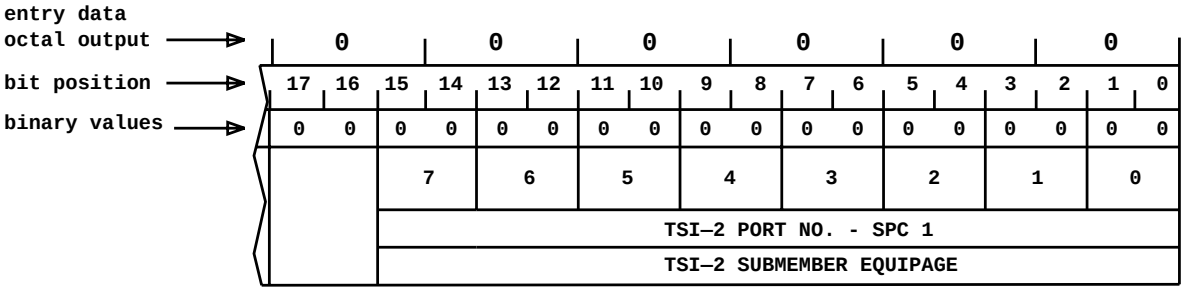


FIG. 2 – Partial Entry Word 13 Layout

SUMMARY

Convert octal digits representing VIU/DTU/DIU/MAU information of entry output word to decimal. Compare entry output data against office records. If entry data and office records do not agree, record discrepancies for later use. Repeat procedure for each TSI port.

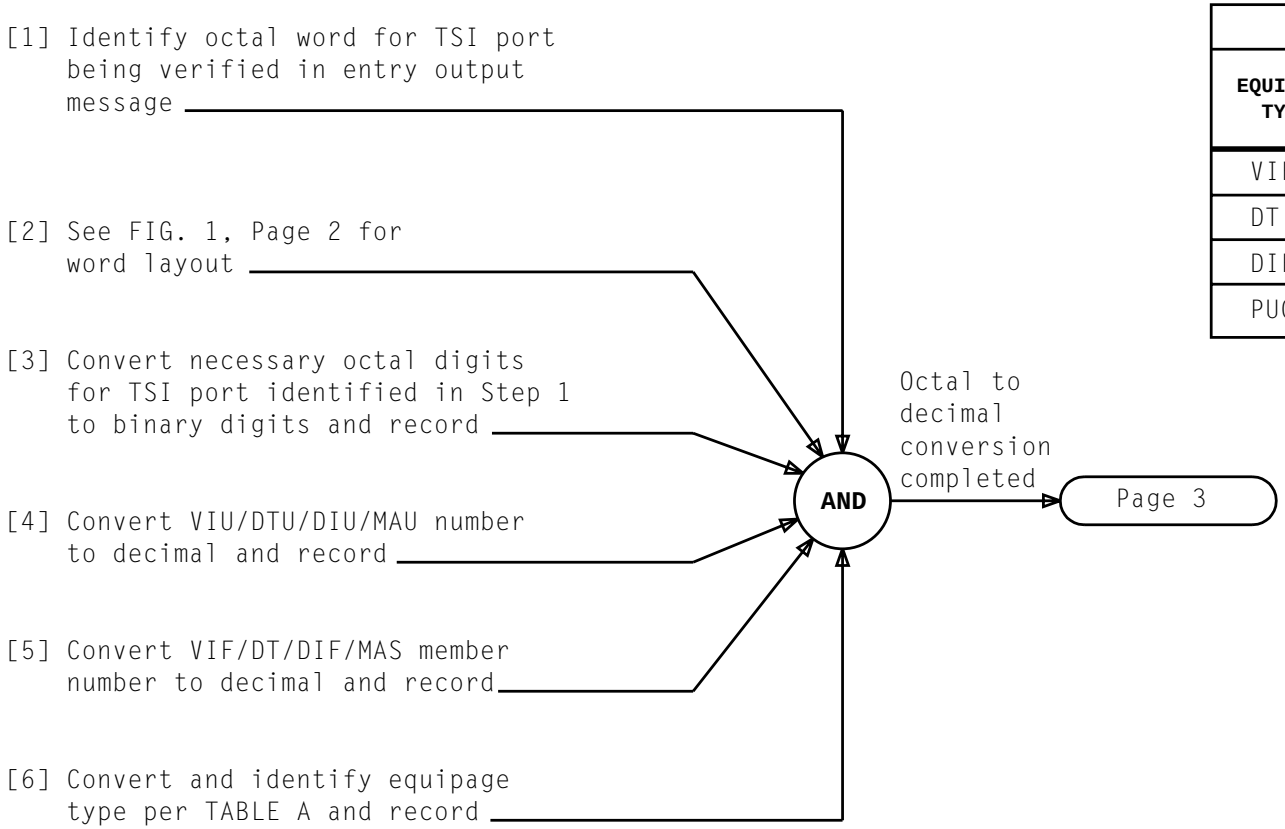


TABLE A

EQUIPAGE TYPE	BIT – VALUE			
	15	14	13	12
VIF	0	0	1	1
DT	0	0	0	1
DIF	0	1	0	0
PUC	0	1	0	1

VERIFY TSI PORT TO VIU/DTU/DIU/MAU ASSIGNMENTS

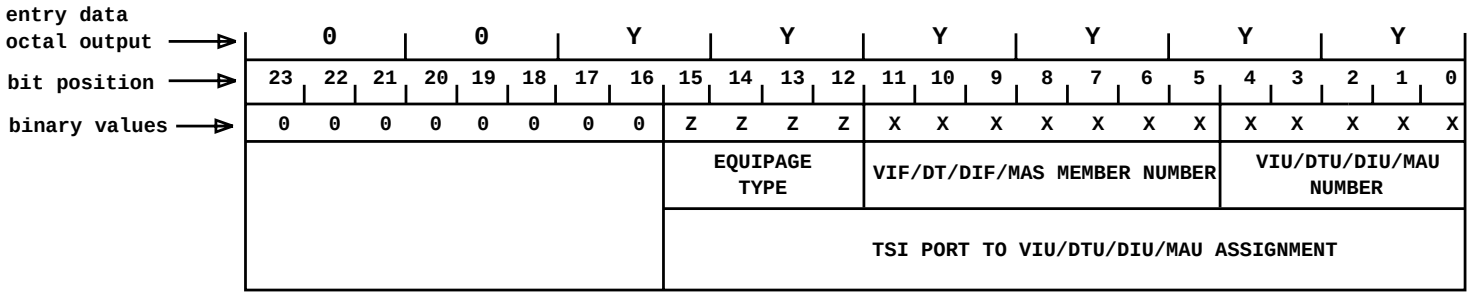
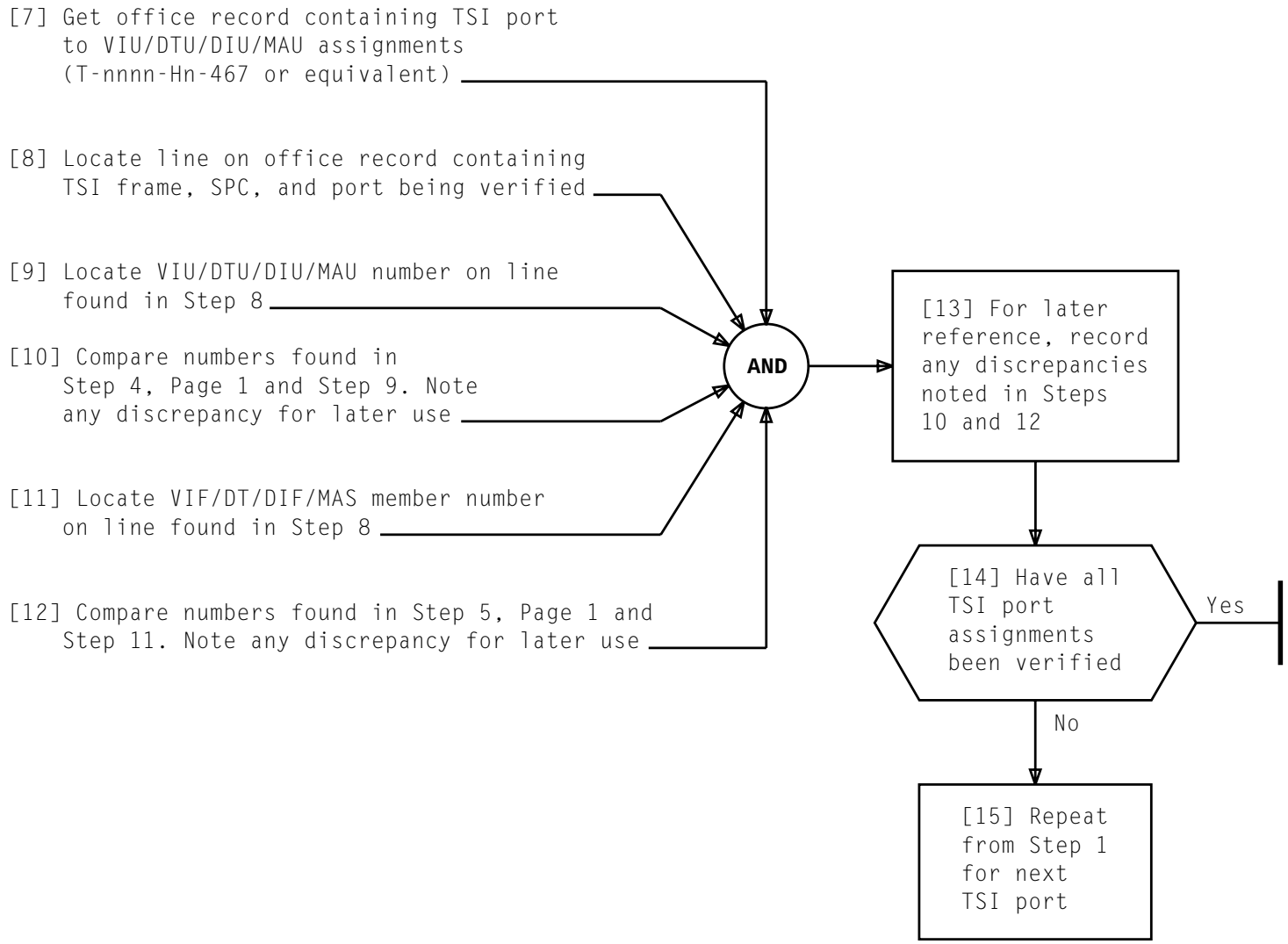
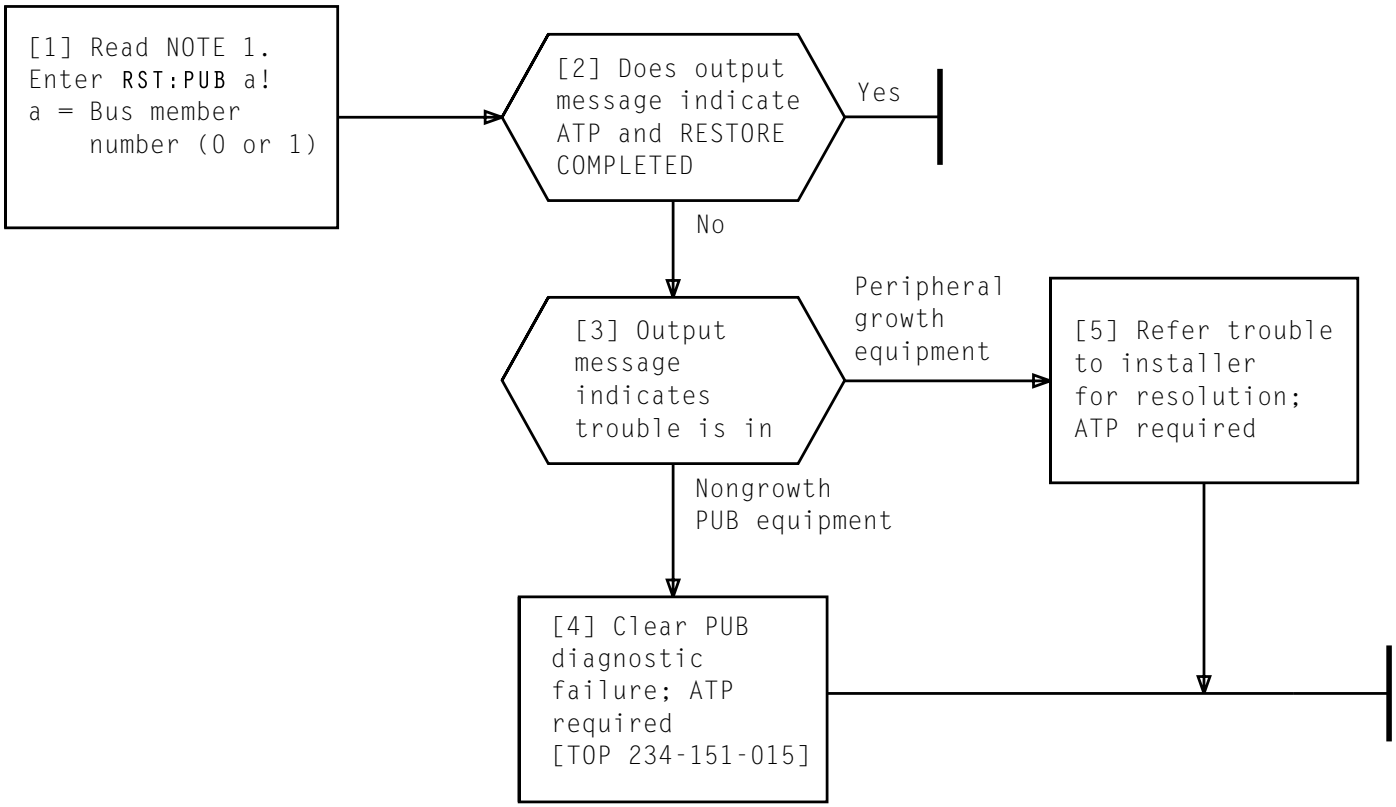


FIG. 1 — Office Generic Word Layout for TSI Port Assignment

VERIFY TSI PORT TO VIU/DTU/DIU/MAU ASSIGNMENTS



VERIFY TSI PORT TO VIU/DTU/DIU/MAU ASSIGNMENTS



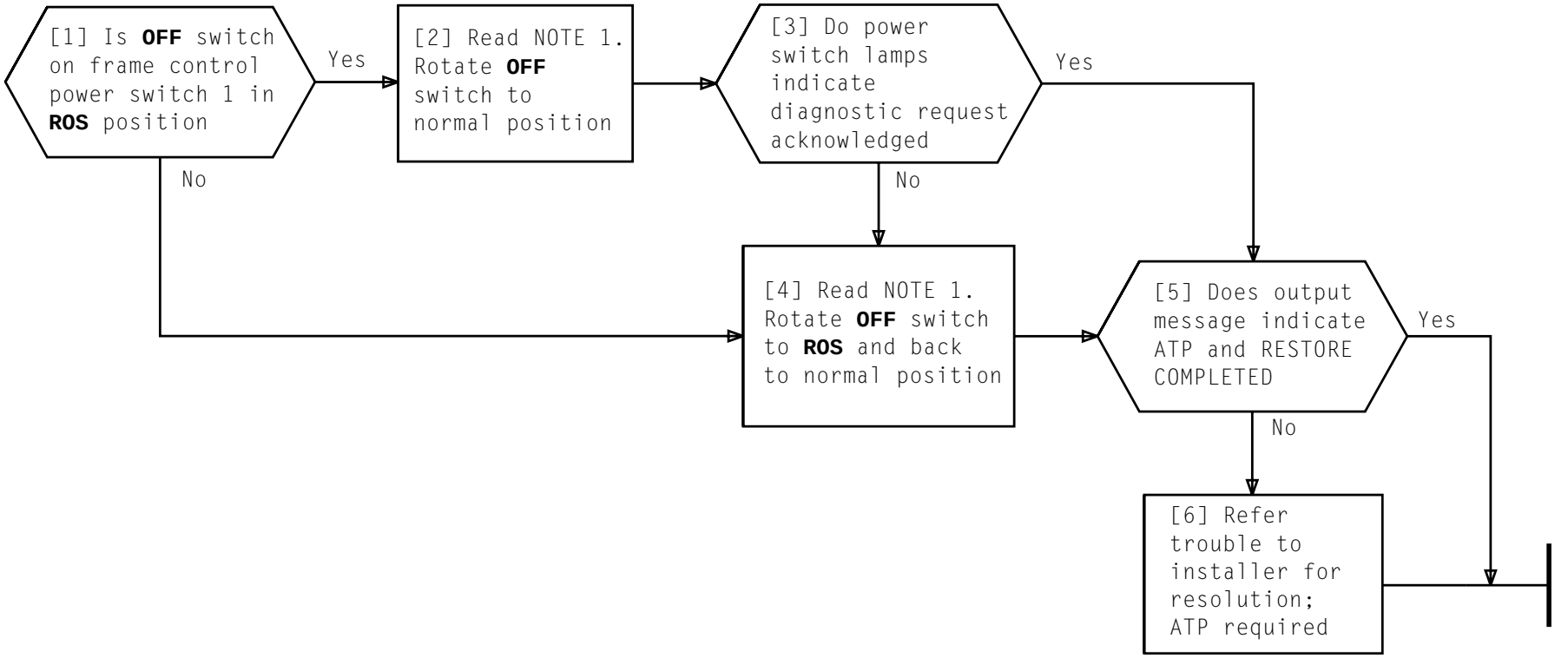
RESTORE PERIPHERAL UNIT BUS TO SERVICE

NOTE 1
Restore message will cause PUB diagnostic to be run. PUB will be restored if ATP

RESTORE AND INITIALIZE CONTROLLER 1

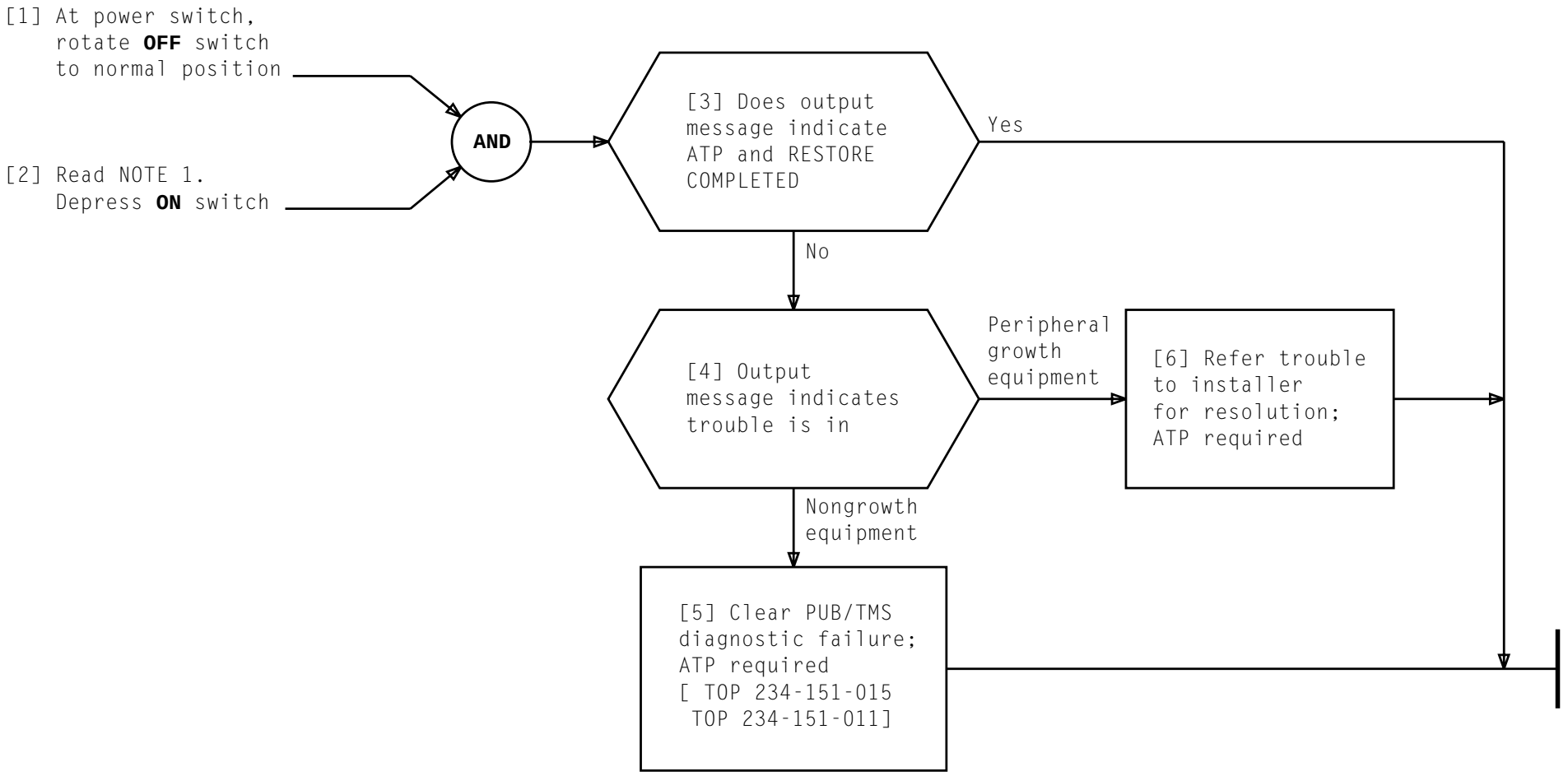
SUMMARY

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



NOTE 1
Operation of **ON** switch will cause diagnostic to be run

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RESTORE FRAME POWER WITH POWER SWITCH

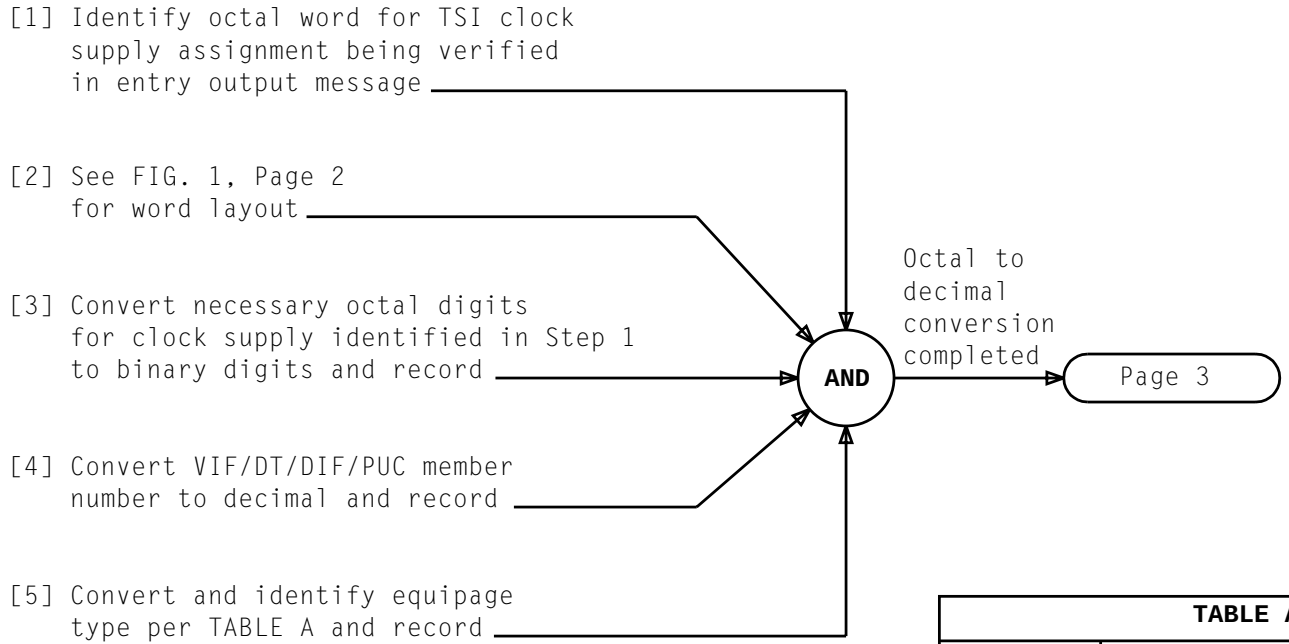


TABLE A

EQUIPAGE TYPE	BIT – VALUE							
	21	20	19	18	10	9	8	7
VIF	0	0	1	1	0	0	1	1
DT	0	0	0	1	0	0	0	1
DIF	0	1	0	0	0	1	0	0
PUC	0	1	0	1	0	1	0	1

VERIFY TSI CLOCK ASSIGNMENTS

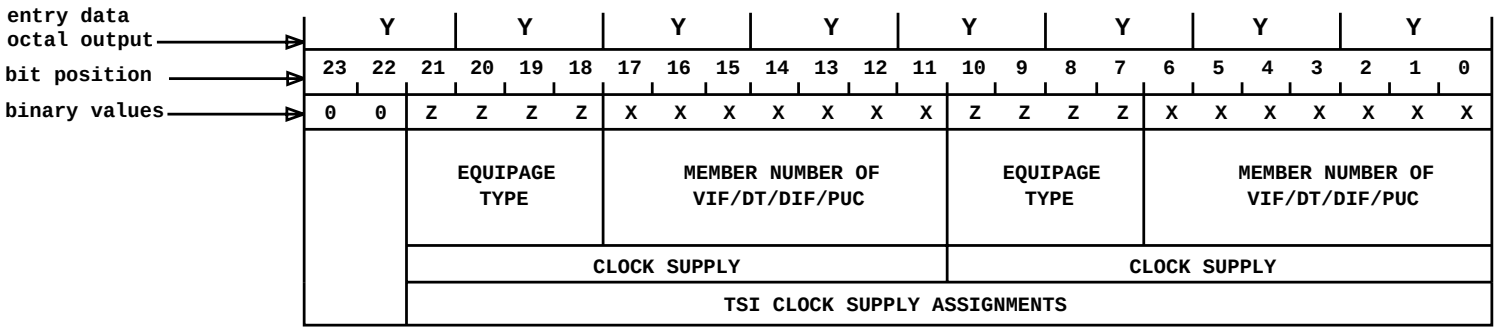


FIG. 1 – Typical Word Layout for Clock Supply

VERIFY TSI CLOCK ASSIGNMENTS

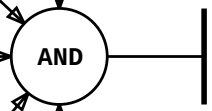
[6] Get office record containing TSI clock supply assignments (T-nnnn-Hn-467 or equivalent)

[7] Locate line on office record containing TSI frame, and clock supply being verified

[8] Locate VIF/DT/DIF/PUC member number on line found in Step 7

[9] Compare numbers found in Step 4, Page 1 and Step 8. Note any discrepancy for later use

[10] Repeat from Step 1, Page 1 for each remaining clock supply in TSI frame



VERIFY TSI CLOCK ASSIGNMENTS

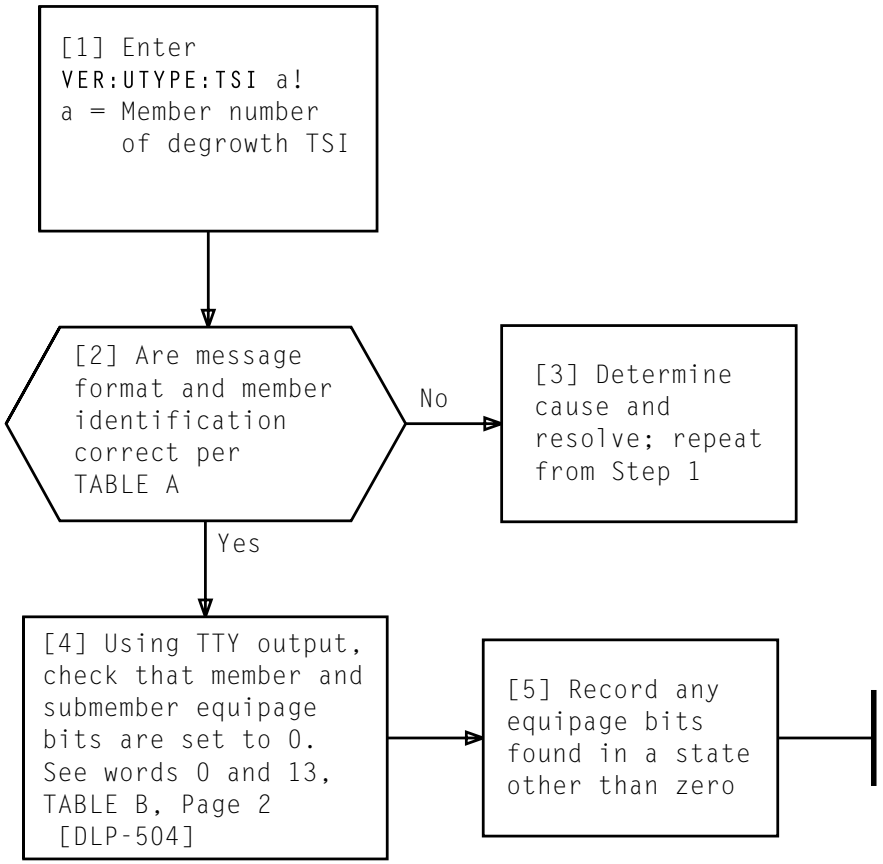


TABLE A

```
VER:UTMN;OPT(),CUR:     FLN a,              UTYN TSI,

MEMN b,            ME UNEQ,
ENTRY ADDRESS c,                ENTRY SIZE 33,

  CUR
  WORD 0  _______ _______ _______ _______
          _______ _______ _______ _______
  WORD 10 _______ _______ _______ _______
          _______ _______ _______ _______
  WORD 20 _______ _______ _______ _______
          _______ _______ _______ _______
  WORD 30 _______ _______ _______ _______
          _______ _______ _______ _______
  WORD 40 _______
```

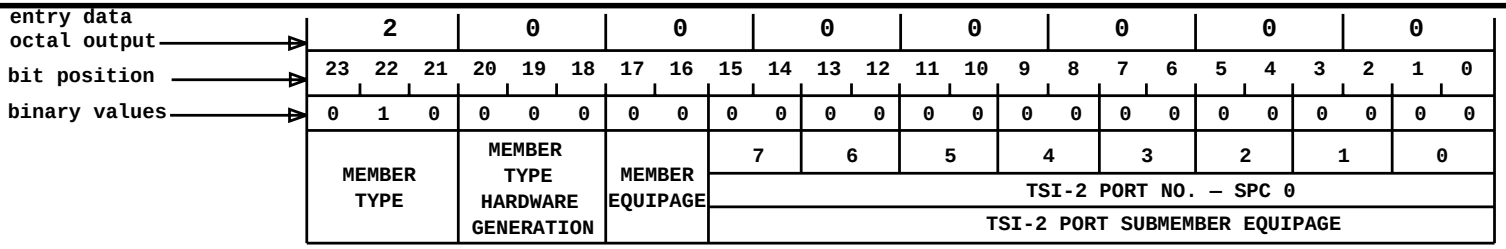
a = Floor location number
b = Member number of degrowth TSI
c = Starting octal address for unit type entry

VERIFY UNEQUIPPED PORTS OF DEGROWTH TSI-2

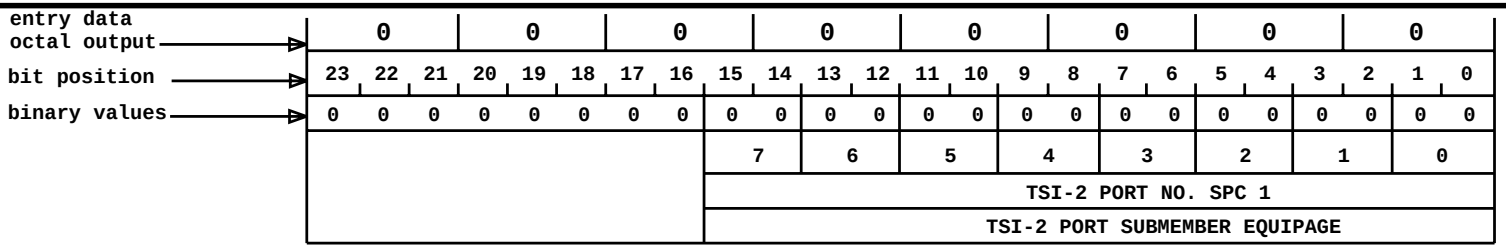
TABLE B

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION

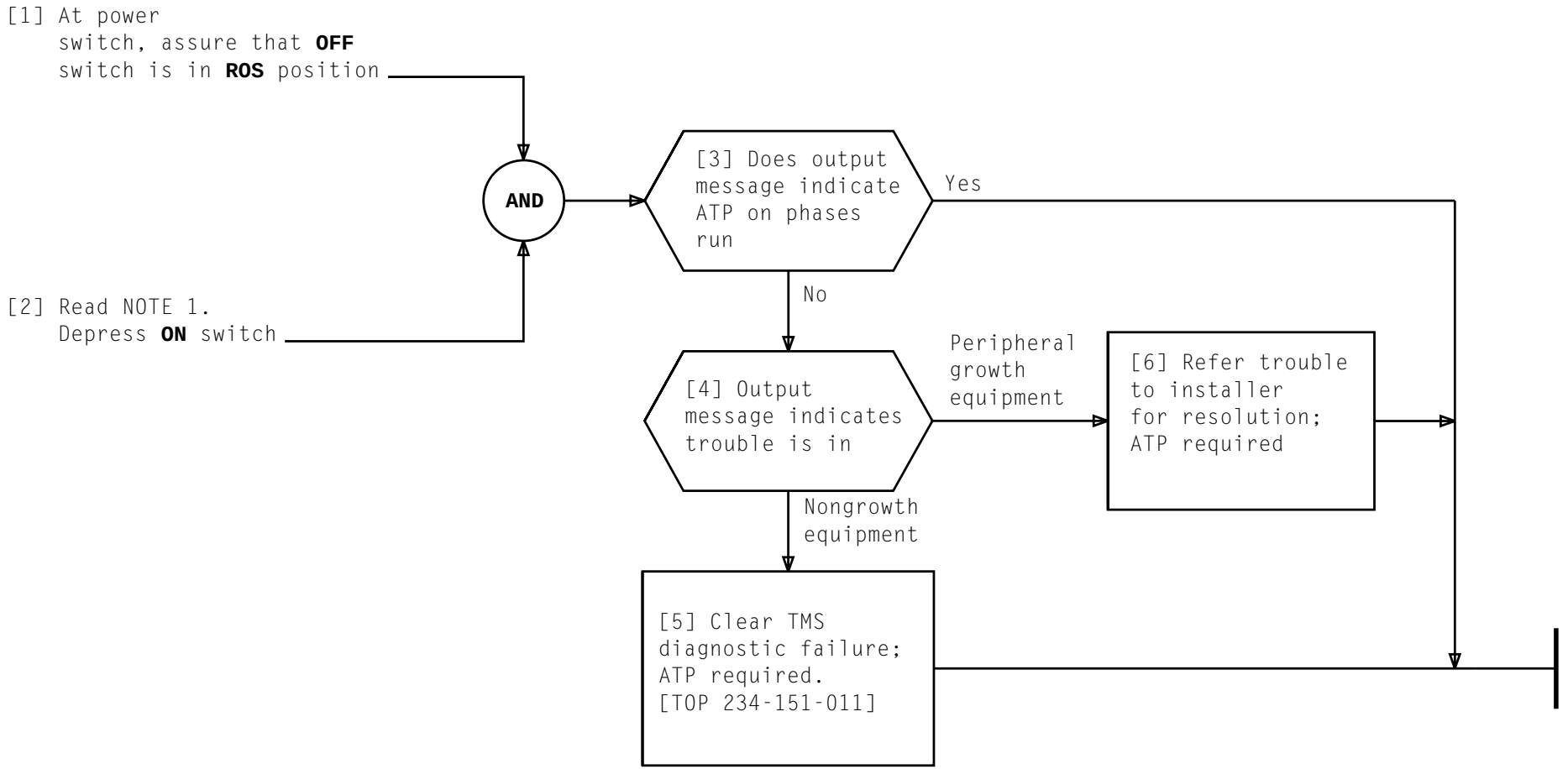
0



13



VERIFY UNEQUIPPED PORTS OF DEGROWTH TSI-2



NOTE 1
Operation of **ON** switch will cause diagnostic to be run

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RESTORE POWER WITH POWER SWITCH (LEAVING OFF SWITCH IN ROS)

SUMMARY

Using verify entry input message, call up growth TSI-2 UT translator for odd member number 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.

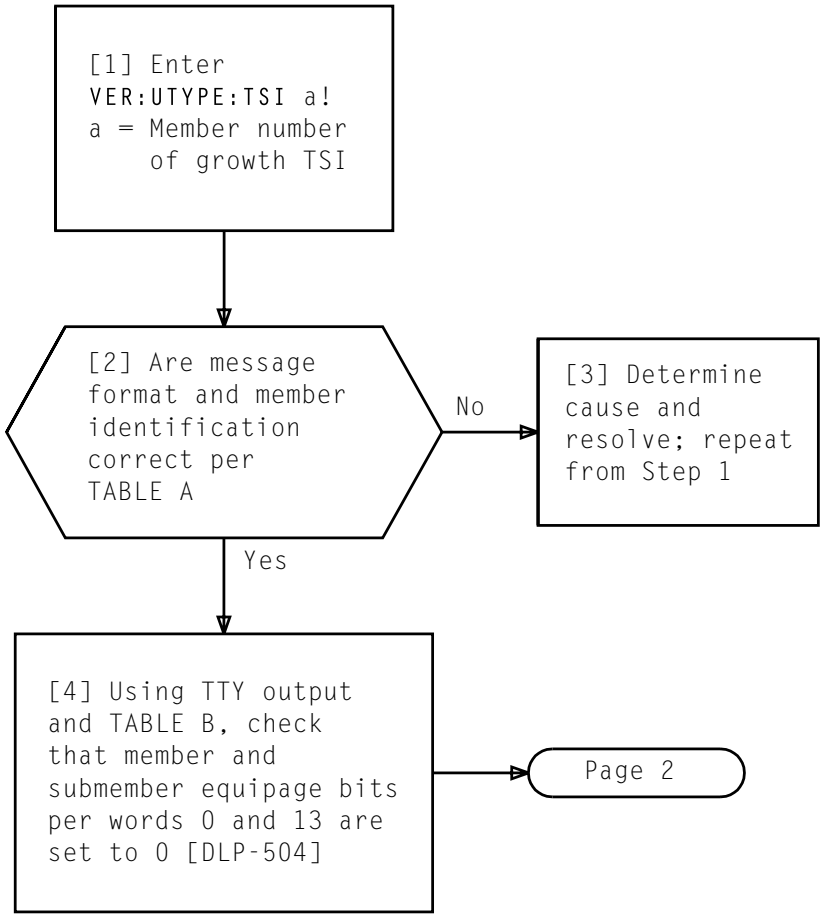


TABLE A

VER:UTMN;OPT(),CUR: FLN a, UTYN TSI,

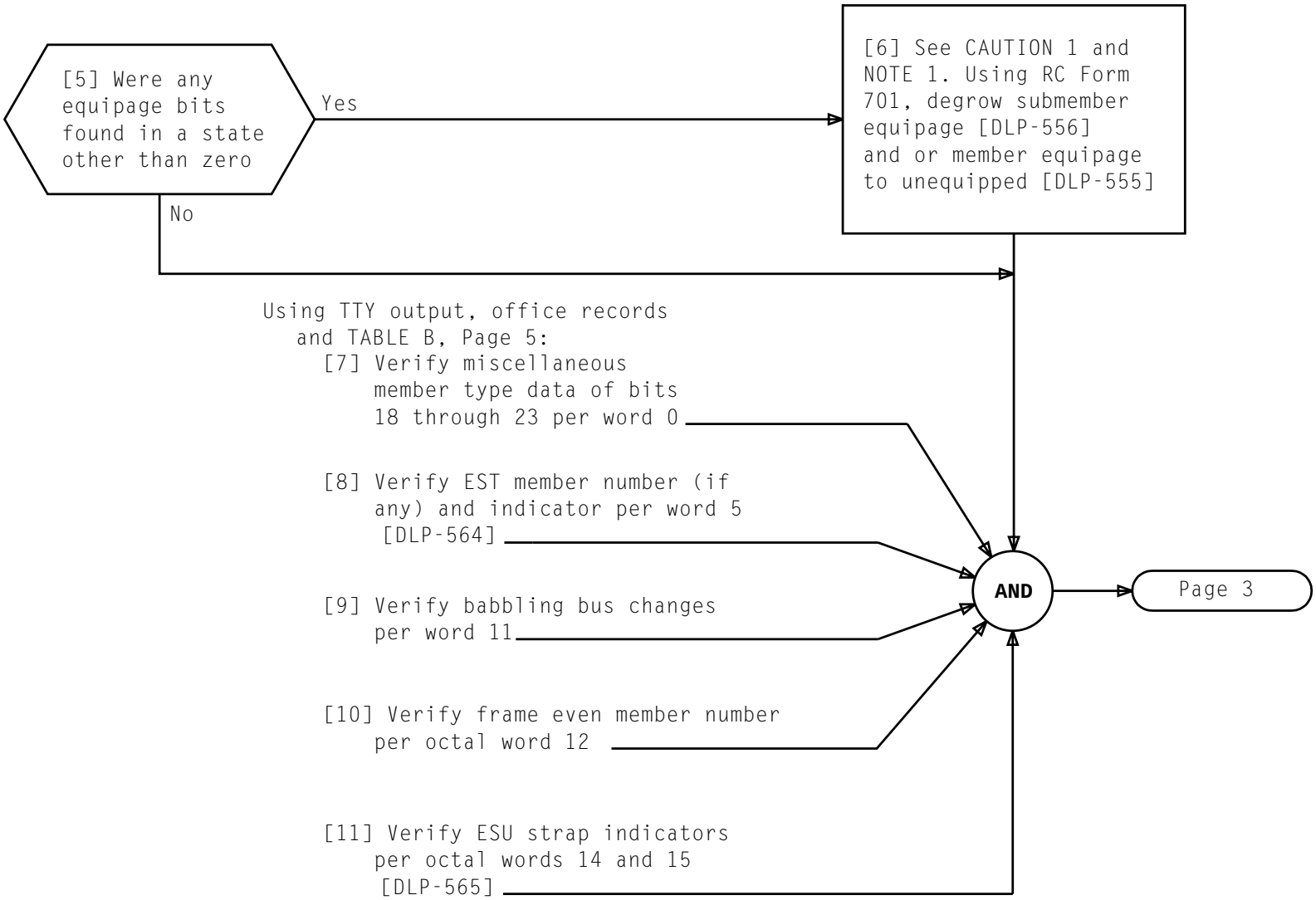
MEMN b, ME UNEQ,
ENTRY ADDRESS c, ENTRY SIZE 33,

CUR

WORD 0	_____	_____	_____	_____
	_____	_____	_____	_____
WORD 10	_____	_____	_____	_____
	_____	_____	_____	_____
WORD 20	_____	_____	_____	_____
	_____	_____	_____	_____
WORD 30	_____	_____	_____	_____
	_____	_____	_____	_____
WORD 40	_____			

a = Floor location number
b = Member number of growth TSI
c = Starting octal address for unit type entry

VERIFY TSI-2 UT TRANSLATOR FOR ODD MEMBER NUMBER



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

VERIFY TSI-2 UT TRANSLATOR FOR ODD MEMBER NUMBER

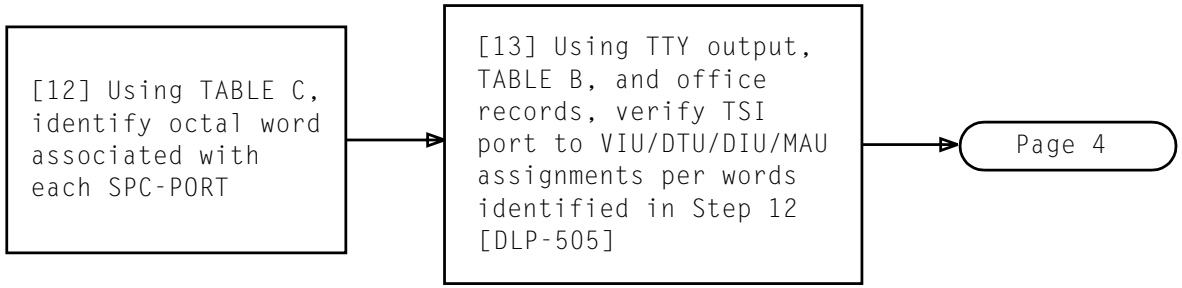
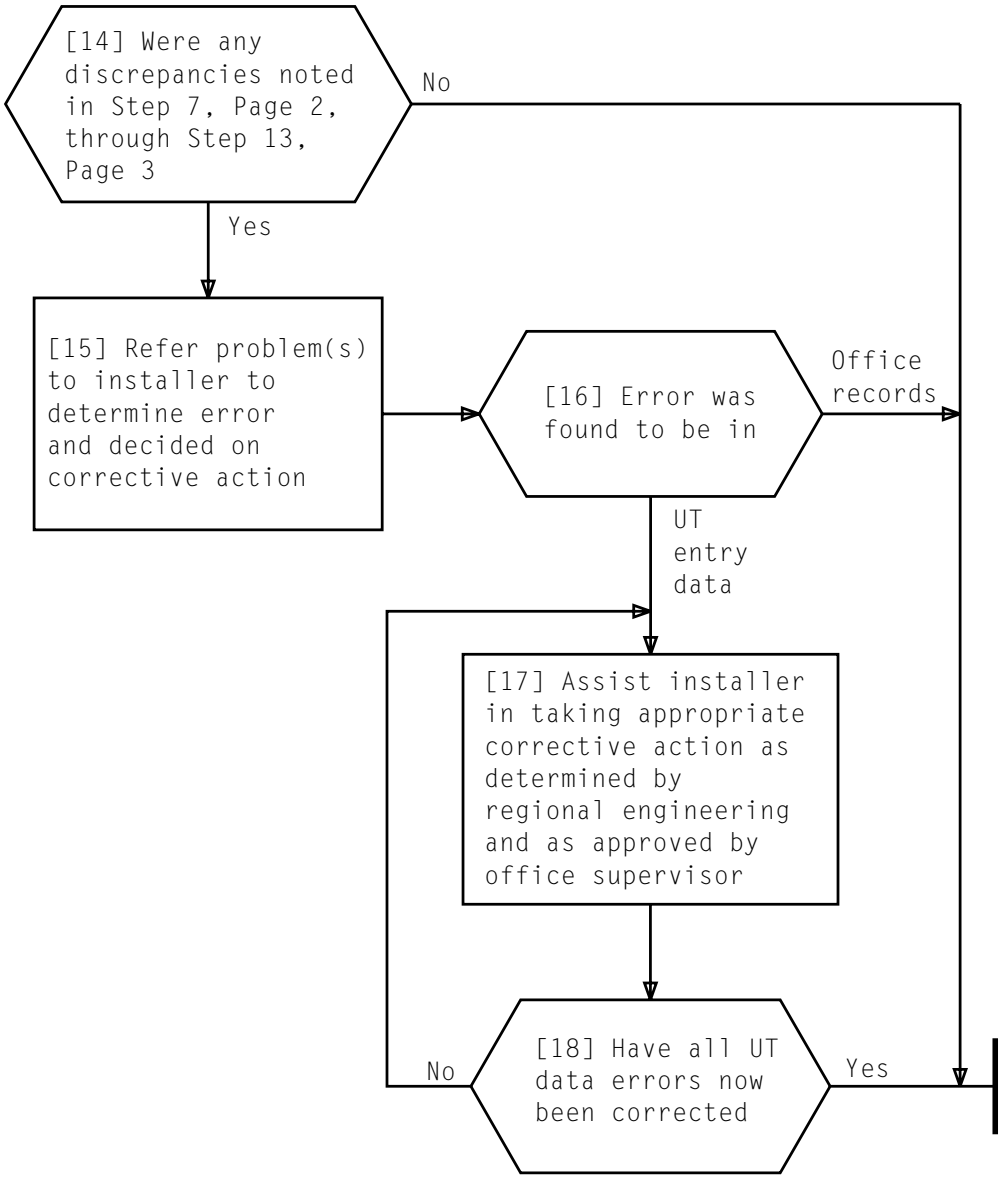


TABLE C

SPC AND TSI PORT	OCTAL WORD
SPC 0 – Port 0	21
– Port 1	22
– Port 2	23
– Port 3	24
– Port 4	25
– Port 5	26
– Port 6	27
SPC 1 – Port 0	31
– Port 1	32
– Port 2	33
– Port 3	34
– Port 4	35
– Port 5	36
– Port 6	37

VERIFY TSI-2 UT TRANSLATOR FOR ODD MEMBER NUMBER



VERIFY TSI-2 UT TRANSLATOR FOR ODD MEMBER NUMBER

TABLE B

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION

0

entry data octal output	3	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	0 1 1	0 0 0	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	7	6	5	4	3	2	1	0
				TSI-2 PORT NO. — SPC 0							
				TSI-2 PORT SUBMEMBER EQUIPAGE							

5

entry data octal output	Y	Y	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	0 X X	X X X	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
	ESTI	EST MEMBER NUMBER						

X...X = Converts to decimal EST member number info as reflected in appropriate office record drawing

Y= Variable octal numbers

VERIFY TSI-2 UT TRANSLATOR FOR ODD MEMBER NUMBER

TABLE B (Contd)

ENTRY WORD (OCTAL) | **UT ENTRY DATA AND WORD CONFIGURATION**

11

entry data octal output	0	0	0	0	0	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 0	X X X X
								BABBLING BUS FEATURE

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)
= 0 indicates babbling bus change is not present
1 indicates babbling bus change is present

Y = Variable octal numbers

12

entry data octal output	0	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 0 0	X X	X X X	X X	X X X X	X X X	
			EVEN MEMBER NUMBER			EVEN MEMBER NUMBER		

X...X = Member number of even member within frame

Y...Y = Variable octal numbers

TABLE B (Contd)

ENTRY WORD (OCTAL) | **UT ENTRY DATA AND WORD CONFIGURATION**

13

entry data octal output → 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 → 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

7	6	5	4	3	2	1	0
TSI-2 PORT NO. SPC 1							
TSI-2 PORT SUBMEMBER EQUIPAGE							

14

entry data octal output → Y Y Y 0 0 0 0 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 → X X X X X X X 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 Z

6	5	4	3	2	1	0																	
ESU NO.																							
ESU STRAP INDICATOR — SPC 0																							

SPC 0 Wideband indicator

Y = Variable octal numbers

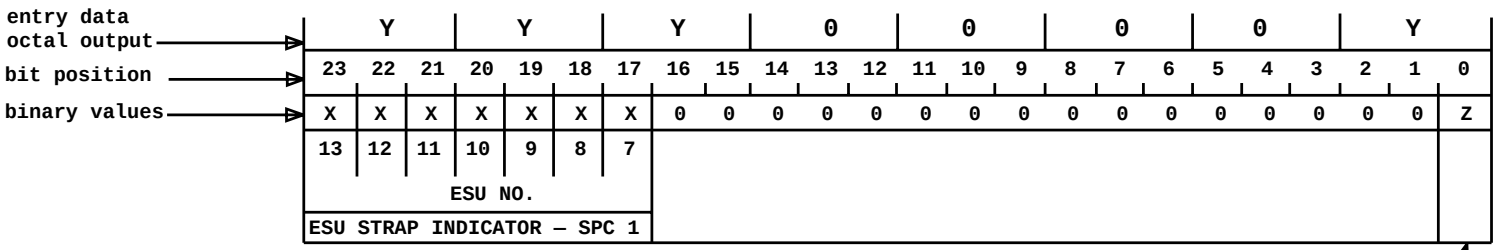
X...X = All zeros if no EST associated with growth TSI-2 or
= All ones if growth TSI-2 will interface with EST

Z = 0 Not equipped for wideband
= 1 Is equipped for wideband

TABLE B (Contd)

ENTRY WORD (OCTAL): 15

UT ENTRY DATA AND WORD CONFIGURATION

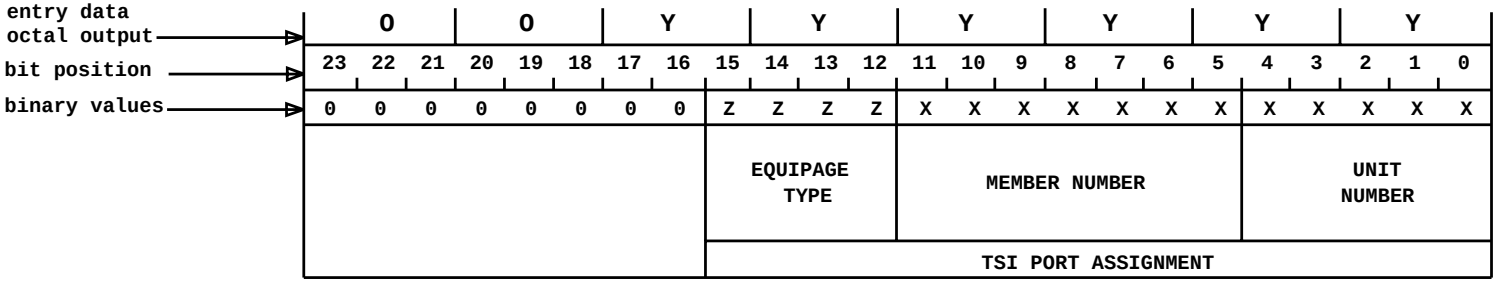


Y = Variable octal numbers

X...X = All zeros if no EST associated with growth TSI-2 or
= All ones if growth TSI-2 will interface with EST

Z = 0 Not equipped for wideband
= 1 Is equipped for wideband

ENTRY WORD (OCTAL): 21 through 27 AND 31 through 37



X...X = Converts to decimal TSI port info as as reflected in office record drawing T-nnnn-Hn-467 or equivalent

Y = Variable octal number

ZZZZ0011 for VIF
0001 for DT
0100 for DIF

Revised

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VERIFY TSI-2 UT TRANSLATOR FOR ODD MEMBER NUMBER

SUMMARY

Using verify entry input message, call up growth TMS 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.

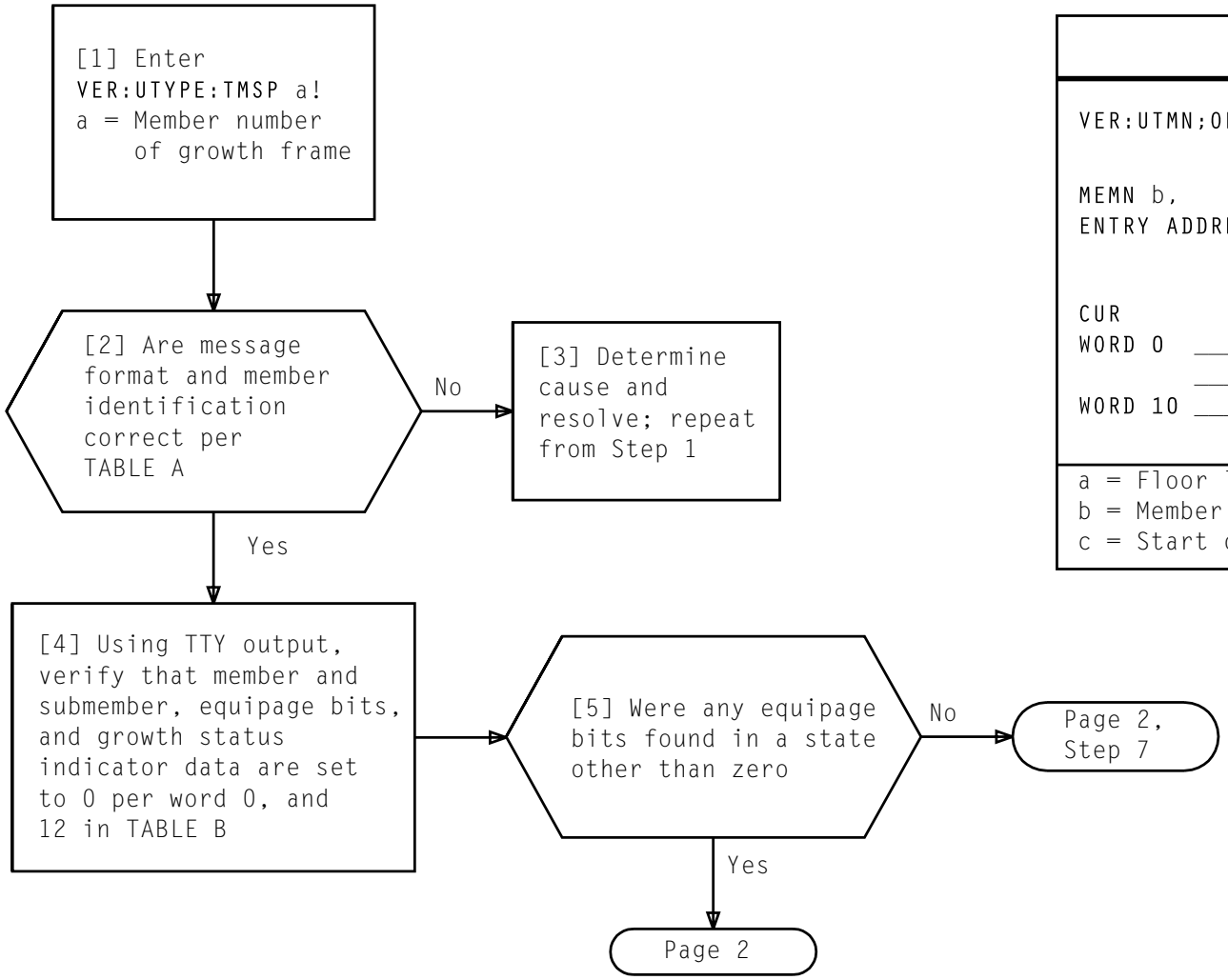

TABLE A

```
VER:UTMN;OPT( ),CUR:    FLN a,       UTYN TMSP,

MEMN b,           ME UNEQ,
ENTRY ADDRESS c,             ENTRY SIZE 11,


CUR
WORD 0  _____ _____ _____ _____
        _____ _____ _____ _____
WORD 10 _____ _____ _____
```

a = Floor location number
b = Member number of growth frame
c = Start octal address for unit type entry

VERIFY TMS UT TRANSLATOR

Reissued

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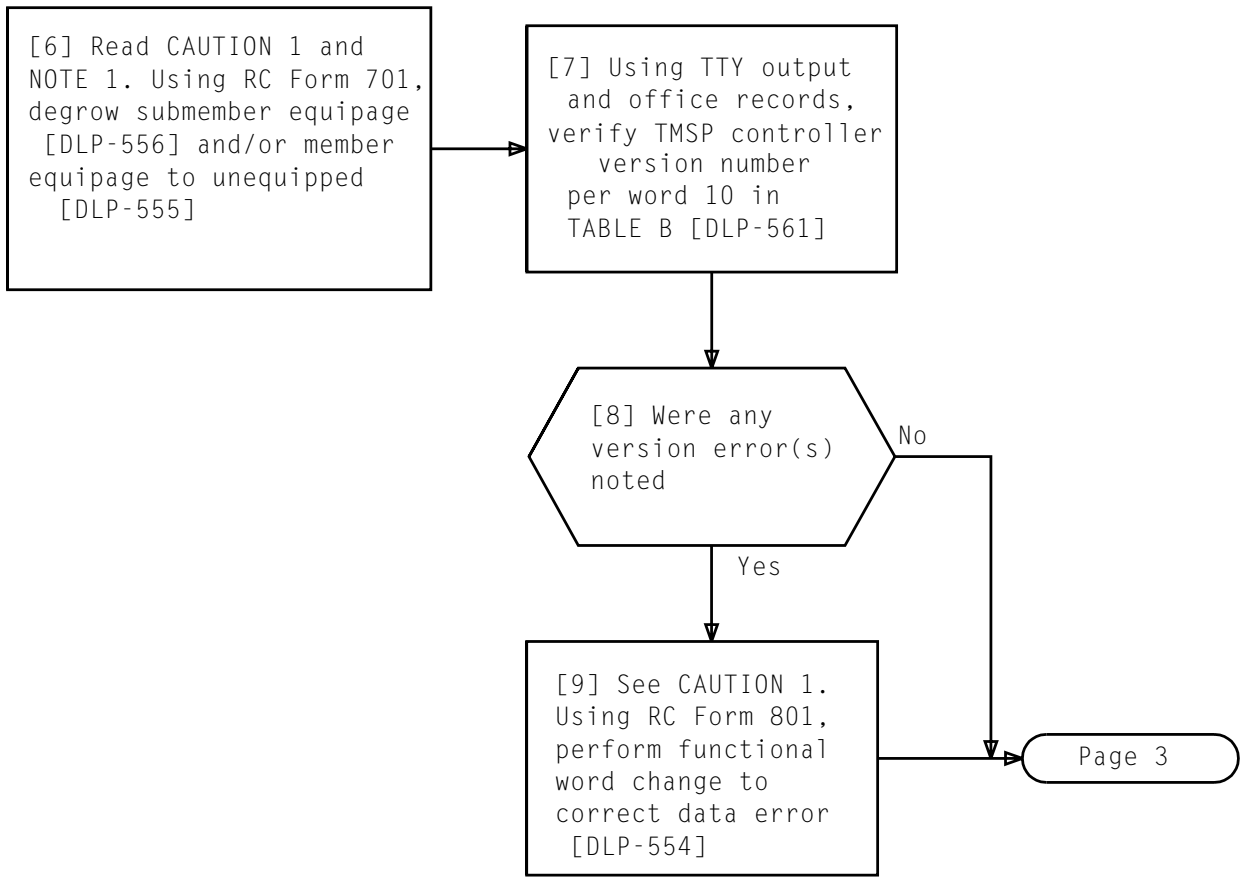


NOTE 1
Submember equipage must be degrown first, if required, followed by degrowth of member equipage, if required

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

VERIFY TMS UT TRANSLATOR

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

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

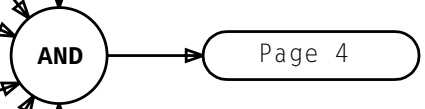
[11] Verify alarm grid, lineup and frame assignment for growth frame per word 1 [DLP-552]

[12] Verify PUB branch assignment for growth frame per word 3 [DLP-553]

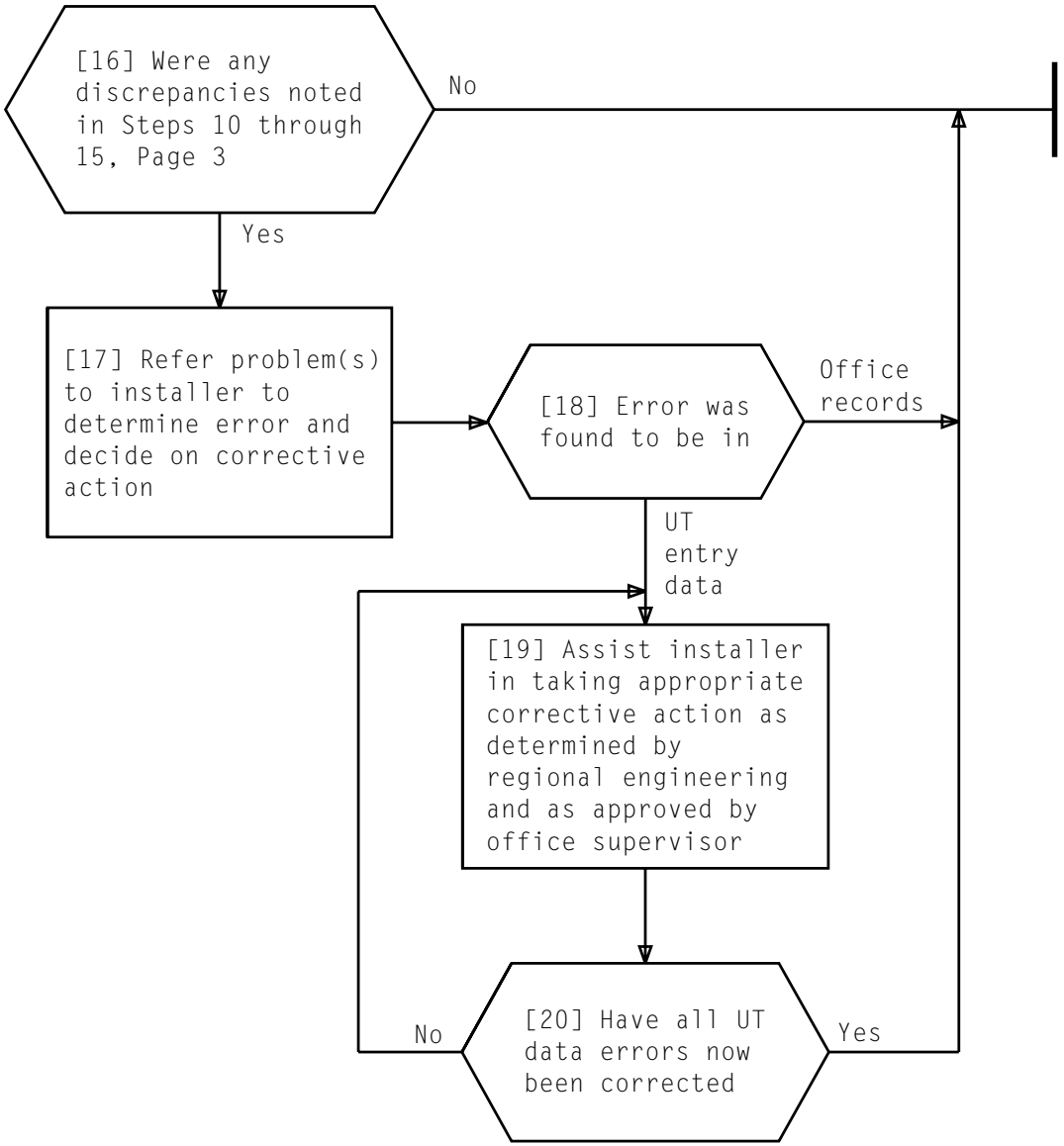
[13] Verify scan point assignments for growth frame per words 3 and 4 [DLP-563]

[14] Verify SD and pulse point assignments for growth frame per words 2, 5, 6, and 7 [DLP-562]

[15] Verify growth TMSP member version per word 11



VERIFY TMS UT TRANSLATOR

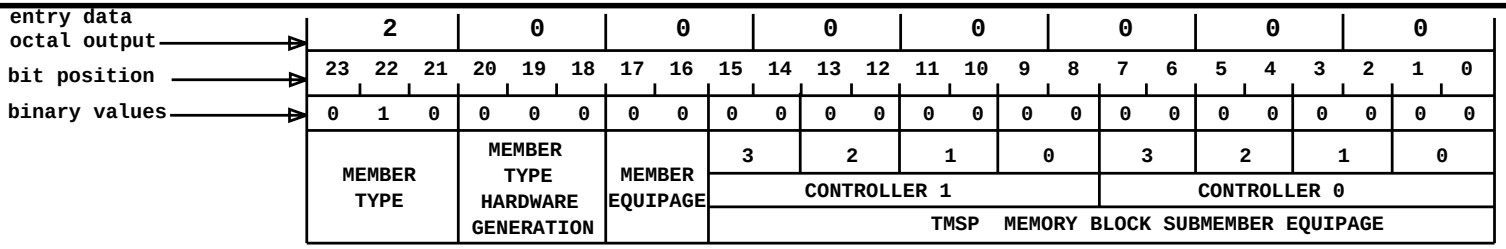


VERIFY TMS UT TRANSLATOR

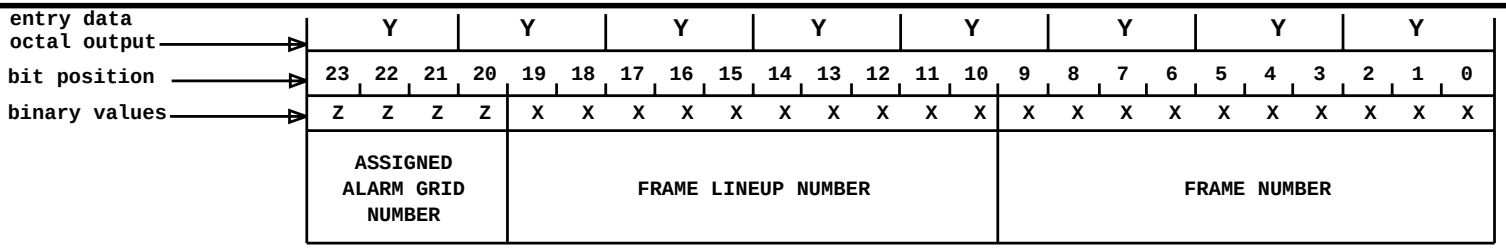
TABLE B

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION

0



1



X...X = Converts to decimal frame info as reflected in office floor plan drawing

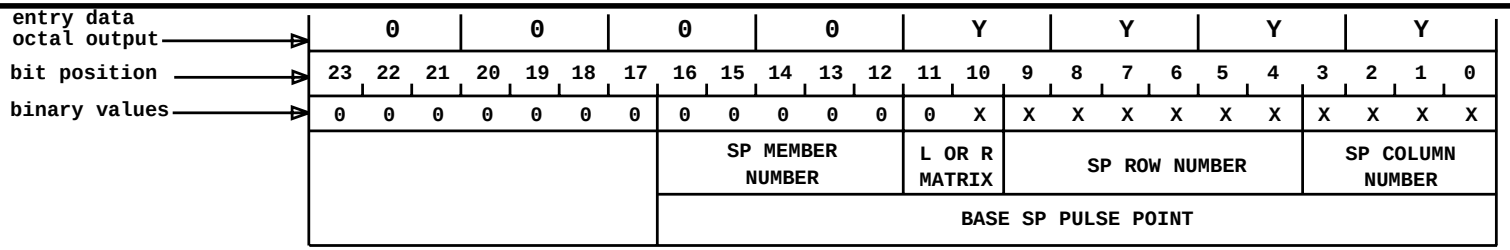
Y= Variable octal numbers

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**

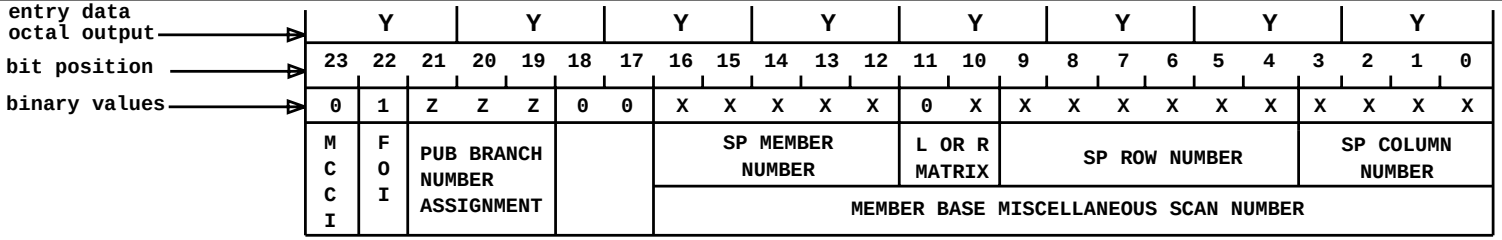
2



X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-462 or equivalent

Y = Variable octal numbers

3



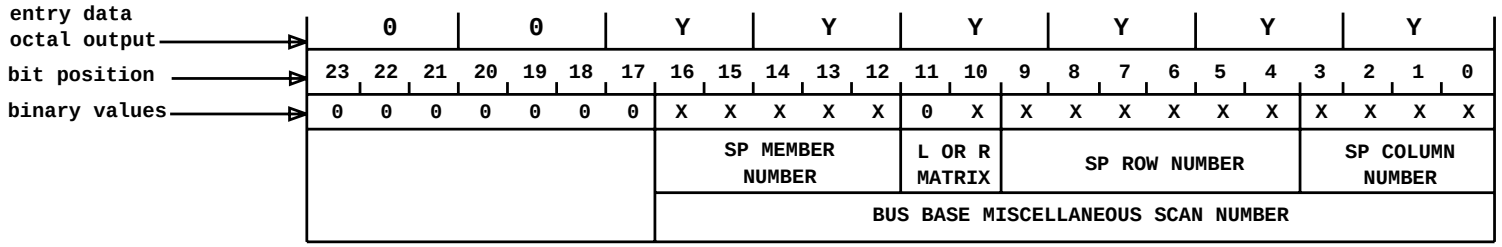
X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-461 or equivalent

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

Y = Variable octal numbers

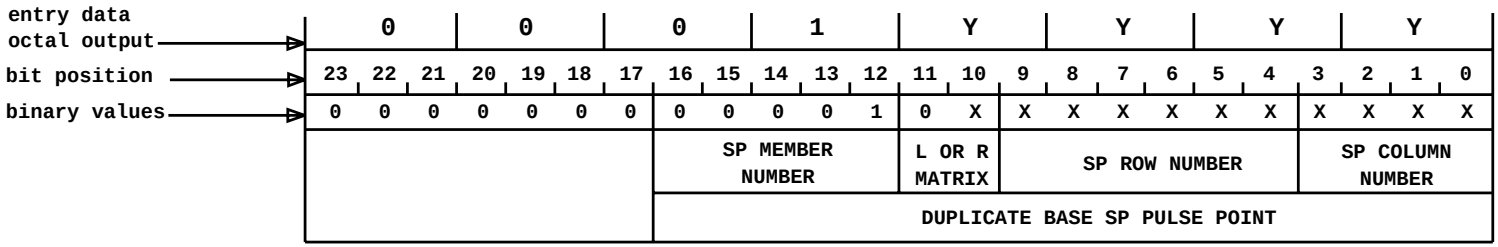
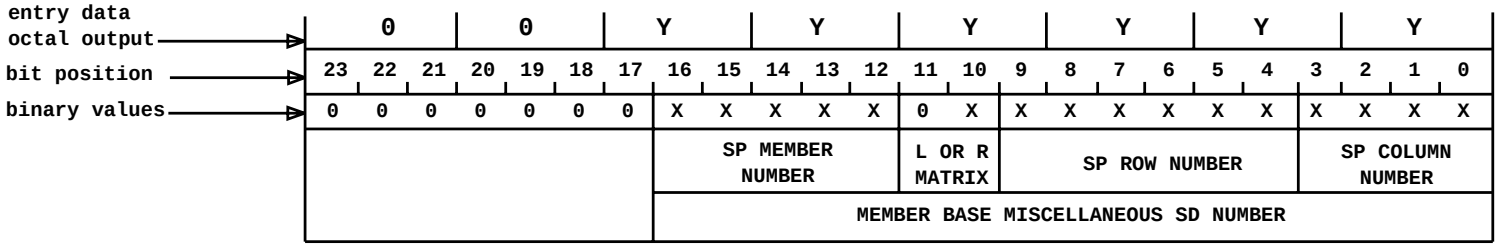
TABLE B (Contd)

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION
4	

X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-461 or equivalent

Y = Variable octal numbers

TABLE B (Contd)

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION
5	
6	

X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-462 or equivalent

Y = Variable octal numbers

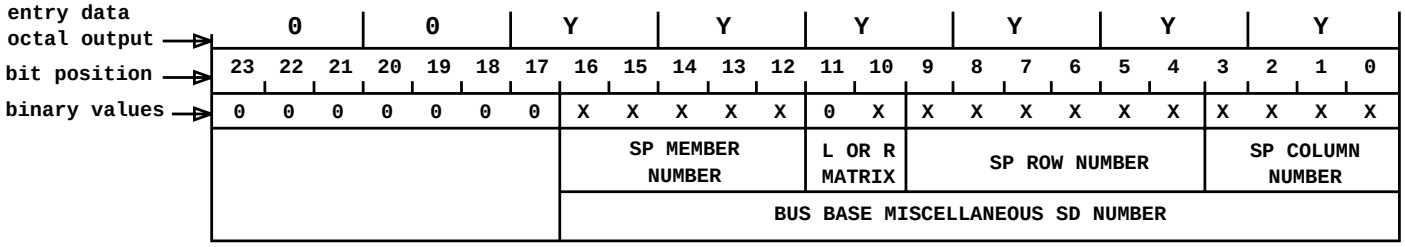
X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-462 or equivalent

Y = Variable octal numbers

TABLE B (Contd)

ENTRY WORD (OCTAL) | **UT ENTRY DATA AND WORD CONFIGURATION**

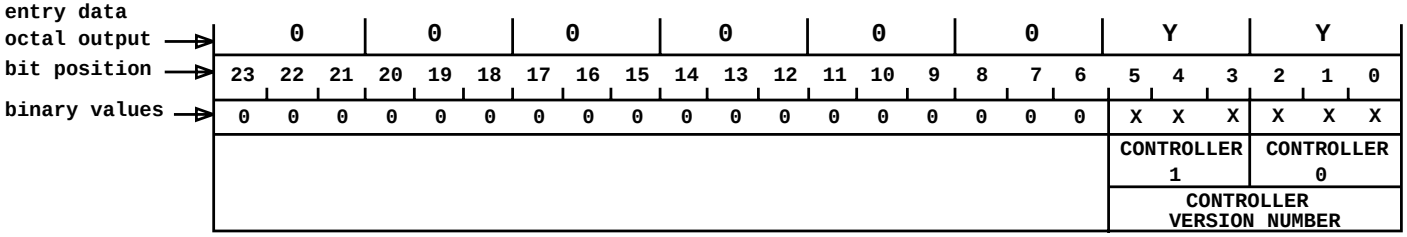
7



X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-462 or equivalent

Y = Variable octal numbers

10



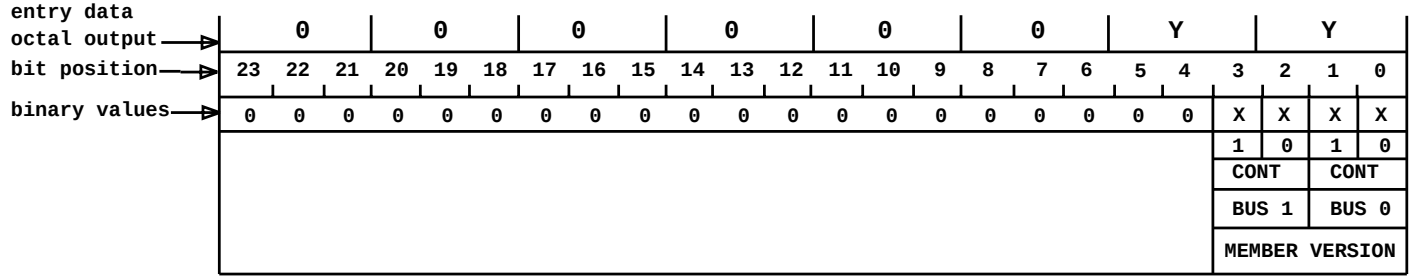
XXX = Version numbers of SP equipment as reflected in appropriate office record drawings and shipping info

Y = Variable octal numbers

TABLE B (Contd)

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION

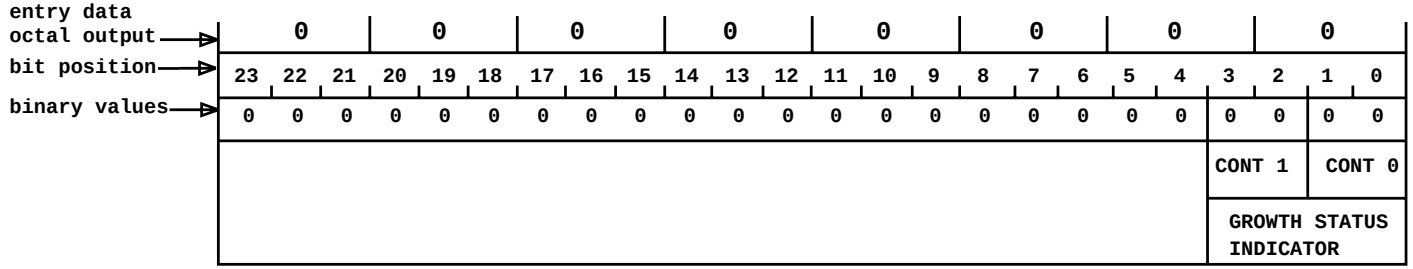
11

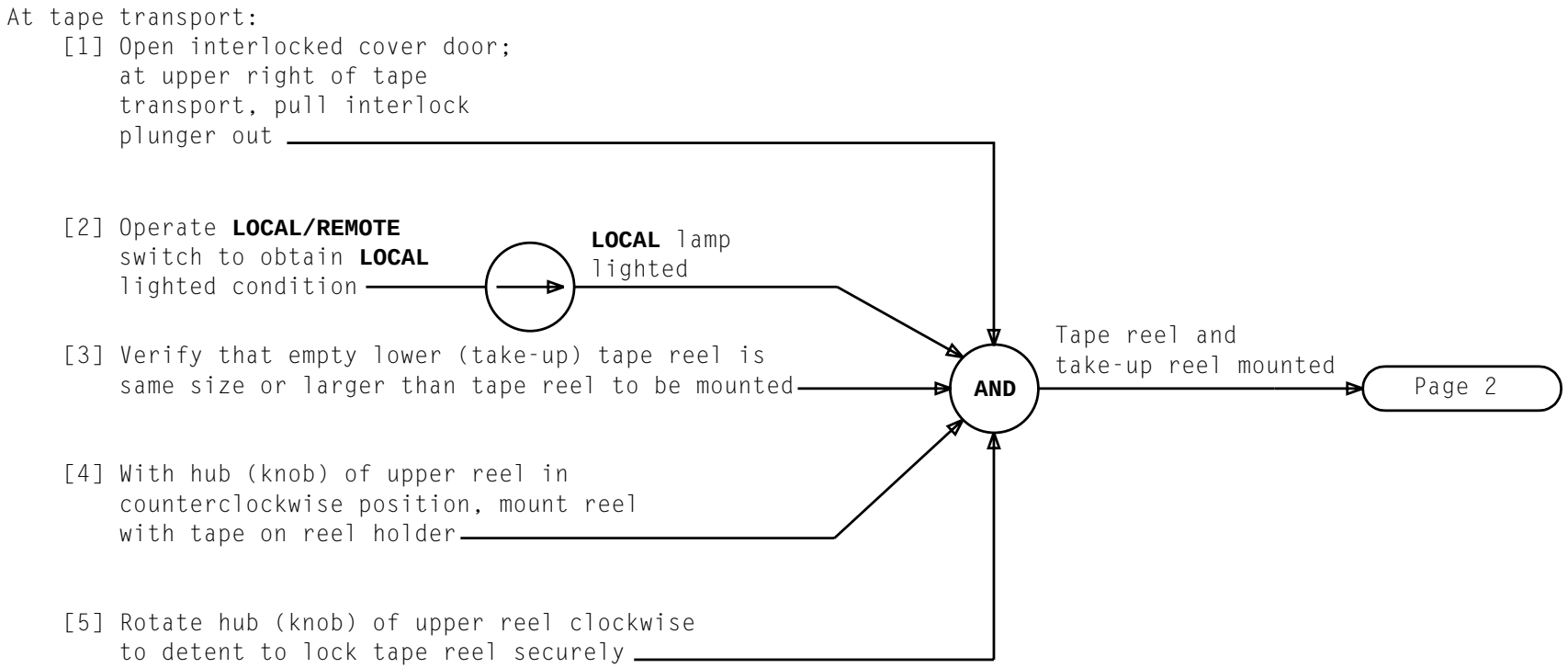


XX = Value determined from PA-4A000 or functional ODA listing

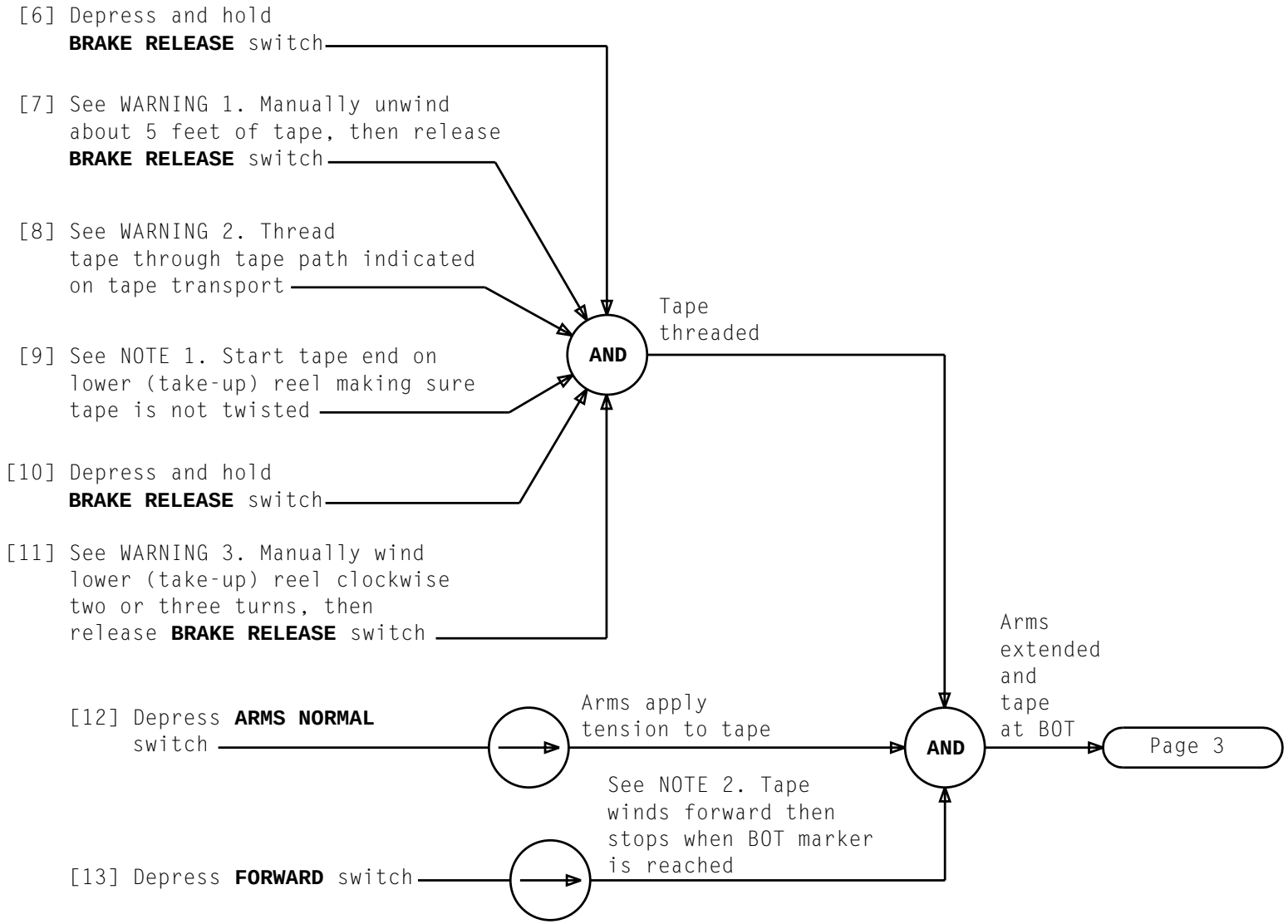
Y = Variable Octal Numbers

12





MOUNT LIBRARY TAPE ON TAPE TRANSPORT



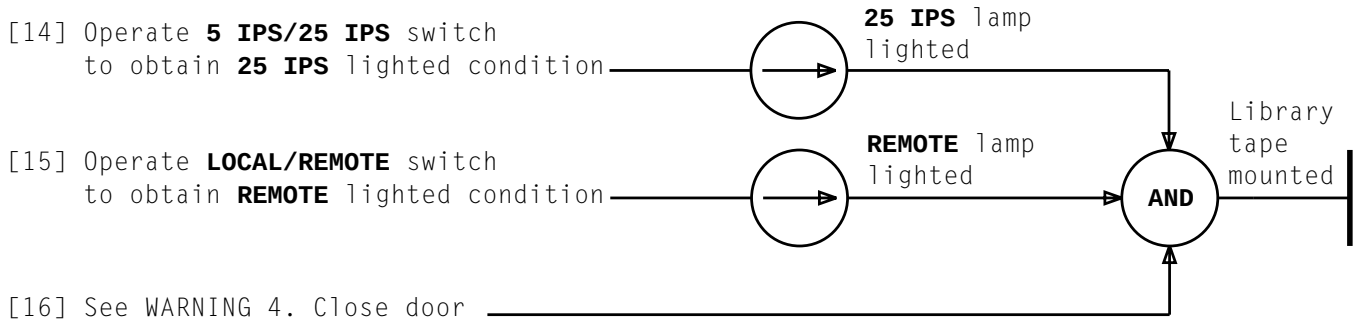
NOTES

1. To start tape on take-up reel, it may help to moisten the tape end (moistened fingers) and stick it to the reel axle
2. Tape may not stop at BOT marker if fast forward is depressed

WARNINGS

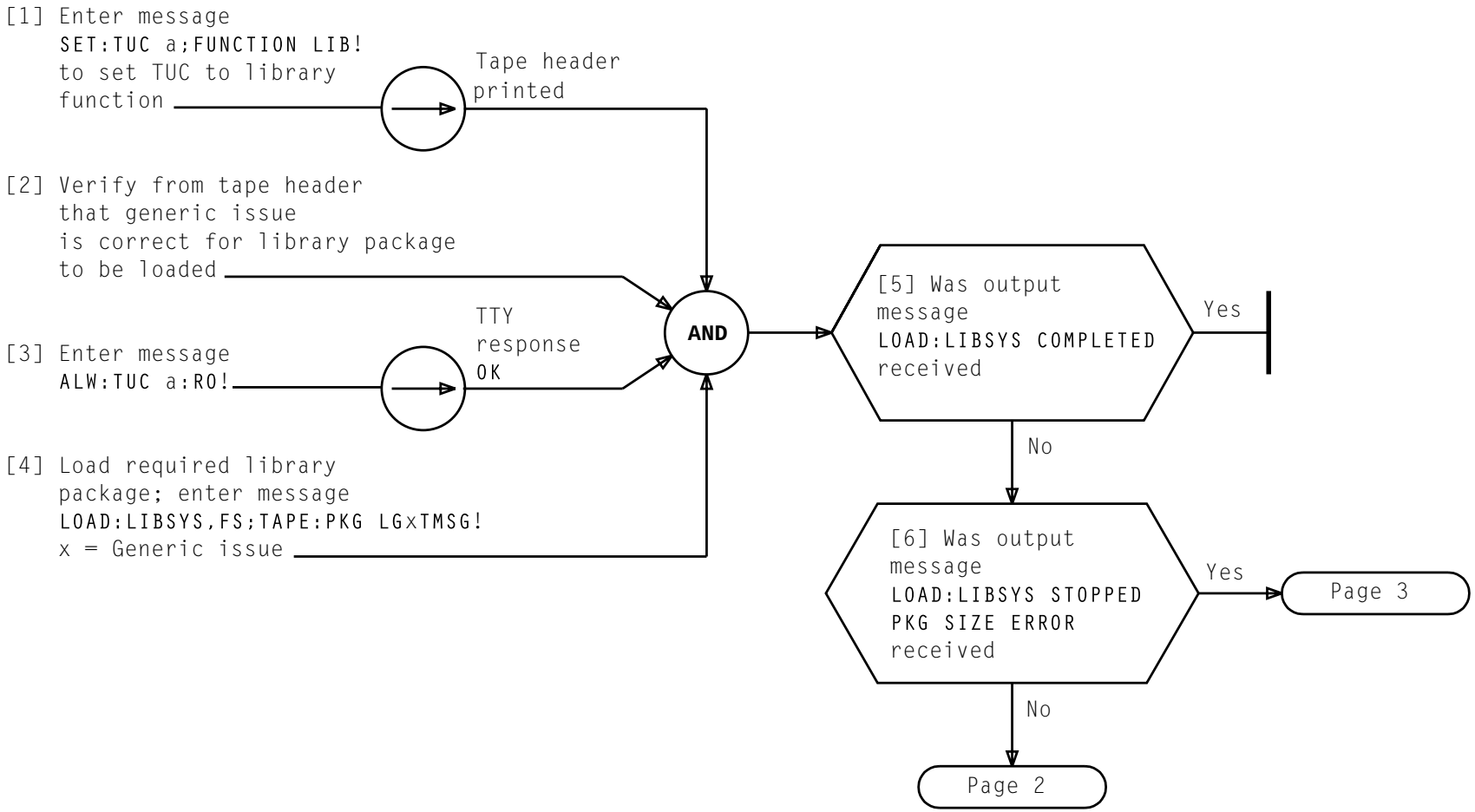
1. *Contamination of tape by contact with floor will damage tape heads*
2. *Do not touch tape head surfaces; body oils will contaminate tape*
3. *If tape is not properly aligned along rollers and guides, or is too loose, it may be damaged*

MOUNT LIBRARY TAPE ON TAPE TRANSPORT



WARNING 4
Closing tape transport door in harsh manner may upset alignment

MOUNT LIBRARY TAPE ON TAPE TRANSPORT



LOAD LIBRARY PROGRAM PACKAGE LGxTMSG

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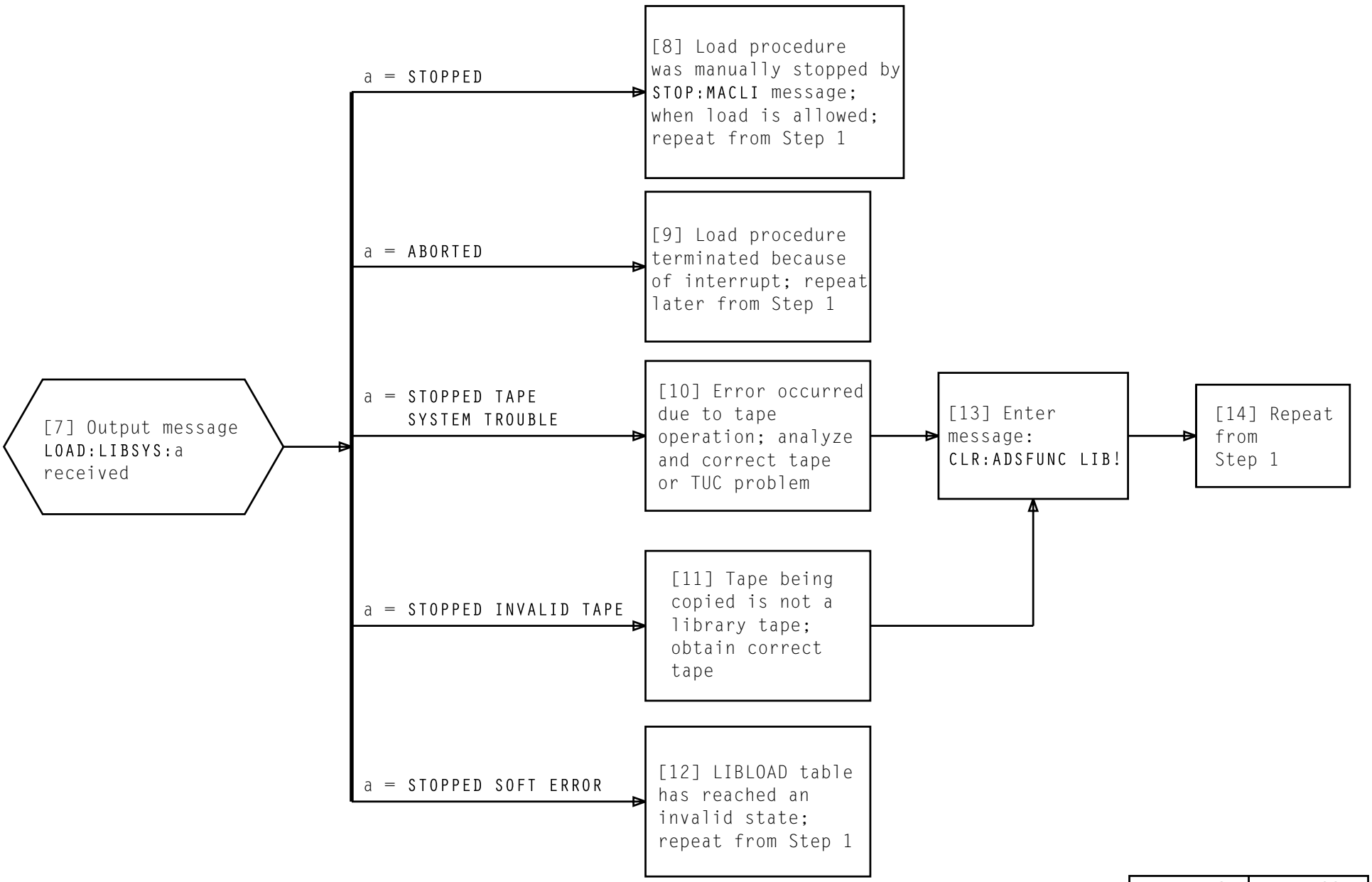
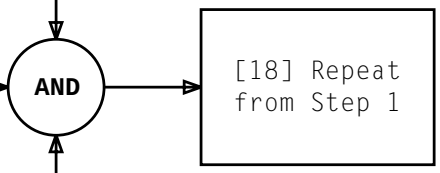


LOAD LIBRARY PROGRAM PACKAGE LGxTMSG

[15] Identify library packages that will not be required for growing TMS frame

[16] Enter message
`INIT:LIBSYS,PKG a!`
to remove a library package
a = library package identified in previous step

[17] Enter message
`UPD:LIBSYS!`
to repack library packages



[18] Repeat from Step 1

LOAD LIBRARY PROGRAM PACKAGE LGxTMSG

SUMMARY

Using TTY, request RC Form 800. Fill in blank fields on form using data from library program task 1 and enter. Using assigned order number, activate recent change; then verify change.

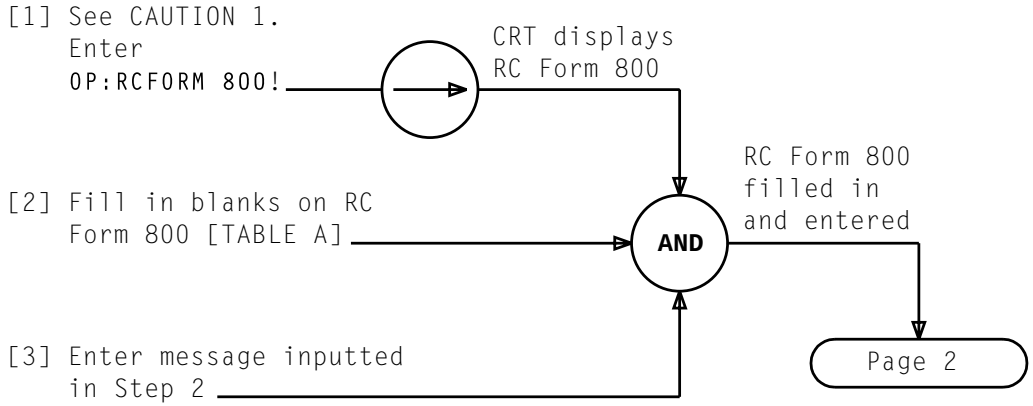


TABLE A

```
RC:FUNC;CHG;OPT(ABSOLUTE),a:      FSONLY b,ADDRESS c,
ORNU d,
WORDNO e,
SIZE f,              DISP g,
BINOCT h,
NEWDATA i,
OLDDATA j,
REMARKS_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ !
```

a = TST
b = N
c = Address determined from library program task 1 TTY output message
d = RC Order No.
e = 0
f = 3
g = 0
h = 0 (letter O)
i = Data specified as NEWDATA in library program task 1 output message
j = Data specified as OLDDATA in library program task 1

CAUTION 1

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

CHANGE CALL STORE WORD (0D4TMSNUM) TO UPDATE TMSP NETWORK CONFIGURATION SIZE

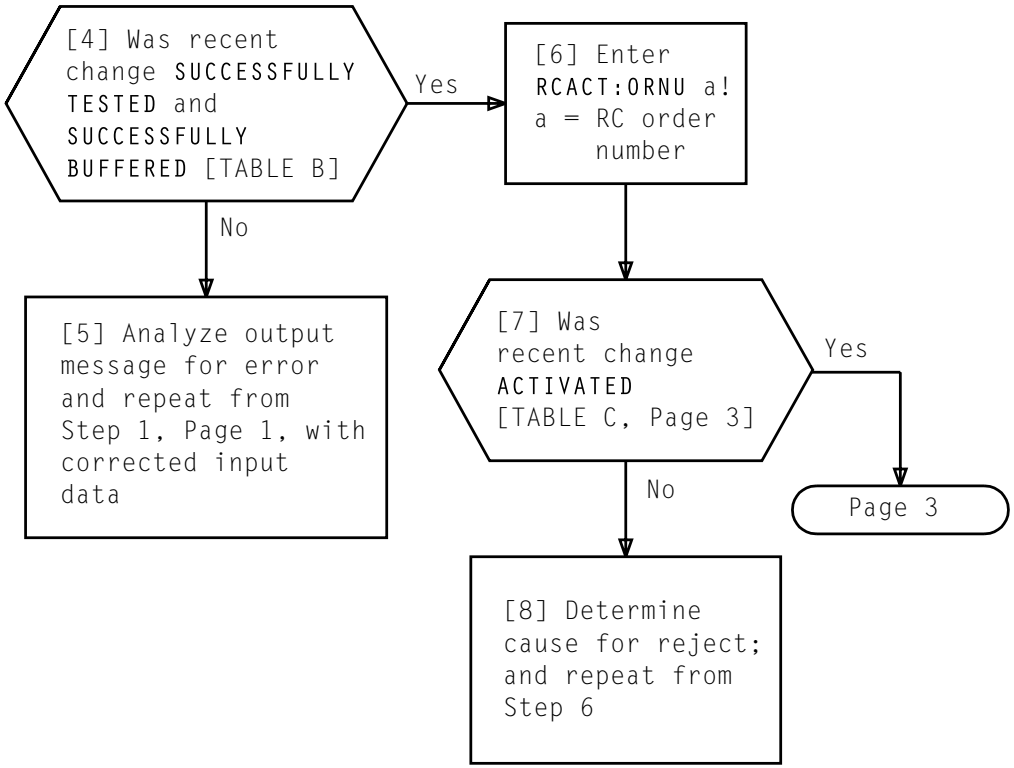


TABLE B

```
RC ORNU a SUCCESSFULLY TESTED

RC ORNU a SUCCESSFULLY BUFFERED

RC:FUNC;CHG;OPT(ABSOLUTE),BUF:  FSONLY N,ADDRESS  b,
ORNU a,
WORDNO 0,
SIZE   3,               DISP 0,
BINOCT 0,
NEWDATA c,
OLDDATA d,
REMARKS _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _!
```

a = RC Order No.
b = Address determined from library program task 1 TTY output message
c = Data specified as NEWDATA in library program task 1 output message
d = Data specified as OLDDATA in library program task 1

CHANGE CALL STORE WORD (OD4TMSNUM) TO UPDATE TMSP NETWORK CONFIGURATION SIZE

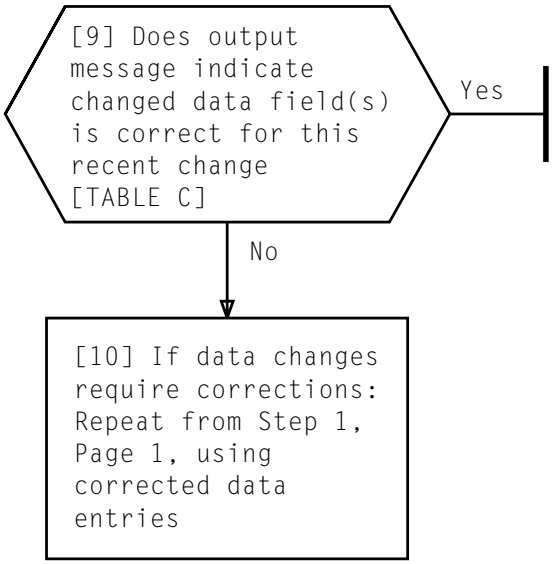


TABLE C

```
RC ORNU a ACTIVATED

RC:FUNC;CHG;OPT(ABSOLUTE),BUF:  FSONLY N,ADDRESS  b,
ORNU a,
WORDNO 0,
SIZE   3,          DISP 0,
BINOCT 0,
NEWDATA c,
OLDDATA d,
REMARKS ---------------------------------------!
```

a = RC Order No.
b = Address determined from library program task 1 TTY output message
c = Data specified as NEWDATA in library program task 1 output message
d = Data specified as OLDDATA in library program task 1

CHANGE CALL STORE WORD (OD4TMSNUM) TO UPDATE TMSP NETWORK CONFIGURATION SIZE

[1] Enter following messages:
EX:LIBSYS:PKG LGxTMSG,PGM TMSG,TASK a,CLIENT O!
a = Task 1 or 2

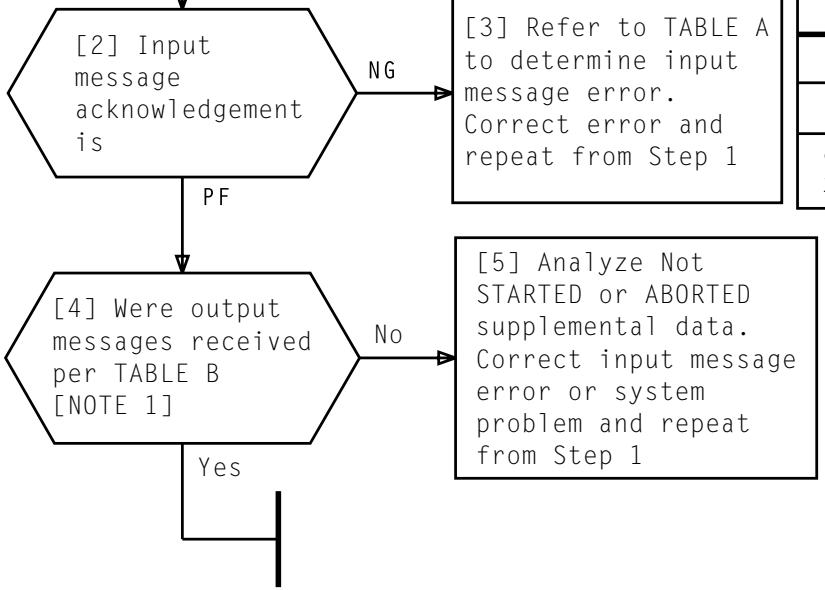
x = Generic program number

IN:LIBSYS:CLIENT c,WORD d,DEC e!

c = Client number (0-7)

d = Word number at which to start loading

e = Decimal data to be loaded



[3] Refer to TABLE A to determine input message error. Correct error and repeat from Step 1

[5] Analyze Not STARTED or ABORTED supplemental data. Correct input message error or system problem and repeat from Step 1

TABLE A

NG CODE	DEFINITION
060	CLIENT NUMBER OUT OF RANGE
061	INVALID COMBINATION OF KEYWORDS SPECIFIED
064	PACKAGE NAME NOT SPECIFIED
065	PROGRAM NAME NOT SPECIFIED
066	TASK NUMBER NOT SPECIFIED
067	INTERNAL ERROR DETECTED

TABLE B

LOAD:LIBSYS COMPLETED
EX:LIBSYS:PKG LGxTMSG,PRM TMSG, TASK a, CLIENT O STARTED
a = 1 or 2 x = Generic program number

NOTE 1
LOAD:LIBSYS COMPLETED message may be received even if the input message was aborted or not started

EXECUTE TMSG LIBRARY PROGRAM LGxTMSG, TASK 1 AND 2

DIAGNOSE AND RESTORE TMS FRAME CONTROLLERS 0 AND 1, PHASE 8

SUMMARY

Diagnose first TMS frame controller 0, specifying phase 8. After phase 8 tests pass ATP, restore controller 0 to service. Repeat diagnostics and restoral of controller 0 for all TMS frames. After controller 0 has been diagnosed and restored for all TMS frames, diagnose and restore controller 1 for all TMS frames

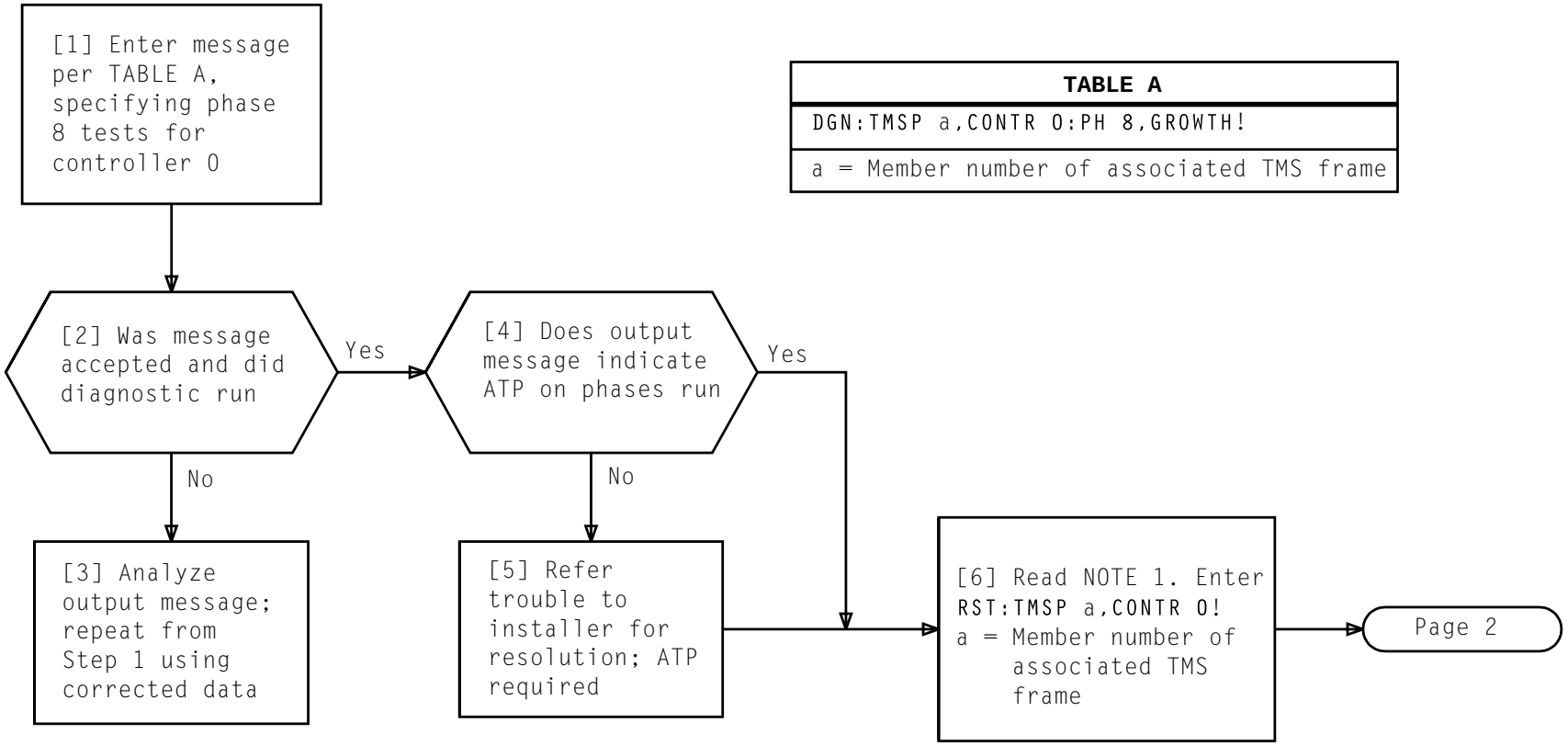


TABLE A
DGN:TMSP a,CONTR 0:PH 8,GROWTH!
a = Member number of associated TMS frame

NOTE 1

Restore input message will run TMS diagnostics and restore controller if ATP

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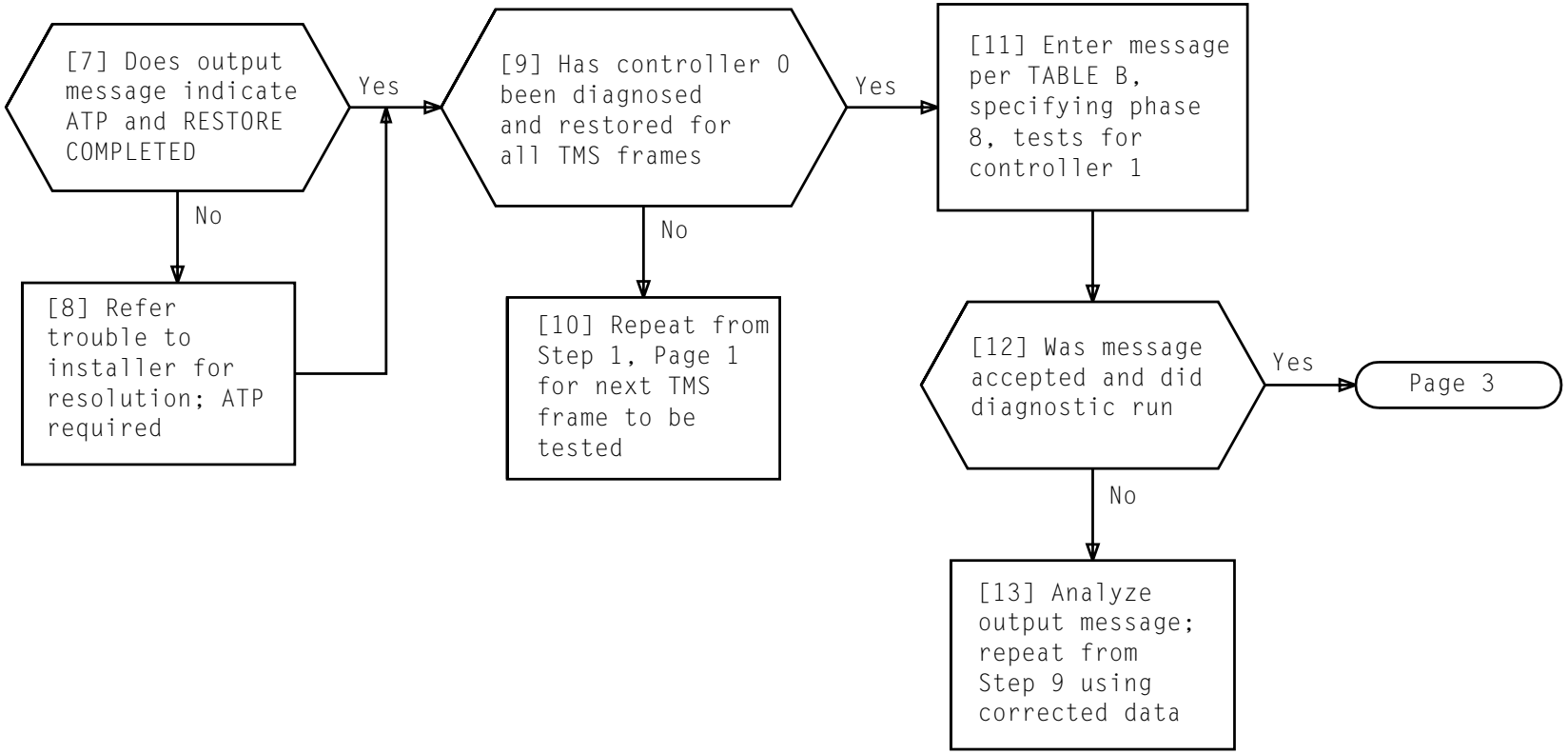
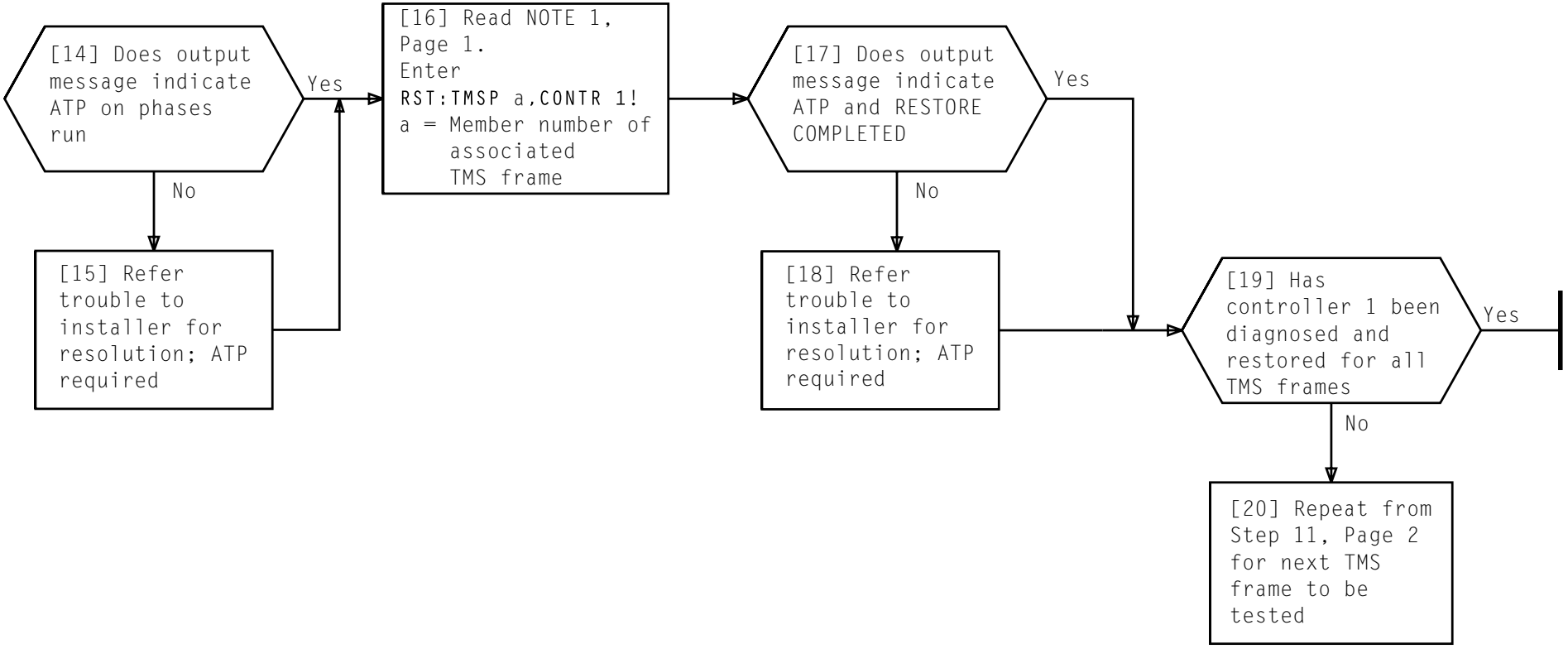


TABLE B
DGN:TMSP a,CONTR 1:PH 8,GROWTH!
a = Member number of associated TMS frame

DIAGNOSE AND RESTORE TMS FRAME CONTROLLERS 0 AND 1, PHASE 8



DIAGNOSE AND RESTORE TMS FRAME CONTROLLERS 0 AND 1, PHASE 8

SUMMARY

Verify status of TMS memory block(s) using SME verify message and specifying index numbers for appropriate memory block and controller. Submembers must be marked **GROW**. If in error, refer to installer for corrective action.

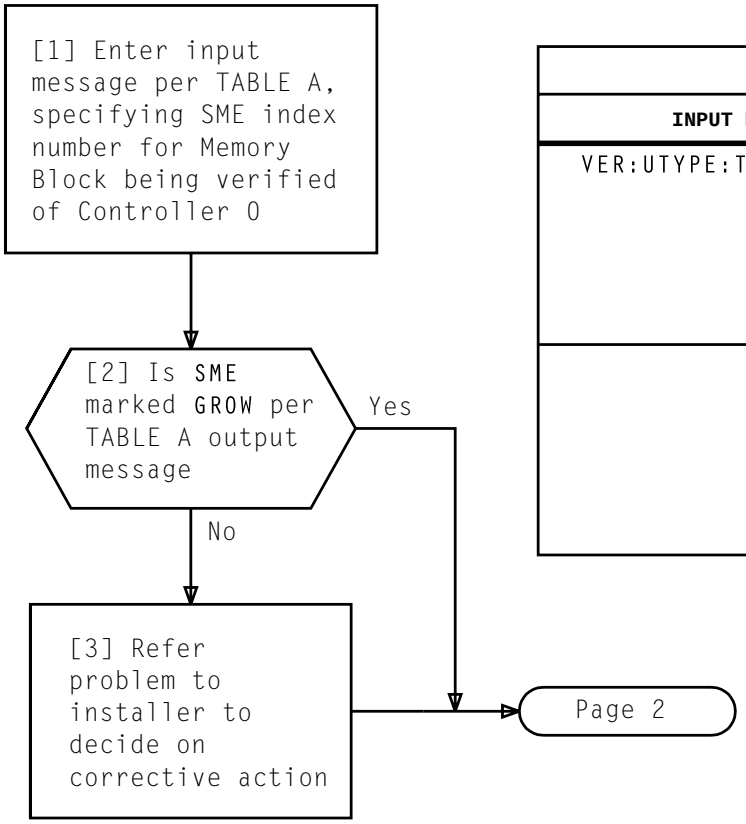


TABLE A

INPUT MESSAGE	OUTPUT MESSAGE
VER:UTYPE:TMSP a,SME b!	VER:UTMN;OPT(SME),CUR: FLN c, UTYN TMSP, MEMN a, ME OPER, SUBMEM b, SME GROW,

a = Member number of associated TMS frame
b = SME index number
= 49 (for Memory Block 1, Controller 0)
= 50 (for Memory Block 2, Controller 0)
= 51 (for Memory Block 3, Controller 0)
c = Floor location number

VERIFY STATUS OF TMS MEMORY BLOCK(S) INTERFACED WITH GROWTH TSI FRAME

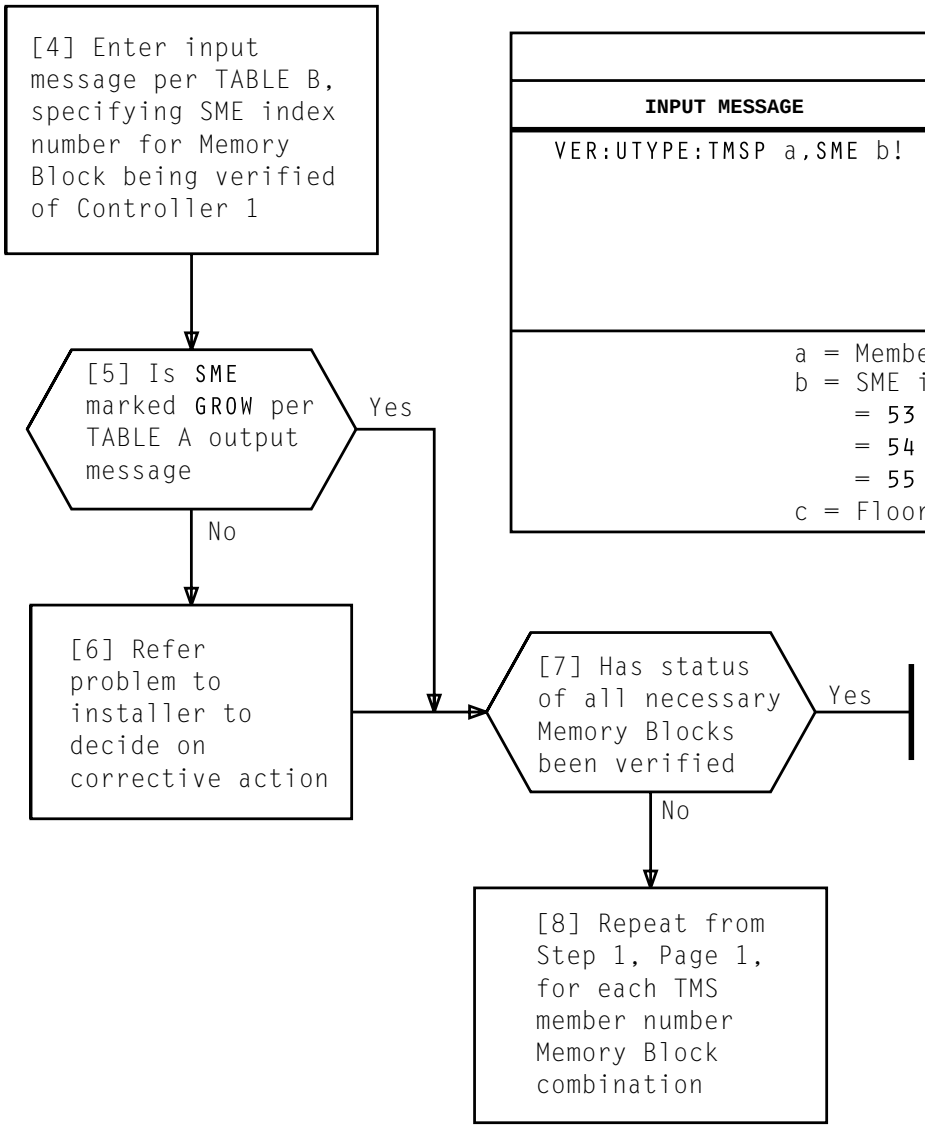


TABLE B

INPUT MESSAGE	OUTPUT MESSAGE
VER:UTYPE:TMSP a,SME b!	VER:UTMN;OPT(SME),CUR: FLN c, UTYN TMSP, MEMN a, ME OPER, SUBMEM b, SME GROW,

a = Member number of associated TMS frame
b = SME index number
= 53 (for Memory Block 1, Controller 1)
= 54 (for Memory Block 2, Controller 1)
= 55 (for Memory Block 3, Controller 1)
c = Floor location number

VERIFY STATUS OF TMS MEMORY BLOCK(S) INTERFACED WITH GROWTH TSI FRAME

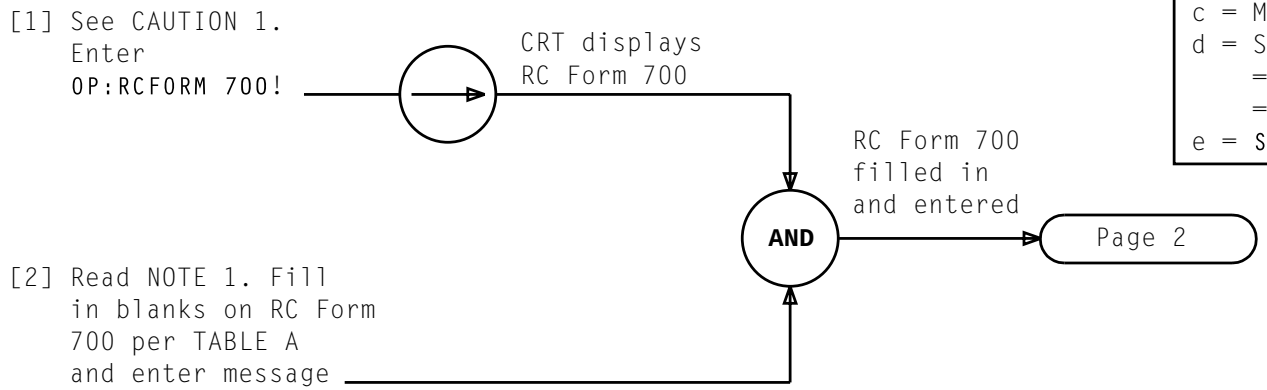
SUMMARY

Request RC Form 700. Fill in blanks on RC Form 700 to change submember equipage to operational test state and enter message. Verify inactive OPER state of memory block. Recent change each TMS memory block being interfaced to added TSI. Request RC Form 600; fill in blanks using memory block RC numbers and advance RC Form 600 to test state.

TABLE A

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

a = Unit type = TMSP
b = RC order number
c = Member number of associated TMS frame
d = Submember name
    = COMBLK(0 to 3) (for Cont 0, Mem Blk 0-3)
    = C1MBLK(0 to 3) (for Cont 1, Mem Blk 0-3)
e = SGRO, OPER



NOTE 1

RC order number should be recorded for use later in this procedure

CAUTION 1

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

ACTIVATE TMS MEMORY BLOCKS TO OPERATIONAL USING RC FORM 600

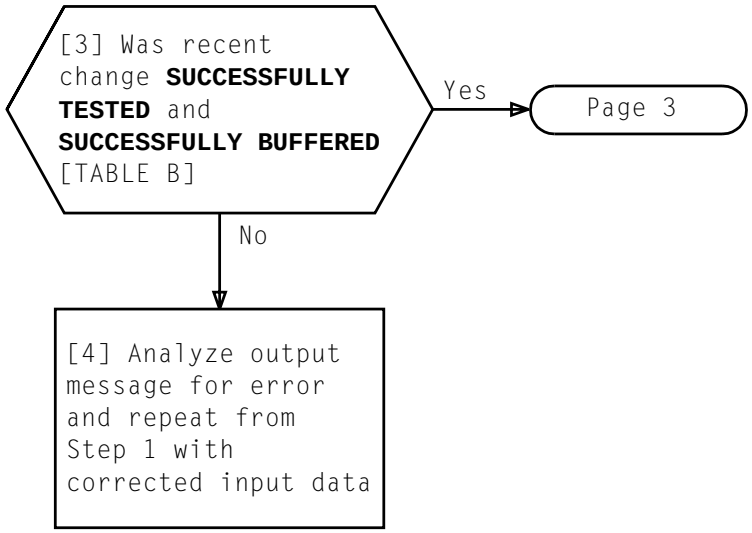


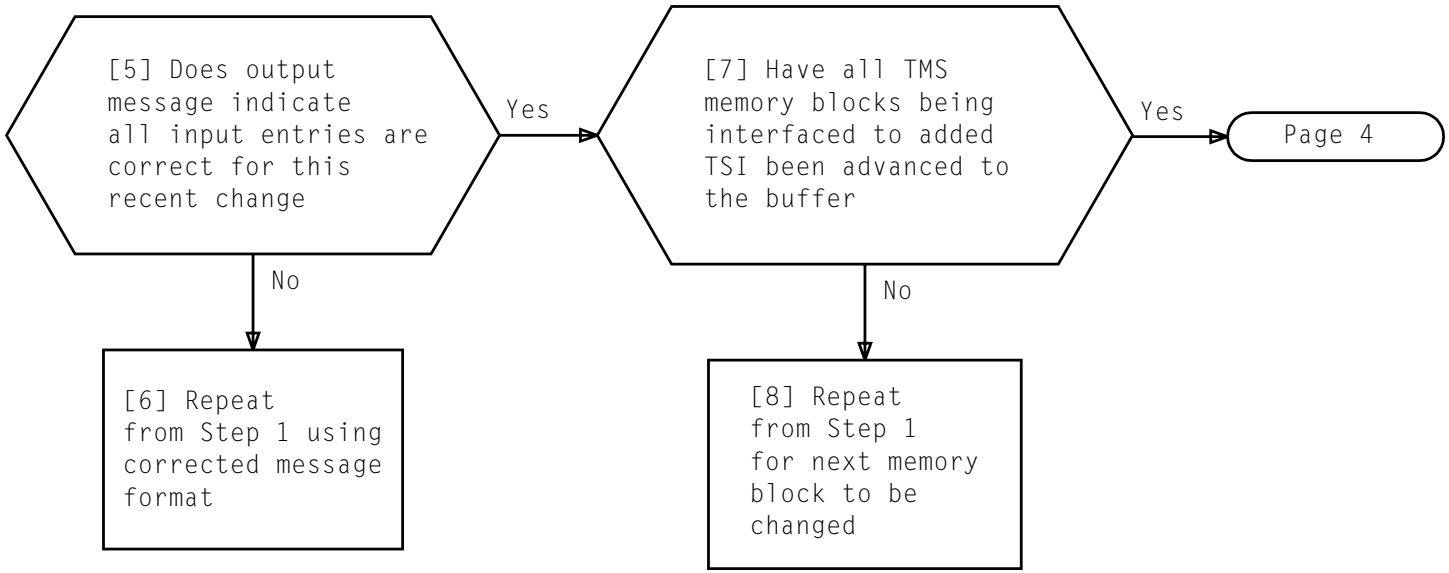
TABLE B

```
RC ORNU a, SUCCESSFULLY TESTED
RC ORNU a, SUCCESSFULLY BUFFERED
RC:UTYPE;CHG;OPT(EQP,GROW),BUF:     UTYN TMSP,
ORNU a,
                          OLD  NEW
MEMN b,           ME (____,____),
                          OLD  NEW
SUBMEM c,       SME (SGRO,OPER),

REMARKS----------------------------!
```

a = RC order number
b = Member number of associated TMS frame
c = Submember name:
    = COMBLK (0 to 3) (for Cont 0, Mem Blk 0-3)
    = C1MBLK (0 to 3) (for Cont 1, Mem Blk 0-3)

ACTIVATE TMS MEMORY BLOCKS TO OPERATIONAL USING RC FORM 600



ACTIVATE TMS MEMORY BLOCKS TO OPERATIONAL USING RC FORM 600

[9] See CAUTION 2.
Enter **OP:RCFORM 600!**

CRT displays RC Form 600

[10] Fill in blanks on RC Form 600 per TABLE C using RC order number(s) previously recorded and enter message

AND

RC Form 600 filled in and entered

[11] Was ACCEPTED message received per TABLE D. Read NOTE 2

No

[12] Repeat from Step 9 with corrected input data determined from reject message

Yes

[13] Enter **RCTST:ORNU a!**
a = RC order number

[14] Was ACCEPTED message received per TABLE E. Read NOTE 3

Yes

No

[15] Analyze reject message; repeat as required with corrected input data. Read NOTE 4

TABLE C

```
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
c = RC order numbers to be activated

TABLE D

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

TABLE E

RC ORNU a ACCEPTED FOR TST STATE
a = RC order number

NOTES

2. Acceptance of RC order number does not necessarily mean all input data was correct
3. A delay up to 30 seconds may occur while processing from buffered to test state
4. Reject could result from other than message format error

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

ACTIVATE TMS MEMORY BLOCKS TO OPERATIONAL USING RC FORM 600

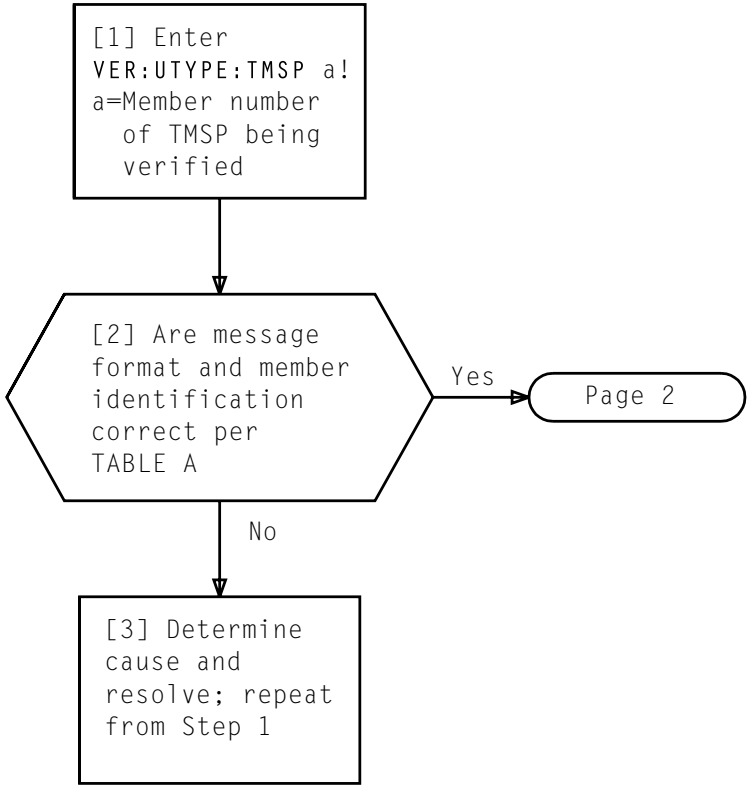


TABLE A

```
VER:UTMN;OPT(),CUR:  FLN a,       UTYN  TMSP,

  MEMN b,       ME OPER,
  ENTRY ADDRESS c,       ENTRY SIZE 11,

  CUR
  WORD 0  _____ _____ _____ _____
          _____ _____ _____ _____
  WORD 10 _____ _____ _____

  TMSP CONFIGURATION 4
```

a = Floor location
b = Member number of TMSP being verified
c = Starting address (word 0)

VERIFY TMS UNIT EQUIPAGE AND GROWTH STATUS INDICATOR

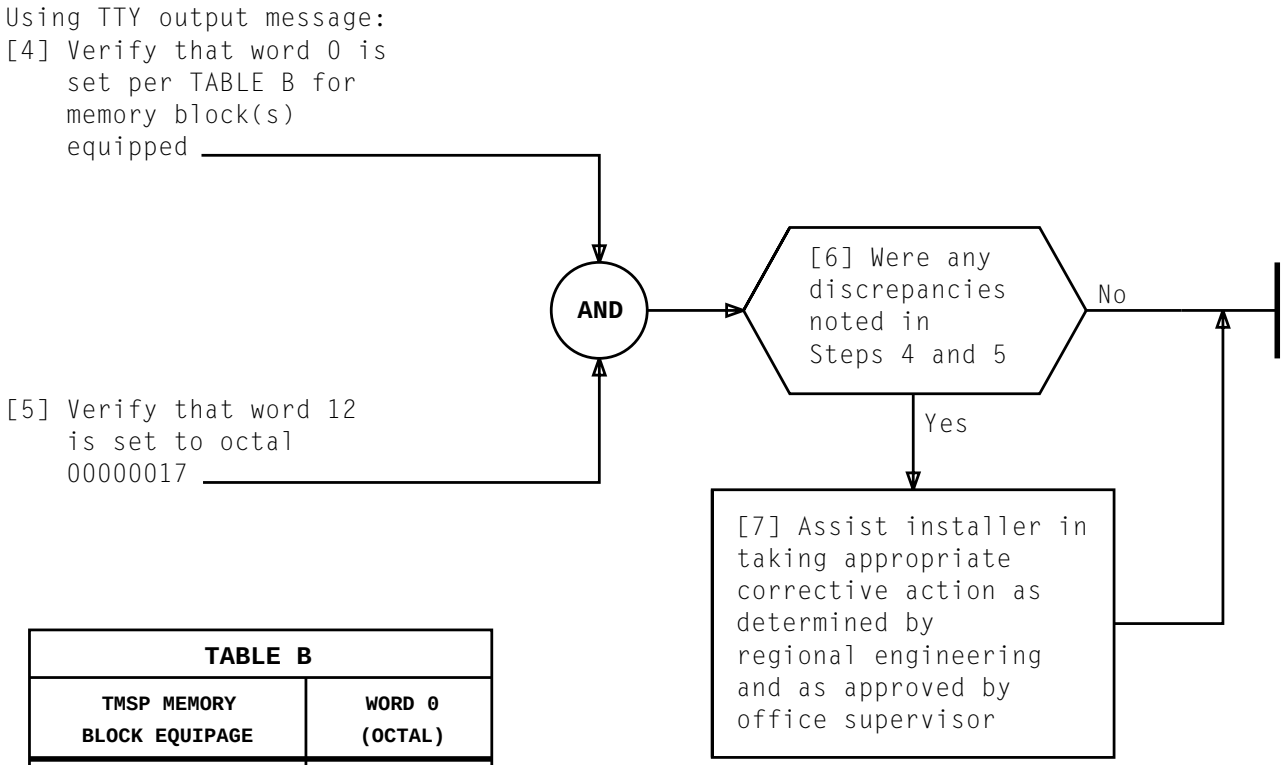
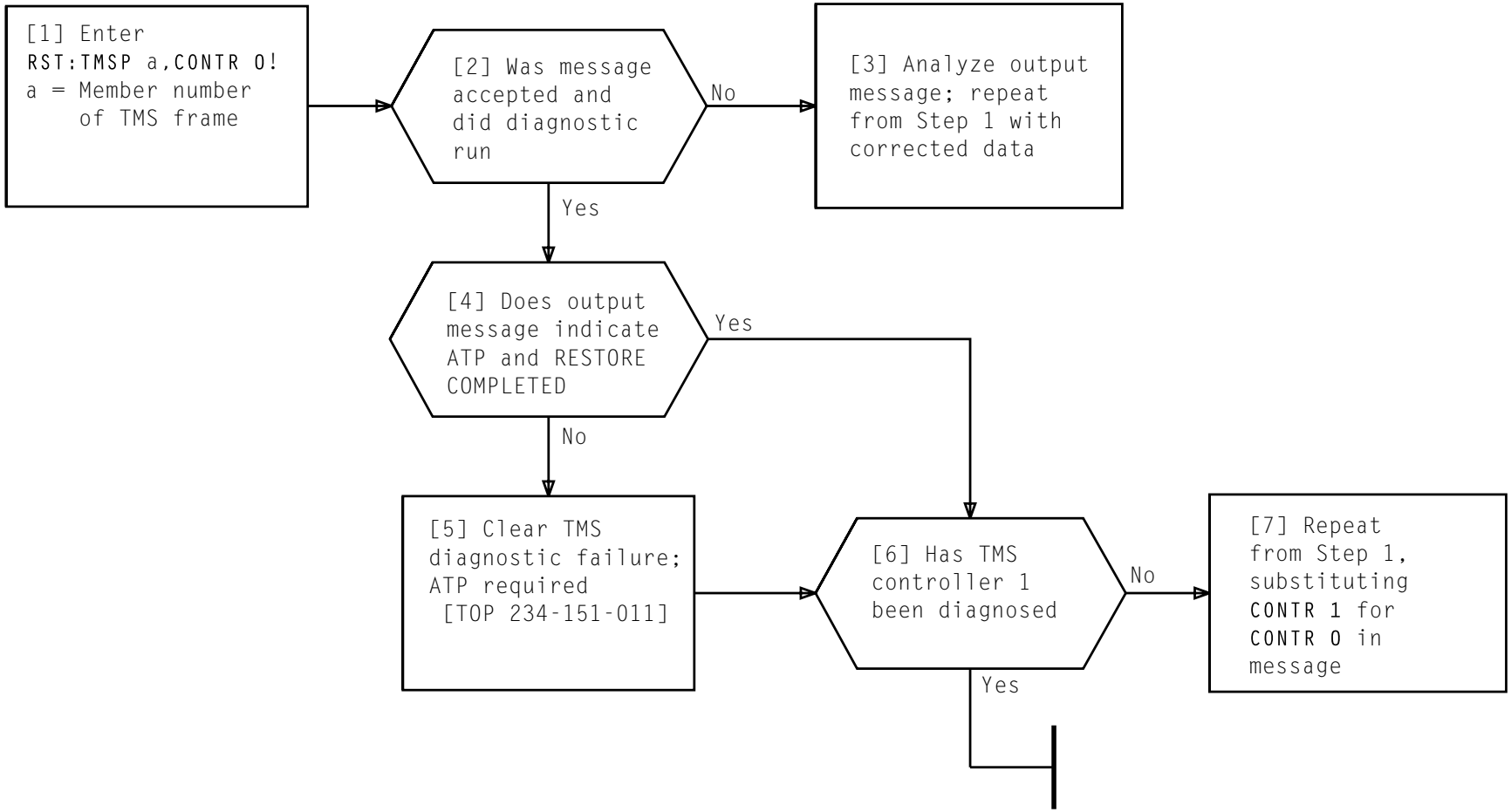


TABLE B	
TMSP MEMORY BLOCK EQUIPAGE	**WORD 0 (OCTAL)**
Memory Block 0	*0601403
Memory Blocks 0 and 1	*0607417
Memory Blocks 0, 1, and 2	*0637477
Memory Blocks 0, 1, 2, and 3	*0777777
* = 0 for original version 1 for multiplex version 2 for TMS-B version	

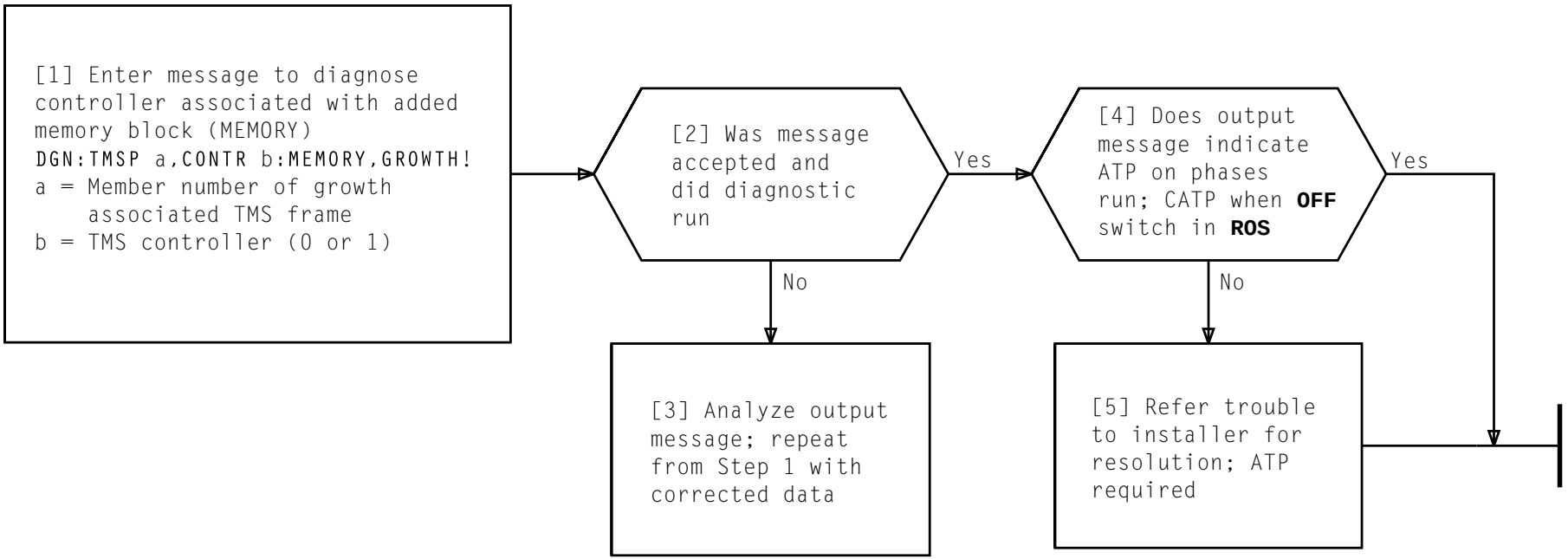
VERIFY TMS UNIT EQUIPAGE AND GROWTH STATUS INDICATOR

SUMMARY

Diagnose TMS frame controllers 0 and 1 using restore message. ATP results required.



DIAGNOSE TMS FRAME CONTROLLERS USING RESTORE MESSAGE



DIAGNOSE TMS GROWTH EQUIPMENT

ESTABLISH FRAME HARDWARE STATUS FOR RUNNING OF NETEX LIBRARY PROGRAM

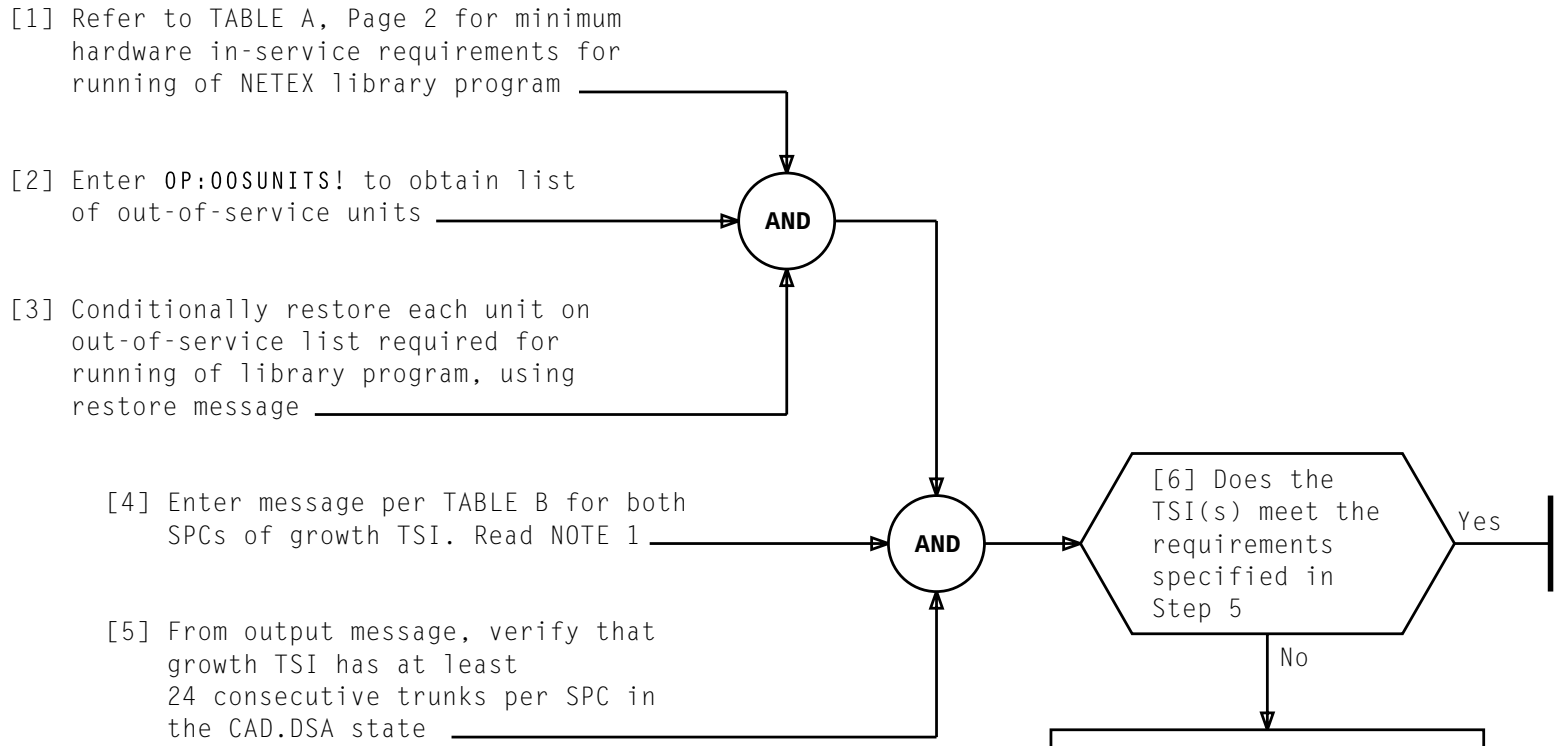


TABLE B
VER:TRK:TAN xxxxxxx – xxxxxxx!
xxxxxx – xxxxxx = range of 120 TANs

NOTES

1. Range of TANs is 001 to 120
2. Trunks used for NETEX testing may be assigned to Trunk Subgroups which will be in service once TSI is operational or they may be assigned to a Dummy Trunk Subgroup created for NETEX testing. The greater the trunk load, the more effective NETEX will be.
3. Those frames which will be Flash-Cut should be loaded to a minimum of 70% trunk capacity for NETEX testing

TABLE A			
1A PROCESSOR		PERIPHERAL	
UNIT	MINIMUM FRAME REQUIREMENTS	UNIT	MINIMUM FRAME REQUIREMENTS
BUSES	All buses in service and operating duplex	NCLK	All four chains in service
CC	Operating full duplex	PUB	All PUBs in service and operating duplex
CS	Address spectrum plus 4 CS in service (Maximum of 2 CS out-of-service)	SP	Base SPs operating duplex plus all nonbase SPs in service. No more than 1 controller out-of-service
DUS	All DUS in service	TMS	All TMSs in service and operating duplex
IOUS	All IOUS plus all required I/O channels in service	TSI	Member number 0 operating duplex plus all other TSIs in service. No more than 1 controller out-of-service. All newly added TSI member numbers associated with NETEX testing operating duplex
PS	All PS in service (address spectrum plus 2 rover PS)		
TUC	Office requirements		

SUMMARY

Verify current equipage status of TMS memory block(s) using SME verify message and specifying index numbers for appropriate memory block and controller. Submembers must be marked **UNEQ** or **GROW** as determined by certain conditions. If in error, perform RC Form 701 degrow procedure to correct submember equipage.

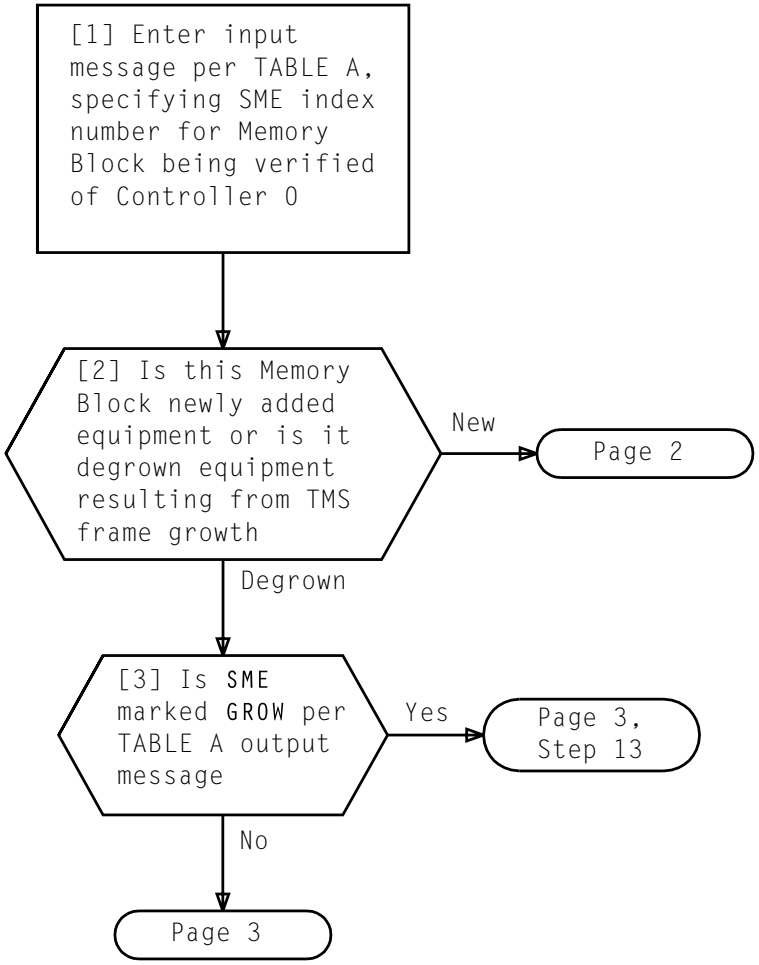
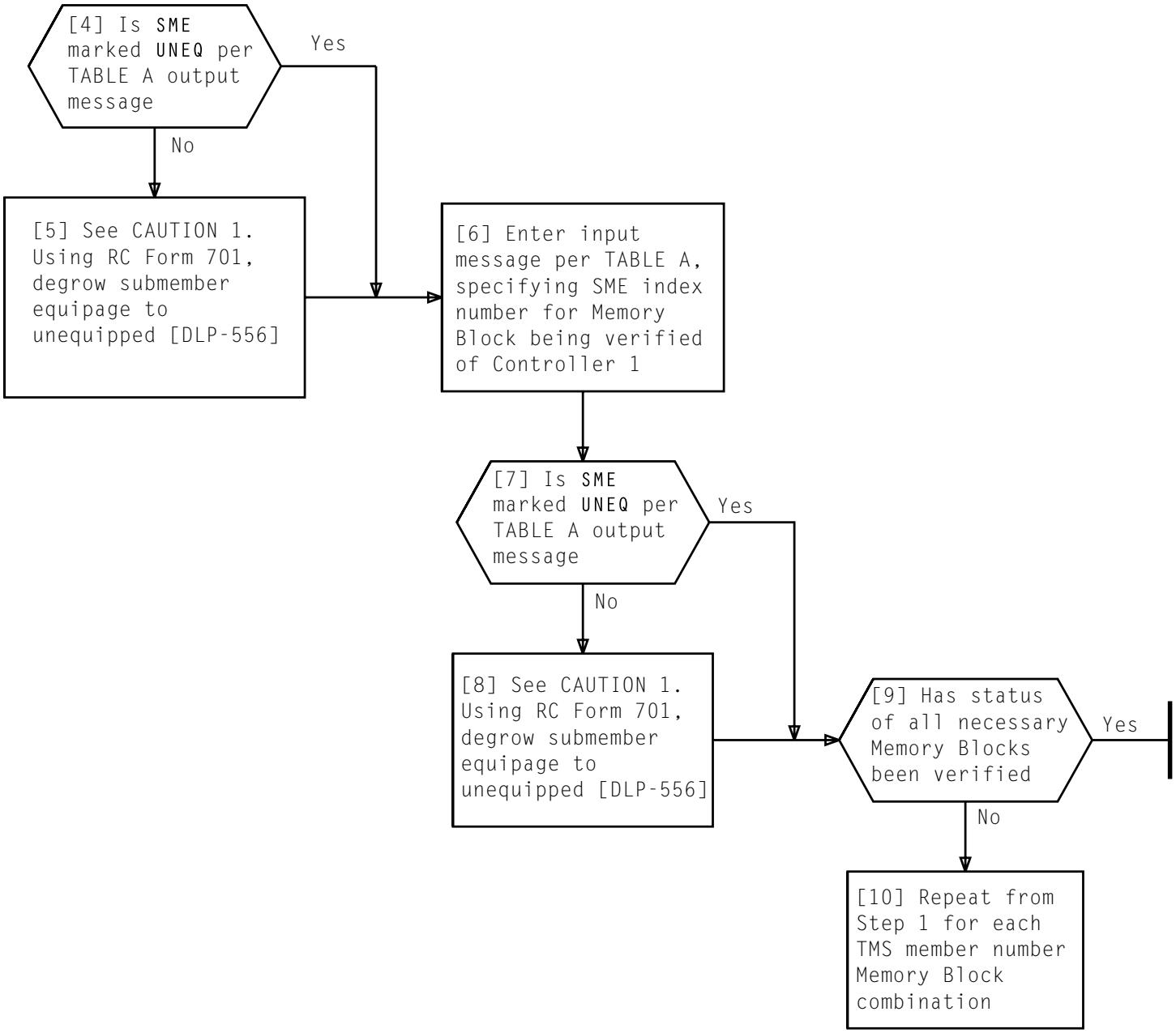


TABLE A

INPUT MESSAGE	OUTPUT MESSAGE
VER:UTYPE:TMSP b,SME d!	VER:UTMN;OPT(SME),CUR: FLN a, UTYN TMSP, MEMN b, ME OPER, SUBMEM d, SME c,

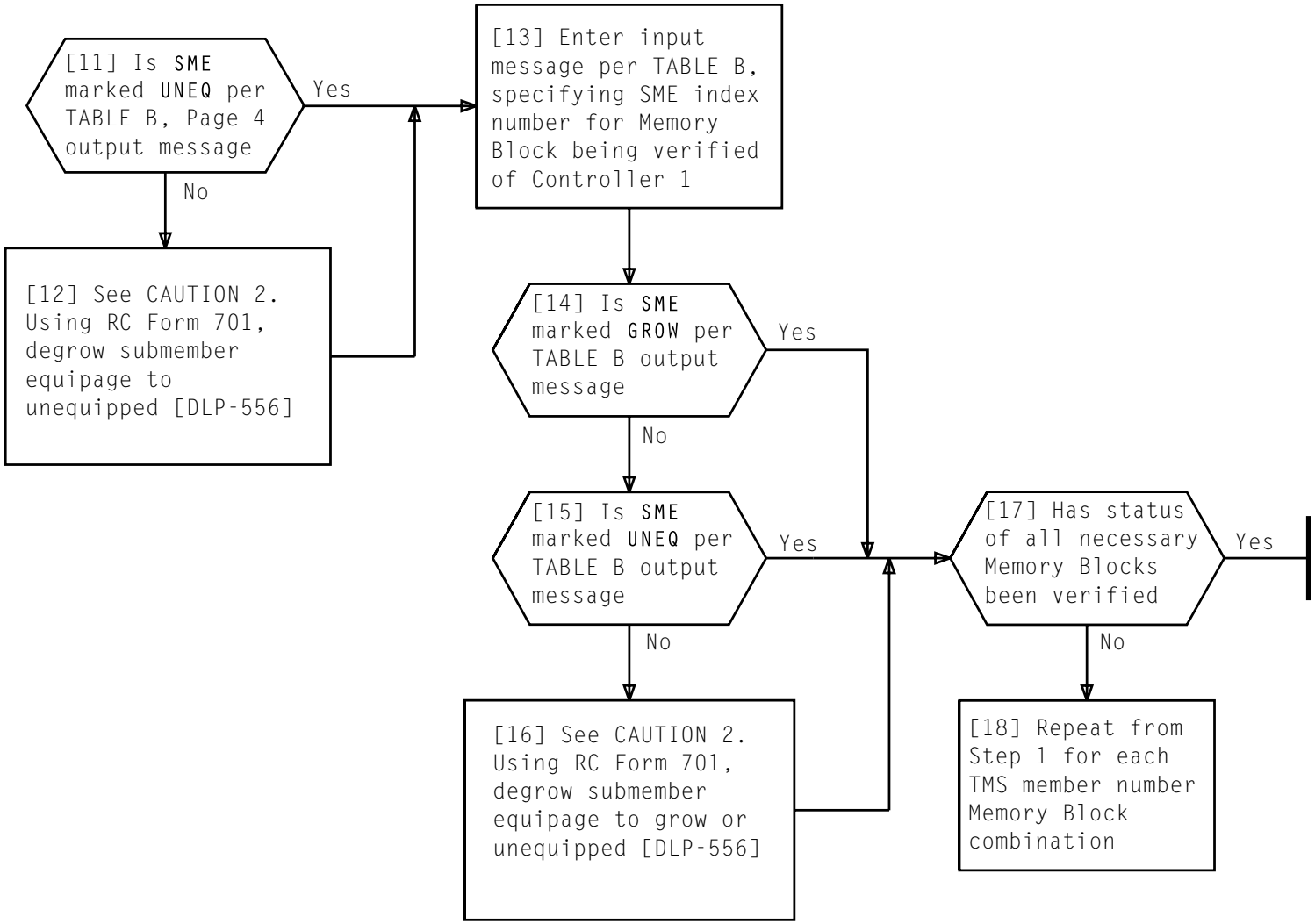
a = Floor location number
b = Member number of growth TMS frame
c = UNEQ or GROW
d = SME index number
= 49 (for Memory Block 1, Controller 0)
= 50 (for Memory Block 2, Controller 0)
= 51 (for Memory Block 3, Controller 0)
= 53 (for Memory Block 1, Controller 1)
= 54 (for Memory Block 2, Controller 1)
= 55 (for Memory Block 3, Controller 1)

VERIFY EQUIPAGE STATUS OF TMS MEMORY BLOCK(S)



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

VERIFY EQUIPAGE STATUS OF TMS MEMORY BLOCK(S)



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

VERIFY EQUIPAGE STATUS OF TMS MEMORY BLOCK(S)

TABLE B	
INPUT MESSAGE	**OUTPUT MESSAGE**
VER:UTYPE:TMSP b,SME d!	VER:UTMN;OPT(SME),CUR: FLN a, UTYN TMSP, MEMN b, ME OPER, SUBMEM d, SME c,

a = Floor location number
b = Member number of growth TMS frame
c = UNEQ or GROW
d = SME index number
= 49 (for Memory Block 1, Controller 0)
= 50 (for Memory Block 2, Controller 0)
= 51 (for Memory Block 3, Controller 0)
= 53 (for Memory Block 1, Controller 1)
= 54 (for Memory Block 2, Controller 1)
= 55 (for Memory Block 3, Controller 1)

VERIFY EQUIPAGE STATUS OF TMS MEMORY BLOCK(S)

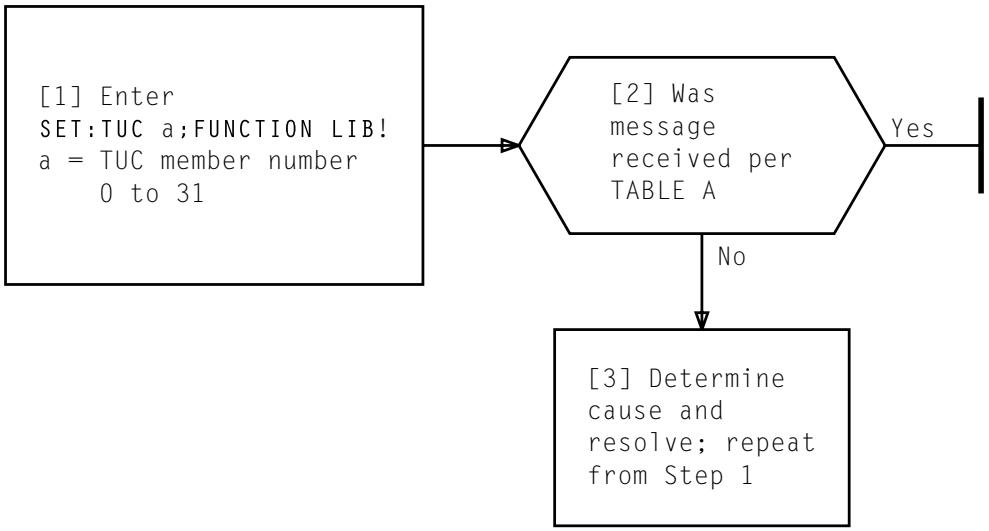


TABLE A
SET:TUC a TAPE MOUNTED ON TUC TAPE TYPE: LIB . . . . OK TO PROCESS TAPE?
a = TUC member number 0 to 31

SET TUC TO LIBRARY FUNCTION

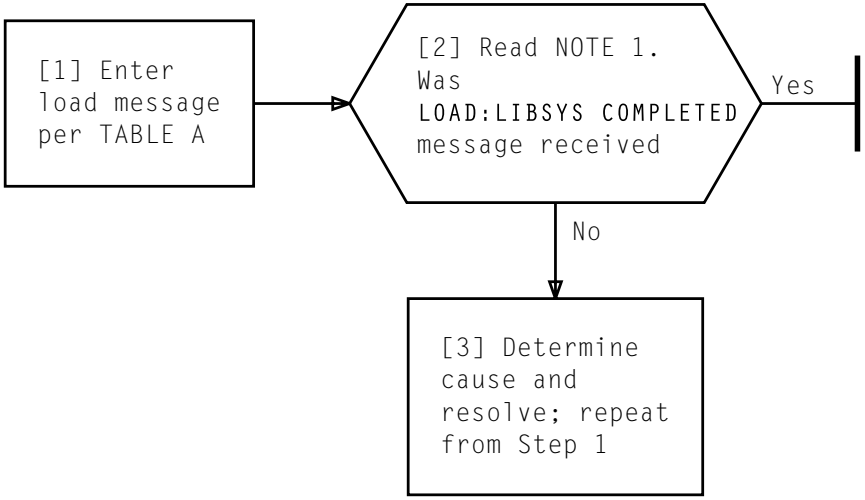


TABLE A
LOAD:LIBSYS,FS;TAPE:PKG LGxNETX!
x = Current generic number

LOAD LGxNETX LIBRARY PROGRAM IN FILE SYSTEM

NOTE 1 System will not respond COMPLETED until tape is loaded	
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1.0 General:

1.1 Log sheet is designed to aid in:

- keeping track of TSIs and network routing paths currently under test
- keeping track of TSIs and network routing paths which have completed test interval
- locating obvious trouble patterns in test runs.

1.2 Copy log sheet, Page 2, locally as needed.

2.0 Requirements to maintain log sheet:

2.1 Each growth TSI and network routing path currently under test should have an entry on log sheet.

2.2 When testing on TSI and network routing path is repeated, new entry should be made on log sheet.

2.3 If failure occurs, all applicable entries should be made.

End of procedure

MAINTAIN LOG SHEET

GROWTH TSI MEMN	NETWORK ROUTING	CONNECT LEVEL	DURATION OF TEST INTERVAL	BEGINNING OF TEST INTERVAL	DID TRPF OCCUR?	TIME OF FAILURE	WAS REPAIR ATTEMPTED	COMMENTS

MAINTAIN LOG SHEET

1.0 Assure that NETEX library program resides in file system:

1.1 Enter message **OP:LIBSTAT,FS!**

Response: Output message which lists the library programs contained in file system

1.2 Observe output for presence of LGxNETX
x = current generic program

1.3 If NETEX resides in file system, proceed to 2.0.

1.4 If NETEX does not reside in file system, obtain library tape containing NETEX program from installer or load NETEX from office library tape.

1.5 Enter message **OP:DUSTATUS!**

1.6 Observe output and select unassigned (UNA) TUC.

1.7 Mount tape containing NETEX library program on tape unit determined in the previous step [DLP-516].

1.8 Set TUC to library function [DLP-538].

1.9 Allow TUC read only access (**ALW:TUC** a**:RO!**)

1.10 Load library program package from tape onto disk [DLP-539].

1.11 Enter message **OP:PERIFINH;UCL!** and save printout for use after NETEX has been stopped.

2.0 Set network routing to NORM state [DLP-548].

3.0 Copy NETEX from file store to program store and begin executing idle loop; enter message
EX:LIBSYS:PKG LGxNETX,PGM NETX,TASK 0,CLIENT 0!
x = current generic program

Response: Prompt output message indicating office status

4.0 Observe prompt output message and note if office translations indicate precut or in-service office status

4.1 If precut status is indicated:

1. Enter message to terminate program (**IN:LIBSYS:CLIENT 0,ASC(NO)!**)

2. Contact support group or NESAC for applicable overwrites.

3. Execute overwrites to set office status to in-service.

4. Repeat from 3.0.

4.2 If an in-service status is indicated, enter message **IN:LIBSYS:CLIENT 0,ASC(YES)!**

End of procedure

PERFORM PRETEST ACTIVITIES

1. Observe following prompt output message:
   NETX ENTER AVERAGE OCCUPANCY ON
   SPCS DESIRED — DEC(50-800)

2. Enter message IN:LIBSYS:CLIENT O,DEC(xxx)!
   xxx = occupancy level desired

   NOTE 1: NETEX should be set to 200 connect level during initial NETEX testing; however occupancy level requested must be less than the number of trunks available on growth TSI.
   NOTE 2: If NETEX testing is terminated to run audits, restart NETX program at the same connect level before termination unless otherwise instructed.

   Response: NETX ENTER TSI MEMBER NUMBERS — DEC(0-63)
   NETX CAUTION CAN ONLY ENTER NEWLY GROWN TSI MEMNS

   NOTE: Member numbers entered must be an even number; for example, member numbers ten and eleven are used if a ten is entered in conjunction with use message. An error message will be printed if companion number is entered.

3. Enter message IN:LIBSYS:CLIENT O,DEC(M,N...Y,Z)!
   Where M,N...Y,Z are growth TSI MEMNS to be used

   Response: BEGIN NETEX EXERCISE

4. Enter message: IN:LIBSYS:CLIENT O,ASC(RUN)!

   Response: REPT:NETX EXERCISE IN PROGRESS
   and additional output messages indicating TSI/SPC and number of trunks available for testing

End of procedure

INPUT INITIAL NETEX PROGRAM EXECUTION DATA

1.0 Purpose

1.1 The purpose of this initial test run is to determine if any faulty network paths exist due to marginal cable, circuit packs, etc., and if they do, determine where and note on log sheet for later use.

2.0 General

2.1 Growth TSIs should be configured to each network routing state (NORM, RTSI, TTSI, and BOTH) for 15 minutes per state.

2.2 If a TRPF occurs during a 15-minute interval, network routing on this TSI frame will automatically switch to next state. Make entry on log sheet and allow NETEX to run on new routing configuration. Begin new 15-minute test interval for new routing.

2.3 If NETEX runs on a route for 15 minutes without triggering a TRPF, network routing should be switched to a new state and new 15-minute test interval begun.

2.4 Do not attempt to repair any trouble areas unless multiple TRPFs occur on a frame and there is a chance of this frame going simplex.

3.0 Test Procedure

3.1 Monitor growth TSIs under test noting any TRPFs caused by a TSI exposed to NETEX testing.

3.2 If a TRPF occurs within a 15-minute test interval:

1. Observe output message to determine path and growth TSI where failure occurred.

2. Make applicable entries on log sheet.

3. Begin new 15-minute test interval on network routing the TSI has switched to.

4. Repeat from Step 3.1.

3.3 If a TSI frame has run for 15 minutes on a network routing path without triggering a TRPF:

1. Make applicable entries on log sheet.

2. Set network routing to next state to be tested [DLP-548].

3. Begin 15-minute test interval on new routing configuration.

4. Repeat from Step 3.1.

3.4 After all four network routes have been tested on each growth TSI, terminate NETEX and run audits [DLP-549].

End of procedure

TEST GROWTH TSIs AT 200 CONNECT LEVEL

1.0 Purpose

1.1 This part of NETEX testing is designed to eliminate any faulty network paths found during initial test run.

2.0 General

2.1 Possible trouble areas should be inspected one at at time.

2.2 Each growth TSI and network routing state under inspection should be entered on log sheet.

2.3 Any repairs made should be noted under the comments column on the log sheet.

3.0 Test procedure

3.1 Analyze log sheet to determine if any obvious trouble patterns exist which could indicate that a faulty marginal unit may be present in newly grown TSI frame(s) and/or TMS interface.

3.2 Rerun NETEX at 200 connect level on TSI frame and network route where a faulty marginal unit may exist

1. Set network routing [DLP-548].

2. Enter message
   EX:LIBSYS:PKG LGxNETX,PGM NETX,TASK 0,CLIENT 0!
   x = current generic program

   Response: Prompt output message indicating office status

3. In response to prompt output message, enter message **IN:LIBSYS,CLIENT 0,ASC(YES)!**

4. Input NETEX Execution Data [DLP-544].

3.3 Monitor TSI under test for 15 minutes.

3.4 If TRPF occurs:

1. Observe output messages to determine path where failure occurred and attempt to repair.

2. After repair (or attempt) is complete, set network routing back to state where failure occurred [DLP-548].

3. Repeat from Step 3.3.

3.5 If no TRPF occurs, set network routing to next routing configuration and TSI member number believed to contain trouble and repeat from 3.3 [DLP-548].

3.6 If no trouble area is believed to exist, Terminate NETEX and Run Audits [DLP-549].

End of procedure

INVESTIGATE ANY TROUBLE PATTERNS

1.0 General

1.1 Apply NETEX on all growth TSIs at the same time

1.2 When a TSI frame completes a 2-hour test interval on all network routes without triggering any TRPFs, this TSI frame should be deleted from NETEX testing using following input message:
IN:LIBSYS:CLIENT 0,DLT(a)!
a = even member number of TSI frame to be deleted

1.3 It is very important to keep the log sheet up to date because NETEX will be terminated and audits run several times during this portion of the procedure. When NETEX is restarted, the network routing configuration on each growth TSI member number will be entered separately and the time period will be picked up where it was when NETEX was terminated. The amount of time NETEX ran in each state before testing was terminated should be entered in comments column on the log sheet.

2.0 Test procedure

2.1 Set network routing to NORM state on all growth TSIs [DLP-548].

2.2 Enter message
EX:LIBSYS:PKG LGxNETX,PGM NETX,TASK 0,CLIENT 0!
x = current generic program

Response: Prompt output message which indicates office status

2.3 In response to prompt output message, enter message
IN:LIBSYS:CLIENT 0,ASC(YES)!

2.4 Input NETEX execution data [DLP-544].

2.5 Monitor growth TSIs while NETEX is being applied to one of four routing states for 2 hours.

2.6 If no TRPFs occur during 2-hour test interval on growth TSI and routing configuration:

1. Note on log sheet the TSI and network route which meet the final criteria of this test

2. Set network routing to next state to be tested on this TSI [DLP-548].

3. Begin 2-hour test interval for new state under test.

4. Repeat from Step 2.5.

2.7 If any TRPFs occur during 2-hour test interval, analyze output message to determine where failure occurred, make applicable entries on log sheet and note any obvious trouble patterns.

2.8 If obvious trouble pattern exists:

1. Attempt to locate trouble and repair.

2. When repair (or attempt) is complete, set network routing back to state where failure occurred [DLP-548] and begin new 2-hour test interval.

3. Repeat from Step 2.5

2.9 If no obvious trouble pattern exists, and TRPF appears to be intermittent:

1. Set network routing back to state where failure occurred and begin new 2-hour test interval.

Continued

RUN NETEX ON GROWTH TSIs AT 800 CONNECT LEVEL

2. Repeat from Step 2.5.

2.10 After all network routing configurations have completed 2-hour test interval on each growth TSI without triggering any TRPFs, terminate NETEX and Run Audits [DLP-549].

End of procedure

1. Enter Message **SET:NETROUT;**xxxx**:MEMN** a!

   xxxx = network routing path to be tested (NORM, RTSI, TTSI, and BOTH)

   Note: Member number entered must be an even number; for example, member numbers ten and eleven are used if ten is entered in conjunction with this message. An error message will be printed if the companion number is entered.

   a = even member number of TSI to be tested

2. Step 1 must be repeated for each pair of member numbers (TSI-B frame) to be tested.

End of procedure

SET NETWORK ROUTING

1. Enter message to terminate NETEX
   IN:LIBSYS:CLIENT O,ASC(TRM)!

2. Wait for EX LIBSYS PKG LGxNETX PGM NETX COMPLETED message.

3. Enter message to allow audits
   ALW:AUD:NUM(8, 16, 19, 27, 28, 29, 32, 34, 36, 46, 48, 52)!

4. Enter message to run audits and ensure no errors received
   AUD:NUM(8, 16, 19, 27, 28, 29, 32, 34, 36, 46, 48)!

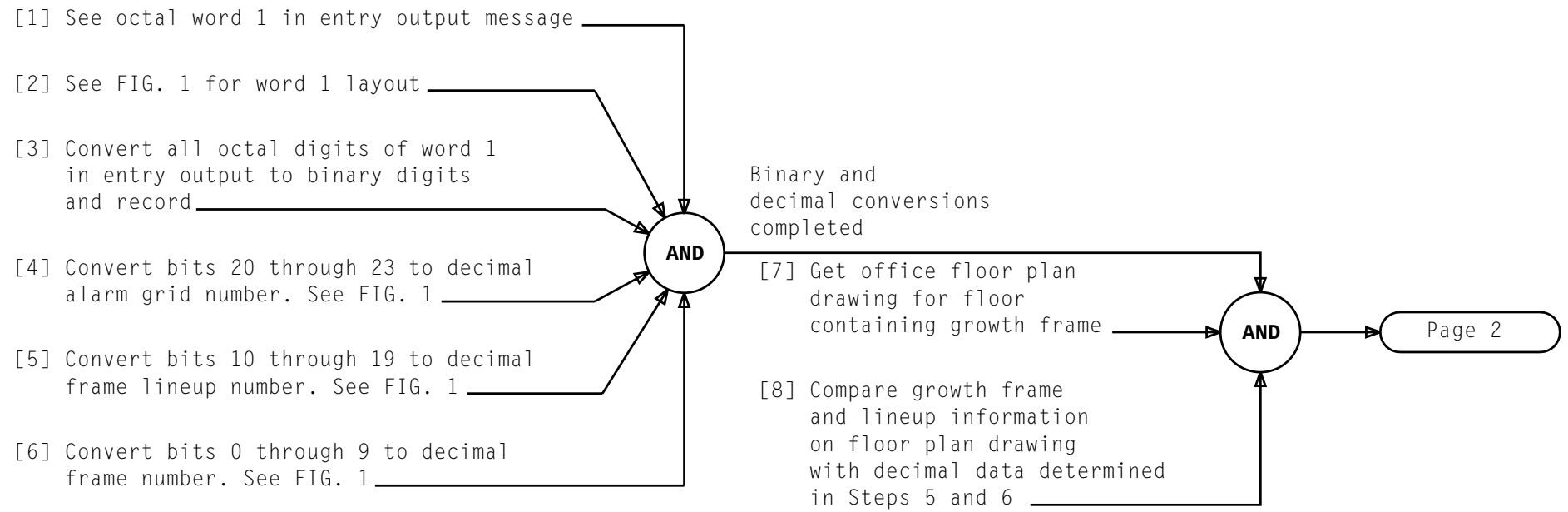
5. Enter message OP:PERIFINH;UCL! and ensure that no additional
   pests are set.

End of procedure

TERMINATE NETEX AND RUN AUDITS

SUMMARY

Convert octal digits of entry output data word 1 to binary. Determine decimal number of grid, lineup and frame using FIG. 1. Compare calculated data with office records and floor plan drawing as required. If UT data does not agree with office records, record discrepancies for later reference.



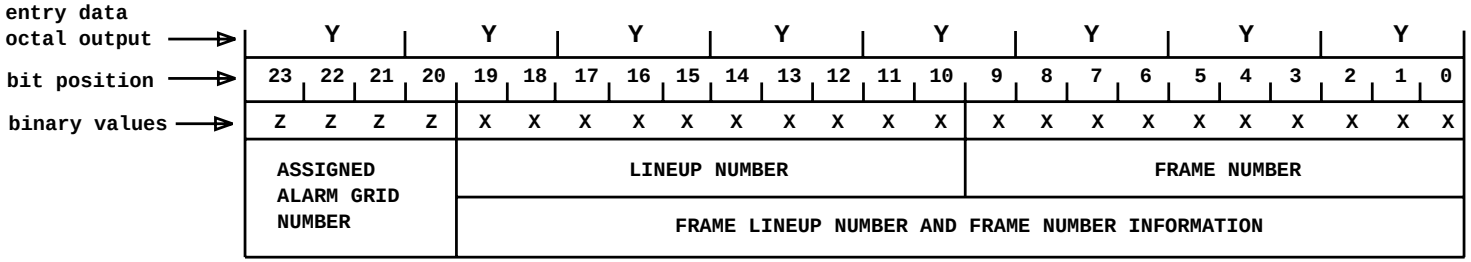


FIG. 1 – Entry Data Word Layout

VERIFY ALARM GRID, LINEUP AND FRAME ASSIGNMENT FOR GROWTH FRAME

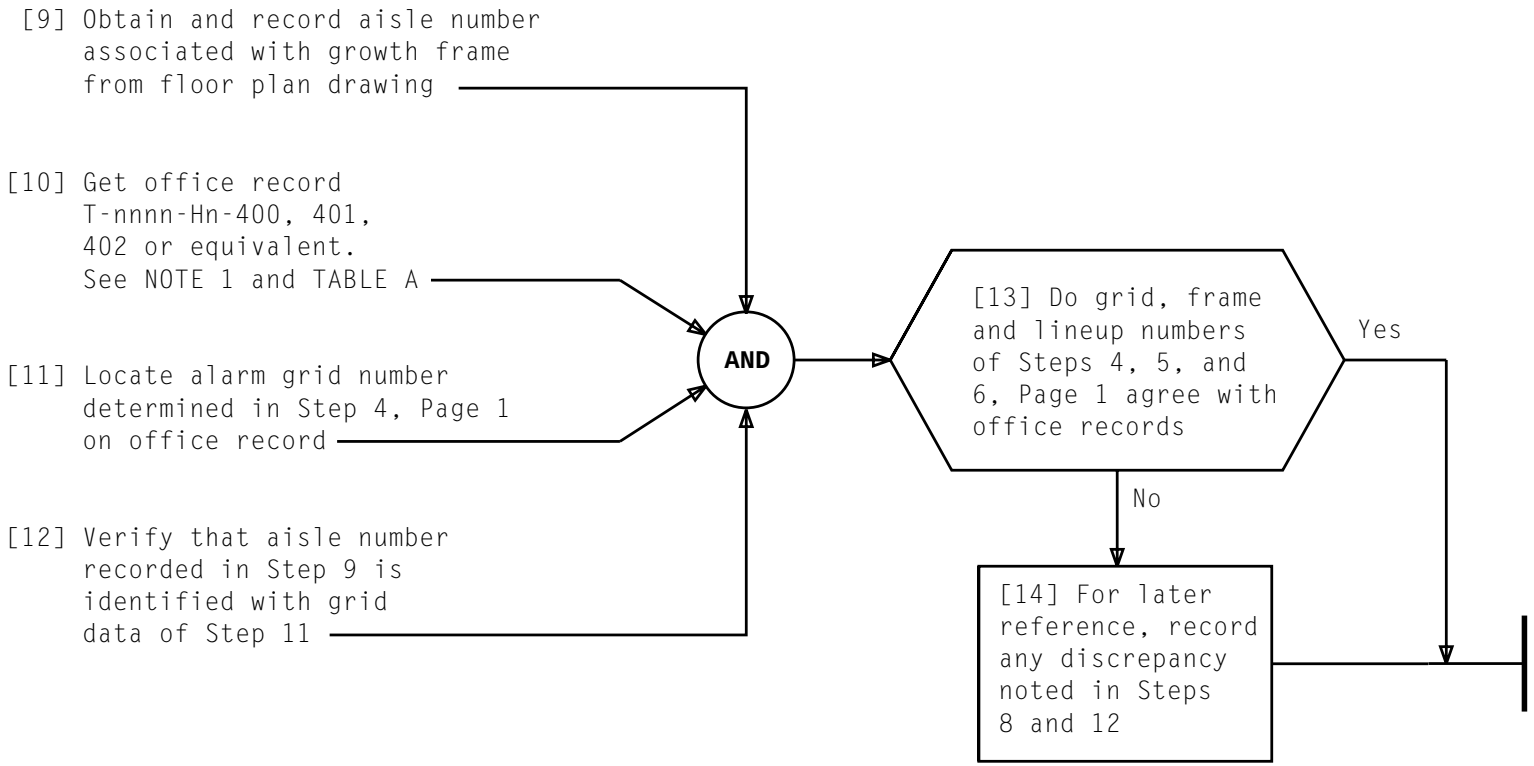
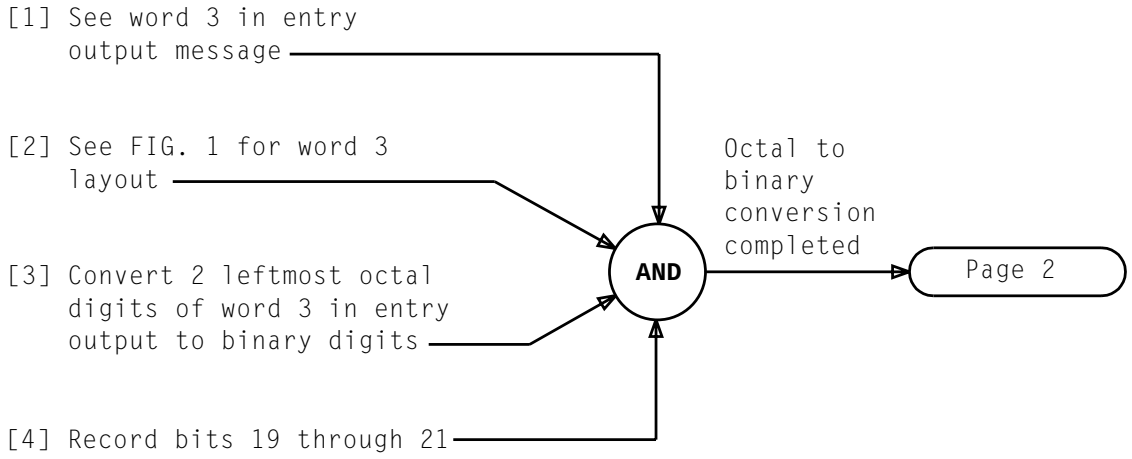


TABLE A	
ALARM GRIDS	**DRAWING NUMBER**
1 through 5	T-nnnn-Hn-400
6 through 10	T-nnnn-Hn-401
11 through 15	T-nnnn-Hn-402

NOTE 1
n = Office unique drawing identification number

VERIFY ALARM GRID, LINEUP AND FRAME ASSIGNMENT FOR GROWTH FRAME

SUMMARY	
Convert 2 leftmost octal digits of entry output data word 3 to binary. Determine PUB branch binary code for growth	frame from TABLE A, Page 2 and office record T-nnnn-Hn-3840 or equivalent. If binary code does not agree with UT entry data, record discrepancy for later reference.



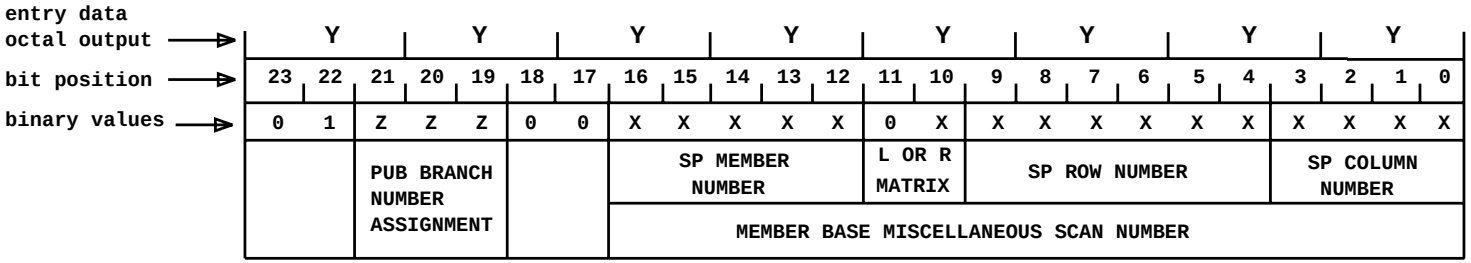


FIG. 1 — Entry Data Word 3 Layout

VERIFY PUB BRANCH ASSIGNMENT FOR GROWTH FRAME

[5] Get office record drawing
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

AND

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

Page 3

TABLE C

LINE NO.	BUS 0&1	FROM	THROUGH	TO	TOTAL LENGTH	TOTAL LOAD	NOTE OR TABLE
1	A	PUBB		1/O 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	TYPICAL				
15	W	PUBB					
16	X	PUBB					
LNN	BS	FROM		TO	TO LG	TO LD	NTTB

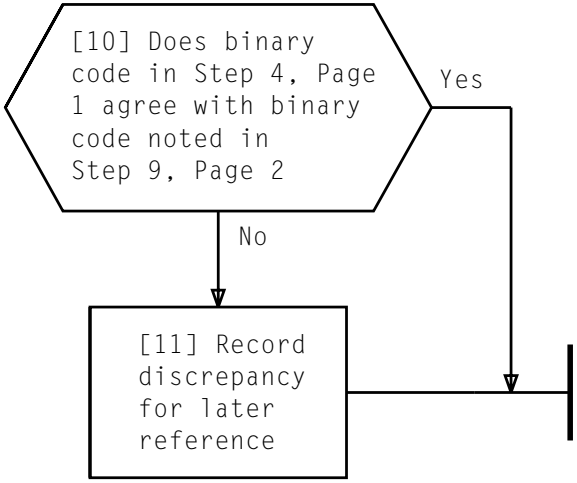
FIG. 2 — Typical Table C of 3840 Drawing

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



VERIFY PUB BRANCH ASSIGNMENT FOR GROWTH FRAME

SUMMARY

Call up RC Form 801 on CRT. Using TTY, fill in blank fields on form to identify and to correct selected digit(s) within a selected word of UT translator. Enter message, then verify. Using assigned order number, activate the recent change; then verify current translations.

[1] See CAUTION 1.
Enter
OP:RCFORM 801!

CRT displays
RC Form 801
per FIG. 1

Using TTY and CRT display of RC Form 801:

[2] Type **TST** in field following (**TRANS**)

[3] See TABLE A, Page 2. Determine translator identifier for growth member requiring UT translator change

[4] In field following **TRANSID**, type unit type identifier determined in Step 3

[5] Type recent change order number assigned to this word change in field following **ORNU**

[6] In field following **ENTRY**, type member number of growth member requiring UT translator change

AND

Page 2

```
RC:FUNC;CHG;OPT(TRANS),_ _ _:      TRANSID _ _ _ _,
ORNU _ _ _ _ _ _ _ _,
ENTRY _ _ _ _ _ _ _ _, WORDNO _ _ _ _,
SIZE _ _,            DISP _ _ _,
BINOCT _ _,
NEWDATA _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _,
OLDDATA _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _,
REMARKS _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _!
```

FIG. 1 — Blank RC Form 801

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

PERFORM FUNCTIONAL WORD CHANGE TO CORRECT UT TRANSLATOR WORD THEN VERIFY

Using TTY and CRT display of RC Form 801:

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

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

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

[10] Determine bit position number (range of 0 to 23) identifying rightmost of the consecutive bits determined in Step 8

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

AND

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TABLE A

GROWTH MEMBER REQUIRING UT TRANSLATOR CHANGE	TRANSLATOR IDENTIFIER (TRANSID)
Time Slot Interchange	UTTSI
Time Multiplex Switching	UTTMSP
Peripheral Unit Controller	UTPUC
Mass Announcement Service Frame	UTMAS

PERFORM FUNCTIONAL WORD CHANGE TO CORRECT UT TRANSLATOR WORD THEN VERIFY

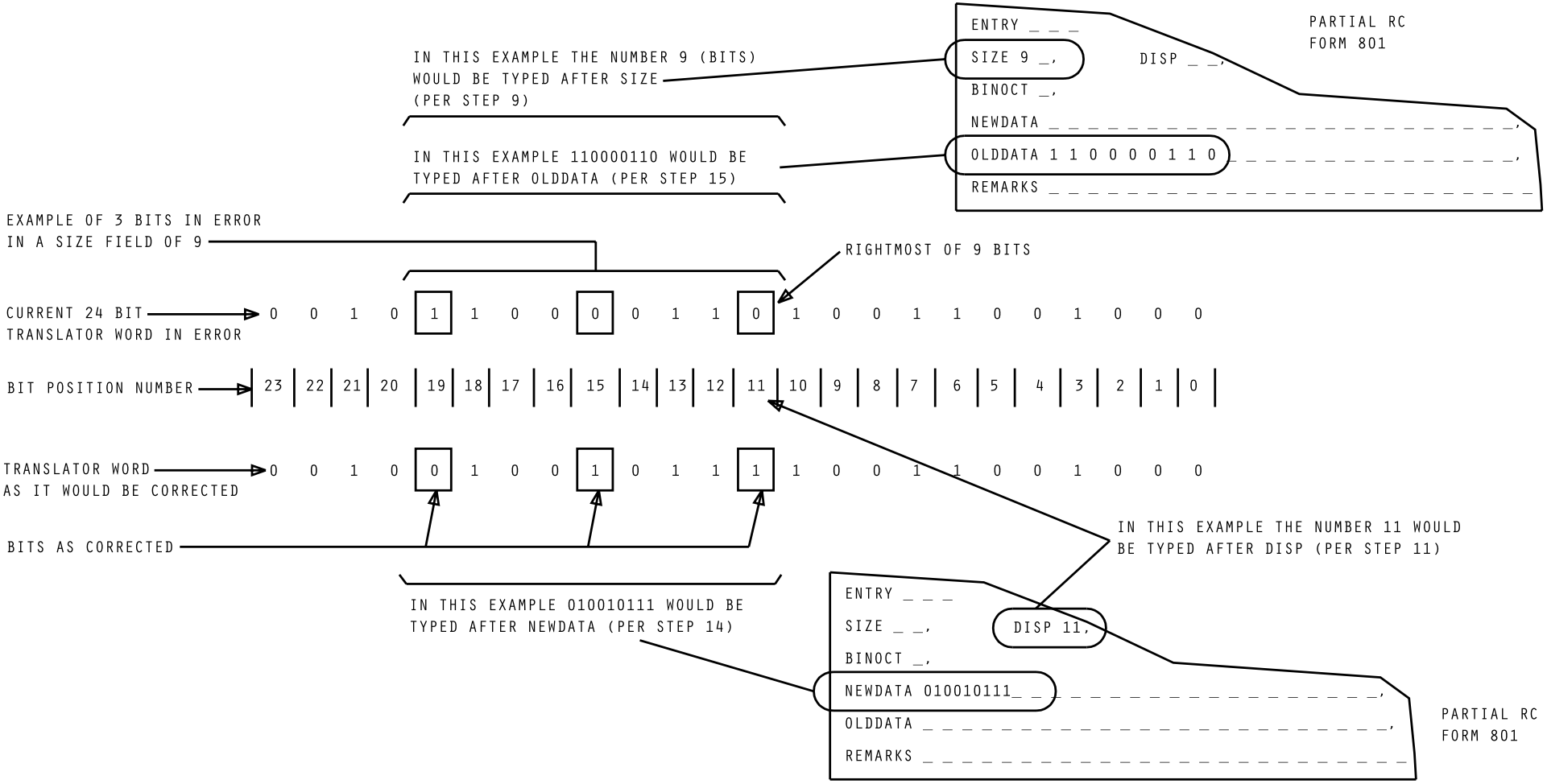


FIG. 2 – Example of Functional Word Change Considerations

PERFORM FUNCTIONAL WORD CHANGE TO CORRECT UT TRANSLATOR WORD THEN VERIFY

Using TTY and CRT display of RC form 801:

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

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

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

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

[16] Enter form

AND

RC Form 801 filled in and entered

Page 5

NOTES

1. Quantity of binary bits to be entered as **NEWDATA** must be equal to decimal number entered as **SIZE**
2. Quantity of binary bits to be entered as **OLDDATA** must be equal to quantity of bits entered as **NEWDATA**

PERFORM FUNCTIONAL WORD CHANGE TO CORRECT UT TRANSLATOR WORD THEN VERIFY

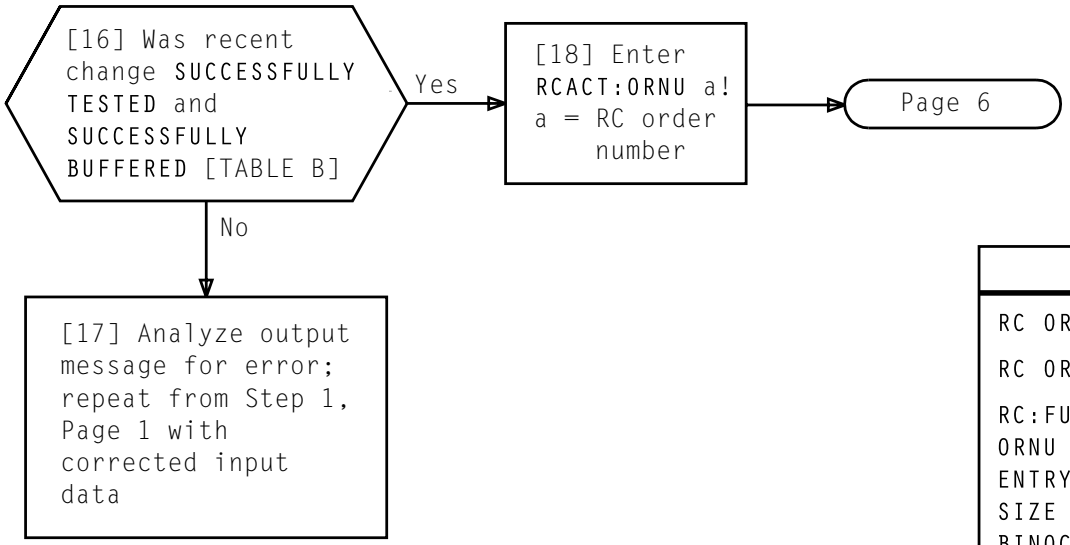


TABLE B

RC ORNU b SUCCESSFULLY TESTED

RC ORNU b SUCCESSFULLY BUFFERED

RC:FUNC;CHG;OPT(TRANS),BUF: TRANSID a,
ORNU b,
ENTRY c, WORDNO d,
SIZE e, DISP f,
BINOCT B,
NEWDATA g,
OLDDATA h,
REMARKS _!
REPT:RC DUMP OF UNIT TYPE ENTRY AS IT WILL APPEAR
AFTER THE MESSAGE IS ACTIVATED

WORD 0 _____ _____ A_____L_____ _____
_____ p_____I_____C_____ _____
WORD 10 ____T____Y_____ _____ _____

a = UTTSI, UTTMSP, UTPUC, or UTMAS
b = RC order number
c = Member number of growth frame
d = Decimal number of word changed
e = Decimal number of bit(s) changed
f = Decimal number of bit position changed (Rightmost bit)
g = Binary bits inserted to correct data
h = Binary contents of portion of word changed

PERFORM FUNCTIONAL WORD CHANGE TO CORRECT UT TRANSLATOR WORD THEN VERIFY

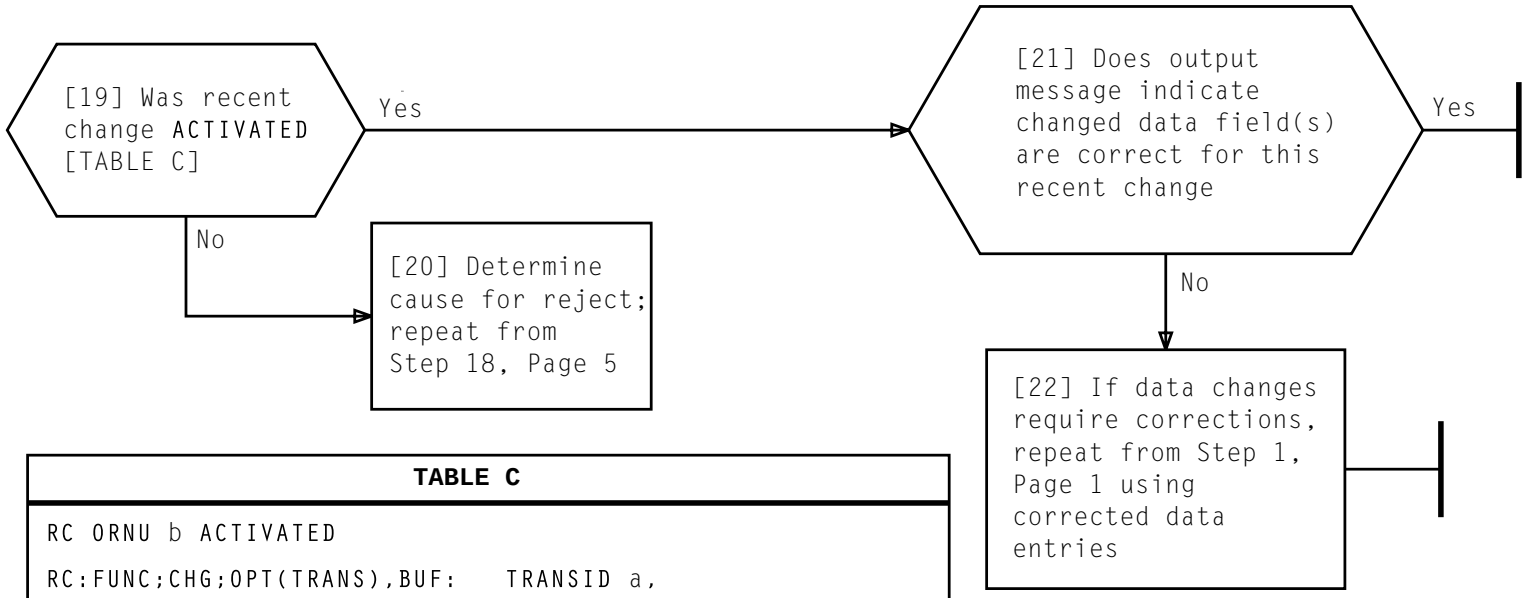


TABLE C

```
RC ORNU b ACTIVATED

RC:FUNC;CHG;OPT(TRANS),BUF:   TRANSID a,
ORNU  b,

ENTRY c,    WORDNO d,

SIZE  e,    DISP f,

BINOCT B,

NEWDATA g,

OLDDATA h,

REMARKS_____________________!
```

a = UTTSI, UTTMSP, UTPUC, or UTMAS
b = RC order number
c = Member number of growth frame
d = Decimal number of word changed
e = Decimal number of bits changed
f = Decimal number of bit position changed (Rightmost bit)
g = Binary bits inserted to correct data
h = Binary contents of portion of word changed

PERFORM FUNCTIONAL WORD CHANGE TO CORRECT UT TRANSLATOR WORD THEN VERIFY

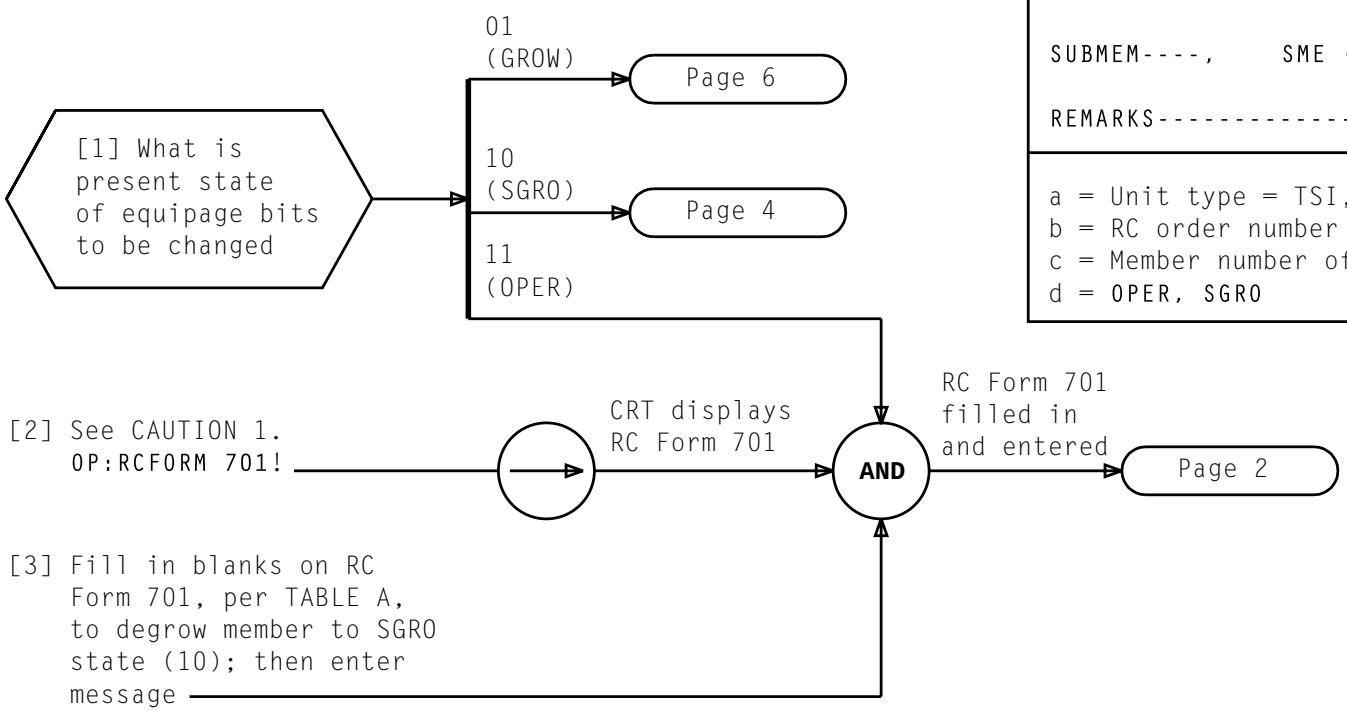
SUMMARY

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,
                        OLD   NEW
MEMN c,          ME   ( d   ,  d   ),

                        OLD   NEW
SUBMEM----,      SME (----, ----),

REMARKS-----------------------------!
```

a = Unit type = TSI, TMSP, PUC, or MAS
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

RECENT CHANGE MEMBER EQUIPAGE USING RC FORM 701 (DEGROW)

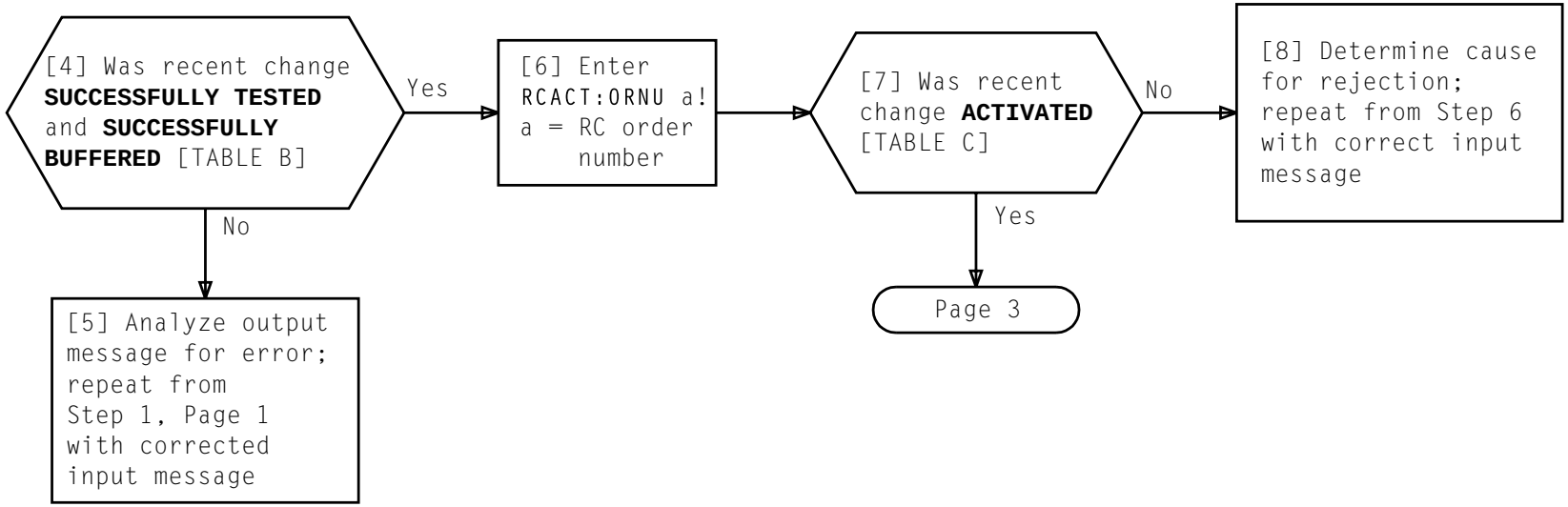


TABLE B

```
RC ORNU b SUCCESSFULLY TESTED

RC ORNU b SUCCESSFULLY BUFFERED

RC:UTYPE;CHG;OPT(EQP, DEGROW), BUF:    UTYN a,

ORNU b,
                          OLD   NEW
MEMN c,          ME    (OPER, SGRO),

                          OLD   NEW
SUBMEM ----,     SME   (----, ----),

REMARKS--------------------------------!
```

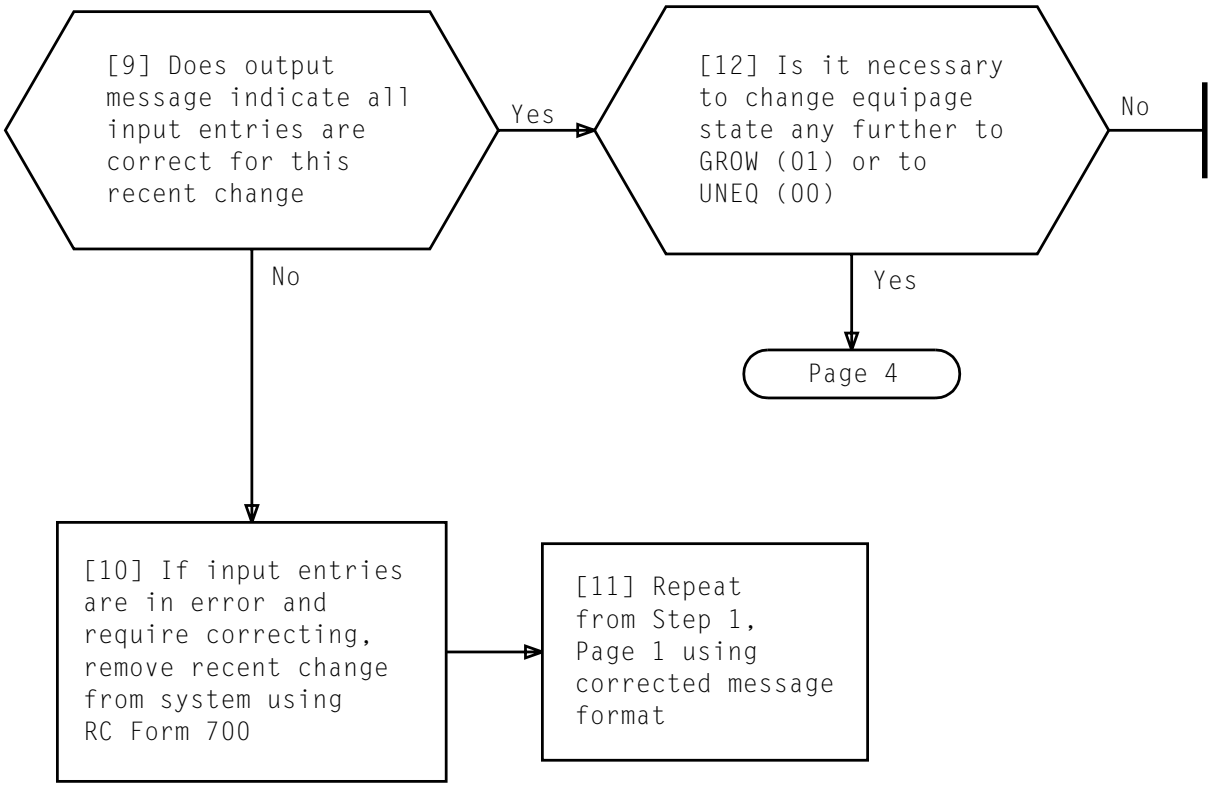
a = Unit type = TSI, TMSP, PUC, or MAS
b = RC order number
c = Member number of degrowth frame

TABLE C

```
RC ORNU b ACTIVATED

RC:UTYPE;CHG;OPT(EQP,DEGROW), BUF:     UTYN a,

ORNU b,
                          OLD   NEW
MEMN c,           ME   (OPER, SGRO),

                          OLD   NEW
SUBMEM ----,     SME   (----, ----),

REMARKS--------------------------------!
```

a = Unit type = TSI, TMSP, PUC, or MAS
b = RC order number
c = Member number of degrowth frame

RECENT CHANGE MEMBER EQUIPAGE USING RC FORM 701 (DEGROW)



RECENT CHANGE MEMBER EQUIPAGE USING RC FORM 701 (DEGROW)

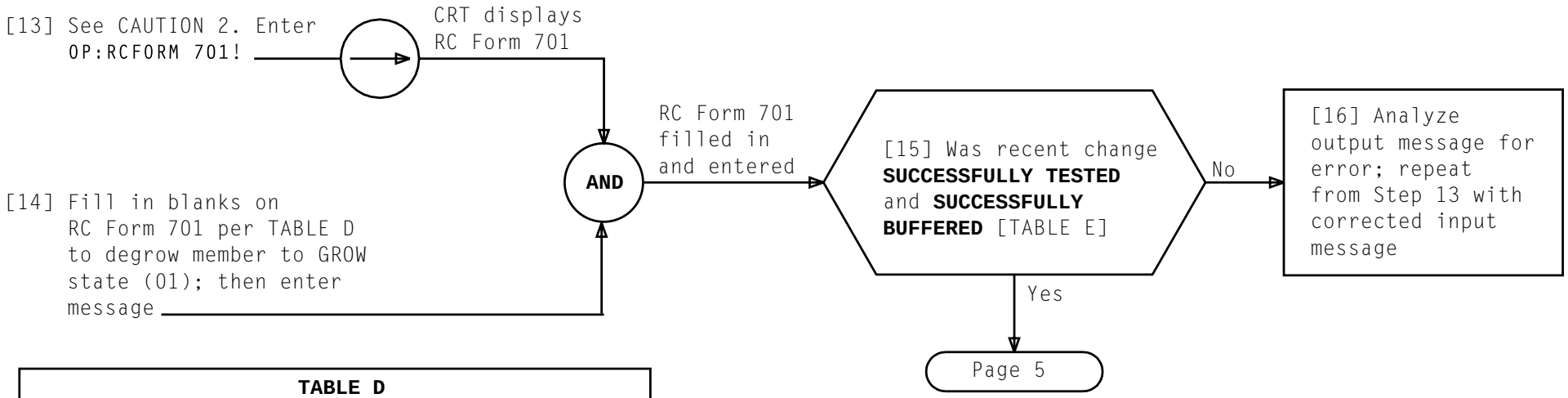


TABLE D

```
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 = TSI, TMSP, PUC, or MAS
b = RC order number
c = Member number of degrowth frame
d = SGRO, GROW

TABLE E

```
RC ORNU b SUCCESSFULLY TESTED

RC ORNU b SUCCESSFULLY BUFFERED

RC:UTYPE;CHG;OPT(EQP,DEGROW), BUF:    UTYN a,

ORNU b,
                          OLD   NEW
MEMN c,           ME  (SGRO, GROW),

                          OLD   NEW
SUBMEM--------, SME  (----, ----),

REMARKS--------------------------------!
```

a = Unit type = TSI, TMSP, PUC, or MAS
b = RC order number
c = Member number of degrowth frame

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

RECENT CHANGE MEMBER EQUIPAGE USING RC FORM 701 (DEGROW)

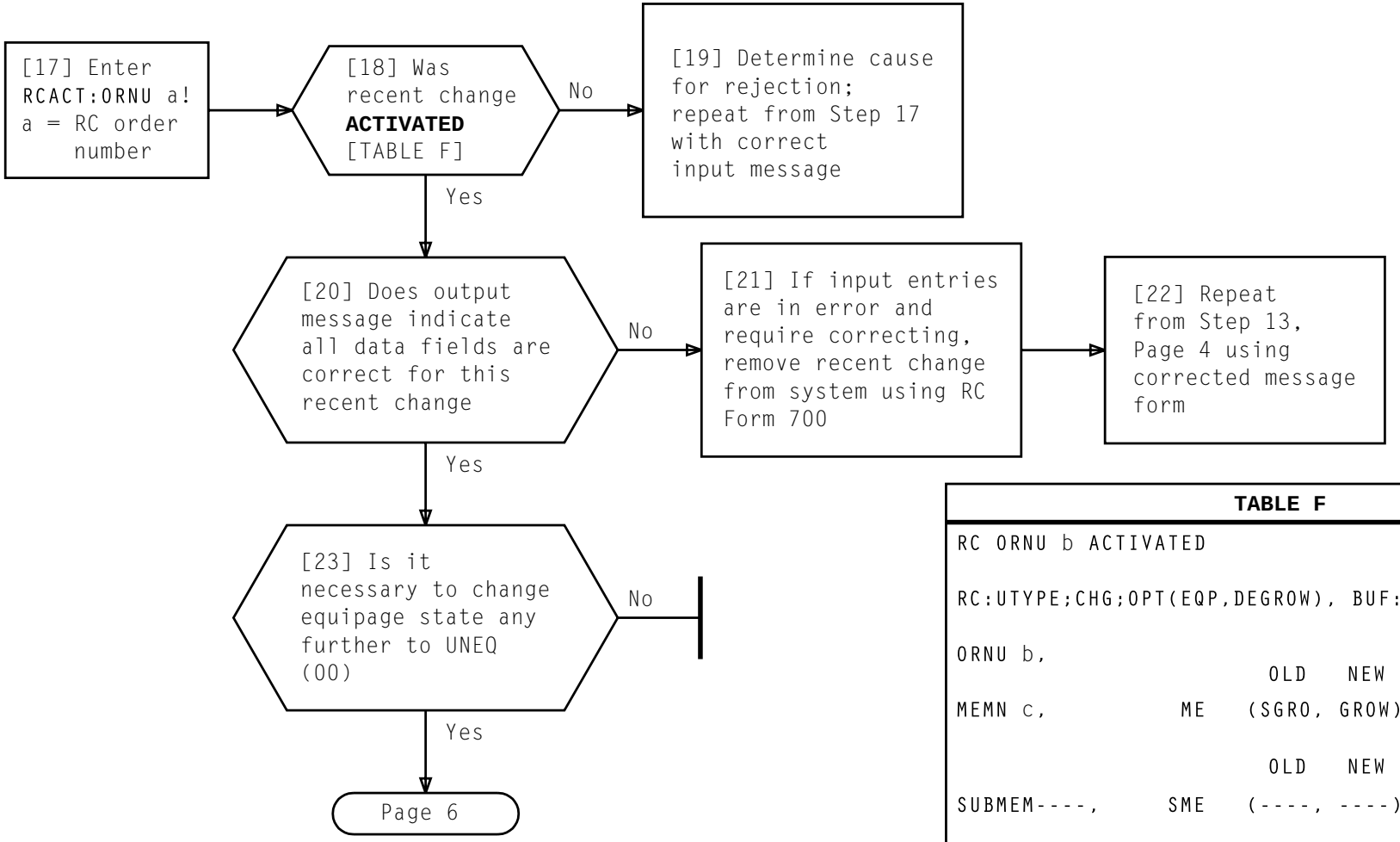


TABLE F

```
RC ORNU b ACTIVATED

RC:UTYPE;CHG;OPT(EQP,DEGROW), BUF:     UTYN a,

ORNU b,
                              OLD   NEW
MEMN c,            ME    (SGRO, GROW),

                              OLD   NEW
SUBMEM----,      SME    (----, ----),

REMARKS--------------------------------!
```

a = Unit type = TSI, TMSP, PUC, or MAS
b = RC order number
c = Member number of degrowth frame

RECENT CHANGE MEMBER EQUIPAGE USING RC FORM 701 (DEGROW)

[24] See CAUTION 3. Enter **OP:RCFORM 701!**

CRT displays RC Form 701

[25] Fill in blanks on RC Form 701 per TABLE G to degrow member to UNEQ state (00); then enter message

AND

RC Form 701 filled in and entered

[26] Was recent change **SUCCESSFULLY TESTED** and **SUCCESSFULLY BUFFERED** [TABLE H]

No

[27] Analyze output message for error; repeat from Step 24 with corrected input message

Yes

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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 = TSI, TMSP, PUC, or MAS
b = RC order number
c = Member number of degrowth frame
d = GROW, UNEQ

TABLE H

```
RC ORNU b SUCCESSFULLY TESTED

RC ORNU b SUCCESSFULLY BUFFERED

RC:UTYPE;CHG;OPT(EQP,DEGROW), BUF:    UTYN a,

ORNU b,
                          OLD   NEW
MEMN c,           ME   (GROW, UNEQ),

                          OLD   NEW
SUBMEM --------, SME   (----, ----),

REMARKS--------------------------------!
```

a = Unit type = TSI, TMSP, PUC, or MAS
b = RC order number
c = Member number of degrowth frame

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

RECENT CHANGE MEMBER EQUIPAGE USING RC FORM 701 (DEGROW)

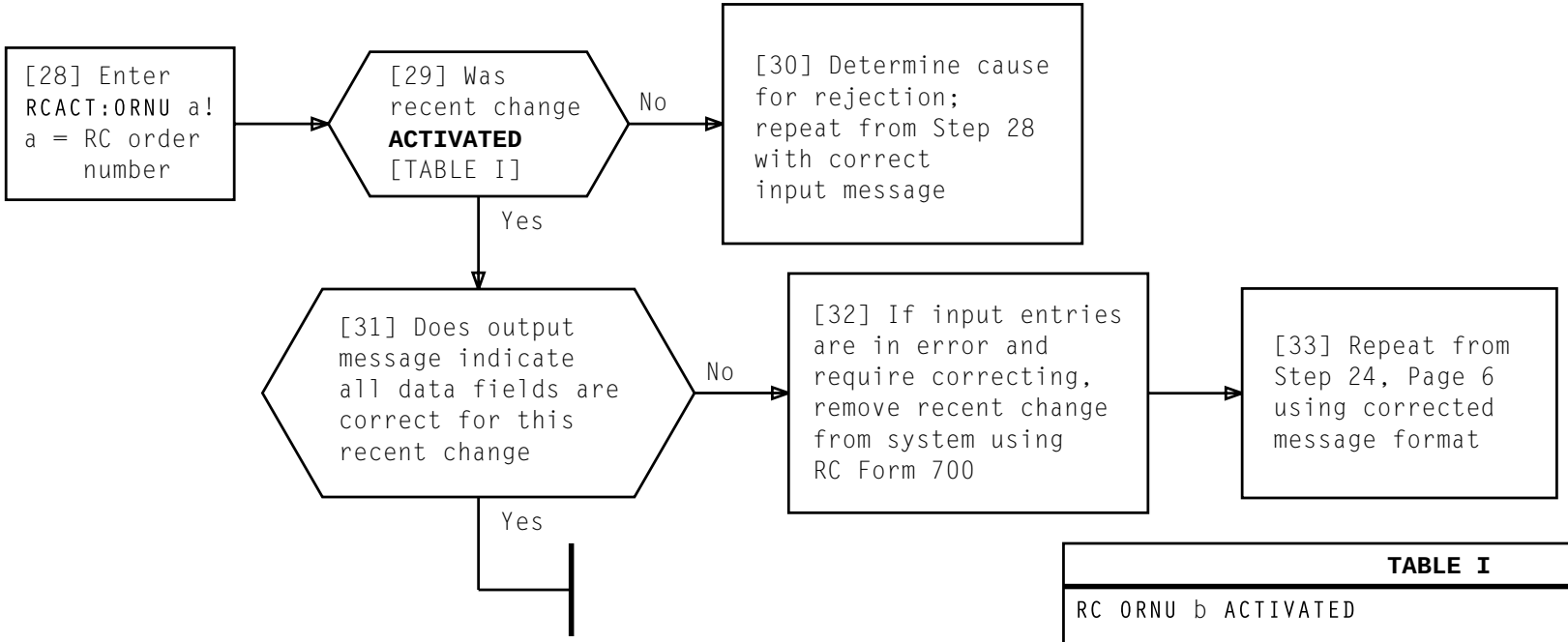


TABLE I

```
RC ORNU b ACTIVATED

RC:UTYPE;CHG;OPT(EQP,DEGROW), BUF:     UTYN a,

ORNU b,
                            OLD   NEW
MEMN c,           ME    (GROW, UNEQ),

                            OLD   NEW
SUBMEM----,      SME    (----, ----),

REMARKS--------------------------------!
```

a = Unit type = TSI, TMSP, PUC, or MAS
b = RC order number
c = Member number of degrowth frame

RECENT CHANGE MEMBER EQUIPAGE USING RC FORM 701 (DEGROW)

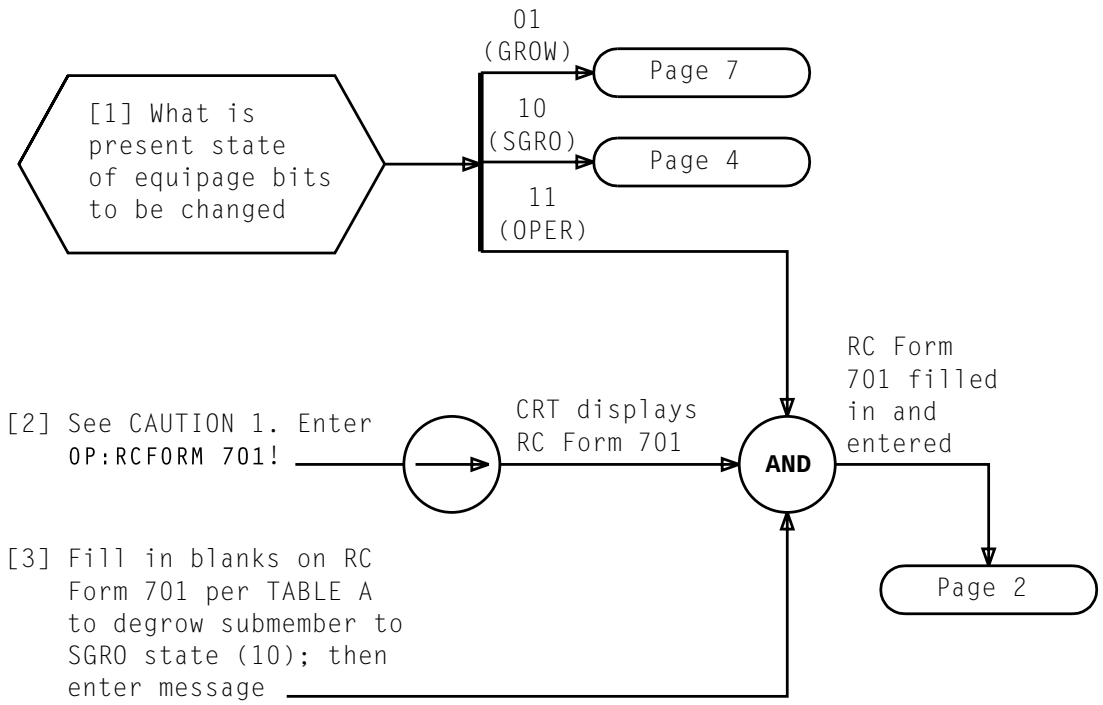
SUMMARY

Call up RC Form 701 on CRT. Using TTY, fill in blank fields on form to degrow state of submember equipage (SME) 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,
                          OLD   NEW
MEMN c,          ME     (----, ----),

                          OLD   NEW
SUBMEM d,        SME    (  e ,   e ),

REMARKS--------------------------------!
```

a = Unit type = TSI, TMSP, PUC, or MAS
b = RC order number
c = Member number of degrowth associated frame
d = Submember name:
= T0PRTEQ(0 to 6) (for SPC 0, Ports 0-6)
= T1PRTEQ(0 to 6) (for SPC 1, Ports 0-6)
= C0GRWTH (for TMS Controller 0)
= C1GRWTH (for TMS Controller 1)
= C0MBLK(0 to 3) (for Cont 0,Mem Blk 0-3)
= C1MBLK(0 to 3) (for Cont 1,Mem Blk 0-3)
= PUCUEQ(0 to 3) (for PUC Units 0-3)
= MAUEQ(0 or 1) (for MAS Units 0 or 1)
e = OPER, SGRO



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

RECENT CHANGE SUBMEMBER EQUIPAGE USING RC FORM 701 (DEGROW)

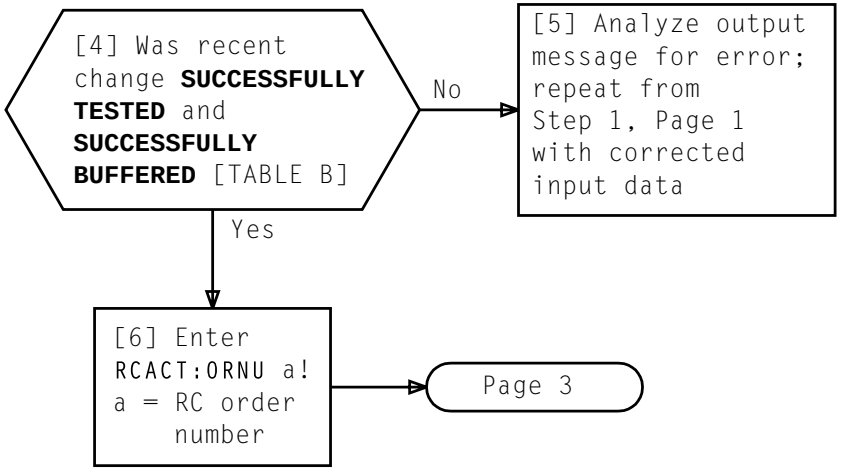


TABLE B

```
RC ORNU b SUCCESSFULLY TESTED

RC ORNU b SUCCESSFULLY BUFFERED

RC:UTYPE;CHG;OPT(EQP,DEGROW),BUF:        UTYN a,

ORNU b,
                          OLD   NEW
MEMN c,          ME    (----, ----),

                          OLD   NEW
SUBMEM d,        SME   (OPER, SGRO),

REMARKS--------------------------------!
```

a = Unit type = TSI, TMSP, PUC, or MAS
b = RC order number
c = Member number of degrowth associated frame
d = Submember name:
= T0PRTEQ(0 to 6) (for SPC 0, Ports 0-6)
= T1PRTEQ(0 to 6) (for SPC 1, Ports 0-6)
= C0GRWTH (for TMS Controller 0)
= C1GRWTH (for TMS Controller 1)
= C0MBLK(0 to 3) (for Cont 0,Mem Blk 0-3)
= C1MBLK(0 to 3) (for Cont 1,Mem Blk 0-3)
= PUCUEQ(0 to 3) (for PUC Units 0-3)
= MAUEQ(0 or 1) (for MAS Units 0 or 1)

RECENT CHANGE SUBMEMBER EQUIPAGE USING RC FORM 701 (DEGROW)

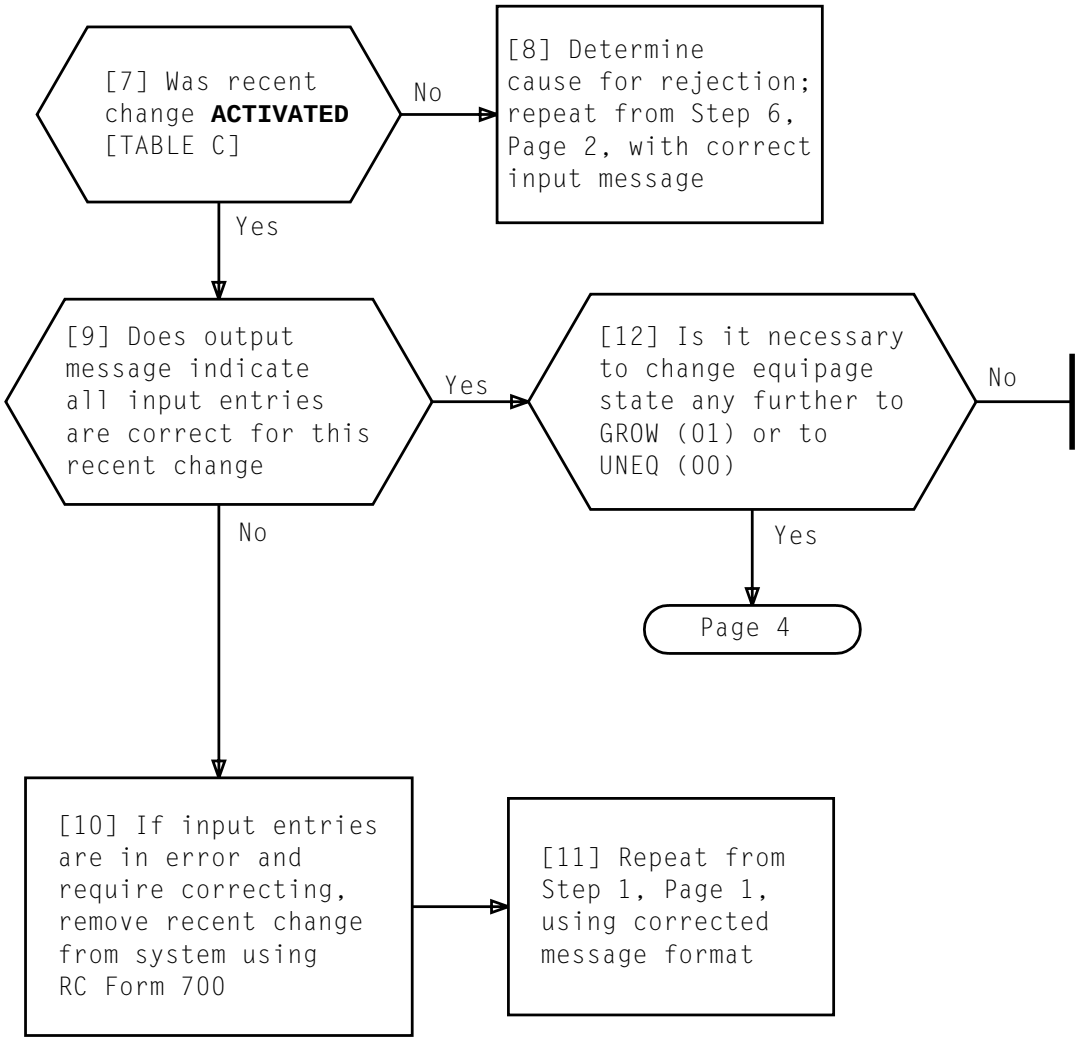


TABLE C

```
RC ORNU b ACTIVATED

RC:UTYPE;CHG;OPT(EQP,GROW),BUF:        UTYN a,

ORNU b,
                          OLD   NEW
MEMN c,          ME     (----, ----),

                          OLD   NEW
SUBMEM d,        SME    (OPER, SGRO),

REMARKS--------------------------------!
```

a = Unit type = TSI, TMSP, PUC, or MAS
b = RC order number
c = Member number of degrowth associated frame
d = Submember name:
= T0PRTEQ(0 to 6) (for SPC 0, Ports 0-6)
= T1PRTEQ(0 to 6) (for SPC 1, Ports 0-6)
= C0GRWTH (for TMS Controller 0)
= C1GRWTH (for TMS Controller 1)
= C0MBLK(0 to 3) (for Cont 0,Mem Blk 0-3)
= C1MBLK(0 to 3) (for Cont 1,Mem Blk 0-3)
= PUCUEQ(0 to 3) (for PUC Units 0-3)
= MAUEQ(0 or 1) (for MAS Units 0 or 1)

RECENT CHANGE SUBMEMBER EQUIPAGE USING RC FORM 701 (DEGROW)

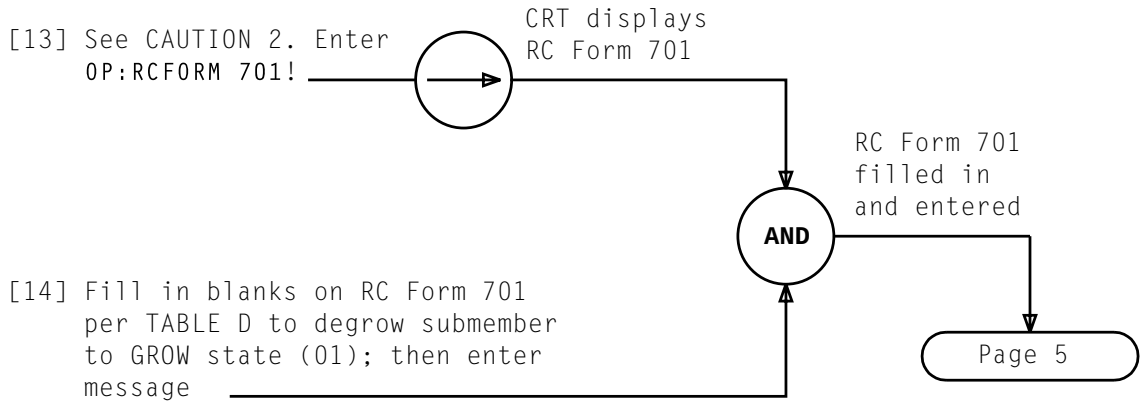


TABLE D

```
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 = TSI, TMSP, PUC, or MAS
b = RC order number
c = Member number of degrowth associated frame
d = Submember name:
= T0PRTEQ(0 to 6) (for SPC 0, Ports 0-6)
= T1PRTEQ(0 to 6) (for SPC 1, Ports 0-6)
= C0GRWTH (for TMS Controller 0)
= C1GRWTH (for TMS Controller 1)
= C0MBLK(0 to 3) (for Cont 0,Mem Blk 0-3)
= C1MBLK(0 to 3) (for Cont 1,Mem Blk 0-3)
= PUCUEQ(0 to 3) (for PUC Units 0-3)
= MAUEQ(0 or 1) (for MAS Units 0 or 1)
e = SGRO, GROW

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

RECENT CHANGE SUBMEMBER EQUIPAGE USING RC FORM 701 (DEGROW)

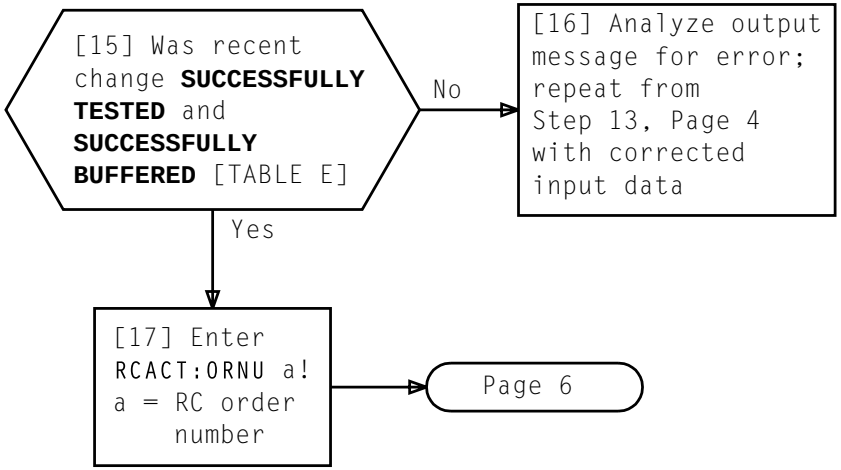


TABLE E

```
RC ORNU b SUCCESSFULLY TESTED

RC ORNU b SUCCESSFULLY BUFFERED

RC:UTYPE;CHG;OPT(EQP,DEGROW),BUF:        UTYN a,

ORNU b,
                          OLD   NEW
MEMN c,          ME    (----, ----),

                          OLD   NEW
SUBMEM d,        SME   (SGRO, GROW),

REMARKS--------------------------------!
```

a = Unit type = TSI, TMSP, PUC, or MAS
b = RC order number
c = Member number of degrowth associated frame
d = Submember name:
= T0PRTEQ(0 to 6) (for SPC 0, Ports 0-6)
= T1PRTEQ(0 to 6) (for SPC 1, Ports 0-6)
= C0GRWTH (for TMS Controller 0)
= C1GRWTH (for TMS Controller 1)
= C0MBLK(0 to 3) (for Cont 0,Mem Blk 0-3)
= C1MBLK(0 to 3) (for Cont 1,Mem Blk 0-3)
= PUCUEQ(0 to 3) (for PUC Units 0-3)
= MAUEQ(0 or 1) (for MAS Units 0 or 1)

RECENT CHANGE SUBMEMBER EQUIPAGE USING RC FORM 701 (DEGROW)

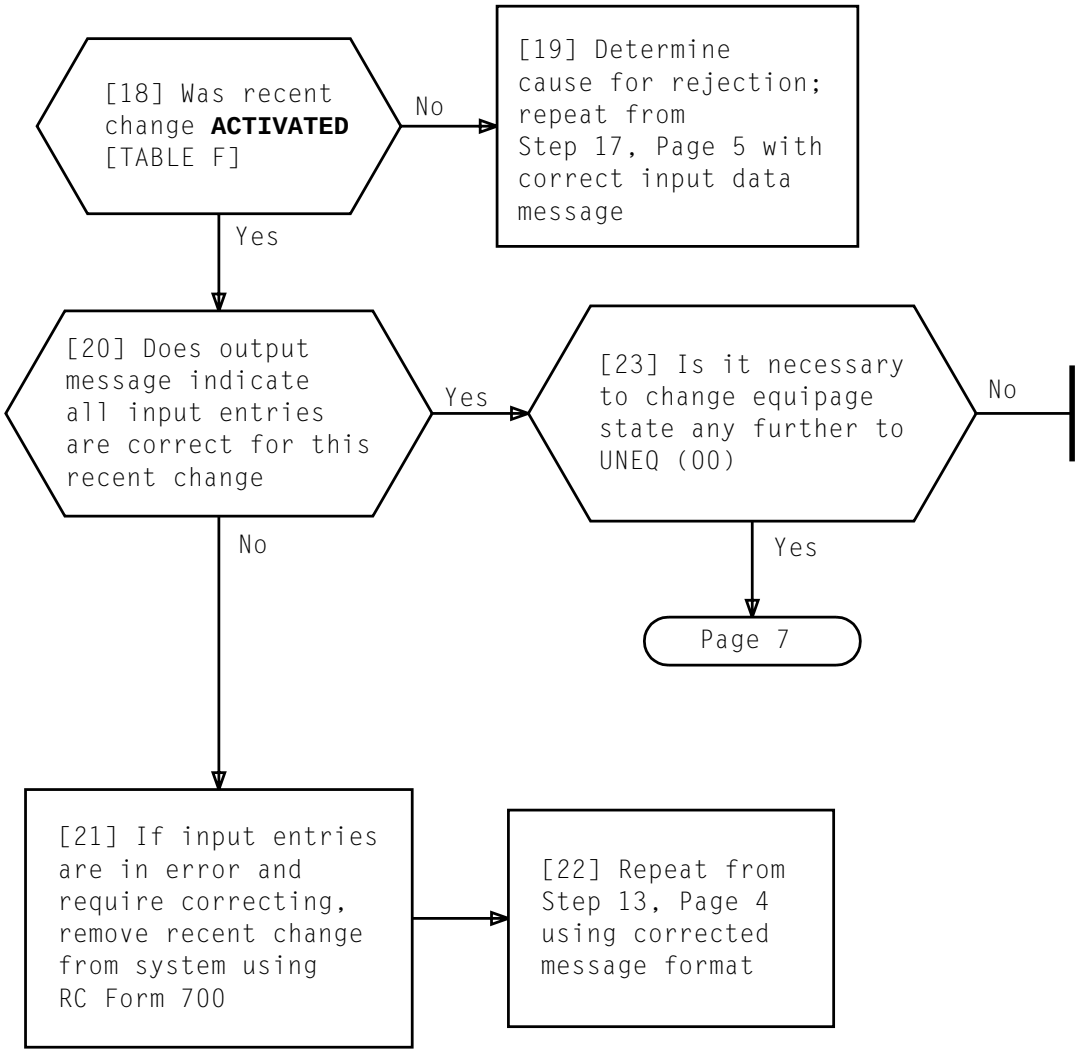


TABLE F

```
RC ORNU b ACTIVATED

RC:UTYPE;CHG;OPT(EQP,GROW), BUF:         UTYN a,

ORNU b,
                            OLD    NEW
MEMN c,           ME    (----, ----),

                            OLD    NEW
SUBMEM d,         SME   (SGRO, GROW),

REMARKS--------------------------------!
```

a = Unit type = TSI, TMSP, PUC, or MAS
b = RC order number
c = Member number of degrowth associated frame
d = Submember name:
= T0PRTEQ(0 to 6) (for SPC 0, Ports 0-6)
= T1PRTEQ(0 to 6) (for SPC 1, Ports 0-6)
= C0GRWTH (for TMS Controller 0)
= C1GRWTH (for TMS Controller 1)
= C0MBLK(0 to 3) (for Cont 0,Mem Blk 0-3)
= C1MBLK(0 to 3) (for Cont 1,Mem Blk 0-3)
= PUCUEQ(0 to 3) (for PUC Units 0-3)
= MAUEQ(0 or 1) (for MAS Units 0 or 1)

RECENT CHANGE SUBMEMBER EQUIPAGE USING RC FORM 701 (DEGROW)

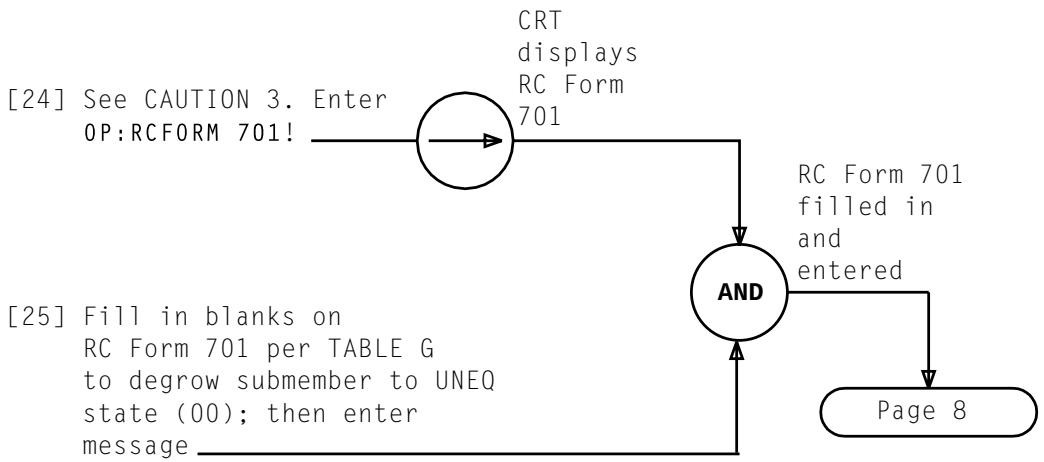


TABLE G

```
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 = TSI, TMSP, PUC, or MAS
b = RC order number
c = Member number of degrowth associated frame
d = Submember name:
= T0PRTEQ(0 to 6) (for SPC 0, Ports 0-6)
= T1PRTEQ(0 to 6) (for SPC 1, Ports 0-6)
= C0GRWTH (for TMS Controller 0)
= C1GRWTH (for TMS Controller 1)
= C0MBLK(0 to 3) (for Cont 0,Mem Blk 0-3)
= C1MBLK(0 to 3) (for Cont 1,Mem Blk 0-3)
= PUCUEQ(0 to 3) (for PUC Units 0-3)
= MAUEQ(0 or 1) (for MAS Units 0 or 1)
e = GROW, UNEQ

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

RECENT CHANGE SUBMEMBER EQUIPAGE USING RC FORM 701 (DEGROW)

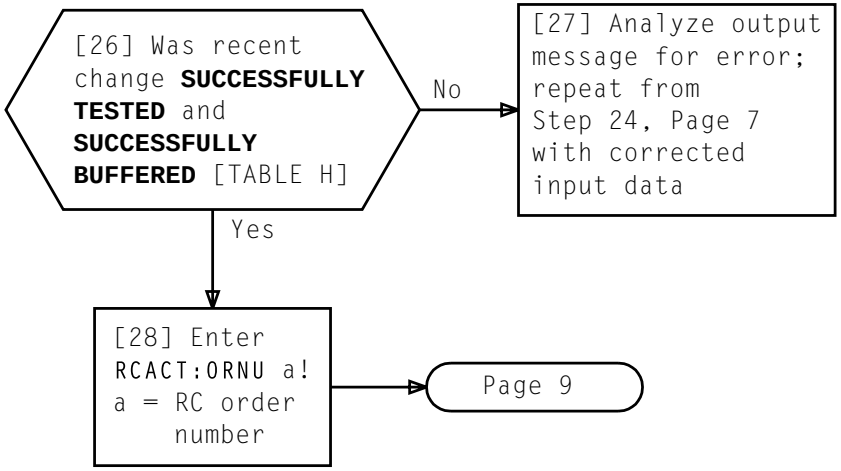


TABLE H

```
RC ORNU b SUCCESSFULLY TESTED

RC ORNO b SUCCESSFULLY BUFFERED

RC:UTYPE;CHG;OPT(EQP,DEGROW),BUF:        UTYN a,

ORNU b,
                           OLD   NEW
MEMN c,           ME    (----, ----),

                           OLD   NEW
SUBMEM d,         SME   (GROW, UNEQ),

REMARKS--------------------------------!
```

a = Unit type = TSI, TMSP, PUC, or MAS
b = RC order number
c = Member number of degrowth associated frame
d = Submember name:
= T0PRTEQ(0 to 6) (for SPC 0, Ports 0-6)
= T1PRTEQ(0 to 6) (for SPC 1, Ports 0-6)
= C0GRWTH (for TMS Controller 0)
= C1GRWTH (for TMS Controller 1)
= C0MBLK(0 to 3) (for Cont 0,Mem Blk 0-3)
= C1MBLK(0 to 3) (for Cont 1,Mem Blk 0-3)
= PUCUEQ(0 to 3) (for PUC Units 0-3)
= MAUEQ(0 or 1) (for MAS Units 0 or 1)

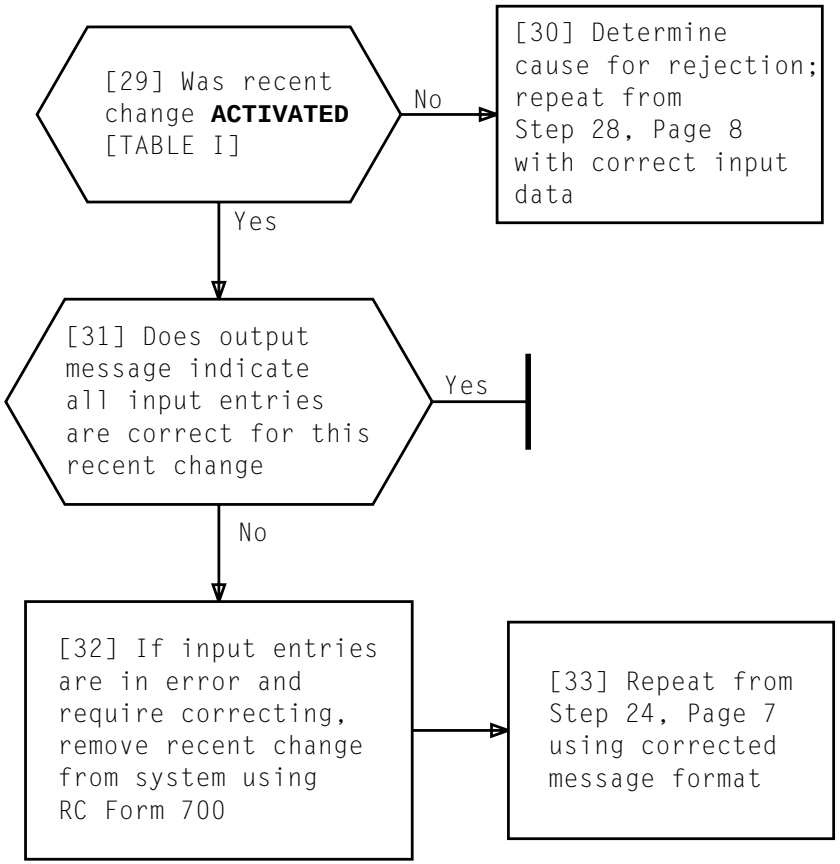


TABLE I

```
RC ORNU b ACTIVATED

RC:UTYPE;CHG;OPT(EQP,GROW),BUF:        UTYN a,

ORNU b,
                              OLD   NEW
MEMN c,            ME    (----, ----),

                              OLD   NEW
SUBMEM d,          SME   (GROW, UNEQ),

REMARKS--------------------------------!
```

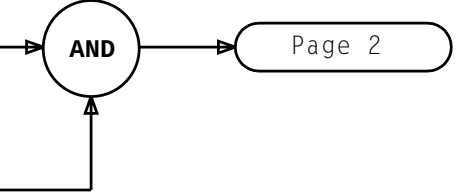
a = Unit type = TSI, TMSP, PUC, or MAS
b = RC order number
c = Member number of degrowth associated frame
d = Submember name:
= T0PRTEQ(0 to 6) (for SPC 0, Ports 0-6)
= T1PRTEQ(0 to 6) (for SPC 1, Ports 0-6)
= C0GRWTH (for TMS Controller 0)
= C1GRWTH (for TMS Controller 1)
= C0MBLK(0 to 3) (for Cont 0,Mem Blk 0-3)
= C1MBLK(0 to 3) (for Cont 1,Mem Blk 0-3)
= PUCUEQ(0 to 3) (for PUC Units 0-3)
= MAUEQ(0 or 1) (for MAS Units 0 or 1)

RECENT CHANGE SUBMEMBER EQUIPAGE USING RC FORM 701 (DEGROW)

[1] See octal word containing version data in entry output message

[2] For each controller/unit, convert octal digits to version number per FIG. 1 and record

[3] Obtain from Installation, LDI issue numbers for each growth frame controller/unit



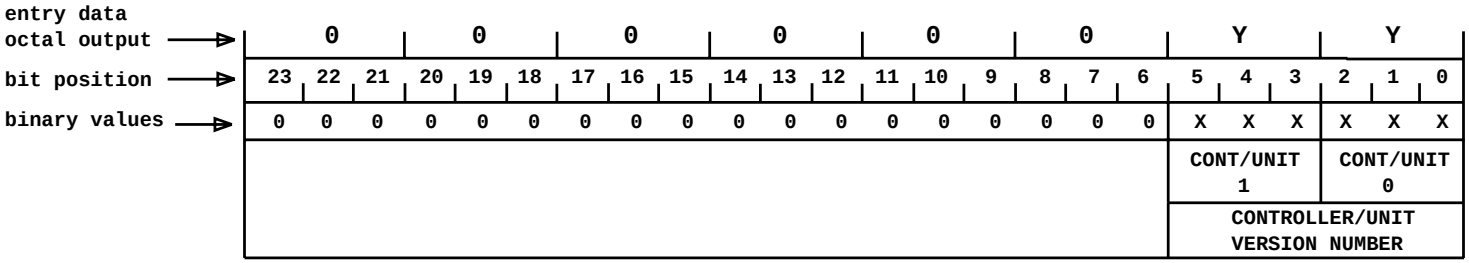


FIG. 1 – Word Layout For Version Numbers

VERIFY CONTROLLER/UNIT VERSION NUMBERS

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

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

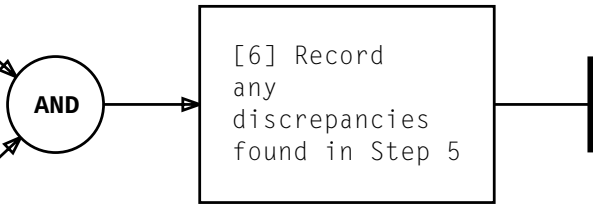


TABLE A

UNIT	SD NUMBER	MEMBER VERSION NUMBER*				
		0	1	2	3	4
TSI-B Controller	4A083-01	1A	—	—	1B	3B
	4A084-01	1A	—	—	1A	2A
	4A085-01	1A	—	—	1B	1C
	4A086-01	1A	—	—	1A	1A
PUC Controller	4A102-01	1A	—	—	—	—
	5G207-01	1A	—	—	—	—
MAS Unit	4A103-01	1A	—	—	—	—
	4A104-01	1A	1B	—	—	—
TMS Controller	4A087-01	1A	2A	—	—	—
	4A089-01	1A	3A	—	—	—
	4A092-01	1A	3A	—	—	—

* LDI Issue Numbers

NOTE 1
PECC diagnostic center may be consulted for current version information if not listed in TABLE A

VERIFY CONTROLLER/UNIT VERSION NUMBERS

[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

AND

[4] Fourth rightmost octal digit of word to be verified is

0 or 1 → Page 2

2 or 3

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

AND

→ Page 2, Step 8

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

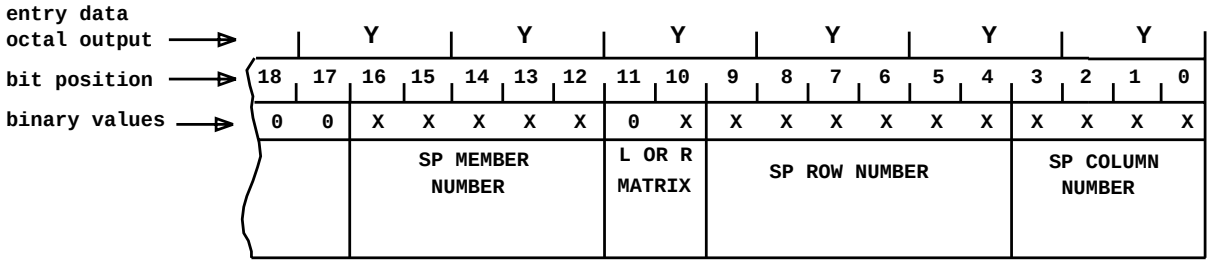
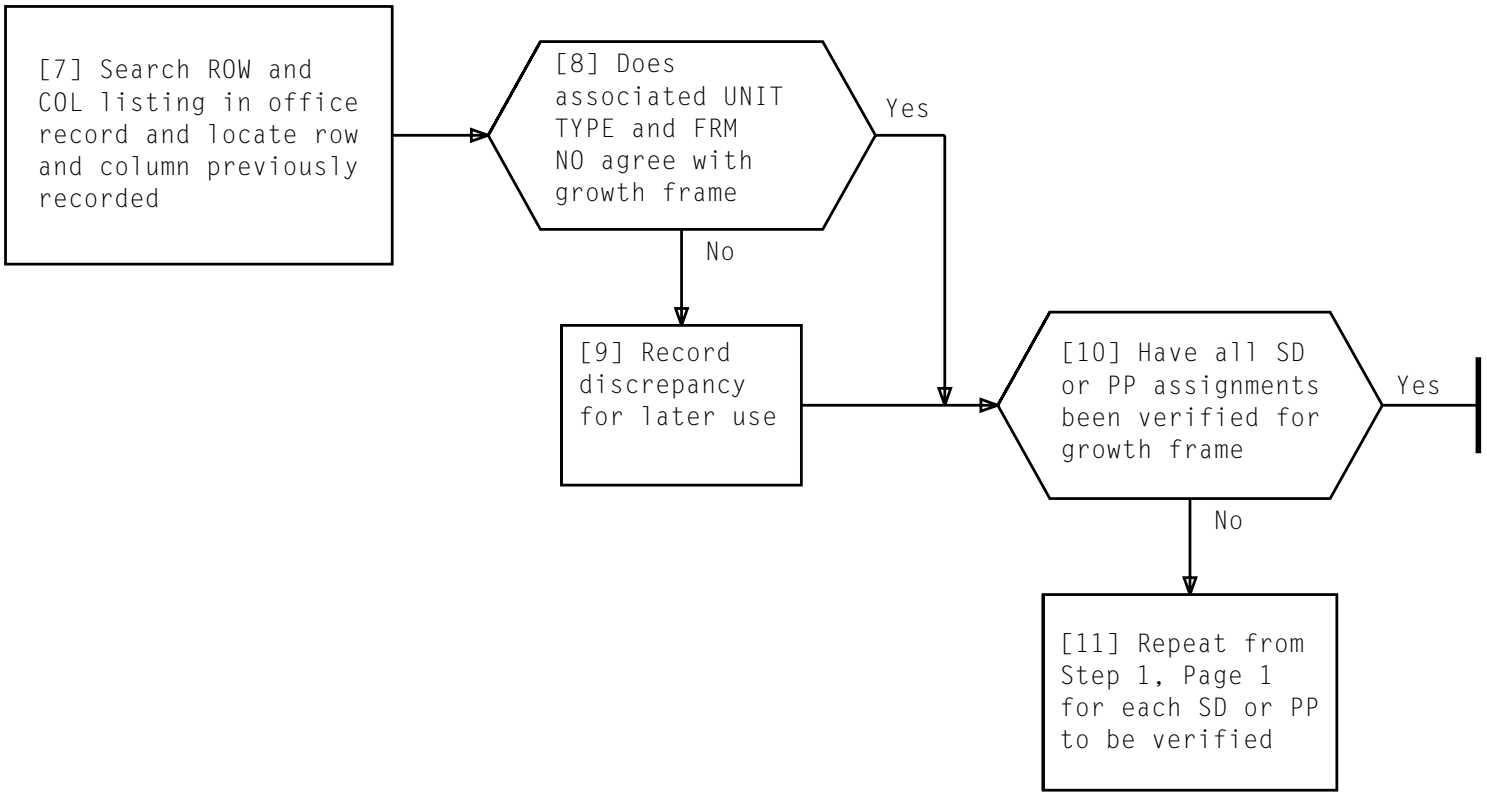


FIG. 1 — Entry Data Word Layout

VERIFY SD OR PULSE POINT ASSIGNMENTS FOR GROWTH FRAME



VERIFY SD OR PULSE POINT ASSIGNMENTS 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

AND

[4] Fourth rightmost octal digit of word to be verified is

0 or 1 → Page 2

2 or 3

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

AND

Page 2, Step 8

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

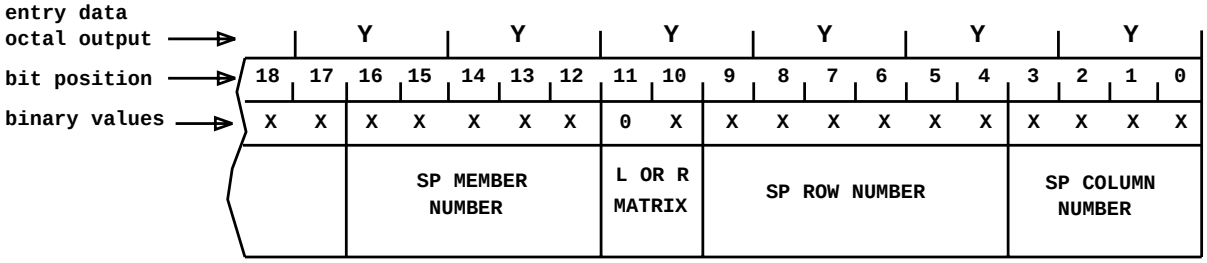
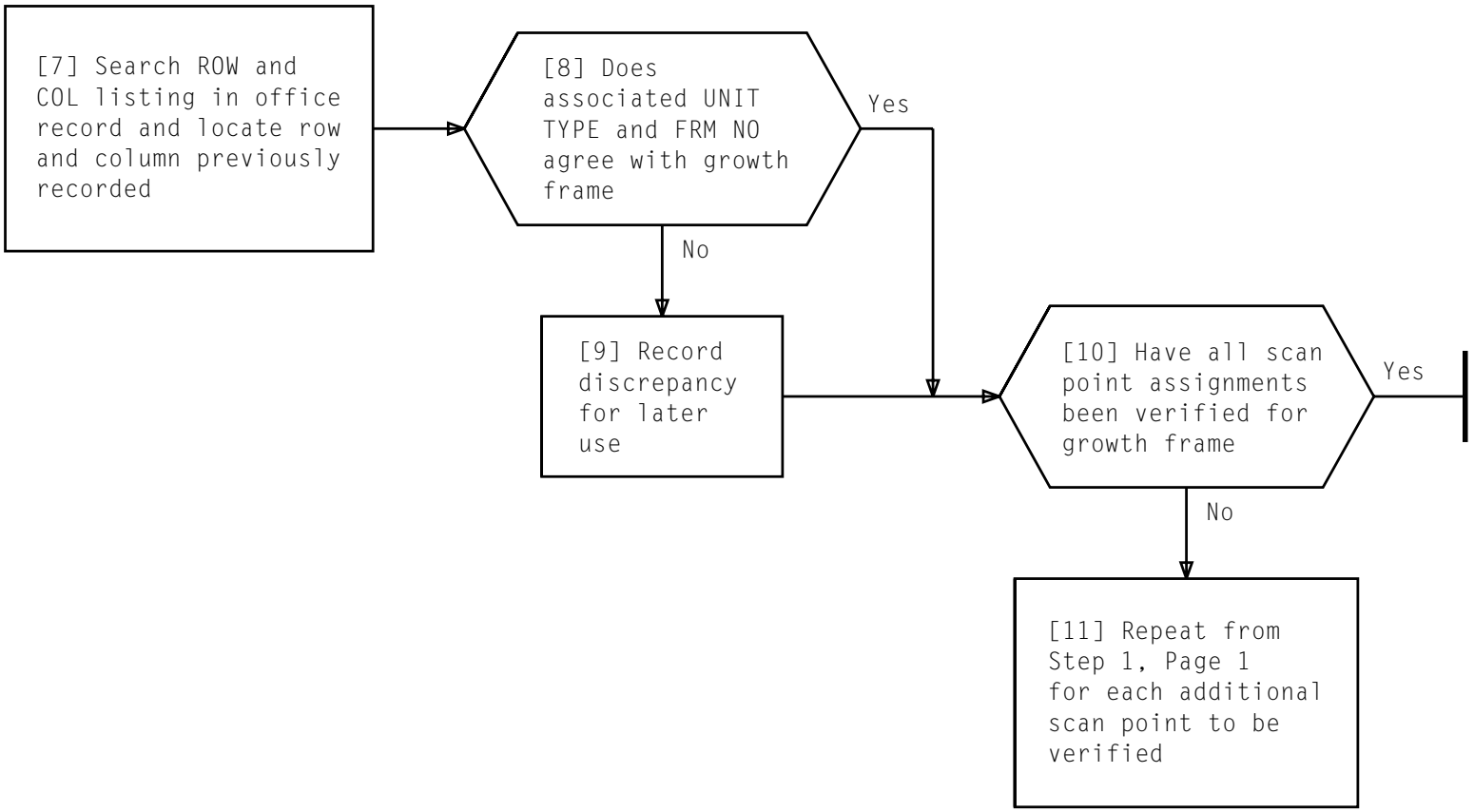


FIG. 1 – Entry Data Word Layout

VERIFY SCAN POINT ASSIGNMENT(S) FOR GROWTH FRAME



VERIFY SCAN POINT ASSIGNMENT(S) FOR GROWTH FRAME

SUMMARY
Convert octal digits of word 5, representing EST indicator, to binary and EST member number (if any) to decimal. Using appropriate office record, look up EST member number associated with growth TSI and compare with value in entry output. Verify that EST indicator is set to 0. If entry output data does not agree, note discrepancies for later use.

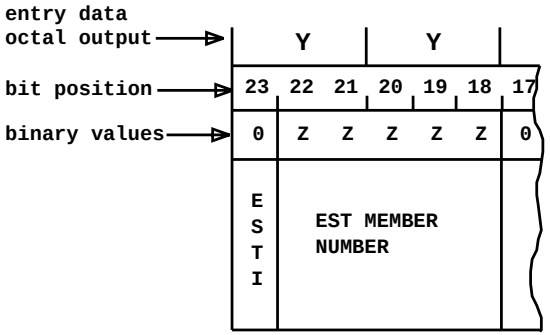


FIG. 1 — Part of Entry Data Word 5 Pertaining to EST Member Number and Indicator

[1] See word 5 in entry output message

[2] See FIG. 1 for word 5 layout

[3] Convert 2 leftmost octal digits of word 5 in entry output to binary digits and record

[4] Convert bits 18 through 22 to decimal EST member number and record

[5] Get appropriate office record reflecting TSI-EST interface

[6] Locate growth TSI member number data in drawing

AND

[7] Note EST member number associated with growth TSI data of Step 6

[8] Compare EST member numbers in Steps 4 and 7. Note any discrepancy for for later use

AND

[9] Verify that bit 23 as recorded in Step 3 is set to 0. Note discrepancy for later use

VERIFY EST MEMBER NUMBER AND INDICATOR

[1] See octal words 14 and 15 in entry output message

[2] See FIGS. 1 and 2 for word layouts

[3] Convert 3 leftmost octal digits of words 14 and 15 in entry output to binary digits and record

[4] If no EST is associated with this growth TSI, verify that bits 17 through 23 are set to zeroes

[5] If growth TSI will interface with EST, verify that bits 17 through 23 are set to ones

AND

[6] Record for later use any discrepancies noted in Steps 4 or 5

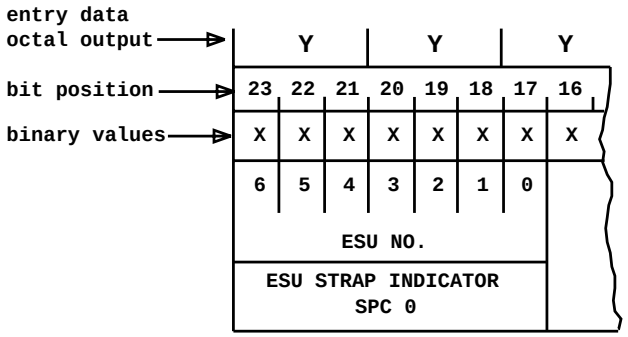


FIG. 1 — Part of Word 14 Pertaining to SPC 0 Strap Indicator

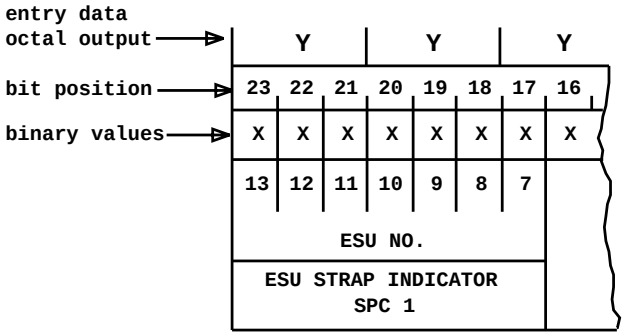


FIG. 2 — Part of Word 15 Pertaining to SPC 1 Strap Indicator

VERIFY ESU STRAP INDICATORS

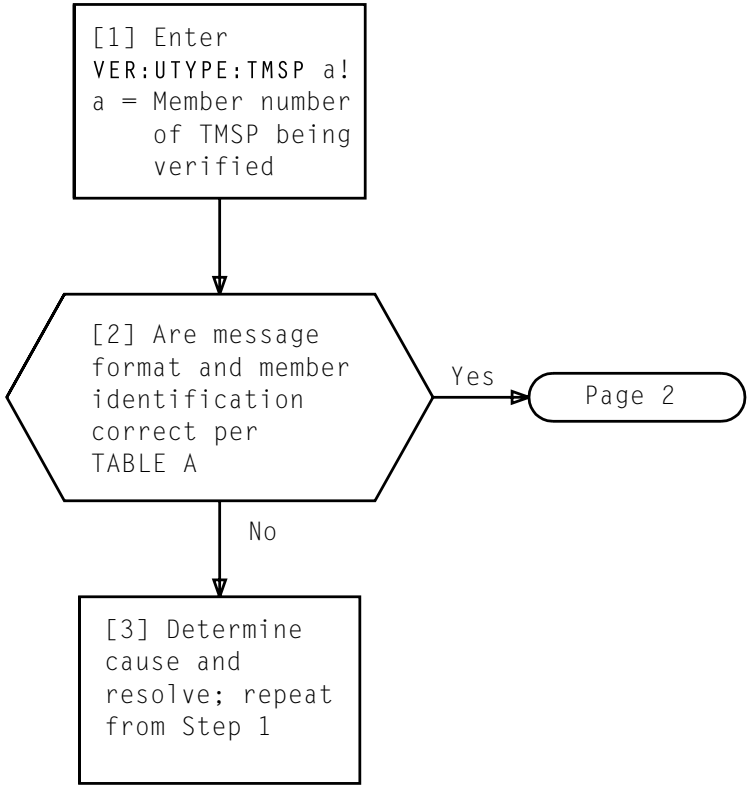


TABLE A

```
VER:UTMN;OPT(),CUR:  FLN a,       UTYN  TMSP,

  MEMN b,       ME OPER,
  ENTRY ADDRESS c,       ENTRY SIZE 11,

  CUR
  WORD 0  _____ _____ _____ _____
          _____ _____ _____ _____
  WORD 10 _____ _____ _____

  TMSP CONFIGURATION 2
```

a = Floor location
b = Member number of TMSP being verified
c = Starting address (word 0)

VERIFY TMS UNIT EQUIPAGE AND GROWTH STATUS INDICATOR FOR A TWO TMS OFFICE

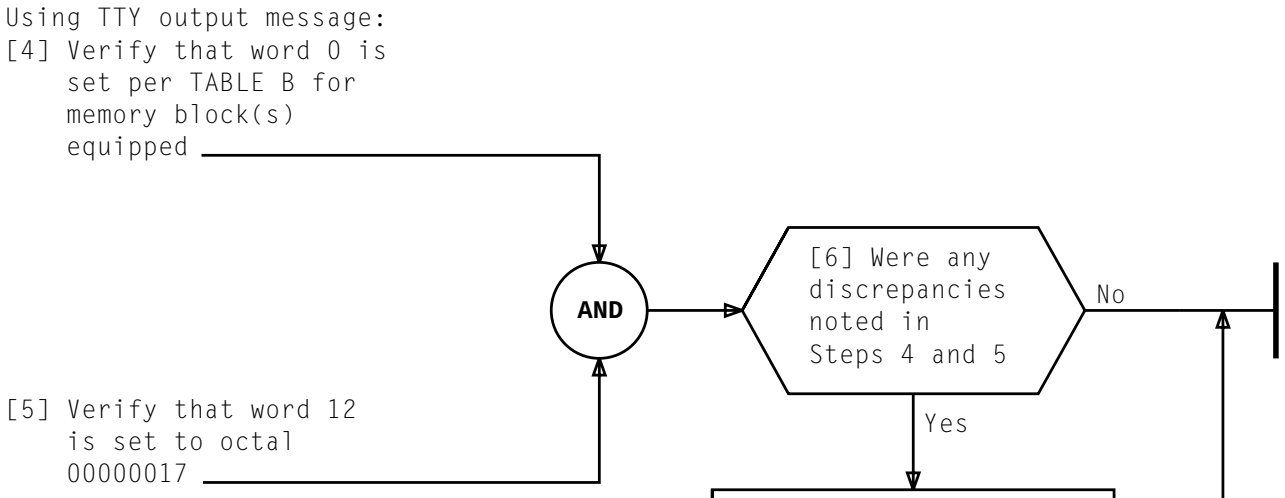


TABLE B

TMS MEMORY BLOCK EQUIPAGE	WORD 0 (OCTAL)
Memory Blocks 0 and 2	20631463

VERIFY TMS UNIT EQUIPAGE AND GROWTH STATUS INDICATOR FOR A TWO TMS OFFICE

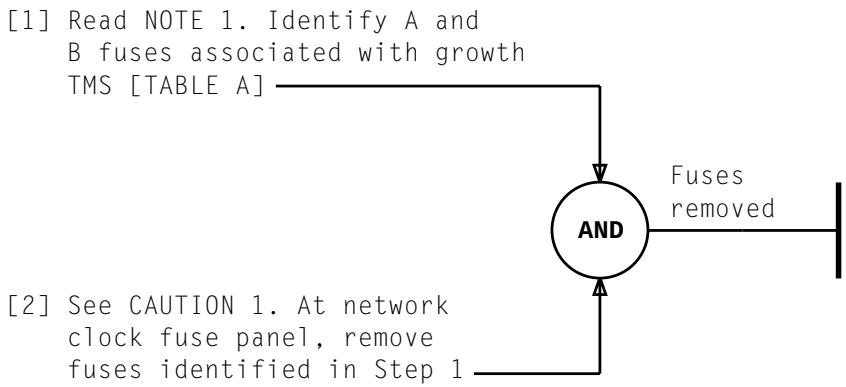


TABLE A

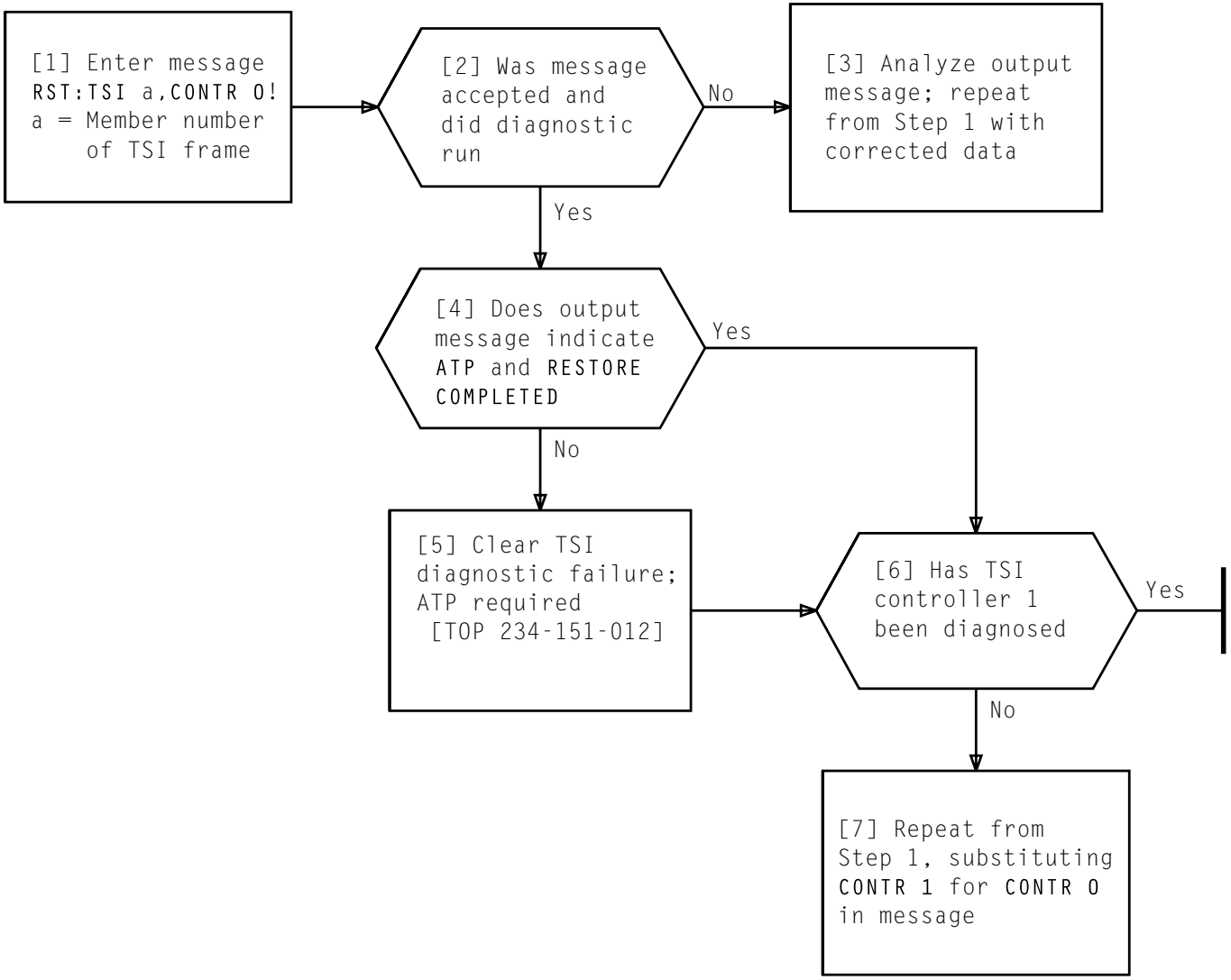
GROWTH TMS	FUSES			
	NO.	EQUIP. LOC.	NO.	EQUIP. LOC.
TMS 1	A3	*06-32	B8	*06-39
TMS 2	A1	*06-32	B7	*06-39
TMS 3	A1	*06-32	B8	*06-39

* = 0 for bay 0 or 1 for bay 1

NOTE 1
On the Network Clock frame, clock cable drivers (Circuit Pack **FB211**) are powered from two separate 9-volt sources with the fuses arranged in a grid pattern. The only means for removing power from circuit pack is through removal of the two assigned 9-volt fuses

CAUTION 1
Ensure that correct fuses for intended circuit pack are being removed. Removal of incorrect fuses could cause loss of service

REMOVE POWER FROM NETWORK CLOCK CABLE DRIVERS ASSOCIATED WITH GROWTH TMS



DIAGNOSE TSI FRAME CONTROLLERS USING RESTORE MESSAGE

[1] Determine J4A001BB unit level associated with SPC being converted per TABLE A

[2] See CAUTION 1. At TSI bay being converted, remove eight **FA1780** and eight **FA1781** circuit packs from J4A001BB unit on level determined in Step 1 [TABLE B]

[3] See CAUTION 1. At J4A001BB unit (Step 2), install eight **FA1816** and eight **FA1817** at locations in TABLE C

[4] Install new designation strips per J4A001BB drawing at unit just converted

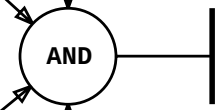


TABLE A

SPC BEING CONVERTED	TSI MEMBER NUMBER	J4A001BB UNIT LEVEL
0	ODD	52
1	ODD	64
0	EVEN	28
1	EVEN	40

TABLE B

CIRCUIT PACK	LOCATIONS
FA1780	37, 39, 41, 43, 51, 54, 56, 58
FA1781	4, 5, 9, 10, 17, 19, 23, 24

TABLE C

CIRCUIT PACK	LOCATIONS
FA1816	37, 39, 41, 43, 51, 54, 56, 58
FA1817	4, 5, 9, 10, 17, 19, 23, 24

CAUTION 1
An antistatic wrist strap must be worn to prevent electrostatic discharge and possible damage to circuit packs while handling

REPLACE FA1780 AND FA1781 CIRCUIT PACKS WITH FA1816 AND FA1817 CIRCUIT PACKS, RESPECTIVELY

SUMMARY

Call up RC Form 801 on CRT. Using TTY, fill in blank fields on form to identify and to change wideband capability data within the selected word of the TSI UT translator. Enter message, then verify translations. Using the assigned order number, activate the recent change then verify current translations.

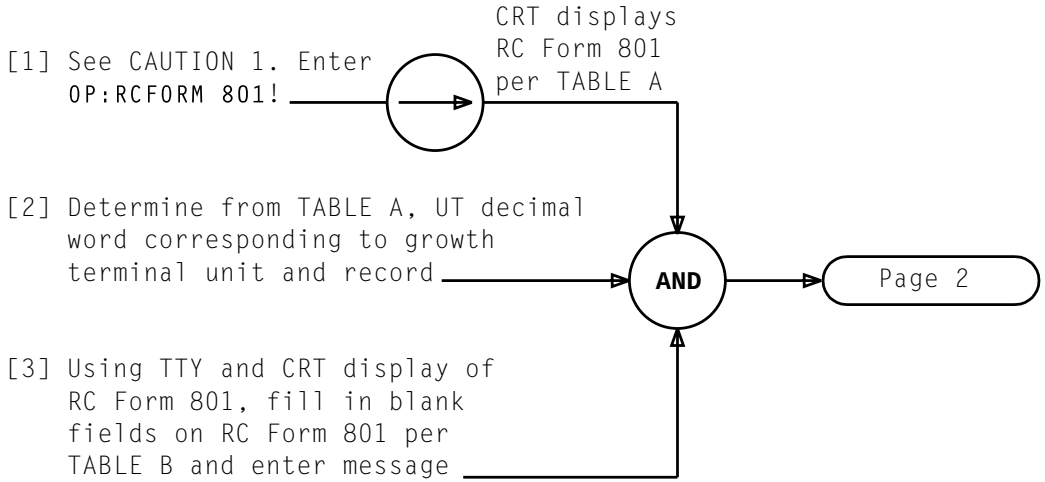


TABLE A

SPC LEVEL CONVERTED	DECIMAL WORD
28	12
40	13
52	12
64	13

TABLE B

```
RC:FUNC;CHG;OPT(TRANS),a:        TRANSID b,
ORNU c,
ENTRY d,       WORDNO e,
SIZE f,   DISP g,
BINOCT h,
NEWDATA i,
OLDDATA j,
REMARKS_____________________________________ !
```

a = TST	f = 1
b = UTTSI	g = 0
c = RC order number	h = B
d = Member number of TSI being converted	i = 1
e = UT decimal word number previously recorded in Step 2	j = 0

CAUTION 1

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

PERFORM FUNCTIONAL WORD CHANGE OF WIDEBAND CAPABILITY DATA

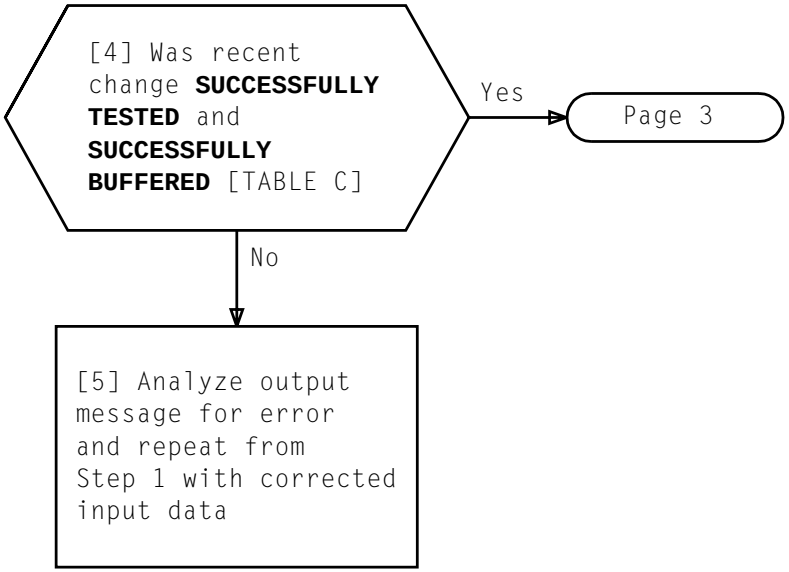


TABLE C

```
RC ORNU a SUCCESSFULLY TESTED

RC ORNU a SUCCESSFULLY BUFFERED

RC:FUNC;CHG;OPT(TRANS),BUF:   TRANSID UTTSI,
ORNU a,
ENTRY b,            WORDNO  c,
SIZE 1,            DISP   0,
BINOCT B,
NEWDATA 1,
OLDDATA 0,
REMARKS _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _!

REPT:RC DUMP OF UNIT TYPE ENTRY AS IT WILL APPEAR
AFTER THE MESSAGE IS ACTIVATED

WORD 0    ______  ______  ______  ______
          ______  ______  ______  ______
WORD 10   ______  ______  ______  ______
                      •
                      •
                      •
WORD 40   ______
```

a = RC order number
b = Member number of TSI being converted
c = UT decimal word number previously recorded in Step 2, Page 1

PERFORM FUNCTIONAL WORD CHANGE OF WIDEBAND CAPABILITY DATA

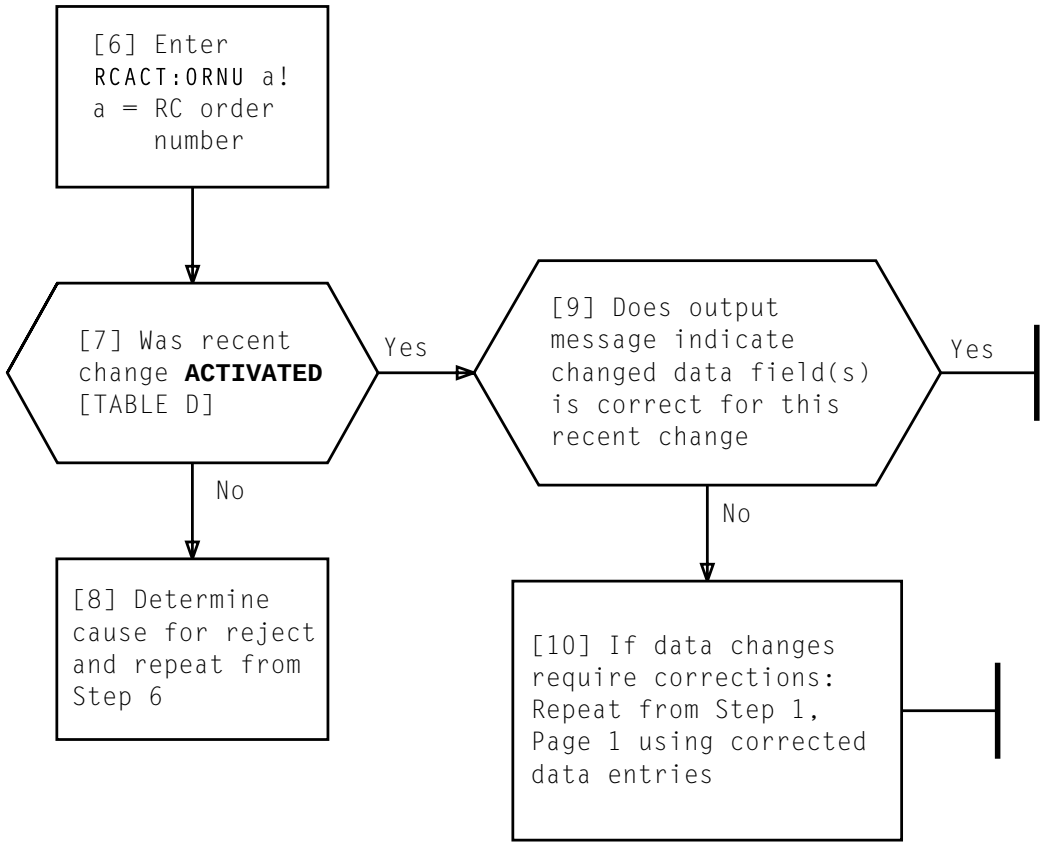
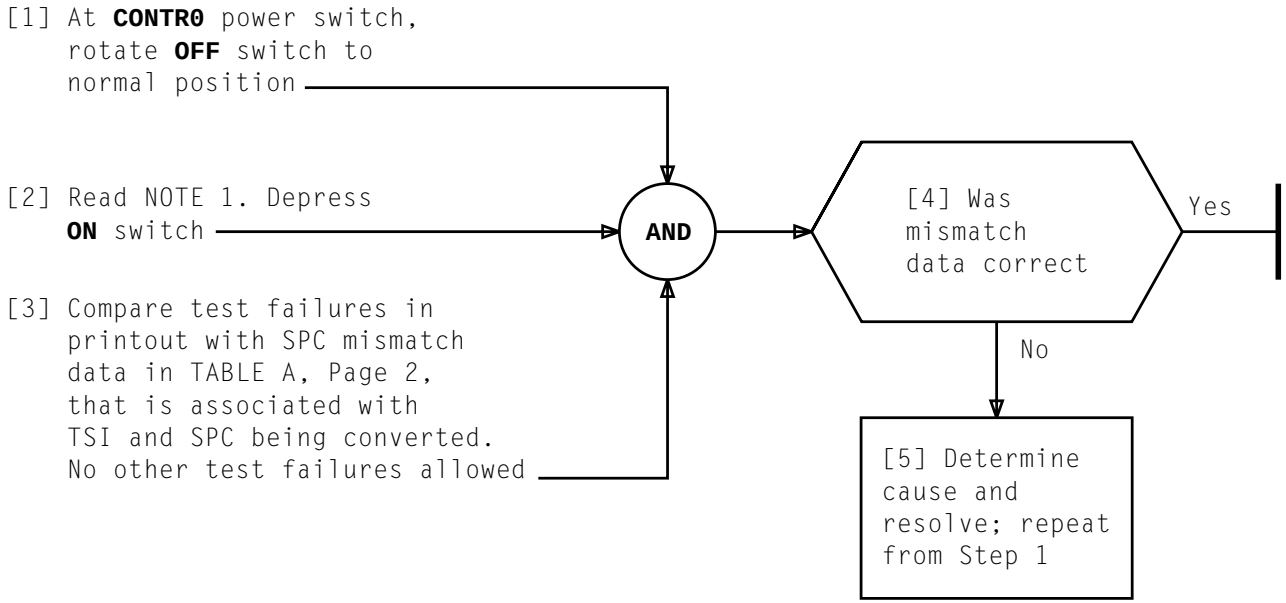


TABLE D

```
RC ORNU a ACTIVATED

RC:FUNC;CHG;OPT(TRANS),BUF:   TRANSID UTTSI,
ORNU  a,

ENTRY b,     WORDNO c,

SIZE  1,    DISP  0,

BINOCT B,

NEWDATA 1,

OLDDATA 0,

REMARKS----------!
```

a = RC order number
b = Member number of TSI being converted
c = UT decimal word number previously recorded in Step 2, Page 1

PERFORM FUNCTIONAL WORD CHANGE OF WIDEBAND CAPABILITY DATA



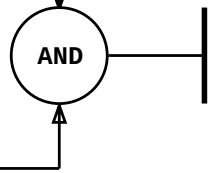
APPLY POWER TO TSI BAY 0

NOTE 1
Operation of **ON** switch will cause diagnostics to be run. Phase 23 will fail

TABLE A			
PHASE 23 TEST FAILURES			
TSI NUMBER	**TEST**	**SPC 0 MISMATCH DATA**	**SPC 1 MISMATCH DATA**
EVEN	6	00060000	00060000
	7	00000300	00000300
	22*	any of bits 0-7	any of bits 8-15
	24*	any of bits 0-7	any of bits 8-15
	26	00060000	00060000
	27	00000300	00000300
	42*	any of bits 0-7	any of bits 8-15
	44*	any of bits 0-7	any of bits 8-15
ODD	6	00060000	00060000
	7	00000300	00000300
	23*	any of bits 0-7	any of bits 8-15
	25*	any of bits 0-7	any of bits 8-15
	26	00060000	00060000
	27	00000300	00000300
	43*	any of bits 0-7	any of bits 8-15
	45*	any of bits 0-7	any of bits 8-15
* Tests that may or may not fail			

APPLY POWER TO TSI BAY 0

[1] Enter message
OP:TRKSTAT,TAN aab0001:NUM 840,STAT ACT!
aa = TSI member number
b = SPC being converted
(0 or 1)



[2] Save printout for
later use

DETERMINE ACTIVE TRUNKS

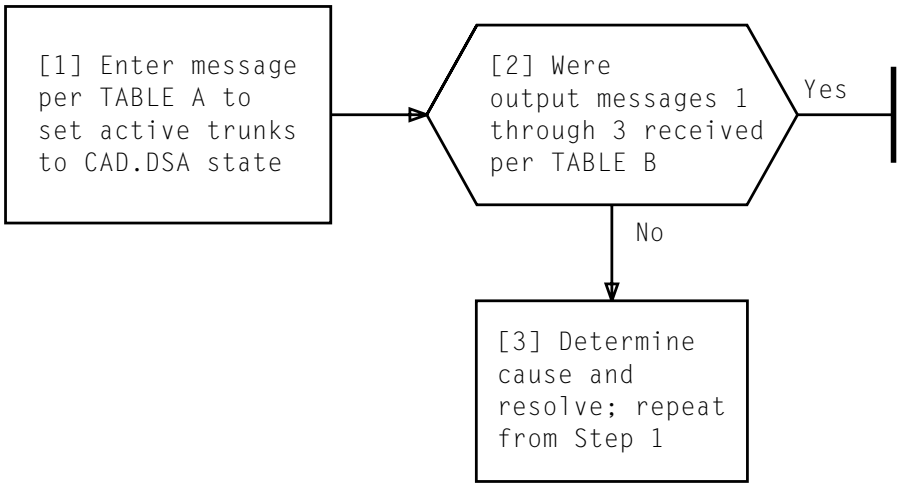


TABLE A

SET:TRKSTAT CAD.DSA,TAN a;SUM:NUM 840!

a = Base TAN for unit being converted (bbc0001)
bb = TSI member number
c = SPC being converted (0 or 1)

TABLE B

MESSAGE NUMBER	OUTPUT MESSAGE
1	REPT:SDC:32 TRKS RMVL LMT EXCEEDED, TAN a TTYCHAN=b
2	REPT:SDC:128 TRKS RMVL LMT EXCEEDED, TAN a TTYCHAN=b
3	SET:TRKSTAT ,TAN a NUM,SUM COMPLETED TRK COUNT c

a = Base TAN for unit being converted
b = TTY channel that SET message was sent
c = Number of trunks set to CAD.DSA state

SET TRUNKS TO CAD.DSA STATE

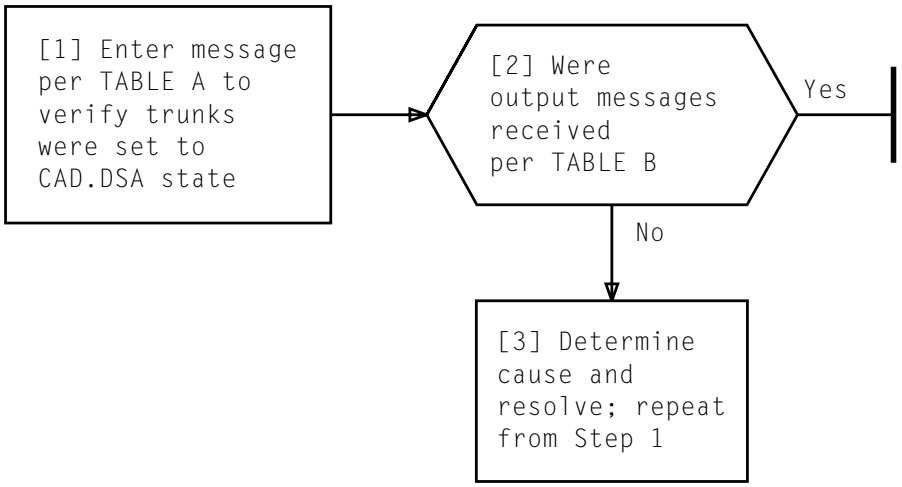


TABLE A

OP:TRKSTAT,TAN a;SUM:NUM 840,STAT ACT!

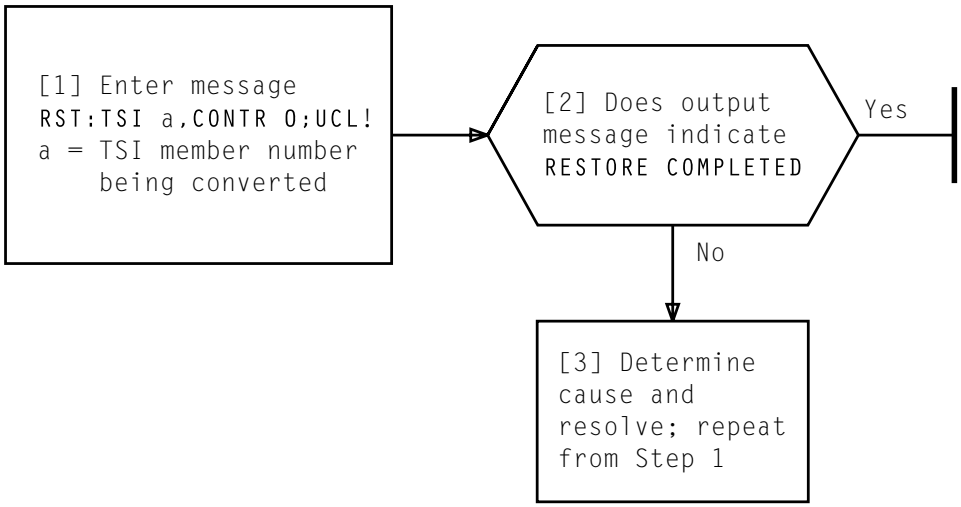
a = Base TAN for unit being converted
(bbc0001)
bb = TSI member number
c = SPC being converted (0 or 1)

TABLE B

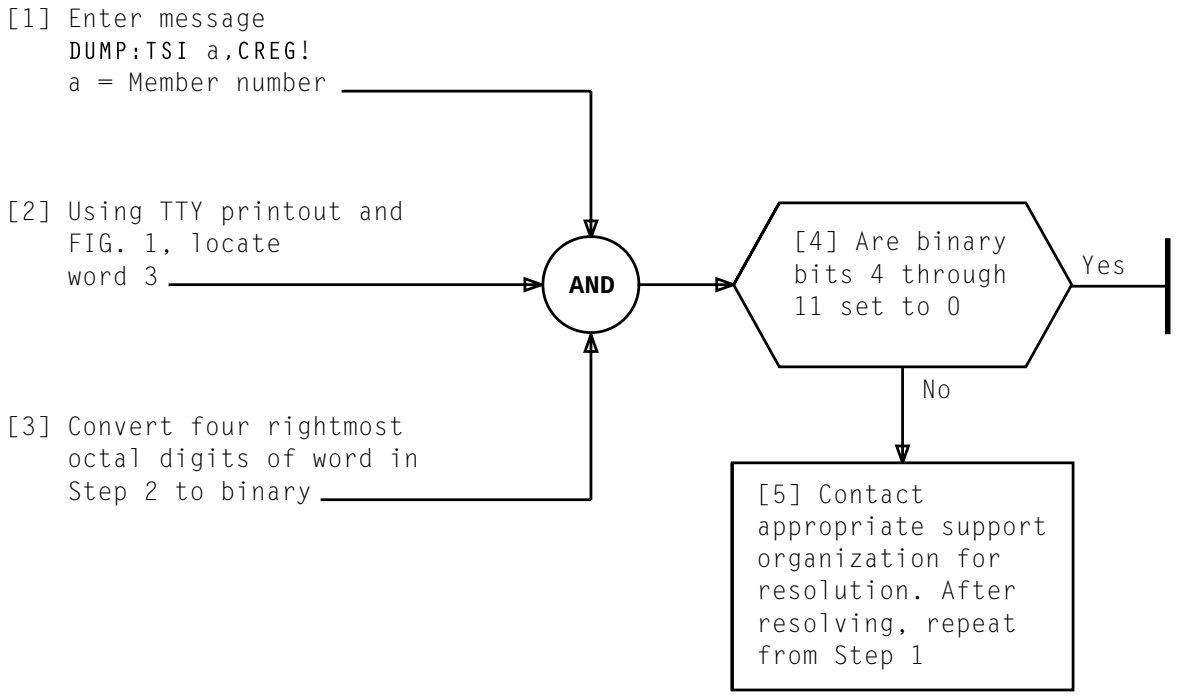
OP:TRKSTAT ACT ,TAN a NUM,SUM COMPLETED
TRK COUNT 0

a = Base TAN for unit being converted

VERIFY TRUNKS SET TO CAD.DSA STATE



RESTORE TSI CONTROLLER 0 TO SERVICE UNCONDITIONALLY



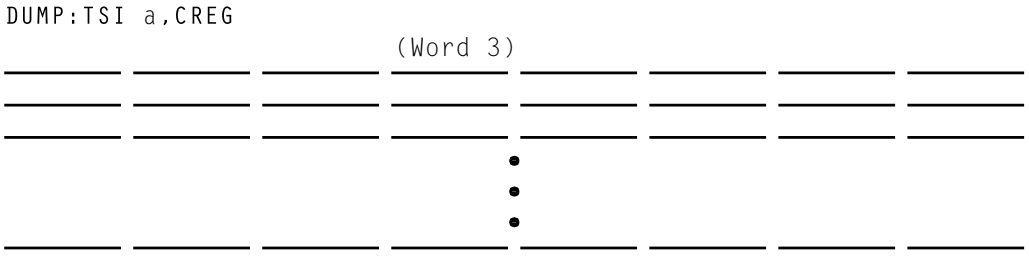


FIG. 1 – TSI CREG Dump Output Message

VERIFY TSI CRITICAL REGISTERS ARE SET CORRECTLY

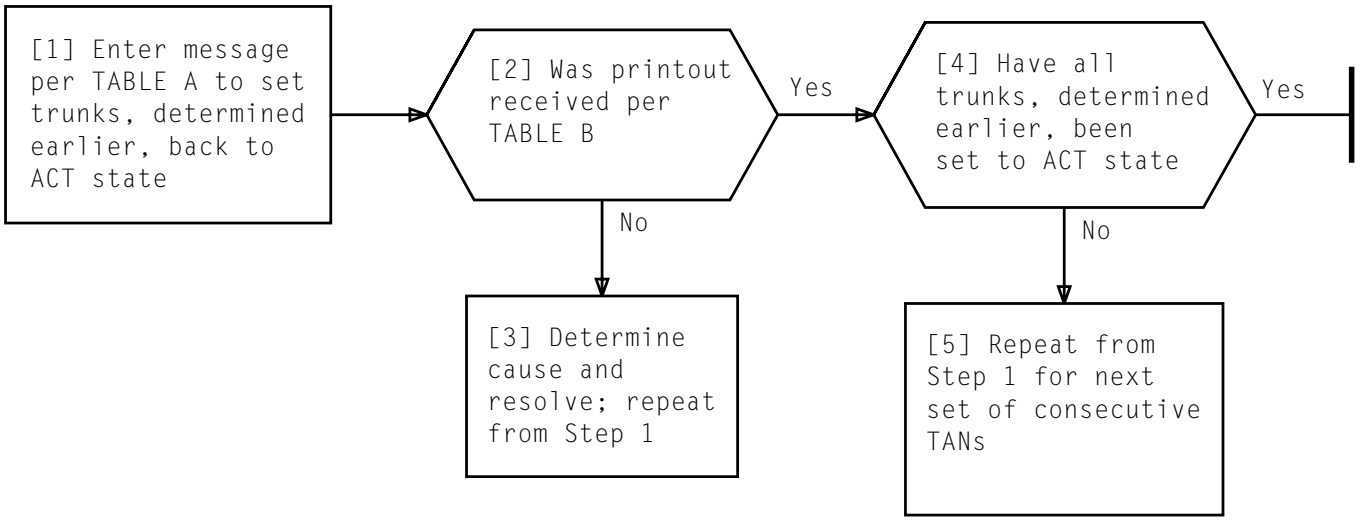


TABLE A
SET:TRKSTAT ACT,TAN a;SUM:NUM b! a = First TAN of consecutive TANs to be set to ACT state b = Number of consecutive TANs to be set to ACT state (840 maximum)

TABLE B
SET:TRKSTAT ,TAN a NUM,SUM COMPLETED TRK COUNT b a = TAN entered in input message b = Number entered in input message

SET TRUNKS BACK TO ACT STATE

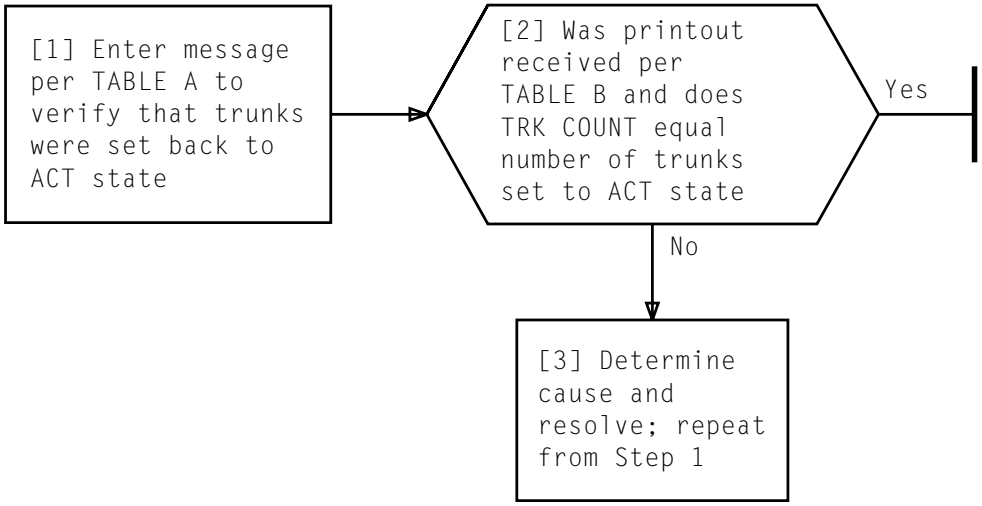


TABLE A

OP:TRKSTAT,TAN a;SUM:NUM 840,STAT ACT!

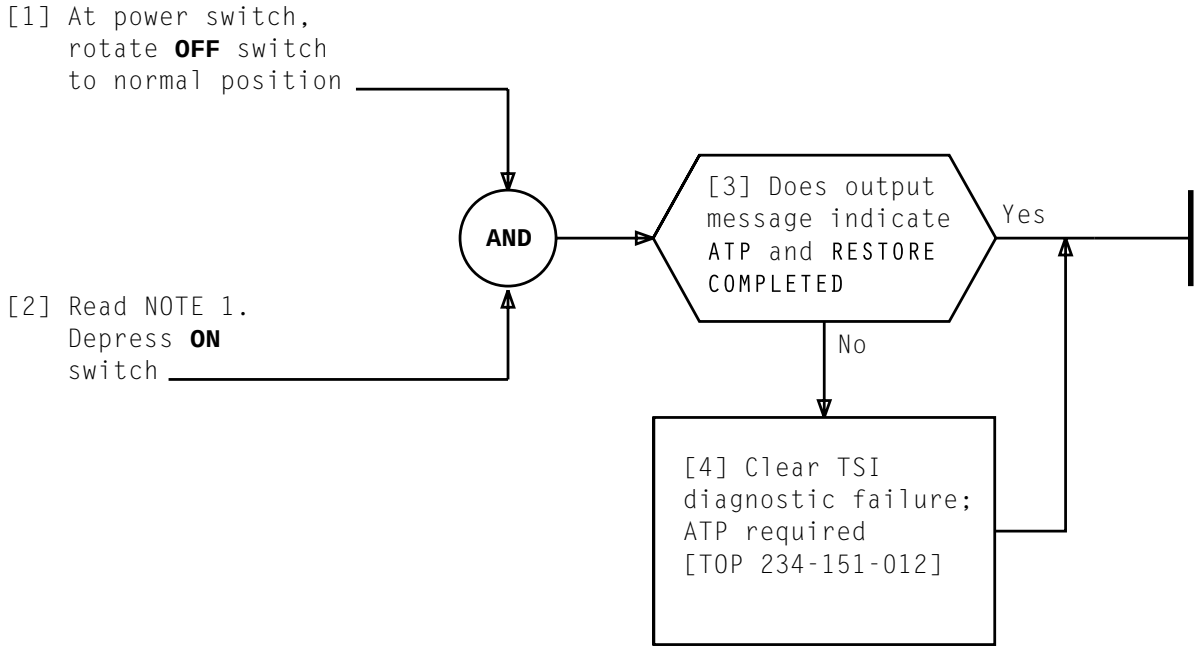
a = Base TAN for unit being converted
(bbc0001)
bb = TSI member number
c = SPC being converted (0 or 1)

TABLE B

OP:TRKSTAT ACT ,TAN a NUM,SUM COMPLETED
TRK COUNT b

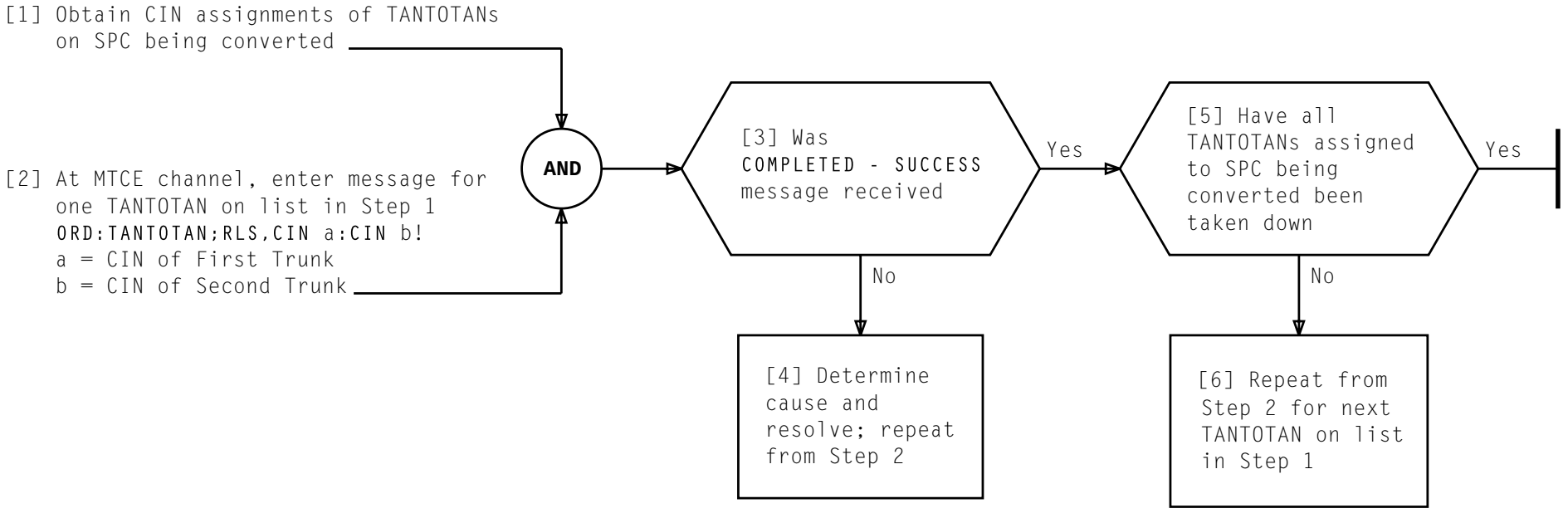
a = Base TAN for unit being converted
b = Total number of trunks set ACT

VERIFY TRUNKS SET TO ACT STATE

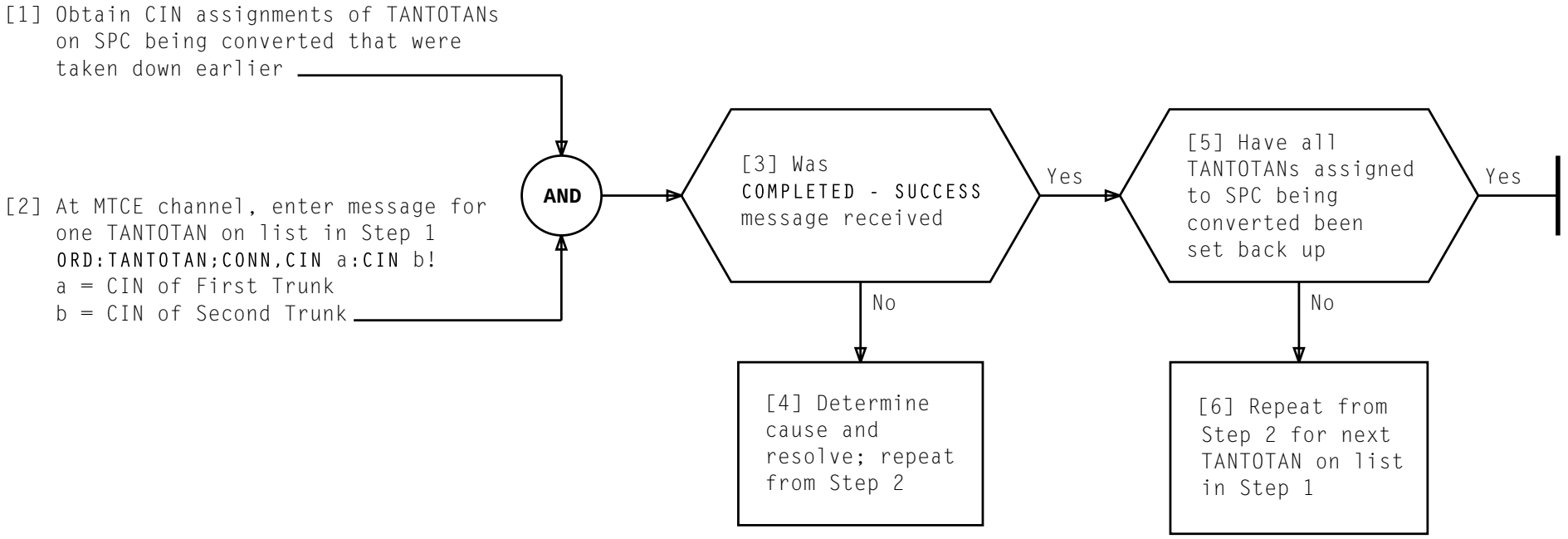


RESTORE POWER USING POWER SWITCH

NOTE 1
Operation of **ON** switch will cause diagnostic to be run



TAKE DOWN TANTOTAN CONNECTIONS



SET UP TANTOTAN CONNECTIONS

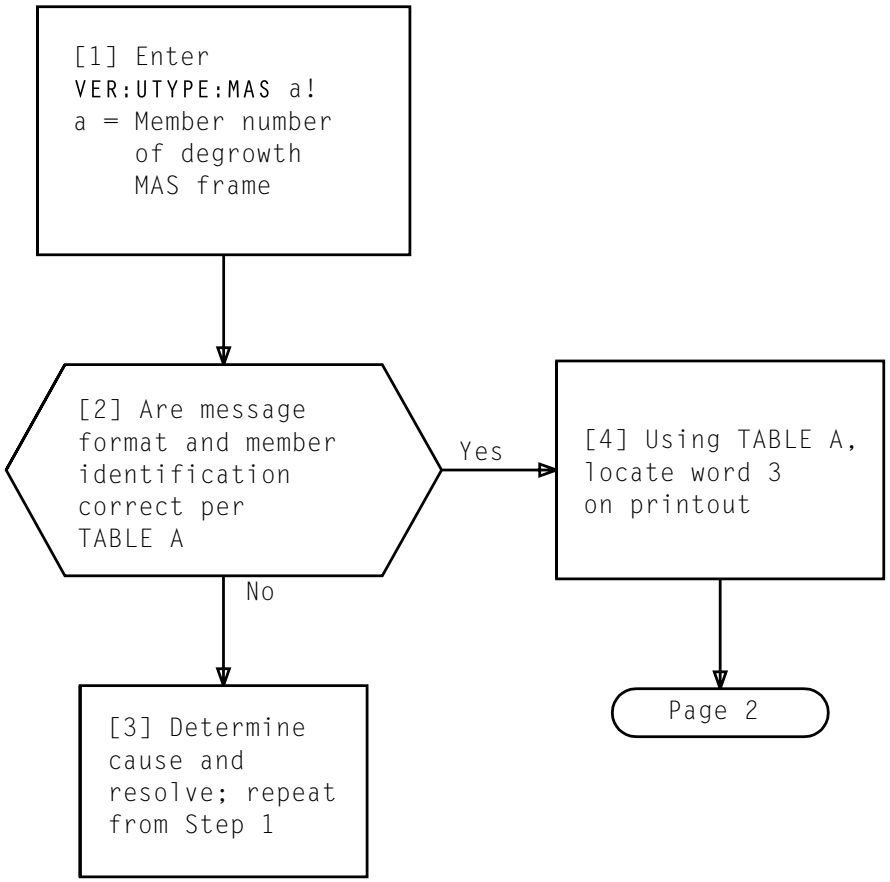


TABLE A

VER:UTMN;OPT(),CUR: FLN a, UTYN MAS,

MEMN b, ME UNEQ,

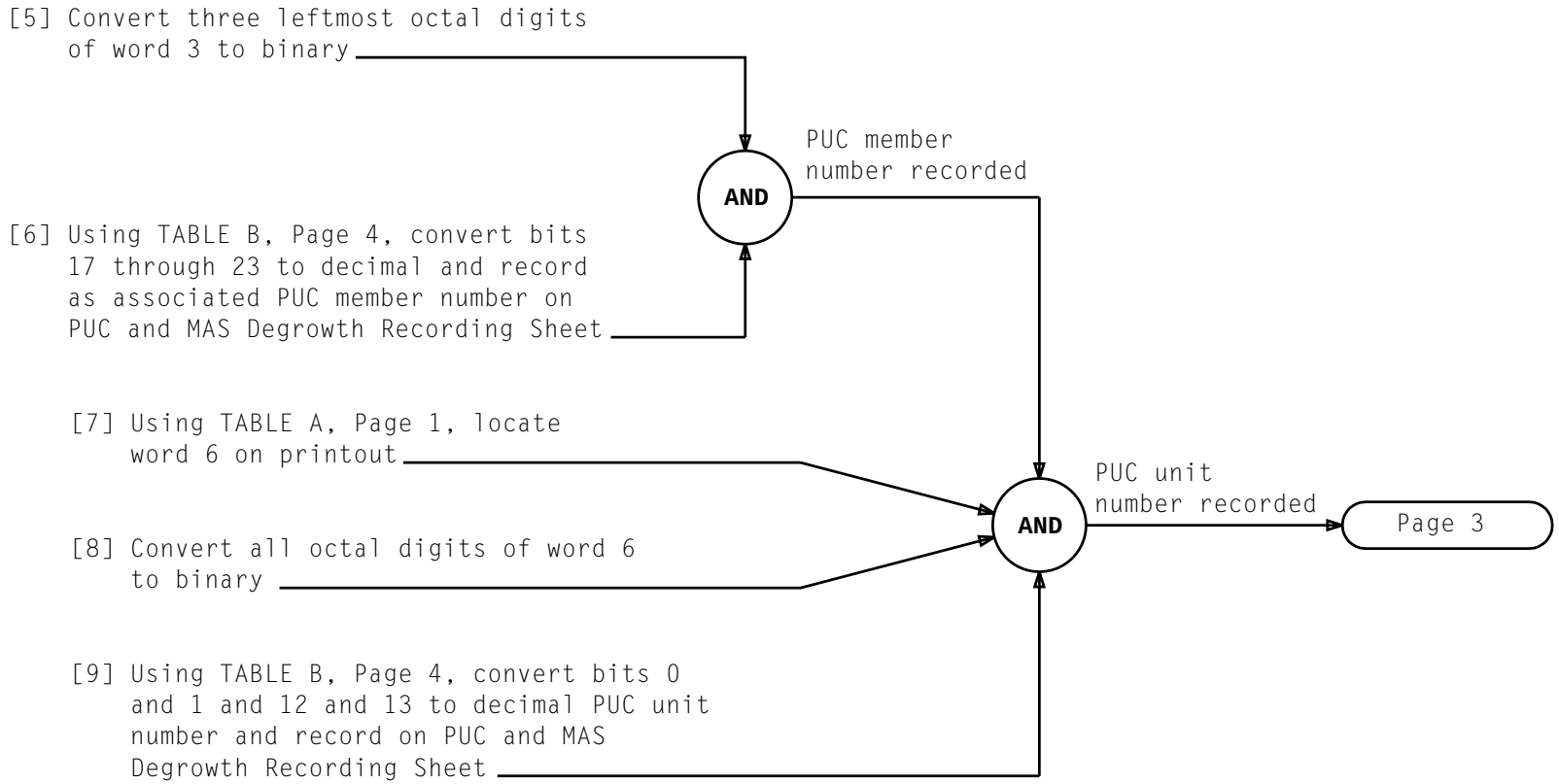
ENTRY ADDRESS c, ENTRY SIZE 126,

CUR

WORD 0					(WORD 3)
			(WORD 6)		
WORD 10					
WORD 20					
WORD 30					
•	•	•	•	•	
•	•	•	•	•	
•	•	•	•	•	
WORD 160					
WORD 170					

a = Floor location number
b = Member number of growth MAS frame
c = Starting octal address for UT entry

RECORD MAS FRAME UT TRANSLATOR INFORMATION



RECORD MAS FRAME UT TRANSLATOR INFORMATION

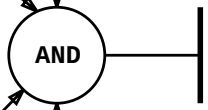
Using binary digits in Step 8, Page 2, and TABLE B, Page 4:

[10] Convert bits 2 through 4 and 14 through 16 to decimal TSI port numbers for MAU 0 and MAU 1, and record on PUC and MAS Degrowth Recording Sheet

[11] Record bits 5 and 17 for MAU 0 and MAU 1 SPC assignments on PUC and MAS Degrowth Recording Sheet

[12] Convert bits 6 through 11 and 18 through 23 to decimal TSI member numbers for MAU 0 and MAU 1, and record on PUC and MAS Degrowth Recording Sheet

[13] See NOTE 1. Determine TAN from values recorded in Steps 10 through 12 and record TAN for MAU 0 and MAU 1 on PUC and MAS Degrowth Recording Sheet



NOTE 1
TAN is made up by combining the decimal values of TSI member number (first), SPC (second), and TSI port number (third)

RECORD MAS FRAME UT TRANSLATOR INFORMATION

TABLE B

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION

3

entry data octal output → 0 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
0	0	0	Z	Z	Z	Z	X	X	X	X	X	0	X	X	X	X	X	X	X	X	X	X	X

binary values →

ASSOCIATED PUC MEMBER NUMBER	SP MEMBER NUMBER	L OR R MATRIX	SP ROW NUMBER	SP COLUMN NUMBER
	MEMBER BASE MISCELLANEOUS SCAN NUMBER			

Z...Z = Converts to associated PUC member number in decimal

Y = Variable octal number

6

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
X	X	X	X	X	X	X	X	X	X	Z	Z	X	X	X	X	X	X	X	X	X	X	Z	Z

binary values →

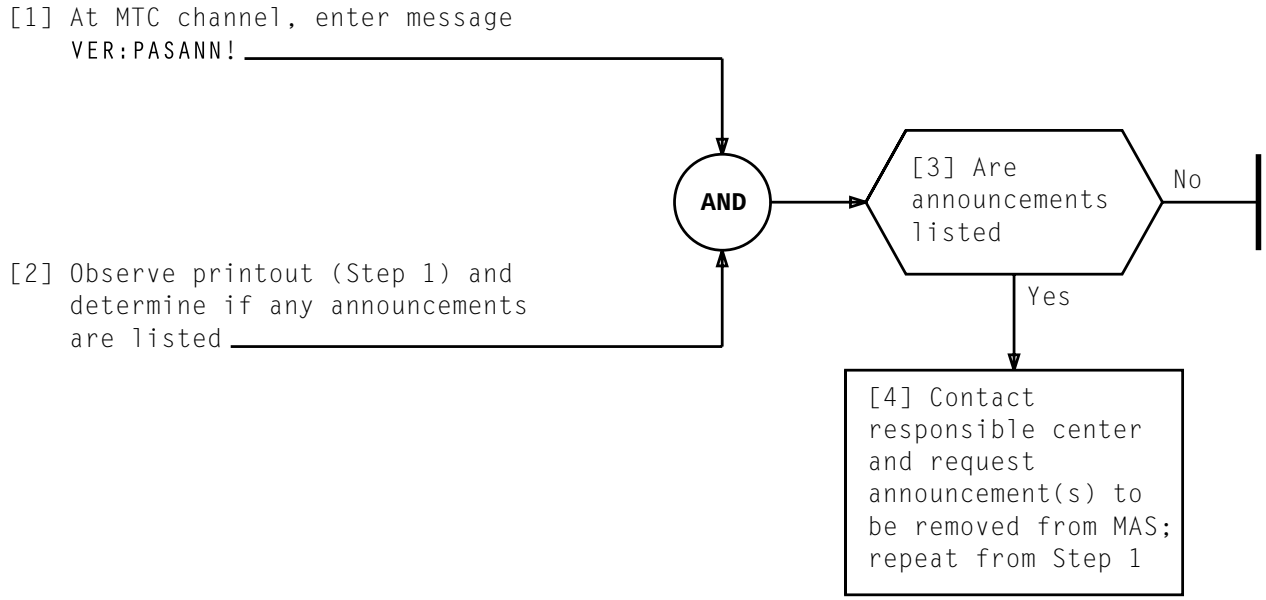
TSI MEMBER NUMBER	SPC	TSI PORT NUMBER	PUC UNIT	TSI MEMBER NUMBER	SPC	TSI PORT NUMBER	PUC UNIT
MAU 1				MAU 0			
MAU TO TSI LEVEL ASSIGNMENT AND PUC UNIT ASSIGNMENT							

X...X = Converts to decimal MAU-TSI level assignment as reflected in office record drawing T-nnnn-Hn-467 or equivalent

Y = Variable octal number

If this MAS is first MAS on PUC frame:
ZZ = 00 for MAU 0
= 01 for MAU 1

If this MAS is second MAS on PUC frame:
ZZ = 10 for MAU 0
= 11 for MAU 1



VERIFY MAS ANNOUNCEMENT STATUS

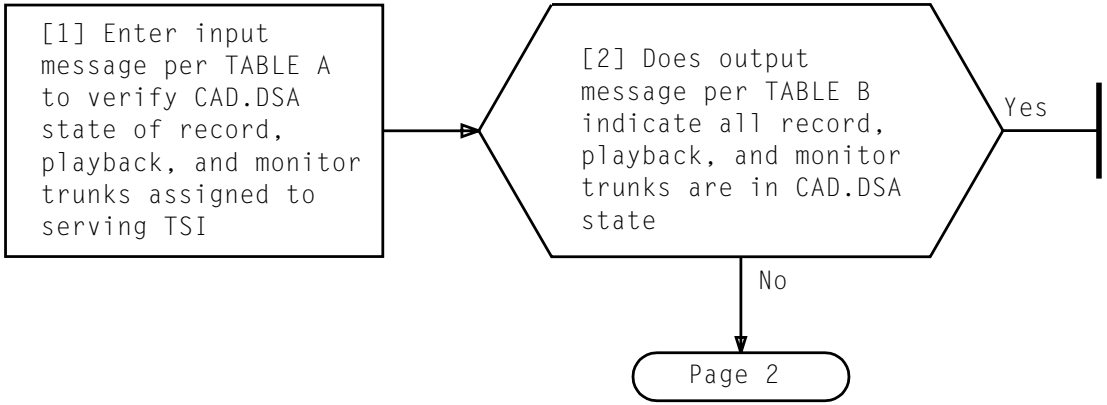


TABLE A
INPUT MESSAGE
OP:TRKSTAT,TAN a:NUM 120!
a = TAN recorded earlier

TABLE B
OUTPUT MESSAGE
OP:TRKSTAT CAD.DSA<MAN> • • OP:TRKSTAT CAD.DSA<MAN> COMPLETED TRK COUNT b
b = Trunk count

VERIFY TRUNK STATUS OF RECORD, PLAYBACK AND MONITOR TRUNKS ASSIGNED TO SERVING TSI

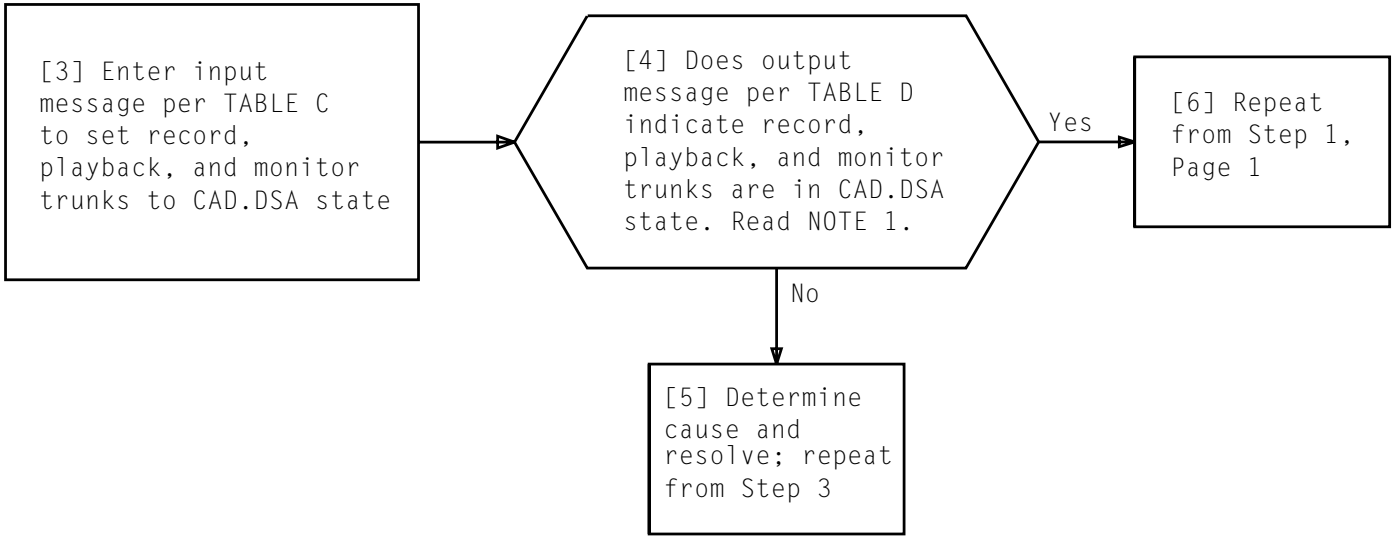


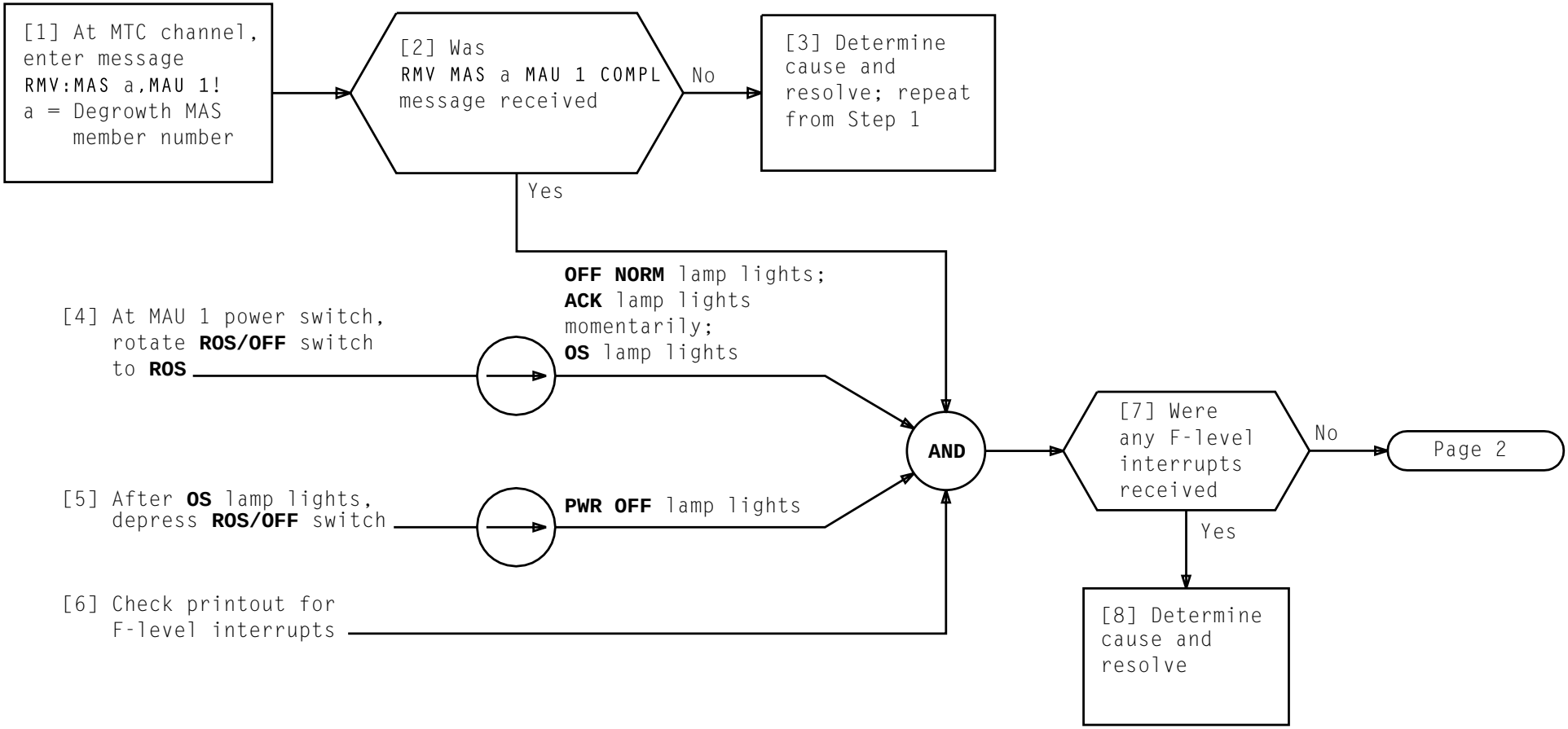
TABLE C
SET:TRKSTAT CAD.DSA,TAN a;SUM:NUM 120!
a = TAN recorded earlier

TABLE E
REPT:SDC:32 TRKS RMVL LMT EXCEEDED, TAN a
a = Trunk appearance number

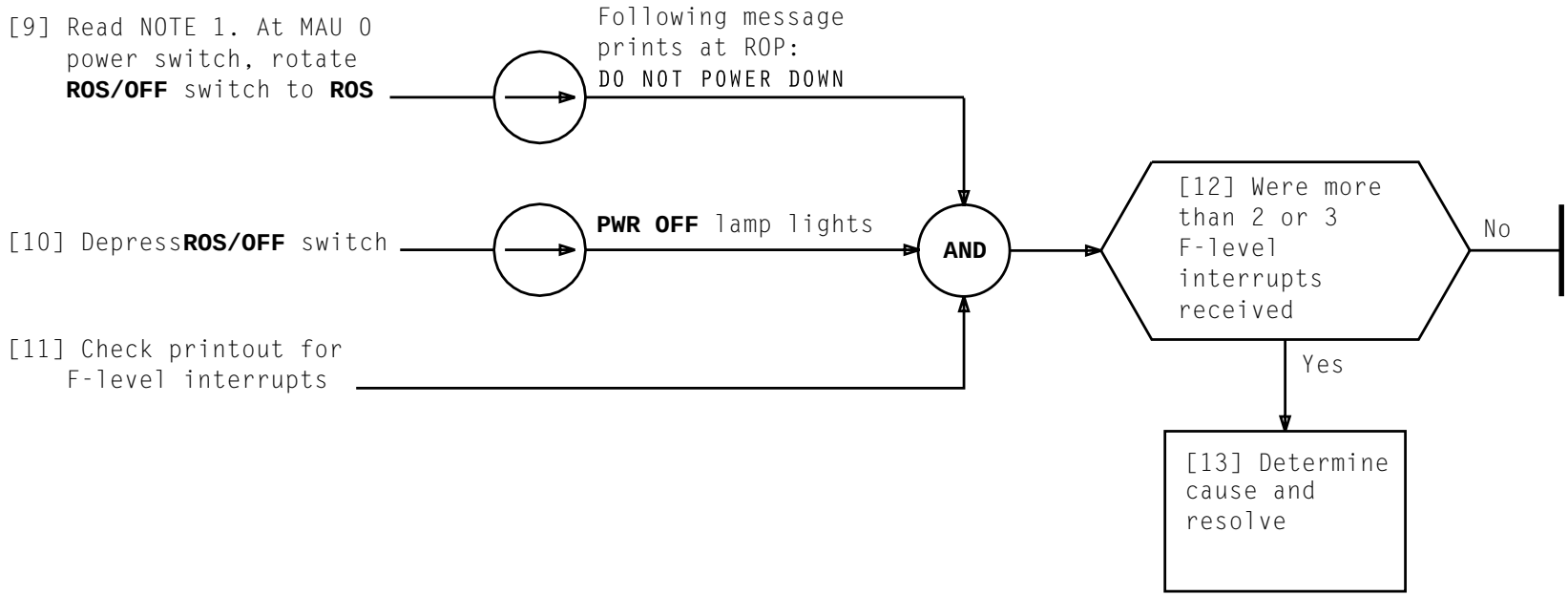
TABLE D
SET:TRKSTAT CAD.DSA,TAN a; NUM,SUM • • • SET:TRKSTAT CAD.DSA,TAN a; NUM,SUM COMPLETED TRK COUNT b
a = TAN recorded earlier b = Number of trunks assigned to DS120

NOTE 1
If large groups of trunks are removed at one time, output message per TABLE E may be received

VERIFY TRUNK STATUS OF RECORD, PLAYBACK AND MONITOR TRUNKS ASSIGNED TO SERVING TSI



DUPLEX FAIL MAS FRAME



NOTE 1
Since MAU 1 is already out of service, the system will not allow you to take MAU 0 out of of service. When you try to take MAU 0 out of service, the message "DO NOT REMOVE POWER" is printed at the read only printer. You can ignore this message and continue to remove power

DUPLEX FAIL MAS FRAME

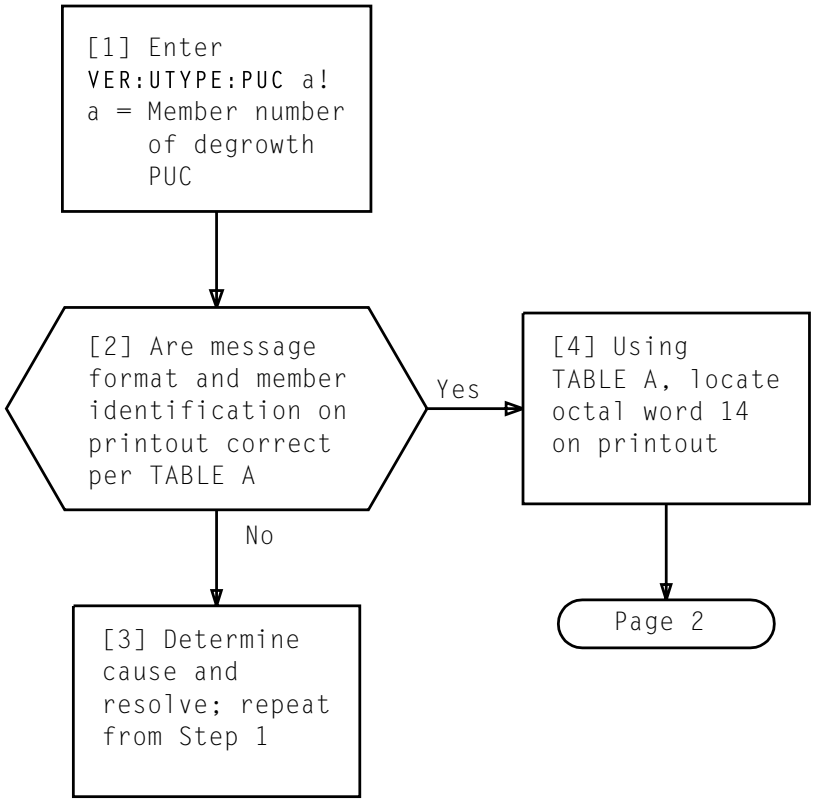


TABLE A

VER:UTMN;OPT(),CUR: FLN a, UTYN PUC,

MEMN b, ME UNEQ,

ENTRY ADDRESS c, ENTRY SIZE 44,

CUR

WORD 0	_____	_____	_____	_____
	_____	_____	_____	_____
WORD 10	_____	_____	_____	_____
(WORD 14)	_____	_____	_____	_____
WORD 20	_____	_____	_____	_____
	_____	_____	_____	_____
WORD 30	_____	_____	_____	_____
	_____	_____	_____	_____
WORD 40	_____	_____	_____	_____
	_____	_____	_____	_____
WORD 50	_____	_____	_____	_____

a = Floor location number
b = Member number of growth PUC
c = Starting octal address for UT entry

DETERMINE MEMBER NUMBERS OF TSIs SUPPLYING CLOCK

[5] Convert four leftmost octal digits of octal word 14 to binary (bits 12 through 23)

[6] Using TABLE B, convert bits 12 through 17 of octal word 14 to decimal and record as first TSI member number

[7] Using TABLE B, convert bits 18 through 23 of octal word 14 to decimal and record as second TSI member number

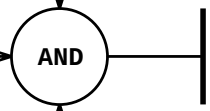


TABLE B

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION
14	entry data octal output: Y Y Y Y 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 X X X X X X X X X X 0 0 0 0 0 0 0 0 0 0 0 0 SECOND TSI MEMBER | FIRST TSI MEMBER | PUC UNIT 29 | PUC UNIT 28 | PUC UNIT 27 | PUC UNIT 26 | PUC UNIT 25 | PUC UNIT 24 TSI MEMBER SUPPLYING CLOCK TO THIS PUC | SUBMEMBER EQUIPAGE (PUC UNITS 24-29)

Y = Variable octal numbers

DETERMINE MEMBER NUMBERS OF TSIs SUPPLYING CLOCK

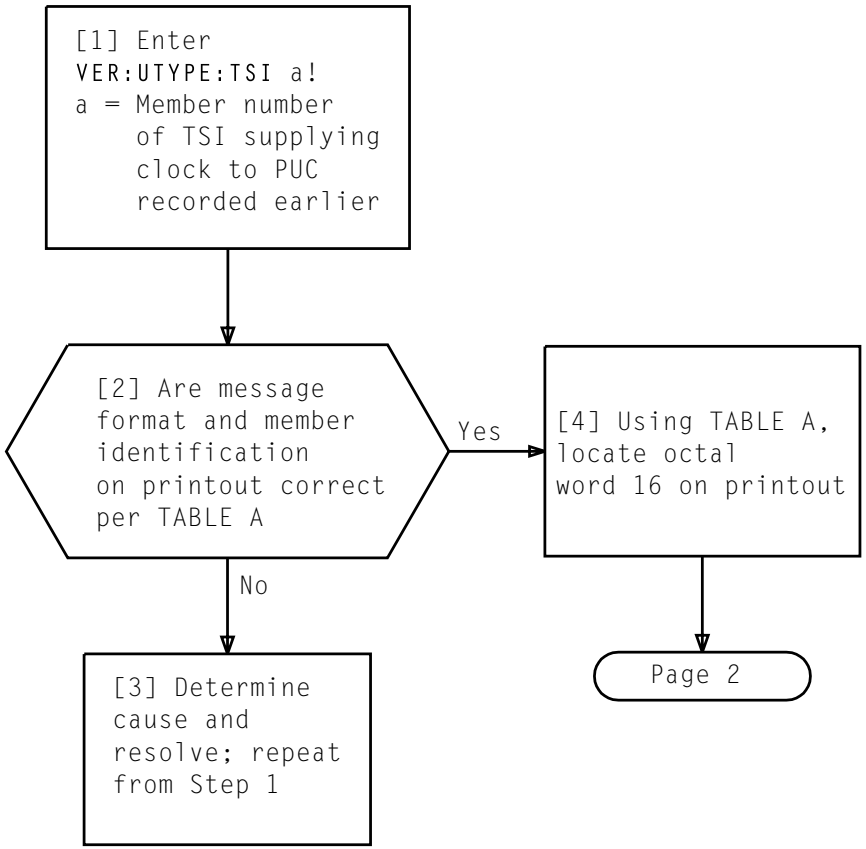


TABLE A

VER:UTMN;OPT(),CUR: FLN a, UTYN TSI,

MEMN b, ME c,

ENTRY ADDRESS d, ENTRY SIZE 33,

CUR

WORD 0	_____	_____	_____	_____	
	_____	_____	_____	_____	
WORD 10	_____	_____	_____	_____	
	_____	_____	(WORD 16) _____	(WORD 17) _____	
WORD 20	_____	_____	_____	_____	
	_____	_____	_____	_____	
WORD 30	_____	_____	_____	_____	
	_____	_____	_____	_____	
WORD 40	_____				

a = Floor location number
b = Member number of growth associated TSI
c = UNEQ or GROW or SGRO or OPER
d = Starting octal address for UT entry

DETERMINE CLOCK NUMBER IN TSIs SUPPLYING CLOCK

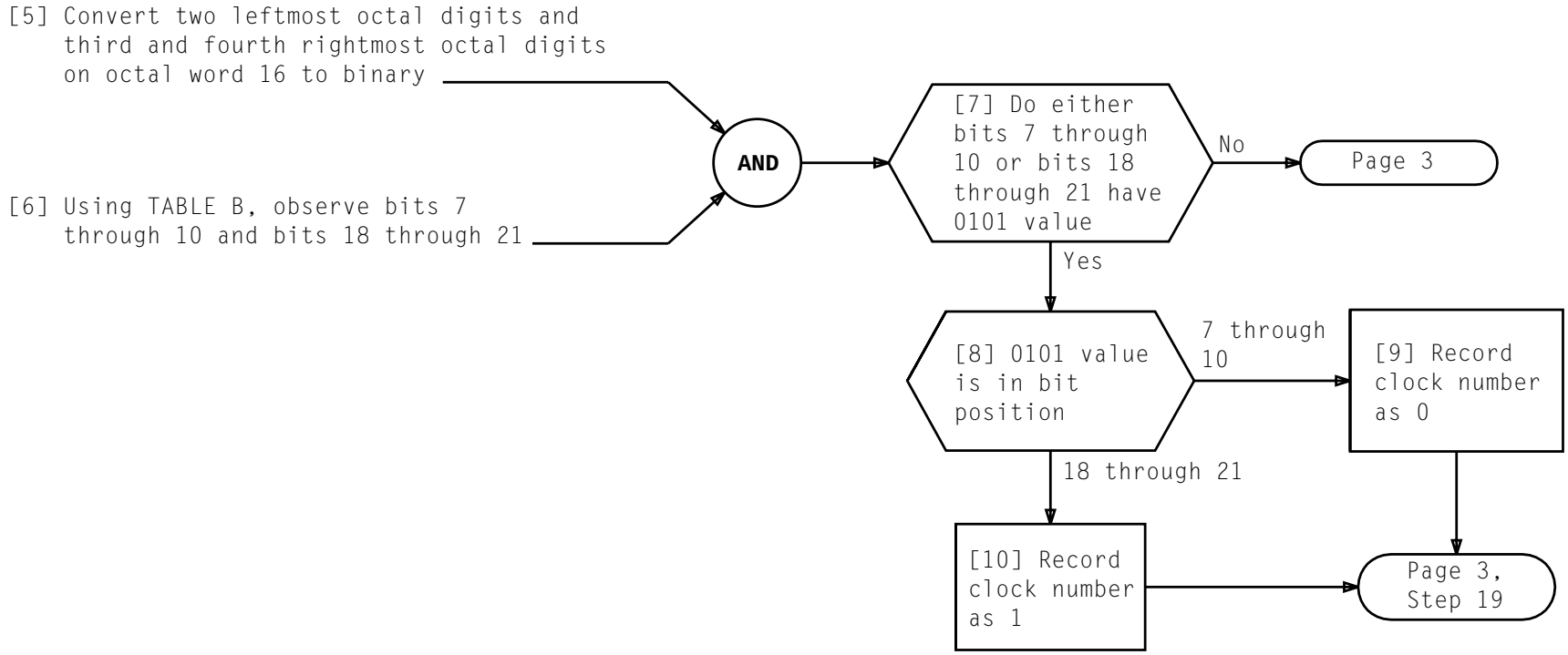
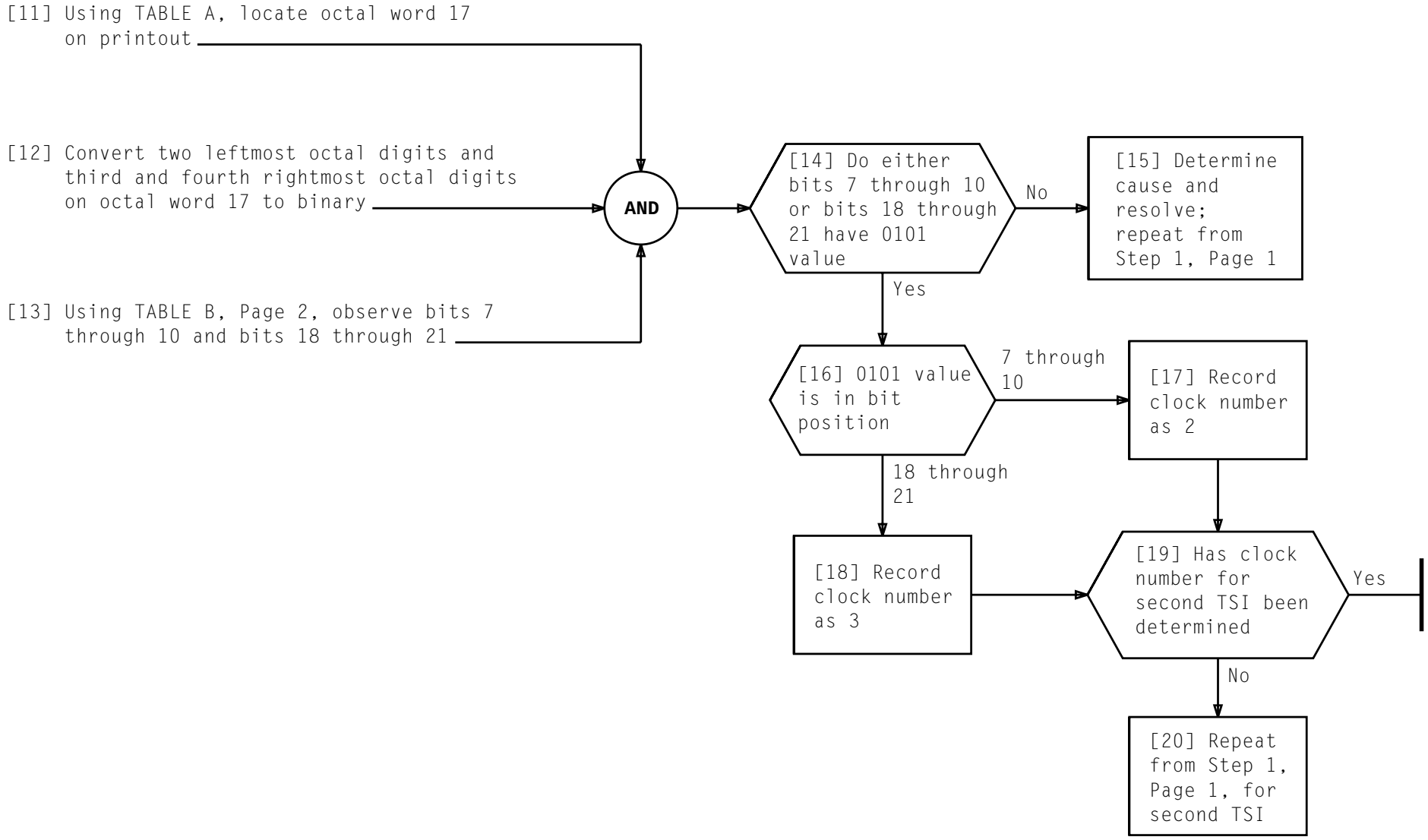


TABLE B

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	Z Z Z Z	X X X X	X X X	Z Z Z Z	X X X X	X X X	
		EQUIPAGE TYPE	MEMBER NUMBER		EQUIPAGE TYPE	MEMBER NUMBER		
		CLOCK			CLOCK			
		TSI CLOCK ASSIGNMENTS						

Y = Variable octal number ZZZZ = 0101 for PUC (clock 4 of TSI J4A001B not available)

DETERMINE CLOCK NUMBER IN TSIs SUPPLYING CLOCK



DETERMINE CLOCK NUMBER IN TSIs SUPPLYING CLOCK

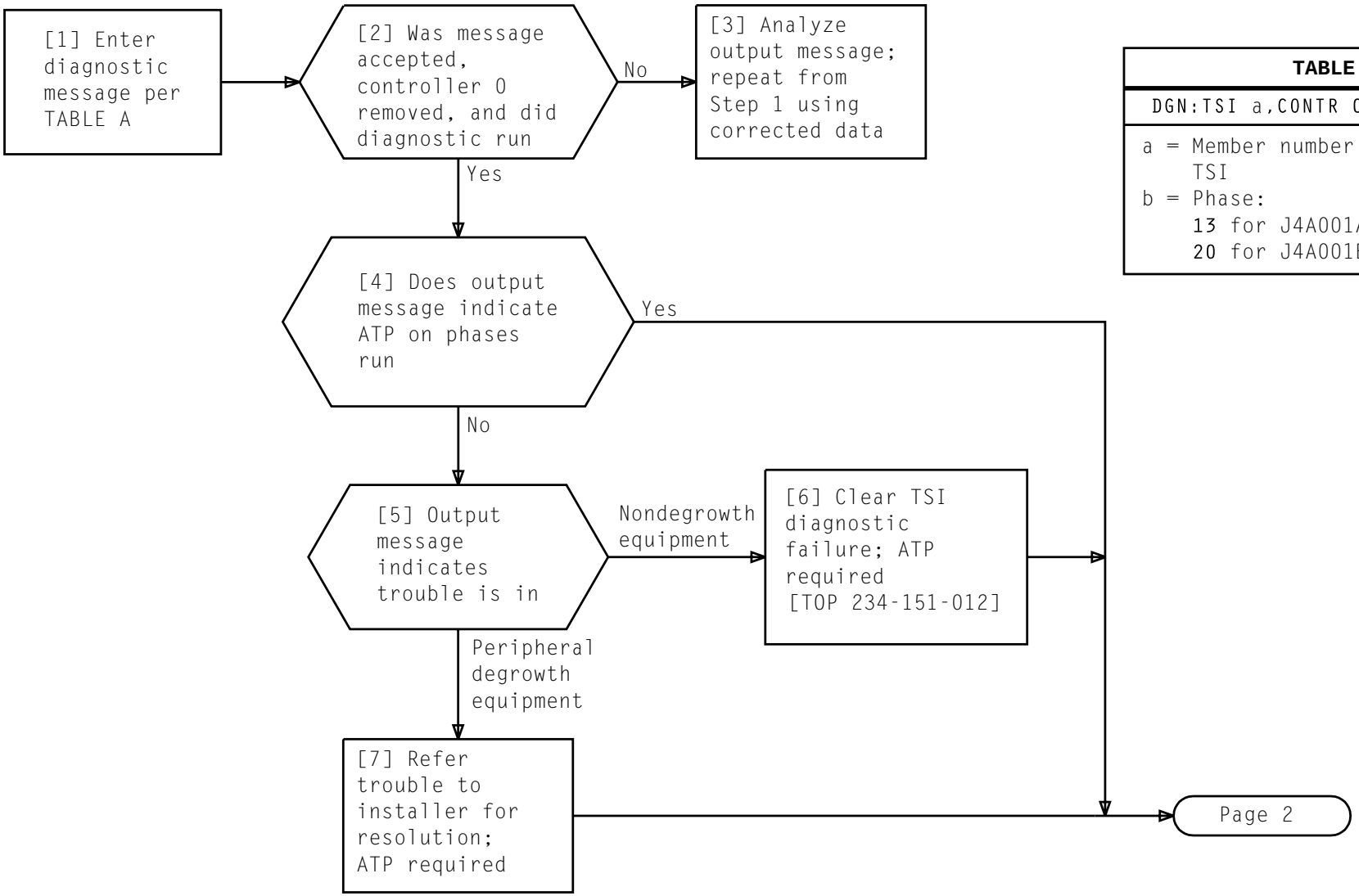


TABLE A
DGN:TSI a,CONTR 0:PH b!
a = Member number of connecting TSI b = Phase: 13 for J4A001A TSI or 20 for J4A001B TSI

DIAGNOSE AND RESTORE DEGROWTH ASSOCIATED TSI FRAME CONTROLLERS 0 AND 1

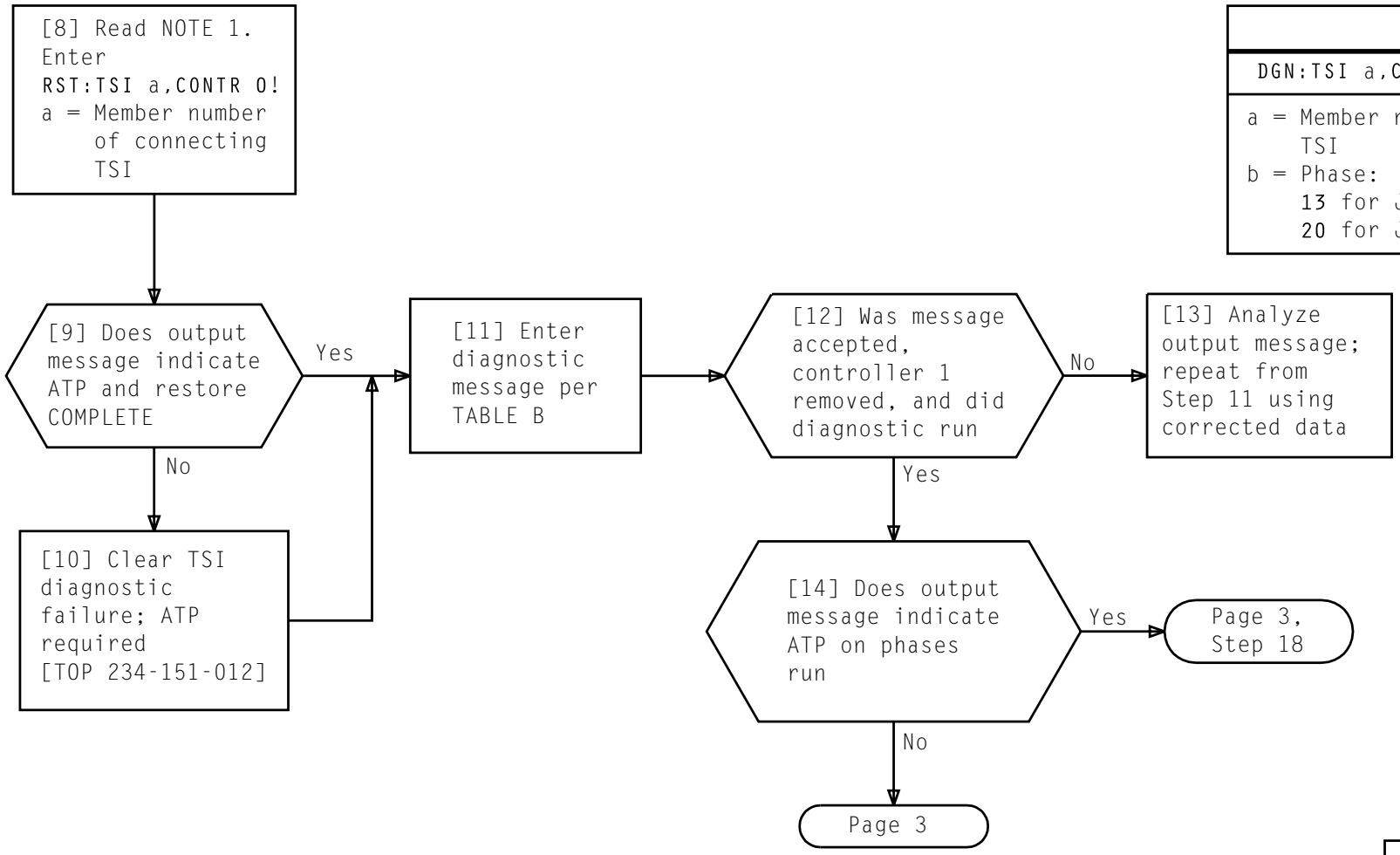
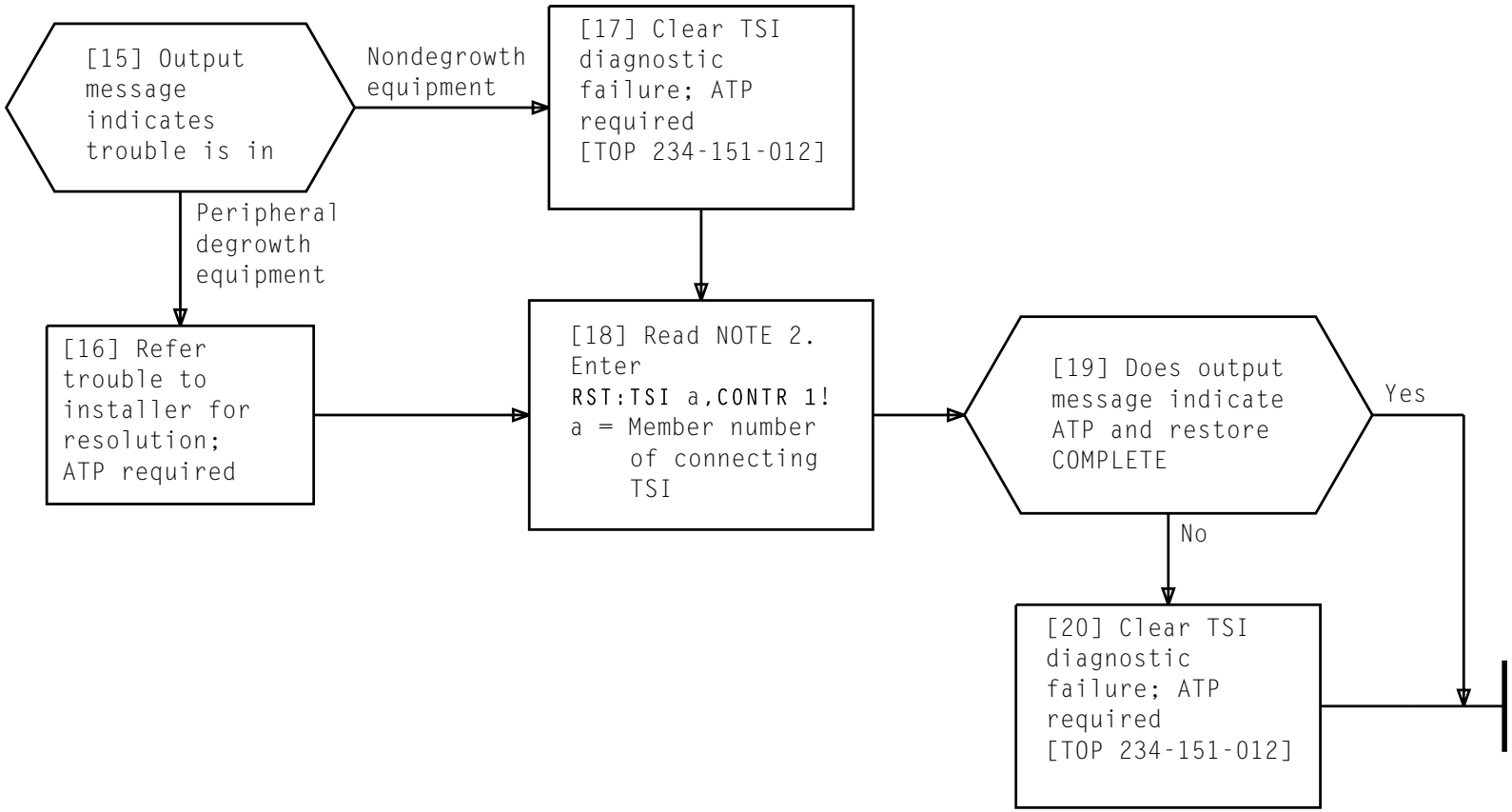


TABLE B
DGN:TSI a,CONTR 1:PH b!
a = Member number of connecting TSI b = Phase: 13 for J4A001A TSI or 20 for J4A001B TSI

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

DIAGNOSE AND RESTORE DEGROWTH ASSOCIATED TSI FRAME CONTROLLERS 0 AND 1



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

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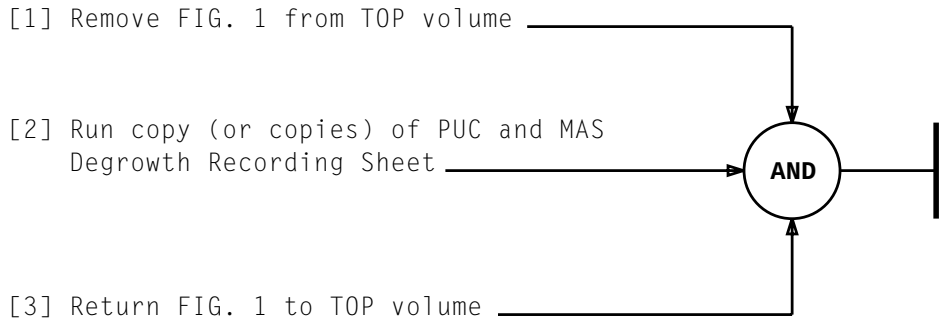
DIAGNOSE AND RESTORE DEGROWTH ASSOCIATED TSI FRAME CONTROLLERS 0 AND 1



OBTAIN BLANK COPY OF PUC AND MAS DEGROWTH RECORDING SHEET

PUC MEMBER NUMBER (BITS 17-23) _____ (BINARY)

_____ (DECIMAL)

UNIT TYPE	MAU 0		MAU 1	
	BINARY VALUE	DECIMAL VALUE	BINARY VALUE	DECIMAL VALUE
PUC UNIT NUMBERS				
TSI PORT NUMBERS				
SPC ASSIGNMENTS				
TSI MEMBER NUMBERS				
TAN				

FIRST TSI MEMBER NUMBER SUPPLYING CLOCK (BITS 12-17) _____ (BINARY)

_____ (DECIMAL)

CLOCK NUMBER SUPPLYING CLOCK _____

SECOND TSI MEMBER NUMBER SUPPLYING CLOCK (BITS 18-23) _____ (BINARY)

_____ (DECIMAL)

CLOCK NUMBER SUPPLYING CLOCK _____

FIG. 1 – PUC AND MAS DEGROWTH RECORDING SHEET

OBTAIN BLANK COPY OF PUC AND MAS DEGROWTH RECORDING SHEET

ITEM	ISSUE	ITEM	ISSUE	ITEM	ISSUE	ITEM	ISSUE	ITEM	ISSUE	ITEM	ISSUE
• IXL-001		DLP-523		☐ DLP-558							
NTP-002		DLP-524		☐ DLP-559							
NTP-003		☐ DLP-525		☐ DLP-560							
NTP-004		☐ DLP-526		DLP-561							
☐ NTP-005		☐ DLP-527		DLP-562							
NTP-006		☐ DLP-528		DLP-563							
☐ NTP-007		☐ DLP-529		DLP-564							
• NTP-008		☐ DLP-530		DLP-565							
• NTP-009		☐ DLP-531		DLP-566							
• NTP-010		DLP-532		DLP-567							
• NTP-011		DLP-533		• DLP-568							
• NTP-012		☐ DLP-534		• DLP-569							
DLP-500		DLP-535		• DLP-570							
• DLP-501		☐ DLP-536		• DLP-571							
DLP-502		DLP-537		• DLP-572							
DLP-503		DLP-538		• DLP-573							
DLP-504		DLP-539		• DLP-574							
DLP-505		☐ DLP-540		• DLP-575							
☐ DLP-506		☐ DLP-541		• DLP-576							
DLP-507		DLP-542		• DLP-577							
☐ DLP-508		DLP-543		• DLP-578							
DLP-509		DLP-544		• DLP-579							
DLP-510		DLP-545		• DLP-580							
DLP-511		DLP-546		• DLP-581							
DLP-512		DLP-547		• DLP-582							
DLP-513		DLP-548		• DLP-583							
DLP-514		• DLP-549		• DLP-584							
DLP-515		☐ DLP-550		• DLP-585							
DLP-516		☐ DLP-551		• DLP-586							
DLP-517		DLP-552		• DLP-587							
DLP-518		DLP-553		• DLP-588							
DLP-519		DLP-554		• DLP-589							
☐ DLP-520		DLP-555		• CKL-891							
• DLP-521		DLP-556		TNG-893							
DLP-522		☐ DLP-557		DPL-895							

• REVISED OR ADDED ITEM ☐ CANCELED ITEM

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CHECKLIST

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