Task Oriented Practice
(TOP)

4ESS™ SWITCH

1A PROCESSOR POWER AND

CONVERSION SWITCH UNITS REMOVAL

TOP Comments Hot Line:
Monday through Friday
8:00 a.m. - 4:00 p.m. Eastern Time
Call: 1-800-334-0404
Or FAX to: 1-910-727-3043

Developed by
AT&T Network Systems Customer Education & Training

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AT&T Network Systems Customer Education & Training

FIND YOUR JOB IN THE LIST BELOW	THEN GO TO
Acceptance	NTP-002
Remove Power From 1A Processor CS, ECS, PS, PPI, and CC Frames — Support to Installer (INST) (J5A007C)	NTP-003
Remove Power From 1A Processor CS, ECS, PS, PPI, and CC Frames (for LEC Offices) — Support to Installer (INST) (J5A007B)	NTP-004
Remove PUB 0 Conversion Switch Unit Using Spliced Cables — Support to Installer (INST)	NTP-005
Remove AUB 0 Conversion Switch Unit Using Spliced Cables — Support to Installer (INST)	NTP-006
Remove CC 0 GCP Conversion Switch Unit Using Spliced Cables — Support to Installer (INST)	NTP-007
Remove Scan and SD Conversion Switch Unit Using Spliced Cables — Support to Installer (INST)	NTP-008
Remove PUB 1 Conversion Switch Unit Using Spliced Cables — Support to Installer (INST)	NTP-009
Remove AUB 1 Conversion Switch Unit Using Spliced Cables — Support to Installer (INST)	NTP-010
Remove CC 1 GCP Conversion Switch Unit Using Spliced Cables — Support to Installer (INST)	NTP-011
Remove Power From 1A Processor CS, ECS, PS, PPI, and CC Frames (for AT&T Offices) — Support to Installer (INST) (J5A007B)	NTP-019
Unequip Office Alarm Assigned to Conversion Switch Units (Performed By TCC)	DLP-532
Unequip Office Alarm Assigned to Conversion Switch Units (Performed for LEC Offices)	DLP-533
Test Aisle Alarm and TTY — TEL Jacks	DLP-535

Acceptance tests are not required for verification of the growth procedures contained in this volume. The readiness of a frame or unit to become 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	
	WARNING: 1. The DUS, 3B computer (APS), CNI ring, TGR, and PUBB are also powered from the power conversion and distribution (PCD) or battery distribution fuse board (BDFB) frame. Therefore, it is extremely important that the correct fuses be marked for removal		
	NOTES: 1. 1A Processor power switch lamps/LEDs may or may not respond in a normal manner when removing power using the **ROS/OFF** switch. In any case, continue to remove power from the 1A Processor call stores (CSs), program stores (PSs), processor peripheral interface (PPI), and central controls (CCs) 2. Investigate all alarms that occur while performing this procedure 3. If on-site work force (OSWF) and installer cannot identify, verify, and record the locations of all PCD or BDFB fuses associated with 1A Processor CSs, PSs, PPI, and CCs to be removed, STOP IMMEDIATELY and contact appropriate technical support group		
1	Using Office Records, Identify, Physically Verify, and Record Location of PCD or BDFB Frame Fuses Associated With 1A Processor CSs, PSs, PPI, and CCs	TELCO/INST	DLP-500
2	If 1A Processor Frames Receive Power From J5A007C PCD Frame, Remove Blown Fuse Indicator LEDs Associated With Fuses Previously Identified by Pushing Inward on LED Cartridge, Rotating Clockwise To Release and Pulling Outward. Otherwise, Continue With Step 3	TELCO/INST	—
3	At Each Conversion Switch Unit, Ensure Each **TN1808/TN2808** Circuit Pack **ON/OFF** Switch Is in **OFF** Position. If Switch Is Not in **OFF** Position, Move Switch to **OFF** Position for Each **TN1808/TN2808** Circuit Pack. Otherwise, Continue With Step 4	TELCO	—
4	At BDFB Frame, Locate Seven Conversion Switch Unit 1/2-Amp **70G** Indicator Fuse Positions (**PU0 CONV SW, PU1 CONV SW, AU0 CONV SW, AU1 CONV SW, GCP0 CONV SW, GCP1 CONV SW,** and **SSD CONV SW**) and Ensure Fuses Have Been Removed and Dummy Fuses Installed. If Fuses Have Not Been Removed, Remove Indicator Fuses and Install Dummy Fuses. Otherwise, Continue With Step 5	TELCO	—
5	At PCD or BDFB Frame, Locate Seven Conversion Switch Unit 5-Amp **74C** Load Fuse Positions (**PU0 CONV SW, PU1 CONV SW, AU0 CONV SW, AU1 CONV SW, GCP0 CONV SW, GCP1 CONV SW,** and **SSD CONV SW**) and Ensure Fuses Have Been Removed and Dummy Fuses Installed. If Fuses Have Not Been Removed, Remove Load Fuses and Install Dummy Fuses. Otherwise, Continue With Step 6	TELCO	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
6	At Power Switch Associated With 1A Processor CS Unit To Be Removed, Depress **TEST** Pushbutton and Expect Lamps/LEDs To Light Verifying That Power Is Present. If No Lamps/ LEDs Light, STOP IMMEDIATELY and Contact Appropriate Technical Support Group. Otherwise, Continue With Step 7	TELCO	—
7	At Power Switch Associated With 1A Processor CS Unit To Be Removed, Rotate **ROS/OFF** Switch Clockwise to **ROS** Position; Depress **ROS/OFF** Switch and Expect **PWR OFF** Lamp/LED To Light	TELCO	—
8	Repeat Steps 6 and 7 for All 1A Processor CS Units	TELCO	—
9	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Locate and Remove All Power Bus A -48V PCD or BDFB Fuses Associated With All 1A Processor CS Units	TELCO/INST	—
10	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Locate and Remove All Power Bus B -48V PCD or BDFB Fuses Associated With All 1A Processor CS Units	TELCO/INST	—
11	At Rear of Power Distribution Frame, Use Clamp-on DC Ammeter and Check All CS Fuse Leads To Ensure No Current Is Present. If Current Is Present, Repeat From Step 9. Otherwise, Continue With Step 12	INST	—
12	Individually Remove All 1A Processor CS Unit **-48A** and **-48B** Power Cables	INST	—
13	At Power Switch Associated With 1A Processor PS Unit To Be Removed, Depress **TEST** Pushbutton and Expect Lamps/LEDs To Light Verifying That Power Is Present. If No Lamps/ LEDs Light, STOP IMMEDIATELY and Contact Appropriate Technical Support Group. Otherwise, Continue With Step 14	TELCO	—
14	At Power Switch Associated With 1A Processor PS Unit To Be Removed, Rotate **ROS/OFF** Switch Clockwise to **ROS** Position; Depress **ROS/OFF** Switch and Expect **PWR OFF** Lamp/LED To Light	TELCO	—
15	Repeat Steps 13 and 14 for All 1A Processor PS Units	TELCO	—
16	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Locate and Remove All Power Bus A -48V PCD or BDFB Fuses Associated With All 1A Processor PS Units	TELCO/INST	—
17	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Locate and Remove All Power Bus B -48V PCD or BDFB Fuses Associated With All 1A Processor PS Units	TELCO/INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
18	At Rear of Power Distribution Frame, Use Clamp-on DC Ammeter and Check All PS Fuse Leads To Ensure No Current Is Present. If Current Is Present, Repeat From Step 16. Otherwise, Continue With Step 19	INST	—
19	Individually Remove All 1A Processor PS Unit **-48A** and **-48B** Power Cables	INST	—
20	At Power Switch (Labeled MCC) Associated With 1A Processor PPI Frame To Be Removed, Depress **TEST** Pushbutton and Expect Lamps/LEDs To Light Verifying That Power Is Present. If No Lamps/LEDs Light, STOP IMMEDIATELY and Contact Appropriate Technical Support Group. Otherwise, Continue With Step 21	TELCO	—
21	At Power Switch (Labeled MCC) Associated With 1A Processor PPI Frame To Be Removed, Rotate **ROS/OFF** Switch Clockwise to **ROS** Position; Depress **ROS/OFF** Switch and Expect **PWR OFF** Lamp/LED To Light	TELCO	—
22	At Power Switch Associated With 1A Processor Remote Access Interface (RAI) Unit To Be Removed, Depress **TEST** Pushbutton and Expect Lamps/LEDs To Light Verifying That Power Is Present. If No Lamps/LEDs Light, STOP IMMEDIATELY and Contact Appropriate Technical Support Group. Otherwise, Continue With Step 23	TELCO	—
23	At Power Switch Associated With 1A Processor RAI Unit To Be Removed, Rotate **ROS/OFF** Switch Clockwise to **ROS** Position; Depress **ROS/OFF** Switch and Expect **PWR OFF** Lamp/LED To Light	TELCO	—
24	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Locate and Remove PCD or BDFB **-48V PPI H** Fuse Associated With PPI Frame	TELCO/INST	—
25	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Locate and Remove PCD or BDFB **-48V PPI AC** Fuse Associated With PPI Frame	TELCO/INST	—
26	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Locate and Remove PCD or BDFB **+24V PPI X, W, V** and **Y** Fuses Associated With PPI Frame	TELCO/INST	—
27	At Rear of Power Distribution Frame, Use Clamp-on DC Ammeter and Check All PPI Fuse Leads To Ensure No Current Is Present. If Current Is Present, Repeat From Step 24. Otherwise, Continue With Step 28	INST	—
28	Individually Remove 1A Processor PPI Frame **+24V, +24W, +24X, +24Y, -48H,** and **-48AC** Power Cables	INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
29	At Power Switch Associated With 1A Processor CC 1 To Be Removed, Depress **TEST** Pushbutton And Expect Lamps/LEDs To Light Verifying That Power Is Present. If No Lamps/LEDs Light, STOP IMMEDIATELY and Contact Appropriate Technical Support Group. Otherwise, Continue With Step 30	TELCO	—
30	At Power Switch Associated With 1A Processor CC 1 To Be Removed, Rotate **ROS/OFF** Switch Clockwise to **ROS** Position; Depress **ROS/OFF** Switch; and Expect **PWR OFF** Lamp/LED To Light	TELCO	—
31	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Locate and Remove **-48V CC1A** and **+24V CC1A** PCD or BDFB Fuses Associated With 1A Processor CC 1	TELCO/INST	—
32	At Rear of Power Distribution Frame, Use Clamp-on DC Ammeter and Check All CC 1 Fuse Leads To Ensure No Current Is Present. If Current Is Present, Repeat From Step 31. Otherwise, Continue With Step 33	INST	—
33	Individually Remove 1A Processor CC 1 Frame **+24B** and **-48B** Power Cables	INST	—
34	At Power Switch Associated With 1A Processor CC 0 To Be Removed, Depress **TEST** Pushbutton and Expect Lamps/LEDs To Light Verifying That Power Is Present. If No Lamps/LEDs Light, STOP IMMEDIATELY and Contact Appropriate Technical Support Group. Otherwise, Continue With Step 35	TELCO	—
35	At Power Switch Associated With 1A Processor CC 0 To Be Removed, Rotate **ROS/OFF** Switch Clockwise to **ROS** Position; Depress **ROS/OFF** Switch and Expect **PWR OFF** Lamp/LED To Light	TELCO	—
36	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Locate and Remove **-48V CC0A** and **+24V CC0A** PCD or BDFB Fuses Associated With 1A Processor CC 0	TELCO/INST	—
37	At Rear of Power Distribution Frame, Use Clamp-on DC Ammeter and Check All CC 0 Fuse Leads To Ensure No Current Is Present. If Current Is Present, Repeat From Step 36. Otherwise, Continue With Step 38	INST	—
38	Individually Remove 1A Processor CC 0 **+24A** and **-48A** Power Cables	INST	—
39	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, at PCD or BDFB Frame Verify That All Identified Fuses Have Been Removed. Turn Over Fuse Designation Cards and Relabel, as Necessary and Install Dummy Fuse at Each Vacant Fuse Location	TELCO/INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
	CAUTIONS: 1. Hazardous voltage is present under 4A timer terminal strip protective cover/shield *2. Terminal strip protective cover/shield may use "stand-off spacers" that can possibly slide off screws as they are being removed. Precautions should be taken to secure spacers as screws are removed*		
40	At Rear of PPI Frame, Locate and Remove 4A Timer Terminal Strip Protective Cover/Shield	INST	—
41	At Rear of PPI Frame, Use Digital Voltmeter (ITE 6379 or Equivalent) and Measure 4A Timer Terminal Strip 120-Volt AC Terminals for Presence of 120-Volt AC. If Voltage Is Present, Go to Step 42. Otherwise, Go to Step 44	INST	—
42	Using Office Drawing T-xxxx-Hy-3300 (xxxx = Office Number; y = 0 or 1), Identify Location of 4A Timer 120-Volt AC 1-1/3 Amp Fuse. At Miscellaneous A Frame, Remove Identified Fuse and Install Dummy Fuse	TELCO	—
43	At Rear of PPI Frame, Use Digital Voltmeter (ITE 6379 or Equivalent) and Measure 4A Timer Terminal Strip 120-Volt AC Terminals for Absence of 120-Volt AC. If Voltage Is Present, STOP IMMEDIATELY and Contact Appropriate Technical Support Group. Otherwise, Go to Step 44	INST	—
44	Using Office Drawing T-xxxx-Hy-3300 (xxxx = Office Number; y = 0 or 1), Identify Location of 1A Processor MCC Clock Fuse and All 1A Processor MCC Console Protected 120-Volt AC Receptacle Fuses. At Miscellaneous A Frame, Remove Identified Fuses and Install Dummy Fuses	TELCO	—
45	Using Digital Voltmeter (ITE 6379 or Equivalent), Check 1A Processor MCC Console 120-Volt AC Receptacles for Absence of Voltage; and Visually Check 1A Processor MCC Clock To Verify Power Has Been Removed	INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
		RESPONSIBILITY	
	WARNING 1: *The DUS, 3B computer (APS), CNI ring, TGR, and PUBB are also powered from the power conversion and distribution (PCD) frame. Therefore, it is extremely important that the correct fuses be marked for removal*		
	NOTES: 1. This procedure is to be performed in a LEC ***4ESS***™ Switch office only 2. 1A Processor power switch lamps/LEDs may or may not respond in a normal manner when removing power using the **ROS/OFF** switch. In any case, continue to remove power from the 1A Processor call stores (CSs), program stores (PSs), processor peripheral interface (PPI), and central controls (CCs) 3. Investigate all alarms that occur while performing this procedure 4. If on-site work force (OSWF) and installer cannot identify, verify, and record the locations of all PCD fuses associated with 1A Processor CSs, PSs, PPI, and CCs to be removed, STOP IMMEDIATELY and contact appropriate technical support group		
1	Using Office Records, Identify, Physically Verify, and Record Location of PCD Frame Fuses Associated With 1A Processor CSs, PSs, PPI, and CCs	TELCO/INST	DLP-500
2	If J5A007B PCD Frame Is Equipped With Six Active Power Converters, Power Down PCD 0, Converter 2 and PCD 1, Converter 2; Then Continue With Step 3. Otherwise, Go to Step 27	TELCO	—
	NOTE: Steps 3 through 14 will be performed to degrow PCD 0, Converter 2		—
3	At 1B Processor MTC Terminal, Restore PCD 0, DAMON 0 (**RST:PCD 0,DAMON 0!**) and Expect Diagnostics To Complete With ATP Results	TELCO	—
4	At 1B Processor MTC Terminal, Remove PCD 0, DAMON 0 (**RMV:PCD 0,DAMON 0!**)	TELCO	—
5	At 1B Processor MTC Terminal, Remove PCD 0, Converter 2 (**RMV:PCD 0,CONV 2!**)	TELCO	—
6	At PCD 0, DAMON 0 Power Switch, Rotate **ROS/OFF** Switch Clockwise to **ROS** Position; Ensure **OS** Lamp/LED Is Lighted; Then Depress **ROS/OFF** Switch and Expect **PWR OFF** Lamp/LED To Light	TELCO	—
7	Remove PCD 0, Converter 2 **CA21** (144-09-300) and **CA22** (144-09-310) Cables From PCD 0, DAMON 0	INST	—
8	At PCD 0, DAMON 0, Remove Fuses **+LP/2** and **+CTST/2** (113-15); Remove Circuit Packs **FB153** (148-10) and **FC23** (148-11), and Re-install Fuses Previously Removed	INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
9	At 1B Processor MTC Terminal, Enter **RST:PCD 0,CONV 2;UCL!** To Clear Out-of-Service (OOS) PCD 0, Converter 2 From OOS List and MCC Display	TELCO	—
10	At 1B Processor MTC Terminal, Perform Overwrite To Change Word 0 of PCD Translator **(IN:0WBUF:ADR 14021200,DATA 600017,0LDDATA 6000777!)**	TELCO	—
11	At 1B Processor MTC Terminal, Enter **COPY:OWBUF!** To Copy Overwrite Buffer	TELCO	—
12	At 1B Processor MTC Terminal, Enter **UPD:HDATA!** To Update Hash Data	TELCO	—
13	At PCD 0, DAMON 0 Power Switch, Depress **ON** Pushbutton; Rotate **ROS/OFF** Switch Counterclockwise to **NORM** Position; and Expect Diagnostics To Run but PCD 0, DAMON 0 To Remain Out-of-Service (OOS)	TELCO	—
14	At 1B Processor MTC Terminal, Restore PCD 0, DAMON 0 **(RST:PCD 0,DAMON 0!)**	TELCO	—
	NOTE: Steps 15 through 26 will be performed to degrow PCD 1, Converter 2		
15	At 1B Processor MTC Terminal, Restore PCD 1, DAMON 0 **(RST:PCD 1,DAMON 0!)** and Expect Diagnostics To Complete With ATP Results	TELCO	—
16	At 1B Processor MTC Terminal, Remove PCD 1, DAMON 0 **(RMV:PCD 1,DAMON 0!)**	TELCO	—
17	At 1B Processor MTC Terminal, Remove PCD 1, Converter 2 **(RMV:PCD 1,CONV 2!)**	TELCO	—
18	At PCD 1, DAMON 0 Power Switch, Rotate **ROS/OFF** Switch Clockwise to **ROS** Position; Ensure **OS** Lamp/LED Is Lighted; Then Depress **ROS/OFF** Switch and Expect **PWR OFF** Lamp/LED To Light	TELCO	—
19	Remove PCD 1, Converter 2 **CA35** (144-24-300) and **CA37** (144-24-310) Cables From PCD 1, DAMON 0	INST	—
20	At PCD 1, DAMON 0, Remove Fuses **+LP/2** and **+CTST/2** (113-27); Remove Circuit Packs **FB153** (148-25) and **FC23** (148-26), and Re-install Fuses Previously Removed	INST	—
21	At 1B Processor MTC Terminal, Enter **RST:PCD 1,CONV 2;UCL!** To Clear Out-of-Service (OOS) PCD 1, Converter 2 From OOS List and MCC Display	TELCO	—
22	At 1B Processor MTC Terminal, Perform Overwrite To Change Word 0 of PCD Translator **(IN:0WBUF:ADR 14021207,DATA 600017,0LDDATA 6000777!)**	TELCO	—
23	At 1B Processor MTC Terminal, Enter **COPY:OWBUF!** To Copy Overwrite Buffer	TELCO	—
24	At 1B Processor MTC Terminal, Enter **UPD:HDATA!** To Update Hash Data	TELCO	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
25	At PCD 1, DAMON 0 Power Switch, Depress **ON** Pushbutton; Rotate **ROS/OFF** Switch Counterclockwise to **NORM** Position; and Expect Diagnostics To Run but PCD 1, DAMON 0 To Remain Out-of-Service (OOS)	TELCO	—
26	At 1B Processor MTC Terminal, Restore PCD 1, DAMON 0 **(RST:PCD 1,DAMON 0!)** and Expect Diagnostics To Complete With ATP Results	TELCO	—
27	Ensure Applicable Load-Resistor Mounting Apparatus and Load Resistors (CN5207IH and CN0196NW) Have Been Installed To Ensure Continued +24V Converter Regulation During the Removal of 1A Processor PPI and CCs. If Mounting Apparatus and Load-Resistors Have Not Been Installed, Continue With Step 28. Otherwise, Continue With Step 54	INST	—
	NOTE: The two load-resistor assemblies are supplied in a mirror-image pair. The ED-5A311-10G-1,SA load-resistor panel must be mounted in Bay 0. The load-resistor assembly mounted in Bay 0 must be performed so that the cable exit hole is position as close as possible to the vertical channel separating PCD frame Bay 0 and Bay 1. The ED-5A311-10G-1,SB load-resistor panel must be mounted in Bay 2. The load-resistor assembly mounted in Bay 2 must be performed so that the cable exit hole is positioned as close as possible to the vertical channel separating PCD frame Bay 1 and Bay 2.		
	CAUTION: *Extreme care must be exercised while working in the PCD frame. Use insulated tools to loosen and tighten terminal screws and nuts. Also, ensure the ends of wires to be added/connected are insulated with tape until they are ready to be secured to the terminals.*		
	NOTE: If SHIELDED power cable is supplied to connect load-resistor assembly to PCD frame, remove outer vinyl jacket and braided shield before mounting assembly to PCD frame		
28	At PCD Frame Bay 0 Vertical Position 056, Mount Load-Resistor Assembly (ED-5A311-10G-1,SA) Using Four Pan Head Self-Tapping (PHST) Screws (840047534)	INST	—
29	If PCD Frame Is Equipped With Only Two Converters, Notify On-Site Work Force (OSWF) That a **HAZARDOUS CONDITION** Exists Due to the High Temperature of the Load-Resistor Assembly Housing. Once the Load-Resistor Assembly Is Operational, Do Not Set Anything on Load-Resistor Assembly Housing.	INST	—
30	If Heat Shroud Hardware Is Required But Not Available, Notify Customer Service via Tracker That Additional Hardware Is Required To Correct Hazardous Condition Due to Temperature of Load-Resistor Assembly Housing	INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
31	Ensure Both Ends of Load-Resistor Assembly Cable Pair Are Insulated With Electrical Tape. Route Cable Pair Down Cable Channel Between PCD Frame Bay 0/Bay 1 and Feed Cable Pair Into +24V A Fuse Cabinet at Vertical Position 32	INST	
32	At 1B Processor MTC Terminal, Restore PCD 0, DAMON 0 (**RST:PCD 0,DAMON 0!**) and Expect Diagnostics To Complete With ATP Results	TELCO	—
33	At 1B Processor MTC Terminal, Remove PCD 0, DAMON 0 (**RMV:PCD 0,DAMON 0!**)	TELCO	—
34	At PCD 0, DAMON 0 Power Switch, Rotate **ROS/OFF** Switch Clockwise to **ROS** Position; Ensure **OS** Lamp/LED Is Lighted; Then Depress **ROS/OFF** Switch and Expect **PWR OFF** Lamp/LED To Light	TELCO	—
35	At Rear of +24V A Fuse Cabinet, Using Terminal Lug Supplied Attach Lug to Cable Pair Lead With "Slash" Tracer and Secure Lead/Lug to +24V A Return Terminal	INST	—
36	At Rear of +24V A Fuse Cabinet, Using Terminal Lug Supplied Attach Lug to Other Cable Pair Lead (Without "Slash" Tracer) and Secure Lead/Lug to Terminal Associated With Fuse Position 4 at Equipment Location 118-15	INST	—
37	At Front of +24V A Fuse Cabinet, Install **74D** 10-Amp Fuse Into Fuse Position 4 at Equipment Location 118-15	TELCO	—
38	At Rear of +24V A Fuse Cabinet, Use Clamp-on Ammeter and Verify Approximately 5 Amps of Current is Being Drawn by PCD Frame Bay 0 Load-Resistor Assembly. If Less Than 5 Amps of Current is Being Drawn by Load-Resistor Assembly, STOP IMMEDIATELY and Contact Appropriate Technical Support Group. Otherwise, Continue With Step 39	INST	—
39	At PCD 0, DAMON 0 Power Switch, Depress **ON** Pushbutton; Rotate **ROS/OFF** Switch Counterclockwise to **NORM** Position and Expect Diagnostics To Run but PCD 0, DAMON 0 To Remain Out-of-Service (OOS)	TELCO	—
40	At 1B Processor MTC Terminal, Restore PCD 0, DAMON 0 (**RST:PCD 0,DAMON 0!**) and Expect Diganostics To Complete With ATP Results	TELCO	—
	NOTE: If SHIELDED power cable is supplied to connect load-resistor assembly to PCD frame, remove outer vinyl jacket and braided shield before mounting assembly to PCD frame		
41	At PCD Frame Bay 2 Vertical Position 256, Mount Load-Resistor Assembly (ED-5A311-10G-1,SB) Using Four PHST Screws (840047534)	INST	—
	(Continued on Page 5)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
42	If PCD Frame Is Equipped With Only Two Converters, Notify On-Site Work Force (OSWF) That a **HAZARDOUS CONDITION** Exists Due to the High Temperature of the Load-Resistor Assembly Housing. Once the Load-Resistor Assembly Is Operational, Do Not Set Anything on Load-Resistor Assembly Housing	INST	—
43	If Heat Shroud Hardware Is Required but Not Available, Notify Customer Service via Tracker That Additional Hardware Is Required To Correct Hazardous Condition Due to Temperature of Load-Resistor Assembly Housing	INST	—
44	Ensure Both Ends of Load-Resistor Assembly Cable Pair Are Insulated With Electrical Tape. Route Cable Pair Down Cable Channel Between PCD Frame Bay 1/Bay 2 and Feed Cable Pair Into +24V B Fuse Cabinet at Vertical Position 32	INST	—
45	At 1B Processor MTC Terminal, Remove PCD 1, DAMON 0 (RMV:PCD 1,DAMON 0!)	TELCO	—
46	At PCD 1, DAMON 0 Power Switch, Rotate **ROS/OFF** Switch Clockwise to **ROS** Position; Ensure **OS** Lamp/LED Is Lighted; Then Depress **ROS/OFF** Switch and Expect **PWR OFF** Lamp/LED To Light	TELCO	—
47	At Rear of +24V B Fuse Cabinet, Using Terminal Lug Supplied, Attach Lug to Cable Pair Lead With "Slash" Tracer and Secure Lead/Lug to +24V B Return Terminal	INST	—
48	At Rear of +24V B Fuse Cabinet, Using Terminal Lug Supplied, Attach Lug to Other Cable Pair Lead (Without "Slash" Tracer) and Secure Lead/Lug to Terminal Associated With Fuse Position 4 at Equipment Location 118-29	INST	—
49	At Front of +24V B Fuse Cabinet, Install **74D** 10-Amp Fuse Into Fuse Position 4 at Equipment Location 118-29	TELCO	—
50	At Rear of +24V B Fuse Cabinet, Use Clamp-on Ammeter and Verify Approximately 5 Amps of Current Is Being Drawn by PCD Frame Bay 2 Load-Resistor Assembly. If Less Than 5 Amps of Current Is Being Drawn by Load-Resistor Assembly, STOP IMMEDIATELY and Contact Appropriate Technical Support Group. Otherwise, Continue With Step 51	INST	—
51	At PCD 1, DAMON 0 Power Switch, Depress **ON** Pushbutton; Rotate **ROS/OFF** Switch Counterclockwise to **NORM** Position and Expect Diagnostics to Run but PCD 1, DAMON 0 To Remain Out-of-Service (OOS)	TELCO	—
52	At 1B Processor MTC Terminal, Restore PCD 1, DAMON 0 (RST:PCD 1,DAMON 0!) and Expect Diagnostics To Complete With ATP Results	TELCO	—
	(Continued on Page 6)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
53	Label Fuse Designation Cards for Fuse Position 4 At Location 118-15 to **DL0** (Dummy Load 0) and Fuse Position 4 at Location 118-29 to **DL1** (Dummy Load 1)	INST	—
54	At Each Conversion Switch Unit, Ensure Each **TN1808/TN2808** Circuit Pack **ON/OFF** Switch Is in **OFF** Position. If Switch Is Not in **OFF** Position, Move Switch to **OFF** Position for Each **TN1808/TN2808** Circuit Pack. Otherwise, Continue With Step 55	TELCO	—
55	At J86334B BDFB Frame, Locate Seven Conversion Switch Unit 1/2-Amp **70G** Indicator Fuse Positions (**PU0 CONV SW, PU1 CONV SW, AU0 CONV SW, AU1 CONV SW, GCP0 CONV SW, GCP1 CONV SW,** and **SSD CONV SW**) and Ensure Fuses Have Been Removed and Dummy Fuses Installed. If Fuses Have Not Been Removed, Remove Indicator Fuses and Install Dummy Fuses. Otherwise, Continue With Step 56	TELCO	—
56	At J86334B BDFB or J5A007B PCD Frame, Locate Seven Conversion Switch Unit 5-Amp **74C** Load Fuse Positions (**PU0 CONV SW, PU1 CONV SW, AU0 CONV SW, AU1 CONV SW, GCP0 CONV SW, GCP1 CONV SW,** and **SSD CONV SW**) and Ensure Fuses Have Been Removed and Dummy Fuses Installed. If Fuses Have Not Been Removed, Remove Load Fuses and Install Dummy Fuses. Otherwise, Continue With Step 57	TELCO	—
57	At Power Switch Associated With 1A Processor CS Unit To Be Removed, Depress **TEST** Pushbutton and Expect Lamps/LEDs To Light Verifying That Power Is Present. If No Lamps/ LEDs Light, STOP IMMEDIATELY and Contact Appropriate Technical Support Group. Otherwise, Continue With Step 58	TELCO	—
58	At Power Switch Associated With 1A Processor CS Unit To Be Removed, Rotate **ROS/OFF** Switch Clockwise to **ROS** Position; Depress **ROS/OFF** Switch and Expect **PWR OFF** Lamp/LED To Light	TELCO	—
59	Repeat Steps 57 and 58 for All 1A Processor CS Units	TELCO	—
60	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Individually Label **-48A** Power Cable Connectors at All CS Units	INST	—
61	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Disconnect All Power Bus A Connectors at All CS Units and Insulate Connector Ends With Electrical Tape To Avoid Shorts	INST	—
62	At Rear of Power Distribution Frame, Use Clamp-on DC Ammeter and Check All CS Fuse Leads To Ensure No Current Is Present. If Current Is Present, Repeat From Step 60. Otherwise, Continue With Step 63	INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
63	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Remove All Power Bus A -48V Fuses Associated With All CS Units	TELCO/INST	—
64	Repeat Steps 60 Through 63 for **-48B** Power Cables Associated With All CS Units	TELCO/INST	—
65	At Power Switch Associated With 1A Processor PS Unit To Be Removed, Depress **TEST** Pushbutton and Expect Lamps/LEDs To Light Verifying That Power Is Present. If No Lamps/ LEDs Light, STOP IMMEDIATELY and Contact Appropriate Technical Support Group. Otherwise, Continue With Step 66	TELCO	—
66	At Power Switch Associated With 1A Processor PS Unit To Be Removed, Rotate **ROS/OFF** Switch Clockwise to **ROS** Position; Depress **ROS/OFF** Switch and Expect **PWR OFF** Lamp/LED To Light	TELCO	—
67	Repeat Steps 65 and 66 for All 1A Processor PS Units	TELCO	—
68	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Individually Label **-48A** Power Cable Connectors at All PS Units	INST	—
69	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Disconnect All Power Bus A Connectors at All PS Units and Insulate Connector Ends With Electrical Tape To Avoid Shorts	INST	—
70	At Rear of PCD Frame, Use Clamp-on DC Ammeter and Check All PS Fuse Leads To Ensure No Current Is Present. If Current Is Present, Repeat From Step 68. Otherwise, Continue With Step 71	INST	—
71	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Remove All Power Bus A -48V Fuses Associated With All PS Units	TELCO/INST	—
72	Repeat Steps 68 Through 71 For **-48B** Power Cables Associated With All PS Units	TELCO/INST	—
73	At Power Switch (Labeled MCC) Associated With 1A Processor PPI Frame To Be Removed, Depress **TEST** Pushbutton and Expect Lamps/LEDs To Light Verifying That Power Is Present. If No Lamps/LEDs Light, STOP IMMEDIATELY and Contact Appropriate Technical Support Group. Otherwise, Continue With Step 74	TELCO	—
74	At Power Switch (Labeled MCC) Associated With 1A Processor PPI Frame To Be Removed, Rotate **ROS/OFF** Switch Clockwise to **ROS** Position; Depress **ROS/OFF** Switch and Expect **PWR OFF** Lamp/LED To Light	TELCO	—
	(Continued on Page 8)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
75	At Power Switch Associated With 1A Processor Remote Access Interface (RAI) Unit To Be Removed, Depress **TEST** Pushbutton and Expect Lamps/LEDs To Light Verifying That Power Is Present. If No Lamps/LEDs Light, STOP IMMEDIATELY and Contact Appropriate Technical Support Group. Otherwise, Continue With Step 76	TELCO	—
76	At Power Switch Associated With 1A Processor RAI Unit To Be Removed. Rotate **ROS/OFF** Switch Clockwise to **ROS** Position; Depress **ROS/OFF** Switch; and Expect **PWR OFF** Lamp/LED To Light	TELCO	—
77	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Individually Label 1A Processor PPI Frame **-48V PPI H** Power Cable Connector	INST	—
78	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Disconnect 1A Processor PPI Frame **-48V PPI H** Connector and Insulate Connector End With Electrical Tape To Avoid Shorts	INST	—
79	At Rear of PCD Frame, Use Clamp-on DC Ammeter and Check PPI Frame **-48V PPI H** Fuse Lead To Ensure No Current Is Present. If Current Is Present, STOP IMMEDIATELY and Contact Appropriate Technical Support Group. Otherwise, Continue With Step 80	INST	—
80	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Remove PCD Frame **-48V PPI H** Fuse Associated With PPI Frame	TELCO/INST	—
81	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Individually Label 1A Processor PPI Frame **-48V PPI AC** Power Cable Connector	INST	—
82	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Disconnect 1A Processor PPI Frame **-48V PPI AC** Connector and Insulate Connector End With Electrical Tape To Avoid Shorts	INST	—
83	At Rear of PCD Frame, Use Clamp-on DC Ammeter and Check PPI Frame **-48V PPI AC** Fuse Lead To Ensure No Current Is Present. If Current Is Present, STOP IMMEDIATELY and Contact Appropriate Technical Support Group. Otherwise, Continue With Step 84	INST	—
84	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Remove PCD Frame **-48V PPI AC** Fuse Associated With PPI Frame	TELCO/INST	— —
85	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Individually Label 1A Processor PPI Frame **+24V PPI X, W, V** and **Y** Power Cable Connectors	INST	—
	(Continued on Page 9)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
86	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Disconnect 1A Processor PPI Frame **+24V PPI X, W, V** and **Y** Connectors and Insulate Connector Ends With Electrical Tape To Avoid Shorts	INST	—
87	At Rear of PCD Frame, Use Clamp-on DC Ammeter and Check **+24V PPI X, W, V** and **Y** Fuse Leads To Ensure No Current Is Present. If Current Is Present, STOP IMMEDIATELY and Contact Appropriate Technical Support Group. Otherwise, Continue With Step 88	INST	—
88	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Remove PCD Frame **+24V PPI X, W, V** and **Y** Fuses Associated With PPI Frame	TELCO/INST	—
89	At Power Switch Associated With 1A Processor CC 1 To Be Removed, Depress **TEST** Pushbutton and Expect Lamps/LEDs To Light Verifying That Power Is Present. If No Lamps/LEDs Light, STOP IMMEDIATELY and Contact Appropriate Technical Support Group. Otherwise, Continue With Step 90	TELCO	—
90	At Power Switch Associated With 1A Processor CC 1 To Be Removed, Rotate **ROS/OFF** Switch Clockwise to **ROS** Position; Depress **ROS/OFF** Switch and Expect **PWR OFF** Lamp/LED To Light	TELCO	—
91	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Individually Label **-48V CC1A** and **+24V CC1A** Power Cable Connectors at CC 1	INST	—
92	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Disconnect 1A Processor CC 1 **-48V CC1A** and **+24V CC1A** Connectors and Insulate Connector Ends With Electrical Tape To Avoid Shorts	INST	—
93	At Rear of PCD Frame, Use Clamp-on DC Ammeter and Check All CC 1 Fuse Leads To Ensure No Current Is Present. If Current Is Present, Repeat From Step 91. Otherwise, Continue With Step 94	INST	—
94	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Remove PCD Frame **-48V CC1A** and **+24V CC1A** Fuses Associated With CC 1	TELCO/INST	—
95	At Power Switch Associated With 1A Processor CC 0 To Be Removed, Depress **TEST** Pushbutton and Expect Lamps/LEDs To Light Verifying That Power Is Present. If No Lamps/LEDs Light, STOP IMMEDIATELY and Contact Appropriate Technical Support Group. Otherwise, Continue with Step 96	TELCO	—
96	At Power Switch Associated With 1A Processor CC 0 To Be Removed, Rotate **ROS/OFF** Switch Clockwise to **ROS** Position; Depress **ROS/OFF** Switch and Expect **PWR OFF** Lamp/LED To Light	TELCO	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
97	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Individually Label **-48V CC0A** and **+24V CC0A** Power Cable Connectors at CC 0	INST	—
98	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Disconnect 1A Processor CC 0 **-48V CC0A** and **+24V CC0A** Connectors and Insulate Connector Ends With Electrical Tape To Avoid Shorts	INST	—
99	At Rear of PCD Frame, Use Clamp-on DC Ammeter and Check All CC 0 Fuse Leads To Ensure No Current Is Present. If Current Is Present, Repeat From Step 97. Otherwise, Continue With Step 100	INST	—
100	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Remove PCD Frame **-48V CC0A** and **+24V CC0A** Fuses Associated With CC 0	TELCO/INST	—
101	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, at PCD Frame Verify That All Identified Fuses Have Been Removed; Turn Over Fuse Designation Cards and Relabel, as Necessary. Install a Dummy Fuse at Each Vacant Fuse Location	TELCO/INST	—
	CAUTIONS: 1. Hazardous voltage is present under 4A timer terminal strip protective cover/shield *2. Terminal strip protective cover/shield may use "stand-off spacers" that can possibly slide off screws as they are being removed. Precautions should be taken to secure spacers as screws are removed*		
102	At Rear of PPI Frame, Locate and Remove 4A Timer Terminal Strip Protective Cover/Shield	INST	—
103	At Rear of PPI Frame, Use Digital Voltmeter (ITE 6379 or Equivalent) and Measure 4A Timer Terminal Strip 120-Volt AC Terminals for Presence of 120-Volt AC. If Voltage Is Present, Go to Step 104. Otherwise, Go to Step 106	INST	—
104	Using Office-Drawing T-xxxx-Hy-3300 (xxxx = Office Number; y = 0 or 1), Identify Location of 4A Timer 120-Volt AC 1-1/3 Amp Fuse. At Miscellaneous A Frame, Remove Identified Fuse and Install Dummy Fuse	TELCO	—
105	At Rear of PPI Frame, Use Digital Voltmeter (ITE 6379 or Equivalent) and Measure 4A Timer Terminal Strip 120-Volt AC Terminals for Absence of 120-Volt AC. If Voltage Is Present, STOP IMMEDIATELY and Contact Appropriate Technical Support Group. Otherwise, Go to Step 106	INST	—
	(Continued on Page 11)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
106	Using Office Drawing T-xxxx-Hy-3300 (xxxx = Office Number; y = 0 or 1), Identify Location of 1A Processor MCC Clock Fuse and All 1A Processor MCC Console Protected 120-Volt AC Receptacle Fuses. At Miscellaneous A Frame, Remove Identified Fuses and Install Dummy Fuses	TELCO	—
107	Using Digital Voltmeter (ITE 6379 or Equivalent), Check 1A Processor MCC Console 120-Volt AC Receptacles for Absence of Voltage; and Visually Check 1A Processor MCC Clock To Verify Power Has Been Removed	INST	—

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

		RESPONSIBILITY	
	WARNINGS: 1. No other growth or maintenance activity is allowed during this procedure *2. If system problems are encountered during cable splicing, cable being spliced must be completed and procedure stopped until resolved. Problems should be reported to next higher technical support group*		
	NOTES: 1. Appropriate Input/Output manuals must be used if clarification of input message or output message is necessary 2. All input messages, except scoping messages, are to be entered at MTC terminal. SREC, Beltline, or applicable terminal is to be used for scoping 3. This procedure must be performed during light traffic periods 4. This procedure contains soak interval for verifying system operation and stability during conversion switch removal. During soak interval, all abnormal conditions (such as interrupts, interjects, and diagnostic failures related to removal) must be investigated and resolved immediately 5. ***4ESS™*** Switch operation must be closely monitored during this procedure		
1	Ensure Appropriate Isolation Material Is Placed To Protect PUBB Frame and any Frame Across Aisle	INST	—
2	Notify Next Higher Technical Support Group That PUB 0 Conversion Switch Unit Removal Is Being Performed. Obtain Information for Items 3 Through 5 From Next Higher Technical Support Group	TELCO	—
3	Ensure 1B Processor Routine Exerciser (REX) Successfully Diagnosed 1B Processor Equipment Within 24 Hours of Performing This Procedure	TELCO	—
4	Ensure No API Interjects, Interrupts, or BLMs Have Occurred Within 24 Hours of Performing This Procedure	TELCO	—
5	Ensure ***4ESS*** Switch Is in Stable Condition	TELCO	DLP-501
6	Ensure 1B Processor and Peripheral Units Are Operating in Normal Duplex Mode	TELCO	DLP-502
7	Set Up Storage Oscilloscope	INST	DLP-503
8	Store PUB 0 Input Messages on 1B Processor Terminal for PUB-Looping Test	TELCO	DLP-505
9	At 1B MTC Terminal, Enter Message INH:MACLI,CLASS MTCE;REX! To Inhibit REX	TELCO	—
10	Enter Message STOP:TEST;PUSYS!; Ensure **OK** Response Is Received	TELCO	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
11	Diagnose PUB 0 Using Restore Message (**RST:PUB 0!**)	TELCO	DLP-506
12	Diagnose PUB 1 Using Restore Message (**RST:PUB 1!**)	TELCO	DLP-506
13	Remove PUB 0 From Service (**RMV:PUB 0!**)	TELCO	DLP-507
14	At PUB 0 Power Switch in PUBB Frame, Rotate **ROS/OFF** Switch to **ROS** Position (Do Not Remove Power)	TELCO	—
	NOTE: Items 15.1 through 15.4 must be performed for one cable at a time		
15	Isolate Conversion Switch Unit From PUB 0:		
	1. At PUB 0 Conversion Switch Unit, Disconnect One Cable in Signal Family Group Coming From 1B Processor. Test Connector Using Gang Test Tool	INST	—
	2. At PUB 0 Conversion Switch Unit, Disconnect Associated Cable (Item 15.1) Coming From PUBB Frame. Test Connector Using Gang Test Tool	INST	—
	3. Securely Route Cables (Items 15.1 and 15.2) So Cables Will Lie in Cross-Aisle-Cable-Trough When Installed	INST	—
	4. Connect Cables (Items 15.1 and 15.2) Together Using Cable Splicer Kit. Place Heat Shrink Material Over Splice, But Do Not Apply Heat at This Time	INST	—
	5. Repeat Items 15.1 Through 15.4 for Each PUB 0 Cable in Signal Family Group	INST	—
	6. Diagnose PUB 0 (**DGN:PUB 0:PH 2!**)	TELCO/INST	DLP-508
	7. Apply Heat to Heat Shrink Material (Item 15.4)	INST	—
	8. Repeat Items 15.1 Through 15.7 for Next PUB 0 Signal Family Group	TELCO/INST	—
16	At PUB 0 Conversion Switch Unit, Ensure No Ivory-Colored Cables Are Connected	INST	—
17	Office Technician Must Observe PUB 0 Scoping Since Successful Completion of This Scoping Will Be Considered Acceptance of PUB 0 Conversion Switch Unit Removal. During Item 18, if any Error is Encountered, Notify Next Higher Technical Support Group and Correct Error Before Continuing	TELCO	—
18	Execute PUB-Looping Test To Verify PUB 0 at BTRs in 10 or IOP:		
	1. Advance Program and Set Up Loop To Observe Bit 0 on PU Write and Reply Bus	TELCO	DLP-509

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
18 (Contd)	2. Scope Bit 0 on PU Write Bus at BTRs in IO or IOP Frame	INST/TELCO	—
	3. Scope Bit 0 on PU Reply Bus at BTRs in IO or IOP Frame	INST/TELCO	—
	4. Enter Stop-Looping Message (**EX:PUB 0!**)	TELCO	—
	5. Advance Program and Set Up Loop To Observe Bits 1 to 35 on Pu Write Bus; Bits 0 to 11 on PU Enable Address Bus; and Bits 1 to 23 on PU Reply Bus	TELCO	DLP-509
	6. Scope Bits 1 to 35 on PU Write Bus at BTRs in IO or IOP Frame	INST/TELCO	—
	7. Scope Bits 0 to 11 on PU Enable Address Bus at BTRs in IO or IOP Frame	INST/TELCO	—
	8. Scope Bits 1 to 23 on PU Reply Bus at BTRs in IO or IOP Frame	INST/TELCO	—
	9. Enter Stop-Looping Message (**EX:PUB 0!**)	TELCO	—
	10. Set Up Loop To Observe PU Control Bus and Miscellaneous Bus Bits	TELCO	DLP-510
	11. Scope PU Control Bus and Miscellaneous Bus Bits at BTRs in IO or IOP Frame	INST/TELCO	—
	12. Enter Stop-Looping Message (**EX:PUB 0!**)	TELCO	—
	13. Stop Maintenance Control Program Client	TELCO	DLP-511
	14. Disconnect Storage Oscilloscope From IO or IOP Frame	INST	—
19	At PUBB Frame Power Switch (Item 13), Rotate **ROS/OFF** Switch to Normal Position	TELCO/INST	DLP-512
20	At 1B Processor MTC Terminal, Restore PUB 0 to Service (**RST:PUB 0!**) (Expect ATP)	TELCO/INST	DLP-506
21	Switch CCs (**SW:CC!**)	TELCO	DLP-513
22	Restore PUB 0 to Service (**RST:PUB 0!**) (Expect ATP)	TELCO/INST	DLP-506
23	Enter Message **TEST:PUSYS;UCL!**; Ensure **OK** Response Is Received	TELCO	—
24	Enter Message **ALW:MACLI,CLASS MTCE!** To Allow REX	TELCO	—
25	At PUB 0 Conversion Switch Unit, Disconnect Cables Coming From 1A Processor, Control/ Interlock Cables From Indicator/Remote Control Unit, and -48V Power Feeders (Tape Ends of -48V Power Feeders)	INST	—
26	After All Cables Have Been Removed From PUB 0 Conversion Switch Unit and Secured, Carefully Remove Unit From Mounting Apparatus	INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
27	Remove Mounting Apparatus	INST	—
28	Install Cross-Aisle Cable Trough in Close Proximity to Secured Spliced Cables (Item 15)	INST	—
29	Disconnect Trunk Support Strap From Spliced Cables and Lay These Spliced Cables in Cross-Aisle Cable Trough	INST	—
30	Notify Next Higher Technical Support Group That PUB 0 Conversion Switch Unit Is Removed	TELCO	—
31	Soak PUB 0 as Standby for at Least One Non-Cabling Shift Before Proceeding	TELCO/INST	—

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

		RESPONSIBILITY	
	WARNINGS: 1. No other growth or maintenance activity is allowed during this procedure *2. If system problems are encountered during cable splicing, cable being spliced must be completed and procedure stopped until resolved. Problems should be reported to next higher technical support group*		
	NOTES: 1. Appropriate Input/Output manuals must be used if clarification of input message or output message is necessary 2. This procedure must be performed during light traffic periods 3. This procedure contains soak interval for verifying system operation and stability during conversion switch removal. During soak interval, all abnormal conditions (such as interrupts, interjects, and diagnostic failures related to removal) must be investigated and resolved immediately 4. ***4ESS™*** Switch and 3B APS operation must be closely monitored during this procedure		
1	Notify Next Higher Technical Support Group That AUB 0 Conversion Switch Unit Removal Is Being Performed. Obtain Information for Items 2 and 3 From Next Higher Technical Support Group	TELCO	—
2	Ensure No API Interjects, Interrupts, or BLMs Have Occurred Within 24 Hours of Performing This Procedure	TELCO	—
3	Ensure ***4ESS*** Switch Is in Stable Condition	TELCO	DLP-501
4	Ensure 1B Processor and Peripheral Units Are Operating in Normal Duplex Mode	TELCO	DLP-502
5	Set Up Storage Oscilloscope	INST	DLP-514
6	Store AUB 0 Input Messages on 1B Processor Terminal for AUB-Looping Test	TELCO	DLP-515
7	At APS MCRT, Verify API-DLN Stream (**OP:DLNCM;STREAM!**)	TELCO	DLP-516
8	Enter Following Messages to Inhibit Automatic Diagnostics ◦ **INH:DMQ;SRC REX!** ◦ **INH:DMQ;SRC ADP!**	TELCO	—
9	At 1B MTC Terminal, Enter Message **INH:MACLI,CLASS MTCE;REX!** To Inhibit REX	TELCO	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
10	Determine Which API Is Standby (**OP:APSTATUS!**)	TELCO	DLP-517
11	Diagnose AUB (Same Member Number as Standby API) Using Restore Message (**RST:AUB a!**)	TELCO	DLP-506
12	Diagnose DUS (Same Member Number as Standby API) Using Restore Message (**RST:DUS a!**)	TELCO	DLP-506
13	Diagnose Standby API Using Restore Message (**RST:API a!**)	TELCO	DLP-506
	NOTE: Procedure must not be continued until API is restored to service		
14	Switch APIs To Make Other API Standby (**SW:APS 0!**)	TELCO	DLP-518
15	Diagnose AUB (Same Member Number as Standby API) Using Restore Message (**RST:AUB a!**)	TELCO	DLP-506
16	Diagnose DUS (Same Member Number as Standby API) Using Restore Message (**RST:DUS a!**)	TELCO	DLP-506
17	Diagnose Standby API Using Restore Message (**RST:API a!**)	TELCO	DLP-506
	NOTE: Procedure must not be continued until API is restored to service		
18	At 1B MTC Terminal, Determine Which API Is Standby (**OP:APSTATUS!**)	TELCO	DLP-517
19	If API 0 Is Not Standby, Switch APIs To Make API 0 Standby (**SW:APS 0!**)	TELCO	DLP-518
20	Remove AUB 0 From Service (**RMV:AUB 0!**)	TELCO	DLP-507
21	Remove All In-Service Equipped TUCs From Service (**RMV:TUC a!**)	TELCO	DLP-507
22	At API 0 Power Switch, Rotate **ROS/OFF** Switch to **ROS** Position (Do Not Remove Power)	TELCO	—
23	At DUS 0 Power Switch, Rotate **ROS/OFF** Switch to **ROS** Position (Do Not Remove Power)	TELCO	—
	NOTE: Items 24.1 through 24.5 must be performed for one cable at a time		
24	Isolate Conversion Switch Unit From AUB 0:		
	1. At 1B MTC Terminal, Enter Message **TEST:AUB 0!**; Ensure **TEST:AUB 0 NTR** Message Is Received. If **NTR** Message Is Received, Continue at Item 24.2; Otherwise, Repeat From Item 10 (AUB 0 Is in Service)	TELCO	—
	2. At AUB 0 Conversion Switch Unit, Disconnect One Cable in Signal Family Group Coming From 1B Processor. Test Connector Using Gang Test Tool	INST	—
	3. At AUB 0 Conversion Switch Unit, Disconnect Associated Cable (Item 24.2) Coming From API 0. Test Connector Using Gang Test Tool	INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
24 (Contd)	4. Securely Route Cables (Items 24.2 and 24.3) So Cables Will Lie in Cross-Aisle Cable Trough When Installed	INST	—
	5. Connect Cables (Items 24.2 and 24.3) Together Using Cable Splicer Kit. Place Heat Shrink Material Over Splice. But Do Not Apply Heat at This Time	INST	—
	6. Repeat Items 24.1 Through 24.5 for Each Cable in AUB 0 Signal Family Group	TELCO/INST	—
	7. Diagnose AUB 0 (**DGN:AUB 0!**)	TELCO/INST	DLP-519
	8. Apply Heat to Heat Shrink Material (Item 24.5)	INST	—
	9. Repeat Items 24.1 Through 24.8 for Next AUB 0 Signal Family Group	INST	—
25	At AUB 0 Conversion Switch Unit, Ensure No Ivory-Colored Cables Are Connected	INST	—
26	At 1B MTC Terminal, Restore TUCs That Were Removed From Service in Item 21 (**RST:TUC a!**)	TELCO	DLP-506
27	Office Technician Must Observe AUB 0 Scoping Since Successful Completion of This Scoping Will Be Considered Acceptance of AUB 0 Conversion Switch Unit Removal. During Item 28, if any Error Is Encountered, Notify Next Higher Technical Support Group and Abort Test Until Error Is Resolved	TELCO	—
28	Execute Phase 99 Diagnostic-Scoping Test To Verify AUB 0		
	1. Enter Execute Messages for Looping on AU Write Bus (**EX:AUB 0;START!** and **EX:AUB 0:PH 99,ADR 42-75!**)	TELCO	DLP-520
	2. Scope AU Write Bus Bits 0 to 23 at BTRs in API 0	TELCO/INST	—
	3. Enter Stop-Looping Message (**EX:AUB 0!**)	TELCO	—
	4. Enter Execute Message for Looping on AU Address Bus (**EX:AUB 0:PH 99,ADR 75-120!**)	TELCO	DLP-520
	5. Scope AU Address Bus Bits 0 to 15 at BTRs in API 0	TELCO/INST	—
	6. Enter Stop-Looping Message (**EX:AUB 0!**)	TELCO	—
	7. Enter Execute Message for Looping on AU Store Address Bus (**EX:AUB 0:PH 99,ADR 163-212!**)	TELCO	DLP-520
	8. Scope AU Store Address Bus Bits 0 to 21 at BTRs in API 0	TELCO/INST	—
	9. Enter Stop-Looping Message (**EX:AUB 0!**)	TELCO	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
28 (Contd)	10. Enter Execute Message for Looping on AU Reply Bus (**EX:AUB 0:PH 99,ADR 120-163!**)	TELCO	DLP-520
	11. Scope AU Reply Bus Bits 0 to 23 at BTRs in API 0	TELCO/INST	—
	12. Enter Stop-Looping Message (**EX:AUB 0!**)	TELCO	—
	13. Stop Maintenance Control Program Client	TELCO	DLP-511
	14. Disconnect Storage Oscilloscope From API 0	INST	—
29	At API 0 Power Switch (Item 22), Rotate **ROS/OFF** Switch to Normal Position (API 0 Will Remain Out of Service)	TELCO/INST	DLP-512
30	At DUS 0 Power Switch (Item 23), Rotate **ROS/OFF** Switch to Normal Position (DUS 0 Will Remain Out of Service)	TELCO/INST	DLP-512
31	At 1B MTC Terminal, Restore AUB 0 to Service (**RST:AUB 0!**)	TELCO/INST	DLP-506
32	Diagnose DUS 0; Ensure All Phases Run Are ATP or Explainable CATP (**DGN:DUS 0!**)	TELCO/INST	DLP-519
33	Diagnose API 0; Ensure All Phases Run Are ATP or Explainable CATP (**DGN:API 0!**)	TELCO/INST	DLP-519
34	Switch CCs (**SW:CC!**)	TELCO	DLP-513
35	Diagnose DUS 0; Ensure All Phases Run Are ATP or Explainable CATP (**DGN:DUS 0!**)	TELCO/INST	DLP-519
36	Diagnose API 0; Ensure All Phases Run Are ATP or Explainable CATP (**DGN:API 0!**)	TELCO/INST	DLP-519
37	Restore DUS 0 to Service (**RST:DUS 0!**)	TELCO/INST	DLP-506
38	Restore API 0 to Service (**RST:API 0!**)	TELCO/INST	DLP-506
39	Diagnose AUB 0 Using Restore Message (ATP Required) (**RST:AUB 0!**)	TELCO/INST	DLP-506
40	Switch APIs To Make API 0 Active (**SW:APS 0!**)	TELCO	DLP-518
41	Enter Message **ALW:MACLI,CLASS MTCE!** To Allow REX	TELCO	—
42	At APS MCRT, Enter Following Messages To Allow Automatic Diagnostics: • **ALW:DMQ;SRC REX!** • **ALW:DMQ;SRC ADP!**	TELCO	—
	(Continued on Page 5)		

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
43	At AUB 0 Conversion Switch Unit, Disconnect Cables Coming From 1A Processor, Control/ Interlock Cables From Indicator/Remote Control Unit, and -48V Power Feeders (Tape Ends of -48V Power Feeders)	INST	—
44	After All Cables Have Been Removed From PUB 0 Conversion Switch Unit and Secured, Carfefully Remove Unit From Mounting Apparatus	INST	—
45	Remove Mounting Apparatus	INST	—
46	Install Cross-Aisle Cable Trough in Close Proximity to Secured Spliced Cables (Item 23)	INST	—
47	Disconnect Trunk Support Strap From Spliced Cables and Lay These Spliced Cables in Cross-Aisle Cable Trough	INST	—
48	Notify Next Higher Technical Support Group That AUB 0 Conversion Switch Unit Is Removed	TELCO	—
49	Soak AUB 0 in Active State for at Least One Non-Cabling Shift Before Proceeding	TELCO/INST	—

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

		RESPONSIBILITY	
	WARNINGS: 1. No other growth or maintenance activity is allowed during this procedure *2. If system problems are encountered during cable splicing, cable being spliced must be completed and procedure stopped until resolved. Problems should be reported to next higher technical support group*		
	NOTES: 1. In place of using the 1B Processor MCC terminal 118 page to determine which CC is standby, **OP:CCSTATUS!** input message can be entered on a beltline terminal in the equipment area to determine the standby CC 2. Appropriate Input/Output manuals must be used if clarification of input message or output message is necessary 3. This procedure must be performed during light traffic periods 4. This procedure contains soak interval for verifying system operation and stability during conversion switch removal. During soak interval, all abnormal conditions (such as interrupts, interjects, and diagnostic failures related to removal) must be investigated and resolved immediately 5. ***4ESS***™ Switch and 3B APS operation must be closely monitored during this procedure 6. This procedure may be safely stopped after cabling and successfully testing each unit. If stopping, REX must be allowed. When resuming, Items 1 through 5 must be performed to ensure system stability		
1	Notify Next Higher Technical Support Group That CC 0 GCP Conversion Switch Unit Removal Is Being Performed. Obtain Information for Items 2 and 3 From Next Higher Technical Support Group	TELCO	—
2	Ensure No API Interjects, Interrupts, or BLMs Have Occurred Within 24 Hours of Performing This Procedure	TELCO	—
3	Ensure ***4ESS*** Switch Is in Stable Condition	TELCO	DLP-501
4	Ensure 1B Processor and Peripheral Units Are Operating in Normal Duplex Mode	TELCO	DLP-502
5	At 1B MTC Terminal, Enter Message **INH:MACLI,CLASS MTCE;REX!** To Inhibit REX	TELCO	—
6	If Office Contains Extended Pollable DIF-E Frames, Member Numbers Greater Than 23, Perform Items 7 Through 23; Otherwise, Go to Item 24	TELCO/INST	—
	NOTE: Items 7 through 23 are being performed to disconnect CC 0 GCP conversion switch unit from GCP cable path to extended pollable DIF-E frames		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
7	At 1B Processor MCC Terminal, Enter **118** to Obtain 1B Processor System Status Page (118)	TELCO	—
8	Determine Which CC Is Standby (MATCH)	TELCO	—
9	If CC 1 Is Standby, Switch CCs To Make CC 0 Standby (**SW:CC!**)	TELCO	DLP-513
10	Diagnose One Extended Pollable DIF-E Frame Associated With GCP Cable Being Disconnected Using Restore Message (**RST:DIF a,CONTR 0!**)	TELCO	DLP-521
11	Remove CC 0 From Service (**RMV:CC 0!**)	TELCO	DLP-507
12	At CC 0 Conversion Switch Unit, Disconnect Ivory-Colored GCP Cable Associated With Extended Pollable DIF-E Frame	INST	—
13	Connect ITE 6921 Cable Discharge Tool Into End of Ivory-Colored GCP Cable Disconnected in Item 12. Wait 30 Seconds Before Continuing	INST	—
14	Disconnect ITE 6921 Cable Discharge Tool From GCP Cable; and Test Connector Using Gang Test Tool. Connect GCP Cable to Double Male Splicer. Remember to Install Heat-Shrink Tubing at This Time.	INST	—
15	At CC 0 Conversion Switch Unit, Disconnect The GCP Cable Associated With Extended Pollable DIF-E Frame. If Extension Cable Was NOT Used, Connect ITE 6921 Cable Discharge Tool Into End of 4E GCP Cable. Wait 30 Seconds Before Continuing and Perform Pin-Test. Skip to Item 19	INST	—
16	If Extension Cable Was Used, Connect ITE 6921 Cable Discharge Tool Into End of 4E GCP Cable. Wait 30 Seconds Before Continuing. Connect 4E GCP to The Shorting Plug	INST	—
17	Remove Temporary Spliced Extension Cable and Discard Surplus Extension Cable. Perform Pin-Test On 4E GCP Cable. Connect Shorting Plug to The 4E GCP Cable	INST	—
18	Locate And Discharge Ivory-Colored GCP Cable Using The ITE 6921 Cable Discharge Tool. Remove Shorting Plug From 4E GCP Cable	INST	—
19	Splice 4E Cable And Ivory-Colored CGP Cable Together. Do Not Heat Shrink At This Time	INST	—
20	Restore CC 0 to Service (**RST:CC 0!**)	TELCO/INST	DLP-522
21	Diagnose Extended Pollable DIF-E Frame Associated With Spliced Cable Using Restore Message (**RST:DIF a,CONTR 0!**)	TELCO/INST	DLP-521
22	Apply Heat to Heat Shrink Material (Item 15)	INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
23	Go to Item 41. Service Circuit System Does Not Need To Be Removed From CC 0 GCP Conversion Switch Unit Since Extended Pollable DIF-E Frame Has Been Removed	TELCO/INST	—
24	If Office Contains Service Circuit System and Extended Pollable DIF-E Frames Were Not Disconnected From CC 0 GCP Conversion Switch Unit. Perform Items 25 Through 40; Otherwise, Go to Item 41	TELCO/INST	—
	NOTE: Items 25 through 40 are being performed to disconnect CC 0 GCP conversion switch unit from GCP cable path to service circuit system		
25	At 1B Processor MCC Terminal, if 118 Page Is Not Displayed, Enter **118**	TELCO	—
26	Determine Which CC Is Standby (MATCH)	TELCO	—
27	If CC 1 Is Standby, Switch CCs To Make CC 0 Standby (**SW:CC!**)	TELCO	DLP-513
28	Diagnose Far-End Unit of Service Circuit System Associated With GCP Cable Being Disconnected Using Restore Message (**RST:SCS a,CONTR 0!**)	TELCO	DLP-523
29	Remove CC 0 From Service (**RMV:CC 0!**)	TELCO	DLP-507
30	At CC 0 Conversion Switch Unit, Disconnect Ivory-Colored GCP Cable Associated With Service Circuit System	INST	—
31	Connect ITE 6921 Cable Discharge Tool Into End of Ivory-Colored GCP Cable Disconnected in Item 30. Wait 30 Seconds Before Continuing	INST	—
32	Disconnect ITE 6921 Cable Discharge Tool From GCP Cable; and Test Connector Using Gang Test Tool. Connect GCP Cable to Double Male Splicer. Remember to Install Heat-Shrink Tubing at This Time	INST	—
33	At CC 0 Conversion Switch Unit, Disconnect The GCP Cable Associated With Service Circuit System. If Extension Cable Was NOT Used, Connect ITE 6921 Cable Discharge Tool Into End of 4E GCP Cable. Wait 30 Seconds Before Continuing and Perform Pin-Test. Skip to Item 37	INST	—
34	If Extension Cable Was Used, Connect ITE 6921 Cable Discharge Tool Into End of 4E GCP Cable. Wait 30 Seconds Before Continuing. Connect 4E GCP to The Shorting Plug	INST	—
35	Remove Temporary Spliced Extension Cable and Discard Surplus Extension Cable. Perform Pin-Test On 4E GCP Cable. Connect Shorting Plug to The 4E GCP Cable	INST	—
36	Locate And Discharge Ivory-Colored GCP Cable Using The ITE 6921 Cable Discharge Tool. Remove Shorting Plug From 4E GCP Cable	INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
37	Splice 4E Cable and Ivory-Colored GCP Cable Together. Do Not Heat Shrink At This Time	INST	—
38	Restore CC 0 to Service (**RST:CC 0!**)	TELCO/INST	DLP-522
39	Diagnose Service Circuit System Associated With Spliced Cable Using Restore Message (**RST:SCS a,CONTR 0!**)	TELCO/INST	DLP-523
40	Apply Heat to Heat Shrink Material (Item 33)	INST	—
	NOTES: 1. Items 41 through 63 are being performed to disconnect CC 0 GCP conversion switch unit from GCP cable path to network clock (NCLK) chains 2. NCLK chains must be diagnosed in member number 3, 1, 2, and 0 order 3. PUBs must be kept duplex at all times (CATP results will be received if one PUB is OOS. Some hardware checks may be left out)		
41	Diagnose Each NCLK Chain in Following Order Using Restore Message (**RST:NCLK 0,CHAIN a!**) • NCLK Chain 3 • NCLK Chain 1 • NCLK Chain 2 • NCLK Chain 0	TELCO	DLP-524
42	Switch CCs **(SW:CC!)**	TELCO	DLP-513
43	Diagnose Each NCLK Chain in Following Order Using Restore Message (**RST:NCLK 0,CHAIN a!**) • NCLK Chain 3 • NCLK Chain 1 • NCLK Chain 2 • NCLK Chain 0	TELCO	DLP-524
	NOTE: Items 44 through 60 are to be repeated for each NCLK chain in member number 3, 1, 2, and 0 order		
44	At 1B Processor MCC Terminal, if 118 Page Is Not Displayed, Enter **118**	TELCO	—
45	Determine Which CC Is Standby (MATCH)	TELCO	—
46	If CC 1 Is Standby, Switch CCs To Make CC 0 Standby (**SW:CC!**)	TELCO	DLP-513
47	Remove CC 0 From Service (**RMV:CC 0!**)	TELCO	DLP-507
48	Remove NCLK Chain (3, 1, 2, or 0) From Service (**RMV:NCLK 0,CHAIN a!**)	TELCO	—
49	At CC 0 Conversion Switch Unit, Disconnect Ivory-Colored GCP Cable Associated With NCLK Chain (3, 1, 2, or 0)	INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
50	Connect ITE 6921 Cable Discharge Tool Into End of Ivory-Colored GCP Cable Disconnected in Item 49. Wait 30 Seconds Before Continuing	INST	—
51	Disconnect ITE 6921 Cable Discharge Tool From GCP Cable; and Test Connector Using Gang Test Tool. Connect GCP Cable to Double Male Splicer. Remember To Install Heat-Shrink Tubing at This Time	INST	—
52	At CC 0 Conversion Switch Unit, Disconnect The GCP Cable Associated With NCLK Chain (3, 1, 2, or 0). If Extension Cable Was NOT Used, Connect ITE 6921 Cable Discharge Tool Into End of 4E GCP Cable. Wait 30 Seconds Before Continuing and Perform Pin-Test. Skip to Item 56	INST	—
53	If Extension Cable Was Used, Connect ITE 6921 Cable Discharge Tool Into End of 4E GCP Cable. Wait 30 Seconds Before Continuing. Connect 4E GCP to The Shorting Plug	INST	—
54	Remove Temporary Spliced Extension Cable and Discard Surplus Extension Cable. Perform Pin-Test On 4E GCP Cable. Connect Shorting Plug to The 4E GCP Cable	INST	—
55	Locate And Discharge Ivory-Colored GCP Cable Using The ITE 6921 Cable Discharge Tool. Remove Shorting Plug From 4E GCP Cable	INST	—
56	Splice 4E Cable And Ivory-Colored GCP Cable Together. Do Not Heat Shrink At This Time	INST	—
57	Restore CC 0 to Service (**RST:CC 0!**)	TELCO/INST	DLP-522
58	Diagnose NCLK Chain (3, 1, 2, or 0) Associated With Spliced Cable Using Restore Message **(RST:NCLK 0,CHAIN a!)**	TELCO/INST	DLP-524
59	Apply Heat to Heat Shrink Material (Item 52)	INST	—
60	Go to Item 61 (for Chain 1) or Item 62 (for Chain 2) or Item 63 (for Chain 0) or Item 64 (if All NCLK Chains Are Disconnected From CC 0 GCP Conversion Switch Unit)	TELCO/INST	—
61	Repeat Items 44 Through 60 To Disconnect NCLK Chain 1 From CC 0 GCP Conversion Switch Unit	TELCO/INST	—
62	Repeat Items 44 Through 60 To Disconnect NCLK Chain 2 From CC 0 GCP Conversion Switch Unit	TELCO/INST	—
63	Repeat Items 44 Through 60 To Disconnect NCLK Chain 0 From CC 0 GCP Conversion Switch Unit	TELCO/INST	—
	(Continued on Page 6)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
	NOTES: 1. Items 64 through 83 are being performed to disconnect CC 0 GCP conversion switch unit from GCP cable path to base SPs 2. Base SPs must be disconnected from CC 0 GCP conversion switch unit in following order: SP 0 Controller 0 and SP 0 Controller 1; then SP 1 Controller 0 and SP 1 Controller 1 (GCP cable being disconnected contains GCPs for both controllers) 3. Items 69 through 82 must be repeated for each base SP		
64	At 1B Processor MCC Terminal, if 118 Page Is Not Displayed, Enter **118**	TELCO	—
65	Determine Which CC Is Standby (MATCH)	TELCO	—
66	If CC 1 Is Standby, Switch CCs To Make CC 0 Standby (**SW:CC!**)	TELCO	DLP-513
67	Diagnose Both Base SP Controller 0 Associated With GCP Cable Being Disconnected Using Restore Message (**RST:SP a,CONTR 0!**)	TELCO	DLP-525
68	Diagnose Both Base SP Controller 1 Associated With GCP Cable Being Disconnected Using Restore Message (**RST:SP a,CONTR 1!**)	TELCO	DLP-525
69	Remove CC 0 From Service (**RMV:CC 0!**)	TELCO	DLP-507
70	At CC 0 Conversion Switch Unit, Disconnect Ivory-Colored GCP Cable Associated With One Base SP	INST	—
71	Connect ITE 6921 Cable Discharge Tool Into End of Ivory-Colored GCP Cable Disconnected in Item 70. Wait 30 Seconds Before Continuing	INST	—
72	Disconnect ITE 6921 Cable Discharge Tool From GCP Cable; and Test Connector Using Gang Test Tool. Connect GCP Cable to Double Male Splicer. Remember To Install Heat-Shrink Tubing at This Time	INST	—
73	At CC 0 Conversion Switch Unit, Disconnect The GCP Cable Associated With One Base SP. If Extension Cable Was NOT Used, Connect ITE 6921 Cable Discharge Tool Into End of 4E GCP Cable. Wait 30 Seconds Before Continuing and Perform Pin-Test. Skip to Item 77	INST	—
74	If Extension Cable Was Used, Connect ITE 6921 Cable Discharge Tool Into End of 4E GCP Cable. Wait 30 Seconds Before Continuing. Connect 4E GCP to The Shorting Plug	INST	—
75	Remove Temporary Spliced Extension Cable and Discard Surplus Extension Cable. Perform Pin-Test On 4E GCP Cable. Connect Shorting Plug to The 4E GCP Cable	INST	—
76	Locate And Discharge Ivory-Colored GCP Cable Using The ITE 6921 Cable Discharge Tool. Remove Shorting Plug From 4E GCP Cable	INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
77	Splice 4E Cable And Ivory-Colored GCP Cable Together. Do Not Heat Shrink At This Time	INST	—
78	Restore CC 0 to Service (RST:CC 0!)	TELCO/INST	DLP-522
79	Diagnose Base SP Controller 0 Associated With Spliced Cable Using Restore Message (RST:SP a,CONTR 0!)	TELCO/INST	DLP-525
80	Diagnose Base SP Controller 1 Associated With Spliced Cable Using Restore Message (RST:SP a,CONTR 1!)	TELCO/INST	DLP-525
81	Apply Heat to Heat Shrink Material (Item 73)	INST	—
82	Go to Item 83 (for SP 1 Controllers 0 and 1) or Item 84 (if Both Base SPs Are Disconnected)	TELCO/INST	—
83	Repeat Items 69 Through 82 for Base SP 1 Controllers 0 and 1	TELCO/INST	—
	NOTES: 1. Items 84 through 118 are being performed to disconnect CC 0 GCP conversion switch unit from GCP cable path to IOP frames 2. IOP frames must be disconnected from CC 0 GCP conversion switch unit from lowest-to highest-member number order 3. Items 84 through 117 must be repeated for each IOUS number in each IOP frame		
84	At 1B Processor MCC Terminal, if 118 Page Is Not Displayed, Enter 118	TELCO	—
85	Determine Which CC Is Standby (MATCH)	TELCO	—
86	If CC 1 Is Standby, Switch CCs To Make CC 0 Standby (SW:CC!)	TELCO	DLP-513
87	Diagnose Lowest-Numbered IOUS in IOP Frame Associated With GCP Cable Being Disconnected Using Restore Message (RST:IOUS a,IPUB 0!)	TELCO	DLP-534
88	Remove CC 0 From Service (RMV:CC 0!)	TELCO	DLP-507
89	At CC 0 Conversion Switch Unit, Disconnect Ivory-Colored GCP Cable Associated With Lowest IOUS in IOP Frame	INST	—
90	Connect ITE 6921 Cable Discharge Tool Into End of Ivory-Colored GCP Cable Disconnected in Item 89. Wait 30 Seconds Before Continuing	INST	—
91	Disconnect ITE 6921 Cable Discharge Tool From GCP Cable; and Test Connnector Using Gang Test Tool. Connect GCP Cable to Double Male Splicer. Remember To Install Heat-Shrink Tubing at This Time	INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
92	At CC 0 Conversion Switch Unit, Disconnect The GCP Cable Associated With Lowest IOUS in IOP Frame. If Extension Cable Was NOT Used, Connect ITE 6921 Cable Discharge Tool Into End of 4E GCP Cable. Wait 30 Seconds Before Continuing and Perform Pin-Test. Skip to Item 96	INST	—
93	If Extension Cable Was Used, Connect ITE 6921 Cable Discharge Tool Into End of 4E GCP Cable. Wait 30 Seconds Before Continuing. Connect 4E GCP to The Shorting Plug	INST	—
94	Remove Temporary Spliced Extension Cable and Discard Surplus Extension Cable. Perform Pin-Test On 4E GCP Cable. Connect Shorting Plug to The 4E GCP Cable	INST	—
95	Locate And Discharge Ivory-Colored GCP Cable Using The ITE 6921 Cable Discharge Tool. Remove Shorting Plug From 4E GCP Cable	INST	—
96	Splice 4E Cable and Ivory-Colored GCP Cable Together. Do Not Heat Shrink At This Time	INST	—
97	Restore CC 0 to Service (**RST:CC 0!**)	TELCO/INST	DLP-522
98	Diagnose Lowest IOUS in IOP Frame Associated With Spliced Cable Using Restore Message (**RST:IOUS a,IPUB 0!**)	TELCO/INST	DLP-534
99	Apply Heat to Heat Shrink Material (Item 92)	INST	—
100	If IOP Frame Contains Two IOUSs, Perform Items 101 Through 118 for Highest IOUS in IOP Frame; Otherwise, Go to Item 119	TELCO/INST	—
101	At 1B Processor MCC Terminal, if 118 Page Is Not Displayed, Enter **118**	TELCO	—
102	Determine Which CC Is Standby (MATCH)	TELCO	—
103	If CC 1 Is Standby, Switch CCs To Make CC 0 Standby (**SW:CC!**)	TELCO	DLP-513
104	Diagnose Highest-Numbered IOUS in IOP Frame Associated With GCP Cable Being Disconnected Using Restore Message (**RST:IOUS a,IPUB 0!**)	TELCO	DLP-534
105	Remove CC 0 From Service (**RMV:CC 0!**)	TELCO	DLP-507
106	At CC 0 Conversion Switch Unit, Disconnect Ivory-Colored GCP Cable Associated With Highest IOUS in IOP Frame	INST	—
107	Connect ITE 6921 Cable Discharge Tool Into End of Ivory-Colored GCP Cable Disconnected in Item 106. Wait 30 Seconds Before Continuing	INST	—
	(Continued on Page 9)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
108	Disconnect ITE 6921 Cable Discharge Tool From GCP Cable; and Test Connector Using Gang Test Tool. Connect GCP Cable to Double Male Splicer. Remember to Install Heat-Shrink Tubing at This Time	INST	—
109	At CC 0 Conversion Switch Unit, Disconnect The GCP Cable Associated With Highest IOUS in IOP Frame. If Extension Cable Was NOT Used, Connect ITE 6921 Cable Discharge Tool Into End of 4E GCP Cable. Wait 30 Seconds Before Continuing and Perform Pin-Test. Skip to Item 113	INST	—
110	If Extension Cable Was Used, Connect ITE 6921 Cable Discharge Tool Into End of 4E GCP Cable. Wait 30 Seconds Before Continuing. Connect 4E GCP to The Shorting Plug	INST	—
111	Remove Temporary Spliced Extension Cable and Discard Surplus Extension Cable. Perform Pin-Test On 4E GCP Cable. Connect Shorting Plug to The 4E GCP Cable	INST	—
112	Locate And Discharge Ivory-Colored GCP Cable Using The ITE 6921 Cable Discharge Tool. Remove Shorting Plug From 4E GCP Cable	INST	—
113	Splice 4E Cable and Ivory-Colored GCP Cable Together. Do Not Heat Shrink At This Time	INST	—
114	Restore CC 0 to Service (RST:CC 0!)	TELCO/INST	DLP-506
115	Diagnose Highest IOUS in IOP Frame Associated With Spliced Cable Using Restore Message (RST:IOUS a,IPUB 0!)	TELCO/INST	DLP-534
116	Diagnose Lowest IOUS in IOP Frame Associated With Spliced Cable Using Restore Message (RST:IOUS a,IPUB 0!)	TELCO/INST	DLP-534
117	Apply Heat to Heat Shrink Material (Item 109)	INST	—
118	Repeat Items 84 Through 117 for Each Equipped IOP Frame	TELCO/INST	—
119	If Office Contains IOUS IO Frame (J5A006A), Perform Items 120 Through 138; Otherwise, Go to Item 139	TELCO/INST	—
	NOTES: 1. Items 120 through 138 are being performed to disconnect CC 0 GCP conversion switch unit from GCP cable path to base IO frames 2. IO frames must be disconnected from CC 0 GCP conversion switch unit from lowest-to highest-member number order 3. Items 120 through 137 must be repeated for each IOUS number in each IO frame		
120	At 1B Processor MCC Terminal, if 118 Page Is Not Displayed, Enter 118	TELCO	—
121	Determine Which CC Is Standby (MATCH)	TELCO	—

DO THE ITEMS BELOW IN THE ORDER LISTED			FOR DETAILS, GO TO
122	If CC 1 Is Standby, Switch CCs To Make CC 0 Standby (**SW:CC!**)	TELCO	DLP-513
123	Diagnose Lowest-Numbered IOUS in IO Frame Associated With GCP Cable Being Disconnected Using Restore Message (**RST:IOUS a!**)	TELCO	DLP-506
124	Diagnose Highest-Numbered IOUS in IO Frame Associated With GCP Cable Being Disconnected Using Restore Message (**RST:IOUS a!**)	TELCO	DLP-506
125	Remove CC 0 From Service **(RMV:CC 0!)**	TELCO	DLP-507
126	At CC 0 Conversion Switch Unit, Disconnect Ivory-Colored GCP Cable Associated With IOUS in 10 Frame	INST	—
127	Connect ITE 6921 Cable Discharge Tool Into End of Ivory-Colored GCP Cable Disconnected in Item 126. Wait 30 Seconds Before Continuing	INST	—
128	Disconnect ITE 6921 Cable Discharge Tool From GCP Cable; and Test Connector Using Gang Test Tool. Connect GCP Cable to Double Male Splicer. Remember To Install Heat-Shrink Tubing at This Time	INST	—
129	At CC 0 Conversion Switch Unit, Disconnect The GCP Cable Associated With IOUS in IO Frame. If Extension Cable Was NOT Used, Connect ITE 6921 Cable Discharge Tool Into End of 4E GCP Cable. Wait 30 Seconds Before Continuing and Perform Pin-Test. Skip to Item 133	INST	—
130	If Extension Cable Was Used, Connect ITE 6921 Cable Discharge Tool Into End of 4E GCP Cable. Wait 30 Seconds Before Continuing. Connect 4E GCP to The Shorting Plug	INST	—
131	Remove Temporary Spliced Extension Cable and Discard Surplus Extension Cable. Perform Pin-Test On 4E GCP Cable. Connect Shorting Plug to The 4E GCP Cable	INST	—
132	Locate And Discharge Ivory-Colored GCP Cable Using The ITE 6921 Cable Discharge Tool. Remove Shorting Plug From 4E GCP Cable	INST	—
133	Splice 4E Cable and Ivory-Colored GCP Cable Together. Do Not Heat Shrink At This Time	INST	—
134	Restore CC 0 to Service (**RST:CC 0!**)	TELCO/INST	DLP-522
135	Diagnose Lowest IOUS in IO Frame Associated With Spliced Cable Using Restore Message (**RST:IOUS a!**)	TELCO/INST	DLP-506
136	Diagnose Highest IOUS in IO Frame Associated With Spliced Cable Using Restore Message (**RST:IOUS a!**)	TELCO/INST	DLP-506

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
137	Apply Heat to Heat Shrink Material (Item 129)	INST	—
138	Repeat Items 120 Through 137 for Each Equipped IO Frame	TELCO/INST	—
139	Switch CCs To Make CC 0 Active (**SW:CC!**)	TELCO	DLP-513
140	At MTC Terminal, Enter Message **ALW:MACLI,CLASS MTCE!** To Allow REX	TELCO	—
141	At CC 0 GCP Conversion Switch Unit, Ensure No Ivory-Colored Cables Are Connected	INST	—
142	At CC 0 GCP Conversion Switch Unit, Disconnect Cables Coming From 1A Processor, Control/Interlock Cables From Indicator/Remote Control Unit, and -48V Power Feeders (Tape Ends of -48V Power Feeders)	INST	—
143	After All Cables Have Been Removed From CC 0 GCP Conversion Switch Unit and Secured, Carefully Remove Unit From Mounting Apparatus	INST	—
144	Remove Mounting Apparatus	INST	—
145	Install Cross-Aisle Cable Trough in Close Proximity to Secured Spliced Cables	INST	—
146	Disconnect Trunk Support Strap From Spliced Cables and Lay These Spliced Cables in Cross-Aisle Cable Trough	INST	—
147	Notify Next Higher Technical Support Group That CC 0 GCP Conversion Switch Removal Is Complete	TELCO	—
148	Soak CC 0 GCP Cables in Active State for at Least One Non-Cabling Shift	TELCO/INST	—

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

		RESPONSIBILITY	
	WARNINGS: 1. No other growth or maintenance activity is allowed during this procedure *2. If system problems are encountered during cable splicing, cable being spliced must be completed and procedure stopped until resolved. Problems should be reported to next higher technical support*		
	NOTES: 1. Appropriate Input/Output manuals must be used if clarification of input message or output message is necessary 2. This procedure must be performed during light traffic periods 3. ***4ESS***™ Switch operation must be closely monitored during this procedure 4. This procedure may be safely stopped after cabling and successfully testing each unit. If stopping, REX must be allowed. When resuming, Items 1 through 4 must be performed to ensure system stability. The following equipment must have Scan and SD jumper cables removed: • PCD 0, CONV 0 and CONV 1 • PCD 1, CONV 0 and CONV 1 • PCD 0, DAMON 0 and CONV 2 (If equipped) • PCD 1, DAMON 0 and CONV 2 (If equipped) • Each Equipped TUC Pair (0 and 1, ... n) • DUS 0 • DUS 1 • API 0 • API 1 • IOUS 0, IPUB 0 and IOUS 1, IPUB 0 • IOUS 0, IPUB 1 and IOUS 1, IPUB 1 • IOUS 2, IPUB 0 and IOUS 3, IPUB 0 • IOUS 2, IPUB 1 and IOUS 3, IPUB 1 • IOUS 4, IPUB 0 and IOUS 5, IPUB 0 (If equipped)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
	NOTE 4 (Contd) • IOUS 4, IPUB 1 and IOUS 5, IPUB 1 (If equipped) • IOUS 6, IPUB 0 and IOUS 7, IPUB 0 (If equipped) • IOUS 6, IPUB 1 and IOUS 7, IPUB 1 (If equipped)		
1	Notify Next Higher Technical Support Group That Scan and SD Conversion Switch Unit Removal Is Being Performed. Obtain Information for Items 2 and 3 From Next Higher Technical Support Group	TELCO	—
2	Ensure No API Interjects, Interrupts, or BLMs Have Occurred Within 24 Hours of Performing This Procedure	TELCO	—
3	Ensure ***4ESS*** Switch Is in Stable Condition	TELCO	DLP-501
4	Ensure 1B Processor and Peripheral Units Are Operating in Normal Duplex Mode	TELCO	DLP-502
5	At 1B MTC Terminal, Enter Message **INH:MACLI,CLASS MTCE;REX!** To Inhibit 1B Processor REX	TELCO	—
6	Enter Message **MON:CHAN SREC1!** To Allow Monitoring of SREC1 Channel	TELCO	—
7	If Office Is Equipped With PCD Frame, Perform Item 8; Otherwise, Go To Item 13	TELCO/INST	—
8	Perform Following for PCD 0, CONV 0 and CONV 1; and PCD 1, CONV 0 and CONV 1:		
	1. Remove PCD Frame (0/1) and Unit (CONV 0) From Service (**RMV:PCD a,CONV 0!**)	TELCO	DLP-526
	2. Diagnose PCD Frame (0/1) and Unit (CONV 0) (Item 8.1) (**DGN:PCD a,CONV 0!**)	TELCO	DLP-527
	3. At Scan and SD Conversion Switch Unit, Disconnect Cable Coming From Removed Unit (Item 8.1); and Test Connector Using Gang Test Tool	INST	—
	4. At Scan and SD Conversion Switch Unit, Disconnect Cable [Associated With Removed Unit (Item 8.1)] Coming From 1B Processor; and Test Connector Using Gang Test Tool	INST	—
	5. Securely Route Cables (Items 8.3 and 8.4) So Cables Will Lie in Cross-Aisle Cable Trough When Installed	INST	—
	6. Connect Cables (Items 8.3 and 8.4) Together Using Cable Splicer Kit. Place Heat Shrink Material Over Splice, But Do Not Apply Heat at This Time	INST	—
	7. Restore PCD Frame (0/1) and Unit (CONV 0) (Item 8.1) to Service (**RST:PCD a,CONV 0!**)	TELCO/INST	DLP-528
	8. Apply Heat to Heat Shrink Material (Item 8.6)	INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
8 (Contd)	9. If Scan and SD Cable Has Not Been Removed for PCD 1, CONV 0 and PCD 1, CONV 1, Repeat From Item 8.1; Otherwise, Go to Item 9	TELCO/INST	—
9	Perform Following for PCD 0, DAMON 0 and PCD 1, DAMON 0:		
	1. Remove PCD Frame (0/1) and Unit (DAMON 0) From Service (**RMV:PCD a,DAMON 0!**)	TELCO	DLP-526
	2. Diagnose PCD Frame (0/1) and Unit (DAMON 0) (Item 9.1) (**DGN:PCD a,DAMON 0!**)	TELCO	DLP-527
	3. At Scan and SD Conversion Switch Unit, Disconnect Cable Coming From Removed Unit (Item 9.1)	INST	—
	4. At Scan and SD Conversion Switch Unit, Disconnect Cable [Associated With Removed Unit (Item 9.1)] Coming From 1B Processor; and Test Connector Using Gang Test Tool	INST	—
	5. Securely Route Cables (Items 9.3 and 9.4) So Cables Will Lie in Cross-Aisle Cable Trough When Installed	INST	—
	6. Connect Cables (Items 9.3 and 9.4) Together Using Cable Splicer Kit. Place Heat Shrink Material Over Splice, But Do Not Apply Heat at This Time	INST	—
	7. Restore PCD Frame (0/1) and Unit (DAMON 0) (Item 9.1) to Service (**RST:PCD a,DAMON 0!**)	TELCO/INST	DLP-528
	8. Apply Heat to Heat Shrink Material (Item 9.6)	INST	—
	9. If Scan and SD Cable Has Not Been Removed for PCD 1, DAMON 0, Repeat From Item 9.1; Otherwise, Go to Item 10	TELCO/INST	—
10	Safe Point To Temporarily Stop This Procedure. If Stopping, Perform Items 11 and 12; Otherwise, Go To Item 13	TELCO/INST	—
11	At 1B MTC Terminal, Enter Message **ALW:MACLI,CLASS MTCE!** To Allow 1B Processor REX	TELCO	—
12	Stop Now Until Resuming. Perform Items 1 Through 4 Before Continuing at Item 13	TELCO/INST	—
13	Perform Following for All Equipped TUC Pairs (0 and 1, 2 and 3, ... n):		
	NOTE: One Scan and SD cable is associated with one TUC pair (0 and 1, 2 and 3, ... n). Therefore, Items 13.1, 13.2, and 13.7 must be performed on both TUCs		
	1. Remove TUC Pair (0 and 1, etc) From Service (**RMV:TUC a!**; Then **RMV:TUC b!**)	TELCO	DLP-526
	2. Diagnose TUC Pair (0 and 1, etc) (Item 13.1) (**DGN:TUC a!**; Then **DGN:TUC b!**)	TELCO	DLP-527

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
13 (Contd)	3. At Scan and SD Conversion Switch Unit, Disconnect Cable Coming From Removed TUC Pair (Item 13.1); and Test Connector Using Gang Test Tool	INST	—
	4. At Scan and SD Conversion Switch Unit, Disconnect Cable [Associated With Removed TUC Pair (Item 13.1)] Coming From 1B Processor; and Test Connector Using Gang Test Tool	INST	—
	5. Securely Route Cables (Items 13.3 and 13.4) So Cables Will Lie in Cross-Aisle Cable Trough When Installed	INST	—
	6. Connect Cables (Items 13.3 and 13.4) Together Using Cable Splicer Kit. Place Heat Shrink Material Over Splice, But Do Not Apply Heat at This Time	INST	—
	7. Restore TUC Pair (0 and 1, etc.) (Item 13.1) to Service (**RST:TUC a!**; Then **RST:TUC b!**)	TELCO/INST	DLP-528
	8. Apply Heat to Heat Shrink Material (Item 13.6)	INST	—
	9. If Scan and SD Cables Have Not Been Removed for All Equipped TUC Pairs (0 and 1, ... n), Repeat From Item 13.1; Otherwise, Go to Item 14	TELCO/INST	—
14	Safe Point To Temporarily Stop This Procedure. If Stopping, Perform Items 15 and 16; Otherwise, Go To Item 17	TELCO/INST	—
15	At 1B MTC Terminal, Enter Message **ALW:MACLI,CLASS MTCE!** To Allow 1B Processor REX	TELCO	—
16	Stop Now Until Resuming. Perform Items 1 Through 4 Before Continuing at Item 17	TELCO/INST	—
17	Perform Following for DUS 0 and DUS 1:		
	1. Remove DUS (0/1) From Service **(RMV:DUS a!)**	TELCO	DLP-526
	2. Diagnose DUS (0/1) (Item 17.1)**(DGN:DUS a!)**	TELCO	DLP-527
	3. At Scan and SD Conversion Switch Unit, Disconnect Cable Coming From DUS (Item 17.1); and Test Connector Using Gang Test Tool	INST	—
	4. At Scan and SD Conversion Switch Unit, Disconnect Cable for DUS (Item 17.1) Coming From 1B Processor; and Test Connector Using Gang Test Tool	INST	—
	5. Securely Route Cables (Items 17.3 and 17.4) So Cables Will Lie in Cross-Aisle Cable Trough When Installed	INST	—
	(Continued on Page 5)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
17 (Contd)	6. Connect Cables (Items 17.3 and 17.4) Together Using Cable Splicer Kit. Place Heat Shrink Material Over Splice, But Do Not Apply Heat at This Time	INST	—
	7. Restore DUS (Item 17.1) to Service **(RST:DUS a!)**	TELCO/INST	DLP-528
	8. Apply Heat to Heat Shrink Material (Item 17.6)	INST	—
	9. At 1B MTC Terminal, Enter Message **SW:APS 0!** To Switch APIs	TELCO	—
	10. If Scan and SD Cable Has Not Been Removed for Both DUSs, Repeat From Item 17.1; Otherwise, Go to Item 18	TELCO/INST	—
18	Safe Point To Temporarily Stop This Procedure. If Stopping, Perform Items 19 and 20; Otherwise, Go To Item 21	TELCO/INST	—
19	At 1B MTC Terminal, Enter Message **ALW:MACLI,CLASS MTCE!** To Allow 1B Processor REX	TELCO	—
20	Stop Now Until Resuming. Perform Items 1 Through 4 Before Continuing at Item 21	TELCO/INST	—
21	Perform Following for API 0 and API 1:		
	1. At MCRT Terminal, Enter Messages **INH:DMQ;SRC REX!** and **INH:DMQ;SRC ADP!** To Inhibit APS Automatic Diagnostics	TELCO	—
	2. Remove API (0/1) From Service	TELCO	DLP-526
	3. Diagnose API (Item 21.2)**(DGN:API a!)**	TELCO	DLP-527
	4. At Scan and SD Conversion Switch Unit, Disconnect Cable Coming From API (Item 21.2); and Test Connector Using Gang Test Tool	INST	—
	5. At Scan and SD Conversion Switch Unit, Disconnect Cable for API (Item 21.2) Coming From 1B Processor; and Test Connector Using Gang Test Tool	INST	—
	6. Securely Route Cables (Items 21.4 and 21.5) So Cables Will Lie in Cross-Aisle Cable Trough When Installed	INST	—
	7. Connect Cables (Items 21.4 and 21.5) Together Using Cable Splicer Kit. Place Heat Shrink Material Over Splice, But Do Not Apply Heat at This Time	INST	—
	8. Restore API (Item 21.2) to Service **(RST:API a!)**	TELCO/INST	DLP-528
	9. Apply Heat to Heat Shrink Material (Item 21.7)	INST	—
	10. At 1B MTC Terminal, Enter Message **SW:APS 0!** To Switch APIs	TELCO	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
21 (Contd)	11. If Scan and SD Cable Has Not Been Removed for Both APIs, Repeat From Item 21.1; Otherwise, Go to Item 21.12	TELCO/INST	—
	12. At MCRT, Enter Message **ALW:DMQ;SRC REX!** and **ALW:DMQ;SRC ADP!** To Allow APS REX	TELCO	—
22	Safe Point To Temporarily Stop This Procedure. If Stopping, Perform Items 23 and 24; Otherwise, Go To Item 25	TELCO/INST	—
23	At 1B MTC Terminal, Enter Message **ALW:MACLI,CLASS MTCE!** To Allow 1B Processor REX	TELCO	—
24	Stop Now Until Resuming. Perform Items 1 Through 4 Before Continuing at Item 25	TELCO/INST	—
25	Perform Following for IO/IOP Frame 0, IOUS 0, IPUB 0; IO/IOP Frame 0, IOUS 1, IPUB 1; IO/IOP Frame 1, IOUS 2, IPUB 0 and IO/IOP Frame 1, IOUS 3, IPUB 1:		
	1. Remove Appropriate IOUS and IPUBs From Service	TELCO	DLP-526
	2. Diagnose IOUS (Item 25.1) **(DGN:IOUS a!)**	TELCO	DLP-527
	3. At Scan and SD Conversion Switch Unit, Disconnect Cable Coming From IOUS/IPUB (Item 25.1); and Test Connector Using Gang Test Tool	INST	—
	4. At Scan and SD Conversion Switch Unit, Disconnect Cable For IOUS/IPUB (Item 25.1) Coming From 1B Processor; and Test Connector Using Gang Test Tool	INST	—
	5. Securely Route Cables (Items 25.3 and 25.4) So Cables Will Lie in Cross-Aisle Cable Trough When Installed	INST	—
	6. Connect Cables (Items 25.3 and 25.4) Together Using Cable Splicer Kit. Place Heat Shrink Material Over Splice, But Do Not Apply Heat at This Time	INST	—
	7. Restore IOUS and IPUBs (Item 25.1) to Service	TELCO/INST	DLP-528
	8. Apply Heat to Heat Shrink Material (Item 25.6)	INST	—
	9. If Scan and SD Cable Has Not Been Installed for IOUS 0, IPUB 0; IOUS 1, IPUB 1; IOUS 2, IPUB 0 and IOUS 3, IPUB 1, Repeat From Item 25.1; Otherwise, Go to Item 26	TELCO/INST	—
26	At 1B MTC Terminal, Enter Message **STOP:MON;CHAN SREC1!**	TELCO	—
27	Safe Point To Temporarily Stop This Procedure. If Stopping, Perform Items 28 and 29; Otherwise, Go to Item 32	TELCO/INST	—
28	At 1B MTC Terminal, Enter Message **ALW:MACLI,CLASS MTCE!** To Allow 1B Processor REX	TELCO	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
29	Stop Now Until Resuming. Perform Items 1 Through 4 Before Continuing at Item 30	TELCO/INST	—
30	Reconnect Software Alarm Cable:		—
	1. At Scan and SD Conversion Switch Unit, Disconnect Cable at Location 088-115; and Test Connector Using Gang Test Tool	INST	—
	2. Disconnect Ivory-Colored Cable at Location 088-132; and Test Connector Using Gang Test Tool	INST	—
	3. Securely Route Cables (Items 30.1 and 30.2) So Cables Will Lie in Cross-Aisle Cable Trough When Installed	INST	—
	4. Connect Cables (Items 30.1 and 30.2) Together Using Cable Splicer Kit. Place Heat Shrink Material Over Splice, But Do Not Apply Heat at This Time	INST	—
	5. At 1B Processor MCC Terminal, Enter **118** To Obtain 1B Processor Status Page (118)	TELCO	—
	6. On 1B Processor Status Page (118), Determine Standby CC (Match)	TELCO	—
	7. Remove Standby CC From Service **(RMV:CC a!)**	TELCO	DLP-507
	8. Test Software Minor Alarm	TELCO/INST	DLP-529
	9. Test Software Major Alarm	TELCO/INST	DLP-530
	10. Test Software Critical Alarm	TELCO/INST	DLP-531
	11. Restore Standby CC to Service **(RST:CC a!)**	TELCO	DLP-522
	12. Apply Heat to Heat Shrink Material (30.4)	INST	—
31	Safe Point To Temporarily Stop This Procedure. If Stopping, Perform Items 32 and 33; Otherwise, Go to Item 34	TELCO/INST	—
32	At 1B MTC Terminal, Enter Message **ALW:MACLI,CLASS MTCE!** To Allow 1B Processor REX	TELCO	—
33	Stop Now Until Resuming. Perform Items 1 Through 4 Before Continuing at Item 34	TELCO	—
34	If This Office Is Equipped With NMDC Frame, Perform Items 35 Through 39; Otherwise, Go to Item 40	INST/TELCO	—
35	At 1B Processor Cabinet, Temporarily Disconnect NMDC Cable	INST	—
	(Continued on Page 8)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
36	At SSD Conversion Switch Unit, Disconnect NMDC Cable, Cut Off and Discard Both 2 x 10 Connectors; Then Rerun This Cable to NMDC Frame	INST	—
37	At NMDC Frame, Remove Proper Wires From Terminal Strip AA	INST	—
38	Wire-Wrap Wires in Cable (Item 36) to Proper Location on Terminal Strip AA	INST	—
39	At 1B Processor Cabinet, Connect Cable That Was Disconnected in Item 35	INST	—
40	Enter Message **ALW:MACLI,CLASS MTCE!** To Allow 1B Processor REX	TELCO	—
41	At Scan and SD Conversion Switch Unit, Ensure No Ivory-Colored Cables Are Connected	INST	—
42	At Scan and SD Conversion Switch Unit, Disconnect Cables Coming From 1A Processor, Control/Interlock Cables From Indicator/Remote Control Unit, and -48V Power Feeders (Tape Ends of -48V Power Feeders)	INST	—
43	After All Cables Have Been Removed From Scan and SD Conversion Switch Unit and Secured, Carefully Remove Unit From Mounting Apparatus	INST	—
44	Remove Mounting Apparatus	INST	—
45	Install Cross-Aisle Cable Trough in Close Proximity to Secured Spliced Cables	INST	—
46	Disconnect Trunk Support Strap From Spliced Cables and Lay These Spliced Cables in Cross-Aisle Cable Trough	INST	—
47	Notify Next Higher Technical Support Group That SSD Conversion Switch Unit Is Removed	TELCO	—

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

		RESPONSIBILITY	
	WARNINGS: 1. No other growth or maintenance activity is allowed during this procedure *2. If system problems are encountered during cable splicing, cable being spliced must be completed and procedure stopped until resolved. Problems should be reported to next higher technical support group*		
	NOTES: 1. Appropriate Input/Output manuals must be used if clarification of input message or output message is necessary 2. All input messages, except scoping messages, are to be entered at MTC terminal. SREC, Beltline, or applicable terminal is to be used for scoping 3. This procedure must be performed during light traffic periods 4. This procedure contains soak interval for verifying system operation and stability during conversion switch removal. During soak interval, all abnormal conditions (such as interrupts, interjects, and diagnostic failures related to removal) must be investigated and resolved immediately 5. ***4ESS™*** Switch operation must be closely monitored during this procedure		
1	Notify Next Higher Technical Support Group That PUB 1 Conversion Switch Unit Removal Is Being Performed. Obtain Information for Items 2 and 3 From Next Higher Technical Support Group	TELCO	—
2	Ensure No API Interjects, Interrupts, or BLMs Have Occurred Within 24 Hours of Performing This Procedure	TELCO	—
3	Ensure ***4ESS*** Switch Is in Stable Condition	TELCO	DLP-501
4	Ensure 1B Processor and Peripheral Units Are Operating in Normal Duplex Mode	TELCO	DLP-502
5	Set Up Storage Oscilloscope	INST	DLP-503
6	Store PUB 1 Input Messages on 1B Processor Terminal for PUB-Looping Test	TELCO	DLP-505
7	At 1B MTC Terminal, Enter Message **INH:MACLI,CLASS MTCE;REX!** To Inhibit REX	TELCO	—
8	Enter Message **STOP:TEST;PUSYS!**; Ensure **OK** Response Is Received	TELCO	—
9	Diagnose PUB 0 Using Restore Message **(RST:PUB 0!)**	TELCO	DLP-506
10	Diagnose PUB 1 Using Restore Message **(RST:PUB 1!)**	TELCO	DLP-506
11	Remove PUB 1 From Service **(RMV:PUB 1!)**	TELCO	DLP-507

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
12	At PUB 1 Power Switch in PUBB Frame, Rotate **ROS/OFF** Switch to **ROS** Position (Do Not Remove Power)	TELCO	—
13	Ensure Appropriate Isolation Material Is Placed To Protect PUBB Frame and any Frame Across Aisle	INST	—
	NOTE: Items 14.1 through 14.4 must be performed for one cable at a time		
14	Isolate Conversion Switch Unit From PUB 1:		
	1. At PUB 1 Conversion Switch Unit, Disconnect One Cable in Signal Family Group Coming From 1B Processor; and Test Connector Using Gang Test Tool	INST	—
	2. At PUB 1 Conversion Switch Unit, Disconnect Associated Cable (Item 14.1) Coming From PUBB Frame; and Test Connector Using Gang Test Tool	INST	—
	3. Securely Route Cables (Items 14.1 and 14.2) So Cables Will Lie in Cross-Aisle Cable Trough When Installed	INST	—
	4. Connect Cables (Items 14.1 and 14.2) Together Using Cable Splicer Kit. Place Heat Shrink Material Over Splice, But Do Not Apply Heat at This Time	INST	—
	5. Repeat Items 14.1 Through 14.4 for Each PUB 1 Cable in Signal Family Group	INST	—
	6. Diagnose PUB 1 (DGN:PUB 1:PH 2!)	TELCO/INST	DLP-508
	7. Apply Heat to Heat Shrink Material (Item 14.4)	INST	—
	8. Repeat Items 14.1 Through 14.7 for Next PUB 1 Signal Family Group	INST	—
15	At PUB 1 Conversion Switch Unit, Ensure No Ivory-Colored Cables Are Connected	INST	—
16	Office Technician Must Observe PUB 1 Scoping Since Successful Completion of This Scoping Will Be Considered Acceptance of PUB 1 Conversion Switch Unit Removal. During Item 17, if any Error Is Encountered, Notify Next Higher Technical Support Group and Correct Error Before Continuing	TELCO	—
17	Execute PUB-Looping Test To Verify PUB 1 at BTRs in IO or IOP:		
	1. Advance Program and Set Up Loop To Observe Bit 0 on PU Write and Reply Bus	TELCO	DLP-509
	2. Scope Bit 0 on PU Write Bus at BTRs in IO or IOP Frame	INST/TELCO	—
	3. Scope Bit 0 on PU Reply Bus at BTRs in IO or IOP Frame	INST/TELCO	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
17 (Contd)	4. Enter Stop-Looping Message (**EX:PUB 1!**)	TELCO	—
	5. Advance Program and Set Up Loop To Observe Bits 1 to 35 Pu Write Bus; Bits 0 to 11 on PU Enable Address Bus; and Bits 1 to 23 on PU Reply Bus	TELCO	DLP-509
	6. Scope Bits 1 to 35 on PU Write Bus at BTRs in IO or IOP Frame	INST/TELCO	—
	7. Scope Bits 0 to 11 on PU Enable Address Bus at BTRs in IO or IOP Frame	INST/TELCO	—
	8. Scope Bits 1 to 23 on PU Reply Bus at BTRs in IO or IOP Frame	INST/TELCO	—
	9. Enter Stop-Looping Message (**EX:PUB 1!**)	TELCO	—
	10. Set Up Loop To Observe PU Control Bus and Miscellaneous Bus Bits	TELCO	DLP-510
	11. Scope PU Control Bus and Miscellaneous Bus Bits at BTRs in IO or IOP Frame	INST/TELCO	—
	12. Enter Stop-Looping Message (**EX:PUB 1!**)	TELCO	—
	13. Stop Maintenance Control Program Client	TELCO	DLP-511
	14. Disconnect Storage Oscilloscope From IO or IOP Frame	INST	—
18	At PUBB Frame Power Switch (Item 12), Rotate **ROS/OFF** Switch to Normal Position	TELCO/INST	DLP-512
19	At 1B Processor MTC Terminal, Restore PUB 1 to Service (**RST:PUB 1!**) (Expect ATP)	TELCO/INST	DLP-506
20	Switch CCs (**SW:CC!**)	TELCO	DLP-513
21	Restore PUB 1 to Service (**RST:PUB 1!**) (Expect ATP)	TELCO/INST	DLP-506
22	Enter Message **TEST:PUSYS;UCL!;** Ensure **OK** Response Is Received	TELCO	—
23	Enter Message **ALW:MACLI,CLASS MTCE!** To Allow REX	TELCO	—
24	At PUB 1 Conversion Switch Unit, Disconnect Cables Coming From 1A Processor, Control/ Interlock Cables From Indicator/Remote Control Unit, and -48V Power Feeders (Tape Ends of -48V Power Feeders)	INST	—
25	After All Cables Have Been Removed From PUB 1 Conversion Switch Unit and Secured, Carefully Remove Unit From Mounting Apparatus	INST	—
26	Remove Mounting Apparatus	INST	—
27	Install Cross-Aisle Cable Trough in Close Proximity to Secured Spliced Cables (Item 14)	INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
28	Disconnect Trunk Support Strap From Spliced Cables and Lay These Spliced Cables in Cross-Aisle Cable Trough	INST	—
29	Notify Next Higher Technical Support Group That PUB 1 Conversion Switch Unit Is Removed	TELCO	—
30	Soak PUB 1 as Standby for at Least One Non-Cabling Shift Before Proceeding	TELCO/INST	—

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

		RESPONSIBILITY	
	WARNINGS: 1. No other growth or maintenance activity is allowed during this procedure *2. If system problems are encountered during cable splicing, cable being spliced must be completed and procedure stopped until resolved. Problems should be reported to next higher technical support group*		
	NOTES: 1. Appropriate Input/Output manuals must be used if clarification of input message or output message is necessary 2. This procedure must be performed during light traffic periods 3. This procedure contains soak interval for verifying system operation and stability during conversion switch removal. During soak interval, all abnormal conditions (such as interrupts, interjects, and diagnostic failures related to removal) must be investigated and resolved immediately 4. ***4ESS™*** Switch and 3B APS operation must be closely monitored during this procedure		
1	Notify Next Higher Technical Support Group That AUB 1 Conversion Switch Unit Removal Is Being Performed. Obtain Information for Items 2 and 3 From Next Higher Technical Support Group	TELCO	—
2	Ensure No API Interjects, Interrupts, or BLMs Have Occurred Within 24 Hours of Performing This Procedure	TELCO	—
3	Ensure ***4ESS*** Switch Is in Stable Condition	TELCO	DLP-501
4	Ensure 1B Processor and Peripheral Units Are Operating in Normal Duplex Mode	TELCO	DLP-502
5	Set Up Storage Oscilloscope	INST	DLP-514
6	Store AUB 1 Input Messages on 1B Processor Terminal for AUB-Looping Test	TELCO	DLP-515
7	At APS MCRT, Verify API-DLN Stream (**OP:DLNCM;STREAM!**)	TELCO	DLP-516
8	Enter Following Messages To Inhibit Automatic Diagnostics: • **INH:DMQ;SRC REX!** • **INH:DMQ;SRC ADP!**	TELCO	—
9	At 1B MTC Terminal, Enter Message **INH:MACLI,CLASS MTCE;REX!** To Inhibit REX	TELCO	—
10	Determine Which API Is Standby (**OP:APSTATUS!**)	TELCO	DLP-517

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
11	Diagnose AUB (Same Member Number as Standby API) Using Restore Message (**RST:AUB a!**)	TELCO	DLP-506
12	Diagnose DUS (Same Member Number as Standby API) Using Restore Message (**RST:DUS a!**)	TELCO	DLP-506
13	Diagnose Standby API Using Restore Message (**RST:API a!**)	TELCO	DLP-506
	NOTE: Procedure must not be continued until API is restored to service		
14	Switch APIs To Make Other API Standby (**SW:APS 0!**)	TELCO	DLP-518
15	Diagnose AUB (Same Member Number as Standby API) Using Restore Message (**RST:AUB a!**)	TELCO	DLP-506
16	Diagnose DUS (Same Member Number as Standby API) Using Restore Message (**RST:DUS a!**)	TELCO	DLP-506
17	Diagnose Standby API Using Restore Message (**RST:API a!**)	TELCO	DLP-506
	NOTE: Procedure must not be continued until API is restored to service		
18	At 1B MTC Terminal, Determine Which API Is Standby (**OP:APSTATUS!**)	TELCO	DLP-517
19	If API 1 Is Not Standby, Switch APIs To Make API 1 Standby (**SW:APS 0!**)	TELCO	DLP-518
20	Remove AUB 1 From Service (**RMV:AUB 1!**)	TELCO	DLP-507
21	Remove All In-Service Equipped TUCs From Service (**RMV:TUC a!**)	TELCO	DLP-507
22	At API 1 Power Switch, Rotate **ROS/OFF** Switch to **ROS** Position (Do Not Remove Power)	TELCO	—
23	At DUS 1 Power Switch, Rotate **ROS/OFF** Switch to **ROS** Position (Do Not Remove Power)	TELCO	—
	NOTE: Items 24.1 through 24.5 must be performed for one cable at a time		
24	Isolate Conversion Switch Unit From AUB 1:		
	1. At 1B MTC Terminal, Enter Message **TEST:AUB 1!**; Ensure **TEST:AUB 1 NTR** Message Is Received, If **NTR** Message Is Received, Continue at Item 24.2; Otherwise, Repeat From Item 10 (AUB 1 Is in Service)	TELCO	—
	2. At AUB 1 Conversion Switch Unit, Disconnect One Cable in Signal Family Group Coming From 1B Processor; and Test Connector Using Gang Test Tool	INST	—
	3. At AUB 1 Conversion Switch Unit, Disconnect Associated Cable (Item 24.2) Coming From API 1; and Test Connector Using Gang Test Tool	INST	—
	4. Securely Route Cables (Items 24.2 and 24.3) So Cables Will Lie in Cross-Aisle Cable Trough When Installed	INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
24 (Contd)	5. Connect Cables (Items 24.2 and 24.3) Together Using Cable Splicer Kit. Place Heat Shrink Material Over Splice. But Do Not Apply Heat at This Time	INST	—
	6. Repeat Items 24.1 Through 24.5 for Each Cable in AUB 1 Signal Family Group	INST	—
	7. Diagnose AUB 1 (**DGN:AUB 1!**)	TELCO/INST	DLP-519
	8. Apply Heat to Heat Shrink Material (Item 24.5)	INST	—
	9. Repeat Items 24.1 Through 24.8 for Next AUB 1 Signal Family Group	INST	—
25	At AUB 1 Conversion Switch Unit, Ensure No Ivory-Colored Cables Are Connected	INST	—
26	At 1B MTC Terminal, Restore TUCs That Were Removed From Service in Item 21 (**RST:TUC a!**)	TELCO	DLP-506
27	Office Technician Must Observe AUB 1 Scoping Since Successful Completion of This Scoping Will Be Considered Acceptance of AUB 1 Conversion Switch Unit Removal. During Item 28, if any Error Is Encountered, Notify Next Higher Technical Support Group and Abort Test Until Error Is Resolved	TELCO	—
28	Execute Phase 99 Diagnostic-Scoping Test To Verify AUB 1		
	1. Enter Execute Messages for Looping on AU Write Bus (**EX:AUB 1;START!** and **EX:AUB 1:PH 99,ADR 216-251!**)	TELCO	DLP-520
	2. Scope AU Write Bus Bits 0 to 23 at BTRs in API 1	TELCO/INST	—
	3. Enter Stop-Looping Message (**EX:AUB 1!**)	TELCO	—
	4. Enter Execute Message for Looping on AU Address Bus (**EX:AUB 1:PH 99,ADR 251-274!**)	TELCO	DLP-520
	5. Scope AU Address Bus Bits 0 to 15 at BTRs in API 1	TELCO/INST	—
	6. Enter Stop-Looping Message (**EX:AUB 1!**)	TELCO	—
	7. Enter Execute Message for Looping on AU Store Address Bus (**EX:AUB 1:PH 99,ADR 337-366!**)	TELCO	DLP-520
	8. Scope AU Store Address Bus Bits 0 to 21 at BTRs in API 1	TELCO/INST	—
	9. Enter Stop-Looping Message (**EX:AUB 1!**)	TELCO	—
	10. Enter Execute Message for Looping on AU Reply Bus (**EX:AUB 1:PH 99,ADR 274-337!**)	TELCO	DLP-520
	11. Scope AU Reply Bus Bits 0 to 23 at BTRs in API 1	TELCO/INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
28 (Contd)	12. Enter Stop-Looping Message (**EX:AUB 1!**)	TELCO	—
	13. Stop Maintenance Control Program Client	TELCO	DLP-511
	14. Disconnect Storage Oscilloscope From API 1	INST	—
29	At API 1 Power Switch (Item 22), Rotate **ROS/OFF** Switch to Normal Position (API 1 Will Remain Out of Service)	TELCO/INST	DLP-512
30	At DUS 1 Power Switch (Item 23), Rotate **ROS/OFF** Switch to Normal Position (DUS 1 Will Remain Out of Service)	TELCO/INST	DLP-512
31	At 1B MTC Terminal, Restore AUB 1 to Service (**RST:AUB 1!**)	TELCO/INST	DLP-506
32	Diagnose DUS 1; Ensure All Phases Run Are ATP or Explainable CATP (**DGN:DUS 1!**)	TELCO/INST	DLP-519
33	Diagnose API 1; Ensure All Phases Run Are ATP or Explainable CATP (**DGN:API 1!**)	TELCO/INST	DLP-519
34	Switch CCs (**SW:CC!**)	TELCO	DLP-513
35	Diagnose DUS 1; Ensure All Phases Run Are ATP or Explainable CATP (**DGN:DUS 1!**)	TELCO/INST	DLP-519
36	Diagnose API 1; Ensure All Phases Run Are ATP or Explainable CATP (**DGN:API 1!**)	TELCO/INST	DLP-519
37	Restore DUS 1 to Service (**RST:DUS 1!**)	TELCO/INST	DLP-506
38	Restore API 1 to Service (**RST:API 1!**)	TELCO/INST	DLP-506
39	Diagnose AUB 1 Using Restore Message (ATP Required) (**RST:AUB 1!**)	TELCO/INST	DLP-506
40	Switch APIs To Make API 1 Active (**SW:APS 0!**)	TELCO	DLP-518
41	Enter Message **ALW:MACLI,CLASS MTCE!** To Allow REX	TELCO	—
42	At APS MCRT. Enter Following Messages To Allow Automatic Diagnostics: • **ALW:DMQ;SRC REX!** • **ALW:DMQ;SRC ADP!**	TELCO	—
43	At AUB 1 Conversion Switch Unit, Disconnect Cables Coming From 1A Processor, Control/ Interlock Cables From Indicator/Remote Control Unit, and -48V Power Feeders (Tape Ends of -48V Power Feeders)	INST	—
44	After All Cables Have Been Removed From AUB 1 Conversion Switch Unit and Secured, Carefully Remove Unit From Mounting Apparatus	INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
45	Remove Mounting Apparatus	INST	—
46	Install Cross-Aisle Cable Trough in Close Proximity to Secured Spliced Cables (Item 23)	INST	—
47	Disconnect Trunk Support Strap From Spliced Cables and Lay These Spliced Cables in Cross-Aisle Cable Trough	INST	—
48	Notify Next Higher Technical Support Group That AUB 1 Conversion Switch Unit Is Removed	TELCO	—
49	Soak AUB 1 in Active State for at Least One Non-Cabling Shift Before Proceeding	TELCO/INST	—

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

		RESPONSIBILITY	
	WARNINGS: 1. No other growth or maintenance activity is allowed during this procedure *2. If system problems are encountered during cable splicing, cable being spliced must be completed and procedure stopped until resolved. Problems should be reported to next higher technical support group*		
	NOTES: 1. In place of using the 1B Processor MCC terminal 118 page to determine which CC is standby, **OP:CCSTATUS!** input message can be entered on a beltline terminal in the equipment area to determine the standby CC 2. Appropriate Input/Output manuals must be used if clarification of input message or output message is necessary 3. This procedure must be performed during light traffic periods 4. This procedure contains soak interval for verifying system operation and stability during conversion switch removal. During soak interval, all abnormal conditions (such as interrupts, interjects, and diagnostic failures related to removal) must be investigated and resolved immediately 5. ***4ESS***™ Switch and 3B APS operation must be closely monitored during this procedure 6. This procedure may be safely stopped after cabling and successfully testing each unit. If stopping, REX must be allowed. When resuming, Items 1 through 5 must be performed to ensure system stability		
1	Notify Next Higher Technical Support Group That CC 1 GCP Conversion Switch Unit Removal Is Being Performed. Obtain Information for Items 2 and 3 From Next Higher Technical Support Group	TELCO	—
2	Ensure No API Interjects, Interrupts, or BLMs Have Occurred Within 24 Hours of Performing This Procedure	TELCO	—
3	Ensure ***4ESS*** Switch Is in Stable Condition	TELCO	DLP-501
4	Ensure 1B Processor and Peripheral Units Are Operating in Normal Duplex Mode	TELCO	DLP-502
5	At 1B MTC Terminal, Enter Message **INH:MACLI,CLASS MTCE;REX!** To Inhibit REX	TELCO	—
6	If Office Contains Extended Pollable DIF-E Frames, Member Numbers Greater Than 23, Perform Items 7 Through 23; Otherwise, Go to Item 24	TELCO/INST	—
	NOTE: Items 7 through 23 are being performed to disconnect CC 1 GCP conversion switch unit from GCP cable path to extended pollable DIF-E frames		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
7	At 1B Processor MCC Terminal, Enter **118** to Obtain 1B Processor System Status Page (118)	TELCO	—
8	Determine Which CC Is Standby (MATCH)	TELCO	—
9	If CC 0 Is Standby, Switch CCs To Make CC 1 Standby (**SW:CC!**)	TELCO	DLP-513
10	Diagnose One Extended Pollable DIF-E Frame Associated With GCP Cable Being Disconnected Using Restore Message (**RST:DIF a,CONTR 1!**)	TELCO	DLP-521
11	Remove CC 1 From Service (**RMV:CC 1!**)	TELCO	DLP-507
12	At CC 1 Conversion Switch Unit, Disconnect Ivory-Colored GCP Cable Associated With Extended Pollable DIF-E Frame	INST	—
13	Connect ITE 6921 Cable Discharge Tool Into End of Ivory-Colored GCP Cable Disconnected in Item 12. Wait 30 Seconds Before Continuing	INST	—
14	Disconnect ITE 6921 Cable Discharge Tool From GCP Cable; and Test Connector Using Gang Test Tool. Connect GCP Cable to Double Male Splicer. Remember to Install Heat-Shrink Tubing at This Time.	INST	—
15	At CC 1 Conversion Switch Unit, Disconnect The GCP Cable Associated With Extended Pollable DIF-E Frame. If Extension Cable Was NOT Used, Connect ITE 6921 Cable Discharge Tool Into End of 4E GCP Cable. Wait 30 Seconds Before Continuing and Perform Pin-Test. Skip to Item 19	INST	—
16	If Extension Cable Was Used, Connect ITE 6921 Cable Discharge Tool Into End of 4E GCP Cable. Wait 30 Seconds Before Continuing. Connect 4E GCP to The Shorting Plug	INST	—
17	Remove Temporary Spliced Extension Cable and Discard Surplus Extension Cable. Perform Pin-Test On 4E GCP Cable. Connect Shorting Plug to The 4E GCP Cable	INST	—
18	Locate And Discharge Ivory-Colored GCP Cable Using The ITE 6921 Cable Discharge Tool. Remove Shorting Plug From 4E GCP Cable	INST	—
19	Splice 4E Cable And Ivory-Colored CGP Cable Together. Do Not Heat Shrink At This Time	INST	—
20	Restore CC 1 to Service (**RST:CC 1!**)	TELCO/INST	DLP-522
21	Diagnose Extended Pollable DIF-E Frame Associated With Spliced Cable Using Restore Message (**RST:DIF a,CONTR 1!**)	TELCO/INST	DLP-521
22	Apply Heat to Heat Shrink Material (Item 15)	INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
23	Go to Item 41. Service Circuit System Does Not Need To Be Removed From CC 1 GCP Conversion Switch Unit Since Extended Pollable DIF-E Frame Has Been Removed	TELCO/INST	—
24	If Office Contains Service Circuit System and Extended Pollable DIF-E Frames Were Not Disconnected From CC 1 GCP Conversion Switch Unit. Perform Items 25 Through 40; Otherwise, Go to Item 41	TELCO/INST	—
	NOTE: Items 25 through 40 are being performed to disconnect CC 1 GCP conversion switch unit from GCP cable path to service circuit system		
25	At 1B Processor MCC Terminal, if 118 Page Is Not Displayed, Enter **118**	TELCO	—
26	Determine Which CC Is Standby (MATCH)	TELCO	—
27	If CC 0 Is Standby, Switch CCs To Make CC 1 Standby (**SW:CC!**)	TELCO	DLP-513
28	Diagnose Far-End Unit of Service Circuit System Associated With GCP Cable Being Disconnected Using Restore Message (**RST:SCS a,CONTR 1!**)	TELCO	DLP-523
29	Remove CC 1 From Service (**RMV:CC 1!**)	TELCO	DLP-507
30	At CC 1 Conversion Switch Unit, Disconnect Ivory-Colored GCP Cable Associated With Service Circuit System	INST	—
31	Connect ITE 6921 Cable Discharge Tool Into End of Ivory-Colored GCP Cable Disconnected in Item 30. Wait 30 Seconds Before Continuing	INST	—
32	Disconnect ITE 6921 Cable Discharge Tool From GCP Cable; and Test Connector Using Gang Test Tool. Connect GCP Cable to Double Male Splicer. Remember to Install Heat-Shrink Tubing at This Time	INST	—
33	At CC 1 Conversion Switch Unit, Disconnect The GCP Cable Associated With Service Circuit System. If Extension Cable Was NOT Used, Connect ITE 6921 Cable Discharge Tool Into End of 4E GCP Cable. Wait 30 Seconds Before Continuing and Perform Pin-Test. Skip to Item 37	INST	—
34	If Extension Cable Was Used, Connect ITE 6921 Cable Discharge Tool Into End of 4E GCP Cable. Wait 30 Seconds Before Continuing. Connect 4E GCP to The Shorting Plug	INST	—
35	Remove Temporary Spliced Extension Cable and Discard Surplus Extension Cable. Perform Pin-Test On 4E GCP Cable. Connect Shorting Plug to The 4E GCP Cable	INST	—
36	Locate And Discharge Ivory-Colored GCP Cable Using The ITE 6921 Cable Discharge Tool. Remove Shorting Plug From 4E GCP Cable	INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
37	Splice 4E Cable and Ivory-Colored GCP Cable Together. Do Not Heat Shrink At This Time	INST	—
38	Restore CC 1 to Service (**RST:CC 1!**)	TELCO/INST	DLP-522
39	Diagnose Service Circuit System Associated With Spliced Cable Using Restore Message (**RST:SCS a,CONTR 1!**)	TELCO/INST	DLP-523
40	Apply Heat to Heat Shrink Material (Item 33)	INST	—
	NOTES: 1. Items 41 through 63 are being performed to disconnect CC 1 GCP conversion switch unit from GCP cable path to network clock (NCLK) chains 2. NCLK chains must be diagnosed in member number 3, 1, 2, and 0 order 3. PUBs must be kept duplex at all times (CATP results will be received if one PUB is OOS. Some hardware checks may be left out)		
41	Diagnose Each NCLK Chain in Following Order Using Restore Message (**RST:NCLK 0,CHAIN a!**) • NCLK Chain 3 • NCLK Chain 1 • NCLK Chain 2 • NCLK Chain 0	TELCO	DLP-524
42	Switch CCs **(SW:CC!)**	TELCO	DLP-513
43	Diagnose Each NCLK Chain in Following Order Using Restore Message (**RST:NCLK 0,CHAIN a!**) • NCLK Chain 3 • NCLK Chain 1 • NCLK Chain 2 • NCLK Chain 0	TELCO	DLP-524
	NOTE: Items 44 through 60 are to be repeated for each NCLK chain in member number 3, 1, 2, and 0 order		
44	At 1B Processor MCC Terminal, if 118 Page Is Not Displayed, Enter **118**	TELCO	—
45	Determine Which CC Is Standby (MATCH)	TELCO	—
46	If CC 0 Is Standby, Switch CCs To Make CC 1 Standby (**SW:CC!**)	TELCO	DLP-513
47	Remove CC 1 From Service (**RMV:CC 1!**)	TELCO	DLP-507
48	Remove NCLK Chain (3, 1, 2, or 0) From Service (**RMV:NCLK 0,CHAIN a!**)	TELCO	—
49	At CC 1 Conversion Switch Unit, Disconnect Ivory-Colored GCP Cable Associated With NCLK Chain (3, 1, 2, or 0)	INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
50	Connect ITE 6921 Cable Discharge Tool Into End of Ivory-Colored GCP Cable Disconnected in Item 49. Wait 30 Seconds Before Continuing	INST	—
51	Disconnect ITE 6921 Cable Discharge Tool From GCP Cable; and Test Connector Using Gang Test Tool. Connect GCP Cable to Double Male Splicer. Remember To Install Heat-Shrink Tubing at This Time	INST	—
52	At CC 1 Conversion Switch Unit, Disconnect The GCP Cable Associated With NCLK Chain (3, 1, 2, or 0). If Extension Cable Was NOT Used, Connect ITE 6921 Cable Discharge Tool Into End of 4E GCP Cable. Wait 30 Seconds Before Continuing and Perform Pin-Test. Skip to Item 56	INST	—
53	If Extension Cable Was Used, Connect ITE 6921 Cable Discharge Tool Into End of 4E GCP Cable. Wait 30 Seconds Before Continuing. Connect 4E GCP to The Shorting Plug	INST	—
54	Remove Temporary Spliced Extension Cable and Discard Surplus Extension Cable. Perform Pin-Test On 4E GCP Cable. Connect Shorting Plug to The 4E GCP Cable	INST	—
55	Locate And Discharge Ivory-Colored GCP Cable Using The ITE 6921 Cable Discharge Tool. Remove Shorting Plug From 4E GCP Cable	INST	—
56	Splice 4E Cable And Ivory-Colored GCP Cable Together. Do Not Heat Shrink At This Time	INST	—
57	Restore CC 1 to Service (**RST:CC 1!**)	TELCO/INST	DLP-522
58	Diagnose NCLK Chain (3, 1, 2, or 0) Associated With Spliced Cable Using Restore Message **(RST:NCLK 0,CHAIN a!)**	TELCO/INST	DLP-524
59	Apply Heat to Heat Shrink Material (Item 52)	INST	—
60	Go to Item 61 (for Chain 1) or Item 62 (for Chain 2) or Item 63 (for Chain 0) or Item 64 (if All NCLK Chains Are Disconnected From CC 1 GCP Conversion Switch Unit)	TELCO/INST	—
61	Repeat Items 44 Through 60 To Disconnect NCLK Chain 1 From CC 1 GCP Conversion Switch Unit	TELCO/INST	—
62	Repeat Items 44 Through 60 To Disconnect NCLK Chain 2 From CC 1 GCP Conversion Switch Unit	TELCO/INST	—
63	Repeat Items 44 Through 60 To Disconnect NCLK Chain 0 From CC 1 GCP Conversion Switch Unit	TELCO/INST	—
	(Continued on Page 6)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
	NOTES: 1. Items 64 through 83 are being performed to disconnect CC 1 GCP conversion switch unit from GCP cable path to base SPs 2. Base SPs must be disconnected from CC 1 GCP conversion switch unit in following order: SP 0 Controller 0 and SP 0 Controller 1; then SP 1 Controller 0 and SP 1 Controller 1 (GCP cable being disconnected contains GCPs for both controllers) 3. Items 69 through 82 must be repeated for each base SP		
64	At 1B Processor MCC Terminal, if 118 Page Is Not Displayed, Enter **118**	TELCO	—
65	Determine Which CC Is Standby (MATCH)	TELCO	—
66	If CC 0 Is Standby, Switch CCs To Make CC 1 Standby (**SW:CC!**)	TELCO	DLP-513
67	Diagnose Both Base SP Controller 0 Associated With GCP Cable Being Disconnected Using Restore Message (**RST:SP a,CONTR 0!**)	TELCO	DLP-525
68	Diagnose Both Base SP Controller 1 Associated With GCP Cable Being Disconnected Using Restore Message (**RST:SP a,CONTR 1!**)	TELCO	DLP-525
69	Remove CC 1 From Service (**RMV:CC 1!**)	TELCO	DLP-507
70	At CC 1 Conversion Switch Unit, Disconnect Ivory-Colored GCP Cable Associated With One Base SP	INST	—
71	Connect ITE 6921 Cable Discharge Tool Into End of Ivory-Colored GCP Cable Disconnected in Item 70. Wait 30 Seconds Before Continuing	INST	—
72	Disconnect ITE 6921 Cable Discharge Tool From GCP Cable; and Test Connector Using Gang Test Tool. Connect GCP Cable to Double Male Splicer. Remember To Install Heat-Shrink Tubing at This Time	INST	—
73	At CC 1 Conversion Switch Unit, Disconnect The GCP Cable Associated With One Base SP. If Extension Cable Was NOT Used, Connect ITE 6921 Cable Discharge Tool Into End of 4E GCP Cable. Wait 30 Seconds Before Continuing and Perform Pin-Test. Skip to Item 77	INST	—
74	If Extension Cable Was Used, Connect ITE 6921 Cable Discharge Tool Into End of 4E GCP Cable. Wait 30 Seconds Before Continuing. Connect 4E GCP to The Shorting Plug	INST	—
75	Remove Temporary Spliced Extension Cable and Discard Surplus Extension Cable. Perform Pin-Test On 4E GCP Cable. Connect Shorting Plug to The 4E GCP Cable	INST	—
76	Locate And Discharge Ivory-Colored GCP Cable Using The ITE 6921 Cable Discharge Tool. Remove Shorting Plug From 4E GCP Cable	INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
77	Splice 4E Cable And Ivory-Colored GCP Cable Together. Do Not Heat Shrink At This Time	INST	—
78	Restore CC 1 to Service (RST:CC 1!)	TELCO/INST	DLP-522
79	Diagnose Base SP Controller 0 Associated With Spliced Cable Using Restore Message (RST:SP a,CONTR 0!)	TELCO/INST	DLP-525
80	Diagnose Base SP Controller 1 Associated With Spliced Cable Using Restore Message (RST:SP a,CONTR 1!)	TELCO/INST	DLP-525
81	Apply Heat to Heat Shrink Material (Item 73)	INST	—
82	Go to Item 83 (for SP 1 Controllers 0 and 1) or Item 84 (if Both Base SPs Are Disconnected)	TELCO/INST	—
83	Repeat Items 69 Through 82 for Base SP 1 Controllers 0 and 1	TELCO/INST	—
	NOTES: 1. Items 84 through 118 are being performed to disconnect CC 1 GCP conversion switch unit from GCP cable path to IOP frames 2. IOP frames must be disconnected from CC 1 GCP conversion switch unit from lowest-to highest-member number order 3. Items 84 through 117 must be repeated for each IOUS number in each IOP frame		
84	At 1B Processor MCC Terminal, if 118 Page Is Not Displayed, Enter 118	TELCO	—
85	Determine Which CC Is Standby (MATCH)	TELCO	—
86	If CC 0 Is Standby, Switch CCs To Make CC 1 Standby (SW:CC!)	TELCO	DLP-513
87	Diagnose Lowest-Numbered IOUS in IOP Frame Associated With GCP Cable Being Disconnected Using Restore Message (RST:IOUS a,IPUB 1!)	TELCO	DLP-534
88	Remove CC 1 From Service (RMV:CC 1!)	TELCO	DLP-507
89	At CC 1 Conversion Switch Unit, Disconnect Ivory-Colored GCP Cable Associated With Lowest IOUS in IOP Frame	INST	—
90	Connect ITE 6921 Cable Discharge Tool Into End of Ivory-Colored GCP Cable Disconnected in Item 89. Wait 30 Seconds Before Continuing	INST	—
91	Disconnect ITE 6921 Cable Discharge Tool From GCP Cable; and Test Connnector Using Gang Test Tool. Connect GCP Cable to Double Male Splicer. Remember To Install Heat-Shrink Tubing at This Time	INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
92	At CC 1 Conversion Switch Unit, Disconnect The GCP Cable Associated With Lowest IOUS in IOP Frame. If Extension Cable Was NOT Used, Connect ITE 6921 Cable Discharge Tool Into End of 4E GCP Cable. Wait 30 Seconds Before Continuing and Perform Pin-Test. Skip to Item 96	INST	—
93	If Extension Cable Was Used, Connect ITE 6921 Cable Discharge Tool Into End of 4E GCP Cable. Wait 30 Seconds Before Continuing. Connect 4E GCP to The Shorting Plug	INST	—
94	Remove Temporary Spliced Extension Cable and Discard Surplus Extension Cable. Perform Pin-Test On 4E GCP Cable. Connect Shorting Plug to The 4E GCP Cable	INST	—
95	Locate And Discharge Ivory-Colored GCP Cable Using The ITE 6921 Cable Discharge Tool. Remove Shorting Plug From 4E GCP Cable	INST	—
96	Splice 4E Cable and Ivory-Colored GCP Cable Together. Do Not Heat Shrink At This Time	INST	—
97	Restore CC 1 to Service (**RST:CC 1!**)	TELCO/INST	DLP-522
98	Diagnose Lowest IOUS in IOP Frame Associated With Spliced Cable Using Restore Message (**RST:IOUS a,IPUB 0!**)	TELCO/INST	DLP-534
99	Apply Heat to Heat Shrink Material (Item 92)	INST	—
100	If IOP Frame Contains Two IOUSs, Perform Items 101 Through 118 for Highest IOUS in IOP Frame; Otherwise, Go to Item 119	TELCO/INST	—
101	At 1B Processor MCC Terminal, if 118 Page Is Not Displayed, Enter **118**	TELCO	—
102	Determine Which CC Is Standby (MATCH)	TELCO	—
103	If CC 0 Is Standby, Switch CCs To Make CC 1 Standby (**SW:CC!**)	TELCO	DLP-513
104	Diagnose Highest-Numbered IOUS in IOP Frame Associated With GCP Cable Being Disconnected Using Restore Message (**RST:IOUS a,IPUB 0!**)	TELCO	DLP-534
105	Remove CC 1 From Service (**RMV:CC 1!**)	TELCO	DLP-507
106	At CC 1 Conversion Switch Unit, Disconnect Ivory-Colored GCP Cable Associated With Highest IOUS in IOP Frame	INST	—
107	Connect ITE 6921 Cable Discharge Tool Into End of Ivory-Colored GCP Cable Disconnected in Item 106. Wait 30 Seconds Before Continuing	INST	—
	(Continued on Page 9)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
108	Disconnect ITE 6921 Cable Discharge Tool From GCP Cable; and Test Connector Using Gang Test Tool. Connect GCP Cable to Double Male Splicer. Remember to Install Heat-Shrink Tubing at This Time	INST	—
109	At CC 1 Conversion Switch Unit, Disconnect The GCP Cable Associated With Highest IOUS in IOP Frame. If Extension Cable Was NOT Used, Connect ITE 6921 Cable Discharge Tool Into End of 4E GCP Cable. Wait 30 Seconds Before Continuing and Perform Pin-Test. Skip to Item 113	INST	—
110	If Extension Cable Was Used, Connect ITE 6921 Cable Discharge Tool Into End of 4E GCP Cable. Wait 30 Seconds Before Continuing. Connect 4E GCP to The Shorting Plug	INST	—
111	Remove Temporary Spliced Extension Cable and Discard Surplus Extension Cable. Perform Pin-Test On 4E GCP Cable. Connect Shorting Plug to The 4E GCP Cable	INST	—
112	Locate And Discharge Ivory-Colored GCP Cable Using The ITE 6921 Cable Discharge Tool. Remove Shorting Plug From 4E GCP Cable	INST	—
113	Splice 4E Cable and Ivory-Colored GCP Cable Together. Do Not Heat Shrink At This Time	INST	—
114	Restore CC 1 to Service (RST:CC 1!)	TELCO/INST	DLP-506
115	Diagnose Highest IOUS in IOP Frame Associated With Spliced Cable Using Restore Message (RST:IOUS a,IPUB 0!)	TELCO/INST	DLP-534
116	Diagnose Lowest IOUS in IOP Frame Associated With Spliced Cable Using Restore Message (RST:IOUS a,IPUB 0!)	TELCO/INST	DLP-534
117	Apply Heat to Heat Shrink Material (Item 109)	INST	—
118	Repeat Items 84 Through 117 for Each Equipped IOP Frame	TELCO/INST	—
119	If Office Contains IOUS IO Frame (J5A006A), Perform Items 120 Through 138; Otherwise, Go to Item 139	TELCO/INST	—
	NOTES: 1. Items 120 through 138 are being performed to disconnect CC 1 GCP conversion switch unit from GCP cable path to base IO frames 2. IO frames must be disconnected from CC 1 GCP conversion switch unit from lowest-to highest-member number order 3. Items 120 through 137 must be repeated for each IOUS number in each IO frame		
120	At 1B Processor MCC Terminal, if 118 Page Is Not Displayed, Enter 118	TELCO	—
121	Determine Which CC Is Standby (MATCH)	TELCO	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
122	If CC 0 Is Standby, Switch CCs To Make CC 1 Standby (**SW:CC!**)	TELCO	DLP-513
123	Diagnose Lowest-Numbered IOUS in IO Frame Associated With GCP Cable Being Disconnected Using Restore Message (**RST:IOUS a!**)	TELCO	DLP-506
124	Diagnose Highest-Numbered IOUS in IO Frame Associated With GCP Cable Being Disconnected Using Restore Message (**RST:IOUS a!**)	TELCO	DLP-506
125	Remove CC 1 From Service **(RMV:CC 1!)**	TELCO	DLP-507
126	At CC 1 Conversion Switch Unit, Disconnect Ivory-Colored GCP Cable Associated With IOUS in 1O Frame	INST	—
127	Connect ITE 6921 Cable Discharge Tool Into End of Ivory-Colored GCP Cable Disconnected in Item 126. Wait 30 Seconds Before Continuing	INST	—
128	Disconnect ITE 6921 Cable Discharge Tool From GCP Cable; and Test Connector Using Gang Test Tool. Connect GCP Cable to Double Male Splicer. Remember To Install Heat-Shrink Tubing at This Time	INST	—
129	At CC 1 Conversion Switch Unit, Disconnect The GCP Cable Associated With IOUS in IO Frame. If Extension Cable Was NOT Used, Connect ITE 6921 Cable Discharge Tool Into End of 4E GCP Cable. Wait 30 Seconds Before Continuing and Perform Pin-Test. Skip to Item 133	INST	—
130	If Extension Cable Was Used, Connect ITE 6921 Cable Discharge Tool Into End of 4E GCP Cable. Wait 30 Seconds Before Continuing. Connect 4E GCP to The Shorting Plug	INST	—
131	Remove Temporary Spliced Extension Cable and Discard Surplus Extension Cable. Perform Pin-Test On 4E GCP Cable. Connect Shorting Plug to The 4E GCP Cable	INST	—
132	Locate And Discharge Ivory-Colored GCP Cable Using The ITE 6921 Cable Discharge Tool. Remove Shorting Plug From 4E GCP Cable	INST	—
133	Splice 4E Cable and Ivory-Colored GCP Cable Together. Do Not Heat Shrink At This Time	INST	—
134	Restore CC 1 to Service (**RST:CC 1!**)	TELCO/INST	DLP-522
135	Diagnose Lowest IOUS in IO Frame Associated With Spliced Cable Using Restore Message **(RST:IOUS a!)**	TELCO/INST	DLP-506
136	Diagnose Highest IOUS in IO Frame Associated With Spliced Cable Using Restore Message (**RST:IOUS a!**)	TELCO/INST	DLP-506

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
137	Apply Heat to Heat Shrink Material (Item 129)	INST	—
138	Repeat Items 120 Through 137 for Each Equipped IO Frame	TELCO/INST	—
139	Switch CCs To Make CC 1 Active (**SW:CC!**)	TELCO	DLP-513
140	At MTC Terminal, Enter Message **ALW:MACLI,CLASS MTCE!** To Allow REX	TELCO	—
141	At CC 1 GCP Conversion Switch Unit, Ensure No Ivory-Colored Cables Are Connected	INST	—
142	At CC 1 GCP Conversion Switch Unit, Disconnect Cables Coming From 1A Processor, Control/Interlock Cables From Indicator/Remote Control Unit, and -48V Power Feeders (Tape Ends of -48V Power Feeders)	INST	—
143	After All Cables Have Been Removed From CC 1 GCP Conversion Switch Unit and Secured, Carefully Remove Unit From Mounting Apparatus	INST	—
144	Remove Mounting Apparatus	INST	—
145	Install Cross-Aisle Cable Trough in Close Proximity to Secured Spliced Cables	INST	—
146	Disconnect Trunk Support Strap From Spliced Cables and Lay These Spliced Cables in Cross-Aisle Cable Trough	INST	—
147	Notify Next Higher Technical Support Group That CC 1 GCP Conversion Switch Removal Is Complete	TELCO	—
148	Soak CC 1 GCP Cables in Active State for at Least One Non-Cabling Shift	TELCO/INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
		RESPONSIBILITY	
	CAUTION 1: *The DUS, 3B computer (APS), CNI ring, TGR, and PUBB are also powered from the power conversion and distribution (PCD) frame. Therefore, it is extremely important that the correct fuses be marked for removal*		
	NOTES: 1. This procedure is to be performed in an NSD ***4ESS***™ Switch office only 2. 1A Processor power switch lamps/LEDs may or may not respond in a normal manner when removing power using the **ROS/OFF** switch. In any case, continue to remove power from the 1A Processor call stores (CSs), program stores (PSs), processor peripheral interface (PPI), and central controls (CCs) 3. Investigate all alarms that occur while performing this procedure 4. If on-site work force (OSWF) and installer cannot identify, verify, and record the locations of all PCD fuses associated with 1A Processor CSs, PSs, PPI, and CCs to be removed, STOP IMMEDIATELY and contact appropriate technical support group		
1	Using Office Records, Identify, Physically Verify, and Record Location of PCD Frame Fuses Associated With 1A Processor CSs, PSs, PPI, and CCs	TELCO/INST	DLP-500
2	Ensure Applicable Load-Resistor Mounting Apparatus and Load Resistors (CN5207IH and CN0196NW) Have Been Installed in PCD Frame Bay 0 To Ensure Continued +24V Converter Regulation During the Removal of 1A Processor PPI and CCs. If Mounting Apparatus and Load-Resistors Have Not Been Installed, Continue With Step 3. Otherwise, Continue With Step 14	INST	—
	NOTE: The two load-resistor assemblies are supplied in a mirror-image pair. The ED-5A311-10G-1,SA load-resistor panel must be mounted in Bay 0. The load-resistor assembly mounted in Bay 0 must be performed so that the cable exit hole is positioned as close as possible to the vertical channel separating PCD frame Bay 0 and Bay 1.		
	WARNING: *Extreme care must be exercised while working in the PCD frame. Use insulated tools to loosen and tighten terminal screws and nuts. Also, ensure ends of wires to be added/connected are insulated with tape until they are ready to be secured to terminals*		
	NOTE: If SHIELDED power cable is supplied to connect load-resistor assembly to PCD frame, remove outer vinyl jacket and braided shield before mounting assembly to PCD frame		
3	At PCD Frame Bay 0 Vertical Position 056, Mount Load-Resistor Assembly (ED-5A311-10G-1,SA) Using Four Pan Head Self-Tapping (PHST) Screws (840047534)	INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
4	If PCD Frame Bay 0 Is Equipped With Only Two Converters, Notify On-Site Work Force (OSWF) That a **HAZARDOUS CONDITION** Exists Due to High Temperature of Load-Resistor Assembly Housing. Once Load-Resistor Assembly Is Operational, Do Not Set Anything on Load-Resistor Assembly Housing.	INST	—
5	If Heat Shroud Hardware Is Required But Not Available, Notify Customer Service Via Tracker That Additional Hardware Is Required To Correct Hazardous Condition Due to Temperature of Load-Resistor Assembly Housing	INST	—
6	Ensure Both Ends of Load Resistor Assembly Cable Pair Are Insulated With Electrical Tape. Route Cable Pair Down Cable Channel Between PCD Frame Bay 0/Bay 1 and Feed Cable Pair Into +24V A Fuse Cabinet at Vertical Position 32	INST	—
7	At 1B Processor MTC Terminal, Restore PCD 0, DAMON 0 and Expect Diagnostic To Complete With ATP Results (RST:PCD 0,DAMON 0!)	TELCO	—
8	At 1B Processor MTC Terminal, Remove PCD 0, DAMON 0 (RMV:PCD 0,DAMON 0!)	TELCO	—
9	At PCD 0, DAMON 0 Power Switch, Rotate **ROS/OFF** Switch Clockwise to **ROS** Position; Ensure **OS** Lamp/LED Is Lighted; Then Depress **ROS/OFF** Switch and Expect **PWR OFF** Lamp/LED To Light	TELCO	—
10	At Rear of +24V A Fuse Cabinet, Using Terminal Lug Supplied, Attach Lug to Cable Pair Lead With "Slash" Tracer and Secure Lead/Lug to +24V A Return Terminal	INST	—
11	At Rear of +24V A Fuse Cabinet, Using Terminal Lug Supplied, Attach Lug to Other Cable Pair Lead (Without "Slash" Tracer) and Secure Lead/Lug to Terminal Associated With Fuse Position 4 at Equipment Location 118-15	INST	—
12	At Front of +24V A Fuse Cabinet, Install **74D** 10-Amp Fuse Into Fuse Position 4 at Equipment Location 118-15	TELCO	—
13	At Rear of +24V A Fuse Cabinet, Use Clamp-on Ammeter and Verify Approximately 5 Amps of Current is Being Drawn by PCD Frame Bay 0 Load-Resistor Assembly; Then, Continue With Step 17. If Less Than 5 Amps of Current Is Being Drawn by Load-Resistor Assembly, STOP IMMEDIATELY and Contact Appropriate Technical Support Group.	INST	—
14	If PCD 0, DAMON 0 Has Not Been Diagnosed Previously With ATP Results, at 1B Processor MTC Terminal, Restore PCD 0, DAMON 0 (RST:PCD 0,DAMON 0!); Expect Diagnostics To Complete With ATP Results and Continue With Step 15	TELCO	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
15	At 1B Processor MTC Terminal, Remove PCD 0, DAMON 0 (**RMV:PCD 0,DAMON 0!**)	TELCO	—
16	At PCD 0, DAMON 0 Power Switch, Rotate **ROS/OFF** Switch Clockwise to **ROS** Position; Ensure **OS** Lamp/LED Is Lighted; Then Depress **ROS/OFF** Switch and Expect **PWR OFF** Lamp/LED To Light	TELCO	—
17	Using Resistor Kit Material Supplied, Create Two Parallel Load-Resistor Assemblies With 25-OHM, 50-Watt Resistors. Use a 6-Inch Red and 6-Inch Black 16-AWG Wire and Connect the Two Resistors in Parallel. Connect Another 6-Inch Black 16-AWG Wire to Corresponding Resistor Terminal With Other Black Wire Creating a "Pig-tail". Trim End of Black "Pig-tail" as Necessary and Attach Terminal Lug. Connect Another 36-Inch Red 16-AWG Wire to Corresponding Resistor Terminal With Other Red Wire Creating a "Pig-tail". Trim End of Red "Pig-tail" as Necessary and Attach Terminal Lug. Solder All Wire Connections to Resistor Terminals. Repeat This Action For Second Parallel Load-Resistor Assembly	INST	—
18	Select an Unassigned +24V A Fuse Position (Preferably Fuse 1 on Fuse Block at Location 118-15 if available); Remove Dummy Fuse and Connect Red Lead of Parallel Load-Resistor Assembly to Fuse Terminal	INST	—
	CAUTION: Care must be taken to avoid breakage when securing resistors to bus bar		
19	Using One Parallel Load-Resistor Assembly, Combine Resistors/Centering Washers/4.5-Inch Screw; Orient Resistor Assembly so That Resistor Ends With Black Wire Will Be Closest to Bus Bar and Mount Load-Resistor Assembly to +24V A RTN Bus Bar in an Area Not Congested With Wires. After Load-Resistor Assembly Mounting Is Completed, Connect Load-Resistor Assembly Black "Pig-tail" to +24V A RTN Bus Bar Using Any Available Position. Blown Fuse Indicator LED for Selected Fuse Position Will Light When Connections Are Made	INST	—
	WARNING: Load resistors will operate at a very high surface temperature. Ensure all wires are routed and positioned so that contact with resistors is avoided. Also, care must be taken when working near resistors to avoid personal injury		
20	At Selected Fuse Position Powering Load-Resistor Assembly, Install a **74C** 5-Amp Fuse	TELCO/INST	—
21	Use Clamp-On DC Ammeter and Verify Parallel Load-Resistor Assembly Is Drawing Approximately 2 Amperes. Each Resistor Should Draw 1 Ampere	INST	—
	(Continued on Page 4)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
22	At PCD 0, DAMON 0 Power Switch, Depress **ON** Pushbutton; Rotate **ROS/OFF** Switch Counterclockwise to **NORM** Position and Expect Diagnostics To Run but PCD 0, DAMON 0 To Remain Out-of-Service (OOS)	TELCO	—
23	At 1B Processor MTC Terminal, Restore PCD 0, DAMON 0 (**RST:PCD 0,DAMON 0!**) and Expect Diagnostics To Complete With ATP Results	TELCO	—
24	Ensure Applicable Load-Resistor Mounting Apparatus and Load Resistors (CN5207IH and CN0196NW) Have Been Installed in PCD Frame Bay 2 To Ensure Continued +24V Converter Regulation During the Removal of 1A Processor PPI and CCs. If Mounting Apparatus and Load-Resistors Have Not Been Installed, Continue With Step 25. Otherwise, Continue With Step 35	INST	—
	NOTE: The two load-resistor assemblies are supplied in a mirror-image pair. The ED-5A311-10G-1,SB load-resistor panel must be mounted in Bay 2. The load-resistor assembly mounted in Bay 2 must be performed so that the cable exit hole is positioned as close as possible to the vertical channel separating PCD frame Bay 1 and Bay 2		
	WARNING: Extreme care must be exercised while working in the PCD frame. Use insulated tools to loosen and tighten terminal screws and nuts. Also, ensure the ends of wires to be added/connected are insulated with tape until they are ready to be secured to terminals		
	NOTE: If SHIELDED power cable is supplied to connect load-resistor assembly to PCD frame, remove outer vinyl jacket and braided shield before mounting assembly to PCD frame		
25	At PCD Frame Bay 2 Vertical Position 256, Mount Load-Resistor Assembly (ED-5A311-10G-1,SB) Using Four PHST Screws (840047534)	INST	—
26	If PCD Frame Bay 2 Is Equipped With Only Two Converters, Notify On-Site Work Force (OSWF) That **HAZARDOUS CONDITION** Exists Due to High Temperature of Load-Resistor Assembly Housing. Once Load-Resistor Assembly Is Operational, Do Not Set Anything on Load-Resistor Assembly Housing	INST	—
27	If Heat Shroud Hardware Is Required but Not Available, Notify Customer Service Via Tracker That Additional Hardware Is Required To Correct Hazardous Condition Due to Temperature of Load-Resistor Assembly Housing	INST	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
28	Ensure Both Ends of Load-Resistor Assembly Cable Pair Are Insulated With Electrical Tape. Route Cable Pair Down Cable Channel Between PCD Frame Bay 1/Bay 2 and Feed Cable Pair Into +24V B Fuse Cabinet at Vertical Position 32	INST	—
29	At 1B Processor MTC Terminal, Remove PCD 1, DAMON 0 (**RMV:PCD 1,DAMON 0!**)	TELCO	—
30	At PCD 1, DAMON 0 Power Switch, Rotate **ROS/OFF** Switch Clockwise to **ROS** Position; Ensure **OS** Lamp/LED Is Lighted; Then Depress **ROS/OFF** Switch and Expect **PWR OFF** Lamp/LED To Light	TELCO	—
31	At Rear of +24V B Fuse Cabinet, Using Terminal Lug Supplied, Attach Lug to Cable Pair Lead With "Slash" Tracer and Secure Lead/Lug to +24V B Return Terminal	INST	—
32	At Rear of +24V B Fuse Cabinet, Using Terminal Lug Supplied, Attach Lug to Other Cable Pair Lead (Without "Slash" Tracer) and Secure Lead/Lug to Terminal Associated With Fuse Position 4 at Equipment Location 118-29	INST	—
33	At Front of +24V B Fuse Cabinet, Install **74D** 10-Amp Fuse Into Fuse Position 4 at Equipment Location 118-29	TELCO	—
34	At Rear of +24V B Fuse Cabinet, Use Clamp-on Ammeter and Verify Approximately 5 Amps of Current Is Being Drawn by PCD Frame Bay 2 Load-Resistor Assembly; Then, Continue With Step 38. If Less Than 5 Amps of Current Is Being Drawn by Load-Resistor Assembly, STOP IMMEDIATELY and Contact Appropriate Technical Support Group	INST	—
35	If PCD 1, DAMON 0 Has Not Previously Been Diagnosed With ATP Results, at 1B Processor MTC Terminal Restore PCD 1, DAMON 0 (**RST:PCD 1,DAMON 0!**); Expect Diagnostics To Complete With ATP Results and Continue With Step 36	TELCO	—
36	At 1B Processor MTC Terminal, Remove PCD 1, DAMON 0 (**RMV:PCD 1,DAMON 0!**)	TELCO	—
37	At PCD 1, DAMON 0 Power Switch, Rotate **ROS/OFF** Switch Clockwise to **ROS** Position; Ensure **OS** Lamp/LED Is Lighted; Then Depress **ROS/OFF** Switch and Expect **PWR OFF** Lamp/LED To Light	TELCO	—
38	Select an Unassigned +24V B Fuse Position (Preferably Fuse 1 on Fuse Block at Location 118-29 if Available); Remove Dummy Fuse and Connect Red Lead of Parallel Load-Resistor Assembly to Fuse Terminal	INST	—
	(Continued on Page 6)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
	CAUTION: Care must be taken to avoid breakage when securing resistors to bus bar		
39	Using Other Parallel Load-Resistor Assembly, Combine Resistors/Centering Washers/4.5-Inch Screws; Orient Resistor Assembly so That Resistor Ends With Black Wire Will Be Closest to Bus Bar and Mount Load-Resistor Assembly to +24V B RTN Bus Bar in an Area Not Congested With Wires. After Load-Resistor Assembly Mounting Is Completed, Connect Load-Resistor Assembly Black "Pig-tail" to +24V B RTN Bus Bar Using Any Available Position. Blown Fuse Indicator LED for Selected Fuse Position Will Light When Connections Are Made	INST	—
	WARNING: Load resistors will operate at a very high surface temperature. Ensure all wires are routed and positioned so that contact with resistors is avoided. Also, care must be taken when working near resistors to avoid personal injury		
40	At Selected Fuse Position Powering Load-Resistor Assembly, Install a **74C** 5-Amp Fuse	TELCO/INST	—
41	Use Clamp-On DC Ammeter and Verify Parallel Load-Resistor Assembly Is Drawing Approximately 2 Amperes. Each Resistor Should Draw 1 Ampere	INST	—
42	At PCD 1, DAMON 0 Power Switch, Depress **ON** Pushbutton; Rotate **ROS/OFF** Switch Counterclockwise to **NORM** Position and Expect Diagnostics To Run but PCD 1, DAMON 0 To Remain Out-of-Service (OOS)	TELCO	—
43	At 1B Processor MTC Terminal, Restore PCD 1, DAMON 0 (**RST:PCD 1,DAMON 0!**) and Expect Diagnostics To Complete With ATP Results	TELCO	—
44	If Load-Resistor Panels Were Installed Above Converters (CN5207IH and CN0196NW), Label Fuse Designation Cards for Fuse Position 4 at Location 118-15 to **DLO** (Dummy Load 0) and Fuse Position 4 at Location 118-29 to **DL1** (Dummy Load 1). Otherwise, Continue With Step 45	INST	—
45	For Load-Resistor Assemblies Installed on Return Bus Bars, Label Selected Fuse Position at Location 118-15 to **ADL0** (Additional Dummy Load 0) and Selected Fuse Position at Location 118-29 to **ADL1** (Additional Dummy Load 1)	INST	—
46	Affix Warning Labels Identifying **"HOT RESISTORS INSIDE USE CAUTION"** to Top of PCD Frame Rear Doors	INST	—
47	If J5A007B PCD Frame Is Equipped With Six Active Power Converters, Power Down PCD 0, Converter 2; Then Continue With Step 48. Otherwise, Go to Step 71	TELCO	—
	(Continued on Page 7)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
	NOTE: Steps 48 Through 59 will be performed to degrow PCD 0, Converter 2		
48	At 1B Processor MTC Terminal, Restore PCD 0, DAMON 0 (**RST:PCD 0,DAMON 0!**) and Expect Diagnostics To Complete With ATP Results	TELCO	—
49	At 1B Processor MTC Terminal, Remove PCD 0, DAMON 0 (**RMV:PCD 0,DAMON 0!**)	TELCO	—
50	At 1B Processor MTC Terminal, Remove PCD 0, Converter 2 (**RMV:PCD 0,CONV 2!**)	TELCO	—
51	At PCD 0, DAMON 0 Power Switch, Rotate **ROS/OFF** Switch Clockwise to **ROS** Position; Ensure **OS** Lamp/LED Is Lighted; Then Depress **ROS/OFF** Switch and Expect **PWR OFF** Lamp/LED To Light	TELCO	—
52	Remove PCD 0, Converter 2 **CA21** (144-09-300) and **CA22** (144-09-310) Cables From PCD 0, DAMON 0	INST	—
53	At PCD 0, DAMON 0, Remove Fuses **+LP/2** and **+CTST/2** (113-15); Remove Circuit Packs **FB153** (148-10) and **FC23** (148-11), and Re-install Fuses Previously Removed	INST	—
54	At 1B Processor MTC Terminal, Enter **RST:PCD 0,CONV 2;UCL!** To Clear Out-of-Service (OOS) PCD 0, Converter 2 From OOS List and MCC Display	TELCO	—
55	At 1B Processor MTC Terminal, Perform Overwrite To Change Word 0 of PCD Translator **(IN:0WBUF:ADR 14021200,DATA 600017,0LDDATA 6000777!)**	TELCO	—
56	At 1B Processor MTC Terminal, Enter **COPY:OWBUF!** To Copy Overwrite Buffer	TELCO	—
57	At 1B Processor MTC Terminal, Enter **UPD:HDATA!** To Update Hash Data	TELCO	—
58	At PCD 0, DAMON 0 Power Switch, Depress **ON** Pushbutton; Rotate **ROS/OFF** Switch Counterclockwise to **NORM** Position and Expect Diagnostics To Run but PCD 0, DAMON 0 To Remain Out-of-Service (OOS)	TELCO	—
59	At 1B Processor MTC Terminal, Restore PCD 0, DAMON 0 **(RST:PCD 0,DAMON 0!)** and Expect Diagnostics To Complete With ATP Results	TELCO	—
	NOTE: Steps 60 through 72 will be performed to degrow PCD 1, Converter 2		
60	Power Down PCD 1, Converter 2; Then Continue With Step 61	TELCO	—
61	At 1B Processor MTC Terminal, Restore PCD 1, DAMON 0 **(RST:PCD 1,DAMON 0!)** and Expect Diagnostics To Complete With ATP Results	TELCO	—
	(Continued on Page 8)	TELCO	—

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
62	At 1B Processor MTC Terminal, Remove PCD 1, DAMON 0 **(RMV:PCD 1,DAMON 0!)**	TELCO	—
63	At 1B Processor MTC Terminal, Remove PCD 1, Converter 2 **(RMV:PCD 1,CONV 2!)**	TELCO	—
64	At PCD 1, DAMON 0 Power Switch, Rotate **ROS/OFF** Switch Clockwise to **ROS** Position; Ensure **OS** Lamp/LED Is Lighted; Then Depress **ROS/OFF** Switch and Expect **PWR OFF** Lamp/LED To Light	TELCO	—
65	Remove PCD 1, Converter 2 **CA35** (144-24-300) and **CA37** (144-24-310) Cables From PCD 1, DAMON 0	INST	—
66	At PCD 1, DAMON 0, Remove Fuses **+LP/2** and **+CTST/2** (113-27); Remove Circuit Packs **FB153** (148-25) and **FC23** (148-26), and Re-install Fuses Previously Removed	TELCO	—
67	At 1B Processor MTC Terminal, Enter **RST:PCD 1,CONV 2;UCL!** To Clear Out-of-Service (OOS) PCD 1, Converter 2 From OOS List and MCC Display	TELCO	—
68	At 1B Processor MTC Terminal, Perform Overwrite To Change Word 0 of PCD Translator **(IN:OWBUF:ADR 14021207,DATA 600017,OLDDATA 6000777!)**	TELCO	—
69	At 1B Processor MTC Terminal, Enter **COPY:OWBUF!** To Copy Overwrite Buffer	TELCO	—
70	At 1B Processor MTC Terminal, Enter **UPD:HDATA!** To Update Hash Data	TELCO	—
71	At PCD 1, DAMON 0 Power Switch, Depress **ON** Pushbutton; Rotate **ROS/OFF** Switch Counterclockwise to **NORM** Position and Expect Diagnostics To Run but PCD 1, DAMON 0 To Remain Out-of-Service (OOS)	TELCO	—
72	At 1B Processor MTC Terminal, Restore PCD 1, DAMON 0 (**RST:PCD 1,DAMON 0!**) and Expect Diagnostics To Complete With ATP Results	TELCO	—
	NOTE: Prior to removing power from 1A Processor frames, ensure +24V converters are balanced (as close as possible) to supply equal outputs. On-site work force (OSWF) can adjust converters (if required) by using TOP 254-251-025, NTP-003		
73	At Each Conversion Switch Unit, Ensure Each **TN1808/TN2808** Circuit Pack **ON/OFF** Switch Is in **OFF** Position. If Switch Is Not in **OFF** Position, Move Switch to **OFF** Position for Each **TN1808/TN2808** Circuit Pack. Otherwise, Continue With Step 74	TELCO	—
	(Continued on Page 9)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
74	At J86334B BDFB Frame, Locate Seven Conversion Switch Unit 1/2-Amp **70G** Indicator Fuse Positions (**PU0 CONV SW, PU1 CONV SW, AU0 CONV SW, AU1 CONV SW, GCP0 CONV SW, GCP1 CONV SW,** and **SSD CONV SW**) and Ensure Fuses Have Been Removed and Dummy Fuses Installed. If Fuses Have Not Been Removed, Remove Indicator Fuses and Install Dummy Fuses. Otherwise, Continue With Step 75	TELCO	—
75	At J86334B BDFB or J5A007B PCD Frame, Locate Seven Conversion Switch Unit 5-Amp **74C** Load Fuse Positions (**PU0 CONV SW, PU1 CONV SW, AU0 CONV SW, AU1 CONV SW, GCP0 CONV SW, GCP1 CONV SW,** and **SSD CONV SW**) and Ensure Fuses Have Been Removed and Dummy Fuses Installed. If Fuses Have Not Been Removed, Remove Load Fuses and Install Dummy Fuses. Otherwise, Continue With Step 76	TELCO	—
76	At Power Switch Associated With 1A Processor CS Unit To Be Removed, Depress **TEST** Pushbutton and Expect Lamps/LEDs To Light Verifying That Power Is Present. If No Lamps/ LEDs Light, STOP IMMEDIATELY and Contact Appropriate Technical Support Group. Otherwise, Continue With Step 77	TELCO	—
77	At Power Switch Associated With 1A Processor CS Unit To Be Removed, Rotate **ROS/OFF** Switch Clockwise to **ROS** Position; Depress **ROS/OFF** Switch and Expect **PWR OFF** Lamp/LED To Light	TELCO	—
78	Repeat Steps 76 and 77 For All 1A Processor CS Units	TELCO	—
79	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Individually Label **-48A** Power Cable Connectors at All CS Units	INST	—
80	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Disconnect All Power Bus A Connectors at All CS Units And Insulate Connector Ends With Electrical Tape To Avoid Shorts	INST	—
81	At Rear of Power Distribution Frame, Use Clamp-On DC Ammeter and Check All CS Fuse Leads To Ensure No Current Is Present. If Current Is Present, Repeat From Step 79. Otherwise, Continue With Step 82	INST	—
82	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Remove All Power Bus A -48V Fuses Associated With All CS Units	TELCO/INST	—
83	Repeat Steps 79 Through 82 for **-48B** Power Cables Associated With All CS Units	TELCO/INST	—
	(Continued on Page 10)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
84	At Power Switch Associated With 1A Processor PS Unit To Be Removed, Depress **TEST** Pushbutton and Expect Lamps/LEDs To Light Verifying That Power Is Present. If No Lamps/ LEDs Light, STOP IMMEDIATELY and Contact Appropriate Technical Support Group. Otherwise, Continue With Step 85	TELCO	—
85	At Power Switch Associated With 1A Processor PS Unit To Be Removed, Rotate **ROS/OFF** Switch Clockwise to **ROS** Position; Depress **ROS/OFF** Switch and Expect **PWR OFF** Lamp/LED To Light	TELCO	—
86	Repeat Steps 84 and 85 for All 1A Processor PS Units	TELCO	—
87	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Individually Label **-48A** Power Cable Connectors at All PS Units	INST	—
88	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Disconnect All Power Bus A Connectors at All PS Units and Insulate Connector Ends With Electrical Tape To Avoid Shorts	INST	—
89	At Rear of PCD Frame, Use Clamp-On DC Ammeter and Check All PS Fuse Leads To Ensure No Current Is Present. If Current Is Present, Repeat From Step 87. Otherwise, Continue With Step 90	INST	—
90	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Remove All Power Bus A -48V Fuses Associated With All PS Units	TELCO/INST	—
91	Repeat Steps 87 Through 90 for **-48B** Power Cables Associated With All PS Units	TELCO/INST	—
92	At Power Switch (Labeled MCC) Associated With 1A Processor PPI Frame To Be Removed, Depress **TEST** Pushbutton and Expect Lamps/LEDs To Light Verifying That Power Is Present. If No Lamps/LEDs Light, STOP IMMEDIATELY and Contact Appropriate Technical Support Group. Otherwise, Continue With Step 93	TELCO	—
93	At Power Switch (Labeled MCC) Associated With 1A Processor PPI Frame To Be Removed. Rotate **ROS/OFF** Switch Clockwise to **ROS** Position; Depress **ROS/OFF** Switch and Expect **PWR OFF** Lamp/LED To Light	TELCO	—
94	At Power Switch Associated With 1A Processor Remote Access Interface (RAI) Unit To Be Removed. Depress **TEST** Pushbutton and Expect Lamps/LEDs To Light Verifying That Power Is Present. If No Lamps/LEDs Light, STOP IMMEDIATELY and Contact Appropriate Technical Support Group. Otherwise, Continue With Step 95	TELCO	—

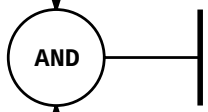
DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
95	At Power Switch Associated With 1A Processor RAI Unit To Be Removed. Rotate **ROS/OFF** Switch Clockwise to **ROS** Position; Depress **ROS/OFF** Switch and Expect **PWR OFF** Lamp/LED To Light	TELCO	—
96	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Individually Label 1A Processor PPI Frame **-48V PPI H** Power Cable Connector	INST	—
97	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Disconnect 1A Processor PPI Frame **-48V PPI H** Connector and Insulate Connector End With Electrical Tape To Avoid Shorts	INST	—
98	At Rear of PCD Frame, Use Clamp-On DC Ammeter and Check PPI Frame **-48V PPI H** Fuse Lead To Ensure No Current Is Present. If Current Is Present, STOP IMMEDIATELY and Contact Appropriate Technical Support Group. Otherwise, Continue With Step 99	INST	—
99	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Remove PCD Frame **-48V PPI H** Fuse Associated With PPI Frame	TELCO/INST	—
100	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Individually Label 1A Processor PPI Frame **-48V PPI AC** Power Cable Connector	INST	—
101	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Disconnect 1A Processor PPI Frame **-48V PPI AC** Connector and Insulate Connector End With Electrical Tape To Avoid Shorts	INST	—
102	At Rear of PCD Frame, Use Clamp-On DC Ammeter and Check PPI Frame **-48V PPI AC** Fuse Lead To Ensure No Current Is Present. If Current Is Present, STOP IMMEDIATELY and Contact Appropriate Technical Support Group. Otherwise, Continue With Step 103	INST	—
103	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Remove PCD Frame **-48V PPI AC** Fuse Associated With PPI Frame	TELCO/INST	—
104	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Individually Label 1A Processor PPI Frame **+24V PPI X, W, V** and **Y** Power Cable Connectors	INST	—
105	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Disconnect 1A Processor PPI Frame **+24V PPI X, W, V** and **Y** Connectors and Insulate Connector Ends With Electrical Tape To Avoid Shorts	INST	—
	(Continued on Page 12)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
106	At Rear of PCD Frame, Use Clamp-On DC Ammeter and Check **+24V PPI X, W, V** and **Y** Fuse Leads To Ensure No Current Is Present. If Current Is Present, STOP IMMEDIATELY and Contact Appropriate Technical Support Group. Otherwise, Continue With Step 107	INST	—
107	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Remove PCD Frame **+24V PPI X, W, V** and **Y** Fuses Associated With PPI Frame	TELCO/INST	—
108	At Power Switch Associated With 1A Processor CC 1 To Be Removed, Depress **TEST** Pushbutton And Expect Lamps/LEDs To Light Verifying That Power Is Present. If No Lamps/LEDs Light, STOP IMMEDIATELY and Contact Appropriate Technical Support Group. Otherwise, Continue With Step 109	TELCO	—
109	At Power Switch Associated With 1A Processor CC 1 To Be Removed, Rotate **ROS/OFF** Switch Clockwise to **ROS** Position; Depress **ROS/OFF** Switch and Expect **PWR OFF** Lamp/LED To Light	TELCO	—
110	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Individually Label **-48V CC1A** and **+24V CC1A** Power Cable Connectors at CC 1	INST	—
111	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Disconnect 1A Processor CC 1 **-48V CC1A** and **+24V CC1A** Connectors and Insulate Connector Ends With Electrical Tape To Avoid Shorts	INST	—
112	At Rear of PCD Frame, Use Clamp-On DC Ammeter and Check All CC 1 Fuse Leads To Ensure No Current Is Present. If Current Is Present, Repeat From Step 110. Otherwise, Continue With Step 113	INST	—
113	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Remove PCD Frame **-48V CC1A** and **+24V CC1A** Fuses Associated With CC 1	TELCO/INST	—
114	At Power Switch Associated With 1A Processor CC 0 To Be Removed, Depress **TEST** Pushbutton and Expect Lamps/LEDs To Light Verifying That Power Is Present. If No Lamps/LEDs Light, STOP IMMEDIATELY and Contact Appropriate Technical Support Group. Otherwise, Continue with Step 115	TELCO	—
115	At Power Switch Associated With 1A Processor CC 0 To Be Removed, Rotate **ROS/OFF** Switch Clockwise to **ROS** Position; Depress **ROS/OFF** Switch and Expect **PWR OFF** Lamp/LED To Light	TELCO	—
116	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Individually Label **-48V CC0A** and **+24V CC0A** Power Cable Connectors at CC 0	INST	—
	(Continued on Page 13)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
117	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Disconnect 1A Processor CC 0 **-48V CC0A** and **+24V CC0A** Connectors and Insulate Connector Ends With Electrical Tape To Avoid Shorts	INST	—
118	At Rear of PCD Frame, Use Clamp-On DC Ammeter and Check All CC 0 Fuse Leads To Ensure No Current Is Present. If Current Is Present, Repeat From Step 116. Otherwise, Continue With Step 119	INST	—
119	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, Remove PCD Frame **-48V CC0A** and **+24V CC0A** Fuses Associated With CC 0	TELCO/INST	—
120	Using 1A Processor Frame/Fuse Location Work List Previously Compiled in Step 1, at PCD Frame Verify That All Identified Fuses Have Been Removed; Turn Over Fuse Designation Cards And Relabel as Necessary and Install a Dummy Fuse at Each Vacant Fuse Location	TELCO/INST	—
	CAUTIONS: 1. Hazardous voltage is present under 4A timer terminal strip protective cover/shield *2. Terminal strip protective cover/shield may use "stand-off spacers" that can possibly slide off screws as they are being removed. Precautions should be taken to secure spacers as screws are removed*		
121	At Rear of PPI Frame, Locate and Remove 4A Timer Terminal Strip Protective Cover/Shield	INST	—
122	At Rear of PPI Frame, Use Digital Voltmeter (ITE 6379 or Equivalent) and Measure 4A Timer Terminal Strip 120-Volt AC Terminals for Presence of 120-Volt AC. If Voltage Is Present, Go to Step 121. Otherwise, Go to Step 125	INST	—
123	Using Office-Drawing T-xxxx-Hy-3300 (xxxx = Office Number; y = 0 or 1), Identify Location of 4A Timer 120-Volt AC 1-1/3 Amp Fuse; and at Miscellaneous A Frame, Remove Identified Fuse and Install Dummy Fuse	TELCO	—
124	At Rear of PPI Frame, Use Digital Voltmeter (ITE 6379 or Equivalent) and Measure 4A Timer Terminal Strip 120-Volt AC Terminals for Absence of 120-Volt AC. If Voltage Is Present, STOP IMMEDIATELY and Contact Appropriate Technical Support Group. Otherwise, Go to Step 125	INST	—
	(Continued on Page 14)		

DO THE ITEMS BELOW IN THE ORDER LISTED . . . . . FOR DETAILS, GO TO			
125	Using Office Drawing T-xxxx-Hy-3300 (xxxx = Office Number; y = 0 or 1), Identify Location of 1A Processor MCC Clock Fuse and All 1A Processor MCC Console Protected 120-Volt AC Receptacle Fuses; and at Miscellaneous A Frame, Remove Identified Fuses and Install Dummy Fuses	TELCO	—
126	Using Digital Voltmeter (ITE 6379 or Equivalent), Check 1A Processor MCC Console 120-Volt AC Receptacles for Absence of Voltage; and Visually Check 1A Processor MCC Clock To Verify Power Has Been Removed	INST	—

[1] Using office records, identify, physically verify, and record fuse information associated with 1A Processor CCs, PPI, CSs, and PSs to be powered down [TABLE A]



[2] Retain compiled list of fuse locations for later use

TABLE A
FUSE LOCATION FORM

1A FRAME	FUSE DESIG	LOAD (A or B)	FUSE PANEL	FUSE NUMBER
CC 0	−48A			
	+24A			
CC 1	−48B			
	+24B			
PPI	+24V			
	+24W			
	+24X			
	+24Y			
	−48H			
	−48AC			
CS 0	−48A			
	−48B			
CS 1	−48A			
	−48B			
CS 2	−48A			
	−48B			
CS 3	−48A			
	−48B			
CS 4	−48A			
	−48B			
CS 5	−48A			
	−48B			

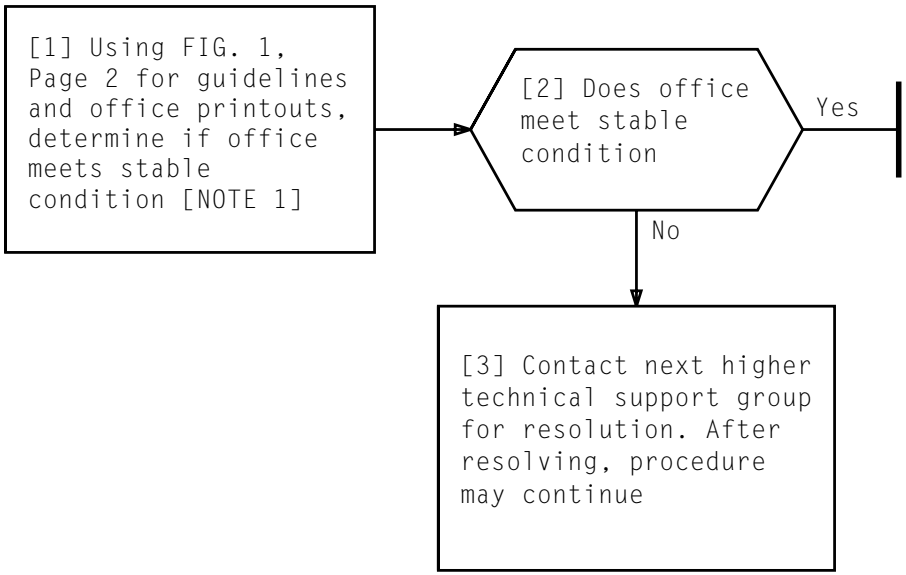
IDENTIFY AND RECORD FUSE INFORMATION ASSOCIATED WITH 1A PROCESSOR FRAMES TO BE POWERED DOWN

TABLE A (Contd)
FUSE LOCATION FORM

1A FRAME	FUSE DESIG	LOAD (A or B)	FUSE PANEL	FUSE NUMBER	1A FRAME	FUSE DESIG	LOAD (A or B)	FUSE PANEL	FUSE NUMBER
CS 6	−48A				CS 14	−48A			
	−48B					−48B			
CS 7	−48A				CS 15	−48A			
	−48B					−48B			
CS 8	−48A				*CS 16	−48A			
	−48B					−48B			
CS 9	−48A				*CS 17	−48A			
	−48B					−48B			
CS 10	−48A				*CS 18	−48A			
	−48B					−48B			
CS 11	−48A				*CS 19	−48A			
	−48B					−48B			
CS 12	−48A				*CS 20	−48A			
	−48B					−48B			
CS 13	−48A				*CS 21	−48A			
	−48B					−48B			

*CS 16 - CS 21 will reside in Extended Call Store (ESC) Frame 0 or 1. CS 20 and CS 21 may not be equipped

TABLE A (Contd) FUSE LOCATION FORM									
1A FRAME	FUSE DESIG	LOAD (A or B)	FUSE PANEL	FUSE NUMBER	1A FRAME	FUSE DESIG	LOAD (A or B)	FUSE PANEL	FUSE NUMBER
PS 0	−48A				PS 6	−48A			
	−48B					−48B			
PS 1	−48A				PS 7	−48A			
	−48B					−48B			
PS 2	−48A				PS 8	−48A			
	−48B					−48B			
PS 3	−48A				PS 9	−48A			
	−48B					−48B			
PS 4	−48A				PS 10	−48A			
	−48B					−48B			
PS 5	−48A				PS 11	−48A			
	−48B					−48B			



NOTE 1
FIG. 1 is based on 7-day rolling average for all per day measures; all other measures are as indicated. All resolved troubles are discounted from measures

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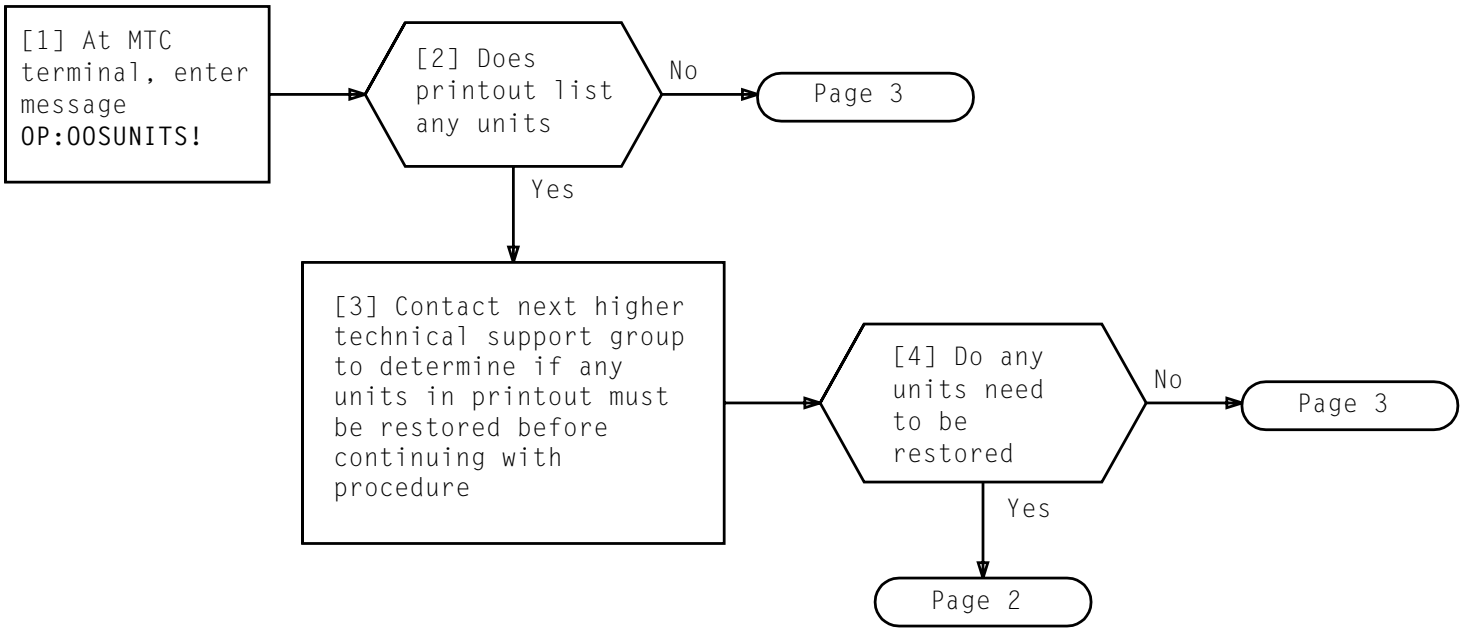
DETERMINE IF OFFICE IS STABLE

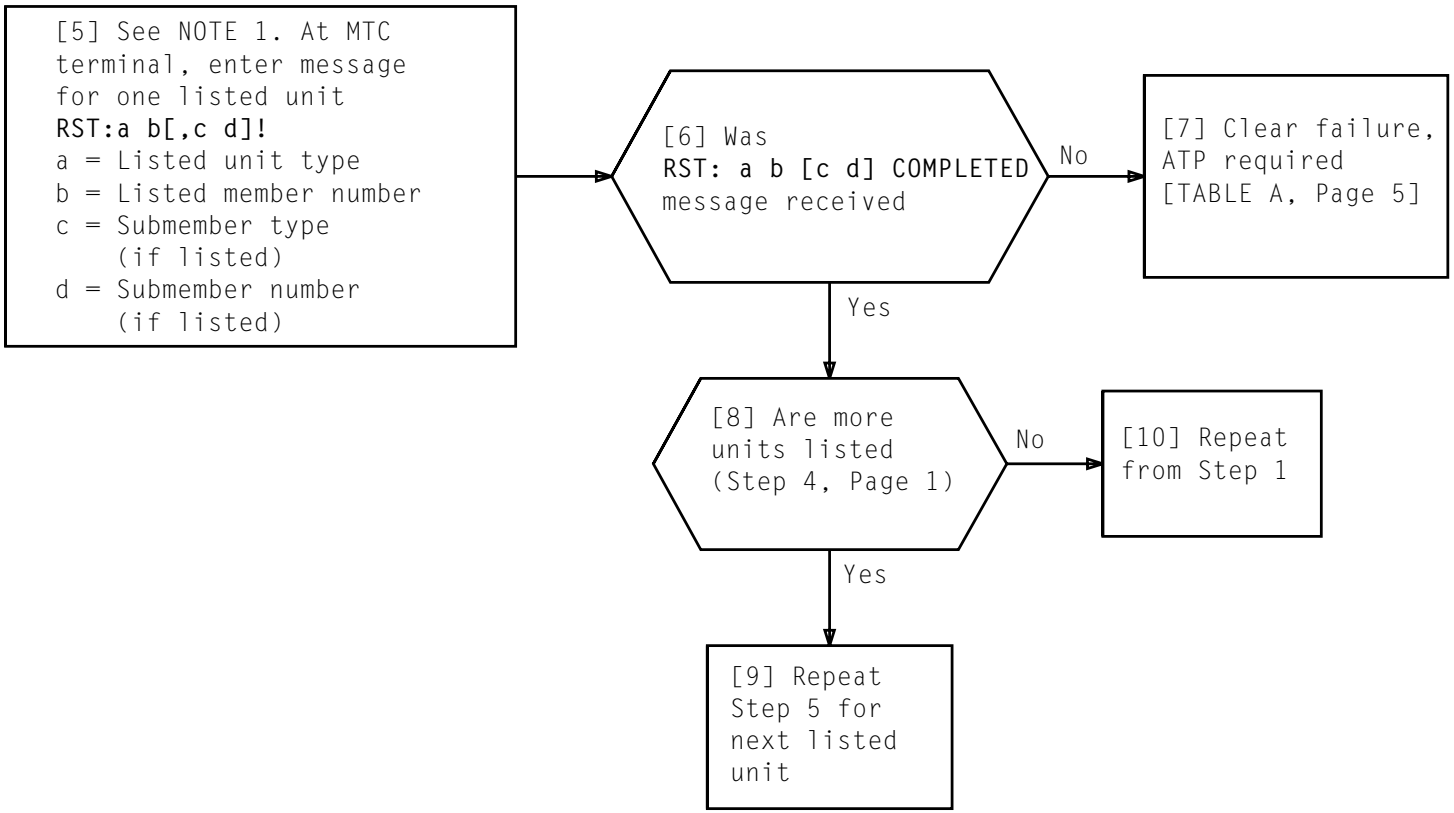
• INTERRUPTS	
1B PROCESSOR	≤ 1 PER MEMBER NUMBER PER DAY ≤ 3 PER DAY TOTAL
TMS, NC, PUB, IO, CCIS	≤ 2 PER MEMBER NUMBER PER DAY ≤ 4 PER DAY TOTAL
PERIPHERY, PER OPERATIONAL SP CORE (SP, DT, TSI) OR DIF (DIF, TSI COMPLEX) (THE ALLOWABLE DAILY INTERRUPT COUNT SHALL NOT EXCEED 25, REGARDLESS OF OFFICE SIZE)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

FIG. 1 - Office Stability Guidelines

DETERMINE IF OFFICE IS STABLE

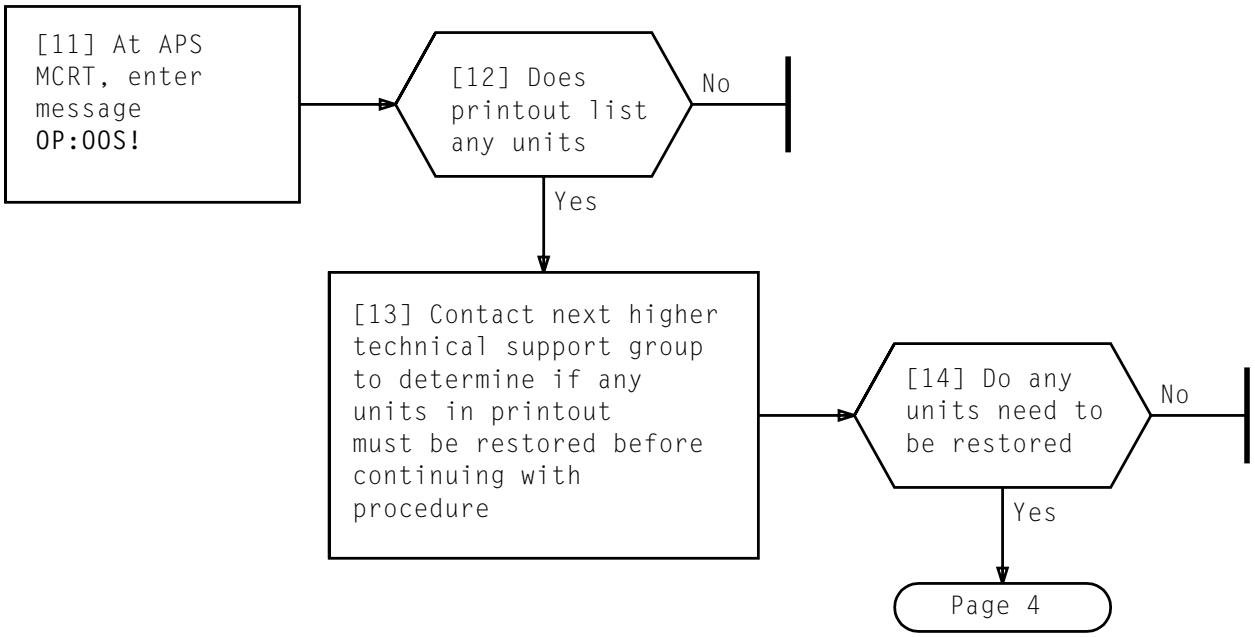


ENSURE ALL UNITS ARE IN-SERVICE

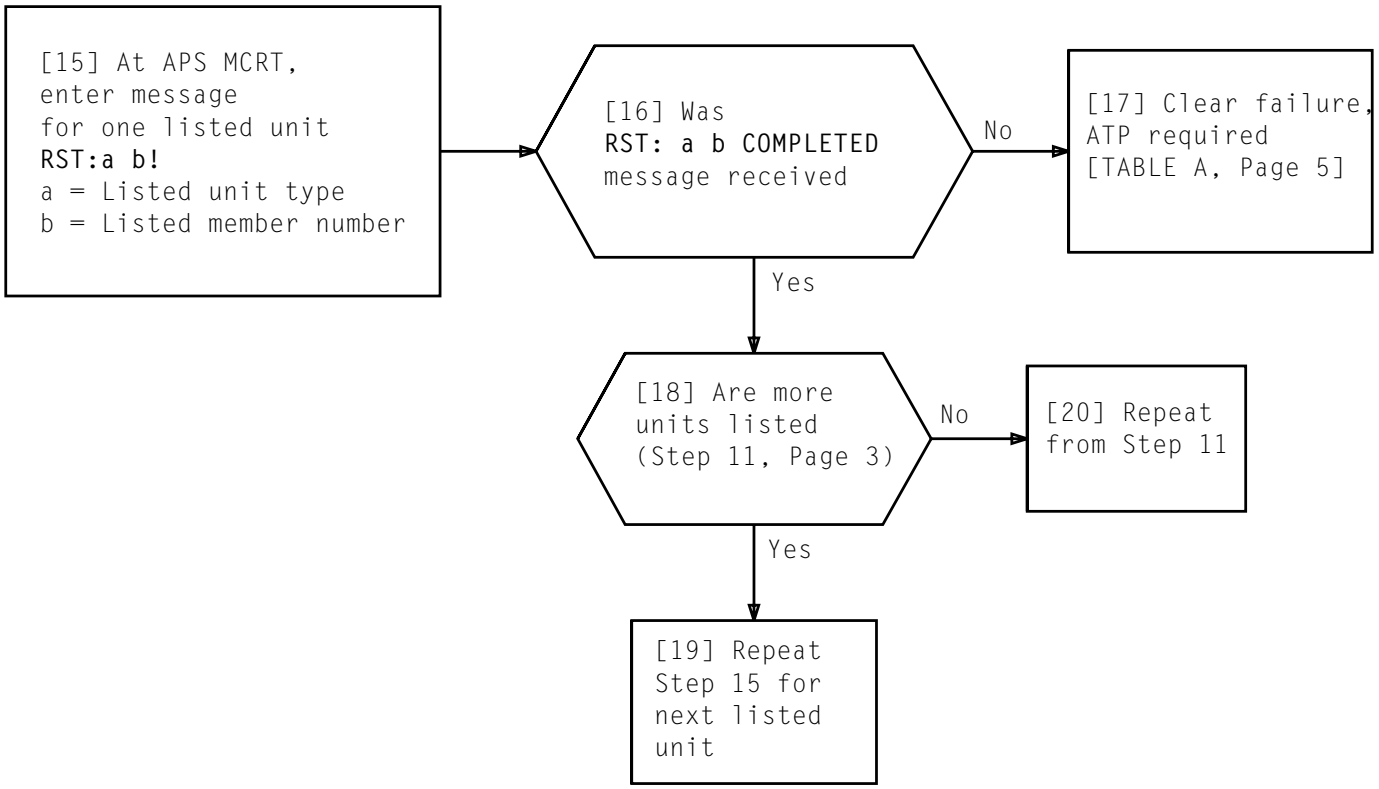


NOTE 1
Variables c and d are only to be used if submember is listed

ENSURE ALL UNITS ARE IN-SERVICE



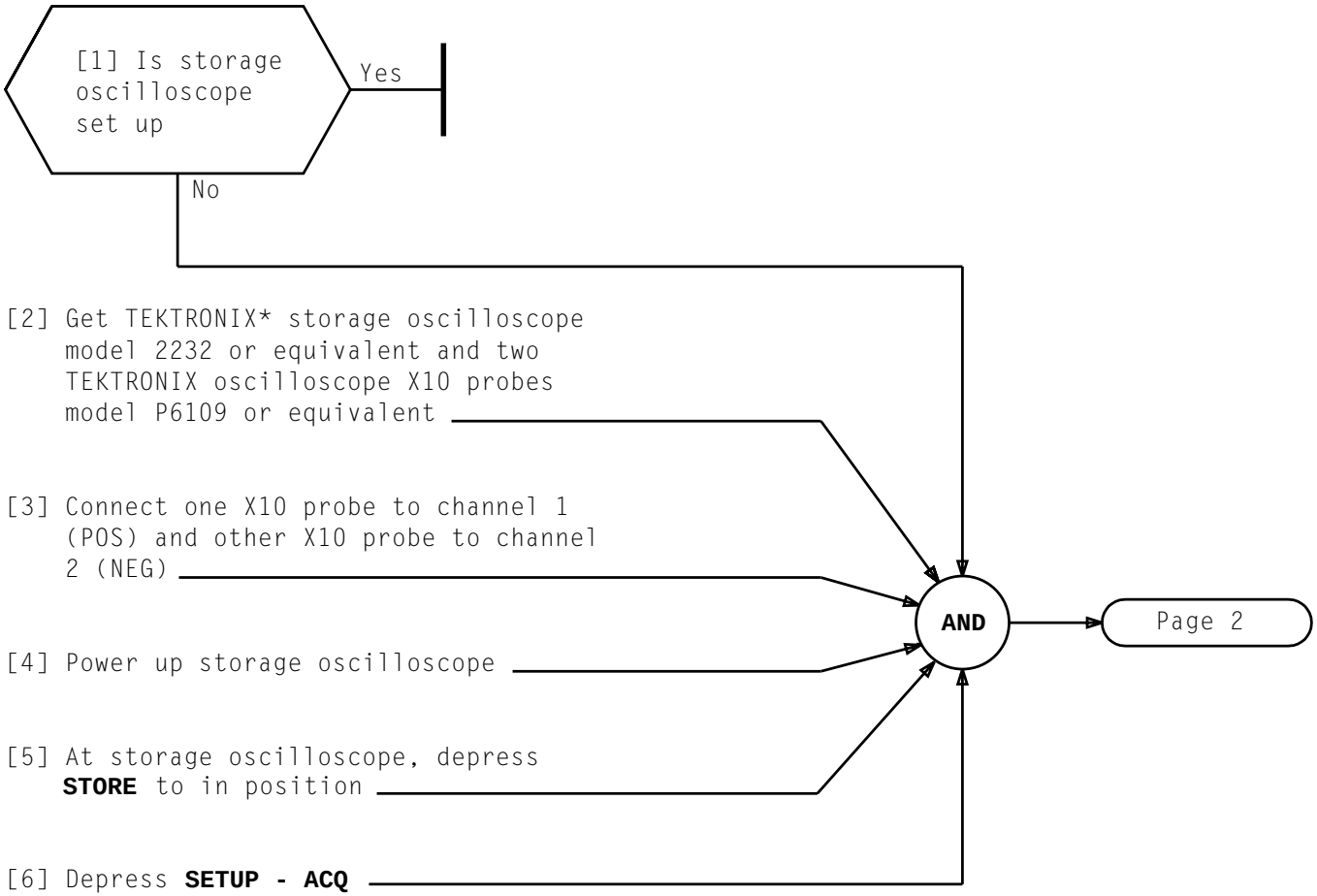
ENSURE ALL UNITS ARE IN-SERVICE



ENSURE ALL UNITS ARE IN-SERVICE

TABLE A			
UNIT TYPE	**TROUBLE CLEARING VOLUME**	**UNIT TYPE**	**TROUBLE CLEARING VOLUME**
1B Processor	234-351-004	MFS	234-151-041
3B Computer Model 1	254-301-812 254-301-813	MISC A, B, C	234-151-043
3B Computer Model 2/3	254-302-812	NCLK	234-151-013
ADS (TUC and DUS)	234-351-010	PCDF J5A007B	254-251-025
API	234-351-016	PCDF J5A007C	254-251-026
AUB	234-351-010	BDFB	234-351-027
CNI	234-151-120	PUBB	234-151-015
DIF	234-151-055	SCS	234-151-077 (LEC) 234-151-077AC (AT&T)
DT	234-151-045	SP1	234-151-031
EST	234-151-050	SP2	234-151-032
IO J5A006A	234-351-020	TGR	234-151-033
IO J5A006C	234-351-021	TMS	234-151-011
IO J5A006D	234-351-022	TSI	234-151-012
		VIF	234-151-025

ENSURE ALL UNITS ARE IN-SERVICE



* Registered trademark of TEKTRONIX, Inc.

SET UP STORAGE OSCILLOSCOPE FOR PUB LOOPING TEST

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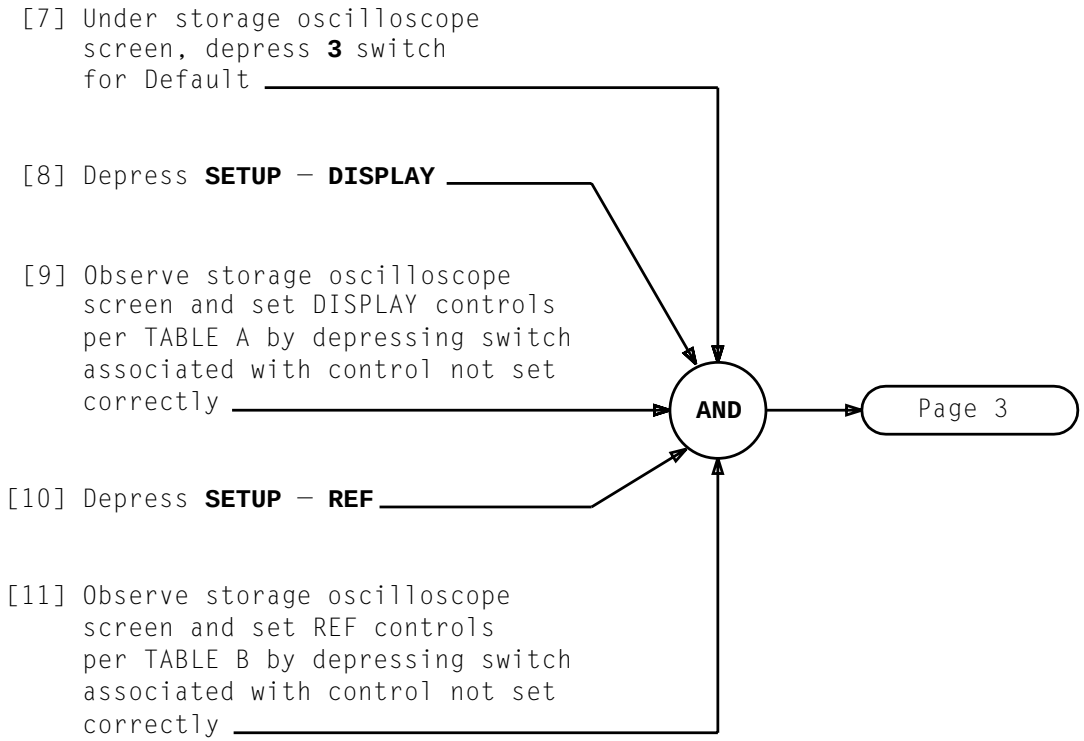


TABLE A

COLUMN	CONTROLS	SWITCH*
1	ΔT	SAVE REF
2	ON	1
3	ON	2

*Switches under display screen are associated with column that they are under

TABLE B

COLUMN	CONTROLS	SWITCH*
1	Format	SAVE REF
2	Ref1	1
3	CH1	2
4	X1	3
5	Vert Gain: 0.2V	4K (for Vert Gain:) and adjust CURSORS to obtain 0.2V

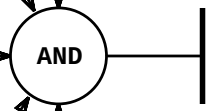
*Switches under display screen are associated with column that they are under

SET UP STORAGE OSCILLOSCOPE FOR PUB LOOPING TEST

[12] Depress **SETUP** – **REF** to return to screen

[13] Determine one location in FIG. 1, Page 5 where bus scoping adapter can be connected

[14] Connect storage scope with bus scoping adapter to connector location determined in Step 13 [see DLP-504 on how to use bus scoping adapter]



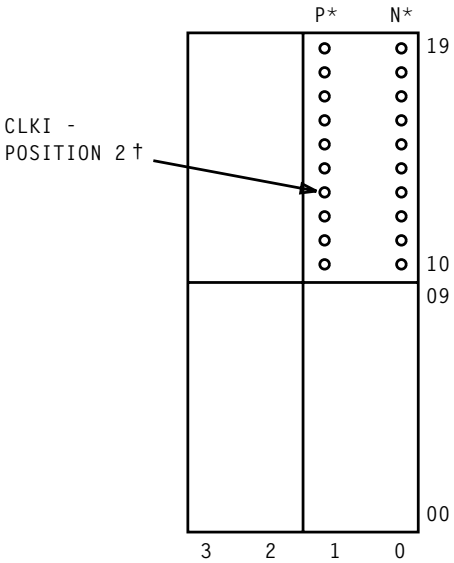
[15] Set bus scoping adapter to position 2

[16] Adjust storage scope per TABLE C, Page 4 for waveform in FIG. 2, Page 5

SET UP STORAGE OSCILLOSCOPE FOR PUB LOOPING TEST

TABLE C
OSCILLOSCOPE CONTROL SETTINGS FOR MODEL 2232

CONTROLS	POSITION
CURSORS	Don't Care
SAVE/CONT	Depress until SAVE is not displayed
STORE	Depress (out)
VAR HOLDOFF	Don't Care
VERTICAL — POSITION (left)	Rotate to 2 o'clock position
VERTICAL — A/B SWP SEP	Don't Care
VERTICAL — POSITION (right)	Rotate to 10 o'clock position
VERTICAL MODE — CH 1 BOTH CH 2	BOTH
VERTICAL MODE — X-Y	Out position
VERTICAL MODE — BW LIMIT	Out position
VERTICAL MODE — ADD ALT CHOP	ADD
VERTICAL — CH 1 VOLTS/DIV	2
VERTICAL — CH 1 VOLTS/DIV — AC GND DC	DC
VERTICAL — INVERT	Depress (in)
VERTICAL — CH 2 VOLTS/DIV	2
VERTICAL — CH 2 VOLTS/DIV — AC GND DC	DC
HORIZONTAL — POSITION	Rotate to 1 o'clock position
HORIZONTAL — MODE	A
HORIZONTAL — A and B SEC/DIV	.2 μs
B TRIGGER — SLOPE	Don't Care
B TRIGGER — LEVEL	Don't Care
A TRIGGER — TV FIELD — NORM	Depress (in)
A TRIGGER — SLOPE	Out position
A TRIGGER — LEVEL	Rotate to 2 o'clock position
A TRIGGER — A & B SOURCE	CH 1
A TRIGGER — A COUPL	NORM
A TRIGGER — A EXT COUPL	Don't Care

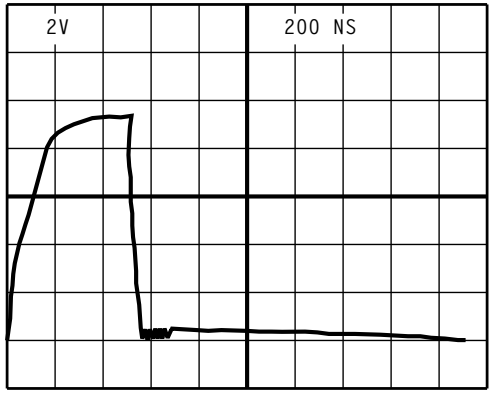


FRAME	
IO	
BUS 0	080-10
BUS 1	080-35
IOP	
BUS 0	080-29
BUS 1	076-29

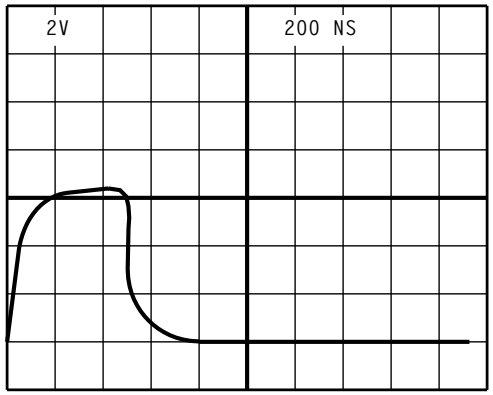
* P FOR POSITIVE LEAD AND
N FOR NEGATIVE LEAD

† POSITION 2 IS ON BUS SCOPING ADAPTER

FIG. 1



NORMAL PULSE AT DRIVER



NORMAL PULSE 500 FEET FROM DRIVER

FIG. 2

SET UP STORAGE OSCILLOSCOPE FOR PUB LOOPING TEST

[1] Ensure scope probes from storage scope are wrapped around each other with positive lead connected to channel 1 and negative lead connected to channel 2 and ground leads are attached together

[2] See FIG. 1, Page 2. At bus scoping adapter, connect probe from channel 1 to P connector and channel 2 to N connector

[3] Connect bus scoping adapter connector to connector at unit/frame to be scoped [FIG. 1, Page 2]

[4] Using bus scoping adapter, starting at position 0, scope each bit, as required through range 0 to 7

[5] If more than one connector is to be scoped, disconnect bus scoping adapter connector and reconnect to another connector to be scoped. Repeat Steps 4 and 5 for each connector to be scoped. See TABLE A for scope adapter position to associated bit

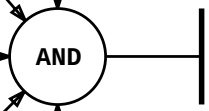


TABLE A

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

HOW TO USE BUS SCOPING ADAPTER

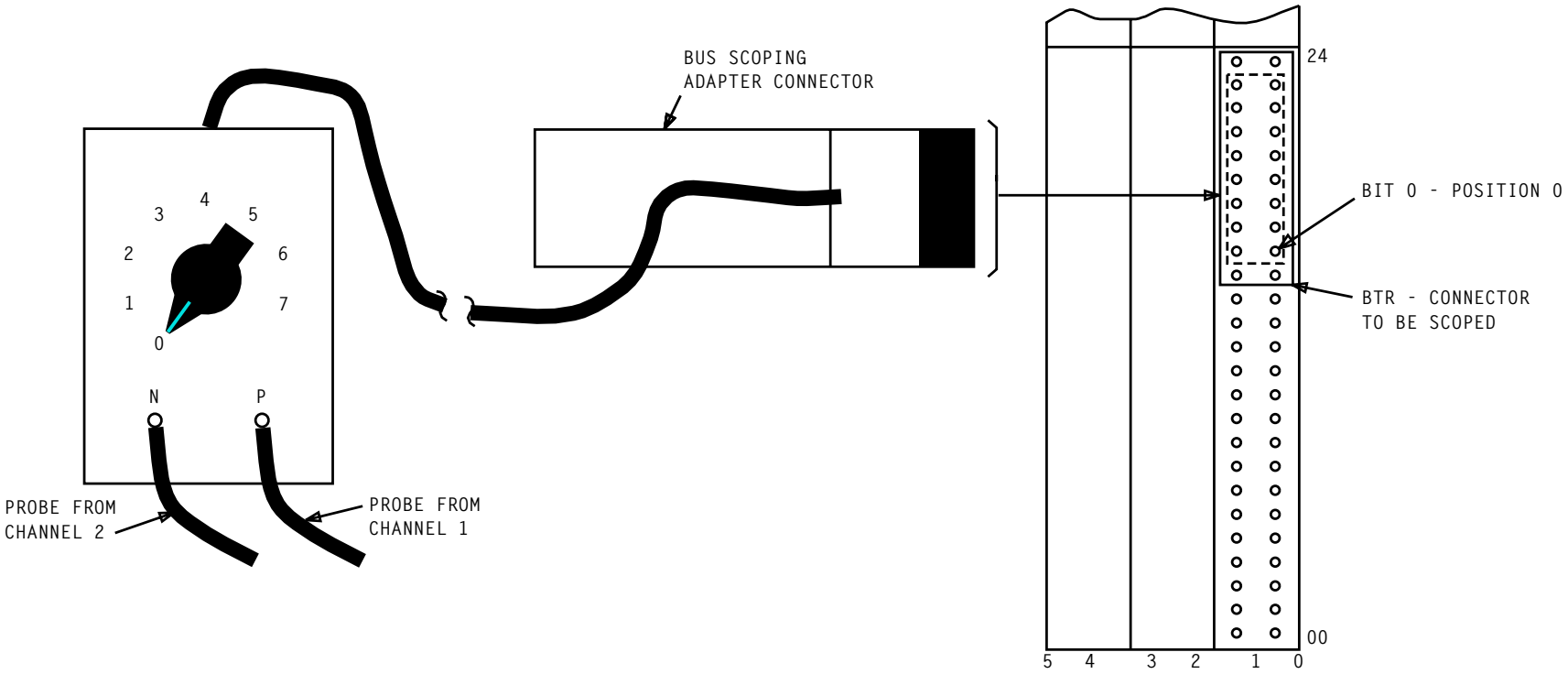


FIG. 1 — Bus Scoping Adapter Connections

HOW TO USE BUS SCOPING ADAPTER

1. Get program listings PR-4A510 (PUDGPBGR) and PR-4A512 (PUDGPB02) (See FIG. 1)

2. Using PR-4A512, verify address of ITEM 1 in TABLE A

3. Using PR-4A510, verify addresses of ITEMS 2 through 6 in TABLE A

TABLE A

ITEM	STATEMENT LABEL	ADDRESS
1	STM10600	543
2	PBTS2600	200
3	PBTS2900	207
4	PBTS3600	246
5	PBTS4400	616
6	PBTS13800	1675

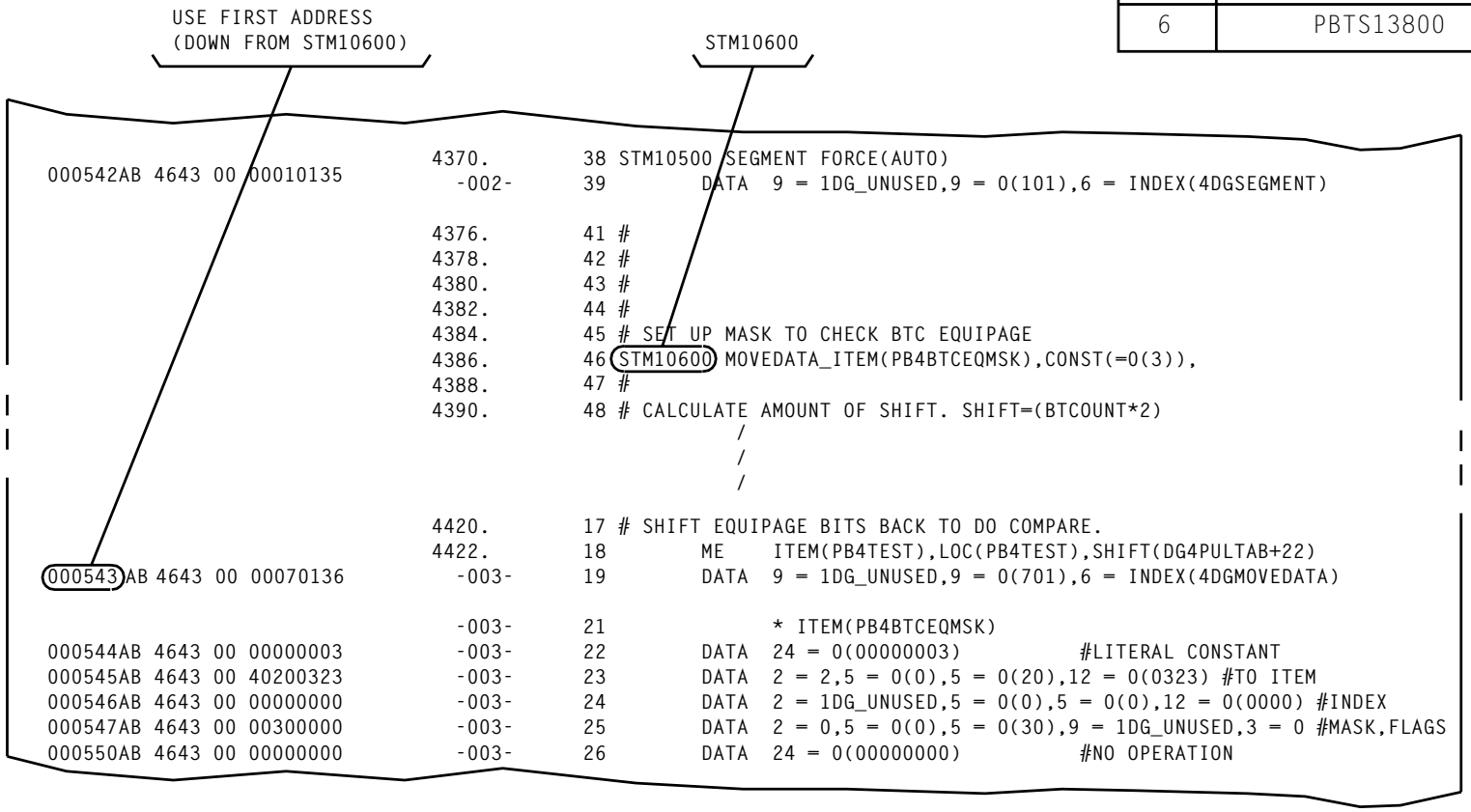


FIG. 1 — Location of STM10600 and Address to Use

STORE INPUT MESSAGES ON 4ESS™ SWITCH INPUT/OUTPUT TERMINAL FOR PUB LOOPING TEST

At SREC or Beltline Terminal:

4. Depress **FORM ENTER** key to **ON**

CAUTION: The messages must not be entered into system at this time

5. Type input messages per TABLE B

6. Depress **FORM ENTER** key to **OFF**

End of procedure

TABLE B

NUMBER	INPUT MESSAGE	NUMBER	INPUT MESSAGE
1	EX:PUB a;START! a = Bus 0 or 1	7	EX:PUB a:ADR 616-1675! a = Bus 0 or 1
2	EX:PUB a:PH 2,ADR 543! a = Bus 0 or 1	8	OP:MACLI,CLASS MTCE!
3	EX:PUB a;STEP! a = Bus 0 or 1	9	STOP:MACLI,CLASS MTCE,SUBCLASS a! a = CLASS MTCE SUBCLASS number from output message assigned to PUB diagnostic*
4	EX:PUB a:ADR 200-207! a = Bus 0 or 1		*To obtain CLASS MTCE SUBCLASS number, type and send OP:MACLI,CLASS MTCE!. From system response, determine which maintenance subclass number is associated with PUB and use that number for "a" for NUMBER 10 message
5	EX:PUB a! a = Bus 0 or 1		
6	EX:PUB a:ADR 207-246! a = Bus 0 or 1		

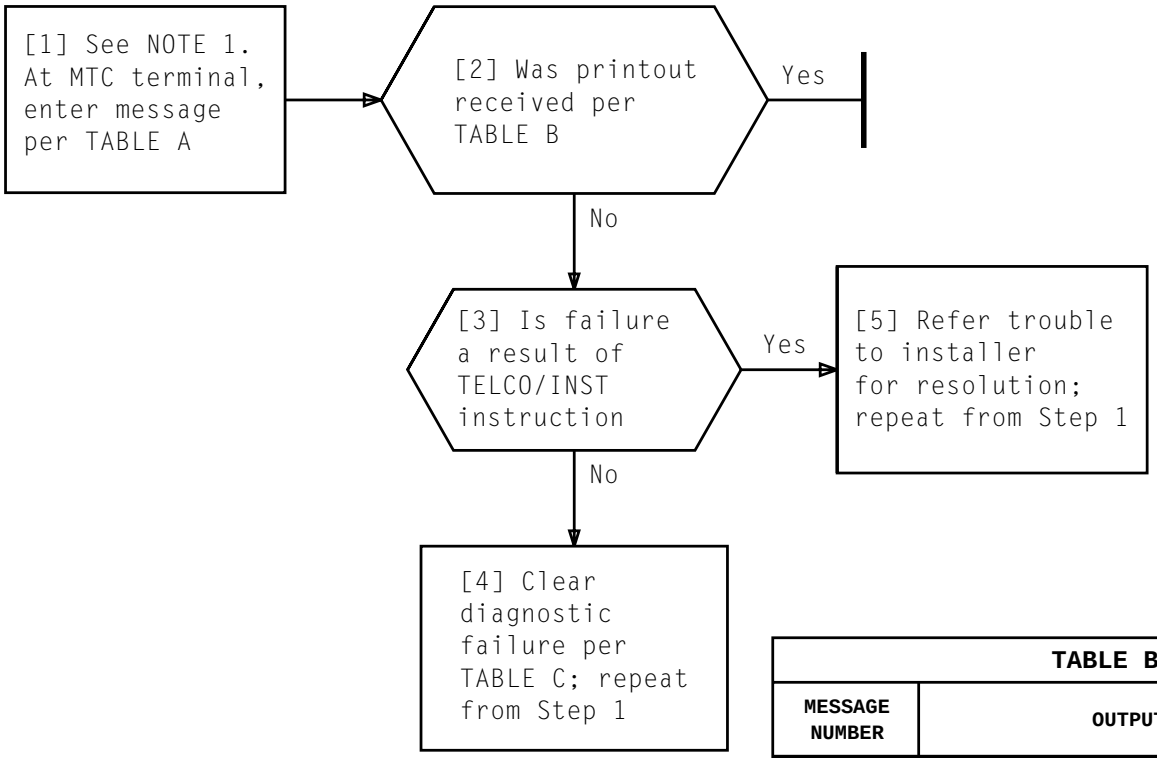


TABLE A

MESSAGE NUMBER	INPUT MESSAGE
1	RST:a b!

a = API, AUB, CC, DUS, IOUS, PUB, or TUC
b = Member number

TABLE B

MESSAGE NUMBER	OUTPUT MESSAGE
1	DGN: a b COMPLETED, c MSG COMPL RST: a b COMPLETED or RST: a b COMPL

a = API, AUB, CC, IOUS, PUB or TUC
b = Member number
c = ATP or CATP

TABLE C

UNIT TYPE	TROUBLE CLEARING VOLUME
API	254-251-016
AUB	254-251-010
CC	254-251-001
DUS	254-251-010
IOUS (J5A006A)	234-351-020
IOUS (J5A006C)	234-351-021
IOUS (J5A006D)	234-351-022
PUB	234-151-015
TUC	254-251-010

NOTE 1
Restore message will cause diagnostic to be run. Unit will be restored if ATP or CATP

RESTORE API, AUB, CC, DUS, IOUS, PUB, OR TUC TO SERVICE

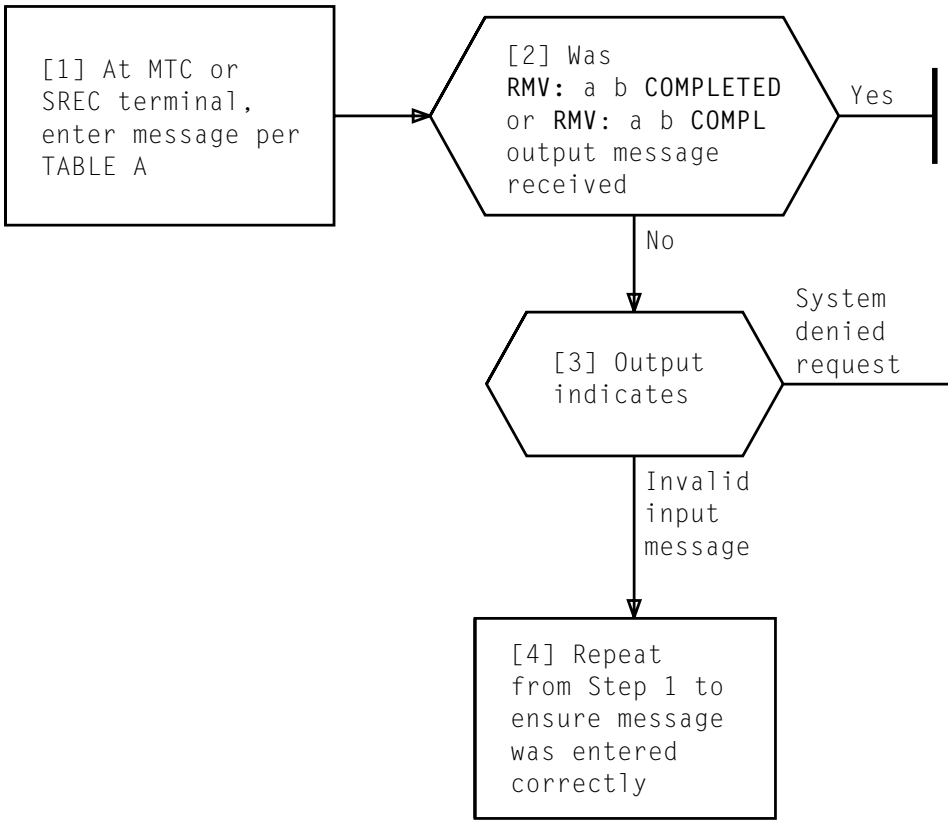


TABLE A

MESSAGE NUMBER	INPUT MESSAGE
1	RMV:a b!

a = API or AUB or CC or DUS or PUB or TUC

b = Member number

REMOVE API, AUB, CC, DUS, PUB, OR TUC FROM SERVICE

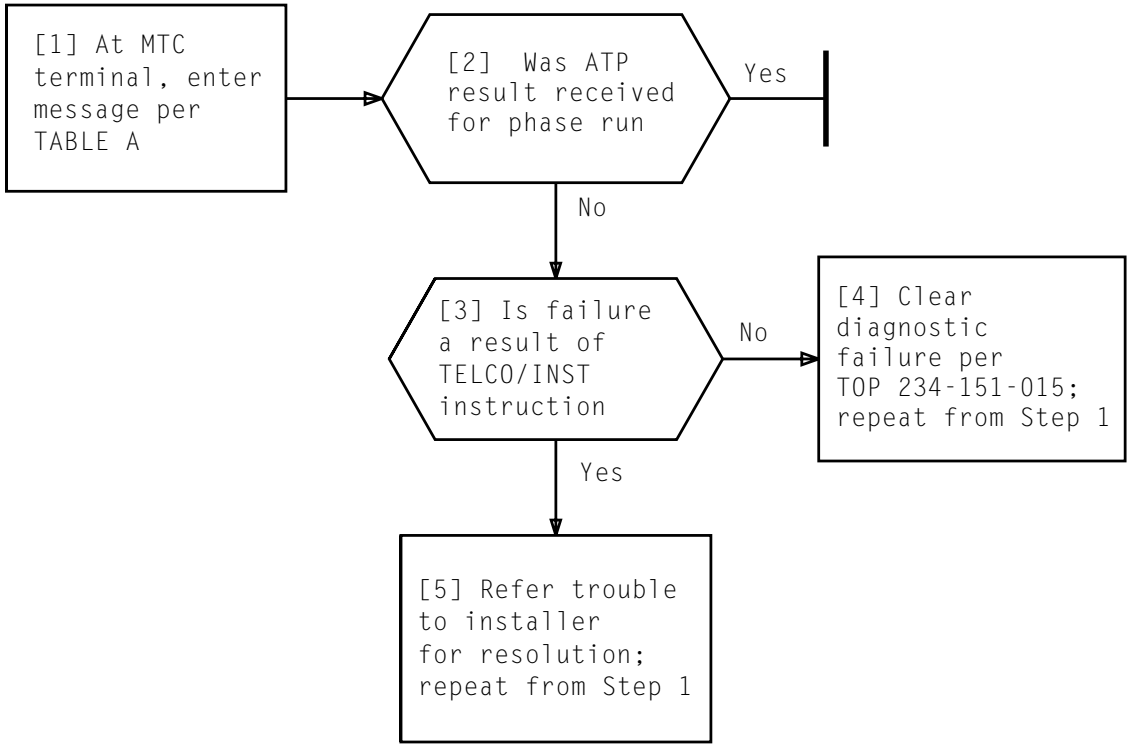


TABLE A	
MESSAGE NUMBER	**INPUT MESSAGE**
1	DGN:PUB a:PH 2!
a = Member number	

DIAGNOSE PUB SPECIFYING PHASE 2

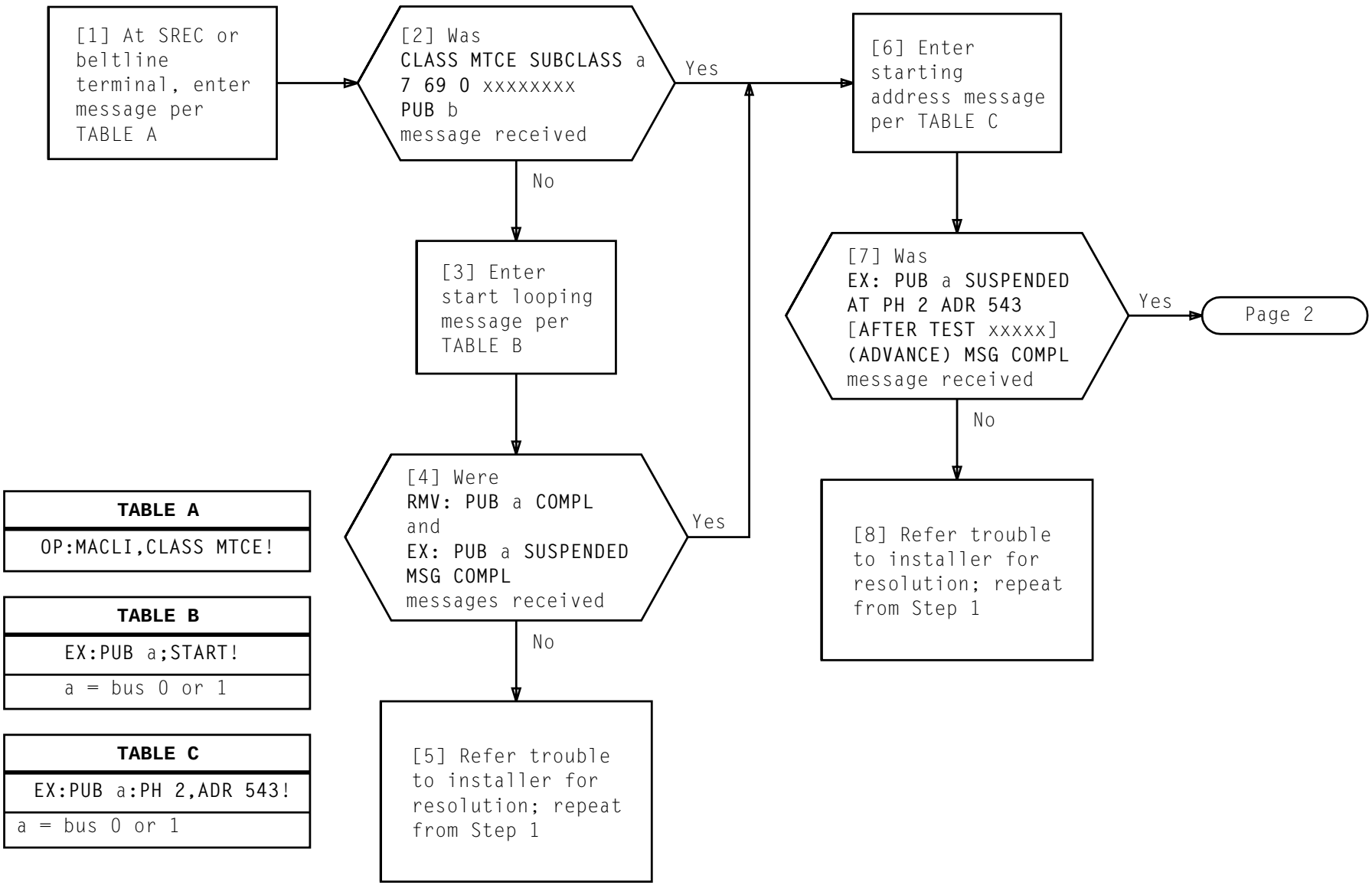


TABLE A
OP:MACLI,CLASS MTCE!

TABLE B
EX:PUB a;START!
a = bus 0 or 1

TABLE C
EX:PUB a:PH 2,ADR 543!
a = bus 0 or 1

ADVANCE PROGRAM AND SET UP LOOP TO OBSERVE BIT ON PU ENABLE ADDRESS AND/OR WRITE AND REPLY BUSES

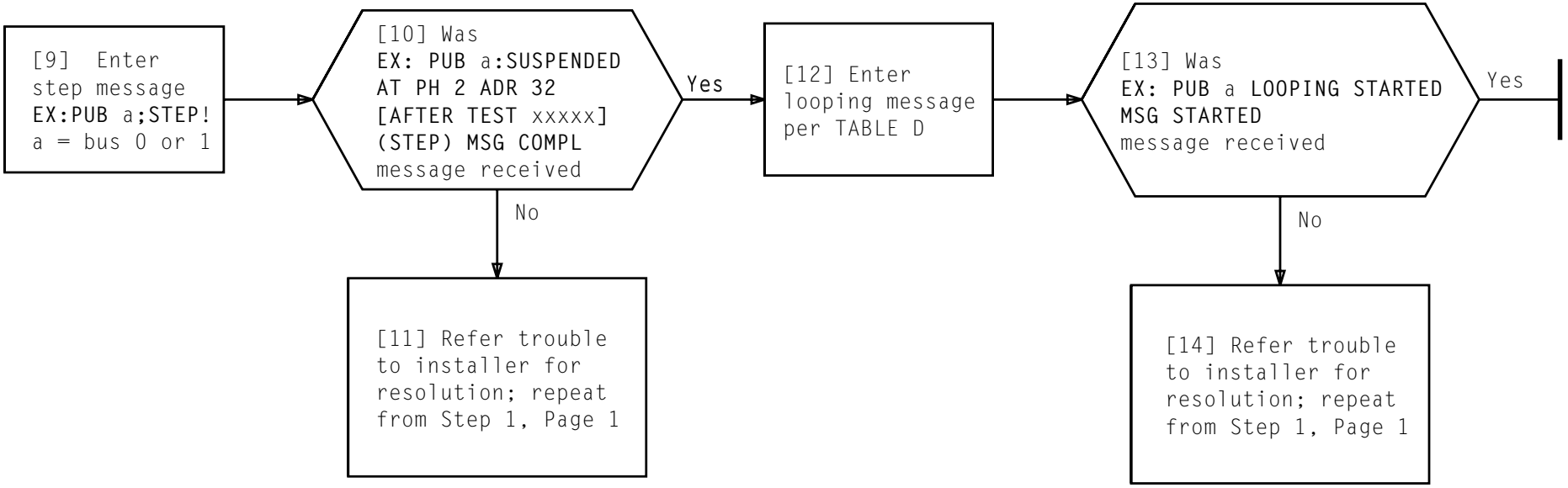


TABLE D

EX:PUB a:ADR b-c!

a = bus 0 or 1
b = 200 for bit 0 PU write and reply bus or 207 for other bits
c = 207 for bit 0 PU write and reply bus or 246 for other bits

ADVANCE PROGRAM AND SET UP LOOP TO OBSERVE BIT ON PU ENABLE ADDRESS AND/OR WRITE AND REPLY BUSES

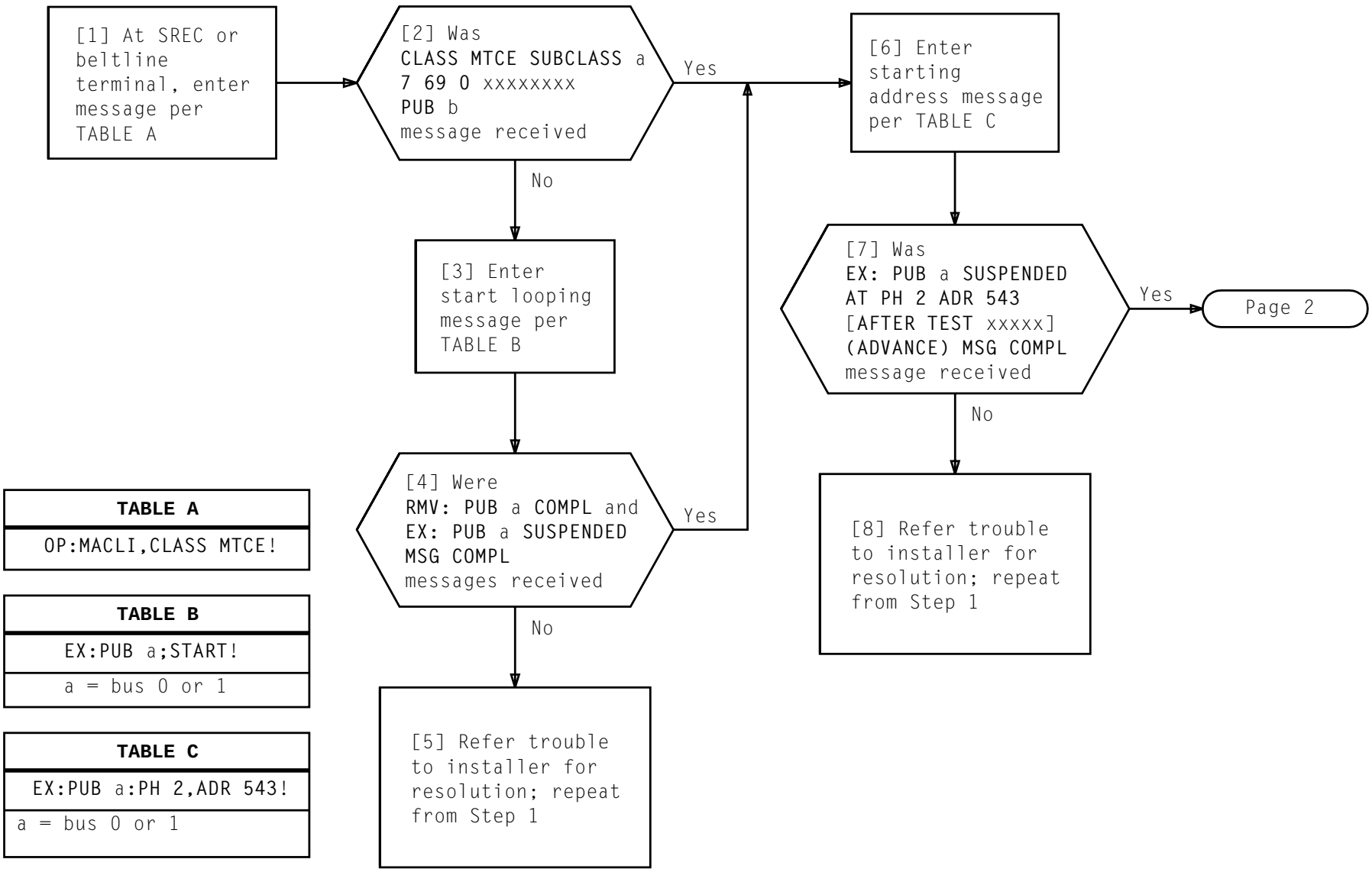


TABLE A
OP:MACLI,CLASS MTCE!

TABLE B
EX:PUB a;START!
a = bus 0 or 1

TABLE C
EX:PUB a:PH 2,ADR 543!
a = bus 0 or 1

ADVANCE PROGRAM AND SET UP LOOP TO OBSERVE PU CONTROL BUS AND MISCELLANEOUS BUS BITS

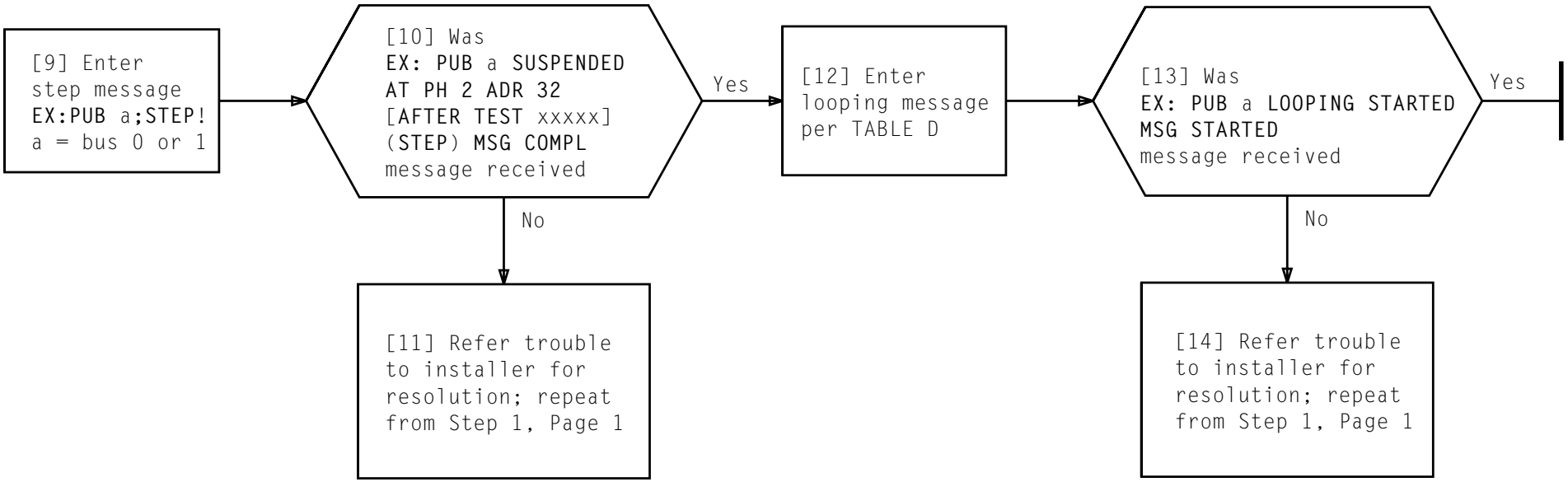


TABLE D
EX:PUB a:ADR 616-1675!
a = bus 0 or 1

ADVANCE PROGRAM AND SET UP LOOP TO OBSERVE PU CONTROL BUS AND MISCELLANEOUS BUS BITS

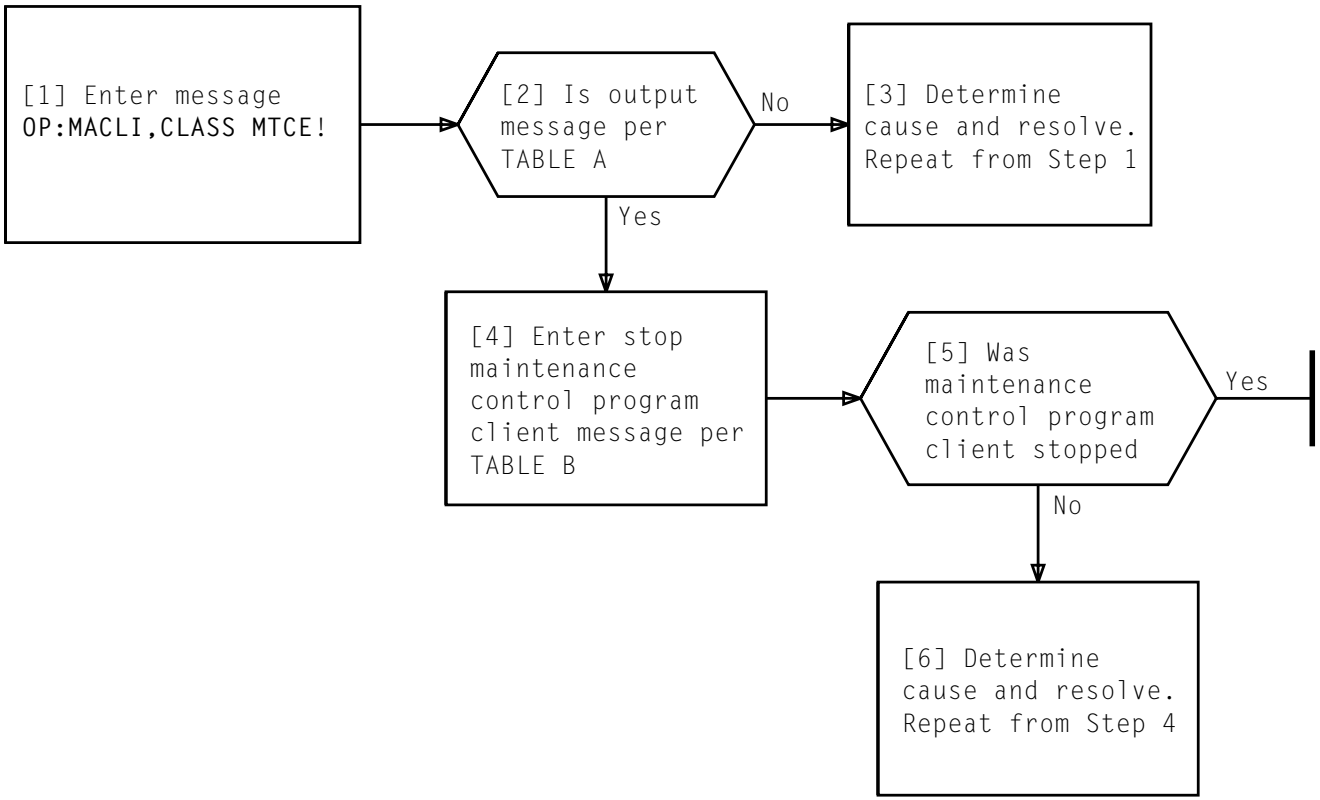


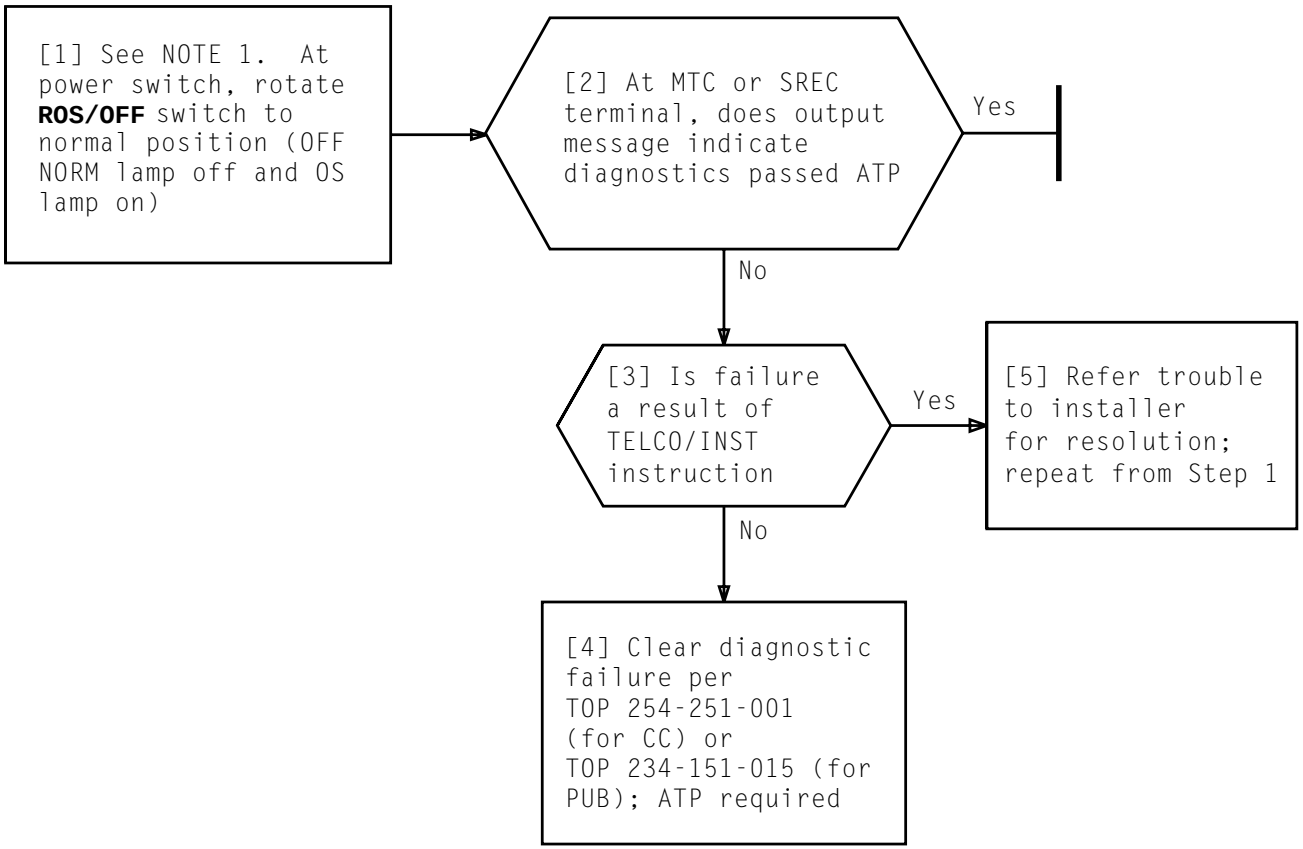
TABLE A	
OP:MACLI	
CLASS MTCE SUBCLASS 0	a - d e f
CLASS MTCE SUBCLASS 1	a - d e f
CLASS MTCE SUBCLASS 2	a - d e f

a - d = NONE or variable data
e = Unit type
f = Member number

TABLE B
STOP:MACLI,CLASS MTCE,SUBCLASS a!

a = CLASS MTCE SUBCLASS number from output message assigned to AUB or PUB diagnostics

STOP MAINTENANCE CONTROL PROGRAM CLIENT



ROTATE ROS/OFF SWITCH TO NORMAL POSITION

NOTE 1
Operation of **ROS/OFF** switch will cause diagnostic to be run

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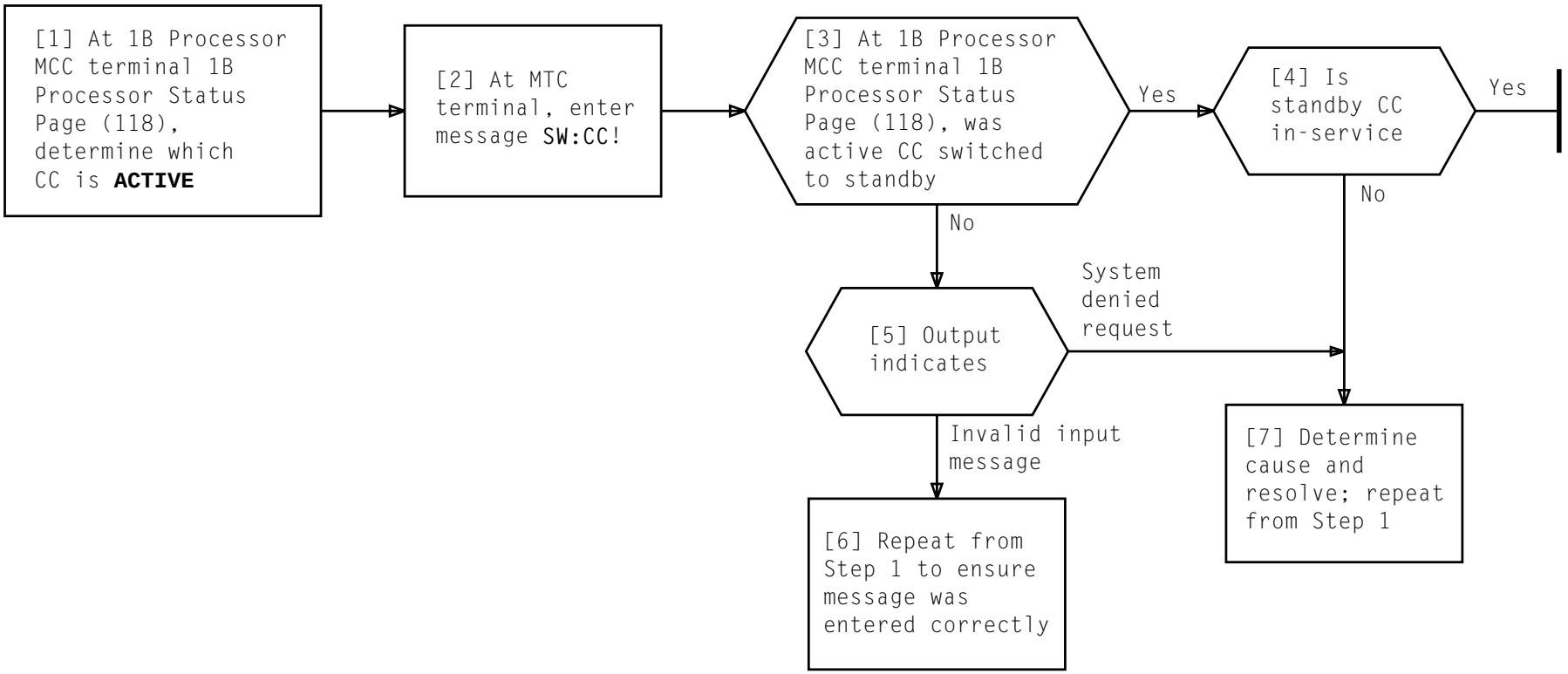
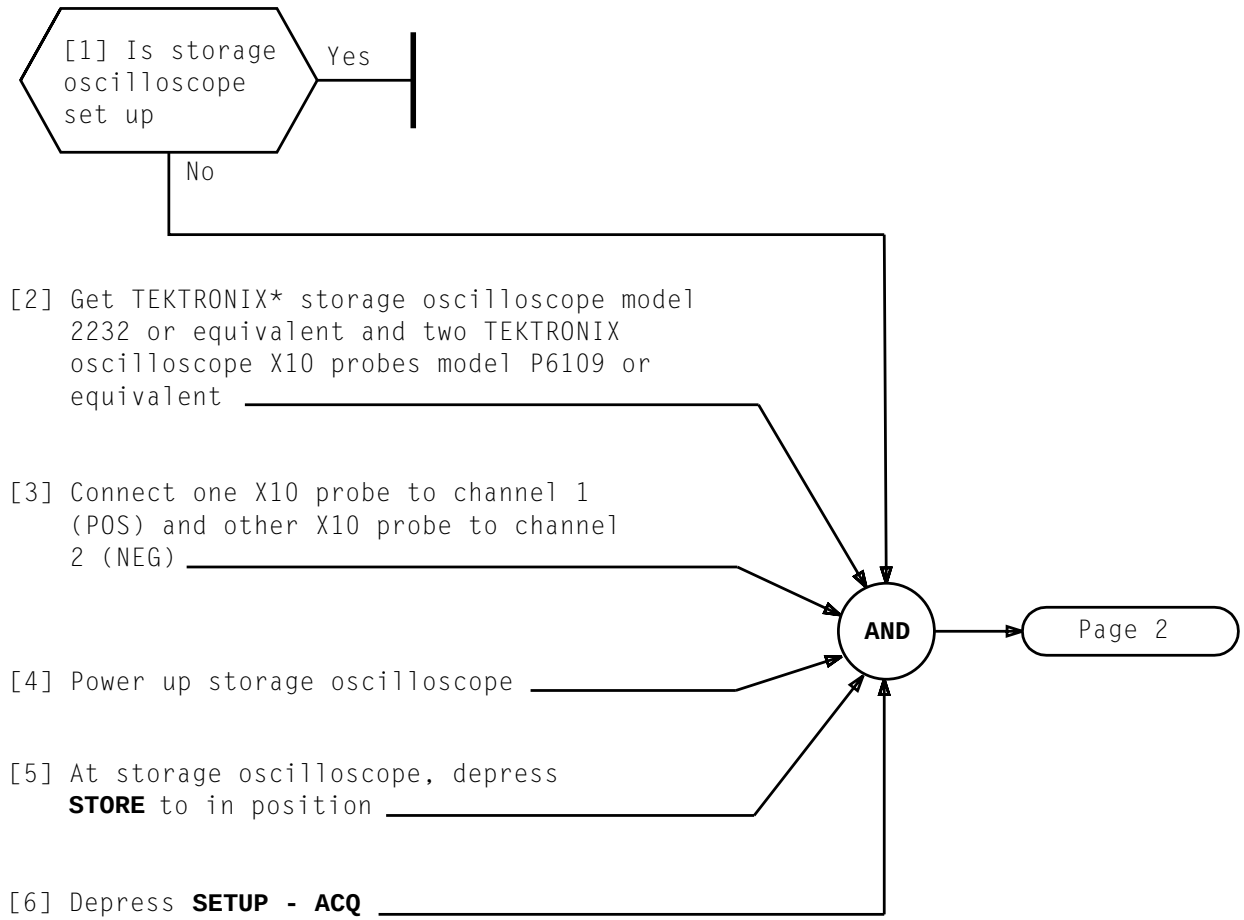


SWITCH 1B PROCESSOR CENTRAL CONTROLS (CCs)



* Registered trademark of TEKTRONIX, Inc.

SET UP STORAGE OSCILLOSCOPE FOR SCOPING AU BUS

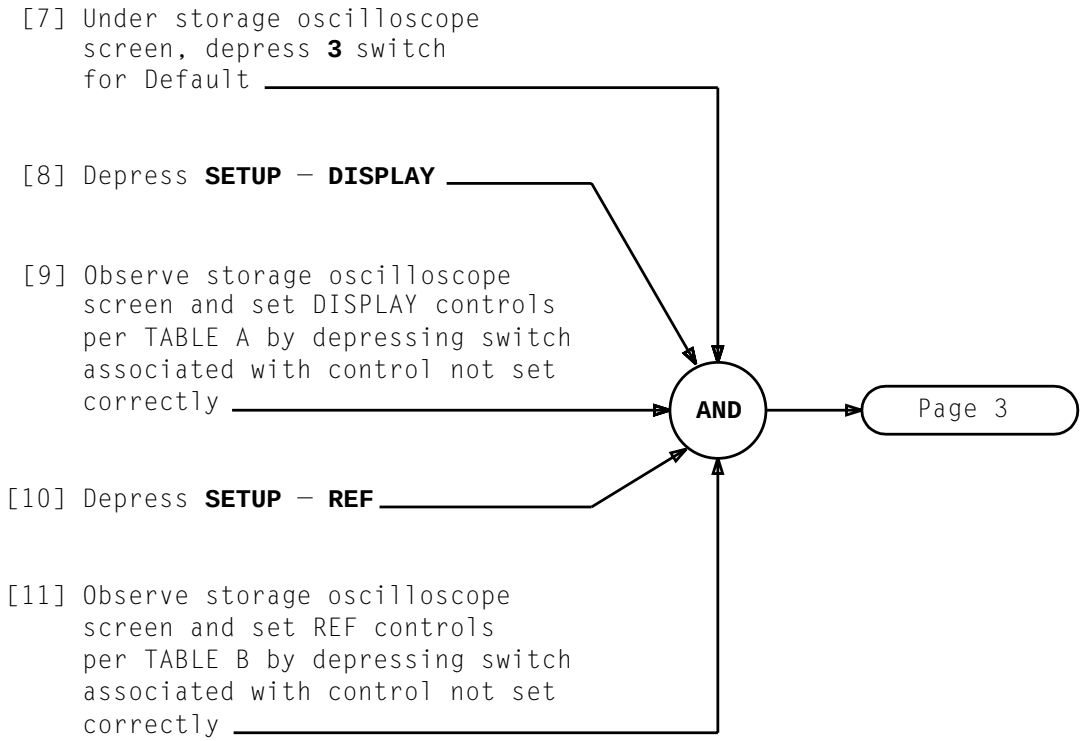


TABLE A

COLUMN	CONTROLS	SWITCH*
1	ΔT	SAVE REF
2	ON	1
3	ON	2

*Switches under display screen are associated with column that they are under

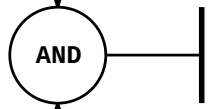
TABLE B

COLUMN	CONTROLS	SWITCH*
1	Format	SAVE REF
2	Ref1	1
3	CH1	2
4	X1	3
5	Vert Gain: 0.2V	4K (for Vert Gain:) and adjust CURSORS to obtain 0.2V

*Switches under display screen are associated with column that they are under

SET UP STORAGE OSCILLOSCOPE FOR SCOPING AU BUS

[12] Depress **SETUP** – **REF** to return to screen



[13] Set 2232 storage oscilloscope
controls per TABLE C, Page 4

SET UP STORAGE OSCILLOSCOPE FOR SCOPING AU BUS

TABLE C — OSCILLOSCOPE CONTROL SETTINGS FOR MODEL 2232	
CONTROLS	**POSITION**
CURSORS	Don't Care
SAVE/CONT	Depress until SAVE is not displayed
STORE	Depress (in)
VAR HOLDOFF	Don't Care
VERTICAL — POSITION (left)	Rotate to 11 o'clock position
VERTICAL — A/B SWP SEP	Don't Care
VERTICAL — POSITION (right)	Rotate to 12 o'clock position
VERTICAL MODE — CH 1 BOTH CH 2	BOTH
VERTICAL MODE — X-Y	Out position
VERTICAL MODE — BW LIMIT	Out position
VERTICAL MODE — ADD ALT CHOP	ADD
VERTICAL — CH 1 VOLTS/DIV	2
VERTICAL — CH 1 VOLTS/DIV — AC GND DC	DC
VERTICAL — INVERT	Depress (in)
VERTICAL — CH 2 VOLTS/DIV	2
VERTICAL — CH 2 VOLTS/DIV — AC GND DC	DC
HORIZONTAL — POSITION	Rotate to 1 o'clock position
HORIZONTAL — MODE	A
HORIZONTAL — A and B SEC/DIV	.1 μs
B TRIGGER — SLOPE	Don't Care
B TRIGGER — LEVEL	Don't Care
A TRIGGER — TV FIELD — NORM	Depress (in)
A TRIGGER — SLOPE	Out position
A TRIGGER — LEVEL	Rotate to 1 o'clock position
A TRIGGER — A & B SOURCE	CH 1
A TRIGGER — A COUPL	NORM
A TRIGGER — A EXT COUPL	Don't Care

At SREC or Beltline Terminal:

[1] Depress **FORM ENTER** key to **ON**

[2] Read NOTE 1. Type input messages per TABLE A

[3] Depress **FORM ENTER** key to **OFF**

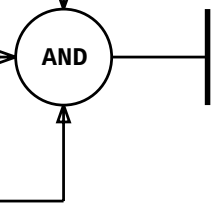
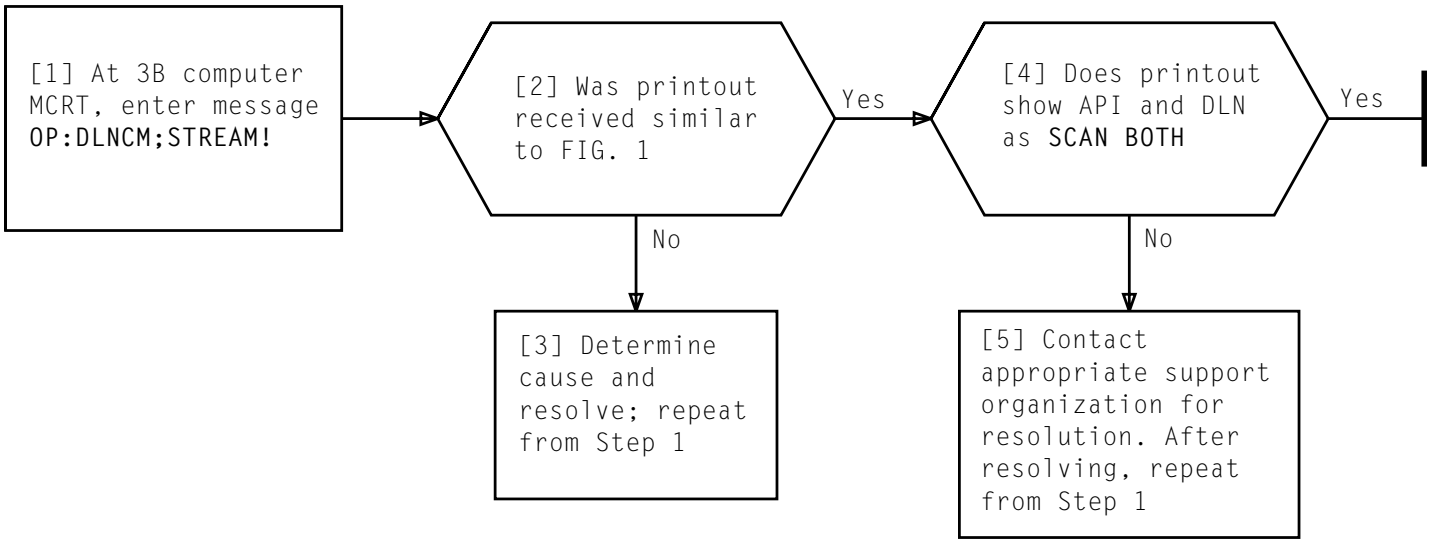


TABLE A

NUMBER	INPUT MESSAGES
1	INH:MACLI,CLASS MTCE;REX!
2	EX:AUB a;START! a = Bus 0 or 1
3	EX:AUB a:PH 99,ADR b a = Bus 0 or 1 b = 42-75 (for bus 0) or 216-251 (for bus 1)
4	EX:AUB a:PH 99,ADR b a = Bus 0 or 1 b = 75-120 (for bus 0) or 251-274 (for bus 1)
5	EX:AUB a:PH 99,ADR b a = Bus 0 or 1 b = 163-212 (for bus 0) or 337-366 (for bus 1)
6	EX:AUB a:PH 99,ADR b a = Bus 0 or 1 b = 120-163 (for bus 0) or 274-337 (for bus 1)
7	EX:AUB a! a = Bus 0 or 1
8	OP:MACLI,CLASS MTCE!
9	STOP:MACLI,CLASS MTCE,SUBCLASS a! a = CLASS MTCE SUBCLASS number from OP:MACLI output message assigned to AUB diagnostics.
10	ALW:MACLI,CLASS MTCE!

NOTE 1
Messages must not be entered into system at this time

STORE AU BUS PHASE 99 INPUT MESSAGES (AUB CONVERSION SWITCH REMOVAL)




```
OP DLNCM STREAM COMPLETED

API-DLN STREAM STATUS

API: SCAN BOTH                      DLN: SCAN BOTH

INCOMING BUFFER                     OUTGOING BUFFER
   START             X'--------        START             X'--------
   END               X'--------        END               X'--------
   LOAD POINTER      X'--------        LOAD POINTER      X'--------
   UNLOAD POINTER    X'--------        UNLOAD POINTER    X'--------
   END POINTER       X'--------        END POINTER       X'--------
   -------- = VARIABLE HEX DATA
```

FIG. 1 — Sample OP:DLNCM Printout

VERIFY API-DLN STREAM STATUS

[1] At MTC terminal, enter message
OP:APSTATUS!

AND

[2] Using printout and FIG. 1, determine API member number assigned SBY and record as standby for later use

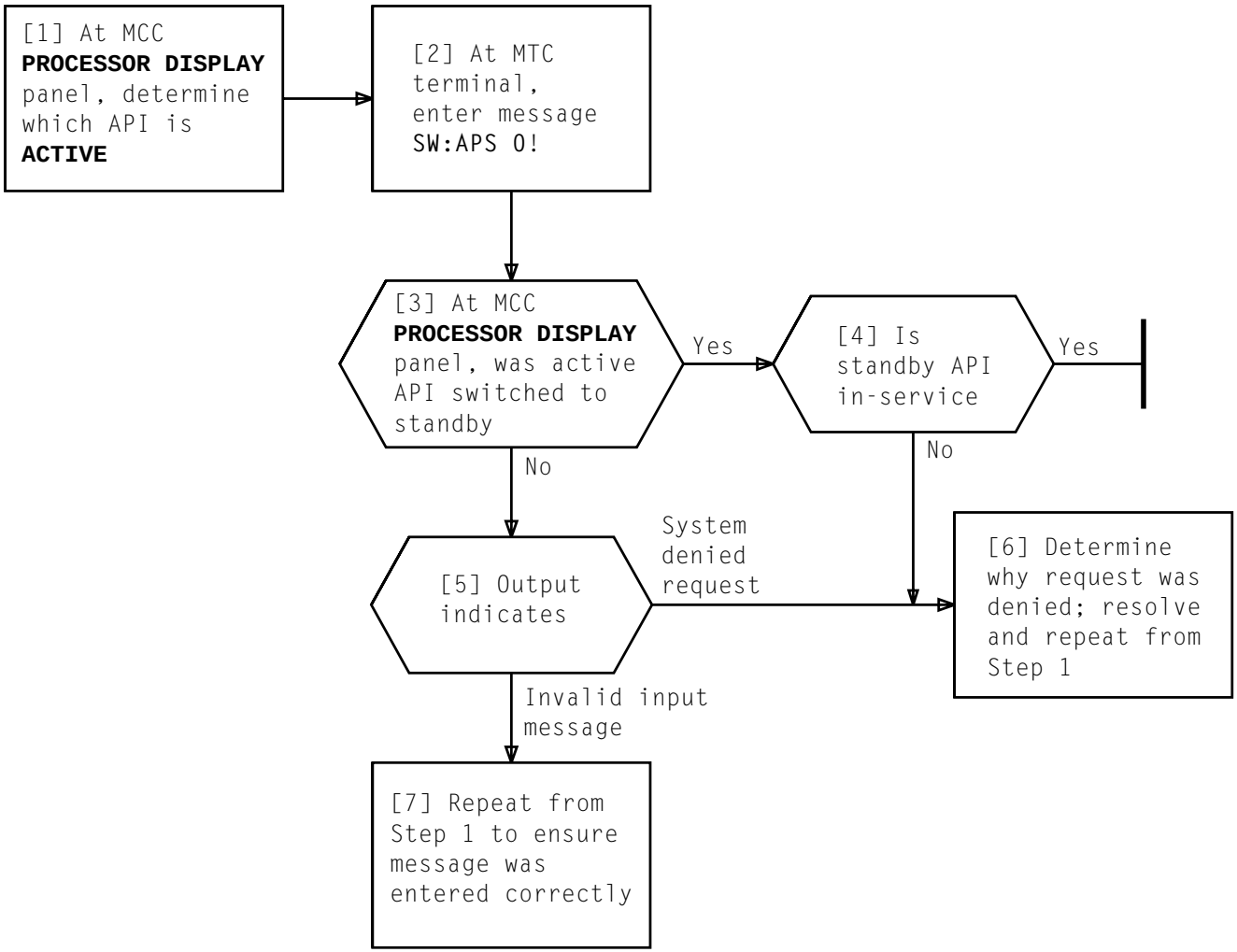
Record this value

APS 0 API a **ACT API** b **SBY**

a = Active API member number
b = Standby API member number

FIG. 1 — Sample OP:APSTATUS Printout

DETERMINE STANDBY API


[1] At MCC **PROCESSOR DISPLAY** panel, determine which API is **ACTIVE**
[2] At MTC terminal, enter message SW:APS 0!
[3] At MCC **PROCESSOR DISPLAY** panel, was active API switched to standby
Yes
[4] Is standby API in-service
Yes
No
No
System denied request
[5] Output indicates
[6] Determine why request was denied; resolve and repeat from Step 1
Invalid input message
[7] Repeat from Step 1 to ensure message was entered correctly

SWITCH APIs

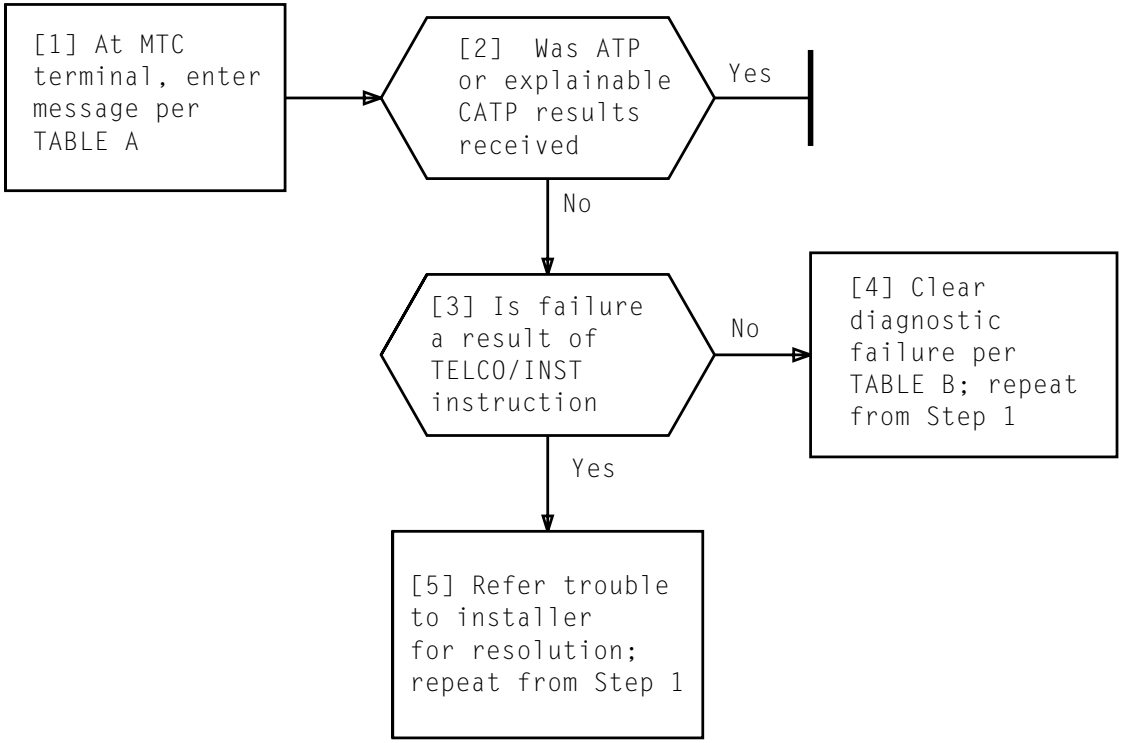


TABLE A

MESSAGE NUMBER	INPUT MESSAGE
1	DGN:a b !

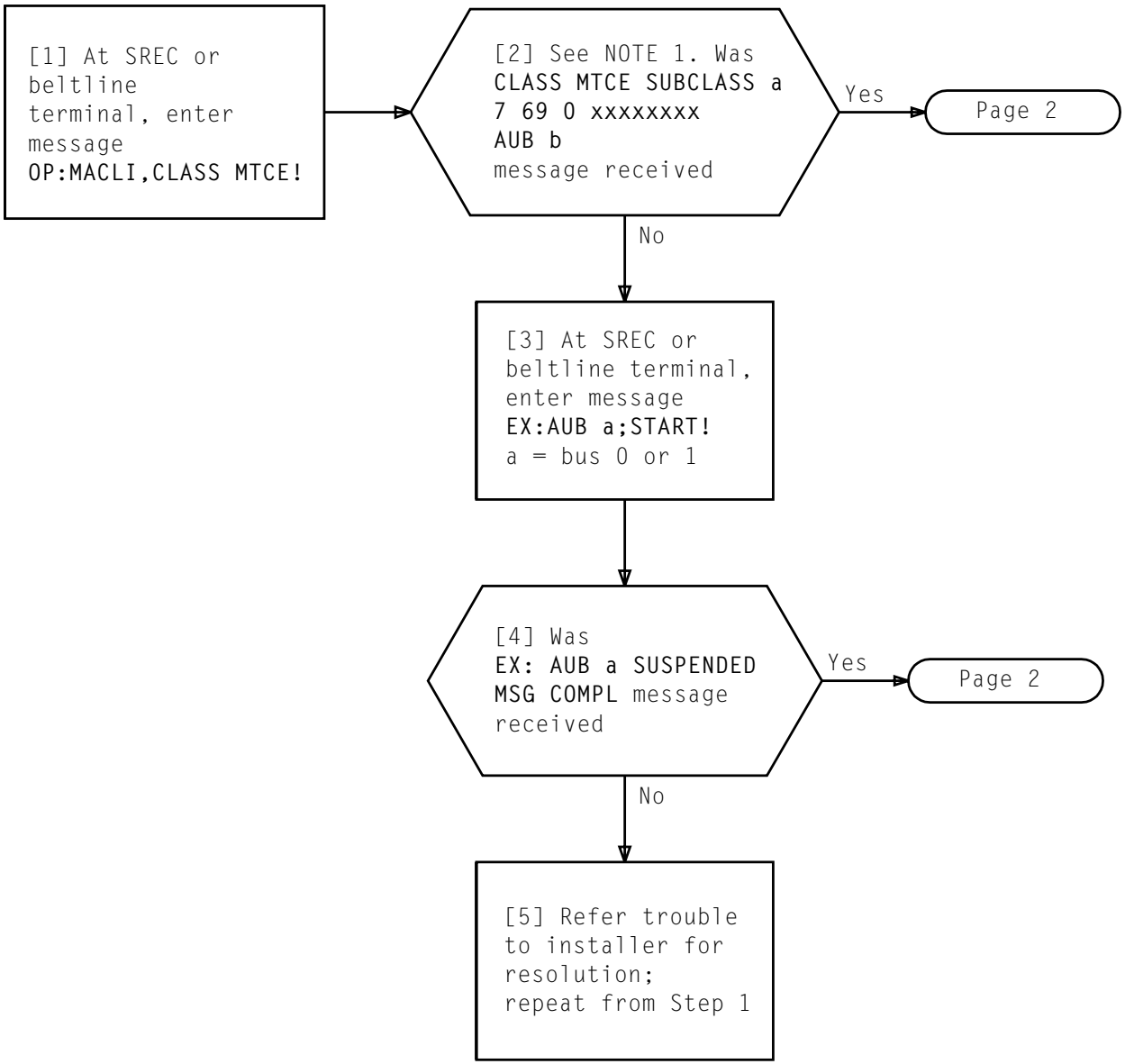
a = API, AUB, or DUS

b = Member number

TABLE B

UNIT TYPE	TROUBLE-CLEARING VOLUME
API	254-251-016
AUB	254-251-010
DUS	254-251-010

DIAGNOSE API, AUB, OR DUS



ENTER EXECUTE MESSAGES FOR LOOPING ON SPECIFIED AU BUS (AUB CONVERSION SWITCH REMOVAL)

NOTE 1
If problem occurs when setting up loop, use program listing ABDG99 (PR-5A737)

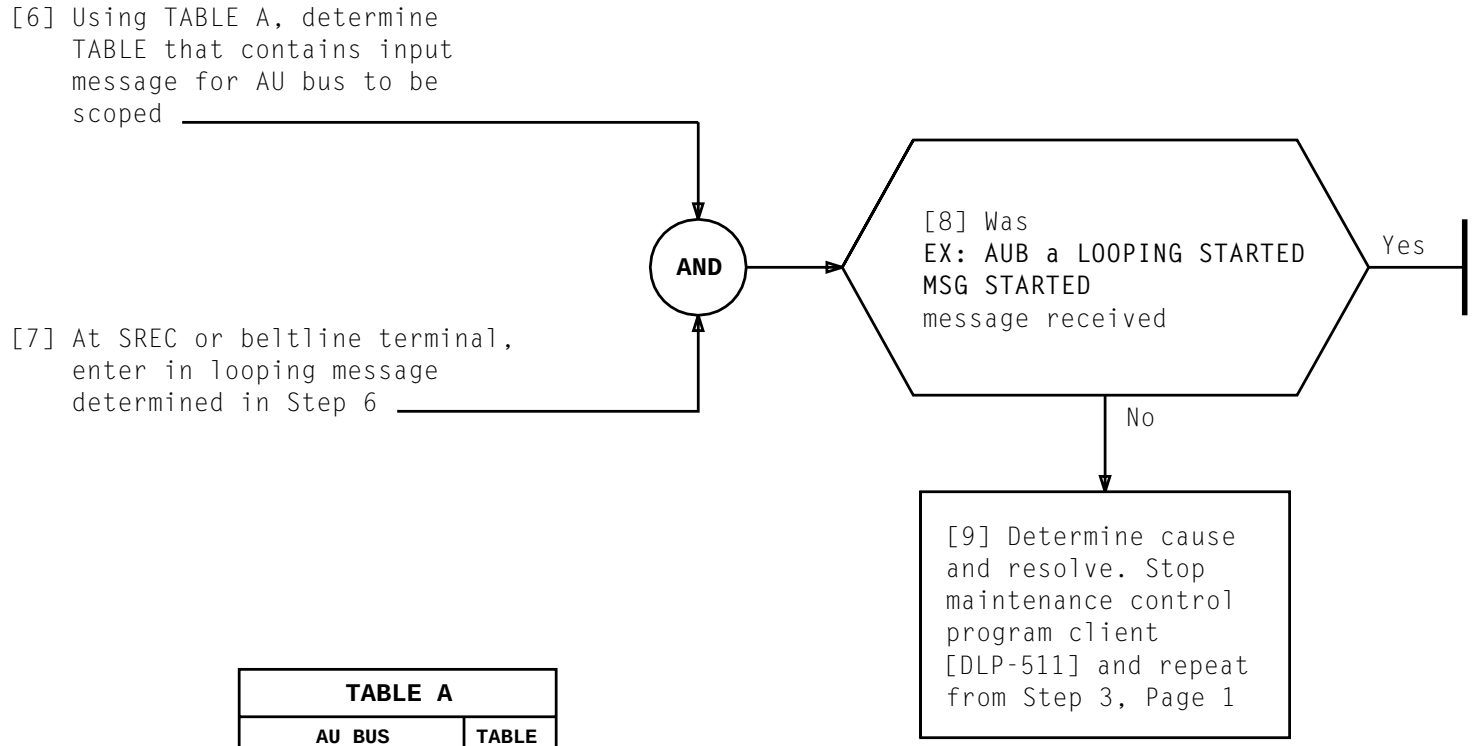


TABLE A	
AU BUS	**TABLE**
Write	B
Address	C
Store-Address	D
Reply	E

ENTER EXECUTE MESSAGES FOR LOOPING ON SPECIFIED AU BUS (AUB CONVERSION SWITCH REMOVAL)

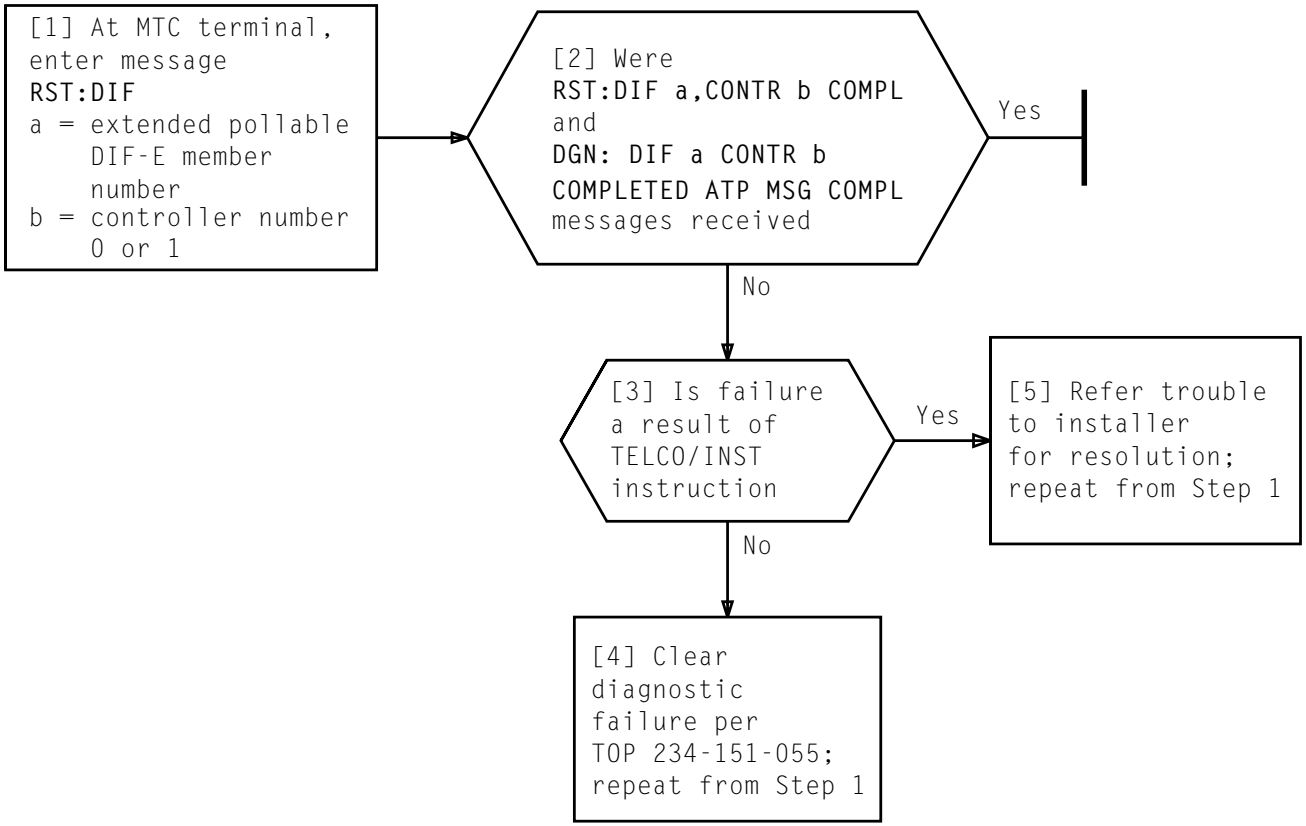
TABLE B — AU WRITE BUS
EX:AUB a:PH 99,ADR b!
a = Bus 0 or 1 b = 42-75 (for bus 0) or 216-251 (for bus 1)

TABLE C — AU ADDRESS BUS
EX:AUB a:PH 99,ADR b!
a = Bus 0 or 1 b = 75-120 (for bus 0) or 251-274 (for bus 1)

TABLE D — AU STORE ADDRESS BUS
EX:AUB a:PH 99,ADR b!
a = Bus 0 or 1 b = 163-212 (for bus 0) or 337-366 (for bus 1)

TABLE E — AU REPLY BUS
EX:AUB a:PH 99,ADR b!
a = Bus 0 or 1 b = 120-163 (for bus 0) or 274-337 (for bus 1)

ENTER EXECUTE MESSAGES FOR LOOPING ON SPECIFIED AU BUS (AUB CONVERSION SWITCH REMOVAL)



RESTORE EXTENDED POLLABLE DIF-E TO SERVICE

RESTORE STANDBY CC TO SERVICE

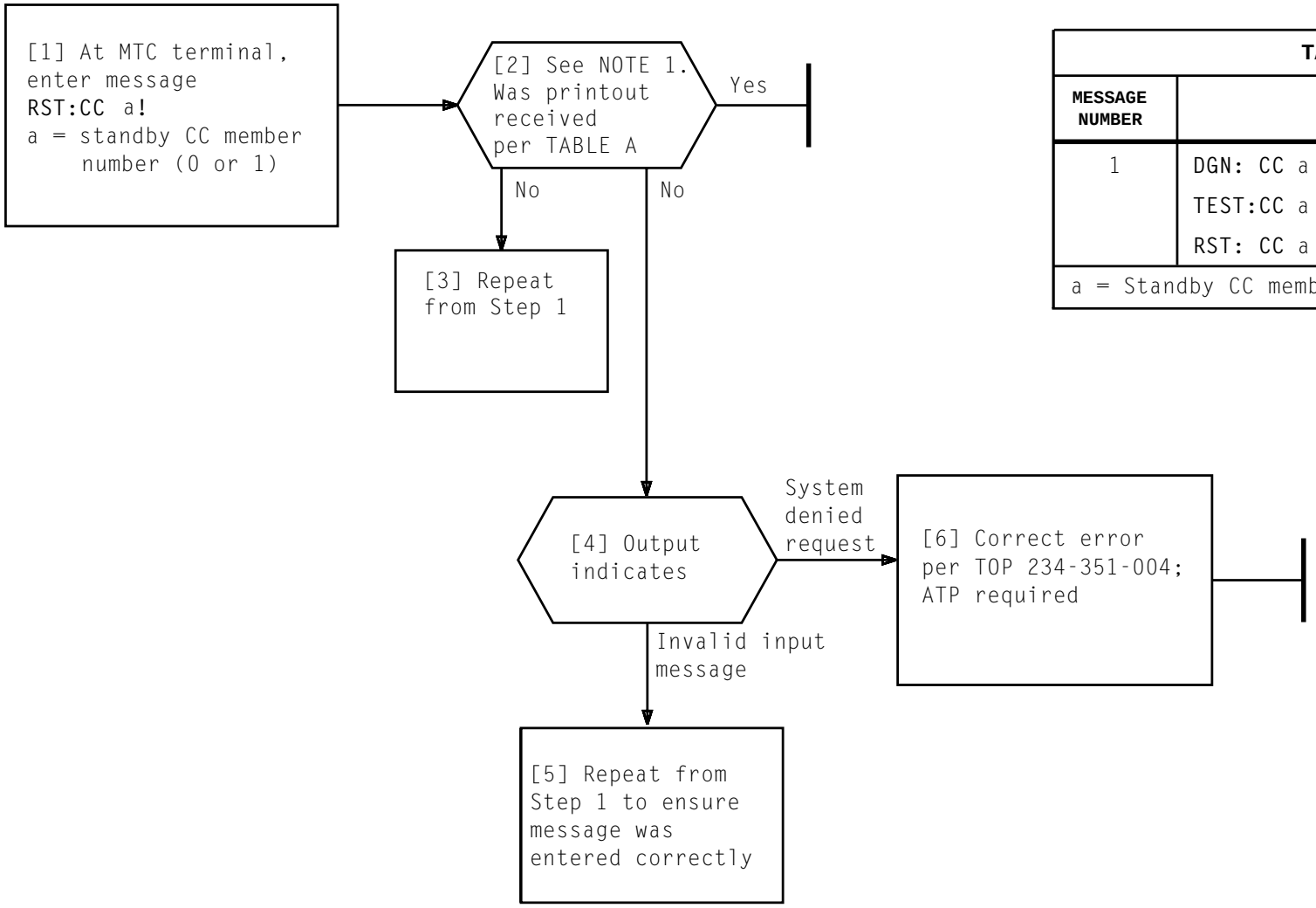
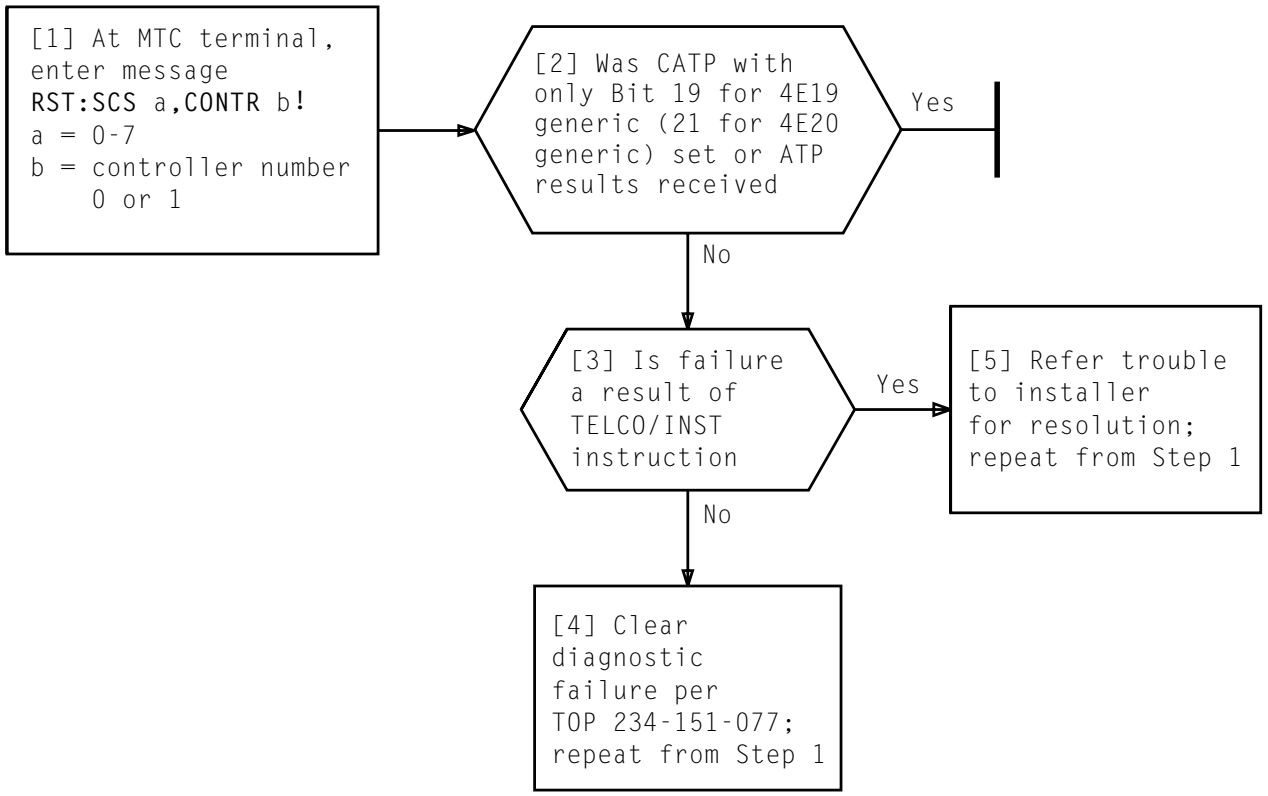


TABLE A

MESSAGE NUMBER	OUTPUT MESSAGES
1	DGN: CC a COMPLETED ATP MSG COMPL TEST:CC a DFR ATP RST: CC a COMPLETED

a = Standby CC member number (0 or 1)

NOTE 1
It will take approximately 12 minutes before printout is received



RESTORE SCS CONTROLLER TO SERVICE

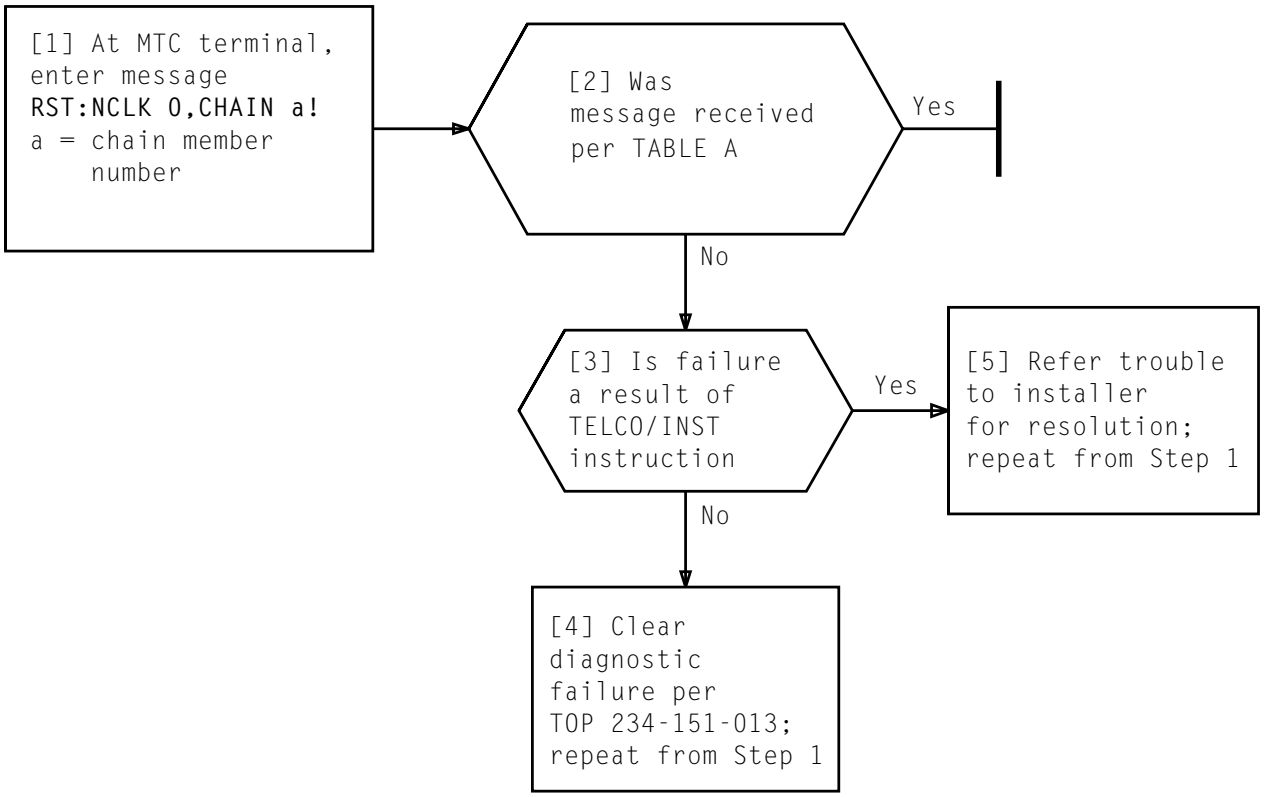
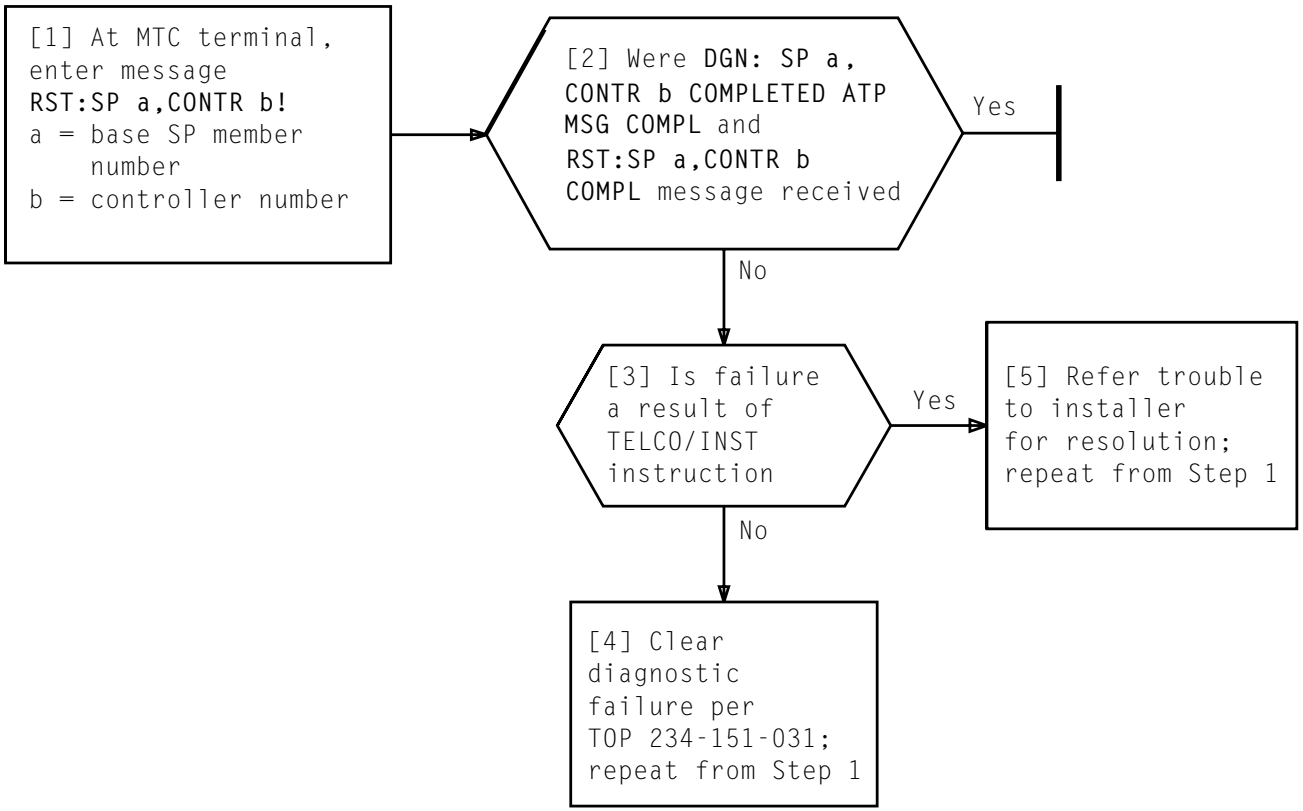


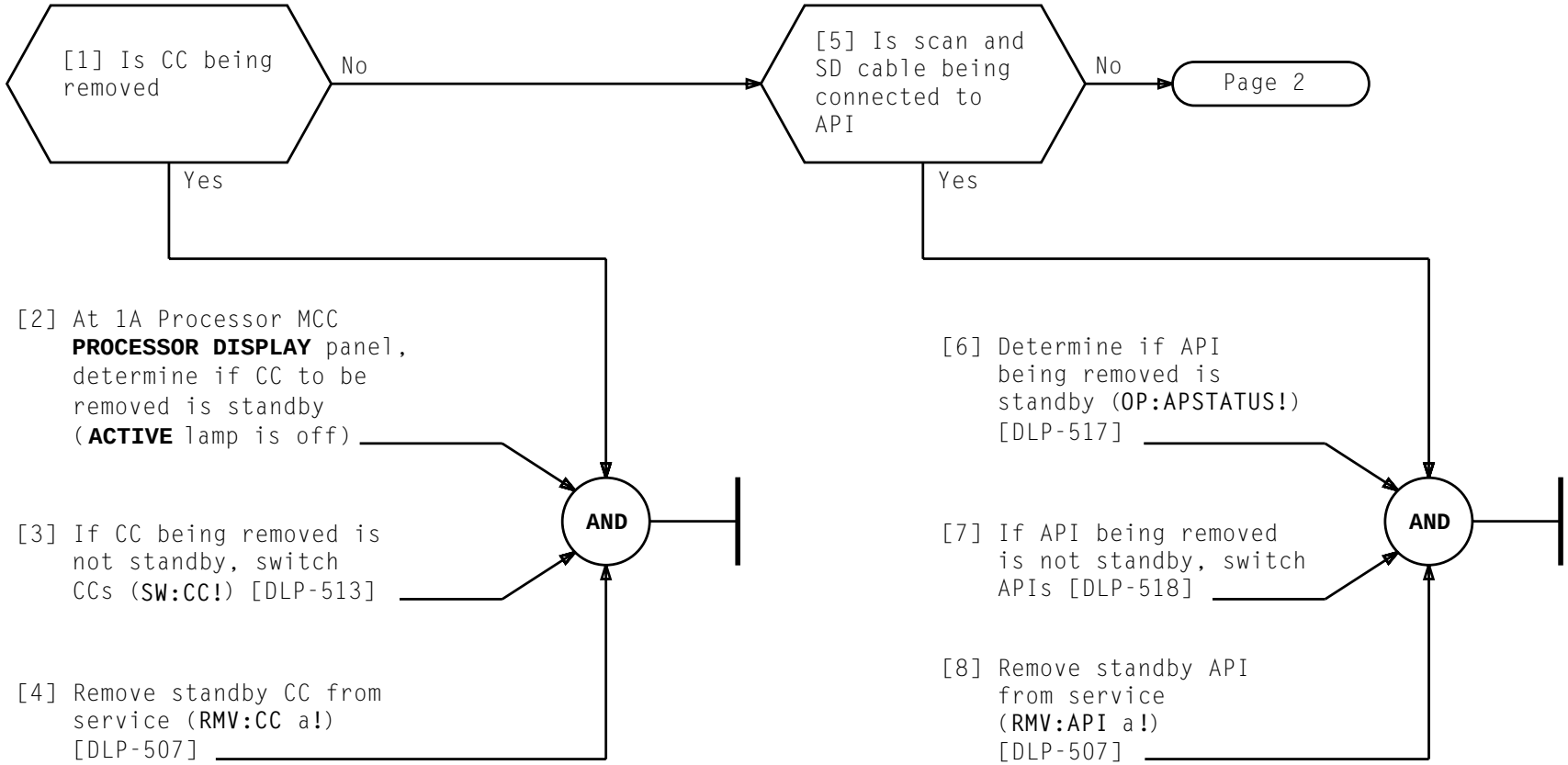
TABLE A

MESSAGE NUMBER	OUTPUT MESSAGES
1	RMV: NCLK O, CHAIN a COMPL DGN: NCLK O, CHAIN a COMPLETED ATP MSG COMPL REPT:NCLK O:OSC I/S - CHAIN a RESTORED (WITH OSC) COMPLETE RST: NCLK O, CHAIN a COMPL

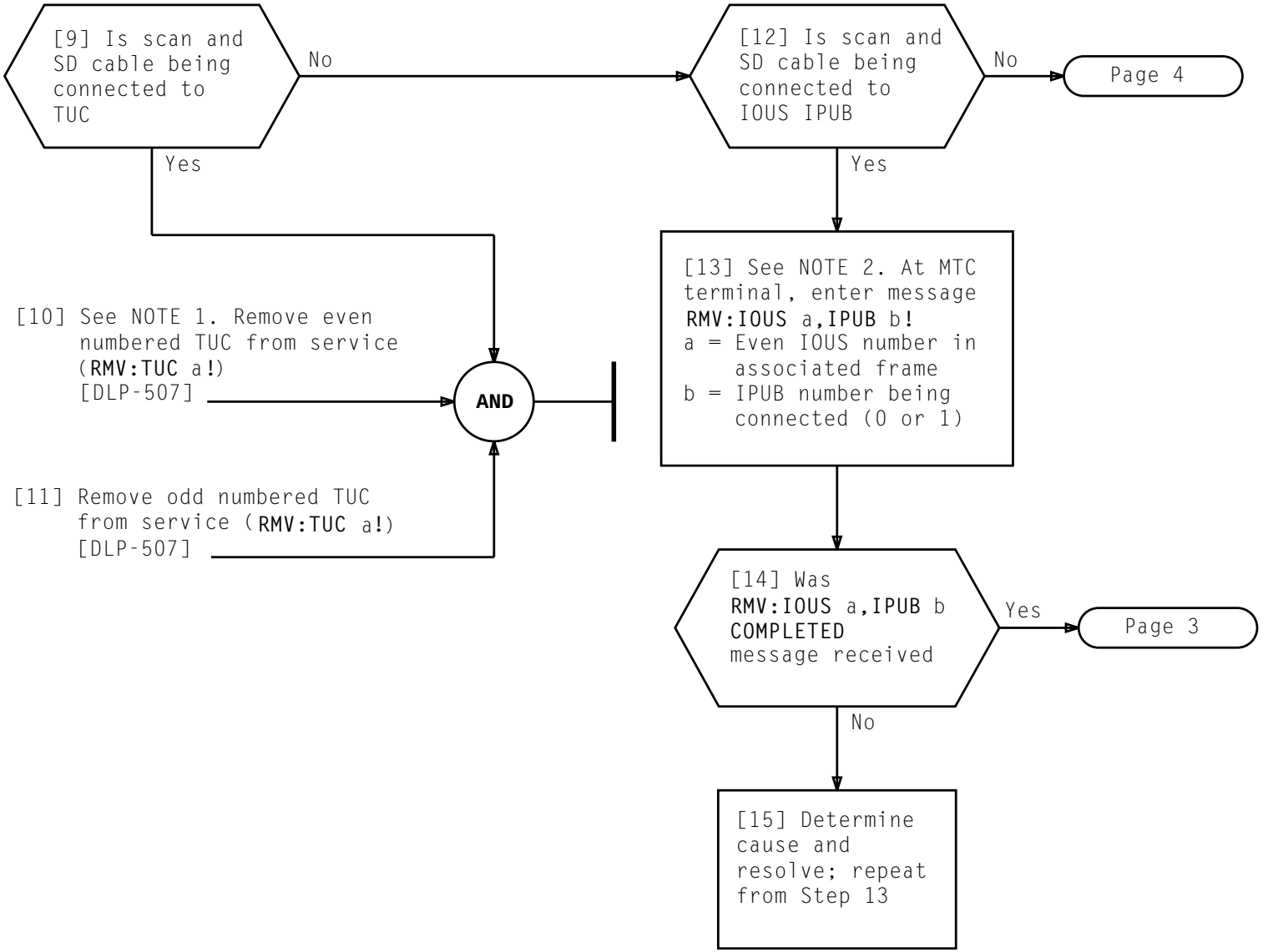
RESTORE NETWORK CLOCK CHAIN TO SERVICE



RESTORE BASE SP CONTROLLER TO SERVICE



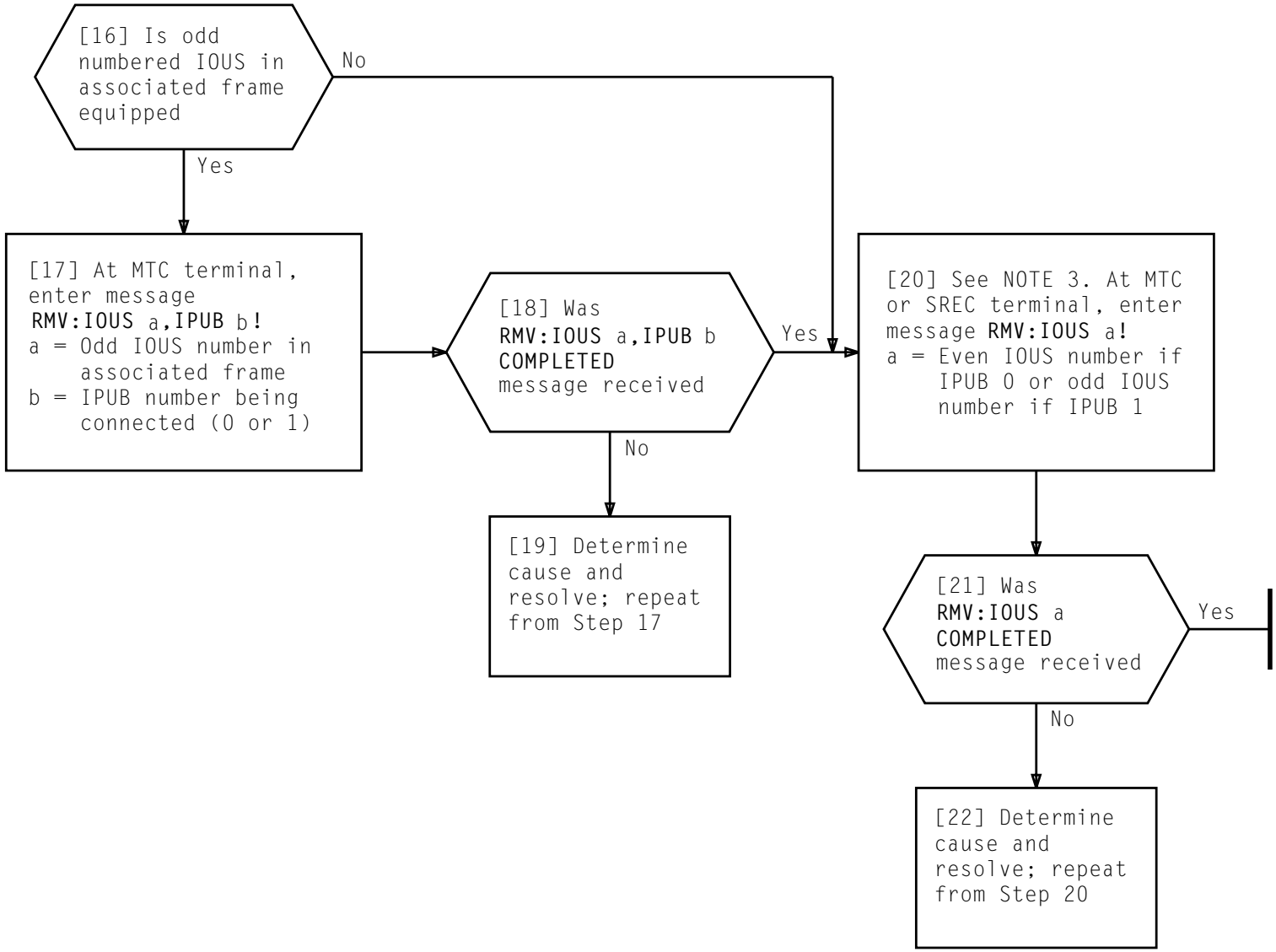
REMOVE UNIT OR FRAME FROM SERVICE



NOTES

1. One scan and SD cable is associated with one TUC pair (0 and 1, 2, and 3, etc).
2. Even and odd IOUSs in IO/IOP frame are associated with each IPUB

REMOVE UNIT OR FRAME FROM SERVICE



NOTE 3
Message must be entered from SREC terminal if removing IOUS 0 or MTC terminal if removing any other IOUS

REMOVE UNIT OR FRAME FROM SERVICE

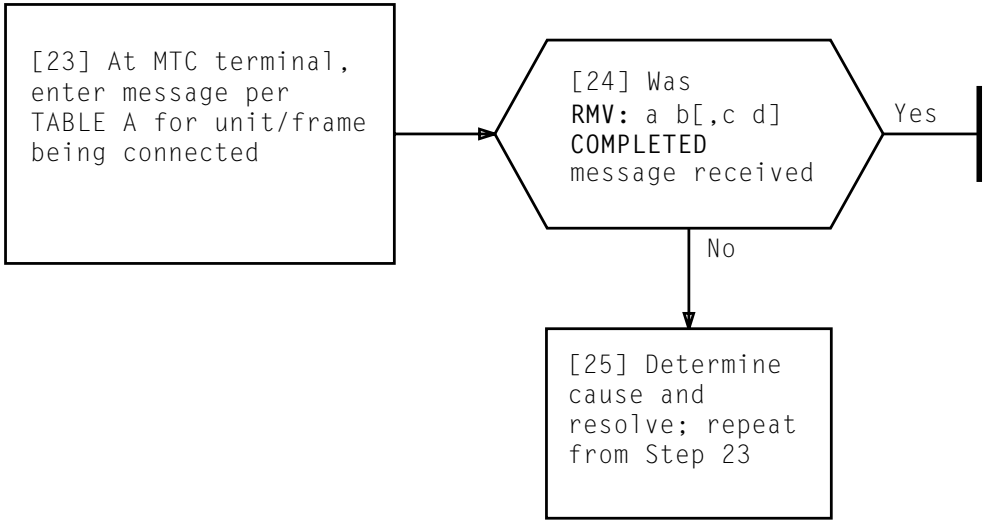
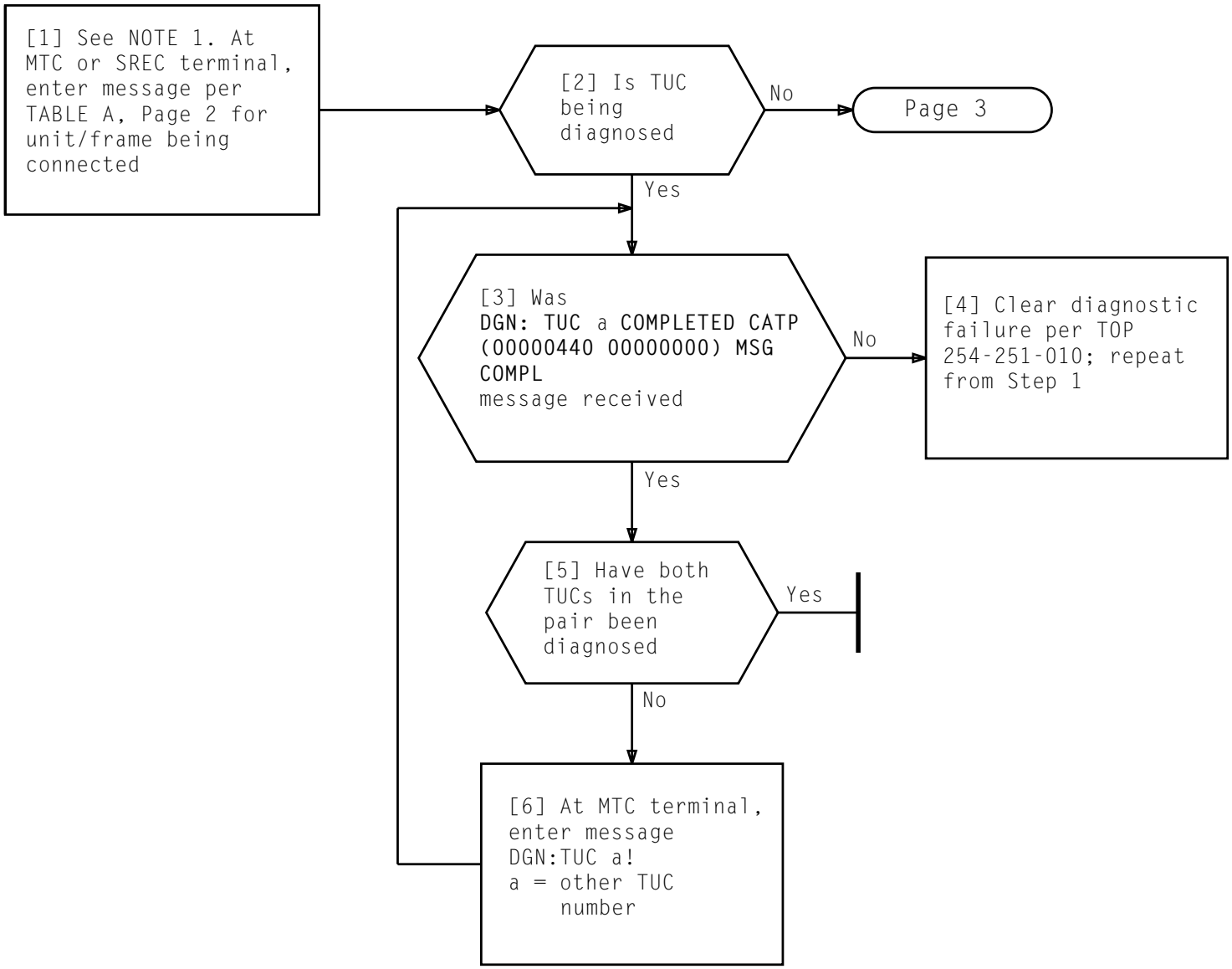


TABLE A

MESSAGE NUMBER	INPUT MESSAGES
1	RMV:PCD a,CONV b! a = PCD number (0 or 1) b = Converter number (0, 1, or 2)
2	RMV:PCD a,DAMON 0 a = PCD number (0 or 1)
3	RMV:DUS a! a = DUS number (0 or 1)

REMOVE UNIT OR FRAME FROM SERVICE



NOTE 1
If IOUS 0 is being diagnosed, SREC terminal must be used to enter message. MTC terminal should be used for all other diagnostics

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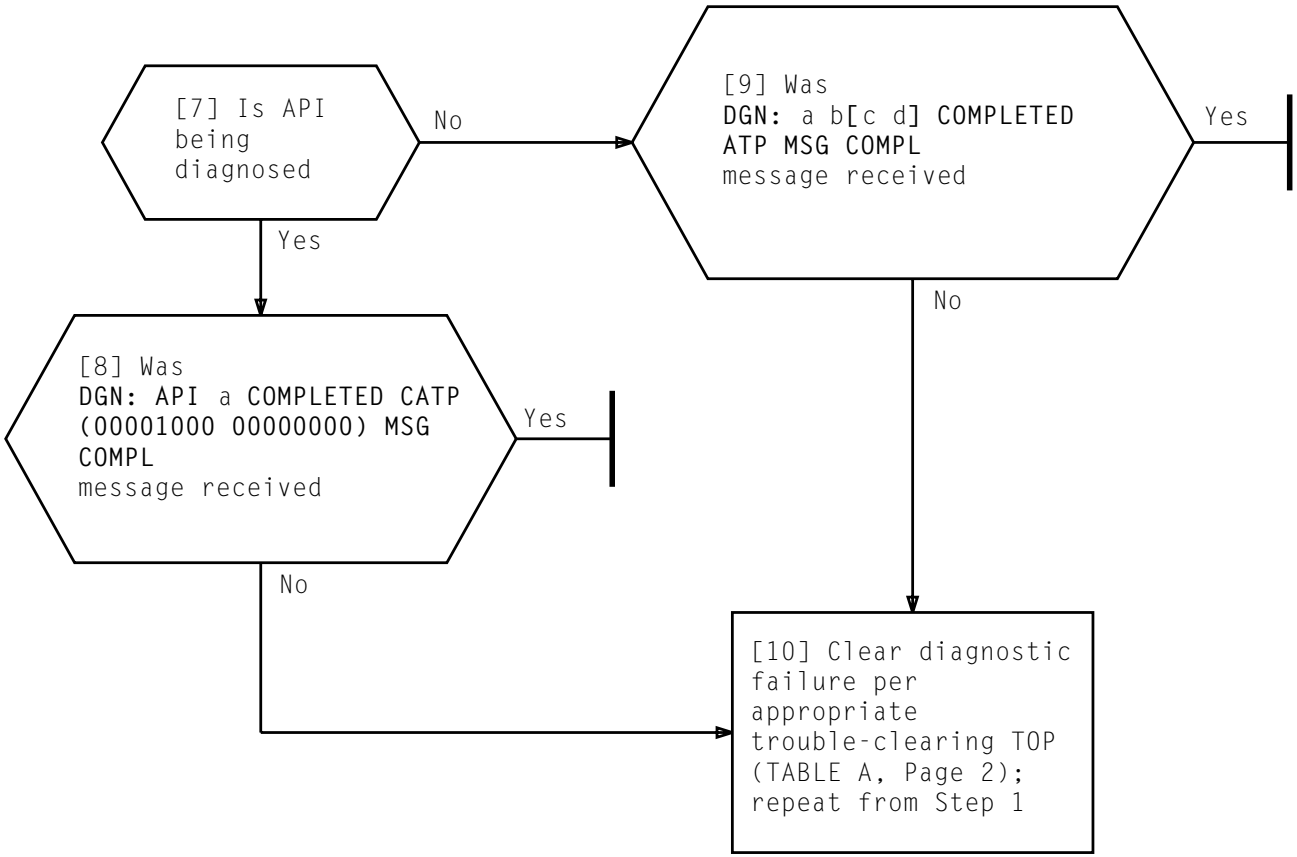
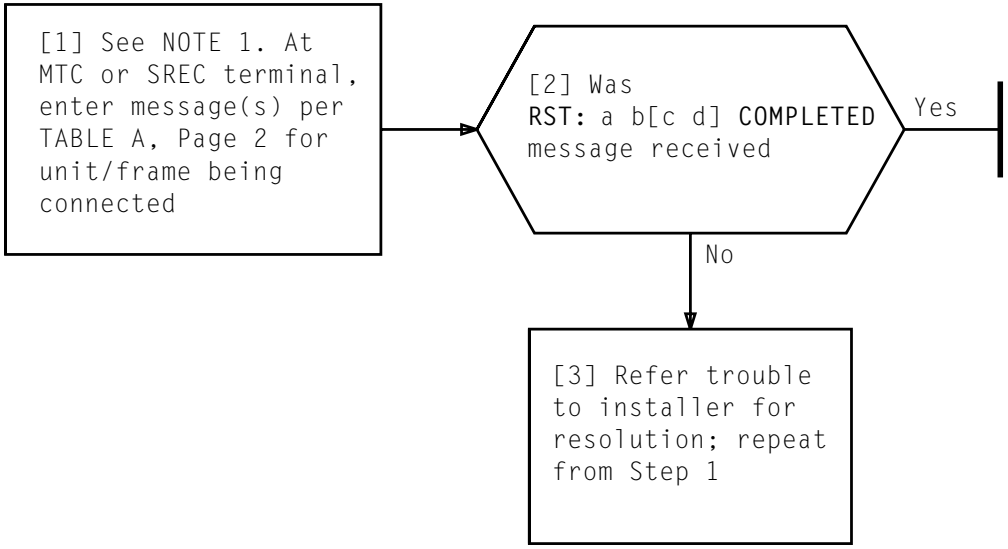
DIAGNOSE UNIT OR FRAME

TABLE A		
MESSAGE NUMBER	**INPUT MESSAGE**	**TROUBLE-CLEARING VOLUME**
1	DGN:PCD a,CONV b! a = PCD number (0 or 1) b = Converter number (0, 1, or 2)	J5A007B = 254-251-025 J5A007C = 254-251-026
2	DGN:PCD a,DAMON 0! a = PCD number (0 or 1)	
3	DGN:TUC c! c = TUC member number	254-251-010
4	DGN:DUS d! d = DUS member number (0 or 1)	
5	DGN:API e! e = API member number (0 or 1)	254-251-016
6*	DGN:IOUS f! f = IOUS number	J5A006A = 254-251-020 J5A006C = 254-251-021 J5A006D = 254-251-022
* IPUBs are not diagnosed		



DIAGNOSE UNIT OR FRAME



NOTE 1
When restoring IOUS 0, RST messages must be entered from SREC terminal

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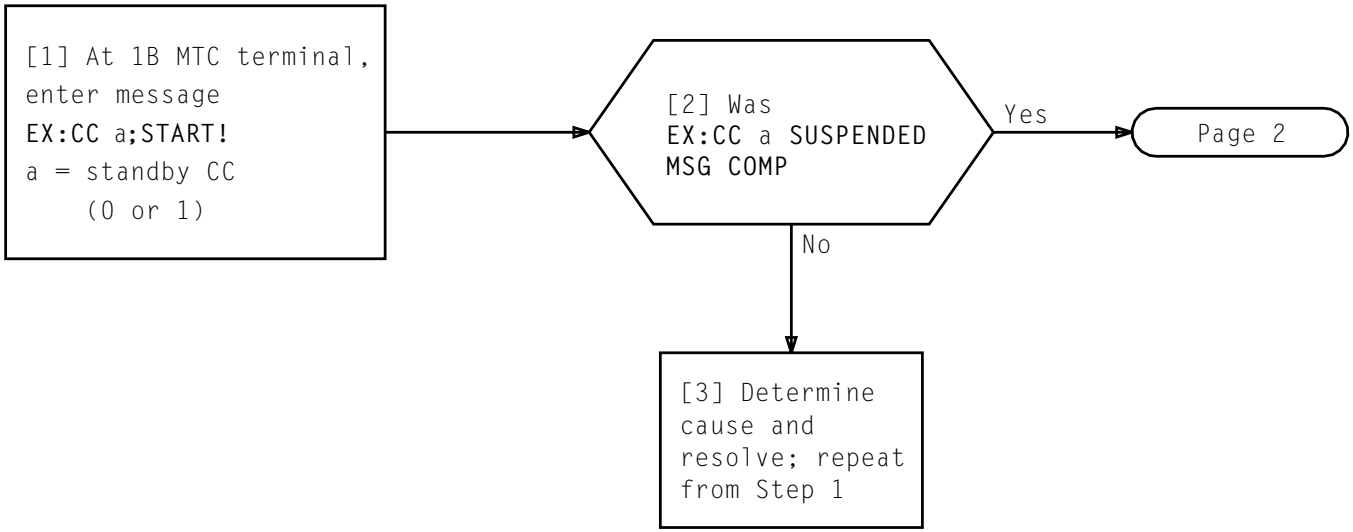
RESTORE UNIT OR FRAME TO SERVICE

TABLE A		
MESSAGE NUMBER	**INPUT MESSAGE**	**TROUBLE-CLEARING VOLUME**
1	RST:PCD a,CONV b! a = PCD number (0 or 1) b = Converter number (0, 1, or 2)	J5A007B = 254-251-025 J5A007C = 254-251-026
2	RST:PCD a,DAMON 0! a = PCD number (0 or 1)	
3	RST:TUC c! c = TUC member number	254-251-010
4	RST:DUS d! d = DUS member number (0 or 1)	
5	RST:API e! e = API member number (0 or 1)	254-251-016
6	RST:IOUS f,IPUB g! RST:IOUS h,IPUB g! f = Even IOUS number (0 or 1) g = IPUB number (0 or 1) h = Odd IOUS number (if equipped) RST:IOUS f!	J5A006A = 254-251-020 J5A006C = 254-251-021 J5A006D = 254-251-022
7	RST:CC i!	254-251-001



TEST SOFTWARE MINOR ALARM

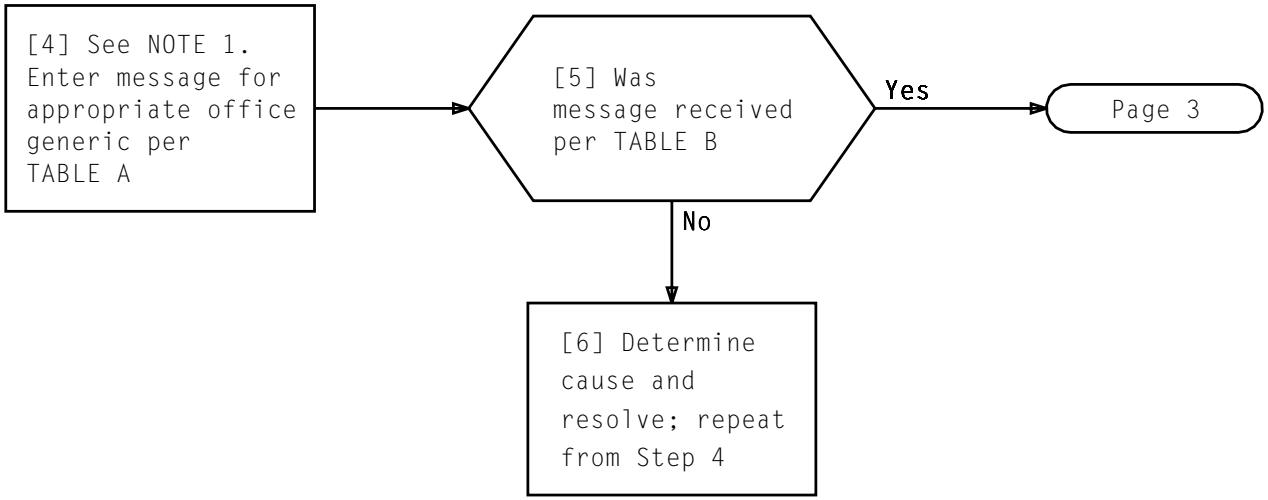


TABLE A

MESSAGE NUMBER	INPUT MESSAGE
1	EX:CC a:PH 81,PAUSE b!

a = standby CC (0 or 1)
b = pause address -
3616 (for 4E19/4E20R1 generic) or
3654 (for 4E20R2 generic)

TABLE B

MESSAGE NUMBER	OUTPUT MESSAGE
1	EX: CC a SUSPENDED AT PH 81 ADR b AFTER TEST 160 (PAUSE) MSG COMPL

NOTE 1

After message is entered, minor, major, and critical alarms will be temporarily activated

TEST SOFTWARE MINOR ALARM

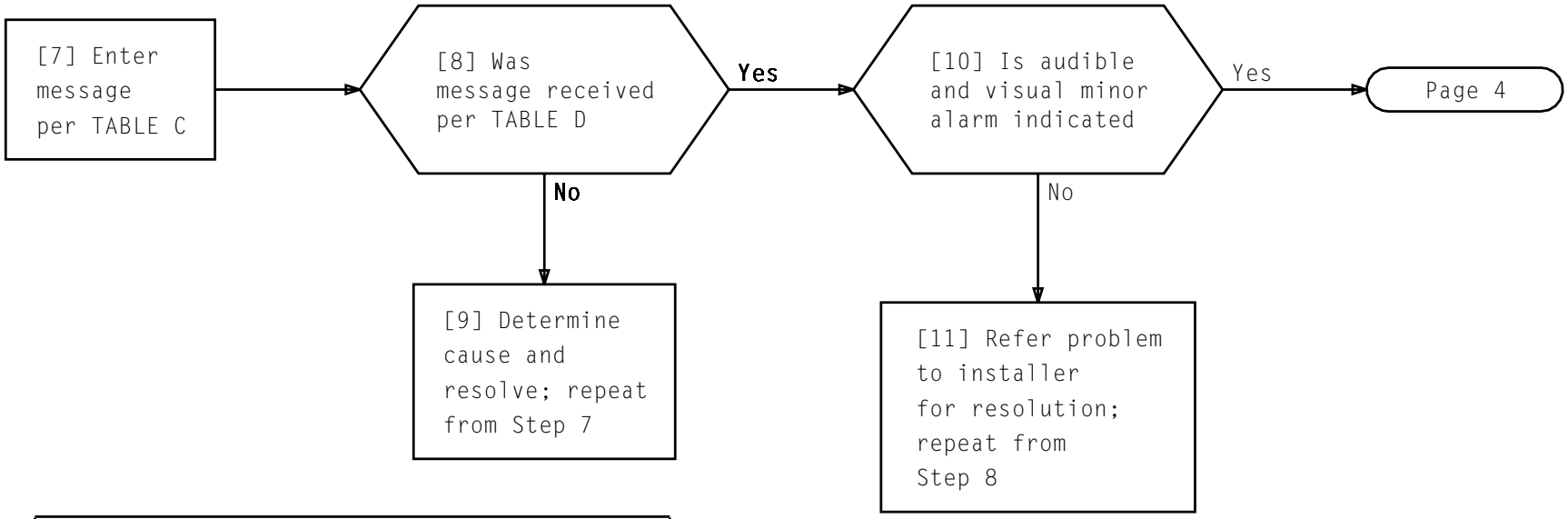


TABLE C	
MESSAGE NUMBER	**INPUT MESSAGE**
1	EX:CC a;STEP!
a = standby CC (0 or 1)	

TABLE D	
MESSAGE NUMBER	**OUTPUT MESSAGE**
1	EX: CC a SUSPENDED AT PH 81 ADR nnnn AFTER TEST 160 (STEP) MSG COMPL

TEST SOFTWARE MINOR ALARM

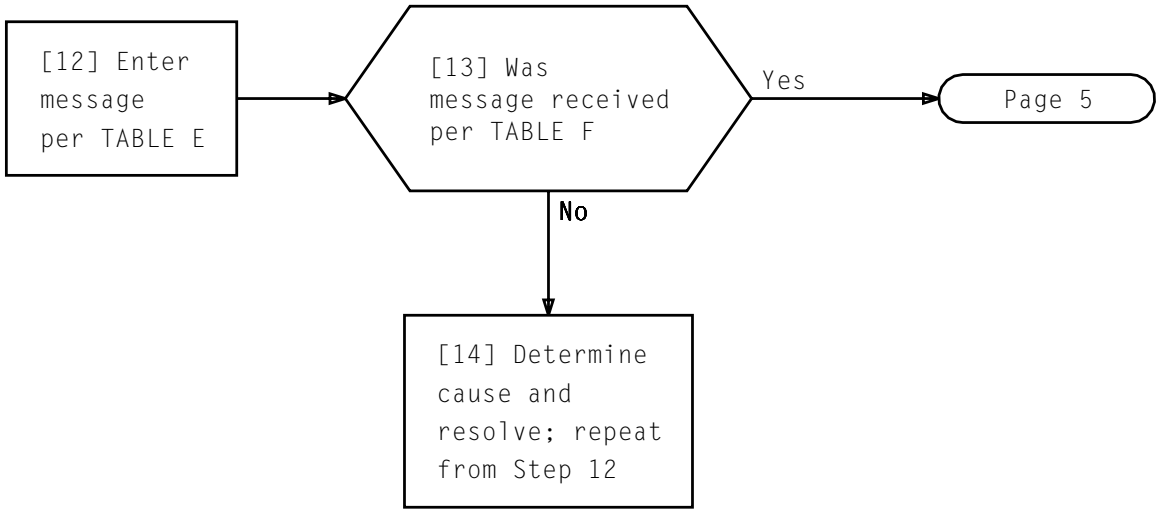


TABLE E

MESSAGE NUMBER	INPUT MESSAGE
1	EX:CC a;STEP!

a = standby CC (0 or 1)

TABLE F

MESSAGE NUMBER	OUTPUT MESSAGE
1	EX: CC a SUSPENDED AT PH 81 ADR nnnn AFTER TEST 162 (STEP) MSG COMPL

TEST SOFTWARE MINOR ALARM

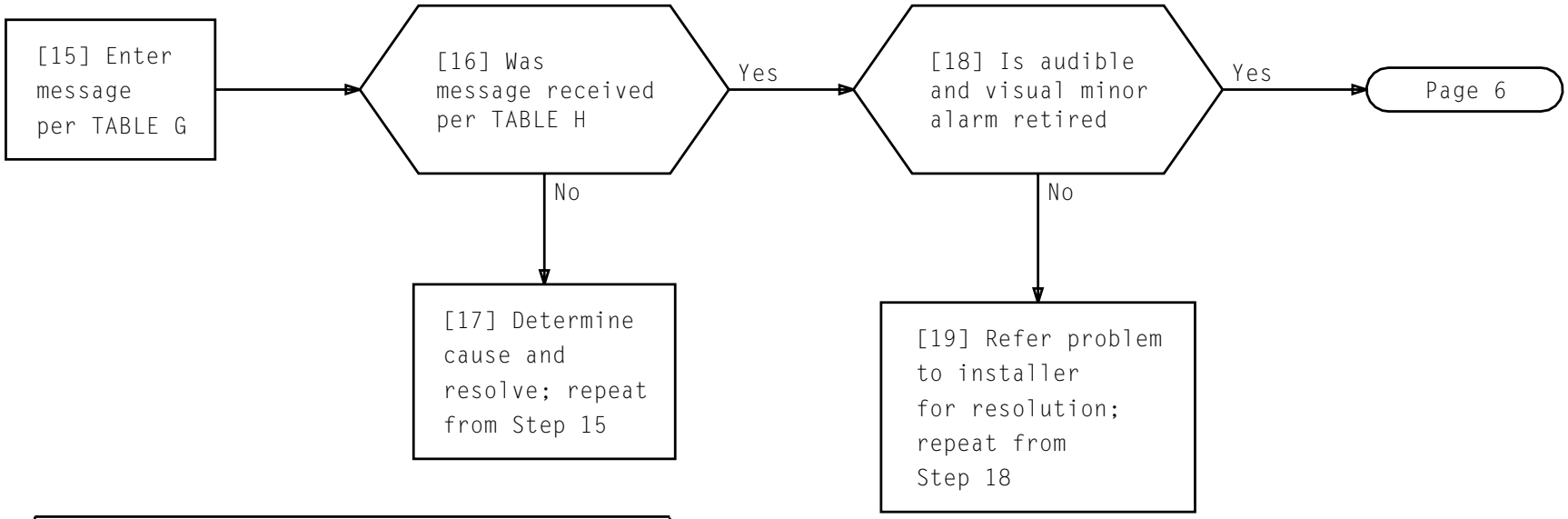


TABLE G	
MESSAGE NUMBER	**INPUT MESSAGE**
1	EX:CC a;STEP!
a = standby CC (0 or 1)	

TABLE H	
MESSAGE NUMBER	**OUTPUT MESSAGE**
1	EX: CC a SUSPENDED AT PH 81 ADR nnnn AFTER TEST 162 (STEP) MSG COMPL

TEST SOFTWARE MINOR ALARM

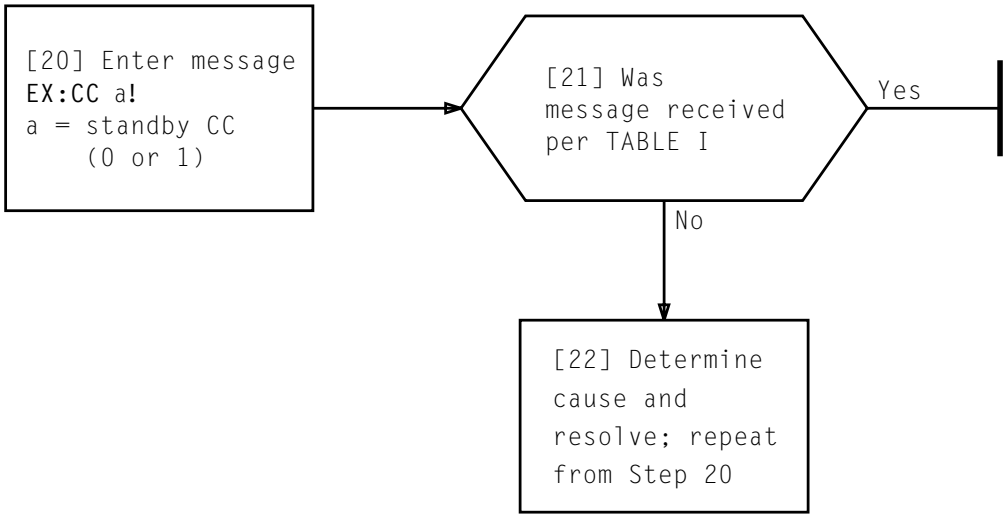
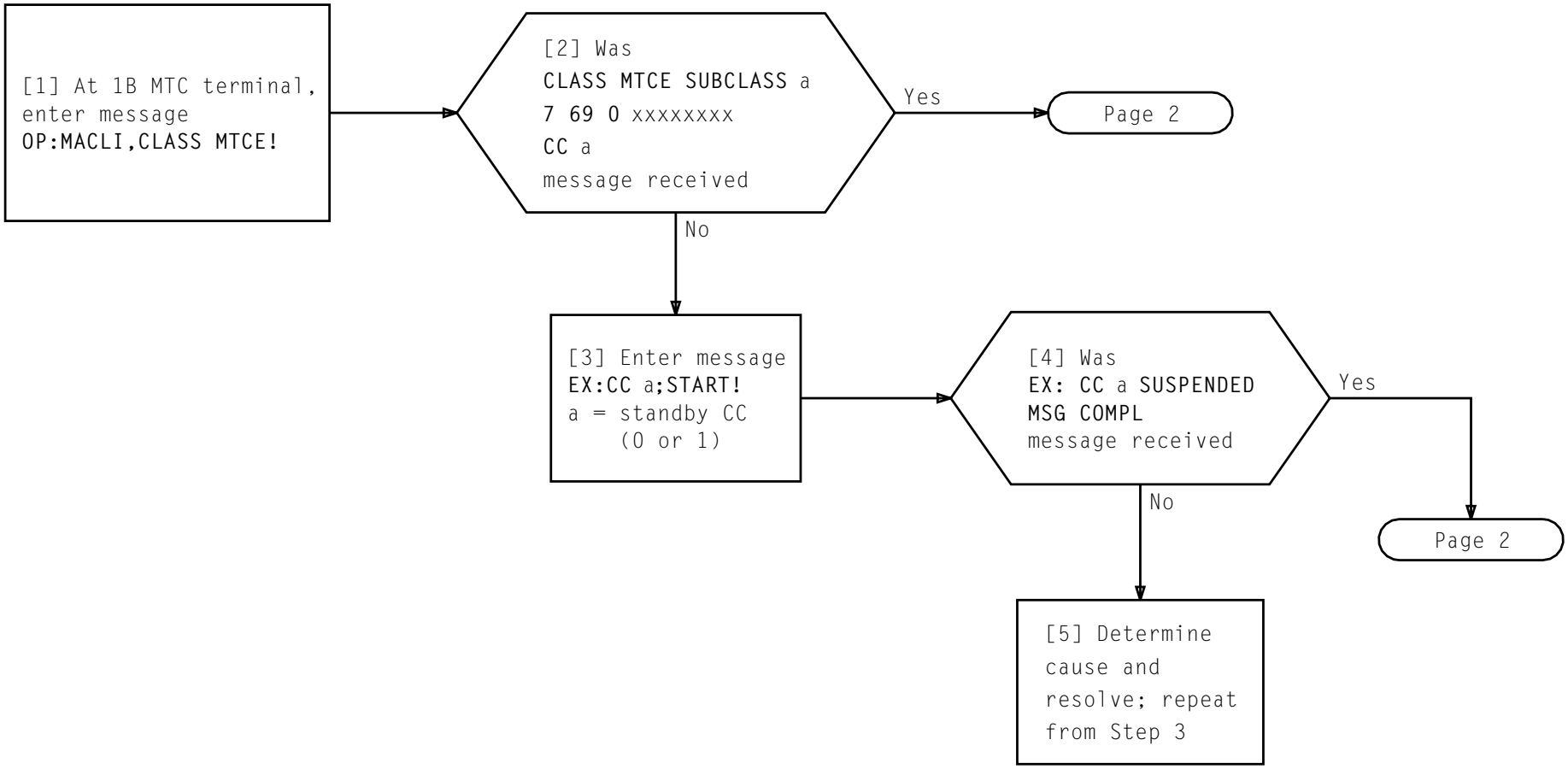


TABLE I

MESSAGE NUMBER	OUTPUT MESSAGE
1	EX: CC a PH 81 ATP MSG STARTED EX: CC a SUSPENDED MSG COMPL

TEST SOFTWARE MINOR ALARM



TEST SOFTWARE MAJOR ALARM

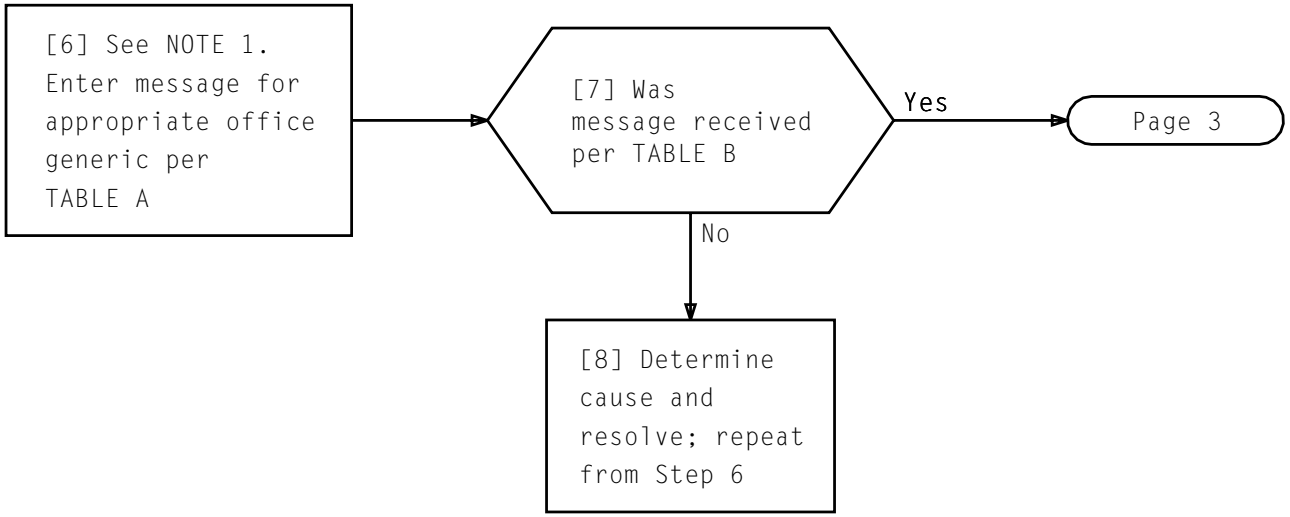


TABLE A

MESSAGE NUMBER	INPUT MESSAGE
1	EX:CC a:PH 81,PAUSE b!

a = standby CC (0 or 1)
b = pause address -
3747 (for 4E19/4E20R1 generic) or
4005 (for 4E20R2 generic)

TABLE B

MESSAGE NUMBER	OUTPUT MESSAGE
1	EX: CC a SUSPENDED AT PH 81 ADR b AFTER TEST 168 (PAUSE) MSG COMPL

NOTE 1

After message is entered, minor, major, and critical alarms will be temporarily activated

TEST SOFTWARE MAJOR ALARM

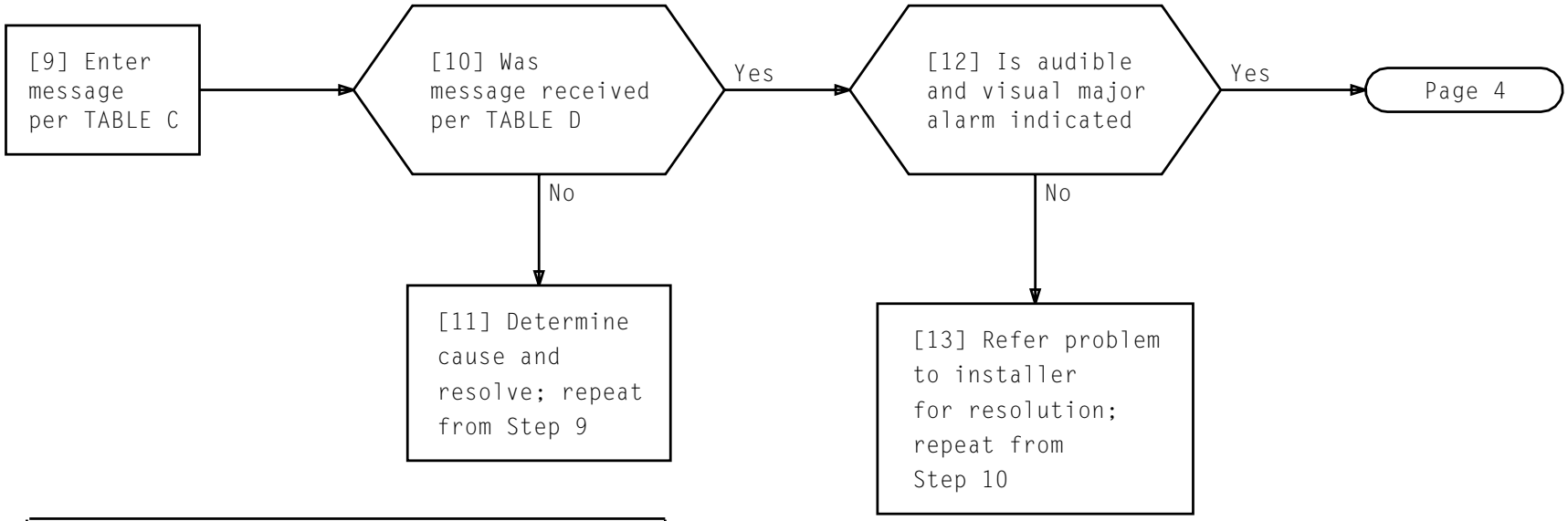


TABLE C

MESSAGE NUMBER	INPUT MESSAGE
1	EX:CC a;STEP!

a = standby CC (0 or 1)

TABLE D

MESSAGE NUMBER	OUTPUT MESSAGE
1	EX: CC a SUSPENDED AT PH 81 ADR nnnn AFTER TEST 168 (STEP) MSG COMPL

TEST SOFTWARE MAJOR ALARM

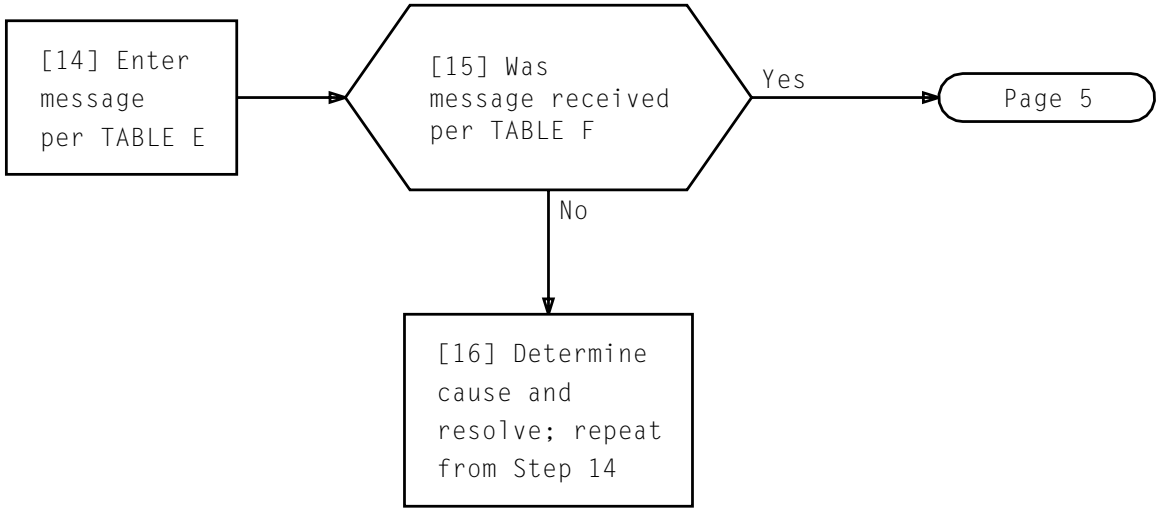


TABLE E	
MESSAGE NUMBER	**INPUT MESSAGE**
1	EX:CC a;STEP!
a = standby CC (0 or 1)	

TABLE F	
MESSAGE NUMBER	**OUTPUT MESSAGE**
1	EX: CC a SUSPENDED AT PH 81 ADR nnnn AFTER TEST 170 (STEP) MSG COMPL

TEST SOFTWARE MAJOR ALARM

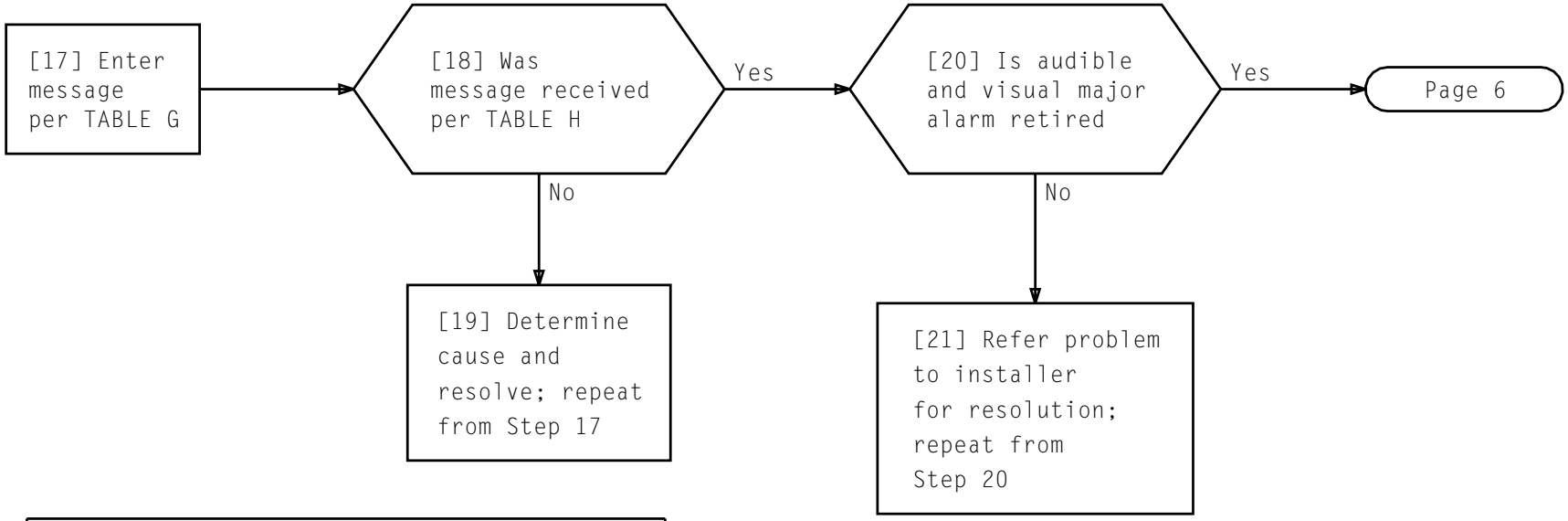


TABLE G

MESSAGE NUMBER	INPUT MESSAGE
1	EX:CC a;STEP!

a = standby CC (0 or 1)

TABLE H

MESSAGE NUMBER	OUTPUT MESSAGE
1	EX: CC a SUSPENDED AT PH 81 ADR nnnn AFTER TEST 170 (STEP) MSG COMPL

TEST SOFTWARE MAJOR ALARM

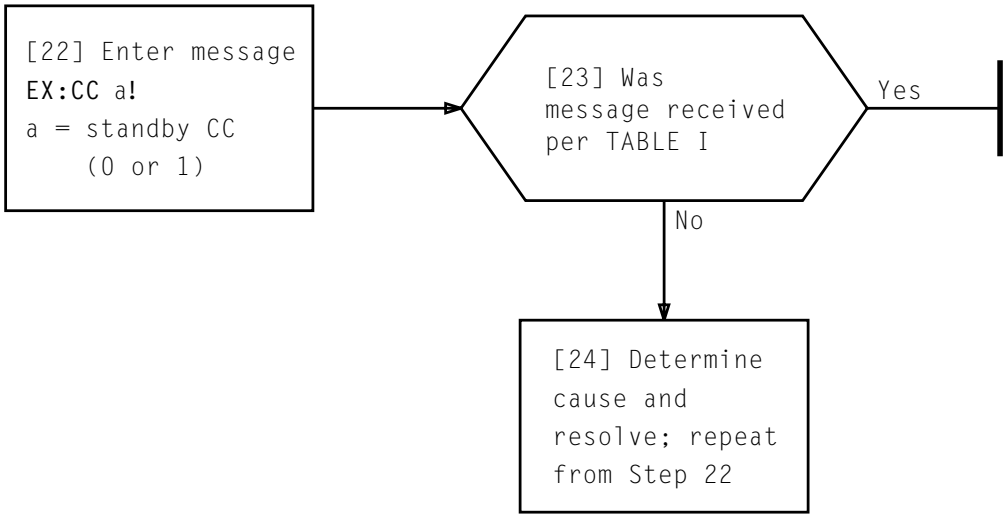
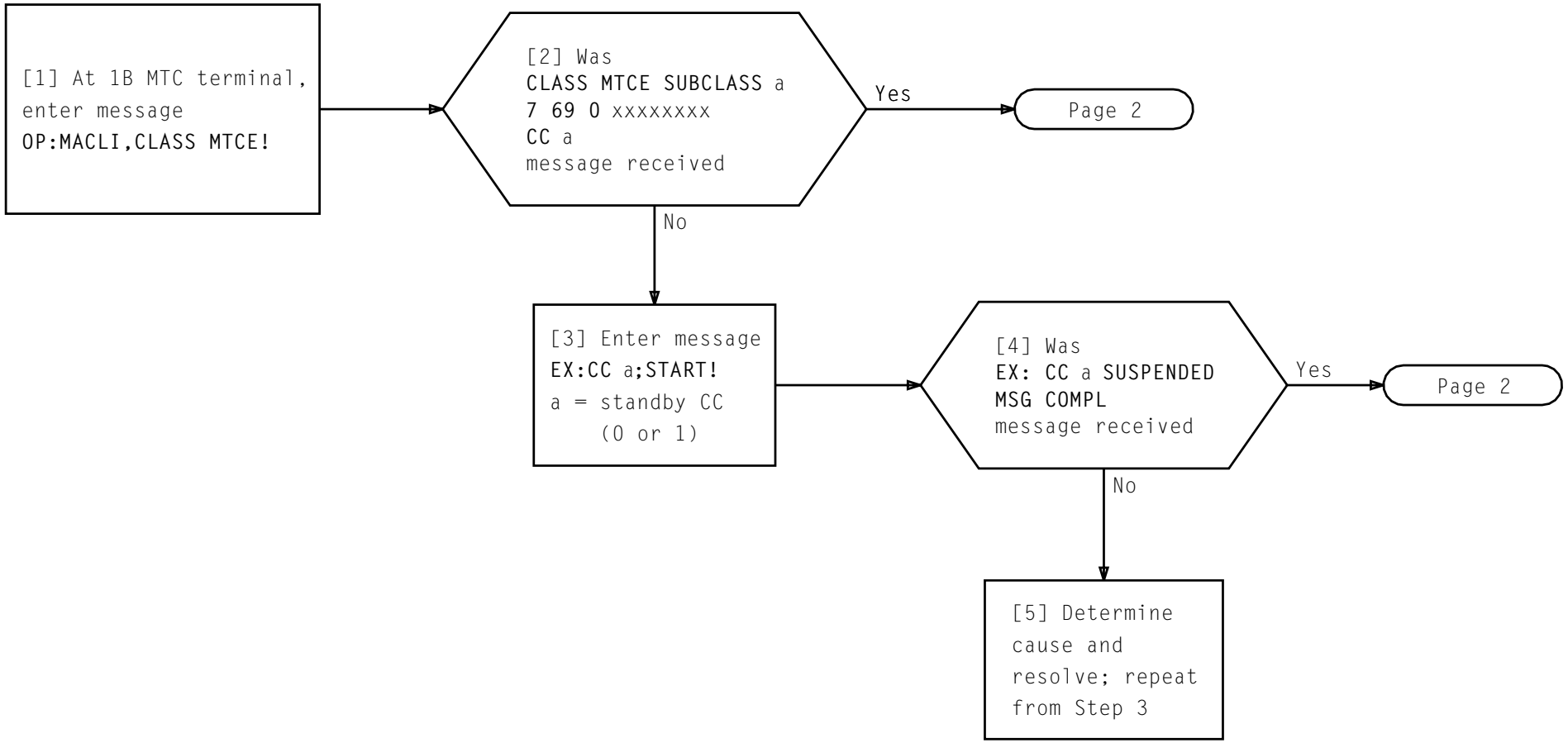


TABLE E

MESSAGE NUMBER	OUTPUT MESSAGE
1	EX: CC a PH 81 ATP MSG STARTED EX: CC a SUSPENDED MSG COMPL



TEST SOFTWARE CRITICAL ALARM

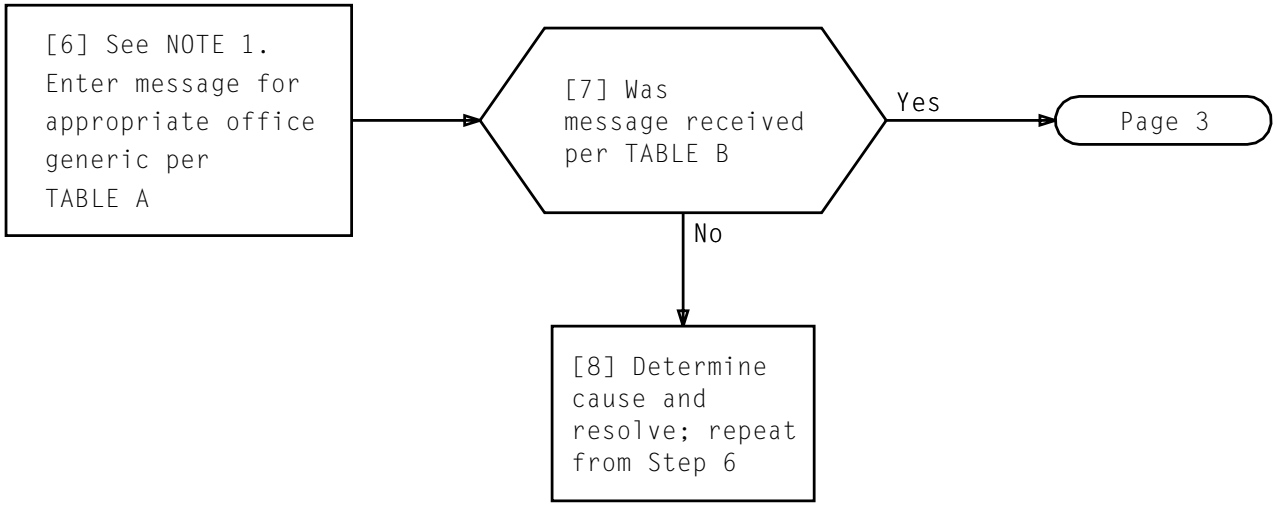


TABLE A

MESSAGE NUMBER	INPUT MESSAGE
1	EX:CC a:PH 81,PAUSE b!

a = standby CC (0 or 1)
b = pause address -
4025 (for 4E19/4E20R1 generic) or
4063 (for 4E20R2 generic)

TABLE B

MESSAGE NUMBER	OUTPUT MESSAGE
1	EX: CC a SUSPENDED AT PH 81 ADR b AFTER TEST 172 (PAUSE) MSG COMPL

NOTE 1

After message is entered, minor, major, and critical alarms will be temporarily activated

TEST SOFTWARE CRITICAL ALARM

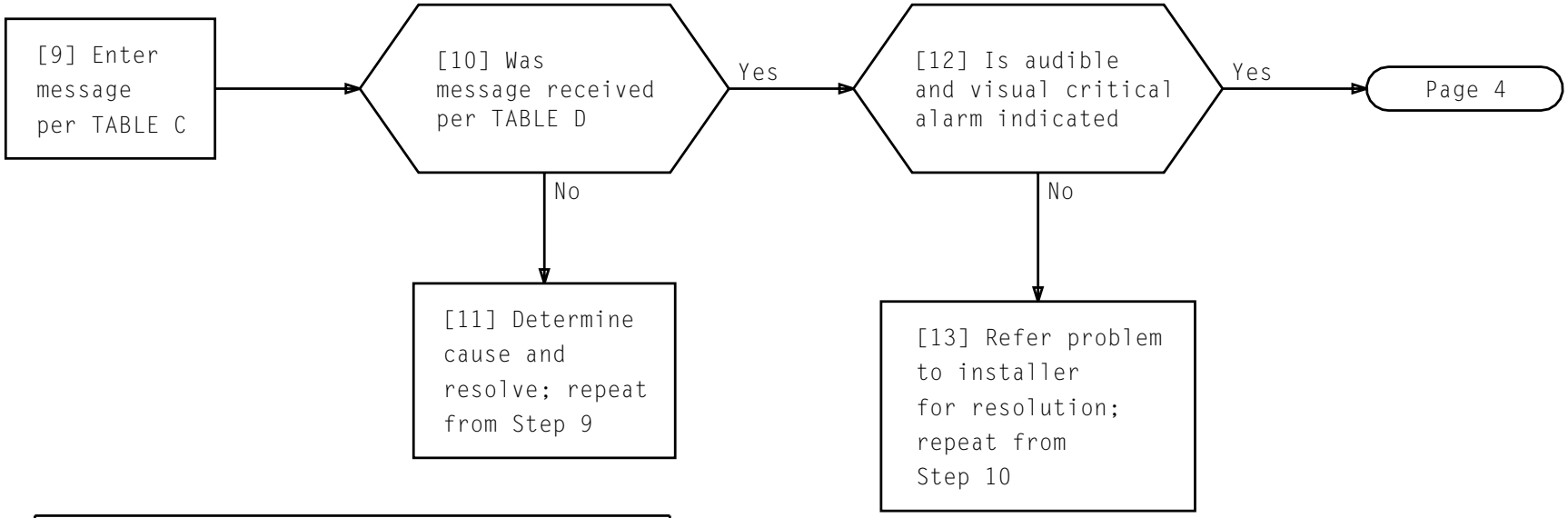


TABLE C

MESSAGE NUMBER	INPUT MESSAGE
1	EX:CC a;STEP!

a = standby CC (0 or 1)

TABLE D

MESSAGE NUMBER	OUTPUT MESSAGE
1	EX: CC a SUSPENDED AT PH 81 ADR nnnn AFTER TEST 172 (STEP) MSG COMPL

TEST SOFTWARE CRITICAL ALARM

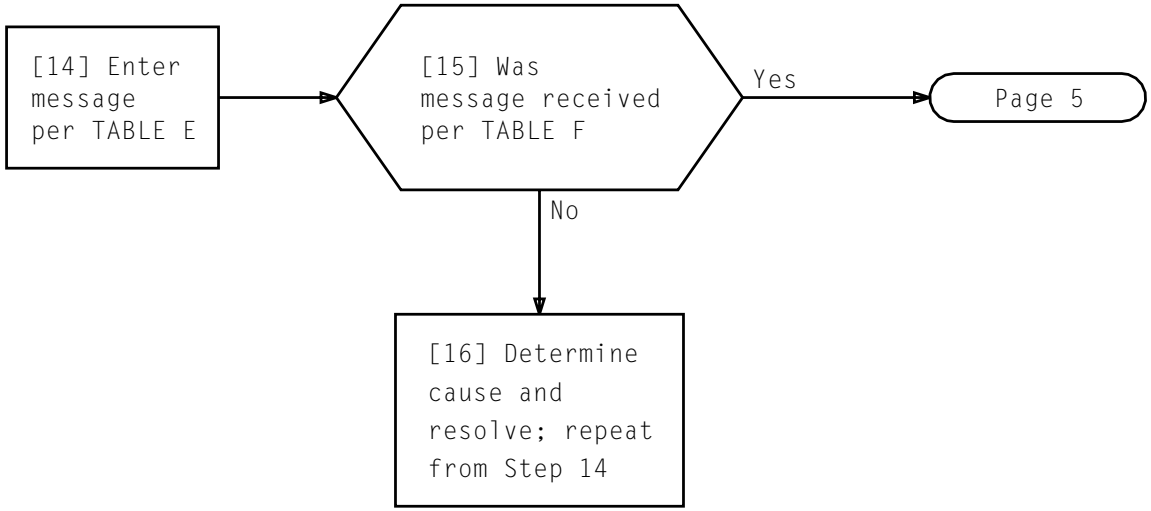


TABLE E	
MESSAGE NUMBER	**INPUT MESSAGE**
1	EX:CC a;STEP!
a = standby CC (0 or 1)	

TABLE F	
MESSAGE NUMBER	**OUTPUT MESSAGE**
1	EX: CC a SUSPENDED AT PH 81 ADR nnnn AFTER TEST 174 (STEP) MSG COMPL

TEST SOFTWARE CRITICAL ALARM

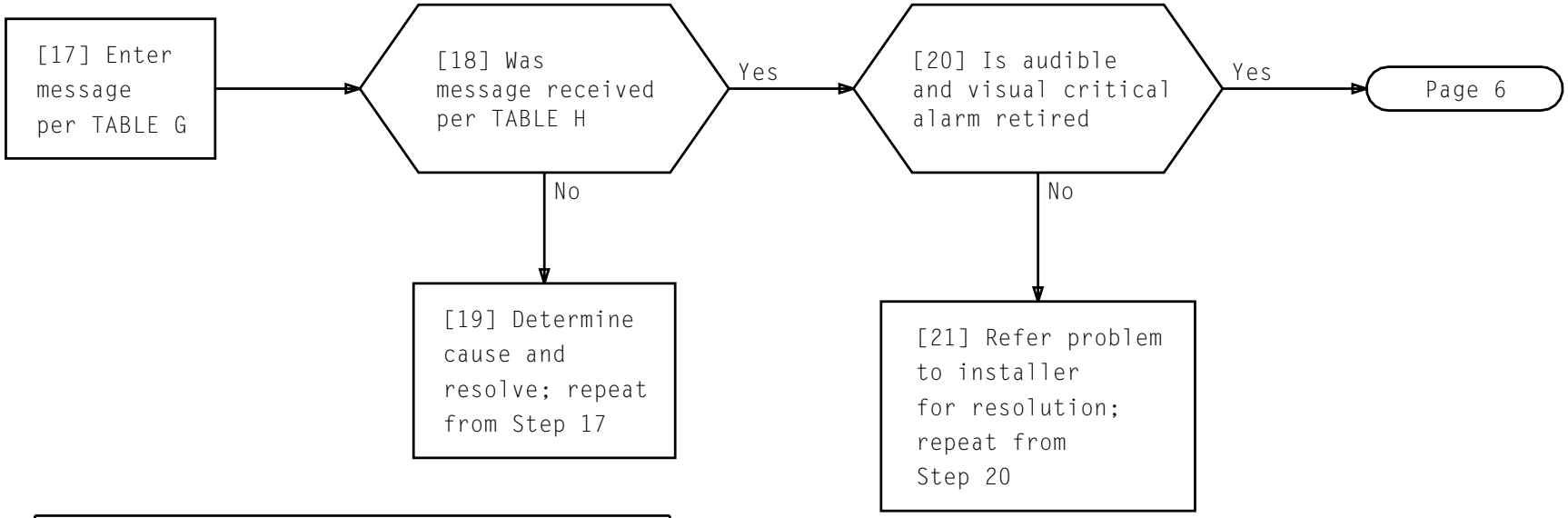


TABLE G	
MESSAGE NUMBER	**INPUT MESSAGE**
1	EX:CC a;STEP!
a = standby CC (0 or 1)	

TABLE H	
MESSAGE NUMBER	**OUTPUT MESSAGE**
1	EX: CC a SUSPENDED AT PH 81 ADR nnnn AFTER TEST 174 (STEP) MSG COMPL

TEST SOFTWARE CRITICAL ALARM

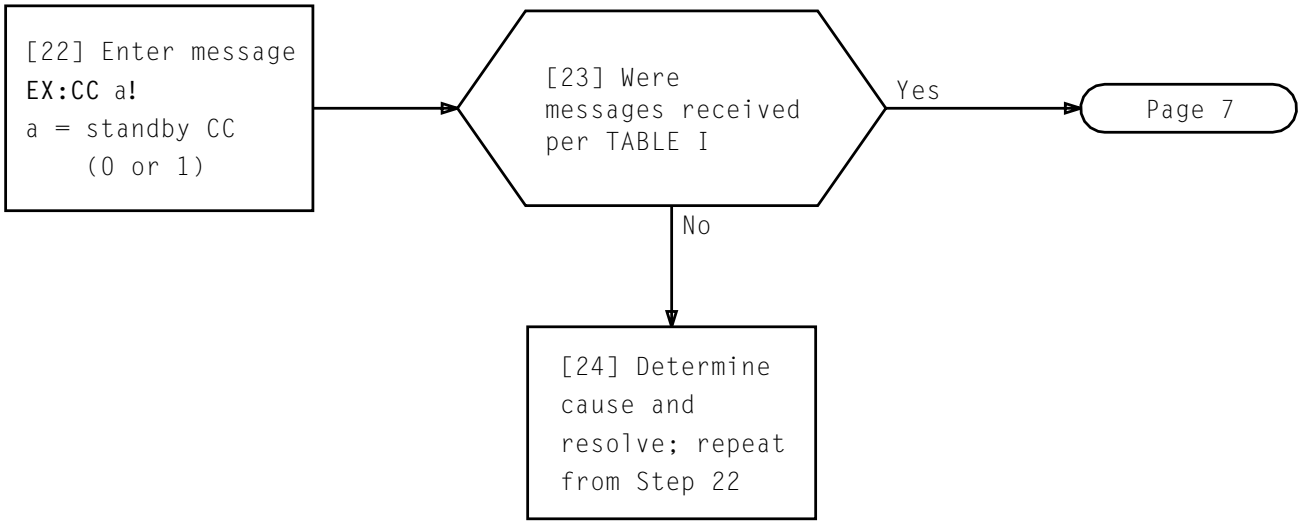


TABLE I

MESSAGE NUMBER	OUTPUT MESSAGES
1	EX: CC a PH 81 ATP MSG STARTED EX: CC a SUSPENDED MSG COMPL

[25] Enter message
OP:MACLI,CLASS MTCE!

[26] Using printout, determine SUBCLASS number assigned to CC

[27] Enter message
STOP:MACLI,CLASS MTCE,SUBCLASS a!
a = SUBCLASS number determined in Step 26

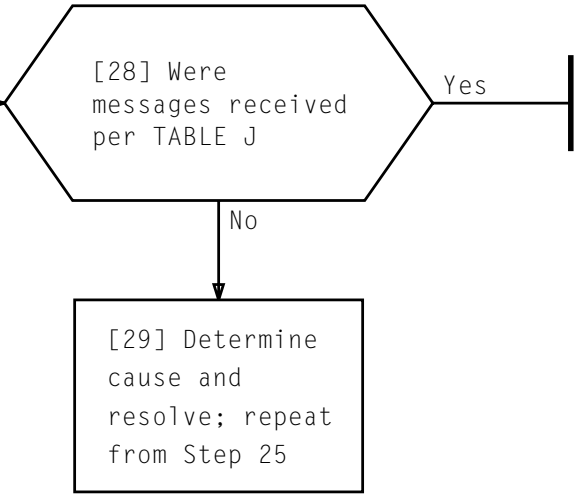
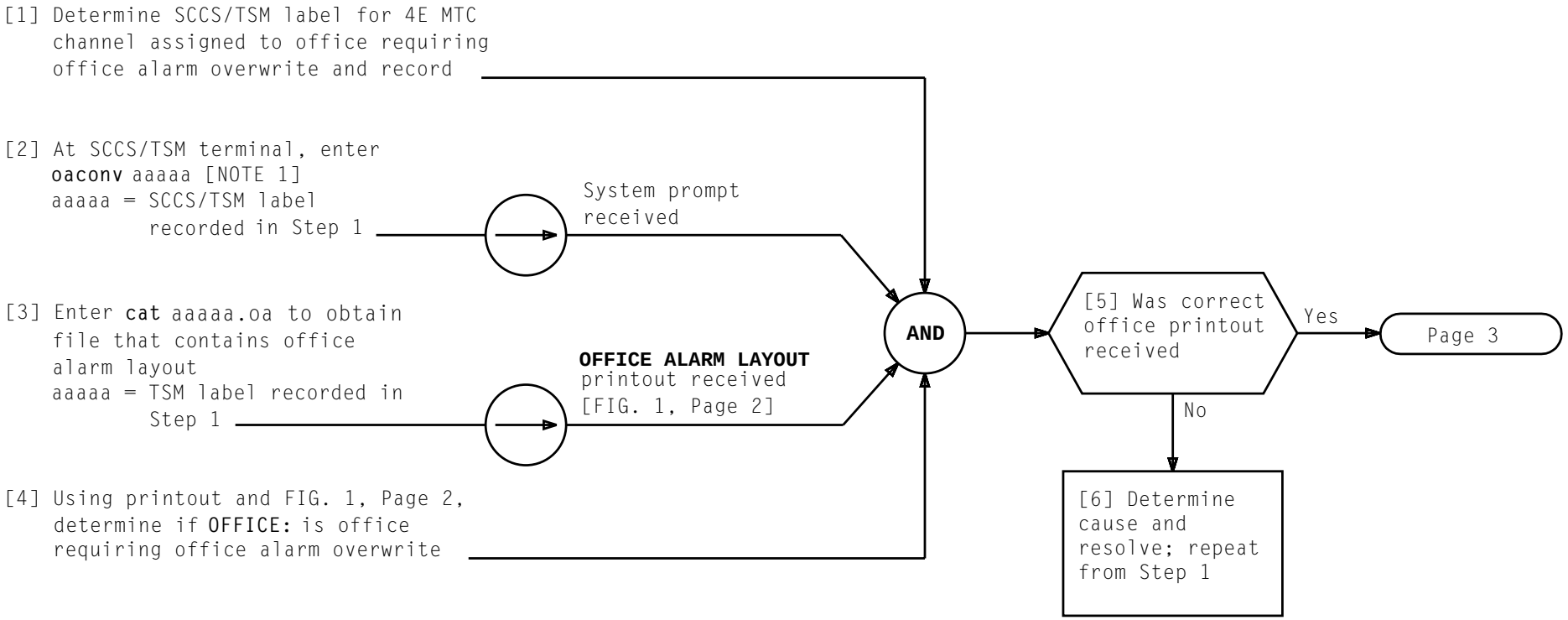


TABLE J

MESSAGE NUMBER	OUTPUT MESSAGES
1	EX: CC a ABORTED MSG STARTED EX: CC a ABORTED ATP MSG COMPL RST: CC a ABORTED

TEST SOFTWARE CRITICAL ALARM



UNEQUIP OFFICE ALARM ASSIGNED TO CONVERSION SWITCH UNITS (PERFORMED BY TCC)

NOTE 1

Message will execute and create file that contains office alarm layout for office requiring overwrite

OFFICE ALARM LAYOUT

Name of office requiring overwrite

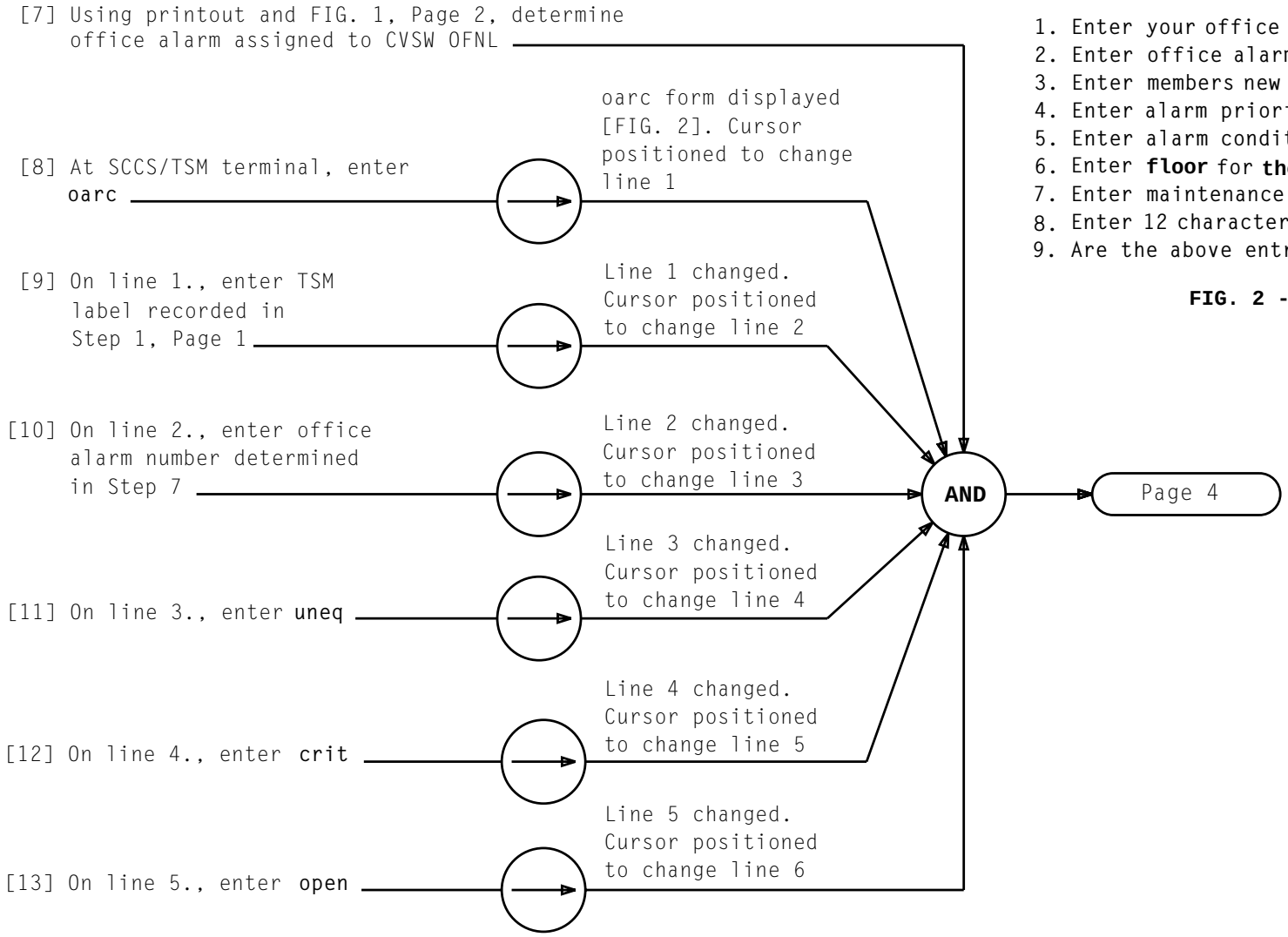
OFFICE: PLANILLL01T Jan 24,1994

ALARM	#	EQUIP	MSN	STATE	CTR	PRIORITY	FLR	ENGLISH
OA	0:	OPER	0103113	CLOS	MOC	CRIT	0	GROUND FAULT
OA	1:	OPER	0003114	CLOS	MOC	CRIT	0	REC PWR OFF
OA	2:	OPER	0103114	CLOS	MOC	CRIT	0	AC PWR FAIL
OA	3:	OPER	0003714	CLOS	MOC	CRIT	0	TR SHUTDOWN
OA	4:	OPER	0104002	CLOS	MOC	MAJR	0	MV SHUTDOWN
.								
.								
OA	96:	OPER	0104300	CLOS	MOC	INFO	1	SPARE OA 096
OA	97:	OPER	0004414	CLOS	MOC	INFO	1	SPARE OA 097
OA	98:	OPER	0104301	CLOS	MOC	INFO	1	SPARE OA 098
OA	99:	OPER	0004415	OPEN	MOC	CRIT	0	CVSW OFNL
OA	100:	OPER	0104302	CLOS	MOC	CMIN	0	PD 0@
OA	101:	OPER	0004500	CLOS	MOC	MAJR	0	PD 0@
.								
.								

Office alarm 99 assigned to CVSW OFNL

FIG. 1 - Sample Office Alarm Layout Printout

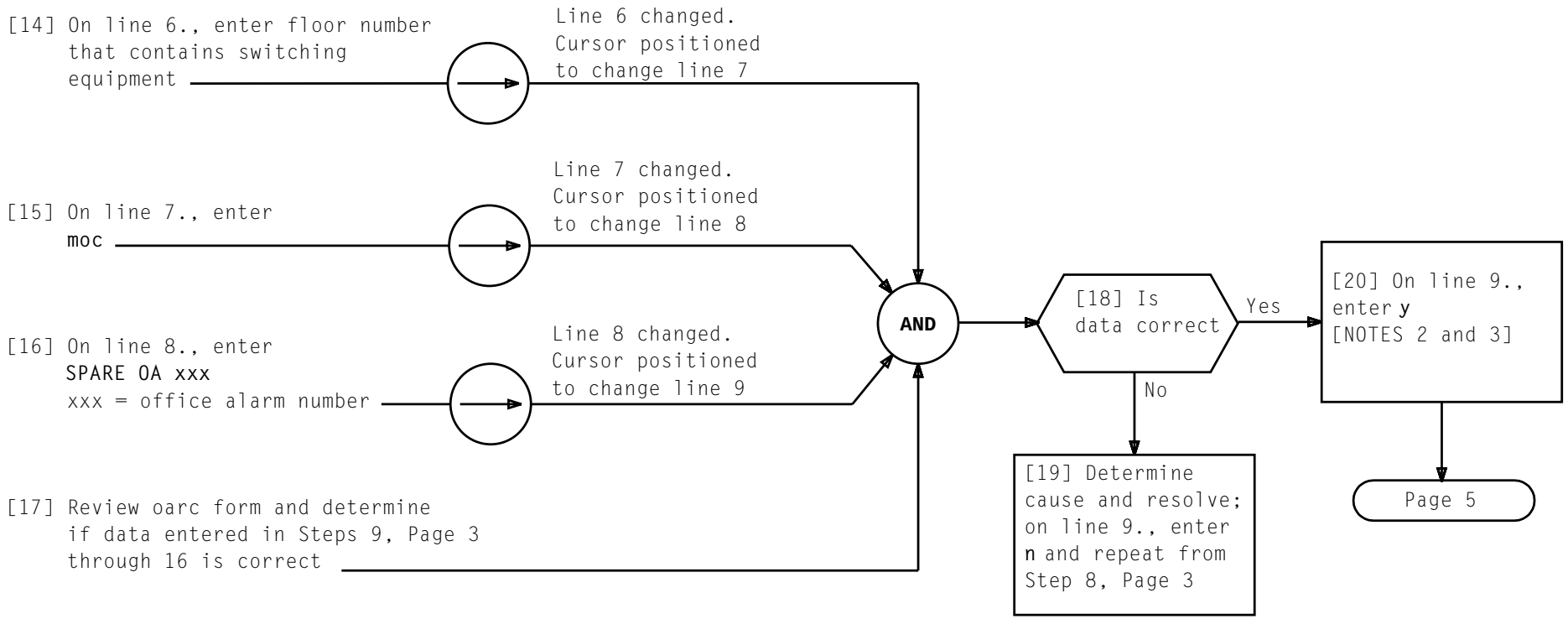
UNEQUIP OFFICE ALARM ASSIGNED TO CONVERSION SWITCH UNITS (PERFORMED BY TCC)



1. Enter your office name (TSM label).
2. Enter office alarm member number (0-127).
3. Enter members new equipage (uneq, grow, sgro, oper).
4. Enter alarm priority **(crit,** majr, cmin, smin, info).
5. Enter alarm condition of contacts (open/closed).
6. Enter **floor** for **the** source of alarm (1-1023).
7. Enter maintenance **center** (moc, toc, tec1 to tec5).
8. Enter 12 character **alarm** message.
9. Are the above entries correct (y,n)?

FIG. 2 - Sample oarc Form

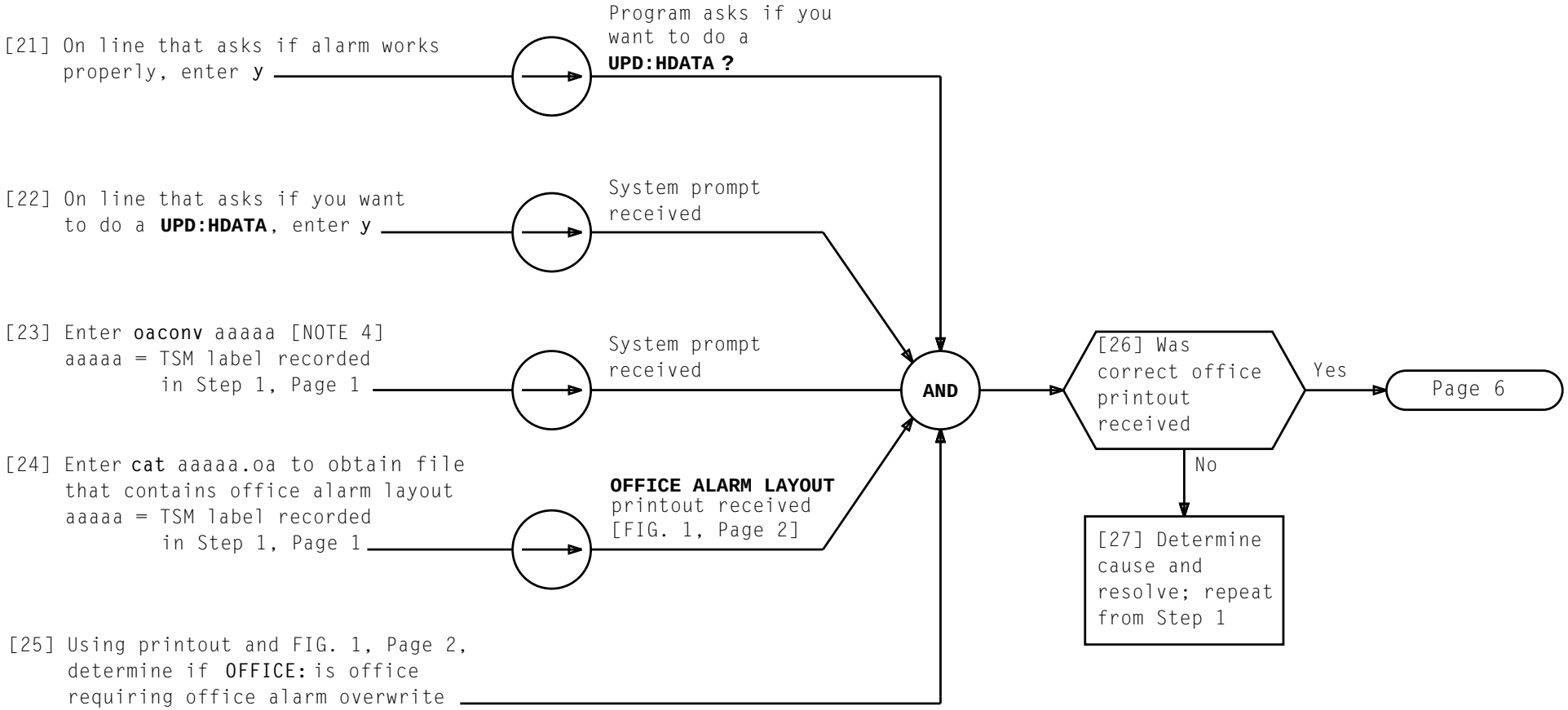
UNEQUIP OFFICE ALARM ASSIGNED TO CONVERSION SWITCH UNITS (PERFORMED BY TCC)



NOTES

2. Program will convert entered data into overwrite format and input to office identified in Step 1, Page 1
3. Program will ask if alarm works properly; answer must not be entered at this time

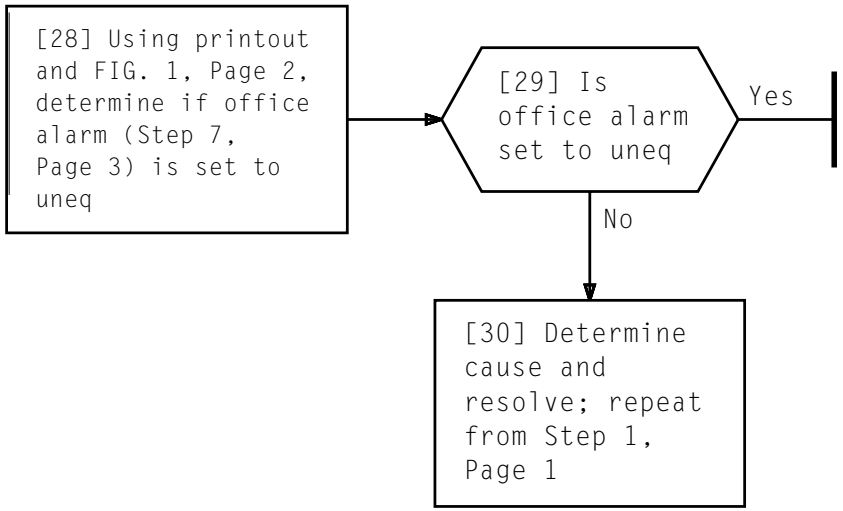
UNEQUIP OFFICE ALARM ASSIGNED TO CONVERSION SWITCH UNITS (PERFORMED BY TCC)



NOTE 4

Message will execute and create file that contains office alarm layout for office requiring overwrite

UNEQUIP OFFICE ALARM ASSIGNED TO CONVERSION SWITCH UNITS (PERFORMED BY TCC)



UNEQUIP OFFICE ALARM ASSIGNED TO CONVERSION SWITCH UNITS (PERFORMED BY TCC)

[1] Using office records, determine office alarm used for conversion switch off normal alarm

[2] At MTC terminal, enter message **VER:UTYPE:OA a!**
a = office alarm determined in Step 1. Record data in ENTRY ADDRESS field

[3] Using printout and FIG. 1, record leftmost octal digit in word 0 to be used as OLDDATA in absolute word change

[4] Using printout and FIG. 1, record seven rightmost octal digits in word 2 to be used as OLDDATA in absolute word change

[5] Using printout and FIG. 1, record words 3 through 6 to be used as OLDDATA in absolute word change

[6] Obtain 4E18 generic Functional Listing and determine data in word 2 for office alarm determined in Step 1. Record this data for later use as NEWDATA in absolute word change

AND

Page 2

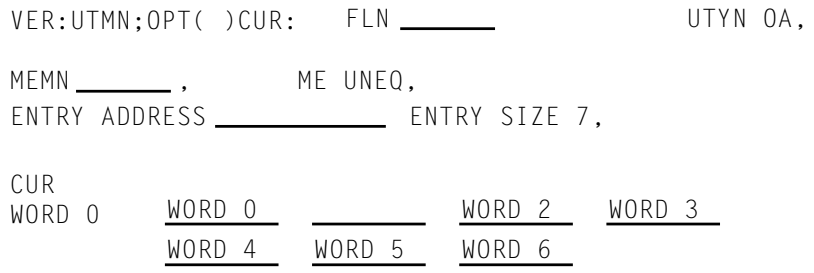


FIG. 1 - OA Unit Type Printout

UNEQUIP OFFICE ALARM ASSIGNED TO CONVERSION SWITCH UNIT (PERFORMED FOR LEC OFFICES)

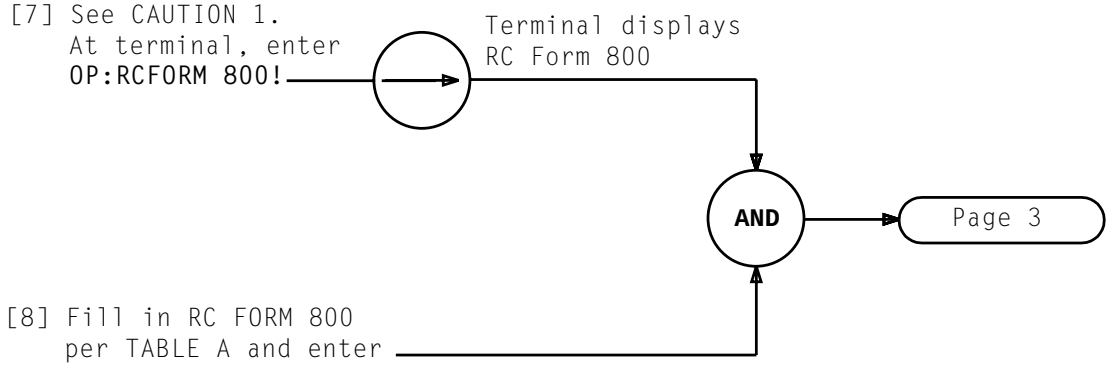


TABLE A

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 = Order number
e = **0** (Zero)
f = **3**
g = **21**
h = **O** (Letter O)
i = **0** (Zero - sets office alarm to unequipped)
j = Octal data recorded in Step 3, Page 1

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

UNEQUIP OFFICE ALARM ASSIGNED TO CONVERSION SWITCH UNIT (PERFORMED FOR LEC OFFICES)

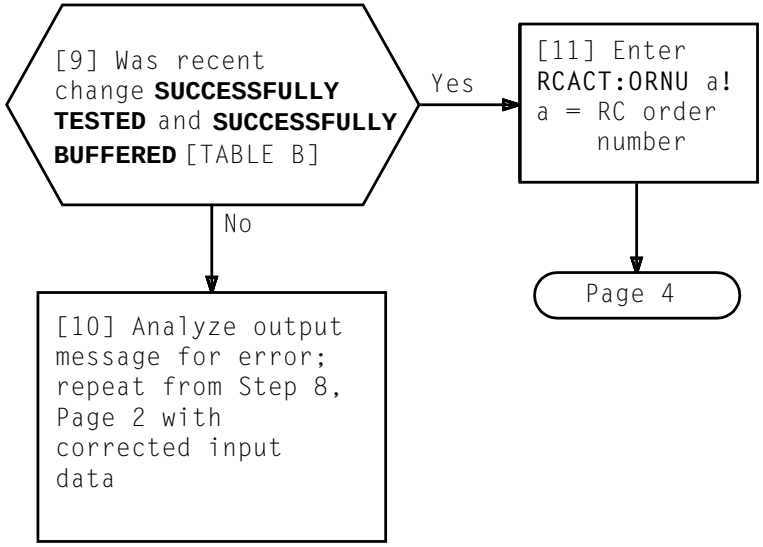


TABLE B

MESSAGE NUMBER	OUTPUT MESSAGE
1	RC ORNU a SUCCESSFULLY TESTED RC ORNU a SUCCESSFULLY BUFFERED RC:FUNC;CHG;OPT(ABSOLUTE),BUF: FSONLY N, ADDRESS a, ORNU b, WORDNO 0, SIZE 3, DISP 21, BINOCT 0, NEWDATA 0, OLDDATA c, REMARKS_ ! REPT:RC DUMP OF UNIT TYPE ENTRY AS IT WILL APPEAR AFTER THE MESSAGE IS ACTIVATED WORD 0 0_____ _____ _____ _____ _____ _____ _____

a = address recorded in Step 2, Page 1
b = order number
c = entered OLDDATA

UNEQUIP OFFICE ALARM ASSIGNED TO CONVERSION SWITCH UNIT (PERFORMED FOR LEC OFFICES)

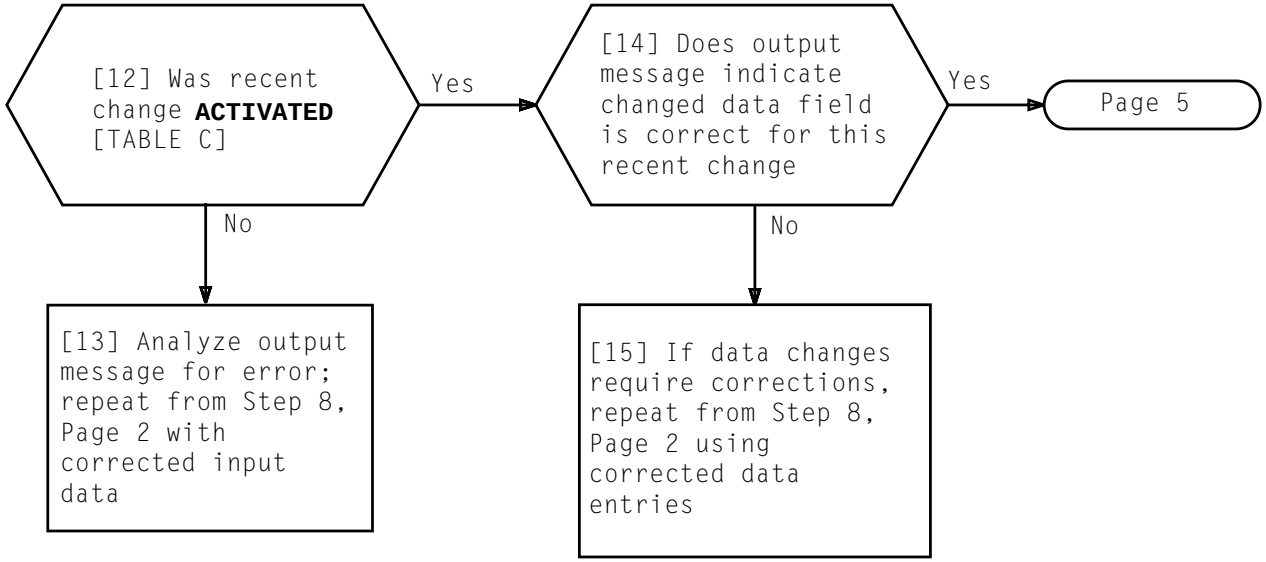


TABLE C

MESSAGE NUMBER	OUTPUT MESSAGE
1	RC ORNU a ACTIVATED RC:FUNC;CHG;OPT(ABSOLUTE),BUF; FSONLY N, ADDRESS a, ORNU b, WORDNO 0, SIZE 3, DISP 21, BINOCT 0, NEWDATA 0, OLDDATA c, REMARKS _ !

a = address recorded in Step 2, Page 1
b = order number
c = entered OLDDATA

UNEQUIP OFFICE ALARM ASSIGNED TO CONVERSION SWITCH UNIT (PERFORMED FOR LEC OFFICES)

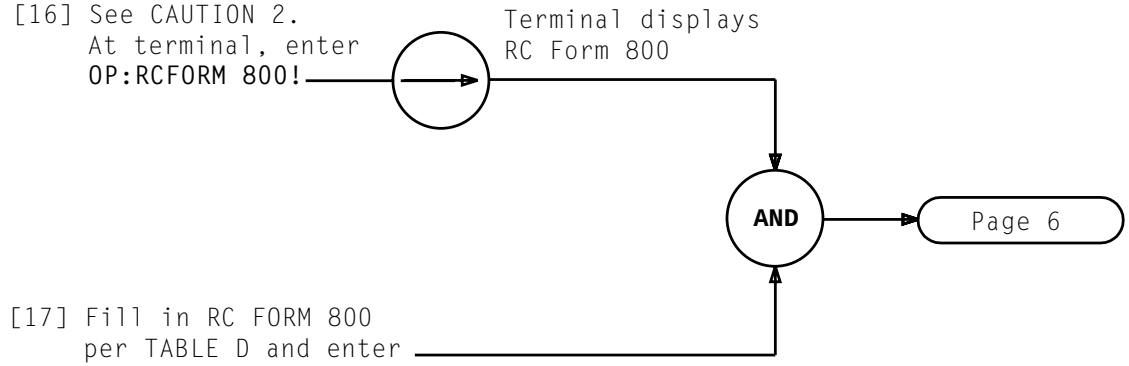


TABLE D

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 = Order number
e = **2**
f = **21**
g = **0 (Zero)**
h = **O** (Letter O)
i = Octal data recorded in Step 6, Page 1
j = Octal data recorded in Step 4, Page 1

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

UNEQUIP OFFICE ALARM ASSIGNED TO CONVERSION SWITCH UNIT (PERFORMED FOR LEC OFFICES)

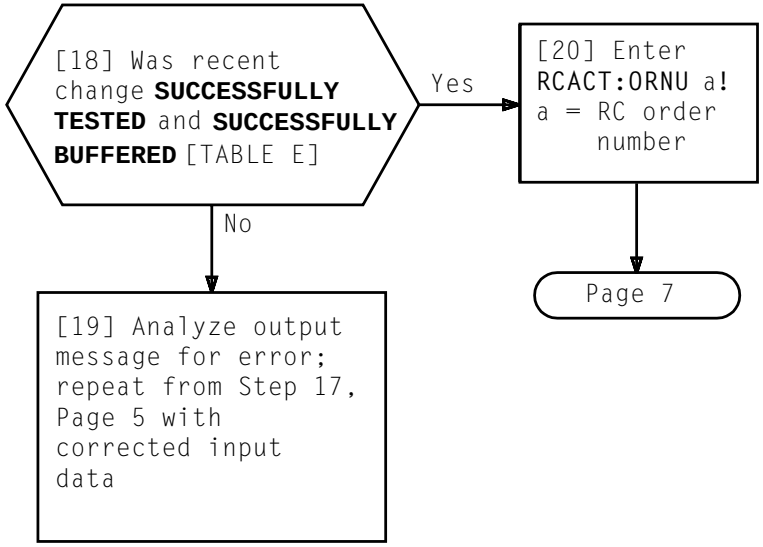


TABLE E

MESSAGE NUMBER	OUTPUT MESSAGE
1	RC ORNU a SUCCESSFULLY TESTED RC ORNU a SUCCESSFULLY BUFFERED RC:FUNC;CHG;OPT(ABSOLUTE),BUF: FSONLY N, ADDRESS a, ORNU b, WORDNO 2, SIZE 21, DISP 0, BINOCT 0, NEWDATA c, OLDDATA d, REMARKS_ ! REPT:RC DUMP OF UNIT TYPE ENTRY AS IT WILL APPEAR AFTER THE MESSAGE IS ACTIVATED WORD 0 _____ _____ _____ _____ _____ _____ _____

a = address recorded in Step 2, Page 1
b = order number
c = entered NEWDATA
d = entered OLDDATA

UNEQUIP OFFICE ALARM ASSIGNED TO CONVERSION SWITCH UNIT (PERFORMED FOR LEC OFFICES)

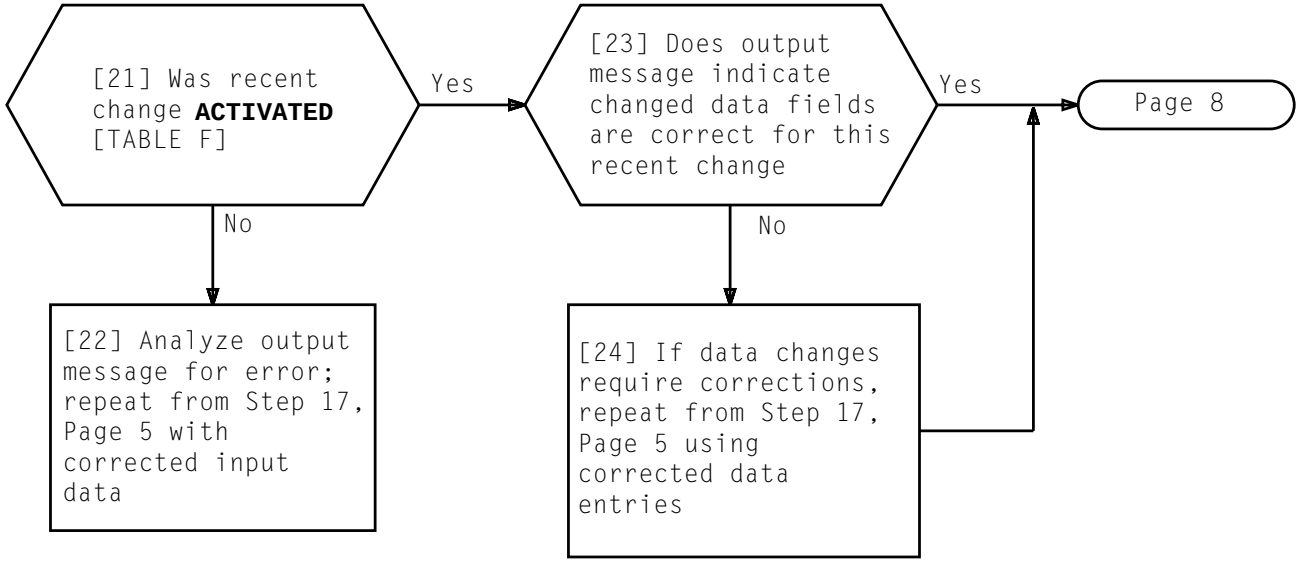


TABLE F

MESSAGE NUMBER	OUTPUT MESSAGE
1	RC ORNU a ACTIVATED RC:FUNC;CHG;OPT(ABSOLUTE),BUF: FSONLY N, ADDRESS a, ORNU b, WORDNO 2, SIZE 21, DISP 0, BINOCT 0, NEWDATA 213, OLDDATA c, REMARKS _ !

a = address recorded in Step 2, Page 1
b = order number
c = entered NEWDATA
d = entered OLDDATA

UNEQUIP OFFICE ALARM ASSIGNED TO CONVERSION SWITCH UNIT (PERFORMED FOR LEC OFFICES)

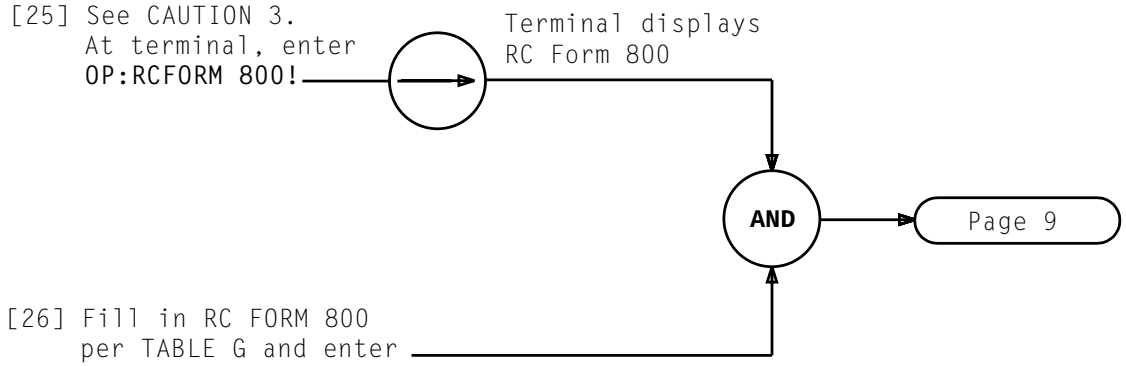


TABLE G

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 = Order number
e = **3**
f = **24**
g = **0** (Zero)
h = **O** (Letter O)
i = **24650101** (ascii for SPA)
j = Octal data (Word 3) recorded in Step 5, Page 1

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

UNEQUIP OFFICE ALARM ASSIGNED TO CONVERSION SWITCH UNIT (PERFORMED FOR LEC OFFICES)

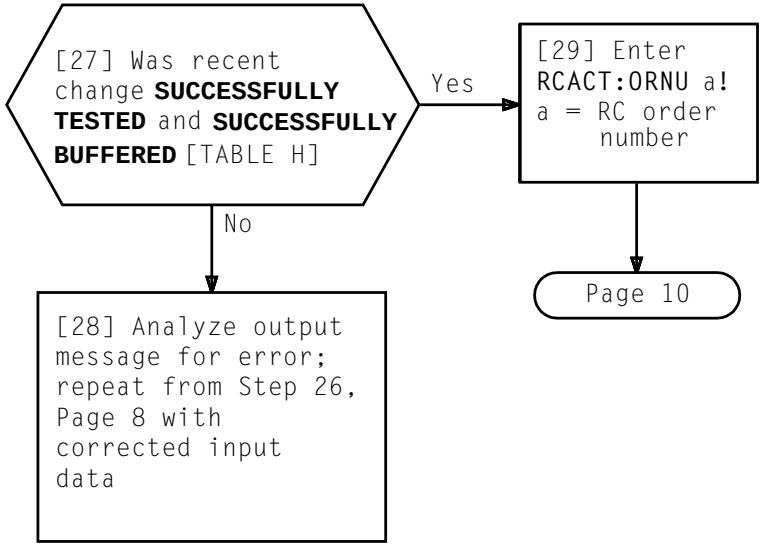


TABLE H

MESSAGE NUMBER	OUTPUT MESSAGE
1	RC ORNU a SUCCESSFULLY TESTED RC ORNU a SUCCESSFULLY BUFFERED RC:FUNC;CHG;OPT(ABSOLUTE),BUF: FSONLY N, ADDRESS a, ORNU b, WORDNO 3, SIZE 24, DISP 0, BINOCT 0, NEWDATA 24650101, OLDDATA c, REMARKS_ ! REPT:RC DUMP OF UNIT TYPE ENTRY AS IT WILL APPEAR AFTER THE MESSAGE IS ACTIVATED WORD 0 _____ _____ _____ 24650101 _____ _____ _____

a = address recorded in Step 2, Page 1
b = order number
c = entered OLDDATA

UNEQUIP OFFICE ALARM ASSIGNED TO CONVERSION SWITCH UNIT (PERFORMED FOR LEC OFFICES)

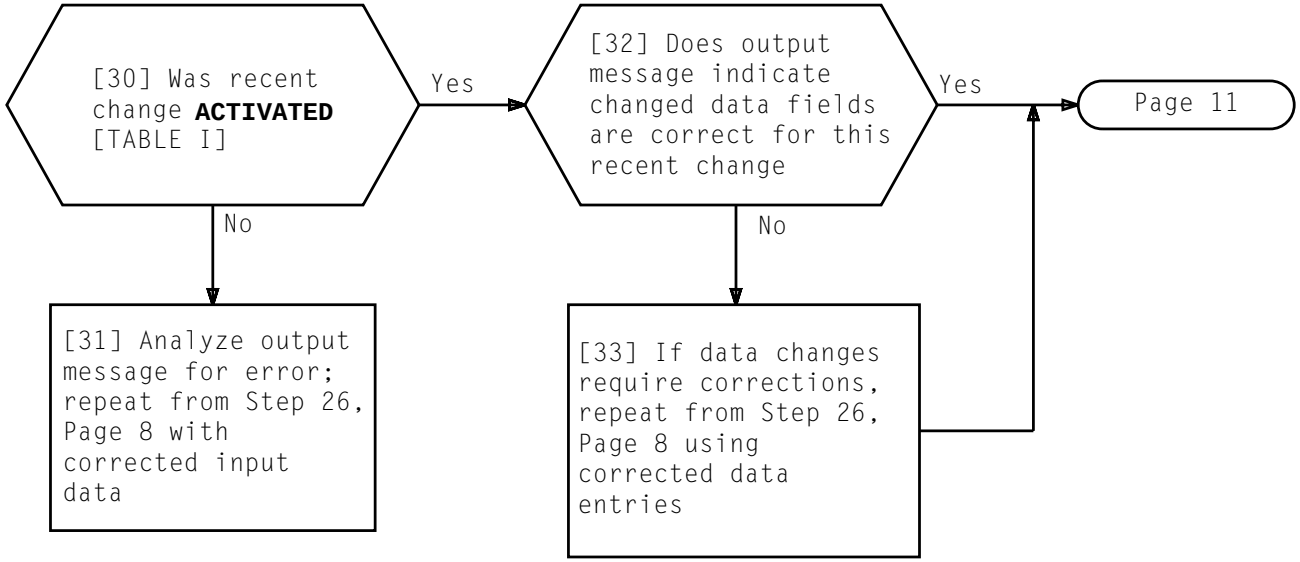


TABLE I

MESSAGE NUMBER	OUTPUT MESSAGE
1	RC ORNU a ACTIVATED RC:FUNC;CHG;OPT(ABSOLUTE),BUF: FSONLY N, ADDRESS a, ORNU b, WORDNO 3, SIZE 24, DISP 0, BINOCT 0, NEWDATA 24650101, OLDDATA c, REMARKS _ !

a = address recorded in Step 2, Page 1
b = order number
c = entered OLDDATA

UNEQUIP OFFICE ALARM ASSIGNED TO CONVERSION SWITCH UNIT (PERFORMED FOR LEC OFFICES)

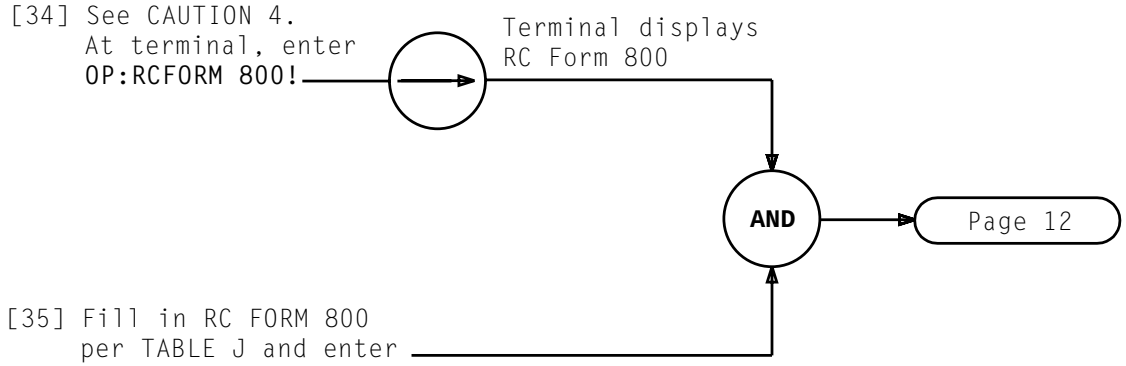


TABLE J

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 = Order number
e = **4**
f = **24**
g = **0** (Zero)
h = **O** (Letter O)
i = **24442440** (ascii for RE<space>)
j = Octal data (Word 4) recorded in Step 5, Page 1

UNEQUIP OFFICE ALARM ASSIGNED TO CONVERSION SWITCH UNIT (PERFORMED FOR LEC OFFICES)

CAUTION 4
Calling up RC Form will cause all CRT data to be cleared

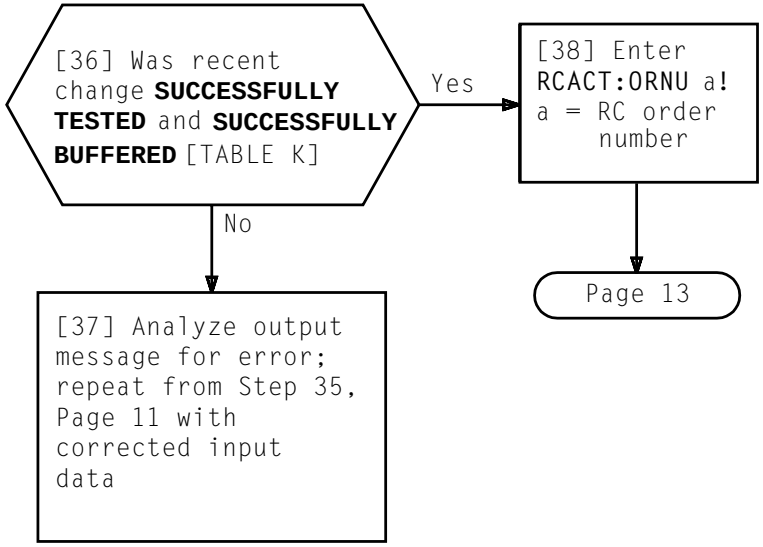


TABLE K

MESSAGE NUMBER	OUTPUT MESSAGE
1	RC ORNU a SUCCESSFULLY TESTED RC ORNU a SUCCESSFULLY BUFFERED RC:FUNC;CHG;OPT(ABSOLUTE),BUF: FSONLY N, ADDRESS a, ORNU b, WORDNO 4, SIZE 24, DISP 0, BINOCT 0, NEWDATA 24442440, OLDDATA c, REMARKS_ ! REPT:RC DUMP OF UNIT TYPE ENTRY AS IT WILL APPEAR AFTER THE MESSAGE IS ACTIVATED WORD 0 _____ _____ _____ _____ 24442440 _____ _____

a = address recorded in Step 2, Page 1
b = order number
c = entered OLDDATA

UNEQUIP OFFICE ALARM ASSIGNED TO CONVERSION SWITCH UNIT (PERFORMED FOR LEC OFFICES)

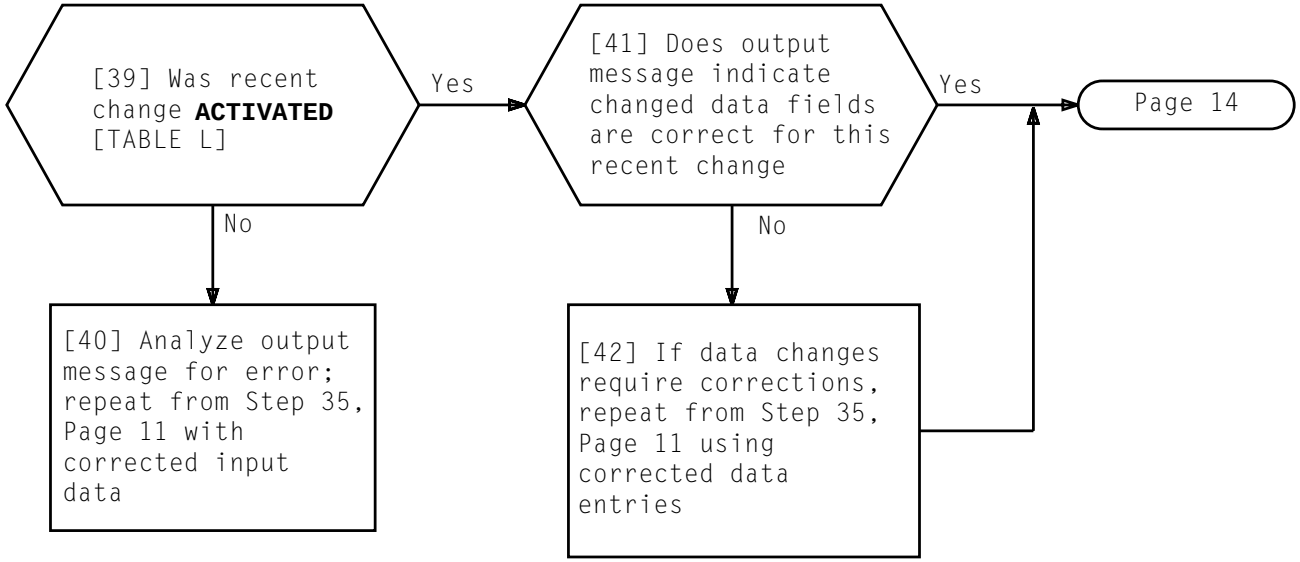


TABLE L

MESSAGE NUMBER	OUTPUT MESSAGE
1	RC ORNU a ACTIVATED RC:FUNC;CHG;OPT(ABSOLUTE),BUF: FSONLY N, ADDRESS a, ORNU b, WORDNO 4, SIZE 24, DISP 0, BINOCT 0, NEWDATA 24442440, OLDDATA c, REMARKS _ !

a = address recorded in Step 2, Page 1
b = order number
c = entered OLDDATA

UNEQUIP OFFICE ALARM ASSIGNED TO CONVERSION SWITCH UNIT (PERFORMED FOR LEC OFFICES)

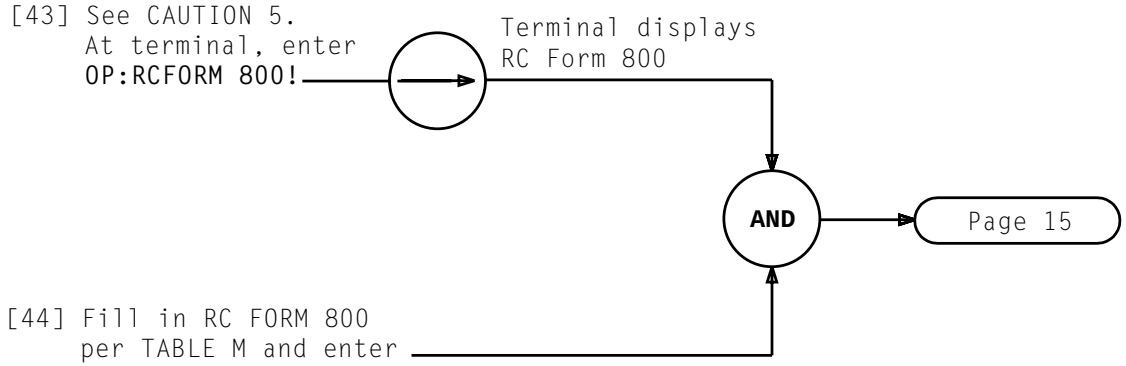


TABLE M

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 = Order number
e = **5**
f = **24**
g = **0** (Zero)
h = **O** (Letter O)
i = **10020040** (ascii for <space><space><space>)
j = Octal data (Word 5) recorded in Step 5, Page 1

UNEQUIP OFFICE ALARM ASSIGNED TO CONVERSION SWITCH UNIT (PERFORMED FOR LEC OFFICES)

CAUTION 5
Calling up RC Form will cause all CRT data to be cleared

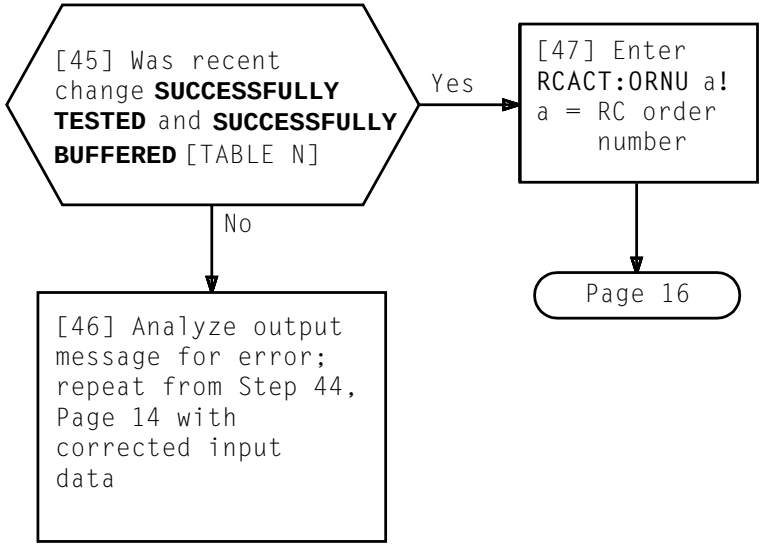


TABLE N

MESSAGE NUMBER	OUTPUT MESSAGE
1	RC ORNU a SUCCESSFULLY TESTED RC ORNU a SUCCESSFULLY BUFFERED RC:FUNC;CHG;OPT(ABSOLUTE),BUF: FSONLY N, ADDRESS a, ORNU b, WORDNO 5, SIZE 24, DISP 0, BINOCT 0, NEWDATA 10020040, OLDDATA c, REMARKS_ ! REPT:RC DUMP OF UNIT TYPE ENTRY AS IT WILL APPEAR AFTER THE MESSAGE IS ACTIVATED WORD 0 _____ _____ _____ _____ _____ 10020040 _____

a = address recorded in Step 2, Page 1
b = order number
c = entered OLDDATA

UNEQUIP OFFICE ALARM ASSIGNED TO CONVERSION SWITCH UNIT (PERFORMED FOR LEC OFFICES)

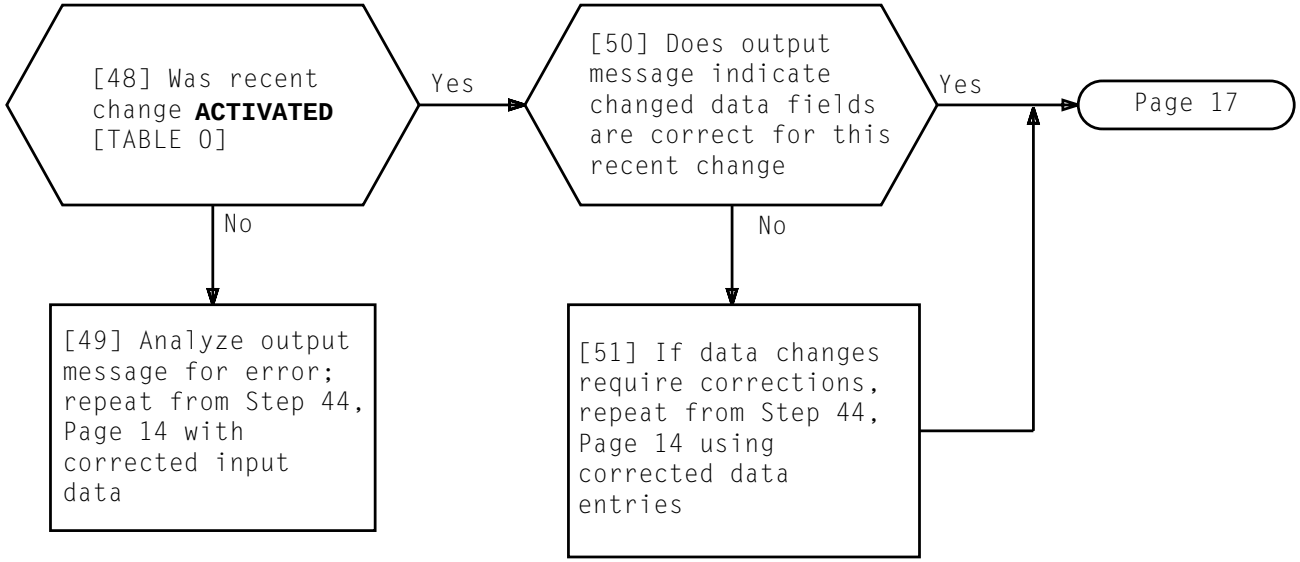
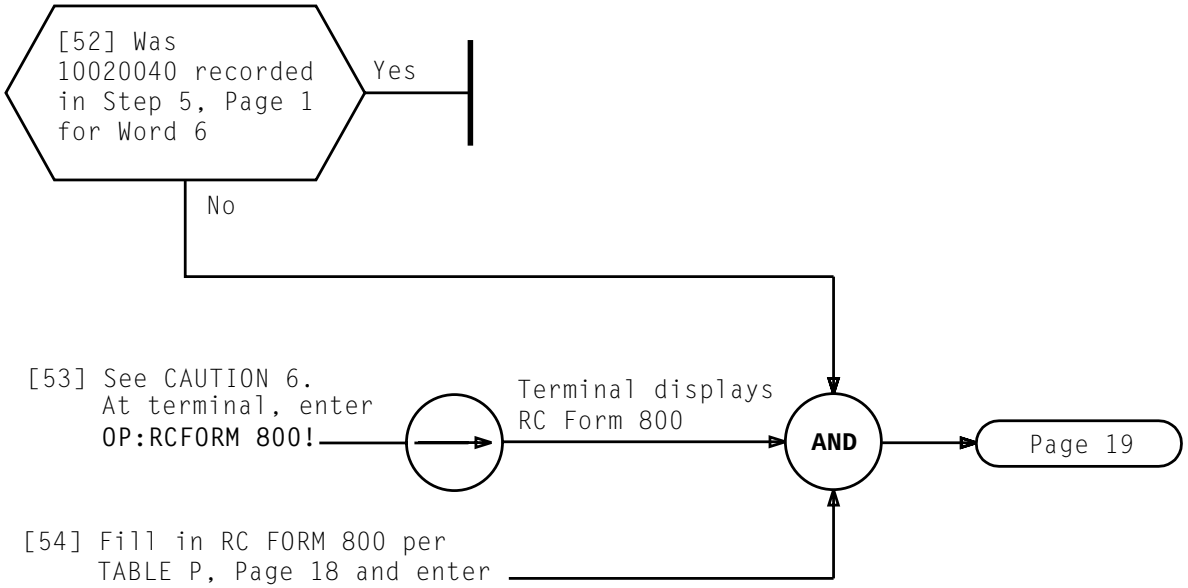


TABLE O

MESSAGE NUMBER	OUTPUT MESSAGE
1	RC ORNU a ACTIVATED RC:FUNC;CHG;OPT(ABSOLUTE),BUF: FSONLY N, ADDRESS a, ORNU b, WORDNO 5, SIZE 24, DISP 0, BINOCT 0, NEWDATA 10020040, OLDDATA c, REMARKS _ !

a = address recorded in Step 2, Page 1
b = order number
c = entered OLDDATA

UNEQUIP OFFICE ALARM ASSIGNED TO CONVERSION SWITCH UNIT (PERFORMED FOR LEC OFFICES)



CAUTION 6
Calling up RC Form will cause all CRT data to be cleared

UNEQUIP OFFICE ALARM ASSIGNED TO CONVERSION SWITCH UNIT (PERFORMED FOR LEC OFFICES)

TABLE P	
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 = Order number
e = **6**
f = **24**
g = **0** (Zero)
h = **O** (Letter O)
i = **10020040** (ascii for <space><space><space>)
j = Octal data (Word 6) recorded in Step 5, Page 1

UNEQUIP OFFICE ALARM ASSIGNED TO CONVERSION SWITCH UNIT (PERFORMED FOR LEC OFFICES)

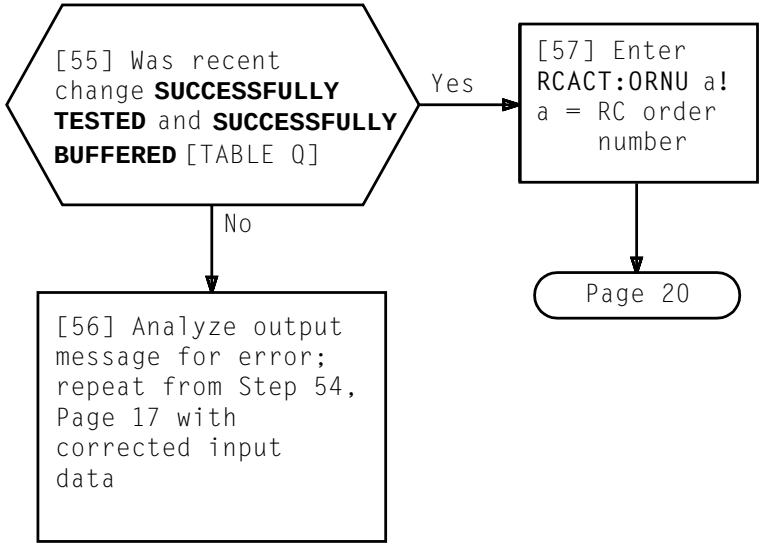


TABLE Q

MESSAGE NUMBER	OUTPUT MESSAGE
1	RC ORNU a SUCCESSFULLY TESTED RC ORNU a SUCCESSFULLY BUFFERED RC:FUNC;CHG;OPT(ABSOLUTE),BUF: FSONLY N, ADDRESS a, ORNU b, WORDNO 6, SIZE 24, DISP 0, BINOCT 0, NEWDATA 10020040, OLDDATA c, REMARKS_ ! REPT:RC DUMP OF UNIT TYPE ENTRY AS IT WILL APPEAR AFTER THE MESSAGE IS ACTIVATED WORD 0 _____ _____ _____ _____ _____ _____ 10020040

a = address recorded in Step 2, Page 1
b = order number
c = entered OLDDATA

UNEQUIP OFFICE ALARM ASSIGNED TO CONVERSION SWITCH UNIT (PERFORMED FOR LEC OFFICES)

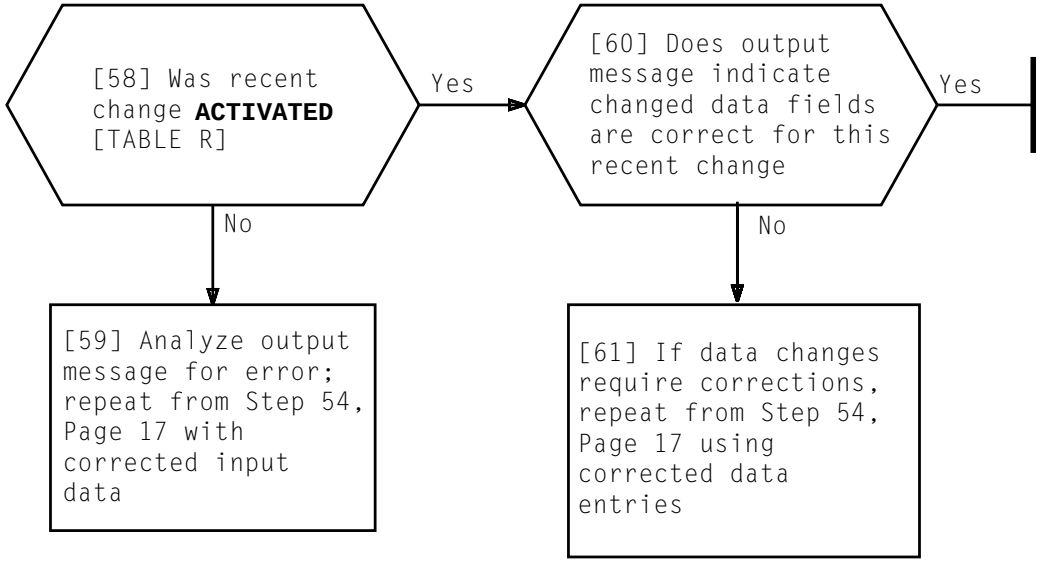
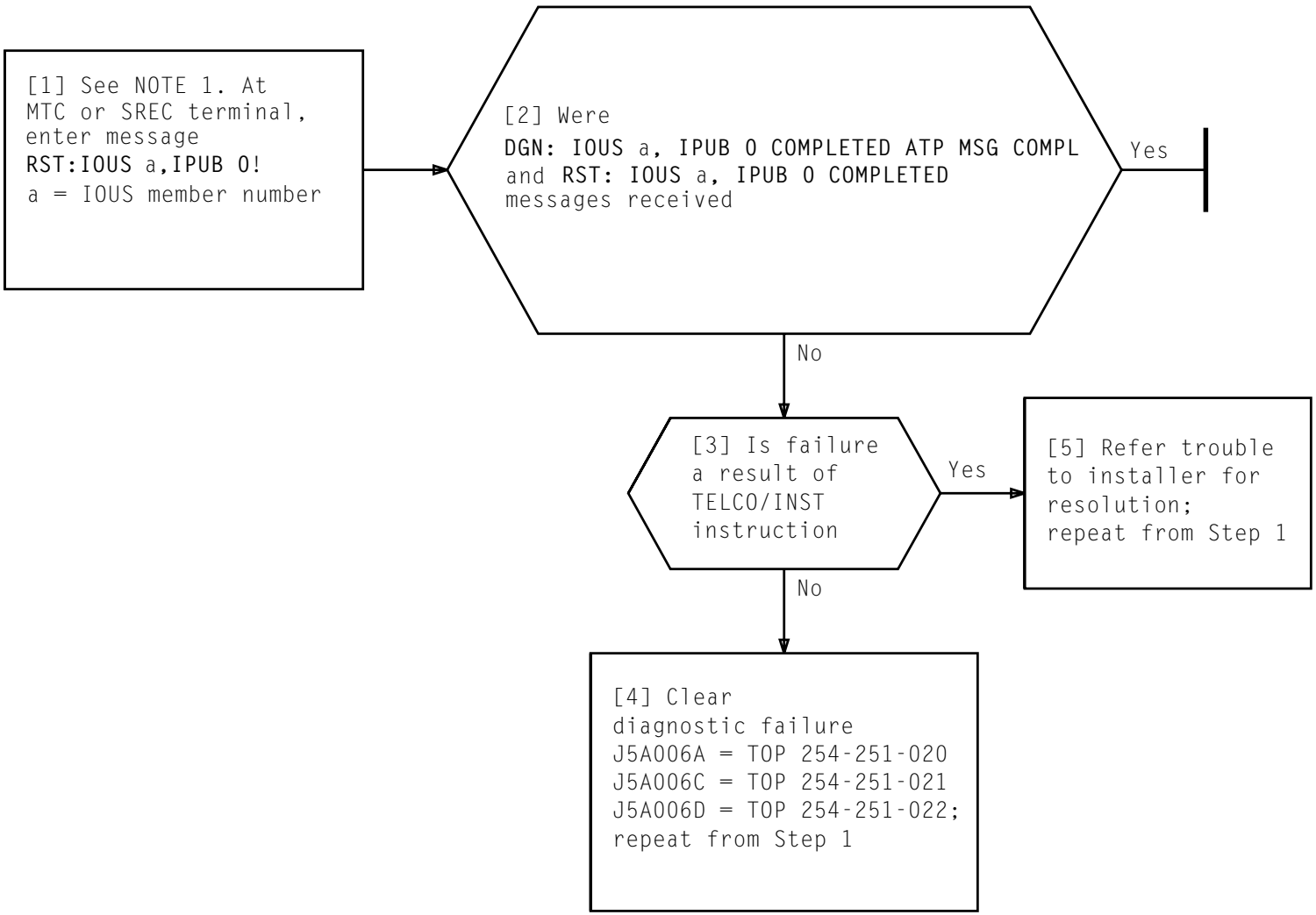


TABLE R

MESSAGE NUMBER	OUTPUT MESSAGE
1	RC ORNU a ACTIVATED RC:FUNC;CHG;OPT(ABSOLUTE),BUF: FSONLY N, ADDRESS a, ORNU b, WORDNO 6, SIZE 24, DISP 0, BINOCT 0, NEWDATA 10020040, OLDDATA c, REMARKS _ !

a = address recorded in Step 2, Page 1
b = order number
c = entered OLDDATA

UNEQUIP OFFICE ALARM ASSIGNED TO CONVERSION SWITCH UNIT (PERFORMED FOR LEC OFFICES)



RESTORE IOP TO SERVICE

NOTE 1
If IOUS 0 is being restored, SREC terminal must be used to enter RST message

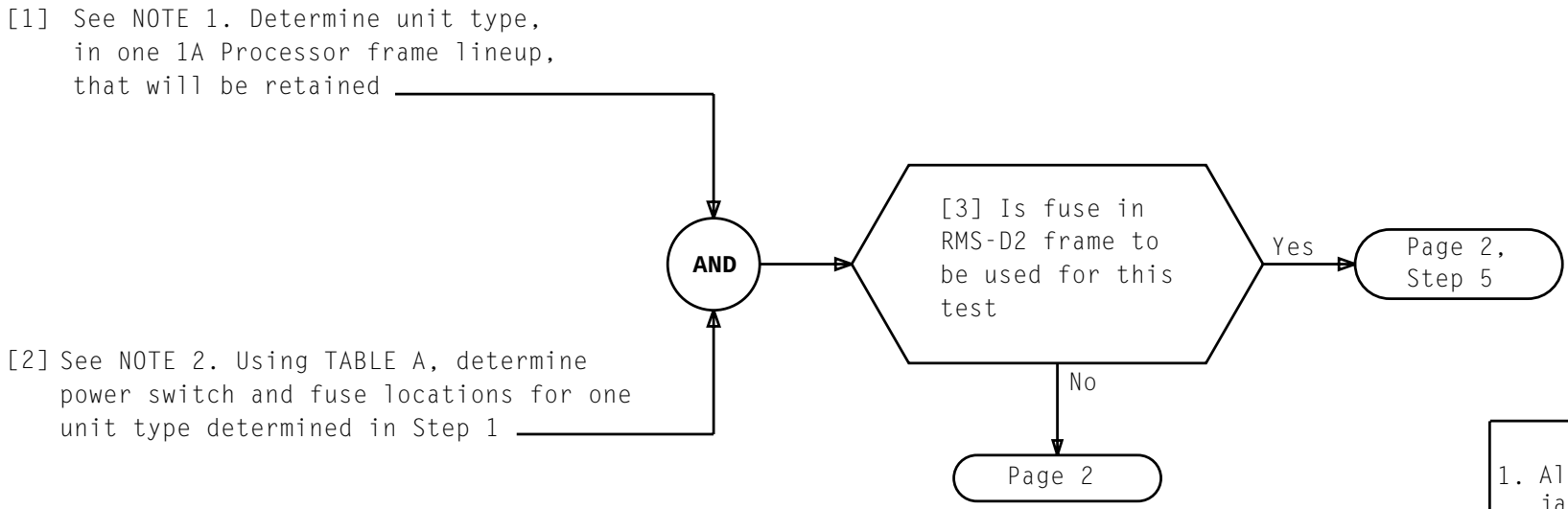


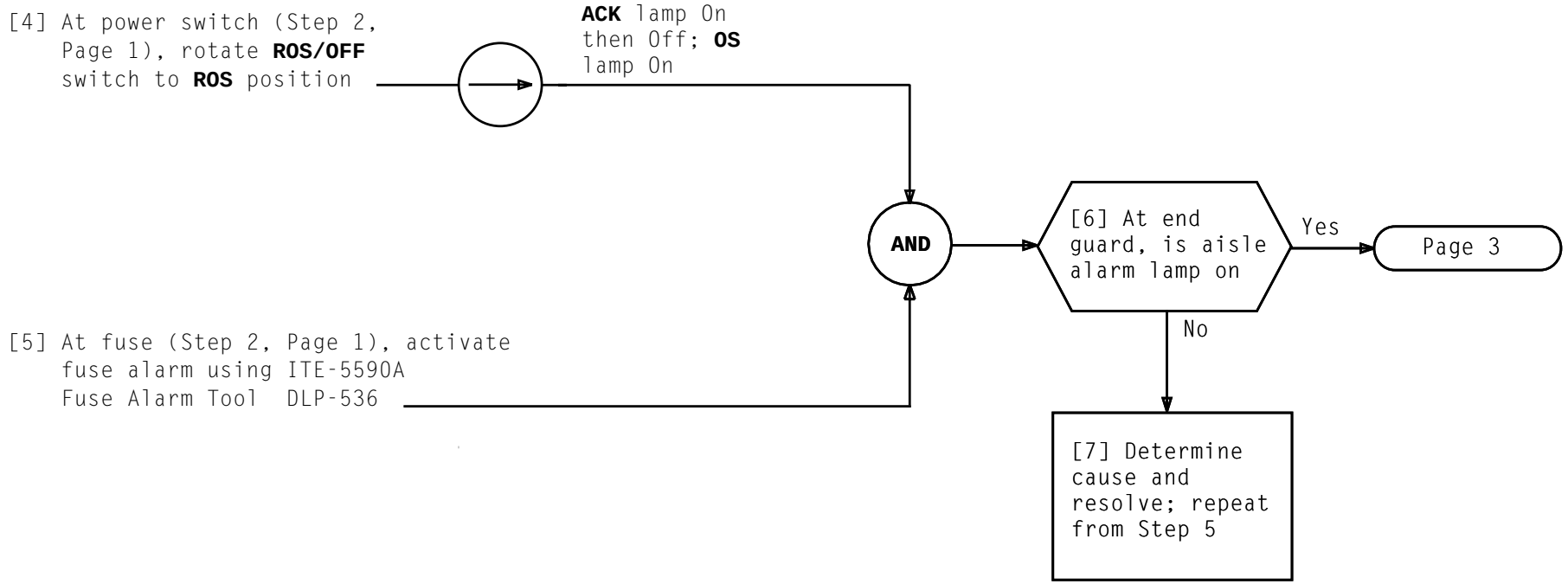
TABLE A

UNIT TYPE*	POWER SWITCH		FUSE	
	NAME	LOCATION	MARKING	LOCATION
DUS	**DUS**	76-017	**+24V V3**	78-007
I/O	**IPUB 0**	76-003	**A0**	76-007
IOP	**IOP BUS 0**	80-013	**+24-2**	80-009
RMS-D2	None	—	**POWER UNIT A**	60-012
TUC	**TUC**	68-017	**+24V V3**	60-012
* API must not be used for alarm test				

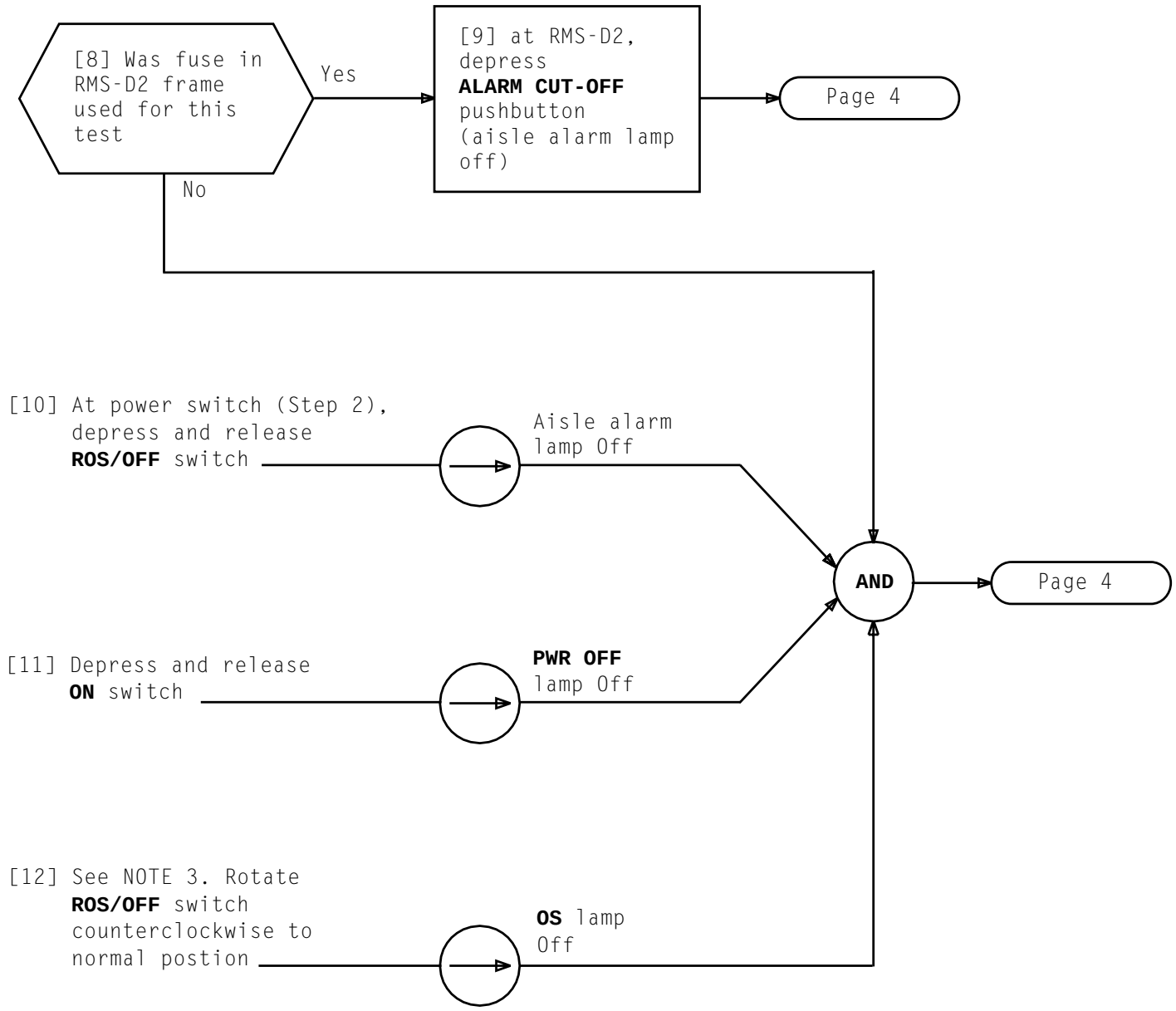
NOTES

1. Alarms and TTY - TEL jacks in frames on either side of 1A Processor equipment being removed must be tested. This procedure is to be repeated for each frame that will be reconfigured during 1A Processor removal
2. If unit type, that is either before or after 1A Processor equipment being removed, is not listed in TABLE A, contact next highest technical support group for power switch and fuse locations for this test

TEST AISLE ALARMS AND TTY — TEL JACKS



TEST AISLE ALARMS AND TTY — TEL JACKS



NOTE 3

Diagnostic will be run when **ROS/OFF** switch set to normal. **OS** lamp will extinguish when diagnostic completes

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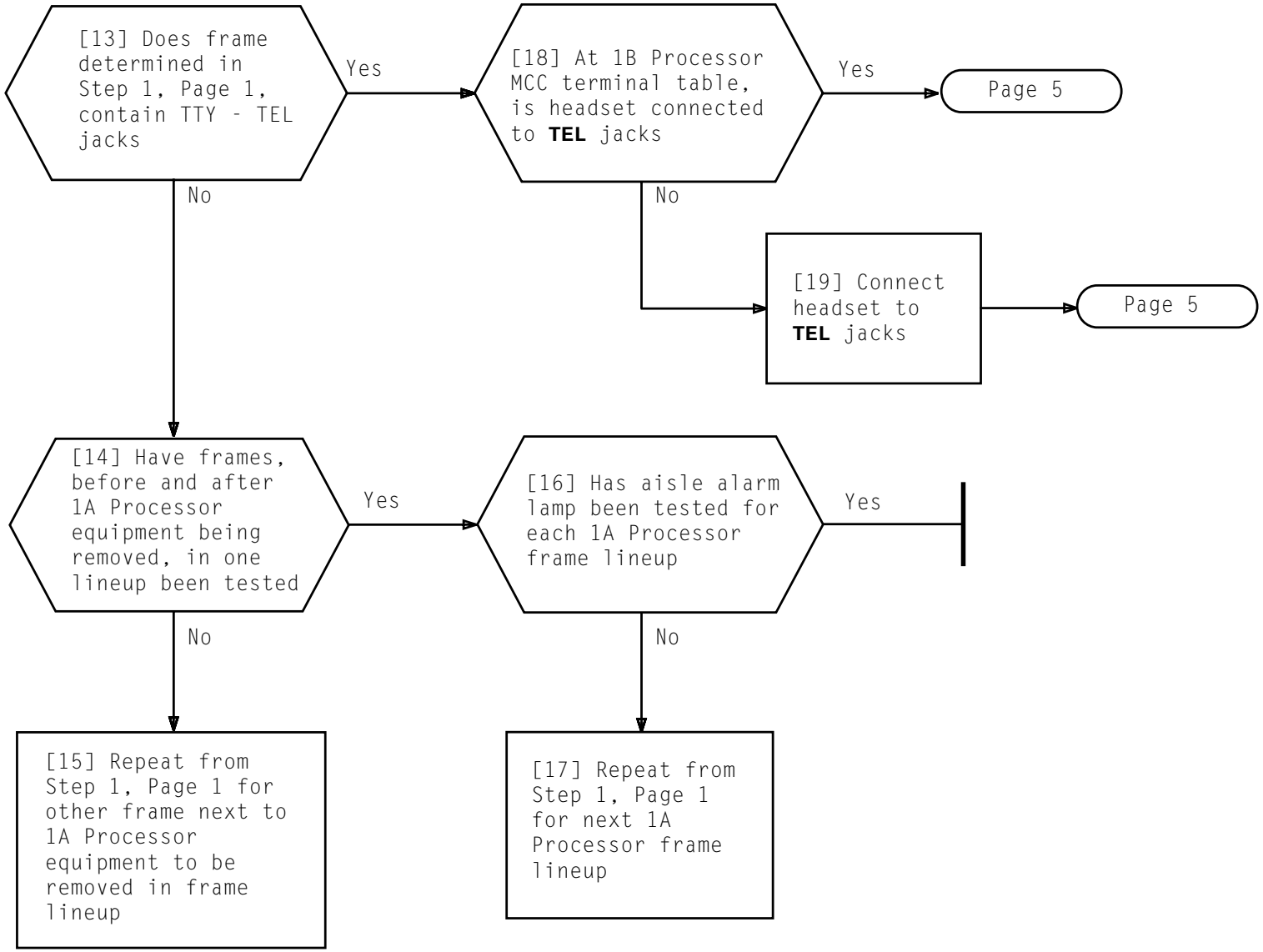
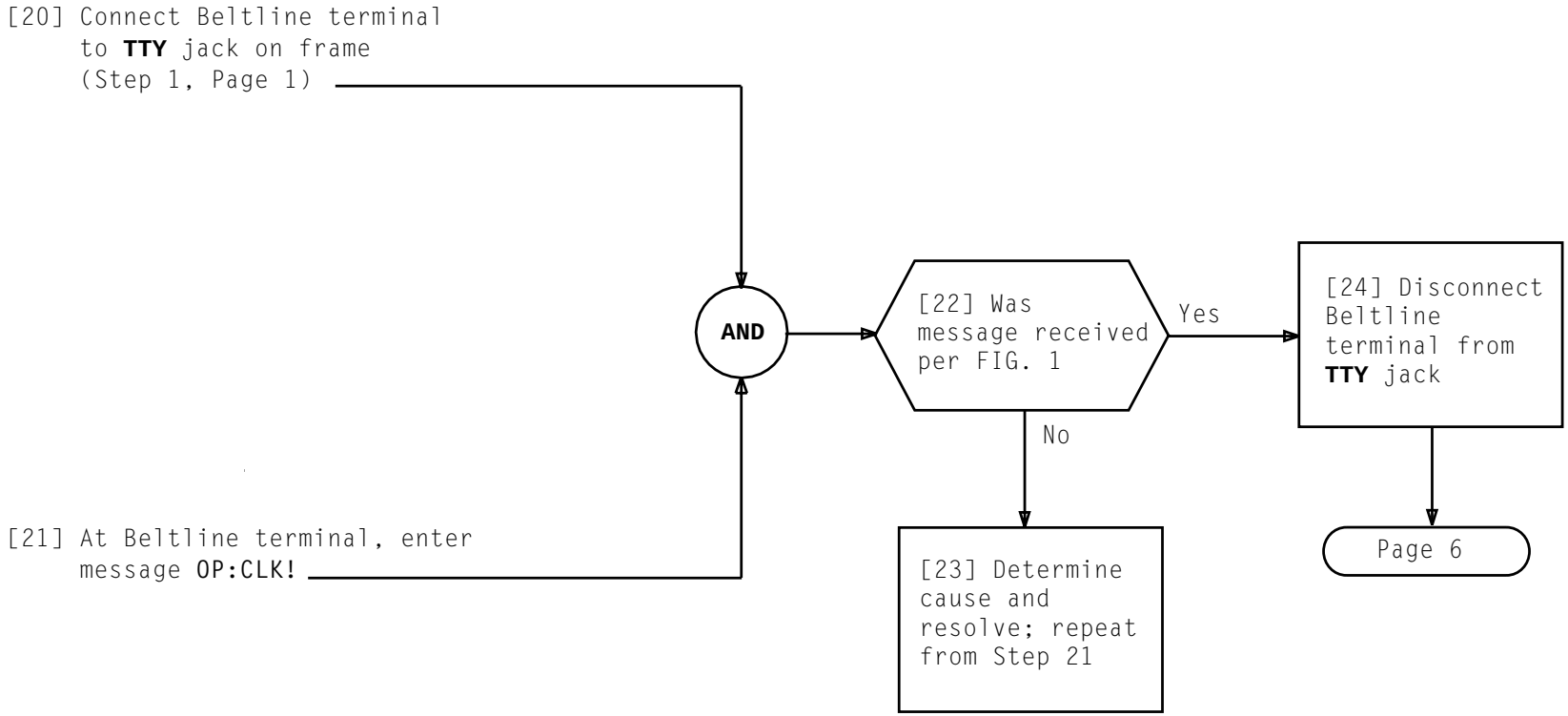
TEST AISLE ALARMS AND TTY — TEL JACKS



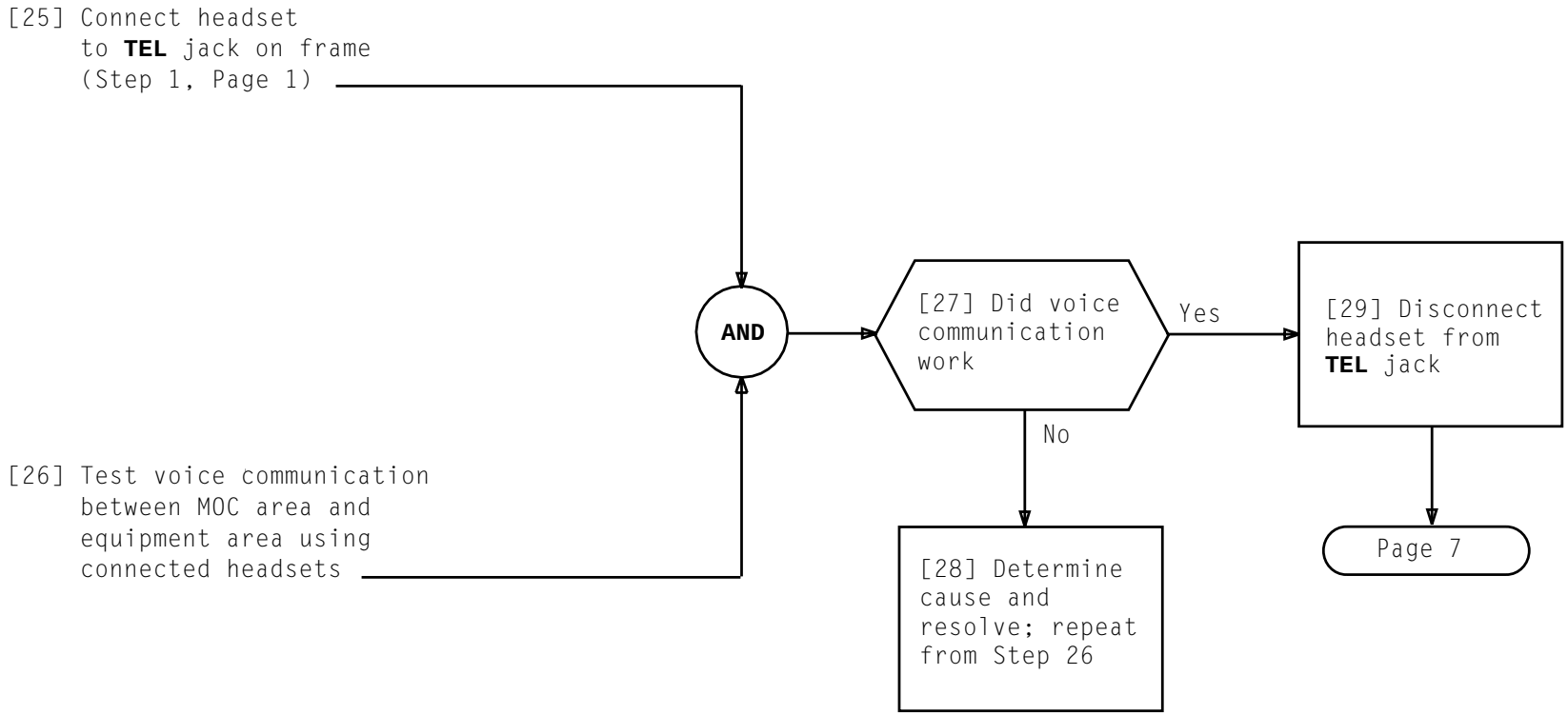
TEST AISLE ALARMS AND TTY — TEL JACKS



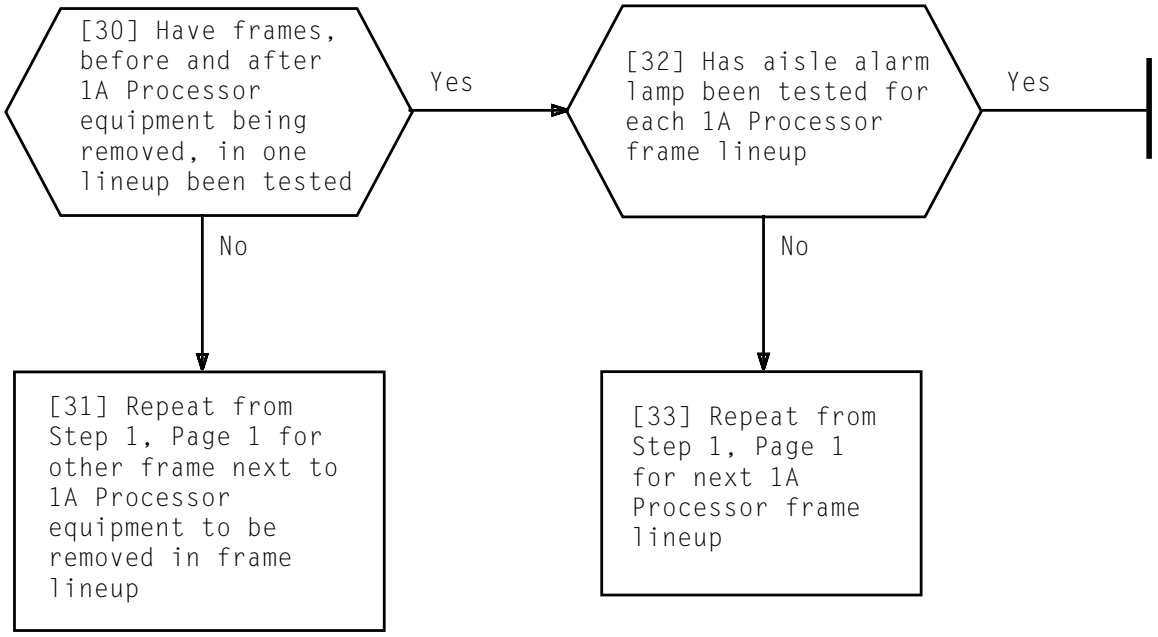
OP CLK COMPLETED
mm/dd/yy hh:mm

FIG. 1 - OP:CLK Printout

TEST AISLE ALARMS AND TTY — TEL JACKS



TEST AISLE ALARMS AND TTY — TEL JACKS



TEST AISLE ALARMS AND TTY — TEL JACKS

[1] Ensure that 1/4 amp fuse (**70F**), is inserted in front of ITE-5590A Fuse Alarm Tool

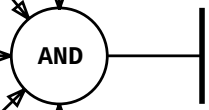
At fuse to be alarmed:

[2] See WARNING 1. Insert small insulated tube on end of Fuse Alarm Tool over colored plastic blown fuse indicator in center of fuse holder

[3] See NOTE 1. Using slight inward pressure rotate Fuse Alarm Tool until tab alongside insulated tube drops into cutout in fuse cap that exposes fuse alarm contact

[4] If alarm is not activated, rock Fuse Alarm Tool in vertical direction until alarm sounds

[5] After alarm has been activated remove tool by pulling straight out



NOTE 1

Cutouts for top row of fuse holders are normally at 12 o'clock position and at 6 o'clock position for bottom row of fuses

WARNING 1

The Fuse Alarm Tool could jam on plastic tab and break the fuse if it is cocked at an angle when being inserted

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ACTIVATE FUSE ALARM USING ITE-5590A FUSE ALARM TOOL

ITEM	ISSUE	ITEM	ISSUE	ITEM	ISSUE	ITEM	ISSUE	ITEM	ISSUE	ITEM	ISSUE
IXL-001 NTP-002 NTP-003 NTP-004 NTP-005		DLP-523 DLP-524 DLP-525 DLP-526 DLP-527									
NTP-006 NTP-007 NTP-008 NTP-009 NTP-010		DLP-528 DLP-529 DLP-530 DLP-531 DLP-532									
NTP-011 NTP-019 DLP-500 DLP-501 DLP-502		DLP-533 DLP-534 DLP-535 DLP-536 CKL-891									
DLP-503 DLP-504 DLP-505 DLP-506 DLP-507		TNG-893									
DLP-508 DLP-509 DLP-510 DLP-511 DLP-512											
DLP-513 DLP-514 DLP-515 DLP-516 DLP-517											
DLP-518 DLP-519 DLP-520 DLP-521 DLP-522											