Task Oriented Practice
(TOP)

GROWTH/DEGROWTH

4 *ESS*™ SWITCH

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TITLE PAGE	000

FIND YOUR JOB IN THE LIST BELOW	THEN GO TO
620A/625F/630A Power Plant — Add (Support to Installer)	NTP-007
105 Test Line — Remote Office Test Line Frame — Add (Support to Installer)	NTP-018
51A Test Position — Degrow (Support to Installer)	NTP-024
39B Oscillators to DROs — Exchange (Support to Installer)	NTP-029
Acceptance	NTP-002
Aisle Pilot Control Unit to Office Alarm Grid — Add (Support to Installer)	NTP-009
Alarm Grid — Miscellaneous Frame B — Add (Support to Installer)	NTP-010
Alarm Grouping Control Unit; Manual — Office Alarm Grid — Add (Support to Installer)	NTP-013
Alarm Transfer Control Unit — Office Alarm Grid — Add (Support to Installer)	NTP-012
Area Bus Center — Add (Support to Installer)	NTP-003
Bus Center; Area — Add (Support to Installer)	NTP-003
Circuits; Receiver and/or MFS Transmitter — MF Signaling Frame — Add (Used by TELCO Personnel Only)	NTP-008
Circuits; Receiver and/or MFS Transmitter — MF Signaling Frame — Add (Support to Installer)	NTP-015
Continuity Check Transceiver Submember, (Transceiver 06-11) — Miscellaneous Frame A or C — Add (Support to Installer)	NTP-005
Continuity Check Transceiver Unit — Miscellaneous Frame A or C — Add (Support to Installer)	NTP-004
Continuity Check Transceiver Unit — Miscellaneous Frame A or C — Degrow (Support to Installer)	NTP-027
Control Unit; Aisle Pilot — Office Alarm Grid — Add (Support to Installer)	NTP-009
Control Unit; Alarm Transfer — Office Alarm Grid — Add (Support to Installer)	NTP-012
Control Unit; Manual Alarm Grouping — Office Alarm Grid — Add (Support to Installer)	NTP-013
DOC Transceiver Modules — DOC Transceiver Unit — Add (Support to Installer)	NTP-020

FIND YOUR JOB IN THE LIST BELOW	THEN GO TO
DOC Transceiver Unit As Transmitter — NMDC Frame — Add (Support to Installer)	NTP-019
DROs; 39B Oscillators to — Exchange (Support to Installer)	NTP-029
E2A Telemetry Remote Unit — NMDC Frame — Add (Support to Installer)	NTP-022
Exit Pilot Lamps — Office Alarm Grid — Add (Support to Installer)	NTP-014
Frame B; Miscellaneous — With Office Alarm Grid(s) — Add (Support to Installer)	NTP-011
Frame C; Miscellaneous — With Continuity Check Transceiver (CCT) — Add (Support to Installer)	NTP-023
Grid; Alarm — Miscellaneous Frame B — Add (Support to Installer)	NTP-010
Lamps; Exit Pilot — Office Alarm Grid — Add (Support to Installer)	NTP-014
Line; 105 Test — Remote Office Test Line Frame — Add (Support to Installer)	NTP-018
Lower Remote Office Test Line Unit — ROTL Frame — Add (Support to Installer)	NTP-017
Management Display Panel; Network — NMDC Frame — Add (Support to Installer)	NTP-021
Manual Alarm Grouping Control Unit — Office Alarm Grid — Add (Support to Installer)	NTP-013
MFS Transmitter and/or Receiver Circuits — MF Signaling Frame — Add (Used by TELCO Personnel Only)	NTP-008
MFS Transmitter and/or Receiver Circuits — MF Signaling Frame — Add (Support to Installer)	NTP-015
Miscellaneous Frame B — With Office Alarm Grid(s) — Add (Support to Installer)	NTP-011
Miscellaneous Frame C — With Continuity Check Transceiver (CCT) — Add (Support to Installer)	NTP-023
Modules; DOC Transceiver — DOC Transceiver Unit — Add (Support to Installer)	NTP-020
Multifrequency Signaling Frame and Interfaces — Add (Support to Installer)	NTP-006
Multifrequency Signaling Frame — Degrow (Support to Installer)	NTP-026
Network Management Display Panel — NMDC Frame — Add (Support to Installer)	NTP-021

FIND YOUR JOB IN THE LIST BELOW	THEN GO TO
Office Test Line Frame; Remote — Add (Support to Installer)	NTP-016
Office Test Line Unit; Lower Remote — ROTL Frame — Add (Support to Installer)	NTP-017
Panel; Network Management Display — NMDC Frame — Add (Support to Installer)	NTP-021
Pilot Control Unit; Aisle — Office Alarm Grid — Add (Support to Installer)	NTP-009
Pilot Lamps; Exit — Office Alarm Grid — Add (Support to Installer)	NTP-014
Power Plant; 620A/625F/630A — Add (Support to Installer)	NTP-007
Receiver Circuits and/or MFS Transmitter — MF Signaling Frame — Add (Used by TELCO Personnel Only)	NTP-008
Receiver Circuits and/or MFS Transmitter — MF Signaling Frame — Add (Support to Installer)	NTP-015
Remote Measurement System-Digital 2 (RMS-D2) — Convert to (Support to Installer)	NTP-025
Remote Office Test Line Frame — Add (Support to Installer)	NTP-016
Remote Office Test Line Frame — Degrow (Support to Installer)	NTP-028
RMS-D2; Remote Measurement System-Digital 2 — Convert to (Support to Installer)	NTP-025
Signaling Frame, Multifreqency — Degrow (Support to Installer)	NTP-026
Signaling Frame, Multifreqency; and Interfaces — Add (Support to Installer)	NTP-006
Submember, Continuity Check Transceiver; (Transceiver 06-11) — Miscellaneous Frame A or C Add (Support to Installer)	NTP-005
Telemetry Remote Unit; E2A — NMDC Frame — Add (Support to Installer)	NTP-022
Test Line; 105 — Remote Office Test Line Frame — Add (Support to Installer)	NTP-018
Test Line Frame; Remote Office — Add (Support to Installer)	NTP-016
Test Line Frame; Remote Office — Degrow (Support to Installer)	NTP-028
Test Line Unit; Lower Remote Office — ROTL Frame — Add (Support to Installer)	NTP-017
Test Position; 51A — Degrow (Support to Installer)	NTP-024

FIND YOUR JOB IN THE LIST BELOW	THEN GO TO
Transceiver, DOC; as Transmitter — NMDC Frame — Add (Support to Installer)	NTP-019
Transceiver Modules; DOC — DOC Transceiver Unit — Add (Support to Installer)	NTP-020
Transceiver Submember, Continuity Check; (Transceiver 06-11) — Miscellaneous Frame A or C — Add (Support to Installer)	NTP-005
Transceiver Unit; Continuity Check — Miscellaneous Frame A or C — Add (Support to Installer)	NTP-004
Transceiver Unit; Continuity Check — Miscellaneous Frame A or C — Degrow (Support to Installer)	NTP-027
Transfer Control Unit, Alarm — Office Alarm Grid — Add (Support to Installer)	NTP-012
Transmitter, MFS; and/or Receiver Circuits — MF Signaling Frame — Add (Used by TELCO Personnel Only)	NTP-008
Transmitter, MFS; and/or Receiver Circuits — MF Signaling Frame — Add (Support to Installer)	NTP-015
Unit, E2A Telemetry Remote — NMDC Frame — Add (Support to Installer)	NTP-022

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

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

		RESPONSIBILITY	
1	Verify Area Bus Center (ABC) Unit Type (UT) Translator and Compare Translations Data O Against Wiring Records:		
	1. Verify ABC UT Translator	TELCO/INST	DLP-510
	2. Compare Translations Data Against Wiring Records	INST	—
2	Install Growth ABC Bay and All Fuse Panels As Required	INST	—
3	Verify That Member Number on Growth ABC Frame Is Correct	INST	—
4	Assure That 415A Battery Plant Circuit Breaker(s) of Feeder(s) for Growth ABC Is Off	INST	—
5	Run and Connect Supply Feeder Cables Between Growth ABC and 415A Battery Plant	INST	—
6	Run and Connect Scan Leads Between Growth ABC and SP	INST	—
7	Run and Connect Cables Between Load and Fuse Panels on Growth ABC	INST	—
8	Perform Absolute Word Change To Change ABC Equipage From Unequipped to Operational and Verify (Using RC Form 800)	TELCO	DLP-521
9	Charge Internal Load Capacitors in 415A Battery Plant	INST	—
10	Insert Fuses in ABC Fuse Panel	INST	—
11	Test Alarm Functions	INST	—

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

		RESPONSIBILITY	
1	Verify Continuity Check Transceiver (CCT) Unit Type (UT) Translator and Compare Translations Data Against Office Records:		
	1. Verify CCT UT Translator	TELCO/INST	DLP-505
	2. Compare Translations Data Against Wiring Records	INST	—
2	Mount Shelving Unit, Connect Power, and Run Power Tests	INST	—
3	Connect CCT Private Signal Leads	INST	—
4	Connect CCT Transmission Leads:	INST	
	A. Connect Leads T, R, T1, R1 to Associated Voiceband Interface Frame	INST	—
	B. Connect Leads T, R, T1, R1 to D4 Channel Bank, DSX 1, and/or Associated Digital Terminal Frame	INST	—
5	Verify Power Switch Leads, Then Apply Power Using Power Switch	INST	—
6	Perform Functional Word Change of CCT Translator Word, Then Verify Using RC Form 801 and the Following Parameters (Change CCT Member Equipage From Unequipped to Operational): 1. WORDNO 0/ 2. SIZE 2 3. DISP 21 4. BINOCT 0 5. NEWDATA 6 6. OLDDATA 0/	TELCO	DLP-568
7	Remove CCT Power Using Power Switch (Turn **OFF** Switch to **ROS**, Then Depress)	TELCO	—
8	Install Circuit Packs	INST	—
9	Restore Power to CCT Using Power Switch	TELCO	DLP-565
	(Continued on Page 2)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
10	If Transmission Leads Are Connected to D4 Channel Bank, DSX 1, and Digital Terminal Frame Equipment, Complete Receiver and Transmit Level Adjustments on D4 Channel Bank Equipment	INST	—
11	Perform Functional Word Change of CCT Translator Word, Then Verify Using RC Form 801 and the Following Parameters (Change CCT Submember Equipage From Unequipped to Operational): 1. WORDNO a (a = 3 for transceivers 00-05 or 4 for transceivers 06-11) 2. SIZE 2 3. DISP 17 4. BINOCT B 5. NEWDATA 11 6. OLDDATA 00//	TELCO	DLP-568
12	Set Status of Transceivers to Circuit Administration (CAD) Lock-Out State	TELCO	DLP-506
13	Test Added Transceivers	TELCO/INST	DLP-507
14	Set Status of Transceivers to Active State	TELCO	DLP-508
15	If Other CCT Submember (Transceivers 06-11) Is To Be Added at This Time, Repeat From Item 7	TELCO/INST	—

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

		RESPONSIBILITY	
1	Verify Continuity Check Transceiver (CCT) Unit Type (UT) Translator and Compare Translations Data Against Office Records:		
	1. Verify CCT UT Translator	TELCO/INST	DLP-509
	2. Compare Translations Data Against Wiring Records	INST	—
	NOTE: Items 2 through 4 should be performed quickly and without interruption because removal of power will take all CCIS type trunks assigned to growth associated CCT unit out of service		
2	Remove CCT Power Using Power Switch (Turn **OFF** Switch to **ROS**, Then Depress)	TELCO	—
3	Install Circuit Packs (Transceivers 06-11)	INST	—
4	Restore Power to CCT Using Power Switch	TELCO	DLP-565
5	If Transmission Leads Are Connected to D4 Channel Bank, DSX 1, and Digital Terminal Frame Equipment, Complete Receiver and Transmit Level Adjustments on D4 Channel Bank Equipment	INST	—
6	Perform Functional Word Change of UT Translator Word, Then Verify Using RC Form 801 and the Following Parameters (Change CCT Submember Equipage From Unequipped to Operational): 1. WORDNO 4 2. SIZE 2 3. DISP 17 4. BINOCT B 5. NEWDATA 11 6. OLDDATA 00//	TELCO	DLP-568
7	Set Status of Transceivers to Circuit Administration (CAD) Lock-Out State (Transceivers 06-11)	TELCO	DLP-506
8	Test Added Transceivers	TELCO/INST	DLP-507
9	Set Status of Transceivers to Active State (Transceivers 06-11)	TELCO	DLP-508

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

		RESPONSIBILITY	
1	Assure That MFS Frame Power Verification Tests Have Been Completed	INST	—
2	Verify MFS Frame Unit Type (UT) Translator and Compare Translations Data Against Wiring Records:		
	1. Verify MFS Frame UT Translator	TELCO/INST	DLP-522
	2. Compare Translations Data Against Wiring Records	INST	—
3	Verify Operational Status of Signal Processor K Blocks Containing Scan and Signal Distributor Points for MFS Frame Being Added	TELCO/INST	DLP-523
4	Verify Disabled Status of Equipped MFS Transmitter and Receiver Circuits	TELCO	DLP-524
5	Verify Equipage Status of Interconnecting Units Connecting to MFS Circuits Being Added		
	1. Enter Message **VER:UTYPE:**a b**,SME** c! a = **VIF** or **DT** or **DIF** b = VIF/DT/DIF Member Number c = SME Index Number	TELCO	—
	2. If Connecting VIU(s)/DTU(s)/DIU(s) Is Not in OPER Equipage State, Discontinue This Procedure Until VIU(s)/DTU(s)/DIU(s) Is in OPER State	TELCO/INST	—
6	Connect MFS Transmitter and Receiver Private Signal Leads	INST	—
7	Connect MFS Frame Transmission Leads:	INST	—
	A. Connect Leads T, R, T1, R1 to Associated Voiceband Interface Frame	INST	—
	B. Connect Leads T, R, T1, R1 to D4 Channel Bank, DSX 1, and/or Associated Digital Terminal Frame	INST	—
8	Connect MFS Frame Alarm and Control Private Signal Leads	INST	—
9	Verify MFS Frame Alarm and Control Private Signal Leads	INST	—
10	Connect and Verify MFS Frame Alarm Cables	INST	—
11	If Transmission Leads Are Connected to D4 Channel Bank, DSX 1, and Digital Terminal Frame Equipment, Complete Receiver and Transmit Level Adjustments on D4 Channel Bank Equipment	INST	—
	(Continued on Page 2)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
12	Recent Change and Verify Member Equipage From UNEQ to GROW	TELCO	DLP-502
13	Recent Change and Verify Member Equipage From GROW to SGRO	TELCO	DLP-502
14	Recent Change and Verify Member Equipage From SGRO to OPER	TELCO	DLP-502
15	Change Added MFS Transmitter and/or Receiver Circuits to Circuit Administration (CAD) Lock-Out State	TELCO	DLP-525
16	Test Equipped MFS Transmitter and Receiver Circuits	INST	—
17	If MFS Transmitter and Receiver Circuits Are To Be Immediately Activated, Change MFS Transmitter and/or Receiver Circuits to Active State and Test	TELCO/INST	DLP-526

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

		RESPONSIBILITY	
1	Verify Power Plant Unit Type (UT) Translator and Compare Translations Data Against Wiring Records:		
	1. Verify Power Plant UT Translator	TELCO/INST	DLP-510
	2. Compare Translations Data Against Wiring Records	INST	—
2	Install Growth Distribution and Converter Bays As Required	INST	—
3	Run and Connect the Following: Scan Leads, 140V Input Feeders, and Alarm Leads	INST	—
4	Run and Connect Scan Leads SA(01) and/or SA(03) From Distribution Bay to SP	INST	—
5	Turn on Converters and Adjust Output	INST	—
6	Perform Absolute Word Change To Change Power Plant Equipage From Unequipped to Operational and Verify (Using RC Form 800)	TELCO	DLP-521
7	Test Alarm Functions	INST	—

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

		RESPONSIBILITY	
1	Verify Disabled Status of MFS Transmitter and/or Receiver Circuits Being Added	TELCO	DLP-527
2	If Transmit and Receive Paths of MF Circuits Being Added Interface to System Via D4 Channel Bank, DSX, and Digital Terminal Equipment:		
	1. Determine Channel Slot Location(s) on D4 Channel Bank to Which MF Circuits Will Interface and Select 4E&MER Channel Unit(s)	TELCO	DLP-514
	2. Disable All Options on 4E&MER Channel Units	TELCO	DLP-518
	3. Condition Test Sets:		
	1. D3/D4 Portable Test Set	TELCO	DLP-515
	2. TTS4BNH Transmission Measuring Set (or Equivalent)	TELCO	DLP-516
	4. Align Receive and Transmit Levels on D4 Channel Bank Unit(s) and Install	TELCO	DLP-517
3	Remove Power, Select and Install MFS Circuit Packs, and Restore Power:		
	A. If Circuits Being Added Are in 04 Through 15 Range:		
	1. From Office Records, Determine Circuit Identification Name (CIN) of MFS Circuits (00-15) in Active State and Contained in MFS Frame to Which Circuits Are Being Added	TELCO	—
	2. Change State of Active MFS Circuits to Maintenance Lock-Out	TELCO	DLP-528
	3. Remove Fuse (**F1**) at Location 52-8 (MFT and MFR Circuits 00-15); **PF** Lamp Lighted	TELCO	—
	4. Select and Install Circuit Packs:		
	A. MFS Transmitter	TELCO	DLP-511
	B. MFS Receiver	TELCO	DLP-512
	5. Replace Fuse (**F1**) Removed in Item 3.A.3 (**PF** Lamp Off)	TELCO	—
	6. Restore Common Tone Supply (**CTSA**) Using Reset Pushbutton (**RSTA**)	TELCO	—
	7. Change MFS Circuits in Maintenance Lock-Out State to Active	TELCO	DLP-528
	(Continued on Page 2)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
3 (Contd)	B. If Circuits Being Added Are in 20 Through 31 Range:		
	1. From Office Records, Determine Circuit Identification Name (CIN) of MFS Circuits (16-31) in Active State and Contained in MFS Frame to Which Circuits Are Being Added	TELCO	—
	2. Change State of Active MFS Circuits to Maintenance Lock-Out	TELCO	DLP-528
	3. Remove Fuse **F2** at Location 52-8 (MFT and MFR Circuits 16-31); **PF** Lamp Lighted	TELCO	—
	4. Select and Install Circuit Packs:		
	A. MFS Transmitter	TELCO	DLP-511
	B. MFS Receiver	TELCO	DLP-512
	5. Replace Fuse (**F2**) Removed in Item 3.B.3 (**PF** Lamp Off)	TELCO	—
	6. Restore Common Tone Supply (**CTSB**) Using Reset Pushbutton (**RSTB**)	TELCO	—
	7. Change MFS Circuits in Maintenance Lock-Out State to Active	TELCO	DLP-528
4	Change Added Transmitter and/or Receiver Circuits to Circuit Administration (CAD) Lock-Out State	TELCO	DLP-525
5	Test MFS Transmitter and/or Receiver Circuits Being Added	TELCO	DLP-513
6	If MFS Transmitter and/or Receiver Circuits Being Added Are To Be Immediately Activated, Change MFS Transmitter and/or Receiver Circuits to Active (ACT) State and Test	TELCO	DLP-526

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

		RESPONSIBILITY	
1	Install Aisle Pilot Control Unit in Growth Associated Alarm Grid	INST	—
2	Connect Cabling From Aisle Pilot Control Unit to:		
	1. Frame Lineups	INST	—
	2. Alarm Grid Control Unit	INST	—
	3. Aisle Pilot Lamps	INST	—
	NOTE: Items 3 through 6 should be performed quickly and without interruption		
3	Remove Fuses **C** and **D** From Growth Associated Alarm Grid Fuse Panel	TELCO	DLP-554
4	If Associated Main Aisle Pilot Lamps Are Connected to More Than One Aisle Pilot Control (APC) Unit in Growth Alarm Grid:		
	1. Determine From Office Records Operational APC Unit(s) Other Than Growth Unit Which Connects to Same Main Aisle Pilot Lamps	INST	—
	2. Remove Fuses **A**() and **B**() From Alarm Grid Fuse Panel [For Operational APC Unit(s) Identified in 4.1]	TELCO	DLP-553
5	Connect Cabling From Growth APC Unit to Operational APC Unit(s) and/or to Main Aisle Pilot Lamps As Required	INST	—
6	Install Alarm Grid Fuses Removed in Items 3 and 4	TELCO	—
7	Remove Dummy Fuses and Insert Fuses **A**() and **B**() at Fuse Panel for Alarm Grid to Which APC Unit Has Been Added	INST	—
8	Perform Aisle and Main Aisle Pilot Lamps Test on Growth APC Unit	INST	—

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

		RESPONSIBILITY	
1	Verify Alarm Grid Unit Type (UT) Translator and Compare Translations Data Against Office Records:		
	1. Verify Alarm Grid UT Translator	TELCO/INST	DLP-542
	2. Compare Translations Data Against Wiring Records	INST	—
2	Install Growth Equipment in Miscellaneous Frame B (MB)	INST	—
3	Connect Private Signal Leads to Upper Alarm Grid Control Unit	INST	—
4	Connect Cabling As Required From Growth Alarm Grid Control Unit to:		
	1. Aisle Pilot Control Unit(s)	INST	—
	2. Fuse Panel	INST	—
	3. Alarm Grid Display Panel in MOC and Other Work Centers As Required	INST	—
	4. Main Aisle Pilot Lamps	INST	—
	5. Audible Alarm Panel	INST	—
5	Connect Cabling From Aisle Pilot Control Unit(s) to:		
	1. Frame Lineups	INST	—
	2. Aisle Pilot Lamps	INST	—
	3. Main Aisle Pilot Lamps	INST	—
6	If Alarm Transfer Control Unit Was Equipped in Item 2, Connect Cabling From Growth Alarm Transfer Control Unit to Alarm Grid Control Unit As Required Depending on Options Selected	INST	—
7	If Manual Alarm Grouping Control Unit Was Equipped in Item 2, Connect Cabling As Required From Growth Manual Alarm Grouping Control Unit to:		
	1. Alarm Grouping Switch	INST	—
	2. Alarm Grid Control Unit As Required Depending on Options Selected	INST	—
	(Continued on Page 2)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
	NOTE: Items 8 through 11 should be performed quickly and without interruption because removal of fuses disables 86V ringing and tone facilities in entire office		
8	Notify Office Personnel That Following Audible Alarms Will Be Disabled: Minor, Power Minor, Alarm Battery Supply, and Display Panel Audible Ringer	TELCO	—
9	Disable 86V Audible Alarm Power at Ringing and Tone Plant (RTP)	TELCO	DLP-543
10	Connect Cabling for 86V Audible Alarm Power Between Lower Alarm Grid Control Unit and Upper Alarm Grid Control Unit in Growth Associated MB Frame	INST	—
11	Replace RTP Fuses **F1** and **F17** Removed in Item 9	TELCO	—
	NOTE: Item 12.A or 12.B should be performed quickly and without interruption		
12	Complete Connections for Exit Pilot Lamps:		
	A. If Exit Pilot Lamps Are Powered by Operational 4 ESS™ Switch G-Option Alarm Grid:		
	1. Remove Power for Exit Pilot Lamps (At Operational G-Option Alarm Grid)	TELCO	DLP-544
	2. Connect Cabling Between Alarm Grid Control Unit of Growth Alarm Grid and Operational G-Option Alarm Grid	INST	—
	3. Replace Fuse **T** (and **R** if Removed) Removed in Item 12.A.1	TELCO	—
	B. If Exit Pilot Lamps Are Provided by Foreign System, ZA-Option:		
	1. Request Personnel in Foreign System To Remove Exit Pilot Lamps Power	TELCO	—
	2. Connect Cabling Between Growth Alarm Grid Control Unit and Foreign Alarm Equipment	INST	—
	3. Request Personnel in Foreign System To Restore Exit Pilot Lamps Power	TELCO	—
	(Continued on Page 3)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
13	If Alarm Transfer Control Unit Was Equipped in Item 2:		
	1. If Alarm Transfer Via E2 Telemetry to Foreign System Is Required:		
	NOTE: Items 13.1.1 through 13.1.4 should be performed quickly and without interruption		
	1. Notify E2 Control That Status Input Circuit Must Be Disabled	TELCO	—
	2. Request Personnel in E2 Central To Remove Circuit Packs **CP26** and **CP27** at Status Input Circuit Frame	TELCO	—
	3. Complete SI and SIR Wiring for Growth Alarm Grid	INST	—
	4. Request Personnel in E2 Central To Replace Circuit Packs **CP26** and **CP27** Removed in Item 13.1.2	TELCO	—
	NOTE: Items 13.2 through 13.6 should be performed quickly and without interruption		
	2. Request Personnel in Foreign System To Remove Power That Connects to Transfer Contact Closures in Growth Alarm Grid	TELCO	—
	3. If Growth Alarm Grid Provides Power and Ground for Alarm Transfer Relays in Foreign System, B or E and V-Options, Assure That Foreign System Is Not Wired To Provide Battery and Ground With V-Option to Growth Alarm Grid	INST	—
	4. If Growth Alarm Grid Does Not Provide Power and Ground for Alarm Transfer Relays in Foreign System, B or E-Option Only, Request Personnel in Foreign System To Remove Power From Leads That Connect to Transfer Relay in Growth Alarm Grid	TELCO	—
	5. Complete Cabling As Required Between Growth Alarm Transfer Control Unit and Foreign Office Alarm System	INST	—
	6. Request Personnel in Foreign System To Restore Power Removed in Items 13.2 and 13.4	TELCO	—
	(Continued on Page 4)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
14	If Manual Alarm Grouping Control Unit Was Equipped in Item 2:		
	NOTE: Items 14.1 through 14.5 should be performed quickly and without interruption		
	1. Request Personnel in Foreign System To Remove Power That Connects to Manual Alarm Grouping Relay Contact Closures in Growth Alarm Grid	TELCO	—
	2. If Growth Alarm Grid Provides Power and Ground for Alarm Grouping Relays in Foreign System, F and V-Options, Assure That Foreign System Is Not Wired To Provide Battery and Ground to Growth Alarm Grid	INST	—
	3. If Growth Alarm Grid Does Not Provide Power and Ground for Alarm Grouping Control Circuit in Foreign System, F-Option Only, Request Personnel in Foreign System To Remove Power From Leads That Connect to Grouping Relays in Growth Alarm Grid	TELCO	—
	4. Connect Cabling for Foreign Alarm Grouping Circuits	INST	—
	5. Request Personnel in Foreign System To Restore Power Removed in Items 14.1 and 14.3	TELCO	—
15	Remove All Fuses From Fuse Panel for Growth Alarm Grid	INST	—
16	Connect Power Lead Between Fuse Panel for Growth Alarm Grid to Filter Panel in MB Frame	INST	—
17	Install All Fuses in Fuse Panel for Growth Alarm Grid	INST	—
18	Retire Work Center Internal Alarms and Terminate All Internal Alarm Grouping and Routing	TELCO	DLP-559
19	At MCC, if **FOR-ATR** Lamp Is Lighted, Depress **FOR-ATR/REQUEST** Switch at MCC (**FOR-ATR** Lamp Goes Out)	TELCO	—
	NOTE: Present state of alarm transfer should be recorded for later use in reconfiguring alarm transfer	TELCO	—
	(Continued on Page 5)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
20	At Nongrowth **ALARM GROUPING** Switch(es), if **ALARM GROUPING** Lamp(s) Is Lighted for Grid(s) Associated With Growth Grid Work Center, Depress **ALARM GROUPING** Switch(es) to Extinguish Lamp(s)	TELCO	—
	NOTE: Present state of alarm grouping should be recorded for later use in reconfiguring alarm grouping and routing		
21	Recent Change Growth Alarm Grid Member Equipage:		
	1. Recent Change and Verify Member Equipage From UNEQ to GROW	TELCO	DLP-502
	2. Recent Change and Verify Member Equipage From GROW to SGRO	TELCO	DLP-502
	3. Recent Change and Verify Member Equipage From SGRO to OPER	TELCO	DLP-502
22	Reconfigure Work Center Alarm Grouping Arrangement and Routing	TELCO	DLP-560
23	Perform Office Alarm Grid Test on Growth Grid:		
	1. Aisle and Main Aisle Pilot Lamps Test	INST	—
	2. Fuse Alarm Test (Major)	INST	—
	3. Fuse Alarm Test (Minor)	INST	—
	4. Office Alarm Grid ABS Failure Test	INST	—
	5. If Growth Grid Is Equipped With Alarm Transfer Control Unit:		
	1. Set **FOR-ATR/REQUEST** Switch at MCC To Transfer Growth Alarm Grid to Foreign System As Specified by Office Engineering	TELCO	—
	2. Assure That Transfer Occurred As Specified	INST	—
	6. If Growth Grid Is Equipped With Manual Alarm Grouping Control Unit:		
	1. Set Growth Alarm Grouping Switch To Group Growth Alarm Grid With Foreign System As Specified by Office Engineering	TELCO	—
	2. Assure That Alarms Are Occurring in 4 ESS Switch System As Specified	INST	—
	3. Assure That Alarms Are Occurring in Foreign Alarm System As Specified	INST	—

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

		RESPONSIBILITY	
1	Assure That Miscellaneous Frame B (MB) Power Verification Test Has Been Completed	INST	—
2	Remove All Power From Growth MB (by Removing MB Fuses and MB Dedicated Power Distribution Frame Fuses)	INST	—
3	Verify MB Unit Type (UT) Translator and Compare Translations Data Against Office Records:		
	1. Verify MB UT Translator	TELCO/INST	DLP-541
	2. Compare Translations Data Against Wiring Records	INST	—
4	Connect and Verify Interframe Communication Cabling to **TEL** and **TTY** Connectors	INST	—
5	Test TTY Beltlines	TELCO	—
6	Verify Alarm Grid UT Translator and Compare Translations Data Against Office Records (Lower Alarm Grid)		
	1. Verify Alarm Grid UT Translator	TELCO/INST	DLP-542
	2. Compare Translations Data Against Wiring Records	INST	—
7	Connect Private Signal Leads to Lower Alarm Grid Control Unit	INST	—
8	Assure That All Fuses Are Removed From Lower Alarm Grid Fuse Panel	INST	—
9	Connect Cabling From Lower Alarm Grid Control Unit to:		
	1. Alarm Grid Display Panel in MOC and Other Maintenance Locations As Required	INST	—
	2. Main Aisle Pilot Lamps	INST	—
	3. Audible Alarm Panel	INST	—
10	Connect Cabling From Lower Alarm Grid Aisle Pilot Control Unit(s) to:		
	1. Frame Lineups	INST	—
	2. Aisle Pilot Lamps	INST	—
	3. Main Aisle Pilot Lamps	INST	—
	(Continued on Page 2)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
11	If Two Alarm Grids Are To Be Equipped on This Order, Repeat Items 6 through 10 for Upper Alarm Grid	TELCO/INST	—
12	Complete Connections for Exit Pilot Lamps:		
	A. If Exit Pilot Lamps Are Powered by Operational 4 ESS Switch G-Option Alarm Grid:		
	NOTE: Items 12.A.1 through 12.A.4 should be performed quickly and without interruption because removal of fuses disables exit pilot lamps		
	1. Remove Power for Exit Pilot Lamps (at Operational G-Option Alarm Grid)	TELCO	DLP-544
	2. Connect Cabling Between Alarm Grid Control Unit of Lower Growth Alarm Grid and Operational G-Option Alarm Grid Control Unit	INST	—
	3. If Upper Alarm Grid Is Equipped, Connect Cabling Between Alarm Grid Control Units of Upper Growth Alarm Grid and Operational G-Option Alarm Grid Control Unit	INST	—
	4. Replace Fuse **T** (and **R** if Removed) Removed in Item 12.A.1	TELCO	—
	B. If Exit Pilot Lamps Are Provided by Foreign System, ZA-Option:		
	NOTE: Items 12.B.1 through 12.B.4 should be performed quickly and without interruption because removal of power in foreign system disables exit pilot lamps		
	1. Request Personnel in Foreign System To Remove Exit Pilot Lamps Power	TELCO	—
	2. Connect Cabling Between Lower Alarm Grid Control Unit and Foreign Alarm Equipment	INST	—
	3. If Upper Alarm Grid Is Equipped, Connect Cabling Between Upper Alarm Grid Control Unit and Foreign Alarm Equipment	INST	—
	4. Request Personnel in Foreign System To Restore Exit Pilot Lamp Power	TELCO	—
	(Continued on Page 3)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
13	If Lower and/or Upper Alarm Grid Is Equipped With Alarm Transfer Control Unit:		
	1. If Alarm Transfer Via E2 Telemetry to Foreign System Is Required:		
	1. Notify E2 Central That Status Input Circuit Must Be Disabled	TELCO	—
	2. Request Personnel in E2 Central To Remove Circuit Packs **CP26** and **CP27** at Status Input Circuit Frame	TELCO	—
	3. If Lower Alarm Grid Is Equipped With Alarm Transfer Control Unit, Complete SI and SIR Wiring for Lower Alarm Grid	INST	—
	4. If Upper Alarm Grid Is Equipped and Contains Alarm Transfer Control Unit, Complete SI and SIR Wiring for Upper Alarm Grid	INST	—
	5. Request Personnel in E2 Central To Replace Circuit Packs **CP26** and **CP27** Removed in Item 13.1.2	TELCO	—
	NOTE: Items 13.2 through 13.8 should be performed quickly and without interruption		
	2. Request Personnel in Foreign System To Remove Power for Transfer Contact Closures in Lower Alarm Grid, if Equipped With Alarm Transfer Control Unit, B or E-Option	TELCO	—
	3. If Upper Alarm Grid Is Equipped and Contains Alarm Transfer Control Unit, B or E-Option, Request Personnel in Foreign System To Remove Power for Transfer Contact Closures in Upper Alarm Grid	TELCO	—
	4. If Lower (or Upper, if Equipped) Alarm Grid Provides Power and Ground for Alarm Transfer Relays in Foreign System, V-Option, Assure That Foreign System Is Not Wired To Provide Power and Ground to Growth Alarm Grid	INST	—
	5. If Lower (or Upper, if Equipped) Alarm Grid Does Not Provide Power and Ground for Alarm Transfer Relays in Foreign System, Request Personnel in Foreign System To Remove Power for Transfer Relay in Growth Alarm Grid	TELCO	—
	6. If Lower (or Upper, if Equipped) Alarm Grid Has Alarm Battery Supply (ABS) Alarms Transferred, Z-Option, and Growth Alarm Grid Does Not Provide Power and Ground for ABS Transfer, Request Personnel in Foreign System To Remove Power for ABS Circuit in Growth Alarm Grid Transfer Control Unit	TELCO	—
	7. Connect Cabling for Alarm Transfer Circuits	INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
13 (Contd)	8. Request Personnel in Foreign System To Restore Power Removed in Items 13.2 through 13.6	TELCO	—
14	If Lower and/or Upper Alarm Grid Is Equipped With Manual Alarm Grouping Control Unit:		
	NOTE: Items 14.1 through 14.6 should be performed quickly and without interruption		
	1. If Lower (or Upper, if Equipped) Alarm Grid Has Grouping Relay Contact Closures Connected to Foreign System, F-Option, Request Personnel in Foreign System To Remove Power for Manual Alarm Grouping Relay Contact Closures	TELCO	—
	2. If Lower (or Upper, if Equipped) Alarm Grid Provides Power and Ground for Alarm Grouping Control Circuit in Foreign System, V-Option, Assure That Foreign System Is Not Wired To Provide Battery and Ground to Growth Alarm Grid	INST	—
	3. If Lower (or Upper, if Equipped) Alarm Grid Does Not Provide Power and Ground for Alarm Grouping Control Circuit in Foreign System, Request Personnel in Foreign System To Remove Power for Manual Alarm Grouping Control Circuit in Growth Alarm Grid	TELCO	—
	4. If Lower (or Upper, if Equipped) Alarm Grid ABS Alarms Grouped With Foreign System, Z-Option, and Growth Alarm Grid Does Not Provide Power and Ground for ABS Grouping, Request Personnel in Foreign System To Remove Power for ABS Circuit in Growth Alarm Grid Manual Alarm Grouping Control Unit	TELCO	—
	5. Connect Cabling for Foreign Alarm Grouping Circuits	INST	—
	6. Request Personnel in Foreign System To Restore Power Removed in Items 14.1 through 14.4	TELCO	—
	NOTE: Items 15 through 19 should be performed quickly and without interruption because removal of fuses disables the 86V ringing and tone facilities in entire office, and all audible alarms are disabled until these items are completed		
15	Notify Office Personnel That Audible Alarms Will Be Disabled: Minor, Power Minor, Alarm Battery Supply, and Display Panel Audible Ringer	TELCO	—
16	Disable 86V Audible Alarm Power at Ringing and Tone Plant (RTP)	TELCO	DLP-543
17	Connect Cabling for 86V Audible Alarm Power From Lower Alarm Grid Control Unit to RTP	INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
18	If Upper Alarm Grid Is Equipped, Repeat Item 17 for Upper Alarm Grid	INST	—
19	Replace RTP Fuses **F1** and **F17** Removed in Item 16	TELCO	—
20	Install Fuses for Growth MB:		
	1. Install Growth MB Fuses Removed in Item 2	INST	—
	2. Install Growth MB Dedicated Power Distribution Frame Fuses Removed in Item 2	INST	—
	3. Install Fuses As Required for Lower Alarm Grid	INST	—
	4. If Upper Alarm Grid Is Equipped, Install Fuses As Required for Upper Alarm Grid	INST	—
21	Retire Work Center Internal Alarms and Terminate All Alarm Grouping and Routing	TELCO	DLP-559
22	At MCC, if **FOR-ATR** Lamp Is Lighted, Depress **FOR-ATR REQUEST** Switch (**FOR-ATR** Lamp Goes Out)	TELCO	—
	NOTE: Present state of alarm transfer should be recorded for later use in reconfiguring the alarm transfer		
23	At Nongrowth **ALARM GROUPING** Switch(es), if **ALARM GROUPING** Lamp(s) Is Lighted for Grid(s) Associated With Growth Grid Work Center, Depress Alarm Grouping Switch(es) To Extinguish Lamp(s)	TELCO	—
	NOTE: Present state of alarm grouping should be recorded for later use in reconfiguring lamp grouping and routing		
24	Recent Change MB Member Equipage from Unequipped to Operational (Using RC Form 801) and Verify	TELCO	DLP-568
25	Recent Change Alarm Grid Member Equipage:		
	A. Lower Alarm Grid:		
	1. Recent Change and Verify Member Equipage From UNEQ to GROW	TELCO	DLP-502
	2. Recent Change and Verify Member Equipage From GROW to SGRO	TELCO	DLP-502
	3. Recent Change and Verify Member Equipage From SGRO to OPER	TELCO	DLP-502
	(Continued on Page 6)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
25 (Contd)	B. Upper Alarm Grid:		
	1. Recent Change and Verify Member Equipage From UNEQ to GROW	TELCO	DLP-502
	2. Recent Change and Verify Member Equipage From GROW to SGRO	TELCO	DLP-502
	3. Recent Change and Verify Member Equipage From SGRO to OPER	TELCO	DLP-502
26	Reconfigure Work Center Alarm Grouping Arrangement and Routing	TELCO	DLP-560
27	Perform Office Alarm Grid Test on Growth Grid(s):		
	1. Aisle and Main Aisle Pilot Lamps Test	INST	—
	2. Fuse Alarm Test (Major)	INST	—
	3. Fuse Alarm Test (Minor)	INST	—
	4. Office Alarm Grid ABS Failure Test	INST	—
	5. If Lower and/or Upper Alarm Grid Is Equipped With Alarm Transfer:		
	1. Set **FOR-ATR/REQUEST** Switch at MCC To Transfer Growth Alarm Grid(s) to Foreign System As Required	TELCO	—
	2. Assure That Transfer Occurred As Specified	INST	—
	6. If Lower and/or Upper Alarm Grid Is Equipped With Manual Alarm Grouping Control Unit:		
	1. Set Alarm Grouping Switch(es) To Group Growth Alarm Grid(s) With Foreign System As Specified by Office Engineering	TELCO	—
	2. Assure That Alarms Are Occurring in 4 ESS Switch System As Specified by Office Engineering	INST	—
	3. Assure That Alarms Are Occurring in Foreign Alarm System As Specified by Office Engineering	INST	—

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

		RESPONSIBILITY	
1	Remove Fuse **C1** from Growth Associated Alarm Grid Fuse Panel	INST	—
2	Install Growth Alarm Transfer Control Equipment	INST	—
	NOTE: Items 3 through 18 should be performed quickly and without interruption		
3	If Growth Associated Alarm Grid Is X or Y Option (Power Grid), and Growth Alarm Transfer Control Unit Is Equipped With E Option (Alarm Transfer Outgoing) and Z Option (ABS Alarm Transfer), Remove Fuse **HB** From Growth Associated Alarm Grid Fuse Panel	TELCO	DLP-548
4	If Growth Alarm Transfer Control Unit Is Equipped With Z Option (ABS Alarm Transfer) and B Option (Alarm Transfer Incoming), Remove Fuses **PB** and **S** From Growth Associated Fuse Panel	TELCO	DLP-549
5	Remove Fuses From Growth Associated Alarm Grid Fuse Panel Which Provides Power to Signal Distributor (SD) Points	TELCO	DLP-550
6	Connect SD Cabling to Growth Associated Alarm Grid Control Unit	INST	—
7	Connect Cabling As Required From Growth Alarm Transfer Control Unit to Alarm Grid Control Unit (Except Leads FAS, FAB, TNR1, TNR2, and TNR3)	INST	—
8	If Growth Alarm Transfer Control Unit Is Equipped With B Option (Alarm Transfer Incoming), Connect Scan Point Cabling Between Growth Associated Alarm Grid Control Unit and Alarm Transfer Control Unit	INST	—
	NOTE: Items 9 through 10.4 should be performed quickly and without interruption because removal of fuses disables 86V ringing and tone facilities in entire office; therefore, all audible alarms are disabled until these items are completed		
9	Notify Office Personnel That Following Audible Alarms Will Be Disabled: Minor, Power Minor, ABS Alarms, and Display Panel Audible Ringer	TELCO	—
10	If Growth Alarm Transfer Control Unit Is Equipped With B Option (Alarm Transfer Incoming) and Z Option (ABS Alarm Transfer):		
	1. Disable 86V Audible Alarm Power at Ringing and Tone Plant (RTP)	TELCO	DLP-543
	2. Connect Leads FAS and FAB Between Alarm Transfer Control Unit and Alarm Grid Control Unit	INST	—
	(Continued on Page 2)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
10 (Contd)	3. If Display Panel Audible Ringer Is Active in Growth Associated Alarm Grid (J-Option), Connect Paired Leads TNR1 (TNR2 and TNR3, if Required) Between Alarm Transfer Control Unit and Alarm Grid Control Unit	INST	—
	4. Replace RTP Fuses **F1** and **F17** Removed in Item 10.1	TELCO	—
11	If Alarm Transfer Via E2 Telemetry to Foreign System Is Required:		
	1. Notify E2 Central That Status Input Circuit Must Be Disabled	TELCO	—
	2. Request Personnel in E2 Central To Remove Circuit Packs **CP26** and **CP27** at Status Input Circuit Frame	TELCO	—
	3. Complete SI and SIR Wiring Associated With Growth Alarm Grid	INST	—
	4. Request Personnel in E2 Central To Replace **CP26** and **CP27** Circuit Packs Removed in Item 11.2	TELCO	—
12	Request Personnel in Foreign System To Remove Power That Connects to Transfer Contact Closures in Growth Alarm Transfer Control at Growth Associated Alarm Grid	TELCO	—
13	If Growth Associated Alarm Grid Provides Power and Ground for Alarm Transfer Relays in Foreign System (V-Option), Assure That Foreign System Is Not Wired To Provide Battery and Ground	INST	—
14	If Growth Associated Alarm Grid Does Not Provide Power and Ground for Alarm Transfer Relays in Foreign System, Request Personnel in Foreign System To Remove Power for Transfer Relays	TELCO	—
15	Complete Cabling As Required Between Growth Alarm Transfer Control Unit and Foreign Office Alarm System	INST	—
16	Request Personnel in Foreign System To Restore Power Removed in Items 12 and 14	TELCO	—
17	Install Fuse **C1** in Fuse Panel for Growth Associated Alarm Grid Removed in Item 1	INST	—
18	Install Fuses in Fuse Panel for Growth Associated Alarm Grid Which Were Removed in Items 3, 4, and 5	TELCO	—
19	Set **FOR-ATR/REQUEST** Switch at MCC To Transfer Growth Associated Alarm Grid to Foreign System As Specified by Office Engineering	TELCO	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
20	Perform Alarm Grid Test:		
	1. Fuse Alarm Test (Major)	INST	—
	2. Fuse Alarm Test (Minor)	INST	—
	3. Office Alarm Grid ABS Failure Test	INST	—
	4. Assure That Transfer Occurred As Specified by Office Engineering	INST	—

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

		RESPONSIBILITY	
1	Remove Fuse **J** from Growth Associated Alarm Grid Fuse Panel	INST	—
2	Install Growth Manual Alarm Grouping Control Equipment	INST	—
	NOTE: Items 3 through 8 should be performed quickly and without interruption		
3	If Growth Associated Alarm Grid Is X or Y Option (Power Grid), and Growth Manual Alarm Grouping Control Unit Is Equipped With F Option (Alarm Grouping) and Z Option (ABS Alarm Grouping), Remove Fuse **HB** From Growth Associated Fuse Panel	TELCO	DLP-548
4	If Growth Manual Alarm Grouping Control Is Equipped With F Option (Alarm Grouping) and Z Option (ABS Alarm Grouping), Remove Fuses **PB** and **S** From Growth Asssciated Alarm Grid Fuse Panel	TELCO	DLP-549
5	Remove Fuse **X** From Growth Associated Alarm Grid Fuse Panel	TELCO	DLP-547
6	If Alarm Grid Display Panels Are Provided in Locations Other Than MOC, Remove Fuses **Y** and **Z** From Growth Associated Alarm Grid Fuse Panel	TELCO	DLP-546
7	Remove Fuses From Growth Associated Alarm Grid Fuse Panel Which Provides Power to Signal Distributor (SD) Points	TELCO	DLP-550
8	Connect SD Cabling to Growth Associated Alarm Grid Control Unit	INST	—
	NOTE: Items 9 through 10.4 should be performed quickly and without interruption because removal of fuses disables 86V ringing and tone facility in entire office, and all audible alarms are disabled until these items are completed	TELCO	—
9	Notify Office Personnel That Following Audible Alarms Will Be Disabled: Minor, Power Minor, ABS Alarms, and Display Panel Audible Ringer	TELCO	—
10	If Growth Manual Alarm Grouping Control Unit Is Equipped With F Option (Alarm Grouping) and Z Option (ABS Alarm Grouping):		
	1. Disable 86V Audible Alarm Power at Ringing and Tone Plant (RTP)	TELCO	DLP-543
	2. Connect Leads FAS and FAB Between Manual Alarm Grouping Control Unit and Alarm Grid Control Unit	INST	—
	(Continued on Page 2)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
10 (Contd)	3. If Display Panel Audible Ringer Is Active in Growth Associated Alarm Grid, Connect Paired Leads TNR1 (TNR2 and TNR3, if Required) Between Manual Alarm Grouping Control Unit and Alarm Grid Control Unit	INST	—
	4. Replace RTP Fuses **F1** and **F17** Removed in Item 10.1	TELCO	—
11	Connect Cabling As Required From Growth Manual Alarm Grouping Control Unit to:		
	1. Alarm Grid Control Unit	INST	—
	2. Alarm Grouping Switch	INST	—
	3. Power Alarm Control Unit (If Required)	INST	—
12	Connect Cabling As Required From Alarm Grid Control Unit to Alarm Grid Display Panel(s) in Maintenance Center Other Than MOC	INST	—
13	Complete Connections for Exit Pilot Lamps Provided by Foreign Alarm System, ZA-Option:		
	1. Remove Fuse **U** From Growth Associated Alarm Grid Fuse Panel	TELCO	DLP-551
	2. Connect Cabling From Growth Manual Alarm Grouping Control Unit to Auxiliary Exit Pilot Relay Lamps	INST	—
	3. Replace Fuse **U** Removed in Item 13.1	TELCO	—
14	Connect Cabling As Required From Power Alarm Control Unit to:		
	1. Auxiliary Exit Pilot Relay in Growth Manual Grouping Control Unit	INST	—
	2. Alarm Grid Control Unit	INST	—
15	Connect Private Signal Leads to Alarm Grid Control Unit	INST	—
16	Complete Connections for Exit Pilot Lamps		
	A. If Growth Associated Alarm Grid Provides Battery and Ground for Floor and AT/AG Exit Pilot Lamps, G-Option:		
	1. Remove Fuse **R** From Growth Associated Alarm Grid Fuse Panel	TELCO	DLP-552
	2. Connect Cabling Between Growth Associated Alarm Grid Control Unit and Exit Pilot Lamps	INST	—
	3. Replace Fuse **R** Removed in Item 16.A.1	TELCO	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
16 (Contd)	B. If Exit Pilot Lamps Are Powered by Another 4 ESS Switch G-Option Alarm Grid:		
	1. Remove Fuse **R** From G-Option Alarm Grid Which Supplies Power for Exit Pilot Lamps	TELCO	DLP-552
	2. Connect Cabling Between Alarm Grid Control Unit of Growth Associated Alarm Grid and Operational G-Option Grid	INST	—
	3. Replace Fuse **R** Removed in Item 16.B.1	TELCO	—
	C. If Exit Pilot Lamps Are Provided by Foreign System, ZA-Option:		
	NOTE: Items 16.C.1 through 3 should be performed quickly and without interruption because removal of power in foreign system disables exit pilot lamps		
	1. Request Personnel in Foreign System to Remove Power for Exit Pilot Lamps Which Are Used in 4 ESS Switch Alarm System	TELCO	—
	2. Connect Cabling Between Growth Associated Alarm Grid and Foreign Alarm Equipment	INST	—
	3. Request Personnel in Foreign System To Restore Power for Exit Power Lamps	TELCO	—
17	Complete Connections for Alarm Grouping With Foreign Alarm System		
	NOTE: Items 17.1 through 17.6 should be performed quickly and without interruption		
	1. If Growth Associated Alarm Grid Is a Power Grid Which Supervises Power Equipment Not in Area of 4 ESS Switch Equipment (X-Option), Request Personnel in Foreign System To Remove Power for Alarm Transfer and/or Grouping Circuits	TELCO	—
	2. Request Personnel in Foreign System To Remove Power That Connects to Manual Alarm Grouping Relay Contact Closures	TELCO	—
	3. If Growth Associated Alarm Grid Provides Battery and Ground for Alarm Grouping Control Circuit in Foreign System, Assure That Foreign System Is Not Wired To Provide Battery and Ground to Growth Associated Grid	INST	—
	4. If Growth Associated Alarm Grid Does Not Provide Battery and Ground for Alarm Grouping Control Circuit in Foreign System, Request Personnel in Foreign System To Remove Power Provided for Grouping Relays in Growth Alarm Grid	TELCO	—
	(Continued on Page 4)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
17 (Contd)	5. Connect Cabling for Foreign Alarm Grouping Circuits	INST	—
	6. Request Personnel in Foreign System To Restore All Power Removed in Items 17.1, 17.2, and 17.4	TELCO	—
18	Install Fuses in Growth Associated Alarm Grid Removed in Items 3 Through 7	INST	—
19	Set Appropriate Alarm Grouping Switch at Exit Pilot Lamps To Group Growth Associated Alarm Grid With Specified Foreign Alarm System	TELCO	—
20	Perform Office Alarm Grid Tests on Growth Grid:		
	1. Fuse Alarm Test (Major)	INST	—
	2. Fuse Alarm Test (Minor)	INST	—
	3. Office Alarm Grid ABS Failure Test	INST	—
	4. Assure That Alarms Are Occurring in 4 ESS Switch As Specified by Office Engineering	INST	—
	5. Assure That Alarms Are Occurring in Foreign Alarm System As Specified by Office Engineering	INST	—

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

		RESPONSIBILITY	
1	If Exit Pilot Lamp Assembly Being Added Is First Exit Pilot Lamp on This Floor:		
	1. Assure That Power Is Not Provided for Exit Pilot Lamps at G-Option Alarm Grid on This Floor	INST	—
	2. Connect Cabling Between G-Option Alarm Grid Control Unit on This Floor and Added Exit Pilot Lamps	INST	—
	NOTE: Items 1.3 through 1.5 should be performed quickly and without interruption because removal of fuses disables exit pilot lamps		
	3. Remove Power for Exit Pilot Lamps (At G-Option Alarm Grid on Other Floor(s))	TELCO	DLP-544
	4. Connect Cabling Between Added Exit Pilot Lamp on This Floor and Specified Exit Pilot Lamps on Other Floor(s)	INST	—
	5. Insert Fuse **T** (and **R** if Required) Removed in Item 1.3	TELCO	—
2	If Exit Pilot Lamp Assembly Is Powered by 4 ESS Switch Alarm Grid and if Exit Pilot Lamp Assembly Being Added Is Other Than First Exit Pilot Lamp:		
	NOTE: Items 2.1 through 2.5 should be performed quickly and without interruption because removal of power in foreign system disables exit pilot lamps		
	1. Remove Power for Exit Pilot Lamps (At G-Option Alarm Grid on This Floor)	TELCO	DLP-544
	2. Remove Power for Power Exit Pilot Lamps (At ZB-Option Alarm Grid)	TELCO	DLP-544
	3. If Exit Pilot Lamps Being Added Are Multiplied With Exit Pilot Lamps on Other Floor(s):		
	1. Remove Power for Exit Pilot Lamps (At G-Option Alarm Grid on Each Floor Involved)	TELCO	DLP-544
	2. Connect Cabling Between Exit Pilot Lamps Being Added and Existing Exit Pilot Lamps on Other Floor(s)	TELCO	—
	4. Connect Cabling Between Exit Pilot Lamps Added and Existing Lamps on This Floor	INST	—
	5. Replace Fuse **T** (and **R** if Removed) Removed in Items 2.1, 2.2, and 2.3.1	TELCO	—
	(Continued on Page 2)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
3	If Exit Pilot Lamps Are Provided by Foreign System, ZA-Option:		
	NOTE: Items 3.1 through 3.4 should be performed quickly and without interruption because removal of power in foreign system disables exit pilot lamps		
	1. Request Personnel in Foreign System To Restore Exit Pilot Lamps Power	TELCO	—
	2. If Power Exit Pilot Lamp Is Provided by Foreign System, Request Personnel in Foreign System To Remove Power for Power Exit Pilot Lamps	TELCO	
	3. Connect Cabling Between 4 ESS Switch ZA-Option Alarm Grid Control Unit and Exit Pilot Lamps Being Added	INST	—
	4. Request Personnel in Foreign System To Restore Exit Pilot Lamps Power	TELCO	—
4	Perform Exit Pilot Lamps Tests:		
	1. Fuse Alarm Test (Major)	INST	—
	2. Fuse Alarm Test (Minor)	INST	—

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

		RESPONSIBILITY	
1	Verify Disabled Status of MFS Transmitter and/or Receiver Circuit(s) Being Added (OP:TRKSTAT,CIN a SVC* b *;SUM:NUM 1,STAT CAD.DSA!)	TELCO	DLP-527
2	If Transmit and Receive Paths of MF Circuits Being Added Interface to System Via D4 Channel Bank, DSX, and Digital Terminal Equipment, Install and Align D4 Channel Bank	INST	—
3	If Local Procedures and Method of Procedure Allow Insertion of MFS Circuit Packs Without Removal of Power From MFS Circuit Pack Locations: Select and Install Circuit Packs	INST	—
4	If Power Must Be Removed From MFS Circuit Pack Locations Before Inserting Circuit Packs:		
	A. If Circuits Being Added Are in 04 Through 15 Range:		
	1. From Office Records, Determine Circuit Identification Name (CIN) of MFS Circuits (00-15) in Active State and Contained in MFS Frame to Which Circuits Are Being Added	TELCO	—
	2. Change State of Active MFS Circuits to Maintenance Lock-Out (SET:TRKSTAT MTC.LKO,CIN a SVC* b *;SUM:NUM 1!)	TELCO	DLP-528
	3. Remove Fuse **F1** at Location 52-8 (MFT and MFR Circuits 00-15); **PF** Lamp Lighted	TELCO	—
	4. Select and Install Circuit Packs	INST	—
	5. Replace Fuse (**F1**) Removed in Item 4.A.3. (**PF** Lamp Off)	TELCO	—
	6. Restore Common Tone Supply (**CTSA**) Using Reset Pushbutton (**RSTA**)	TELCO	—
	7. Change MFS Circuits in Maintenance Lock-Out State to Active (SET:TRKSTAT ACT,CIN a SVC* b *;SUM:NUM 1!)	TELCO	DLP-528
	B. If Circuits Being Added Are in 20 Through 31 Range:		
	1. From Office Records, Determine Circuit Identification Name (CIN) of MFS Circuits (16-31) in Active State and Contained in MFS Frame to Which Circuits Are Being Added	TELCO	—
	2. Change State of Active MFS Circuits to Maintenance Lock-Out (SET:TRKSTAT MTC.LKO,CIN a SVC* b *;SUM:NUM 1!)	TELCO	DLP-528
	(Continued on Page 2)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
4 (Contd)	3. Remove Fuse **F2** at Location 52-8 (MFT and MFR Circuits 16-31); **PF** Lamp Lighted	TELCO	—
	4. Select and Install Circuit Packs	INST	—
	5. Replace Fuse (**F2**) Removed in Item 4.B.3. (**PF** Lamp Off)	TELCO	—
	6. Restore Common Tone Supply (**CTSB**) Using Reset Pushbutton (**RSTB**)	TELCO	—
	7. Change MFS Circuits in Maintenance Lock-Out State to Active (SET:TRKSTAT ACT,CIN a SVC* b *;SUM:NUM 1!)	TELCO	DLP-528
5	Change Added Transmitter and/or Receiver Circuit(s) to Circuit Administration (CAD) Lock-Out State (SET:TRKSTAT CAD.LKO,CIN a SVC* b *;SUM:NUM 1!)	TELCO	DLP-525
6	Test MFS Transmitter and/or Receiver Circuits Being Added	INST	—
7	If MFS Transmitter and/or Receiver Circuit(s) Being Added Are To Be Immediately Activated, Change MFS Transmitter and/or Receiver Circuit(s) to Active State and Test	TELCO/INST	DLP-526

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

		RESPONSIBILITY	
1	Assure That Remote Office Test Line (ROTL) Frame Power Verification Tests Have Been Completed	INST	—
2	Assure That All Fuses Are Removed From Fuse Panel for Growth Frame	INST	—
3	Verify Status of Growth ROTL Unit Trunks (Upper ROTL Unit) (**VER:TRK:CIN** a!):		
	1. ROTL Control Access Trunk of Port 0 (RT0A)	TELCO/INST	DLP-530
	2. ROTL Trunk Under Test Access Trunk of Port 0 (RT0T)	TELCO/INST	DLP-530
	3. ROTL Control Access Trunk of Port 1 (RT1A)	TELCO/INST	DLP-530
	4. ROTL Trunk Under Test Access Trunk of Port 1 (RT1T)	TELCO/INST	DLP-530
	5. ROTL Port Access Circuit Unsecured (RPCU)	TELCO/INST	DLP-530
4	If Lower ROTL Unit or 105 Test Line(s) Is To Be Equipped on This Order: Verify Status of Trunk(s) for (A) Lower ROTL Unit or (B) 105 Test Line(s) (**VER:TRK:CIN** a!):		
	A. Lower ROTL Unit:		
	1. RT0A	TELCO/INST	DLP-530
	2. RT0T	TELCO/INST	DLP-530
	3. RT1A	TELCO/INST	DLP-530
	4. RT1T	TELCO/INST	DLP-530
	5. RPCU	TELCO/INST	DLP-530
	B. 105 Test Line(s):		
	1. Verify Trunk Status for Growth 105 Test Line	TELCO/INST	DLP-530
	2. If Two 105 Test Lines Are To Be Equipped on This Order: Repeat Item 4.B.1 for Second 105 Test Line	TELCO/INST	—
5	Connect and Verify Alarm Cables	INST	—
6	Connect and Verify Signaling Leads From Ringing and Tone Plant	INST	—
7	Connect and Verify Scan and SD Cables	INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
8	Connect and Verify Cables From Multifrequency Signaling Frame	INST	—
9	Insert All Fuses in Fuse Panel for Growth Frame	INST	—
10	If Metallic Trunk (MT) Units Have Not Been Installed for Growth ROTL Ports: Discontinue This Growth Procedure Until MT Units Have Been Installed in MT Frame, Aligned, and Tested	TELCO/INST	—
11	If Transmission Leads Are Connected to D4 Channel Bank, DSX 1, and Digital Terminal Frame Equipment, Complete Receiver and Transmit Level Adjustments on D4 Channel Bank Equipment	INST	—
12	Align 52A Responder(s) in Growth ROTL Frame Using 52C Test Set	INST	—
13	Set All Operational Office ROTL Unit Trunks to CAD Lock-Out State and Verify	TELCO	DLP-531
14	Set Growth ROTL Unit Trunks to Active State (Upper ROTL Unit) (SET:TRKSTAT ACT,CIN aATM*RTO/A)	TELCO	DLP-532
15	Perform ROTL Unit Test Using ITE 5462 Test Set and Local Office 105 Test Line (Growth Upper ROTL Unit)	INST	—
16	Perform ROTL Unit Test Using ITE 5462 Test Set and Far-End Office 105 Test Line (Growth Upper ROTL Unit)	INST	—
17	Align Growth ROTL Unit Attenuator Pads (Upper ROTL Unit)	INST	—
18	Set All Operational ROTL Port Access Circuit (RPAC) Trunks to CAD Disable State and Verify	TELCO	DLP-533
19	Set One RPAC Trunk Associated With Growth Upper ROTL Unit to Active State (SET:TRKSTAT ACT,CIN aATM*RPCU!)	TELCO	DLP-534
20	Test CAROT/ROTL Compatibility or Manual Test Position/ROTL Compatibility for RPAC Trunk Activated in Item 19:		
	A. Arrange for CAROT Center To Exercise CAROT/ROTL Compatibility Test, Using a Far-End Office 105 Test Line, for RPAC Trunk Activated in Item 19	TELCO/INST	DLP-535
	B. Arrange for Associated Remote Office Manual Test Position To Exercise Compatibility Test, Using a Far-End Office 105 Test Line, for RPAC Trunk Activated in Item 19	TELCO/INST	DLP-536
21	Set RPAC Trunk Activated in Item 19 to CAD Disable State and Verify	TELCO	DLP-537
22	Set Remaining RPAC Trunk Associated With Growth Upper ROTL Unit to Active State (SET:TRKSTAT ACT,CIN aATM*RPCU!)	TELCO	DLP-534

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
23	Test CAROT/ROTL Compatibility or Manual Test Position/ROTL Compatibility for RPAC Trunk Activated in Item 22:		
	A. Arrange for CAROT Center To Exercise CAROT/ROTL Compatibility Test, Using Far-End Office 105 Test Line, for RPAC Trunk Activated in Item 22	TELCO/INST	DLP-535
	B. Arrange for Associated Remote Office Manual Test Position To Exercise Compatibility Test, Using Far-End Office 105 Test Line, for RPAC Trunk Activated in Item 22	TELCO/INST	DLP-536
24	If Lower ROTL Unit Is To Be Equipped on This Order:		
	1. Set RPAC Trunk Activated in Item 22 to CAD Disable State and Verify	TELCO	DLP-537
	2. Set ROTL Trunks Associated With Growth Upper ROTL Unit to CAD Lock-Out State and Verify	TELCO	DLP-538
	3. Set Growth ROTL Trunks to Active State (Lower ROTL Unit) (SET:TRKSTAT ACT,CIN aATM*RTO/A)	TELCO	DLP-532
	4. Perform ROTL Unit Test Using ITE 5462 Test Set and Local Office 105 Test Line (Lower ROTL Unit)	INST	—
	5. Perform ROTL Unit Test Using ITE 5462 Test Set and Far-End Office 105 Test Line (Lower ROTL Unit)	INST	—
	6. Align Growth ROTL Unit Attenuator Pads (Lower ROTL Unit)	INST	—
	7. Set One RPAC Trunk Associated With Growth Lower ROTL Unit to Active State (SET:TRKSTAT ACT,CIN aATM*RPCU!)	TELCO	DLP-534
	8. Test CAROT/ROTL Compatibility or Manual Test Position/ROTL Compatibility for RPAC Trunk Activated in Item 24.7:		
	A. Arrange for CAROT Center To Exercise CAROT/ROTL Compatibility Test, Using Far-End Office 105 Test Line, for RPAC Trunk Activated in Item 24.7	TELCO/INST	DLP-535
	B. Arrange for Associated Remote Office Manual Test Position To Exercise Compatibility Test, Using Far-End Office 105 Test Line, for RPAC Trunk Activated in Item 24.7	TELCO/INST	DLP-536
	9. Set RPAC Trunk Activated in Item 24.7 to CAD Disabled State and Verify	TELCO	DLP-537
	(Continued on Page 4)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
24 (Contd)	10. Set Remaining RPAC Trunk Associated With Growth Lower ROTL Unit to Active State (**SET:TRKSTAT ACT,CIN** a**ATM*RPCU!**)	TELCO	DLP-534
	11. Test CAROT/ROTL Compatibility or Manual Test Position/ROTL Compatibility for RPAC Trunk Activated in Item 24.10:		
	A. Arrange for CAROT Center To Exercise CAROT/ROTL Compatibility Test, Using Far-End Office 105 Test Line, for RPAC Trunk Activated in Item 24.10	TELCO/INST	DLP-535
	B. Arrange for Associated Remote Office Manual Test Position To Exercise Compatibility Test, Using Far-End Office 105 Test Line, for RPAC Trunk Activated in Item 24.10	TELCO/INST	DLP-536
25	Set All Office RPAC Trunks to Active State and Verify	TELCO	DLP-539
26	Set All Office ROTL Unit Trunks to Active State and Verify	TELCO	DLP-540
27	If 105 Test Line(s) Is To Be Equipped on This Order:		
	1. Set All Office 105 Test Lines to CAD Lock-Out State and Verify	TELCO	DLP-545
	2. Set Growth 105 Test Line to Active State (105 Test Line 0) (**SET:TRKSTAT ACT,TAN** a!)	TELCO	DLP-555
	3. Perform 105 Test Line Local Office Test Using ITE 5462 Test Set (105 Test Line 0)	INST	—
	4. Arrange for Far-End Office To Exercise ROTL Compatibility Test With Local Office (105 Test Line 0)	TELCO/INST	DLP-556
	5. If Two 105 Test Lines Are To Be Equipped on This Order:		
	1. Set Growth 105 Test Line to CAD Lock-Out State and Verify (105 Test Line 0)	TELCO	DLP-557
	2. Set Growth 105 Test Line to Active State (105 Test Line 1) (**SET:TRKSTAT ACT,TAN** a!)	TELCO	DLP-555
	3. Perform 105 Test Line Local Office Test Using ITE 5462 Test Set (105 Test Line 1)	INST	—
	4. Arrange for Far-End Office To Exercise ROTL Compatibility Test With Local Office (105 Test Line 1)	TELCO/INST	DLP-556
	6. Set All Office 105 Test Lines to Active State and Verify	TELCO	DLP-558

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
		RESPONSIBILITY	
1	Verify Status of Growth ROTL Trunks (Lower ROTL Unit) (**VER:TRK:CIN** a!):		
	1. ROTL Control Access Trunk of Port 0 (RT0A)	TELCO/INST	DLP-530
	2. ROTL Trunk Under Test Access Trunk of Port 0 (RT0T)	TELCO/INST	DLP-530
	3. ROTL Control Access Trunk of Port 1 (RT1A)	TELCO/INST	DLP-530
	4. ROTL Trunk Under Test Access Trunk of Port 1 (RT1T)	TELCO/INST	DLP-530
	5. ROTL Port Access Circuit Unsecured (RPCU)	TELCO/INST	DLP-530
2	Perform Preliminary Installation Activities	INST	—
3	Install ROTL Unit in Growth ROTL Frame	INST	—
4	Assure That Fuses Are Removed From Fuse Panel for Growth ROTL Unit	INST	—
	NOTE: Perform Items 5 through 7 without interruption		
5	Remove Fuse in Power Distribution Frame for Growth Associated ROTL Frame	TELCO	—
6	Install **DS2** Terminal Strip and Associated Equipment at Growth Associated ROTL Frame Location 79	INST	—
7	Charge Filter Capacitor and Restore –48V Power to Growth Associated ROTL Frame	TELCO	DLP-529
8	Connect Intraframe Wiring for Growth ROTL Unit	INST	—
9	Connect and Verify Alarm Cables	INST	—
10	Connect and Verify Signaling Leads From Ringing and Tone Plant	INST	—
11	Connect and Verify Scan and SD Cables	INST	—
12	Connect and Verify Cables From Multifrequency Signaling Frame	INST	—
13	Insert All Fuses in Fuse Panel for Growth ROTL Unit	INST	—
14	If Metallic Trunk (MT) Units Have Not Been Installed for Growth ROTL Ports, Discontinue This Growth Procedure Until MT Units Have Been Installed in MT Frame, Aligned, and Tested	TELCO/INST	—
15	If Transmission Leads Are Connected to D4 Channel Bank, DSX 1, and Digital Terminal Frame Equipment, Complete Receiver and Transmit Level Adjustments on D4 Channel Bank Equipment	INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
16	Align Growth ROTL 52A Responder Using 52C Test Set	INST	—
17	Set All Operational Office ROTL Unit Trunks to CAD Lock-Out State and Verify	TELCO	DLP-531
18	Set Growth ROTL Unit Trunks to Active State (**SET:TRKSTAT ACT,CIN** a**ATM*RTO/A**)	TELCO	DLP-532
19	Perform Test on Growth ROTL Unit Using ITE 5462 Test Set and Local Office 105 Test Line	INST	—
20	Perform Test on Growth ROTL Unit Using ITE 5462 Test Set and Far-End Office 105 Test Line	INST	—
21	Align Growth ROTL Unit Attenuator Pads	INST	—
22	Set All Operational ROTL Port Access Circuit (RPAC) Trunks to CAD Disable State and Verify	TELCO	DLP-533
23	Set One RPAC Trunk Associated With Growth ROTL Unit to Active State (**SET:TRKSTAT ACT,CIN** a**ATM*RPCU!**)	TELCO	DLP-534
24	Test CAROT/ROTL Compatibility or Manual Test Position/ROTL Compatibility for RPAC Trunk Activated in Item 23:		
	A. Arrange for CAROT Center To Exercise CAROT/ROTL Compatibility Test, Using Far-End Office 105 Test Line, for RPAC Trunk Activated in Item 23	TELCO/INST	DLP-535
	B. Arrange for Associated Remote Office Manual Test Position To Exercise Compatibility Test, Using Far-End Office 105 Test Line, for RPAC Trunk Activated in Item 23	TELCO/INST	DLP-536
25	Set RPAC Trunk Activated in Item 23 to CAD Disable State and Verify	TELCO	DLP-537
26	Set Remaining RPAC Trunk Associated With Growth ROTL Unit to Active State (**SET:TRKSTAT ACT,CIN** a**ATM*RPCU!**)	TELCO	DLP-534
27	Test CAROT/ROTL Compatibility or Manual Test Position/ROTL Compatibility for RPAC Trunk Activated in Item 26:		
	A. Arrange for CAROT Center To Exercise CAROT/ROTL Compatibility Test, Using Far-End Office 105 Test Line, for RPAC Trunk Activated in Item 26	TELCO/INST	DLP-535
	B. Arrange for Associated Remote Office Manual Test Position To Exercise Compatibility Test, Using Far-End Office 105 Test Line, for RPAC Trunk Activated in Item 26	TELCO/INST	DLP-536
28	Set All Office RPAC Trunks to Active State and Verify	TELCO	DLP-539
29	Set All Office ROTL Unit Trunks to Active State and Verify	TELCO	DLP-540

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

		RESPONSIBILITY	
1	Verify Status of 105 Test Line Trunk (**VER:TRK:CIN** a!)	TELCO/INST	DLP-530
2	Perform Preliminary Installation Activities	INST	—
3	Install 105 Test Line in Growth Remote Office Test Line (ROTL) Frame	INST	—
4	Assure That Fuses Are Removed From Fuse Panel for Growth 105 Test Line	INST	—
	NOTE: Perform Items 5 through 7 without interruption		
5	Remove Fuse in Power Distribution Frame for Growth Associated ROTL Frame	TELCO	—
6	Install **TST/LN** Terminal Strip, Relays, and Associated Equipment at Growth Associated ROTL Frame Location 79	INST	—
7	Charge Filter Capacitor and Restore −48V Power to Growth Associated ROTL Frame	TELCO	DLP-529
8	Connect Intraframe Wiring for Growth 105 Test Line	INST	—
9	Connect and Verify Scan and SD Cables	INST	—
10	Connect and Verify Cables From Multifrequency Signaling Frame	INST	—
11	Insert All Fuses in Fuse Panel for Growth 105 Test Line	INST	—
12	If Transmission Leads Are Connected to D4 Channel Bank, DSX 1, and Digital Terminal Frame Equipment, Complete Receiver and Transmit Level Adjustments on D4 Channel Bank Equipment	INST	—
13	Set All Office 105 Test Lines to CAD Lock-Out State and Verify	TELCO	DLP-545
14	Set Growth 105 Test Line to Active State (**SET:TRKSTAT ACT,TAN** a!)	TELCO	DLP-555
15	Perform Local Office Test on Growth 105 Test Line Using ITE 5462 Test Set	INST	—
16	Arrange for a Far-End Office To Exercise ROTL Compatibility Test With Local Office on Growth 105 Test Line	TELCO/INST	DLP-556
17	Set All Office 105 Test Lines That Are Set in CAD Lock-Out State to Active State and Verify	TELCO	DLP-558

ADD 105 TEST LINE TO REMOTE OFFICE TEST LINE FRAME — SUPPORT TO INSTALLER (INST)

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

		RESPONSIBILITY	
1	Verify Network Management Dynamic Overload Control (DOC) Transceiver UT Translator and Compare Translations Data Against Office Records:		
	1. Verify Network Management DOC Transmitter UT Translator (**VER:UTYPE:DOCT 0!**)	TELCO/INST	DLP-561
	2. Compare Translations Data Against Wiring Records	INST	—
2	Assure That Fuses Are Removed for DOC Transceiver Unit To Be Added	INST	—
3	Assure That Power Switch on Growth DOC Transceiver Unit Is Set to Off	INST	—
4	Install DOC Transceiver Unit in Network Management Display Control (NMDC) Frame	INST	—
5	In Added DOC Transceiver Unit, Assure That **FB588** Circuit Packs Switches Are Set to Transmit Position	INST	—
6	Complete Connections for Transmit and Acknowledge Signaling:		
	A. If Added DOC Transceiver Modules Are Used With 43A1 Data Set and Carrier Telegraph Interface (CTI) Unit To Be Added Is First CTI Unit in NMDC Frame, Unit 0:		
	1. Install 43A1 CTI Unit 00 in NMDC Frame Equipment Location 064-00	INST	—
	2. Install Fuse Panel (J4A011AH-1) in NMDC Frame	INST	—
	3. Assure That All Fuses Are Removed From Fuse Panel Added in Item 6.A.2	INST	—
	4. Connect Cabling Between Added Fuse Panel and Each CTI Equipment Location in NMDC Frame	INST	—
	NOTE: Items 6.A.5 through 6.A.10 should be performed quickly and without interruption because +24V will be removed from NMDC frame		
	5. Remove Power on Each Operational Unit in NMDC Frame Using Unit Power Switch	TELCO	DLP-566
	6. At PD Frame, Remove **+24 VA** and **+24 VB** Fuses Supplying Growth NMDC Frame	TELCO	—
	(Continued on Page 2)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
6 (Contd)	7. Connect Cabling Between Added Fuse Panel (J4A011AH-1) and Filter Unit	INST	—
	8. Replace PD Frame Fuses Removed in Item 6.A.6	TELCO	—
	9. Charge Filter Capacitors and Restore +24V Power to NMDC Frame	TELCO	DLP-562
	10. Restore Power on Each Operational Unit in NMDC Frame Except Growth Transmitter Unit	TELCO	DLP-565
	11. Connect Cabling Between Added CTI Unit and Added DOC Transceiver Modules	INST	—
	12. Connect Cabling Between Added CTI Unit and 43A1 Data Set	INST	—
	13. Install Fuse **U00** in Added Fuse Panel (J4A011AH-1)	TELCO	DLP-564
	B. If Added DOC Transceiver Modules Are Used With 43A1 Data Set and CTI Unit(s) To Be Added Are 1 Through 19:		
	1. Assure That Fuses Are Removed for CTI Unit(s) To Be Added	INST	—
	2. Install 43A1 CTI Unit(s) in NMDC Frame	INST	—
	3. Connect Cabling Between Added CTI Unit(s) and Added DOC Transceiver Modules	INST	—
	4. Connect Cabling Between Added CTI Unit(s) and 43A1 Data Set(s)	INST	—
	5. Install Fuse(s) for Added CTI Unit(s) in Fuse Panel (J4A011AH-1)	TELCO	DLP-564
	C. If Added DOC Transceiver Modules Are Used With 43B1, 108D, 108E, 109E, or 109H Data Sets: Connect Transmit and Acknowledge Cabling Between Added DOC Transceiver Modules and Data Sets	INST	—
	D. If Added DOC Transceiver Modules Are Used With Balanced Loop and Loop Resistance Is Less Than 4500 Ohms: Connect Transmit Leads WXYTA and WXYTB and Acknowledge Leads WXYRR and WXYOR to Applicable Transmission Equipment	INST	—
	E. If Added DOC Transceiver Modules Are Used With E and M Signaling and Balanced Loop Resistance Is Greater Than 4500 Ohms: Connect Transmit and Acknowledge Cabling Between Added DOC Transceiver Modules and E and M Applique	INST	—
	(Continued on Page 3)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
7	Connect Cabling From Added DOC Transceiver Unit to:		
	1. DOC Transceiver Unit 0	INST	—
	2. Fuse Panel (J4A011AD-1)	INST	—
	3. Control Panel	INST	—
	4. Signal Processor	INST	—
8	Recent Change Network Management DOC Transmitter Equipage to Operational (Using RC Form 801) and Verify	TELCO	DLP-568
9	Install Fuses for Added DOC Transceiver	TELCO	DLP-563
10	Power Up Added DOC Transceiver Unit Using Power Switch	TELCO	DLP-565
11	Perform DOC Transceiver Tests:		
	1. MC1 and MC2 Transmitting Test	TELCO/INST	DLP-569
	2. MC3 Loop Test	TELCO/INST	DLP-570

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

		RESPONSIBILITY	
1	Remove Power on Growth Associated Dynamic Overload Control (DOC) Transceiver Unit with Power Switch	TELCO	DLP-566
2	If Growth DOC Transceiver Is Used in Transmit Mode (Unit 0, 1, 2, or 3):		
	1. Set Switches on **FB588** Circuit Packs to Transmit Position	INST	—
	2. Install Circuit Packs in Growth Associated DOC Transceiver Unit	INST	—
3	If Growth DOC Transceiver Is Used in Receive Mode (Unit 4):		
	1. Set Switch on **FB588** Circuit Packs to Receive Position	INST	—
	2. Install Circuit Packs in Growth Associated DOC Transceiver Unit	INST	—
4	Complete Connections for Transmit and Acknowledge Signaling:		
	A. If Growth DOC Transceiver Modules Are Used With 43A1 Data Set and Carrier Telegraph Interface (CTI) Unit To Be Added Is First CTI Unit in NMDC Frame, Unit 0:		
	1. Install 43A1 CTI Unit 00 in NMDC Frame Equipment Location 046-00	INST	—
	2. Install Fuse Panel (J4A011AH-1) in NMDC Frame	INST	—
	3. Assure That All Fuses Are Removed From Fuse Panel Added in Item 4.A.2	INST	—
	4. Connect Cabling Between Added Fuse Panel and Each CTI Equipment Location in NMDC Frame	INST	—
	NOTE: Items 4.A.5 through 4.A.10 should be performed quickly and without interruption because +24V will be removed from NMDC frame		
	5. Remove Power on Each Operational Unit in NMDC Frame Using Unit Power Switch	TELCO	DLP-566
	6. At PD Frame, Remove **+24 VA** and **+24 VB** Fuses Supplying Growth Associated NMDC Frame	TELCO	—
	7. Connect Cabling Between Added Fuse Panel (J4A011AH-1) and Filter Unit	INST	—
	(Continued on Page 2)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
4 (Contd)	8. Replace PD Frame Fuses Removed in Item 4.A.6	TELCO	—
	9. Charge Filter Capacitors and Restore +24V Power to NMDC Frame	TELCO	DLP-562
	10. Restore Power on Each Operational Unit in NMDC Frame Except Growth Associated Transmitter Unit	TELCO	DLP-565
	11. Connect Cabling Between Added CTI Unit and Added DOC Transceiver Modules	INST	—
	12. Connect Cabling Between Added CTI Unit and 43A1 Data Set	INST	—
	13. Install Fuse **U00** in Added Fuse Panel (J4A011AH-1)	TELCO	DLP-564
	B. If Added DOC Transceiver Modules Are Used With 43A1 Data Set and CTI Unit(s) To Be Added Are 1 Through 19:		
	1. Assure That Fuses Are Removed for CTI Unit(s) To Be Added	INST	—
	2. Install 43A1 CTI Unit(s) in NMDC Frame	INST	—
	3. Connect Cabling Between Added CTI Unit(s) and Added DOC Transceiver Modules	INST	—
	4. Connect Cabling Between Added CTI Unit(s) and 43A1 Data Set(s)	INST	—
	5. Install Fuse(s) for Added CTI Unit(s) in Fuse Panel (J4A011AH-1)	TELCO	DLP-564
	C. If Growth DOC Transceiver Modules Are Used With 43B1, 108D, 108E, or 109H Data Sets: Connect Transmit and Acknowledge Cabling Between Growth DOC Transceiver Modules and Data Sets	INST	—
	D. If Growth DOC Transceiver Modules Are Used With Balanced Loop and Loop Resistance Is Less Than 4500 Ohms: Connect Transmit Leads WXYTA and WXYTB and Acknowledge Leads WXYRR and WXYOR to Applicable Transmission Equipment	INST	—
	E. If Growth DOC Transceiver Modules Are Used With E and M Signaling and Balanced Loop Resistance Is Greater Than 4500 Ohms: Connect Transmit and Acknowledge Cabling Between Added DOC Transceiver Modules and E and M Applique	INST	—
5	Restore Power on Growth Associated DOC Transceiver Unit With Power Switch	TELCO	DLP-565
	(Continued on Page 3)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
6	If Modules Were Added to DOC Transceiver Unit 0, 1, 2, or 3, Perform Following Tests:		
	1. MC1 and MC2 Transmitting Tests	TELCO/INST	DLP-569
	2. MC3 Loop Test	TELCO/INST	DLP-570
7	If Modules Were Added to DOC Transceiver Unit 4, Perform DOC Receive Test:		
	1. Request Far-End Office Personnel To Perform MC1 and MC2 Transmitting Tests	TELCO/INST	—
	2. Assure That DOC MC1 and MC2 Transmitting Tests Are Completed	TELCO/INST	—

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

		RESPONSIBILITY	
1	Install Network Management Display (NMD) (Console) or (Wall) Panel	INST	—
2	Remove Power on Network Management Remote and Distribution (NMR&D) Unit Using Power Switch	TELCO	DLP-566
3	Install Circuit Packs in NMR&D Unit	INST	—
4	Connect and Verify Interframe Communication Cabling	INST	—
5	Connect System Status Cabling Between NMR&D Unit and Added NMD (Console) or (Wall) Panel	INST	—
6	Restore Power on NMR&D Unit Using Power Switch	TELCO	DLP-565
7	Connect +24V (A and X or B and Y) Cabling Between Fuse Panel on NMDC Frame and Added NMD (Console) or (Wall) Panel	INST	—
8	Remove Dummy Fuses and Install Fuses in Fuse Panel (J4A011AE and J4A011AF) at NMDC Frame for Added NMD Panel	INST	—
9	Perform DOC Transceiver Tests:		
	1. MC1 and MC2 Transmitting Test	TELCO/INST	DLP-569
	2. MC3 Loop Test	TELCO/INST	DLP-570

ADD NETWORK MANAGEMENT DISPLAY PANEL TO NMDC FRAME — SUPPORT TO INSTALLER (INST)

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

		RESPONSIBILITY	
1	Install E2A Telemetry Remote Unit in Network Management Display Control (NMDC) Frame	INST	—
	NOTE: Items 2 through 6 should be performed quickly and without interruption because removal of power disables existing network management display panel		
2	Remove Power on Network Management Remote and Distribution (NMR&D) Unit Using Power Switch	TELCO	DLP-566
3	Connect Cabling Between NMR&D Unit and Added E2A Telemetry Unit	INST	—
4	Restore Power on NMR&D Unit Using Power Switch	TELCO	DLP-565
5	Remove Dummy Fuses and Install Fuses **TN** and **TP** in Fuse Panel (J4A011AE-1) at NMDC Frame	INST	—
6	If E2A Telemetry Remote Unit Has Transmission Equipment Ready for Test, Perform Following Tests:		
	1. DOC MC1 and MC2 Transmitting Test	TELCO/INST	DLP-569
	2. DOC MC3 Loop Test	TELCO/INST	DLP-570

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

		RESPONSIBILITY	
1	Assure that Miscellaneous Frame C (MCF) Power Verification Test Has Been Completed	INST	—
2	Remove All Power From Growth MCF (by Removing MCF Fuses and MCF Dedicated Power Distribution Frame Fuses)	INST	—
3	Verify MCF Unit Type (UT) Translator and Compare Translations Data Against Office Records:		
	1. Verify MCF UT Translator	TELCO/INST	DLP-541
	2. Compare Translations Data Against Wiring Records	INST	—
4	Connect and Verify Interframe Communication Cabling to TEL and TTY Connectors	INST	—
5	Test TTY Beltlines	TELCO/INST	
6	Install Fuses Removed in Item 2	INST	
7	Recent Change MCF Member Equipage From Unequipped to Operational; Using RC Form 801 and the Following Parameters, Perform Functional Word Change of UT Translator Word; Then Verify 1. WORDNO 0/ 2. SIZE 2 3. DISP 22 4. BINOCT B 5. NEWDATA 11 6. OLDDATA 0/0/	TELCO	DLP-568
8	Verify CCT Unit Type (UT) Translator and Compare Translations Data Against Office Records:		
	1. Verify CCT UT Translator	TELCO/INST	DLP-505
	2. Compare Translations Data Against Wiring Records	INST	—
9	At CCT Unit, Connect Power and Run Power Tests	INST	—
10	Connect Private Signal and Transmission Leads	INST	—
11	Verify Power Switch Leads and Then Apply Power Using Power Switch	INST	—
	(Continued on Page 2)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
12	Change CCT Member Equipage From Unequipped to Operational; Using RC Form 801 and the Following Parameters, Perform Functional Word Change of UT Translator Word; Then Verify 1. WORDNO 0/ 2. SIZE 2 3. DISP 22 4. BINOCT B 5. NEWDATA 11 6. OLDDATA 0/0/	TELCO	DLP-568
13	Remove CCT Power Using Power Switch (Turn OFF Switch ROS, Then Depress)	TELCO	—
14	Install Circuit Packs	INST	—
15	Restore Power to CCT Using Power Switch	TELCO	DLP-565
16	Change CCT Submember Equipage From Unequipped to Operational; Using RC Form 801 and the Following Parameters, Perform Functional Word Change of UT Translator Word; Then Verify 1. WORDNO a (a = 3 for transceivers 00-05 or 4 for transceivers 06-11) 2. SIZE 2 3. DISP 17 4. BINOCT B 5. NEWDATA 11 6. OLDDATA 0/0/	TELCO	DLP-568
17	Set Status of Tranceivers to Circuit Administration (CAD) Lock-Out State	TELCO	DLP-506
18	Test Added Transceivers	TELCO/INST	DLP-507
19	Set Status of Transceivers to Active State	TELCO	DLP-508
20	If Other CCT Submember (Transceivers 06-11) Is To Be Added at This Time, Repeat From Item 13	TELCO/INST	—
21	If Additional CCT Units Are To Be Added to Miscellaneous Frame C, Complete Procedures Contained in NTP-004	TELCO/INST	—

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

		RESPONSIBILITY	
	NOTE: The control area and the position number make up the test position (TPOS) member number. For example, control area 2 and position 5 would be test position 25		
1	If 51A Test Position Is Being Degrown Because of RMS-D2 Conversion, Go to Item 15	TELCO/INST	—
2	At TCA Channel, Enter Message To Reroute Termination of Incoming 101 Calls Destined for 51A TPOS To Be Degrown to Different TPOS (**RTE:TP** a;**TP** b!) a = Member Number of the Degrowth 51A TPOS b = Member Number of the TPOS to Which Incoming 101 Calls Are To Be Transferred	TELCO/TOC	—
3	At Degrowth TTP Channel, Enter 001/ab to Log-Off DATASPEED 40/4 TTP Channel a = Control Area b = Position Number in Control Group	TELCO/TOC	—
4	Enter Message To Obtain List of TSGs Assigned to Degrowth 51A TPOS (**VER:TSGLIST:CAREA** a,**CPOS** b!) a = Control Area Associated With Degrowth 51A TPOS b = Degrowth 51A Position Within Control Area	TELCO/MAC	—
	NOTE: All test positions might not have the optional equipment required to satisfactorily test some TSGs		
5	Reassign All TSGs Assigned to Degrowth 51A TPOS to Different TPOS With Same Optional Equipment Using RC Form 107, 108, or 109 for Message TSGs or RC Forms 106 and 103 for Voice Frequency Link (VFL) TSGs	TELCO/MAC	—
	NOTE: Due to the complexity of reassigning VFL trunk subgroups, consideration should be given to changing the degrowth test position to one which has no VFL TSG(s) assigned		
6	Verify That Degrowth 51A TPOS Has No TSGs Assigned to it (**VER:TSGLIST:CAREA** a,**CPOS** b!) a = Control Area Associated With 51A TPOS Degrowth, b = Degrowth 51A Position	TELCO/TOC	—
	CAUTION: If degrowth test position is to be maintained as a pseudo test position, procedures in Items 7, 8, and 9 shall be executed as directed by local requirements		
7	Change TSG Responsibility From Degrowth 51A TPOS to Different TPOS Using Procedures Outlined in AT&T TOP 234-152-051	TELCO/MAC	—
8	Obtain TSGLST (Trunk Subgroup List) From CMSMC and Verify That Degrowth 51A TPOS Is No Longer Responsible for Any TSGs in CMS	TELCO/MAC	—

DEGROW 51A TEST POSITION — SUPPORT TO INSTALLER (INST)

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
9	At Control Position Associated With Degrowth 51A TPOS:		
	1. Obtain 900 Display	TELCO/TOC	—
	2. Reassign Work (Circuit Orders) Identified on Page 206 Using 902 Command	TELCO/TOC	—
	3. Reassign Work (Trouble Tickets and Routines) Identified on Pages 201, 202, 203, 204, 205, and 207 Using 903 Command	TELCO/TOC	—
	4. Obtain New 900 Display and Verify That Degrowth TPOS Does Not Have Any Work Assigned to It	TELCO/TOC	—
10	Inform CAROT 2 Center of Pending 51A TPOS Removal and Request Changes Be Made, As Required, to CAROT 2 Data File Records Listed Below: • Control Office for Trunks (CT) Record • Control Office for Facilities (CF) Record • ROTL Control Office For Trunks (RC) Record Refer to AT&T 190-102-203 for Precautions and Additional Information Regarding These Changes	TELCO	—
11	At TCA Channel, Obtain Printout of UT Translation Data for Degrowth 51A TPOS (**VER:UTYPE:TPOS** a!) a = Degrowth 51A TPOS Member Number (2 Digits)	TELCO/TOC	—
12	At TCA Channel, Set TATs Assigned to Degrowth 51A TPOS to CAD Disabled State and Verify (**SET:TRKSTAT CAD.DSA,TSN 0'a:NUM 3**!) a = Octal TSN Value Found in Word 3, Bits 0 Through 16 of Translations Data Obtained in Previous Item	TELCO/TOC	—
	NOTE: All TSNs assigned to degrowth 51A TPOS must be in CAD.DSA state in output messages of Item 12 before continuing with this procedure		
13	Delete Degrowth 51A TPOS As Alternate for Other Test Positions	TELCO/MAC	DLP-567
14	Use RC Form 701 to Degrow Member Equipage From Operational to Unequipped	TELCO/MAC	DLP-500
15	Remove Power From Degrowth 51A TPOS:		
	1. Locate –48V BDFB/–48V Power Plant (625B Type) Fuse Supplying –48V to Degrowth 51A TPOS	INST	—
	(Continued on Page 3)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
15 (Contd)	2. Locate +24V Power Plant (620A Type) Fuse Supplying +24V to Degrowth 51A TPOS	INST	—
	3. Locate Circuit Breaker Supplying 115V AC to Degrowth 51A TPOS	INST	—
	4. If More Than One Test Position Is Supplied Through Same **—48V** and **+24V** Fuse, and 115V AC Circuit Breaker, Temporarily Cease Operations at These Positions Before Proceeding	TELCO/TOC	—
	CAUTION: If —48V BDFB/—48V Power Plant (625B Type) fuse is equipped with separately mounted alarm fuse, remove alarm fuse first.		
	NOTE: The decision to disconnect or leave in place power supply cables for degrowth 51A should be as directed by office supervisor and/or office engineer. In any case, office records shall be updated to reflect the change in fuse designation.		
	5. At —48V BDFB/—48V Power Plant (625B Type) and +24V Power Plant (620A Type) Fuse Locations, Remove Fuses or Set Circuit Breakers to Open Position	TELCO/INST	—
	6. Open Circuit Breaker Supplying 115V AC to Degrowth 51A TPOS	TELCO/INST	—
	7. Carefully Disconnect —48V Cable From Ground and Load Side of Respective Fuse Post	INST	—
	8. Carefully Disconnect +24V Cable From Ground and Load Side of Respective Fuse Post	INST	—
	9. Disconnect 115V AC Supply Cable From Degrowth 51A TPOS	INST	—
	10. If Other Test Positions Are Supplied Through Fuses Removed or Circuit Breakers Opened, Restore Power to These Positions Whose Power Was Removed in Items 15.5 and 15.6	INST	—
	11. Operation of These Test Positions May Now Resume	TELCO/TOC	—
16	Disconnect All Incoming Cabling From Position Connector Panel at Degrowth TPOS Console	INST	—
17	Disconnect TTP Channel Power Cord and Data Cable	INST	—
18	Disconnect —48V and +24V Cables From Position Console	INST	—

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

		RESPONSIBILITY	
	NOTES: 1. Remote Measurement System-Digital 2 (RMS-D2) equipment must be installed and operational 2. Circuit Maintenance System (CMS) must be running on 1CMS10 generic or later 3. Unit Type (UT) entries for RMS-D2 test positions must be provided in ODA prior to test position growth 4. Digital Service test line (DS-1 interface) assignments [Test Access Trunks (TATs) and service circuits] must be provided in ODA prior to RMS-D2 growth 5. Two TCA channels, one for each RMS-D2, must be grown in input/output processor per AT&T Practice 234-153-010. See DLP-573, in this practice, for typical channel and port data 6. Close coordination, between CMS, MOC, and TOC, must be maintained during this procedure 7. Two 9600 BPS private lines (BX.25 level 3 permanent virtual circuit), one for each RMS-D2, must be installed between CMS and RMS-D2 and tested per local practice 8. 51A test position terminals, linked to CMS, must be modified to 9600 BPS 9. Each trunk work station must have two types of voiceband link telephone sets connected through a private branch exchange to RMS-D2 frames (2-way handset and receive only speaker phone)		
1	Verify CINs Assigned to DS-1 Interfaces for RMS-D2 Frame 1. Save Printout for Later Use (**OP:TRKSTAT,CIN 1a00CLN*TAT****:CAR!**)	TELCO	DLP-571
2	Verify CINs Assigned to DS-1 Interfaces for RMS-D2 Frame 2. Save Printout for Later Use (**OP:TRKSTAT,CIN 2a00CLN*TAT****:CAR!**)	TELCO	DLP-571
3	Verify UT Translator (TPOS) for One Test Position To Be Added. Record TSN Value in Word 3 (**VER:UTYPE:TPOS** ab!)	TELCO/INST	DLP-572
4	Using Printout From Item 3, Compare Translations Data Against Wiring Records	INST	—
5	Verify That TAT 0 and TAT 1 Are Assigned to Test Position (Item 3) To Be Added (**VER:TRKNAME,TSN 0'**a!)	TELCO	DLP-575
	(Continued on Page 2)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
6	Repeat Items 3 Through 5 for Each Test Position To Be Added	TELCO/INST	—
7	Ensure That Alarm Cables Are Connected Between RMS-D2 Frames and Office Alarms	INST	—
8	Using Office Drawing T-nnnn-Hn-407, Determine Crossconnect Assignments at DSX-1 for DS-1 Interface (n = Office Unique Drawing Identification Number)	INST	—
9	At DSX-1, Crossconnect Between Facility Port (DIU) and RMS-D2 Frame 1	INST	—
10	At DSX-1, Crossconnect Between Facility Port (DIU) and RMS-D2 Frame 2	INST	—
11	Activate DS-1 Interface Channels 17 Through 24 on RMS-D2 Frame 1 That Are Not Active (Channels 17 Through 24 Recorded in Item 1) (**SET:TRKSTAT ACT,CIN** a!)	TELCO	DLP-576
12	Activate DS-1 Interface Channels 17 Through 24 on RMS-D2 Frame 2 That Are Not Active (Channels 17 Through 24 Recorded in Item 2) (**SET:TRKSTAT ACT,CIN** a!)	TELCO	DLP-576
13	Ensure That **TN1187** Circuit Pack (Digital Remote Test Port) Is Installed in RMS-D2 Frames 1 and 2 at 39-148 Location	INST	—
14	Recent Change and Verify TPOS Member Equipage for One Test Position To Be Added From UNEQ to GROW	TELCO	DLP-502
15	Recent Change and Verify TPOS Member Equipage for Test Position (Item 14) From GROW to SGRO	TELCO	DLP-502
16	Recent Change and Verify TPOS Member Equipage for Test Position (Item 14) From SGRO to OPER	TELCO	DLP-502
17	Enter **INIT:TPDT**! To Initialize Test Position Directory Table	TELCO	—
18	Activate TAT 0 and TAT 1 Assigned to Test Position (Item 14) (**SET:TRKSTAT ACT,TSN 0'a:NUM 2**!)	TELCO	DLP-577
19	Enter **SET:TP** ab**;ON**! To Set Attended Status for Test Position (Item 14) to Attended	TELCO	—
20	Enter **OP:TPMAP**! and Verify That Test Position (Item 14) Is Listed in Printout	TELCO/INST	—
21	Repeat Items 14 through 20 for Each Test Position To Be Added	TELCO/INST	—
22	Request TOC To Perform Acceptance Tests on RMS-D2 Frames	TELCO/INST	—
	NOTE: Satisfactory acceptance test results must be received before continuing		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
23	Request TOC To Reroute Incoming 101 Calls From 51A Test Positions To Be Removed to RMS-D2 Test Positions (**RTE:TP** ab;**TP** cd!)	TELCO	—
	NOTE: 51A test positions must not be degrown to unequipped state at this time. These test positions will be degrown in ODA during generic retrofit or ODA update. 51A test positions can be disconnected and removed as long as 101 calls are routed to RMS-D2		
24	If 51A Test Positions Are To Be Removed, Perform Degrow 51A Test Position Procedure. Continue This Procedure at Item 25 Upon Completion	TELCO/INST	—
25	If ROTL Frames Are To Be Removed, Perform Degrow ROTL Frame Procedure	TELCO/INST	—

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

		RESPONSIBILITY	
	NOTE: This procedure may be used for MF Signaling (MFS) frame not equipped with MF test circuits		
1	Determine From Company Order, MFS Frame To Be Degrown and Associated SP1 and DIU, DTU, or VIU, As Required	TELCO/INST	—
2	Set Receiver and Transmitter Circuits for Degrowth MFS Frame to CAD.DSA State (**SET:TRKSTAT CAD.DSA,CIN** aabb **SVC*** c ***;SUM:NUM 32**!)	TELCO	DLP-578
3	Verify Disabled Status of Equipped MFS Transmitter and Receiver Circuits Assigned to Degrowth MFS Frame (**OP:TRKSTAT,CIN** aabb **SVC*** c ***;SUM:NUM 32,STAT CAD.DSA**!)	TELCO	DLP-524
4	Verify DIU, DTU, or VIU Number Interconnected to Degrowth MFS Circuits (**VER:TRKNAME,CIN** aabb **SVC*** c ***!**)	TELCO	DLP-579
5	Recent Change and Verify Member Equipage of Degrowth MFS From OPER to SGRO (Degrow) Using RC Form 701	TELCO	DLP-500
6	Recent Change and Verify Member Equipage of Degrowth MFS From SGRO to GROW (Degrow) Using RC Form 701	TELCO	DLP-500
7	Recent Change and Verify Member Equipage of Degrowth MFS From GROW to UNEQ (Degrow) Using RC Form 701	TELCO	DLP-500
8	At Degrowth MFS Frame, Remove Alarm and Power Fuses	INST	—
9	Remove —48V Power From Degrown MFS Frame at Power Distribution Frame	INST	—
10	If Degrowth MFS Circuits Connect to DIF or DT Via D4 Channel Bank, Install Looping Devices at DSX for Degrowth MFS Circuits Assigned to DIU or DTU (Item 4)	INST	—
11	If DIU or DTU Was Removed From Service During Item 10, Restore Unit to Service (**RST:DIF/DT** a**,DIU/DTU** b!)	TELCO	—
12	Remove MFS Transmission Leads:		
	A. Remove Leads T, R, T1, R1 to Associated VIF Frame	INST	—
	B. Remove Leads T, R, T1, R1 to D4 Channel Bank and DSX	INST	—
	(Continued on Page 2)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
13	Remove Alarm Wiring in Degrown MFS Frame. If MFS Frame Is in Middle of Lineup, Connect New Cable Between Remaining Frames To Bridge Open	INST	—
14	Remove Private Signal Leads (MSD and MSN Points)	INST/TELCO	—
15	Remove Cables Between MFS Frame and Associated SP Matrix Frame for MF Transmitters and Receivers (MSD and MSN)	INST/TELCO	—
16	If Degrown MFS Frame Provides 480 Hz for International Dialing, Remove Cable Pair Between Ringing and Tone Plant and Degrown MFS Frame	INST	—
17	Remove Common Circuits (Telephone Jacks, TTY Jacks, and Appliance Outlets) From Degrown MFS Frame	INST	—
	NOTE: If degrown MFS frame is to be removed from lineup, all signal and transmission leads for miscellaneous external circuits must be removed and recabled prior to MFS frame removal		
18	Remove Degrown MFS Frame From Lineup	INST	—

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

		RESPONSIBILITY	
1	Determine From Company Order, Continuity Check Transceiver (CCT) Unit To Be Degrown	TELCO/INST	—
2	Set CCIS Type Trunks for Transceivers 00-05 and/or 06-11 in Degrowth CCT to CAD.DSA (SET:TRKSTAT CAD.DSA,CIN aØSVC*XCVR:NUM c!)	TELCO	DLP-580
3	Verify Disabled Status of CCIS Type Trunks Assigned to Degrowth CCT (OP:TRKSTAT,CIN aØSVC*XCVR:NUM c,STAT CAD.DSA!)	TELCO	DLP-581
4	Perform Functional Word Change of CCT Translator Word, Then Verify Using RC Form 801 and the Following Parameters (Change CCT Submember Equipage From Operational to Unequipped): 1. WORDNO a (a = 3 for transceiver 00-05 or 4 for transceiver 06-11) 2. SIZE 2 3. DISP 17 4. BINOCT B 5. NEWDATA 0/0/ 6. OLDDATA 11	TELCO	DLP-568
5	Remove CCT Power Using Power Switch (Turn **OFF** Switch to **ROS**, Then Depress)	TELCO	—
6	Remove CCT Circuit Packs	INST	—
7	Perform Functional Word Change of CCT Translator Word, Then Verify Using RC Form 801 and the Following Parameters (Change CCT Member Equipage From Operatonal to Unequipped): 1. WORDNO 0/ 2. SIZE 2 3. DISP 21 4. BINOCT 0 5. NEWDATA 0/ 6. OLDDATA 6	TELCO	DLP-568
	(Continued on Page 2)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
8	Remove CCT Transmission Leads:		
	A. Remove Leads T, R, T1, R1 to Associated VIF	INST	—
	B. Remove Leads T, R, T1, R1 to D4 Channel Bank, DSX 1, DTF, and/or DIF	INST	—
9	If Degrowth CCT Connects to DIF or DT Via D4 Channel Bank, Install Looping Devices at DSX for Degrowth CCT Transceivers	INST	—
10	Remove Private Signal Leads	INST	—
11	If Second Set of Transceivers (00-05 or 06-11), Repeat From Item 4	TELCO/INST	—

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

		RESPONSIBILITY	
	NOTE: RMS-D2 frames must be grown before remote office test line (ROTL) frame is degrown		
1	Determine From Company Order ROTL Frame Number To Be Degrown	TELCO	—
2	If ROTL Is Equipped With 105 Test Line(s), Set Degrowth ROTL 105 Test Line(s) to CAD.DSA State and Verify	TELCO	DLP-582
3	Set RPAC Trunks for Degrowth ROTL Frame to CAD.DSA State and Verify	TELCO	DLP-584
4	Set ROTL Unit Trunks for Degrowth ROTL Frame to CAD.DSA State and Verify	TELCO	DLP-583
5	Remove Fuses From Degrowth ROTL Frame	INST	—
6	Disconnect Degrowth ROTL Frame Transmission Leads	INST	—
7	Disconnect Scan and SD Cables	INST	—
8	Disconnect Signaling Leads From Ringing and Tone Plant	INST	—
9	Disconnect Alarm Cables. If ROTL Frame Is in Middle of Lineup, Place New Cable Between Remaining Frames To Bridge Open	INST	—
10	Remove Frame Equipment From Floor	INST	—

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

		RESPONSIBILITY	
	WARNING: An antistatic wrist strap must be worn to prevent electrostatic discharge and possible damage to circuit packs and DROs (before ground strap is installed) while handling		
	NOTES: 1. If problems are encountered and backout is required, Items 117 through 134 can be used as guidelines with assistance from appropriate support organization 2. This procedure must be performed during light traffic periods 3. 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 4. Maximum of two DROs can be exchanged per shift 5. Office must be in 4E15 Release 4 or later generic		
1	Perform Preliminary Installation Activities	INST	—
2	Verify That Sync Reference Signal Is Not Received From 39B Oscillator. Do Not Continue if Sync Reference Signal Is Received From 39B Oscillator	TELCO	—
3	Ensure That Each 39B Oscillator is Stable for a Period of 48 Hours Prior to Conversion	TELCO	—
4	Test DS1 Sync Reference Signal Level	TELCO	DLP-591
5	At MTC Channel, Enter Message **INH:MACLI,CLASS MTCE;ALL!** To Inhibit REX	TELCO	—
6	Enter Message **STOP:TEST;PUSYS!** To Terminate Routine Maintenance Tests on Peripheral System	TELCO	—
7	At MTC Channel, Enter Message **OP:OOSUNITS!** and Ensure None of Following Frames or Units Are Listed: • CC • PUB • TSI • TMS • SCLK • NCSU • NCLK Chains 0 Through 3	TELCO	DLP-585
	(Continued on Page 2)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
	NOTE: Do not continue until all above frames and units are in-service		
8	Using Associated Unit Power Switch, Diagnose Each Unit in Following Order: • NCLK Chain 3 • NCLK Chain 2 • NCLK Chain 1 • NCLK Chain 0	TELCO	DLP-586
	NOTE: Items 9 through 17 are being performed to exchange NCSU firmware to support DRO		
9	At **NCSU** Power Switch, Rotate **ROS**/**OFF** Switch to **ROS**; Ensure **OS** Lamp Lights	TELCO	—
10	At MTC Channel, Enter Message **DGN:SCLK 0,NCSU 0!** To Diagnose NCSU. No Diagnostic Failures Allowed on Phases Run	TELCO	—
11	At Each 39B Oscillator in NCLK Frame, Set **STROBE** Switch to **DISABLE**	TELCO	—
12	At **NCSU** Power Switch, Depress **ROS**/**OFF** Pushbutton; Ensure **PWR OFF** Lamp Lights	TELCO	—
13	At NCLK Frame Location 046-044, Remove **FG58** Circuit Pack	INST	—
14	Install **FG92** Circuit Pack (MC-4A067-01) at Location in Item 13	INST	—
15	Perform Recent Change for New Firmware Version	TELCO	DLP-587
16	At **NCSU** Power Switch, Depress **ON** Pushbutton To Restore Power (Leave **ROS**/**OFF** Switch in **ROS** Position)	TELCO/INST	—
17	At MTC Channel, Enter Message **DGN:SCLK 0,NCSU 0:PH 1-7!** To Diagnose Firmware Change. No Failures Allowed on Phases Run; Phase 1 CATP and Phases 2 Through 7 ATP Required	TELCO/INST	DLP-588
	NOTES: 1. One clock chain at a time must be exchanged in following order: chain 3, chain 1, chain 2, and chain 0 2. DRO exchange will take place over two-night period. Chain 3 and chain 1 first night; chain 2 and chain 0 second night		
18	At MTC Channel, Enter Message **OP:OOSUNITS:NCLK!** and Ensure No NCLK Chain Is Listed (Leave NCSU Out-of-Service). If any NCLK Chain Is Listed, Enter Message **RST:NCLK 0,CHAIN a!** (a = Chain Listed in Printout) for Each Chain Listed. Do Not Continue Until All NCLK Chains Are Restored	TELCO	DLP-589

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
19	Enter Message **RMV:NCLK 0,CHAIN** a! (a = 39B Oscillator Number Being Exchanged — 3, 1, 2, or 0) To Remove Chain From Service; Ensure **RMV: NCLK 0, CHAIN** a **COMPL** Message Is Received	TELCO	—
20	At NCLK **CHAIN** Power Switch (3, 1, 2, or 0) Associated With One 39B Oscillator Being Exchanged, Rotate **ROS**/**OFF** Switch to **ROS**; Ensure **OS** Lamp Is On	TELCO	—
21	At MTC Channel, Enter Message **RMV:NCLK 0,OSC** a! (a = 39B Oscillator Number Being Exchanged — 3, 1, 2, or 0) To Remove 39B Oscillator From Service; Ensure **RMV: NCLK 0, OSC** a **COMPL** Message Is Received	TELCO	—
22	At NCLK **CHAIN** Power Switch (Item 20), Depress **ROS**/**OFF** Switch To Remove Power; Ensure **PWR OFF** Lamp Lights	TELCO	—
23	At 39B Oscillator Being Exchanged, Record LED Settings for Later Use if Backout Is Required	INST	—
24	At NCLK Frame Fuse Panel, Remove +24V and −48V Fuses Associated With 39B Oscillator Being Exchanged	INST	—
	CAUTION: When removing +5V power unit, be careful that adjacent +5V power unit stays in place		
25	At NCLK Frame Remove +24V Power Unit (71G1) and +5V Power Unit (J87389S-3,L3) Associated With 39B Oscillator Being Exchanged	INST	—
26	At 39B Oscillator Being Exchanged, Disconnect Cables Only at P13, P18, P19, P21, and J20	INST	—
27	Remove Eight Screws Holding 39B Oscillator Being Exchanged	INST	—
28	At 39B Oscillator Being Exchanged and Frame Upright, Remove Oscillator Ground Strap	INST	—
29	Remove 39B Oscillator Being Exchanged From NCLK Frame	INST	—
	WARNING: New DRO must be carried to NCLK frame in ESD bag until antistatic wrist strap can be put on		
30	Place New DRO in Location Vacated by 39B Oscillator	INST	—
31	At New DRO, Set **ENABLE**/**DISABLE** Switch to **DISABLE**	INST	—
32	Install New Group Strap From DRO to Frame Upright (6" Strap for DROs 0 and 2 or 8-1/2" Strap for DROs 1 and 3)	INST	—
	(Continued on Page 4)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
33	Fasten DRO Mounting Plate to Frame Shelf	INST	—
	DANGER: 140 volts present at rear of fuse panel		
	WARNING: Wires in this area are extremely susceptible to breakage		
34	At Rear of Fuse Panel and Power Converter Associated With 39B Oscillator Being Exchanged, Replace Bias Resistor	INST	—
35	On Terminal Strip at Rear Side of NCLK Chain Being Exchanged, Replace Equalizer Components	INST	—
36	At DRO, Connect —48V Power Cable to P19	INST	—
37	At DRO, Connect D/A INPUT/OUTPUT Cable to J20	INST	—
38	At DRO, Connect Phase Lock Cable to P21	INST	—
	NOTE: Do Not connect RF Output cable to P13 at this time		
39	Recheck All Wiring Changes Before Going to Next Item	INST	—
40	At NCLK Frame Fuse Panel, Install —48V and +24V Fuses Associated With New DRO To Apply Power to DRO	INST	—
	NOTE: Associated clock chain is still powered down. Power is applied to new DRO		
41	Perform Items 43 Through 45 During 30-Minute Warm-up Period (Item 42)	TELCO/INST	—
42	During First 30 Minutes After —48V Power Is Applied (Warm-up Period), Ensure Following DRO Status: • **RF OUTPUT** — Disconnected • **ENABLE**/**DISABLE** Switch — Ignored • **TOS INHIBIT** (TOS Card) — On then Off • **FREE RUN** — Flashing • **OSC WRITE WORD** — **init** • **MAJOR** — On • All other status lamps — Off	INST	—
	(Continued on Page 5)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
43	At NCLK **CHAIN** Power Switch Associated With DRO Being Exchanged, Depress **ON** Pushbutton To Restore Power (Leave **ROS**/**OFF** Switch in **ROS** Position)	TELCO/INST	—
44	At MTC Channel, Enter Message **DGN:NCLK 0,CHAIN** a;**RAW!** (a = New DRO Number — 3, 1, 2, or 0) To Diagnose NCLK Chain for DRO Being Exchanged. Expect Tests To Fail for Phase 4 Only; No Failures Allowed on Any Other Phases Run	TELCO/INST	DLP-590
45	At NCLK **CHAIN** Power Switch Associated With DRO Being Exchanged, Depress **ROS**/**OFF** Pushbutton; Ensure **PWR OFF** Lamp Lights	TELCO	—
46	If 30-Minute Warm-up Period (Item 42) Has Not Completed, Wait Until Time Is Up Before Proceeding to Next Item	TELCO/INST	—
47	At DRO, Verify **2000** Is Indicated on **OSC WRITE WORD** Display	INST	—
	NOTE: After fourth DRO has been installed, more than one DRO may have **MASTER** LED lighted temporarily		
48	Verify All Other Indicators Are Off (**RANGE TOL** and/or **MINOR** LEDs May Be On)	INST	—
49	Connect RF Output Cable to P13	INST	—
	WARNING: NCLK chain of DRO being checked must remain powered down		
50	At DRO, Verify **ENABLE**/**DISABLE** Switch Still Set to **DISABLE**	INST	—
51	Disconnect NCSU Cable at J20	INST	—
52	Connect Oscillator Manual Adjustment Unit (OMAU) Cable to J20. Expect OMAU Power LED On	INST	—
53	At OMAU, Set Thumbwheel Switches to Frequency Word **FFFF** and Depress **LOAD** Pushbutton	INST	—
54	Ensure Following OMAU LED Status: • **VERIFY** — Off • **FREQ HI** — On • **FREQ LO** — On	INST	—
	NOTE: Items 55 through 69 are being performed to test new DRO		
55	At DRO, Set **ENABLE/DISABLE** Switch to **ENABLE**	INST	—
	(Continued on Page 6)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
56	Test Full Frequency Range of DRO. For Each Frequency Setting, Ensure **OSC WRITE WORD** Display at DRO Is Same Frequency That Was Set at OMAU	INST	—
	NOTE: Items 57 through 69 are being performed to test DRO alarm bits	INST	—
57	At OMAU, Set Thumbwheel Switches to Frequency Word **0001** and Depress **LOAD** Pushbutton	INST	—
58	Ensure Following OMAU and DRO LED Status: • At OMAU, **FREQ HI** — On • At OMAU, **FREQ LO** — Off • At DRO, **MAJOR** — On • At DRO, **MINOR** — Off	INST	—
59	At OMAU, Set Thumbwheel Switches to Frequency Word **0000** and Depress **LOAD** Pushbutton	INST	—
60	Ensure Following OMAU and DRO LED Status: • At OMAU, **FREQ HI** — Off • At OMAU, **FREQ LO** — Off • At DRO, **MAJOR** — Off • At DRO, **MINOR** — Off	INST	—
61	At OMAU, Set Thumbwheel Switches to Frequency Word **0002** and Depress **LOAD** Pushbutton	INST	—
62	Ensure Following OMAU and DRO LED Status: • At OMAU, **FREQ HI** — Off • At OMAU, **FREQ LO** — On • At DRO, **MAJOR** — Off • At DRO, **MINOR** — On	INST	—
63	At OMAU, Set Thumbwheel Switches to Frequency Word **0000** and Depress **LOAD** Pushbutton	INST	—
64	Ensure OMAU and DRO LED Status Is Same As in Item 60	INST	—
65	At OMAU, Set Thumbwheel Switches to Frequency Word **2000** and Depress **LOAD** Pushbutton	INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
66	At DRO, Ensure **OSC WRITE WORD** Display Indicates **2000**	INST	—
67	Set **ENABLE**/**DISABLE** Switch to **DISABLE**	INST	—
68	Disconnect OMAU Cable at J20	INST	—
69	Connect NCSU Cable to J20	INST	—
	NOTE: Items 70 through 77 are being performed to test RF Output level		
70	Set Up Oscilloscope Using Standard Procedures	INST	—
	WARNING: When terminal 201 on FB687 is being scoped, power must be removed from chain while connecting or disconnecting scope probe		
71	At Network Clock Unit, Connect Scope Probe to Terminal 201 on **FB687** Circuit Pack Associated With NCLK Chain Being Exchanged	INST	—
72	Verify Level Is 0.9±0.1V Peak-to-Peak (Expected Voltage Level When NCLK Chain Is Powered Down)	INST	—
73	Disconnect Scope Probe (Item 71)	INST	—
74	At Network Clock Unit, Connect Scope Probe to Terminal 018 on **FB214** Circuit Pack Associated With NCLK Chain Being Exchanged	INST	—
75	At NCLK **CHAIN** Power Switch Associated With DRO Being Exchanged, Depress **ON** Pushbutton To Restore Power (Leave **ROS**/**OFF** Switch in **ROS** Position)	TELCO/INST	—
76	Verify Level Is 1.9±0.1V Peak-to-Peak	INST	—
77	Disconnect Scope Probe (Item 74)	INST	—
78	At MTC Channel, Enter Message **AUD:PUSTAT!** To Run Peripheral Unit Status Audit; Wait for Message Complete (**MSG COMPL**)	TELCO/INST	—
79	At DRO, Set **ENABLE/DISABLE** Switch to **ENABLE**	INST	—
80	At MTC Channel, Enter Message **RST:NCLK 0,OSC** a! (a = New DRO Number — 3, 1, 2, or 0); Ensure **REPT:NCSU 0:RST OSC** a **STOPPED,NCSU O/S,** **OSC** a **MARKED I/S, MANUAL UPDATE REQUIRED** and **RST: NCLK 0, OSC** a **COMPL** Messages Are Received	TELCO/INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
81	Enter Message **DGN:SCLK 0,NCSU 0:PH 8,NCLK 0,CHAIN** a! (a = New DRO Number — 3, 1, 2, or 0). Expect **CATP** and **STOPPED OS DGN** Messages	TELCO/INST	—
82	At DRO, Set **ENABLE/DISABLE** Switch to **DISABLE**	INST	—
83	At NCLK **CHAIN** Power Switch Associated With New DRO, Rotate **ROS/OFF** Switch to Normal Position. Expect **CATP** and **STOPPED OS RMVD** Messages	TELCO/INST	—
84	At MTC Channel, Enter Message **RST:NCLK 0,CHAIN** a! (a = New DRO Number — 3, 1, 2, or 0); Ensure **REPT:NCLK 0,OSC I/S — CHAIN** a **RESTORED (WITH OSC) COMPLETE** and **RST: NCLK 0, CHAIN** a **COMPL** Messages Are Received	TELCO/INST	—
85	If Only One 39B Oscillator Is Being Replaced This Shift, Perform Items 86 Through 88; Otherwise, Go to Item 91 (If Two DROs Are Completed, Go to Item 92)	TELCO	—
86	At MTC Channel, Enter Message **ALW:MACLI,CLASS MTCE**! To Allow REX	TELCO	—
87	Enter Message **TEST:PUSYS**! To Start Scheduling of Routine Maintenance Tests	TELCO	—
88	Safe Point To Temporarily Stop This Procedure. Resume Procedure at Item 89 When Continuing	TELCO/INST	—
89	At MTC Channel, Enter Message **INH:MACLI,CLASS MTCE;ALL**! To Inhibit REX	TELCO	—
90	Enter Message **STOP:TEST;PUSYS**! To Terminate Routine Maintenance Tests on Peripheral System	TELCO	—
91	Repeat Items 18 Through 84 To Exchange NCLK Chain 1	TELCO/INST	—
92	At MTC Channel, Enter Message **ALW:MACLI,CLASS MTCE**! To Allow REX	TELCO	—
93	Enter Message **TEST:PUSYS**! To Start Scheduling of Routine Maintenance Tests	TELCO	—
94	Soak NCLK Chains 3 and 1 for 12 Hours	TELCO/INST	—
95	Safe Point To Temporarily Stop This Procedure (Leave NCSU Out-of-Service)	TELCO/INST	—
96	At MTC Channel, Enter Message **INH:MACLI,CLASS MTCE;ALL**! To Inhibit REX	TELCO	—
97	Enter Message **STOP:TEST;PUSYS**! To Terminate Routine Maintenance Tests on Peripheral System	TELCO	—
98	Repeat Items 18 Through 84 To Exchange NCLK Chain 2	TELCO/INST	—
99	If Only One 39B Oscillator Is Being Replaced This Shift, Perform Items 100 Through 102; Otherwise, Go to Item 105 (If Two DROs Are Completed, Go to Item 106)	TELCO	—
100	At MTC Channel, Enter Message **ALW:MACLI,CLASS MTCE**! To Allow REX	TELCO	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
101	Enter Message **TEST:PUSYS!** To Start Scheduling of Routine Maintenance Tests	TELCO	—
102	Safe Point To Temporarily Stop This Procedure, Resume Procedure at Item 103 When Continuing	TELCO/INST	—
103	At MTC Channel, Enter Message **INH:MACLI,CLASS MTCE;ALL!** To Inhibit REX	TELCO	—
104	Enter Message **STOP:TEST;PUSYS!** To Terminate Routine Maintenance Tests on Peripheral System	TELCO	—
105	Repeat Items 18 Through 84 To Exchange NCLK Chain 0	TELCO/INST	—
106	At Each DRO, Set **ENABLE**/**DISABLE** Switch to **ENABLE**	INST	—
107	At NCSU Power Switch, Rotate **ROS**/**OFF** Switch to Normal Position. Expect **RST: SCLK 0,NCSU 0 STOPPED OS RMVD** Message To Be Received	TELCO/INST	—
	CAUTION: Do not restore NCSU unconditionally		
	NOTE: Expect BLM on NCSU within 10 minutes after entering restore message		
108	At MTC Channel, Enter Message **RST:SCLK 0,NCSU 0!**; Ensure **DGN: SCLK 0, NCSU 0 CATP** (xxxxxxxx xxxxxxxx) **MSG COMPL** **RST: SCLK 0, NCSU 0 COMPL** Messages Are Received	TELCO/INST	—
109	Wait for BLM Printout Before Continuing	TELCO/INST	—
110	At NCSU Status and Display Panel, Ensure **OPERATIONAL MODE — NORMAL** LED Is On	INST	—
111	At MTC Channel, Enter Message **ALW:MACLI,CLASS MTCE!** To Allow REX	TELCO	—
112	Enter Message **TEST:PUSYS!** To Start Scheduling of Routine Maintenance Tests	TELCO	—
113	Using MTC Channel Printouts, Ensure No NCSU F-Level Interrupt Printouts Are Being Received	INST	—
114	At MCC **SYSTEM ALARM** Panel, if **REF STAT** Lamp Is On, Depress **REF STAT** Key for Status Printout. If Error Condition Is Indicated in Status Printout, Fix Trouble	INST	—
115	At This Point, Office Is Committed to New DROs. No Backout Is Allowed	TELCO/INST	—
116	At MCC **SYSTEM ALARM** Panel, Ensure **FREE RUN** Lamp Is Off (Indicates DROs Are Phase Locked and NCSU in Normal Mode)	INST	—
	NOTE: This completes DRO Exchange. End of procecdure		
	(Continued on Page 10)		

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

	BACKOUT PROCEDURE		
	NOTES: 1. Decision to backout DRO exchange must be determined from situation involved. Appropriate technical support organization must be consulted and assist in making the decision 2. Following sequence is not a requirement, but provides recommended guidelines for DRO backout. Appropriate technical support organization must assist during DRO backout		
117	Remove Power From Associated Clock Chain Using Power Switch	INST	—
118	Remove Power From DRO by Removing Associated Power Fuses (Item 40)	INST	—
119	Remove DRO From NCLK Frame	INST	—
120	Change Straps Installed in Item 35	INST	—
121	Place 9.53K Resistor Across (in Parallel) Resistor R32 Replaced in Item 35	INST	—
122	Install +5V and —24V Converters for 39B Oscillator	INST	—
123	Install 39B Oscillator in NCLK Shelf Position	INST	—
124	Install All 39B Oscillator Cabling	INST	—
125	Restore Power to 39B Oscillator by Installing Associated —48V and +24V Fuses	INST	—
126	Restore Power to Associated Clock Chain Using Power Switch (Leave **ROS**/**OFF** Switch in **ROS** Position)	TELCO	—
127	Check 39B Oscillator per AT&T 234-151-013	INST	—
128	If RF Output Level and Frequency Are Not Set to Specifications, Perform Manual Adjustment of 39B Oscillator	INST	—
129	Conditionally Restore Clock Chain and 39B Oscillator to Service	TELCO/INST	—
130	At NCLK **CHAIN** Power Switch, Rotate **ROS**/**OFF** Switch to Normal Position	TELCO/INST	—
131	Allow 39B Oscillator to Stabilize and Warm Up at Least 24 Hours. Continue at Item 132 During Warm up Period	TELCO/INST	—
132	Repeat From Item 117 for Next DRO, if Required	TELCO/INST	—
133	If NCSU Is Equipped With DRO Firmware, Reinstall 39B Oscillator Firmware	TELCO/INST	—
134	Restore NCSU to Service	TELCO/INST	—

SUMMARY

Call up RC Form 701 on CRT. Using ouptput, 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.

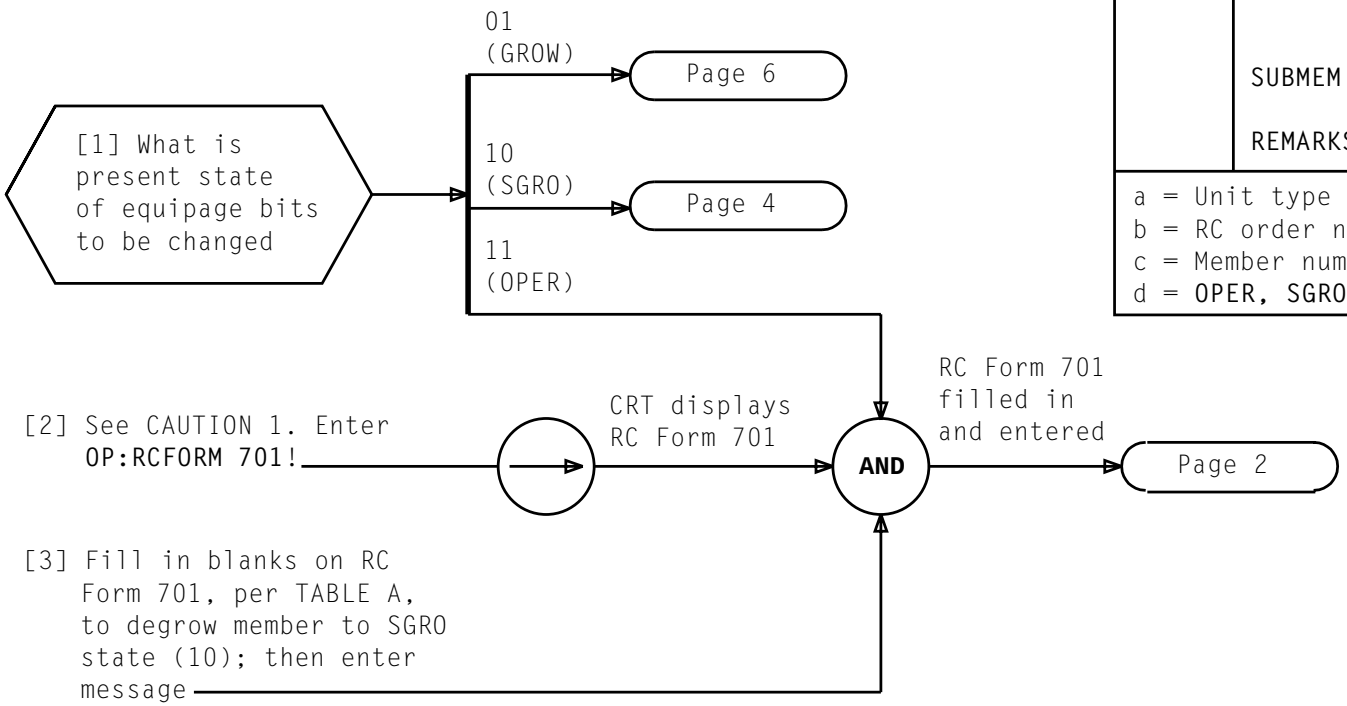


TABLE A

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

a = Unit type = GRID, MFS, or TPOS
b = RC order number
c = Member number of degrowth frame
d = OPER, SGRO

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

RECENT CHANGE MEMBER EQUIPAGE USING RC FORM 701 (DEGROW)

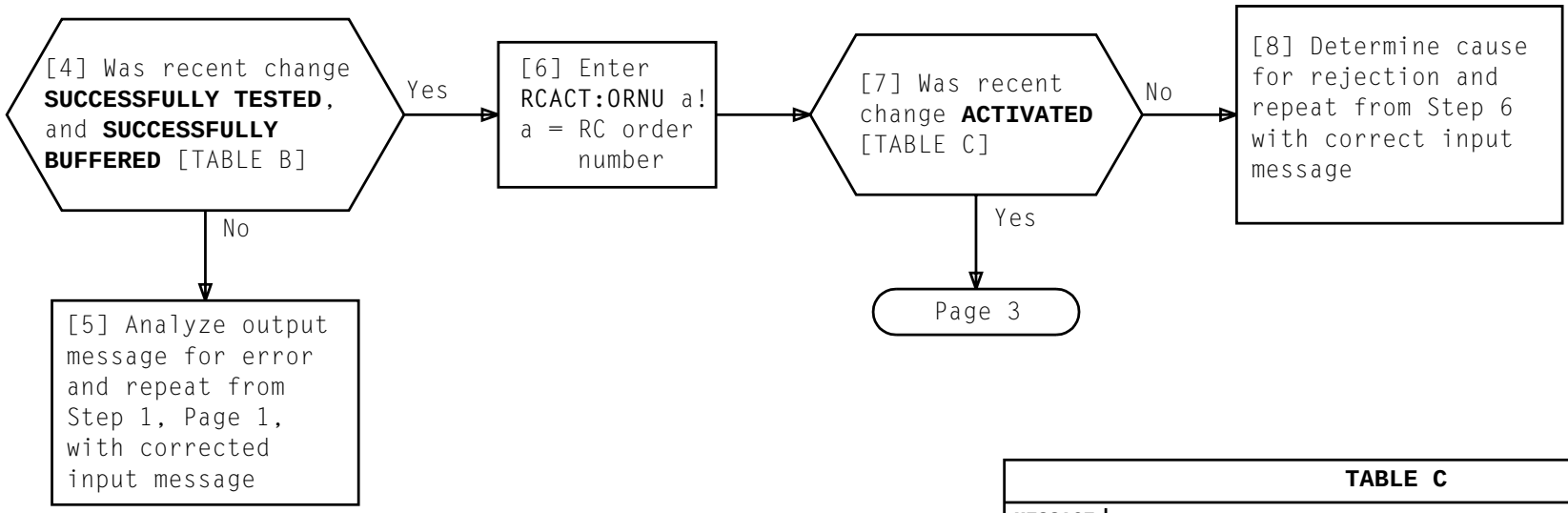


TABLE B

MESSAGE NUMBER	OUTPUT MESSAGE
1	RC ORNU b SUCCESSFULLY TESTED
2	RC ORNU b SUCCESSFULLY BUFFERED
3	RC:UTYPE;CHG;OPT(EQP,DEGROW),BUF: UTYN a, ORNU b, OLD NEW MEMN c, ME (OPER, SGRO), OLD NEW SUBMEM ____, SME (____, ____), REMARKS_____!

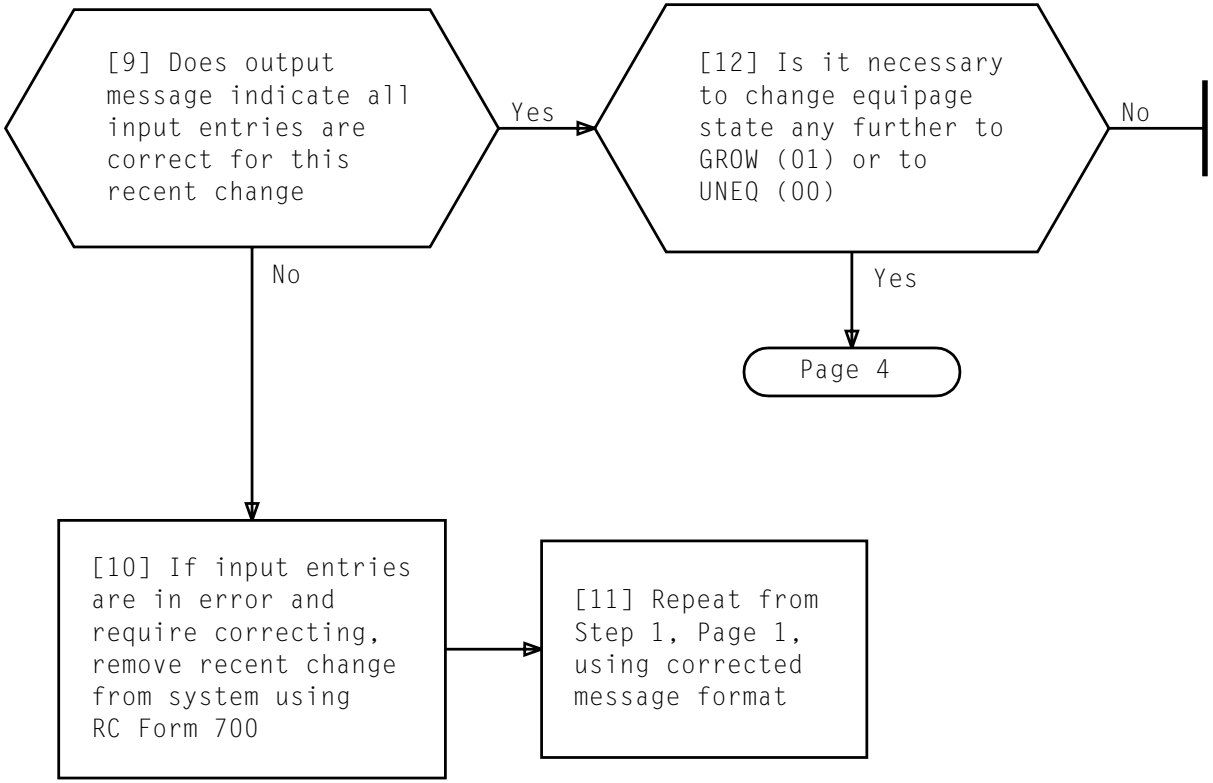
a = Unit type = GRID, MFS, or TPOS
b = RC order number
c = Member number of degrowth frame

TABLE C

MESSAGE NUMBER	OUTPUT MESSAGE
1	RC ORNU b ACTIVATED
2	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 = GRID, MFS, or TPOS
b = RC order number
c = Member number of degrowth frame

RECENT CHANGE MEMBER EQUIPAGE USING RC FORM 701 (DEGROW)



RECENT CHANGE MEMBER EQUIPAGE USING RC FORM 701 (DEGROW)

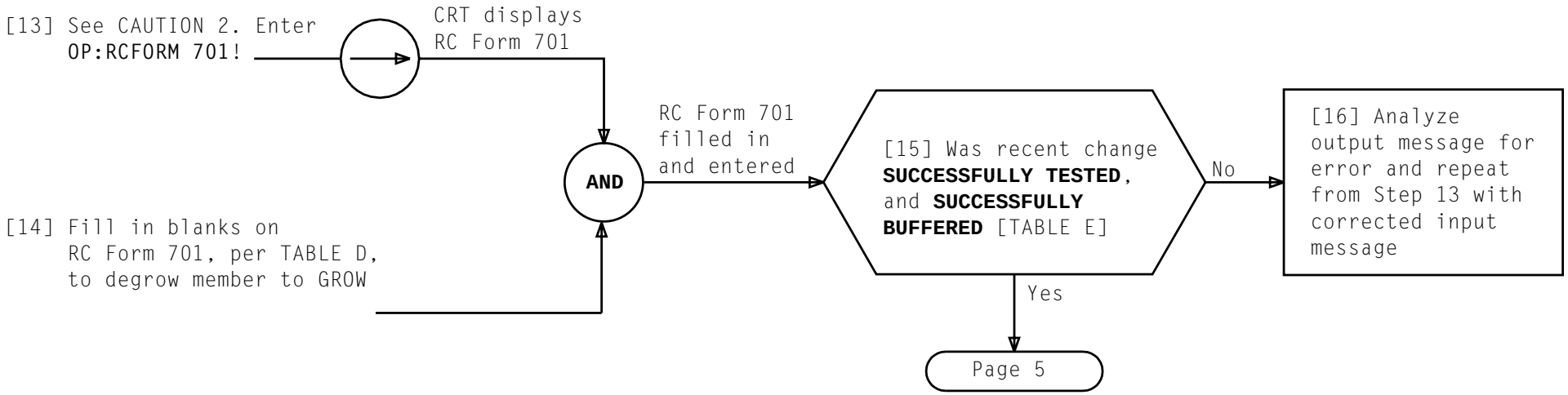


TABLE D

MESSAGE NUMBER	INPUT MESSAGE
1	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 = GRID, MFS, or TPOS
b = RC order number
c = Member number of degrowth frame
d = SGRO, GROW

TABLE E

MESSAGE NUMBER	OUTPUT MESSAGE
1	RC ORNU b SUCCESSFULLY TESTED
2	RC ORNU b SUCCESSFULLY BUFFERED
3	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 = GRID, MFS, or TPOS
b = RC order number
c = Member number of degrowth frame

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

RECENT CHANGE MEMBER EQUIPAGE USING RC FORM 701 (DEGROW)

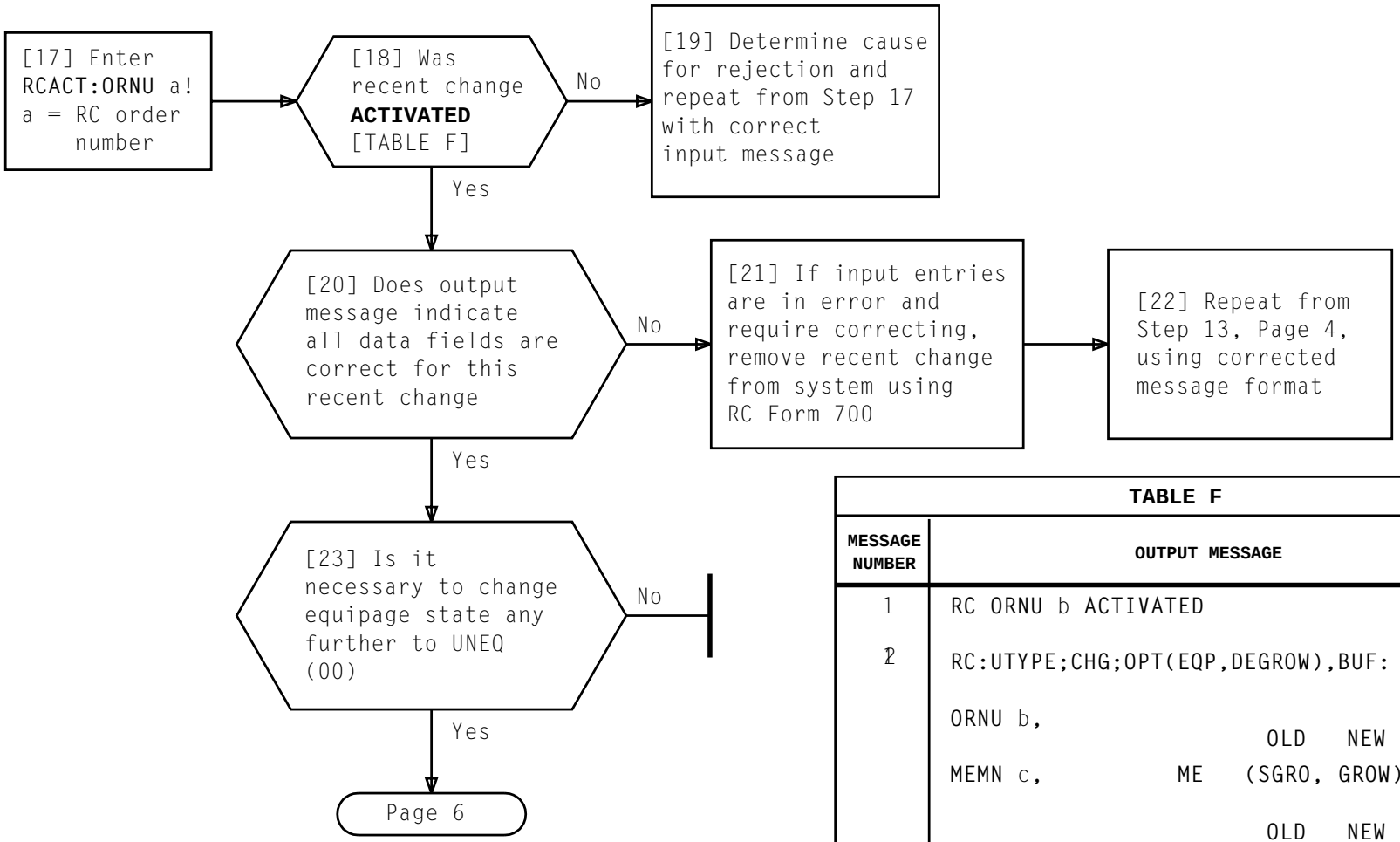


TABLE F

MESSAGE NUMBER	OUTPUT MESSAGE
1	RC ORNU b ACTIVATED
2	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 = GRID, MFS, or TPOS
b = RC order number
c = Member number of degrowth frame

RECENT CHANGE MEMBER EQUIPAGE USING RC FORM 701 (DEGROW)

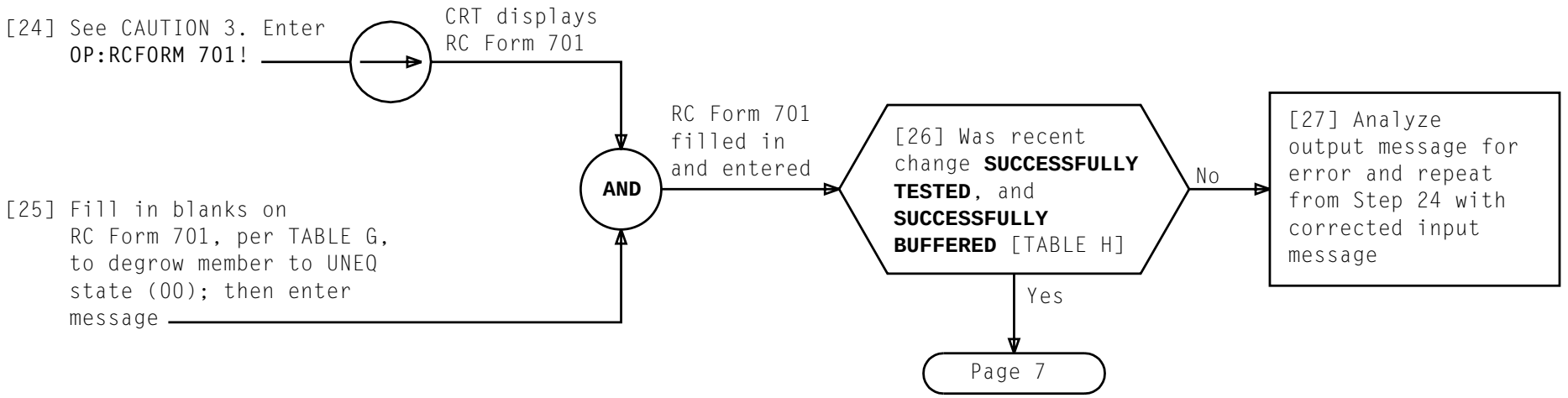


TABLE G

MESSAGE NUMBER	INPUT MESSAGE
1	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 = GRID, MFS, or TPOS
b = RC order number
c = Member number of degrowth frame
d = SGRO, GROW

TABLE H

MESSAGE NUMBER	OUTPUT MESSAGE
1	RC ORNU b SUCCESSFULLY TESTED
2	RC ORNU b SUCCESSFULLY BUFFERED
3	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 = GRID, MFS, or TPOS
b = RC order number
c = Member number of degrowth frame

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

RECENT CHANGE MEMBER EQUIPAGE USING RC FORM 701 (DEGROW)

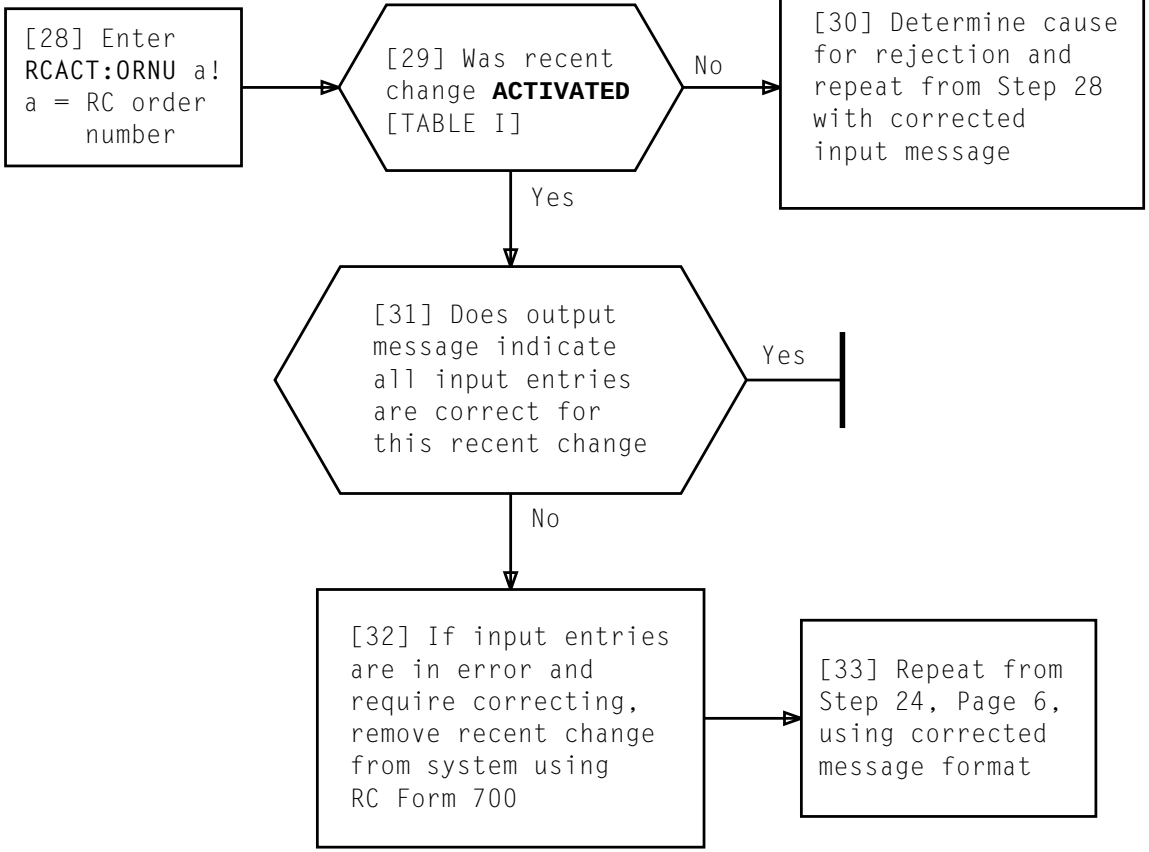


TABLE I

MESSAGE NUMBER	OUTPUT MESSAGE
1	RC ORNU b ACTIVATED
2	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 = GRID, MFS, or TPOS
b = RC order number
c = Member number of degrowth frame

RECENT CHANGE MEMBER EQUIPAGE USING RC FORM 701 (DEGROW)

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

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

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

AND

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

0 or 1 → Page 2

2 or 3

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

AND

Page 2, Step 8

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

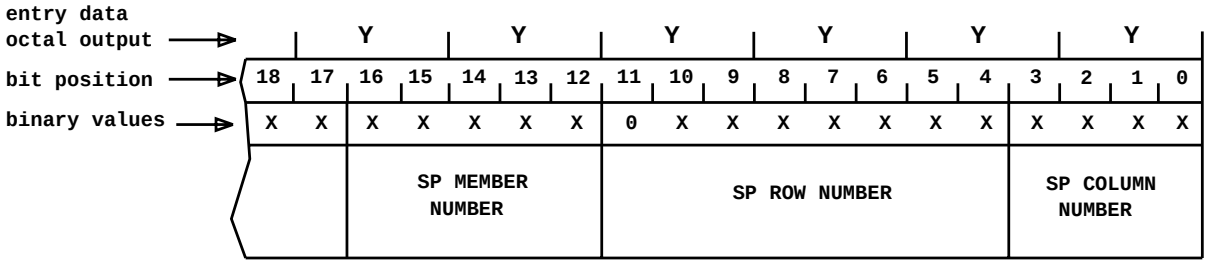
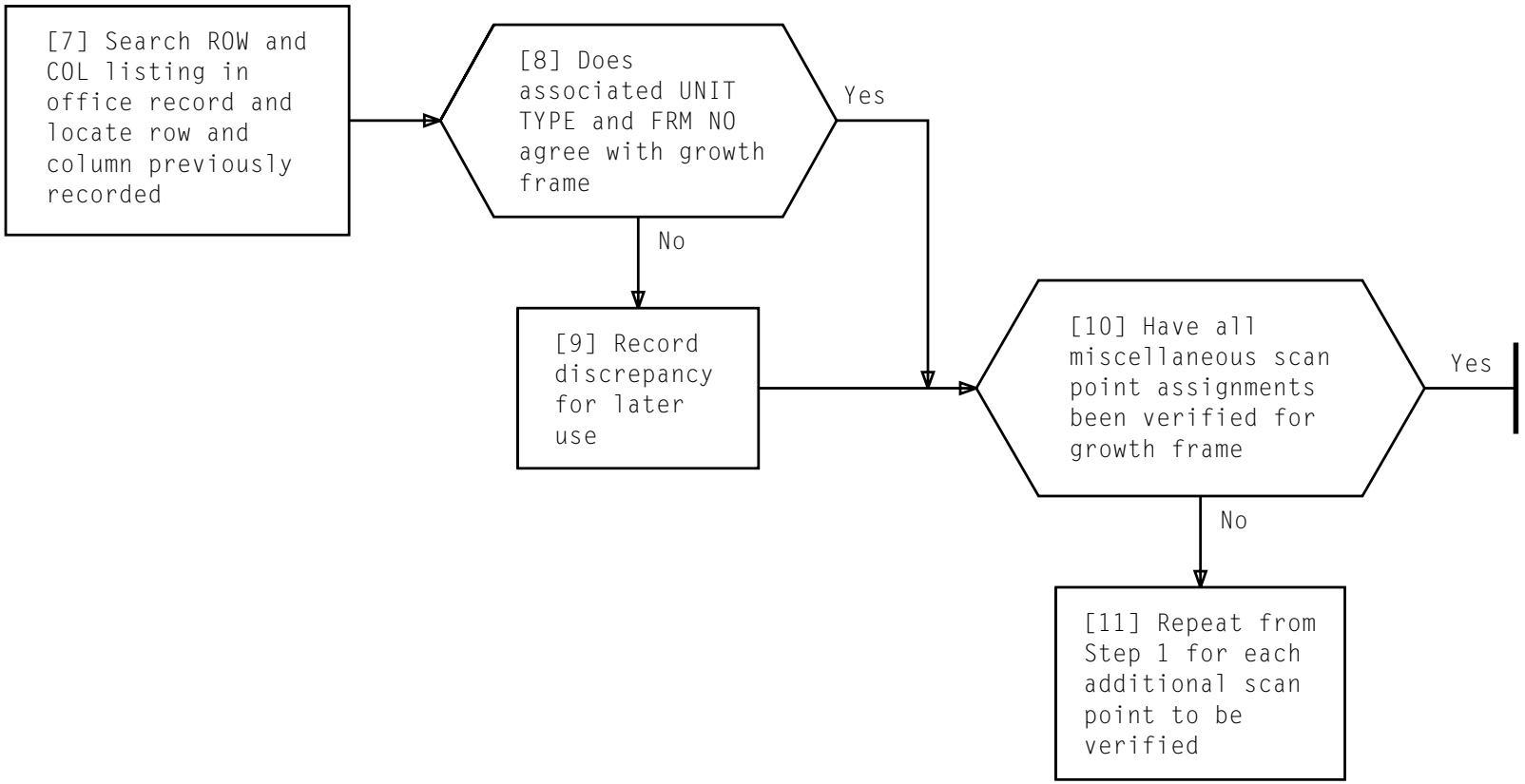


FIG. 1 — Entry Data Word Layout

VERIFY MISCELLANEOUS SCAN POINT ASSIGNMENT(S) FOR GROWTH FRAME



VERIFY MISCELLANEOUS SCAN POINT ASSIGNMENT(S) FOR GROWTH FRAME

RECENT CHANGE AND VERIFY MEMBER EQUIPAGE

[1] See CAUTION 1.
At 1B terminal, enter message
OP:RCFORM 700!

CRT displays RC Form 700

RC Form 700 filled in and entered

AND

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

TABLE A

MESSAGE NUMBER	INPUT MESSAGE
1	RC:UTYPE;CHG;OPT(EQP,GROW),TST: UTYN a, ORNU b, OLD NEW MEMN c, ME (d , d), OLD NEW SUBMEM ___SME (____, ____), REMARKS ----------!

a = Unit type = GRID, MFS, or TPOS
b = RC order number
c = Member number of degrowth frame
d = UNEQ, GROW or GROW, SGRO or SGRO, OPER

TABLE B

MESSAGE NUMBER	OUTPUT MESSAGE
1	RC ORNU a SUCCESSFULLY TESTED
2	RC ORNU a SUCCESSFULLY BUFFERED
3	RC:UTYPE;CHG;OPT(EQP,GROW),BUF: UTYN b, ORNU a, OLD NEW MEMN c, ME (d, d), OLD NEW SUBMEM ____, SME (____, ____), REMARKS---------- !

a = RC order number
b = Unit type = GRID, MFS, or TPOS
c = Member number of degrowth frame
d = Entered member equipage

[3] Was recent change **SUCCESSFULLY TESTED** and **SUCCESSFULLY BUFFERED** [TABLE B]

Yes → Page 2

No → [4] Analyze output message for error and repeat from Step 1 with corrected input data

NOTE 1
When growing TPOS, member number is two-digit value. First is control area and second is test position number

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

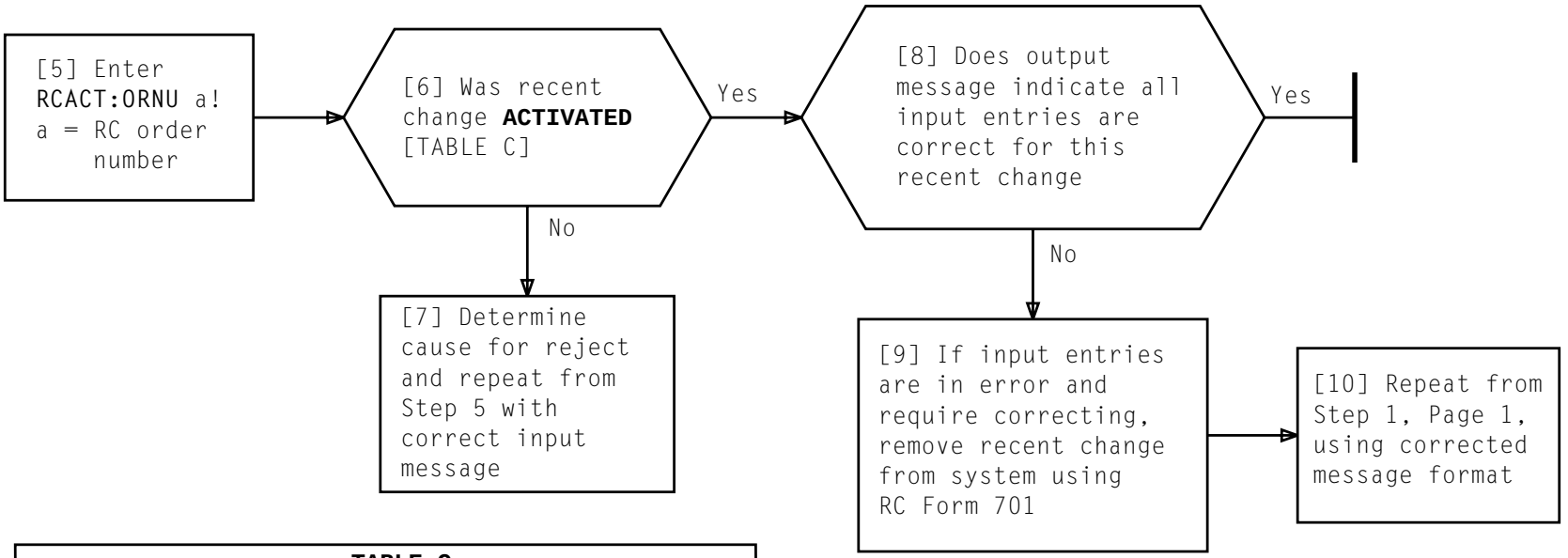


TABLE C

MESSAGE NUMBER	OUTPUT MESSAGE
1	RC ORNU a ACTIVATED RC:UTYPE;CHG;OPT(EQP,GROW),BUF: UTYN b, ORNU a, OLD NEW MEMN c, ME (d, d), OLD NEW SUBMEM ____, SME (____, ____), REMARKS---------- !

a = RC order number
b = Unit type = GRID, MFS or TPOS
c = Member number of growth frame
d = Entered member equipage

RECENT CHANGE AND VERIFY MEMBER EQUIPAGE

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.

[1] See word 1 in entry output message

[2] See FIG. 1 for word 1 layout

[3] Convert all octal digits of word 1 in entry output to binary digits and record

[4] Convert bits 20 through 23 to decimal alarm grid number per FIG. 1

[5] Convert bits 10 through 19 to decimal frame lineup number per FIG. 1

[6] Convert bits 0 through 9 to decimal frame number per FIG. 1

AND

Word 1 binary and decimal conversions completed

[7] Get office floor plan drawing for floor containing growth frame

[8] Compare growth frame and lineup information on floor plan drawing with decimal data determined in Steps 5 and 6

AND

Page 2

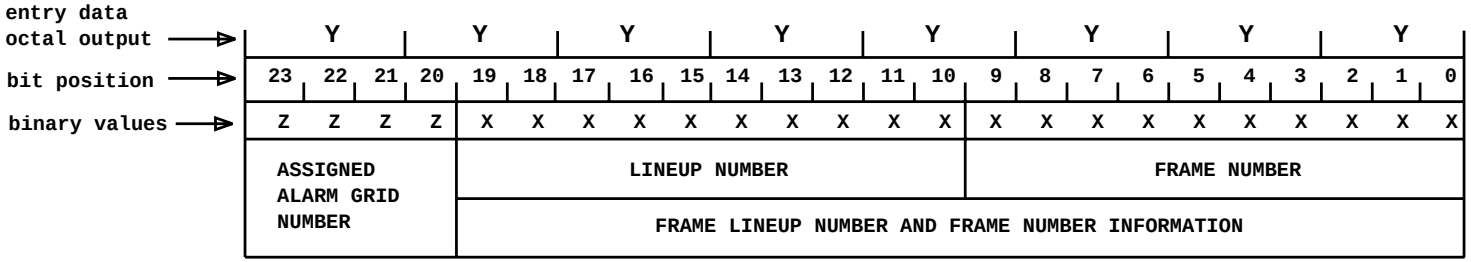


FIG. 1 – Entry Data Word 1 Layout

VERIFY ALARM GRID, LINEUP AND FRAME ASSIGNMENT FOR GROWTH FRAME

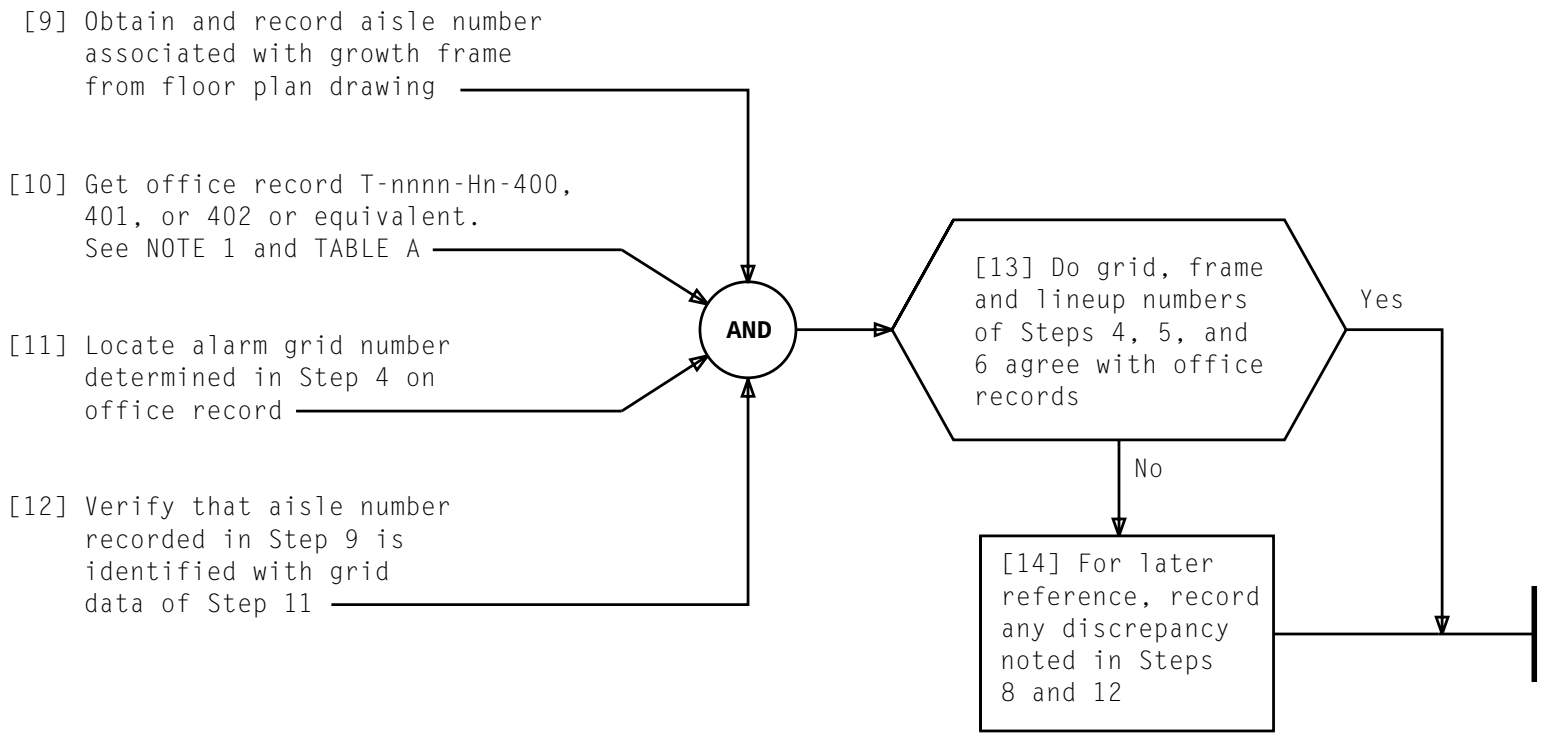


TABLE A	
ALARM GRIDS	**DRAWING NUMBER**
1 through 5	T-nnnn-Hn-400
6 through 10	T-nnnn-Hn-401
11 through 15	T-nnnn-Hn-402

NOTE 1
n = Office unique drawing identification number

VERIFY ALARM GRID, LINEUP AND FRAME ASSIGNMENT FOR GROWTH FRAME

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

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

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

AND

Page 2

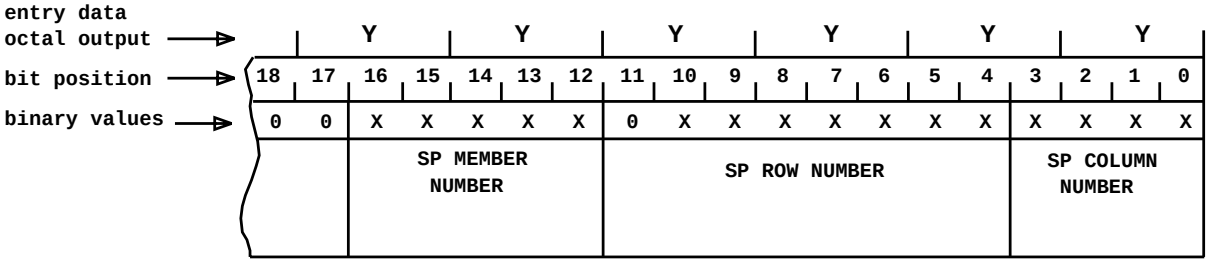
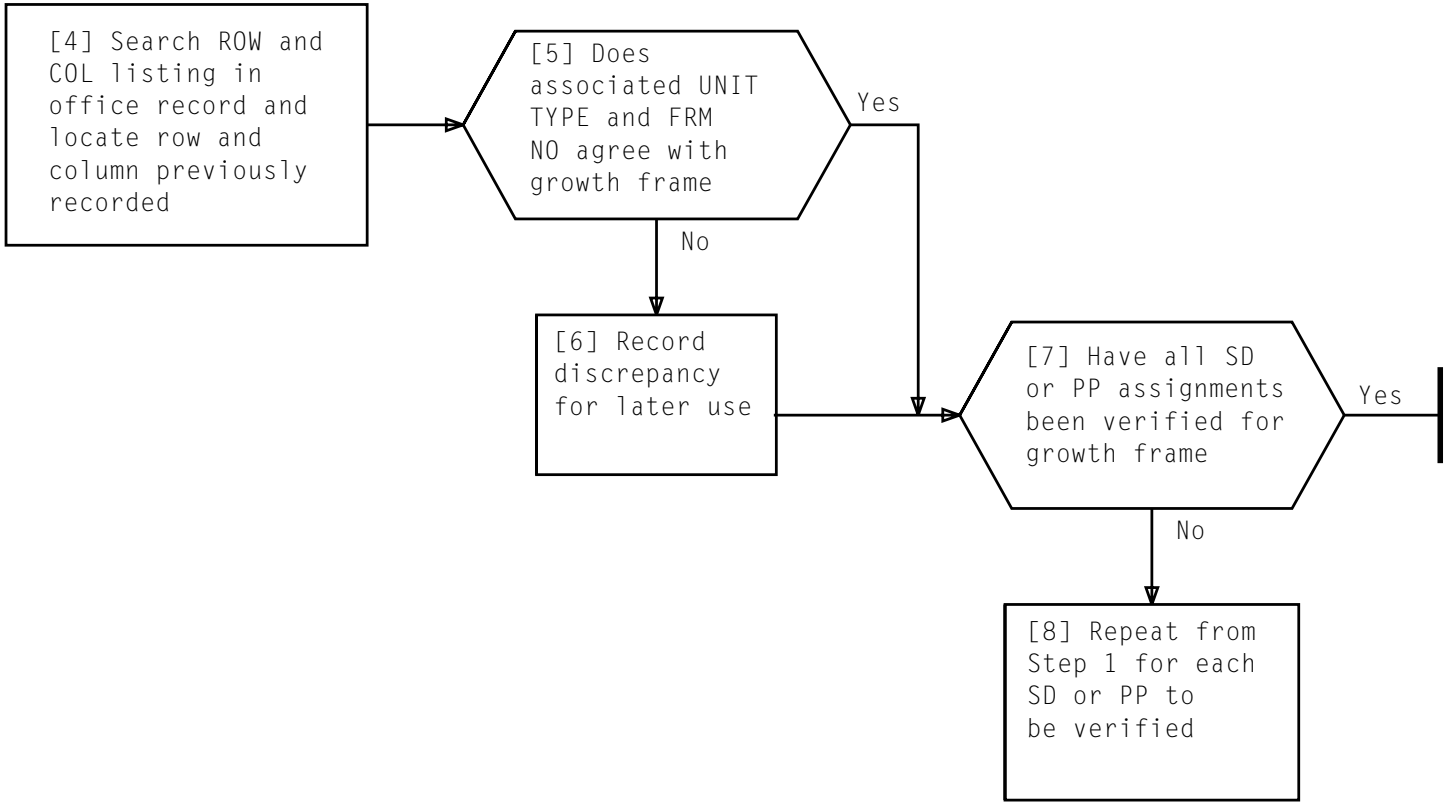


FIG. 1 – Entry Data Word Layout

VERIFY SD OR PULSE POINT ASSIGNMENTS FOR GROWTH FRAME



VERIFY SD OR PULSE POINT ASSIGNMENTS FOR GROWTH FRAME

SUMMARY

Using verify entry input message, call the CCT 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 4 for assistance in interpreting specific data fields. If it is determined that UT entry data are in error, word change(s) may be required.

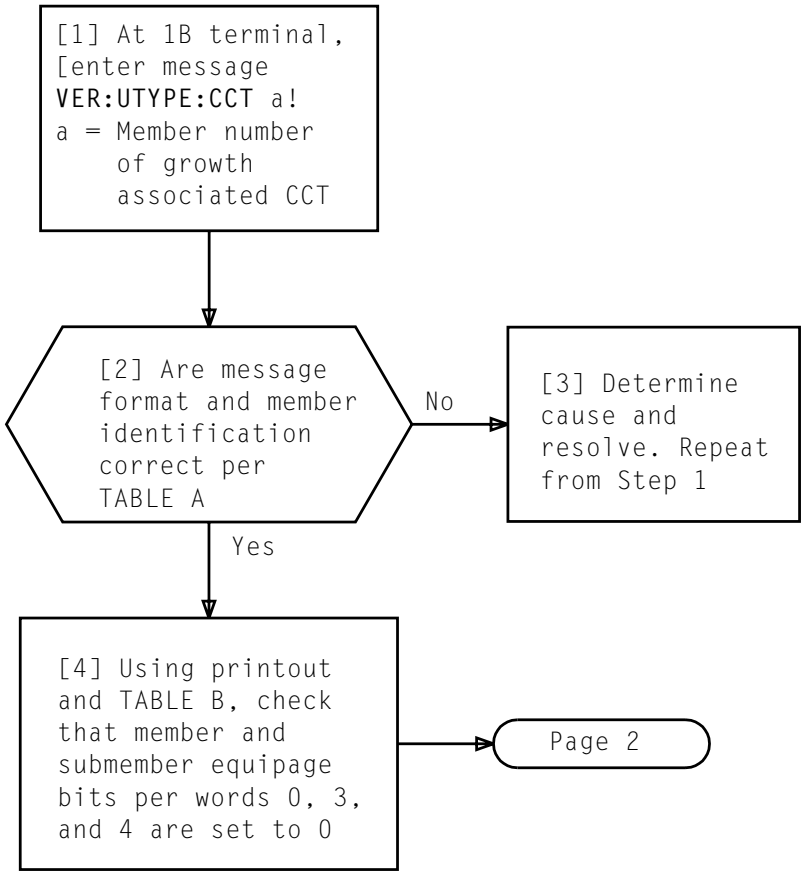
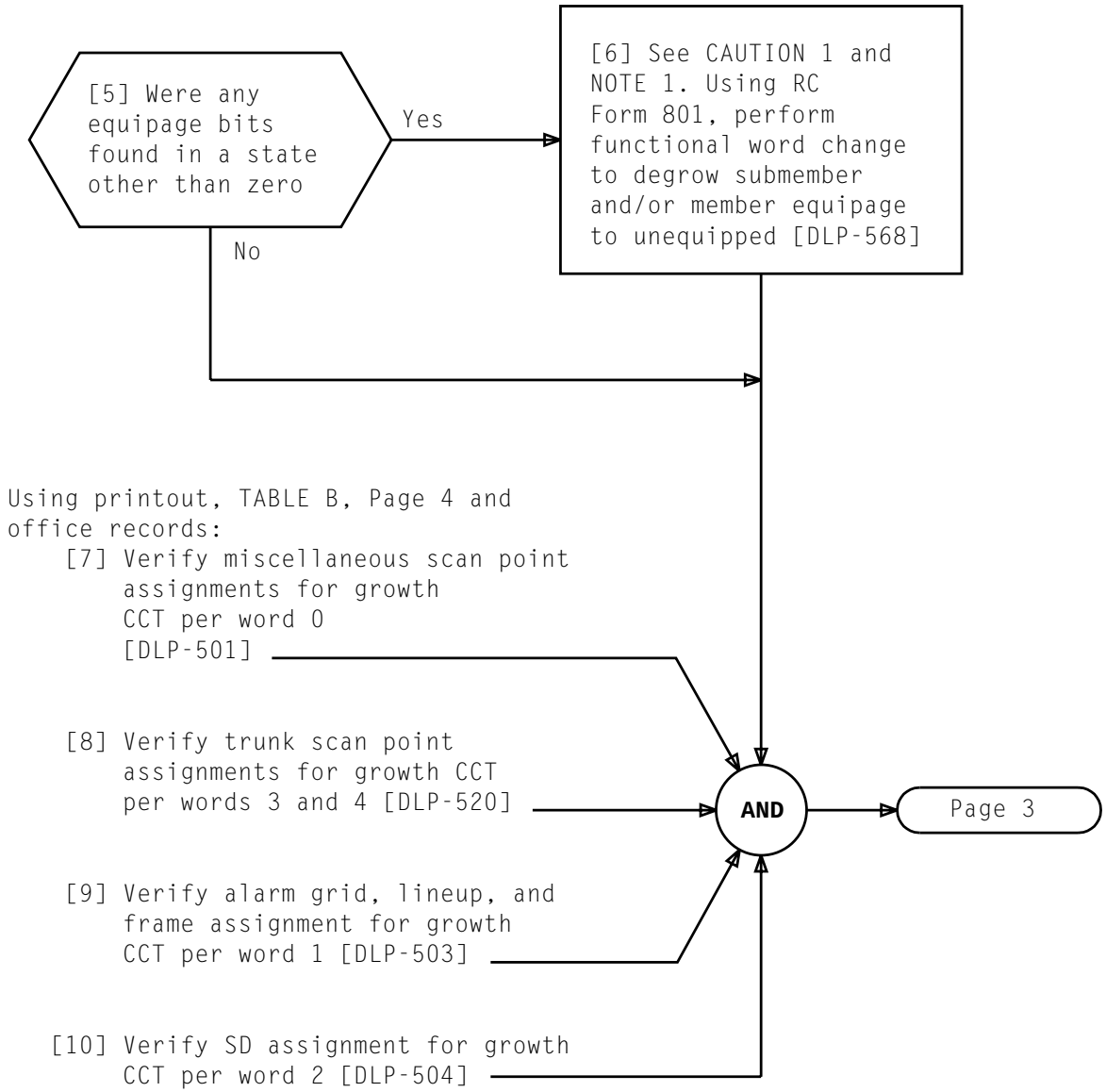


TABLE A

MESSAGE NUMBER	INPUT MESSAGE
1	VER:UTMN;OPT(),CUR: FLN a, UTYN CCT, MEMN b, ME UNEQ, ENTRY ADDRESS c, ENTRY SIZE 5, CUR WORD 0 _____ _____ _____ _____ _____

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

VERIFY CONTINUITY CHECK TRANSCEIVER (CCT) UT TRANSLATOR



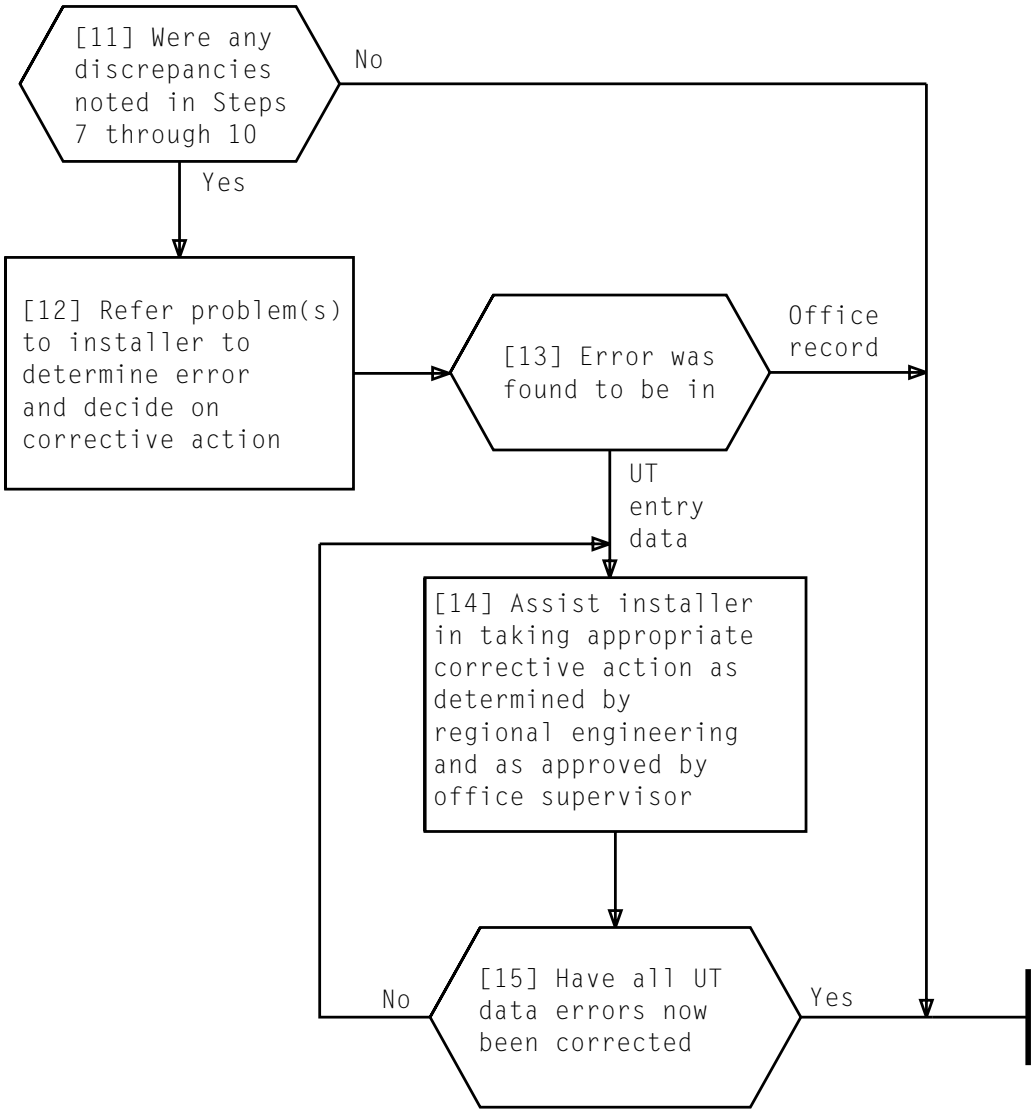
NOTE 1

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

CAUTION 1

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

VERIFY CONTINUITY CHECK TRANSCEIVER (CCT) UT TRANSLATOR



VERIFY CONTINUITY CHECK TRANSCEIVER (CCT) UT TRANSLATOR

TABLE B

ENTRY WORD (OCTAL) 0

UT ENTRY DATA AND WORD CONFIGURATION

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 | X X X X X | 0 | X X X X X X X | X X X X

MEMBER EQUIPAGE		SP MEMBER NUMBER	SP ROW NUMBER	SP COLUMN NUMBER
		MEMBER BASE MISCELLANEOUS SCAN NUMBER		

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

Y = Variable octal numbers

ENTRY WORD (OCTAL) 1

entry data octal output → Y | Y | Y | Y | Y | Y | Y | Y

bit position → 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0

binary values → Z Z Z Z | X X X X X X X X X X | X X X X X X X X X X

ASSIGNED ALARM GRID NUMBER	FRAME LINEUP NUMBER	FRAME NUMBER

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

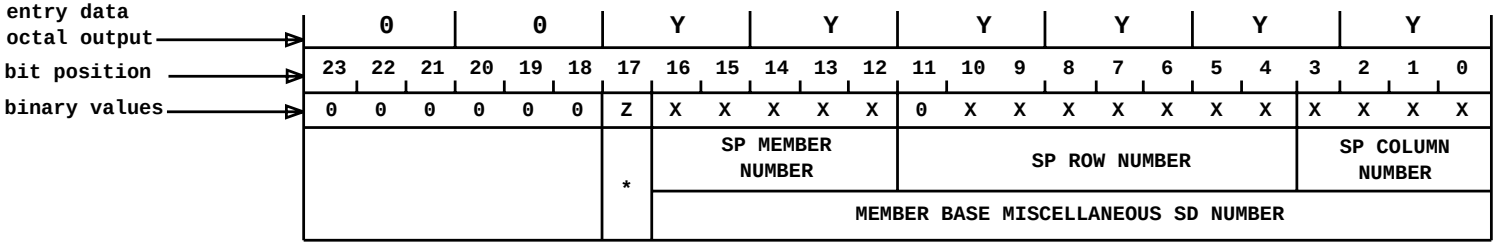
Y= Variable octal numbers

ZZZZ = Converts to decimal alarm grid number as reflected in office record drawings T-nnnn-Hn-400, 401, or 402 or equivalent

TABLE B (Contd)

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION

2



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

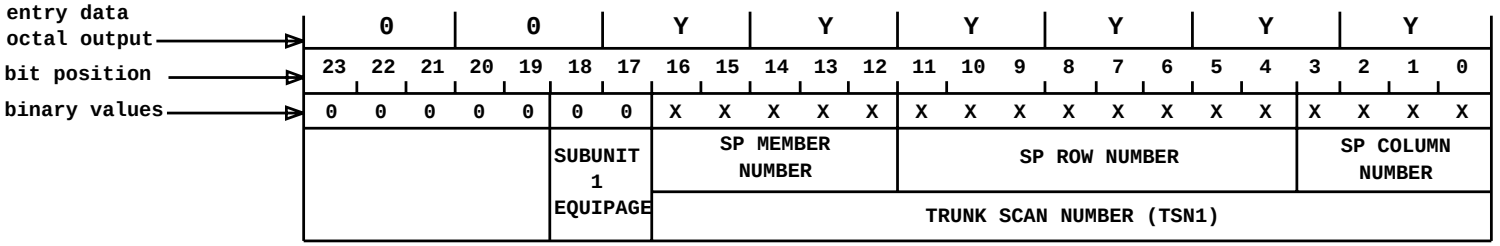
Y = Variable octal numbers

*CCT rack mounting type

Z = 0 for type 1: subunit with 8 transceivers and 2 test circuits

= 1 for type 2: two subunits each with 6 transceivers

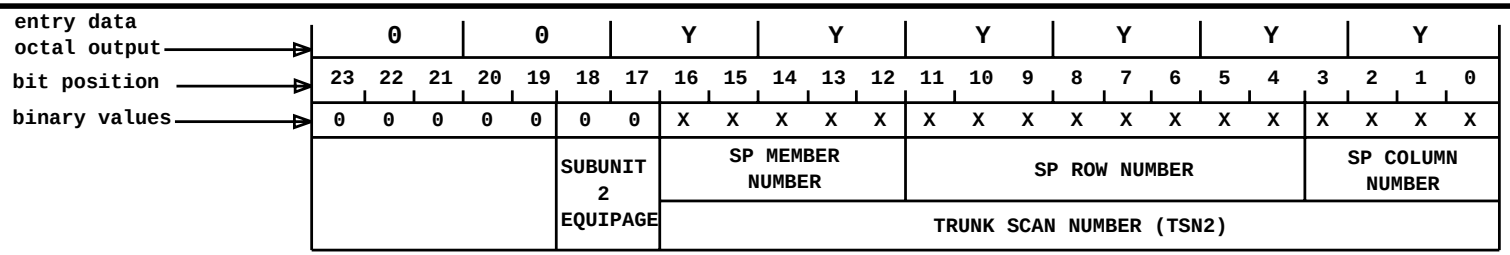
3



X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-460 or equivalent

Y = Variable octal numbers

TABLE B (Contd)

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

X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-460 or equivalent

Y = Variable octal numbers

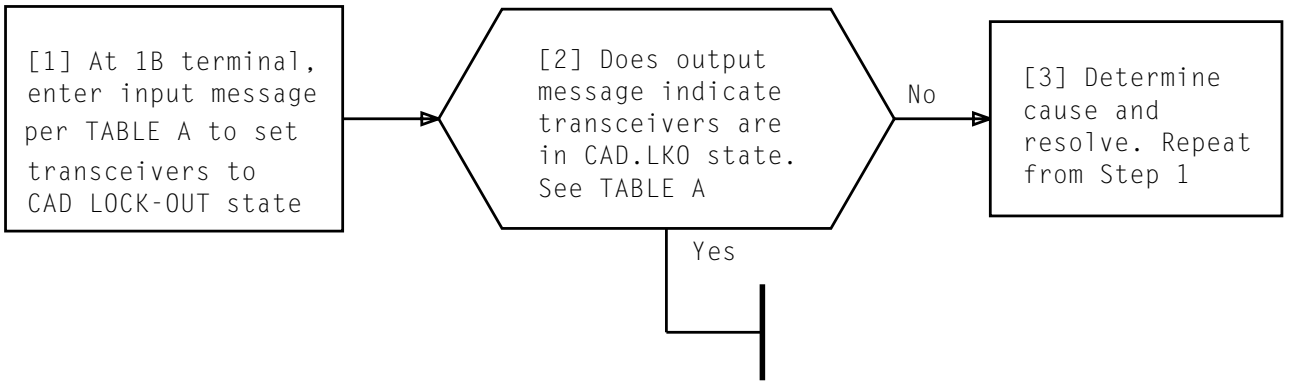


TABLE A

INPUT MESSAGE	OUTPUT MESSAGE
SET:TRKSTAT CAD.LKO,CIN aOØSVC*XCVR:NUM 6!	SET:TRKSTAT CAD.LKO<MAN> TRAF<c> ,CIN aO/bSVC* XCVR *** • • SET:TRKSTAT ,CIN aO/bSVC* XCVR *** NUM COMPLETED TRK COUNT 6

a = Member number of growth CCT to which transceivers belong
b = Number of first transceiver in submember
    = 0 for transceivers 00-05
    = 6 for transceivers 06-11
c = Trunk register state code

SET TRANSCEIVERS (CCT) TO CAD LOCK-OUT STATE

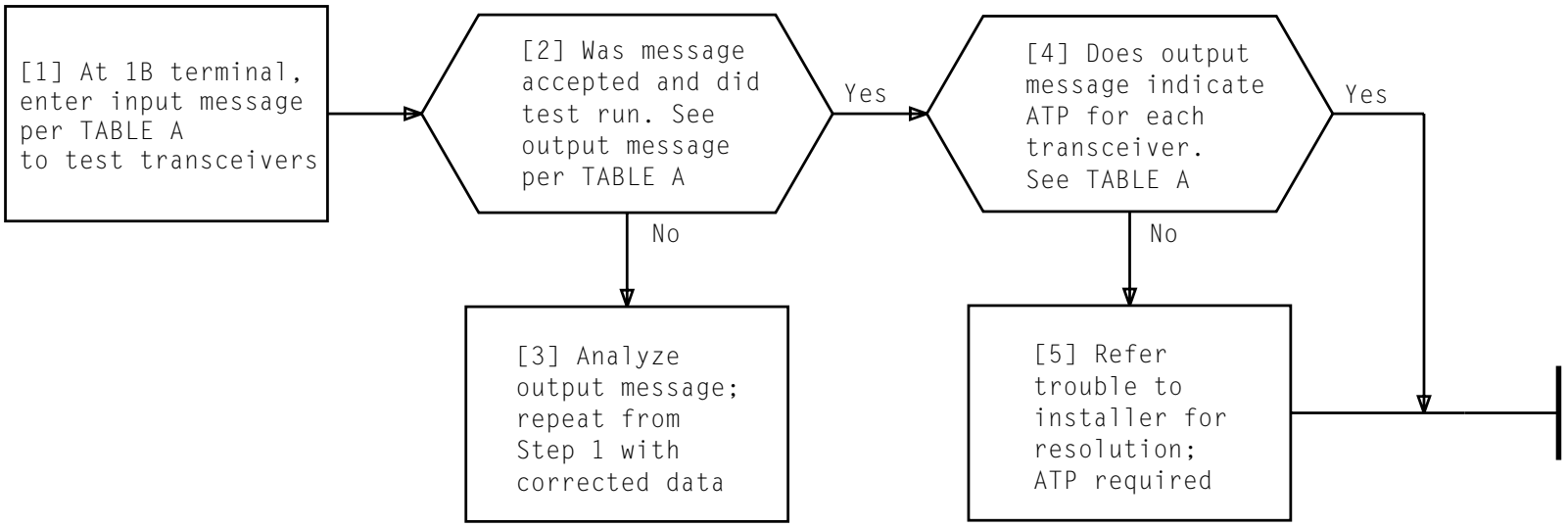


TABLE A

INPUT MESSAGE	OUTPUT MESSAGE
TEST:TRK,CIN a0/bSVC*XCVR;SVC:TSG,STAT CAD.LKO!	TEST:TRK,CIN a0/bSVC* XCVR *** ;SVC ,ATP • • TEST:TRK,CIN a0/bSVC* XCVR *** ;SVC , TSG STAT CAD.LKO COMPLETED

a = Member number of growth CCT to which transceivers belong
b = Number of first transceiver in submember
= 0 for transceivers 00-05
= 6 for transceivers 06-11

TEST TRANSCEIVERS (CCT)

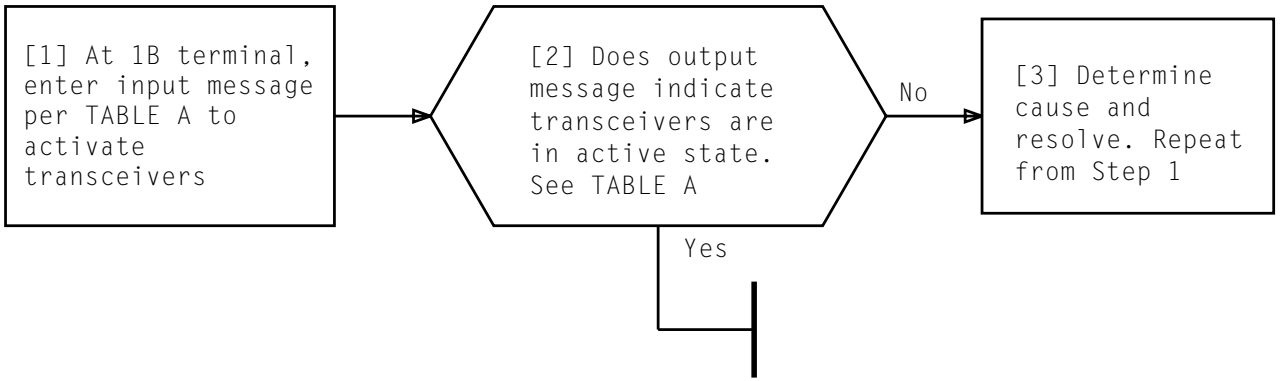


TABLE A

INPUT MESSAGE	OUTPUT MESSAGE
SET:TRKSTAT ACT,CIN aO/bSVC*XCVR:STAT CAD.LKO!	SET:TRKSTAT ACT TRAF<c> ,CIN aO/bSVC* XCVR *** • • SET:TRKSTAT ,CIN aO/bSVC* XCVR *** TSG,STAT COMPLETED TRK COUNT 6

a = Member number of growth CCT to which transceivers belong
b = Number of first transceiver in submember
= 0 for transceivers 00-05
= 6 for transceivers 06-11
c = Trunk register state code

SET TRANSCEIVERS (CCT) TO ACTIVE STATE

VERIFY CONTINUITY CHECK TRANSCEIVER (CCT) UT TRANSLATOR (ADDING SUBMEMBER ONLY)

SUMMARY

At 1B maintenance terminal, using verify entry input message, call up CCT UT translator and verify that resulting octal output data, when converted, agrees with office records.

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

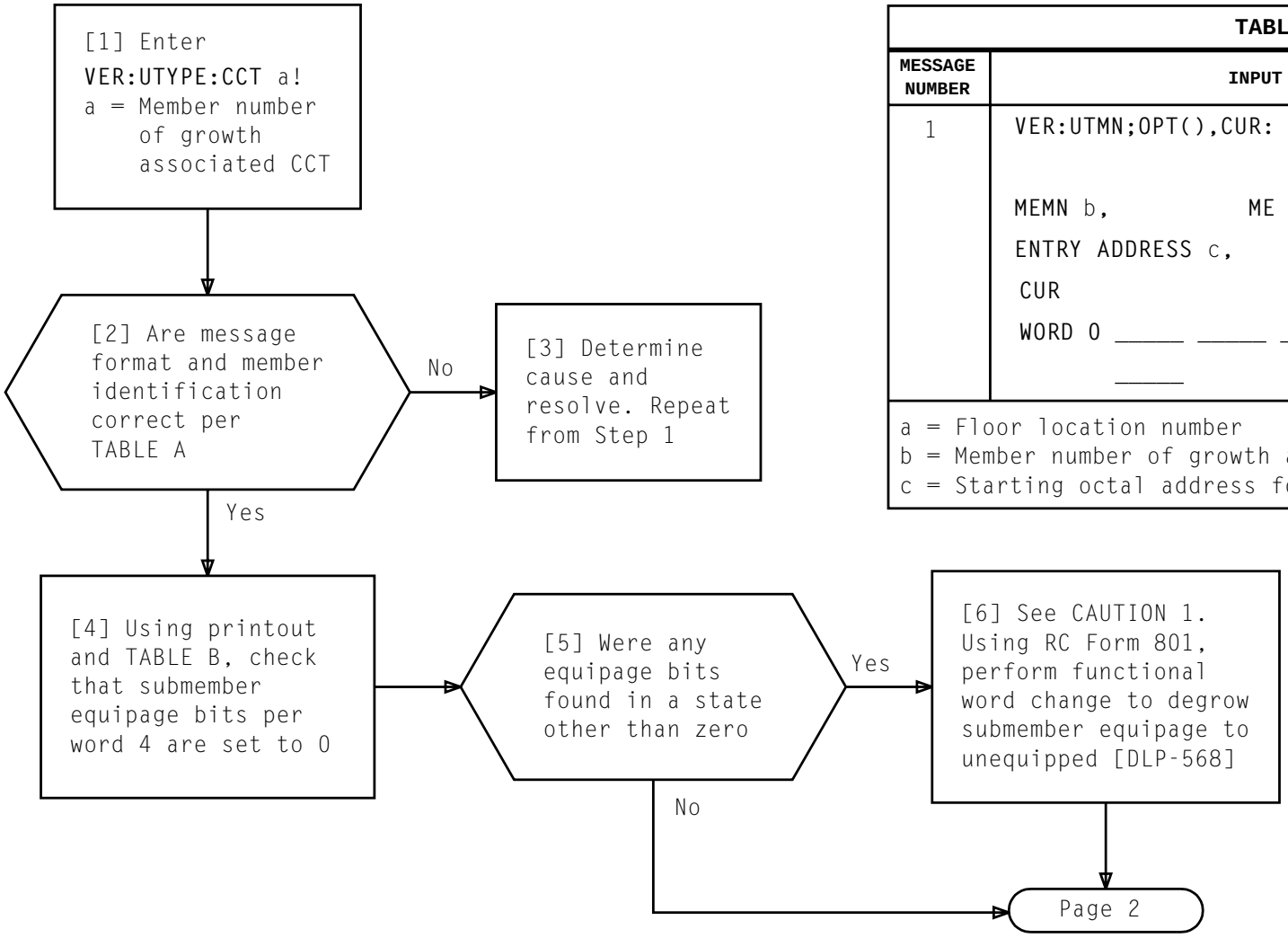
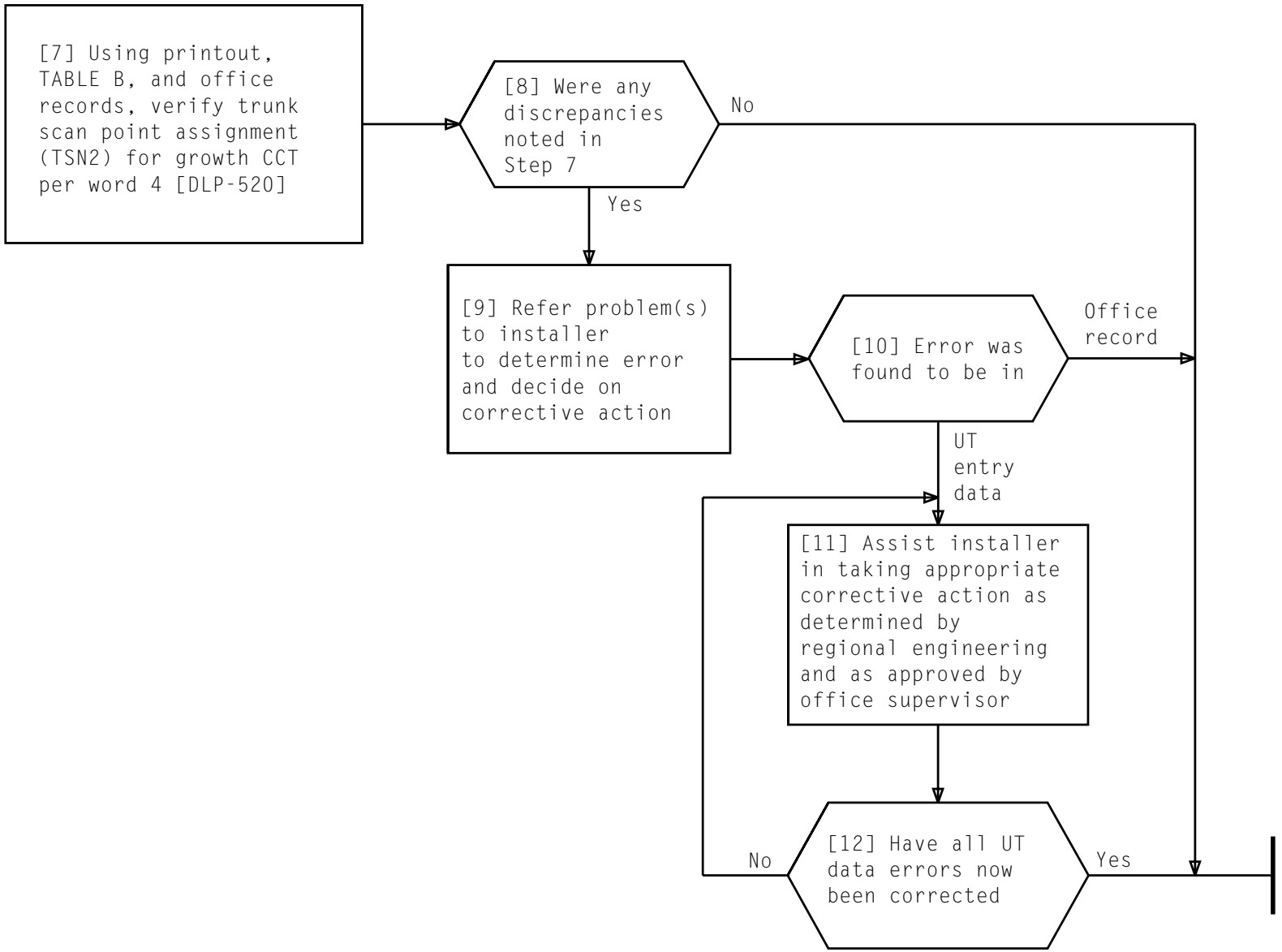


TABLE A

MESSAGE NUMBER	INPUT MESSAGE
1	VER:UTMN;OPT(),CUR: FLN a, UTYN CCT, MEMN b, ME OPER, ENTRY ADDRESS c, ENTRY SIZE 5, CUR WORD O _____ _____ _____ _____ _____

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

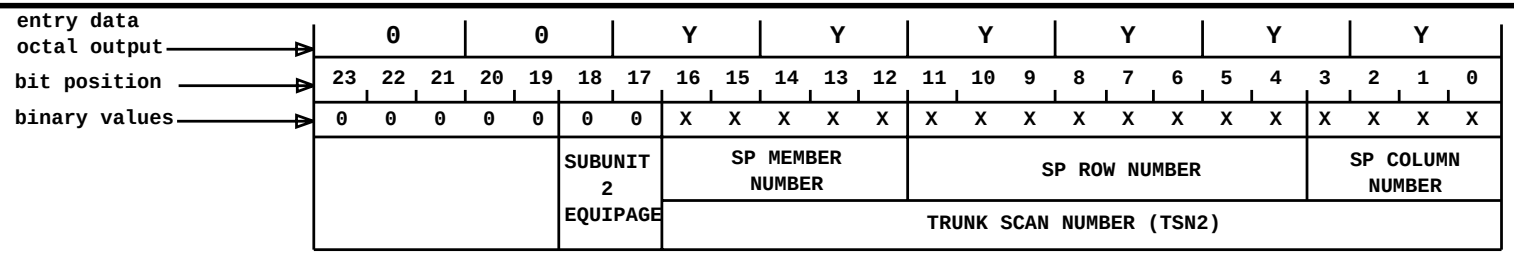
CAUTION 1
Depending on local procedures, supervisory or TELCO engineering approval must be obtained prior to performing any data change



VERIFY CONTINUITY CHECK TRANSCEIVER (CCT) UT TRANSLATOR (ADDING SUBMEMBER ONLY)

TABLE B

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION



4

X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-460 or equivalent

Y = Variable octal numbers

VERIFY CONTINUITY CHECK TRANSCEIVER (CCT) UT TRANSLATOR (ADDING SUBMEMBER ONLY)

SUMMARY

Using verify input message, call up appropriate UT translator and verify that resulting octal output data, when converted, agrees with office records. Refer to entry word explanations in TABLE C, Page 4, as required, for assistance in interpreting specific data fields. If it is determined that UT entry data are in error, word change(s) may be required.

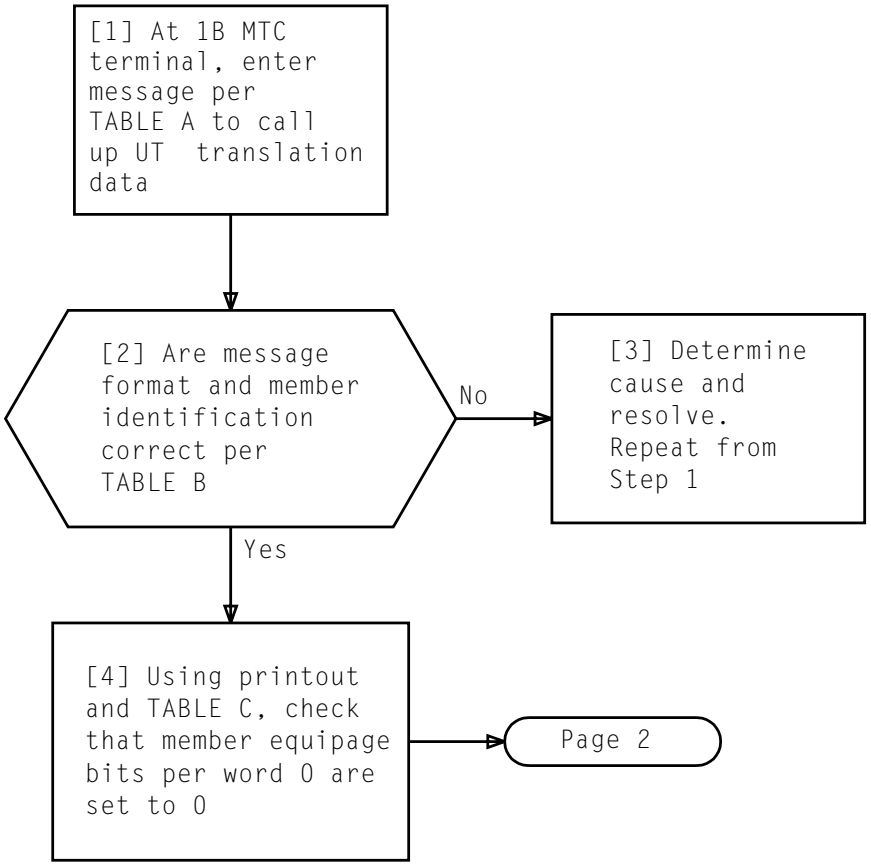


TABLE A

MESSAGE NUMBER	INPUT MESSAGE
1	VER:UTYPE:a b!

a = Unit type

= PP620 (for 620A Power Plant)
= PP625 (for 625F Power Plant)
= PP630 (for 630A Power PLant)
= ABCNT (for Area Bus Center)

b = Member number of growth unit

TABLE B

MESSAGE NUMBER	OUTPUT MESSAGE
1	VER:UTMN;OPT(),CUR: FLN a, UTYN b,
2	MEMN c, ME UNEQ, ENTRY ADDRESS d, ENTRY SIZE 2, CUR WORD 0 _____ _____

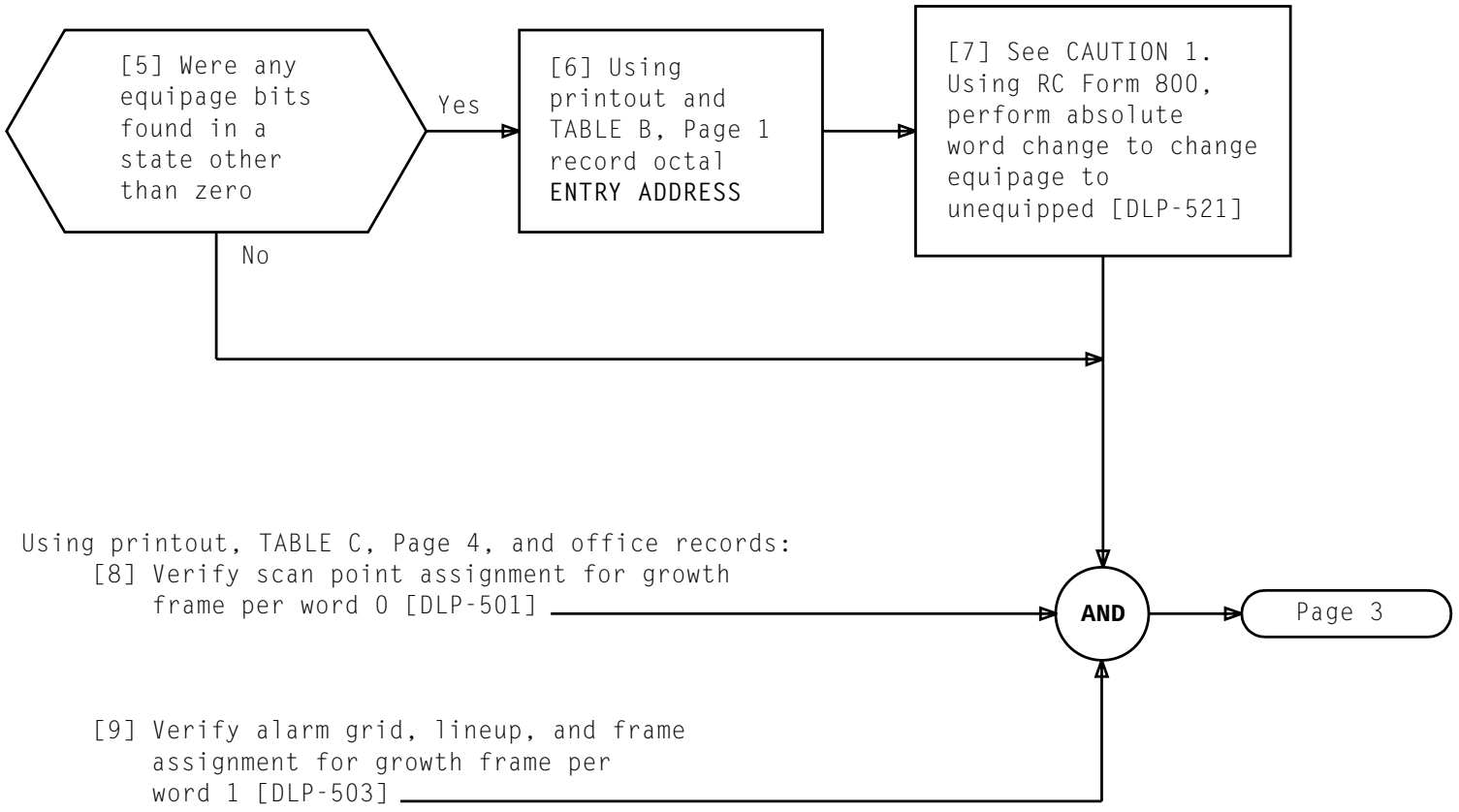
a = Floor location number

b = Unit type = PP620 (for 620A Power Plant)
= PP625 (for 625F Power Plant)
= PP630 (for 630A Power PLant)
= ABCNT (for Area Bus Center)

c = Member number of growth ABC or Power Plant

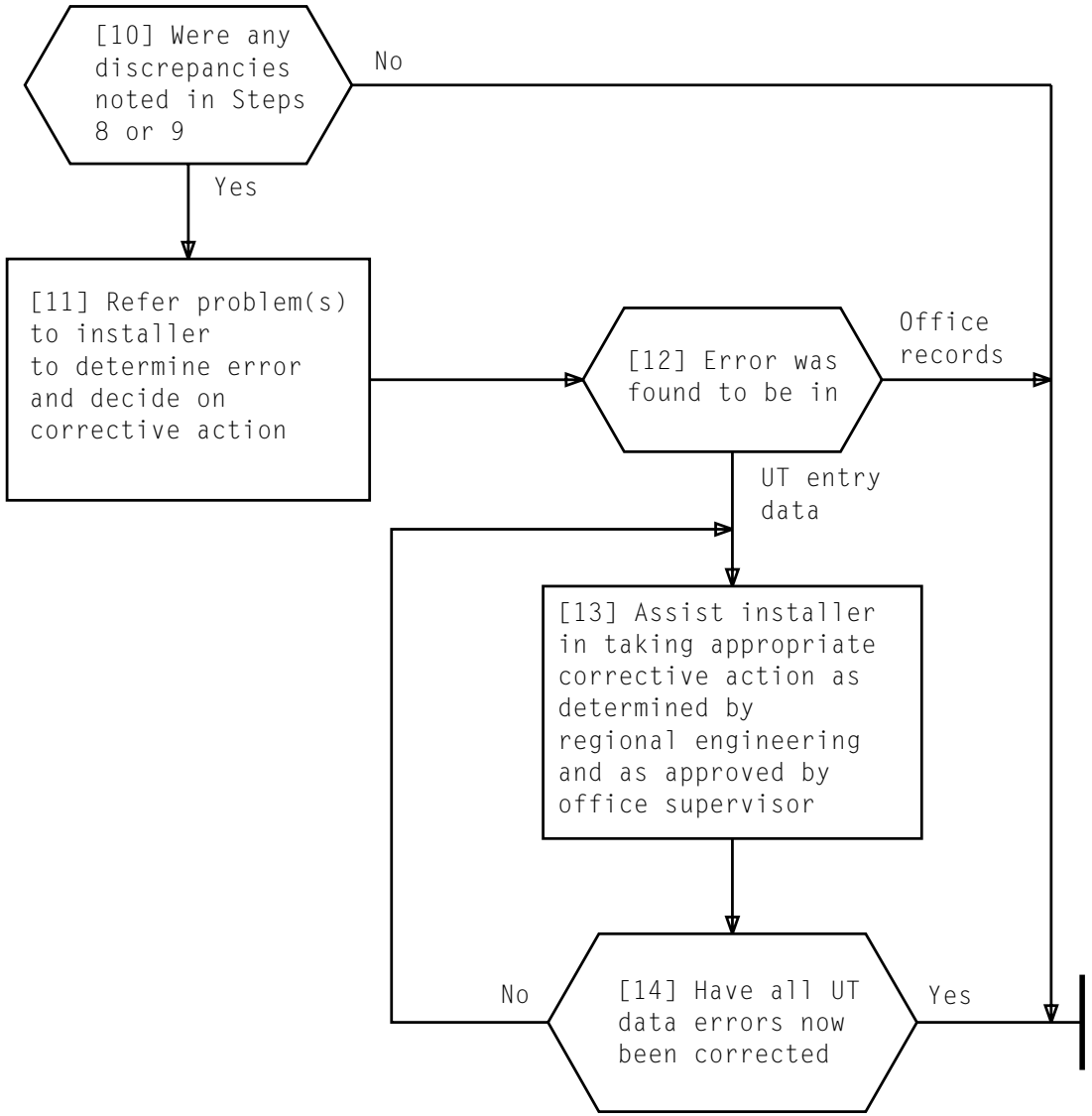
d = Starting octal address for unit type entry

VERIFY AREA BUS CENTER (ABC) OR POWER PLANT (620A/625F/630A) UT TRANSLATOR



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

VERIFY AREA BUS CENTER (ABC) OR POWER PLANT (620A/625F/630A) UT TRANSLATOR

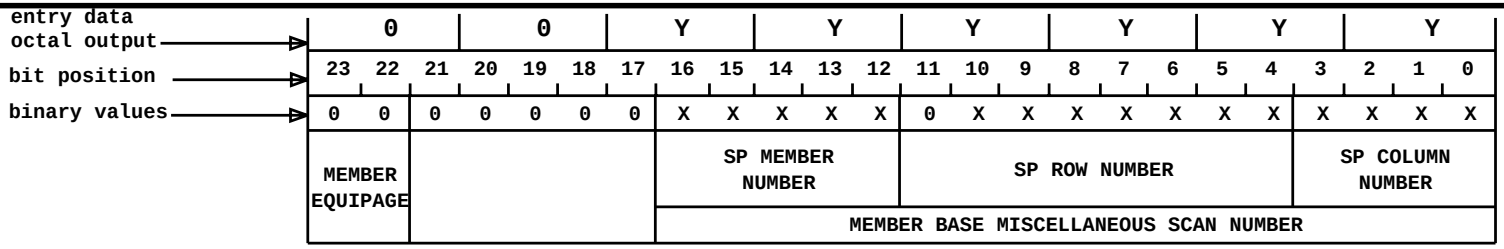


VERIFY AREA BUS CENTER (ABC) OR POWER PLANT (620A/625F/630A) UT TRANSLATOR

TABLE C

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

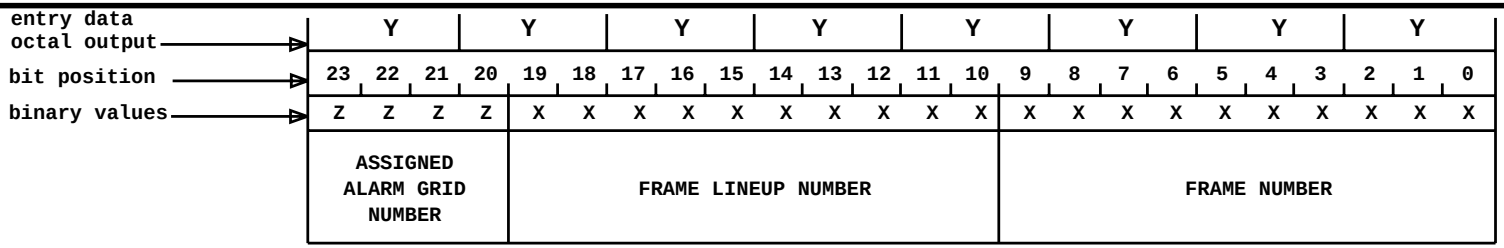
0



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

Y = Variable octal numbers

1



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

Y= Variable octal numbers

ZZZZ = Converts to decimal alarm grid number as reflected in office record drawings T-nnnn-Hn-400, 401 or 402 or equivalent

VERIFY AREA BUS CENTER (ABC) OR POWER PLANT (620A/625F/630A) UT TRANSLATOR

[1] Determine from company order transmitter circuits to be equipped

[2] Circuits being equipped in range 00-15 or 16-31

00-15

[3] Using FIG. 1, determine location of transmitter circuits to be added and install **JD7** circuit packs in required positions

16-31

[4] Using FIG. 2, determine location of transmitter circuits to be added and install **JD7** circuit packs in required positions

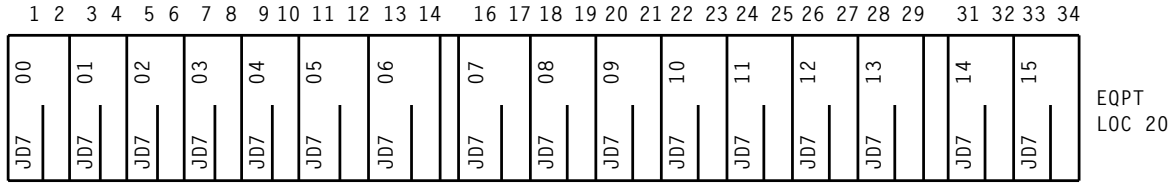


FIG. 1 — MFS Transmitter Circuit Pack Locations (00-15)

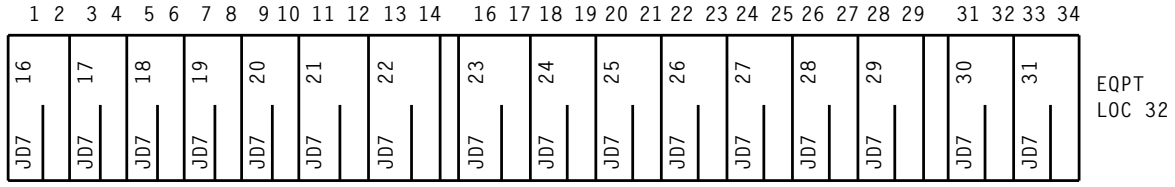


FIG. 2 — MFS Transmitter Circuit Pack Locations (16-31)

SELECT AND INSTALL MFS TRANSMITTER CIRCUIT PACKS

[1] Determine from company order receiver circuits to be equipped

[2] Circuits being equipped in range 00-15 or 16-31

00-15

[3] Using FIG. 1, determine location of receiver circuits to be added and install **JD8**, **JD9**, **JD10**, and **JD11** circuit packs in required positions

16-31

[4] Using FIG. 2, determine location of receiver circuits to be added and install **JD8**, **JD9**, **JD10**, and **JD11** circuit packs in required positions

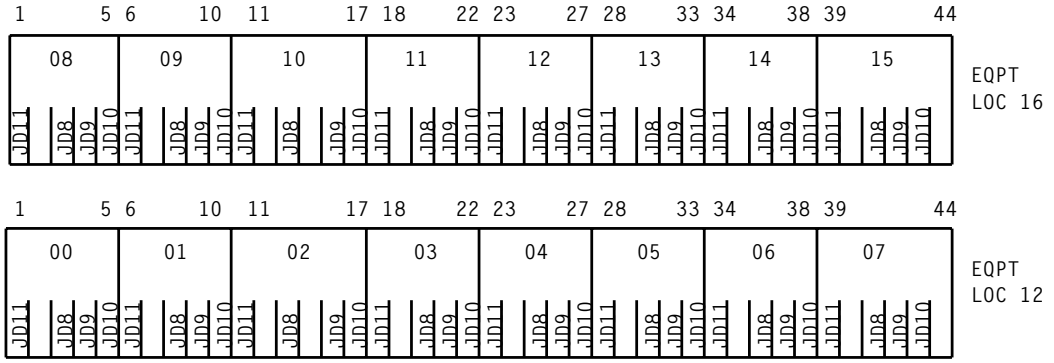


FIG. 1 – MFS Receiver Circuit Pack Locations (00-15)

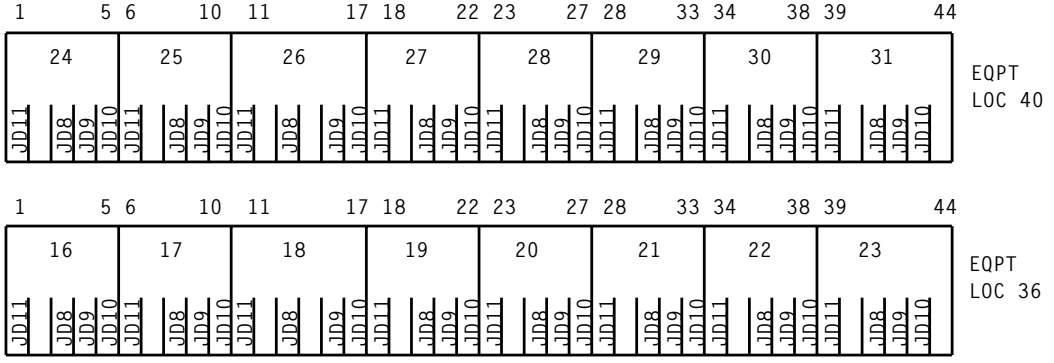


FIG. 2 – MFS Receiver Circuit Pack Locations (16-31)

SELECT AND INSTALL MFS RECEIVER CIRCUIT PACKS

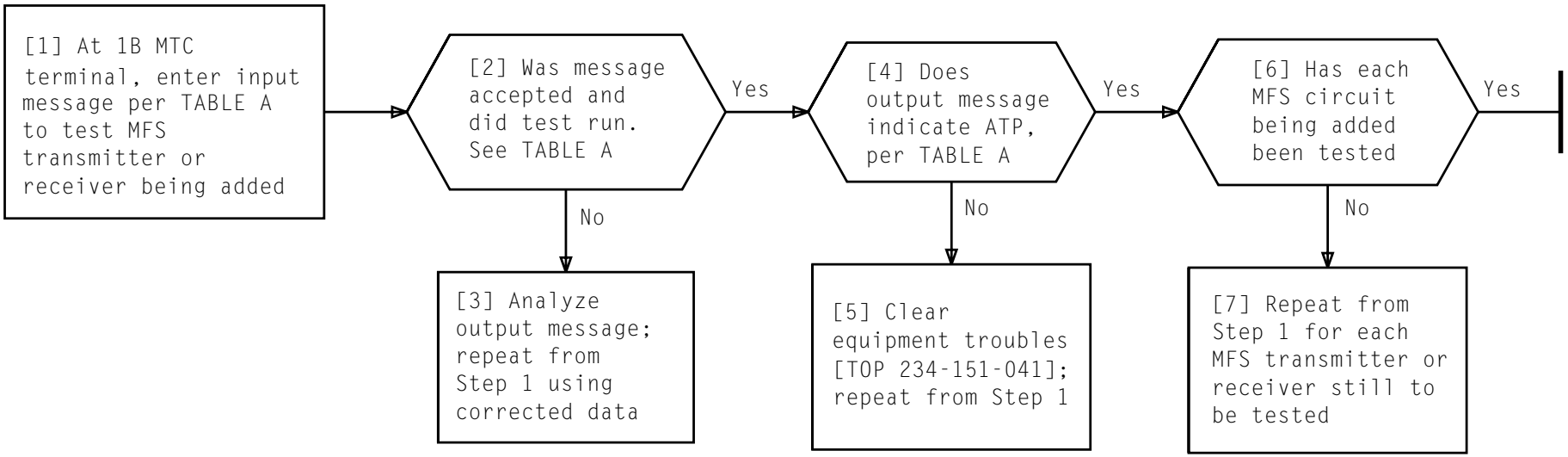


TABLE A

INPUT MESSAGE	OUTPUT MESSAGE
TEST:TRK,CIN aabb SVC* c *;SVC!	TEST:TRK,CIN aabb SVC* c * ***;SVC,ATP

aa = MFS frame member number
bb = MFS circuit number to be tested
c = MFX for MFS transmitter
MFR for MFS receiver

TEST MFS TRANSMITTER AND/OR RECEIVER CIRCUITS BEING ADDED

[1] Determine location of added channel unit(s) using FIG. 1

[2] Select one **4E&MER** channel unit pack per added unit. See FIG. 2

AND

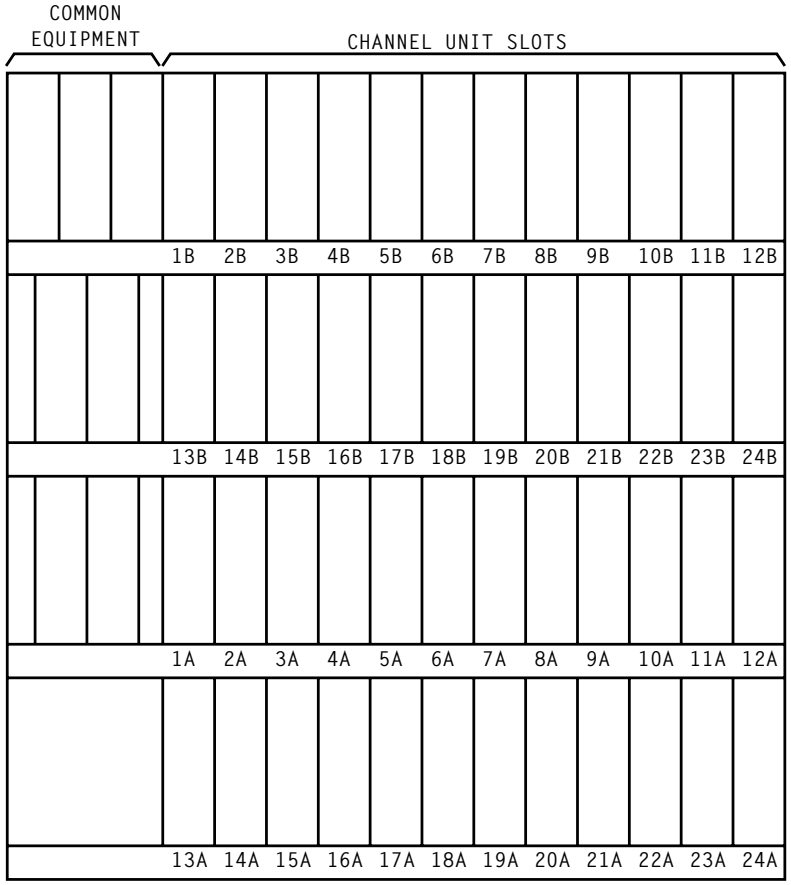


FIG. 1 – D4 Channel Bank (Front View)

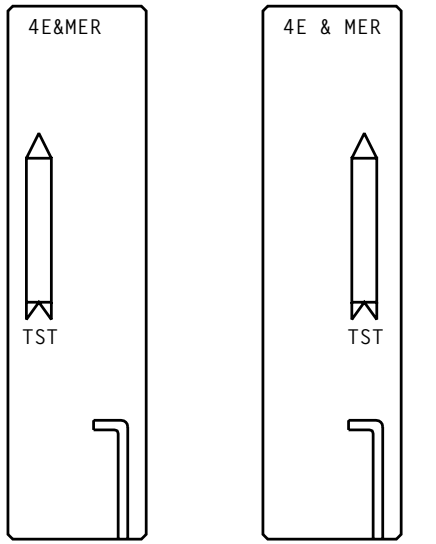


FIG. 2 – Faceplate of 4E&MER Channel Unit

DETERMINE CHANNEL SLOT LOCATION(S) AND SELECT 4E&MER CHANNEL UNIT(S)

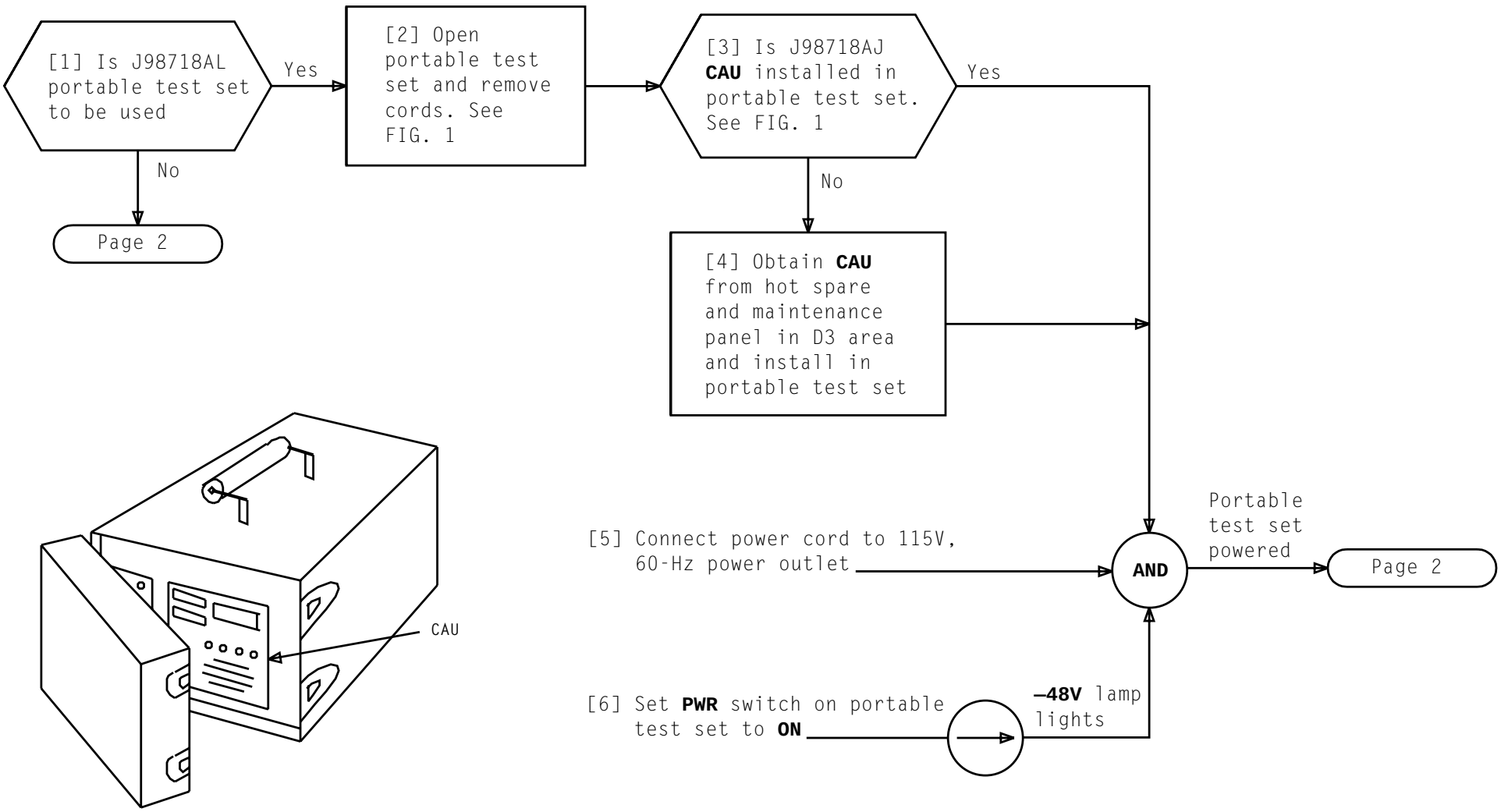


FIG. 1 – Portable Test Set Equipped With CAU

CONDITION D3/D4 PORTABLE TEST SET

ON **CAU**:

[7] Set **REJ FLT** switch to **OUT**

[8] Set **SEND LEVEL DB** switch to **OFF**

[9] Set **TEST** switch to **CAL**

Meter pointer is at left end of scale

AND

CAU switches set

[10] Does meter indicate within raised black index per FIG. 2

No

[13] **CAU** is out of calibration. Get another **CAU** and repeat Steps 1 through 10

Yes

[11] Is **CAU** speaker emitting sound

Yes

[14] Set **TEST** switch to **CHAN LINE** and rotate **VOL** control counterclockwise

No

[12] Rotate **VOL** control clockwise

No

[15] Get another **CAU** and repeat Steps 1 through 11

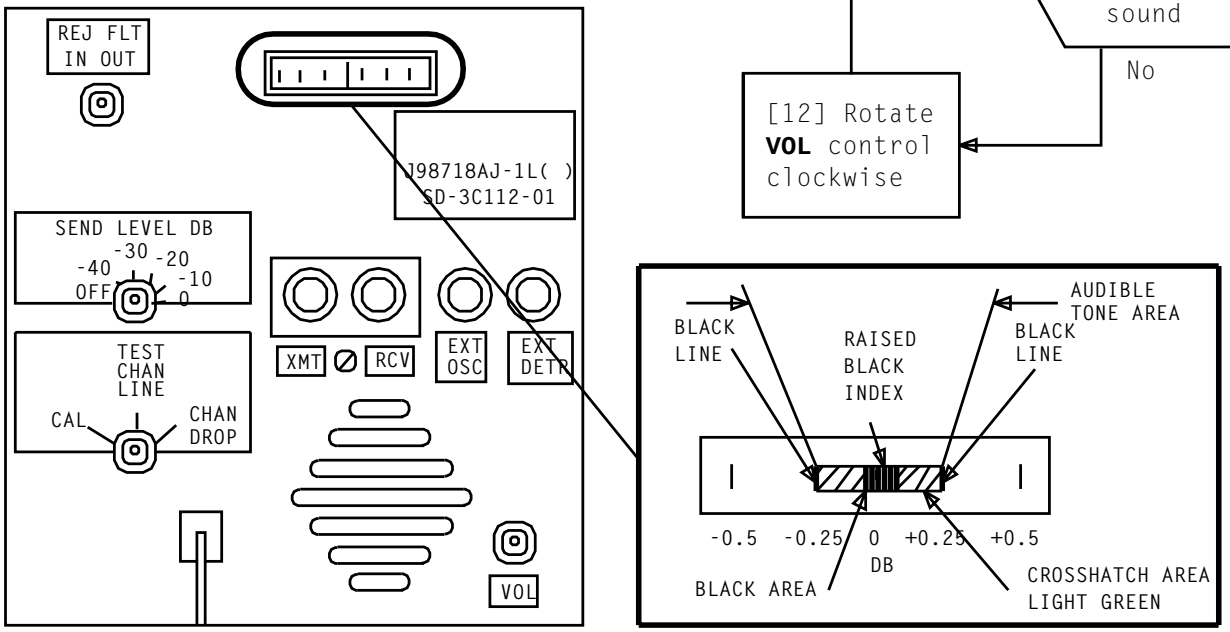
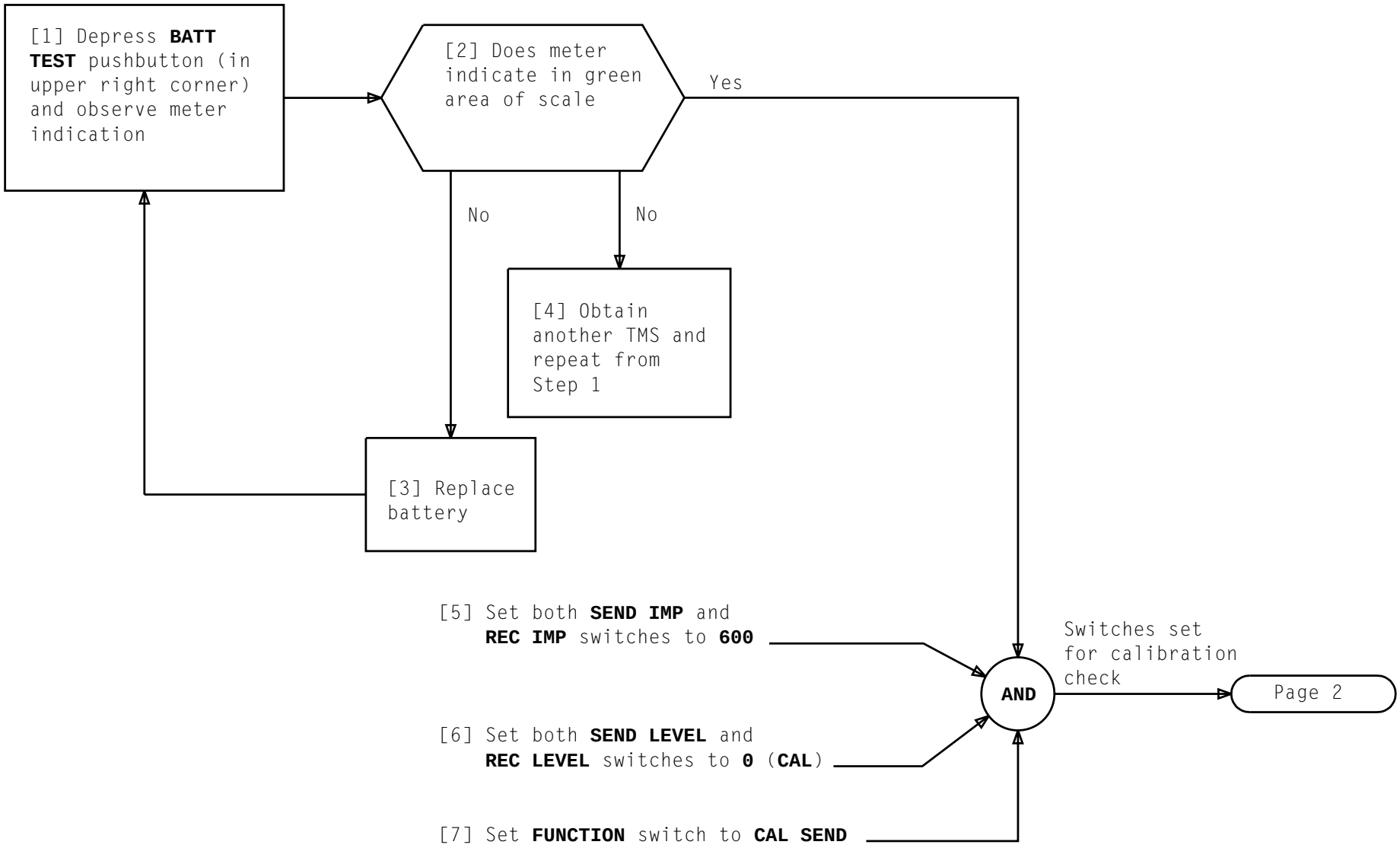


FIG. 2

CONDITION D3/D4 PORTABLE TEST SET



CONDITION TTS4BNH TRANSMISSION MEASURING SET

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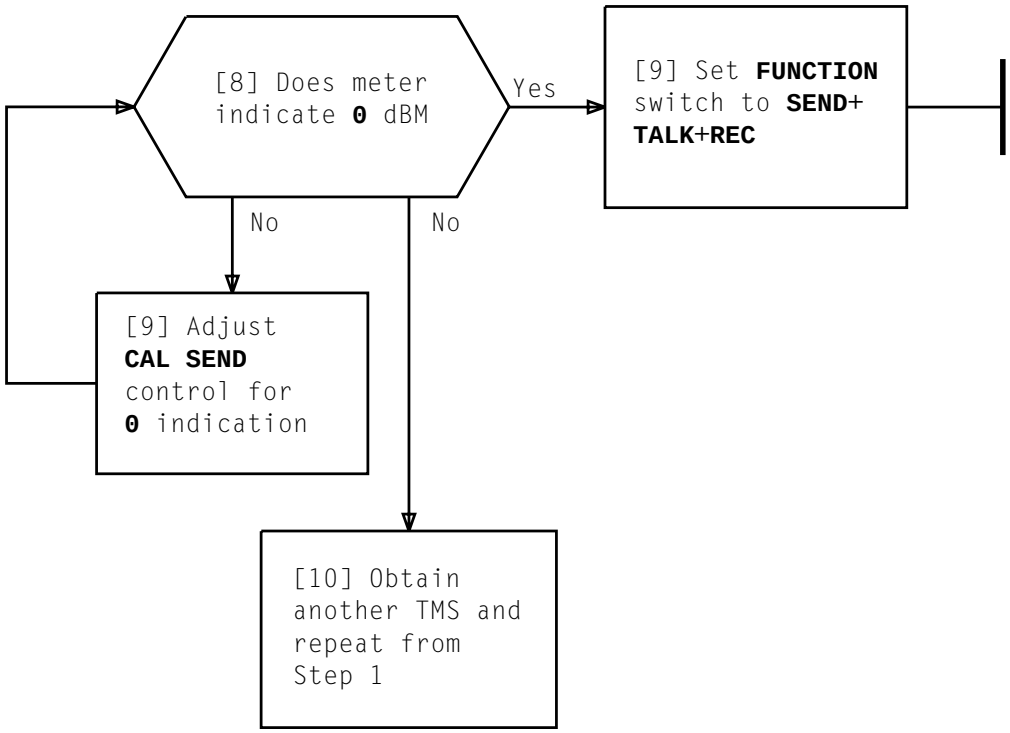


CONDITION TTS4BNH TRANSMISSION MEASURING SET

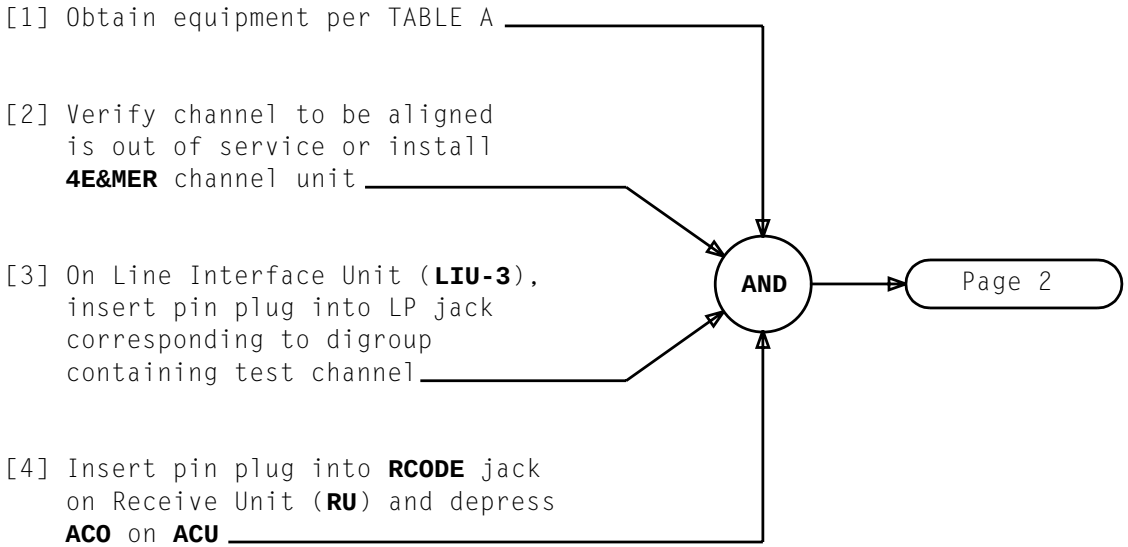


TABLE A

EQUIPMENT REQUIRED	RECOMMENDED TYPE
D4 Channel Unit Extender	J98726MF
D3 Channel Access Unit	J98718AJ, L2
D3/D4 Portable Test Set	J98718AL
2 Patch Cords	3P6D
1 Test Cord	P6AD
2 Pin Plugs	KS-19531 or Equiv.
Signal Generator	HP3550 or Equiv.
Transmission Measuring Set (TMS)	TTS4BNH or Equivalent

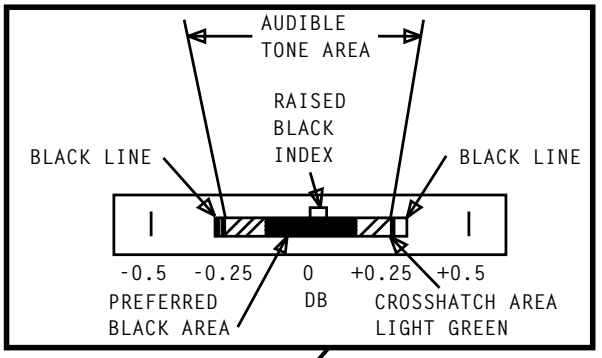
ALIGN RECEIVE AND TRANSMIT LEVELS ON D4 CHANNEL BANK UNIT(S) AND INSTALL

[5] Make test connections per FIG. 1

AND

Page 3

[6] Observe **CAU** meter. See FIG. 1



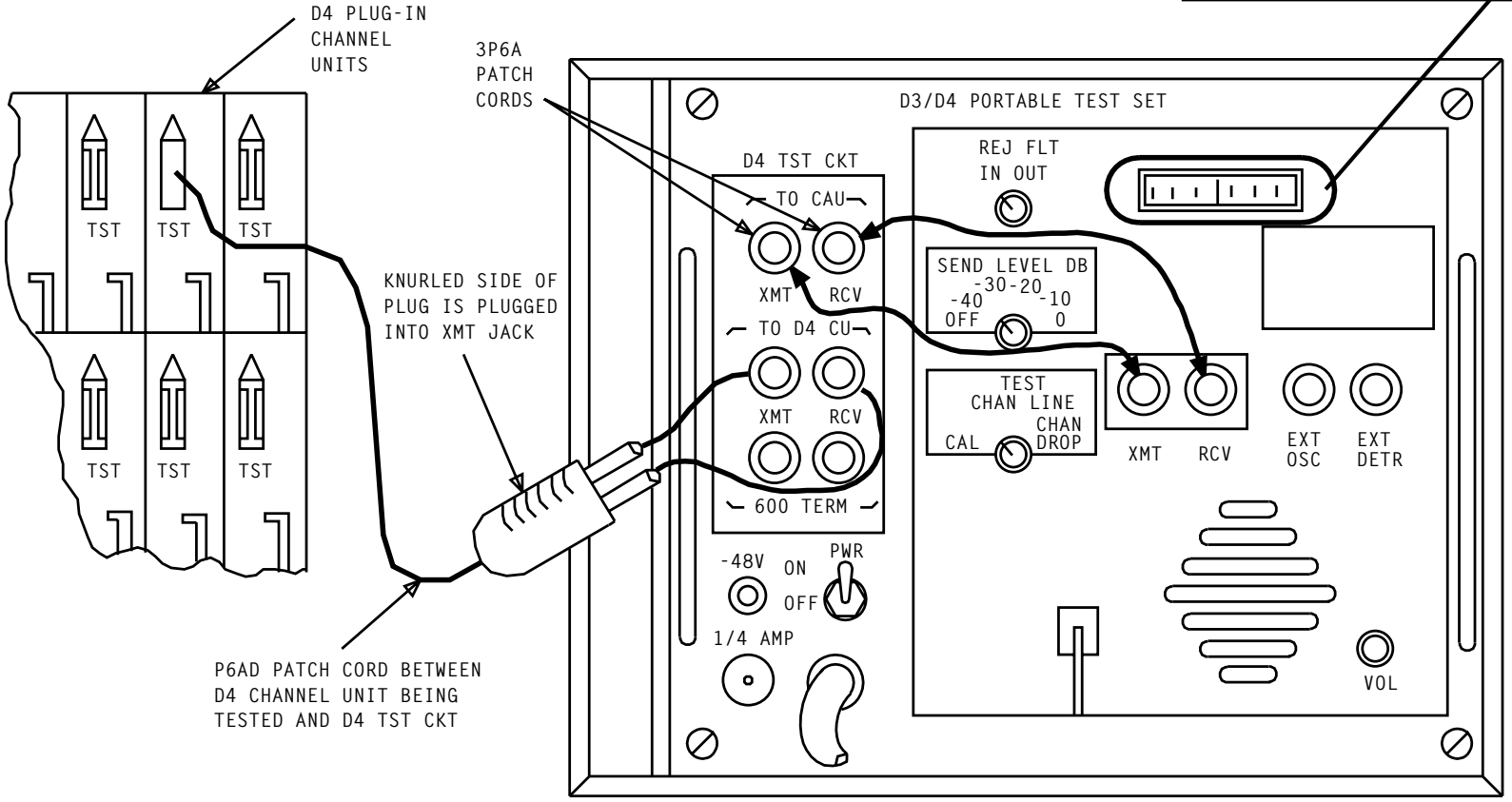


FIG. 1

ALIGN RECEIVE AND TRANSMIT LEVELS ON D4 CHANNEL BANK UNIT(S) AND INSTALL

[7] Does **CAU** meter indicate between −0.25 dB and +0.25 dB (preferred meter indication black area)

Yes

[9] Disconnect **P6AD** patch cord at channel unit **TST** jack

No

[8] Replace channel unit and repeat from Step 5

[10] Unseat Trunk Processing Unit (**TPU**) from TPU slot

[11] Remove channel unit from channel slot and install Channel Unit Extender

[12] Insert **4E&MER** channel unit into Channel Unit Extender

[13] Connect transmission measuring set (TMS) to **T1/R1** jacks on Channel Unit Extender. See FIG. 2

[14] Set receive pads on channel unit to obtain −2.9 dBm to −3.1 dBm indication on TMS [DLP-519]

AND

Page 4

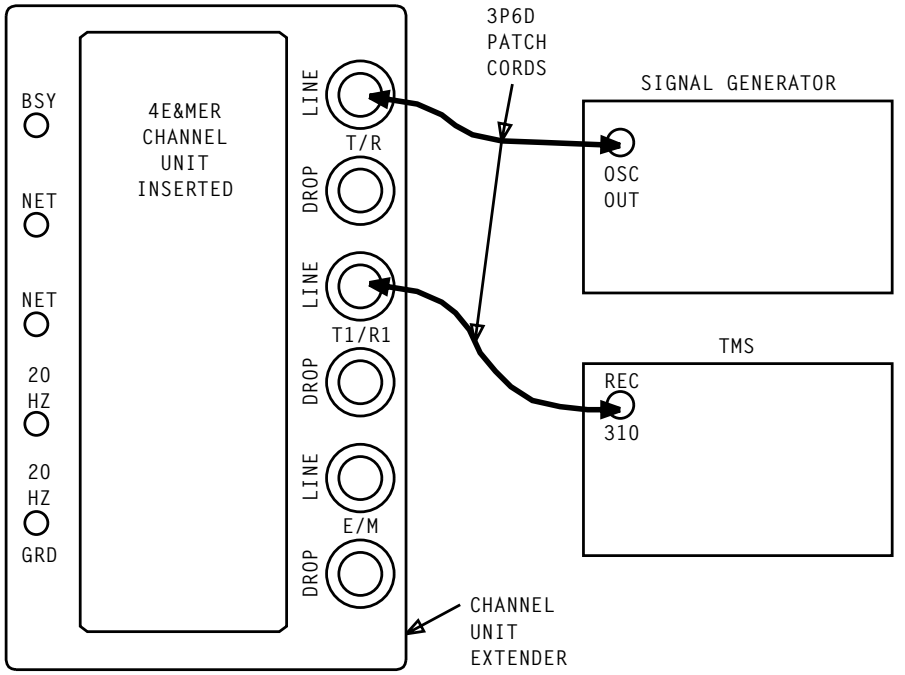
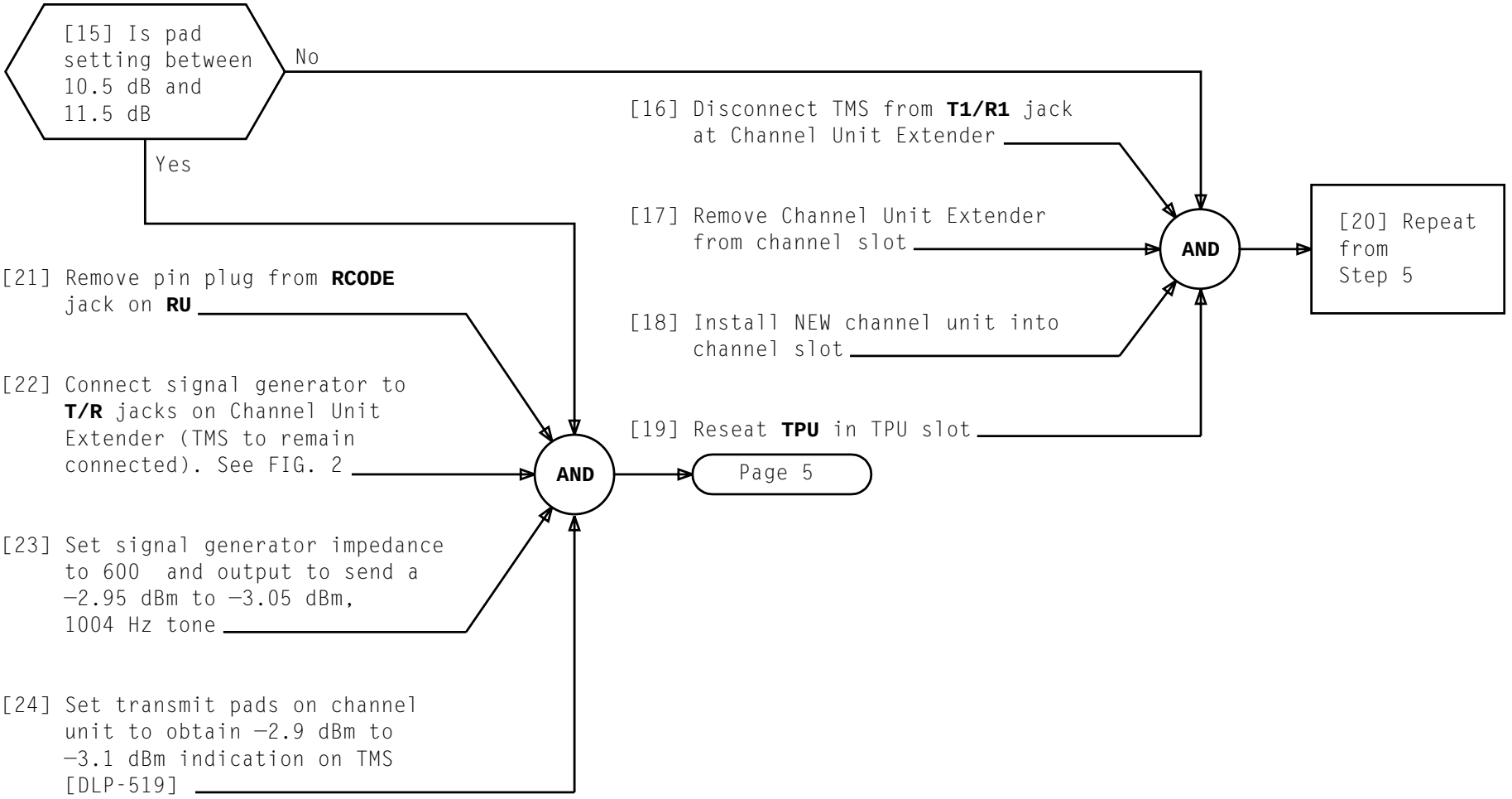
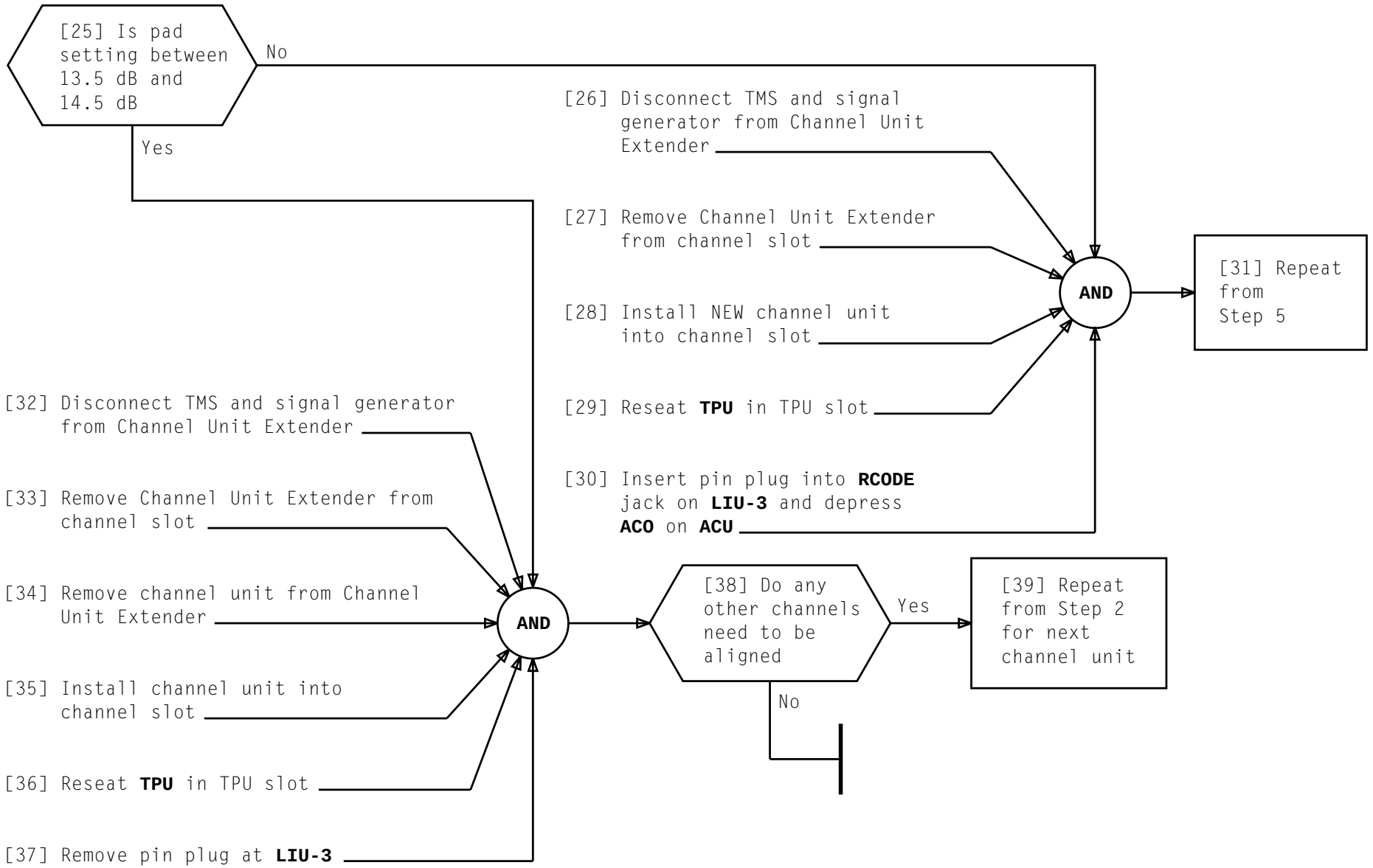


FIG. 2

ALIGN RECEIVE AND TRANSMIT LEVELS ON D4 CHANNEL BANK UNIT(S) AND INSTALL



ALIGN RECEIVE AND TRANSMIT LEVELS ON D4 CHANNEL BANK UNIT(S) AND INSTALL



ALIGN RECEIVE AND TRANSMIT LEVELS ON D4 CHANNEL BANK UNIT(S) AND INSTALL

[1] Get KS-21838, L1 extractor or longnose pliers. See FIG. 1

[2] Locate option socket-plug combination on side of channel unit. See FIG. 2

AND

[3] See WARNING 1. Use extractor or pliers to move all four plugs to white side of socket (black showing). See FIG. 3

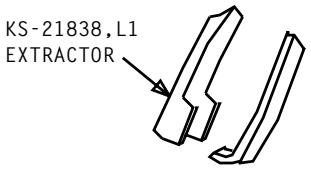


FIG. 1

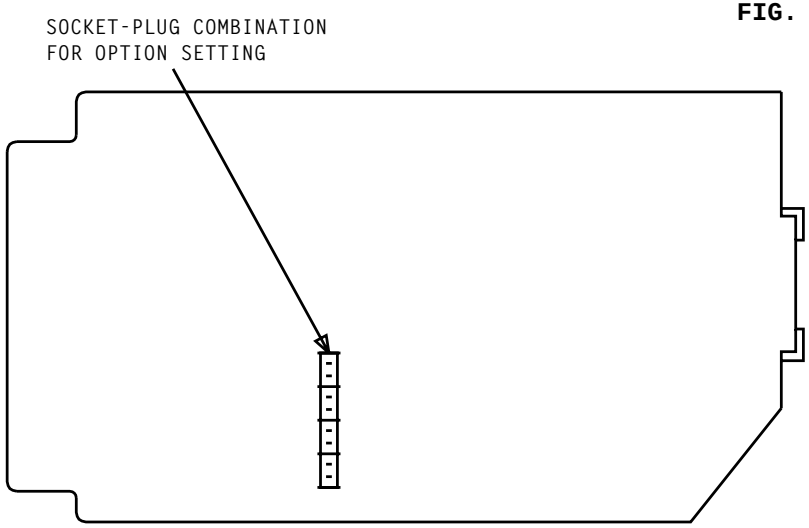


FIG. 2 — 4E&MER Channel Unit (Component Side)

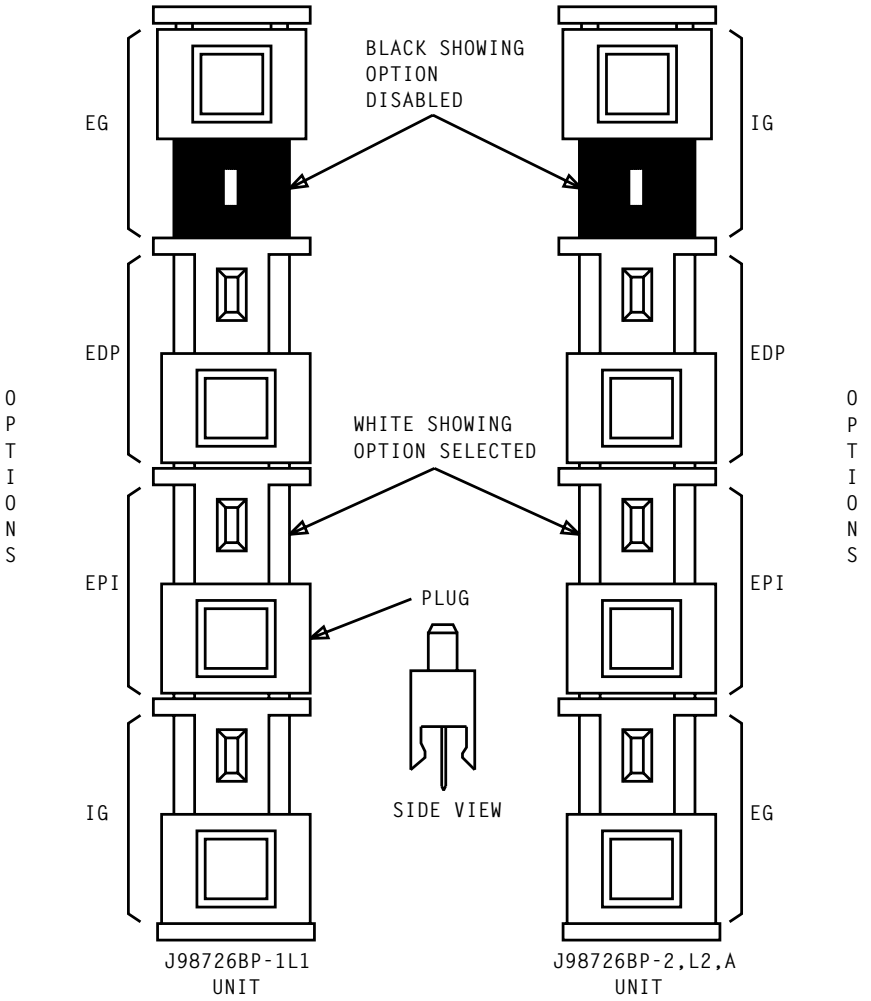


FIG. 3 — Option Plugs Located on 4E&MER Channel Unit

WARNING 1
Twisting will break connectors

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DISABLE ALL OPTIONS ON 4E&MER CHANNEL UNIT(S)

[1] Identify plug-socket attenuators on channel unit. See FIG. 1

[2] Get **KS-21838, L1** extractor or longnose pliers. See FIG. 2

[3] See WARNING 1. Using tool in Step 2, increase attenuation by moving plugs next to numbers on sockets until TMS reads between −2.9 dBm and −3.1 dBm. See EXAMPLE 1 and NOTE 1

AND

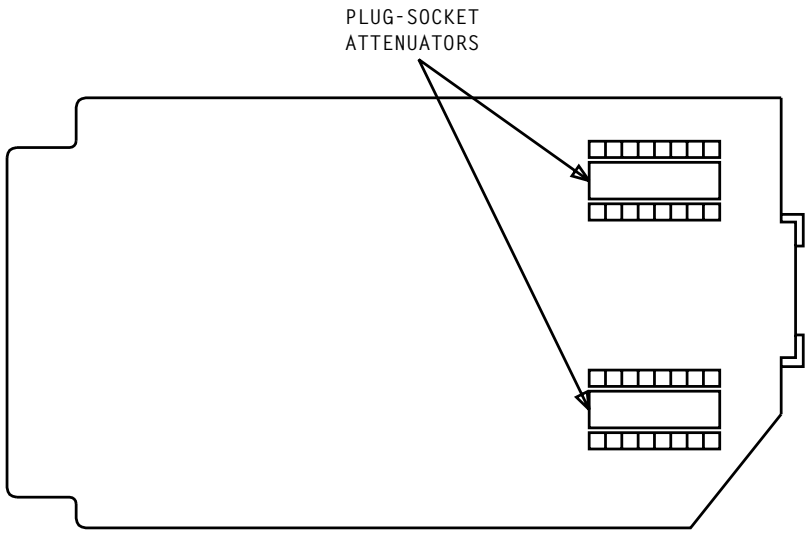
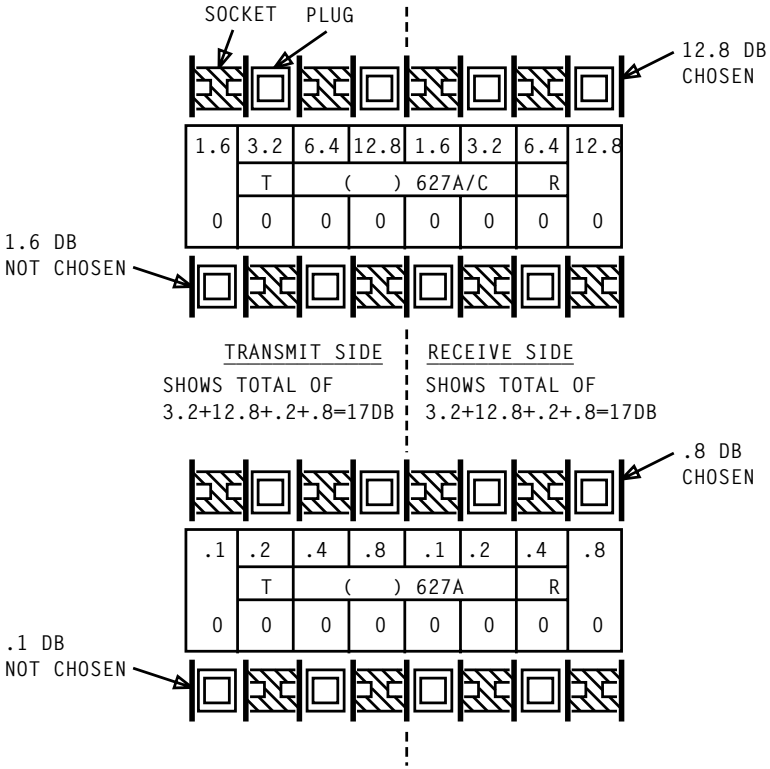


FIG. 1 — 4E&MER Channel Unit (Component Side)



EXAMPLE 1

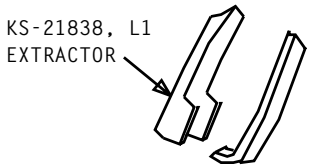


FIG. 2

NOTE 1
There must be a plug placed either on the numbered side or **0** side of each setting

WARNING 1
Twisting will break connectors. Plugs should be pulled straight out

SET RECEIVER/TRANSMIT PADS ON 4E&MER CHANNEL UNIT

[1] Note word in output message containing trunk 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-460-xx or equivalent.
xx = SP member number determined in Step 2

[4] Add decimal number per TABLE A to SP row number determined in Step 2. Record new result

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

AND

Page 2

TABLE A	
FOURTH RIGHTMOST OCTAL DIGIT IN ENTRY WORD EQUALS	DECIMAL NUMBER TO BE ADDED
0 or 1	0
2 or 3	64
4 or 5	128
6 or 7	192

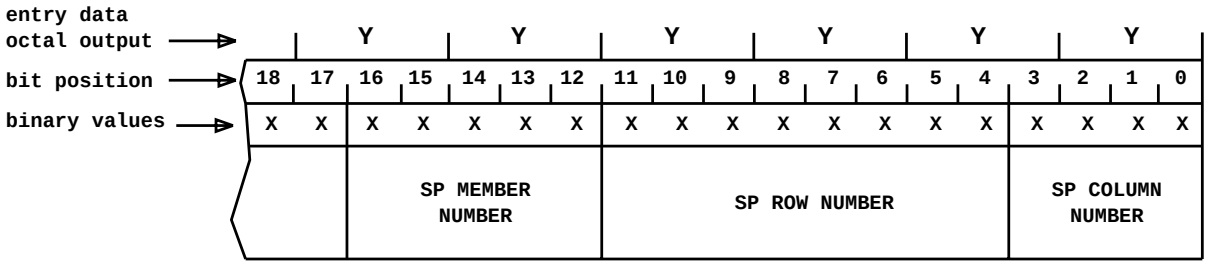
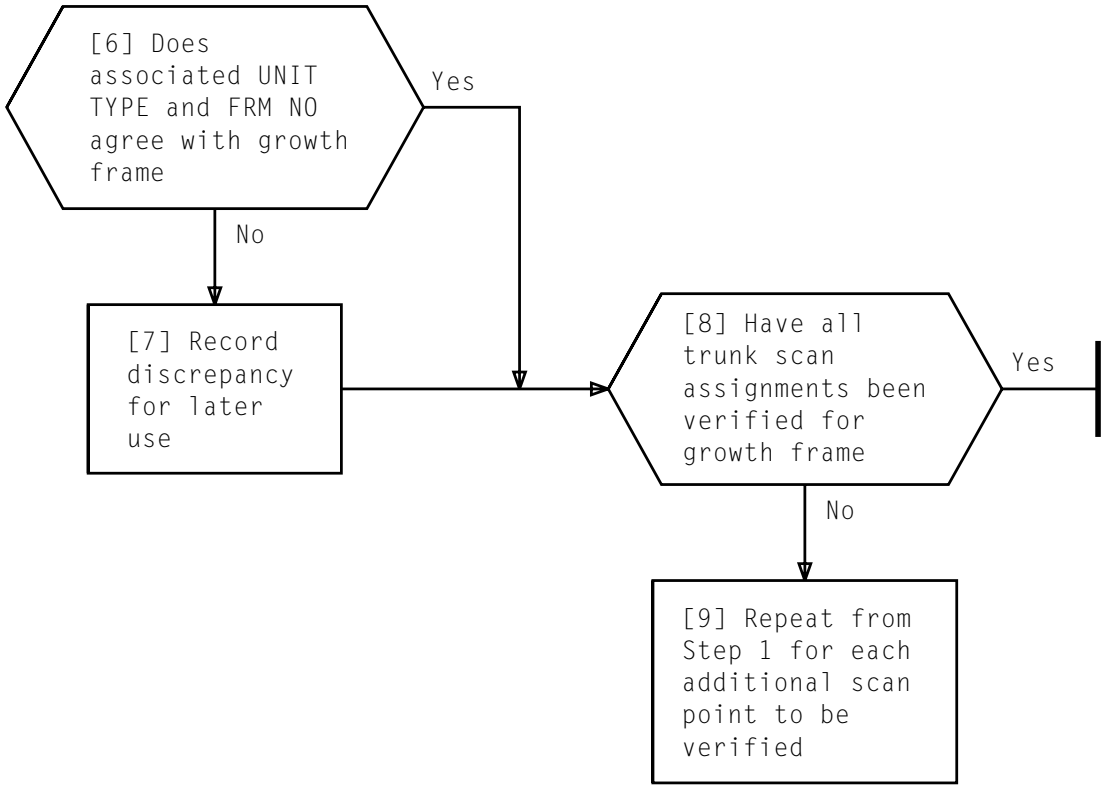


FIG. 1 – Entry Data Word Layout

VERIFY TRUNK SCAN POINT ASSIGNMENT(S) FOR GROWTH FRAME



VERIFY TRUNK SCAN POINT ASSIGNMENT(S) FOR GROWTH FRAME

SUMMARY

If necessary, obtain octal ENTRY ADDRESS. Request RC Form 800 and fill in blanks to change equipage of Area Bus Center/Power Plant. Enter message and then verify inactive translations. Using assigned order number, activate the recent change and then verify current translations.

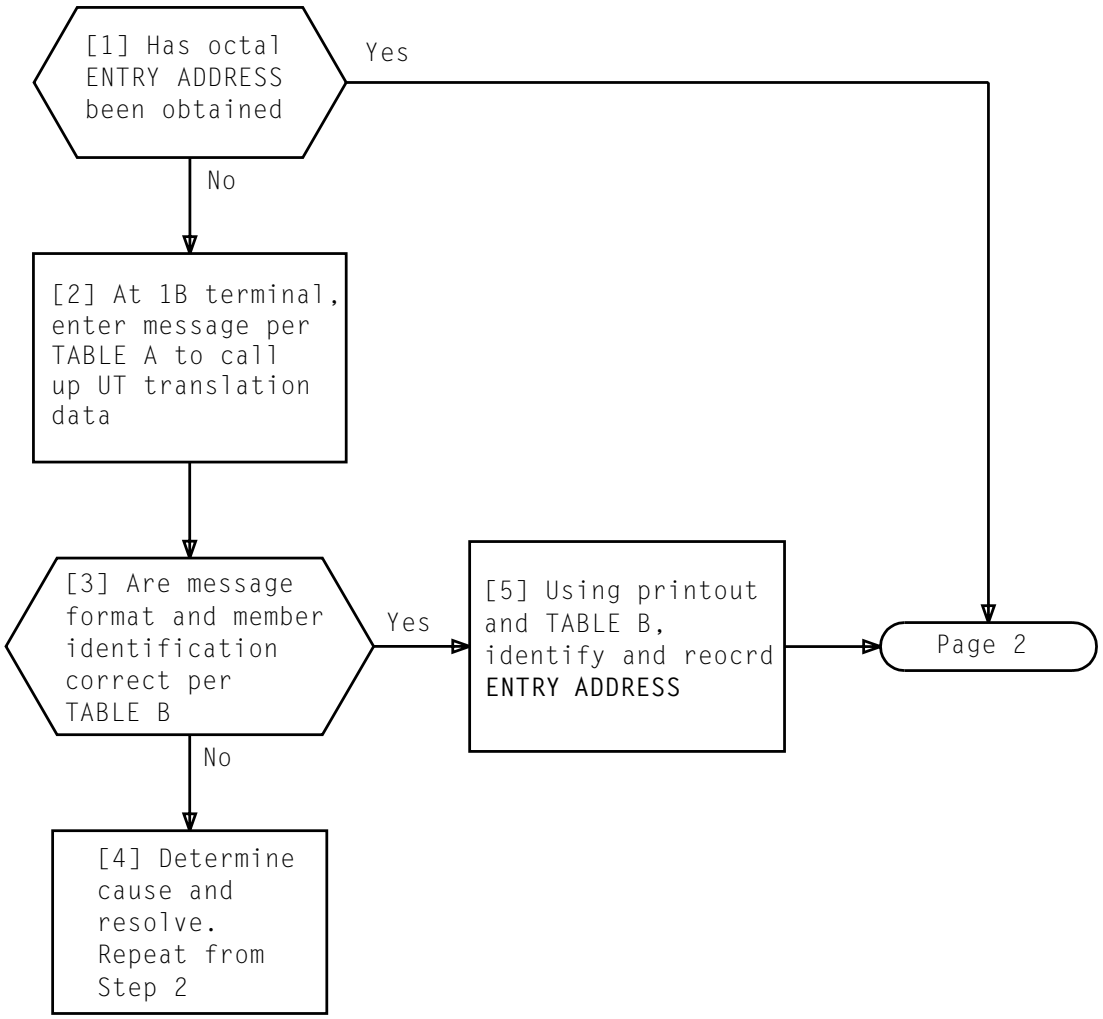


TABLE A

MESSAGE NUMBER	INPUT MESSAGE
1	VER:UTYPE:a b!

a = Unit type
- = PP620 (for 620A Power Plant)
- = PP625 (for 625F Power Plant)
- = PP630 (for 630A Power PLant)
- = ABCNT (for Area Bus Center)

b = Member number of growth unit

TABLE B

MESSAGE NUMBER	OUTPUT MESSAGE
1	VER:UTMN;OPT(),CUR: FLN a, UTYN b,
2	MEMN c, ME d, ENTRY ADDRESS e, ENTRY SIZE 2, CUR WORD 0 _____ _____

a = Floor location number
b = Unit type = PP620 (for 620A Power Plant)
= PP625 (for 625F Power Plant)
= PP630 (for 630A Power PLant)
= ABCNT (for Area Bus Center)
c = Member number of growth ABC or Power Plant
d = UNEQ, GROW, SGRO, or OPER
e = Starting octal address for unit type entry

PERFORM ABSOLUTE WORD CHANGE TO CHANGE ABC/POWER PLANT EQUIPAGE (USING RC FORM 800) AND VERIFY

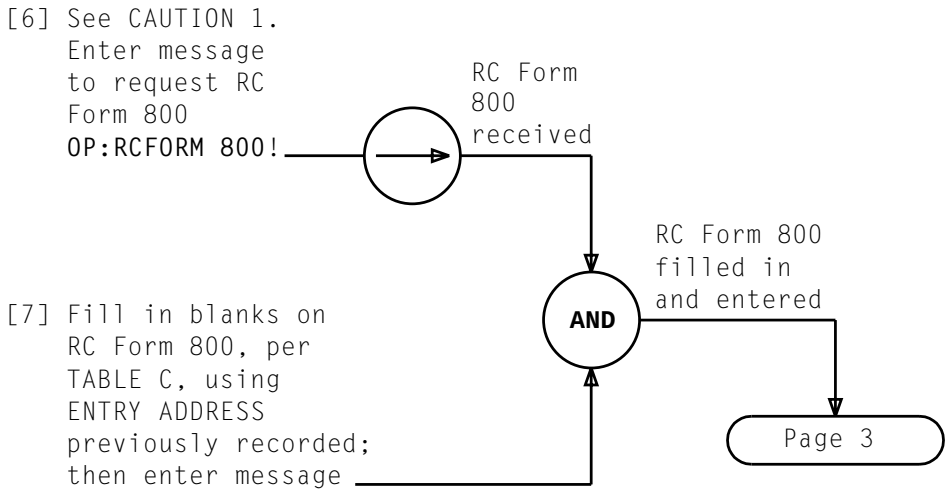


TABLE C

MESSAGE NUMBER	INPUT MESSAGE
1	RC:FUNC;CHG;OPT(ABSOLUTE),a:FSONLY b ,ADDRESS__c __, ORNU __ d __, WORDNO ____, SIZE e, DISP f, BINOCT g, NEWDATA h _____ , OLDDATA i _____ , REMARKS _____!

a = TST
b = N
c = Absolute word address
(octal ENTRY ADDRESS)
d = RC order number
e = 2
f = 22
g = B

h = Desired equipage of
ABC/Power Plant:
= 00 for UNEQ
= 01 for GROW
= 10 for SGRO
= 11 for OPER
i = Present equipage of
ABC/Power Plant:
= 00 for UNEQ
= 01 for GROW
= 10 for SGRO
= 11 for OPER

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

PERFORM ABSOLUTE WORD CHANGE TO CHANGE ABC/POWER PLANT EQUIPAGE (USING RC FORM 800) AND VERIFY

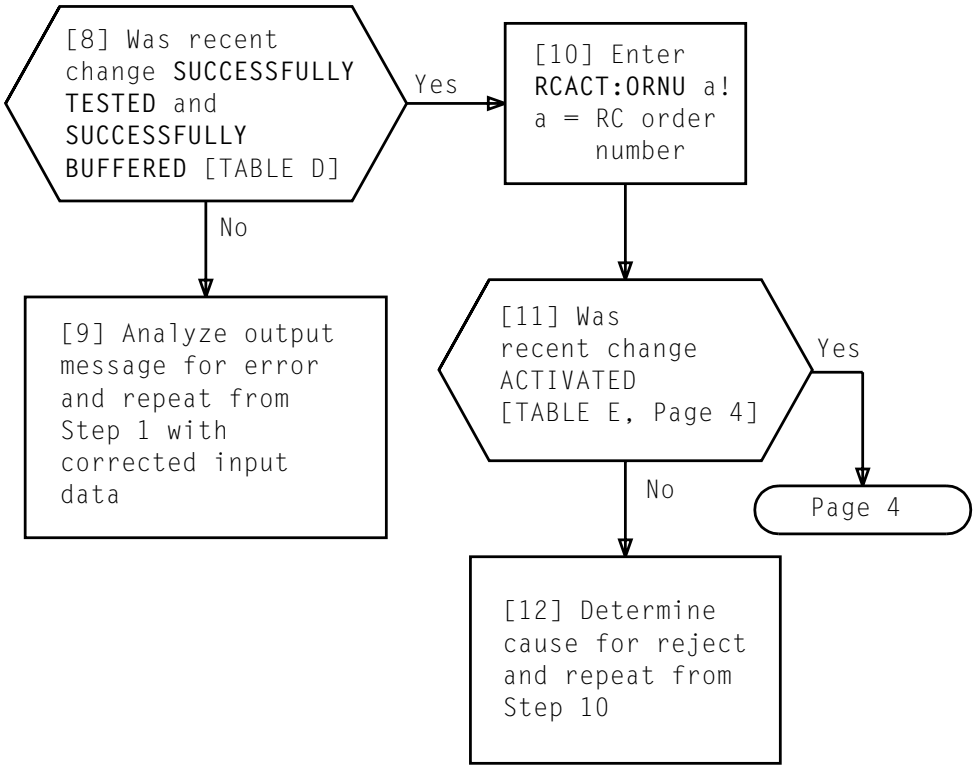


TABLE D

MESSAGE NUMBER	OUTPUT MESSAGE
1	RC ORNU a SUCCESSFULLY TESTED
2	RC ORNU a SUCCESSFULLY BUFFERED
3	RC:FUNC;CHG;OPT(ABSOLUTE),BUF: FSONLY N,ADDRESS b, ORNU a, WORDNO ----, SIZE 2, DISP 22, BINOCT B, NEWDATA c, OLDDATA d, REMARKS _!

a = RC order number
b = Absolute word address (octal ENTRY ADDRESS)
c = Desired equipage of ABC/Power Plant:
= 00 for UNEQ
= 01 for GROW
= 10 for SGRO
= 11 for OPER
d = Present equipage of ABC/Power Plant:
= 00 for UNEQ
= 01 for GROW
= 10 for SGRO
= 11 for OPER

PERFORM ABSOLUTE WORD CHANGE TO CHANGE ABC/POWER PLANT EQUIPAGE (USING RC FORM 800) AND VERIFY

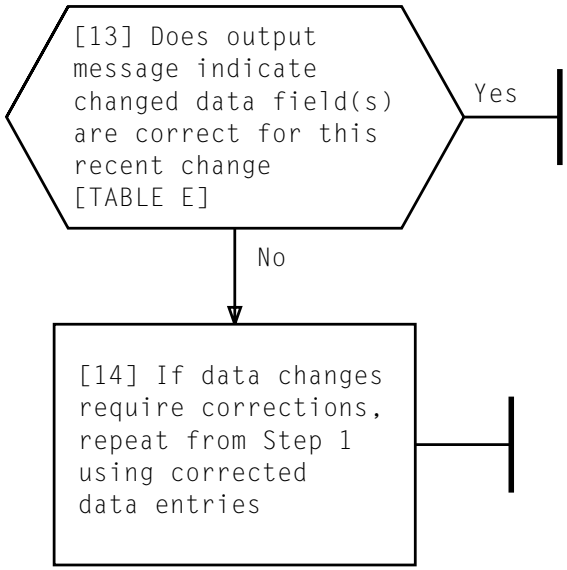


TABLE E

MESSAGE NUMBER	OUTPUT MESSAGE
1	RC ORNU a ACTIVATED RC:FUNC;CHG;OPT(ABSOLUTE),BUF: FSONLY N,ADDRESS b, ORNU a, WORDNO ----, SIZE 2, DISP 22, BINOCT B, NEWDATA c, OLDDATA d, REMARKS ----------!

a = RC order number
b = Absolute word address (octal ENTRY ADDRESS)
c = Desired equipage of ABC/Power Plant:
= 00 for UNEQ
= 01 for GROW
= 10 for SGRO
= 11 for OPER
d = Present equipage of ABC/Power Plant:
= 00 for UNEQ
= 01 for GROW
= 10 for SGRO
= 11 for OPER

PERFORM ABSOLUTE WORD CHANGE TO CHANGE ABC/POWER PLANT EQUIPAGE (USING RC FORM 800) AND VERIFY

SUMMARY	
Using verify entry input message, call up growth MFS UT translator and verify that resulting octal output data, when converted, agrees with office records.	Refer to entry word explanations in TABLE B, Page 3, as required, for assistance in interpreting specific data fields. If it is determined that UT entry data are in error, word change(s) may be required.

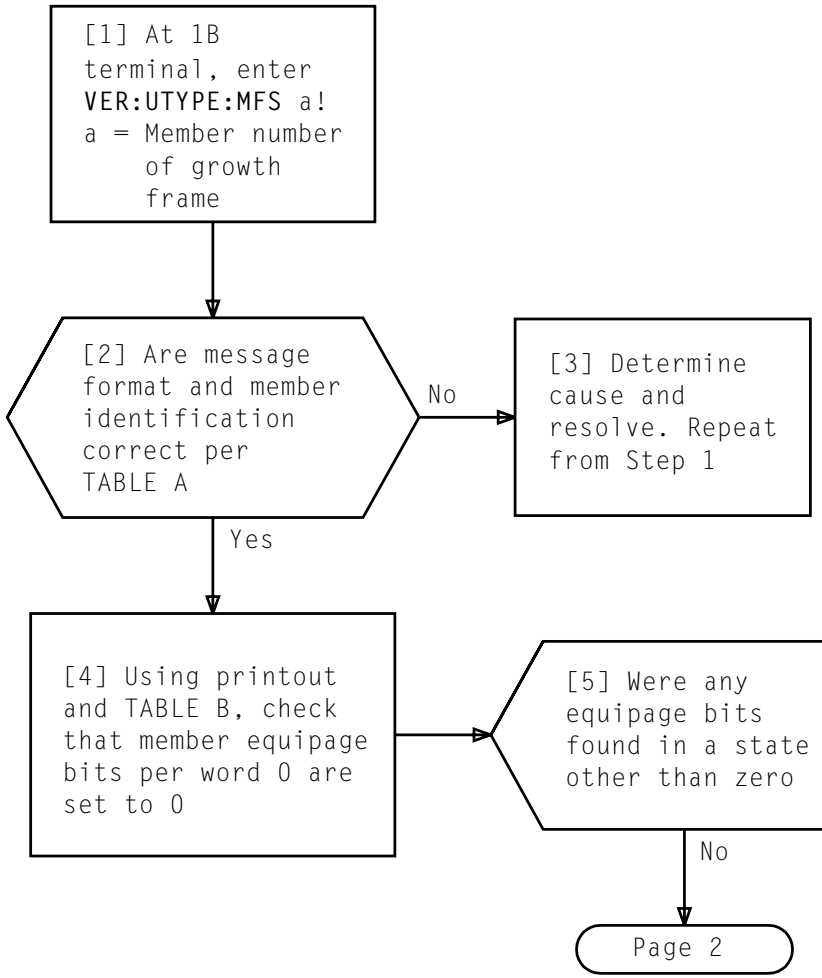


TABLE A

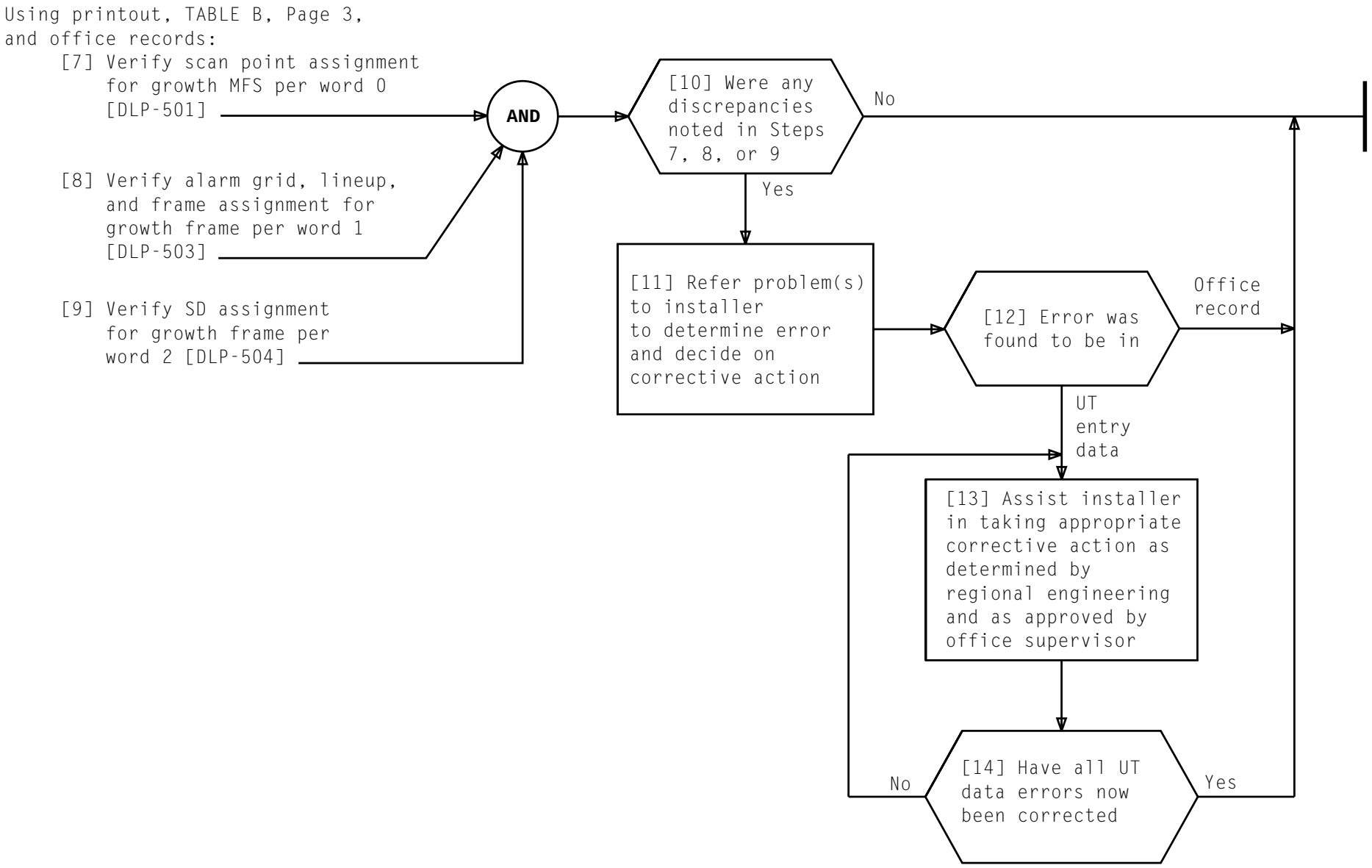
MESSAGE NUMBER	OUTPUT MESSAGE
1	VER:UTMN;OPT(),CUR: FLN a, UTYN MFS, MEMN b, ME UNEQ, ENTRY ADDRESS c, ENTRY SIZE 4, CUR WORD 0 _____ _____ _____ _____

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

CAUTION 1

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

VERIFY MFS FRAME UT TRANSLATOR

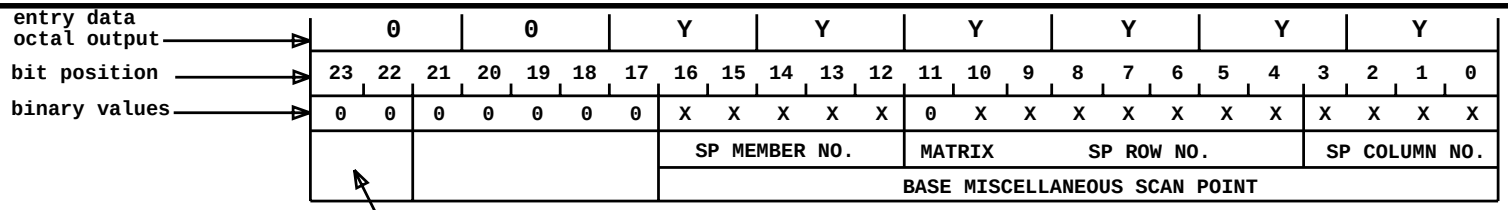


VERIFY MFS FRAME UT TRANSLATOR

TABLE B

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION

0

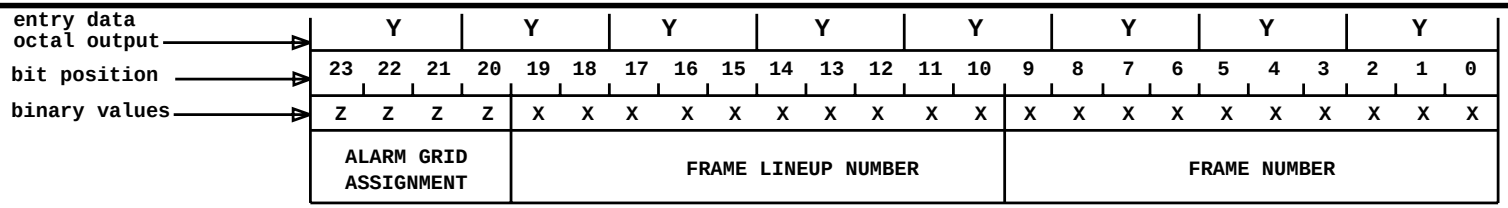


Equipage (equivalent to member equipage in standard UT layout)

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

Y = Variable octal numbers

1

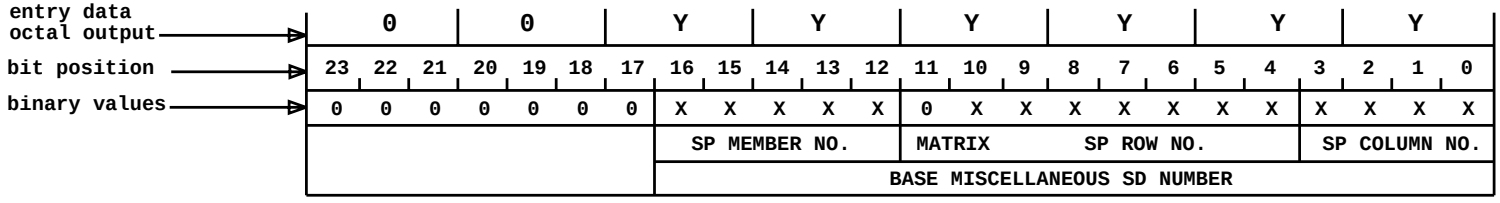


X...X = Converts to decimal frame information as reflected in office floor plan drawing

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

2



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

Y = Variable octal numbers

VERIFY MFS FRAME UT TRANSLATOR

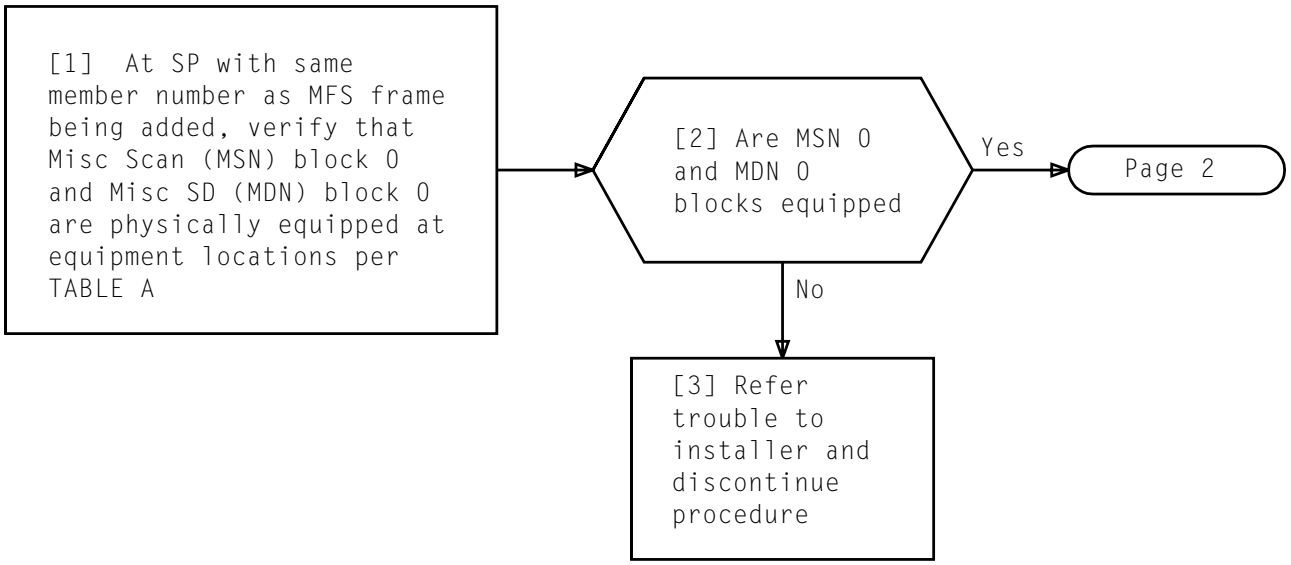


TABLE A

SP BLOCK	EQUIPMENT LOCATION
MSN 0	168, 268
MDN 0	056, 145, 245

VERIFY OPERATIONAL STATUS OF SIGNAL PROCESSOR K BLOCKS CONTAINING SCAN AND SIGNAL DISTRIBUTOR POINTS FOR MFS FRAME BEING ADDED

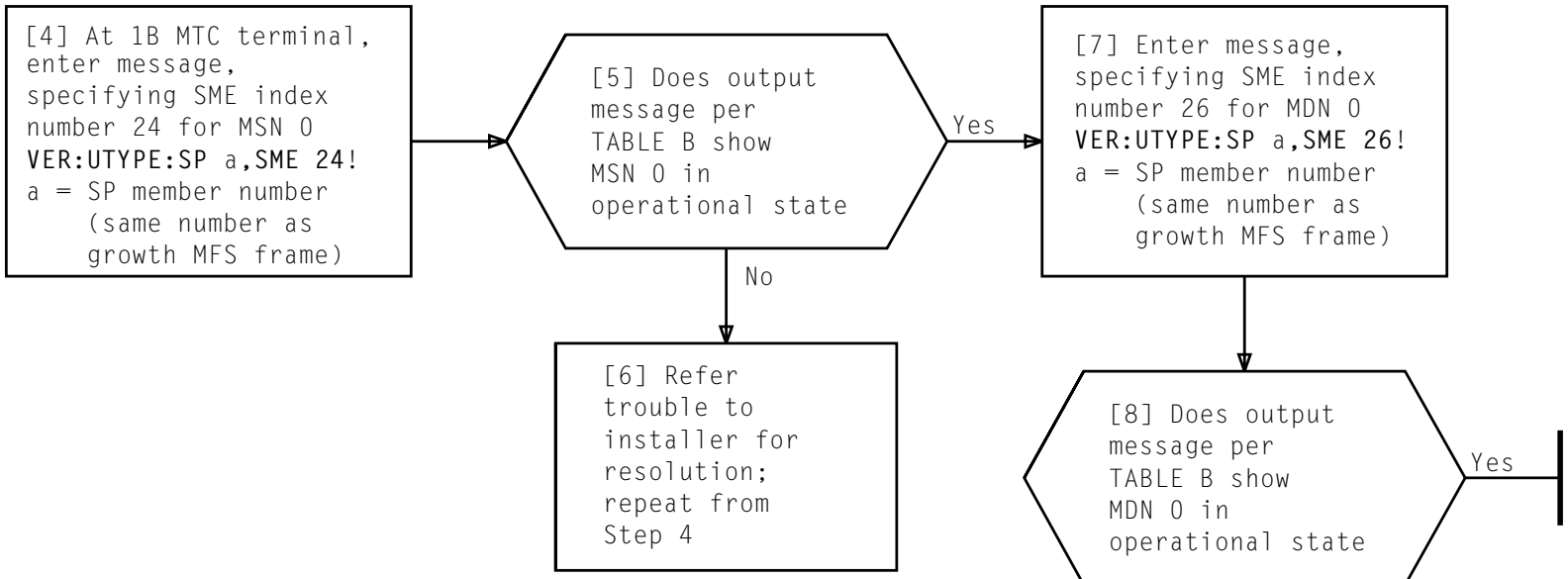


TABLE B

MESSAGE NUMBER	OUTPUT MESSAGE
1	VER:UTMN;OPT(SME),CUR: FLN a, UTYN SP, MEMN b, ME OPER, SUBMEM c, SME OPER,

a = Floor location number
b = SP member number (same number as growth MFS frame)
c = SME index number
= 24 (for MSN 0)
= 26 (for MDN 0)

VERIFY OPERATIONAL STATUS OF SIGNAL PROCESSOR K BLOCKS CONTAINING SCAN AND SIGNAL DISTRIBUTOR POINTS FOR MFS FRAME BEING ADDED

[1] At 1B MTC terminal, enter input message per TABLE A to verify disabled state of MFS transmitters

[2] Verify that output message shows **TRK COUNT** as 32. See TABLE A

[3] Enter input message per TABLE A to verify disabled state of MFS receivers

[4] Verify that output message shows **TRK COUNT** as 32. See TABLE A

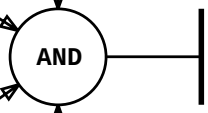


TABLE A

INPUT MESSAGE	OUTPUT MESSAGE
OP:TRKSTAT,CIN aabb SVC* c *;SUM:NUM 32,STAT CAD.DSA!	OP:TRKSTAT CAD.DSA ,CIN aabb SVC* c* *** NUM,STAT,SUM COMPLETED TRK COUNT 32

aa = MFS frame member number
bb = MFS circuit number (specify lowest circuit number of MFS circuit(s) being added)
c = MFX for MFS transmitter
MFR for MFS receiver

VERIFY DISABLED STATUS OF EQUIPPED MFS TRANSMITTER AND RECEIVER CIRCUITS

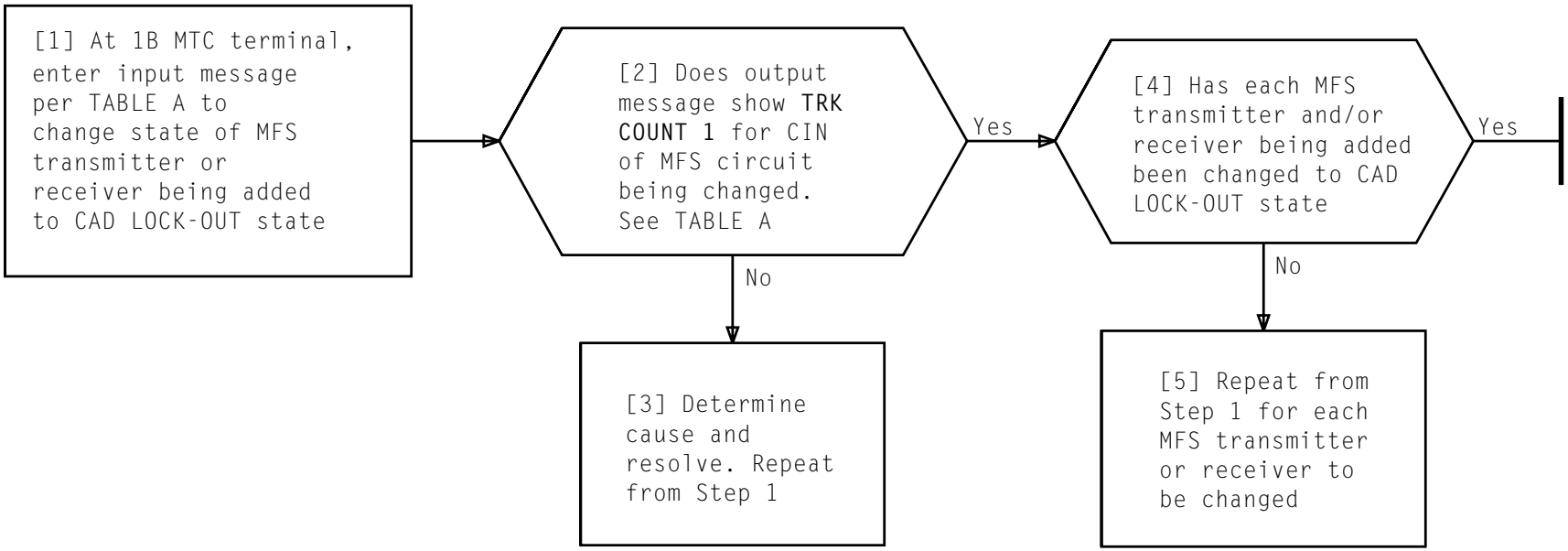


TABLE A

INPUT MESSAGE	OUTPUT MESSAGE
SET:TRKSTAT CAD.LKO,CIN aabb SVC* c *;SUM:NUM 1!	SET:TRKSTAT,CIN aabb SVC* c* *** NUM,STAT,SUM COMPLETED TRK COUNT 1

aa = MFS frame member number
bb = MFS circuit number to be added
c = MFX for MFS transmitter
MFR for MFS receiver

CHANGE ADDED MFS TRANSMITTER AND/OR RECEIVER CIRCUITS TO CIRCUIT ADMINISTRATION (CAD) LOCK-OUT STATE

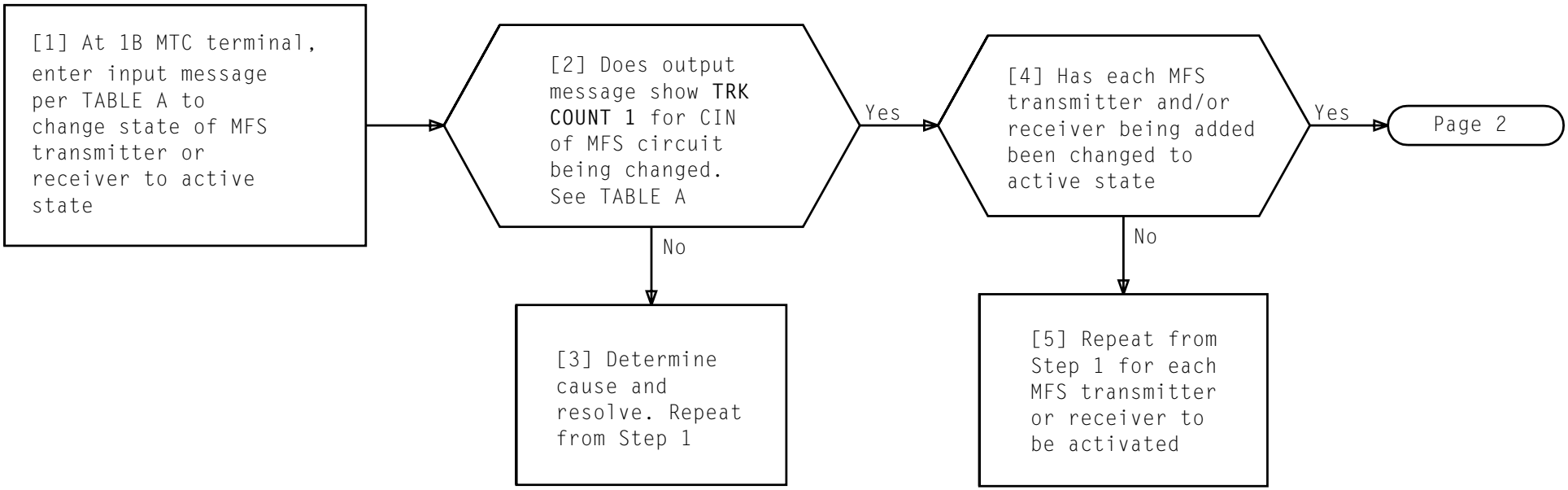


TABLE A	
INPUT MESSAGE	**OUTPUT MESSAGE**
SET:TRKSTAT ACT,CIN aabb SVC* c *;SUM:NUM 1!	SET:TRKSTAT,CIN aabb SVC* c* *** NUM,SUM COMPLETED TRK COUNT 1
aa = MFS frame member number bb = MFS circuit number to be activated c = MFX for MFS transmitter MFR for MFS receiver	

CHANGE MFS TRANSMITTER AND/OR RECEIVER CIRCUIT(S) TO ACTIVE STATE AND TEST

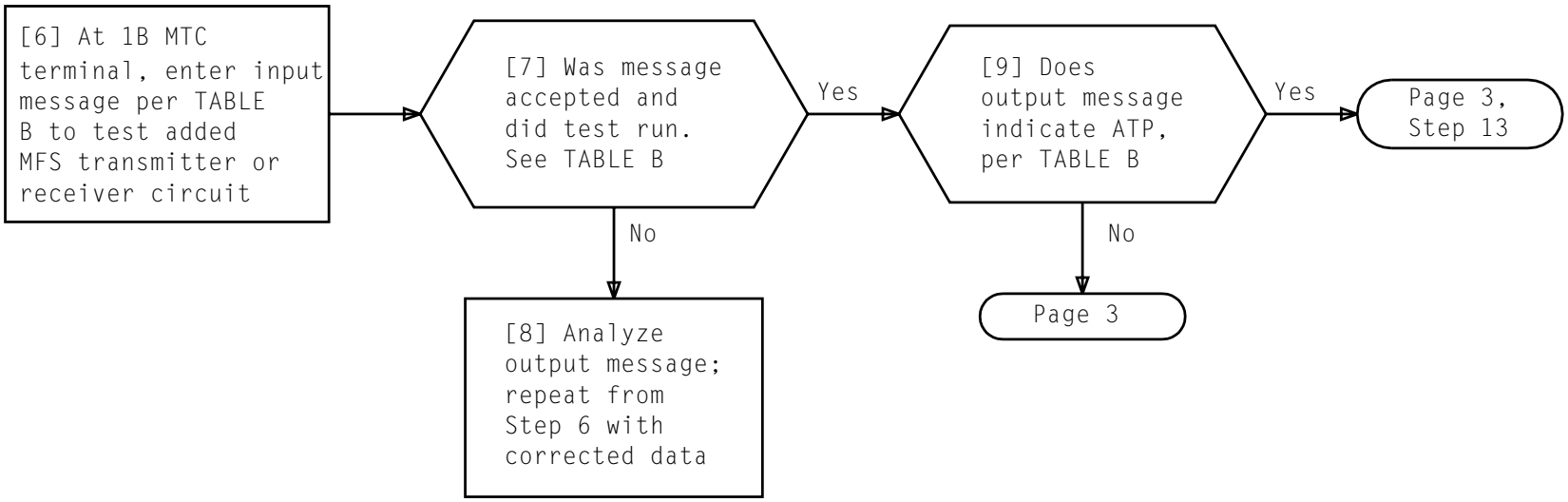
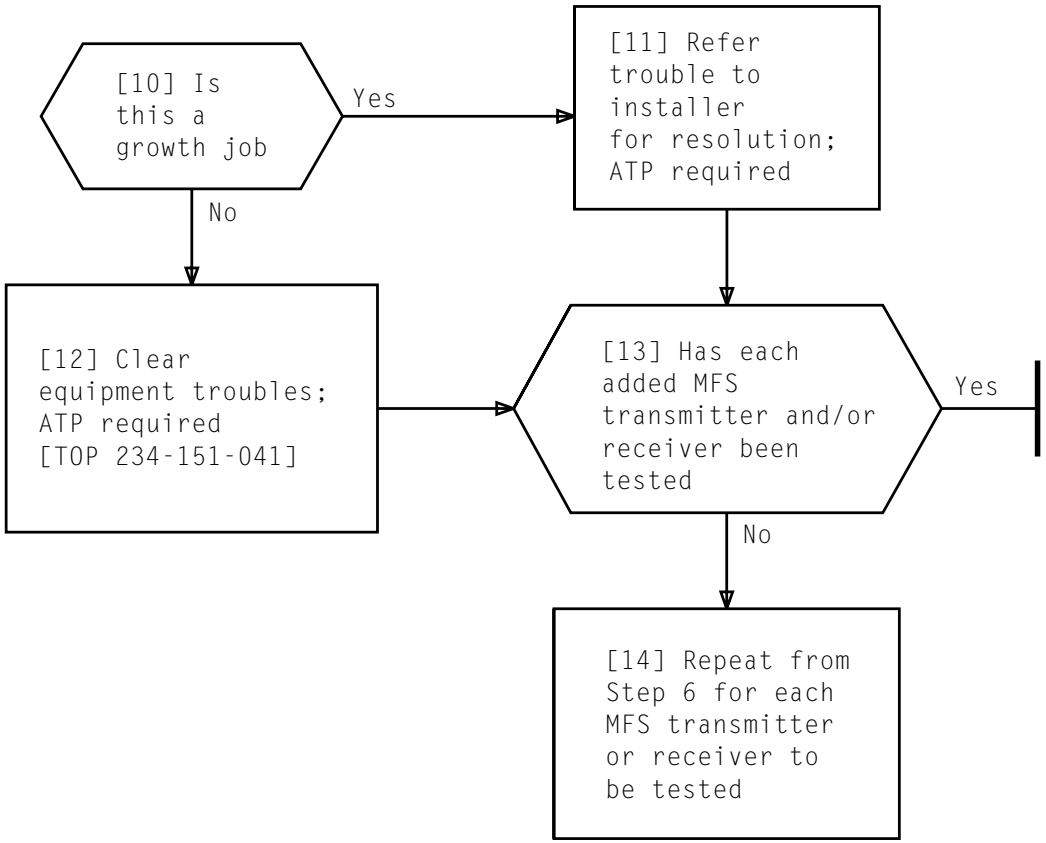


TABLE B

INPUT MESSAGE	OUTPUT MESSAGE
TEST:TRK,CIN aabb SVC* c *;SVC!	TEST:TRK,CIN aabb SVC* c* ***;SVC, ATP

aa = MFS frame member number
bb = MFS circuit number to be activated
c = MFX for MFS transmitter
MFR for MFS receiver

CHANGE MFS TRANSMITTER AND/OR RECEIVER CIRCUIT(S) TO ACTIVE STATE AND TEST



CHANGE MFS TRANSMITTER AND/OR RECEIVER CIRCUIT(S) TO ACTIVE STATE AND TEST

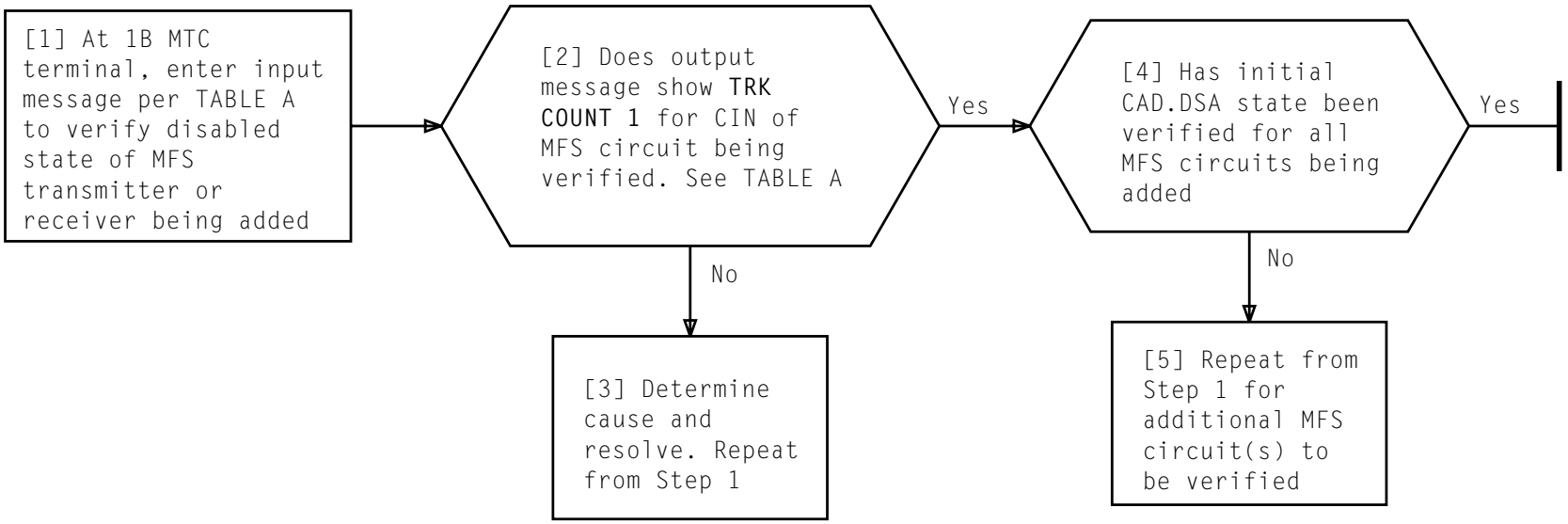


TABLE A

INPUT MESSAGE	OUTPUT MESSAGE
OP:TRKSTAT,CIN aabb SVC* c *;SUM:NUM 1,STAT CAD.DSA!	OP:TRKSTAT ,CIN aabb SVC* c* *** NUM,STAT, SUM COMPLETED TRK COUNT 1

aa = MFS frame member number
bb = MFS circuit number (specify lowest circuit number of MFS circuit(s) being added)
c = MFR for MFS receiver
MFX for MFS transmitter

VERIFY DISABLED STATUS OF MFS TRANSMITTER AND/OR RECEIVER CIRCUIT(S) BEING ADDED

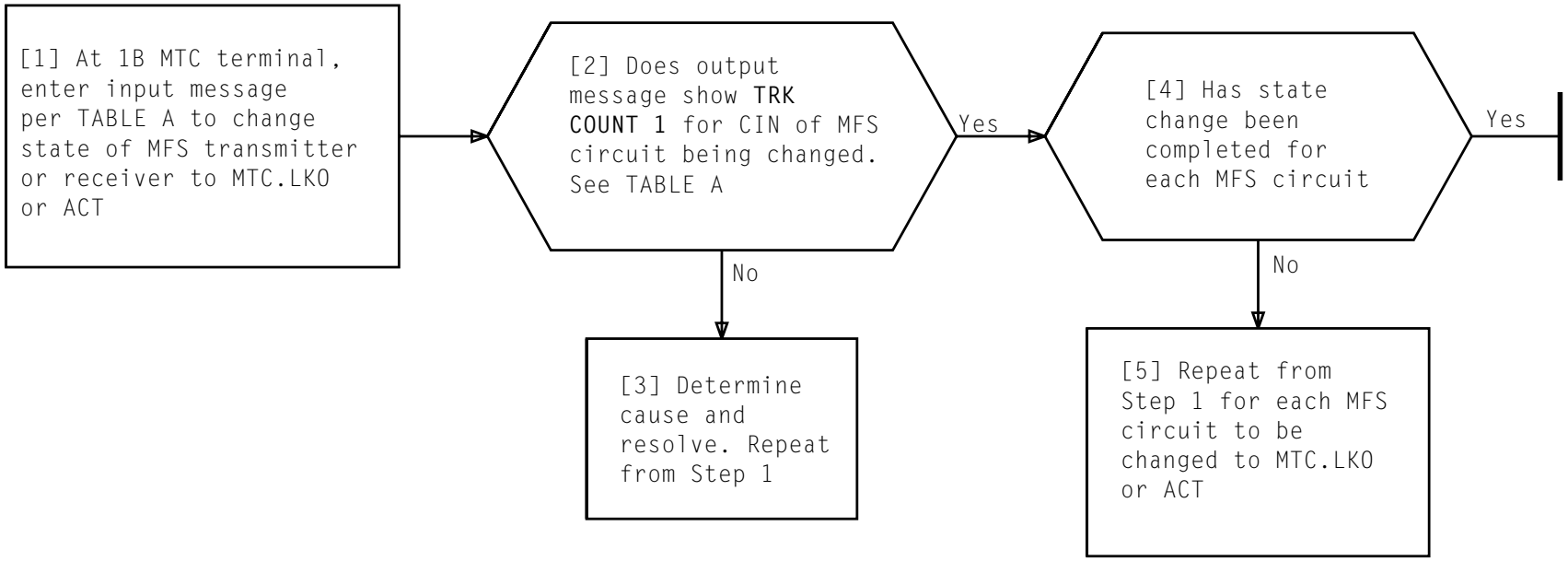
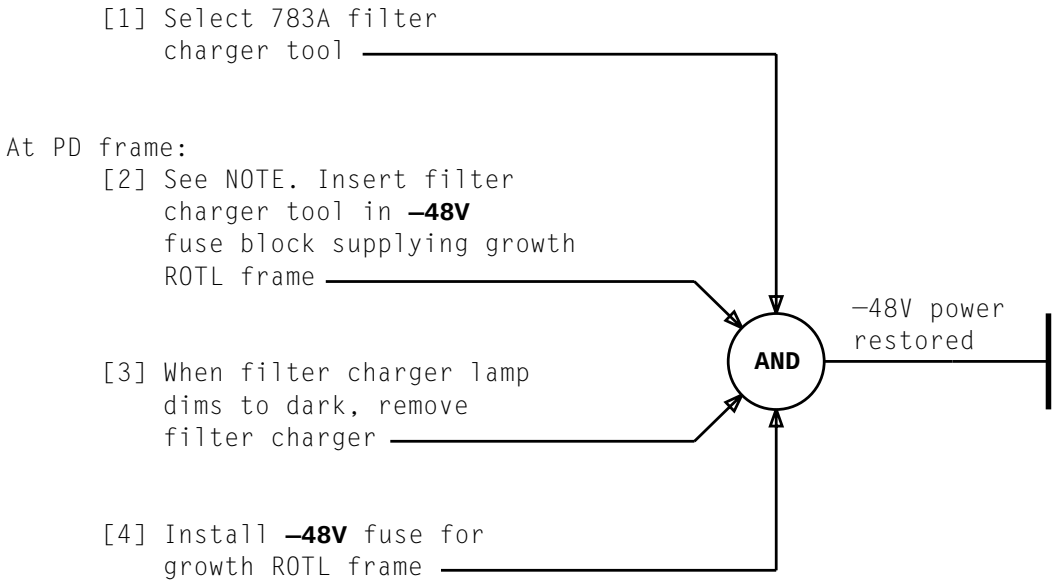


TABLE A

INPUT MESSAGE	OUTPUT MESSAGE
SET:TRKSTAT a,CIN bbcc SVC* d *;SUM:NUM 1!	SET:TRKSTAT a,CIN bbcc SVC* d* *** NUM,SUM COMPLETED TRK COUNT 1

a = State to which circuit will be changed
ACT or MTC.LKO
bb = MFS frame member number
cc = MFS circuit number to be changed
d = MFR for MFS receiver
MFX for MFS transmitter

CHANGE STATE OF MFS CIRCUITS TO ACTIVE OR MAINTENANCE LOCK-OUT



NOTE
When filter charger tool is inserted in fuse block, filter charger lamp is initially on at full bright. As capacitor is charged, filter charger lamp gradually dims to dark

CHARGE FILTER CAPACITOR AND RESTORE –48V POWER TO GROWTH ROTL FRAME

VERIFY STATUS OF GROWTH ROTL UNIT TRUNKS

SUMMARY

Using a trunk status verify message, call up growth ROTL unit trunk translations. Verify that trunk status of nonmessage trunk is in proper state for growth. If trunk status is UNASSIGNED, refer to MAC supervisor for corrective action.

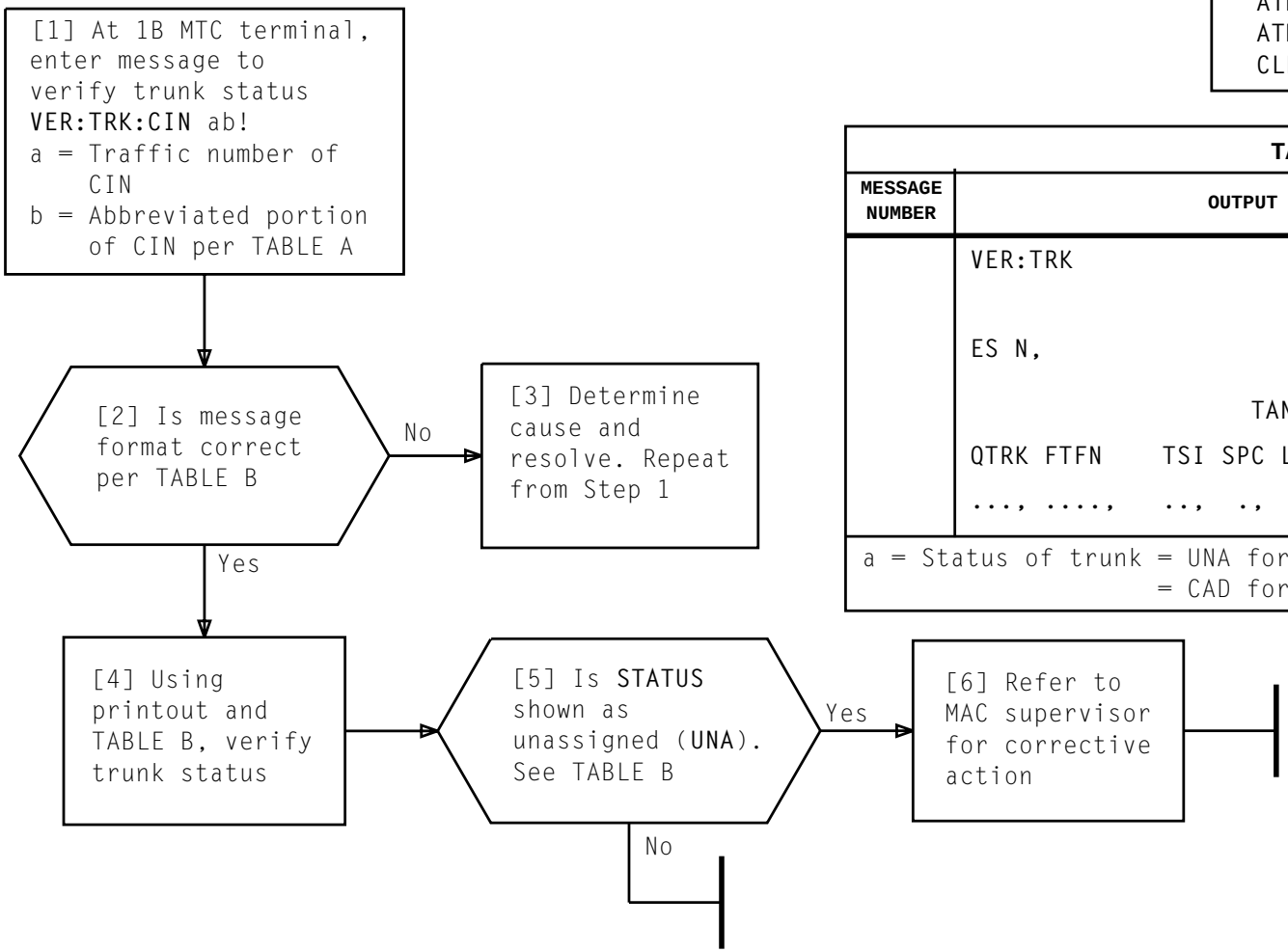


TABLE A

ABBREVIATED PORTION OF CIN
ATM*RT0/A
ATM*RT0/T
ATM*RT1A
ATM*RT1T
ATM*RPCU
CLN*10/5*

TABLE B

MESSAGE NUMBER	OUTPUT MESSAGE
	VER:TRK BFTN TOWN ST BL FBS NBS TSG ...., ES N, D1D2 N, TAN QTRK FTFN TSI SPC LVL FTS FCHAN STATUS ..., ..., .., ., ., ..., 0, a,

a = Status of trunk = UNA for unassigned
= CAD for circuit administration

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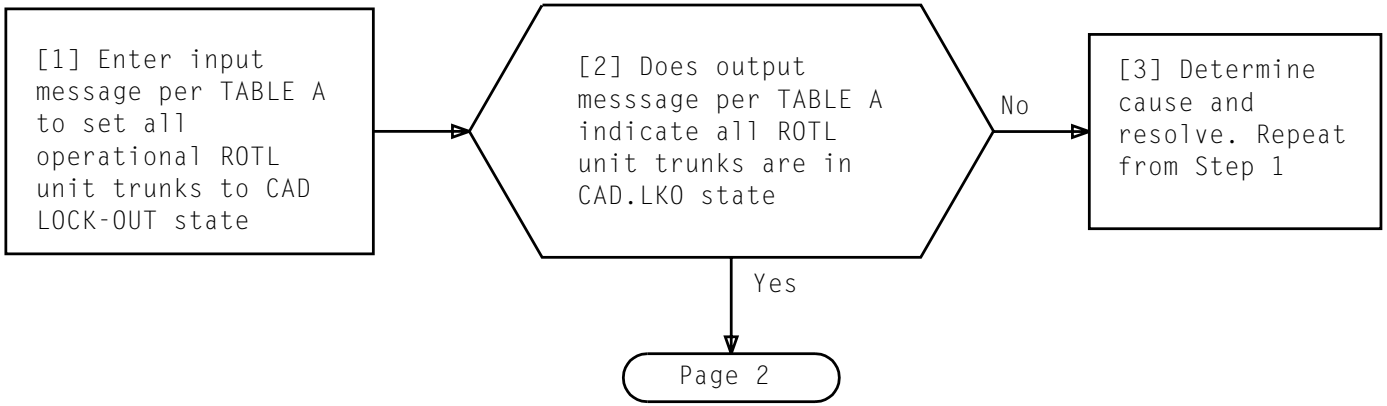


TABLE A

INPUT MESSAGE	OUTPUT MESSAGE
SET:TRKSTAT CAD.LKO,CIN aATM*RTO/A:TSG	SET:TRKSTAT CAD.LKO TRAF ,CIN aATM*RTO/A • • • SET:TRKSTAT,CIN aATM*RTO/A TSG COMPLETED TRK COUNT b

a = Traffic number of CIN
b = Trunk count

SET ALL ROTL UNIT TRUNKS TO CAD LOCK-OUT STATE AND VERIFY

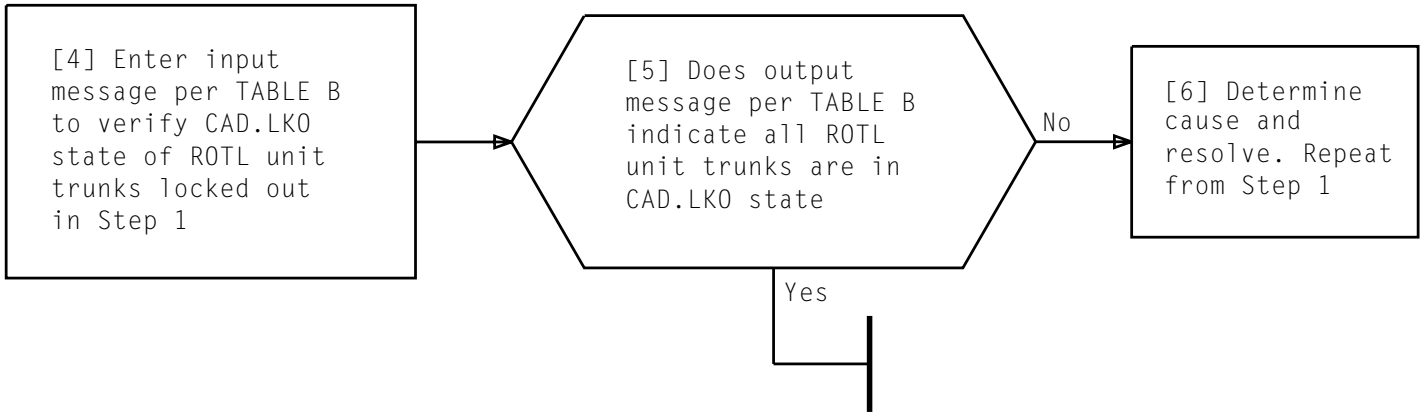


TABLE B

INPUT MESSAGE	OUTPUT MESSAGE
OP:TRKSTAT,CIN aATM*RTO/A:TSG	OP:TRKSTAT CAD.LKO TRAF ,CIN aATM*RTO/A • • • OP:TRKSTAT,CIN aATM*RTO/A TSG COMPLETED TRK COUNT b

a = Traffic number of CIN
b = Trunk count

SET ALL ROTL UNIT TRUNKS TO CAD LOCK-OUT STATE AND VERIFY

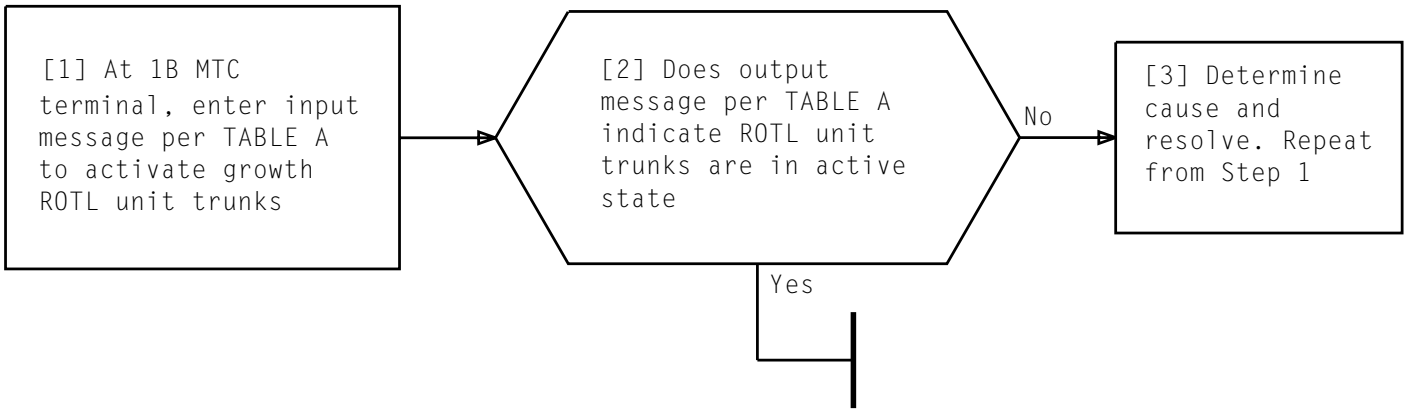


TABLE A

INPUT MESSAGE	OUTPUT MESSAGE
SET:TRKSTAT ACT,CIN aATM*RTO/A	SET:TRKSTAT ACT TRAF ,CIN aATM*RTO/A 4 TSNS AFFECTED. BASE TSN
a = Traffic number of CIN	

SET GROWTH ROTL UNIT TRUNKS TO ACTIVE STATE

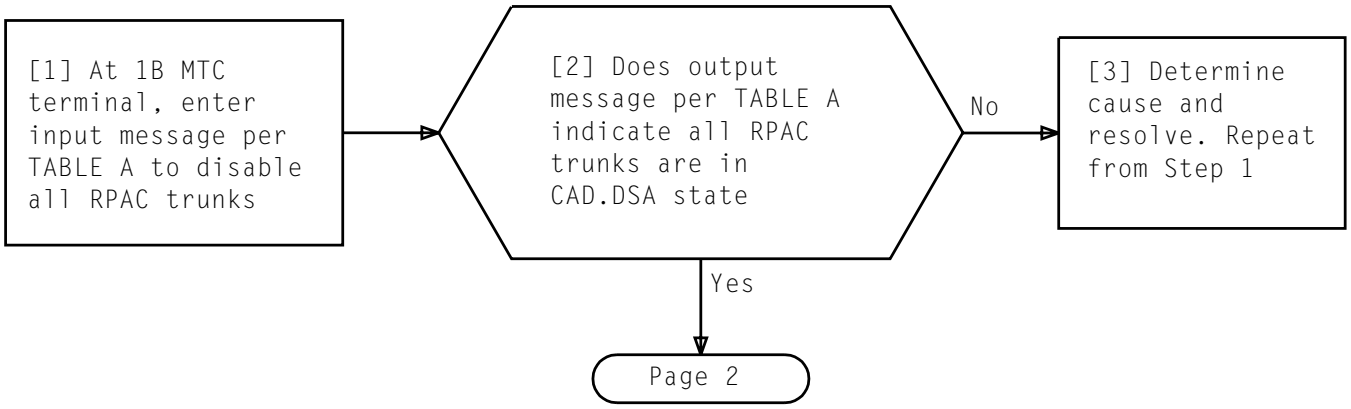


TABLE A

INPUT MESSAGE	OUTPUT MESSAGE
SET:TRKSTAT CAD.DSA,CIN aATM*RPCU:TSG!	SET:TRKSTAT CAD.DSA TRAF ,CIN aATM*RPCU • • SET:TRKSTAT,CIN aATM*RPCU TSG COMPLETED TRK COUNT b

a = Traffic number of CIN
b = Trunk count

SET ALL RPAC TRUNKS TO CAD DISABLE STATE AND VERIFY

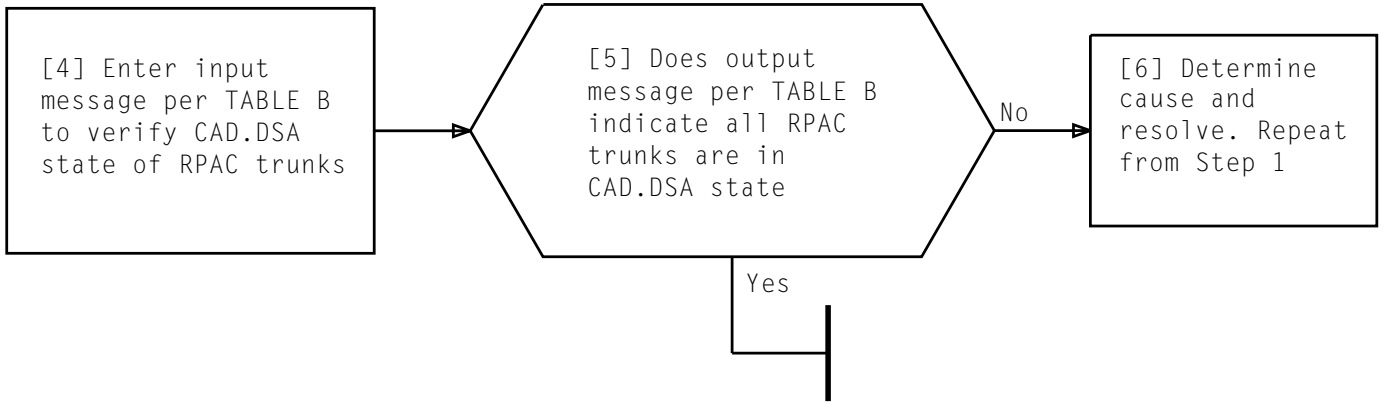


TABLE B

INPUT MESSAGE	OUTPUT MESSAGE
OP:TRKSTAT,CIN aATM*RPCU:TSG!	OP:TRKSTAT CAD.DSA TRAF ,CIN aATM*RPCU • • OP:TRKSTAT,CIN aATM*RPCU TSG COMPLETED TRK COUNT b

a = Traffic number of CIN
b = Trunk count

SET ALL RPAC TRUNKS TO CAD DISABLE STATE AND VERIFY

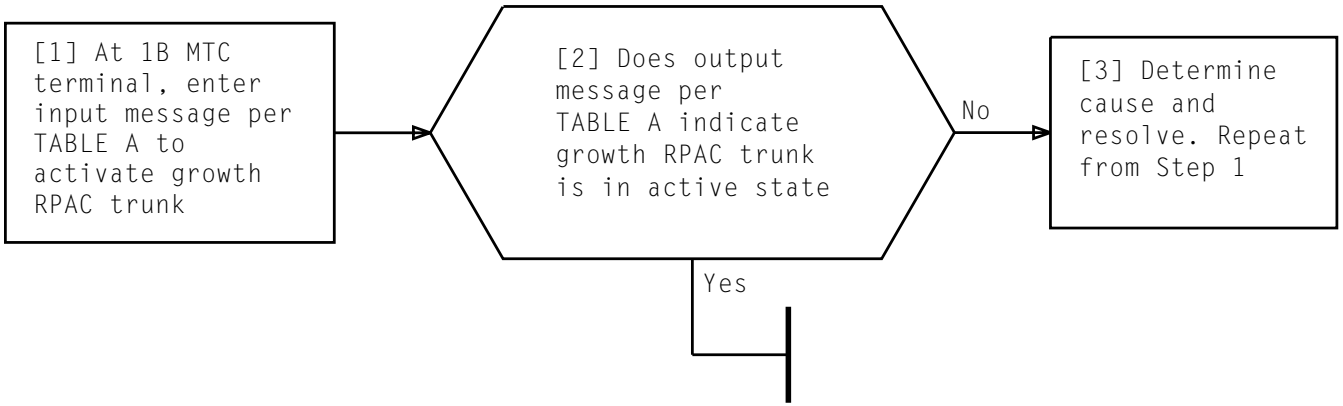
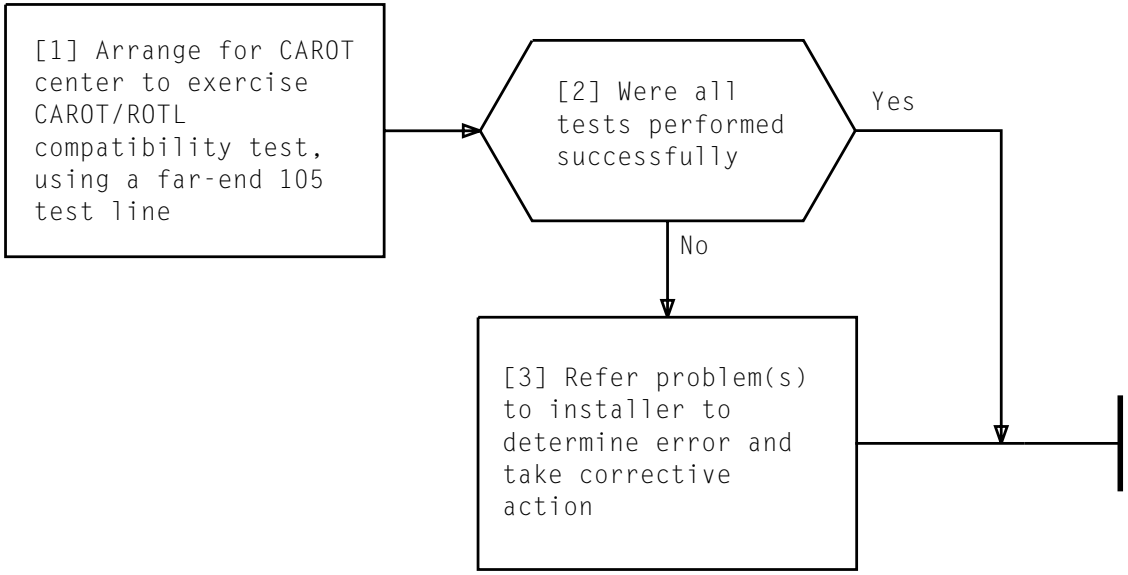


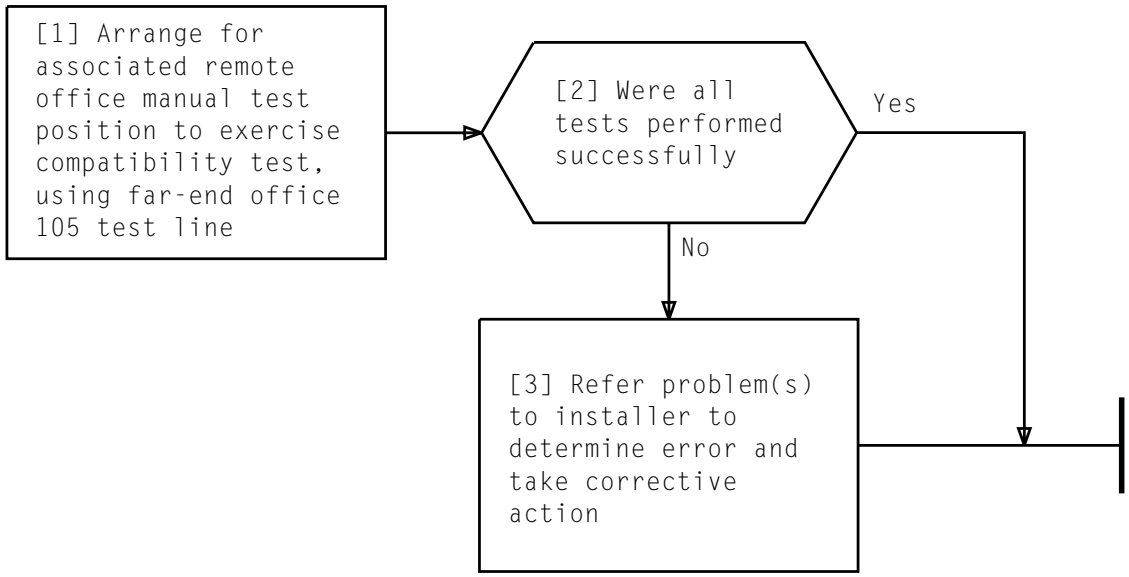
TABLE A

INPUT MESSAGE	OUTPUT MESSAGE
SET:TRKSTAT ACT,CIN aATM*RPCU!	SET:TRKSTAT ACT TRAF ,CIN aATM*RPCU
a = Traffic number of CIN	

SET GROWTH RPAC TRUNK TO ACTIVE



PERFORM CAROT/ROTL COMPATIBILITY TEST



PERFORM MANUAL TEST POSITION COMPATIBILITY TEST

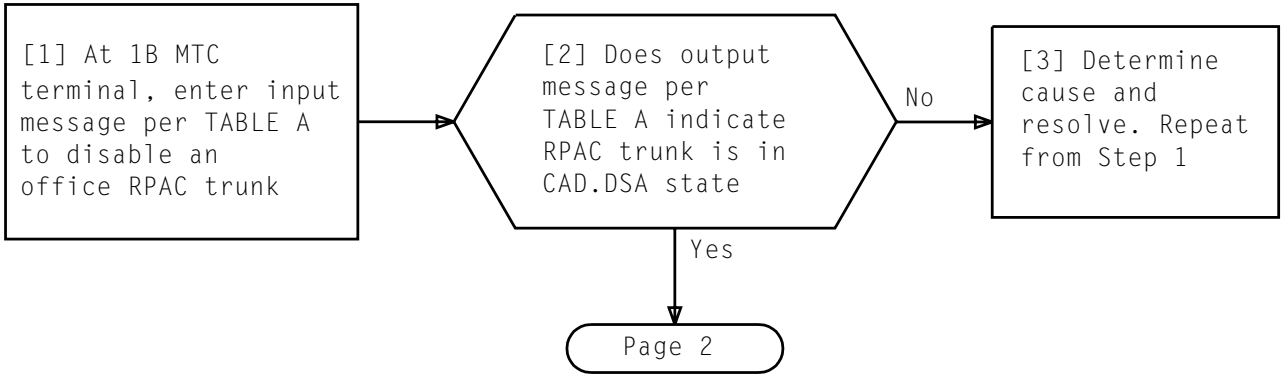


TABLE A

INPUT MESSAGE	OUTPUT MESSAGE
SET:TRKSTAT CAD.DSA,CIN aATM*RPCU!	SET:TRKSTAT CAD.DSA TRAF ,CIN aATM*RPCU
a = Traffic number of CIN	

SET OFFICE RPAC TRUNK TO CAD DISABLE STATE AND VERIFY

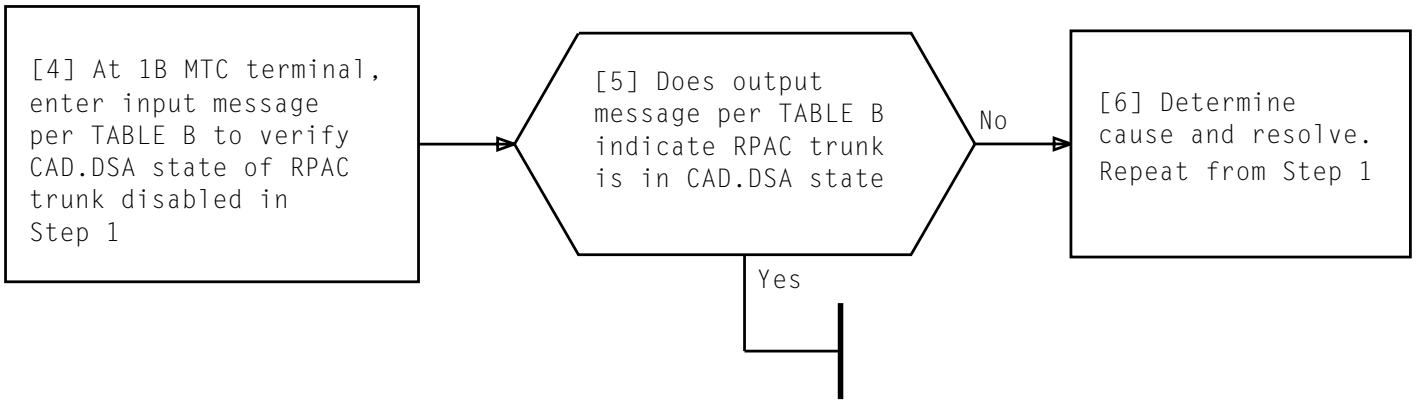


TABLE B

INPUT MESSAGE	OUTPUT MESSAGE
OP:TRKSTAT,CIN aATM*RPCU!	OP:TRKSTAT CAD.DSA TRAF ,CIN aATM*RPCU
a = Traffic number of CIN	

SET OFFICE RPAC TRUNK TO CAD DISABLE STATE AND VERIFY

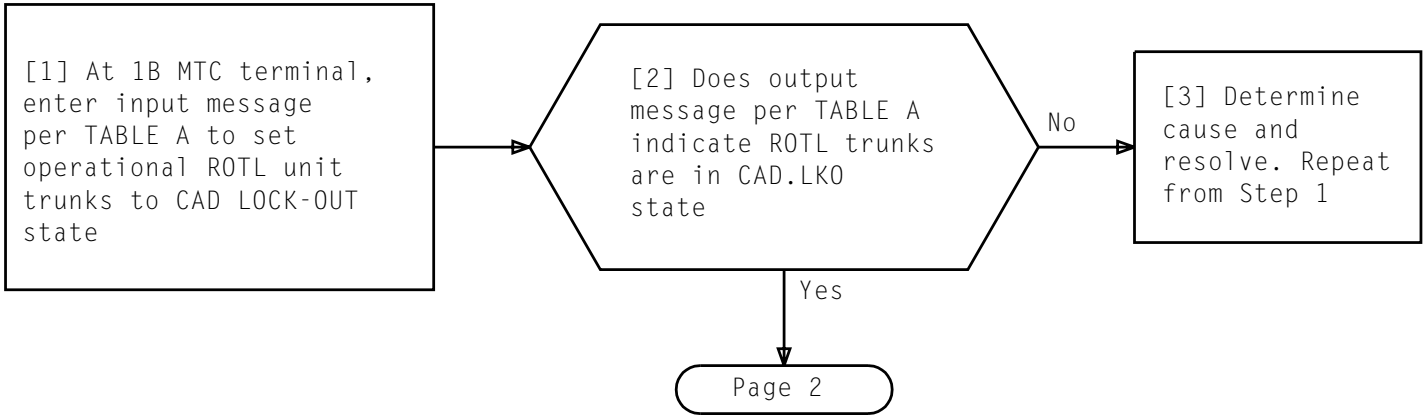


TABLE A

INPUT MESSAGE	OUTPUT MESSAGE
SET:TRKSTAT CAD.LKO,CIN aATM*RTO/A	SET:TRKSTAT CAD.LKO TRAF ,CIN aATM*RTO/A 4 TSNS AFFECTED. BASE TSN
a = Traffic number of CIN	

SET ROTL UNIT TRUNKS TO CAD LOCK-OUT STATE AND VERIFY

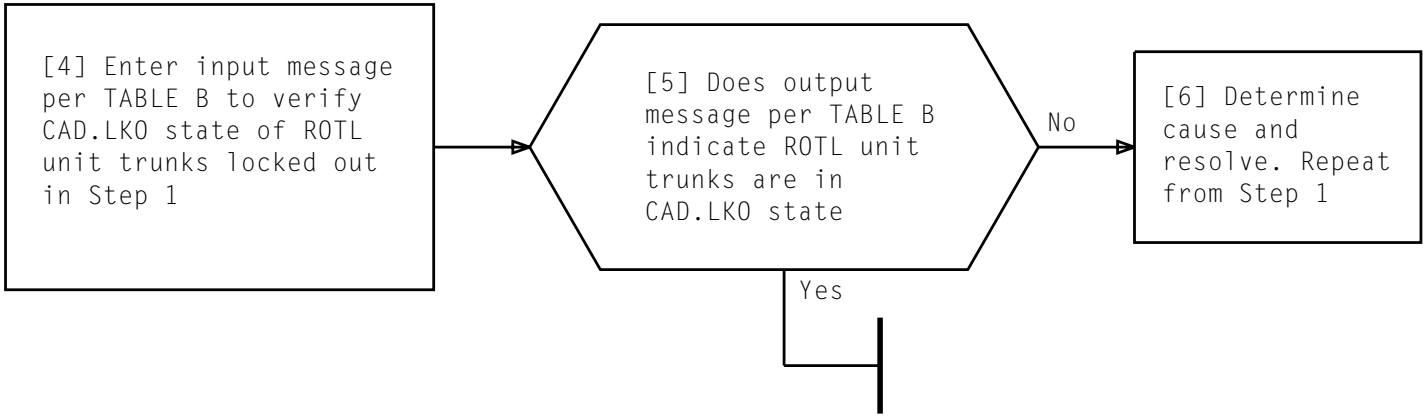


TABLE B

INPUT MESSAGE	OUTPUT MESSAGE
OP:TRKSTAT,TSN a:NUM 4!	OP:TRKSTAT CAD.LKO TRAF ,TSN b OP:TRKSTAT CAD.LKO TRAF ,TSN c OP:TRKSTAT CAD.LKO TRAF ,TSN d OP:TRKSTAT CAD.LKO TRAF ,TSN e OP:TRKSTAT, TSN a NUM COMPLETED TRK COUNT 4

a = Base TSN from SET:TRKSTAT output message
b = TSN of RTOA
c = TSN of RTOT
d = TSN of RT1A
e = TSN of RT1T

SET ROTL UNIT TRUNKS TO CAD LOCK-OUT STATE AND VERIFY

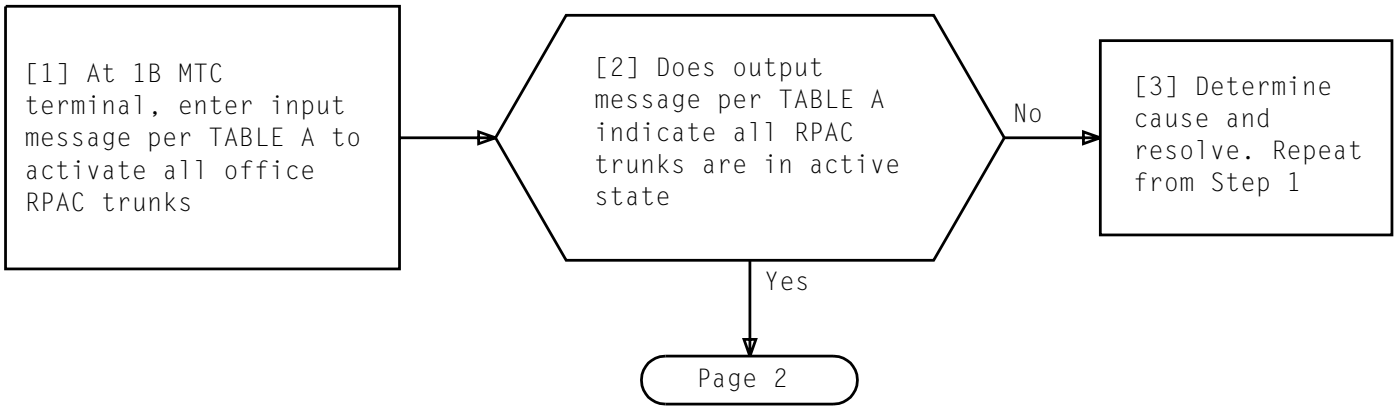


TABLE A

INPUT MESSAGE	OUTPUT MESSAGE
SET:TRKSTAT ACT,CIN aATM*RPCU:TSG!	SET:TRKSTAT ACT TRAF ,CIN a ATM*RPCU • • SET:TRKSTAT,CIN a ATM*RPCU TSG COMPLETED

a = Traffic number of CIN

SET ALL OFFICE RPAC TRUNKS TO ACTIVE STATE AND VERIFY

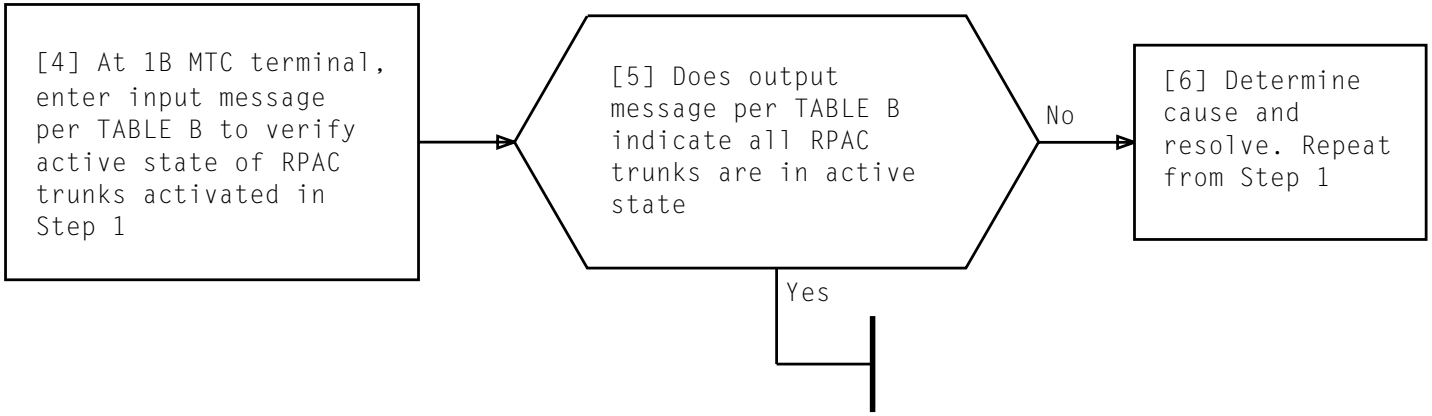


TABLE B

INPUT MESSAGE	OUTPUT MESSAGE
OP:TRKSTAT,CIN aATM*RPCU:TSG!	OP:TRKSTAT ACT TRAF ,CIN a ATM*RPCU • • OP:TRKSTAT,CIN a ATM*RPCU TSG COMPLETED
a = Traffic number of CIN	

SET ALL OFFICE RPAC TRUNKS TO ACTIVE STATE AND VERIFY

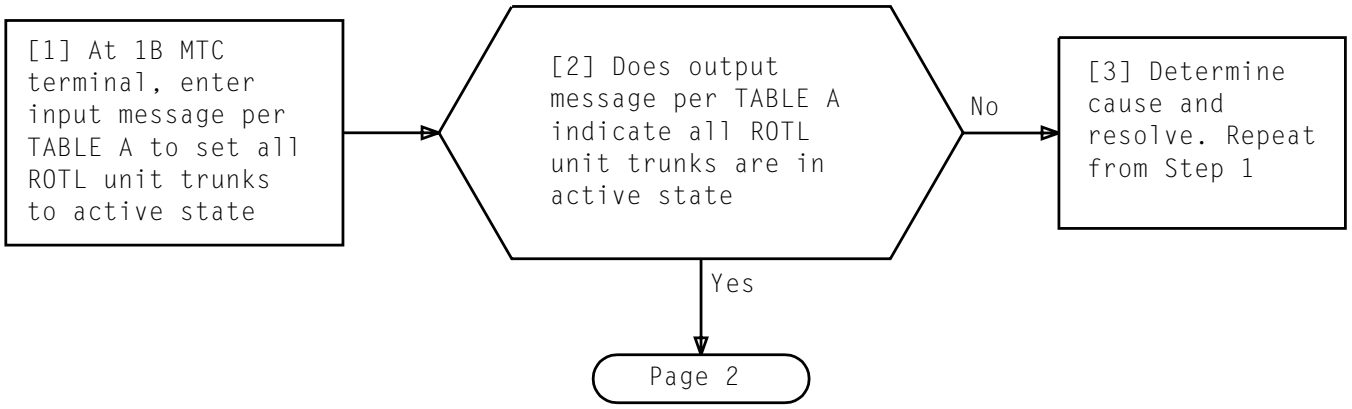


TABLE A

INPUT MESSAGE	OUTPUT MESSAGE
SET:TRKSTAT ACT,CIN aATM*RTO/A:TSG	SET:TRKSTAT ACT TRAF ,CIN a ATM*RTO/A • • SET:TRKSTAT,CIN a ATM*RTO/A TSG COMPLETED TRK COUNT b

a = Traffic number of CIN
b = Trunk count

SET ALL ROTL UNIT TRUNKS TO ACTIVE STATE AND VERIFY

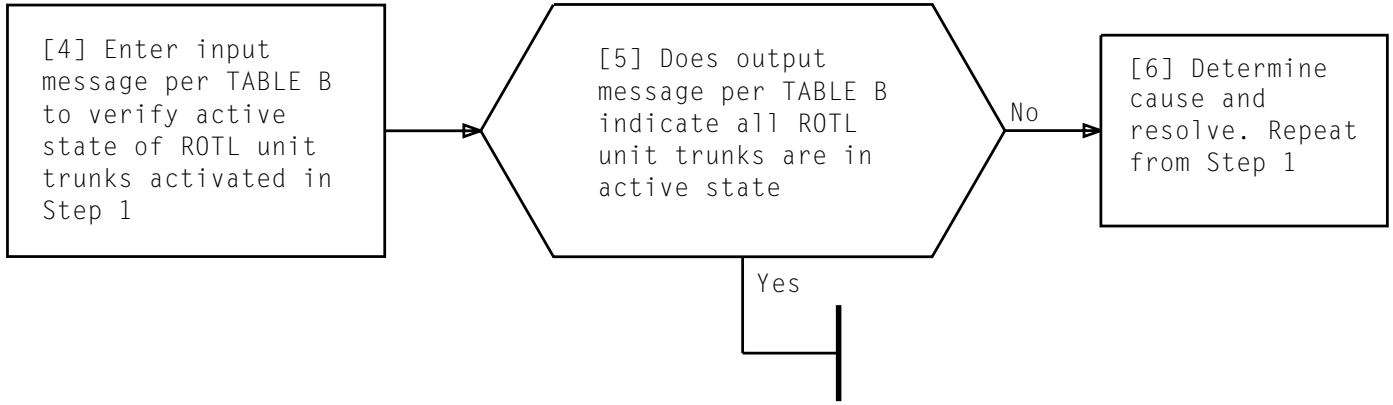


TABLE B

INPUT MESSAGE	OUTPUT MESSAGE
OP:TRKSTAT,CIN aATM*RTO/A:TSG	OP:TRKSTAT ACT TRAF ,CIN a ATM*RTO/A • • OP:TRKSTAT,CIN a ATM*RTO/A TSG COMPLETED TRK COUNT b

a = Traffic number of CIN
b = Trunk count

SET ALL ROTL UNIT TRUNKS TO ACTIVE STATE AND VERIFY

SUMMARY

Using verify entry input message, call up growth MB or MCF UT translator and verify that resulting octal output, when converted, agrees with office records.

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

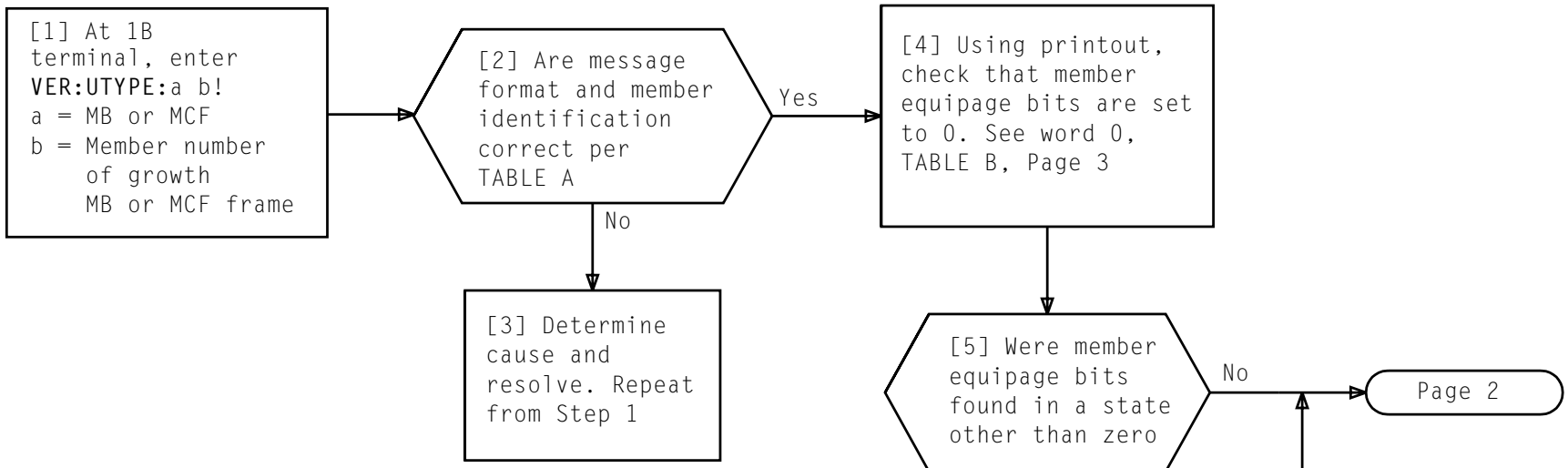


TABLE A

MESSAGE NUMBER	OUTPUT MESSAGE
1	VER:UTMN;OPT(),CUR: FLN a , UTYN b, MEMN c, ME UNEQ, ENTRY ADDRESS d, ENTRY SIZE 2, CUR WORD 0 _____ _____

a = Floor location number
b = MB or MCF
c = Member number of growth frame
d = Starting octal address for unit type entry

CAUTION 1

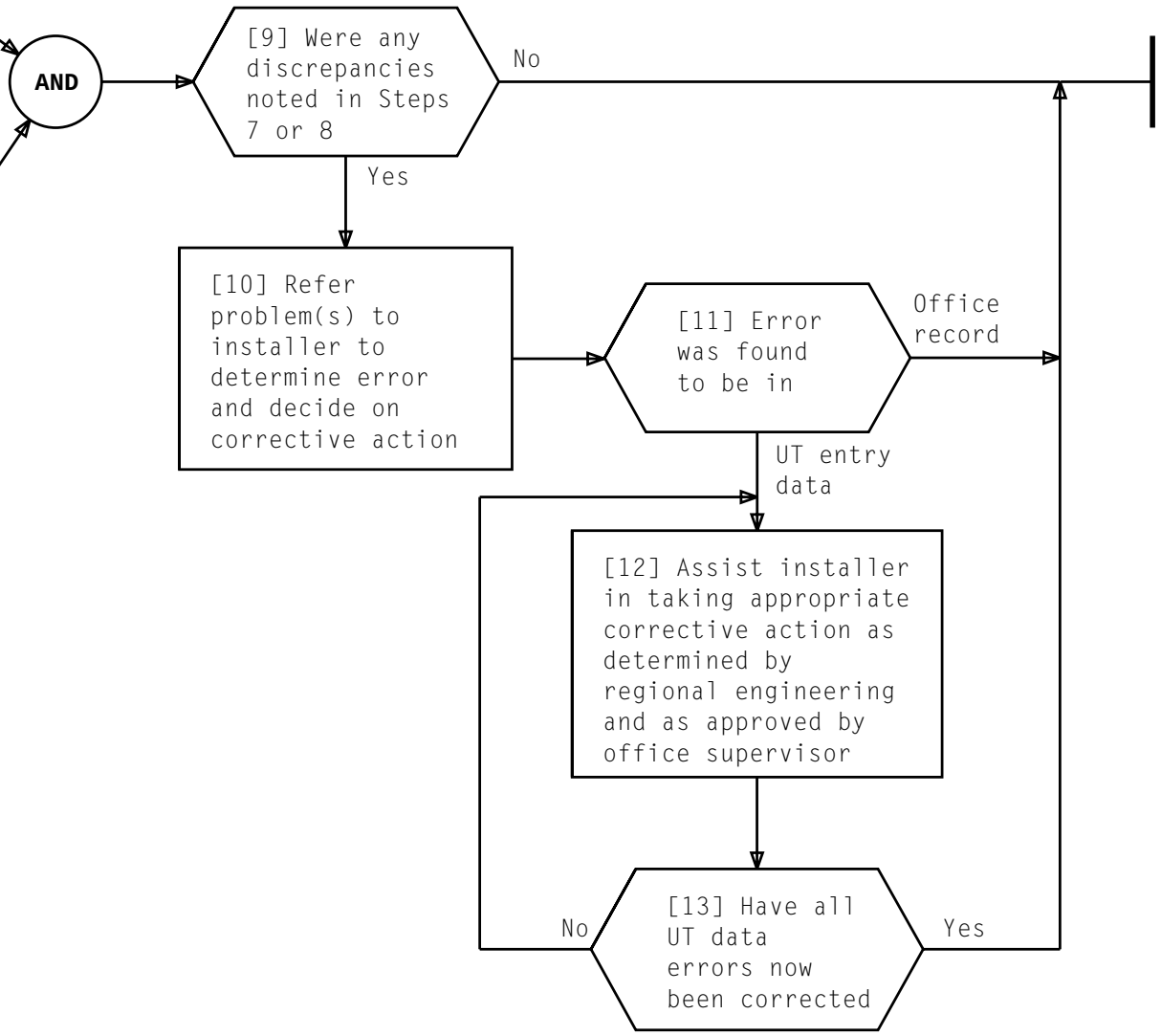
Depending on local procedures, supervisory or TELCO engineering approval must be obtained prior to performing any data changes

VERIFY MB OR MCF UT TRANSLATOR

Using printout, office records, and TABLE B, Page 3:

[7] Verify scan point assignment for growth MB or MCF per word 0 [DLP-501]

[8] Verify alarm grid, lineup and frame assignment for growth MB or MCF per word 1 [DLP-503]



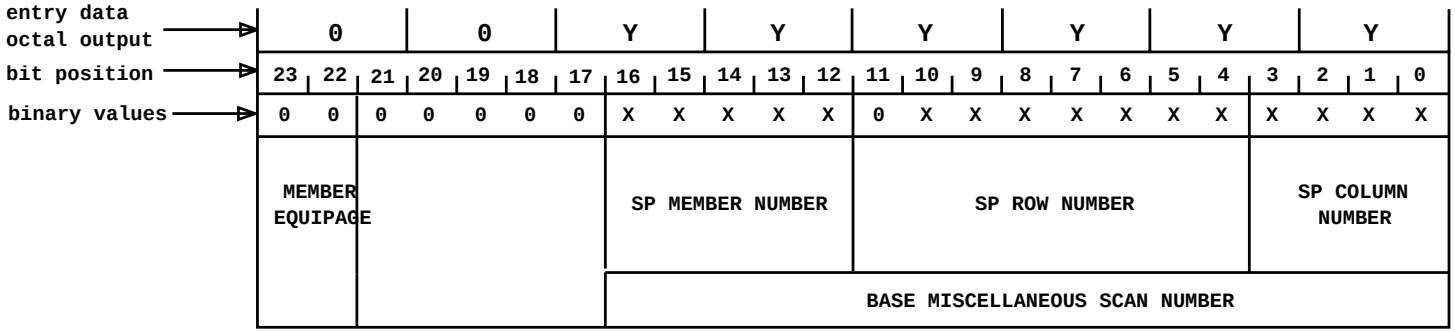
VERIFY MB OR MCF UT TRANSLATOR

TABLE B

ENTRY WORD (OCTAL)

UT ENTRY DATA AND WORD CONFIGURATION

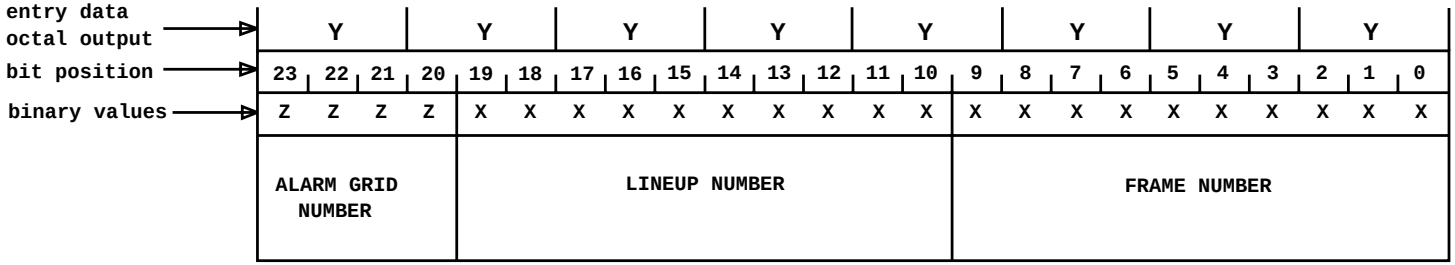
0



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

Y = Variable octal numbers

1



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

Y = Variable octal numbers

ZZZZ = Converts to decimal alarm grid number as reflected in office record drawings T-nnnn-Hn-400,401, or 402 or equivalent

VERIFY MB OR MCF UT TRANSLATOR

SUMMARY

Using verify entry input message, call up growth Alarm Grid UT translator and verify that resulting octal output data, when converted, agrees with office records. Refer to entry word explanations of TABLE B, Page 4, as required, for assistance in interpreting specific data fields. If it is determined that UT entry data are in error, word change(s) may be required.

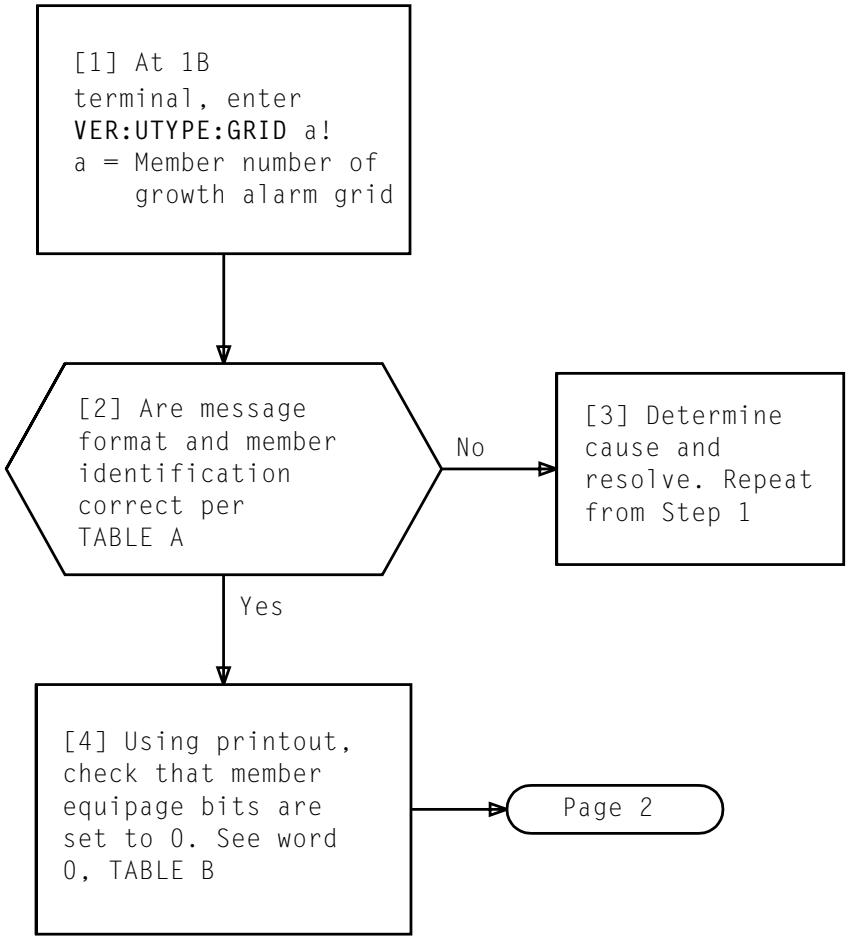
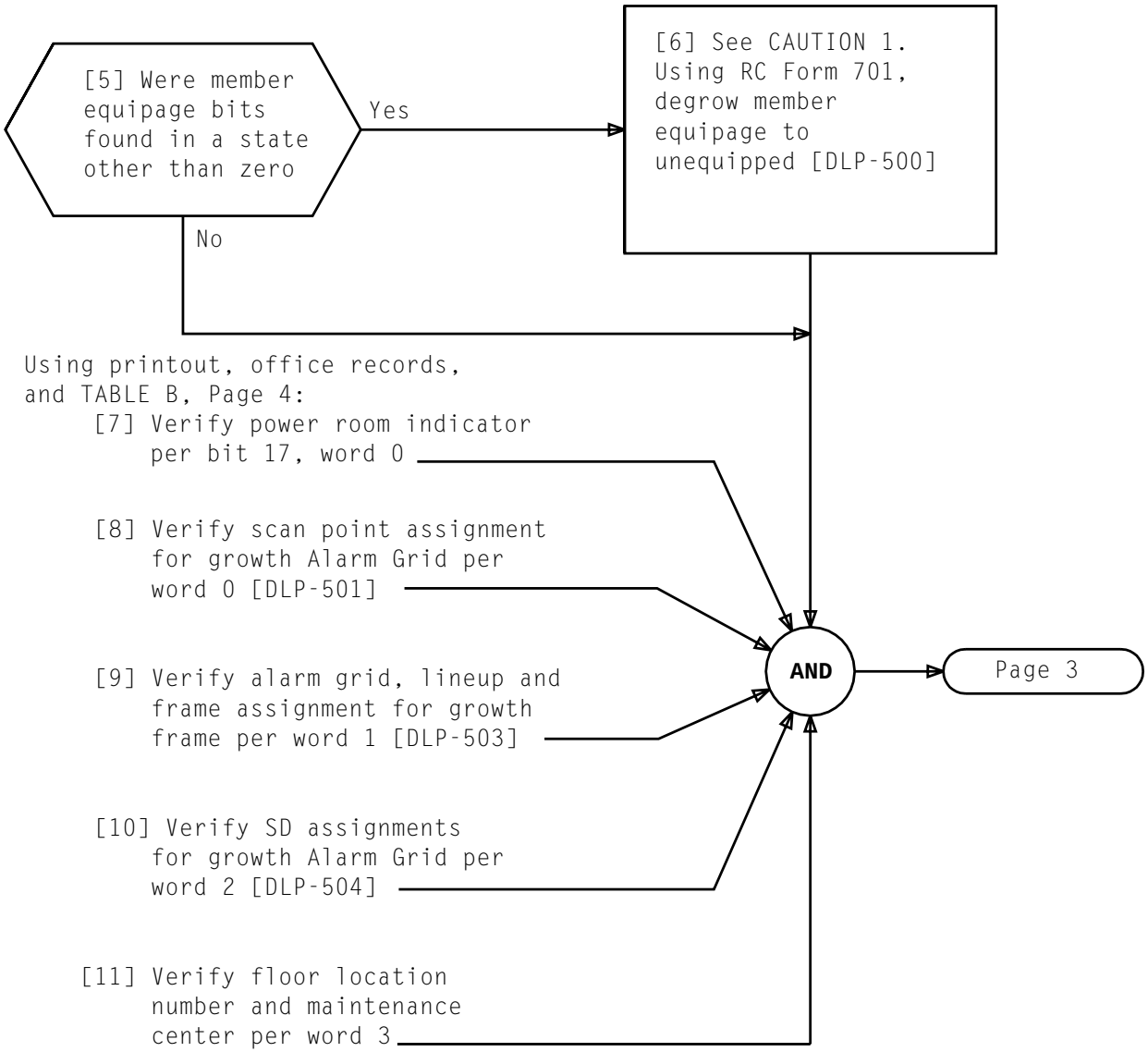


TABLE A

MESSAGE NUMBER	INPUT MESSAGE
1	VER:UTMN;OPT(),CUR: FLN a, UTYN GRID, MEMN b, ME UNEQ, ENTRY ADDRESS c, ENTRY SIZE 4, CUR WORD 0 _____ _____ _____ _____

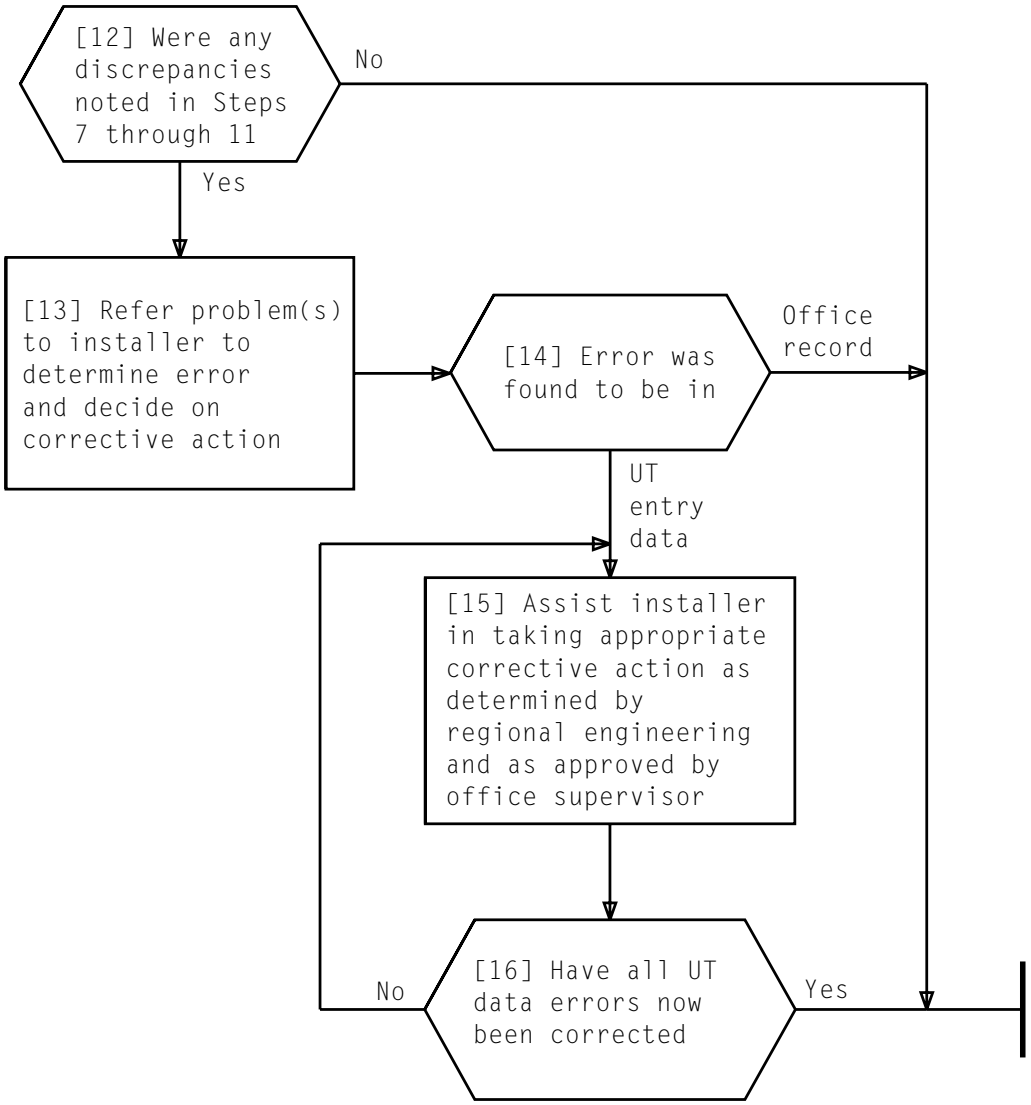
a = Floor location number
b = Member number of growth alarm grid
c = Starting octal address for unit type entry

VERIFY ALARM GRID UT TRANSLATOR



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

VERIFY ALARM GRID UT TRANSLATOR



VERIFY ALARM GRID UT TRANSLATOR

TABLE B

ENTRY WORD (OCTAL): 0

UT ENTRY DATA AND WORD CONFIGURATION

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	Z	X X X X X	0 X X X X X X X		X X X X	
	MEMBER EQUIPAGE		P R	SP MEMBER NUMBER	SP ROW NUMBER		SP COLUMN NUMBER	
				BASE MISCELLANEOUS SCAN NUMBER				

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

Y = Variable octal numbers

Z = 0 (Not equipped for power room alarm monitoring)
1 (Equipped for power room alarm monitoring)

ENTRY WORD (OCTAL): 1

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

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

Y = Variable octal numbers

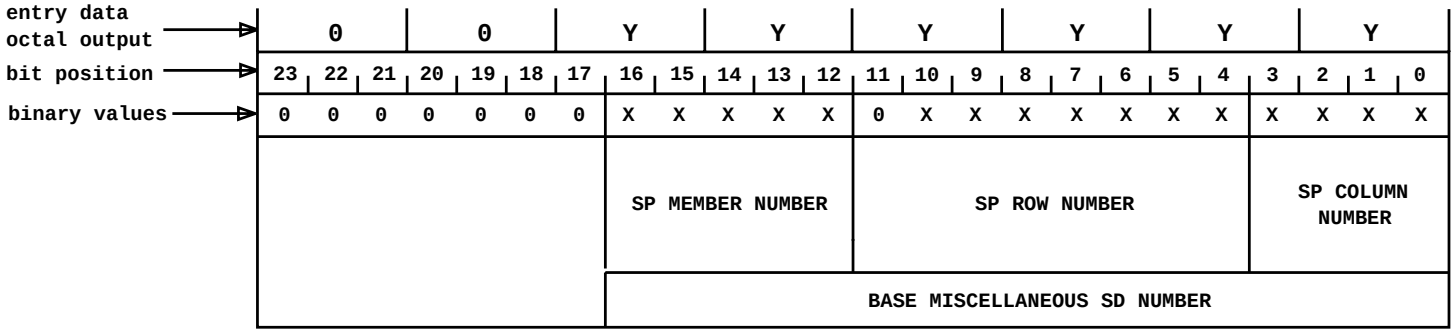
ZZZZ = Converts to decimal alarm grid number as reflected in office record drawings T-nnnn-Hn-400,401, or 402 or equivalent

VERIFY ALARM GRID UT TRANSLATOR

TABLE B (Contd)

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION

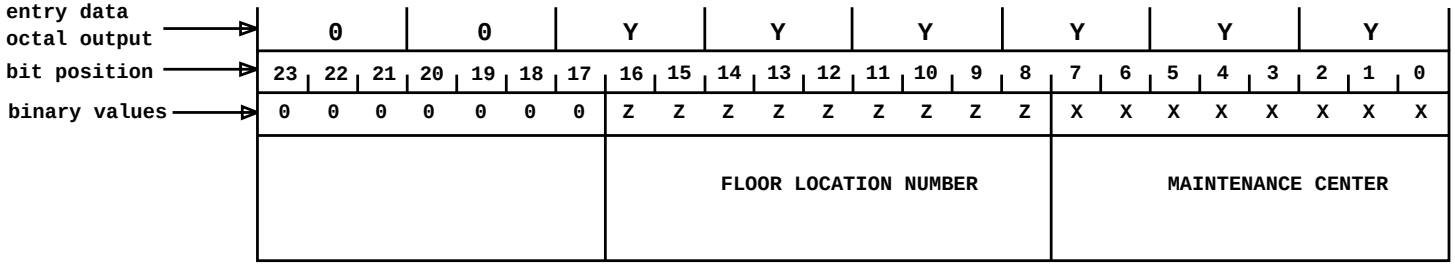
2



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

Y = Variable octal numbers

3



XXX = 223 for MOC
224 for TEC1
225 for TEC2
226 for TEC3
227 for TEC4
230 for TEC5
231 for TOC

Y = Variable octal numbers

ZZZZ = Converts to decimal floor location number of frame containing growth Alarm Grid as reflected in office record

[1] Read CAUTION 1

[2] See FIG. 1. Remove fuses **F1** and **F17** at ringing and tone plant fuse panel

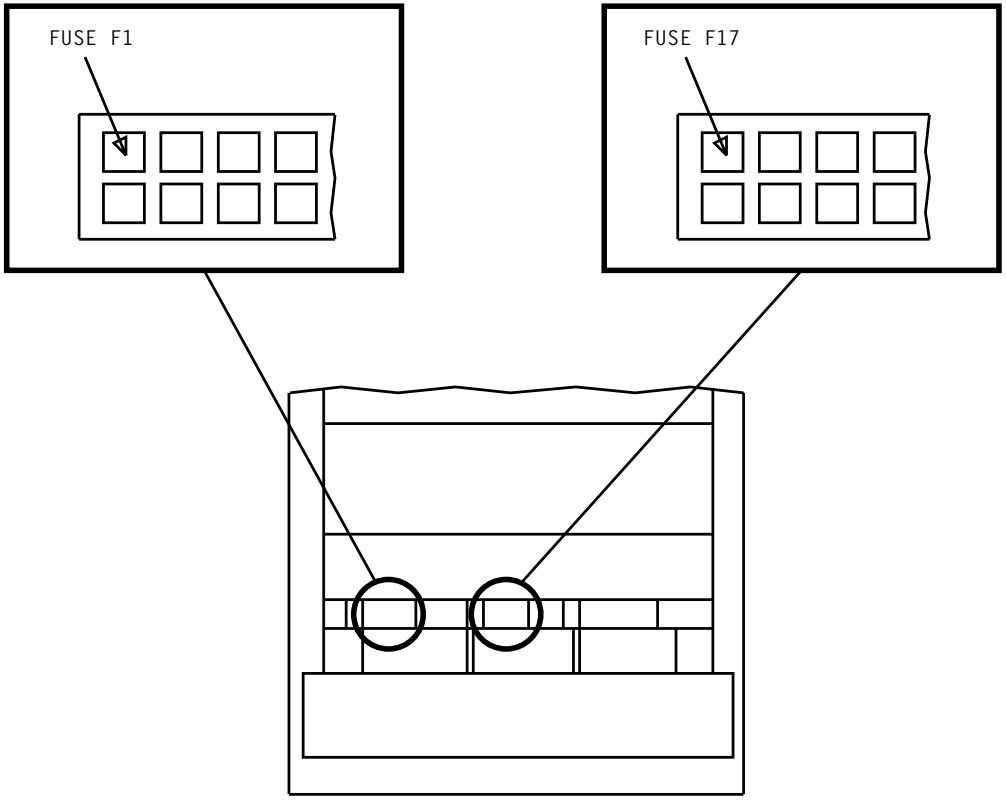


FIG. 1 — Ringing and Tone Plant Fuse Location

CAUTION 1

Removal of fuses **F1** *and* **F17** *will disable 86V ringing and tone facility in the entire 4 ESS switching office. All minor, power minor, alarm battery supply, and display panel audible alarm ringer will be disabled. Complete wiring quickly and without delay*

DISABLE 86V AUDIBLE ALARM POWER AT RINGING AND TONE PLANT

REMOVE POWER FOR EXIT PILOT LAMPS

[1] Read CAUTION 1

[2] Remove fuse **T** from alarm grid fuse panel that provides power for floor exit pilot lamps. See FIG. 1

[3] Does this grid have manual alarm grouping with foreign alarm system (F-option)

No

Yes

[4] Remove fuse **R** from alarm grid fuse panel that provides power for floor exit pilot lamps. See FIG. 1

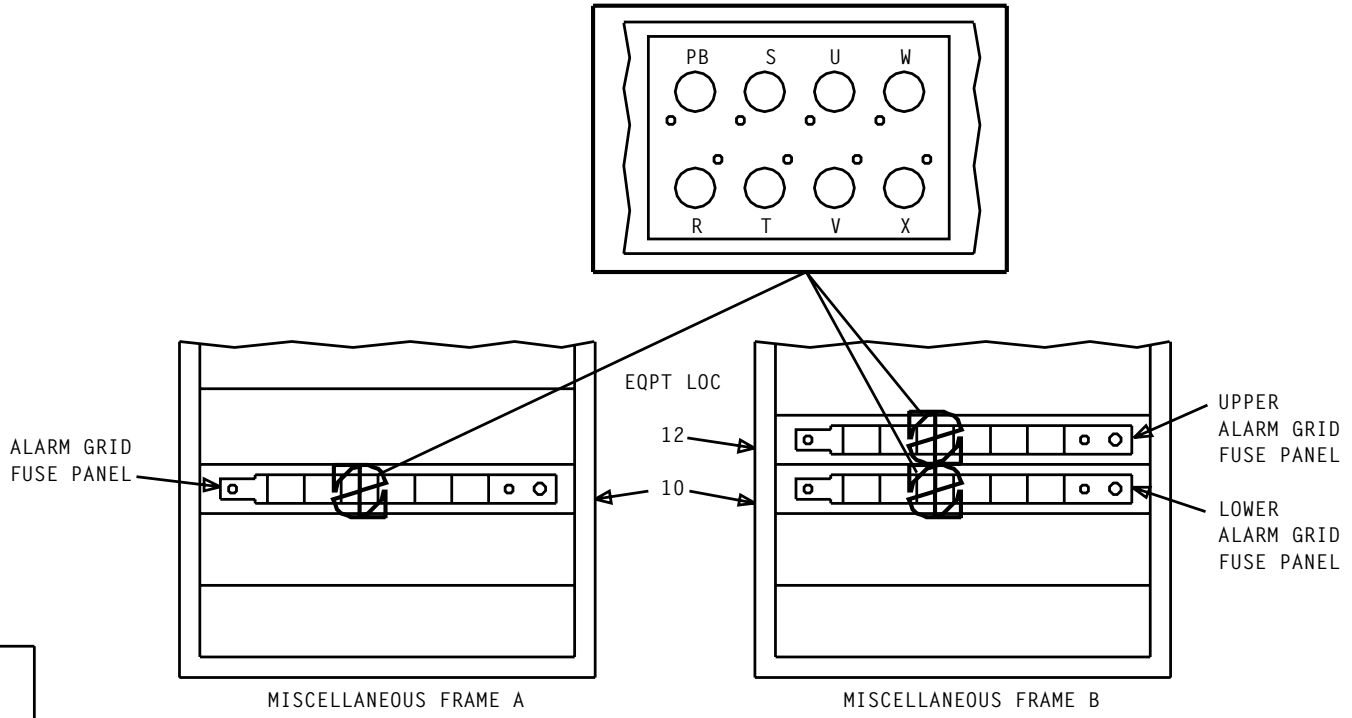


FIG. 1 — Office Alarm Grid Fuse Location

CAUTION 1
Removal of fuses will disable exit pilot lamps on this floor. Complete wiring quickly and restore power without delay

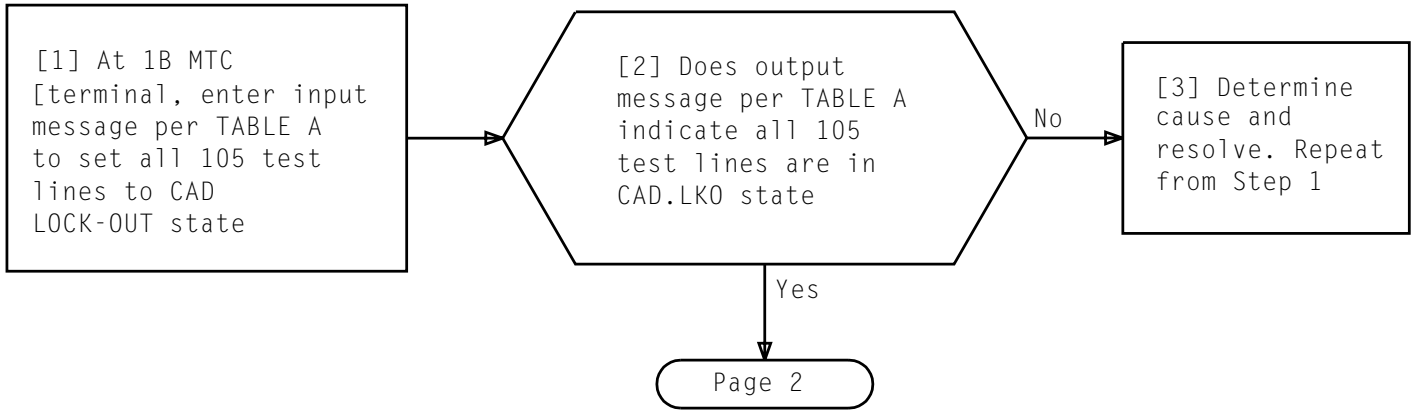


TABLE A

INPUT MESSAGE	OUTPUT MESSAGE
SET:TRKSTAT CAD.LKO,TAN a:TSG!	SET:TRKSTAT CAD.LKO TRAF ,TAN a • • SET:TRKSTAT,TAN a TSG COMPLETED TRK COUNT b

a = TAN number assigned to 105 test line
b = Trunk count

SET ALL 105 TEST LINES TO CAD LOCK-OUT STATE AND VERIFY

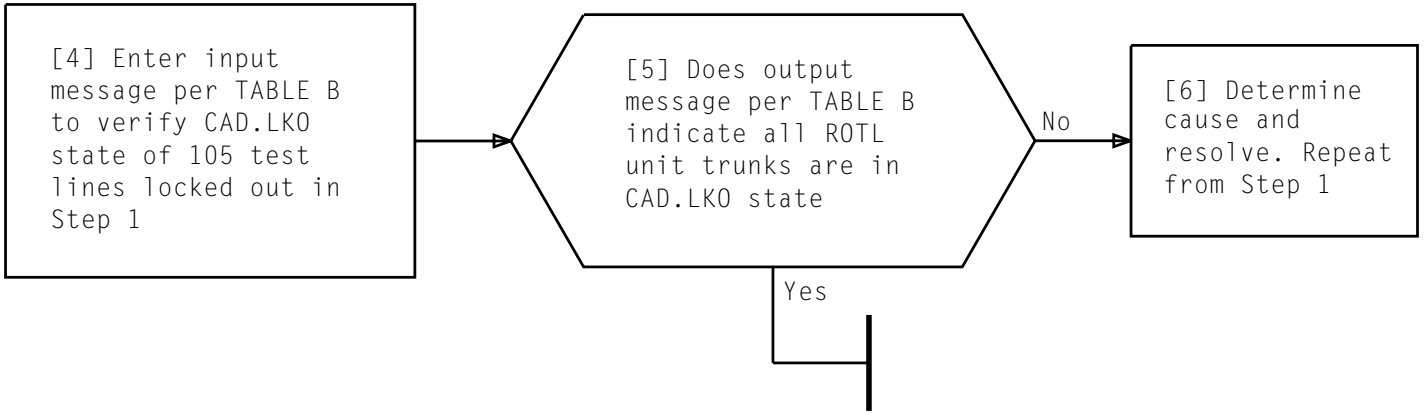


TABLE B

INPUT MESSAGE	OUTPUT MESSAGE
OP:TRKSTAT,TAN a:TSG!	OP:TRKSTAT CAD.LKO TRAF ,TAN a • • OP:TRKSTAT,TAN a TSG COMPLETED TRK COUNT b

a = TAN number assigned to 105 test line
b = Trunk count

SET ALL 105 TEST LINES TO CAD LOCK-OUT STATE AND VERIFY

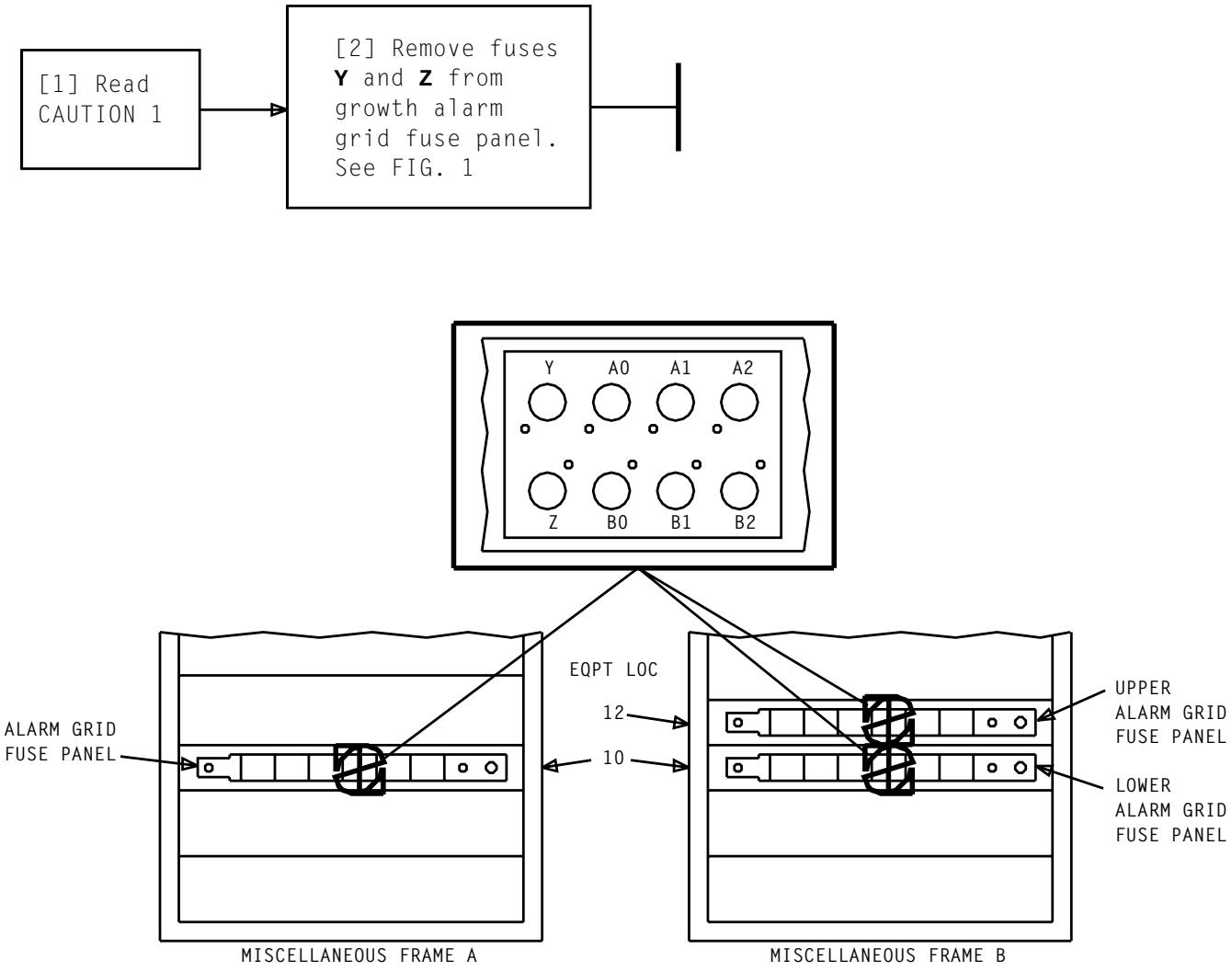


FIG. 1 — Office Alarm Grid Fuse Location

CAUTION 1
Removal of fuses **Y** *and* **Z** *will disable alarm grid display panel in location other than MOC. Complete wiring quickly and restore power without delay*

REMOVE FUSES Y AND Z FROM GROWTH ASSOCIATED ALARM GRID FUSE PANEL

[1] Read CAUTION 1

[2] Remove fuse **X** from growth associated alarm grid fuse panel. See FIG. 1

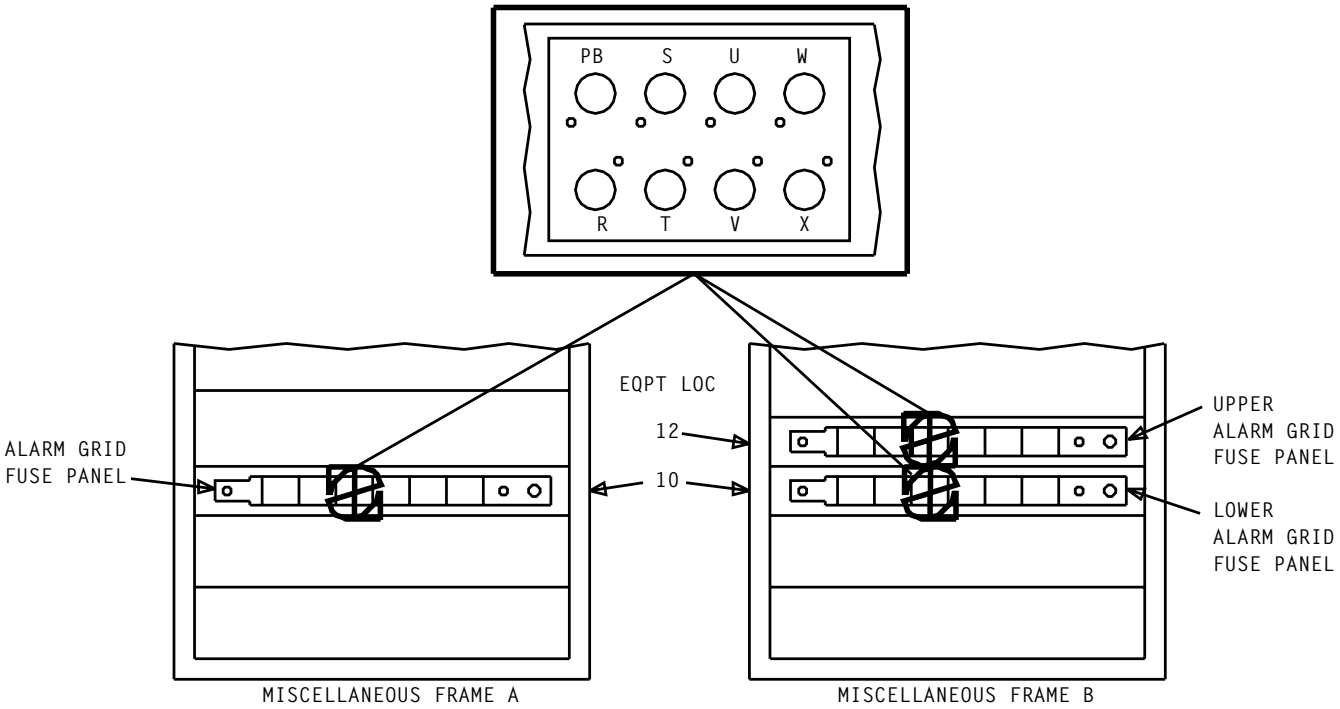


FIG. 1 — Office Alarm Grid Fuse Location

CAUTION 1
*Removal of fuse **X** will disable alarm grid display panel at MOC. Complete wiring quickly and restore power without delay*

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REMOVE FUSE X FROM GROWTH ASSOCIATED ALARM GRID FUSE PANEL

[1] Read CAUTION 1

[2] Remove fuse **HB** at growth associated alarm grid fuse panel. See FIG. 1

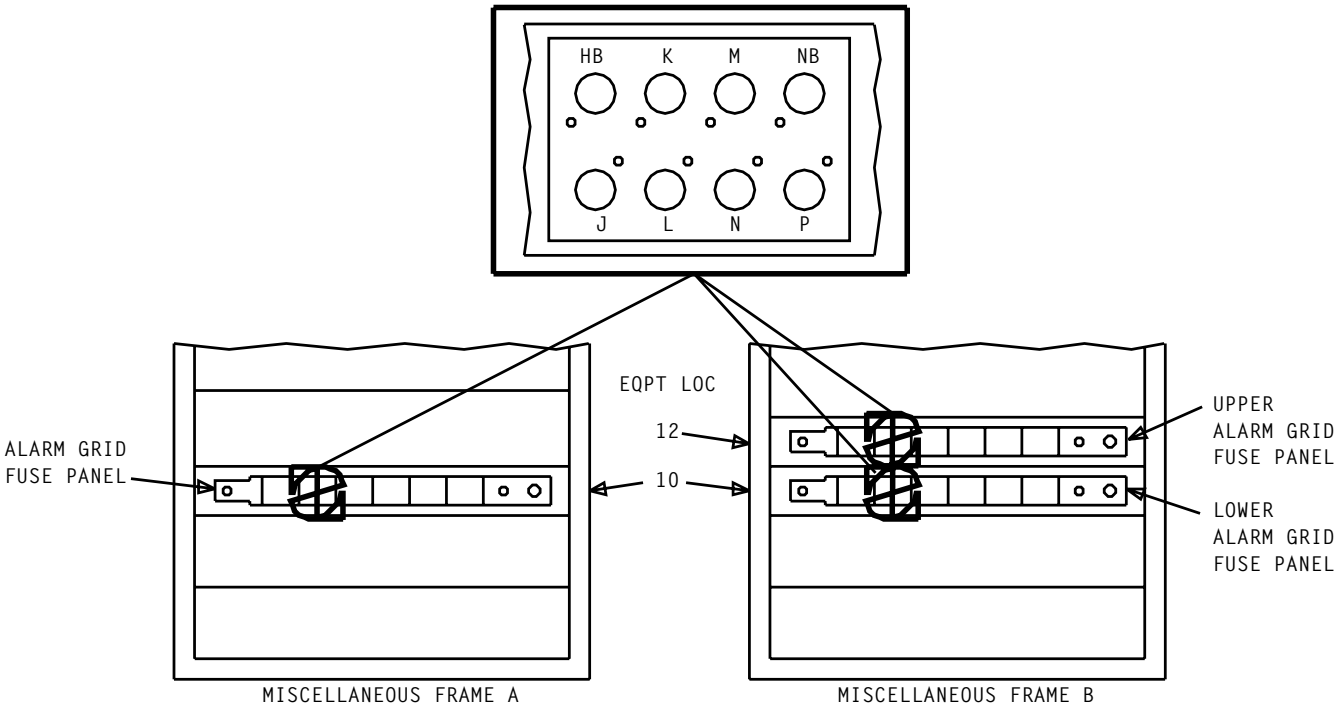

FIG. 1 — Office Alarm Grid Fuse Location

CAUTION 1
Removal of fuse **HB** *will disable alarm battery supply alarm in this grid. Complete wiring quickly and restore power without delay*

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234-153-050	**DLP**
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REMOVE FUSE HB FROM GROWTH ASSOCIATED ALARM GRID FUSE PANEL

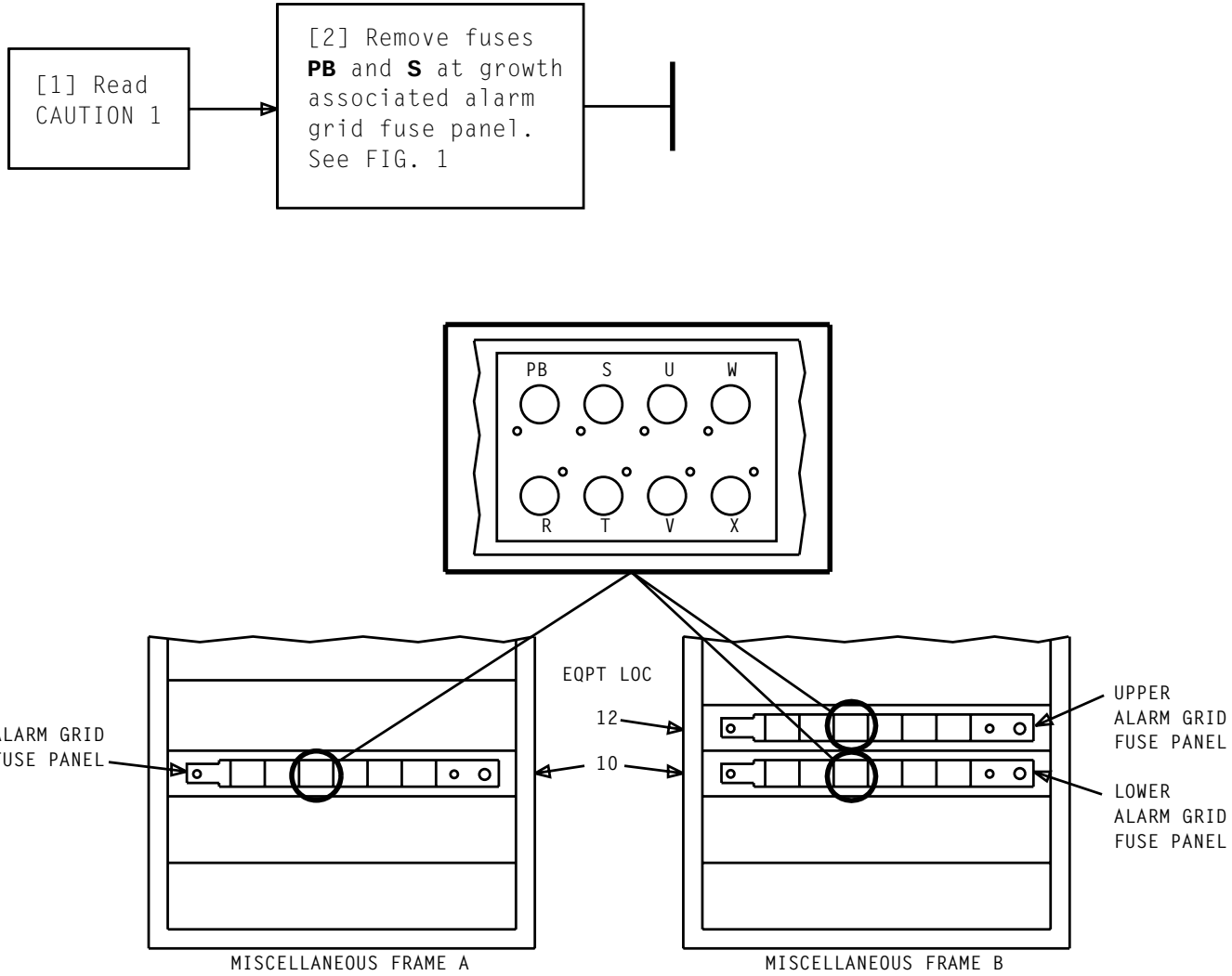

FIG. 1 — Office Alarm Grid Fuse Location

CAUTION 1
Removal of fuses **PB** *and* **S** *will disable* **OTH** *lamp at auxiliary main, processor main, and main aisle pilot lamps. Complete wiring quickly and restore power without delay*

REMOVE FUSES PB AND S FROM GROWTH ASSOCIATED ALARM GRID FUSE PANEL

[1] Read CAUTION 1

[2] Remove fuses **D**, **E**, **F**, and **G** at growth associated alarm grid fuse panel. See FIG. 1

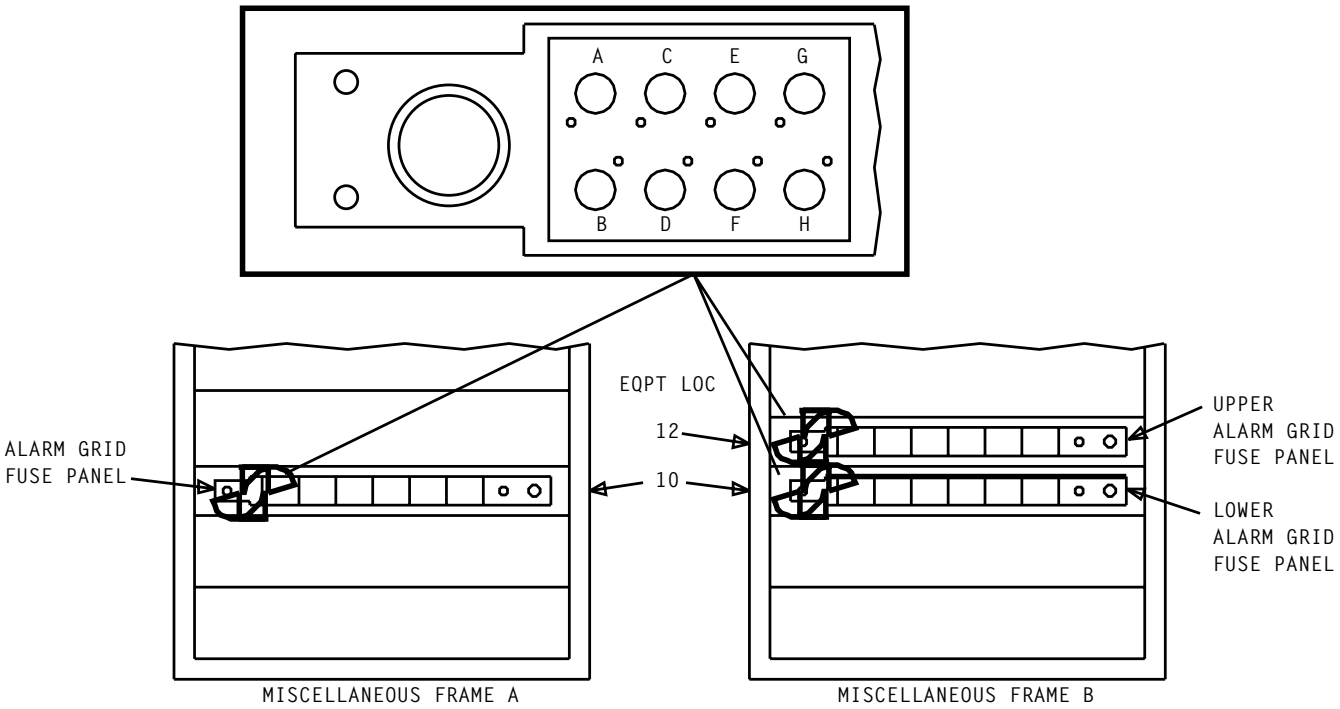

FIG. 1 – Office Alarm Grid Fuse Location

CAUTION 1
Removal of fuses **D**, **E**, **F**, *and* **G** *will disable signal distributor points in growth associated grid. Complete wiring quickly and restore power without delay*

REMOVE FUSES FROM GROWTH ASSOCIATED ALARM GRID FUSE PANEL WHICH PROVIDES POWER TO SD POINTS

[1] Read CAUTION 1

[2] Remove fuse **U** from growth associated alarm grid fuse panel. See FIG. 1

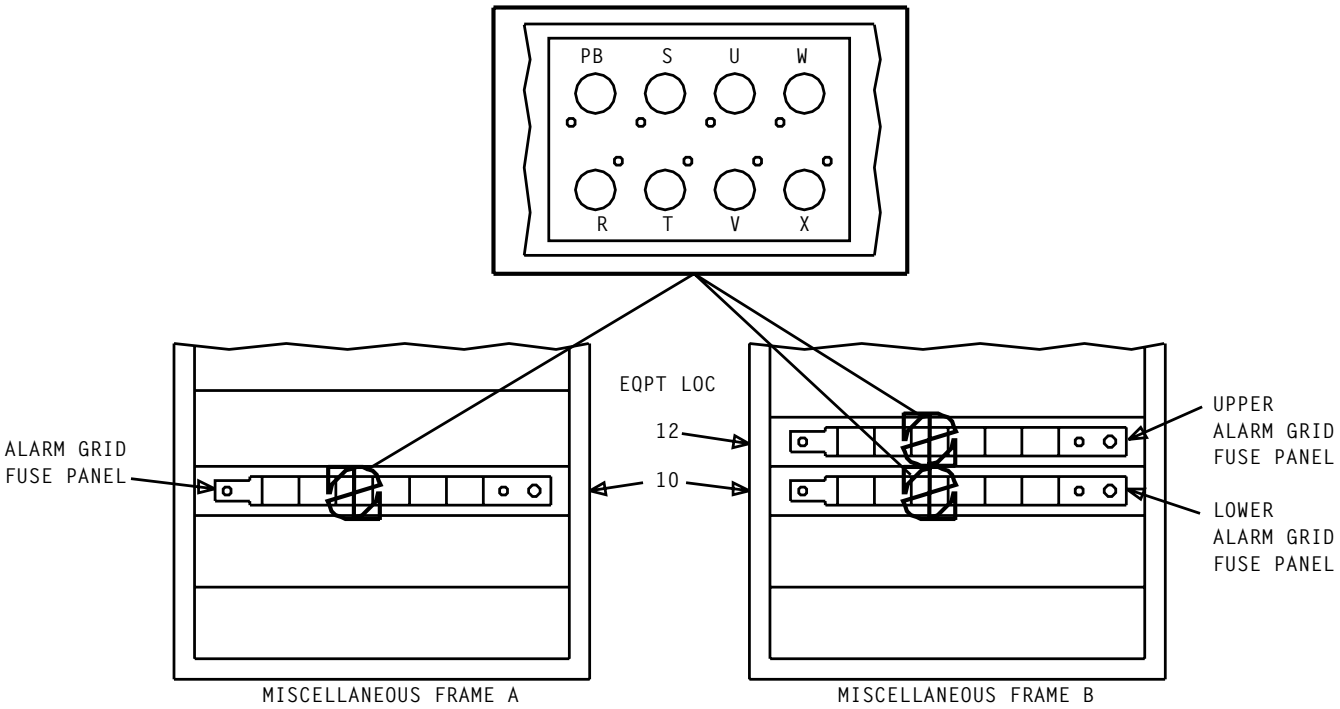

FIG. 1 — Office Alarm Grid Fuse Location

CAUTION 1
*Removal of fuse **U** will remove battery and ground to foreign exit pilot lamps. Complete wiring quickly and restore power without delay*

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REMOVE FUSE U FROM GROWTH ASSOCIATED ALARM GRID FUSE PANEL

[1] Read CAUTION 1

[2] Remove fuse **R** from growth associated alarm grid fuse panel that supplies power to floor exit pilot lamps. See FIG. 1

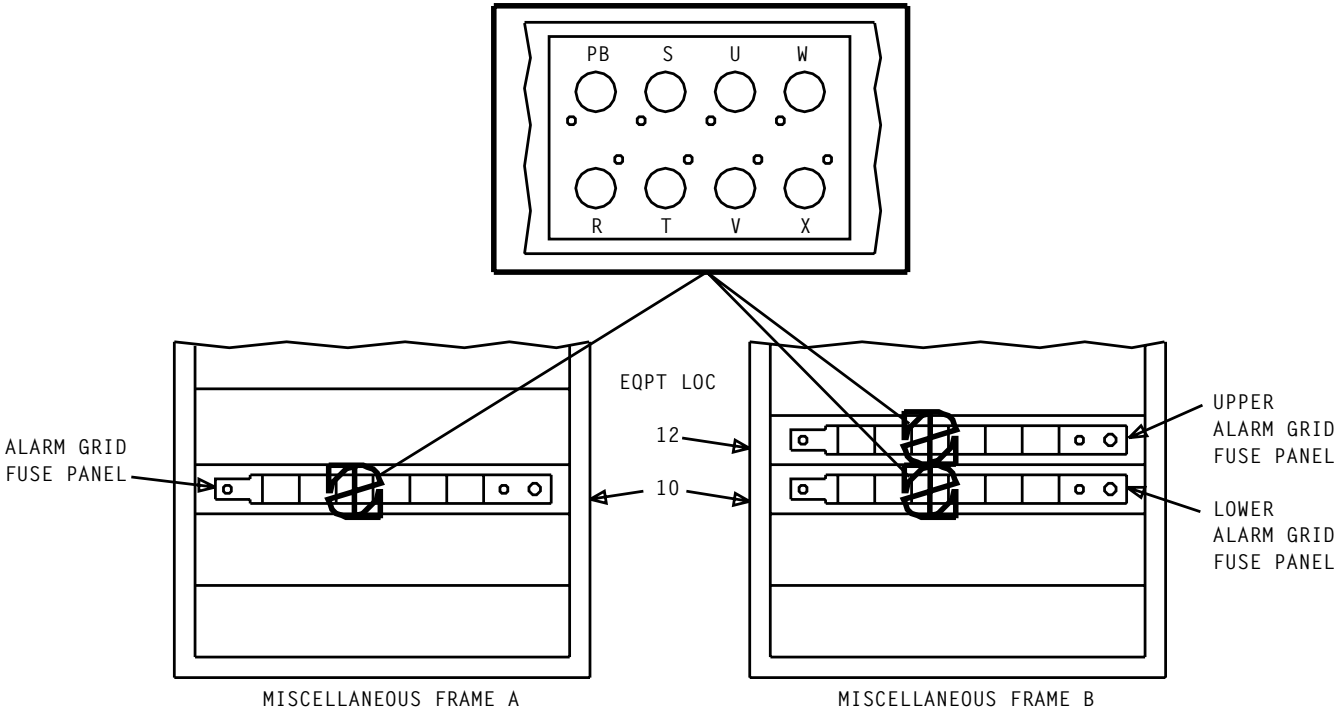


FIG. 1 – Office Alarm Grid Fuse Location

CAUTION 1
*Removal of fuse **R** will de-energize floor exit pilot lamps and all system alarm visual indicators. Complete wiring quickly and restore power without delay*

REMOVE FUSE R FROM GROWTH ASSOCIATED ALARM GRID FUSE PANEL

[1] Read CAUTION 1

[2] Read NOTE 1. Remove fuses **A()** and **B()** from alarm grid fuse panel supplying power to operational APC unit. See FIG. 1

[3] Are all **A()** and **B()** fuses removed that are associated with all APC units which connect to same main aisle pilot lamps as growth APC units

Yes

No

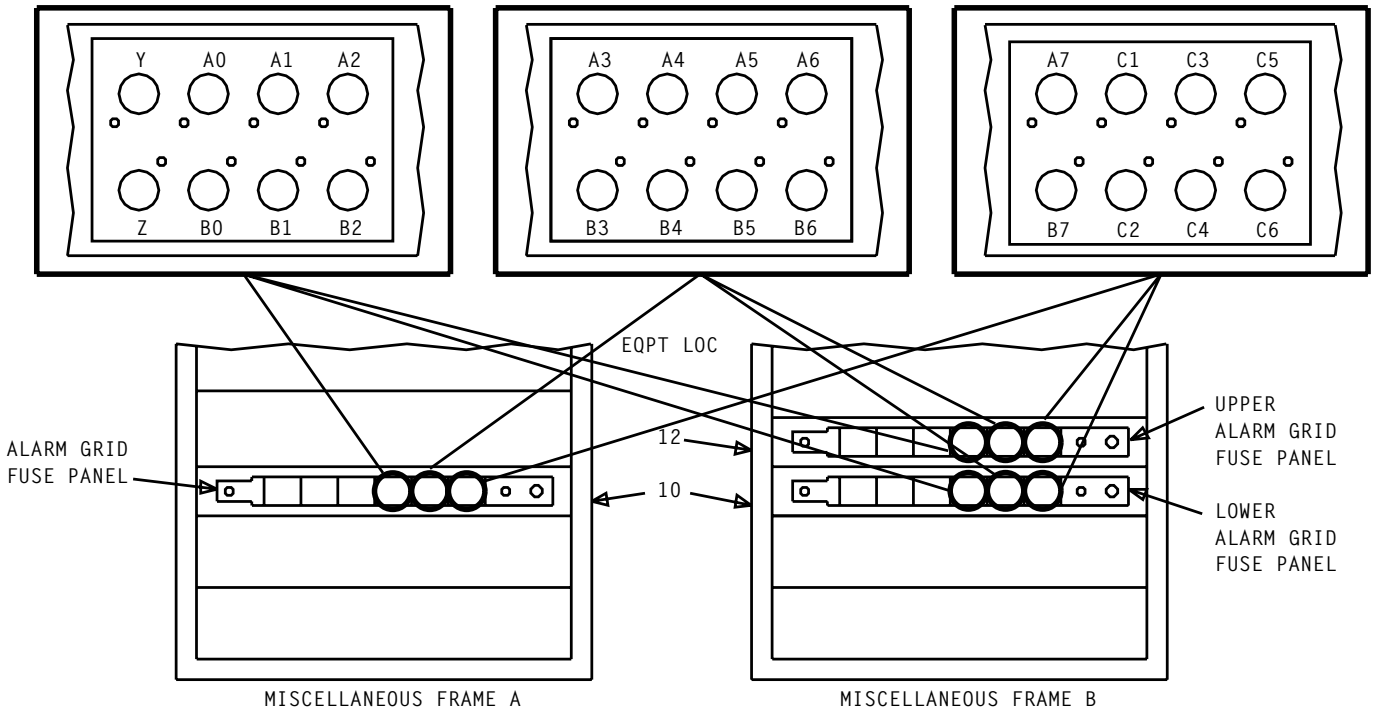


FIG. 1 – Office Alarm Grid Fuse Location

NOTE 1
Parentheses following A and B represent numbers from 0 to 7. Fuse pairs **A0** and **B0**, **A1** and **B1**, etc., to **A7** and **B7** relate to like numbered aisle pilot control units 0 to 7

CAUTION 1
Removal of fuses **A()** *and* **B()** *will disable all functions of aisle pilot control(s). Complete wiring quickly and restore power without delay*

REMOVE FUSES A AND B FROM ALARM GRID FUSE PANEL

[1] Read CAUTION 1

[2] Remove fuses **C** and **D** from growth associated alarm grid fuse panel. See FIG. 1

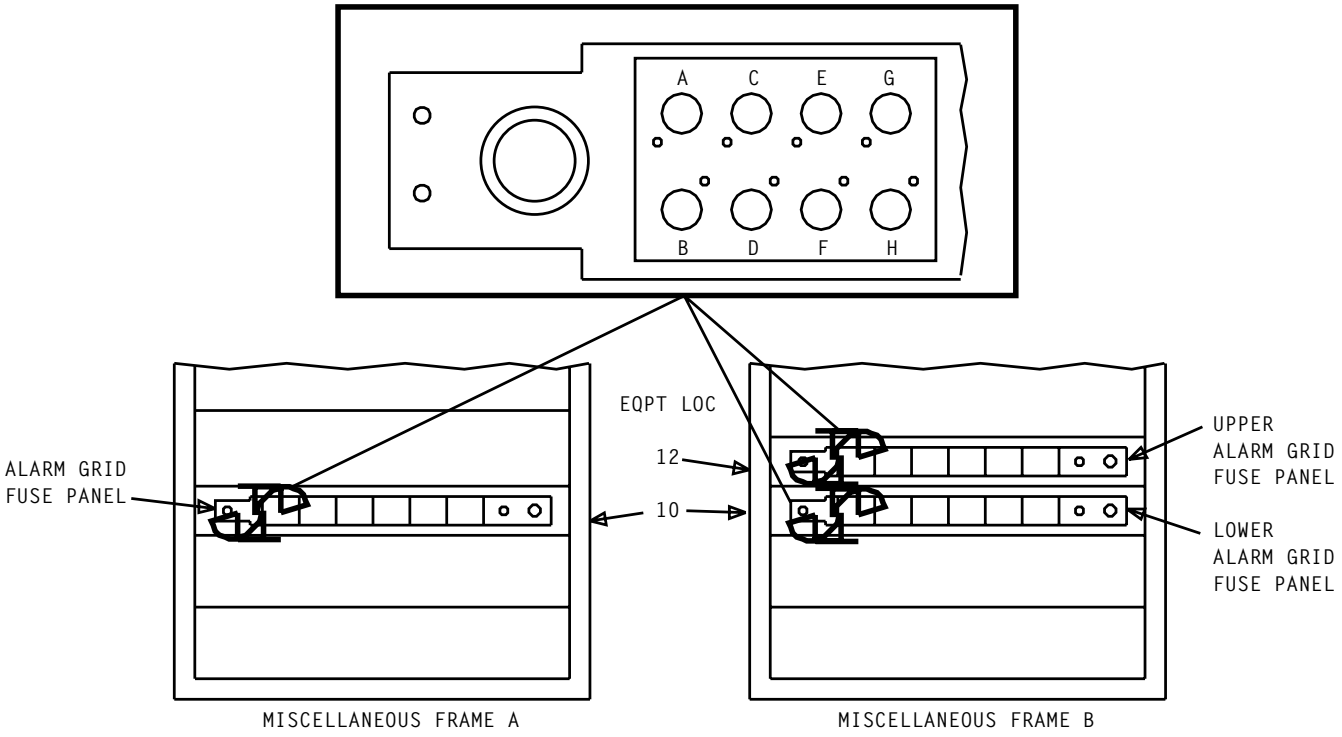


FIG. 1 — Office Alarm Grid Fuse Location

CAUTION 1
Removal of fuses **C** *and* **D** *will affect major and minor alarm relays. Complete wiring quickly and restore power without delay*

REMOVE FUSES C AND D FROM GROWTH ASSOCIATED ALARM GRID FUSE PANEL

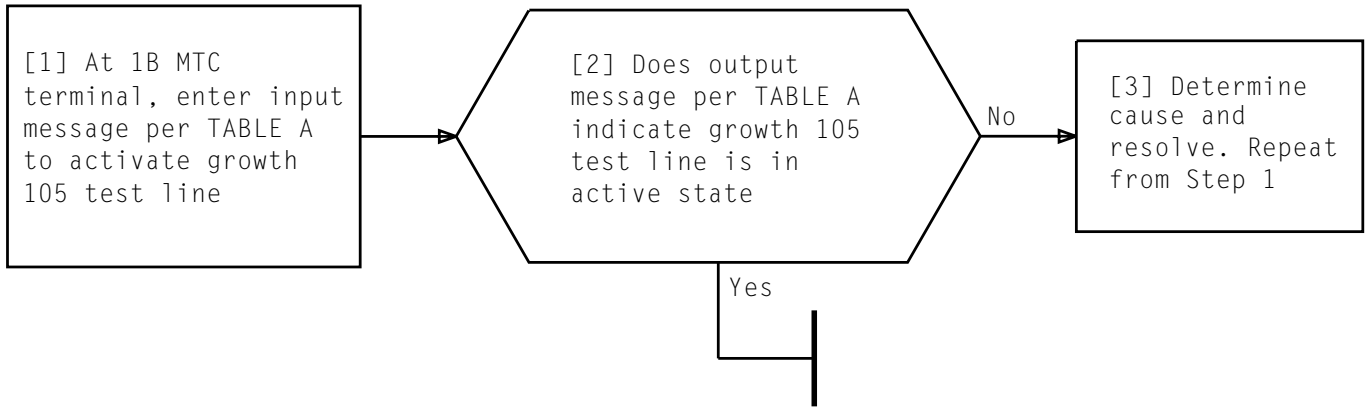
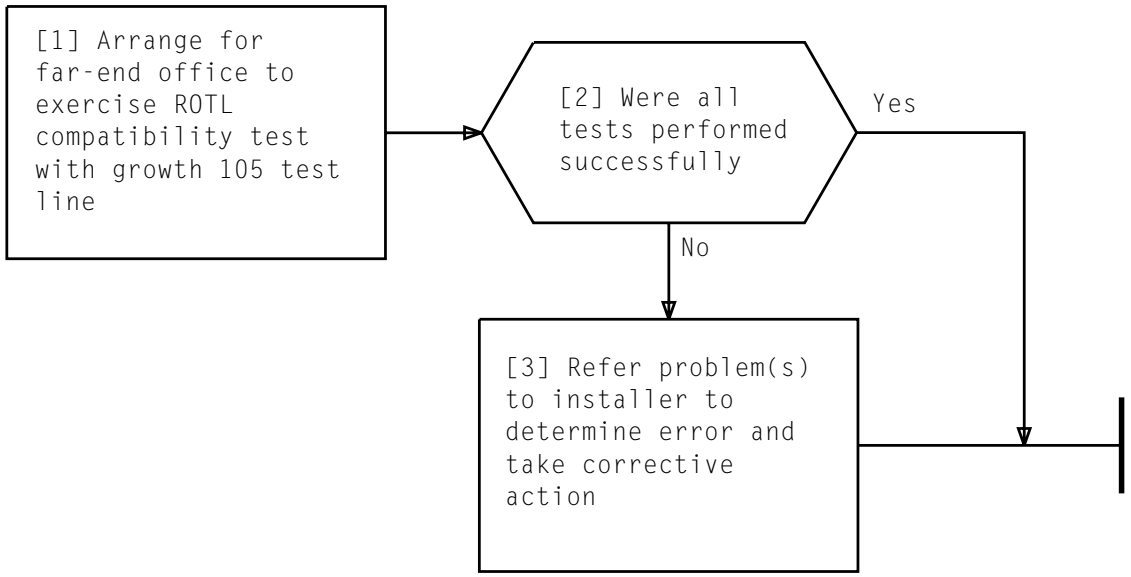


TABLE A

INPUT MESSAGE	OUTPUT MESSAGE
SET:TRKSTAT ACT,TAN a!	SET:TRKSTAT ACT TRAF ,TAN a
a = TAN number assigned to 105 test line	

SET GROWTH 105 TEST LINE TO ACTIVE STATE



PERFORM ROTL COMPATIBILITY TEST WITH GROWTH 105 TEST LINE

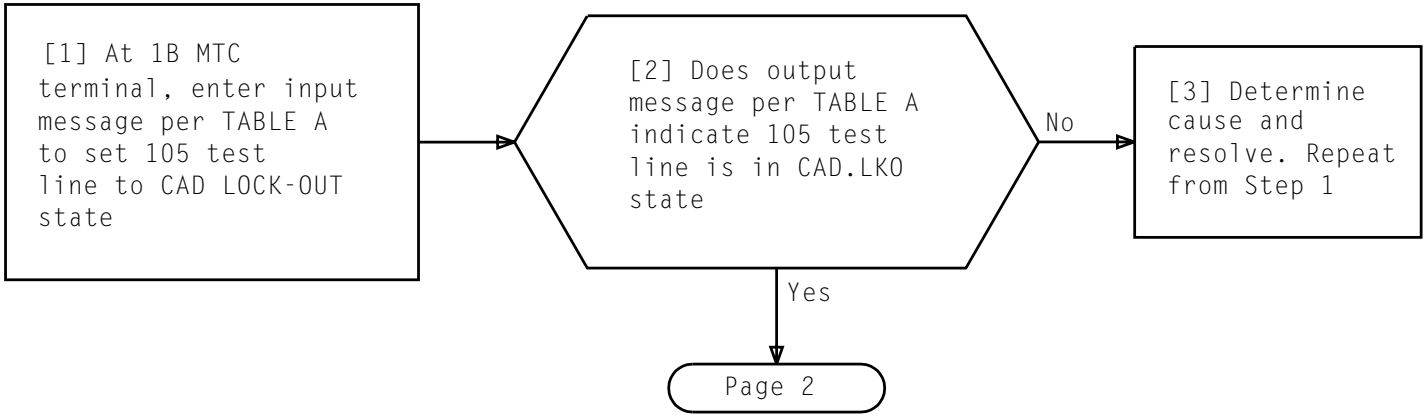


TABLE A	
INPUT MESSAGE	**OUTPUT MESSAGE**
SET:TRKSTAT CAD.LKO,TAN a!	SET:TRKSTAT CAD.LKO TRAF ,TAN a
a = TAN number assigned to 105 test line	

SET 105 TEST LINE TO CAD LOCK-OUT STATE AND VERIFY

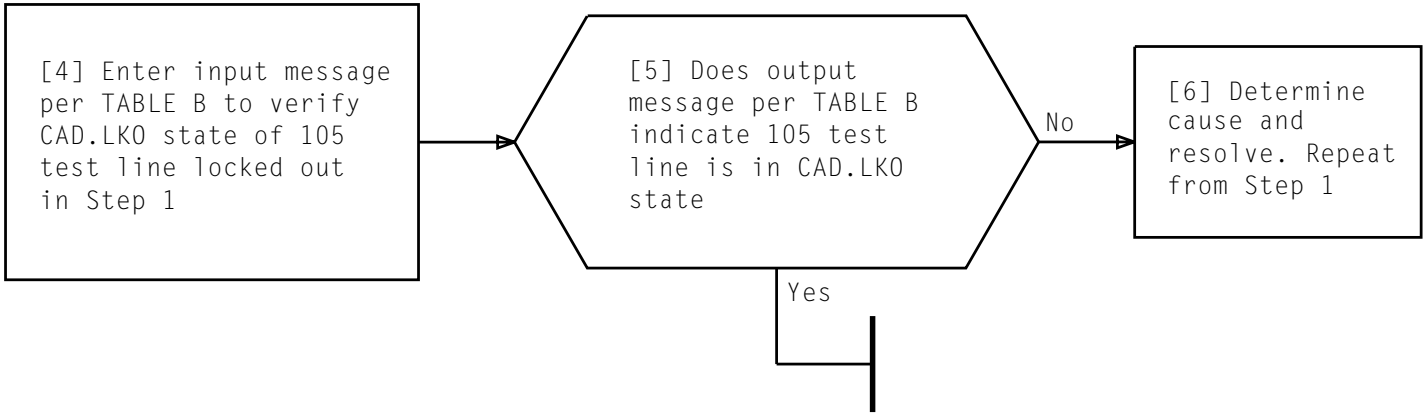


TABLE B	
INPUT MESSAGE	**OUTPUT MESSAGE**
OP:TRKSTAT,TAN a!	OP:TRKSTAT CAD.LKO TRAF ,TAN a
a = TAN number assigned to 105 test line	

SET 105 TEST LINE TO CAD LOCK-OUT STATE AND VERIFY

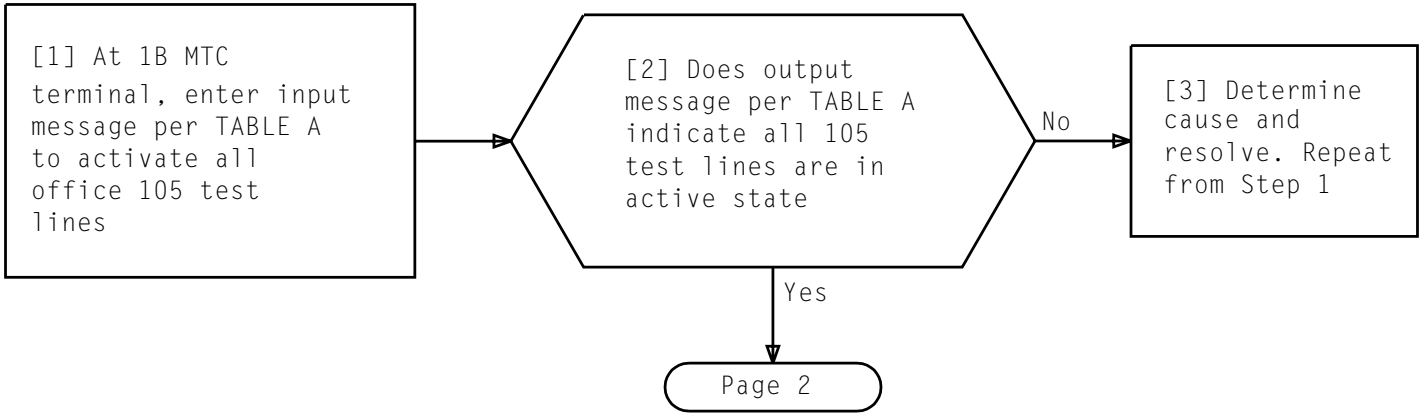


TABLE A

INPUT MESSAGE	OUTPUT MESSAGE
SET:TRKSTAT ACT,TAN a:TSG!	SET:TRKSTAT ACT TRAF ,TAN a • • SET:TRKSTAT,TAN a TSG COMPLETED TRK COUNT b

a = TAN number assigned to 105 test line
b = Trunk count

SET ALL OFFICE 105 TEST LINES TO ACTIVE STATE AND VERIFY

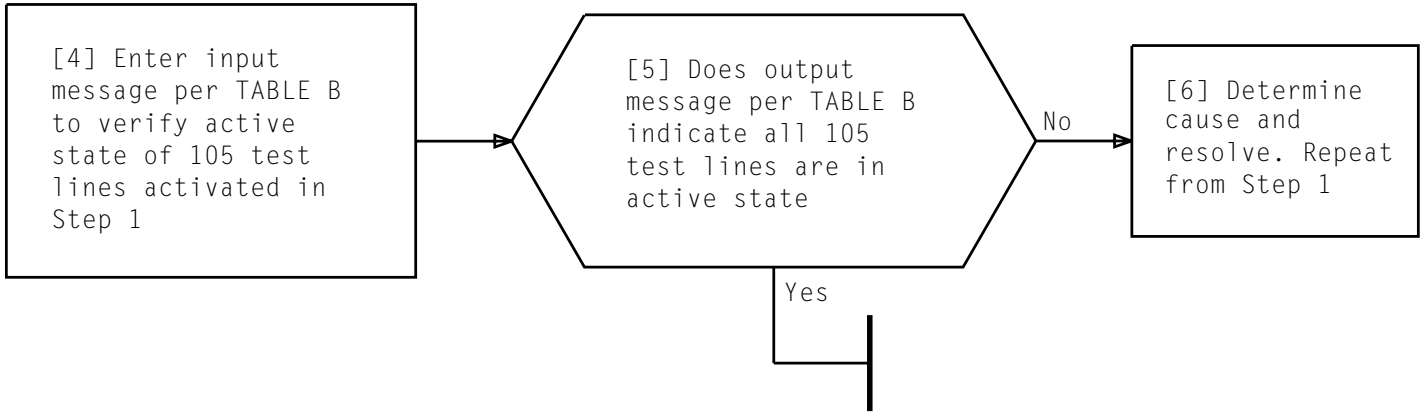


TABLE B

INPUT MESSAGE	OUTPUT MESSAGE
OP:TRKSTAT,TAN a:TSG!	OP:TRKSTAT ACT TRAF ,TAN a • • OP:TRKSTAT,TAN a TSG COMPLETED TRK COUNT b

a = TAN number assigned to 105 test line
b = Trunk count

SET ALL OFFICE 105 TEST LINES TO ACTIVE STATE AND VERIFY

SUMMARY

Retire software alarms at each work center indicating active system alarms. Manually clear any hardware alarms at individual frames. Determine status of alarm system configuration with input message before terminating all alarm grouping and routing between work centers.

[1] Determine from **SYS** lamp at each alarm grid display panel which work center(s) indicates active software alarm

[2] At 1B MTC terminal, enter input message per TABLE A to retire software alarms for a work center indicating active software alarm

[3] Does output message indicate **RETIRE ALARM COMPLETE** per TABLE A

No

[4] Determine cause and resolve; repeat from Step 1

Yes

[5] Has alarm been retired for each office work center

Yes

Page 2

No

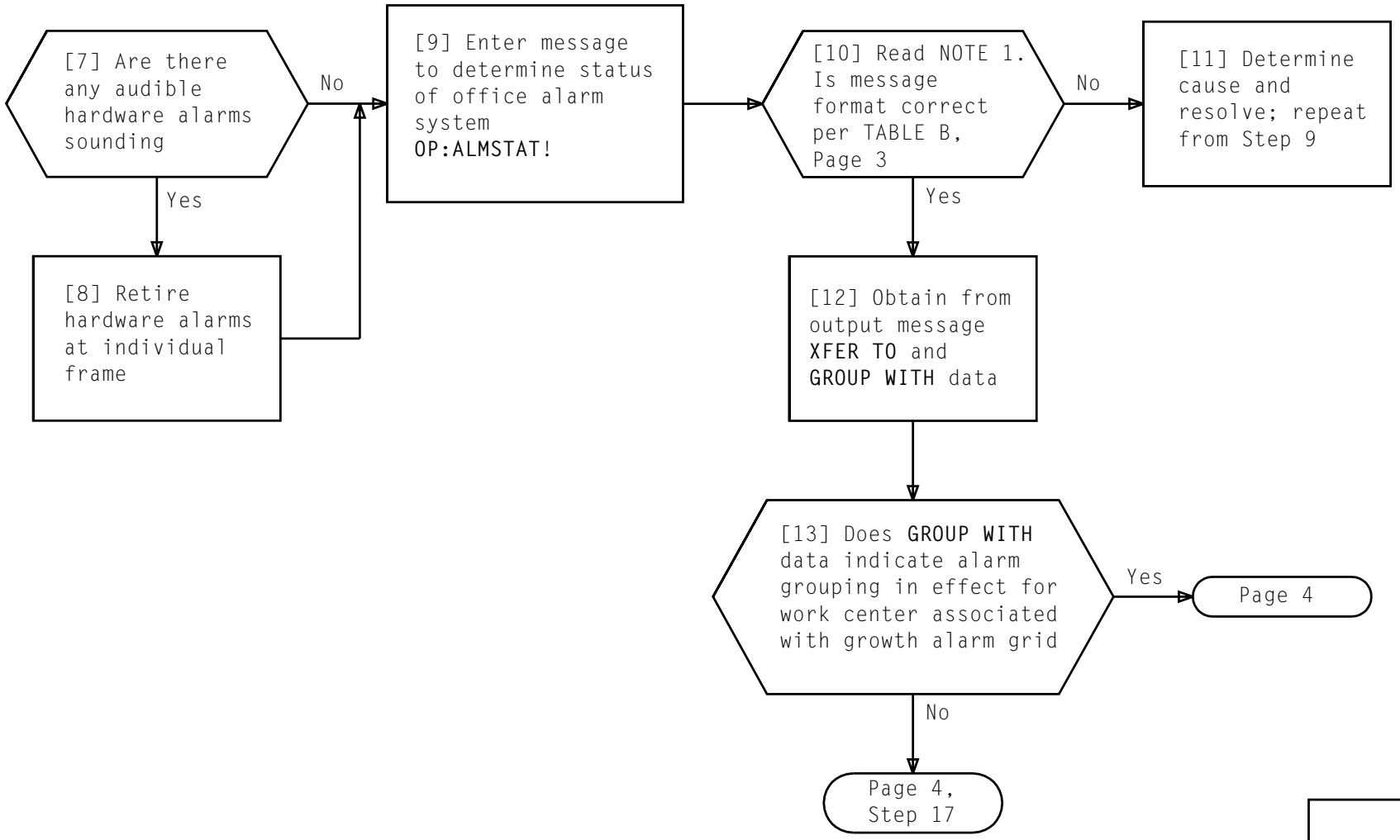
[6] Repeat from Step 2 for each work center indicating active software alarms

TABLE A

INPUT MESSAGE	OUTPUT MESSAGE
RTR:ALM;MC a!	RTR:ALM a COMPL

a = Maintenance Center in which alarms are to be retired —
MOC or TEC1 or TEC2 or TEC3 or TEC4 or TEC5 or TOC

RETIRE WORK CENTER INTERNAL ALARMS AND TERMINATE ALL INTERNAL ALARM GROUPING AND ROUTING



NOTE 1
Retain output message printout for later use in reconfiguring the alarm grouping and routing

RETIRE WORK CENTER INTERNAL ALARMS AND TERMINATE ALL INTERNAL ALARM GROUPING AND ROUTING

TABLE B

MESSAGE NUMBER	OUTPUT MESSAGE
1	OP:ALMSTAT MC XFER TO a ---- XFER INTO FROM b ---- ALM SIL c ---- GRP WITH d ---- LINKS IN ---- LINKS OUT MOC a ---- b ---- c ---- d ---- -------- -------- TEC1 a ---- b ---- c ---- d ---- -------- -------- TEC2 a ---- b ---- c ---- d ---- -------- -------- TEC3 a ---- b ---- c ---- d ---- -------- -------- TEC4 a ---- b ---- c ---- d ---- -------- -------- TEC5 a ---- b ---- c ---- d ---- -------- -------- TOC a ---- b ---- c ---- d ---- -------- --------

a = Decimal number indicating Maintenance Center that the MC is transferred to:
0 = Not Transferred
1 = MOC 2 = TEC1 3 = TEC2
4 = TEC3 5 = TEC4 6 = TEC5
7 = TOC 8-15 Reserved

b = 15 bit binary field indicating Maintenance Center that is transferred into the MC: (bit value of 1 indicates transferred into or grouped with the MC)
Bit 0 Identifies MOC Bit 1 Identifies TEC1
Bit 2 Identifies TEC2 Bit 3 Identifies TEC3
Bit 4 Identifies TEC4 Bit 5 Identifies TEC5
Bit 6 Identifies TOC

c = Binary bit indicating if audible alarms are silenced:
0 = Not Silenced 1 = Silenced

d = 15 bit binary field indicating Maintenance Center grouped with the MC:
See definition of "b" above for bit identities

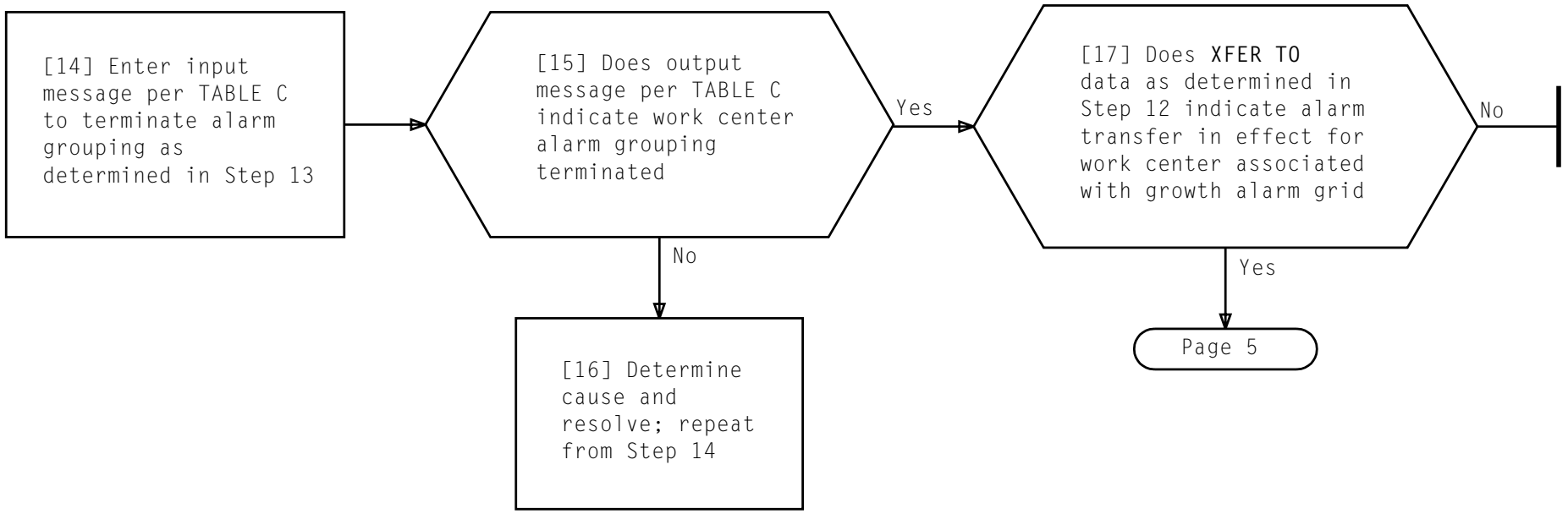


TABLE C	
INPUT MESSAGE	**OUTPUT MESSAGE**
STOP:CFR;ALMGRP,MC a!	STOP:CFR;ALMGRP a COMPL
a = Maintenance Center for which alarm grouping is to be terminated = MOC or TEC1 or TEC2 or TEC3 or TEC4 or TEC5 or TOC or ALL	

RETIRE WORK CENTER INTERNAL ALARMS AND TERMINATE ALL INTERNAL ALARM GROUPING AND ROUTING

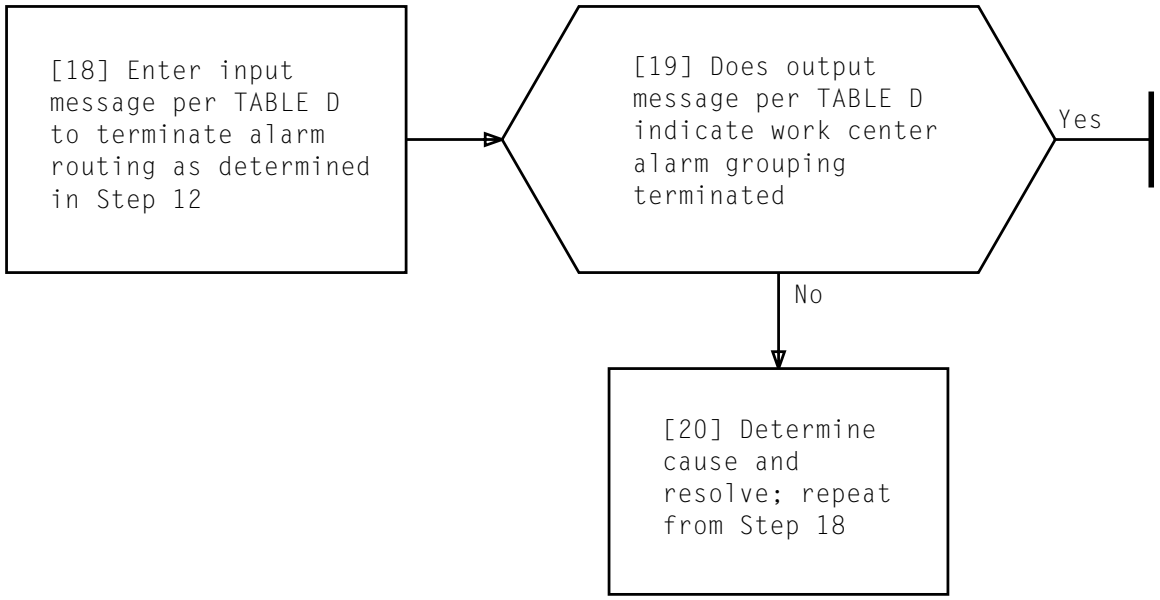


TABLE D	
INPUT MESSAGE	**OUTPUT MESSAGE**
STOP:RTE;ALM,MC a!	STOP:RTE;ALM FROM a COMPL
a = Maintenance Center for which alarm routing is to be terminated = MOC or TEC1 or TEC2 or TEC3 or TEC4 or TEC5 or TOC or ALL	

RETIRE WORK CENTER INTERNAL ALARMS AND TERMINATE ALL INTERNAL ALARM GROUPING AND ROUTING

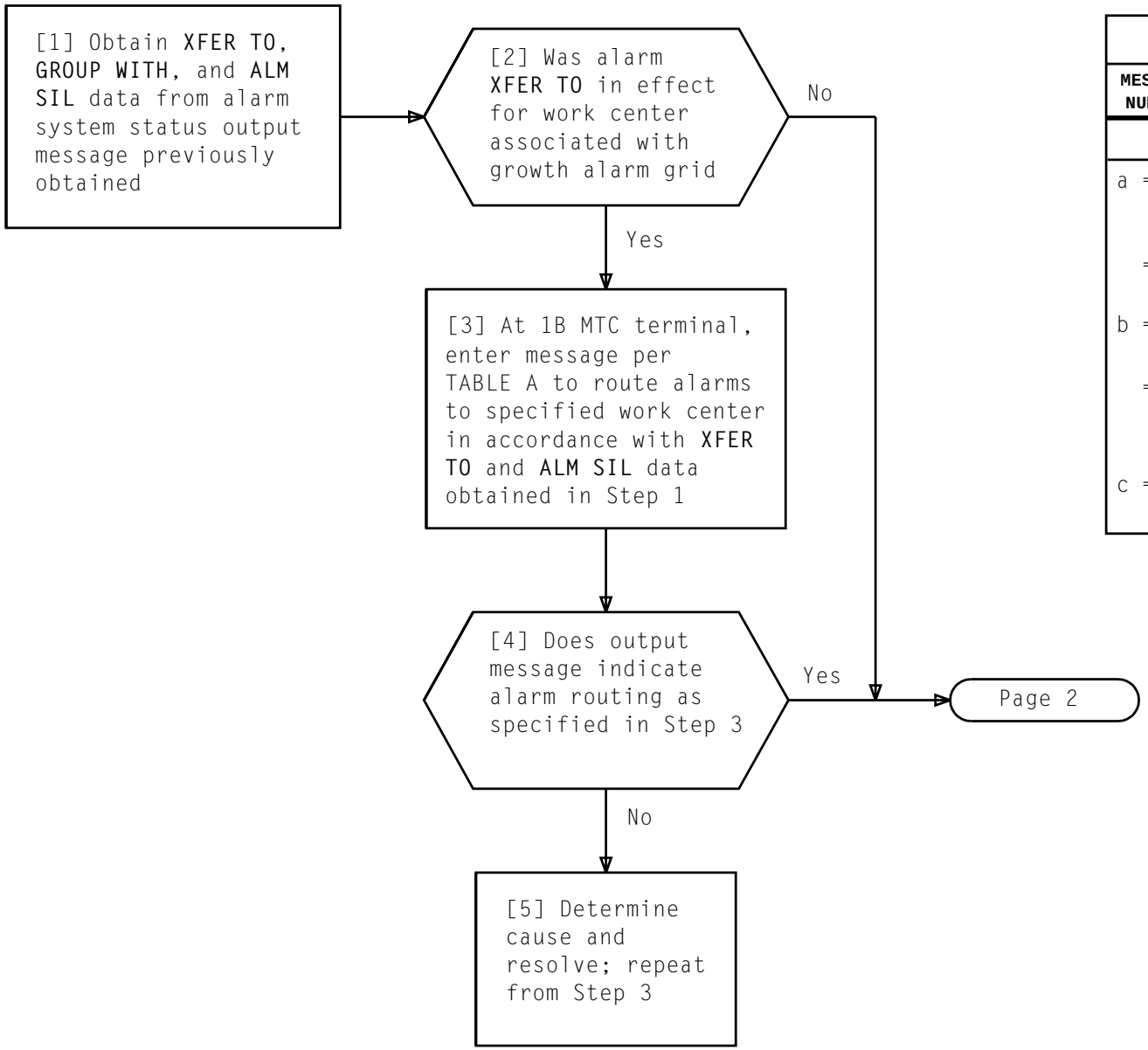


TABLE A

MESSAGE NUMBER	INPUT MESSAGE
1	RTE:ALM,MC a;MC b:c!

a = Maintenance Center from which alarms which alarms are to be routed
= MOC or TEC1 or TEC2 or TEC3 or TEC4 or TEC5 or TOC or ALL

b = Maintenance Center to which alarms are to be routed
= MOC or TEC1 or TEC2 or TEC3 or TEC4 or TEC5 or TOC or ALL

c = SIL (if audible alarms are to be silenced in MC a)

RECONFIGURE WORK CENTER ALARM GROUPING ARRANGEMENT AND ROUTING

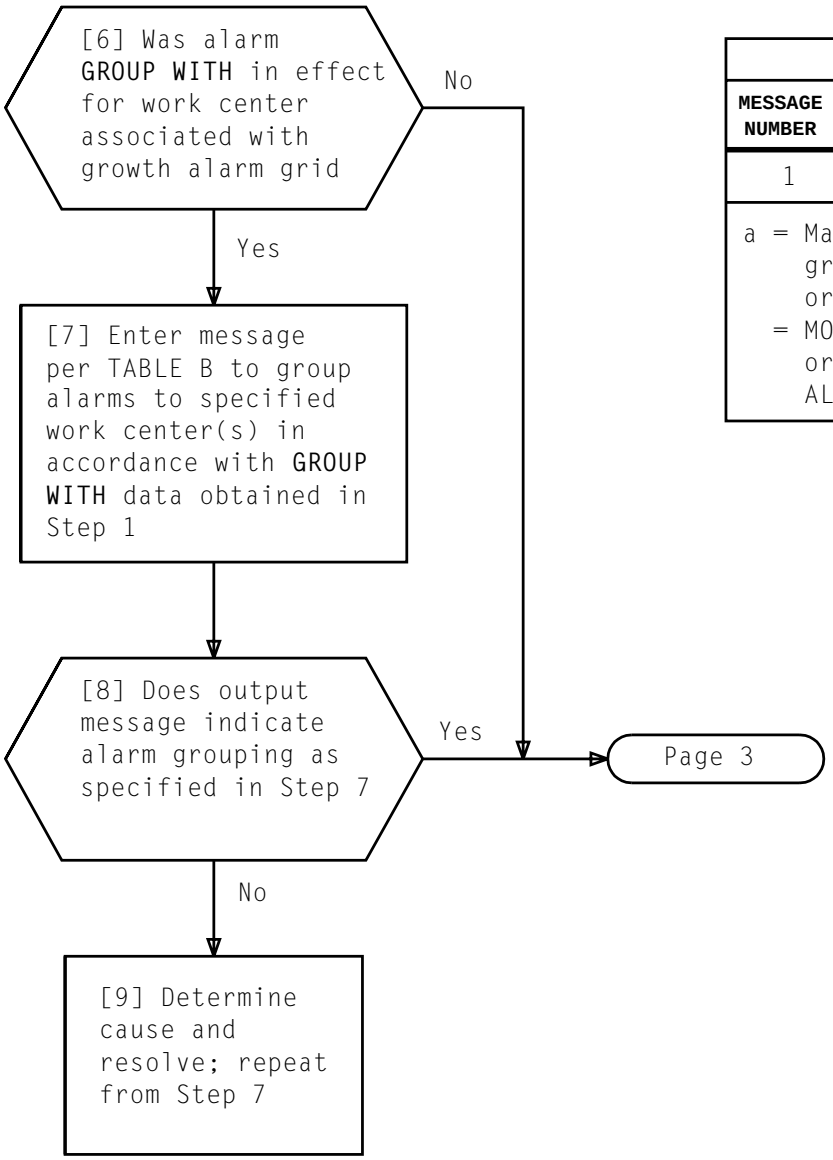
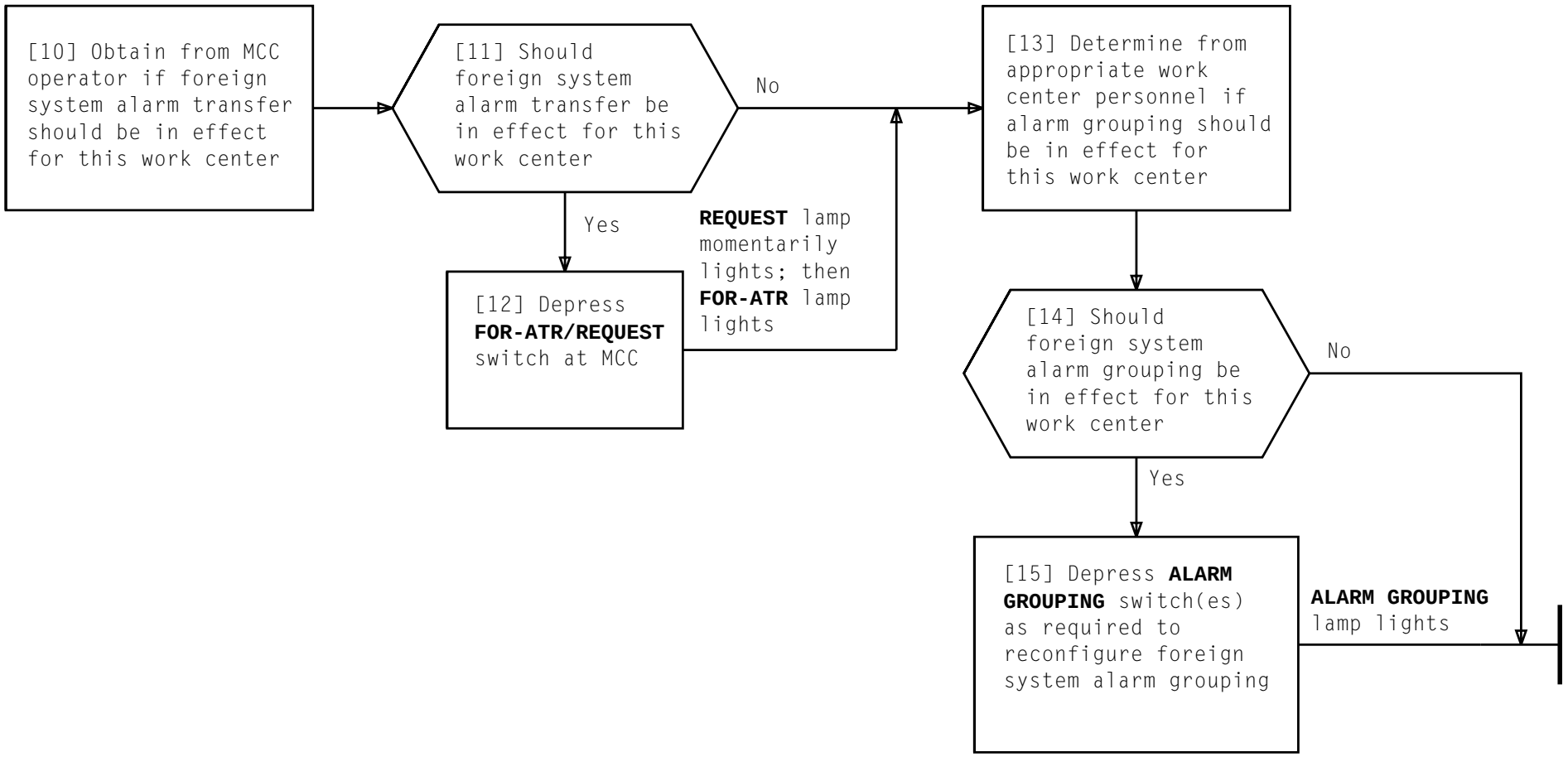


TABLE B

MESSAGE NUMBER	INPUT MESSAGE
1	CFR:ALMGRP,MC a!

a = Maintenance centers to be grouped (enter ALL, or two or more)
= MOC or TEC1 or TEC2 or TEC3 or TEC4 or TEC5 or TOC or ALL

RECONFIGURE WORK CENTER ALARM GROUPING ARRANGEMENT AND ROUTING



RECONFIGURE WORK CENTER ALARM GROUPING ARRANGEMENT AND ROUTING

SUMMARY

Using verify entry input message, call up growth DOC transmitter UT translator and verify that resulting octal output data, when converted, agrees with office records. Refer to entry word explanations in TABLE B, Page 4 for assistance in interpreting specific data fields. If it is determined that UT entry data are in error, word change(s) may be required

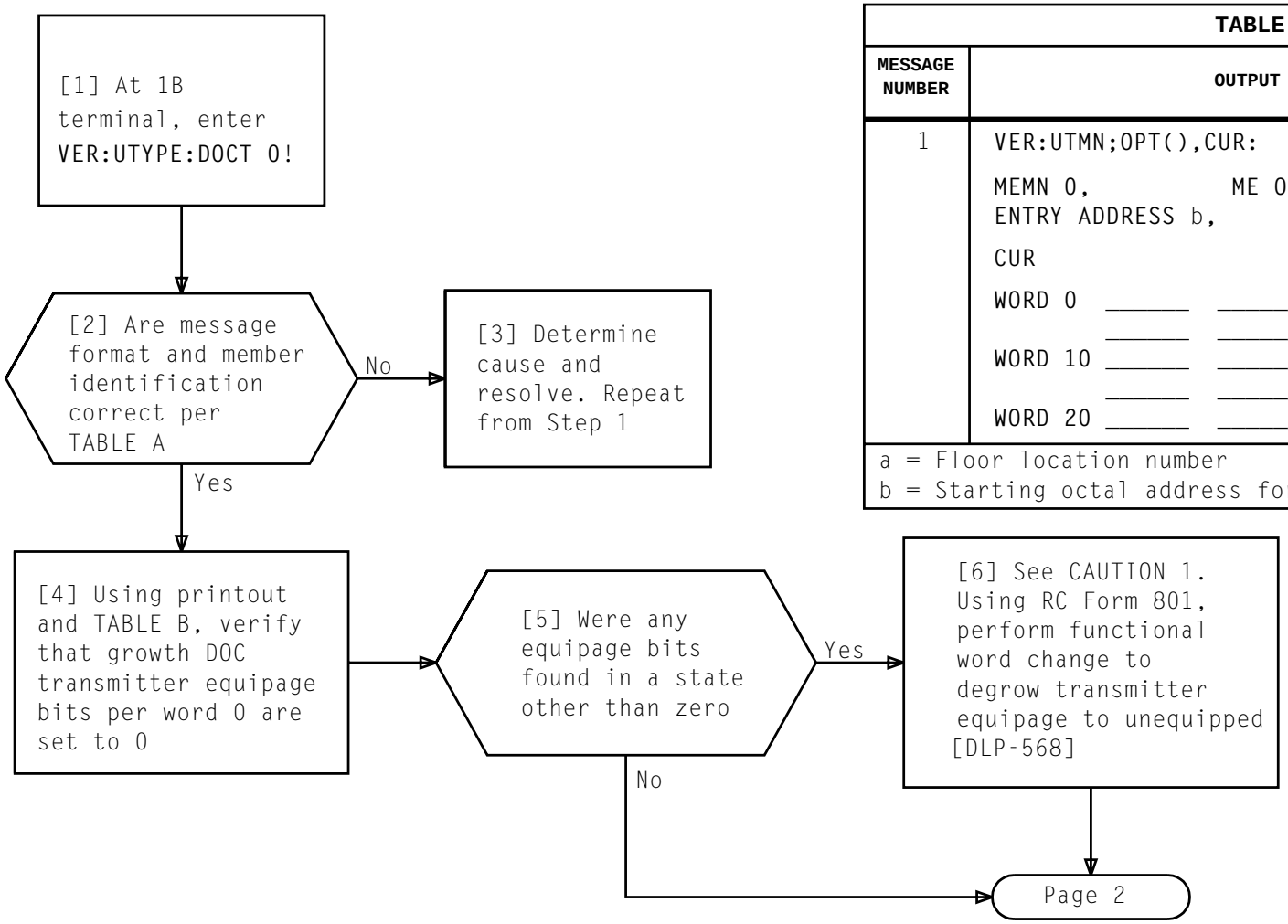


TABLE A

MESSAGE NUMBER	OUTPUT MESSAGE
1	VER:UTMN;OPT(),CUR: FLN a, UTYN DOCT, MEMN 0, ME OPER, ENTRY ADDRESS b, ENTRY SIZE 20, CUR WORD 0 _____ _____ _____ _____ _____ _____ _____ _____ WORD 10 _____ _____ _____ _____ _____ _____ _____ _____ WORD 20 _____ _____ _____ _____

a = Floor location number
b = Starting octal address for unit type entry

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

VERIFY NM DOC TRANSMITTER UT TRANSLATOR

[7] Using TABLE C, identify octal word associated with growth DOC transmitter

[8] Using printout, TABLE B, Page 4 and office records, verify scan point assignment for growth DOC transmitter per word identified in Step 7 [DLP-501]

[9] Using TABLE D, identify octal word associated with growth DOC transmitter

[10] Using printout, TABLE B, and office records, verify SD point assignment for growth DOC transmitter per word identified in Step 9 [DLP-504]

AND

[11] Using TABLE E, identify octal words associated with growth DOC transmitter

AND

Page 3

[12] Using printout and TABLE B, verify with MAC supervisor that growth DOC transmitter assignment and dial pulse indicator bits are properly set in words identified in Step 11

TABLE C

DOC TRANSMITTER	ENTRY DATA OCTAL WORD
1	6
2	10
3	12

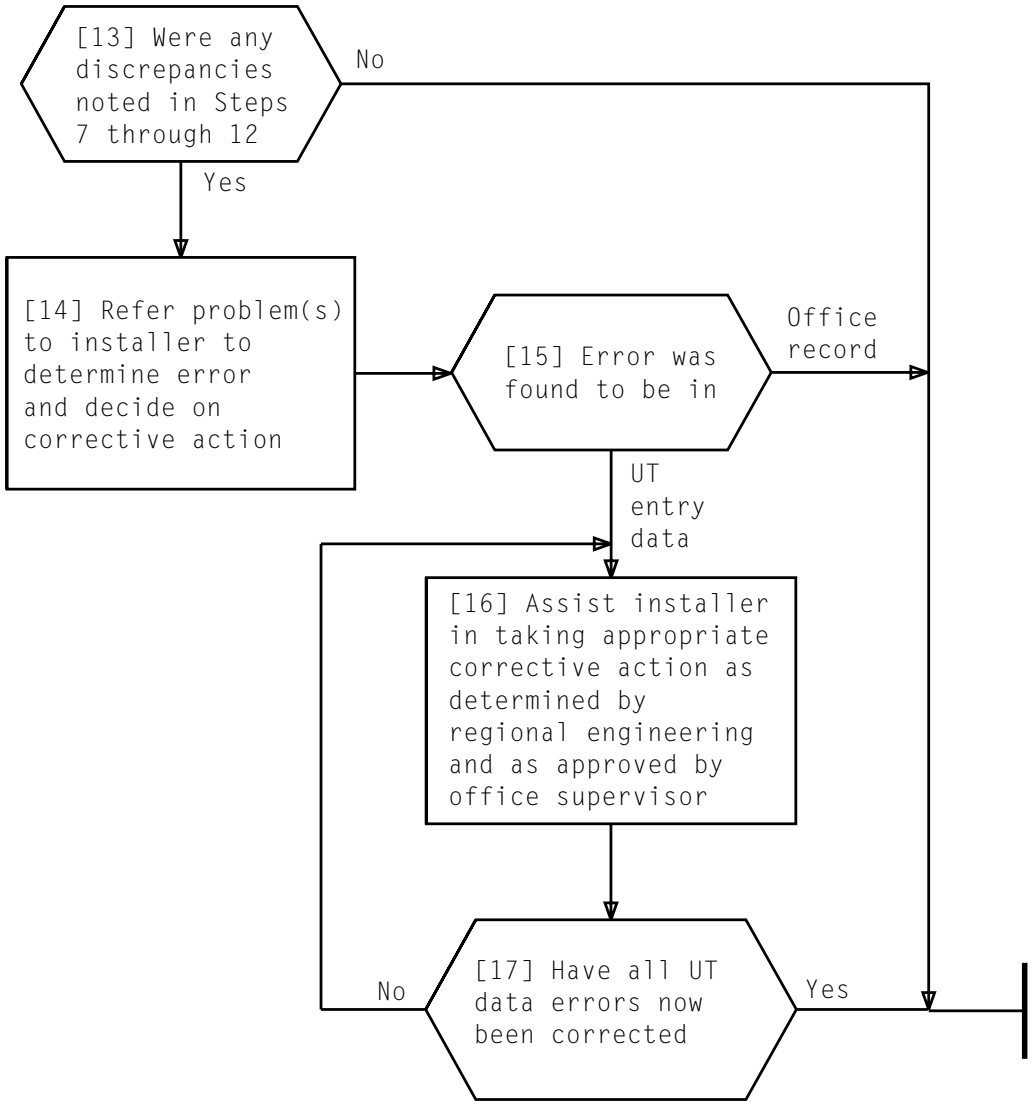
TABLE D

DOC TRANSMITTER	ENTRY DATA OCTAL WORD
1	7
2	11
3	13

TABLE E

DOC TRANSMITTER	ENTRY DATA OCTAL WORD
1	15 and 21
2	16 and 22
3	17 and 23

VERIFY NM DOC TRANSMITTER UT TRANSLATOR



VERIFY NM DOC TRANSMITTER UT TRANSLATOR

TABLE B

ENTRY WORD (OCTAL): 0

UT ENTRY DATA AND WORD CONFIGURATION

entry data octal output → 6 | 0 | 0 | 0 | 0 | Y | Y | Y

bit position →

23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	X	X	X	X	X	X	1	1

binary values →

MEMBER EQUIPAGE																3	2	1	0				
																DOC TRANSMITTER NUMBER							
																DOC TRANSMITTER EQUIPAGE							

XX = 00 for DOC transmitter being added and other unequipped DOC transmitter or 11 for each operational DOC transmitter

Y.Y = Variable octal numbers

ENTRY WORD (OCTAL): 6, 10, and 12

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
0	0	0	0	0	0	0	X	X	X	X	X	0	X	X	X	X	X	X	X	X	X	X	X

binary values →

							SP MEMBER NUMBER					SP ROW NUMBER								SP COLUMN NUMBER			
							BASE MISC SCAN POINT FOR DOC TRANSMITTER 1/2/3																

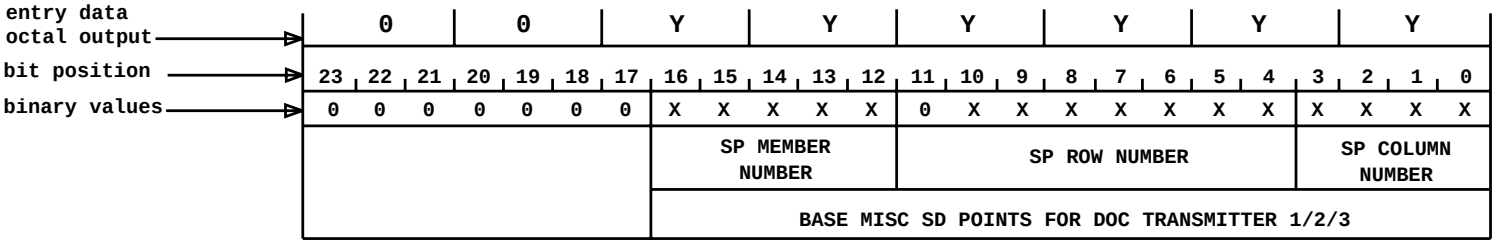
X...X = Converts to decimal SP information as reflected in office record drawing T-nnnn-Hn-461 or equivalent

Y..Y = Variable octal numbers

VERIFY NM DOC TRANSMITTER UT TRANSLATOR

TABLE B (Contd)

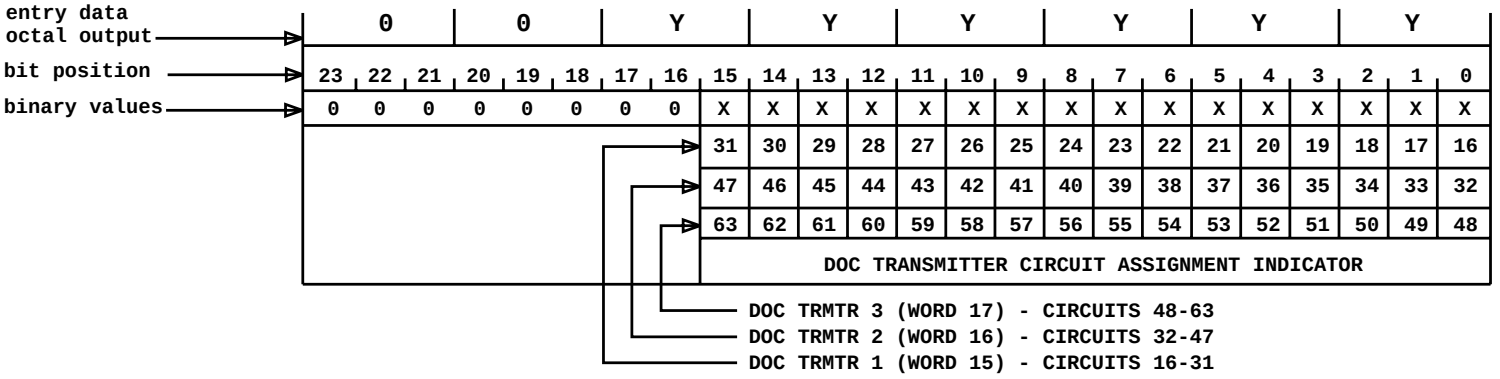
7, 11, and 13



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

Y..Y = Variable octal numbers.

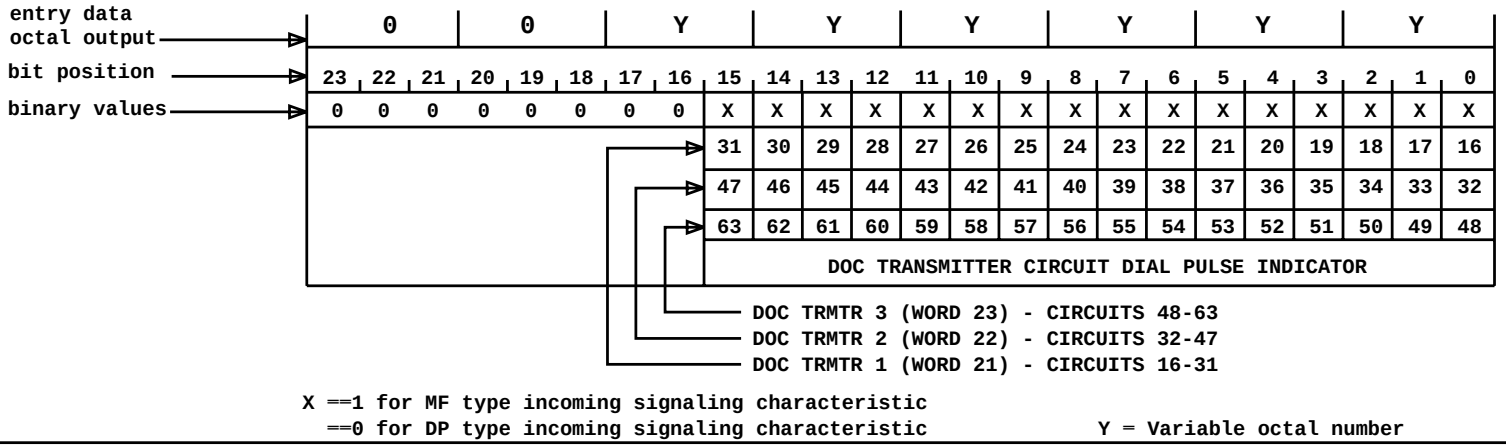
15, 16, and 17



X ==1 for assigned circuits
==0 for unassigned circuits

Y = Variable octal number

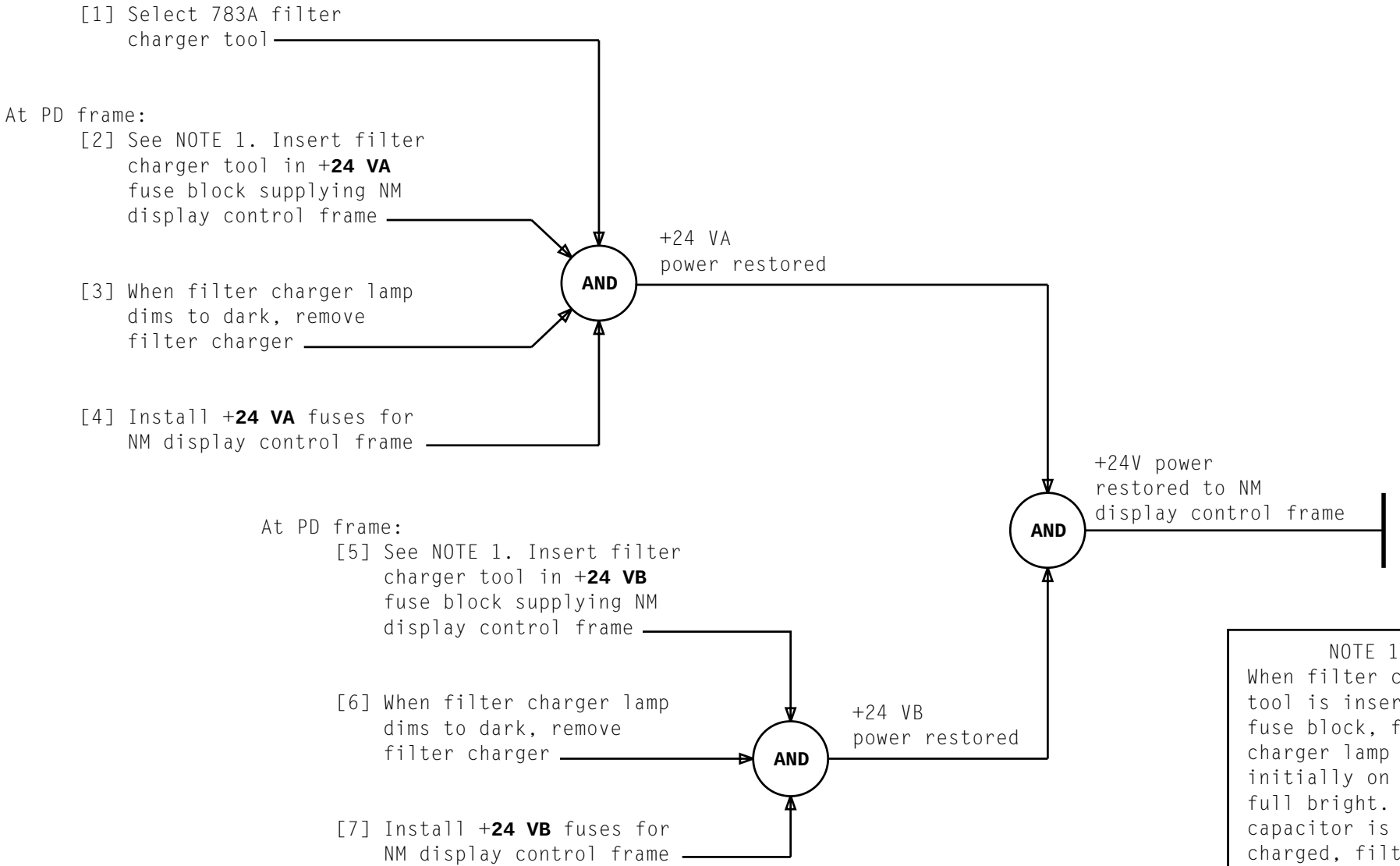
TABLE B (Contd)

ENTRY WORD (OCTAL)	UT ENTRY DATA AND WORD CONFIGURATION
21, 22, and 23	

X ==1 for MF type incoming signaling characteristic
==0 for DP type incoming signaling characteristic

Y = Variable octal number

VERIFY NM DOC TRANSMITTER UT TRANSLATOR



NOTE 1
When filter charger tool is inserted in fuse block, filter charger lamp is initially on at full bright. As capacitor is charged, filter charger lamp gradually dims to dark

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CHARGE FILTER CAPACITOR AND RESTORE 24V POWER TO NM DISPLAY CONTROL FRAME

TABLE A	
DOC TRANSCEIVER UNIT [SEE CAUTION 1]	**FUSE DESIGNATION**
0	V0 R0 0V 0L 0VA
1	V1 R1 1V 1L 1VA
2	V2 R2 2V 2L 2VA
3	V3 R3 3V 3L 3VA
4	V4 R4 4V 4L 4VA

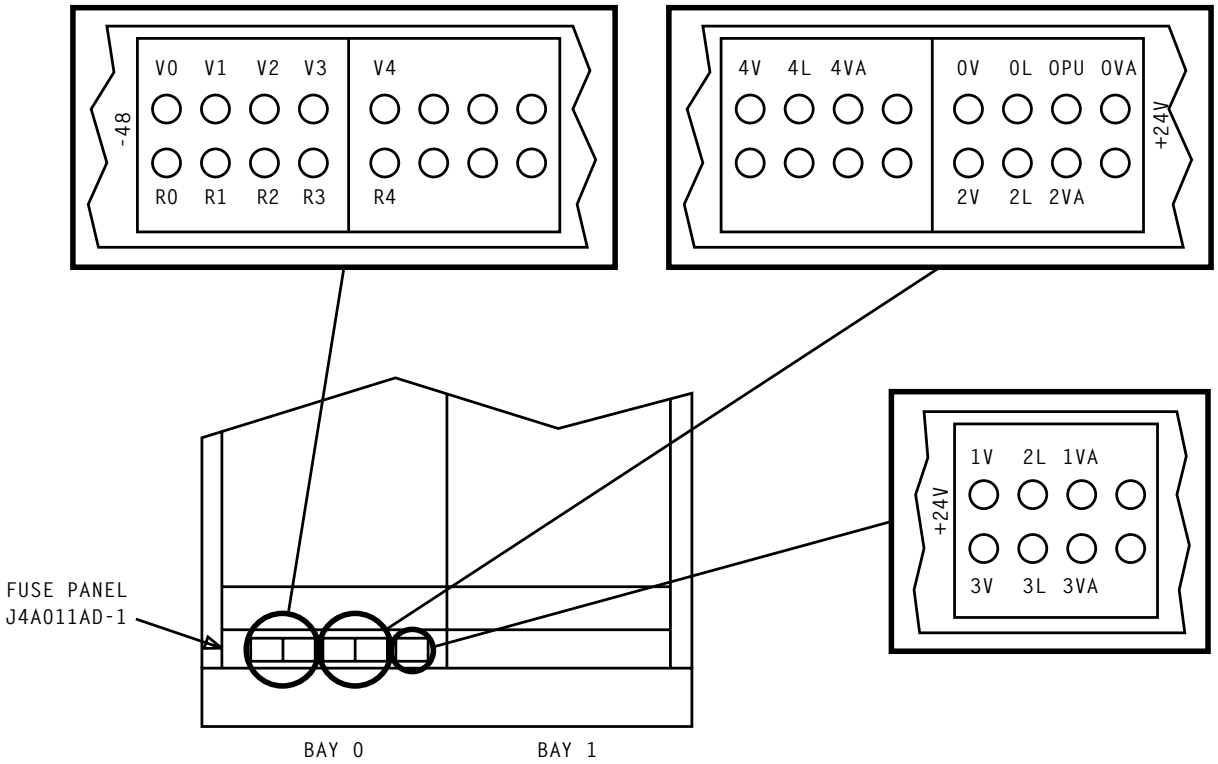


FIG. 1 – NM Display Control Frame Fuse Location

CAUTION 1
Removal of fuses will disable DOC transceiver

DOC TRANSCEIVER FUSE DESIGNATION AND LOCATION

TABLE A	
CARRIER TELEGRAPH INTERFACE UNIT	**FUSE DESIGNATION**
00	U00
01	U01
02	U02
03	U03
04	U04
05	U05
06	U06
07	U07
08	U08
09	U09
10	U10
11	U11
12	U12
13	U13
14	U14
15	U15
16	U16
17	U17
18	U18
19	U19

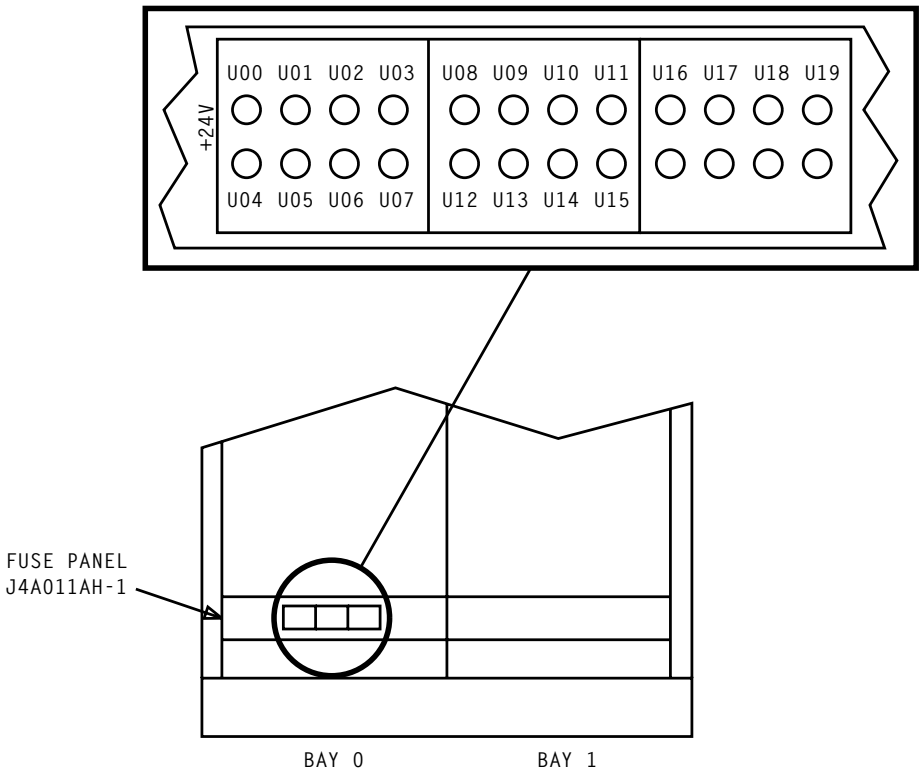


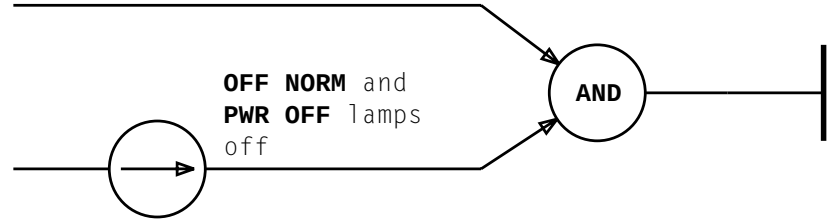
FIG. 1 – NM Display Control Frame Fuse Location

CARRIER TELEGRAPH INTERFACE FUSE DESIGNATION AND LOCATION

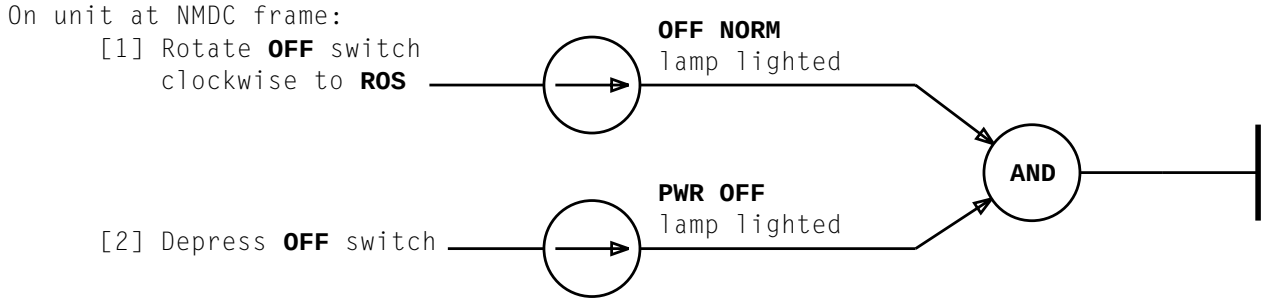
At unit on frame:

[1] Rotate **OFF** switch to normal position

[2] Depress **ON** switch



RESTORE POWER USING UNIT POWER SWITCH



REMOVE POWER FOR UNIT ON NMDC FRAME USING UNIT POWER SWITCH

At TCA Channel:

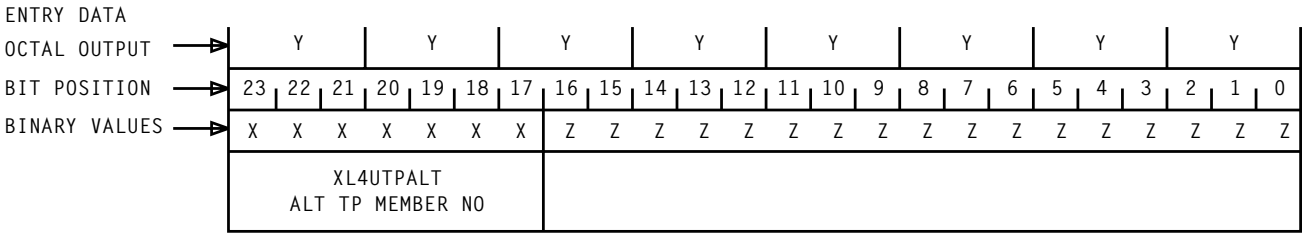
[1] Enter **VER:UTYPE:TPOS** a! for each Test Position in the Control Area associated with Degrowth 51A where a = Test Position Member Number

[2] Scan Word 2 of the Translations Data for each Test Position, Bits 17-23 to determine if the Alternate Test Position designated is the Degrowth 51A [See FIG. 1]

[3] Record Member Number of Test Positions with Degrowth 51A assigned as Alternate

[4] Using RC Form 801, change Word 2, Bits 17-23, Data of each Test Position Translator recorded in Step 3 to assign a different Alternate Test Position [DLP-568] See NOTES 1 and 2

AND



X . . . X = CONVERTS TO DECIMAL TP MEMBER NUMBER
Y = VARIABLE OCTAL NUMBERS
Z . . . Z = MDN

FIG. 1

NOTES
1. RC Form 801 must be executed at a MAC/MOC channel
2. The new alternate test position assigned must be within same control area

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DELETE DEGROWTH 51A TPOS AS ALTERNATE FOR OTHER TEST POSITIONS

SUMMARY

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

[1] See CAUTION 1.
At 1B terminal, enter
OP:RCFORM 801!

CRT displays
RC Form 801
per FIG. 1

Using CRT display of RC Form 801:

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

[3] See TABLE A. Determine translator identifier for growth or degrowth member requiring UT translator change

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

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

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

AND

Page 2

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

FIG. 1 — Blank RC Form 801

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

PERFORM FUNCTIONAL WORD CHANGE OF UT TRANSLATOR WORD THEN VERIFY

Using 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, Page 3

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

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

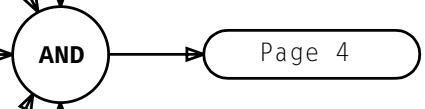


TABLE A

GROWTH MEMBER REQUIRING UT TRANSLATOR CHANGE	TRANSLATOR IDENTIFIER (TRANSID)
Continuity Check Transceiver	UTCCT
DOC Transmitter	UTDOCT
Misc Frame B	UTMB
Misc Frame C	UTMCF
51A Test Position	UTTPOS

PERFORM FUNCTIONAL WORD CHANGE OF UT TRANSLATOR WORD THEN VERIFY

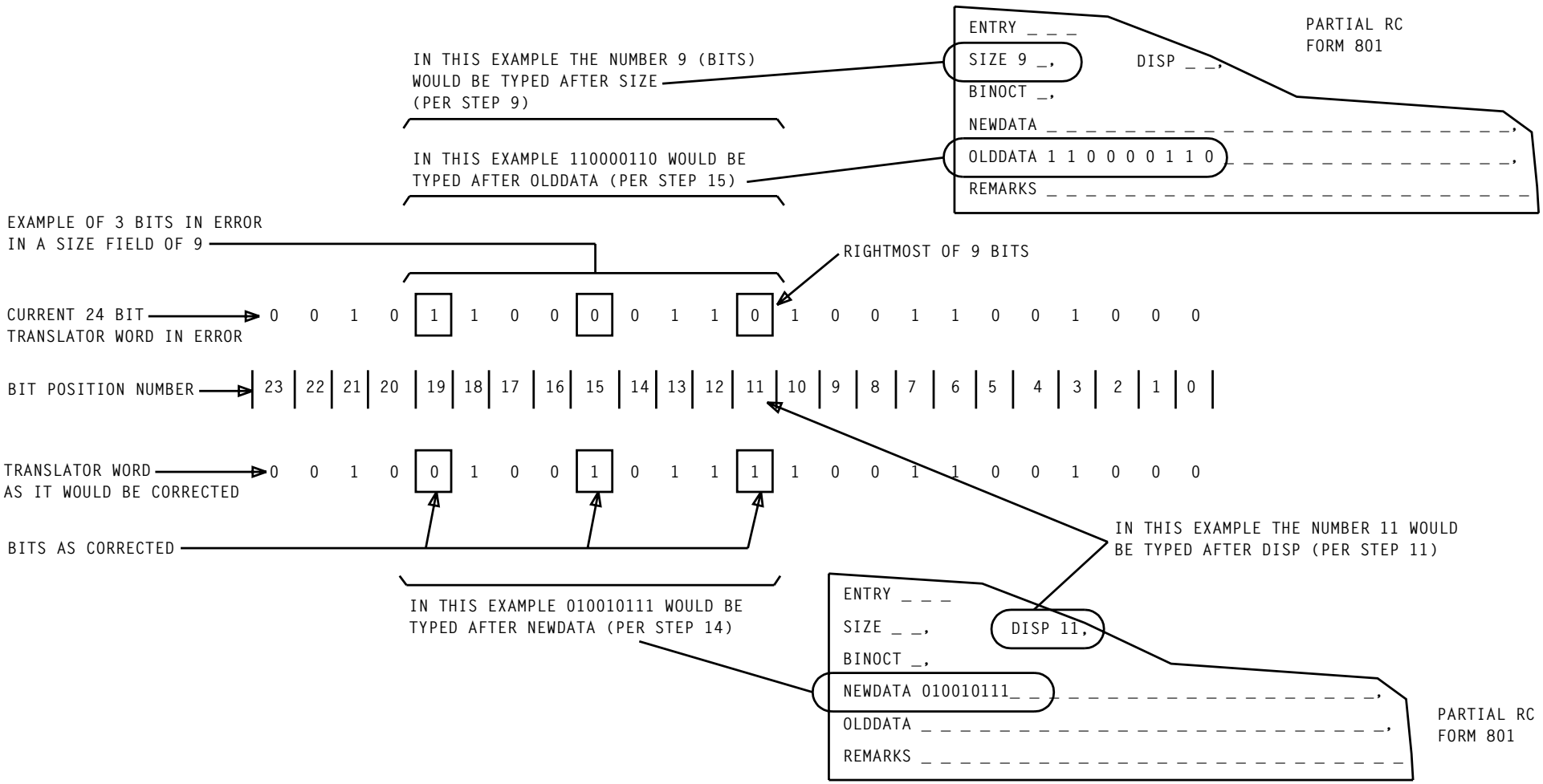


FIG. 2 — Example of Functional Word Change Considerations

PERFORM FUNCTIONAL WORD CHANGE OF UT TRANSLATOR WORD THEN VERIFY

Using 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, Page 3

[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 current binary contents of only that portion of the UT translator word requiring change. See example in FIG. 2

[16] Enter form

AND

RC Form 801 filled in and entered

Page 5

PERFORM FUNCTIONAL WORD CHANGE OF UT TRANSLATOR WORD THEN VERIFY

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**

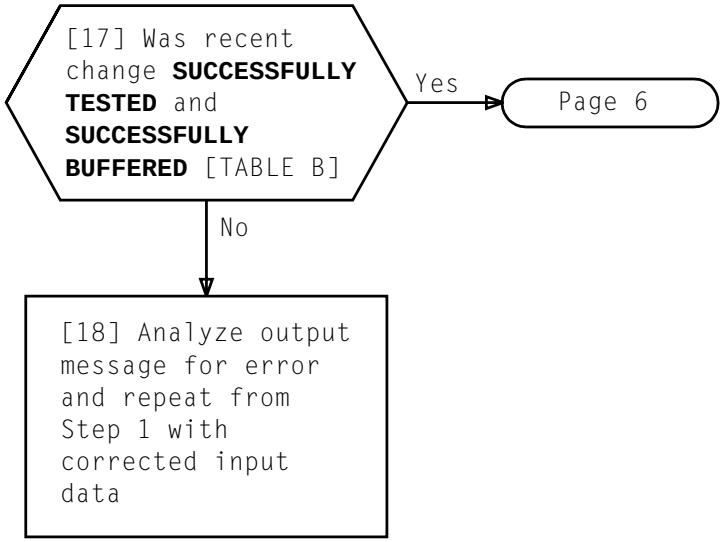


TABLE B

MESSAGE NUMBER	OUTPUT MESSAGE
1	RC ORNU a SUCCESSFULLY TESTED
2	RC ORNU a SUCCESSFULLY BUFFERED
3	RC:FUNC;CHG;OPT(TRANS),BUF: TRANSID b, ORNU a, 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 _____ _____ _____ _____ _____ _____ _____ _____ WORD 10 _____ _____ _____

a = RC order number
b = Unit type = UTCCT, UTDOCT, UTMB, UTMCF, or UTTPOS
c = Member number of growth/degrowth frame
d = Decimal number of word changed
e = Decimal number of bits changed
f = Decimal number of bit position (Rightmost bit)
g = Binary bits inserted to correct data
h = Binary contents of portion of word changed

PERFORM FUNCTIONAL WORD CHANGE OF UT TRANSLATOR WORD THEN VERIFY

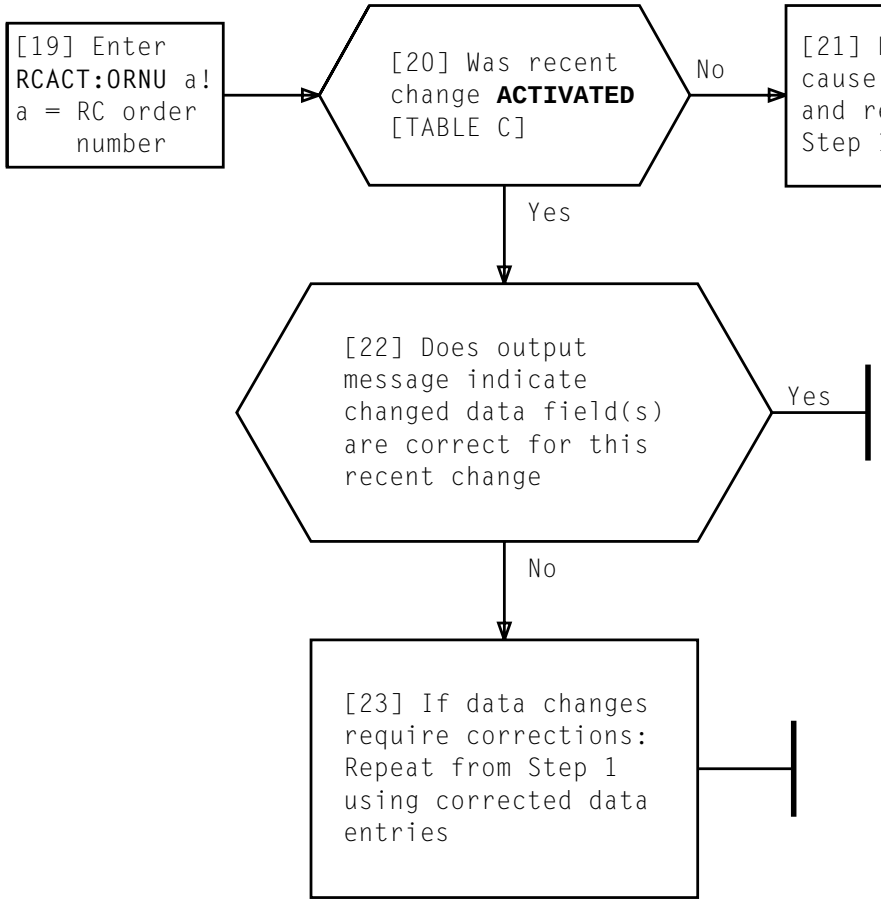


TABLE C

MESSAGE NUMBER	OUTPUT MESSAGE
1	RC ORNU a ACTIVATED RC:FUNC;CHG;OPT(TRANS),BUF: TRANSID b, ORNU a, ENTRY c, WORDNO d, SIZE e, DISP f, BINOCT B, NEWDATA g, OLDDATA h, REMARKS---------- !

a = RC order number
b = Unit type = UTCCT, UTDOCT, UTMB, UTMCF or UTTPOS
c = Member number of growth/degrowth frame
d = Decimal number of word changed
e = Decimal number of bits changed
f = Decimal number of bit position (Rightmost bit)
g = Binary bits inserted to correct data
h = Binary contents of portion of word changed

PERFORM FUNCTIONAL WORD CHANGE OF UT TRANSLATOR WORD THEN VERIFY

SUMMARY

Using network management maintenance terminal request control and input directory page, type CIN name for TSG associated with growth transmitter. Using **SEND MC1** window, activate transmitting signals and verify that **DOC ACK** lamp does not light, and that DOC inconsistency report is not output.

[1] Notify far-end office personnel to expect transmit test to be performed

At Network Management Display terminal:

[2] If control and input directory page is not displayed, type (+) in directory space at bottom of page and depress **SEND** key

Control and input directory page displayed

[3] Type (+) in parenthesis after CN3 on directory page

[4] Depress **SEND** key

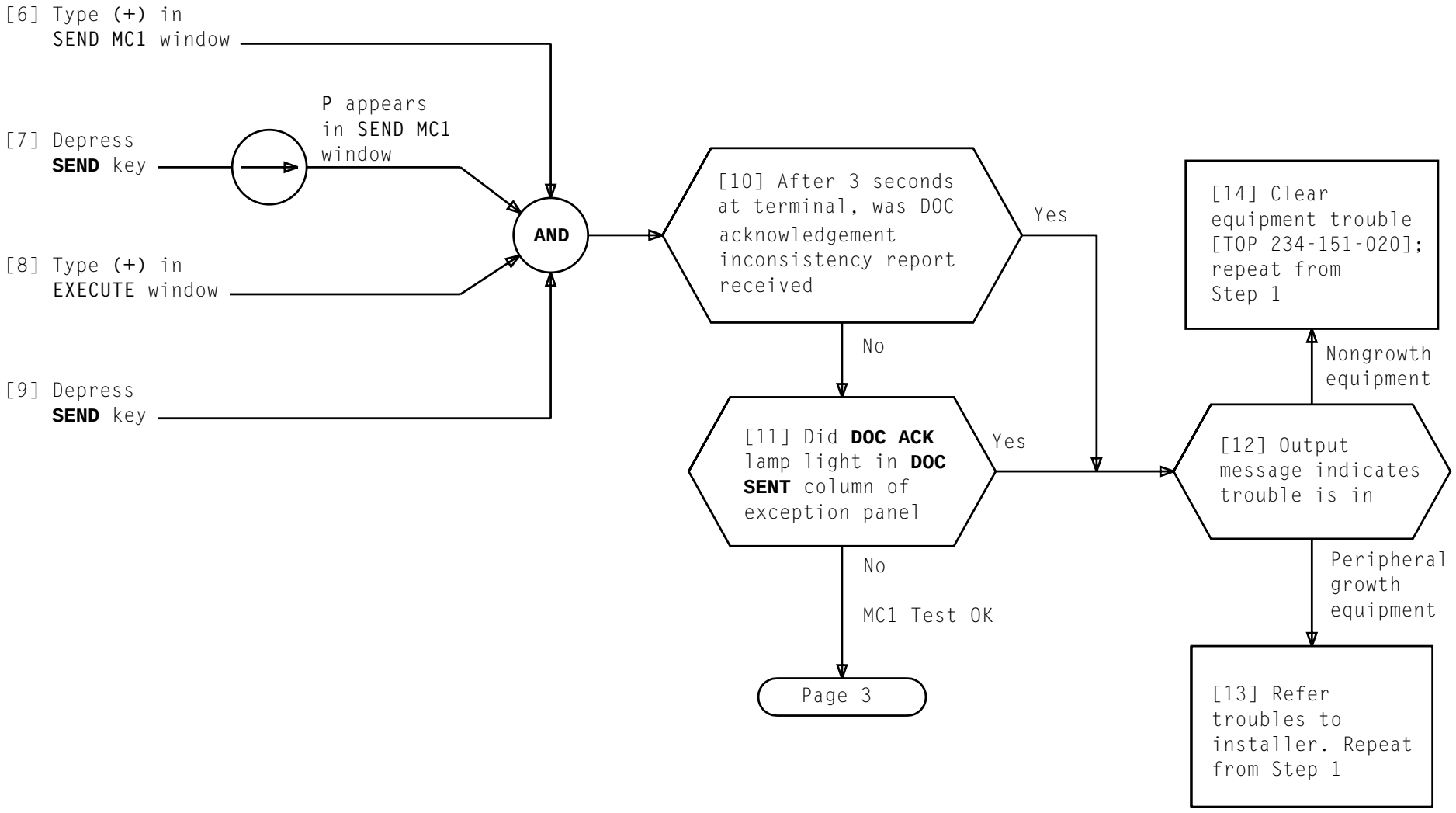
CN3 general control change page displayed

[5] On CN3 page, type CIN name in window for TSG associated with transmitter under test

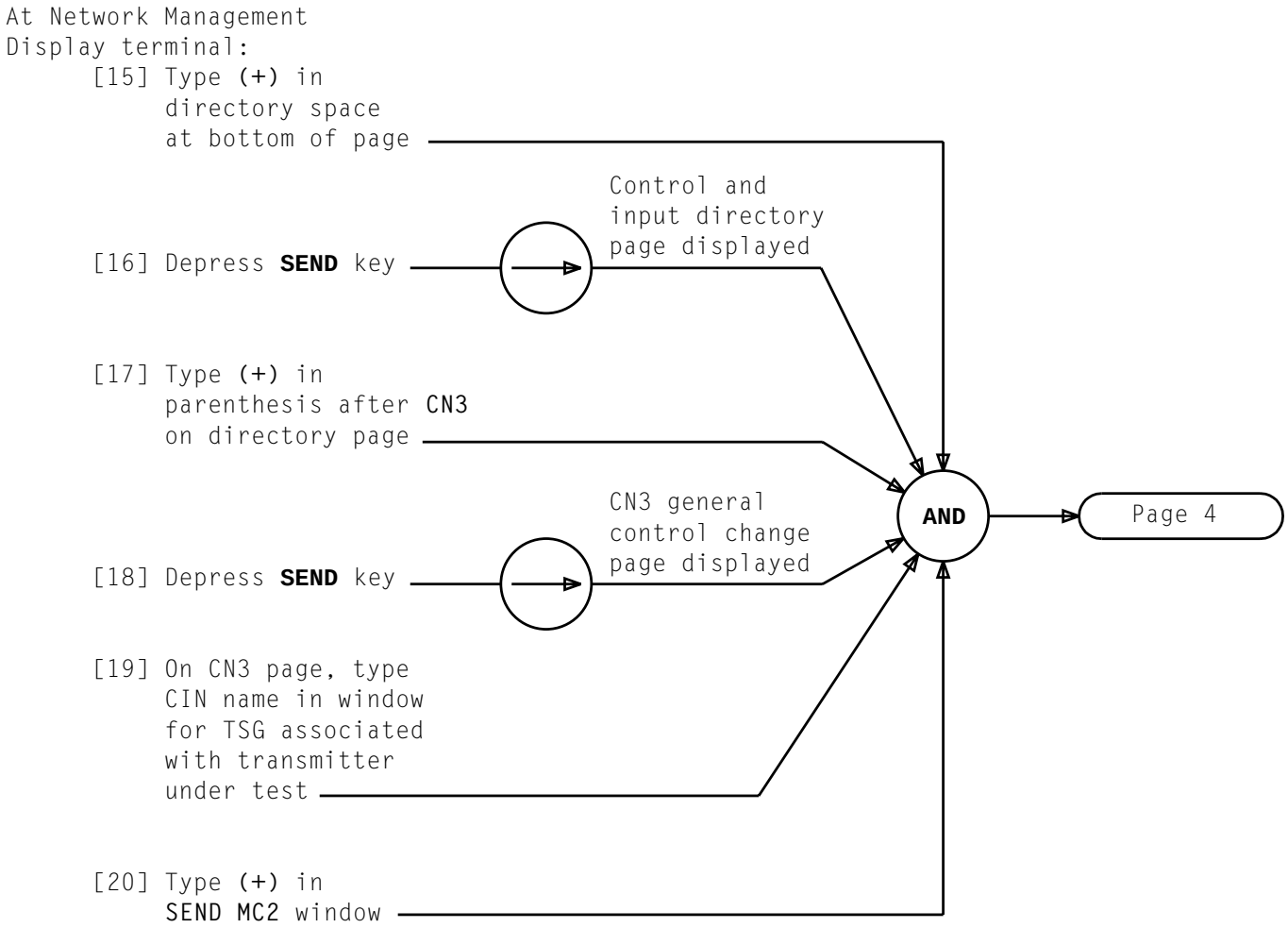
AND

Page 2

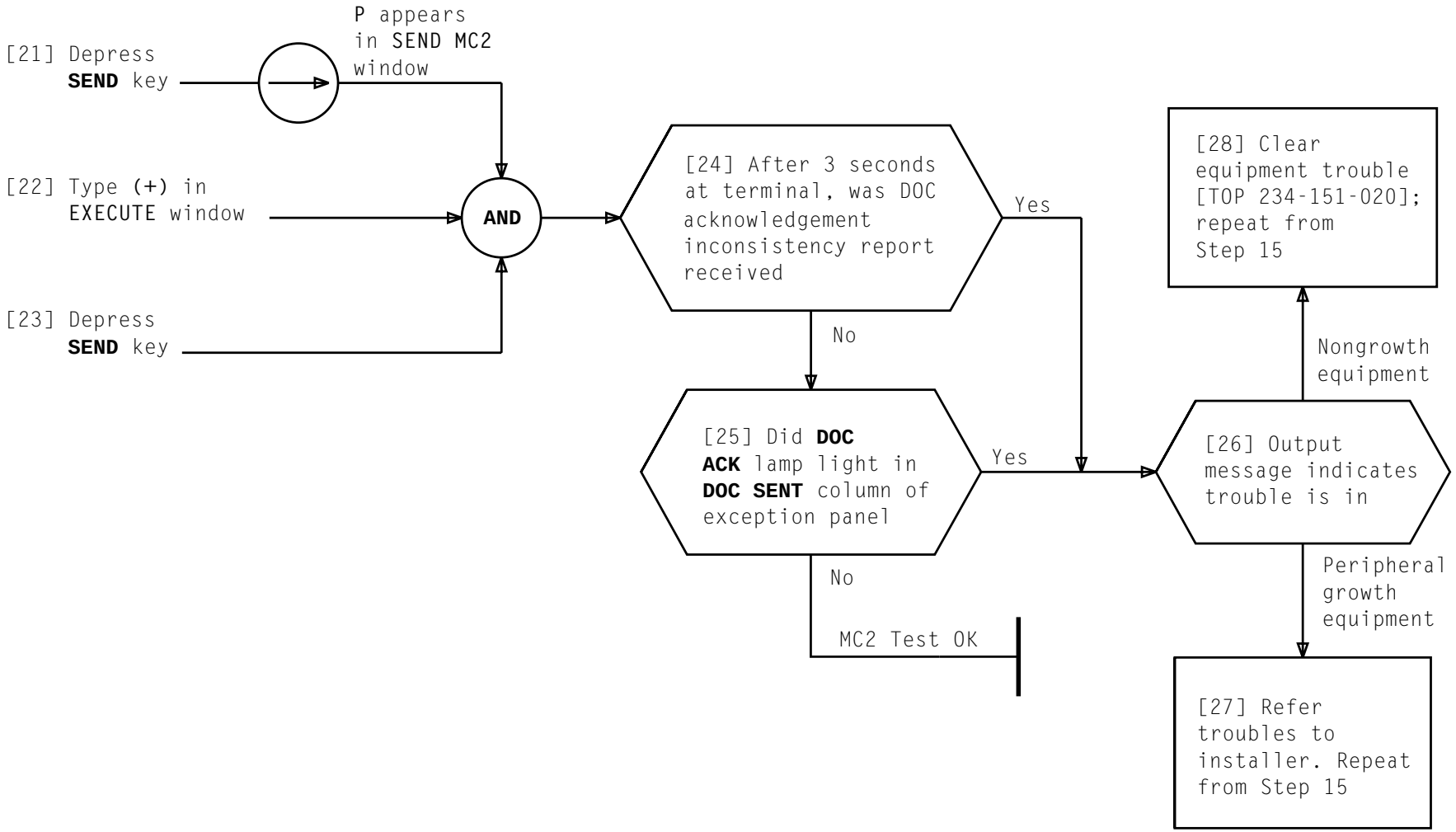
PERFORM DOC MC1 AND MC2 TRANSMITTING TEST



PERFORM DOC MC1 AND MC2 TRANSMITTING TEST



PERFORM DOC MC1 AND MC2 TRANSMITTING TEST



PERFORM DOC MC1 AND MC2 TRANSMITTING TEST

SUMMARY

Using network management maintenance terminal, obtain CN4 control change page and fill in appropriate windows to transmit and execute the MC3 loop test. Verify that **DOC ACK** lamp does not light, and DOC inconsistency report is not output.

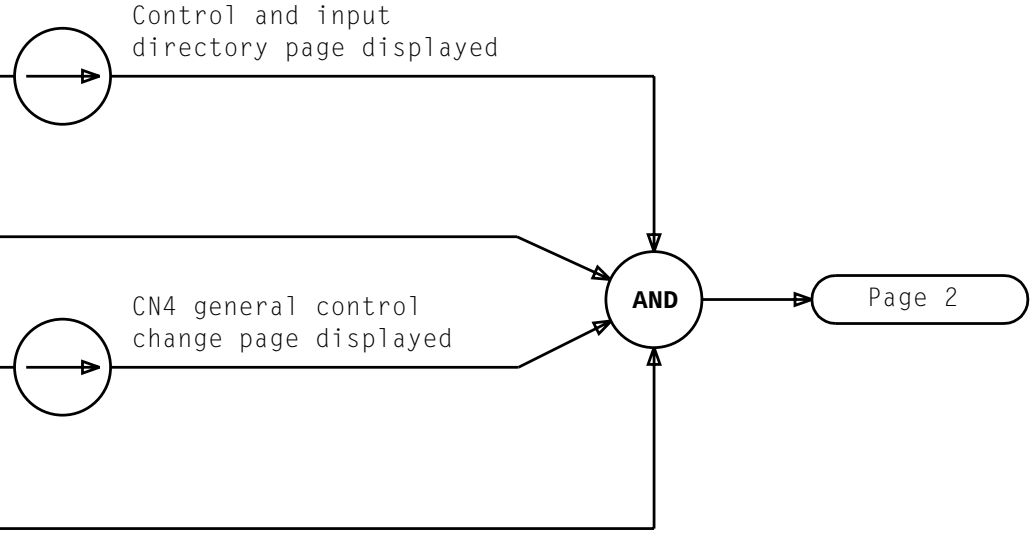
At Network Management Display terminal:

[1] If control and input directory page is not displayed, type **(+)** in directory space at bottom of page and depress **SEND** key

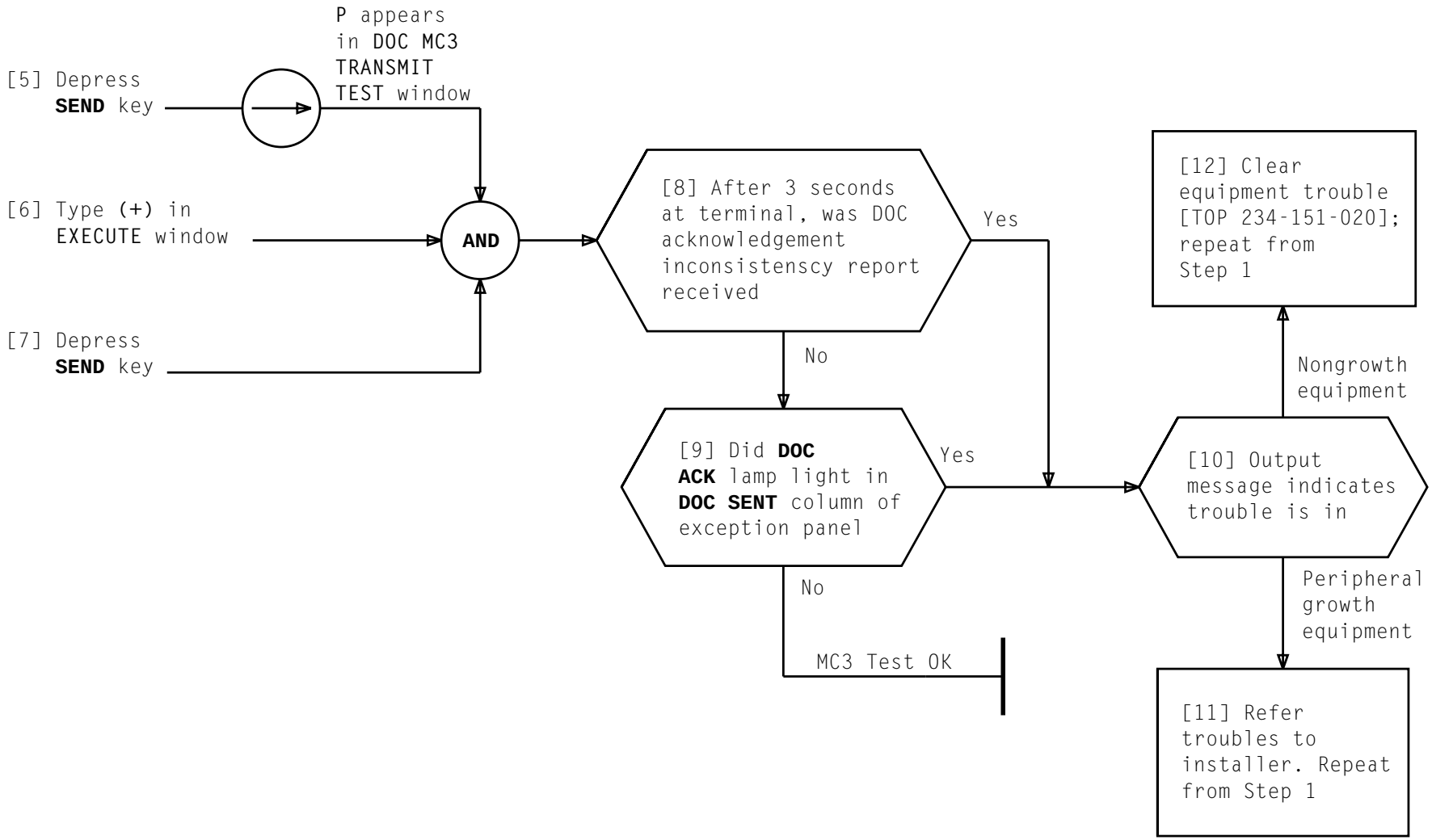
[2] Type **(+)** in parenthesis after **CN4** on directory page

[3] Depress **SEND** key

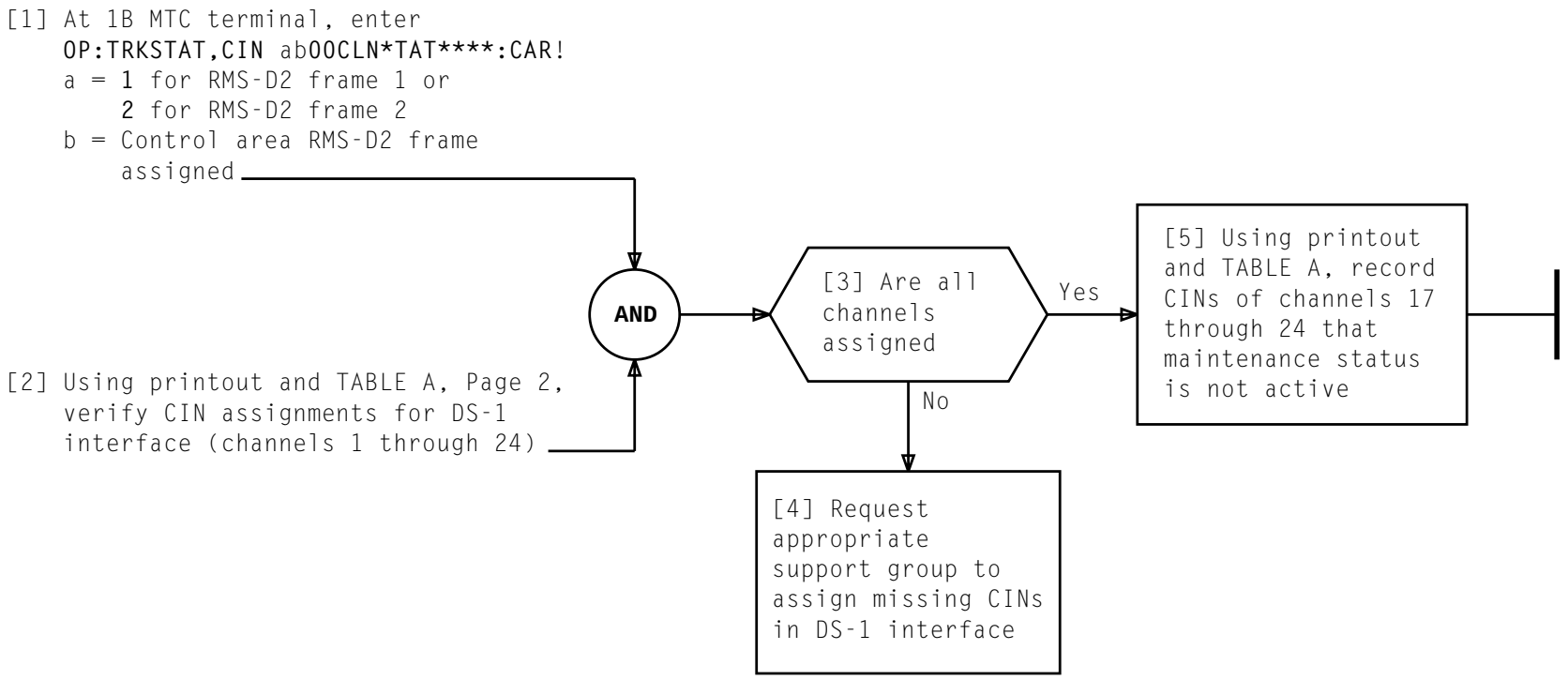
[4] On CN4 page, type **(+)** in **DOC MC3 TRANSMIT TEST** window



PERFORM DOC MC3 LOOP TEST



PERFORM DOC MC3 LOOP TEST



VERIFY DS-1 INTERFACE ASSIGNMENTS

TABLE A

CHANNEL	OUTPUT MESSAGE	VARIABLES
1	OP:TRKSTAT a *MBT*,CIN bc00 CLN* TAT* *** d	a = Maintenance status
2	OP:TRKSTAT a *MBT*,CIN bc01 CLN* TAT* *** d	b = 1 for RMS-D2 frame 1 or
3	OP:TRKSTAT a *MBT*,CIN bc10 CLN* TAT* *** d	2 for RMS-D2 frame 2
4	OP:TRKSTAT a *MBT*,CIN bc11 CLN* TAT* *** d	c = Control area RMS-D2 frame
5	OP:TRKSTAT a *MBT*,CIN bc20 CLN* TAT* *** d	assigned
6	OP:TRKSTAT a *MBT*,CIN bc21 CLN* TAT* *** d	d = Office identity
7	OP:TRKSTAT a *MBT*,CIN bc30 CLN* TAT* *** d	e = 0 for RMS-D2 frame 1 or
8	OP:TRKSTAT a *MBT*,CIN bc31 CLN* TAT* *** d	1 for RMS-D2 frame 2
9	OP:TRKSTAT a *MBT*,CIN bc40 CLN* TAT* *** d	f = 0 for RMS-D2 frame 1 or
10	OP:TRKSTAT a *MBT*,CIN bc41 CLN* TAT* *** d	3 for RMS-D2 frame 2
11	OP:TRKSTAT a *MBT*,CIN bc50 CLN* TAT* *** d	g = 1 for RMS-D2 frame 1 or
12	OP:TRKSTAT a *MBT*,CIN bc51 CLN* TAT* *** d	4 for RMS-D2 frame 2
13	OP:TRKSTAT a *MBT*,CIN bc60 CLN* TAT* *** d	h = 2 for RMS-D2 frame 1 or
14	OP:TRKSTAT a *MBT*,CIN bc61 CLN* TAT* *** d	5 for RMS-D2 frame 2
15	OP:TRKSTAT a *MBT*,CIN bc70 CLN* TAT* *** d	i = MWAT for RMS-D2 frame 1 or
16	OP:TRKSTAT a *MBT*,CIN bc71 CLN* TAT* *** d	MW10 for RMS-D2 frame 2
17	OP:TRKSTAT a *MBT*,CIN e CLN* DTAT *** d	
18	OP:TRKSTAT a *MBT*,CIN e CLN* DLPC *** d	
19	OP:TRKSTAT a *MBT*,CIN e CLN* 104D *** d	
20	OP:TRKSTAT a *MBT*,CIN e CLN* 109* *** d	
21	OP:TRKSTAT a *MBT*,CIN f CLN* 105D *** d	
22	OP:TRKSTAT a *MBT*,CIN g CLN* 105D *** d	
23	OP:TRKSTAT a *MBT*,CIN h CLN* 105D *** d	
24	OP:TRKSTAT a *MBT*,CIN 1 TAS* i *** d	
	OP:TRKSTAT ,CIN bc00 CLN* TAT* *** d CAR COMPLETED TRK COUNT 24	

VERIFY DS-1 INTERFACE ASSIGNMENTS

SUMMARY
Using verify entry input message, call up growth TPOS UT translator 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

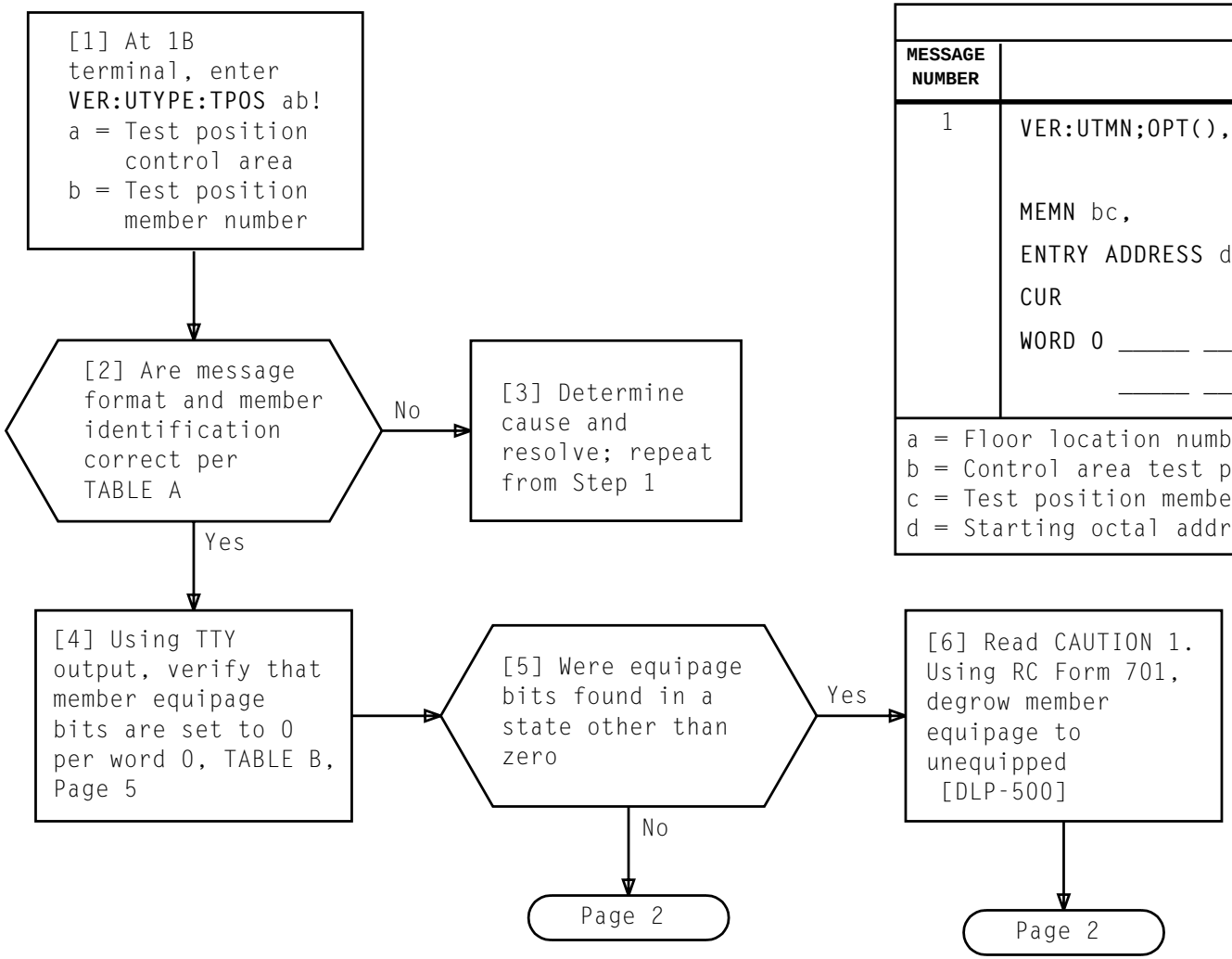


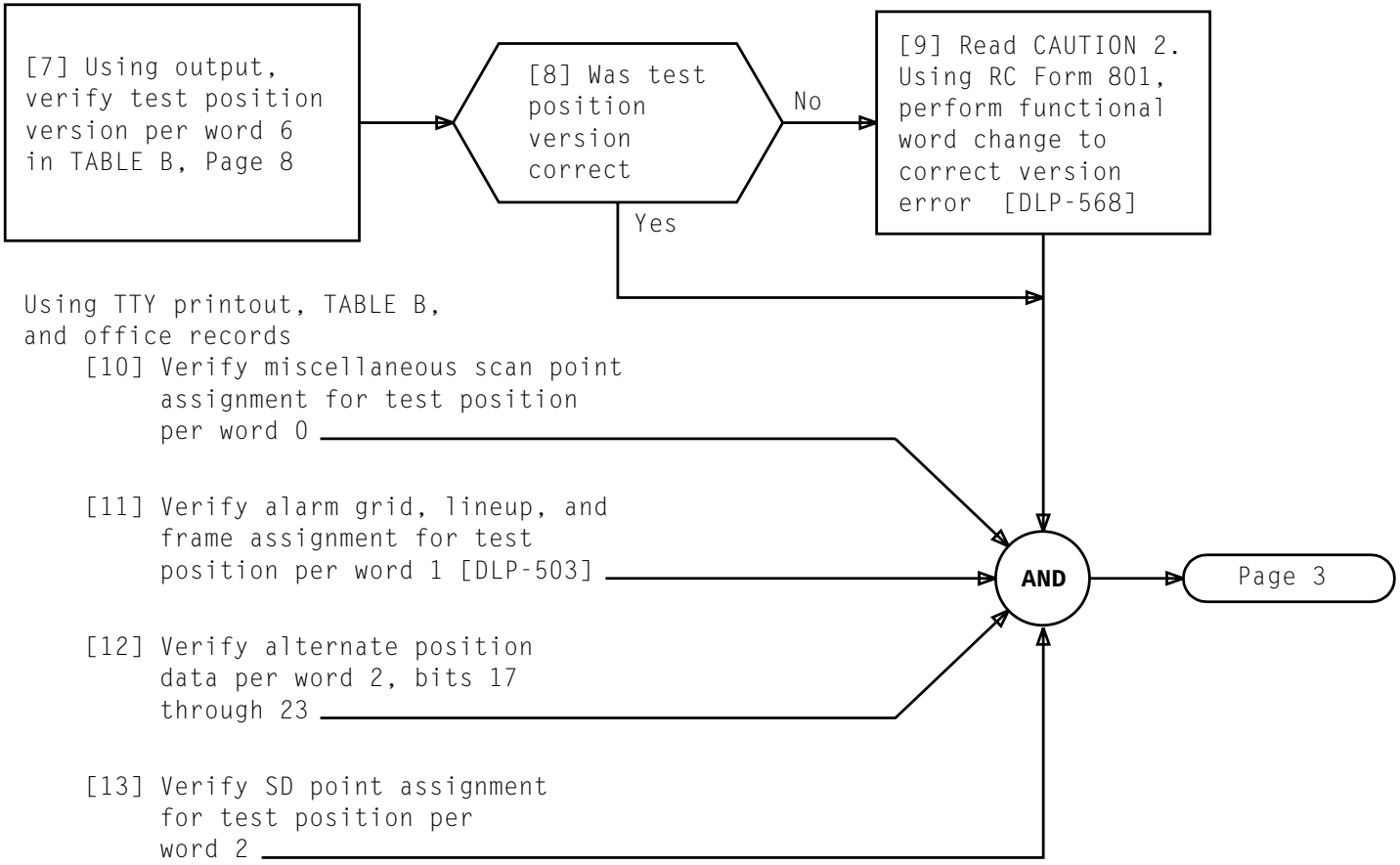
TABLE A

MESSAGE NUMBER	OUTPUT MESSAGE
1	VER:UTMN;OPT(),CUR: FLN a, UTYN TPOS, MEMN bc, ME UNEQ, ENTRY ADDRESS d, ENTRY SIZE 7, CUR WORD O _____ _____ _____ _____ _____ _____ _____

a = Floor location number
b = Control area test position assigned to
c = Test position member number
d = Starting octal address for UT entry

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

VERIFY TEST POSITION UT TRANSLATOR



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

VERIFY TEST POSITION UT TRANSLATOR

[14] Verify CMS trouble channel indicator for test position per word 3, bit 22

[15] Verify test position member number per word 3, bits 17 through 20

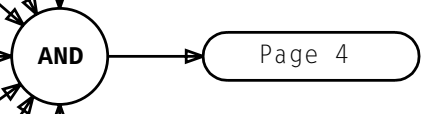
[16] Verify base trunk scan number for test position per word 3 and record octal value for later use [DLP-520]

[17] Verify trouble report channel and test results channel for test position per word 4 [DLP-574]

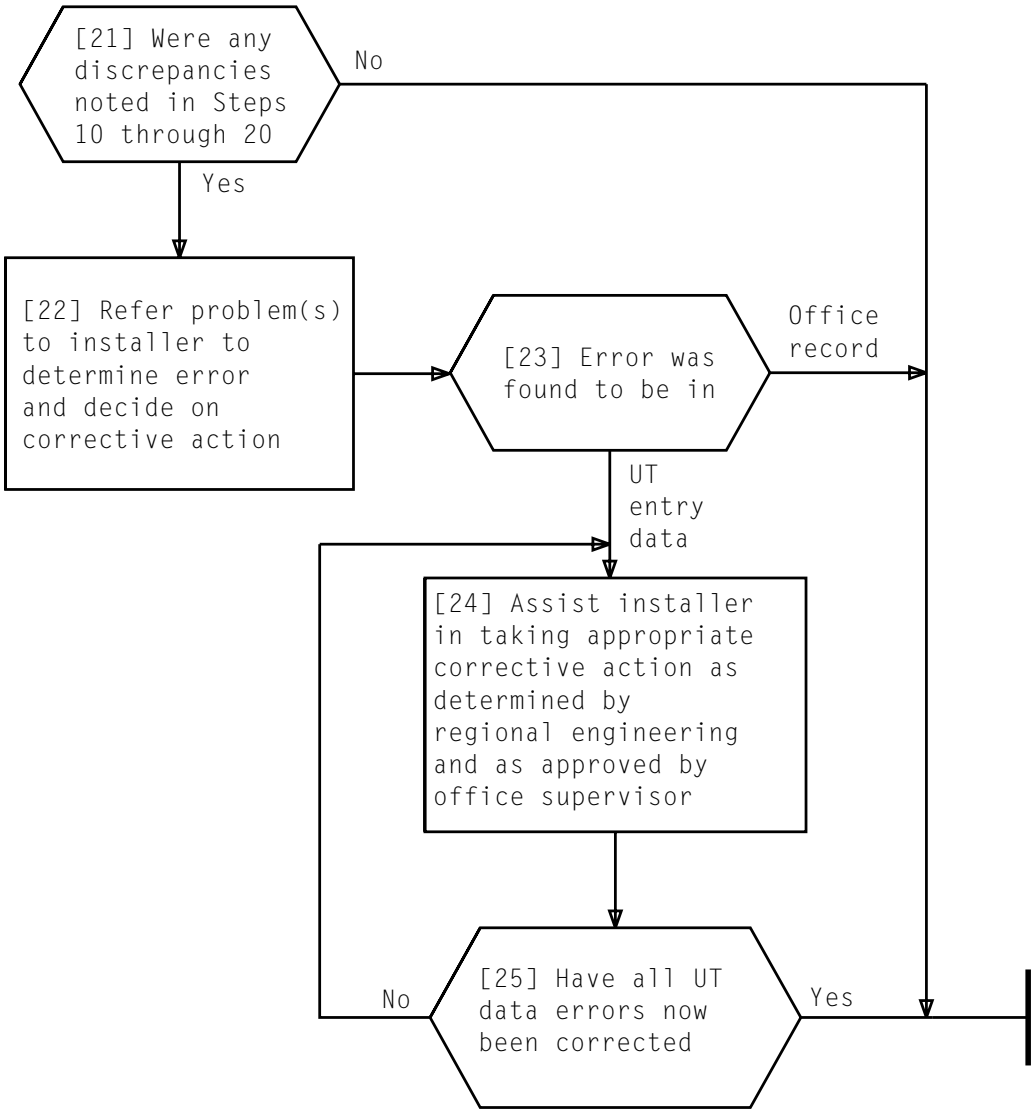
[18] Verify administration area for test position per word 5, bits 4 and 5

[19] Verify control group for test position per word 5, bits 0 through 3

[20] Verify test position type per word 6, bits 3 through 5



VERIFY TEST POSITION UT TRANSLATOR

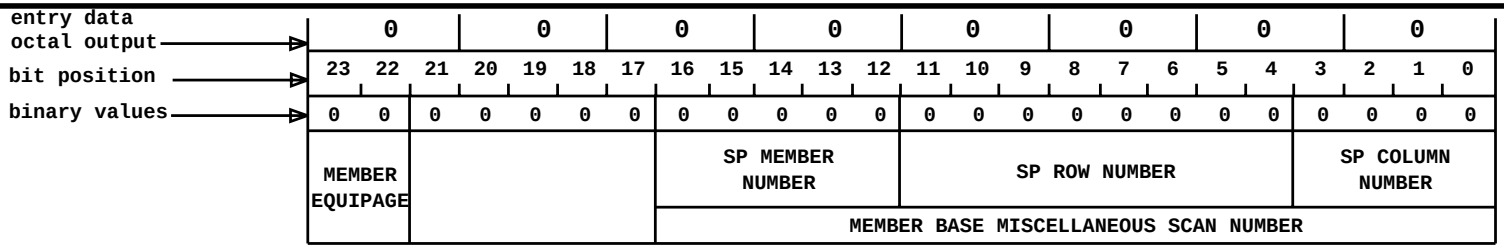


VERIFY TEST POSITION UT TRANSLATOR

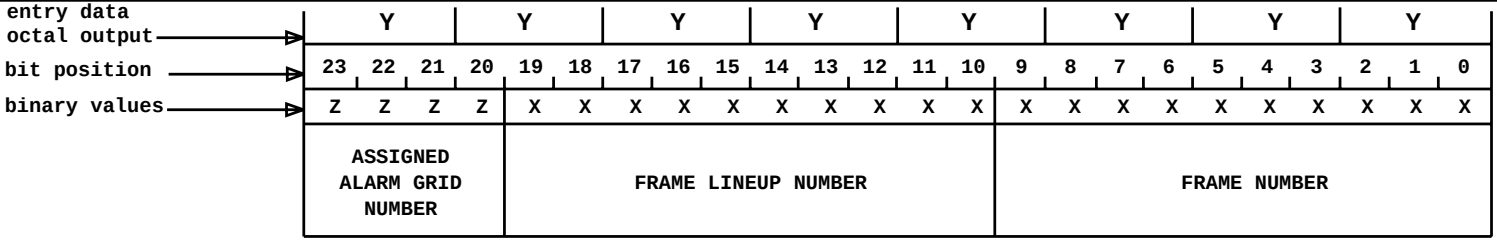
TABLE B

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

0



1



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

Y= Variable octal numbers

ZZZZ = Converts to decimal alarm grid number as reflected in office record drawings T-nnnn-Hn-400, 401, or 402 or equivalent

TABLE B (Contd)

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

2

entry data octal output →
bit position →
binary values →

0	0	0	0	0	0	0	0
23 22 21	20 19 18 17	16 15 14 13 12	11 10 9	8 7 6	5 4 3	2 1 0	
0 0 0	0 0 0 0	0 0 0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	
ALTERNATE TEST POSITION		SP MEMBER NUMBER	SP ROW NUMBER			SP COLUMN NUMBER	
		MEMBER BASE MISCELLANEOUS SD NUMBER					

3

entry data octal output →
bit position →
binary values →

Y	Y	Y	Y	Y	Y	Y	Y
23 22 21	20 19 18 17	16 15 14 13 12	11 10 9	8 7 6	5 4 3	2 1 0	
0 W 0	Z Z Z Z	X X X X X	X X X	X X X	X X X	X X X	
	MEMBER NUMBER	SP MEMBER NUMBER	SP ROW NUMBER			SP COLUMN NUMBER	
T P C M S L		TRUNK SCAN NUMBER (TSN)					

X...X = Converts to decimal SP info as reflected in office record drawing T-nnnn-Hn-460 or equivalent

W = CMS trouble channel indicator -
= 1 if troubles reported on CMS1 through CMS4, CMSH1, or CMSH2 channel
= 0 if troubles reported on any other channel

Y = Variable octal numbers

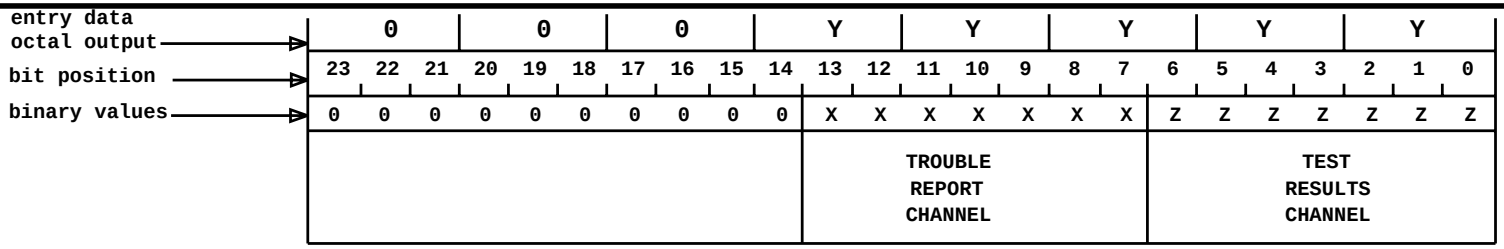
Z.Z = Test position member number in binary

VERIFY TEST POSITION UT TRANSLATOR

TABLE B (Contd)

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

4

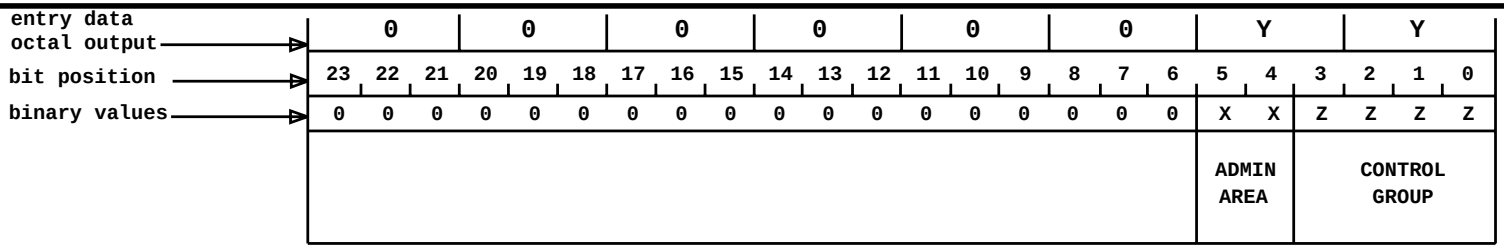


X...X = Converts to octal channel value

Z...Z = Converts to octal channel value

Y = Variable octal numbers

5

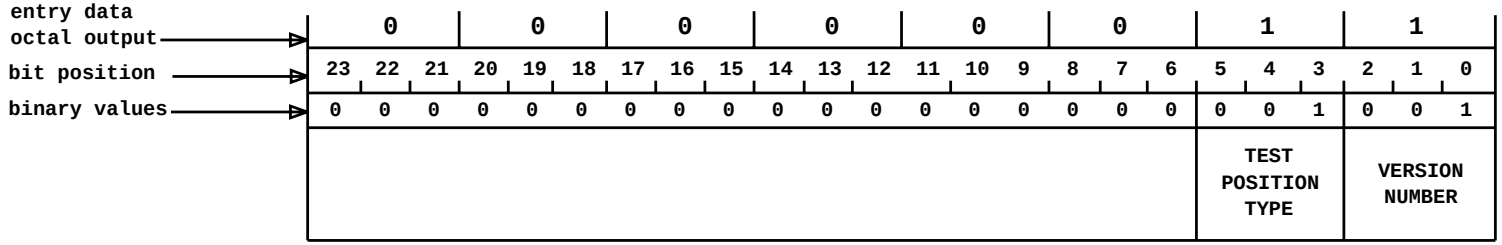


XX = Administration area -
= 00 for associated company
= 01 for AT&T Communications
= 10 for international

ZZZZ = Converts to decimal Control Area

Y= Variable octal numbers

TABLE B (Contd)

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

VERIFY TEST POSITION UT TRANSLATOR

Channel and port data in TABLE A are typical values for the growth TCA channel assigned to RMS-D2. Engineered values must be used if different from TABLE A

TABLE A

FIELD NAME	VALUE
Hardware generation (CHG)	1
Name (CHNAME)	TCAa (a = Growth TCA number)
Backup name (BKUP)	SREC1
Speed (SPD)	4800
Mode (MODE)	FLLDPX
Dialup security (DIALUP)	N
Terminal type (TRMTYP)	KD
Paper tape (TAPE)	N
Special handling (CHTYP)	0 (zero)
Network protocol application ID (PHAPPLID)	0 (zero)
Station type (STATYP)	DCE
Automatic calling unit (ACU)	N
Port type connection (PTC)	PLDS
Data set type (DSTYPE)	Not Required for this channel
Switched carrier (SWC)	Not Required for this channel
Answer back feature (AB)	N

TYPICAL TCA CHANNEL AND PORT DATA

[1] Note contents of word 4 in entry output message

[2] Convert five rightmost octal digits to binary per FIG. 1

[3] Convert binary bits 0 through 6 to octal per FIG. 1 and record

[4] Convert binary bits 7 through 13 to octal per FIG. 1 and record

[5] Using TABLE A, Page 2, locate channel(s) that trouble reports and test results will be received and record associated octal value(s)

[6] Compare test results channel octal value recorded in Step 5 with value recorded in Step 3

[7] Compare trouble reports channel octal value recorded in Step 5 with value recorded in Step 4

AND

[8] Record any discrepancies found is Steps 6 and 7

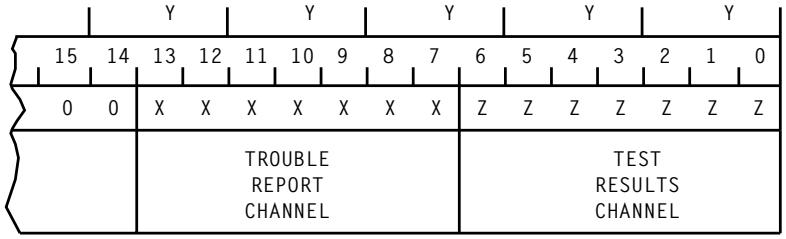
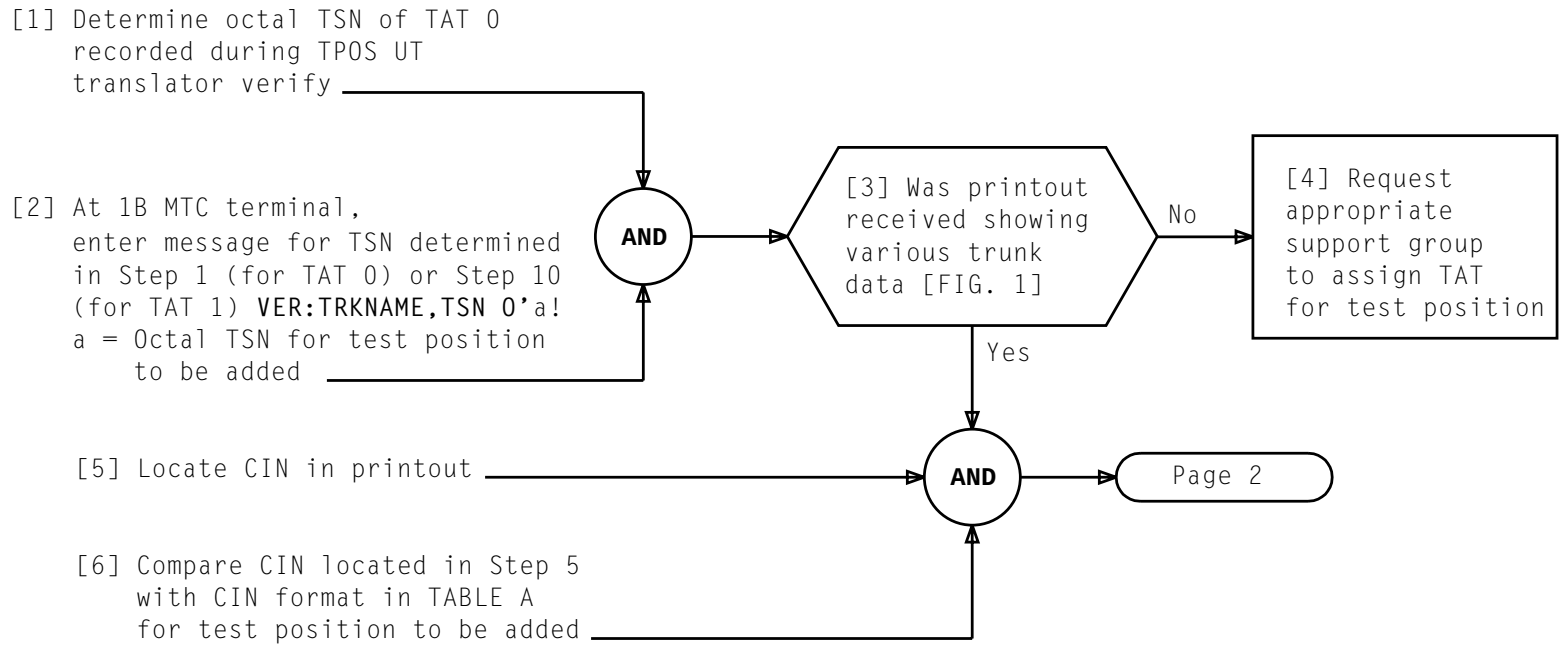


FIG. 1 — Entry Word 4 Layout

VERIFY TROUBLE REPORT AND TEST RESULTS CHANNEL(S)

TABLE A			
CHANNEL	OCTAL VALUE	CHANNEL	OCTAL VALUE
BELT1	3	TCA1	21
BELT2	4	TCA2	45
CMS1	15	TCA3	46
CMS2	16	TCA4	47
CMS3	17	TCA5	50
CMS4	20	TCA6	51
CMSH1	100	TCA7	52
CMSH2	101	TCA8	53
EADASH1	102	TCA9	54
EADASH2	103	TCA10	55
ISCC	71	TEC1	14
MTC	0	TEC2	35
NMDT1	12	TEC3	36
NMDT2	13	TEC4	37
NMDT3	34	TEC5	40
NMNOC1	61	TRF1	10
NMPR1	11	TRF2	33
NMPR2	60	TTS1	62
RCDT1	7	TTS2	63
RCDT2	31	TTS3	64
RCDT3	32	TTS4	65
RCMOC	2	TTS5	66
RCREC	6	TTS6	67
RCRRT1	56	DUP1	72
RCRRT2	57	DUP2	73
RMT1	22	DUP3	74
SCC1	24	DUP4	75
SREC1	1	DUP5	76
SREC2	30	DUP6	77
SVOBS	23		

VERIFY TROUBLE REPORT AND TEST RESULTS CHANNEL(S)




```
VER:TRKNAME,TSN 2021601: ISC TESTATP   OSC TESTATP
OTAN 106601  –  TAN 17 1 3 001
CIN 1500 CLN* TAT* *** STC   –  BTFN 100
TSN 2021601  –  TSN 0'246601
DIF 20,DIU 27,DG 1
```

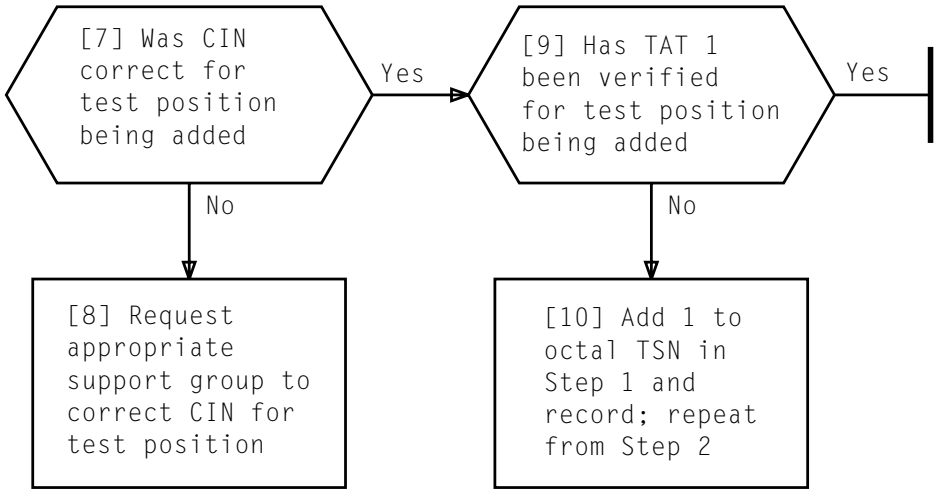
FIG. 1 – Sample VER:TRKNAME Printout

TABLE A

MESSAGE NUMBER	OUTPUT MESSAGE
1	abcd CLN* TAT* ***

a = 1 for RMS-D2 frame 1 or
    2 for RMS-D2 frame 2
b = Control area RMS-D2 frame assigned
c = Test position number to be added (0-7)
d = TAT number (0 or 1)

VERIFY TEST POSITION TAT ASSIGNMENTS



VERIFY TEST POSITION TAT ASSIGNMENTS

[1] Determine one channel that is not active, channels 17 through 24, recorded from OP:TRKSTAT message [TABLE A]

[2] At 1B MTC terminal, enter message for CIN determined in Step 1
SET:TRKSTAT ACT,CIN a!
a = CIN of trunk not active

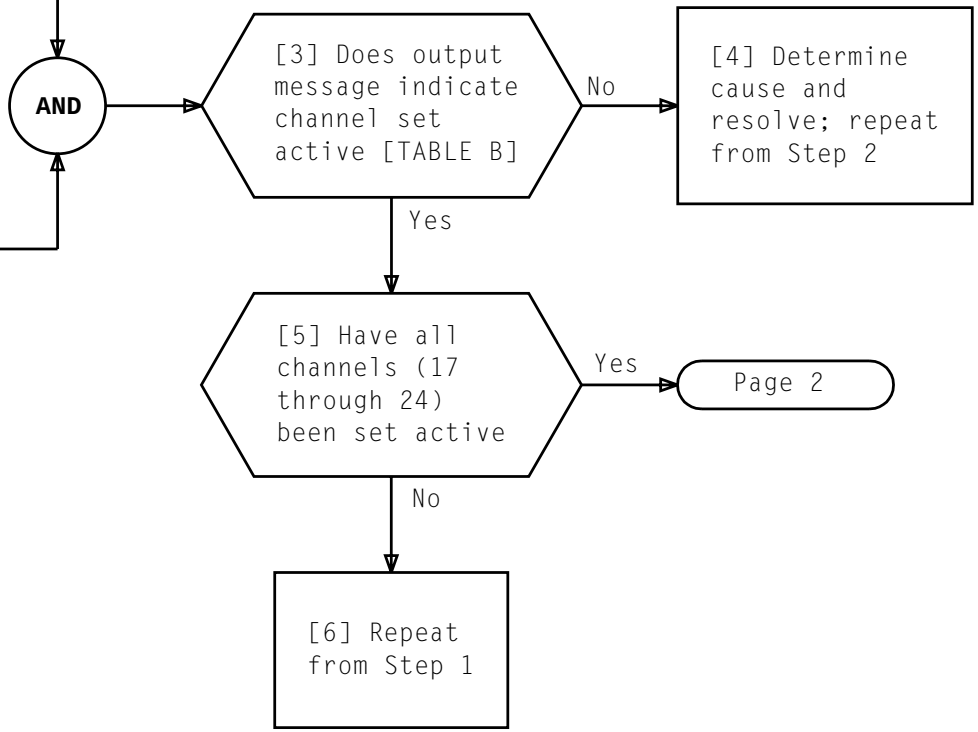


TABLE A

CHANNEL	CIN
17	a CLN* DTAT ***
18	a CLN* DLPC ***
19	a CLN* 104D ***
20	a CLN* 109* ***
21	b CLN* 105D ***
22	c CLN* 105D ***
23	d CLN* 105D ***
24	1 TAS* MWAT *** for RMS-D2 frame 1 or 1 TAS* MW10 *** for RMS-D2 frame 2

a = 0 for RMS-D2 frame 1 or
1 for RMS-D2 frame 2
b = 0 for RMS-D2 frame 1 or
3 for RMS-D2 frame 2
c = 1 for RMS-D2 frame 1 or
4 for RMS-D2 frame 2
d = 2 for RMS-D2 frame 1 or
5 for RMS-D2 frame 2

TABLE B

MESSAGE NUMBER	OUTPUT MESSAGE
1	SET:TRKSTAT ACT TRAF< IDLE 1> *MBT*,CIN a bbb

a = CIN of channel set active
bbb = Office identity

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ACTIVATE DS-1 INTERFACE CHANNELS 17 THROUGH 24

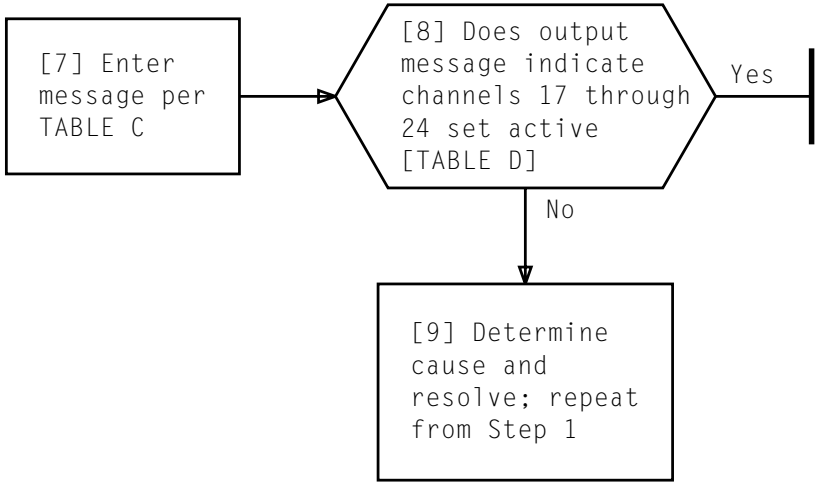


TABLE C

MESSAGE NUMBER	INPUT MESSAGE
1	OP:TRKSTAT,CIN ab00CLN*TAT****:CAR!

a = **1** for RMS-D2 frame 1 or
    2 for RMS-D2 frame 2
b = Control area RMS-D2 frame assigned

TABLE D

CHANNEL	OUTPUT MESSAGE
1	
16	
17	OP:TRKSTAT ACT TRAF< IDLE 1> *MBT*,CIN a CLN* DTAT *** b
18	OP:TRKSTAT ACT TRAF< IDLE 1> *MBT*,CIN a CLN* DLPC *** b
19	OP:TRKSTAT ACT TRAF< IDLE 1> *MBT*,CIN a CLN* 104D *** b
20	OP:TRKSTAT ACT TRAF< IDLE 1> *MBT*,CIN a CLN* 109* *** b
21	OP:TRKSTAT ACT TRAF< IDLE 1> *MBT*,CIN c CLN* 105D *** b
22	OP:TRKSTAT ACT TRAF< IDLE 1> *MBT*,CIN d CLN* 105D *** b
23	OP:TRKSTAT ACT TRAF< IDLE 1> *MBT*,CIN e CLN* 105D *** b
24	OP:TRKSTAT ACT TRAF< IDLE 1> *MBT*,CIN 1 TAS* f *** b

a = **0** for RMS-D2 frame 1 or
    1 for RMS-D2 frame 2
b = Office identity
c = **0** for RMS-D2 frame 1 or
    3 for RMS-D2 frame 2
d = **1** for RMS-D2 frame 1 or
    4 for RMS-D2 frame 2
e = **2** for RMS-D2 frame 1 or
    5 for RMS-D2 frame 2
f = **MWAT** for RMS-D2 frame 1 or
    MW10 for RMS-D2 frame 2

ACTIVATE DS-1 INTERFACE CHANNELS 17 THROUGH 24

ACTIVATE TATs ASSIGNED TO ADDED TEST POSITIONS

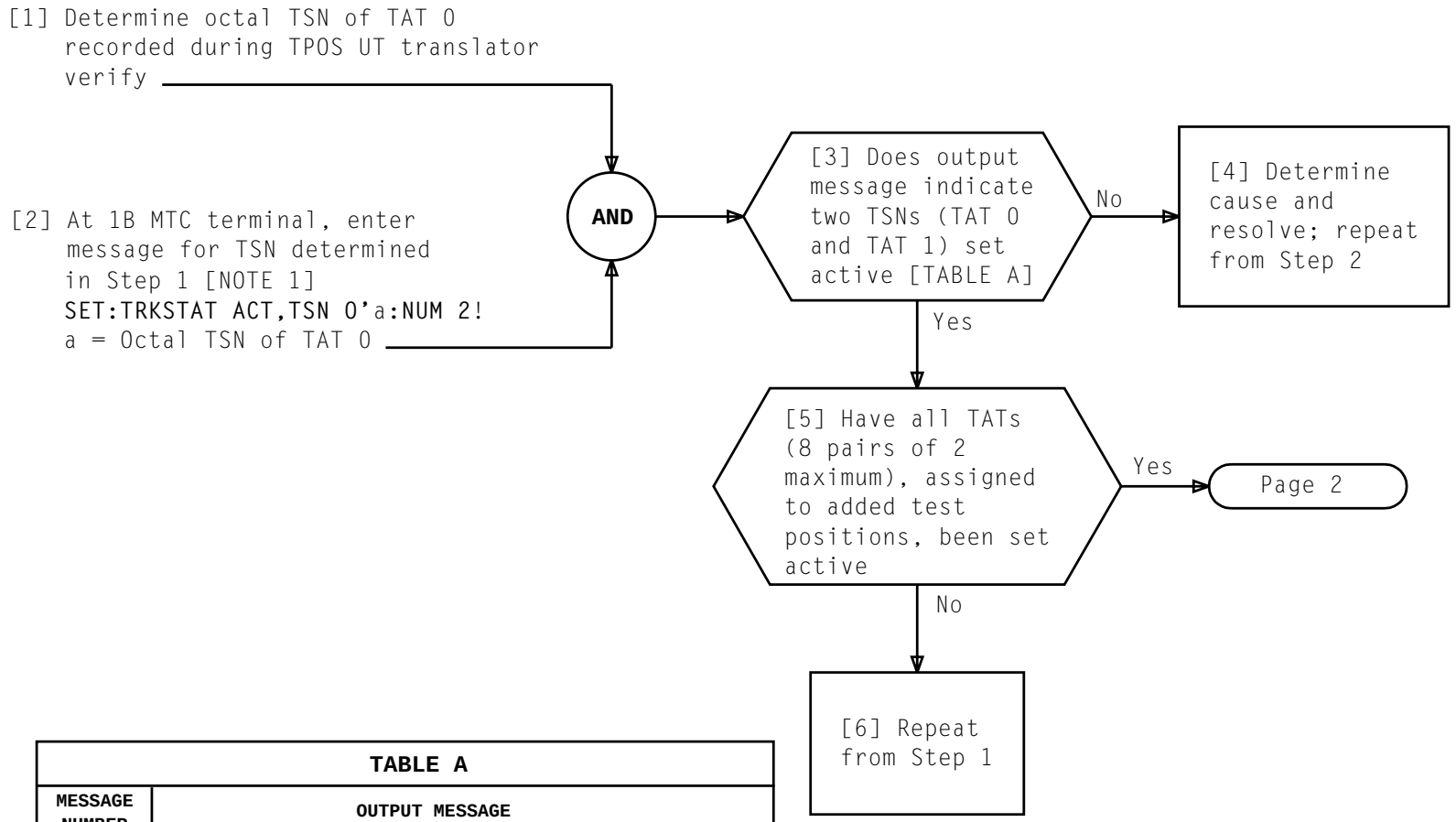


TABLE A

MESSAGE NUMBER	OUTPUT MESSAGE
1	SET:TRKSTAT ACT TRAF< IDLE 1> *MBT*,TSN a SET:TRKSTAT ACT TRAF< IDLE 1> *MBT*,TSN b SET:TRKSTAT ,TSN a NUM COMPLETED TRK COUNT 2

a = Decimal TSN of TAT 0
b = Decimal TSN of TAT 1

NOTE 1
SET message will activate TAT 0 and TAT 1 assigned to added test position

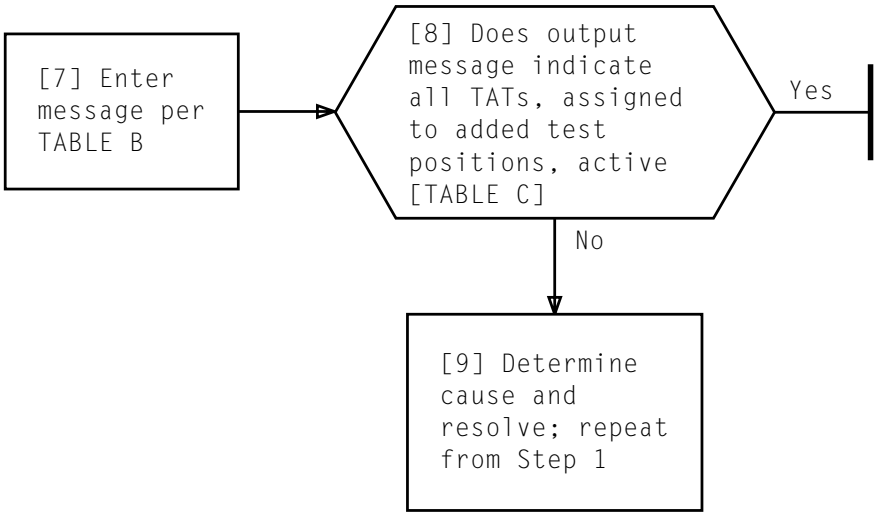


TABLE B

OP:TRKSTAT,CIN abOOCLN*TAT****:CAR!
a = 1 for RMS-D2 frame 1 or 2 for RMS-D2 frame 2 b = Control area RMS-D2 frame assigned

TABLE C

TEST POSITION	CHANNEL	OUTPUT MESSAGE
0	1	OP:TRKSTAT a *MBT*,CIN bc00 CLN* TAT* *** d
0	2	OP:TRKSTAT a *MBT*,CIN bc01 CLN* TAT* *** d
1	3	OP:TRKSTAT a *MBT*,CIN bc10 CLN* TAT* *** d
1	4	OP:TRKSTAT a *MBT*,CIN bc11 CLN* TAT* *** d
2	5	OP:TRKSTAT a *MBT*,CIN bc20 CLN* TAT* *** d
2	6	OP:TRKSTAT a *MBT*,CIN bc21 CLN* TAT* *** d
3	7	OP:TRKSTAT a *MBT*,CIN bc30 CLN* TAT* *** d
3	8	OP:TRKSTAT a *MBT*,CIN bc31 CLN* TAT* *** d
4	9	OP:TRKSTAT a *MBT*,CIN bc40 CLN* TAT* *** d
4	10	OP:TRKSTAT a *MBT*,CIN bc41 CLN* TAT* *** d
5	11	OP:TRKSTAT a *MBT*,CIN bc50 CLN* TAT* *** d
5	12	OP:TRKSTAT a *MBT*,CIN bc51 CLN* TAT* *** d
6	13	OP:TRKSTAT a *MBT*,CIN bc60 CLN* TAT* *** d
6	14	OP:TRKSTAT a *MBT*,CIN bc61 CLN* TAT* *** d
7	15	OP:TRKSTAT a *MBT*,CIN bc70 CLN* TAT* *** d
7	16	OP:TRKSTAT a *MBT*,CIN bc71 CLN* TAT* *** d
		Printout continues with status of channels 17 through 24

a = Maintenance status — must be ACT for test positions being added
b = 1 for RMS-D2 frame 1 or
2 for RMS-D2 frame 2
c = Control area RMS-D2 frame assigned
d = Office identity

ACTIVATE TATs ASSIGNED TO ADDED TEST POSITIONS

[1] Determine lowest receiver and transmitter circuit numbers in degrowth MFS frame

[2] At 1B MTC terminal, enter message for receives or transmitters in degrowth MFS
SET:TRKSTAT CAD.DSA,CIN aabb SVC* c *;SUM:NUM 32!
aa = Degrowth MFS member number
bb = Receiver or transmitter circuit number (Step 1)
c = MFR for receivers or
MFX for transmitters

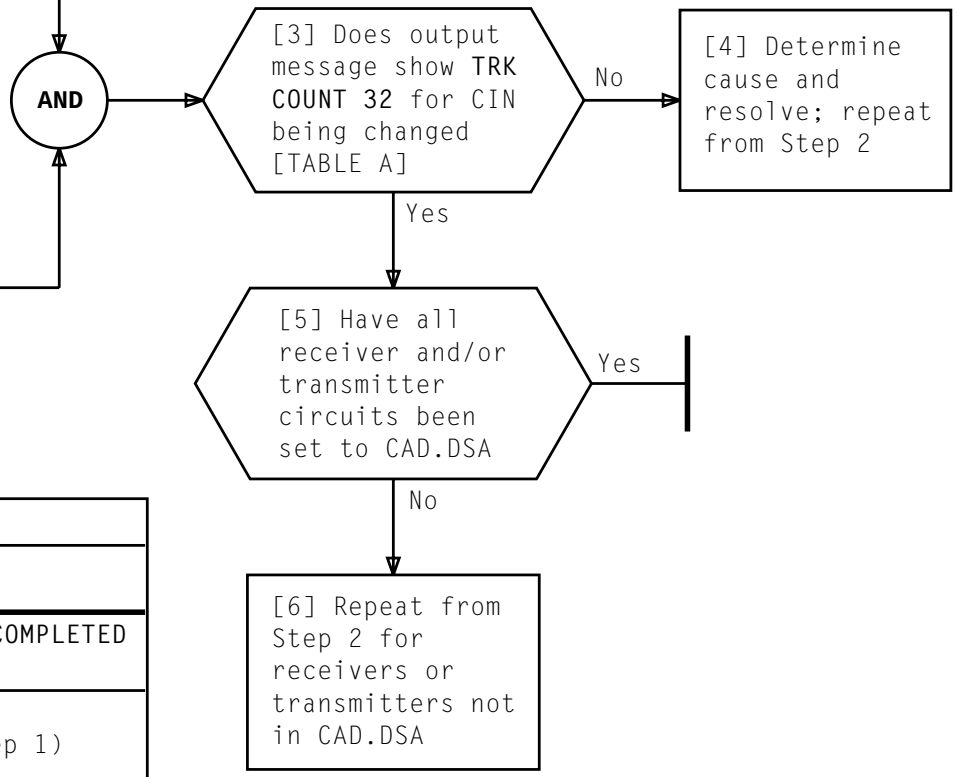


TABLE A

MESSAGE NUMBER	OUTPUT MESSAGE
1	SET:TRKSTAT ,CIN aabb SVC* c* *** NUM,STAT,SUM COMPLETED TRK COUNT 32

aa = Degrowth MFS member number
bb = Receiver or transmitter circuit number (Step 1)
c = MFR for receivers or
MFX for transmitters

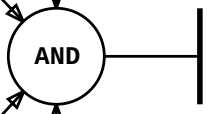
SET RECEIVERS AND/OR TRANSMITTERS TO CAD DISABLE STATE

[1] At 1B MTC terminal,
enter message for receivers in
degrowth MFS frame
VER:TRKNAME,CIN aabb **SVC* MFR *!**
aa = Degrowth MFS member number
bb = Lowest receiver circuit number

[2] Using printout and FIG. 1, locate
fifth line with DIF/DT/VIF data
and record for later use

[3] Enter message for transmitters in
degrowth MFS frame
VER:TRKNAME,CIN aabb **SVC* MFX *!**
aa = Degrowth MFS member number
bb = Lowest transmitter circuit
number

[4] Using printout and FIG. 1, locate
fifth line with DIF/DT/VIF data
and record for later use




```
VER:TRKNAME,CIN 1800 SVC* MFR* ***: ISC TESTATP OSC TESTATP
OTAN 106601 - TAN 17 1 3 001
CIN 1800 SVC* MFR* *** STC - BTFN 100
TSN 2021601 - TSN 0'246601
DT 10,DTU 5,DG 1
```

RECORD THIS LINE

FIG. 1 — Sample VER:TRKNAME Printout

VERIFY DIU/DTU/VIU ASSIGNED TO DEGROWTH MFS FRAME

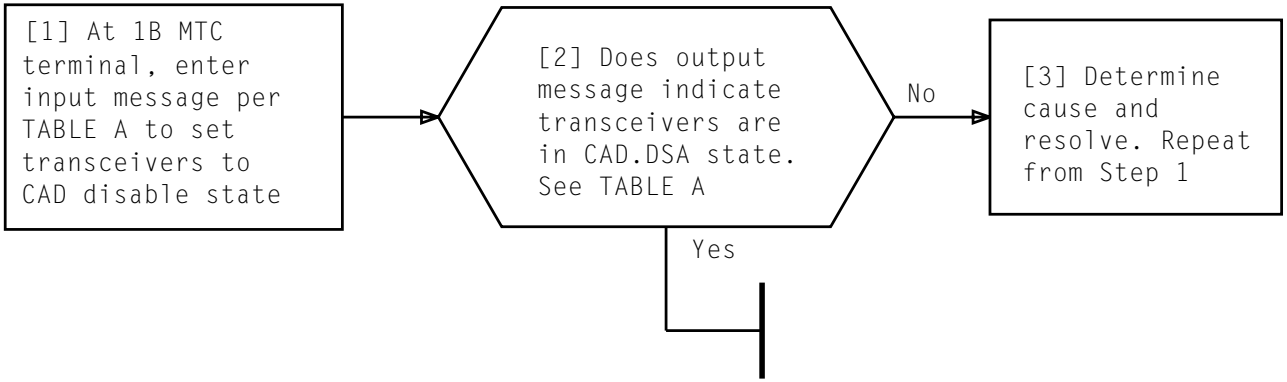


TABLE A

INPUT MESSAGE	OUTPUT MESSAGE
SET:TRKSTAT CAD.DSA,CIN aOØSVC*XCVR:NUM c!	SET:TRKSTAT ,CIN aO/bSVC* XCVR *** NUM COMPLETED TRK COUNT c

a = Member number of degrowth CCT to which transceivers belong
b = Number of first transceiver in submember
= 0/for transceivers 00-05 or 00-11
= 6 for transceivers 06-11

c = Number of transceivers being degrown
= 6 for transceivers 00-05 or 06-11
= 12 for transceivers 00-11

SET TRANSCEIVERS (CCT) TO CAD DISABLE STATE

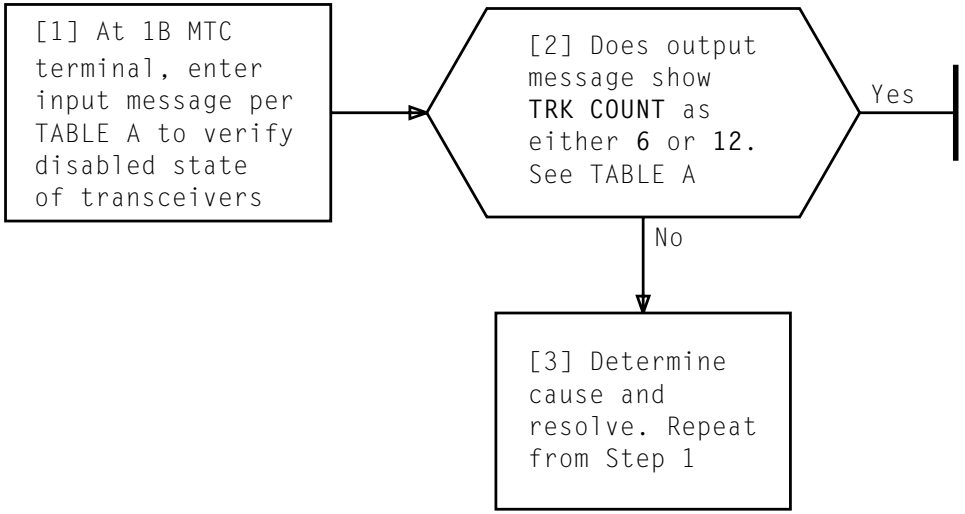


TABLE A

INPUT MESSAGE	OUTPUT MESSAGE
OP:TRKSTAT,CIN aØbSVC*XCVR:NUM c,STAT CAD.DSA!	OP:TRKSTAT CAD.DSA ,CIN aØb SVC* XCVR *** NUM,STAT COMPLETED TRK COUNT c

a = Member number of degrowth CCT to which transceivers belong
b = Number of first transceiver in submember
= 0 for transceivers 00-05 or 00-11
= 6 for transceivers 06-11
c = Number of transceivers being degrown
= 6 for transceivers 00-05 or 06-11
= 12 for transceivers 00-11

VERIFY DISABLE STATUS OF TRANSCEIVERS (CCT)

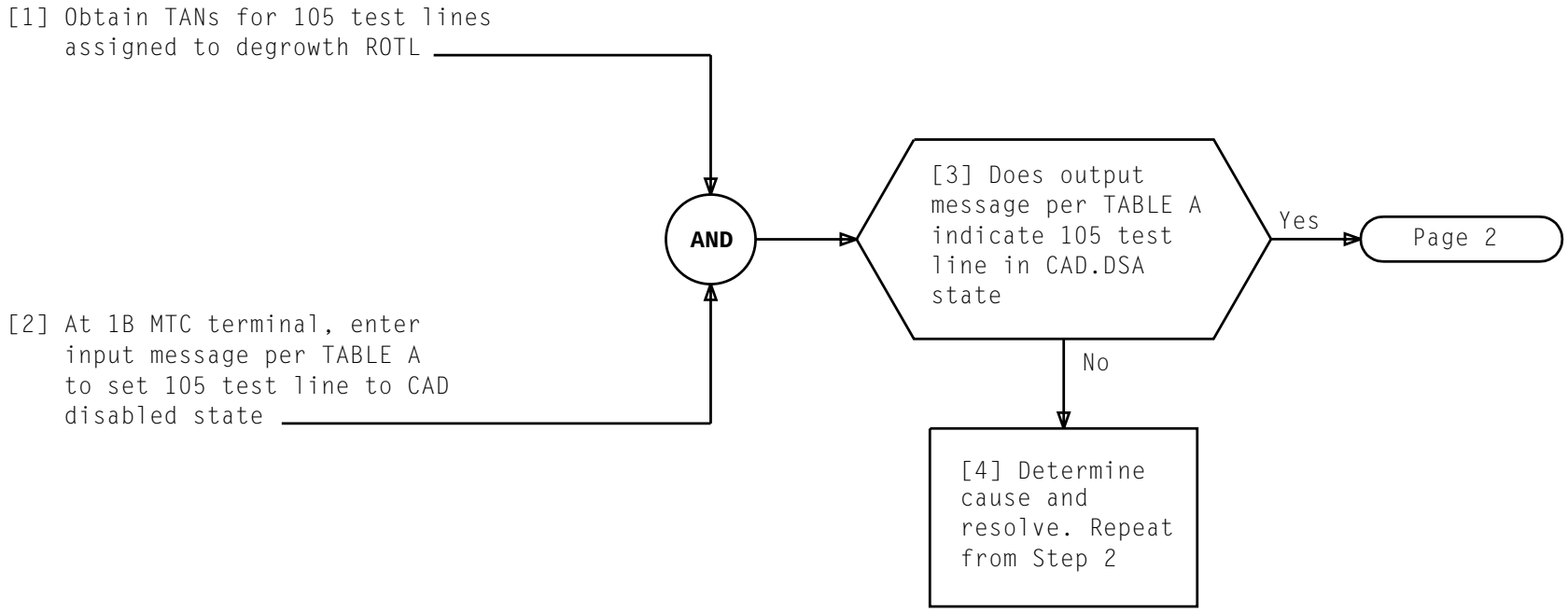


TABLE A

INPUT MESSAGE	OUTPUT MESSAGE
SET:TRKSTAT CAD.DSA,TAN a!	SET:TRKSTAT CAD.DSA TRAF ,TAN a SET:TRKSTAT,TAN a COMPLETED TRK COUNT 1
a = TAN number assigned to 105 test line	

SET 105 TEST LINES TO CAD DISABLED STATE AND VERIFY

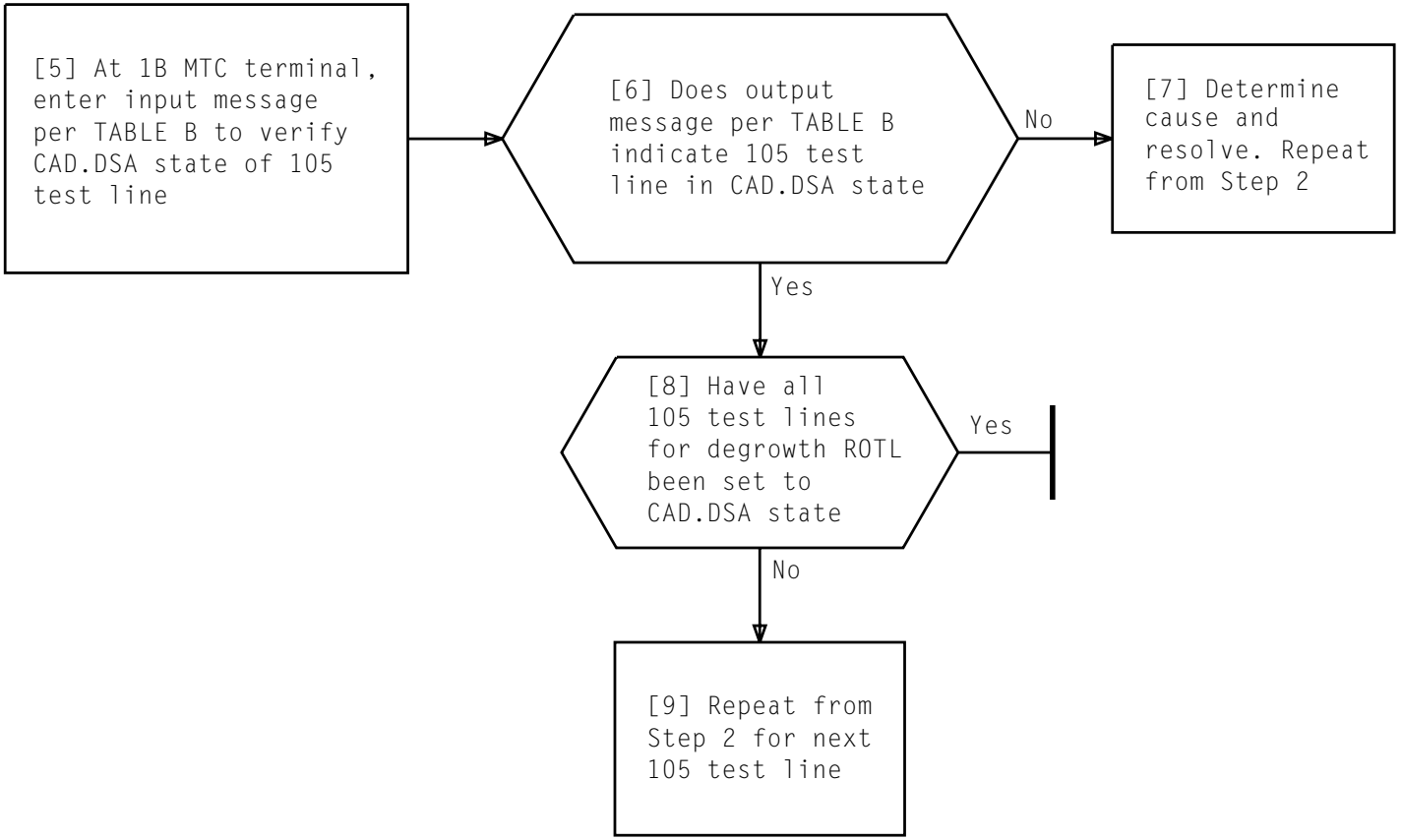


TABLE B

INPUT MESSAGE	OUTPUT MESSAGE
OP:TRKSTAT,TAN a!	OP:TRKSTAT CAD.DSA TRAF ,TAN a OP:TRKSTAT,TAN a COMPLETED TRK COUNT 1

a = TAN number assigned to 105 test line

SET 105 TEST LINES TO CAD DISABLED STATE AND VERIFY

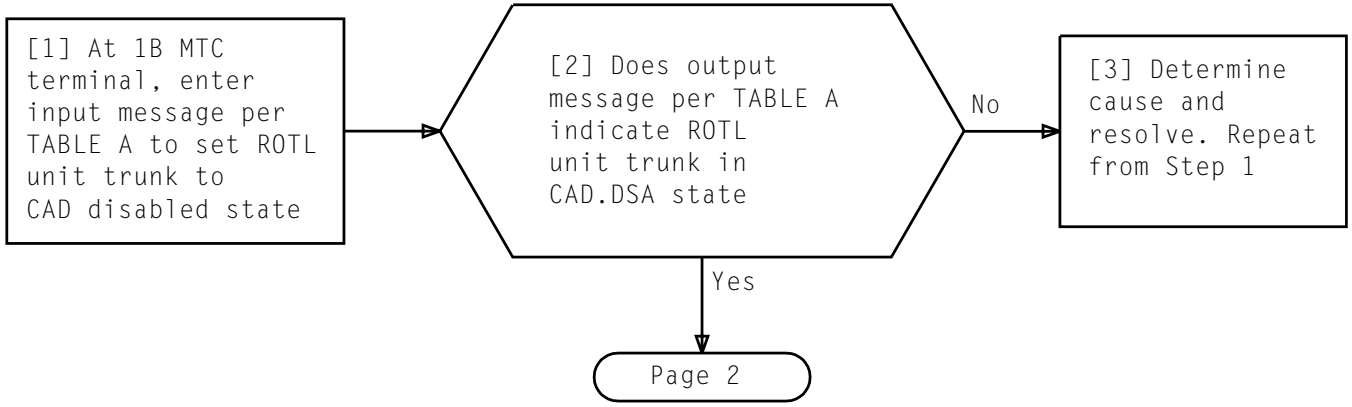


TABLE A

INPUT MESSAGE	OUTPUT MESSAGE
SET:TRKSTAT CAD.DSA,CIN ab!	SET:TRKSTAT CAD.DSA TRAF ,CIN a b SET:TRKSTAT,CIN a b COMPLETED TRK COUNT 1

a = Traffic number of CIN
b = Abbreviated portion of CIN
= ATM*RT0/A
= ATM*RT0/T
= ATM*RT1A
= ATM*RT1T

SET DEGROWTH ROTL UNIT TRUNKS TO CAD DISABLED STATE AND VERIFY

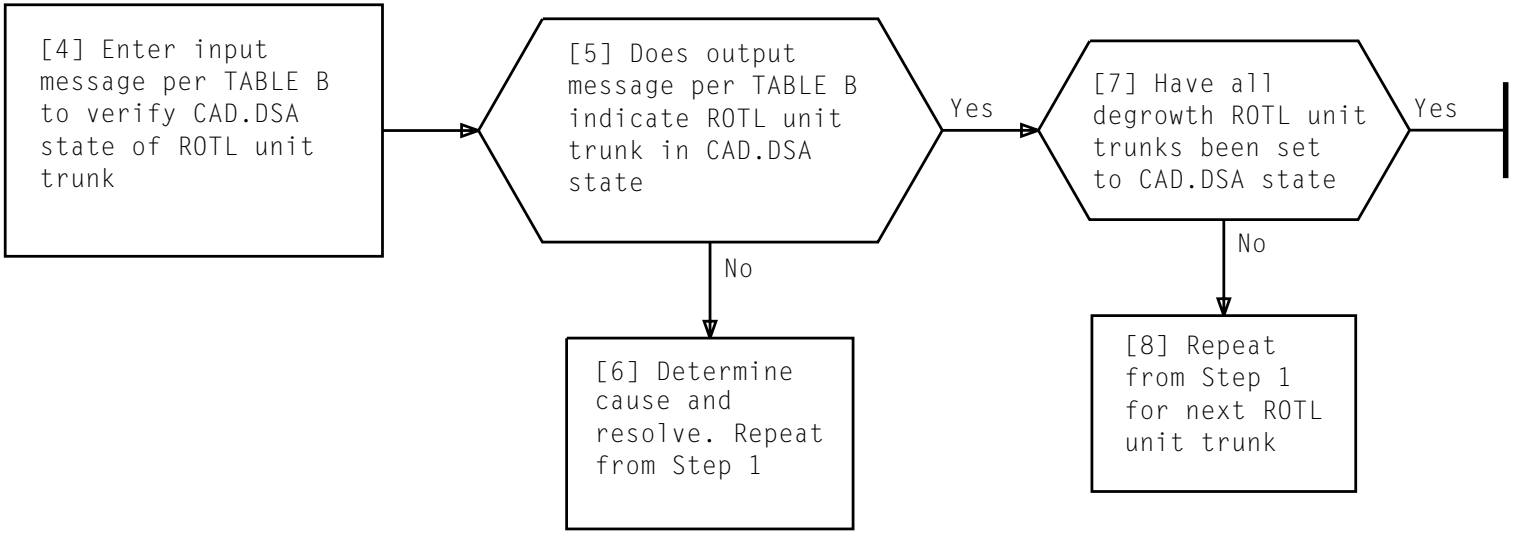


TABLE B

INPUT MESSAGE	OUTPUT MESSAGE
OP:TRKSTAT,CIN ab!	OP:TRKSTAT CAD.DSA TRAF ,CIN a b OP:TRKSTAT,CIN a b COMPLETED TRK COUNT 1

a = Traffic number of CIN
b = Abbreviated portion of CIN for trunk just set to CAD.DSA
= ATM*RT0/A
= ATM*RT0/T
= ATM*RT1A
= ATM*RT1T

SET DEGROWTH ROTL UNIT TRUNKS TO CAD DISABLED STATE AND VERIFY

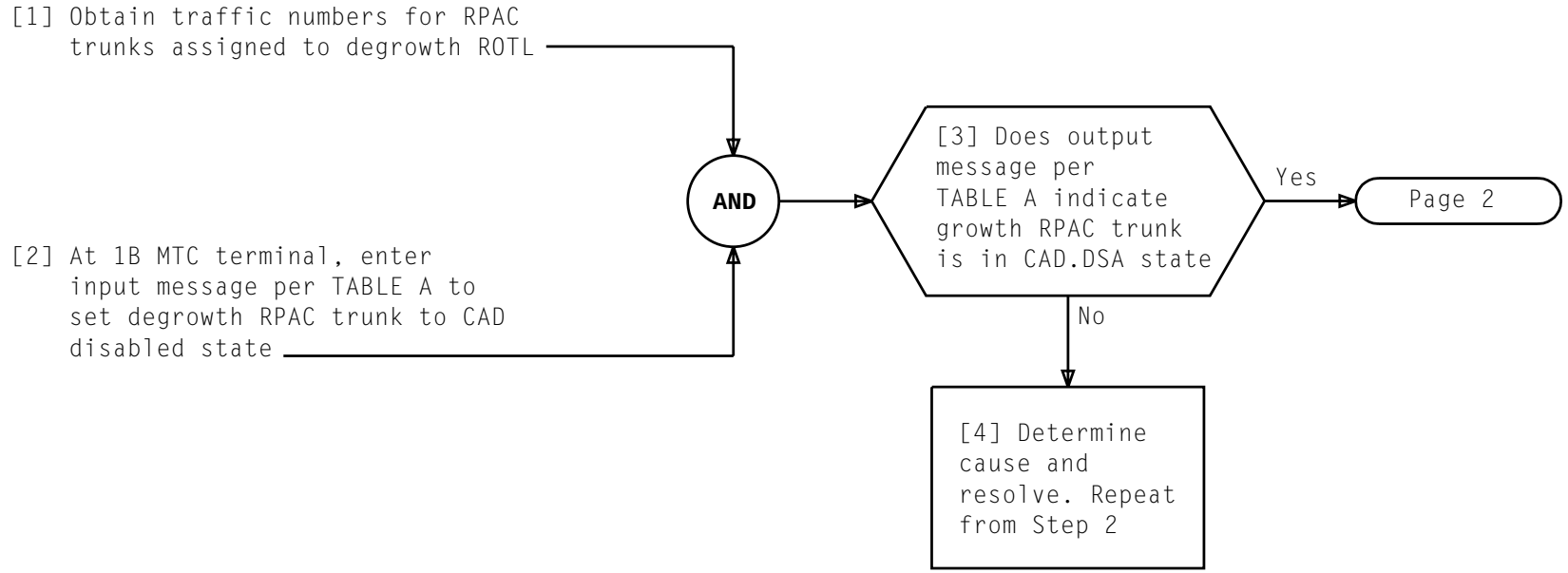


TABLE A

INPUT MESSAGE	OUTPUT MESSAGE
SET:TRKSTAT CAD.DSA,CIN aATM*RPCU!	SET:TRKSTAT CAD.DSA TRAF ,CIN aATM*RPCU
a = Traffic number of CIN	

SET DEGROWTH RPAC TRUNKS TO CAD DISABLED STATE AND VERIFY

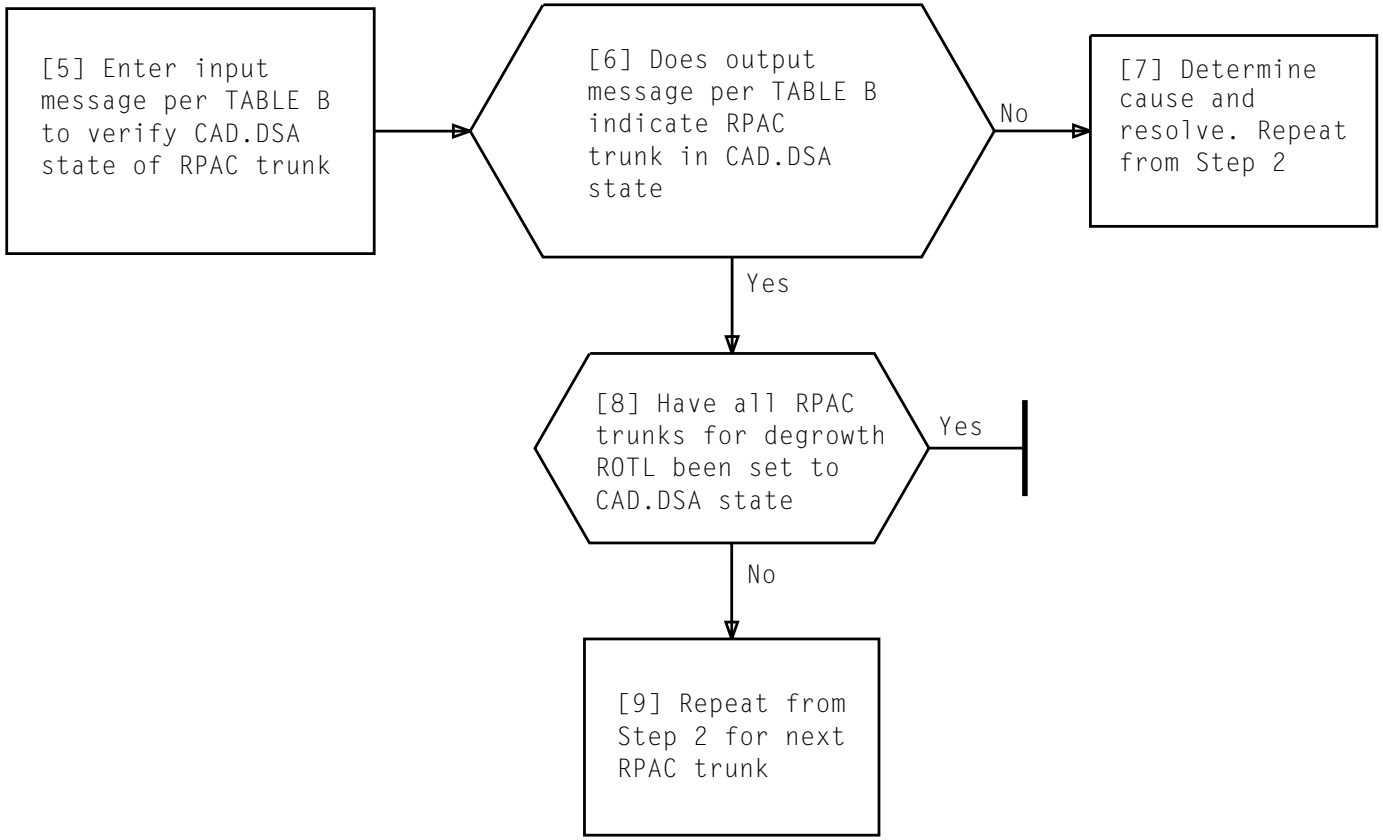


TABLE B

INPUT MESSAGE	OUTPUT MESSAGE
OP:TRKSTAT,CIN aATM*RPCU!	OP:TRKSTAT CAD.DSA TRAF ,CIN aATM*RPCU OP:TRKSTAT,CIN aATM*RPCU COMPLETED TRK COUNT 1
a = Traffic number of CIN	

SET DEGROWTH RPAC TRUNKS TO CAD DISABLED STATE AND VERIFY

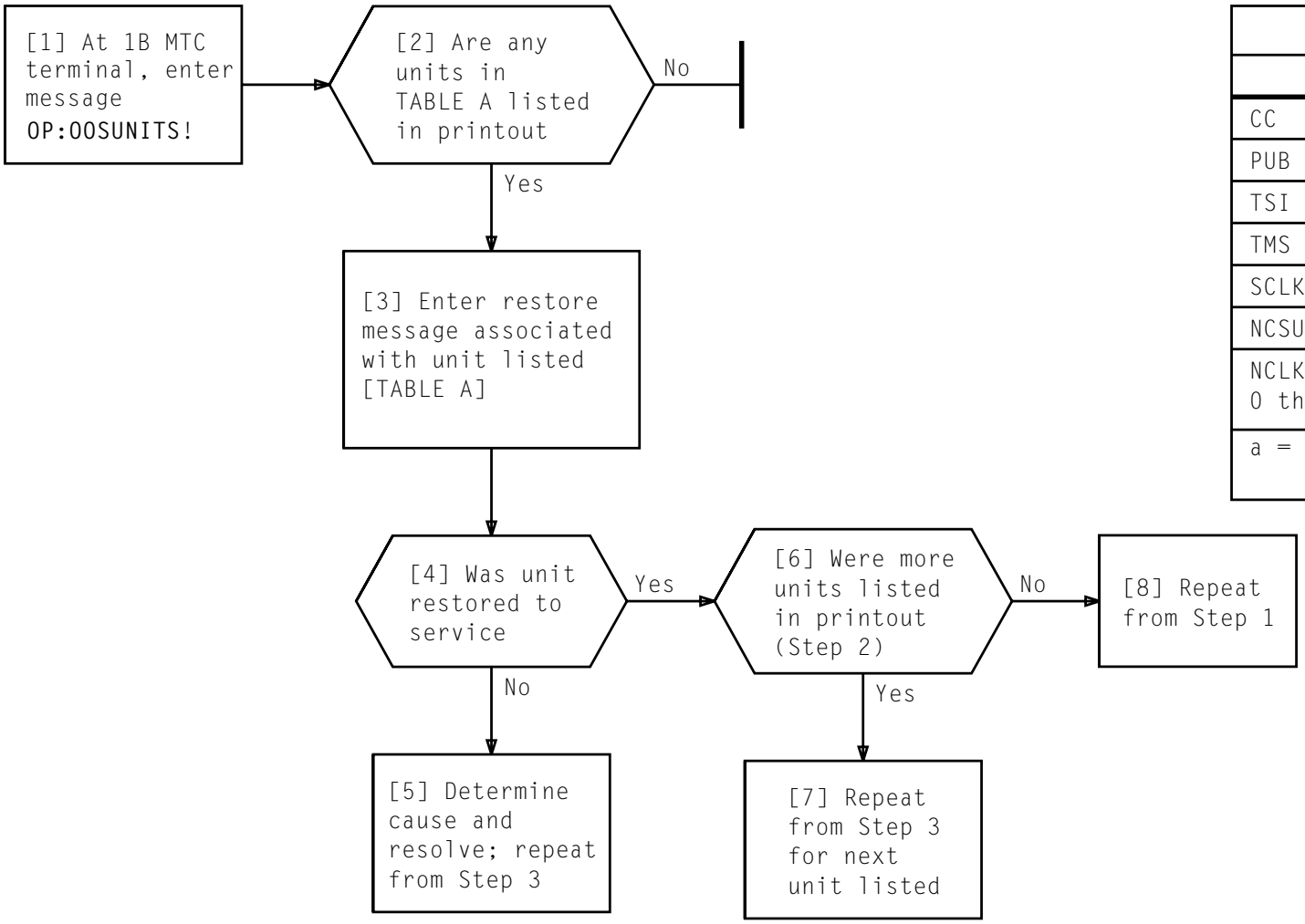


TABLE A

UNIT	RESTORE MESSAGE
CC	RST:CC a!
PUB	RST:PUB a!
TSI	RST:TSI a!
TMS	RST:TMS a!
SCLK	RST:SCLK 0!
NCSU	RST:SCLK 0,NCSU 0!
NCLK Chains 0 through 3	RST:NCLK 0,CHAIN a!

a = Member number/chain number listed in printout

VERIFY SYSTEM STATUS

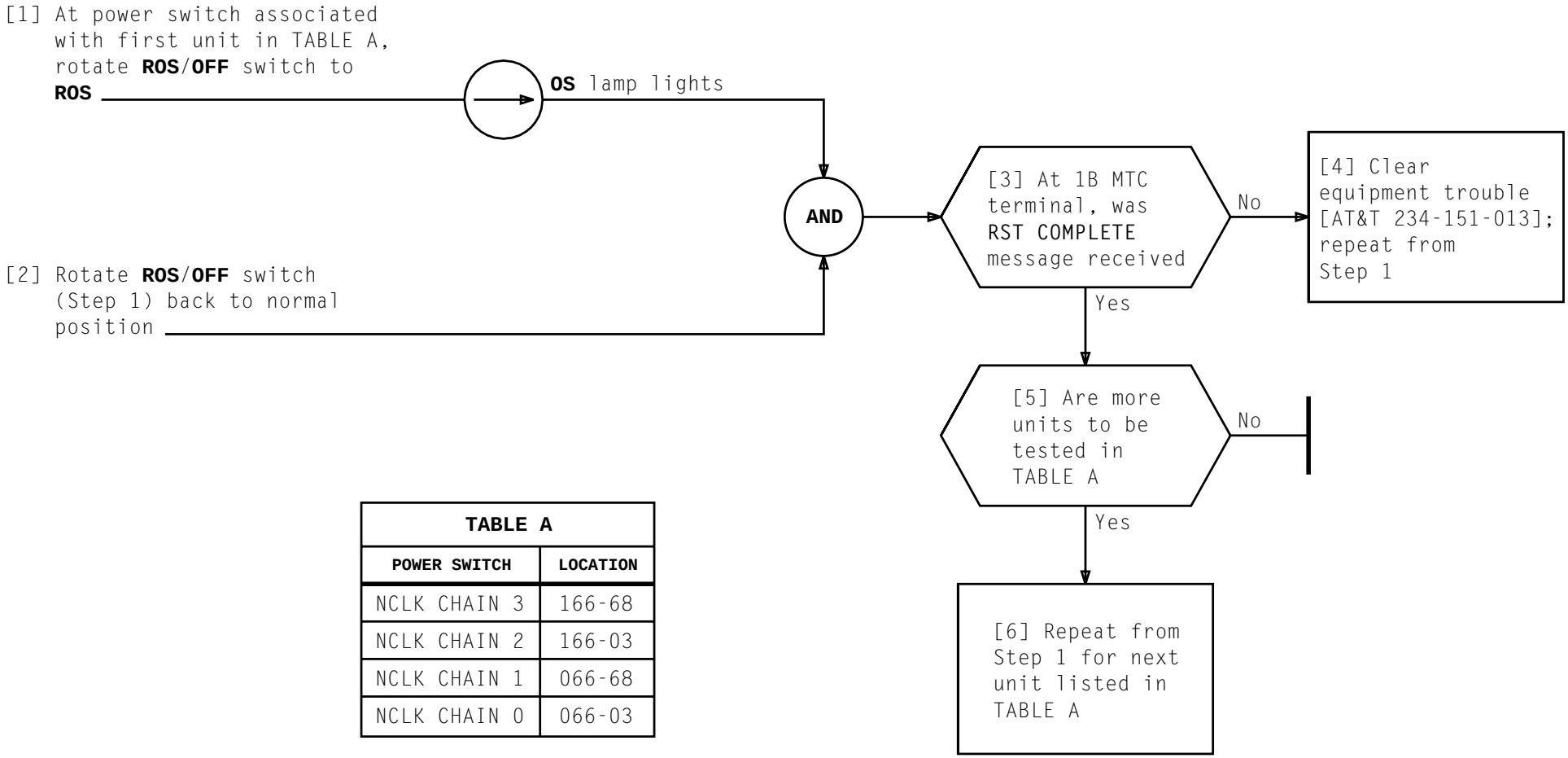


TABLE A	
POWER SWITCH	**LOCATION**
NCLK CHAIN 3	166-68
NCLK CHAIN 2	166-03
NCLK CHAIN 1	066-68
NCLK CHAIN 0	066-03

DIAGNOSE AND RESTORE FOUR CLOCK CHAINS

[1] At 1B MTC terminal, enter message
VER:UTYPE:SCLK 0!

[2] Using printout and TABLE A, record ENTRY ADDRESS for later use

[3] Using printout, FIG. 1 and TABLE A, convert second and third leftmost octal digits of octal word 12 to binary

[4] Record binary bits 17 through 19 for later use

[5] Using printout and TABLE A, record octal word 16 for later use

AND

Page 2

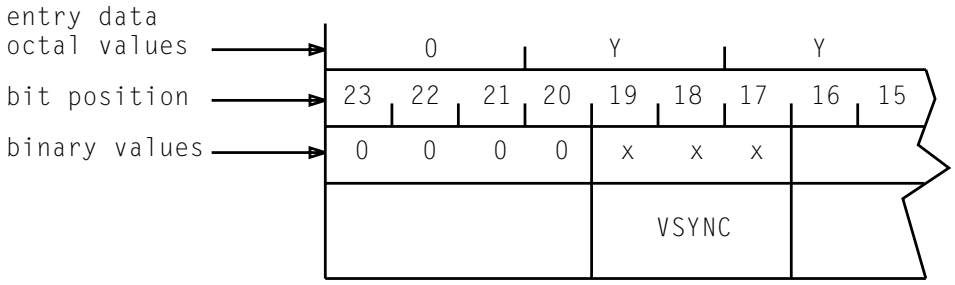


FIG. 1 - Octal Word 12 VSYNC Layout

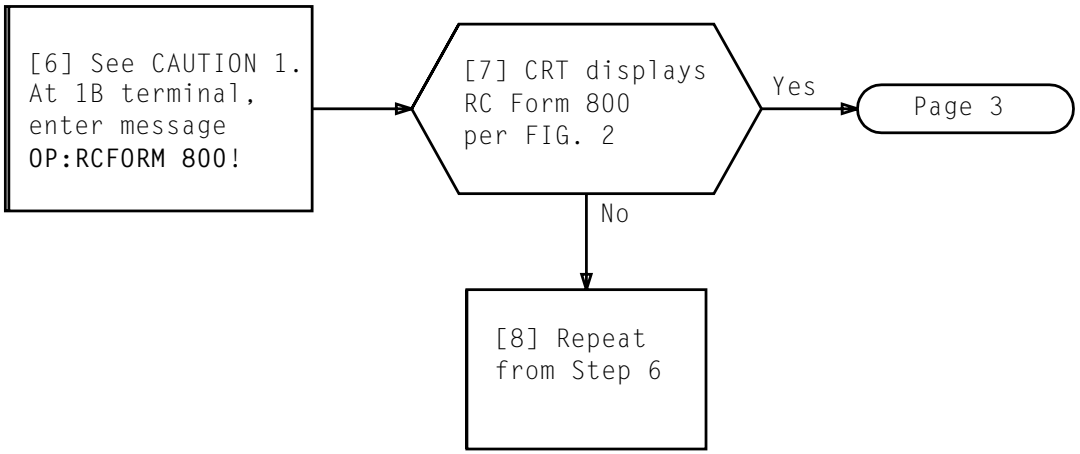
TABLE A

MESSAGE NUMBER	OUTPUT MESSAGE
1	VER:UTMN;OPT (),CUR: FLN a, UTYN SCLK, MEMN 0, ME OPER, ENTRY ADDRESS b, ENTRY SIZE 15, CUR WORD 0 _____ _____ _____ _____ _____ _____ _____ _____ WORD 10 _____ _____(WORD 12)_____ _____ _____(WORD 16)

a = Floor location number

b = Starting octal address for unit-type entry

RECENT CHANGE NCSU FIRMWARE VALUE




```
RC:FUNC;CHG;OPT (ABSOLUTE), ___:   FSONLY _ ,  ADDRESS ________,
ORNU ______ ,
WORDNO ____ ,
SIZE __ , DISP __ ,
BINOCT _ ,
NEWDATA ________________________,
OLDDATA ________________________,
REMARKS ______________________________________________!
```

FIG. 2 — Blank RC Form 800

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

RECENT CHANGE NCSU FIRMWARE VALUE

[9] Read NOTES 1 and 2. Using terminal and CRT display of RC Form 800, fill in blank fields on RC Form 800 per TABLE B and enter

Page 4

TABLE B

MESSAGE NUMBER	INPUT 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 recorded in Step 2, Page 1
d = RC order number
e = 10 (decimal)
f = 3
g = 17
h = B
i = 010
j = Binary bits recorded in Step 4, Page 1

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

RECENT CHANGE NCSU FIRMWARE VALUE

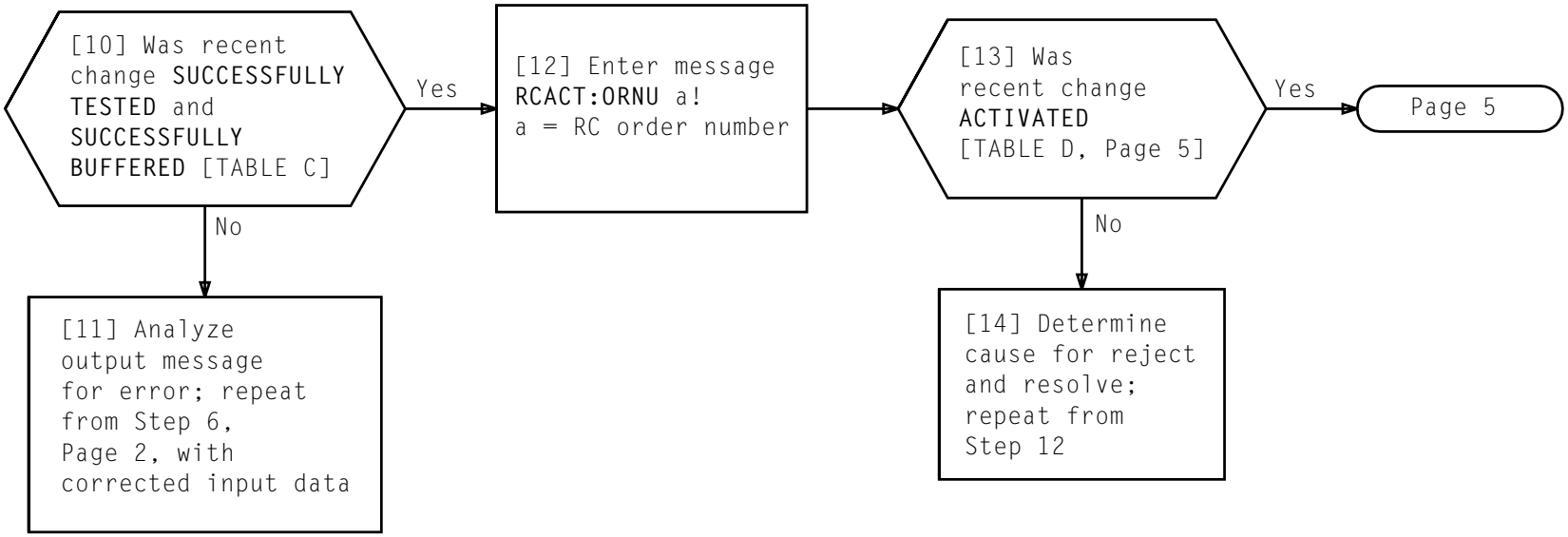


TABLE C

MESSAGE NUMBER	OUTPUT MESSAGES
1	RC ORNU a SUCCESSFULLY TESTED RC ORNU a SUCCESSFULLY BUFFERED RC:FUNC;CHG;OPT(ABSOLUTE),BUF: FSONLY N,ADDRESS a, ORNU b, WORDNO 10, SIZE 3, DISP 17, BINOCT B, NEWDATA 010, OLDDATA c, REMARKS ----------!

a = Entered address
b = RC Order number
c = Entered OLDDATA

RECENT CHANGE NCSU FIRMWARE VALUE

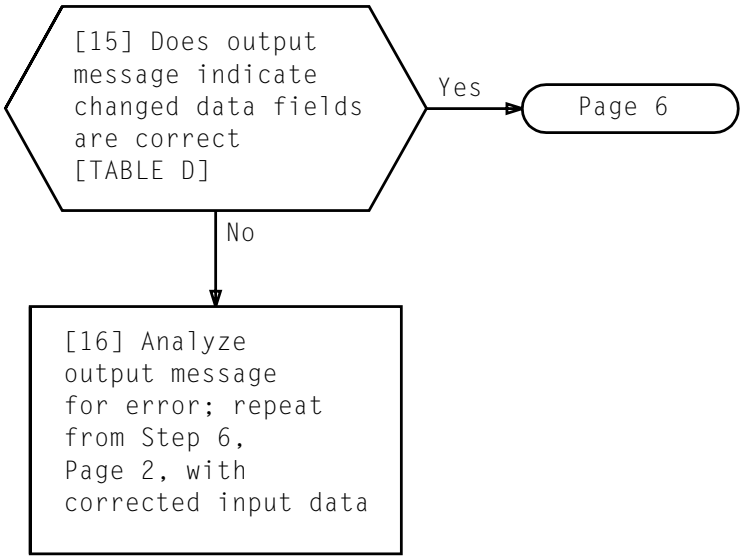
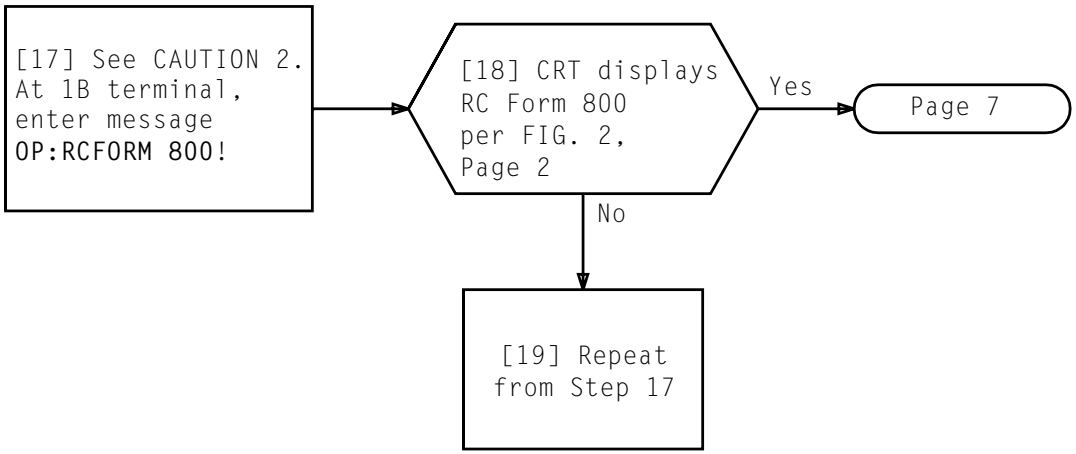


TABLE D

MESSAGE NUMBER	OUTPUT MESSAGES
1	RC ORNU a ACTIVATED RC:FUNC;CHG;OPT(ABSOLUTE),BUF: FSONLY N,ADDRESS a, ORNU b, WORDNO 10, SIZE 3, DISP 17, BINOCT B, NEWDATA 010, OLDDATA c, REMARKS _____!

a = Entered address
b = RC Order number
c = Entered OLDDATA

RECENT CHANGE NCSU FIRMWARE VALUE



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

RECENT CHANGE NCSU FIRMWARE VALUE

[20] Read NOTES 3 and 4. Using terminal and CRT display of RC Form 800, fill in blank fields on RC Form 800 per TABLE E and enter

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TABLE E

MESSAGE NUMBER	INPUT 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 recorded in Step 2, Page 1
d = RC order number
e = 14 (decimal)
f = 24
g = 0 (zero)
h = 0 (letter O)
i = 00010000
j = Octal word 16 recorded in Step 5, Page 1

NOTES
3. The quantity of binary bits to be entered as NEWDATA must be equal to decimal number entered as SIZE
4. The quantity of binary bits to be entered as OLDDATA must be equal to quantity of bits entered as NEWDATA

RECENT CHANGE NCSU FIRMWARE VALUE

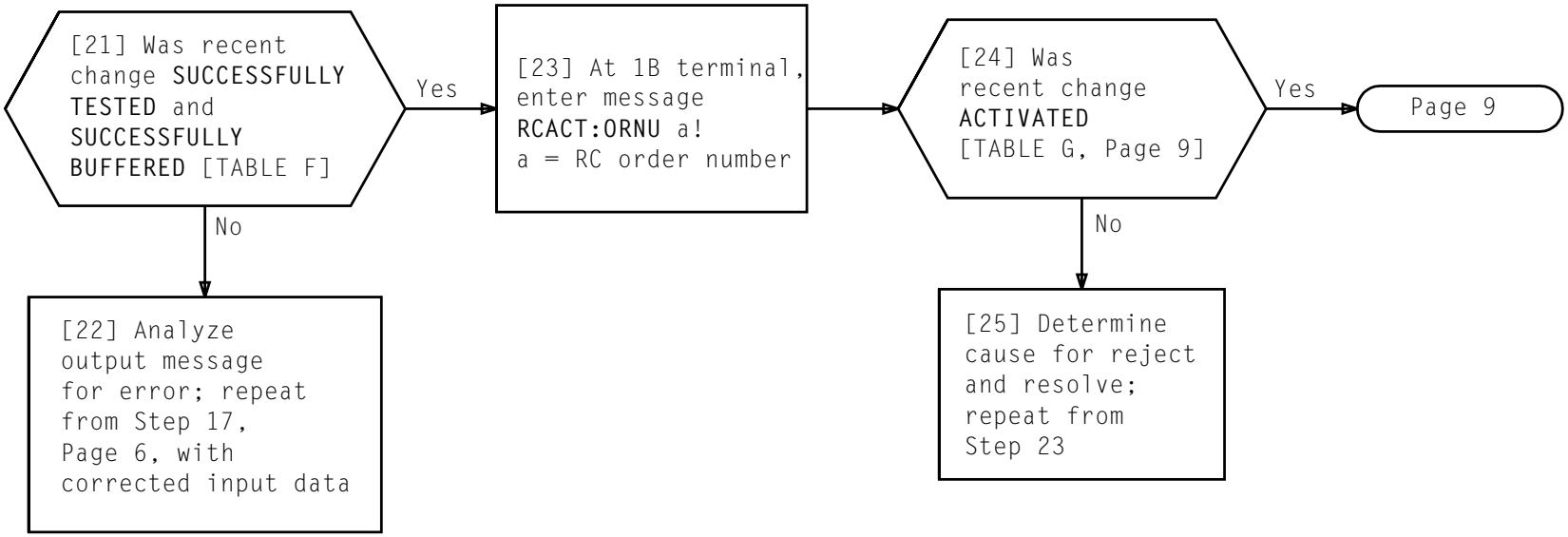


TABLE F

MESSAGE NUMBER	OUTPUT MESSAGES
1	RC ORNU a SUCCESSFULLY TESTED RC ORNU a SUCCESSFULLY BUFFERED RC:FUNC;CHG;OPT(ABSOLUTE),BUF: FSONLY N,ADDRESS a, ORNU b, WORDNO 14, SIZE 24, DISP 0, BINOCT 0, NEWDATA 00010000, OLDDATA c, REMARKS _____!

a = Entered address
b = RC Order number
c = Entered OLDDATA

RECENT CHANGE NCSU FIRMWARE VALUE

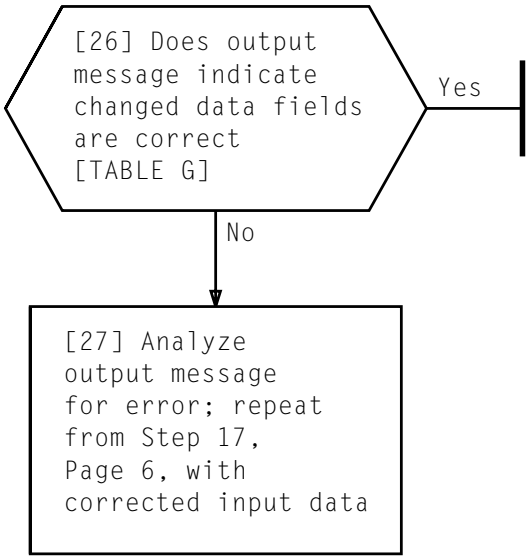
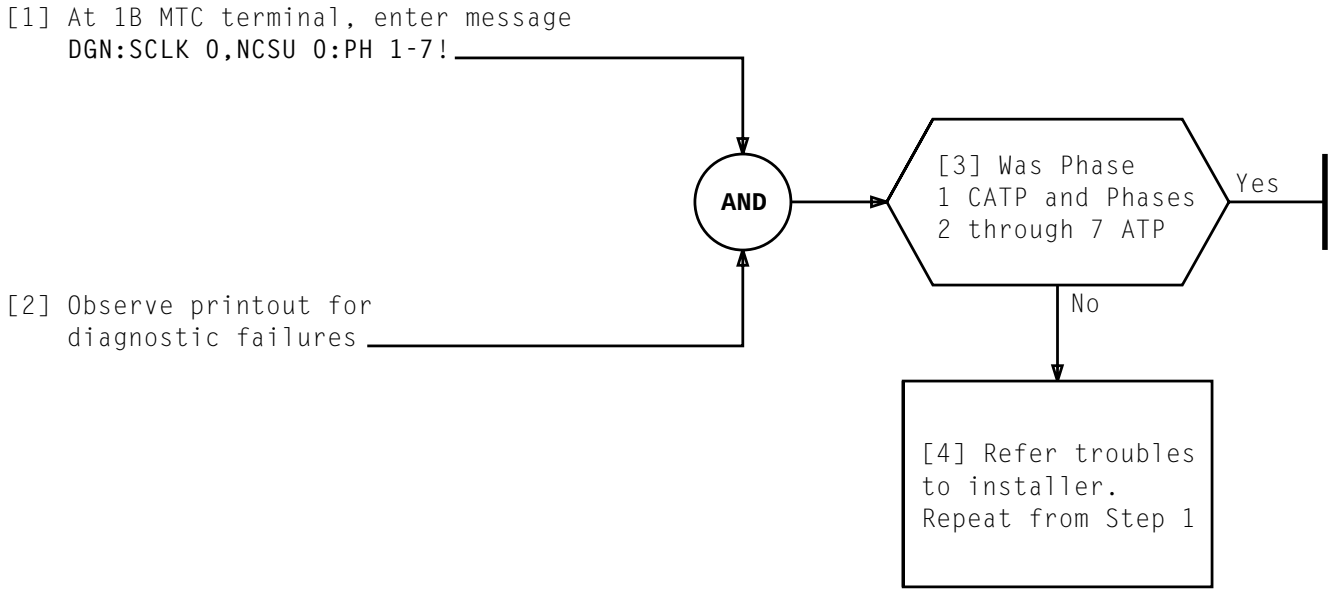


TABLE G

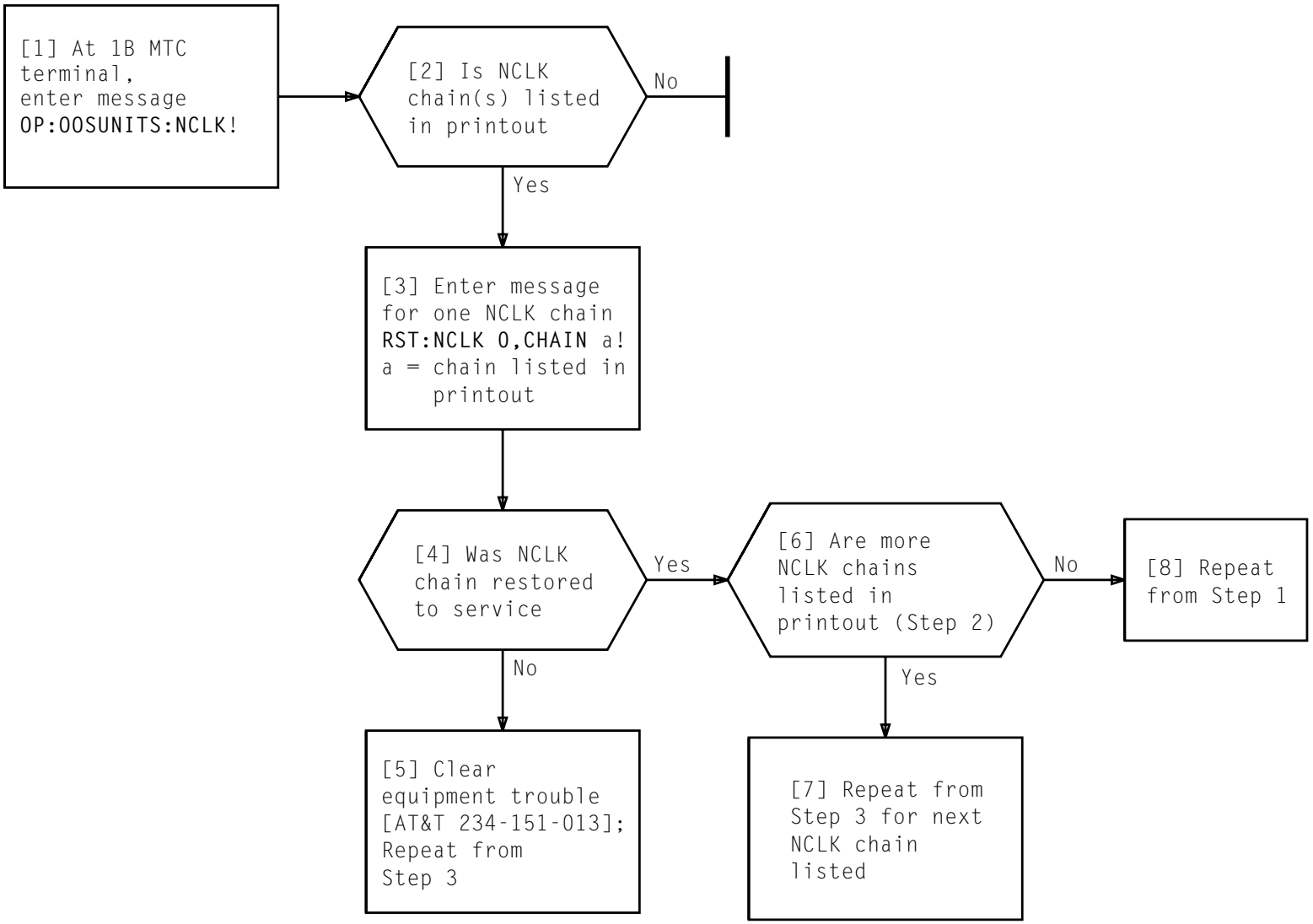
MESSAGE NUMBER	OUTPUT MESSAGES
1	RC ORNU a ACTIVATED RC:FUNC;CHG;OPT(ABSOLUTE),BUF: FSONLY N,ADDRESS a, ORNU b, WORDNO 14, SIZE 24, DISP 0, BINOCT 0, NEWDATA 00010000, OLDDATA c, REMARKS _____!

a = Entered address
b = RC Order number
c = Entered OLDDATA

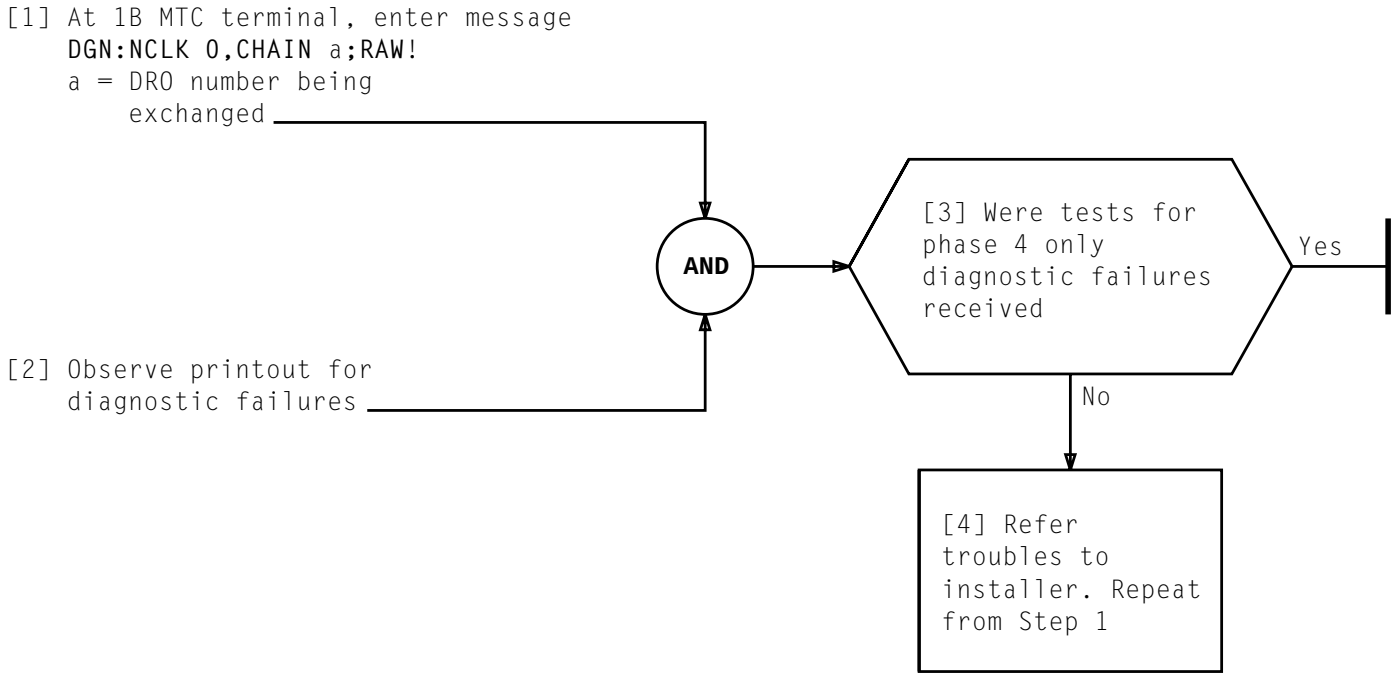
RECENT CHANGE NCSU FIRMWARE VALUE



DIAGNOSE NCSU FIRMWARE CHANGE



VERIFY NCLK CHAINS ARE IN-SERVICE



DIAGNOSE NCLK CHAIN BEING EXCHANGED

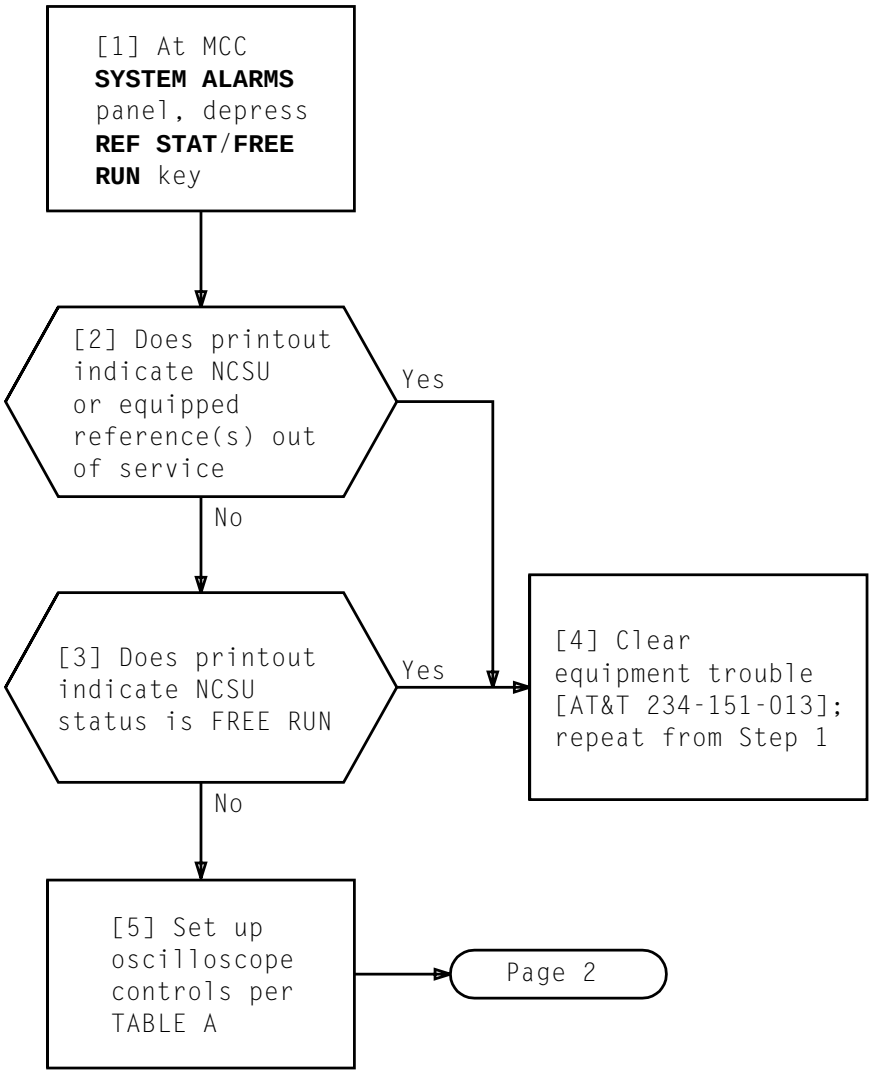


TABLE A

CONTROLS	SETTINGS
Channel 1 sensitivity*	2 volts/div
Vertical input	Channel 1
Trigger	Internal and norm or channel 1
Timebase	.1 or .2μs/div
Vertical and horizontal coupling	DC

*Scope probe must be connected to vertical channel 1

CHECK DS1 SYNC REFERENCE SIGNAL LEVEL

[6] At terminal block 052-03, attach probe ground to pin 090 and scope probe to pin 091

[7] See FIG. 1. Observe waveform for symmetry and amplitude [NOTES 1 and 2]

AND

[8] Does waveform resemble FIG. 1

No

[9] Contact sync coordinator for assistance

Yes

[10] At terminal block 052-03, move probe ground to pin 092 and scope probe to pin 093

[11] See FIG. 1. Observe waveform for symmetry and amplitude [NOTES 1 and 2]

AND

[12] Does waveform resemble FIG. 1

Yes

No

[13] Contact sync coordinator for assistance

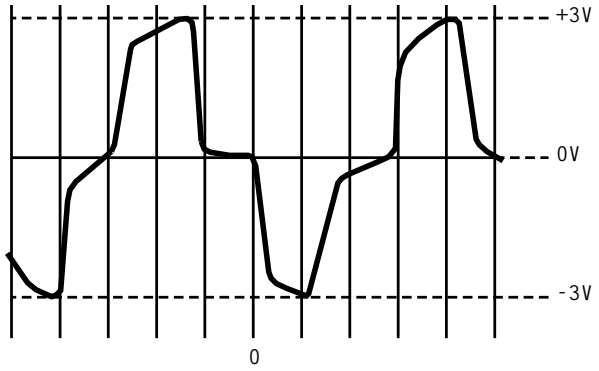


FIG. 1 — Typical DS1 Sync Reference Signal
Vert = 2V/DIV, Horiz = 0.1 µs/DIV

NOTES
1. Symmetry may vary slightly depending on cable lengths and grounding conditions
2. Amplitude limits are 3.5V p-p minimum and 8V p-p maximum

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CHECK DS1 SYNC REFERENCE SIGNAL LEVEL

ITEM	ISSUE	ITEM	ISSUE	ITEM	ISSUE	ITEM	ISSUE	ITEM	ISSUE	ITEM	ISSUE
• IXL-001		DLP-506		DLP-541		DLP-576					
NTP-002		DLP-507		DLP-542		DLP-577					
NTP-003		DLP-508		DLP-543		DLP-578					
NTP-004		DLP-509		DLP-544		DLP-579					
NTP-005		DLP-510		DLP-545		DLP-580					
• NTP-006		DLP-511		DLP-546		DLP-581					
NTP-007		DLP-512		DLP-547		DLP-582					
NTP-008		DLP-513		DLP-548		DLP-583					
• NTP-009		DLP-514		DLP-549		DLP-584					
• NTP-010		DLP-515		DLP-550		• DLP-585					
• NTP-011		DLP-516		DLP-551		• DLP-586					
NTP-012		DLP-517		DLP-552		• DLP-587					
NTP-013		DLP-518		DLP-553		• DLP-588					
NTP-014		DLP-519		DLP-554		• DLP-589					
• NTP-015		DLP-520		DLP-555		• DLP-590					
NTP-016		DLP-521		DLP-556		• DLP-591					
NTP-017		DLP-522		DLP-557		• CKL-891					
NTP-018		DLP-523		DLP-558		TNG-893					
NTP-019		DLP-524		DLP-559		DPL-895					
NTP-020		DLP-525		DLP-560							
NTP-021		DLP-526		DLP-561							
NTP-022		DLP-527		DLP-562							
NTP-023		DLP-528		DLP-563							
NTP-024		DLP-529		DLP-564							
• NTP-025		DLP-530		DLP-565							
• NTP-026		DLP-531		DLP-566							
• NTP-027		DLP-532		DLP-567							
• NTP-028		DLP-533		DLP-568							
• NTP-029		DLP-534		DLP-569							
DLP-500		DLP-535		DLP-570							
DLP-501		DLP-536		DLP-571							
DLP-502		DLP-537		DLP-572							
DLP-503		DLP-538		DLP-573							
DLP-504		DLP-539		DLP-574							
DLP-505		DLP-540		DLP-575							