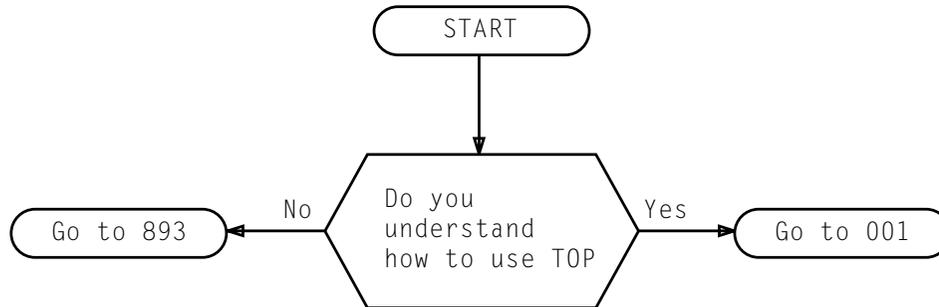




Task Oriented Practice (TOP)

4ESS™ Switch With 1B Processor TMS And TSI Growth/Degrowth



TOP Comments Hot Line:

*Monday through Friday
8:00 a.m. - 4:00 p.m. (Eastern)
Call: 1-888-LTINFO6
Or FAX to: 1-910-727-3043*

Issue 1	SEP 1998
234-353-040	TPG
TITLE PAGE	000

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Issue 1	SEP 1998
234-353-040	LPG
LEGAL 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 Time Slot Interchange (J4A001B) (TSI-2) Frame and TMS Interface (Support to Installer)	NTP-004
Convert TSI to Wideband Capability	NTP-011
Degrow Mass Announcement Service (MAS) and Peripheral Unit Controller (PUC) Hardware	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.

ACCEPTANCE

Issue 1	SEP 1998
234-353-040	NTP
PAGE 1 of 1	002

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

		RESPONSIBILITY	
	<p>WARNING: 1. An anti-static wrist strap must be worn to prevent electrostatic discharge which could result in damage to circuit packs while working in frame</p> <p>2. No growth or maintenance activity should be performed during this procedure</p> <p>3. It is assumed that will coaxial cabling is non-faulty. Improper handling of cabling may damage cables or cause service interruption. Extreme care must be used when Inspecting or Handling cables, cables are very sensitive to movement or handling and can become damaged very easily.</p>		
	<p>NOTES: 1. Appropriate Input/Output Manuals must be used if clarification of input message or output message is necessary</p> <p>2. This procedure must be performed during light traffic periods</p> <p>3. 4ESS™ Switch operation must be closely monitored while performing this procedure</p> <p>4. Corrective action must be taken immediately on any activity that may cause any unit to go out of service (OOS)</p> <p>5. Stability of office must be maintained throughout this procedure</p>		
1	Notify Next Higher Technical Support Group That TSI-B And TMS Intergace Are To Be Added	TELCO	—
2	Ensure 1B Processor Routine Exerciser (REX) Successfully Diagnosed 1B Processor Equipment Within 24 Hours of Performing This Procedure	TELCO	—
3	Ensure 4ESS Switch Is In Stable Condition	TELCO	DLP-590
4	Ensure 1B Processor and Peripheral Units Are Operating in Normal Duplex Mode	TELCO	DLP-591
5	Assure That TSI Frame Power Verification Tests Have Been Completed	INST	—
6	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	—
	(Continued on Page 2)		

ADD TIME SLOT INTERCHANGE J4A001B (TSI-B) FRAME AND TMS INTERFACE — SUPPORT TO INSTALLER (INST)

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

7	Remove All Frame and Bus Power From Growth Frame Using Following Switches: <ul style="list-style-type: none"> • IPUB0 and IPUB1 • ALC0 and ALC1 • CONTR0 and CONTR1 	INST	—
8	Connect Private Signal Leads	INST	—
9	Install Strapping for K Code, MI, GI Options, and Verify That All TSI Port Loop Devices Are in Place	INST	—
10	Connect Major and Minor Alarm Cables	INST	—
11	Verify Major and Minor TSI Alarm Cables	INST	—
12	Verify TSI Private Signal Leads	INST	—
13	Connect Network Clock Coaxial Cables (Clock Distribution Cables Involved)	INST	—
14	Extend or Insert Peripheral Unit Bus Per TOP 234-353-045; Then Continue This Procedure at Item 11 Upon Completion	TELCO/INST	—
15	Recent Change and Verify Member Equipage From UNEQ to GROW (TSI Even Member Number)	TELCO	DLP-502
16	Enter Message RMV:PUB 0! To Remove Peripheral Unit Bus 0 From Service	TELCO	—
17	Apply Power to Controllers 0 and 1 and Network Drivers 0 and 1	INST	—
18	Apply Power to Growth TSI Bus Interface Unit 0	INST	—
19	Diagnose TSI Frame Controllers 0 and 1 (Specifying Phases 1-23, PUB 0, and Growth)	INST	—
20	Remove Power From TSI Bus Interface Unit 0	INST	—
21	Restore Peripheral Unit Bus 0 to Service (RST:PUB 0!)	TELCO/INST	DLP-507
22	Enter Message RMV:PUB 1! To Remove Peripheral Unit Bus 1 From Service	TELCO	—
23	Apply Power to Growth TSI Bus Interface Unit 1	INST	—
24	Diagnose TSI Frame Controllers 0 and 1 (Specifying Phases 1-23, PUB 1, and Growth)	INST	—
	(Continued on Page 3)		

ADD TIME SLOT INTERCHANGE J4A001B (TSI-B) FRAME AND TMS INTERFACE — SUPPORT TO INSTALLER (INST)

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

25	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 16	TELCO/INST	—
26	Restore Peripheral Unit Bus 1 to Service (RST:PUB 1!)	TELCO/INST	DLP-507
27	Apply Power to Growth TSI Bus Interface Unit 0	INST	—
28	Diagnose TSI Frame Controllers 0 and 1 (Specifying Phases 1-23 and Growth)	INST	—
29	Diagnose TMS Frame Controllers Using Restore Message (All TMS Frames)	TELCO	DLP-532
30	Determine Where TSI-TMS Coaxial Cables Are To Be Connected	INST	—
31	Check Continuity of TSI-TMS Transmit Coaxial Cables Which Have Been Prerun and Then Connect	INST	—
32	Check Continuity of TSI-TMS Receive Coaxial Cables Which Have Been Prerun and Then Connect	INST	—
33	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
34	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
35	For Any TMS Memory Blocks Being Interfaced With Added TSI and Which Were Changed to SGRO State per Item 34 Above, Activate TMS Memory Blocks to Operational Using RC Form 600	TELCO	DLP-523

ADD TIME SLOT INTERCHANGE J4A001B (TSI-B) FRAME AND TMS INTERFACE — SUPPORT TO INSTALLER (INST)

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

36	Enter Message To Run Peripheral Unit Status Audit (AUD:PUSTAT!); Wait for Message Complete (MSG COMPL)	TELCO	-
37	Recent Change and Verify Member Equipage From 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		
38	Diagnose TSI Controllers 0 and 1 (Specifying Phases 1-23 and Growth)	INST	-
39	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		
40	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	-
41	Recent Change and Verify Member Equipage From SGRO to OPER (TSI Even Member Number)	TELCO	DLP-502
42	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	-
	(Continued on Page 5)		

ADD TIME SLOT INTERCHANGE J4A001B (TSI-B) FRAME AND TMS INTERFACE - SUPPORT TO INSTALLER (INST)

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

43	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 43 for Odd Member TSI	TELCO	—
44	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	—
	<i>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 40 or 41 as applicable.</i>		
45	Enter Message To Inhibit Growth TSI KCODE (INH:TSI a,KCODE!); Wait for Repeat of Input Message To Be Printed	TELCO	—
	<i>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 40 or 41 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.</i>		
46	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	—
(Continued on Page 6)			

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

46 (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	—
47	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	—
48	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 49	TELCO/INST	—
	B. If "F" Level Interrupt Occurs When Pest Controls Are Released, Normal Trouble Analysis for Interrupts Should Be Executed (TOP 234-351-003)	TELCO/INST	—

**ADD TIME SLOT INTERCHANGE J4A001B (TSI-B) FRAME AND TMS
INTERFACE — SUPPORT TO INSTALLER (INST)**

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

48 (Contd)	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 40	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.		
49	Read Entire Test Procedure To Become Familiar With its Contents Before Beginning NETEX Testing	TELCO/INST	—
	<i>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</i>		
	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		
50	Establish Frame Hardware Status Required	TELCO	DLP-535
51	Review Requirements To Maintain Log Sheet	TELCO	DLP-542
	(Continued on Page 8)		

ADD TIME SLOT INTERCHANGE J4A001B (TSI-B) FRAME AND TMS INTERFACE — SUPPORT TO INSTALLER (INST)

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

52	Perform Pretest Activities	TELCO/INST	DLP-543
53	Input NETEX Execution Data	TELCO	DLP-544
54	Run Growth TSIs at 200 Connect Level	TELCO/INST	DLP-545
	NOTE: Safe point to temporarily stop procedure		
55	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		
56	Run NETEX on Growth TSIs at 800 Connect Level	TELCO/INST	DLP-547
57	Enter Message To Delete NETEX From Program Store (STOP:LIBSYS;RELEASE!)	TELCO	-
58	If No Further NETEX Testing Is Anticipated, Enter Message To Remove NETEX From File System INIT:LIBSYS,PKG LGxNETX! where x = Generic Release Number	TELCO	-
59	Determine PS Member Number Assigned K-Code 34 When NETEX Library Program Was Executed (OP:PSSTATUS!)	TELCO	-
60	Set PS Assigned K-Code 34 (Item 59) to NORM (SET:PS a;NORM!)	TELCO	-

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

		RESPONSIBILITY	
	<p><i>WARNING: 1. An anti-static wrist strap must be worn to prevent electrostatic discharge which could result in damage to circuit packs while working in frame</i></p> <p><i>2. No growth or maintenance activity should be performed during this procedure</i></p>		
	<p>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.</p> <p>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</p> <p>3. Appropriate Input/Output Manuals must be used if clarification of input message or output message is necessary</p> <p>4. This procedure must be performed during light traffic periods</p> <p>5. 4ESS™ Switch operation must be closely monitored while performing this procedure</p> <p>6. Corrective action must be taken immediately on any activity that may cause any unit to go out of service (OOS)</p> <p>7. Stability of office must be maintained throughout this procedure</p>		
1	Notify Next Higher Technical Support Group That TMS Memory Blocks Are To Be Added	TELCO	—
2	Ensure 1B Processor Routine Exerciser (REX) Successfully Diagnosed 1B Processor Equipment Within 24 Hours of Performing This Procedure	TELCO	—
3	Ensure 4ESS Switch Is In Stable Condition	TELCO	DLP-590
4	Ensure 1B Processor and Peripheral Units Are Operating in Normal Duplex Mode	TELCO	DLP-591
5	Select TMS Memory Block Equipment, If Required	INST	—
6	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
	(Continued on Page 2)		

**ADD MEMORY BLOCKS TO TIME MULTIPLEXED SWITCHING (TMS)
FRAMES IN FOUR TMS OFFICE — SUPPORT TO INSTALLER (INST)**

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

	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
7	Diagnose TMS Frame Controllers Using Restore Message (Controller 0 and 1, All Member Numbers) (RST:TMSP a,CONTR b!)	TELCO	DLP-532
8	Remove Power With Power Switch (TMS Member Number 0 – Controller 0)	TELCO	–
9	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	–
10	If Growth TMS Memory Blocks Are in UNEQ State as Determined in Item 6, 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 9, 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 9, 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 9, Recent Change and Verify Submember Equipage From UNEQ to GROW (Memory Block 3)	TELCO	DLP-503
11	Restore Frame Power With Power Switch (TMS Member Number 0 - Controller 0) (Leave OFF Switch in ROS)	TELCO/INST	DLP-513
12	Diagnose TMS Growth Equipment Specifying Memory (TMS Member Number 0 - Controller 0) (DGN:TMSP 0,CONTR 0:MEMORY,GROWTH!)	TELCO/INST	DLP-533
13	Rotate OFF Switch to Normal Position (TMS Member Number 1 – Controller 0)	TELCO/INST	–
14	Remove Power With Power Switch (TMS Member Number 1 – Controller 0)	TELCO	–
15	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	–
	(Continued on Page 3)		

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

16	If Growth TMS Memory Blocks Are in UNEQ State As Determined in Item 6, 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 15, 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 15, 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 15, Recent Change and Verify Submember Equipage From UNEQ to GROW (Memory Block 3)	TELCO	DLP-503
17	Restore Frame Power With Power Switch (TMS Member Number 1 – Controller 0) (Leave OFF Switch in ROS)	TELCO/INST	DLP-513
18	Diagnose TMS Growth Equipment Specifying Memory (TMS Member Number 1 – Controller 0) (DGN:TMS 1,CONTR 0:MEMORY,GROWTH!)	TELCO/INST	DLP-533
19	Rotate OFF Switch to Normal Position (TMS Member Number 1 – Controller 0)	TELCO/INST	–
20	Remove Power With Power Switch (TMS Member Number 2 – Controller 0)	TELCO	–
21	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	–
22	If Growth TMS Memory Blocks Are in UNEQ State As Determined in Item 6, 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 21, 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 21, 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 21, Recent Change and Verify Submember Equipage From UNEQ to GROW (Memory Block 3)	TELCO	DLP-503
23	Restore Frame Power With Power Switch (TMS Member Number 2 – Controller 0) (Leave OFF Switch in ROS)	TELCO/INST	DLP-513
	(Continued on Page 4)		

**ADD MEMORY BLOCKS TO TIME MULTIPLEXED SWITCHING (TMS)
FRAMES IN FOUR TMS OFFICE – SUPPORT TO INSTALLER (INST)**

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

24	Diagnose TMS Growth Equipment Specifying Memory (TMS Member Number 2 – Controller 0) (DGN:TMSP 2,CONTR 0:MEMORY,GROWTH!)	TELCO/INST	DLP-533
25	Rotate OFF Switch to Normal Position (TMS Member Number 2 – Controller 0)	TELCO/INST	–
26	Remove Power With Power Switch (TMS Member Number 3 – Controller 0)	TELCO	–
27	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	–
28	If Growth TMS Memory Blocks Are in UNEQ State As Determined in Item 6, 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 27, 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 27, 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 27, Recent Change and Verify Submember Equipage From UNEQ to GROW (Memory Block 3)	TELCO	DLP-503
29	Restore Frame Power With Power Switch (TMS Member Number 3 – Controller 0) (Leave OFF Switch in ROS)	TELCO/INST	DLP-513
30	Diagnose TMS Growth Equipment Specifying Memory (TMS Member Number 3 – Controller 0) (DGN:TMSP 3,CONTR 0:MEMORY,GROWTH!)	TELCO/INST	DLP-533
31	Rotate OFF Switch to Normal Position (TMS Member Number 3 – Controller 0)	TELCO/INST	–
32	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	–
33	Remove Power With Power Switch (TMS Member Number 0 - Controller 1)	TELCO	–
34	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	–
	(Continued on Page 5)		

**ADD MEMORY BLOCKS TO TIME MULTIPLEXED SWITCHING (TMS)
FRAMES IN FOUR TMS OFFICE – SUPPORT TO INSTALLER (INST)**

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

35	If Growth TMS Memory Blocks Are in UNEQ State As Determined in Item 6, 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 34, 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 34, 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 34, Recent Change and Verify Submember Equipage From UNEQ to GROW (Memory Block 3)	TELCO	DLP-503
36	Restore Frame Power With Power Switch (TMS Member Number 0 – Controller 1) (Leave OFF Switch in ROS)	TELCO/INST	DLP-513
37	Diagnose TMS Growth Equipment Specifying Memory (TMS Member Number 0 – Controller 1) (DGN:TMSP 0,CONTR 1:MEMORY,GROWTH!)	TELCO/INST	DLP-533
38	Rotate OFF Switch to Normal Position (TMS Member Number 0 – Controller 1)	TELCO/INST	–
39	Remove Power With Power Switch (TMS Member Number 1 – Controller 1)	TELCO	–
40	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	–
41	If Growth TMS Memory Blocks Are in UNEQ State As Determined in Item 6, 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 40, 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 40, 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 40, Recent Change and Verify Submember Equipage From UNEQ to GROW (Memory Block 3)	TELCO	DLP-503
42	Restore Frame Power With Power Switch (TMS Member Number 1 – Controller 1) (Leave OFF Switch in ROS)	TELCO/INST	DLP-513
	(Continued on Page 6)		

**ADD MEMORY BLOCKS TO TIME MULTIPLEXED SWITCHING (TMS)
FRAMES IN FOUR TMS OFFICE – SUPPORT TO INSTALLER (INST)**

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

43	Diagnose TMS Growth Equipment Specifying Memory (TMS Member Number 1 – Controller 1) (DGN:TMSP 1,CONTR 1:MEMORY,GROWTH!)	TELCO/INST	DLP-533
44	Restore OFF Switch to Normal Position (TMS Member Number 1 – Controller 1)	TELCO/INST	–
45	Remove Power With Power Switch (TMS Member Number 2 – Controller 1)	TELCO	–
46	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	–
47	If Growth TMS Memory Blocks Are in UNEQ State As Determined in Item 6, 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 46, 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 46, 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 46, Recent Change and Verify Submember Equipage From UNEQ to GROW (Memory Block 3)	TELCO	DLP-503
48	Restore Frame Power With Power Switch (TMS Member Number 2 – Controller 1) (Leave OFF Switch in ROS)	TELCO/INST	DLP-513
49	Diagnose TMS Growth Equipment Specifying Memory (TMS Member Number 2 – Controller 1) (DGN:TMSP 2,CONTR 1:MEMORY,GROWTH!)	TELCO/INST	DLP-533
50	Rotate OFF Switch to Normal Position (TMS Member Number 2 – Controller 1)	TELCO/INST	–
51	Remove Power With Power Switch (TMS Member Number 3 – Controller 1)	TELCO	–
52	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	–
53	If Growth TMS Memory Blocks Are in UNEQ State As Determined in Item 6, 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 52, Recent Change and Verify Submember Equipage From UNEQ to GROW (Memory Block 1)	TELCO	DLP-503
	(Continued on Page 7)		

**ADD MEMORY BLOCKS TO TIME MULTIPLEXED SWITCHING (TMS)
FRAMES IN FOUR TMS OFFICE – SUPPORT TO INSTALLER (INST)**

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

53 (Cntd)	B. If Memory Block 2 Was Equipped in Item 52, 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 52, Recent Change and Verify Submember Equipage From UNEQ to GROW (Memory Block 3)	TELCO	DLP-503
54	Restore Frame Power With Power Switch (TMS Member Number 3 – Controller 1) (Leave OFF Switch in ROS)	TELCO/INST	DLP-513
55	Diagnose TMS Growth Equipment Specifying Memory (TMS Member Number 3 – Controller 1) (DGN:TMSP 3,CONTR 1:MEMORY,GROWTH!)	TELCO/INST	DLP-533
56	Rotate OFF Switch to Normal Position (TMS Member Number 3 – Controller 1)	TELCO/INST	–
57	Allow Soak Interval Same as Item 32	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.		

**ADD MEMORY BLOCKS TO TIME MULTIPLEXED SWITCHING (TMS)
FRAMES IN FOUR TMS OFFICE – SUPPORT TO INSTALLER (INST)**

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

		RESPONSIBILITY	
	<i>WARNING: 1. An anti-static wrist strap must be worn to prevent electrostatic discharge which could result in damage to circuit packs while working in frame 2. No growth or maintenance activity should be performed during this procedure</i>		
	NOTES: 1. This procedure may not be executed with DIF/DT/EXT/VIF associated with degrowth TSI in OPER state 2. Appropriate Input/Output Manuals must be used if clarification of input message or output message is necessary 3. This procedure must be performed during light traffic periods 4. 4ESS ™ Switch operation must be closely monitored while performing this procedure 5. Corrective action must be taken immediately on any activity that may cause any unit to go out of service (OOS) 6. Stability of office must be maintained throughout this procedure		
1	Notify Next Higher Technical Support Group That TSI-B Frame Is To Be Degrown	TELCO	—
2	Ensure 1B Processor Routine Exerciser (REX) Successfully Diagnosed 1B Processor Equipment Within 24 Hours of Performing This Procedure	TELCO	—
3	Ensure 4ESS Switch Is In Stable Condition	TELCO	DLP-590
4	Ensure 1B Processor and Peripheral Units Are Operating in Normal Duplex Mode	TELCO	DLP-591
5	If Associated DIF/DT/EST/VIF Is Operational, Degrowth Is Required. DIF/DT/EST/VIF Degrowth Procedures Are Contained in TOP 234-353-030	TELCO/INST	—
6	Verify That All TSI Ports Have Been Degrown From Degrowth TSI (VER:UTYPE:TSI a!)	TELCO	DLP-512
7	If All TSI Ports Are Not UNEQ per Item 6, Discontinue This Procedure Until All TSI Ports Are Degrown. TSI Port Degrowth Procedures Are Contained in TOP 234-353-030	TELCO	—
8	Recent Change and Verify Member Equipage of Degrowth TSI From OPER to SGRO Using RC Form 701 (Degrow)	TELCO	DLP-555
9	Run Peripheral Unit Status Audit (AUD:PUSTAT!)	TELCO	—
	(Continued on Page 2)		

DEGROW TIME SLOT INTERCHANGE (TSI-B) FRAME — SUPPORT TO INSTALLER (INST)

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

10	Remove Power From IPUB 0 and IPUB1 Using Power Switches	TELCO	—
11	Recent Change and Verify Member Equipage of Degrowth TSI From SGRO to GROW Using RC Form 701 (Degrow)	TELCO	DLP-555
12	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
	3. Diagnose TMS 0 Controllers 0 and 1 Using Restore Message (RST:TMS 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	—
	(Continued on Page 3)		

DEGROW TIME SLOT INTERCHANGE (TSI-B) FRAME — SUPPORT TO INSTALLER (INST)

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

12 (Contd)	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
	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
(Continued on Page 4)			

DEGROW TIME SLOT INTERCHANGE (TSI-B) FRAME — SUPPORT TO INSTALLER (INST)

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

12 (Contd)	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 12 for TMS 1 (Degrow TMS 1, Memory Blocks 3 and 1)	TELCO/INST	-
13	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
	3. Diagnose TMS 0 Controllers 0 and 1 Using Restore Message (RST:TMSP a, 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) for RESTORE COMPLETE Message	TELCO/INST	DLP-510
8. Remove Power With Power Switch (TMS 0, CONTR1 Power Switch)	TELCO	-	
(Continued on Page 5)			

DEGROW TIME SLOT INTERCHANGE (TSI-B) FRAME — SUPPORT TO INSTALLER (INST)

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

13 (Contd)	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 13 for TMS 1 (Degrow TMS 1, Memory Block 1)	TELCO/INST	—
	3. Repeat Item 13 for TMS 2 (Degrow TMS 2, Memory Block 1)	TELCO/INST	—
4. Repeat Item 13 for TMS 3 (Degrow TMS 3, Memory Block 1)	TELCO/INST	—	
14	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
	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
(Continue on Page 6)			

DEGROW TIME SLOT INTERCHANGE (TSI-B) FRAME — SUPPORT TO INSTALLER (INST)

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

14 (Contd)	6. At TMS 0-0, Remove Memory Block 2 Circuit Packs	INST	-
	7. Restore Frame Power With Power Switch (TMS 0, CONTR0 Power Switch) 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	-
15	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
	(Continued on Page 7)		

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

15 (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) 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. 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	—
	16	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		
17	At TMS Frame, Identify and Carefully Tag A Link Coaxial Cables To Be Removed	INST	—
18	Remove A Link Cables Between Degrowth TSI and Associated TMS Frames	INST	—
19	Remove Degrowth TSI From Peripheral Unit Bus Using Selected Option A or B in TOP 234-353-045; Then Continue This Procedure at Item 19 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	—
	(Continued on Page 8)		

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

20	Remove Network Clock Coaxial Cables From Degrowth TSI	INST	-
21	Recent Change and Verify Member Equipage for Degrowth TSI From GROW to UNEQ Using RC Form 701 (Degrow)	TELCO	DLP-555
22	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	-
23	Remove Alarm Cables in Degrowth TSI. If TSI Is in Middle of Lineup, Place New Cable Between Remaining Frames To Bridge Open	INST	-
24	Remove Private Signal Leads (MSD, PP, MSN)	INST	-
25	Remove +140V and +24V Power From Degrowth TSI at Power Distribution Frame	INST	-
26	Remove Degrowth TSI Common Circuits (Telephone Jacks, TTY Jacks, Appliance Outlets)	INST	-
27	Remove Degrown TSI Frame From Lineup	INST	-

**DEGROW TIME SLOT INTERCHANGE (TSI-B) FRAME — SUPPORT TO
INSTALLER (INST)**

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

		RESPONSIBILITY	
	<p><i>WARNING: 1. An anti-static wrist strap must be worn to prevent electrostatic discharge which could result in damage to circuit packs while working in frame</i></p> <p><i>2. No growth or maintenance activity should be performed during this procedure</i></p>		
	<p>NOTES: 1. This procedure may not be executed with DIF/DT/EXT/VIF associated with degrowth TSI in OPER state</p> <p>2. Appropriate Input/Output Manuals must be used if clarification of input message or output message is necessary</p> <p>3. This procedure must be performed during light traffic periods</p> <p>4. 4ESS™ Switch operation must be closely monitored while performing this procedure</p> <p>5. Corrective action must be taken immediately on any activity that may cause any unit to go out of service (OOS)</p> <p>6. Stability of office must be maintained throughout this procedure</p>		
1	Notify Next Higher Technical Support Group That TSI Is Being Converted to Wideband Capability	TELCO	–
2	Ensure 1B Processor Routine Exerciser (REX) Successfully Diagnosed 1B Processor Equipment Within 24 Hours of Performing This Procedure	TELCO	–
3	Ensure 4ESS Switch Is In Stable Condition	TELCO	DLP-590
4	Ensure 1B Processor and Peripheral Units Are Operating in Normal Duplex Mode	TELCO	DLP-591
5	Determine Member Number of TSI Frame To Be Converted	TELCO	–
6	Request Machine Administration Center To Determine If Any TANTOTANs and/or Nailup Connections Are Assigned to SPC in TSI To Be Converted	TELCO	–
7	If TANTOTANs Are Assigned, Obtain CIN Assignments of TANTOTANs on SPC To Be Converted for Later Use	TELCO	–
8	If Nailup Connections Are Assigned, Obtain TAN Assignments of Nailup Connections on SPC To Be Converted for Later Use	TELCO	–
	(Continued on Page 2)		

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

9	Diagnose Controllers 0 and 1 in TSI Being Converted Using Restore Message (RST:TSI a,CONTR b!)	TELCO	DLP-568
10	Ensure That 16 FA1816 and 16 FA1817 Circuit Packs Are Available for SPC Being Converted	TELCO	—
11	Remove Power From Bay 0 of TSI Frame Being Converted Using CONTR0 Power Switch	TELCO	DLP-593
12	Ensure That Proper Overcurrent Resistors Have Been Installed ED-4A155-30,G52	TELCO	—
13	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 (OA0B) 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 (OA0B) at Location 0-07-07	TELCO	—
	2. Replace the Two 245A Converters With the Two 245C Converters (Lucent Technologies Practices TOP 234-151-012, DLP-549)	TELCO	—
	14	Replace FA1780 and FA1781 Circuit Packs With FA1816 and FA1817 Circuit Packs, Respectively, in J4A001BB Unit in Bay 0	TELCO
15	Perform Functional Word Change of Wideband Capability Indicator	TELCO	DLP-570
	NOTE: When power is restored to Bay 0, Phase 23 will fail diagnostics		
16	Restore Power to Bay 0 Using CONTR0 Power Switch	TELCO	DLP-571
17	Determine Active Trunks for SPC Being Converted. Save Printouts for Later Use (OP:TRKSTAT,TAN aab0001:NUM 840,STAT ACT!)	TELCO	DLP-572
	(Continued on Page 3)		

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

18	Set All Trunks Associated With Unit Being Converted to CAD.DSA State (SET:TRKSTAT CAD.DSA,TAN aab0001;SUM:NUM 840!)	TELCO	DLP-573
19	Verify That No Trunks, Set to CAD.DSA State in Item 13, Are Active (OP:TRKSTAT,TAN aab0001;SUM:NUM 840,STAT ACT!)	TELCO	DLP-574
20	If TANTOTANs Are Assigned to SPC Being Converted (Item 6), 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
21	If Nailup Connections Are Assigned to SPC Being Converted (Item 6), Request Machine Administration Center To Delete Each Nailup Connection Using Recent Change Form 206	TELCO	-
22	Enter Message INH:TSI a,CONTR 0,SPEC! (a = TSI Member Number) To Inhibit TSI Controller 0	TELCO	-
23	Enter Message INH:TSI a,CONTR 1,SPEC! (a = TSI Member Number) To Inhibit TSI Controller 1	TELCO	-
24	Restore TSI Controller 0 to Service Unconditionally (RST:TSI a,CONTR 0;UCL!)	TELCO	DLP-575
25	Dump TSI Critical Registers and Ensure Bits 4 Through 11 in Word 3 Are Set to 0 (DUMP:TSI a,CREG!)	TELCO	DLP-576
26	Remove Power From Bay 1 of TSI Frame Being Converted Using CONTR1 Power Switch	TELCO	-
27	Enter Message ALW:TSI a,CONTR 0,SPEC! (a = TSI Member Number) To Allow TSI Controller 0	TELCO	-
28	Enter Message ALW:TSI a,CONTR 1,SPEC! (a = TSI Member Number) To Allow TSI Controller 1	TELCO	-
29	Set All Trunks That Were Disabled in Item 17 to ACT State (Use Printout From Item 16) (SET:TRKSTAT ACT,TAN a;SUM:NUM b!)	TELCO	DLP-577
30	If TANTOTANs Were Taken Down In Item 19, 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
31	If Nailup Connections Were Deleted in Item 20, Request Machine Administration Center To Add Each Nailup Connection That Was Deleted Using Recent Change Form 205	TELCO	-
32	Verify That All Trunks Set in Item 28 Are Active (OP:TRKSTAT,TAN aab0001;SUM:NUM 840,STAT ACT!)	TELCO	DLP-578
	(Continued on Page 4)		

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

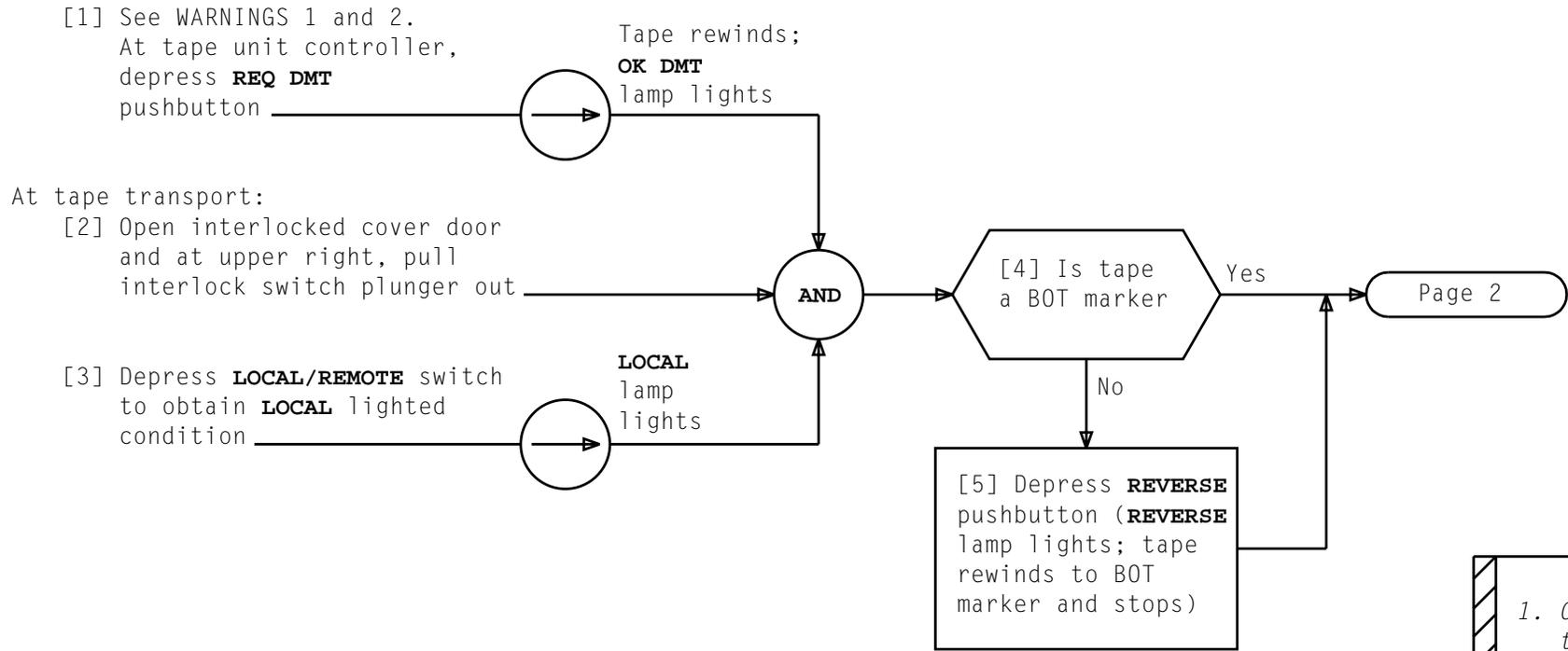
33	If Additional 245A Converter Needs to be Added in Bay 1, Add Converter		
	1. Install 245A (1COB) at Location 1-14-36	TELCO	-
	2. Install Fuse (1A0B) at Location 1-07-09	TELCO	-
	NOTE: When converting to wideband capability, additional 3-volt power is required. This can be accomplished in two ways: 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 (0COB) at Location 0-14-36	TELCO	-
	C. Install Fuse (0A0B) 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	-
34	Replace FA1780 and FA1781 Circuit Packs With FA1816 and FA1817 Circuit Packs, Respectively, in J4A001BB Unit in Bay 1	TELCO	DLP-569
35	Restore Power to Bay 1 Using CONTR1 Power Switch (Controller 1 Restored to Service)	TELCO	DLP-579
36	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	
	<p><i>WARNING: 1. An anti-static wrist strap must be worn to prevent electrostatic discharge which could result in damage to circuit packs while working in the frame</i></p> <p><i>2. It is assumed that all coaxial cabling is non-faulty. Improper handling of cabling may damage cables or cause service interruption. Extreme care must be used when inspecting or handling cables, cables are very sensitive to movement or handling and may become damaged very easily</i></p>		
	<p>NOTES: 1. Appropriate Input/Output (I/O) Manuals must be used if clarification of input message or output message is necessary</p> <p>2. This procedure must be performed during light traffic periods</p> <p>3. 4ESS™ Switch operation must be closely monitored while performing this procedure</p> <p>4. Corrective action must be taken immediately on any activity that may cause any unit to go out of service (OOS)</p> <p>5. Stability of office must be maintained throughout this procedure</p> <p>6. This procedure contains soak intervals for verifying system operation and stability during growth. All abnormal conditions that occur must be investigated and resolved immediately. Growth equipment, being soaked, must be error free for the specified time given</p>		
1	Notify Next Higher Technical Support Organization Cross Talk Noise Test is to be Performed	TELCO	—
2	Ensure 4ESS Switch Is In Stable Condition	TELCO	DLP-590
3	Ensure 1B Processor and Peripheral Units Are Operating in Normal Duplex Mode	TELCO	DLP-591
4	Inspect Coax Connector Fields For Proper Ground At TSI Bay 1, Frame Levels 24, 36, 48, and 50, Check the Six Mounting Screws Which Attach The DS120 Coax Connector and Transformer Printed Wiring Boards to The Mounting Plates Insuring That They Are Snug. Using An Ohm Meter Check, Resistance Should Be Less Than 1 Ohm Between Board Ground and the Mounting Plate	INST	—
5	At Bay 0 and Bay 1, Frame Level 72, Check the clock Coax Connector Printed Circuit Boards As Done In The Previous Step	INST	—
	(Continued on Page 2)		

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

	NOTE: A fault in the following step can become a source of noise in the TSI due to cable routing on the frame		
6	At TEL and TTY Jack Assembly (ED-5A134-30), Using ITE-5356 Multimeter or Equivalent verify That There Is Zero DC Voltage Reading Between Each Sleeve of TEL Jack Assembly and Ground	INST	-
7	Using Ohm Meter, Verify That There Is Infinite Resistance (Open Circuit) Between Each Sleeve And Frame Ground	INST	-

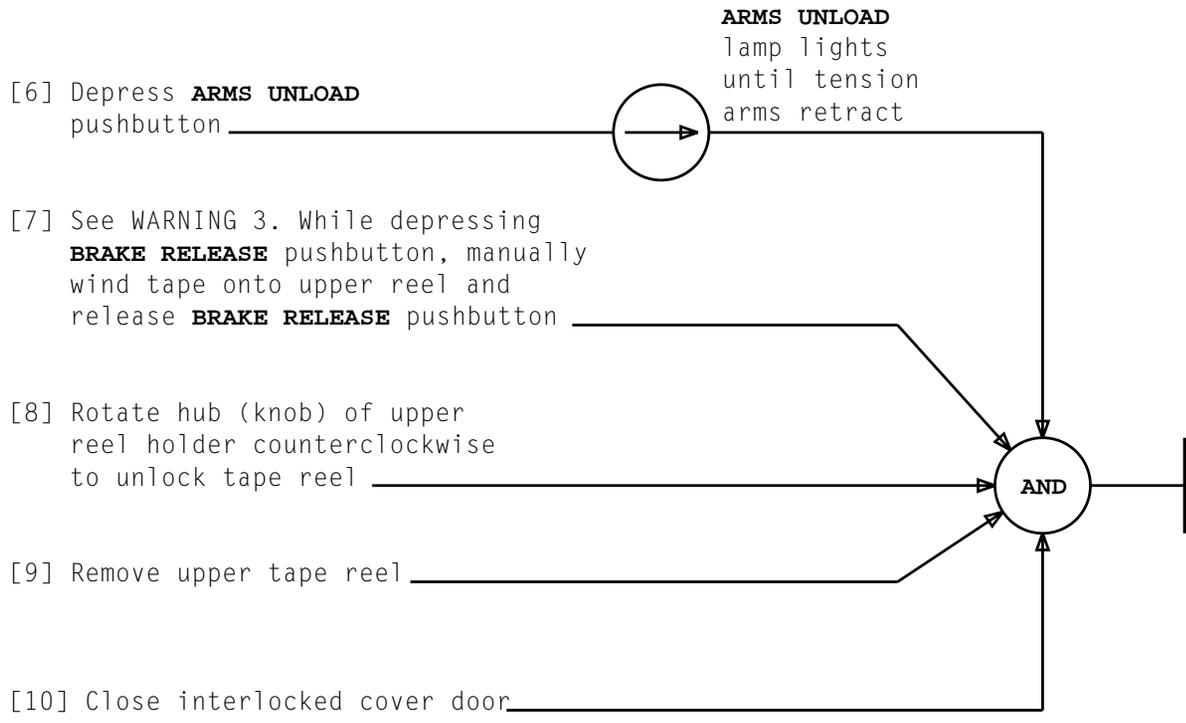


WARNINGS

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*

Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 2	500

DEMOUNT TAPE ON TAPE TRANSPORT



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

Issue 1	SEP 1998
234-353-040	DLP
PAGE 2 of 2	500

SUMMARY

Using verify entry input message, call up growth TSI-B UT translations for even member number and verify that resulting 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.

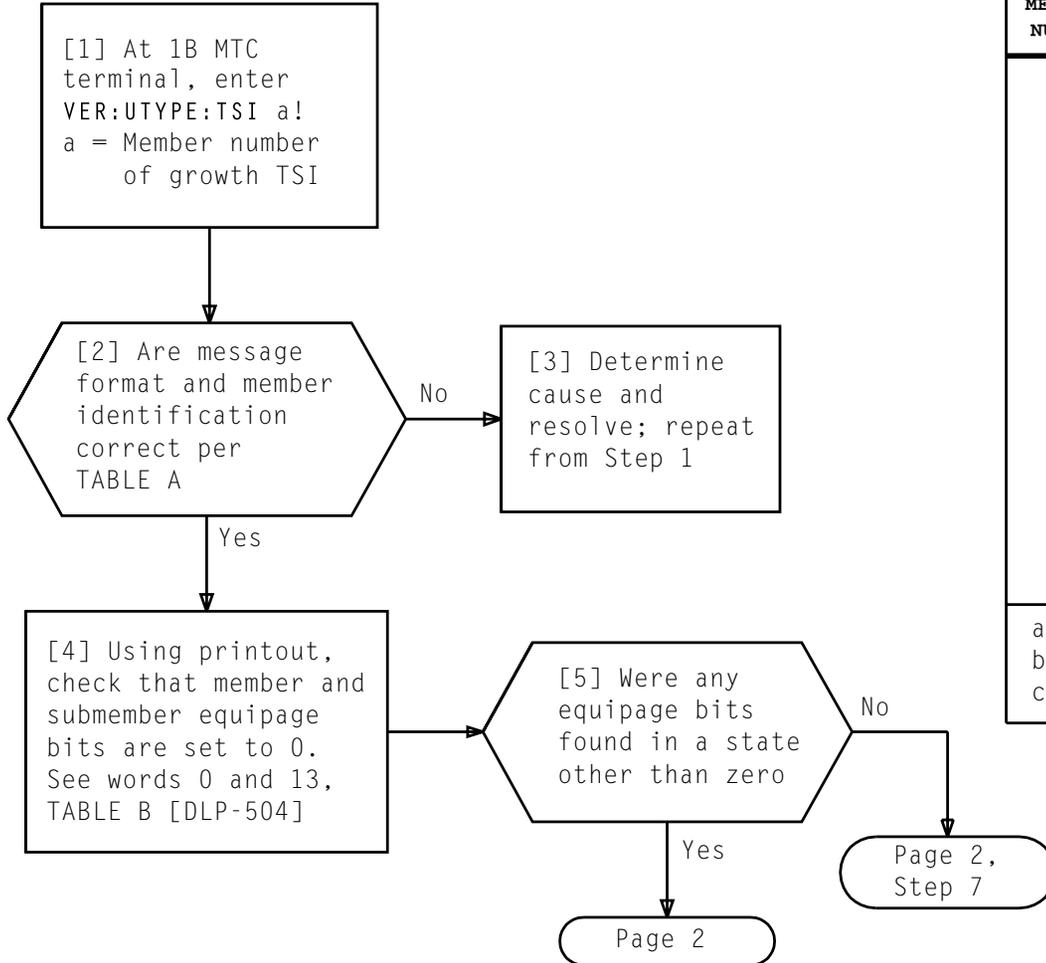
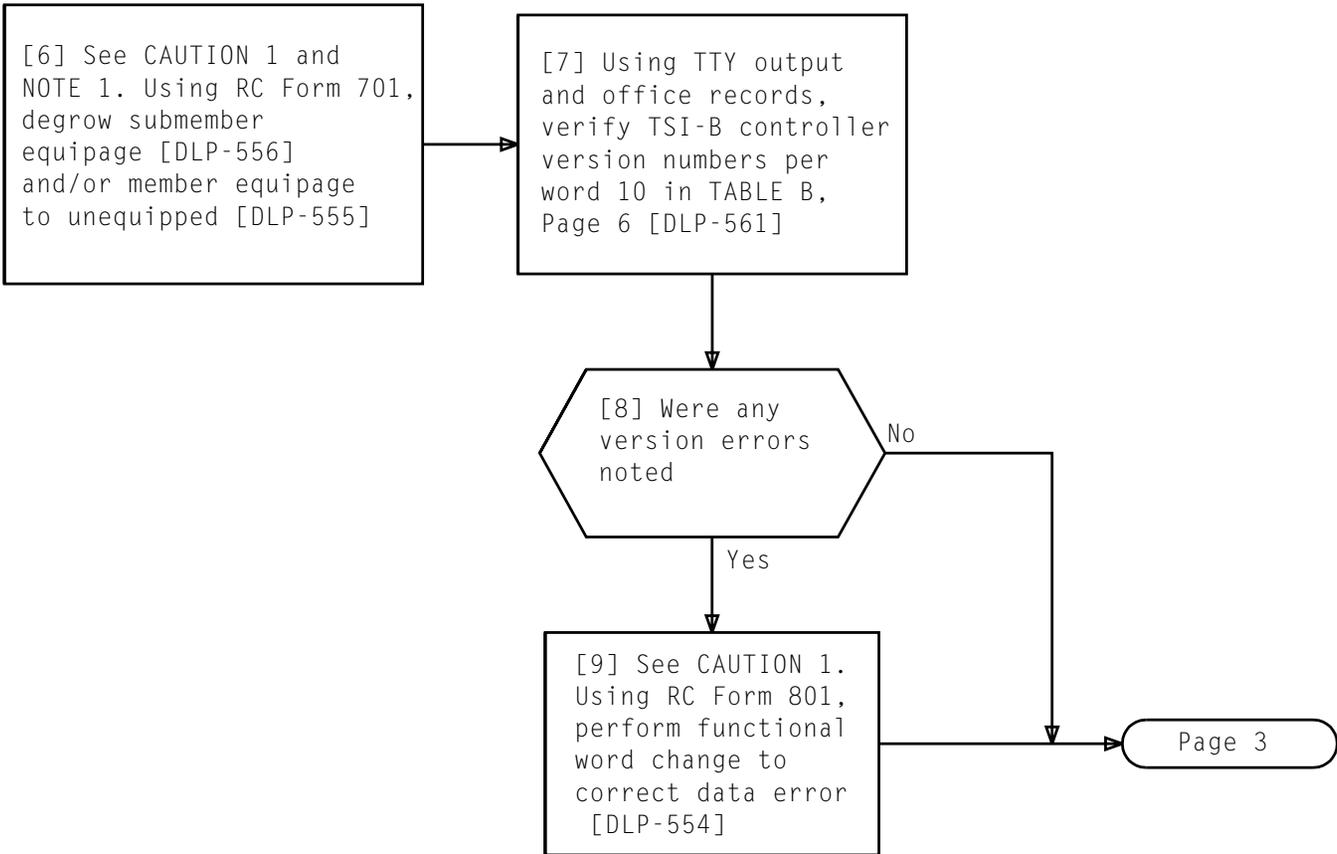


TABLE A	
MESSAGE NUMBER	OUTPUT MESSAGE
1	VER:UTMN;OPT(),CUR: FLN a, UTYN TSI, MEMN b, ME UNEQ, ENTRY ADDRESS c, ENTRY SIZE 33, CUR WORD 0 _____ _____ WORD 10 _____ _____ WORD 20 _____ _____ WORD 30 _____ _____ WORD 40 _____ _____
a = Floor location number b = Member number of growth TSI c = Starting octal address for unit type entry	



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*

Issue 1	SEP 1998
234-353-040	DLP
PAGE 2 of 14	501

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-B per words 3 and 4 [DLP-563]

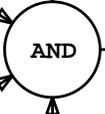
[14] Verify EST member number (if any) and indicator per word 5 [DLP-564]

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

[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]



Page 4

Issue 1	SEP 1998
234-353-040	DLP
PAGE 3 of 14	501

[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]

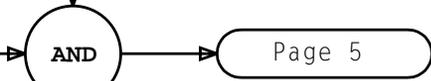
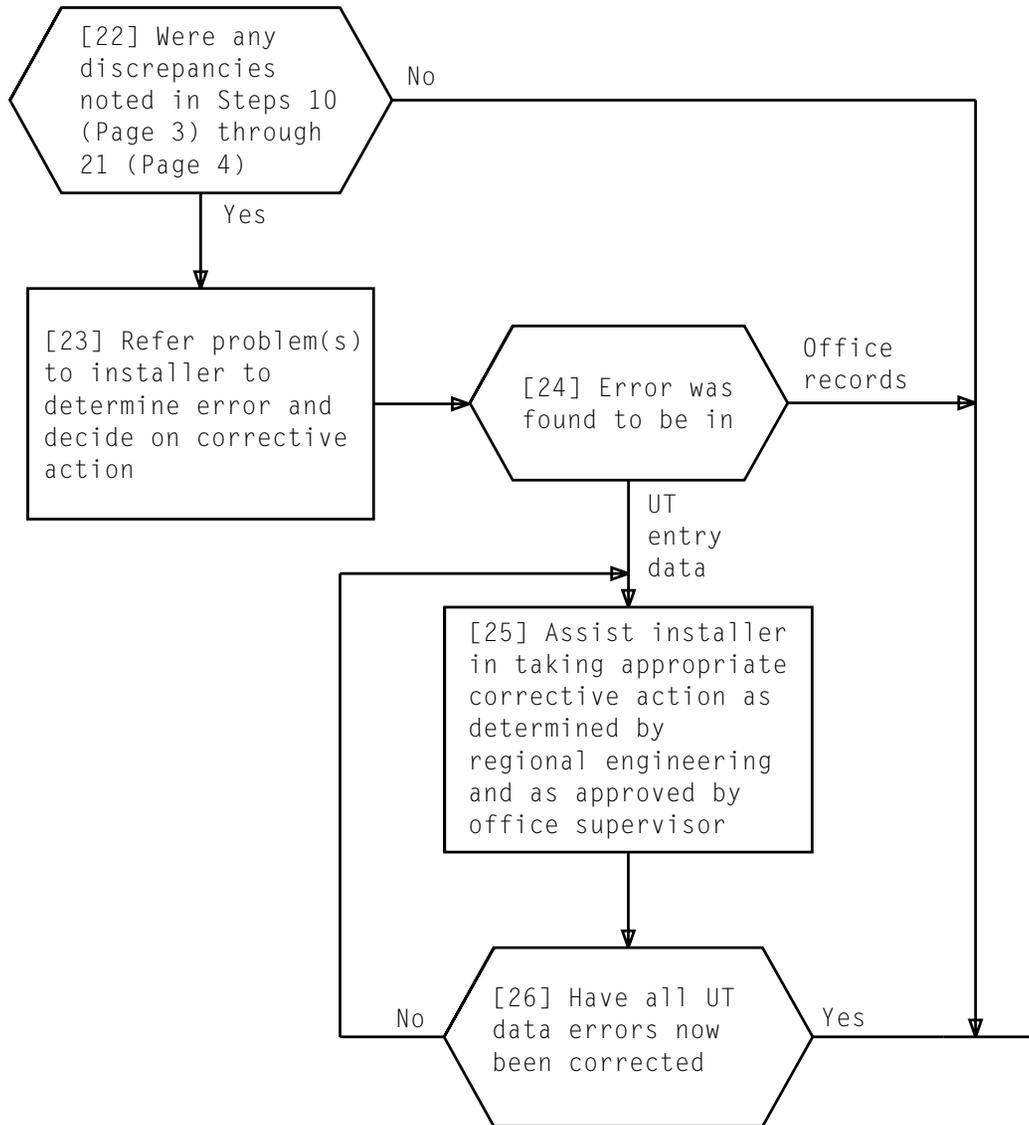


TABLE C	
SPC AND TSI PORT	OCTAL WORD
SPC 0 – PORT 0	21
– PORT 1	22
– PORT 2	23
– PORT 3	24
– PORT 4	25
– PORT 5	26
– PORT 6	27
SPC 1 – PORT 0	31
– PORT 1	32
– PORT 2	33
– PORT 3	34
– PORT 4	35
– PORT 5	36
– PORT 6	37



Issue 1	SEP 1998
234-353-040	DLP
PAGE 5 of 14	501

TABLE B

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION																								
0	entry data	2		0		0		0		0		0		0		0		0							
	octal output																								
	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-B PORT NO. - SPC 0																							
		TSI-B PORT SUBMEMBER EQUIPAGE																							
1	entry data	Y		Y		Y		Y		Y		Y		Y		Y		Y							
	octal output																								
	bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	binary values	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												ZZZZ = Converts to decimal alarm grid number as reflected in office record drawings T-nnnn-Hn-400, 401, or 402 or equivalent											
		Y= Variable octal numbers																							

VERIFY TSI-B UT TRANSLATOR FOR EVEN MEMBER NUMBER

Issue 1	SEP 1998
234-353-040	DLP
PAGE 6 of 14	501

TABLE B (Contd)

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION																																								
2	entry data	0	0	Y	Y	Y	Y	Y	Y	0	0	0	0	0	0	0	X	X	X	X	X	0	X	X	X	X	X	X	X	X	X	X	X								
	octal output																																								
	bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0																
	binary values	0	0	0	0	0	0	0	X	X	X	X	X	0	X	X	X	X	X	X	X	X	X	X	X																
						SP MEMBER NUMBER				SP ROW NUMBER				SP COLUMN NUMBER				BASE SP PULSE POINT																							
	<p>X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-462 or equivalent</p> <p>Y = Variable octal numbers</p>																																								
3	entry data	Y	Y	Y	Y	Y	Y	Y	Y	0	1	Z	Z	Z	0	0	X	X	X	X	X	0	X	X	X	X	X	X	X	X	X	X	X								
	octal output																																								
	bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0																
	binary values	0	1	Z	Z	Z	0	0	X	X	X	X	X	0	X	X	X	X	X	X	X	X	X	X	X																
		PUB BRANCH NUMBER ASSIGNMENT						SP MEMBER NUMBER		SP ROW NUMBER				SP COLUMN NUMBER				MEMBER BASE MISCELLANEOUS SCAN NUMBER																							
	<p>X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-461 or equivalent</p> <p>Y = Variable octal numbers</p> <p>ZZZ = 3-digit code corresponding to lettered PUB branch as reflected in office record drawing T-nnnn-Hn-3840 or equivalent</p> <p>000 - branch A&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</p>																																								

VERIFY TSI-B UT TRANSLATOR FOR EVEN MEMBER NUMBER

Issue 1	SEP 1998
234-353-040	DLP
PAGE 7 of 14	501

TABLE B (Contd)

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION																								
4	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	0	0	0	0	0	X	X	X	X	X	0	X	X	X	X	X	X	X	X	X	X	X	X
								SP MEMBER NUMBER				SP ROW NUMBER				SP COLUMN NUMBER									
BUS BASE MISCELLANEOUS SCAN NUMBER																									
<p>X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-461 or equivalent</p> <p>Y = Variable octal numbers</p>																									
5	entry data 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	Z	Z	Z	Z	Z	0	X	X	X	X	X	0	X	X	X	X	X	X	X	X	X	X	X	X
E S T I		EST MEMBER NUMBER						SP MEMBER NUMBER				SP ROW NUMBER				SP COLUMN NUMBER									
DUPLICATE BASE SP PULSE POINT																									
<p>X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-462 or equivalent</p> <p>Y = Variable octal numbers</p> <p>Z...Z = Converts to decimal EST member number info as reflected in appropriate office record drawing</p>																									

VERIFY TSI-B UT TRANSLATOR FOR EVEN MEMBER NUMBER

TABLE B (Contd)

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION																							
14	entry data	Y		Y		Y		0		0		0		0		Y								
	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																							
	<p>X...X = All zeros if no EST associated with growth TSI-B or = All ones if growth TSI-B will interface with EST</p> <p>Y = Variable octal numbers Z = 0 Not equipped for Wideband = 1 Is equipped for Wideband</p>																							
15	entry data	Y		Y		Y		0		0		0		0		Y								
	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
	13	12	11	10	9	8	7																	
	ESU NO.																							
	ESU STRAP INDICATOR - SPC 1																							
	<p>X...X = All zeros if no EST associated with growth TSI-B or = All ones if growth TSI-B will interface with EST</p> <p>Y = Variable octal numbers Z = 0 Not equipped for Wideband = 1 Is equipped for Wideband</p>																							

SPC 0 Wideband indicator

SPC 1 Wideband indicator

TABLE B (Contd)

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION																								
20	entry data octal output	0	0	0	0	Y	Y	Y	Y																
	bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
binary values	0	0	0	0	0	0	0	0	0	0	0	0	0	Z	Z	Z	Z	X	X	X	X	X	X	X	X
														FRAME TYPE		MEMBER NUMBER									
CLOCK E																									
<p>X...X = Converts to decimal TSI clock information as reflected in office record drawing T-nnnn-Hn-467 or equivalent</p> <p>Y = Variable octal number</p> <p>ZZZZ = 0011 for VIF 0001 for DT</p>																									
21 through 27 and 31 through 37	entry data octal output	0	0	Y	Y	Y	Y	Y	Y																
	bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
binary values	0	0	0	0	0	0	0	0	Z	Z	Z	Z	X	X	X	X	X	X	X	X	X	X	X	X	
										EQUIPAGE TYPE		MEMBER NUMBER				UNIT NUMBER									
TSI PORT ASSIGNMENT																									
<p>X...X = Converts to decimal TSI clock information as reflected in office record drawing T-nnnn-Hn-467 or equivalent</p> <p>Y = Variable octal number</p> <p>ZZZZ = 0011 for VIF 0001 for DT 0100 for DIF 0110 for MAS</p>																									

VERIFY TSI-B UT TRANSLATOR FOR EVEN MEMBER NUMBER

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.

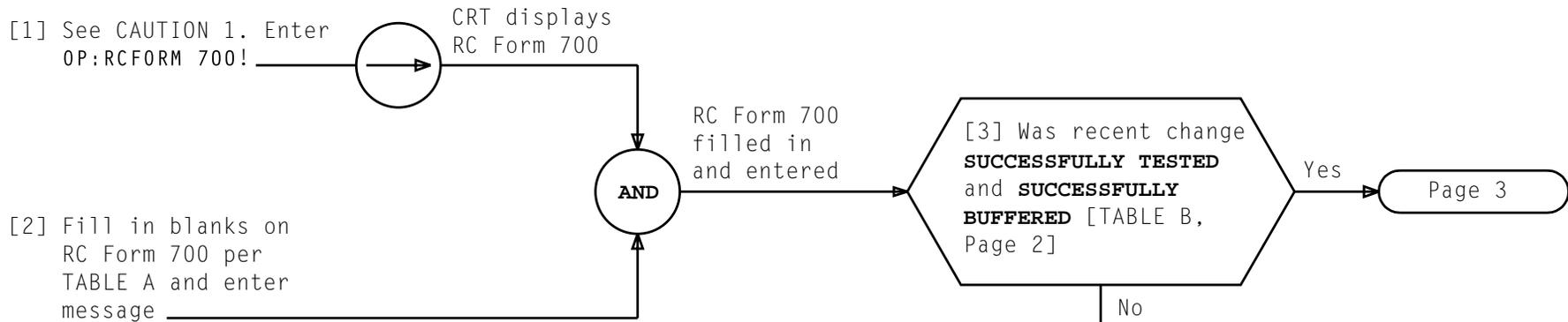


TABLE A

MESSAGE NUMBER	OUTPUT MESSAGE
1	RC:UTYPE;CHG;OPT(EQP,GROW),TST: UTYN a, ORNU b, MEMN c, ME (d , d), SUBMEM ----, SME (----, ----), REMARKS-----!
a = Unit type = TSI or TMSP b = RC order number c = Member number of growth frame d = UNEQ, GROW or GROW, SGRO or SGRO, OPER	

[4] Analyze output message for error and repeat from Step 1 with corrected input data

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

Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 3	502

TABLE B	
MESSAGE NUMBER	OUTPUT MESSAGE
1	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 or TMSP 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	
Issue 1	SEP 1998
234-353-040	DLP
PAGE 2 of 3	502

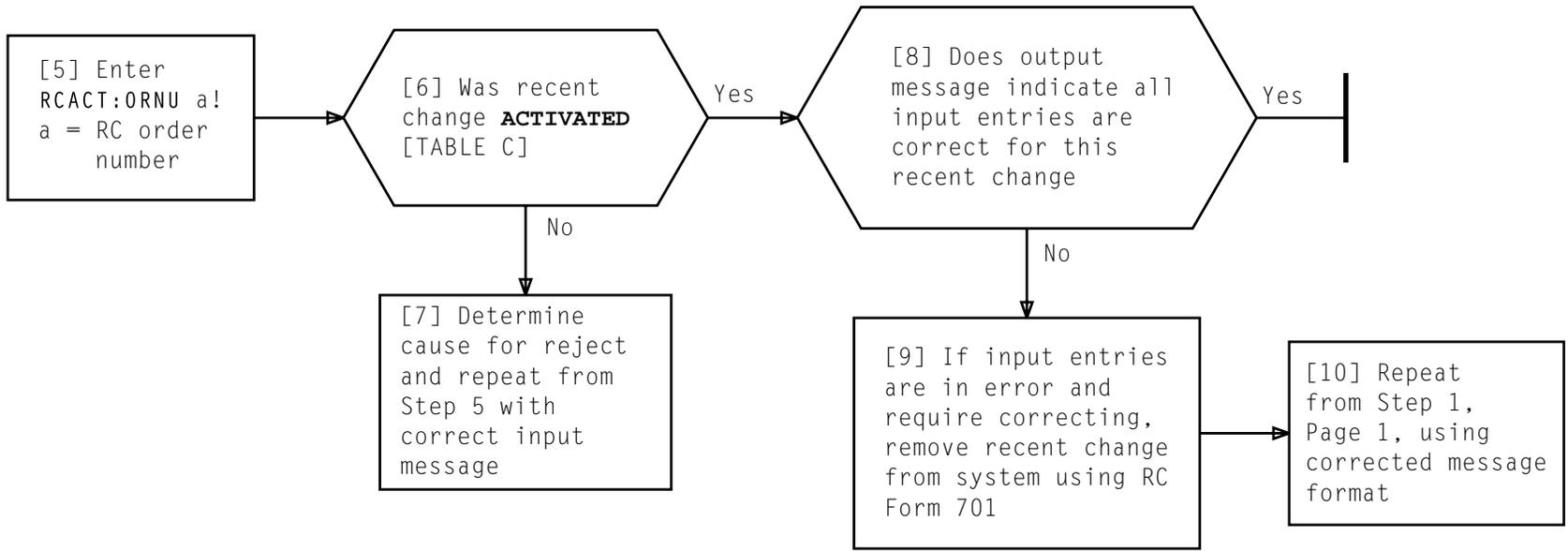


TABLE C	
MESSAGE NUMBER	OUTPUT MESSAGE
1	RC ORNU b ACTIVATED RC:UTYPE;CHG;OPT(EQP,GROW),BUF: UTYN a, ORNU b, OLD NEW MEMN c, ME (d , d), OLD NEW SUBMEM ----, SME (----, ----), REMARKS-----!
a = Unit type = TSI or TMSP b = RC order number c = Member number of growth frame d = Entered member equipage	

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.

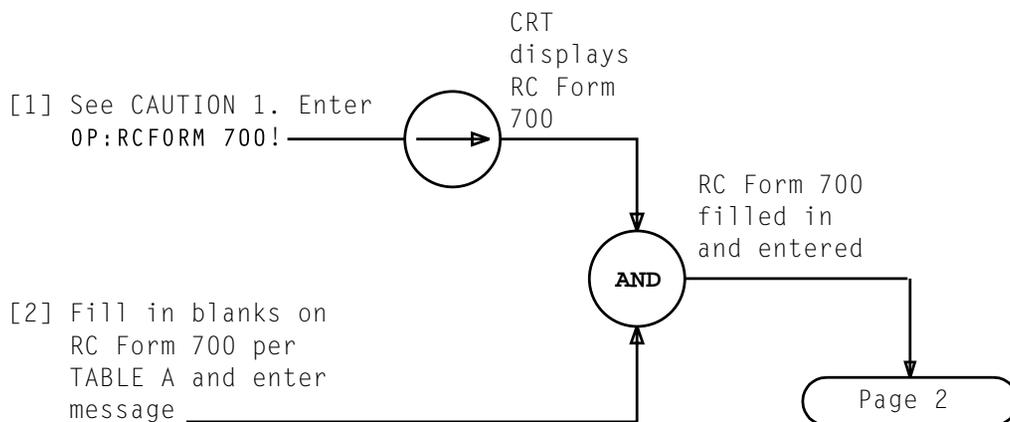


TABLE A	
MESSAGE NUMBER	OUTPUT MESSAGE
1	RC:UTYPE;CHG;OPT(EQP,GROW),TST: UTYN a, ORNU b, MEMN c, ME (----, ----), SUBMEM d, SME (e , e), REMARKS-----!
a = Unit type = TMSP or TSI b = RC order number c = Member number of growth associated frame d = Submember name: = COGRWTH (for TMS Controller 0) = C1GRWTH (for TMS Controller 1) = COMBLK(0 to 3) (for Cont 0, Mem Blk 0-3) = C1MBLK(0 to 3) (for Cont 1, Mem Blk 0-3) = TOPRTEQ(0 to 6) (for SPC 0 Ports 0-6) = T1PRTEQ(0 to 6) (for SPC 1 Ports 0-6) e = UNEQ, GROW or = GROW, SGRO or = SGRO, OPER	

<i>CAUTION 1</i> Calling up RC form will cause all CRT data to be cleared	
Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 3	503

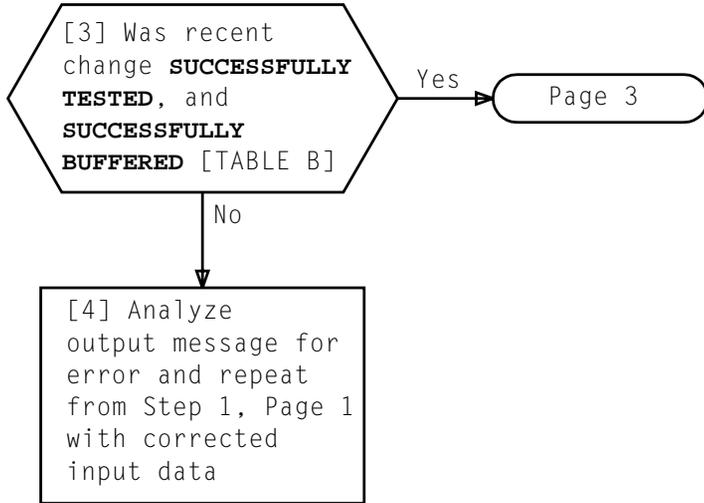


TABLE B	
MESSAGE NUMBER	OUTPUT MESSAGE
1	RC ORNU b SUCCESSFULLY TESTED RC ORNU b SUCCESSFULLY BUFFERED RC:UTYPE;CHG;OPT(EQP,GROW),BUF: UTYN a, ORNU b, MEMN c, ME (OLD NEW OLD NEW SUBMEM d, SME (e , e), REMARKS-----!
a = Unit type = TMSP or TSI b = RC order number c = Member number of growth associated frame d = Submember name: = COGRWTH (for TMS Controller 0) = C1GRWTH (for TMS Controller 1) = COMBLK(0 to 3) (for Cont 0, Mem Blk 0-3) = C1MBLK(0 to 3) (for Cont 1, Mem Blk 0-3) = TOPRTEQ(0 to 6) (for SPC 0 Ports 0-6) = T1PRTEQ(0 to 6) (for SPC 1 Ports 0-6) e = Entered submember equipage	

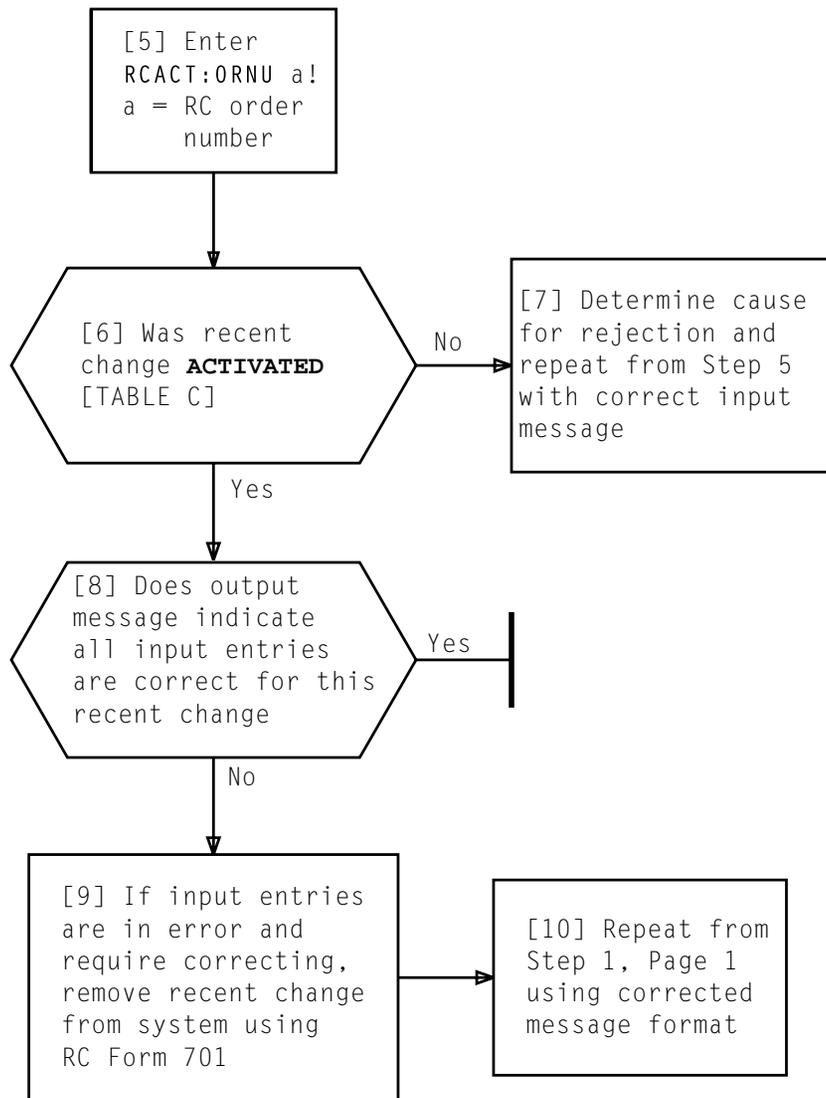
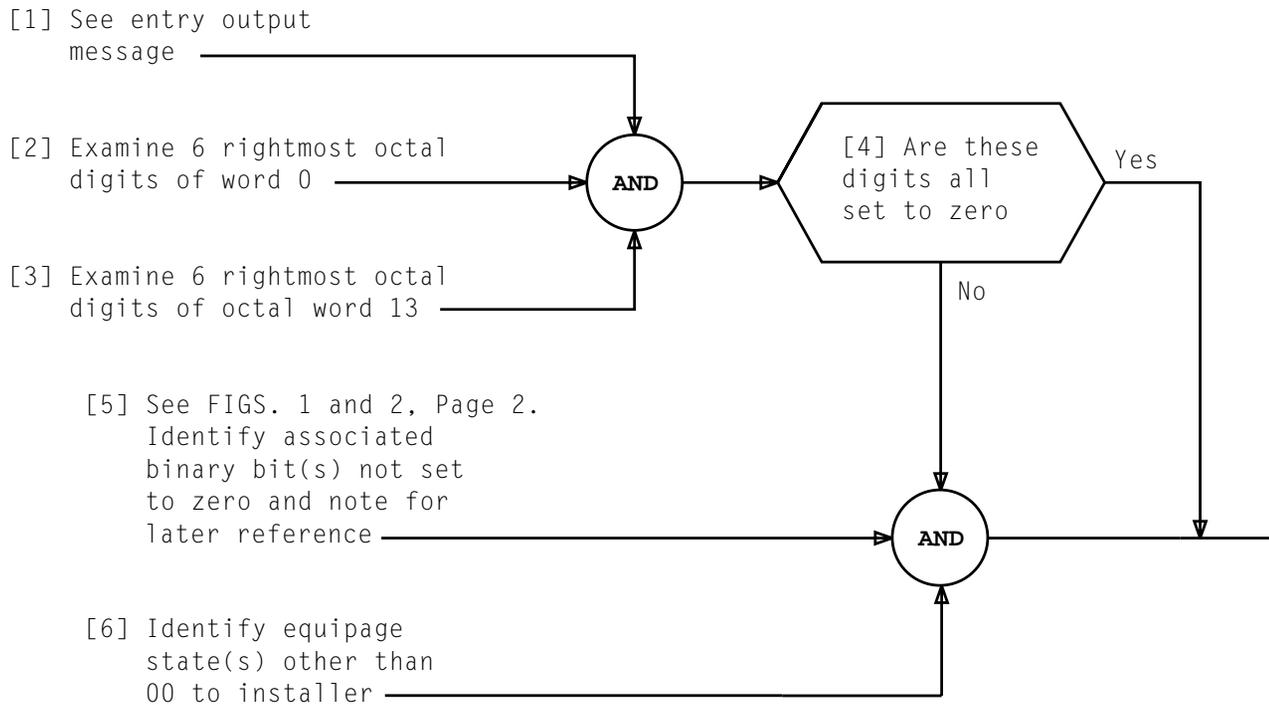


TABLE C	
MESSAGE NUMBER	OUTPUT MESSAGE
1	RC ORNU b ACTIVATED RC:UTYPE;CHG;OPT(EQP,GROW),BUF: UTYN a, ORNU b, MEMN c, ME (----, ----), SUBMEM d, SME (e , e), REMARKS-----!
a = Unit type = TMSP or TSI b = RC order number c = Member number of growth associated frame d = Submember name: = COGRWTH (for TMS Controller 0) = C1GRWTH (for TMS Controller 1) = COMBLK(0 to 3) (for Cont 0, Mem Blk 0-3) = C1MBLK(0 to 3) (for Cont 1, Mem Blk 0-3) = TOPRTEQ(0 to 6) (for SPC 0 Ports 0-6) = T1PRTEQ(0 to 6) (for SPC 1 Ports 0-6) e = Entered submember equipage	

Issue 1	SEP 1998
234-353-040	DLP
PAGE 3 of 3	503

SUMMARY

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



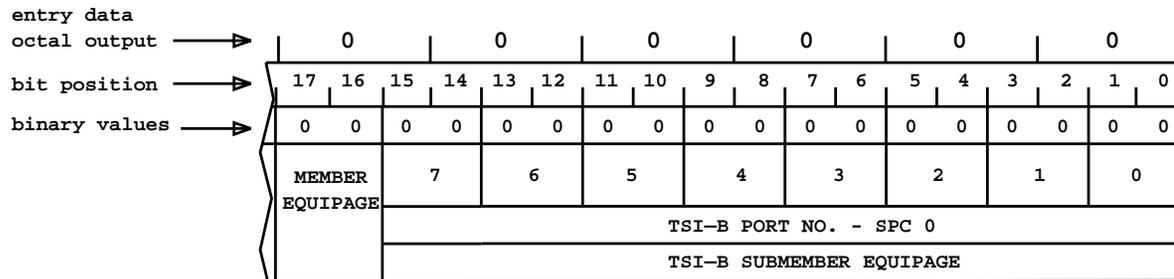


FIG. 1 - Partial Entry Word 0 Layout

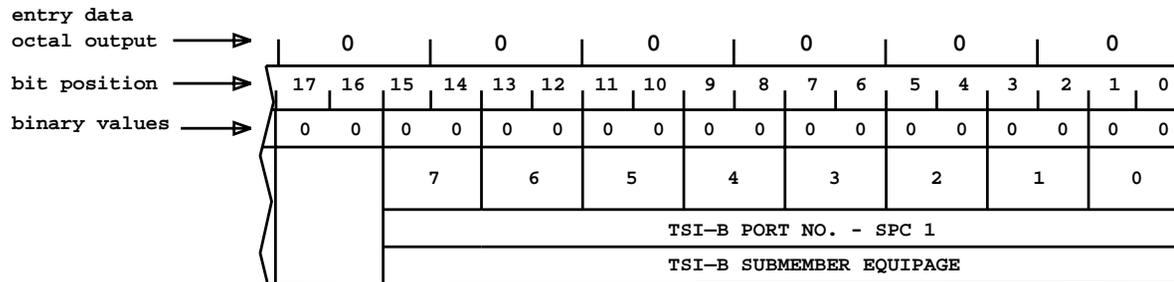


FIG. 2 - Partial Entry Word 13 Layout

SUMMARY

Convert octal digits representing VIU/DTU/DIU 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.

- [1] Identify octal word for TSI port being verified in entry output message _____
- [2] See FIG. 1, Page 2 for word layout _____
- [3] Convert necessary octal digits for TSI port identified in Step 1 to binary digits and record _____
- [4] Convert VIU/DTU/DIU number to decimal and record _____
- [5] Convert VIF/DT/DIF member number to decimal and record _____
- [6] Convert and identify equipage type per TABLE A and record _____

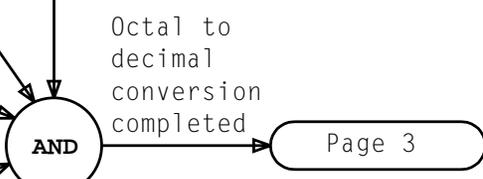


TABLE A				
EQUIPAGE TYPE	BIT - VALUE			
	15	14	13	12
VIF	0	0	1	1
DT	0	0	0	1
DIF	0	1	0	0

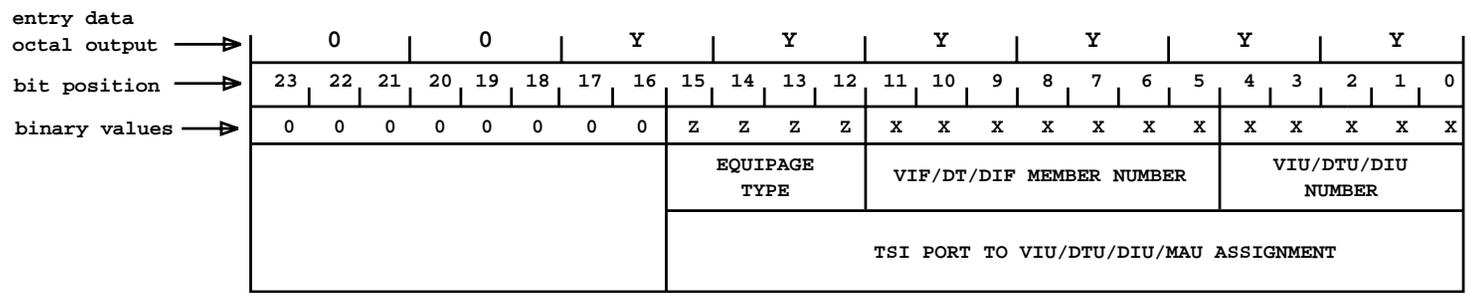
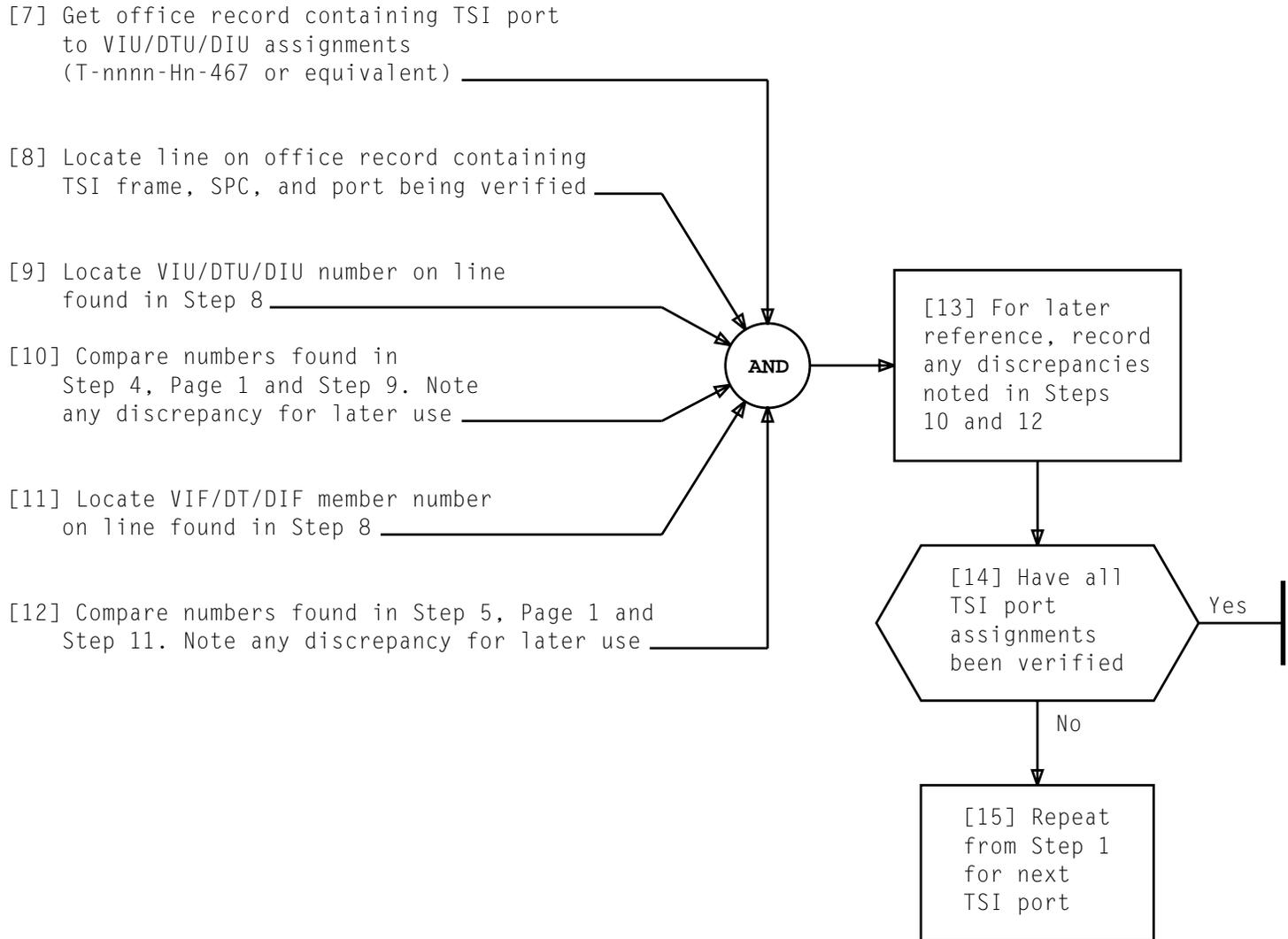


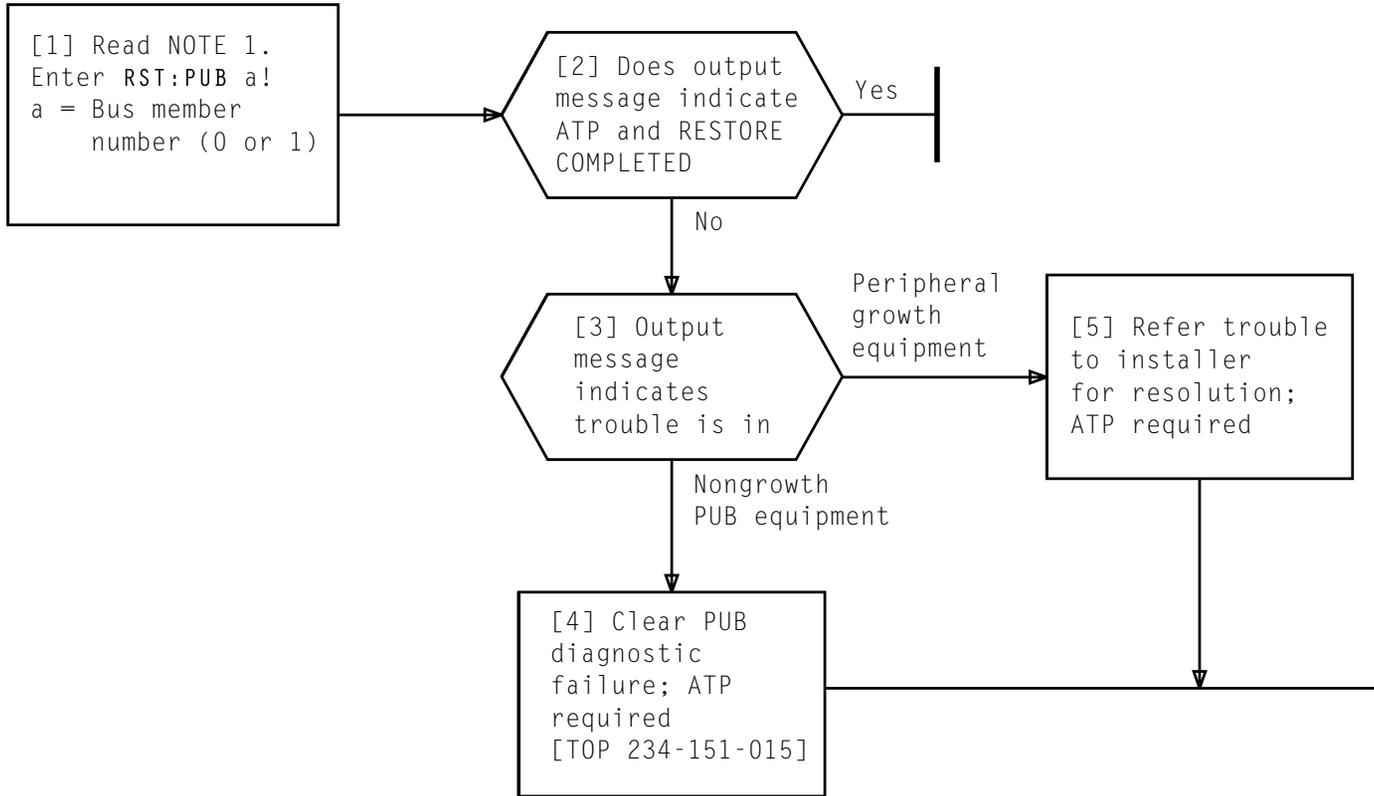
FIG. 1 - Office Generic Word Layout for TSI Port Assignment

VERIFY TSI PORT TO VIU/DTU/DIU ASSIGNMENTS



VERIFY TSI PORT TO VIU/DTU/DIU ASSIGNMENTS

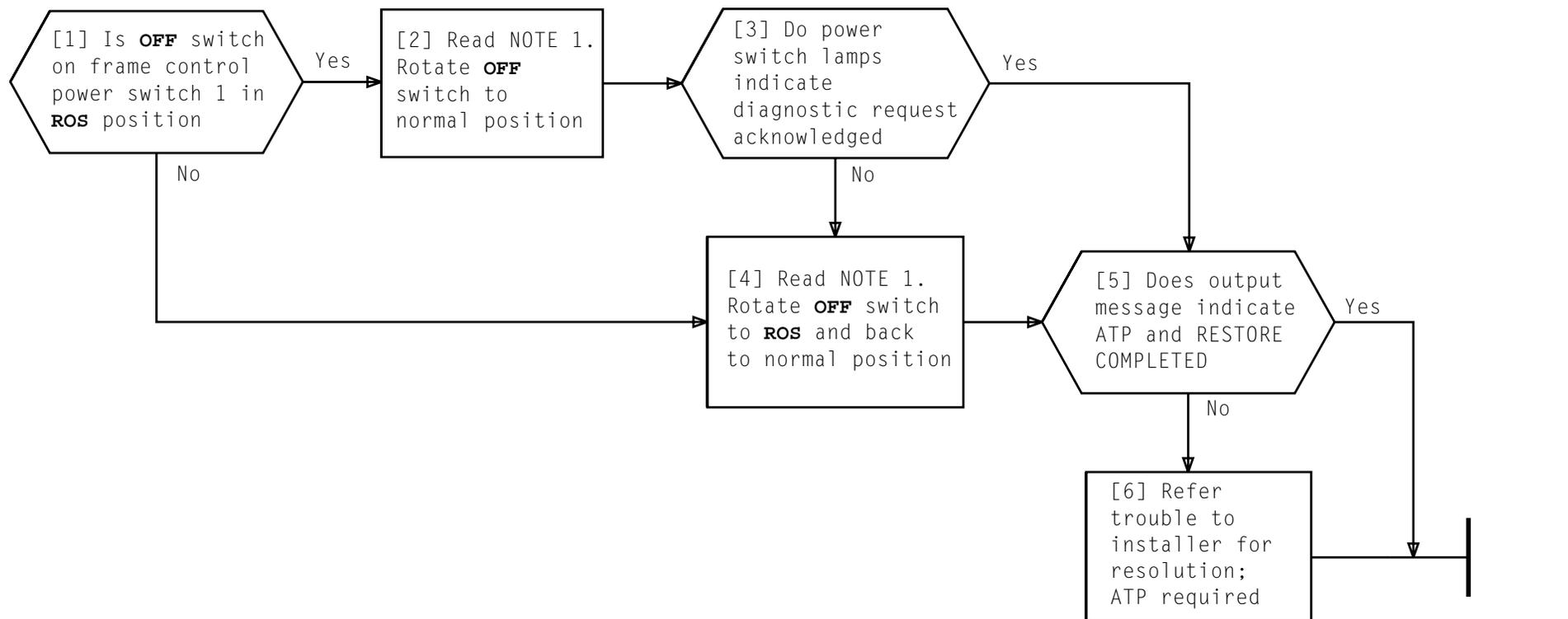
Issue 1	SEP 1998
234-353-040	DLP
PAGE 3 of 3	505



NOTE 1	
Restore message will cause PUB diagnostic to be run. PUB will be restored if ATP	
Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 1	507

SUMMARY

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

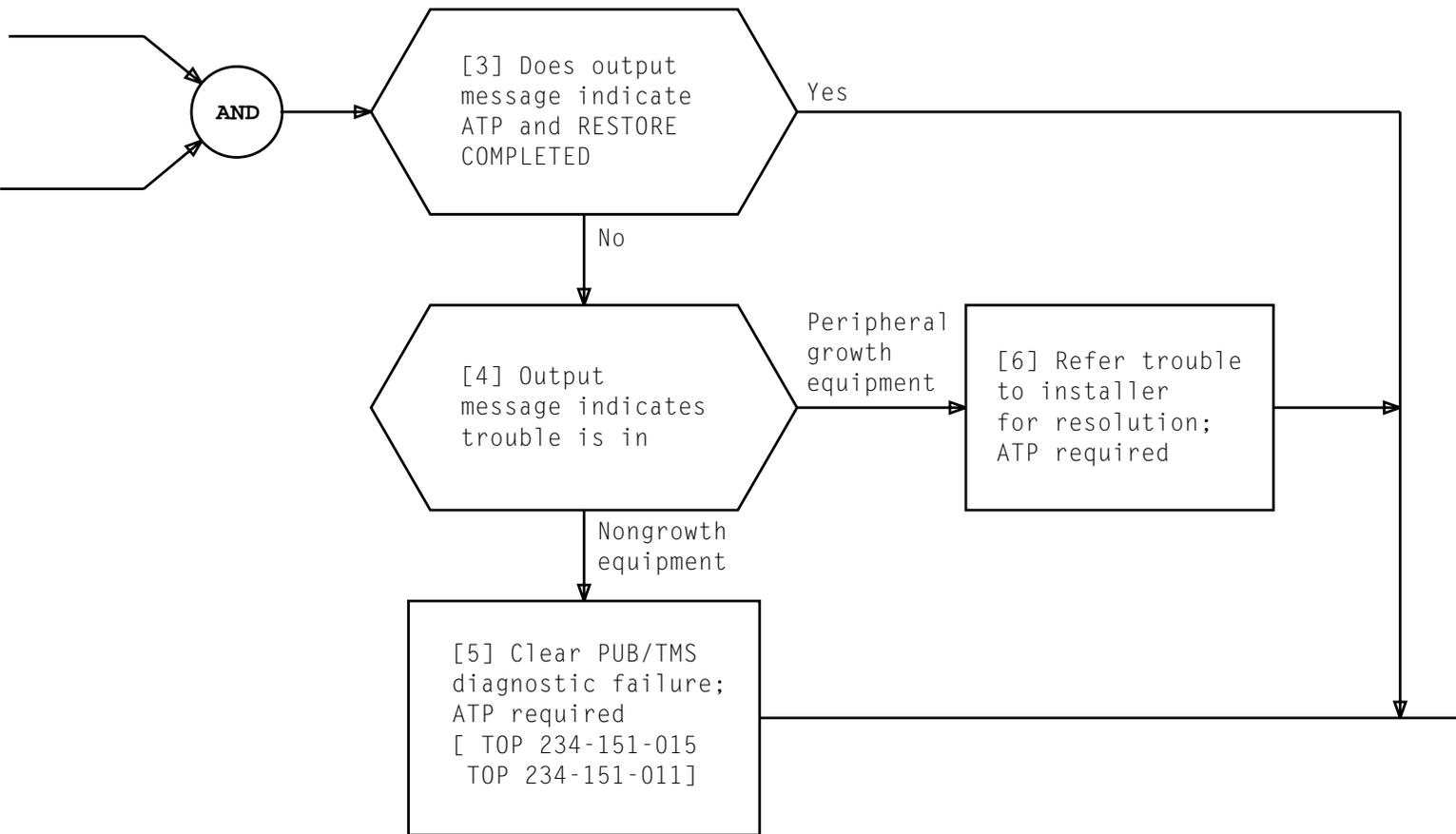


NOTE 1
 Operation of **OFF** switch should cause diagnostic to be run. Controller will be restored and initialized if ATP

Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 1	509

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

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



NOTE 1	
Operation of ON switch will cause diagnostic to be run	
Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 1	510

[1] Identify octal word for TSI clock supply assignment being verified in entry output message

[2] See FIG. 1, Page 2 for word layout

[3] Convert necessary octal digits for clock supply identified in Step 1 to binary digits and record

[4] Convert VIF/DT/DIF member number to decimal and record

[5] Convert and identify equipage type per TABLE A and record

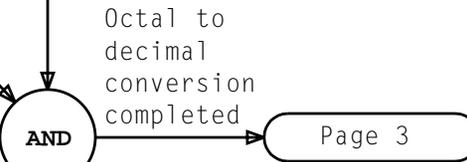
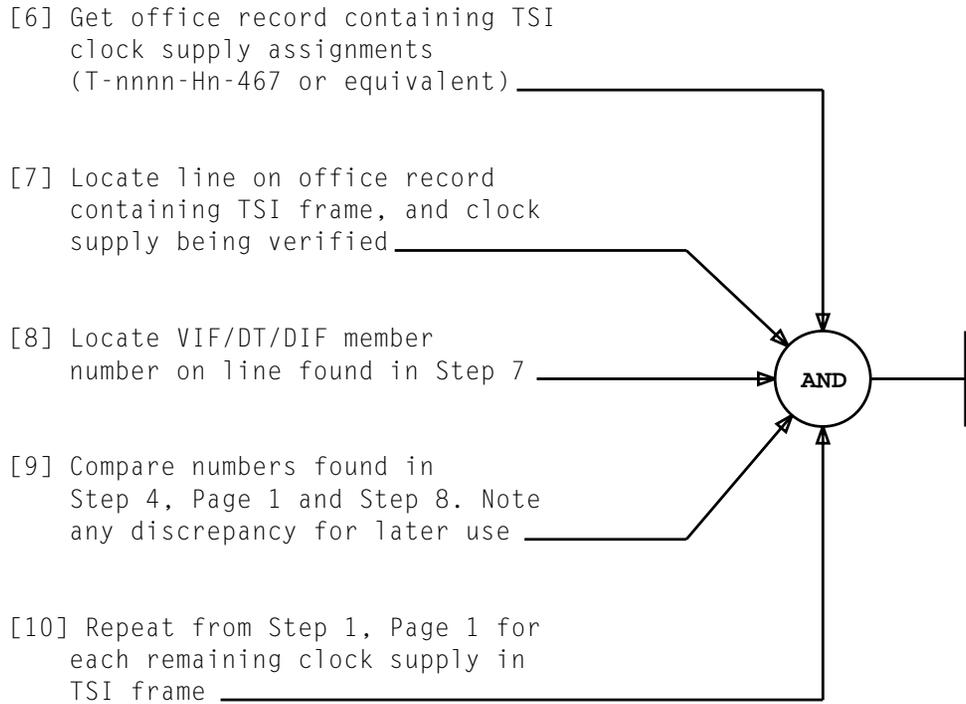


TABLE A								
EQUIPAGE TYPE	BIT - VALUE							
	21	20	19	18	10	9	8	7
VIF	0	0	1	1	0	0	1	1
DT	0	0	0	1	0	0	0	1
DIF	0	1	0	0	0	1	0	0



VERIFY TSI CLOCK ASSIGNMENTS

Issue 1	SEP 1998
234-353-040	DLP
PAGE 3 of 3	511

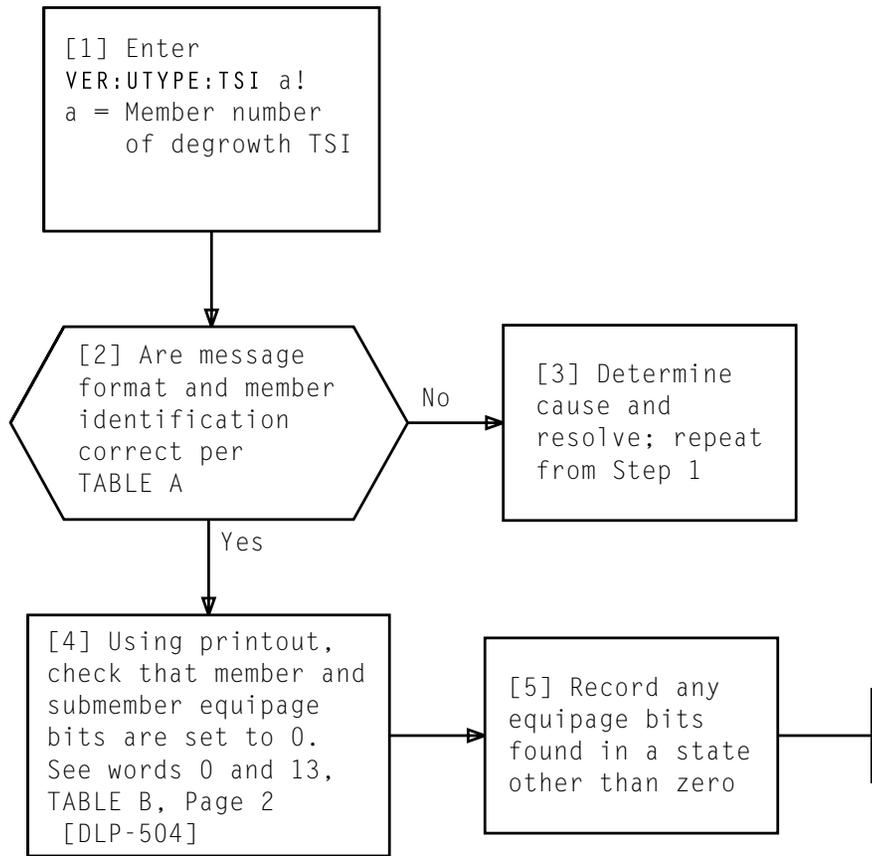


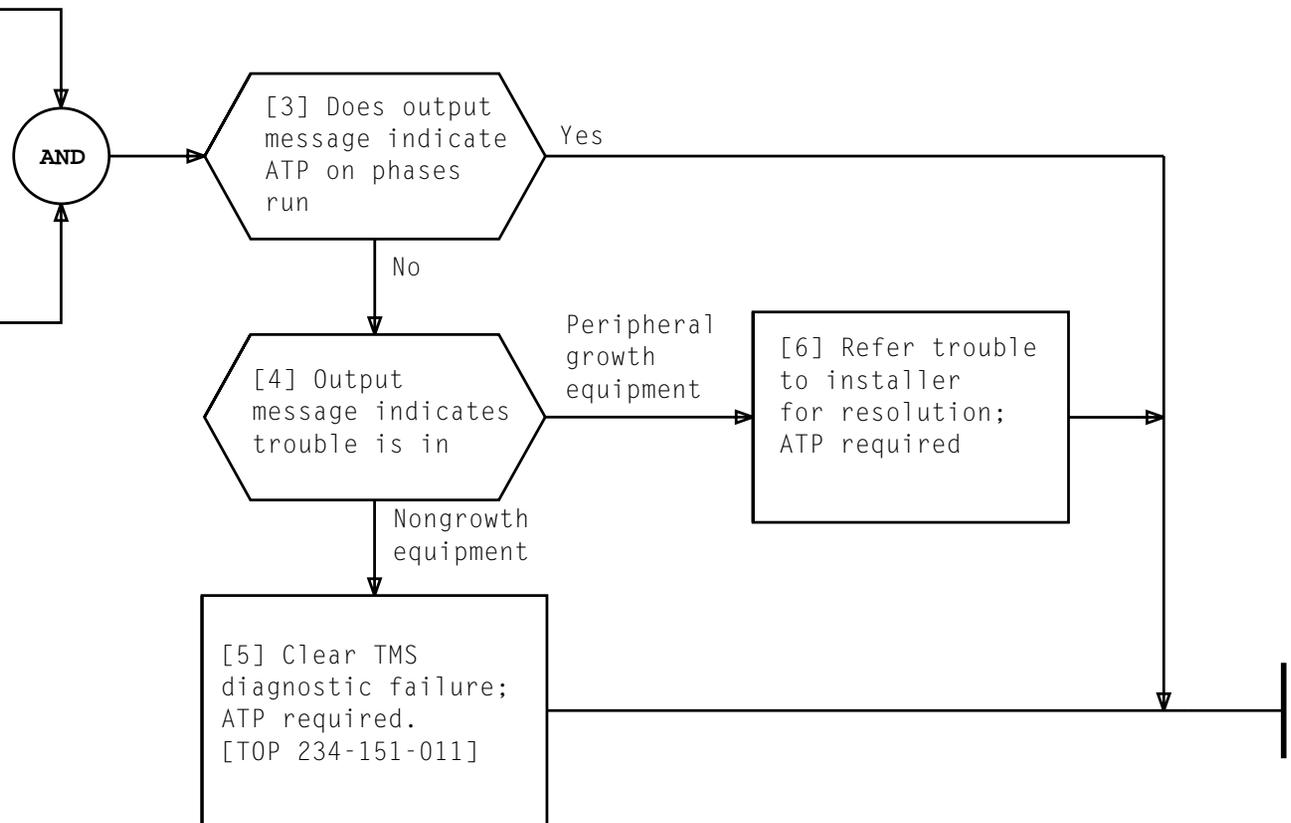
TABLE A	
MESSAGE NUMBER	OUTPUT MESSAGE
1	VER:UTMN;OPT(),CUR: FLN a, UTYN TSI, MEMN b, ME UNEQ, ENTRY ADDRESS c, ENTRY SIZE 33, CUR WORD 0 _____ _____ WORD 10 _____ _____ WORD 20 _____ _____ WORD 30 _____ _____ WORD 40 _____
a = Floor location number b = Member number of degrowth TSI c = Starting octal address for unit type entry	

TABLE B

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION																								
0	entry data	2		0		0		0		0		0		0		0									
	octal output																								
	bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	binary values	0	1	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-B PORT NO. - SPC 0																							
		TSI-B PORT SUBMEMBER EQUIPAGE																							
13	entry data	0		0		0		0		0		0		0		0		0		0		0		0	
	octal output																								
	bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	binary values	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
								7		6		5		4		3		2		1		0			
		TSI-B PORT NO. SPC 1																							
		TSI-B PORT SUBMEMBER EQUIPAGE																							

[1] At power switch, assure that **OFF** switch is in **ROS** position

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



NOTE 1 Operation of ON switch will cause diagnostic to be run	
Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 1	513

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

SUMMARY

Using verify entry input message, call up growth TSI-B UT translator for odd member number and verify that resulting 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.

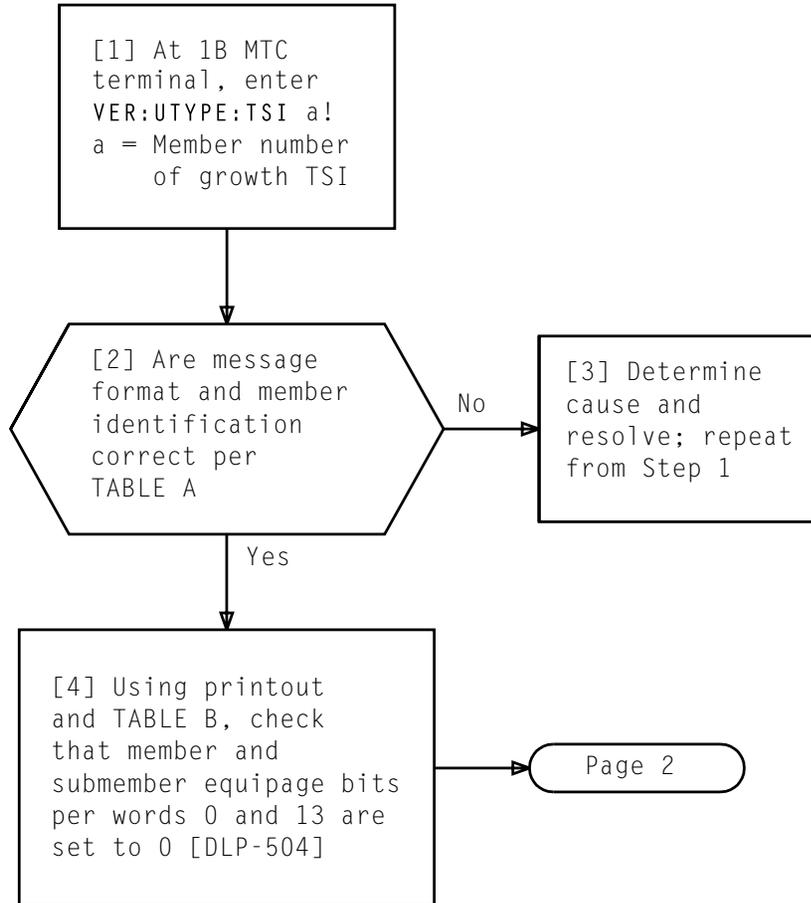
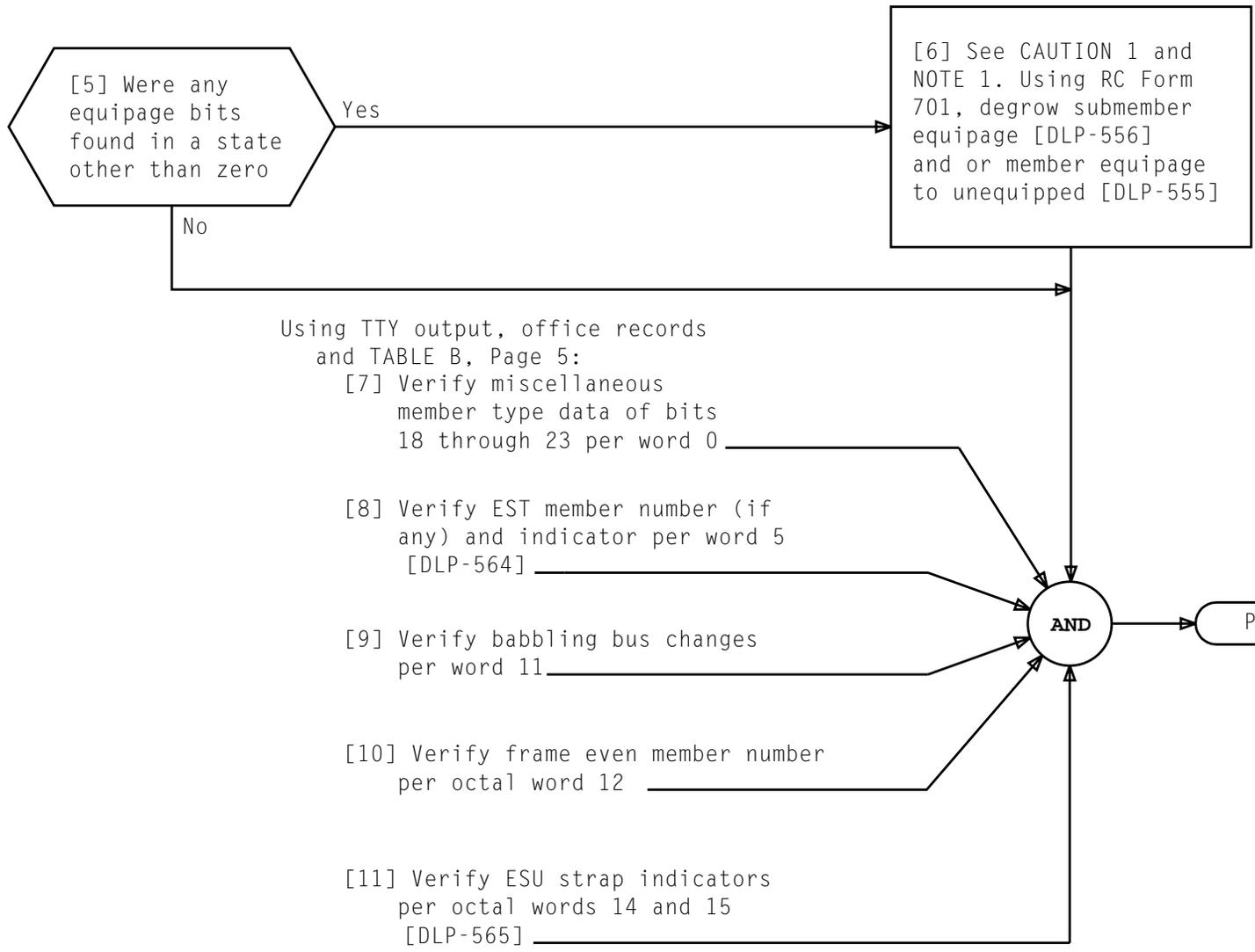


TABLE A	
MESSAGE NUMBER	OUTPUT MESSAGE
1	VER:UTMN;OPT().CUR: FLN a, UTYN TSI, MEMN b, ME UNEQ, ENTRY ADDRESS c, ENTRY SIZE 33, CUR WORD 0 _____ _____ WORD 10 _____ _____ WORD 20 _____ _____ WORD 30 _____ _____ WORD 40 _____
a = Floor location number b = Member number of growth TSI c = Starting octal address for unit type entry	

Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 8	514



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

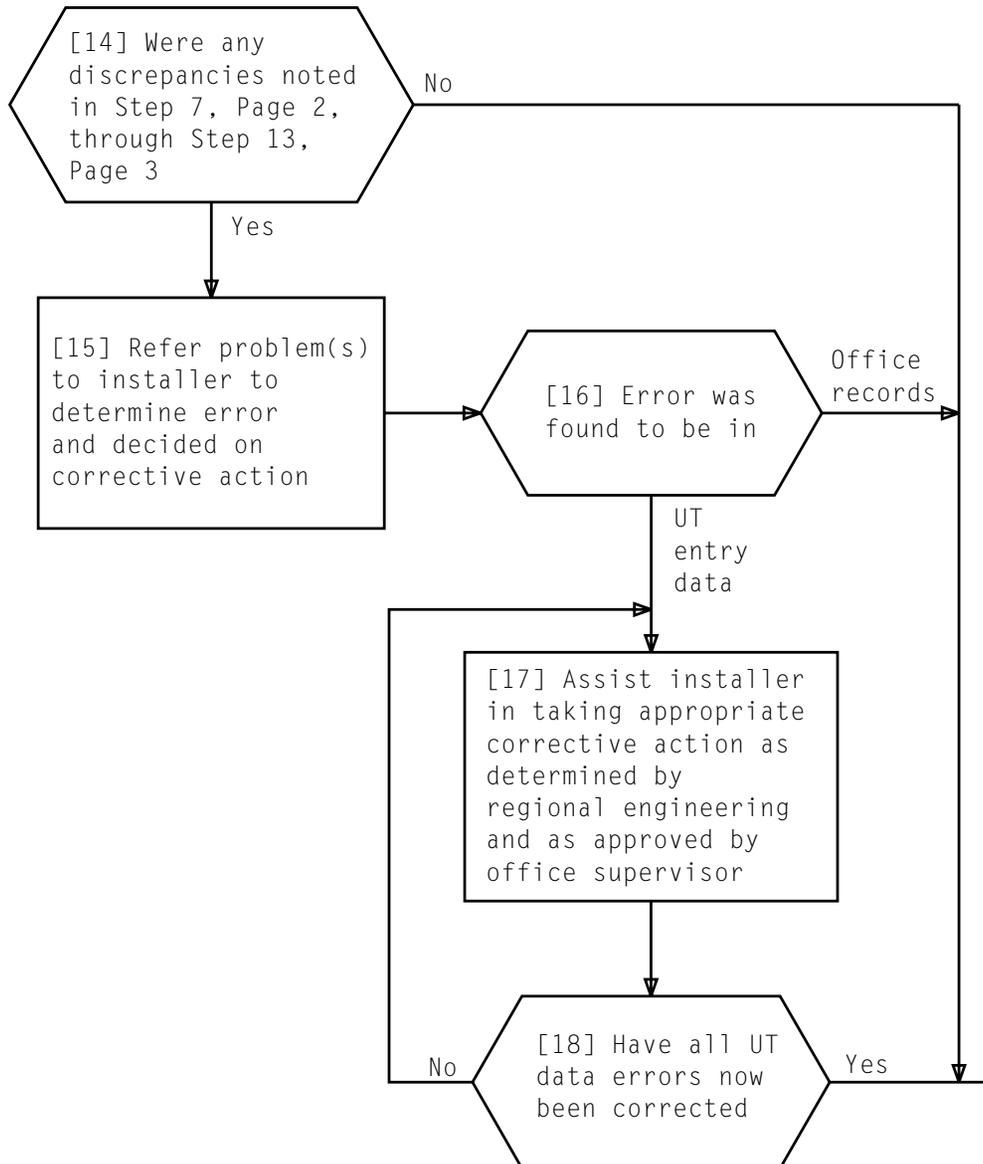
Issue 1	SEP 1998
234-353-040	DLP
PAGE 2 of 8	514

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

[13] Using TTY output, TABLE B, and office records, verify TSI port to VIU/DTU/DIU assignments per words identified in Step 12 [DLP-505]

Page 4

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



Issue 1	SEP 1998
234-353-040	DLP
PAGE 4 of 8	514

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																													
		MEMBER TYPE	MEMBER TYPE HARDWARE GENERATION	MEMBER EQUIPAGE	7	6	5	4	3	2	1	0	TSI-B PORT NO. - SPC 0										TSI-B 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																													
		E S T I	EST MEMBER NUMBER																												
<p>X...X = Converts to decimal EST member number info as reflected in appropriate office record drawing</p> <p>Y= Variable octal numbers</p>																															

VERIFY TSI-B UT TRANSLATOR FOR ODD MEMBER NUMBER

Issue 1	SEP 1998
234-353-040	DLP
PAGE 5 of 8	514

TABLE B (Contd)

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION																								
11	entry data	0		0		0		0		0		0		Y		Y									
	octal output																								
	bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	binary values	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	X	X	X
												BABBLING BUS FEATURE													
<p>X = Babbling Bus Change (bit 0-IPUB 0, CONTR 0) (bit 1-IPUB 0, CONTR 1) (bit 2-IPUB 1, CONTR 0) (bit 3-IPUB 1, CONTR 1)</p> <p>= 0 indicates babbling bus change is not present 1 indicates babbling bus change is present</p> <p style="text-align: right;">Y = Variable octal numbers</p>																									
12	entry data	0		0		0		Y		Y		Y		Y		Y									
	octal output																								
	bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	binary values	0	0	0	0	0	0	0	0	0	0	X	X	X	X	X	X	X	X	X	X	X	X	X	X
										EVEN MEMBER NUMBER				EVEN MEMBER NUMBER											
<p>X...X = Member number of even member within frame</p> <p>Y...Y = Variable octal numbers</p>																									

TABLE B (Contd)

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION																									
13	entry data	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																								
	octal output																									
	bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
	binary values	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		7	6	5	4	3	2	1	0	TSI-B PORT NO. SPC 1																
	TSI-B PORT SUBMEMBER EQUIPAGE																									
14	entry data	Y Y Y 0 0 0 0 Y																								
	octal output																									
	bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
	binary values	x	x	x	x	x	x	x	0	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																									
	<p>Y = Variable octal numbers</p> <p>X...X = All zeros if no EST associated with growth TSI-B or = All ones if growth TSI-B will interface with EST</p> <p>Z = 0 Not equipped for wideband = 1 Is equipped for wideband</p>																									

SPC 0 Wideband indicator

TABLE B (Contd)

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION																								
15	entry data	Y						0						0						Y					
	octal output																								
	bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	binary values	X	X	X	X	X	X	X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Z
		13	12	11	10	9	8	7																	
		ESU NO.																							
		ESU STRAP INDICATOR - SPC 1																							
		<p>Y = Variable octal numbers</p> <p>X...X = All zeros if no EST associated with growth TSI-B or = All ones if growth TSI-B will interface with EST</p> <p>Z = 0 Not equipped for wideband = 1 Is equipped for wideband</p>																							
		<p>SPC 1 Wideband indicator</p>																							
21 through 27 AND 31 through 37	entry data	0						Y						Y						Y					
	octal output																								
	bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	binary values	0	0	0	0	0	0	0	0	Z	Z	Z	Z	X	X	X	X	X	X	X	X	X	X	X	X
								EQUIPAGE TYPE						MEMBER NUMBER						UNIT NUMBER					
		TSI PORT ASSIGNMENT																							
		<p>X...X = Converts to decimal TSI port info as as reflected in office record drawing T-nnnn-Hn-467 or equivalent</p> <p>Y = Variable octal number</p> <p>ZZZZ0011 for VIF 0001 for DT 0100 for DIF</p>																							

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.

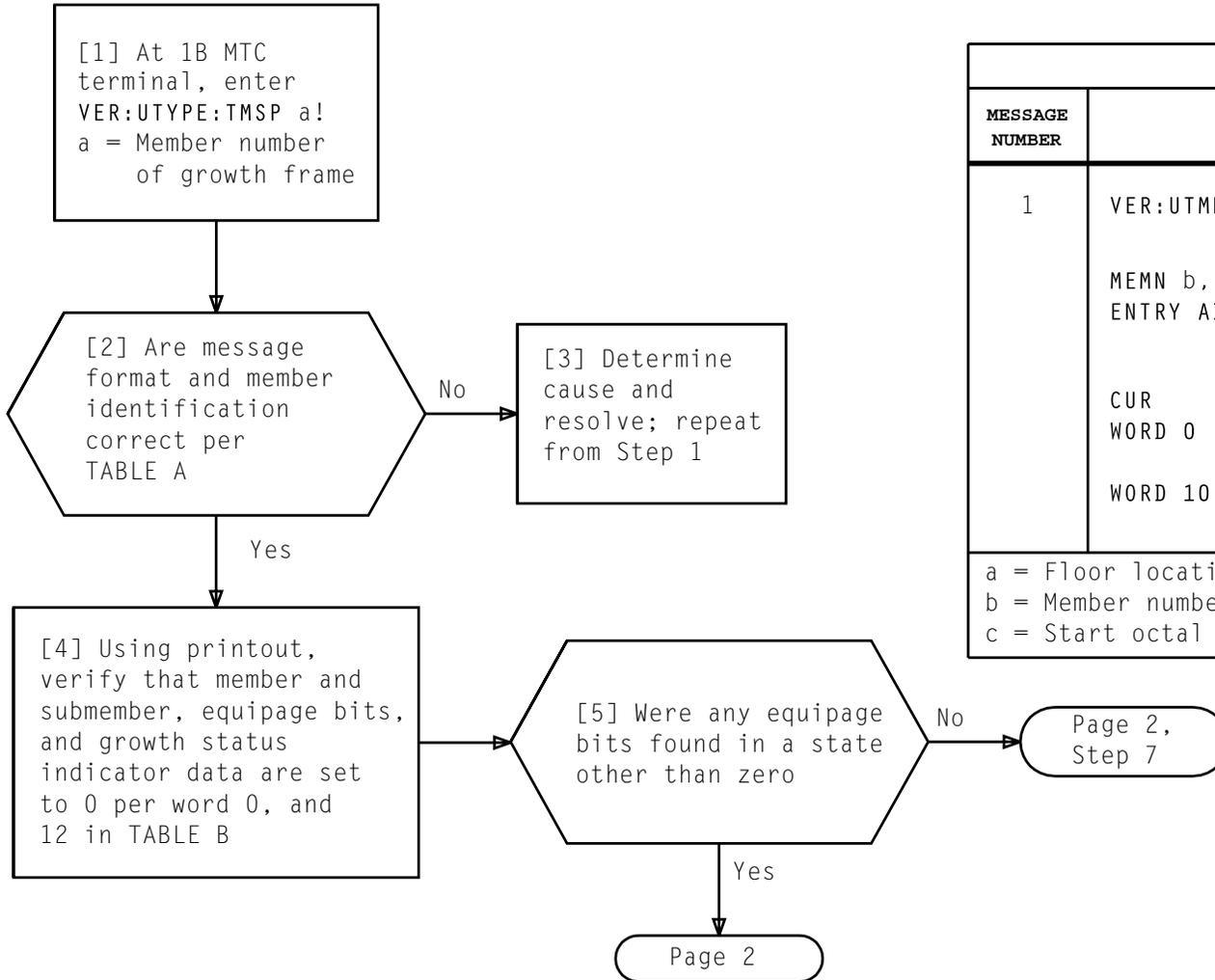
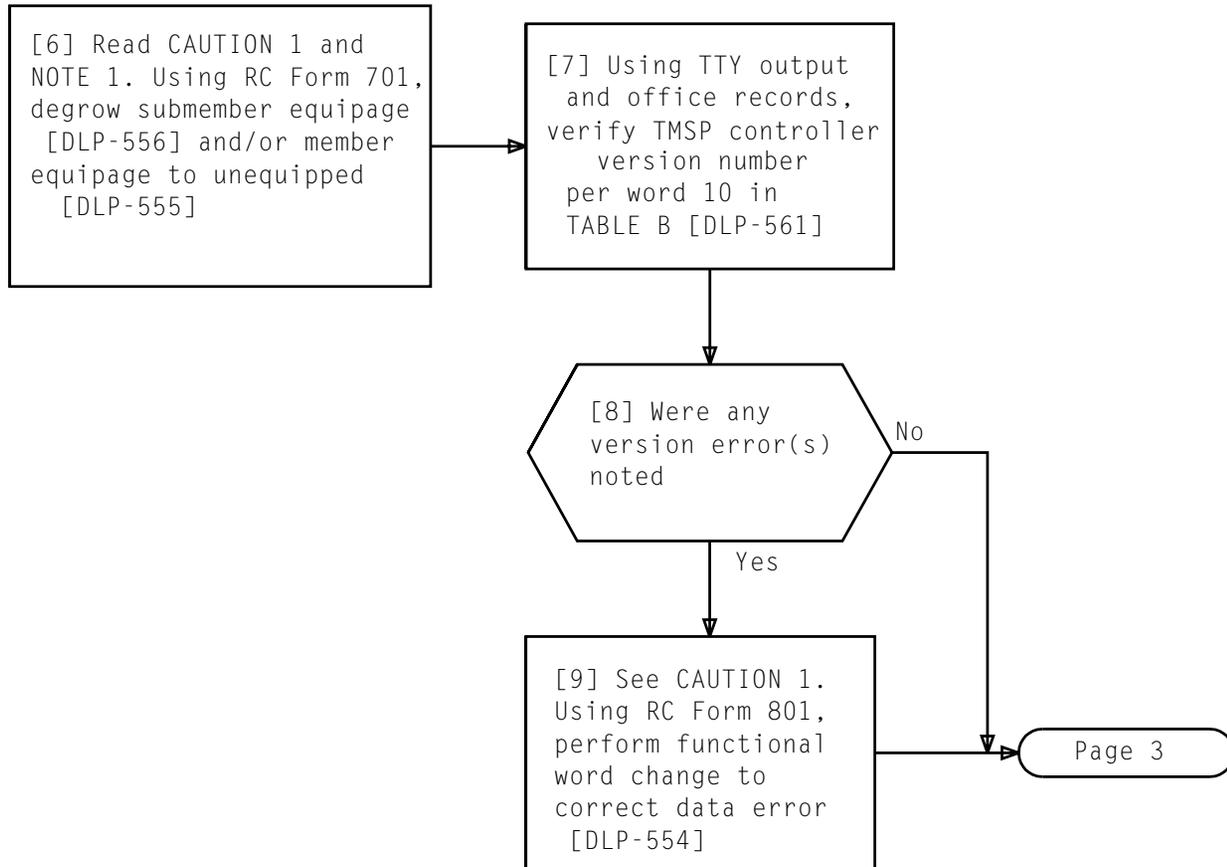


TABLE A	
MESSAGE NUMBER	OUTPUT MESSAGE
1	VER:UTMN;OPT(),CUR: FLN a, UTYN TMSP, MEMN b, ME UNEQ, ENTRY ADDRESS c, ENTRY SIZE 11, CUR WORD 0 _____ _____ WORD 10 _____ _____
a = Floor location number b = Member number of growth frame c = Start octal address for unit type entry	



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

Issue 1	SEP 1998
234-353-040	DLP
PAGE 2 of 10	515

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

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

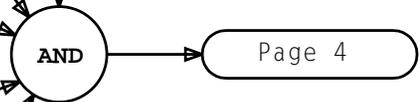
[11] Verify alarm grid, lineup and
frame assignment for growth frame
per word 1 [DLP-552]

[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 TMS member
version per word 11



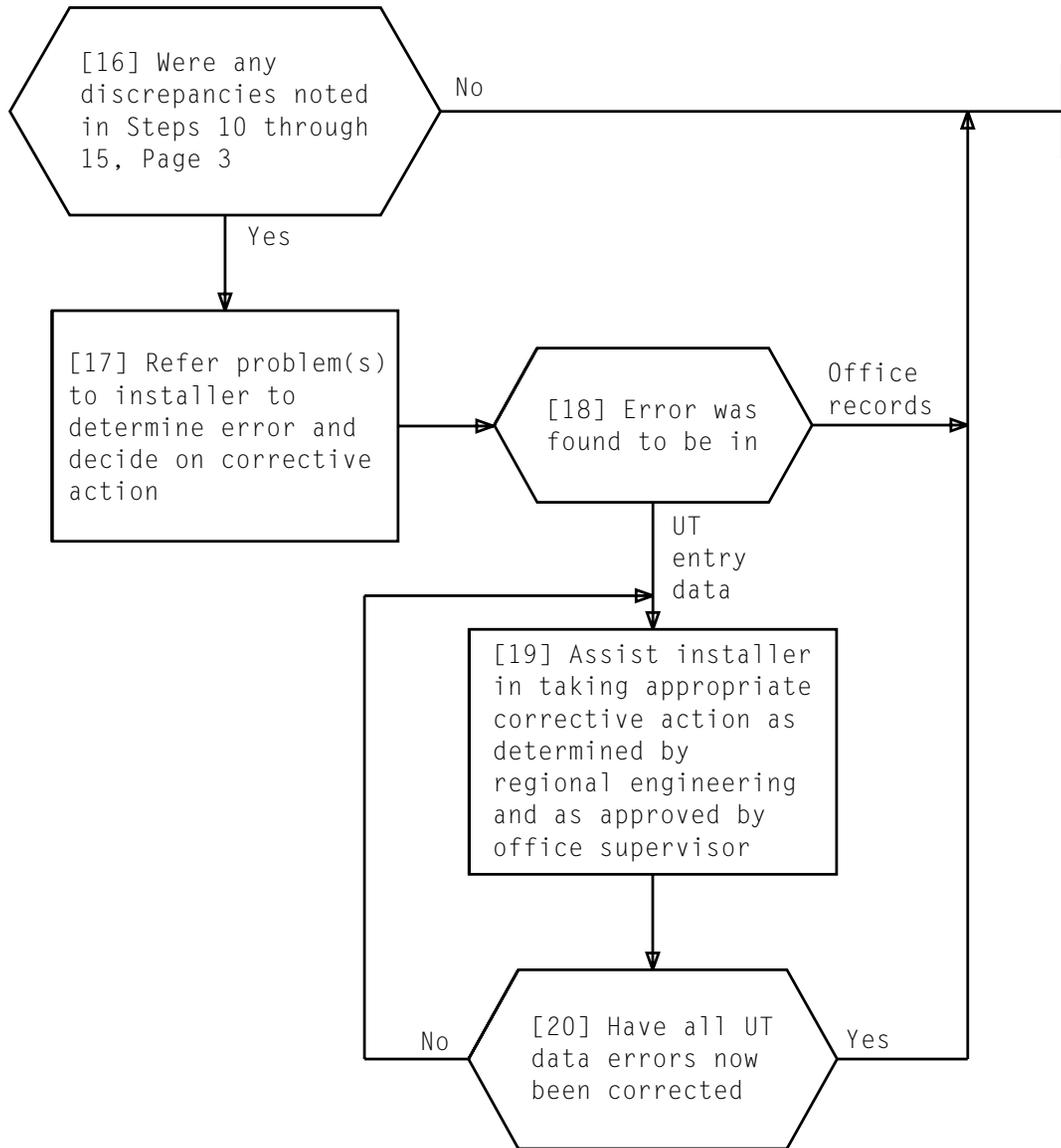


TABLE B

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

TABLE B (Contd)

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

TABLE B (Contd)

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

TABLE B (Contd)

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

At tape transport:

[1] Open interlocked cover door;
at upper right of tape
transport, pull interlock
plunger out

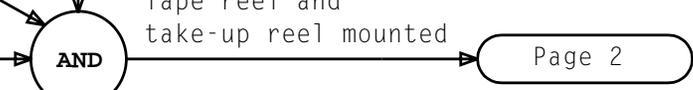
[2] Operate **LOCAL/REMOTE**
switch to obtain **LOCAL**
lighted condition

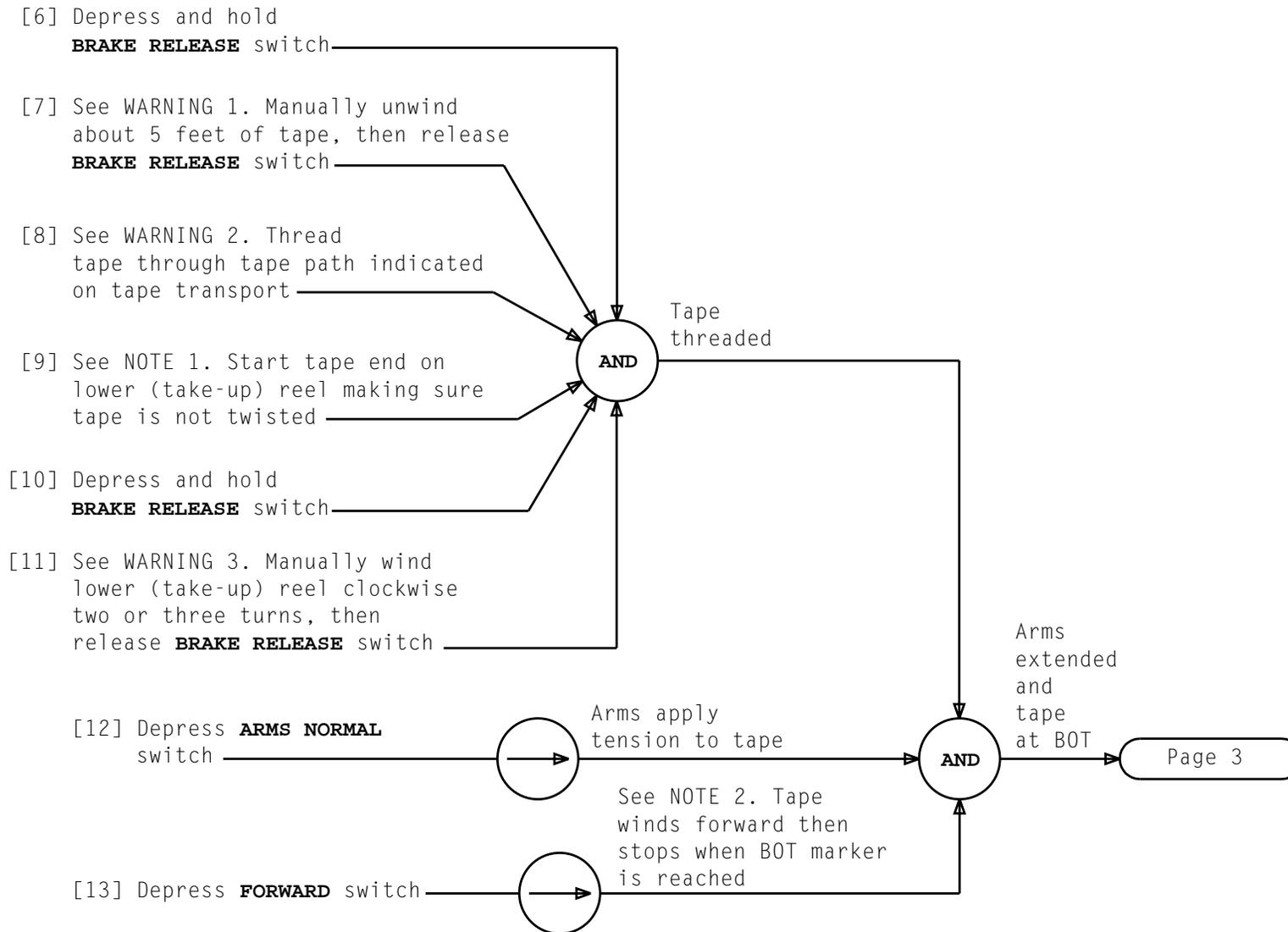


[3] Verify that empty lower (take-up) tape reel is
same size or larger than tape reel to be mounted

[4] With hub (knob) of upper reel in
counterclockwise position, mount reel
with tape on reel holder

[5] Rotate hub (knob) of upper reel clockwise
to detent to lock tape reel securely





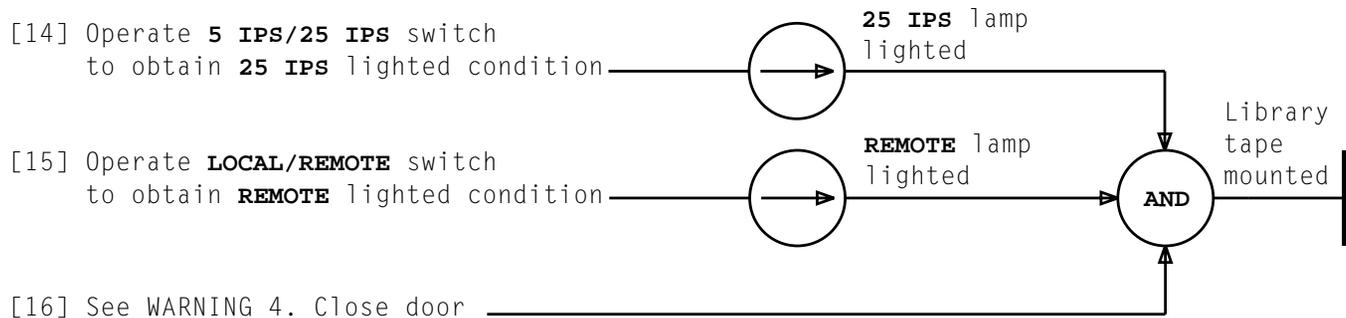
NOTES

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

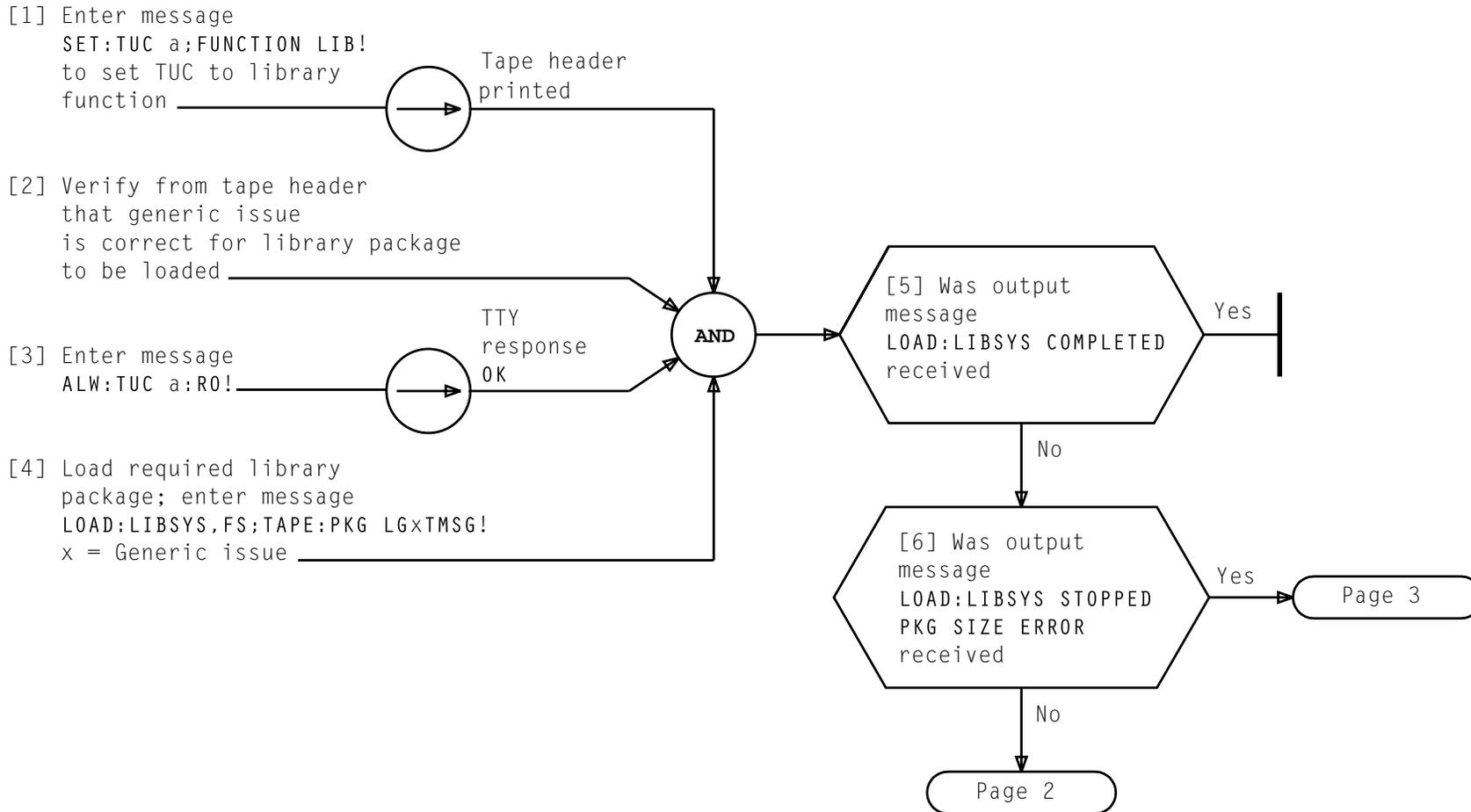
1. Contamination of tape by contact with floor will damage tape heads
2. Do not touch tape head surfaces; body oils will contaminate tape
3. If tape is not properly aligned along rollers and guides, or is too loose, it may be damaged

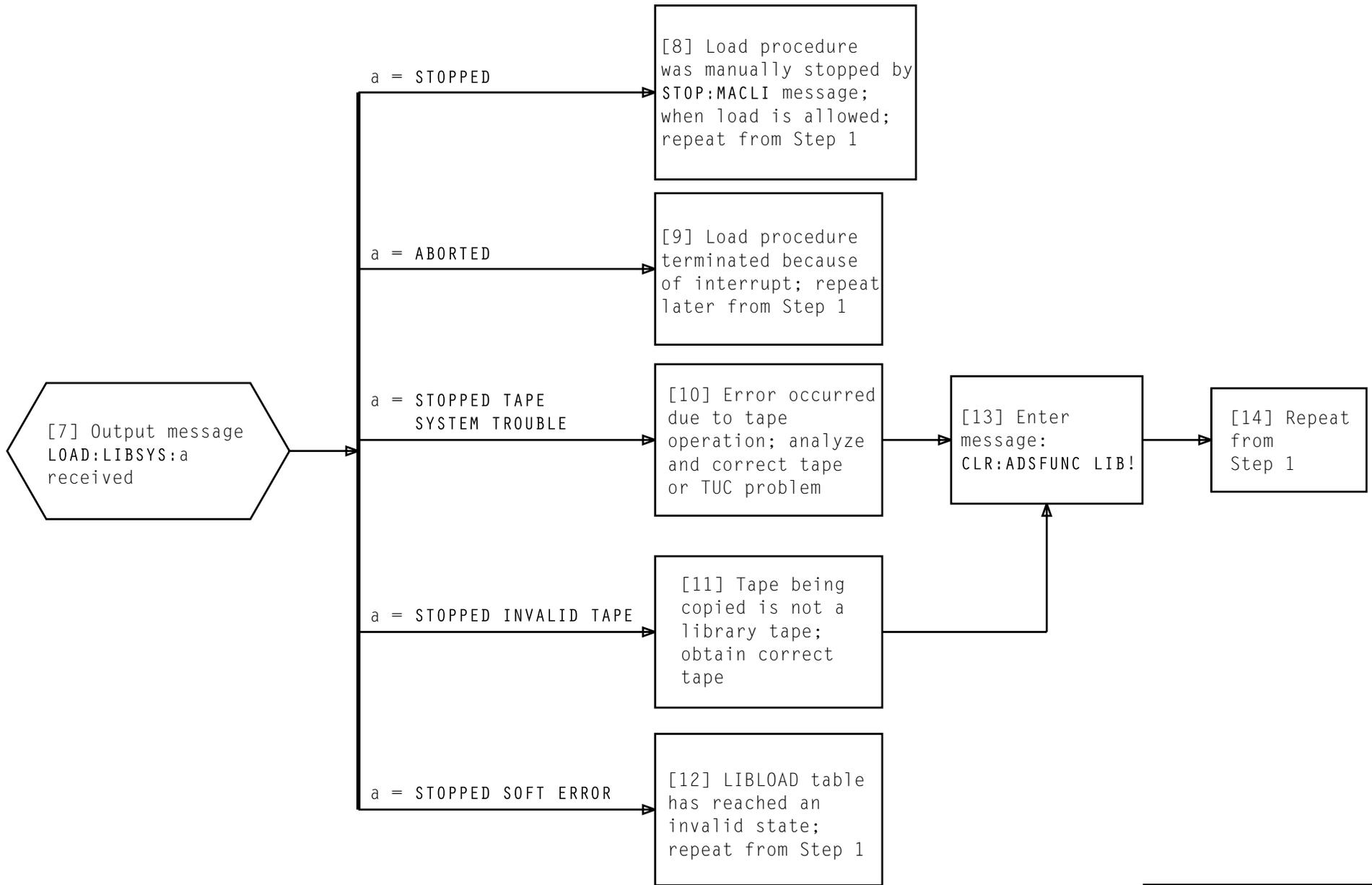
Issue 1	SEP 1998
234-353-040	DLP
PAGE 2 of 3	516

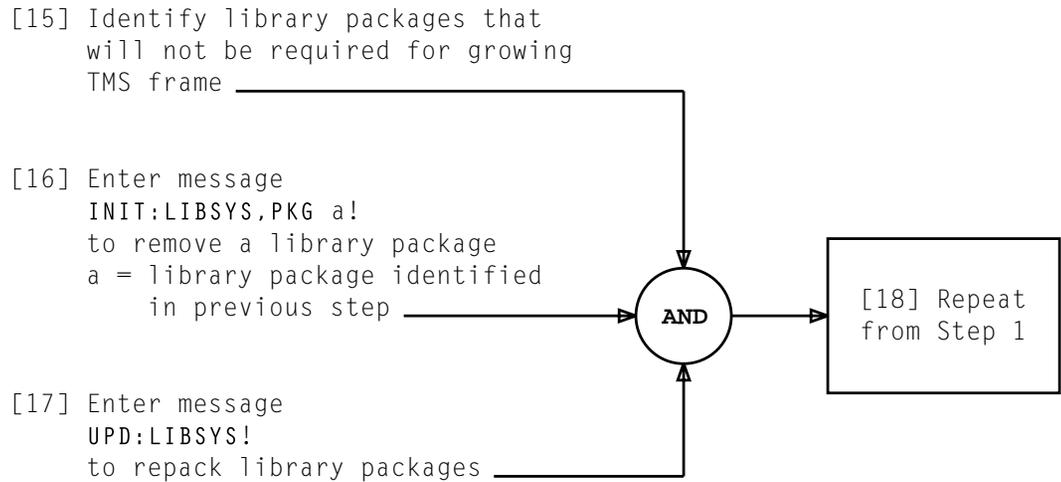


<i>WARNING 4</i> <i>Closing tape transport door in harsh manner may upset alignment</i>	
Issue 1	SEP 1998
234-353-040	DLP
PAGE 3 of 3	516

MOUNT LIBRARY TAPE ON TAPE TRANSPORT

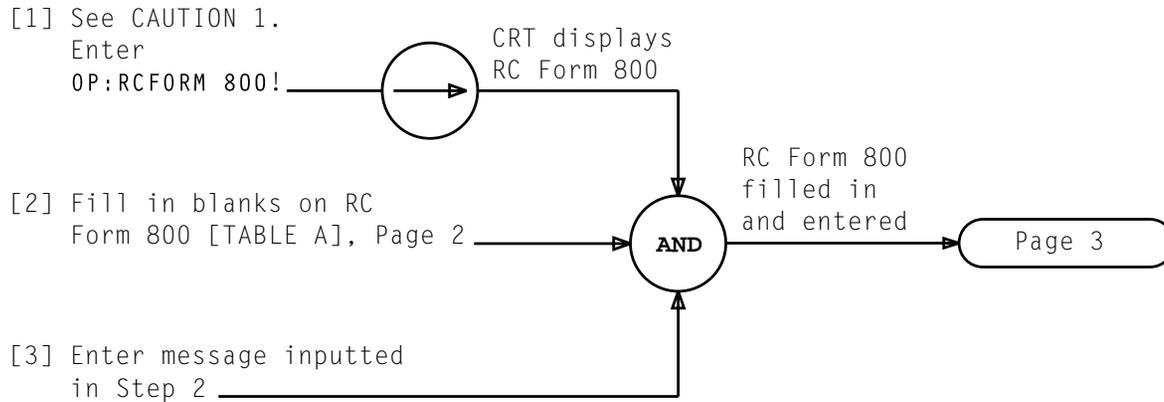






SUMMARY

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.



CAUTION 1

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

Issue 1 | SEP 1998

234-353-040 | DLP

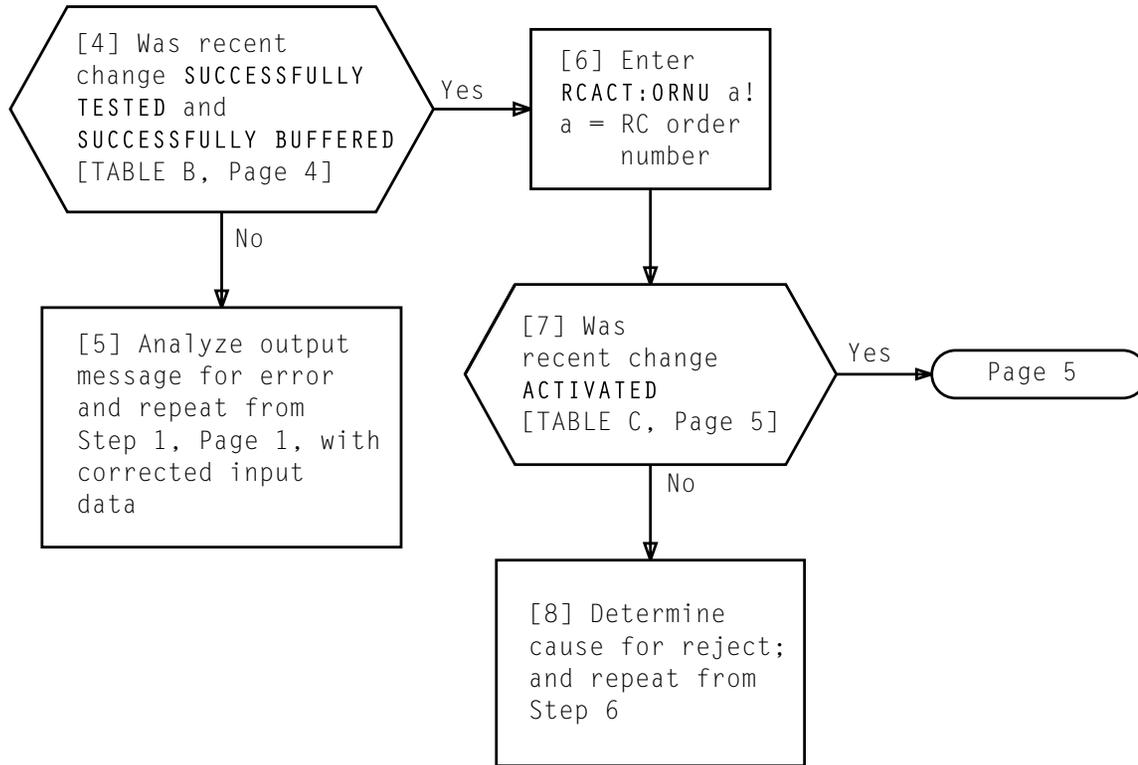
PAGE 1 of 5 | 518

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

TABLE A	
MESSAGE NUMBER	OUTPUT MESSAGE
1	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	

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

Issue 1	SEP 1998
234-353-040	DLP
PAGE 2 of 5	518



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

Issue 1	SEP 1998
234-353-040	DLP
PAGE 3 of 5	518

TABLE B	
MESSAGE NUMBER	OUTPUT MESSAGE
1	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

Issue 1	SEP 1998
234-353-040	DLP
PAGE 4 of 5	518

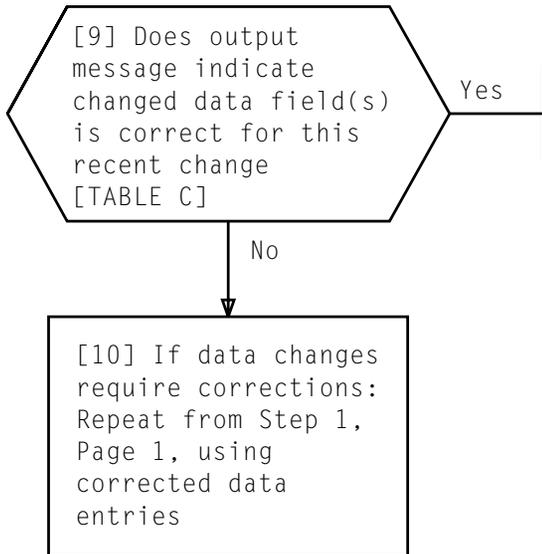


TABLE C	
MESSAGE NUMBER	OUTPUT MESSAGE
1	RC ORNU a ACTIVATED RC:FUNC;CHG;OPT(ABSOLUTE),BUF: FSONLY N,ADDRESS b, ORNU a, WORDNO 0, SIZE 3, DISP 0, BINOCT 0, NEWDATA c, OLDDATA d, REMARKS!
a = RC Order No. b = Address determined from library program task 1 TTY output message c = Data specified as NEWDATA in library program task 1 output message d = Data specified as OLDDATA in library program task 1	

[1] Enter following messages:
 EX:LIBSYS:PKG LGxTMSG,PGM TMSG,TASK a,CLIENT 0!
 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

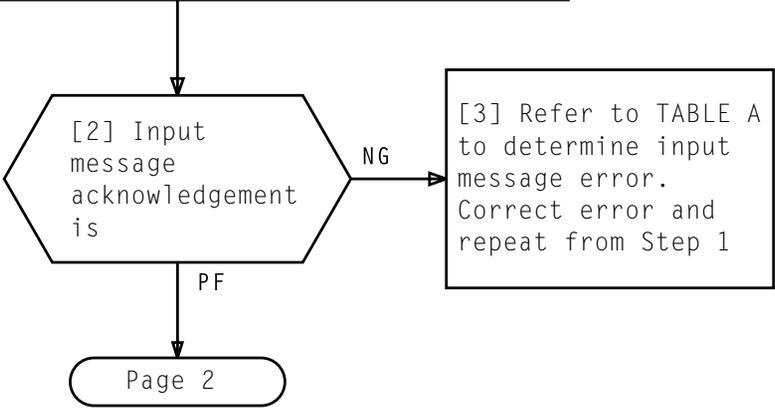


TABLE A	
NG CODE	DEFINITION
060	CLIENT NUMBER OUT OF RANGE
061	INVALID COMBINATION OF KEYWORDS SPECIFIED
064	PACKAGE NAME NOT SPECIFIED
065	PROGRAM NAME NOT SPECIFIED
066	TASK NUMBER NOT SPECIFIED
067	INTERNAL ERROR DETECTED

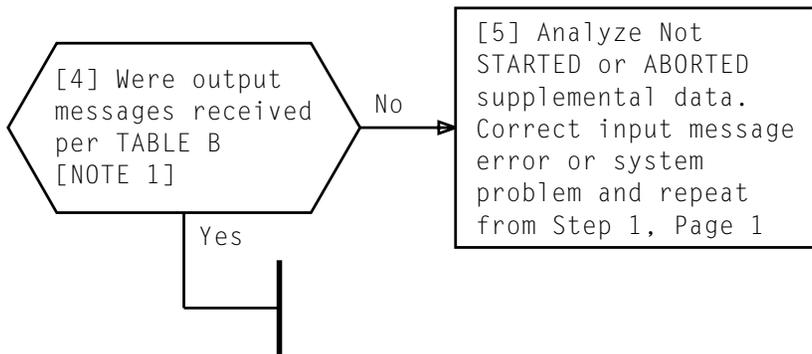


TABLE B	
MESSAGE NUMBER	OUTPUT MESSAGE
1	LOAD:LIBSYS COMPLETED EX:LIBSYS:PKG LGxTMSG, PRM TMSG, TASK a, CLIENT 0 STARTED
a = 1 or 2 x = Generic program number	

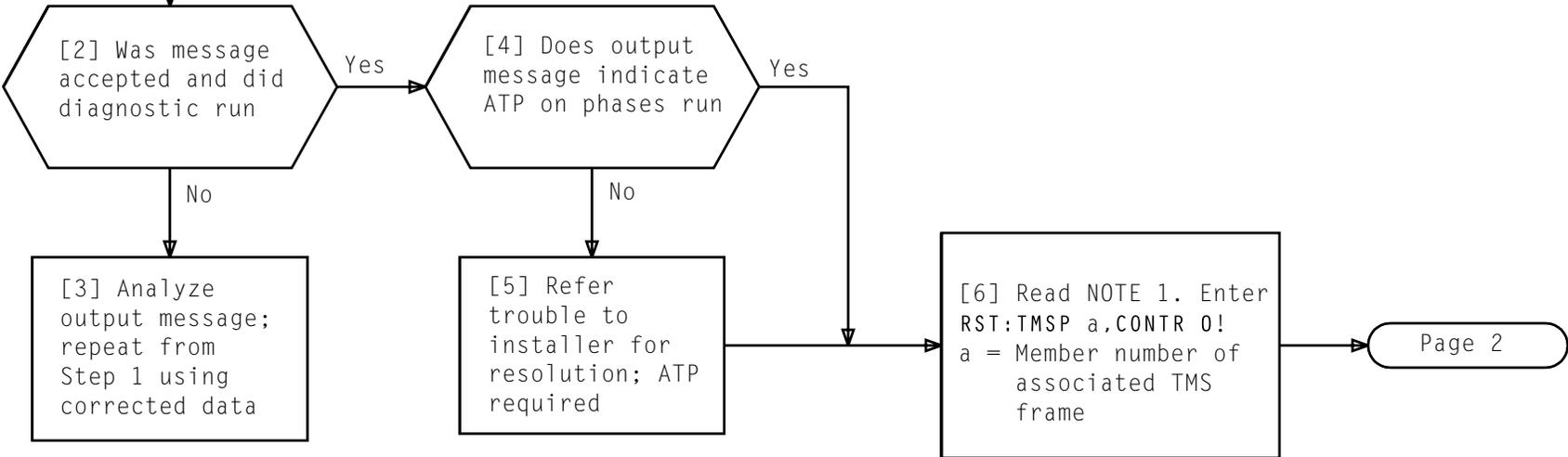
NOTE 1	
LOAD:LIBSYS COMPLETED message may be received even if the input message was aborted or not started	
Issue 1	SEP 1998
234-353-040	DLP
PAGE 2 of 2	519

EXECUTE TMSG LIBRARY PROGRAM LGxTMSG, TASK 1 AND 2

<p>SUMMARY</p> <p>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</p>	<p>all TMS frames. After controller 0 has been diagnosed and restored for all TMS frames, diagnose and restore controller 1 for all TMS frames</p>
--	--

[1] Enter message per TABLE A, specifying phase 8 tests for controller 0

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



<p>NOTE 1</p> <p>Restore input message will run TMS diagnostics and restore controller if ATP</p>	
Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 3	521

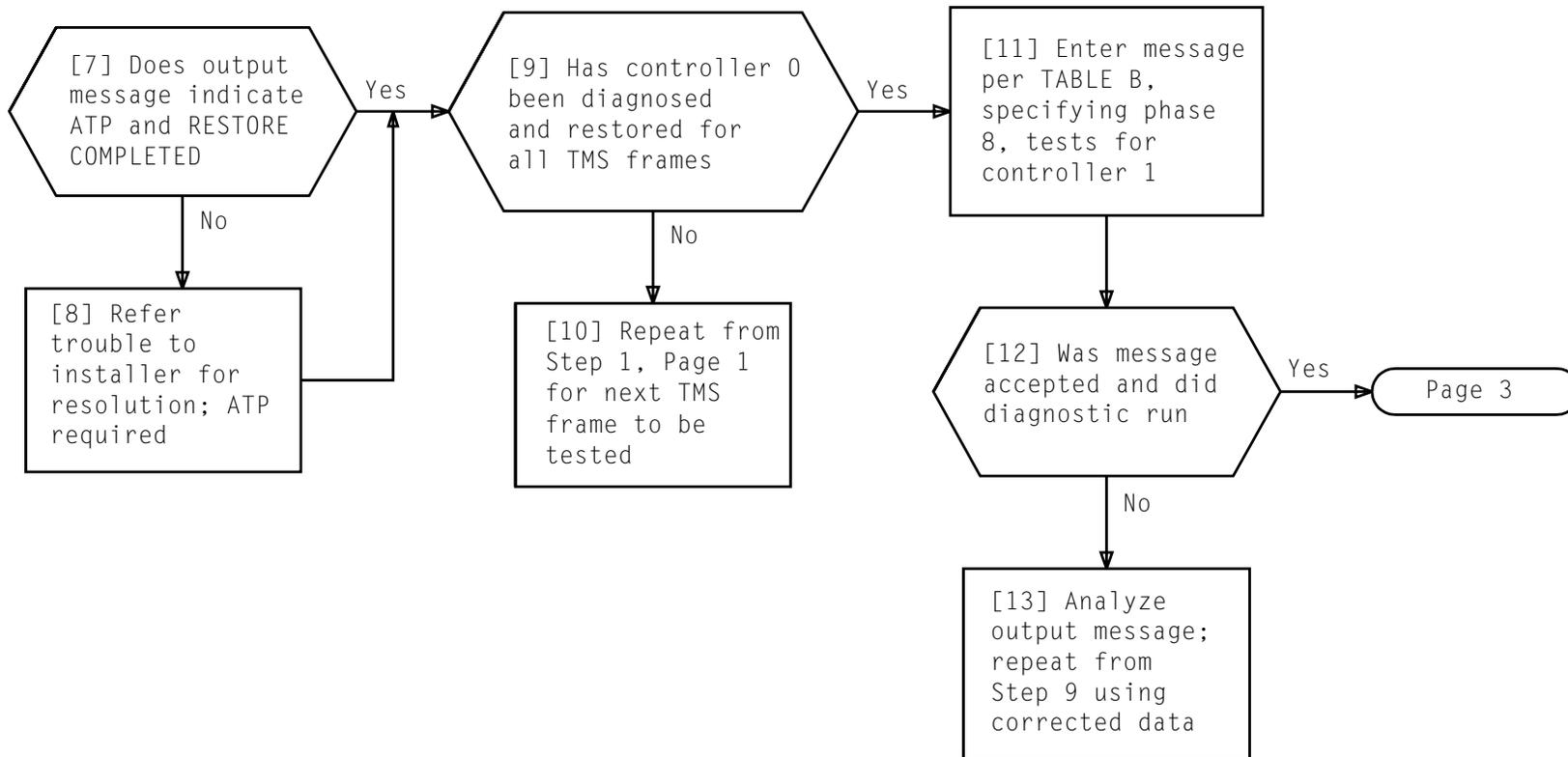
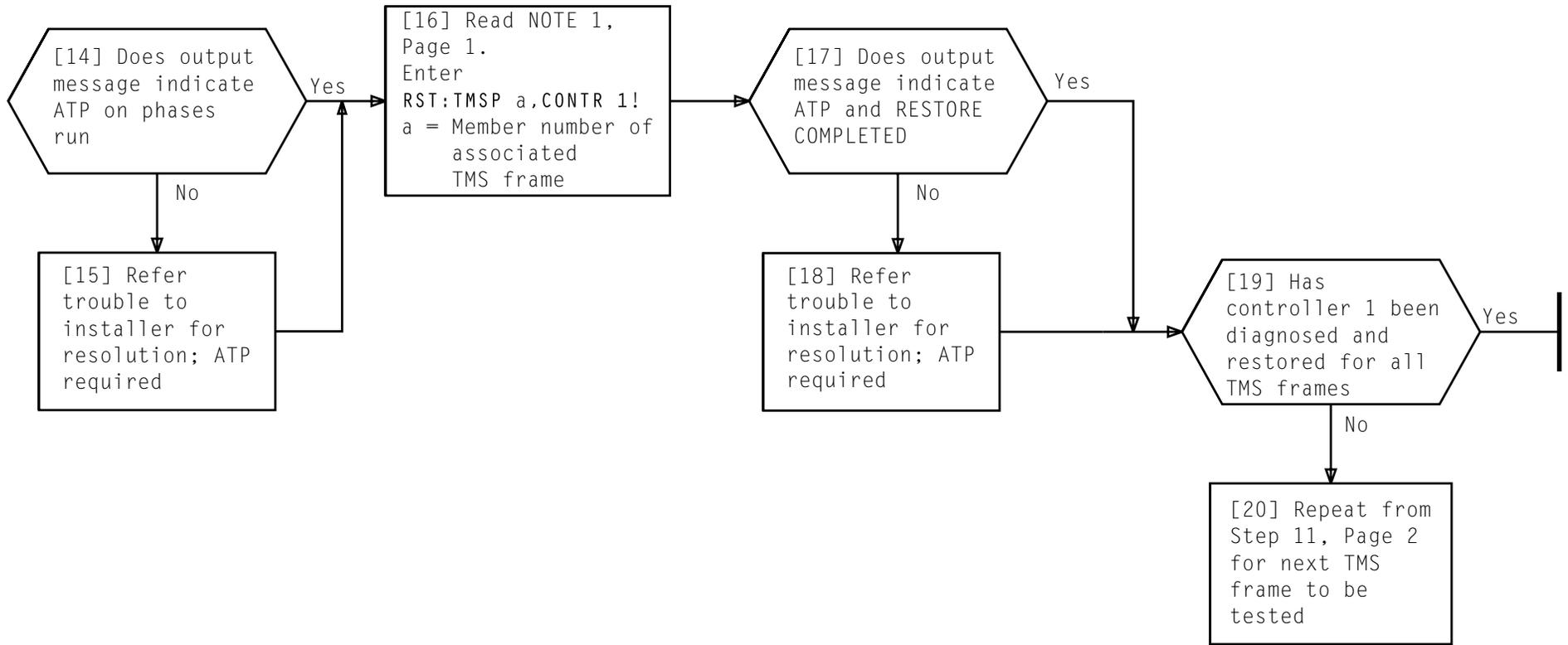


TABLE B	
MESSAGE NUMBER	INPUT MESSAGE
1	DGN:TMSP a,CONTR 1:PH 8,GROWTH!
a = Member number of associated TMS frame	



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.

[1] Enter input message per TABLE A, specifying SME index number for Memory Block being verified of Controller 0

[2] Is SME marked GROW per TABLE A output message

Yes

No

[3] Refer problem to installer to decide on 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	

Page 2

[4] Enter input message per TABLE B, specifying SME index number for Memory Block being verified of Controller 1

[5] Is SME marked GROW per TABLE A output message

[6] Refer problem to installer to decide on corrective action

[7] Has status of all necessary Memory Blocks been verified

[8] Repeat from Step 1, Page 1, for each TMS member number Memory Block combination

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**

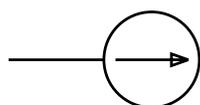
Issue 1	SEP 1998
234-353-040	DLP
PAGE 2 of 2	522

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	
MESSAGE NUMBER	OUTPUT MESSAGE
1	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	

[1] See CAUTION 1.
Enter
OP:RCFORM 700!



CRT displays
RC Form 700

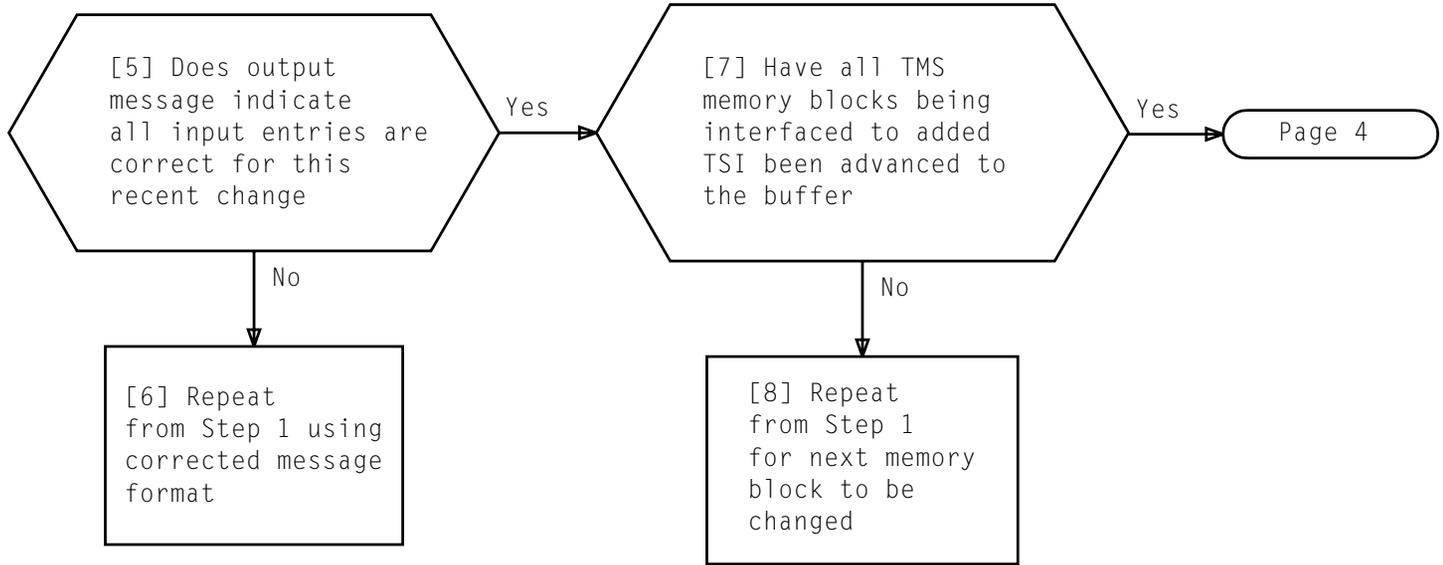


RC Form 700
filled in
and entered

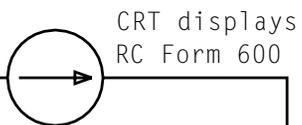


[2] Read NOTE 1. Fill
in blanks on RC Form
700 per TABLE A
and enter message

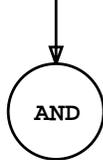
NOTE 1 RC order number should be recorded for use later in this procedure	
<i>CAUTION 1 Calling up RC form will cause all CRT data to be cleared</i>	
Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 4	523



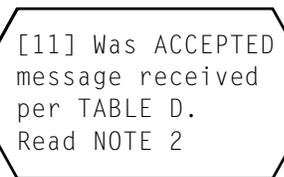
[9] See CAUTION 2.
Enter OP:RCFORM 600!



[10] Fill in blanks on RC Form 600 per TABLE C, Page 2, using RC order number(s) previously recorded and enter message _____



RC Form 600 filled in and entered

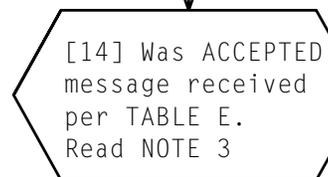


No

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

Yes

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



Yes



No

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

TABLE D	
MESSAGE NUMBER	OUTPUT MESSAGE
1	RC ORNU a ACCEPTED FOR BUF STATE a = RC order number

TABLE E	
MESSAGE NUMBER	OUTPUT MESSAGE
1	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

Issue 1	SEP 1998
234-353-040	DLP
PAGE 4 of 4	523

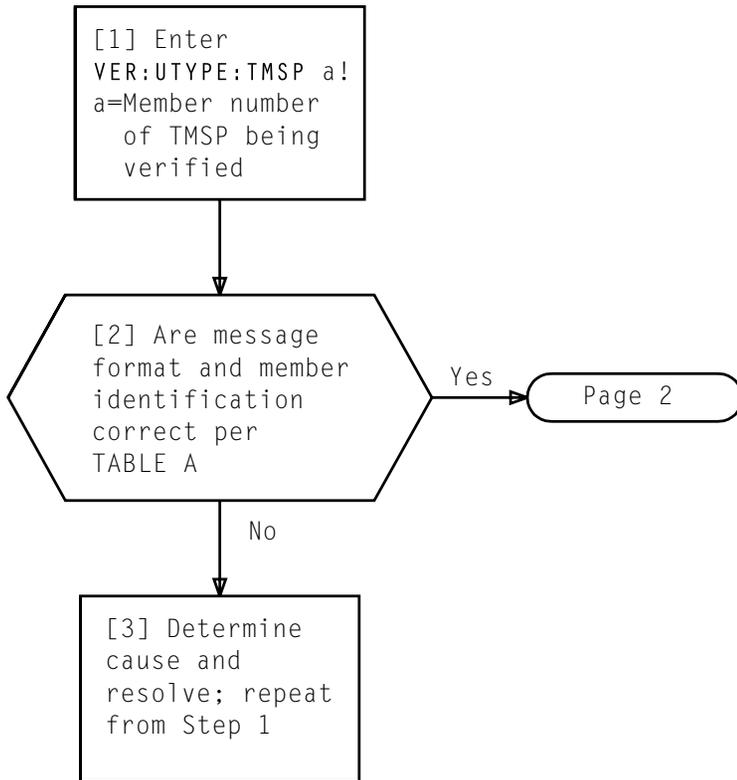


TABLE A	
MESSAGE NUMBER	OUTPUT MESSAGE
1	VER:UTMN;OPT(),CUR: FLN a, UTYN TMSP, MEMN b, ME OPER, ENTRY ADDRESS c, ENTRY SIZE 11, CUR WORD 0 _____ _____ WORD 10 _____ _____ TMSP CONFIGURATION 4
a = Floor location b = Member number of TMSP being verified c = Starting address (word 0)	

Using TTY output message:

[4] Verify that word 0 is set per TABLE B for memory block(s) equipped

[5] Verify that word 12 is set to octal 00000017

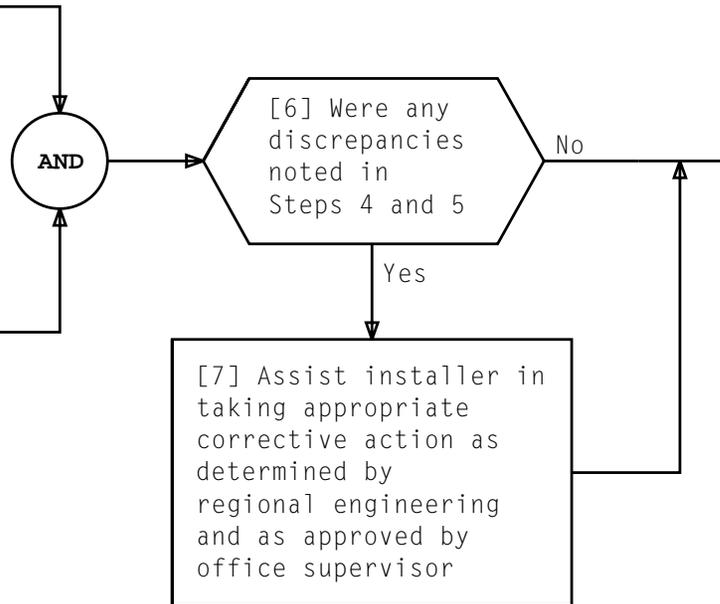
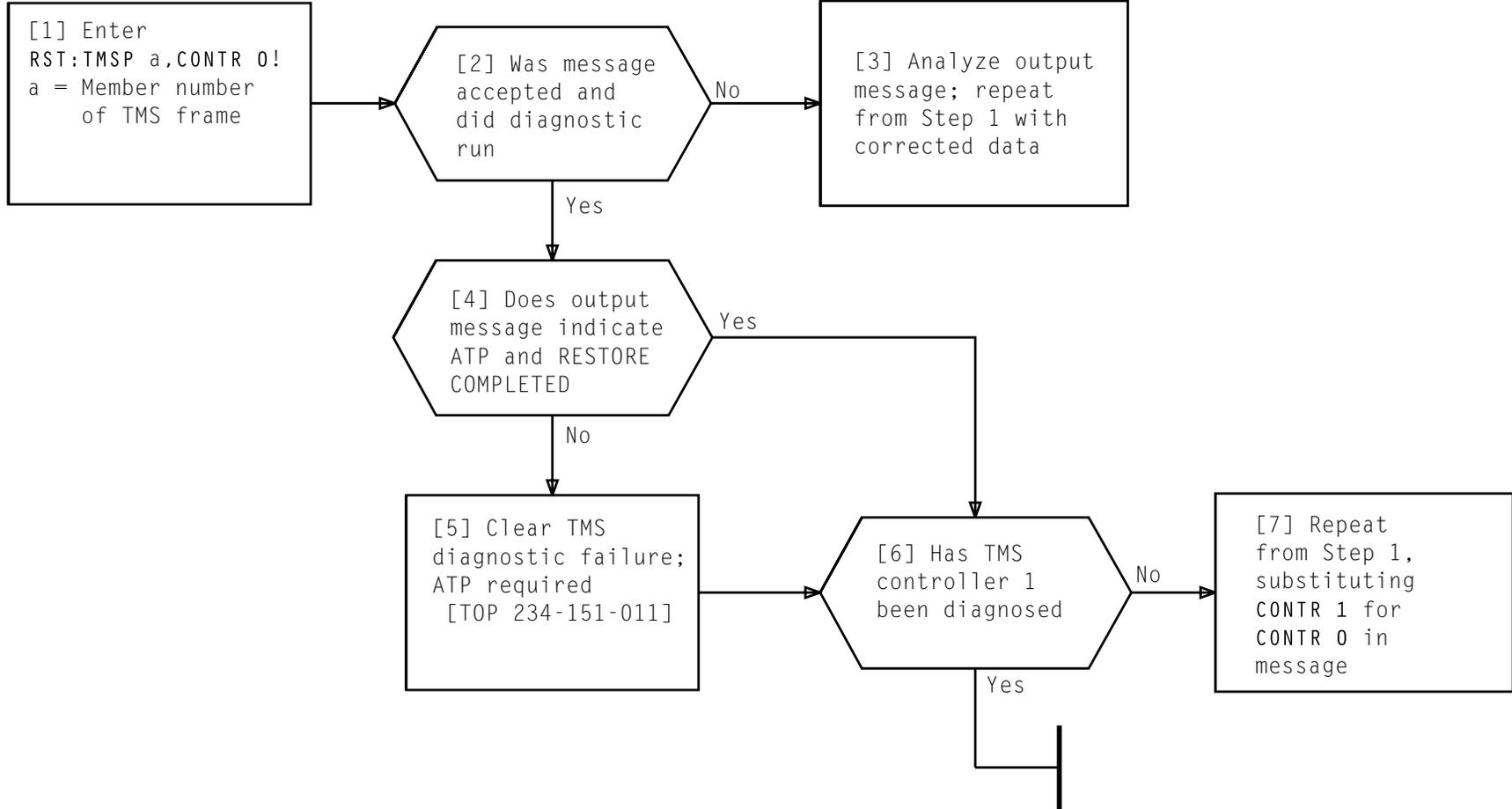


TABLE B	
TMSB MEMORY BLOCK EQUIPAGE	WORD 0 (OCTAL)
Memory Block 0	*0601403
Memory Blocks 0 and 1	*0607417
Memory Blocks 0, 1, and 2	*0637477
Memory Blocks 0, 1, 2, and 3	*0777777
* = 0 for original version 1 for multiplex version 2 for TMS-B version	

Issue 1	SEP 1998
234-353-040	DLP
PAGE 2 of 2	524

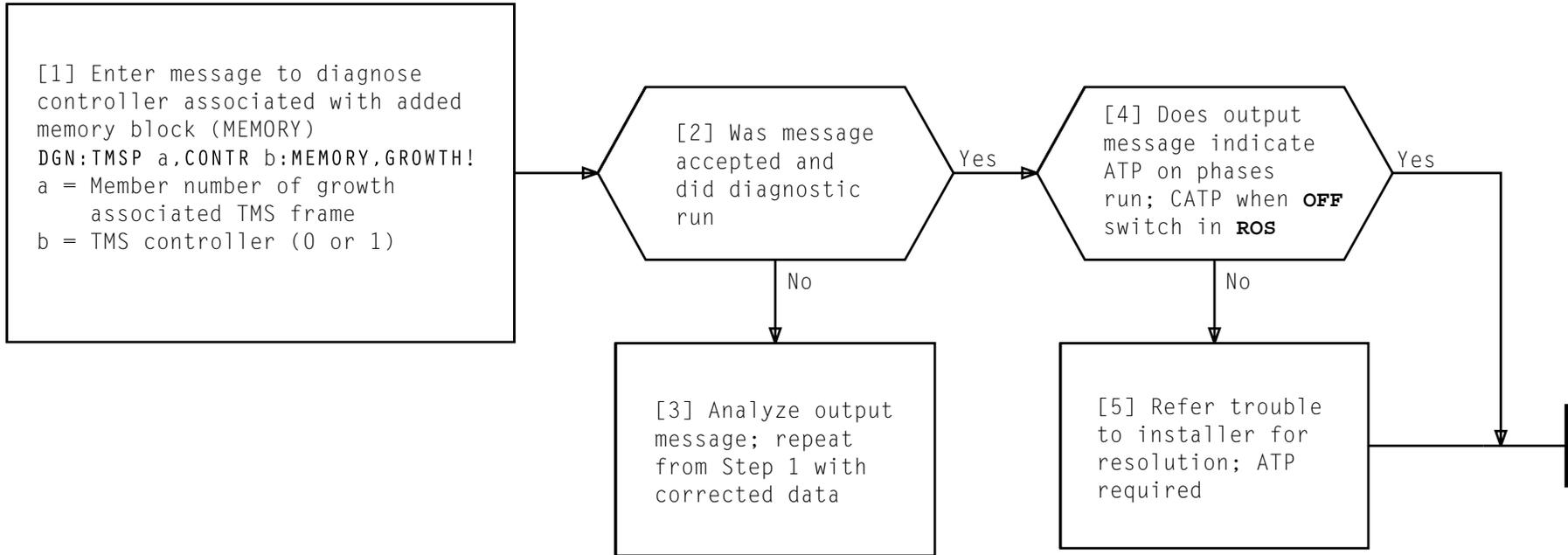
SUMMARY

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



DIAGNOSE TMS FRAME CONTROLLERS USING RESTORE MESSAGE

Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 1	532



[1] Refer to TABLE A, Page 2 for minimum hardware in-service requirements for running of NETEX library program

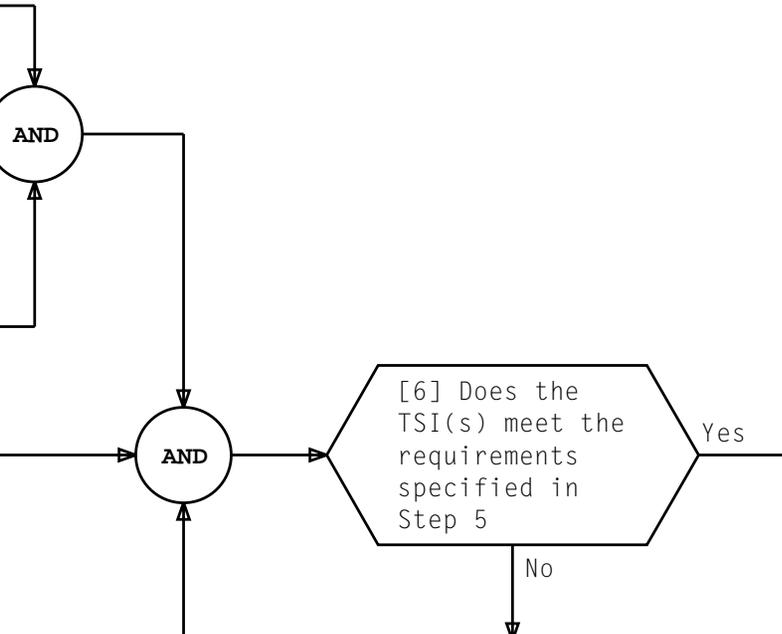
[2] Enter OP:00SUNITS! to obtain list of out-of-service units

[3] Conditionally restore each unit on out-of-service list required for running of library program, using restore message

[4] Enter message per TABLE B for both SPCs of growth TSI. Read NOTE 1

[5] From output message, verify that growth TSI has at least 24 consecutive trunks per SPC in the CAD.DSA state

TABLE B
VER:TRK:TAN xxxxxxxx - xxxxxxxx!
xxxxxx - xxxxxx = range of 120 TANs



[7] Request MAC to recent change trunks to a minimum of 24 consecutive TANs on each of the SPCs for TSI(s) to be tested. Read NOTES 2 and 3

- 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

Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 2	535

ESTABLISH FRAME HARDWARE STATUS FOR RUNNING OF NETEX LIBRARY PROGRAM

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		

**ESTABLISH FRAME HARDWARE STATUS FOR RUNNING
OF NETEX LIBRARY PROGRAM**

Issue 1	SEP 1998
234-353-040	DLP
PAGE 2 of 2	535

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.

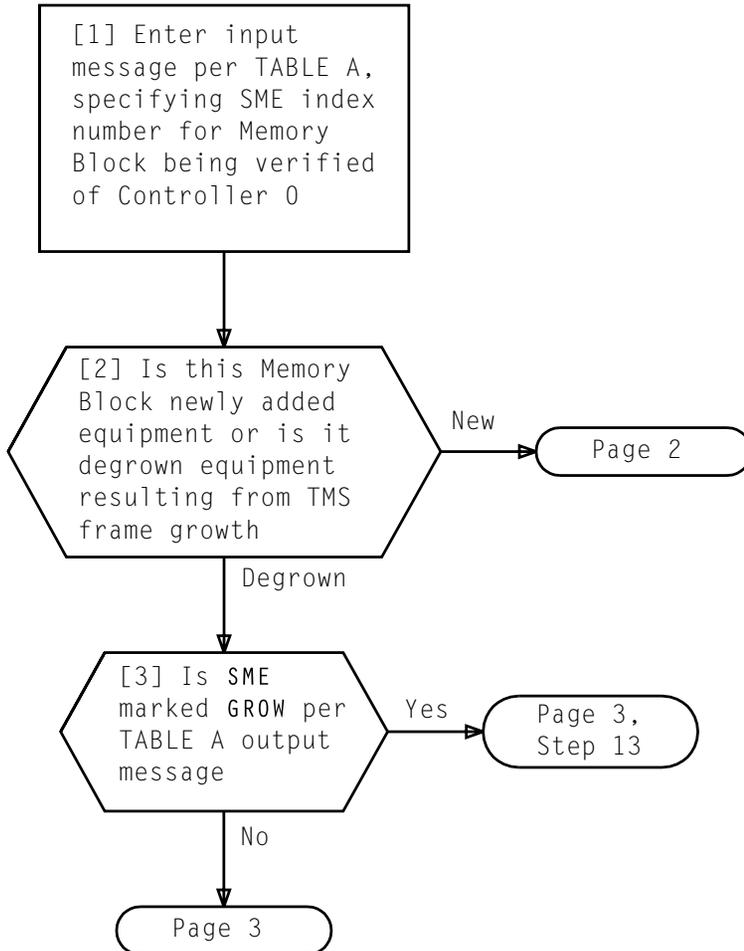
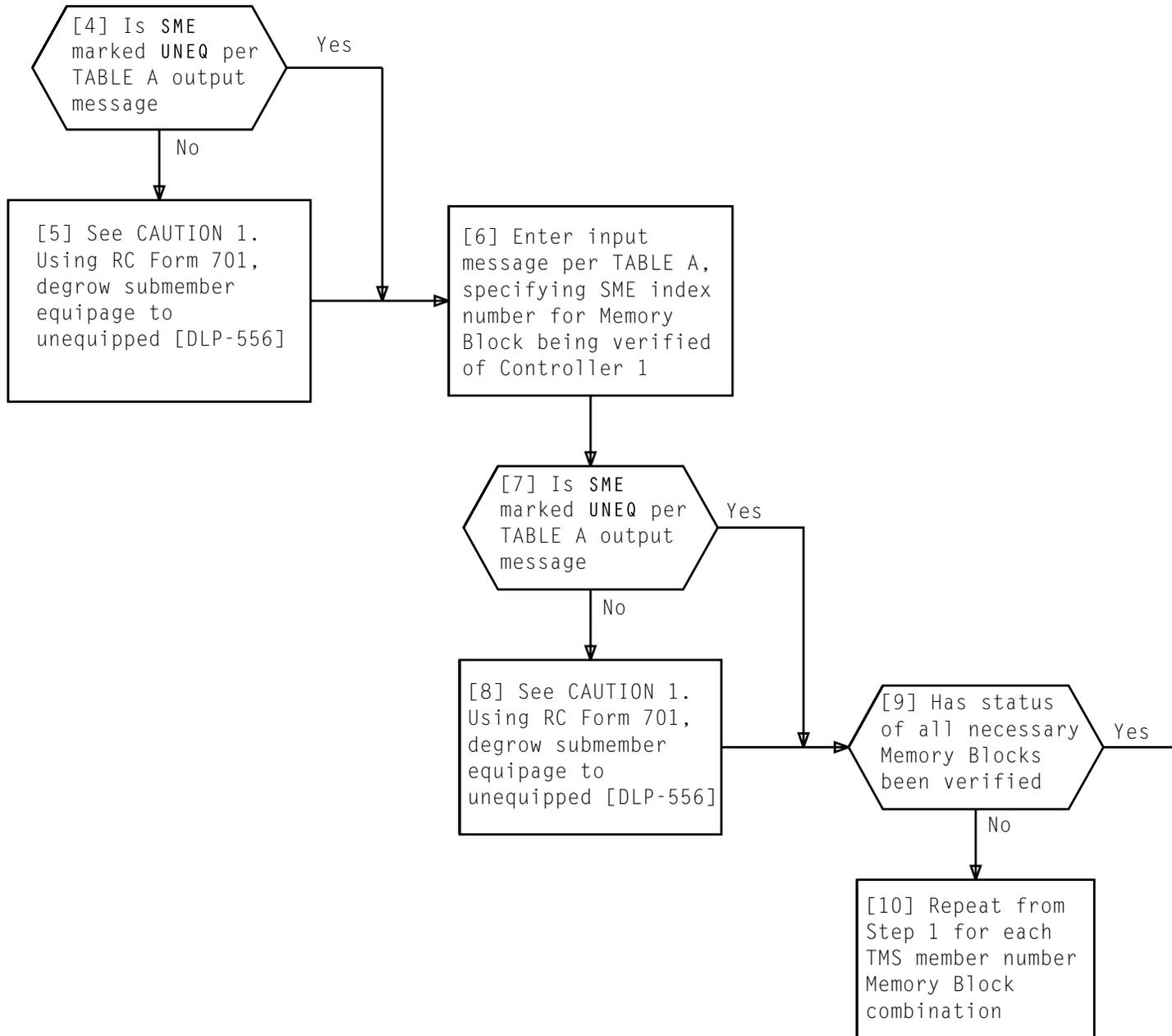


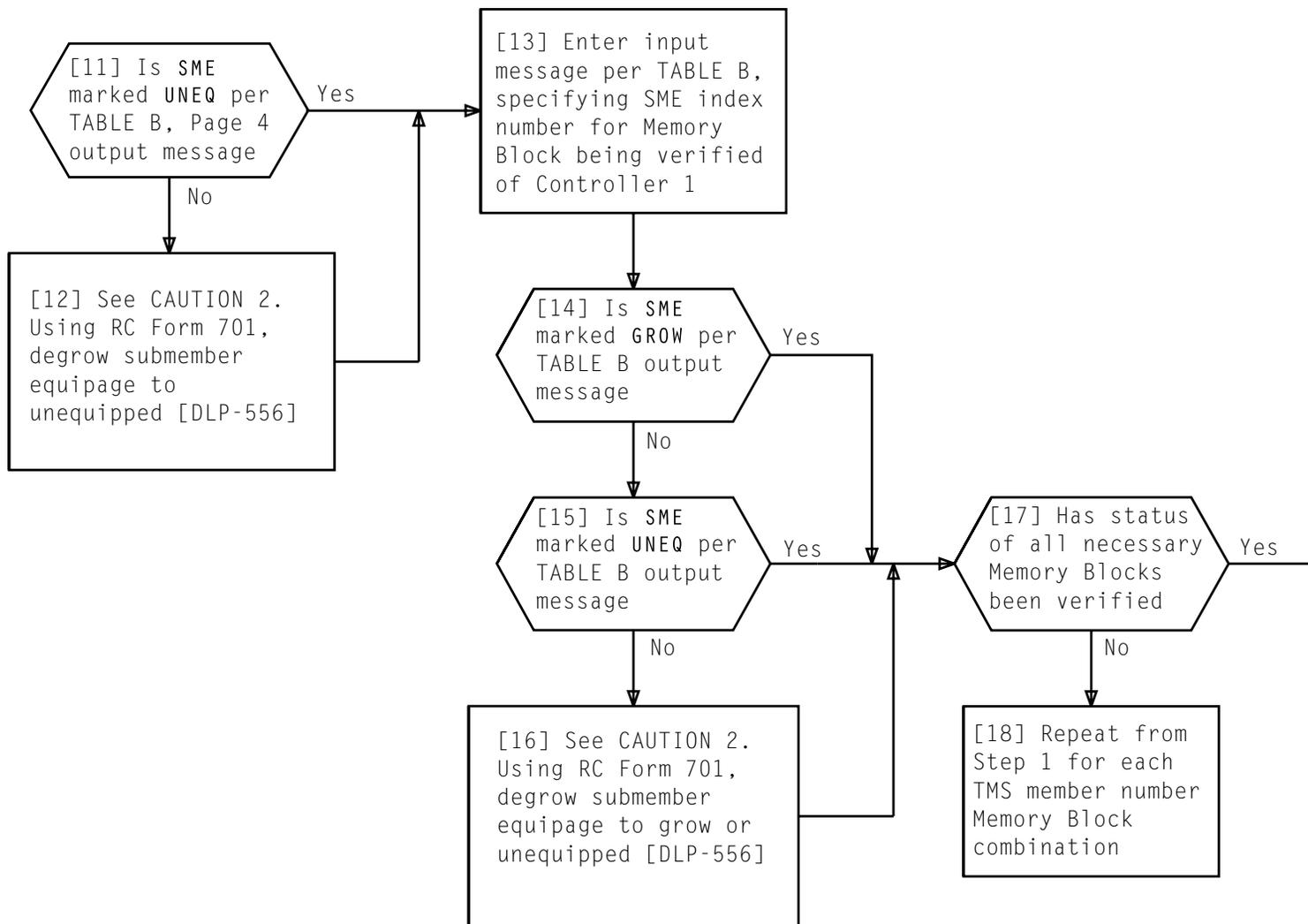
TABLE A	
INPUT MESSAGE	OUTPUT MESSAGE
VER:UTYPE:TMSP b,SME d!	VER:UTMN:OPT(SME),CUR: FLN a, UTYN TMSP, MEMN b, ME OPER, SUBMEM d, SME c,
a = Floor location number b = Member number of growth TMS frame c = UNEQ or GROW d = SME index number = 49 (for Memory Block 1, Controller 0) = 50 (for Memory Block 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)	



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

Issue 1	SEP 1998
234-353-040	DLP
PAGE 2 of 4	537

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

Issue 1	SEP 1998
234-353-040	DLP
PAGE 3 of 4	537

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)	

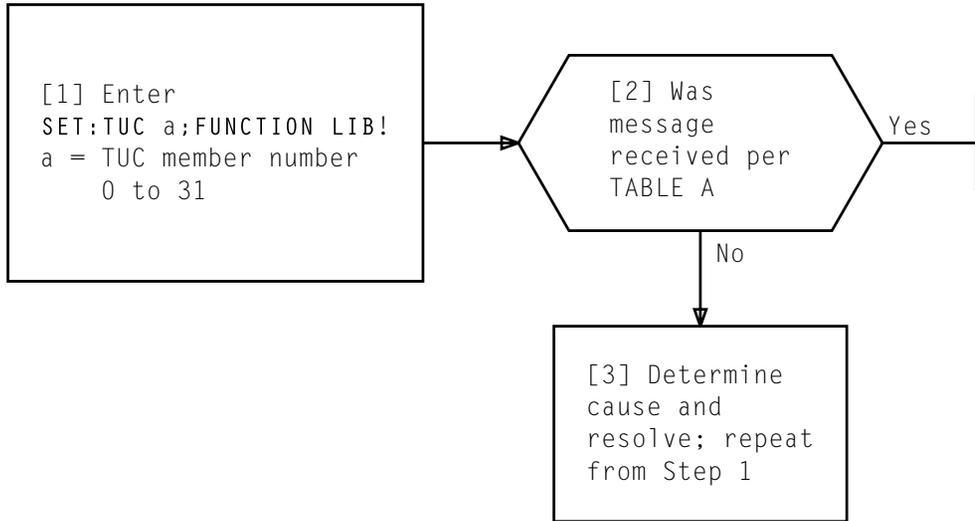


TABLE A
SET:TUC a
TAPE MOUNTED ON TUC
TAPE TYPE: LIB
.
.
.
OK TO PROCESS TAPE?
a = TUC member number 0 to 31

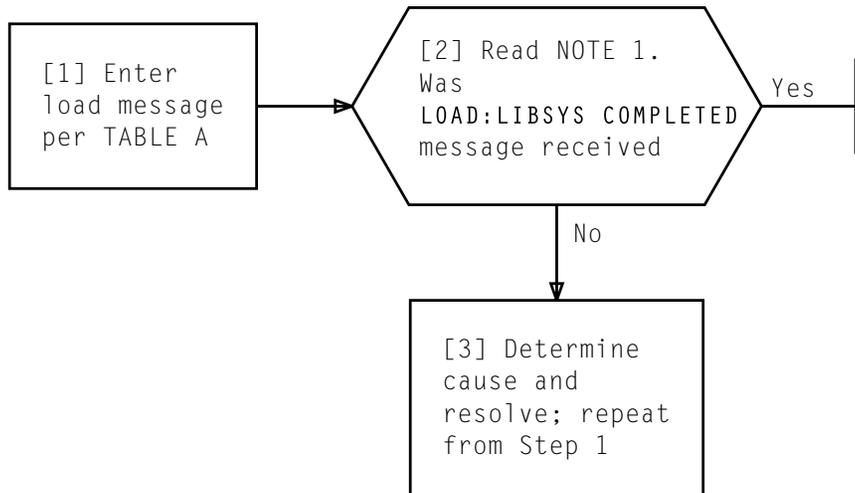


TABLE A
LOAD:LIBSYS,FS;TAPE:PKG LGxNETX!
x = Current generic number

NOTE 1 System will not respond COMPLETED until tape is loaded	
Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 1	539

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

- 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:R0!`)
 - 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

Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 1	543

1. Observe following prompt output message:

```
NETX ENTER AVERAGE OCCUPANCY ON  
SPCS DESIRED - DEC(50-800)
```

2. Enter message IN:LIBSYS:CLIENT 0,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 0,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 0,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

Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 1	544

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

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 a 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

Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 1	546

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

Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 2	547

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

RUN NETEX ON GROWTH TSIs AT 800 CONNECT LEVEL

Issue 1	SEP 1998
234-353-040	DLP
PAGE 2 of 2	547

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

1. Enter message to terminate NETEX
IN:LIBSYS:CLIENT 0,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)!

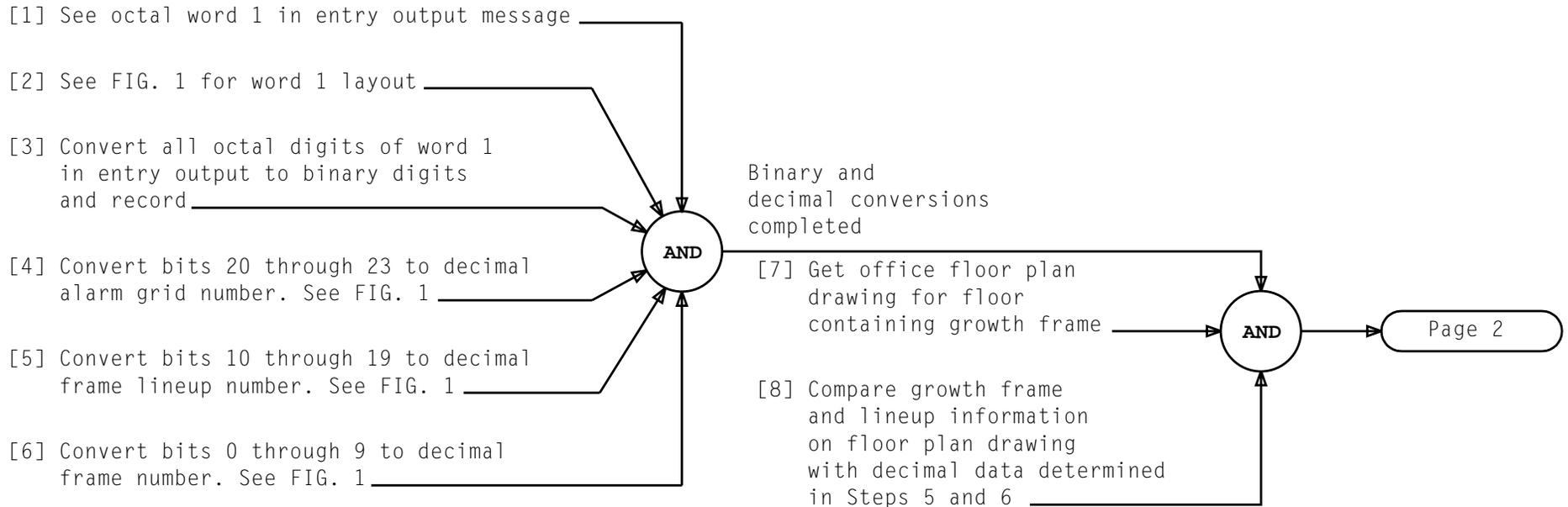
 5. Enter message OP:PERIFINH;UCL! and ensure that no additional
pests are set.
- End of procedure

TERMINATE NETEX AND RUN AUDITS

Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 1	549

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.



entry data																								
octal output	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y				
bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
binary values	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				LINEUP NUMBER								FRAME NUMBER											
	FRAME LINEUP NUMBER AND FRAME NUMBER INFORMATION																							

FIG. 1 - Entry Data Word Layout

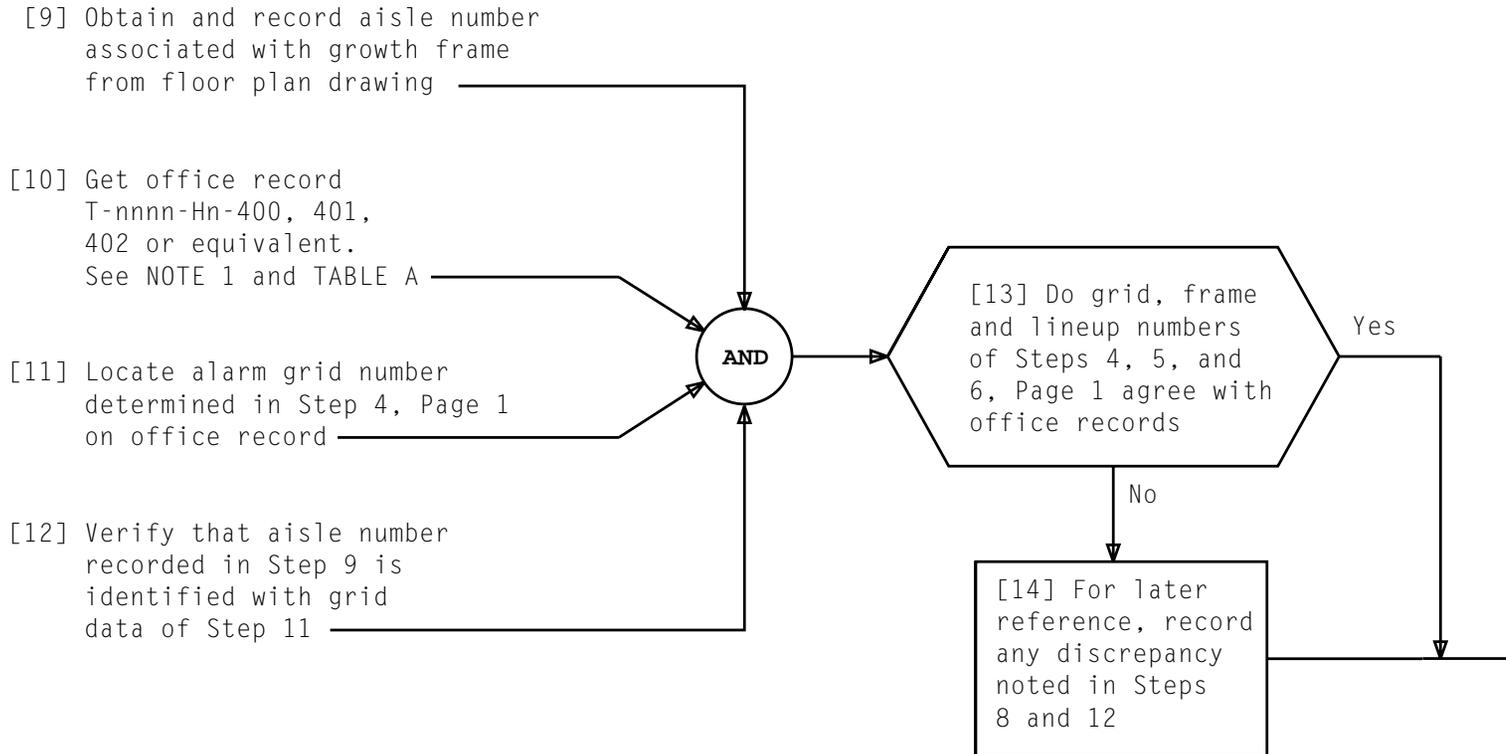
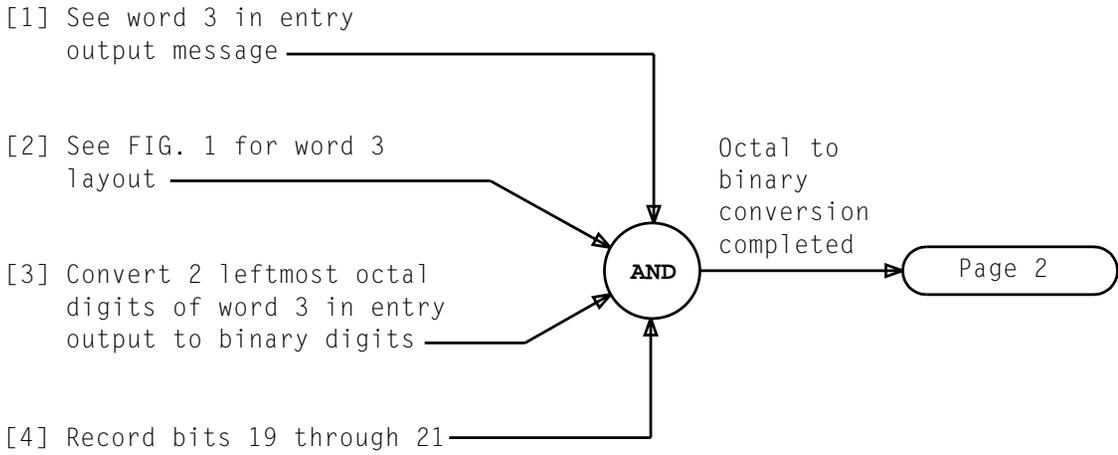


TABLE A	
ALARM GRIDS	DRAWING NUMBER
1 through 5	T-nnnn-Hn-400
6 through 10	T-nnnn-Hn-401
11 through 15	T-nnnn-Hn-402

NOTE 1 n = Office unique drawing identification number	
Issue 1	SEP 1998
234-353-040	DLP
PAGE 2 of 2	552

<p>SUMMARY</p> <p>Convert 2 leftmost octal digits of entry output data word 3 to binary. Determine PUB branch binary code for growth</p>	<p>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.</p>
--	---



entry data																								
octal output	Y		Y		Y		Y		Y		Y		Y		Y		Y		Y		Y		Y	
bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
binary values	0	1	Z	Z	Z	0	0	X	X	X	X	X	0	X	X	X	X	X	X	X	X	X	X	X
	PUB BRANCH NUMBER ASSIGNMENT				SP MEMBER NUMBER				L OR R MATRIX		SP ROW NUMBER				SP COLUMN NUMBER									
	MEMBER BASE MISCELLANEOUS SCAN NUMBER																							

FIG. 1 - Entry Data Word 3 Layout

VERIFY PUB BRANCH ASSIGNMENT FOR GROWTH FRAME

Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 3	553

[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



[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		1/0 1		1	
2	B	PUBB	TS1 00,01,02,03,04,05,06,13,12,11,10,09,08,07,	TS1 28		44	1
3	C	PUBB	VIF 020,019;SP 03;VIF 018,017,016,014,015;SP	VIF 013		12	2
4	D	PUBB	VIF 010,009; VIF 008,007,006,004,005;	VIF 003		13	2
5	E	PUBB		TG1935.1		1	
6	F	PUBB	SP II 7,8,9,10	SPII 11		6	
7	G	PUBB	SP 01	SP 00		2	
8	H	PUBB	SP 2,12,13	SP 2 14		4	
9	K	PUBB	VIF 023,022,021,SP 04,VIF 025	VIF 024		6	2
10	L	PUBB					
11	M	PUBB					
12	R	PUBB					
13	T	PUBB					
14	V	PUBB	TYPICAL				
15	W	PUBB					
16	X	PUBB					
LNN	BS	FROM		TO	TO LG	TO LD	NTTB

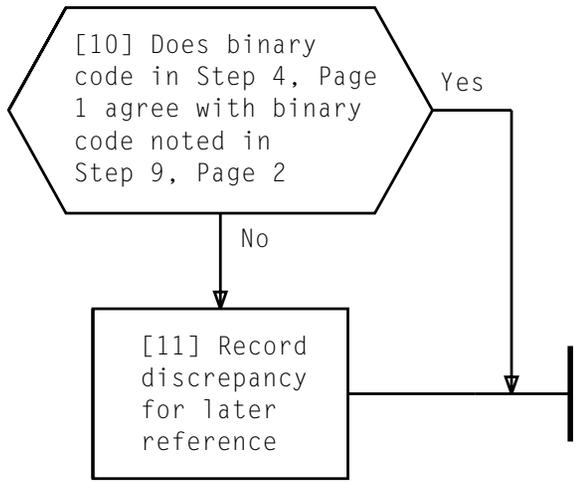
FIG. 2 - Typical Table C of 3840 Drawing

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

Issue 1	SEP 1998
234-353-040	DLP
PAGE 2 of 3	553

VERIFY PUB BRANCH ASSIGNMENT FOR GROWTH FRAME



VERIFY PUB BRANCH ASSIGNMENT FOR GROWTH FRAME

Issue 1	SEP 1998
234-353-040	DLP
PAGE 3 of 3	553

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

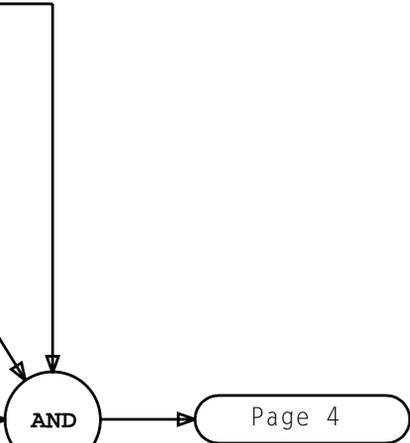


TABLE A	
GROWTH MEMBER REQUIRING UT TRANSLATOR CHANGE	TRANSLATOR IDENTIFIER (TRANSID)
Time Slot Interchange	UTTSI
Time Multiplex Switching	UTTMSP
Peripheral Unit Controller	UTPUC
Mass Announcement Service Frame	UTMAS

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

Issue 1	SEP 1998
234-353-040	DLP
PAGE 2 of 6	554

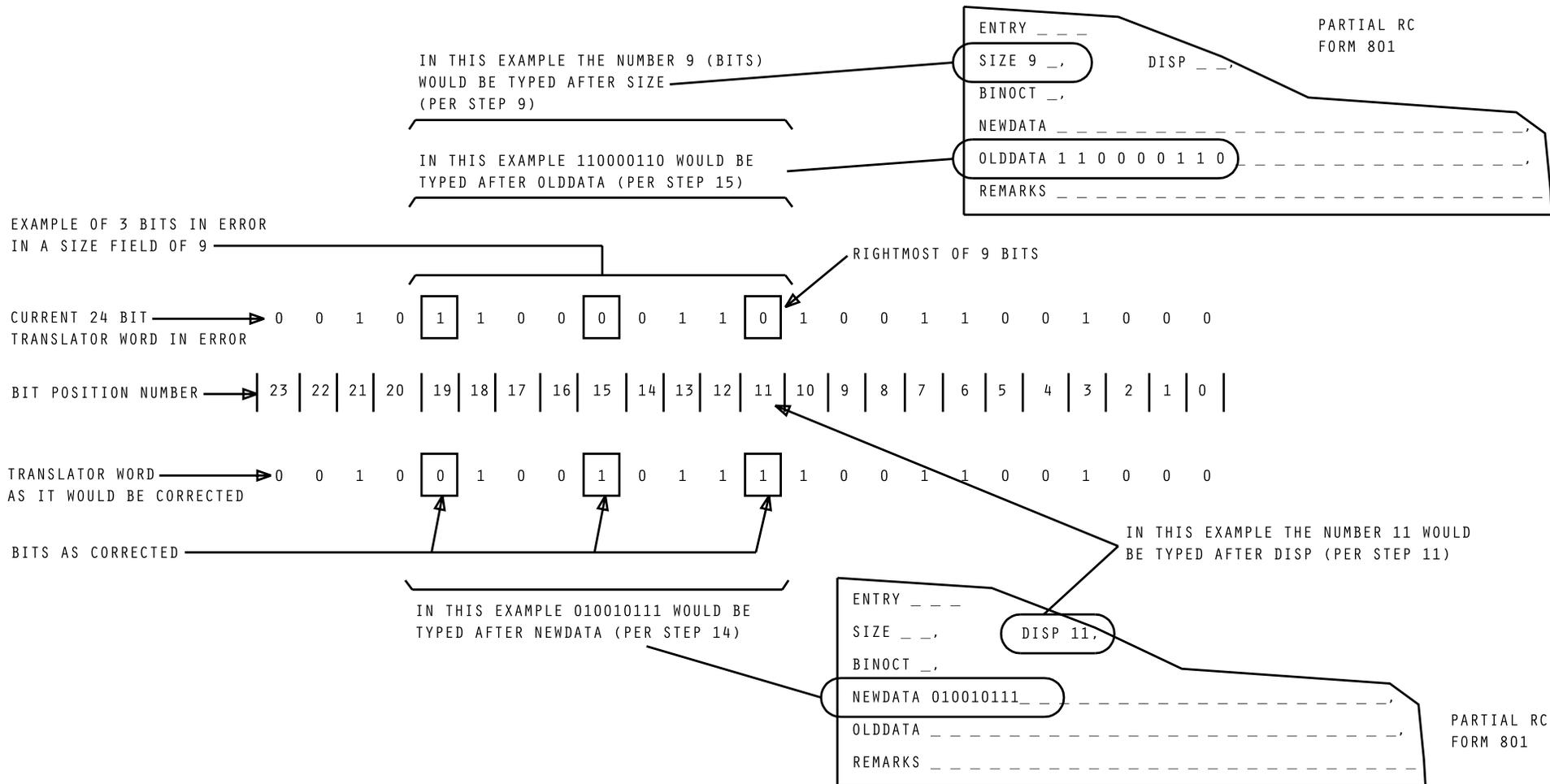


FIG. 2 - Example of Functional Word Change Considerations

PERFORM FUNCTIONAL WORD CHANGE TO CORRECT
 UT TRANSLATOR WORD THEN VERIFY

Issue 1	SEP 1998
234-353-040	DLP
PAGE 3 of 6	554

Using TTY and CRT display of RC form 801:

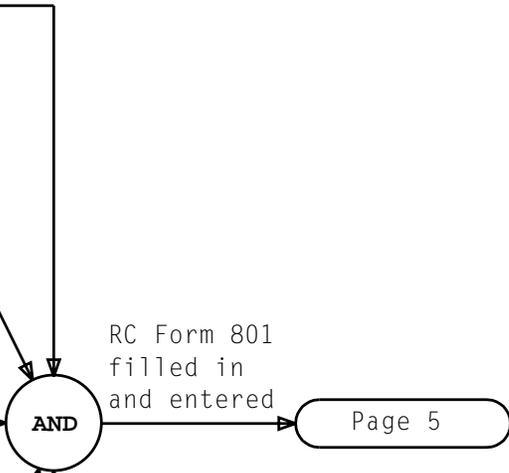
[12] Type **B** in field following **BINOCT**

[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



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	
Issue 1	SEP 1998
234-353-040	DLP
PAGE 4 of 6	554

PERFORM FUNCTIONAL WORD CHANGE TO CORRECT UT TRANSLATOR WORD THEN VERIFY

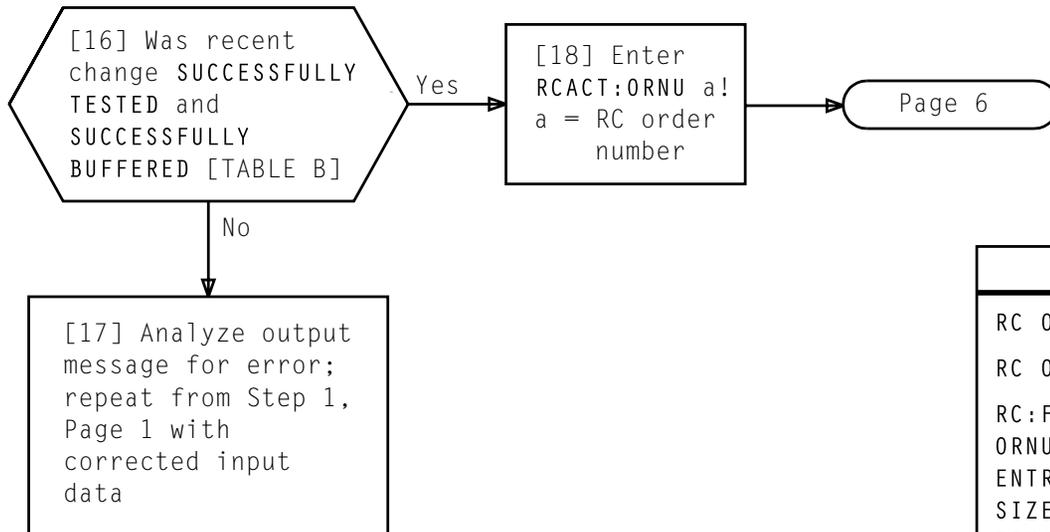


TABLE B	
RC ORNU b SUCCESSFULLY TESTED	
RC ORNU b SUCCESSFULLY BUFFERED	
RC:FUNC;CHG;OPT(TRANS),BUF: TRANSID a, ORNU b, ENTRY c, WORDNO d, SIZE e, DISP f, BINOCT B, NEWDATA g, OLDDATA h, REMARKS _____!	
REPT:RC DUMP OF UNIT TYPE ENTRY AS IT WILL APPEAR AFTER THE MESSAGE IS ACTIVATED	
WORD 0	_____ A L _____
	_____ 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**

Issue 1	SEP 1998
234-353-040	DLP
PAGE 5 of 6	554

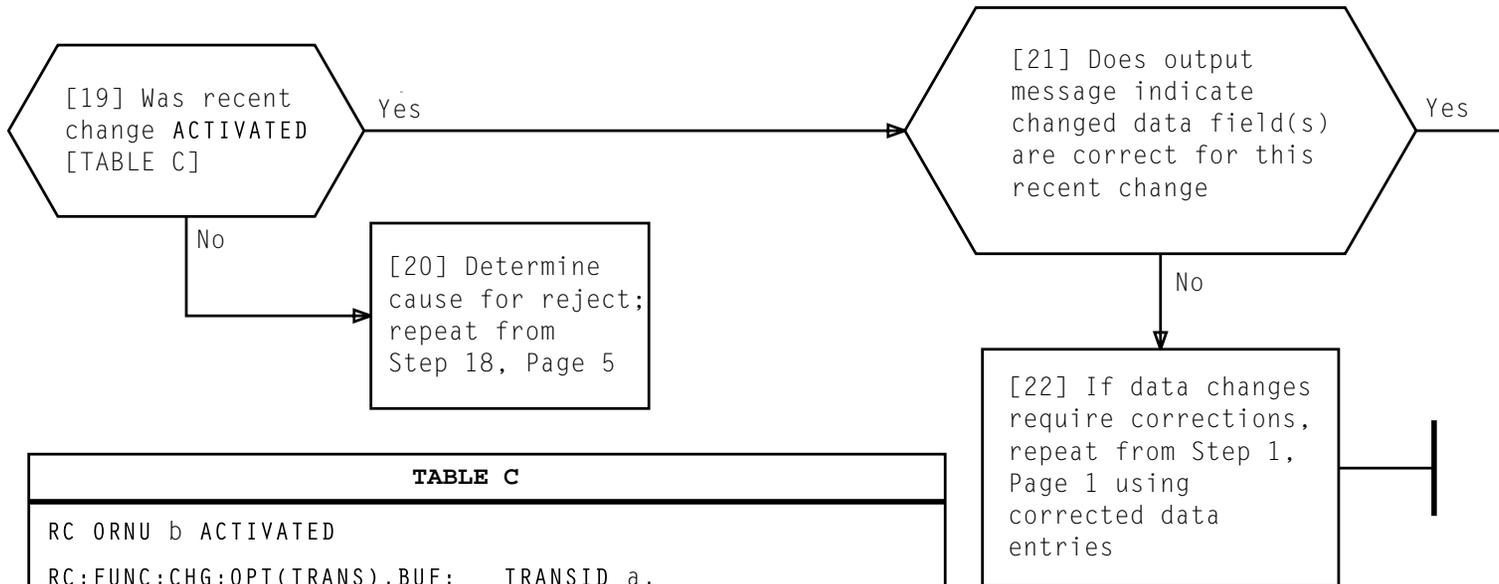


TABLE C
RC ORNU b ACTIVATED RC:FUNC;CHG;OPT(TRANS),BUF: TRANSID a, ORNU b, ENTRY c, WORDNO d, SIZE e, DISP f, BINOCT B, NEWDATA g, OLDDATA h, REMARKS!
a = UTTSI, UTTMSP, UTPUC, or UTMAS b = RC order number c = Member number of growth frame d = Decimal number of word changed e = Decimal number of bits 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.

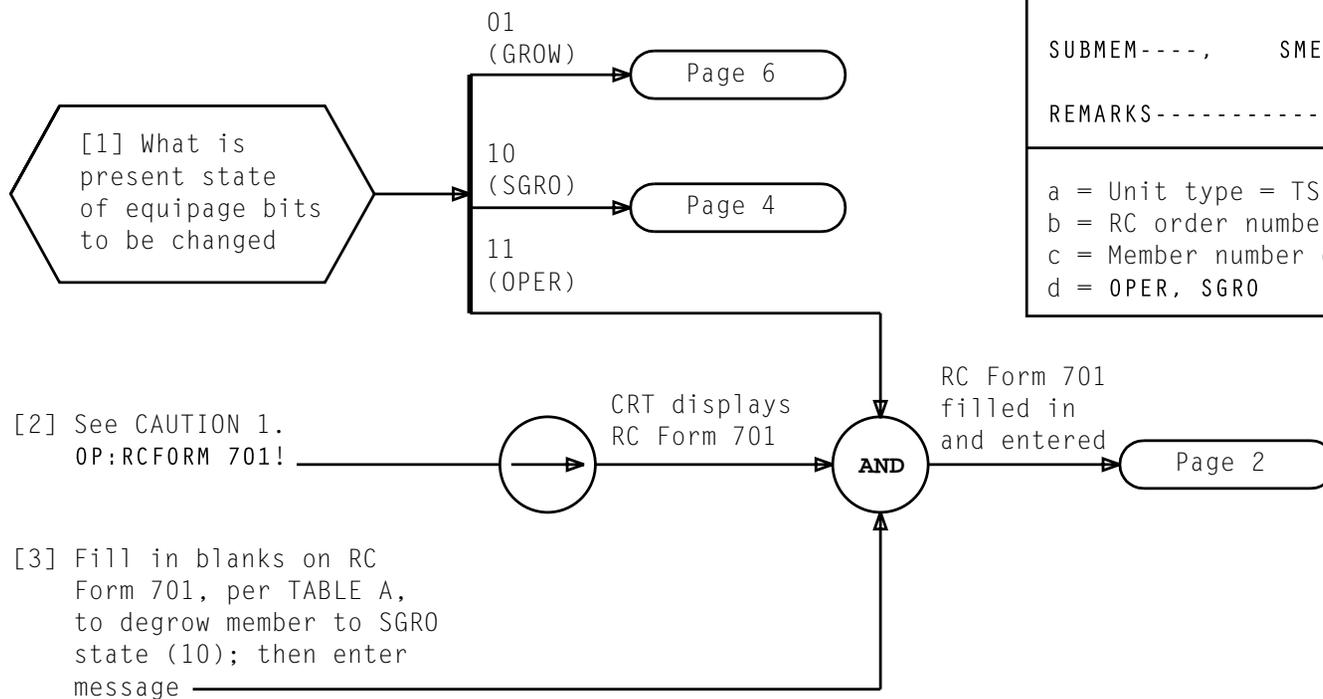


TABLE A

```

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

Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 7	555

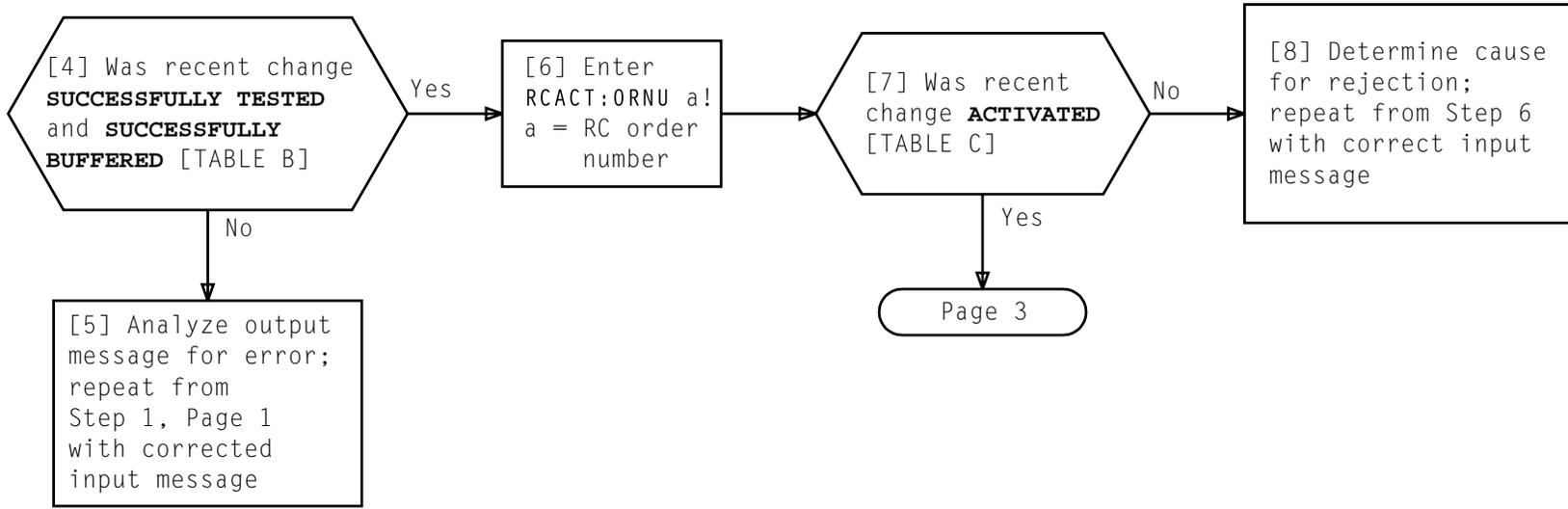
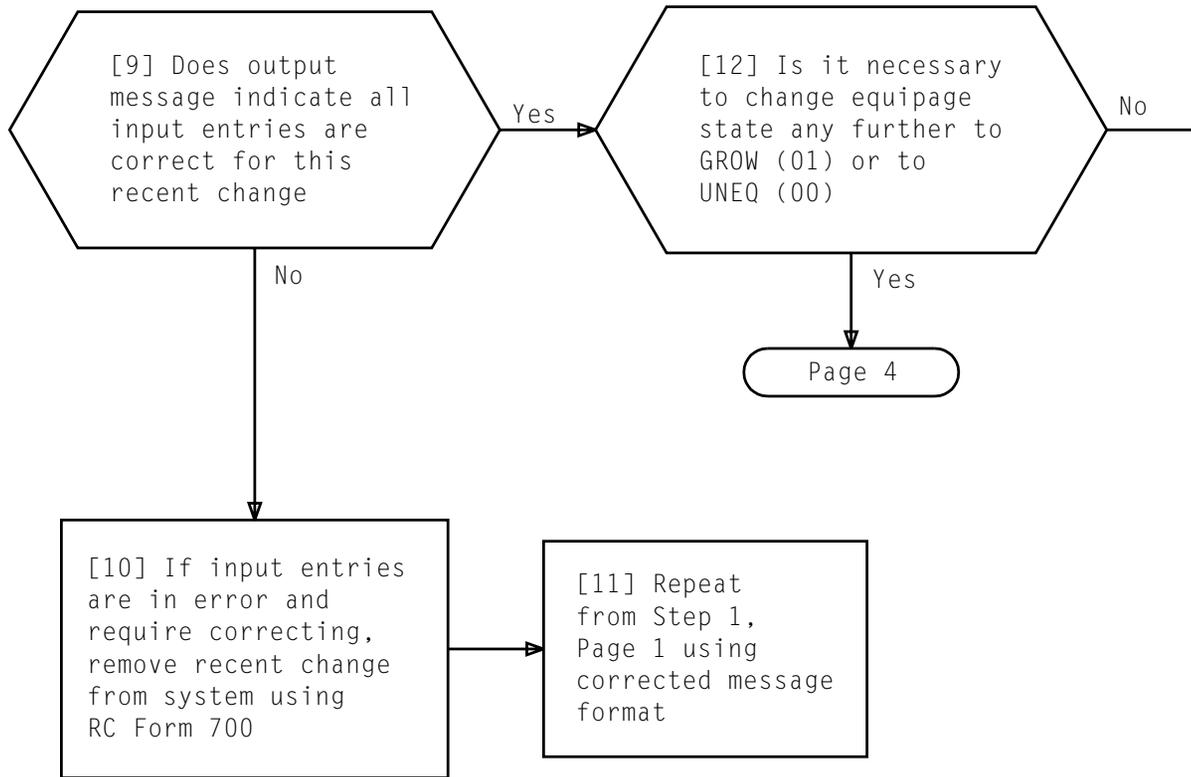


TABLE B	
RC ORNU b SUCCESSFULLY TESTED	
RC ORNU b SUCCESSFULLY BUFFERED	
RC:UTYPE;CHG;OPT(EQP, DEGROW), BUF: UTYN a,	
ORNU b,	
	OLD NEW
MEMN c,	ME (OPER, SGRO),
	OLD NEW
SUBMEM ----,	SME (----, ----),
REMARKS-----!	
a = Unit type = TSI, TMSP, PUC, or MAS	
b = RC order number	
c = Member number of degrowth 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	

Issue 1	SEP 1998
234-353-040	DLP
PAGE 2 of 7	555



[13] See CAUTION 2. Enter
OP:RCFORM 701!

CRT displays
RC Form 701

[14] Fill in blanks on
RC Form 701 per TABLE D
to degrow member to GROW
state (01); then enter
message _____

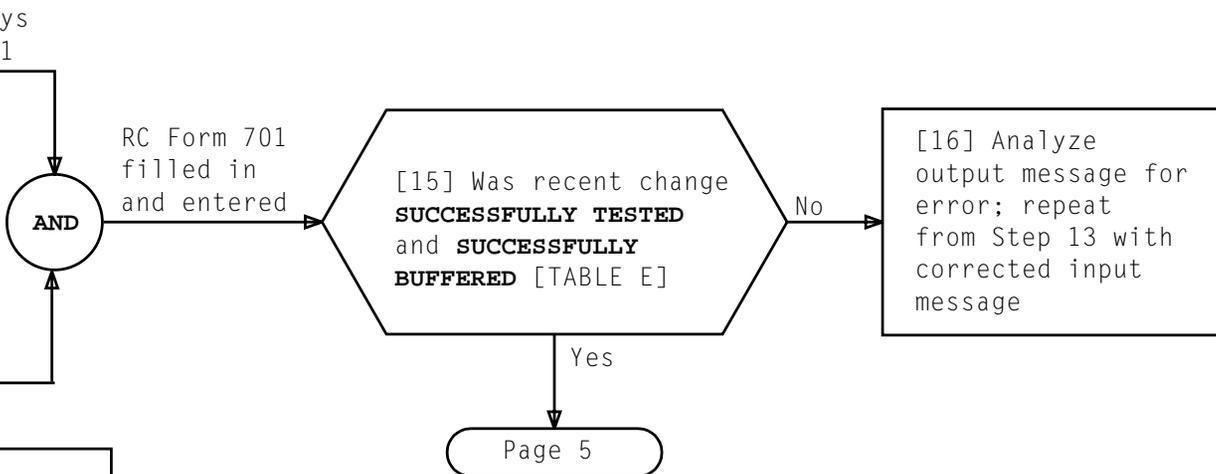


TABLE D

```

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

Issue 1	SEP 1998
234-353-040	DLP
PAGE 4 of 7	555

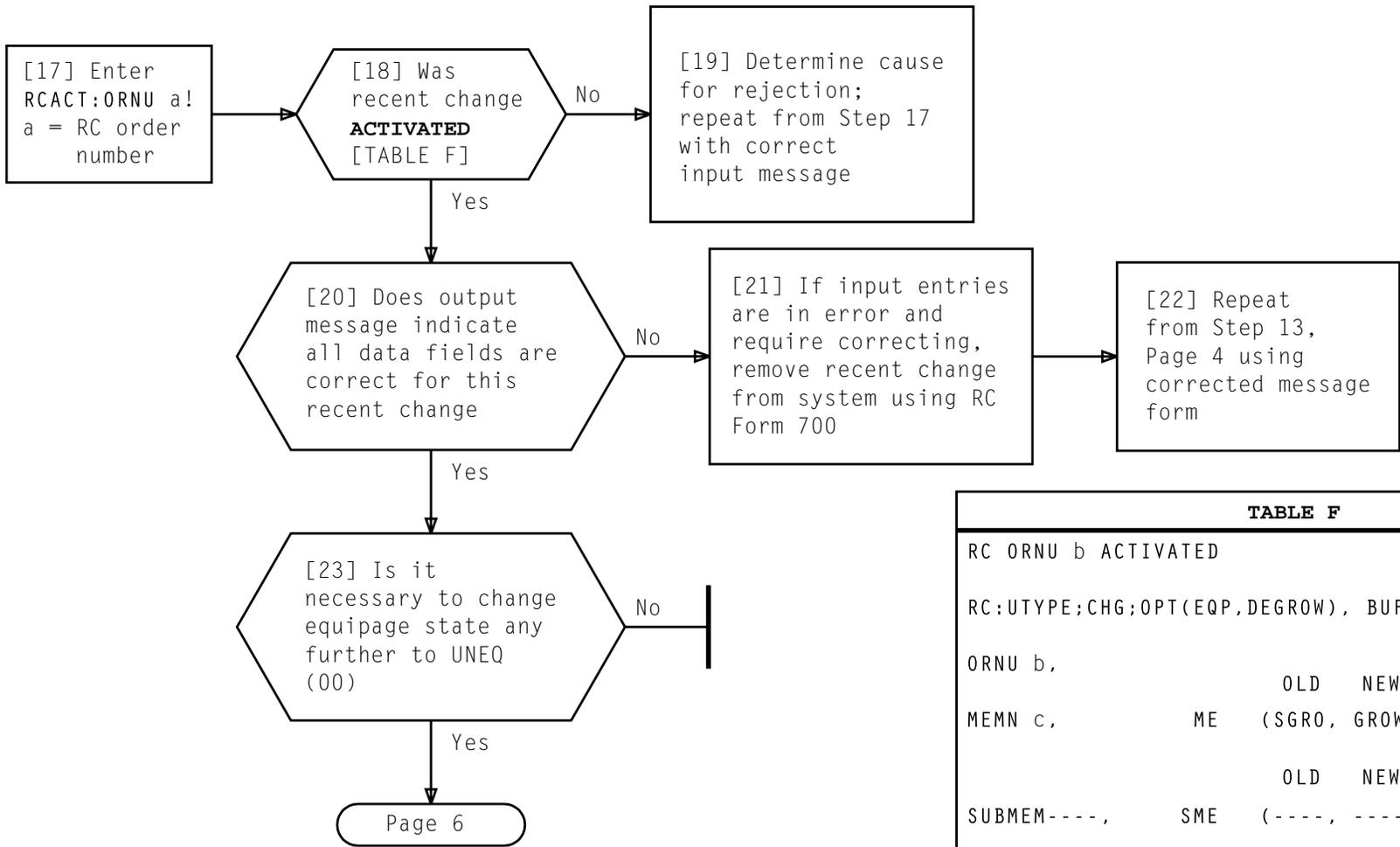


TABLE F	
RC ORNU b	ACTIVATED
RC:UTYPE;CHG;OPT(EQP,DEGROW), BUF:	UTYN a,
ORNU b,	
	OLD NEW
MEMN c, ME	(SGRO, GROW),
	OLD NEW
SUBMEM-----, SME	(-----, -----),
REMARKS-----	-----!
a = Unit type = TSI, TMSP, PUC, or MAS	
b = RC order number	
c = Member number of degrowth frame	

[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 _____

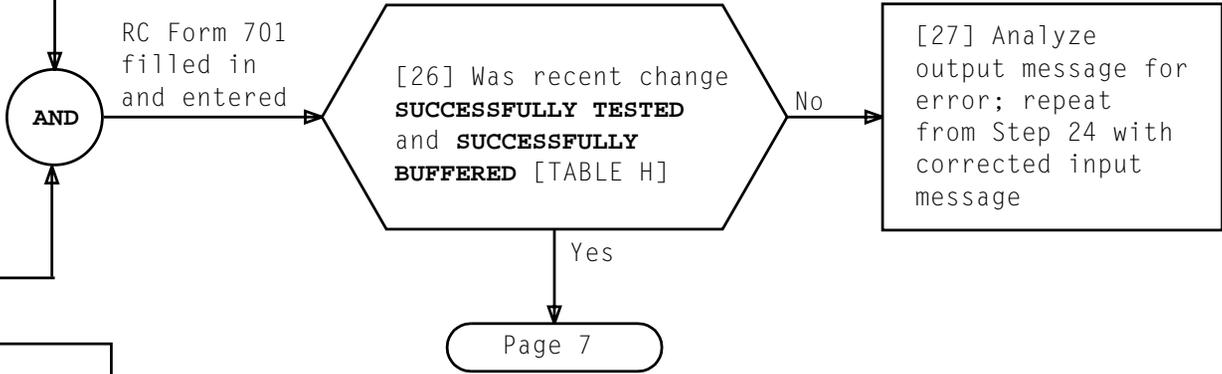


TABLE G

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

Issue 1	SEP 1998
234-353-040	DLP
PAGE 6 of 7	555

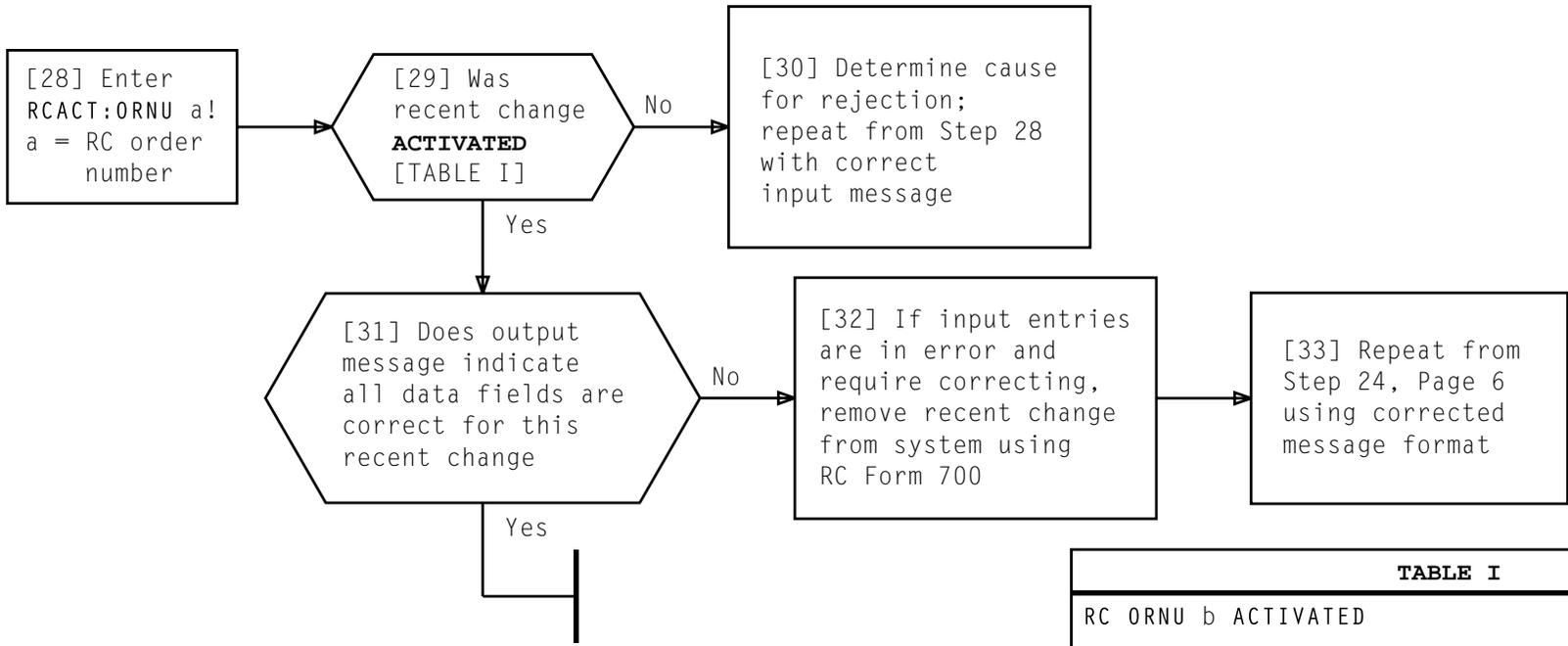


TABLE I	
RC ORNU b ACTIVATED	
RC:UTYPE;CHG;OPT(EQP,DEGROW), BUF:	UTYN a,
ORNU b,	
	OLD NEW
MEMN c, ME (GROW, UNEQ),	
	OLD NEW
SUBMEM----, SME (----, ----),	
REMARKS-----	!
a = Unit type = TSI, TMSP, PUC, or MAS	
b = RC order number	
c = Member number of degrowth frame	

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.

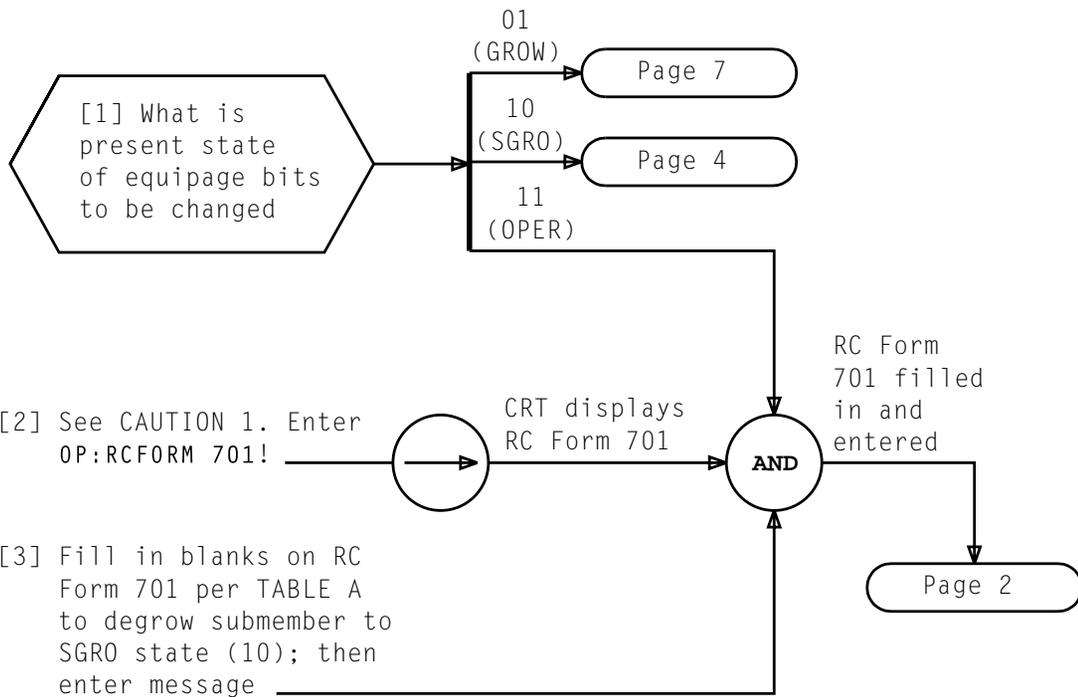


TABLE A

```

RC:UTYPE;CHG;OPT(EQP,DEGROW),TST:          UTYN a,
ORNU b,
MEMN c,          ME  (----, ----),
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:
 - = TOPRTEQ(0 to 6) (for SPC 0, Ports 0-6)
 - = T1PRTEQ(0 to 6) (for SPC 1, Ports 0-6)
 - = COGRWTH (for TMS Controller 0)
 - = C1GRWTH (for TMS Controller 1)
 - = COMBLK(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*

Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 9	556

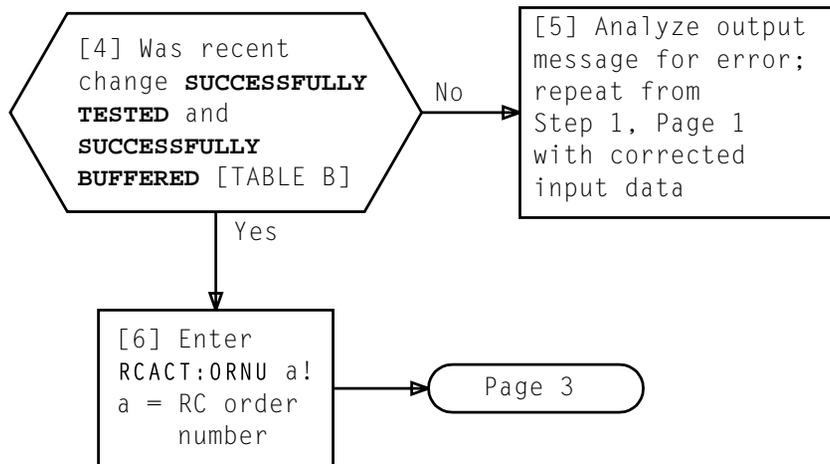


TABLE B	
RC ORNU b	SUCCESSFULLY TESTED
RC ORNU b	SUCCESSFULLY BUFFERED
RC:UTYPE;CHG;OPT(EQP,DEGROW),BUF:	UTYN a,
ORNU b,	
	OLD NEW
MEMN c,	ME (----, ----),
	OLD NEW
SUBMEM d,	SME (OPER, SGRO),
REMARKS-----!	
a = Unit type = TSI, TMSP, PUC, or MAS b = RC order number c = Member number of degrowth associated frame d = Submember name: = TOPRTEQ(0 to 6) (for SPC 0, Ports 0-6) = T1PRTEQ(0 to 6) (for SPC 1, Ports 0-6) = COGRWTH (for TMS Controller 0) = C1GRWTH (for TMS Controller 1) = COMBLK(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)	

Issue 1	SEP 1998
234-353-040	DLP
PAGE 2 of 9	556

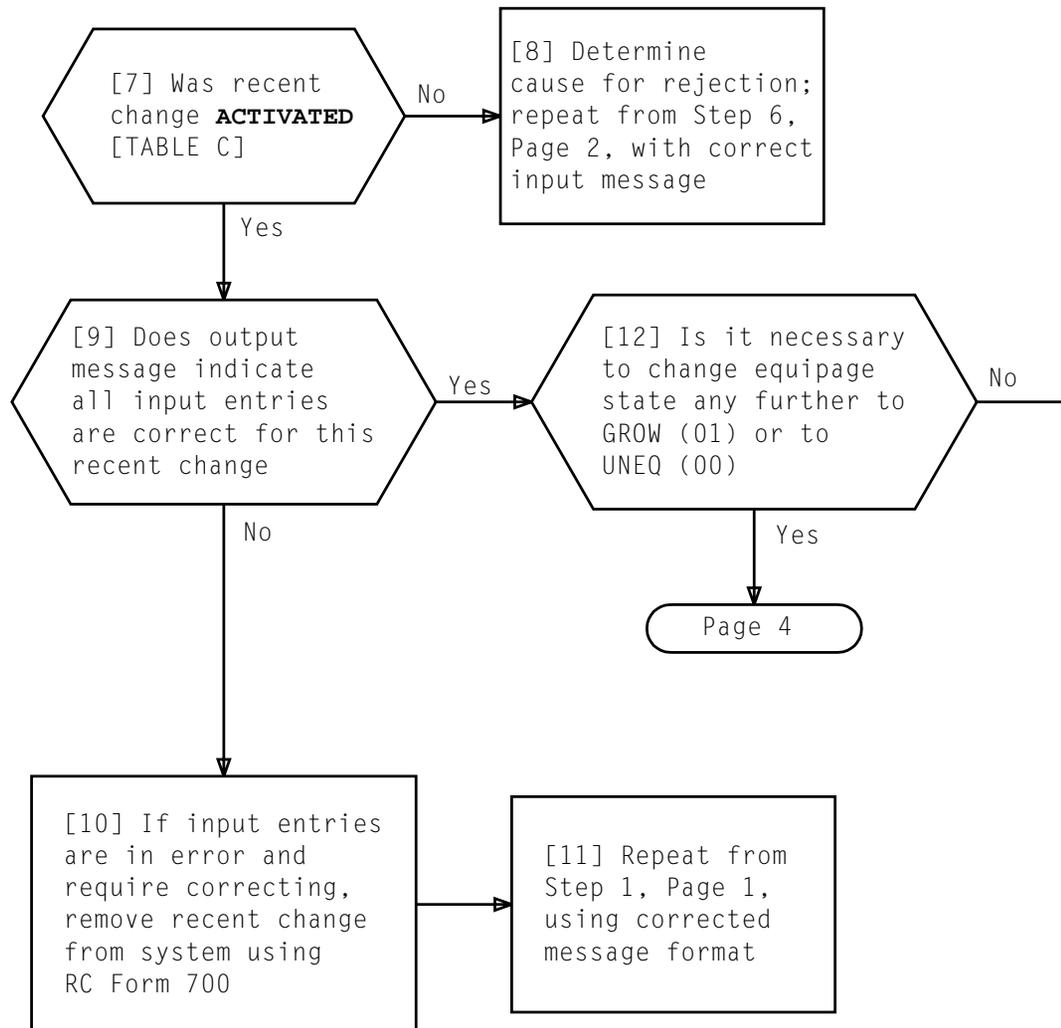


TABLE C	
RC ORNU b ACTIVATED	
RC:UTYPE;CHG;OPT(EQP,GROW),BUF:	UTYN a,
ORNU b,	OLD NEW
MEMN c, ME	(----, ----),
	OLD NEW
SUBMEM d, SME	(OPER, SGRO),
REMARKS-----!	
a = Unit type = TSI, TMS, PUC, or MAS	
b = RC order number	
c = Member number of degrowth associated frame	
d = Submember name:	
= TOPRTEQ(0 to 6) (for SPC 0, Ports 0-6)	
= T1PRTEQ(0 to 6) (for SPC 1, Ports 0-6)	
= COGRWTH (for TMS Controller 0)	
= C1GRWTH (for TMS Controller 1)	
= COMBLK(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)	

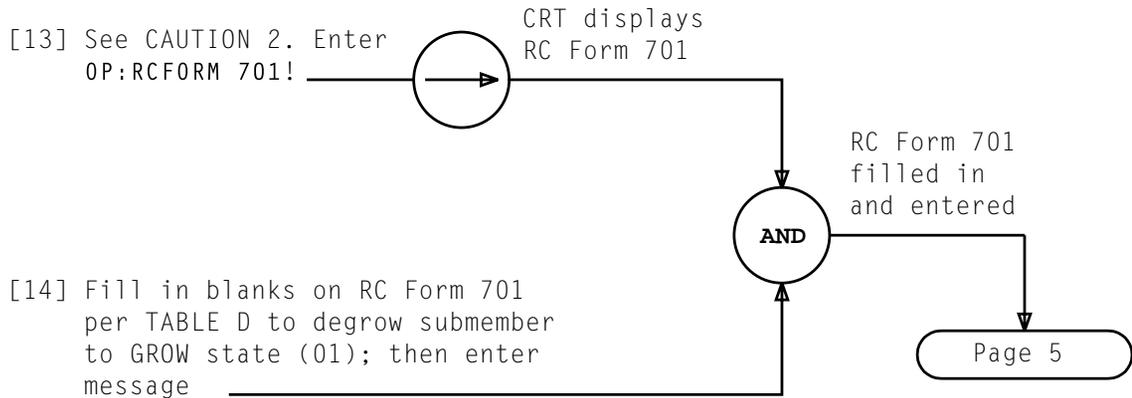


TABLE D	
RC:UTYPE;CHG;OPT(EQP,DEGROW),TST:	UTYN a,
ORNU b,	
MEMN c,	ME (----, ----),
	OLD NEW
SUBMEM d,	SME (e , e),
	OLD NEW
REMARKS-----!	
a = Unit type = TSI, TMSP, PUC, or MAS b = RC order number c = Member number of degrowth associated frame d = Submember name: = TOPRTEQ(0 to 6) (for SPC 0, Ports 0-6) = T1PRTEQ(0 to 6) (for SPC 1, Ports 0-6) = COGRWTH (for TMS Controller 0) = C1GRWTH (for TMS Controller 1) = COMBLK(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 = SGR0, GROW	

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

Issue 1	SEP 1998
234-353-040	DLP
PAGE 4 of 9	556

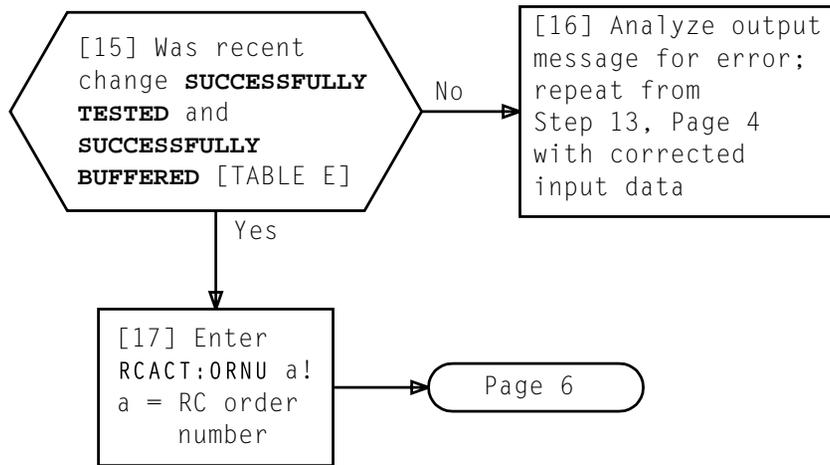


TABLE E	
RC ORNU b	SUCCESSFULLY TESTED
RC ORNU b	SUCCESSFULLY BUFFERED
RC:UTYPE;CHG;OPT(EQP,DEGROW),BUF:	UTYN a,
ORNU b,	
	OLD NEW
MEMN c,	ME (----, ----),
	OLD NEW
SUBMEM d,	SME (SGRO, GROW),
REMARKS-----!	
a = Unit type = TSI, TMSP, PUC, or MAS	
b = RC order number	
c = Member number of degrowth associated frame	
d = Submember name:	
= TOPRTEQ(0 to 6) (for SPC 0, Ports 0-6)	
= T1PRTEQ(0 to 6) (for SPC 1, Ports 0-6)	
= COGRWTH (for TMS Controller 0)	
= C1GRWTH (for TMS Controller 1)	
= COMBLK(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)	

Issue 1	SEP 1998
234-353-040	DLP
PAGE 5 of 9	556

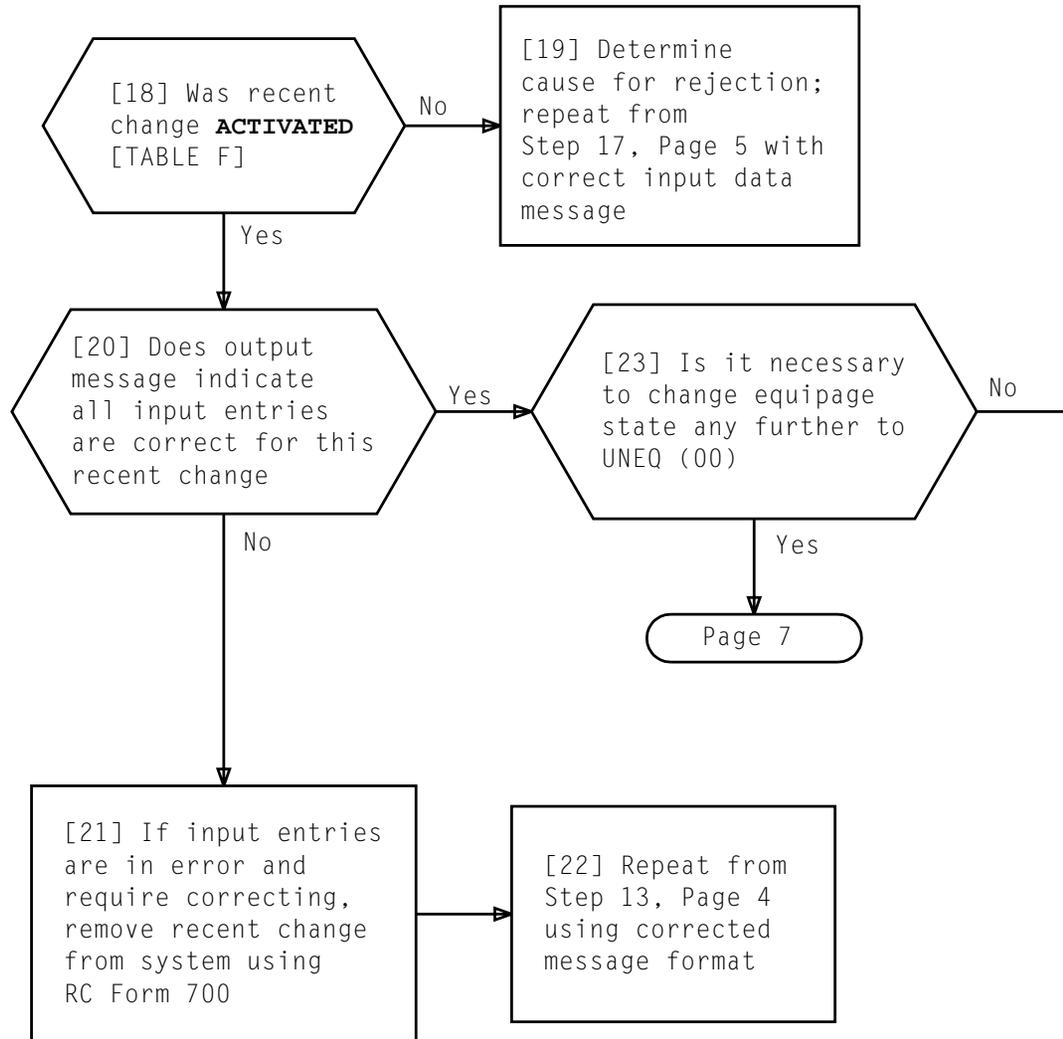


TABLE F	
RC ORNU b	ACTIVATED
RC:UTYPE;CHG;OPT(EQP,GROW), BUF:	UTYN a,
ORNU b,	OLD NEW
MEMN c,	ME (----, ----),
	OLD NEW
SUBMEM d,	SME (SGRO, GROW),
REMARKS-----!	
a = Unit type = TSI, TMSP, PUC, or MAS	
b = RC order number	
c = Member number of degrowth associated frame	
d = Submember name:	
= TOPRTEQ(0 to 6) (for SPC 0, Ports 0-6)	
= T1PRTEQ(0 to 6) (for SPC 1, Ports 0-6)	
= COGRWTH (for TMS Controller 0)	
= C1GRWTH (for TMS Controller 1)	
= COMBLK(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)	

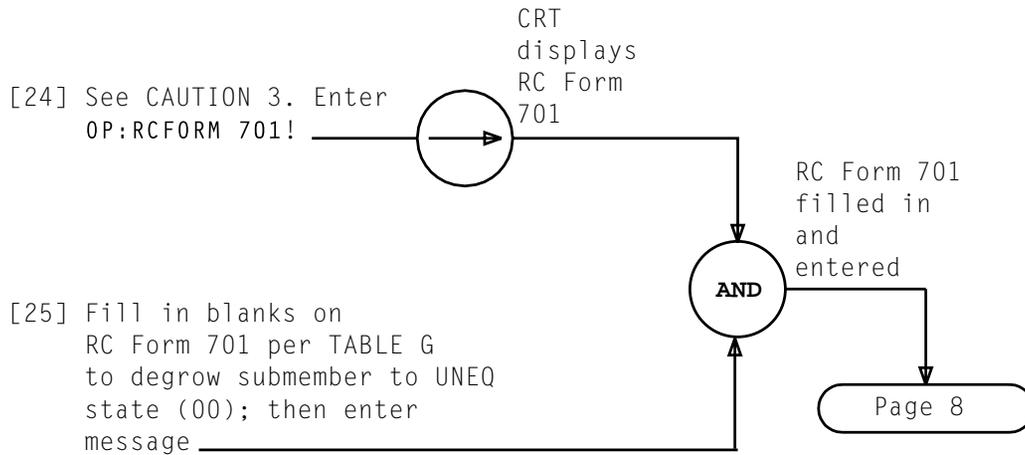


TABLE G	
RC:UTYPE;CHG;OPT(EQP,DEGROW),TST:	UTYN a,
ORNU b,	
MEMN c,	ME (----, ----),
	OLD NEW
SUBMEM d,	SME (e , e),
	OLD NEW
REMARKS-----!	
a = Unit type = TSI, TMSP, PUC, or MAS b = RC order number c = Member number of degrowth associated frame d = Submember name: = TOPRTEQ(0 to 6) (for SPC 0, Ports 0-6) = T1PRTEQ(0 to 6) (for SPC 1, Ports 0-6) = COGRWTH (for TMS Controller 0) = C1GRWTH (for TMS Controller 1) = COMBLK(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	

<i>CAUTION 3 Calling up RC form will cause all CRT data to be cleared</i>	
Issue 1	SEP 1998
234-353-040	DLP
PAGE 7 of 9	556

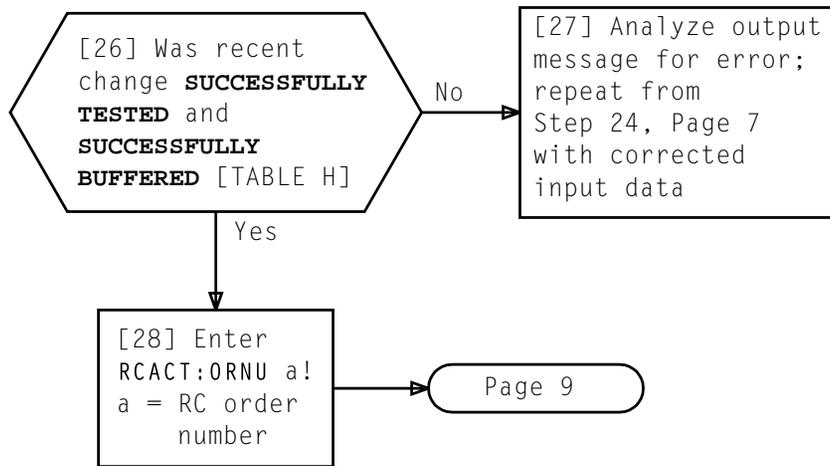


TABLE H			
RC ORNU b	SUCCESSFULLY TESTED		
RC ORNO b	SUCCESSFULLY BUFFERED		
RC:UTYPE;CHG;OPT(EQP,DEGROW),BUF:			UTYN a,
ORNU b,		OLD NEW	
MEMN c,	ME	(----, ----),	
		OLD NEW	
SUBMEM d,	SME	(GROW, UNEQ),	
REMARKS-----!			
a = Unit type = TSI, TMSP, PUC, or MAS			
b = RC order number			
c = Member number of degrowth associated frame			
d = Submember name:			
= TOPRTEQ(0 to 6) (for SPC 0, Ports 0-6)			
= T1PRTEQ(0 to 6) (for SPC 1, Ports 0-6)			
= COGRWTH (for TMS Controller 0)			
= C1GRWTH (for TMS Controller 1)			
= COMBLK(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)			

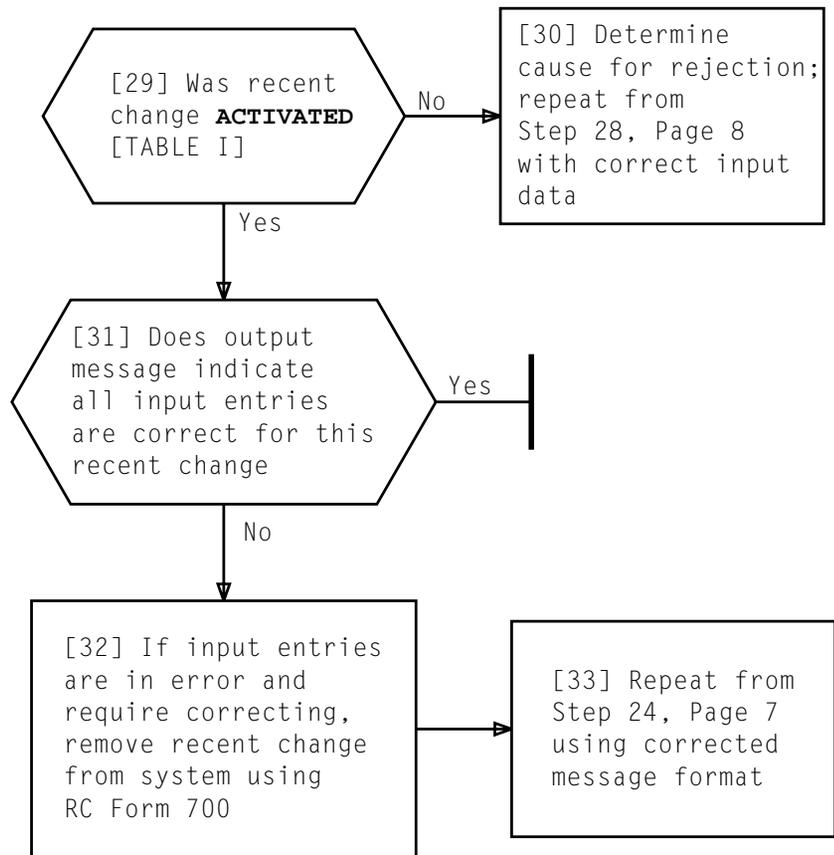


TABLE I	
RC ORNU b	ACTIVATED
RC:UTYPE;CHG;OPT(EQP,GROW),BUF:	UTYN a,
ORNU b,	OLD NEW
MEMN c,	ME (----, ----),
	OLD NEW
SUBMEM d,	SME (GROW, UNEQ),
REMARKS-----!	
a = Unit type = TSI, TMSP, PUC, or MAS b = RC order number c = Member number of degrowth associated frame d = Submember name: = TOPRTEQ(0 to 6) (for SPC 0, Ports 0-6) = T1PRTEQ(0 to 6) (for SPC 1, Ports 0-6) = COGRWTH (for TMS Controller 0) = C1GRWTH (for TMS Controller 1) = COMBLK(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)	

Issue 1	SEP 1998
234-353-040	DLP
PAGE 9 of 9	556

[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

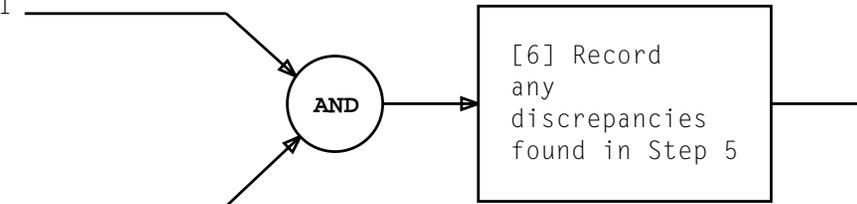


TABLE A						
UNIT	SD NUMBER	MEMBER VERSION NUMBER*				
		0	1	2	3	4
TSI-B Controller	4A083-01	1A	—	—	1B	3B
	4A084-01	1A	—	—	1A	2A
	4A085-01	1A	—	—	1B	1C
	4A086-01	1A	—	—	1A	1A
PUC Controller	4A102-01	1A	—	—	—	—
	5G207-01	1A	—	—	—	—
MAS Unit	4A103-01	1A	—	—	—	—
	4A104-01	1A	1B	—	—	—
TMS Controller	4A087-01	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	
Issue 1	SEP 1998
234-353-040	DLP
PAGE 2 of 2	561

[1] Note word in output message containing SD or pulse point to be verified _____

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

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

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

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

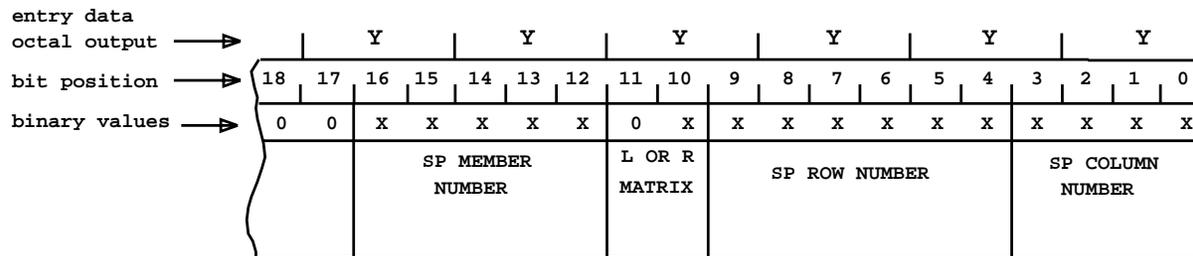
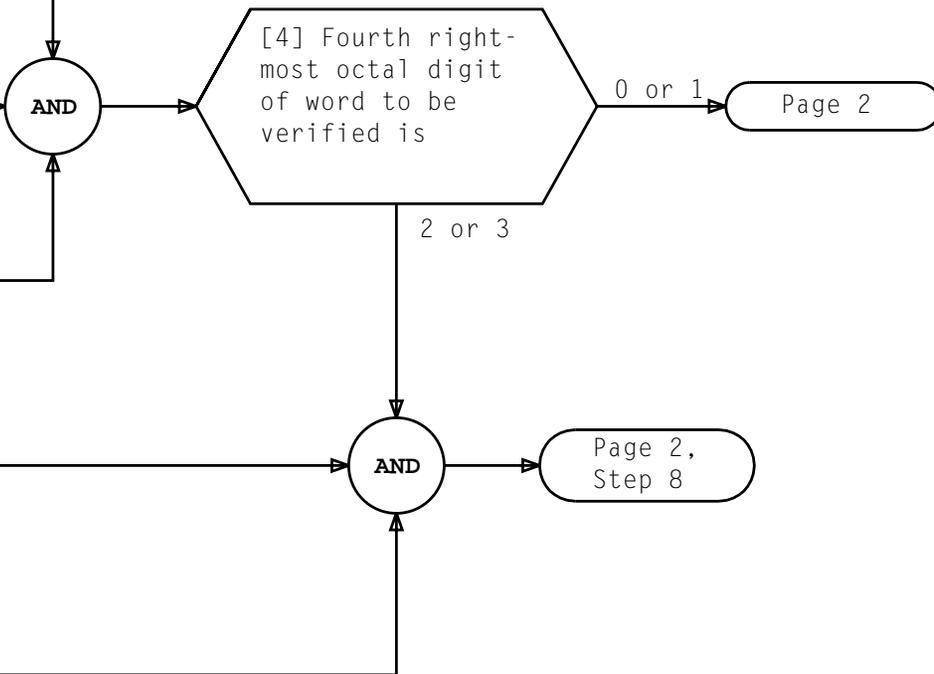
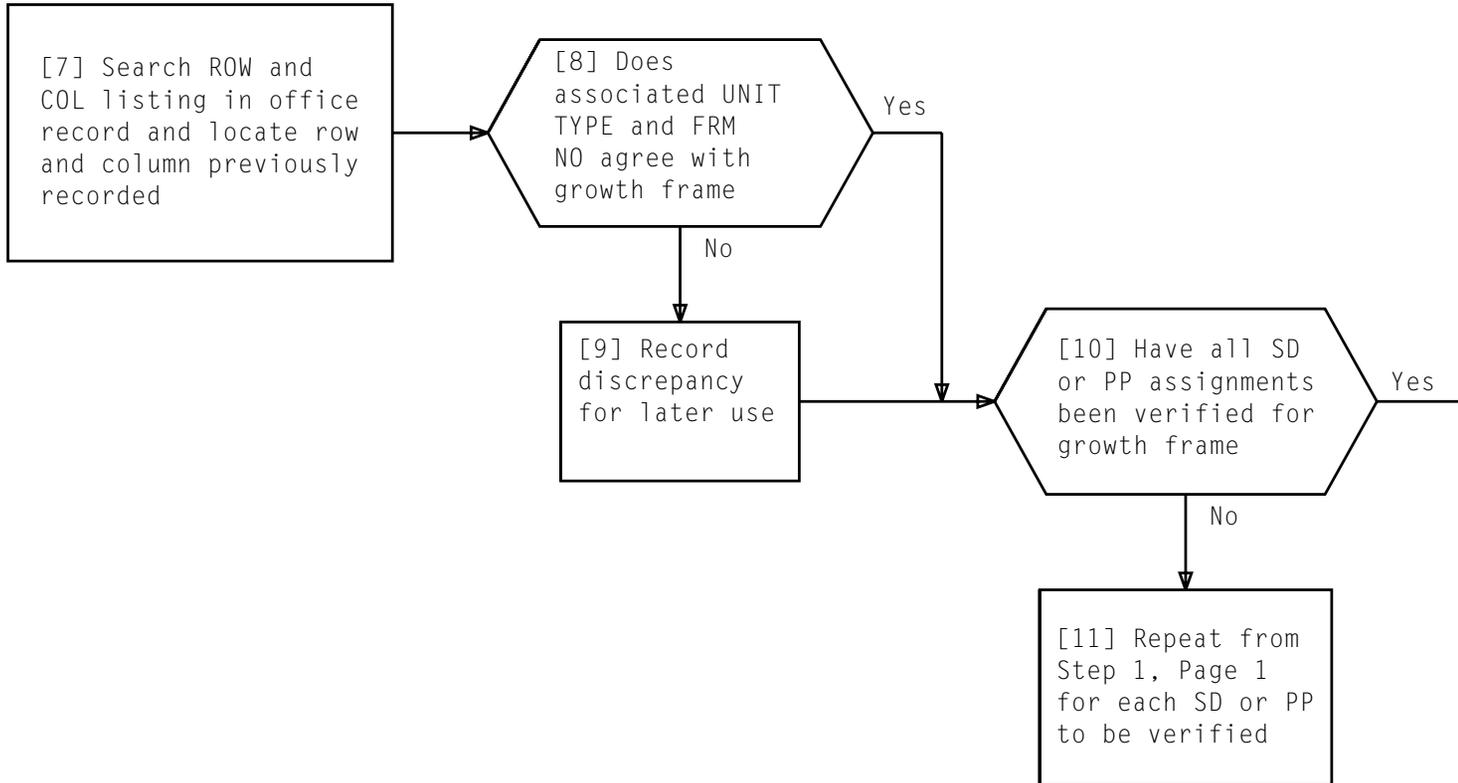


FIG. 1 - Entry Data Word Layout

Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 2	562



VERIFY SD OR PULSE POINT ASSIGNMENTS FOR GROWTH FRAME

Issue 1	SEP 1998
234-353-040	DLP
PAGE 2 of 2	562

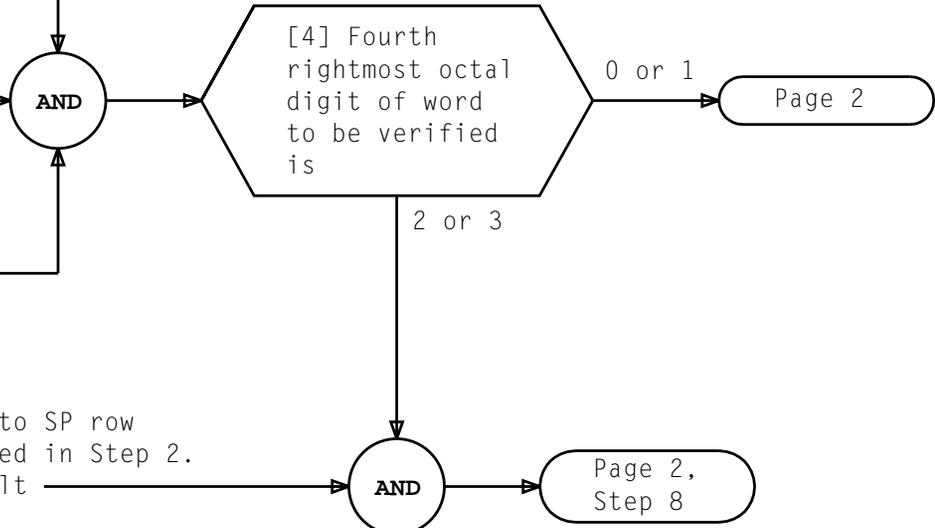
[1] Note word in output message containing scan point to be verified

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

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

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

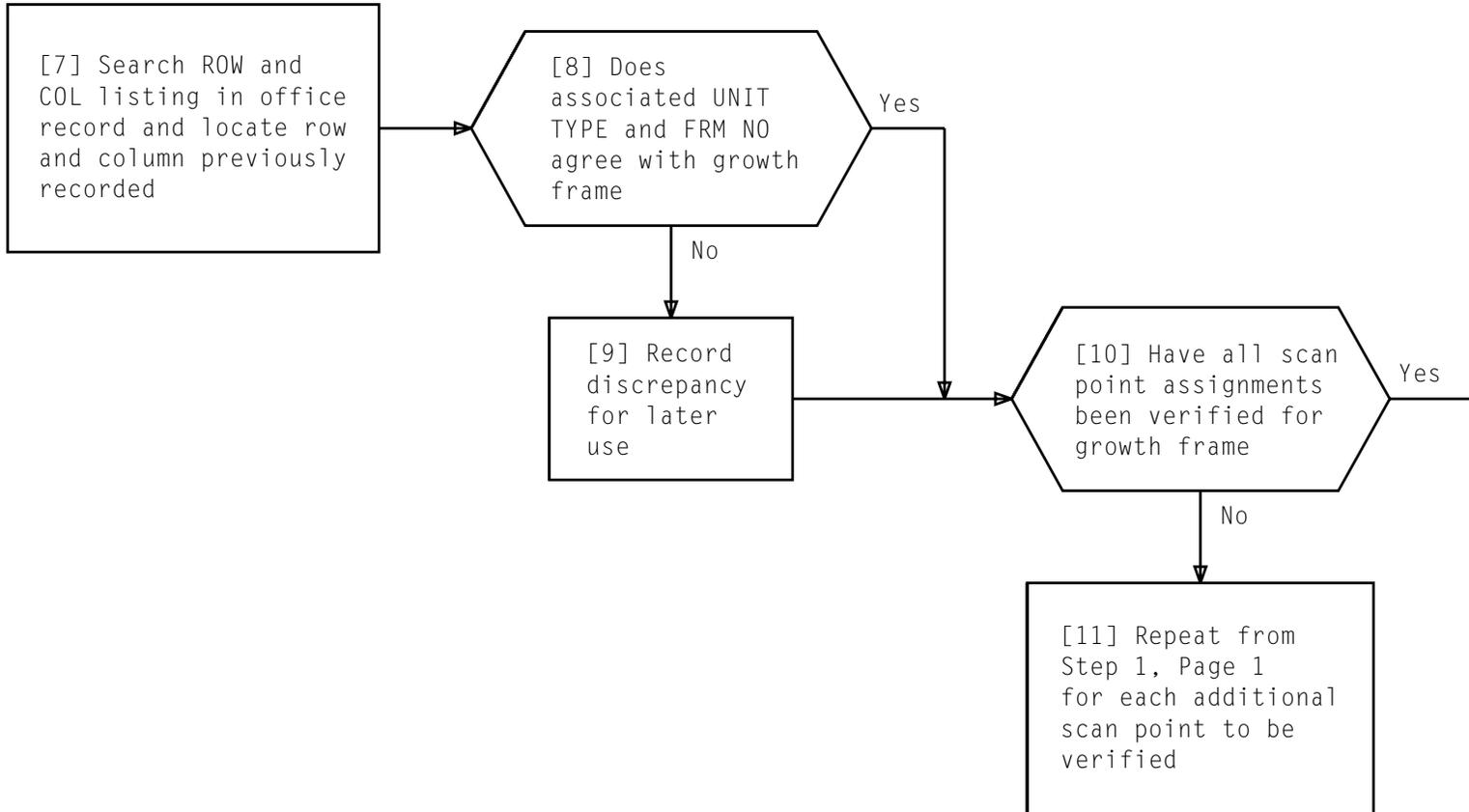
[6] Search ROW and COL listing in office record and locate row and column previously recorded



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

FIG. 1 - Entry Data Word Layout

Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 2	563



VERIFY SCAN POINT ASSIGNMENT(S) FOR GROWTH FRAME

Issue 1	SEP 1998
234-353-040	DLP
PAGE 2 of 2	563

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.

[1] See word 5 in entry output message

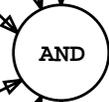
[2] See FIG. 1 for word 5 layout

[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



[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 later use

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

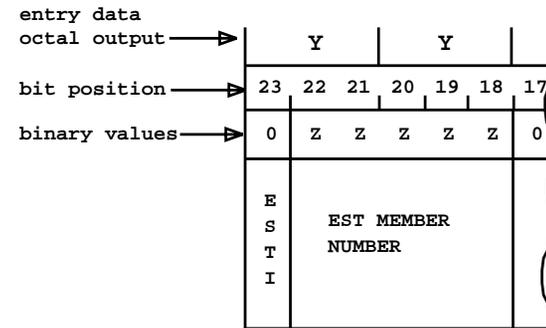
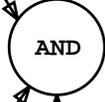


FIG. 1 - Part of Entry Data Word 5 Pertaining to EST Member Number and Indicator



VERIFY EST MEMBER NUMBER AND INDICATOR

Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 1	564

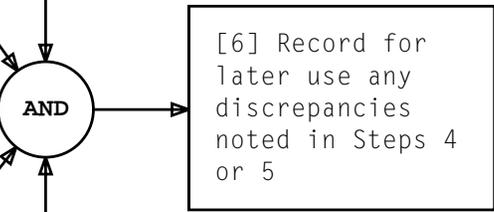
[1] See octal words 14 and 15
in entry output message

[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



entry data								
octal output		Y		Y			Y	
bit position	23	22	21	20	19	18	17	16
binary values	X	X	X	X	X	X	X	X
	6	5	4	3	2	1	0	
	ESU NO.							
	ESU STRAP INDICATOR							
	SPC 0							

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

entry data								
octal output		Y		Y			Y	
bit position	23	22	21	20	19	18	17	16
binary values	X	X	X	X	X	X	X	X
	13	12	11	10	9	8	7	
	ESU NO.							
	ESU STRAP INDICATOR							
	SPC 1							

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

VERIFY ESU STRAP INDICATORS

Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 1	565

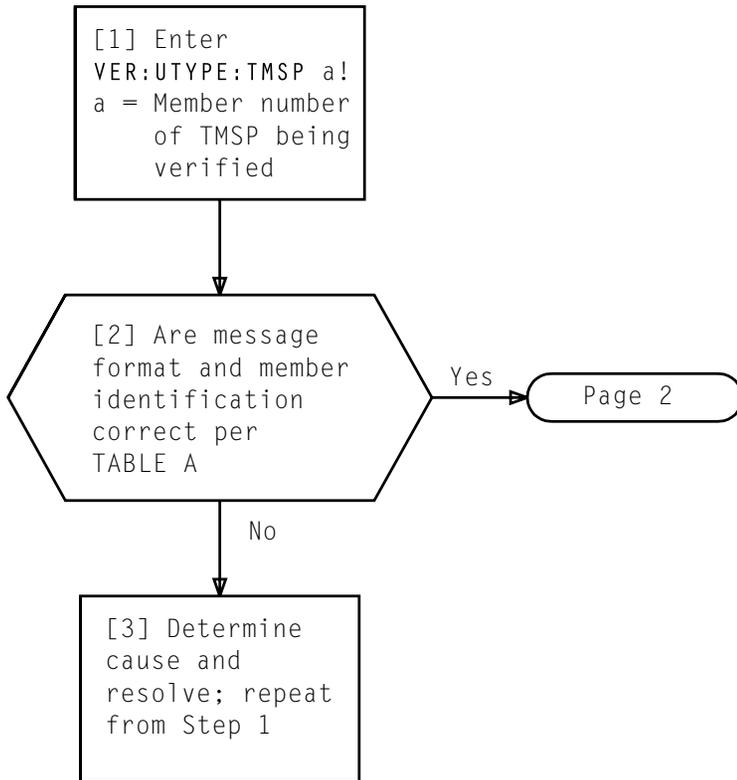


TABLE A	
VER:UTMN;OPT(),CUR: FLN a,	UTYN TMSP,
MEMN b,	ME OPER,
ENTRY ADDRESS c,	ENTRY SIZE 11,
CUR	
WORD 0	_____

WORD 10	_____

TMSP CONFIGURATION 2	
a = Floor location	
b = Member number of TMSP being verified	
c = Starting address (word 0)	

Using TTY output message:

[4] Verify that word 0 is set per TABLE B for memory block(s) equipped

[5] Verify that word 12 is set to octal 00000017

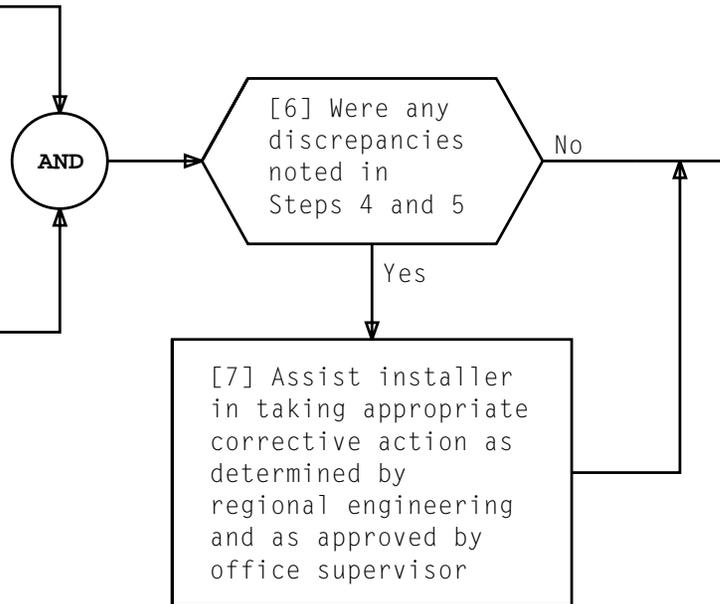
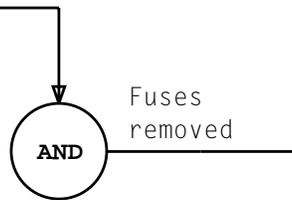


TABLE B	
TMS MEMORY BLOCK EQUIPAGE	WORD 0 (OCTAL)
Memory Blocks 0 and 2	20631463

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

Issue 1	SEP 1998
234-353-040	DLP
PAGE 2 of 2	566

[1] Read NOTE 1. Identify A and B fuses associated with growth TMS [TABLE A]



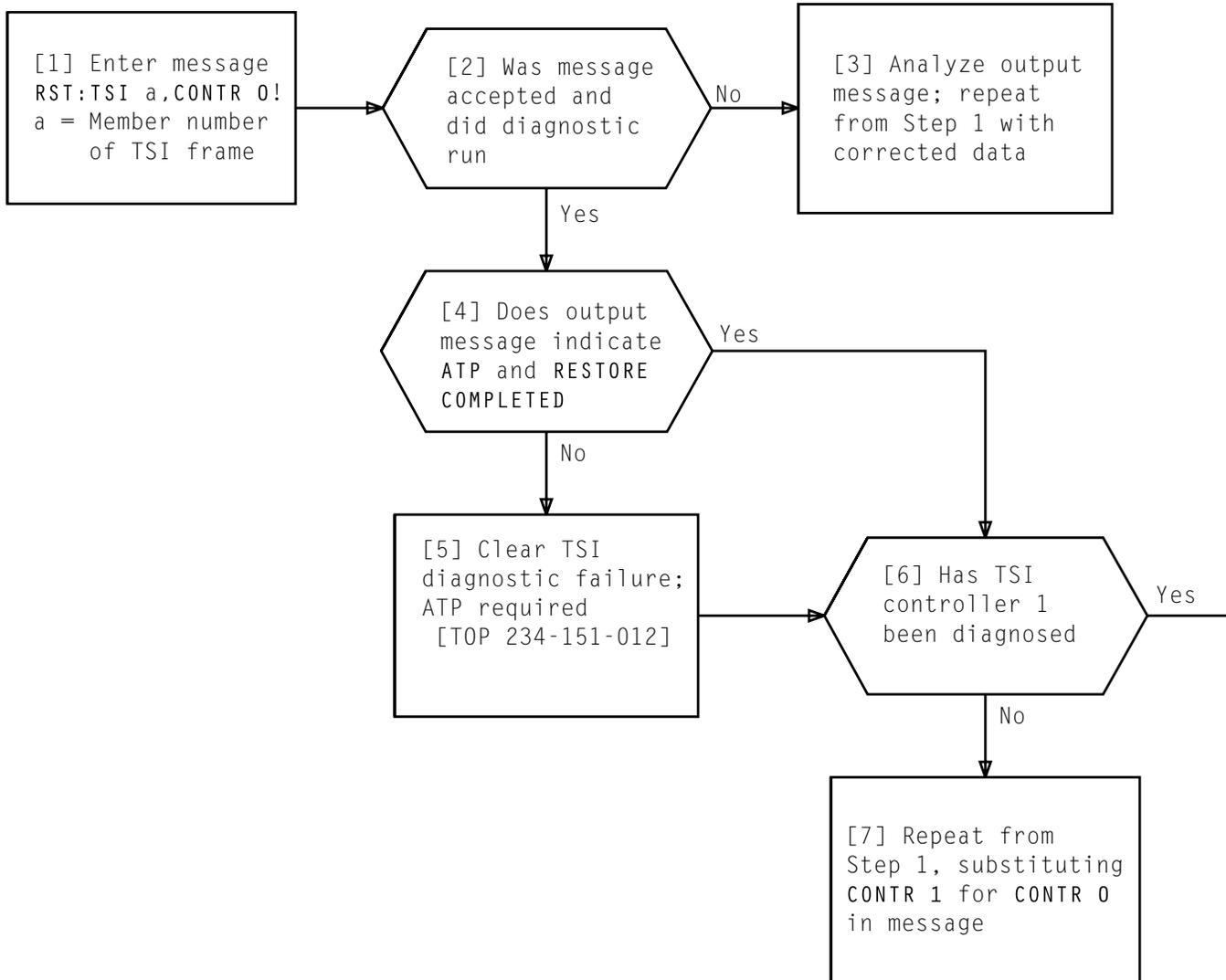
[2] See CAUTION 1. At network clock fuse panel, remove fuses identified in Step 1

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

Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 1	568

[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

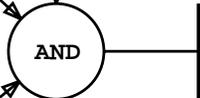


TABLE A		
SPC BEING CONVERTED	TSI MEMBER NUMBER	J4A001BB UNIT LEVEL
0	ODD	52
1	ODD	64
0	EVEN	28
1	EVEN	40

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.

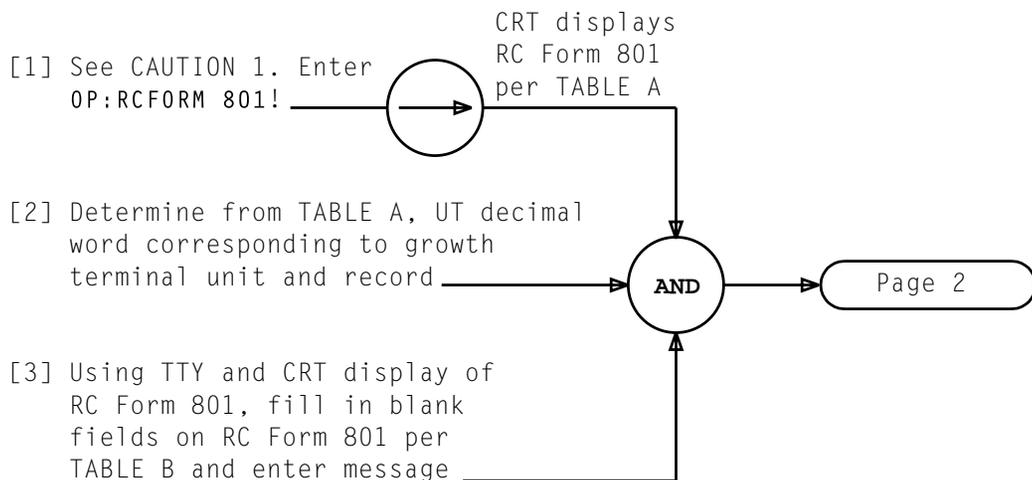


TABLE A	
SPC LEVEL CONVERTED	DECIMAL WORD
28	12
40	13
52	12
64	13

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*

Issue 1 | **SEP 1998**

234-353-040 | **DLP**

PAGE 1 of 3 | **570**

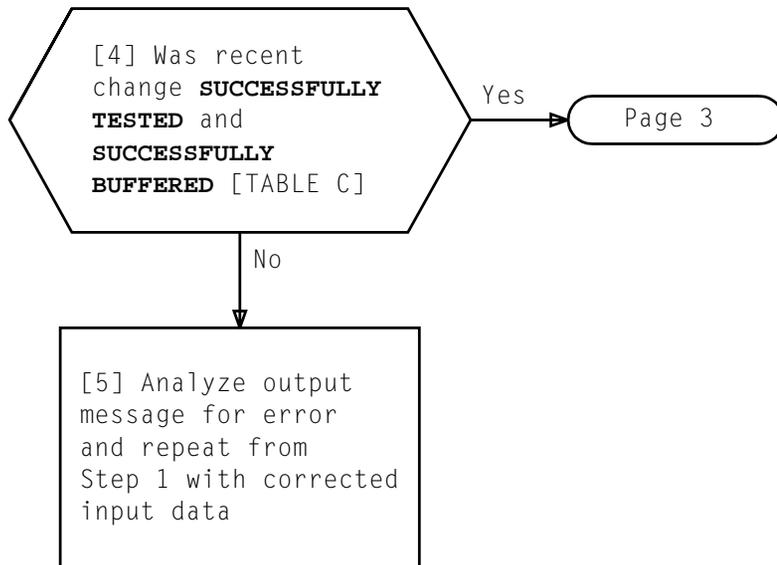


TABLE C	
RC ORNU a	SUCCESSFULLY TESTED
RC ORNU a	SUCCESSFULLY BUFFERED
RC:FUNC;CHG;OPT(TRANS),BUF:	TRANSID UTTSI,
ORNU a,	
ENTRY b,	WORDNO c,
SIZE 1,	DISP 0,
BINOCT B,	
NEWDATA 1,	
OLDDATA 0,	
REMARKS	-----!
REPT:RC DUMP OF UNIT TYPE ENTRY AS IT WILL APPEAR AFTER THE MESSAGE IS ACTIVATED	
WORD 0	_____
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	

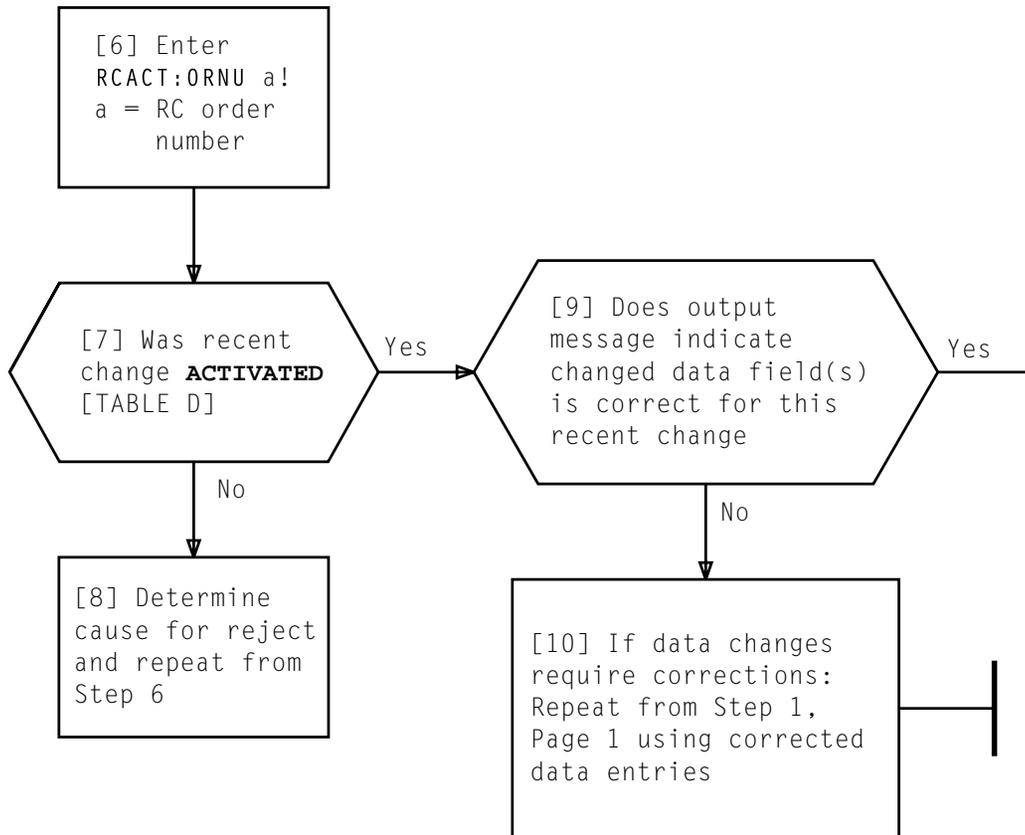
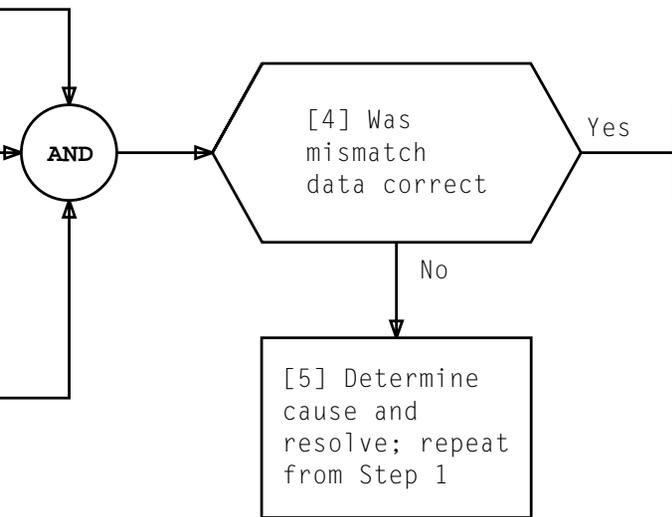


TABLE D	
RC ORNU a ACTIVATED	
RC:FUNC;CHG;OPT(TRANS),BUF: TRANSID UTTSI, ORNU a,	
ENTRY b,	WORDNO c,
SIZE 1,	DISP 0,
BINOCT B,	
NEWDATA 1,	
OLDDATA 0,	
REMARKS..... !	
a = RC order number	
b = Member number of TSI being converted	
c = UT decimal word number previously recorded in Step 2, Page 1	

[1] At **CONTR0** power switch,
rotate **OFF** switch to
normal position

[2] Read NOTE 1. Depress
ON switch

[3] Compare test failures in
printout with SPC mismatch
data in TABLE A, Page 2,
that is associated with
TSI and SPC being converted.
No other test failures allowed



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

Issue 1 | SEP 1998

234-353-040 | DLP

PAGE 1 of 2 | 571

APPLY POWER TO TSI BAY 0

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

Issue 1	SEP 1998
234-353-040	DLP
PAGE 2 of 2	571

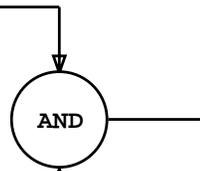
[1] Enter message

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

Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 1	572

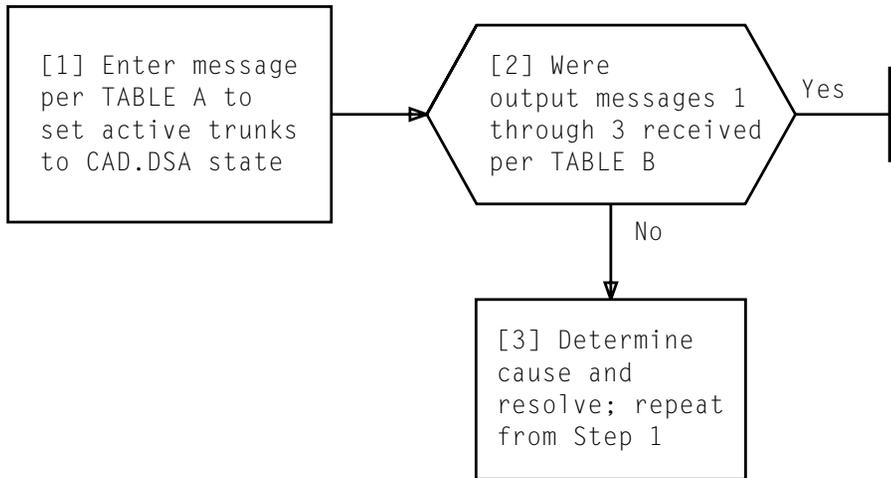


TABLE A	
SET:TRKSTAT CAD.DSA,TAN a;SUM:NUM 840!	
a = Base TAN for unit being converted (bbc0001)	
bb = TSI member number	
c = SPC being converted (0 or 1)	

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

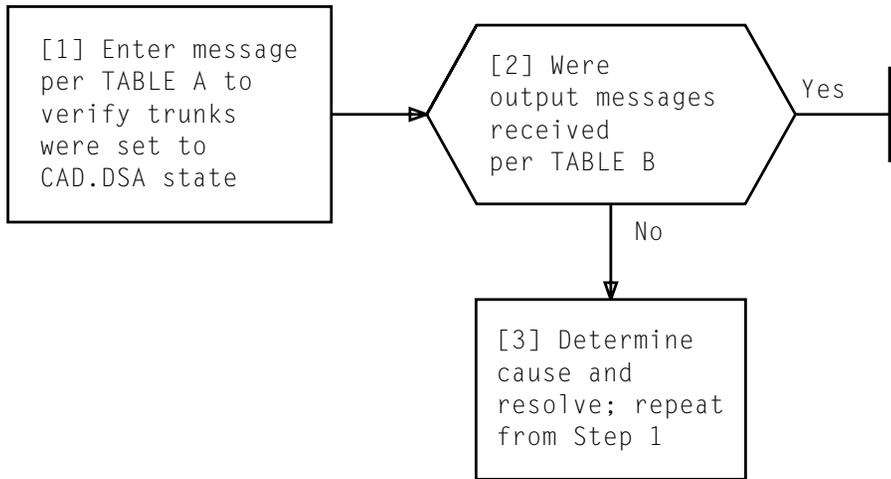
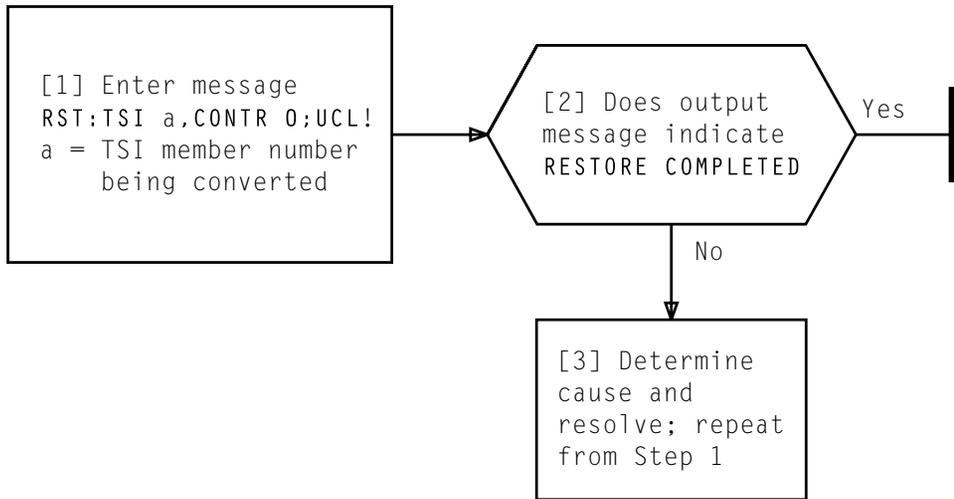


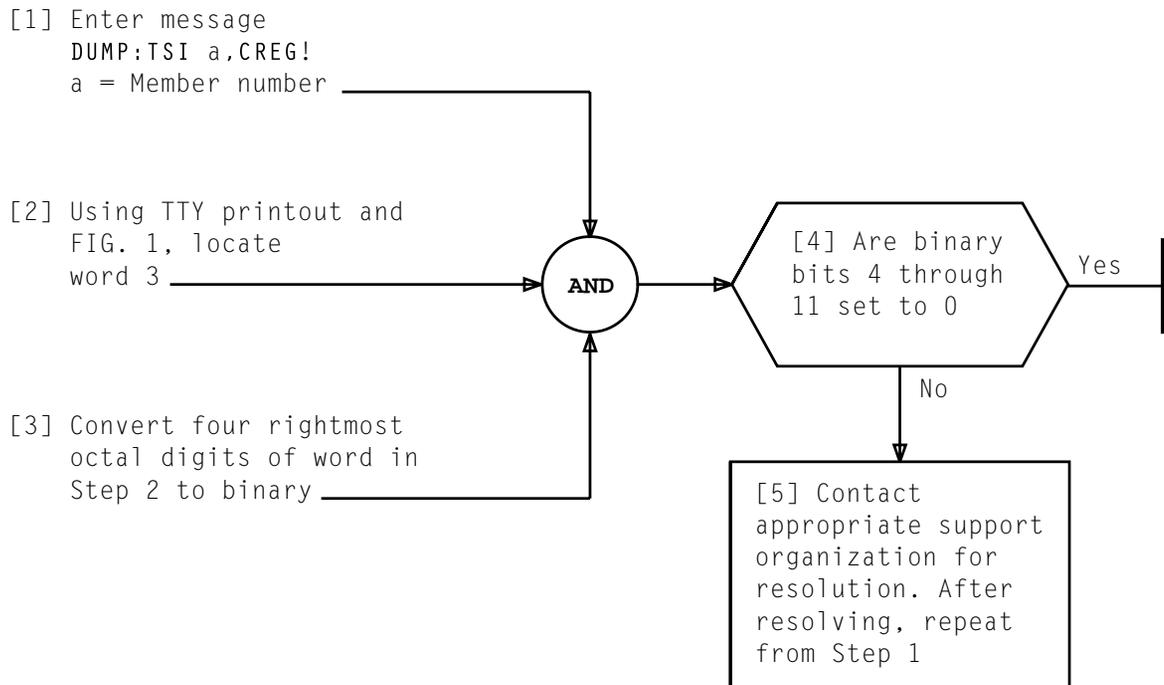
TABLE A
OP:TRKSTAT,TAN a;SUM:NUM 840,STAT ACT! a = Base TAN for unit being converted (bbc0001) bb = TSI member number c = SPC being converted (0 or 1)

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

Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 1	574





DUMP:TSI a,CREG

(Word 3)

•

•

•

FIG. 1 - TSI CREG Dump Output Message

VERIFY TSI CRITICAL REGISTERS ARE SET CORRECTLY

Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 1	576

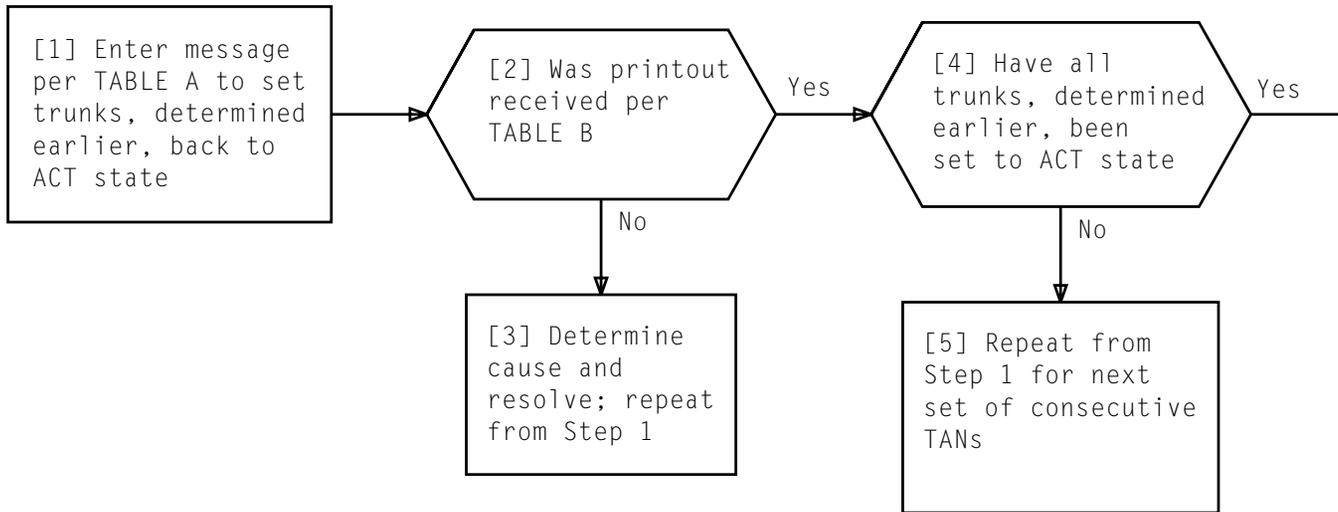


TABLE A
SET:TRKSTAT ACT,TAN a;SUM:NUM b!
a = First TAN of consecutive TANs to be set to ACT state
b = Number of consecutive TANs to be set to ACT state (840 maximum)

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

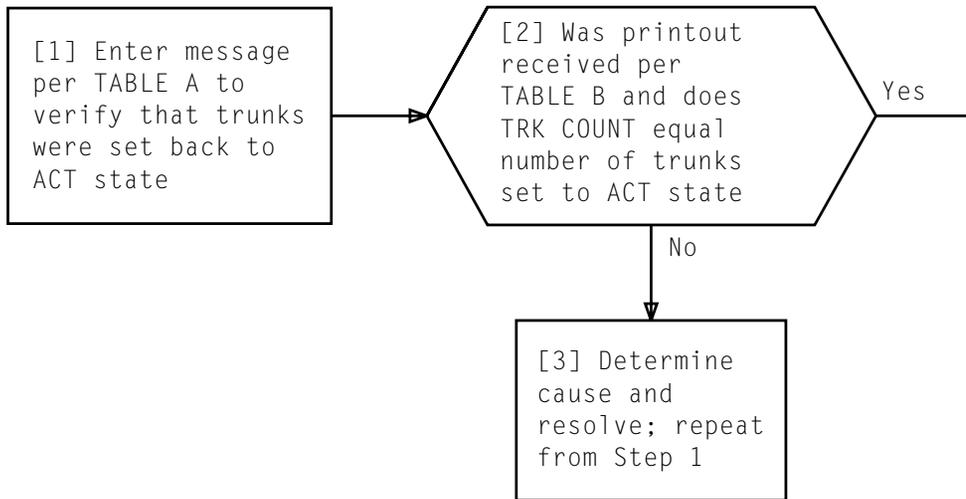
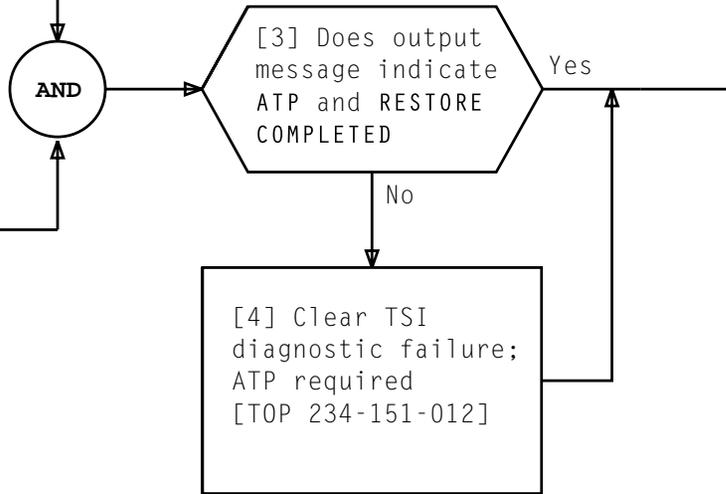


TABLE A
OP:TRKSTAT,TAN a;SUM:NUM 840,STAT ACT!
a = Base TAN for unit being converted (bbc0001)
bb = TSI member number
c = SPC being converted (0 or 1)

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

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

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



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

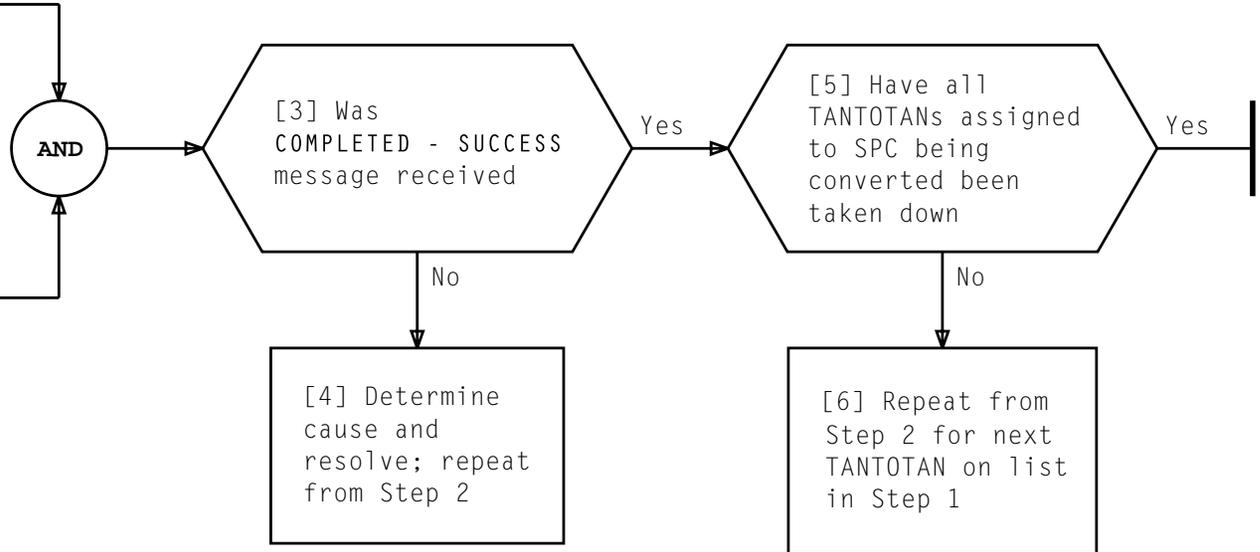
Issue 1	SEP 1998
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234-353-040	DLP
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PAGE 1 of 1	579
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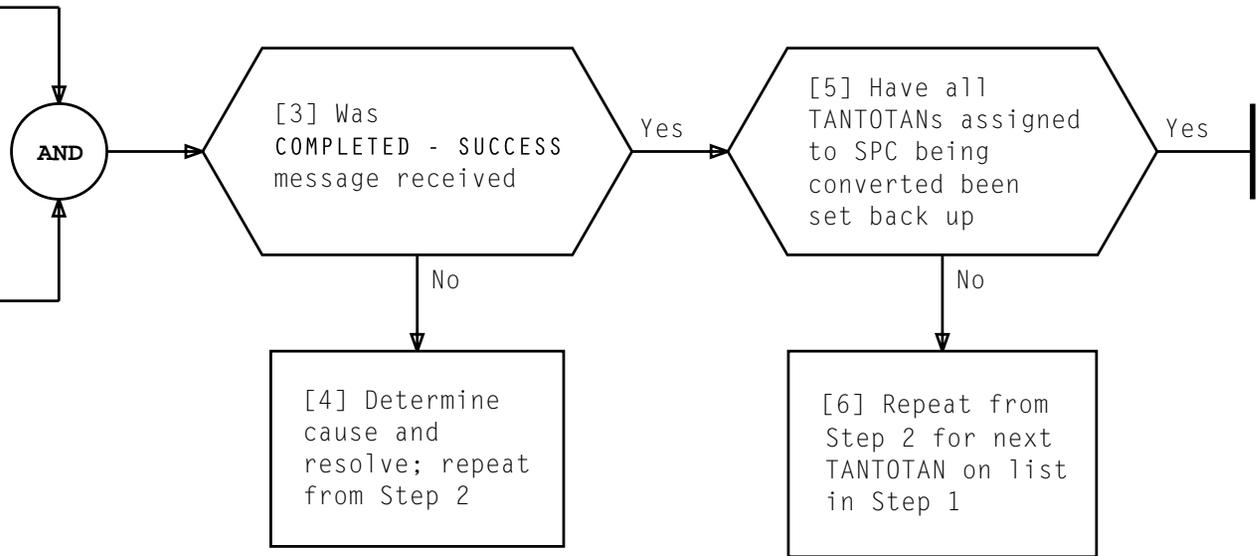
[1] Obtain CIN assignments of TANTOTANs on SPC being converted

[2] At MTCE channel, enter message for one TANTOTAN on list in Step 1
ORD:TANTOTAN;RLS,CIN a:CIN b!
a = CIN of First Trunk
b = CIN of Second Trunk



[1] Obtain CIN assignments of TANTOTANs on SPC being converted that were taken down earlier

[2] At MTCE channel, enter message for one TANTOTAN on list in Step 1
 ORD:TANTOTAN;CONN,CIN a:CIN b!
 a = CIN of First Trunk
 b = CIN of Second Trunk



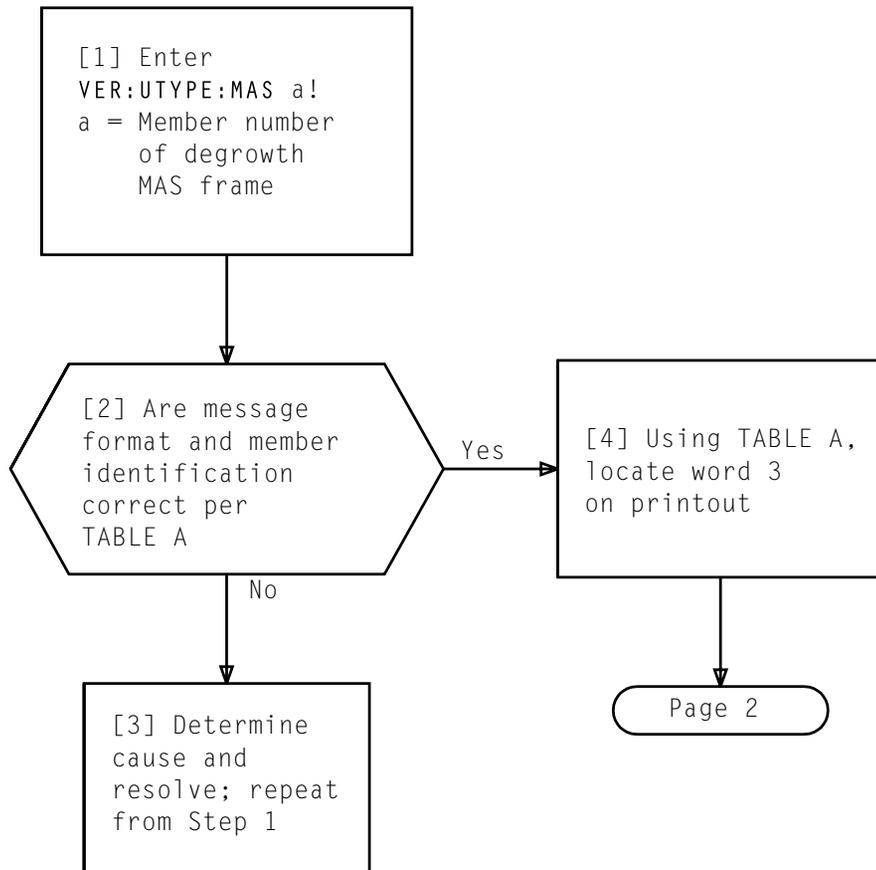
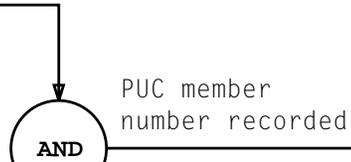


TABLE A				
VER:UTMN;OPT().CUR:	FLN a,		UTYN MAS,	
MEMN b,	ME UNEQ,			
ENTRY ADDRESS c,			ENTRY SIZE 126,	
CUR				
WORD 0	_____	_____	_____	(WORD 3)
				(WORD 6)
WORD 10	_____	_____	_____	_____
WORD 20	_____	_____	_____	_____
WORD 30	_____	_____	_____	_____
•	•	•	•	•
•	•	•	•	•
•	•	•	•	•
WORD 160	_____	_____	_____	_____
WORD 170	_____	_____	_____	_____
	_____	_____	_____	_____

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

[5] Convert three leftmost octal digits of word 3 to binary



[6] Using TABLE B, Page 4, convert bits 17 through 23 to decimal and record as associated PUC member number on PUC and MAS Degrowth Recording Sheet



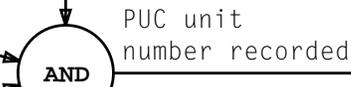
[7] Using TABLE A, Page 1, locate word 6 on printout



[8] Convert all octal digits of word 6 to binary

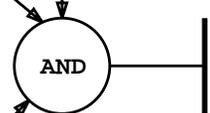


[9] Using TABLE B, Page 4, convert bits 0 and 1 and 12 and 13 to decimal PUC unit number and record on PUC and MAS Degrowth Recording Sheet



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

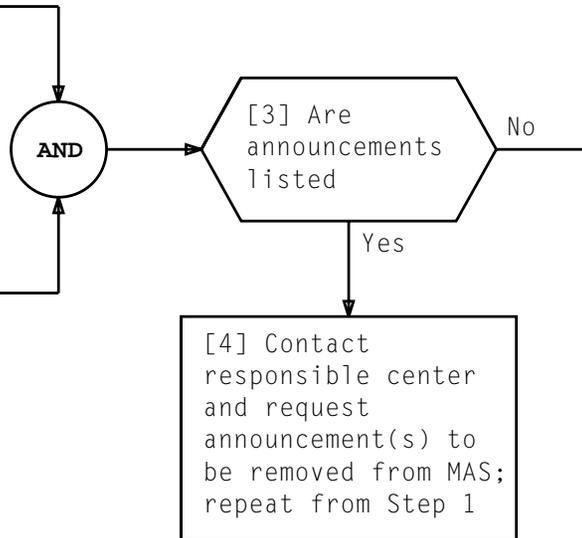
- [10] Convert bits 2 through 4 and 14 through 16 to decimal TSI port numbers for MAU 0 and MAU 1, and record on PUC and MAS Degrowth Recording Sheet
- [11] Record bits 5 and 17 for MAU 0 and MAU 1 SPC assignments on PUC and MAS Degrowth Recording Sheet
- [12] Convert bits 6 through 11 and 18 through 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)	
Issue 1	SEP 1998
234-353-040	DLP
PAGE 3 of 4	582

[1] At MTC channel, enter message
VER: PASANN!

[2] Observe printout (Step 1) and
determine if any announcements
are listed



VERIFY MAS ANNOUNCEMENT STATUS

Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 1	583

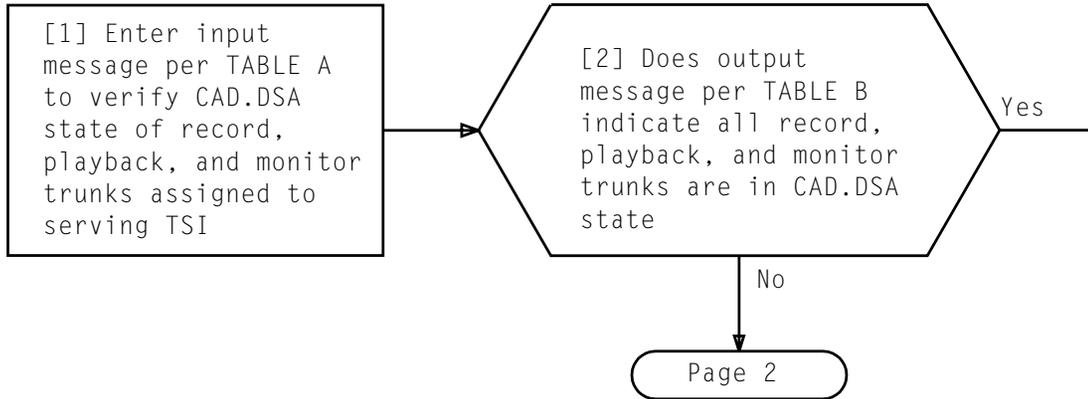


TABLE A
INPUT MESSAGE
OP:TRKSTAT,TAN a:NUM 120!
a = TAN recorded earlier

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

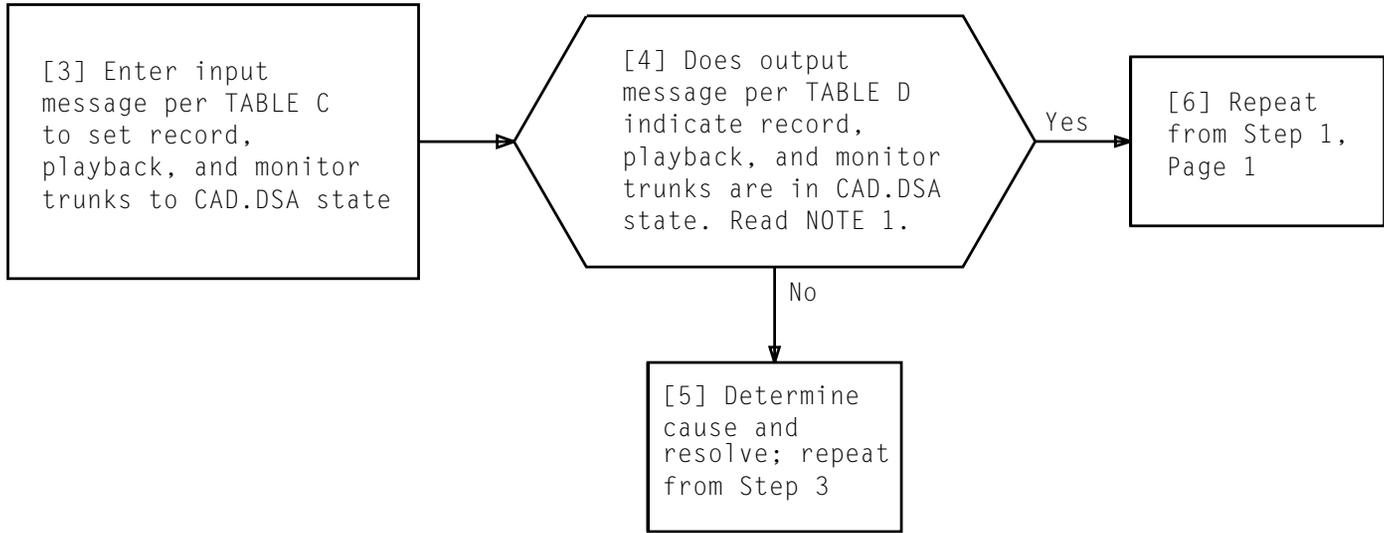


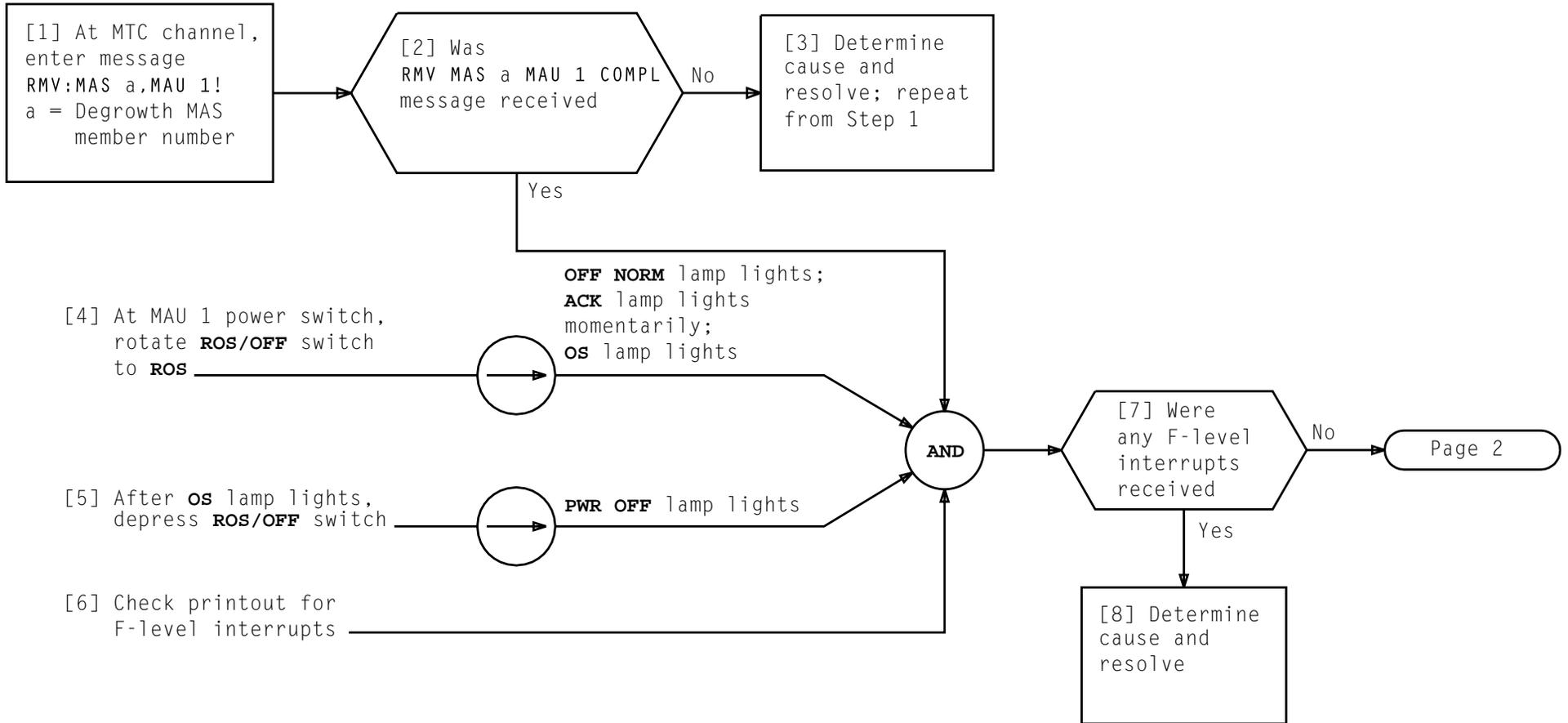
TABLE C
SET:TRKSTAT CAD.DSA,TAN a;SUM:NUM 120!
a = TAN recorded earlier

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

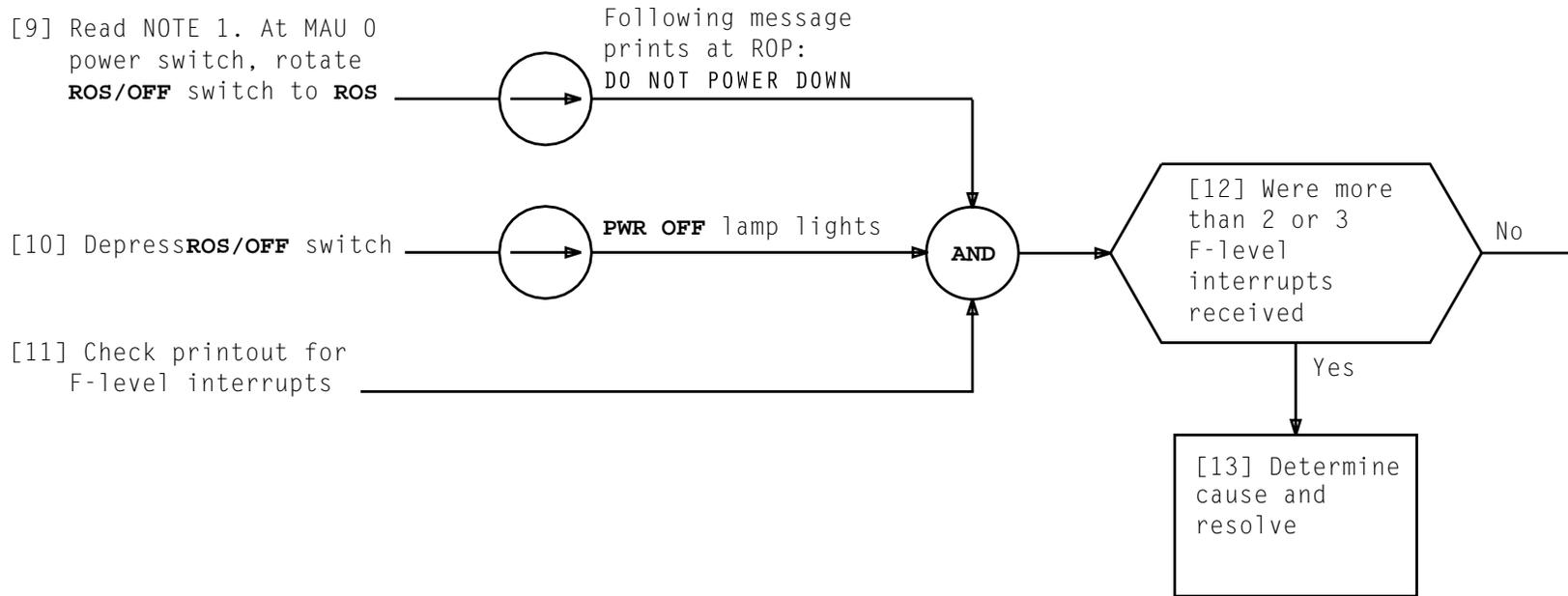
NOTE 1	
If large groups of trunks are removed at one time, output message per TABLE E may be received	
Issue 1	SEP 1998
234-353-040	DLP
PAGE 2 of 2	584

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



DUPLEX FAIL MAS FRAME

Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 2	585



NOTE 1
 Since MAU 1 is already out of service, the system will not allow you to take MAU 0 out 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

Issue 1	SEP 1998
234-353-040	DLP
PAGE 2 of 2	585

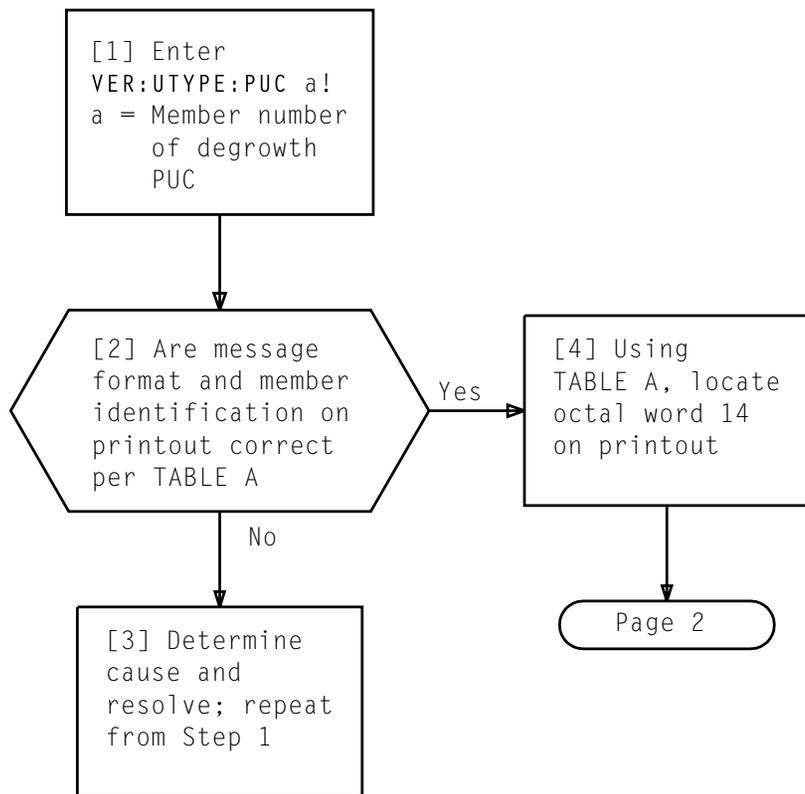
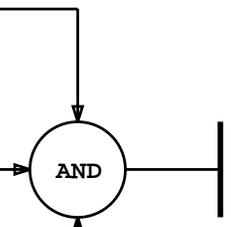


TABLE A			
VER:UTMN;OPT(),CUR:	FLN a,	UTYN PUC,	
MEMN b,	ME UNEQ,		
ENTRY ADDRESS c,	ENTRY SIZE 44,		
CUR			
WORD 0	_____	_____	_____
	_____	_____	_____
WORD 10	_____	_____	_____
	(WORD 14)	_____	_____
WORD 20	_____	_____	_____
	_____	_____	_____
WORD 30	_____	_____	_____
	_____	_____	_____
WORD 40	_____	_____	_____
	_____	_____	_____
WORD 50	_____	_____	_____
	_____	_____	_____
a = Floor location number b = Member number of growth PUC c = Starting octal address for UT entry			

[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



ENTRY WORD (OCTAL)		UT ENTRY DATA AND WORD CONFIGURATION																									
14	entry data	Y				Y				0				0													
	octal output	Y				Y				0				0													
	bit position	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0		
	binary values	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																									

Issue 1	SEP 1998
234-353-040	DLP
PAGE 2 of 2	586

DETERMINE MEMBER NUMBERS OF TSIs SUPPLYING CLOCK

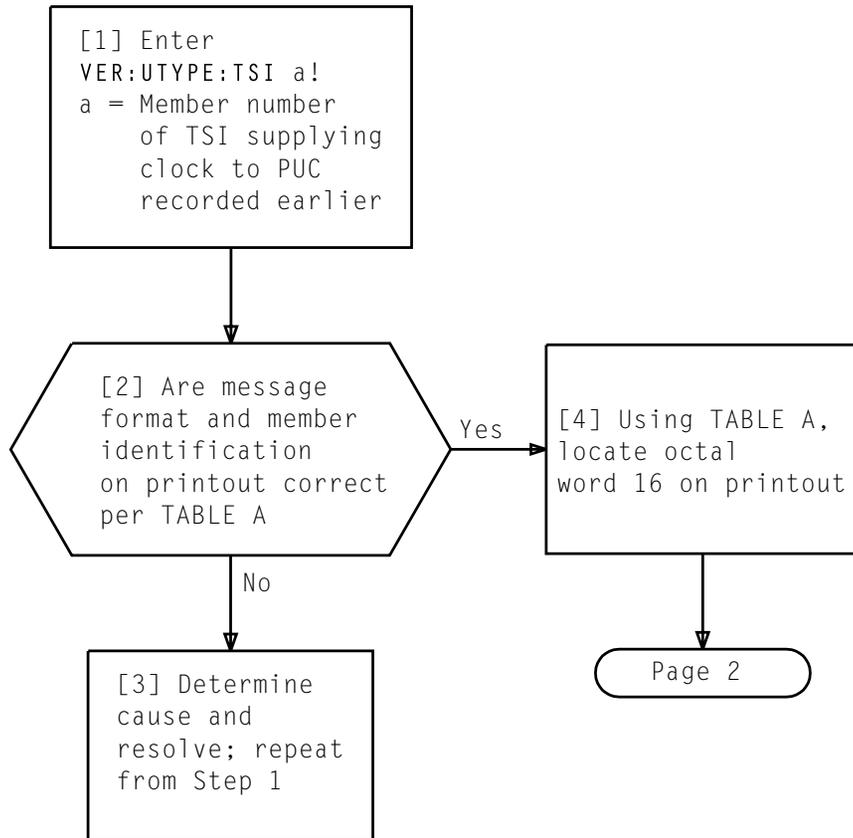


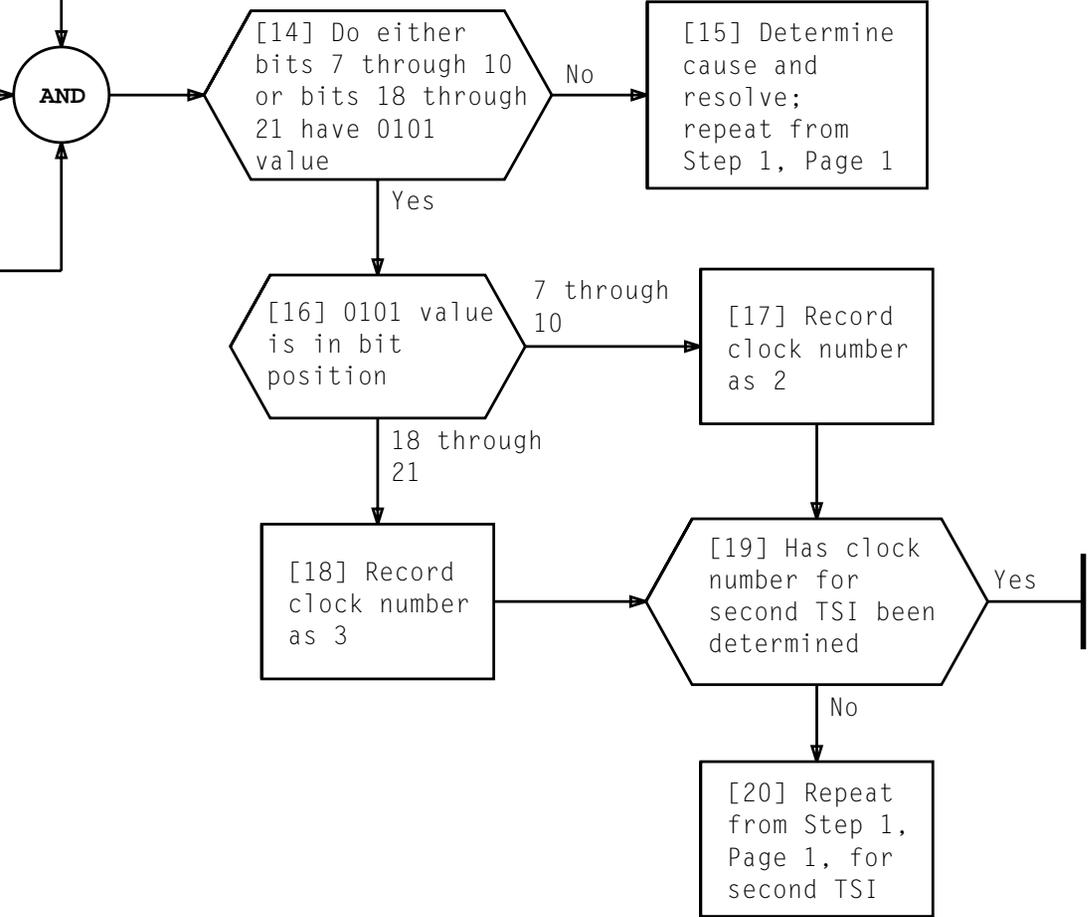
TABLE A			
VER:UTMN;OPT(),CUR: FLN a,	UTYN TSI,		
MEMN b,	ME c,		
ENTRY ADDRESS d,	ENTRY SIZE 33,		
CUR			
WORD 0	_____	_____	_____
	_____	_____	_____
WORD 10	_____	_____	_____
	_____	(WORD 16)	(WORD 17)
WORD 20	_____	_____	_____
	_____	_____	_____
WORD 30	_____	_____	_____
	_____	_____	_____
WORD 40	_____		

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

[11] Using TABLE A, locate octal word 17 on printout

[12] Convert two leftmost octal digits and third and fourth rightmost octal digits on octal word 17 to binary

[13] Using TABLE B, Page 2, observe bits 7 through 10 and bits 18 through 21



Issue 1	SEP 1998
234-353-040	DLP
PAGE 3 of 3	587

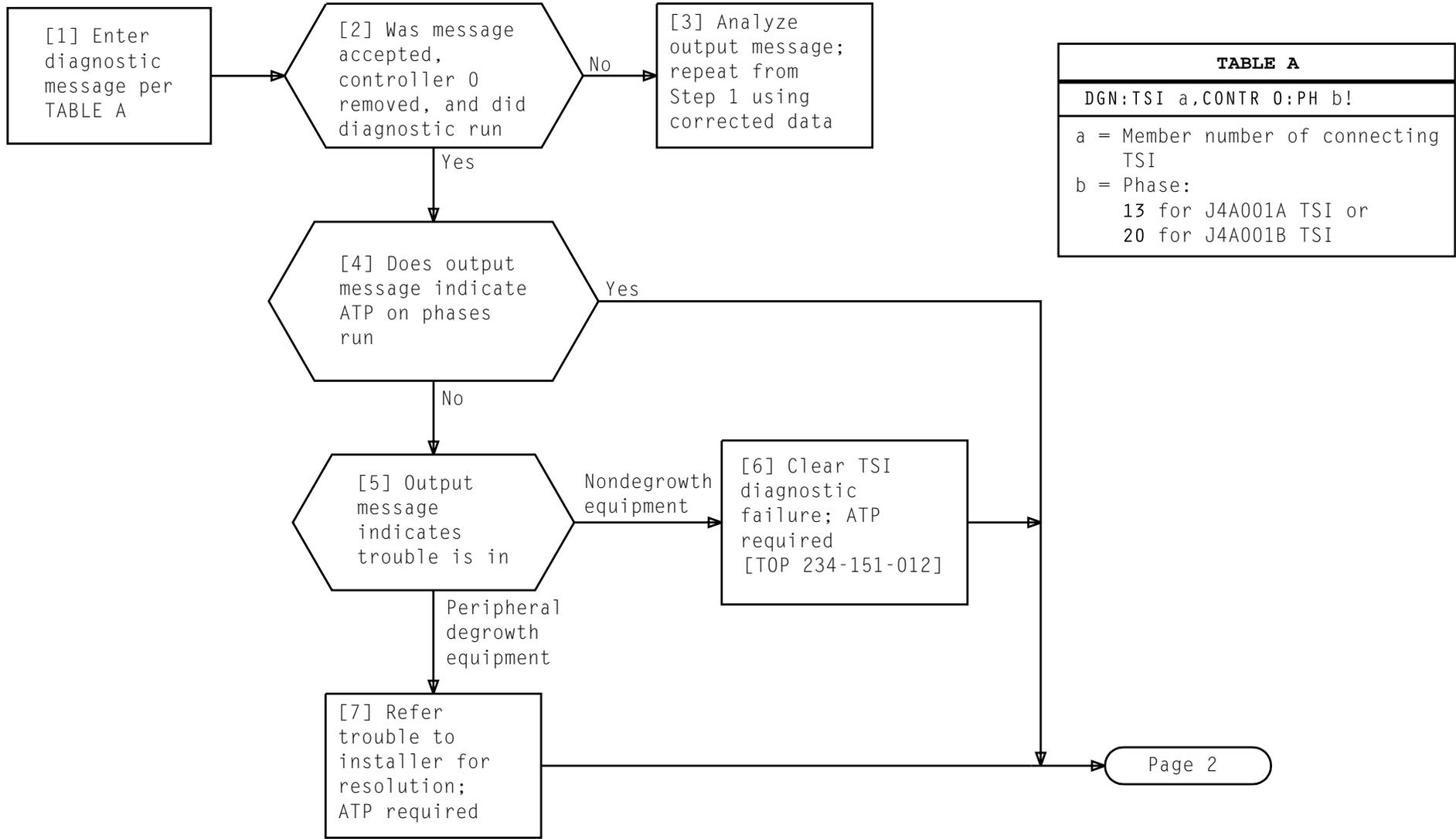


TABLE A	
DGN:TSI a,CONTR 0:PH b!	
a = Member number of connecting TSI	
b = Phase:	
13 for J4A001A TSI or	
20 for J4A001B TSI	

DIAGNOSE AND RESTORE DEGROWTH ASSOCIATED TSI FRAME CONTROLLERS 0 AND 1

Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 3	588

[8] Read NOTE 1.
Enter
RST:TSI a,CONTR 0!
a = Member number
of connecting
TSI

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	

[9] Does output message indicate ATP and restore COMPLETE

Yes

[11] Enter diagnostic message per TABLE B

[12] Was message accepted, controller 1 removed, and did diagnostic run

No

[13] Analyze output message; repeat from Step 11 using corrected data

No

[10] Clear TSI diagnostic failure; ATP required
[TOP 234-151-012]

[14] Does output message indicate ATP on phases run

Yes

Page 3, Step 18

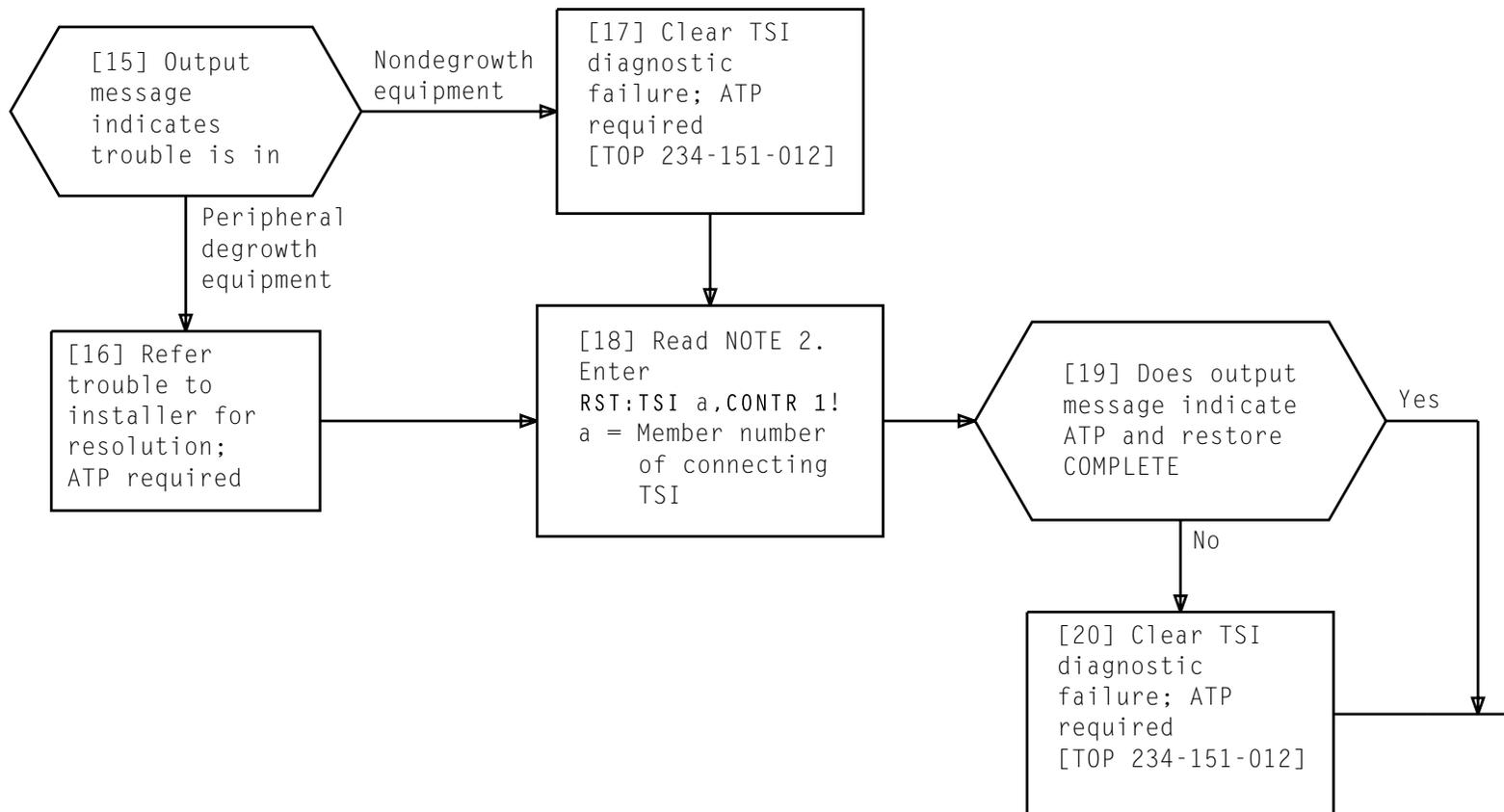
No

Page 3

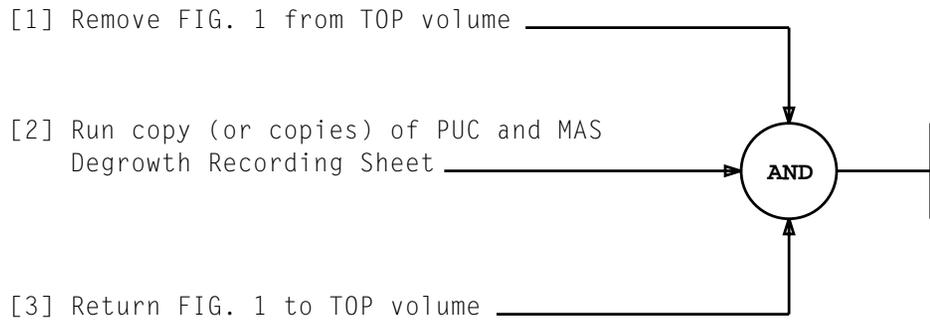
NOTE 1
Restore input message will cause diagnostic to be run and controller to be restored if ATP

Issue 1	SEP 1998
234-353-040	DLP
PAGE 2 of 3	588

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	
Issue 1	SEP 1998
234-353-040	DLP
PAGE 3 of 3	588



**OBTAIN BLANK COPY OF PUC AND MAS DEGROWTH
RECORDING SHEET**

Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 2	589

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 _____

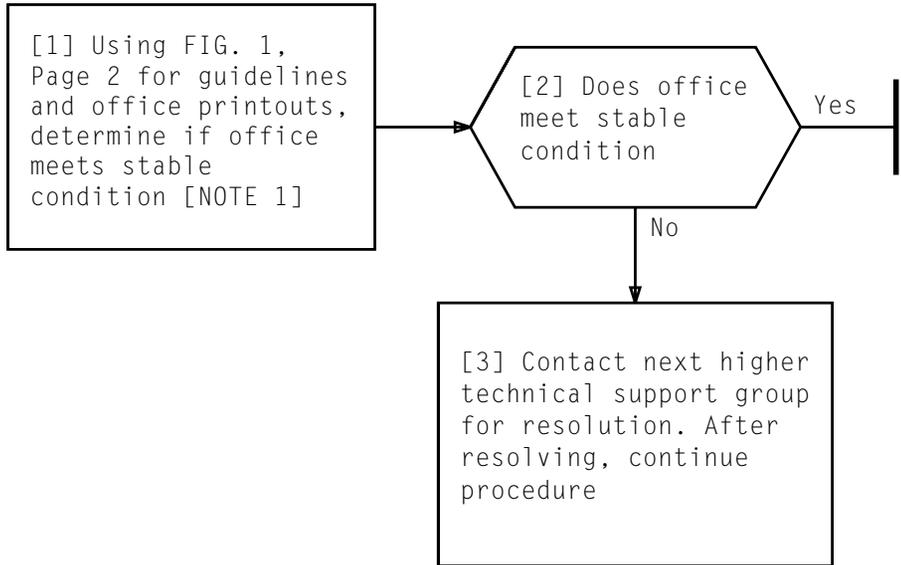
SECOND TSI MEMBER NUMBER SUPPLYING CLOCK (BITS 18-23) _____ (BINARY)
 _____ (DECIMAL)

CLOCK NUMBER SUPPLYING CLOCK _____

FIG. 1 - PUC AND MAS DEGROWTH RECORDING SHEET

**OBTAIN BLANK COPY OF PUC AND MAS DEGROWTH
 RECORDING SHEET**

Issue 1	SEP 1998
234-353-040	DLP
PAGE 2 of 2	589



DETERMINE IF OFFICE IS STABLE

NOTE 1	
FIG. 1 is based on 7-day rolling average for all per-day measures; all other measures are as indicated. All resolved troubles are discounted from measures	
Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 2	590

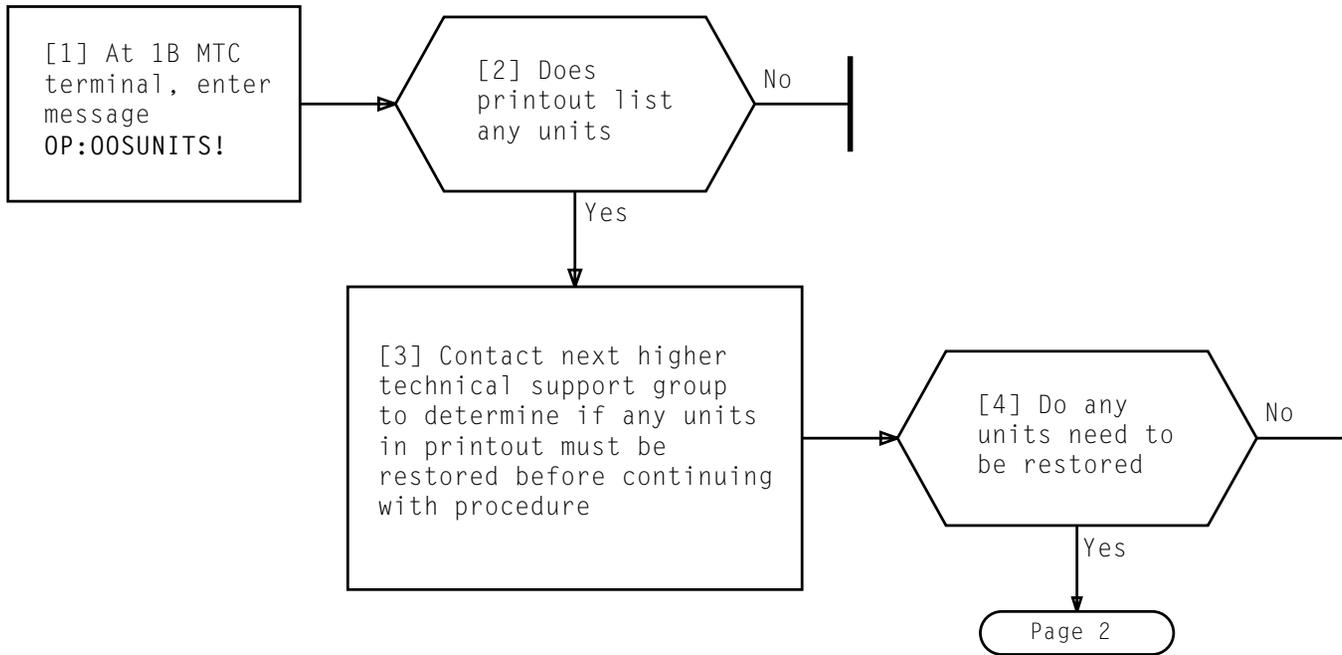
- INTERRUPTS
 - 1B PROCESSOR ≤ 1 PER MEMBER NUMBER PER DAY
≤ 3 PER DAY TOTAL
 - TMS, NC, PUB, IO, CCIS ≤ 2 PER MEMBER NUMBER PER DAY
≤ 4 PER DAY TOTAL
 - PERIPHERY, PER OPERATIONAL SP CORE (SP, DT, TSI) OR DIF (DIF, TSI COMPLEX) (THE ALLOWABLE DAILY INTERRUPT COUNT SHALL NOT EXCEED 25, REGARDLESS OF OFFICE SIZE) ≤ 3 PER DAY
 - PBFRs ≤ 1 PER DAY
- INTERJECTS ≤ 2 PER MEMBER NUMBER PER DAY
≤ 5 PER DAY TOTAL
- BASE LEVEL
ANALYZED, CORRECTED AND/OR UNDERSTOOD
- PHASES/DUPLEX FAILURES
 - DIRECTED PHASE 1 ≤ 1 IN 2 WEEKS
 - SYSTEM PHASE 1 ≤ 1 IN 1 WEEK
 - PHASE 2 OR 3 ≤ 1 IN 4 WEEKS
 - DT, VIF, OR EST ≤ 1 IN 4 WEEKS
 - TGR/TER LINK PAIR ≤ 1 IN 2 WEEKS
- OUT-OF-SERVICE UNITS ≤ 5 AT ANYTIME
 - NUMBER OUT-OF-SERVICE
 - CRITICAL UNITS:

CC	DIF	PS	TMS
CS	LN	PUB	TSI
CU	NCLK	SP	
- 3B COMPUTER
 - INTERRUPTS ≤ 3 PER DAY
 - PHASE 1 ≤ 1 IN 4 WEEKS
 - PHASE 2 OR 3 ≤ 1 IN 4 WEEKS
 - CNI RING INIT ≤ 1 IN 2 WEEKS
 - CNI RING TRANSPORT ERRORS ≤ 2 PER DAY
 - DLNE ERRORS ≤ 1 PER DAY

FIG. 1 - Office Stability Guidelines

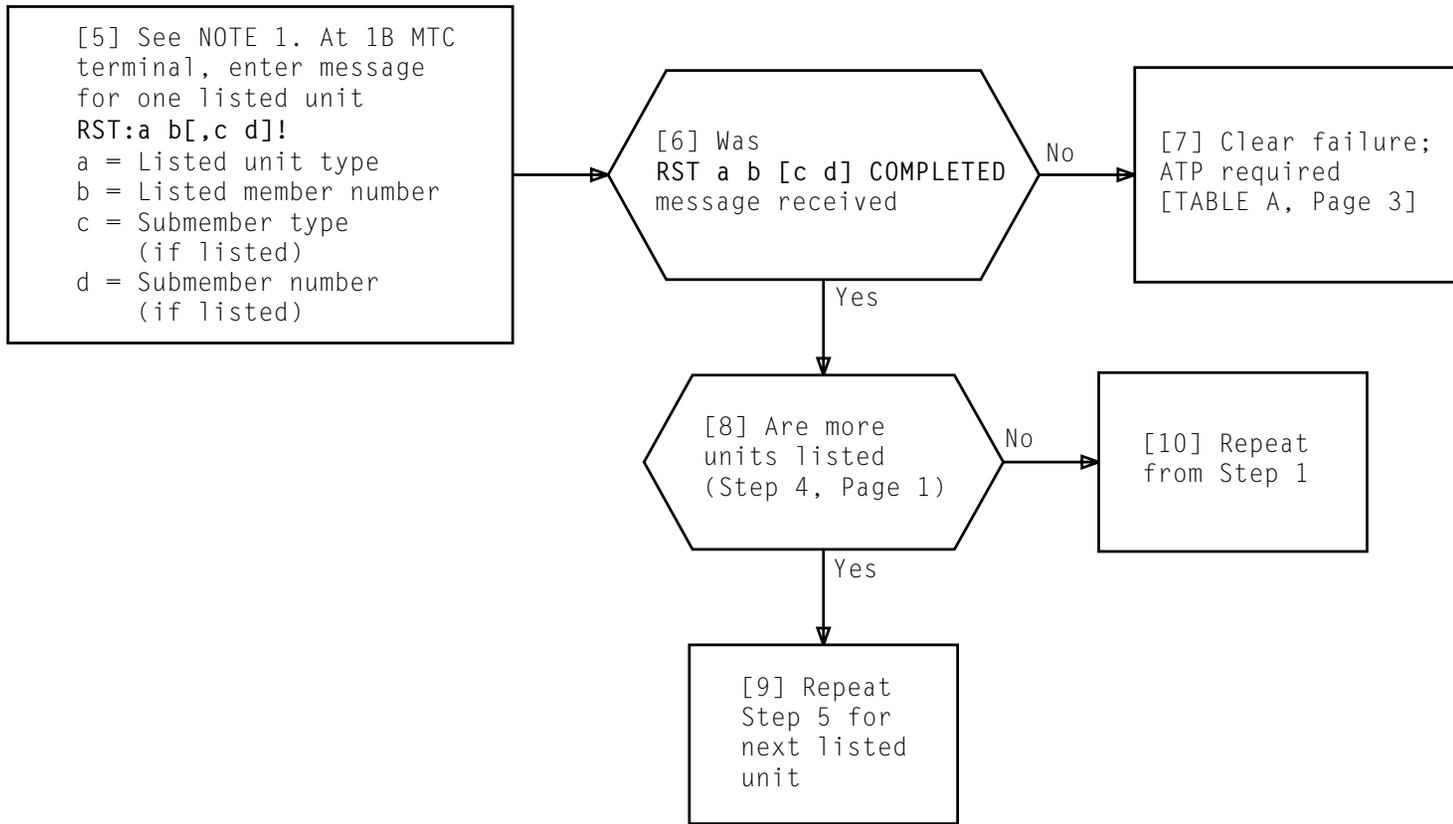
DETERMINE IF OFFICE IS STABLE

Issue 1	SEP 1998
234-353-040	DLP
PAGE 2 of 2	590



ENSURE ALL UNITS ARE IN-SERVICE

Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 3	591



NOTE 1	
Variables c and d are only to be used if submember is listed	
Issue 1	SEP 1998
234-353-040	DLP
PAGE 2 of 3	591

TABLE A			
UNIT TYPE	TROUBLE-CLEARING VOLUME	UNIT TYPE	TROUBLE-CLEARING VOLUME
1B Processor	234-351-004	MFS	234-151-041
3B Computer Model 1	254-301-812	MISC A, B, C	234-151-043
	254-301-813	NCLK	234-151-013
3B Computer Model 2/3	254-302-812	PCDF J5A007B	234-351-025
ADS (TUC and DUS)	234-351-010	PCDF J5A007C	234-351-026
API	234-351-016	PUBB	234-151-015
AUB	234-351-010	SCS	234-151-077
CNI	234-151-120	SP1	234-151-031
DIF	234-151-055	SP2	234-151-032
DT	234-151-045	TGR	234-151-033
EST	234-151-050	TMS	234-151-011
IO J5A006A	234-351-020	TSI	234-151-012
IO J5A006C	234-351-021	VIF	234-151-025
IO J5A006D	234-351-022	XTSI	234-351-011

ENSURE ALL UNITS ARE IN-SERVICE

Issue 1	SEP 1998
234-353-040	DLP
PAGE 3 of 3	591

1. Compare translation data from UT translator to equipment using Equipment Specification 384 and Office Recor Drawings 461, 462, and 467 as needed
2. Verify signal lead assignments agree with stored data (Scan, SD, PP, Bus Branch, Frame Number, Frame Line-up, Alarm Grid Number, TSI Clock, and Port Assignment) using PA-4A000 for values and conversion tables
3. Verify that Member Version (MV), Member Type (MT), and Member Type Hardware Generation (MTHG) values are correct for hardware LDI and type of growth frame
4. See Notes 1, 2, and 3. Check for Wideband Capability using TABLE A and B and DLP-570
5. Veirfy that all SPCs with Wideband Capability are correctly indicated in TSI UT translator and perform functional word change if required

TABLE A			
SPC	TSI MEMBER NUMBER	J4A001BB UNIT LEVEL	UT TRANSLATOR DECIMAL WORD
0	Even	26	12
1	Even	40	13
0	Odd	52	12
1	Odd	64	13

TABLE B		
WIDEBAND	CIRCUIT PACK	LOCATIONS
Yes	FA1816	37, 39, 41, 43, 51, 54, 56, 58
Yes	FA1817	04, 05, 09, 10, 17, 19, 23, 24
No	FA1780	37, 39, 41, 43, 51, 54, 56, 58
No	FA1781	04, 05, 09, 10, 17, 19, 23, 24

NOTES

1. Wideband capability indicated when UT translator word bit 0-1. Refer to TABLE A, for the UT word number and SPC unit level. For Wideband SPC, refer to TABLE B to verify FA1616 and FA1817 circuit packs are present for SPC locations.
2. Wideband capability indicator when UT translator word bit is reset bit 0 = 0 indicates Non-Wideband SPC, refer to TABLE B to verify FA1780 and FA1781 circuit packs are present for SPC locations
3. Non-Wideband and Wideband circuit packs cannot be mixed within any SPC Unit Level and must be the same for bays 0 and 1, and for controllers 0 and 1 for each SPC level

Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 1	592

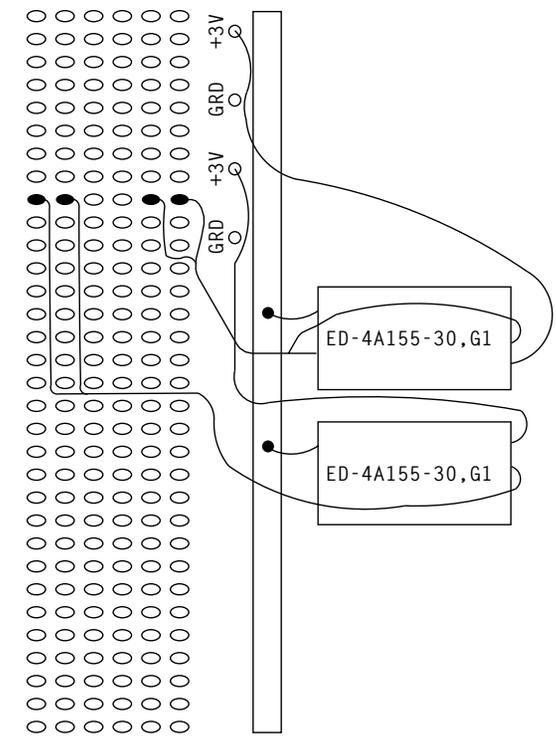
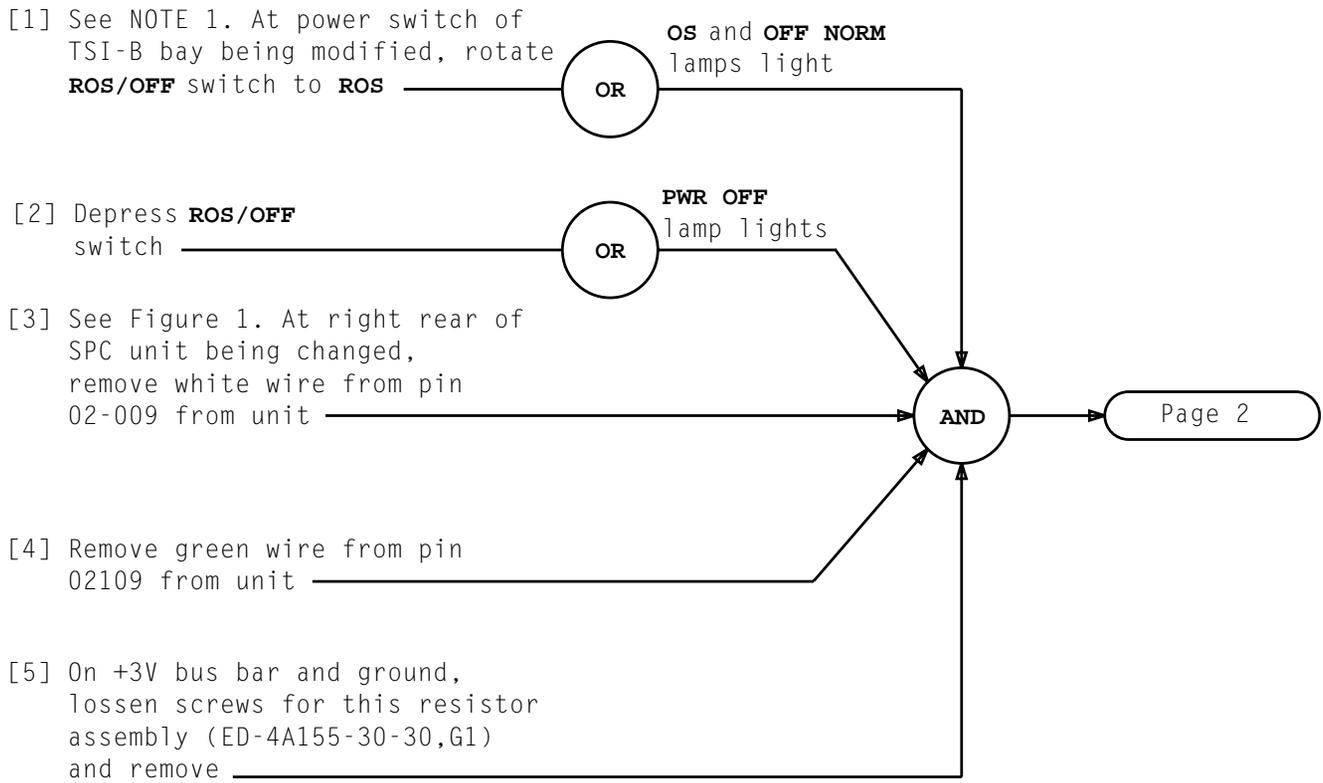


Figure 2 - Sample of Resistor Assembly (ED-4A155-30,G1)

NOTE 1	
Ensure that the 245A Power Mod is installed	
Issue 1	SEP 1998
234-353-040	DLP
PAGE 1 of 2	593

INSTALL OVERCURRENT RESISTORS

[6] See Figure 2. Install new resistor assembly (ED-4A155-30, G52), using same connection location in Steps 3 and 4

[7] At rear of SPC being changed, remove white wire from pin 03-009 from unit

[8] Remove green wire from pin 03-109 from unit

[9] On +3V bus bar and ground, loosen screws for this resistor assembly (ED-4A155-30,G1)

[10] Install new assembly (ED-4A155-30,G52), using same connection locations used in steps 7 and 8

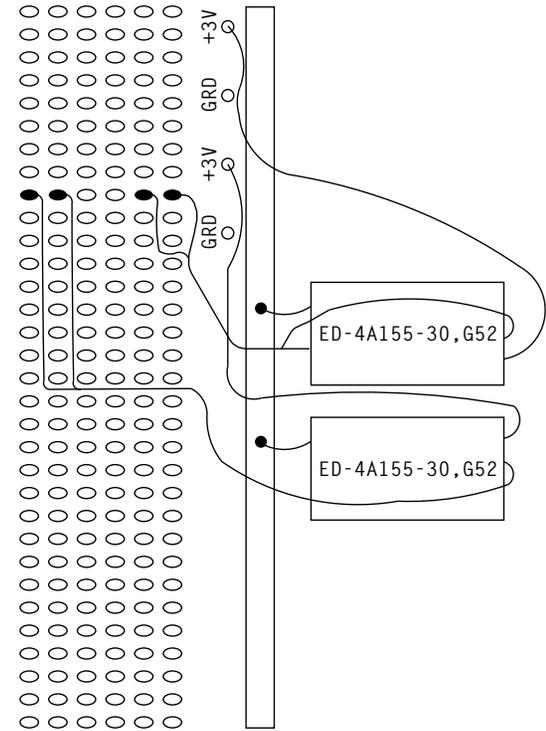
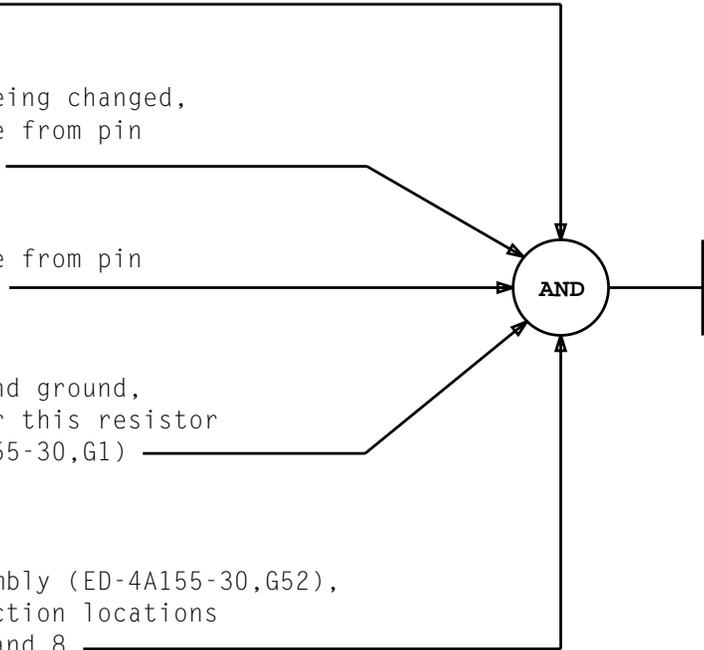


Figure 2 - Sample of Resistor Assembly
ED-4A155-30,G52

INSTALL OVERCURRENT RESISTORS

Issue 1	SEP 1998
234-353-040	DLP
PAGE 2 of 2	593

ITEM	ISSUE	ITEM	ISSUE	ITEM	ISSUE	ITEM	ISSUE	ITEM	ISSUE	ITEM	ISSUE
• IXL-001 NTP-002 NTP-003 NTP-004 <input type="checkbox"/> NTP-005		DLP-523 DLP-524 <input type="checkbox"/> DLP-525 <input type="checkbox"/> DLP-526 <input type="checkbox"/> DLP-527		<input type="checkbox"/> DLP-558 <input type="checkbox"/> DLP-559 <input type="checkbox"/> DLP-560 DLP-561 DLP-562		• DLP-593 • CKL-891 TNG-893					
NTP-006 <input type="checkbox"/> NTP-007 • NTP-008 • NTP-009 • NTP-010		<input type="checkbox"/> DLP-528 <input type="checkbox"/> DLP-529 <input type="checkbox"/> DLP-530 <input type="checkbox"/> DLP-531 DLP-532		DLP-563 DLP-564 DLP-565 DLP-566 DLP-567							
• NTP-011 • NTP-012 DLP-500 • DLP-501 DLP-502		DLP-533 <input type="checkbox"/> DLP-534 DLP-535 <input type="checkbox"/> DLP-536 DLP-537		• DLP-568 • DLP-569 • DLP-570 • DLP-571 • DLP-572							
DLP-503 DLP-504 DLP-505 <input type="checkbox"/> DLP-506 DLP-507		DLP-538 DLP-539 <input type="checkbox"/> DLP-540 <input type="checkbox"/> DLP-541 DLP-542		• DLP-573 • DLP-574 • DLP-575 • DLP-576 • DLP-577							
<input type="checkbox"/> DLP-508 DLP-509 DLP-510 DLP-511 DLP-512		DLP-543 DLP-544 DLP-545 DLP-546 DLP-547		• DLP-578 • DLP-579 • DLP-580 • DLP-581 • DLP-582							
DLP-513 DLP-514 DLP-515 DLP-516 DLP-517		DLP-548 • DLP-549 <input type="checkbox"/> DLP-550 <input type="checkbox"/> DLP-551 DLP-552		• DLP-583 • DLP-584 • DLP-585 • DLP-586 • DLP-587							
DLP-518 DLP-519 <input type="checkbox"/> DLP-520 • DLP-521 DLP-522		DLP-553 DLP-554 DLP-555 DLP-556 <input type="checkbox"/> DLP-557		• DLP-588 • DLP-589 • DLP-590 • DLP-591 • DLP-592							

• REVISED OR ADDED ITEM

CANCELED ITEM

Issue 1 | SEP 1998

234-353-040

CKL

PAGE 1 of 1

891

CHECKLIST